Appendix A: SEQRA Documentation

617.20
Appendix A
State Environmental Quality Review
FULL ENVIRONMENTAL ASSESSMENT FORM

Purpose: The full EAF is designed to help applicants and agencies determine, in an orderly manner, whether a project or action may be significant. The question of whether an action may be significant is not always easy to answer. Frequently, there are aspects of a project that are subjective or unmeasurable. It is also understood that those who determine significance may have little or no formal knowledge of the environment or may not be technically expert in environmental analysis. In addition, many who have knowledge in one particular area may not be aware of the broader concerns affecting the question of significance.

The full EAF is intended to provide a method whereby applicants and agencies can be assured that the determination process has been orderly, comprehensive in nature, yet flexible enough to allow introduction of information to fit a project or action.

Full EAF Components: The full EAF is comprised of three parts:

Part 1: Provides objective data and information about a given project and its site. By identifying basic project data, it assists a reviewer in the analysis that takes place in Parts 2 and 3.

Part 2: Focuses on identifying the range of possible impacts that may occur from a project or action. It provides guidance as to whether an impact is likely to be considered small to moderate or whether it is a potentially-large impact. The form also identifies whether an impact can be mitigated or reduced.

Part 3: If any impact in Part 2 is identified as potentially-large, then Part 3 is used to evaluate whether or not the impact is actually important.

DETERMINATION OF SIGNIFICANCE — Type 1 and Unlisted Actions

Identify the Portions of EAF completed for this project: [X] Part 1 [X] Part 2 [ ] Part 3

Upon review of the information recorded on this EAF (Parts 1 and 2 and 3 if appropriate), and any other supporting information, and considering both the magnitude and importance of each impact, it is reasonably determined by the lead agency that:

[ ] A. The project will not result in any large and important impact(s) and, therefore, is one which **will not** have a significant impact on the environment, therefore **a negative declaration will be prepared.**

[ ] B. Although the project could have a significant effect on the environment, there will not be a significant effect for this Unlisted Action because the mitigation measures described in PART 3 have been required, therefore **a CONDITIONED negative declaration will be prepared.***

[ ] C. The project may result in one or more large and important impacts that may have a significant impact on the environment, therefore **a positive declaration will be prepared.**

* A Conditioned Negative Declaration is only valid for Unlisted Actions.

11 New King Street Parking Facility (Aerotech)

Name of Action

Town of North Castle Planning Board

Name of Lead Agency

Peg Michelman	**Chairman**
Print or Type Name of Responsible Officer in Lead Agency	Title of Responsible Officer
Signature of Responsible Officer in Lead Agency	Signature of Preparer (if different from responsible officer)

June 26, 2009

Date

PART I — PROJECT INFORMATION

Prepared by Project Sponsor

NOTICE: This document is designed to assist in determining whether the action proposed may have a significant effect on the environment. Please complete the entire form, Parts A through E. Answers to these questions will be considered as part of the application for approval and may be subject to further verification and public review. Provide any additional information you believe will be needed to complete Parts 2 and 3.

It is expected that completion of the full EAF will be dependent on information currently available and will not involve new studies, research or investigation. If information requiring such additional work is unavailable, so indicate and specify each instance.

NAME OF ACTION **11 New King Street Parking Facility (Aerotech)**		
LOCATION OF ACTION (INCLUDE STREET ADDRESS, MUNICIPALITY AND COUNTY) **11 New King Street, North Castle, Westchester County**		
NAME OF APPLICANT/SPONSOR **11 New King Street, LLC**	BUSINESS TELEPHONE **(914) 681-3001**	
ADDRESS **11 New King Street**		
CITY/PO **North Castle**	STATE **NY**	ZIP CODE **10604**
NAME OF OWNER (IF DIFFERENT)	BUSINESS TELEPHONE ( )	
ADDRESS		
CITY/PO	STATE	ZIP CODE

DESCRIPTION OF ACTION

The applicant proposes to construct a multi-story parking structure on a 2.47-acre lot identified on the official tax map of the Town of North Castle as block 4, lot 14B. The structure would be designed to accommodate up to 1,450 cars in a combination of valet/self-park/automated manner—all fully screened from view—with a small area for exterior parking and concierge drop off. The proposed parking structure would have a footprint of approximately 52,000 square feet and a height of approximately 55-feet at average finished grade. The proposed project would meet an existing demand for parking at Westchester County Airport (HPN). The potential for utilizing the automated parking technology would permit a more efficient use of space to maximize the number of vehicles in a smaller footprint. A drainage easement, for stormwater quality and quantity, is proposed on a 1.20-acre portion of an adjacent parcel identified as block 4, lot 13A (the applicant has joint ownership of lot 13A). Where applicable, information in this EAF for lot 14B and the affected portion of lot 13A is shown separately as "lot 14B / lot 13A." An existing office building on lot 14B would be demolished, with the existing business to be relocated to another location. To accommodate the proposed use in the existing Industrial (IND-AA) zoning district, a zoning text change is proposed to allow parking structures by special permit.

Please Complete Each Question—Indicate N.A. if not applicable

A. Site Description

Physical setting of overall project, both developed and undeveloped areas.

1. Present Land Use: [ ] Urban [X] Industrial [ ] Commercial [ ] Residential (subruban) [ ] Rural (non-farm)
   [X] Forest [ ] Agriculture [ ] Other _____

2. Total acreage of project area: **2.47/1.20*** acres.

APPROXIMATE ACREAGE	PRESENTLY		AFTER COMPLETION	
Meadow or Brushland (Non-agricultural)		acres		acres
Forested	**1.50 / 1.20**	acres	**1.17 / 0.60**	acres
Agricultural (Includes orchards, cropland, pasture, etc.)		acres		acres
Wetland (Freshwater or tidal as per Articles 24, 25 of ECL)		acres		acres
Water Surface Area	**0.00 / 0.00**	acres	**0.00 / 0.27**	acres
Unvegetated (Rock, earth or fill)		acres		acres
Roads, buildings and other paved surfaces	**0.78 / 0.00**	acres	**1.30 / 0.00**	acres
Other (Indicate type) **Grass/Lawn**	**0.19 / 0.00**	acres	**0.00 / 0.33**	acres

*** Acreages are shown as "Lot 14B / Lot 13A (partial)." The proposed project considers a 1.20-acre section of Lot 13A.**

3. What is predominant soil type(s) on the project site?* Ridgebury Loam (RdB), Woodbridge Loam (WdB), Udorthents (Ub)

   a. Soil drainage*: [X] Well drained **25 / 0**** % of site [X] Moderately well drained **25 / 40*** % of site.
   [X] Poorly drained **50 / 60**** % of site

   *** Based on the Westchester County Soil Survey.**
   **** Lot 14B / Lot 13A**

   b. If any agricultural land is involved, how many acres of soil are classified within soil group 1 through 4 of the NYS Land Classification System? **N/A** Acres (see 1NYCRR 370)

4. Are there bedrock outcroppings on project site? [ ] Yes [X] No

What is the depth to bedrock? (in feet) **> 5***

***Based on the Westchester County Soil Survey.**

5. Approximate percentage of proposed project site with slopes: [X] 0-10% **78 / 26*** % [X] 10-15% **2 / 51*** %

[X] 15% or greater **20 / 23*** %

*** Lot 14B / Lot 13A**

6. Is project substantially contiguous to, or contain a building, site, or district, listed on the State or National Registers of Historic Places? [ ] Yes [X] No

7. Is project substantially contiguous to a site listed on the Register of National Natural Landmarks? [ ] Yes [X] No

8. What is the depth of the water table? **0-2.5*** (in feet)

***Based on the Westchester County Soil Survey. Depth of water table is shown for November through May.**

9. Is site located over a primary, principal, or sole source aquifer? [ ] Yes [X] No

10. Do hunting, fishing or shell fishing opportunities presently exist in the project area? [ ] Yes [X] No

11. Does project site contain any species of plant or animal life that is identified as threatened or endangered? [ ] Yes [X] No

According to: **NYSDEC Environmental Resource Map (to be verified by field investigation)**

Identify each species:

12. Are there any unique or unusual land forms on the project site? (i.e., cliffs, dunes or other geological formations? [ ] Yes [X] No

Describe:

13. Is the project site presently used by the community or neighborhood as an open space or recreation area? [ ] Yes [X] No

If yes, explain:

14. Does the present site include scenic views known to be important to the community? [ ] Yes [X] No

15. Streams within or contiguous to project area? **Yes**

a. Name of Stream and name of River to which it is tributary: **Unnamed; tributary to Rye Lake**

16. Lakes, ponds, wetland areas within or contiguous to project area:

a. Name: **Town-regulated wetland**

b. Size (in acres): **0.40 / 0.07* (portrays acreage of wetland within project site boundaries)**

*** Lot 14 B / Lot 13A**

17. Is the site served by existing public utilities? [X] Yes [ ] No

a. If YES, does sufficient capacity exist to allow connection? [X] Yes [ ] No

b. If YES, will improvements be necessary to allow connection? [X] Yes [ ] No

18. Is the site located in an agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? [ ] Yes [X] No

19. Is the site located in or substantially contiguous to a Critical Environmental Area designated pursuant to Article 8 of the ECL, and 6 NYCRR 617? [X] Yes [ ] No

20. Has the site ever been used for the disposal of solid or hazardous waste? [ ] Yes [X] No

B. Project Description

1. Physical dimensions and scale of project (fill in dimensions as appropriate).

a. Total contiguous acreage owned or controlled by project sponsor **2.47 / 1.20*** acres.

b. Project acreage to be developed: **1.30 / 0.00*** acres initially; **1.30 / 0.00*** acres ultimately.

c. Project acreage to remain undeveloped **1.17/ 1.20*** acres.

*** Lot 14B / Lot 13A**

d. Length of project, in miles: **N/A** (If appropriate)

e. If the project is an expansion, indicate percent of expansion proposed **N/A** %

f. Number of off-street parking spaces existing **50** ; proposed **1,450 (maximum potential)**

g. Maximum vehicular trips generated per hour **TBD** (upon completion of project)?

h. If residential: Number and type of housing units? **N/A**

	One Family	Two Family	Multiple Family	Condominium
Initially				
Ultimately				

i. Dimensions (in feet) of largest proposed structure **55** height; **176** width; **302** length.

j. Linear feet of frontage along a public thoroughfare project will occupy is? **47** ft.

2. How much natural material (i.e., rock, earth, etc.) will be removed from the site? **TBD** cubic yards.

3. Will disturbed areas be reclaimed? [ ] N/A [X] Yes [ ] No

a. If yes, for what intended purpose is the site being reclaimed? **Topsoil would be stockpiled and reused as topsoil.**

b. Will topsoil be stockpiled for reclamation? [X] Yes [ ] No

c. Will upper subsoil be stockpiled for reclamation? [ ] Yes [X] No

4. How many acres of vegetation (trees, shrubs, ground covers) will be removed from site? **0.52 / 0.60*** acres.

*** Lot 14B / Lot 13A**

5. Will any mature forest (over 100 years old) or other locally-important vegetation be removed by this project? [ ] Yes [X] No

6. If single phase project: Anticipated period of construction **14** months, (including demolition)

7. If multi-phased: **N/A**

a. Total number of phases anticipated _____ (number)

b. Anticipated date of commencement phase 1 _____ month _____ year, including (demolition)

c. Approximate completion date of final phase _____ month _____ year.

d. Is phase 1 functionally dependent of subsequent phases? [ ] Yes [ ] No

8. Will blasting occur during construction? [ ] Yes [X] No

9. Number of jobs generated: during construction **TBD** ; after project is complete **TBD**

10. Number of jobs eliminated by this project **0**

11. Will project require relocation of any projects or facilities? [X] Yes [ ] No

If yes, explain: **The proposed project would replace an existing office building owned by the applicant. Existing tenants would relocate to new office locations.**

12. Is surface liquid waste disposal involved? [ ] Yes [X] No

a. If yes, indicate type of waste (sewage, industrial, etc) and amount **N/A**

b. Name of water body into which effluent will be discharged **N/A**

13. Is subsurface liquid waste disposal involved? Type _____ [ ] Yes [X] No

14. Will surface area of an existing water body increase or decrease by proposal? [ ] Yes [X] No

If yes, explain: _____

15. Is project or any portion of project located in a 100 year flood plain? [ ] Yes [X] No

16. Will the project generate solid waste? [X] Yes [ ] No

a. If yes, what is the amount per month? **TBD** tons

b. If yes, will an existing solid waste facility be used? [X] Yes [ ] No

c. If yes, give name **Local carting firm to be used.** ; location **TBD**

d. Will any wastes not go into a sewage disposal system or into a sanitary landfill? [ ] Yes [X] No

e. If yes, explain: _____

17. Will the project involve the disposal of solid waste? [ ] Yes [X] No

a. If yes, what is the anticipated rate of disposal? _____ tons/month

b. If yes, what is the anticipated site life? _____ years

18. Will project use herbicides or pesticides? [ ] Yes [X] No

19. Will project routinely produce odors (more than one hour per day)? [ ] Yes [X] No

20. Will project produce operating noise exceeding the local ambient noise levels? [ ] Yes [X] No

21. Will project result in an increase in energy use? **TBD** [ ] Yes [ ] No

If yes, indicate type(s): _____

22. If water supply is from wells, indicate pumping capacity **TBD** gallons/minute

23. Total anticipated water usage per day **TBD** gallons/day

24. Does project involve Local, State, or Federal funding? [ ] Yes [X] No

If yes, explain: _____

25. Approvals Required:

			Type	Submittal Date
City, Town, Village Board	[X] Yes	[ ] No	**Zoning Text Amendment**	
City, Town, Village Planning Board	[X] Yes	[ ] No	**Site Plan, Wetlands**	
City, Town, Village Zoning Board	[ ] Yes	[X] No		
City, County Health Department	[X] Yes	[ ] No	**Water, Sanitary Sewer**	
Other Local Agencies	[X] Yes	[ ] No	**Bldg Dept (Sewer)**	
Other Regional Agencies	[X] Yes	[ ] No	**NYCDEP**	
State Agencies	[X] Yes	[ ] No	**NYSDEC**	
Federal Agencies	[X] Yes	[ ] No	**FAA**	

C. Zoning and Planning Information

1. Does proposed action involve a planning or zoning decision? [X] Yes [ ] No
   If Yes, indicate decision required:
   [X] Zoning amendment [ ] Zoning variance [ ] New/revision of master plan [ ] Subdivision
   [X] Site plan [X] Special use permit [ ] Resource management plan [ ] Other _____

2. What is the zoning classification(s) of the site? **Industrial AA (IND-AA) District**

3. What is the maximum potential development of the site if developed as permitted by the present zoning?
   30 % building coverage

4. What is the proposed zoning of the site? **Same as existing.**

5. What is the maximum potential development of the site if developed as permitted by the proposed zoning?
   60 % gross land coverage

6. Is the proposed action consistent with the recommended uses in adopted local land use plans? [X] Yes [ ] No

7. What are the predominant land use(s) and zoning classifications within a ¼-mile radius of proposed action?
   LAND USE: Office Buildings, Airport, I-684, Reservoir, (Greenwich, CT: Single-Family Residential); ZONING: IND-AA and R-2A (Greenwich, CT: R-4A)

8. Is the proposed action compatible with adjoining/surrounding land uses with a ¼ mile? [X] Yes [ ] No

9. If the proposed action is the subdivision of land, how many lots are proposed? **N/A**

   a. What is the minimum lot size proposed? **N/A**

10. Will the proposed action require authorization(s) for the formation of sewer or water districts? [ ] Yes [X] No

11. Will the proposed action create a demand for any community provided services (recreation, education, police, fire protection)? [X] Yes [ ] No

    a. If yes, is existing capacity sufficient to handle projected demand? [X] Yes [ ] No

12. Will the proposed action result in the generation of traffic significantly above present levels? [ ] Yes [X] No

    a. If yes, is the existing road network adequate to handle the additional traffic? **TBD** [ ] Yes [ ] No

D. Informational Details

Attach any additional information as may be needed to clarify your project. If there are or may be an adverse impacts associated with your proposal, please discuss such impacts and the measures which you proposed to mitigate or avoid them.

E. Verification

I certify that the information provided above is true to the best of my knowledge.

Applicant/Sponsor Name **Nanette H. Bourne for 11 New King Street, LLC** Date **June 26, 2009**

Signature _____ Title **Senior Vice President, AKRF, Inc.**

If the action is in the Coastal Area, and you are a state agency, complete the Coastal Assessment Form before proceeding with this assessment.

Part 2 - PROJECT IMPACTS AND THEIR MAGNITUDE

Responsibility of Lead Agency

General Information (Read Carefully)

In completing the form the reviewer should be guided by the question: Have my responses and determinations been **reasonable**? The reviewer is not expected to be an expert environmental analyst.

The **Examples** provided are to assist the reviewer by showing types of impacts and wherever possible the threshold of magnitude that would trigger a response in column 2. The examples are generally applicable throughout the State and for most situations. But, for any specific project or site other examples and/or lower thresholds may be appropriate for a Potential Large Impact response, thus requiring evaluation in Part 3.

The impacts of each project, on each site, in each locality, will vary. Therefore, the examples are illustrative and have been offered as guidance. They do not constitute an exhaustive list of impacts and thresholds to answer each question.

The number of examples per question does not indicate the importance of each question.

In identifying impacts, consider long term, short term and cumulative effects.

Instructions (Read Carefully)

a. Answer each of the 20 questions in PART 2. Answer **Yes** if there will be **any** impact.
b. **Maybe** answers should be considered as **Yes** answers.
c. If answering **Yes** to a question, then check the appropriate box (column 1 or 2) to indicate the potential size of the impact. If impact threshold equals or exceeds any example provided, check column 2. If impact will occur but threshold is lower than example, check column 1.
d. Identifying that an Impact will be potentially large (column 2) does not mean that it is also necessarily **significant**. Any large impact must be evaluated in PART 3 to determine significance. Identifying an impact in column 2 simply asks that it be looked at further.
e. If a reviewer has doubt about size of the impact then consider the impact as potentially large and proceed to PART 3.
f. If a potentially large impact checked in column 2 can be mitigated by change(s) in the project to a small to moderate impact, also check the **Yes** box in column 3. A **No** response indicates that such a reduction is not possible. This must be explained in PART 3.

IMPACT ON LAND

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
1. Will the Proposed Action result in a physical change to the project site? ☐ NO ☒ YES			
Examples that would apply to column 2			
Any construction on slopes of 15% or greater, (15 foot rise per 100 foot of length), or where the general slopes in the project area exceed 10%.	☐	☐	☐ **YES** ☐ **NO**
Construction on land where the depth to the water table is less than 3 feet.	☒	☐	☐ **YES** ☒ **NO**
Construction of paved parking area for 1,000 or more vehicles.	☒	☐	☒ **YES** ☐ **NO**
Construction on land where bedrock is exposed or generally within 3 feet of existing ground surface.	☒	☐	☐ **YES** ☐ **NO**
Construction that will continue for more than 1 year or involve more than one phase or stage.	☒	☐	☐ **YES** ☒ **NO**
Excavation for mining purposes that would remove more than 1,000 tons of natural material (i.e., rock or soil) per year.	☐	☐	☐ **YES** ☐ **NO**
Construction or expansion of a sanitary landfill.	☐	☐	☐ **YES** ☐ **NO**
Construction in a designated floodway.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
2. Will there be an effect to any unique or unusual land forms found on the site? (i.e., cliffs, dunes, geological) ☒ NO ☐ YES			
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**

IMPACT ON WATER

		1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
3.	Will Proposed Action affect any water body designated? (Under Articles 15, 24, 25 of the Environmental Conservation Law, ECL) ☒ **NO** ☐ **YES**			
Examples that would apply to column 2				
Developable area of site contains a protected water body.		☐	☐	☐ **YES** ☒ **NO**
Dredging more than 100 cubic yards of material from channel of a protected stream.		☐	☐	☐ **YES** ☐ **NO**
Extension of utility distribution facilities through a protected water body.		☐	☐	☐ **YES** ☐ **NO**
Construction in a designated freshwater or tidal wetland.		☐	☐	☐ **YES** ☐ **NO**
Other impacts _____		☐	☐	☐ **YES** ☐ **NO**
4.	Will Proposed Action affect any non-protected existing or new body of water? ☒ **NO** ☐ **YES**			
Examples that would apply to column 2				
A 10% increase or decrease in the surface area of any body of water or more than a 10-acre increase or decrease.		☐	☐	☐ **YES** ☐ **NO**
Construction of a body of water that exceeds 10 acres of surface area.		☐	☐	☐ **YES** ☐ **NO**
Other impacts _____		☐	☐	☐ **YES** ☐ **NO**
5.	Will Proposed Action affect surface or ground water quality or quantity? ☐ **NO** ☒ **YES**			
Examples that would apply to column 2				
Proposed Action will require a discharge permit.		☒	☐	☐ **YES** ☒ **NO**
Proposed Action requires use of a source of water that does not have approval to serve proposed (project) action.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action requires water supply from wells with greater than 45 gallons per minute pumping capacity. **TBD**		☐	☐	☐ **YES** ☐ **NO**
Construction or operation causing any contamination of a water supply system.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action will adversely affect groundwater.		☐	☐	☐ **YES** ☐ **NO**
Liquid effluent will be conveyed off the site to facilities which presently do not exist or have inadequate capacity.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action would use water in excess of 20,000 gallons per day.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action will likely cause siltation or other discharge into an existing body of water to the extent that there will be an obvious visual contrast to natural conditions.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action will require the storage of petroleum or chemical products greater than 1,100 gallons.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action will allow residential uses in areas without water and/or sewer services.		☐	☐	☐ **YES** ☐ **NO**
Proposed Action locates commercial and/or industrial uses which may require new or expansion of existing waste treatment and/or storage facilities.		☐	☐	☐ **YES** ☐ **NO**
Other impacts _____		☐	☐	☐ **YES** ☐ **NO**

	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
6. Will Proposed Action alter drainage flow or patterns, or surface water runoff? ☐ **NO** ☒ **YES**			
Examples that would apply to column 2			
Proposed Action would change flood water flows.	☒	☐	☐ **YES** ☐ **NO**
Proposed Action may cause substantial erosion.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action is incompatible with existing drainage patterns.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will allow development in a designated floodway.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
IMPACT ON AIR			
7. Will Proposed Action affect air quality? ☒ **NO** ☐ **YES**			
Examples that would apply to column 2			
Proposed Action will induce 1,000 or more vehicle trips in any given hour.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will result in the incineration of more than 1 ton of refuse per hour.	☐	☐	☐ **YES** ☐ **NO**
Emission rate of total contaminants will exceed 5 lbs. per hour or a heat source producing more than 10 million BTU's per hour.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will allow an increase in the amount of land committed to industrial use.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will allow an increase in the density of industrial development within existing industrial areas.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
IMPACT ON PLANTS AND ANIMALS			
8. Will Proposed Action affect threatened or endangered species? ☒ **NO** ☐ **YES**			
Examples that would apply to column 2			
Reduction of one or more species listed on the New York or Federal list, using the site, over or near the site, or found on the site.	☐	☐	☐ **YES** ☐ **NO**
Removal or any portion of a critical or significant wildlife habitat.	☐	☐	☐ **YES** ☐ **NO**
Application of pesticide or herbicide more than twice a year, other than for agricultural purposes.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
9. Will Proposed Action substantially affect non-threatened or non-endangered species? ☒ **NO** ☐ **YES**			
Examples that would apply to column 2			
Proposed Action would substantially interfere with any resident or migratory fish, shellfish, or wildlife species.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action requires the removal or more than 10 acres of mature forest (over 100 years of age) or other locally important vegetation.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
IMPACT ON AGRICULTURAL LAND RESOURCES			
10. Will Proposed Action affect agricultural land resources? ☒ **NO** ☐ **YES**			
Examples that would apply to column 2			
The Proposed Action would sever, cross or limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc.)	☐	☐	☐ **YES** ☐ **NO**
Construction activity would excavate or compact the soil profile of agricultural land.	☐	☐	☐ **YES** ☐ **NO**
The Proposed Action would irreversibly convert more than 10 acres of agricultural land or, if located in an Agricultural District, more than 2.5 acres of agricultural land.	☐	☐	☐ **YES** ☐ **NO**
The Proposed Action would disrupt or prevent installation of agricultural land management systems (e.g. subsurface drain lines, outlet ditches, strip cropping) or create a need for such measures (e.g. cause a farm field to drain poorly due to increased runoff).	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**

IMPACT ON AESTHETIC RESOURCES			
11. Will Proposed Action affect aesthetic resources? (If necessary, use the Visual EAR Addendum Section 617.20, Appendix B.) ☒ **NO** ☐ **YES**	1 Small to Moderate Impact	2 Potential Large Impact	3 Can Impact be Mitigated by Project Change
Examples that would apply to column 2			
Proposed land uses, or project components obviously different from or in sharp contrast to current surrounding land use patterns, whether man-made or natural.	☐	☐	☐ **YES** ☒ **NO**
Proposed land uses, project components visible to users of aesthetic resources which will eliminate or significantly reduce their enjoyment of the aesthetic qualities of that resource.	☐	☐	☐ **YES** ☐ **NO**
Project components that will result in the elimination or significant screening of scenic views known to be important to the area.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
IMPACT ON HISTORIC AND ARCHEOLOGICAL RESOURCES			
12. Will Proposed Action impact any site or structure of historic, prehistoric or paleontological importance? ☒ NO ☐ YES			
Examples that would apply to column 2			
Proposed Action occurring wholly or partially within or substantially contiguous to any facility or site listed on the State or National Register of Historic places.	☐	☐	☐ **YES** ☐ **NO**
Any impact to an archeological site or fossil bed located within the project site.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will occur in an area designated as sensitive for archeological sites on the NYS Site Inventory.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**
IMPACT ON OPEN SPACE AND RECREATION			
13. Will Proposed Action affect the quantity or quality of existing or future open spaces or recreational opportunities? ☒ NO ☐ YES			
Examples that would apply to column 2			
The permanent foreclosure of a future recreational opportunity.	☐	☐	☐ **YES** ☐ **NO**
A major reduction of an open space important to the community.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**

IMPACT ON CRITICAL ENVIRONMENTAL AREAS

14. Will Proposed Action impact the exceptional or unique characteristics of a critical environmental area (CEA) established pursuant to subdivision 6NYCRR 617.14(g)? ☒ NO ☐ YES

List the environmental characteristics that caused the designation of the CEA

Examples that would apply to column 2			
Proposed Action to locate within the CEA?	☐	☐	☐ **YES** ☒ **NO**
Proposed Action will result in a reduction in the quantity of the resource?	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will result in a reduction in the quality of the resource?	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will impact the use, function or enjoyment of the resource?	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**

IMPACT ON TRANSPORTATION

15. Will there be an effect to existing transportation systems? ☐ NO ☒ YES

Examples that would apply to column 2			
Alteration of present patterns of movement of people and/or goods.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action would result in major traffic problems.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _**Proposed project would reduce vehicular trips to Westchester County Airport.**_	☐	☐	☐ **YES** ☐ **NO**

IMPACT ON ENERGY

16. Will Proposed Action affect the community's sources of fuel or energy supply? ☒ NO ☐ YES

Examples that would apply to column 2			
Proposed Action will cause a greater than 5% increase in the use of any form of energy in the municipality.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two family residences or to serve a major commercial or industrial use.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**

NOISE AND ODOR IMPACT

17. Will there be objectionable odors, noise, or vibration as a result of the Proposed Action? ☒ NO ☐ YES

Examples that would apply to column 2			
Blasting within 1,500 feet of a hospital, school or other sensitive facility.	☐	☐	☐ **YES** ☐ **NO**
Odors will occur routinely (more than one hour per day).	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will produce operating noise exceeding the local ambient noise levels for noise outside of structures.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will remove natural barriers that would act as a noise screen.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____	☐	☐	☐ **YES** ☐ **NO**

IMPACT ON PUBLIC HEALTH			
18. Will Proposed Action affect public health and safety? ☒ NO ☐ YES			
Examples that would apply to column 2			
Proposed Action may cause a risk of explosion or release of hazardous substances (i.e. oil, pesticides, chemicals, radiation, etc.) in the event of accident or upset conditions, or there may be a chronic low level discharge or emission.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action may result in the burial of "hazardous wastes" in any form (i.e. toxic, poisonous, highly reactive, radioactive, irritating, infectious, etc.)	☐	☐	☐ **YES** ☐ **NO**
Storage facilities for one million or more gallons of liquefied natural gas or other flammable liquids.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action may result in the excavation or other disturbance within 2,000 feet of a site used for the disposal of solid or hazardous waste.	☐	☐	☐ **YES** ☐ **NO**
Other impacts _____			
IMPACT ON GROWTH AND CHARACTER OF COMMUNITY OR NEIGHBORHOOD			
19. Will Proposed Action affect the character of the existing community? ☒ NO ☐ YES			
Examples that would apply to column 2			
The permanent population of the city, town or village in which the project is located is likely to grow by more than 5%.	☐	☐	☐ **YES** ☐ **NO**
The municipal budget for capital expenditures or operating services will increase by more than 5% per year as a result of this project.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will conflict with officially adopted plans or goals.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will cause a change in the density of land use.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will replace or eliminate existing facilities, structures or areas of historic importance to the community.	☐	☐	☐ **YES** ☐ **NO**
Development will create a demand for additional community services (e.g. schools, police and fire, etc.)	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will set an important precedent for future projects.	☐	☐	☐ **YES** ☐ **NO**
Proposed Action will create or eliminate employment.	☒	☐	☐ **YES** ☒ **NO**
Other impacts _____			

20 Is there, or is there likely to be, public controversy related to potential adverse environmental impacts? ☒ **NO** ☐ **YES**

If Any Action in Part 2 is identified as a Potential Large Impact or If you Cannot Determine the Magnitude of Impact, Proceed to Part 3

State Environmental Quality Review
POSITIVE DECLARATION
Notice of Intent to Prepare a Draft EIS
Determination of Significance
Notice of Scoping Session

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The Town of North Castle Planning Board, acting as Lead Agency, has determined that the proposed action described below may have a significant effect on the environment and that a Draft Environmental Impact Statement will be prepared.

Date: September 30, 2009

Name of Action: 11 New King Street Airport Parking Facility

SEQRA Status: Type I

Description of Action: The Town of North Castle Planning Board has received an application from 11 New King Street, LLC (the "Applicant") to construct a parking structure (the "proposed project") at 11 New King Street in the Town of North Castle. The proposed project involves two adjacent parcels. The proposed parking structure would be constructed on a 2.47 acre lot. A drainage easement to create two stormwater detention basins would be obtained on an adjacent 4.2 acre lot.

The purpose of the proposed project is to provide off-site structured parking for primarily Westchester County Airport (HPN) and alleviate an existing shortage of parking for airport customers. The proposed multistory parking structure would have a footprint of approximately 52,000 square feet and a height of approximately 55 feet. The parking structure would be designed to accommodate up to 1,450 automobiles in a combination of valet/self-park/automated manner.

The Zoning classification of the property is Industrial AA (IND-AA) in the Town Code of the Town of North Castle. As part of the proposed project, the Applicant is submitting a petition to amend the Town's Zoning Code to permit structured parking as a special permit use in the IND-AA Zoning District.

It is anticipated that the proposal will require the following approvals: site development plan, wetlands permit, tree removal permit and zoning text amendment from the Town of North Castle; Westchester County approval for sewer, potable water connections and roadway improvements; New York State approval for roadway improvements and stormwater measures; New York City approval for development within the Kensico Reservoir Watershed and Federal Government approval (FAA) for the proposed building height and new building construction.

Location: Located in the Town of North Castle on New King Street

Tax Lots: Section 3, Block 4, Lot 14.B and Section 3, Block 4, Lot 13.A

Reasons Supporting This Determination:

Based upon a review of the applicant's submitted Full Environmental Assessment Form and all other application materials that were prepared for this action, the Lead Agency has determined that the proposed action may have the following significant adverse impacts:

1. The Proposed Action would change the land use on the property from office to structured parking, requiring an amendment to the permitted uses within the IND-AA Zoning District.

2. The proposed construction would result in the physical alteration of approximately 1.3 acres, including land with slopes in excess of 15%, with shallow depth to watertable and containing areas of existing vegetation and wildlife habitat.

3. The proposed disturbance on the site may impact cultural resources.

4. The proposed construction would result in parking in excess of 1,000 vehicles.

5. The proposed project may create additional demand for police, fire and highway maintenance services.

6. The proposed construction would continue for more than 1 year.

7. The proposed project would create new stationery and mobile sources of potential air pollutants and greenhouse gases.

8. The proposed construction is to occur wholly within the Kensico Reservoir Watershed.

9. The proposed construction will require a discharge permit and may require water supply from wells with greater than 45 gallons per minute pumping capacity.

10. The proposed construction may impact flood water flows.

11. The proposal would alter existing Town-regulated wetland buffers.

12. The proposal would cause the removal of Town-regulated trees.

13. The proposed construction may affect aesthetic resources.

14. The Proposed Action occurs entirely within the Westchester County Airport 60 LDN Noise Contour.

15. The Proposed Action may conflict with officially adopted plans or goals.

16. Runoff from the site may cause substantial erosion, may contain fertilizers and pesticides and may affect the water quality in the Kensico Reservoir, a public drinking water supply.

17. Traffic as a result of the Proposed Action may affect the existing roadway network.

Scoping Information:

Scoping of the issues to be contained in the EIS will be conducted. The Applicant has prepared a draft scope for consideration and is attached to this document. Involved agencies should provide written comments reflecting their concerns, jurisdictions and information needs sufficient to ensure that the EIS will be adequate to support their SEQR findings.

In addition, the Lead Agency will hold a public scoping session on Monday, November 30, 2009 at 7:00 PM at the following location:

Whippoorwill Hall
Town of North Castle Public Library
19 Whippoorwill Road East
Armonk, NY 10504

Lead Agency: Town of North Castle Planning Board
Town Hall
17 Bedford Road
Armonk, New York 10504

Lead Agency Contact Person: Adam R. Kaufman, AICP, Director of Planning
Town of North Castle
17 Bedford Road
Armonk, NY 10504
Telephone: (914) 273-3542
Fax: (914) 273-3554
E-mail: planning@northcastleny.com

A Copy Of This Notice Has Been Sent To The Following Involved and Interested Agencies:

Involved Agencies

Town of North Castle Planning Board, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Town of North Castle Town Board, Town Hall, 15, Bedford Road, Armonk, New York 10504

U.S. Army Corps of Engineers, Jacob Javits Federal Building, 26 Federal Plaza, New York 10278

Commissioner, New York State Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-1011

Region 3, New York State Department of Environmental Conservation, 21 South Putt Corners Road, New Paltz, New York 12561

Westchester County Department of Health, Attn: Commissioner, 145 Huguenot St., New Rochelle, New York 10801

New York City Department of Environmental Protection, 465 Columbus Avenue, Suite 350, Valhalla, New York 10595

New York State Department of Transportation, SEQR Unit, Traffic Engineering & Safety Division 4 Burnett Blvd., Poughkeepsie, New York 12603

Commissioner, Westchester County Department of Transportation, Westchester County Office Building, 148 Martine Avenue, White Plains, New York 10601

Federal Aviation Administration, Eastern Region, 159-30 Rockaway Blvd., Jamaica, NY 11434-4848

Interested Agencies

Ryan Coyne, P.E., Town Engineer, Kellard Sessions Consulting, 500 Main Street, Armonk, New York 10504

Roland A. Baroni, Esq., Town Counsel, Town of North Castle, Town Hall, 15, Bedford Road, Armonk, New York 10504

John Fava, Chairman, Town of North Castle Conservation Board, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Anthony Calvello, Chairman, Town of North Castle Architectural Review Board, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Richard Conrad, Chairman, Town of North Castle Airport Committee, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Craig Usted, Highway Superintendent, Town of North Castle, Town Hall, 15 Bedford Road, Armonk, New York 10504

Anthony Futia, Superintendent, Town of North Castle, Department of Sewer and Water, 115 Business Park Drive, Armonk, New York 10504

Fire Commissioners, Town of North Castle Fire District No. 2, 40 Maple Avenue, Armonk, New York 10504

Town of North Castle Public Library, 19 Whippoorwill Road East, Armonk, New York 10504

North White Plains Public Library, Clove Road, North White Plains, New York 10604

Westchester County Planning Board, Attn: Gerard E. Mulligan, AICP, Commissioner, 432 Michaelian Office Building, 148 Martine Avenue, White Plains, New York 10601

Deputy Commissioner, Historic Preservation, New York State Office of Parks, Recreation and Historic Preservation, Empire State Plaza, Agency Building 1, 20th Floor, Albany. New York 12238

Village of Rye Brook, Village Clerk, 938 King Street, Rye Brook, N.Y. 10576
Town of Rye, Town Clerk, 14 West Glen Ave., Port Chester, N.Y. 10573

Town of Greenwich, Town Clerk, 101 Field Point Road, Greenwich, Ct. 06830

Town/Village of Harrison, Town Clerk, 1 Heineman Place, Harrison, N.Y. 10528

State of New York, Office of the Attorney General, The Capital, Albany, New York 12224

Riverkeeper, Senior Watershed Attorney, Pace Environmental Litigation Clinic, 78 North Broadway, White Plains, New York 10603

NYPIRG, New York Pubic Interest Research Group, Attn: Watershed Protection Coordinator
9 Murray Street, New York, New York 10007-2272

NRDC, Natural Resources Defense Council, 40 West 20 Street, New York, New York 10011

WESPAC, 17 Marble Ave, Pleasantville, NY 10570

John M. Nonna, County Legislator, District 3, Westchester County Board of Legislators, 800 Michaelian Office Building, 148 Martine Avenue, White Plains, NY 10601

The Environmental Notice Bulletin (ENB), enb@gw.dec.state.ny.us

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TOWN OF NORTH CASTLE

WESTCHESTER COUNTY
17 Bedford Road
Armonk, New York 10504-1898

PLANNING BOARD
Peg Michelman, Chair

Telephone: (914) 273-3542
Fax: (914) 273-3554
www.northcastleny.com

To: All Involved and Interested Agencies

Date: February 23, 2010

Subject: **11 New King Street Airport Parking Facility**

On February 22, 2010, the Town of North Castle Planning Board, acting as Lead Agency, approved the final scope for the required Draft Environmental Impact Statement for the proposed 11 New King Street Airport Parking Facility. This final document was based upon review by the Lead Agency, Town Planner, Town Engineer, Town Attorney and verbal and written comments received during the comment period.

Additional copies of the enclosed final scope can be obtained from the following locations:

Town of North Castle Planning Board
Town Hall
17 Bedford Road
Armonk, New York 10504

Adam R. Kaufman, AICP
Director of Planning

Enclosure

f:\plan6.0\airport parking garage documentation\airport parking.apprvdscope.letter.ark.doc

APPROVED SCOPE
11 NEW KING STREET AIRPORT PARKING FACILITY
TOWN OF NORTH CASTLE
WESTCHESTER COUNTY, NEW YORK

DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
SCOPE OF ISSUES TO BE ADDRESSED

Name of Project:	11 New King Street Airport Parking Facility
Project Location:	Located in the Town of North Castle on New King Street Tax Lots: Section 3, Block 4, Lot 14.B and Section 3, Block 4, Lot 13.A (partial – 1.2 acres of 4.2 acres)
SEQRA Classification:	Type I Action
Lead Agency:	Town of North Castle Planning Board Town Hall 17 Bedford Road Armonk, New York 10504 (914) 273-3542
Lead Agency Contact:	Adam R. Kaufman, AICP Director of Planning 17 Bedford Road Armonk, New York 10504 Telephone: (914) 273-3542
Scoping Session:	Monday November 30, 2009 at 7:00 P.M. Whippoorwill Hall Town of North Castle Public Library 19 Whippoorwill Road East Armonk, NY 10504
Scope Adoption by Lead Agency:	February 22, 2010

ORGANIZATION OF THE DEIS SCOPE

DESCRIPTION OF PROPOSED ACTION

The Town of North Castle Planning Board has received an application from 11 New King Street, LLC (the "Applicant") to construct a parking structure (the "proposed project") at 11 New King Street in the Town of North Castle. The proposed project involves two adjacent parcels. The proposed parking structure would be constructed on a 2.47 acre lot. A 1.2 acre drainage easement, to create two stormwater detention basins, would be obtained on an adjacent 4.2 acre lot.

The purpose of the proposed project is to provide off-site structured parking for primarily Westchester County Airport (HPN) and alleviate an existing shortage of parking for airport customers. The proposed multistory parking structure would have a footprint of approximately 52,000 square feet and a height of approximately 55 feet. The parking structure would be designed to accommodate up to 1,450 automobiles in a combination of valet/self-park/automated manner.

The Zoning classification of the proposed is Industrial AA (IND-AA) in the Town Code of the Town of North Castle. As part of the proposed project, the Applicant is submitting a petition to amend the Town's Zoning Code to permit structured parking as a special permit use in the IND-AA Zoning District.

It is anticipated that the proposal will require the following approvals: site development plan, wetlands permit, tree removal permit and zoning text amendment from the Town of North Castle; Westchester County approval for sewer, potable water connections and roadway improvements; New York State approval for roadway improvements and stormwater measures; New York City approval for development within the Kensico Reservoir Watershed and Federal Government approval (FAA) for the proposed building height and new building construction.

POTENTIAL SIGNIFICANT ADVERSE IMPACTS

Based upon a review of the applicant's submitted Full Environmental Assessment Form and all other application materials that were prepared for this action, the Lead Agency has determined that the proposed action may have the following significant adverse impacts:

1. The Proposed Action would change the land use on the property from office to structured parking, requiring an amendment to the permitted uses within the IND-AA Zoning District.

2. The proposed construction would result in the physical alteration of approximately 1.3 acres, including land with slopes in excess of 15%, with shallow depth to bedrock and containing areas of existing vegetation and wildlife habitat.

3. The proposed disturbance on the site may impact cultural resources.

4. The proposed construction would result in parking in excess of 1,000 vehicles.

5. The proposed project may create additional demand for police, fire and highway maintenance services.

6. The proposed construction would continue for more than 1 year.

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14. The Proposed Action occurs entirely within the Westchester County Airport 60 LDN Noise Contour.

15. The Proposed Action may conflict with officially adopted plans or goals.

16. Runoff from the site may cause substantial erosion, may contain fertilizers and pesticides and may affect the water quality in the Kensico Reservoir, a public drinking water supply.

17. Traffic as a result of the Proposed Action may affect the existing roadway network.

GENERAL GUIDELINES

"Scoping" means the process by which the Lead Agency identifies the potentially significant adverse impacts related to the Proposed Action that are to be addressed in the Draft Environmental Impact Statement (DEIS), including the content and level of detail of the analysis, the range of alternatives, the mitigation measures needed and the identification of non-relevant issues. Scoping provides a Project Sponsor (also referred to as "the Applicant" herein) with guidance on matters which must be considered and provides an opportunity for early participation by Involved Agencies and the public in the review of the Proposed Action. The primary goals of scoping are to focus the EIS on potentially significant adverse impacts and to eliminate consideration of those impacts that are irrelevant or nonsignificant.

The DEIS for the 11 New King Street Airport Parking Facility shall cover all items in this "Scope of Issues" document. Each impact issue (e.g., soils, surface water, traffic, etc.) can be presented in a separate subsection which includes a discussion of existing conditions, significant impacts associated with the Proposed Action, and mitigation measures designed to minimize the identified impacts. If appropriate, impact issues listed separately in this document may be combined in the DEIS, as long as all issues are addressed.

Narrative discussions shall be accompanied by appropriate tables, charts, graphs, and figures whenever possible. If a particular subject can be most effectively described in graphic format, the narrative discussion should merely summarize and highlight the information presented graphically. All plans and maps showing the site shall include adjacent uses and structures (including but not limited to wells and subsurface sanitary sewage disposal systems), roads and water bodies within a distance of not less than two hundred and fifty (250) feet from the property line of the Proposed Action based upon existing available data sources.

The preferred development plan for the entire site shall be prepared at a scale of 1 inch = 40 feet. Reduced scale drawings shall be incorporated into the DEIS text [Note: The original full-size scale drawings shall also be separately submitted to each of the Involved Agency members as well as their advisors in the quantities required by those agencies.]

Information shall be presented in a manner that can be readily understood by the public. Use of technical terminologies shall be avoided. When practical, impacts shall be described in terms that the lay person can readily understand.

All discussions of mitigation measures shall consider at least those measures mentioned in this "Scope of Issues" document. Where reasonable and necessary, they shall be incorporated into the Proposed Action if they are not already so included. For any mitigation measures listed in this "Scope of Issues" document that are not incorporated into the Proposed Action, the reason why the Applicant considers them unnecessary shall be discussed in the DEIS. The Applicant may suggest additional mitigation measures where appropriate. When no mitigation is needed, the DEIS shall so indicate.

The document shall be written in the third person (i.e., the terms "we" and "our" shall not be used). The Applicant's conclusions and opinions, if given, shall be identified as those of "the Applicant."

Any assumptions incorporated into assessments of impact shall be clearly identified. In such cases, the "worst case" scenario analysis shall also be identified and discussed.

The entire document shall be checked carefully to ensure consistency with respect to the information presented in the various sections.

ENVIRONMENTAL IMPACT STATEMENT CONTENT

I. FRONT MATERIAL

A. Cover Sheet.

The DEIS shall be preceded by a cover sheet that identifies the following:

1. That it is a Draft Environmental Impact Statement.

2. The name or descriptive title of the Proposed Action.

3. Location: Street names, Town of North Castle, Westchester County, New York, as well as the tax map designation numbers of all properties that are part of the subject parcel.

4. The Town of North Castle Planning Board as the Lead Agency for the project and the name and telephone number of the following persons to be contacted for further information:

   - Town of North Castle – Adam R. Kaufman, AICP
     (914) 273-3542

5. The name and address of the Project Sponsor, and the name and telephone number of a contact person representing the Project Sponsor.

6. The name and address of the primary preparer(s) of the DEIS and the name and telephone number of a contact person representing the preparer(s).

7. Date of acceptance of the DEIS [Note: Specific calendar date to be inserted later].

8. Deadline by which comments on the DEIS are due [Note: Specific calendar date to be inserted later].

B. List of Consultants Involved With the Project.

The names, addresses and project responsibilities of all consultants involved with the project shall be listed.

C. Table of Contents.

All headings which appear in the text shall be presented in the Table of Contents along with the appropriate page numbers. In addition, the Table of Contents shall include a list of figures, a list of tables, a list of appendix items, and a list of additional DEIS volumes, if any.

II. SUMMARY

The DEIS shall include a summary. The summary shall only include information found elsewhere in the main body of the DEIS and shall be organized as follows:

A. Brief description of the Proposed Action.

B. List of Involved Agencies and required approvals/permits.

C. Brief listing of the anticipated impacts and proposed mitigation measures for each impact issue discussed in the DEIS. The presentation format shall be simple and concise.

D. Brief description of the project alternatives considered in the DEIS. A table shall be presented which assesses and compares each alternative relative to the various impact issues.

III. DESCRIPTION OF PROPOSED ACTION

A. Project Overview.

Describe site location and description, including tax map designation, zoning, site access, easements, general site characteristics. Include ownership information for all parcels. In addition, the project overview section should include a description of the proposed car wash facility.

B. Approvals.

Describe jurisdiction of three municipalities over the site and the various local approvals required. List other County, State, regional and Federal agencies having jurisdiction over the site and the various approvals required. Include list of Involved and Interested Agencies.

C. Site Description.

The site description shall include the following:

1. General location; acreage; zoning; and tax map designations.

2. Frontage and access (vehicular and pedestrian).

3. Existing buildings, other site improvements and uses.

4. Environmental characteristics, including topography, steep slopes, wetlands, bedrock outcrops, etc.

6. Description of any easements, restrictions and/or other conditions that affect the future development and use of the subject site, including submission of a full title report.

D. Description of Surrounding Uses and Facilities.

The description shall include the following:

1. Westchester County Airport (HPN), including a description of its history and its purpose and all restrictions and conditions placed on this property.

2. Kensico Reservoir, including a description of its history and all restrictions and conditions placed on this property.

3. Surrounding industrial areas, including a description of the restrictions and conditions placed upon these properties over the years.

4. Surrounding residential areas (including those in Greenwich, CT), including a description of the restrictions and conditions placed upon these properties over the years.

5. Critical Environmental Area(s) (map required).

6. Regional and local roadway network (map required).

E. Detailed Description of Proposed Action.

1. 1,450 space structured parking garage. Submitted plans shall identify the following information:

   a. Site layout plan

   b. Floor plans (internal layout) of the proposed structure

   c. Detailed Zoning conformance chart

   d. Proposed Grading Plan

   e. Proposed Limits of Disturbance

   f. Proposed signage

   g. Proposed lighting plan, photometric plan and lighting details

   h. Location of proposed wells

   i. Location of proposed septic systems

   j. Location of proposed stormwater management facilities

   k. Location of proposed erosion controls

l. Proposed architectural plans including graphic depictions of façades, building materials, screening of mechanicals and any green building technology

m. Landscaping Plan

n. Wetland mitigation plan

o. Proposed construction sequencing plan

p. Proposed phasing plan

2. Gross Floor Area analysis and building footprint analysis

3. Area of land to be cleared (square foot and percent of site), new impervious surfaces (square foot and percent of site)

4. Description of any zoning amendments

5. Description of any applicable FAA regulations

6. Description and plans describing/depicting any proposed automated parking system

7. Operational information including vehicular access, traffic circulation, vehicles height clearances, emergency access, fire protection and site security.

8. Description of any off-site improvements.

3. Description of Accessory uses, including but not limited to airport shuttle service and car washing facility.

3. Description of Proposed Site Access(es), including a discussion of emergency access roads, maintenance issues and whether the facility will be gated to control access to the subject site.

F. **Project Purpose, Needs and Benefits.**

Specifically demonstrate need for additional parking at the Westchester County Airport.

IV. ENVIRONMENTAL ANALYSES

The DEIS shall include a discussion of the existing conditions, potentially significant adverse impacts and proposed mitigation measures for the following:

A. Land Use and Zoning.

1. Existing Conditions.

a. Describe existing land uses and zoning district designations on the subject site, within a 1/2-mile from the site boundaries.

b. Discuss history of land use of the Westchester County Airport specifically and the properties surrounding it, including a description of all easements, restrictive covenants and/or other conditions established over the years concerning the use and development of these properties.

c. Discuss history of land use of the Kensico Reservoir specifically and the properties surrounding it, including a description of all easements, restrictive covenants and/or other conditions established over the years concerning the use and development of these properties.

d. Discuss land use plans and regulations for the areas studied in Section IV.A.1.a, b and c above.

e. Discuss recommendations of the comprehensive master plan for the Town of North Castle applicable to the areas studied in Section IV.A.1.a, b and c above.

f. Discuss recommendations of the Westchester County master plan entitled "Westchester 2025 - Context for County and Municipal Planning and Policies to Guide County Planning" as well as the strategies set forth in the "Patterns Program" in "Patterns for Westchester" and other pertinent planning documents prepared by the County or other agencies applicable to the areas studied in Section IV.A.1.a, b and c. above.

g. Discuss recommendations of the Hudson River Greenway Compact Plan applicable to the areas studied in Section IV.A.1.a, b and c. above.

2. Potential Impacts.

a. Describe the compatibility of the proposed action with existing land uses and zoning district designations on the subject site and within the areas studied in Section IV.A.1.a, b and c above.

b. Describe how the proposed development will comply with the requirements of all easements, restrictive covenants and/or other conditions established over the years concerning the use and development of the subject site and the areas studied in Section IV.A.1.a, b and c above.

c. Discuss the consistency of the proposed garage use with articulated land use and planning policies and recommendations of the Town, Westchester County, State and Federal Government and other pertinent agencies for the subject site and the areas studied in Section IV.A.1.a, b and c above.

d. Discuss proposed zoning amendments and describe how the zoning amendments would affect development of the project site and other properties within the same zoning district.

e. Discuss how the provision of additional parking at the subject site may or may not lead to expansion of the Westchester County Airport. Discuss how the provision of additional parking at the subject site may or may not lead to 24 hour operation at the airport.

f. Discuss impacts resulting from a vacant structure as a result of a failed off-site parking facility.

g. Discuss whether stormwater facilities to be constructed on adjacent lot meet the requirements of the Town of North Castle Town Code (Zoning).

3. Mitigation Measures.

Describe proposed mitigation measures to minimize potential impacts to surrounding land uses. Consider cumulative impact of other development proposals that are currently planned or proposed for the area surrounding the subject site.

B. Visual Resources.

1. Existing Conditions.

a. Provide analysis of the existing visual character of the subject site as viewed from surrounding roads (including but not limited to all frontage roads as well as Interstate 684) and surrounding properties, based upon use of photographs, site line diagrams and/or cross-sections, as appropriate. Existing views shall be clearly described in narrative form and supplemented with appropriate graphic illustrations.

2. **Potential Impacts.**

   a. Provide analysis of the visual character of the subject site after development as viewed from surrounding roads (including but not limited to all frontage roads as well as Interstate 684) and surrounding properties, based upon use of photographs, computer simulations, site line diagrams and/or cross-sections, as appropriate. Altered views shall be clearly described in narrative form and supplemented with appropriate graphic illustrations. Any plans to erect fencing and/or gates along some or all of the subject site's perimeter during construction and after development of the subject site shall be identified, including but not limited to a description of the type, materials and height of proposed fencing and/or gates.

   b. Assess the visual impact of the proposed project in context with other existing structures in the study area.

   c. Provide architectural renderings, details and photosimulations illustrating height massing, scale and façade treatments. Photosimulations shall use photographs of existing and proposed conditions during the leaf and leafless seasons.

   d. Describe impacts associated with proposed lighting plan and how lighting may impact adjoining properties.

3. **Mitigation Measures.**

   Potential mitigation measures to explore:

   a. Measures aimed at reducing visual impact

   b. Preservation of existing trees.

   c. Establishment of larger setbacks from property lines.

   d. Reducing height of structure

d. Establishment of Clearing Limit Lines to depict maximum limits of areas of disturbance.

e. Landscaping, including buffer screening plans.

f. Enhancement of views.

g. Other.

C. Historic, Archaeological and Cultural Resources.

1. Existing Conditions.

a. Describe historic resources on the subject site. Include information obtained from the New York State Office of Parks, Recreation and Historic Preservation (NYSOPRHP) and North Castle Historical Society.

b. Prepare a Stage 1A Cultural Resources Study, as well as Stage 1B and Stage 2 Studies, if recommended by the Stage 1A Study. Evaluate the potential for any archaeological resources on the subject site.

c. Identify any properties listed on the State or National Register of Historic Places on or within a 1/2-mile of the subject site's boundaries.

d. Identify locally significant properties within a 1/2-mile of the subject site's boundaries.

e. Identify and map existing on-site stone walls and lane-ways.

2. **Potential Impacts.**

   a. Discuss proposed removal of existing buildings and other structures, including but not limited to stone walls.

   b. Describe impacts to any historic, archaeological or locally significant resources identified in Section IV.C.1. above.

   c. Other.

3. **Mitigation Measures.**

   Potential mitigation measures to explore:

   a. Preserve historic and archeological resources on the subject site.

   b. Other.

D. **Vegetation.**

1. **Existing Conditions.**

   a. Woody and herbaceous species on the subject site.

      (1) Distribution of vegetative cover types for the entire site (map required).

      (2) General species abundance.

      (3) Approximate age and sizes of woody species.

   b. Presence of threatened, rare or endangered plant species on or near the subject site based upon existing available data and recent field inspection (map required). Include description of species, size and health condition.

c. Presence of trees greater than twenty-four (24) inches in diameter at breast height along roadways providing construction access to and along roadway frontages of the subject site, including but not limited to NYS Route 120 and New King Street (map required). Include description of species, size and health condition.

d. Survey of location, species, size and health condition of individual trees on the subject site that are regulated by Chapter 192 (Tree Preservation) of the Code of the Town of North Castle (i.e., trees greater than eight (8) inches in diameter at breast height (DBH) in areas proposed to be disturbed, including significant trees) (map required).

e. Location of unique trees on the subject site that are not regulated by the Town (if any).

2. Potential Impacts.

a. Description of proposed limits of site disturbance and impacts to each vegetative cover type and threatened, rare or endangered plant species on entire site; and other trees (including specimen trees) identified in Section IV.D.1. above.

b. Cumulative loss of vegetation, overall and by vegetative cover type, upon project completion.

c. Vegetation to remain as a result of construction, especially at critical buffering locations, such as the site's property lines.

d. Unique or specimen trees worthy of preservation as part of the development, and discussion of any compelling reasons justifying the removal of such trees.

e. Increased erosion resulting from removal of vegetation.

f. Loss of water retention capabilities of soil resulting from removal of vegetation.

g. Changes to wetland vegetative composition.

h. Impacts associated with the establishment of invasive plants during construction.

i. Impacts of construction traffic on street trees located along roadways providing construction access to the subject site, as identified in Section IV.D.1.c. above.

3. **Mitigation Measures.**

Potential mitigation measures to explore:

a. Utilization of existing cleared areas to maximum extent possible.

b. Establishment of Clearing Limit Lines and Clearing and Grading Limit Lines (if not the same) to depict maximum limits of areas of disturbance.

c. Schematic landscape plan for the subject site at a scale of 1 inch = 100 feet showing proposed planting areas, as well as their design intent and function (e.g., visual buffer, wetland enhancement, wildlife, street trees, slope stabilization, formal garden, etc). Typical plant lists for each of specified functions shall be provided. Include a description of the resulting planting character of the site and the length of time it will take to achieve that character.

d. Buffer screening to reduce impacts on neighboring properties and area roadways.

e. Measures to prevent the proliferation of invasive plants during construction.

f. Preservation of trees identified in Section IV.D.1.d. above, to the maximum extent possible.

g. Proposed method of identification and preservation of specimen (significant) trees, to the maximum extent possible.

h. Other.

E. Wildlife.

1. Existing Conditions.

a. Site-specific analysis of resident and migratory wildlife, including aquatic, amphibian, reptile, mammal and bird species. Assessment shall examine habitat functions (i.e., breeding habitat, transitional staging areas, feeding and roosting sites and travel lanes).

b. Presence of threatened, rare or endangered species on or near the subject site based upon existing available data and recent field inspection.

c. Species abundance.

2. Potential Impacts.

a. Impact on habitat and habitat functions caused by site development (e.g., clearing of vegetation, loss of wetlands).

(1) Forests.

(2) Riparian areas.

(3) Wetlands.

(4) Other.

b. Changes to aquatic species composition caused by potential reduced water quality.

c. Impacts of use of fertilizer, pesticides, herbicides, fungicides and other chemicals on the subject site.

d. Impacts on species intolerant of humans.

e. Impacts construction of stormwater facilities may have upon wildfife.

f. Habitat fragmentation.

g. Corridor fragmentation, including but not limited to that associated with installation of fencing (if proposed along perimeters of the subject site).

g. Wildlife impacts on neighboring properties caused by displacement of wildlife from the subject site.

3. **Mitigation Measures.**

Potential mitigation measures to explore:

a. Preservation of existing conditions (e.g., forested areas, wetlands).

b. Protection of water bodies and wetlands.

c. Preservation and creation of wildlife corridors.

d. Fertilizer, Herbicide, Fungicide and Pesticide Application Plan.

e. Planting plan.

f. Other measures proposed to encourage wildlife and minimize potential impacts.

g. Alternative stormwater engineering that would result in the protection of wildlife from the effects of stormwater management features.

h. Measures to discourage geese from inhabiting the subject site.

i. Other.

F. Geology and Soils.

1. Existing Conditions.

a. Describe regional and bedrock geology.

b. Discuss any special geological features on or adjacent to the subject site, including but not limited to the location of significant rock outcrops. Provide map identifying all such features.

c. Identify and list soil types on the site based on site-specific mapping, with discussion of soil characteristics. Include a soils map and identify location of areas of sensitive soils (soils with shallow depth to bedrock, shallow water table, high erodibility characteristics or having greater than 20% clay content). Provide tables indicating soil characteristics (e.g., construction-related and long-term erosion potential, runoff, permeability), limitations and suitability of each soil type for particular land uses, specifically, roads, driveways, sewage disposal areas, underground utility installation, and building construction.

2. **Potential Impacts.**

   a. Describe impacts to special geological features of the subject site. Describe location and amount of blasting anticipated. Include map showing areas of potential blasting activities. Describe blasting procedures to be followed and materials to be used. Discuss compliance with Chapter 71 (Blasting and Explosives) of the Code of the Town of North Castle.

   b. Describe soil types to be impacted, and to what extent, with a grading limit line indicated on the preliminary grading plan. Indicate amount (preliminary cut and fill analysis) and location of earthwork anticipated.

   c. Discuss potential impacts of soil limitations on proposed actions.

3. **Mitigation Measures.**

   Potential mitigation measures to explore:

   a. Sedimentation and Erosion Control Plan based upon consideration of a 100-year storm event and proposed modifications to vegetative cover. Include discussion of initial installation by phase, maintenance, contingency and emergency measures, notification procedures in the event of failure of sedimentation and erosion control measures, and timing of removal.

   b. Corrective measures necessary to overcome any soil limitations.

c. Blasting mitigation plan, including a discussion of alternatives to blasting (e.g., cutting, ripping, chipping); a description of blasting activities, methods and schedules; and a description of the procedures that will be followed to document existing conditions, notify neighboring properties and the pertinent municipal jurisdiction(s) of the timing of blasting activities and remediate potential impacts.

d. Construction Phasing Plan.

e. Other.

G. Topography and Slopes.

1. Existing Conditions.

a. Describe existing topography, variation in elevation and relationship to surrounding topography.

b. Prepare slope analysis of the overall site showing slope categories 0-25%, 25-35% and 35%+.

2. Potential Impacts.

a. Prepare cut and fill analysis for proposed development (preliminary grading plan required). Discuss quality of fill to be brought onto the subject site from off-site locations (if any).

b. Describe potential impacts to the steep slopes (25% and greater) on the entire site, including but not limited to potential sedimentation impacts and the potential for slope failure.

c. Describe steep slope permits required in North Castle based upon post-construction steep slopes analysis as required by Section 213-17 (Steep Slopes) of the Code of the Town of North Castle.

3. **Mitigation Measures.**

   a. Sedimentation and Erosion Control Plan prepared for the entire site.

   b. Describe erosion control measures and/or stabilization methods proposed to meet requirements of Section 213-17 (Steep Slopes) of the Code of the Town of North Castle.

   c. Use of retaining walls to minimize proposed grading.

   d . Other.

H. **Critical Environmental Areas (CEAs)**

1. **Existing Conditions.**

   a. Identify and describe any Critical Environmental Areas designated by the New York State Department of Environmental Conservation (NYSDEC), such as the Westchester County Airport Ldn Noise Contour CEA.

2. **Potential Impacts.**

   a. Describe potential impacts to CEAs and other sensitive environmental areas.

3. **Mitigation Measures.**

   a. Any proposed mitigation as a result of impacts to the CEA

   b. Other.

I. **Water Resources.**

1. **Groundwater Resources.**

a. **Existing Conditions.**

(1) Describe location and capacity of aquifers and recharge areas on the subject site and in areas surrounding the subject site that are functionally related to it.

(2) Describe groundwater resources and existing state and federally designated aquifers, if applicable.

(3) Describe the interconnectivity between wetlands and water resources, including the Kensico Reservoir.

(4) Describe existing surface water bodies (including classification), drainage patterns and discharge points based upon site-specific watershed analysis. Identify location of 100-year floodplain.

(5) Discuss existing drainage patterns, existing discharge points of drainage and the Kensico Watershed.

(6) Describe flooding issues and any identified 100-year floodplains in the vicinity of the project site.

(7) Identify any applicable regulatory authorities including Town, NYCDEP, NYSDEC, and the USACOE.

b. **Potential Impacts.**

(1) Describe anticipated water demand and availability (for car wash, potable consumption and irrigation purposes).

(2) Describe potential for groundwater pollution from fertilizers, pesticides, herbicides, fungicides and other chemicals proposed for use on the subject site.

(3) Discuss potential impacts of changes to groundwater quantity or quality on the Kensico Reservoir and its tributary watercourses.

(4) Describe impacts to wetland and watercourse buffer areas, including any impacts associated with the construction of stormwater management basins.

(5) Discuss potential alterations to drainage patterns and the resultant effects on wetlands, streams, aquifers, and floodplains.

(6) Discuss potential flooding impacts downstream of the project. Discuss potential flooding impacts upon the Blind Brook.

(7) For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

c. Mitigation Measures.

Potential mitigation measures to explore:

(1) Describe provisions for groundwater recharge, water supply availability and provisions to address potential water quality impacts.

(2) Describe provisions for eliminating the application of fertilizer, herbicide, fungicide and pesticide or the use of organic chemicals as opposed to standard chemicals.

(3) Describe efforts to avoid wetland and wetland buffer disturbance.

(4) Describe measures that would be implemented to minimize impacts on water resources during and after construction, including reuse of stormwater for car washing and on-site irrigation.

(5) Describe how proposed stormwater basins would be managed/upkeep.

(6) Describe mitigation measures to prevent flooding downstream. Describe mitigation measure to prevent flooding of the Blind Brook.

(7) Other.

2. Stormwater Drainage.

a. Existing Conditions.

(1) Discuss existing stormwater runoff quality and quantity within the watersheds of which the subject site is a part, with modeling for 1-, 2-, 5-, 10-, 25-, 50- and 100-year storm events. Include quantitative measurements of existing surface water quality by monitoring locations where surface water enters and exits the subject site. The specific protocol to be followed for purposes of conducting this study, including but not limited to the frequency and duration of testing and the parameters to be tested, shall be developed by the Applicant, and submitted to the Lead Agency for review and approval.

Discuss and quantify existing conditions in Kensico Reservoir. The specific protocol to be followed for purposes of conducting this study, including but not limited to the frequency and duration of testing and the parameters to be tested, shall be developed by the Applicant, and submitted to the Lead Agency for review and approval.

(2) Discuss the history of water quality and quantity in Kensico Reservoir, including its current status as an existing public water supply, and anticipated needs for future water supply.

(3) Discuss existing point and nonpoint pollution sources within the watersheds of which the subject site is a part.

(a) Subsurface sewage disposal systems.

(b) Roadway runoff.

(c) Grass clippings and other organic materials containing chemical residues.

(d) Other.

(4) Description of existing (and proposed, if different) New York City Watershed Regulations.

b. Potential Impacts.

(1) Stormwater runoff quantity; volume of stormwater runoff and peak discharge rates within the watersheds of which the subject site is a part for 1-, 2-, 5-, 10-, 25-, 50- and 100-year storm events.

(2) Surface water quality and quantity impacts on receiving wetlands, streams, ponds, Kensico Reservoir and its tributary watercourses, and the 100-year floodplain within the watersheds of which the subject site is a part. Complete phosphorus loading study prepared in accordance with the requirements of the New York City Department of Environmental Protection (NYCDEP). Include potential short-term and long-term impacts of runoff carrying fertilizers, pesticides, herbicides, fungicides and other chemicals from lawns, roadways and other impervious surfaces, and sedimentation. Evaluate potential impact of failure of erosion and sedimentation control measures and stormwater control measures both during the construction process and after the proposed development is in operation.

(3) Description of stormwater permits required from the New York State Department of Environmental Conservation (NYSDEC) or other agencies having jurisdiction.

(4) Description of permits required from the New York City Department of Environmental Protection (NYCDEP).

(5) Secondary impacts to the Kensico Reservoir and its tributary watercourses due to changes in water quality or quantity.

(6) Discuss impacts associated with construction of proposed infrastructure.

(7) For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

c. Mitigation Measures.

Potential mitigation measures to explore:

(1) Description of erosion and sedimentation control measures to protect water bodies, wetlands, Kensico Reservoir and its tributary watercourses, and maintenance of such measures during construction.

(2) Stormwater Pollution Prevention Plan (SWPPP) prepared for the entire site in accordance with the Rules and Regulations for the Protection from Contamination, Degradation, and Pollution of the New York City Water Supply and Its Sources (Watershed Regulations).

(3) Fertilizer, Herbicide, Fungicide and Pesticide Application Plan.

(4) Compliance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit #GP 0-08-001).

(5) Use of permeable pavers in an effort to reduce the amount of impervious surface on the site.

(6) Other.

J. **Wetlands.**

1. **Existing Conditions.**

a. Delineate in the field, survey for accurate location and map existing Town of North Castle, NYSDEC and U.S Army Corps of Engineers (USACOE) wetlands on the subject site using wetlands definition appropriate to each jurisdiction. All wetlands should be identified regardless of size.

b. Identify and map existing Town of North Castle, NYSDEC and USACOE wetlands within a distance of not less than 1/4-mile from the site boundaries, expanded as necessary to include all areas that are functionally related to and which might reasonably be expected to be impacted by development of the subject site based upon watershed analysis completed in Section IV.I.1.a above, based upon the best available data sources. All wetlands should be identified regardless of size.

c. For each wetland, indicate:

(1) Location.

(2) Wetlands type, including soils, vegetation and hydrology.

(3) Wetlands acreage (approximate for off-site wetlands).

(4) Pertinent jurisdiction.

(5) Wetlands functions, as identified in Chapter 209 (Wetlands and Drainage) of the Code of the Town of North Castle. Functional analysis shall be based upon one of the accepted methodologies, such as the U.S. Army Corps of Engineers HGM (hydrogeomorphic model), EPW (Evaluation of Planned Wetlands) model or Hollands-Magee Method.

d. Identify any National Wetland Inventory (NWI) wetlands on site.

e. Identify total wetlands acreage on the subject site and percent of site occupied by all wetlands, regulated wetlands and regulated wetlands buffer/adjacent areas using definitions appropriate to each jurisdiction identified in Section IV.J.1.a. above.

f. Identify any NYDCEP reservoir stems/streams.

g. Identify any applicable regulatory authorities including Town, NYCDEP, NYSDEC, and the USACOE.

h. Discuss existing drainage patterns, existing discharge points of drainage and the Kensico Watershed.

i. Describe the interconnectivity between wetlands and water resources, including the Kensico Reservoir.

2. **Potential Impacts.**

a. Identify acreage of proposed wetlands and wetland buffer/adjacent area disturbances and analyze potential direct and indirect impacts on survey-located wetlands as regulated by the Town of North Castle, the NYSDEC and the USACOE. Discuss area to be disturbed, types of potential disturbance, impact to functional values of the wetland, changes to wetland vegetative composition, modifications to hydrology and hydroperiod, and modifications to the 100-year floodplain. Include discussion of impacts of the proposed irrigation pond on existing hydrology, including off-site wetlands.

b. Describe permits required for local, State and Federal jurisdictions.

c. Describe potential for and evaluate the impact of increased sedimentation of wetlands.

d. Describe potential for and evaluate the impact of increased concentrations of fertilizer, pesticides, herbicides, fungicides and other chemicals proposed for use on the subject site in the existing and proposed wetlands.

e. Include qualitative analysis of impacts on upstream and downstream wetlands within the watersheds of which the subject site is a part due to changes in water budget.

f. Include qualitative analysis of construction-related and long-term impacts to wetlands and their functions, including impact on wildlife habitat, pollution abatement capabilities, stormwater control capabilities, changes in water budget and aesthetic value based upon evaluation methodology described in Section IV.J.1.c.(5) above. Redo the evaluation as if the proposed construction were in place to compare the before and after values.

g. For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

3. Mitigation Measures.

Potential mitigation measures to explore:

a. Avoidance of wetland areas.

b. Minimization of wetland impacts.

c. Replacement and enhancement of wetlands and wetland buffer/adjacent areas.

d. Increased buffer/adjacent areas.

e. Creation of new wetlands and ponds on-site and off-site, including a description of their size, vegetative composition and proposed function.

f. Elimination and minimization of fertilizer, pesticide, herbicide, fungicide and other chemical concentrations in existing and proposed wetlands through avoidance and containment, respectively.

g. Other.

K. Community Facilities and Services.

1. Schools.

a. Existing Conditions.

(1) Describe the location of the subject site in relation to the public school district that serves the site.

b. Potential Impacts.

(1) Provide an estimate of the number of school children generated by the proposed development (or lack thereof) on the subject site.

c. Mitigation Measures.

Discuss potential mitigation measures, if necessary.

2. Open Space and Recreation.

a. Existing Conditions.

(1) Identify any existing trails on the subject site and their linkage to mapped trails located in the surrounding area within a 1/4-mile of the subject site's boundaries (map required).

b. Potential Impacts.

(1) Discuss whether there would an increased demand for recreational facilities generated (or lack thereof) by the proposed development.

c. **Mitigation Measures.**

Discuss whether Town of North Castle Open Space Committee or other communities would be interested in purchasing the subject property as open space.

3. **Police Protection.**

a. **Existing Conditions.**

(1) Staff size and organization of service provider in town.

(2) Location of stations in relation to the subject site.

(3) Average response time to the subject site for service provider.

(4) Service ratio for service provider.

(5) Adequacy of access for service provider, as confirmed by written statements from service provider.

b. **Potential Impacts.**

(1) Increased demand for services (based upon normal usage of the subject site) and allocation of responsibilities between service provider.

(2) Increased costs for service provider.

(3) Adequacy of access to/from and on the subject site, including roadway surface and width, barriers and maintenance.

(4) Concerns of Police Department.

(5) For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

(6) Other.

c. Mitigation Measures.

Potential mitigation measures to explore:

(1) Property taxes generated.

(2) Site access modifications.

(3) Other.

4. Fire Protection.

a. Existing Conditions.

(1) Size of existing force and organization of service provider.

(2) Location of stations in relation to the subject site.

(3) Number and type of apparatus for service provider.

(4) Average response time to the subject site for service provider.

(5) Adequacy of access for service provider, as confirmed by written statement from service provider.

(6) Water supply and capacity for fire-fighting purposes.

b. **Potential Impacts.**

(1) Increased demand for services (based upon normal usage of the subject site).

(2) Increased costs for service provider.

(3) Adequacy of access to/from and on the subject site, including roadway surface and width, barriers and maintenance.

(4) Concerns of Fire Department.

(5) Water supply and pressure.

(6) For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency).

(7) Other.

c. **Mitigation Measures.**

Potential mitigation measures to explore:

(1) Property taxes generated.

(2) Site access modifications.

(3) Road and driveway design modifications.

(4) Alternative water supply source(s).

(5) Other.

5. **Ambulance Service.**

a. **Existing Conditions.**

(1) Size of existing forces and organization of service provider.

(2) Location of stations in relation to the subject site.

(3) Equipment.

(4) Average response time to the subject site for service provider.

(5) Transport time to the nearest hospital for service provider.

(6) Adequacy of access for service provider, as confirmed by written statement from service provider.

b. **Potential Impacts.**

(1) Increased demand for services (based upon normal usage of the subject site).

(2) Increased costs for service provider.

(3) Adequacy of access to/from and on the subject site, including roadway surface and width, barriers and maintenance.

(4) Concerns of Ambulance Corps.

(5) For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

(6) Other.

c. **Mitigation Measures.**

Potential mitigation measures to explore:

(1) Property taxes generated.

(2) Site access modifications.

(3) Road and driveway design modifications.

(4) Other.

6. **Sewage Disposal.**

a. **Existing Conditions.**

(1) Describe the extent of existing sanitary sewage facilities on the subject site, and the location of the nearest public sanitary sewer.

b. **Potential Impacts.**

(1) Provide description of proposed sanitary sewage treatment facilities and NYCDEP, NYSDEC and WCDOH jurisdiction.

(2) Discuss potential impacts on Kensico Reservoir and its tributary watercourses.

(3) Discuss impacts related to construction of proposed infrastructure.

c. **Mitigation Measures.**

Discuss potential mitigation measures, if necessary.

7. **Water Supply.**

a. **Existing Conditions.**

(1) Describe the groundwater geology of the subject site and its viability for wells.

(2) Describe existing wells and water supply (including water storage facilities) on and within a distance of not less than 1/4-mile from the site boundaries, expanded as necessary to include all areas that are functionally related to and which might reasonably be expected to be impacted by development of the subject site based upon hydrogeological analysis. Discuss pertinent characteristics of well water supply sources as identified in Sections IV.I.1.a above. For public water supply sources, discuss existing pressure and volume under all conditions of flow. Describe proximity of the subject site to Kensico Reservoir and its tributary watercourses.

(3) Describe the location of the nearest public water supply and discuss applicable connection policies.

(4) Identify existing water quality requirements of applicable agencies for drinking water and other purposes.

b. **Potential Impacts.**

(1) Describe quantity of water required for the proposed development for potable consumption, irrigation, fire-fighting purposes and accessory uses (car wash), based upon consideration of total average daily and maximum daily site population, peak usage on a daily basis and seasonal requirements.

(2) Describe impacts on the water supply(ies) proposed to be used for such purposes (e.g., public water and/or groundwater in aquifer) for the proposed development, including consideration of seasonal variations and cyclical drought conditions.

(3) Discuss impacts on pressure and volume of wells within a distance of not less than 1/4-mile from the site boundaries, expanded as necessary to include all areas that are functionally related to and which might reasonably be expected to be impacted by development of the subject site based upon hydrogeological analysis, including under drought conditions.

(4) Discuss impacts related to construction of proposed infrastructure.

(5) For each of above analyses, also include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

c. **Mitigation Measures.**

Potential mitigation measures to explore:

(1) Connection to one or more public water supply systems.

(2) Appropriate sizing of facilities, including demonstration that proposed method of water supply and/or storage (if proposed) will satisfactorily serve the potable consumption, accessory uses and fire-fighting needs of the proposed development.

(3) Measures to reduce water consumption for irrigation purposes.

(4) Other.

8. **Solid Waste.**

a. **Existing Conditions.**

Describe amount of solid waste currently being generated by existing facilities on the subject site and where it is disposed.

b. **Potential Impacts.**

Estimate quantity of solid waste to be generated by the proposed development and indicate how it will be disposed of. Discuss impacts of increased solid waste on capacity of processing facilities.

c. **Mitigation Measures.**

Potential mitigation measures to explore:

(1) Conformance with local and State recycling plans.

(2) Other.

9. **Other Utilities (Gas, Electric, Telephone, Cable TV).**

a. **Existing Conditions.**

(1) Describe existing service to the subject site by each service provider. Identify the location of service lines and other infrastructure elements (e.g., existing antennas) (map required).

b. **Potential Impacts.**

Potential mitigation measures to explore:

(1) Discuss proposed expanded and/or new service to the subject site by each service provider.

c. **Mitigation Measures.**

10. **Public Works.**

a. **Existing Conditions.**

(1) Identify the municipal departments or other entity responsible for maintenance (including snow-plowing) of existing access roadways.

(2) Describe existing maintenance program, including type and frequency of service provided by service provider(s).

(3) Describe adequacy of access to the subject site for service provider(s), as confirmed by written statements from each service provider.

b. Potential Impacts.

(1) Increased demand for services (based upon normal usage of the subject site) and allocation of responsibilities between service provider(s).

(2) Increase costs for service provider(s).

(3) Adequacy of access to/from and on the subject site, including consideration of existing and proposed roadway conditions.

(4) Concerns of service provider(s).

(5) For each of above analysis, include consideration of cumulative impacts of other developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

(6) Other.

c. Mitigation Measures.

Potential mitigation measures to explore:

(1) Property taxes generated.

(2) Site access modifications.

(3) Road design modifications.

(4) Other.

L. Economic Conditions

1. Existing Conditions.

a. Calculate existing tax revenues to the Town of North Castle, Byram Hills Central School District, Westchester County, and New York State from the existing office building.

b. Identify number of existing employees at the existing office building, including information with regard to type and salary level. Indicate whether existing jobs will be eliminated with the removal of the existing office. If not, indicate where existing employees will be relocated.

2. Potential Impacts.

a. Quantify the expected economic impacts to the local economy during the construction period. Identify the number of jobs (in person-years) to be generated directly and indirectly as a result of construction. Calculate income to the local economy from sales of construction material, construction labor and sales tax.

b. Prepare an economic impact analysis based on the commercial activities associated with operation of the proposed project (i.e., paid parking facility and car washing services).

c. Identify approximate number of employees that would be generated by the proposed project, including information with regard to type and salary level.

d. Calculate existing tax revenues to the Town of North Castle, Byram Hills Central School District, Westchester County, and New York State from the existing office building.

e. Compare future tax revenues resulting from the proposed project with current tax revenues generated from the existing office use on the project site.

f. Evaluate negative and positive effects resulting from relocation of existing jobs on-site due to the demolition of the existing office building with generation of new jobs from the proposed project.

3. Mitigation Measures.

a. Describe any measures that would be pursued to maximize economic benefits to the community from the proposed project.

b. Analyze whether or not the anticipated tax revenues will meet or exceed anticipated costs for any needed increases in community services.

c. Other.

M. Traffic and Transportation.

1. Existing Conditions.

a. Provide description (number of lanes, posted speed limits, travel-way width, surface treatment and condition, horizontal and vertical curves, grades, drainage, parking, traffic controls, vehicle classification restrictions and general character) of the following area roadways and intersections:

(1) Roadways.

(a) New King Street

(b) Airport Road

(c) Purchase Street (NYS Route 120)

(d) King Street

(e) Rye Lake Avenue

(f) Gateway Lane

(g) Interstate 684/Interchange 2

(2) Intersections.

a. NYS Route 120 and Gateway Lane

b. NYS Route 120 and New King Street

c. NYS Route 120 and Airport Road

d. Airport Road and the Southbound I-684 Ramps

e. Airport Road and the Northbound I-684 Ramps

f. NYS Route 120 and Lake Street

g. Airport Road and Rye Lake Avenue/Westchester County Airport Driveway

h. King Street and Rye Lake Avenue/Tudor Group Driveway

i. Airport Road and New King Street

All area roadways and intersections noted above shall be graphically indicated.

b. Conduct automated traffic recorder (ATR) counts at the following locations to obtain data on hourly/daily volumes for each day of week:

(1) New King Street, between Purchase Street and Airport Road.

(2) Airport Road, between Purchase Street and New King Street; and

(3) Airport Road, east of New King Street.

This data shall be used to identify peak hours and traffic volumes for each day (weekdays and weekends). This will enable the Applicant to identify different peak hours.

c. Conduct manual traffic movement surveys at the intersections listed in Section IV.M.1.a.2. above for the day before Thanksgiving, which is considered the peak travel day. To supplement this traffic counting program manual traffic volume surveys shall be conducted on typical peak periods (weekday and weekend A.M. and P.M.). In addition, a traffic volume comparison of the peak travel day and typical peak (peak hour) shall be provided in a tabular format. A sampling of vehicle classifications shall be provided for two intersections. Peak hour volumes shall be graphically shown.

d. Complete intersection capacity analyses for existing conditions at each intersection listed in Section IV.M.1.a.2. above using the SYNCHRO computer model.

f. Evaluate accident history along roadways and at intersections listed in Section IV.M.1.a. above for the most recent 3-year period.

(1) Location.

(2) Date.

(3) Type of accident.

(4) Number of injuries.

(5) Probable cause.

(6) Road conditions.

(7) Number of vehicles involved.

g. Complete analysis of existing sight distance at project entry points.

2. Potential Impacts.

a. Complete intersection capacity analyses of future background conditions based upon an annual growth factor of two percent (2%) per year applied to existing baseline volumes and including all developments planned or proposed in the immediate area of the subject site. (List of developments to be supplied by Lead Agency.)

b. Complete projection of site-generated traffic on area roadways based upon accepted trip generation rates for the project components.

c. Complete projected distribution of site-generated traffic on area roadways.

d. Complete intersection capacity analyses of build conditions, no build and proposed development of subject site with projected site-generated traffic, with and without consideration of proposed road and intersection improvements, if any.

e. Evaluate safety concerns regarding existing and proposed roadways.

   (1) Proposed sight distance at project entry points, driveways and roadway curves.

   (2) Roadway width and conditions for routine travel and emergency services access purposes.

   (3) Road grades.

f. Evaluate impact of gate house installation (or other property access control) and operation on areawide traffic circulation, including emergency service access, if proposed.

g. Complete projection of construction traffic, including volumes (number of trips), type and size of vehicles, hours of operation, duration, and trip routing and origin/destination of construction vehicles. Include discussion of construction traffic for removal of excess fill from the subject site (if any). Provide estimate of number of trips and information on type and capacity of vehicle(s) to be used and trip routing for such vehicles (e.g., directed toward I-684, use of local roads, or both).

h. Describe the proposed parking facility and its ability to meet existing demand. Describe the type of automated parking system, how it would operate and provide flexibility in capacity.

i. Identify primary access paths for passenger vehicles, emergency vehicles, delivery vehicles and pedestrians.

j. Describe proposed transportation between the proposed parking facility and the Airport and type of vehicle proposed to be used. Discuss any proposed shuttle service or collaboration with existing public transportation systems. Provide a description of expected schedules, organization responsible for operating the shuttle, and the types of shuttles to be used.

k. Describe potential impacts to local public transportation systems. Discuss potential decreased usage of the existing public bus system.

l. Discuss impact of proposed action upon the NYS Department of Transportation (NYSDOT) plan for the Route 120/Exit 2 improvements.

3. **Mitigation Measures.**

Potential mitigation measures to explore:

a. Proposed roadway improvements, including sight distance improvements.

(1) Types of improvements (as needed), e.g., traffic control at intersections, intersection improvements, drainage improvements, surface improvements.

(2) Responsibility for improvements.

(3) Method(s) of funding, as appropriate.

(4) Approval jurisdiction for proposed improvements.

b. Alternative emergency-only access point(s).

c. Remediation plan for repair of local streets damaged during construction.

d. Measures to safeguard the public during the construction process.

e. Traffic calming measures

f. Low emission and high-efficiency fuels for airport shuttle

g. Other.

N. Air Quality

This subject shall be addressed in the DEIS with respect to the short-term impacts associated with construction-related activities (dust and fumes from site work and traffic). Air quality shall also be addressed in the DEIS with respect to the long-term impacts associated with the permanent operation of the subject site after development.

1. Existing Conditions.

a. Identify and describe air quality pollutants of concern (dust and carbon monoxide at a minimum).

b. Describe existing air quality on the subject site and within the surrounding area.

c. Discuss compliance with pertinent ambient air quality standards.

2. **Potential Impacts.**

   a. Conduct a screening analysis following the procedures outlined in NYSDOT's Environmental Procedures Manual. The impacts of the emissions from stationary sources at the project site shall be assessed, as well as mobile sources from inherent traffic flow of a parking structure.

   b. Discuss air quality impacts associated with idling vehicles on the subject site.

3. **Mitigation Measures.**

   a. Green technology to be implemented during the construction and operation of the project.

   b. Other.

O. **Greenhouse Gas Emissions**

This subject shall be addressed in the DEIS with respect to the short-term impacts associated with construction-related activities and with respect to the long-term impacts associated with the permanent operation of the subject site after development.

1. **Existing Conditions.**

   a. Identify and describe greenhouse gas emissions of concern as described in NYSDEC Policy *Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement.*

2. **Potential Impacts.**

   a. Conduct a Greenhouse Gas (GHG) analysis following the procedures outlined in NYSDEC's *Guide for Assessing Energy Use and Greenhouse Gas Emissions in an Environmental Impact Statement.* The impacts of the emissions from stationary sources at the project site shall be assessed, as well as mobile sources from inherent traffic flow of a parking structure.

3. **Mitigation Measures.**

   a. Green technology to be implemented during the construction and operation of the project.

   b. Other.

P. **Noise.**

1. **Existing Conditions.**

   a. Describe ambient conditions on and near the subject site. Identify existing sources (e.g., airplane traffic, vehicle traffic and grounds maintenance equipment) and decibel levels on the subject site and along the property lines of the subject site.

2. **Potential Impacts.**

   a. Discuss noise associated with increased traffic traveling to and from the subject site after the proposed development is in operation. Identify potential sources and decibel levels. Evaluate noise levels associated with the project based upon "DEC Policy DEP 00-1: Assessing and Mitigating Noise Impacts.

b. Describe noise that may be generated during construction of the proposed development and its likely duration, including consideration of on-site noise (e.g., blasting, construction equipment) and construction traffic noise on area roadways. Identify potential sources and decibel levels. Evaluate noise levels associated with the project based upon "DEC Policy DEP 00-1: Assessing and Mitigating Noise Impacts.

c. Discuss how the proposed development will comply with the requirements of Chapter 137 (Noise) of the Code of the Town of North Castle, both during construction and over the long-term once the proposed development has been completed.

3. Mitigation Measures.

Discussion of potential mitigation measures, if applicable, based upon "DEC Policy DEP 00-1: Assessing and Mitigating Noise Impacts.

Q. Hazardous Materials

1. Existing Conditions.

a. A Phase I environmental Site Assessment (ESA) of the project site shall be conducted to determine whether there is the presence of asbestos, lead paint, and/or any other regulated materials within the existing building to be demolished. The findings of the Phase I ESA shall be summarized in the DEIS and the full Phase I ESA and any supplemental investigation shall be included as an appendix to the DEIS.

2. **Potential Impacts.**

   a. Describe how contaminants, if any, will be abated prior to commencement of construction.

   b. Identify any hazardous materials to be generated or stored on the project site in both the construction and operations periods of the proposed project. Describe storage and disposal practices to be implemented for these hazardous materials. Specifically, indicate whether any fuel will be stored on the site.

3. **Mitigation Measures.**

   a. Describe mitigation measures, best management practices to be utilized during construction and operation of the project. Describe any required mitigation as part of any Remedial Action Plan.

   b. Other.

R. **Construction**

1. **Existing Conditions.**

   a. Introduction

2. **Potential Impacts.**

   a. Describe construction access routes, proposed construction phasing, overall schedule for project completion, and hours of construction operation.

   b. Describe the equipment and materials storage and/or staging area, anticipated number of construction workers, anticipated lighting and security, and the delivery means and methods.

c. Describe the erosion and sediment control plan for the proposed project and any stormwater management practices to be used on a temporary basis.

d. Describe how the infrastructure relevant to the completion of each phase will be implemented, and any potential impacts.

e. Assess the potential environmental impacts anticipated due to the construction of the proposed project including traffic, noise, air quality, GHG emissions, dust, erosion and sedimentation and its impact on the surrounding area.

3. **Mitigation Measures.**

a. Discuss construction management techniques and restoration of disturbed areas.

b. Enforcement

c. Erosion control plans

d. Ideal management practices to be employed, along with mechanisms to minimize impacts related to partial project completion.

e. Other.

V. REASONABLE ALTERNATIVES TO BE CONSIDERED

The description and evaluation of the following alternatives to the Proposed Action shall address all of the topics in Section IV of this document, shall be at a level of detail sufficient to permit a comparative assessment of the alternatives discussed, shall be analyzed in terms of the impact issues listed above in summary and matrix format, and shall reflect compliance with all applicable regulations of the Town of North Castle. Alternatives shall include the following:

A. Reduced Size Parking Facility

1. Parking facility for 500 cars

2. Parking facility for 1,000 cars.

The analysis of the above alternatives shall include, at a minimum, an evaluation of clearing required, trees impacted, estimated cut and fill, wetlands and wetlands buffer/adjacent area disturbance, steep slope disturbance and visual impact.

B. Reduced Height Parking Facility

This alternative should be considered as a way to significantly reduce visual impacts as viewed from NYS Route 120.

C. Reduced Wetland Impact Alternative

The analysis of the above alternative shall include, at a minimum, an evaluation of clearing required, trees impacted, estimated cut and fill, wetlands and wetlands buffer/adjacent area disturbance, steep slope disturbance and visual impact.

D. No Wetland Impact Alternative

This alternative should depict no Town-regulated wetland or wetland buffer impact and depict all stormwater management facilities on the main subject parcel. The analysis of the above alternative shall include, at a minimum, an evaluation of clearing required, trees impacted, estimated cut and fill, wetlands and wetlands buffer/adjacent area disturbance, steep slope disturbance and visual impact.

E. Alternative Use

Analyze an alternative use pursuant to existing zoning. Assess potential impacts of an office building constructed to maximum buildout under existing zoning regulations.

F. No Action.

VI. ADVERSE IMPACTS THAT CANNOT BE AVOIDED IF THE PROPOSED ACTION IS IMPLEMENTED

VII. OTHER REQUIRED ANALYSES

A. Irreversible and Irretrievable Commitment of Resources.

B. Impacts on the Use and Conservation of Energy.

C. **Growth Inducing Aspects of Proposed Action.**

Assess the potential for the project to bring new users to the Westchester County Airport.

Assess the potential for the project to bring new flights to the Westchester County Airport.

Assess the potential for the proposed project to introduce new residents and workers to the study area.

Assess the potential for the proposed project to spur offsite development and include a discussion of potential development growth resulting from any proposed zoning amendments.

VIII. SOURCES AND BIBLIOGRAPHY

IX. APPENDICES

A. **All SEQRA documentation, including a copy of the Environmental Assessment Form (EAF), the Positive Declaration and the DEIS Scope.**

B. **Copies of all official correspondence related to issues discussed in the DEIS.**

C. **Copies of all technical studies, in their entirety, including the following:**

1. Drainage Study
2. Traffic Study
3. Architectural, Historic and/or Archaeological Reports
4. Phase I Environmental Site Assessment (ESA)

ISSUES RAISED DURING SCOPING THAT HAVE BEEN DETERMINED BY THE LEAD AGENCY TO BE NOT RELEVANT OR NOT ENVIRONMENTALLY SIGNIFICANT OR THAT HAVE BEEN ADEQUATELY ADDRESSED IN A PRIOR ENVIRONMENTAL REVIEW

1. Impact of airport expansion on property values.
2. Reduction of the number of flights at Westchester County Airport
3. Permit only high bypass engines at the Westchester County Airport
4. Westchester County should further limit number of passengers.

11 NEW KING STREET AIRPORT PARKING FACILITY
LIST OF INVOLVED AND INTERESTED AGENCIES
(Last Updated 9/17/09)

Town of North Castle Planning Board, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Town of North Castle Town Board, Town Hall, 15, Bedford Road, Armonk, New York 10504

U.S. Army Corps of Engineers, Jacob Javits Federal Building, 26 Federal Plaza, New York 10278

Commissioner, New York State Department of Environmental Conservation, 625 Broadway, Albany, New York 12233-1011

Region 3, New York State Department of Environmental Conservation, 21 South Putt Corners Road, New Paltz, New York 12561

Westchester County Department of Health, Attn: Commissioner, 145 Huguenot St., New Rochelle, New York 10801

New York City Department of Environmental Protection, 465 Columbus Avenue, Suite 350, Valhalla, New York 10595

New York State Department of Transportation, SEQR Unit, Traffic Engineering & Safety Division
4 Burnett Blvd., Poughkeepsie, New York 12603

Commissioner, Westchester County Department of Transportation, Westchester County Office Building, 148 Martine Avenue, White Plains, New York 10601

Federal Aviation Administration, Eastern Region, 159-30 Rockaway Blvd., Jamaica, NY 11434-4848

Interested Agencies

Ryan Coyne, P.E., Town Engineer, Kellard Engineering & Consulting, 500 Main Street, Armonk, New York 10504

Roland A. Baroni, Esq., Town Counsel, Town of North Castle, Town Hall, 15, Bedford Road, Armonk, New York 10504

John Fava, Chairman, Town of North Castle Conservation Board, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Anthony Calvello, Chairman, Town of North Castle Architectural Review Board, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Richard Conrad, Chairman, Town of North Castle Airport Committee, Town Hall Annex, 17 Bedford Road, Armonk, New York 10504

Craig Usted, Highway Superintendent, Town of North Castle, Town Hall, 15 Bedford Road, Armonk, New York 10504

Anthony Futia, Superintendent, Town of North Castle, Department of Sewer and Water, 115 Business Park Drive, Armonk, New York 10504

Fire Commissioners, Town of North Castle Fire District No. 2, 40 Maple Avenue, Armonk, New York 10504

Town of North Castle Public Library, 19 Whippoorwill Road East, Armonk, New York 10504

North White Plains Public Library, Clove Road, North White Plains, New York 10604

Westchester County Planning Board, Attn: Gerard E. Mulligan, AICP, Commissioner, 432 Michaelian Office Building, 148 Martine Avenue, White Plains, New York 10601

Deputy Commissioner, Historic Preservation, New York State Office of Parks, Recreation and Historic Preservation, Empire State Plaza, Agency Building 1, 20th Floor, Albany. New York 12238

Village of Rye Brook, Village Clerk, 938 King Street, Rye Brook, N.Y. 10576
Town of Rye, Town Clerk, 14 West Glen Ave., Port Chester, N.Y. 10573

Town of Greenwich, Town Clerk, 101 Field Point Road, Greenwich, Ct. 06830

Town/Village of Harrison, Town Clerk, 1 Heineman Place, Harrison, N.Y. 10528

State of New York, Office of the Attorney General, The Capital, Albany, New York 12224

Riverkeeper, Senior Watershed Attorney, Pace Environmental Litigation Clinic, 78 North Broadway, White Plains, New York 10603

NYPIRG, New York Pubic Interest Research Group, Attn: Watershed Protection Coordinator
9 Murray Street, New York, New York 10007-2272

NRDC, Natural Resources Defense Council, 40 West 20 Street, New York, New York 10011

WESPAC, 17 Marble Ave, Pleasantville, NY 10570

John M. Nonna, County Legislator, District 3, Westchester County Board of Legislators, 800 Michaelian Office Building, 148 Martine Avenue, White Plains, NY 10601

Appendix B: Correspondence

David A. Paterson
Governor

Carol Ash
Commissioner

New York State Office of Parks,
Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

www.nysparks.com

April 22, 2010

Molly McDonald
AKRF
440 Park Avenue South
New York, New York 10016

Re: SEQRA
Parking Garage for Westchester County Airport
11 New King Street/NORTH CASTLE,
Westchester County
10PR02122

Dear Ms. McDonald:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP) concerning your project's potential impact/effect upon historic and/or prehistoric cultural resources. Our staff has reviewed the documentation that you provided on your project. Preliminary comments and/or requests for additional information are noted on separate enclosures accompanying this letter. A determination of impact/effect will be provided only after ALL documentation requirements noted on any enclosures have been met. Any questions concerning our preliminary comments and/or requests for additional information should be directed to the appropriate staff person identified on each enclosure.

In cases where a state agency is involved in this undertaking, it is appropriate for that agency to determine whether consultation should take place with OPRHP under Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law. In addition, if there is any federal agency involvement, Advisory Council on Historic Preservation's regulations, "Protection of Historic and Cultural Properties" 36 CFR 800 requires that agency to initiate Section 106 consultation with the State Historic Preservation Officer (SHPO).

When responding, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont

Ruth L. Pierpont
Director

Enclosure

An Equal Opportunity/Affirmative Action Agency

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ARCHEOLOGY COMMENTS
10PR02122

Based on reported resources, there is an archeological site in or adjacent to your project area. Therefore the Office of Parks, Recreation and Historic Preservation (OPRHP) recommends that a Phase 1 archeological survey is warranted for all portions of the project to involve ground disturbance, unless substantial prior ground disturbance can be documented. If you consider the project area to be disturbed, documentation of the disturbance will need to be reviewed by OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition.

A Phase 1 survey is designed to determine the presence or absence of archeological sites or other cultural resources in the project's area of potential effect. The OPRHP can provide standards for conducting cultural resource investigations upon request. Cultural resource surveys and survey reports that meet these standards will be accepted and approved by the OPRHP.

Our office does not conduct cultural resources surveys. A 36 CFR 61 qualified archeologist should be retained to conduct the Phase 1 survey. Many archeological consulting firms advertise their availability in the yellow pages. The services of qualified archeologists can also be obtained by contacting local, regional, or statewide professional archeological organizations. Phase 1 surveys can be expected to vary in cost per mile of right-of-way or by the number of acres impacted. We encourage you to contact a number of consulting firms and compare examples of each firm's work to obtain the best product.

Documentation of ground disturbance should include a description of the disturbance with confirming evidence. Confirmation can include current photographs and/or older photographs of the project area which illustrate the disturbance (approximately keyed to a project area map), past maps or site plans that accurately record previous disturbances, or current soil borings that verify past disruptions to the land. Agricultural activity is not considered to be substantial ground disturbance and many sites have been identified in previously cultivated land.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before any archeological survey activities are conducted on State-owned land.If any portion of the project includes the lands of New York State you should contact the SED before initiating survey activities.The SED contact is Christina B. Rieth and she can be reached at (518) 402-5975. Section 233 permits are not required for projects on private lands.

If you have any questions concerning archeology, please contact Daniel A. Bagrow at 518-237-8643. ext 3254

BUILDINGS/STRUCTURES/DISTRICTS EVALUATION COMMENTS

PROJECT NUMBER 10PR02122

(Parking Garage for Westchester County Airport/11 New King Street/T/NORTH CASTLE)

☑ Based upon a review of the information submitted and the scope of the project described, the NYS Office of Parks, Recreation and Historic Preservation has no concerns regarding historic buildings/structures/ districts within your project area.

☐ The following State/National Registers of Historic Places listed/eligible property/district is located within or adjacent to your project area. However, given the scope of the project, the NYS Office of Parks, Recreation and Historic Preservation has no concerns regarding historic buildings/structures/districts within your project area.

* Archaeology comments will be provided in a separate attachment.

If you have any questions concerning this information, please call Peter Shaver at 518-237-8643. ext 3264

PLEASE BE SURE TO REFER TO THE PROJECT NUMBER NOTED ABOVE WHEN RESPONDING TO THIS REQUEST

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

April 30, 2010

Steven Gates
A K R F Environmental and Planning Consultants
34 South Broadway, Suite 401
White Plains, NY 10601

Dear Mr. Gates:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Parking Facility at Westchester County Airport, site as indicated on the map you provided, located in the Town of North Castle, Westchester County.

We have no records of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,
Tara Salerno

Tara Salerno, Information Services
New York Natural Heritage Program

Enc.
cc: Reg. 3, Wildlife Mgr.

438

AKRF

Environmental and Planning Consultants

34 South Broadway
Suite 401
White Plains, NY 10601
tel: 914 922-2350
fax: 914 949-7559
www.akrf.com

May 12, 2010

Chief Geoffrey Major
Armonk Fire Department
North Castle Fire District #2
400 Bedford Road
P.O. Box 116
Armonk, NY 10504

Re: Proposed Parking Facility

Dear Chief Major:

AKRF has been retained by 11 New King Street, LLC to prepare an environmental impact statement (EIS) for a proposed multi-level automated parking facility at 11 New King Street in the Town of North Castle. In order to fully assess potential impacts, we request that the Fire Department share any concerns it may have regarding the proposed project, described below.

The proposed parking facility would provide off-site structured parking for customers of Westchester County Airport (HPN) to alleviate an existing shortage of parking at the airport. An existing small office building on the project site would be demolished. The facility would be approximately 55 feet tall with a building footprint of approximately 52,000 square feet and would accommodate approximately 1,450 vehicles. Ingress and egress to the facility would be via an access drive off New King Street. Due to the automated nature of the parking facility, patrons would not enter the interior of the facility, but would drop off their cars near the entrance. A shuttle stop would be provided on the project site for a shuttle service to the airport terminal, located about one mile away. The parking facility would have an office and waiting area located near the building entrance.

Attached is a graphic showing the location of the project site. The project site boundary extends into an adjacent parcel where proposed stormwater detention ponds would be located.

To assist with the analysis of potential impacts, we kindly request the following information on the Fire Department, per the scope adopted by the Town of North Castle Planning Board (I realize some information is posted on the Department's website; this information is listed below in parentheses – please confirm or update, as necessary):

- Current number of volunteers *(60)*;
  - Number of EMTs and Paramedics;
  - Is the Armonk Fire Department the first responder for emergency medical services (EMS) in the subject area?
- Organization of the fire department;

- Location of any auxiliary stations;
- Number and type of apparatuses;
  - Please include ladder heights.
  - Are ambulances equipped for Advanced Life Support (ALS) or Basic Life Support (BLS)?
- Average response time to the project site;
- Name of nearest hospital and transport time from the project site;
- Average call volume *(about 1,000/year, with an even split of fire and EMS calls)*;
- Water capacity and water pressure requirements;
- Any concerns related to site access; and
- Any concerns related to the adequacy of existing staff, equipment, and financial resources to accommodate the proposed project.

Thank you for your time and assistance. Please do not hesitate to contact me with any questions. I can be reached at (914) 922-2358 or sgates@akrf.com.

Sincerely,

Steven Gates
Planner

TOWN OF NORTH CASTLE
15 BEDFORD ROAD
Armonk, New York 10504
Established 1736

ROBERT M. D'ANGELO
Chief of Police

DEPARTMENT OF POLICE
Tel: 914-273-9500
Fax: 914-273-5412

Mr. Steven Gates
AKRF
Environmental Planning Consultants
34 South Broadway
Suite 401
White Plains NY 10601

June 9th, 2010

Dear Mr Gates:

In response to your letter of inquiry dated May 12, 2010 regarding a proposed parking facility at 11 New King Street, I provide the following data:

The Town of North Castle Police Department is currently staffed by 35 Officers which includes the Chief of Police, 3 Lieutenants, 6 Patrol Sergeants, 1 Detective Sergeant, 3 Detectives, and 21 Patrolmen. Our police headquarters is located within the Town Hall at 15 Bedford Road in Armonk. We have one satellite substation which is unmanned. It is located at 10 Clove Road in North White Plains. An average response time to this project location is estimated to be 5 - 8 minutes and is dependant upon other demands for service and/or the severity of the calls. The North Castle Police Department responded to 13,142 calls for service in 2008, and 13,513 in 2009. The population of the Town of North Castle was 10,061 in 1990, 10,849 in 2000 and is estimated to have been 12,148 in 2008. A new census report is currently being conducted during 2010, and to date there are no estimates or results from that study.

This proposed structure will add to the demand and responsibilities of the North Castle Police Department to some unknown degree. The addition of 1,450 vehicles traveling to and parking at this location will require some type of semi-regular police response or assistance. The addition of security cameras with a DVR, remotely viewable by internet link, and physically controlling access to this location will be deterrents to criminal activity and also important tools in solving any crimes that may occur. Restricted access by some type of fencing in the rear and sides of the structure will also make it harder for would be criminals to easily access this site from Route 120 or neighboring properties forcing access through areas that are covered by the surveillance equipment.

I believe that I have covered the questions in your letter of inquiry. If you require additional information, please do not hesitate to contact me at (914) 273-9500.

Very truly yours,

Lieutenant Peter Simonsen

AKRF

Environmental and Planning Consultants

34 South Broadway
Suite 401
White Plains, NY 10601
tel: 914 949-7336
fax: 914 949-7559
www.akrf.com

December 21, 2010

11 New King Street, LLC
11 New King Street
White Plains, NY 10604
c/o Jeffrey Brown

Re: Aerotech Wetland Delineation

Dear Mr. Brown:

The following letter report describes the results of a wetland delineation conducted on the subject property in June and October 2008. Two areas meeting the Federal/Town definition of wetland were identified and flagged. These include the primary forested wetland located west of the existing building (Flagged A1 to A43) and a secondary forested floodplain wetland that is primarily located immediately offsite east of the parcel (Flagged B1-B24). Please note, wetland flags must be survey-located by a licensed surveyor. Wetland flags were placed in the field sufficient to demarcate wetlands and regulated wetland buffers on the subject property. Wetlands were not flagged in their entirety, but extend beyond the parcel boundaries. A note to this effect should be added to the survey drawings.

FORESTED WETLAND (WETLAND "A" – FLAGGED A-1 TO A-43):

Forested wetland habitat occupies the lower elevations of the project site. Surface water runoff is sufficient at the toe-of-slope adjacent to the Route 120 highway berm to support a predominance of vegetation adapted to wetland conditions (hydrophytic vegetation). Some standing water was observed in this region, but the area is primarily saturated (not inundated).

This wetland is largely unmapped. A linear portion of this wetland is mapped as PFO1A by the USFWS National Wetland Inventory (NWI) – see attached figure. Although not seen the field due to debris and growth of dense shrub/vine cover, a small culvert is shown on project plans at the SW corner of the site adjacent to Route 120. We speculate that this culvert has been blocked/unmaintained over time preventing the effective drainage of these flows from the NWI-mapped linear wetland. Instead, runoff from the wooded hillside west of the existing building onsite is diverted northwards along the Route 120 highway berm and causing saturated conditions here. Over time, this has created wetland conditions. As such, this wetland is likely of recent origin. It contains a mix of facultative wetland species common to the area and relatively high degree of invasive species cover in the shrub stratum typical of disturbed lands that have re-grown over a 40-year period.

Dominant overstory trees within the forested wetland include green ash (Fraxinus pennsylvanica), which are the largest diameter trees in this region reaching 30 inches, American elm (Ulmus americana), red maple (Acer rubrum), and pin oak (Quercus palustris) ranging in diameter from 10 to 24 inches. The

shrub stratum contains a mix of native and non-native species, including winterberry (Ilex verticillata), spicebush (Lindera benzoin), smooth blackhaw (Viburnum prunifolium), poison ivy (Rhus radicans), red-osier dogwood (Cornus sericea), multiflora rose (Rosa multiflora), oriental bittersweet (Celastrus orbiculatus), wine raspberry (Rubus phoenicolasius), porcelain berry (Ampelopsis brevipedunculata), and Japanese barberry (Berberis thunbergii). Groundcover species include wrinkleleaf goldenrod (Solidago rugosa), panicled aster (Aster simplex), lady fern (Athyrium filix-femina), northern willow herb (Epilobium ciliatum), great lobelia (Lobelia siphilitica), Japanese honeysuckle (Lonicera japonica), broadleaf enchanter's nightshade (Circaea lutetiana), jumpseed (Polygonum virginianum), spinulose woodfern (Dryopteris carthusiana), and jack in the pulpit (Arisaema triphyllum).

A portion of Wetland "A" consists of a narrow ephemeral drainage way on the southern property border adjacent to a stone wall. Such species as smooth blackhaw (Viburnum prunifolium), spicebush (Lindera benzoin), elderberry (Sambucus canadensis), jewelweed (Impatiens capensis) and Hercules club (Aralia spinosa) were noted.

FORESTED STREAM CORRIDOR (WETLAND "B" – FLAGGED B-1 TO B-24):

This is a forested, riparian (riverine) wetland that traverses the project site parcel at the eastern entrance drive only – it is primarily located offsite. Near the entranceway, this stream is a relatively low-gradient (level topography), slow-flowing floodplain wetland, which transitions to a narrow, confined, rock-lined stream immediately offsite on the adjacent parcel to the north, before flowing down a steeper rocky gradient. Just prior to exiting the project site through a culvert beneath Route 120, this stream joins with surface water runoff from Wetland "A".

The lower reaches of this stream (flagged wetland "B") bordering the project site to the north are mapped as a class "A" stream by NYSDEC. The stream flows to the Kensico Reservoir, approximately 600 feet west of the project site.

Vegetation bordering this riparian wetland includes skunk cabbage (Symplocarpus foetidus), spicebush (Lindera benzoin), winterberry (Ilex verticillata), silky dogwood (Cornus amomum), smooth blackhaw, red maple (Acer rubrum), jewelweed, Christmas fern, Japanese knotweed (Polygonum cuspidatum), and scouring rush (Equisetum hyemale). Upland species bordering the stream include mature sugar maple (Acer saccharum) and shagbark hickory (Carya ovata).

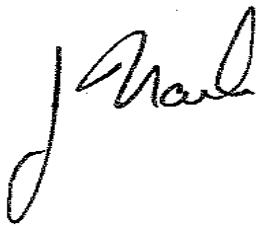
ONSITE SOILS:

Three soil types are mapped by the NRCS for the project site:

> Ub: Udorthents smoothed. Not listed as hydric.
>
> WdB: Woodbridge loam, 3 to 8 percent slopes. This soil is very deep and moderately well drained, on lower parts of hillsides. Water table is 1.5 to 2.5' from Nov. to May. Not listed as hydric.
>
> RdB: Ridgebury loam, 3 to 8 percent slopes. This soil is poorly drained and somewhat poorly drained, on the lower parts of hillsides and along small drainageways. Water table is within 1.5' from November to May. Not listed as hydric.

As shown on the attached figures, the areas found to exhibit wetland conditions are located within the Ridgebury loam soils. Although not listed as a hydric soil, the Ridgebury loam is known to contain hydric inclusions.

Sincerely,



James Nash
Technical Director

cc: Jannine McColgan (AKRF); Nanette Bourne (AKRF)

Attachments:

Figure 1: Approximate Wetland Flag Locations
Figure 2: USGS Project Site Location
Figure 3: NWI Mapped Wetlands
Figure 4: NRCS Mapped Soils
Figure 5: Aerial Photograph
Figure 6: Photo Location Key
Figure 7 & 8: Project Site Photos
USACE Data Sheets

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 11 New King Street (Aerotech) – North Castle NY
Applicant/Owner:
Investigator: J. Nash, AKRF, Inc.

Date: 6.11.08
County: Westchester
State: NY

Do Normal Circumstances exist on the site?	Yes	No	Community ID: Wooded Slope
Is the site significantly disturbed (Atypical Situation)?	Yes	No	Transect ID: not flagged
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	No	Plot ID: Data Point 1

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Circaea lutetiana	Herb	NL	6. Lindera benzoin	Shrub	FACW-
2. Polygonum virginianum	Herb	FAC	7. Acer saccharum	Tree	FACU-
3. Rosa multiflora	Shrub	FACU	8. Ampelopsis brevipedunculata	Vine	NL
4. Solidago flexicaulis	Herb	FACU	9. Robinia pseudoacacia	Tree	FACU-
5. Carya ovata	Tree	FACU-	10.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 11%

Remarks: winged euonymus, smooth blackhaw also common.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:

Depth of Surface Water: _____ (in.)
Depth to Free Water in Pit: _____ (in.)
Depth to Saturated Soil: _____ (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Data point on wooded hillside slope west of existing building, wetland indicators more predominant downslope. No indicators of wetland hydrology

SOILS

Map Unit Name (Series and Phase): WdB: Woodbridge loam, 3 to 8 percent slopes

Drainage Class: moderately well drained

Taxonomy (Subgroup): Coarse-loamy, mixed, mesic Aquic Dystrochrepts

Field Observations

Confirm Mapped Type? Yes No

Profile Description:

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3"	A1	10YR 3/1			loam
4-8"	A2	10YR 4/4			loam
8-12"	B1	10YR 4/3			loam

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfuric Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Forested upland slope – @20-30' upslope from toe-of-slope where evidence of wetland indicators most evident.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes No (Circle)

Wetland Hydrology Present? Yes No

Hydric Soils Present? Yes No

Is this Sampling Point Within a Wetland? (Circle) Yes No

Remarks:

Non-wetland, mesic wooded slope exhibiting signs of disturbance (invasive vine/rose cover, pit/mount topography from past grading/excavation, some native species but disturbed in last 20 years).

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 11 New King Street (Aerotech) – North Castle NY
Date: 6/11/08
Applicant/Owner:
County: Westchester
Investigator: J.Nash, AKRF, Inc.
State: NY

Do Normal Circumstances exist on the site? **Yes** / No
Community ID: Wooded Stream Corridor - floodplain
Is the site significantly disturbed (Atypical Situation)? Yes / **No**
Transect ID: "B" Wetland
Is the area a potential Problem Area? Yes / **No**
Plot ID: Data Point #2
(If needed, explain on reverse.)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Symplocarpus foetidus	herb	OBL	6. Cornus amomum	shrub	FACW
2. Acer rubrum	tree	FAC	7.		
3. Lindera benzoin	shrub	FACW-	8.		
4. Impatiens capensis	herb	FACW	9.		
5. Ulmus americana	tree	FACW-	10.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-):100%

Remarks: Moist, meandering floodplain, well-defined, distinct boundaries.

HYDROLOGY

X Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0-12"(in.)
Depth to Free Water in Pit: (in.)
Depth to Saturated Soil: 0-20" (in.)

Wetland Hydrology Indicators:
Primary Indicators:
X Inundated
X Saturated in Upper 12 Inches
___ Water Marks
X Drift Lines
X Sediment Deposits
X Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks:
Mapped as NYSDEC and Westchester County stream corridor; Mapped as PFO1E wetland on NWI;

SOILS

Map Unit Name (Series and Phase): RdB: Ridgebury loam, 3 to 8 percent slopes.

Drainage Class: poorly drained and somewhat poorly drained

Taxonomy (Subgroup): coarse-loamy, mixed, nonacid, mesic Aeric Haplaquepts

Field Observations

Confirm Mapped Type? Yes No

Profile Description: **TO COME**

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-6"	A	10YR 4/2	3/6		silty loam
7-10"	B	10YR 4/1	3/6		sandy loam
11-15"	B2	10YR 5/2	4/5		sandy loam

Hydric Soil Indicators:

___	Histosol	___	Concretions
___	Histic Epipedon	X	High Organic Content in Surface Layer in Sandy Soils
___	Sulfuric Odor	___	Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	___	Listed on Local Hydric Soils List
___	Reducing Conditions	___	Listed on National Hydric Soils List
X	Gleyed or Low-Chroma Colors	___	Other (Explain in Remarks)

Remarks: Meets general depleted matrix criteria in most places, elsewhere meets S5: Sandy Redox where accumulation of sandy material in floodplain evident

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	Yes	No	(Circle)
Wetland Hydrology Present?	Yes	No	
Hydric Soils Present?	Yes	No	

Is this Sampling Point Within a Wetland? (Circle) Yes No

Remarks:

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 11 New King Street (Aerotech) – North Castle NY
Applicant/Owner:
Investigator: J. Nash, AKRF, Inc.

Date: 6/12/08
County: Westchester
State: NY

Do Normal Circumstances exist on the site?	Yes	No	Community ID: Forested Wetland
Is the site significantly disturbed (Atypical Situation)?	Yes	No	Transect ID: Flagged Wetland "A"
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	No	Plot ID: Data Point #3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Fraxinus pennsylvanica	Tree	FACW	6. Cornus sericea	shrub	FACW+
2. Acer rubrum	Tree	FAC	7. Rosa multiflora	shrub	FACU
3. Lindera benzoin	shrub	FACW-	8. Rhus radicans	shrub/vine	FAC
4. Dryopteris carthusiana	herb	FAC+	9.		
5. Polygonum persicaria	herb	FACW	10.		

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 80%

Remarks: Vegetation variable but uniformly facultative– overall complex meets hydrophytic vegetation critera, as do soils/hydrology. Other common but typically non-dominant species in forested wetland include smooth blackhaw, jumpseed, broadleaf enchanter's nightshade, northern willow herb, blackberry, phragmites (small patch), others.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:

Depth of Surface Water:	0-2" (in.)
Depth to Free Water in Pit:	NA (in.)
Depth to Saturated Soil:	0-5"(in.)

Wetland Hydrology Indicators:
Primary Indicators:
X Inundated
X Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
X Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
X Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Forested wetland a narrow strip at the toe-of-slope where the Route 120 highway berm occurs. We speculate that the small culvert at the SW corner of the project site is ineffective in draining surface runoff and has allowed saturated soil conditions to develop at the Route 120 highway berm.

SOILS

Map Unit Name (Series and Phase): RdB: Ridgebury loam, 3 to 8 percent slopes.

Drainage Class: poorly drained and somewhat poorly drained

Taxonomy (Subgroup): coarse-loamy, mixed, nonacid, mesic Aeric Haplaquepts

Field Observations

Confirm Mapped Type? Yes No

Profile Description: **TO COME**

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-4"	O	10YR 3/1			
5-7"	A	10YR 4/2	10YR 3/6		concretions
8-12+	A2	10YR5/2	10YR 4/6	10%	redox conc.

Hydric Soil Indicators:

___	Histosol	X	Concretions
___	Histic Epipedon	___	High Organic Content in Surface Layer in Sandy Soils
___	Sulfuric Odor	___	Organic Streaking in Sandy Soils
X	Aquic Moisture Regime	___	Listed on Local Hydric Soils List
X	Reducing Conditions	___	Listed on National Hydric Soils List
X	Gleyed or Low-Chroma Colors	___	Other (Explain in Remarks)

Remarks: Soil meets Field Indicator F3 (Depleted Matrix) throughout flagged wetland area, five soil pits examined. Matrix chroma below 5 inches varies from 10YR 6/1 to 5/2 (highest value/lowest chroma – to – lowest value/highest chroma).

WETLAND DETERMINATION

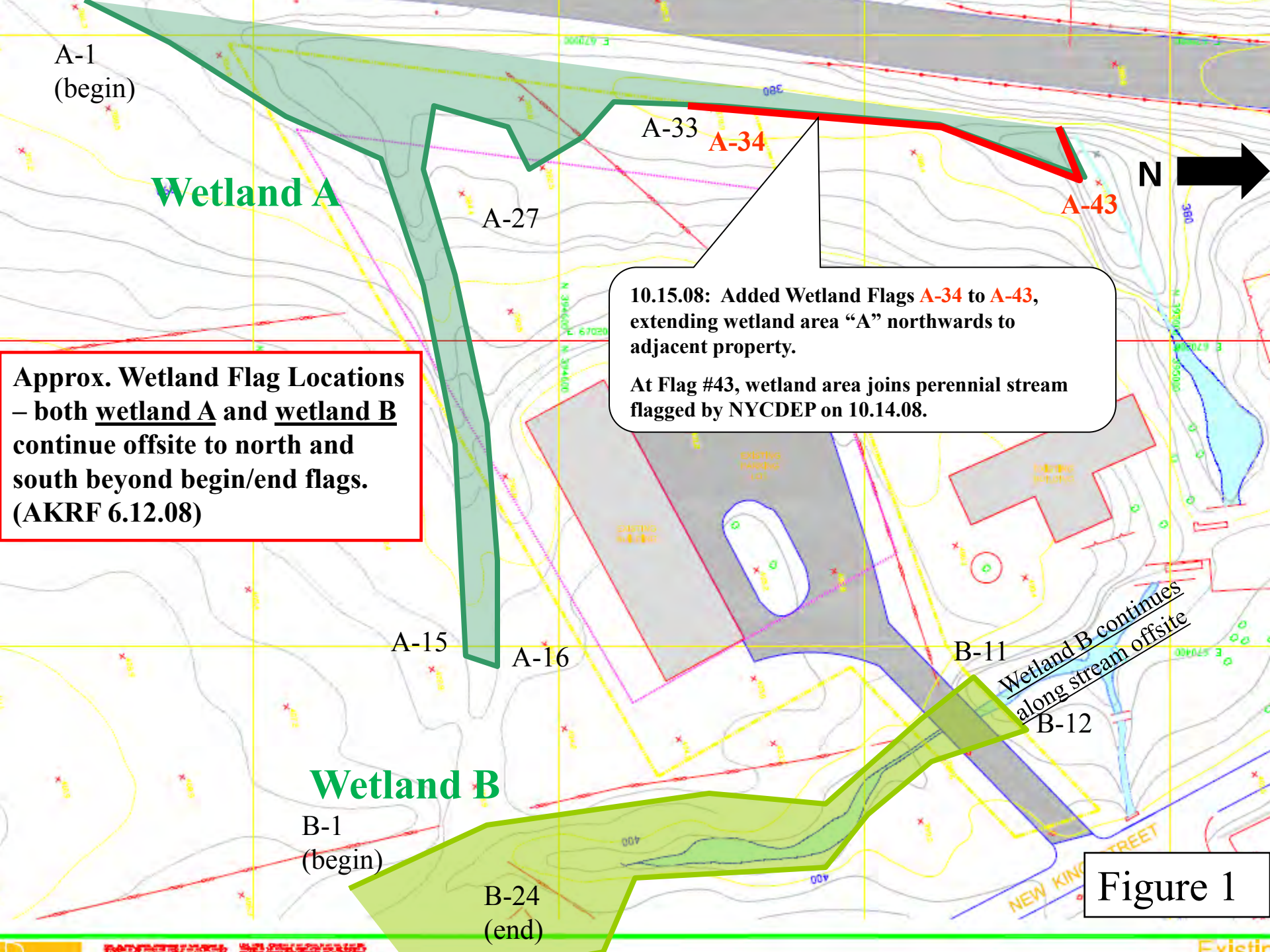
Hydrophytic Vegetation Present? Yes No (Circle)

Wetland Hydrology Present? Yes No

Hydric Soils Present? Yes No

Is this Sampling Point Within a Wetland? (Circle) Yes No

Remarks: Wetland was initially flagged A1-A33 on 6/12/08. Need for project expansion to adjacent parcel resulted in extending the wetland line from flag A34 to A43 on 10/15/08. NOTE: Wetland extends further offsite to the south (beyond flag A-1).


A-1
(begin)
Wetland A
A-27
A-33
A-34
A-43
N
10.15.08: Added Wetland Flags A-34 to A-43, extending wetland area "A" northwards to adjacent property.
At Flag #43, wetland area joins perennial stream flagged by NYCDEP on 10.14.08.
Approx. Wetland Flag Locations – both wetland A and wetland B continue offsite to north and south beyond begin/end flags. (AKRF 6.12.08)
A-15
A-16
B-11
Wetland B continues along stream offsite
B-12
Wetland B
B-1
(begin)
B-24
(end)
Figure 1

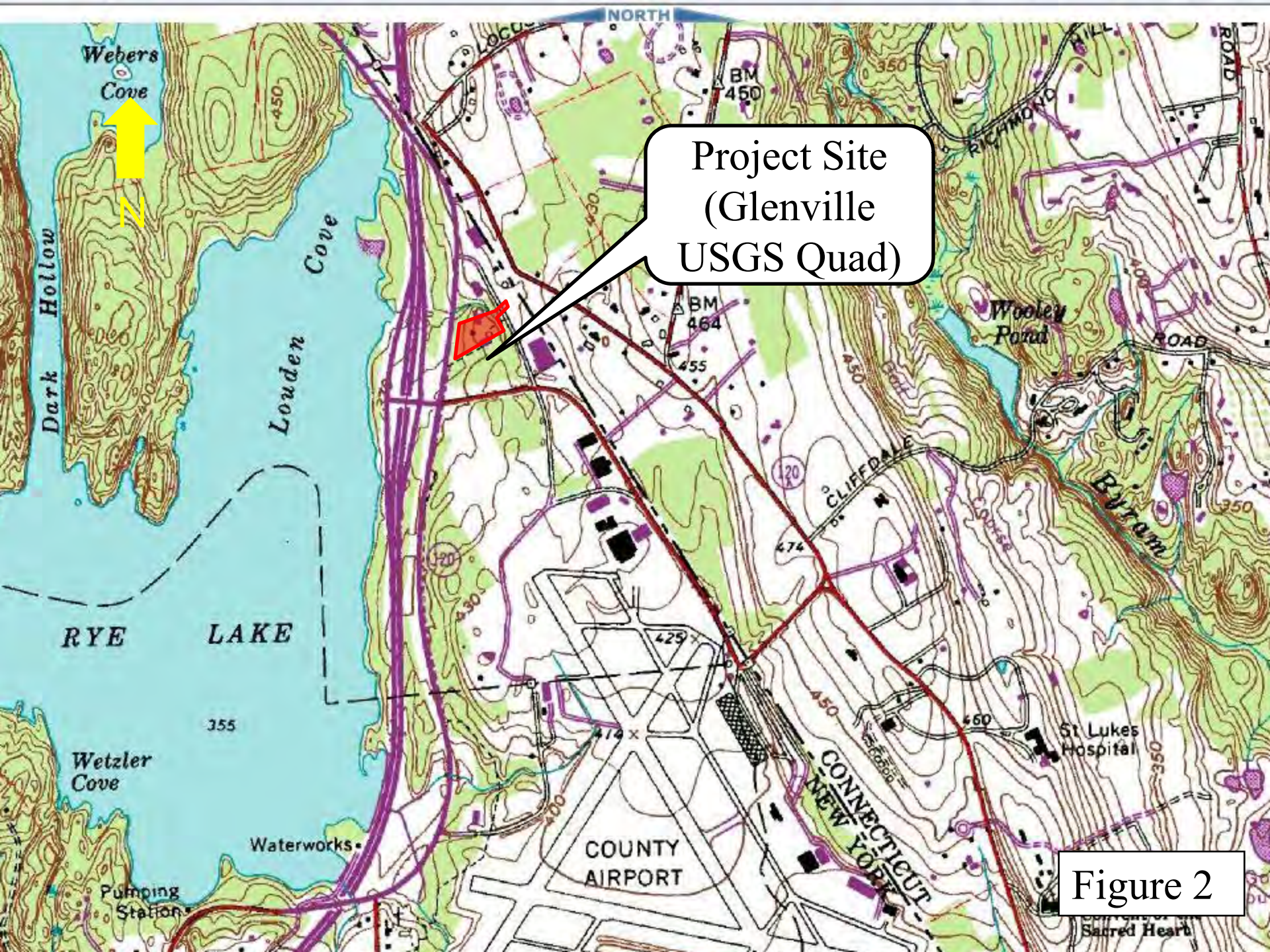

NORTH
Project Site
(Glenville
USGS Quad)
Webers
Cove
N
Dark Hollow
Louden Cove
RYE LAKE
Wetzler
Cove
Waterworks
Pumping
Station
COUNTY
AIRPORT
CONNECTICUT
NEW YORK
CLIFFDALE
ROAD
Woolsey
Pond
St Lukes
Hospital
Sacred Heart
BM
450
BM
464
355
425
474
460

Figure 2

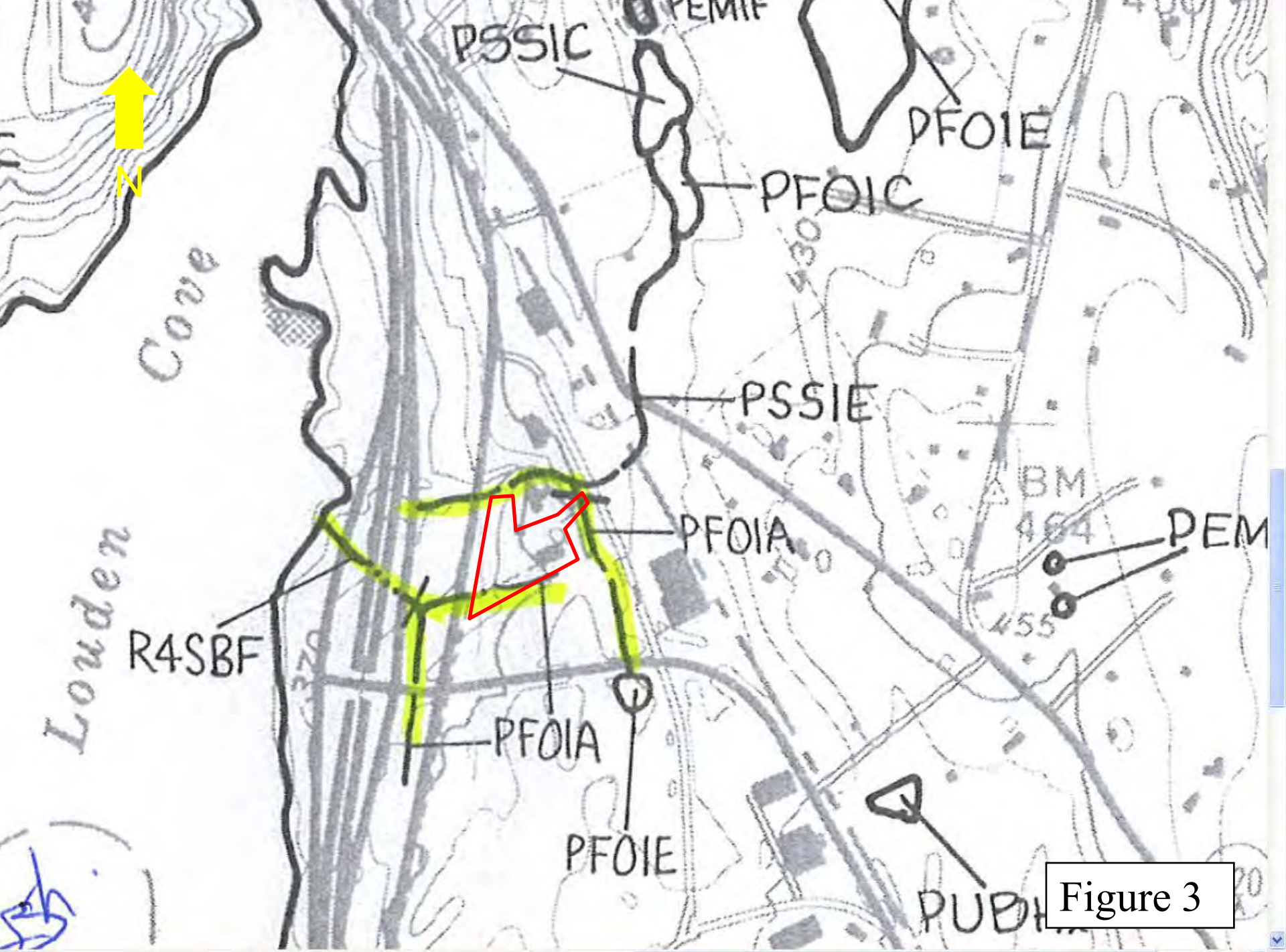
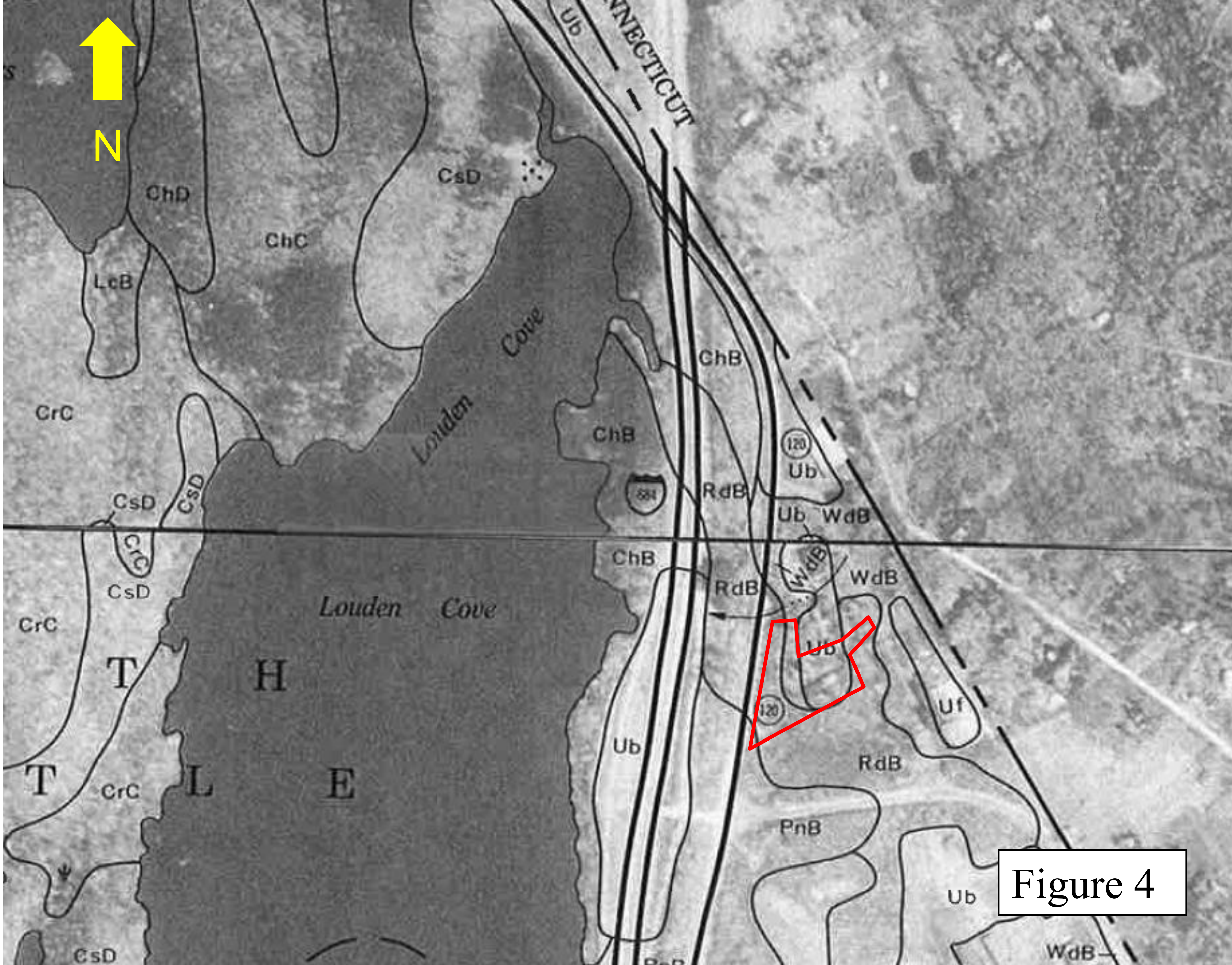

PEMF
PSSIC
PFO1E
PFO1C
N
Louden
Cove
430
PSSIE
BM
464
PEM
PFO1A
455
R4SBF
PFO1A
PFO1E
PUB

Figure 3


N
CONNECTICUT
Ub
CsD
ChD
ChC
LcB
Louden Cove
CrC
ChB
ChB
RdB
Ub
Ub WdB
CsD
CsD
CrC
CsD
ChB
RdB
WdB
WdB
Louden Cove
CrC
Ub
Uf
T H
T L E
CrC
Ub
RdB
PnB
Ub
WdB
CsD
Figure 4


N
©2010 Google - Imagery ©2010 DigitalGlobe, USDA Farm Service Agency, Geo

Figure 5

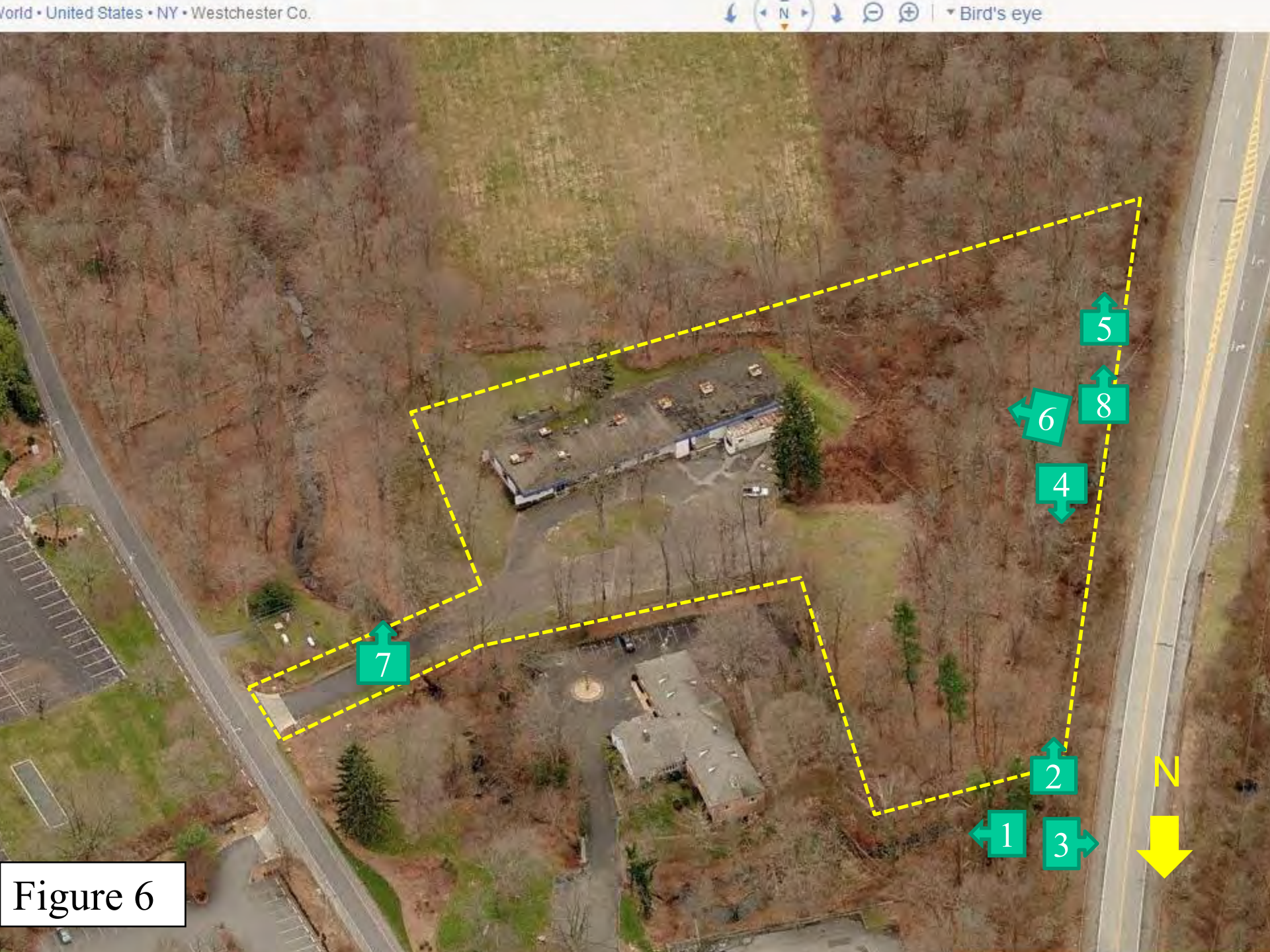
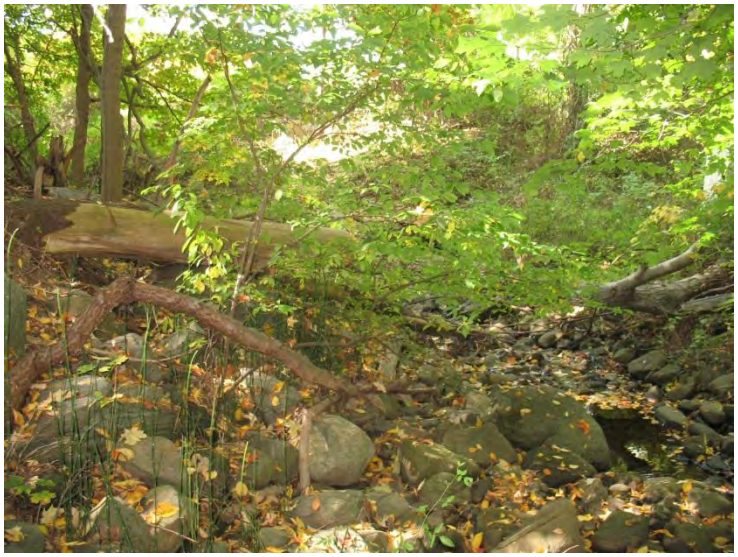


Figure 6

Photograph 1: Onsite Perennial Stream – DEP Flagged. (10.14.2008)



Photograph 2: Showing confluence of Wetland "A" and Perennial Stream. (10.14.2008)

Photograph 3: Culvert conveying Perennial Stream beneath Route 120. (10.29.09)

Photograph 4: Wetland "A", toe-of-slope by Route 120 berm after rain event (10.29.09)

Photograph 5: SW corner of wetland "A". (June, 2008)

Photograph 6: Wetland "A" looking through upland hillside. (1/08)

Photograph 7: Wetland "B" from entryway. (10/08)

Photograph 8: Wetland "A" . (8/2010)

OFFICE OF PARKS · RECREATION · HISTORIC PRESERVATION
NEW YORK STATE

New York State Office of Parks, Recreation and Historic Preservation

Andrew M. Cuomo
Governor

Rose Harvey
Acting Commissioner

Historic Preservation Field Services Bureau
P.O. Box 189, Waterford, New York 12188-0189
518-237-8643 Fax: 518-233-9049
March 1, 2011

Ms. Molly McDonald
AKRF, Inc.
440 Park Avenue South, 7th Floor
New York, New York 10016

Re: FAA,SEQRA,DEC,DOT
Parking Garage for Westchester County Airport
11 New King Street/NORTH CASTLE, Westchester County
10PR02122

Dear Ms. McDonald:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the submitted report *Phase I Archaeological Assessment: Park Place at Westchester Airport, Town of North Castle, New York* completed by AKRF, Inc. and received by our office January 27, 2011. We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966, *as amended*; and its implementing regulations 36 CFR Part 800: Protection of Historic Properties.

Results of the submitted survey indicate that a total of 38 shovel tests were excavated within the area of potential effects (APE) for the proposed project. A total of 25 artifacts were recovered during the field survey. In general, materials recovered from the western portion of the APE were recovered from disturbed soils and consisted primarily of modern debris. Soils in the eastern portion of the project area characterized as re-deposited fill layers. Cultural materials recovered consisted largely of modern refuse (e.g., plastic and Styrofoam). The few chert and quartzite fragments recovered were determined not to be cultural in origin. Additional historic artifacts recovered were determined not to constitute an archaeological site.

It is the determination of AKRF, Inc. that there are no properties listed, or eligible for listing, in the State or National Register of Historic Places within the APE of the proposed project. As such, there will be *no historic properties affected* [as per 36 CFR Part 800, § 800.4(d)(1)] as a result of the proposed project. Based on the information provided, our office concurs with this finding.

Should you have any questions, please feel free to contact me directly at (518) 237-8643, Extension 3288 or via electronic mail at Brian.Yates@oprhp.state.ny.us. If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Wm. B. Yates

Wm. Brian Yates
Historic Preservation Specialist

Appendix C: Press

Westchestergov.com

Robert P. Astorino, Westchester County Executive

NEWS RELEASE

Ned McCormack, Communications Director (914) 995-2932

Contact: Adele Dowling (914) 995-2951

FOR IMMEDIATE RELEASE: JANUARY 28, 2010

TRAVELERS URGED TO GET RIDES TO COUNTY AIRPORT
Flights are full and parking is limited

Don't let the holiday hustle be more of a hassle. If you're flying out of Westchester County Airport for President's week, spring break or the Easter and Passover holidays, get a ride. Don't drive. With more flights to popular destinations and with thousands of people traveling over the next few months, there are simply not enough parking spaces for everyone.

County Transportation Commissioner Lawrence C. Salley said, "Flying out of Westchester is so easy and convenient. But travelers need to keep in mind that this is a busy time for air travel and unfortunately there's just not enough parking at the county airport to accommodate our passengers. We want everyone's trip to and from the airport to be as enjoyable as possible. If you plan ahead and get a ride to the airport, it will be."

Motorists meeting arriving passengers can wait at the cell phone waiting areas until passengers call to say they are ready to be picked up at terminal curbside. The area has an electronic sign giving airline arrival times.

Salley said the airport management, the airlines and the Transportation Security Administration (TSA) work cooperatively to ensure a positive experience for travelers flying out of Westchester. The airlines also help by notifying passengers that parking is limited when reservations are made or emailing them when flights are booked online. Inside the terminal, the TSA is putting additional staff on duty to operate at maximum efficiency and meet the high demand for passenger and baggage screening.

For information on parking alternatives, travelers can visit www.westchestergov.com/airport or call 914-995-RIDE.

#####

Greenwich Time

http://www.greenwichtime.com/scn-gt-a1airportmondayaug20,0,3678185.story?coll=green-top-headlines

Airport parking frustrates passengers

By Neil Vigdor
Staff Writer

August 20, 2007

WHITE PLAINS -- Business traveler Doug Mellinger would not take "no" for an answer when a security guard recently told him he could not park in the garage at Westchester County Airport because it is now being reserved for short-term parking only.

Told he would have to use a satellite lot nearly a mile away on the airport property for long-term parking, Mellinger drove past the security guard to the ticket machine for the garage and entered anyway.

Mellinger, who was on his way to Phoenix Wednesday for a business trip and lives in Stamford, grumbled that he paid an extra $200 for the convenience of flying out Westchester County Airport.

"You're killing me," Mellinger told the security guard when he was directed to the satellite lot. "I've been coming here 40 years, and this is b....."

While summer is normally a slow period for travel at the airport, which borders Greenwich, county officials say this summer has been the exception. Lured by the introduction of low-fare flights to Florida by JetBlue and AirTran airways, passengers are flocking in droves to Westchester.

Passenger complaints over the lack of available parking at the airport are becoming nearly as common as setting off the metal detector at security, according to county officials.

"We're really in the survival mode and trying to accommodate the customers as best we can," said Peter Scherrer, the airport's manager.

According to the airport, 226,297 passengers flew out of White Plains from the beginning of May to the end of June, a 58 percent increase from the 143,178 who departed during the same three months last year.

As a result, the airport's 1,200-car garage, where parking costs $22.60 a day, is often full. When it approaches capacity, security guards have been diverting cars that will be left longer than a day to a long-term parking lot at the other end of the airport property.

"I wish I would have known that. I have about an hour and 15 minutes until my flight," said a woman passenger who chewed out a security guard Wednesday.

Gordie Hoilett, who bore the brunt of woman's complaint, said he has never seen the garage so full at this time of the year.

"Busy, busy. I'm on my feet all day," said Hoilett, who kept having to give drivers directions to the satellite lot.

Some refused to take the roundabout route past the terminal and back towards the airport's entrance after seeing Hoilett wave others into the garage.

Others have been even less understanding, according to airport officials, who said security guards have been spat at and cursed by irate travelers.

The county is urging travelers to get dropped off at the terminal or take a new shuttle service it is offering from the White Plains train station if they don't want to cope with parking in a satellite lot.

"Is it fun parking down there? No," Scherrer said.

The airport runs shuttle buses 24 hours a day to the lot. Parking rates are the same for the satellite lot as the garage.

Inside the terminal, there were other signs of overcrowding. Most of the seats in the main departure lounge were full. A number of passengers opted to sit in the baggage claim area or other parts of the terminal outside the security checkpoint, which is encroaching on other areas.

Stewart Wild, who works for a Memphis architectural firm and has been flying into the airport for the past six months on business, said the baggage claim area was crammed with people when he arrived at 11:30 p.m. Tuesday.

When he went back to the airport Wednesday for his return flight, Wild said the security line was quite long, so he decided to wait in a quieter part of the terminal.

Along the airport's eastern property line, northwest Greenwich residents are monitoring the influx of passengers with a degree of concern.

"I'd like for it not be a magnet," said Joan Caldwell, chairman of the Representative Town Meeting District 10/Northwest delegation.

Caldwell said she doesn't see the airport's popularity with local travelers declining.

"As long as the people from Connecticut, the people from Greenwich specifically, continue to want to fly out of there, something is going to have to be done to accommodate them," Caldwell said.

Despite a recent increase in the airport's parking rate from $21.50 a day, Caldwell said she doesn't see it as a deterrent for travelers considering driving themselves.

"When you have people willing to pay upwards of $4 million and $5 million for a house, $22 a day to park is not hard to believe," Caldwell said. "They want convenience."

Airport officials have proposed building an addition onto the terminal for the security and baggage screening equipment, which take up considerable space. A second garage or the expansion of the airport's garage, which was originally designed to hold 2,000 cars but scaled back, also are being considered, according to Scherrer. For the time being, Scherrer said the airport was trying to make the best of a difficult parking situation.

"You may not like it, but we'll get you something," Scherrer said. "I don't want to ruin somebody's vacation."

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Appendix D: Title Report

First American Title Insurance Company of New York
1 Water Street, 2nd Floor, White Plains, NY 10601
(914)428-3433 - Fax (914)428-0159

FACSIMILE TRANSMISSION

DATE: 08/13/2008
PAGES:

TO: Cuddy & Feder, LLP
FAX NO.: 1(914)761-5372
ATTN: Eon Nichols

FROM: Antonio Vozza, Esq.

RE: File No.: 3004-244305

SUBJECT:

Note: The information transmitted above with this page is confidential, for use of the individual named above, and may be privileged. If you are not the intended recipient, you are hereby notified that any retention, copying, or distribution of this fax in any form is strictly prohibited. If you have received this transmission in error, please notify the sender by telephone and dispose of the same in the manner that will be requested.

First American Title Insurance Company of New York
1 Water Street, 2nd Floor, White Plains, NY 10601
(914)428-3433 - Fax (914)428-0159

August 13th, 2008

Cuddy & Feder, LLP
445 Hamilton Avenue, 14th Floor
White Plains, NY 10601
Attn: Eon Nichols

RE: Title No.: 3004-244305
Premises: 11 New King Street,
White Plains, New York
Owners:
Purchaser(s): 11 New King Street LLC

Dear Eon Nichols:

With reference to the above mentioned title report, enclosed please find the following:

Amended Schedule "A"

Amended Exception No. 3 on Schedule B-II

Added Exception No. 8 to Schedule B-II

Survey Reading

Kindly attach this letter and the enclosure(s) to the report in your possession and consider same a part thereof.

Very truly yours,

Antonio Vozzalabb

Antonio Vozza
VP & Counsel

AV/abb

Enclosures

First American Title Insurance Company of New York

Title No. 3004-244305
AMENDED 08/13/2008 (abb)

SCHEDULE "A"

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE TOWN OF NORTH CASTLE, COUNTY OF WESTCHESTER AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WESTERLY SIDE OF NEW KING STREET WHERE IT IS INTERSECTED BY THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS NOW OR FORMERLY OF MEEHANITE METAL CORP., FORMERLY OF EDWARD WOLFE;

THENCE ALONG THE WESTERLY SIDE OF NEW KING STREET, SOUTH 27° 15' 00" EAST 50.00 FEET TO THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS NOW OR FORMERLY OF NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY;

THENCE ALONG SAID DIVISION LINE AND THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS NOW OR FORMERLY OF NEW YORK, WESTCHESTER AND BOSTON RAILWAY CO., THE FOLLOWING COURSES AND DISTANCES:

SOUTH 48° 14' 50" WEST 154.96 FEET;
SOUTH 27° 15' 00" EAST 144.89 FEET; AND
SOUTH 61° 58' 18" WEST 555.43 FEET TO THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS OF THE INTER-STATE ROUTE 502 AS SHOWN ON MAP FILED IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS, AS MAP NO. 14457;

THENCE ALONG SAID LAND NORTH 9° 35' 30" EAST 190.72 FEET TO THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LAND OF THE CITY OF NEW YORK;

THENCE ALONG THE SAME, NORTH 43° 04' 40" EAST 279.32 FEET (DEED) 279.56 FEET (SURVEY) TO LANDS NOW OR FORMERLY OF MEEHANITE METAL CORP., FORMERLY OF EDWARD WOLFE;

THENCE ALONG THE WESTERLY AND SOUTHERLY LINES OF THE LAST MENTIONED LANDS AND ALONG THE CENTER OF AN OLD STONE WALL THE FOLLOWING COURSES AND DISTANCES:

SOUTH 13° 11' 00" EAST 1.38 FEET (DEED) 1.50 FEET (SURVEY);
NORTH 72° 34' 50" EAST 201.87 FEET (DEED) 201.68 (SURVEY);
NORTH 56° 47' 10" EAST 20.22 FEET; AND
NORTH 48° 14' 50" EAST 112.94 FEET TO THE WESTERLY SIDE OF NEW KING STREET AT THE POINT OR PLACE OF BEGINNING.

THE policy to be issued under this report will insure the title to such buildings and improvements erected on the premises, which by law constitute real property.

FOR CONVEYANCING ONLY: TOGETHER with all the right, title and interest of the party of the first part, of in and to the land lying in the street in front of and adjoining said premises.

First American Title Insurance Company of New York

Title No. 3004-244305
AMENDED 08/13/2008 (abb)

SCHEDULE "B-II"
(EXCEPTIONS)

THE POLICY WILL INCLUDE AS EXCEPTIONS TO TITLE THE FOLLOWING MATTERS UNLESS THEY ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY:

1. Rights of tenants or persons in possession, if any.

2. Taxes, tax liens, tax sales, water rates, sewer rents and assessments set forth herein.

3. **AMENDED 08/13/2008 (abb)** Survey reading herein.

4. There are three open mortgages of record. (See Mortgage Schedule herein)

5. Assignment of leases and rents recorded 5/22/2003 in Document Control #431280919.

6. The following Financing Statement(s) (UCC-1) must be disposed of:

Debtor:	Aerotech Realty, Inc.
Secured Party:	Hudson United Bank
File No.:	46009-6003
Filed:	1/9/2006
Covers:	Fixtures and Equipment
Land (Block & Lot):	Section 3 Block 4 Lot 14B

7. Easement agreement recorded 3/23/2005 in Document Control #443410941 (see post).

8. **ADDED 08/13/2008 (abb)** Policy excepts the rights of others in and to the natural and unobstructed flow of the brook and stream crossing the premises described in Schedule A herein.

First American Title Insurance Company of New York

Title No. 3004-244305
AMENDED 08/13/2008 (abb)

SURVEY READING

Survey made by Ralph L. MacDonald Co., Engineers & Land Surveyors dated 6/11/2002;

Shows the following:

(a) Macadam driveway extends onto New King Street. FOR MORTGAGE POLICY ONLY: Policy insures against monetary loss by reason of the enforced removal thereof.

(b) Brook and stream cross subject premises at northeast and southwest portions.

(c) Stone wall lies an undisclosed distance East of the southeasterly record line.

(d) Stone walls on subject premises extend an undisclosed distance onto premises adjoining to the South.

(e) Variation between the location of stone wall and the northwesterly record line. FOR MORTGAGE POLICY ONLY: Policy insures against monetary loss by reason of the enforced removal thereof.

(f) Center line of stone wall lies generally along northerly record line, said stone wall extends an undisclosed distance onto premises adjoining to the North.

(g) Stone wall on northeasterly record line lies partially on subject premises and partially on premises adjoining to the North.

(h) Center line of stone wall is as much as 3.5 feet South of the northeasterly record line.

NOTE: Projections over and encroachments onto interior lines are not made a part of this survey reading.

NOTE: Subject to any state of facts that an accurate survey would disclose since 6/11/2002.

DELIVERING THE INFORMATION YOU NEED—QUICKLY

FIRST AMERICAN

First American Title

Order Confirmation

First American Title Insurance Company of New York
1 Water Street, 2nd Floor
White Plains, New York 10601

Phone: (914)428-3433
Fax: (914)428-0159

TITLE NUMBER: 3004-244305 **SUBMITTED BY:** Wayne R. Baird
APPLICATION DATE: 07/25/2008 **REPORT DATE:** 07/31/2008 **TYPED BY:** Stephanie Smith
AMENDED DATE: 07/31/2008

APPLICANT:
Eon Nichols
Cuddy & Feder, LLP
445 Hamilton Avenue, 14th Floor
White Plains, NY 10601
Phone #(914)761-1300
Fax #(914)761-5372
Email:
REF:

BANK ATTORNEY:
Will Advise

SELLER'S ATTORNEY:
Will Advise

ADDITIONAL COPIES:

TRANSACTION TYPE: Sale w/Mortgage
AMOUNT OF INSURANCE: **FEE: $** 0.00 **MTGE: $** 0.00

INSURED MORTGAGEE: Will Advise,
INSURED FEE: To Be Determined
RECORD OWNER: AEROTECH REALTY INC.

PREMISES: 11 New King Street,
White Plains, New York

DISTRICT:

SECTION:
3

BLOCK:
4

LOTS:
14B

COUNTY OF:
Westchester

TOWN:

Subdivision/Condo Name/Filed Map:
APP DESC:
UNIT #:
SURVEY INSTRUCTIONS: Will Advise

Order Confirmation

First American Title Insurance Company of New York

FIRST AMERICAN TITLE INSURANCE COMPANY OF NEW YORK WEBSITE

First American Title Insurance Company of New York is pleased to announce our updated website which can be accessed at http://www.Firstamny.com. This site will enable you to calculate charges for premiums, endorsements, taxes, recording fees and more.

In addition you can now place an order online, download forms and documents or just peruse our underwriting library.

We thank you for giving us the opportunity to work with you on this transaction. We hope to meet all of your title needs and look forward to working with you in the future.

Title Report

First American Title Insurance Company of New York
1 Water Street, 2nd Floor
White Plains, New York 10601
Phone: (914)428-3433 - Fax: (914)428-0159

CERTIFICATE OF TITLE

First American Title Insurance Company of New York

Title No. 3004-244305

First American Title Insurance Company of New York ("the Company") certifies to the "proposed insured(s)" listed herein that an examination of title to the premises described in Schedule A has been made in accordance with its usual procedure and agrees to issue its standard form of title insurance policy authorized by the Insurance Department of the State of New York, in the amount set forth herein, insuring the interest set forth herein, and the marketability thereof, in the premises described in Schedule A, after the closing of the transaction in conformance with the requirements and procedures approved by the Company and after the payment of the premium and fees associated herewith excepting (a) all loss or damage by reason of the estates, interests, defects, objections, liens, encumbrances and other matters set forth herein that are not disposed of to the satisfaction of the Company prior to such closing or issuance of the policy (b) any question or objection coming to the attention of the Company before the date of closing, or if there be no closing, before the issuance of the policy.

This Agreement to insure shall terminate (1) if the prospective insured, his or her attorney or agent makes any untrue statement with respect to any material fact or suppresses or fails to disclose any material fact or if any untrue answers are given to material inquires by or on behalf of the Company; or (2) upon the issuance of title insurance in accordance herewith. In the event that this Certificate is endorsed and redated by an authorized representative of the Company after the closing of the transaction and payment of the premium and fees associated herewith, such "redated" Certificate shall serve as evidence of the title insurance issued until such time as a policy of title insurance is delivered to the insured. Any claim made under the redated Certificate shall be restricted to the conditions, stipulations and exclusions from coverage of the standard form of title insurance policy issued by the Company.

Countersigned

By: Gail P. Benkwitt

Gail P. Benkwitt, Secretary

First American Title Insurance Company of New York

By: Steven M Napolitano

Steven M. Napolitano, President

First American Title Insurance Company of New York

CLOSING REQUIREMENTS

1. CLOSING DATE: In order to facilitate the closing of title, please notify the closing department at least 48 hours prior to the closing, of the date and place of closing, so that searches may be continued.

2. PROOF OF IDENTITY: Identity of all persons executing the papers delivered on the closing must be established to the satisfaction of the Company.

3. POWER OF ATTORNEY: If any of the closing instruments are to be executed pursuant to a Power of Attorney, a copy of such Power should be submitted to the Company prior to closing. THE IDENTITY OF THE PRINCIPAL EXECUTING THE POWER AND THE CONTINUED EFFECTIVENESS OF THE POWER MUST BE ESTABLISHED TO THE SATISFACTION OF THE COMPANY. The Power must be in recordable form.

4. CLOSING INSTRUMENTS: If any of the closing instruments will be other than commonly used forms or contain unusual provisions, the closing can be simplified and expedited by furnishing the Company with copies of the proposed documents in advance of closing.

5. LIEN LAW CLAUSE: Deeds and mortgages must contain the covenant required by Section 13 of the Lien Law. The covenant is not required in deeds from referees or other persons appointed by a court for the sole purpose of selling property.

6. REFERENCE TO SURVEYS AND MAPS: Closing instruments should make no reference to surveys or maps unless such surveys or maps are on file.

7. INTERMEDIARY DEEDS: In the event an intermediary will come into title at closing, other than the ultimate insured, the name of such party must be furnished to the Company in advance of closing so that appropriate searches can be made and relevant exceptions considered.

MISCELLANEOUS PROVISIONS

1. THIS CERTIFICATE IS INTENDED FOR LAWYERS ONLY. YOUR LAWYER SHOULD BE CONSULTED BEFORE TAKING ANY ACTION BASED UPON THE CONTENTS HEREOF.

2. THE COMPANY'S CLOSER MAY NOT ACT AS LEGAL ADVISOR FOR ANY OF THE PARTIES OR DRAW LEGAL INSTRUMENTS FOR THEM. THE CLOSER IS PERMITTED TO BE OF ASSISTANCE ONLY TO AN ATTORNEY.

3. If the insured contemplates making improvements to the property costing more than twenty per centum of the amount of insurance to be issued hereunder, we suggest that the amount of insurance be increased to cover the cost thereof; otherwise, in certain cases the insured will become a co-insurer.

4. Our policy will except from coverage any state of facts which an accurate survey might show, unless survey coverage is ordered. When such coverage is ordered, this certificate will set forth the specific survey exceptions which we will include in our policy. Whenever the word "trim" is used in any survey exceptions from coverage, it shall be deemed to include, roof cornices, mouldings, belt courses, water tables, keystones, pilasters, portico, balcony all of which project beyond the street line.

5. Our examination of the title includes a search for any unexpired financing statements which affect fixtures and which have been properly filed and indexed pursuant to the Uniform Commercial Code in the office of the recording officer of the county in which the real property lies. No search has been made for other financing statements because we do not insure title to personal property. We will on request, in connection with the issuance of a title insurance policy, prepare such search for an additional charge. Our liability in connection with such search is limited to $1,000.00.

6. This company must be notified immediately of the recording or the filing, after the date of this certificate, of any instrument and of the discharge or other disposition of any mortgage, judgment, lien or any other matter set forth in this certificate and of any change in the transaction to be insured or the parties thereto. The continuation will not otherwise disclose the disposition of any lien.

7. If affirmative insurance is desired regarding any of the restrictive covenants with respect to new construction or alterations, please request such insurance in advance of closing as this request should not be considered at closing.

8. If it is discovered that there is additional property or an appurtenant easement for which insurance is desired, please contact the Company in advance of closing so that an appropriate title search may be made. In some cases, our rate manual provides for an additional charge for such insurance.

First American Title Insurance Company of New York

Proposed Insured		Title No.:	3004-244305
Purchaser:	To Be Determined	Effective Date:	06/30/2008
Mortgagee:	Will Advise	Redated:	

Amount of Insurance:
Fee: $0.00
Mortgage: $0.00

THIS COMPANY CERTIFIES that a good and marketable title to the premises described in Schedule "A", subject to the liens, encumbrances and other matters, if any, set forth in this certificate may be conveyed and or mortgaged by:

AEROTECH REALTY INC.

Who acquired title by deed from Aerotech World Trade Corp. dated 12/31/1986 recorded 3/26/1987 in Liber 8776 Cp 302.

Premises described in Schedule "A" are known as:

Address:	11 New King Street, White Plains, New York		
County:	Westchester	City:	White Plains

Section: 3

Block: 4

Lot: 14B

For any Title Clearance Questions
on this Report please call
ANTONIO VOZZA
VICE PRESIDENT AND COUNSEL
(914) 286-6426

RJW/slp

First American Title Insurance Company of New York

NOTICE

First American will collect fees to enable the recording of documents for this transaction. If it is thereafter determined that a Lender paid all or a portion of those recording fees, First American will promptly refund the amount paid by the Lender to the party from whom it was collected.

First American Title Insurance Company of New York

Title No. 3004-244305

SCHEDULE "A"

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE TOWN OF NORTH CASTLE, COUNTY OF WESTCHESTER AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WESTERLY SIDE OF NEW KING STREET WHERE IT IS INTERSECTED BY THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS NOW OR FORMERLY OF MEEHANITE METAL CORP., FORMERLY OF EDWARD WOLFE;

THENCE ALONG THE WESTERLY SIDE OF NEW KING STREET, SOUTH 27° 15' 00" EAST 50.00 FEET TO THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS NOW OR FORMERLY OF NEW YORK, NEW HAVEN AND HARTFORD RAILROAD COMPANY;

THENCE ALONG SAID DIVISION LINE AND THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS NOW OR FORMERLY OF NEW YORK, WESTCHESTER AND BOSTON RAILWAY CO., THE FOLLOWING COURSES AND DISTANCES:

SOUTH 48° 14' 50" WEST 154.96 FEET;
SOUTH 27° 15' 00" EAST 144.89 FEET; AND
SOUTH 61° 58' 18" WEST 555.43 FEET TO THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LANDS OF THE INTER-STATE ROUTE 502 AS SHOWN ON MAP FILED IN THE WESTCHESTER COUNTY CLERK'S OFFICE, DIVISION OF LAND RECORDS, AS MAP NO. 14457;

THENCE ALONG SAID LAND NORTH 9° 35' 30" EAST 190.72 FEET TO THE DIVISION LINE BETWEEN THE PREMISES HEREIN DESCRIBED AND LAND OF THE CITY OF NEW YORK;

THENCE ALONG THE SAME, NORTH 43° 04' 40" EAST 279.32 FEET TO LANDS NOW OR FORMERLY OF MEEHANITE METAL CORP., FORMERLY OF EDWARD WOLFE;

THENCE ALONG THE WESTERLY AND SOUTHERLY LINES OF THE LAST MENTIONED LANDS AND ALONG THE CENTER OF AN OLD STONE WALL THE FOLLOWING COURSES AND DISTANCES:

SOUTH 13° 11' 00" EAST 1.38 FEET;
NORTH 72° 34' 50" EAST 201.87 FEET;
NORTH 56° 47' 10" EAST 20.22 FEET; AND
NORTH 48° 14' 50" EAST 112.94 FEET TO THE WESTERLY SIDE OF NEW KING STREET AT THE POINT OR PLACE OF BEGINNING.

THE policy to be issued under this report will insure the title to such buildings and improvements erected on the premises, which by law constitute real property.

FOR CONVEYANCING ONLY: TOGETHER with all the right, title and interest of the party of the first part, of in and to the land lying in the street in front of and adjoining said premises.

First American Title Insurance Company of New York

Title No. 3004-244305

SCHEDULE "B-I"
(REQUIREMENTS)

THE FOLLOWING ARE REQUIREMENTS TO BE COMPLIED WITH FOR A TITLE POLICY TO ISSUE:

1. A copy of the Contract of Sale must be submitted for consideration prior to closing.

   NOTE: When applicable, a copy of the Contract of Sale must be submitted with the New York City Real Property Transfer Tax Return (RPT) when the consideration is $400,000.00 or more.

2. Closing mortgage/deed must contain the following recital: Being the same premises conveyed to the parties of the first part herein by deed recorded on 3/26/1987 in(as) Liber 8776 Cp 302.

3. Searches, including judgments, federal tax liens and bankruptcies have been run against AEROTECH REALTY INC., the certified owner(s) herein and the following must be disposed of: NO RETURNS

4. If the present transaction consists in whole or in part of a conveyance or lease by a corporate grantor or lessor, there must be compliance with Sections 615 and 909 of the Business Corporation Law.

   The vote of shareholders holding two - thirds of the outstanding shares of the stock of the corporation entitled to be voted is required at a meeting duly called to approve the sale or lease of all or substantially all of the assets of a corporation not made in the usual course of business; provided, however, that a majority vote of the shares outstanding and entitled to be voted is required for a corporation formed after February 22, 1998 and for a corporation formed prior thereto, the certificates of incorporation of which provides for a majority vote.

   Approval of such a sale or lease may be obtained without a meeting on the written consent of the holders of all outstanding shares entitled to be voted or, if the certificate of incorporation so permits, on the written consent of the holders of outstanding shares of no less than the minimum number of votes required by the certificate of incorporation to authorize an action at a meeting at which all shares entitled to vote were present and voted.

   Proofs showing the authority upon which the conveyance or lease is to be made should be submitted to counsel for the Company in advance of closing. The instrument on closing should recite the authority for the conveyance or lease.

5. The name of the proposed mortgagor must be disclosed to the Company in advance of closing so that the appropriate bankruptcy and lien searches can be run.

6. If the proposed mortgagor is an entity, the Certificate (Articles) and Agreements relating to its formation and operation and any amendments thereto and proof of its good standing and authority to acquire or lease and mortgage under the laws of the state (country) of its formation must be furnished the Company in advance of the closing.

7. NOTE: Westchester County has imposed a mortgage recording tax of .0025 (1/4%) of the principal amount of the mortgage, in addition to the New York State portion of the tax, for an aggregate mortgage recording tax in Westchester County (outside of the City of Yonkers) of 1.30 %.

8. To verify at closing the identity of the persons who are executing closing documents, two forms of identification, at least one of which is to contain a photograph, is required to be presented.

First American Title Insurance Company of New York

Title No. 3004-244305

SCHEDULE "B-I" Continued
(REQUIREMENTS)

THE FOLLOWING ARE REQUIREMENTS TO BE COMPLIED WITH FOR A TITLE POLICY TO ISSUE:

9. FOR INFORMATION ONLY:

RE: Real Property Tax Payments

NOTE: The recording of documents has been significantly delayed by many county recording offices in New York State. When real estate tax payments become due prior to the recording of a deed, the local tax assessor may not have sufficient information as to where tax bills are to be sent. Where this is an issue, it may be advisable to contact the office of your local tax assessor with a copy of the closing deed. First American is not responsible for the failure to receive real estate tax bills or for any additional charges that may result from the failure to timely pay such amounts. The prompt payment of real estate taxes is the responsibility of the property owner and its mortgage lender.

First American Title Insurance Company of New York

Title No. 3004-244305

SCHEDULE "B-II"
(EXCEPTIONS)

THE POLICY WILL INCLUDE AS EXCEPTIONS TO TITLE THE FOLLOWING MATTERS UNLESS THEY ARE DISPOSED OF TO THE SATISFACTION OF THE COMPANY:

1. Rights of tenants or persons in possession, if any.

2. Taxes, tax liens, tax sales, water rates, sewer rents and assessments set forth herein.

3. Any state of facts which a guaranteed survey of current date would disclose.

4. There are three open mortgages of record. (See Mortgage Schedule herein)

5. Assignment of leases and rents recorded 5/22/2003 in Document Control #431280919.

6. The following Financing Statement(s) (UCC-1) must be disposed of:

Debtor:	Aerotech Realty, Inc.
Secured Party:	Hudson United Bank
File No.:	46009-6003
Filed:	1/9/2006
Covers:	Fixtures and Equipment
Land (Block & Lot):	Section 3 Block 4 Lot 14B

7. Easement agreement recorded 3/23/2005 in Document Control #443410941 (see post).

First American Title Insurance Company of New York

Title No. 3004-244305

SURVEY READING

First American Title Insurance Company of New York

Title No. 3004-244305

MORTGAGE SCHEDULE

MORTGAGE 'A'

MORTGAGE made by AEROTECH WORLD TRADE CORP. to CONNECTICUT NATIONAL BANK in the amount of dated 8/20/1986, recorded 8/25/1986 in (as) Liber 10199 Mp 218. (Mortgage Tax Paid:)

ASSIGNMENT OF MORTGAGE made by FLEET BANK, AS SUCCESSOR BY MERGER TO CONNECTICUT NATIONAL BANK to PURCHASE ACQUISITION COMPANY, LLC dated 9/11/1998, recorded 12/31/1998 in (as) Liber 24972 Mp 44. Assigns Mortgage(s) 'A'.

ASSIGNMENT OF MORTGAGE made by PURCHASE ACQUISITION COMPANY, LLC to METROPOLITAN BANK AND TRUST COMPANY dated 10/9/1998, recorded 1/4/1999 in (as) Liber 24982 Mp 256. Assigns Mortgage(s) 'A'.

ASSIGNMENT OF MORTGAGE made by METROPOLITAN BANK AND TRUST COMPANY to HUDSON UNITED BANK dated 6/19/2002, recorded 5/22/2003 in (as) Document Control #431280906. Assigns Mortgage(s) 'A'.

FOR CONSOLIDATION SEE MORTGAGE 'B'

MORTGAGE 'B'

GAP MORTGAGE made by AEROTECH REALTY, INC. to HUDSON UNITED BANK in the amount of dated 6/21/2002, recorded 5/22/2003 in (as) Document Control #431280907. (Mortgage Tax Paid:)

CONSOLIDATION, EXTENSION AND MODIFICATION AGREEMENT made by and between AEROTECH REALTY, INC. and HUDSON UNITED BANK dated 6/21/2002, recorded 5/22/2003 in (as) Document Control #431280910. Consolidates Mortgages 'A' and 'B' to form a single lien in the amount of and interest.

FOR CONSOLIDATION SEE MORTGAGE 'C'

MORTGAGE 'C'

MORTGAGE made by AEROTECH REALTY, INC. to HUDSON UNITED BANK in the amount of dated 12/23/2005, recorded 3/17/2006 in (as) Document Control #460720238. (Mortgage Tax Paid:)

CONSOLIDATION, EXTENSION AND MODIFICATION AGREEMENT made by and between AEROTECH REALTY, INC. and HUDSON UNITED BANK dated 12/23/2005, recorded 3/17/2006 in (as) Document Control #460720245. Consolidates Mortgages 'A' through 'C' to form a single lien in the amount of and interest.

Mortgages 'A' through 'C', as consolidated, may be assigned and/or satisfied by:

HUDSON UNITED BANK

This title report does not show all the terms and provisions of the mortgage(s) set forth herein. Interested parties should contact the holder(s) thereof to ascertain the terms, covenants and conditions contained therein, and to determine if there are any unrecorded amendments or modifications thereto.

Exception 7

443410941EASV

Control Number	W.ID Number	Instrument Type
443410941	2004341-000379	EAS

WESTCHESTER COUNTY RECORDING AND ENDORSEMENT PAGE
(THIS PAGE FORMS PART OF THE INSTRUMENT)
*** DO NOT REMOVE ***

THE FOLLOWING INSTRUMENT WAS ENDORSED FOR THE RECORD AS FOLLOWS:

TYPE OF INSTRUMENT EAS - EASEMENT
FEE PAGES 6 TOTAL PAGES 6

RECORDING FEES	
STATUTORY CHARGE	$6.00
RECORDING CHARGE	$18.00
RECORD MGT. FUND	$19.00
RP 5217	$0.00
TP-584	$5.00
CROSS REFERENCE	$0.00
MISCELLANEOUS	$0.00
TOTAL FEES PAID	$48.00

TRANSFER TAXES	
CONSIDERATION	$0.00
TAX PAID	$0.00
TRANSFER TAX #	11002

RECORDING DATE 03/23/2005
TIME 16:19:00

MORTGAGE TAXES	
MORTGAGE DATE	
MORTGAGE AMOUNT	$0.00
EXEMPT	
COUNTY TAX	$0.00
YONKERS	$0.00
BASIC	$0.00
ADDITIONAL	$0.00
SUBTOTAL	$0.00
MTA	$0.00
SPECIAL	$0.00
TOTAL PAID	$0.00

SERIAL NUMBER
DWELLING
THE PROPERTY IS SITUATED IN WESTCHESTER COUNTY, NEW YORK IN THE:

TOWN OF NORTH CASTLE

WITNESS MY HAND AND OFFICIAL SEAL

LEONARD N. SPANO
WESTCHESTER COUNTY CLERK

Record & Return to:
ROLAND A BARONI ESQ
175 MAIN ST
SUITE 800
WHITE PLAINS, NY 10601

ERD
SP
MaC

#941

Record and Return to:
Roland A. Baroni, Esq.
Stephens, Baroni, Reilly & Lewis, LLP
175 Main Street, Suite 800
White Plains, New York 10601

EASEMENT AGREEMENT

THIS EASEMENT AGREEMENT ("Easement Agreement"), made as of the 28th day of October, 2004, by and between the Town of North Castle, a municipal corporation with an address at 15 Bedford Road, Armonk, New York 10504 (hereinafter the "Grantor") Aerotech Realty Incorporated, a New York general partnership, having its principal place of business at 4 New King Street, P.O. Box 339, Purchase, New York 10577 (hereinafter the "Grantee").

WITNESSETH:

WHEREAS, Grantee owns real property lying and being in the Town of North Castle, County of Westchester, State of New York known as 11 New King Street, more particularly described on Schedule A annexed hereto and made a part hereof, and designated on the Town of North Castle Assessor's tax map as Section 3, Block 4, Lot 14B; and

WHEREAS, the Grantor is the owner of the public street known as New King Street (the "Right-of-Way") and designated on the Town of North Castle Assessor's tax map as Section 3, Block 4 Lot RD1 ; and

WHEREAS, the Grantee is proposing to install vegetation, perform and maintain landscaping, landscape lighting, and other improvements, conduct tree removal, and perform and maintain certain other work within the New King Street Right-of-Way (the "Work") within the area more particularly described on Schedule B annexed hereto and made a part hereof; and

WHEREAS, Grantor desires to grant to Grantee and Grantee desires to accept from Grantor, a permanent non-exclusive easement

over the Right of Way to perform the Work under certain conditions (the "Easement");

NOW, THEREFORE, in consideration of the premises and of the mutual covenants made herein, and the sum of one dollar ($1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Grantor does hereby give, grant, and convey unto Grantee, its successors and assigns, the Easement, subject to the following terms and conditions:

1. Grantor hereby grants and conveys to Grantee, its successors and assigns, a perpetual, permanent and non-exclusive Easement (except for the reservations set forth, and subject to the conditions herein set forth) to perform the Work within the Right-of-Way.

2. Grantee shall have and exercise the right of reasonable ingress and egress in, to, through, over, under and across the Right of Way and from any roads, highways, streets, alleys, or any other point to the Easement in order to perform maintenance, repair and upkeep of the Work, including, without limitation, the right to cut, trim, control and remove trees, brush and other obstructions which injure or interfere with Grantee's use, occupation and enjoyment of the Easement.

3. Grantor warrants that it has full right and lawful authority to make this grant contained herein.

4. Grantor shall not interfere, now or in the future, with any rights provided to Grantee under this Easement Agreement, including, but not limited to, Grantee's rights of maintenance and reasonable access.

5. The Easement herein granted across the Right-of-Way shall be exercised and used in such a manner so as to not cause any damage or destruction of any nature whatsoever to, or interruption of, the use of the Right-of-Way.

6. Any debris left in the Right-of Way as a result of Grantee's Work shall be promptly removed by the Grantee, it personal representatives, successors and assigns.

7. Grantor shall have the right to grant other non-exclusive easements over, along or upon the Right-of-Way, provided however, that any such easements shall be subject to the Easement hereby granted.

8. The Grantee, for itself and its representatives, successors and assigns, does hereby agree to hold the Grantor harmless and agree to indemnify the Grantor from any and all liability resulting from the rights granted herein. By the granting of the Easement, the Grantee and its representatives, successors and assigns, further agree that maintenance of the Easement shall be the responsibility of the Grantee and its representatives, successors and assigns, and any disturbance of said Easement by the Grantee shall be the responsibility of the Grantee, and its representatives, successors and assigns. Grantee assumes no responsibility to maintain the easement area beyond the duties associated with the Work.

9. Grantee shall obtain an insurance policy for liability coverage of at least One Million Dollars that names the Town of North Castle as an additional insured with regard to the Work, which shall contain a notification of cancellation provision for the benefit of the Town of North Castle, and which policy shall remain in force and effect so long as the Work shall stand.

10. Grantor shall have no responsibility to perform or maintain the Work.

11. This Easement Agreement may not be modified, amended or terminated without the prior written consent of the Grantor and Grantee.

12. The covenants set forth herein shall run with the land and be binding upon and inure to the benefit of the parties hereto and their respective heirs, representatives, successors and assigns.

13. This Easement agreement shall be recorded at the Westchester County Clerk's Office, Division of Land Records.

14. Grantee hereby acknowledges and agrees that in the event that Grantor determines that the Work interferes with proposed roadway improvements, then and in this event, Grantee agrees to remove all Work it has created within the easement area at its cost and expense and to reasonably restore the easement area to its original condition and that this Easement shall then be terminated and be of no further force and effect.

In witness whereof, the parties have executed this agreement as of the date first above written.

Aerotech Realty Incorporated
By: _____
Jan Andresen
Title: Partner

TOWN OF NORTH CASTLE
By: _____
Name: John A. Lombardi
Title: Supervisor

STATE OF NEW YORK)
COUNTY OF WESTCHESTER) ss.:

On the 22 day of November, in the year 2004, before me, the undersigned, a Notary Public in and for said state, personally appeared Jan Andreser., personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

Karen E Gomez
Notary Public
KAREN E. GOMEZ
Notary Public, State of New York
No. 01GO6016636
Qualified in Westchester County
Commission Expires November 23, 2006

STATE OF NEW YORK)
COUNTY OF WESTCHESTER) ss.:

On the 29 day of November, in the year 2004, before me, the undersigned, a Notary Public in and for said state, personally appeared John A. Lombardi, personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

Wendy Federici
Notary Public

WENDY FEDERICI
Notary Public, State Of New York
No. 4866147
Qualified In Westchester County
Commission Expires July 28, 2006

Taxes

Title Support Services

140 Littner Road ~ Rensselaerville, NY 12147 ~ (518) 797-3169/797-3683 Fax: (518) 797-3210 email: spicone@titlesupport.net

TAX SEARCH FOR COUNTY OF WESTCHESTER

Title Number: 3004244305 **Date:** 7/29/08

Assessed Valuation:

Land: $ 24,800

Total: $ 46,200

Tax Map Designation:

Section: 3

Sheet:

Block: 4

Lot: 14B

Property Size: 2.48 Property Class: 464

Assessed To: Aerotech Realty Inc.

Street Address: 11 New King Street

County of: Westchester Town: North Castle

School District: Byram Hills

Account #:

RECEIVER OF TAXES

2008 Town Tax	$ 20,692.59 paid	Year: 1/1-12/31 Lien: 4/1 Due: 4/1
2007/2008 School Tax	$ 30,875.84 paid	Year: 7/1-6/30 Lien: 9/1 Due: 9/1,1/1

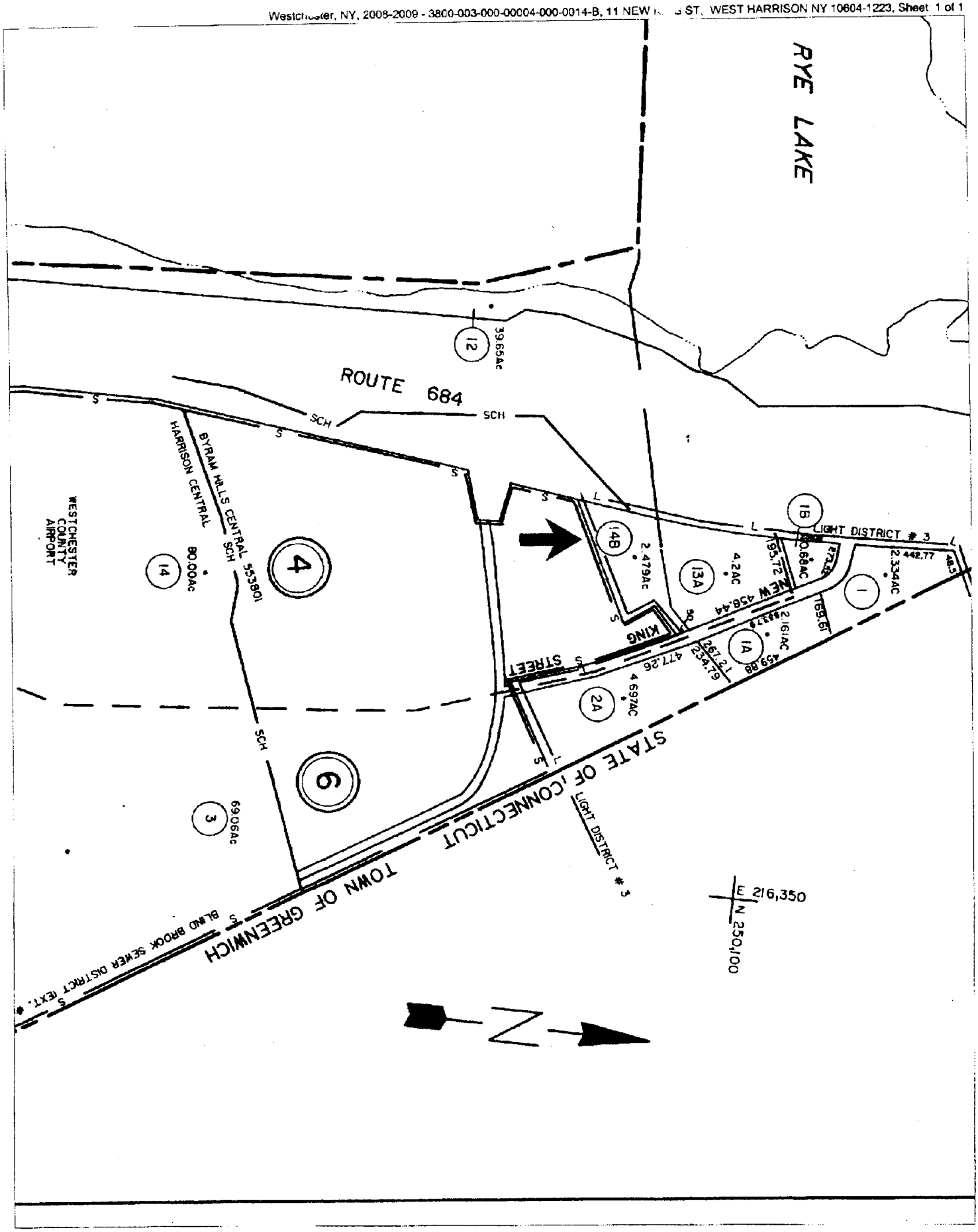
Water Account: Private

All water accounts require a final reading. The owner must request this from the town water department.

Closers note: If premises are being improved from vacant land or by addition, the following year's taxes will increase. Our policy does not insure such items which have not become a lien up to the date of closing, or installmens due after such date. Neither our tax search nor our policy cover any part of streets on which the premises to be insured abut.

NO SEARCHES ARE MADE FOR REFUSE COLLECTION CHARGES.

If the above mentioned tax lot(s) cover more or less than that of the premises under examination, this fact will be noted herein. In such case, the interested parties should take the necessary steps to make the tax map conform to the description to be insured.


RYE LAKE
ROUTE 684
SCH
12
39.654Ac
HARRISON CENTRAL
BYRAM HILLS CENTRAL SCH
553801
WESTCHESTER COUNTY AIRPORT
14
80.00Ac
4
6
3
69.06Ac
14B
2.479Ac
13A
4.2AC
1B
LIGHT DISTRICT # 3
NEW
458.44
KING
STREET
477.26
2A
4.697AC
1A
2.161AC
459.88
1
2.334AC
442.77
STATE OF CONNECTICUT
TOWN OF GREENWICH
BLIND BROOK SEWER DISTRICT EXT. #
LIGHT DISTRICT # 3
E 216,350
N 250,100
N

First American Title Insurance Company of New York

3004-244305

NOTICE

RE: OPTIONAL MARKET VALUE POLICY RIDER NOW AVAILABLE:

NOTE: THE FOLLOWING IS ONLY APPLICABLE TO THE PURCHASE OF A ONE TO FOUR FAMILY DWELLING OR A RESIDENTAL CONDOMINIUM OR COOPERATIVE UNIT. THE PURCHASER MUST BE A NATURAL PERSON AND MUST RESIDE AT THE PROPERTY WHICH MUST BE USED PREDOMINANTLY FOR RESIDENTIAL PURPOSES.

Section 6409, Subdivision "C" of the Insurance Law requires that title companies offer at or prior to closing an optional policy rider to cover the homeowner for the future market value of his or her home.

A. I choose to accept the Market Value Policy Rider.

_____ day of _____, 20____.

_____ _____
Owner Owner

B. I do not wish to accept the Market Value Policy Rider for future increased market value and elect to waive the offer for such additional coverage.

_____ day of _____, 20____.

_____ _____
Owner Owner

C. TO BE COMPLETED BY COMPANY CLOSER:

The Optional Market Value Policy Rider is not applicable to this transaction.

Reason:
( ) Commercial Property
( ) Vacant Land
( ) Multiple Dwelling (consisting of 5 families or more)
( ) Purchaser is not a natural person (e.g. corporation, partnership, trust, etc.)
( ) Purchasers will not reside at dwelling

By: _____
Company Closer

THE FOLLOWING MAY APPLY TO THE TRANSACTION TO BE INSURED

The identification, including photograph (i.e. N.Y.S. Driver's License, U.S. Passport, etc.), of a; parties (whether present or not) executing any documents (deeds, mortgages, powers of attorney, etc.) must be presented at closing.

Any mortgage(s) taken for recording after August 1, 1987 must contain the following recital or in lieu thereof, a signed statement attached to such mortgage.

"The real property principally improved or to be improved by one or more structures containing in the aggregate not more than six residential dwelling units, each dwelling unit having its own separate cooking facilities."

Note 1: The $10,000 mortgage exemption clause, (i.e., "The real property is improved or will be improved by a one or two family dwelling or residence") if applicable, and if recited in the mortgage will comply with the above requirement.

Note 2: A form of the statement to be attached to the mortgage in lieu of such recital in the mortgage is attached.

Compliance with Articles 31 and 31-B of Tax Law, as amended, and Tax Law Section 253 on transfers subject to credit line mortgages.

a. Compliance with section 11-2101, et.seq. of the Administrative Code of the City of New York. (New York City Real Property Transfer Tax - NYCRPTT)

b. Multiple Dwelling Registration Card or Affidavit In Lieu of Registration Statement.

For Assignment of Mortgages:

In order to comply with the amendments to Section 275 of the Real Property Law imposed by Chapter 241 of the laws of 1989, "There must be set forth in the assignment document or attached thereto and recorded as part thereof, a statement under oath signed by the mortgagor or any other party to the transaction having knowledge of the facts (provided such other party asserts such knowledge), that the assignee is not acting as a nominee of the mortgagor and that the mortgage continues to secure a bona fide obligation".
This requirement is not applicable to sales of mortgages by lenders on the "secondary market", in which case such assignments shall contain the statement: "This assignment is not subject to the requirements of Section 275 of the Real property law because it is an assignment within the secondary mortgage market."

(continued)

THE FOLLOWING MAY APPLY TO THE TRANSACTION TO BE INSURED

(continued)

NOTE: Smoke Detecting Device Requirement for New York City:

The Conveyance of a one or two family dwelling will not be accepted for the filing unless accompanied by an affidavit signed by both the grantor and grantee indicating that the premises is equipped with an approved and operational smoke detecting device as provided in Article 6 of subchapter 17 of Chapter 1 of Title 27 of the Code (Section 27-981). See Affidavit attached.

STATEMENT ATTACHED TO MORTGAGE

MORTGAGOR(S): _____

MORTGAGEE(S):_____

PREMISES:_____

CHECK THE APPROPRIATE BOX

[ ] The attached mortgage covers real property principally improved or to be improved by one or more structures containing in the aggregate not more than six residential dwelling units, each having their own separate cooking facilities.

[ ] The attached mortgage does not cover real property improved as described above.

DATED:_____

3004-244305

NOTE: First American Title Insurance Company of New York is hereby authorized to receive a copy of NYS Form TP-584 for the purpose of filing such form and recording of the deed or other instrument effecting the transfer associated with 11 New King Street, White Plains, New York.

Grantor(s) Signature	Print Name	Date
Grantee(s) Signature	Print Name	Date

PRIVACY NOTICE

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information – particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our website at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

© 2001 The First American Corporation • All Rights Reserved

§ 1031 TAX-DEFERRED EXCHANGES

IN CASE YOU'VE FORGOTTEN, THIS IS A SUNSET.

If your 1031 Exchange is taking up all your time, maybe you should let us light the way.

If words like sun, sand, and relaxation seem vaguely familiar to you these days, we can help. With First American Exchange Corporation servicing all of your 1031 Exchange needs, you'll have time for the things you'd rather be doing.

Our industry-leading services include:

- The financial strength of being wholly owned by the First American Corporation (NYSE:FAF), a FORTUNE 300® company
- Nationwide locations, providing a local touch with national strength and the ability to service multistate exchanges
- On-staff professionals with the experience to handle any type of exchange

Call us to have all your questions answered.

S.H Spencer Compton, Esq.
212.850-0647
exchangeny@firstam.com

Vindra Sooknanan
212.551-9417
exchangeny@firstam.com

First American Exchange Corporation

800.437.1234 ▾ www.firstamny.com

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ALTA Request Form

First Ame can Title Insurance Com, ny of New York
1 Water Street, 2nd Floor
White Plains, New York 10601

Phone: (914)428-3433
Fax: (914)428-0159

ALTA REQUEST FORM
------ ATTENTION ATTORNEY ------

We issue ALTA Policies (FEE and/or MORTGAGE POLICIES) at the Closing. The following form must be FAXED (or called in verbally) AT LEAST 24 hours in advance of the closing. We cannot guarantee ALTA POLICIES will be provided at the closing unless this procedure is followed:

ATTENTION: Closing Department (fax 914-686-0367, Phone 914-286-6450)

TITLE NUMBER: 3004-244305

DATE CLOSING: _____ PLACE: _____

TIME: _____ _____

YOUR NAME: _____ _____

YOUR FIRM / COMPANY: _____
_____
_____

YOUR PHONE: _____

FULL NAME OF THE PURCHASER(S) AS IT SHOULD APPEAR IN THE FEE POLICY:

_____

AMOUNT TO BE INSURED, FEE/PURCHASE AMOUNT: $_____

FULL NAME OF THE LENDER AS IT SHOULD APPEAR ON THE LOAN/MORTGAGE POLICY:

_____

AMOUNT TO BE INSURED, TOTAL LOAN/MORTGAGE AMOUNT: $_____

IF A REFINANCE, WILL PRIOR LOANS BE PAID OFF? (CHECK ONE ONLY): YES _____ NO _____

IF CONSOLIDATION, WHAT IS THE AMOUNT OF THE CURRENT UNPAID PRINCIPAL BALANCE OF CURRENT LOAN?
$ _____

WHAT IS THE AMOUNT OF NEW MONEY? $_____

ENDORSEMENTS YOU WILL NEED, PLEASE CHECK ALL THAT APPLIES:

NEW YORK: _____ REVOLVING CREDIT: _____ ENVIRONMENTAL LIEN (8.1): _____ WAIVER: _____
PUD/CONDO: _____ VARIABLE: _____ RESIDENTIAL: _____ _____ _____

(082807 dhq)

Muni Info Letter

First American Title Insurance Company of New York
1 Water Street, 2nd Floor, White Plains, NY 10601
(914)428-3433 - Fax (914)428-0159

July 31, 2008

Cuddy & Feder, LLP
445 Hamilton Avenue, 14th Floor
White Plains, NY 10601

Attn: Eon Nichols

RE:	Title No.:	3004-244305
	Premises:	11 New King Street White Plains, NY
	Record Owner:	AEROTECH REALTY INC.
	Purchaser(s):	To Be Determined

Dear Mr. Nichols,

As you requested, enclosed please find the following municipal searches:

Certificate of Occupancy
Fire Search
Housing and Building
Street Report

Any searches or returns reported herein are furnished FOR INFORMATION ONLY. The Company assumes no liability for these searches or for the accuracy thereof. They are not part of the aforementioned title report and, therefore, will not be continued to the date of closing.

Very truly yours,

Antonio Vozza
Vice President and Counsel

AV/slp

Munis/See Info Ltr

Title Support Services

140 Littner Road ~ Rensselaerville, NY 12147 ~ (518) 797-3169/797-3683 Fax: (518) 797-3210 email: spicone@titlesupport.net

MUNICIPAL INFORMATION SEARCH

Title Number: 3004244305

Tax Designation:

New: **Section:** 3 **Sheet:** **Block:** 4 **Lot:** 14B
Old:

Street Address: 11 New King Street

County of: Westchester **Town:** North Castle

No fire violations found.

No building violations found.

Copy of C. of O. herewith for:

- Showroom
- Warehouse
- Addition

New King Street is a public street.

Nothing further found.

7/29/08

cc50

Any searches or returns reported herein are furnished FOR INFORMATION ONLY. They will not be insured and the company assumes no liability for the accuracy thereof. They will not be CONTINUED to the date of closing.

FEE: $ 2 00

Nº 2246

Certificate of Occupancy

DEPARTMENT OF ZONING AND BUILDING
TOWN OF NORTH CASTLE
WESTCHESTER COUNTY, NEW YORK

Issued 4/20/67 19

TO: D Corneran, Inc

ADDRESS 7 West 30th Street

New York, N.Y.

Premises located at: New King Street - Armonk, N.Y.

In zone area: Ind. A-A Type or Use Showroom & Warehouse with Business Office

Tax map designation: Section 3 Block 4 Lot 1bg1, 1bg2, 1b3

This certifies that the aforementioned structure and/or premise conforms with the application, use and plans on file in the building department office of the Town of North Castle;

that said structure or use is in conformity with the Zoning Ordinance, Building Code and other applicable requirements of the Town of North Castle;

that permission is hereby granted for the use and/or occupancy as set forth herein;

that this Certificate of Occupancy is subject to revocation for non-compliance of any of the laws or ordinances applicable thereto;

that this certificate is further subject to compliance to any other governmental agencies having jurisdiction thereof;

that this certificate is issued subject to the following conditions:

Building Permit Number 2022 and date issued 10/7/66 19

Approved by: Ray Johnson

Building Inspector

FEE: $ 2.00

№ 3270

Certificate of Occupancy

DEPARTMENT OF ZONING AND BUILDING
TOWN OF NORTH CASTLE
WESTCHESTER COUNTY, NEW YORK

Issued Jan 7 19 74

TO: D. Stanley Corwran, Inc.

ADDRESS New King Street

White Plains, N.Y. 10604

Premises located at: Above

In zone area: Ind. AA Type or Use Warehouse addition

Tax map designation: Section 3 Block 4 Lot 14A1, A2, 14B

This certifies that the aforementioned structure and/or premise conforms with the application, use and plans on file in the building department office of the Town of North Castle;

that said structure or use is in conformity with the Zoning Ordinance, Building Code and other applicable requirements of the Town of North Castle;

that permission is hereby granted for the use and/or occupancy as set forth herein;

that this Certificate of Occupancy is subject to revocation for non-compliance of any of the laws or ordinances applicable thereto;

that this certificate is further subject to compliance to any other governmental agencies having jurisdiction thereof;

that this certificate is issued subject to the following conditions:

Building Permit Number 3881 and date issued 5/20/73 19

Approved by: Ray Johnson
Building Inspector

Appendix E: Revised Zoning Amendment

Town of North Castle

Local Law No. ___of ~~2009~~ 2011

A LOCAL LAW entitled: "A Local Law to Amend Chapter 213 of the Town Code, "Zoning."

Be it enacted by the Town Board of the Town of North Castle, Westchester County, New York, as follows:

SECTION 1: LEGISLATIVE INTENT

The Town of North Castle proposes to allow structured parking as a special permit use in the Industrial AA (IND-AA) Zoning District to address, among other things, insufficient parking conditions at Westchester County Airport (HPN). Existing parking demand far exceeds the existing parking supply at HPN. The construction of new structured parking pursuant to the proposed special permit conditions would alleviate existing parking deficiencies and reduce vehicular trips with beneficial implications for air quality and traffic.

The proposed special permit conditions include standards to maintain community character and minimize potential traffic impacts to local roadways. Therefore, the proposed special permit use would accommodate existing parking demand while maintaining the existing development pattern surrounding HPN.

By permitting structured parking as a special permit use, it is not the intent (or the authority) of the Town to promote greater frequency of commercial flights at HPN. Flight schedules are regulated by the Federal Aviation Administration (FAA).

SECTION 2: PROPERTY AFFECTED

The proposed zoning amendment would affect parcels of land located in the IND-AA Zoning District. In the Town of North Castle, the IND-AA district is limited to the area surrounding and including Westchester County Airport. This area is generally bounded by NYS Route 120, and the Town border with Greenwich, CT; Harrison, NY; and Rye Brook, NY.

SECTION 3: AMENDMENTS TO ARTICLE II, "DEFINITIONS AND WORD USAGE"

Section 213-3, "Definitions" of the Code of the Town of North Castle is hereby amended as follows:

PARKING STRUCTURE

Any structure or portion of a structure which is used solely as a place to park automobiles as (a) an accessory use in a nonresidential district; (b) a special permit use in an IND-AA Zoning District in accordance with §213-33U of the Town Code.

SECTION 4: AMENDMENTS TO ARTCILE VI, "DISTRICT REGULATIONS"

Section 213-21, "Schedule of Office and Industrial District Regulations, Part 2" of the Code of the Town of North Castle is hereby amended to include structured parking as a Permitted Principal use in the IND-AA Zoning District and subject to conformance to additional standards as set forth in Article VII. This shall be identified column 2, "Permitted Principal Uses," of the "Schedule of Office and Industrial District Regulations, Part 2" as follows:

*6. Parking structures pursuant to §213-33U of the Town Code.

SECTION 5: AMENDMENTS TO ARTICLE VII, "SPECIAL PERMIT USES"

Section 213-33, "Individual Standards and Regulations" of the Code of the Town of North Castle is hereby amended to add the following:

U. Special permit parking structures. In the IND-AA Zoning District, parking structures shall be permitted, subject to Town Board approval and subject to the following special conditions. Notwithstanding any other provisions of this Zoning Ordinance, the Town Board, by special permit, may modify certain physical dimensional requirements for properties in the IND-AA Zoning District as specified below.

(1) Purpose. It is the purpose and intent of this subsection to permit, subject to the limitations set forth below, parking structures in the IND-AA Zone with a special permit, with accompanying modifications to dimensional parameters, including but not limited to coverage requirements and yard and buffer setbacks.

(2) Use. Parking structures shall be privately operated and accessible to Westchester County Airport (HPN) users. Car wash, oil change, and valet services are permitted as accessory uses to the parking structure use.

(3) Location. Parking structures shall be located on lots or assemblages of parcels aggregating not less than two acres in area. Such parking structures shall neither adjoin (i.e., share a common property line) nor be located within 50 feet from any residentially zoned land. Access and frontage shall be on a state or county highway, or nonresidential collector road ~~not~~ less than 1,500 feet from an intersection with state or county highway.

(4) Setbacks. Parking structures shall maintain the following setbacks from adjoining properties in an industrial district:

(a) Minimum front yard setback: 50 feet

(b) Minimum side yard setback: 10 feet

(c) Minimum rear yard setback: 50 feet

(5) Height. Parking structures shall have a maximum height of ~~55~~ 60 feet.

(6) Total Lot Coverage. The maximum total lot coverage shall be 60% of the ~~total lot area~~ land area covered by impervious surfaces, including all buildings, structures and paved areas. Walls under four feet in height and fences shall not be considered in such calculation.

(7) Instead of the design and dimensional requirements set forth in §213-44 of the Code, the Town Board shall have the jurisdiction to be flexible in approving alternative designs and/or layouts, including valet and/or automated parking systems to improve efficiency of parking operations and to minimize building size.

(8) Lighting. All exterior lighting shall be shielded with full cut-off fixtures so that the source of the light is limited to that necessary for safety and security purposes. A photometric plan shall be required to demonstrate that all light in excess of 0.5 footcandles remains within the boundaries of the lot.

(9) Landscaped parking areas and internal circulation roadways may be located within a required buffer, provided they are not within 10 feet of the property line.

(10) FAR is not applicable within the limitations set forth above.

SECTION 6: CONFLICTING STANDARDS

Where the requirements of this Local Law impose a different restriction or requirement than imposed by other sections of the Code of the Town of North Castle, the Town Law of the State of New York or other applicable rules or regulations, the requirements of this Local Law shall prevail.

SECTION 7: SEVERABILITY

If a court of competent jurisdiction declares any portion of this local law illegal or unconstitutional such a declaration shall not prevent the enforcement of any other portion of this local law.

SECTION 8: EFFECTIVE DATE

This local law shall become effective immediately upon filing with the New York Secretary of State.

Dated : _____, ~~2009~~ 2011

Appendix F: Phase 1 Archaeological Assessment

Phase 1 Archaeological Assessment

Park Place at Westchester Airport
Town of North Castle, New York

Westchester County, New York

Prepared for:

11 New King Street, LLC
11 New King Street
White Plains, NY 10604

Prepared by:

AKRF, Inc.
440 Park Avenue South
New York, New York 10016

October 2010

Management Summary

SHPO Project Review Number:	10PR02122
Involved State and Federal Agencies:	Federal Aviation Administration New York City Department of Environmental Protection New York State Department of Environmental Conservation New York State Department of Transportation Town of North Castle Building Department Town of North Castle Planning Board Town of North Castle Town Board Westchester County Department of Health Westchester County Department of Transportation
Phase of Survey:	Phase 1 Archaeological Assessment
Location Information:	
Location:	11 New King Street, North Castle, New York
Minor Civil Division:	11910, North Castle
County:	Westchester
Survey Area:	
Length:	*Approx. 600 feet*
Width:	*Approx. 600 feet*
Depth: Ap	*prox. 2 feet*
Number of Acres Surveyed:	*Approx. 3.3 acres*
USGS 7.5 Minute Quadrangle Map:	Glenville
Archaeological Survey Overview:	
Number of Shovel Tests:	38
Interval of Shovel Tests:	Approximately 50 feet
Results of Archaeological Survey:	
Prehistoric Sites Identified:	None
Historic Sites Identified:	None
Sites Recommended for Phase II/Avoidance:	None

Results of Architectural Survey:

Buildings/structures/ cemeteries within project area:	None
Buildings/structures/ cemeteries adjacent to project area:	None
Previously determined NR listed or eligible buildings/structures/ cemeteries/districts:	None
Identified eligible buildings/ structures/cemeteries/districts:	None

Report Authors: Molly McDonald, M.A., R.P.A.
Elizabeth D. Meade, M.A., R.P.A.

Date of Report: October 2010

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A. PROJECT DESCRIPTION

The Town of North Castle Planning Board has received an application from 11 New King Street, LLC (the "applicant") to construct an automated parking structure (the "proposed project") at 11 New King Street in the Town of North Castle (see Figures 1 and 2). The proposed project involves two adjacent parcels (the "project site"), identified on the official tax map of the Town of North Castle as Section 3, Block 4, Lot 14B ("Lot 14B") and Section 3, Block 4, Lot 13A ("Lot 13A") (partial). The proposed parking structure would be constructed on Lot 14B, which has a surface area of 2.47 acres and is owned by the applicant. A drainage easement to develop stormwater management practices would be obtained on a 0.87-acre section of Lot 13A, which has a total area of 4.20 acres and is owned by JAM Airport, LLC.

The purpose of the proposed project is to provide off-site structured parking for Westchester County Airport customers that would alleviate an existing shortage of parking at the airport. The proposed multi-story parking structure would have a building footprint of approximately 51,000 square feet and a height of approximately 56 feet at average finished grade. The parking facility would be an enclosed structure designed to accommodate up to 1,450 automobiles with an airport shuttle bus pick-up/drop-off area provided onsite.

The zoning classification of the project site is Industrial AA (IND-AA) in the Town Code of the Town of North Castle. As part of the proposed project, the applicant is submitting a petition to amend the Town's Zoning Ordinance to permit structured parking as a special permit use in the IND-AA district. The Town of North Castle Planning Board has declared itself lead agency for purposes of review under the State Environmental Quality Review Act (SEQRA). A number of permits and approvals are anticipated for the proposed project, as shown in Table 1, below.

Table 1
Required Permits/Approvals and Involved Agencies

Approval/Permit/Review	Involved/Interested Agency
Town of North Castle	
Site Development Plan Approval	Planning Board
Wetland Permit	Planning Board
Tree Removal Permit	Planning Board
Zoning Text Amendment	Town Board
Sanitary Sewer Connection	Building Department
Westchester County	
Sanitary Sewer Connection	Department of Health (WCDOH)
Water Supply Well	WCDOH
Roadway/Signal Improvements	Department of Transportation (WCDOT)
New York City	
SWPPP	Department of Environmental Protection (NYCDEP)
Sanitary Sewer Connection	NYCDEP
Limiting Distance Disturbance	NYCDEP
New York State	
Roadway/Signal Improvements (NYS Route 120)	Department of Transportation (NYSDOT)
SPDES Permit (GP-0-10-001)	Department of Environmental Conservation (NYSDEC)
Federal	
Height Limitation	Federal Aviation Administration (FAA)
Notice of Proposed Construction or Alteration	FAA

B. RESEARCH GOALS AND METHODOLOGY

The goal of this Phase 1 Archaeological Assessment of the Park Place at Westchester Airport project site is to determine whether potential archaeological resources have survived within the boundaries of the project site. The

study has been designed in accordance with the guidelines for cultural resources investigations put forth by the New York Archaeological Council (NYAC) and the report has been prepared in keeping with the New York State Historic Preservation Office (NYSHPO) *Phase I Archaeological Report Format Requirements* (2005).

The study documents the history of the proposed project site as well as its potential to yield archaeological resources dating to both the precontact and historic periods. Research was completed to establish a chronology of the project site's development and to identify any individuals who may have owned the land or worked and/or resided there. As part of the background research for this Archaeological Assessment, various primary and secondary resources were analyzed. These included historic maps and atlases; historic photographs; building construction, renovation, and demolition records; newspaper articles; and local histories. These published and unpublished resources were consulted at various repositories, including the New York Public Library, and on-line textual archives such as Google Books and the Internet Archive Open Access Texts. In addition, the archaeological site files of OPRHP and the New York State Museum (NYSM) were consulted to gather information regarding previously identified archaeological sites and previously conducted cultural resources assessments in the vicinity of the project site. A walkover of the site was completed to identify visible signs of disturbance and/or landscape transformation. The topography and hydrology of the location were evaluated and the presence of existing structures, utilities, and landscape features were taken into account.

Based on the results of this documentary study, a subsurface testing strategy was developed and implemented by a Registered Professional Archaeologist (RPA) to determine the presence or absence of archaeological resources in the project site. Subsurface testing consisted of the hand excavation of circular shovel test pits having a diameter of approximately 18 inches (46 centimeters). Unless excavation was stopped by roots, rocks, utility lines, buried paved surfaces, or very dense soil, test pits were excavated to sterile subsoil. Test pits were excavated opportunistically at a variable interval (every 30 to 50 feet where possible) in all areas determined to possess archaeological potential. Areas with obvious signs of disturbance such as grading or having a slope greater than 15 percent were not tested. The location of individual test pits were recorded onto survey maps of the project site using a compass and fiberglass tape. In most cases, test locations were mapped off of surveyed features such as houses and telephone polls.

All excavated soils were screened through ¼ inch (0.6 cm) hardware cloth and artifacts were collected or sampled and placed in zip locked bags labeled with their provenience information. Soil observations and inclusions were documented in field notebooks, a summary of which is included as Appendix B. All laboratory activity was conducted in compliance with standard practices. Artifacts were cleaned, stabilized, and catalogued at AKRF's archaeological materials laboratory.

C. SUMMARY OF PREVIOUS CULTURAL RESOURCES ASSESSMENTS IN THE VICINITY OF THE PROJECT SITE

Research conducted at the OPRHP offices indicated that several precontact period archaeological sites were previously identified within one mile of the project site. These sites are discussed in Chapter 3, "Precontact Period."

The research indicated that no previous cultural resources reports located within one mile of the project site are on file at OPRHP. Several previous cultural resources investigations were conducted between one and two miles from the project site, however. A little more than one mile northwest of the project site on the north edge of Rye Lake, archaeological investigations of a historic period midden site were conducted by Malcom Pirnie, Inc. on behalf of the New York City Department of Environmental Protection in 2004 (Malcom Pirnie, Inc. 2004). These Phase I and Phase II archaeological studies of the Cooney Hill Midden Site were conducted in connection with the Reconstruction of the Delaware Aqueduct. The investigations identified a midden associated with the Cunningham/Maleful residence which contained domestic artifacts dating to the late 19th and early 20th century.

Several archaeological studies were conducted a short distance south of Westchester County Airport (all approximately 1.5 miles southeast of the project site). Phase 1A and Phase 1B archaeological investigations were conducted on the Purchase College campus by Historical Perspectives, Inc. (HPI) in June and October 1999 on behalf of the State University of New York (HPI 1999a and 1999b). A small number of precontact period artifacts were encountered during Phase 1B field investigations, including 3 pieces of lithic debitage and a quartzite core fragment. Additional testing revealed no further evidence of Native American occupation. Also in 1999, Hartgen Archaeological Associates conducted a Phase 1 study on a 66-acre parcel on behalf of the Sterling Subdivision,

LLC, who planned to develop the site. Although the project site was considered sensitive for precontact period resources, and one chert flake was recovered from the ground surface, excavation of 135 shovel test pits encountered no cultural material (Hartgen 1999). Lastly, the Public Archaeology Facility (PAF) at Binghamton University completed a Phase 1 cultural resources survey on behalf of the Westchester Joint Water Works in connection with the Rye Lake Water Treatment Plant Project in 2005 (PAF 2005). Field testing on the project site, located immediately southeast of Rye Lake, consisted of the excavation of 292 shovel test pits. No precontact period cultural materials were encountered. A historic period bottle dump was documented, however, no further investigation of this feature was recommended.

A. GEOLOGY AND TOPOGRAPHY

The project site ranges in elevation from 404 feet to 370 feet above sea level. The elevation slopes downward from east to west towards a wetland along the western property boundary. A historic USGS map of Stamford, Connecticut depicts the project site (see Figure 3). The map suggests that while some landscape modification is evident, modern and historic contour lines in the vicinity of the project site are relatively similar.

Bedrock in Westchester County consists largely of metamorphic bedrock overlain by more recent unconsolidated glacial deposits (sand, silt, clay, till) upon which soil (solum) has formed in the uppermost few feet through the action of weathering a biologic deposition over time. The project site is underlain by bedrock of the Manhattan formation, which is comprised of metamorphic rock including schistose gneiss with local interlayers of amphibolite and marble. A second bedrock type known as Inwood marble borders the project site to the west. This formation contains dolomite marble, calc-schist, granulite, and quartzite, overlain by calcite marble (Fisher et al. 1970).

B. HYDROLOGY

The project site is located approximately 500 to 700 feet east of Rye Lake and is approximately 8 miles east of the Hudson River. Through artificial means, Rye Lake was enlarged as part of the construction of the adjacent Kensico Reservoir, which supplies drinking water to New York City. Rye Lake, originally called Rye Pond, is one of the largest natural bodies of fresh water in the vicinity of the project site. The lake, which is the main source of the Bronx River, originally covered approximately 210 acres (Bolton 1848). Historically, it was bounded by "high and bold shores…tending towards each other at the outlet" (Assembly of the State of New York 1918).

The pond was well known as an excellent fishing spot. The pond originally drained into a smaller lake, called Little Rye Pond, to the west. Through the construction of a dam these bodies of water were combined into a single 280-acre lake by 1900 (Spooner 1900).

In addition, a perennial stream is located near the northern and western boundary of the project site near a paved driveway. The stream flows to the north, outside of the project site, and reenters the project site briefly before draining through a culvert located beneath Route 120. To the southeast, outside the APE, this stream contains a meandering floodplain wetland.

C. SOILS

The soil survey of the Natural Resource Conservation Service (NRCS), part of the United States Department of Agriculture (USDA), indicates that there are four major soil types present within or in the immediate vicinity of the project site. These are shown on Figure 4 and are described in Table 2, below.

In 2008, in connection with the proposed project, Melick-Tully and Associates, P.C. conducted soil investigations on the project site which consisted of six soil borings and four test pits. The borings were taken using a combination of truck and ATV mounted rotary wash and hollow stem auger drilling equipment. They extended between 30 and 51 feet below ground surface. The test pits extended to depths of between 8 and 11 feet below ground surface. The Preliminary Soils and Foundation Investigation are included in this report as Appendix A. A summary of the soil types encountered during the investigation is provided below:

- Topsoil: A surficial layer of topsoil, generally ranging 4 to 8 inches in thickness. In one case it extended to a depth of 18 inches.
- Fill: A fill layer consisting of silty sand was noted in 3 of the 6 soil borings (located at the southwestern edge of the project site building, atop the large fill pile, and in the grass island within the parking lot), extending to between 6.5 and 9 feet below ground surface.
- Silty Sands: Glacial till underlying topsoil and/or fill layers consisted of silty sands with varying amounts of gravel and cobbles. This soil was considered dense or very dense and extended to the final depth of the soil borings (8 to 51 feet below ground surface) in all of the borings. Two of the borings included highly decomposed schistic rock.

Table 2
Soils in the Project Area

Soil Series Name	Soil Horizon Depth (in inches)	Soil Color	Texture and Inclusions	Slope (%)	Drainage	Landform
Woodbridge Loam (WdB)	**Ap** 0 to 7	Very dark brown (10YR 3/2)	Fine Sandy Loam	3 to 8	Moderately well drained	Hills, ridges, and till plains
	Bw1 7 to 18	Dark yellow brown (10YR 4/4)				
	Bw2 18 to 26	Dark yellowish brown (10YR 5/6)				
	Bw3 26 to 30	Light olive brown (2.5Y 5/4)				
	Cd1 30 to 43		Gravelly fine sandy loam			
	Cd2 43 to 65					
Paxton Series (PnB)	**Ap** 0 to 8	Dark brown (10YR 3/3)	Fine sandy loam	2 to 8	Well drained	Drumlinoid ridges, hills, and till plains.
	Bw1 8 to 15	Dark yellowish brown (10YR 4/4)				
	Bw2 15 to 26	Olive brown (2.5Y 4/4)				
	Cd 26 to 65	Olive (5Y 5/3)	Gravelly fine sandy loam			
Ridgebury Loam (RdB)	**A** 0 to 5	Black (N 2/0)black (N 2/0)	Fine sandy loam	3 to 8	Somewhat poorly drained	Drumlinoid ridges, hills, and till plains.
	Bw 5 to 9	Brown (10YR 4/3)	Sandy loam			
	Bg 9 to 18	Dark gray (10YR 4/1)	Gravelly sandy loam			
	Cd 18 to 65	Gray (5Y 5/1)				
Udorthents, Smoothed	0 to 4	*Not given*	Gravelly Loam	0 to 8	Somewhat poorly drained	*In and adjacent to urban highways and areas that have been modified by cutting and filling*
	4 to 70	*Not given*	Very Gravelly Loam			

Source: NRCS 2006.

Groundwater levels on the project site varied widely depending on location and surface elevation between approximately 6 and 26.5 feet below ground surface. In seasonal wetlands, groundwater was encountered at 3 feet below ground surface.

D. SITE WALKOVER

Views of the project site and surrounding properties are included as Photographs 1 through 8. The vantage points from which these photographs were taken are indicated on Figure 2. The only building located on the project site (see Photo 1) is situated in the approximate center of the project site (Lot 14B) and has an address at 11 New King Street. Its 50- by 200-foot footprint occupies approximately 15 percent of the total project area. This single-story concrete-block office building was constructed in 1966. An asphalt-paved driveway provides access to the site from New King Street and terminates in a parking lot which occupies the area between the building described above and the north edge of the project site. The asphalt-paved driveway and parking lot collectively occupy approximately 25 percent of the surface area of the project site.

The remaining roughly 60 percent of the project site is undeveloped. Slopes of 15 percent or greater characterize approximately 10 percent of the project site. These areas of steep slope are indicated on Figure 5. The elevation is relatively flat in the eastern portion of the project site where the office building, parking lot, and landscaped areas are located, however, there are steep berms immediately south and west of the project site building, likely the result of grading during the building's construction. The elevation of the project site drops gradually to the west in a

natural slope towards Rye Lake. This portion of the project site is wooded. A steep grade slopes downwards towards the northern edge of the project site and borders a wetland. A large pile of fill is clearly visible northwest of the project site building and parking lot, creating slopes steeper than 15 percent in which stones, concrete, gravel, and refuse such as mid-20th century glass bottles, are visible on the ground surface. The top of the fill pile is level and covered with grass and gravel. A small stream runs along the northern edge of the project site, curving southward at a point just east of the project site, passing beneath the project site driveway through a culvert. A wetland is also located at the southern and western edges of the project site. The wetland to the south appears to be a drainage swale which was dry at the time of archaeological field survey, while the lower elevation western wetland consisted of a slightly swampy area.

Several stone walls are located on the project site. A roughly east-west oriented wall runs along the northern edge of Lots 13A and 14B within the project site. Another runs along the eastern boundary of Lot 14B. The remnants of a pair of parallel stone walls follow the course of the small stream described above, skirting the northern edge and portions of the eastern edge of the project site. Finally, an east-west oriented pair of parallel stone walls passes through the southwestern portion of the project site. These were most likely built to border the seasonal wetland and/or drainage channel that currently occupies the area. The date at which they were constructed is not known.

On the parcel immediately north of the project site is a single-story building clad in brick and vinyl siding, currently used as an office. The structure does not appear on a 1934 aerial photograph of the location, and was likely built in stages in the mid-20th century. Late 20th century office complexes occupy the parcels adjacent to or across New King Street from the project site.

A. PREVIOUSLY DOCUMENTED NATIVE AMERICAN ACTIVITY NEAR THE PROJECT SITE

Archaeologists have divided the time between the arrival of the first humans in northeastern North America and the arrival of Europeans more than 10,000 years later into three prehistoric periods: Paleo-Indian (11,000-10,000 BP), Archaic (10,000-2,700 BP), and Woodland (2,700 BP–AD 1500). These divisions are based on certain changes in environmental conditions, technological advancements, and cultural adaptations, which are observable in the archaeological record.

During the Paleo-Indian period, nomadic hunters arrived in the wake of glacial retreat. Paleo-Indians had a high degree of geographic mobility but likely operated out of base camps, making expeditions to hunt large mammals and quarry stone for tools. Projectile points known as Clovis points are considered indicators of Paleo-Indian sites. Due to the sea level rise, locations that were coastal during the period are now largely inundated. Very few Paleo-Indian sites have been previously documented in Westchester County. Any intact sites Paleo-Indian sites would have the potential to contribute meaningfully to our understanding of this period (HPI 1999).

Table 3
Previously Identified Precontact Archaeological Sites

Site Name	Site Number	Approximate Distance from APE	Time Period	Site Type and Information	Reference(s)
Unnamed	NYSM 5179	500 ft	Precontact	"Village: shell beads and (many) relics… (found)… On NE point of Rye Lake" (Parker)	Parker 1922
Unnamed	NYSM 5180	0.5 miles	Precontact	"In Harrison along 2 small brooks that flow into Rye Lake at its SE corner" (Parker). NYSM location based on Parker text.	Parker 1922
Unnamed	NYSM 5181	0.75 miles	Precontact	"On neck land between Rye Lake and Little Rye Pond."	Parker 1922
Unnamed	NYSM 5233	1,000 ft	Precontact	Camp site. NYSM site file note "NYSM map location extended to lake shores, AC [Parker] map is distorted with site c. ½ mile east of Rye Lake."	Parker 1922
Rye Lake	NYSM 6807	1,000 ft	Precontact	"Sites entered by Whiteman from Blackie manuscript and C. Gillette transcription of collection documentation. NYSM SF map shows lake level at the time, before Kensico Reservoir." (NYSM)	A. Whiteman 1970
GMF/VMH Site: Transect II	NYSHPO A11905.000004	.75 miles	Precontact	2 quartz flakes, 1 chert flake	HPI 1989
GMF/VMH Site: Transect K	NYSHPO A11905.000005	.75 miles	Precontact	4 quartz flakes, 1 unknown flake	HPI 1989
Notes: *See Figure 6 for Reference*					

As the climate gradually changed during the Archaic period, Native Americans in the area typically pursued smaller game such as white-tailed deer and rabbits and foraged for fish, shellfish, nuts, and plants. Grinding and polishing implements and a variety of projectile point styles characterized lithic technology. Early Archaic sites are rare in Westchester County, but several Late Archaic and Early Woodland sites have been documented in the vicinity. The Purchase I, II, III, and IV sites, located less than 2 miles south of the project site, yielded lithic artifacts indicative of

this transitional period. Archaeological evidence suggests that by the Late Archaic Period, several Native American populations, including the Delaware and Siwanoy, were well established in Westchester County (Jacobson 2005).

During the Woodland Period, Native Americans settled in villages and began to cultivate crops such as corn, beans, and squash. The period also saw the development of pottery making, the use of bows and arrows, and shifts in projectile point styles. When European settlers arrived in the area in the mid-17th century, they engaged in trading and missionary activity with the local Siwanoy and Delaware. Native American populations swiftly declined in the area as European settlement in the Hudson Valley increased.

As indicated in Table 3 and shown on Figure 6, Native American activity has been documented in both the immediate vicinity of the project site as well as the region surrounding it. Parker indicated the existence of a village site located at the northeast point of Rye Lake (NYSM Site 5179), less than ¼-mile from the project site. Six additional precontact period archaeological sites have been documented in New York State within one mile of the project site. These yielded lithic materials, but no features or diagnostic artifacts appear to have been recorded.

B. PRECONTACT SENSITIVITY ASSESSMENT

A high concentration of previously recorded precontact period archaeological sites in the vicinity of the project site suggests that Native Americans populated this area. The natural environment of the area would have been attractive to Native American settlement and foraging, with the Long Island Sound approximately 3 miles to the south and east, Rye Lake immediately west of the project site, and numerous streams, wetlands, and well-drained uplands in the immediate vicinity. Based on the location of previous archaeological sites and the topographical and hydrological conditions, the project site was considered to possess moderate to high sensitivity for precontact period archaeological resources, except in extensive areas of documented or clearly visible ground disturbance (discussed in greater detail in Chapter 4 and illustrated on Figure 5) or in areas with slopes of great than 15 percent (see Figure 5).

A. THE DEVELOPMENT HISTORY OF THE PROJECT SITE

The area surrounding Rye Pond was sparsely settled during the colonial period. One of the first towns established in the vicinity was Purchase to the southeast of the Pond, which was founded by Anthony Field, formerly of Flushing (now in Queens, New York City). The "Road to Bedford," to the east of the project site, was one of the earliest roads constructed in the area and some of the earliest homes were built along it. Portions of what is now King Street were constructed by 1681 (Baird 1871). Family burial places associated with the road's early occupants were located near the homes of the Haight, Merritt, and Anderson families (ibid).

The 1839 Burr map of New York State indicates that Purchase was the only major town in the vicinity of Rye Pond in the early 19th century. However, the fresh water of the Rye Pond made it attractive to early settlers, as it had been to the Native Americans. In 1705, the Native Americans sold a large tract of ground on the northern side of the pond to John Clapp, although a 300-acre section in the vicinity of the pond was reserved for the Native Americans (Bolton 1848). Clapp co-purchased the land with Joseph Theall and John Horton (Baird 1871). John Clapp had formerly lived in New York City, and his purchase of the land near Rye Pond was confirmed by Royal Charter in 1708 (Clapp 1876).

Some of the earliest settlers on the pond included Ezra Carpenter, who owned the land to the south, Thomas Clapp, who owned the land to the east, and Oliver Matthews, who owned the land to the north (Bolton 1848). The project site appears to have been situated within the property of Thomas Clapp, which straddled the New York-Connecticut border (Clapp 1876).

After the Battle of White Plains in 1776, George Washington and the American troops retreated to the hills of North Castle (Bolton 1848). During the Revolutionary War, American troops were stationed around the lake and had a camp at the head of King Street (ibid). The troops, led by Generals Heath and Parsons, were stationed in the area in late 1776 and early 1777, and may have been stationed on or near Clapp's property and also at the home of John Cromwell near the Quaker Meeting House to the southeast of the lake, less than one mile south of the project site (Baird 1871).

The 1868 Beers atlas of New York State does not appear to show any structures in the vicinity of the project site, although several are depicted to the north along King Street. An 1868 atlas of Connecticut shows several nearby properties as well, although the closest home depicted on the map is that of Daniel Tripp, which was located along King Street to the northeast of the project site near the Connecticut-New York border.

The 1868 Beers maps of New York[1] and an 1868 map of Connecticut created by an unknown cartographer (see Figures 7a and 7b) and the 1881 Bromley atlas of New York depict a railroad line running through the immediate vicinity of the project site. The line is identified on the map as part of the New York, Housatonic, and Northern Railroad (NYH&NRR). The NYH&NRR was established in 1863 with the goal of linking White Plains, New York with Brookfield, Connecticut (Parker 2008). By 1874, operations were suspended as a result of litigation in both New York State and Connecticut and the line was all but defunct by 1876 (New York State Engineer and Surveyor 1876). The trustees of the railroad corporation sold the line in 1880. At that time, the only completed sections of tracks were located between Brookfield and Danbury, Connecticut, however approximately 23 miles of the proposed route had been graded in anticipation of the construction of the rail line (*New York Times* 1880). Horace Bridgeman, a "capitalist and speculator" purchased the line in 1880 and was expected to complete the construction of the rails, however, this does not appear to have ever taken place (ibid). Therefore, the portion of the rail line that was planned to cross through or in the immediate vicinity of the project site may have been graded although the rail line itself does not appear to have been constructed.

No 19th century maps indicate that there were any structures on the project site. A map published by E. Belcher Hyde in 1900 suggests that the majority of the project site was situated on the property of the Wolf family, although

[1] The 1868 Beers atlas of New York State only depicts the proposed line on the map of North Castle and not on the connecting plate depicting the town of Harrison.

a portion of it may have also been situated on the D. Matthews Estate to the south of the Wolf property. While a structure is depicted on the Wolf estate along the road to the east, no structures are indicated elsewhere on the property. A similar map published by Hyde in 1908 (see Figure 8) depicts the property in the same way, although the former Matthews estate is identified as the Prigge property. This map also depicts the high water line surrounding Rye Lake to the west, which indicates that the project site was very close to the high water line of the pond.

The 1930 Hopkins map of Westchester County does not depict any structures within the project site, although it does depict the area to the east of the Lake as divided into irregularly-shaped parcels. The owners of these parcels included the NYH&N and New York, Westchester & Boston (NYW&B) railroad companies, the City of New York Water Supply, and Herbert L. Scoffield. Structures are depicted on the eastern side of New King Street in the vicinity of the project site on this map.

Based on property records investigated as part of a Phase I Environmental Site Assessment (The Chazen Companies 2002), the building was constructed in 1966 and was expanded in 1973. Based on historical aerial photos, the 1973 addition was likely the small warehouse addition on the west side of the building. The building was originally owned by D. Stanley Concoran, Inc., a distributor of crystal glass, until 1975 when it was occupied by the current owner.

The building that now stands immediately north of the project site was probably built in stages from the early 20th century through the mid 20th century. This building was reportedly once part of a hunting club (Jan Endresen, pers. comm. September 2010), possibly the Daniel Gray Fishing Club of White Plains. Interstate (I)-684 was constructed to the west of the project site in the 1960s.

B. GROUND DISTURBANCE AND EXISTING UTILITIES

As described above, the project site was developed with the large single-story concrete-block office building and associated parking lot and landscape features in the late 1960s. Areas where some amount of ground disturbance is apparent through the construction of these features or the deposition of fill are depicted on Figure 5.

Information on utilities currently located on the project site was provided in a survey completed by Control Point Associates, Inc. (2008). Several utilities run along the northern edge of the property between the parking lot on Lot 14B and the boundary between Lot 14B and Lot 13A to the north. These include telephone and cable lines as well as an overhead electric line connecting to a transformer box located between the parking lot and the adjacent stone wall. Telephone and cable lines branch to the south passing beneath the parking lot and grassy landscaped island within the parking lot to connect to the north side of the office building. A lighting line also runs beneath the parking lot and island and beneath the grassy edge of the driveway.

In addition to these mapped utilities, the current owner had indicated that a buried septic tank is located west of the parking lot and fill pile and north of the office building.

Immediately southeast of the project site stands a small sewer pump station building for the Town of North Castle.

C. HISTORIC SENSITIVITY ASSESSMENT

As part of the background research for this archaeological documentary study, various primary and secondary resources were analyzed. The information provided by these sources was analyzed to reach the following conclusions. No structures are documented within or immediately adjacent to the project site until the middle of the 20th century. Therefore, the project site is considered to possess low sensitivity for historic period archaeological resources such as domestic shaft features, foundation remains, or refuse deposits.

A. FIELD TESTING

Field testing was conducted on August 31, September 1, and September 8, 2010. Testing involved the manual excavation of 38 shovel test pits, each measuring approximately 18 inches (46 centimeters) in diameter. In the western portion of the study area, ten parallel east-west oriented transects were delineated, spaced between 30 and 50 feet apart, depending on obstructions and field conditions. Along these transects, STPs were excavated every 50 feet except where obstructions or visible disturbance intervened. STPs were spaced more closely in some areas where adjacent obstructions or disturbance would have limited the number of STPs that could be excavated in a given area. Additional STPs were excavated at 50-foot intervals along the east edge of the project site and one STP was placed west of the brick building on Lot 13A. Field testing within mapped seasonal wetlands was limited.

As described in Chapter 1, "Introduction and Methodology," test pits were excavated to sterile subsoil or approximately 2 feet below ground surface unless excavation was stopped by roots, rocks, paved surfaces, or other obstructions. Areas with obvious signs of disturbance such as grading or steep slopes were not tested. All excavated soils were screened through ¼ inch (0.6 cm) hardware cloth and artifacts were collected or sampled and placed in zip locked bags labeled with their provenience information. Soil observations and inclusions were documented in field notebooks, a summary of which is included as Appendix B. Laboratory activity was conducted in compliance with standard practices. The limited number of artifacts that were recovered from the site were cleaned, stabilized, and catalogued at AKRF's archaeological materials laboratory. A record of these artifacts is also included in the table in Appendix B.

No significant archaeological resources were encountered during Phase 1B field testing. Two lithic fragments that were recovered from the field as possible flakes were determined not to be cultural when examined more closely in the laboratory. Modern deposits such as plastic and styrofoam were encountered, likely associated with 20th century construction and deposition of fill on site. The results of field testing are summarized below. For the purposes of this discussion, the project site has been divided somewhat arbitrarily into the Western Portion (generally characterized as an undeveloped wooded area sloping downwards to the west) and the Eastern Portion (consisting of a relatively flat cleared area surrounding the project site building and parking lot).

WESTERN PORTION OF THE PROJECT SITE (STPs 1-28)

The STPs excavated in the western portion of the project site (STPs 1 through 28) were positioned to avoid four primary types of obstructions:

- Steep slopes and fill deposits—In this portion of the project site, the majority of steep slopes consisted of extensive fill deposits and apparent earth moving associated with the construction of 11 New King Street.
- Delineated wetlands along the western and southern edges of the project site—In some cases these wetlands were characterized by wet mucky soils and wetland vegetation, while in other areas the soil was not noticeably damp at the surface, but appeared rockier and sandier than surrounding soils.
- Stone walls—As described in Chapter 2, "Environmental and Physical Settings," a number of stone walls are located in this portion of the project site, near the eastern and southern boundaries and at the property boundary between Lots 14B and 13A.
- Trees and other vegetation—The western portion of the project site is currently wooded. Small vegetation growth, such as vines and small bushes, were cleared by hand; however trees and larger bushes were avoided.

The northernmost east-west transect was delineated along the top of the higher elevation area bordering a steep slope downwards towards a stream that runs east-west along the north edge of the study area. Three STPs (STPs 1, 2, and 3) were excavated along this transect. All three STPs contained an upper stratum (0-4 inches below ground surface [bgs]) of dark brown or dark yellow-brown sandy silt. Beneath the first level was a layer of finer dark yellow-brown sandy silt, ranging between 8 and 18 inches in thickness. In STPs 2 and 3, which were at a higher elevation, a third soil level consisting of 10YR5/6 yellow-brown silty sand comprised the remainder of the STPs. Modern materials were encountered in STP 3, Level 1, but no cultural materials were encountered in the lower levels.

The second and third transects, consisting of STPs 4, 5, and 6 and STPs 7, 8, and 9, respectively, were positioned to avoid visibly disturbed soils associated with the large fill pile discussed above. Soils in these STPs exhibited a similar pattern of soil strata in the upper three levels. The uppermost soil level consisted of a relatively thin yellow-brown or grey-brown silty root mat. Beneath this uppermost level were either one or two soil levels consisting of dark yellow-brown and/or yellow-brown sandy silt. In the cases of STPs 4, 5, 8, and 9, the deepest soil level consisted of a 10YR5/8 yellow-brown silty sand which was very compact and contained gravel and cobbles.

The remaining STPs in the western portion of the study area generally exhibited a similar pattern. Typically, a dark brown or grey-brown root mat, 3 to 5 inches in thickness, was present at the top of the STPs. Beneath this was one or two levels of yellow-brown or dark yellow-brown sandy silt. In some cases, a slightly paler and yellower (10YR5/8 or 10YR6/6) very compact silty sand containing gravel and cobbles was found at the deepest level, often between 15 and 22 inches bgs. Where STPs were excavated in mapped seasonal wetlands, such as STPs 26 and 27, darker more clayey soils were encountered.

Very few artifacts were found in the western portion of the study area. In STP 12, located near the swampy wetland along the project site's western edge, two fragments of clay pigeon were recovered from Level 2, in soil characterized as yellow-brown (10YR 5/6) silty sand. Approximately 50 feet to the south, on the edge of the same wetland, STP 14 contained 1 fragment of green bottle glass in Level 2. Another piece of bottle glass was collected in Level 2 of STP 18. A small fragment of chert, initially considered to be a possible flake, was also recovered from this context; however, on further examination it was determined unlikely that this artifact was cultural in origin. Three clear glass bottle fragments were recovered from the upper level of STP 28, located between the project site building and stone walls flanking an apparent drainage swale.

In general, STPs within the western portion of the project site encountered disturbed sandy fill soils. No potentially significant cultural deposits were encountered.

EASTERN PORTION OF THE PROJECT SITE (STPS 29-38)

Shovel test pits were excavated along the south edge of the project site roughly in line with the southernmost east-west transect discussed above. These STPs (numbered 29 through 34) were located approximately 50 feet apart, placed judgmentally to avoid the steep berms along the southeastern side of the office building, a small and a large slate patio immediately south of the building, and mature trees. Three additional STPs (numbered 35-37) were excavated along the eastern edge of the project site, north of STP 34.

Most of the STPs in this area exhibited similarities in soil stratigraphy. Typically, the uppermost level was relatively thick (between 6 and 12 inches) and consisted of a dark yellow-brown (10YR 4/4) fine silty sand. Cultural materials, most of which were clearly modern (plastic, Styrofoam, etc.), were recovered from this upper soil level in four of the nine STPs in this area. A possible quartzite flake was recovered from Level 1, in the same context as a glass bottle fragment; however, it was subsequently determined that this flake was not cultural in origin. Beneath this soil level, Level 2 typically consisted of a yellow-brown (10YR 5/6 or 10YR 5/8) sandy silt. One small fragment of porcelain was recovered from Level 2 in STP 36. A finer yellow-brown (10YR 6/6) silty sand underlay the 10YR5/6 soils in STPs 32 and 33.

A final STP (STP 38) was excavated in the level lawn area adjacent to the brick building immediately northeast of the project site on Lot 13A. Soils in this STP consisted of yellow-brown silty sands containing no cultural material.

The excavated soils in the eastern portion of the project site appeared to be redeposited fill layers, possibly shifted during the construction of the building at 11 New King Street and subsequent landscaping. No significant cultural deposits were identified.

B. LABORATORY ANALYSIS

Twenty-five artifacts were recovered during field testing (catalogued in the table attached as Appendix B). Of these 25 artifacts, two are lithic materials collected in the field as possible flakes. The black chert and quartzite fragments were examined more closely in the laboratory and it was determined that these were not cultural in origin. In addition to these materials, 15 small fragments of bottle glass (green and clear in color) and two small pieces of undecorated porcelain were collected. The remainder of the artifacts collected from the site were modern, including plastic wrappers, a cigarette filter, Styrofoam, concrete, and a metal screw.

Chapter 6: Conclusions and Recommendations

As described above, a Phase 1A literature search was conducted to evaluate the archaeological sensitivity of the project site using documentary sources and archaeological site files as well as information on soils, topography, hydrology, and visible ground disturbance. Based on this research, it was determined that the project site possessed low sensitivity for historic period archaeological resources but moderate to high sensitivity for precontact period resources, except in areas of visible or documented disturbance or steep slopes.

A Phase 1B field testing program was designed and implemented in the late summer of 2010 to determine the presence or absence of precontact period resources. Thirty-eight STPs were excavated at approximately 50-foot intervals throughout potentially sensitive portions of the project site. No potentially significant archaeological artifacts or features were encountered. No further archaeological testing is recommended for this project site.

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Figures

10.20.10

PARK PLACE at Westchester Airport

Project Site
Figure 1

9.30.10

APE Boundary

Photo View Direction and Reference Number

0 200 400 FEET

SCALE

APE and Photo Locations

Figure 2

PARK PLACE at Westchester Airport

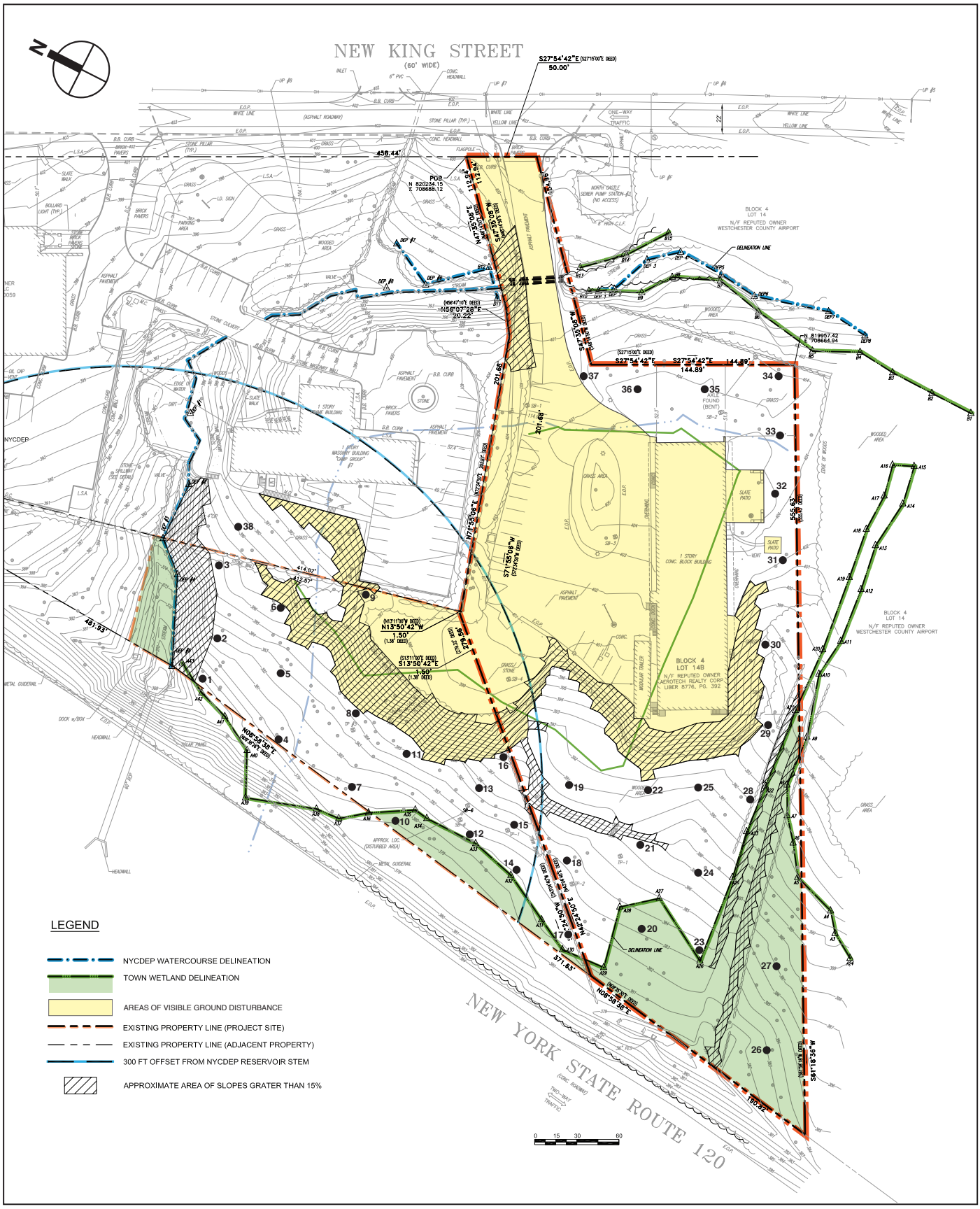
1899 USGS Map, Stamford

Figure 3

10.20.10

Soils Map
Figure 4

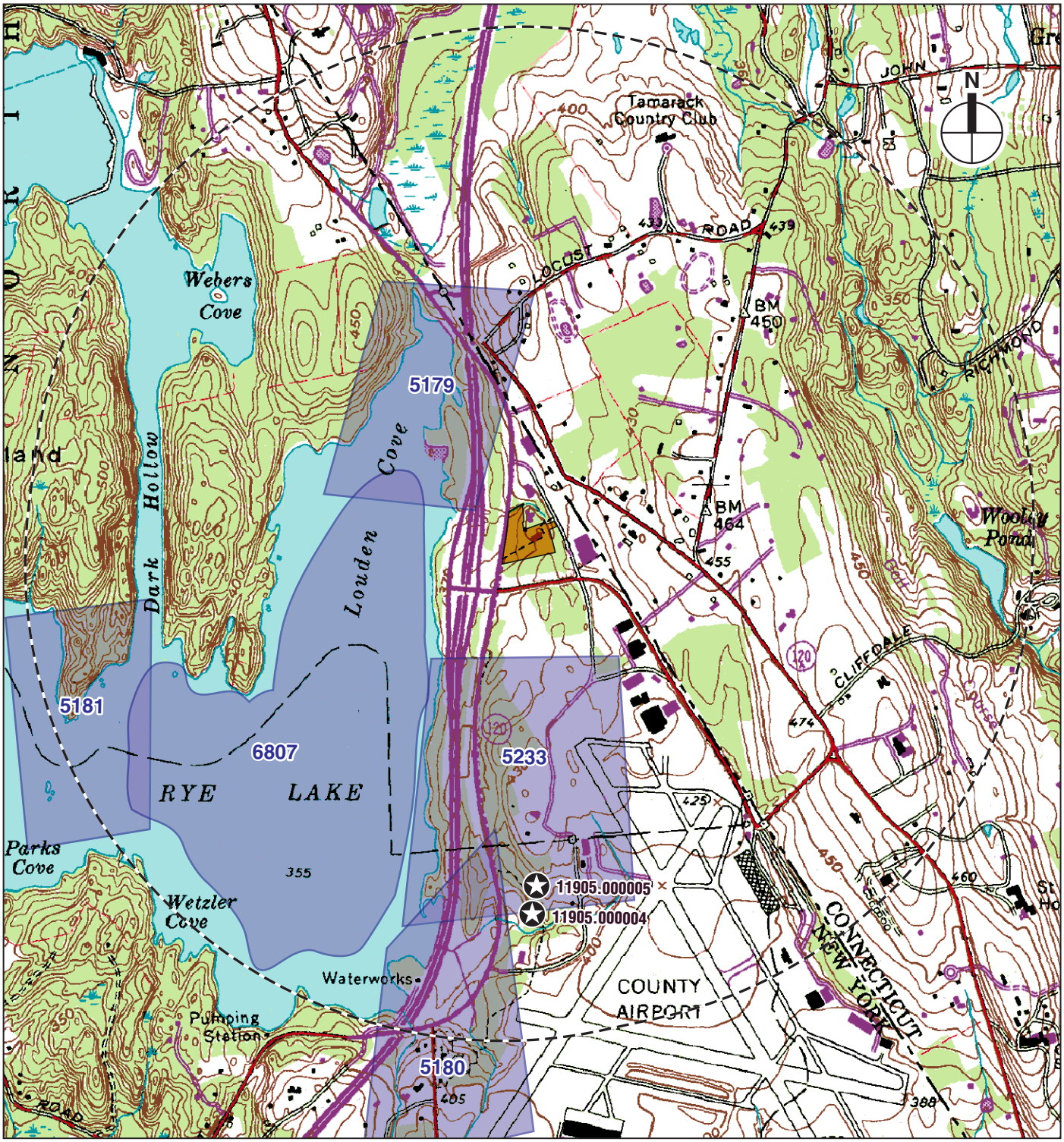
9.28.10



●1 *Location of STP (Shovel Pit Test)*

Phase 1B Testing Locations
Figure 5

9.30.10



APE Boundary

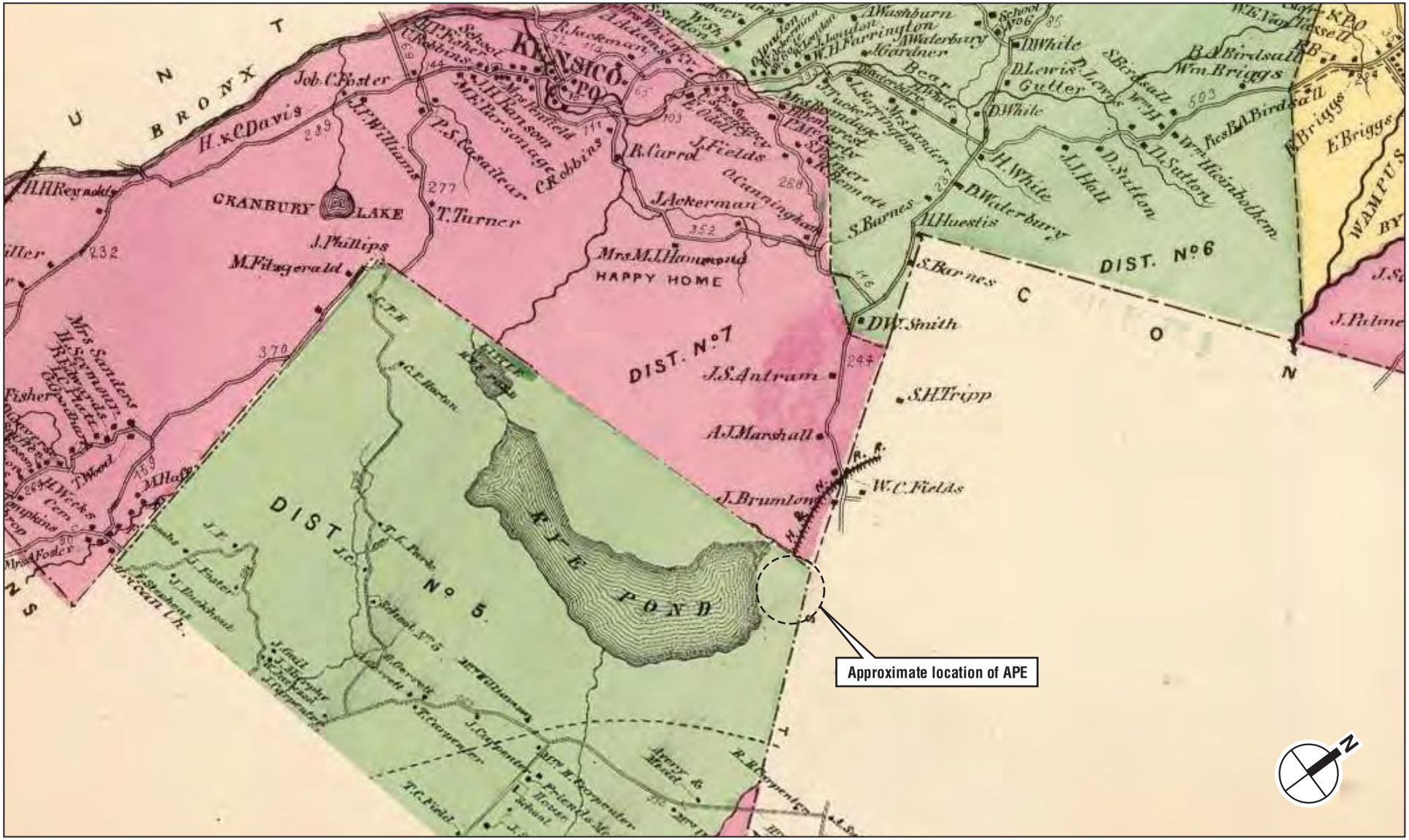
1-Mile Perimeter

Known Archaeological Site (NYSM Site)

Known Archaeological Site (NYSHPO Site)

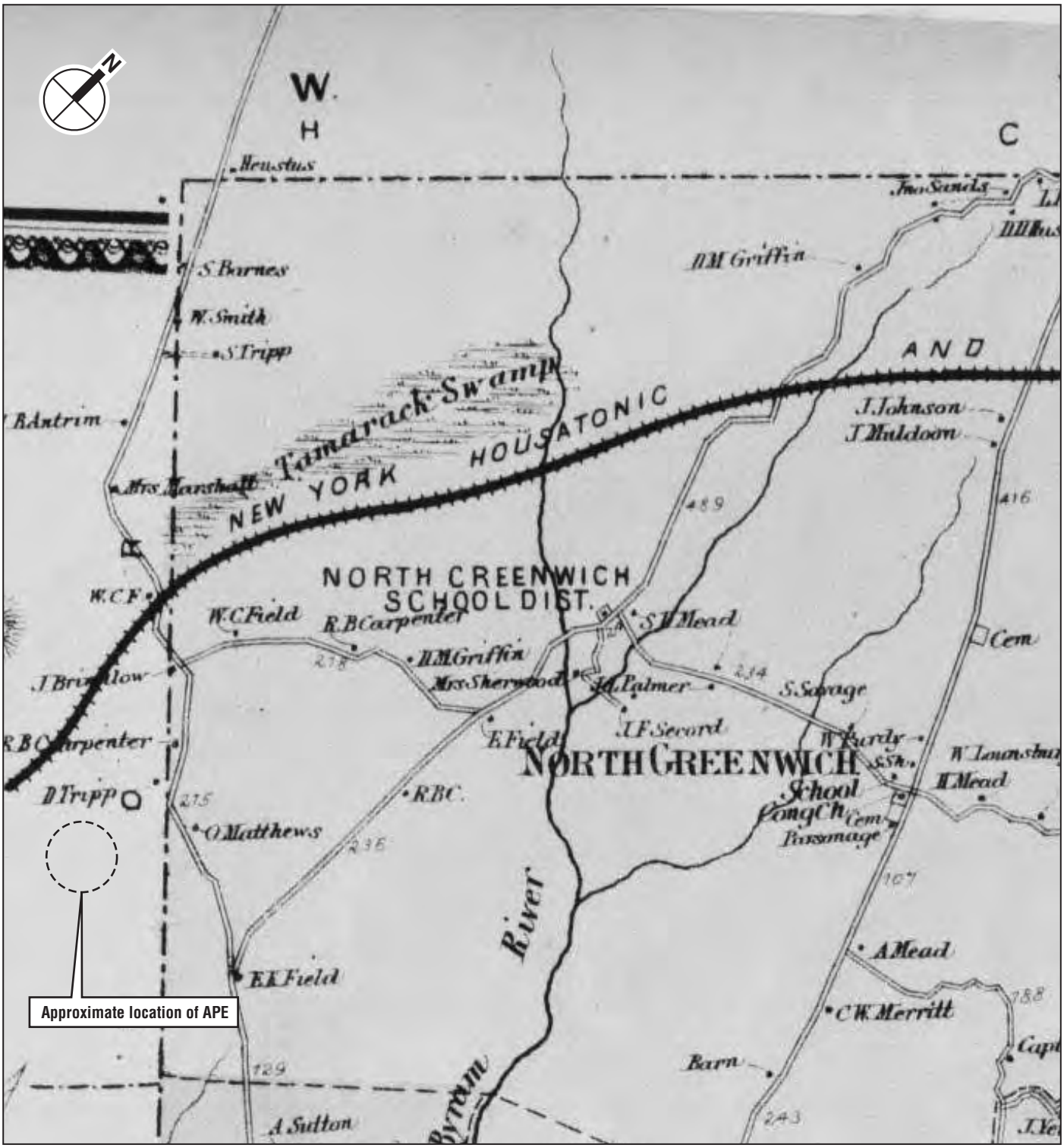
Known Archaeological Sites in APE Vicinity

Figure 6



1868 Beers Atlas of New York
Figure 7a

9.30.10



ca. 1868 Beers Atlas of Greenwich, CT

Figure 7b

9.30.10

Atlas of the Rural District North of New York City.
E. Belcher Hyde, 1908
Figure 8

Photographs

From the driveway of 11 New King Street looking southwest towards the building and parking lot in the project site **1**

Looking west from the western portion of the project site, showing the large parking lot north of the existing building in the project site **2**

From the south edge of the project site, looking southwest, showing the remnants of two parallel stone walls which pass through the southern portion of project site **3**

Looking northwest from a location immediately west of the project site building, showing the steeply sloping graded topography in this portion of the project site **4**

From the wooded western section of the project site, looking southeast towards the project site building. A stone wall is visible in the foreground **5**

Looking southeast from the southeastern edge of the project site, showing the small creek that passes through the northern and eastern portions of the project site. The enclosure with chain-link fence visible in the background is the North Castle Sewer Pump Station # 3 **6**

From immediately north of the project site, a view looking northeast to the office building immediately north and east of the project site **7**

Looking northwest from the north edge of the project site towards a steep slope and water course **8**

Appendices

PHASE 1 APPENDIX A

PRELIMINARY SOILS AND FOUNDATION INVESTIGATION REPORT

(See Appendix E of the DEIS)

PHASE 1 APPENDIX B
EXCAVATION RECORD

Appendix B: Excavation Record

Table B-1
Excavation Record

STP	Level	Opening Depth	Closing Depth	Munsell Soil Color	Soil Type	Cultural Material	Comment
1	1	0	4”	10YR3/3	dk yb sd si		
	2	4”	22”	10YR4/4	dk yb fine si sd		Stopped by rock
2	1	0	4”	10YR4/4	dk yb sd si		
	2	4”	13”	10YR4/6	dk yb sd si		
	3	13”	17.5”	10YR5/6	yb si sd		
3	1	0	4”	10YR3/3	dk gb sd lm		Modern materials not collected
	2	4”	12”	10YR4/4	dk yb fine si		
	3	12”	20”	10YR5/6	yb fine si sd		Many rocks present
4	1	0	4”	10YR3/2	v dk gb root mat		
	2	4”	12”	10YR4/4	dk yb sd si		
	3	12”	19”	10YR4/6	dk yb sd si		Large rock at bottom
5	1	0	3”	10YR3/4	dk yb root mat		
	2	3”	10”	10YR4/4	dk yb sd si		
	3	10”	16”	10YR5/6	yb sd si		
	4	16”	20”	10YR5/8	yb coarse si sd		Many rocks present
6	1	0	5”	10YR4/4	dk yb si lm		
	2	5”	16”	10YR5/6	yb sd si		
	3	16”	21”	10YR5/8	yb sd si		
7	1	0	5”	10YR3/3	dk bn si topsoil		
	2	5”	12”	10YR3/6	dk yb sd si		
	3	12”	20”	10YR4/6	dk yb si sd		
	4	20”	23”	10YR5/8	yb si sd		
8	1	0	3”	10YR3/2	v dk gb root mat		At bottom of fill pile
	2	3”	11”	10YR4/4	dk yb sd si		
	3	11”	17”	10YR4/6	dk yb fine si lm		
	4	17”	21”	10YR5/8	yb fine si sd		
9	1	0	4.5”	10YR4/4	dk yb si sd		Atop fill pile, a few feet SW of parking lot
	2	4.5”	8”	10YR4/3	bn si sd w/ gvl		Full of gravel
10	1	0	5.5”	10YR3/4	dk yb sd si		Mottled with dk bn cl si 10.5YR3/3;

	2	5.5”	15”	10YR5/4	yb sis d w/ gvl		Full of gravel and rocks
11	1	0	3”	10YR3/4	dk yb si topsoil		
	2	3”	21”	10YR4/6	dk yb si sd		
12	1	0	4”	10YR3/4	dk bn si lm		
	2	4”	17”	10YR5/6	yb si sd	2 fragments clay pigeon	Stopped by rocks
13	1	0	3.5”	10YR3/3	dk bn si lm		
	2	3.5”	22”	10YR5/6	yb sd si		Near fill pile
14	1	0	3”	10YR2/1	bl cl lm, wet		Mapped as wetland
	2	3”	15”	10YR4/4	dk yb sd si	1 small fragment green bottle glass	
	3	15”	21”	10YR5/6	dk yb si sd		Interface w/ L.2 very gradual
15	1	0	2”	10YR4/4	dk yb si root mat		
	2	2”	13.5”	10YR5/6	yb sd si		
	3	13.5”	17”	10YR5/8	yb si sd		
16	1	0	2”	10YR3/2	v dk gb lm root mat		
	2	2”	24”	10YR4/6	dk yb fi sd si, clean		Glass fragment at interface with L.1
17	1	0	2”	10YR3/2	v dk gb si lm root mat		
	2	2”	13”	10YR3/4	dk yb si lm		Stopped by rock and roots
18	1	0	2”	10YR3/2	v dk gb dry sd si		
	2	2”	16”	10YR5/6	yb sd si	1 clear glass bottle fragment; 1 poss chert flake?	Poss flake, glass beneath
	3	16”	19”	10YR6/6	yb fine compact si sd		
19	1	0	3”	10YR3/3	dk bn fine sd si		
	2	3”	15.5”	10YR5/6	yb sd si		large rock in north half of STP
20	1	0	11”	10YR3/3	dk bn si lm		Stopped by large rock
21	1	0	4.5”	10YR5/2	gr cl		Mottled with 10YR3/2 v dk gb si cl
	2	4.5”	16”	10YR3/3	dk bn cl si		Stopped by rock
22	1	0	3”	10YR2/1	bl si lm		
	2	3”	9”	10YR3/3	dk bn cl si		
	3	9”	19”	10YR4/6	dk yb sd si		
	4	19”	22.5”	10YR5/8	yb sd si		
23	1	0	5”	10YR3/1	v dk gr sd si		
	2	5”	14”	10YR4/3	bn si sd		Mottled with L.3 soil
	3	14”	16”	10YR3/2	gb fine compact sd si		
24	1	0	3”	10YR3/2	v dk gb loose sd si		
	2	3	21”	10YR4/4	dk yb sd si		
25	1	0	3”	10YR2/2	v dk bn sd si		
	2	3”	21”	10YR4/6	dk yb sd cl si		
26	1	0	16”	10YR3/2	v dk bn sd si		
	2	16”	20”	10YR5/4	yb compact sd si		
27	1	0	11”	10YR2/1	bl cl si		
	2	11”	22”	10YR5/3	bn sd si		

28	1	0	17.5”	10YR4/4	dk yb fine compact si sd	3 clear glass bottle fragments	Stopped by large root
29	1	0	12”	10YR4/4	dk yb fine si sd	7 clear glass bottle frags; 1 small porcelain frag; 1 plastic wrapper	
	2	12”	17.5”	10YR5/6	dk yb fine si sd		Stopped by rocks
30	1	0	10”	10YR4/4	dk yb fine sd si	1 frag green bottle glass; 1 frag clear bottle glass; 2 plastic wrappers; 1 plastic cigarette filter	
	2	10”	15”	10YR4/6	dk yb fine sd si		
31	1	0	12”	10YR5/4	yb fine sd si		Lots of rock
32	1	0	7.5”	10YR4/4	yb fine sd si	1 concrete fragment; 1 metal screw	
	2	7.5”	16”	10YR5/6	yb sd si		
	3	16”	18.5”	10YR6/6	yb sd si w/ gvl		
33	1	0	17.5”	10YR5/6	yb light loose sd si		
	2	17.5”	23”	10YR6/6	yb fine sd si		Large rocks throughout
34	1	0	9”	10YR4/4	dk yb fine loose sd si		
	2	9”	18.5”	10YR5/6	yb sd si	styrofoam cup fragment	
35	1	0	11”	10YR4/4	dk yb fine sd si	1 glass bottle fragment; 1 poss quartz flake?	
	2	6”	23”	10YR5/8	yb sd si		
36	1	0	6”	10YR4/4	yb light fine sd si		
	2	6”	24”	10YR5/6	yb fi sd si	1 porcelain rim fragment	
37	1	0	6”	10YR4/4	dk yb fi sd si		
	2	6”	18”	10YR5/6	yb sd si w/ gvl		
38	1	0	9”	10YR5/4	yb fine sd si		Mottled with 10YR5/6 yb sd si
	2	9”	18”	10YR5/8	yb si sd		Gradual interface; lots of rock and gvl

Notes:
cl: clay/ey; si: silt/y; sd: sand/y; lm: loam/y; gvl: gravel
bl: black; bn: brown; yb: yellowish brown; rb: reddish brown; gb: grayish brown; gr: gray; dk: dark; st: strong; v: very

Appendix G: Geotechnical Report

REPORT
PRELIMINARY SOILS AND FOUNDATION INVESTIGATION

PROPOSED PARKING GARAGE
TOWN OF NORTH CASTLE, NEW YORK
AEROTECH REALTY CORP.

November 6,2008

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November 6, 2008

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Report
Preliminary Soils and Foundation Investigation
Proposed Parking Garage
Town of North Castle, New York
Aerotech Realty Corp.

Introduction

This report presents the results of a preliminary soils and foundation investigation performed by Melick-Tully and Associates, P.C. (MTA) for a proposed five-story parking garage to be constructed at 11 New King Street in the Town of North Castle, Westchester County, New York. The location of the proposed parking garage is shown on the Site Location Map, Plate 1. This investigation was performed in general accordance with our proposal dated July 21, 2008.

Proposed Construction

We understand that planning for the proposed parking garage is currently ongoing. However, discussions with representatives of AKRF Engineering, P.C. (AKRF) indicate that the proposed garage would be a five level structure with the lowest level floor slab established at approximately Elevation +382 feet, roughly 4 to 23 feet below the existing surface grades. The lowest level floor slab may be raised or lowered depending on the overall height restrictions in

the town zoning requirements which we understand limit structures to a maximum height of 35 feet, and possibly height constraints imposed by the nearby Westchester County Airport. A preliminary footprint shown on plans provided to us indicates that the garage would be approximately 170 feet by 320 feet in overall plan dimensions. While structural loading information was not provided to us, the five story garage will likely impose relatively heavy individual column loads.

We understand that stormwater management facilities will be located to the west of the proposed garage.

Purpose and Scope of Work

The purpose of our services was to:

1) explore the subsurface soil, rock and groundwater conditions, at the six boring and four test pit locations requested by AKRF;

2) estimate the relevant geotechnical engineering properties of the encountered materials;

3) evaluate the site foundation requirements considering the anticipated structural loads and encountered subsurface conditions;

4) recommend an appropriate type of foundation for support of the proposed structure, and provide preliminary geotechnical-related foundation design and installation criteria, including an estimate of the Site Class as defined by the New York State Building Code, 2007 Edition for seismic design purposes;

5) provide preliminary recommendations for the support and the need for subdrainage of the lowest level garage floor slab;

6) estimate the post-construction settlements of the recommended floor and foundation systems;

7) provide preliminary geotechnical-related parameters for use in pavement design; and

8) discuss appropriate earthwork operations or considerations consistent with the recommended site and foundations solutions.

To accomplish these purposes, a subsurface exploration program consisting of six test borings and four test pit excavations was performed at the approximate locations identified by AKRF. Prior to the start of our subsurface exploration program, a utility locating contractor was brought to the site to aid in determining that the explorations would be advanced in areas where they would not conflict with the existing utilities. The borings were advanced utilizing a combination of truck and ATV mounted rotary wash and hollow stem auger drilling equipment. The borings extended to depths varying from approximately 30 to 51 feet below the existing surface grades. The test pits were advanced utilizing a rubber tire backhoe and extended to depths of approximately eight to eleven feet below the existing surface grades. Soil samples suitable for identification purposes were extracted from the borings utilizing the general procedures of the Standard Penetration Test, and bulk samples of the encountered soils were obtained from the test pit explorations.

All field work was performed under the direct technical observation of an engineer and geologist from MTA. Our representatives located the explorations in the field by tape measurement from the existing site features, maintained continuous logs of the explorations as the work proceeded, and supervised the soil sampling operations to obtain the desired subsurface information. The approximate locations of the explorations are shown on the Plot Plan, Plate 2. Detailed descriptions of the encountered materials are shown on the individual Logs of Borings, Plates 3A through 3F and Logs of Test Pits, Plates 4A through 4D. The soils were visually classified in general accordance with the Unified Soil Classification System shown on Plate 5.

A temporary PVC piezometer was installed in Boring No. 2 to a depth of 35 feet to obtain follow-up water level readings. The water levels measured in the piezometer are indicated on the log of Boring No. 2.

All soil samples obtained from the explorations were brought to our office where they were further examined in our soil mechanics laboratory. Nine of the samples obtained from the explorations were subjected to laboratory testing consisting of grain size analyses and moisture content determinations to aid in their evaluation and engineering classification. The results of the grain size and moisture content testing are presented on Plates 6A and 6B, Gradation Curves. The results of the moisture content determinations are also presented on the appropriate exploration logs.

The results of our subsurface exploration program, our visual examination of the soil samples, and a review of the laboratory test results have provided the basis for our engineering analyses and preliminary design recommendations. The following discussions of our findings and recommendations are subject to the limitations attached as an Appendix to this report.

Site Conditions

Surface Features: The site is occupied by a one story concrete block office building with a modular trailer unit located adjacent to the northwest corner of the structure. The north side of the structure is primarily a paved automobile parking area and the south side a grass covered landscaped area. The western portion of the property adjacent to the existing improvements is currently moderately to heavily wooded, and a drainage swale runs along the southern edge of the property. Several stone walls traverse the undeveloped portions of the

property and wetlands have been delineated in the woods to the south and west of the existing building.

Topographic information shown on plans provided to us indicates that the site slopes gently to moderately downward from east to west from a high of approximately Elevation +405 feet in the north central portion of the site adjacent to the property line to a low of approximately Elevation +377 feet in the southwest corner of the parcel east of Route 120.

Subsurface Conditions: The subsurface conditions encountered in the explorations performed for this study consisted of the following generalized strata, listed in the order of increasing depth:

1) Topsoil: The surficial material encountered in all of the explorations consisted of a layer of topsoil. In nine of the ten explorations the topsoil was generally found to range from approximately four to eight inches in thickness; however, in Boring No. 2 the topsoil was observed to extend to a depth of 18 inches below grade.

2) Fill: Fill was encountered in Borings No. 3, 4, and 5. The fill generally consisted of silty sands which extended to depths of approximately six and one half to nine feet below grade.

3) Silty Sands: The surficial topsoil and fill materials were underlain by glacial till consisting of silty sands with varying amounts of gravel and cobbles. The sandy materials were generally found to be dense to very dense in relative density, and extended to the completion depths in all of the explorations of eight to fifty-one feet below grade. The bottom ten to fifteen feet of the sandy soils in Borings No. 1 and 2 appeared to be composed of highly decomposed schistic bedrock.

A temporary piezometer installed in Boring No. 2 and monitored for approximately 24 hours. Water was initially measured upon completion of drilling at a depth of 25 feet below grade and the water level rose to a depth of ten and one half feet below grade, corresponding to approximately Elevation +493 feet, the following day. The water levels encountered in the

remaining borings were measured at depths varying from approximately 16 to 26-1/2 feet below grade at the completion of the drilling operations. Water levels and mottling observed in the test pit explorations were observed at depths of approximately three and one half to eight feet below grade. The test pits were in the lower elevated areas of the site.

Conclusions and Recommendations

General: Based on the results of our study, it is our opinion that:

1) Excavations of 4 to 23 feet will be required to achieve the proposed lowest garage floor slab level of Elevation +382 feet. The presently planned depth of excavation extends below any fill materials encountered in the borings. The dense to very dense natural silty sand soils anticipated to be encountered at the proposed building subgrade levels would provide adequate support for the proposed garage using conventional spread footings. Allowable foundation bearing pressures of three to four tons per square foot (tsf) appear feasible.

2) Groundwater was encountered at completion of drilling at depths varying from approximately 6 to 26-1/2 feet below the existing surface grades, equivalent to roughly Elevation +376 feet to Elevation +394 feet. In addition, mottling which is typically indicative of seasonal high groundwater or seasonally saturated soils was observed in Test Pit No 2 at a depth of three and one half feet below grade corresponding to Elevation +379.5 feet above the observed seepage level. Significant variations were noted between the water levels in the borings at the time of drilling and the 24 hour water level measured in Boring 2, likely due to the slow recharge through the relatively impervious natural soils. Consequently, dewatering is anticipated to be required to maintain the water level below the proposed excavation bottom during construction. Further, establishing the garage floor at the current planned elevation would require an extensive permanent drainage system, or the walls and floor slab would have to be designed to withstand hydrostatic pressures. Additional studies are recommended to better evaluate stabilized groundwater levels and estimate groundwater inflow volumes.

3) Excavations of approximately 4 to 23 feet will be required to reach the proposed lowest slab level. Where sufficient space is available, the excavations could be adequately sloped to maintain safe excavation conditions. However, where the distance to the property lines and/or adjacent improvements is less and deeper excavations are required,

excavation support will be necessary. These conditions exist along the north side of the site next to the adjoining parking lot and the drainage swale on the south side of the proposed garage structure.

The excavation support and dewatering operations are interrelated and the design of both systems should be coordinated under one entity. It is our recommendation that this work be designed and coordinated by the site contractor as the means and methods available to complete the work are varied.

Discussions of these and other geotechnical related items which are considered relevant to the ongoing design and proposed construction are presented in subsequent sections of this report.

Initial Site Preparation: The existing structure should be demolished and any utilities including underground tanks abandoned and capped off, or rerouted beyond the limits of the excavation required to construct the proposed garage. Pavement and any demolition rubble should be excavated and legally disposed of off-site. The existing vegetation should be cleared and the topsoil stripped from within and up to ten feet beyond the proposed building and access drive limits. The topsoil would not be suitable for reuse as structural backfill.

Excavation and Dewatering: After demolition, clearing, stripping, and removal of the existing improvements, excavation to the proposed subgrade levels should proceed. All construction excavation should be performed in accordance with the most recent OSHA excavations guidelines and governing safety codes. Based on the results of our explorations, we believe that the existing site soils would be considered Type "C" soils as defined by the latest OSHA excavation regulations.

In areas where safe side slopes can not be practically maintained, excavation support systems will be required. This appears to be necessary near the northwest building corner and

along portions of the south side of the proposed garage. The presence of cobbles and boulders and extremely dense sandy soils would likely prevent installation of driven sheeting to support the excavation. One excavation support option would be a soldier pile and lagging system. However, due to the above soil conditions, it would likely be necessary to predrill the soldier piles and grout them in place. The excavation support system would be in excess of 20 feet high in places and would be required to be designed by a licensed professional engineer. Typically, heights greater than about twelve feet cannot be economically cantilevered and the use of tie-backs or internal bracing is required. The proximity of the excavation support to the adjacent property lines would limit tie-back lengths (unless easements are obtained) and the support system may need to be internally braced.

Based on the results of the borings, it is our opinion that the following soil parameters could be used in design of the excavation support system.

Soil Type	Total Unit Weight	Angle of Internal Friction (degrees)	Cohesion (psf)
Dense to very dense glacial sand	140	34	0
Clean three-quarter inch stone	110	40	0

Groundwater was measured in the borings upon completion of the drilling at depths of 16 to 26-1/2 feet, corresponding to elevations varying from about 372 feet to 387 feet. However, water was measured in the piezometer installed in Boring No. 2 a day after drilling at a depth of ten and one half feet below grade (about 15 feet higher than during drilling), corresponding approximately to Elevation +393 feet. Further, the seepage level recorded in Test Pit 2 was about twelve feet higher than in nearby Boring 6. This is attributed to the slow recharge rate of the dense glacial soils.

Water levels in the test pit explorations were observed at depths of approximately six to eight feet below grade, corresponding to Elevations +370 feet to Elevation +377 feet. The test pits were excavated at lower elevated areas of the site. In addition, mottling was observed at Test Pit No. 2 at a depth of three and one half feet indicating that groundwater levels will fluctuate seasonally.

The 24 hour water level reading in Boring 2 and the groundwater level reading in Boring 3, which are located in the higher elevated portion of the site where deeper cuts are planned, correspond to approximately levels of Elevation+387 to Elevation +393.5 feet, well above the planned excavation level. It should be expected that stabilized water levels within other borings could also be higher than measured. Consequently, shallower groundwater levels will likely be encountered during construction and significant dewatering will be required during excavation to the proposed design subgrade levels. Water seepage also would affect the stability of excavations and flatter slopes may be necessary. The contract documents should require the contractor to provide the equipment and whatever means necessary to maintain relatively dry excavations at all times.

We recommend that at least two wells be installed prior to finalizing the bid documents to further define the groundwater conditions, and to help estimate construction dewatering requirements as well as permanent building drainage considerations.

Based on the currently proposed lowest garage slab level, we recommend overexcavation of approximately 18 to 24 inches of the underlying soils, and replacing them with clean three quarter inch crushed stone or washed gravel to help maintain a stable subgrade during construction. The stone would also help the dewatering operations.

Foundation Design Criteria: The exposed soils at the proposed building subgrade levels are anticipated to consist of dense to very dense silty sands. The natural dense to very dense sandy materials are capable of providing adequate support for foundations designed to impose maximum allowable net bearing pressures of up to 6,000 to 8,000 pounds per square foot. For planning purposes, foundations established at levels where the existing overburden soils are at least 15 feet above the design levels could be designed for 8,000 pounds per square foot. Foundations where overburden depths are less could be designed for 6,000 pounds per square foot. Once building loads and foundation plans are available, we could finalize these recommendations.

Depending on the effectiveness of the dewatering, the soils below the individual footing locations should be overexcavated for a minimum of six to twelve inches and be replaced with clean three quarter inch crushed stone or washed gravel to help provide a stable working base during construction.

We anticipate that the post construction settlements of the foundations designed and installed in accordance with our recommendations would be on the order of one inch or less. Settlement estimates should be reviewed when footing sizes and building loads are determined.

Seismic Design Criteria: Based on the subsurface conditions encountered in the explorations performed for this study, it is our opinion that the site conditions are representative of a Site Class "C" as defined by the Building Code of The State of New York, 2007 Edition for seismic design purposes. This estimate was based on a correlation of the SPT "N" values obtained in the borings in accordance with the building code. To more accurately define the site class, shear wave velocity measurements could be made using geophysical methods.

Fill and Backfill: Moisture contents performed on samples of the natural soils obtained from the explorations indicate that they are at or slightly above the anticipated moisture levels required to immediately reuse the materials as backfill. Consequently, some aeration and drying of excavated materials could be required to permit their reuse as controlled compacted backfill adjacent to footings, utilities or below grade walls. Segregation of cobbles and boulders would also be required. All fill and backfill within the proposed building should be placed in lifts and compacted to at least 95 percent of ASTM D 1557 maximum dry density. Imported fill, if required, should consist of granular soils containing not more than 15 percent by weight passing a No. 200 sieve and having a maximum particle size of four inches.

Below Grade Drainage: Plans provided to us show a storm drain near Route 120 with an invert of 376.59, about 5.4 feet below the proposed lowest slab elevation. Conversations with AKRF indicated they feel this storm drain could serve as an outlet for basement drainage, so it appears that gravity drainage would be feasible and the following discussions will therefore focus on gravity drainage. If gravity discharge is not feasible, then an extensive permanent pumping system will be required, or a portion of the walls and slab of the garage would have to be designed to resist hydrostatic pressures.

The below grade walls for the proposed structure should be designed to resist lateral earth pressures imposed by the adjacent soils as well as surcharge loads from traffic, temporary construction traffic, material stockpiles, sloping backfill, etc, as well as any potential hydrostatic pressure. In areas where it is not possible to operate compaction equipment to achieve adequate compaction, clean three quarter inch crushed stone or washed gravel could be used as backfill. Estimated soil parameters for the encountered materials and clean stone are provided in the table

shown on Page 8. If imported sandy soils or processed stone are used as backfill, appropriate design parameters should be confirmed at the time of construction.

We recommend that the below grade walls be provided with a vertical drainage system to prevent the buildup of hydrostatic pressures behind the walls. The vertical drains should consist of a synthetic drainage material (Enkadrain, Miradrain, or equivalent) or a column of crushed stone which extends from the top of the wall foundation to within two feet of the proposed ground surface. If stone is used, it should be separated from the adjacent soils by a filter fabric (Mirafi 140N, or equivalent). The vertical drainage layer should be connected to a foundation drain consisting of a minimum six inch diameter porous concrete or perforated pipe surrounded on all sides by at least six inches of crushed stone wrapped in filter fabric. The foundation drains should be sloped to drain by gravity to the storm sewer outlet.

The lowest level floor slab of the garage slab should be underlain by a minimum of 18 inches of clean three quarter inch crushed stone or washed gravel as previously described. Depending upon the estimated groundwater inflow volume, the subslab stone layer will require drainpipes to help transmit water. For preliminary design purposes, we recommend that four inch diameter perforated pipes spaced twenty feet on center be installed below the slab. The pipes should attach to a manifold that connects to the storm drain. We recommend that the outlet pipe from the garage, as well as the perimeter footing drain, be provided with clean-outs. In addition, we recommend that sumps be located through the building where water could be removed from the stone layer by pumping in the event that the outflow pipe becomes flooded or clogged.

If gravity drainage of the lowest level is not feasible, it would likely be necessary to construct the lowest level floor slab as a reinforced concrete slab with sufficient weight or an appropriate anchoring system capable of resisting hydrostatic uplift pressures. Additional evaluation of floor slab design and construction considerations could be provided after the final floor slab level is decided, and pending additional groundwater studies.

Pavement: Pavements for access drives which lead to the garage structure should be established on the dense natural soils, or similar materials installed as controlled compacted fill. Any existing fill materials should be removed for their full depth and be replaced with controlled compacted fill. All controlled compacted fill installed in structural areas should consist of granular materials installed in loose lifts of approximately 12 inches or less and compacted to 95 percent of their maximum dry density as determined by the ASTM D- 1557 test procedure. The moisture contents of the existing soils were observed to be at or slightly above the levels which would allow their immediate re-use as controlled compacted fill. Consequently, some aeration and drying of the existing soils should be anticipated in order to install and compact the soils to 95 percent of their maximum dry density. Pavements established atop sandy portions of the natural soils or similar materials installed as controlled compacted fill could be designed assuming a "good" subgrade support condition with an estimated California Bearing Ratio (CBR) of 10 percent. Laboratory testing would be required to confirm the estimated values.

Environmental Screening: At the time of our study, petroleum like odors were observed in two of the borings. Representatives of AKRF provided environmental screening to evaluate the presence of any contaminants. We recommend that further evaluation of the potential for

encountering contaminated soils and/or groundwater be performed before construction so that any premium costs are considered in the overall site planning.

Future Work: Once the final floor slab level has been established, we recommend that additional groundwater and permeability testing be performed to further evaluate groundwater levels, potential of temporary and permanent hydrostatic pressures, and dewatering requirements for the proposed structure. We would be pleased to provide a proposal for these services, if requested.

Please feel free to contact us if you have any questions regarding this information.

The following Plates and Appendix are attached to complete this report:

Plate 1 – Site Location Map
Plate 2 – Plot Plan
Plates 3A through 3F – Logs of Borings
Plates 4A through 4D – Logs of Test Pits
Plate 5 – Unified Soil Classification System
Plates 6A and 6B – Gradation Curves
Appendix – Limitations

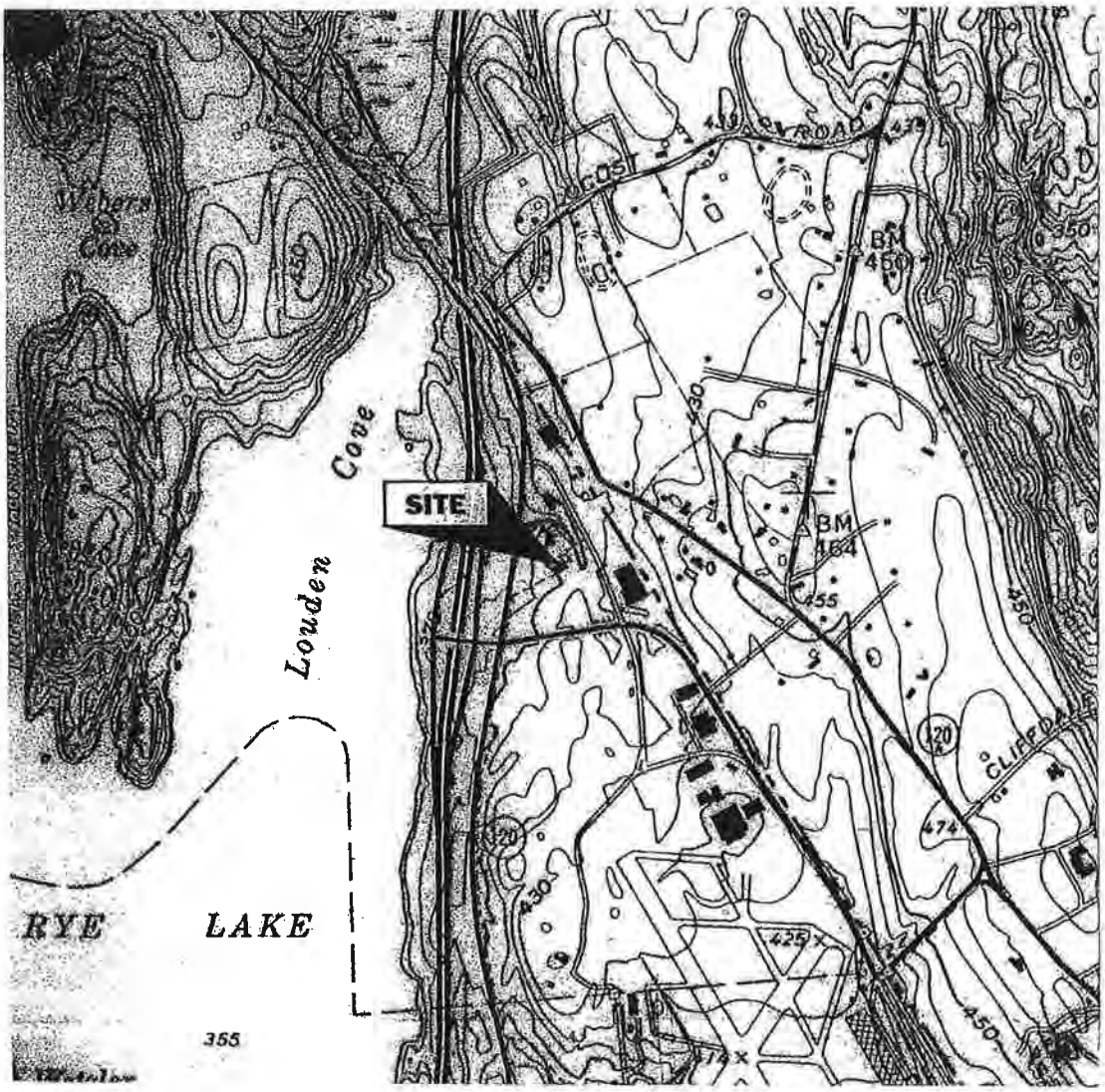
Respectfully submitted,

MELICK-TULLY and ASSOCIATES, P.C.

James H. Beattie, P.E.
Senior Associate

Todd E. Horowitz, P.E.
Vice President

JHB:TEH/jm
8612-001*3D
(3 copies submitted)



FROM: "Glenville Quadrangle, CT-NY, 7.5 Minute Series (Topographic)," USGS, 1960, photorevised 1971.

MELICK-TULLY AND ASSOCIATES, P.C.
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117 Canal Road
South Bound Brook, New Jersey 08880
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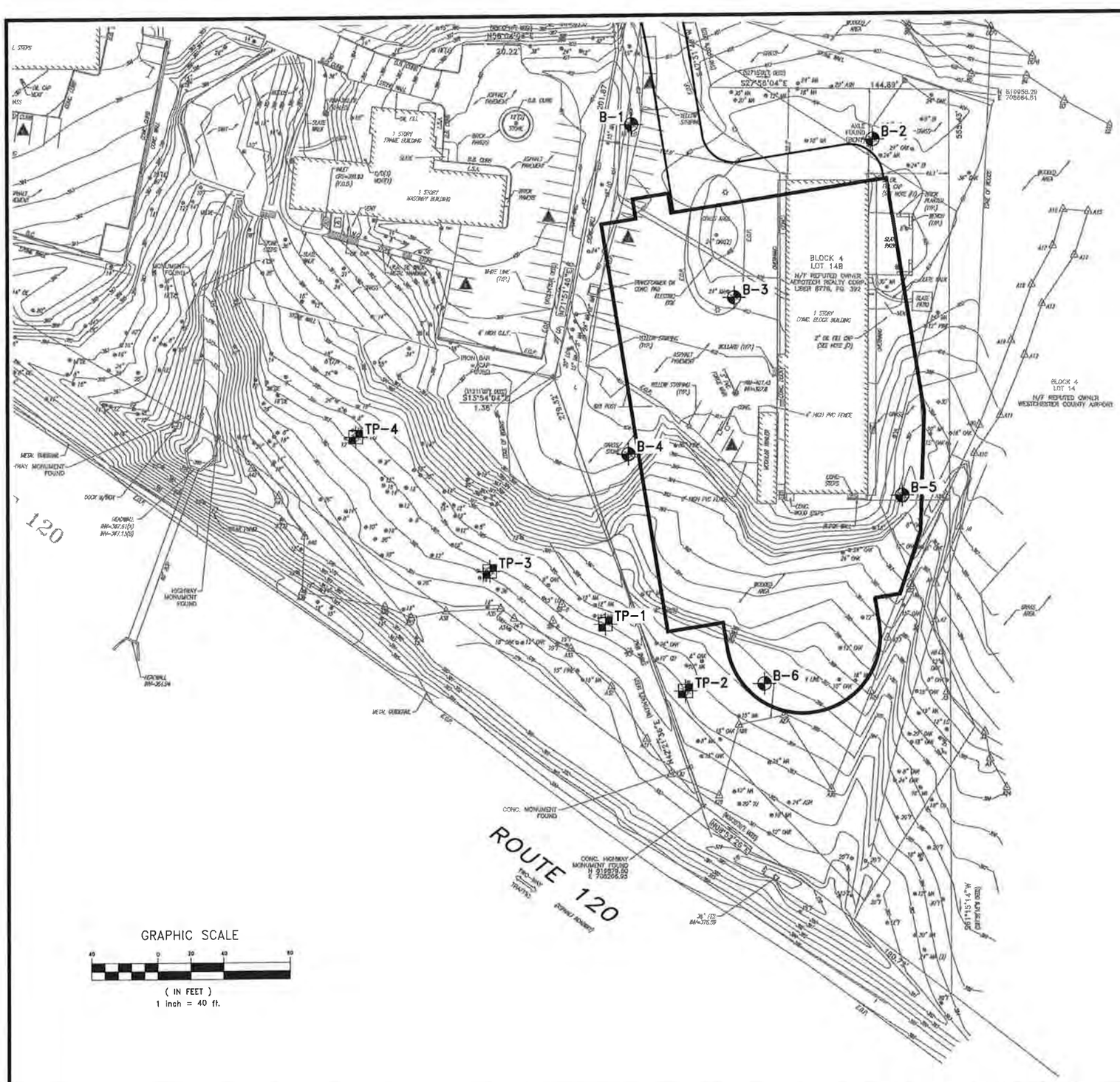
SITE LOCATION MAP

PROPOSED PARKING FACILITY
NORTH CASTLE, NEW JERSEY
AEROTECH REALTY CORP.

JOB NO.	FILE NO.	DR. BY	CHK. BY	DATE	APPROX. SCALE	PLATE
8612-001*3D	23846	VJD	JHB	10-31-08	1"=1,430'	1



KEY:

B-1
NUMBER AND APPROXIMATE LOCATION OF BORINGS PERFORMED FOR THIS STUDY

TP-1
NUMBER AND APPROXIMATE LOCATION OF TEST PITS PERFORMED FOR THIS STUDY

NOTES:

1. This drawing is part of Melick-Tully and Associates, P.C. Report No. 8612-001*3D and should be read together with the report for complete evaluation.

2. General layout was obtained from an unlabeled drawing provided by the client.

PLOT PLAN

PROPOSED PARKING GARAGE
TOWN OF NORTH CASTLE, NEW YORK
AEROTECH REALTY CORPORATION

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers
& Environmental Consultants
117 Canal Road
South Bound Brook, New Jersey 08880
(732) 356-3400

JOB NO.	FILE NO.			
8612-001*3D	23846			
DR. BY	CHK. BY	DATE	SCALE	PLATE
VJD	JHB	10-31-08	1"=40'	2

LOG OF BORING

BORING NO. B-1

COMPLETION DATE: 10/16/08 | SURFACE ELEVATION: +403 ft (±) | WATER LEVEL: *

JOB NUMBER: 8612-001*3D | READING DATE: 10/16/08

DEPTH	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
0	S1	33	7.2		4" Topsoil	0
				SM	Brown fine to medium sand, some silt, trace fine gravel, occasional cobbles (moist)(dense to very dense)	
5	S2	63				5
10	S3	92	8.1		Gray-brown fine to coarse sand, some silt, trace fine gravel, with cobbles (moist)(very dense)	10
15	S4	151				15
20	S5	100/6"		SM		20
25	S6	196				25
30	S7	105/6"				30
35	S8	55				35
				SM	Gray-brown micaceous fine to coarse sand, and silt, trace fine gravel (moist)(very dense) (highly decomposed schistic bedrock)	
40	S9	81				40
	S10	78				
45					Boring completed @ 44'	45
					*Groundwater measured @ 25'-6" upon completion of boring	
50						50

NOTES FOR COLUMNS:
1.SAMPLE AT AVERAGE SAMPLING DEPTH
2.INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 3A

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF BORING

BORING NO. B-2

COMPLETION DATE: 10/16/08 | SURFACE ELEVATION: +404 ft (±) | WATER LEVEL: *

JOB NUMBER: 8612-001*3D | READING DATE: 10/16/08

DEPTH	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
0	S1	15			18" Topsoil	0
	S2	41	8.5	SM	Brown fine to coarse sand, some silt, trace fine gravel (moist)(dense)	
5	S3	94			Gray-brown fine to coarse sand, and silt, trace fine gravel, with cobbles (moist)(very dense)	5
	S4	51				
10	S5	69	8.3	SM		10
15	S6	191/10"				15
20	S7	70/3"			- driller notes boulder @ 23'	20
25	S8	65		SM	Brown fine to coarse sand, little to some silt, trace fine gravel, with cobbles and boulders (moist to wet)(very dense)	25
30	S9	100/5"				30
35	S10	77		SM	Brown micaceous fine to coarse sand, some silt, trace fine gravelly (highly decomposed schistic bedrock)(moist)(dense to very dense)	35
40	S11	31			- grading (dense) @ 40'	40
45	S12	34				45
50	S13	57				50
55					Boring completed @ 51'	55
60					Groundwater level / Date / Time: 25' / 10/16/08 / 1:30 pm; 11.5' / 10/16/08 / 3:30 pm; 10.5' / 10/17/08 / 2:00 pm	60

NOTES FOR COLUMNS:
1.SAMPLE AT AVERAGE SAMPLING DEPTH
2.INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 3B

MELICK-TULLY AND ASSOCIATES, P.C.
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LOG OF BORING

BORING NO. B-3

COMPLETION DATE: 10/15/08
JOB NUMBER: 8612-001*3D

SURFACE ELEVATION: +403.5 ft (±)

WATER LEVEL: *
READING DATE: 10/15/08

DEPTH	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1	10			8" Topsoil	
	S2	45	6.0		FILL - Light brown fine to medium sand, some silt, trace fine gravel, with roots	
5	S3	119/10"			FILL - Brown fine to medium sand, little silt, some fine to coarse gravel (slight petroleum odor)	5
10	S4	49		SM	Gray fine to coarse sand, and silt, trace fine gravel, with cobbles and boulders (moist to wet)(dense to very dense)	10
15	S5	112	10.5			15
20	S6	100				20
25	S7	138				25
30	S8	165/10"				30
35	S9	100/3"			- auger refusal @ 36'	35
	S10	100/1"				
40					Boring completed @ 36'	40
					*Groundwater encountered @ 16' upon completion of boring	
45						45
50						50

NOTES FOR COLUMNS:
1.SAMPLE AT AVERAGE SAMPLING DEPTH
2.INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 3C

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LOG OF BORING

BORING NO. B-4

COMPLETION DATE: 10/15/08
JOB NUMBER: 8612-001*3D

SURFACE ELEVATION: +399 ft (±)

WATER LEVEL: *
READING DATE: 10/15/08

DEPTH	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
0	S1	15			4" Topsoil	0
	S2	22			FILL - Brown fine to coarse sand, little to some silt, some fine to coarse gravel (petroleum odor)	
5	S3	5				5
	S4	7		SM	Brown fine to coarse sand, some silt, little fine to coarse gravel (moist)(loose)(possible fill)	
10	S5	22	11.3	SM	Brown fine to coarse sand, and silt, trace fine gravel, with cobbles (moist)(medium dense)	10
15	S6	37				15
				SM	Gray fine to medium sand, and silt, some fine to coarse gravel, with cobbles (moist)(dense) - grading (very dense) @ 21'	
20	S7	106/10"				20
25	S8	32			- grading (wet)(dense) @ 26'-6"	25
30	S9	137			- grading (very dense) @ 30'	30
35	S10	88				35
40	S11	123		SM	Gray fine to medium sand, some silt, some fine to coarse gravel (wet)(very dense) - auger refusal @ 45'-2"	40
45	S12	100/2"				45
					Boring completed @ 45'-2"	
50					*Groundwater encountered @ 26'-6" upon completion of boring	50

NOTES FOR COLUMNS:
1.SAMPLE AT AVERAGE SAMPLING DEPTH
2.INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 3D

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF BORING

BORING NO. B-5

COMPLETION DATE: 10/17/08
JOB NUMBER: 8612-001*3D

SURFACE ELEVATION: +396 ft (±)

WATER LEVEL: *
READING DATE: 10/17/08

DEPTH	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
0	S1	10			4" Topsoil	0
	S2	11			FILL - Brown fine to medium sand, little silt, trace fine to coarse gravel, with roots	
5	S3	43				5
				SM	Gray fine to coarse sand, little silt, some fine to coarse gravel (moist)(dense)	
10	S4	31	10.6		Gray fine to medium sand, and silt, trace fine gravel (moist to wet)(medium dense to very dense)	10
15	S5	57				15
				SM		
20	S6	96				20
25	S7	79			- grading with rock fragments @ 27'	25
					- rotary drill refusal @ 30'-4"	
30	S8	100/4"				30
35						35
40					Boring completed @ 30'-4" Water level not recorded due to drilling mud used for boring	40
45						45
50						50

NOTES FOR COLUMNS:
1.SAMPLE AT AVERAGE SAMPLING DEPTH
2.INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet 1 of 1 PLATE: 3E

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF BORING

BORING NO. B-6

COMPLETION DATE: 10/17/08 | SURFACE ELEVATION: +388 ft (±) | WATER LEVEL: *

JOB NUMBER: 8612-001*3D | READING DATE: 10/17/08

DEPTH	SAMPLES	N-VALUE	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1	6		SM	4" Topsoil Brown fine to medium sand, some silt (moist)(loose)	
5	S2	19		SM	Gray fine to coarse sand, and silt some fine to coarse gravel, with cobbles and boulders (moist)(medium dense)	5
10	S3	86		SM	- grading (very dense) @ 10'	10
15	S4	50/3"				15
20	S5	100/5"		SM	Gray fine to coarse sand, little silt, some fine to coarse gravel, with cobbles and boulders (moist)(very dense)	20
25	S6	100/5"		SM		25
30	S7 S8	50/2" 50/0"		SM	- auger refusal @ 31'	30
35						35
40					Boring completed @ 31' *Groundwater encountered @ 18' upon completion of boring	40
45						45
50						50

NOTES FOR COLUMNS:
1.SAMPLE AT AVERAGE SAMPLING DEPTH
2.INDICATES THE NUMBER OF BLOWS TO ADVANCE A 2" OD SAMPLER A DISTANCE OF 12 INCHES USING A 140 POUND WEIGHT FALLING 30 INCHES

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 3F

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 1

COMPLETION DATE: 10/17/08 SURFACE ELEVATION: +383 ft (±) WATER LEVEL: *

JOB NUMBER: 8612-001*3D READING DATE: 10/17/08

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1		SM	Brown fine to coarse sand, and silt, trace fine gravel (moist)(medium dense)	
	S2	13.7			
5			SM	Brown fine to coarse sand, and silt, little fine to coarse gravel, occasional cobbles and boulders (moist)(dense)	5
10				Test pit completed @ 10' *Slight groundwater seepage encountered @ 6'	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 4A

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 2

COMPLETION DATE: 10/17/08 SURFACE ELEVATION: +383 ft (±) WATER LEVEL: *

JOB NUMBER: 8612-001*3D READING DATE: 10/17/08

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
	S1			4" Topsoil	
	S2		SM	Brown fine to coarse sand, some silt, some fine to coarse gravel (moist)(medium dense)	
5	S3		SM	Brown fine to coarse sand, and silt, some fine to coarse gravel (moist)(dense)	5
10				Test pit completed @ 8' *Slight groundwater seepage encountered @ 6' Mottling observed @ 3'-6"	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 4B

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 3

COMPLETION DATE: 10/17/08
JOB NUMBER: 8612-001*3D

SURFACE ELEVATION: +382.5 ft (±)

WATER LEVEL: *
READING DATE: 10/17/08

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				4" Topsoil	
	S1		SM	Brown fine to medium sand, some silt, trace fine gravel (moist)(medium dense)	
5	S2		SM	Brown fine to coarse sand, and silt, little fine to coarse gravel (moist to wet)(dense)	5
10				Test pit completed @ 11' *Slight groundwater seepage encountered @ 7'	10
15					15

NOTES FOR COLUMNS:
1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:
TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 4C

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

LOG OF TEST PIT

TEST PIT NO: 4

COMPLETION DATE: 10/17/08 SURFACE ELEVATION: +383 ft (±) WATER LEVEL: *

JOB NUMBER: 8612-001*3D READING DATE: 10/17/08

DEPTH	SAMPLES (1)	MOISTURE CONTENT (%)	SYMBOL	DESCRIPTION	DEPTH
				6" Topsoil	
	S1		SM	Brown fine to medium sand, some silt, trace fine to coarse gravel (moist)(medium dense)	
	S2		SM	Brown fine to coarse sand, and silt, some fine to coarse gravel (moist to wet)(dense)	
5				- boulder @ 7'	5
10				Test pit completed @ 9'	10
				*Slight groundwater seepage encountered @ 8'	
15					15

NOTES FOR COLUMNS:

1. SAMPLE AT AVERAGE SAMPLING DEPTH

SOIL DESCRIPTION MODIFIERS:

TRACE 0 - 10%
LITTLE 10 - 20%
SOME 20 - 35%
AND OVER 35%

Typist/Date: jhb/mh 10/08

Sheet: 1 of 1 PLATE: 4D

MELICK-TULLY AND ASSOCIATES, P.C.
Geotechnical Engineers and Environmental Consultants

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS More than 50% of material is LARGER than No. 200 Sieve	GRAVEL & GRAVELLY SOILS More than 50% of coarse fraction RETAINED on No. 4 Sieve	CLEAN GRAVELS (Little or no fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS More than 50% of coarse fraction PASSING a No. 4 Sieve	CLEAN SAND (Little or no fines)	SW	Well-graded sands, gravelly sands, little or no fines.
			SP	Poorly-graded sands, gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS More than 50% of material is SMALLER than No. 200 Sieve.	SILTS AND CLAYS	Liquid limit LESS than 50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS	Liquid limit GREATER than 50	MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PT	Peat, humus, swamp soils with high organic contents

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS.

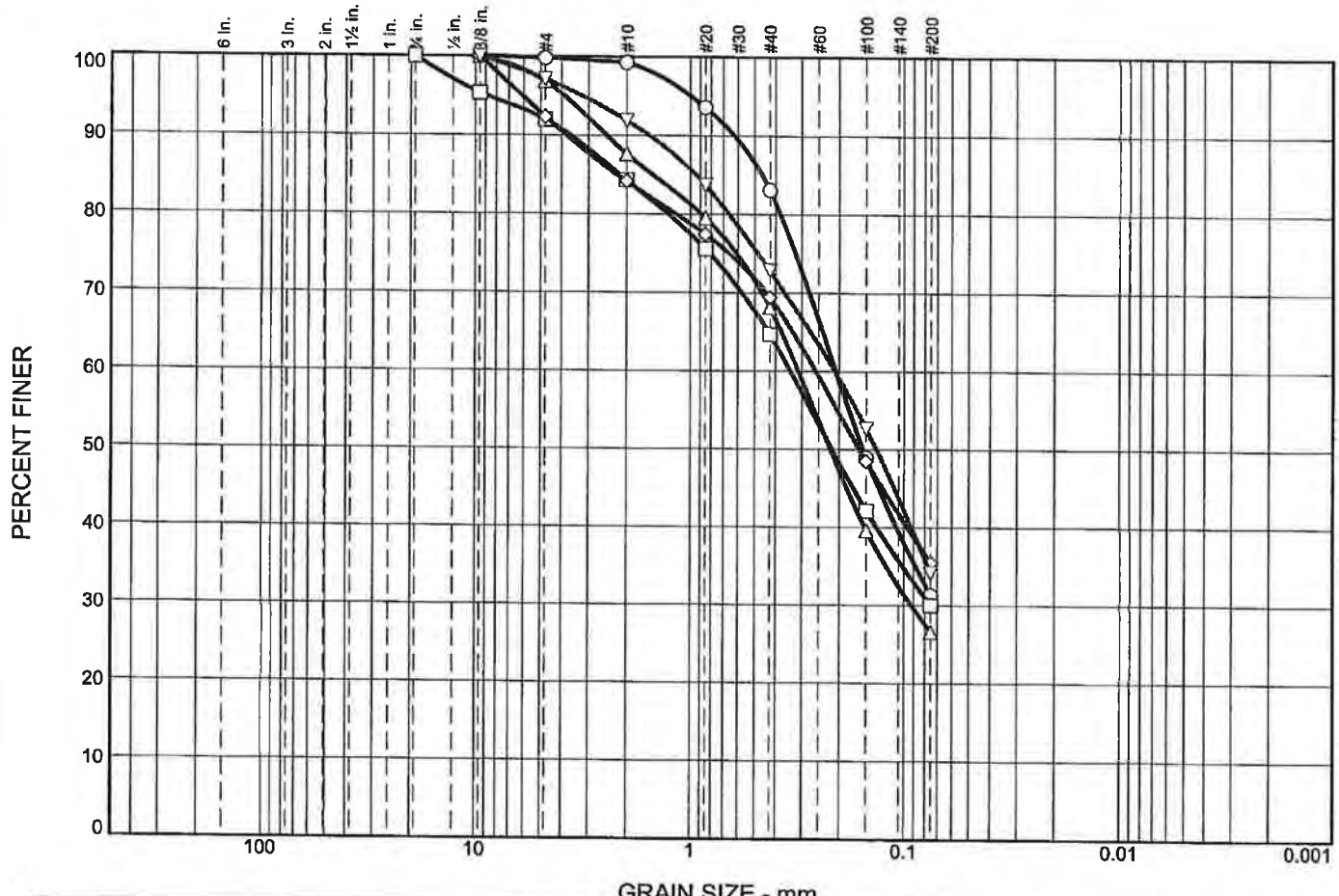
GRADATION*		COMPACTNESS* sand and/or gravel		CONSISTENCY* clay and/or silt	
% Finer by Weight		Relative Density		Range of Shearing Strength in Pounds per Square Foot	
Trace	0% to 10%	Loose	0% to 40%	Very Soft	less than 250
Little	10% to 20%	Medium Dense	40% to 70%	Soft	250 to 500
Some	20% to 35%	Dense	70% to 90%	Medium	500 to 1000
And	35% to 50%	Very Dense	90% to 100%	Stiff	1000 to 2000
				Very Stiff	2000 to 4000
				Hard	Greater than 4000

**Values are from laboratory or field test data, where applicable. When no testing was performed, values are estimated.*

UNIFIED SOIL CLASSIFICATION SYSTEM

SOIL CLASSIFICATION CHART

Gradation Curve(s)



	% +3"	% Gravel		% Sand			% Fines
		Coarse	Fine	Coarse	Medium	Fine	
○	0.0	0.0	0.2	0.6	16.2	51.7	31.3
□	0.0	0.0	8.0	7.7	19.6	34.7	30.0
△	0.0	0.0	3.2	9.2	19.5	41.5	26.6
◇	0.0	0.0	7.7	8.1	14.8	33.9	35.5
▽	0.0	0.0	2.9	5.2	19.1	38.7	34.1

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-1	S-1	0-2	Fine to medium Sand, some Silt, trace fine Gravel. (MC=7.2%)	SM
□	B-1	S-3	10-12	Fine to coarse Sand, some Silt, trace fine Gravel. (MC=8.1%)	SM
△	B-2	S-2	2-4	Fine to coarse Sand, some Silt, trace fine Gravel. (MC=8.5%)	SM
◇	B-2	S-5	10-12	Fine to coarse Sand, and Silt, trace fine Gravel. (MC=8.3%)	SM
▽	B-3	S-2	2-4	Fine to medium Sand, some Silt, trace fine Gravel. (MC=6.0%)	SM

Melick-Tully & Associates, P.C.

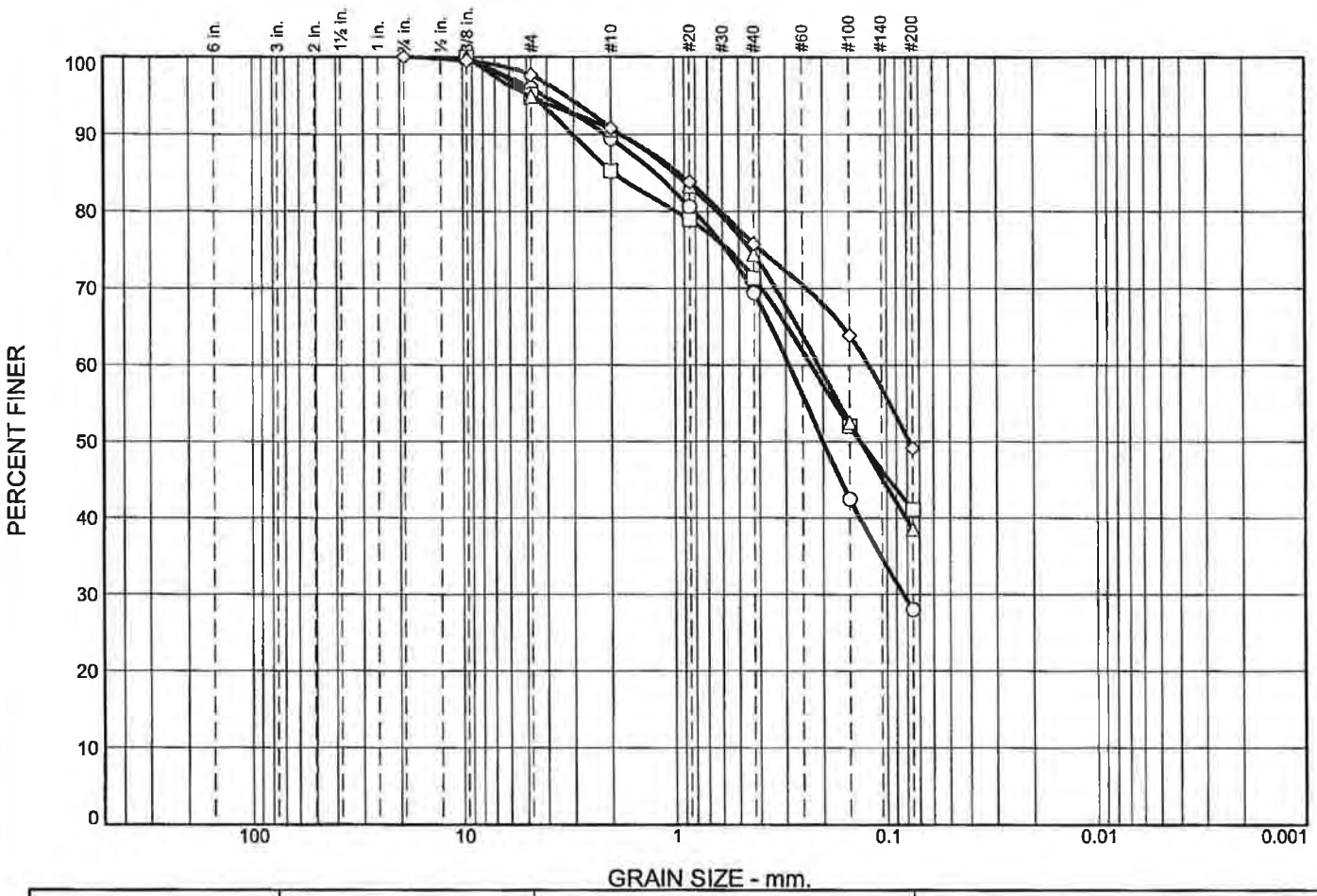
Client: Aerotech Realty Corp.

Project: Proposed Parking Garage, Town of North Castle, NY

Project No.: 8612-001*3D

Plate 6A

Gradation Curve(s)



	% +3"	% Gravel		% Sand			% Fines
		Coarse	Fine	Coarse	Medium	Fine	
○	0.0	0.0	4.2	6.4	20.0	41.4	28.0
□	0.0	0.0	5.0	9.8	13.9	30.2	41.1
△	0.0	0.0	5.2	4.2	16.2	35.9	38.5
◇	0.0	0.0	2.5	6.7	15.1	26.5	49.2

SOIL DATA

SYMBOL	SOURCE	SAMPLE NO.	DEPTH (ft.)	Material Description	USCS
○	B-3	S-5	15-17	Fine to coarse Sand, some Silt, trace fine Gravel. (MC=10.5%)	SM
□	B-4	S-5	10-12	Fine to coarse Sand, and Silt, trace fine Gravel. (MC=11.3%)	SM
△	B-5	S-4	10-12	Fine to medium Sand, and Silt, trace fine Gravel. (MC=10.6%)	SM
◇	TP-1	S-2	2-4	Fine to coarse Sand, and Silt, trace fine Gravel. (MC=13.7%)	SM

Melick-Tully & Associates, P.C.

Client: Aerotech Realty Corp.

Project: Proposed Parking Garage, Town of North Castle, NY

Project No.: 8612-001*3D **Plate** 6B

APPENDIX

APPENDIX

Limitations

A. Subsurface Information

Locations: The locations of the explorations were approximately determined by tape measurement from the existing site features. Elevations of the explorations were determined by interpolation between contours shown on topographic plans provided to us by AKRF. The locations of the explorations should be considered accurate only to the degree implied by the method used.

Interface of Strata: The stratification lines shown on the individual logs of the subsurface explorations represent the approximate boundaries between soil types, and the transitions may be gradual.

Field Logs/Final Logs: A field log was prepared for each exploration by a member of our staff. The field log contains factual information and interpretation of the soil conditions between samples. Our recommendations are based on the final logs as shown in this report and the information contained therein, and not on the field logs. The final logs represent our interpretation of the contents of the field logs, and the results of the laboratory observations and/or tests of the field samples.

Water Levels: Water level readings have been made in the explorations at times and under conditions stated on the individual logs. These data have been reviewed and interpretations made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater will occur due to variations in rainfall, temperature, and other factors.

Pollution/Contamination: Unless specifically indicated to the contrary in this report, the scope of our services was limited only to investigation and evaluation of the geotechnical engineering aspects of the site conditions, and did not include any consideration of potential site pollution or contamination resulting from the presence of chemicals, metals, radioactive elements, etc. This report offers no facts or opinions related to potential pollution/contamination of the site.

Environmental Considerations: Unless specifically indicated to the contrary in this report, this report does not address environmental considerations which may affect the site development, e.g., wetlands determinations, flora and fauna, wildlife, etc. The conclusions and recommendations of this report are not intended to supersede any environmental conditions which should be reflected in the site planning.

B. Applicability of Report

This report has been prepared in accordance with generally accepted soils and foundation engineering practices for the exclusive use of AKRF for specific application to the preliminary design of the proposed parking garage. No other warranty, expressed or implied, is made.

This report may be referred to in the project specifications for general information purposes only, but should not be used as the technical specifications for the work, as it was prepared for design purposes exclusively.

C. Reinterpretation of Recommendations

Change in Location or Nature of Facilities: In the event that any changes in the nature, design or location of the building are planned, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and conclusions of this report modified or verified in writing.

Changed Conditions During Construction: The analyses and recommendations submitted in this report are based in part upon the data obtained from six widely-spaced test borings and four test pit excavations performed for this study. The nature and extent of variations between the explorations may not become evident until construction. If variations then appear evident, it will be necessary to reevaluate the recommendations of this report.

Changes in State-of-the-Art: The conclusions and recommendations contained in this report are based upon the applicable standards of our profession at the time this report was prepared.

D. Use of Report by Prospective Bidders

This soil and foundation engineering report was prepared for the project by Melick-Tully and Associates, P.C. for design purposes and may not be sufficient to prepare an accurate bid. Contractors utilizing the information in the report should do so with the express understanding that its scope was developed to address design considerations. Prospective bidders should obtain the owner's permission to perform whatever additional explorations or data gathering they deem necessary to prepare their bid accurately.

E. Construction Observation

We recommend that Melick-Tully and Associates, P.C. be retained to provide on-site soils engineering services during the earthwork construction and foundation phases of the work. This is to observe compliance with the design concepts and to allow changes in the event that subsurface conditions differ from those anticipated prior to the start of construction.

Appendix H: Preliminary Stormwater Pollution Prevention Plan (SWPPP)

Park Place at Westchester Airport

TOWN OF NORTH CASTLE

WESTCHESTER COUNTY, NEW YORK

Preliminary Stormwater Pollution Prevention Plan

AKRF Project Number: 80202

Prepared for:

11 New King Street, LLC
11 New King Street
White Plains, NY 10604

Prepared by:

AKRF Engineering, P.C.
440 Park Avenue South
New York, NY 10016
212-696-0670

OCTOBER 2010

Revised January 2011

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FIGURES

APPENDICES

1.0 OBJECTIVE

AKRF Engineering, P.C. (AKRF) prepared this Stormwater Pollution Prevention Plan (SWPPP) in accordance with the following applicable rules, regulations and guidance documents:

- New York State Department of Environmental Conservation (NYSDEC) Stormwater Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities Permit No. GP-0-10-001 (SPDES GP-0-10-001);
- New York State Stormwater Management Design Manual, dated August 2010 produced by the NYSDEC;
- New York State Standards and Specifications for Erosion and Sediment Control, dated August 2005 produced by NYSDEC;
- City of New York, Watershed Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources;
- Town of North Castle, Stormwater, Soil Erosion and Sediment Control (Town Code Chapter 173) Management Code

The objectives of this SWPPP are to:

1. Outline Owner and Contractor responsibilities to maintain compliance with SPDES GP-0-10-001, including required inspections, maintenance, forms, and certifications.
2. Outline measures to install, inspect, and maintain erosion and sediment control measures for the proposed project. The objective of these measures is to eliminate or significantly minimize pollutant discharges to the adjacent surface water bodies during construction activities.
3. Demonstrate that the post construction water quality treatment practices as proposed are designed to capture and treat the stormwater runoff from the proposed project.
4. Specify post construction stormwater management structures on-site such that the proposed peak flows do not exceed the pre–development peak flows, thus providing channel protection, overbank flood control, and control of the peak discharge control from the extreme storm event.
5. Incorporate green infrastructure techniques in order to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow and discharge volume.
6. Provide a long term inspection and maintenance plan that will ensure the long term operation of the proposed practices.

2.0 OWNER/APPLICANT'S RESPONSIBILITIES

11 New King Street, LLC, the "Owner/Applicant", is responsible to ensure that the Contractor installs and maintains the erosion and sediment control measures in accordance with this SWPPP. The Owner/Applicant is also responsible to ensure that the appropriate forms and certifications contained herein are completed prior to and throughout the duration of demolition and construction activities. The Owner/Applicant shall keep a copy of this document, associated attachments, and any inspection reports generated on-site for the duration of the project and for a minimum of 5 years from the date that the site achieves final stabilization. During this time period it is the Owner/Applicant's responsibility to conform to any changes or updates to the current regulations as they apply to the project.

The Owner/Applicant should ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (NOT) has been submitted to the appropriate NYSDEC office.

The Owner/Applicant should maintain a copy of the General Permit (SPDES GP-0-10-001), Notice of Intent (NOI), NOI acknowledgement letter, SWPPP, MS4, and SWPPP Acceptance Form and Inspection Reports at the construction site until all disturbed areas have achieved final stabilization and the Notice of Termination has been submitted to the NYSDEC. The documents must be maintained in a secure location, such as a project trailer, on-site construction office, or mailbox with lock; that is accessible during normal working hours to an individual performing a compliance inspection.

3.0 CONTRACTOR'S RESPONSIBILITIES

The Contractor is responsible for implementing this SWPPP and related project specifications and reviewing all forms, certifications, and contract drawings, in order to become familiar with all aspects related to the SPDES GP-0-10-001. The Contractor shall retain a signed copy of this SWPPP and all associated attachments on-site from the initiation of demolition and proposed construction activities to the date of final stabilization. The Contractor is responsible for completing the certification contained herein Appendix A, prior to the commencement of demolition and proposed construction activities. Each of the Subcontractors involved in the implementation of erosion and sediment control measures must also complete a certification. The Contractor is responsible for each of the Subcontractors employed by the Contractor that are involved in the implementation of erosion and sediment controls or earthwork.

It is the duty of the Contractor to properly install and maintain all erosion and sediment control measures on the site as per this SWPPP. The Contractor shall also be responsible for the inspection of all erosion and sediment control measures for the proposed project by a "Trained Contractor" as per this SWPPP. Should the Owner, an owner's representative, or any local authority having jurisdiction deem that the SWPPP or the Contractor's implementation of the SWPPP proves to be ineffective in eliminating or significantly minimizing the pollutants or achieving the goals of the SPDES GP-0-10-001, the Contractor shall take any necessary action to conform to the objectives of the permit at no additional cost to the Owner.

It is the duty of the Contractor to properly inspect and maintain all erosion and sediment control measures installed on the site as per this SWPPP. Any revision to the SWPPP in design, demolition and construction activities, inspection, or maintenance shall be reflected by the Contractor in the on-site copy of the SWPPP in a timely manner. At the beginning of this work, the Contractor must designate a qualified inspector. The Contractor shall coordinate with the Resident Engineer to ensure that all of the inspection requirements are in conformance with this SWPPP and the requirements of the SPDES GP-0-10-001. On a monthly basis, copies of all inspection forms and maintenance records shall be organized and filed accordingly by the Contractor.

4.0 PRE-DEVELOPMENT CONDITIONS

The proposed project site is located at 11 New King Street in the Town of North Castle, New York. The site is situated to the east of New York State Route 120, north of Airport Road and to the west of New King Street. Further west of Route 120 is U.S. Highway 684 and Rye Lake. Rye Lake is part of Kensico Reservoir which is part of the New York City Department of Environmental Protection (NYCDEP) East

of Hudson (EOH) watershed. The NYCDEP water supply system provides drinking water to 9 million people within New York City and other municipalities.

The phosphorous load to the reservoirs from the contributing drainage basins results in exceedances of the phosphorous water quality values established by the NYSDEC and set forth in its Technical and Operational Guidance Series (TOGS) as determined by the NYCDEP. Therefore NYSDEC and NYCDEP have identified phosphorous as a pollutant of concern within the EOH watershed and have established specific design criteria as outlined in the NYSSDM "Enhanced Phosphorous Removal" standards.

The project development comprises of two tax map parcels within the Industrial AA (IND-AA) zoning district. The existing flag lot, designated as Block 4, Lot 14B, is approximately 2.47 acres and is currently developed with a one-story office building, associated parking area, and a two-way driveway which provides access from New King Street. The existing lot contains minimal slopes stretching from New King Street to the edge of the existing development but has moderate to steep slopes (15% or greater) beyond and extending to the western property line. A NYCDEP delineated watercourse traverses the eastern portion of the site through an existing 36-in. diameter culvert. This culvert is located beneath the existing driveway which connects the parking area to New King Street. A wetland, delineated by AKRF staff and to be confirmed by Town staff, also traverses the site along the southern and western boundary lines.

The proposed project will also involve the use of a portion of the adjoining property, designated as Block 4, Lot 13A, located to the northwest of Lot 14B. The portion of this property which is planned for drainage use is currently undeveloped and consists of trees and low-lying brush located within moderately to steep slopes. This area is bound by Town delineated wetlands to the west and a parking area to the east.

4.1 Existing Soil Conditions

The following soils are found on the property and adjacent sites based on the United States Department of Agriculture (USDA) Natural Resource Conservation Service Soil Survey of Putnam and Westchester Counties, New York.

4.1.1 USDA Soil Description

Below is a list of on-site soil types and associated descriptions as determined by United States Department of Agriculture "Soil Survey of Putnam and Westchester Counties, New York". (See Sheet No. D-1 Pre-Development Stormwater Map in Appendix B)

Woodbridge Loam (WdB)

This soil is gently sloping, very deep, and moderately well drained. It formed in compact glacial till derived from schist, gneiss, and granite and is located on the lower parts of hillsides in the uplands. Slope of the Woodbridge Loam soil ranges from 3 to 8 percent slope. The water table of this soil mapping unit is between 1.5 to 2.5 feet below the surface from November to May. Bedrock is at a depth of more than 60 inches. Included with this soil mapping are small areas of the poorly drained and very poorly drained Sun soils, areas of well drained Paxton soils, the somewhat poorly drained Ridgebury soils, bouldery or very stony areas, and areas of soils with a friable substratum.

Ridgebury Loam (RdB)

Ridgebury loam consists of gently sloping, very deep soil that is poorly drained to somewhat poorly drained. Slope of the Ridgebury loam ranges on the project site from 3 to 8 percent slope. The water table is perched from November to May and is located at a depth of 0 to 1.5 feet. Permeability is moderate or moderately rapid in the surface layer

and subsoil and slow or very slow in the substratum. Bedrock is at a depth of more than 60 inches. Ridgebury loam is present on along both the east and west boundary line.

Udorthents, Smoothed (Ub)

Udorthents, smoothed consists of very deep soil that is excessively drained to moderately well-drained. Slope of the Udorthents soil ranges from 0 to 25 percent slope. Many characteristics cannot be defined for this soil because there is a high variable composition. Fill material can be present at depths greater than 20 inches over the original soil. The Udorthents soil comprises the majority of the total soil on the site.

Table 4-1
Project Site Soil Types

Symbol	Soil Series Name	Hydrologic Soil Group	Drainage Characteristics
WdB	Woodbridge loam 2 to 8 percent slopes	C	Moderately well drained. Permeability is moderate in the surface layer and subsoil and slow or very slow in the substratum. Erosion hazard is moderate, surface runoff medium, and water capacity moderate. "K" Factor: 0.24 to 0.32.
RdB	Ridgebury loam, 3 to 8 percent slopes	C	Gently sloping, very deep and poorly drained soil located on lower parts of hillsides and along small drainage ways. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum. Erosion factor is slight, surface runoff medium and water capacity moderate. K factor: 0.24 to 0.32.
Ub	Udorthents, smoothed		Very deep, excessively drained to moderately well-drained soil located near urban areas, highways, and borrow areas. It is comprised of alternating layers of material ranging from sand to silt loam. Properties are extremely variable and merit onsite investigation to determine properties for given site.

Source: Soil Survey of Putnam and Westchester Counties, New York, USDA Soil Conservation Service.

Note: "K" Factor given indicates the erosion potential of each soil type. This indicates the susceptibility of a soil to sheet and rill erosion by water. Values of "K" range from 0.05 to 0.69. The higher the value the more susceptible the soil to erosion

4.1.2 Geotechnical Results

Test pits and soil borings were performed throughout the proposed development areas to help determine the feasibility of certain types of stormwater treatment practices and those that will offer the best performance, see Table 4-2 and 4-3. Test pits locations were survey located and can be found on the Pre-Development Drainage Map (Appendix B). NYCDEP and AKRF staff was present to witness the soil testing.

Deep test holes were performed in the northwest area of the project and generally indicated seasonal high groundwater varying from 3-foot 6 inches below grade to 8 feet below grade. Therefore, percolation testing was not performed in these areas. Borings were performed throughout the site, to provide information for the building foundation and pavement design. However, the information was also used to evaluate the potential for green infrastructure design.

Table 4-2
Project Site Deep Test Results

Deep Test Hole Number	Description
1	10’ Total Depth, 6’ Groundwater Seepage
2	8’ Total Depth, 6’ Groundwater Seepage, 3’-6” Mottling Observed
3	11’ Total Depth, 7’ Groundwater Seepage
4	9’ Total Depth, 8’ Groundwater Seepage

Table 4-3
Project Site Boring Results

Boring Number	Description
1	44’ Total Depth, 25’-6” Groundwater Seepage
2	51’ Total Depth, 10.5’ Groundwater Seepage
3	36’ Total Depth, 16’ Groundwater Seepage
4	45’-2” Total Depth, 26’-6” Groundwater Seepage
5	30’-4” Total Depth, Water level not recorded
6	31’ Total Depth, 18’ Groundwater Seepage

4.2 Existing Natural Resources

Located within the project site are a Town designated wetland and a class “A” watercourse, as designated by NYSDEC. Approximately 18,680 square feet (sf) (0.428 acres) of the wetland is on Lot 14B, and approximately 3,200 sf (0.073 acres) of the wetland is on Lot 13A. The town designated wetland was delineated by a field survey conducted by AKRF. The wetland was found to be present within the undeveloped southern portion of the project site and outside the western borders of the property along Route 120. A wetland is mapped along the unnamed stream outside the eastern project boundary near New King Street. These designated wetland areas are protected

by town defined wetland setbacks. A reservoir stem is located at the outlet of the existing 60-in. diameter culvert on the west side of NYS Route 120. NYCDEP requires a 300 foot boundary line setback from a reservoir stem.

4.2.1 Watercourses

All state waters are assigned a class and standard designation based on existing or expected best usage. Streams that are designated as C(t) or higher (i.e., C(ts), B, or A) are collectively referred to as protected streams and are subject to the stream protection provisions of the Protection of Waters regulations.

The primary stream that traverses across the eastern portion of the project site flows through an existing 36-in. diameter culvert beneath the existing driveway. This perennial stream is listed as Class A by the NYSDEC and is therefore subject to the provisions of the Protection of Waters Program (6 NYCRR Part 608). The classification AA or A is assigned to waters used as a source of drinking water. The stream's proximity to the Kensico Reservoir, which is part of the NYCDEP water supply system, accounts for this designation. This stream is also subject to the Town of North Castle Code which regulates watercourses and disturbance activities within 100 feet of watercourses.

The secondary on-site drainage feature is identified as the Town designated wetland portion which stretches along the southern property line from east to west. This secondary drainage feature does not demonstrate perennial or intermittent flow and is more accurately termed an ephemeral drainageway, conveying surface runoff during or immediately following a rain event only. It is not mapped by NYSDEC and is therefore not regulated at the state level pursuant to the Protection of Waters Program.

Section 18-39(c)(6) of the Watershed Rules and Regulations prohibits impervious surfaces within 100 feet of a watercourse. NYCDEP staff members were present at the project site during the delineation of the watercourse. This information is shown on Sheet No. C-2 - Existing Conditions, see Appendix C.

4.2.2 Reservoir Stem

The NYCDEP regulates activities within a 300-foot radius of a reservoir stem. This setback helps to limit activities to areas within close proximity to downstream water supply reservoirs. The reservoir stem associated with this project is located to the northwest of the project site at the discharge point of the watercourse into Rye Lake, part of the Kensico Reservoir. The reservoir stem was determined using the elevation of the Kensico Dam, as provided by NYCDEP, and survey locating the elevation along the reservoir edge within the proximity of the tributary stream. The surveyor then delineated a 500-foot segment of the tributary stream. A 300-foot radius from the 500-foot segment was then drawn on the plans to show the reservoir stem setback. The project site is located within this reservoir stem setback however, the building and associated impervious surfaces has been situated outside of this required setback zone.

4.2.3 Wetlands

The project site contains wetlands located along the east, west, and south property lines. These two wetland areas were delineated by the Town of North Castle and survey located. The wetland area to the east of the property follows the delineation of the NYCDEP defined watercourse and stretches through the adjacent property to the north

until it reaches an existing 60-in. diameter culvert located to the northwest of the site. This culvert conveys water beneath New York State Route 120 and towards Rye Lake.

The town delineated wetland area located along the south and west property lines conveys water to an existing 36-in. diameter culvert located off-site. This culvert conveys water beneath New York State Route 120 and towards Rye Lake

Wetlands are defined at the Federal level as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands generally include "swamps, marshes, bogs, and similar areas" (Federal Register, 1982). Wetlands are regulated at the Federal level by the Army Corps of Engineers (ACOE) pursuant to Section 404 of the Clean Water Act and its implementing regulations. Wetlands are also regulated at the local level by the Town of North Castle, Town Code §209. The Town also regulates disturbance activities within a 100-foot buffer surrounding wetlands to protect their function and values.

4.3 Existing Utilities

Based on discussions with the Town of North Castle personnel there is no existing water service from New King Street, Route 120, or Airport Road. The project site is currently located outside of any existing water districts. An existing well is located on the slate patio in the rear of the existing building which currently provides potable water to the office building.

Sanitary sewage is discharged through a 3" PVC force main that runs under the driveway to the sanitary manhole located approximately 14 feet from the eastern most property line. At this point the sanitary flows are connected to the municipal sanitary system which runs beneath New King Street to the south.

There is an existing 1,000-gallon underground storage tank located along the southeast corner of the existing building. This fuel tank is used to provide heat and hot water to the existing facility.

4.4 Existing Stormwater

There are no existing stormwater management systems on-site and therefore, no existing treatment practices. The existing subwatersheds have been delineated in order to understand existing stormwater runoff flow conditions (See Sheet No. D-1 in Appendix B). Pre-development hydrologic routing calculations can be found in Appendix D of this report.

Therefore the majority of stormwater runoff is conveyed via overland flow from paved surfaces. Stormwater flows from rooftops, over paved areas and bare soil, and through sloped lawns collecting and transporting soil, animal waste, salt, pesticides, fertilizers, oil and grease, debris and other potential pollutants.

Potential Sources of Water Pollution

The existing subsurface sewage treatment systems are no longer functional and have been abandoned for several years and therefore is not a contributing source of pollution runoff. Roof leaders convey stormwater runoff from the office buildings to the lawn areas, where flow is spread out. Potential pollution sources within the watersheds include sand and salt from roadway and parking lot runoff, pesticide and fertilizers, and grass clippings.

Sand and salt is typically used for de-icing on the project site and adjacent paved surfaces. Since there is no existing stormwater management system, accumulated sediment could potentially be transported to the adjacent waterbodies.

Many of the NYC Water Supply streams, lakes and reservoirs are impacted from intensifying land use. In addition to increased levels of phosphorous, chloride concentrations due to de-icing operations are increasingly found at higher levels in surface waters. Not only is chloride conveyed via surface water runoff, but it also infiltrates through the soil and intercepts the groundwater table, which is the contributing base flow of streams. In its annual report, New York City DEP has reported steady increases in conductivity of most reservoirs in the Croton Watershed since the early 1990s, most likely a result of increased development and associated pollutants (e.g., increased use of road salt).

Potential short-term and long-term impacts of runoff carrying fertilizers, pesticides, and other chemicals from lawns, roadways and other impervious surfaces and sedimentation is that it can be toxic to plants and animals.

Design Point 1

Design Point 1 is located along New York State Route 120 at the inlet of an existing 36-in. diameter culvert which is located within an existing stormwater wetland just beyond the southwest property line. This existing 36-in. diameter culvert conveys stormwater from a portion of the project site and the adjoining Westchester Airport property (located to the south) beneath NYS Route 120 towards Rye Lake which is part of the Kensico Reservoir. Stormwater flow across the south end of the property and a portion of the roof of the existing office building (Pre1) drains to the town designated wetland located along the western property line. From here, stormwater runoff is conveyed off-site to an existing 36-in. diameter culvert which directs stormwater under New York State Route 120.

The contributing drainage area consists of land use types varying from wooded areas, landscaped areas, and impervious surfaces from the existing buildings, surface drive and walkway areas. Currently stormwater runoff is conveyed via overland flow to this design point and at no point is runoff collected into on-site existing stormwater structures.

Design Point 2

Design Point 2 is located along New York State Route 120 at the inlet of an existing 60-in. diameter culvert which is located within an existing town designated wetland and NYCDEP designated watercourse. This existing 60-inch (in.) diameter culvert is located northwest of the property line just west of lot 13A.

The existing watercourse which traverses south to north at the existing driveway entrance for 11 New King Street is conveyed under the drive, via a 38 linear foot, 36-in. diameter culvert. This watercourse traverses through the adjoining property, crossing beneath the existing driveway through a stone culvert and over a concrete spillway, before eventually leading to a 60-in. diameter culvert downstream. This existing 60-in. diameter culvert conveys stormwater, from a portion of the project site and the adjoining properties to the north, beneath NYS Route 120 towards Rye Lake, a portion of the Kensico Reservoir.

The contributing drainage area consists of land use types varying from wooded areas, landscaped areas, and impervious surfaces from the existing buildings, surface drive and walkway areas. The stormwater flows contributing from the associated parking area and a portion of the existing building (Pre2), are directed northwest, overland towards the town designated wetland. A portion of the stormwater runoff is conveyed via overland sheet flow, before discharging into the

watercourse at the stream edge, while the majority of the overland flow collects into a town designated wetland located to the west of Lot 13A. After ponding in this area, stormwater runoff is conveyed to the north and discharges into the watercourse in the area of the existing 60-in. diameter culvert.

The existing watercourse appears to be in stable condition with minimal erosion issues, as a majority of the stream banks are rock-lined. In many cases the degree of stream movement is limited by these rock-lined banks allowing little opportunity to meander. These attributes are suggestive of a stream system with relatively low sensitivity to hydrologic changes.

Design Point 3

Design Point 3 is located in the eastern portion of the site adjacent to the watercourse. In the pre-development condition, this drainage area consists of a portion of the existing one-story building, a portion of the associated parking area and driveway, and wooded/landscaped areas.

Stormwater runoff from the eastern portion of the project site, including the eastern portion of the associated parking and driveway leading towards New King Street (Pre3), is conveyed via overland flow to the NYCDEP watercourse located off-site. Runoff then flows within the watercourse through the existing 36-in. diameter culvert, beneath the existing driveway, and eventually to the existing 60-in. diameter culvert which conveys water under New York State Route 120. In the pre-development condition, stormwater runoff from the impervious surface is not collected or treated within a stormwater facility.

5.0 PROPOSED PROJECT DESCRIPTION

11 New King Street, LLC (the Applicant) proposes to construct a parking structure (proposed project) at 11 New King Street (project site) in the Town of North Castle, Westchester County to alleviate an existing parking shortage at Westchester County Airport.

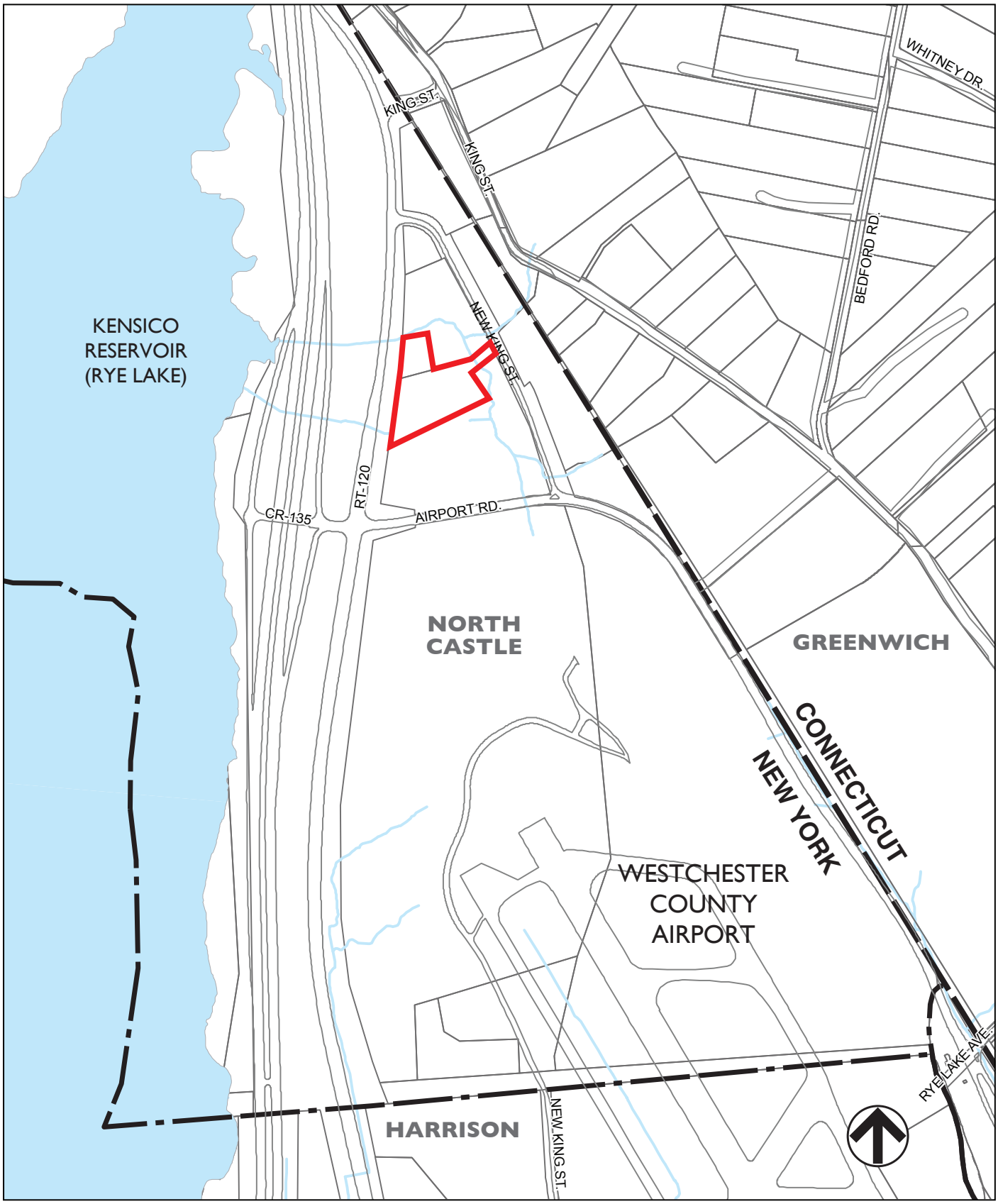
The project site is located in the southern portion of the Town of North Castle, near the Connecticut state line and Westchester County Airport. (see Figure 5-1, Site Location Map). The proposed project would involve the construction of a multi-level parking structure with a building footprint of approximately 51,000 square feet. This project would also involve the construction of associated paved areas for on-site drive lanes and site access from New King Street. The site is currently developed with an approximately 9,700-square-foot one-story office building, an associated parking area, and a driveway which provides access from New King Street.

5.1 Anticipated Permits

The following is a list of anticipated permits for the construction activities associated with the proposed project.

5.1.1 New York State Department of Environmental Conservation

The project work will result in more than 5,000 square feet of disturbance within the New York City East of Hudson Watershed. This will require coverage under the SPDES General Permit for New Construction GP-0-10-001. This SWPPP is being prepared in compliance with the requirements of the New York State Stormwater Management Design Manual (NYSSMDM).



Site Location
Figure 5-1

5.1.2 Westchester County Department of Health

The existing well is located within the footprint of the proposed building therefore a new well will be located on-site. Westchester County Department of Health approval will be required for the new on-site well.

5.1.3 New York City Department of Environmental Protection

In conformance with Section 18-37(d) of the Watershed Rules and Regulations (WRR), the applicant will be required to notify the Department of the modification to the existing sanitary sewer connection and submit associated engineering drawings. The proposed building will require a pump chamber and associated force main to pump sewage from the new building to the municipal sewer system located along New King Street. This connection will be made at an existing manhole located along the edge of the existing driveway, at the southeastern most property line.

NYCDEP review and approval of the SWPPP is required according to Section 18-39(b)(3)(iii) of the Watershed Rules and Regulations.

A variance will be necessary from Section 18-39(a)(4)(iii) of the Watershed Rules and Regulations. The proposed impervious surface will be increased within the limiting distance of 100 feet of a watercourse or wetland to meet the town requirements of driveway width of 24 ft. The 24 foot wide driveway is also necessary to address safety concerns.

5.1.4 Town of North Castle

The town is considered a regulated, land use control under the Municipal Separate Storm Sewer System (MS4) program and therefore the review and approval of the SWPPP is required prior to submission to NYSDEC.

The following table is a complete list of all permits required for the proposed project.

Table 5-1
Required Permits, Approvals and Involved Agencies

Approval/Permit/Review	Involved Agency
Town of North Castle	
Site Plan Approval	Planning Board
Wetland Permit	Planning Board
Tree Removal Permit	Planning Board
Zoning Text Amendment	Town Board
Sanitary Sewer Connection	Building Department
Westchester County	
Sanitary Sewer Connection	Department of Health (WCDOH)
Water Supply Well	WCDOH
Roadway/Signal Improvements	Department of Public Works (WCDPW)
New York City	
SWPPP	Department of Environmental Protection (NYCDEP)
Sanitary Sewer Connection	NYCDEP
Limiting Distance Disturbance	NYCDEP
New York State	
Roadway/Signal Improvements (NYS Route 120)	Department of Transportation (NYSDOT)
SPDES Permit (GP-0-10-001)	Department of Environmental Conservation (NYSDEC)
Federal	
Height Limitation	Federal Aviation Administration (FAA)
Notice of Proposed Construction or Alteration	FAA
Nationwide Permit, if applicable	U.S. Army Corps of Engineers (USACE)

6.0 POST-CONSTRUCTION STORMWATER PRACTICES

Post-construction stormwater practices that provide water quality and quantity control are required to meet pollutant removal goals, reduce runoff volume, reduce channel erosion, prevent overbank flooding, and control extreme floods. These controls help mitigate the effects of development by controlling suspended solids content and peak flows of runoff from developed sites. The NYSDEC has developed unified sizing criteria to size stormwater management measures. However, as previously mentioned, the project is located within the NYCDEP East of Hudson Watershed where the stormwater management design must also address specific NYCDEP requirements. The NYCDEP requirement for the treatment volume, also referred to as water quality volume (WQv), is to capture and treat the runoff generated from a 1-year, 24-hour storm event. The NYSDEC requirements for overbank flood and extreme storm are the same as NYCDEP requirements for attenuating the larger storm events.

The NYSDEC requirement for Water Quality Volume (WQv) for enhanced phosphorous removal is to capture the calculated runoff from the 1-year, 24-hour design storm. The method for calculating the runoff volume is based on the USDA NRCS Technical Release 20 and Technical Release 55. The stormwater treatment practices have been designed to meet the current WRR, including the requirement that the stormwater ponds be designed to capture and treat the runoff generated from the 1-year, 24-hour storm event from new impervious surfaces based on the requirements of Chapter 10 – Enhanced Phosphorous Removal Standards outlined in the NYSSMDM.

6.1 Regulations

6.1.1 NYSDEC Sizing Criteria

The following table is representative of the storm design criteria required within the New York State Stormwater Management Design Manual.

Table 6-1
NYSDEC Uniform Sizing Criteria

Water Quality Volume (WQv)	WQv = Detention of the 1 year storm event
Runoff Reduction Volume (RRv)	RRv = Reduction of the total WQv by application of green infrastructure techniques and SMPs to replicate pre-development hydrology.
Channel Protection (Cpv)	Cpv = 24 hour extended detention of post-developed 1-year, 24-hour storm event.
Overbank Flood (Qp)	Control the peak discharge from the 10-year storm to 10-year predevelopment rates.
Extreme Storm (Qf)	Control the peak discharge from the 100-year storm to 100-year predevelopment rates. Safely pass the 100-year storm event.

As the project is within the NYCDEP East of Hudson Watershed, the requirements and guidelines within the New York State Stormwater Management Design Manual Chapter 10 – Phosphorous Removal Enhancement was used to design the stormwater management system.

6.1.2 New York City Department of Environmental Protection Requirements

The project is located within the Kensico Reservoir watershed, which is part of New York City's surface water drinking water supply. NYCDEP is currently operating under a Memorandum of Agreement with the United States Environmental Protection Agency for filtration avoidance. Under this agreement certain provisions regarding impervious surface and stormwater runoff were incorporated within the City of New York, Rules and Regulations for the Protection from Contamination, Degradation and Pollution of the New York City Water Supply and its Sources (WRR) promulgated in 1997 and revised most recently in April 2010. The stormwater design criteria of the NYSSMDM are now referenced in the WRR. The WRR has additional criteria, such as the stormwater treatment practices must be designed to be in series. However, generally, the sizing and design criteria follow the state requirements.

6.1.3 Town

The Town of North Castle is a regulated, traditional land use control MS4, therefore the review and approval of the SWPPP is required.

6.2 Design Approach

6.2.1 Site Planning

The development of the stormwater management system for the proposed project site involves the use of green infrastructure practices, where feasible. The project is less than 2.8 acres with approximately 32,489 square feet (sf) (0.75 acres) of existing impervious surface. The proposed automated parking garage design was a major factor in reducing the building footprint from the typical multi-level self-park system. The proposed project includes 67,072 sf (1.54 acres) of impervious surface, or 0.78 acres of new impervious surface. The proposed stormwater plan will also include approximately 5,370 sf (0.12 acre) of impervious surfaces from the existing office building roof runoff and associated parking area from adjacent Lot 13A.

The parking, drop-off, and traffic queuing areas are all located internal to the building. Therefore, runoff from the parking areas is not connected to the stormwater system and hence, decreasing the likelihood for oil and grease type pollutants to enter the storm system.

The following site planning practices were used to help determine the site plan and stormwater management system design.

Planning Practice 1: Preservation of Undisturbed Areas

The first approach to the overall design at Park Place is the preservation of undisturbed site area in order to maintain natural features and native vegetative areas. This technique coincides with Better Site Design (BSD) practice #1: preservation of undisturbed and BSD practice #3: reduction of clearing and grading. Both practices ensure that unnecessary earthwork is performed and instead help to limit overall site disturbance by developing in areas where disturbance has already occurred. Where possible the project has been designed to re-use existing impervious areas (i.e., driveway entrance, driveway) and has eliminated any disturbance of the presently undisturbed wetlands along the south and west property lines.

Planning Practice 2: Preservation of Buffers

The project site is situated in an area where Town delineated wetlands and NYCDEP designated wetlands greatly minimize the developable area on site. Currently, stormwater runoff from impervious surfaces located within wetland and watercourse buffers discharge directly to the waterbodies without any treatment. The project has been designed such that all runoff on impervious surfaces is treated by a series of water quality treatment methods before discharging downstream.

Planning Practice 3: Reduction of Clearing and Grading

The proposed building and associated impervious surfaces have been situated on the project site such that there will be no disturbance to existing wetland areas and hence, no clearing or grading is expected within these areas. The building has also been designed as

a tiered structure which will work most efficiently with the existing site topography and thus minimize clearing and grading areas to the greatest extend possible.

Planning Practice 4: Locating Sites in Less Sensitive Areas

By constructing the new development in an area already disturbed, the project has helped to maintain the site's natural character and existing habitat. Also, while the proposed project will increase impervious surface, the project will provide stormwater quality and quantity controls where there are presently none. By treating runoff through a series of stormwater treatment facilities the stormwater quality will be improved and will thus, improve the surrounding watercourse and wetland areas.

Planning Practice 6: Soil Restoration

Prior to final site stabilization the on-site soils will be modified or restored in order to reintroduce oxygen into compacted soils and improve the water storage within the soil. This process will subsequently help reduce runoff by allowing for a greater potential for infiltration and evapotranspiration.

Planning Practice 8: Roadway Reduction

The driveway travel lanes at the Park Place development have been designed to provide adequate safety and conveyance throughout the site. Originally four car exit lanes were designed to leave the building, however after evaluating the travel patterns the two lane exit was reduced to only one lane. Also, the fire access lane and maintenance path have both been designed to consist of permeable pavers in order to decrease impervious cover and increase site infiltration.

6.2.2 Green Infrastructure Techniques

Along with treating for water quality and quantity during the major storm events on the proposed project site, the NYSSMDM requires the applicant to achieve a runoff reduction volume. This volume is achieved through infiltration, groundwater recharge, reuse, recycle, evaporation/evapotranspiration of 100 percent of the post-development water quality volumes in order to replicate pre-development hydrology by maintaining pre-construction infiltration, peak runoff flow, discharge volume, as well as minimizing concentrated flow. This requirement can be accomplished by application of on-site green infrastructure techniques, standard stormwater management practices with runoff reduction capacity, and good operation and maintenance.

Infrastructure Technique 7: Rain Gardens

The paved entrance areas located near the building will be directed to a central rain garden located within an unpaved landscaped island. This area will be designed to capture and treat surface runoff before discharging into the proposed stormwater conveyance system. Stormwater quantity reduction for this rain garden will be achieved via the infiltration capacity of the soil utilized.

Infrastructure Technique 9: Stormwater Planters

The proposed development will be designed to have stormwater planter systems along the south and north face of the parking structure. These stormwater planters will be designed to treat the stormwater runoff from the roof of the proposed structure. The roof leaders will be routed to one of these two areas for water quality treatment and nutrient intake before releasing into the proposed stormwater conveyance system.

Infrastructure Technique 11: Porous Pavement

As discussed earlier, in the areas where high traffic is not expected (i.e. fire access lane, maintenance path), permeable pavers will be installed in place of conventional paving. This will help to reduce stormwater runoff from these areas and improve water quality and quantity downstream. The use of permeable pavers will reduce the amount of stormwater runoff through promoting infiltration.

6.2.3 Runoff Reduction Volume Comparison

In order to achieve the requirements for the Runoff Reduction Volume (RRv), the proposed project site must use green infrastructure techniques and practices to meet the required water quality volume (WQv) as determined in the NYSSMDM. The water quality volume required to be achieved for the Park Place development is 4,144 cubic feet (CF). By providing rain garden and stormwater planter areas the project was able to treat 4,073.5 CF. There are limiting site conditions that do not warrant the ability to reduce the runoff to pre-construction conditions, however the project has been designed to reduce a percentage of the runoff from impervious areas of the proposed development. Since this is not able to meet the required standard for RRv, the NYSSMDM allows for projects to reduce the required water quality volume where additional efforts are not feasible. This reduction is based on a Hydrologic Soil Group(s) (HSG) of the site and is defined as the Specific Reduction Factor (S). The project site is located in Hydrologic Soil Group (HSG) C soils, therefore the percent reduction factor is 0.30. The reduction factor for this site decreases the required RRv water quality volume to 1,743 CF. According to the revised reduction factor the provided green infrastructure measures implemented on the site are sufficient to meet the revised RRv water quality volume. The comparison calculations for RRv and WQv can be found in Appendix E of this report.

Non-structural Stormwater Best Management Practices

Below is a list of nonstructural stormwater management practices that will be implemented throughout the project site:

- Long term soil stabilization through landscaping and maintenance in the developed areas. Prevention of soil loss, through establishment of vegetation and a landscape plan that will increase the amount of tree canopy and healthy ground cover. The landscape plan will also maximize the travel time of stormwater runoff and minimize concentrated flows.
- The grounds maintenance program limits the potential for excessive nutrient loading, specifically controlling the application of phosphate-based fertilizers.
- There is a potential for an increase in pollutants associated with open parking areas such as petroleum, antifreeze, and refuse. These pollutants are picked up through stormwater flows and carried downstream, thus increasing pollutant loading in the stream and reducing water quality. This project however, is designed to provide multiple floor parking within the building. By doing so, the impervious cover or impervious footprint will be decreased from a development of equal parking volumes. It will also allow for the pollutants, associated with parking areas, to be collected internally and discharged to the sanitary system rather than into the watershed.

- For those driving surfaces located at the entrance to the proposed building, a high level of maintenance and good housekeeping practices will be implemented at the site.
- Catch basins with a deep sump and a hood will be installed at the downstream end of all proposed catch basins. This will trap floatables and debris within the catch basin. The deep sumps will trap the petroleum and antifreeze attached to sediment particles. The accumulated material will be cleaned out of the catch basins in accordance with the long term inspection and maintenance plan.

6.3 Design Analysis

In order to evaluate the pre- and post-development drainage conditions, the site has been delineated into three (3) discharge analysis points based on pre-development hydrology; Design Points 1, 2, & 3. These points were analyzed to evaluate the effects of the proposed development on surface stormwater runoff. The design points and their pre- and post-development contributing subcatchment areas are shown on Pre- and Post-Development Stormwater Maps, Sheet Nos. D-1 and D-2 found in Appendix B.

To analyze the peak flow in pre-and post-development conditions HydroCAD®, a computer aided design tool is used to evaluate and analyze the stormwater runoff from the site. The program also models the surface flow through the proposed stormwater practices determining the plug-flow and center-of-mass detention time within the ponds. A simultaneous routing process is used to evaluate the impacts associated with stormwater practices in series. The program is based on United State Department of Agriculture, Natural Resources Conservation Service (NRCS) Technical Releases TR20 and TR55. TR55 and TR20 are tools that were developed to calculate the volume and peak discharge rates of stormwater runoff generated in different rainfall events over a 24-hour period. Runoff volumes and rates are calculated by determining the curve numbers (CN) and calculating the time of concentration (Tc) for each subcatchment area depending on the given rainfall value. The CN values are based on the TR55 table and the hydrologic soil group, cover type, hydrologic condition and antecedent runoff condition. The Tc represents the time it takes for surface water to travel the hydraulically most distant point within the subcatchment area. The post-development hydrologic analysis can be found in Appendix F.

The following rainfall values for Westchester County, shown in Table 6-2, were used in the analysis. For the purposes of the hydrologic analysis the runoff was based on Type III rainfall distribution for the northeast region. The following rainfall values are based on the 24-hour storm event. These values represent the rainfall distribution for various 24-hour storm frequencies.

Table 6-2
Rainfall Values

Rainfall Value (inches)	24-hour Storm Event (Year)
3.2	1
3.6	2
5.0	10
6.5	25
7.5	50
9.0	100
Source: Northeast Regional Climate Center	

6.3.1 Design Point 1

The proposed development area contributing to Design Point 1 includes the following proposed surfaces: a portion of the fire access lane, two concrete pads at building emergency access doors, landscaped areas, and wooded areas. Permeable pavers, such as Turfstone™ are proposed in the fire access lane.

The existing and proposed drainage areas do differ in size because of the location of the proposed building and required treatment. The roof leaders for the proposed structure will collect and convey stormwater runoff to the north side of the building and discharge ultimately to Design Point 2. For this reason, the proposed impervious surface within the Design Point 1 drainage area is decreased in proposed conditions and stormwater flows are reduced from existing conditions.

Therefore, a stormwater treatment practice is not proposed for this drainage area. The results of the pre- and post-development flows demonstrate that the impact of the proposed permeable pavers is minimal. The proposed condition will improve the stormwater quality and quantity at Design Point 1.

Table 6-3 displays the pre- and post-development flow rates to Design Point 1.

Table 6-3
Comparison of Pre- and Post-Development Conditions – Design Point 1

		Pre-Development DP-1	Post-Development DP-1
1 – Year Storm	Flow (cfs)	0.99	0.42
	Volume (CF)	3,659	1,695
2 – Year Storm	Flow (cfs)	1.25	0.53
	Volume (CF)	4,574	2,128
10 – Year Storm	Flow (cfs)	2.22	0.96
	Volume (CF)	8,015	3,796
25 – Year Storm	Flow (cfs)	3.31	1.46
	Volume (CF)	12,066	5,753
50 – Year Storm	Flow (cfs)	4.08	1.80
	Volume (CF)	14,853	7,118
100 – Year Storm	Flow (cfs)	5.22	2.32
	Volume (CF)	19,167	9,225

6.3.2 Design Point 2

The proposed development area contributing to Design Point 2 includes the following proposed surfaces: the proposed building, the driveway and associated drive lanes, the maintenance access path, the fire access lane, multiple concrete pads for utilities, new landscaped areas, and the existing building on the adjoining property to the north. The location of the new building is such that there will be an increase in impervious surface coverage, total drainage area, and post stormwater flows conveyed to Design Point 2.

Increases in impervious surfaces associated with the proposed project will also indirectly reduce groundwater recharge. This reduction in groundwater recharge may, in turn, result in lower rates of base flow, that portion of a stream's flow not directly associated with storm events, upstream of the proposed outfall location.

The contributing drainage area to the proposed stormwater facilities (approx. 2.7 acres), along with the high seasonal groundwater table makes the stormwater pocket wetland (W-4) the most suitable method for stormwater treatment. In accordance with Section 18-39(c)(6) of the Watershed Rules and Regulations, "If an activity requiring a stormwater pollution prevention plan will result in impervious surfaces covering twenty percent (20%) or more of the drainage area for which a stormwater management practice is designed, the stormwater pollution prevention plan shall provide for stormwater runoff from that drainage area to be treated by two different types of stormwater management practices in series". Therefore, to address the stormwater runoff from the proposed development, two stormwater facilities are proposed; a stormwater surface sand filter to treat the water quality volume and a stormwater wetland (W-4) which will treat water quality volume conveyed from the surface sand filter and attenuate the flows from the larger storm events. These stormwater facilities are designed in series to capture and treat the stormwater runoff from the 1-year, 24-hour storm event in accordance with NYSDEC and NYCDEP requirements for treatment of phosphorous pollutants. These stormwater ponds also provide attenuation of peak flows from the larger storm events.

Due to the associated drive and building layout, and the existing topography, two ponds could not be placed on the project site; therefore the stormwater facilities were located on the adjoining property to the north. The ponds are referred to as Ponds W-4, and F-1 in the HydroCAD® analysis.

The stormwater ponds have been designed to capture and treat the stormwater runoff associated with the 1-year, 24-hour storm event and to meet the required elements of the NYSSMDM design criteria for stormwater ponds, specifically for surface sand filter design (F-1) and pocket wetland (W-4). The volume of the permanent pool for each pond is sized to capture 100% of the water quality volume (WQv), the runoff from the 1-year, 24-hour storm event.

The stormwater runoff from post-development contributing drainage areas 2A, 2B, and 2C, a total of 1.6 acres, will collect and convey stormwater through a conventional stormwater collection system (i.e., pipes, manholes, catch basins) to a flow diversion structure (Structure # 6, see Sheet No. C-5 in Appendix C). The stormwater volume of a 1-year storm event will be diverted into a surface sand filter for water quality treatment of the stormwater runoff. Per the requirements of the NYSSMDM, the flow diversion structure is designed as an off-line device which will direct the water quality volume into the surface sand filter system.

The proposed project would disturb a portion of the steep slopes (>25%) on the western and northern sides of the project site. A majority of the existing steep slopes were created by soil filling during previous site development and do not include appropriate measures to minimize erosion and environmental impacts. The proposed development plan includes removal of the fill material comprising the steep slopes, and engineering measures to construct a new slope network that will minimize project-related and future environmental impacts.

Proposed Surface Sand Filter (F-1 per the NYSSMDM)

The following parameters were used in designing and sizing the surface sand filter system:

- Off-Line System – Stormwater runoff is conveyed via a storm pipe network, therefore the Sand Filter is designed off-line. A flow-splitter diversion structure has been designed to divert the runoff from the 1-year, 24 hour storm.
- Overflow – An overflow structure has been provided to convey stormwater to Pond W-4. A stabilized rip-rap spillway has also been provided to convey stormwater from the larger storm events.
- Underdrain – A 6-inch diameter perforated pipe placed in a gravel layer, is proposed to collect stormwater that has filtered through the sand layer. Geotextile filter fabric will be placed between the gravel layer and sand layer.
- Groundwater Table – A 2-ft. separation between the filter bottom and the seasonal high groundwater table has been provided.
- Pretreatment (Sedimentation Basin) – A sedimentation basin will provide pretreatment at the inlet point. This will provide primary settling for the larger particulates. The sedimentation basin will be sized to contain 25% of the WQv. The depth of the sedimentation basin is four feet. The outfall from the inlet pipe will be stabilized with rip rap to minimize erosion of the ponds' sideslopes. A fixed depth marker will be installed to assist in the long term inspection and maintenance plan. This will help determine the depth of sediment accumulation and when maintenance is required.
- Treatment Basin Sizing - The complete system, including sedimentation basin, is designed to hold and treat at least 75% of the water quality volume and will consist of a surface sand filter which will have a coefficient of permeability of 3.5 ft/day.
- Filter Media – The proposed filter media will consist of a medium sand meeting ASTM C-33 concrete sand.
- Side-Slopes - The side slopes for the sedimentation basin and the surface sand filter are 3:1(H:1).
- Vegetation – Landscape plans include various grass species for the sideslopes and bottom of the surface sand filter. The plant variety will provide treatment through filtering and nutrient uptake. See Landscape Plans.
- Geometry – Both pretreatment and the surface sand filter have been designed with a length to width ratio of 1.5:1 as required by NYSSMDM.
- Energy Dissipater - A rip rap velocity dissipater will be installed at the outlet that discharges into the sedimentation basin.
- Outlet control structure – The pre-cast concrete structure is designed with a low flow orifice that will detain the 1-year, 24-hour storm event.
- Maintenance – As specified in the Operation and Maintenance section of the Preliminary SWPPP a legally binding and enforceable maintenance agreement shall be executed with the Town and the applicant/operator.

The stormwater flows leaving the surface sand filter will then get discharged to the larger pocket wetland located slightly down gradient. Stormwater runoff volumes larger than the 1-year storm will by-pass the sedimentation basin and discharge directly into the pocket wetland. The post-development contributing drainage areas 2D and 2E, a total of 0.5 acres, will provide additional overland flows to the sedimentation basin and surface sand filter during all rain events. Also, post-development contributing drainage areas 2F and 2G, a total of 0.6 acres will provide additional stormwater runoff directly to the pocket wetland via piped roof leaders (from drainage area 2F) and overland flow (from drainage area 2G). The pocket wetland will serve as the second level of water quality and water quantity control before stormwater is discharged off-site and into the existing watercourse to the north.

Proposed Pocket Wetland (W-4 per the NYSSMDM)

The following parameters were used in designing and sizing the pocket wetland (W-4):

- Water Quality Volume – The WQv is equivalent to the runoff from the 1-year, 24-hour storm event. A detention time of 33 hours has been provided.
- Wetland – The proposed pocket wetland is not located within NYSDEC jurisdictional waters, including wetlands.
- Pond Embankment – The proposed pocket wetland would not consist of a dam as it is excavated system below the existing grading.
- Forebay – A forebay is not provided as the proposed pocket wetland is the second in series. The contributing drainage area from the proposed roof leader extension from the existing office building Lot 13B is less than 10% of the total design storm flow to the pond.
- Side-Slopes – The side slopes for the pocket wetland are 4:1(H:1) , therefore a pond safety bench and aquatic bench are not required. However, an aquatic bench has been provided to help establish wetland vegetation.
- Micropool - A micropool will be provided at the outlet in order to protect the low flow pipe from clogging and prevent sediment resuspension. This area will range from four to six feet in depth and will be able to store a minimum of 10% of the WQv.
- Water Quality Volume – At a minimum 25% of the water quality volume will be in deepwater zones with a depth greater than four feet.
- Vegetation – Landscape plans include various grass species for the sideslopes and emergent wetland species. The plant variety will provide treatment through nutrient uptake. Minimum elements of a plan include: delineation of pondscaping zones, selection of corresponding plant species, planting plan, sequence for preparing the wetland bed and sources of plant material.
- Landscaping – Native plants that promote phosphorous and nitrogen uptake will be specified in the final landscaping plans.
- Permanent pool – 50% of the water quality volume will be provided in the permanent pool, as required for stormwater wetlands designed for extended detention. The seasonal groundwater table will be intercepted to provide a permanent pool.

- Geometry – The pocket wetland has been designed with a length to width ratio of 2:1 as required by NYSSMDM. A minimum Surface Area: Drainage Area of 1:100 has been provided.
- Pond Buffer – A pond buffer of at least 25 ft has been provided around the pond maximum water surface elevation.
- Energy Dissipater - A rip rap velocity dissipater will be installed at the inlet and outlet of the lower pond. The lower pond discharges to the existing NYCDEP delineated watercourse where the banks are in stable condition. This will minimize the potential for erosion of the stream bed.
- Freeboard - 1 foot of freeboard will be provided.
- Emergency overflow - Safe conveyance of the 100-year storm flow will be provided through a rip rap lined overflow spillway. The elevation is determined by the 100-yr flood elevation and located such that stormwater flows will not adversely impact surrounding properties.
- Maintenance access – A 10-foot minimum width access path will be provided for long term maintenance of the stormwater ponds. The path will be constructed of grasspavers in order to decrease impervious surface and increase infiltration.
- Outlet control structure – The pre-cast concrete structure is designed with a low flow orifice that will detain the 1-year, 24-hour storm event for a minimum of 24 hours, meeting the NYSDEC and NYCDEP requirements. The larger storm events will also be conveyed through an opening at the top of the outlet control structure designed to attenuate the larger storm events.
- The outlet control structure is located within the embankment, providing safe egress for maintenance.
- Freeboard – 1-ft of freeboard above the 100-year storm elevation.
- Pond Drain – A drain pipe would be part of the outlet control structure so that the pond could be completely drained for maintenance.
- Maintenance Agreement – An Operation and Maintenance Plan as outlined in the Preliminary SWPPP would be developed into a legally binding and enforceable agreement with Town as a condition of the site plan approval.

Table 6-4 below demonstrated that the post-development flow rates are less than or equal to the pre-development flow rates to Design Point 2.

6.3.3 Design Point 3

The proposed design area contributing to Design Point 3 will result in a reduction of the drainage area as well as eliminate the impervious surface runoff to this design point. The proposed condition will redirect the stormwater flows from the impervious surfaces into a conventional collection system and treat the runoff in the series of ponds discussed in Section 6.3.2. Therefore, a stormwater treatment practice is not proposed for this drainage area. The results of the pre- and post-development flows demonstrate that the impact of the proposed condition will improve the stormwater quality and quantity at Design Point 3.

Table 6-4
Comparison of Pre- and Post-Development Conditions – Design Point 2

		Pre-Development DP-2	Post-Development DP-2
1 – Year Storm	Flow (cfs)	3.12	0.37
	Volume (CF)	10,585	22,756
2 – Year Storm	Flow (cfs)	3.78	0.46
	Volume (CF)	12,850	26,683
10 – Year Storm	Flow (cfs)	6.15	1.70
	Volume (CF)	21,126	40,920
25 – Year Storm	Flow (cfs)	8.74	5.66
	Volume (CF)	30,448	56,693
50 – Year Storm	Flow (cfs)	10.47	8.45
	Volume (CF)	36,808	67,393
100 – Year Storm	Flow (cfs)	13.06	11.51
	Volume (CF)	46,522	83,624

Table 6-5 displays the pre- and post-development flow rates to Design Point 3.

Table 6-5
Comparison of Pre- and Post-Development Conditions – Design Point 3

		Pre-Development DP-3	Post-Development DP-3
1 – Year Storm	Flow (cfs)	2.27	0.98
	Volume (CF)	7,362	4,029
2 – Year Storm	Flow (cfs)	2.76	1.22
	Volume (CF)	8,930	4,989
10 – Year Storm	Flow (cfs)	4.58	2.14
	Volume (CF)	14,853	8,631
25 – Year Storm	Flow (cfs)	6.56	3.17
	Volume (CF)	21,562	12,841
50 – Year Storm	Flow (cfs)	7.89	3.87
	Volume (CF)	26,136	15,753
100 – Year Storm	Flow (cfs)	9.87	4.93
	Volume (CF)	33,149	20,255

6.4 Phosphorous Loading Analysis

A phosphorous loading analysis was performed to evaluate the quality of the stormwater runoff through the proposed stormwater treatment system. The pollutant coefficient method as outlined in 'Reducing the Impacts from Urban Runoff' was used to evaluate the effects of the change in land use due to the project on the surface water conditions. Various sources of the pollutant coefficient values were used to best evaluate the pre- and post-development conditions. Table 6-6 represents the coefficients that were used in the analysis.

Table 6-6
Pollutant Loading Coefficient

Land Use Type	Coefficient (lbs/acre/year)
	TP
Forested/Wooded	0.1
Commercial (60% impervious)	1.2
Sources of these pollutant loading coefficients is the 'Reducing the Impacts of Stormwater Runoff from New Development', produced by NYSDEC, April 1992.	

A pollutant loading analysis was performed at each of the design points. The detailed calculations can be found in the Appendix G of this report. Pollutant removal rates presented within this table represent a range from low to high. By providing catch basins with deep sumps the higher end of the range was used to demonstrate the post-development pollutant loading. In addition to deep sump catch basins, several no-mow zones will be identified increasing the buffer around the streams.

Table 6-7
Total Phosphorous (TP)

Design Analysis Point	Pre-Development Pollutant Loading (lbs/year)	Post-Development Pollutant Loading (lbs/year)	Post-Development Pollutant Loading w/ Treatment (lbs/year)
1	0.5	0.2	NA
2	1.4	3.3	1.86/0.38
3	1.2	0.5	NA

6.5 Potential Pollutants

De-icing Materials

There is a reduction of paved asphalt area from existing conditions therefore there would be a decrease in potential pollutant loading due to the reduce application area. The following guidance, based on guidance from the NYS Office of the Attorney General, would be observed with the primary duty to protect human life and safety.

1. Total Phosphorus Guidance:

   Winter Road Maintenance Deicers:

   - Endorsed – Deicer products that contain 50 parts per million total phosphorus (ppm) or less.
   - Discouraged – Deicer products that contain more than 100 ppm total phosphorus.
   - Avoid – Any deicer that contains greater than 250 ppm total phosphorus should not be used or applied.

2. Reducing the use of sand as a treatment material should be a primary goal of environmentally responsible road maintenance because sand usage is responsible for much of the phosphorus introduced into the reservoirs from winter road maintenance. The use of sand also degrades aquatic habitat in streams, wetlands and rivers.

Herbicide, Pesticide, Fertilizer, and Fungicide

Fertilizer and pesticide application will be performed in accordance with NYSDEC application rates and be applied by a certified company. Fertilizer will be applied so that the vegetation can be quickly established; however, repeat use is not anticipated once vegetation has been sufficiently established. A more detailed plan for fertilization and pesticide application will be presented with the final landscaping plan. Fungicide and herbicides use are not anticipated. Manual weeding will be performed to avoid the use of chemicals that can potentially be harmful to water quality.

The proposed stormwater management system and non-structural practices will provide adequate mitigation of potential impacts including potential secondary impacts to the Kensico Reservoir and the reservoir stem.

6.6 Summary

The proposed stormwater management system has been designed to treat the Water Quality Volume (WQv) and attenuate the larger storm events to pre-development conditions. The project is designed based on Chapter 10 of the NYSSMDM.

The proposed project incorporates stormwater management practices as well as green infrastructure techniques that will treat runoff from the proposed project. These practices, designed in accordance with the regulations established by NYSDEC and NYCDEP, will include water quality treatment, peak flow attenuation, and temporary and permanent erosion and sediment control measures. The proposed facilities will be sufficient to mitigate the potential impacts of the proposed project related to the quantity and quality of stormwater runoff.

6.7 Variance

A variance from Section 28-39(a)(4)(iii) of the WRR is required for this project. The existing paved driveway is approximately 20 feet wide in the area of the existing 36 inch diameter culvert. However, to comply with the Town Code, the minimum width of an access driveway to a site with more than 21 parking spaces shall be 24 feet.

Article IX §213-44G of the Town Code states that access drives for ingress and egress to and from the parking areas for sites located in commercial districts shall be designed in conformance with the width standards, as well as the grade and surface standards provided in § 213-47. The driveway width requirement for a parking area with more than 21 parking spaces is 24 feet. The driveway surface shall be improved and suitably maintained to the extent deemed necessary by

the Town Engineer to avoid nuisances of dust, erosion or excessive water flow across public ways or adjacent lands.

Therefore the applicant is requesting a variance so that the driveway will meet the Town Code and provide safe travel conditions for vehicular traffic. Shuttle busses will be used to transport passengers to and from Westchester County Airport. Various driveway alternatives were reviewed, including keeping the existing driveway width of 20.7 feet, however, 24 feet, or two 12-foot travel lanes, would meet the Town Code and provide a safe buffer width for passing vehicles. The 3.3-foot additional impervious surface is the minimum necessary to afford relief from the Town Code.

The following is a breakdown of the proposed surfaces within 100 feet of the watercourse.

- 1,737 sf (0.04 acre) of new impervious surface.
- 2,255 sf (0.05 acre) of full depth asphalt replacement of existing asphalt surface.
- 3,115 sf (0.07 acre) mill and repave existing asphalt surface.

Stormwater runoff currently flows across the asphalt driveway and directly discharges to the watercourse and wetland areas. With the proposed driveway widening, stormwater runoff would be directed to catch basins with deep sumps, rain garden, surface sand filter and a pocket wetland. The practices have been designed to treat 100% of the water quality volume from all of the existing and proposed asphalt pavement within the contributing drainage area. However, only 25% of the WQv from the existing impervious surfaces would be required. In addition to treating the larger WQv, the stormwater management system is designed to capture existing impervious surfaces from the adjacent Lot 13A. Stormwater runoff from the roof and paved surfaces currently flow overland towards the watercourse, causing erosive conditions in some areas of the lawn. Stormwater treatment practices do not exist at the site, therefore this would be a significant improvement over existing conditions and would go beyond the design requirements.

7.0 TEMPORARY EROSION AND SEDIMENT CONTROLS

The proposed new building will be arranged on the project site to maximize the use of the existing site topography and in order to utilize previously disturbed (cleared/regraded) areas for the new building and the proposed circulation network. The proposed 'Site Plan' and 'Paving, Grading and Drainage Plan' are shown on the large-scale plans (Sheet No. C-4 and C-5 in Appendix C).

The majority of the proposed development will be located within the existing developed area, which has moderate slopes of 25% or less. Disturbance to slopes greater than 25 percent would be minimized, totaling approximately 0.21 acres.

Table 7-1 indicates the acreage of disturbance by slope category.

Table 7-1
Slope Disturbance

Slope Category	Acreage of Disturbance
0-25 percent	2.55 acres
25-35 percent	0.14 acres
35 percent or greater	0.07 acres

The proposed project will require excavation of soil and the grading of topography, which will result in the exposure of soil to natural forces. Several soil types located on the project site have moderate erosion potential, including the Charlton and Ridgebury loam. If not properly managed, the temporary exposure of bare soil accelerates the potential for erosion. This acceleration in soil erosion could potentially lead to siltation of the on- and off-site wetlands, ponds, and off-site watercourses. This may cause a reduction in surface water quality. Measures to avoid impacts from the proposed project are discussed below.

Section 213-17 (Hilltops, ridgelines and steep slopes) of the Town of North Castle Code requires that a building permit be attained prior to disturbing a slope category (25% or greater). The appropriate plans and permits will be submitted to the Town of North Castle for approval prior to initiating site development. The current engineering design plans include measures to minimize erosion and sedimentation, protect against possible slope failure and landslides, minimize stormwater runoff and flooding, and meet or exceed all applicable regulations for slope disturbance.

The proposed site plan for the Park Place project would result in the alteration of the geology, soils, and topography of a portion of the property. Specifically, the proposed area of disturbance will occur on approximately120,846 square feet (2.77 acres), of which approximately 86,767 square feet (1.99 acres) of the approximately 2.74 acres of land owned by the applicant.

The proposed project will require the excavation of approximately 25,475 cubic yards of earth material. Of the total excavated material, only 400 cubic yards will be used as fill in the regrading of the construction area. The net excess material of 25,076 cubic yards is to be disposed off-site.

7.1 Erosion and Sediment Control Practices

The following are specific erosion control measures as identified in the large scale drawings prepared for this project. Please refer to the large scale Erosion and Sediment Control drawing in Appendix C.

7.1.1 Stabilized Construction Entrance / Exit (SCE)

The construction entrance/exit shall have a stabilized aggregate pad underlain with filter cloth to prevent construction vehicles from tracking sediment off-site. Stabilized construction entrances are located at specific transition areas between concrete/asphalt to exposed earth.

7.1.2 Silt Fence

Silt fence shall be installed on the down gradient edge of disturbed areas parallel to existing or proposed contours or along the property line as perimeter control. Silt fence are to be used where stakes can be properly driven into the ground as per the Silt Fence detail in the New York State Standards and Specifications for Erosion and Sediment Control and as shown on the drawings (See large scale drawings Appendix C).

Silt fence controls sediment runoff where the soil has been disturbed by slowing the flow of water and encouraging the deposition of sediment before the water passes through the straw bale or silt fence. Built-up sediment shall be removed from silt fences when it has reached one-third the height of the bale/fence and properly disposed.

7.1.3 Storm Drain Inlet Protection

Inlet protection shall be installed at all inlets where the surrounding area has been disturbed. The inlet protection shall be constructed in accordance with NYSDEC

Standards and Specifications for Erosion and Sediment Control. Typically they should be constructed to pass stormwater through, but prevent silt and sediment from entering the drainage system.

7.1.4 Stockpile Detail

Stockpiled soil is to be protected, stabilized, and sited in accordance with the Soil Stockpile Detail, as shown on the detail sheets in Appendix C. Soil stockpiles and exposed soil shall be stabilized by seed, mulch, or other appropriate measures, when activities temporarily cease during construction for 7 days or more in accordance with NYSDEC requirements.

7.1.5 Dust Control

During the demolition and construction process, debris and any disturbed earth shall be wet down with water, if necessary to control dust. After demolition and construction activities, all disturbed areas shall be covered and/or vegetated to provide for dust control on the site.

7.1.6 Temporary Seeding and Stabilization

In areas where demolition and construction activities, clearing, and grubbing have ceased, temporary seeding or permanent landscaping shall be performed to control sediment laden runoff and provide stabilization to control erosion during storm events. This temporary seeding/stabilization or permanent landscaping shall be in place no later than 14 days after demolition and construction activity has ceased.

7.1.7 Sump Pit

A temporary pit is constructed to trap and filter water for pumping to a suitable discharge area. The purpose is to remove excessive water from excavations. Sump pits are constructed when water collects during the excavation phase of construction.

7.1.8 Dewatering

Due to the depth of excavation for the building foundation and proximity to on-site watercourses and wetland areas, there may be areas of construction where the groundwater table will be intercepted and dewatering activities will take place. Site-specific practices and appropriate filtering devices should be employed by the contractor so as to avoid discharging turbid water to the surface waters of the State of New York.

A sediment tank may be used in conjunction with other practices that will settle and filter the sediment from the stormwater runoff. The sediment tank is a compartmented tank container to which sediment laden water is pumped to trap and retain the sediment. The purpose of the tank is to trap and retain sediment prior to pumping the water to drainage ways, adjoining properties, and rights-of-way below the sediment tank site. In conjunction with the portable sediment tank, the mechanical filtering devices may be necessary to filter out the finer particulates. A permit may be required for such activities, therefore the contractor must coordinate with the resident engineer.

7.1.9 Perimeter Dike/Swale

The purpose of a perimeter dike/swale is to prevent off-site storm runoff from entering a disturbed area and to prevent sediment laden storm runoff from leaving the construction

site or disturbed area. It can be used to convey stormwater runoff from the work area to a proposed sediment basin.

7.1.10 Temporary Sediment Basin

The purpose of a sediment basin is to intercept sediment-laden runoff and filter the sediment laden stormwater runoff leaving the disturbed area in order to protect drainage ways, properties, and rights-of-way below the sediment basin. The basin will be installed down gradient of construction operations which expose critical areas to soil erosion. The basin shall be maintained until the disturbed area is protected against erosion by permanent stabilization.

7.1.11 Materials Handling

The Contractor must store construction and waste materials as far as practical from any environmentally sensitive areas. Where possible, materials shall be stored in a covered area to minimize any potential runoff. The Contractor shall incorporate storage practices to minimize exposure of the materials to stormwater, and spill prevention and response where practicable. Prior to commencing any construction activities the contractor shall obtain all necessary permits or verify that all permits have been obtained.

7.2 Sequence of Construction

The phasing of the project is important for the construction of the proposed development. The protection of the natural resources, specifically the watercourse and wetland areas, have also been carefully factored into the development of the sequence of construction.

A pre-construction meeting shall be held with representatives of the Town, NYCDEP, the Resident Engineer, and the Contractor prior to any site disturbance. Any potential changes to the Erosion and Sediment Control Plan should be discussed at this time.

Sequence of Construction Activities

1. A pre-construction meeting shall be held with representatives of NYCDEP, certified professional trained contractor, the town, the resident engineer, and the contractor prior to any site disturbance.
2. Prior to clearing and grubbing activities the contractor shall install stabilized construction entrance/exit and construction access area as shown on the plan.
3. Install silt fence as indicated on the erosion and sediment control plan.
4. Disconnect all utility connections to existing one story building and remove building and associated appurtenances in accordance with demolition plan. Pavement demolition shall not be performed until Temporary Sediment Basin is installed.
5. Clear and grub in area of proposed temporary sediment basins. Any topsoil shall be stockpiled on-site as shown on drawing.
6. Rough grade proposed temporary sediment basin and associated stormwater structures. Install 6" of topsoil, seed, and stabilize with rolled erosion control product (RECP).
7. Soil stockpile should be located on grassy areas in accordance with detail.
8. Install perimeter dike/swale 1 and 2 starting at the temporary sediment basins as shown on plan.

9. Begin clearing and grubbing in the area of the proposed building footprint. Stockpile fill material in designated area as shown on plan.
10. Begin construction of building and associated driveway and stormwater infrastructure.
11. Install inlet protection.
12. Once building and paved surfaces are complete, complete final grading in adjacent areas. Stabilize with rolled erosion control product.
13. Complete final grading in basins and install vegetation in accordance with landscape plan.
14. Once final grade is achieved in proposed landscaped areas temporary seeding and mulching shall be done immediately.

8.0 INSPECTION AND MAINTENANCE

8.1 Inspections and Record Keeping During Construction

Once the contract has been let, the name, address, and phone number of responsible parties for maintenance will be provided to the NYSDEC. The following is a description of the maintenance and inspection practices that will be implemented as part of the project. Maintenance and inspection is important to ensure that the stabilization and structural practices that are part of the SWPPP continue to be effective in preventing sediment and other pollutants from entering the stormwater system. It is the responsibility of the owner or operator to ensure that inspections are completed in accordance with NYSDEC regulations.

8.1.1 Erosion and Sediment Control Inspection Report

As a part of the SWPPP inspection and maintenance activities during construction, the Erosion and Sediment Control Inspection Report shall be updated and kept on-site. A sample Erosion and Sediment Control Inspection Report is provided in Appendix H of this report.

Inspections would be conducted by the qualified inspector periodically according to the schedule required by the SPDES GP-0-10-001. During each inspection, the qualified inspector would record the areas of disturbance, deficiencies in erosion and sediment control practices, required maintenance, and areas of temporary or permanent stabilization. The need for modifications to the Erosion and Sediment Control Plan should be identified and implemented immediately.

The Erosion and Sediment Control Inspection Report will be completed by a qualified inspector to fully document each inspection. A qualified inspector is a person knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), licensed Landscape Architect, or other NYSDEC endorsed individual(s). It also means someone working under the direct supervision of the licensed Professional Engineer or licensed Landscape Architect, provided the person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that an individual performing the site inspection has received four hours of training, which has been endorsed by the NYSDEC, from a Soil and Water Conservation District, CPESC, Inc., or other NYSDEC endorsed entity, in proper erosion and sediment control principles no later than two years from the

date SPDES GP-0-10-001 is issued. After receiving the initial training, an individual working under the direct supervision of the licensed Professional Engineer or licensed Landscape Architect shall receive four hours of training every three years.

8.1.2 Inspections

Inspections shall be conducted by the qualified inspector periodically according to the following schedule:

1. When construction activities are ongoing, the qualified inspector shall conduct a site inspection at least once every seven (7) calendar days.
2. When construction activities are ongoing and the owner or operator has received authorization in accordance with Part II.C.3 of GP-0-10-001 to disturb greater than five acres of soil at any one time, the qualified inspector shall conduct at least two site inspections every seven calendar days. When performing two inspections every seven calendar days, the inspections shall be separated by a minimum of two full calendar days.
3. If soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and temporary stabilization measures have been applied to all disturbed areas, the qualified inspector shall conduct a site inspection at least once every thirty (30) calendar days. The owner or operator shall notify the Regional Office stormwater contact person in writing prior to reducing the frequency of inspections.
4. If soil disturbance activities have been shut down with partial project completion, the qualified inspector can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved final stabilization and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The owner or operator shall notify the Regional Office stormwater contact person in writing prior to the shutdown. If soil disturbance activities have not resumed within 2 years from the date of shutdown, the owner or operator shall have the qualified inspector(s) perform a final inspection and certify that all disturbed areas have achieved final stabilization, and all temporary, structural erosion and sediment control measures have been removed, and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the "Final Stabilization" and "Post-Construction Stormwater Management Practice" certification statements on the Notice of Termination (NOT). The owner or operator shall then submit the completed NOT form in accordance with NYSDEC regulations.

During each inspection, the qualified inspector should fill out the Erosion and Sediment Control Inspection Report as directed below:

On the Erosion and Sediment Control Inspection Report site map show the following:

- Disturbed site areas and drainage pathways.
- Site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period.
- Site areas that have undergone temporary or permanent stabilization.

- In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.
- Photographs, including date stamp, of any deficiencies and recommendations.
- As deficiencies are fixed by the contractor, a photograph, include date stamp, should be included in the report.
- Photograph of each outfall during a rain event.

Record the following information on the Erosion and Sediment Control Inspection Report:

- For each structural measure, circle YES, NO, or N/A (not applicable) to indicate if the pollutant control measure is in conformance with specifications.
- For each structural measure, circle YES, NO, or N/A to indicate whether the structural measure is performing effectively in minimizing stormwater pollution.
- Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of the sediment storage volume in the allocated location on the Inspection Form Chart (i.e., 10 percent, 20 percent, and 50 percent).
- A description of the condition of the runoff at all points of discharge from the construction site. This shall include identification of any discharges of sediment from the construction site. Include discharges from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the construction site which receive runoff from disturbed areas. This shall include identification of any discharges of sediment to the surface waterbody;

The qualified inspector will give a brief explanation for all locations where he/she has noted that the structural practice was either not in conformance with specifications or in need of repair. This should be noted in the Erosion and Sediment Control Inspection Report. The qualified inspector will then give a brief recommendation for soil erosion and sediment control practices that were not installed properly or are not functioning as designed and need to be reinstalled or replaced.

8.1.3 Erosion And Sediment Control Maintenance Measures

All maintenance described below shall be completed in accordance with the New York State Standards and Specifications for Erosion and Sediment Control. Any material removed from erosion and sediment control measure shall be properly disposed.

All measures will be maintained in good working order; if repairs are found to be necessary, the qualified inspector shall notify the owner or operator and appropriate contractor (and subcontractor) of any corrective actions needed within one business day. The contractor (or subcontractor) shall begin implementing the corrective actions within

one business day of this notification and shall complete the corrective actions in a reasonable time frame.

A maintenance inspection report, titled "Erosion and Sediment Control Inspection Report," will be made after each inspection conducted by a qualified inspector.

Disturbed areas and materials storage areas will be inspected for evidence of potential pollutants entering stormwater systems. Within one business day of the completion of the inspection, the qualified inspector shall notify the owner or operator and the appropriate contractor (or subcontractor) of any corrective actions that need to be taken. The contractor (or subcontractor) shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.

A Monthly Summary of Site Inspection Activities will be prepared and kept on file with completed Erosion and Sediment Control Inspection Report. A Record of Stabilization and Construction Activities will be prepared and kept on file with the completed Construction Duration Inspection Forms.

The following are the maintenance requirements for each practice that will be implemented at the site.

8.1.4 Stabilized Construction Entrance/Exit

The stabilized construction entrance/exit shall be maintained in a condition that will prevent the tracking or flow of sediment onto public rights-of-way. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately; streets shall be swept as needed. The gravel pad shall be replaced as necessary. Sediment tracked onto public streets should be removed or cleaned on a daily basis.

8.1.5 Silt Fence

Maintenance of all silt fence shall be performed as needed. If a silt fence is knocked down, it shall be replaced immediately. When a silt fence appears deteriorated or ineffective and/or built up sediment reaches one-third the height of the bale or fence, the silt fence shall be replaced and/or cleaned accordingly. When "bulges" of material develop on the fence, they shall be removed.

Silt fence controls sediment runoff where the soil has been disturbed by slowing the flow of water and encouraging the deposition of sediment before the water passes through the silt fence. Built-up sediment shall be removed from silt fences when it has reached one-third the height of the fence and properly disposed.

8.1.6 Sump Pit

The sump pit will be inspected for proper control of runoff and sediment materials. Clean water should be pumped to a grassy area. If the contractor notices any visible contrast in the water, proper filtration shall be provided to release off site.

8.1.7 Soil Stockpile Detail

The silt fencing should be inspected for bulges and proper installation. The soil stockpile should be stabilized with grass or rolled erosion control blanket.

8.1.8 Storm Drain Inlet Protection

Maintenance and inspection of the filter fabric cloth beneath inlet grates in paved areas or the filter fabric drop inlet protection around the drop inlet shall be conducted. The filter fabric cloth shall be cleaned to allow water to pass and prevent clogging the drainage structure. The drainage inlet protection should be inspected for integrity and visible sediment buildup. Collected sediment should be removed from the drainage inlet protection and shall be disposed of properly in accordance with all applicable local, state, and federal requirements.

8.1.9 Dust Control

Maintain all dust control measures through dry weather periods until all disturbed areas are stabilized.

8.1.10 Soil Stabilization

To ensure that the site is properly seeded and stabilized, the Contractor must initiate stabilization measures as soon as practicable in areas of the site where construction activities have permanently ceased and in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. The Contractor will be responsible for the maintenance of the vegetated cover for the duration of construction activities. The areas shall be monitored to ensure that vegetation achieves good coverage over the entire disturbed section. Additional seeding shall be completed as needed. Watering shall be provided as needed.

In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.

8.1.11 Perimeter Dike/Swale

The dike/swale should be properly stabilized with rolled erosion control blanket or other stabilization measures. Any rilling or areas of cutting should be immediately stabilized. Further investigation as to the cause should also be performed to determine if other upstream erosion and sediment control measures are needed. When accumulated sediment reached a depth of 1/3 of the total depth of the swale, this material shall be removed and properly disposed.

8.1.12 Temporary Sediment Basin

Any rilling and erosion of the basin sideslopes should be evaluated and adequate stabilization should be provided. Rolled erosion control blankets or other stabilization practices should be installed on the sideslopes. The outlet structure should be inspected for damages, accumulation of sediment, trash and debris, and overall performance. If sediment-laden stormwater is leaving the basin then additional erosion and sediment control practices may be required.

8.2 Post-Construction Operation and Maintenance

Following completion of construction, a long term inspection and maintenance program will be implemented to ensure the proper function of the stormwater management system. The program will be carried out by the facilities manager. A detailed checklist of pond inspection and maintenance is included in the Appendix I.

The stormwater conveyance system maintenance program will include the following:

- Litter and debris will be removed from catch basins, vegetated swales, ponds, and the outlet control structures.
- The stormwater management system should be inspected after each major storm event (greater than 1-year, 24-hour storm) to ensure the small orifices and inlets remain open.
- Silt will be cleaned from catch basins and other drainage structures when the depth exceeds half of the depth of the sump.
- Use of road salt for maintenance of driveway areas will be minimized.

In addition to inspection and maintenance of the stormwater management system, inspection of the overall site for areas of potential contamination will also be noted. Maintenance of existing landscaped areas is performed consistently throughout the year. Pest control would follow an Integrated Pest Management program in conjunction with guidance from the Cornell Cooperative Extension Agency, applicable regulations, and best practices. All potential pollutants, such as petroleum products, chemicals, etc, will be properly stored in designated areas that will minimize contact with precipitation.

Post-Construction Operation and Maintenance

Following completion of construction, a long term inspection and maintenance program would be implemented to ensure the proper function of the stormwater management system. The program would be carried out by the facilities manager. A detailed checklist of pond inspection and maintenance is included in Appendix I of the Preliminary SWPPP.

Below is a breakdown of the maintenance programs designed for the different proposed stormwater facilities:

Surface Sand Filter (F-1)

Sedimentation Basin (Pretreatment)

- A fixed vertical sediment depth marker would be installed in the forebay to measure sediment deposition over time.

Surface Sand Filter

- Maintenance responsibility for the filtering system would be vested with a responsible authority by means of a legally binding and enforceable instrument that is executed as a condition of plan approval. A legally binding and enforceable maintenance agreement shall be executed between the facility owner and the local review authority to ensure the following:

    a. Sediment shall be cleaned out of the sedimentation chamber when it accumulates to a depth of more than six inches. Vegetation within the sedimentation chamber shall be limited to a height of 18 inches. The sediment chamber outlet devices shall be

cleaned/repaired when drawdown times exceed 36 hours. Trash and debris shall be removed as necessary.

b. Silt/sediment shall be removed from the filter bed when the accumulation exceeds one inch. When the filtering capacity of the filter diminishes substantially (i.e., when water ponds on the surface of the filter bed for more than 48 hours), the top few inches of discolored material shall be removed and shall be replaced with fresh material. The removed sediments shall be disposed in an acceptable manner (i.e., landfill).

- Surface sand filters that have a grass cover should be mowed a minimum of three times per growing season to maintain maximum grass heights less than 12 inches.
- Remove sediment/gross solids from sedimentation chamber and filter surface annually or when depth exceeds 3 inches.
- Sediment will be removed from stormwater ponds as needed, but at a minimum of every five years. A backhoe or excavator will be used to remove sediment accumulation from the bottom of the detention pond. However, vehicles shall be prevented from traversing the sideslopes to the extent possible to avoid damaging established vegetation. Repairs to the embankment should be done with hand tools to the extent practical.
- Provide stone drop (at least 6 inches) at the inlet.
- Eroded areas and gullies will be restored and re-seeded as soon as possible.

Wet Pond (W-4)

- Maintenance responsibility for a pond and its buffer shall be vested with a responsible authority by means of a legally binding and enforceable maintenance agreement that is executed as a condition of plan approval.
- The principal spillway shall be equipped with a removable trash rack, and generally accessible from dry land.
- If a minimum coverage of 50% is not achieved in the planted wetland zones after the second growing season, a reinforcement planting is required. Eroded areas and gullies will be restored and re-seeded as soon as possible.
- Sediment removal at the inlets shall occur every 3 years or after 30% of pipe end section stone has been filled.
- Sediment removal from the main basin every 5 years or when the minimum water depth approaches 3 feet. More regular maintenance will help ensure that the system is achieving the highest removal of phosphorus. A backhoe or excavator will be used to remove sediment accumulation from the bottom of the detention pond. However, vehicles shall be prevented from traversing the sideslopes to the extent possible to avoid damaging established vegetation. Repairs to the embankment should be done with hand tools to the extent practical.
- The side slopes of the pond will be mowed at a minimum twice a year. If necessary, invasive woody vegetation around and in the pond will be removed to prevent it from becoming established within the pond.

Stormwater Planters

A regular and thorough inspection regime is vital to the proper and efficient function of stormwater

planters. The following operation and maintenance program would be implemented:

- Debris and trash removal should be conducted on a weekly or monthly basis, depending on likelihood of accumulation.
- Following construction, planters should be inspected after each storm event greater than 0.5 inches, and at least twice in the first six months. Subsequently, inspections should be conducted seasonally and after storm events equal to or greater than the 1-year storm event.
- Routine maintenance activities include pruning and replacing dead or dying vegetation, plant thinning, and erosion repair.
- The soil surface should be inspected for evidence of sediment build-up from the connected impervious surface and for surface ponding. Attention should be paid to additional seasonal maintenance needs as well as the first growing season.

Permeable Pavers

- Permeable pavements are highly susceptible to clogging and subject to owner neglect. Individual owners need to be educated to ensure that proper maintenance and winter operation activities will allow the system to function properly.
- The type of permeable paving and the location of the site dictate the required maintenance level and failure rate. Concrete grid pavers and plastic modular blocks require less maintenance because they are not clogged by sediment as easily as porous asphalt and concrete. Typical maintenance activities for permeable paving are summarized below.

Activity	**Schedule**
Ensure that paving area is clean of debris	Monthly
Ensure that paving dewaters between storms	Monthly and after storms >0.5 in.
Ensure that the area is clean of sediments	Monthly
Mow upland and adjacent areas, and seed bare areas	As needed
Vacuum sweep frequently to keep surface free of sediments	Typically 3 to 4 times a year
Inspect the surface for deterioration or spalling	Annual

When maintenance of permeable paving areas is required, the cause of the maintenance should be understood prior to commencing repairs so unnecessary difficulties and recurring costs can be avoided (Ferguson, 2005). Generally, routine vacuum sweeping and high-pressure washing (with proper disposal of removed material and washwater) can maintain infiltration rates when clogged or crusted material is removed. Signs can also be posted visibly within a permeable paving area to prevent such activities as resurfacing, the use of abrasives, and to restrict truck parking.

Rain Garden

Rain gardens are intended to be relatively low maintenance. However, these practices may be subject to

sedimentation and invasive plant species which could create maintenance problems. If the recharge ability is lost by accumulation of fine sediment, mosquito breeding may occur. Adequate arrangements for long-term maintenance of these systems and updated inventories of their location are essential for the long-

term performance of these practices. Rain gardens should be treated as a component of the landscaping, with routine maintenance specified through a legally binding maintenance agreement.

- Routine maintenance would include the occasional replacement of plants, mulching, weeding and thinning to maintain the desired appearance. Weeding and watering are essential the first year, and would be minimized with the use of a weed-free mulch layer.
- The landscapers would be educated regarding the purpose and maintenance requirements of the rain garden, so the desirable aspects of ponded water are recognized and maintained.
- Keeping the garden weeded is one of the most important tasks, especially in the first couple of years while the native plants are establishing their root systems. Once the rain garden has matured, the garden area should be free of bare areas except where outlet structure is located. Keep plants pruned if they start to get "leggy" and floppy. Cut off old flower heads after a plant is done blooming.
- Inspect for sediment accumulations or heavy organic matter where runoff enters the garden and remove as necessary. The top few inches of planting soil should be removed and replaced when water ponds for more than 48 hours. Blockages may cause diversion of flow around the garden. Make sure all appropriate elevations have been maintained, no settlement has occurred and no low spots have been created.

WEST NILE VIRUS

Recent field observations conclude that constructed wetlands and stormwater management ponds actually pose a low risk in spreading the West Nile Virus since the mosquito species that are found in wetlands and stormwater management ponds tend not to be the variety that are known to carry the West Nile Virus. Within a healthy aquatic ecosystem, other aquatic invertebrates (dragonfly larvae and other species) prey on mosquito larvae thereby reducing mosquito populations. The SWPPP submitted to the NYSDEC and NYCDEP will include a regular maintenance schedule to be implemented at the completion of construction. This may include the stocking of the ponds with species to feed on potential mosquito larvae, and possible aeration systems to be exercised during periods of minimal flow through the ponds.

SWPPP APPENDIX A

CONTRACTOR'S CERTIFICATION

OWNER'S CERTIFICATION

CONTRACTOR'S CERTIFICATION

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings. "

SIGNED: _____ DATE: _____

NAME: _____

FIRM: _____

ADDRESS: _____

_____

PHONE: _____

SITE: _____

SWPPP
IMPLEMENTER'S NAME: _____

SWPPP
IMPLEMETER'S TITLE: _____

CONTRACTOR'S SCOPE: _____

TRAINED
CONTRACTOR'S NAME: _____

TRAINED
CONTRACTOR'S TITLE: _____

*The SWPPP Implementer must be a trained contractor responsible for SWPPP implementation, an employee of the firm who has received training in accordance with SPEDES GP-0-10-001.

OWNER'S CERTIFICATION

"I hereby certify that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings."

NAME: _____

FIRM: _____

ADDRESS: _____

_____

PHONE: _____

SITE: _____

SWPPP APPENDIX B

PRE- AND POST-DEVELOPMENT STORMWATER MAPS

PARK PLACE

11 New King Street

Town of North Castle New York

11 New King Street LLC
11 New King Street,
White Plains, NY
10604

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AKRF
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440 PARK AVENUE SOUTH
NEW YORK, NY 10016
Tel:(212)696-0670
Fax:(212)726-0942

DEIS SUBMISSION

LEGEND

DP1	DESIGN POINT
	PRE 1
	PRE 2
	PRE 3
PRE 1	PRE DEVELOPMENT SUB-CATCHMENT AREA
	Tc FLOW PATH
	SOIL BORING AND TEST PIT
	SOILBOUNDARY
ChB	CHARLTON LOAM
RhB	RIDGEBURY LOAM
Ub	UDORTHENTS, SMOOTHED

PROJECT NORTH

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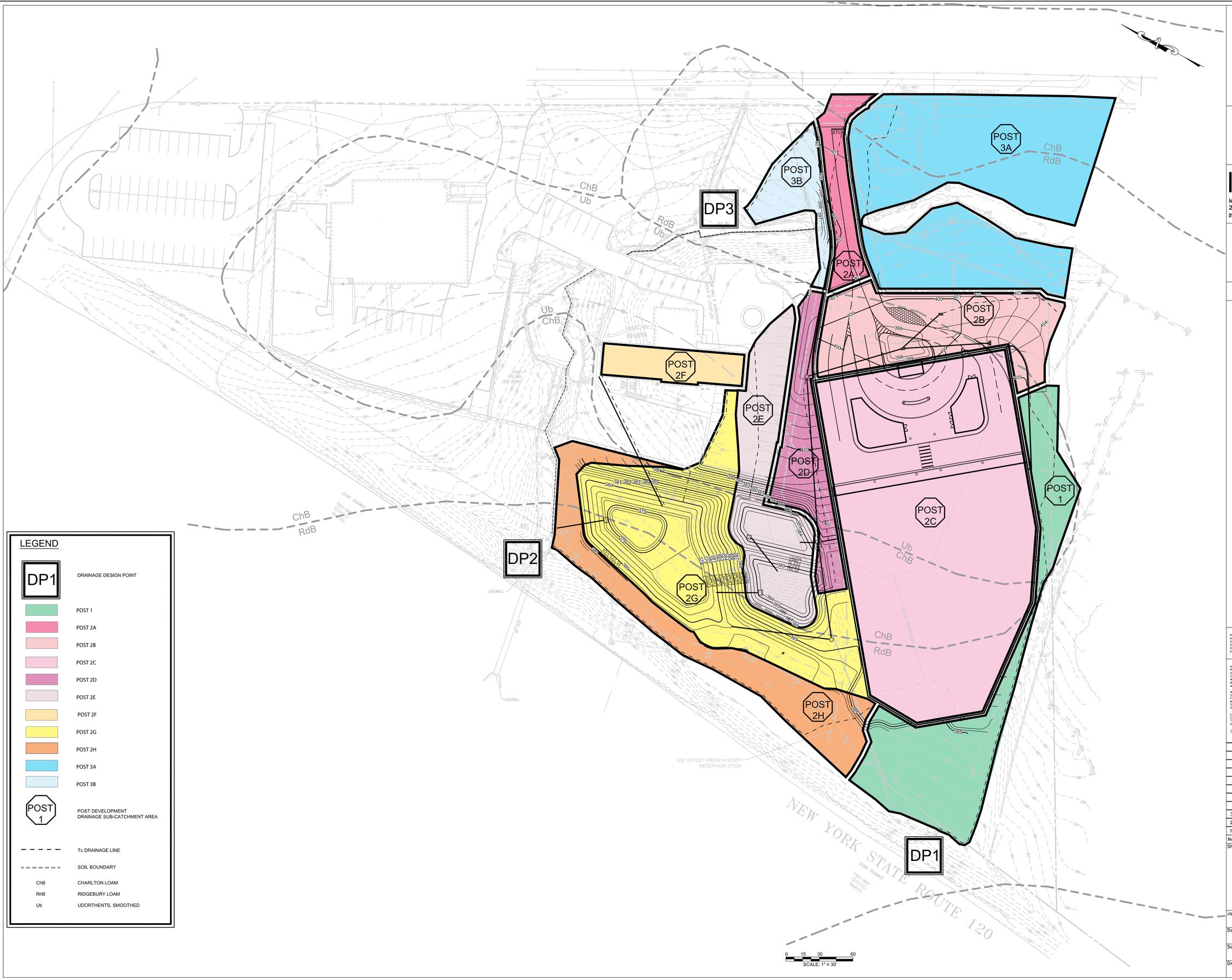
No.	Date	Issue
3	12-30-10	REVISION PER DEIS COMMENTS
2	10-26-10	DEIS SUBMISSION
1	06-15-09	SITE PLAN SUBMISSION

Sheet Title

PRE-DEVELOPMENT STORMWATER MAP

Job No. 2007-0632	Sheet No. D-1
Date 08-25-10	
Scale 1"=30'	
Drawn/Checked JR/AM	

S:\80202 - 11 New King Street LLC\Drawings\Drainage Design.dwg



LEGEND

DP1	DRAINAGE DESIGN POINT
	POST 1
	POST 2A
	POST 2B
	POST 2C
	POST 2D
	POST 2E
	POST 2F
	POST 2G
	POST 2H
	POST 3A
	POST 3B
POST 1	POST DEVELOPMENT DRAINAGE SUB-CATCHMENT AREA
	Tc DRAINAGE LINE
	SOIL BOUNDARY
ChB	CHARLTON LOAM
RhB	RIDGEBURY LOAM
Ub	UDORTHENTS, SMOOTHED

PARK PLACE

11 New King Street

Town of North Castle New York

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Fax:(212)726-0942

DEIS SUBMISSION

PROJECT NORTH

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No.	Date	Issue
3	01-18-11	REVISION PER DEIS COMMENTS
2	10-26-10	DEIS SUBMISSION
1	06-15-09	SITE PLAN SUBMISSION

Sheet Title

POST-DEVELOPMENT STORMWATER MAP

Job No. 2007-0632	Sheet No. D-2
Date 08-25-10	
Scale 1"=30'	
Drawn/Checked JR/AM	

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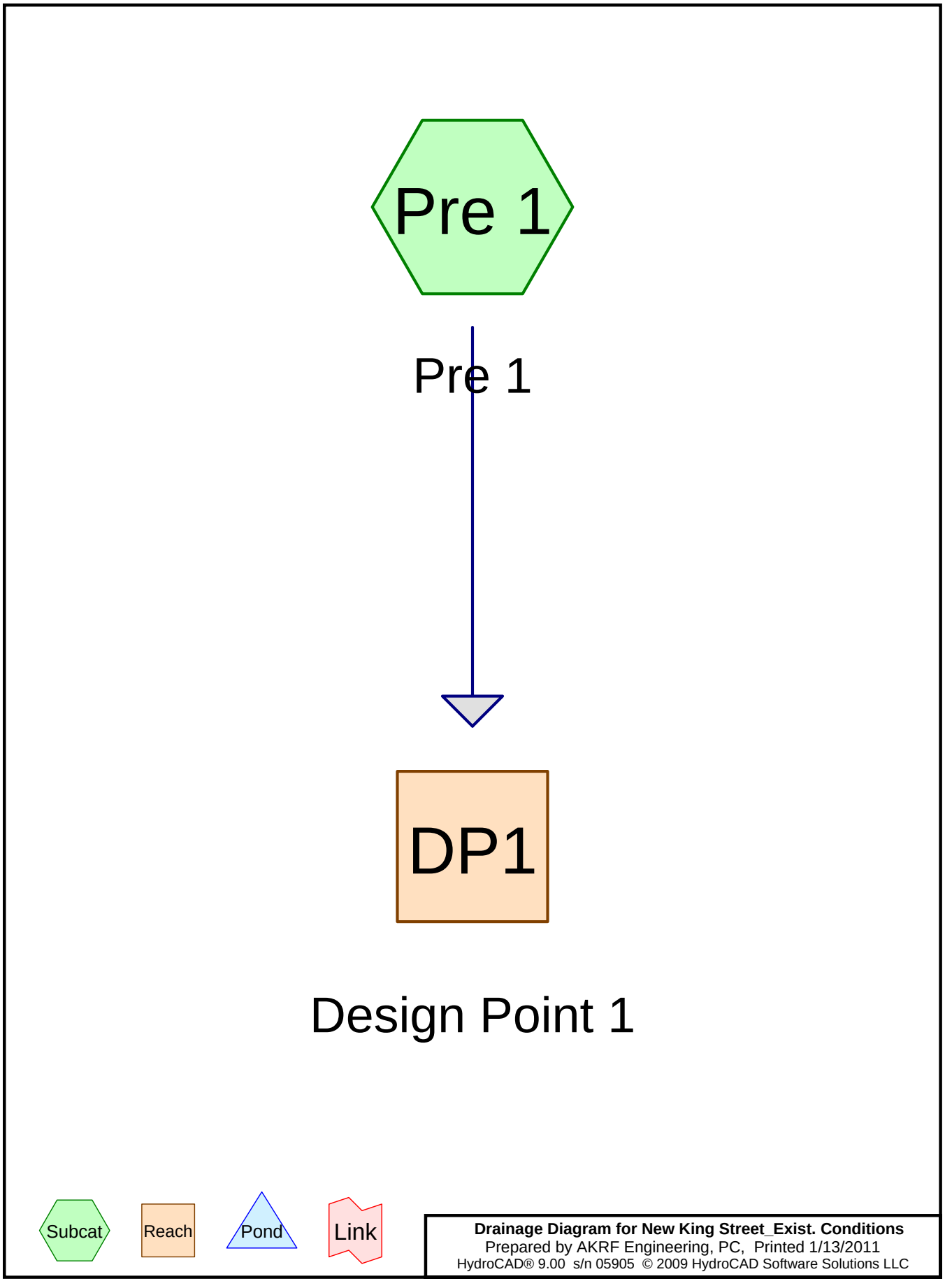
SWPPP APPENDIX C

DRAWINGS

THE LARGE SCALE DRAWINGS ARE INCLUDED IN THE DEIS SUBMISSION AS A SEPARATE ATTACHMENT

SWPPP APPENDIX D

PRE-DEVELOPMENT HYDROLOGIC ROUTING CALCULATIONS



Drainage Diagram for New King Street_Exist. Conditions
Prepared by AKRF Engineering, PC, Printed 1/13/2011
HydroCAD® 9.00 s/n 05905 © 2009 HydroCAD Software Solutions LLC

Summary for Subcatchment Pre 1: Pre 1

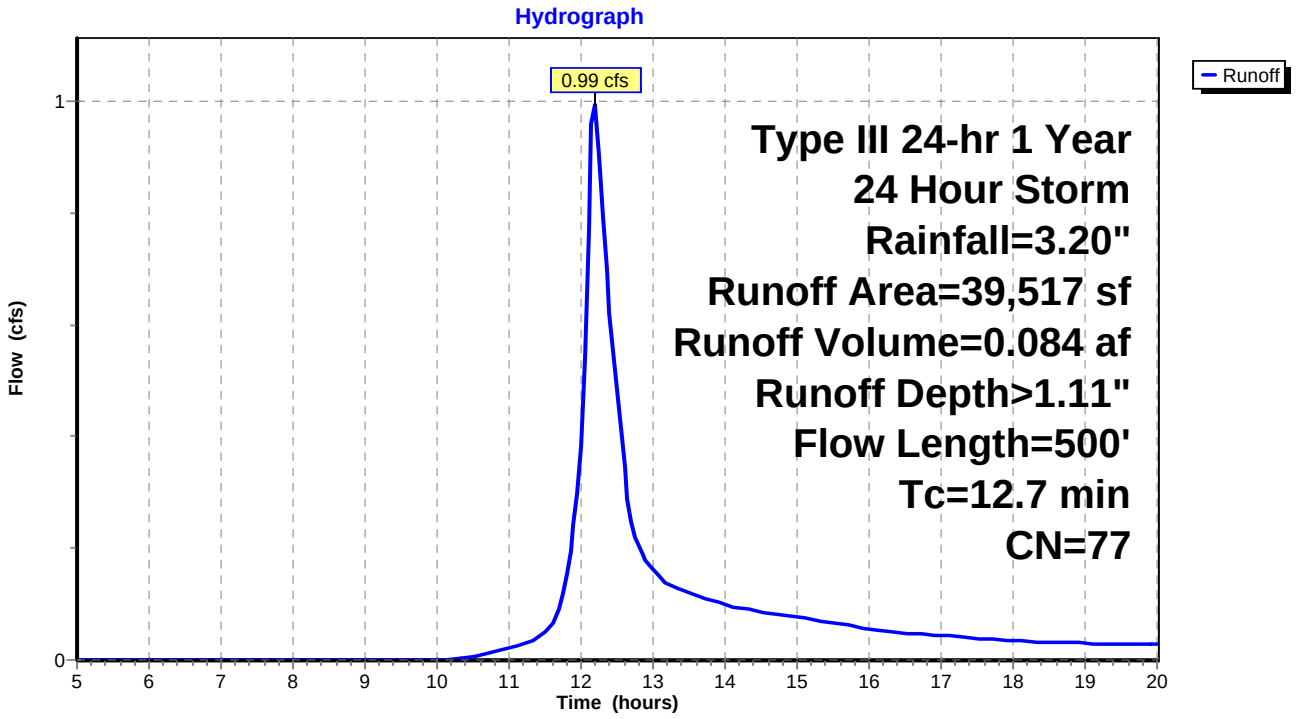
Runoff = 0.99 cfs @ 12.19 hrs, Volume= 0.084 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
3,802	98	Paved parking, HSG C
24,338	73	Woods, Fair, HSG C
11,377	79	50-75% Grass cover, Fair, HSG C
39,517	77	Weighted Average
35,715		90.38% Pervious Area
3,802		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	150	0.0460	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.4	350	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.7	500	Total			

Subcatchment Pre 1: Pre 1



Hydrograph for Subcatchment Pre 1: Pre 1

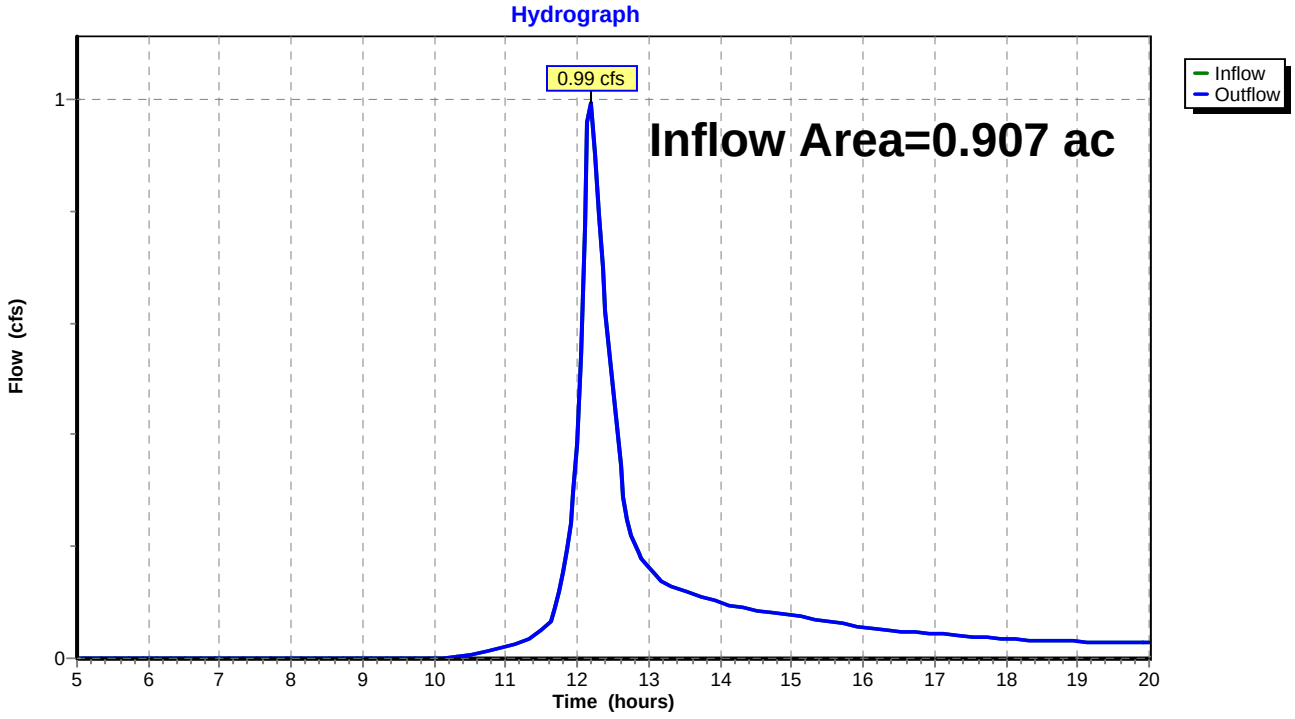
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.00
9.50	0.53	0.00	0.00
9.75	0.57	0.00	0.00
10.00	0.60	0.00	0.00
10.25	0.65	0.00	0.00
10.50	0.69	0.00	0.01
10.75	0.74	0.01	0.01
11.00	0.80	0.01	0.02
11.25	0.87	0.02	0.03
11.50	0.95	0.04	0.05
11.75	1.14	0.08	0.12
12.00	1.60	0.25	**0.38**
12.25	2.06	0.48	**0.90**
12.50	2.25	0.59	0.48
12.75	2.33	0.64	0.22
13.00	2.40	0.68	0.16
13.25	2.46	0.71	0.13
13.50	2.51	0.74	0.12
13.75	2.55	0.77	0.11
14.00	2.60	0.80	0.10
14.25	2.63	0.83	0.09
14.50	2.67	0.85	0.09
14.75	2.70	0.87	0.08
15.00	2.73	0.89	0.08
15.25	2.76	0.91	0.07
15.50	2.79	0.93	0.07
15.75	2.81	0.94	0.06
16.00	2.84	0.96	0.06
16.25	2.86	0.97	0.05
16.50	2.87	0.99	0.05
16.75	2.89	1.00	0.05
17.00	2.91	1.01	0.04
17.25	2.93	1.02	0.04
17.50	2.94	1.03	0.04
17.75	2.96	1.04	0.04
18.00	2.97	1.05	0.03
18.25	2.98	1.06	0.03
18.50	2.99	1.07	0.03
18.75	3.01	1.08	0.03
19.00	3.02	1.08	0.03
19.25	3.03	1.09	0.03
19.50	3.04	1.10	0.03
19.75	3.05	1.11	0.03
20.00	**3.06**	**1.11**	0.03

Summary for Reach DP1: Design Point 1

Inflow Area = 0.907 ac, 9.62% Impervious, Inflow Depth > 1.11" for 1 Year, 24 Hour Storm event
Inflow = 0.99 cfs @ 12.19 hrs, Volume= 0.084 af
Outflow = 0.99 cfs @ 12.19 hrs, Volume= 0.084 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.00		0.00
10.50	0.01		0.01
10.75	0.01		0.01
11.00	0.02		0.02
11.25	0.03		0.03
11.50	0.05		0.05
11.75	0.12		0.12
12.00	**0.38**		**0.38**
12.25	**0.90**		**0.90**
12.50	0.48		0.48
12.75	0.22		0.22
13.00	0.16		0.16
13.25	0.13		0.13
13.50	0.12		0.12
13.75	0.11		0.11
14.00	0.10		0.10
14.25	0.09		0.09
14.50	0.09		0.09
14.75	0.08		0.08
15.00	0.08		0.08
15.25	0.07		0.07
15.50	0.07		0.07
15.75	0.06		0.06
16.00	0.06		0.06
16.25	0.05		0.05
16.50	0.05		0.05
16.75	0.05		0.05
17.00	0.04		0.04
17.25	0.04		0.04
17.50	0.04		0.04
17.75	0.04		0.04
18.00	0.03		0.03
18.25	0.03		0.03
18.50	0.03		0.03
18.75	0.03		0.03
19.00	0.03		0.03
19.25	0.03		0.03
19.50	0.03		0.03
19.75	0.03		0.03
20.00	0.03		0.03

Summary for Subcatchment Pre 1: Pre 1

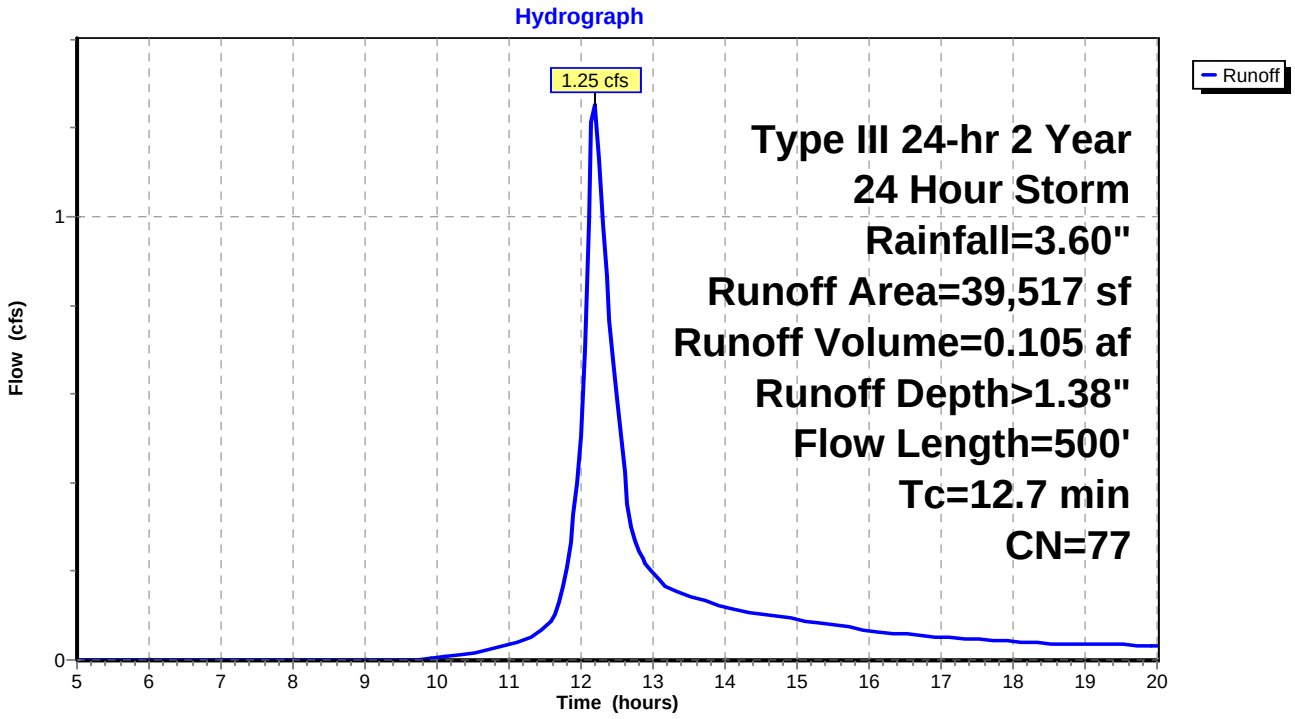
Runoff = 1.25 cfs @ 12.19 hrs, Volume= 0.105 af, Depth> 1.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
3,802	98	Paved parking, HSG C
24,338	73	Woods, Fair, HSG C
11,377	79	50-75% Grass cover, Fair, HSG C
39,517	77	Weighted Average
35,715		90.38% Pervious Area
3,802		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	150	0.0460	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.4	350	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.7	500	Total			

Subcatchment Pre 1: Pre 1



Hydrograph for Subcatchment Pre 1: Pre 1

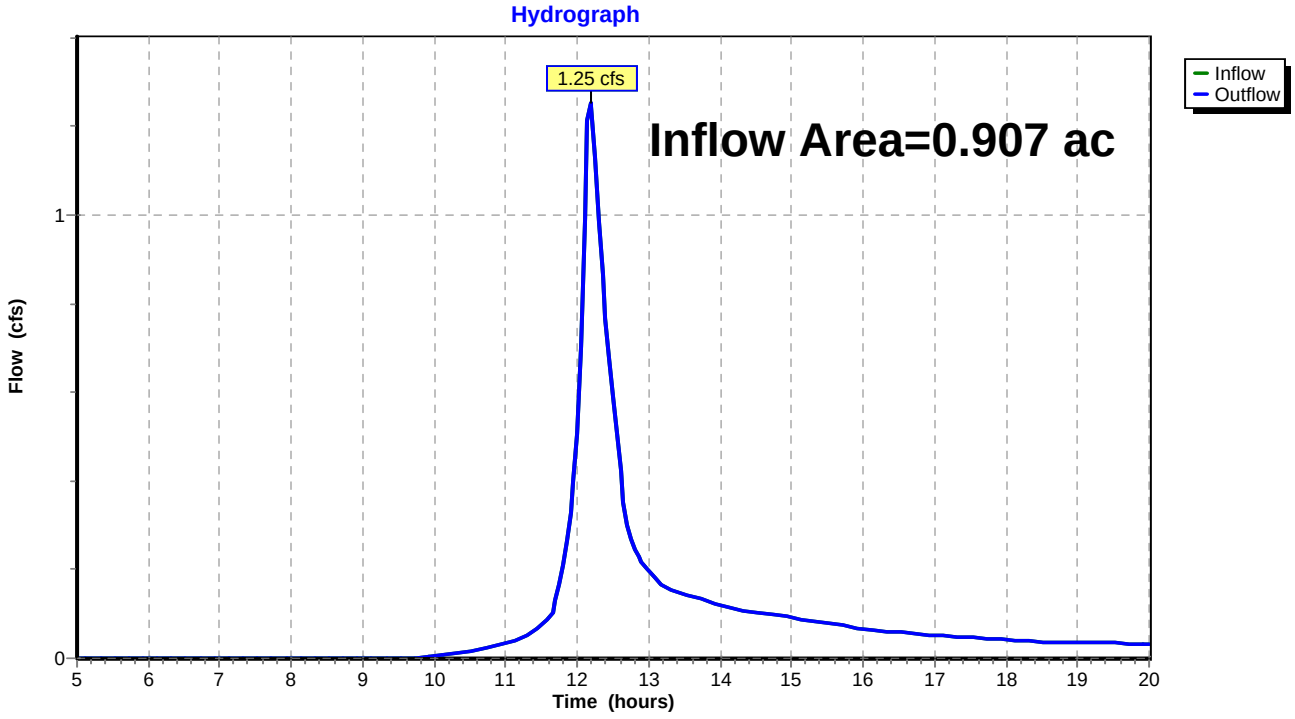
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.31	0.00	0.00
7.00	0.33	0.00	0.00
7.25	0.35	0.00	0.00
7.50	0.37	0.00	0.00
7.75	0.39	0.00	0.00
8.00	0.41	0.00	0.00
8.25	0.44	0.00	0.00
8.50	0.46	0.00	0.00
8.75	0.49	0.00	0.00
9.00	0.52	0.00	0.00
9.25	0.56	0.00	0.00
9.50	0.60	0.00	0.00
9.75	0.64	0.00	0.00
10.00	0.68	0.00	0.00
10.25	0.73	0.01	0.01
10.50	0.78	0.01	0.02
10.75	0.84	0.02	0.02
11.00	0.90	0.03	0.03
11.25	0.98	0.04	0.05
11.50	1.07	0.07	0.07
11.75	1.28	0.13	0.17
12.00	1.80	0.35	**0.50**
12.25	2.32	0.63	**1.13**
12.50	2.53	0.76	0.59
12.75	2.62	0.82	0.27
13.00	2.70	0.87	0.20
13.25	2.76	0.91	0.16
13.50	2.82	0.95	0.14
13.75	2.87	0.98	0.13
14.00	2.92	1.02	0.12
14.25	2.96	1.05	0.11
14.50	3.00	1.07	0.10
14.75	3.04	1.10	0.10
15.00	3.08	1.12	0.09
15.25	3.11	1.15	0.09
15.50	3.14	1.17	0.08
15.75	3.16	1.19	0.07
16.00	3.19	1.20	0.07
16.25	3.21	1.22	0.06
16.50	3.23	1.24	0.06
16.75	3.25	1.25	0.05
17.00	3.27	1.27	0.05
17.25	3.29	1.28	0.05
17.50	3.31	1.29	0.05
17.75	3.33	1.30	0.04
18.00	3.34	1.31	0.04
18.25	3.36	1.32	0.04
18.50	3.37	1.33	0.04
18.75	3.38	1.34	0.04
19.00	3.40	1.35	0.04
19.25	3.41	1.36	0.03
19.50	3.42	1.37	0.03
19.75	3.43	1.38	0.03
20.00	**3.45**	**1.39**	0.03

Summary for Reach DP1: Design Point 1

Inflow Area = 0.907 ac, 9.62% Impervious, Inflow Depth > 1.38" for 2 Year, 24 Hour Storm event
Inflow = 1.25 cfs @ 12.19 hrs, Volume= 0.105 af
Outflow = 1.25 cfs @ 12.19 hrs, Volume= 0.105 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.00		0.00
9.50	0.00		0.00
9.75	0.00		0.00
10.00	0.00		0.00
10.25	0.01		0.01
10.50	0.02		0.02
10.75	0.02		0.02
11.00	0.03		0.03
11.25	0.05		0.05
11.50	0.07		0.07
11.75	0.17		0.17
12.00	**0.50**		**0.50**
12.25	**1.13**		**1.13**
12.50	0.59		0.59
12.75	0.27		0.27
13.00	0.20		0.20
13.25	0.16		0.16
13.50	0.14		0.14
13.75	0.13		0.13
14.00	0.12		0.12
14.25	0.11		0.11
14.50	0.10		0.10
14.75	0.10		0.10
15.00	0.09		0.09
15.25	0.09		0.09
15.50	0.08		0.08
15.75	0.07		0.07
16.00	0.07		0.07
16.25	0.06		0.06
16.50	0.06		0.06
16.75	0.05		0.05
17.00	0.05		0.05
17.25	0.05		0.05
17.50	0.05		0.05
17.75	0.04		0.04
18.00	0.04		0.04
18.25	0.04		0.04
18.50	0.04		0.04
18.75	0.04		0.04
19.00	0.04		0.04
19.25	0.03		0.03
19.50	0.03		0.03
19.75	0.03		0.03
20.00	0.03		0.03

Summary for Subcatchment Pre 1: Pre 1

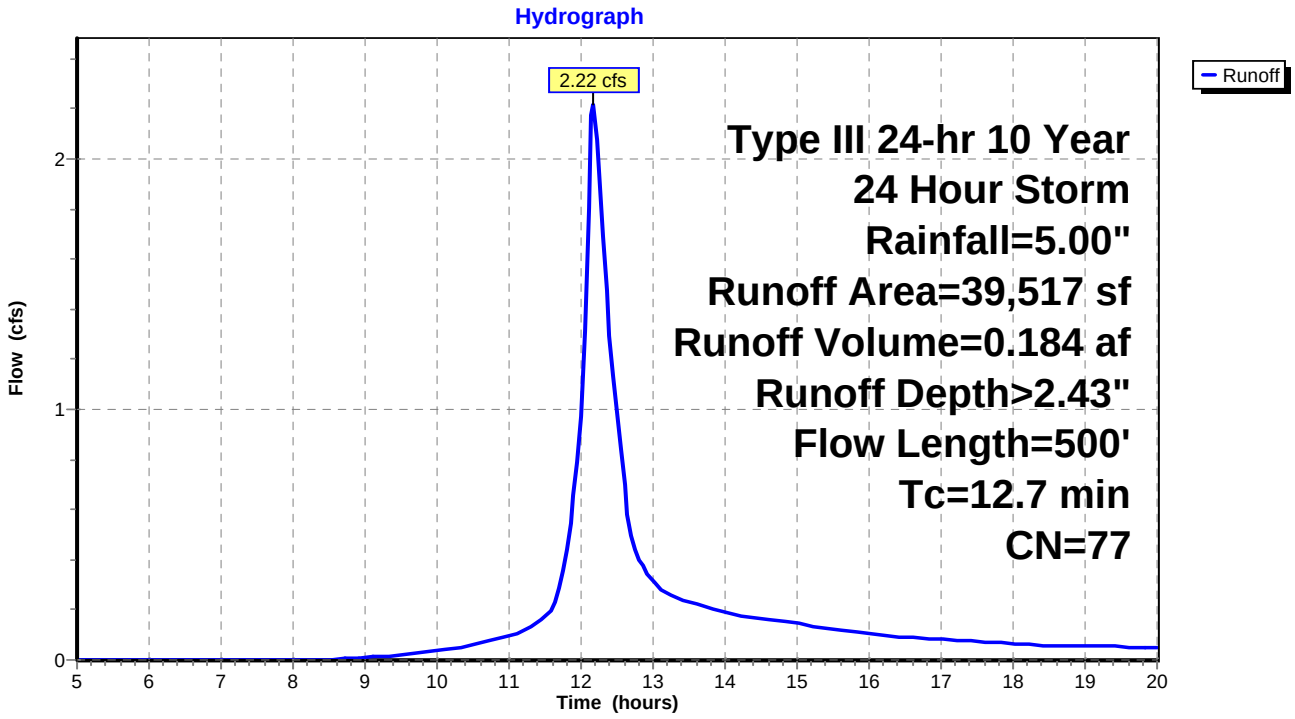
Runoff = 2.22 cfs @ 12.18 hrs, Volume= 0.184 af, Depth> 2.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
3,802	98	Paved parking, HSG C
24,338	73	Woods, Fair, HSG C
11,377	79	50-75% Grass cover, Fair, HSG C
39,517	77	Weighted Average
35,715		90.38% Pervious Area
3,802		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	150	0.0460	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.4	350	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.7	500	Total			

Subcatchment Pre 1: Pre 1



Hydrograph for Subcatchment Pre 1: Pre 1

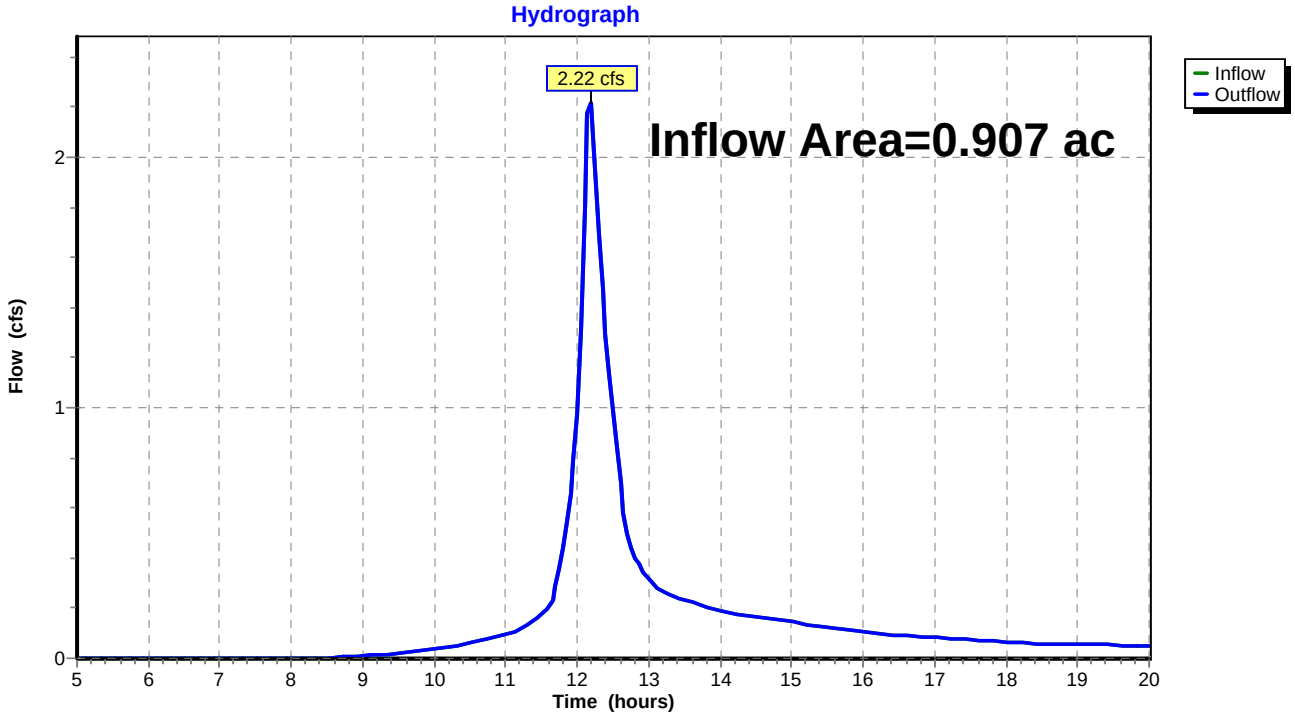
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.43	0.00	0.00
7.00	0.45	0.00	0.00
7.25	0.48	0.00	0.00
7.50	0.51	0.00	0.00
7.75	0.54	0.00	0.00
8.00	0.57	0.00	0.00
8.25	0.60	0.00	0.00
8.50	0.64	0.00	0.00
8.75	0.68	0.00	0.01
9.00	0.73	0.01	0.01
9.25	0.78	0.01	0.02
9.50	0.83	0.02	0.02
9.75	0.89	0.03	0.03
10.00	0.95	0.04	0.04
10.25	1.01	0.05	0.05
10.50	1.08	0.07	0.06
10.75	1.16	0.09	0.08
11.00	1.25	0.12	0.09
11.25	1.36	0.15	0.12
11.50	1.49	0.21	0.17
11.75	1.78	0.33	0.36
12.00	2.50	0.74	**0.97**
12.25	3.22	1.23	**1.96**
12.50	3.51	1.44	0.98
12.75	3.64	1.54	0.44
13.00	3.75	1.62	0.32
13.25	3.84	1.69	0.26
13.50	3.92	1.75	0.23
13.75	3.99	1.80	0.21
14.00	4.06	1.86	0.19
14.25	4.11	1.90	0.17
14.50	4.17	1.95	0.16
14.75	4.22	1.99	0.15
15.00	4.27	2.03	0.14
15.25	4.32	2.06	0.13
15.50	4.36	2.10	0.12
15.75	4.40	2.13	0.11
16.00	4.43	2.15	0.10
16.25	4.46	2.18	0.10
16.50	4.49	2.20	0.09
16.75	4.52	2.23	0.09
17.00	4.55	2.25	0.08
17.25	4.57	2.27	0.08
17.50	4.60	2.29	0.07
17.75	4.62	2.31	0.07
18.00	4.64	2.32	0.06
18.25	4.66	2.34	0.06
18.50	4.68	2.36	0.06
18.75	4.70	2.37	0.06
19.00	4.72	2.39	0.06
19.25	4.73	2.40	0.05
19.50	4.75	2.42	0.05
19.75	4.77	2.43	0.05
20.00	**4.79**	**2.44**	0.05

Summary for Reach DP1: Design Point 1

Inflow Area = 0.907 ac, 9.62% Impervious, Inflow Depth > 2.43" for 10 Year, 24 Hour Storm event
Inflow = 2.22 cfs @ 12.18 hrs, Volume= 0.184 af
Outflow = 2.22 cfs @ 12.18 hrs, Volume= 0.184 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.01		0.01
9.00	0.01		0.01
9.25	0.02		0.02
9.50	0.02		0.02
9.75	0.03		0.03
10.00	0.04		0.04
10.25	0.05		0.05
10.50	0.06		0.06
10.75	0.08		0.08
11.00	0.09		0.09
11.25	0.12		0.12
11.50	0.17		0.17
11.75	0.36		0.36
12.00	**0.97**		**0.97**
12.25	**1.96**		**1.96**
12.50	0.98		0.98
12.75	0.44		0.44
13.00	0.32		0.32
13.25	0.26		0.26
13.50	0.23		0.23
13.75	0.21		0.21
14.00	0.19		0.19
14.25	0.17		0.17
14.50	0.16		0.16
14.75	0.15		0.15
15.00	0.14		0.14
15.25	0.13		0.13
15.50	0.12		0.12
15.75	0.11		0.11
16.00	0.10		0.10
16.25	0.10		0.10
16.50	0.09		0.09
16.75	0.09		0.09
17.00	0.08		0.08
17.25	0.08		0.08
17.50	0.07		0.07
17.75	0.07		0.07
18.00	0.06		0.06
18.25	0.06		0.06
18.50	0.06		0.06
18.75	0.06		0.06
19.00	0.06		0.06
19.25	0.05		0.05
19.50	0.05		0.05
19.75	0.05		0.05
20.00	0.05		0.05

Summary for Subcatchment Pre 1: Pre 1

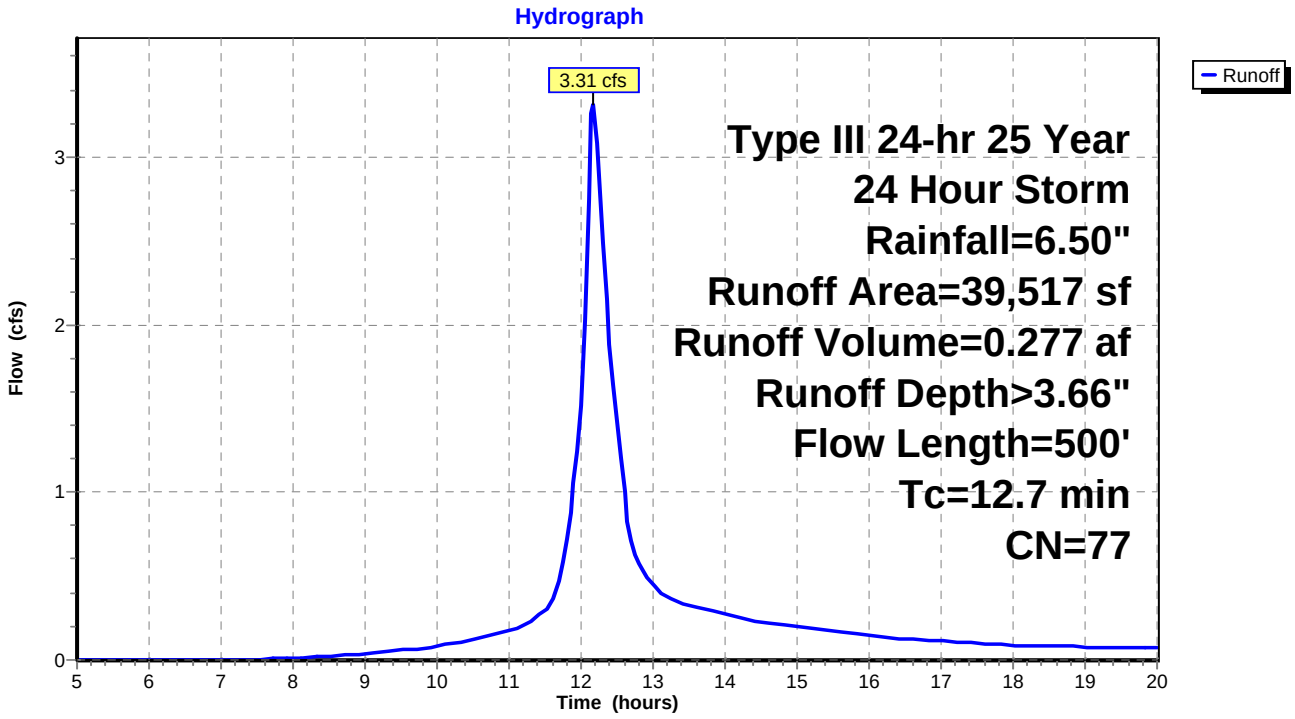
Runoff = 3.31 cfs @ 12.18 hrs, Volume= 0.277 af, Depth> 3.66"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
3,802	98	Paved parking, HSG C
24,338	73	Woods, Fair, HSG C
11,377	79	50-75% Grass cover, Fair, HSG C
39,517	77	Weighted Average
35,715		90.38% Pervious Area
3,802		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	150	0.0460	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.4	350	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.7	500	Total			

Subcatchment Pre 1: Pre 1



Hydrograph for Subcatchment Pre 1: Pre 1

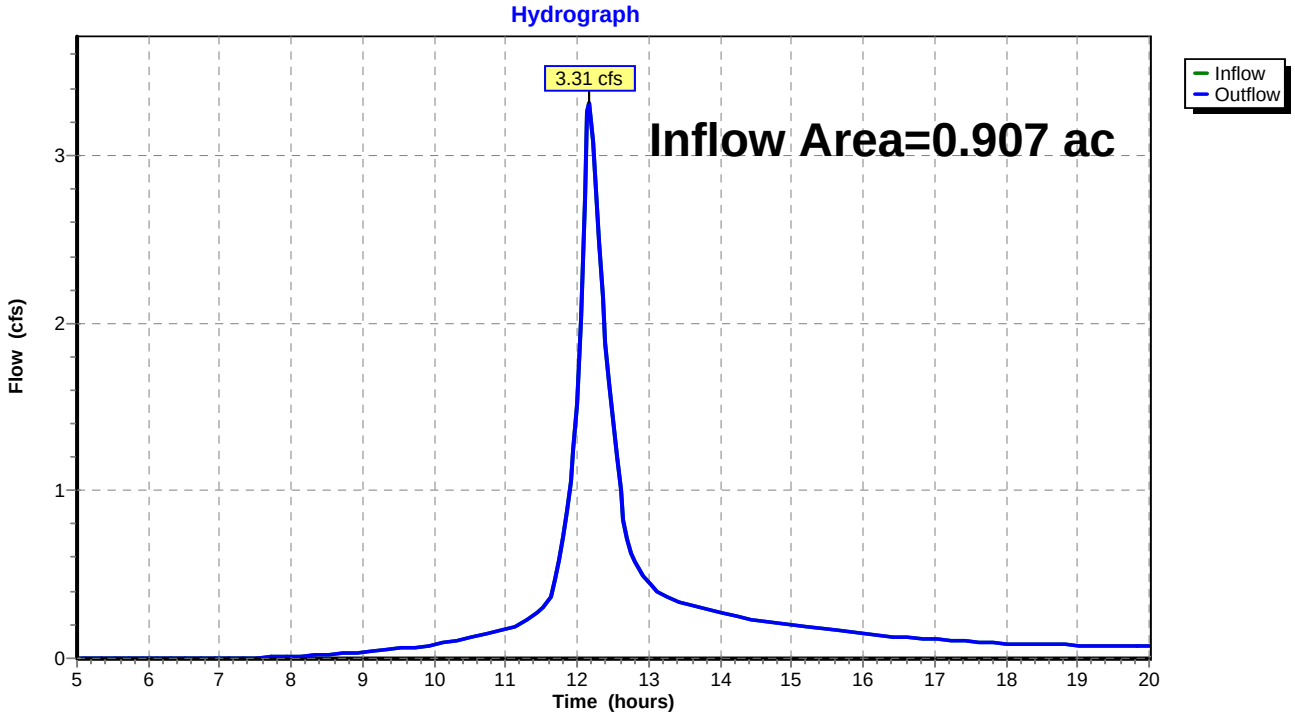
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.37	0.00	0.00
5.25	0.39	0.00	0.00
5.50	0.42	0.00	0.00
5.75	0.44	0.00	0.00
6.00	0.47	0.00	0.00
6.25	0.50	0.00	0.00
6.50	0.52	0.00	0.00
6.75	0.56	0.00	0.00
7.00	0.59	0.00	0.00
7.25	0.62	0.00	0.00
7.50	0.66	0.00	0.00
7.75	0.70	0.00	0.01
8.00	0.74	0.01	0.01
8.25	0.79	0.01	0.02
8.50	0.83	0.02	0.02
8.75	0.89	0.03	0.03
9.00	0.95	0.04	0.04
9.25	1.01	0.05	0.05
9.50	1.08	0.07	0.06
9.75	1.15	0.09	0.07
10.00	1.23	0.11	0.08
10.25	1.31	0.14	0.10
10.50	1.41	0.17	0.12
10.75	1.51	0.21	0.14
11.00	1.63	0.26	0.17
11.25	1.76	0.33	0.21
11.50	1.94	0.41	0.30
11.75	2.31	0.62	0.59
12.00	3.25	1.25	**1.52**
12.25	4.19	1.96	**2.90**
12.50	4.56	2.26	1.42
12.75	4.74	2.41	0.63
13.00	4.87	2.52	0.45
13.25	4.99	2.61	0.36
13.50	5.09	2.70	0.33
13.75	5.19	2.78	0.30
14.00	5.27	2.85	0.27
14.25	5.35	2.92	0.25
14.50	5.42	2.98	0.23
14.75	5.49	3.04	0.22
15.00	5.55	3.09	0.20
15.25	5.61	3.14	0.19
15.50	5.67	3.19	0.17
15.75	5.71	3.23	0.16
16.00	5.76	3.27	0.15
16.25	5.80	3.31	0.13
16.50	5.84	3.34	0.13
16.75	5.88	3.37	0.12
17.00	5.91	3.40	0.11
17.25	5.94	3.43	0.11
17.50	5.98	3.46	0.10
17.75	6.00	3.48	0.09
18.00	6.03	3.51	0.09
18.25	6.06	3.53	0.08
18.50	6.08	3.55	0.08
18.75	6.11	3.57	0.08
19.00	6.13	3.59	0.08
19.25	6.15	3.61	0.08
19.50	6.18	3.63	0.07
19.75	6.20	3.65	0.07
20.00	**6.22**	**3.67**	0.07

Summary for Reach DP1: Design Point 1

Inflow Area = 0.907 ac, 9.62% Impervious, Inflow Depth > 3.66" for 25 Year, 24 Hour Storm event
Inflow = 3.31 cfs @ 12.18 hrs, Volume= 0.277 af
Outflow = 3.31 cfs @ 12.18 hrs, Volume= 0.277 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.01		0.01
8.00	0.01		0.01
8.25	0.02		0.02
8.50	0.02		0.02
8.75	0.03		0.03
9.00	0.04		0.04
9.25	0.05		0.05
9.50	0.06		0.06
9.75	0.07		0.07
10.00	0.08		0.08
10.25	0.10		0.10
10.50	0.12		0.12
10.75	0.14		0.14
11.00	0.17		0.17
11.25	0.21		0.21
11.50	0.30		0.30
11.75	0.59		0.59
12.00	**1.52**		**1.52**
12.25	**2.90**		**2.90**
12.50	1.42		1.42
12.75	0.63		0.63
13.00	0.45		0.45
13.25	0.36		0.36
13.50	0.33		0.33
13.75	0.30		0.30
14.00	0.27		0.27
14.25	0.25		0.25
14.50	0.23		0.23
14.75	0.22		0.22
15.00	0.20		0.20
15.25	0.19		0.19
15.50	0.17		0.17
15.75	0.16		0.16
16.00	0.15		0.15
16.25	0.13		0.13
16.50	0.13		0.13
16.75	0.12		0.12
17.00	0.11		0.11
17.25	0.11		0.11
17.50	0.10		0.10
17.75	0.09		0.09
18.00	0.09		0.09
18.25	0.08		0.08
18.50	0.08		0.08
18.75	0.08		0.08
19.00	0.08		0.08
19.25	0.08		0.08
19.50	0.07		0.07
19.75	0.07		0.07
20.00	0.07		0.07

Summary for Subcatchment Pre 1: Pre 1

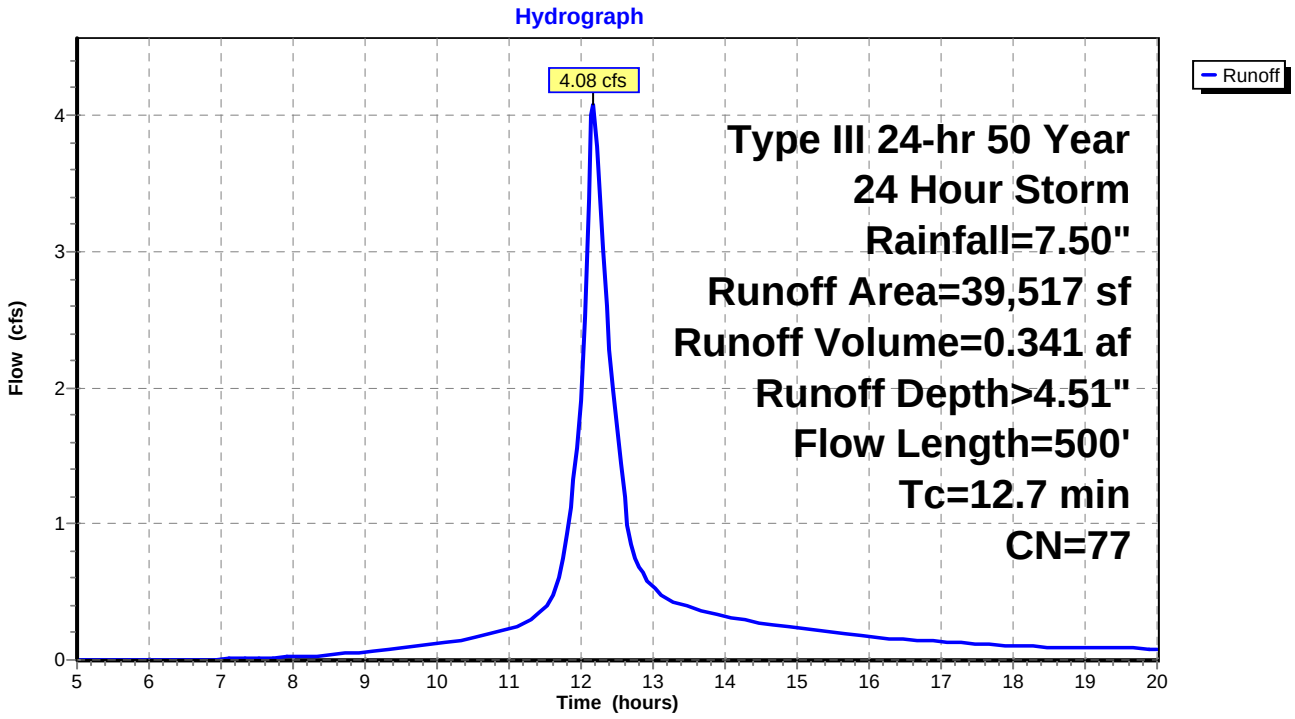
Runoff = 4.08 cfs @ 12.17 hrs, Volume= 0.341 af, Depth> 4.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
3,802	98	Paved parking, HSG C
24,338	73	Woods, Fair, HSG C
11,377	79	50-75% Grass cover, Fair, HSG C
39,517	77	Weighted Average
35,715		90.38% Pervious Area
3,802		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	150	0.0460	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.4	350	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.7	500	Total			

Subcatchment Pre 1: Pre 1



Hydrograph for Subcatchment Pre 1: Pre 1

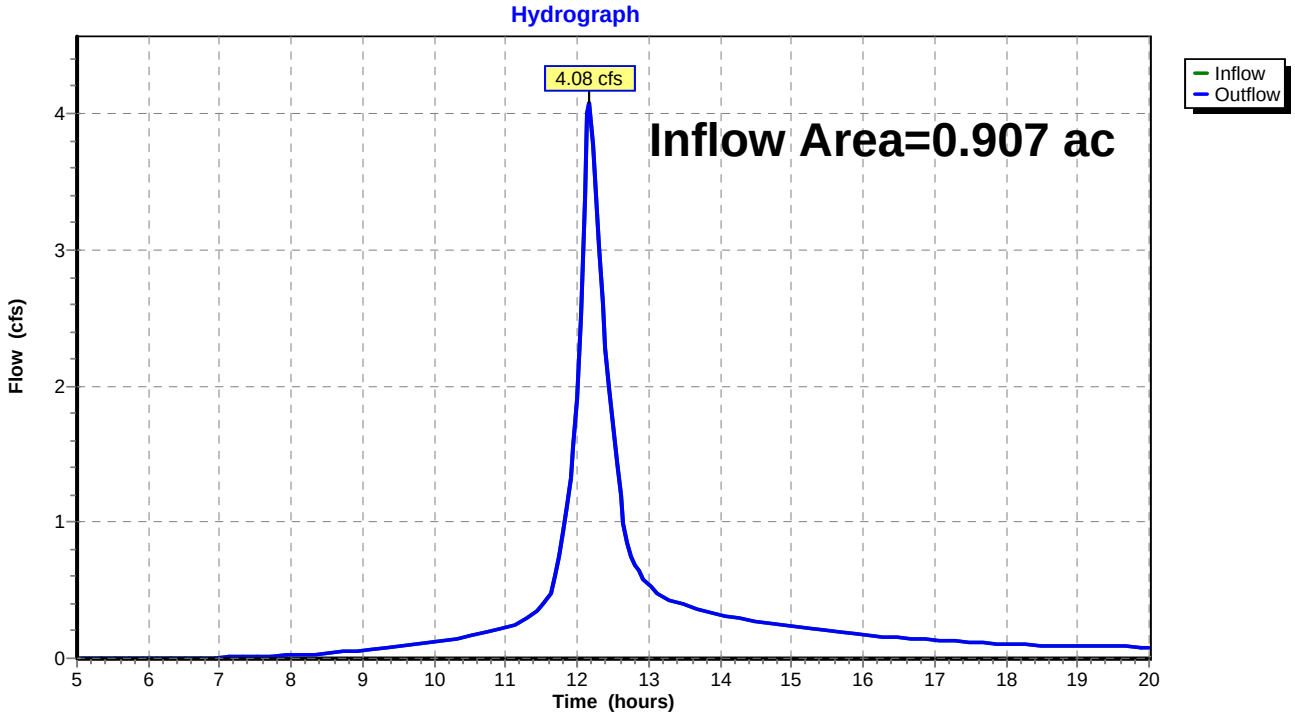
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.43	0.00	0.00
5.25	0.45	0.00	0.00
5.50	0.48	0.00	0.00
5.75	0.51	0.00	0.00
6.00	0.54	0.00	0.00
6.25	0.57	0.00	0.00
6.50	0.60	0.00	0.00
6.75	0.64	0.00	0.00
7.00	0.68	0.00	0.00
7.25	0.72	0.00	0.01
7.50	0.76	0.01	0.01
7.75	0.81	0.01	0.02
8.00	0.86	0.02	0.02
8.25	0.91	0.03	0.03
8.50	0.96	0.04	0.04
8.75	1.03	0.05	0.05
9.00	1.09	0.07	0.06
9.25	1.17	0.09	0.07
9.50	1.24	0.12	0.08
9.75	1.33	0.14	0.10
10.00	1.42	0.18	0.12
10.25	1.52	0.22	0.14
10.50	1.62	0.26	0.16
10.75	1.74	0.32	0.19
11.00	1.88	0.38	0.23
11.25	2.03	0.47	0.28
11.50	2.24	0.58	0.38
11.75	2.66	0.85	0.75
12.00	3.75	1.62	**1.90**
12.25	4.84	2.49	**3.54**
12.50	5.26	2.85	1.71
12.75	5.47	3.02	0.75
13.00	5.62	3.15	0.54
13.25	5.76	3.27	0.43
13.50	5.88	3.37	0.39
13.75	5.99	3.47	0.36
14.00	6.08	3.55	0.32
14.25	6.17	3.63	0.29
14.50	6.26	3.70	0.27
14.75	6.33	3.77	0.26
15.00	6.41	3.84	0.24
15.25	6.47	3.90	0.22
15.50	6.54	3.95	0.21
15.75	6.59	4.00	0.19
16.00	6.64	4.05	0.17
16.25	6.69	4.09	0.16
16.50	6.74	4.13	0.15
16.75	6.78	4.17	0.14
17.00	6.82	4.21	0.13
17.25	6.86	4.24	0.13
17.50	6.90	4.27	0.12
17.75	6.93	4.30	0.11
18.00	6.96	4.33	0.10
18.25	6.99	4.36	0.10
18.50	7.02	4.38	0.10
18.75	7.05	4.41	0.09
19.00	7.07	4.43	0.09
19.25	7.10	4.46	0.09
19.50	7.13	4.48	0.09
19.75	7.15	4.50	0.08
20.00	**7.18**	**4.53**	0.08

Summary for Reach DP1: Design Point 1

Inflow Area = 0.907 ac, 9.62% Impervious, Inflow Depth > 4.51" for 50 Year, 24 Hour Storm event
Inflow = 4.08 cfs @ 12.17 hrs, Volume= 0.341 af
Outflow = 4.08 cfs @ 12.17 hrs, Volume= 0.341 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.01		0.01
7.50	0.01		0.01
7.75	0.02		0.02
8.00	0.02		0.02
8.25	0.03		0.03
8.50	0.04		0.04
8.75	0.05		0.05
9.00	0.06		0.06
9.25	0.07		0.07
9.50	0.08		0.08
9.75	0.10		0.10
10.00	0.12		0.12
10.25	0.14		0.14
10.50	0.16		0.16
10.75	0.19		0.19
11.00	0.23		0.23
11.25	0.28		0.28
11.50	0.38		0.38
11.75	0.75		0.75
12.00	**1.90**		**1.90**
12.25	**3.54**		**3.54**
12.50	1.71		1.71
12.75	0.75		0.75
13.00	0.54		0.54
13.25	0.43		0.43
13.50	0.39		0.39
13.75	0.36		0.36
14.00	0.32		0.32
14.25	0.29		0.29
14.50	0.27		0.27
14.75	0.26		0.26
15.00	0.24		0.24
15.25	0.22		0.22
15.50	0.21		0.21
15.75	0.19		0.19
16.00	0.17		0.17
16.25	0.16		0.16
16.50	0.15		0.15
16.75	0.14		0.14
17.00	0.13		0.13
17.25	0.13		0.13
17.50	0.12		0.12
17.75	0.11		0.11
18.00	0.10		0.10
18.25	0.10		0.10
18.50	0.10		0.10
18.75	0.09		0.09
19.00	0.09		0.09
19.25	0.09		0.09
19.50	0.09		0.09
19.75	0.08		0.08
20.00	0.08		0.08

Summary for Subcatchment Pre 1: Pre 1

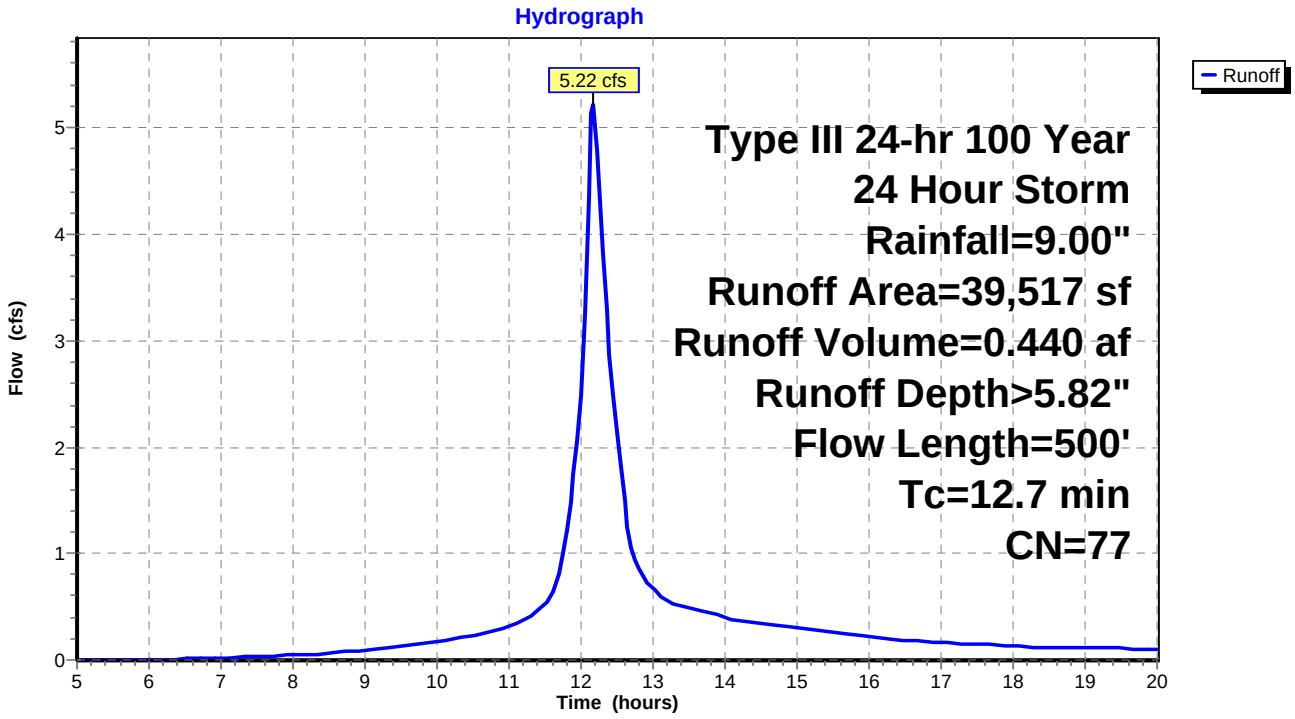
Runoff = 5.22 cfs @ 12.17 hrs, Volume= 0.440 af, Depth> 5.82"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
3,802	98	Paved parking, HSG C
24,338	73	Woods, Fair, HSG C
11,377	79	50-75% Grass cover, Fair, HSG C
39,517	77	Weighted Average
35,715		90.38% Pervious Area
3,802		9.62% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.3	150	0.0460	0.27		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.4	350	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
12.7	500	Total			

Subcatchment Pre 1: Pre 1



Hydrograph for Subcatchment Pre 1: Pre 1

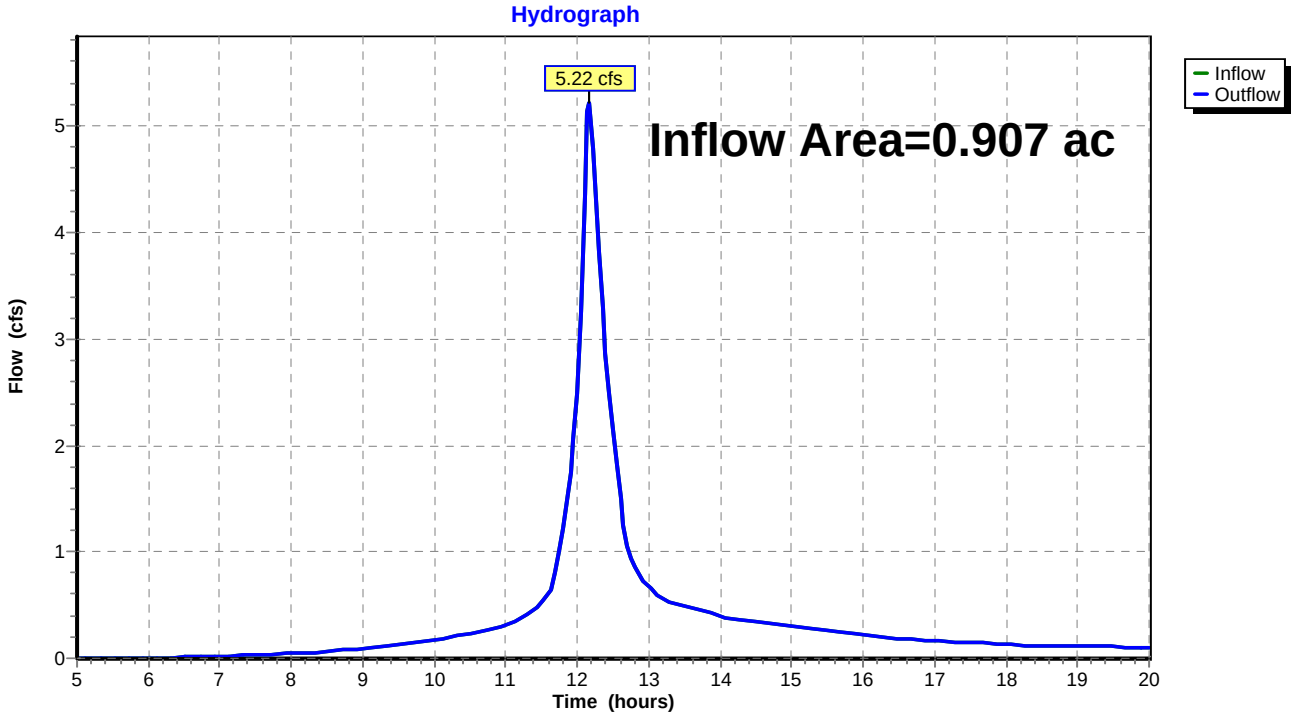
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.51	0.00	0.00
5.25	0.54	0.00	0.00
5.50	0.58	0.00	0.00
5.75	0.61	0.00	0.00
6.00	0.65	0.00	0.00
6.25	0.69	0.00	0.01
6.50	0.73	0.01	0.01
6.75	0.77	0.01	0.01
7.00	0.81	0.01	0.02
7.25	0.86	0.02	0.02
7.50	0.91	0.03	0.03
7.75	0.97	0.04	0.04
8.00	1.03	0.05	0.04
8.25	1.09	0.07	0.05
8.50	1.16	0.09	0.07
8.75	1.23	0.11	0.08
9.00	1.31	0.14	0.09
9.25	1.40	0.17	0.11
9.50	1.49	0.21	0.13
9.75	1.59	0.25	0.15
10.00	1.70	0.30	0.17
10.25	1.82	0.35	0.20
10.50	1.95	0.42	0.23
10.75	2.09	0.50	0.27
11.00	2.25	0.59	0.32
11.25	2.44	0.70	0.39
11.50	2.68	0.86	0.52
11.75	3.20	1.21	1.00
12.00	4.50	2.21	**2.48**
12.25	5.80	3.31	**4.50**
12.50	6.32	3.76	2.14
12.75	6.56	3.97	0.94
13.00	6.75	4.14	0.67
13.25	6.91	4.28	0.54
13.50	7.05	4.41	0.49
13.75	7.18	4.53	0.44
14.00	7.30	4.64	0.40
14.25	7.41	4.73	0.36
14.50	7.51	4.82	0.34
14.75	7.60	4.91	0.32
15.00	7.69	4.99	0.30
15.25	7.77	5.06	0.28
15.50	7.84	5.13	0.26
15.75	7.91	5.19	0.23
16.00	7.97	5.25	0.21
16.25	8.03	5.30	0.20
16.50	8.09	5.35	0.19
16.75	8.14	5.40	0.18
17.00	8.19	5.44	0.17
17.25	8.23	5.49	0.16
17.50	8.27	5.53	0.15
17.75	8.31	5.56	0.14
18.00	8.35	5.60	0.13
18.25	8.39	5.63	0.12
18.50	8.42	5.66	0.12
18.75	8.46	5.69	0.12
19.00	8.49	5.72	0.11
19.25	8.52	5.75	0.11
19.50	8.55	5.78	0.11
19.75	8.58	5.81	0.10
20.00	**8.61**	**5.84**	0.10

Summary for Reach DP1: Design Point 1

Inflow Area = 0.907 ac, 9.62% Impervious, Inflow Depth > 5.82" for 100 Year, 24 Hour Storm event
Inflow = 5.22 cfs @ 12.17 hrs, Volume= 0.440 af
Outflow = 5.22 cfs @ 12.17 hrs, Volume= 0.440 af, Atten= 0%, Lag= 0.0 min

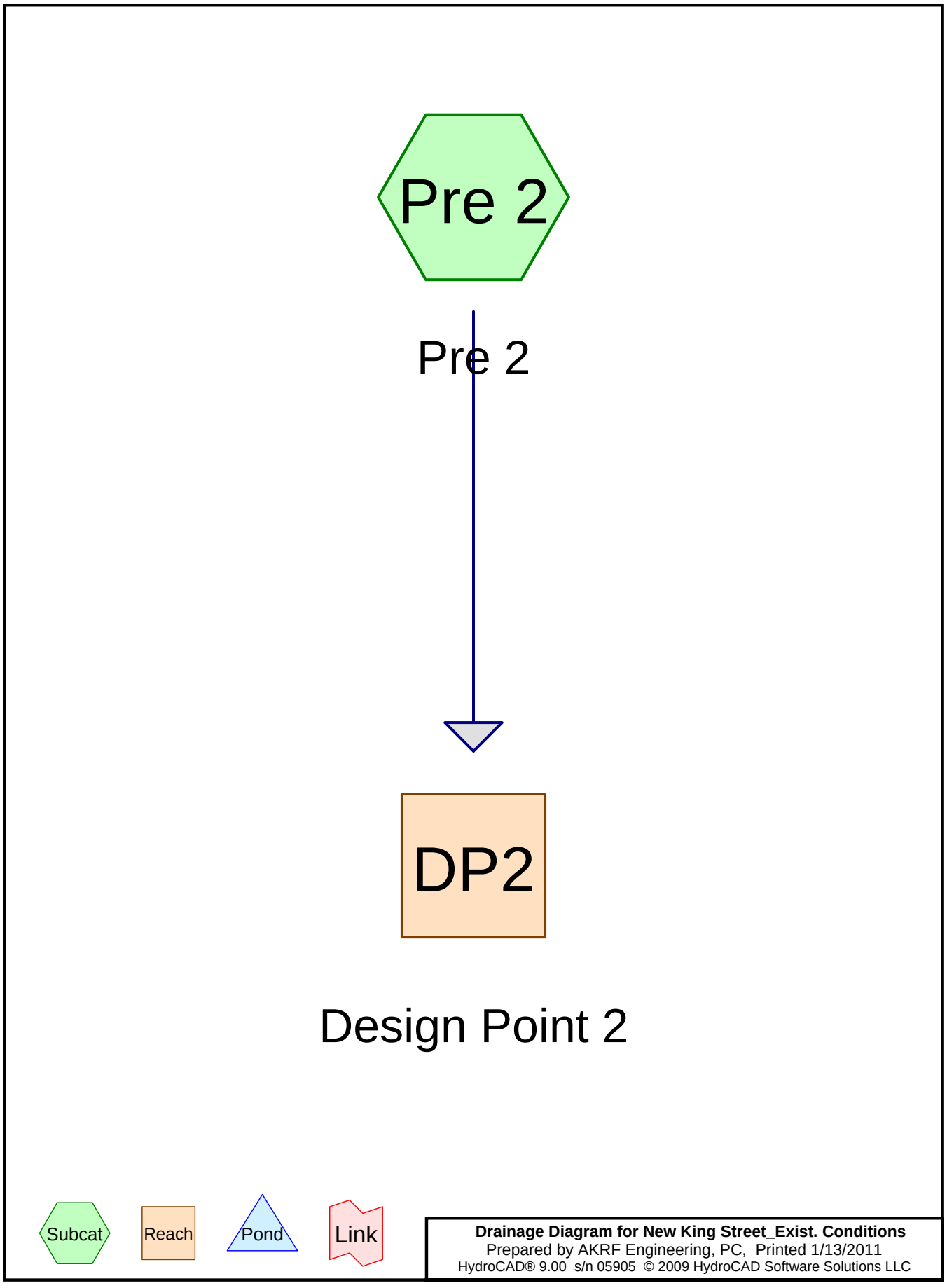
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.01		0.01
6.50	0.01		0.01
6.75	0.01		0.01
7.00	0.02		0.02
7.25	0.02		0.02
7.50	0.03		0.03
7.75	0.04		0.04
8.00	0.04		0.04
8.25	0.05		0.05
8.50	0.07		0.07
8.75	0.08		0.08
9.00	0.09		0.09
9.25	0.11		0.11
9.50	0.13		0.13
9.75	0.15		0.15
10.00	0.17		0.17
10.25	0.20		0.20
10.50	0.23		0.23
10.75	0.27		0.27
11.00	0.32		0.32
11.25	0.39		0.39
11.50	0.52		0.52
11.75	1.00		1.00
12.00	**2.48**		**2.48**
12.25	**4.50**		**4.50**
12.50	2.14		2.14
12.75	0.94		0.94
13.00	0.67		0.67
13.25	0.54		0.54
13.50	0.49		0.49
13.75	0.44		0.44
14.00	0.40		0.40
14.25	0.36		0.36
14.50	0.34		0.34
14.75	0.32		0.32
15.00	0.30		0.30
15.25	0.28		0.28
15.50	0.26		0.26
15.75	0.23		0.23
16.00	0.21		0.21
16.25	0.20		0.20
16.50	0.19		0.19
16.75	0.18		0.18
17.00	0.17		0.17
17.25	0.16		0.16
17.50	0.15		0.15
17.75	0.14		0.14
18.00	0.13		0.13
18.25	0.12		0.12
18.50	0.12		0.12
18.75	0.12		0.12
19.00	0.11		0.11
19.25	0.11		0.11
19.50	0.11		0.11
19.75	0.10		0.10
20.00	0.10		0.10



Drainage Diagram for New King Street_Exist. Conditions
Prepared by AKRF Engineering, PC, Printed 1/13/2011
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Summary for Subcatchment Pre 2: Pre 2

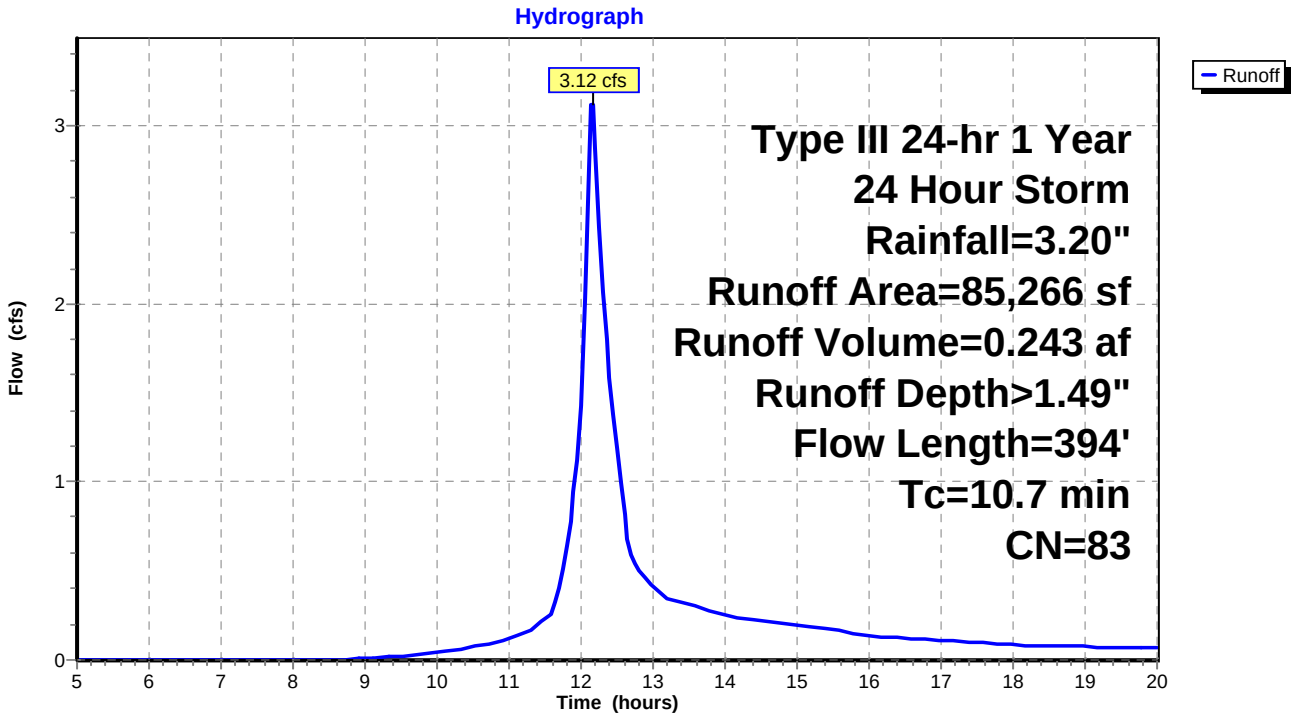
Runoff = 3.12 cfs @ 12.15 hrs, Volume= 0.243 af, Depth> 1.49"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
30,862	98	Paved parking, HSG C
34,072	73	Woods, Fair, HSG C
20,332	79	50-75% Grass cover, Fair, HSG C
85,266	83	Weighted Average
54,404		63.81% Pervious Area
30,862		36.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0500	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
1.7	244	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.7	394	Total			

Subcatchment Pre 2: Pre 2



Hydrograph for Subcatchment Pre 2: Pre 2

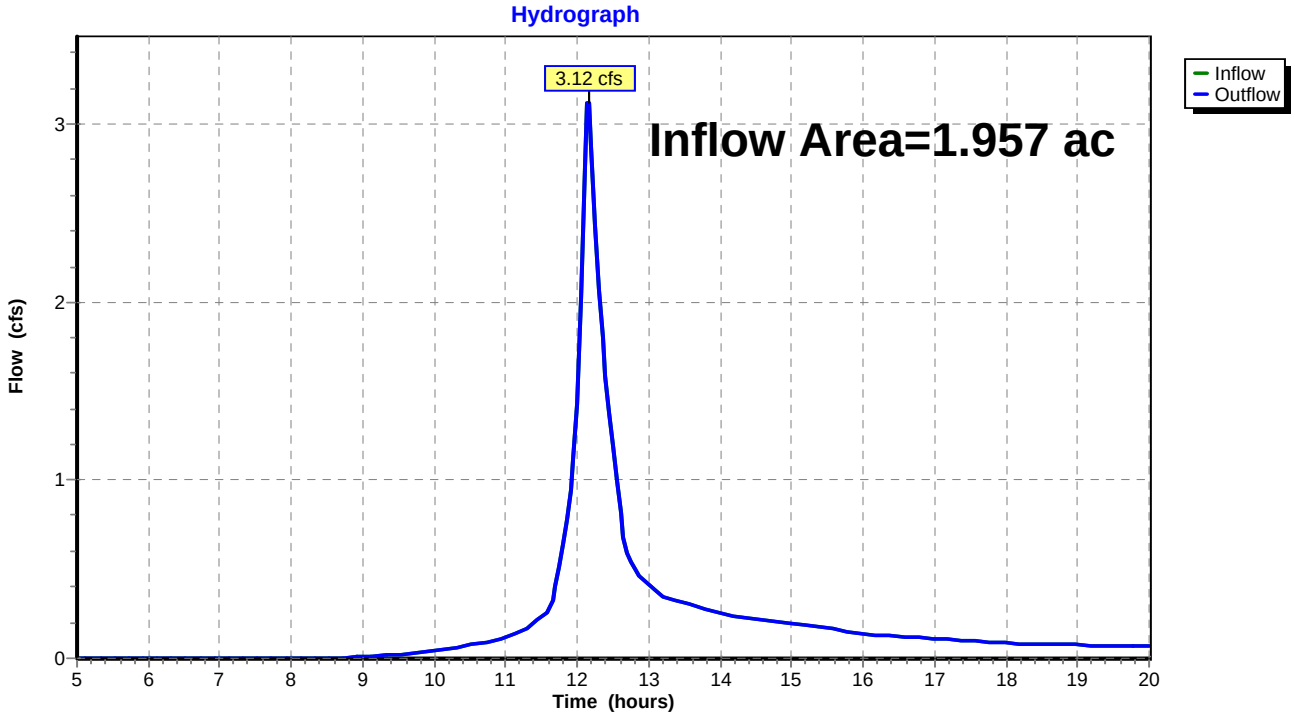
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.01
9.25	0.50	0.00	0.02
9.50	0.53	0.01	0.02
9.75	0.57	0.01	0.03
10.00	0.60	0.02	0.04
10.25	0.65	0.02	0.06
10.50	0.69	0.03	0.07
10.75	0.74	0.05	0.10
11.00	0.80	0.06	0.12
11.25	0.87	0.08	0.16
11.50	0.95	0.11	0.23
11.75	1.14	0.19	0.51
12.00	1.60	0.44	**1.43**
12.25	2.06	0.74	**2.43**
12.50	2.25	0.87	1.19
12.75	2.33	0.93	0.54
13.00	2.40	0.98	0.41
13.25	2.46	1.02	0.34
13.50	2.51	1.06	0.31
13.75	2.55	1.10	0.28
14.00	2.60	1.13	0.26
14.25	2.63	1.16	0.23
14.50	2.67	1.19	0.22
14.75	2.70	1.21	0.21
15.00	2.73	1.24	0.19
15.25	2.76	1.26	0.18
15.50	2.79	1.28	0.17
15.75	2.81	1.30	0.15
16.00	2.84	1.32	0.14
16.25	2.86	1.33	0.13
16.50	2.87	1.35	0.12
16.75	2.89	1.36	0.12
17.00	2.91	1.37	0.11
17.25	2.93	1.39	0.10
17.50	2.94	1.40	0.10
17.75	2.96	1.41	0.09
18.00	2.97	1.42	0.09
18.25	2.98	1.43	0.08
18.50	2.99	1.44	0.08
18.75	3.01	1.45	0.08
19.00	3.02	1.46	0.08
19.25	3.03	1.47	0.07
19.50	3.04	1.48	0.07
19.75	3.05	1.49	0.07
20.00	**3.06**	**1.50**	0.07

Summary for Reach DP2: Design Point 2

Inflow Area = 1.957 ac, 36.19% Impervious, Inflow Depth > 1.49" for 1 Year, 24 Hour Storm event
Inflow = 3.12 cfs @ 12.15 hrs, Volume= 0.243 af
Outflow = 3.12 cfs @ 12.15 hrs, Volume= 0.243 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.01		0.01
9.25	0.02		0.02
9.50	0.02		0.02
9.75	0.03		0.03
10.00	0.04		0.04
10.25	0.06		0.06
10.50	0.07		0.07
10.75	0.10		0.10
11.00	0.12		0.12
11.25	0.16		0.16
11.50	0.23		0.23
11.75	0.51		0.51
12.00	**1.43**		**1.43**
12.25	**2.43**		**2.43**
12.50	1.19		1.19
12.75	0.54		0.54
13.00	0.41		0.41
13.25	0.34		0.34
13.50	0.31		0.31
13.75	0.28		0.28
14.00	0.26		0.26
14.25	0.23		0.23
14.50	0.22		0.22
14.75	0.21		0.21
15.00	0.19		0.19
15.25	0.18		0.18
15.50	0.17		0.17
15.75	0.15		0.15
16.00	0.14		0.14
16.25	0.13		0.13
16.50	0.12		0.12
16.75	0.12		0.12
17.00	0.11		0.11
17.25	0.10		0.10
17.50	0.10		0.10
17.75	0.09		0.09
18.00	0.09		0.09
18.25	0.08		0.08
18.50	0.08		0.08
18.75	0.08		0.08
19.00	0.08		0.08
19.25	0.07		0.07
19.50	0.07		0.07
19.75	0.07		0.07
20.00	0.07		0.07

Summary for Subcatchment Pre 2: Pre 2

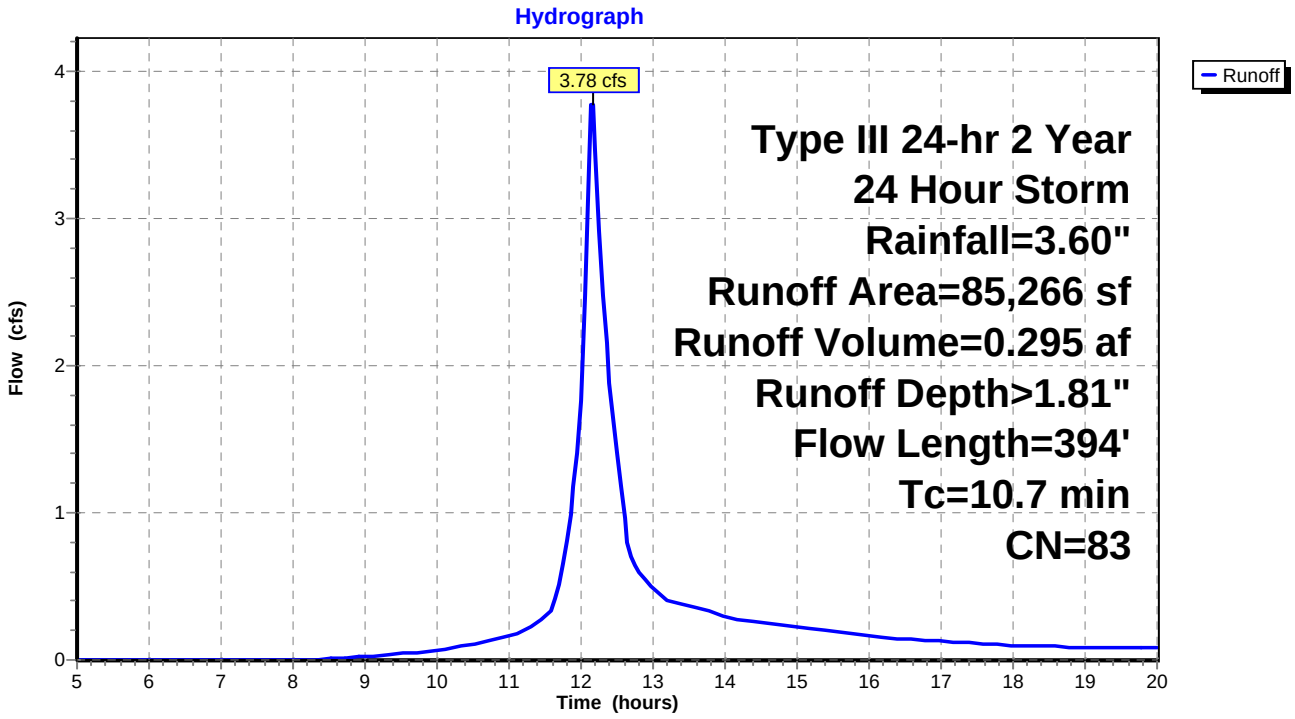
Runoff = 3.78 cfs @ 12.15 hrs, Volume= 0.295 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
30,862	98	Paved parking, HSG C
34,072	73	Woods, Fair, HSG C
20,332	79	50-75% Grass cover, Fair, HSG C
85,266	83	Weighted Average
54,404		63.81% Pervious Area
30,862		36.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0500	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
1.7	244	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.7	394	Total			

Subcatchment Pre 2: Pre 2



Hydrograph for Subcatchment Pre 2: Pre 2

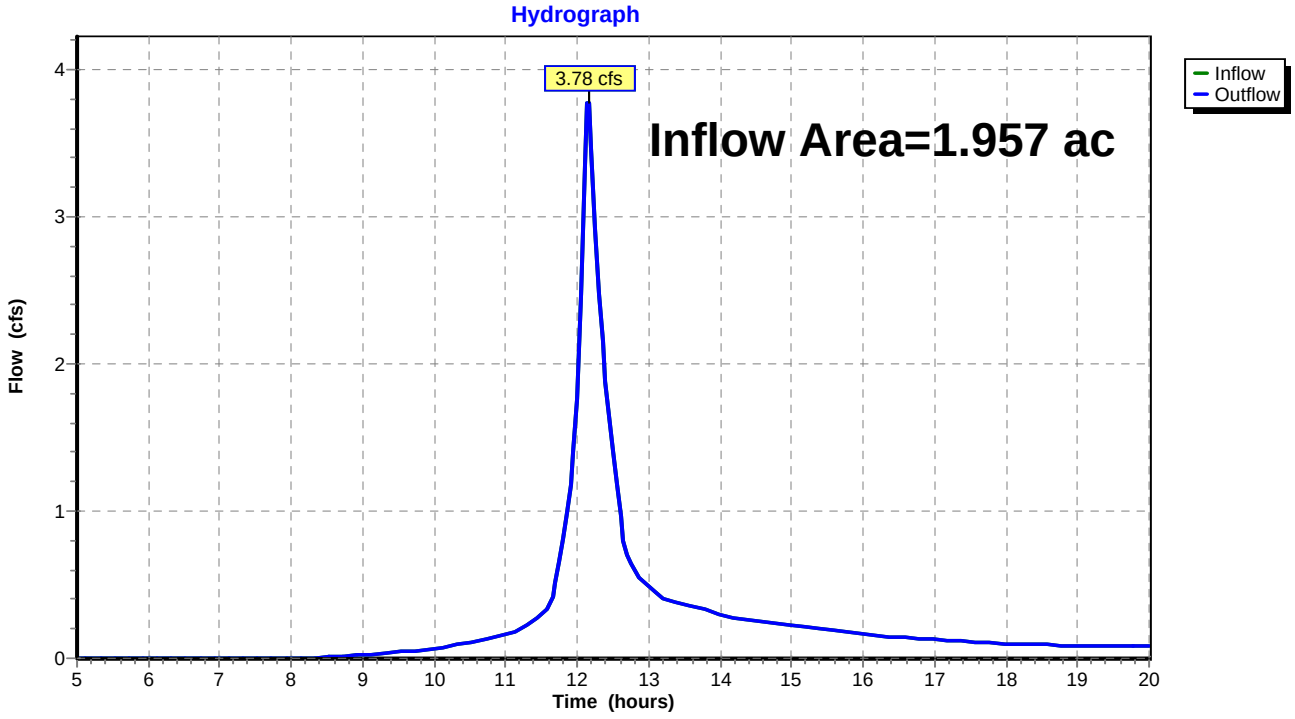
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.31	0.00	0.00
7.00	0.33	0.00	0.00
7.25	0.35	0.00	0.00
7.50	0.37	0.00	0.00
7.75	0.39	0.00	0.00
8.00	0.41	0.00	0.00
8.25	0.44	0.00	0.00
8.50	0.46	0.00	0.01
8.75	0.49	0.00	0.01
9.00	0.52	0.01	0.02
9.25	0.56	0.01	0.03
9.50	0.60	0.02	0.04
9.75	0.64	0.02	0.05
10.00	0.68	0.03	0.07
10.25	0.73	0.04	0.08
10.50	0.78	0.06	0.11
10.75	0.84	0.07	0.13
11.00	0.90	0.09	0.16
11.25	0.98	0.12	0.21
11.50	1.07	0.16	0.30
11.75	1.28	0.26	0.65
12.00	1.80	0.56	**1.76**
12.25	2.32	0.92	**2.92**
12.50	2.53	1.08	1.41
12.75	2.62	1.15	0.64
13.00	2.70	1.21	0.48
13.25	2.76	1.26	0.40
13.50	2.82	1.30	0.36
13.75	2.87	1.34	0.33
14.00	2.92	1.38	0.30
14.25	2.96	1.42	0.27
14.50	3.00	1.45	0.26
14.75	3.04	1.48	0.24
15.00	3.08	1.51	0.23
15.25	3.11	1.53	0.21
15.50	3.14	1.56	0.19
15.75	3.16	1.58	0.18
16.00	3.19	1.60	0.16
16.25	3.21	1.62	0.15
16.50	3.23	1.64	0.14
16.75	3.25	1.65	0.14
17.00	3.27	1.67	0.13
17.25	3.29	1.69	0.12
17.50	3.31	1.70	0.11
17.75	3.33	1.71	0.11
18.00	3.34	1.73	0.10
18.25	3.36	1.74	0.09
18.50	3.37	1.75	0.09
18.75	3.38	1.76	0.09
19.00	3.40	1.77	0.09
19.25	3.41	1.78	0.09
19.50	3.42	1.79	0.08
19.75	3.43	1.80	0.08
20.00	**3.45**	**1.81**	0.08

Summary for Reach DP2: Design Point 2

Inflow Area = 1.957 ac, 36.19% Impervious, Inflow Depth > 1.81" for 2 Year, 24 Hour Storm event
Inflow = 3.78 cfs @ 12.15 hrs, Volume= 0.295 af
Outflow = 3.78 cfs @ 12.15 hrs, Volume= 0.295 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.01		0.01
8.75	0.01		0.01
9.00	0.02		0.02
9.25	0.03		0.03
9.50	0.04		0.04
9.75	0.05		0.05
10.00	0.07		0.07
10.25	0.08		0.08
10.50	0.11		0.11
10.75	0.13		0.13
11.00	0.16		0.16
11.25	0.21		0.21
11.50	0.30		0.30
11.75	0.65		0.65
12.00	**1.76**		**1.76**
12.25	**2.92**		**2.92**
12.50	1.41		1.41
12.75	0.64		0.64
13.00	0.48		0.48
13.25	0.40		0.40
13.50	0.36		0.36
13.75	0.33		0.33
14.00	0.30		0.30
14.25	0.27		0.27
14.50	0.26		0.26
14.75	0.24		0.24
15.00	0.23		0.23
15.25	0.21		0.21
15.50	0.19		0.19
15.75	0.18		0.18
16.00	0.16		0.16
16.25	0.15		0.15
16.50	0.14		0.14
16.75	0.14		0.14
17.00	0.13		0.13
17.25	0.12		0.12
17.50	0.11		0.11
17.75	0.11		0.11
18.00	0.10		0.10
18.25	0.09		0.09
18.50	0.09		0.09
18.75	0.09		0.09
19.00	0.09		0.09
19.25	0.09		0.09
19.50	0.08		0.08
19.75	0.08		0.08
20.00	0.08		0.08

Summary for Subcatchment Pre 2: Pre 2

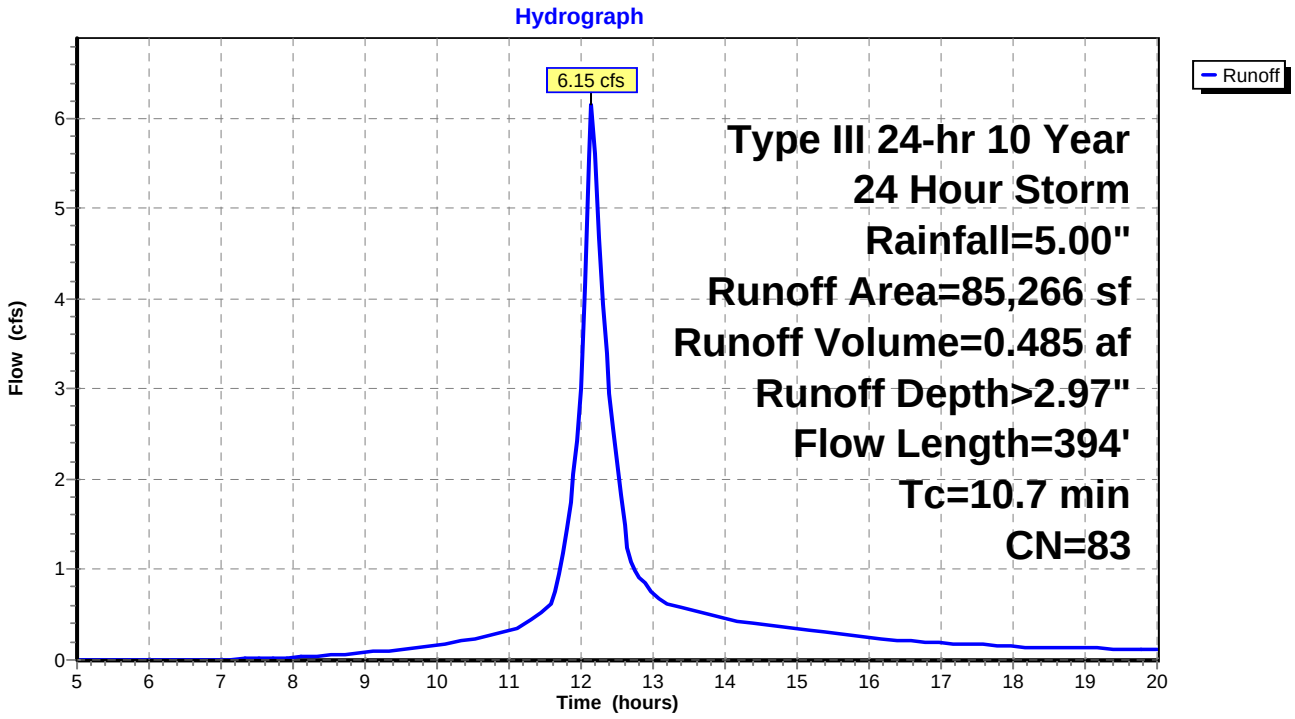
Runoff = 6.15 cfs @ 12.15 hrs, Volume= 0.485 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
30,862	98	Paved parking, HSG C
34,072	73	Woods, Fair, HSG C
20,332	79	50-75% Grass cover, Fair, HSG C
85,266	83	Weighted Average
54,404		63.81% Pervious Area
30,862		36.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0500	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
1.7	244	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.7	394	Total			

Subcatchment Pre 2: Pre 2



Hydrograph for Subcatchment Pre 2: Pre 2

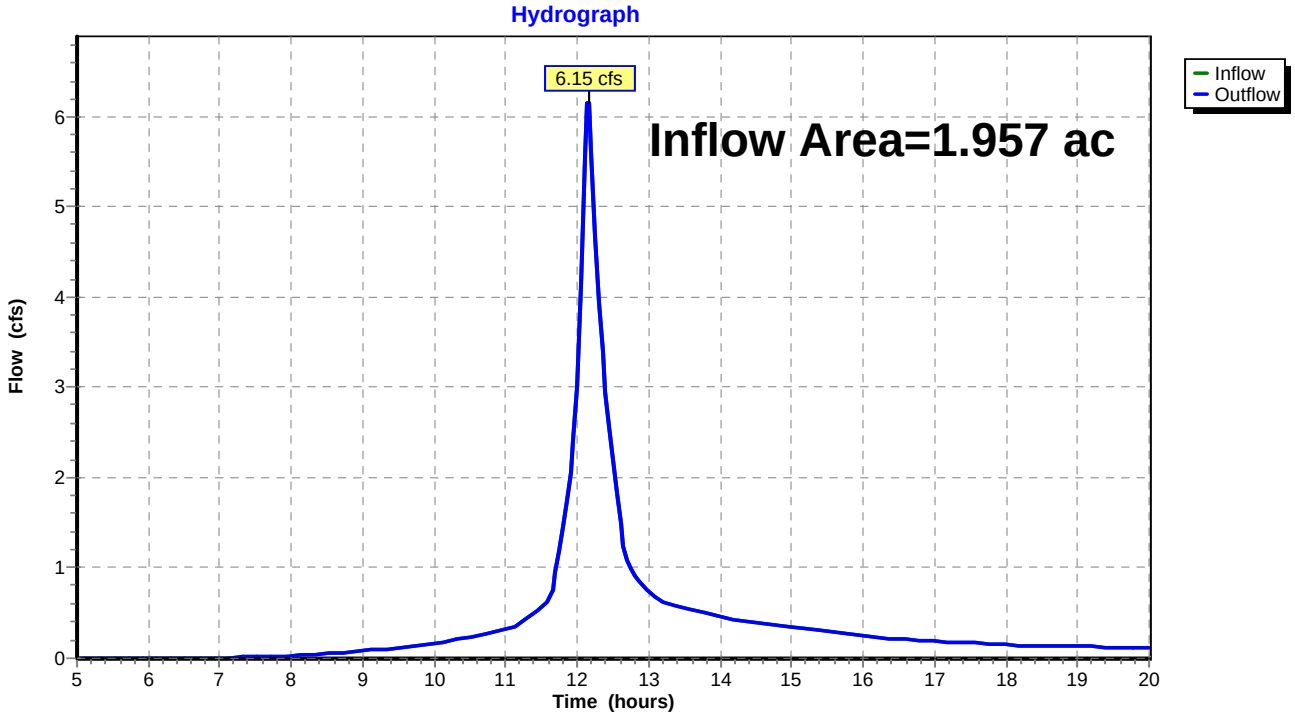
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.43	0.00	0.00
7.00	0.45	0.00	0.00
7.25	0.48	0.00	0.01
7.50	0.51	0.00	0.02
7.75	0.54	0.01	0.02
8.00	0.57	0.01	0.03
8.25	0.60	0.02	0.04
8.50	0.64	0.02	0.05
8.75	0.68	0.03	0.07
9.00	0.73	0.04	0.08
9.25	0.78	0.06	0.10
9.50	0.83	0.07	0.12
9.75	0.89	0.09	0.14
10.00	0.95	0.11	0.16
10.25	1.01	0.14	0.19
10.50	1.08	0.17	0.23
10.75	1.16	0.20	0.28
11.00	1.25	0.24	0.32
11.25	1.36	0.30	0.41
11.50	1.49	0.37	0.56
11.75	1.78	0.55	1.18
12.00	2.50	1.06	**3.01**
12.25	3.22	1.63	**4.67**
12.50	3.51	1.87	2.19
12.75	3.64	1.98	0.99
13.00	3.75	2.07	0.74
13.25	3.84	2.15	0.61
13.50	3.92	2.21	0.55
13.75	3.99	2.28	0.50
14.00	4.06	2.33	0.45
14.25	4.11	2.39	0.41
14.50	4.17	2.43	0.39
14.75	4.22	2.48	0.37
15.00	4.27	2.52	0.34
15.25	4.32	2.56	0.32
15.50	4.36	2.60	0.29
15.75	4.40	2.63	0.27
16.00	4.43	2.66	0.24
16.25	4.46	2.69	0.22
16.50	4.49	2.72	0.21
16.75	4.52	2.74	0.20
17.00	4.55	2.77	0.19
17.25	4.57	2.79	0.18
17.50	4.60	2.81	0.17
17.75	4.62	2.83	0.16
18.00	4.64	2.85	0.15
18.25	4.66	2.87	0.14
18.50	4.68	2.89	0.14
18.75	4.70	2.90	0.13
19.00	4.72	2.92	0.13
19.25	4.73	2.93	0.13
19.50	4.75	2.95	0.12
19.75	4.77	2.97	0.12
20.00	**4.79**	**2.98**	0.12

Summary for Reach DP2: Design Point 2

Inflow Area = 1.957 ac, 36.19% Impervious, Inflow Depth > 2.97" for 10 Year, 24 Hour Storm event
Inflow = 6.15 cfs @ 12.15 hrs, Volume= 0.485 af
Outflow = 6.15 cfs @ 12.15 hrs, Volume= 0.485 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.01		0.01
7.50	0.02		0.02
7.75	0.02		0.02
8.00	0.03		0.03
8.25	0.04		0.04
8.50	0.05		0.05
8.75	0.07		0.07
9.00	0.08		0.08
9.25	0.10		0.10
9.50	0.12		0.12
9.75	0.14		0.14
10.00	0.16		0.16
10.25	0.19		0.19
10.50	0.23		0.23
10.75	0.28		0.28
11.00	0.32		0.32
11.25	0.41		0.41
11.50	0.56		0.56
11.75	1.18		1.18
12.00	**3.01**		**3.01**
12.25	**4.67**		**4.67**
12.50	2.19		2.19
12.75	0.99		0.99
13.00	0.74		0.74
13.25	0.61		0.61
13.50	0.55		0.55
13.75	0.50		0.50
14.00	0.45		0.45
14.25	0.41		0.41
14.50	0.39		0.39
14.75	0.37		0.37
15.00	0.34		0.34
15.25	0.32		0.32
15.50	0.29		0.29
15.75	0.27		0.27
16.00	0.24		0.24
16.25	0.22		0.22
16.50	0.21		0.21
16.75	0.20		0.20
17.00	0.19		0.19
17.25	0.18		0.18
17.50	0.17		0.17
17.75	0.16		0.16
18.00	0.15		0.15
18.25	0.14		0.14
18.50	0.14		0.14
18.75	0.13		0.13
19.00	0.13		0.13
19.25	0.13		0.13
19.50	0.12		0.12
19.75	0.12		0.12
20.00	0.12		0.12

Summary for Subcatchment Pre 2: Pre 2

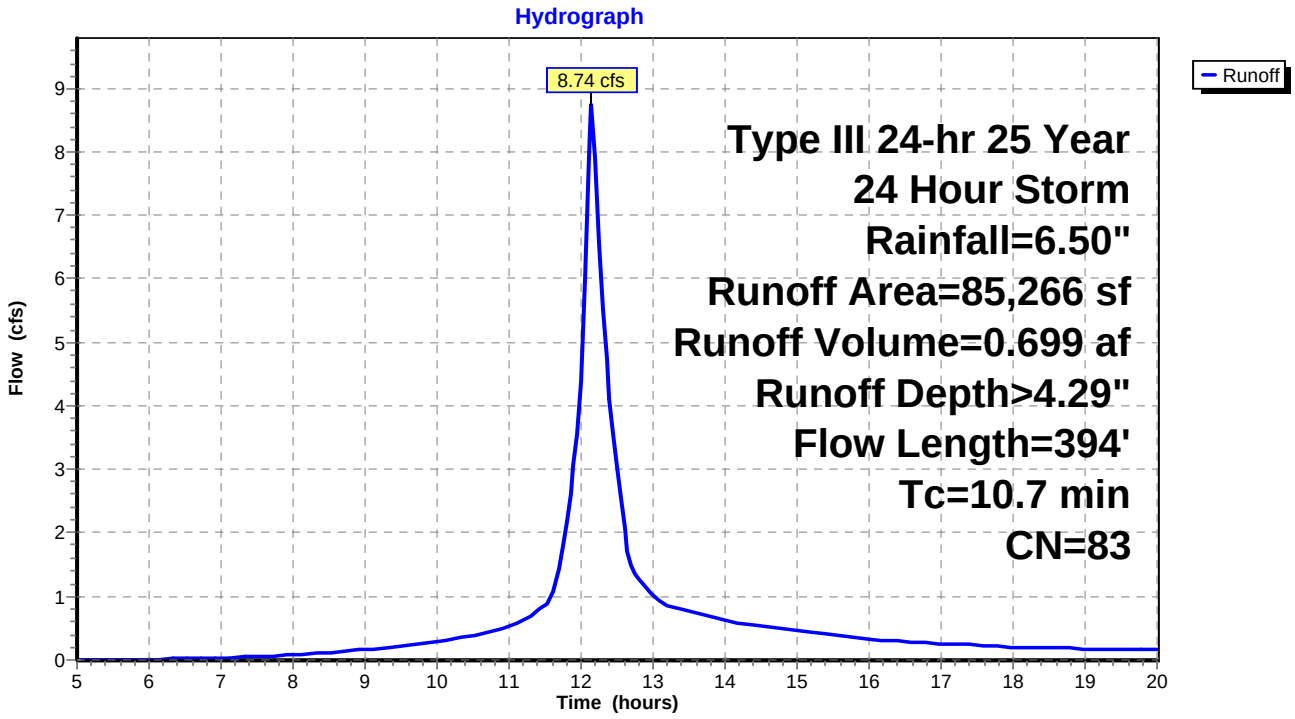
Runoff = 8.74 cfs @ 12.15 hrs, Volume= 0.699 af, Depth> 4.29"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
30,862	98	Paved parking, HSG C
34,072	73	Woods, Fair, HSG C
20,332	79	50-75% Grass cover, Fair, HSG C
85,266	83	Weighted Average
54,404		63.81% Pervious Area
30,862		36.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0500	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
1.7	244	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.7	394	Total			

Subcatchment Pre 2: Pre 2



Hydrograph for Subcatchment Pre 2: Pre 2

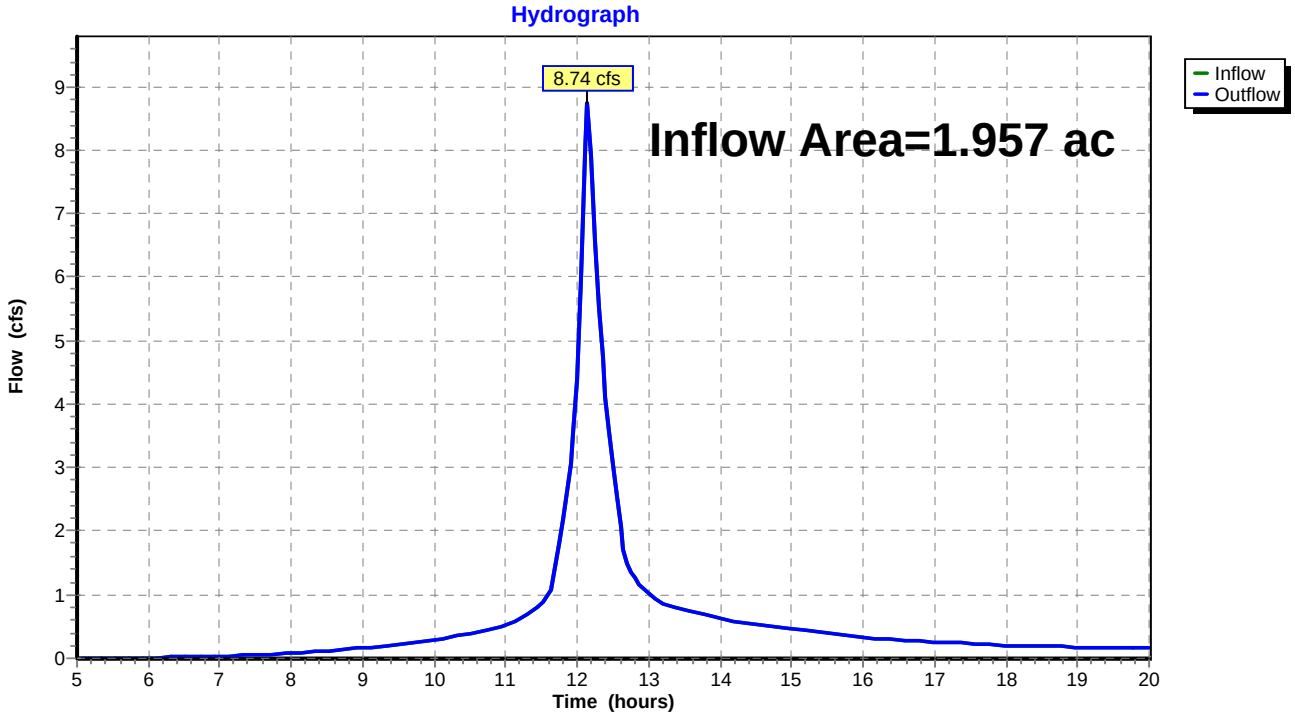
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.37	0.00	0.00
5.25	0.39	0.00	0.00
5.50	0.42	0.00	0.00
5.75	0.44	0.00	0.00
6.00	0.47	0.00	0.01
6.25	0.50	0.00	0.01
6.50	0.52	0.01	0.02
6.75	0.56	0.01	0.03
7.00	0.59	0.01	0.04
7.25	0.62	0.02	0.04
7.50	0.66	0.03	0.06
7.75	0.70	0.04	0.07
8.00	0.74	0.05	0.08
8.25	0.79	0.06	0.09
8.50	0.83	0.07	0.11
8.75	0.89	0.09	0.14
9.00	0.95	0.11	0.16
9.25	1.01	0.14	0.19
9.50	1.08	0.16	0.22
9.75	1.15	0.20	0.25
10.00	1.23	0.23	0.28
10.25	1.31	0.28	0.33
10.50	1.41	0.33	0.39
10.75	1.51	0.39	0.45
11.00	1.63	0.45	0.52
11.25	1.76	0.54	0.64
11.50	1.94	0.65	0.87
11.75	2.31	0.91	1.79
12.00	3.25	1.65	**4.39**
12.25	4.19	2.45	**6.57**
12.50	4.56	2.78	3.03
12.75	4.74	2.94	1.36
13.00	4.87	3.06	1.02
13.25	4.99	3.16	0.83
13.50	5.09	3.26	0.75
13.75	5.19	3.34	0.69
14.00	5.27	3.42	0.62
14.25	5.35	3.49	0.56
14.50	5.42	3.56	0.53
14.75	5.49	3.62	0.50
15.00	5.55	3.68	0.46
15.25	5.61	3.73	0.43
15.50	5.67	3.78	0.40
15.75	5.71	3.83	0.36
16.00	5.76	3.87	0.33
16.25	5.80	3.91	0.30
16.50	5.84	3.94	0.29
16.75	5.88	3.98	0.27
17.00	5.91	4.01	0.26
17.25	5.94	4.04	0.24
17.50	5.98	4.07	0.23
17.75	6.00	4.10	0.22
18.00	6.03	4.12	0.20
18.25	6.06	4.14	0.19
18.50	6.08	4.17	0.18
18.75	6.11	4.19	0.18
19.00	6.13	4.21	0.18
19.25	6.15	4.23	0.17
19.50	6.18	4.26	0.17
19.75	6.20	4.28	0.16
20.00	**6.22**	**4.30**	0.16

Summary for Reach DP2: Design Point 2

Inflow Area = 1.957 ac, 36.19% Impervious, Inflow Depth > 4.29" for 25 Year, 24 Hour Storm event
Inflow = 8.74 cfs @ 12.15 hrs, Volume= 0.699 af
Outflow = 8.74 cfs @ 12.15 hrs, Volume= 0.699 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.01		0.01
6.25	0.01		0.01
6.50	0.02		0.02
6.75	0.03		0.03
7.00	0.04		0.04
7.25	0.04		0.04
7.50	0.06		0.06
7.75	0.07		0.07
8.00	0.08		0.08
8.25	0.09		0.09
8.50	0.11		0.11
8.75	0.14		0.14
9.00	0.16		0.16
9.25	0.19		0.19
9.50	0.22		0.22
9.75	0.25		0.25
10.00	0.28		0.28
10.25	0.33		0.33
10.50	0.39		0.39
10.75	0.45		0.45
11.00	0.52		0.52
11.25	0.64		0.64
11.50	0.87		0.87
11.75	1.79		1.79
12.00	**4.39**		**4.39**
12.25	**6.57**		**6.57**
12.50	3.03		3.03
12.75	1.36		1.36
13.00	1.02		1.02
13.25	0.83		0.83
13.50	0.75		0.75
13.75	0.69		0.69
14.00	0.62		0.62
14.25	0.56		0.56
14.50	0.53		0.53
14.75	0.50		0.50
15.00	0.46		0.46
15.25	0.43		0.43
15.50	0.40		0.40
15.75	0.36		0.36
16.00	0.33		0.33
16.25	0.30		0.30
16.50	0.29		0.29
16.75	0.27		0.27
17.00	0.26		0.26
17.25	0.24		0.24
17.50	0.23		0.23
17.75	0.22		0.22
18.00	0.20		0.20
18.25	0.19		0.19
18.50	0.18		0.18
18.75	0.18		0.18
19.00	0.18		0.18
19.25	0.17		0.17
19.50	0.17		0.17
19.75	0.16		0.16
20.00	0.16		0.16

Summary for Subcatchment Pre 2: Pre 2

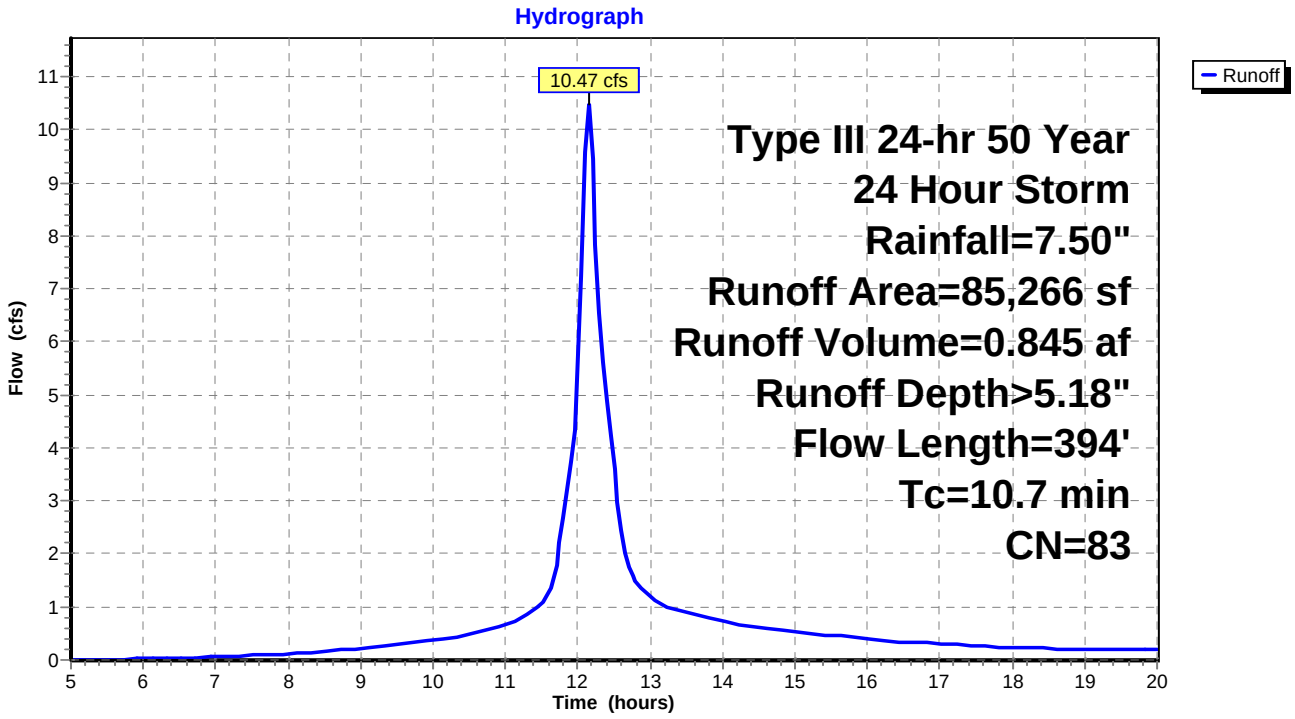
Runoff = 10.47 cfs @ 12.15 hrs, Volume= 0.845 af, Depth> 5.18"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
30,862	98	Paved parking, HSG C
34,072	73	Woods, Fair, HSG C
20,332	79	50-75% Grass cover, Fair, HSG C
85,266	83	Weighted Average
54,404		63.81% Pervious Area
30,862		36.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0500	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
1.7	244	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.7	394	Total			

Subcatchment Pre 2: Pre 2



Hydrograph for Subcatchment Pre 2: Pre 2

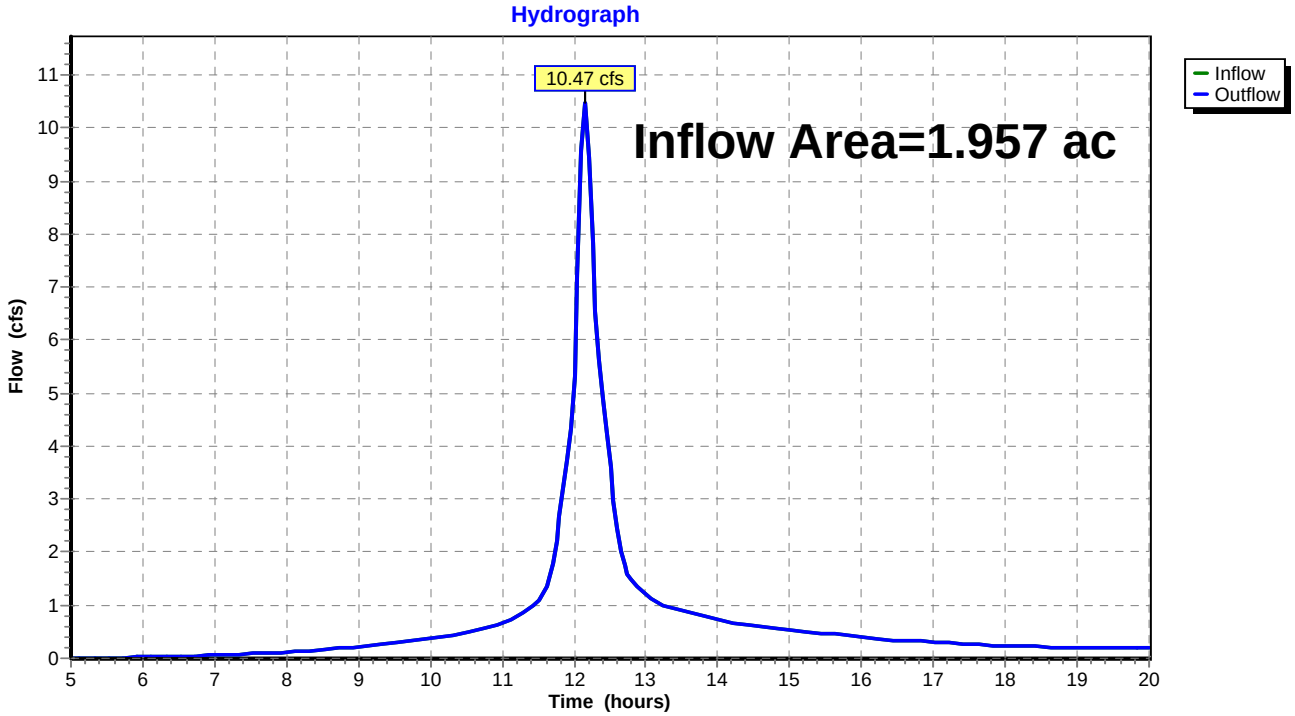
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.43	0.00	0.00
5.25	0.45	0.00	0.01
5.50	0.48	0.00	0.01
5.75	0.51	0.00	0.02
6.00	0.54	0.01	0.02
6.25	0.57	0.01	0.03
6.50	0.60	0.02	0.04
6.75	0.64	0.02	0.05
7.00	0.68	0.03	0.06
7.25	0.72	0.04	0.07
7.50	0.76	0.05	0.09
7.75	0.81	0.06	0.10
8.00	0.86	0.08	0.11
8.25	0.91	0.10	0.13
8.50	0.96	0.12	0.16
8.75	1.03	0.14	0.19
9.00	1.09	0.17	0.22
9.25	1.17	0.20	0.26
9.50	1.24	0.24	0.29
9.75	1.33	0.28	0.33
10.00	1.42	0.33	0.37
10.25	1.52	0.39	0.42
10.50	1.62	0.45	0.50
10.75	1.74	0.53	0.57
11.00	1.88	0.61	0.66
11.25	2.03	0.72	0.81
11.50	2.24	0.86	1.08
11.75	2.66	1.18	2.20
12.00	3.75	2.07	**5.32**
12.25	4.84	3.03	**7.83**
12.50	5.26	3.41	3.59
12.75	5.47	3.60	1.60
13.00	5.62	3.74	1.20
13.25	5.76	3.87	0.98
13.50	5.88	3.98	0.89
13.75	5.99	4.08	0.81
14.00	6.08	4.17	0.73
14.25	6.17	4.25	0.66
14.50	6.26	4.33	0.62
14.75	6.33	4.40	0.58
15.00	6.41	4.47	0.54
15.25	6.47	4.53	0.51
15.50	6.54	4.59	0.47
15.75	6.59	4.65	0.43
16.00	6.64	4.69	0.39
16.25	6.69	4.74	0.36
16.50	6.74	4.78	0.34
16.75	6.78	4.82	0.32
17.00	6.82	4.86	0.30
17.25	6.86	4.90	0.29
17.50	6.90	4.93	0.27
17.75	6.93	4.96	0.25
18.00	6.96	4.99	0.23
18.25	6.99	5.02	0.22
18.50	7.02	5.05	0.22
18.75	7.05	5.07	0.21
19.00	7.07	5.10	0.21
19.25	7.10	5.12	0.20
19.50	7.13	5.15	0.20
19.75	7.15	5.17	0.19
20.00	**7.18**	**5.20**	0.19

Summary for Reach DP2: Design Point 2

Inflow Area = 1.957 ac, 36.19% Impervious, Inflow Depth > 5.18" for 50 Year, 24 Hour Storm event
Inflow = 10.47 cfs @ 12.15 hrs, Volume= 0.845 af
Outflow = 10.47 cfs @ 12.15 hrs, Volume= 0.845 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.01		0.01
5.50	0.01		0.01
5.75	0.02		0.02
6.00	0.02		0.02
6.25	0.03		0.03
6.50	0.04		0.04
6.75	0.05		0.05
7.00	0.06		0.06
7.25	0.07		0.07
7.50	0.09		0.09
7.75	0.10		0.10
8.00	0.11		0.11
8.25	0.13		0.13
8.50	0.16		0.16
8.75	0.19		0.19
9.00	0.22		0.22
9.25	0.26		0.26
9.50	0.29		0.29
9.75	0.33		0.33
10.00	0.37		0.37
10.25	0.42		0.42
10.50	0.50		0.50
10.75	0.57		0.57
11.00	0.66		0.66
11.25	0.81		0.81
11.50	1.08		1.08
11.75	2.20		2.20
12.00	**5.32**		**5.32**
12.25	**7.83**		**7.83**
12.50	3.59		3.59
12.75	1.60		1.60
13.00	1.20		1.20
13.25	0.98		0.98
13.50	0.89		0.89
13.75	0.81		0.81
14.00	0.73		0.73
14.25	0.66		0.66
14.50	0.62		0.62
14.75	0.58		0.58
15.00	0.54		0.54
15.25	0.51		0.51
15.50	0.47		0.47
15.75	0.43		0.43
16.00	0.39		0.39
16.25	0.36		0.36
16.50	0.34		0.34
16.75	0.32		0.32
17.00	0.30		0.30
17.25	0.29		0.29
17.50	0.27		0.27
17.75	0.25		0.25
18.00	0.23		0.23
18.25	0.22		0.22
18.50	0.22		0.22
18.75	0.21		0.21
19.00	0.21		0.21
19.25	0.20		0.20
19.50	0.20		0.20
19.75	0.19		0.19
20.00	0.19		0.19

Summary for Subcatchment Pre 2: Pre 2

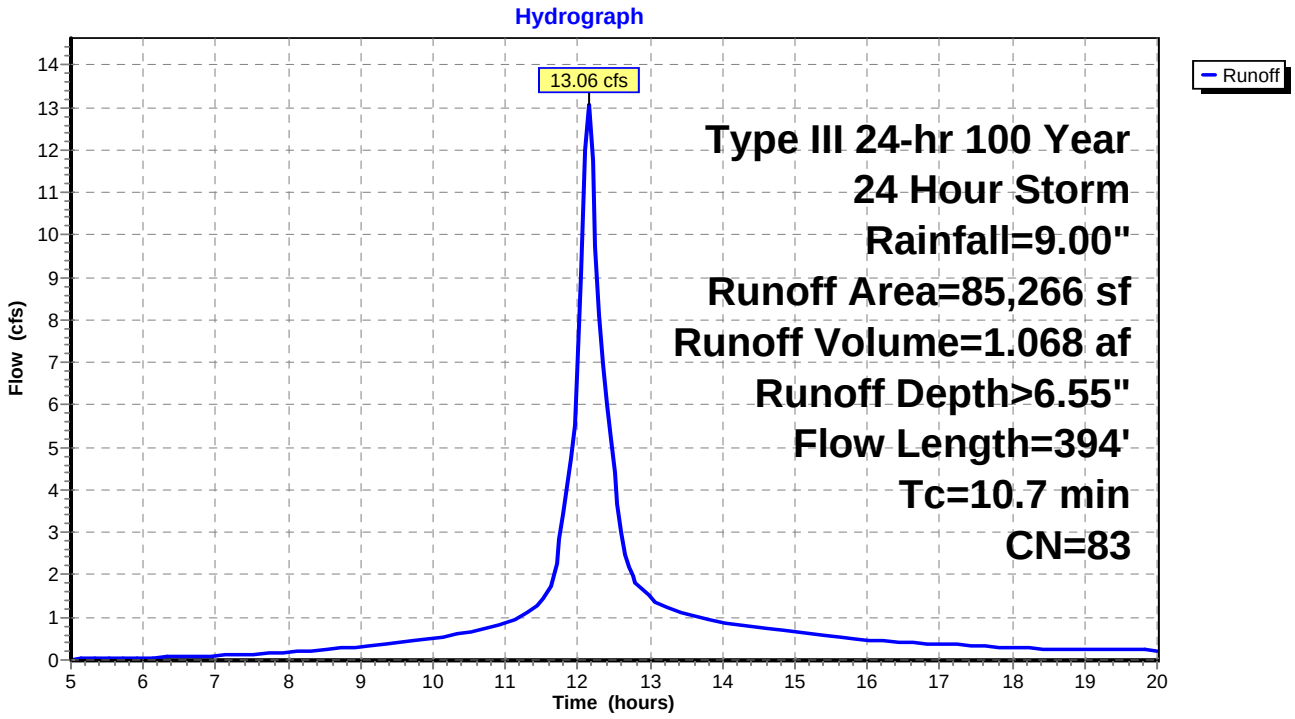
Runoff = 13.06 cfs @ 12.15 hrs, Volume= 1.068 af, Depth> 6.55"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
30,862	98	Paved parking, HSG C
34,072	73	Woods, Fair, HSG C
20,332	79	50-75% Grass cover, Fair, HSG C
85,266	83	Weighted Average
54,404		63.81% Pervious Area
30,862		36.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	150	0.0500	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
1.7	244	0.1200	2.42		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
10.7	394	Total			

Subcatchment Pre 2: Pre 2



Hydrograph for Subcatchment Pre 2: Pre 2

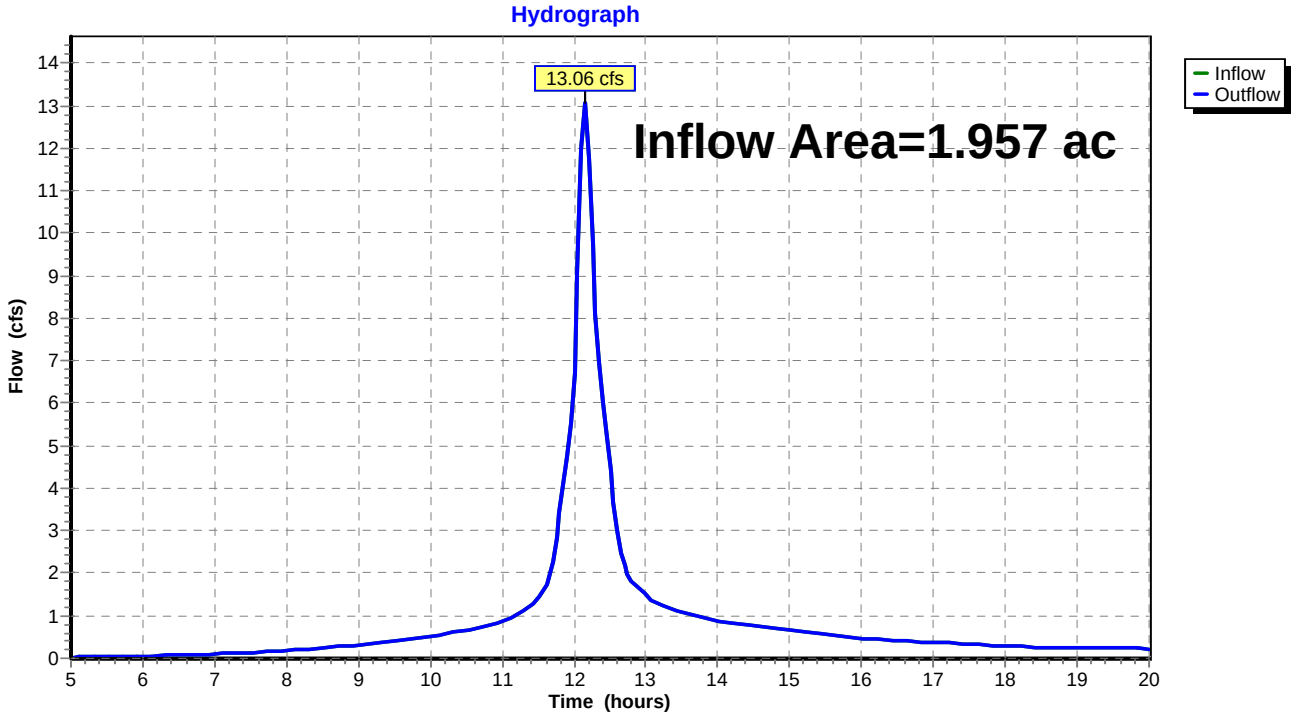
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.51	0.00	0.02
5.25	0.54	0.01	0.03
5.50	0.58	0.01	0.03
5.75	0.61	0.02	0.04
6.00	0.65	0.02	0.05
6.25	0.69	0.03	0.06
6.50	0.73	0.04	0.07
6.75	0.77	0.05	0.09
7.00	0.81	0.07	0.10
7.25	0.86	0.08	0.12
7.50	0.91	0.10	0.14
7.75	0.97	0.12	0.16
8.00	1.03	0.14	0.18
8.25	1.09	0.17	0.20
8.50	1.16	0.20	0.24
8.75	1.23	0.23	0.27
9.00	1.31	0.28	0.32
9.25	1.40	0.32	0.36
9.50	1.49	0.38	0.41
9.75	1.59	0.43	0.46
10.00	1.70	0.50	0.51
10.25	1.82	0.57	0.57
10.50	1.95	0.66	0.67
10.75	2.09	0.76	0.76
11.00	2.25	0.87	0.87
11.25	2.44	1.01	1.06
11.50	2.68	1.20	1.40
11.75	3.20	1.61	2.82
12.00	4.50	2.73	**6.72**
12.25	5.80	3.91	**9.72**
12.50	6.32	4.39	4.42
12.75	6.56	4.61	1.97
13.00	6.75	4.79	1.47
13.25	6.91	4.94	1.20
13.50	7.05	5.08	1.09
13.75	7.18	5.20	0.99
14.00	7.30	5.31	0.89
14.25	7.41	5.41	0.81
14.50	7.51	5.51	0.76
14.75	7.60	5.60	0.71
15.00	7.69	5.68	0.67
15.25	7.77	5.76	0.62
15.50	7.84	5.83	0.57
15.75	7.91	5.89	0.52
16.00	7.97	5.95	0.47
16.25	8.03	6.01	0.43
16.50	8.09	6.06	0.41
16.75	8.14	6.11	0.39
17.00	8.19	6.15	0.37
17.25	8.23	6.20	0.35
17.50	8.27	6.24	0.33
17.75	8.31	6.28	0.31
18.00	8.35	6.31	0.29
18.25	8.39	6.35	0.27
18.50	8.42	6.38	0.26
18.75	8.46	6.41	0.26
19.00	8.49	6.45	0.25
19.25	8.52	6.48	0.24
19.50	8.55	6.51	0.24
19.75	8.58	6.54	0.23
20.00	**8.61**	**6.56**	0.23

Summary for Reach DP2: Design Point 2

Inflow Area = 1.957 ac, 36.19% Impervious, Inflow Depth > 6.55" for 100 Year, 24 Hour Storm event
Inflow = 13.06 cfs @ 12.15 hrs, Volume= 1.068 af
Outflow = 13.06 cfs @ 12.15 hrs, Volume= 1.068 af, Atten= 0%, Lag= 0.0 min

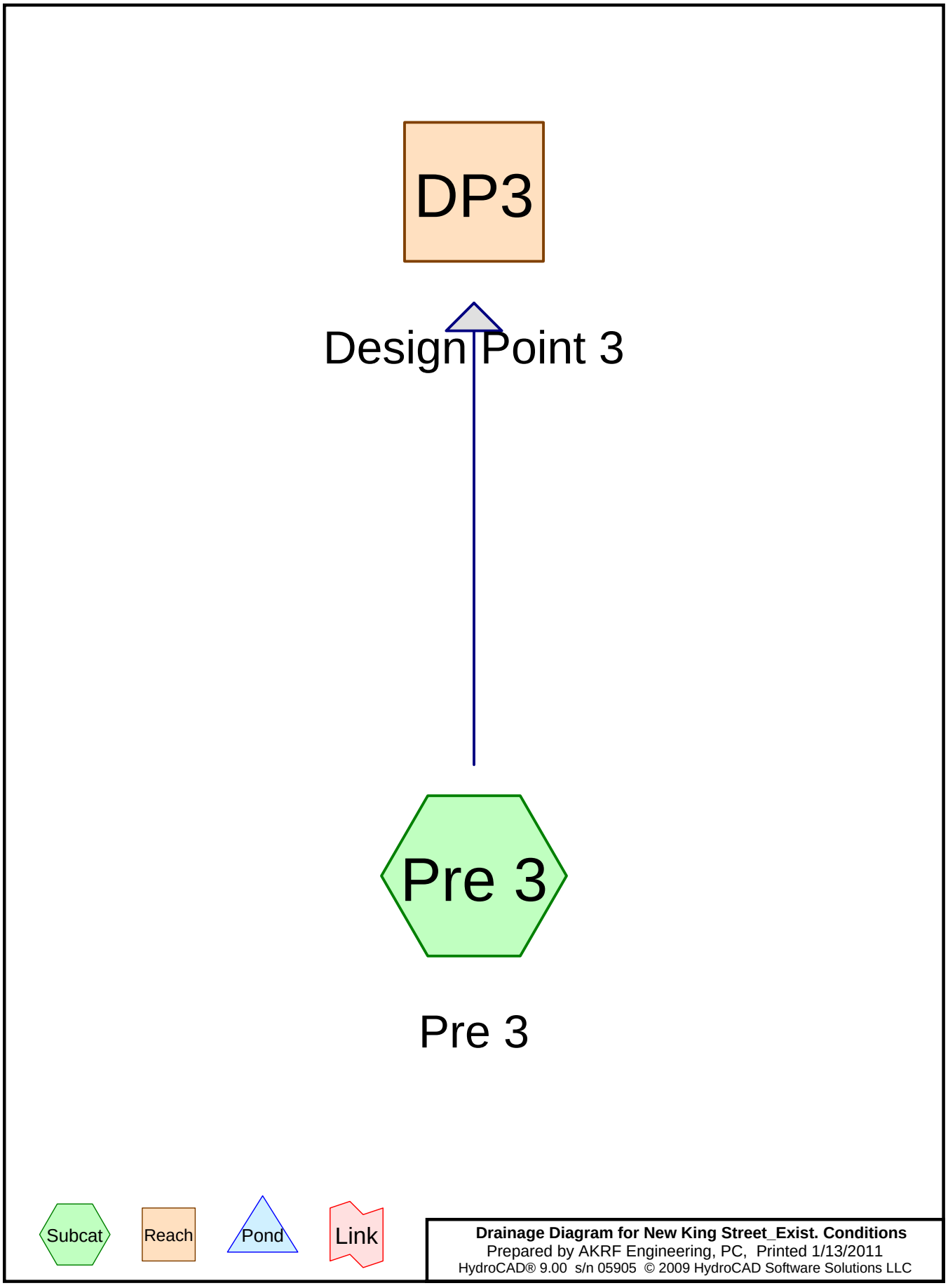
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.02		0.02
5.25	0.03		0.03
5.50	0.03		0.03
5.75	0.04		0.04
6.00	0.05		0.05
6.25	0.06		0.06
6.50	0.07		0.07
6.75	0.09		0.09
7.00	0.10		0.10
7.25	0.12		0.12
7.50	0.14		0.14
7.75	0.16		0.16
8.00	0.18		0.18
8.25	0.20		0.20
8.50	0.24		0.24
8.75	0.27		0.27
9.00	0.32		0.32
9.25	0.36		0.36
9.50	0.41		0.41
9.75	0.46		0.46
10.00	0.51		0.51
10.25	0.57		0.57
10.50	0.67		0.67
10.75	0.76		0.76
11.00	0.87		0.87
11.25	1.06		1.06
11.50	1.40		1.40
11.75	2.82		2.82
12.00	**6.72**		**6.72**
12.25	**9.72**		**9.72**
12.50	4.42		4.42
12.75	1.97		1.97
13.00	1.47		1.47
13.25	1.20		1.20
13.50	1.09		1.09
13.75	0.99		0.99
14.00	0.89		0.89
14.25	0.81		0.81
14.50	0.76		0.76
14.75	0.71		0.71
15.00	0.67		0.67
15.25	0.62		0.62
15.50	0.57		0.57
15.75	0.52		0.52
16.00	0.47		0.47
16.25	0.43		0.43
16.50	0.41		0.41
16.75	0.39		0.39
17.00	0.37		0.37
17.25	0.35		0.35
17.50	0.33		0.33
17.75	0.31		0.31
18.00	0.29		0.29
18.25	0.27		0.27
18.50	0.26		0.26
18.75	0.26		0.26
19.00	0.25		0.25
19.25	0.24		0.24
19.50	0.24		0.24
19.75	0.23		0.23
20.00	0.23		0.23



Drainage Diagram for New King Street_Exist. Conditions
Prepared by AKRF Engineering, PC, Printed 1/13/2011
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Summary for Subcatchment Pre 3: Pre 3

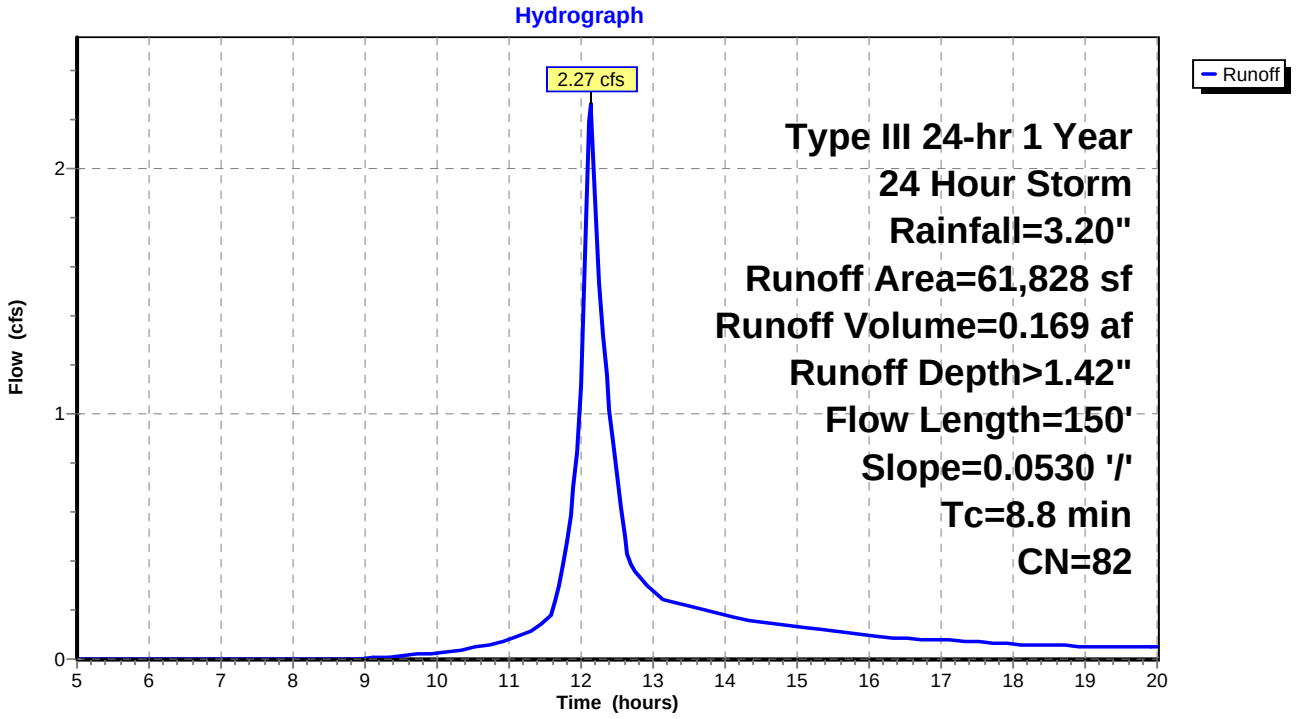
Runoff = 2.27 cfs @ 12.13 hrs, Volume= 0.169 af, Depth> 1.42"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
16,986	98	Paved parking, HSG C
25,334	73	Woods, Fair, HSG C
19,508	79	50-75% Grass cover, Fair, HSG C
61,828	82	Weighted Average
44,842		72.53% Pervious Area
16,986		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	150	0.0530	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Pre 3: Pre 3



Hydrograph for Subcatchment Pre 3: Pre 3

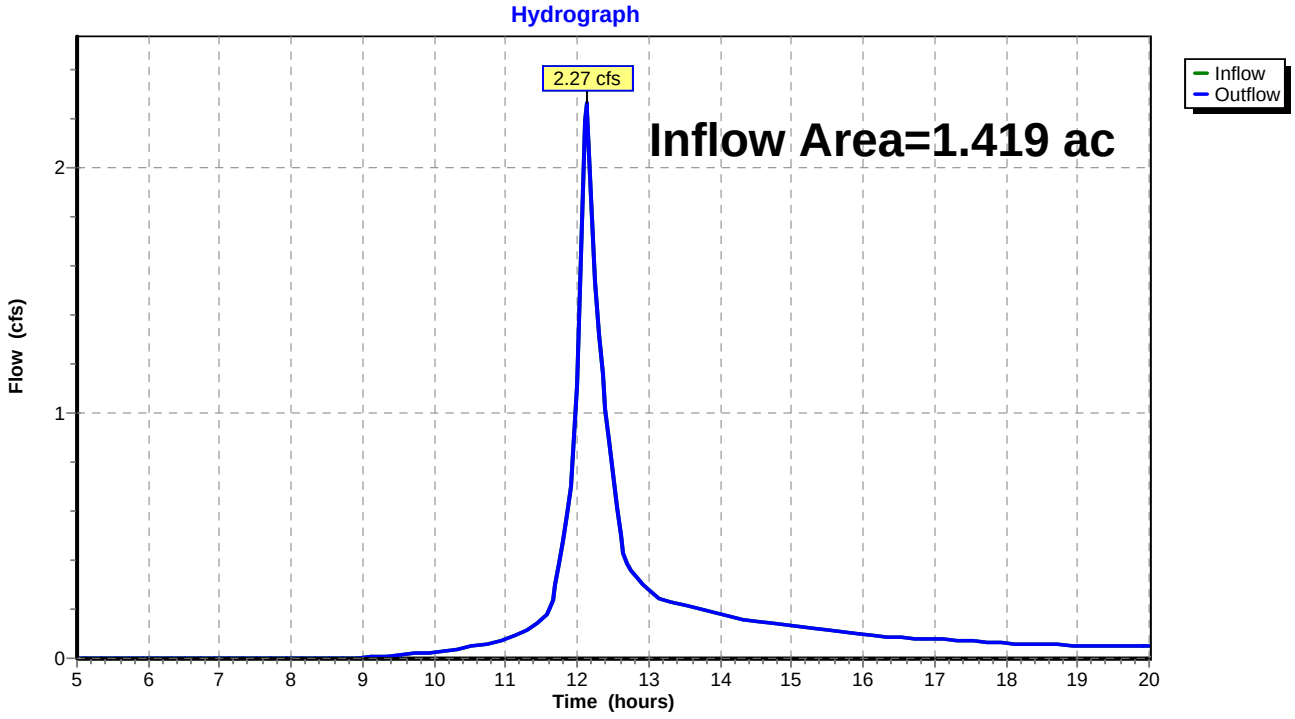
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.18	0.00	0.00
5.25	0.19	0.00	0.00
5.50	0.21	0.00	0.00
5.75	0.22	0.00	0.00
6.00	0.23	0.00	0.00
6.25	0.24	0.00	0.00
6.50	0.26	0.00	0.00
6.75	0.27	0.00	0.00
7.00	0.29	0.00	0.00
7.25	0.31	0.00	0.00
7.50	0.33	0.00	0.00
7.75	0.34	0.00	0.00
8.00	0.36	0.00	0.00
8.25	0.39	0.00	0.00
8.50	0.41	0.00	0.00
8.75	0.44	0.00	0.00
9.00	0.47	0.00	0.00
9.25	0.50	0.00	0.01
9.50	0.53	0.00	0.01
9.75	0.57	0.01	0.02
10.00	0.60	0.01	0.03
10.25	0.65	0.02	0.04
10.50	0.69	0.03	0.05
10.75	0.74	0.04	0.06
11.00	0.80	0.05	0.08
11.25	0.87	0.07	0.11
11.50	0.95	0.10	0.16
11.75	1.14	0.17	0.39
12.00	1.60	0.40	**1.11**
12.25	2.06	0.69	**1.54**
12.50	2.25	0.82	0.75
12.75	2.33	0.88	0.36
13.00	2.40	0.93	0.28
13.25	2.46	0.97	0.23
13.50	2.51	1.00	0.22
13.75	2.55	1.04	0.20
14.00	2.60	1.07	0.18
14.25	2.63	1.10	0.16
14.50	2.67	1.12	0.15
14.75	2.70	1.15	0.15
15.00	2.73	1.17	0.14
15.25	2.76	1.19	0.13
15.50	2.79	1.22	0.12
15.75	2.81	1.23	0.11
16.00	2.84	1.25	0.10
16.25	2.86	1.27	0.09
16.50	2.87	1.28	0.09
16.75	2.89	1.30	0.08
17.00	2.91	1.31	0.08
17.25	2.93	1.32	0.07
17.50	2.94	1.33	0.07
17.75	2.96	1.34	0.06
18.00	2.97	1.36	0.06
18.25	2.98	1.37	0.06
18.50	2.99	1.37	0.06
18.75	3.01	1.38	0.05
19.00	3.02	1.39	0.05
19.25	3.03	1.40	0.05
19.50	3.04	1.41	0.05
19.75	3.05	1.42	0.05
20.00	**3.06**	**1.43**	0.05

Summary for Reach DP3: Design Point 3

Inflow Area = 1.419 ac, 27.47% Impervious, Inflow Depth > 1.42" for 1 Year, 24 Hour Storm event
Inflow = 2.27 cfs @ 12.13 hrs, Volume= 0.169 af
Outflow = 2.27 cfs @ 12.13 hrs, Volume= 0.169 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.00		0.00
9.00	0.00		0.00
9.25	0.01		0.01
9.50	0.01		0.01
9.75	0.02		0.02
10.00	0.03		0.03
10.25	0.04		0.04
10.50	0.05		0.05
10.75	0.06		0.06
11.00	0.08		0.08
11.25	0.11		0.11
11.50	0.16		0.16
11.75	0.39		0.39
12.00	**1.11**		**1.11**
12.25	**1.54**		**1.54**
12.50	0.75		0.75
12.75	0.36		0.36
13.00	0.28		0.28
13.25	0.23		0.23
13.50	0.22		0.22
13.75	0.20		0.20
14.00	0.18		0.18
14.25	0.16		0.16
14.50	0.15		0.15
14.75	0.15		0.15
15.00	0.14		0.14
15.25	0.13		0.13
15.50	0.12		0.12
15.75	0.11		0.11
16.00	0.10		0.10
16.25	0.09		0.09
16.50	0.09		0.09
16.75	0.08		0.08
17.00	0.08		0.08
17.25	0.07		0.07
17.50	0.07		0.07
17.75	0.06		0.06
18.00	0.06		0.06
18.25	0.06		0.06
18.50	0.06		0.06
18.75	0.05		0.05
19.00	0.05		0.05
19.25	0.05		0.05
19.50	0.05		0.05
19.75	0.05		0.05
20.00	0.05		0.05

Summary for Subcatchment Pre 3: Pre 3

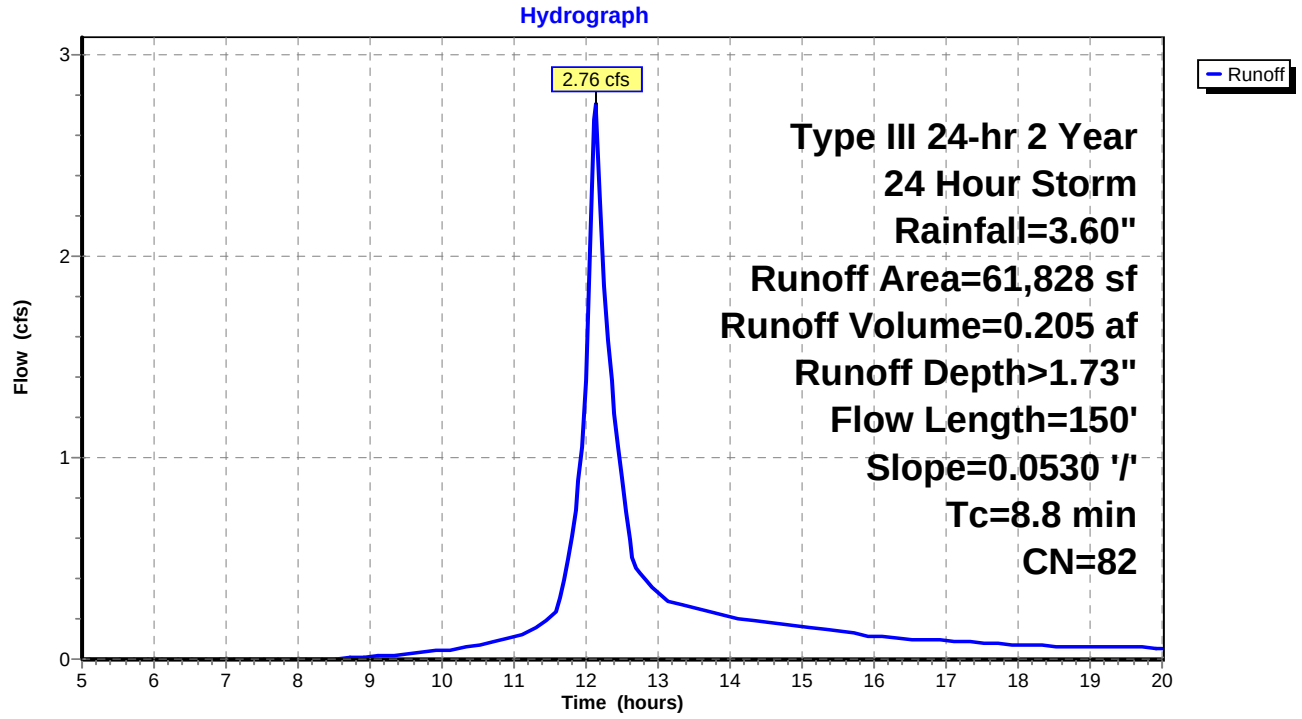
Runoff = 2.76 cfs @ 12.13 hrs, Volume= 0.205 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
16,986	98	Paved parking, HSG C
25,334	73	Woods, Fair, HSG C
19,508	79	50-75% Grass cover, Fair, HSG C
61,828	82	Weighted Average
44,842		72.53% Pervious Area
16,986		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	150	0.0530	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Pre 3: Pre 3



Hydrograph for Subcatchment Pre 3: Pre 3

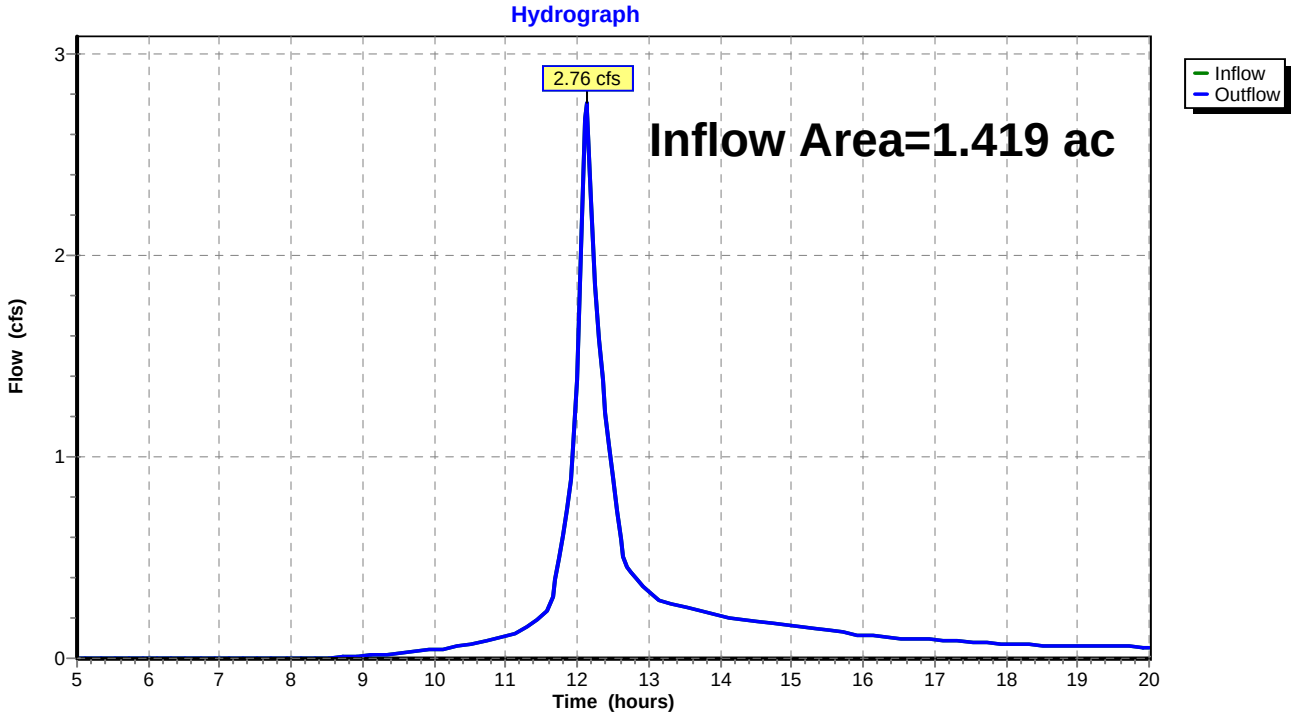
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.20	0.00	0.00
5.25	0.22	0.00	0.00
5.50	0.23	0.00	0.00
5.75	0.24	0.00	0.00
6.00	0.26	0.00	0.00
6.25	0.27	0.00	0.00
6.50	0.29	0.00	0.00
6.75	0.31	0.00	0.00
7.00	0.33	0.00	0.00
7.25	0.35	0.00	0.00
7.50	0.37	0.00	0.00
7.75	0.39	0.00	0.00
8.00	0.41	0.00	0.00
8.25	0.44	0.00	0.00
8.50	0.46	0.00	0.00
8.75	0.49	0.00	0.01
9.00	0.52	0.00	0.01
9.25	0.56	0.01	0.02
9.50	0.60	0.01	0.02
9.75	0.64	0.02	0.03
10.00	0.68	0.02	0.04
10.25	0.73	0.03	0.05
10.50	0.78	0.05	0.07
10.75	0.84	0.06	0.09
11.00	0.90	0.08	0.11
11.25	0.98	0.11	0.14
11.50	1.07	0.14	0.21
11.75	1.28	0.23	0.50
12.00	1.80	0.52	**1.38**
12.25	2.32	0.87	**1.85**
12.50	2.53	1.02	0.89
12.75	2.62	1.09	0.43
13.00	2.70	1.15	0.33
13.25	2.76	1.20	0.28
13.50	2.82	1.24	0.25
13.75	2.87	1.28	0.23
14.00	2.92	1.32	0.21
14.25	2.96	1.35	0.19
14.50	3.00	1.38	0.18
14.75	3.04	1.41	0.17
15.00	3.08	1.44	0.16
15.25	3.11	1.46	0.15
15.50	3.14	1.49	0.14
15.75	3.16	1.51	0.13
16.00	3.19	1.53	0.11
16.25	3.21	1.55	0.11
16.50	3.23	1.57	0.10
16.75	3.25	1.58	0.10
17.00	3.27	1.60	0.09
17.25	3.29	1.61	0.09
17.50	3.31	1.63	0.08
17.75	3.33	1.64	0.08
18.00	3.34	1.65	0.07
18.25	3.36	1.66	0.07
18.50	3.37	1.67	0.06
18.75	3.38	1.69	0.06
19.00	3.40	1.70	0.06
19.25	3.41	1.71	0.06
19.50	3.42	1.72	0.06
19.75	3.43	1.73	0.06
20.00	**3.45**	**1.74**	0.06

Summary for Reach DP3: Design Point 3

Inflow Area = 1.419 ac, 27.47% Impervious, Inflow Depth > 1.73" for 2 Year, 24 Hour Storm event
Inflow = 2.76 cfs @ 12.13 hrs, Volume= 0.205 af
Outflow = 2.76 cfs @ 12.13 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.00		0.00
7.75	0.00		0.00
8.00	0.00		0.00
8.25	0.00		0.00
8.50	0.00		0.00
8.75	0.01		0.01
9.00	0.01		0.01
9.25	0.02		0.02
9.50	0.02		0.02
9.75	0.03		0.03
10.00	0.04		0.04
10.25	0.05		0.05
10.50	0.07		0.07
10.75	0.09		0.09
11.00	0.11		0.11
11.25	0.14		0.14
11.50	0.21		0.21
11.75	0.50		0.50
12.00	**1.38**		**1.38**
12.25	**1.85**		**1.85**
12.50	0.89		0.89
12.75	0.43		0.43
13.00	0.33		0.33
13.25	0.28		0.28
13.50	0.25		0.25
13.75	0.23		0.23
14.00	0.21		0.21
14.25	0.19		0.19
14.50	0.18		0.18
14.75	0.17		0.17
15.00	0.16		0.16
15.25	0.15		0.15
15.50	0.14		0.14
15.75	0.13		0.13
16.00	0.11		0.11
16.25	0.11		0.11
16.50	0.10		0.10
16.75	0.10		0.10
17.00	0.09		0.09
17.25	0.09		0.09
17.50	0.08		0.08
17.75	0.08		0.08
18.00	0.07		0.07
18.25	0.07		0.07
18.50	0.06		0.06
18.75	0.06		0.06
19.00	0.06		0.06
19.25	0.06		0.06
19.50	0.06		0.06
19.75	0.06		0.06
20.00	0.06		0.06

Summary for Subcatchment Pre 3: Pre 3

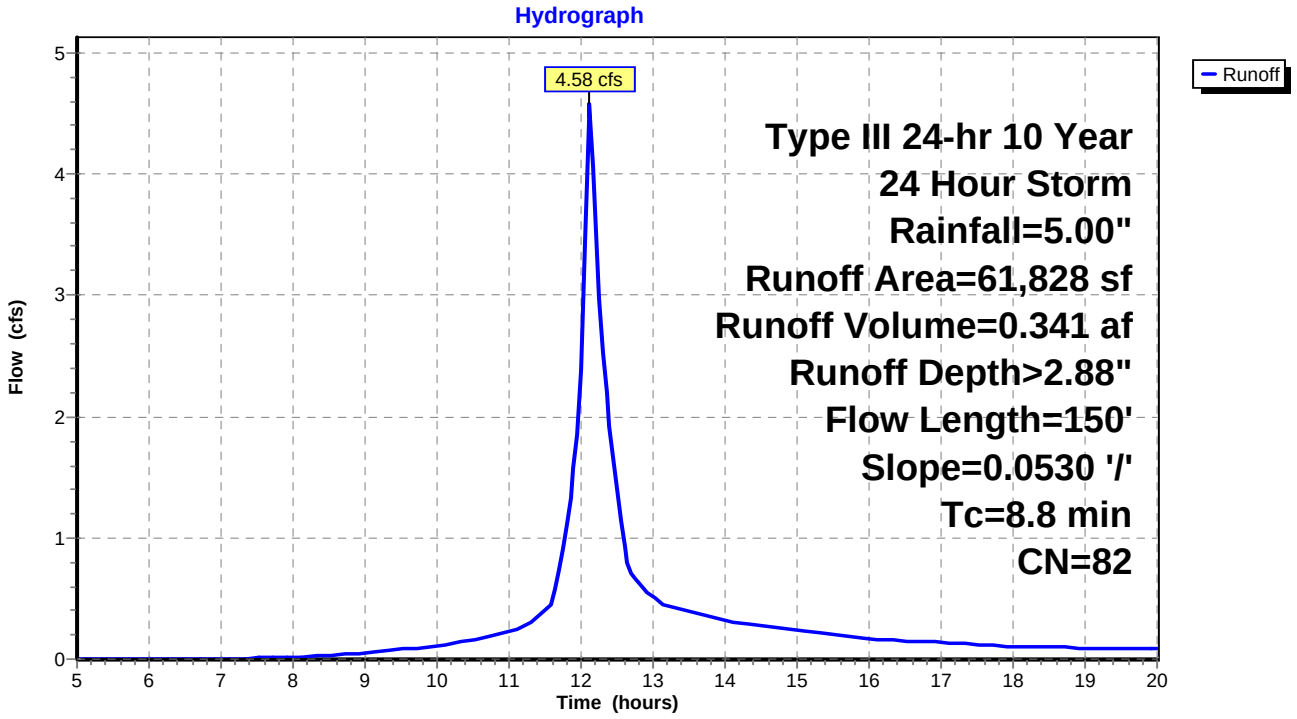
Runoff = 4.58 cfs @ 12.12 hrs, Volume= 0.341 af, Depth> 2.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
16,986	98	Paved parking, HSG C
25,334	73	Woods, Fair, HSG C
19,508	79	50-75% Grass cover, Fair, HSG C
61,828	82	Weighted Average
44,842		72.53% Pervious Area
16,986		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	150	0.0530	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Pre 3: Pre 3



Hydrograph for Subcatchment Pre 3: Pre 3

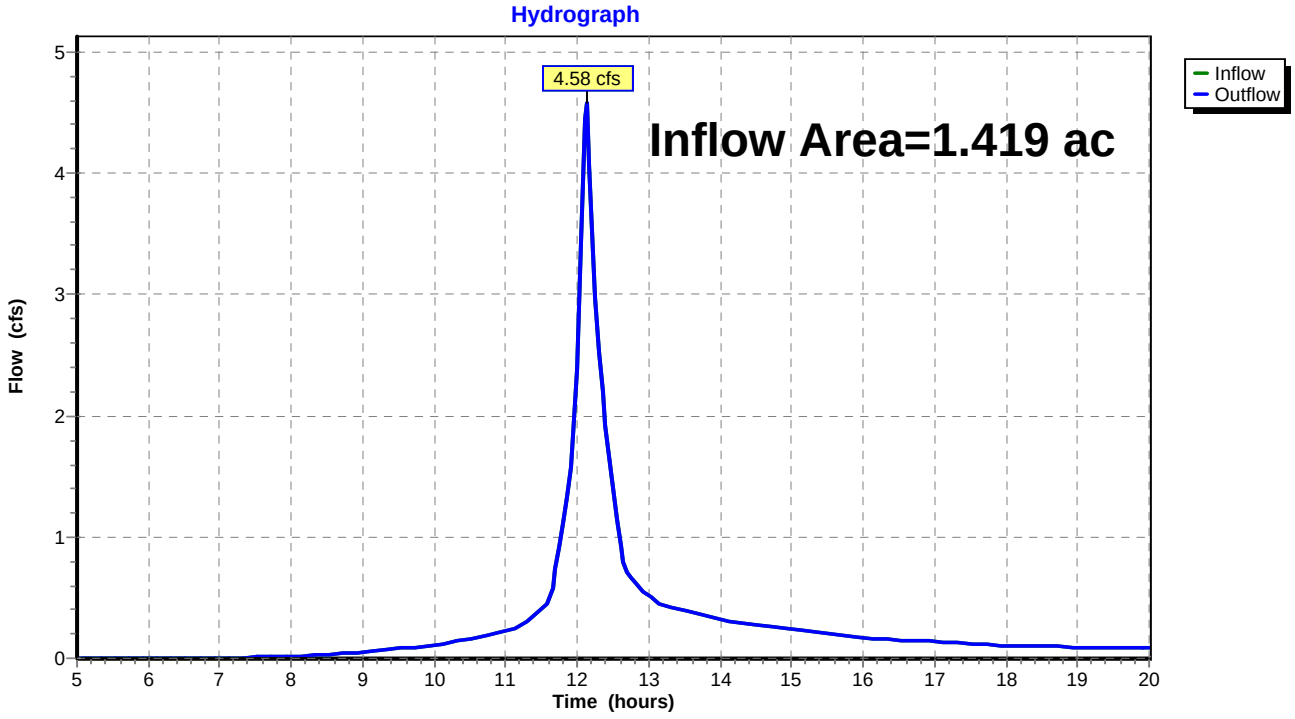
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.28	0.00	0.00
5.25	0.30	0.00	0.00
5.50	0.32	0.00	0.00
5.75	0.34	0.00	0.00
6.00	0.36	0.00	0.00
6.25	0.38	0.00	0.00
6.50	0.40	0.00	0.00
6.75	0.43	0.00	0.00
7.00	0.45	0.00	0.00
7.25	0.48	0.00	0.00
7.50	0.51	0.00	0.01
7.75	0.54	0.00	0.01
8.00	0.57	0.01	0.02
8.25	0.60	0.01	0.02
8.50	0.64	0.02	0.03
8.75	0.68	0.02	0.04
9.00	0.73	0.03	0.05
9.25	0.78	0.05	0.06
9.50	0.83	0.06	0.08
9.75	0.89	0.08	0.09
10.00	0.95	0.09	0.11
10.25	1.01	0.12	0.13
10.50	1.08	0.15	0.16
10.75	1.16	0.18	0.19
11.00	1.25	0.22	0.22
11.25	1.36	0.27	0.29
11.50	1.49	0.34	0.40
11.75	1.78	0.51	0.91
12.00	2.50	1.00	**2.38**
12.25	3.22	1.56	**2.98**
12.50	3.51	1.79	1.40
12.75	3.64	1.90	0.66
13.00	3.75	1.99	0.51
13.25	3.84	2.06	0.43
13.50	3.92	2.13	0.39
13.75	3.99	2.19	0.36
14.00	4.06	2.25	0.32
14.25	4.11	2.30	0.29
14.50	4.17	2.35	0.28
14.75	4.22	2.39	0.26
15.00	4.27	2.44	0.24
15.25	4.32	2.48	0.22
15.50	4.36	2.51	0.21
15.75	4.40	2.54	0.19
16.00	4.43	2.57	0.17
16.25	4.46	2.60	0.16
16.50	4.49	2.63	0.15
16.75	4.52	2.65	0.14
17.00	4.55	2.68	0.14
17.25	4.57	2.70	0.13
17.50	4.60	2.72	0.12
17.75	4.62	2.74	0.11
18.00	4.64	2.76	0.11
18.25	4.66	2.78	0.10
18.50	4.68	2.79	0.10
18.75	4.70	2.81	0.10
19.00	4.72	2.83	0.09
19.25	4.73	2.84	0.09
19.50	4.75	2.86	0.09
19.75	4.77	2.87	0.09
20.00	**4.79**	**2.89**	0.08

Summary for Reach DP3: Design Point 3

Inflow Area = 1.419 ac, 27.47% Impervious, Inflow Depth > 2.88" for 10 Year, 24 Hour Storm event
Inflow = 4.58 cfs @ 12.12 hrs, Volume= 0.341 af
Outflow = 4.58 cfs @ 12.12 hrs, Volume= 0.341 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.00		0.00
6.50	0.00		0.00
6.75	0.00		0.00
7.00	0.00		0.00
7.25	0.00		0.00
7.50	0.01		0.01
7.75	0.01		0.01
8.00	0.02		0.02
8.25	0.02		0.02
8.50	0.03		0.03
8.75	0.04		0.04
9.00	0.05		0.05
9.25	0.06		0.06
9.50	0.08		0.08
9.75	0.09		0.09
10.00	0.11		0.11
10.25	0.13		0.13
10.50	0.16		0.16
10.75	0.19		0.19
11.00	0.22		0.22
11.25	0.29		0.29
11.50	0.40		0.40
11.75	0.91		0.91
12.00	**2.38**		**2.38**
12.25	**2.98**		**2.98**
12.50	1.40		1.40
12.75	0.66		0.66
13.00	0.51		0.51
13.25	0.43		0.43
13.50	0.39		0.39
13.75	0.36		0.36
14.00	0.32		0.32
14.25	0.29		0.29
14.50	0.28		0.28
14.75	0.26		0.26
15.00	0.24		0.24
15.25	0.22		0.22
15.50	0.21		0.21
15.75	0.19		0.19
16.00	0.17		0.17
16.25	0.16		0.16
16.50	0.15		0.15
16.75	0.14		0.14
17.00	0.14		0.14
17.25	0.13		0.13
17.50	0.12		0.12
17.75	0.11		0.11
18.00	0.11		0.11
18.25	0.10		0.10
18.50	0.10		0.10
18.75	0.10		0.10
19.00	0.09		0.09
19.25	0.09		0.09
19.50	0.09		0.09
19.75	0.09		0.09
20.00	0.08		0.08

Summary for Subcatchment Pre 3: Pre 3

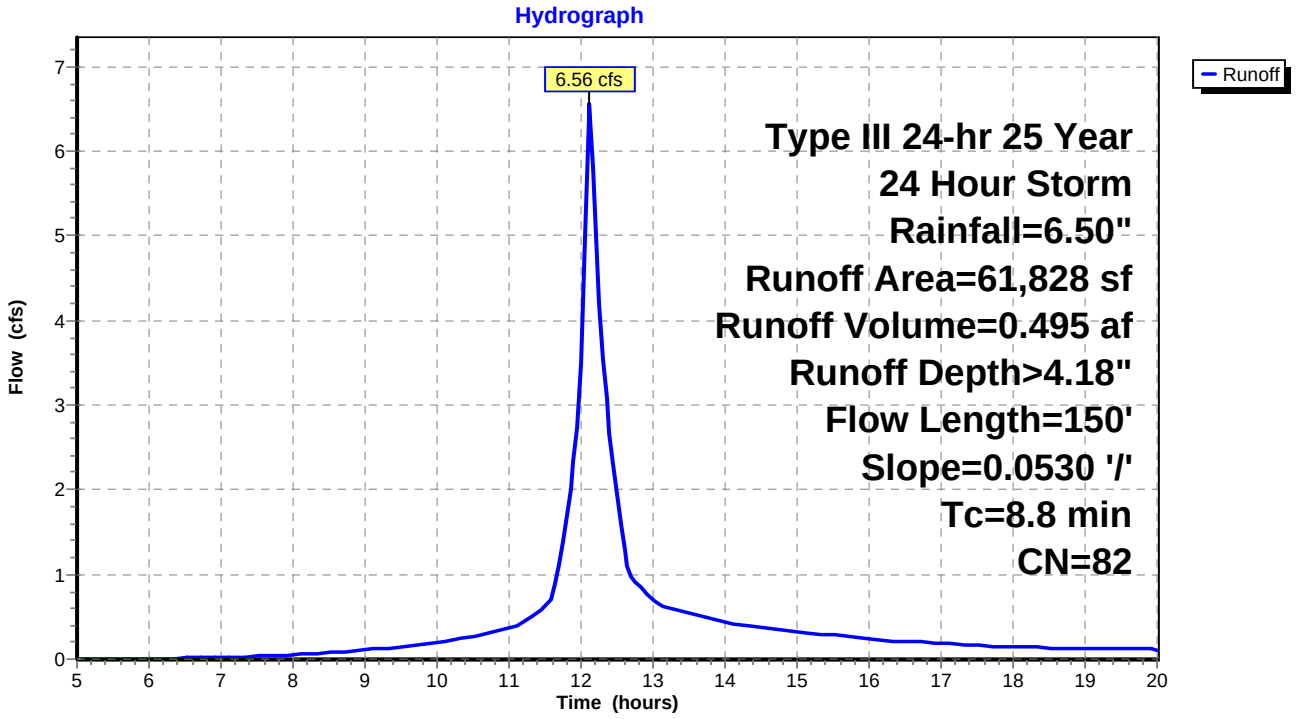
Runoff = 6.56 cfs @ 12.12 hrs, Volume= 0.495 af, Depth> 4.18"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
16,986	98	Paved parking, HSG C
25,334	73	Woods, Fair, HSG C
19,508	79	50-75% Grass cover, Fair, HSG C
61,828	82	Weighted Average
44,842		72.53% Pervious Area
16,986		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	150	0.0530	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Pre 3: Pre 3



Hydrograph for Subcatchment Pre 3: Pre 3

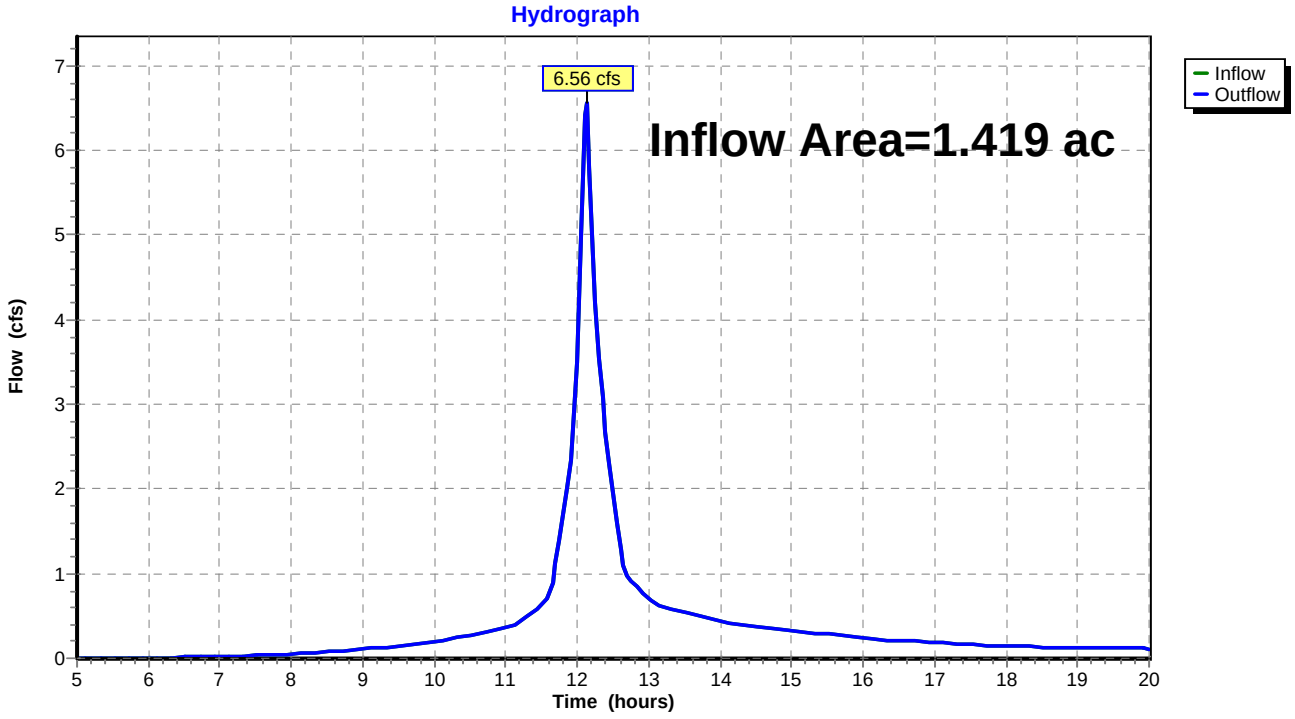
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.37	0.00	0.00
5.25	0.39	0.00	0.00
5.50	0.42	0.00	0.00
5.75	0.44	0.00	0.00
6.00	0.47	0.00	0.00
6.25	0.50	0.00	0.01
6.50	0.52	0.00	0.01
6.75	0.56	0.01	0.01
7.00	0.59	0.01	0.02
7.25	0.62	0.01	0.03
7.50	0.66	0.02	0.03
7.75	0.70	0.03	0.04
8.00	0.74	0.04	0.05
8.25	0.79	0.05	0.06
8.50	0.83	0.06	0.07
8.75	0.89	0.08	0.09
9.00	0.95	0.10	0.11
9.25	1.01	0.12	0.13
9.50	1.08	0.14	0.15
9.75	1.15	0.17	0.17
10.00	1.23	0.21	0.20
10.25	1.31	0.25	0.23
10.50	1.41	0.30	0.27
10.75	1.51	0.35	0.32
11.00	1.63	0.42	0.36
11.25	1.76	0.50	0.46
11.50	1.94	0.61	0.62
11.75	2.31	0.86	1.39
12.00	3.25	1.58	**3.49**
12.25	4.19	2.37	**4.21**
12.50	4.56	2.69	1.94
12.75	4.74	2.85	0.91
13.00	4.87	2.97	0.71
13.25	4.99	3.07	0.59
13.50	5.09	3.16	0.54
13.75	5.19	3.25	0.49
14.00	5.27	3.32	0.44
14.25	5.35	3.39	0.40
14.50	5.42	3.46	0.38
14.75	5.49	3.52	0.35
15.00	5.55	3.58	0.33
15.25	5.61	3.63	0.31
15.50	5.67	3.68	0.28
15.75	5.71	3.73	0.26
16.00	5.76	3.77	0.23
16.25	5.80	3.80	0.22
16.50	5.84	3.84	0.21
16.75	5.88	3.87	0.20
17.00	5.91	3.91	0.19
17.25	5.94	3.94	0.17
17.50	5.98	3.96	0.16
17.75	6.00	3.99	0.15
18.00	6.03	4.02	0.14
18.25	6.06	4.04	0.14
18.50	6.08	4.06	0.13
18.75	6.11	4.09	0.13
19.00	6.13	4.11	0.13
19.25	6.15	4.13	0.12
19.50	6.18	4.15	0.12
19.75	6.20	4.17	0.12
20.00	**6.22**	**4.19**	0.11

Summary for Reach DP3: Design Point 3

Inflow Area = 1.419 ac, 27.47% Impervious, Inflow Depth > 4.18" for 25 Year, 24 Hour Storm event
Inflow = 6.56 cfs @ 12.12 hrs, Volume= 0.495 af
Outflow = 6.56 cfs @ 12.12 hrs, Volume= 0.495 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.00		0.00
6.00	0.00		0.00
6.25	0.01		0.01
6.50	0.01		0.01
6.75	0.01		0.01
7.00	0.02		0.02
7.25	0.03		0.03
7.50	0.03		0.03
7.75	0.04		0.04
8.00	0.05		0.05
8.25	0.06		0.06
8.50	0.07		0.07
8.75	0.09		0.09
9.00	0.11		0.11
9.25	0.13		0.13
9.50	0.15		0.15
9.75	0.17		0.17
10.00	0.20		0.20
10.25	0.23		0.23
10.50	0.27		0.27
10.75	0.32		0.32
11.00	0.36		0.36
11.25	0.46		0.46
11.50	0.62		0.62
11.75	1.39		1.39
12.00	**3.49**		**3.49**
12.25	**4.21**		**4.21**
12.50	1.94		1.94
12.75	0.91		0.91
13.00	0.71		0.71
13.25	0.59		0.59
13.50	0.54		0.54
13.75	0.49		0.49
14.00	0.44		0.44
14.25	0.40		0.40
14.50	0.38		0.38
14.75	0.35		0.35
15.00	0.33		0.33
15.25	0.31		0.31
15.50	0.28		0.28
15.75	0.26		0.26
16.00	0.23		0.23
16.25	0.22		0.22
16.50	0.21		0.21
16.75	0.20		0.20
17.00	0.19		0.19
17.25	0.17		0.17
17.50	0.16		0.16
17.75	0.15		0.15
18.00	0.14		0.14
18.25	0.14		0.14
18.50	0.13		0.13
18.75	0.13		0.13
19.00	0.13		0.13
19.25	0.12		0.12
19.50	0.12		0.12
19.75	0.12		0.12
20.00	0.11		0.11

Summary for Subcatchment Pre 3: Pre 3

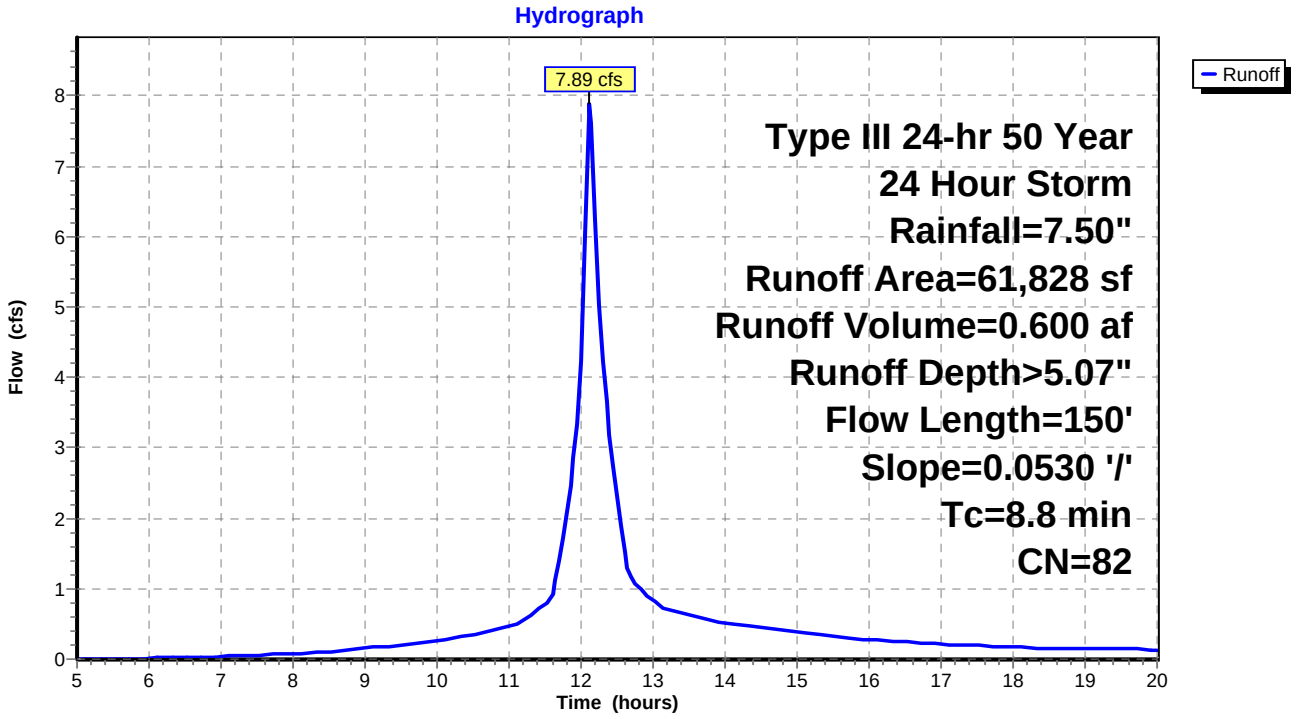
Runoff = 7.89 cfs @ 12.12 hrs, Volume= 0.600 af, Depth> 5.07"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
16,986	98	Paved parking, HSG C
25,334	73	Woods, Fair, HSG C
19,508	79	50-75% Grass cover, Fair, HSG C
61,828	82	Weighted Average
44,842		72.53% Pervious Area
16,986		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	150	0.0530	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Pre 3: Pre 3



Hydrograph for Subcatchment Pre 3: Pre 3

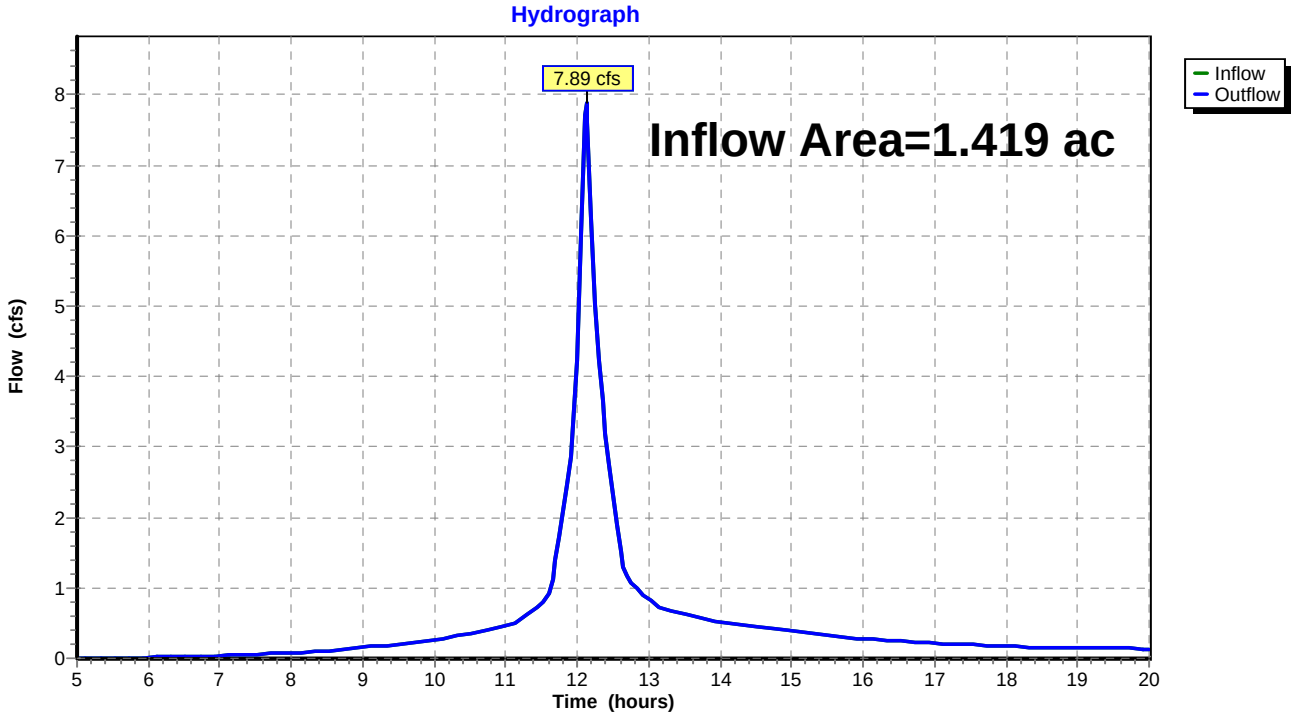
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.43	0.00	0.00
5.25	0.45	0.00	0.00
5.50	0.48	0.00	0.00
5.75	0.51	0.00	0.01
6.00	0.54	0.00	0.01
6.25	0.57	0.01	0.02
6.50	0.60	0.01	0.02
6.75	0.64	0.02	0.03
7.00	0.68	0.02	0.04
7.25	0.72	0.03	0.05
7.50	0.76	0.04	0.06
7.75	0.81	0.05	0.07
8.00	0.86	0.07	0.08
8.25	0.91	0.08	0.09
8.50	0.96	0.10	0.11
8.75	1.03	0.12	0.13
9.00	1.09	0.15	0.15
9.25	1.17	0.18	0.17
9.50	1.24	0.22	0.20
9.75	1.33	0.26	0.23
10.00	1.42	0.30	0.26
10.25	1.52	0.35	0.30
10.50	1.62	0.42	0.35
10.75	1.74	0.49	0.40
11.00	1.88	0.57	0.46
11.25	2.03	0.67	0.58
11.50	2.24	0.81	0.78
11.75	2.66	1.12	1.72
12.00	3.75	1.99	**4.24**
12.25	4.84	2.93	**5.02**
12.50	5.26	3.32	2.30
12.75	5.47	3.50	1.08
13.00	5.62	3.64	0.83
13.25	5.76	3.76	0.69
13.50	5.88	3.87	0.63
13.75	5.99	3.97	0.57
14.00	6.08	4.06	0.52
14.25	6.17	4.15	0.47
14.50	6.26	4.22	0.44
14.75	6.33	4.30	0.42
15.00	6.41	4.36	0.39
15.25	6.47	4.43	0.36
15.50	6.54	4.48	0.33
15.75	6.59	4.54	0.30
16.00	6.64	4.58	0.28
16.25	6.69	4.63	0.25
16.50	6.74	4.67	0.24
16.75	6.78	4.71	0.23
17.00	6.82	4.75	0.22
17.25	6.86	4.78	0.20
17.50	6.90	4.82	0.19
17.75	6.93	4.85	0.18
18.00	6.96	4.88	0.17
18.25	6.99	4.91	0.16
18.50	7.02	4.93	0.16
18.75	7.05	4.96	0.15
19.00	7.07	4.99	0.15
19.25	7.10	5.01	0.14
19.50	7.13	5.04	0.14
19.75	7.15	5.06	0.14
20.00	**7.18**	**5.08**	0.13

Summary for Reach DP3: Design Point 3

Inflow Area = 1.419 ac, 27.47% Impervious, Inflow Depth > 5.07" for 50 Year, 24 Hour Storm event
Inflow = 7.89 cfs @ 12.12 hrs, Volume= 0.600 af
Outflow = 7.89 cfs @ 12.12 hrs, Volume= 0.600 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.00		0.00
5.25	0.00		0.00
5.50	0.00		0.00
5.75	0.01		0.01
6.00	0.01		0.01
6.25	0.02		0.02
6.50	0.02		0.02
6.75	0.03		0.03
7.00	0.04		0.04
7.25	0.05		0.05
7.50	0.06		0.06
7.75	0.07		0.07
8.00	0.08		0.08
8.25	0.09		0.09
8.50	0.11		0.11
8.75	0.13		0.13
9.00	0.15		0.15
9.25	0.17		0.17
9.50	0.20		0.20
9.75	0.23		0.23
10.00	0.26		0.26
10.25	0.30		0.30
10.50	0.35		0.35
10.75	0.40		0.40
11.00	0.46		0.46
11.25	0.58		0.58
11.50	0.78		0.78
11.75	1.72		1.72
12.00	**4.24**		**4.24**
12.25	**5.02**		**5.02**
12.50	2.30		2.30
12.75	1.08		1.08
13.00	0.83		0.83
13.25	0.69		0.69
13.50	0.63		0.63
13.75	0.57		0.57
14.00	0.52		0.52
14.25	0.47		0.47
14.50	0.44		0.44
14.75	0.42		0.42
15.00	0.39		0.39
15.25	0.36		0.36
15.50	0.33		0.33
15.75	0.30		0.30
16.00	0.28		0.28
16.25	0.25		0.25
16.50	0.24		0.24
16.75	0.23		0.23
17.00	0.22		0.22
17.25	0.20		0.20
17.50	0.19		0.19
17.75	0.18		0.18
18.00	0.17		0.17
18.25	0.16		0.16
18.50	0.16		0.16
18.75	0.15		0.15
19.00	0.15		0.15
19.25	0.14		0.14
19.50	0.14		0.14
19.75	0.14		0.14
20.00	0.13		0.13

Summary for Subcatchment Pre 3: Pre 3

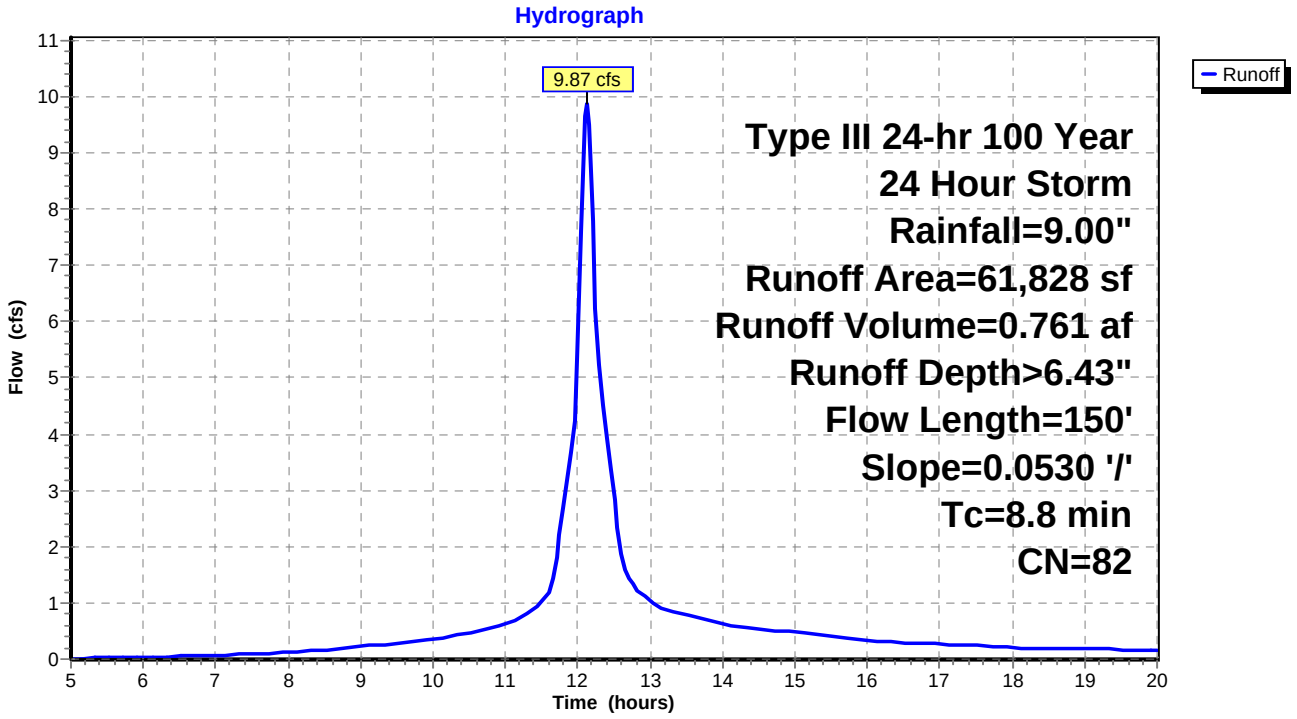
Runoff = 9.87 cfs @ 12.12 hrs, Volume= 0.761 af, Depth> 6.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
16,986	98	Paved parking, HSG C
25,334	73	Woods, Fair, HSG C
19,508	79	50-75% Grass cover, Fair, HSG C
61,828	82	Weighted Average
44,842		72.53% Pervious Area
16,986		27.47% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	150	0.0530	0.28		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Pre 3: Pre 3



Hydrograph for Subcatchment Pre 3: Pre 3

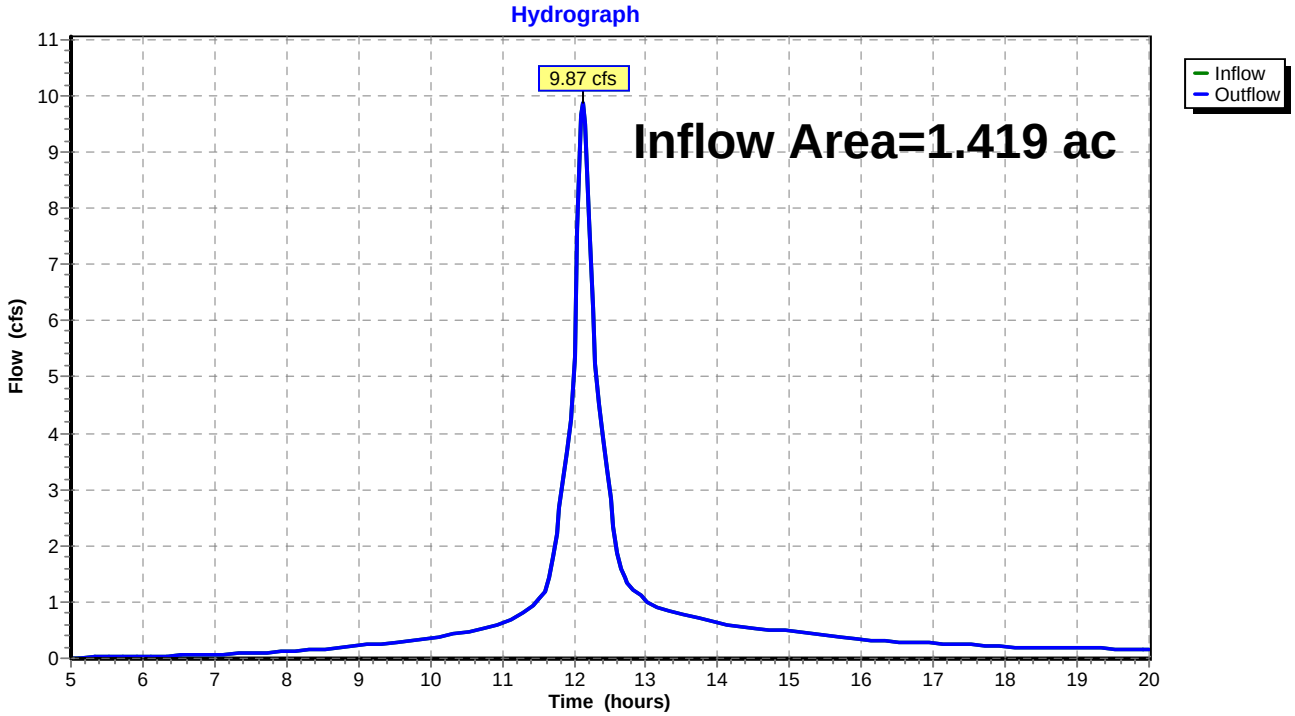
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
5.00	0.51	0.00	0.01
5.25	0.54	0.00	0.01
5.50	0.58	0.01	0.02
5.75	0.61	0.01	0.03
6.00	0.65	0.02	0.03
6.25	0.69	0.02	0.04
6.50	0.73	0.03	0.05
6.75	0.77	0.04	0.06
7.00	0.81	0.05	0.07
7.25	0.86	0.07	0.08
7.50	0.91	0.08	0.09
7.75	0.97	0.10	0.10
8.00	1.03	0.12	0.12
8.25	1.09	0.15	0.14
8.50	1.16	0.18	0.16
8.75	1.23	0.21	0.19
9.00	1.31	0.25	0.22
9.25	1.40	0.29	0.25
9.50	1.49	0.34	0.28
9.75	1.59	0.40	0.32
10.00	1.70	0.46	0.36
10.25	1.82	0.53	0.41
10.50	1.95	0.62	0.47
10.75	2.09	0.71	0.54
11.00	2.25	0.82	0.62
11.25	2.44	0.95	0.77
11.50	2.68	1.13	1.01
11.75	3.20	1.54	2.22
12.00	4.50	2.64	**5.37**
12.25	5.80	3.81	**6.24**
12.50	6.32	4.28	2.84
12.75	6.56	4.51	1.33
13.00	6.75	4.68	1.03
13.25	6.91	4.83	0.85
13.50	7.05	4.96	0.78
13.75	7.18	5.09	0.70
14.00	7.30	5.20	0.63
14.25	7.41	5.30	0.58
14.50	7.51	5.39	0.54
14.75	7.60	5.48	0.51
15.00	7.69	5.56	0.48
15.25	7.77	5.64	0.44
15.50	7.84	5.71	0.41
15.75	7.91	5.78	0.37
16.00	7.97	5.84	0.34
16.25	8.03	5.89	0.31
16.50	8.09	5.94	0.30
16.75	8.14	5.99	0.28
17.00	8.19	6.04	0.27
17.25	8.23	6.08	0.25
17.50	8.27	6.12	0.24
17.75	8.31	6.16	0.22
18.00	8.35	6.19	0.20
18.25	8.39	6.23	0.19
18.50	8.42	6.26	0.19
18.75	8.46	6.29	0.19
19.00	8.49	6.33	0.18
19.25	8.52	6.36	0.18
19.50	8.55	6.39	0.17
19.75	8.58	6.42	0.17
20.00	**8.61**	**6.44**	0.16

Summary for Reach DP3: Design Point 3

Inflow Area = 1.419 ac, 27.47% Impervious, Inflow Depth > 6.43" for 100 Year, 24 Hour Storm event
Inflow = 9.87 cfs @ 12.12 hrs, Volume= 0.761 af
Outflow = 9.87 cfs @ 12.12 hrs, Volume= 0.761 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
5.00	0.01		0.01
5.25	0.01		0.01
5.50	0.02		0.02
5.75	0.03		0.03
6.00	0.03		0.03
6.25	0.04		0.04
6.50	0.05		0.05
6.75	0.06		0.06
7.00	0.07		0.07
7.25	0.08		0.08
7.50	0.09		0.09
7.75	0.10		0.10
8.00	0.12		0.12
8.25	0.14		0.14
8.50	0.16		0.16
8.75	0.19		0.19
9.00	0.22		0.22
9.25	0.25		0.25
9.50	0.28		0.28
9.75	0.32		0.32
10.00	0.36		0.36
10.25	0.41		0.41
10.50	0.47		0.47
10.75	0.54		0.54
11.00	0.62		0.62
11.25	0.77		0.77
11.50	1.01		1.01
11.75	2.22		2.22
12.00	**5.37**		**5.37**
12.25	**6.24**		**6.24**
12.50	2.84		2.84
12.75	1.33		1.33
13.00	1.03		1.03
13.25	0.85		0.85
13.50	0.78		0.78
13.75	0.70		0.70
14.00	0.63		0.63
14.25	0.58		0.58
14.50	0.54		0.54
14.75	0.51		0.51
15.00	0.48		0.48
15.25	0.44		0.44
15.50	0.41		0.41
15.75	0.37		0.37
16.00	0.34		0.34
16.25	0.31		0.31
16.50	0.30		0.30
16.75	0.28		0.28
17.00	0.27		0.27
17.25	0.25		0.25
17.50	0.24		0.24
17.75	0.22		0.22
18.00	0.20		0.20
18.25	0.19		0.19
18.50	0.19		0.19
18.75	0.19		0.19
19.00	0.18		0.18
19.25	0.18		0.18
19.50	0.17		0.17
19.75	0.17		0.17
20.00	0.16		0.16

SWPPP APPENDIX E

STORMWATER CALCULATIONS

AKRF
Environmental, Planning and Engineering Consultants
440 Park Avenue South
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www.akrf.com

JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE _____

AREA (1) EXIST

$WQ_{V\ EXIST} = \frac{[(P)(R_V)(A)]}{12}$

SITE AREA = 3,217

P = 3.2

I = 100

$R_V = 0.05 + 0.009(100)$

$R_V = 0.95$

A = 0.073 AC

$WQ_V = \frac{(3.2)(0.95)(0.073)}{12}$

WQ_V = 0.185 AC-FT OR 806 FT^3

25% OF 806 FT^3 : 202 FT^3

AREA (1) Proposed

$WQ_{V\ prop} = \frac{(P_1)(R_V)(A)}{12}$

AREA = 557 FT

P = 3.2

I = 100

$R_V = 0.05 + 0.009(100)$

$R_V = 0.95$

A = 0.012 AC

$WQ_{V\ prop} = \frac{(3.2)(0.95)(0.012)}{12}$

$WQ_{V\ prop}$ = 0.003 AC-FT OR 133 FT^3

TOTAL WQ_{V_t} = 335 FT^3

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JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE WQv - CALCULATION

- Redevelopment Portion of Project - Chp 9 - (9.3.2)
- New Development Portion " " - Chp. 4

9.3.1 → CRITERIA MET.

9.3.2-A. III.

- Quantity Controls must be applied for increased discharge

9.3.2-B - II.

- Treatment req'd for 25% of the existing impervious area
- and 100% of the additional impervious area

- Meeting the Runoff Reduction Volume (RR_V) sizing criteria is not required for redevelopment projects that meet the application criteria in Section 9.3.1

---

(2) $WQ_{v_2} = \frac{[(P)(R_v)(A)]}{12}$

Site Area (2) =
Total - 14,630 SF
Imperv = 5,513 SF
I = 38%

$P = 3.2$
$R_v = 0.05 + 0.009(I)$
$I = 38\%$
$R_v = 0.392$
$A = 0.335$ AC

$WQ_{v_2} = \frac{(3.2)(.392)(0.335)}{12}$

$WQ_{v_2} =$ 0.035 AC-FT or 1,526 FT^3

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JOB
SHEET NO OF
CALCULATED BY DATE
CHECKED BY DATE
SCALE

RAIN GARDEN FOR SITE AREA (2):

STEP 1: WQv_2 = 1,526 FT^3

STEP 2: SOLVE FOR DRAINAGE LAYER AND SOIL MEDIA STORAGE VOLUME

$V_{SM} = A_{RG} \times D_{SM} \times P_{SM}$

$V_{DL} = A_{RG} \times D_{DL} \times P_{DL}$

A_{RG} = 485 SF
D_{SM} = 2FT
D_{DL} = 1 FT
P_{SM} = 0.20
P_{DL} = 0.40
Dp = 0.5

$V_{SM} = (485)(2)(0.2)$
$= 194$ FT^3
$V_{DL} = (485)(.40)(1)$
$= 194$ FT^3

$WQv = 1{,}526$ FT$^3 \leq (194)+(194)+(0.5 \times 485)$

1,526 FT$^3 \leq$ 630.5 FT^3

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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

WQV_3 =

P = 3.2

I = 100

R_V = 0.05 + 0.009(100)

R_V = 0.95

A = 1.17 AC

$WQV_2 = \frac{(3.2)(0.95)(1.17)}{12}$

WQV_3 = 0.296 AC-FT OR 12,912 FT^3

SITE AREA (3):

TOTAL AREA = 50,915

IMPERVIOUS = 50,915

I = 100%

EXISTING IMPERVIOUS

TOTAL AREA = 24,009

P = 3.2

I = 100

RV = 0.05 + 0.009 (100)

R_V = 0.95

A = 0.55 AC

$WQ_V = \frac{(3.2)(0.95)(0.55)}{12}$

WQ_V = 0.139 AC-FT OR 6,069 FT^3

25% OF 6,069 FT^3 = 1,518 FT^3

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New York, New York 10016
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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

PROPOSED IMPERVIOUS

TOTAL AREA = 26,906 FT^3

P = 3.2

I = 100

R_v = 0.05 + 0.009 (100)

R_v = 0.95

A = 0.618 AC

$$WQ_v = \frac{(3.2)(0.95)(0.618)}{12}$$

WQ_v = 0.156 AC-FT OR 6,820 FT^3

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SHEET NO. OF
CALCULATED BY DATE
CHECKED BY DATE
SCALE

STORMWATER PLANTER – FOR SITE AREA (3)

STEP 1: WQ_V = 1,518
+ 6,820
WQ_V = 8,338 FT^3.

d_F = 1.5 FT
K = 8.7 FT/DAY
h_f = 0.5 FT
t_f = 0.17 days

$$A_f = \frac{(8,338)(1.5)}{[(8.7)(0.5+1.5)(0.17)]} = \frac{12,507}{2.96}$$

A_f = 4,226 FT^2

164 + 287 = 451 FT OF PERIMETER BLDG

$$\frac{4,226\ FT^2}{451\ FT} = 9.37\ FT$$

STORMWATER PLANTER IN SE CORNER OF SITE = 1,056 SF

200 FT x 3.5' = 700 FT

WQ_V PROVIDED

$$1,746 = \frac{(WQ_V)(1.5)}{(8.7)(.5+1.5)(1.17)}$$

5,165 = 1.5 WQ_V

WQ_V 3,443

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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

WQ_v Reduction Calculation

$$RR_v = \frac{[(P)(R_v^*)(A_i)]}{12}$$

$A_i = (S)(A_c)$

$A_{ic} = 5{,}514 \text{ SF} + 50{,}915$

$A_{ic} = 56{,}429 \text{ SF}$

$R_v^* = 0.05 + 0.009(I)$

$R_v^* = 0.05 + 0.009(100)$

$R_v^* = 0.95$

$A_i = (0.30)(56{,}429)$

$A_i = 16{,}929$

$$WQ_v = \frac{(3.2)(0.95)(16{,}929)}{12}$$

$WQ_v = 4{,}289 \text{ FT}^3$

TOTAL WQ_v TREATED = _____ FT^3

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JOB _____

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE _____

SITE AREA (4)

TOTAL AREA = 8,773 SF

- NO INCREASE IN IMPERVIOUS

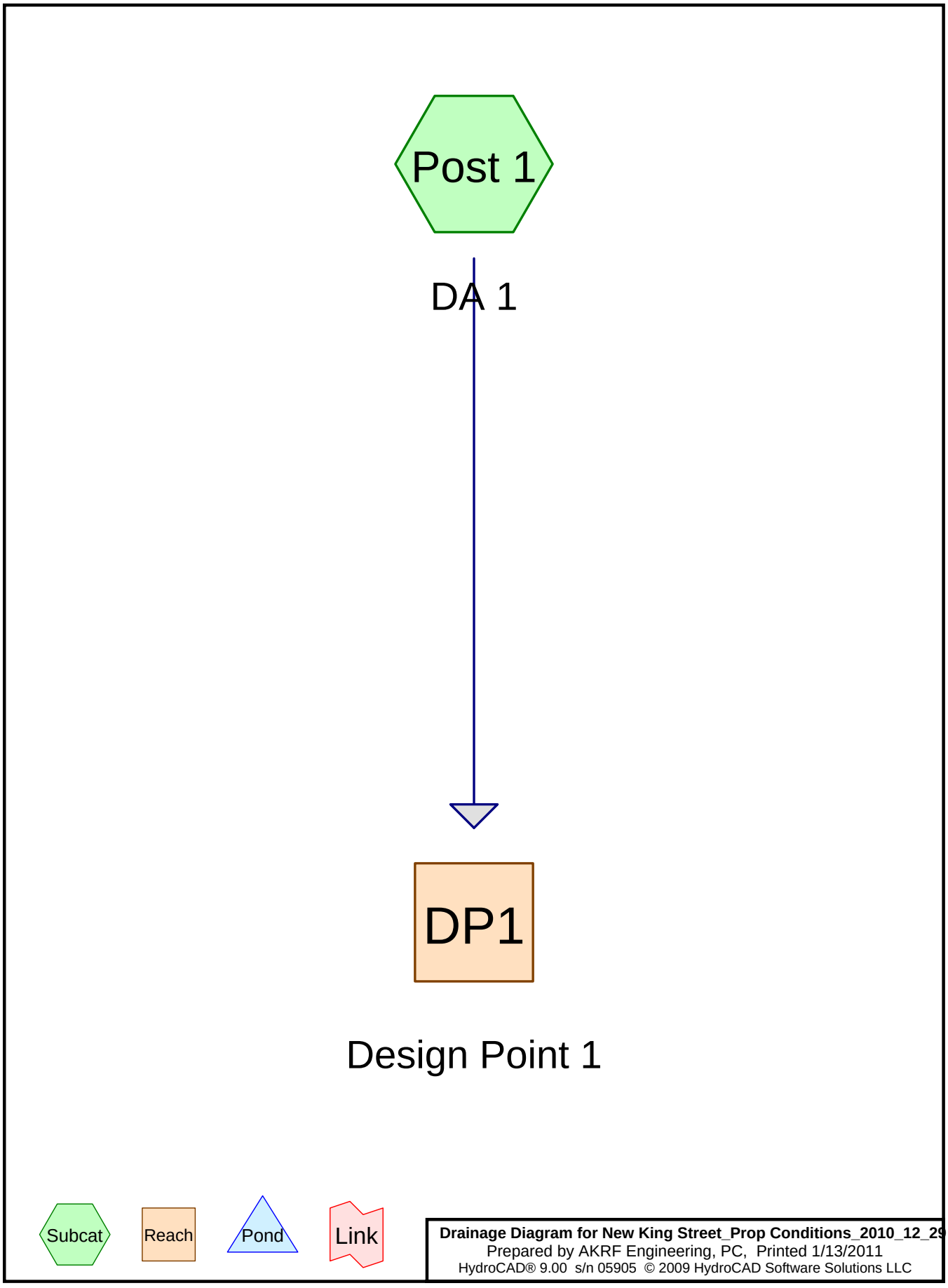
SITE AREA (5)

TOTAL AREA = 18,022 SF

- NO INCREASE IN IMPERVIOUS

SWPPP APPENDIX F

POST-DEVELOPMENT HYDROLOGIC ROUTING CALCULATIONS



Drainage Diagram for New King Street_Prop Conditions_2010_12_29
Prepared by AKRF Engineering, PC, Printed 1/13/2011
HydroCAD® 9.00 s/n 05905 © 2009 HydroCAD Software Solutions LLC

Summary for Subcatchment Post 1: DA 1

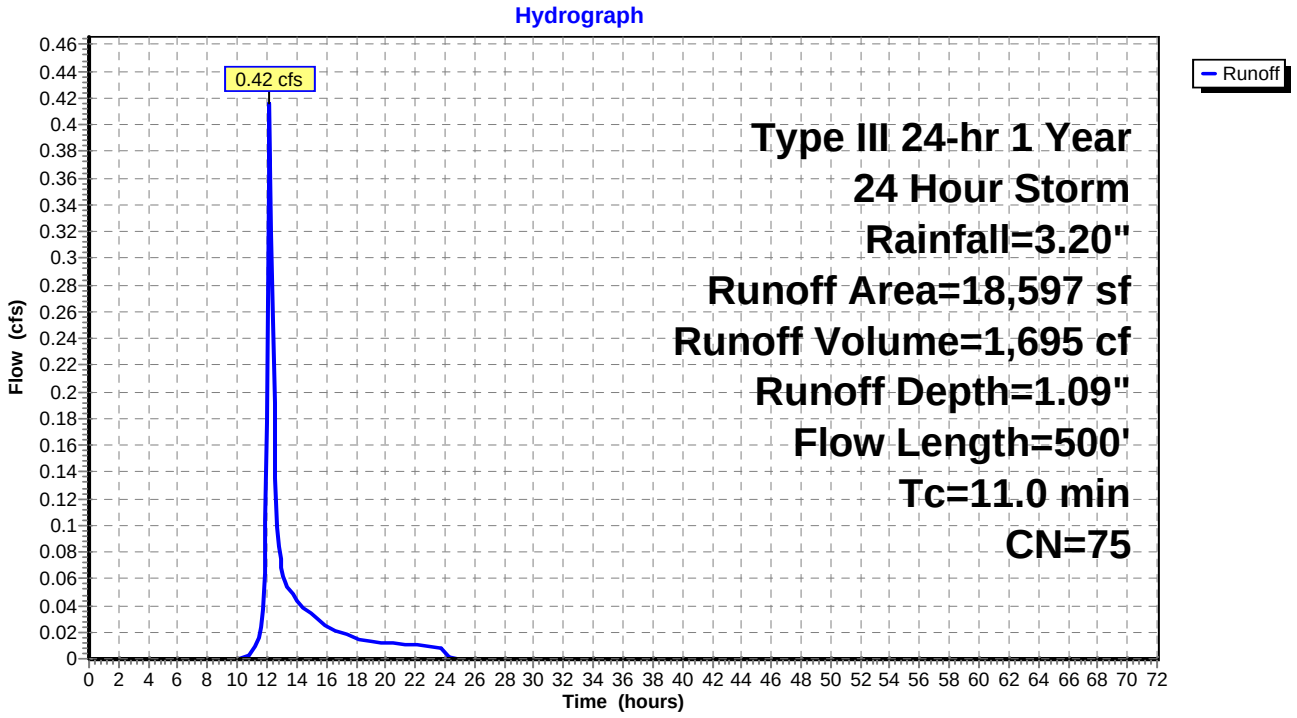
Runoff = 0.42 cfs @ 12.19 hrs, Volume= 1,695 cf, Depth= 1.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
14,652	73	Woods, Fair, HSG C
2,399	79	50-75% Grass cover, Fair, HSG C
1,496	89	Gravel roads, HSG C
50	98	Unconnected pavement, HSG C
18,597	75	Weighted Average
18,547		99.73% Pervious Area
50		0.27% Impervious Area
50		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0400	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.9	400	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.0	500	Total			

Subcatchment Post 1: DA 1



Hydrograph for Subcatchment Post 1: DA 1

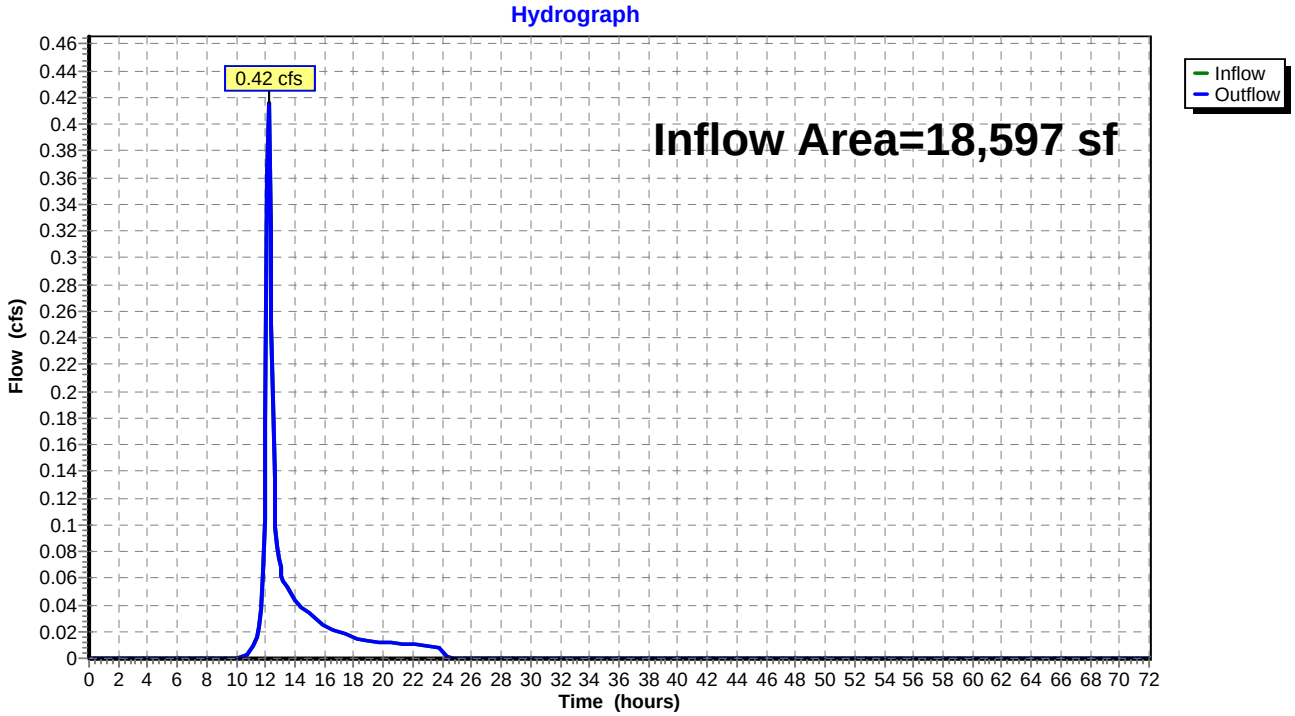
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	3.20	1.09	0.00
1.00	0.03	0.00	0.00	53.00	3.20	1.09	0.00
2.00	0.06	0.00	0.00	54.00	3.20	1.09	0.00
3.00	0.10	0.00	0.00	55.00	3.20	1.09	0.00
4.00	0.14	0.00	0.00	56.00	3.20	1.09	0.00
5.00	0.18	0.00	0.00	57.00	3.20	1.09	0.00
6.00	0.23	0.00	0.00	58.00	3.20	1.09	0.00
7.00	0.29	0.00	0.00	59.00	3.20	1.09	0.00
8.00	0.36	0.00	0.00	60.00	3.20	1.09	0.00
9.00	0.47	0.00	0.00	61.00	3.20	1.09	0.00
10.00	0.60	0.00	0.00	62.00	3.20	1.09	0.00
11.00	0.80	0.01	0.01	63.00	3.20	1.09	0.00
12.00	1.60	0.20	**0.18**	64.00	3.20	1.09	0.00
13.00	2.40	0.59	**0.07**	65.00	3.20	1.09	0.00
14.00	2.60	0.71	0.04	66.00	3.20	1.09	0.00
15.00	2.73	0.79	0.03	67.00	3.20	1.09	0.00
16.00	2.84	0.85	0.02	68.00	3.20	1.09	0.00
17.00	2.91	0.90	0.02	69.00	3.20	1.09	0.00
18.00	2.97	0.94	0.02	70.00	3.20	1.09	0.00
19.00	3.02	0.97	0.01	71.00	3.20	1.09	0.00
20.00	3.06	1.00	0.01	72.00	3.20	1.09	0.00
21.00	3.10	1.03	0.01				
22.00	3.14	1.05	0.01				
23.00	3.17	1.07	0.01				
24.00	**3.20**	**1.09**	0.01				
25.00	3.20	1.09	0.00				
26.00	3.20	1.09	0.00				
27.00	3.20	1.09	0.00				
28.00	3.20	1.09	0.00				
29.00	3.20	1.09	0.00				
30.00	3.20	1.09	0.00				
31.00	3.20	1.09	0.00				
32.00	3.20	1.09	0.00				
33.00	3.20	1.09	0.00				
34.00	3.20	1.09	0.00				
35.00	3.20	1.09	0.00				
36.00	3.20	1.09	0.00				
37.00	3.20	1.09	0.00				
38.00	3.20	1.09	0.00				
39.00	3.20	1.09	0.00				
40.00	3.20	1.09	0.00				
41.00	3.20	1.09	0.00				
42.00	3.20	1.09	0.00				
43.00	3.20	1.09	0.00				
44.00	3.20	1.09	0.00				
45.00	3.20	1.09	0.00				
46.00	3.20	1.09	0.00				
47.00	3.20	1.09	0.00				
48.00	3.20	1.09	0.00				
49.00	3.20	1.09	0.00				
50.00	3.20	1.09	0.00				
51.00	3.20	1.09	0.00				

Summary for Reach DP1: Design Point 1

Inflow Area = 18,597 sf, 0.27% Impervious, Inflow Depth = 1.09" for 1 Year, 24 Hour Storm event
Inflow = 0.42 cfs @ 12.19 hrs, Volume= 1,695 cf
Outflow = 0.42 cfs @ 12.19 hrs, Volume= 1,695 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.00		0.00	60.00	0.00		0.00
9.00	0.00		0.00	61.00	0.00		0.00
10.00	0.00		0.00	62.00	0.00		0.00
11.00	0.01		0.01	63.00	0.00		0.00
12.00	**0.18**		**0.18**	64.00	0.00		0.00
13.00	**0.07**		**0.07**	65.00	0.00		0.00
14.00	0.04		0.04	66.00	0.00		0.00
15.00	0.03		0.03	67.00	0.00		0.00
16.00	0.02		0.02	68.00	0.00		0.00
17.00	0.02		0.02	69.00	0.00		0.00
18.00	0.02		0.02	70.00	0.00		0.00
19.00	0.01		0.01	71.00	0.00		0.00
20.00	0.01		0.01	72.00	0.00		0.00
21.00	0.01		0.01				
22.00	0.01		0.01				
23.00	0.01		0.01				
24.00	0.01		0.01				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 1: DA 1

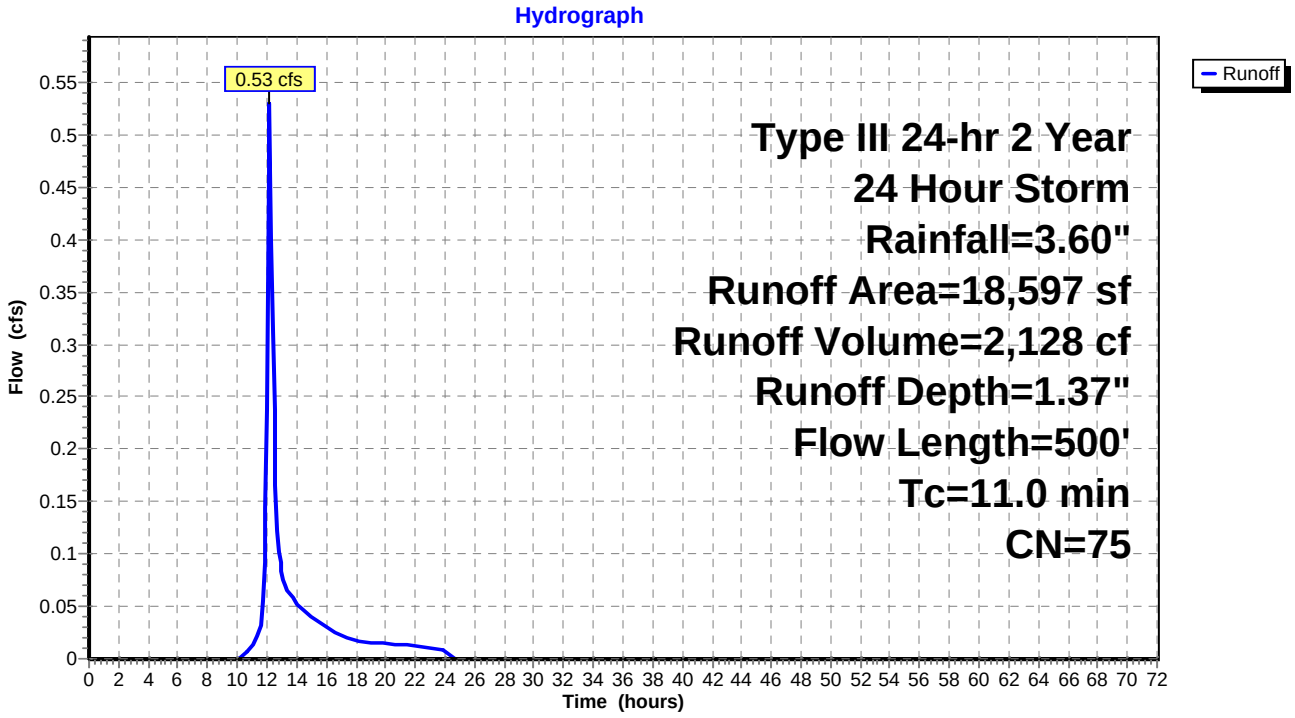
Runoff = 0.53 cfs @ 12.18 hrs, Volume= 2,128 cf, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
14,652	73	Woods, Fair, HSG C
2,399	79	50-75% Grass cover, Fair, HSG C
1,496	89	Gravel roads, HSG C
50	98	Unconnected pavement, HSG C
18,597	75	Weighted Average
18,547		99.73% Pervious Area
50		0.27% Impervious Area
50		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0400	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.9	400	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.0	500	Total			

Subcatchment Post 1: DA 1



Hydrograph for Subcatchment Post 1: DA 1

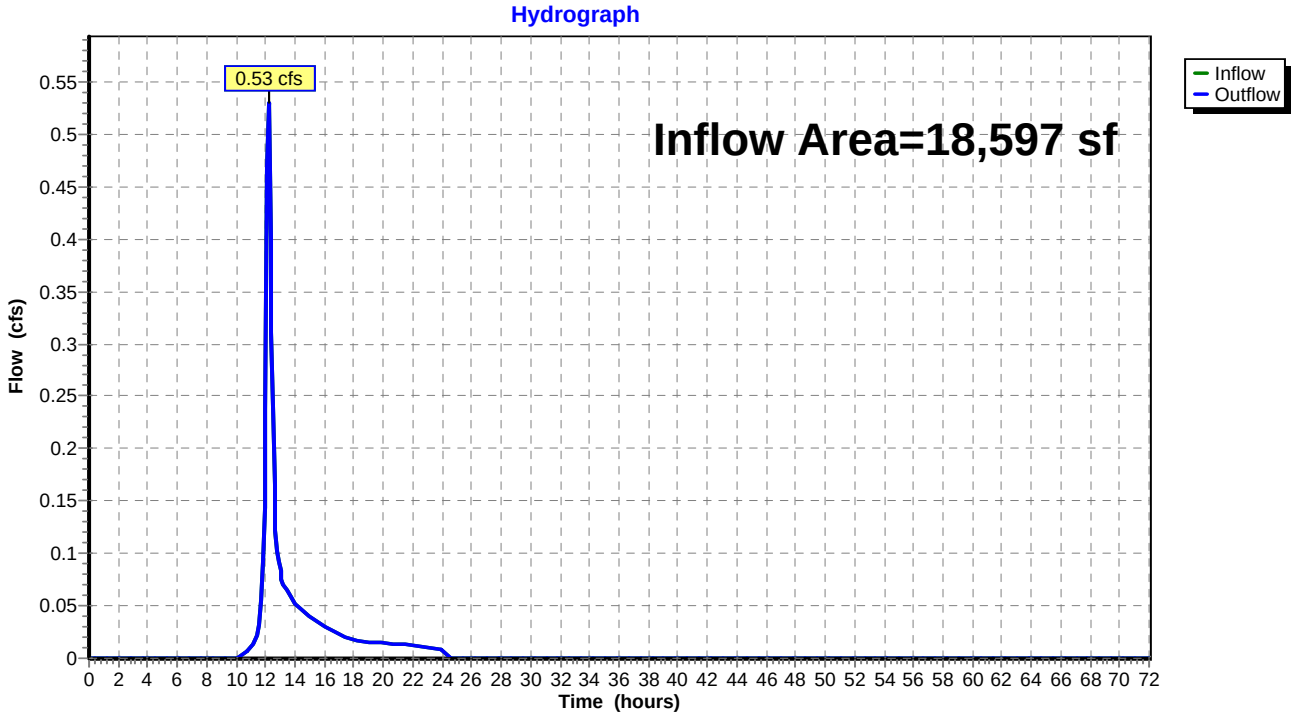
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.90	0.02	0.01
12.00	1.80	0.29	**0.24**
13.00	2.70	0.77	**0.08**
14.00	2.92	0.91	0.05
15.00	3.08	1.01	0.04
16.00	3.19	1.09	0.03
17.00	3.27	1.14	0.02
18.00	3.34	1.19	0.02
19.00	3.40	1.23	0.02
20.00	3.45	1.26	0.01
21.00	3.49	1.29	0.01
22.00	3.53	1.32	0.01
23.00	3.57	1.35	0.01
24.00	**3.60**	**1.37**	0.01
25.00	3.60	1.37	0.00
26.00	3.60	1.37	0.00
27.00	3.60	1.37	0.00
28.00	3.60	1.37	0.00
29.00	3.60	1.37	0.00
30.00	3.60	1.37	0.00
31.00	3.60	1.37	0.00
32.00	3.60	1.37	0.00
33.00	3.60	1.37	0.00
34.00	3.60	1.37	0.00
35.00	3.60	1.37	0.00
36.00	3.60	1.37	0.00
37.00	3.60	1.37	0.00
38.00	3.60	1.37	0.00
39.00	3.60	1.37	0.00
40.00	3.60	1.37	0.00
41.00	3.60	1.37	0.00
42.00	3.60	1.37	0.00
43.00	3.60	1.37	0.00
44.00	3.60	1.37	0.00
45.00	3.60	1.37	0.00
46.00	3.60	1.37	0.00
47.00	3.60	1.37	0.00
48.00	3.60	1.37	0.00
49.00	3.60	1.37	0.00
50.00	3.60	1.37	0.00
51.00	3.60	1.37	0.00
52.00	3.60	1.37	0.00
53.00	3.60	1.37	0.00
54.00	3.60	1.37	0.00
55.00	3.60	1.37	0.00
56.00	3.60	1.37	0.00
57.00	3.60	1.37	0.00
58.00	3.60	1.37	0.00
59.00	3.60	1.37	0.00
60.00	3.60	1.37	0.00
61.00	3.60	1.37	0.00
62.00	3.60	1.37	0.00
63.00	3.60	1.37	0.00
64.00	3.60	1.37	0.00
65.00	3.60	1.37	0.00
66.00	3.60	1.37	0.00
67.00	3.60	1.37	0.00
68.00	3.60	1.37	0.00
69.00	3.60	1.37	0.00
70.00	3.60	1.37	0.00
71.00	3.60	1.37	0.00
72.00	3.60	1.37	0.00

Summary for Reach DP1: Design Point 1

Inflow Area = 18,597 sf, 0.27% Impervious, Inflow Depth = 1.37" for 2 Year, 24 Hour Storm event
Inflow = 0.53 cfs @ 12.18 hrs, Volume= 2,128 cf
Outflow = 0.53 cfs @ 12.18 hrs, Volume= 2,128 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.00		0.00	60.00	0.00		0.00
9.00	0.00		0.00	61.00	0.00		0.00
10.00	0.00		0.00	62.00	0.00		0.00
11.00	0.01		0.01	63.00	0.00		0.00
12.00	**0.24**		**0.24**	64.00	0.00		0.00
13.00	**0.08**		**0.08**	65.00	0.00		0.00
14.00	0.05		0.05	66.00	0.00		0.00
15.00	0.04		0.04	67.00	0.00		0.00
16.00	0.03		0.03	68.00	0.00		0.00
17.00	0.02		0.02	69.00	0.00		0.00
18.00	0.02		0.02	70.00	0.00		0.00
19.00	0.02		0.02	71.00	0.00		0.00
20.00	0.01		0.01	72.00	0.00		0.00
21.00	0.01		0.01				
22.00	0.01		0.01				
23.00	0.01		0.01				
24.00	0.01		0.01				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 1: DA 1

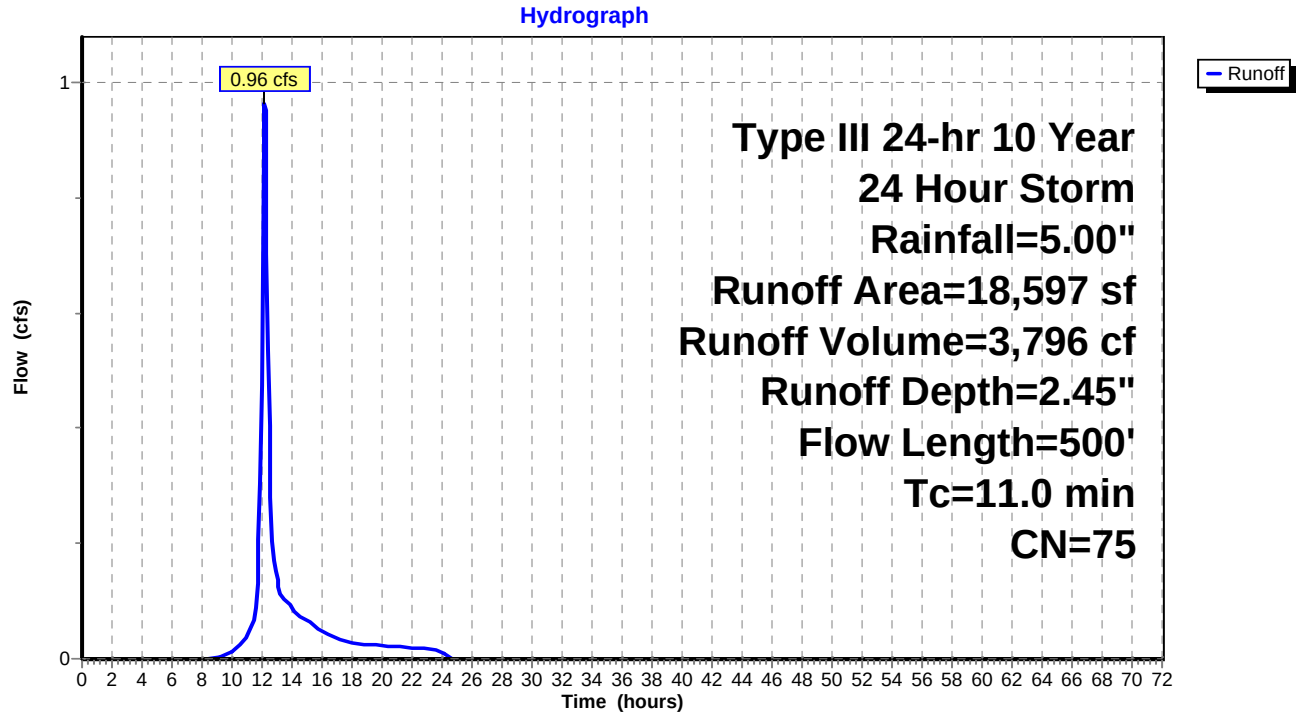
Runoff = 0.96 cfs @ 12.17 hrs, Volume= 3,796 cf, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
14,652	73	Woods, Fair, HSG C
2,399	79	50-75% Grass cover, Fair, HSG C
1,496	89	Gravel roads, HSG C
50	98	Unconnected pavement, HSG C
18,597	75	Weighted Average
18,547		99.73% Pervious Area
50		0.27% Impervious Area
50		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0400	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.9	400	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.0	500	Total			

Subcatchment Post 1: DA 1



Hydrograph for Subcatchment Post 1: DA 1

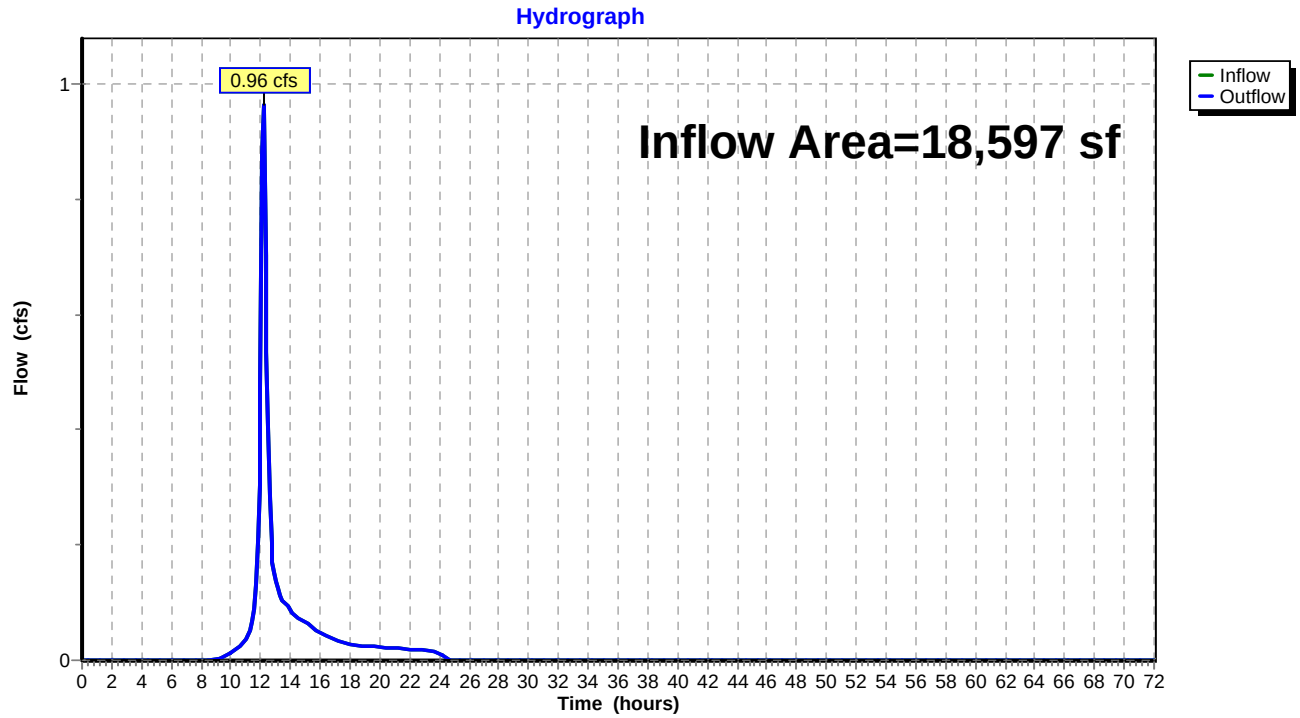
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.00	0.00
8.00	0.57	0.00	0.00
9.00	0.73	0.00	0.00
10.00	0.95	0.02	0.01
11.00	1.25	0.09	0.04
12.00	2.50	0.65	**0.47**
13.00	3.75	1.48	**0.14**
14.00	4.06	1.71	0.09
15.00	4.27	1.87	0.07
16.00	4.43	2.00	0.05
17.00	4.55	2.09	0.04
18.00	4.64	2.16	0.03
19.00	4.72	2.22	0.03
20.00	4.79	2.28	0.02
21.00	4.85	2.33	0.02
22.00	4.90	2.37	0.02
23.00	4.95	2.41	0.02
24.00	**5.00**	**2.45**	0.02
25.00	5.00	2.45	0.00
26.00	5.00	2.45	0.00
27.00	5.00	2.45	0.00
28.00	5.00	2.45	0.00
29.00	5.00	2.45	0.00
30.00	5.00	2.45	0.00
31.00	5.00	2.45	0.00
32.00	5.00	2.45	0.00
33.00	5.00	2.45	0.00
34.00	5.00	2.45	0.00
35.00	5.00	2.45	0.00
36.00	5.00	2.45	0.00
37.00	5.00	2.45	0.00
38.00	5.00	2.45	0.00
39.00	5.00	2.45	0.00
40.00	5.00	2.45	0.00
41.00	5.00	2.45	0.00
42.00	5.00	2.45	0.00
43.00	5.00	2.45	0.00
44.00	5.00	2.45	0.00
45.00	5.00	2.45	0.00
46.00	5.00	2.45	0.00
47.00	5.00	2.45	0.00
48.00	5.00	2.45	0.00
49.00	5.00	2.45	0.00
50.00	5.00	2.45	0.00
51.00	5.00	2.45	0.00
52.00	5.00	2.45	0.00
53.00	5.00	2.45	0.00
54.00	5.00	2.45	0.00
55.00	5.00	2.45	0.00
56.00	5.00	2.45	0.00
57.00	5.00	2.45	0.00
58.00	5.00	2.45	0.00
59.00	5.00	2.45	0.00
60.00	5.00	2.45	0.00
61.00	5.00	2.45	0.00
62.00	5.00	2.45	0.00
63.00	5.00	2.45	0.00
64.00	5.00	2.45	0.00
65.00	5.00	2.45	0.00
66.00	5.00	2.45	0.00
67.00	5.00	2.45	0.00
68.00	5.00	2.45	0.00
69.00	5.00	2.45	0.00
70.00	5.00	2.45	0.00
71.00	5.00	2.45	0.00
72.00	5.00	2.45	0.00

Summary for Reach DP1: Design Point 1

Inflow Area = 18,597 sf, 0.27% Impervious, Inflow Depth = 2.45" for 10 Year, 24 Hour Storm event
Inflow = 0.96 cfs @ 12.17 hrs, Volume= 3,796 cf
Outflow = 0.96 cfs @ 12.17 hrs, Volume= 3,796 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.00		0.00	60.00	0.00		0.00
9.00	0.00		0.00	61.00	0.00		0.00
10.00	0.01		0.01	62.00	0.00		0.00
11.00	0.04		0.04	63.00	0.00		0.00
12.00	**0.47**		**0.47**	64.00	0.00		0.00
13.00	**0.14**		**0.14**	65.00	0.00		0.00
14.00	0.09		0.09	66.00	0.00		0.00
15.00	0.07		0.07	67.00	0.00		0.00
16.00	0.05		0.05	68.00	0.00		0.00
17.00	0.04		0.04	69.00	0.00		0.00
18.00	0.03		0.03	70.00	0.00		0.00
19.00	0.03		0.03	71.00	0.00		0.00
20.00	0.02		0.02	72.00	0.00		0.00
21.00	0.02		0.02				
22.00	0.02		0.02				
23.00	0.02		0.02				
24.00	0.02		0.02				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 1: DA 1

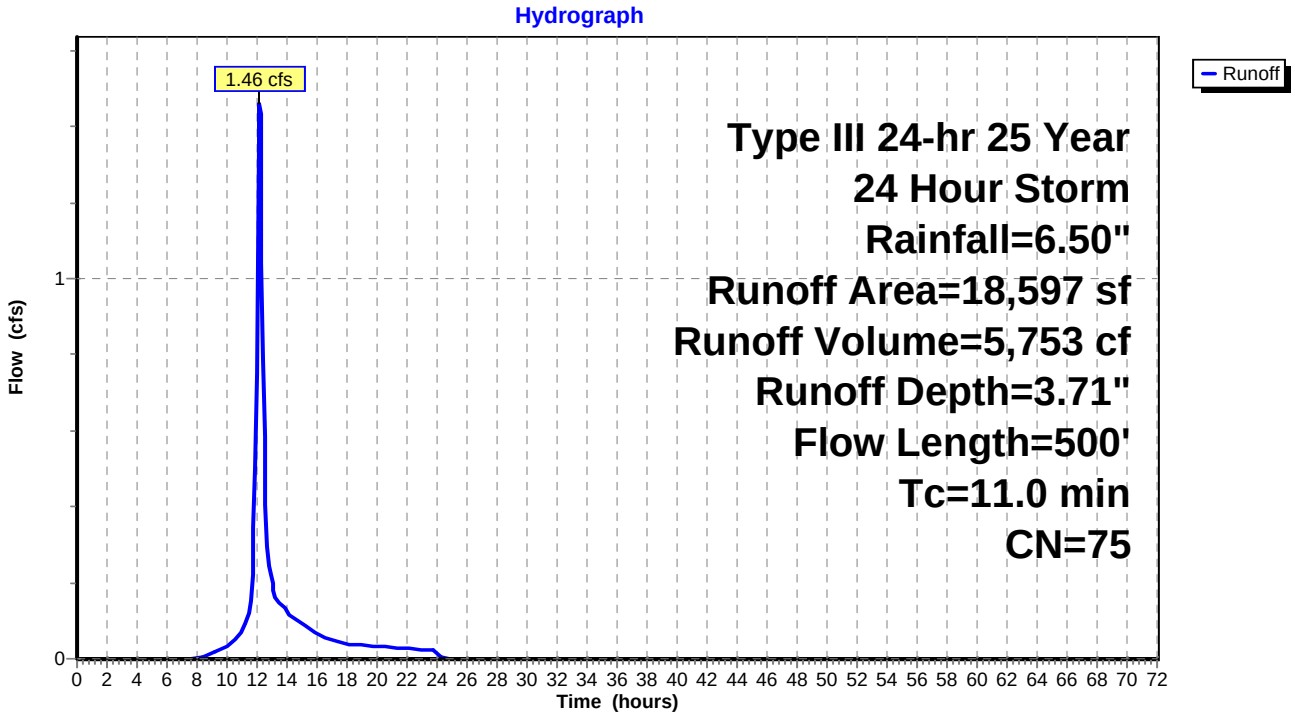
Runoff = 1.46 cfs @ 12.17 hrs, Volume= 5,753 cf, Depth= 3.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
14,652	73	Woods, Fair, HSG C
2,399	79	50-75% Grass cover, Fair, HSG C
1,496	89	Gravel roads, HSG C
50	98	Unconnected pavement, HSG C
18,597	75	Weighted Average
18,547		99.73% Pervious Area
50		0.27% Impervious Area
50		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0400	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.9	400	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.0	500	Total			

Subcatchment Post 1: DA 1



Hydrograph for Subcatchment Post 1: DA 1

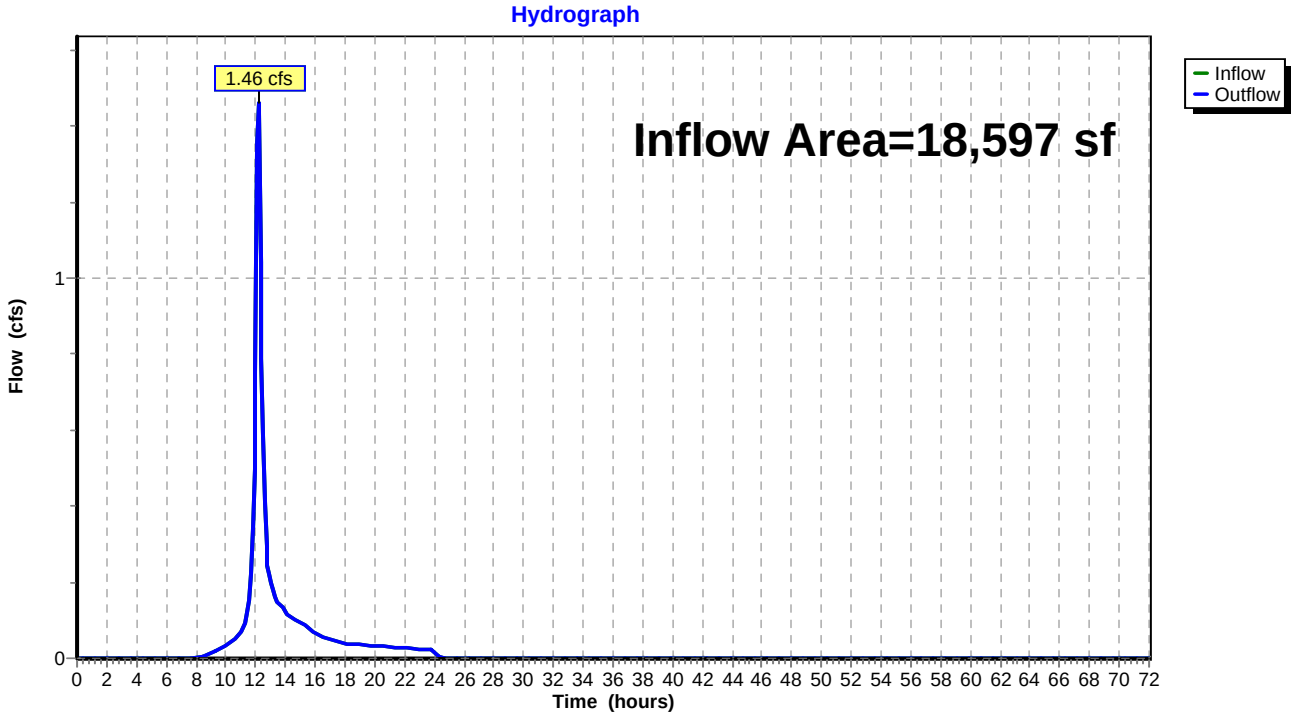
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	6.50	3.71	0.00
1.00	0.07	0.00	0.00	53.00	6.50	3.71	0.00
2.00	0.13	0.00	0.00	54.00	6.50	3.71	0.00
3.00	0.20	0.00	0.00	55.00	6.50	3.71	0.00
4.00	0.28	0.00	0.00	56.00	6.50	3.71	0.00
5.00	0.37	0.00	0.00	57.00	6.50	3.71	0.00
6.00	0.47	0.00	0.00	58.00	6.50	3.71	0.00
7.00	0.59	0.00	0.00	59.00	6.50	3.71	0.00
8.00	0.74	0.00	0.00	60.00	6.50	3.71	0.00
9.00	0.95	0.02	0.01	61.00	6.50	3.71	0.00
10.00	1.23	0.08	0.03	62.00	6.50	3.71	0.00
11.00	1.63	0.21	0.07	63.00	6.50	3.71	0.00
12.00	3.25	1.13	**0.75**	64.00	6.50	3.71	0.00
13.00	4.87	2.35	**0.20**	65.00	6.50	3.71	0.00
14.00	5.27	2.67	0.12	66.00	6.50	3.71	0.00
15.00	5.55	2.90	0.09	67.00	6.50	3.71	0.00
16.00	5.76	3.08	0.07	68.00	6.50	3.71	0.00
17.00	5.91	3.21	0.05	69.00	6.50	3.71	0.00
18.00	6.03	3.31	0.04	70.00	6.50	3.71	0.00
19.00	6.13	3.39	0.04	71.00	6.50	3.71	0.00
20.00	6.22	3.47	0.03	72.00	6.50	3.71	0.00
21.00	6.30	3.54	0.03				
22.00	6.37	3.60	0.03				
23.00	6.44	3.66	0.02				
24.00	**6.50**	**3.71**	0.02				
25.00	6.50	3.71	0.00				
26.00	6.50	3.71	0.00				
27.00	6.50	3.71	0.00				
28.00	6.50	3.71	0.00				
29.00	6.50	3.71	0.00				
30.00	6.50	3.71	0.00				
31.00	6.50	3.71	0.00				
32.00	6.50	3.71	0.00				
33.00	6.50	3.71	0.00				
34.00	6.50	3.71	0.00				
35.00	6.50	3.71	0.00				
36.00	6.50	3.71	0.00				
37.00	6.50	3.71	0.00				
38.00	6.50	3.71	0.00				
39.00	6.50	3.71	0.00				
40.00	6.50	3.71	0.00				
41.00	6.50	3.71	0.00				
42.00	6.50	3.71	0.00				
43.00	6.50	3.71	0.00				
44.00	6.50	3.71	0.00				
45.00	6.50	3.71	0.00				
46.00	6.50	3.71	0.00				
47.00	6.50	3.71	0.00				
48.00	6.50	3.71	0.00				
49.00	6.50	3.71	0.00				
50.00	6.50	3.71	0.00				
51.00	6.50	3.71	0.00				

Summary for Reach DP1: Design Point 1

Inflow Area = 18,597 sf, 0.27% Impervious, Inflow Depth = 3.71" for 25 Year, 24 Hour Storm event
Inflow = 1.46 cfs @ 12.17 hrs, Volume= 5,753 cf
Outflow = 1.46 cfs @ 12.17 hrs, Volume= 5,753 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.00		0.00
9.00	0.01		0.01
10.00	0.03		0.03
11.00	0.07		0.07
12.00	**0.75**		**0.75**
13.00	**0.20**		**0.20**
14.00	0.12		0.12
15.00	0.09		0.09
16.00	0.07		0.07
17.00	0.05		0.05
18.00	0.04		0.04
19.00	0.04		0.04
20.00	0.03		0.03
21.00	0.03		0.03
22.00	0.03		0.03
23.00	0.02		0.02
24.00	0.02		0.02
25.00	0.00		0.00
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Subcatchment Post 1: DA 1

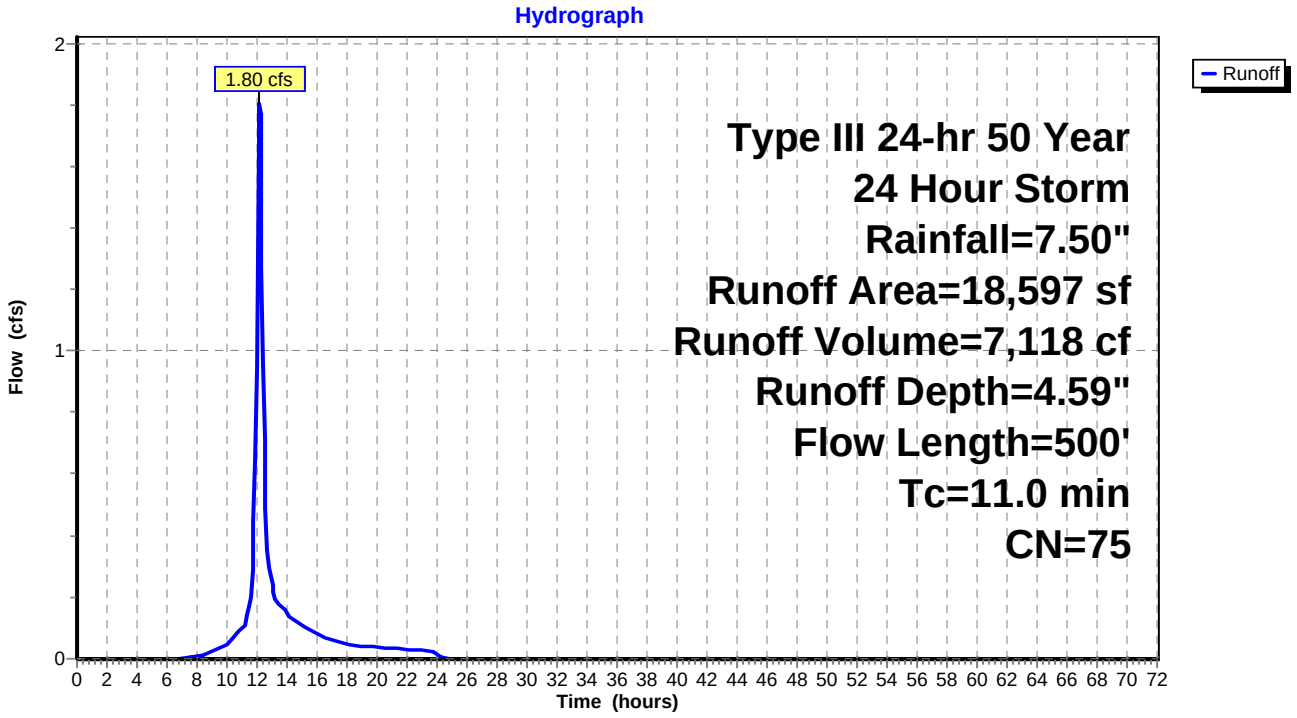
Runoff = 1.80 cfs @ 12.16 hrs, Volume= 7,118 cf, Depth= 4.59"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
14,652	73	Woods, Fair, HSG C
2,399	79	50-75% Grass cover, Fair, HSG C
1,496	89	Gravel roads, HSG C
50	98	Unconnected pavement, HSG C
18,597	75	Weighted Average
18,547		99.73% Pervious Area
50		0.27% Impervious Area
50		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0400	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.9	400	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.0	500	Total			

Subcatchment Post 1: DA 1



Hydrograph for Subcatchment Post 1: DA 1

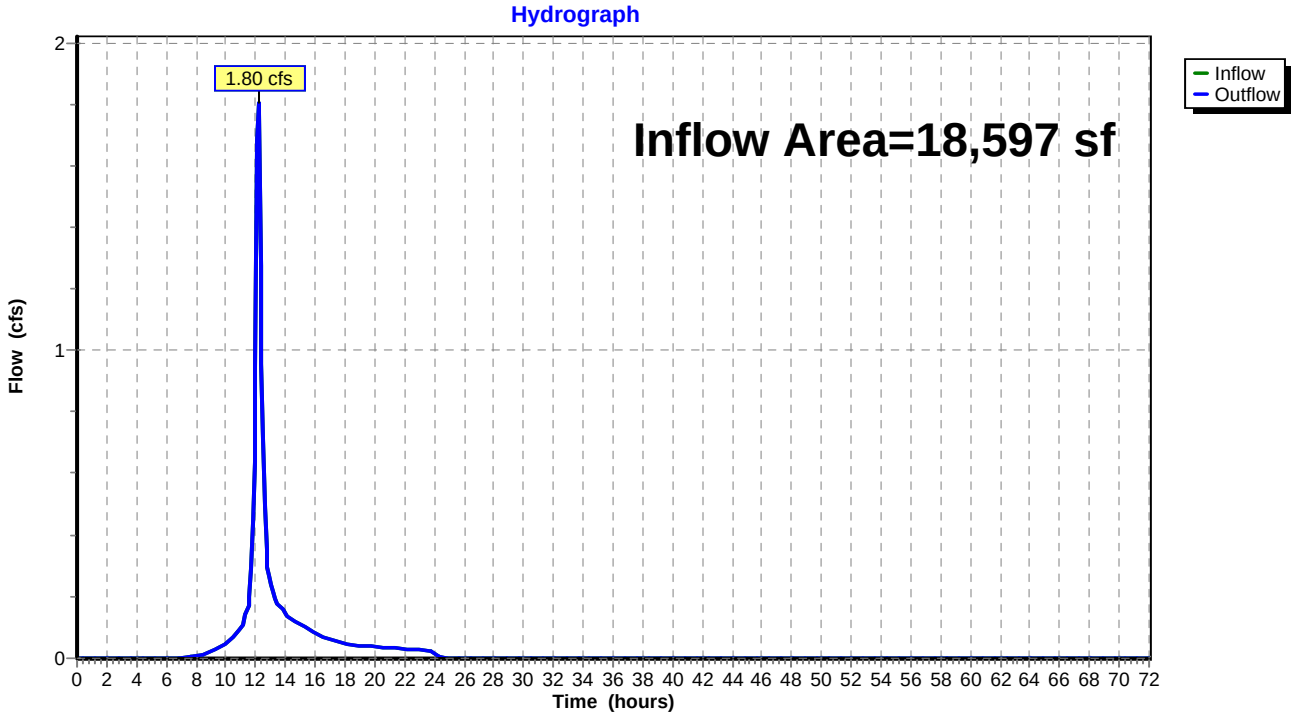
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.23	0.00	0.00
4.00	0.32	0.00	0.00
5.00	0.43	0.00	0.00
6.00	0.54	0.00	0.00
7.00	0.68	0.00	0.00
8.00	0.86	0.01	0.01
9.00	1.09	0.05	0.02
10.00	1.42	0.14	0.05
11.00	1.88	0.32	0.10
12.00	3.75	1.48	**0.95**
13.00	5.62	2.97	**0.24**
14.00	6.08	3.35	0.15
15.00	6.41	3.63	0.11
16.00	6.64	3.84	0.08
17.00	6.82	3.99	0.06
18.00	6.96	4.11	0.05
19.00	7.07	4.22	0.04
20.00	7.18	4.31	0.04
21.00	7.27	4.39	0.03
22.00	7.36	4.46	0.03
23.00	7.43	4.53	0.03
24.00	**7.50**	**4.59**	0.02
25.00	7.50	4.59	0.00
26.00	7.50	4.59	0.00
27.00	7.50	4.59	0.00
28.00	7.50	4.59	0.00
29.00	7.50	4.59	0.00
30.00	7.50	4.59	0.00
31.00	7.50	4.59	0.00
32.00	7.50	4.59	0.00
33.00	7.50	4.59	0.00
34.00	7.50	4.59	0.00
35.00	7.50	4.59	0.00
36.00	7.50	4.59	0.00
37.00	7.50	4.59	0.00
38.00	7.50	4.59	0.00
39.00	7.50	4.59	0.00
40.00	7.50	4.59	0.00
41.00	7.50	4.59	0.00
42.00	7.50	4.59	0.00
43.00	7.50	4.59	0.00
44.00	7.50	4.59	0.00
45.00	7.50	4.59	0.00
46.00	7.50	4.59	0.00
47.00	7.50	4.59	0.00
48.00	7.50	4.59	0.00
49.00	7.50	4.59	0.00
50.00	7.50	4.59	0.00
51.00	7.50	4.59	0.00
52.00	7.50	4.59	0.00
53.00	7.50	4.59	0.00
54.00	7.50	4.59	0.00
55.00	7.50	4.59	0.00
56.00	7.50	4.59	0.00
57.00	7.50	4.59	0.00
58.00	7.50	4.59	0.00
59.00	7.50	4.59	0.00
60.00	7.50	4.59	0.00
61.00	7.50	4.59	0.00
62.00	7.50	4.59	0.00
63.00	7.50	4.59	0.00
64.00	7.50	4.59	0.00
65.00	7.50	4.59	0.00
66.00	7.50	4.59	0.00
67.00	7.50	4.59	0.00
68.00	7.50	4.59	0.00
69.00	7.50	4.59	0.00
70.00	7.50	4.59	0.00
71.00	7.50	4.59	0.00
72.00	7.50	4.59	0.00

Summary for Reach DP1: Design Point 1

Inflow Area = 18,597 sf, 0.27% Impervious, Inflow Depth = 4.59" for 50 Year, 24 Hour Storm event
Inflow = 1.80 cfs @ 12.16 hrs, Volume= 7,118 cf
Outflow = 1.80 cfs @ 12.16 hrs, Volume= 7,118 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.01		0.01	60.00	0.00		0.00
9.00	0.02		0.02	61.00	0.00		0.00
10.00	0.05		0.05	62.00	0.00		0.00
11.00	0.10		0.10	63.00	0.00		0.00
12.00	**0.95**		**0.95**	64.00	0.00		0.00
13.00	**0.24**		**0.24**	65.00	0.00		0.00
14.00	0.15		0.15	66.00	0.00		0.00
15.00	0.11		0.11	67.00	0.00		0.00
16.00	0.08		0.08	68.00	0.00		0.00
17.00	0.06		0.06	69.00	0.00		0.00
18.00	0.05		0.05	70.00	0.00		0.00
19.00	0.04		0.04	71.00	0.00		0.00
20.00	0.04		0.04	72.00	0.00		0.00
21.00	0.03		0.03				
22.00	0.03		0.03				
23.00	0.03		0.03				
24.00	0.02		0.02				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 1: DA 1

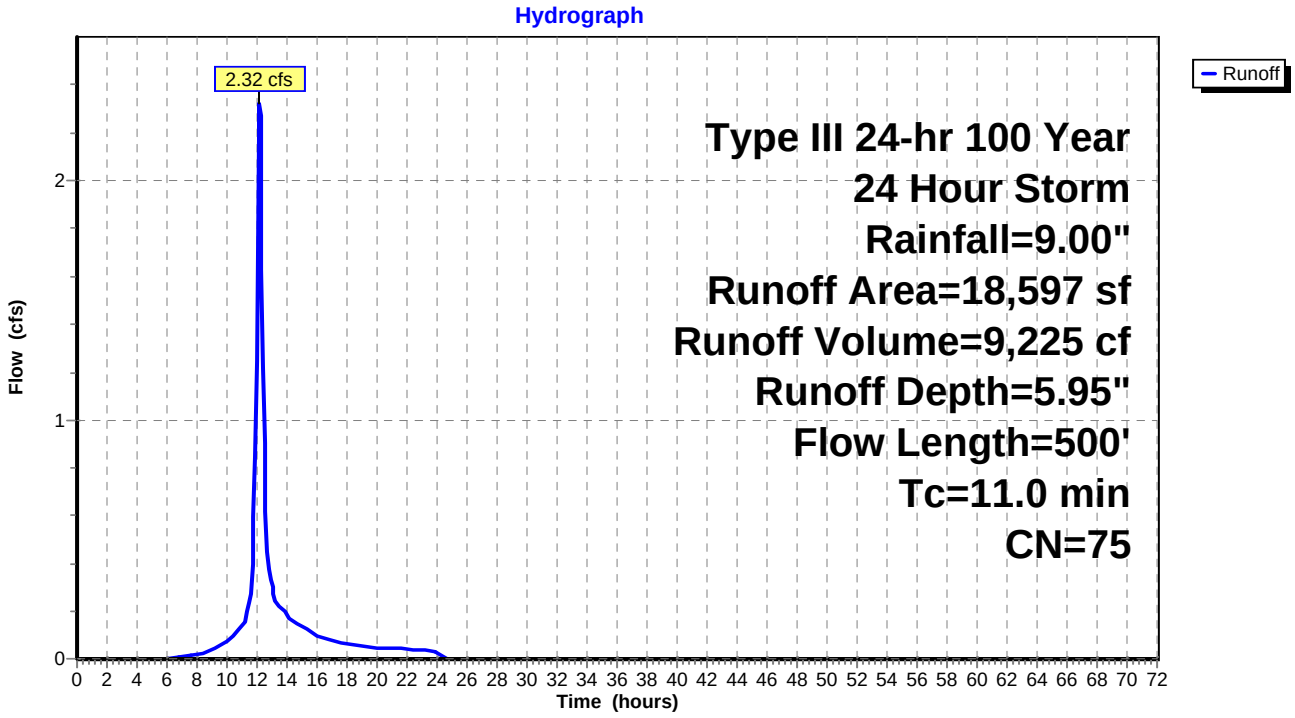
Runoff = 2.32 cfs @ 12.16 hrs, Volume= 9,225 cf, Depth= 5.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
14,652	73	Woods, Fair, HSG C
2,399	79	50-75% Grass cover, Fair, HSG C
1,496	89	Gravel roads, HSG C
50	98	Unconnected pavement, HSG C
18,597	75	Weighted Average
18,547		99.73% Pervious Area
50		0.27% Impervious Area
50		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.1	100	0.0400	0.23		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"
3.9	400	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
11.0	500	Total			

Subcatchment Post 1: DA 1



Hydrograph for Subcatchment Post 1: DA 1

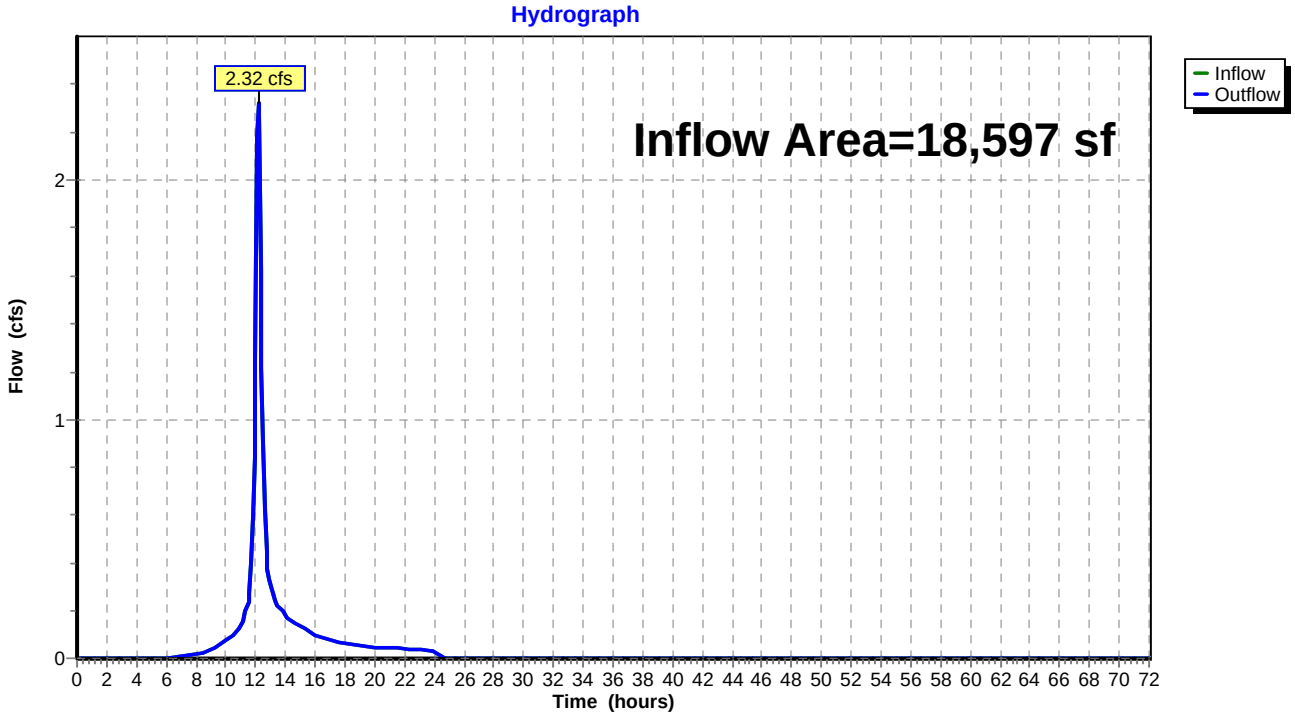
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.39	0.00	0.00
5.00	0.51	0.00	0.00
6.00	0.65	0.00	0.00
7.00	0.81	0.01	0.01
8.00	1.03	0.03	0.02
9.00	1.31	0.10	0.04
10.00	1.70	0.24	0.07
11.00	2.25	0.51	0.14
12.00	4.50	2.05	**1.25**
13.00	6.75	3.93	**0.30**
14.00	7.30	4.41	0.18
15.00	7.69	4.76	0.14
16.00	7.97	5.02	0.10
17.00	8.19	5.21	0.08
18.00	8.35	5.36	0.06
19.00	8.49	5.49	0.05
20.00	8.61	5.60	0.05
21.00	8.72	5.70	0.04
22.00	8.83	5.79	0.04
23.00	8.92	5.88	0.03
24.00	**9.00**	**5.95**	0.03
25.00	9.00	5.95	0.00
26.00	9.00	5.95	0.00
27.00	9.00	5.95	0.00
28.00	9.00	5.95	0.00
29.00	9.00	5.95	0.00
30.00	9.00	5.95	0.00
31.00	9.00	5.95	0.00
32.00	9.00	5.95	0.00
33.00	9.00	5.95	0.00
34.00	9.00	5.95	0.00
35.00	9.00	5.95	0.00
36.00	9.00	5.95	0.00
37.00	9.00	5.95	0.00
38.00	9.00	5.95	0.00
39.00	9.00	5.95	0.00
40.00	9.00	5.95	0.00
41.00	9.00	5.95	0.00
42.00	9.00	5.95	0.00
43.00	9.00	5.95	0.00
44.00	9.00	5.95	0.00
45.00	9.00	5.95	0.00
46.00	9.00	5.95	0.00
47.00	9.00	5.95	0.00
48.00	9.00	5.95	0.00
49.00	9.00	5.95	0.00
50.00	9.00	5.95	0.00
51.00	9.00	5.95	0.00
52.00	9.00	5.95	0.00
53.00	9.00	5.95	0.00
54.00	9.00	5.95	0.00
55.00	9.00	5.95	0.00
56.00	9.00	5.95	0.00
57.00	9.00	5.95	0.00
58.00	9.00	5.95	0.00
59.00	9.00	5.95	0.00
60.00	9.00	5.95	0.00
61.00	9.00	5.95	0.00
62.00	9.00	5.95	0.00
63.00	9.00	5.95	0.00
64.00	9.00	5.95	0.00
65.00	9.00	5.95	0.00
66.00	9.00	5.95	0.00
67.00	9.00	5.95	0.00
68.00	9.00	5.95	0.00
69.00	9.00	5.95	0.00
70.00	9.00	5.95	0.00
71.00	9.00	5.95	0.00
72.00	9.00	5.95	0.00

Summary for Reach DP1: Design Point 1

Inflow Area = 18,597 sf, 0.27% Impervious, Inflow Depth = 5.95" for 100 Year, 24 Hour Storm event
Inflow = 2.32 cfs @ 12.16 hrs, Volume= 9,225 cf
Outflow = 2.32 cfs @ 12.16 hrs, Volume= 9,225 cf, Atten= 0%, Lag= 0.0 min

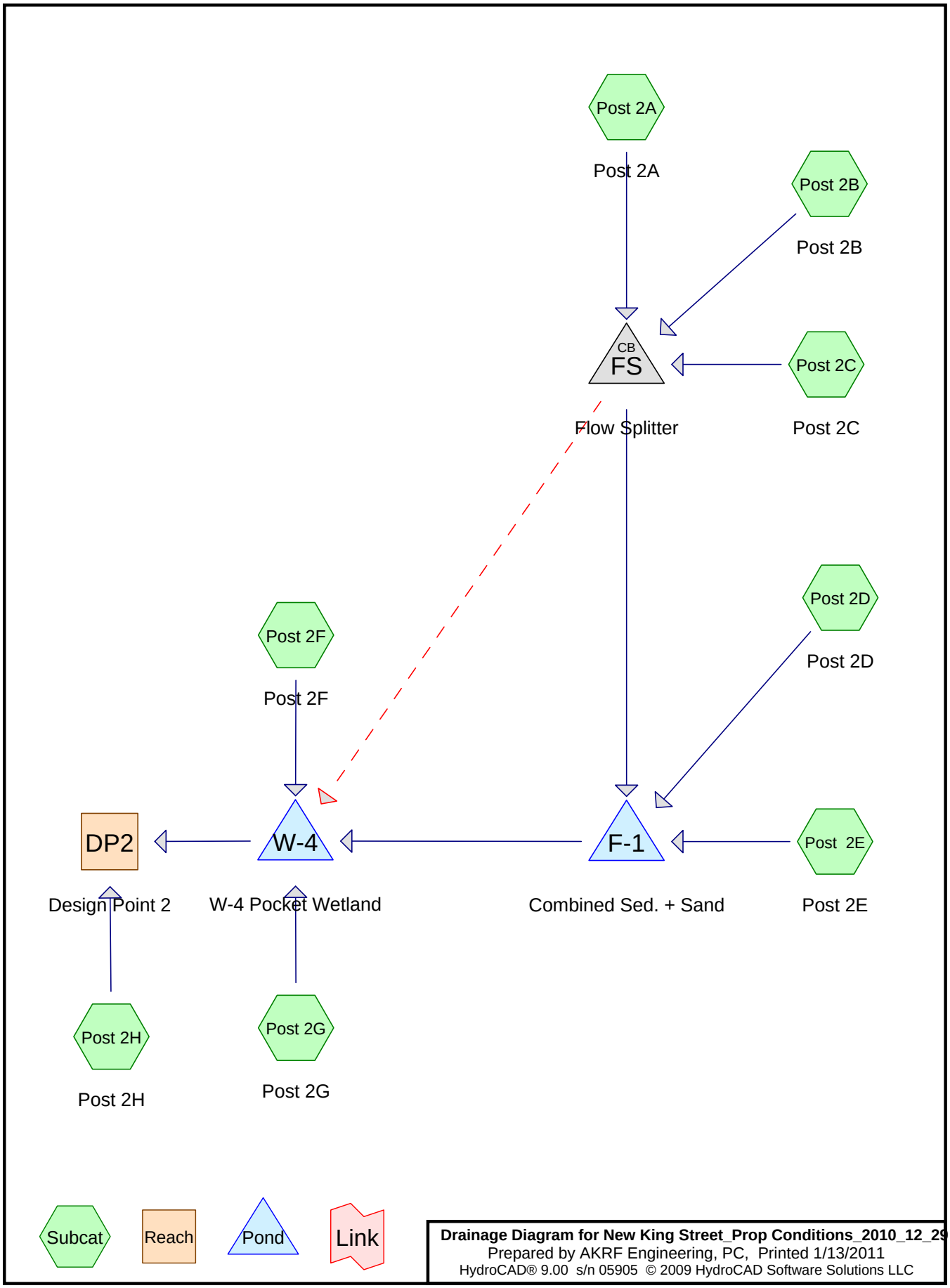
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP1: Design Point 1



Hydrograph for Reach DP1: Design Point 1

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.01		0.01
8.00	0.02		0.02
9.00	0.04		0.04
10.00	0.07		0.07
11.00	0.14		0.14
12.00	**1.25**		**1.25**
13.00	**0.30**		**0.30**
14.00	0.18		0.18
15.00	0.14		0.14
16.00	0.10		0.10
17.00	0.08		0.08
18.00	0.06		0.06
19.00	0.05		0.05
20.00	0.05		0.05
21.00	0.04		0.04
22.00	0.04		0.04
23.00	0.03		0.03
24.00	0.03		0.03
25.00	0.00		0.00
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00



Drainage Diagram for New King Street_Prop Conditions_2010_12_29
Prepared by AKRF Engineering, PC, Printed 1/13/2011
HydroCAD® 9.00 s/n 05905 © 2009 HydroCAD Software Solutions LLC

Summary for Subcatchment Post 2E: Post 2E

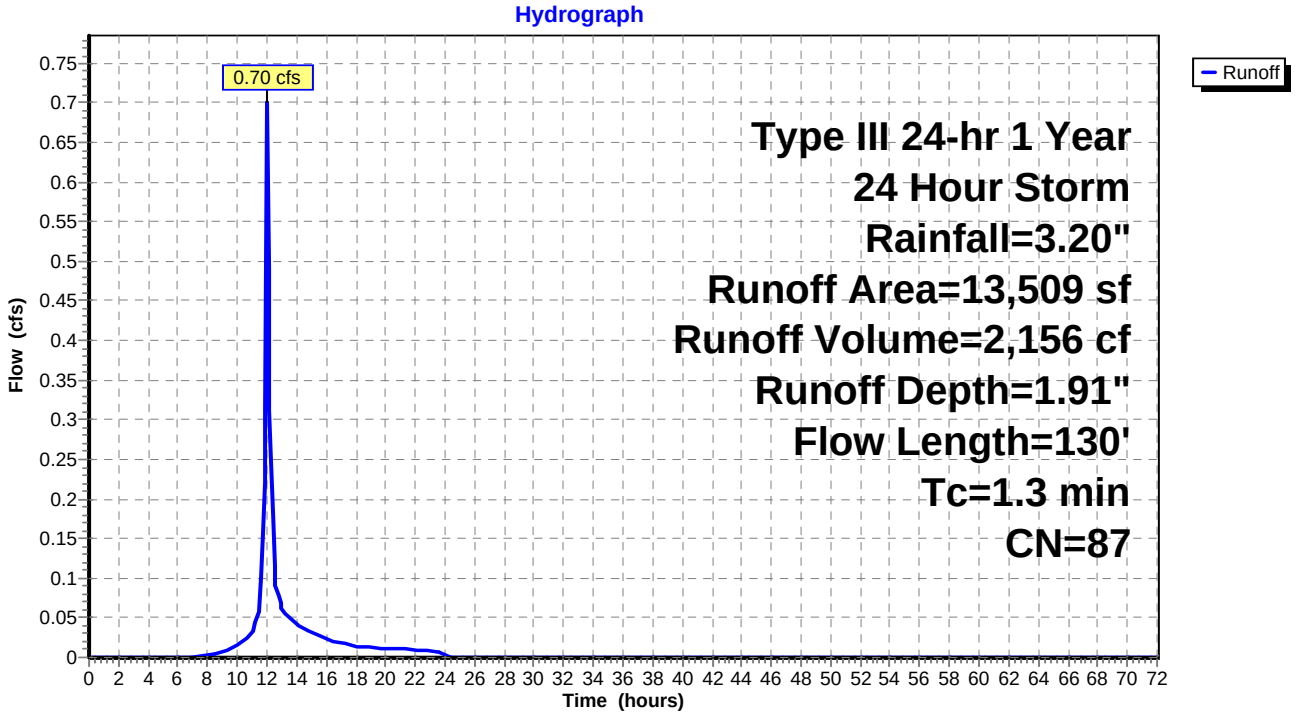
Runoff = 0.70 cfs @ 12.02 hrs, Volume= 2,156 cf, Depth= 1.91"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
5,415	98	Paved parking, HSG C
8,094	79	50-75% Grass cover, Fair, HSG C
13,509	87	Weighted Average
8,094		59.92% Pervious Area
5,415		40.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.44		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
0.1	30	0.3800	9.92		**Shallow Concentrated Flow, Pavement** Unpaved Kv= 16.1 fps
1.3	130	Total			

Subcatchment Post 2E: Post 2E



Hydrograph for Subcatchment Post 2E: Post 2E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	3.20	1.91	0.00
1.00	0.03	0.00	0.00	53.00	3.20	1.91	0.00
2.00	0.06	0.00	0.00	54.00	3.20	1.91	0.00
3.00	0.10	0.00	0.00	55.00	3.20	1.91	0.00
4.00	0.14	0.00	0.00	56.00	3.20	1.91	0.00
5.00	0.18	0.00	0.00	57.00	3.20	1.91	0.00
6.00	0.23	0.00	0.00	58.00	3.20	1.91	0.00
7.00	0.29	0.00	0.00	59.00	3.20	1.91	0.00
8.00	0.36	0.00	0.00	60.00	3.20	1.91	0.00
9.00	0.47	0.02	0.01	61.00	3.20	1.91	0.00
10.00	0.60	0.05	0.02	62.00	3.20	1.91	0.00
11.00	0.80	0.13	0.03	63.00	3.20	1.91	0.00
12.00	1.60	0.61	**0.69**	64.00	3.20	1.91	0.00
13.00	2.40	1.23	0.06	65.00	3.20	1.91	0.00
14.00	2.60	1.39	0.04	66.00	3.20	1.91	0.00
15.00	2.73	1.51	0.03	67.00	3.20	1.91	0.00
16.00	2.84	1.60	0.02	68.00	3.20	1.91	0.00
17.00	2.91	1.66	0.02	69.00	3.20	1.91	0.00
18.00	2.97	1.71	0.01	70.00	3.20	1.91	0.00
19.00	3.02	1.76	0.01	71.00	3.20	1.91	0.00
20.00	3.06	1.79	0.01	72.00	3.20	1.91	0.00
21.00	3.10	1.83	0.01				
22.00	3.14	1.86	0.01				
23.00	3.17	1.89	0.01				
24.00	**3.20**	**1.91**	0.01				
25.00	3.20	1.91	0.00				
26.00	3.20	1.91	0.00				
27.00	3.20	1.91	0.00				
28.00	3.20	1.91	0.00				
29.00	3.20	1.91	0.00				
30.00	3.20	1.91	0.00				
31.00	3.20	1.91	0.00				
32.00	3.20	1.91	0.00				
33.00	3.20	1.91	0.00				
34.00	3.20	1.91	0.00				
35.00	3.20	1.91	0.00				
36.00	3.20	1.91	0.00				
37.00	3.20	1.91	0.00				
38.00	3.20	1.91	0.00				
39.00	3.20	1.91	0.00				
40.00	3.20	1.91	0.00				
41.00	3.20	1.91	0.00				
42.00	3.20	1.91	0.00				
43.00	3.20	1.91	0.00				
44.00	3.20	1.91	0.00				
45.00	3.20	1.91	0.00				
46.00	3.20	1.91	0.00				
47.00	3.20	1.91	0.00				
48.00	3.20	1.91	0.00				
49.00	3.20	1.91	0.00				
50.00	3.20	1.91	0.00				
51.00	3.20	1.91	0.00				

Summary for Subcatchment Post 2A: Post 2A

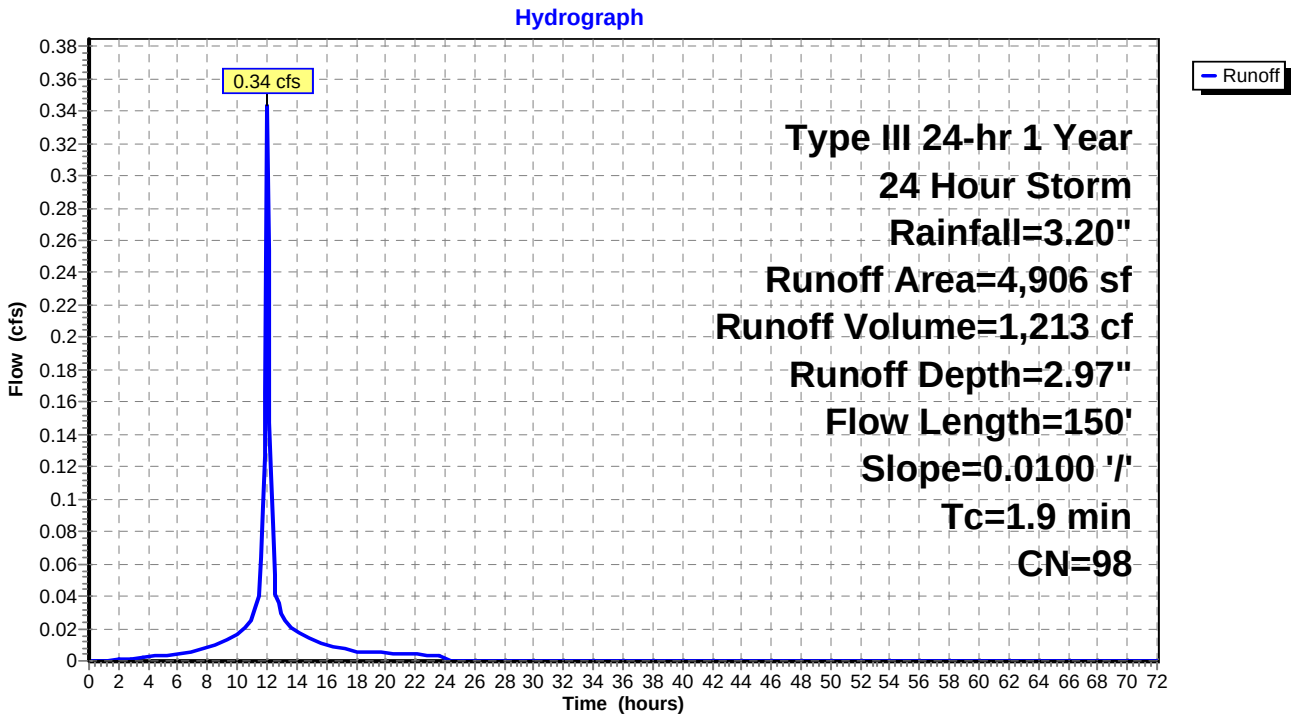
Runoff = 0.34 cfs @ 12.02 hrs, Volume= 1,213 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
4,906	98	Paved parking, HSG C
4,906		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, Pavement** Paved Kv= 20.3 fps
1.9	150	Total			

Subcatchment Post 2A: Post 2A



Hydrograph for Subcatchment Post 2A: Post 2A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	3.20	2.97	0.00
1.00	0.03	0.00	0.00	53.00	3.20	2.97	0.00
2.00	0.06	0.00	0.00	54.00	3.20	2.97	0.00
3.00	0.10	0.01	0.00	55.00	3.20	2.97	0.00
4.00	0.14	0.03	0.00	56.00	3.20	2.97	0.00
5.00	0.18	0.06	0.00	57.00	3.20	2.97	0.00
6.00	0.23	0.09	0.00	58.00	3.20	2.97	0.00
7.00	0.29	0.14	0.01	59.00	3.20	2.97	0.00
8.00	0.36	0.20	0.01	60.00	3.20	2.97	0.00
9.00	0.47	0.29	0.01	61.00	3.20	2.97	0.00
10.00	0.60	0.41	0.02	62.00	3.20	2.97	0.00
11.00	0.80	0.60	0.03	63.00	3.20	2.97	0.00
12.00	1.60	1.38	**0.34**	64.00	3.20	2.97	0.00
13.00	2.40	2.17	0.03	65.00	3.20	2.97	0.00
14.00	2.60	2.37	0.02	66.00	3.20	2.97	0.00
15.00	2.73	2.50	0.01	67.00	3.20	2.97	0.00
16.00	2.84	2.60	0.01	68.00	3.20	2.97	0.00
17.00	2.91	2.68	0.01	69.00	3.20	2.97	0.00
18.00	2.97	2.74	0.01	70.00	3.20	2.97	0.00
19.00	3.02	2.79	0.01	71.00	3.20	2.97	0.00
20.00	3.06	2.83	0.00	72.00	3.20	2.97	0.00
21.00	3.10	2.87	0.00				
22.00	3.14	2.91	0.00				
23.00	3.17	2.94	0.00				
24.00	**3.20**	**2.97**	0.00				
25.00	3.20	2.97	0.00				
26.00	3.20	2.97	0.00				
27.00	3.20	2.97	0.00				
28.00	3.20	2.97	0.00				
29.00	3.20	2.97	0.00				
30.00	3.20	2.97	0.00				
31.00	3.20	2.97	0.00				
32.00	3.20	2.97	0.00				
33.00	3.20	2.97	0.00				
34.00	3.20	2.97	0.00				
35.00	3.20	2.97	0.00				
36.00	3.20	2.97	0.00				
37.00	3.20	2.97	0.00				
38.00	3.20	2.97	0.00				
39.00	3.20	2.97	0.00				
40.00	3.20	2.97	0.00				
41.00	3.20	2.97	0.00				
42.00	3.20	2.97	0.00				
43.00	3.20	2.97	0.00				
44.00	3.20	2.97	0.00				
45.00	3.20	2.97	0.00				
46.00	3.20	2.97	0.00				
47.00	3.20	2.97	0.00				
48.00	3.20	2.97	0.00				
49.00	3.20	2.97	0.00				
50.00	3.20	2.97	0.00				
51.00	3.20	2.97	0.00				

Summary for Subcatchment Post 2B: Post 2B

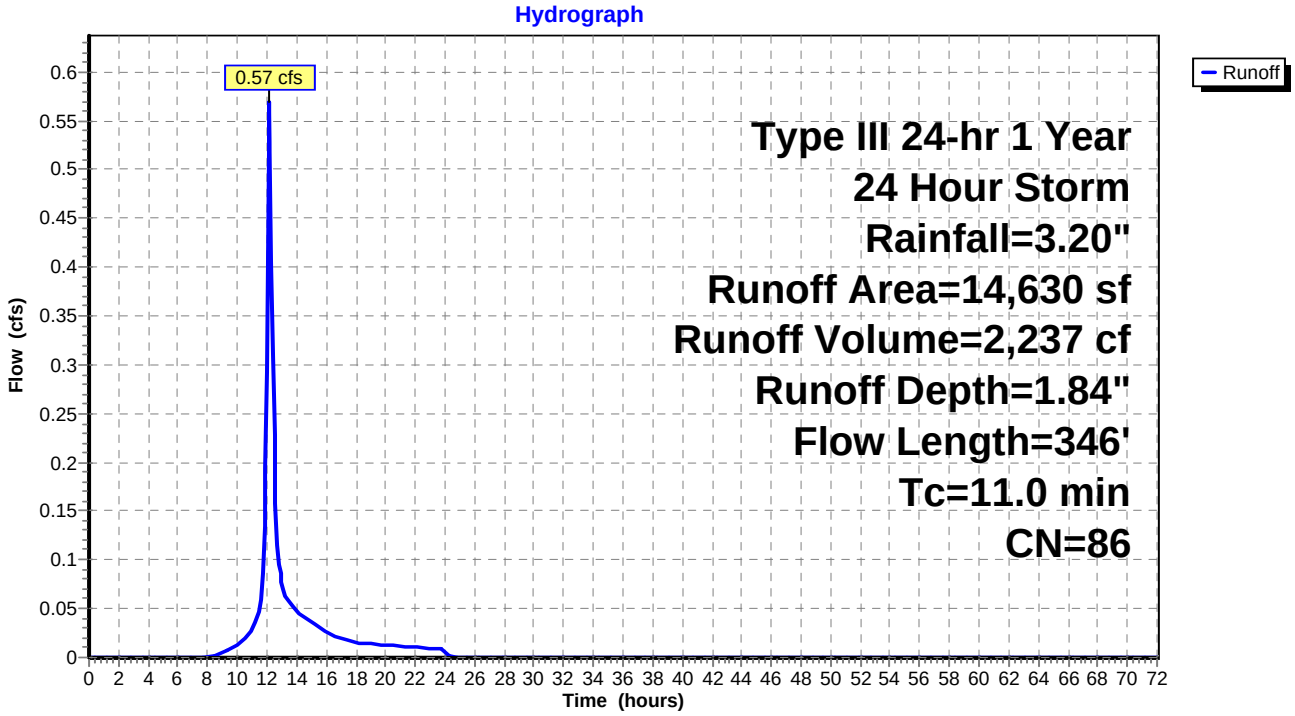
Runoff = 0.57 cfs @ 12.17 hrs, Volume= 2,237 cf, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
5,836	98	Paved parking
6,450	74	>75% Grass cover, Good, HSG C
2,344	89	Gravel roads, HSG C
14,630	86	Weighted Average
8,794		60.11% Pervious Area
5,836		39.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0400	0.16		**Sheet Flow, Landscaped area** Grass: Dense n= 0.240 P2= 3.50"
0.7	246	0.0100	5.90	4.63	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
11.0	346	Total			

Subcatchment Post 2B: Post 2B



Hydrograph for Subcatchment Post 2B: Post 2B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.01	0.01
10.00	0.60	0.04	0.01
11.00	0.80	0.11	0.03
12.00	1.60	0.56	**0.29**
13.00	2.40	1.16	**0.08**
14.00	2.60	1.32	0.05
15.00	2.73	1.44	0.04
16.00	2.84	1.52	0.03
17.00	2.91	1.59	0.02
18.00	2.97	1.64	0.02
19.00	3.02	1.68	0.01
20.00	3.06	1.72	0.01
21.00	3.10	1.75	0.01
22.00	3.14	1.78	0.01
23.00	3.17	1.81	0.01
24.00	**3.20**	**1.84**	0.01
25.00	3.20	1.84	0.00
26.00	3.20	1.84	0.00
27.00	3.20	1.84	0.00
28.00	3.20	1.84	0.00
29.00	3.20	1.84	0.00
30.00	3.20	1.84	0.00
31.00	3.20	1.84	0.00
32.00	3.20	1.84	0.00
33.00	3.20	1.84	0.00
34.00	3.20	1.84	0.00
35.00	3.20	1.84	0.00
36.00	3.20	1.84	0.00
37.00	3.20	1.84	0.00
38.00	3.20	1.84	0.00
39.00	3.20	1.84	0.00
40.00	3.20	1.84	0.00
41.00	3.20	1.84	0.00
42.00	3.20	1.84	0.00
43.00	3.20	1.84	0.00
44.00	3.20	1.84	0.00
45.00	3.20	1.84	0.00
46.00	3.20	1.84	0.00
47.00	3.20	1.84	0.00
48.00	3.20	1.84	0.00
49.00	3.20	1.84	0.00
50.00	3.20	1.84	0.00
51.00	3.20	1.84	0.00
52.00	3.20	1.84	0.00
53.00	3.20	1.84	0.00
54.00	3.20	1.84	0.00
55.00	3.20	1.84	0.00
56.00	3.20	1.84	0.00
57.00	3.20	1.84	0.00
58.00	3.20	1.84	0.00
59.00	3.20	1.84	0.00
60.00	3.20	1.84	0.00
61.00	3.20	1.84	0.00
62.00	3.20	1.84	0.00
63.00	3.20	1.84	0.00
64.00	3.20	1.84	0.00
65.00	3.20	1.84	0.00
66.00	3.20	1.84	0.00
67.00	3.20	1.84	0.00
68.00	3.20	1.84	0.00
69.00	3.20	1.84	0.00
70.00	3.20	1.84	0.00
71.00	3.20	1.84	0.00
72.00	3.20	1.84	0.00

Summary for Subcatchment Post 2C: Post 2C

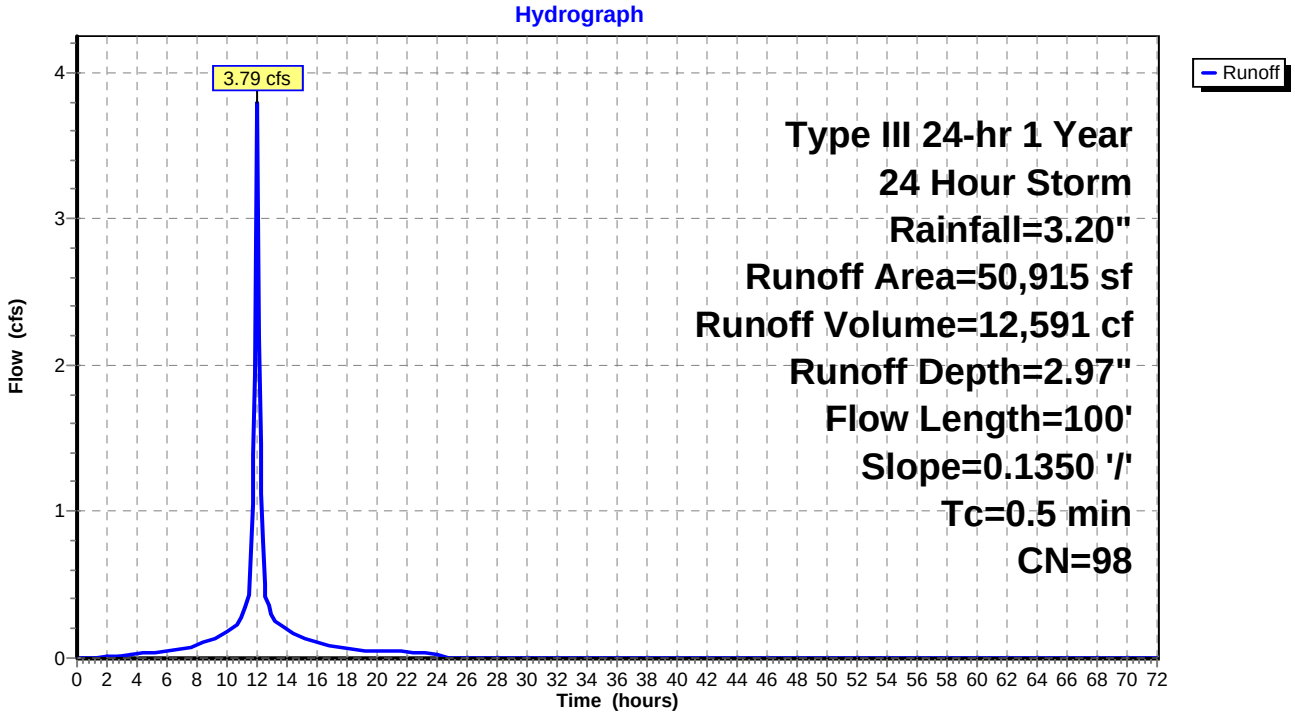
Runoff = 3.79 cfs @ 12.00 hrs, Volume= 12,591 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
50,915	98	Paved parking, HSG C
50,915		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.1350	3.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"

Subcatchment Post 2C: Post 2C



Hydrograph for Subcatchment Post 2C: Post 2C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.01
3.00	0.10	0.01	0.02
4.00	0.14	0.03	0.03
5.00	0.18	0.06	0.04
6.00	0.23	0.09	0.04
7.00	0.29	0.14	0.06
8.00	0.36	0.20	0.08
9.00	0.47	0.29	0.13
10.00	0.60	0.41	0.17
11.00	0.80	0.60	0.26
12.00	1.60	1.38	**3.79**
13.00	2.40	2.17	0.28
14.00	2.60	2.37	0.18
15.00	2.73	2.50	0.14
16.00	2.84	2.60	0.10
17.00	2.91	2.68	0.08
18.00	2.97	2.74	0.06
19.00	3.02	2.79	0.05
20.00	3.06	2.83	0.05
21.00	3.10	2.87	0.04
22.00	3.14	2.91	0.04
23.00	3.17	2.94	0.04
24.00	**3.20**	**2.97**	0.02
25.00	3.20	2.97	0.00
26.00	3.20	2.97	0.00
27.00	3.20	2.97	0.00
28.00	3.20	2.97	0.00
29.00	3.20	2.97	0.00
30.00	3.20	2.97	0.00
31.00	3.20	2.97	0.00
32.00	3.20	2.97	0.00
33.00	3.20	2.97	0.00
34.00	3.20	2.97	0.00
35.00	3.20	2.97	0.00
36.00	3.20	2.97	0.00
37.00	3.20	2.97	0.00
38.00	3.20	2.97	0.00
39.00	3.20	2.97	0.00
40.00	3.20	2.97	0.00
41.00	3.20	2.97	0.00
42.00	3.20	2.97	0.00
43.00	3.20	2.97	0.00
44.00	3.20	2.97	0.00
45.00	3.20	2.97	0.00
46.00	3.20	2.97	0.00
47.00	3.20	2.97	0.00
48.00	3.20	2.97	0.00
49.00	3.20	2.97	0.00
50.00	3.20	2.97	0.00
51.00	3.20	2.97	0.00
52.00	3.20	2.97	0.00
53.00	3.20	2.97	0.00
54.00	3.20	2.97	0.00
55.00	3.20	2.97	0.00
56.00	3.20	2.97	0.00
57.00	3.20	2.97	0.00
58.00	3.20	2.97	0.00
59.00	3.20	2.97	0.00
60.00	3.20	2.97	0.00
61.00	3.20	2.97	0.00
62.00	3.20	2.97	0.00
63.00	3.20	2.97	0.00
64.00	3.20	2.97	0.00
65.00	3.20	2.97	0.00
66.00	3.20	2.97	0.00
67.00	3.20	2.97	0.00
68.00	3.20	2.97	0.00
69.00	3.20	2.97	0.00
70.00	3.20	2.97	0.00
71.00	3.20	2.97	0.00
72.00	3.20	2.97	0.00

Summary for Subcatchment Post 2D: Post 2D

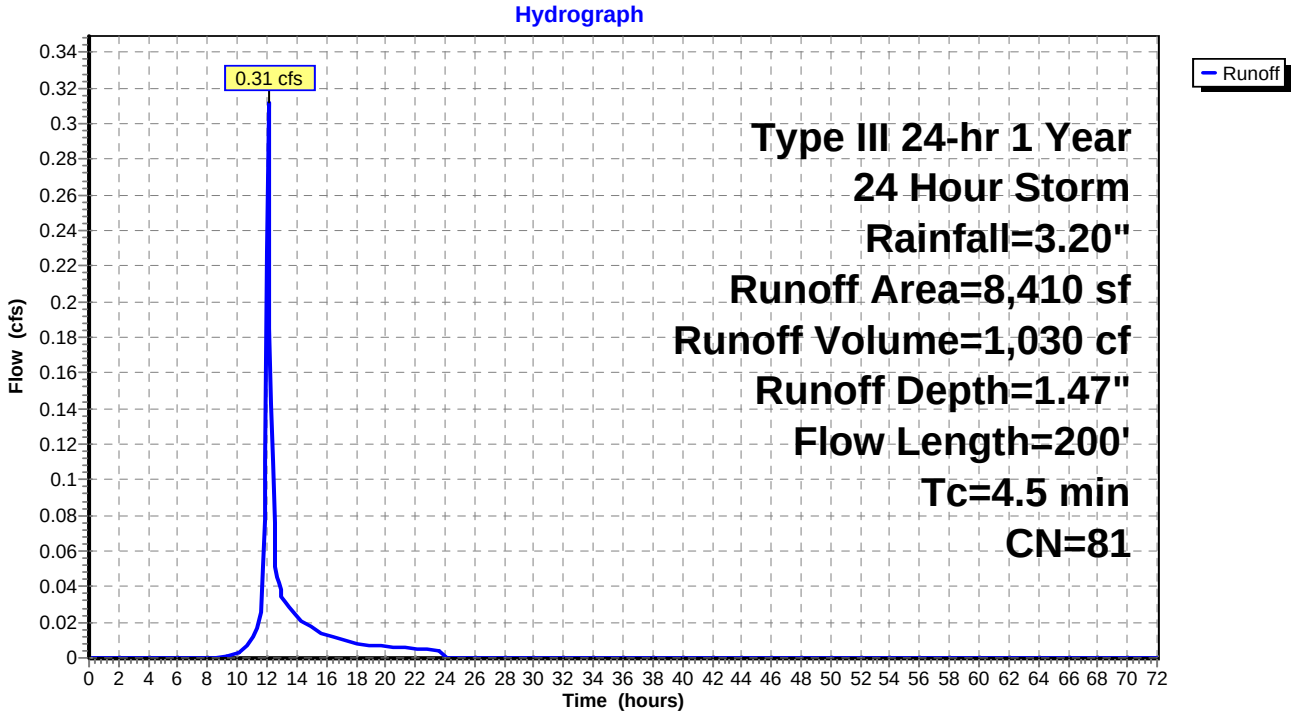
Runoff = 0.31 cfs @ 12.09 hrs, Volume= 1,030 cf, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
6,348	79	50-75% Grass cover, Fair, HSG C
2,062	89	Gravel roads, HSG C
8,410	81	Weighted Average
8,410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1000	0.20		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
0.4	150	0.0860	5.95		**Shallow Concentrated Flow, Maintenance Drive** Paved Kv= 20.3 fps
4.5	200	Total			

Subcatchment Post 2D: Post 2D



Hydrograph for Subcatchment Post 2D: Post 2D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.01	0.00
11.00	0.80	0.04	0.01
12.00	1.60	0.37	**0.23**
13.00	2.40	0.87	**0.03**
14.00	2.60	1.01	0.02
15.00	2.73	1.11	0.02
16.00	2.84	1.19	0.01
17.00	2.91	1.25	0.01
18.00	2.97	1.29	0.01
19.00	3.02	1.33	0.01
20.00	3.06	1.36	0.01
21.00	3.10	1.39	0.01
22.00	3.14	1.42	0.01
23.00	3.17	1.45	0.00
24.00	**3.20**	**1.47**	0.00
25.00	3.20	1.47	0.00
26.00	3.20	1.47	0.00
27.00	3.20	1.47	0.00
28.00	3.20	1.47	0.00
29.00	3.20	1.47	0.00
30.00	3.20	1.47	0.00
31.00	3.20	1.47	0.00
32.00	3.20	1.47	0.00
33.00	3.20	1.47	0.00
34.00	3.20	1.47	0.00
35.00	3.20	1.47	0.00
36.00	3.20	1.47	0.00
37.00	3.20	1.47	0.00
38.00	3.20	1.47	0.00
39.00	3.20	1.47	0.00
40.00	3.20	1.47	0.00
41.00	3.20	1.47	0.00
42.00	3.20	1.47	0.00
43.00	3.20	1.47	0.00
44.00	3.20	1.47	0.00
45.00	3.20	1.47	0.00
46.00	3.20	1.47	0.00
47.00	3.20	1.47	0.00
48.00	3.20	1.47	0.00
49.00	3.20	1.47	0.00
50.00	3.20	1.47	0.00
51.00	3.20	1.47	0.00
52.00	3.20	1.47	0.00
53.00	3.20	1.47	0.00
54.00	3.20	1.47	0.00
55.00	3.20	1.47	0.00
56.00	3.20	1.47	0.00
57.00	3.20	1.47	0.00
58.00	3.20	1.47	0.00
59.00	3.20	1.47	0.00
60.00	3.20	1.47	0.00
61.00	3.20	1.47	0.00
62.00	3.20	1.47	0.00
63.00	3.20	1.47	0.00
64.00	3.20	1.47	0.00
65.00	3.20	1.47	0.00
66.00	3.20	1.47	0.00
67.00	3.20	1.47	0.00
68.00	3.20	1.47	0.00
69.00	3.20	1.47	0.00
70.00	3.20	1.47	0.00
71.00	3.20	1.47	0.00
72.00	3.20	1.47	0.00

Summary for Subcatchment Post 2F: Post 2F

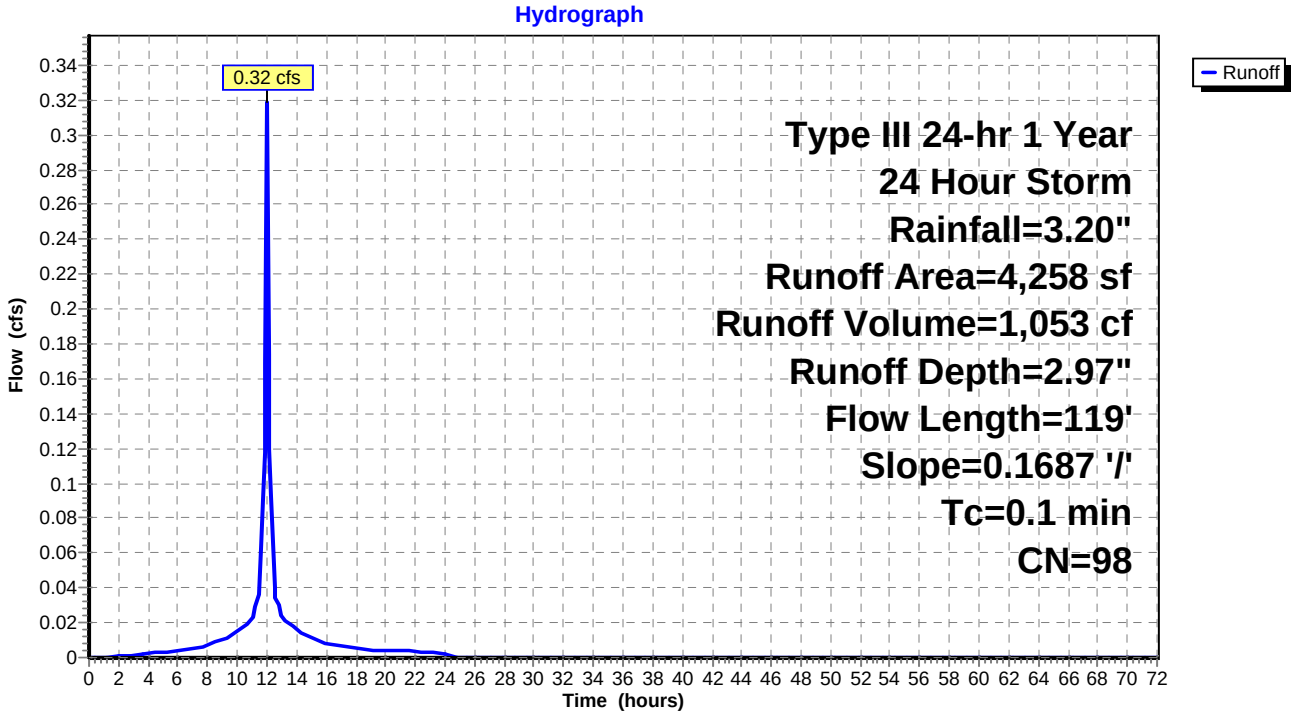
Runoff = 0.32 cfs @ 12.00 hrs, Volume= 1,053 cf, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
4,258	98	Roofs, HSG C
4,258		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	119	0.1687	14.22	4.96	**Pipe Channel, Roof Leader** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior

Subcatchment Post 2F: Post 2F



Hydrograph for Subcatchment Post 2F: Post 2F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	3.20	2.97	0.00
1.00	0.03	0.00	0.00	53.00	3.20	2.97	0.00
2.00	0.06	0.00	0.00	54.00	3.20	2.97	0.00
3.00	0.10	0.01	0.00	55.00	3.20	2.97	0.00
4.00	0.14	0.03	0.00	56.00	3.20	2.97	0.00
5.00	0.18	0.06	0.00	57.00	3.20	2.97	0.00
6.00	0.23	0.09	0.00	58.00	3.20	2.97	0.00
7.00	0.29	0.14	0.01	59.00	3.20	2.97	0.00
8.00	0.36	0.20	0.01	60.00	3.20	2.97	0.00
9.00	0.47	0.29	0.01	61.00	3.20	2.97	0.00
10.00	0.60	0.41	0.01	62.00	3.20	2.97	0.00
11.00	0.80	0.60	0.02	63.00	3.20	2.97	0.00
12.00	1.60	1.38	**0.32**	64.00	3.20	2.97	0.00
13.00	2.40	2.17	0.02	65.00	3.20	2.97	0.00
14.00	2.60	2.37	0.02	66.00	3.20	2.97	0.00
15.00	2.73	2.50	0.01	67.00	3.20	2.97	0.00
16.00	2.84	2.60	0.01	68.00	3.20	2.97	0.00
17.00	2.91	2.68	0.01	69.00	3.20	2.97	0.00
18.00	2.97	2.74	0.01	70.00	3.20	2.97	0.00
19.00	3.02	2.79	0.00	71.00	3.20	2.97	0.00
20.00	3.06	2.83	0.00	72.00	3.20	2.97	0.00
21.00	3.10	2.87	0.00				
22.00	3.14	2.91	0.00				
23.00	3.17	2.94	0.00				
24.00	**3.20**	**2.97**	0.00				
25.00	3.20	2.97	0.00				
26.00	3.20	2.97	0.00				
27.00	3.20	2.97	0.00				
28.00	3.20	2.97	0.00				
29.00	3.20	2.97	0.00				
30.00	3.20	2.97	0.00				
31.00	3.20	2.97	0.00				
32.00	3.20	2.97	0.00				
33.00	3.20	2.97	0.00				
34.00	3.20	2.97	0.00				
35.00	3.20	2.97	0.00				
36.00	3.20	2.97	0.00				
37.00	3.20	2.97	0.00				
38.00	3.20	2.97	0.00				
39.00	3.20	2.97	0.00				
40.00	3.20	2.97	0.00				
41.00	3.20	2.97	0.00				
42.00	3.20	2.97	0.00				
43.00	3.20	2.97	0.00				
44.00	3.20	2.97	0.00				
45.00	3.20	2.97	0.00				
46.00	3.20	2.97	0.00				
47.00	3.20	2.97	0.00				
48.00	3.20	2.97	0.00				
49.00	3.20	2.97	0.00				
50.00	3.20	2.97	0.00				
51.00	3.20	2.97	0.00				

Summary for Subcatchment Post 2G: Post 2G

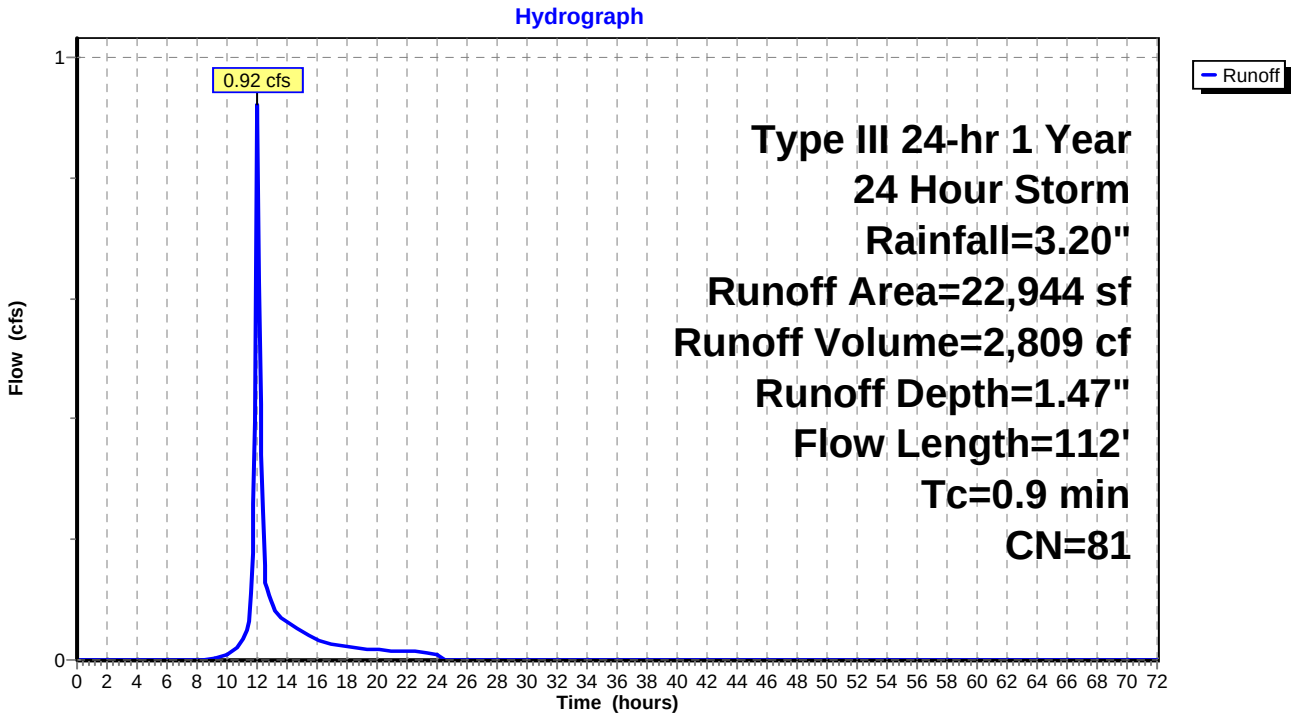
Runoff = 0.92 cfs @ 12.01 hrs, Volume= 2,809 cf, Depth= 1.47"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
1,112	98	Paved parking, HSG C
19,649	79	50-75% Grass cover, Fair, HSG C
2,183	89	Gravel roads, HSG C
22,944	81	Weighted Average
21,832		95.15% Pervious Area
1,112		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	80	0.0250	1.50		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.0	32	0.4600	10.92		**Shallow Concentrated Flow, Landscaped** Unpaved Kv= 16.1 fps
0.9	112	Total			

Subcatchment Post 2G: Post 2G



Hydrograph for Subcatchment Post 2G: Post 2G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.01	0.01
11.00	0.80	0.04	0.03
12.00	1.60	0.37	**0.91**
13.00	2.40	0.87	0.09
14.00	2.60	1.01	0.06
15.00	2.73	1.11	0.05
16.00	2.84	1.19	0.03
17.00	2.91	1.25	0.03
18.00	2.97	1.29	0.02
19.00	3.02	1.33	0.02
20.00	3.06	1.36	0.02
21.00	3.10	1.39	0.02
22.00	3.14	1.42	0.01
23.00	3.17	1.45	0.01
24.00	**3.20**	**1.47**	0.01
25.00	3.20	1.47	0.00
26.00	3.20	1.47	0.00
27.00	3.20	1.47	0.00
28.00	3.20	1.47	0.00
29.00	3.20	1.47	0.00
30.00	3.20	1.47	0.00
31.00	3.20	1.47	0.00
32.00	3.20	1.47	0.00
33.00	3.20	1.47	0.00
34.00	3.20	1.47	0.00
35.00	3.20	1.47	0.00
36.00	3.20	1.47	0.00
37.00	3.20	1.47	0.00
38.00	3.20	1.47	0.00
39.00	3.20	1.47	0.00
40.00	3.20	1.47	0.00
41.00	3.20	1.47	0.00
42.00	3.20	1.47	0.00
43.00	3.20	1.47	0.00
44.00	3.20	1.47	0.00
45.00	3.20	1.47	0.00
46.00	3.20	1.47	0.00
47.00	3.20	1.47	0.00
48.00	3.20	1.47	0.00
49.00	3.20	1.47	0.00
50.00	3.20	1.47	0.00
51.00	3.20	1.47	0.00
52.00	3.20	1.47	0.00
53.00	3.20	1.47	0.00
54.00	3.20	1.47	0.00
55.00	3.20	1.47	0.00
56.00	3.20	1.47	0.00
57.00	3.20	1.47	0.00
58.00	3.20	1.47	0.00
59.00	3.20	1.47	0.00
60.00	3.20	1.47	0.00
61.00	3.20	1.47	0.00
62.00	3.20	1.47	0.00
63.00	3.20	1.47	0.00
64.00	3.20	1.47	0.00
65.00	3.20	1.47	0.00
66.00	3.20	1.47	0.00
67.00	3.20	1.47	0.00
68.00	3.20	1.47	0.00
69.00	3.20	1.47	0.00
70.00	3.20	1.47	0.00
71.00	3.20	1.47	0.00
72.00	3.20	1.47	0.00

Summary for Subcatchment Post 2H: Post 2H

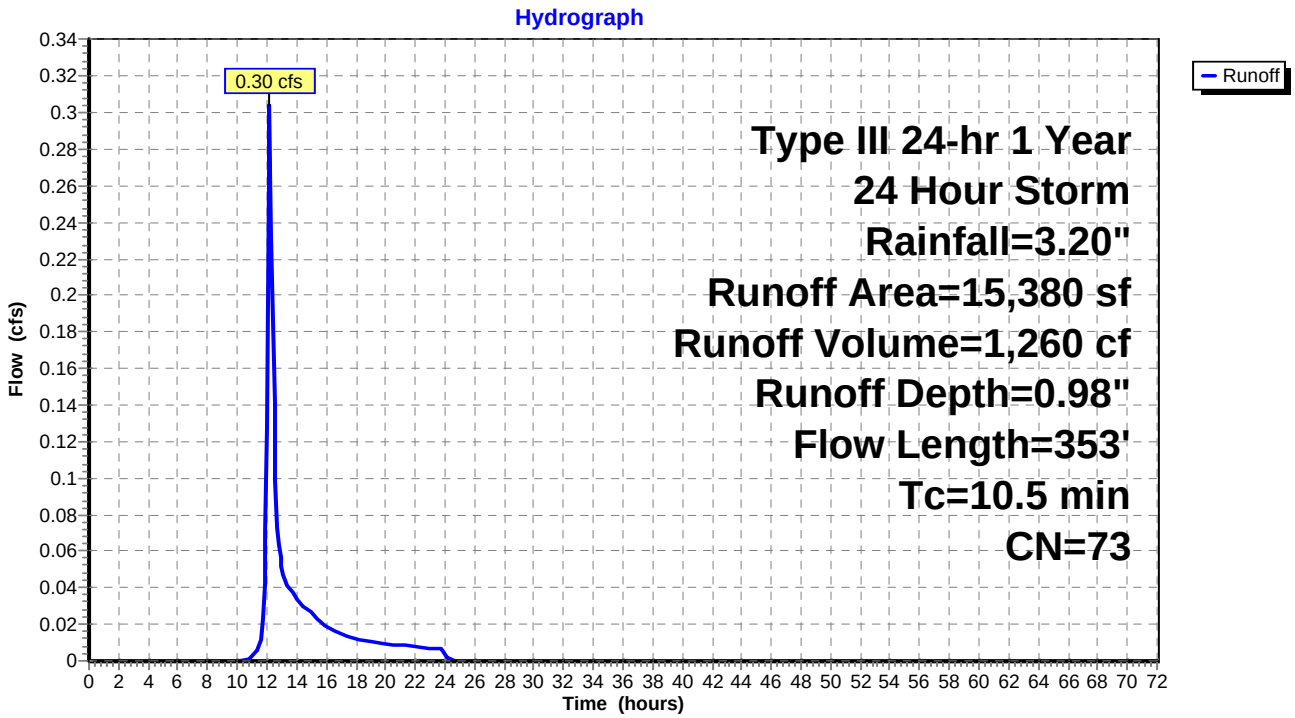
Runoff = 0.30 cfs @ 12.18 hrs, Volume= 1,260 cf, Depth= 0.98"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
15,380	73	Woods, Fair, HSG C
15,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
1.7	253	0.0260	2.42		**Shallow Concentrated Flow, Grassed waterway** Grassed Waterway Kv= 15.0 fps
10.5	353	Total			

Subcatchment Post 2H: Post 2H



Hydrograph for Subcatchment Post 2H: Post 2H

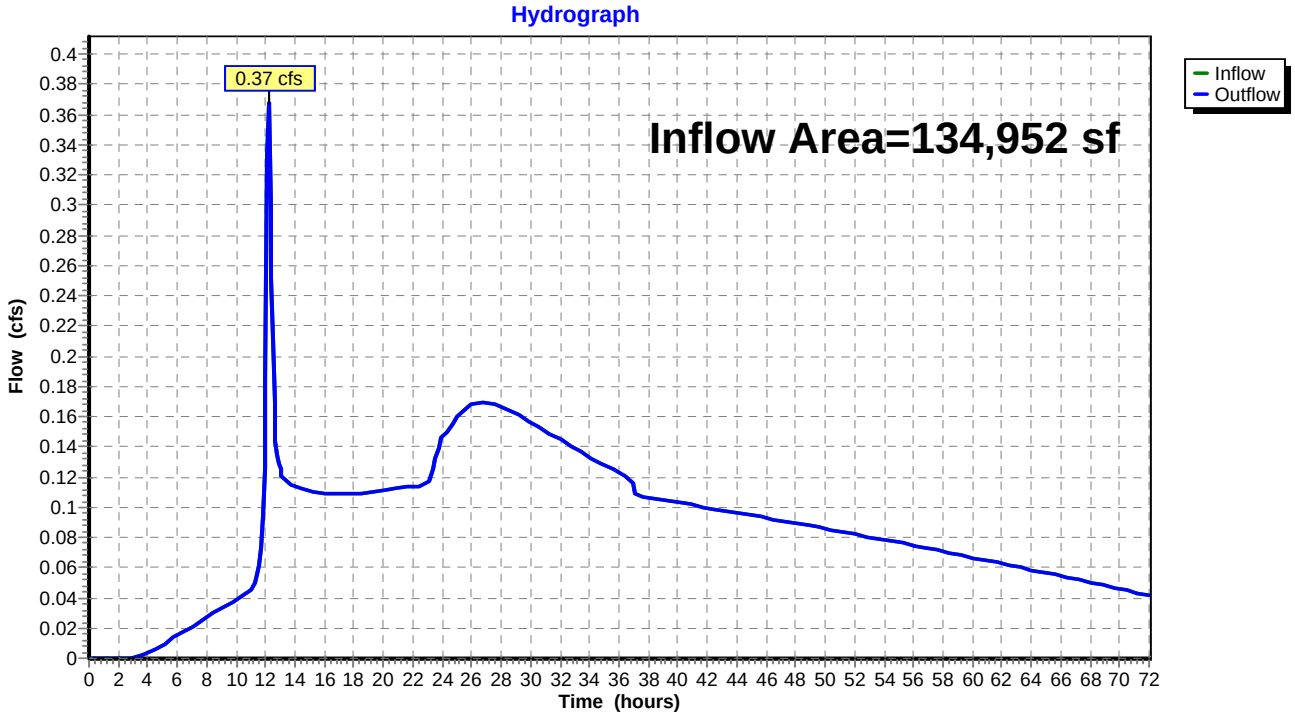
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.00	0.00
12.00	1.60	0.16	**0.13**
13.00	2.40	0.51	**0.05**
14.00	2.60	0.62	0.03
15.00	2.73	0.70	0.03
16.00	2.84	0.76	0.02
17.00	2.91	0.80	0.01
18.00	2.97	0.84	0.01
19.00	3.02	0.87	0.01
20.00	3.06	0.90	0.01
21.00	3.10	0.92	0.01
22.00	3.14	0.94	0.01
23.00	3.17	0.96	0.01
24.00	**3.20**	**0.98**	0.01
25.00	3.20	0.98	0.00
26.00	3.20	0.98	0.00
27.00	3.20	0.98	0.00
28.00	3.20	0.98	0.00
29.00	3.20	0.98	0.00
30.00	3.20	0.98	0.00
31.00	3.20	0.98	0.00
32.00	3.20	0.98	0.00
33.00	3.20	0.98	0.00
34.00	3.20	0.98	0.00
35.00	3.20	0.98	0.00
36.00	3.20	0.98	0.00
37.00	3.20	0.98	0.00
38.00	3.20	0.98	0.00
39.00	3.20	0.98	0.00
40.00	3.20	0.98	0.00
41.00	3.20	0.98	0.00
42.00	3.20	0.98	0.00
43.00	3.20	0.98	0.00
44.00	3.20	0.98	0.00
45.00	3.20	0.98	0.00
46.00	3.20	0.98	0.00
47.00	3.20	0.98	0.00
48.00	3.20	0.98	0.00
49.00	3.20	0.98	0.00
50.00	3.20	0.98	0.00
51.00	3.20	0.98	0.00
52.00	3.20	0.98	0.00
53.00	3.20	0.98	0.00
54.00	3.20	0.98	0.00
55.00	3.20	0.98	0.00
56.00	3.20	0.98	0.00
57.00	3.20	0.98	0.00
58.00	3.20	0.98	0.00
59.00	3.20	0.98	0.00
60.00	3.20	0.98	0.00
61.00	3.20	0.98	0.00
62.00	3.20	0.98	0.00
63.00	3.20	0.98	0.00
64.00	3.20	0.98	0.00
65.00	3.20	0.98	0.00
66.00	3.20	0.98	0.00
67.00	3.20	0.98	0.00
68.00	3.20	0.98	0.00
69.00	3.20	0.98	0.00
70.00	3.20	0.98	0.00
71.00	3.20	0.98	0.00
72.00	3.20	0.98	0.00

Summary for Reach DP2: Design Point 2

Inflow Area = 134,952 sf, 53.68% Impervious, Inflow Depth > 2.02" for 1 Year, 24 Hour Storm event
Inflow = 0.37 cfs @ 12.18 hrs, Volume= 22,756 cf
Outflow = 0.37 cfs @ 12.18 hrs, Volume= 22,756 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.01		0.01
6.00	0.02		0.02
7.00	0.02		0.02
8.00	0.03		0.03
9.00	0.03		0.03
10.00	0.04		0.04
11.00	0.05		0.05
12.00	**0.18**		**0.18**
13.00	**0.13**		**0.13**
14.00	0.11		0.11
15.00	0.11		0.11
16.00	0.11		0.11
17.00	0.11		0.11
18.00	0.11		0.11
19.00	0.11		0.11
20.00	0.11		0.11
21.00	0.11		0.11
22.00	0.11		0.11
23.00	0.12		0.12
24.00	0.15		0.15
25.00	0.16		0.16
26.00	0.17		0.17
27.00	0.17		0.17
28.00	0.17		0.17
29.00	0.16		0.16
30.00	0.16		0.16
31.00	0.15		0.15
32.00	0.14		0.14
33.00	0.14		0.14
34.00	0.13		0.13
35.00	0.13		0.13
36.00	0.12		0.12
37.00	0.11		0.11
38.00	0.11		0.11
39.00	0.10		0.10
40.00	0.10		0.10
41.00	0.10		0.10
42.00	0.10		0.10
43.00	0.10		0.10
44.00	0.10		0.10
45.00	0.09		0.09
46.00	0.09		0.09
47.00	0.09		0.09
48.00	0.09		0.09
49.00	0.09		0.09
50.00	0.09		0.09
51.00	0.08		0.08
52.00	0.08		0.08
53.00	0.08		0.08
54.00	0.08		0.08
55.00	0.08		0.08
56.00	0.07		0.07
57.00	0.07		0.07
58.00	0.07		0.07
59.00	0.07		0.07
60.00	0.07		0.07
61.00	0.06		0.06
62.00	0.06		0.06
63.00	0.06		0.06
64.00	0.06		0.06
65.00	0.06		0.06
66.00	0.05		0.05
67.00	0.05		0.05
68.00	0.05		0.05
69.00	0.05		0.05
70.00	0.05		0.05
71.00	0.04		0.04
72.00	0.04		0.04

Summary for Pond F-1: Combined Sed. + Sand

Inflow Area = 92,370 sf, 72.61% Impervious, Inflow Depth = 2.50" for 1 Year, 24 Hour Storm event
Inflow = 5.38 cfs @ 12.01 hrs, Volume= 19,227 cf
Outflow = 0.26 cfs @ 14.75 hrs, Volume= 19,230 cf, Atten= 95%, Lag= 164.0 min
Primary = 0.26 cfs @ 14.75 hrs, Volume= 19,230 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 386.59' @ 14.75 hrs Surf.Area= 6,384 sf Storage= 10,617 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 471.2 min (1,243.1 - 771.9)

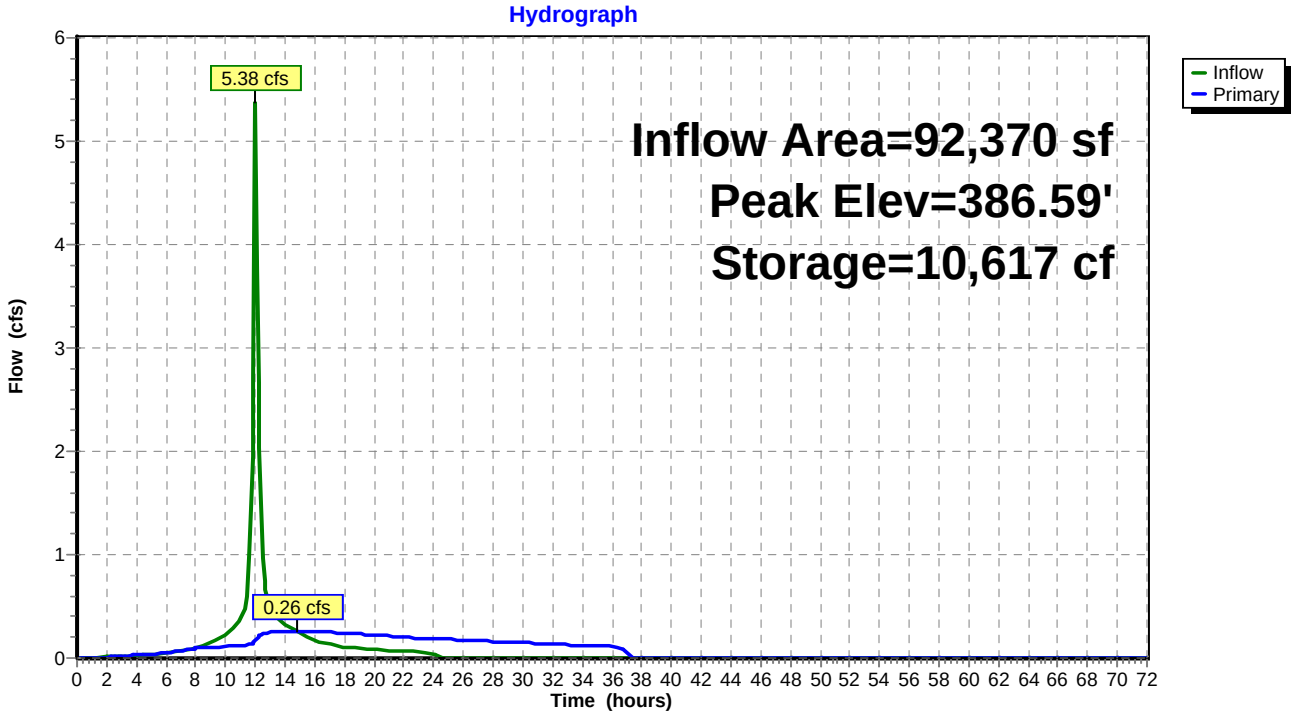
Volume	Invert	Avail.Storage	Storage Description
#1	384.00'	20,877 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
384.00	2,608	188.0	0	0	2,608
385.00	3,635	237.0	3,107	3,107	4,279
386.00	4,801	285.0	4,205	7,312	6,290
387.00	7,600	320.0	6,147	13,459	8,002
388.00	7,237	337.0	7,418	20,877	8,949

Device	Routing	Invert	Outlet Devices
#1	Primary	382.00'	**10.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 377.00' S= 0.1316 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	382.00'	**1.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	384.00'	**1.750 in/hr Exfiltration over Surface area**
#4	Device 1	386.60'	**18.0" x 18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.26 cfs @ 14.75 hrs HW=386.59' TW=378.18' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.26 cfs of 4.24 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.26 cfs of 0.56 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.26 cfs)
  - **4=Orifice/Grate** (Controls 0.00 cfs)

Pond F-1: Combined Sed. + Sand



Hydrograph for Pond F-1: Combined Sed. + Sand

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	384.00	0.00
2.00	0.01	0	384.00	0.01
4.00	0.03	0	384.00	0.03
6.00	0.05	0	384.00	0.05
8.00	0.09	0	384.00	0.09
10.00	0.22	334	384.13	0.11
12.00	**5.34**	4,966	385.48	0.17
14.00	0.31	**10,544**	**386.58**	**0.26**
16.00	0.17	**10,419**	**386.56**	**0.25**
18.00	0.10	9,607	386.43	0.24
20.00	0.08	8,619	386.26	0.22
22.00	0.07	7,649	386.07	0.20
24.00	0.04	6,699	385.87	0.19
26.00	0.00	5,407	385.58	0.17
28.00	0.00	4,204	385.29	0.16
30.00	0.00	3,098	385.00	0.15
32.00	0.00	2,085	384.71	0.13
34.00	0.00	1,163	384.41	0.12
36.00	0.00	327	384.12	0.11
38.00	0.00	0	384.00	0.00
40.00	0.00	0	384.00	0.00
42.00	0.00	0	384.00	0.00
44.00	0.00	0	384.00	0.00
46.00	0.00	0	384.00	0.00
48.00	0.00	0	384.00	0.00
50.00	0.00	0	384.00	0.00
52.00	0.00	0	384.00	0.00
54.00	0.00	0	384.00	0.00
56.00	0.00	0	384.00	0.00
58.00	0.00	0	384.00	0.00
60.00	0.00	0	384.00	0.00
62.00	0.00	0	384.00	0.00
64.00	0.00	0	384.00	0.00
66.00	0.00	0	384.00	0.00
68.00	0.00	0	384.00	0.00
70.00	0.00	0	384.00	0.00
72.00	0.00	0	384.00	0.00

Summary for Pond FS: Flow Splitter

Inflow Area = 70,451 sf, 87.52% Impervious, Inflow Depth = 2.73" for 1 Year, 24 Hour Storm event
Inflow = 4.44 cfs @ 12.01 hrs, Volume= 16,041 cf
Outflow = 4.44 cfs @ 12.01 hrs, Volume= 16,041 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.44 cfs @ 12.01 hrs, Volume= 16,041 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

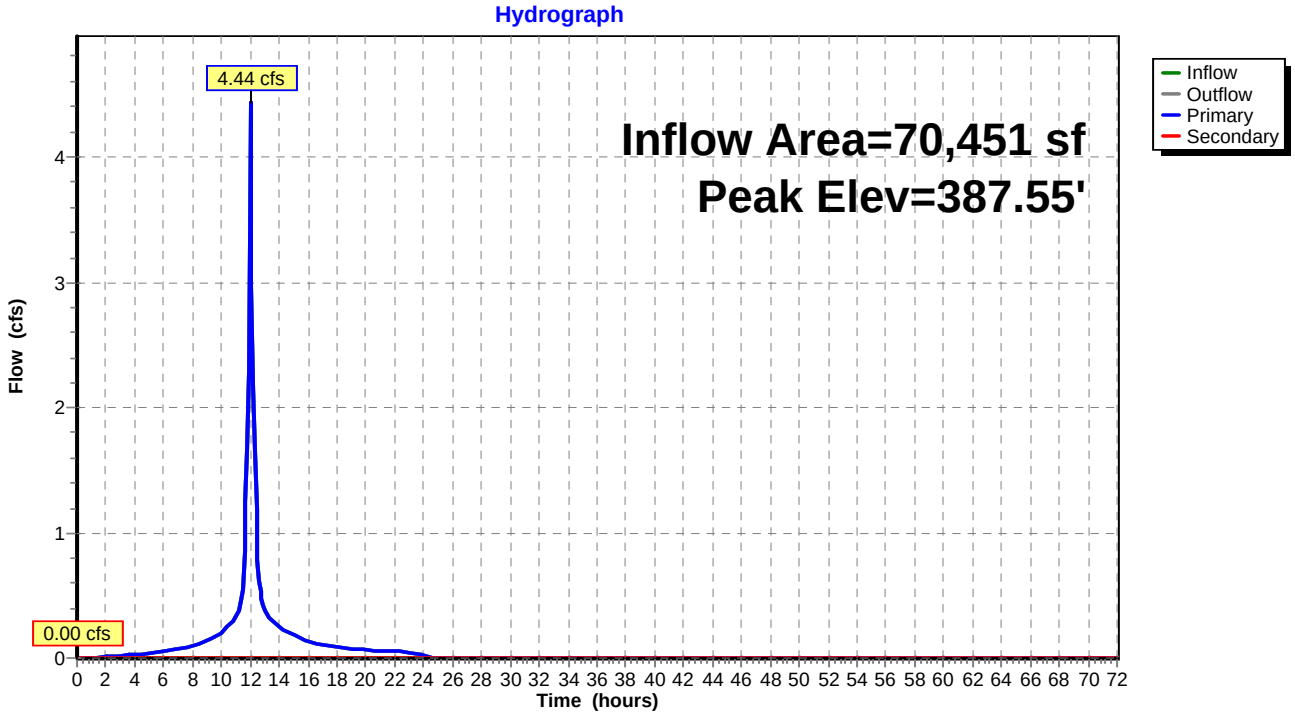
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 387.55' @ 12.01 hrs
Flood Elev= 392.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	386.45'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#2	Secondary	386.60'	**24.0" Round Culvert** L= 86.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 384.50' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#3	Device 2	387.75'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=4.31 cfs @ 12.01 hrs HW=387.51' TW=385.51' (Dynamic Tailwater)
└─**1=Orifice/Grate** (Orifice Controls 4.31 cfs @ 4.31 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=386.45' TW=377.00' (Dynamic Tailwater)
└─**2=Culvert** (Controls 0.00 cfs)
└─**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond FS: Flow Splitter



Hydrograph for Pond FS: Flow Splitter

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	386.45	0.00	0.00	**0.00**
2.00	0.01	386.46	0.01	0.01	0.00
4.00	0.03	386.48	0.03	0.03	0.00
6.00	0.05	386.49	0.05	0.05	0.00
8.00	0.09	386.51	0.09	0.09	0.00
10.00	0.20	386.55	0.20	0.20	0.00
12.00	**4.42**	**387.55**	**4.42**	**4.42**	0.00
14.00	0.25	386.61	0.25	0.25	0.00
16.00	0.13	386.57	0.13	0.13	0.00
18.00	0.08	386.50	0.08	0.08	0.00
20.00	0.07	386.50	0.07	0.07	0.00
22.00	0.05	386.49	0.05	0.05	0.00
24.00	0.03	386.48	0.03	0.03	0.00
26.00	0.00	386.45	0.00	0.00	0.00
28.00	0.00	386.45	0.00	0.00	0.00
30.00	0.00	386.45	0.00	0.00	0.00
32.00	0.00	386.45	0.00	0.00	0.00
34.00	0.00	386.45	0.00	0.00	0.00
36.00	0.00	386.45	0.00	0.00	0.00
38.00	0.00	386.45	0.00	0.00	0.00
40.00	0.00	386.45	0.00	0.00	0.00
42.00	0.00	386.45	0.00	0.00	0.00
44.00	0.00	386.45	0.00	0.00	0.00
46.00	0.00	386.45	0.00	0.00	0.00
48.00	0.00	386.45	0.00	0.00	0.00
50.00	0.00	386.45	0.00	0.00	0.00
52.00	0.00	386.45	0.00	0.00	0.00
54.00	0.00	386.45	0.00	0.00	0.00
56.00	0.00	386.45	0.00	0.00	0.00
58.00	0.00	386.45	0.00	0.00	0.00
60.00	0.00	386.45	0.00	0.00	0.00
62.00	0.00	386.45	0.00	0.00	0.00
64.00	0.00	386.45	0.00	0.00	0.00
66.00	0.00	386.45	0.00	0.00	0.00
68.00	0.00	386.45	0.00	0.00	0.00
70.00	0.00	386.45	0.00	0.00	0.00
72.00	0.00	386.45	0.00	0.00	0.00

Summary for Pond W-4: W-4 Pocket Wetland

Inflow Area = 119,572 sf, 60.58% Impervious, Inflow Depth = 2.32" for 1 Year, 24 Hour Storm event
Inflow = 1.41 cfs @ 12.01 hrs, Volume= 23,092 cf
Outflow = 0.17 cfs @ 26.66 hrs, Volume= 21,496 cf, Atten= 88%, Lag= 878.8 min
Primary = 0.17 cfs @ 26.66 hrs, Volume= 21,496 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Starting Elev= 377.00' Surf.Area= 4,840 sf Storage= 8,493 cf
Peak Elev= 378.97' @ 26.66 hrs Surf.Area= 7,255 sf Storage= 20,150 cf (11,657 cf above start)

Plug-Flow detention time= 2,015.9 min calculated for 13,003 cf (56% of inflow)
Center-of-Mass det. time= 1,046.8 min (2,217.8 - 1,171.0)

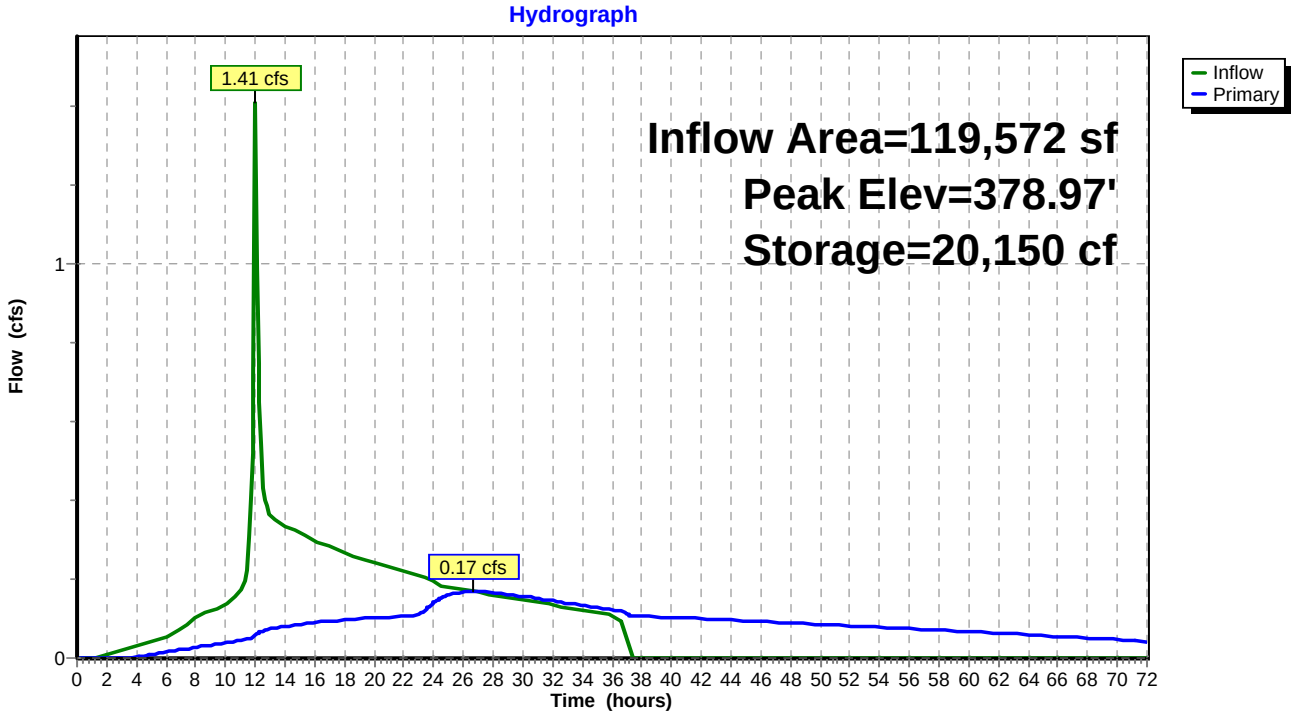
Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	28,507 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
373.00	994	124.0	0	0	994
374.00	1,255	136.0	1,122	1,122	1,274
375.00	1,541	149.0	1,396	2,518	1,602
376.00	2,862	220.0	2,168	4,685	3,695
377.00	4,840	303.0	3,808	8,493	7,159
378.00	5,830	325.0	5,327	13,820	8,302
379.00	7,302	361.0	6,552	20,373	10,297
380.00	8,995	407.0	8,134	28,507	13,135

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.013
#2	Device 1	377.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Primary	378.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.40 0.50 0.90 1.00 2.00 Width (feet) 1.00 1.00 1.00 1.00 1.00
#4	Device 1	379.00'	**15.0" x 15.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.17 cfs @ 26.66 hrs HW=378.97' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.11 cfs of 9.62 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 6.69 fps)
  - **4=Orifice/Grate** (Controls 0.00 cfs)
- **3=Custom Weir/Orifice** (Weir Controls 0.06 cfs @ 0.86 fps)

Pond W-4: W-4 Pocket Wetland



Hydrograph for Pond W-4: W-4 Pocket Wetland

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,493	377.00	0.00
2.00	0.01	8,505	377.00	0.00
4.00	0.03	8,641	377.03	0.00
6.00	0.05	8,878	377.08	0.02
8.00	0.10	9,267	377.16	0.03
10.00	0.13	9,886	377.28	0.04
12.00	**1.40**	11,450	377.58	0.06
14.00	0.33	14,260	378.07	0.08
16.00	0.30	15,926	378.35	0.09
18.00	0.27	17,281	378.56	0.10
20.00	0.24	18,393	378.72	0.10
22.00	0.22	19,304	378.85	0.11
24.00	0.20	19,980	378.95	0.14
26.00	0.17	**20,144**	**378.97**	**0.17**
28.00	0.16	**20,134**	**378.97**	**0.17**
30.00	0.15	20,076	378.96	0.16
32.00	0.13	20,005	378.95	0.14
34.00	0.12	19,927	378.94	0.13
36.00	0.11	19,843	378.93	0.12
38.00	0.00	19,356	378.86	0.11
40.00	0.00	18,602	378.75	0.10
42.00	0.00	17,872	378.64	0.10
44.00	0.00	17,166	378.54	0.10
46.00	0.00	16,485	378.43	0.09
48.00	0.00	15,828	378.33	0.09
50.00	0.00	15,197	378.23	0.09
52.00	0.00	14,591	378.13	0.08
54.00	0.00	14,013	378.03	0.08
56.00	0.00	13,462	377.94	0.07
58.00	0.00	12,939	377.85	0.07
60.00	0.00	12,444	377.76	0.07
62.00	0.00	11,978	377.67	0.06
64.00	0.00	11,542	377.59	0.06
66.00	0.00	11,135	377.52	0.05
68.00	0.00	10,758	377.45	0.05
70.00	0.00	10,412	377.38	0.05
72.00	0.00	10,096	377.32	0.04

Summary for Subcatchment Post 2E: Post 2E

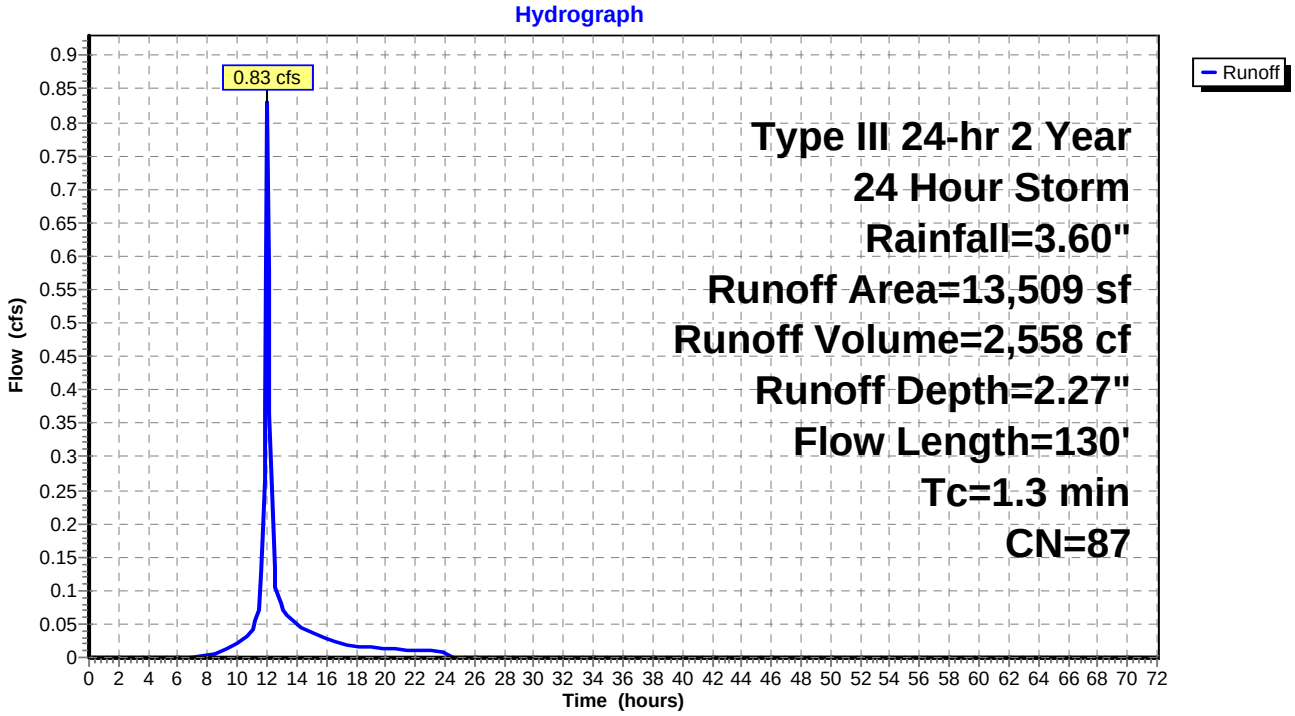
Runoff = 0.83 cfs @ 12.01 hrs, Volume= 2,558 cf, Depth= 2.27"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
5,415	98	Paved parking, HSG C
8,094	79	50-75% Grass cover, Fair, HSG C
13,509	87	Weighted Average
8,094		59.92% Pervious Area
5,415		40.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.44		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
0.1	30	0.3800	9.92		**Shallow Concentrated Flow, Pavement** Unpaved Kv= 16.1 fps
1.3	130	Total			

Subcatchment Post 2E: Post 2E



Hydrograph for Subcatchment Post 2E: Post 2E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	3.60	2.27	0.00
1.00	0.04	0.00	0.00	53.00	3.60	2.27	0.00
2.00	0.07	0.00	0.00	54.00	3.60	2.27	0.00
3.00	0.11	0.00	0.00	55.00	3.60	2.27	0.00
4.00	0.15	0.00	0.00	56.00	3.60	2.27	0.00
5.00	0.20	0.00	0.00	57.00	3.60	2.27	0.00
6.00	0.26	0.00	0.00	58.00	3.60	2.27	0.00
7.00	0.33	0.00	0.00	59.00	3.60	2.27	0.00
8.00	0.41	0.01	0.00	60.00	3.60	2.27	0.00
9.00	0.52	0.03	0.01	61.00	3.60	2.27	0.00
10.00	0.68	0.08	0.02	62.00	3.60	2.27	0.00
11.00	0.90	0.17	0.04	63.00	3.60	2.27	0.00
12.00	1.80	0.75	**0.82**	64.00	3.60	2.27	0.00
13.00	2.70	1.48	0.07	65.00	3.60	2.27	0.00
14.00	2.92	1.67	0.05	66.00	3.60	2.27	0.00
15.00	3.08	1.81	0.04	67.00	3.60	2.27	0.00
16.00	3.19	1.91	0.03	68.00	3.60	2.27	0.00
17.00	3.27	1.98	0.02	69.00	3.60	2.27	0.00
18.00	3.34	2.04	0.02	70.00	3.60	2.27	0.00
19.00	3.40	2.09	0.01	71.00	3.60	2.27	0.00
20.00	3.45	2.13	0.01	72.00	3.60	2.27	0.00
21.00	3.49	2.17	0.01				
22.00	3.53	2.21	0.01				
23.00	3.57	2.24	0.01				
24.00	**3.60**	**2.27**	0.01				
25.00	3.60	2.27	0.00				
26.00	3.60	2.27	0.00				
27.00	3.60	2.27	0.00				
28.00	3.60	2.27	0.00				
29.00	3.60	2.27	0.00				
30.00	3.60	2.27	0.00				
31.00	3.60	2.27	0.00				
32.00	3.60	2.27	0.00				
33.00	3.60	2.27	0.00				
34.00	3.60	2.27	0.00				
35.00	3.60	2.27	0.00				
36.00	3.60	2.27	0.00				
37.00	3.60	2.27	0.00				
38.00	3.60	2.27	0.00				
39.00	3.60	2.27	0.00				
40.00	3.60	2.27	0.00				
41.00	3.60	2.27	0.00				
42.00	3.60	2.27	0.00				
43.00	3.60	2.27	0.00				
44.00	3.60	2.27	0.00				
45.00	3.60	2.27	0.00				
46.00	3.60	2.27	0.00				
47.00	3.60	2.27	0.00				
48.00	3.60	2.27	0.00				
49.00	3.60	2.27	0.00				
50.00	3.60	2.27	0.00				
51.00	3.60	2.27	0.00				

Summary for Subcatchment Post 2A: Post 2A

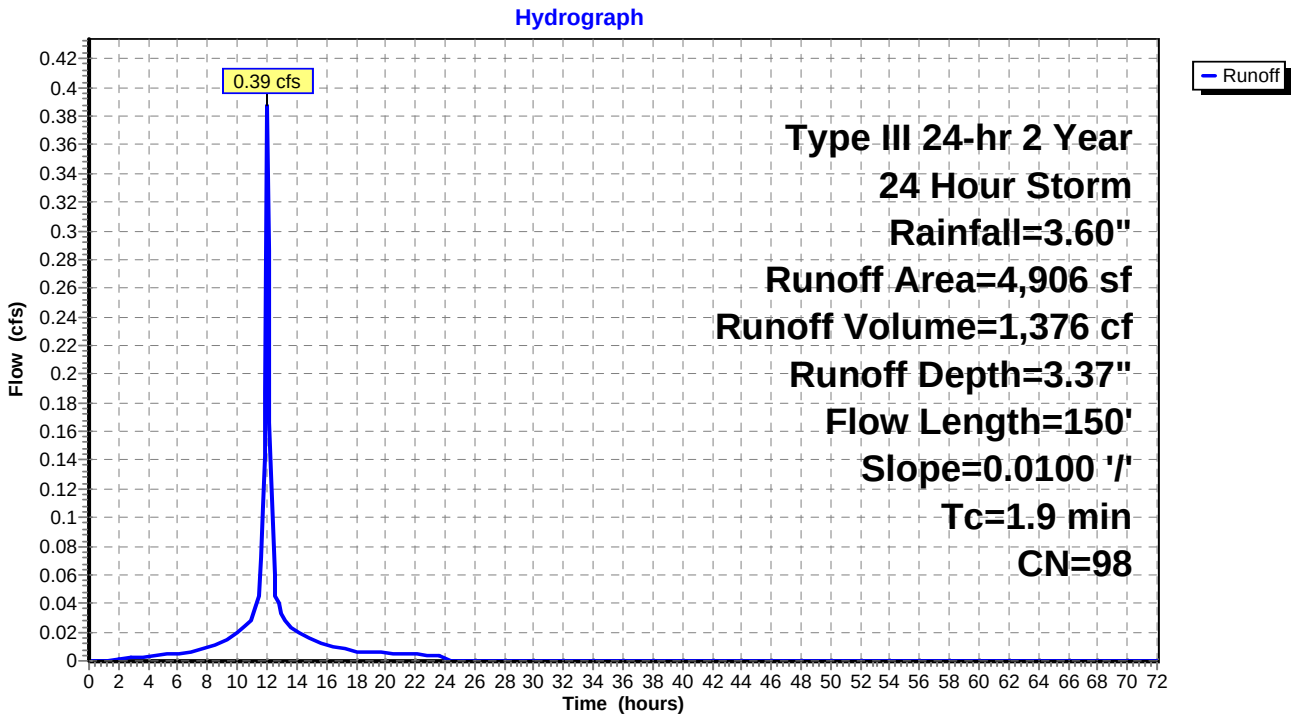
Runoff = 0.39 cfs @ 12.02 hrs, Volume= 1,376 cf, Depth= 3.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
4,906	98	Paved parking, HSG C
4,906		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, Pavement** Paved Kv= 20.3 fps
1.9	150	Total			

Subcatchment Post 2A: Post 2A



Hydrograph for Subcatchment Post 2A: Post 2A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.02	0.00
4.00	0.15	0.04	0.00
5.00	0.20	0.07	0.00
6.00	0.26	0.11	0.00
7.00	0.33	0.17	0.01
8.00	0.41	0.24	0.01
9.00	0.52	0.34	0.01
10.00	0.68	0.48	0.02
11.00	0.90	0.69	0.03
12.00	1.80	1.58	**0.38**
13.00	2.70	2.47	0.03
14.00	2.92	2.69	0.02
15.00	3.08	2.84	0.02
16.00	3.19	2.96	0.01
17.00	3.27	3.04	0.01
18.00	3.34	3.11	0.01
19.00	3.40	3.16	0.01
20.00	3.45	3.21	0.01
21.00	3.49	3.26	0.00
22.00	3.53	3.30	0.00
23.00	3.57	3.33	0.00
24.00	**3.60**	**3.37**	0.00
25.00	3.60	3.37	0.00
26.00	3.60	3.37	0.00
27.00	3.60	3.37	0.00
28.00	3.60	3.37	0.00
29.00	3.60	3.37	0.00
30.00	3.60	3.37	0.00
31.00	3.60	3.37	0.00
32.00	3.60	3.37	0.00
33.00	3.60	3.37	0.00
34.00	3.60	3.37	0.00
35.00	3.60	3.37	0.00
36.00	3.60	3.37	0.00
37.00	3.60	3.37	0.00
38.00	3.60	3.37	0.00
39.00	3.60	3.37	0.00
40.00	3.60	3.37	0.00
41.00	3.60	3.37	0.00
42.00	3.60	3.37	0.00
43.00	3.60	3.37	0.00
44.00	3.60	3.37	0.00
45.00	3.60	3.37	0.00
46.00	3.60	3.37	0.00
47.00	3.60	3.37	0.00
48.00	3.60	3.37	0.00
49.00	3.60	3.37	0.00
50.00	3.60	3.37	0.00
51.00	3.60	3.37	0.00
52.00	3.60	3.37	0.00
53.00	3.60	3.37	0.00
54.00	3.60	3.37	0.00
55.00	3.60	3.37	0.00
56.00	3.60	3.37	0.00
57.00	3.60	3.37	0.00
58.00	3.60	3.37	0.00
59.00	3.60	3.37	0.00
60.00	3.60	3.37	0.00
61.00	3.60	3.37	0.00
62.00	3.60	3.37	0.00
63.00	3.60	3.37	0.00
64.00	3.60	3.37	0.00
65.00	3.60	3.37	0.00
66.00	3.60	3.37	0.00
67.00	3.60	3.37	0.00
68.00	3.60	3.37	0.00
69.00	3.60	3.37	0.00
70.00	3.60	3.37	0.00
71.00	3.60	3.37	0.00
72.00	3.60	3.37	0.00

Summary for Subcatchment Post 2B: Post 2B

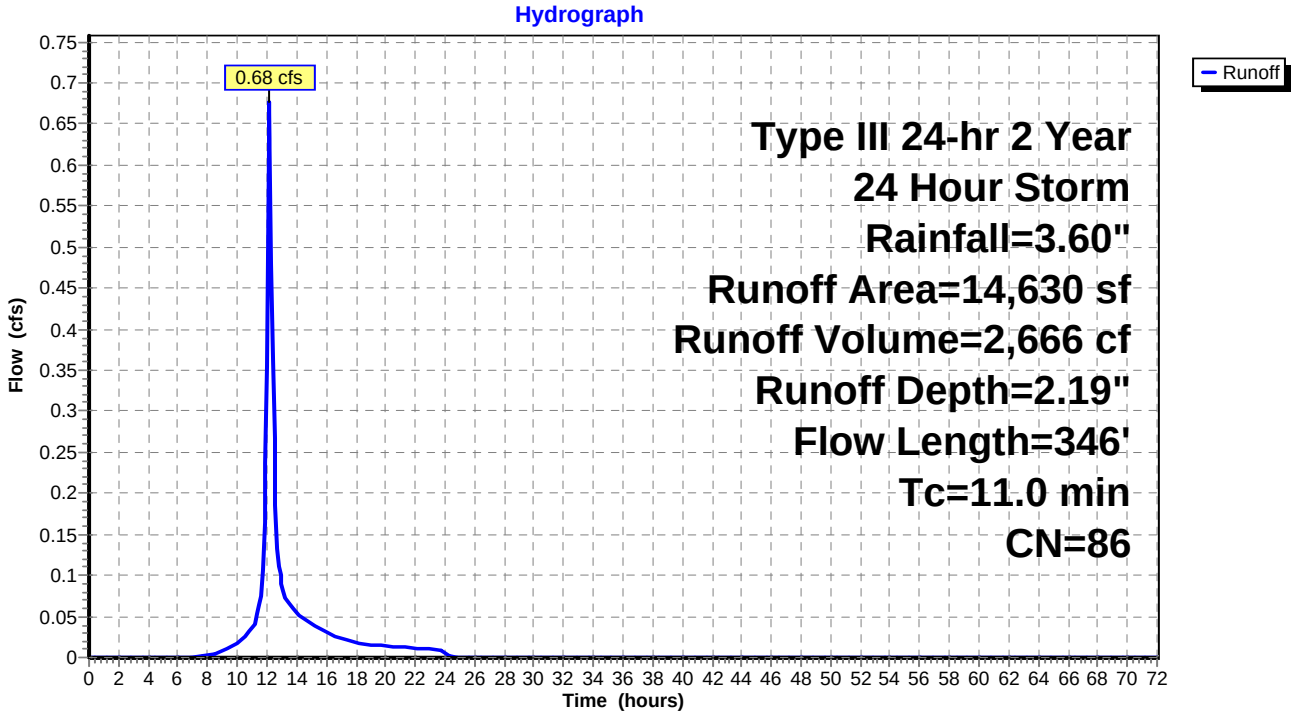
Runoff = 0.68 cfs @ 12.16 hrs, Volume= 2,666 cf, Depth= 2.19"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
5,836	98	Paved parking
6,450	74	>75% Grass cover, Good, HSG C
2,344	89	Gravel roads, HSG C
14,630	86	Weighted Average
8,794		60.11% Pervious Area
5,836		39.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0400	0.16		**Sheet Flow, Landscaped area** Grass: Dense n= 0.240 P2= 3.50"
0.7	246	0.0100	5.90	4.63	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
11.0	346	Total			

Subcatchment Post 2B: Post 2B



Hydrograph for Subcatchment Post 2B: Post 2B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.02	0.01
10.00	0.68	0.06	0.02
11.00	0.90	0.15	0.04
12.00	1.80	0.70	**0.35**
13.00	2.70	1.41	**0.09**
14.00	2.92	1.59	0.05
15.00	3.08	1.73	0.04
16.00	3.19	1.83	0.03
17.00	3.27	1.90	0.02
18.00	3.34	1.96	0.02
19.00	3.40	2.01	0.02
20.00	3.45	2.05	0.01
21.00	3.49	2.09	0.01
22.00	3.53	2.13	0.01
23.00	3.57	2.16	0.01
24.00	**3.60**	**2.19**	0.01
25.00	3.60	2.19	0.00
26.00	3.60	2.19	0.00
27.00	3.60	2.19	0.00
28.00	3.60	2.19	0.00
29.00	3.60	2.19	0.00
30.00	3.60	2.19	0.00
31.00	3.60	2.19	0.00
32.00	3.60	2.19	0.00
33.00	3.60	2.19	0.00
34.00	3.60	2.19	0.00
35.00	3.60	2.19	0.00
36.00	3.60	2.19	0.00
37.00	3.60	2.19	0.00
38.00	3.60	2.19	0.00
39.00	3.60	2.19	0.00
40.00	3.60	2.19	0.00
41.00	3.60	2.19	0.00
42.00	3.60	2.19	0.00
43.00	3.60	2.19	0.00
44.00	3.60	2.19	0.00
45.00	3.60	2.19	0.00
46.00	3.60	2.19	0.00
47.00	3.60	2.19	0.00
48.00	3.60	2.19	0.00
49.00	3.60	2.19	0.00
50.00	3.60	2.19	0.00
51.00	3.60	2.19	0.00
52.00	3.60	2.19	0.00
53.00	3.60	2.19	0.00
54.00	3.60	2.19	0.00
55.00	3.60	2.19	0.00
56.00	3.60	2.19	0.00
57.00	3.60	2.19	0.00
58.00	3.60	2.19	0.00
59.00	3.60	2.19	0.00
60.00	3.60	2.19	0.00
61.00	3.60	2.19	0.00
62.00	3.60	2.19	0.00
63.00	3.60	2.19	0.00
64.00	3.60	2.19	0.00
65.00	3.60	2.19	0.00
66.00	3.60	2.19	0.00
67.00	3.60	2.19	0.00
68.00	3.60	2.19	0.00
69.00	3.60	2.19	0.00
70.00	3.60	2.19	0.00
71.00	3.60	2.19	0.00
72.00	3.60	2.19	0.00

Summary for Subcatchment Post 2C: Post 2C

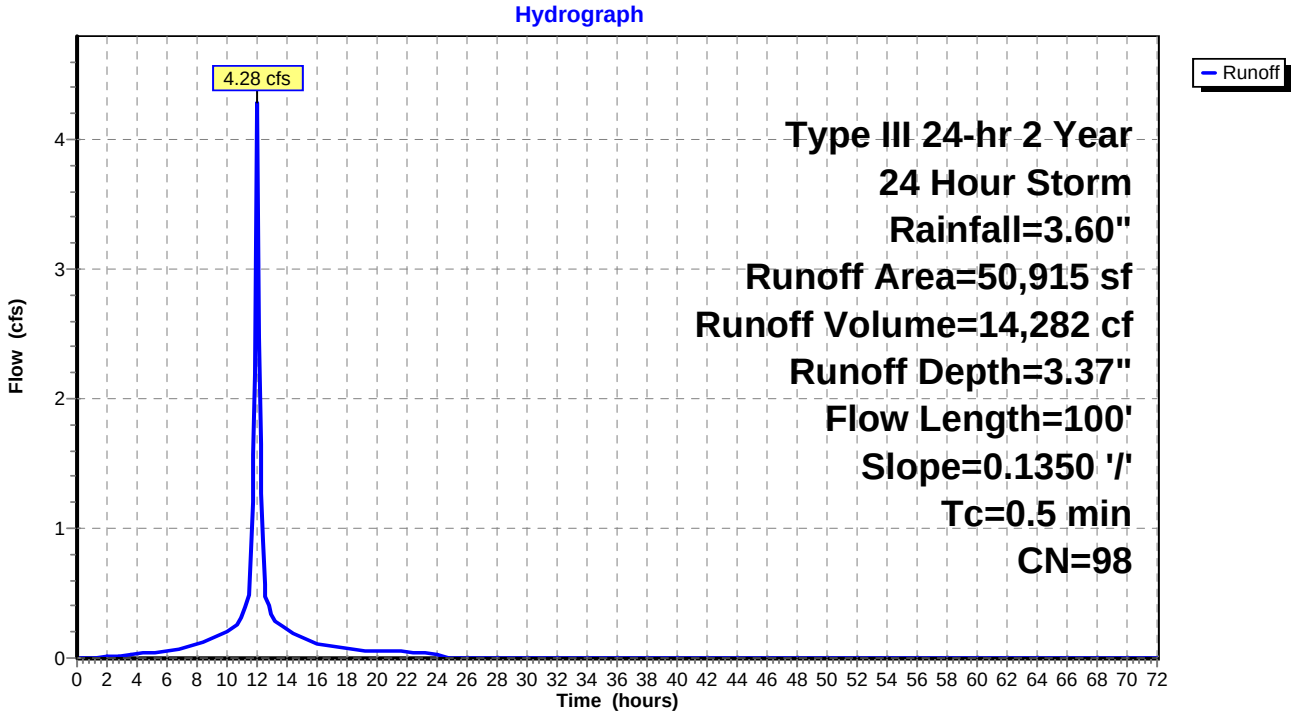
Runoff = 4.28 cfs @ 12.00 hrs, Volume= 14,282 cf, Depth= 3.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
50,915	98	Paved parking, HSG C
50,915		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.1350	3.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"

Subcatchment Post 2C: Post 2C



Hydrograph for Subcatchment Post 2C: Post 2C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.01
3.00	0.11	0.02	0.02
4.00	0.15	0.04	0.03
5.00	0.20	0.07	0.04
6.00	0.26	0.11	0.05
7.00	0.33	0.17	0.07
8.00	0.41	0.24	0.10
9.00	0.52	0.34	0.14
10.00	0.68	0.48	0.20
11.00	0.90	0.69	0.30
12.00	1.80	1.58	**4.28**
13.00	2.70	2.47	0.31
14.00	2.92	2.69	0.21
15.00	3.08	2.84	0.16
16.00	3.19	2.96	0.11
17.00	3.27	3.04	0.09
18.00	3.34	3.11	0.07
19.00	3.40	3.16	0.06
20.00	3.45	3.21	0.06
21.00	3.49	3.26	0.05
22.00	3.53	3.30	0.05
23.00	3.57	3.33	0.04
24.00	**3.60**	**3.37**	0.02
25.00	3.60	3.37	0.00
26.00	3.60	3.37	0.00
27.00	3.60	3.37	0.00
28.00	3.60	3.37	0.00
29.00	3.60	3.37	0.00
30.00	3.60	3.37	0.00
31.00	3.60	3.37	0.00
32.00	3.60	3.37	0.00
33.00	3.60	3.37	0.00
34.00	3.60	3.37	0.00
35.00	3.60	3.37	0.00
36.00	3.60	3.37	0.00
37.00	3.60	3.37	0.00
38.00	3.60	3.37	0.00
39.00	3.60	3.37	0.00
40.00	3.60	3.37	0.00
41.00	3.60	3.37	0.00
42.00	3.60	3.37	0.00
43.00	3.60	3.37	0.00
44.00	3.60	3.37	0.00
45.00	3.60	3.37	0.00
46.00	3.60	3.37	0.00
47.00	3.60	3.37	0.00
48.00	3.60	3.37	0.00
49.00	3.60	3.37	0.00
50.00	3.60	3.37	0.00
51.00	3.60	3.37	0.00
52.00	3.60	3.37	0.00
53.00	3.60	3.37	0.00
54.00	3.60	3.37	0.00
55.00	3.60	3.37	0.00
56.00	3.60	3.37	0.00
57.00	3.60	3.37	0.00
58.00	3.60	3.37	0.00
59.00	3.60	3.37	0.00
60.00	3.60	3.37	0.00
61.00	3.60	3.37	0.00
62.00	3.60	3.37	0.00
63.00	3.60	3.37	0.00
64.00	3.60	3.37	0.00
65.00	3.60	3.37	0.00
66.00	3.60	3.37	0.00
67.00	3.60	3.37	0.00
68.00	3.60	3.37	0.00
69.00	3.60	3.37	0.00
70.00	3.60	3.37	0.00
71.00	3.60	3.37	0.00
72.00	3.60	3.37	0.00

Summary for Subcatchment Post 2D: Post 2D

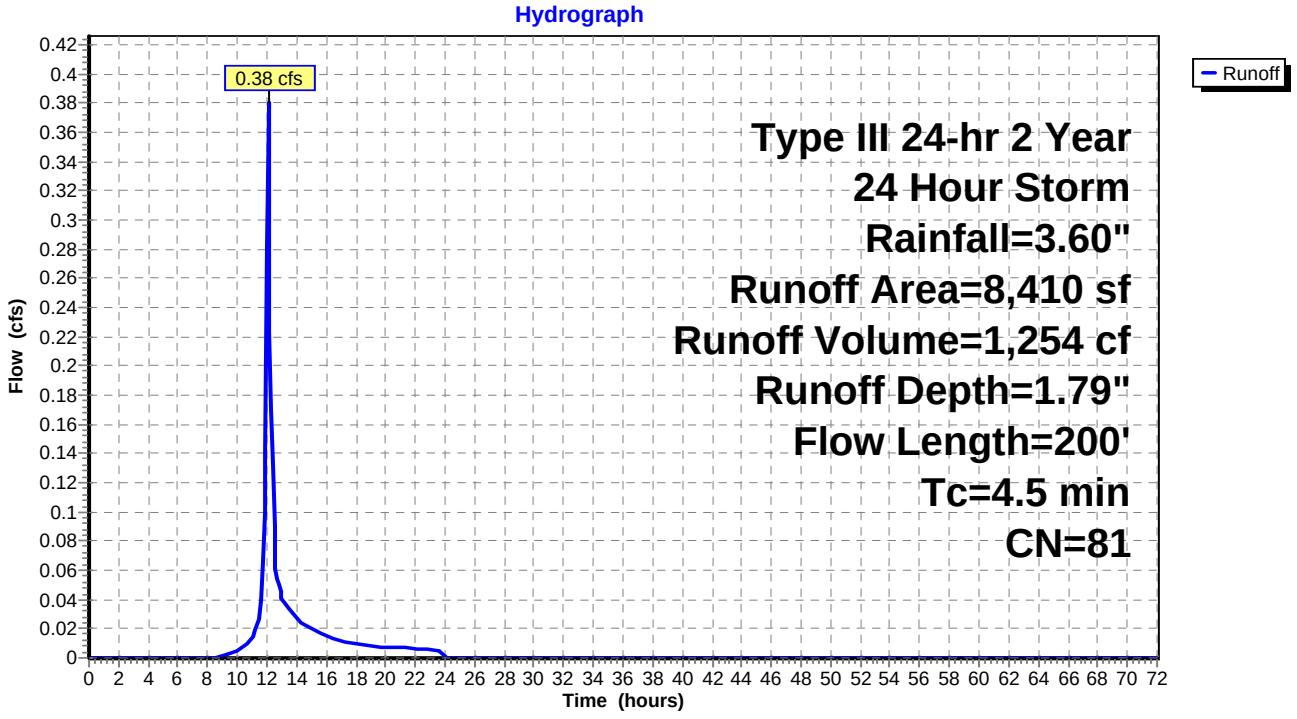
Runoff = 0.38 cfs @ 12.09 hrs, Volume= 1,254 cf, Depth= 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
6,348	79	50-75% Grass cover, Fair, HSG C
2,062	89	Gravel roads, HSG C
8,410	81	Weighted Average
8,410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1000	0.20		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
0.4	150	0.0860	5.95		**Shallow Concentrated Flow, Maintenance Drive** Paved Kv= 20.3 fps
4.5	200	Total			

Subcatchment Post 2D: Post 2D



Hydrograph for Subcatchment Post 2D: Post 2D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.68	0.02	0.01
11.00	0.90	0.07	0.01
12.00	1.80	0.48	**0.28**
13.00	2.70	1.09	**0.04**
14.00	2.92	1.25	0.03
15.00	3.08	1.37	0.02
16.00	3.19	1.46	0.01
17.00	3.27	1.53	0.01
18.00	3.34	1.58	0.01
19.00	3.40	1.62	0.01
20.00	3.45	1.66	0.01
21.00	3.49	1.70	0.01
22.00	3.53	1.73	0.01
23.00	3.57	1.76	0.01
24.00	**3.60**	**1.79**	0.00
25.00	3.60	1.79	0.00
26.00	3.60	1.79	0.00
27.00	3.60	1.79	0.00
28.00	3.60	1.79	0.00
29.00	3.60	1.79	0.00
30.00	3.60	1.79	0.00
31.00	3.60	1.79	0.00
32.00	3.60	1.79	0.00
33.00	3.60	1.79	0.00
34.00	3.60	1.79	0.00
35.00	3.60	1.79	0.00
36.00	3.60	1.79	0.00
37.00	3.60	1.79	0.00
38.00	3.60	1.79	0.00
39.00	3.60	1.79	0.00
40.00	3.60	1.79	0.00
41.00	3.60	1.79	0.00
42.00	3.60	1.79	0.00
43.00	3.60	1.79	0.00
44.00	3.60	1.79	0.00
45.00	3.60	1.79	0.00
46.00	3.60	1.79	0.00
47.00	3.60	1.79	0.00
48.00	3.60	1.79	0.00
49.00	3.60	1.79	0.00
50.00	3.60	1.79	0.00
51.00	3.60	1.79	0.00
52.00	3.60	1.79	0.00
53.00	3.60	1.79	0.00
54.00	3.60	1.79	0.00
55.00	3.60	1.79	0.00
56.00	3.60	1.79	0.00
57.00	3.60	1.79	0.00
58.00	3.60	1.79	0.00
59.00	3.60	1.79	0.00
60.00	3.60	1.79	0.00
61.00	3.60	1.79	0.00
62.00	3.60	1.79	0.00
63.00	3.60	1.79	0.00
64.00	3.60	1.79	0.00
65.00	3.60	1.79	0.00
66.00	3.60	1.79	0.00
67.00	3.60	1.79	0.00
68.00	3.60	1.79	0.00
69.00	3.60	1.79	0.00
70.00	3.60	1.79	0.00
71.00	3.60	1.79	0.00
72.00	3.60	1.79	0.00

Summary for Subcatchment Post 2F: Post 2F

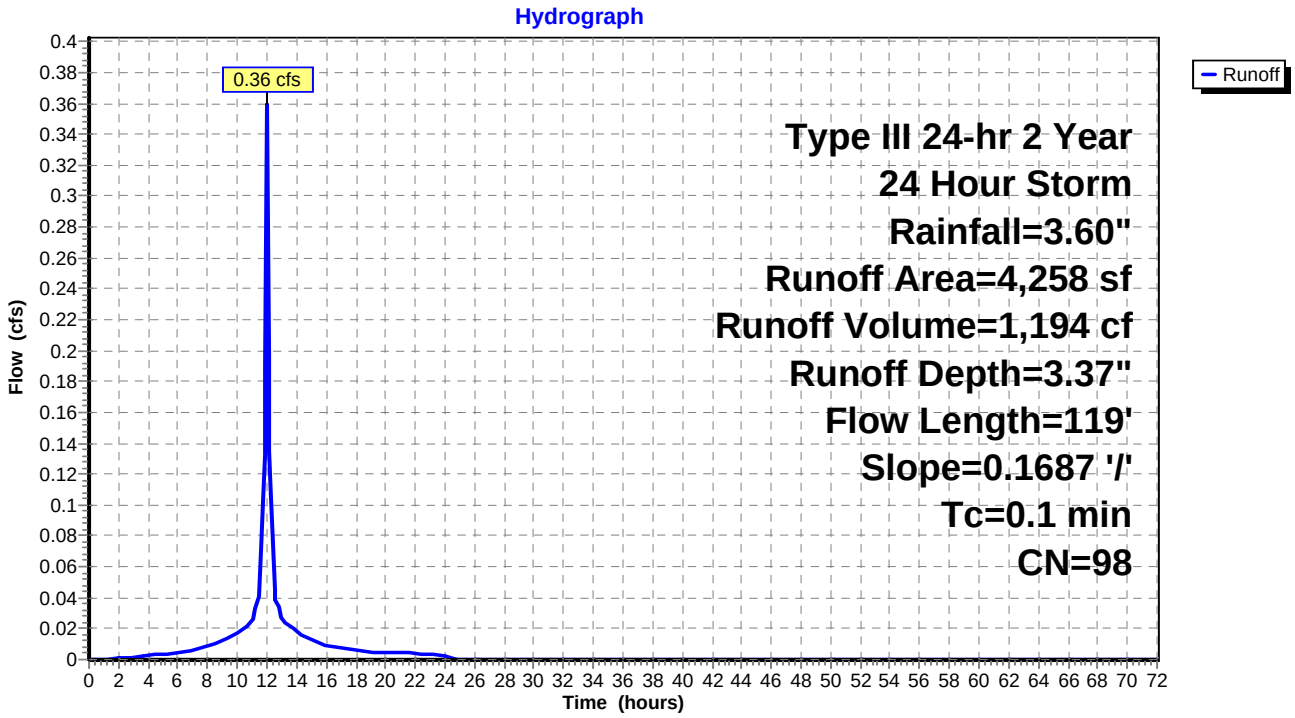
Runoff = 0.36 cfs @ 12.00 hrs, Volume= 1,194 cf, Depth= 3.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
4,258	98	Roofs, HSG C
4,258		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	119	0.1687	14.22	4.96	**Pipe Channel, Roof Leader** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior

Subcatchment Post 2F: Post 2F



Hydrograph for Subcatchment Post 2F: Post 2F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	3.60	3.37	0.00
1.00	0.04	0.00	0.00	53.00	3.60	3.37	0.00
2.00	0.07	0.00	0.00	54.00	3.60	3.37	0.00
3.00	0.11	0.02	0.00	55.00	3.60	3.37	0.00
4.00	0.15	0.04	0.00	56.00	3.60	3.37	0.00
5.00	0.20	0.07	0.00	57.00	3.60	3.37	0.00
6.00	0.26	0.11	0.00	58.00	3.60	3.37	0.00
7.00	0.33	0.17	0.01	59.00	3.60	3.37	0.00
8.00	0.41	0.24	0.01	60.00	3.60	3.37	0.00
9.00	0.52	0.34	0.01	61.00	3.60	3.37	0.00
10.00	0.68	0.48	0.02	62.00	3.60	3.37	0.00
11.00	0.90	0.69	0.03	63.00	3.60	3.37	0.00
12.00	1.80	1.58	**0.36**	64.00	3.60	3.37	0.00
13.00	2.70	2.47	0.03	65.00	3.60	3.37	0.00
14.00	2.92	2.69	0.02	66.00	3.60	3.37	0.00
15.00	3.08	2.84	0.01	67.00	3.60	3.37	0.00
16.00	3.19	2.96	0.01	68.00	3.60	3.37	0.00
17.00	3.27	3.04	0.01	69.00	3.60	3.37	0.00
18.00	3.34	3.11	0.01	70.00	3.60	3.37	0.00
19.00	3.40	3.16	0.01	71.00	3.60	3.37	0.00
20.00	3.45	3.21	0.00	72.00	3.60	3.37	0.00
21.00	3.49	3.26	0.00				
22.00	3.53	3.30	0.00				
23.00	3.57	3.33	0.00				
24.00	**3.60**	**3.37**	0.00				
25.00	3.60	3.37	0.00				
26.00	3.60	3.37	0.00				
27.00	3.60	3.37	0.00				
28.00	3.60	3.37	0.00				
29.00	3.60	3.37	0.00				
30.00	3.60	3.37	0.00				
31.00	3.60	3.37	0.00				
32.00	3.60	3.37	0.00				
33.00	3.60	3.37	0.00				
34.00	3.60	3.37	0.00				
35.00	3.60	3.37	0.00				
36.00	3.60	3.37	0.00				
37.00	3.60	3.37	0.00				
38.00	3.60	3.37	0.00				
39.00	3.60	3.37	0.00				
40.00	3.60	3.37	0.00				
41.00	3.60	3.37	0.00				
42.00	3.60	3.37	0.00				
43.00	3.60	3.37	0.00				
44.00	3.60	3.37	0.00				
45.00	3.60	3.37	0.00				
46.00	3.60	3.37	0.00				
47.00	3.60	3.37	0.00				
48.00	3.60	3.37	0.00				
49.00	3.60	3.37	0.00				
50.00	3.60	3.37	0.00				
51.00	3.60	3.37	0.00				

Summary for Subcatchment Post 2G: Post 2G

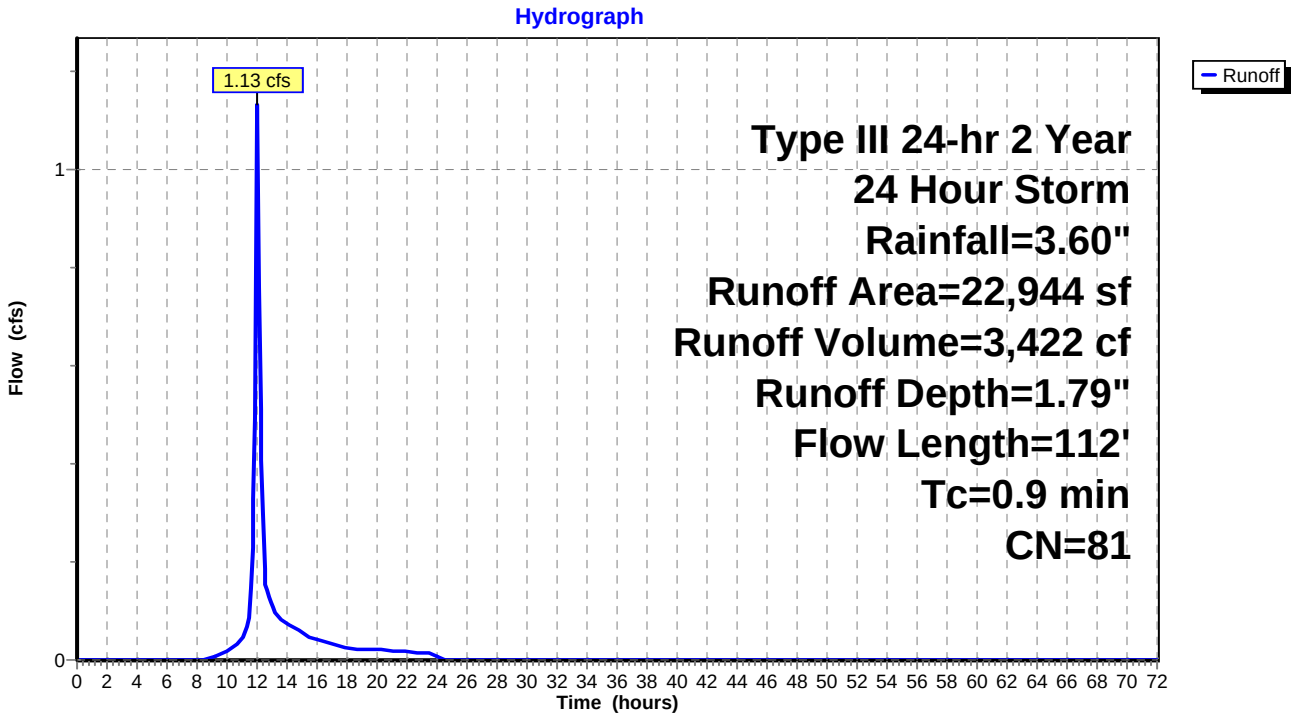
Runoff = 1.13 cfs @ 12.01 hrs, Volume= 3,422 cf, Depth= 1.79"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
1,112	98	Paved parking, HSG C
19,649	79	50-75% Grass cover, Fair, HSG C
2,183	89	Gravel roads, HSG C
22,944	81	Weighted Average
21,832		95.15% Pervious Area
1,112		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	80	0.0250	1.50		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.0	32	0.4600	10.92		**Shallow Concentrated Flow, Landscaped** Unpaved Kv= 16.1 fps
0.9	112	Total			

Subcatchment Post 2G: Post 2G



Hydrograph for Subcatchment Post 2G: Post 2G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.68	0.02	0.01
11.00	0.90	0.07	0.04
12.00	1.80	0.48	**1.12**
13.00	2.70	1.09	0.11
14.00	2.92	1.25	0.07
15.00	3.08	1.37	0.06
16.00	3.19	1.46	0.04
17.00	3.27	1.53	0.03
18.00	3.34	1.58	0.02
19.00	3.40	1.62	0.02
20.00	3.45	1.66	0.02
21.00	3.49	1.70	0.02
22.00	3.53	1.73	0.02
23.00	3.57	1.76	0.02
24.00	**3.60**	**1.79**	0.01
25.00	3.60	1.79	0.00
26.00	3.60	1.79	0.00
27.00	3.60	1.79	0.00
28.00	3.60	1.79	0.00
29.00	3.60	1.79	0.00
30.00	3.60	1.79	0.00
31.00	3.60	1.79	0.00
32.00	3.60	1.79	0.00
33.00	3.60	1.79	0.00
34.00	3.60	1.79	0.00
35.00	3.60	1.79	0.00
36.00	3.60	1.79	0.00
37.00	3.60	1.79	0.00
38.00	3.60	1.79	0.00
39.00	3.60	1.79	0.00
40.00	3.60	1.79	0.00
41.00	3.60	1.79	0.00
42.00	3.60	1.79	0.00
43.00	3.60	1.79	0.00
44.00	3.60	1.79	0.00
45.00	3.60	1.79	0.00
46.00	3.60	1.79	0.00
47.00	3.60	1.79	0.00
48.00	3.60	1.79	0.00
49.00	3.60	1.79	0.00
50.00	3.60	1.79	0.00
51.00	3.60	1.79	0.00
52.00	3.60	1.79	0.00
53.00	3.60	1.79	0.00
54.00	3.60	1.79	0.00
55.00	3.60	1.79	0.00
56.00	3.60	1.79	0.00
57.00	3.60	1.79	0.00
58.00	3.60	1.79	0.00
59.00	3.60	1.79	0.00
60.00	3.60	1.79	0.00
61.00	3.60	1.79	0.00
62.00	3.60	1.79	0.00
63.00	3.60	1.79	0.00
64.00	3.60	1.79	0.00
65.00	3.60	1.79	0.00
66.00	3.60	1.79	0.00
67.00	3.60	1.79	0.00
68.00	3.60	1.79	0.00
69.00	3.60	1.79	0.00
70.00	3.60	1.79	0.00
71.00	3.60	1.79	0.00
72.00	3.60	1.79	0.00

Summary for Subcatchment Post 2H: Post 2H

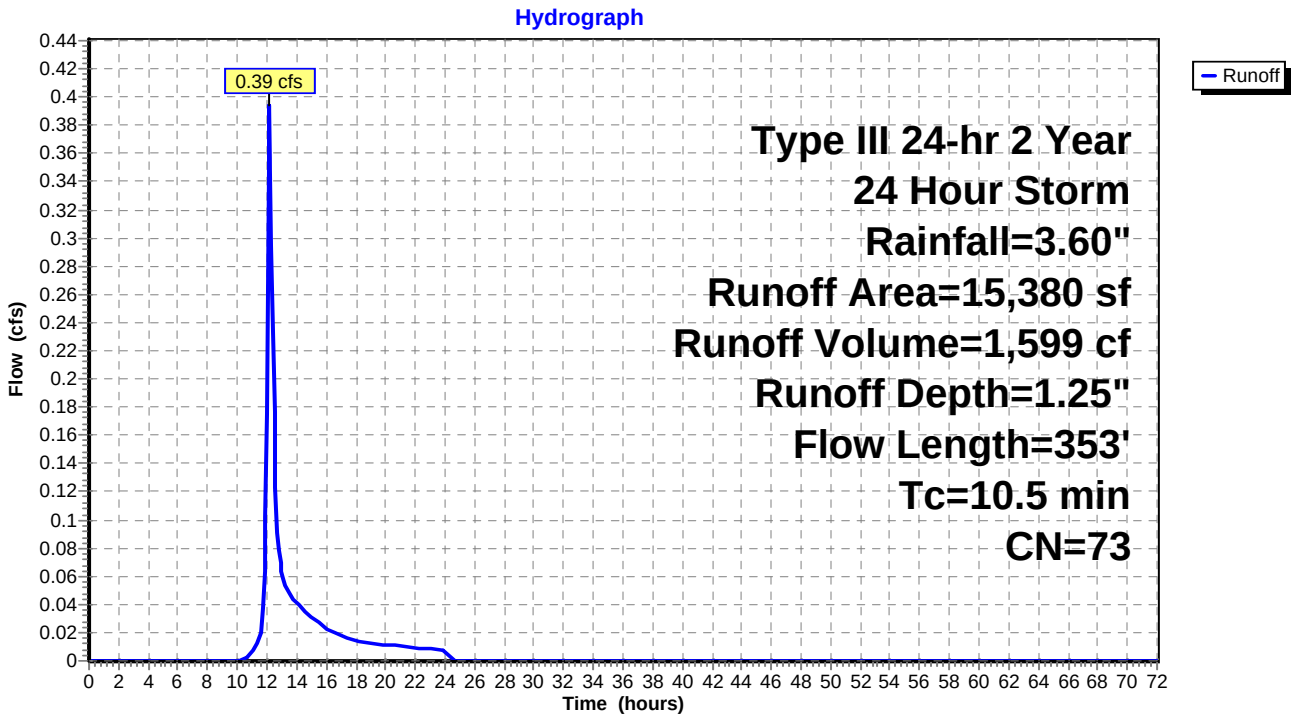
Runoff = 0.39 cfs @ 12.18 hrs, Volume= 1,599 cf, Depth= 1.25"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
15,380	73	Woods, Fair, HSG C
15,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
1.7	253	0.0260	2.42		**Shallow Concentrated Flow, Grassed waterway** Grassed Waterway Kv= 15.0 fps
10.5	353	Total			

Subcatchment Post 2H: Post 2H



Hydrograph for Subcatchment Post 2H: Post 2H

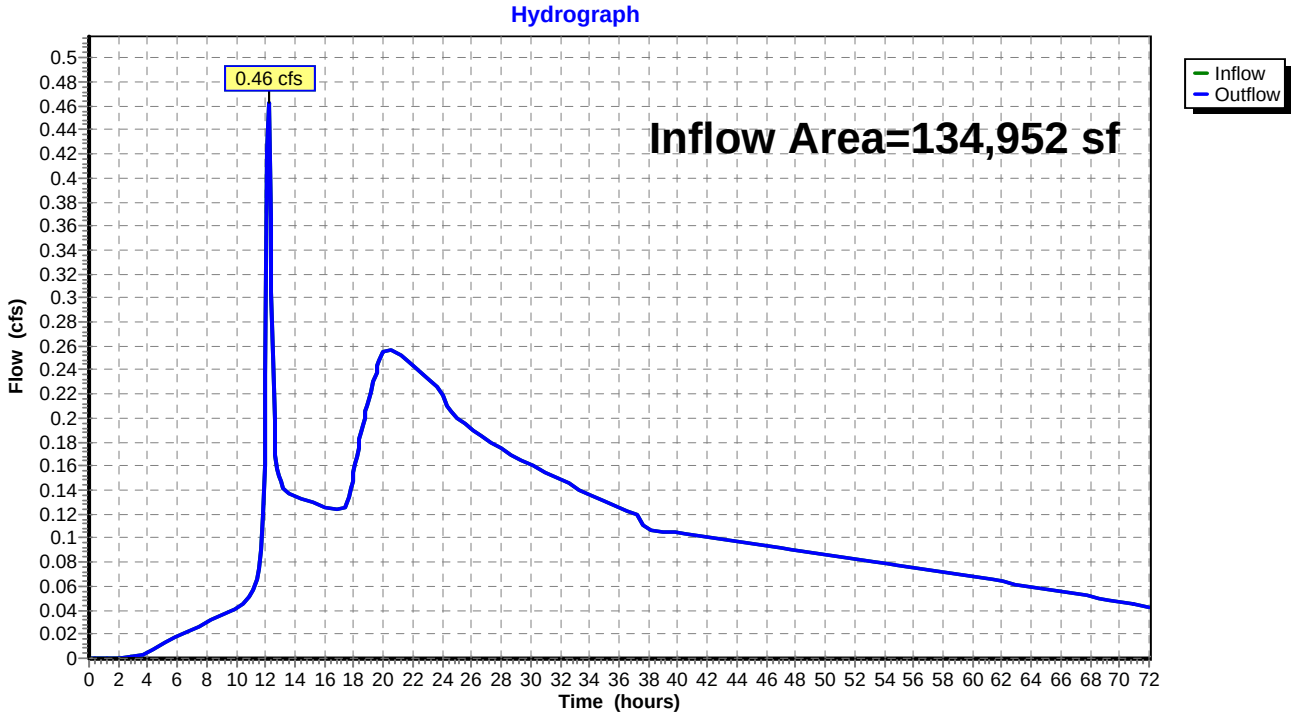
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.90	0.01	0.01
12.00	1.80	0.24	**0.18**
13.00	2.70	0.68	**0.06**
14.00	2.92	0.81	0.04
15.00	3.08	0.90	0.03
16.00	3.19	0.98	0.02
17.00	3.27	1.03	0.02
18.00	3.34	1.07	0.01
19.00	3.40	1.11	0.01
20.00	3.45	1.14	0.01
21.00	3.49	1.17	0.01
22.00	3.53	1.20	0.01
23.00	3.57	1.23	0.01
24.00	**3.60**	**1.25**	0.01
25.00	3.60	1.25	0.00
26.00	3.60	1.25	0.00
27.00	3.60	1.25	0.00
28.00	3.60	1.25	0.00
29.00	3.60	1.25	0.00
30.00	3.60	1.25	0.00
31.00	3.60	1.25	0.00
32.00	3.60	1.25	0.00
33.00	3.60	1.25	0.00
34.00	3.60	1.25	0.00
35.00	3.60	1.25	0.00
36.00	3.60	1.25	0.00
37.00	3.60	1.25	0.00
38.00	3.60	1.25	0.00
39.00	3.60	1.25	0.00
40.00	3.60	1.25	0.00
41.00	3.60	1.25	0.00
42.00	3.60	1.25	0.00
43.00	3.60	1.25	0.00
44.00	3.60	1.25	0.00
45.00	3.60	1.25	0.00
46.00	3.60	1.25	0.00
47.00	3.60	1.25	0.00
48.00	3.60	1.25	0.00
49.00	3.60	1.25	0.00
50.00	3.60	1.25	0.00
51.00	3.60	1.25	0.00
52.00	3.60	1.25	0.00
53.00	3.60	1.25	0.00
54.00	3.60	1.25	0.00
55.00	3.60	1.25	0.00
56.00	3.60	1.25	0.00
57.00	3.60	1.25	0.00
58.00	3.60	1.25	0.00
59.00	3.60	1.25	0.00
60.00	3.60	1.25	0.00
61.00	3.60	1.25	0.00
62.00	3.60	1.25	0.00
63.00	3.60	1.25	0.00
64.00	3.60	1.25	0.00
65.00	3.60	1.25	0.00
66.00	3.60	1.25	0.00
67.00	3.60	1.25	0.00
68.00	3.60	1.25	0.00
69.00	3.60	1.25	0.00
70.00	3.60	1.25	0.00
71.00	3.60	1.25	0.00
72.00	3.60	1.25	0.00

Summary for Reach DP2: Design Point 2

Inflow Area = 134,952 sf, 53.68% Impervious, Inflow Depth > 2.37" for 2 Year, 24 Hour Storm event
Inflow = 0.46 cfs @ 12.18 hrs, Volume= 26,683 cf
Outflow = 0.46 cfs @ 12.18 hrs, Volume= 26,683 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.01		0.01
5.00	0.01		0.01
6.00	0.02		0.02
7.00	0.02		0.02
8.00	0.03		0.03
9.00	0.04		0.04
10.00	0.04		0.04
11.00	0.05		0.05
12.00	**0.24**		**0.24**
13.00	**0.15**		**0.15**
14.00	0.13		0.13
15.00	0.13		0.13
16.00	0.13		0.13
17.00	0.12		0.12
18.00	0.15		0.15
19.00	0.22		0.22
20.00	0.25		0.25
21.00	0.26		0.26
22.00	0.24		0.24
23.00	0.23		0.23
24.00	0.22		0.22
25.00	0.20		0.20
26.00	0.19		0.19
27.00	0.18		0.18
28.00	0.17		0.17
29.00	0.17		0.17
30.00	0.16		0.16
31.00	0.15		0.15
32.00	0.15		0.15
33.00	0.14		0.14
34.00	0.14		0.14
35.00	0.13		0.13
36.00	0.13		0.13
37.00	0.12		0.12
38.00	0.11		0.11
39.00	0.11		0.11
40.00	0.10		0.10
41.00	0.10		0.10
42.00	0.10		0.10
43.00	0.10		0.10
44.00	0.10		0.10
45.00	0.10		0.10
46.00	0.09		0.09
47.00	0.09		0.09
48.00	0.09		0.09
49.00	0.09		0.09
50.00	0.09		0.09
51.00	0.09		0.09
52.00	0.08		0.08
53.00	0.08		0.08
54.00	0.08		0.08
55.00	0.08		0.08
56.00	0.08		0.08
57.00	0.07		0.07
58.00	0.07		0.07
59.00	0.07		0.07
60.00	0.07		0.07
61.00	0.07		0.07
62.00	0.06		0.06
63.00	0.06		0.06
64.00	0.06		0.06
65.00	0.06		0.06
66.00	0.06		0.06
67.00	0.05		0.05
68.00	0.05		0.05
69.00	0.05		0.05
70.00	0.05		0.05
71.00	0.05		0.05
72.00	0.04		0.04

Summary for Pond F-1: Combined Sed. + Sand

Inflow Area = 92,370 sf, 72.61% Impervious, Inflow Depth = 2.87" for 2 Year, 24 Hour Storm event
Inflow = 6.12 cfs @ 12.01 hrs, Volume= 22,124 cf
Outflow = 0.69 cfs @ 12.79 hrs, Volume= 22,140 cf, Atten= 89%, Lag= 46.7 min
Primary = 0.69 cfs @ 12.79 hrs, Volume= 22,140 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 386.68' @ 12.79 hrs Surf.Area= 6,628 sf Storage= 11,168 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 437.1 min (1,206.7 - 769.6)

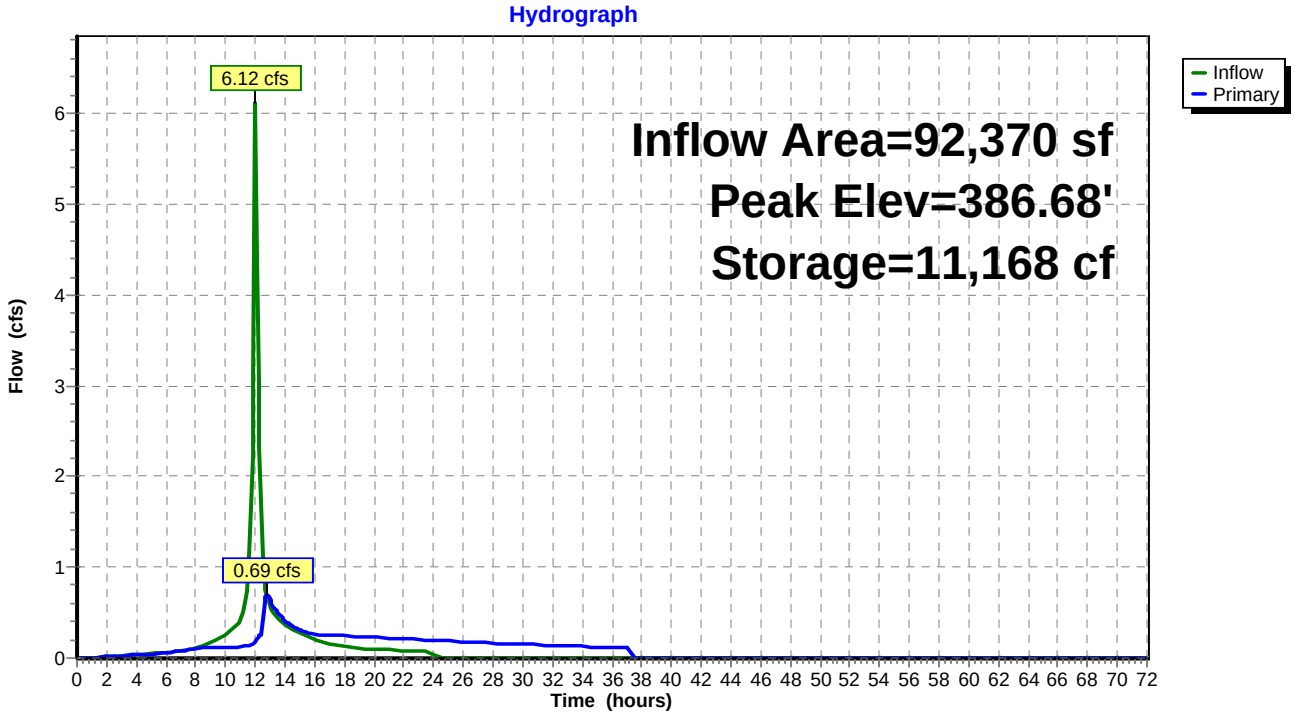
Volume	Invert	Avail.Storage	Storage Description
#1	384.00'	20,877 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
384.00	2,608	188.0	0	0	2,608
385.00	3,635	237.0	3,107	3,107	4,279
386.00	4,801	285.0	4,205	7,312	6,290
387.00	7,600	320.0	6,147	13,459	8,002
388.00	7,237	337.0	7,418	20,877	8,949

Device	Routing	Invert	Outlet Devices
#1	Primary	382.00'	**10.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 377.00' S= 0.1316 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	382.00'	**1.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	384.00'	**1.750 in/hr Exfiltration over Surface area**
#4	Device 1	386.60'	**18.0" x 18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.69 cfs @ 12.79 hrs HW=386.68' TW=378.06' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.69 cfs of 4.28 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.27 cfs of 0.57 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.27 cfs)
  - **4=Orifice/Grate** (Weir Controls 0.42 cfs @ 0.91 fps)

Pond F-1: Combined Sed. + Sand



Hydrograph for Pond F-1: Combined Sed. + Sand

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	384.00	0.00
2.00	0.01	0	384.00	0.01
4.00	0.04	0	384.00	0.04
6.00	0.06	0	384.00	0.06
8.00	0.11	4	384.00	0.11
10.00	0.26	520	384.19	0.11
12.00	**6.08**	**5,965**	**385.71**	**0.18**
14.00	0.36	**10,906**	**386.64**	**0.41**
16.00	0.19	10,618	386.59	0.26
18.00	0.12	9,906	386.48	0.25
20.00	0.10	8,965	386.32	0.23
22.00	0.08	8,018	386.14	0.21
24.00	0.04	7,086	385.95	0.19
26.00	0.00	5,766	385.66	0.18
28.00	0.00	4,535	385.37	0.16
30.00	0.00	3,402	385.08	0.15
32.00	0.00	2,363	384.79	0.14
34.00	0.00	1,416	384.50	0.13
36.00	0.00	555	384.21	0.11
38.00	0.00	0	384.00	0.00
40.00	0.00	0	384.00	0.00
42.00	0.00	0	384.00	0.00
44.00	0.00	0	384.00	0.00
46.00	0.00	0	384.00	0.00
48.00	0.00	0	384.00	0.00
50.00	0.00	0	384.00	0.00
52.00	0.00	0	384.00	0.00
54.00	0.00	0	384.00	0.00
56.00	0.00	0	384.00	0.00
58.00	0.00	0	384.00	0.00
60.00	0.00	0	384.00	0.00
62.00	0.00	0	384.00	0.00
64.00	0.00	0	384.00	0.00
66.00	0.00	0	384.00	0.00
68.00	0.00	0	384.00	0.00
70.00	0.00	0	384.00	0.00
72.00	0.00	0	384.00	0.00

Summary for Pond FS: Flow Splitter

Inflow Area = 70,451 sf, 87.52% Impervious, Inflow Depth = 3.12" for 2 Year, 24 Hour Storm event
Inflow = 5.03 cfs @ 12.01 hrs, Volume= 18,325 cf
Outflow = 5.03 cfs @ 12.01 hrs, Volume= 18,325 cf, Atten= 0%, Lag= 0.0 min
Primary = 4.99 cfs @ 12.01 hrs, Volume= 18,311 cf
Secondary = 0.04 cfs @ 12.00 hrs, Volume= 14 cf

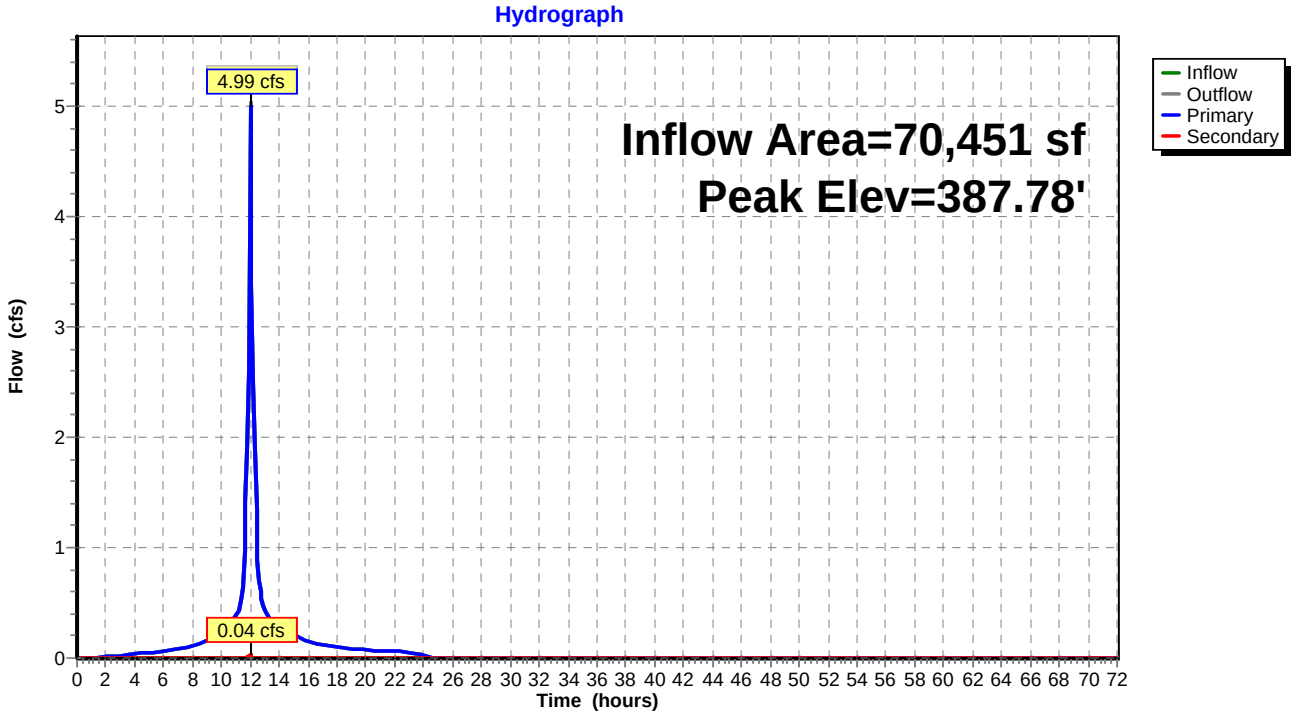
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 387.78' @ 12.01 hrs
Flood Elev= 392.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	386.45'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#2	Secondary	386.60'	**24.0" Round Culvert** L= 86.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 384.50' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#3	Device 2	387.75'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=4.84 cfs @ 12.01 hrs HW=387.72' TW=385.75' (Dynamic Tailwater)
└**1=Orifice/Grate** (Orifice Controls 4.84 cfs @ 4.84 fps)

Secondary OutFlow Max=0.04 cfs @ 12.00 hrs HW=387.77' TW=377.66' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.04 cfs of 7.06 cfs potential flow)
└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.04 cfs @ 0.42 fps)

Pond FS: Flow Splitter



Hydrograph for Pond FS: Flow Splitter

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	386.45	0.00	0.00	0.00
2.00	0.01	386.46	0.01	0.01	0.00
4.00	0.04	386.48	0.04	0.04	0.00
6.00	0.06	386.49	0.06	0.06	0.00
8.00	0.11	386.52	0.11	0.11	0.00
10.00	0.23	386.56	0.23	0.23	0.00
12.00	**5.01**	**387.77**	**5.01**	**4.98**	**0.04**
14.00	0.28	386.66	0.28	0.28	0.00
16.00	0.15	386.60	0.15	0.15	0.00
18.00	0.09	386.51	0.09	0.09	0.00
20.00	0.07	386.50	0.07	0.07	0.00
22.00	0.06	386.50	0.06	0.06	0.00
24.00	0.03	386.48	0.03	0.03	0.00
26.00	0.00	386.45	0.00	0.00	0.00
28.00	0.00	386.45	0.00	0.00	0.00
30.00	0.00	386.45	0.00	0.00	0.00
32.00	0.00	386.45	0.00	0.00	0.00
34.00	0.00	386.45	0.00	0.00	0.00
36.00	0.00	386.45	0.00	0.00	0.00
38.00	0.00	386.45	0.00	0.00	0.00
40.00	0.00	386.45	0.00	0.00	0.00
42.00	0.00	386.45	0.00	0.00	0.00
44.00	0.00	386.45	0.00	0.00	0.00
46.00	0.00	386.45	0.00	0.00	0.00
48.00	0.00	386.45	0.00	0.00	0.00
50.00	0.00	386.45	0.00	0.00	0.00
52.00	0.00	386.45	0.00	0.00	0.00
54.00	0.00	386.45	0.00	0.00	0.00
56.00	0.00	386.45	0.00	0.00	0.00
58.00	0.00	386.45	0.00	0.00	0.00
60.00	0.00	386.45	0.00	0.00	0.00
62.00	0.00	386.45	0.00	0.00	0.00
64.00	0.00	386.45	0.00	0.00	0.00
66.00	0.00	386.45	0.00	0.00	0.00
68.00	0.00	386.45	0.00	0.00	0.00
70.00	0.00	386.45	0.00	0.00	0.00
72.00	0.00	386.45	0.00	0.00	0.00

Summary for Pond W-4: W-4 Pocket Wetland

Inflow Area = 119,572 sf, 60.58% Impervious, Inflow Depth = 2.69" for 2 Year, 24 Hour Storm event
Inflow = 1.71 cfs @ 12.01 hrs, Volume= 26,771 cf
Outflow = 0.25 cfs @ 20.47 hrs, Volume= 25,084 cf, Atten= 86%, Lag= 507.7 min
Primary = 0.25 cfs @ 20.47 hrs, Volume= 25,084 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Starting Elev= 377.00' Surf.Area= 4,840 sf Storage= 8,493 cf
Peak Elev= 379.01' @ 20.47 hrs Surf.Area= 7,318 sf Storage= 20,447 cf (11,954 cf above start)

Plug-Flow detention time= 1,773.7 min calculated for 16,568 cf (62% of inflow)
Center-of-Mass det. time= 957.1 min (2,094.8 - 1,137.7)

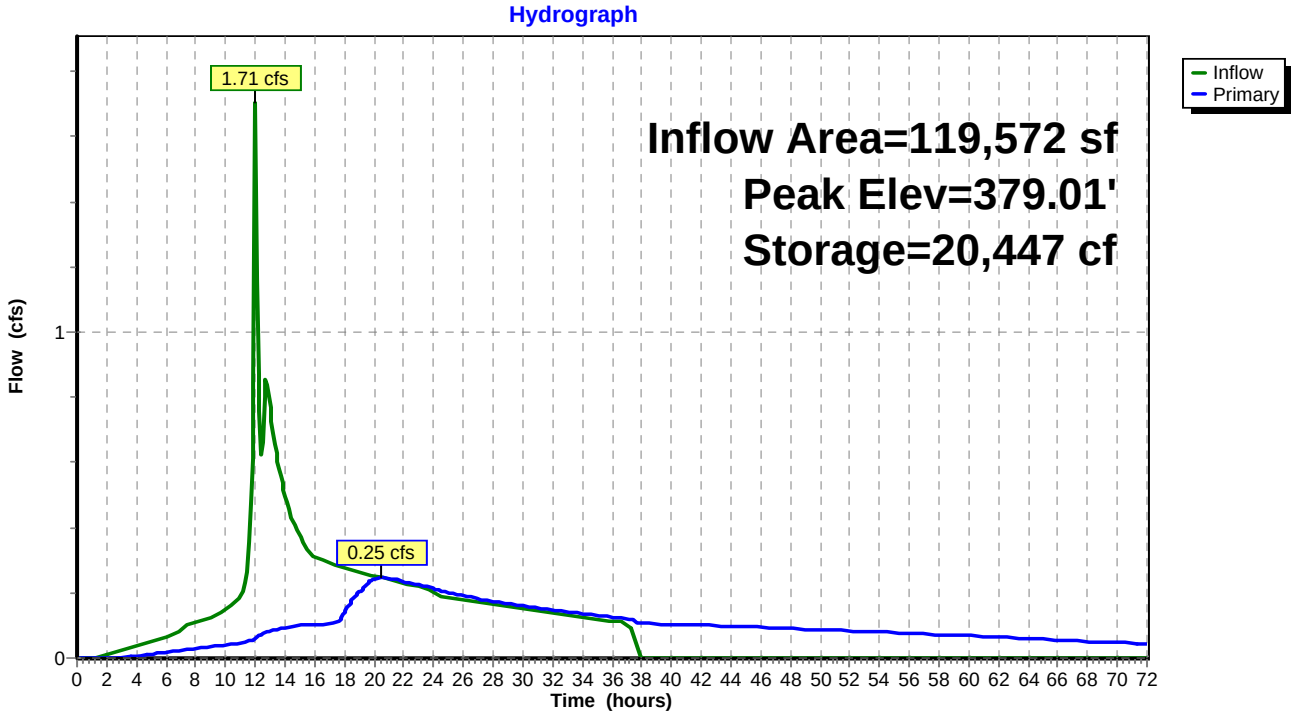
Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	28,507 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
373.00	994	124.0	0	0	994
374.00	1,255	136.0	1,122	1,122	1,274
375.00	1,541	149.0	1,396	2,518	1,602
376.00	2,862	220.0	2,168	4,685	3,695
377.00	4,840	303.0	3,808	8,493	7,159
378.00	5,830	325.0	5,327	13,820	8,302
379.00	7,302	361.0	6,552	20,373	10,297
380.00	8,995	407.0	8,134	28,507	13,135

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.013
#2	Device 1	377.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Primary	378.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.40 0.50 0.90 1.00 2.00 Width (feet) 1.00 1.00 1.00 1.00 1.00
#4	Device 1	379.00'	**15.0" x 15.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.25 cfs @ 20.47 hrs HW=379.01' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 0.13 cfs of 9.65 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 6.76 fps)
  - **4=Orifice/Grate** (Weir Controls 0.02 cfs @ 0.33 fps)
- **3=Custom Weir/Orifice** (Weir Controls 0.12 cfs @ 1.09 fps)

Pond W-4: W-4 Pocket Wetland



Hydrograph for Pond W-4: W-4 Pocket Wetland

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,493	377.00	0.00
2.00	0.01	8,513	377.00	0.00
4.00	0.04	8,684	377.04	0.01
6.00	0.06	8,959	377.10	0.02
8.00	0.11	9,419	377.19	0.03
10.00	0.14	10,062	377.31	0.04
12.00	**1.70**	11,884	377.66	0.06
14.00	0.50	16,624	378.46	0.09
16.00	0.31	18,665	378.76	0.10
18.00	0.28	19,976	378.95	0.14
20.00	0.25	**20,441**	**379.01**	**0.24**
22.00	0.23	**20,425**	**379.01**	**0.24**
24.00	0.20	20,376	379.00	0.21
26.00	0.18	20,261	378.98	0.19
28.00	0.16	20,179	378.97	0.17
30.00	0.15	20,104	378.96	0.16
32.00	0.14	20,029	378.95	0.15
34.00	0.13	19,951	378.94	0.14
36.00	0.11	19,868	378.93	0.13
38.00	0.00	19,585	378.89	0.11
40.00	0.00	18,825	378.78	0.10
42.00	0.00	18,088	378.68	0.10
44.00	0.00	17,374	378.57	0.10
46.00	0.00	16,685	378.47	0.09
48.00	0.00	16,021	378.36	0.09
50.00	0.00	15,382	378.26	0.09
52.00	0.00	14,769	378.16	0.08
54.00	0.00	14,183	378.06	0.08
56.00	0.00	13,624	377.97	0.08
58.00	0.00	13,092	377.87	0.07
60.00	0.00	12,589	377.78	0.07
62.00	0.00	12,114	377.70	0.06
64.00	0.00	11,669	377.62	0.06
66.00	0.00	11,253	377.54	0.06
68.00	0.00	10,867	377.47	0.05
70.00	0.00	10,512	377.40	0.05
72.00	0.00	10,187	377.34	0.04

Summary for Subcatchment Post 2E: Post 2E

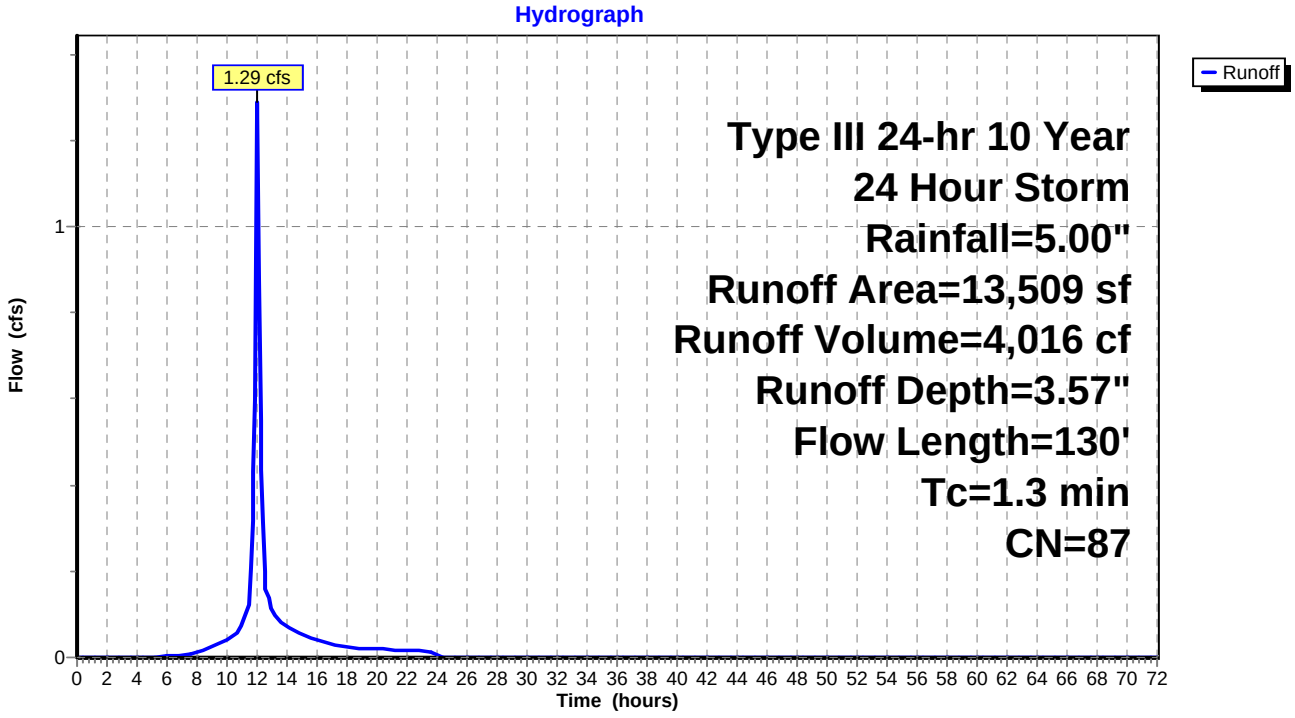
Runoff = 1.29 cfs @ 12.01 hrs, Volume= 4,016 cf, Depth= 3.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
5,415	98	Paved parking, HSG C
8,094	79	50-75% Grass cover, Fair, HSG C
13,509	87	Weighted Average
8,094		59.92% Pervious Area
5,415		40.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.44		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
0.1	30	0.3800	9.92		**Shallow Concentrated Flow, Pavement** Unpaved Kv= 16.1 fps
1.3	130	Total			

Subcatchment Post 2E: Post 2E



Hydrograph for Subcatchment Post 2E: Post 2E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.01	0.01
8.00	0.57	0.04	0.01
9.00	0.73	0.10	0.02
10.00	0.95	0.20	0.04
11.00	1.25	0.37	0.07
12.00	2.50	1.31	**1.28**
13.00	3.75	2.41	0.11
14.00	4.06	2.69	0.07
15.00	4.27	2.89	0.05
16.00	4.43	3.03	0.04
17.00	4.55	3.14	0.03
18.00	4.64	3.23	0.02
19.00	4.72	3.30	0.02
20.00	4.79	3.37	0.02
21.00	4.85	3.42	0.02
22.00	4.90	3.48	0.02
23.00	4.95	3.52	0.01
24.00	**5.00**	**3.57**	0.01
25.00	5.00	3.57	0.00
26.00	5.00	3.57	0.00
27.00	5.00	3.57	0.00
28.00	5.00	3.57	0.00
29.00	5.00	3.57	0.00
30.00	5.00	3.57	0.00
31.00	5.00	3.57	0.00
32.00	5.00	3.57	0.00
33.00	5.00	3.57	0.00
34.00	5.00	3.57	0.00
35.00	5.00	3.57	0.00
36.00	5.00	3.57	0.00
37.00	5.00	3.57	0.00
38.00	5.00	3.57	0.00
39.00	5.00	3.57	0.00
40.00	5.00	3.57	0.00
41.00	5.00	3.57	0.00
42.00	5.00	3.57	0.00
43.00	5.00	3.57	0.00
44.00	5.00	3.57	0.00
45.00	5.00	3.57	0.00
46.00	5.00	3.57	0.00
47.00	5.00	3.57	0.00
48.00	5.00	3.57	0.00
49.00	5.00	3.57	0.00
50.00	5.00	3.57	0.00
51.00	5.00	3.57	0.00
52.00	5.00	3.57	0.00
53.00	5.00	3.57	0.00
54.00	5.00	3.57	0.00
55.00	5.00	3.57	0.00
56.00	5.00	3.57	0.00
57.00	5.00	3.57	0.00
58.00	5.00	3.57	0.00
59.00	5.00	3.57	0.00
60.00	5.00	3.57	0.00
61.00	5.00	3.57	0.00
62.00	5.00	3.57	0.00
63.00	5.00	3.57	0.00
64.00	5.00	3.57	0.00
65.00	5.00	3.57	0.00
66.00	5.00	3.57	0.00
67.00	5.00	3.57	0.00
68.00	5.00	3.57	0.00
69.00	5.00	3.57	0.00
70.00	5.00	3.57	0.00
71.00	5.00	3.57	0.00
72.00	5.00	3.57	0.00

Summary for Subcatchment Post 2A: Post 2A

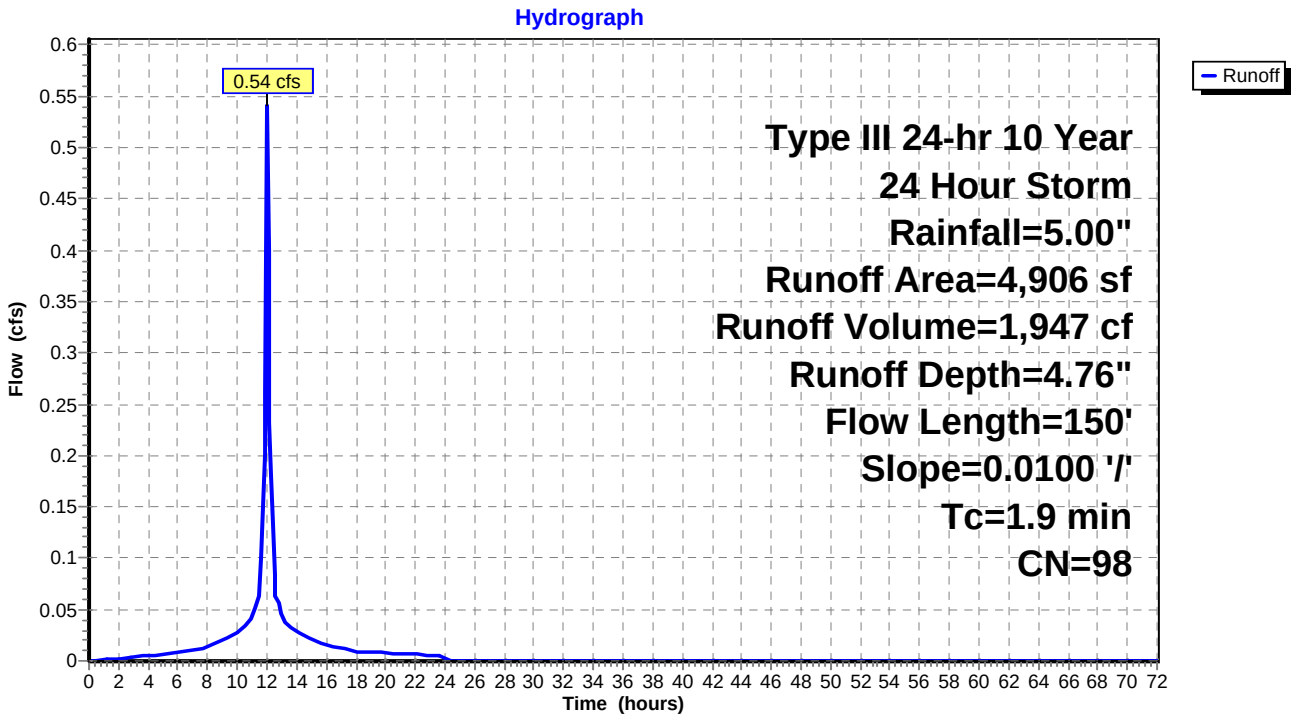
Runoff = 0.54 cfs @ 12.02 hrs, Volume= 1,947 cf, Depth= 4.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
4,906	98	Paved parking, HSG C
4,906		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, Pavement** Paved Kv= 20.3 fps
1.9	150	Total			

Subcatchment Post 2A: Post 2A



Hydrograph for Subcatchment Post 2A: Post 2A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.01	0.00
3.00	0.15	0.04	0.00
4.00	0.22	0.08	0.01
5.00	0.28	0.13	0.01
6.00	0.36	0.19	0.01
7.00	0.45	0.28	0.01
8.00	0.57	0.38	0.01
9.00	0.73	0.53	0.02
10.00	0.95	0.74	0.03
11.00	1.25	1.03	0.04
12.00	2.50	2.27	**0.54**
13.00	3.75	3.52	0.04
14.00	4.06	3.82	0.03
15.00	4.27	4.04	0.02
16.00	4.43	4.19	0.01
17.00	4.55	4.31	0.01
18.00	4.64	4.40	0.01
19.00	4.72	4.48	0.01
20.00	4.79	4.55	0.01
21.00	4.85	4.61	0.01
22.00	4.90	4.67	0.01
23.00	4.95	4.72	0.01
24.00	**5.00**	**4.76**	0.00
25.00	5.00	4.76	0.00
26.00	5.00	4.76	0.00
27.00	5.00	4.76	0.00
28.00	5.00	4.76	0.00
29.00	5.00	4.76	0.00
30.00	5.00	4.76	0.00
31.00	5.00	4.76	0.00
32.00	5.00	4.76	0.00
33.00	5.00	4.76	0.00
34.00	5.00	4.76	0.00
35.00	5.00	4.76	0.00
36.00	5.00	4.76	0.00
37.00	5.00	4.76	0.00
38.00	5.00	4.76	0.00
39.00	5.00	4.76	0.00
40.00	5.00	4.76	0.00
41.00	5.00	4.76	0.00
42.00	5.00	4.76	0.00
43.00	5.00	4.76	0.00
44.00	5.00	4.76	0.00
45.00	5.00	4.76	0.00
46.00	5.00	4.76	0.00
47.00	5.00	4.76	0.00
48.00	5.00	4.76	0.00
49.00	5.00	4.76	0.00
50.00	5.00	4.76	0.00
51.00	5.00	4.76	0.00
52.00	5.00	4.76	0.00
53.00	5.00	4.76	0.00
54.00	5.00	4.76	0.00
55.00	5.00	4.76	0.00
56.00	5.00	4.76	0.00
57.00	5.00	4.76	0.00
58.00	5.00	4.76	0.00
59.00	5.00	4.76	0.00
60.00	5.00	4.76	0.00
61.00	5.00	4.76	0.00
62.00	5.00	4.76	0.00
63.00	5.00	4.76	0.00
64.00	5.00	4.76	0.00
65.00	5.00	4.76	0.00
66.00	5.00	4.76	0.00
67.00	5.00	4.76	0.00
68.00	5.00	4.76	0.00
69.00	5.00	4.76	0.00
70.00	5.00	4.76	0.00
71.00	5.00	4.76	0.00
72.00	5.00	4.76	0.00

Summary for Subcatchment Post 2B: Post 2B

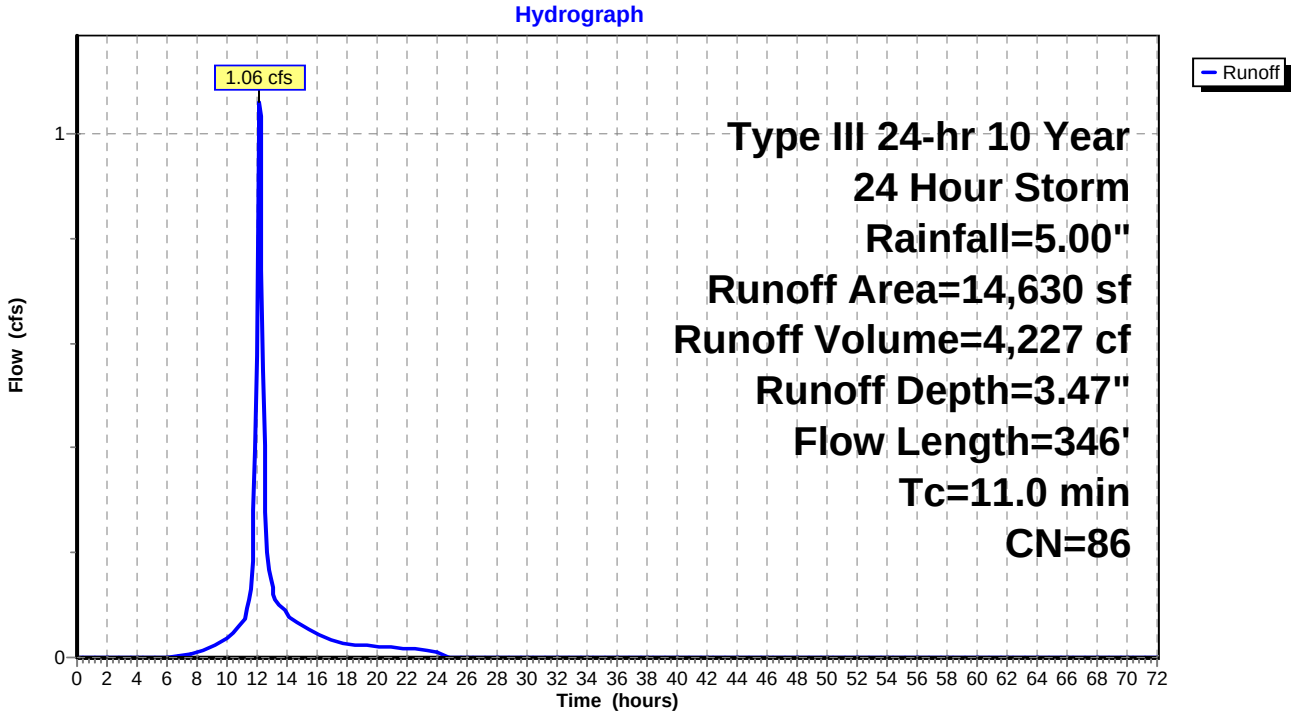
Runoff = 1.06 cfs @ 12.16 hrs, Volume= 4,227 cf, Depth= 3.47"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
5,836	98	Paved parking
6,450	74	>75% Grass cover, Good, HSG C
2,344	89	Gravel roads, HSG C
14,630	86	Weighted Average
8,794		60.11% Pervious Area
5,836		39.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0400	0.16		**Sheet Flow, Landscaped area** Grass: Dense n= 0.240 P2= 3.50"
0.7	246	0.0100	5.90	4.63	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
11.0	346	Total			

Subcatchment Post 2B: Post 2B



Hydrograph for Subcatchment Post 2B: Post 2B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.01	0.00
8.00	0.57	0.03	0.01
9.00	0.73	0.08	0.02
10.00	0.95	0.17	0.04
11.00	1.25	0.33	0.07
12.00	2.50	1.24	**0.58**
13.00	3.75	2.32	**0.13**
14.00	4.06	2.60	0.08
15.00	4.27	2.79	0.06
16.00	4.43	2.94	0.04
17.00	4.55	3.05	0.03
18.00	4.64	3.13	0.03
19.00	4.72	3.20	0.02
20.00	4.79	3.27	0.02
21.00	4.85	3.32	0.02
22.00	4.90	3.38	0.02
23.00	4.95	3.42	0.02
24.00	**5.00**	**3.47**	0.01
25.00	5.00	3.47	0.00
26.00	5.00	3.47	0.00
27.00	5.00	3.47	0.00
28.00	5.00	3.47	0.00
29.00	5.00	3.47	0.00
30.00	5.00	3.47	0.00
31.00	5.00	3.47	0.00
32.00	5.00	3.47	0.00
33.00	5.00	3.47	0.00
34.00	5.00	3.47	0.00
35.00	5.00	3.47	0.00
36.00	5.00	3.47	0.00
37.00	5.00	3.47	0.00
38.00	5.00	3.47	0.00
39.00	5.00	3.47	0.00
40.00	5.00	3.47	0.00
41.00	5.00	3.47	0.00
42.00	5.00	3.47	0.00
43.00	5.00	3.47	0.00
44.00	5.00	3.47	0.00
45.00	5.00	3.47	0.00
46.00	5.00	3.47	0.00
47.00	5.00	3.47	0.00
48.00	5.00	3.47	0.00
49.00	5.00	3.47	0.00
50.00	5.00	3.47	0.00
51.00	5.00	3.47	0.00
52.00	5.00	3.47	0.00
53.00	5.00	3.47	0.00
54.00	5.00	3.47	0.00
55.00	5.00	3.47	0.00
56.00	5.00	3.47	0.00
57.00	5.00	3.47	0.00
58.00	5.00	3.47	0.00
59.00	5.00	3.47	0.00
60.00	5.00	3.47	0.00
61.00	5.00	3.47	0.00
62.00	5.00	3.47	0.00
63.00	5.00	3.47	0.00
64.00	5.00	3.47	0.00
65.00	5.00	3.47	0.00
66.00	5.00	3.47	0.00
67.00	5.00	3.47	0.00
68.00	5.00	3.47	0.00
69.00	5.00	3.47	0.00
70.00	5.00	3.47	0.00
71.00	5.00	3.47	0.00
72.00	5.00	3.47	0.00

Summary for Subcatchment Post 2C: Post 2C

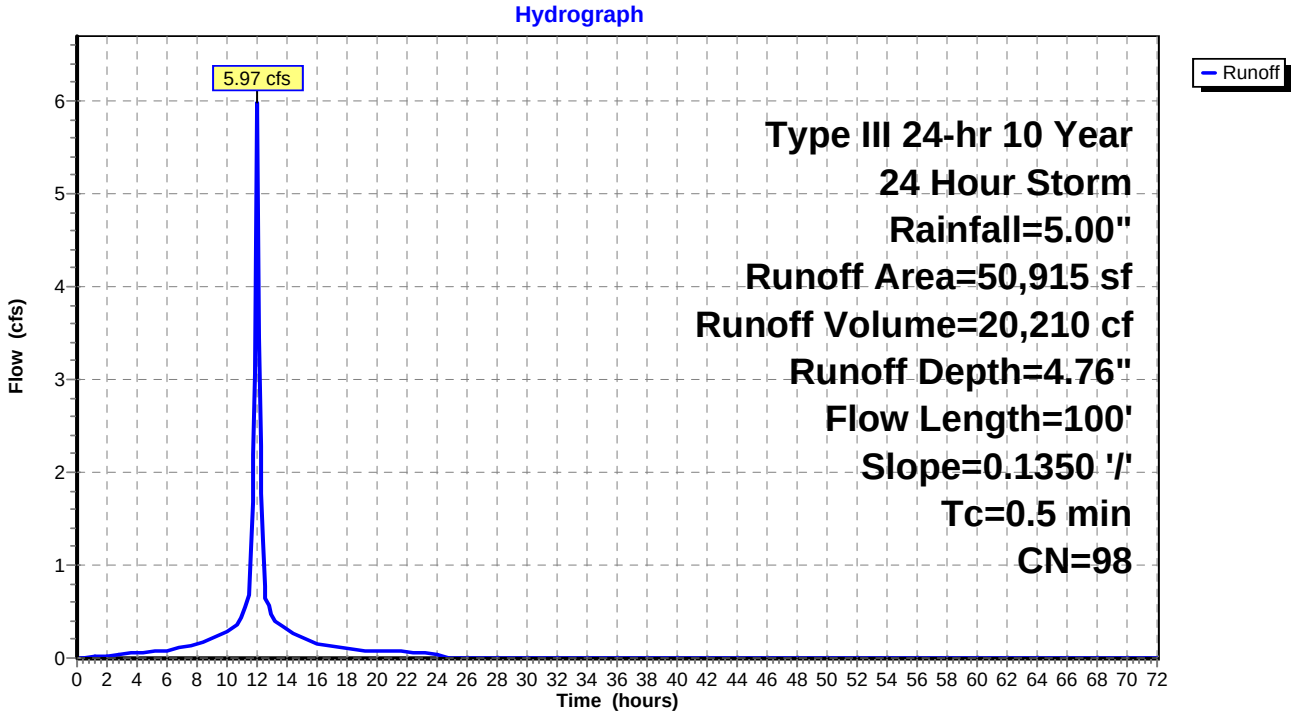
Runoff = 5.97 cfs @ 12.00 hrs, Volume= 20,210 cf, Depth= 4.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
50,915	98	Paved parking, HSG C
50,915		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.1350	3.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"

Subcatchment Post 2C: Post 2C



Hydrograph for Subcatchment Post 2C: Post 2C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.01	0.02
3.00	0.15	0.04	0.04
4.00	0.22	0.08	0.05
5.00	0.28	0.13	0.07
6.00	0.36	0.19	0.08
7.00	0.45	0.28	0.11
8.00	0.57	0.38	0.14
9.00	0.73	0.53	0.21
10.00	0.95	0.74	0.28
11.00	1.25	1.03	0.42
12.00	2.50	2.27	**5.97**
13.00	3.75	3.52	0.44
14.00	4.06	3.82	0.29
15.00	4.27	4.04	0.22
16.00	4.43	4.19	0.15
17.00	4.55	4.31	0.12
18.00	4.64	4.40	0.09
19.00	4.72	4.48	0.09
20.00	4.79	4.55	0.08
21.00	4.85	4.61	0.07
22.00	4.90	4.67	0.06
23.00	4.95	4.72	0.06
24.00	**5.00**	**4.76**	0.03
25.00	5.00	4.76	0.00
26.00	5.00	4.76	0.00
27.00	5.00	4.76	0.00
28.00	5.00	4.76	0.00
29.00	5.00	4.76	0.00
30.00	5.00	4.76	0.00
31.00	5.00	4.76	0.00
32.00	5.00	4.76	0.00
33.00	5.00	4.76	0.00
34.00	5.00	4.76	0.00
35.00	5.00	4.76	0.00
36.00	5.00	4.76	0.00
37.00	5.00	4.76	0.00
38.00	5.00	4.76	0.00
39.00	5.00	4.76	0.00
40.00	5.00	4.76	0.00
41.00	5.00	4.76	0.00
42.00	5.00	4.76	0.00
43.00	5.00	4.76	0.00
44.00	5.00	4.76	0.00
45.00	5.00	4.76	0.00
46.00	5.00	4.76	0.00
47.00	5.00	4.76	0.00
48.00	5.00	4.76	0.00
49.00	5.00	4.76	0.00
50.00	5.00	4.76	0.00
51.00	5.00	4.76	0.00
52.00	5.00	4.76	0.00
53.00	5.00	4.76	0.00
54.00	5.00	4.76	0.00
55.00	5.00	4.76	0.00
56.00	5.00	4.76	0.00
57.00	5.00	4.76	0.00
58.00	5.00	4.76	0.00
59.00	5.00	4.76	0.00
60.00	5.00	4.76	0.00
61.00	5.00	4.76	0.00
62.00	5.00	4.76	0.00
63.00	5.00	4.76	0.00
64.00	5.00	4.76	0.00
65.00	5.00	4.76	0.00
66.00	5.00	4.76	0.00
67.00	5.00	4.76	0.00
68.00	5.00	4.76	0.00
69.00	5.00	4.76	0.00
70.00	5.00	4.76	0.00
71.00	5.00	4.76	0.00
72.00	5.00	4.76	0.00

Summary for Subcatchment Post 2D: Post 2D

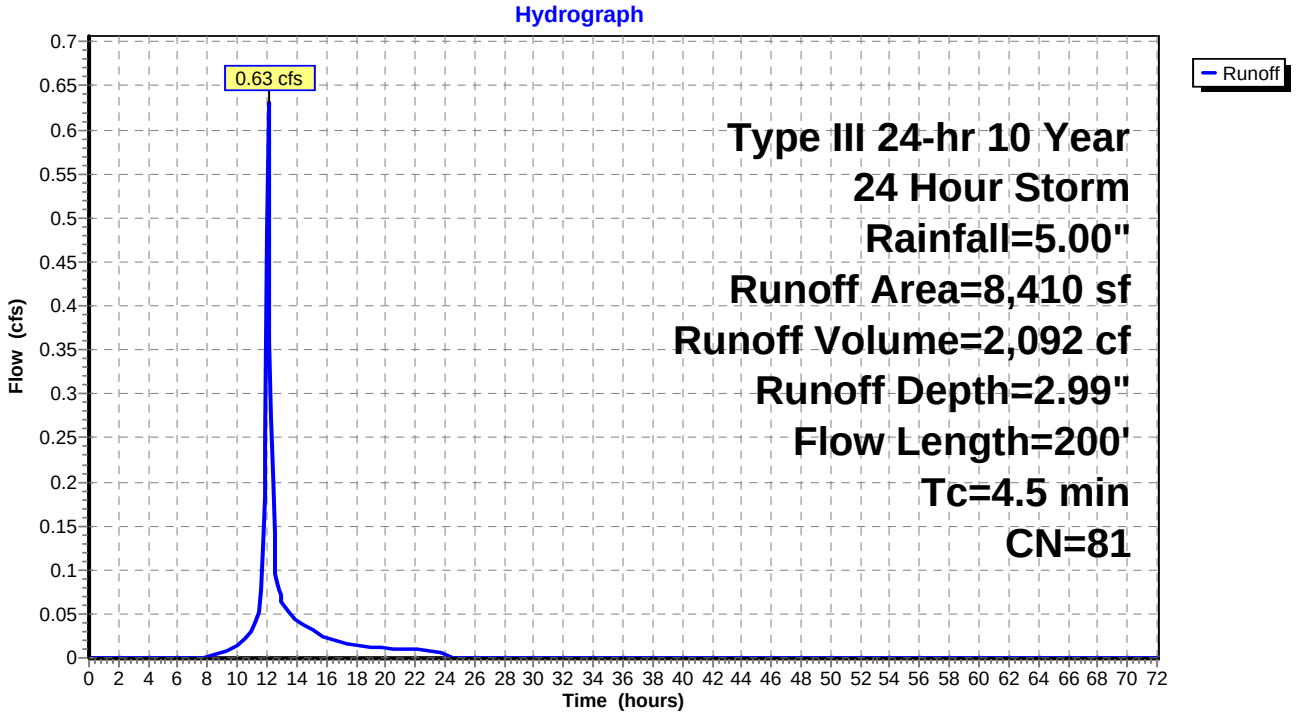
Runoff = 0.63 cfs @ 12.09 hrs, Volume= 2,092 cf, Depth= 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
6,348	79	50-75% Grass cover, Fair, HSG C
2,062	89	Gravel roads, HSG C
8,410	81	Weighted Average
8,410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1000	0.20		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
0.4	150	0.0860	5.95		**Shallow Concentrated Flow, Maintenance Drive** Paved Kv= 20.3 fps
4.5	200	Total			

Subcatchment Post 2D: Post 2D



Hydrograph for Subcatchment Post 2D: Post 2D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.00	0.00
8.00	0.57	0.00	0.00
9.00	0.73	0.03	0.01
10.00	0.95	0.08	0.01
11.00	1.25	0.20	0.03
12.00	2.50	0.94	**0.48**
13.00	3.75	1.91	**0.06**
14.00	4.06	2.17	0.04
15.00	4.27	2.35	0.03
16.00	4.43	2.49	0.02
17.00	4.55	2.59	0.02
18.00	4.64	2.67	0.01
19.00	4.72	2.74	0.01
20.00	4.79	2.80	0.01
21.00	4.85	2.85	0.01
22.00	4.90	2.90	0.01
23.00	4.95	2.95	0.01
24.00	**5.00**	**2.99**	0.01
25.00	5.00	2.99	0.00
26.00	5.00	2.99	0.00
27.00	5.00	2.99	0.00
28.00	5.00	2.99	0.00
29.00	5.00	2.99	0.00
30.00	5.00	2.99	0.00
31.00	5.00	2.99	0.00
32.00	5.00	2.99	0.00
33.00	5.00	2.99	0.00
34.00	5.00	2.99	0.00
35.00	5.00	2.99	0.00
36.00	5.00	2.99	0.00
37.00	5.00	2.99	0.00
38.00	5.00	2.99	0.00
39.00	5.00	2.99	0.00
40.00	5.00	2.99	0.00
41.00	5.00	2.99	0.00
42.00	5.00	2.99	0.00
43.00	5.00	2.99	0.00
44.00	5.00	2.99	0.00
45.00	5.00	2.99	0.00
46.00	5.00	2.99	0.00
47.00	5.00	2.99	0.00
48.00	5.00	2.99	0.00
49.00	5.00	2.99	0.00
50.00	5.00	2.99	0.00
51.00	5.00	2.99	0.00
52.00	5.00	2.99	0.00
53.00	5.00	2.99	0.00
54.00	5.00	2.99	0.00
55.00	5.00	2.99	0.00
56.00	5.00	2.99	0.00
57.00	5.00	2.99	0.00
58.00	5.00	2.99	0.00
59.00	5.00	2.99	0.00
60.00	5.00	2.99	0.00
61.00	5.00	2.99	0.00
62.00	5.00	2.99	0.00
63.00	5.00	2.99	0.00
64.00	5.00	2.99	0.00
65.00	5.00	2.99	0.00
66.00	5.00	2.99	0.00
67.00	5.00	2.99	0.00
68.00	5.00	2.99	0.00
69.00	5.00	2.99	0.00
70.00	5.00	2.99	0.00
71.00	5.00	2.99	0.00
72.00	5.00	2.99	0.00

Summary for Subcatchment Post 2F: Post 2F

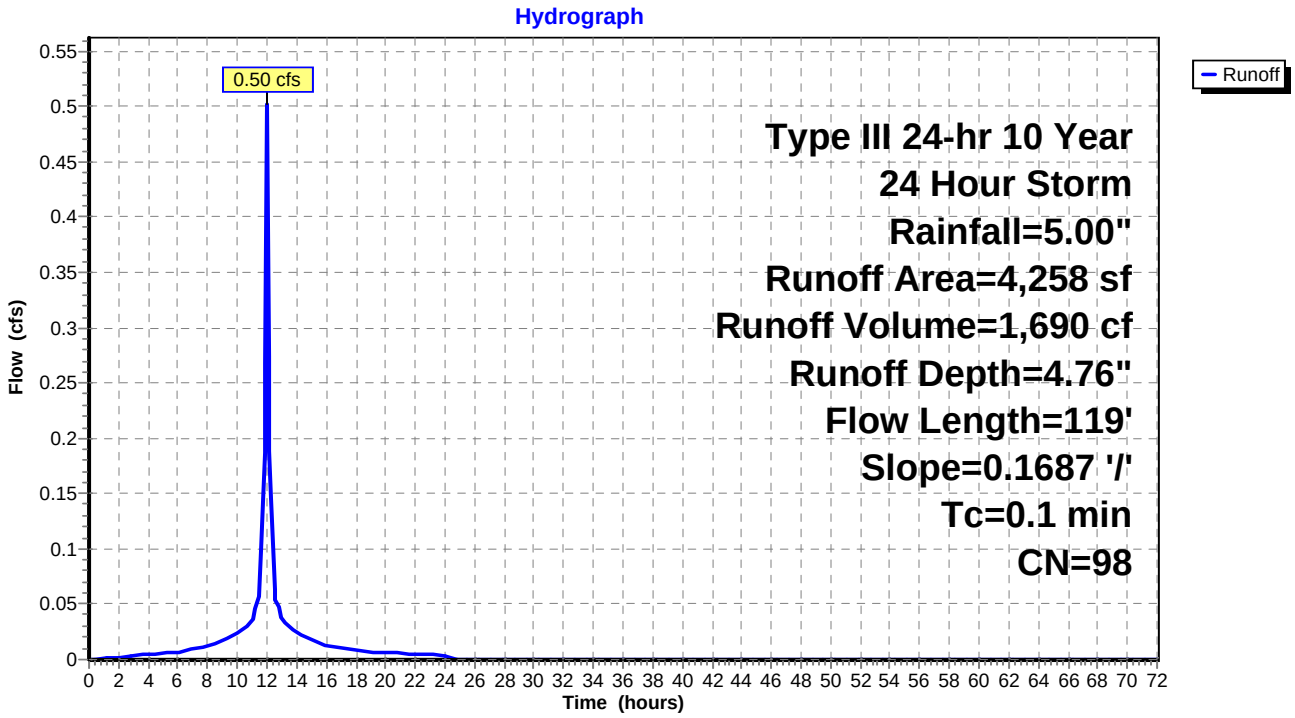
Runoff = 0.50 cfs @ 12.00 hrs, Volume= 1,690 cf, Depth= 4.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
4,258	98	Roofs, HSG C
4,258		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	119	0.1687	14.22	4.96	**Pipe Channel, Roof Leader** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior

Subcatchment Post 2F: Post 2F



Hydrograph for Subcatchment Post 2F: Post 2F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.01	0.00
3.00	0.15	0.04	0.00
4.00	0.22	0.08	0.00
5.00	0.28	0.13	0.01
6.00	0.36	0.19	0.01
7.00	0.45	0.28	0.01
8.00	0.57	0.38	0.01
9.00	0.73	0.53	0.02
10.00	0.95	0.74	0.02
11.00	1.25	1.03	0.04
12.00	2.50	2.27	**0.50**
13.00	3.75	3.52	0.04
14.00	4.06	3.82	0.02
15.00	4.27	4.04	0.02
16.00	4.43	4.19	0.01
17.00	4.55	4.31	0.01
18.00	4.64	4.40	0.01
19.00	4.72	4.48	0.01
20.00	4.79	4.55	0.01
21.00	4.85	4.61	0.01
22.00	4.90	4.67	0.01
23.00	4.95	4.72	0.00
24.00	**5.00**	**4.76**	0.00
25.00	5.00	4.76	0.00
26.00	5.00	4.76	0.00
27.00	5.00	4.76	0.00
28.00	5.00	4.76	0.00
29.00	5.00	4.76	0.00
30.00	5.00	4.76	0.00
31.00	5.00	4.76	0.00
32.00	5.00	4.76	0.00
33.00	5.00	4.76	0.00
34.00	5.00	4.76	0.00
35.00	5.00	4.76	0.00
36.00	5.00	4.76	0.00
37.00	5.00	4.76	0.00
38.00	5.00	4.76	0.00
39.00	5.00	4.76	0.00
40.00	5.00	4.76	0.00
41.00	5.00	4.76	0.00
42.00	5.00	4.76	0.00
43.00	5.00	4.76	0.00
44.00	5.00	4.76	0.00
45.00	5.00	4.76	0.00
46.00	5.00	4.76	0.00
47.00	5.00	4.76	0.00
48.00	5.00	4.76	0.00
49.00	5.00	4.76	0.00
50.00	5.00	4.76	0.00
51.00	5.00	4.76	0.00
52.00	5.00	4.76	0.00
53.00	5.00	4.76	0.00
54.00	5.00	4.76	0.00
55.00	5.00	4.76	0.00
56.00	5.00	4.76	0.00
57.00	5.00	4.76	0.00
58.00	5.00	4.76	0.00
59.00	5.00	4.76	0.00
60.00	5.00	4.76	0.00
61.00	5.00	4.76	0.00
62.00	5.00	4.76	0.00
63.00	5.00	4.76	0.00
64.00	5.00	4.76	0.00
65.00	5.00	4.76	0.00
66.00	5.00	4.76	0.00
67.00	5.00	4.76	0.00
68.00	5.00	4.76	0.00
69.00	5.00	4.76	0.00
70.00	5.00	4.76	0.00
71.00	5.00	4.76	0.00
72.00	5.00	4.76	0.00

Summary for Subcatchment Post 2G: Post 2G

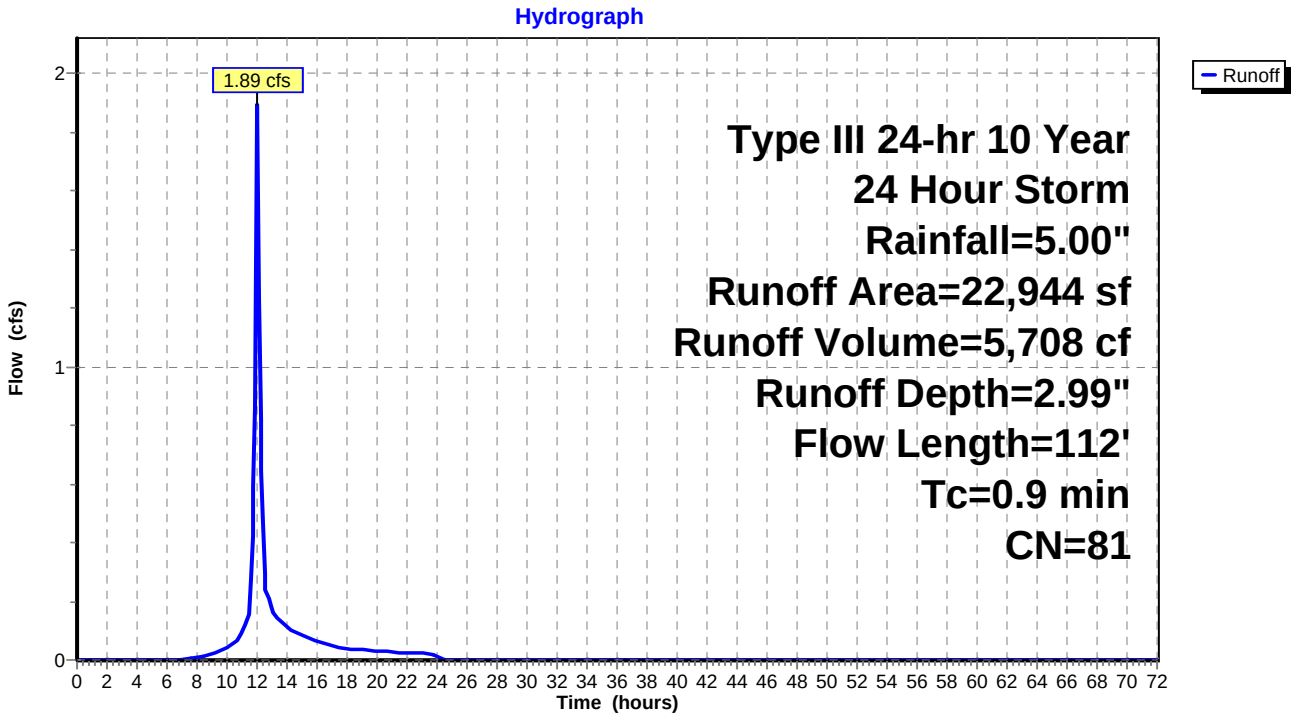
Runoff = 1.89 cfs @ 12.01 hrs, Volume= 5,708 cf, Depth= 2.99"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
1,112	98	Paved parking, HSG C
19,649	79	50-75% Grass cover, Fair, HSG C
2,183	89	Gravel roads, HSG C
22,944	81	Weighted Average
21,832		95.15% Pervious Area
1,112		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	80	0.0250	1.50		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.0	32	0.4600	10.92		**Shallow Concentrated Flow, Landscaped** Unpaved Kv= 16.1 fps
0.9	112	Total			

Subcatchment Post 2G: Post 2G



Hydrograph for Subcatchment Post 2G: Post 2G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.00	0.00
8.00	0.57	0.00	0.01
9.00	0.73	0.03	0.02
10.00	0.95	0.08	0.04
11.00	1.25	0.20	0.08
12.00	2.50	0.94	**1.88**
13.00	3.75	1.91	0.16
14.00	4.06	2.17	0.11
15.00	4.27	2.35	0.09
16.00	4.43	2.49	0.06
17.00	4.55	2.59	0.05
18.00	4.64	2.67	0.04
19.00	4.72	2.74	0.03
20.00	4.79	2.80	0.03
21.00	4.85	2.85	0.03
22.00	4.90	2.90	0.03
23.00	4.95	2.95	0.02
24.00	**5.00**	**2.99**	0.01
25.00	5.00	2.99	0.00
26.00	5.00	2.99	0.00
27.00	5.00	2.99	0.00
28.00	5.00	2.99	0.00
29.00	5.00	2.99	0.00
30.00	5.00	2.99	0.00
31.00	5.00	2.99	0.00
32.00	5.00	2.99	0.00
33.00	5.00	2.99	0.00
34.00	5.00	2.99	0.00
35.00	5.00	2.99	0.00
36.00	5.00	2.99	0.00
37.00	5.00	2.99	0.00
38.00	5.00	2.99	0.00
39.00	5.00	2.99	0.00
40.00	5.00	2.99	0.00
41.00	5.00	2.99	0.00
42.00	5.00	2.99	0.00
43.00	5.00	2.99	0.00
44.00	5.00	2.99	0.00
45.00	5.00	2.99	0.00
46.00	5.00	2.99	0.00
47.00	5.00	2.99	0.00
48.00	5.00	2.99	0.00
49.00	5.00	2.99	0.00
50.00	5.00	2.99	0.00
51.00	5.00	2.99	0.00
52.00	5.00	2.99	0.00
53.00	5.00	2.99	0.00
54.00	5.00	2.99	0.00
55.00	5.00	2.99	0.00
56.00	5.00	2.99	0.00
57.00	5.00	2.99	0.00
58.00	5.00	2.99	0.00
59.00	5.00	2.99	0.00
60.00	5.00	2.99	0.00
61.00	5.00	2.99	0.00
62.00	5.00	2.99	0.00
63.00	5.00	2.99	0.00
64.00	5.00	2.99	0.00
65.00	5.00	2.99	0.00
66.00	5.00	2.99	0.00
67.00	5.00	2.99	0.00
68.00	5.00	2.99	0.00
69.00	5.00	2.99	0.00
70.00	5.00	2.99	0.00
71.00	5.00	2.99	0.00
72.00	5.00	2.99	0.00

Summary for Subcatchment Post 2H: Post 2H

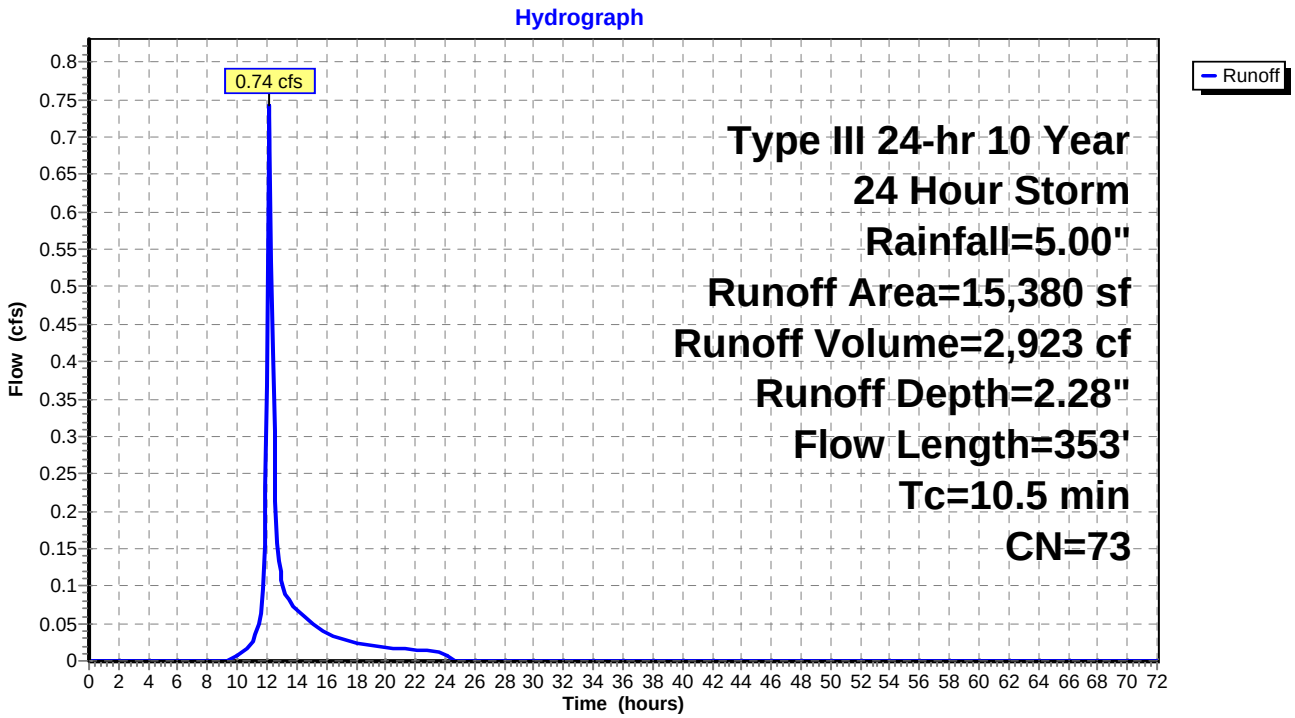
Runoff = 0.74 cfs @ 12.16 hrs, Volume= 2,923 cf, Depth= 2.28"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
15,380	73	Woods, Fair, HSG C
15,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
1.7	253	0.0260	2.42		**Shallow Concentrated Flow, Grassed waterway** Grassed Waterway Kv= 15.0 fps
10.5	353	Total			

Subcatchment Post 2H: Post 2H



Hydrograph for Subcatchment Post 2H: Post 2H

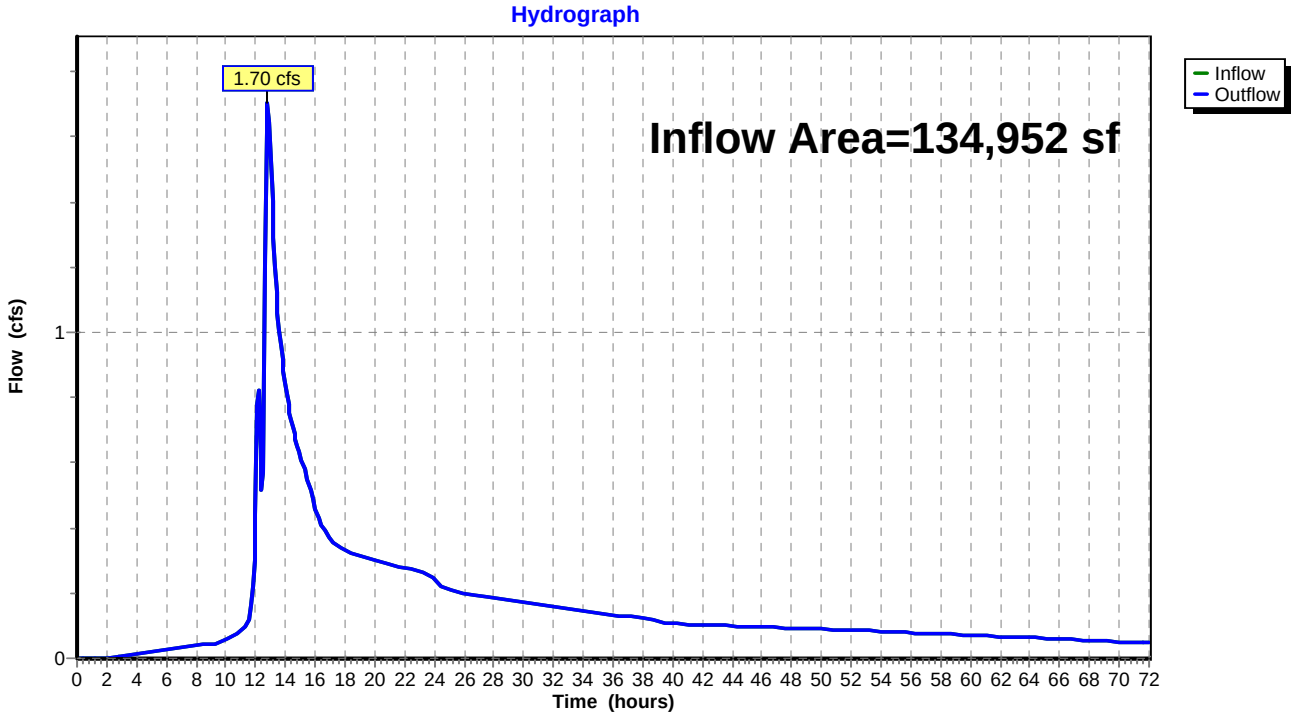
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.00	0.00
8.00	0.57	0.00	0.00
9.00	0.73	0.00	0.00
10.00	0.95	0.01	0.01
11.00	1.25	0.06	0.03
12.00	2.50	0.57	**0.37**
13.00	3.75	1.35	**0.11**
14.00	4.06	1.57	0.07
15.00	4.27	1.72	0.05
16.00	4.43	1.84	0.04
17.00	4.55	1.93	0.03
18.00	4.64	2.00	0.02
19.00	4.72	2.06	0.02
20.00	4.79	2.11	0.02
21.00	4.85	2.16	0.02
22.00	4.90	2.21	0.02
23.00	4.95	2.24	0.01
24.00	**5.00**	**2.28**	0.01
25.00	5.00	2.28	0.00
26.00	5.00	2.28	0.00
27.00	5.00	2.28	0.00
28.00	5.00	2.28	0.00
29.00	5.00	2.28	0.00
30.00	5.00	2.28	0.00
31.00	5.00	2.28	0.00
32.00	5.00	2.28	0.00
33.00	5.00	2.28	0.00
34.00	5.00	2.28	0.00
35.00	5.00	2.28	0.00
36.00	5.00	2.28	0.00
37.00	5.00	2.28	0.00
38.00	5.00	2.28	0.00
39.00	5.00	2.28	0.00
40.00	5.00	2.28	0.00
41.00	5.00	2.28	0.00
42.00	5.00	2.28	0.00
43.00	5.00	2.28	0.00
44.00	5.00	2.28	0.00
45.00	5.00	2.28	0.00
46.00	5.00	2.28	0.00
47.00	5.00	2.28	0.00
48.00	5.00	2.28	0.00
49.00	5.00	2.28	0.00
50.00	5.00	2.28	0.00
51.00	5.00	2.28	0.00
52.00	5.00	2.28	0.00
53.00	5.00	2.28	0.00
54.00	5.00	2.28	0.00
55.00	5.00	2.28	0.00
56.00	5.00	2.28	0.00
57.00	5.00	2.28	0.00
58.00	5.00	2.28	0.00
59.00	5.00	2.28	0.00
60.00	5.00	2.28	0.00
61.00	5.00	2.28	0.00
62.00	5.00	2.28	0.00
63.00	5.00	2.28	0.00
64.00	5.00	2.28	0.00
65.00	5.00	2.28	0.00
66.00	5.00	2.28	0.00
67.00	5.00	2.28	0.00
68.00	5.00	2.28	0.00
69.00	5.00	2.28	0.00
70.00	5.00	2.28	0.00
71.00	5.00	2.28	0.00
72.00	5.00	2.28	0.00

Summary for Reach DP2: Design Point 2

Inflow Area = 134,952 sf, 53.68% Impervious, Inflow Depth > 3.64" for 10 Year, 24 Hour Storm event
Inflow = 1.70 cfs @ 12.81 hrs, Volume= 40,920 cf
Outflow = 1.70 cfs @ 12.81 hrs, Volume= 40,920 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.01		0.01
4.00	0.01		0.01
5.00	0.02		0.02
6.00	0.03		0.03
7.00	0.03		0.03
8.00	0.04		0.04
9.00	0.04		0.04
10.00	0.06		0.06
11.00	0.08		0.08
12.00	**0.44**		**0.44**
13.00	**1.53**		**1.53**
14.00	0.84		0.84
15.00	0.62		0.62
16.00	0.46		0.46
17.00	0.37		0.37
18.00	0.33		0.33
19.00	0.31		0.31
20.00	0.30		0.30
21.00	0.29		0.29
22.00	0.28		0.28
23.00	0.26		0.26
24.00	0.25		0.25
25.00	0.21		0.21
26.00	0.20		0.20
27.00	0.19		0.19
28.00	0.18		0.18
29.00	0.18		0.18
30.00	0.17		0.17
31.00	0.16		0.16
32.00	0.16		0.16
33.00	0.15		0.15
34.00	0.14		0.14
35.00	0.14		0.14
36.00	0.13		0.13
37.00	0.13		0.13
38.00	0.12		0.12
39.00	0.11		0.11
40.00	0.11		0.11
41.00	0.10		0.10
42.00	0.10		0.10
43.00	0.10		0.10
44.00	0.10		0.10
45.00	0.10		0.10
46.00	0.10		0.10
47.00	0.09		0.09
48.00	0.09		0.09
49.00	0.09		0.09
50.00	0.09		0.09
51.00	0.09		0.09
52.00	0.09		0.09
53.00	0.08		0.08
54.00	0.08		0.08
55.00	0.08		0.08
56.00	0.08		0.08
57.00	0.08		0.08
58.00	0.07		0.07
59.00	0.07		0.07
60.00	0.07		0.07
61.00	0.07		0.07
62.00	0.07		0.07
63.00	0.06		0.06
64.00	0.06		0.06
65.00	0.06		0.06
66.00	0.06		0.06
67.00	0.06		0.06
68.00	0.05		0.05
69.00	0.05		0.05
70.00	0.05		0.05
71.00	0.05		0.05
72.00	0.05		0.05

Summary for Pond F-1: Combined Sed. + Sand

Inflow Area = 92,370 sf, 72.61% Impervious, Inflow Depth = 4.15" for 10 Year, 24 Hour Storm event
Inflow = 7.38 cfs @ 12.02 hrs, Volume= 31,911 cf
Outflow = 3.74 cfs @ 12.29 hrs, Volume= 31,917 cf, Atten= 49%, Lag= 15.8 min
Primary = 3.74 cfs @ 12.29 hrs, Volume= 31,917 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 386.91' @ 12.29 hrs Surf.Area= 7,332 sf Storage= 12,811 cf

Plug-Flow detention time= 344.0 min calculated for 31,873 cf (100% of inflow)
Center-of-Mass det. time= 344.9 min (1,108.8 - 763.9)

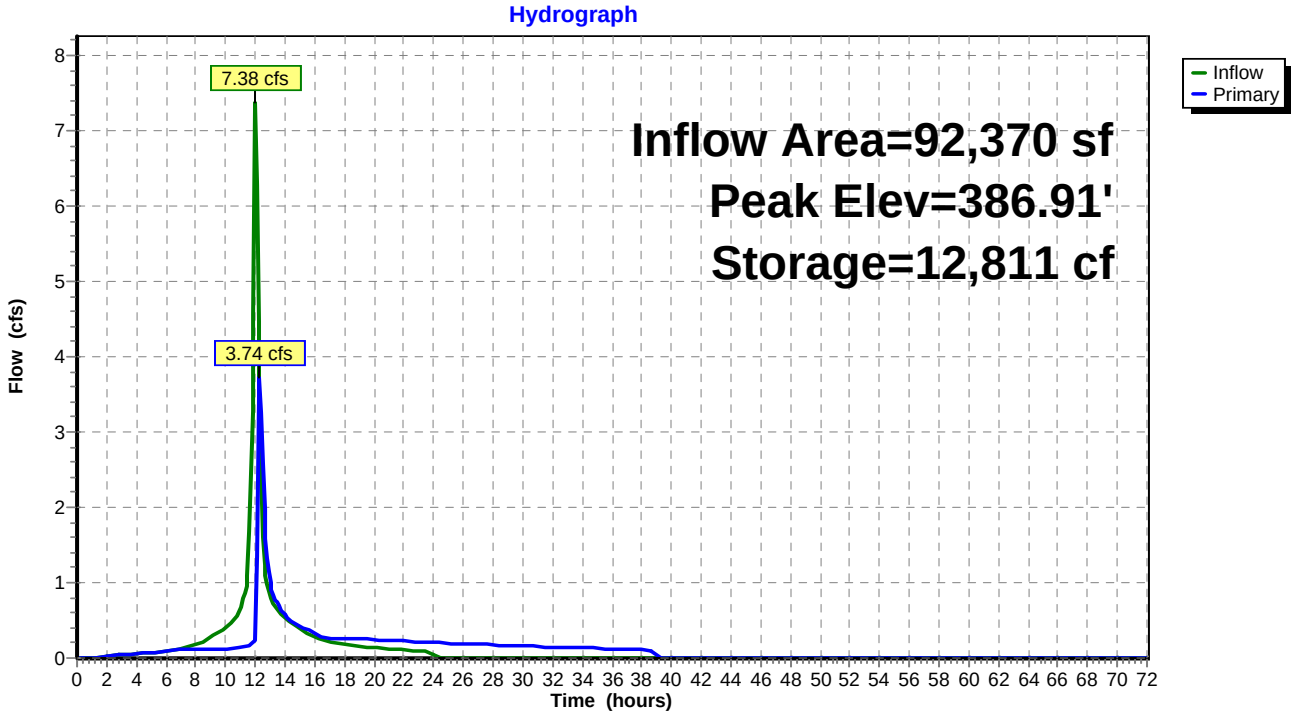
Volume	Invert	Avail.Storage	Storage Description
#1	384.00'	20,877 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
384.00	2,608	188.0	0	0	2,608
385.00	3,635	237.0	3,107	3,107	4,279
386.00	4,801	285.0	4,205	7,312	6,290
387.00	7,600	320.0	6,147	13,459	8,002
388.00	7,237	337.0	7,418	20,877	8,949

Device	Routing	Invert	Outlet Devices
#1	Primary	382.00'	**10.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 377.00' S= 0.1316 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	382.00'	**1.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	384.00'	**1.750 in/hr Exfiltration over Surface area**
#4	Device 1	386.60'	**18.0" x 18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.69 cfs @ 12.29 hrs HW=386.91' TW=378.61' (Dynamic Tailwater)
- **1=Culvert** (Passes 3.69 cfs of 4.40 cfs potential flow)
  - **2=Orifice/Grate** (Passes 0.30 cfs of 0.58 cfs potential flow)
    - **3=Exfiltration** (Exfiltration Controls 0.30 cfs)
  - **4=Orifice/Grate** (Weir Controls 3.40 cfs @ 1.82 fps)

Pond F-1: Combined Sed. + Sand



Hydrograph for Pond F-1: Combined Sed. + Sand

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	384.00	0.00
2.00	0.03	0	384.00	0.03
4.00	0.06	0	384.00	0.06
6.00	0.09	0	384.00	0.09
8.00	0.18	194	384.07	0.11
10.00	0.40	1,388	384.49	0.13
12.00	**7.28**	**9,459**	**386.40**	**0.24**
14.00	0.51	**11,065**	**386.66**	**0.57**
16.00	0.27	10,788	386.62	0.32
18.00	0.17	10,425	386.56	0.26
20.00	0.14	9,717	386.45	0.24
22.00	0.11	8,917	386.31	0.23
24.00	0.06	8,060	386.15	0.21
26.00	0.00	6,660	385.86	0.19
28.00	0.00	5,361	385.57	0.17
30.00	0.00	4,162	385.28	0.16
32.00	0.00	3,059	384.99	0.15
34.00	0.00	2,050	384.70	0.13
36.00	0.00	1,131	384.40	0.12
38.00	0.00	298	384.11	0.11
40.00	0.00	0	384.00	0.00
42.00	0.00	0	384.00	0.00
44.00	0.00	0	384.00	0.00
46.00	0.00	0	384.00	0.00
48.00	0.00	0	384.00	0.00
50.00	0.00	0	384.00	0.00
52.00	0.00	0	384.00	0.00
54.00	0.00	0	384.00	0.00
56.00	0.00	0	384.00	0.00
58.00	0.00	0	384.00	0.00
60.00	0.00	0	384.00	0.00
62.00	0.00	0	384.00	0.00
64.00	0.00	0	384.00	0.00
66.00	0.00	0	384.00	0.00
68.00	0.00	0	384.00	0.00
70.00	0.00	0	384.00	0.00
72.00	0.00	0	384.00	0.00

Summary for Pond FS: Flow Splitter

Inflow Area = 70,451 sf, 87.52% Impervious, Inflow Depth = 4.49" for 10 Year, 24 Hour Storm event
Inflow = 7.11 cfs @ 12.01 hrs, Volume= 26,384 cf
Outflow = 7.11 cfs @ 12.01 hrs, Volume= 26,384 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.57 cfs @ 12.02 hrs, Volume= 25,803 cf
Secondary = 1.56 cfs @ 12.00 hrs, Volume= 581 cf

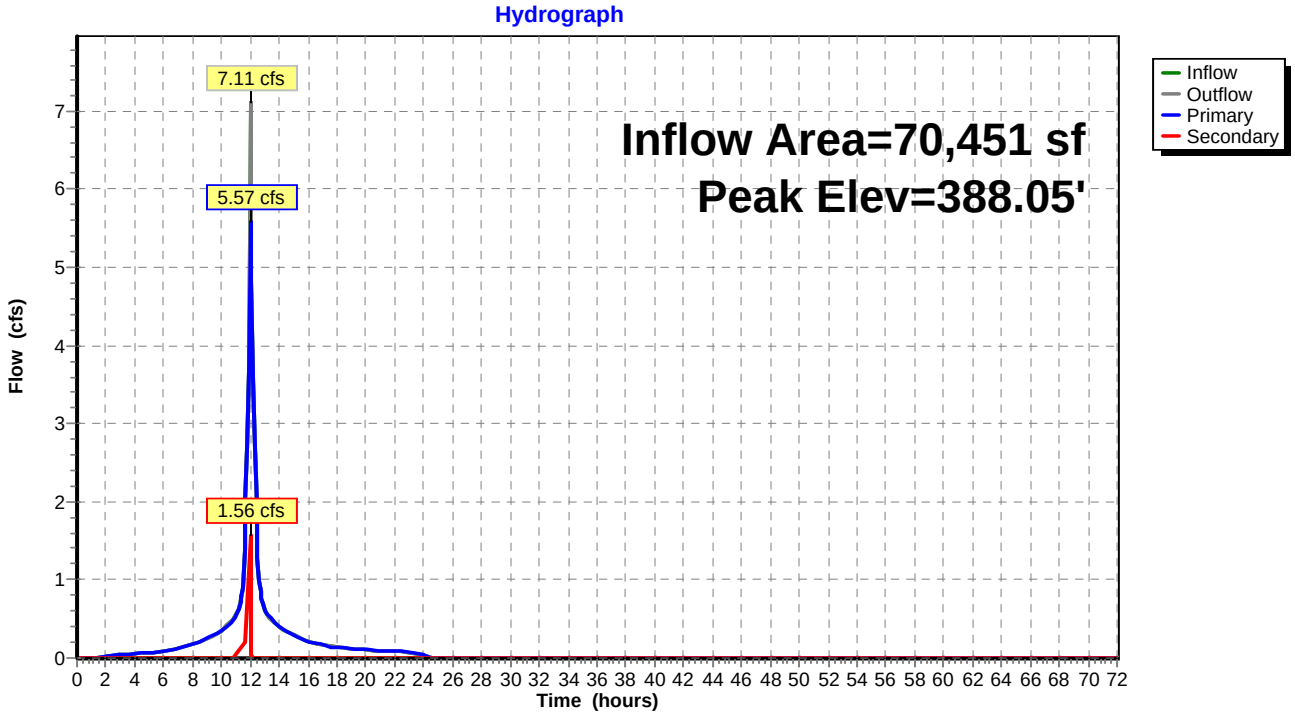
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 388.05' @ 12.02 hrs
Flood Elev= 392.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	386.45'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#2	Secondary	386.60'	**24.0" Round Culvert** L= 86.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 384.50' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#3	Device 2	387.75'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.41 cfs @ 12.02 hrs HW=387.97' TW=386.48' (Dynamic Tailwater)
└─**1=Orifice/Grate** (Orifice Controls 5.41 cfs @ 5.41 fps)

Secondary OutFlow Max=1.55 cfs @ 12.00 hrs HW=388.01' TW=377.98' (Dynamic Tailwater)
└─**2=Culvert** (Passes 1.55 cfs of 9.62 cfs potential flow)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 1.55 cfs @ 1.46 fps)

Pond FS: Flow Splitter



Hydrograph for Pond FS: Flow Splitter

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	386.45	0.00	0.00	0.00
2.00	0.03	386.48	0.03	0.03	0.00
4.00	0.06	386.49	0.06	0.06	0.00
6.00	0.09	386.51	0.09	0.09	0.00
8.00	0.16	386.54	0.16	0.16	0.00
10.00	0.34	386.59	0.34	0.34	0.00
12.00	**7.08**	**388.02**	**7.08**	**5.52**	**1.56**
14.00	0.40	386.69	0.40	0.40	0.00
16.00	0.21	386.63	0.21	0.21	0.00
18.00	0.13	386.58	0.13	0.13	0.00
20.00	0.10	386.51	0.10	0.10	0.00
22.00	0.09	386.51	0.09	0.09	0.00
24.00	0.05	386.49	0.05	0.05	0.00
26.00	0.00	386.45	0.00	0.00	0.00
28.00	0.00	386.45	0.00	0.00	0.00
30.00	0.00	386.45	0.00	0.00	0.00
32.00	0.00	386.45	0.00	0.00	0.00
34.00	0.00	386.45	0.00	0.00	0.00
36.00	0.00	386.45	0.00	0.00	0.00
38.00	0.00	386.45	0.00	0.00	0.00
40.00	0.00	386.45	0.00	0.00	0.00
42.00	0.00	386.45	0.00	0.00	0.00
44.00	0.00	386.45	0.00	0.00	0.00
46.00	0.00	386.45	0.00	0.00	0.00
48.00	0.00	386.45	0.00	0.00	0.00
50.00	0.00	386.45	0.00	0.00	0.00
52.00	0.00	386.45	0.00	0.00	0.00
54.00	0.00	386.45	0.00	0.00	0.00
56.00	0.00	386.45	0.00	0.00	0.00
58.00	0.00	386.45	0.00	0.00	0.00
60.00	0.00	386.45	0.00	0.00	0.00
62.00	0.00	386.45	0.00	0.00	0.00
64.00	0.00	386.45	0.00	0.00	0.00
66.00	0.00	386.45	0.00	0.00	0.00
68.00	0.00	386.45	0.00	0.00	0.00
70.00	0.00	386.45	0.00	0.00	0.00
72.00	0.00	386.45	0.00	0.00	0.00

Summary for Pond W-4: W-4 Pocket Wetland

Inflow Area = 119,572 sf, 60.58% Impervious, Inflow Depth = 4.00" for 10 Year, 24 Hour Storm event
Inflow = 4.59 cfs @ 12.26 hrs, Volume= 39,896 cf
Outflow = 1.57 cfs @ 12.82 hrs, Volume= 37,997 cf, Atten= 66%, Lag= 33.8 min
Primary = 1.57 cfs @ 12.82 hrs, Volume= 37,997 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Starting Elev= 377.00' Surf.Area= 4,840 sf Storage= 8,493 cf
Peak Elev= 379.16' @ 12.82 hrs Surf.Area= 7,558 sf Storage= 21,548 cf (13,055 cf above start)

Plug-Flow detention time= 1,185.3 min calculated for 29,504 cf (74% of inflow)
Center-of-Mass det. time= 669.6 min (1,715.1 - 1,045.5)

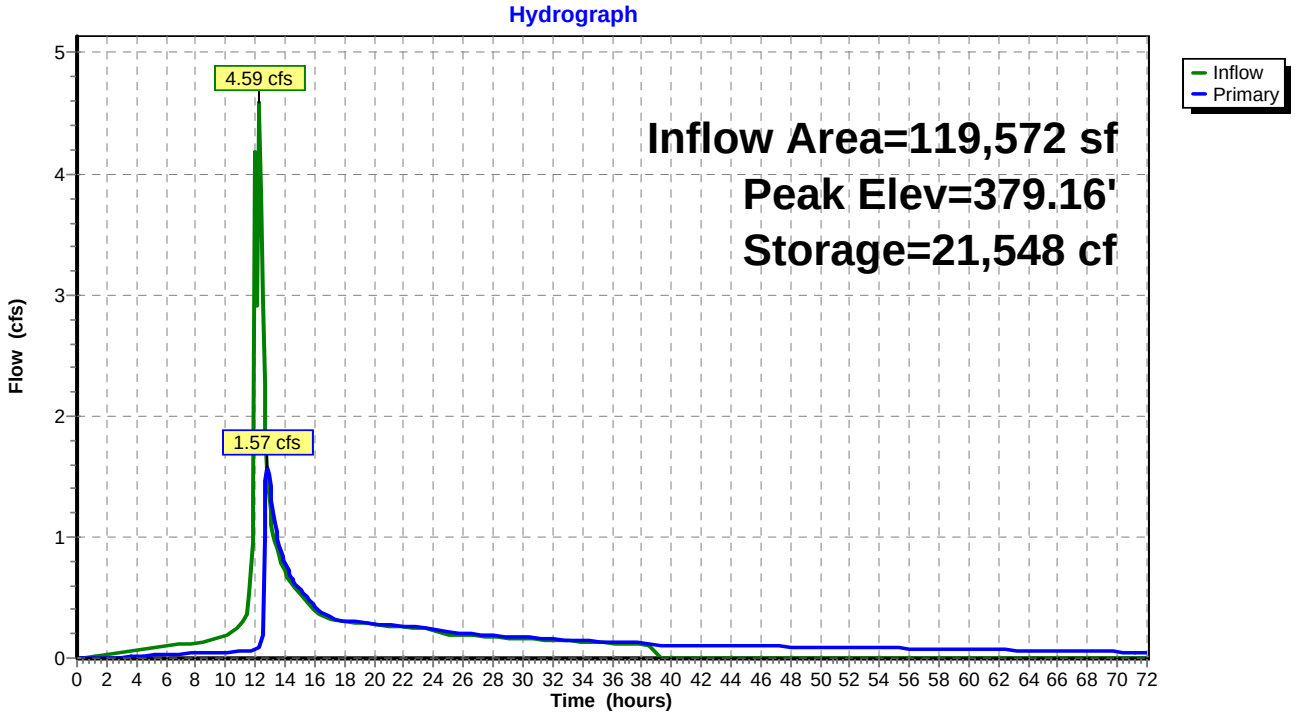
Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	28,507 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
373.00	994	124.0	0	0	994
374.00	1,255	136.0	1,122	1,122	1,274
375.00	1,541	149.0	1,396	2,518	1,602
376.00	2,862	220.0	2,168	4,685	3,695
377.00	4,840	303.0	3,808	8,493	7,159
378.00	5,830	325.0	5,327	13,820	8,302
379.00	7,302	361.0	6,552	20,373	10,297
380.00	8,995	407.0	8,134	28,507	13,135

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.013
#2	Device 1	377.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Primary	378.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.40 0.50 0.90 1.00 2.00 Width (feet) 1.00 1.00 1.00 1.00 1.00
#4	Device 1	379.00'	**15.0" x 15.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.56 cfs @ 12.82 hrs HW=379.16' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 1.13 cfs of 9.76 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.11 cfs @ 7.00 fps)
  - **4=Orifice/Grate** (Weir Controls 1.02 cfs @ 1.30 fps)
- **3=Custom Weir/Orifice** (Weir Controls 0.43 cfs @ 1.66 fps)

Pond W-4: W-4 Pocket Wetland



Hydrograph for Pond W-4: W-4 Pocket Wetland

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,493	377.00	0.00
2.00	0.03	8,558	377.01	0.00
4.00	0.06	8,850	377.07	0.01
6.00	0.10	9,275	377.16	0.03
8.00	0.13	9,866	377.28	0.04
10.00	0.19	10,653	377.43	0.05
12.00	**4.18**	**13,719**	**377.98**	**0.08**
14.00	**0.71**	**20,998**	**379.08**	**0.78**
16.00	0.39	20,681	379.04	0.43
18.00	0.30	20,539	379.02	0.31
20.00	0.28	20,505	379.02	0.28
22.00	0.26	20,472	379.01	0.26
24.00	0.22	20,433	379.01	0.24
26.00	0.19	20,310	378.99	0.20
28.00	0.17	20,228	378.98	0.18
30.00	0.16	20,154	378.97	0.17
32.00	0.15	20,080	378.96	0.16
34.00	0.13	20,004	378.95	0.14
36.00	0.12	19,925	378.94	0.13
38.00	0.11	19,840	378.93	0.12
40.00	0.00	19,330	378.85	0.11
42.00	0.00	18,578	378.75	0.10
44.00	0.00	17,849	378.64	0.10
46.00	0.00	17,143	378.54	0.10
48.00	0.00	16,462	378.43	0.09
50.00	0.00	15,806	378.33	0.09
52.00	0.00	15,176	378.23	0.09
54.00	0.00	14,572	378.13	0.08
56.00	0.00	13,994	378.03	0.08
58.00	0.00	13,444	377.94	0.07
60.00	0.00	12,922	377.84	0.07
62.00	0.00	12,428	377.76	0.07
64.00	0.00	11,963	377.67	0.06
66.00	0.00	11,528	377.59	0.06
68.00	0.00	11,122	377.52	0.05
70.00	0.00	10,746	377.45	0.05
72.00	0.00	10,401	377.38	0.05

Summary for Subcatchment Post 2E: Post 2E

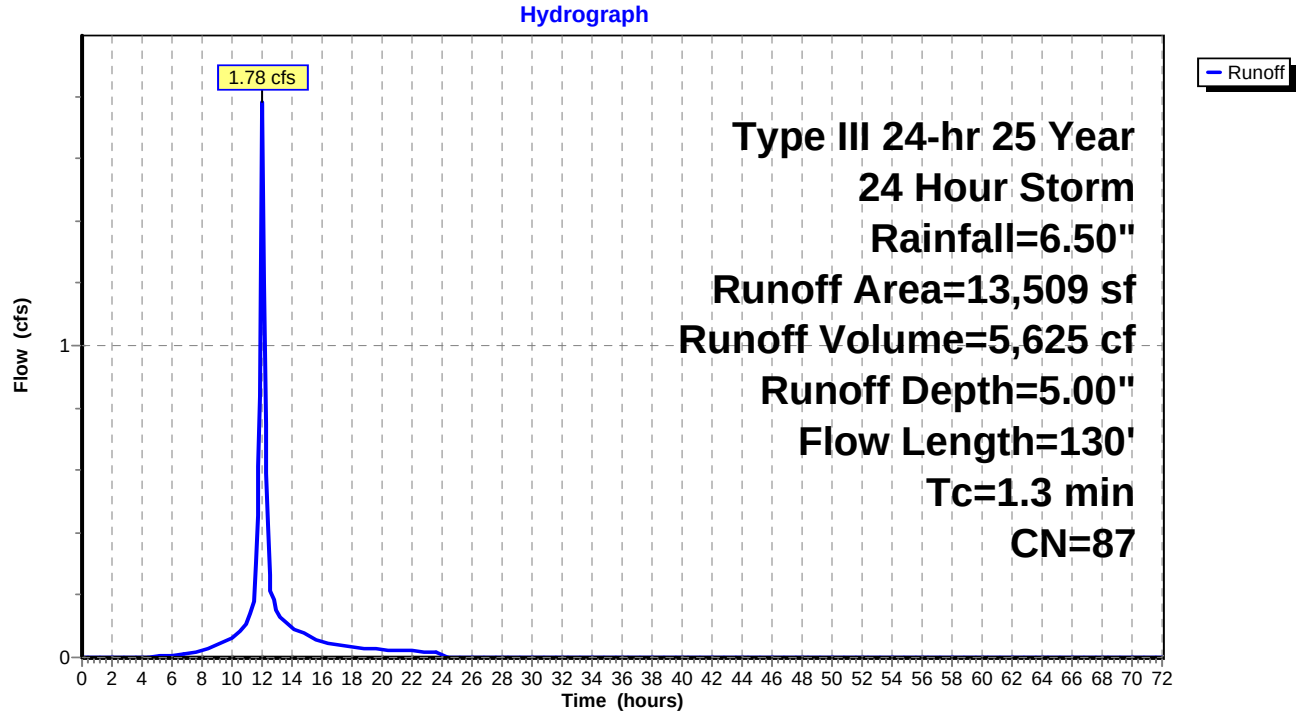
Runoff = 1.78 cfs @ 12.01 hrs, Volume= 5,625 cf, Depth= 5.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
5,415	98	Paved parking, HSG C
8,094	79	50-75% Grass cover, Fair, HSG C
13,509	87	Weighted Average
8,094		59.92% Pervious Area
5,415		40.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.44		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
0.1	30	0.3800	9.92		**Shallow Concentrated Flow, Pavement** Unpaved Kv= 16.1 fps
1.3	130	Total			

Subcatchment Post 2E: Post 2E



Hydrograph for Subcatchment Post 2E: Post 2E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	6.50	5.00	0.00
1.00	0.07	0.00	0.00	53.00	6.50	5.00	0.00
2.00	0.13	0.00	0.00	54.00	6.50	5.00	0.00
3.00	0.20	0.00	0.00	55.00	6.50	5.00	0.00
4.00	0.28	0.00	0.00	56.00	6.50	5.00	0.00
5.00	0.37	0.00	0.00	57.00	6.50	5.00	0.00
6.00	0.47	0.02	0.01	58.00	6.50	5.00	0.00
7.00	0.59	0.05	0.01	59.00	6.50	5.00	0.00
8.00	0.74	0.10	0.02	60.00	6.50	5.00	0.00
9.00	0.95	0.20	0.04	61.00	6.50	5.00	0.00
10.00	1.23	0.36	0.06	62.00	6.50	5.00	0.00
11.00	1.63	0.62	0.11	63.00	6.50	5.00	0.00
12.00	3.25	1.96	**1.77**	64.00	6.50	5.00	0.00
13.00	4.87	3.45	0.14	65.00	6.50	5.00	0.00
14.00	5.27	3.82	0.10	66.00	6.50	5.00	0.00
15.00	5.55	4.09	0.07	67.00	6.50	5.00	0.00
16.00	5.76	4.29	0.05	68.00	6.50	5.00	0.00
17.00	5.91	4.43	0.04	69.00	6.50	5.00	0.00
18.00	6.03	4.55	0.03	70.00	6.50	5.00	0.00
19.00	6.13	4.64	0.03	71.00	6.50	5.00	0.00
20.00	6.22	4.73	0.03	72.00	6.50	5.00	0.00
21.00	6.30	4.81	0.02				
22.00	6.37	4.88	0.02				
23.00	6.44	4.94	0.02				
24.00	**6.50**	**5.00**	0.01				
25.00	6.50	5.00	0.00				
26.00	6.50	5.00	0.00				
27.00	6.50	5.00	0.00				
28.00	6.50	5.00	0.00				
29.00	6.50	5.00	0.00				
30.00	6.50	5.00	0.00				
31.00	6.50	5.00	0.00				
32.00	6.50	5.00	0.00				
33.00	6.50	5.00	0.00				
34.00	6.50	5.00	0.00				
35.00	6.50	5.00	0.00				
36.00	6.50	5.00	0.00				
37.00	6.50	5.00	0.00				
38.00	6.50	5.00	0.00				
39.00	6.50	5.00	0.00				
40.00	6.50	5.00	0.00				
41.00	6.50	5.00	0.00				
42.00	6.50	5.00	0.00				
43.00	6.50	5.00	0.00				
44.00	6.50	5.00	0.00				
45.00	6.50	5.00	0.00				
46.00	6.50	5.00	0.00				
47.00	6.50	5.00	0.00				
48.00	6.50	5.00	0.00				
49.00	6.50	5.00	0.00				
50.00	6.50	5.00	0.00				
51.00	6.50	5.00	0.00				

Summary for Subcatchment Post 2A: Post 2A

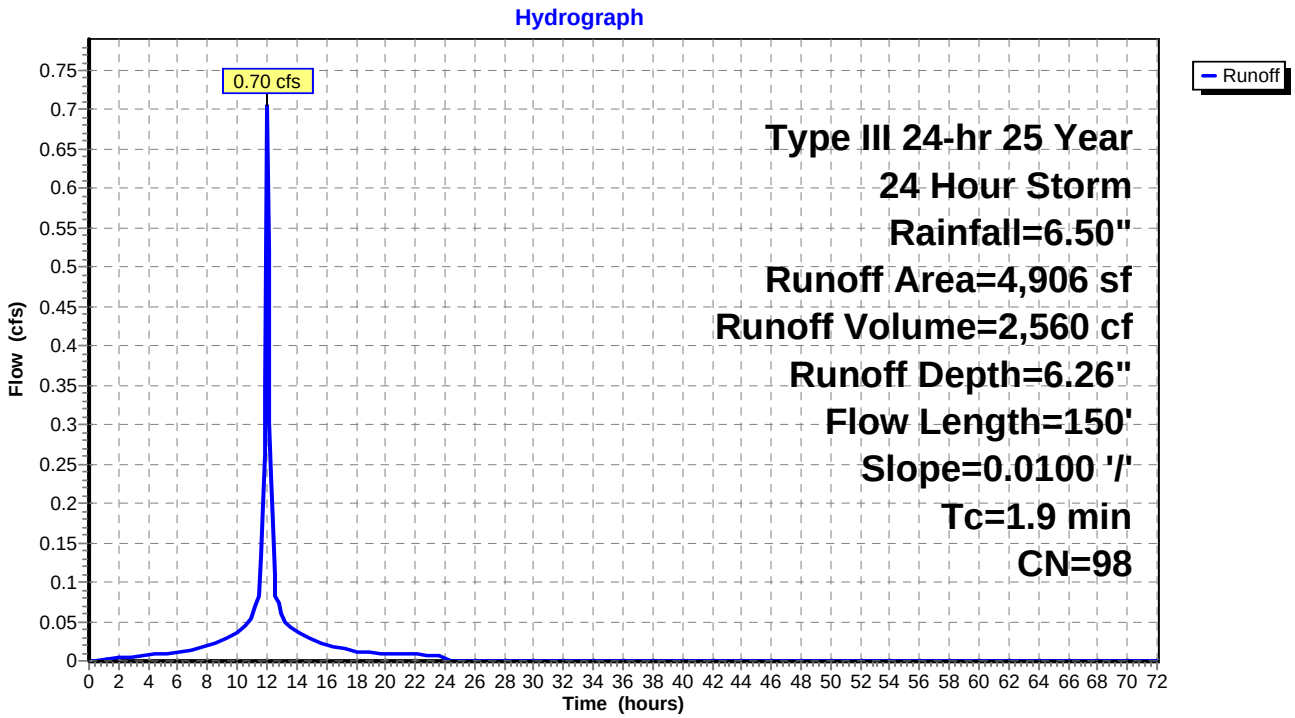
Runoff = 0.70 cfs @ 12.02 hrs, Volume= 2,560 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
4,906	98	Paved parking, HSG C
4,906		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, Pavement** Paved Kv= 20.3 fps
1.9	150	Total			

Subcatchment Post 2A: Post 2A



Hydrograph for Subcatchment Post 2A: Post 2A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	6.50	6.26	0.00
1.00	0.07	0.00	0.00	53.00	6.50	6.26	0.00
2.00	0.13	0.03	0.00	54.00	6.50	6.26	0.00
3.00	0.20	0.07	0.01	55.00	6.50	6.26	0.00
4.00	0.28	0.13	0.01	56.00	6.50	6.26	0.00
5.00	0.37	0.20	0.01	57.00	6.50	6.26	0.00
6.00	0.47	0.29	0.01	58.00	6.50	6.26	0.00
7.00	0.59	0.40	0.01	59.00	6.50	6.26	0.00
8.00	0.74	0.54	0.02	60.00	6.50	6.26	0.00
9.00	0.95	0.74	0.03	61.00	6.50	6.26	0.00
10.00	1.23	1.01	0.04	62.00	6.50	6.26	0.00
11.00	1.63	1.40	0.05	63.00	6.50	6.26	0.00
12.00	3.25	3.02	**0.70**	64.00	6.50	6.26	0.00
13.00	4.87	4.64	0.06	65.00	6.50	6.26	0.00
14.00	5.27	5.03	0.04	66.00	6.50	6.26	0.00
15.00	5.55	5.32	0.03	67.00	6.50	6.26	0.00
16.00	5.76	5.52	0.02	68.00	6.50	6.26	0.00
17.00	5.91	5.67	0.02	69.00	6.50	6.26	0.00
18.00	6.03	5.79	0.01	70.00	6.50	6.26	0.00
19.00	6.13	5.89	0.01	71.00	6.50	6.26	0.00
20.00	6.22	5.98	0.01	72.00	6.50	6.26	0.00
21.00	6.30	6.06	0.01				
22.00	6.37	6.14	0.01				
23.00	6.44	6.20	0.01				
24.00	**6.50**	**6.26**	0.00				
25.00	6.50	6.26	0.00				
26.00	6.50	6.26	0.00				
27.00	6.50	6.26	0.00				
28.00	6.50	6.26	0.00				
29.00	6.50	6.26	0.00				
30.00	6.50	6.26	0.00				
31.00	6.50	6.26	0.00				
32.00	6.50	6.26	0.00				
33.00	6.50	6.26	0.00				
34.00	6.50	6.26	0.00				
35.00	6.50	6.26	0.00				
36.00	6.50	6.26	0.00				
37.00	6.50	6.26	0.00				
38.00	6.50	6.26	0.00				
39.00	6.50	6.26	0.00				
40.00	6.50	6.26	0.00				
41.00	6.50	6.26	0.00				
42.00	6.50	6.26	0.00				
43.00	6.50	6.26	0.00				
44.00	6.50	6.26	0.00				
45.00	6.50	6.26	0.00				
46.00	6.50	6.26	0.00				
47.00	6.50	6.26	0.00				
48.00	6.50	6.26	0.00				
49.00	6.50	6.26	0.00				
50.00	6.50	6.26	0.00				
51.00	6.50	6.26	0.00				

Summary for Subcatchment Post 2B: Post 2B

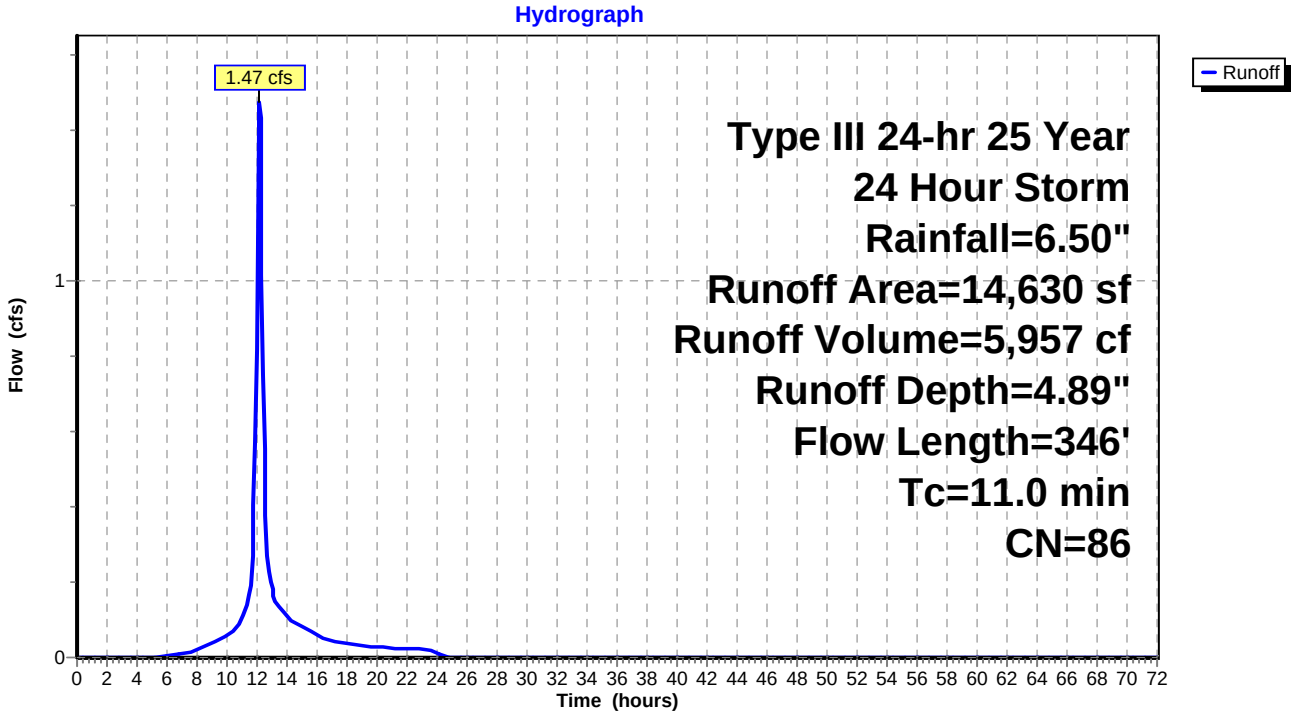
Runoff = 1.47 cfs @ 12.16 hrs, Volume= 5,957 cf, Depth= 4.89"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
5,836	98	Paved parking
6,450	74	>75% Grass cover, Good, HSG C
2,344	89	Gravel roads, HSG C
14,630	86	Weighted Average
8,794		60.11% Pervious Area
5,836		39.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0400	0.16		**Sheet Flow, Landscaped area** Grass: Dense n= 0.240 P2= 3.50"
0.7	246	0.0100	5.90	4.63	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
11.0	346	Total			

Subcatchment Post 2B: Post 2B



Hydrograph for Subcatchment Post 2B: Post 2B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.28	0.00	0.00
5.00	0.37	0.00	0.00
6.00	0.47	0.01	0.00
7.00	0.59	0.04	0.01
8.00	0.74	0.08	0.02
9.00	0.95	0.17	0.04
10.00	1.23	0.32	0.06
11.00	1.63	0.58	0.10
12.00	3.25	1.88	**0.82**
13.00	4.87	3.35	**0.18**
14.00	5.27	3.72	0.11
15.00	5.55	3.99	0.08
16.00	5.76	4.18	0.06
17.00	5.91	4.33	0.05
18.00	6.03	4.44	0.04
19.00	6.13	4.53	0.03
20.00	6.22	4.62	0.03
21.00	6.30	4.70	0.03
22.00	6.37	4.77	0.02
23.00	6.44	4.83	0.02
24.00	**6.50**	**4.89**	0.02
25.00	6.50	4.89	0.00
26.00	6.50	4.89	0.00
27.00	6.50	4.89	0.00
28.00	6.50	4.89	0.00
29.00	6.50	4.89	0.00
30.00	6.50	4.89	0.00
31.00	6.50	4.89	0.00
32.00	6.50	4.89	0.00
33.00	6.50	4.89	0.00
34.00	6.50	4.89	0.00
35.00	6.50	4.89	0.00
36.00	6.50	4.89	0.00
37.00	6.50	4.89	0.00
38.00	6.50	4.89	0.00
39.00	6.50	4.89	0.00
40.00	6.50	4.89	0.00
41.00	6.50	4.89	0.00
42.00	6.50	4.89	0.00
43.00	6.50	4.89	0.00
44.00	6.50	4.89	0.00
45.00	6.50	4.89	0.00
46.00	6.50	4.89	0.00
47.00	6.50	4.89	0.00
48.00	6.50	4.89	0.00
49.00	6.50	4.89	0.00
50.00	6.50	4.89	0.00
51.00	6.50	4.89	0.00
52.00	6.50	4.89	0.00
53.00	6.50	4.89	0.00
54.00	6.50	4.89	0.00
55.00	6.50	4.89	0.00
56.00	6.50	4.89	0.00
57.00	6.50	4.89	0.00
58.00	6.50	4.89	0.00
59.00	6.50	4.89	0.00
60.00	6.50	4.89	0.00
61.00	6.50	4.89	0.00
62.00	6.50	4.89	0.00
63.00	6.50	4.89	0.00
64.00	6.50	4.89	0.00
65.00	6.50	4.89	0.00
66.00	6.50	4.89	0.00
67.00	6.50	4.89	0.00
68.00	6.50	4.89	0.00
69.00	6.50	4.89	0.00
70.00	6.50	4.89	0.00
71.00	6.50	4.89	0.00
72.00	6.50	4.89	0.00

Summary for Subcatchment Post 2C: Post 2C

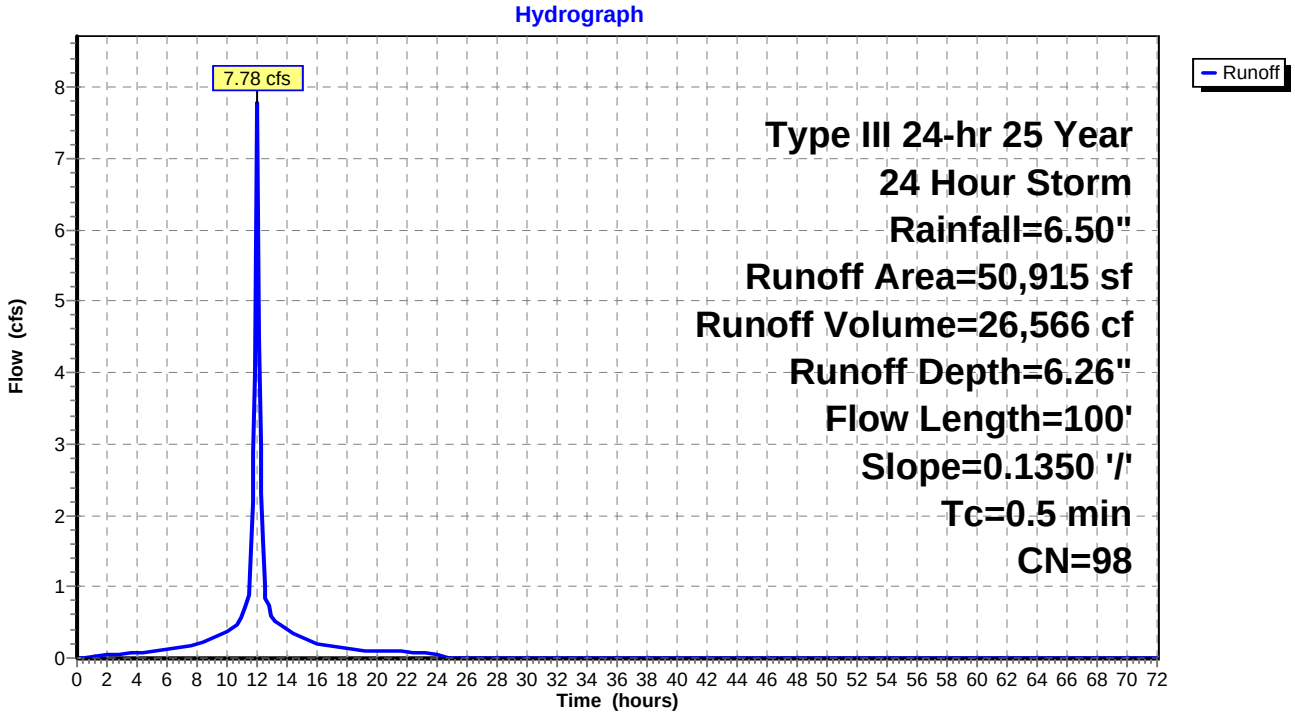
Runoff = 7.78 cfs @ 12.00 hrs, Volume= 26,566 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
50,915	98	Paved parking, HSG C
50,915		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.1350	3.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"

Subcatchment Post 2C: Post 2C



Hydrograph for Subcatchment Post 2C: Post 2C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.02
2.00	0.13	0.03	0.04
3.00	0.20	0.07	0.06
4.00	0.28	0.13	0.08
5.00	0.37	0.20	0.09
6.00	0.47	0.29	0.11
7.00	0.59	0.40	0.15
8.00	0.74	0.54	0.19
9.00	0.95	0.74	0.28
10.00	1.23	1.01	0.37
11.00	1.63	1.40	0.56
12.00	3.25	3.02	**7.78**
13.00	4.87	4.64	0.57
14.00	5.27	5.03	0.38
15.00	5.55	5.32	0.29
16.00	5.76	5.52	0.20
17.00	5.91	5.67	0.16
18.00	6.03	5.79	0.12
19.00	6.13	5.89	0.11
20.00	6.22	5.98	0.10
21.00	6.30	6.06	0.09
22.00	6.37	6.14	0.08
23.00	6.44	6.20	0.07
24.00	**6.50**	**6.26**	0.04
25.00	6.50	6.26	0.00
26.00	6.50	6.26	0.00
27.00	6.50	6.26	0.00
28.00	6.50	6.26	0.00
29.00	6.50	6.26	0.00
30.00	6.50	6.26	0.00
31.00	6.50	6.26	0.00
32.00	6.50	6.26	0.00
33.00	6.50	6.26	0.00
34.00	6.50	6.26	0.00
35.00	6.50	6.26	0.00
36.00	6.50	6.26	0.00
37.00	6.50	6.26	0.00
38.00	6.50	6.26	0.00
39.00	6.50	6.26	0.00
40.00	6.50	6.26	0.00
41.00	6.50	6.26	0.00
42.00	6.50	6.26	0.00
43.00	6.50	6.26	0.00
44.00	6.50	6.26	0.00
45.00	6.50	6.26	0.00
46.00	6.50	6.26	0.00
47.00	6.50	6.26	0.00
48.00	6.50	6.26	0.00
49.00	6.50	6.26	0.00
50.00	6.50	6.26	0.00
51.00	6.50	6.26	0.00
52.00	6.50	6.26	0.00
53.00	6.50	6.26	0.00
54.00	6.50	6.26	0.00
55.00	6.50	6.26	0.00
56.00	6.50	6.26	0.00
57.00	6.50	6.26	0.00
58.00	6.50	6.26	0.00
59.00	6.50	6.26	0.00
60.00	6.50	6.26	0.00
61.00	6.50	6.26	0.00
62.00	6.50	6.26	0.00
63.00	6.50	6.26	0.00
64.00	6.50	6.26	0.00
65.00	6.50	6.26	0.00
66.00	6.50	6.26	0.00
67.00	6.50	6.26	0.00
68.00	6.50	6.26	0.00
69.00	6.50	6.26	0.00
70.00	6.50	6.26	0.00
71.00	6.50	6.26	0.00
72.00	6.50	6.26	0.00

Summary for Subcatchment Post 2D: Post 2D

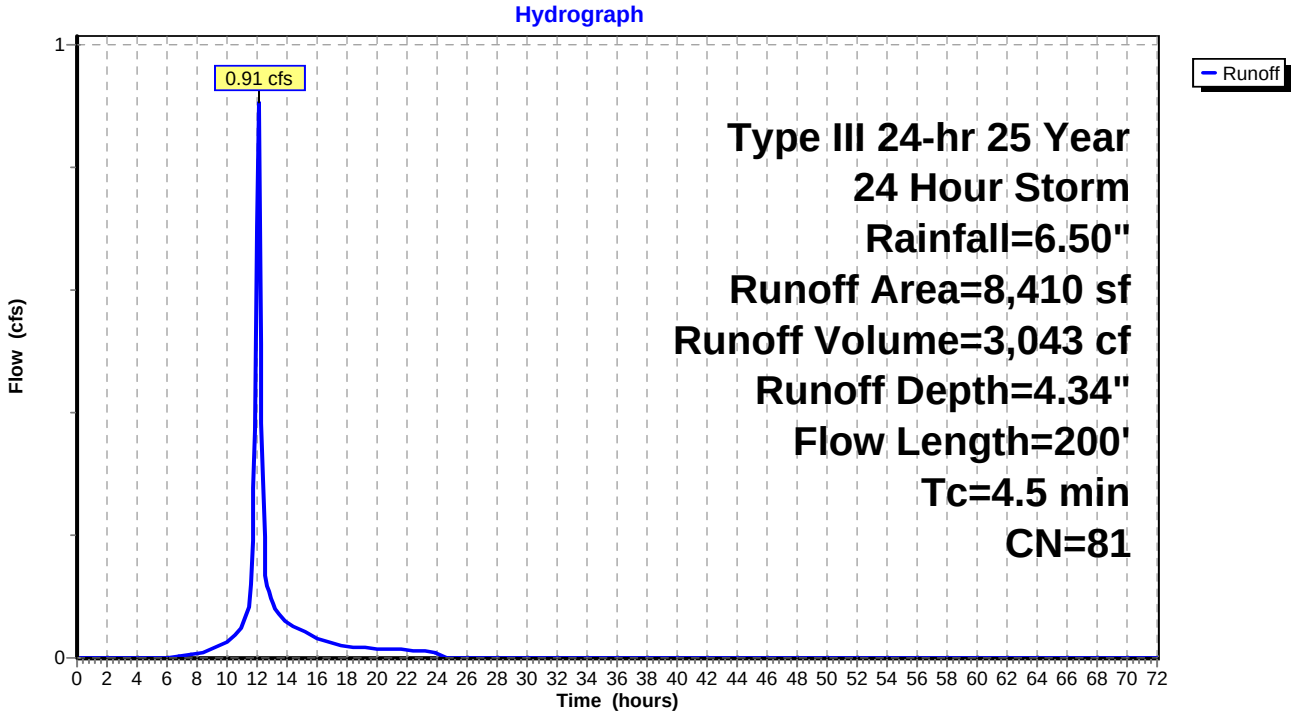
Runoff = 0.91 cfs @ 12.08 hrs, Volume= 3,043 cf, Depth= 4.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
6,348	79	50-75% Grass cover, Fair, HSG C
2,062	89	Gravel roads, HSG C
8,410	81	Weighted Average
8,410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1000	0.20		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
0.4	150	0.0860	5.95		**Shallow Concentrated Flow, Maintenance Drive** Paved Kv= 20.3 fps
4.5	200	Total			

Subcatchment Post 2D: Post 2D



Hydrograph for Subcatchment Post 2D: Post 2D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.28	0.00	0.00
5.00	0.37	0.00	0.00
6.00	0.47	0.00	0.00
7.00	0.59	0.01	0.00
8.00	0.74	0.03	0.01
9.00	0.95	0.08	0.01
10.00	1.23	0.19	0.03
11.00	1.63	0.38	0.05
12.00	3.25	1.51	**0.71**
13.00	4.87	2.88	**0.09**
14.00	5.27	3.23	0.06
15.00	5.55	3.48	0.04
16.00	5.76	3.66	0.03
17.00	5.91	3.80	0.02
18.00	6.03	3.91	0.02
19.00	6.13	4.00	0.02
20.00	6.22	4.09	0.02
21.00	6.30	4.16	0.01
22.00	6.37	4.23	0.01
23.00	6.44	4.29	0.01
24.00	**6.50**	**4.34**	0.01
25.00	6.50	4.34	0.00
26.00	6.50	4.34	0.00
27.00	6.50	4.34	0.00
28.00	6.50	4.34	0.00
29.00	6.50	4.34	0.00
30.00	6.50	4.34	0.00
31.00	6.50	4.34	0.00
32.00	6.50	4.34	0.00
33.00	6.50	4.34	0.00
34.00	6.50	4.34	0.00
35.00	6.50	4.34	0.00
36.00	6.50	4.34	0.00
37.00	6.50	4.34	0.00
38.00	6.50	4.34	0.00
39.00	6.50	4.34	0.00
40.00	6.50	4.34	0.00
41.00	6.50	4.34	0.00
42.00	6.50	4.34	0.00
43.00	6.50	4.34	0.00
44.00	6.50	4.34	0.00
45.00	6.50	4.34	0.00
46.00	6.50	4.34	0.00
47.00	6.50	4.34	0.00
48.00	6.50	4.34	0.00
49.00	6.50	4.34	0.00
50.00	6.50	4.34	0.00
51.00	6.50	4.34	0.00
52.00	6.50	4.34	0.00
53.00	6.50	4.34	0.00
54.00	6.50	4.34	0.00
55.00	6.50	4.34	0.00
56.00	6.50	4.34	0.00
57.00	6.50	4.34	0.00
58.00	6.50	4.34	0.00
59.00	6.50	4.34	0.00
60.00	6.50	4.34	0.00
61.00	6.50	4.34	0.00
62.00	6.50	4.34	0.00
63.00	6.50	4.34	0.00
64.00	6.50	4.34	0.00
65.00	6.50	4.34	0.00
66.00	6.50	4.34	0.00
67.00	6.50	4.34	0.00
68.00	6.50	4.34	0.00
69.00	6.50	4.34	0.00
70.00	6.50	4.34	0.00
71.00	6.50	4.34	0.00
72.00	6.50	4.34	0.00

Summary for Subcatchment Post 2F: Post 2F

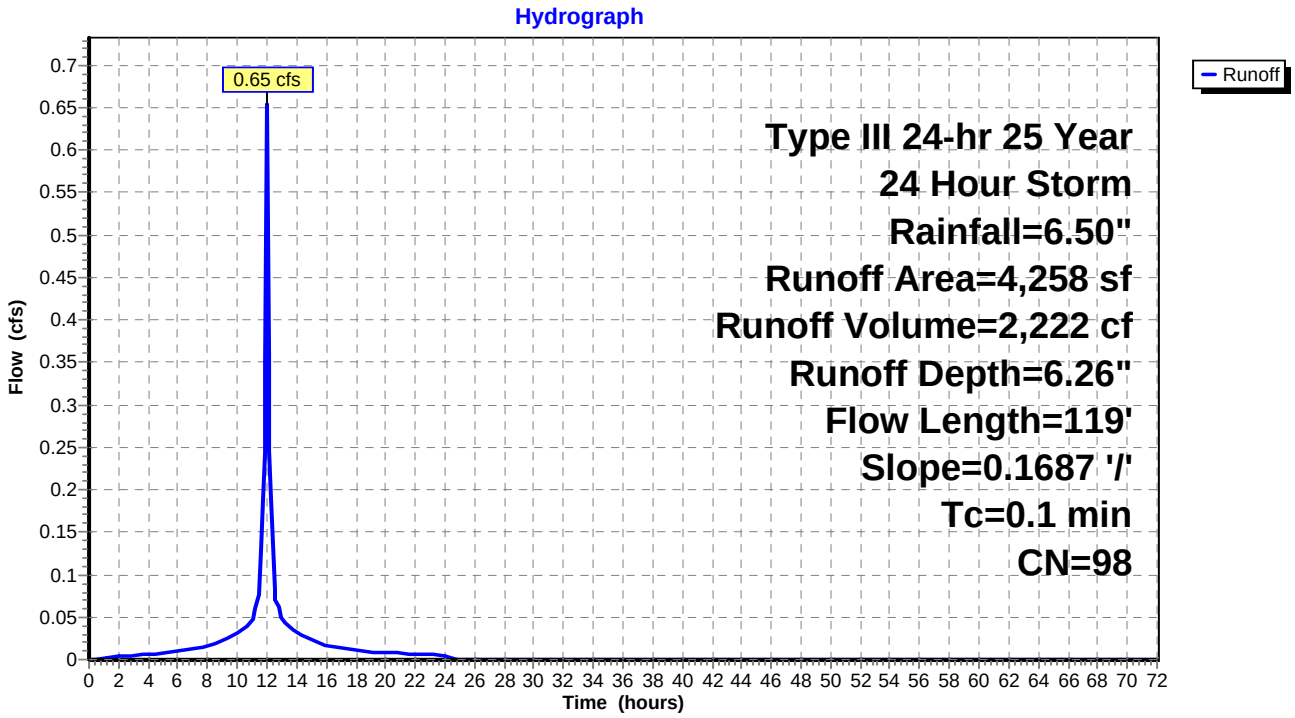
Runoff = 0.65 cfs @ 12.00 hrs, Volume= 2,222 cf, Depth= 6.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
4,258	98	Roofs, HSG C
4,258		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	119	0.1687	14.22	4.96	**Pipe Channel, Roof Leader** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior

Subcatchment Post 2F: Post 2F



Hydrograph for Subcatchment Post 2F: Post 2F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	6.50	6.26	0.00
1.00	0.07	0.00	0.00	53.00	6.50	6.26	0.00
2.00	0.13	0.03	0.00	54.00	6.50	6.26	0.00
3.00	0.20	0.07	0.01	55.00	6.50	6.26	0.00
4.00	0.28	0.13	0.01	56.00	6.50	6.26	0.00
5.00	0.37	0.20	0.01	57.00	6.50	6.26	0.00
6.00	0.47	0.29	0.01	58.00	6.50	6.26	0.00
7.00	0.59	0.40	0.01	59.00	6.50	6.26	0.00
8.00	0.74	0.54	0.02	60.00	6.50	6.26	0.00
9.00	0.95	0.74	0.02	61.00	6.50	6.26	0.00
10.00	1.23	1.01	0.03	62.00	6.50	6.26	0.00
11.00	1.63	1.40	0.05	63.00	6.50	6.26	0.00
12.00	3.25	3.02	**0.65**	64.00	6.50	6.26	0.00
13.00	4.87	4.64	0.05	65.00	6.50	6.26	0.00
14.00	5.27	5.03	0.03	66.00	6.50	6.26	0.00
15.00	5.55	5.32	0.02	67.00	6.50	6.26	0.00
16.00	5.76	5.52	0.02	68.00	6.50	6.26	0.00
17.00	5.91	5.67	0.01	69.00	6.50	6.26	0.00
18.00	6.03	5.79	0.01	70.00	6.50	6.26	0.00
19.00	6.13	5.89	0.01	71.00	6.50	6.26	0.00
20.00	6.22	5.98	0.01	72.00	6.50	6.26	0.00
21.00	6.30	6.06	0.01				
22.00	6.37	6.14	0.01				
23.00	6.44	6.20	0.01				
24.00	**6.50**	**6.26**	0.00				
25.00	6.50	6.26	0.00				
26.00	6.50	6.26	0.00				
27.00	6.50	6.26	0.00				
28.00	6.50	6.26	0.00				
29.00	6.50	6.26	0.00				
30.00	6.50	6.26	0.00				
31.00	6.50	6.26	0.00				
32.00	6.50	6.26	0.00				
33.00	6.50	6.26	0.00				
34.00	6.50	6.26	0.00				
35.00	6.50	6.26	0.00				
36.00	6.50	6.26	0.00				
37.00	6.50	6.26	0.00				
38.00	6.50	6.26	0.00				
39.00	6.50	6.26	0.00				
40.00	6.50	6.26	0.00				
41.00	6.50	6.26	0.00				
42.00	6.50	6.26	0.00				
43.00	6.50	6.26	0.00				
44.00	6.50	6.26	0.00				
45.00	6.50	6.26	0.00				
46.00	6.50	6.26	0.00				
47.00	6.50	6.26	0.00				
48.00	6.50	6.26	0.00				
49.00	6.50	6.26	0.00				
50.00	6.50	6.26	0.00				
51.00	6.50	6.26	0.00				

Summary for Subcatchment Post 2G: Post 2G

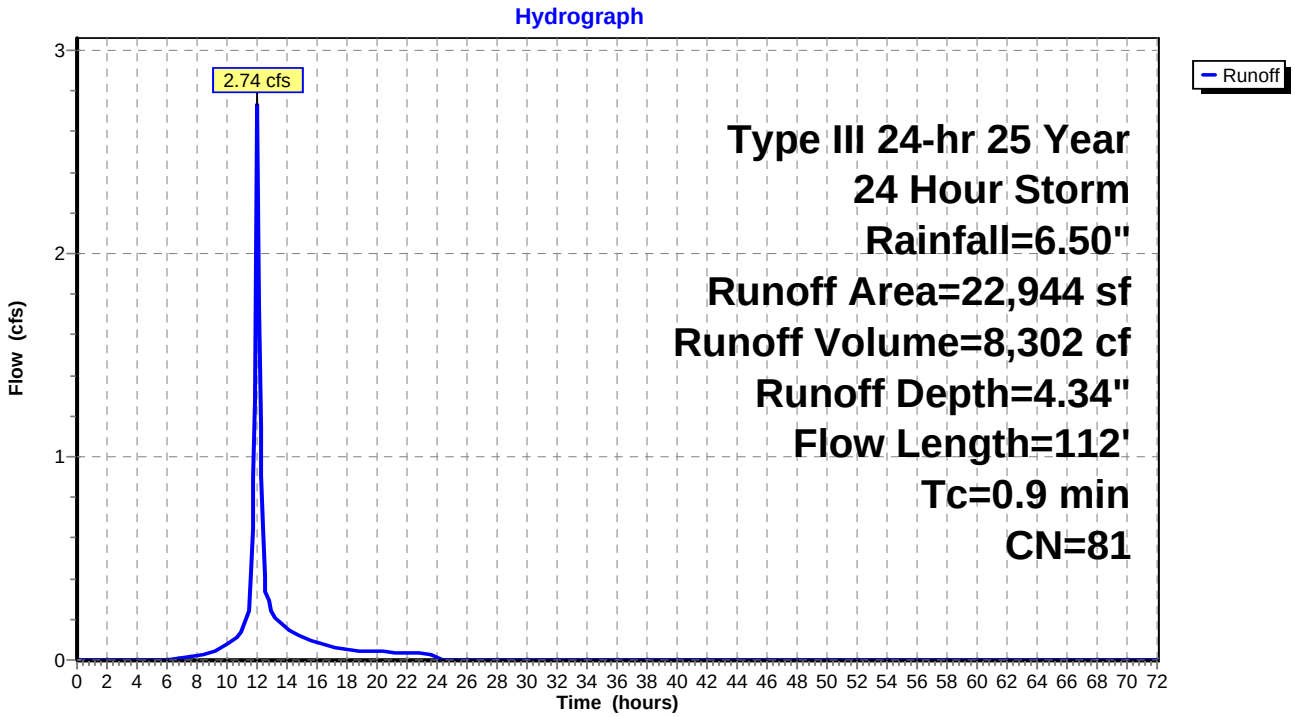
Runoff = 2.74 cfs @ 12.01 hrs, Volume= 8,302 cf, Depth= 4.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
1,112	98	Paved parking, HSG C
19,649	79	50-75% Grass cover, Fair, HSG C
2,183	89	Gravel roads, HSG C
22,944	81	Weighted Average
21,832		95.15% Pervious Area
1,112		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	80	0.0250	1.50		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.0	32	0.4600	10.92		**Shallow Concentrated Flow, Landscaped** Unpaved Kv= 16.1 fps
0.9	112	Total			

Subcatchment Post 2G: Post 2G



Hydrograph for Subcatchment Post 2G: Post 2G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	6.50	4.34	0.00
1.00	0.07	0.00	0.00	53.00	6.50	4.34	0.00
2.00	0.13	0.00	0.00	54.00	6.50	4.34	0.00
3.00	0.20	0.00	0.00	55.00	6.50	4.34	0.00
4.00	0.28	0.00	0.00	56.00	6.50	4.34	0.00
5.00	0.37	0.00	0.00	57.00	6.50	4.34	0.00
6.00	0.47	0.00	0.00	58.00	6.50	4.34	0.00
7.00	0.59	0.01	0.01	59.00	6.50	4.34	0.00
8.00	0.74	0.03	0.02	60.00	6.50	4.34	0.00
9.00	0.95	0.08	0.04	61.00	6.50	4.34	0.00
10.00	1.23	0.19	0.07	62.00	6.50	4.34	0.00
11.00	1.63	0.38	0.14	63.00	6.50	4.34	0.00
12.00	3.25	1.51	**2.72**	64.00	6.50	4.34	0.00
13.00	4.87	2.88	0.23	65.00	6.50	4.34	0.00
14.00	5.27	3.23	0.15	66.00	6.50	4.34	0.00
15.00	5.55	3.48	0.12	67.00	6.50	4.34	0.00
16.00	5.76	3.66	0.08	68.00	6.50	4.34	0.00
17.00	5.91	3.80	0.07	69.00	6.50	4.34	0.00
18.00	6.03	3.91	0.05	70.00	6.50	4.34	0.00
19.00	6.13	4.00	0.05	71.00	6.50	4.34	0.00
20.00	6.22	4.09	0.04	72.00	6.50	4.34	0.00
21.00	6.30	4.16	0.04				
22.00	6.37	4.23	0.03				
23.00	6.44	4.29	0.03				
24.00	**6.50**	**4.34**	0.02				
25.00	6.50	4.34	0.00				
26.00	6.50	4.34	0.00				
27.00	6.50	4.34	0.00				
28.00	6.50	4.34	0.00				
29.00	6.50	4.34	0.00				
30.00	6.50	4.34	0.00				
31.00	6.50	4.34	0.00				
32.00	6.50	4.34	0.00				
33.00	6.50	4.34	0.00				
34.00	6.50	4.34	0.00				
35.00	6.50	4.34	0.00				
36.00	6.50	4.34	0.00				
37.00	6.50	4.34	0.00				
38.00	6.50	4.34	0.00				
39.00	6.50	4.34	0.00				
40.00	6.50	4.34	0.00				
41.00	6.50	4.34	0.00				
42.00	6.50	4.34	0.00				
43.00	6.50	4.34	0.00				
44.00	6.50	4.34	0.00				
45.00	6.50	4.34	0.00				
46.00	6.50	4.34	0.00				
47.00	6.50	4.34	0.00				
48.00	6.50	4.34	0.00				
49.00	6.50	4.34	0.00				
50.00	6.50	4.34	0.00				
51.00	6.50	4.34	0.00				

Summary for Subcatchment Post 2H: Post 2H

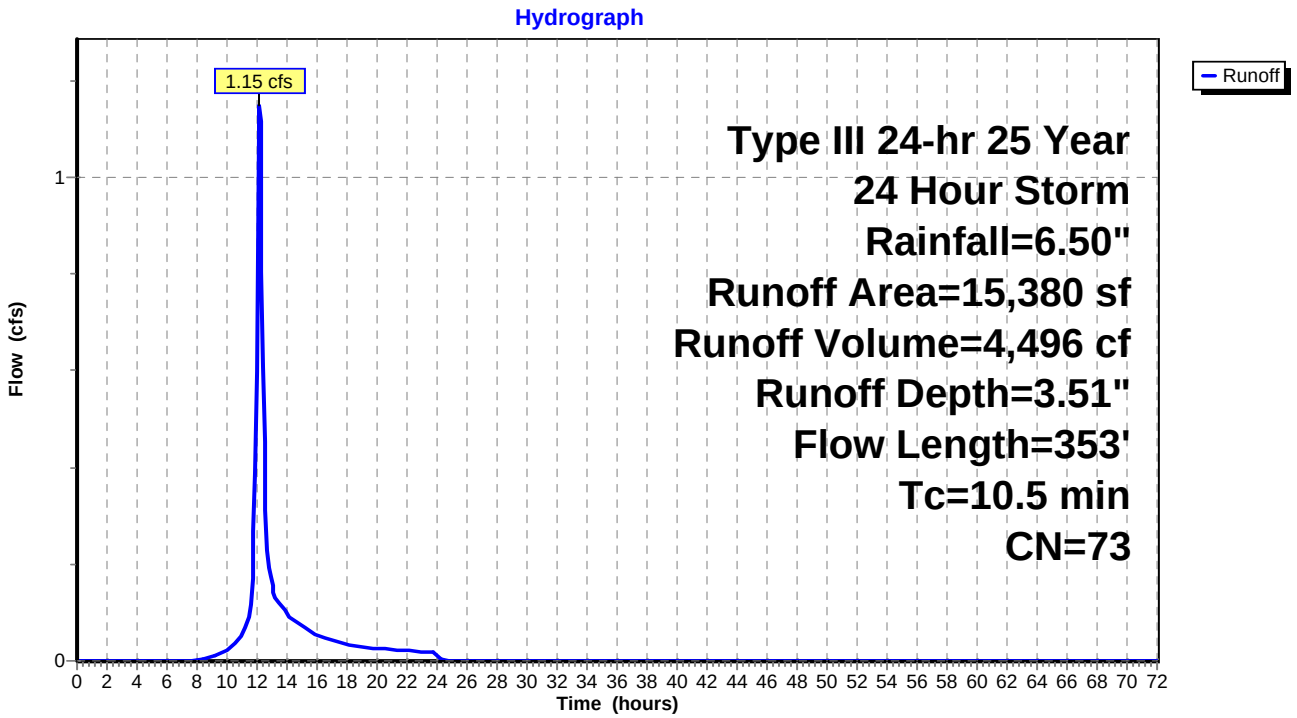
Runoff = 1.15 cfs @ 12.16 hrs, Volume= 4,496 cf, Depth= 3.51"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
15,380	73	Woods, Fair, HSG C
15,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
1.7	253	0.0260	2.42		**Shallow Concentrated Flow, Grassed waterway** Grassed Waterway Kv= 15.0 fps
10.5	353	Total			

Subcatchment Post 2H: Post 2H



Hydrograph for Subcatchment Post 2H: Post 2H

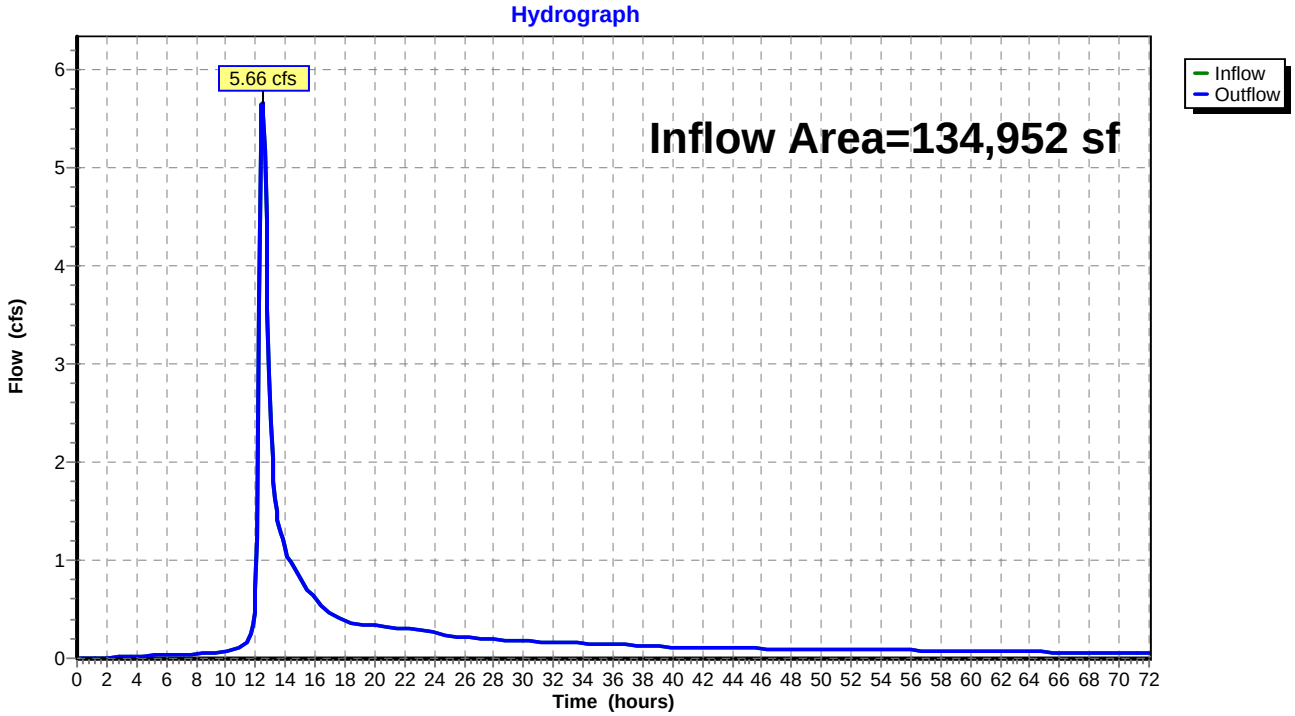
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	6.50	3.51	0.00
1.00	0.07	0.00	0.00	53.00	6.50	3.51	0.00
2.00	0.13	0.00	0.00	54.00	6.50	3.51	0.00
3.00	0.20	0.00	0.00	55.00	6.50	3.51	0.00
4.00	0.28	0.00	0.00	56.00	6.50	3.51	0.00
5.00	0.37	0.00	0.00	57.00	6.50	3.51	0.00
6.00	0.47	0.00	0.00	58.00	6.50	3.51	0.00
7.00	0.59	0.00	0.00	59.00	6.50	3.51	0.00
8.00	0.74	0.00	0.00	60.00	6.50	3.51	0.00
9.00	0.95	0.01	0.01	61.00	6.50	3.51	0.00
10.00	1.23	0.06	0.02	62.00	6.50	3.51	0.00
11.00	1.63	0.17	0.05	63.00	6.50	3.51	0.00
12.00	3.25	1.01	**0.60**	64.00	6.50	3.51	0.00
13.00	4.87	2.18	**0.16**	65.00	6.50	3.51	0.00
14.00	5.27	2.50	0.10	66.00	6.50	3.51	0.00
15.00	5.55	2.72	0.07	67.00	6.50	3.51	0.00
16.00	5.76	2.89	0.05	68.00	6.50	3.51	0.00
17.00	5.91	3.02	0.04	69.00	6.50	3.51	0.00
18.00	6.03	3.12	0.03	70.00	6.50	3.51	0.00
19.00	6.13	3.20	0.03	71.00	6.50	3.51	0.00
20.00	6.22	3.27	0.03	72.00	6.50	3.51	0.00
21.00	6.30	3.34	0.02				
22.00	6.37	3.40	0.02				
23.00	6.44	3.46	0.02				
24.00	**6.50**	**3.51**	0.02				
25.00	6.50	3.51	0.00				
26.00	6.50	3.51	0.00				
27.00	6.50	3.51	0.00				
28.00	6.50	3.51	0.00				
29.00	6.50	3.51	0.00				
30.00	6.50	3.51	0.00				
31.00	6.50	3.51	0.00				
32.00	6.50	3.51	0.00				
33.00	6.50	3.51	0.00				
34.00	6.50	3.51	0.00				
35.00	6.50	3.51	0.00				
36.00	6.50	3.51	0.00				
37.00	6.50	3.51	0.00				
38.00	6.50	3.51	0.00				
39.00	6.50	3.51	0.00				
40.00	6.50	3.51	0.00				
41.00	6.50	3.51	0.00				
42.00	6.50	3.51	0.00				
43.00	6.50	3.51	0.00				
44.00	6.50	3.51	0.00				
45.00	6.50	3.51	0.00				
46.00	6.50	3.51	0.00				
47.00	6.50	3.51	0.00				
48.00	6.50	3.51	0.00				
49.00	6.50	3.51	0.00				
50.00	6.50	3.51	0.00				
51.00	6.50	3.51	0.00				

Summary for Reach DP2: Design Point 2

Inflow Area = 134,952 sf, 53.68% Impervious, Inflow Depth > 5.04" for 25 Year, 24 Hour Storm event
Inflow = 5.66 cfs @ 12.43 hrs, Volume= 56,693 cf
Outflow = 5.66 cfs @ 12.43 hrs, Volume= 56,693 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.01		0.01
4.00	0.02		0.02
5.00	0.03		0.03
6.00	0.03		0.03
7.00	0.04		0.04
8.00	0.04		0.04
9.00	0.06		0.06
10.00	0.08		0.08
11.00	0.12		0.12
12.00	**0.69**		**0.69**
13.00	**2.39**		**2.39**
14.00	1.11		1.11
15.00	0.81		0.81
16.00	0.60		0.60
17.00	0.46		0.46
18.00	0.38		0.38
19.00	0.34		0.34
20.00	0.33		0.33
21.00	0.32		0.32
22.00	0.31		0.31
23.00	0.29		0.29
24.00	0.28		0.28
25.00	0.22		0.22
26.00	0.21		0.21
27.00	0.20		0.20
28.00	0.19		0.19
29.00	0.18		0.18
30.00	0.18		0.18
31.00	0.17		0.17
32.00	0.16		0.16
33.00	0.16		0.16
34.00	0.15		0.15
35.00	0.15		0.15
36.00	0.14		0.14
37.00	0.13		0.13
38.00	0.13		0.13
39.00	0.12		0.12
40.00	0.11		0.11
41.00	0.11		0.11
42.00	0.10		0.10
43.00	0.10		0.10
44.00	0.10		0.10
45.00	0.10		0.10
46.00	0.10		0.10
47.00	0.10		0.10
48.00	0.09		0.09
49.00	0.09		0.09
50.00	0.09		0.09
51.00	0.09		0.09
52.00	0.09		0.09
53.00	0.09		0.09
54.00	0.08		0.08
55.00	0.08		0.08
56.00	0.08		0.08
57.00	0.08		0.08
58.00	0.08		0.08
59.00	0.07		0.07
60.00	0.07		0.07
61.00	0.07		0.07
62.00	0.07		0.07
63.00	0.07		0.07
64.00	0.06		0.06
65.00	0.06		0.06
66.00	0.06		0.06
67.00	0.06		0.06
68.00	0.06		0.06
69.00	0.05		0.05
70.00	0.05		0.05
71.00	0.05		0.05
72.00	0.05		0.05

Summary for Pond F-1: Combined Sed. + Sand

Inflow Area = 92,370 sf, 72.61% Impervious, Inflow Depth = 5.40" for 25 Year, 24 Hour Storm event
Inflow = 8.00 cfs @ 12.01 hrs, Volume= 41,573 cf
Outflow = 4.52 cfs @ 12.29 hrs, Volume= 41,575 cf, Atten= 44%, Lag= 16.8 min
Primary = 4.52 cfs @ 12.29 hrs, Volume= 41,575 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 387.16' @ 12.29 hrs Surf.Area= 7,540 sf Storage= 14,692 cf

Plug-Flow detention time= 293.7 min calculated for 41,517 cf (100% of inflow)
Center-of-Mass det. time= 294.6 min (1,054.7 - 760.1)

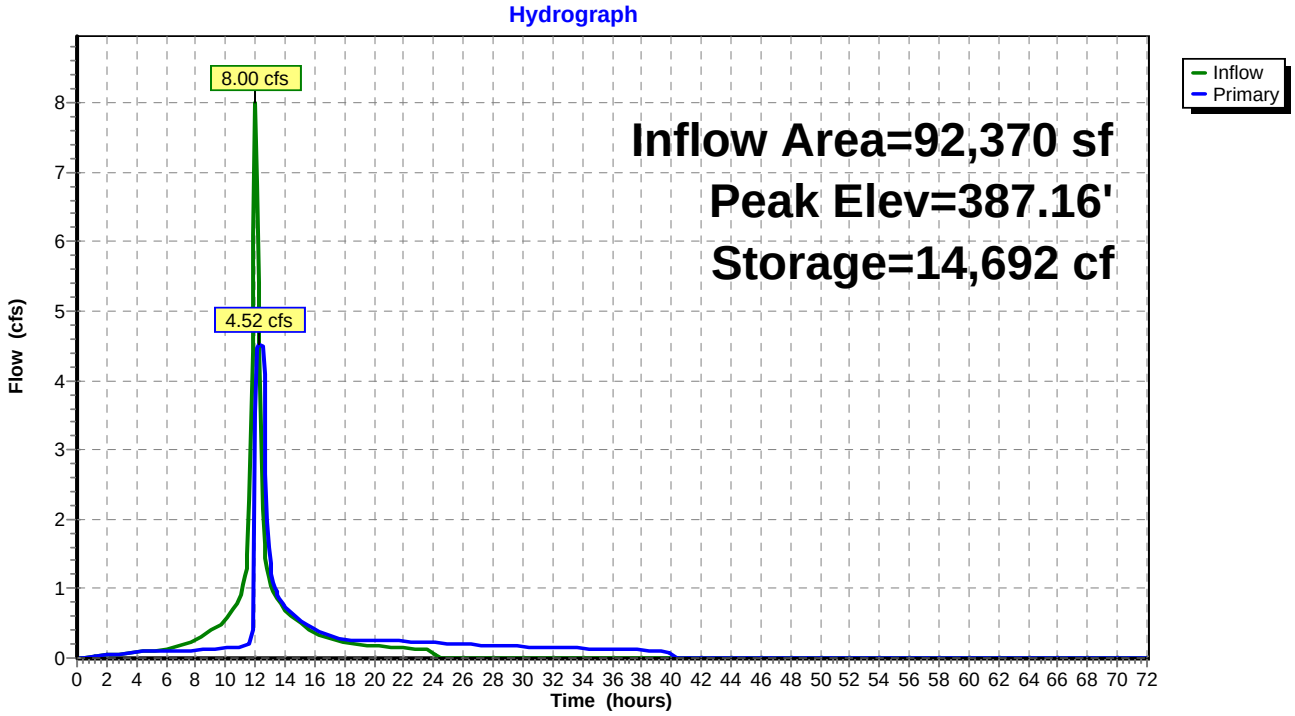
Volume	Invert	Avail.Storage	Storage Description
#1	384.00'	20,877 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
384.00	2,608	188.0	0	0	2,608
385.00	3,635	237.0	3,107	3,107	4,279
386.00	4,801	285.0	4,205	7,312	6,290
387.00	7,600	320.0	6,147	13,459	8,002
388.00	7,237	337.0	7,418	20,877	8,949

Device	Routing	Invert	Outlet Devices
#1	Primary	382.00'	**10.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 377.00' S= 0.1316 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	382.00'	**1.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	384.00'	**1.750 in/hr Exfiltration over Surface area**
#4	Device 1	386.60'	**18.0" x 18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.52 cfs @ 12.29 hrs HW=387.16' TW=379.34' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 4.52 cfs @ 8.28 fps)
- **2=Orifice/Grate** (Passes < 0.60 cfs potential flow)
  - **3=Exfiltration** (Passes < 0.31 cfs potential flow)
- **4=Orifice/Grate** (Passes < 8.12 cfs potential flow)

Pond F-1: Combined Sed. + Sand



Hydrograph for Pond F-1: Combined Sed. + Sand

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	384.00	0.00
2.00	0.04	0	384.00	0.04
4.00	0.09	0	384.00	0.09
6.00	0.13	50	384.02	0.11
8.00	0.25	627	384.23	0.11
10.00	0.55	2,564	384.85	0.14
12.00	**7.98**	**12,722**	**386.90**	**3.54**
14.00	0.68	**11,207**	**386.68**	**0.74**
16.00	0.36	10,901	386.64	0.40
18.00	0.22	10,672	386.60	0.26
20.00	0.18	10,253	386.54	0.25
22.00	0.15	9,646	386.44	0.24
24.00	0.08	8,904	386.31	0.23
26.00	0.00	7,405	386.02	0.20
28.00	0.00	6,050	385.73	0.18
30.00	0.00	4,797	385.44	0.17
32.00	0.00	3,643	385.14	0.15
34.00	0.00	2,583	384.85	0.14
36.00	0.00	1,616	384.56	0.13
38.00	0.00	737	384.27	0.12
40.00	0.00	0	384.00	0.00
42.00	0.00	0	384.00	0.00
44.00	0.00	0	384.00	0.00
46.00	0.00	0	384.00	0.00
48.00	0.00	0	384.00	0.00
50.00	0.00	0	384.00	0.00
52.00	0.00	0	384.00	0.00
54.00	0.00	0	384.00	0.00
56.00	0.00	0	384.00	0.00
58.00	0.00	0	384.00	0.00
60.00	0.00	0	384.00	0.00
62.00	0.00	0	384.00	0.00
64.00	0.00	0	384.00	0.00
66.00	0.00	0	384.00	0.00
68.00	0.00	0	384.00	0.00
70.00	0.00	0	384.00	0.00
72.00	0.00	0	384.00	0.00

Summary for Pond FS: Flow Splitter

Inflow Area = 70,451 sf, 87.52% Impervious, Inflow Depth = 5.98" for 25 Year, 24 Hour Storm event
Inflow = 9.33 cfs @ 12.01 hrs, Volume= 35,083 cf
Outflow = 9.33 cfs @ 12.01 hrs, Volume= 35,083 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.51 cfs @ 11.99 hrs, Volume= 32,905 cf
Secondary = 3.85 cfs @ 12.01 hrs, Volume= 2,178 cf

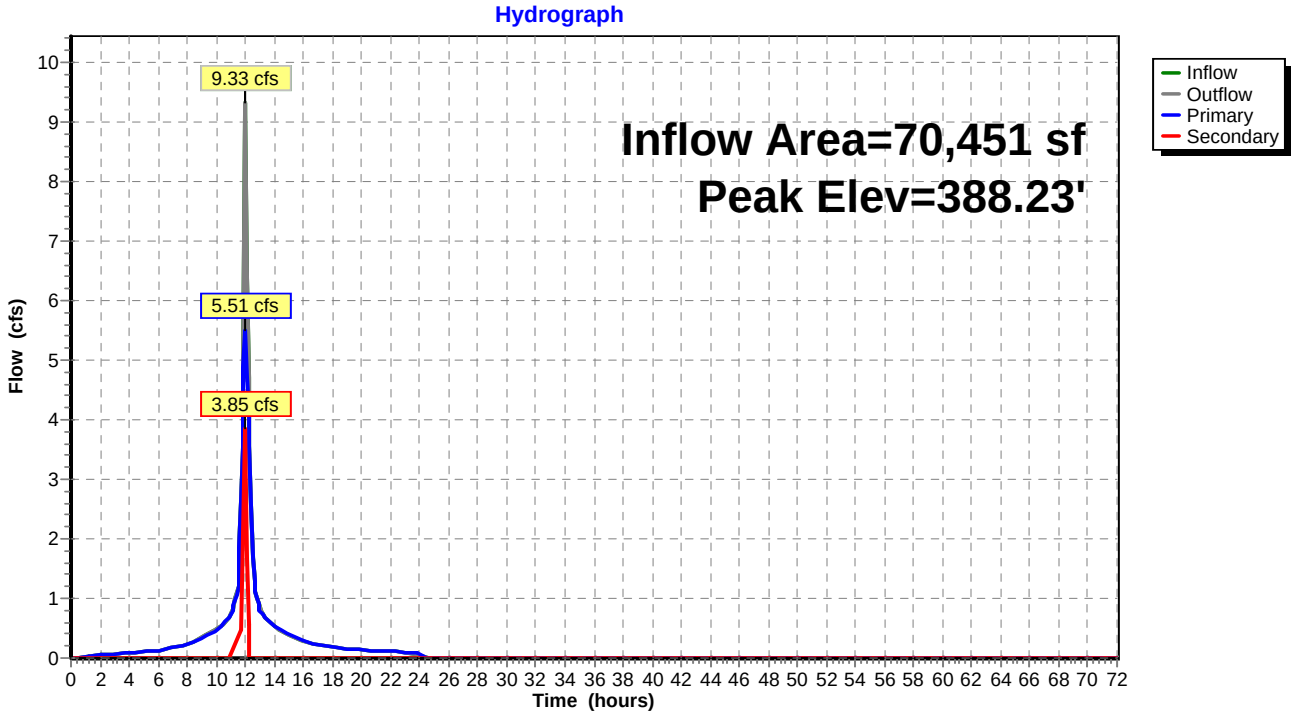
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 388.23' @ 12.02 hrs
Flood Elev= 392.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	386.45'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#2	Secondary	386.60'	**24.0" Round Culvert** L= 86.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 384.50' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#3	Device 2	387.75'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.49 cfs @ 11.99 hrs HW=388.19' TW=386.89' (Dynamic Tailwater)
└─**1=Orifice/Grate** (Orifice Controls 5.49 cfs @ 5.49 fps)

Secondary OutFlow Max=3.44 cfs @ 12.01 hrs HW=388.19' TW=378.51' (Dynamic Tailwater)
└─**2=Culvert** (Passes 3.44 cfs of 11.50 cfs potential flow)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 3.44 cfs @ 1.96 fps)

Pond FS: Flow Splitter



Hydrograph for Pond FS: Flow Splitter

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	386.45	0.00	0.00	0.00
2.00	0.04	386.49	0.04	0.04	0.00
4.00	0.09	386.51	0.09	0.09	0.00
6.00	0.13	386.52	0.13	0.13	0.00
8.00	0.23	386.56	0.23	0.23	0.00
10.00	0.46	386.62	0.46	0.46	0.00
12.00	**9.29**	**388.22**	**9.29**	**5.51**	**3.79**
14.00	0.52	386.73	0.52	0.52	0.00
16.00	0.28	386.66	0.28	0.28	0.00
18.00	0.17	386.61	0.17	0.17	0.00
20.00	0.14	386.56	0.14	0.14	0.00
22.00	0.11	386.52	0.11	0.11	0.00
24.00	0.06	386.49	0.06	0.06	0.00
26.00	0.00	386.45	0.00	0.00	0.00
28.00	0.00	386.45	0.00	0.00	0.00
30.00	0.00	386.45	0.00	0.00	0.00
32.00	0.00	386.45	0.00	0.00	0.00
34.00	0.00	386.45	0.00	0.00	0.00
36.00	0.00	386.45	0.00	0.00	0.00
38.00	0.00	386.45	0.00	0.00	0.00
40.00	0.00	386.45	0.00	0.00	0.00
42.00	0.00	386.45	0.00	0.00	0.00
44.00	0.00	386.45	0.00	0.00	0.00
46.00	0.00	386.45	0.00	0.00	0.00
48.00	0.00	386.45	0.00	0.00	0.00
50.00	0.00	386.45	0.00	0.00	0.00
52.00	0.00	386.45	0.00	0.00	0.00
54.00	0.00	386.45	0.00	0.00	0.00
56.00	0.00	386.45	0.00	0.00	0.00
58.00	0.00	386.45	0.00	0.00	0.00
60.00	0.00	386.45	0.00	0.00	0.00
62.00	0.00	386.45	0.00	0.00	0.00
64.00	0.00	386.45	0.00	0.00	0.00
66.00	0.00	386.45	0.00	0.00	0.00
68.00	0.00	386.45	0.00	0.00	0.00
70.00	0.00	386.45	0.00	0.00	0.00
72.00	0.00	386.45	0.00	0.00	0.00

Summary for Pond W-4: W-4 Pocket Wetland

Inflow Area = 119,572 sf, 60.58% Impervious, Inflow Depth = 5.45" for 25 Year, 24 Hour Storm event
Inflow = 11.14 cfs @ 12.03 hrs, Volume= 54,277 cf
Outflow = 5.10 cfs @ 12.47 hrs, Volume= 52,197 cf, Atten= 54%, Lag= 26.5 min
Primary = 5.10 cfs @ 12.47 hrs, Volume= 52,197 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Starting Elev= 377.00' Surf.Area= 4,840 sf Storage= 8,493 cf
Peak Elev= 379.38' @ 12.47 hrs Surf.Area= 7,930 sf Storage= 23,289 cf (14,796 cf above start)

Plug-Flow detention time= 840.3 min calculated for 43,704 cf (81% of inflow)
Center-of-Mass det. time= 495.8 min (1,485.8 - 990.0)

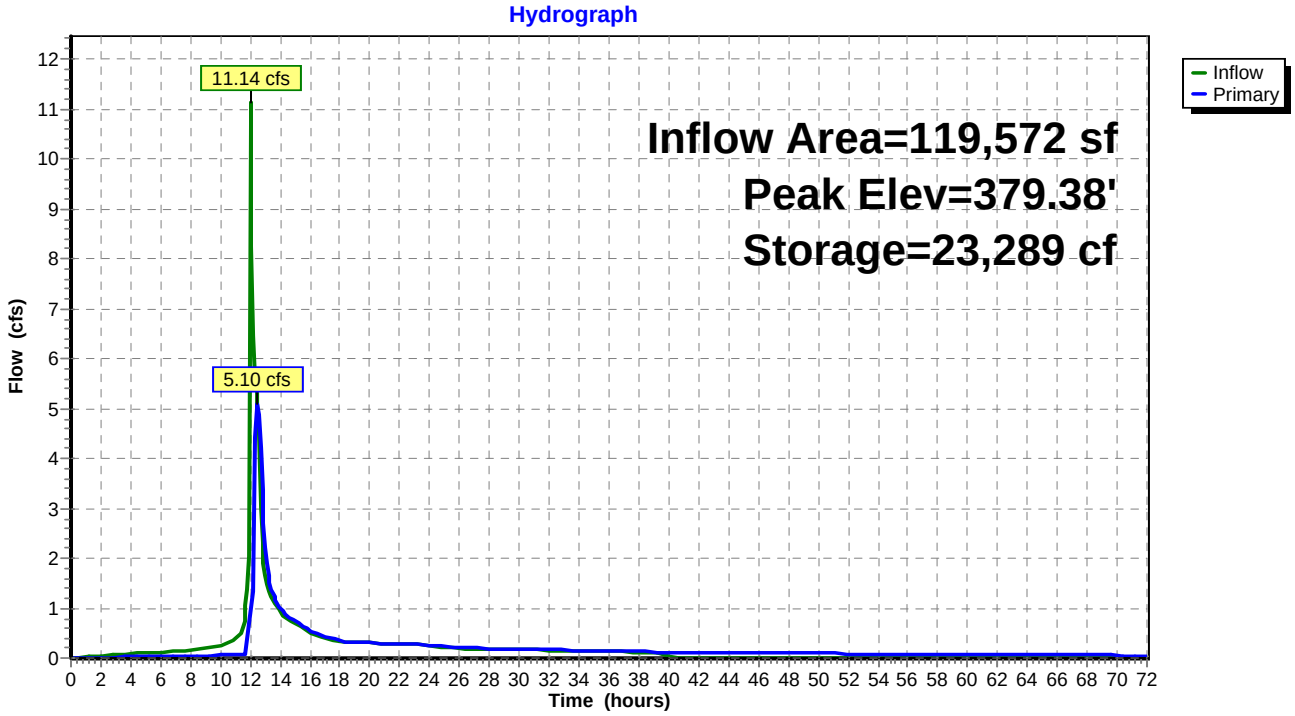
Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	28,507 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
373.00	994	124.0	0	0	994
374.00	1,255	136.0	1,122	1,122	1,274
375.00	1,541	149.0	1,396	2,518	1,602
376.00	2,862	220.0	2,168	4,685	3,695
377.00	4,840	303.0	3,808	8,493	7,159
378.00	5,830	325.0	5,327	13,820	8,302
379.00	7,302	361.0	6,552	20,373	10,297
380.00	8,995	407.0	8,134	28,507	13,135

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.013
#2	Device 1	377.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Primary	378.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.40 0.50 0.90 1.00 2.00 Width (feet) 1.00 1.00 1.00 1.00 1.00
#4	Device 1	379.00'	**15.0" x 15.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.07 cfs @ 12.47 hrs HW=379.38' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 3.97 cfs of 9.92 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.12 cfs @ 7.37 fps)
  - **4=Orifice/Grate** (Weir Controls 3.85 cfs @ 2.02 fps)
- **3=Custom Weir/Orifice** (Weir Controls 1.09 cfs @ 2.27 fps)

Pond W-4: W-4 Pocket Wetland



Hydrograph for Pond W-4: W-4 Pocket Wetland

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,493	377.00	0.00
2.00	0.05	8,625	377.03	0.00
4.00	0.09	9,046	377.11	0.02
6.00	0.12	9,627	377.23	0.03
8.00	0.15	10,277	377.36	0.04
10.00	0.24	11,288	377.55	0.06
12.00	**10.70**	**16,534**	**378.44**	**0.09**
14.00	0.93	**21,177**	**379.11**	**1.01**
16.00	0.50	20,802	379.06	0.55
18.00	0.32	20,585	379.03	0.34
20.00	0.30	20,536	379.02	0.31
22.00	0.28	20,508	379.02	0.29
24.00	0.25	20,474	379.01	0.26
26.00	0.20	20,357	379.00	0.21
28.00	0.18	20,268	378.99	0.19
30.00	0.17	20,193	378.98	0.18
32.00	0.15	20,120	378.97	0.16
34.00	0.14	20,046	378.95	0.15
36.00	0.13	19,968	378.94	0.14
38.00	0.12	19,886	378.93	0.13
40.00	0.00	19,743	378.91	0.11
42.00	0.00	18,977	378.80	0.10
44.00	0.00	18,235	378.70	0.10
46.00	0.00	17,517	378.59	0.10
48.00	0.00	16,823	378.49	0.09
50.00	0.00	16,153	378.38	0.09
52.00	0.00	15,509	378.28	0.09
54.00	0.00	14,891	378.18	0.08
56.00	0.00	14,299	378.08	0.08
58.00	0.00	13,734	377.99	0.08
60.00	0.00	13,197	377.89	0.07
62.00	0.00	12,688	377.80	0.07
64.00	0.00	12,208	377.72	0.06
66.00	0.00	11,757	377.63	0.06
68.00	0.00	11,335	377.56	0.06
70.00	0.00	10,943	377.48	0.05
72.00	0.00	10,581	377.41	0.05

Summary for Subcatchment Post 2E: Post 2E

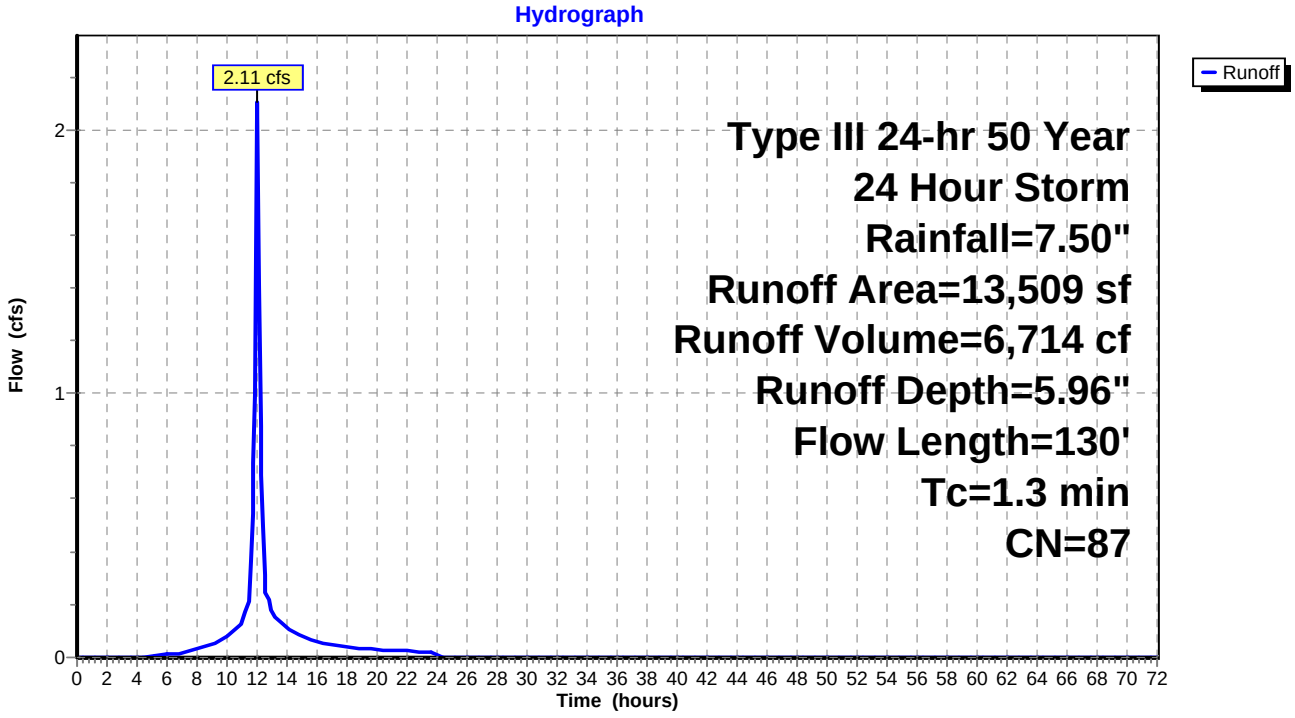
Runoff = 2.11 cfs @ 12.01 hrs, Volume= 6,714 cf, Depth= 5.96"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
5,415	98	Paved parking, HSG C
8,094	79	50-75% Grass cover, Fair, HSG C
13,509	87	Weighted Average
8,094		59.92% Pervious Area
5,415		40.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.44		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
0.1	30	0.3800	9.92		**Shallow Concentrated Flow, Pavement** Unpaved Kv= 16.1 fps
1.3	130	Total			

Subcatchment Post 2E: Post 2E



Hydrograph for Subcatchment Post 2E: Post 2E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	7.50	5.96	0.00
1.00	0.08	0.00	0.00	53.00	7.50	5.96	0.00
2.00	0.15	0.00	0.00	54.00	7.50	5.96	0.00
3.00	0.23	0.00	0.00	55.00	7.50	5.96	0.00
4.00	0.32	0.00	0.00	56.00	7.50	5.96	0.00
5.00	0.43	0.01	0.01	57.00	7.50	5.96	0.00
6.00	0.54	0.03	0.01	58.00	7.50	5.96	0.00
7.00	0.68	0.08	0.02	59.00	7.50	5.96	0.00
8.00	0.86	0.15	0.03	60.00	7.50	5.96	0.00
9.00	1.09	0.28	0.05	61.00	7.50	5.96	0.00
10.00	1.42	0.48	0.08	62.00	7.50	5.96	0.00
11.00	1.88	0.81	0.13	63.00	7.50	5.96	0.00
12.00	3.75	2.41	**2.09**	64.00	7.50	5.96	0.00
13.00	5.62	4.16	0.17	65.00	7.50	5.96	0.00
14.00	6.08	4.60	0.11	66.00	7.50	5.96	0.00
15.00	6.41	4.91	0.09	67.00	7.50	5.96	0.00
16.00	6.64	5.14	0.06	68.00	7.50	5.96	0.00
17.00	6.82	5.31	0.05	69.00	7.50	5.96	0.00
18.00	6.96	5.44	0.04	70.00	7.50	5.96	0.00
19.00	7.07	5.55	0.03	71.00	7.50	5.96	0.00
20.00	7.18	5.65	0.03	72.00	7.50	5.96	0.00
21.00	7.27	5.74	0.03				
22.00	7.36	5.82	0.02				
23.00	7.43	5.90	0.02				
24.00	**7.50**	**5.96**	0.01				
25.00	7.50	5.96	0.00				
26.00	7.50	5.96	0.00				
27.00	7.50	5.96	0.00				
28.00	7.50	5.96	0.00				
29.00	7.50	5.96	0.00				
30.00	7.50	5.96	0.00				
31.00	7.50	5.96	0.00				
32.00	7.50	5.96	0.00				
33.00	7.50	5.96	0.00				
34.00	7.50	5.96	0.00				
35.00	7.50	5.96	0.00				
36.00	7.50	5.96	0.00				
37.00	7.50	5.96	0.00				
38.00	7.50	5.96	0.00				
39.00	7.50	5.96	0.00				
40.00	7.50	5.96	0.00				
41.00	7.50	5.96	0.00				
42.00	7.50	5.96	0.00				
43.00	7.50	5.96	0.00				
44.00	7.50	5.96	0.00				
45.00	7.50	5.96	0.00				
46.00	7.50	5.96	0.00				
47.00	7.50	5.96	0.00				
48.00	7.50	5.96	0.00				
49.00	7.50	5.96	0.00				
50.00	7.50	5.96	0.00				
51.00	7.50	5.96	0.00				

Summary for Subcatchment Post 2A: Post 2A

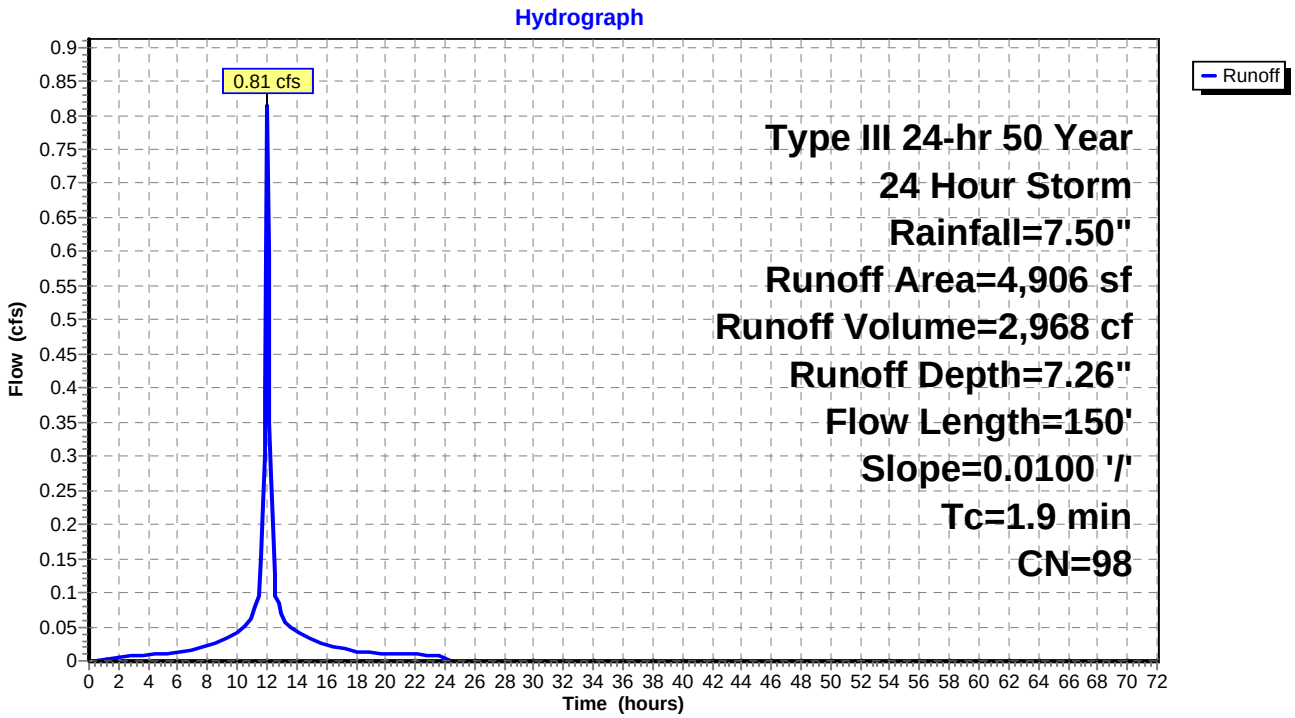
Runoff = 0.81 cfs @ 12.02 hrs, Volume= 2,968 cf, Depth= 7.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
4,906	98	Paved parking, HSG C
4,906		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, Pavement** Paved Kv= 20.3 fps
1.9	150	Total			

Subcatchment Post 2A: Post 2A



Hydrograph for Subcatchment Post 2A: Post 2A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	7.50	7.26	0.00
1.00	0.08	0.00	0.00	53.00	7.50	7.26	0.00
2.00	0.15	0.04	0.00	54.00	7.50	7.26	0.00
3.00	0.23	0.09	0.01	55.00	7.50	7.26	0.00
4.00	0.32	0.16	0.01	56.00	7.50	7.26	0.00
5.00	0.43	0.25	0.01	57.00	7.50	7.26	0.00
6.00	0.54	0.35	0.01	58.00	7.50	7.26	0.00
7.00	0.68	0.48	0.02	59.00	7.50	7.26	0.00
8.00	0.86	0.65	0.02	60.00	7.50	7.26	0.00
9.00	1.09	0.88	0.03	61.00	7.50	7.26	0.00
10.00	1.42	1.20	0.04	62.00	7.50	7.26	0.00
11.00	1.88	1.65	0.06	63.00	7.50	7.26	0.00
12.00	3.75	3.52	**0.81**	64.00	7.50	7.26	0.00
13.00	5.62	5.39	0.06	65.00	7.50	7.26	0.00
14.00	6.08	5.84	0.04	66.00	7.50	7.26	0.00
15.00	6.41	6.17	0.03	67.00	7.50	7.26	0.00
16.00	6.64	6.41	0.02	68.00	7.50	7.26	0.00
17.00	6.82	6.58	0.02	69.00	7.50	7.26	0.00
18.00	6.96	6.72	0.01	70.00	7.50	7.26	0.00
19.00	7.07	6.84	0.01	71.00	7.50	7.26	0.00
20.00	7.18	6.94	0.01	72.00	7.50	7.26	0.00
21.00	7.27	7.03	0.01				
22.00	7.36	7.12	0.01				
23.00	7.43	7.19	0.01				
24.00	**7.50**	**7.26**	0.01				
25.00	7.50	7.26	0.00				
26.00	7.50	7.26	0.00				
27.00	7.50	7.26	0.00				
28.00	7.50	7.26	0.00				
29.00	7.50	7.26	0.00				
30.00	7.50	7.26	0.00				
31.00	7.50	7.26	0.00				
32.00	7.50	7.26	0.00				
33.00	7.50	7.26	0.00				
34.00	7.50	7.26	0.00				
35.00	7.50	7.26	0.00				
36.00	7.50	7.26	0.00				
37.00	7.50	7.26	0.00				
38.00	7.50	7.26	0.00				
39.00	7.50	7.26	0.00				
40.00	7.50	7.26	0.00				
41.00	7.50	7.26	0.00				
42.00	7.50	7.26	0.00				
43.00	7.50	7.26	0.00				
44.00	7.50	7.26	0.00				
45.00	7.50	7.26	0.00				
46.00	7.50	7.26	0.00				
47.00	7.50	7.26	0.00				
48.00	7.50	7.26	0.00				
49.00	7.50	7.26	0.00				
50.00	7.50	7.26	0.00				
51.00	7.50	7.26	0.00				

Summary for Subcatchment Post 2B: Post 2B

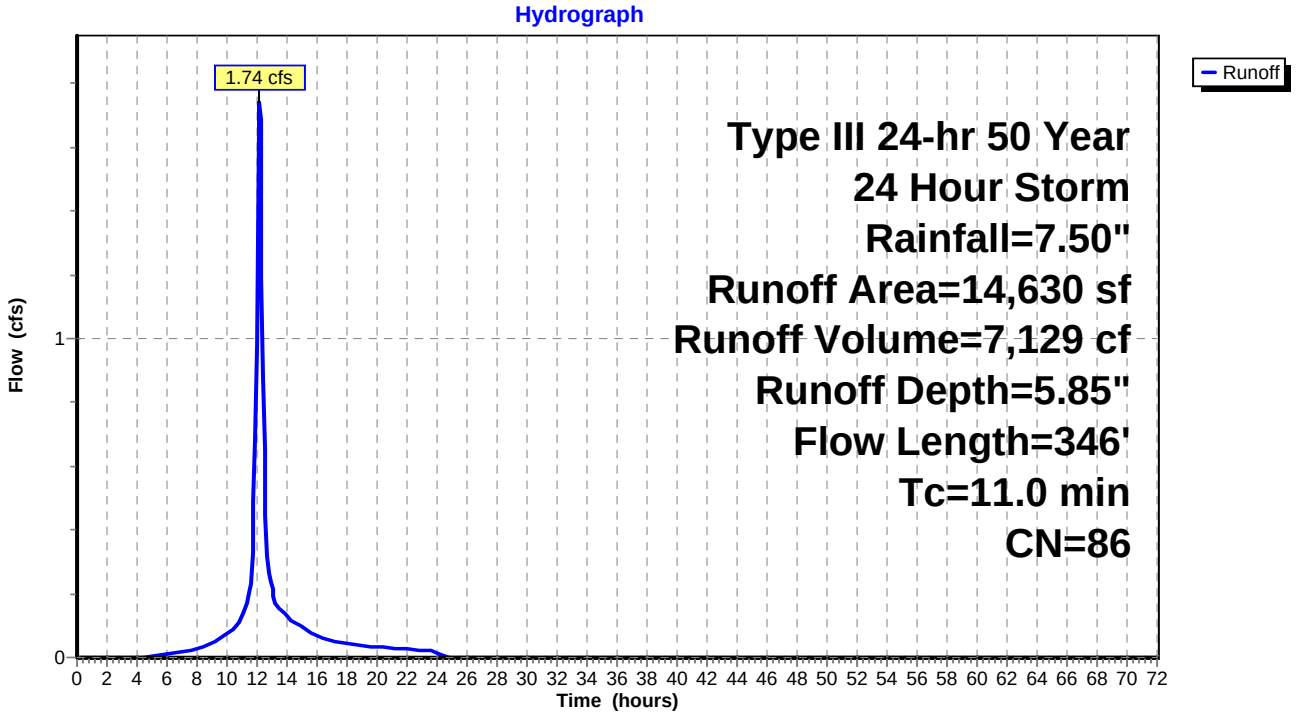
Runoff = 1.74 cfs @ 12.16 hrs, Volume= 7,129 cf, Depth= 5.85"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
5,836	98	Paved parking
6,450	74	>75% Grass cover, Good, HSG C
2,344	89	Gravel roads, HSG C
14,630	86	Weighted Average
8,794		60.11% Pervious Area
5,836		39.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0400	0.16		**Sheet Flow, Landscaped area** Grass: Dense n= 0.240 P2= 3.50"
0.7	246	0.0100	5.90	4.63	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
11.0	346	Total			

Subcatchment Post 2B: Post 2B



Hydrograph for Subcatchment Post 2B: Post 2B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	7.50	5.85	0.00
1.00	0.08	0.00	0.00	53.00	7.50	5.85	0.00
2.00	0.15	0.00	0.00	54.00	7.50	5.85	0.00
3.00	0.23	0.00	0.00	55.00	7.50	5.85	0.00
4.00	0.32	0.00	0.00	56.00	7.50	5.85	0.00
5.00	0.43	0.01	0.00	57.00	7.50	5.85	0.00
6.00	0.54	0.02	0.01	58.00	7.50	5.85	0.00
7.00	0.68	0.06	0.02	59.00	7.50	5.85	0.00
8.00	0.86	0.13	0.03	60.00	7.50	5.85	0.00
9.00	1.09	0.25	0.05	61.00	7.50	5.85	0.00
10.00	1.42	0.44	0.07	62.00	7.50	5.85	0.00
11.00	1.88	0.76	0.13	63.00	7.50	5.85	0.00
12.00	3.75	2.32	**0.98**	64.00	7.50	5.85	0.00
13.00	5.62	4.05	**0.21**	65.00	7.50	5.85	0.00
14.00	6.08	4.49	0.13	66.00	7.50	5.85	0.00
15.00	6.41	4.80	0.10	67.00	7.50	5.85	0.00
16.00	6.64	5.02	0.07	68.00	7.50	5.85	0.00
17.00	6.82	5.19	0.05	69.00	7.50	5.85	0.00
18.00	6.96	5.33	0.04	70.00	7.50	5.85	0.00
19.00	7.07	5.44	0.04	71.00	7.50	5.85	0.00
20.00	7.18	5.54	0.03	72.00	7.50	5.85	0.00
21.00	7.27	5.63	0.03				
22.00	7.36	5.71	0.03				
23.00	7.43	5.78	0.02				
24.00	**7.50**	**5.85**	0.02				
25.00	7.50	5.85	0.00				
26.00	7.50	5.85	0.00				
27.00	7.50	5.85	0.00				
28.00	7.50	5.85	0.00				
29.00	7.50	5.85	0.00				
30.00	7.50	5.85	0.00				
31.00	7.50	5.85	0.00				
32.00	7.50	5.85	0.00				
33.00	7.50	5.85	0.00				
34.00	7.50	5.85	0.00				
35.00	7.50	5.85	0.00				
36.00	7.50	5.85	0.00				
37.00	7.50	5.85	0.00				
38.00	7.50	5.85	0.00				
39.00	7.50	5.85	0.00				
40.00	7.50	5.85	0.00				
41.00	7.50	5.85	0.00				
42.00	7.50	5.85	0.00				
43.00	7.50	5.85	0.00				
44.00	7.50	5.85	0.00				
45.00	7.50	5.85	0.00				
46.00	7.50	5.85	0.00				
47.00	7.50	5.85	0.00				
48.00	7.50	5.85	0.00				
49.00	7.50	5.85	0.00				
50.00	7.50	5.85	0.00				
51.00	7.50	5.85	0.00				

Summary for Subcatchment Post 2C: Post 2C

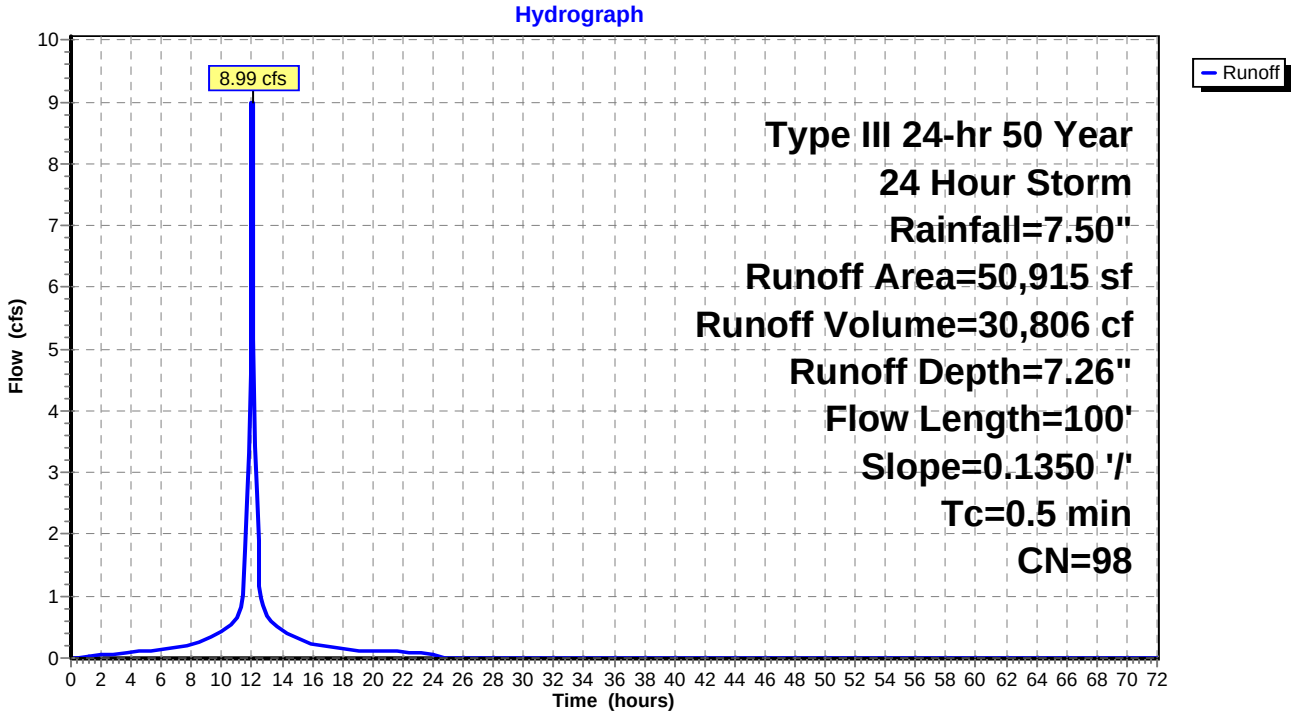
Runoff = 8.99 cfs @ 12.00 hrs, Volume= 30,806 cf, Depth= 7.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
50,915	98	Paved parking, HSG C
50,915		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.1350	3.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"

Subcatchment Post 2C: Post 2C



Hydrograph for Subcatchment Post 2C: Post 2C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	7.50	7.26	0.00
1.00	0.08	0.00	0.02	53.00	7.50	7.26	0.00
2.00	0.15	0.04	0.05	54.00	7.50	7.26	0.00
3.00	0.23	0.09	0.07	55.00	7.50	7.26	0.00
4.00	0.32	0.16	0.09	56.00	7.50	7.26	0.00
5.00	0.43	0.25	0.11	57.00	7.50	7.26	0.00
6.00	0.54	0.35	0.13	58.00	7.50	7.26	0.00
7.00	0.68	0.48	0.17	59.00	7.50	7.26	0.00
8.00	0.86	0.65	0.22	60.00	7.50	7.26	0.00
9.00	1.09	0.88	0.32	61.00	7.50	7.26	0.00
10.00	1.42	1.20	0.43	62.00	7.50	7.26	0.00
11.00	1.88	1.65	0.64	63.00	7.50	7.26	0.00
12.00	3.75	3.52	**8.98**	64.00	7.50	7.26	0.00
13.00	5.62	5.39	0.66	65.00	7.50	7.26	0.00
14.00	6.08	5.84	0.44	66.00	7.50	7.26	0.00
15.00	6.41	6.17	0.33	67.00	7.50	7.26	0.00
16.00	6.64	6.41	0.23	68.00	7.50	7.26	0.00
17.00	6.82	6.58	0.19	69.00	7.50	7.26	0.00
18.00	6.96	6.72	0.14	70.00	7.50	7.26	0.00
19.00	7.07	6.84	0.13	71.00	7.50	7.26	0.00
20.00	7.18	6.94	0.11	72.00	7.50	7.26	0.00
21.00	7.27	7.03	0.10				
22.00	7.36	7.12	0.10				
23.00	7.43	7.19	0.09				
24.00	**7.50**	**7.26**	0.04				
25.00	7.50	7.26	0.00				
26.00	7.50	7.26	0.00				
27.00	7.50	7.26	0.00				
28.00	7.50	7.26	0.00				
29.00	7.50	7.26	0.00				
30.00	7.50	7.26	0.00				
31.00	7.50	7.26	0.00				
32.00	7.50	7.26	0.00				
33.00	7.50	7.26	0.00				
34.00	7.50	7.26	0.00				
35.00	7.50	7.26	0.00				
36.00	7.50	7.26	0.00				
37.00	7.50	7.26	0.00				
38.00	7.50	7.26	0.00				
39.00	7.50	7.26	0.00				
40.00	7.50	7.26	0.00				
41.00	7.50	7.26	0.00				
42.00	7.50	7.26	0.00				
43.00	7.50	7.26	0.00				
44.00	7.50	7.26	0.00				
45.00	7.50	7.26	0.00				
46.00	7.50	7.26	0.00				
47.00	7.50	7.26	0.00				
48.00	7.50	7.26	0.00				
49.00	7.50	7.26	0.00				
50.00	7.50	7.26	0.00				
51.00	7.50	7.26	0.00				

Summary for Subcatchment Post 2D: Post 2D

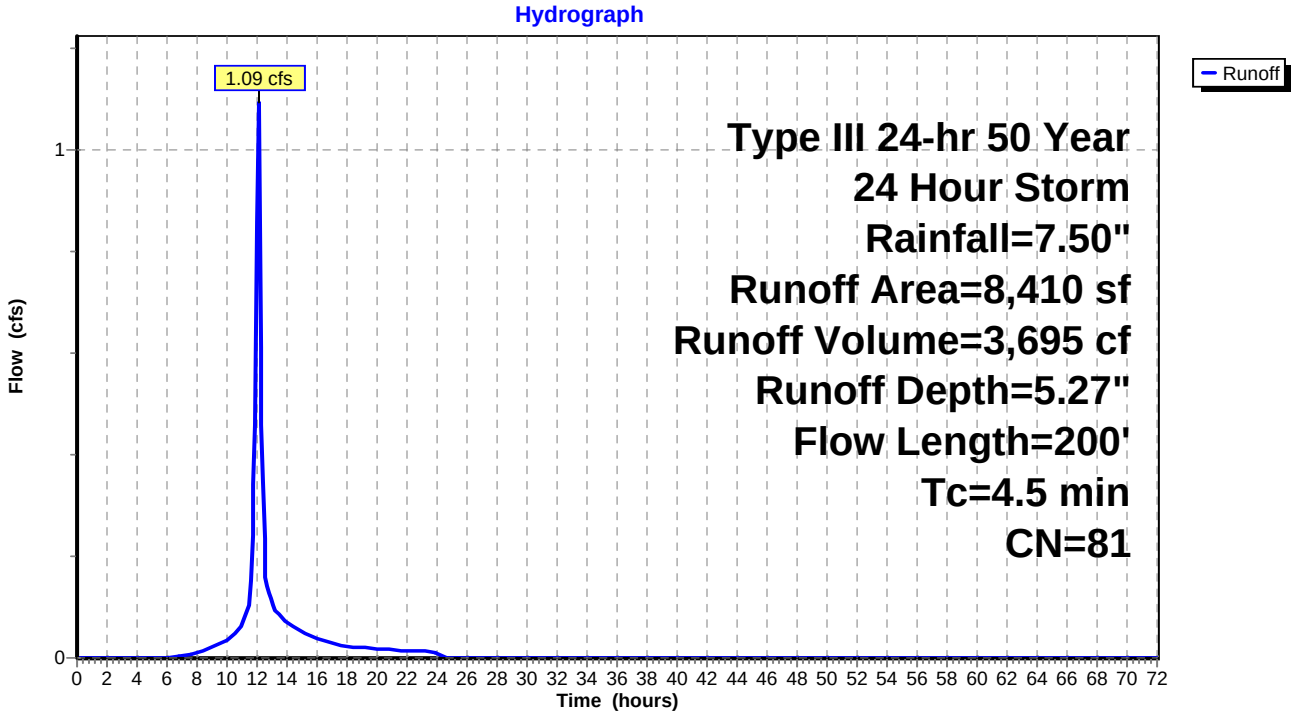
Runoff = 1.09 cfs @ 12.08 hrs, Volume= 3,695 cf, Depth= 5.27"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
6,348	79	50-75% Grass cover, Fair, HSG C
2,062	89	Gravel roads, HSG C
8,410	81	Weighted Average
8,410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1000	0.20		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
0.4	150	0.0860	5.95		**Shallow Concentrated Flow, Maintenance Drive** Paved Kv= 20.3 fps
4.5	200	Total			

Subcatchment Post 2D: Post 2D



Hydrograph for Subcatchment Post 2D: Post 2D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.23	0.00	0.00
4.00	0.32	0.00	0.00
5.00	0.43	0.00	0.00
6.00	0.54	0.00	0.00
7.00	0.68	0.02	0.00
8.00	0.86	0.05	0.01
9.00	1.09	0.13	0.02
10.00	1.42	0.27	0.03
11.00	1.88	0.53	0.06
12.00	3.75	1.91	**0.86**
13.00	5.62	3.54	**0.10**
14.00	6.08	3.96	0.07
15.00	6.41	4.26	0.05
16.00	6.64	4.48	0.04
17.00	6.82	4.64	0.03
18.00	6.96	4.77	0.02
19.00	7.07	4.87	0.02
20.00	7.18	4.97	0.02
21.00	7.27	5.06	0.02
22.00	7.36	5.14	0.01
23.00	7.43	5.21	0.01
24.00	**7.50**	**5.27**	0.01
25.00	7.50	5.27	0.00
26.00	7.50	5.27	0.00
27.00	7.50	5.27	0.00
28.00	7.50	5.27	0.00
29.00	7.50	5.27	0.00
30.00	7.50	5.27	0.00
31.00	7.50	5.27	0.00
32.00	7.50	5.27	0.00
33.00	7.50	5.27	0.00
34.00	7.50	5.27	0.00
35.00	7.50	5.27	0.00
36.00	7.50	5.27	0.00
37.00	7.50	5.27	0.00
38.00	7.50	5.27	0.00
39.00	7.50	5.27	0.00
40.00	7.50	5.27	0.00
41.00	7.50	5.27	0.00
42.00	7.50	5.27	0.00
43.00	7.50	5.27	0.00
44.00	7.50	5.27	0.00
45.00	7.50	5.27	0.00
46.00	7.50	5.27	0.00
47.00	7.50	5.27	0.00
48.00	7.50	5.27	0.00
49.00	7.50	5.27	0.00
50.00	7.50	5.27	0.00
51.00	7.50	5.27	0.00
52.00	7.50	5.27	0.00
53.00	7.50	5.27	0.00
54.00	7.50	5.27	0.00
55.00	7.50	5.27	0.00
56.00	7.50	5.27	0.00
57.00	7.50	5.27	0.00
58.00	7.50	5.27	0.00
59.00	7.50	5.27	0.00
60.00	7.50	5.27	0.00
61.00	7.50	5.27	0.00
62.00	7.50	5.27	0.00
63.00	7.50	5.27	0.00
64.00	7.50	5.27	0.00
65.00	7.50	5.27	0.00
66.00	7.50	5.27	0.00
67.00	7.50	5.27	0.00
68.00	7.50	5.27	0.00
69.00	7.50	5.27	0.00
70.00	7.50	5.27	0.00
71.00	7.50	5.27	0.00
72.00	7.50	5.27	0.00

Summary for Subcatchment Post 2F: Post 2F

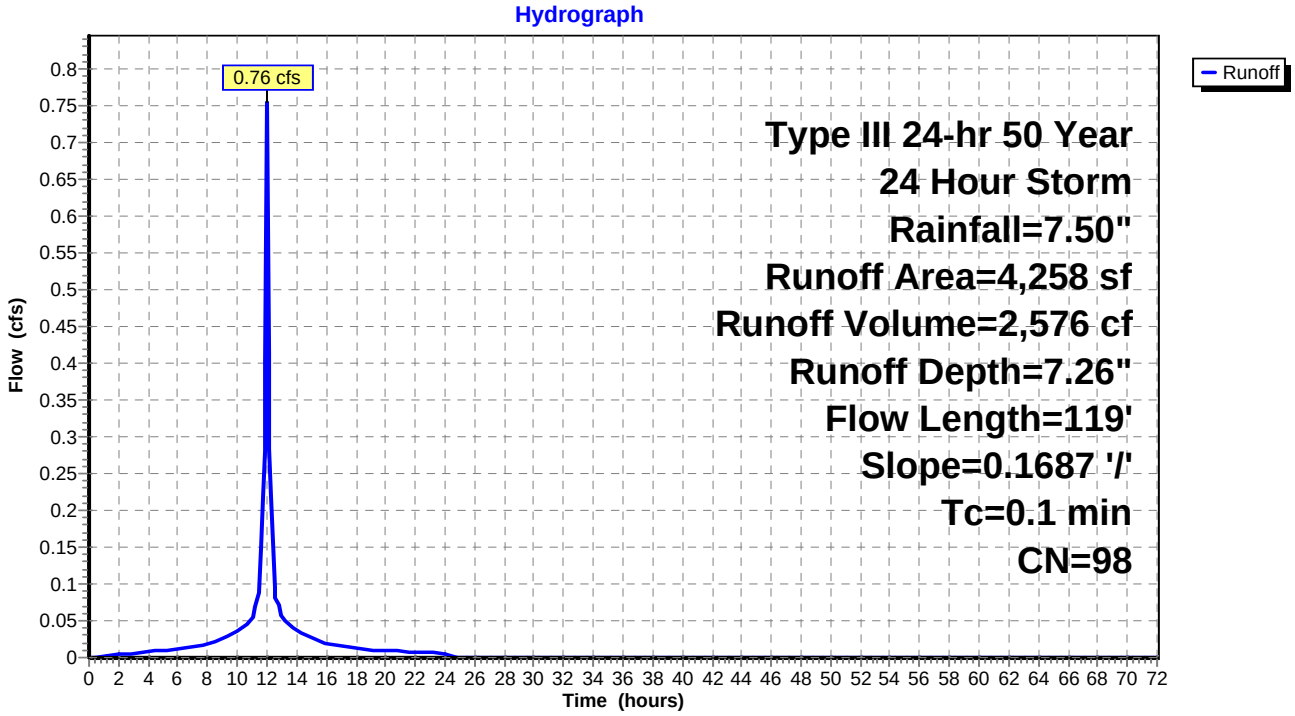
Runoff = 0.76 cfs @ 12.00 hrs, Volume= 2,576 cf, Depth= 7.26"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
4,258	98	Roofs, HSG C
4,258		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	119	0.1687	14.22	4.96	**Pipe Channel, Roof Leader** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior

Subcatchment Post 2F: Post 2F



Hydrograph for Subcatchment Post 2F: Post 2F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	7.50	7.26	0.00
1.00	0.08	0.00	0.00	53.00	7.50	7.26	0.00
2.00	0.15	0.04	0.00	54.00	7.50	7.26	0.00
3.00	0.23	0.09	0.01	55.00	7.50	7.26	0.00
4.00	0.32	0.16	0.01	56.00	7.50	7.26	0.00
5.00	0.43	0.25	0.01	57.00	7.50	7.26	0.00
6.00	0.54	0.35	0.01	58.00	7.50	7.26	0.00
7.00	0.68	0.48	0.01	59.00	7.50	7.26	0.00
8.00	0.86	0.65	0.02	60.00	7.50	7.26	0.00
9.00	1.09	0.88	0.03	61.00	7.50	7.26	0.00
10.00	1.42	1.20	0.04	62.00	7.50	7.26	0.00
11.00	1.88	1.65	0.05	63.00	7.50	7.26	0.00
12.00	3.75	3.52	**0.76**	64.00	7.50	7.26	0.00
13.00	5.62	5.39	0.05	65.00	7.50	7.26	0.00
14.00	6.08	5.84	0.04	66.00	7.50	7.26	0.00
15.00	6.41	6.17	0.03	67.00	7.50	7.26	0.00
16.00	6.64	6.41	0.02	68.00	7.50	7.26	0.00
17.00	6.82	6.58	0.02	69.00	7.50	7.26	0.00
18.00	6.96	6.72	0.01	70.00	7.50	7.26	0.00
19.00	7.07	6.84	0.01	71.00	7.50	7.26	0.00
20.00	7.18	6.94	0.01	72.00	7.50	7.26	0.00
21.00	7.27	7.03	0.01				
22.00	7.36	7.12	0.01				
23.00	7.43	7.19	0.01				
24.00	**7.50**	**7.26**	0.00				
25.00	7.50	7.26	0.00				
26.00	7.50	7.26	0.00				
27.00	7.50	7.26	0.00				
28.00	7.50	7.26	0.00				
29.00	7.50	7.26	0.00				
30.00	7.50	7.26	0.00				
31.00	7.50	7.26	0.00				
32.00	7.50	7.26	0.00				
33.00	7.50	7.26	0.00				
34.00	7.50	7.26	0.00				
35.00	7.50	7.26	0.00				
36.00	7.50	7.26	0.00				
37.00	7.50	7.26	0.00				
38.00	7.50	7.26	0.00				
39.00	7.50	7.26	0.00				
40.00	7.50	7.26	0.00				
41.00	7.50	7.26	0.00				
42.00	7.50	7.26	0.00				
43.00	7.50	7.26	0.00				
44.00	7.50	7.26	0.00				
45.00	7.50	7.26	0.00				
46.00	7.50	7.26	0.00				
47.00	7.50	7.26	0.00				
48.00	7.50	7.26	0.00				
49.00	7.50	7.26	0.00				
50.00	7.50	7.26	0.00				
51.00	7.50	7.26	0.00				

Summary for Subcatchment Post 2G: Post 2G

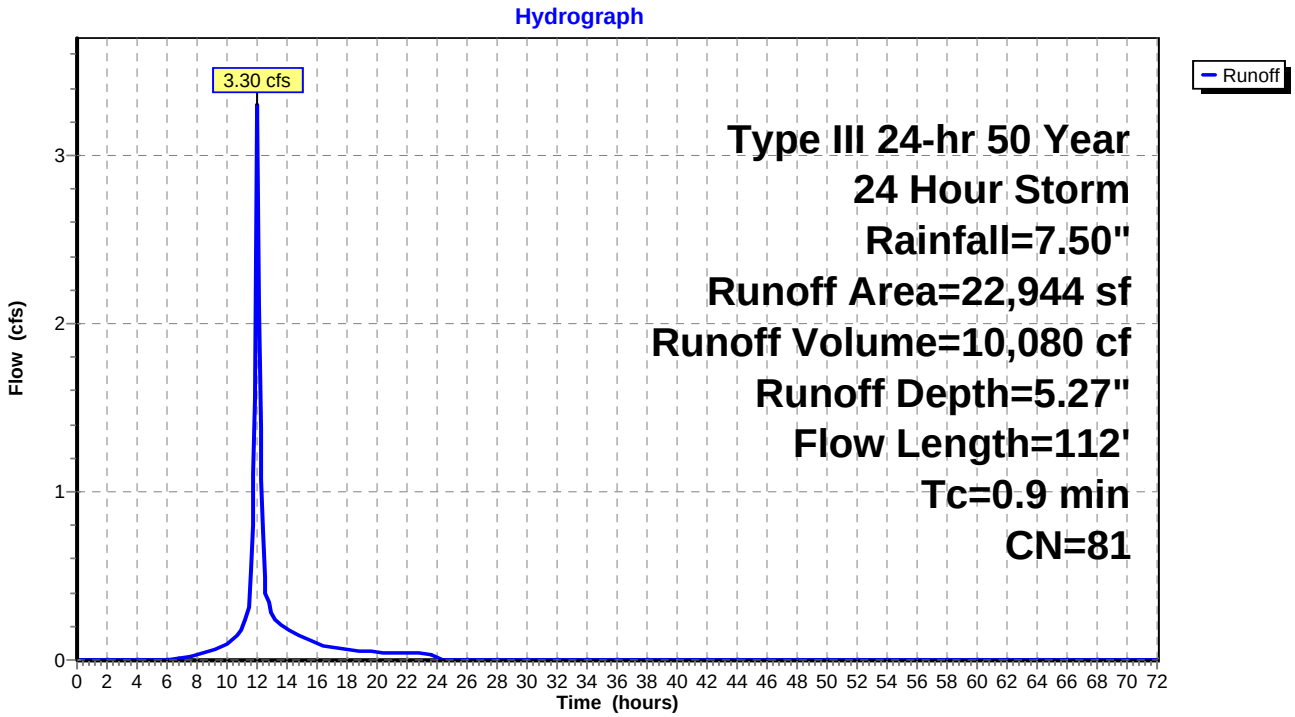
Runoff = 3.30 cfs @ 12.01 hrs, Volume= 10,080 cf, Depth= 5.27"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
1,112	98	Paved parking, HSG C
19,649	79	50-75% Grass cover, Fair, HSG C
2,183	89	Gravel roads, HSG C
22,944	81	Weighted Average
21,832		95.15% Pervious Area
1,112		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	80	0.0250	1.50		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.0	32	0.4600	10.92		**Shallow Concentrated Flow, Landscaped** Unpaved Kv= 16.1 fps
0.9	112	Total			

Subcatchment Post 2G: Post 2G



Hydrograph for Subcatchment Post 2G: Post 2G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.23	0.00	0.00
4.00	0.32	0.00	0.00
5.00	0.43	0.00	0.00
6.00	0.54	0.00	0.00
7.00	0.68	0.02	0.01
8.00	0.86	0.05	0.03
9.00	1.09	0.13	0.06
10.00	1.42	0.27	0.10
11.00	1.88	0.53	0.18
12.00	3.75	1.91	**3.29**
13.00	5.62	3.54	0.27
14.00	6.08	3.96	0.18
15.00	6.41	4.26	0.14
16.00	6.64	4.48	0.10
17.00	6.82	4.64	0.08
18.00	6.96	4.77	0.06
19.00	7.07	4.87	0.05
20.00	7.18	4.97	0.05
21.00	7.27	5.06	0.04
22.00	7.36	5.14	0.04
23.00	7.43	5.21	0.04
24.00	**7.50**	**5.27**	0.02
25.00	7.50	5.27	0.00
26.00	7.50	5.27	0.00
27.00	7.50	5.27	0.00
28.00	7.50	5.27	0.00
29.00	7.50	5.27	0.00
30.00	7.50	5.27	0.00
31.00	7.50	5.27	0.00
32.00	7.50	5.27	0.00
33.00	7.50	5.27	0.00
34.00	7.50	5.27	0.00
35.00	7.50	5.27	0.00
36.00	7.50	5.27	0.00
37.00	7.50	5.27	0.00
38.00	7.50	5.27	0.00
39.00	7.50	5.27	0.00
40.00	7.50	5.27	0.00
41.00	7.50	5.27	0.00
42.00	7.50	5.27	0.00
43.00	7.50	5.27	0.00
44.00	7.50	5.27	0.00
45.00	7.50	5.27	0.00
46.00	7.50	5.27	0.00
47.00	7.50	5.27	0.00
48.00	7.50	5.27	0.00
49.00	7.50	5.27	0.00
50.00	7.50	5.27	0.00
51.00	7.50	5.27	0.00
52.00	7.50	5.27	0.00
53.00	7.50	5.27	0.00
54.00	7.50	5.27	0.00
55.00	7.50	5.27	0.00
56.00	7.50	5.27	0.00
57.00	7.50	5.27	0.00
58.00	7.50	5.27	0.00
59.00	7.50	5.27	0.00
60.00	7.50	5.27	0.00
61.00	7.50	5.27	0.00
62.00	7.50	5.27	0.00
63.00	7.50	5.27	0.00
64.00	7.50	5.27	0.00
65.00	7.50	5.27	0.00
66.00	7.50	5.27	0.00
67.00	7.50	5.27	0.00
68.00	7.50	5.27	0.00
69.00	7.50	5.27	0.00
70.00	7.50	5.27	0.00
71.00	7.50	5.27	0.00
72.00	7.50	5.27	0.00

Summary for Subcatchment Post 2H: Post 2H

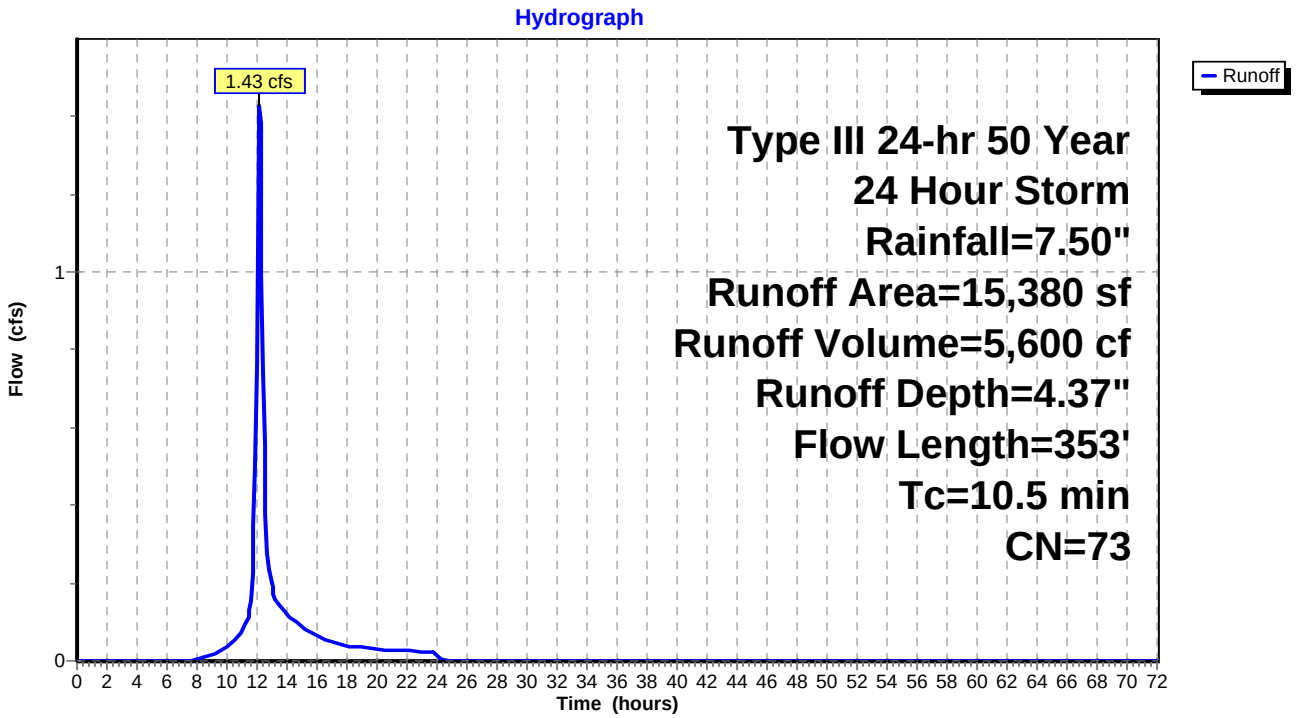
Runoff = 1.43 cfs @ 12.15 hrs, Volume= 5,600 cf, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
15,380	73	Woods, Fair, HSG C
15,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
1.7	253	0.0260	2.42		**Shallow Concentrated Flow, Grassed waterway** Grassed Waterway Kv= 15.0 fps
10.5	353	Total			

Subcatchment Post 2H: Post 2H



Hydrograph for Subcatchment Post 2H: Post 2H

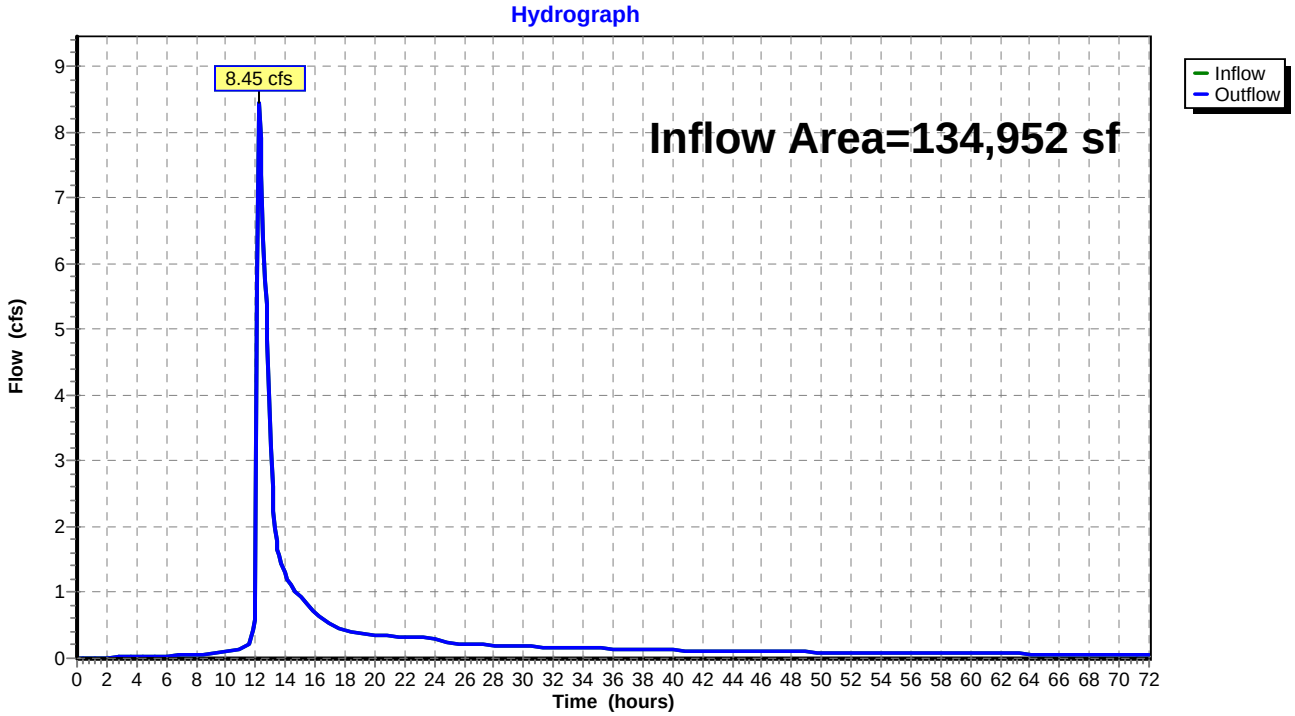
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	7.50	4.37	0.00
1.00	0.08	0.00	0.00	53.00	7.50	4.37	0.00
2.00	0.15	0.00	0.00	54.00	7.50	4.37	0.00
3.00	0.23	0.00	0.00	55.00	7.50	4.37	0.00
4.00	0.32	0.00	0.00	56.00	7.50	4.37	0.00
5.00	0.43	0.00	0.00	57.00	7.50	4.37	0.00
6.00	0.54	0.00	0.00	58.00	7.50	4.37	0.00
7.00	0.68	0.00	0.00	59.00	7.50	4.37	0.00
8.00	0.86	0.00	0.00	60.00	7.50	4.37	0.00
9.00	1.09	0.03	0.01	61.00	7.50	4.37	0.00
10.00	1.42	0.10	0.03	62.00	7.50	4.37	0.00
11.00	1.88	0.27	0.07	63.00	7.50	4.37	0.00
12.00	3.75	1.35	**0.76**	64.00	7.50	4.37	0.00
13.00	5.62	2.78	**0.19**	65.00	7.50	4.37	0.00
14.00	6.08	3.16	0.12	66.00	7.50	4.37	0.00
15.00	6.41	3.43	0.09	67.00	7.50	4.37	0.00
16.00	6.64	3.63	0.06	68.00	7.50	4.37	0.00
17.00	6.82	3.78	0.05	69.00	7.50	4.37	0.00
18.00	6.96	3.90	0.04	70.00	7.50	4.37	0.00
19.00	7.07	4.00	0.03	71.00	7.50	4.37	0.00
20.00	7.18	4.09	0.03	72.00	7.50	4.37	0.00
21.00	7.27	4.17	0.03				
22.00	7.36	4.24	0.03				
23.00	7.43	4.31	0.02				
24.00	**7.50**	**4.37**	0.02				
25.00	7.50	4.37	0.00				
26.00	7.50	4.37	0.00				
27.00	7.50	4.37	0.00				
28.00	7.50	4.37	0.00				
29.00	7.50	4.37	0.00				
30.00	7.50	4.37	0.00				
31.00	7.50	4.37	0.00				
32.00	7.50	4.37	0.00				
33.00	7.50	4.37	0.00				
34.00	7.50	4.37	0.00				
35.00	7.50	4.37	0.00				
36.00	7.50	4.37	0.00				
37.00	7.50	4.37	0.00				
38.00	7.50	4.37	0.00				
39.00	7.50	4.37	0.00				
40.00	7.50	4.37	0.00				
41.00	7.50	4.37	0.00				
42.00	7.50	4.37	0.00				
43.00	7.50	4.37	0.00				
44.00	7.50	4.37	0.00				
45.00	7.50	4.37	0.00				
46.00	7.50	4.37	0.00				
47.00	7.50	4.37	0.00				
48.00	7.50	4.37	0.00				
49.00	7.50	4.37	0.00				
50.00	7.50	4.37	0.00				
51.00	7.50	4.37	0.00				

Summary for Reach DP2: Design Point 2

Inflow Area = 134,952 sf, 53.68% Impervious, Inflow Depth > 5.99" for 50 Year, 24 Hour Storm event
Inflow = 8.45 cfs @ 12.24 hrs, Volume= 67,393 cf
Outflow = 8.45 cfs @ 12.24 hrs, Volume= 67,393 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.02		0.02
4.00	0.02		0.02
5.00	0.03		0.03
6.00	0.04		0.04
7.00	0.04		0.04
8.00	0.05		0.05
9.00	0.07		0.07
10.00	0.09		0.09
11.00	0.14		0.14
12.00	**0.87**		**0.87**
13.00	**3.20**		**3.20**
14.00	1.29		1.29
15.00	0.94		0.94
16.00	0.70		0.70
17.00	0.53		0.53
18.00	0.43		0.43
19.00	0.37		0.37
20.00	0.35		0.35
21.00	0.34		0.34
22.00	0.33		0.33
23.00	0.31		0.31
24.00	0.30		0.30
25.00	0.23		0.23
26.00	0.22		0.22
27.00	0.21		0.21
28.00	0.20		0.20
29.00	0.19		0.19
30.00	0.18		0.18
31.00	0.17		0.17
32.00	0.17		0.17
33.00	0.16		0.16
34.00	0.15		0.15
35.00	0.15		0.15
36.00	0.14		0.14
37.00	0.14		0.14
38.00	0.13		0.13
39.00	0.13		0.13
40.00	0.12		0.12
41.00	0.11		0.11
42.00	0.11		0.11
43.00	0.10		0.10
44.00	0.10		0.10
45.00	0.10		0.10
46.00	0.10		0.10
47.00	0.10		0.10
48.00	0.10		0.10
49.00	0.09		0.09
50.00	0.09		0.09
51.00	0.09		0.09
52.00	0.09		0.09
53.00	0.09		0.09
54.00	0.09		0.09
55.00	0.08		0.08
56.00	0.08		0.08
57.00	0.08		0.08
58.00	0.08		0.08
59.00	0.08		0.08
60.00	0.07		0.07
61.00	0.07		0.07
62.00	0.07		0.07
63.00	0.07		0.07
64.00	0.07		0.07
65.00	0.06		0.06
66.00	0.06		0.06
67.00	0.06		0.06
68.00	0.06		0.06
69.00	0.06		0.06
70.00	0.05		0.05
71.00	0.05		0.05
72.00	0.05		0.05

Summary for Pond F-1: Combined Sed. + Sand

Inflow Area = 92,370 sf, 72.61% Impervious, Inflow Depth = 6.16" for 50 Year, 24 Hour Storm event
Inflow = 8.40 cfs @ 12.01 hrs, Volume= 47,392 cf
Outflow = 4.59 cfs @ 12.31 hrs, Volume= 47,401 cf, Atten= 45%, Lag= 18.2 min
Primary = 4.59 cfs @ 12.31 hrs, Volume= 47,401 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 387.32' @ 12.31 hrs Surf.Area= 7,484 sf Storage= 15,851 cf

Plug-Flow detention time= 274.2 min calculated for 47,335 cf (100% of inflow)
Center-of-Mass det. time= 275.3 min (1,033.6 - 758.3)

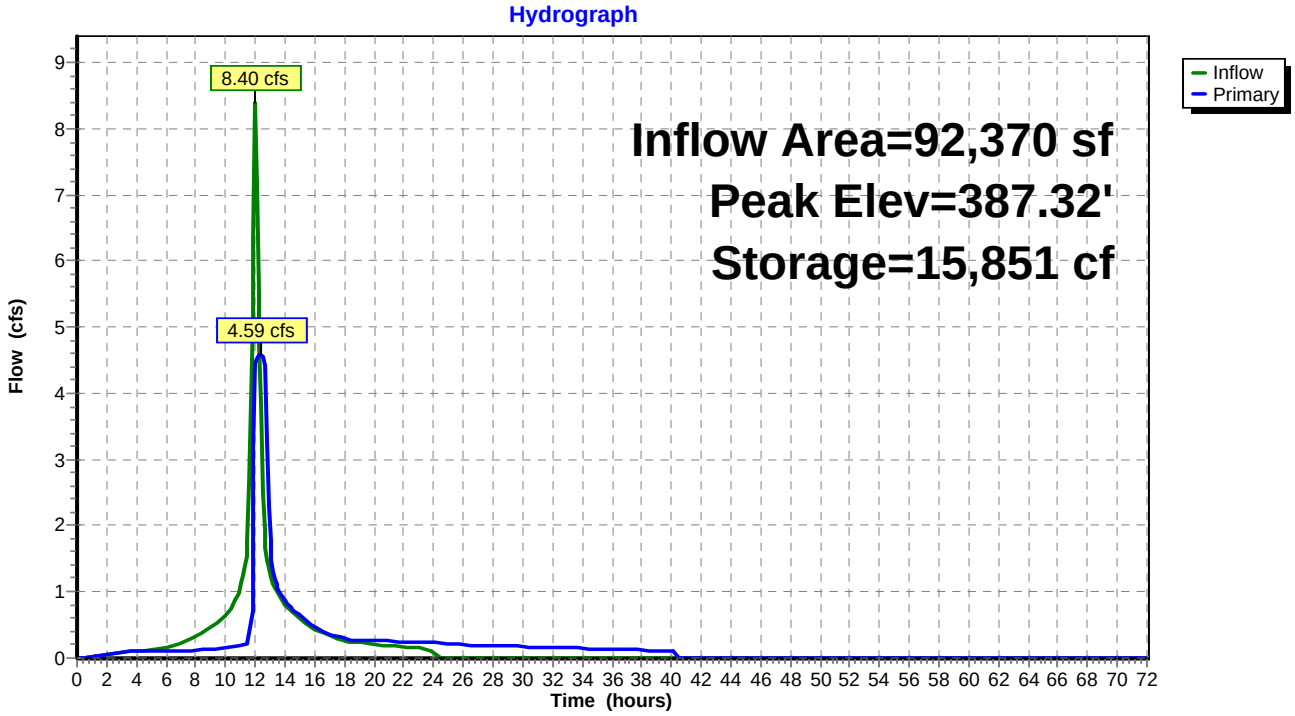
Volume	Invert	Avail.Storage	Storage Description
#1	384.00'	20,877 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
384.00	2,608	188.0	0	0	2,608
385.00	3,635	237.0	3,107	3,107	4,279
386.00	4,801	285.0	4,205	7,312	6,290
387.00	7,600	320.0	6,147	13,459	8,002
388.00	7,237	337.0	7,418	20,877	8,949

Device	Routing	Invert	Outlet Devices
#1	Primary	382.00'	**10.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 377.00' S= 0.1316 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	382.00'	**1.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	384.00'	**1.750 in/hr Exfiltration over Surface area**
#4	Device 1	386.60'	**18.0" x 18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.59 cfs @ 12.31 hrs HW=387.31' TW=379.49' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 4.59 cfs @ 8.41 fps)
- **2=Orifice/Grate** (Passes < 0.61 cfs potential flow)
  - **3=Exfiltration** (Passes < 0.30 cfs potential flow)
- **4=Orifice/Grate** (Passes < 9.16 cfs potential flow)

Pond F-1: Combined Sed. + Sand



Hydrograph for Pond F-1: Combined Sed. + Sand

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	384.00	0.00
2.00	0.06	0	384.00	0.06
4.00	0.10	1	384.00	0.10
6.00	0.16	185	384.07	0.11
8.00	0.31	1,029	384.37	0.12
10.00	0.65	3,466	385.10	0.15
12.00	**8.37**	**13,836**	**387.05**	**4.46**
14.00	0.78	**11,292**	**386.70**	**0.86**
16.00	0.42	10,965	386.65	0.46
18.00	0.26	10,744	386.61	0.29
20.00	0.21	10,500	386.57	0.26
22.00	0.17	10,036	386.50	0.25
24.00	0.10	9,383	386.39	0.24
26.00	0.00	7,824	386.10	0.21
28.00	0.00	6,432	385.81	0.19
30.00	0.00	5,150	385.52	0.17
32.00	0.00	3,968	385.23	0.16
34.00	0.00	2,881	384.94	0.14
36.00	0.00	1,887	384.65	0.13
38.00	0.00	983	384.35	0.12
40.00	0.00	164	384.06	0.11
42.00	0.00	0	384.00	0.00
44.00	0.00	0	384.00	0.00
46.00	0.00	0	384.00	0.00
48.00	0.00	0	384.00	0.00
50.00	0.00	0	384.00	0.00
52.00	0.00	0	384.00	0.00
54.00	0.00	0	384.00	0.00
56.00	0.00	0	384.00	0.00
58.00	0.00	0	384.00	0.00
60.00	0.00	0	384.00	0.00
62.00	0.00	0	384.00	0.00
64.00	0.00	0	384.00	0.00
66.00	0.00	0	384.00	0.00
68.00	0.00	0	384.00	0.00
70.00	0.00	0	384.00	0.00
72.00	0.00	0	384.00	0.00

Summary for Pond FS: Flow Splitter

Inflow Area = 70,451 sf, 87.52% Impervious, Inflow Depth = 6.97" for 50 Year, 24 Hour Storm event
Inflow = 10.81 cfs @ 12.01 hrs, Volume= 40,903 cf
Outflow = 10.81 cfs @ 12.01 hrs, Volume= 40,903 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.43 cfs @ 11.99 hrs, Volume= 36,984 cf
Secondary = 5.42 cfs @ 12.01 hrs, Volume= 3,920 cf

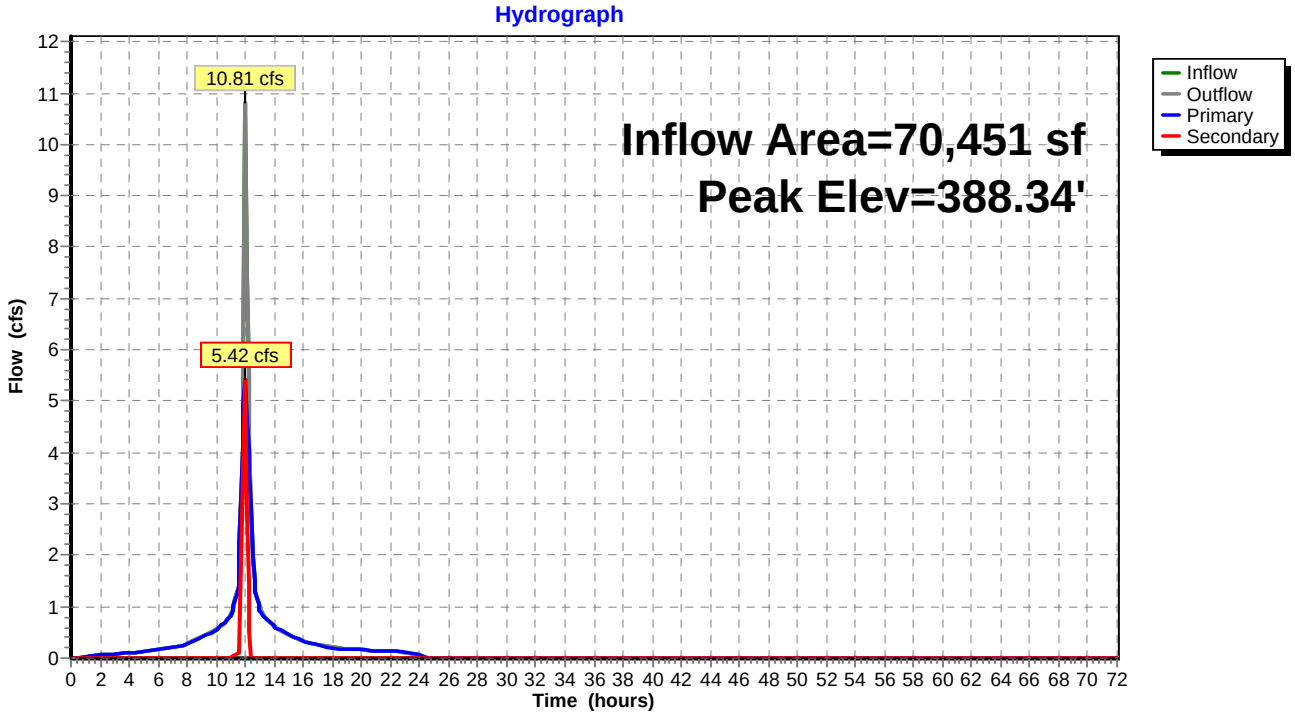
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 388.34' @ 12.02 hrs
Flood Elev= 392.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	386.45'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#2	Secondary	386.60'	**24.0" Round Culvert** L= 86.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 384.50' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#3	Device 2	387.75'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.39 cfs @ 11.99 hrs HW=388.29' TW=387.03' (Dynamic Tailwater)
└─**1=Orifice/Grate** (Orifice Controls 5.39 cfs @ 5.39 fps)

Secondary OutFlow Max=4.94 cfs @ 12.01 hrs HW=388.30' TW=378.96' (Dynamic Tailwater)
└─**2=Culvert** (Passes 4.94 cfs of 12.62 cfs potential flow)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 4.94 cfs @ 2.25 fps)

Pond FS: Flow Splitter



Hydrograph for Pond FS: Flow Splitter

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	386.45	0.00	0.00	0.00
2.00	0.06	386.49	0.06	0.06	0.00
4.00	0.10	386.51	0.10	0.10	0.00
6.00	0.15	386.53	0.15	0.15	0.00
8.00	0.27	386.57	0.27	0.27	0.00
10.00	0.54	386.64	0.54	0.54	0.00
12.00	**10.77**	**388.33**	**10.77**	**5.42**	**5.34**
14.00	0.61	386.75	0.61	0.61	0.00
16.00	0.32	386.67	0.32	0.32	0.00
18.00	0.20	386.63	0.20	0.20	0.00
20.00	0.16	386.59	0.16	0.16	0.00
22.00	0.13	386.53	0.13	0.13	0.00
24.00	0.07	386.50	0.07	0.07	0.00
26.00	0.00	386.45	0.00	0.00	0.00
28.00	0.00	386.45	0.00	0.00	0.00
30.00	0.00	386.45	0.00	0.00	0.00
32.00	0.00	386.45	0.00	0.00	0.00
34.00	0.00	386.45	0.00	0.00	0.00
36.00	0.00	386.45	0.00	0.00	0.00
38.00	0.00	386.45	0.00	0.00	0.00
40.00	0.00	386.45	0.00	0.00	0.00
42.00	0.00	386.45	0.00	0.00	0.00
44.00	0.00	386.45	0.00	0.00	0.00
46.00	0.00	386.45	0.00	0.00	0.00
48.00	0.00	386.45	0.00	0.00	0.00
50.00	0.00	386.45	0.00	0.00	0.00
52.00	0.00	386.45	0.00	0.00	0.00
54.00	0.00	386.45	0.00	0.00	0.00
56.00	0.00	386.45	0.00	0.00	0.00
58.00	0.00	386.45	0.00	0.00	0.00
60.00	0.00	386.45	0.00	0.00	0.00
62.00	0.00	386.45	0.00	0.00	0.00
64.00	0.00	386.45	0.00	0.00	0.00
66.00	0.00	386.45	0.00	0.00	0.00
68.00	0.00	386.45	0.00	0.00	0.00
70.00	0.00	386.45	0.00	0.00	0.00
72.00	0.00	386.45	0.00	0.00	0.00

Summary for Pond W-4: W-4 Pocket Wetland

Inflow Area = 119,572 sf, 60.58% Impervious, Inflow Depth = 6.42" for 50 Year, 24 Hour Storm event
Inflow = 14.01 cfs @ 12.02 hrs, Volume= 63,977 cf
Outflow = 6.95 cfs @ 12.26 hrs, Volume= 61,793 cf, Atten= 50%, Lag= 14.9 min
Primary = 6.95 cfs @ 12.26 hrs, Volume= 61,793 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Starting Elev= 377.00' Surf.Area= 4,840 sf Storage= 8,493 cf
Peak Elev= 379.50' @ 12.26 hrs Surf.Area= 8,124 sf Storage= 24,216 cf (15,722 cf above start)

Plug-Flow detention time= 701.2 min calculated for 53,226 cf (83% of inflow)
Center-of-Mass det. time= 422.5 min (1,388.1 - 965.6)

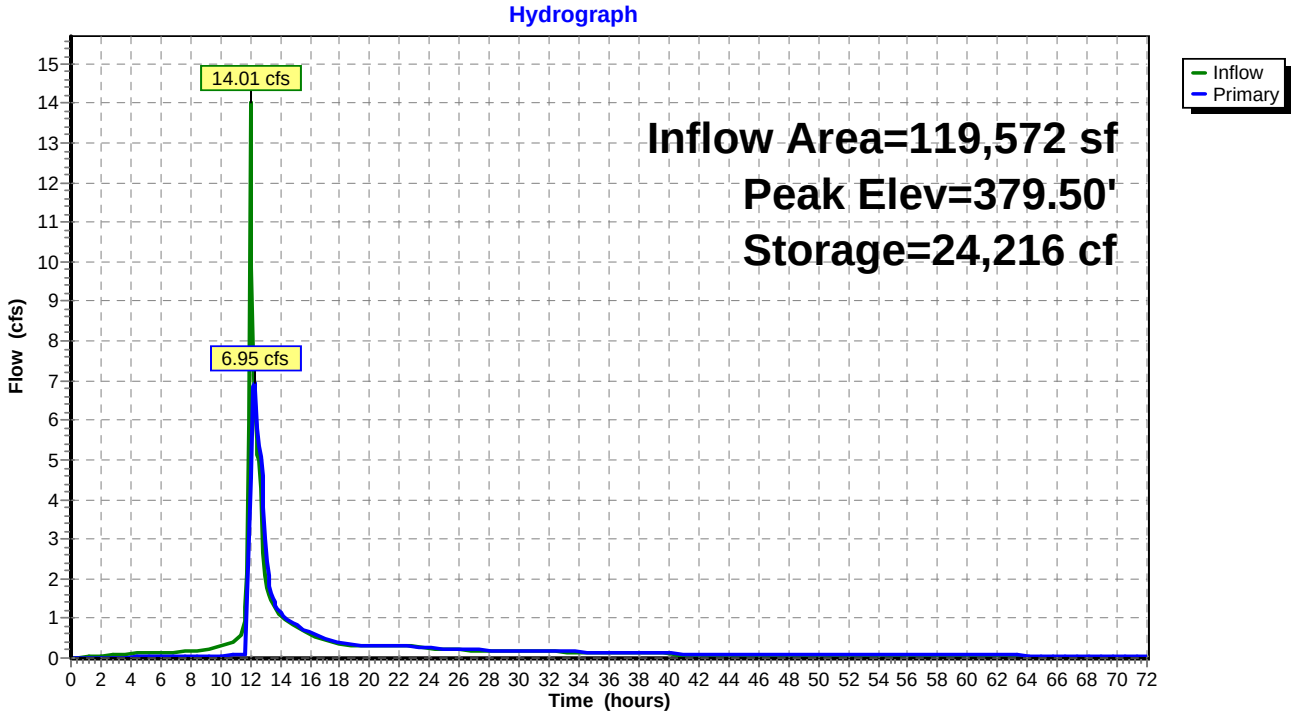
Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	28,507 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
373.00	994	124.0	0	0	994
374.00	1,255	136.0	1,122	1,122	1,274
375.00	1,541	149.0	1,396	2,518	1,602
376.00	2,862	220.0	2,168	4,685	3,695
377.00	4,840	303.0	3,808	8,493	7,159
378.00	5,830	325.0	5,327	13,820	8,302
379.00	7,302	361.0	6,552	20,373	10,297
380.00	8,995	407.0	8,134	28,507	13,135

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.013
#2	Device 1	377.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Primary	378.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.40 0.50 0.90 1.00 2.00 Width (feet) 1.00 1.00 1.00 1.00 1.00
#4	Device 1	379.00'	**15.0" x 15.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=6.91 cfs @ 12.26 hrs HW=379.49' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 5.41 cfs of 10.00 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.12 cfs @ 7.54 fps)
  - **4=Orifice/Grate** (Orifice Controls 5.29 cfs @ 3.38 fps)
- **3=Custom Weir/Orifice** (Weir Controls 1.50 cfs @ 2.52 fps)

Pond W-4: W-4 Pocket Wetland



Hydrograph for Pond W-4: W-4 Pocket Wetland

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,493	377.00	0.00
2.00	0.06	8,676	377.04	0.00
4.00	0.11	9,188	377.14	0.02
6.00	0.12	9,800	377.26	0.04
8.00	0.17	10,516	377.40	0.05
10.00	0.28	11,704	377.62	0.06
12.00	**13.85**	**19,614**	**378.89**	**0.11**
14.00	1.07	**21,288**	**379.12**	**1.17**
16.00	0.58	20,877	379.07	0.63
18.00	0.36	20,638	379.04	0.39
20.00	0.31	20,553	379.02	0.32
22.00	0.30	20,528	379.02	0.30
24.00	0.26	20,496	379.02	0.28
26.00	0.21	20,380	379.00	0.22
28.00	0.19	20,290	378.99	0.20
30.00	0.17	20,214	378.98	0.18
32.00	0.16	20,141	378.97	0.17
34.00	0.14	20,067	378.96	0.15
36.00	0.13	19,991	378.95	0.14
38.00	0.12	19,911	378.94	0.13
40.00	0.11	19,825	378.92	0.12
42.00	0.00	19,203	378.84	0.11
44.00	0.00	18,454	378.73	0.10
46.00	0.00	17,729	378.62	0.10
48.00	0.00	17,028	378.52	0.10
50.00	0.00	16,351	378.41	0.09
52.00	0.00	15,699	378.31	0.09
54.00	0.00	15,073	378.21	0.09
56.00	0.00	14,473	378.11	0.08
58.00	0.00	13,900	378.01	0.08
60.00	0.00	13,355	377.92	0.07
62.00	0.00	12,838	377.83	0.07
64.00	0.00	12,349	377.74	0.07
66.00	0.00	11,889	377.66	0.06
68.00	0.00	11,458	377.58	0.06
70.00	0.00	11,057	377.50	0.05
72.00	0.00	10,686	377.43	0.05

Summary for Subcatchment Post 2E: Post 2E

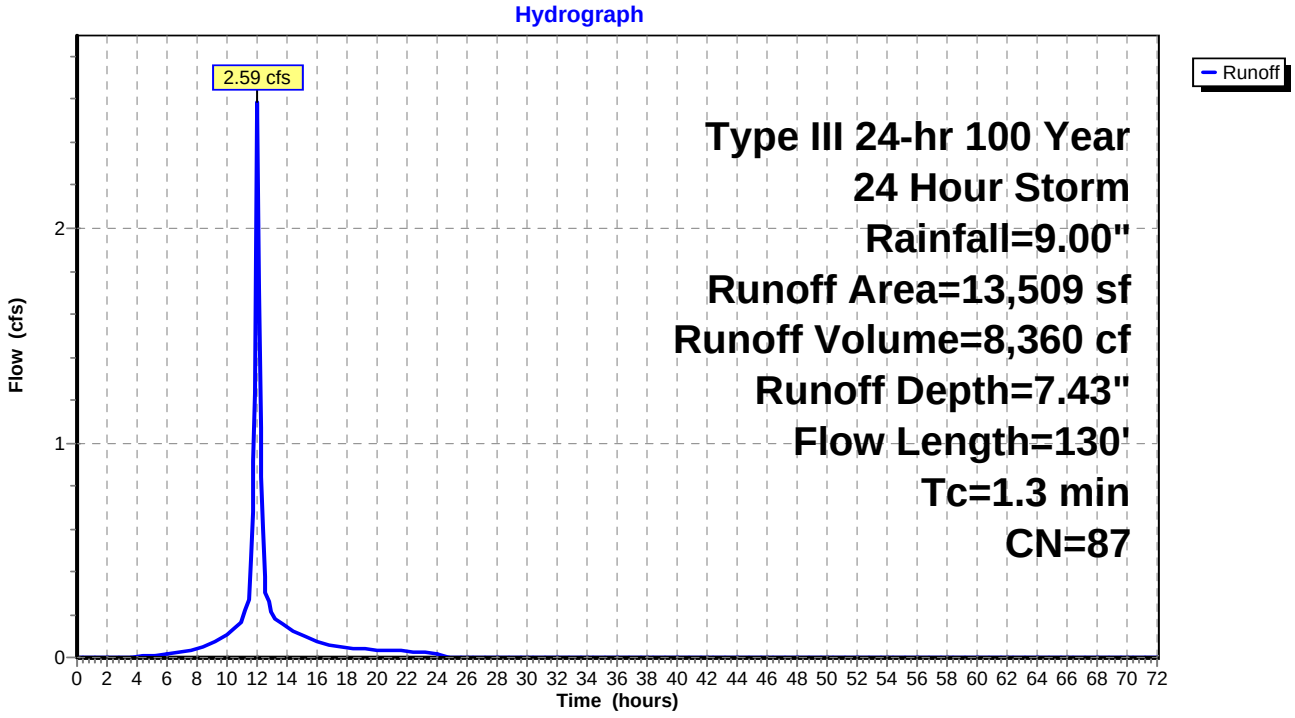
Runoff = 2.59 cfs @ 12.01 hrs, Volume= 8,360 cf, Depth= 7.43"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
5,415	98	Paved parking, HSG C
8,094	79	50-75% Grass cover, Fair, HSG C
13,509	87	Weighted Average
8,094		59.92% Pervious Area
5,415		40.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.44		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"
0.1	30	0.3800	9.92		**Shallow Concentrated Flow, Pavement** Unpaved Kv= 16.1 fps
1.3	130	Total			

Subcatchment Post 2E: Post 2E



Hydrograph for Subcatchment Post 2E: Post 2E

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	9.00	7.43	0.00
1.00	0.09	0.00	0.00	53.00	9.00	7.43	0.00
2.00	0.18	0.00	0.00	54.00	9.00	7.43	0.00
3.00	0.28	0.00	0.00	55.00	9.00	7.43	0.00
4.00	0.39	0.00	0.00	56.00	9.00	7.43	0.00
5.00	0.51	0.03	0.01	57.00	9.00	7.43	0.00
6.00	0.65	0.07	0.02	58.00	9.00	7.43	0.00
7.00	0.81	0.13	0.03	59.00	9.00	7.43	0.00
8.00	1.03	0.24	0.04	60.00	9.00	7.43	0.00
9.00	1.31	0.41	0.07	61.00	9.00	7.43	0.00
10.00	1.70	0.68	0.10	62.00	9.00	7.43	0.00
11.00	2.25	1.10	0.17	63.00	9.00	7.43	0.00
12.00	4.50	3.10	**2.58**	64.00	9.00	7.43	0.00
13.00	6.75	5.24	0.20	65.00	9.00	7.43	0.00
14.00	7.30	5.77	0.14	66.00	9.00	7.43	0.00
15.00	7.69	6.15	0.10	67.00	9.00	7.43	0.00
16.00	7.97	6.42	0.07	68.00	9.00	7.43	0.00
17.00	8.19	6.63	0.06	69.00	9.00	7.43	0.00
18.00	8.35	6.79	0.04	70.00	9.00	7.43	0.00
19.00	8.49	6.93	0.04	71.00	9.00	7.43	0.00
20.00	8.61	7.05	0.04	72.00	9.00	7.43	0.00
21.00	8.72	7.16	0.03				
22.00	8.83	7.26	0.03				
23.00	8.92	7.35	0.03				
24.00	**9.00**	**7.43**	0.02				
25.00	9.00	7.43	0.00				
26.00	9.00	7.43	0.00				
27.00	9.00	7.43	0.00				
28.00	9.00	7.43	0.00				
29.00	9.00	7.43	0.00				
30.00	9.00	7.43	0.00				
31.00	9.00	7.43	0.00				
32.00	9.00	7.43	0.00				
33.00	9.00	7.43	0.00				
34.00	9.00	7.43	0.00				
35.00	9.00	7.43	0.00				
36.00	9.00	7.43	0.00				
37.00	9.00	7.43	0.00				
38.00	9.00	7.43	0.00				
39.00	9.00	7.43	0.00				
40.00	9.00	7.43	0.00				
41.00	9.00	7.43	0.00				
42.00	9.00	7.43	0.00				
43.00	9.00	7.43	0.00				
44.00	9.00	7.43	0.00				
45.00	9.00	7.43	0.00				
46.00	9.00	7.43	0.00				
47.00	9.00	7.43	0.00				
48.00	9.00	7.43	0.00				
49.00	9.00	7.43	0.00				
50.00	9.00	7.43	0.00				
51.00	9.00	7.43	0.00				

Summary for Subcatchment Post 2A: Post 2A

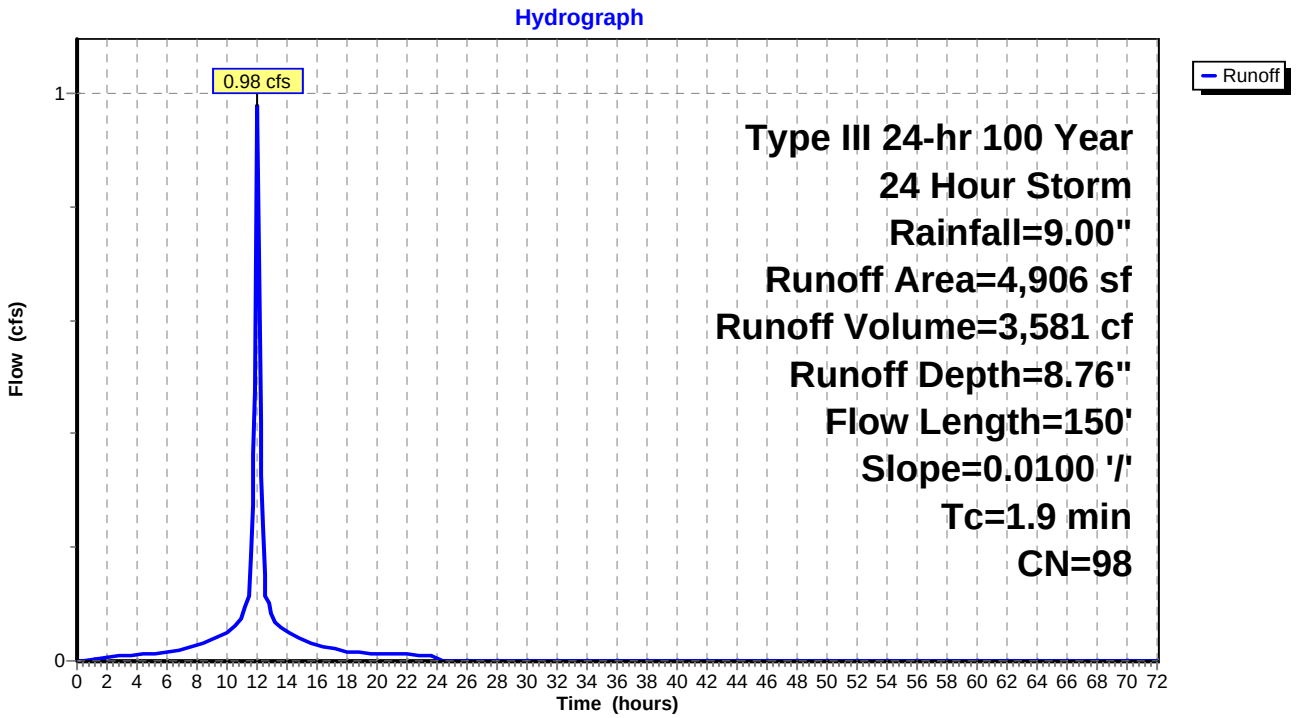
Runoff = 0.98 cfs @ 12.02 hrs, Volume= 3,581 cf, Depth= 8.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
4,906	98	Paved parking, HSG C
4,906		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	100	0.0100	1.09		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.4	50	0.0100	2.03		**Shallow Concentrated Flow, Pavement** Paved Kv= 20.3 fps
1.9	150	Total			

Subcatchment Post 2A: Post 2A



Hydrograph for Subcatchment Post 2A: Post 2A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.01	0.00
2.00	0.18	0.06	0.01
3.00	0.28	0.13	0.01
4.00	0.39	0.22	0.01
5.00	0.51	0.33	0.01
6.00	0.65	0.45	0.02
7.00	0.81	0.61	0.02
8.00	1.03	0.82	0.03
9.00	1.31	1.10	0.04
10.00	1.70	1.48	0.05
11.00	2.25	2.02	0.07
12.00	4.50	4.26	**0.97**
13.00	6.75	6.51	0.08
14.00	7.30	7.06	0.05
15.00	7.69	7.45	0.04
16.00	7.97	7.73	0.03
17.00	8.19	7.95	0.02
18.00	8.35	8.11	0.02
19.00	8.49	8.25	0.01
20.00	8.61	8.37	0.01
21.00	8.72	8.48	0.01
22.00	8.83	8.59	0.01
23.00	8.92	8.68	0.01
24.00	**9.00**	**8.76**	0.01
25.00	9.00	8.76	0.00
26.00	9.00	8.76	0.00
27.00	9.00	8.76	0.00
28.00	9.00	8.76	0.00
29.00	9.00	8.76	0.00
30.00	9.00	8.76	0.00
31.00	9.00	8.76	0.00
32.00	9.00	8.76	0.00
33.00	9.00	8.76	0.00
34.00	9.00	8.76	0.00
35.00	9.00	8.76	0.00
36.00	9.00	8.76	0.00
37.00	9.00	8.76	0.00
38.00	9.00	8.76	0.00
39.00	9.00	8.76	0.00
40.00	9.00	8.76	0.00
41.00	9.00	8.76	0.00
42.00	9.00	8.76	0.00
43.00	9.00	8.76	0.00
44.00	9.00	8.76	0.00
45.00	9.00	8.76	0.00
46.00	9.00	8.76	0.00
47.00	9.00	8.76	0.00
48.00	9.00	8.76	0.00
49.00	9.00	8.76	0.00
50.00	9.00	8.76	0.00
51.00	9.00	8.76	0.00
52.00	9.00	8.76	0.00
53.00	9.00	8.76	0.00
54.00	9.00	8.76	0.00
55.00	9.00	8.76	0.00
56.00	9.00	8.76	0.00
57.00	9.00	8.76	0.00
58.00	9.00	8.76	0.00
59.00	9.00	8.76	0.00
60.00	9.00	8.76	0.00
61.00	9.00	8.76	0.00
62.00	9.00	8.76	0.00
63.00	9.00	8.76	0.00
64.00	9.00	8.76	0.00
65.00	9.00	8.76	0.00
66.00	9.00	8.76	0.00
67.00	9.00	8.76	0.00
68.00	9.00	8.76	0.00
69.00	9.00	8.76	0.00
70.00	9.00	8.76	0.00
71.00	9.00	8.76	0.00
72.00	9.00	8.76	0.00

Summary for Subcatchment Post 2B: Post 2B

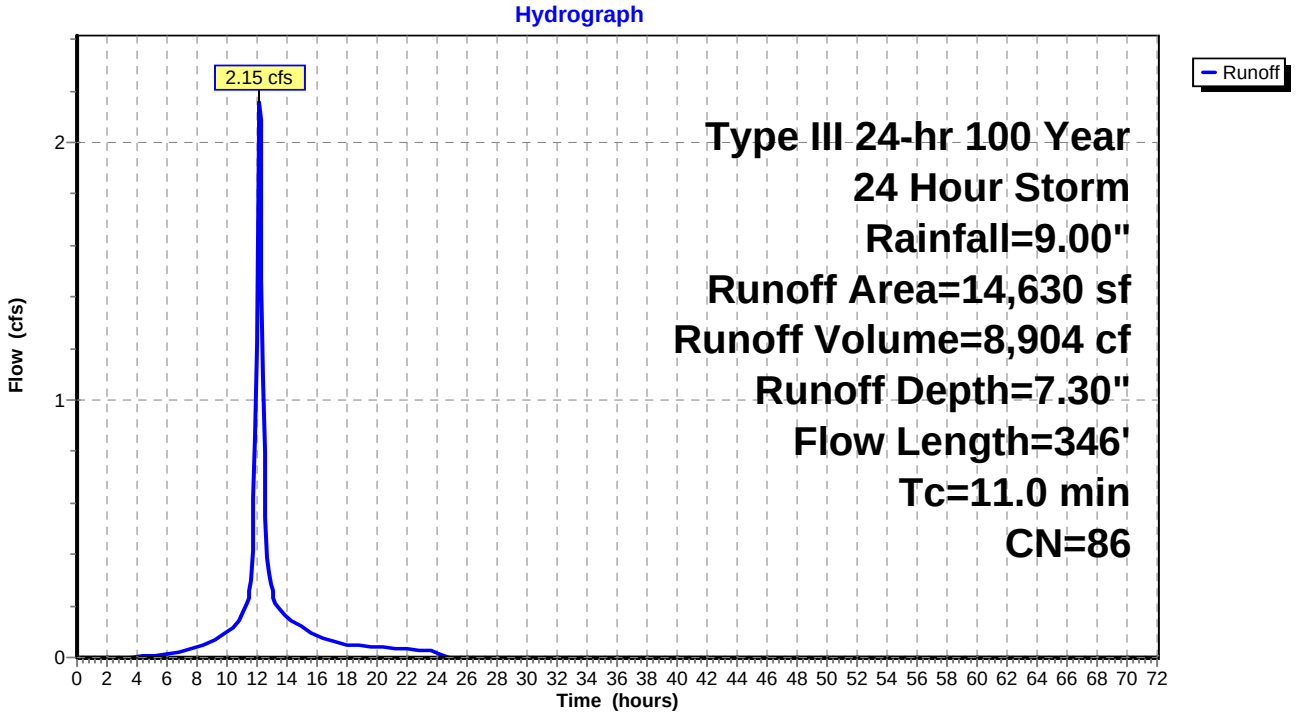
Runoff = 2.15 cfs @ 12.15 hrs, Volume= 8,904 cf, Depth= 7.30"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
5,836	98	Paved parking
6,450	74	>75% Grass cover, Good, HSG C
2,344	89	Gravel roads, HSG C
14,630	86	Weighted Average
8,794		60.11% Pervious Area
5,836		39.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.3	100	0.0400	0.16		**Sheet Flow, Landscaped area** Grass: Dense n= 0.240 P2= 3.50"
0.7	246	0.0100	5.90	4.63	**Pipe Channel, Pipe** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.010 PVC, smooth interior
11.0	346	Total			

Subcatchment Post 2B: Post 2B



Hydrograph for Subcatchment Post 2B: Post 2B

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.39	0.00	0.00
5.00	0.51	0.02	0.01
6.00	0.65	0.05	0.01
7.00	0.81	0.11	0.02
8.00	1.03	0.21	0.04
9.00	1.31	0.37	0.06
10.00	1.70	0.63	0.10
11.00	2.25	1.04	0.16
12.00	4.50	3.00	**1.22**
13.00	6.75	5.13	**0.26**
14.00	7.30	5.65	0.16
15.00	7.69	6.03	0.12
16.00	7.97	6.31	0.08
17.00	8.19	6.51	0.06
18.00	8.35	6.67	0.05
19.00	8.49	6.81	0.04
20.00	8.61	6.93	0.04
21.00	8.72	7.04	0.04
22.00	8.83	7.13	0.03
23.00	8.92	7.22	0.03
24.00	**9.00**	**7.30**	0.03
25.00	9.00	7.30	0.00
26.00	9.00	7.30	0.00
27.00	9.00	7.30	0.00
28.00	9.00	7.30	0.00
29.00	9.00	7.30	0.00
30.00	9.00	7.30	0.00
31.00	9.00	7.30	0.00
32.00	9.00	7.30	0.00
33.00	9.00	7.30	0.00
34.00	9.00	7.30	0.00
35.00	9.00	7.30	0.00
36.00	9.00	7.30	0.00
37.00	9.00	7.30	0.00
38.00	9.00	7.30	0.00
39.00	9.00	7.30	0.00
40.00	9.00	7.30	0.00
41.00	9.00	7.30	0.00
42.00	9.00	7.30	0.00
43.00	9.00	7.30	0.00
44.00	9.00	7.30	0.00
45.00	9.00	7.30	0.00
46.00	9.00	7.30	0.00
47.00	9.00	7.30	0.00
48.00	9.00	7.30	0.00
49.00	9.00	7.30	0.00
50.00	9.00	7.30	0.00
51.00	9.00	7.30	0.00
52.00	9.00	7.30	0.00
53.00	9.00	7.30	0.00
54.00	9.00	7.30	0.00
55.00	9.00	7.30	0.00
56.00	9.00	7.30	0.00
57.00	9.00	7.30	0.00
58.00	9.00	7.30	0.00
59.00	9.00	7.30	0.00
60.00	9.00	7.30	0.00
61.00	9.00	7.30	0.00
62.00	9.00	7.30	0.00
63.00	9.00	7.30	0.00
64.00	9.00	7.30	0.00
65.00	9.00	7.30	0.00
66.00	9.00	7.30	0.00
67.00	9.00	7.30	0.00
68.00	9.00	7.30	0.00
69.00	9.00	7.30	0.00
70.00	9.00	7.30	0.00
71.00	9.00	7.30	0.00
72.00	9.00	7.30	0.00

Summary for Subcatchment Post 2C: Post 2C

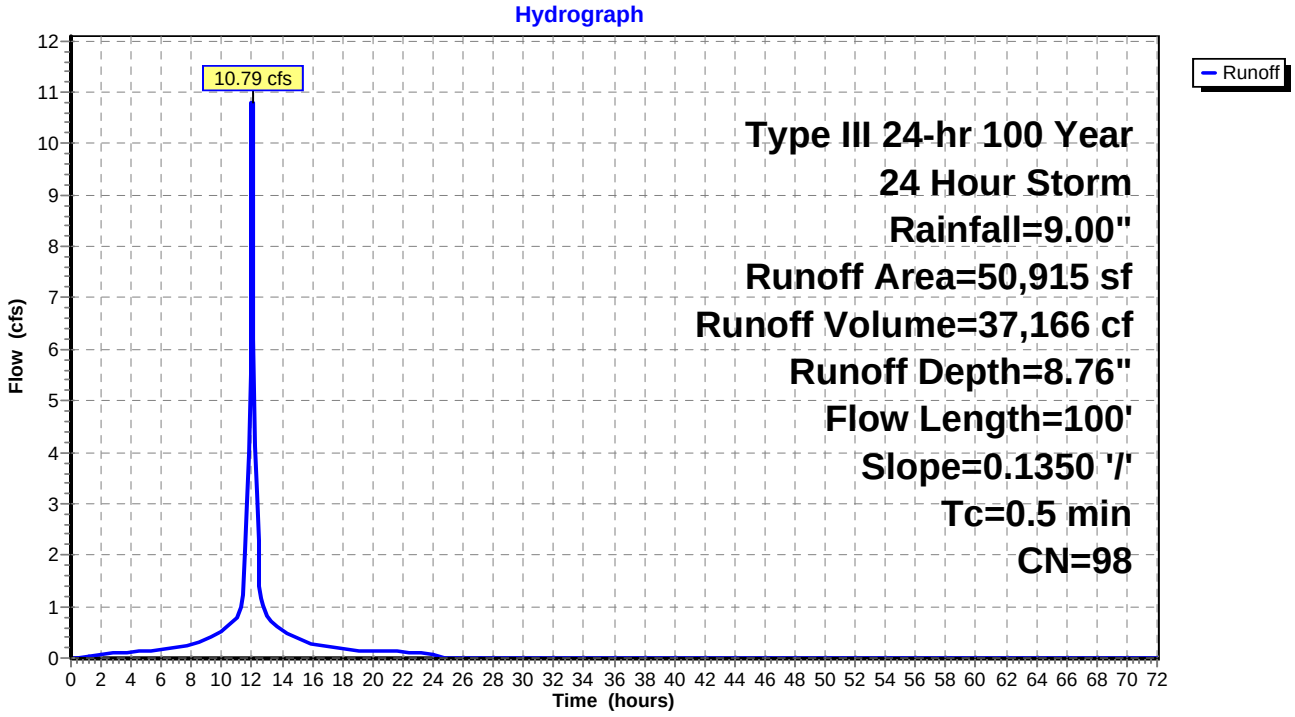
Runoff = 10.79 cfs @ 12.00 hrs, Volume= 37,166 cf, Depth= 8.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
50,915	98	Paved parking, HSG C
50,915		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	100	0.1350	3.09		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.50"

Subcatchment Post 2C: Post 2C



Hydrograph for Subcatchment Post 2C: Post 2C

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.01	0.04
2.00	0.18	0.06	0.07
3.00	0.28	0.13	0.10
4.00	0.39	0.22	0.12
5.00	0.51	0.33	0.14
6.00	0.65	0.45	0.16
7.00	0.81	0.61	0.21
8.00	1.03	0.82	0.27
9.00	1.31	1.10	0.39
10.00	1.70	1.48	0.51
11.00	2.25	2.02	0.77
12.00	4.50	4.26	**10.79**
13.00	6.75	6.51	0.79
14.00	7.30	7.06	0.52
15.00	7.69	7.45	0.40
16.00	7.97	7.73	0.28
17.00	8.19	7.95	0.22
18.00	8.35	8.11	0.17
19.00	8.49	8.25	0.15
20.00	8.61	8.37	0.14
21.00	8.72	8.48	0.13
22.00	8.83	8.59	0.11
23.00	8.92	8.68	0.10
24.00	**9.00**	**8.76**	0.05
25.00	9.00	8.76	0.00
26.00	9.00	8.76	0.00
27.00	9.00	8.76	0.00
28.00	9.00	8.76	0.00
29.00	9.00	8.76	0.00
30.00	9.00	8.76	0.00
31.00	9.00	8.76	0.00
32.00	9.00	8.76	0.00
33.00	9.00	8.76	0.00
34.00	9.00	8.76	0.00
35.00	9.00	8.76	0.00
36.00	9.00	8.76	0.00
37.00	9.00	8.76	0.00
38.00	9.00	8.76	0.00
39.00	9.00	8.76	0.00
40.00	9.00	8.76	0.00
41.00	9.00	8.76	0.00
42.00	9.00	8.76	0.00
43.00	9.00	8.76	0.00
44.00	9.00	8.76	0.00
45.00	9.00	8.76	0.00
46.00	9.00	8.76	0.00
47.00	9.00	8.76	0.00
48.00	9.00	8.76	0.00
49.00	9.00	8.76	0.00
50.00	9.00	8.76	0.00
51.00	9.00	8.76	0.00
52.00	9.00	8.76	0.00
53.00	9.00	8.76	0.00
54.00	9.00	8.76	0.00
55.00	9.00	8.76	0.00
56.00	9.00	8.76	0.00
57.00	9.00	8.76	0.00
58.00	9.00	8.76	0.00
59.00	9.00	8.76	0.00
60.00	9.00	8.76	0.00
61.00	9.00	8.76	0.00
62.00	9.00	8.76	0.00
63.00	9.00	8.76	0.00
64.00	9.00	8.76	0.00
65.00	9.00	8.76	0.00
66.00	9.00	8.76	0.00
67.00	9.00	8.76	0.00
68.00	9.00	8.76	0.00
69.00	9.00	8.76	0.00
70.00	9.00	8.76	0.00
71.00	9.00	8.76	0.00
72.00	9.00	8.76	0.00

Summary for Subcatchment Post 2D: Post 2D

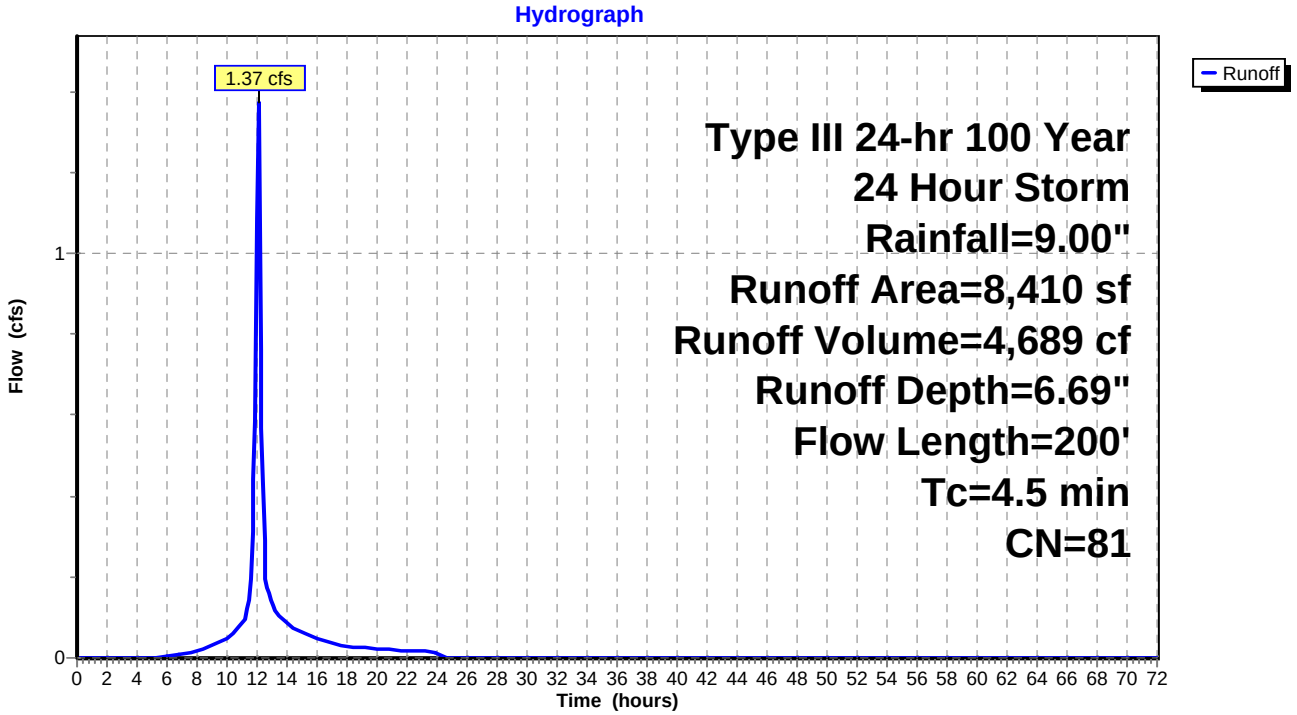
Runoff = 1.37 cfs @ 12.08 hrs, Volume= 4,689 cf, Depth= 6.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
6,348	79	50-75% Grass cover, Fair, HSG C
2,062	89	Gravel roads, HSG C
8,410	81	Weighted Average
8,410		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.1	50	0.1000	0.20		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
0.4	150	0.0860	5.95		**Shallow Concentrated Flow, Maintenance Drive** Paved Kv= 20.3 fps
4.5	200	Total			

Subcatchment Post 2D: Post 2D



Hydrograph for Subcatchment Post 2D: Post 2D

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	52.00	9.00	6.69	0.00
1.00	0.09	0.00	0.00	53.00	9.00	6.69	0.00
2.00	0.18	0.00	0.00	54.00	9.00	6.69	0.00
3.00	0.28	0.00	0.00	55.00	9.00	6.69	0.00
4.00	0.39	0.00	0.00	56.00	9.00	6.69	0.00
5.00	0.51	0.00	0.00	57.00	9.00	6.69	0.00
6.00	0.65	0.01	0.00	58.00	9.00	6.69	0.00
7.00	0.81	0.04	0.01	59.00	9.00	6.69	0.00
8.00	1.03	0.11	0.02	60.00	9.00	6.69	0.00
9.00	1.31	0.22	0.03	61.00	9.00	6.69	0.00
10.00	1.70	0.42	0.05	62.00	9.00	6.69	0.00
11.00	2.25	0.77	0.08	63.00	9.00	6.69	0.00
12.00	4.50	2.55	**1.08**	64.00	9.00	6.69	0.00
13.00	6.75	4.57	**0.13**	65.00	9.00	6.69	0.00
14.00	7.30	5.08	0.08	66.00	9.00	6.69	0.00
15.00	7.69	5.45	0.06	67.00	9.00	6.69	0.00
16.00	7.97	5.72	0.04	68.00	9.00	6.69	0.00
17.00	8.19	5.92	0.04	69.00	9.00	6.69	0.00
18.00	8.35	6.08	0.03	70.00	9.00	6.69	0.00
19.00	8.49	6.21	0.02	71.00	9.00	6.69	0.00
20.00	8.61	6.32	0.02	72.00	9.00	6.69	0.00
21.00	8.72	6.43	0.02				
22.00	8.83	6.53	0.02				
23.00	8.92	6.61	0.02				
24.00	**9.00**	**6.69**	0.01				
25.00	9.00	6.69	0.00				
26.00	9.00	6.69	0.00				
27.00	9.00	6.69	0.00				
28.00	9.00	6.69	0.00				
29.00	9.00	6.69	0.00				
30.00	9.00	6.69	0.00				
31.00	9.00	6.69	0.00				
32.00	9.00	6.69	0.00				
33.00	9.00	6.69	0.00				
34.00	9.00	6.69	0.00				
35.00	9.00	6.69	0.00				
36.00	9.00	6.69	0.00				
37.00	9.00	6.69	0.00				
38.00	9.00	6.69	0.00				
39.00	9.00	6.69	0.00				
40.00	9.00	6.69	0.00				
41.00	9.00	6.69	0.00				
42.00	9.00	6.69	0.00				
43.00	9.00	6.69	0.00				
44.00	9.00	6.69	0.00				
45.00	9.00	6.69	0.00				
46.00	9.00	6.69	0.00				
47.00	9.00	6.69	0.00				
48.00	9.00	6.69	0.00				
49.00	9.00	6.69	0.00				
50.00	9.00	6.69	0.00				
51.00	9.00	6.69	0.00				

Summary for Subcatchment Post 2F: Post 2F

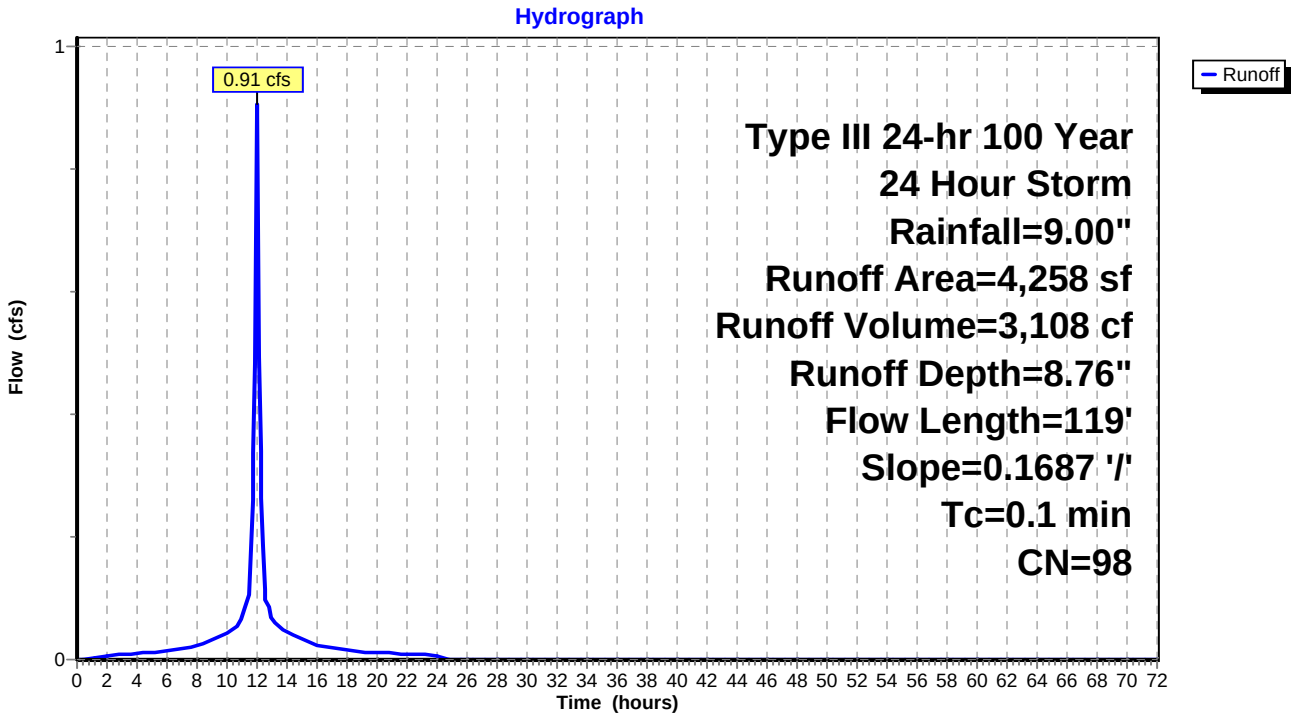
Runoff = 0.91 cfs @ 12.00 hrs, Volume= 3,108 cf, Depth= 8.76"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
4,258	98	Roofs, HSG C
4,258		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	119	0.1687	14.22	4.96	**Pipe Channel, Roof Leader** 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.013 Corrugated PE, smooth interior

Subcatchment Post 2F: Post 2F



Hydrograph for Subcatchment Post 2F: Post 2F

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.01	0.00
2.00	0.18	0.06	0.01
3.00	0.28	0.13	0.01
4.00	0.39	0.22	0.01
5.00	0.51	0.33	0.01
6.00	0.65	0.45	0.01
7.00	0.81	0.61	0.02
8.00	1.03	0.82	0.02
9.00	1.31	1.10	0.03
10.00	1.70	1.48	0.04
11.00	2.25	2.02	0.06
12.00	4.50	4.26	**0.91**
13.00	6.75	6.51	0.07
14.00	7.30	7.06	0.04
15.00	7.69	7.45	0.03
16.00	7.97	7.73	0.02
17.00	8.19	7.95	0.02
18.00	8.35	8.11	0.01
19.00	8.49	8.25	0.01
20.00	8.61	8.37	0.01
21.00	8.72	8.48	0.01
22.00	8.83	8.59	0.01
23.00	8.92	8.68	0.01
24.00	**9.00**	**8.76**	0.00
25.00	9.00	8.76	0.00
26.00	9.00	8.76	0.00
27.00	9.00	8.76	0.00
28.00	9.00	8.76	0.00
29.00	9.00	8.76	0.00
30.00	9.00	8.76	0.00
31.00	9.00	8.76	0.00
32.00	9.00	8.76	0.00
33.00	9.00	8.76	0.00
34.00	9.00	8.76	0.00
35.00	9.00	8.76	0.00
36.00	9.00	8.76	0.00
37.00	9.00	8.76	0.00
38.00	9.00	8.76	0.00
39.00	9.00	8.76	0.00
40.00	9.00	8.76	0.00
41.00	9.00	8.76	0.00
42.00	9.00	8.76	0.00
43.00	9.00	8.76	0.00
44.00	9.00	8.76	0.00
45.00	9.00	8.76	0.00
46.00	9.00	8.76	0.00
47.00	9.00	8.76	0.00
48.00	9.00	8.76	0.00
49.00	9.00	8.76	0.00
50.00	9.00	8.76	0.00
51.00	9.00	8.76	0.00
52.00	9.00	8.76	0.00
53.00	9.00	8.76	0.00
54.00	9.00	8.76	0.00
55.00	9.00	8.76	0.00
56.00	9.00	8.76	0.00
57.00	9.00	8.76	0.00
58.00	9.00	8.76	0.00
59.00	9.00	8.76	0.00
60.00	9.00	8.76	0.00
61.00	9.00	8.76	0.00
62.00	9.00	8.76	0.00
63.00	9.00	8.76	0.00
64.00	9.00	8.76	0.00
65.00	9.00	8.76	0.00
66.00	9.00	8.76	0.00
67.00	9.00	8.76	0.00
68.00	9.00	8.76	0.00
69.00	9.00	8.76	0.00
70.00	9.00	8.76	0.00
71.00	9.00	8.76	0.00
72.00	9.00	8.76	0.00

Summary for Subcatchment Post 2G: Post 2G

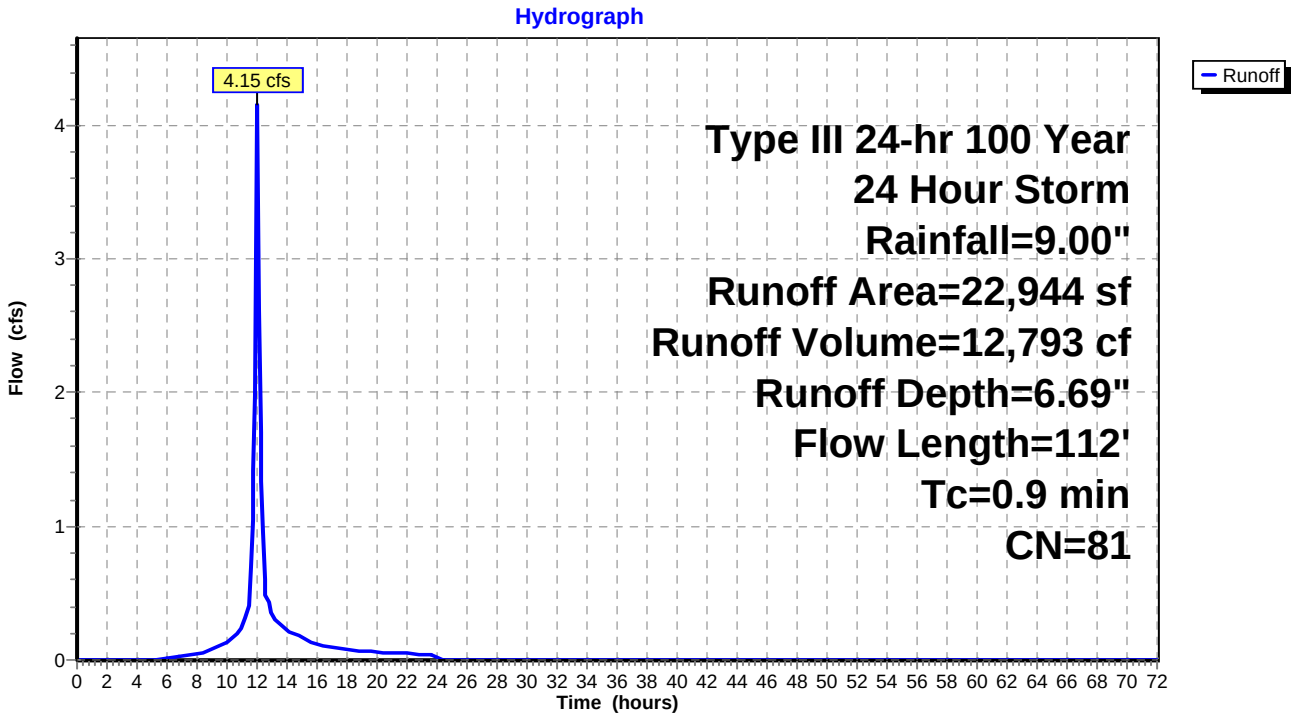
Runoff = 4.15 cfs @ 12.01 hrs, Volume= 12,793 cf, Depth= 6.69"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
1,112	98	Paved parking, HSG C
19,649	79	50-75% Grass cover, Fair, HSG C
2,183	89	Gravel roads, HSG C
22,944	81	Weighted Average
21,832		95.15% Pervious Area
1,112		4.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	80	0.0250	1.50		**Sheet Flow, Pavement** Smooth surfaces n= 0.011 P2= 3.50"
0.0	32	0.4600	10.92		**Shallow Concentrated Flow, Landscaped** Unpaved Kv= 16.1 fps
0.9	112	Total			

Subcatchment Post 2G: Post 2G



Hydrograph for Subcatchment Post 2G: Post 2G

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.39	0.00	0.00
5.00	0.51	0.00	0.00
6.00	0.65	0.01	0.01
7.00	0.81	0.04	0.02
8.00	1.03	0.11	0.04
9.00	1.31	0.22	0.08
10.00	1.70	0.42	0.13
11.00	2.25	0.77	0.24
12.00	4.50	2.55	**4.14**
13.00	6.75	4.57	0.33
14.00	7.30	5.08	0.22
15.00	7.69	5.45	0.17
16.00	7.97	5.72	0.12
17.00	8.19	5.92	0.10
18.00	8.35	6.08	0.07
19.00	8.49	6.21	0.07
20.00	8.61	6.32	0.06
21.00	8.72	6.43	0.05
22.00	8.83	6.53	0.05
23.00	8.92	6.61	0.04
24.00	**9.00**	**6.69**	0.02
25.00	9.00	6.69	0.00
26.00	9.00	6.69	0.00
27.00	9.00	6.69	0.00
28.00	9.00	6.69	0.00
29.00	9.00	6.69	0.00
30.00	9.00	6.69	0.00
31.00	9.00	6.69	0.00
32.00	9.00	6.69	0.00
33.00	9.00	6.69	0.00
34.00	9.00	6.69	0.00
35.00	9.00	6.69	0.00
36.00	9.00	6.69	0.00
37.00	9.00	6.69	0.00
38.00	9.00	6.69	0.00
39.00	9.00	6.69	0.00
40.00	9.00	6.69	0.00
41.00	9.00	6.69	0.00
42.00	9.00	6.69	0.00
43.00	9.00	6.69	0.00
44.00	9.00	6.69	0.00
45.00	9.00	6.69	0.00
46.00	9.00	6.69	0.00
47.00	9.00	6.69	0.00
48.00	9.00	6.69	0.00
49.00	9.00	6.69	0.00
50.00	9.00	6.69	0.00
51.00	9.00	6.69	0.00
52.00	9.00	6.69	0.00
53.00	9.00	6.69	0.00
54.00	9.00	6.69	0.00
55.00	9.00	6.69	0.00
56.00	9.00	6.69	0.00
57.00	9.00	6.69	0.00
58.00	9.00	6.69	0.00
59.00	9.00	6.69	0.00
60.00	9.00	6.69	0.00
61.00	9.00	6.69	0.00
62.00	9.00	6.69	0.00
63.00	9.00	6.69	0.00
64.00	9.00	6.69	0.00
65.00	9.00	6.69	0.00
66.00	9.00	6.69	0.00
67.00	9.00	6.69	0.00
68.00	9.00	6.69	0.00
69.00	9.00	6.69	0.00
70.00	9.00	6.69	0.00
71.00	9.00	6.69	0.00
72.00	9.00	6.69	0.00

Summary for Subcatchment Post 2H: Post 2H

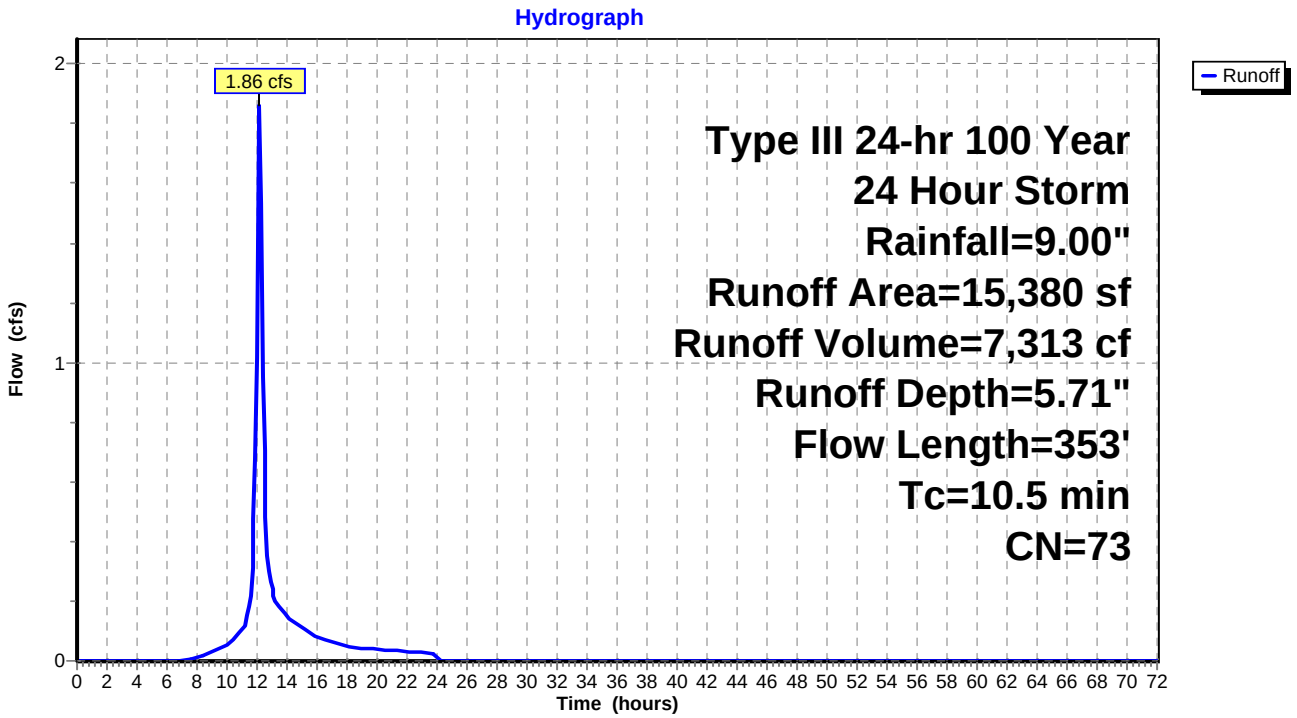
Runoff = 1.86 cfs @ 12.15 hrs, Volume= 7,313 cf, Depth= 5.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
15,380	73	Woods, Fair, HSG C
15,380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	100	0.0600	0.19		**Sheet Flow, Landscaped** Grass: Dense n= 0.240 P2= 3.50"
1.7	253	0.0260	2.42		**Shallow Concentrated Flow, Grassed waterway** Grassed Waterway Kv= 15.0 fps
10.5	353	Total			

Subcatchment Post 2H: Post 2H



Hydrograph for Subcatchment Post 2H: Post 2H

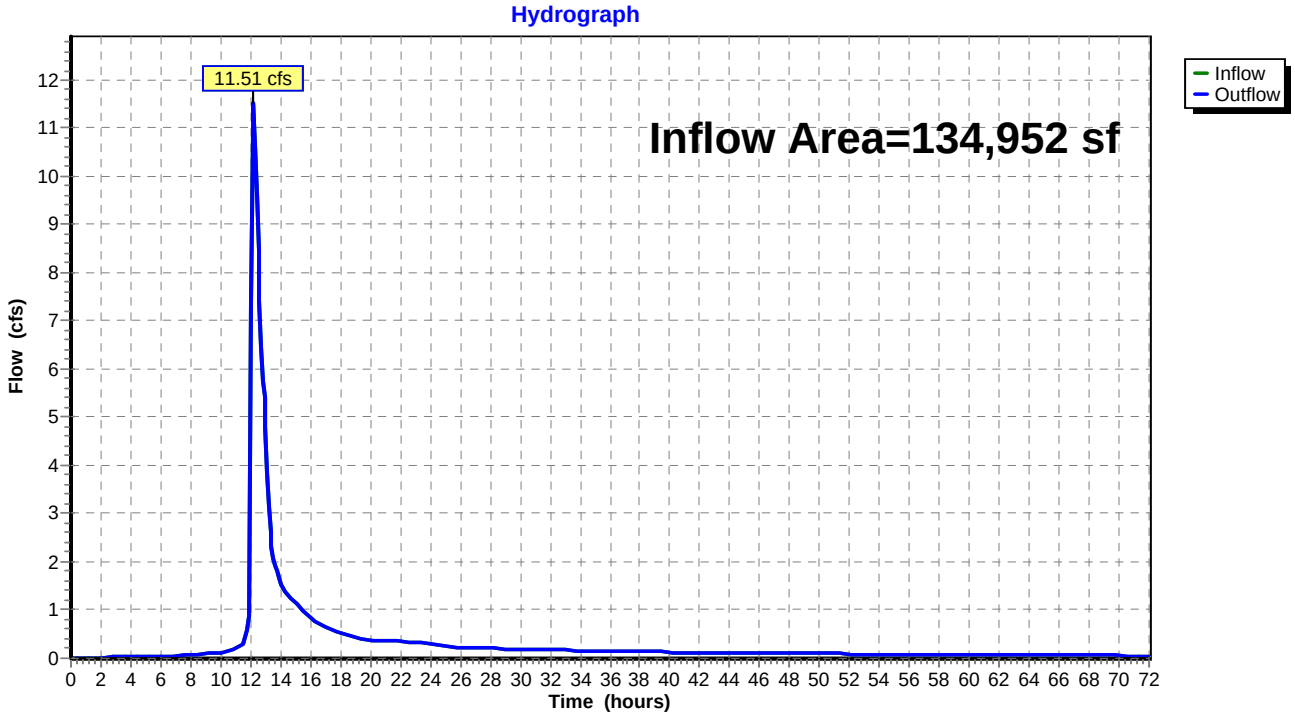
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.39	0.00	0.00
5.00	0.51	0.00	0.00
6.00	0.65	0.00	0.00
7.00	0.81	0.00	0.00
8.00	1.03	0.02	0.01
9.00	1.31	0.08	0.03
10.00	1.70	0.20	0.05
11.00	2.25	0.44	0.11
12.00	4.50	1.90	**1.01**
13.00	6.75	3.72	**0.24**
14.00	7.30	4.19	0.15
15.00	7.69	4.53	0.11
16.00	7.97	4.79	0.08
17.00	8.19	4.97	0.06
18.00	8.35	5.12	0.05
19.00	8.49	5.25	0.04
20.00	8.61	5.36	0.04
21.00	8.72	5.46	0.03
22.00	8.83	5.55	0.03
23.00	8.92	5.63	0.03
24.00	**9.00**	**5.71**	0.03
25.00	9.00	5.71	0.00
26.00	9.00	5.71	0.00
27.00	9.00	5.71	0.00
28.00	9.00	5.71	0.00
29.00	9.00	5.71	0.00
30.00	9.00	5.71	0.00
31.00	9.00	5.71	0.00
32.00	9.00	5.71	0.00
33.00	9.00	5.71	0.00
34.00	9.00	5.71	0.00
35.00	9.00	5.71	0.00
36.00	9.00	5.71	0.00
37.00	9.00	5.71	0.00
38.00	9.00	5.71	0.00
39.00	9.00	5.71	0.00
40.00	9.00	5.71	0.00
41.00	9.00	5.71	0.00
42.00	9.00	5.71	0.00
43.00	9.00	5.71	0.00
44.00	9.00	5.71	0.00
45.00	9.00	5.71	0.00
46.00	9.00	5.71	0.00
47.00	9.00	5.71	0.00
48.00	9.00	5.71	0.00
49.00	9.00	5.71	0.00
50.00	9.00	5.71	0.00
51.00	9.00	5.71	0.00
52.00	9.00	5.71	0.00
53.00	9.00	5.71	0.00
54.00	9.00	5.71	0.00
55.00	9.00	5.71	0.00
56.00	9.00	5.71	0.00
57.00	9.00	5.71	0.00
58.00	9.00	5.71	0.00
59.00	9.00	5.71	0.00
60.00	9.00	5.71	0.00
61.00	9.00	5.71	0.00
62.00	9.00	5.71	0.00
63.00	9.00	5.71	0.00
64.00	9.00	5.71	0.00
65.00	9.00	5.71	0.00
66.00	9.00	5.71	0.00
67.00	9.00	5.71	0.00
68.00	9.00	5.71	0.00
69.00	9.00	5.71	0.00
70.00	9.00	5.71	0.00
71.00	9.00	5.71	0.00
72.00	9.00	5.71	0.00

Summary for Reach DP2: Design Point 2

Inflow Area = 134,952 sf, 53.68% Impervious, Inflow Depth > 7.44" for 100 Year, 24 Hour Storm event
Inflow = 11.51 cfs @ 12.19 hrs, Volume= 83,624 cf
Outflow = 11.51 cfs @ 12.19 hrs, Volume= 83,624 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP2: Design Point 2



Hydrograph for Reach DP2: Design Point 2

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.01		0.01
3.00	0.02		0.02
4.00	0.03		0.03
5.00	0.04		0.04
6.00	0.04		0.04
7.00	0.05		0.05
8.00	0.06		0.06
9.00	0.08		0.08
10.00	0.12		0.12
11.00	0.18		0.18
12.00	**7.39**		**7.39**
13.00	**4.78**		**4.78**
14.00	1.56		1.56
15.00	1.13		1.13
16.00	0.83		0.83
17.00	0.64		0.64
18.00	0.51		0.51
19.00	0.43		0.43
20.00	0.39		0.39
21.00	0.36		0.36
22.00	0.35		0.35
23.00	0.34		0.34
24.00	0.32		0.32
25.00	0.24		0.24
26.00	0.22		0.22
27.00	0.21		0.21
28.00	0.20		0.20
29.00	0.19		0.19
30.00	0.19		0.19
31.00	0.18		0.18
32.00	0.17		0.17
33.00	0.17		0.17
34.00	0.16		0.16
35.00	0.15		0.15
36.00	0.15		0.15
37.00	0.14		0.14
38.00	0.13		0.13
39.00	0.13		0.13
40.00	0.12		0.12
41.00	0.12		0.12
42.00	0.11		0.11
43.00	0.11		0.11
44.00	0.10		0.10
45.00	0.10		0.10
46.00	0.10		0.10
47.00	0.10		0.10
48.00	0.10		0.10
49.00	0.10		0.10
50.00	0.09		0.09
51.00	0.09		0.09
52.00	0.09		0.09
53.00	0.09		0.09
54.00	0.09		0.09
55.00	0.08		0.08
56.00	0.08		0.08
57.00	0.08		0.08
58.00	0.08		0.08
59.00	0.08		0.08
60.00	0.08		0.08
61.00	0.07		0.07
62.00	0.07		0.07
63.00	0.07		0.07
64.00	0.07		0.07
65.00	0.07		0.07
66.00	0.06		0.06
67.00	0.06		0.06
68.00	0.06		0.06
69.00	0.06		0.06
70.00	0.06		0.06
71.00	0.05		0.05
72.00	0.05		0.05

Summary for Pond F-1: Combined Sed. + Sand

Inflow Area = 92,370 sf, 72.61% Impervious, Inflow Depth = 7.25" for 100 Year, 24 Hour Storm event
Inflow = 9.09 cfs @ 12.01 hrs, Volume= 55,786 cf
Outflow = 4.68 cfs @ 12.32 hrs, Volume= 55,804 cf, Atten= 49%, Lag= 18.7 min
Primary = 4.68 cfs @ 12.32 hrs, Volume= 55,804 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 387.50' @ 12.32 hrs Surf.Area= 7,417 sf Storage= 17,226 cf

Plug-Flow detention time= 251.9 min calculated for 55,726 cf (100% of inflow)
Center-of-Mass det. time= 253.2 min (1,009.2 - 756.0)

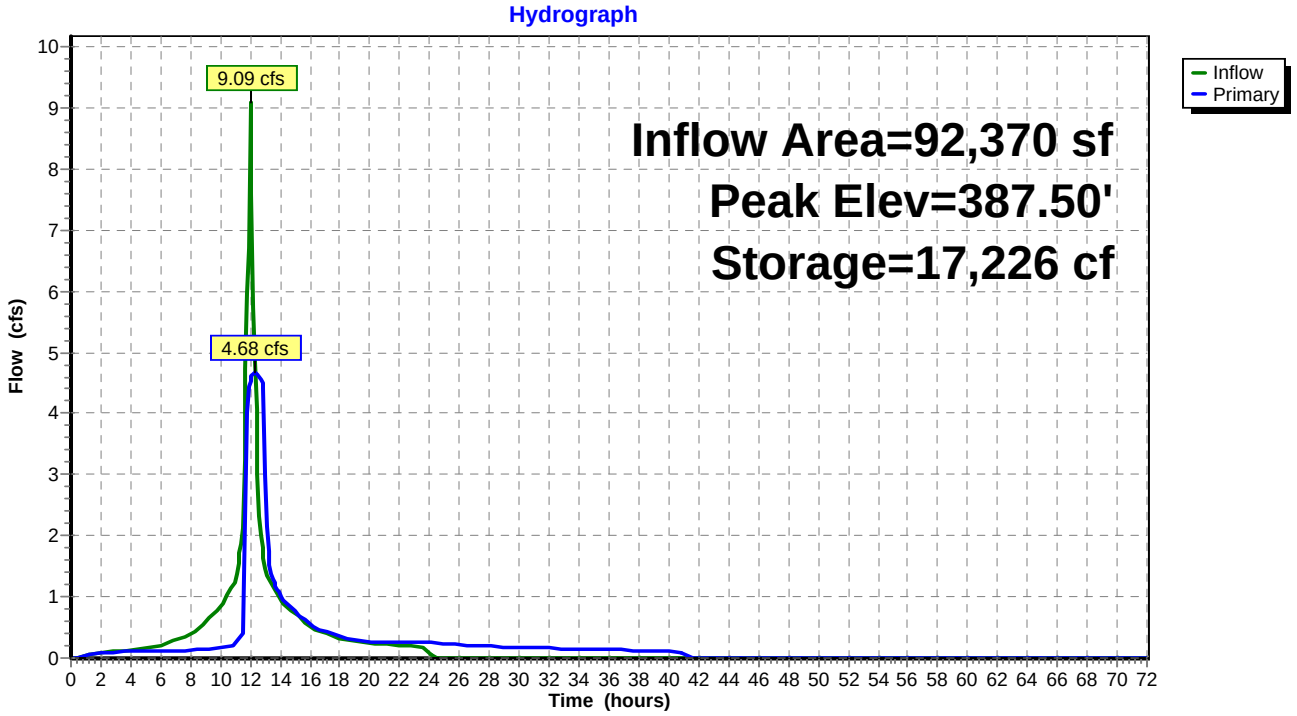
Volume	Invert	Avail.Storage	Storage Description
#1	384.00'	20,877 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
384.00	2,608	188.0	0	0	2,608
385.00	3,635	237.0	3,107	3,107	4,279
386.00	4,801	285.0	4,205	7,312	6,290
387.00	7,600	320.0	6,147	13,459	8,002
388.00	7,237	337.0	7,418	20,877	8,949

Device	Routing	Invert	Outlet Devices
#1	Primary	382.00'	**10.0" Round Culvert** L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 377.00' S= 0.1316 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	382.00'	**1.0" Horiz. Orifice/Grate X 10.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	384.00'	**1.750 in/hr Exfiltration over Surface area**
#4	Device 1	386.60'	**18.0" x 18.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.67 cfs @ 12.32 hrs HW=387.50' TW=379.75' (Dynamic Tailwater)
- **1=Culvert** (Inlet Controls 4.67 cfs @ 8.57 fps)
- **2=Orifice/Grate** (Passes < 0.62 cfs potential flow)
  - **3=Exfiltration** (Passes < 0.30 cfs potential flow)
- **4=Orifice/Grate** (Passes < 10.27 cfs potential flow)

Pond F-1: Combined Sed. + Sand



Hydrograph for Pond F-1: Combined Sed. + Sand

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	384.00	0.00
2.00	0.08	0	384.00	0.08
4.00	0.14	51	384.02	0.11
6.00	0.21	496	384.18	0.11
8.00	0.39	1,742	384.60	0.13
10.00	0.81	4,935	385.47	0.17
12.00	**9.06**	**14,906**	**387.19**	**4.53**
14.00	0.95	**11,412**	**386.71**	**1.03**
16.00	0.50	11,051	386.66	0.55
18.00	0.31	10,823	386.63	0.34
20.00	0.25	10,691	386.60	0.27
22.00	0.21	10,460	386.57	0.26
24.00	0.12	9,964	386.49	0.25
26.00	0.00	8,333	386.20	0.22
28.00	0.00	6,886	385.91	0.19
30.00	0.00	5,570	385.62	0.18
32.00	0.00	4,355	385.33	0.16
34.00	0.00	3,236	385.04	0.15
36.00	0.00	2,212	384.74	0.14
38.00	0.00	1,278	384.45	0.12
40.00	0.00	430	384.16	0.11
42.00	0.00	0	384.00	0.00
44.00	0.00	0	384.00	0.00
46.00	0.00	0	384.00	0.00
48.00	0.00	0	384.00	0.00
50.00	0.00	0	384.00	0.00
52.00	0.00	0	384.00	0.00
54.00	0.00	0	384.00	0.00
56.00	0.00	0	384.00	0.00
58.00	0.00	0	384.00	0.00
60.00	0.00	0	384.00	0.00
62.00	0.00	0	384.00	0.00
64.00	0.00	0	384.00	0.00
66.00	0.00	0	384.00	0.00
68.00	0.00	0	384.00	0.00
70.00	0.00	0	384.00	0.00
72.00	0.00	0	384.00	0.00

Summary for Pond FS: Flow Splitter

Inflow Area = 70,451 sf, 87.52% Impervious, Inflow Depth = 8.46" for 100 Year, 24 Hour Storm event
Inflow = 13.03 cfs @ 12.01 hrs, Volume= 49,652 cf
Outflow = 13.03 cfs @ 12.01 hrs, Volume= 49,652 cf, Atten= 0%, Lag= 0.0 min
Primary = 5.41 cfs @ 11.99 hrs, Volume= 42,737 cf
Secondary = 7.67 cfs @ 12.01 hrs, Volume= 6,915 cf

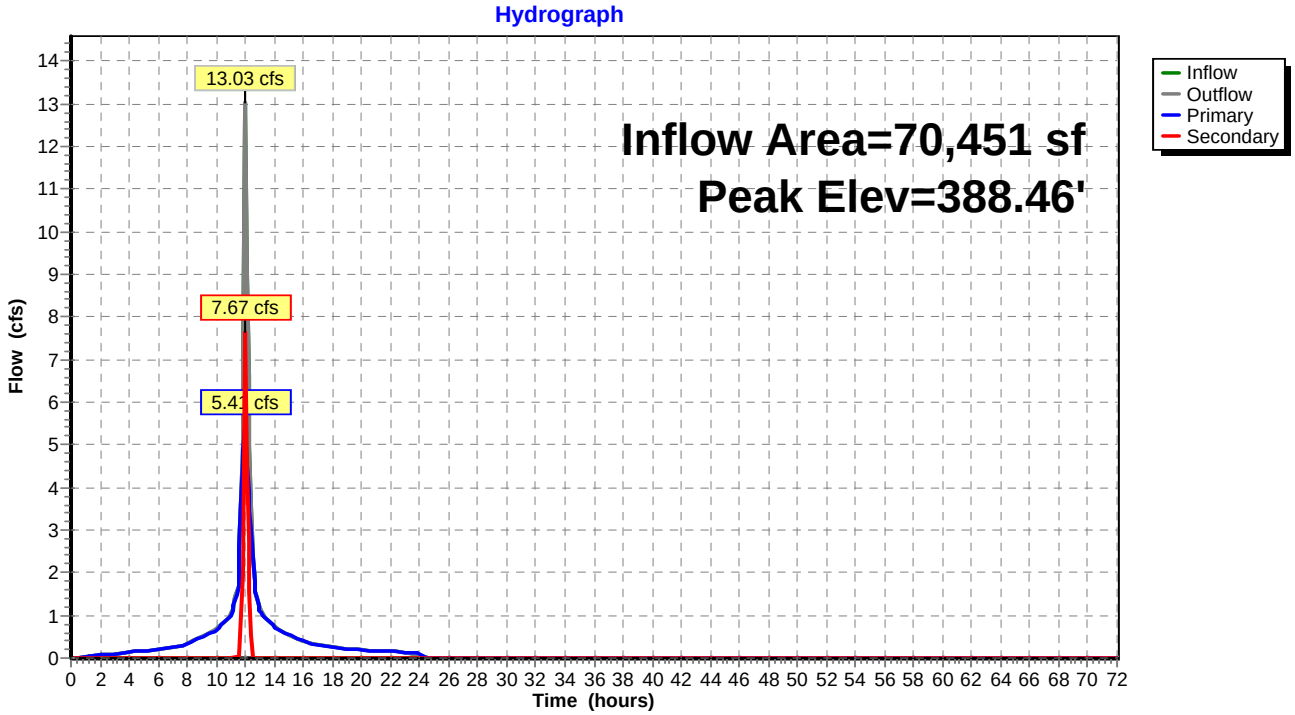
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Peak Elev= 388.46' @ 12.02 hrs
Flood Elev= 392.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	386.45'	**24.0" W x 6.0" H Vert. Orifice/Grate** C= 0.600
#2	Secondary	386.60'	**24.0" Round Culvert** L= 86.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 384.50' S= 0.0244 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior
#3	Device 2	387.75'	**4.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=5.35 cfs @ 11.99 hrs HW=388.41' TW=387.17' (Dynamic Tailwater)
└─**1=Orifice/Grate** (Orifice Controls 5.35 cfs @ 5.35 fps)

Secondary OutFlow Max=7.08 cfs @ 12.01 hrs HW=388.43' TW=379.49' (Dynamic Tailwater)
└─**2=Culvert** (Passes 7.08 cfs of 13.86 cfs potential flow)
└─**3=Broad-Crested Rectangular Weir** (Weir Controls 7.08 cfs @ 2.61 fps)

Pond FS: Flow Splitter



Hydrograph for Pond FS: Flow Splitter

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	386.45	0.00	0.00	0.00
2.00	0.08	386.50	0.08	0.08	0.00
4.00	0.13	386.53	0.13	0.13	0.00
6.00	0.19	386.55	0.19	0.19	0.00
8.00	0.33	386.59	0.33	0.33	0.00
10.00	0.66	386.67	0.66	0.66	0.00
12.00	**12.97**	**388.46**	**12.97**	**5.40**	**7.58**
14.00	0.73	386.78	0.73	0.73	0.00
16.00	0.39	386.69	0.39	0.39	0.00
18.00	0.24	386.64	0.24	0.24	0.00
20.00	0.19	386.62	0.19	0.19	0.00
22.00	0.16	386.58	0.16	0.16	0.00
24.00	0.08	386.51	0.08	0.08	0.00
26.00	0.00	386.45	0.00	0.00	0.00
28.00	0.00	386.45	0.00	0.00	0.00
30.00	0.00	386.45	0.00	0.00	0.00
32.00	0.00	386.45	0.00	0.00	0.00
34.00	0.00	386.45	0.00	0.00	0.00
36.00	0.00	386.45	0.00	0.00	0.00
38.00	0.00	386.45	0.00	0.00	0.00
40.00	0.00	386.45	0.00	0.00	0.00
42.00	0.00	386.45	0.00	0.00	0.00
44.00	0.00	386.45	0.00	0.00	0.00
46.00	0.00	386.45	0.00	0.00	0.00
48.00	0.00	386.45	0.00	0.00	0.00
50.00	0.00	386.45	0.00	0.00	0.00
52.00	0.00	386.45	0.00	0.00	0.00
54.00	0.00	386.45	0.00	0.00	0.00
56.00	0.00	386.45	0.00	0.00	0.00
58.00	0.00	386.45	0.00	0.00	0.00
60.00	0.00	386.45	0.00	0.00	0.00
62.00	0.00	386.45	0.00	0.00	0.00
64.00	0.00	386.45	0.00	0.00	0.00
66.00	0.00	386.45	0.00	0.00	0.00
68.00	0.00	386.45	0.00	0.00	0.00
70.00	0.00	386.45	0.00	0.00	0.00
72.00	0.00	386.45	0.00	0.00	0.00

Summary for Pond W-4: W-4 Pocket Wetland

Inflow Area = 119,572 sf, 60.58% Impervious, Inflow Depth = 7.89" for 100 Year, 24 Hour Storm event
Inflow = 17.25 cfs @ 12.01 hrs, Volume= 78,620 cf
Outflow = 9.71 cfs @ 12.21 hrs, Volume= 76,311 cf, Atten= 44%, Lag= 11.9 min
Primary = 9.71 cfs @ 12.21 hrs, Volume= 76,311 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2
Starting Elev= 377.00' Surf.Area= 4,840 sf Storage= 8,493 cf
Peak Elev= 379.81' @ 12.21 hrs Surf.Area= 8,652 sf Storage= 26,793 cf (18,300 cf above start)

Plug-Flow detention time= 568.6 min calculated for 67,818 cf (86% of inflow)
Center-of-Mass det. time= 346.8 min (1,284.7 - 937.9)

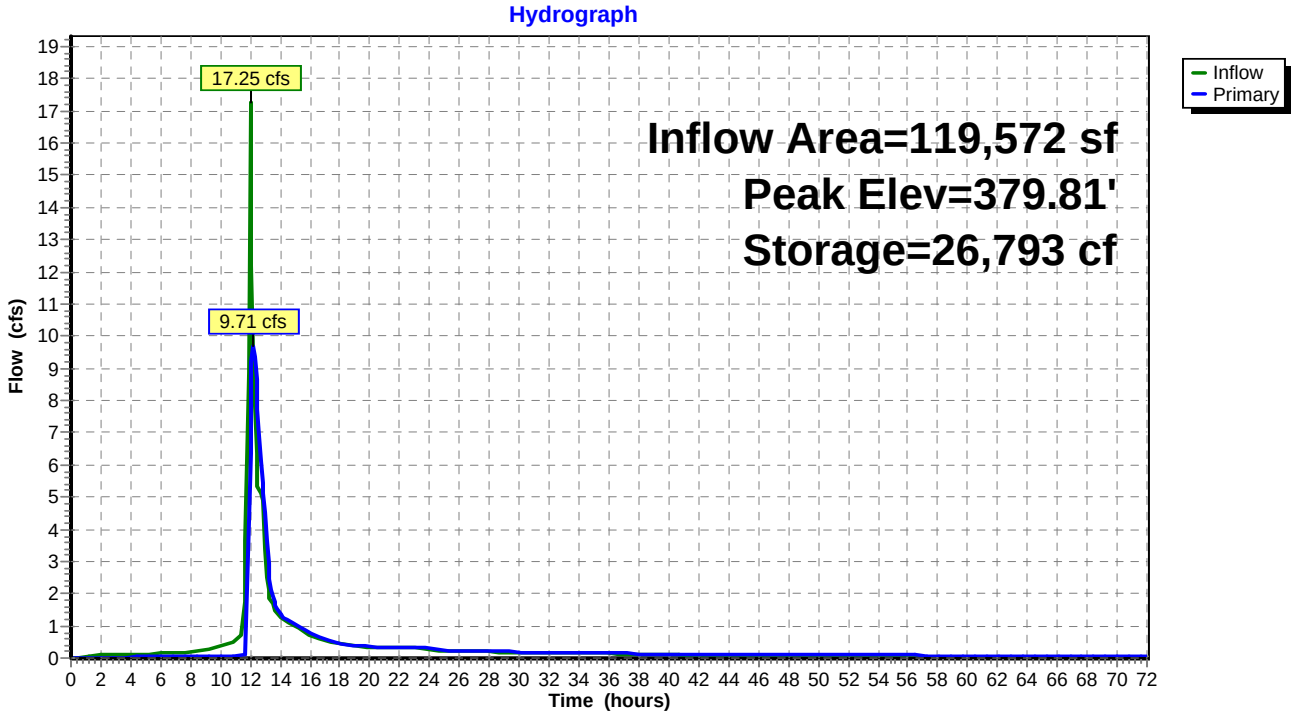
Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	28,507 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
373.00	994	124.0	0	0	994
374.00	1,255	136.0	1,122	1,122	1,274
375.00	1,541	149.0	1,396	2,518	1,602
376.00	2,862	220.0	2,168	4,685	3,695
377.00	4,840	303.0	3,808	8,493	7,159
378.00	5,830	325.0	5,327	13,820	8,302
379.00	7,302	361.0	6,552	20,373	10,297
380.00	8,995	407.0	8,134	28,507	13,135

Device	Routing	Invert	Outlet Devices
#1	Primary	372.00'	**12.0" Round Culvert** L= 40.0' CPP, square edge headwall, Ke= 0.500 Outlet Invert= 370.00' S= 0.0500 '/' Cc= 0.900 n= 0.013
#2	Device 1	377.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Primary	378.50'	**Custom Weir/Orifice, Cv= 2.62 (C= 3.28)** Head (feet) 0.40 0.50 0.90 1.00 2.00 Width (feet) 1.00 1.00 1.00 1.00 1.00
#4	Device 1	379.00'	**15.0" x 15.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

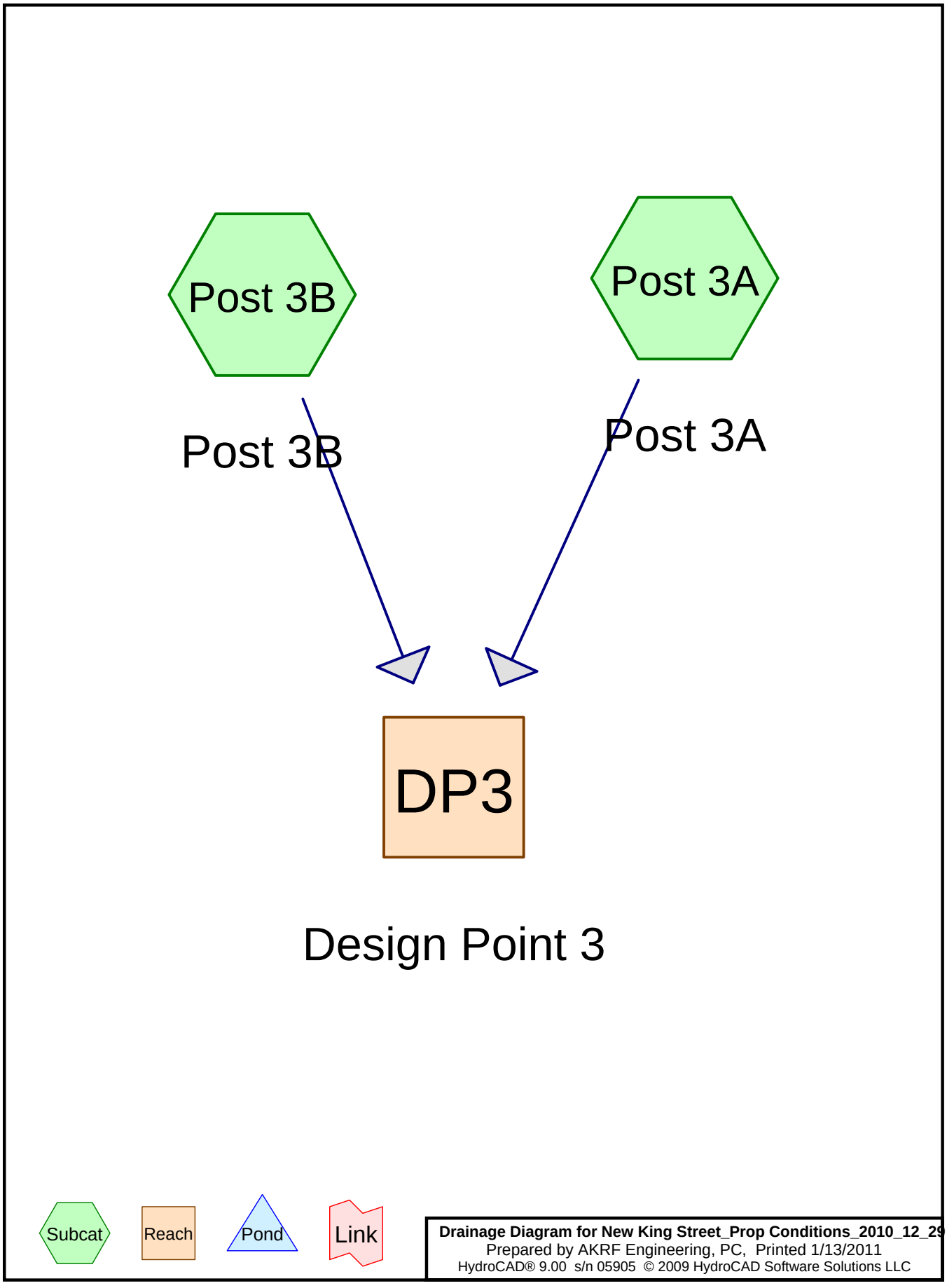
Primary OutFlow Max=9.67 cfs @ 12.21 hrs HW=379.80' TW=0.00' (Dynamic Tailwater)
- **1=Culvert** (Passes 6.87 cfs of 10.22 cfs potential flow)
  - **2=Orifice/Grate** (Orifice Controls 0.13 cfs @ 8.00 fps)
  - **4=Orifice/Grate** (Orifice Controls 6.74 cfs @ 4.31 fps)
- **3=Custom Weir/Orifice** (Weir Controls 2.80 cfs @ 3.11 fps)

Pond W-4: W-4 Pocket Wetland



Hydrograph for Pond W-4: W-4 Pocket Wetland

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	8,493	377.00	0.00
2.00	0.08	8,760	377.05	0.01
4.00	0.12	9,373	377.18	0.03
6.00	0.14	10,014	377.31	0.04
8.00	0.20	10,856	377.47	0.05
10.00	0.34	12,332	377.74	0.07
12.00	**17.15**	**23,817**	**379.45**	**6.38**
14.00	1.29	**21,445**	**379.14**	**1.41**
16.00	0.70	20,980	379.08	0.75
18.00	0.43	20,714	379.05	0.46
20.00	0.34	20,590	379.03	0.35
22.00	0.31	20,552	379.02	0.32
24.00	0.28	20,522	379.02	0.30
26.00	0.22	20,403	379.00	0.22
28.00	0.19	20,319	378.99	0.20
30.00	0.18	20,239	378.98	0.19
32.00	0.16	20,165	378.97	0.17
34.00	0.15	20,092	378.96	0.16
36.00	0.14	20,017	378.95	0.15
38.00	0.12	19,938	378.94	0.13
40.00	0.11	19,854	378.93	0.12
42.00	0.00	19,468	378.87	0.11
44.00	0.00	18,711	378.77	0.10
46.00	0.00	17,978	378.66	0.10
48.00	0.00	17,268	378.55	0.10
50.00	0.00	16,583	378.45	0.09
52.00	0.00	15,922	378.35	0.09
54.00	0.00	15,287	378.24	0.09
56.00	0.00	14,678	378.14	0.08
58.00	0.00	14,096	378.05	0.08
60.00	0.00	13,541	377.95	0.08
62.00	0.00	13,014	377.86	0.07
64.00	0.00	12,515	377.77	0.07
66.00	0.00	12,045	377.69	0.06
68.00	0.00	11,604	377.61	0.06
70.00	0.00	11,193	377.53	0.06
72.00	0.00	10,811	377.46	0.05



Drainage Diagram for New King Street_Prop Conditions_2010_12_29
Prepared by AKRF Engineering, PC, Printed 1/13/2011
HydroCAD® 9.00 s/n 05905 © 2009 HydroCAD Software Solutions LLC

Summary for Subcatchment Post 3A: Post 3A

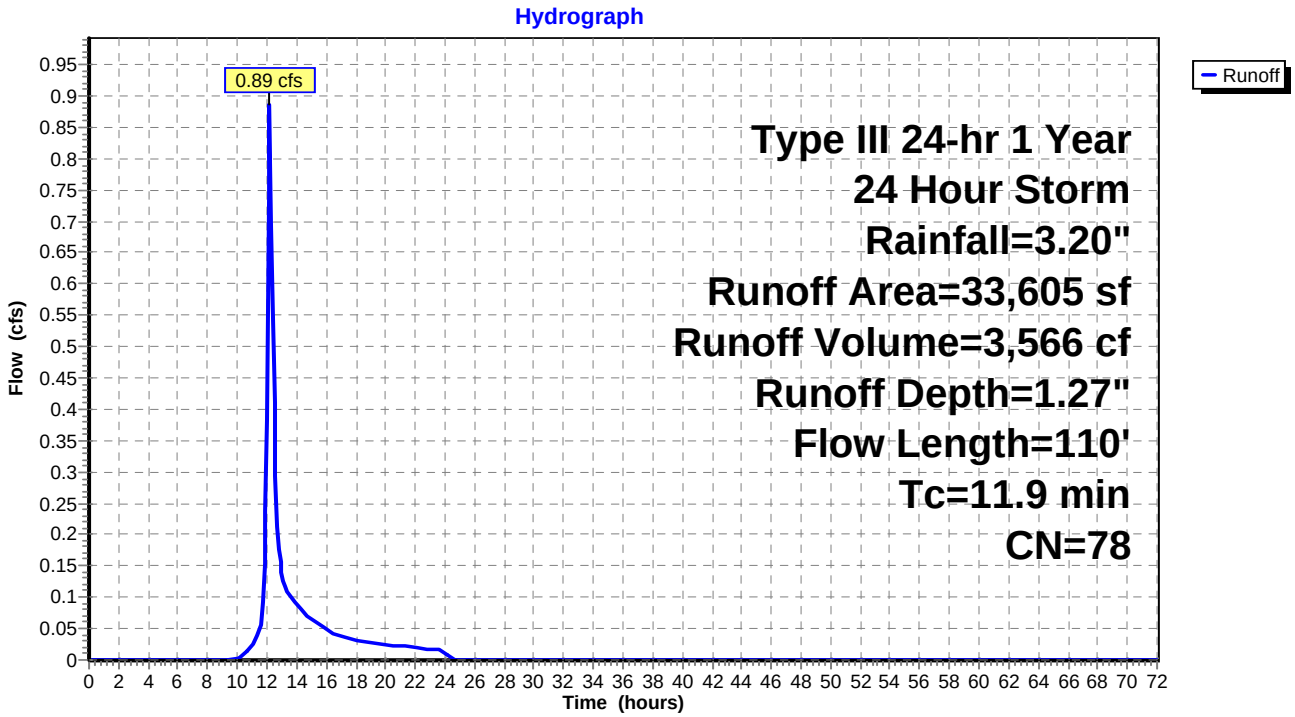
Runoff = 0.89 cfs @ 12.19 hrs, Volume= 3,566 cf, Depth= 1.27"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
3,842	98	Paved parking, HSG C
20,173	73	Woods, Fair, HSG C
9,590	79	50-75% Grass cover, Fair, HSG C
33,605	78	Weighted Average
29,763		88.57% Pervious Area
3,842		11.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	67	0.0600	0.25		**Sheet Flow, Landscaped** Grass: Short n= 0.150 P2= 3.50"
7.5	43	0.0460	0.10		**Sheet Flow, Wooded** Woods: Light underbrush n= 0.400 P2= 3.50"
11.9	110	Total			

Subcatchment Post 3A: Post 3A



Hydrograph for Subcatchment Post 3A: Post 3A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.02	0.02
12.00	1.60	0.28	**0.38**
13.00	2.40	0.72	**0.14**
14.00	2.60	0.85	0.09
15.00	2.73	0.94	0.07
16.00	2.84	1.01	0.05
17.00	2.91	1.07	0.04
18.00	2.97	1.11	0.03
19.00	3.02	1.14	0.03
20.00	3.06	1.17	0.02
21.00	3.10	1.20	0.02
22.00	3.14	1.23	0.02
23.00	3.17	1.25	0.02
24.00	**3.20**	**1.27**	0.02
25.00	3.20	1.27	0.00
26.00	3.20	1.27	0.00
27.00	3.20	1.27	0.00
28.00	3.20	1.27	0.00
29.00	3.20	1.27	0.00
30.00	3.20	1.27	0.00
31.00	3.20	1.27	0.00
32.00	3.20	1.27	0.00
33.00	3.20	1.27	0.00
34.00	3.20	1.27	0.00
35.00	3.20	1.27	0.00
36.00	3.20	1.27	0.00
37.00	3.20	1.27	0.00
38.00	3.20	1.27	0.00
39.00	3.20	1.27	0.00
40.00	3.20	1.27	0.00
41.00	3.20	1.27	0.00
42.00	3.20	1.27	0.00
43.00	3.20	1.27	0.00
44.00	3.20	1.27	0.00
45.00	3.20	1.27	0.00
46.00	3.20	1.27	0.00
47.00	3.20	1.27	0.00
48.00	3.20	1.27	0.00
49.00	3.20	1.27	0.00
50.00	3.20	1.27	0.00
51.00	3.20	1.27	0.00
52.00	3.20	1.27	0.00
53.00	3.20	1.27	0.00
54.00	3.20	1.27	0.00
55.00	3.20	1.27	0.00
56.00	3.20	1.27	0.00
57.00	3.20	1.27	0.00
58.00	3.20	1.27	0.00
59.00	3.20	1.27	0.00
60.00	3.20	1.27	0.00
61.00	3.20	1.27	0.00
62.00	3.20	1.27	0.00
63.00	3.20	1.27	0.00
64.00	3.20	1.27	0.00
65.00	3.20	1.27	0.00
66.00	3.20	1.27	0.00
67.00	3.20	1.27	0.00
68.00	3.20	1.27	0.00
69.00	3.20	1.27	0.00
70.00	3.20	1.27	0.00
71.00	3.20	1.27	0.00
72.00	3.20	1.27	0.00

Summary for Subcatchment Post 3B: Post 3B

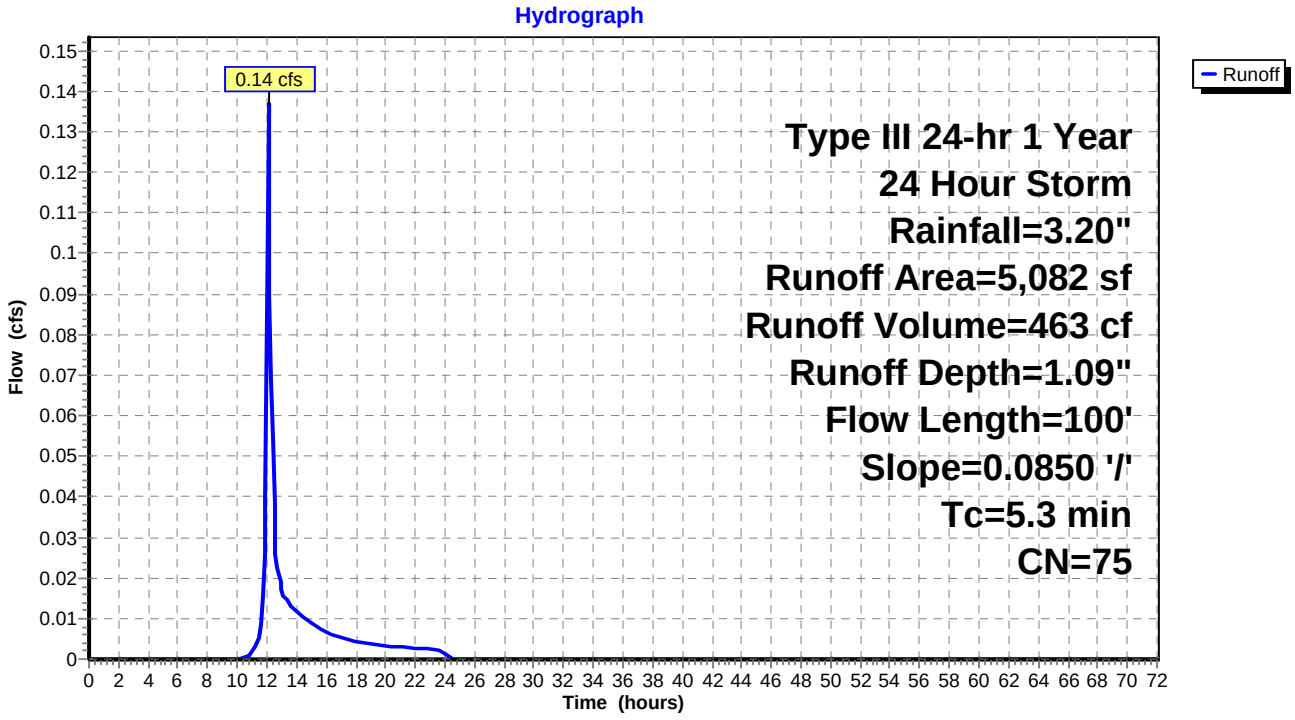
Runoff = 0.14 cfs @ 12.10 hrs, Volume= 463 cf, Depth= 1.09"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 1 Year, 24 Hour Storm Rainfall=3.20"

Area (sf)	CN	Description
3,044	73	Woods, Fair, HSG C
2,038	79	50-75% Grass cover, Fair, HSG C
5,082	75	Weighted Average
5,082		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0850	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Post 3B: Post 3B



Hydrograph for Subcatchment Post 3B: Post 3B

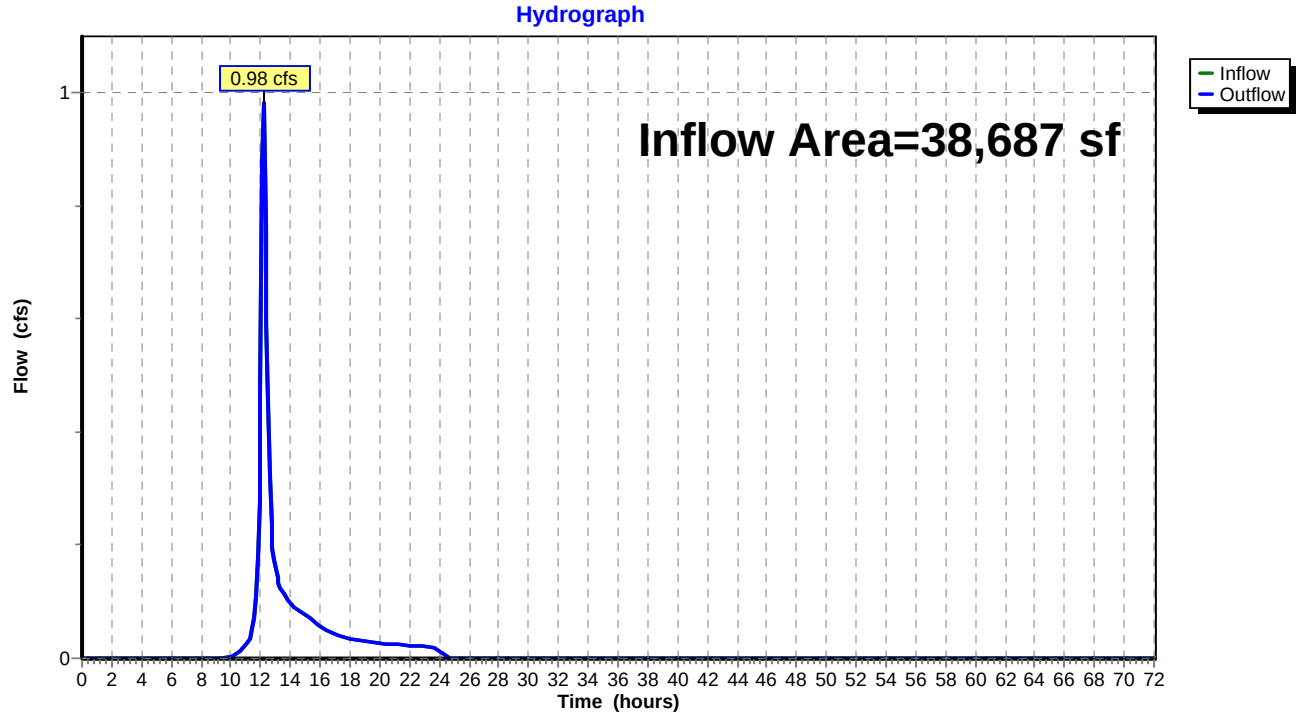
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00
2.00	0.06	0.00	0.00
3.00	0.10	0.00	0.00
4.00	0.14	0.00	0.00
5.00	0.18	0.00	0.00
6.00	0.23	0.00	0.00
7.00	0.29	0.00	0.00
8.00	0.36	0.00	0.00
9.00	0.47	0.00	0.00
10.00	0.60	0.00	0.00
11.00	0.80	0.01	0.00
12.00	1.60	0.20	**0.08**
13.00	2.40	0.59	**0.02**
14.00	2.60	0.71	0.01
15.00	2.73	0.79	0.01
16.00	2.84	0.85	0.01
17.00	2.91	0.90	0.01
18.00	2.97	0.94	0.00
19.00	3.02	0.97	0.00
20.00	3.06	1.00	0.00
21.00	3.10	1.03	0.00
22.00	3.14	1.05	0.00
23.00	3.17	1.07	0.00
24.00	**3.20**	**1.09**	0.00
25.00	3.20	1.09	0.00
26.00	3.20	1.09	0.00
27.00	3.20	1.09	0.00
28.00	3.20	1.09	0.00
29.00	3.20	1.09	0.00
30.00	3.20	1.09	0.00
31.00	3.20	1.09	0.00
32.00	3.20	1.09	0.00
33.00	3.20	1.09	0.00
34.00	3.20	1.09	0.00
35.00	3.20	1.09	0.00
36.00	3.20	1.09	0.00
37.00	3.20	1.09	0.00
38.00	3.20	1.09	0.00
39.00	3.20	1.09	0.00
40.00	3.20	1.09	0.00
41.00	3.20	1.09	0.00
42.00	3.20	1.09	0.00
43.00	3.20	1.09	0.00
44.00	3.20	1.09	0.00
45.00	3.20	1.09	0.00
46.00	3.20	1.09	0.00
47.00	3.20	1.09	0.00
48.00	3.20	1.09	0.00
49.00	3.20	1.09	0.00
50.00	3.20	1.09	0.00
51.00	3.20	1.09	0.00
52.00	3.20	1.09	0.00
53.00	3.20	1.09	0.00
54.00	3.20	1.09	0.00
55.00	3.20	1.09	0.00
56.00	3.20	1.09	0.00
57.00	3.20	1.09	0.00
58.00	3.20	1.09	0.00
59.00	3.20	1.09	0.00
60.00	3.20	1.09	0.00
61.00	3.20	1.09	0.00
62.00	3.20	1.09	0.00
63.00	3.20	1.09	0.00
64.00	3.20	1.09	0.00
65.00	3.20	1.09	0.00
66.00	3.20	1.09	0.00
67.00	3.20	1.09	0.00
68.00	3.20	1.09	0.00
69.00	3.20	1.09	0.00
70.00	3.20	1.09	0.00
71.00	3.20	1.09	0.00
72.00	3.20	1.09	0.00

Summary for Reach DP3: Design Point 3

Inflow Area = 38,687 sf, 9.93% Impervious, Inflow Depth = 1.25" for 1 Year, 24 Hour Storm event
Inflow = 0.98 cfs @ 12.18 hrs, Volume= 4,029 cf
Outflow = 0.98 cfs @ 12.18 hrs, Volume= 4,029 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.00		0.00	60.00	0.00		0.00
9.00	0.00		0.00	61.00	0.00		0.00
10.00	0.00		0.00	62.00	0.00		0.00
11.00	0.02		0.02	63.00	0.00		0.00
12.00	**0.47**		**0.47**	64.00	0.00		0.00
13.00	**0.16**		**0.16**	65.00	0.00		0.00
14.00	0.10		0.10	66.00	0.00		0.00
15.00	0.08		0.08	67.00	0.00		0.00
16.00	0.05		0.05	68.00	0.00		0.00
17.00	0.04		0.04	69.00	0.00		0.00
18.00	0.03		0.03	70.00	0.00		0.00
19.00	0.03		0.03	71.00	0.00		0.00
20.00	0.03		0.03	72.00	0.00		0.00
21.00	0.02		0.02				
22.00	0.02		0.02				
23.00	0.02		0.02				
24.00	0.02		0.02				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 3A: Post 3A

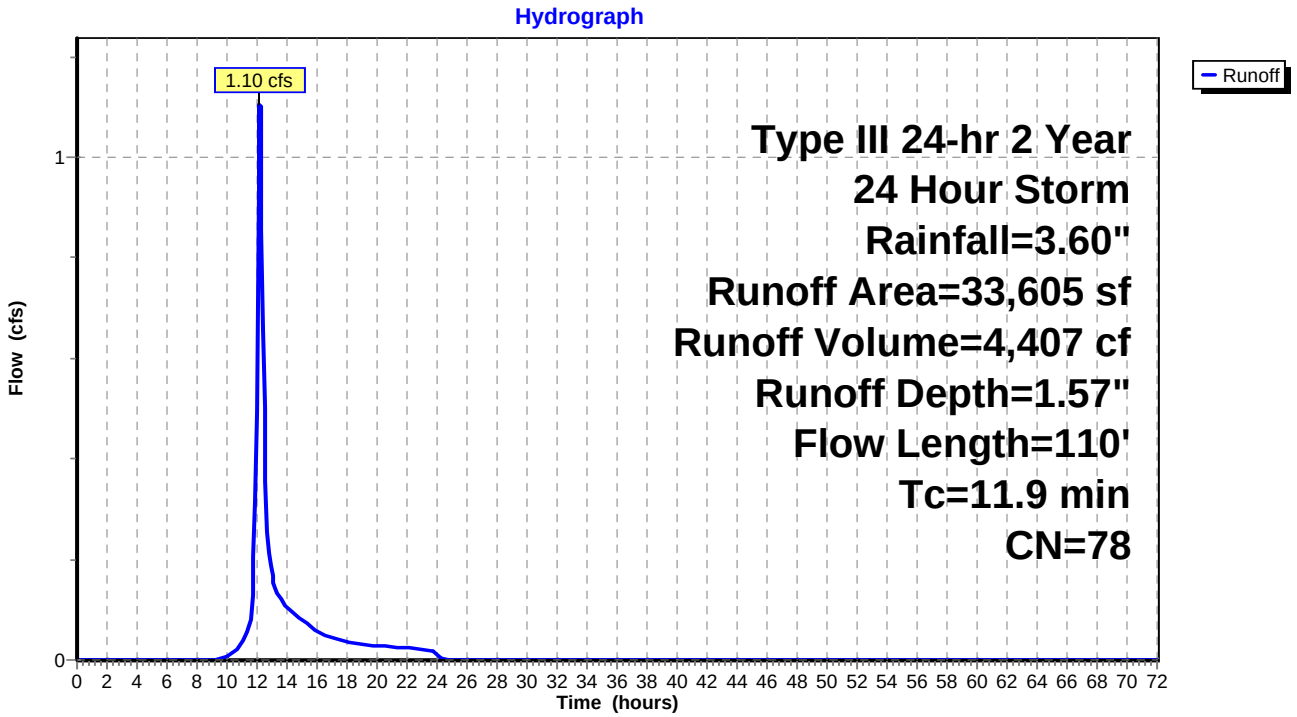
Runoff = 1.10 cfs @ 12.19 hrs, Volume= 4,407 cf, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
3,842	98	Paved parking, HSG C
20,173	73	Woods, Fair, HSG C
9,590	79	50-75% Grass cover, Fair, HSG C
33,605	78	Weighted Average
29,763		88.57% Pervious Area
3,842		11.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	67	0.0600	0.25		**Sheet Flow, Landscaped** Grass: Short n= 0.150 P2= 3.50"
7.5	43	0.0460	0.10		**Sheet Flow, Wooded** Woods: Light underbrush n= 0.400 P2= 3.50"
11.9	110	Total			

Subcatchment Post 3A: Post 3A



Hydrograph for Subcatchment Post 3A: Post 3A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.68	0.00	0.01
11.00	0.90	0.04	0.03
12.00	1.80	0.38	**0.49**
13.00	2.70	0.92	**0.17**
14.00	2.92	1.07	0.10
15.00	3.08	1.18	0.08
16.00	3.19	1.27	0.06
17.00	3.27	1.33	0.05
18.00	3.34	1.38	0.04
19.00	3.40	1.42	0.03
20.00	3.45	1.46	0.03
21.00	3.49	1.49	0.03
22.00	3.53	1.52	0.02
23.00	3.57	1.55	0.02
24.00	**3.60**	**1.57**	0.02
25.00	3.60	1.57	0.00
26.00	3.60	1.57	0.00
27.00	3.60	1.57	0.00
28.00	3.60	1.57	0.00
29.00	3.60	1.57	0.00
30.00	3.60	1.57	0.00
31.00	3.60	1.57	0.00
32.00	3.60	1.57	0.00
33.00	3.60	1.57	0.00
34.00	3.60	1.57	0.00
35.00	3.60	1.57	0.00
36.00	3.60	1.57	0.00
37.00	3.60	1.57	0.00
38.00	3.60	1.57	0.00
39.00	3.60	1.57	0.00
40.00	3.60	1.57	0.00
41.00	3.60	1.57	0.00
42.00	3.60	1.57	0.00
43.00	3.60	1.57	0.00
44.00	3.60	1.57	0.00
45.00	3.60	1.57	0.00
46.00	3.60	1.57	0.00
47.00	3.60	1.57	0.00
48.00	3.60	1.57	0.00
49.00	3.60	1.57	0.00
50.00	3.60	1.57	0.00
51.00	3.60	1.57	0.00
52.00	3.60	1.57	0.00
53.00	3.60	1.57	0.00
54.00	3.60	1.57	0.00
55.00	3.60	1.57	0.00
56.00	3.60	1.57	0.00
57.00	3.60	1.57	0.00
58.00	3.60	1.57	0.00
59.00	3.60	1.57	0.00
60.00	3.60	1.57	0.00
61.00	3.60	1.57	0.00
62.00	3.60	1.57	0.00
63.00	3.60	1.57	0.00
64.00	3.60	1.57	0.00
65.00	3.60	1.57	0.00
66.00	3.60	1.57	0.00
67.00	3.60	1.57	0.00
68.00	3.60	1.57	0.00
69.00	3.60	1.57	0.00
70.00	3.60	1.57	0.00
71.00	3.60	1.57	0.00
72.00	3.60	1.57	0.00

Summary for Subcatchment Post 3B: Post 3B

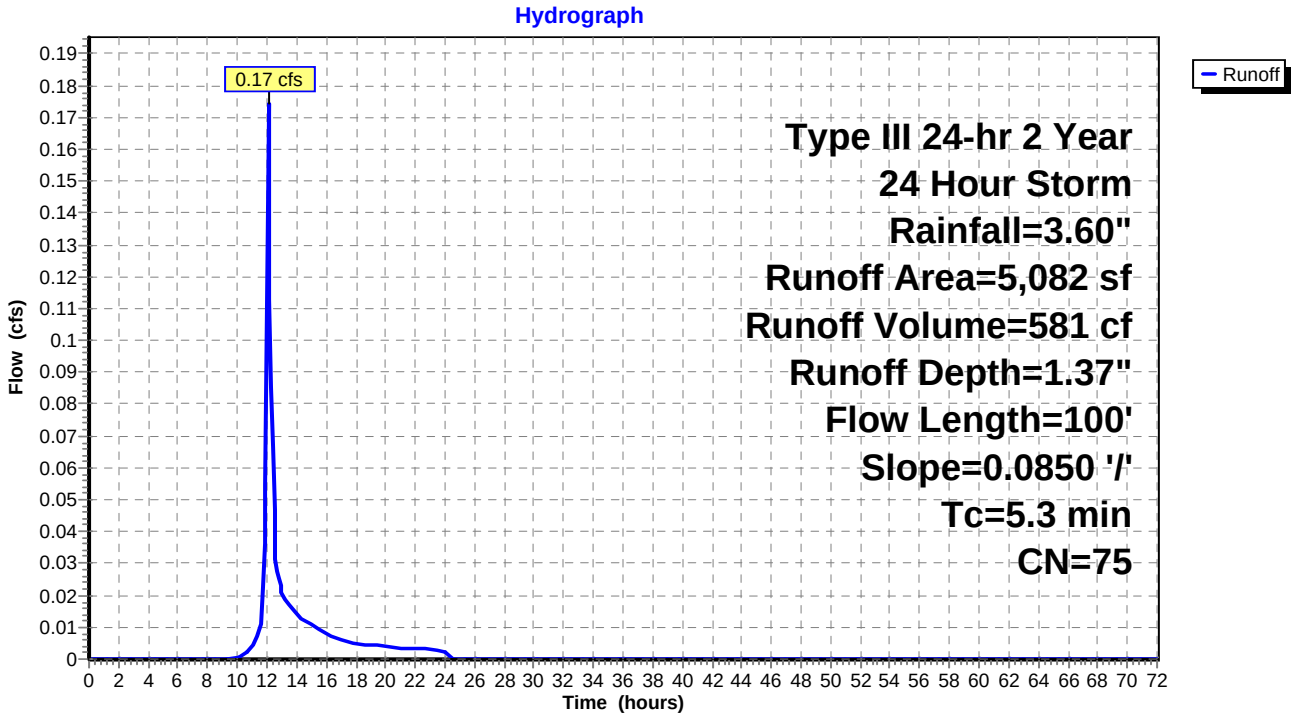
Runoff = 0.17 cfs @ 12.10 hrs, Volume= 581 cf, Depth= 1.37"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 2 Year, 24 Hour Storm Rainfall=3.60"

Area (sf)	CN	Description
3,044	73	Woods, Fair, HSG C
2,038	79	50-75% Grass cover, Fair, HSG C
5,082	75	Weighted Average
5,082		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0850	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Post 3B: Post 3B



Hydrograph for Subcatchment Post 3B: Post 3B

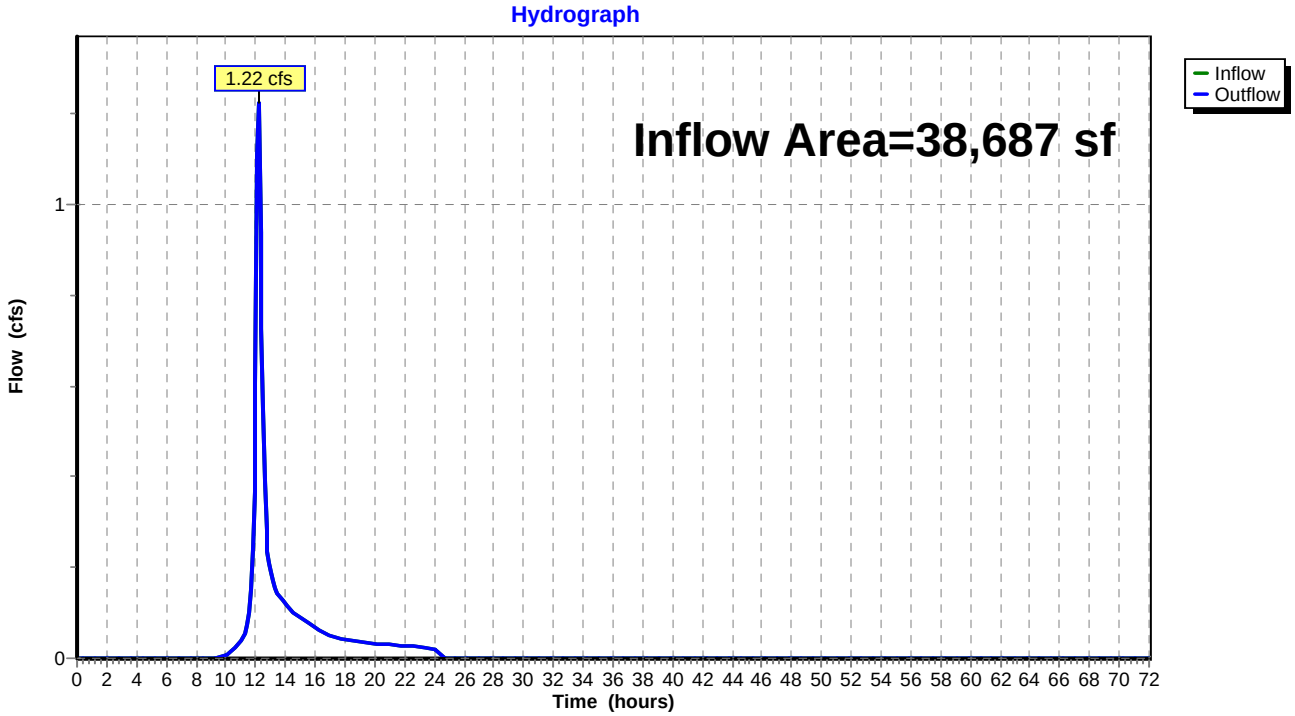
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00
2.00	0.07	0.00	0.00
3.00	0.11	0.00	0.00
4.00	0.15	0.00	0.00
5.00	0.20	0.00	0.00
6.00	0.26	0.00	0.00
7.00	0.33	0.00	0.00
8.00	0.41	0.00	0.00
9.00	0.52	0.00	0.00
10.00	0.68	0.00	0.00
11.00	0.90	0.02	0.00
12.00	1.80	0.29	**0.11**
13.00	2.70	0.77	**0.02**
14.00	2.92	0.91	0.01
15.00	3.08	1.01	0.01
16.00	3.19	1.09	0.01
17.00	3.27	1.14	0.01
18.00	3.34	1.19	0.00
19.00	3.40	1.23	0.00
20.00	3.45	1.26	0.00
21.00	3.49	1.29	0.00
22.00	3.53	1.32	0.00
23.00	3.57	1.35	0.00
24.00	**3.60**	**1.37**	0.00
25.00	3.60	1.37	0.00
26.00	3.60	1.37	0.00
27.00	3.60	1.37	0.00
28.00	3.60	1.37	0.00
29.00	3.60	1.37	0.00
30.00	3.60	1.37	0.00
31.00	3.60	1.37	0.00
32.00	3.60	1.37	0.00
33.00	3.60	1.37	0.00
34.00	3.60	1.37	0.00
35.00	3.60	1.37	0.00
36.00	3.60	1.37	0.00
37.00	3.60	1.37	0.00
38.00	3.60	1.37	0.00
39.00	3.60	1.37	0.00
40.00	3.60	1.37	0.00
41.00	3.60	1.37	0.00
42.00	3.60	1.37	0.00
43.00	3.60	1.37	0.00
44.00	3.60	1.37	0.00
45.00	3.60	1.37	0.00
46.00	3.60	1.37	0.00
47.00	3.60	1.37	0.00
48.00	3.60	1.37	0.00
49.00	3.60	1.37	0.00
50.00	3.60	1.37	0.00
51.00	3.60	1.37	0.00
52.00	3.60	1.37	0.00
53.00	3.60	1.37	0.00
54.00	3.60	1.37	0.00
55.00	3.60	1.37	0.00
56.00	3.60	1.37	0.00
57.00	3.60	1.37	0.00
58.00	3.60	1.37	0.00
59.00	3.60	1.37	0.00
60.00	3.60	1.37	0.00
61.00	3.60	1.37	0.00
62.00	3.60	1.37	0.00
63.00	3.60	1.37	0.00
64.00	3.60	1.37	0.00
65.00	3.60	1.37	0.00
66.00	3.60	1.37	0.00
67.00	3.60	1.37	0.00
68.00	3.60	1.37	0.00
69.00	3.60	1.37	0.00
70.00	3.60	1.37	0.00
71.00	3.60	1.37	0.00
72.00	3.60	1.37	0.00

Summary for Reach DP3: Design Point 3

Inflow Area = 38,687 sf, 9.93% Impervious, Inflow Depth = 1.55" for 2 Year, 24 Hour Storm event
Inflow = 1.22 cfs @ 12.18 hrs, Volume= 4,989 cf
Outflow = 1.22 cfs @ 12.18 hrs, Volume= 4,989 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.00		0.00	60.00	0.00		0.00
9.00	0.00		0.00	61.00	0.00		0.00
10.00	0.01		0.01	62.00	0.00		0.00
11.00	0.04		0.04	63.00	0.00		0.00
12.00	**0.61**		**0.61**	64.00	0.00		0.00
13.00	**0.19**		**0.19**	65.00	0.00		0.00
14.00	0.12		0.12	66.00	0.00		0.00
15.00	0.09		0.09	67.00	0.00		0.00
16.00	0.07		0.07	68.00	0.00		0.00
17.00	0.05		0.05	69.00	0.00		0.00
18.00	0.04		0.04	70.00	0.00		0.00
19.00	0.04		0.04	71.00	0.00		0.00
20.00	0.03		0.03	72.00	0.00		0.00
21.00	0.03		0.03				
22.00	0.03		0.03				
23.00	0.02		0.02				
24.00	0.02		0.02				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 3A: Post 3A

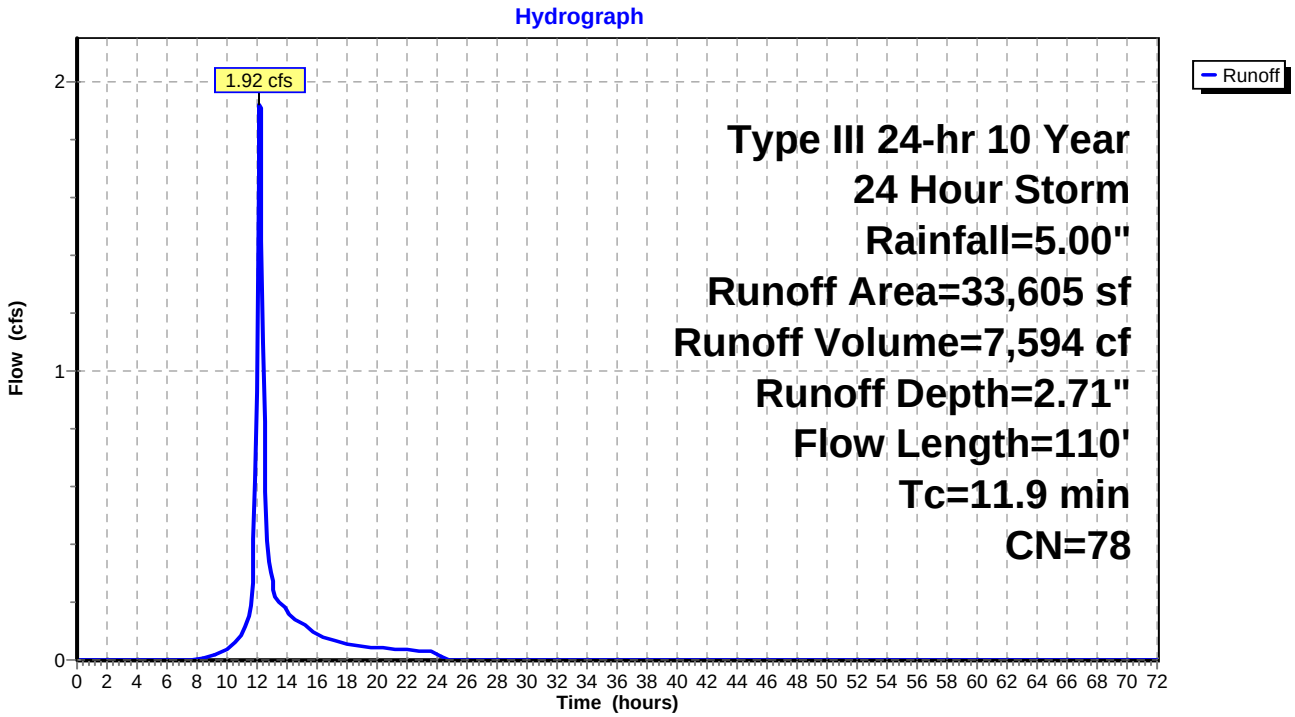
Runoff = 1.92 cfs @ 12.18 hrs, Volume= 7,594 cf, Depth= 2.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
3,842	98	Paved parking, HSG C
20,173	73	Woods, Fair, HSG C
9,590	79	50-75% Grass cover, Fair, HSG C
33,605	78	Weighted Average
29,763		88.57% Pervious Area
3,842		11.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	67	0.0600	0.25		**Sheet Flow, Landscaped** Grass: Short n= 0.150 P2= 3.50"
7.5	43	0.0460	0.10		**Sheet Flow, Wooded** Woods: Light underbrush n= 0.400 P2= 3.50"
11.9	110	Total			

Subcatchment Post 3A: Post 3A



Hydrograph for Subcatchment Post 3A: Post 3A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.00	0.00
8.00	0.57	0.00	0.00
9.00	0.73	0.01	0.01
10.00	0.95	0.05	0.04
11.00	1.25	0.13	0.09
12.00	2.50	0.79	**0.93**
13.00	3.75	1.69	**0.27**
14.00	4.06	1.93	0.17
15.00	4.27	2.11	0.12
16.00	4.43	2.24	0.09
17.00	4.55	2.33	0.07
18.00	4.64	2.41	0.05
19.00	4.72	2.47	0.05
20.00	4.79	2.53	0.04
21.00	4.85	2.58	0.04
22.00	4.90	2.63	0.04
23.00	4.95	2.67	0.03
24.00	**5.00**	**2.71**	0.03
25.00	5.00	2.71	0.00
26.00	5.00	2.71	0.00
27.00	5.00	2.71	0.00
28.00	5.00	2.71	0.00
29.00	5.00	2.71	0.00
30.00	5.00	2.71	0.00
31.00	5.00	2.71	0.00
32.00	5.00	2.71	0.00
33.00	5.00	2.71	0.00
34.00	5.00	2.71	0.00
35.00	5.00	2.71	0.00
36.00	5.00	2.71	0.00
37.00	5.00	2.71	0.00
38.00	5.00	2.71	0.00
39.00	5.00	2.71	0.00
40.00	5.00	2.71	0.00
41.00	5.00	2.71	0.00
42.00	5.00	2.71	0.00
43.00	5.00	2.71	0.00
44.00	5.00	2.71	0.00
45.00	5.00	2.71	0.00
46.00	5.00	2.71	0.00
47.00	5.00	2.71	0.00
48.00	5.00	2.71	0.00
49.00	5.00	2.71	0.00
50.00	5.00	2.71	0.00
51.00	5.00	2.71	0.00
52.00	5.00	2.71	0.00
53.00	5.00	2.71	0.00
54.00	5.00	2.71	0.00
55.00	5.00	2.71	0.00
56.00	5.00	2.71	0.00
57.00	5.00	2.71	0.00
58.00	5.00	2.71	0.00
59.00	5.00	2.71	0.00
60.00	5.00	2.71	0.00
61.00	5.00	2.71	0.00
62.00	5.00	2.71	0.00
63.00	5.00	2.71	0.00
64.00	5.00	2.71	0.00
65.00	5.00	2.71	0.00
66.00	5.00	2.71	0.00
67.00	5.00	2.71	0.00
68.00	5.00	2.71	0.00
69.00	5.00	2.71	0.00
70.00	5.00	2.71	0.00
71.00	5.00	2.71	0.00
72.00	5.00	2.71	0.00

Summary for Subcatchment Post 3B: Post 3B

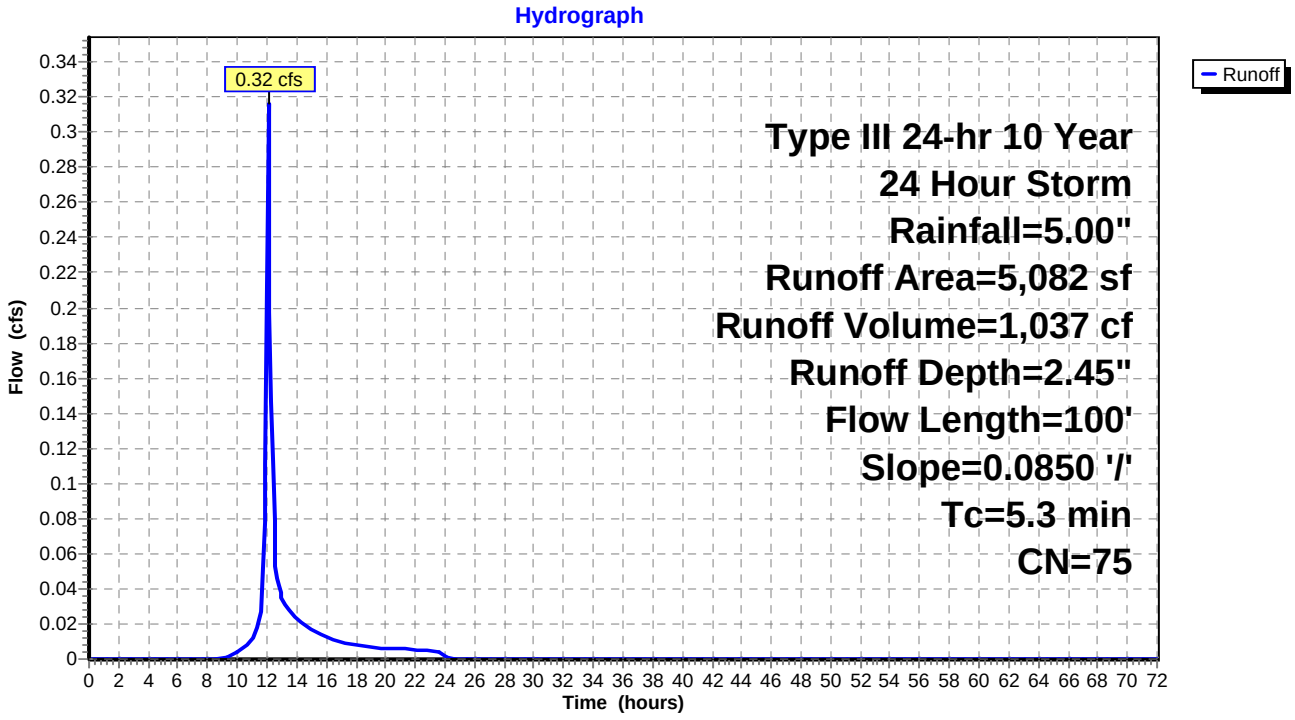
Runoff = 0.32 cfs @ 12.10 hrs, Volume= 1,037 cf, Depth= 2.45"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 10 Year, 24 Hour Storm Rainfall=5.00"

Area (sf)	CN	Description
3,044	73	Woods, Fair, HSG C
2,038	79	50-75% Grass cover, Fair, HSG C
5,082	75	Weighted Average
5,082		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0850	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Post 3B: Post 3B



Hydrograph for Subcatchment Post 3B: Post 3B

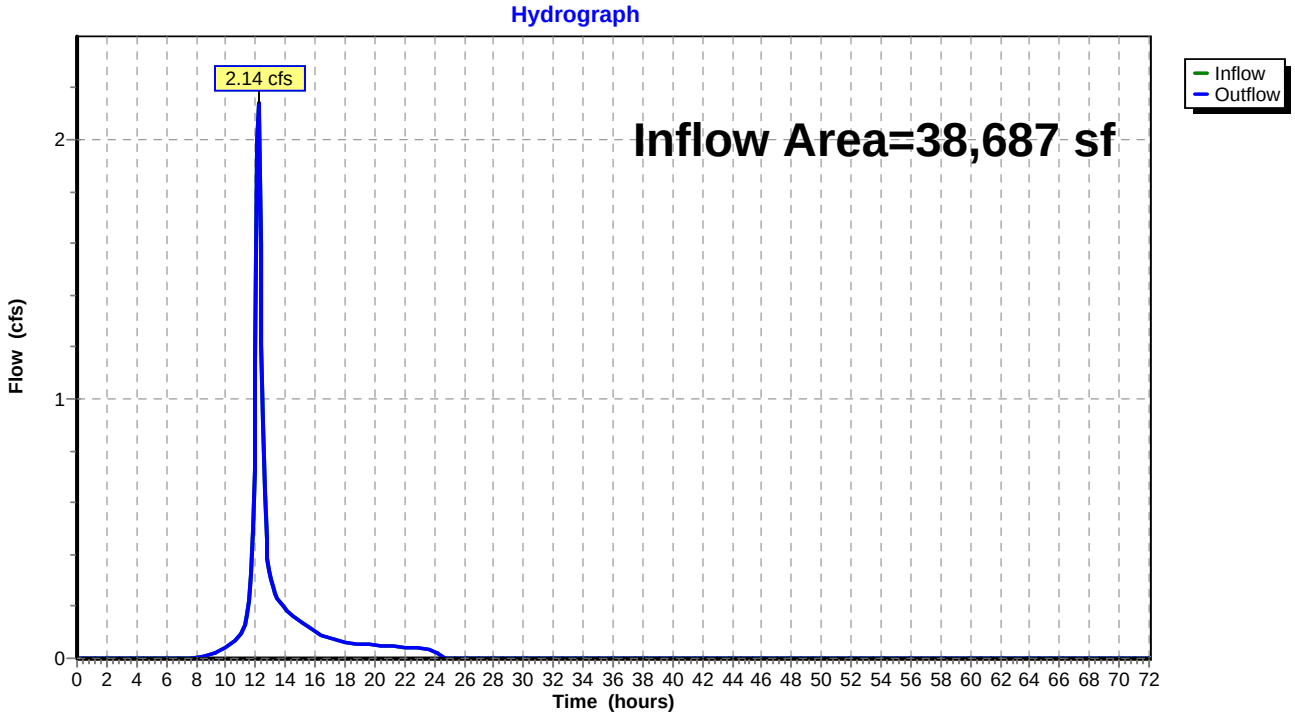
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00
2.00	0.10	0.00	0.00
3.00	0.15	0.00	0.00
4.00	0.22	0.00	0.00
5.00	0.28	0.00	0.00
6.00	0.36	0.00	0.00
7.00	0.45	0.00	0.00
8.00	0.57	0.00	0.00
9.00	0.73	0.00	0.00
10.00	0.95	0.02	0.00
11.00	1.25	0.09	0.01
12.00	2.50	0.65	**0.21**
13.00	3.75	1.48	**0.03**
14.00	4.06	1.71	0.02
15.00	4.27	1.87	0.02
16.00	4.43	2.00	0.01
17.00	4.55	2.09	0.01
18.00	4.64	2.16	0.01
19.00	4.72	2.22	0.01
20.00	4.79	2.28	0.01
21.00	4.85	2.33	0.01
22.00	4.90	2.37	0.01
23.00	4.95	2.41	0.00
24.00	**5.00**	**2.45**	0.00
25.00	5.00	2.45	0.00
26.00	5.00	2.45	0.00
27.00	5.00	2.45	0.00
28.00	5.00	2.45	0.00
29.00	5.00	2.45	0.00
30.00	5.00	2.45	0.00
31.00	5.00	2.45	0.00
32.00	5.00	2.45	0.00
33.00	5.00	2.45	0.00
34.00	5.00	2.45	0.00
35.00	5.00	2.45	0.00
36.00	5.00	2.45	0.00
37.00	5.00	2.45	0.00
38.00	5.00	2.45	0.00
39.00	5.00	2.45	0.00
40.00	5.00	2.45	0.00
41.00	5.00	2.45	0.00
42.00	5.00	2.45	0.00
43.00	5.00	2.45	0.00
44.00	5.00	2.45	0.00
45.00	5.00	2.45	0.00
46.00	5.00	2.45	0.00
47.00	5.00	2.45	0.00
48.00	5.00	2.45	0.00
49.00	5.00	2.45	0.00
50.00	5.00	2.45	0.00
51.00	5.00	2.45	0.00
52.00	5.00	2.45	0.00
53.00	5.00	2.45	0.00
54.00	5.00	2.45	0.00
55.00	5.00	2.45	0.00
56.00	5.00	2.45	0.00
57.00	5.00	2.45	0.00
58.00	5.00	2.45	0.00
59.00	5.00	2.45	0.00
60.00	5.00	2.45	0.00
61.00	5.00	2.45	0.00
62.00	5.00	2.45	0.00
63.00	5.00	2.45	0.00
64.00	5.00	2.45	0.00
65.00	5.00	2.45	0.00
66.00	5.00	2.45	0.00
67.00	5.00	2.45	0.00
68.00	5.00	2.45	0.00
69.00	5.00	2.45	0.00
70.00	5.00	2.45	0.00
71.00	5.00	2.45	0.00
72.00	5.00	2.45	0.00

Summary for Reach DP3: Design Point 3

Inflow Area = 38,687 sf, 9.93% Impervious, Inflow Depth = 2.68" for 10 Year, 24 Hour Storm event
Inflow = 2.14 cfs @ 12.17 hrs, Volume= 8,631 cf
Outflow = 2.14 cfs @ 12.17 hrs, Volume= 8,631 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.00		0.00	59.00	0.00		0.00
8.00	0.00		0.00	60.00	0.00		0.00
9.00	0.01		0.01	61.00	0.00		0.00
10.00	0.04		0.04	62.00	0.00		0.00
11.00	0.10		0.10	63.00	0.00		0.00
12.00	**1.14**		**1.14**	64.00	0.00		0.00
13.00	**0.31**		**0.31**	65.00	0.00		0.00
14.00	0.19		0.19	66.00	0.00		0.00
15.00	0.14		0.14	67.00	0.00		0.00
16.00	0.10		0.10	68.00	0.00		0.00
17.00	0.08		0.08	69.00	0.00		0.00
18.00	0.06		0.06	70.00	0.00		0.00
19.00	0.05		0.05	71.00	0.00		0.00
20.00	0.05		0.05	72.00	0.00		0.00
21.00	0.05		0.05				
22.00	0.04		0.04				
23.00	0.04		0.04				
24.00	0.03		0.03				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 3A: Post 3A

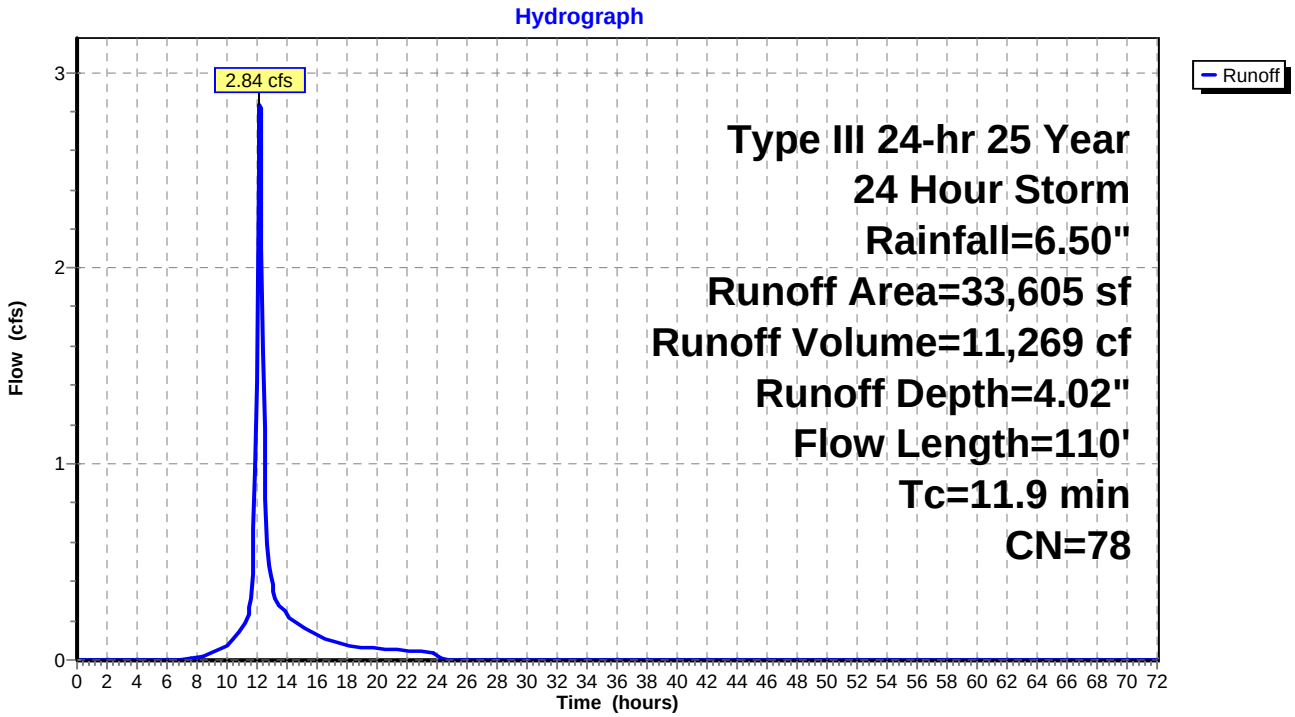
Runoff = 2.84 cfs @ 12.18 hrs, Volume= 11,269 cf, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
3,842	98	Paved parking, HSG C
20,173	73	Woods, Fair, HSG C
9,590	79	50-75% Grass cover, Fair, HSG C
33,605	78	Weighted Average
29,763		88.57% Pervious Area
3,842		11.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	67	0.0600	0.25		**Sheet Flow, Landscaped** Grass: Short n= 0.150 P2= 3.50"
7.5	43	0.0460	0.10		**Sheet Flow, Wooded** Woods: Light underbrush n= 0.400 P2= 3.50"
11.9	110	Total			

Subcatchment Post 3A: Post 3A



Hydrograph for Subcatchment Post 3A: Post 3A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.28	0.00	0.00
5.00	0.37	0.00	0.00
6.00	0.47	0.00	0.00
7.00	0.59	0.00	0.00
8.00	0.74	0.01	0.01
9.00	0.95	0.05	0.04
10.00	1.23	0.13	0.08
11.00	1.63	0.29	0.16
12.00	3.25	1.31	**1.43**
13.00	4.87	2.61	**0.38**
14.00	5.27	2.94	0.23
15.00	5.55	3.19	0.17
16.00	5.76	3.37	0.12
17.00	5.91	3.50	0.10
18.00	6.03	3.61	0.08
19.00	6.13	3.69	0.07
20.00	6.22	3.77	0.06
21.00	6.30	3.85	0.05
22.00	6.37	3.91	0.05
23.00	6.44	3.97	0.04
24.00	**6.50**	**4.02**	0.04
25.00	6.50	4.02	0.00
26.00	6.50	4.02	0.00
27.00	6.50	4.02	0.00
28.00	6.50	4.02	0.00
29.00	6.50	4.02	0.00
30.00	6.50	4.02	0.00
31.00	6.50	4.02	0.00
32.00	6.50	4.02	0.00
33.00	6.50	4.02	0.00
34.00	6.50	4.02	0.00
35.00	6.50	4.02	0.00
36.00	6.50	4.02	0.00
37.00	6.50	4.02	0.00
38.00	6.50	4.02	0.00
39.00	6.50	4.02	0.00
40.00	6.50	4.02	0.00
41.00	6.50	4.02	0.00
42.00	6.50	4.02	0.00
43.00	6.50	4.02	0.00
44.00	6.50	4.02	0.00
45.00	6.50	4.02	0.00
46.00	6.50	4.02	0.00
47.00	6.50	4.02	0.00
48.00	6.50	4.02	0.00
49.00	6.50	4.02	0.00
50.00	6.50	4.02	0.00
51.00	6.50	4.02	0.00
52.00	6.50	4.02	0.00
53.00	6.50	4.02	0.00
54.00	6.50	4.02	0.00
55.00	6.50	4.02	0.00
56.00	6.50	4.02	0.00
57.00	6.50	4.02	0.00
58.00	6.50	4.02	0.00
59.00	6.50	4.02	0.00
60.00	6.50	4.02	0.00
61.00	6.50	4.02	0.00
62.00	6.50	4.02	0.00
63.00	6.50	4.02	0.00
64.00	6.50	4.02	0.00
65.00	6.50	4.02	0.00
66.00	6.50	4.02	0.00
67.00	6.50	4.02	0.00
68.00	6.50	4.02	0.00
69.00	6.50	4.02	0.00
70.00	6.50	4.02	0.00
71.00	6.50	4.02	0.00
72.00	6.50	4.02	0.00

Summary for Subcatchment Post 3B: Post 3B

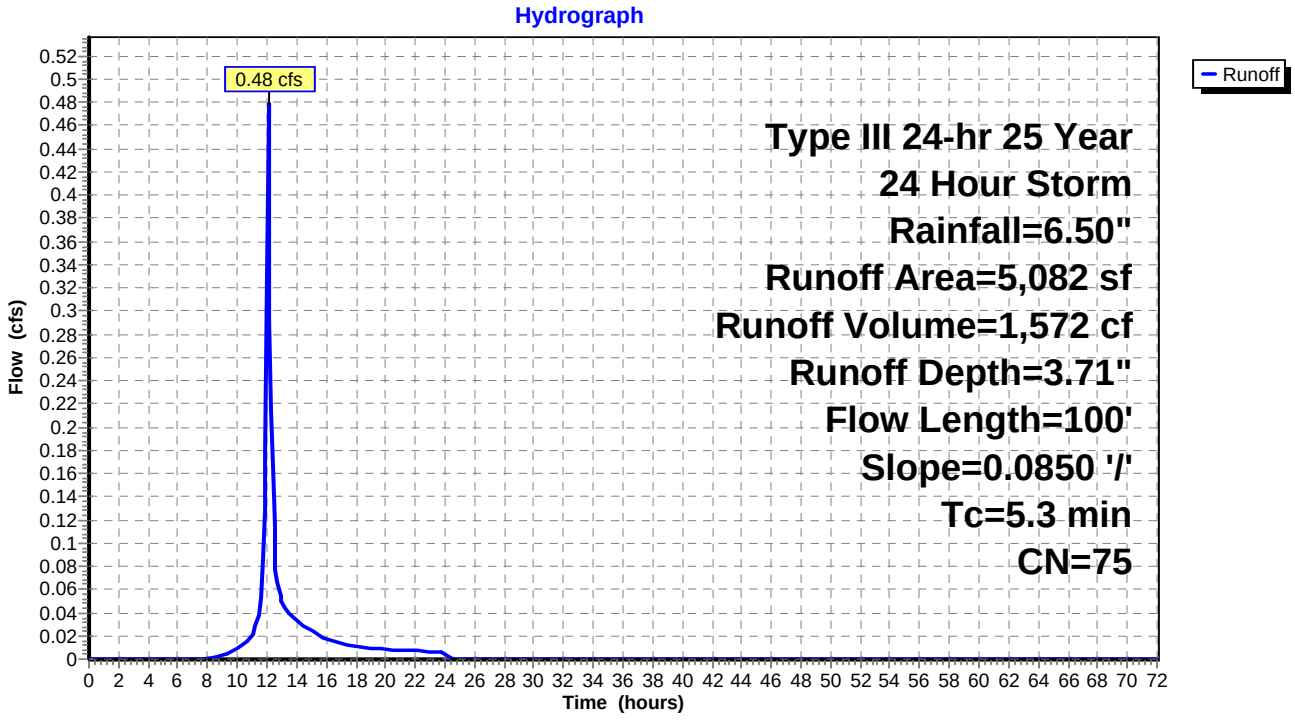
Runoff = 0.48 cfs @ 12.09 hrs, Volume= 1,572 cf, Depth= 3.71"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 25 Year, 24 Hour Storm Rainfall=6.50"

Area (sf)	CN	Description
3,044	73	Woods, Fair, HSG C
2,038	79	50-75% Grass cover, Fair, HSG C
5,082	75	Weighted Average
5,082		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0850	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Post 3B: Post 3B



Hydrograph for Subcatchment Post 3B: Post 3B

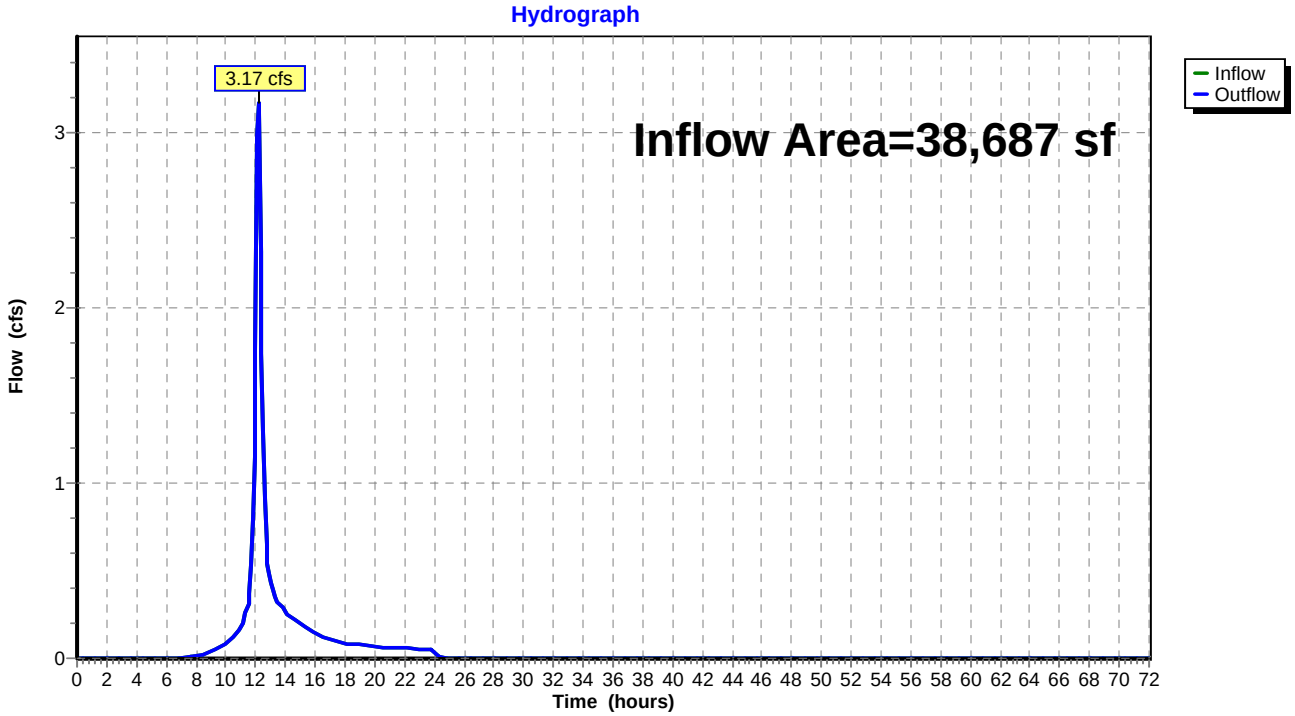
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00
2.00	0.13	0.00	0.00
3.00	0.20	0.00	0.00
4.00	0.28	0.00	0.00
5.00	0.37	0.00	0.00
6.00	0.47	0.00	0.00
7.00	0.59	0.00	0.00
8.00	0.74	0.00	0.00
9.00	0.95	0.02	0.00
10.00	1.23	0.08	0.01
11.00	1.63	0.21	0.02
12.00	3.25	1.13	**0.33**
13.00	4.87	2.35	**0.05**
14.00	5.27	2.67	0.03
15.00	5.55	2.90	0.02
16.00	5.76	3.08	0.02
17.00	5.91	3.21	0.01
18.00	6.03	3.31	0.01
19.00	6.13	3.39	0.01
20.00	6.22	3.47	0.01
21.00	6.30	3.54	0.01
22.00	6.37	3.60	0.01
23.00	6.44	3.66	0.01
24.00	**6.50**	**3.71**	0.01
25.00	6.50	3.71	0.00
26.00	6.50	3.71	0.00
27.00	6.50	3.71	0.00
28.00	6.50	3.71	0.00
29.00	6.50	3.71	0.00
30.00	6.50	3.71	0.00
31.00	6.50	3.71	0.00
32.00	6.50	3.71	0.00
33.00	6.50	3.71	0.00
34.00	6.50	3.71	0.00
35.00	6.50	3.71	0.00
36.00	6.50	3.71	0.00
37.00	6.50	3.71	0.00
38.00	6.50	3.71	0.00
39.00	6.50	3.71	0.00
40.00	6.50	3.71	0.00
41.00	6.50	3.71	0.00
42.00	6.50	3.71	0.00
43.00	6.50	3.71	0.00
44.00	6.50	3.71	0.00
45.00	6.50	3.71	0.00
46.00	6.50	3.71	0.00
47.00	6.50	3.71	0.00
48.00	6.50	3.71	0.00
49.00	6.50	3.71	0.00
50.00	6.50	3.71	0.00
51.00	6.50	3.71	0.00
52.00	6.50	3.71	0.00
53.00	6.50	3.71	0.00
54.00	6.50	3.71	0.00
55.00	6.50	3.71	0.00
56.00	6.50	3.71	0.00
57.00	6.50	3.71	0.00
58.00	6.50	3.71	0.00
59.00	6.50	3.71	0.00
60.00	6.50	3.71	0.00
61.00	6.50	3.71	0.00
62.00	6.50	3.71	0.00
63.00	6.50	3.71	0.00
64.00	6.50	3.71	0.00
65.00	6.50	3.71	0.00
66.00	6.50	3.71	0.00
67.00	6.50	3.71	0.00
68.00	6.50	3.71	0.00
69.00	6.50	3.71	0.00
70.00	6.50	3.71	0.00
71.00	6.50	3.71	0.00
72.00	6.50	3.71	0.00

Summary for Reach DP3: Design Point 3

Inflow Area = 38,687 sf, 9.93% Impervious, Inflow Depth = 3.98" for 25 Year, 24 Hour Storm event
Inflow = 3.17 cfs @ 12.16 hrs, Volume= 12,841 cf
Outflow = 3.17 cfs @ 12.16 hrs, Volume= 12,841 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00
1.00	0.00		0.00
2.00	0.00		0.00
3.00	0.00		0.00
4.00	0.00		0.00
5.00	0.00		0.00
6.00	0.00		0.00
7.00	0.00		0.00
8.00	0.01		0.01
9.00	0.04		0.04
10.00	0.09		0.09
11.00	0.18		0.18
12.00	**1.76**		**1.76**
13.00	**0.43**		**0.43**
14.00	0.26		0.26
15.00	0.20		0.20
16.00	0.14		0.14
17.00	0.11		0.11
18.00	0.09		0.09
19.00	0.08		0.08
20.00	0.07		0.07
21.00	0.06		0.06
22.00	0.06		0.06
23.00	0.05		0.05
24.00	0.04		0.04
25.00	0.00		0.00
26.00	0.00		0.00
27.00	0.00		0.00
28.00	0.00		0.00
29.00	0.00		0.00
30.00	0.00		0.00
31.00	0.00		0.00
32.00	0.00		0.00
33.00	0.00		0.00
34.00	0.00		0.00
35.00	0.00		0.00
36.00	0.00		0.00
37.00	0.00		0.00
38.00	0.00		0.00
39.00	0.00		0.00
40.00	0.00		0.00
41.00	0.00		0.00
42.00	0.00		0.00
43.00	0.00		0.00
44.00	0.00		0.00
45.00	0.00		0.00
46.00	0.00		0.00
47.00	0.00		0.00
48.00	0.00		0.00
49.00	0.00		0.00
50.00	0.00		0.00
51.00	0.00		0.00
52.00	0.00		0.00
53.00	0.00		0.00
54.00	0.00		0.00
55.00	0.00		0.00
56.00	0.00		0.00
57.00	0.00		0.00
58.00	0.00		0.00
59.00	0.00		0.00
60.00	0.00		0.00
61.00	0.00		0.00
62.00	0.00		0.00
63.00	0.00		0.00
64.00	0.00		0.00
65.00	0.00		0.00
66.00	0.00		0.00
67.00	0.00		0.00
68.00	0.00		0.00
69.00	0.00		0.00
70.00	0.00		0.00
71.00	0.00		0.00
72.00	0.00		0.00

Summary for Subcatchment Post 3A: Post 3A

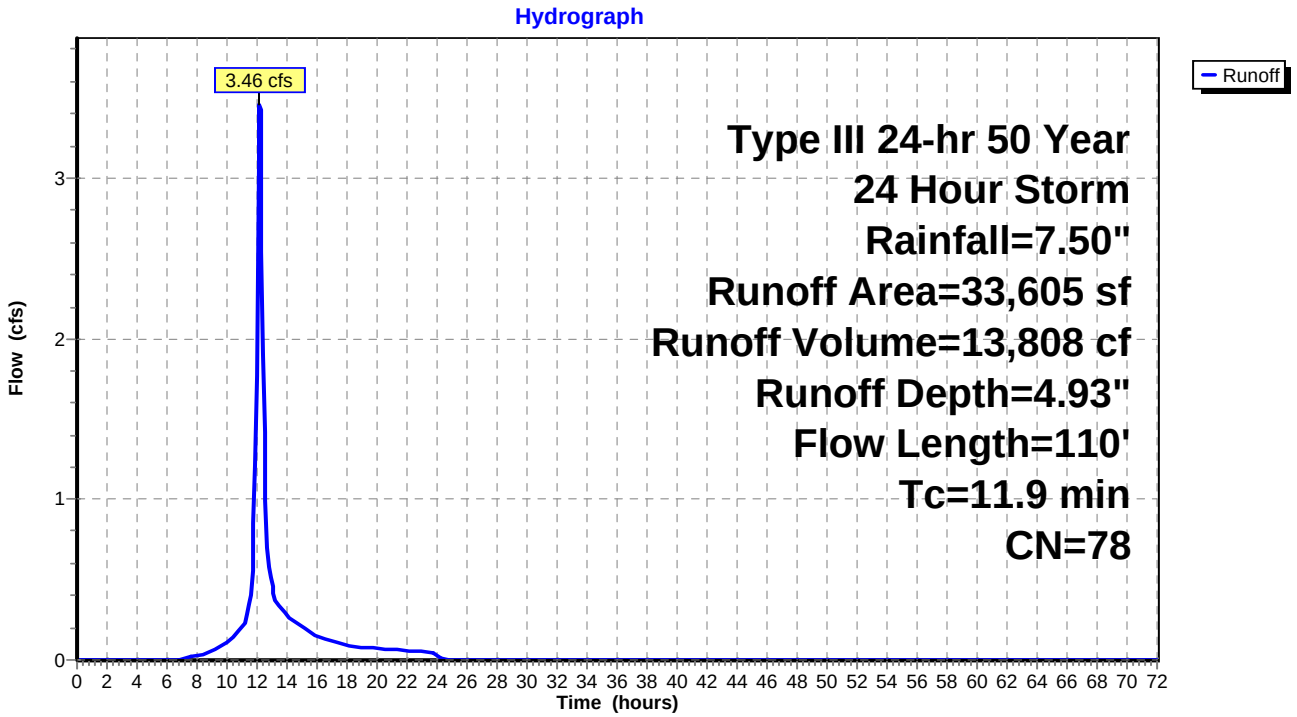
Runoff = 3.46 cfs @ 12.18 hrs, Volume= 13,808 cf, Depth= 4.93"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
3,842	98	Paved parking, HSG C
20,173	73	Woods, Fair, HSG C
9,590	79	50-75% Grass cover, Fair, HSG C
33,605	78	Weighted Average
29,763		88.57% Pervious Area
3,842		11.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	67	0.0600	0.25		**Sheet Flow, Landscaped** Grass: Short n= 0.150 P2= 3.50"
7.5	43	0.0460	0.10		**Sheet Flow, Wooded** Woods: Light underbrush n= 0.400 P2= 3.50"
11.9	110	Total			

Subcatchment Post 3A: Post 3A



Hydrograph for Subcatchment Post 3A: Post 3A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.23	0.00	0.00
4.00	0.32	0.00	0.00
5.00	0.43	0.00	0.00
6.00	0.54	0.00	0.00
7.00	0.68	0.00	0.01
8.00	0.86	0.03	0.02
9.00	1.09	0.08	0.06
10.00	1.42	0.20	0.11
11.00	1.88	0.42	0.20
12.00	3.75	1.69	**1.77**
13.00	5.62	3.25	**0.46**
14.00	6.08	3.65	0.28
15.00	6.41	3.94	0.21
16.00	6.64	4.15	0.15
17.00	6.82	4.31	0.12
18.00	6.96	4.44	0.09
19.00	7.07	4.54	0.08
20.00	7.18	4.64	0.07
21.00	7.27	4.72	0.06
22.00	7.36	4.80	0.06
23.00	7.43	4.87	0.05
24.00	**7.50**	**4.93**	0.05
25.00	7.50	4.93	0.00
26.00	7.50	4.93	0.00
27.00	7.50	4.93	0.00
28.00	7.50	4.93	0.00
29.00	7.50	4.93	0.00
30.00	7.50	4.93	0.00
31.00	7.50	4.93	0.00
32.00	7.50	4.93	0.00
33.00	7.50	4.93	0.00
34.00	7.50	4.93	0.00
35.00	7.50	4.93	0.00
36.00	7.50	4.93	0.00
37.00	7.50	4.93	0.00
38.00	7.50	4.93	0.00
39.00	7.50	4.93	0.00
40.00	7.50	4.93	0.00
41.00	7.50	4.93	0.00
42.00	7.50	4.93	0.00
43.00	7.50	4.93	0.00
44.00	7.50	4.93	0.00
45.00	7.50	4.93	0.00
46.00	7.50	4.93	0.00
47.00	7.50	4.93	0.00
48.00	7.50	4.93	0.00
49.00	7.50	4.93	0.00
50.00	7.50	4.93	0.00
51.00	7.50	4.93	0.00
52.00	7.50	4.93	0.00
53.00	7.50	4.93	0.00
54.00	7.50	4.93	0.00
55.00	7.50	4.93	0.00
56.00	7.50	4.93	0.00
57.00	7.50	4.93	0.00
58.00	7.50	4.93	0.00
59.00	7.50	4.93	0.00
60.00	7.50	4.93	0.00
61.00	7.50	4.93	0.00
62.00	7.50	4.93	0.00
63.00	7.50	4.93	0.00
64.00	7.50	4.93	0.00
65.00	7.50	4.93	0.00
66.00	7.50	4.93	0.00
67.00	7.50	4.93	0.00
68.00	7.50	4.93	0.00
69.00	7.50	4.93	0.00
70.00	7.50	4.93	0.00
71.00	7.50	4.93	0.00
72.00	7.50	4.93	0.00

Summary for Subcatchment Post 3B: Post 3B

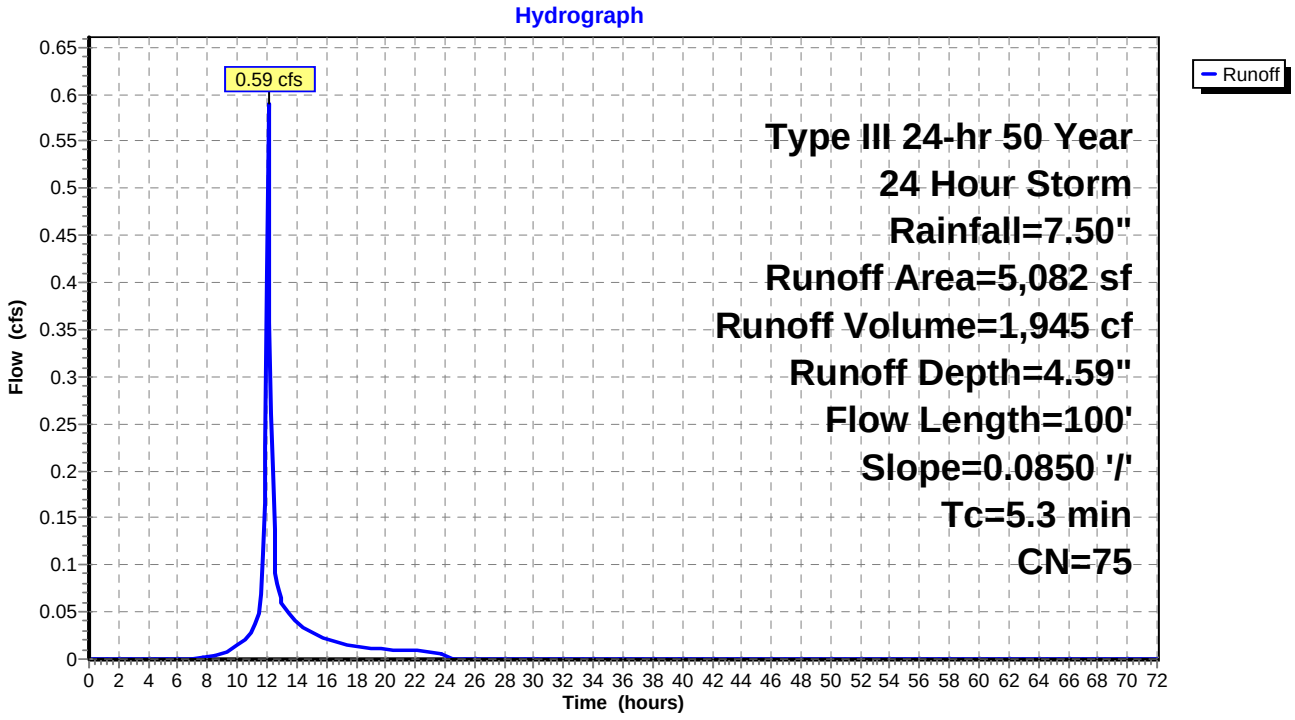
Runoff = 0.59 cfs @ 12.09 hrs, Volume= 1,945 cf, Depth= 4.59"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 50 Year, 24 Hour Storm Rainfall=7.50"

Area (sf)	CN	Description
3,044	73	Woods, Fair, HSG C
2,038	79	50-75% Grass cover, Fair, HSG C
5,082	75	Weighted Average
5,082		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0850	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Post 3B: Post 3B



Hydrograph for Subcatchment Post 3B: Post 3B

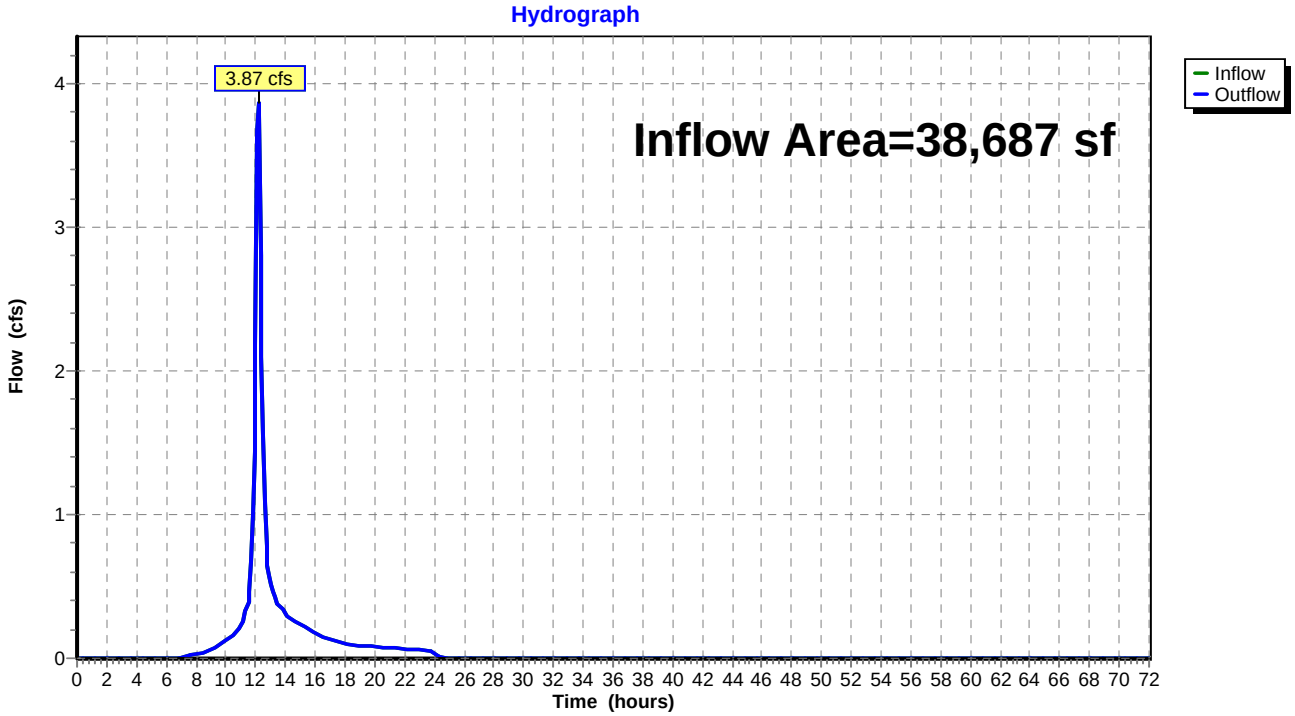
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00
2.00	0.15	0.00	0.00
3.00	0.23	0.00	0.00
4.00	0.32	0.00	0.00
5.00	0.43	0.00	0.00
6.00	0.54	0.00	0.00
7.00	0.68	0.00	0.00
8.00	0.86	0.01	0.00
9.00	1.09	0.05	0.01
10.00	1.42	0.14	0.01
11.00	1.88	0.32	0.03
12.00	3.75	1.48	**0.41**
13.00	5.62	2.97	**0.06**
14.00	6.08	3.35	0.04
15.00	6.41	3.63	0.03
16.00	6.64	3.84	0.02
17.00	6.82	3.99	0.02
18.00	6.96	4.11	0.01
19.00	7.07	4.22	0.01
20.00	7.18	4.31	0.01
21.00	7.27	4.39	0.01
22.00	7.36	4.46	0.01
23.00	7.43	4.53	0.01
24.00	**7.50**	**4.59**	0.01
25.00	7.50	4.59	0.00
26.00	7.50	4.59	0.00
27.00	7.50	4.59	0.00
28.00	7.50	4.59	0.00
29.00	7.50	4.59	0.00
30.00	7.50	4.59	0.00
31.00	7.50	4.59	0.00
32.00	7.50	4.59	0.00
33.00	7.50	4.59	0.00
34.00	7.50	4.59	0.00
35.00	7.50	4.59	0.00
36.00	7.50	4.59	0.00
37.00	7.50	4.59	0.00
38.00	7.50	4.59	0.00
39.00	7.50	4.59	0.00
40.00	7.50	4.59	0.00
41.00	7.50	4.59	0.00
42.00	7.50	4.59	0.00
43.00	7.50	4.59	0.00
44.00	7.50	4.59	0.00
45.00	7.50	4.59	0.00
46.00	7.50	4.59	0.00
47.00	7.50	4.59	0.00
48.00	7.50	4.59	0.00
49.00	7.50	4.59	0.00
50.00	7.50	4.59	0.00
51.00	7.50	4.59	0.00
52.00	7.50	4.59	0.00
53.00	7.50	4.59	0.00
54.00	7.50	4.59	0.00
55.00	7.50	4.59	0.00
56.00	7.50	4.59	0.00
57.00	7.50	4.59	0.00
58.00	7.50	4.59	0.00
59.00	7.50	4.59	0.00
60.00	7.50	4.59	0.00
61.00	7.50	4.59	0.00
62.00	7.50	4.59	0.00
63.00	7.50	4.59	0.00
64.00	7.50	4.59	0.00
65.00	7.50	4.59	0.00
66.00	7.50	4.59	0.00
67.00	7.50	4.59	0.00
68.00	7.50	4.59	0.00
69.00	7.50	4.59	0.00
70.00	7.50	4.59	0.00
71.00	7.50	4.59	0.00
72.00	7.50	4.59	0.00

Summary for Reach DP3: Design Point 3

Inflow Area = 38,687 sf, 9.93% Impervious, Inflow Depth = 4.89" for 50 Year, 24 Hour Storm event
Inflow = 3.87 cfs @ 12.16 hrs, Volume= 15,753 cf
Outflow = 3.87 cfs @ 12.16 hrs, Volume= 15,753 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.01		0.01	59.00	0.00		0.00
8.00	0.03		0.03	60.00	0.00		0.00
9.00	0.06		0.06	61.00	0.00		0.00
10.00	0.12		0.12	62.00	0.00		0.00
11.00	0.23		0.23	63.00	0.00		0.00
12.00	**2.18**		**2.18**	64.00	0.00		0.00
13.00	**0.52**		**0.52**	65.00	0.00		0.00
14.00	0.31		0.31	66.00	0.00		0.00
15.00	0.24		0.24	67.00	0.00		0.00
16.00	0.17		0.17	68.00	0.00		0.00
17.00	0.13		0.13	69.00	0.00		0.00
18.00	0.10		0.10	70.00	0.00		0.00
19.00	0.09		0.09	71.00	0.00		0.00
20.00	0.08		0.08	72.00	0.00		0.00
21.00	0.07		0.07				
22.00	0.07		0.07				
23.00	0.06		0.06				
24.00	0.05		0.05				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

Summary for Subcatchment Post 3A: Post 3A

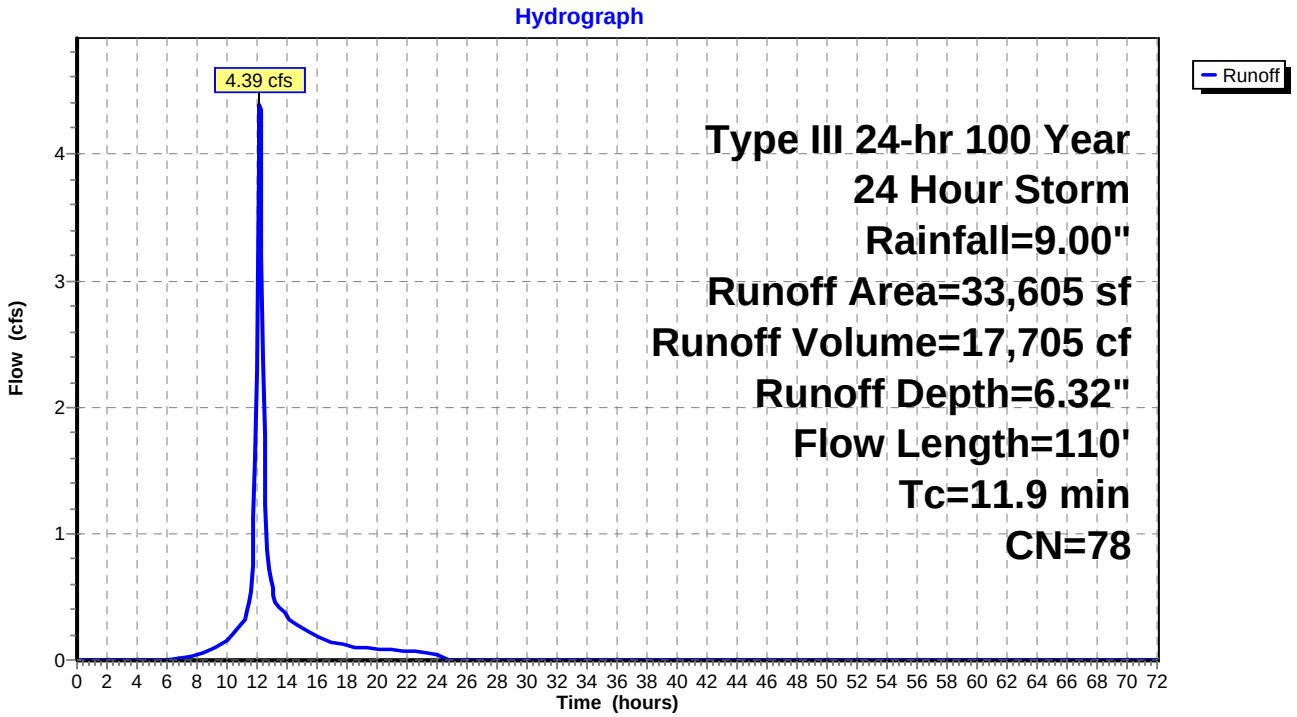
Runoff = 4.39 cfs @ 12.18 hrs, Volume= 17,705 cf, Depth= 6.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
3,842	98	Paved parking, HSG C
20,173	73	Woods, Fair, HSG C
9,590	79	50-75% Grass cover, Fair, HSG C
33,605	78	Weighted Average
29,763		88.57% Pervious Area
3,842		11.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.4	67	0.0600	0.25		**Sheet Flow, Landscaped** Grass: Short n= 0.150 P2= 3.50"
7.5	43	0.0460	0.10		**Sheet Flow, Wooded** Woods: Light underbrush n= 0.400 P2= 3.50"
11.9	110	Total			

Subcatchment Post 3A: Post 3A



Hydrograph for Subcatchment Post 3A: Post 3A

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.39	0.00	0.00
5.00	0.51	0.00	0.00
6.00	0.65	0.00	0.00
7.00	0.81	0.02	0.02
8.00	1.03	0.06	0.04
9.00	1.31	0.16	0.09
10.00	1.70	0.33	0.15
11.00	2.25	0.63	0.28
12.00	4.50	2.29	**2.30**
13.00	6.75	4.25	**0.57**
14.00	7.30	4.75	0.34
15.00	7.69	5.10	0.25
16.00	7.97	5.37	0.18
17.00	8.19	5.56	0.14
18.00	8.35	5.72	0.11
19.00	8.49	5.84	0.10
20.00	8.61	5.96	0.09
21.00	8.72	6.06	0.08
22.00	8.83	6.16	0.07
23.00	8.92	6.25	0.06
24.00	**9.00**	**6.32**	0.06
25.00	9.00	6.32	0.00
26.00	9.00	6.32	0.00
27.00	9.00	6.32	0.00
28.00	9.00	6.32	0.00
29.00	9.00	6.32	0.00
30.00	9.00	6.32	0.00
31.00	9.00	6.32	0.00
32.00	9.00	6.32	0.00
33.00	9.00	6.32	0.00
34.00	9.00	6.32	0.00
35.00	9.00	6.32	0.00
36.00	9.00	6.32	0.00
37.00	9.00	6.32	0.00
38.00	9.00	6.32	0.00
39.00	9.00	6.32	0.00
40.00	9.00	6.32	0.00
41.00	9.00	6.32	0.00
42.00	9.00	6.32	0.00
43.00	9.00	6.32	0.00
44.00	9.00	6.32	0.00
45.00	9.00	6.32	0.00
46.00	9.00	6.32	0.00
47.00	9.00	6.32	0.00
48.00	9.00	6.32	0.00
49.00	9.00	6.32	0.00
50.00	9.00	6.32	0.00
51.00	9.00	6.32	0.00
52.00	9.00	6.32	0.00
53.00	9.00	6.32	0.00
54.00	9.00	6.32	0.00
55.00	9.00	6.32	0.00
56.00	9.00	6.32	0.00
57.00	9.00	6.32	0.00
58.00	9.00	6.32	0.00
59.00	9.00	6.32	0.00
60.00	9.00	6.32	0.00
61.00	9.00	6.32	0.00
62.00	9.00	6.32	0.00
63.00	9.00	6.32	0.00
64.00	9.00	6.32	0.00
65.00	9.00	6.32	0.00
66.00	9.00	6.32	0.00
67.00	9.00	6.32	0.00
68.00	9.00	6.32	0.00
69.00	9.00	6.32	0.00
70.00	9.00	6.32	0.00
71.00	9.00	6.32	0.00
72.00	9.00	6.32	0.00

Summary for Subcatchment Post 3B: Post 3B

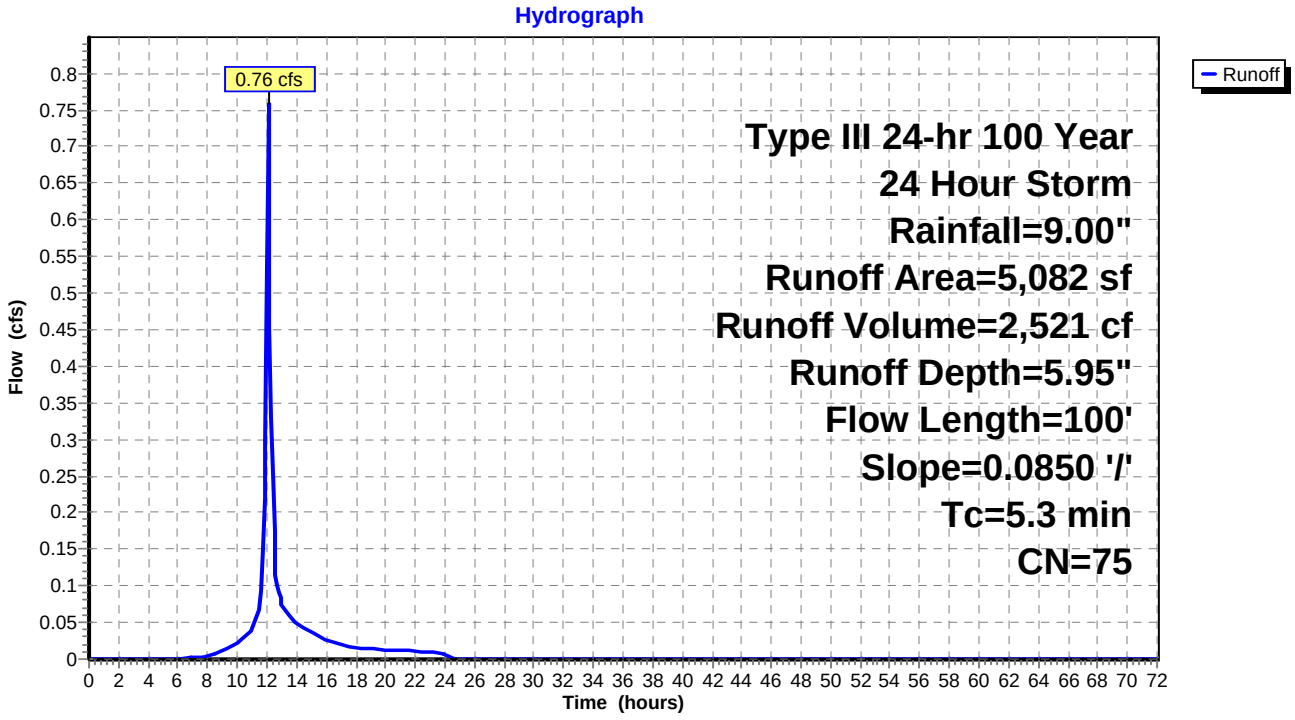
Runoff = 0.76 cfs @ 12.09 hrs, Volume= 2,521 cf, Depth= 5.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs
Type III 24-hr 100 Year, 24 Hour Storm Rainfall=9.00"

Area (sf)	CN	Description
3,044	73	Woods, Fair, HSG C
2,038	79	50-75% Grass cover, Fair, HSG C
5,082	75	Weighted Average
5,082		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.3	100	0.0850	0.32		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.50"

Subcatchment Post 3B: Post 3B



Hydrograph for Subcatchment Post 3B: Post 3B

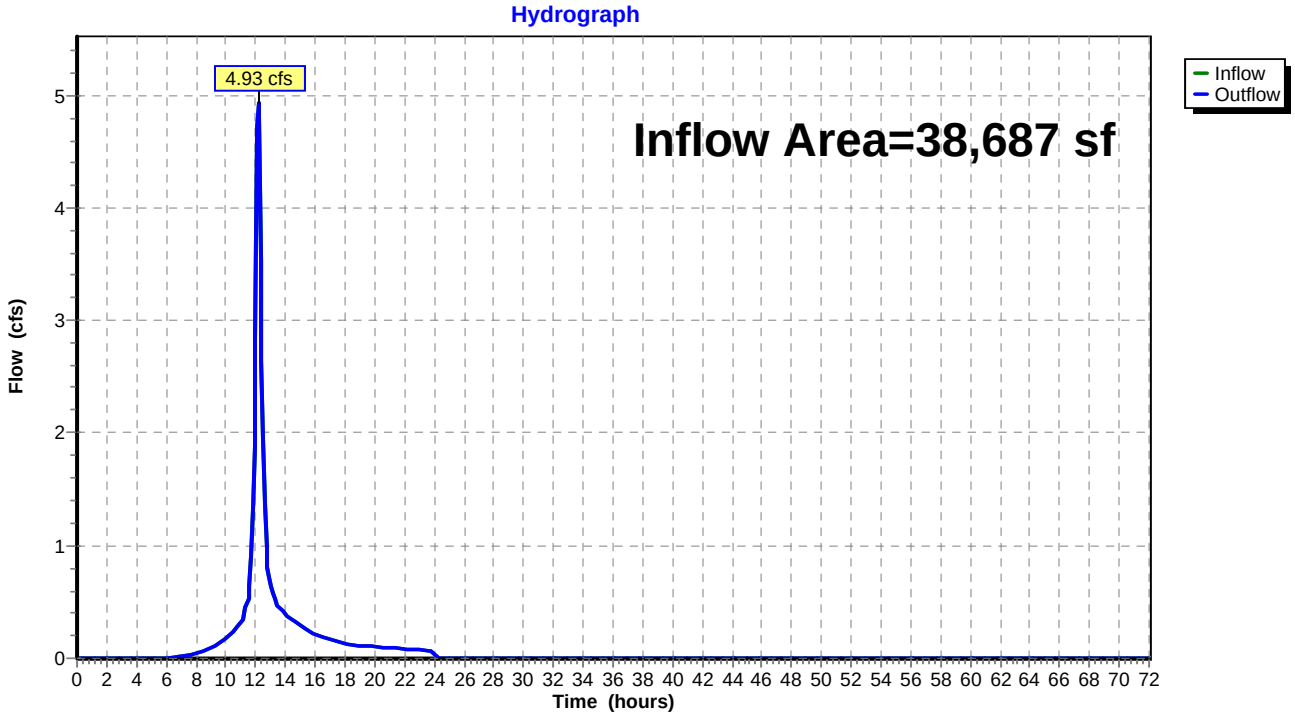
Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00
1.00	0.09	0.00	0.00
2.00	0.18	0.00	0.00
3.00	0.28	0.00	0.00
4.00	0.39	0.00	0.00
5.00	0.51	0.00	0.00
6.00	0.65	0.00	0.00
7.00	0.81	0.01	0.00
8.00	1.03	0.03	0.00
9.00	1.31	0.10	0.01
10.00	1.70	0.24	0.02
11.00	2.25	0.51	0.04
12.00	4.50	2.05	**0.54**
13.00	6.75	3.93	**0.07**
14.00	7.30	4.41	0.05
15.00	7.69	4.76	0.04
16.00	7.97	5.02	0.03
17.00	8.19	5.21	0.02
18.00	8.35	5.36	0.02
19.00	8.49	5.49	0.01
20.00	8.61	5.60	0.01
21.00	8.72	5.70	0.01
22.00	8.83	5.79	0.01
23.00	8.92	5.88	0.01
24.00	**9.00**	**5.95**	0.01
25.00	9.00	5.95	0.00
26.00	9.00	5.95	0.00
27.00	9.00	5.95	0.00
28.00	9.00	5.95	0.00
29.00	9.00	5.95	0.00
30.00	9.00	5.95	0.00
31.00	9.00	5.95	0.00
32.00	9.00	5.95	0.00
33.00	9.00	5.95	0.00
34.00	9.00	5.95	0.00
35.00	9.00	5.95	0.00
36.00	9.00	5.95	0.00
37.00	9.00	5.95	0.00
38.00	9.00	5.95	0.00
39.00	9.00	5.95	0.00
40.00	9.00	5.95	0.00
41.00	9.00	5.95	0.00
42.00	9.00	5.95	0.00
43.00	9.00	5.95	0.00
44.00	9.00	5.95	0.00
45.00	9.00	5.95	0.00
46.00	9.00	5.95	0.00
47.00	9.00	5.95	0.00
48.00	9.00	5.95	0.00
49.00	9.00	5.95	0.00
50.00	9.00	5.95	0.00
51.00	9.00	5.95	0.00
52.00	9.00	5.95	0.00
53.00	9.00	5.95	0.00
54.00	9.00	5.95	0.00
55.00	9.00	5.95	0.00
56.00	9.00	5.95	0.00
57.00	9.00	5.95	0.00
58.00	9.00	5.95	0.00
59.00	9.00	5.95	0.00
60.00	9.00	5.95	0.00
61.00	9.00	5.95	0.00
62.00	9.00	5.95	0.00
63.00	9.00	5.95	0.00
64.00	9.00	5.95	0.00
65.00	9.00	5.95	0.00
66.00	9.00	5.95	0.00
67.00	9.00	5.95	0.00
68.00	9.00	5.95	0.00
69.00	9.00	5.95	0.00
70.00	9.00	5.95	0.00
71.00	9.00	5.95	0.00
72.00	9.00	5.95	0.00

Summary for Reach DP3: Design Point 3

Inflow Area = 38,687 sf, 9.93% Impervious, Inflow Depth = 6.27" for 100 Year, 24 Hour Storm event
Inflow = 4.93 cfs @ 12.16 hrs, Volume= 20,225 cf
Outflow = 4.93 cfs @ 12.16 hrs, Volume= 20,225 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.10 hrs / 2

Reach DP3: Design Point 3



Hydrograph for Reach DP3: Design Point 3

Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Outflow (cfs)
0.00	0.00		0.00	52.00	0.00		0.00
1.00	0.00		0.00	53.00	0.00		0.00
2.00	0.00		0.00	54.00	0.00		0.00
3.00	0.00		0.00	55.00	0.00		0.00
4.00	0.00		0.00	56.00	0.00		0.00
5.00	0.00		0.00	57.00	0.00		0.00
6.00	0.00		0.00	58.00	0.00		0.00
7.00	0.02		0.02	59.00	0.00		0.00
8.00	0.05		0.05	60.00	0.00		0.00
9.00	0.10		0.10	61.00	0.00		0.00
10.00	0.18		0.18	62.00	0.00		0.00
11.00	0.32		0.32	63.00	0.00		0.00
12.00	**2.83**		**2.83**	64.00	0.00		0.00
13.00	**0.64**		**0.64**	65.00	0.00		0.00
14.00	0.39		0.39	66.00	0.00		0.00
15.00	0.29		0.29	67.00	0.00		0.00
16.00	0.21		0.21	68.00	0.00		0.00
17.00	0.16		0.16	69.00	0.00		0.00
18.00	0.13		0.13	70.00	0.00		0.00
19.00	0.11		0.11	71.00	0.00		0.00
20.00	0.10		0.10	72.00	0.00		0.00
21.00	0.09		0.09				
22.00	0.08		0.08				
23.00	0.07		0.07				
24.00	0.07		0.07				
25.00	0.00		0.00				
26.00	0.00		0.00				
27.00	0.00		0.00				
28.00	0.00		0.00				
29.00	0.00		0.00				
30.00	0.00		0.00				
31.00	0.00		0.00				
32.00	0.00		0.00				
33.00	0.00		0.00				
34.00	0.00		0.00				
35.00	0.00		0.00				
36.00	0.00		0.00				
37.00	0.00		0.00				
38.00	0.00		0.00				
39.00	0.00		0.00				
40.00	0.00		0.00				
41.00	0.00		0.00				
42.00	0.00		0.00				
43.00	0.00		0.00				
44.00	0.00		0.00				
45.00	0.00		0.00				
46.00	0.00		0.00				
47.00	0.00		0.00				
48.00	0.00		0.00				
49.00	0.00		0.00				
50.00	0.00		0.00				
51.00	0.00		0.00				

SWPPP APPENDIX G

PHOSPHOROUS LOADING CALCULATIONS

Phosphorous Loading Calculations
Preliminary Storwater Pollution Prevention Plan
Park Place Parking Facility

Watershed	Drainage Area (SF)	Drainage Area (Acres)	Land Use	Rate (lbs/acre TP[1]	Total Loading TP
EXISTING Design Point 1					
PRE 1	15,179	0.35	Commercial (60%)	1.2	0.4
PRE 1	24,338	0.56	Woods	0.1	0.1
Total Area	39,517	0.91			0.5
EXISTING Design Point 2					
PRE 2	48,406	1.11	Commercial (60%)	1.2	1.3
PRE 2	34,072	0.78	Woods	0.1	0.1
Total Area	82,478	1.89			1.4
EXISTING Design Point 3					
PRE 3	43,030	0.99	Commercial (60%)	1.2	1.2
PRE 3	18,798	0.43	Woods	0.1	0.04
Total Area	61,828	1.42			1.2

Phosphorous Loading Calculations
Preliminary Storwater Pollution Prevention Plan
Park Place Parking Facility

Watershed	Drainage Area (SF)	Drainage Area (Acres)	Land Use	Rate (lbs/acre TP[1]	Total Loading TP				
Proposed Design Point 1									
PROP 1	11,445	0.26	Woods	0.1	0.03				
PROP 1	5,003	0.11	Commercial (60%)	1.2	0.1				
Total Area	16,448	0.38			0.2				
% decrease from Pre-development condition					-65.4%				
PROPOSED Design Point 2									
PROP 2H	12,626	0.29	Woods	0.1	0.03				
PROP 2A, 2B, 2C, 2D, 2E	92,693	2.13	Commercial (60%)	1.2	2.6	60	80	1.02	0.51
						60	80	0.41	0.10
PROP 2G AND 2F	27,202	0.62	Commercial (60%)	1.2	0.7	60	80	0.30	0.15
			Total without treatment		3.3				
Total Design Point 2	132,521.00	3.04	Total with treatment (low removal rate):					1.35	
			Total with treatment (high removal rate):					0.28	
% decrease from Pre-development condition:								-4.4%	
PROPOSED Design Point 3									
PROP 3	15,470	0.36	Commercial (60%)	1.2	0.4				
PROP 3	22,217	0.51	Woods	0.1	0.05				
Total Area	37,687	0.87			0.5				
		% decrease from Pre-development condition			-61%				

SWPPP APPENDIX H

EROSION AND SEDIMENT CONTROL INSPECTION REPORT

Project Name: _____ **Date:** _____

Project Number: _____ **Logged by:** _____

Weather: _____

SITE PLAN/SKETCH

Provide a concise sketch indicating construction activities, location and description of stormwater runoff from the site, stabilization activities, and soil erosion and sediment control BMPs. Indicate BMPs improperly installed or in need of repair. The inspector shall notify the contractor(s) and subcontractor(s) of necessary repairs of BMPs required within one business day of this inspection.

Maintain Water Quality

Yes	No	NA	
[ ]	[ ]	[ ]	Is there an increase in turbidity causing a substantial visible contrast to natural conditions?
[ ]	[ ]	[ ]	Is there residue from oil and floating substances, visible oil film, or globules or grease?
[ ]	[ ]	[ ]	All disturbance is within the limits of the approved plans.
[ ]	[ ]	[ ]	Have receiving lake/bay, stream, and/or wetland been impacted by silt from project?

Housekeeping

1. General Site Conditions

Yes	No	NA	
[ ]	[ ]	[ ]	Is construction site litter and debris appropriately managed?
[ ]	[ ]	[ ]	Are facilities and equipment necessary for implementation of erosion and sediment control in working order and/or properly maintained?
[ ]	[ ]	[ ]	Is construction impacting the adjacent property?
[ ]	[ ]	[ ]	Is dust adequately controlled?

2. Temporary Stream Crossing

Yes	No	NA	
[ ]	[ ]	[ ]	Maximum diameter pipes necessary to span creek without dredging are installed.
[ ]	[ ]	[ ]	Installed non-woven geotextile fabric beneath approaches.
[ ]	[ ]	[ ]	Is fill composed of aggregate (no earth or soil)?
[ ]	[ ]	[ ]	Rock on approaches is clean enough to remove mud from vehicles & prevent sediment from entering stream during high flow.

Runoff Control Practices

1. Excavation Dewatering

Yes	No	NA	
[ ]	[ ]	[ ]	Upstream and downstream berms (sandbags, inflatable dams, etc.) are installed per plan.
[ ]	[ ]	[ ]	Clean water from upstream pool is being pumped to the downstream pool.
[ ]	[ ]	[ ]	Sediment laden water from work area is being discharged to a silt-trapping device.
[ ]	[ ]	[ ]	Constructed upstream berm with one-foot minimum freeboard.

2. Level Spreader

Yes	No	NA	
[ ]	[ ]	[ ]	Installed per plan.
[ ]	[ ]	[ ]	Constructed on undisturbed soil, not on fill, receiving only clear, non-sediment laden flow.
[ ]	[ ]	[ ]	Flow sheets out of level spreader without erosion on downstream edge.

3. Interceptor Dikes and Swales

Yes	No	NA	
[ ]	[ ]	[ ]	Installed per plan with minimum side slopes 2H:1V or flatter.
[ ]	[ ]	[ ]	Stabilized by geotextile fabric, seed, or mulch with no erosion occurring.
[ ]	[ ]	[ ]	Sediment-laden runoff directed to sediment trapping structure.

4. Stone Check Dam

Yes	No	NA	
[ ]	[ ]	[ ]	Is channel stable (the flow is not eroding soil underneath or around the structure)?
[ ]	[ ]	[ ]	Check is in good condition (rocks in place and no permanent pools behind structure).
[ ]	[ ]	[ ]	Has accumulated sediment been removed?

5. Rock Outlet Protection

Yes	No	NA	
[ ]	[ ]	[ ]	Installed per plan.
[ ]	[ ]	[ ]	Installed concurrently with pipe installation.

Soil Stabilization

1. Topsoil and Spoil Stockpiles

Yes	No	NA	
[ ]	[ ]	[ ]	Stockpiles are stabilized with vegetation and/or mulch.
[ ]	[ ]	[ ]	Sediment control is installed at the toe of the slope.

2. Revegetation

Yes	No	NA	
[ ]	[ ]	[ ]	Temporary seeding and mulch have been applied to idle areas.
[ ]	[ ]	[ ]	4 inches minimum of topsoil has been applied under permanent seeding.

Sediment Control

1. Stabilized Construction Entrance

Yes	No	NA	
[ ]	[ ]	[ ]	Stone is clean enough to effectively remove mud from vehicles.
[ ]	[ ]	[ ]	Installed per standards and specifications?
[ ]	[ ]	[ ]	Does all traffic use the stabilized entrance to enter and leave site?
[ ]	[ ]	[ ]	Is adequate drainage provided to prevent ponding at entrance?

2. Silt Fence

Yes	No	NA	
[ ]	[ ]	[ ]	Installed on Contour, 10 feet from toe of slope (not across conveyance channels).
[ ]	[ ]	[ ]	Joints constructed by wrapping the two ends together for continuous support.
[ ]	[ ]	[ ]	Fabric buried 6 inches minimum.
[ ]	[ ]	[ ]	Posts are stable, fabric is tight and without rips or frayed areas.

Sediment accumulation is % of design capacity.

3. Storm Drain Inlet Protection (Use for Stone & Block; Filter Fabric; Curb; or, Excavated practices)

Yes	No	NA	
[ ]	[ ]	[ ]	Installed concrete blocks lengthwise so open ends face outward, not upward.
[ ]	[ ]	[ ]	Placed wire screen between No. 3 crushed stone and concrete blocks.
[ ]	[ ]	[ ]	Drainage area is 1acre or less.
[ ]	[ ]	[ ]	Excavated area is 900 cubic feet.
[ ]	[ ]	[ ]	Excavated side slopes should be 2:1.
[ ]	[ ]	[ ]	2" x 4" frame is constructed and structurally sound.
[ ]	[ ]	[ ]	Posts 3-foot maximum spacing between posts.
[ ]	[ ]	[ ]	Fabric is embedded 1 to 1.5 feet below ground and secured to frame/posts with staples at max 8-inch spacing.
[ ]	[ ]	[ ]	Posts are stable, fabric is tight and without rips or frayed areas. Sediment accumulation % of design capacity.

4. Temporary Sediment Trap

Yes	No	NA	
[ ]	[ ]	[ ]	Outlet structure is constructed per the approved plan or drawing.
[ ]	[ ]	[ ]	Geotextile fabric has been placed beneath rock fill. Sediment accumulation is % of design capacity.

5. Temporary Sediment Basin

Yes	No	NA	
[ ]	[ ]	[ ]	Basin and outlet structure constructed per the approved plan.
[ ]	[ ]	[ ]	Basin side slopes are stabilized with seed/mulch.
[ ]	[ ]	[ ]	Drainage structure flushed and basin surface restored upon removal of sediment basin facility. Sediment accumulation is % of design capacity.

Note: Not all erosion and sediment control practices are included in this listing. Add additional pages to this list as required by site specific design.

Construction inspection checklists for post-development stormwater management practices can be found in the SWPPP.

RECOMMENDATIONS

b. Modifications to the SWPPP (To be completed as described below)

The Operator shall amend the SWPPP whenever:

1. There is a significant change in design, construction, operation, or maintenance which may have a significant effect on the potential for the discharge of pollutants to the waters of the United States and which has not otherwise been addressed in the SWPPP; or

2. The SWPPP proves to be ineffective in:

   a. Eliminating or significantly minimizing pollutants from sources identified in the SWPPP and as required by this permit; or

   b. Achieving the general objectives of controlling pollutants in stormwater discharges from permitted construction activity; and

3. Additionally, the SWPPP shall be amended to identify any new contractor or subcontractor that will implement any measure of the SWPPP.

MODIFICATION & REASON:

Qualified Inspector (print name) Date of Inspection

Qualified Professional (print name) Qualified Professional Signature

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

SWPPP APPENDIX I

INSPECTION AND MAINTENANCE FORMS FOR POST-CONSTRUCTION PRACTICES

RAIN GARDEN

STORMWATER PLANTER

SURFACE SAND FILTER

STORMWATER WET POND

Rain Garden Operation, Maintenance and Management Inspection Checklist

Project: _____

Location: _____

Site Status: _____

Date: _____

Time: _____

Inspector: _____

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris / Trash Cleanout (Monthly)		
Bioretention and contributing areas clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Plant height not less than design water depth		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
Grass height not greater than 6 inches		
No evidence of erosion		
3. Check Dams/Energy Dissipaters/Sumps (Annual, After Major Storms)		
No evidence of sediment buildup		
Sumps should not be more than 50% full of sediment		
No evidence of erosion at downstream toe of drop structure		
4. Dewatering (Monthly)		
Dewaters between storms		
No evidence of standing water		
5. Sediment Deposition (Annual)		
Swale clean of sediments		
Sediments should not be > 20% of swale design depth		
6. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
7. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

Stormwater Planter Operation, Maintenance and Management Inspection Checklist

Project:
Location:
Site Status:
Date:
Time:
Inspector:

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris / Trash Cleanout (Monthly)		
Stormwater planter clean of debris		
No dumping of yard wastes into practice		
Litter (branches, etc.) have been removed		
2. Vegetation (Monthly)		
Pruning and replacing dead or dying vegetation, plant thinning, and erosion repair		
Fertilized per specifications		
Plant composition according to approved plans		
No placement of inappropriate plants		
No evidence of erosion		
3. Dewatering (Monthly, After Major Storms)		
Dewaters between storms		
Planters should be inspected after each storm event greater than 0.5 inches, and at least twice in the first six months		
No evidence of standing water		
4. Sediment Deposition (Annual)		
Stormwater planter clean of sediments		
5. Outlet/Overflow Spillway (Annual, After Major Storms)		
Good condition, no need for repair		
No evidence of erosion		
No evidence of any blockages		
6. Integrity of Filter Bed (Annual)		
Filter bed has not been blocked or filled inappropriately		

Comments:

Actions to be Taken:

Sand/Organic Filter Operation, Maintenance and Management Inspection Checklist

Project: _____

Location: _____

Site Status: _____

Date: _____

Time: _____

Inspector: _____

MAINTENANCE ITEM	SATISFACTORY / UNSATISFACTORY	COMMENTS
1. Debris Cleanout (Monthly)		
Contributing areas clean of debris		
Filtration facility clean of debris		
Inlet and outlets clear of debris		
2. Oil and Grease (Monthly)		
No evidence of filter surface clogging		
Activities in drainage area minimize oil and grease entry		
3. Vegetation (Monthly)		
Contributing drainage area stabilized		
No evidence of erosion		
Area mowed and clipping removed		
4. Water Retention Where Required (Monthly)		
Water holding chambers at normal pool		
No evidence of leakage		
5. Sediment Deposition (Annual)		
Filter chamber free of sediments		
Sedimentation chamber not more than half full of sediments		
6. Structural Components (Annual)		
No evidence of structural deterioration		
Any grates are in good condition		
No evidence of spalling or cracking of structural parts		
7. Outlet/Overflow Spillway (Annual)		
Good condtion, no need for repairs		
No evidence of erosion (if draining into a natural channel)		
8. Overflow Function of Facility (Annual)		
Evidence of flow bypassing facility		
No noticeable odors outside of facility		

Comments:

Actions to be Taken:

STORMWATER POCKET WETLAND		
Project Name:	**Location:**	
Site Status:	**Weather Condition:**	
Inspector:	**Date:**	**Time:**
Maintenance Item	**Satisfactory/ Unsatisfactory**	**Comments**
Embankment and emergency spillway (Annual, After Major Storms)		
1. Vegetation and ground cover adequate		
2. Embankment erosion		
3. Animal burrows		
4. Unauthorized planting		
5. Cracking, bulging, or sliding of dam		
a. Upstream face		
b. Downstream face		
c. At or beyond toe downstream/downstream		
d. Emergency spillway		
6. Pond, toe & chimney drains clear and functioning		
7. Seeps/leaks on downstream face		
8. Slope protection or riprap failure		
9. Vertical/horizontal alignment of top of dam As-Built		
10. Emergency spillway clear of obstructions and debris		
Riser and principal spillway (Annual)		
Type: Reinforced concrete _____		
Corrugated pipe _____		
1. Low flow orifice obstructed		
2. Low flow trash rack.		

STORMWATER POCKET WETLAND		
Project Name:	**Location:**	
Site Status:	**Weather Condition:**	
Inspector:	**Date:**	**Time:**
Maintenance Item	**Satisfactory/ Unsatisfactory**	**Comments**
a. Debris removal necessary		
b. Corrosion control		
3. Weir trash rack maintenance		
a. Debris removal necessary		
b. corrosion control		
4. Excessive sediment accumulation insider riser		
5. Concrete/masonry condition riser and barrels		
a. cracks or displacement		
b. Minor spalling (<1")		
c. Major spalling (exposed rebar)		
d. Joint failures		
e. Water tightness		
6. Metal pipe condition		
7. Control valve		
a. Operational/exercised		
b. Chained and locked		
8. Pond drain valve		
a. Operational/exercised		
b. Chained and locked		
9. Outfall channels functioning		

STORMWATER POCKET WETLAND		
Project Name:	**Location:**	
Site Status:	**Weather Condition:**	
Inspector:	**Date:**	**Time:**
Maintenance Item	**Satisfactory/ Unsatisfactory**	**Comments**
Permanent Pool (Wet Ponds)	**(monthly)**	
1. Undesirable vegetative growth		
2. Floating or floatable debris removal required		
3. Visible pollution		
4. Shoreline problem		
Sediment Forebay		
1.Sedimentation noted		
2. Sediment cleanout when depth < 50% design depth		
Dry Pond Areas		
1. Vegetation adequate		
2. Undesirable vegetative growth		
3. Undesirable woody vegetation		
4. Low flow channels clear of obstructions		
5. Standing water or wet spots		
6. Sediment and / or trash accumulation		
Condition of Outfalls (Annual, After Major Storms)		
1. Riprap failures		
2. Slope erosion		
3. Storm drain pipes		
4. Endwalls / Headwalls		

STORMWATER POCKET WETLAND		
Project Name:	**Location:**	
Site Status:	**Weather Condition:**	
Inspector:	**Date:**	**Time:**
Maintenance Item	**Satisfactory/ Unsatisfactory**	**Comments**
Other (monthly)		
1. Encroachment on pond, wetland or easement area		
2. Complaints from residents		
3.Aesthetics		
a. Grass growing required		
b. Graffiti removal needed		
4. Conditions of maintenance access routes.		
5. Signs of hydrocarbon build-up		
6. Any public hazards (specify)		
Wetland Vegetation (Annual)		
1. Vegetation healthy and growing		
Wetland maintaining 50% surface area coverage of wetland plants after the second growing season. (If unsatisfactory, reinforcement plantings needed)		
2. Dominant wetland plants:		
Survival of desired wetland plant species		
Distribution according to landscaping plan?		
3. Evidence of invasive species		
4. Maintenance of adequate water depths for desired wetland plant species		
5. Harvesting of emergent plantings needed		

STORMWATER POCKET WETLAND		
Project Name:	**Location:**	
Site Status:	**Weather Condition:**	
Inspector:	**Date:**	**Time:**
Maintenance Item	**Satisfactory/ Unsatisfactory**	**Comments**
6. Have sediment accumulations reduced pool volume significantly or are plants choked with sediment?		
7. Eutrophication level of the wetland.		

Comments:

Actions to be Taken:

Appendix I: Well Completion Report

11 New King St

Westchester County Department of Health
Division of Environmental Sanitation

WELL COMPLETION REPORT

This report is to be completed by well driller and submitted to Health Department, together with laboratory report of analysis of water sample indicating water is of satisfactory bacterial quality, before certificate of construction compliance is issued.

Well construction to be in accordance with Bulletin SD-62
"RULES & REGULATIONS RELATING TO INDIVIDUAL WATER SUPPLIES"

14A1
14A2
14B

LOCATION: MUNICIPALITY NORTH CASTLE, ~~WHITE PLAINS~~, N. Y. SECTION 3 BLOCK 4 LOT

WELL OWNER: D. Stanley Corcoran, New King St., NORTH CASTLE, ~~White Plains~~, N. Y.
Name Street Address City and Town

WELL DRILLER: J.P.HARRIS WELL CONTRS. INC., GLENVILLE RD., GLENVILLE, CONN.
Name Street Address City and Town

CASING DETAILS	YIELD TEST	WATER LEVEL	SCREEN DETAILS
	___ Bailed	(measure from land surface)	
Length, 39 Feet	or		
	X Pumped 3 Hours	Static: 20 Feet	Make: None
		When Bailed	Slot
Diameter: 6 Inches	Yield: 20 G.P.M.	or Pumped 180 Feet	Length Ft. Size
Kind: Drive			Diameter In.

TOTAL DEPTH OF WELL 225 FEET

WELL LOG

Depth From Ground Surface	Give description of formations penetrated, such as: peat, silt, sand, gravel, clay, hardpan, shale, sandstone, granite, etc. Include size of gravel (diameter) and sand (fine, medium, coarse), color of material, structure (Loose, packed, cemented, soft, hard). For example: 0 ft. to 27 ft. fine, packed, yellow sand; 27 ft. to 134 ft. gray granite.
1 Ft. to 20 Ft.	HARDPAN
20 Ft. to 35 Ft.	SHALE
35 Ft. to 160 Ft.	INWOOD MARBLE
160 Ft. to 225 Ft.	~~Mica Schist~~ Gneiss
Ft. to Ft.	
Ft. to Ft.	
Ft. to Ft.	
Ft. to Ft.	

NC-885

Date Well Was Completed 12/2/66 Date of Report 12/9/66

Well Driller Jm Grossman
Signature

11 New King St

WELL PIT AND PUMP EQUIPMENT DETAILS

Finished Well: Check ____ Pit with 4-inch Gravity Drain to Grade

____ Pit with 4-inch Gravity Drain to Basement

X Pitless Adapter – Casing Min. 12 inches above grade

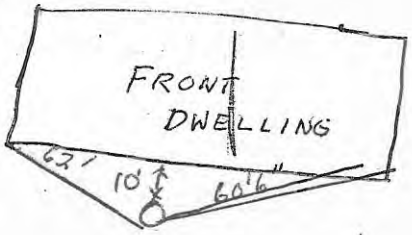
____ Other: Describe

Pump: Make Sumo Type Submersible Capacity 1hp. G.P.M. 15

Storage Tank: Type ~~Steel~~ Permapressure Capacity 82 Gal. (42 Gal. Min.)

DIAGRAM SHOWING LOCATION OF WELL ON PREMISES

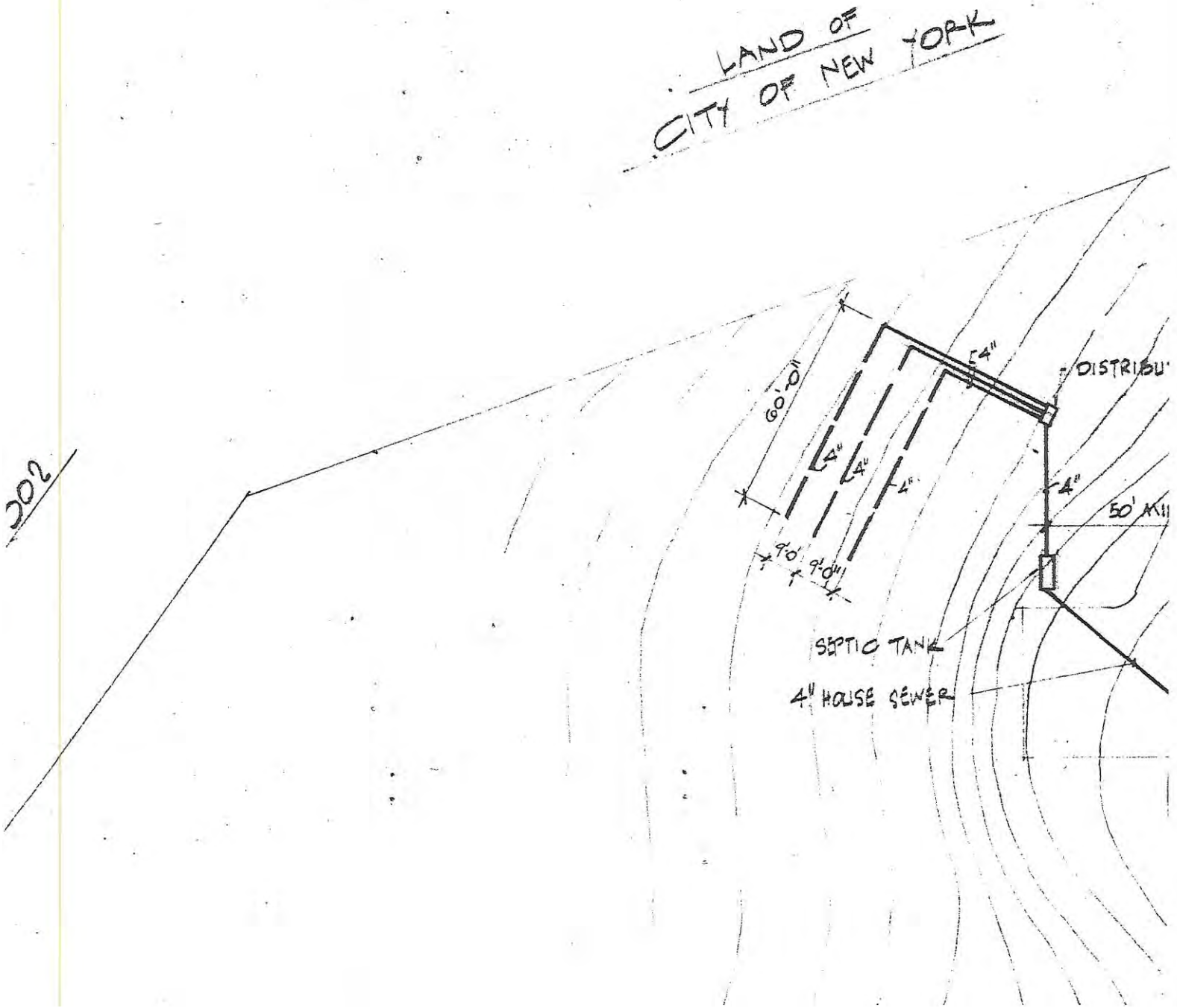
Indicate location of house, well and sewage disposal system with distances. Also indicate direction of slopes, and direction with distances to all wells and sewage disposal systems within 250 feet.



I certify that the individual water supply indicated above was installed as per the rules and regulations of Bulletin SD.62 of the Westchester County Department of Health.

George R. Grossman

11 New King St
pg 1 of 2



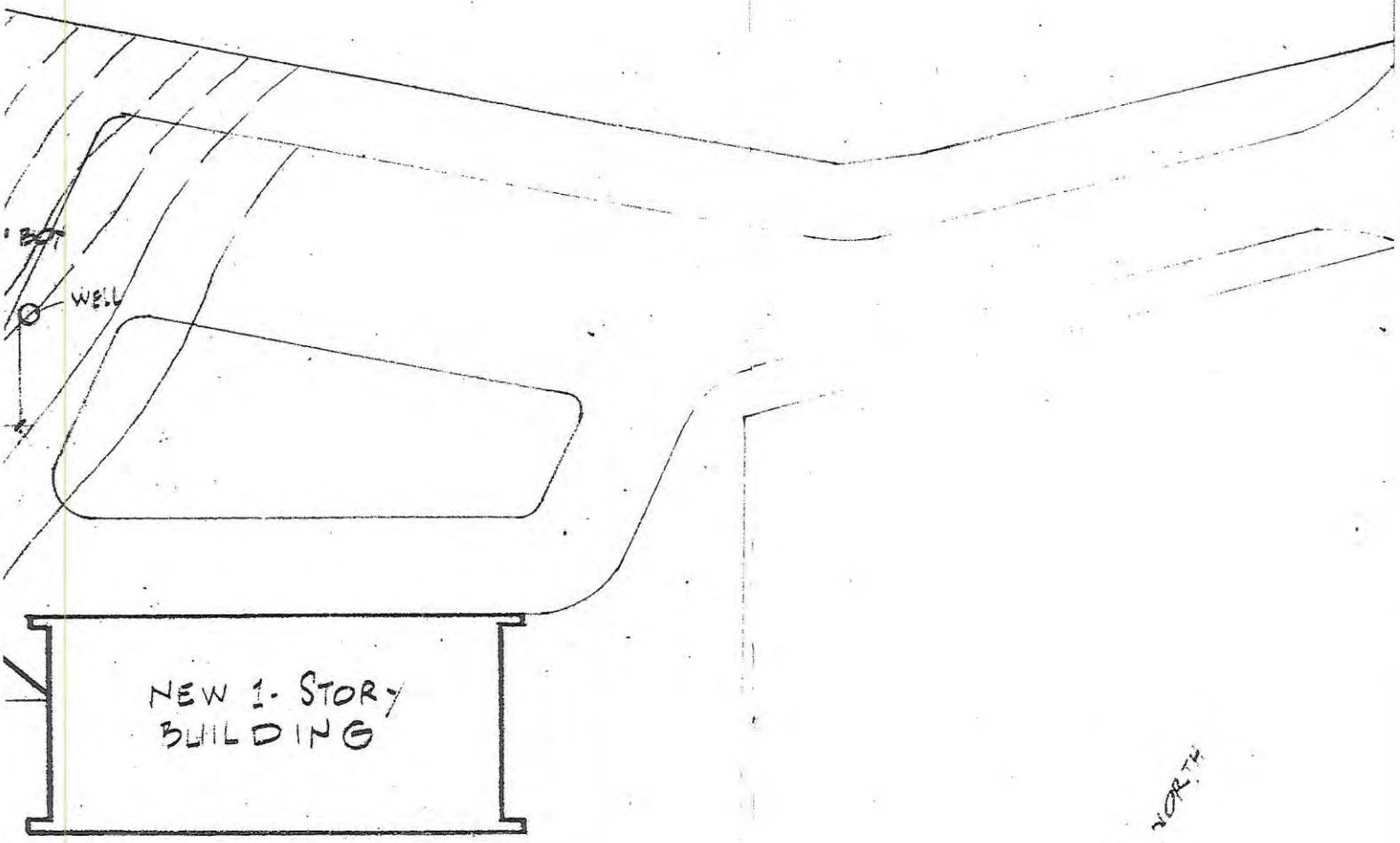
11 New King St.
pg. 2 of 2

P

MEEHANITE METAL CORP.

FORMERLY

EDWARD WOLFE



Appendix J: Traffic Impact Study

Appendix J: Traffic Impact Study

Accident Data

Accident Location Information System | Location Editing/Simple Query and Report | Build Map Query

Home | Reports | Geocode | Batch Queue

Go to Build Data Query Page

Complete Accident data from NYSDMV is only available thru 4/30/2010

You have 0 accident cases in the view box.

Cannot find any accident with the specified conditions.

Find On Map:

County: Westchester Map It!

Muni: North Castle (T) Map It!

Accident Date (mm/dd/yyyy)

From 5/1/2007 ... To 4/30/2010 ...

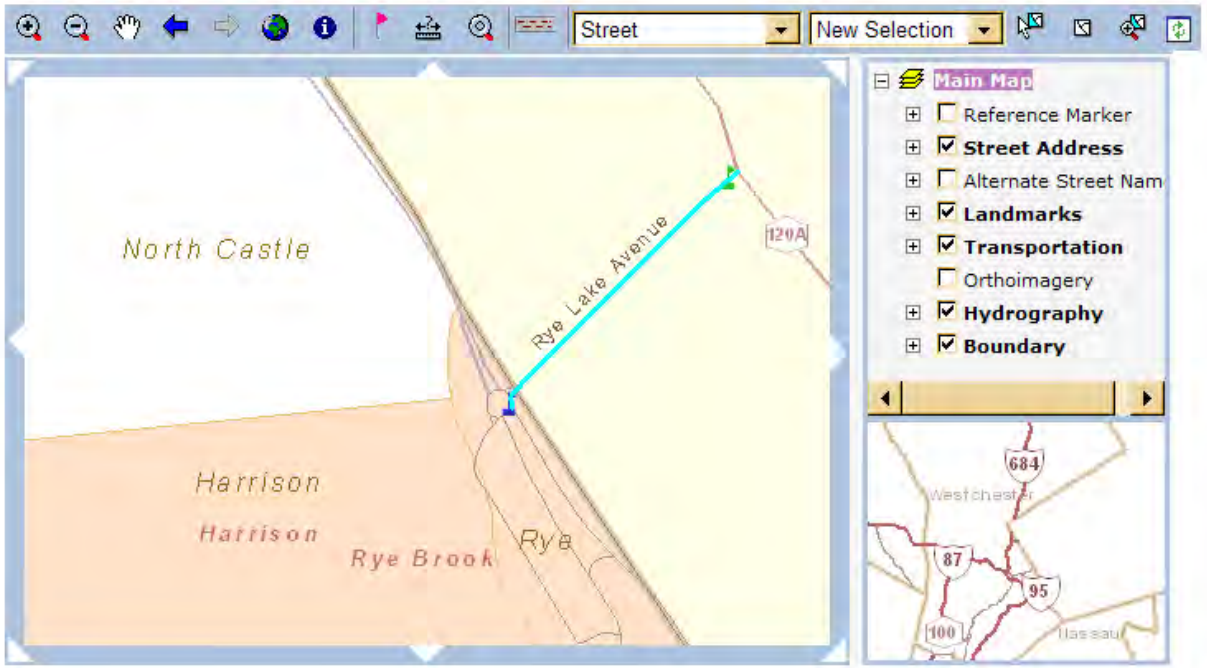
At Intersection	○ Yes	○ No	◉ All
At Railroad	○ Yes	○ No	◉ All
Non-Highway	○ Yes	○ No	◉ All
Parking Lot	○ Yes	○ No	◉ All
Outcome LCode:	○ A	○ B	◉ All
Primary/Secondary:	○ Primary	○ User Placed	
	○ Secondary	◉ All	

Road System

Location Method

Buffer Distance Units Buffer

Remove Add



LoadCase	DOT Verified	Case Number	Case Year	Date	County	Municipalities	Muni Type	Ped/Bike Action	Reference Marker	On Street

Accident Location Information System (ALIS)

Date: 08/20/10
09:33

Page: 1

County Interim Accident Summary

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

Number Of Accidents

COUNTY	TOTAL	AT INT.	FTL	INJ	PDO	N/R	WET ROAD	FIXED OBJ	PED & BIKE	TRUCK	LIGHT CONDITION DWN/DSK	DAY	NIGHT
WESTCHESTER	16	8	0	7	8	1	6	3	0	1	0	11	5
Total	16	8	0	7	8	1	6	3	0	1	0	11	5

Accident Location Information System (ALIS)

Date: 08/20/10
09:13

Page: 1

County Interim Accident Summary

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

Number Of Accidents

		AT					WET	FIXED	PED &		LIGHT CONDITION		
COUNTY	TOTAL	INT.	FTL	INJ	PDO	N/R	ROAD	OBJ	BIKE	TRUCK	DWN/DSK	DAY	NIGHT
WESTCHESTER	15	14	0	6	9	0	3	0	1	1	0	11	3
Total	15	14	0	6	9	0	3	0	1	1	0	11	3

Accident Location Information System (ALIS)

Date: 08/20/10
09:40

Page: 1

County Interim Accident Summary

5652 New King Street from Airport Road to NYS120

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

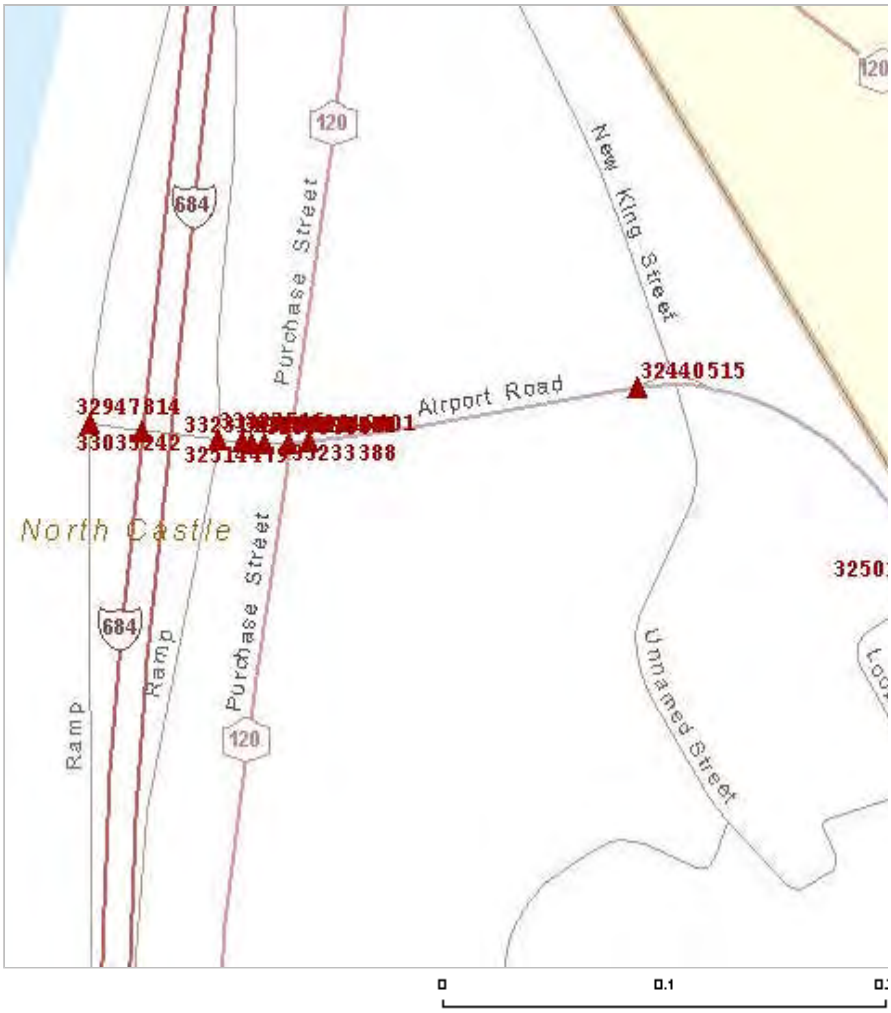
Number Of Accidents

		AT							PED &		LIGHT CONDITION		
COUNTY	TOTAL	INT.	FTL	INJ	PDO	N/R	WET ROAD	FIXED OBJ	BIKE	TRUCK	DWN/DSK	DAY	NIGHT
WESTCHESTER	4	4	0	1	3	0	0	0	1	1	0	2	1
Total	4	4	0	1	3	0	0	0	1	1	0	2	1

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Legend

Accident	**Street**
Street Name Change	<all other values>
Airport	**SHIELD**
Bus Station	C
College	I
Government Office	U
Hospital	S
Institution	Hydrography
Library	County Boundary
Nursing Home	State Recreation
Parking Area	NYS Campground
Point Of Interest	State Non Recreation
Public School	City
Rail Station	Town
Retail Center	Indian Reservation
Service Area	Village



Accident Location Information System (ALIS)

Date: 08/20/10
09:31

Accident Verbal Description Report

Page: 1

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
19 Meters West of NEW KING ST

10/27/2007 Sat 23:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32368307**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH GUIDE RAIL Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3307 State of Registration: NY
Num of Occupants: 1 Driver's Age: 17 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: DRIVER INEXPERIENCE, PAVEMENT SLIPPERY

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
28 Meters West of UNNAMED STREET

11/15/2007 Thu 08:08 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2007-32440515**
Accident Class: INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH SIGN POST Traffic Control: NONE
Manner of Collision: OTHER Weather: RAIN
Road Surface Condition: WET Road Char.: CURVE AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 21 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
AT INTERSECTION WITH NEW KING ST

12/4/2007 Tue 11:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32514479**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 5214 State of Registration: NY
Num of Occupants: 2 Driver's Age: 48 Sex: M Citation Issued: Y
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING U TURN
Apparent Factors: TURNING IMPROPER, UNKNOWN

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
***** CONTINUED

Veh :1 OTHER Registered Weight: State of Registration: CT
Num of Occupants: 2 Driver's Age: 56 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: Street: LOOP RD

12/19/2007 Wed 09:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32501334**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: UNKNOWN Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 8650 State of Registration: NY
Num of Occupants: 2 Driver's Age: 51 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: BACKING
Apparent Factors: BACKING UNSAFELY, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: 2608 State of Registration: NY
Num of Occupants: 1 Driver's Age: Sex: Citation Issued:
Direction of Travel: UNKNOWN Public Property Damage: N School Bus Involved: N
Pre-Accd Action: PARKED
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
AT INTERSECTION WITH NEW KING ST

5/30/2008 Fri 07:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32646101**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OVERTAKING Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3669 State of Registration: NY
Num of Occupants: 1 Driver's Age: 56 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STARTING IN TRAFFIC
Apparent Factors: GLARE, UNKNOWN

Veh :2 TRUCK Registered Weight: State of Registration: FL
Num of Occupants: 1 Driver's Age: 54 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STARTING IN TRAFFIC
Apparent Factors: GLARE, UNKNOWN

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: [Route] 120
AT INTERSECTION WITH AIRPORT RD

7/28/2008 Mon 08:08 AM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2008-32692582**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: 24 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 CAR/VAN/PICKUP Registered Weight: 4672 State of Registration: NY
Num of Occupants: 1 Driver's Age: 40 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
AT INTERSECTION WITH Westchester County Airport

10/10/2008 Fri 11:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32775094**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: FL
Num of Occupants: 1 Driver's Age: 90 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STARTING IN TRAFFIC
Apparent Factors: UNKNOWN, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 1 Driver's Age: 19 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: OVERTAKING
Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
AT INTERSECTION WITH Ramp

3/7/2009 Sat 14:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-32947814**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: STOP SIGN
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AT HILLCREST Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 84 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 2 Driver's Age: 52 Sex: M Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
41 Meters East of Ramp

5/15/2009 Fri 02:08 AM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2009-33035242**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH GUIDE RAIL Traffic Control: UNKNOWN
Manner of Collision: OTHER Weather: CLOUDY
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3752 State of Registration: NY
Num of Occupants: 1 Driver's Age: 30 Sex: M Citation Issued: N
Direction of Travel: NORTH-EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: PAVEMENT SLIPPERY, ANIMAL'S ACTION

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
AT INTERSECTION WITH Purchase St

7/22/2009 Wed 18:08 PM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2009-33080416**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3450 State of Registration: NY
Num of Occupants: 1 Driver's Age: 23 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: Y School Bus Involved: N
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: FAILURE TO YIELD RIGHT OF WAY, BRAKES DEFECTIVE

Veh :2 CAR/VAN/PICKUP Registered Weight: 5357 State of Registration: NY
Num of Occupants: 1 Driver's Age: 31 Sex: M Citation Issued: N
Direction of Travel: WEST Public Property Damage: Y School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: [Route] 120
AT INTERSECTION WITH AIRPORT RD

8/28/2009 Fri 17:08 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2009-33176516**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 46 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 2 Driver's Age: 58 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
AT INTERSECTION WITH [Route] 120

10/15/2009 Thu 16:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33231496**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: UNKNOWN Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: GA
Num of Occupants: 1 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: UNKNOWN, TURNING IMPROPER

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 1 Driver's Age: 25 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: STATE HWY 120
AT INTERSECTION WITH AIRPORT RD

10/23/2009 Fri 23:08 PM Persons Killed: 0 Persons Injured: 3 Extent of Injuries: CCC **Case: 2009-33233388**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: STATE HWY 120
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: 3045 State of Registration: NY
Num of Occupants: 1 Driver's Age: 69 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: 2495 State of Registration: NY
Num of Occupants: 2 Driver's Age: 17 Sex: F Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: TURNING IMPROPER, FAILURE TO YIELD RIGHT OF WAY

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: [Route] 120
AT INTERSECTION WITH AIRPORT RD

2/10/2010 Wed 19:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33376255**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (WITH OTHER CAR) Weather: SNOW
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4120 State of Registration: NY
Num of Occupants: 1 Driver's Age: 41 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: LANE MARKING IMPROPER/INADEQUATE, PAVEMENT SLIPPERY

Veh :1 CAR/VAN/PICKUP Registered Weight: 7700 State of Registration: NY
Num of Occupants: 1 Driver's Age: 34 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: PAVEMENT SLIPPERY, LANE MARKING IMPROPER/INADEQUATE

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
20 Meters East of Ramp

3/3/2010 Wed 08:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33370694**
Accident Class: NON-REPORTABLE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: SNOW
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 53 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: FOLLOWING TOO CLOSELY, DRIVER INATTENTION

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 Airport Rd from I-684 Ramp to Rye Lake Road

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 40 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
1 Meters East of Ramp

3/17/2010 Wed 21:08 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2010-33387516**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: YIELD SIGN
Manner of Collision: RIGHT TURN (WITH OTHER CAR) Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3323 State of Registration: NY
Num of Occupants: 3 Driver's Age: 20 Sex: F Citation Issued: N
Direction of Travel: WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 2547 State of Registration: NY
Num of Occupants: 1 Driver's Age: 20 Sex: F Citation Issued: Y
Direction of Travel: NORTH-EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: ALCOHOL INVOLVEMENT, TURNING IMPROPER

5652 New King Street from Airport Road to NYS120

Accident Location Information System (ALIS)

Date: 08/20/10
09:38

Accident Verbal Description Report

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5652 New King Street from Airport Road to NYS120

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: Purchase St
AT INTERSECTION WITH New King St

7/8/2007 Sun 10:08 AM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: AA **Case: 2007-32265841**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH BICYCLIST Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: PED/BICYCLIST AT INTERSECTION Action of Ped/Bicycle: ALONG HIGHWAY WITH TRAFFIC

Veh :1 CAR/VAN/PICKUP Registered Weight: 2519 State of Registration: NY
Num of Occupants: 2 Driver's Age: 50 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 BICYCLE Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: 43 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, DRIVER INATTENTION

Veh :3 BICYCLE Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
AT INTERSECTION WITH NEW KING ST

2/21/2008 Thu 23:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32572907**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: UNKNOWN
Manner of Collision: RIGHT TURN (AGAINST OTHER CAR) Weather: UNKNOWN
Road Surface Condition: UNKNOWN Road Char.: UNKNOWN Light Condition: UNKNOWN
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 2 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 OTHER Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 23 Sex: F Citation Issued: N
Direction of Travel: UNKNOWN Public Property Damage: N School Bus Involved: N
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: UNKNOWN, UNKNOWN

Accident Location Information System (ALIS)

Date: 08/20/10
09:38

Accident Verbal Description Report

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5652 New King Street from Airport Road to NYS120

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
AT INTERSECTION WITH NEW KING ST

3/21/2008 Fri 10:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32572516**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 4250 State of Registration: NY
Num of Occupants: 2 Driver's Age: 47 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 TRUCK Registered Weight: State of Registration: VT
Num of Occupants: 1 Driver's Age: 55 Sex: M Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
AT INTERSECTION WITH New King St

9/25/2008 Thu 19:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32770650**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

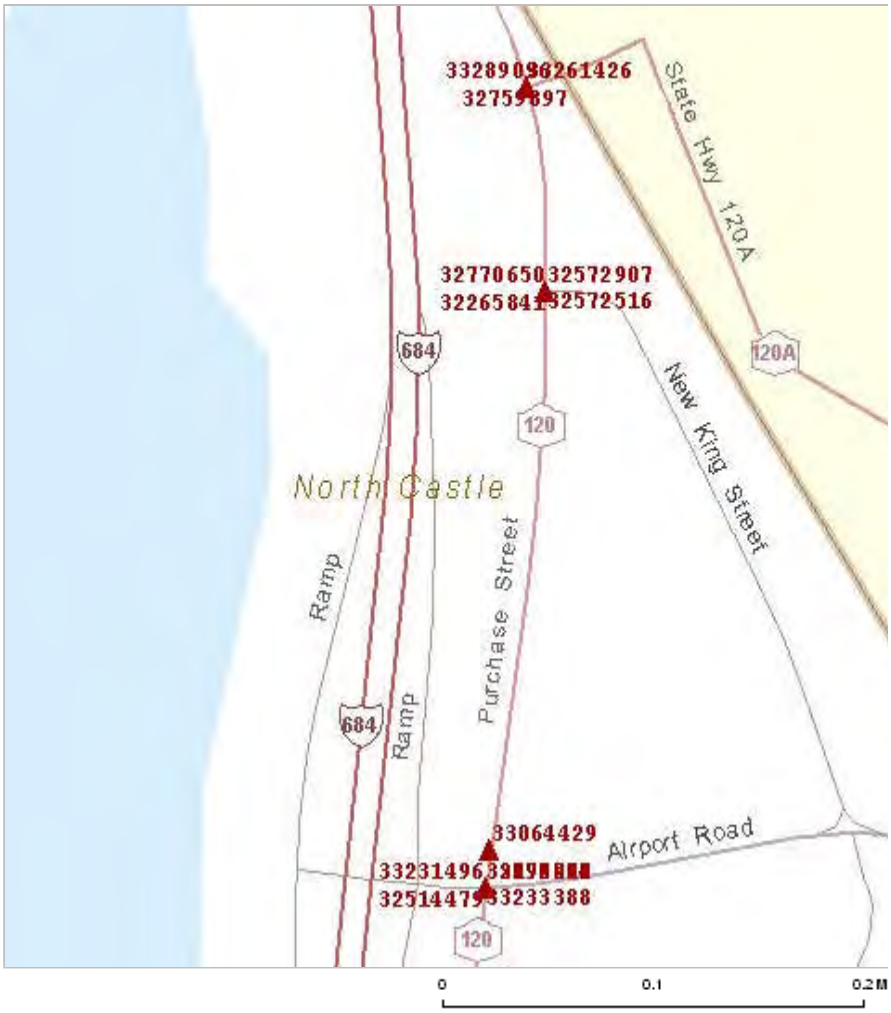
Veh :1 CAR/VAN/PICKUP Registered Weight: 3220 State of Registration: NY
Num of Occupants: 1 Driver's Age: 43 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 OTHER Registered Weight: State of Registration: FL
Num of Occupants: 1 Driver's Age: 88 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, TRAFFIC CONTROL DEVICES DISREGARDED

5652 NYS 120 from Lake Street to NYS 120A

Legend

Accident	**Street**
Street Name Change	<all other values>
Airport	**SHIELD**
Bus Station	C
College	I
Government Office	U
Hospital	S
Institution	Hydrography
Library	County Boundary
Nursing Home	State Recreation
Parking Area	NYS Campground
Point Of Interest	State Non Recreation
Public School	City
Rail Station	Town
Retail Center	Indian Reservation
Service Area	Village



Accident Location Information System (ALIS)

Date: 08/20/10
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Accident Verbal Description Report

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: Street: AIRPORT RD
AT INTERSECTION WITH Westchester County Airport

10/10/2008 Fri 11:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32775094**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: FL
Num of Occupants: 1 Driver's Age: 90 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STARTING IN TRAFFIC
Apparent Factors: UNKNOWN, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 1 Driver's Age: 19 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: OVERTAKING
Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: STATE HWY 120
AT INTERSECTION WITH AIRPORT RD

10/23/2009 Fri 23:08 PM Persons Killed: 0 Persons Injured: 3 Extent of Injuries: CCC **Case: 2009-33233388**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 3045 State of Registration: NY
Num of Occupants: 1 Driver's Age: 69 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: 2495 State of Registration: NY
Num of Occupants: 2 Driver's Age: 17 Sex: F Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: TURNING IMPROPER, FAILURE TO YIELD RIGHT OF WAY

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: [Route] 120
AT INTERSECTION WITH AIRPORT RD

8/28/2009 Fri 17:08 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2009-33176516**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: [Route] 120
***** CONTINUED

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 46 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 2 Driver's Age: 58 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012066 Street: [Route] 120
AT INTERSECTION WITH AIRPORT RD

2/10/2010 Wed 19:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2010-33376255**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (WITH OTHER CAR) Weather: SNOW
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD UNLIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 4120 State of Registration: NY
Num of Occupants: 1 Driver's Age: 41 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: LANE MARKING IMPROPER/INADEQUATE, PAVEMENT SLIPPERY

Veh :1 CAR/VAN/PICKUP Registered Weight: 7700 State of Registration: NY
Num of Occupants: 1 Driver's Age: 34 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: PAVEMENT SLIPPERY, LANE MARKING IMPROPER/INADEQUATE

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: PURCHASE ST
29 Meters North of Westchester County Airport

5/29/2009 Fri 13:08 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: C **Case: 2009-33064429**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2826 State of Registration: NY
Num of Occupants: 1 Driver's Age: 23 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Accident Location Information System (ALIS)

Date: 08/20/10
09:05

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Accident Verbal Description Report

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: PURCHASE ST
***** CONTINUED

Veh :2 OTHER Registered Weight: State of Registration: CT
Num of Occupants: 1 Driver's Age: 55 Sex: F Citation Issued: N
Direction of Travel: NORTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
AT INTERSECTION WITH [Route] 120

10/15/2009 Thu 16:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33231496**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: UNKNOWN Weather: RAIN
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: GA
Num of Occupants: 1 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING RIGHT TURN
Apparent Factors: UNKNOWN, TURNING IMPROPER

Veh :2 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 1 Driver's Age: 25 Sex: F Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: AIRPORT RD
AT INTERSECTION WITH NEW KING ST

12/4/2007 Tue 11:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2007-32514479**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :2 CAR/VAN/PICKUP Registered Weight: 5214 State of Registration: NY
Num of Occupants: 2 Driver's Age: 48 Sex: M Citation Issued: Y
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING U TURN
Apparent Factors: TURNING IMPROPER, UNKNOWN

Veh :1 OTHER Registered Weight: State of Registration: CT
Num of Occupants: 2 Driver's Age: 56 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012067 Street: [Route] 120
AT INTERSECTION WITH AIRPORT RD

7/28/2008 Mon 08:08 AM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: CC **Case: 2008-32692582**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: RIGHT ANGLE Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: 24 Sex: M Citation Issued: N
Direction of Travel: EAST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 CAR/VAN/PICKUP Registered Weight: 4672 State of Registration: NY
Num of Occupants: 1 Driver's Age: 40 Sex: F Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
AT INTERSECTION WITH New King St

9/25/2008 Thu 19:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32770650**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLOUDY
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DARK-ROAD LIGHTED
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 3220 State of Registration: NY
Num of Occupants: 1 Driver's Age: 43 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 OTHER Registered Weight: State of Registration: FL
Num of Occupants: 1 Driver's Age: 88 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, TRAFFIC CONTROL DEVICES DISREGARDED

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
AT INTERSECTION WITH NEW KING ST

3/21/2008 Fri 10:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32572516**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: UNKNOWN Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Accident Location Information System (ALIS)

Date: 08/20/10
09:05

Accident Verbal Description Report

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5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
***** CONTINUED

Veh :1 CAR/VAN/PICKUP Registered Weight: 4250 State of Registration: NY
Num of Occupants: 2 Driver's Age: 47 Sex: F Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 TRUCK Registered Weight: State of Registration: VT
Num of Occupants: 1 Driver's Age: 55 Sex: M Citation Issued: N
Direction of Travel: SOUTH-WEST Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: [Route] 120
AT INTERSECTION WITH NEW KING ST

2/21/2008 Thu 23:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2008-32572907**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: UNKNOWN
Manner of Collision: RIGHT TURN (AGAINST OTHER CAR) Weather: UNKNOWN
Road Surface Condition: UNKNOWN Road Char.: UNKNOWN Light Condition: UNKNOWN
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: CT
Num of Occupants: 2 Driver's Age: 39 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

Veh :2 OTHER Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 23 Sex: F Citation Issued: N
Direction of Travel: UNKNOWN Public Property Damage: N School Bus Involved: N
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: Purchase St
AT INTERSECTION WITH New King St

7/8/2007 Sun 10:08 AM Persons Killed: 0 Persons Injured: 2 Extent of Injuries: AA **Case: 2007-32265841**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 1
Type Of Accident: COLLISION WITH BICYCLIST Traffic Control: TRAFFIC SIGNAL
Manner of Collision: OTHER Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: PED/BICYCLIST AT INTERSECTION Action of Ped/Bicycle: ALONG HIGHWAY WITH TRAFFIC

Veh :1 CAR/VAN/PICKUP Registered Weight: 2519 State of Registration: NY
Num of Occupants: 2 Driver's Age: 50 Sex: F Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: UNKNOWN, UNKNOWN

Accident Location Information System (ALIS)

Accident Verbal Description Report

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120 87012070 Street: Purchase St
***** CONTINUED

Veh :2 BICYCLE Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: 43 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PASSING OR LANE USAGE IMPROPERLY, DRIVER INATTENTION

Veh :3 BICYCLE Registered Weight: State of Registration:
Num of Occupants: 1 Driver's Age: 45 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120A87015001 Street: STATE HWY 120
AT INTERSECTION WITH GATEWAY LN

12/13/2009 Sun 12:08 PM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33289096**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NO PASSING ZONE
Manner of Collision: SIDESWIPE Weather: SLEET/HAIL/FREEZING RAIN
Road Surface Condition: SNOW/ICE Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 OTHER Registered Weight: State of Registration: VT
Num of Occupants: 1 Driver's Age: 50 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: NOT APPLICABLE, UNKNOWN

Veh :2 CAR/VAN/PICKUP Registered Weight: 5280 State of Registration: NY
Num of Occupants: 1 Driver's Age: 50 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: PAVEMENT SLIPPERY, UNKNOWN

County: Westchester Muni: North Castle(T) Ref. Marker: 120A87015001 Street: [Route] 120
AT INTERSECTION WITH GATEWAY LN

12/8/2009 Tue 07:08 AM Persons Killed: 0 Persons Injured: 0 Extent of Injuries: **Case: 2009-33261426**
Accident Class: PROPERTY DAMAGE Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: TRAFFIC SIGNAL
Manner of Collision: REAR END Weather: CLEAR
Road Surface Condition: DRY Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: State of Registration: NY
Num of Occupants: 1 Driver's Age: 18 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: Y
Pre-Accd Action: SLOWED OR STOPPING
Apparent Factors: UNSAFE SPEED, DRIVER INATTENTION

Accident Location Information System (ALIS)

Date: 08/20/10
09:05

Accident Verbal Description Report

Page: 7

5652 NYS 120 from Lake Street to NYS 120A

Data in this report covers the period May 01, 2007 - Apr 30, 2010

Complete Accident data from NYSDMV is only available thru 4/30/2010

County: Westchester Muni: North Castle(T) Ref. Marker: 120A87015001 Street: [Route] 120
***** CONTINUED

Veh :2 BUS Registered Weight: State of Registration: NY
Num of Occupants: 3 Driver's Age: 57 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: STOPPED IN TRAFFIC
Apparent Factors: NOT APPLICABLE, NOT APPLICABLE

County: Westchester Muni: North Castle(T) Ref. Marker: 120A87015001 Street: STATE HWY 120
AT INTERSECTION WITH Gateway Ln

9/26/2008 Fri 13:08 PM Persons Killed: 0 Persons Injured: 1 Extent of Injuries: A **Case: 2008-32759897**
Accident Class: PROPERTY DAMAGE AND INJURY Police Agency: Num of Veh: 2
Type Of Accident: COLLISION WITH MOTOR VEHICLE Traffic Control: NONE
Manner of Collision: LEFT TURN (AGAINST OTHER CAR) Weather: CLOUDY
Road Surface Condition: WET Road Char.: STRAIGHT AND LEVEL Light Condition: DAYLIGHT
Loc. of Ped/Bicycle: NOT APPLICABLE Action of Ped/Bicycle: NOT APPLICABLE

Veh :1 CAR/VAN/PICKUP Registered Weight: 2982 State of Registration: NY
Num of Occupants: 1 Driver's Age: 52 Sex: M Citation Issued: N
Direction of Travel: NORTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: GOING STRAIGHT AHEAD
Apparent Factors: UNKNOWN, FAILURE TO YIELD RIGHT OF WAY

Veh :2 CAR/VAN/PICKUP Registered Weight: 3501 State of Registration: NY
Num of Occupants: 1 Driver's Age: 81 Sex: M Citation Issued: N
Direction of Travel: SOUTH Public Property Damage: N School Bus Involved: N
Pre-Accd Action: MAKING LEFT TURN
Apparent Factors: UNKNOWN, UNKNOWN

Appendix J: Traffic Impact Study

Automatic Traffic Recorder (ATR) Counts and Summary

Table 3

Peak Hours for Individual Study Area ATR Machines and Intersections

Aerotech Parking Facility

Count Method & Location	Date of Counts											
	11/26/2008						12/4/2008					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
ATR Location[1]	AM Peak Hour	ATR Volumes	Balanced Network Volume	PM Peak Hour	ATR Volumes	Balanced Network Volume	AM Peak Hour	ATR Volumes	Balanced Network Volume	PM Peak Hour	ATR Volumes	Balanced Network Volume
1 (Southbound)	10:00 - 11:00 AM	168	165	1:30 - 2:30 PM	460	420	7:30 - 8:30 AM	177	165	4:30 - 5:30 PM	419	420
1 (Northbound)	7:15 - 8:15 AM	267	230	1:45 - 2:45 PM	242	240	7:15 - 8:15 AM	394	230	1:30 - 2:30 PM	215	240
2	7:15 - 8:15 AM	108	105	1:00 - 2:00 PM	31	15	7:15 - 8:15 AM	125	105	2:15 - 3:15 PM	39	15
3	10:30 - 11:30 AM	350	295	2:15 - 3:15 PM	599	510	10:45 - 11:45 AM	219	295	1:30 - 2:30 PM	408	510
4	8:15 - 9:15 AM	287	300	3:30 - 4:30 PM	622	600	7:45 - 8:45 AM	323	300	5:00 - 6:00 PM	490	600
5	7:45 - 8:45 AM	561	540	2:45 - 3:45 PM	999	920	7:30 - 8:30 AM	692	540	4:45 - 5:45 PM	942	920
6	7:45 - 8:45 AM	546	530	2:00 - 3:00 PM	239	225	7:45 - 8:45 AM	775	530	5:15 - 6:15 PM	251	225
7	7:15 - 8:15 AM	415	530	1:45 - 2:45 PM	474	470	7:15 - 8:15 AM	592	530	1:30 - 2:30 PM	453	470
8	7:45 - 8:45 AM	435	420	2:15 - 3:15 PM	482	455	8:15 - 9:15 AM	527	420	4:45 - 5:45 PM	375	455
9	10:15 - 11:15 AM	493	405	2:00 - 3:00 PM	727	660	6:00 - 7:00 AM	413	405	1:30 -2:30 PM	546	660
10	10:30 - 11:30 AM	276	260	2:15 - 3:15 PM	626	585	10:45 - 11:45 AM	262	260	3:45 - 4:45 PM	518	585
Turning Movement Count Location (Intersection)	**AM Peak Hour**			**PM Peak Hour**								
Airport Road @ I-684 NB Ramps	8:15 - 9:15 AM			5:00 - 6:00 PM								
Airport Road @ I-684 SB Ramps	8:15 - 9:15 AM			4:00 - 5:00 PM								
Rye Lake Ave/Airport Driveway @ Airport Road	8:00 - 9:00 AM			4:30 - 5:30 PM								
Rye Lake Ave @ King Street	8:15 - 9:15 AM			4:30 - 5:30 PM								
Lake Street/NYS Route 120 @ NYS Route 120	8:00 - 9:00 AM			4:15 - 5:15 PM								
Airport Road @ NYS Route 120	8:15 - 9:15 AM			4:15 - 5:15 PM								
New King Street @ NYS Route 120	8:00 - 9:00 AM			4:15 - 5:15 PM								

Note:

(1) See Figure 1 for ATR locations.

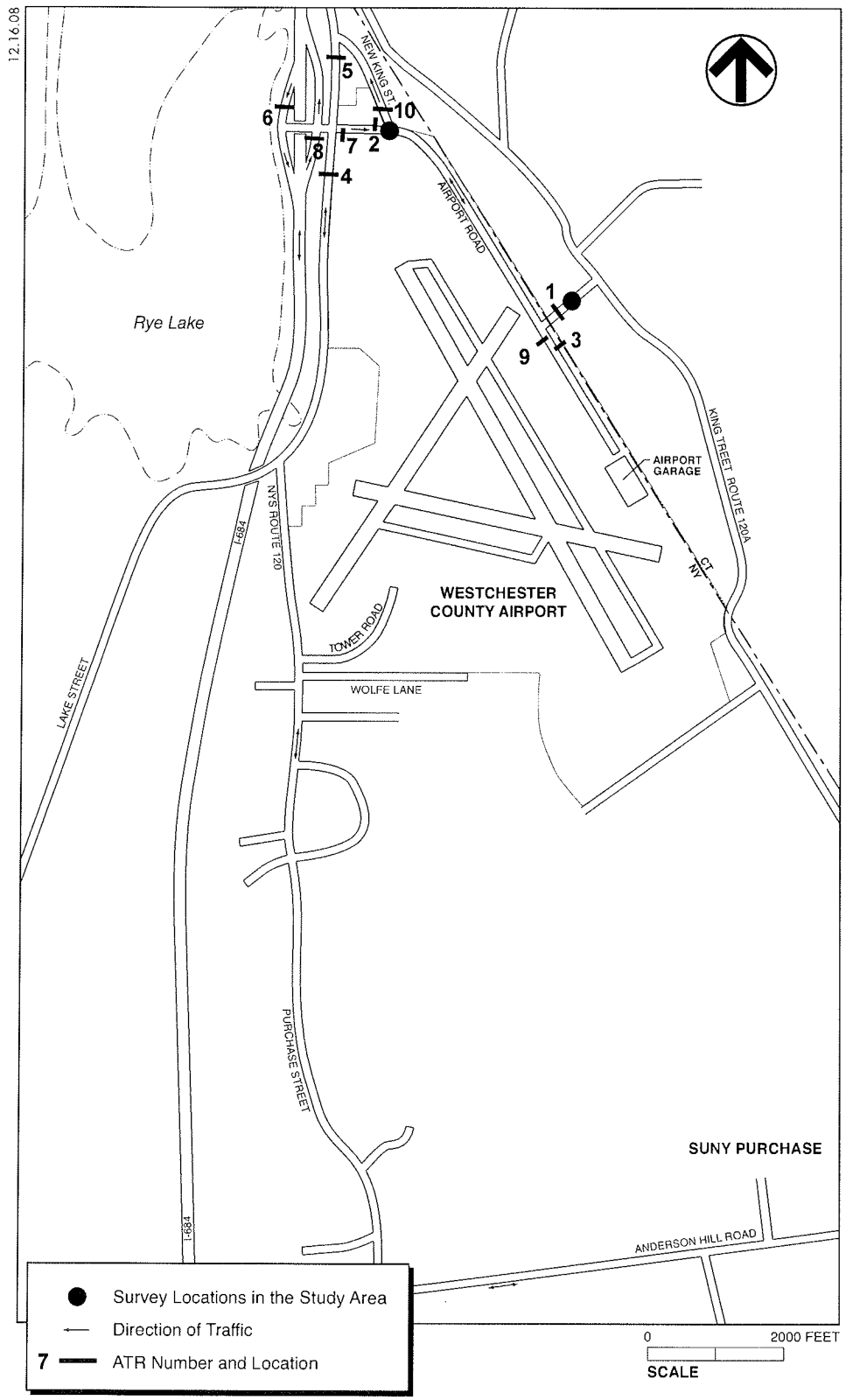


Figure 1

AEROTECH Westchester County Airport

Automatic Traffic Recorder (ATR) Locations

Basic Volume Report: AIRPORT IN

Station ID : AIRPORT IN

Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : AIRPORT IN.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 98955

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 07:45 - 11/26/2008 To: 15:59 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/26/08	07:00				68	68
Wed	08:00	67	57	66	63	253
	09:00	50	59	81	100	290
	10:00	108	110	83	156	457
	11:00	144	105	74	107	430
	12:00	122	102	106	128	458
	13:00	115	122	154	170	561
	14:00	211	177	168	171	727
	15:00	117	166	151	120	554
	16:00	131	149	183	125	588
	17:00	97	136	120	160	513
	18:00	136	102	69	70	377
	19:00	83	52	44	67	246
	20:00	75	83	56	24	238
	21:00	40	108	149	75	372
	22:00	47	60	92	90	289
	23:00	95	162	84	39	380
Day Total :						6801

AM Total :	1498 (22.0%)	Peak AM Hour :	10:15 =	493 (7.2%)	Peak AM Factor :	0.790	Average Period : 104.6
PM Total :	5303 (78.0%)	Peak PM Hour :	14:00 =	727 (10.7%)	Peak PM Factor :	0.861	Average Hour : 418.5

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	19	6	7	3	35
Thu	01:00	2	3	1	2	8
	02:00	1	0	2	3	6
	03:00	1	6	15	25	47
	04:00	14	30	56	77	177
	05:00	83	31	62	83	259
	06:00	123	96	93	82	394
	07:00	53	57	68	65	243
	08:00	55	23	31	49	158
	09:00	38	63	61	79	241
	10:00	92	88	70	63	313
	11:00	96	153	89	64	402
	12:00	61	54	78	46	239
	13:00	58	69	91	134	352
	14:00	84	103	108	69	364
	15:00	77	52	45	26	200
	16:00	38	27	27	19	111
	17:00	35	35	40	36	146
	18:00	25	43	32	37	137
	19:00	22	25	21	24	92
	20:00	15	3	4	8	30
	21:00	12	14	11	11	48
	22:00	3	21	16	11	51
	23:00	27	11	16	15	69
Day Total :						4122

AM Total :	2283 (55.4%)	Peak AM Hour :	11:00 =	402 (9.8%)	Peak AM Factor : 0.657	Average Period :	42.9
PM Total :	1839 (44.6%)	Peak PM Hour :	13:45 =	429 (10.4%)	Peak PM Factor : 0.800	Average Hour :	171.8

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	8	1	5	1	15
Fri	01:00	0	3	1	1	5
	02:00	0	7	0	4	11
	03:00	5	2	7	25	39
	04:00	13	17	21	45	96
	05:00	25	24	35	61	145
	06:00	61	71	75	65	272
	07:00	38	50	63	78	229
	08:00	75	73	57	30	235
	09:00	35	36	38	66	175
	10:00	88	78	93	92	351
	11:00	123	104	70	81	378
	12:00	56	63	80	68	267
	13:00	87	107	108	173	475
	14:00	135	128	87	81	431
	15:00	80	100	109	66	355
	16:00	75	89	86	81	331
	17:00	81	77	70	94	322
	18:00	51	87	64	56	258
	19:00	27	24	22	33	106
	20:00	30	27	17	18	92
	21:00	42	64	41	27	174
	22:00	34	54	33	55	176
	23:00	38	29	35	12	114
Day Total :						5052

AM Total :	1951 (38.6%)	Peak AM Hour : 10:30 =	412 (8.2%)	Peak AM Factor : 0.837	Average Period : 52.6
PM Total :	3101 (61.4%)	Peak PM Hour : 13:30 =	544 (10.8%)	Peak PM Factor : 0.786	Average Hour : 210.5

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	4	17	4	3	28
Sat	01:00	6	3	3	1	13
	02:00	0	0	0	0	0
	03:00	2	2	10	23	37
	04:00	15	15	38	60	128
	05:00	80	43	64	65	252
	06:00	83	120	106	111	420
	07:00	87	64	72	76	299
	08:00	79	28	21	24	152
	09:00	38	29	48	60	175
	10:00	68	103	100	127	398
	11:00	141	113	72	63	389
	12:00	54	41	71	81	247
	13:00	77	100	161	138	476
	14:00	131	124	134	145	534
	15:00	105	69	57	86	317
	16:00	80	72	92	101	345
	17:00	68	83	90	104	345
	18:00	104	80	70	46	300
	19:00	28	36	33	19	116
	20:00	18	10	13	16	57
	21:00	21	23	41	61	146
	22:00	38	42	34	44	158
	23:00	37	32	39	39	147
Day Total :						5479

AM Total :	2291 (41.8%)	Peak AM Hour : 10:30 =	481 (8.8%)	Peak AM Factor : 0.853	Average Period :	57.1
PM Total :	3188 (58.2%)	Peak PM Hour : 13:30 =	554 (10.1%)	Peak PM Factor : 0.860	Average Hour :	228.3

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	15	11	4	3	33
Sun	01:00	2	7	8	18	35
	02:00	0	1	0	4	5
	03:00	2	3	11	21	37
	04:00	5	11	26	45	87
	05:00	24	42	34	77	177
	06:00	82	98	109	127	416
	07:00	95	63	86	80	324
	08:00	46	35	35	30	146
	09:00	46	22	71	67	206
	10:00	67	116	126	145	454
	11:00	131	92	110	103	436
	12:00	96	91	110	111	408
	13:00	103	121	126	171	521
	14:00	120	141	137	118	516
	15:00	90	97	113	112	412
	16:00	109	152	138	137	536
	17:00	129	125	143	129	526
	18:00	108	91	89	77	365
	19:00	41	34	36	41	152
	20:00	43	65	45	73	226
	21:00	76	66	95	100	337
	22:00	79	68	64	112	323
	23:00	71	85	53	86	295
Day Total :						6973

AM Total :	2356 (33.8%)	Peak AM Hour : 10:15 =	518 (7.4%)	Peak AM Factor : 0.893	Average Period :	72.6
PM Total :	4617 (66.2%)	Peak PM Hour : 13:45 =	569 (8.2%)	Peak PM Factor : 0.832	Average Hour :	290.5

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	76	107	69	62	314
Mon	01:00	48	42	29	13	132
	02:00	7	4	11	13	35
	03:00	2	10	9	26	47
	04:00	9	16	40	125	190
	05:00	149	113	78	96	436
	06:00	143	155	183	184	665
	07:00	126	128	114	121	489
	08:00	102	91	84	71	348
	09:00	92	58	70	125	345
	10:00	118	140	194	178	630
	11:00	114	129	103	83	429
	12:00	90	101	97	171	459
	13:00	115	170	176	206	667
	14:00	188	163	115	133	599
	15:00	126	149	148	164	587
	16:00	155	157	137	107	556
	17:00	132	145	115	134	526
	18:00	125	126	119	99	469
	19:00	68	65	39	37	209
	20:00	27	33	52	37	149
	21:00	28	47	62	74	211
	22:00	49	31	51	78	209
	23:00	91	87	110	125	413
Day Total :						9114

AM Total :	4060 (44.5%)	Peak AM Hour : 06:00 =	665 (7.3%)	Peak AM Factor : 0.857	Average Period : 94.9
PM Total :	5054 (55.5%)	Peak PM Hour : 13:15 =	740 (8.1%)	Peak PM Factor : 0.898	Average Hour : 379.8

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	59	32	15	12	118
Tue	01:00	19	8	7	4	38
	02:00	3	1	5	1	10
	03:00	4	4	4	27	39
	04:00	10	24	63	94	191
	05:00	90	78	56	109	333
	06:00	134	137	136	129	536
	07:00	111	94	115	108	428
	08:00	79	59	54	45	237
	09:00	49	72	59	103	283
	10:00	112	132	123	134	501
	11:00	126	117	83	90	416
	12:00	88	76	87	133	384
	13:00	150	179	198	184	711
	14:00	175	165	142	141	623
	15:00	100	126	118	149	493
	16:00	156	177	144	127	604
	17:00	96	96	92	96	380
	18:00	137	105	72	71	385
	19:00	57	40	24	20	141
	20:00	31	37	36	40	144
	21:00	40	49	76	77	242
	22:00	32	42	24	63	161
	23:00	75	54	36	21	186
Day Total :						7584

AM Total :	3130 (41.3%)	Peak AM Hour : 06:00 =	536 (7.1%)	Peak AM Factor : 0.978	Average Period :	79.0
PM Total :	4454 (58.7%)	Peak PM Hour : 13:15 =	736 (9.7%)	Peak PM Factor : 0.929	Average Hour :	316.0

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	9	16	7	1	33
Wed	01:00	9	2	5	1	17
	02:00	2	2	3	5	12
	03:00	2	2	5	24	33
	04:00	13	13	55	55	136
	05:00	74	60	65	84	283
	06:00	120	107	110	106	443
	07:00	82	78	95	77	332
	08:00	79	53	48	50	230
	09:00	57	57	67	87	268
	10:00	78	107	110	125	420
	11:00	82	82	117	80	361
	12:00	70	83	95	120	368
	13:00	104	125	158	148	535
	14:00	204	170	125	131	630
	15:00	95	99	113	102	409
	16:00	83	123	91	74	371
	17:00	73	77	67	75	292
	18:00	67	57	42	28	194
	19:00	33	20	24	56	133
	20:00	50	34	39	30	153
	21:00	33	64	33	33	163
	22:00	29	53	52	55	189
	23:00	25	52	39	28	144
Day Total :						6149

AM Total :	2568 (41.8%)	Peak AM Hour : 06:00 =	443 (7.2%)	Peak AM Factor : 0.886	Average Period : 64.1
PM Total :	3581 (58.2%)	Peak PM Hour : 13:30 =	680 (11.1%)	Peak PM Factor : 0.833	Average Hour : 256.2

Date	Time	:00	:15	:30	:45	Total	
12/04/08	00:00	15	8	9	7	39	
Thu	01:00	1	5	4	1	11	
	02:00	0	0	2	1	3	
	03:00	0	2	5	21	28	
	04:00	12	23	41	71	147	
	05:00	57	56	57	72	242	
	06:00	94	98	129	92	413	
	07:00	75	81	81	65	302	
	08:00	70	62	43	42	217	
	09:00	58	53	67	79	257	
	10:00	96	76	89	80	341	
	11:00	100	72	64	77	313	1,177
	12:00	79	86	85	89	339	
	13:00	100	128	155	132	515	
	14:00	126	133	82	73	414	
	15:00	64	70	75	75	284	
	16:00	112	88	100	97	397	
	17:00	81	96	81	107	365	
	18:00	101	68	49	60	278	
	19:00	43	34	33	26	136	
	20:00	43	23	37	37	140	1,432
	21:00	41	67	71	27	206	
	22:00	43	35	40	52	170	
	23:00	36	32	43	17	128	
Day Total :						5685	

AM Total :	2313 (40.7%)	Peak AM Hour : 06:00 =	413 (7.3%)	Peak AM Factor : 0.800	Average Period : 59.2
PM Total :	3372 (59.3%)	Peak PM Hour : 13:30 =	546 (9.6%)	Peak PM Factor : 0.881	Average Hour : 236.9

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	12	24	7	5	48
Fri	01:00	0	4	2	2	8
	02:00	0	2	4	3	9
	03:00	0	3	12	27	42
	04:00	12	16	33	65	126
	05:00	74	45	41	78	238
	06:00	82	86	104	108	380
	07:00	89	69	90	89	337
	08:00	71	67	39	45	222
	09:00	45	33	49	72	199
	10:00	70	89	81	106	346
	11:00	88	78	82	93	341
	12:00	91	94	85	87	357
	13:00	123	146	184	162	615
	14:00	148	131	87	104	470
	15:00	99	72	85	82	338
	16:00	87	93	82	88	350
	17:00	76	90	66	88	320
	18:00	79	55	90	65	289
	19:00	50	27	22	45	144
	20:00	27	19	24	31	101
	21:00	50	92	34	35	211
	22:00	65	59	46	58	228
	23:00	43	43	23	24	133
Day Total :						5852

AM Total :	2296 (39.2%)	Peak AM Hour : 06:15 =	387 (6.6%)	Peak AM Factor : 0.896	Average Period :	61.0
PM Total :	3556 (60.8%)	Peak PM Hour : 13:15 =	640 (10.9%)	Peak PM Factor : 0.870	Average Hour :	243.8

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	11	7	9	4	31
Sat	01:00	6	0	4	2	12
	02:00	2	0	3	0	5
	03:00	0	4	4	19	27
	04:00	10	27	41	37	115
	05:00	46	41	39	49	175
	06:00	77	83	88	94	342
	07:00	61	55	77	78	271
	08:00	59	23	25	18	125
	09:00	32	18	37	40	127
	10:00	58	82	80	89	309
	11:00	69	54	42	68	233
	12:00	57	56	78	46	237
	13:00	74	135	100	126	435
	14:00	126	102	98	76	402
	15:00	59	55	65	57	236
	16:00	46	31	47	51	175
	17:00	56	35	60	66	217
	18:00	32	34	29	45	140
	19:00	24	22	17	13	76
	20:00	10	13	19	24	66
	21:00	18	20	28	68	134
	22:00	22	13	8	13	56
	23:00	21	30	22	13	86
Day Total :						4032

AM Total :	1772 (43.9%)	Peak AM Hour : 06:00 =	342 (8.5%)	Peak AM Factor : 0.910	Average Period : 42.0
PM Total :	2260 (56.1%)	Peak PM Hour : 13:15 =	487 (12.1%)	Peak PM Factor : 0.902	Average Hour : 168.0

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	11	13	3	3	30
Sun	01:00	1	0	1	4	6
	02:00	1	5	7	1	14
	03:00	1	9	15	21	46
	04:00	9	7	20	19	55
	05:00	16	18	26	42	102
	06:00	66	47	45	55	213
	07:00	29	26	46	71	172
	08:00	43	28	20	26	117
	09:00	30	38	41	68	177
	10:00	67	84	100	69	320
	11:00	97	55	68	62	282
	12:00	71	73	78	63	285
	13:00	90	130	165	140	525
	14:00	158	131	112	67	468
	15:00	71	87	96	96	350
	16:00	117	103	125	115	460
	17:00	81	55	91	96	323
	18:00	86	60	49	39	234
	19:00	37	26	35	30	128
	20:00	34	58	36	41	169
	21:00	32	57	44	27	160
	22:00	38	37	68	60	203
	23:00	75	57	83	27	242
Day Total :						5081

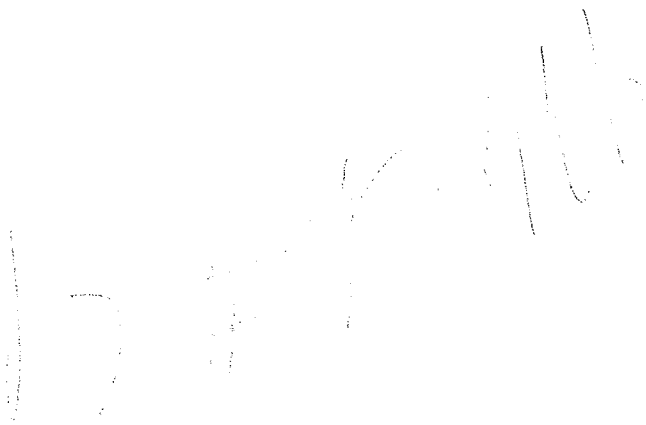
AM Total :	1534 (30.2%)	Peak AM Hour :	10:15 =	350 (6.9%)	Peak AM Factor : 0.875	Average Period : 52.9
PM Total :	3547 (69.8%)	Peak PM Hour :	13:30 =	594 (11.7%)	Peak PM Factor : 0.900	Average Hour : 211.7

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	31	15	5	12	63
Mon	01:00	11	7	3	3	24
	02:00	3	0	3	2	8
	03:00	0	0	10	26	36
	04:00	9	21	44	88	162
	05:00	104	59	58	106	327
	06:00	107	119	134	137	497
	07:00	99	84	110	66	359
	08:00	72	58	45	69	244
	09:00	54	53	70	75	252
	10:00	92	108	107	136	443
	11:00	128	79	76	69	352
	12:00	65	80	93	84	322
	13:00	86	124	150	159	519
	14:00	119	96	125	75	415
	15:00	83	84	69	72	308
	16:00	87	111	89	77	364
	17:00	81	75	63	92	311
	18:00	39	55	53	50	197
	19:00	34	45	24	35	138
	20:00	43	26	36	20	125
	21:00	24	61	78	22	185
	22:00	28	58	48	106	240
	23:00	42	39	35	18	134
Day Total :						6025

AM Total :	2767 (45.9%)	Peak AM Hour : 06:00 =	497 (8.2%)	Peak AM Factor : 0.907	Average Period :	62.8
PM Total :	3258 (54.1%)	Peak PM Hour : 13:15 =	552 (9.2%)	Peak PM Factor : 0.868	Average Hour :	251.0

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	10	19	3	0	32
Tue	01:00	2	6	0	2	10
	02:00	1	3	1	2	7
	03:00	2	6	11	20	39
	04:00	9	23	31	72	135
	05:00	88	51	38	71	248
	06:00	92	92	103	99	386
	07:00	77	63	80	67	287
	08:00	59	44	56	50	209
	09:00	48	59	65	45	217
	10:00	67	76	91	77	311
	11:00	59	40	62	45	206
	12:00	45	46	42	56	189
	13:00	67	89	117	122	395
	14:00	127	110	96	107	440
	15:00	65	84	72		221
Day Total :						3332

AM Total :	2087 (62.6%)	Peak AM Hour : 06:00 =	386 (11.6%)	Peak AM Factor : 0.937	Average Period : 52.9
PM Total :	1245 (37.4%)	Peak PM Hour : 13:30 =	476 (14.3%)	Peak PM Factor : 0.937	Average Hour : 211.6



Basic Volume Summary: AIRPORT IN

Grand Total For Data From: 07:45 - 11/26/2008 To: 15:59 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	81281	(100.0%)	13.33	6096	63.5	254.0	32906 (40.5%)	48375 (59.5%)
ALL	81281		13.33	6096	63.5	254.0	32906 (40.5%)	48375 (59.5%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	06:00 =	665	12/01/2008	0.857	13:15 =	740	12/01/2008	0.898

Basic Volume Report: AIRPORT EXIT

Station ID : AIRPORT EXIT
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : AIRPORT EXIT.DB

Last Connected Device Type : Apollo
Version Number : 1.41
Serial Number : 89585

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

Date	Time	:00	:15	:30	:45	Total
11/26/08	08:00	36	30	39	39	144
Wed	09:00	38	44	42	71	195
	10:00	45	89	70	68	272
	11:00	103	109	55	55	322
	12:00	87	91	66	105	349
	13:00	77	92	96	137	402
	14:00	126	138	187	135	586
	15:00	139	115	135	96	485
	16:00	105	96	151	158	510
	17:00	101	81	100	84	366
	18:00	137	158	86	53	434
	19:00	64	86	36	29	215
	20:00	58	72	106	24	260
	21:00	20	37	116	119	292
	22:00	57	20	64	94	235
	23:00	61	74	157	72	364
Daily Total:						5431

AM Total:	933	(17.2%)	Peak AM Hour: 10:30 = 350 (6.4%)	Peak AM Factor: 0.803	Average Period: 84.9
PM Total:	4498	(82.8%)	Peak PM Hour: 14:15 = 599 (11.0%)	Peak PM Factor: 0.801	AverageHour: 339.4

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	32	24	8	7	71
Thu	01:00	1	1	4	0	6
	02:00	1	0	1	2	4
	03:00	1	1	1	4	7
	04:00	3	5	17	29	54
	05:00	39	20	24	34	117
	06:00	65	61	53	50	229
	07:00	41	37	30	36	144
	08:00	30	13	17	19	79
	09:00	35	22	48	39	144
	10:00	59	62	43	35	199
	11:00	55	82	98	59	294
	12:00	55	41	50	54	200
	13:00	40	46	41	92	219
	14:00	80	53	93	81	307
	15:00	65	65	57	24	211
	16:00	20	25	32	21	98
	17:00	12	26	24	23	85
	18:00	16	36	51	27	130
	19:00	42	18	24	12	96
	20:00	33	8	3	4	48
	21:00	6	4	10	10	30
	22:00	5	9	25	15	54
	23:00	16	22	13	10	61
Daily Total:						2887

AM Total:	1348	(46.7%)	Peak AM Hour: 11:00 = 294 (10.2%)	Peak AM Factor: 0.750	Average Period: 30.1
PM Total:	1539	(53.3%)	Peak PM Hour: 13:45 = 318 (11.0%)	Peak PM Factor: 0.855	AverageHour: 120.3

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	10	7	2	2	21
Fri	01:00	0	2	1	0	3
	02:00	1	0	3	0	4
	03:00	4	0	1	1	6
	04:00	2	3	6	5	16
	05:00	14	7	14	22	57
	06:00	26	32	46	51	155
	07:00	41	16	30	42	129
	08:00	35	47	40	36	158
	09:00	25	20	14	39	98
	10:00	40	52	67	55	214
	11:00	69	77	71	48	265
	12:00	63	47	61	52	223
	13:00	44	71	63	116	294
	14:00	105	94	104	82	385
	15:00	64	46	107	56	273
	16:00	42	78	82	80	282
	17:00	53	66	53	33	205
	18:00	81	76	85	42	284
	19:00	54	30	15	21	120
	20:00	51	32	24	10	117
	21:00	9	74	56	18	157
	22:00	23	44	42	52	161
	23:00	56	19	50	29	154
Daily Total:						3781

AM Total:	1126	(29.8%)	Peak AM Hour: 10:45 = 272 (7.2%)	Peak AM Factor: 0.883	Average Period: 39.4
PM Total:	2655	(70.2%)	Peak PM Hour: 13:45 = 419 (11.1%)	Peak PM Factor: 0.903	AverageHour: 157.5

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	10	7	6	3	26
Sat	01:00	2	5	2	0	9
	02:00	1	0	0	0	1
	03:00	1	3	1	2	7
	04:00	3	4	3	13	23
	05:00	49	18	26	28	121
	06:00	46	67	79	68	260
	07:00	53	44	46	43	186
	08:00	37	29	16	25	107
	09:00	16	21	25	32	94
	10:00	37	63	67	67	234
	11:00	83	103	59	45	290
	12:00	38	37	37	63	175
	13:00	40	58	79	118	295
	14:00	90	85	93	110	378
	15:00	133	93	45	63	334
	16:00	71	43	70	97	281
	17:00	38	58	78	84	258
	18:00	70	105	65	46	286
	19:00	40	43	36	32	151
	20:00	15	9	9	5	38
	21:00	12	34	55	38	139
	22:00	50	50	24	23	147
	23:00	48	46	42	38	174
Daily Total:						4014

AM Total:	1358	(33.8%)	Peak AM Hour: 10:30 = 320 (8.0%)	Peak AM Factor: 0.777	Average Period: 41.8
PM Total:	2656	(66.2%)	Peak PM Hour: 14:30 = 429 (10.7%)	Peak PM Factor: 0.806	AverageHour: 167.3

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	51	14	11	2	78
Sun	01:00	8	2	12	36	58
	02:00	5	0	5	2	12
	03:00	0	2	2	8	12
	04:00	2	3	3	17	25
	05:00	23	17	17	53	110
	06:00	90	64	126	125	405
	07:00	100	103	58	90	351
	08:00	45	47	37	11	140
	09:00	33	19	45	55	152
	10:00	50	53	115	140	358
	11:00	172	145	94	66	477
	12:00	119	67	89	114	389
	13:00	117	87	108	109	421
	14:00	139	158	112	123	532
	15:00	94	100	175	95	464
	16:00	148	139	144	106	537
	17:00	165	161	137	165	628
	18:00	151	214	98	70	533
	19:00	98	36	27	75	236
	20:00	48	39	78	25	190
	21:00	83	147	58	97	385
	22:00	148	133	44	106	431
	23:00	129	126	103	59	417
Daily Total:						7341

AM Total:	2178	29.7%	Peak AM Hour: 10:30 = 572 (7.8%)	Peak AM Factor: 0.831	Average Period: 76.5
PM Total:	5163	70.3%	Peak PM Hour: 17:30 = 667 (9.1%)	Peak PM Factor: 0.779	AverageHour: 305.9

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	104	101	120	86	411
Mon	01:00	88	77	74	26	265
	02:00	6	6	10	4	26
	03:00	7	15	13	6	41
	04:00	3	7	10	48	68
	05:00	89	74	60	60	283
	06:00	88	121	120	158	487
	07:00	115	76	107	104	402
	08:00	101	77	85	80	343
	09:00	74	67	48	60	249
	10:00	96	98	164	178	536
	11:00	150	133	128	121	532
	12:00	77	72	79	145	373
	13:00	136	110	187	180	613
	14:00	218	174	171	120	683
	15:00	130	136	134	180	580
	16:00	232	145	169	194	740
	17:00	134	107	123	200	564
	18:00	128	171	115	120	534
	19:00	156	118	83	57	414
	20:00	60	25	53	107	245
	21:00	48	6	50	99	203
	22:00	121	66	39	64	290
	23:00	124	149	131	126	530
Daily Total:						9412

AM Total:	3643	38.7%	Peak AM Hour: 10:30 = 628 (6.7%)	Peak AM Factor: 0.882	Average Period: 98.1
PM Total:	5769	61.3%	Peak PM Hour: 13:30 = 759 (8.1%)	Peak PM Factor: 0.870	AverageHour: 392.2

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	159	93	20	12	284
Tue	01:00	23	23	11	3	60
	02:00	3	1	9	4	17
	03:00	3	4	4	0	11
	04:00	3	3	31	36	73
	05:00	50	47	38	54	189
	06:00	81	88	100	78	347
	07:00	85	54	66	81	286
	08:00	59	42	43	38	182
	09:00	28	42	32	62	164
	10:00	88	115	84	97	384
	11:00	140	81	100	74	395
	12:00	124	76	66	61	327
	13:00	136	139	162	153	590
	14:00	182	124	155	149	610
	15:00	147	84	81	135	447
	16:00	138	136	170	155	599
	17:00	176	131	100	107	514
	18:00	139	159	111	86	495
	19:00	128	73	23	23	247
	20:00	15	34	73	96	218
	21:00	49	80	54	124	307
	22:00	96	69	30	50	245
	23:00	132	134	46	30	342
Daily Total:						7333

AM Total:	2392	32.6%	Peak AM Hour: 10:15 = 436 (5.9%)	Peak AM Factor: 0.779	Average Period: 76.4
PM Total:	4941	67.4%	Peak PM Hour: 16:15 = 637 (8.7%)	Peak PM Factor: 0.905	Average Hour: 305.5

Basic Volume Report: EB AIR RD LANE1

Station ID : EB AIR RD LANE1
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : EB AIR RD LANE1.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 97855

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 10:15 - 11/24/2008 To: 15:59 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	10:00		83	96	87	266
Mon	11:00	78	84	64	60	286
	12:00	69	56	79	72	276
	13:00	64	73	99	114	350
	14:00	95	79	103	96	373
	15:00	79	58	88	98	323
	16:00	80	79	89	66	314
	17:00	79	75	76	90	320
	18:00	65	71	43	38	217
	19:00	44	31	21	20	116
	20:00	47	24	26	35	132
	21:00	39	50	36	38	163
	22:00	41	44	30	32	147
	23:00	47	38	29	19	133
Day Total :						3416

AM Total :	552 (16.2%)	Peak AM Hour : 10:30 =	345 (10.1%)	Peak AM Factor : 0.898	Average Period : 62.1
PM Total :	2864 (83.8%)	Peak PM Hour : 13:45 =	391 (11.4%)	Peak PM Factor : 0.857	Average Hour : 248.4

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	12	5	3	7	27
Tue	01:00	2	1	1	1	5
	02:00	1	1	0	2	4
	03:00	2	5	10	12	29
	04:00	18	15	34	62	129
	05:00	42	59	43	62	206
	06:00	72	68	94	120	354
	07:00	99	104	121	137	461
	08:00	127	138	101	93	459
	09:00	88	78	86	100	352
	10:00	133	78	88	102	401
	11:00	93	67	79	63	302
	12:00	90	82	60	80	312
	13:00	92	98	121	131	442
	14:00	119	111	97	92	419
	15:00	86	103	86	91	366
	16:00	81	93	91	78	343
	17:00	93	70	67	71	301
	18:00	92	90	72	89	343
	19:00	53	44	21	29	147
	20:00	30	45	43	42	160
	21:00	46	54	61	54	215
	22:00	41	43	51	61	196
	23:00	51	40	27	27	145
Day Total :						6118

AM Total :	2729 (44.6%)	Peak AM Hour : 07:30 =	523 (8.5%)	Peak AM Factor : 0.947	Average Period : 63.7
PM Total :	3389 (55.4%)	Peak PM Hour : 13:30 =	482 (7.9%)	Peak PM Factor : 0.920	Average Hour : 254.9

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	13	6	5	0	24
Wed	01:00	2	2	0	2	6
	02:00	2	4	2	7	15
	03:00	3	7	10	12	32
	04:00	18	16	34	53	121
	05:00	54	51	46	57	208
	06:00	78	82	81	105	346
	07:00	98	93	88	115	394
	08:00	119	78	95	98	390
	09:00	78	77	83	82	320
	10:00	80	87	54	113	334
	11:00	90	74	73	72	309
	12:00	80	80	72	90	322
	13:00	77	123	105	114	419
	14:00	128	118	114	104	464
	15:00	90	91	77	96	354
	16:00	100	110	89	59	358
	17:00	74	97	91	93	355
	18:00	85	63	45	54	247
	19:00	49	40	41	47	177
	20:00	32	39	28	25	124
	21:00	24	56	67	38	185
	22:00	30	48	52	47	177
	23:00	61	61	42	36	200
Day Total :						5881

AM Total :	2499 (42.5%)	Peak AM Hour : 07:15 =	415 (7.1%)	Peak AM Factor : 0.872	Average Period : 61.3
PM Total :	3382 (57.5%)	Peak PM Hour : 13:45 =	474 (8.1%)	Peak PM Factor : 0.926	Average Hour : 245.0

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	11	5	6	6	28
Thu	01:00	7	6	2	5	20
	02:00	1	0	0	5	6
	03:00	1	3	11	11	26
	04:00	14	17	39	50	120
	05:00	52	33	38	57	180
	06:00	70	56	56	65	247
	07:00	28	34	39	43	144
	08:00	30	22	27	39	118
	09:00	25	36	42	43	146
	10:00	60	60	63	60	243
	11:00	65	61	69	62	257
	12:00	71	51	68	72	262
	13:00	57	78	78	92	305
	14:00	78	84	69	60	291
	15:00	66	62	35	25	188
	16:00	43	29	34	21	127
	17:00	23	38	35	23	119
	18:00	26	36	31	33	126
	19:00	29	30	32	29	120
	20:00	39	27	28	33	127
	21:00	33	29	21	24	107
	22:00	27	22	15	17	81
	23:00	20	19	11	9	59
Day Total :						3447

AM Total :	1535 (44.5%)	Peak AM Hour : 11:00 =	257 (7.5%)	Peak AM Factor : 0.918	Average Period : 35.9
PM Total :	1912 (55.5%)	Peak PM Hour : 13:30 =	332 (9.6%)	Peak PM Factor : 0.902	Average Hour : 143.6

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	8	2	4	5	19
Fri	01:00	1	4	2	0	7
	02:00	2	3	1	4	10
	03:00	3	2	6	15	26
	04:00	13	12	18	30	73
	05:00	19	25	28	42	114
	06:00	39	35	53	53	180
	07:00	37	44	56	56	193
	08:00	59	59	63	41	222
	09:00	52	32	42	57	183
	10:00	57	57	76	67	257
	11:00	100	80	67	66	313
	12:00	56	48	61	62	227
	13:00	63	91	85	125	364
	14:00	87	101	75	57	320
	15:00	56	70	79	56	261
	16:00	55	53	74	46	228
	17:00	62	51	72	65	250
	18:00	43	44	42	36	165
	19:00	30	22	27	28	107
	20:00	26	13	22	16	77
	21:00	28	42	28	32	130
	22:00	22	29	33	29	113
	23:00	26	16	17	11	70
Day Total :						3909

AM Total :	1597 (40.9%)	Peak AM Hour : 10:30 =	323 (8.3%)	Peak AM Factor : 0.808	Average Period : 40.7
PM Total :	2312 (59.1%)	Peak PM Hour : 13:30 =	398 (10.2%)	Peak PM Factor : 0.796	Average Hour : 162.9

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	3	6	2	3	14
Sat	01:00	3	2	2	2	9
	02:00	0	1	1	1	3
	03:00	4	3	8	11	26
	04:00	15	13	19	45	92
	05:00	44	37	33	52	166
	06:00	38	62	47	60	207
	07:00	53	34	52	58	197
	08:00	43	36	24	25	128
	09:00	32	42	50	62	186
	10:00	51	75	72	81	279
	11:00	74	79	66	62	281
	12:00	56	36	63	57	212
	13:00	61	72	98	88	319
	14:00	85	104	101	89	379
	15:00	69	57	60	72	258
	16:00	63	45	55	64	227
	17:00	56	57	63	67	243
	18:00	46	55	36	41	178
	19:00	33	30	24	24	111
	20:00	16	15	18	16	65
	21:00	23	21	21	25	90
	22:00	25	26	34	30	115
	23:00	21	20	28	27	96
Day Total :						3881

AM Total :	1588 (40.9%)	Peak AM Hour : 10:30 =	306 (7.9%)	Peak AM Factor : 0.944	Average Period : 40.4
PM Total :	2293 (59.1%)	Peak PM Hour : 14:00 =	379 (9.8%)	Peak PM Factor : 0.911	Average Hour : 161.7

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	13	2	7	4	26
Sun	01:00	7	5	6	9	27
	02:00	1	0	1	5	7
	03:00	4	3	6	20	33
	04:00	8	7	13	36	64
	05:00	19	29	22	46	116
	06:00	44	57	57	73	231
	07:00	55	30	46	48	179
	08:00	34	24	35	28	121
	09:00	31	21	36	49	137
	10:00	41	64	69	94	268
	11:00	80	51	68	59	258
	12:00	69	63	77	74	283
	13:00	78	77	87	110	352
	14:00	87	89	103	117	396
	15:00	72	67	81	70	290
	16:00	84	92	84	92	352
	17:00	76	85	81	78	320
	18:00	52	46	73	51	222
	19:00	35	28	45	31	139
	20:00	31	42	38	49	160
	21:00	50	64	60	41	215
	22:00	48	43	35	41	167
	23:00	40	34	14	40	128
Day Total :						4491

AM Total :	1467 (32.7%)	Peak AM Hour :	10:15 =	307 (6.8%)	Peak AM Factor : 0.816	Average Period :	46.8
PM Total :	3024 (67.3%)	Peak PM Hour :	14:00 =	396 (8.8%)	Peak PM Factor : 0.846	Average Hour :	187.1

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	36	39	18	25	118
Mon	01:00	21	21	14	8	64
	02:00	7	1	7	7	22
	03:00	4	4	8	13	29
	04:00	16	13	25	72	126
	05:00	86	82	61	62	291
	06:00	89	98	130	155	472
	07:00	135	151	156	160	602
	08:00	164	122	134	118	538
	09:00	133	113	102	108	456
	10:00	102	114	132	114	462
	11:00	96	100	71	79	346
	12:00	89	83	72	109	353
	13:00	110	109	116	144	479
	14:00	116	131	98	95	440
	15:00	96	120	124	104	444
	16:00	85	121	101	94	401
	17:00	106	101	96	87	390
	18:00	96	86	67	55	304
	19:00	48	36	33	28	145
	20:00	36	33	30	27	126
	21:00	24	35	34	31	124
	22:00	26	27	31	58	142
	23:00	52	47	51	50	200
Day Total :						7074

AM Total :	3526 (49.8%)	Peak AM Hour : 07:15 =	631 (8.9%)	Peak AM Factor : 0.962	Average Period : 73.7
PM Total :	3548 (50.2%)	Peak PM Hour : 13:30 =	507 (7.2%)	Peak PM Factor : 0.880	Average Hour : 294.8

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	28	19	8	7	62
Tue	01:00	10	9	3	3	25
	02:00	2	1	2	5	10
	03:00	4	4	5	17	30
	04:00	11	14	42	64	131
	05:00	59	55	47	79	240
	06:00	87	96	111	132	426
	07:00	140	139	137	181	597
	08:00	154	115	115	122	506
	09:00	115	84	72	99	370
	10:00	87	90	102	97	376
	11:00	95	78	91	82	346
	12:00	68	59	89	89	305
	13:00	92	112	119	137	460
	14:00	129	135	97	94	455
	15:00	92	97	82	81	352
	16:00	103	93	80	80	356
	17:00	76	71	78	87	312
	18:00	85	54	41	49	229
	19:00	41	39	39	22	141
	20:00	31	35	38	24	128
	21:00	34	35	53	45	167
	22:00	24	35	31	37	127
	23:00	43	31	27	9	110
Day Total :						6261

AM Total :	3119 (49.8%)	Peak AM Hour : 07:15 =	611 (9.8%)	Peak AM Factor : 0.844	Average Period : 65.2
PM Total :	3142 (50.2%)	Peak PM Hour : 13:30 =	520 (8.3%)	Peak PM Factor : 0.949	Average Hour : 260.9

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	6	5	9	6	26
Wed	01:00	6	2	1	1	10
	02:00	0	2	6	6	14
	03:00	2	7	4	18	31
	04:00	15	18	22	49	104
	05:00	47	42	48	57	194
	06:00	76	88	96	124	384
	07:00	118	118	132	157	525
	08:00	159	100	113	121	493
	09:00	123	98	80	85	386
	10:00	79	88	93	80	340
	11:00	72	82	94	70	318
	12:00	66	69	76	84	295
	13:00	90	107	109	131	437
	14:00	126	122	94	93	435
	15:00	90	85	111	99	385
	16:00	88	86	80	75	329
	17:00	65	85	67	78	295
	18:00	71	50	39	26	186
	19:00	33	27	30	42	132
	20:00	39	38	36	31	144
	21:00	28	39	26	28	121
	22:00	27	38	35	37	137
	23:00	17	31	22	17	87
Day Total :						5808

AM Total :	2825 (48.6%)	Peak AM Hour : 07:15 =	566 (9.7%)	Peak AM Factor : 0.890	Average Period : 60.5
PM Total :	2983 (51.4%)	Peak PM Hour : 13:30 =	488 (8.4%)	Peak PM Factor : 0.931	Average Hour : 242.0

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	11	7	6	6	30
Thu	01:00	1	5	2	0	8
	02:00	1	1	0	3	5
	03:00	0	5	4	18	27
	04:00	7	20	15	48	90
	05:00	46	54	53	56	209
	06:00	73	76	118	130	397
	07:00	108	142	153	143	546
	08:00	154	117	124	109	504
	09:00	127	84	78	104	393
	10:00	78	66	91	88	323
	11:00	84	64	76	65	289
	12:00	70	82	63	82	297
	13:00	73	86	125	107	391
	14:00	100	121	78	80	379
	15:00	82	90	79	77	328
	16:00	89	100	78	91	358
	17:00	80	86	94	71	331
	18:00	77	80	36	49	242
	19:00	46	45	37	40	168
	20:00	41	39	25	34	139
	21:00	30	32	42	31	135
	22:00	33	27	21	35	116
	23:00	23	22	24	9	78
Day Total :						5783

AM Total :	2821 (48.8%)	Peak AM Hour :	07:15 =	592 (10.2%)	Peak AM Factor : 0.961	Average Period :	60.2
PM Total :	2962 (51.2%)	Peak PM Hour :	13:30 =	453 (7.8%)	Peak PM Factor : 0.906	Average Hour :	241.0

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	16	13	5	8	42
Fri	01:00	6	3	5	1	15
	02:00	0	1	4	2	7
	03:00	1	4	6	16	27
	04:00	13	10	25	47	95
	05:00	53	43	51	55	202
	06:00	70	73	97	130	370
	07:00	112	116	149	159	536
	08:00	130	122	121	109	482
	09:00	99	68	74	92	333
	10:00	72	78	78	76	304
	11:00	81	76	76	83	316
	12:00	79	70	87	76	312
	13:00	97	97	117	114	425
	14:00	114	122	87	72	395
	15:00	81	75	74	72	302
	16:00	91	83	71	61	306
	17:00	76	72	80	71	299
	18:00	74	47	59	58	238
	19:00	25	30	24	43	122
	20:00	28	23	25	24	100
	21:00	28	51	27	34	140
	22:00	37	42	41	33	153
	23:00	35	35	12	15	97
Day Total :						5618

AM Total :	2729 (48.6%)	Peak AM Hour : 07:30 =	560 (10.0%)	Peak AM Factor : 0.881	Average Period : 58.5
PM Total :	2889 (51.4%)	Peak PM Hour : 13:30 =	467 (8.3%)	Peak PM Factor : 0.957	Average Hour : 234.1

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	7	6	7	4	24
Sat	01:00	6	2	5	2	15
	02:00	0	1	4	0	5
	03:00	6	2	6	12	26
	04:00	7	17	22	35	81
	05:00	29	32	32	39	132
	06:00	53	47	62	85	247
	07:00	48	36	53	57	194
	08:00	56	46	35	37	174
	09:00	36	32	35	47	150
	10:00	58	60	61	83	262
	11:00	52	50	46	51	199
	12:00	61	62	59	54	236
	13:00	74	77	86	90	327
	14:00	79	77	78	52	286
	15:00	52	61	52	62	227
	16:00	49	36	55	54	194
	17:00	55	56	54	48	213
	18:00	36	30	32	46	144
	19:00	15	27	29	24	95
	20:00	10	24	20	23	77
	21:00	18	26	32	33	109
	22:00	15	14	18	24	71
	23:00	17	20	24	13	74
Day Total :						3562

AM Total :	1509 (42.4%)	Peak AM Hour : 10:00 =	262 (7.4%)	Peak AM Factor : 0.771	Average Period : 37.1
PM Total :	2053 (57.6%)	Peak PM Hour : 13:15 =	332 (9.3%)	Peak PM Factor : 0.922	Average Hour : 148.4

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	14	6	5	6	31
Sun	01:00	6	5	4	3	18
	02:00	3	4	5	2	14
	03:00	1	7	9	13	30
	04:00	13	9	9	26	57
	05:00	14	14	19	40	87
	06:00	40	27	26	35	128
	07:00	28	20	31	42	121
	08:00	42	14	24	41	121
	09:00	32	32	47	44	155
	10:00	51	54	74	55	234
	11:00	60	50	22	52	184
	12:00	47	63	60	58	228
	13:00	63	93	112	104	372
	14:00	97	82	95	52	326
	15:00	48	60	78	74	260
	16:00	91	82	86	90	349
	17:00	73	48	66	59	246
	18:00	54	45	44	36	179
	19:00	32	29	24	29	114
	20:00	32	25	22	23	102
	21:00	24	25	36	28	113
	22:00	24	25	36	29	114
	23:00	34	32	35	19	120
Day Total :						3703

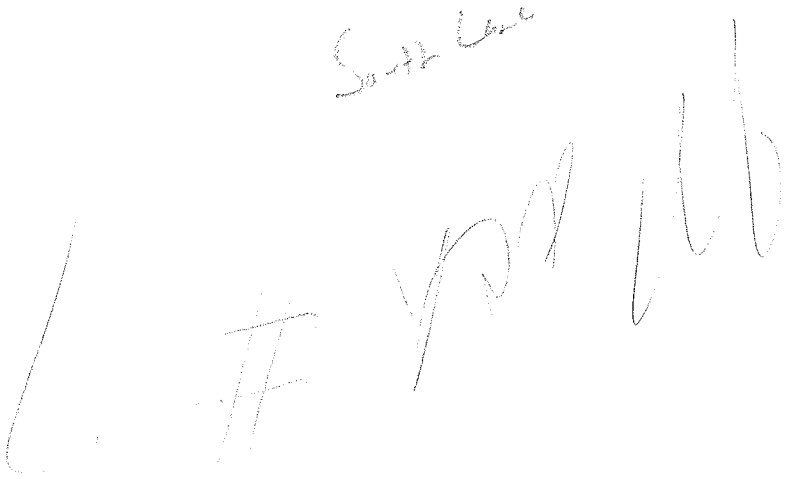
AM Total :	1180 (31.9%)	Peak AM Hour : 10:15 =	243 (6.6%)	Peak AM Factor : 0.821	Average Period : 38.6
PM Total :	2523 (68.1%)	Peak PM Hour : 13:15 =	406 (11.0%)	Peak PM Factor : 0.906	Average Hour : 154.3

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	16	8	1	6	31
Mon	01:00	5	3	4	1	13
	02:00	1	0	2	1	4
	03:00	2	2	7	18	29
	04:00	14	11	20	53	98
	05:00	65	53	52	80	250
	06:00	76	96	104	122	398
	07:00	111	127	160	144	542
	08:00	129	126	119	116	490
	09:00	126	90	78	85	379
	10:00	66	76	71	93	306
	11:00	81	81	60	56	278
	12:00	75	75	72	77	299
	13:00	77	93	96	114	380
	14:00	91	98	100	65	354
	15:00	74	84	80	67	305
	16:00	76	101	73	71	321
	17:00	54	65	64	63	246
	18:00	42	45	44	40	171
	19:00	40	40	30	25	135
	20:00	37	30	27	19	113
	21:00	22	37	36	32	127
	22:00	22	46	25	49	142
	23:00	26	22	19	15	82
Day Total :						5493

AM Total :	2818 (51.3%)	Peak AM Hour : 07:15 =	560 (10.2%)	Peak AM Factor : 0.875	Average Period : 57.2
PM Total :	2675 (48.7%)	Peak PM Hour : 13:45 =	403 (7.3%)	Peak PM Factor : 0.884	Average Hour : 228.9

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	7	6	3	1	17
Tue	01:00	2	2	0	1	5
	02:00	1	1	2	1	5
	03:00	5	5	8	7	25
	04:00	14	12	21	51	98
	05:00	42	57	30	56	185
	06:00	71	75	81	134	361
	07:00	118	131	130	155	534
	08:00	131	124	114	126	495
	09:00	107	83	84	66	340
	10:00	81	69	76	75	301
	11:00	48	51	63	64	226
	12:00	75	60	37	59	231
	13:00	67	74	104	83	328
	14:00	98	98	68	78	342
	15:00	85	71	76		232
Day Total :						3725

AM Total :	2592 (69.6%)	Peak AM Hour : 07:15 =	547 (14.7%)	Peak AM Factor : 0.882	Average Period : 59.1
PM Total :	1133 (30.4%)	Peak PM Hour : 13:30 =	383 (10.3%)	Peak PM Factor : 0.921	Average Hour : 236.5



Basic Volume Summary: EB AIR RD LANE1

Grand Total For Data From: 10:15 - 11/24/2008 To: 15:59 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	78170	(100.0%)	15.23	5133	53.5	213.9	35086 (44.9%)	43084 (55.1%)
ALL	78170		15.23	5133	53.5	213.9	35086 (44.9%)	43084 (55.1%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	07:15 =	631	12/01/2008	0.962	13:30 =	520	12/02/2008	0.949

Basic Volume Report: EBAIR RD LANE 2

Station ID : EBAIR RD LANE 2
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : EBAIR RD LANE 2.DB

Last Connected Device Type : Apollo
Version Number : 1.41
Serial Number : 89582

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 10:30 - 11/24/2008 To: 15:59 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	10:00			7	7	14
Mon	11:00	1	8	12	7	28
	12:00	3	4	9	8	24
	13:00	5	4	8	7	24
	14:00	13	12	6	10	41
	15:00	9	5	6	7	27
	16:00	5	4	3	4	16
	17:00	6	7	3	3	19
	18:00	1	1	1	3	6
	19:00	1	0	0	0	1
	20:00	3	3	3	1	10
	21:00	0	2	0	0	2
	22:00	0	0	0	0	0
	23:00	1	0	0	1	2
Day Total :						214

AM Total :	42 (19.6%)	Peak AM Hour : 10:45 =	28 (13.1%)	Peak AM Factor : 0.583	Average Period : 4.0
PM Total :	172 (80.4%)	Peak PM Hour : 14:00 =	41 (19.2%)	Peak PM Factor : 0.788	Average Hour : 15.9

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	1	1	0	0	2
Tue	01:00	0	0	0	0	0
	02:00	0	1	0	1	2
	03:00	1	0	1	0	2
	04:00	0	0	0	3	3
	05:00	3	0	1	3	7
	06:00	3	6	13	17	39
	07:00	14	20	37	34	105
	08:00	23	22	20	19	84
	09:00	24	11	14	17	66
	10:00	13	9	16	10	48
	11:00	2	7	4	6	19
	12:00	7	12	7	9	35
	13:00	11	7	9	5	32
	14:00	6	5	7	7	25
	15:00	8	8	1	5	22
	16:00	5	5	4	4	18
	17:00	1	3	2	6	12
	18:00	2	3	2	5	12
	19:00	0	3	1	0	4
	20:00	1	2	2	1	6
	21:00	1	1	2	0	4
	22:00	2	0	0	0	2
	23:00	1	1	0	0	2
Day Total :						551

AM Total :	377 (68.4%)	Peak AM Hour : 07:30 =	116 (21.1%)	Peak AM Factor : 0.784	Average Period : 5.7
PM Total :	174 (31.6%)	Peak PM Hour : 12:15 =	39 (7.1%)	Peak PM Factor : 0.812	Average Hour : 23.0

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	1	0	0	0	1
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	1	0	1
	04:00	1	0	0	0	1
	05:00	0	5	5	1	11
	06:00	3	7	19	13	42
	07:00	14	29	34	28	105
	08:00	17	16	20	31	84
	09:00	17	11	9	15	52
	10:00	5	3	2	4	14
	11:00	7	4	8	8	27
	12:00	6	6	8	6	26
	13:00	10	5	6	10	31
	14:00	3	6	8	5	22
	15:00	7	7	3	5	22
	16:00	6	1	5	2	14
	17:00	4	3	3	2	12
	18:00	1	2	0	2	5
	19:00	3	2	0	1	6
	20:00	4	0	2	1	7
	21:00	0	4	2	0	6
	22:00	1	0	1	1	3
	23:00	0	1	0	0	1
Day Total :						493

AM Total :	338 (68.6%)	Peak AM Hour : 07:15 =	108 (21.9%)	Peak AM Factor : 0.794	Average Period : 5.1
PM Total :	155 (31.4%)	Peak PM Hour : 13:00 =	31 (6.3%)	Peak PM Factor : 0.775	Average Hour : 20.5

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	0	0	0	0	0
Thu	01:00	1	0	0	2	3
	02:00	0	1	0	1	2
	03:00	1	0	2	1	4
	04:00	0	1	0	2	3
	05:00	0	0	0	3	3
	06:00	1	0	0	1	2
	07:00	2	0	1	0	3
	08:00	0	1	0	0	1
	09:00	1	0	1	0	2
	10:00	0	0	1	0	1
	11:00	1	2	1	1	5
	12:00	1	2	5	0	8
	13:00	1	1	1	1	4
	14:00	2	2	1	2	7
	15:00	1	2	2	1	6
	16:00	1	2	1	0	4
	17:00	1	1	1	1	4
	18:00	1	0	1	0	2
	19:00	1	0	3	3	7
	20:00	1	2	1	2	6
	21:00	1	3	0	0	4
	22:00	0	0	0	0	0
	23:00	2	0	0	1	3
Day Total :						84

AM Total :	29 (34.5%)	Peak AM Hour : 11:00 =	5 (6.0%)	Peak AM Factor : 0.417	Average Period :	0.9
PM Total :	55 (65.5%)	Peak PM Hour : 19:30 =	9 (10.7%)	Peak PM Factor : 0.450	Average Hour :	3.5

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	1	0	0	1	2
Fri	01:00	1	1	0	0	2
	02:00	0	0	0	0	0
	03:00	0	1	0	0	1
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	1	1
	07:00	1	0	5	2	8
	08:00	5	4	4	3	16
	09:00	4	2	3	7	16
	10:00	2	2	3	2	9
	11:00	0	2	1	3	6
	12:00	4	8	1	3	16
	13:00	3	2	8	2	15
	14:00	5	0	0	1	6
	15:00	0	1	1	0	2
	16:00	1	3	1	3	8
	17:00	5	6	2	2	15
	18:00	2	0	0	0	2
	19:00	3	1	1	2	7
	20:00	0	2	0	0	2
	21:00	1	5	0	1	7
	22:00	0	0	0	2	2
	23:00	0	0	0	4	4
Day Total :						147

AM Total :	61 (41.5%)	Peak AM Hour : 07:30 =	16 (10.9%)	Peak AM Factor : 0.571	Average Period :	1.5
PM Total :	86 (58.5%)	Peak PM Hour : 13:15 =	17 (11.6%)	Peak PM Factor : 0.531	Average Hour :	6.1

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	1	0	0	0	1
Sat	01:00	1	0	0	0	1
	02:00	0	1	0	0	1
	03:00	1	0	1	0	2
	04:00	0	0	0	2	2
	05:00	0	1	0	0	1
	06:00	0	1	1	1	3
	07:00	1	0	0	2	3
	08:00	0	0	3	0	3
	09:00	2	1	2	1	6
	10:00	3	0	4	2	9
	11:00	1	0	1	1	3
	12:00	2	5	1	3	11
	13:00	5	3	1	1	10
	14:00	4	4	5	2	15
	15:00	1	1	2	2	6
	16:00	2	3	1	2	8
	17:00	1	0	5	2	8
	18:00	2	2	1	2	7
	19:00	1	1	2	0	4
	20:00	0	1	0	1	2
	21:00	0	0	1	0	1
	22:00	1	1	2	3	7
	23:00	0	1	0	0	1
Day Total :						115

AM Total :	35 (30.4%)	Peak AM Hour : 10:00 =	9 (7.8%)	Peak AM Factor : 0.562	Average Period : 1.2
PM Total :	80 (69.6%)	Peak PM Hour : 14:00 =	15 (13.0%)	Peak PM Factor : 0.750	Average Hour : 4.8

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	0	0	1	0	1
Sun	01:00	0	0	0	1	1
	02:00	0	0	1	0	1
	03:00	0	0	1	0	1
	04:00	0	0	0	1	1
	05:00	0	0	1	0	1
	06:00	0	0	1	2	3
	07:00	0	0	0	0	0
	08:00	1	0	0	0	1
	09:00	1	1	1	1	4
	10:00	1	0	3	2	6
	11:00	2	1	1	0	4
	12:00	0	2	2	0	4
	13:00	2	4	2	3	11
	14:00	4	4	4	2	14
	15:00	3	2	9	2	16
	16:00	1	1	2	1	5
	17:00	1	4	2	2	9
	18:00	0	0	1	2	3
	19:00	1	0	2	0	3
	20:00	1	1	1	1	4
	21:00	0	1	0	0	1
	22:00	1	3	0	1	5
	23:00	2	0	0	0	2
Day Total :						101

AM Total :	24 (23.8%)	Peak AM Hour : 10:30 =	8 (7.9%)	Peak AM Factor : 0.667	Average Period : 1.1
PM Total :	77 (76.2%)	Peak PM Hour : 14:45 =	16 (15.8%)	Peak PM Factor : 0.444	Average Hour : 4.2

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	0	2	0	0	2
Mon	01:00	0	1	1	0	2
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	2	2
	05:00	0	1	0	0	1
	06:00	0	6	12	16	34
	07:00	15	21	33	41	110
	08:00	22	10	22	23	77
	09:00	26	11	15	13	65
	10:00	15	10	9	1	35
	11:00	4	8	4	3	19
	12:00	6	6	10	9	31
	13:00	6	7	8	6	27
	14:00	11	6	11	11	39
	15:00	8	2	10	4	24
	16:00	2	9	6	2	19
	17:00	8	8	2	2	20
	18:00	1	5	5	3	14
	19:00	0	3	0	1	4
	20:00	3	2	1	0	6
	21:00	1	0	0	0	1
	22:00	1	1	0	1	3
	23:00	0	3	0	0	3
Day Total :						538

AM Total :	347 (64.5%)	Peak AM Hour : 07:15 =	117 (21.7%)	Peak AM Factor : 0.713	Average Period : 5.6
PM Total :	191 (35.5%)	Peak PM Hour : 14:00 =	39 (7.2%)	Peak PM Factor : 0.886	Average Hour : 22.4

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	0	0	0	0	0
Tue	01:00	0	0	0	0	0
	02:00	1	0	0	1	2
	03:00	0	0	0	0	0
	04:00	0	0	1	1	2
	05:00	0	3	0	1	4
	06:00	5	9	19	15	48
	07:00	11	28	35	48	122
	08:00	20	20	15	33	88
	09:00	25	20	15	15	75
	10:00	11	8	8	13	40
	11:00	4	6	5	8	23
	12:00	4	4	3	14	25
	13:00	8	10	14	9	41
	14:00	8	11	6	11	36
	15:00	3	1	1	3	8
	16:00	4	4	1	3	12
	17:00	6	3	3	5	17
	18:00	2	5	4	1	12
	19:00	2	1	1	1	5
	20:00	1	1	3	3	8
	21:00	5	0	1	2	8
	22:00	2	0	0	2	4
	23:00	1	2	0	0	3
Day Total :						583

AM Total :	404 (69.3%)	Peak AM Hour : 07:15 =	131 (22.5%)	Peak AM Factor : 0.682	Average Period : 6.1
PM Total :	179 (30.7%)	Peak PM Hour : 12:45 =	46 (7.9%)	Peak PM Factor : 0.821	Average Hour : 24.3

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	1	0	0	0	1
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	1	2	1	4
	06:00	3	10	14	13	40
	07:00	23	23	31	37	114
	08:00	21	13	29	29	92
	09:00	22	16	18	13	69
	10:00	7	6	10	6	29
	11:00	4	4	6	6	20
	12:00	5	6	6	9	26
	13:00	6	10	12	11	39
	14:00	8	6	8	7	29
	15:00	9	3	9	4	25
	16:00	4	2	6	2	14
	17:00	6	7	4	4	21
	18:00	2	4	1	2	9
	19:00	3	0	1	1	5
	20:00	1	1	0	2	4
	21:00	0	0	0	0	0
	22:00	1	0	0	1	2
	23:00	1	2	2	0	5
Day Total :						548

AM Total :	369 (67.3%)	Peak AM Hour : 07:00 =	114 (20.8%)	Peak AM Factor : 0.770	Average Period : 5.7
PM Total :	179 (32.7%)	Peak PM Hour : 13:15 =	41 (7.5%)	Peak PM Factor : 0.854	Average Hour : 22.8

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	0	0	0	0	0
Thu	01:00	0	1	0	0	1
	02:00	0	0	0	0	0
	03:00	0	0	2	0	2
	04:00	0	0	2	1	3
	05:00	0	1	0	4	5
	06:00	2	10	14	9	35
	07:00	22	18	45	38	123
	08:00	24	14	20	21	79
	09:00	22	16	16	13	67
	10:00	13	9	9	18	49
	11:00	4	4	7	3	18
	12:00	11	10	6	4	31
	13:00	9	8	11	3	31
	14:00	4	14	12	8	38
	15:00	5	6	3	4	18
	16:00	5	7	5	5	22
	17:00	1	6	1	2	10
	18:00	2	4	0	4	10
	19:00	1	2	0	1	4
	20:00	1	1	2	0	4
	21:00	1	5	1	0	7
	22:00	1	0	0	2	3
	23:00	0	0	1	0	1
Day Total :						561

AM Total :	382 (68.1%)	Peak AM Hour : 07:15 =	125 (22.3%)	Peak AM Factor : 0.694	Average Period : 5.8
PM Total :	179 (31.9%)	Peak PM Hour : 14:15 =	39 (7.0%)	Peak PM Factor : 0.696	Average Hour : 23.4

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	0	0	1	0	1
Fri	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	1	1	0	2
	04:00	0	0	0	1	1
	05:00	1	2	1	1	5
	06:00	5	11	14	11	41
	07:00	20	21	43	30	114
	08:00	24	18	21	18	81
	09:00	14	11	17	17	59
	10:00	5	10	6	14	35
	11:00	5	8	5	11	29
	12:00	9	4	15	8	36
	13:00	8	11	12	8	39
	14:00	5	16	8	6	35
	15:00	3	3	10	2	18
	16:00	2	5	4	4	15
	17:00	6	7	3	5	21
	18:00	0	4	3	2	9
	19:00	0	1	0	1	2
	20:00	0	4	1	0	5
	21:00	2	5	1	0	8
	22:00	0	4	0	0	4
	23:00	0	0	2	0	2
Day Total :						562

AM Total :	368 (65.5%)	Peak AM Hour : 07:15 =	118 (21.0%)	Peak AM Factor : 0.686	Average Period :	5.9
PM Total :	194 (34.5%)	Peak PM Hour : 12:30 =	42 (7.5%)	Peak PM Factor : 0.656	Average Hour :	23.4

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	1	0	0	0	1
Sat	01:00	0	0	1	0	1
	02:00	0	1	1	0	2
	03:00	0	0	0	0	0
	04:00	0	0	1	3	4
	05:00	0	0	0	0	0
	06:00	1	5	10	4	20
	07:00	1	1	2	5	9
	08:00	1	3	2	2	8
	09:00	3	7	4	4	18
	10:00	3	1	1	3	8
	11:00	1	1	2	2	6
	12:00	0	2	0	3	5
	13:00	4	1	3	0	8
	14:00	7	1	5	2	15
	15:00	1	4	1	1	7
	16:00	1	2	0	1	4
	17:00	5	2	1	2	10
	18:00	4	2	0	0	6
	19:00	0	1	3	1	5
	20:00	1	1	0	0	2
	21:00	0	0	0	2	2
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						141

AM Total :	77 (54.6%)	Peak AM Hour : 06:00 =	20 (14.2%)	Peak AM Factor : 0.500	Average Period : 1.5
PM Total :	64 (45.4%)	Peak PM Hour : 14:00 =	15 (10.6%)	Peak PM Factor : 0.536	Average Hour : 5.9

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	0	0	0	2	2
Sun	01:00	0	0	0	0	0
	02:00	0	1	0	0	1
	03:00	0	0	0	1	1
	04:00	0	0	0	1	1
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	1	0	0	1
	08:00	0	1	1	3	5
	09:00	1	6	2	3	12
	10:00	1	2	2	3	8
	11:00	2	2	5	1	10
	12:00	0	3	4	1	8
	13:00	2	1	1	1	5
	14:00	0	3	0	1	4
	15:00	1	2	1	0	4
	16:00	2	1	3	2	8
	17:00	1	1	3	3	8
	18:00	0	1	2	1	4
	19:00	0	0	0	0	0
	20:00	0	0	0	1	1
	21:00	1	0	1	1	3
	22:00	1	1	0	0	2
	23:00	1	1	0	0	2
Day Total :						90

AM Total :	41 (45.6%)	Peak AM Hour : 08:45 =	12 (13.3%)	Peak AM Factor : 0.500	Average Period :	0.9
PM Total :	49 (54.4%)	Peak PM Hour : 12:15 =	10 (11.1%)	Peak PM Factor : 0.625	Average Hour :	3.8

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	2	1	0	0	3
Mon	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	1	0	0	1
	04:00	0	1	0	2	3
	05:00	0	0	2	1	3
	06:00	1	6	13	14	34
	07:00	18	22	45	37	122
	08:00	20	19	21	21	81
	09:00	17	18	8	10	53
	10:00	4	8	8	6	26
	11:00	8	8	5	4	25
	12:00	3	3	5	6	17
	13:00	11	13	4	5	33
	14:00	11	5	7	2	25
	15:00	4	7	4	5	20
	16:00	4	5	4	5	18
	17:00	4	2	1	1	8
	18:00	1	3	2	4	10
	19:00	6	2	1	0	9
	20:00	1	2	1	0	4
	21:00	0	2	1	0	3
	22:00	0	1	1	2	4
	23:00	2	2	0	1	5
Day Total :						507

AM Total :	351 (69.2%)	Peak AM Hour : 07:15 =	124 (24.5%)	Peak AM Factor : 0.689	Average Period : 5.3
PM Total :	156 (30.8%)	Peak PM Hour : 12:30 =	35 (6.9%)	Peak PM Factor : 0.673	Average Hour : 21.1

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	0	1	1	0	2
Tue	01:00	1	0	1	0	2
	02:00	0	0	0	0	0
	03:00	0	2	0	0	2
	04:00	1	0	0	0	1
	05:00	0	1	3	2	6
	06:00	7	9	12	19	47
	07:00	18	28	37	36	119
	08:00	27	19	10	17	73
	09:00	19	20	14	9	62
	10:00	7	5	10	6	28
	11:00	6	8	7	6	27
	12:00	9	3	10	6	28
	13:00	9	5	6	9	29
	14:00	13	11	9	6	39
	15:00	8	2	8		18
Day Total :						483

AM Total :	369 (76.4%)	Peak AM Hour : 07:15 =	128 (26.5%)	Peak AM Factor : 0.865	Average Period : 7.7
PM Total :	114 (23.6%)	Peak PM Hour : 13:45 =	42 (8.7%)	Peak PM Factor : 0.808	Average Hour : 30.7

Basic Volume Summary: EBAIR RD LANE 2

Grand Total For Data From: 10:30 - 11/24/2008 To: 15:59 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	5718	(100.0%)	15.22	376	3.9	15.7	3614 (63.2%)	2104 (36.8%)
ALL	5718		15.22	376	3.9	15.7	3614 (63.2%)	2104 (36.8%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	07:15 =	131	12/02/2008	0.682	12:45 =	46	12/02/2008	0.821

Basic Volume Report: NBI684 RAMP

Station ID : NBI684 RAMP
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : NBI684 RAMP.DB

Last Connected Device Type : Apollo
Version Number : 1.51
Serial Number : 97852

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 11:45 - 11/24/2008 To: 16:29 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	11:00				52	52
Mon	12:00	70	44	55	54	223
	13:00	57	72	86	81	296
	14:00	75	80	90	70	315
	15:00	81	75	73	89	318
	16:00	54	73	86	82	295
	17:00	87	95	95	95	372
	18:00	81	71	58	54	264
	19:00	46	37	37	27	147
	20:00	54	30	22	32	138
	21:00	28	36	14	27	105
	22:00	37	25	20	20	102
	23:00	24	17	14	14	69
Day Total :						2696

AM Total :	52 (1.9%)	Peak AM Hour : 11:00 =	52 (1.9%)	Peak AM Factor : 0.250	Average Period :	55.0
PM Total :	2644 (98.1%)	Peak PM Hour : 17:00 =	372 (13.8%)	Peak PM Factor : 0.979	Average Hour :	220.1

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	7	7	4	4	22
Tue	01:00	4	2	1	1	8
	02:00	0	3	2	0	5
	03:00	0	6	6	18	30
	04:00	8	10	34	40	92
	05:00	30	25	34	59	148
	06:00	48	63	93	101	305
	07:00	87	72	107	148	414
	08:00	108	104	122	97	431
	09:00	106	95	88	83	372
	10:00	101	71	64	73	309
	11:00	55	47	56	53	211
	12:00	75	63	71	108	317
	13:00	75	76	104	89	344
	14:00	94	81	72	86	333
	15:00	104	91	84	70	349
	16:00	80	77	78	125	360
	17:00	127	131	122	103	483
	18:00	116	124	105	98	443
	19:00	87	70	65	34	256
	20:00	44	37	30	42	153
	21:00	35	44	38	44	161
	22:00	28	30	38	44	140
	23:00	31	25	23	16	95
Day Total :						5781

AM Total :	2347 (40.6%)	Peak AM Hour : 07:45 =	482 (8.3%)	Peak AM Factor : 0.814	Average Period : 60.2
PM Total :	3434 (59.4%)	Peak PM Hour : 16:45 =	505 (8.7%)	Peak PM Factor : 0.964	Average Hour : 240.9

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	9	9	6	5	29
Wed	01:00	4	4	3	3	14
	02:00	3	1	7	7	18
	03:00	3	3	8	12	26
	04:00	12	17	30	30	89
	05:00	36	35	40	53	164
	06:00	55	61	91	97	304
	07:00	93	84	115	119	411
	08:00	100	99	117	115	431
	09:00	79	77	68	95	319
	10:00	59	64	54	68	245
	11:00	69	52	59	65	245
	12:00	71	76	82	96	325
	13:00	81	104	99	90	374
	14:00	101	138	119	105	463
	15:00	120	132	117	113	482
	16:00	106	122	118	95	441
	17:00	121	109	102	98	430
	18:00	98	49	53	49	249
	19:00	54	39	31	37	161
	20:00	22	31	27	27	107
	21:00	23	40	29	27	119
	22:00	19	26	40	33	118
	23:00	36	36	31	17	120
Day Total :						5684

AM Total :	2295 (40.4%)	Peak AM Hour : 07:45 =	435 (7.7%)	Peak AM Factor : 0.914	Average Period : 59.2
PM Total :	3389 (59.6%)	Peak PM Hour : 14:15 =	482 (8.5%)	Peak PM Factor : 0.873	Average Hour : 236.8

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	2	2	6	6	16
Thu	01:00	10	3	2	2	17
	02:00	5	3	6	3	17
	03:00	1	3	10	10	24
	04:00	9	17	26	35	87
	05:00	33	39	24	47	143
	06:00	45	39	32	34	150
	07:00	22	20	26	34	102
	08:00	23	10	12	30	75
	09:00	22	33	29	39	123
	10:00	35	33	36	41	145
	11:00	48	42	38	44	172
	12:00	46	32	51	46	175
	13:00	55	50	60	78	243
	14:00	52	72	69	60	253
	15:00	60	73	45	49	227
	16:00	52	45	26	22	145
	17:00	19	30	24	19	92
	18:00	20	22	19	23	84
	19:00	19	17	13	21	70
	20:00	26	18	33	22	99
	21:00	26	36	18	20	100
	22:00	21	22	11	20	74
	23:00	26	12	13	13	64
Day Total :						2697

AM Total :	1071 (39.7%)	Peak AM Hour :	11:00 =	172 (6.4%)	Peak AM Factor : 0.896	Average Period :	28.1
PM Total :	1626 (60.3%)	Peak PM Hour :	13:45 =	271 (10.0%)	Peak PM Factor : 0.869	Average Hour :	112.4

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	4	7	3	6	20
Fri	01:00	5	3	2	1	11
	02:00	1	4	0	5	10
	03:00	0	2	4	10	16
	04:00	9	11	16	24	60
	05:00	17	13	23	23	76
	06:00	32	34	50	42	158
	07:00	25	30	54	60	169
	08:00	43	60	50	54	207
	09:00	30	23	45	48	146
	10:00	43	52	63	38	196
	11:00	72	62	38	55	227
	12:00	49	45	39	47	180
	13:00	51	56	66	84	257
	14:00	80	55	47	50	232
	15:00	56	46	50	36	188
	16:00	57	45	40	41	183
	17:00	53	46	62	52	213
	18:00	32	38	34	28	132
	19:00	17	21	24	19	81
	20:00	11	12	18	18	59
	21:00	21	28	23	27	99
	22:00	23	26	31	25	105
	23:00	15	14	13	12	54
Day Total :						3079

AM Total :	1296 (42.1%)	Peak AM Hour : 10:30 =	235 (7.6%)	Peak AM Factor : 0.816	Average Period : 32.1
PM Total :	1783 (57.9%)	Peak PM Hour : 13:15 =	286 (9.3%)	Peak PM Factor : 0.851	Average Hour : 128.3

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	5	6	6	3	20
Sat	01:00	4	2	7	5	18
	02:00	3	5	1	4	13
	03:00	3	2	7	13	25
	04:00	6	11	19	18	54
	05:00	22	24	21	28	95
	06:00	16	45	25	45	131
	07:00	35	22	26	39	122
	08:00	30	22	16	21	89
	09:00	32	22	44	45	143
	10:00	28	36	55	64	183
	11:00	49	56	48	38	191
	12:00	44	38	47	40	169
	13:00	45	57	63	63	228
	14:00	67	65	65	69	266
	15:00	62	41	29	49	181
	16:00	31	38	40	39	148
	17:00	44	43	44	58	189
	18:00	39	28	33	31	131
	19:00	32	25	18	23	98
	20:00	11	22	26	19	78
	21:00	13	15	13	18	59
	22:00	21	25	30	31	107
	23:00	17	15	18	17	67
Day Total :						2805

AM Total :	1084 (38.6%)	Peak AM Hour :	10:30 =	224 (8.0%)	Peak AM Factor : 0.875	Average Period :	29.2
PM Total :	1721 (61.4%)	Peak PM Hour :	14:00 =	266 (9.5%)	Peak PM Factor : 0.964	Average Hour :	116.9

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	15	7	7	3	32
Sun	01:00	5	2	5	5	17
	02:00	1	3	3	3	10
	03:00	6	3	8	11	28
	04:00	5	8	16	22	51
	05:00	16	25	11	30	82
	06:00	24	32	43	32	131
	07:00	28	18	18	34	98
	08:00	26	21	18	33	98
	09:00	18	17	27	40	102
	10:00	41	53	46	56	196
	11:00	64	54	64	47	229
	12:00	48	45	70	49	212
	13:00	73	87	99	139	398
	14:00	97	159	115	121	492
	15:00	103	111	102	75	391
	16:00	82	88	76	79	325
	17:00	60	67	71	67	265
	18:00	51	56	77	66	250
	19:00	75	59	28	30	192
	20:00	30	43	31	32	136
	21:00	39	34	42	28	143
	22:00	31	27	22	43	123
	23:00	26	20	13	31	90
Day Total :						4091

AM Total :	1074 (26.3%)	Peak AM Hour :	10:45 =	238 (5.8%)	Peak AM Factor :	0.930	Average Period : 42.6
PM Total :	3017 (73.7%)	Peak PM Hour :	13:45 =	510 (12.5%)	Peak PM Factor :	0.802	Average Hour : 170.5

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	21	28	16	19	84
Mon	01:00	11	14	10	6	41
	02:00	6	0	4	3	13
	03:00	4	5	9	17	35
	04:00	5	14	19	40	78
	05:00	43	43	48	46	180
	06:00	57	72	105	123	357
	07:00	102	102	120	145	469
	08:00	139	112	124	144	519
	09:00	119	77	93	80	369
	10:00	94	71	80	87	332
	11:00	72	64	62	67	265
	12:00	71	65	54	70	260
	13:00	69	83	79	98	329
	14:00	74	88	75	89	326
	15:00	75	109	85	71	340
	16:00	82	84	81	99	346
	17:00	94	112	110	99	415
	18:00	92	102	82	57	333
	19:00	41	38	45	32	156
	20:00	36	39	22	31	128
	21:00	22	41	30	21	114
	22:00	28	25	31	42	126
	23:00	35	29	31	22	117
Day Total :						5732

AM Total :	2742 (47.8%)	Peak AM Hour : 07:45 =	520 (9.1%)	Peak AM Factor : 0.897	Average Period : 59.7
PM Total :	2990 (52.2%)	Peak PM Hour : 16:45 =	415 (7.2%)	Peak PM Factor : 0.926	Average Hour : 238.8

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	11	10	8	14	43
Tue	01:00	4	1	2	3	10
	02:00	6	1	1	5	13
	03:00	2	3	7	16	28
	04:00	8	19	27	43	97
	05:00	25	35	36	64	160
	06:00	48	74	105	118	345
	07:00	109	111	110	157	487
	08:00	147	124	113	133	517
	09:00	120	85	72	73	350
	10:00	65	69	71	68	273
	11:00	62	66	71	65	264
	12:00	57	45	69	63	234
	13:00	72	75	88	83	318
	14:00	68	115	85	83	351
	15:00	79	72	64	71	286
	16:00	81	75	84	87	327
	17:00	91	101	74	106	372
	18:00	78	69	61	52	260
	19:00	47	49	42	31	169
	20:00	29	33	39	38	139
	21:00	30	38	38	40	146
	22:00	25	23	20	24	92
	23:00	26	14	18	7	65
Day Total :						5346

AM Total :	2587 (48.4%)	Peak AM Hour : 07:45 =	541 (10.1%)	Peak AM Factor : 0.861	Average Period : 55.7
PM Total :	2759 (51.6%)	Peak PM Hour : 17:00 =	372 (7.0%)	Peak PM Factor : 0.809	Average Hour : 222.8

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	6	11	6	8	31
Wed	01:00	3	2	1	1	7
	02:00	0	0	3	7	10
	03:00	0	5	3	21	29
	04:00	7	13	21	30	71
	05:00	22	26	46	44	138
	06:00	63	73	90	98	324
	07:00	100	103	132	141	476
	08:00	133	108	120	135	496
	09:00	131	95	72	79	377
	10:00	59	68	68	54	249
	11:00	58	55	71	61	245
	12:00	58	63	76	79	276
	13:00	90	82	90	72	334
	14:00	98	86	75	77	336
	15:00	79	78	86	82	325
	16:00	72	65	71	102	310
	17:00	85	79	85	76	325
	18:00	79	80	54	47	260
	19:00	47	43	42	41	173
	20:00	32	34	27	29	122
	21:00	26	32	27	35	120
	22:00	25	25	31	30	111
	23:00	17	19	14	16	66
Day Total :						5211

AM Total :	2453 (47.1%)	Peak AM Hour : 07:30 =	514 (9.9%)	Peak AM Factor : 0.911	Average Period : 54.3
PM Total :	2758 (52.9%)	Peak PM Hour : 16:45 =	351 (6.7%)	Peak PM Factor : 0.860	Average Hour : 217.1

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	14	3	8	4	29
Thu	01:00	3	2	2	4	11
	02:00	1	1	0	1	3
	03:00	5	4	4	17	30
	04:00	4	16	23	30	73
	05:00	24	39	46	52	161
	06:00	61	64	115	113	353
	07:00	98	99	114	135	446
	08:00	130	126	125	139	520
	09:00	137	102	73	94	406
	10:00	68	62	67	61	258
	11:00	56	61	63	63	243
	12:00	67	71	64	68	270
	13:00	57	62	84	80	283
	14:00	84	105	81	75	345
	15:00	71	84	67	83	305
	16:00	79	74	90	104	347
	17:00	85	91	95	98	369
	18:00	86	62	39	41	228
	19:00	51	45	26	41	163
	20:00	34	32	30	33	129
	21:00	36	39	33	28	136
	22:00	28	22	31	31	112
	23:00	24	14	21	9	68
Day Total :						5288

AM Total :	2533 (47.9%)	Peak AM Hour : 08:15 =	527 (10.0%)	Peak AM Factor : 0.948	Average Period : 55.1
PM Total :	2755 (52.1%)	Peak PM Hour : 16:45 =	375 (7.1%)	Peak PM Factor : 0.893	Average Hour : 220.3

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	12	10	6	11	39
Fri	01:00	5	2	4	0	11
	02:00	1	1	2	2	6
	03:00	1	8	8	13	30
	04:00	5	10	27	35	77
	05:00	39	30	37	46	152
	06:00	56	66	79	107	308
	07:00	104	96	129	148	477
	08:00	150	116	123	139	528
	09:00	117	81	71	78	347
	10:00	56	76	76	75	283
	11:00	63	73	66	78	280
	12:00	71	59	71	68	269
	13:00	69	68	88	81	306
	14:00	89	104	66	78	337
	15:00	57	73	83	57	270
	16:00	74	80	91	75	320
	17:00	97	97	89	109	392
	18:00	76	51	73	50	250
	19:00	39	42	39	35	155
	20:00	25	24	28	28	105
	21:00	31	30	27	24	112
	22:00	34	38	30	39	141
	23:00	22	18	15	11	66
Day Total :						5261

AM Total :	2538 (48.2%)	Peak AM Hour : 07:30 =	543 (10.3%)	Peak AM Factor : 0.905	Average Period : 54.8
PM Total :	2723 (51.8%)	Peak PM Hour : 17:00 =	392 (7.5%)	Peak PM Factor : 0.899	Average Hour : 219.2

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	9	8	8	4	29
Sat	01:00	9	2	6	4	21
	02:00	2	5	4	0	11
	03:00	6	3	5	12	26
	04:00	8	14	20	19	61
	05:00	24	23	21	26	94
	06:00	32	37	52	50	171
	07:00	33	33	32	53	151
	08:00	45	29	39	48	161
	09:00	36	33	27	41	137
	10:00	43	46	52	59	200
	11:00	36	41	41	46	164
	12:00	52	48	50	54	204
	13:00	54	59	68	59	240
	14:00	65	55	58	51	229
	15:00	43	38	46	44	171
	16:00	44	31	45	40	160
	17:00	52	40	35	38	165
	18:00	28	37	40	33	138
	19:00	30	22	25	36	113
	20:00	13	18	18	19	68
	21:00	24	22	20	21	87
	22:00	10	17	18	18	63
	23:00	18	22	20	13	73
Day Total :						2937

AM Total :	1226 (41.7%)	Peak AM Hour : 10:00 =	200 (6.8%)	Peak AM Factor : 0.847	Average Period : 30.6
PM Total :	1711 (58.3%)	Peak PM Hour : 13:15 =	251 (8.5%)	Peak PM Factor : 0.923	Average Hour : 122.4

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	16	6	6	5	33
Sun	01:00	4	2	4	7	17
	02:00	5	5	4	2	16
	03:00	4	4	11	9	28
	04:00	8	6	10	16	40
	05:00	11	18	15	25	69
	06:00	24	23	22	18	87
	07:00	16	13	26	29	84
	08:00	22	9	24	24	79
	09:00	21	18	33	43	115
	10:00	40	37	47	30	154
	11:00	36	41	55	43	175
	12:00	39	49	60	50	198
	13:00	56	73	59	65	253
	14:00	70	65	60	58	253
	15:00	36	36	50	58	180
	16:00	65	66	62	71	264
	17:00	58	47	69	54	228
	18:00	40	51	29	29	149
	19:00	20	24	20	25	89
	20:00	24	24	19	19	86
	21:00	21	27	18	21	87
	22:00	17	19	19	20	75
	23:00	23	20	25	15	83
Day Total :						2842

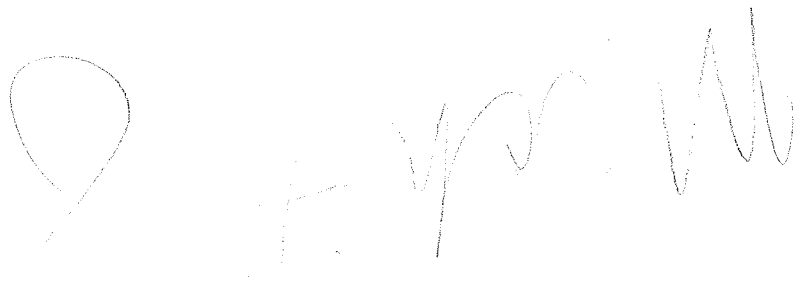
AM Total :	897 (31.6%)	Peak AM Hour : 11:00 =	175 (6.2%)	Peak AM Factor : 0.795	Average Period : 29.6
PM Total :	1945 (68.4%)	Peak PM Hour : 13:15 =	267 (9.4%)	Peak PM Factor : 0.914	Average Hour : 118.4

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	14	5	4	6	29
Mon	01:00	9	1	3	0	13
	02:00	2	0	0	6	8
	03:00	0	1	8	15	24
	04:00	11	15	17	42	85
	05:00	37	24	41	58	160
	06:00	48	79	80	94	301
	07:00	102	100	131	160	493
	08:00	109	132	96	128	465
	09:00	115	93	81	80	369
	10:00	53	41	82	72	248
	11:00	68	53	47	51	219
	12:00	52	48	55	55	210
	13:00	50	86	73	105	314
	14:00	85	72	90	57	304
	15:00	59	87	64	75	285
	16:00	80	71	73	81	305
	17:00	66	87	85	72	310
	18:00	49	62	61	55	227
	19:00	46	49	38	32	165
	20:00	36	26	26	23	111
	21:00	20	27	25	22	94
	22:00	23	27	21	32	103
	23:00	21	16	17	8	62
Day Total :						4904

AM Total :	2414 (49.2%)	Peak AM Hour : 07:30 =	532 (10.8%)	Peak AM Factor : 0.831	Average Period : 51.1
PM Total :	2490 (50.8%)	Peak PM Hour : 13:45 =	352 (7.2%)	Peak PM Factor : 0.838	Average Hour : 204.3

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	11	4	4	4	23
Tue	01:00	4	1	2	2	9
	02:00	2	1	0	2	5
	03:00	8	3	10	16	37
	04:00	4	15	18	31	68
	05:00	34	28	32	52	146
	06:00	45	73	79	112	309
	07:00	103	102	127	149	481
	08:00	113	119	142	124	498
	09:00	107	83	60	68	318
	10:00	57	46	77	50	230
	11:00	33	42	53	52	180
	12:00	41	39	54	53	187
	13:00	55	74	81	90	300
	14:00	79	89	59	60	287
	15:00	75	70	51	59	255
	16:00	44				44
Day Total :						3377

AM Total :	2304 (68.2%)	Peak AM Hour : 07:45 =	523 (15.5%)	Peak AM Factor : 0.878	Average Period : 52.0
PM Total :	1073 (31.8%)	Peak PM Hour : 13:30 =	339 (10.0%)	Peak PM Factor : 0.942	Average Hour : 207.8



Basic Volume Summary: NB1684 RAMP

Grand Total For Data From: 11:45 - 11/24/2008 To: 16:29 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	67731	(100.0%)	15.19	4460	46.5	185.8	28913 (42.7%)	38818 (57.3%)
ALL	67731		15.19	4460	46.5	185.8	28913 (42.7%)	38818 (57.3%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	07:30 =	543	12/05/2008	0.905	13:45 =	510	11/30/2008	0.802

Basic Volume Report: SBI684 RAMP

Station ID : SBI684 RAMP
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : SBI684 RAMP.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 97854

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 09:45 - 11/24/2008 To: 16:14 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	09:00				93	93
Mon	10:00	102	73	73	76	324
	11:00	54	53	54	45	206
	12:00	53	59	54	49	215
	13:00	48	54	58	55	215
	14:00	57	38	60	52	207
	15:00	45	45	61	72	223
	16:00	65	59	70	44	238
	17:00	61	67	50	77	255
	18:00	44	58	46	36	184
	19:00	27	18	20	11	76
	20:00	19	14	22	8	63
	21:00	17	29	16	12	74
	22:00	20	14	18	20	72
	23:00	19	16	14	5	54
Day Total :						2499

AM Total :	623 (24.9%)	Peak AM Hour : 09:45 =	341 (13.6%)	Peak AM Factor : 0.836	Average Period : 43.8
PM Total :	1876 (75.1%)	Peak PM Hour : 15:45 =	266 (10.6%)	Peak PM Factor : 0.864	Average Hour : 175.4

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	4	2	0	4	10
Tue	01:00	1	2	2	1	6
	02:00	0	0	1	2	3
	03:00	5	3	1	3	12
	04:00	4	6	8	10	28
	05:00	19	27	25	35	106
	06:00	46	63	111	98	318
	07:00	93	114	131	164	502
	08:00	172	183	162	147	664
	09:00	122	109	110	102	443
	10:00	128	68	55	54	305
	11:00	58	40	53	47	198
	12:00	53	58	51	50	212
	13:00	61	54	67	70	252
	14:00	42	58	51	53	204
	15:00	55	48	45	61	209
	16:00	62	73	72	60	267
	17:00	61	58	66	61	246
	18:00	63	56	64	52	235
	19:00	32	18	28	28	106
	20:00	11	28	31	23	93
	21:00	23	30	26	24	103
	22:00	20	17	26	22	85
	23:00	12	13	12	13	50
Day Total :						4657

AM Total :	2595 (55.7%)	Peak AM Hour : 07:45 =	681 (14.6%)	Peak AM Factor : 0.930	Average Period : 48.5
PM Total :	2062 (44.3%)	Peak PM Hour : 15:45 =	268 (5.8%)	Peak PM Factor : 0.918	Average Hour : 194.0

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	6	3	2	3	14
Wed	01:00	1	1	0	2	4
	02:00	2	1	3	0	6
	03:00	1	2	1	3	7
	04:00	2	5	7	16	30
	05:00	11	21	26	32	90
	06:00	37	62	91	95	285
	07:00	87	94	117	126	424
	08:00	133	136	151	120	540
	09:00	88	87	60	66	301
	10:00	66	57	38	56	217
	11:00	68	57	47	53	225
	12:00	52	56	43	49	200
	13:00	59	58	62	48	227
	14:00	63	59	67	50	239
	15:00	39	48	53	57	197
	16:00	55	57	62	50	224
	17:00	47	48	56	57	208
	18:00	27	42	38	50	157
	19:00	23	21	28	26	98
	20:00	10	20	17	16	63
	21:00	24	26	37	21	108
	22:00	22	24	19	27	92
	23:00	29	26	18	12	85
Day Total :						4041

AM Total :	2143 (53.0%)	Peak AM Hour : 07:45 =	546 (13.5%)	Peak AM Factor : 0.904	Average Period : 42.1
PM Total :	1898 (47.0%)	Peak PM Hour : 14:00 =	239 (5.9%)	Peak PM Factor : 0.892	Average Hour : 168.4

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	5	5	0	2	12
Thu	01:00	2	0	0	1	3
	02:00	0	1	0	0	1
	03:00	0	4	1	5	10
	04:00	1	5	12	11	29
	05:00	12	9	14	11	46
	06:00	24	22	18	21	85
	07:00	13	10	18	10	51
	08:00	19	10	15	15	59
	09:00	13	11	14	27	65
	10:00	36	32	44	22	134
	11:00	42	35	43	43	163
	12:00	36	40	56	60	192
	13:00	46	53	56	73	228
	14:00	47	58	44	40	189
	15:00	38	44	27	24	133
	16:00	26	17	17	20	80
	17:00	27	17	32	15	91
	18:00	33	17	30	27	107
	19:00	20	31	41	42	134
	20:00	39	48	42	51	180
	21:00	39	43	31	31	144
	22:00	29	21	23	13	86
	23:00	16	21	8	7	52
Day Total :						2274

AM Total :	658 (28.9%)	Peak AM Hour : 11:00 =	163 (7.2%)	Peak AM Factor : 0.926	Average Period : 23.7
PM Total :	1616 (71.1%)	Peak PM Hour : 13:30 =	234 (10.3%)	Peak PM Factor : 0.801	Average Hour : 94.8

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	6	5	3	3	17
Fri	01:00	0	4	0	2	6
	02:00	2	2	0	2	6
	03:00	1	1	1	5	8
	04:00	3	4	5	3	15
	05:00	5	5	14	18	42
	06:00	21	21	44	37	123
	07:00	25	33	38	51	147
	08:00	57	56	49	59	221
	09:00	40	29	33	46	148
	10:00	37	39	57	46	179
	11:00	55	52	47	65	219
	12:00	34	30	40	36	140
	13:00	38	57	59	56	210
	14:00	45	44	39	43	171
	15:00	39	58	46	41	184
	16:00	41	40	45	41	167
	17:00	38	42	47	40	167
	18:00	32	29	23	28	112
	19:00	29	15	16	20	80
	20:00	16	9	20	15	60
	21:00	15	21	12	16	64
	22:00	16	13	20	15	64
	23:00	9	17	9	12	47
Day Total :						2597

AM Total :	1131 (43.6%)	Peak AM Hour : 08:00 =	221 (8.5%)	Peak AM Factor : 0.850	Average Period : 27.1
PM Total :	1466 (56.4%)	Peak PM Hour : 13:15 =	217 (8.4%)	Peak PM Factor : 0.919	Average Hour : 108.2

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	4	4	8	4	20
Sat	01:00	2	5	1	2	10
	02:00	0	0	0	1	1
	03:00	2	1	1	6	10
	04:00	6	2	6	17	31
	05:00	20	10	19	26	75
	06:00	18	25	36	33	112
	07:00	19	28	25	38	110
	08:00	26	28	13	21	88
	09:00	25	33	30	44	132
	10:00	40	37	48	44	169
	11:00	38	36	37	48	159
	12:00	41	37	46	44	168
	13:00	43	46	51	47	187
	14:00	48	64	45	63	220
	15:00	38	44	52	48	182
	16:00	50	44	47	44	185
	17:00	46	30	38	51	165
	18:00	35	38	28	35	136
	19:00	29	27	12	23	91
	20:00	16	10	17	17	60
	21:00	13	17	13	18	61
	22:00	20	9	16	11	56
	23:00	17	12	22	12	63
Day Total :						2491

AM Total :	917 (36.8%)	Peak AM Hour : 09:45 =	169 (6.8%)	Peak AM Factor : 0.880	Average Period : 25.9
PM Total :	1574 (63.2%)	Peak PM Hour : 14:00 =	220 (8.8%)	Peak PM Factor : 0.859	Average Hour : 103.8

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	7	8	5	2	22
Sun	01:00	3	4	5	3	15
	02:00	1	0	2	2	5
	03:00	2	1	6	4	13
	04:00	2	1	6	5	14
	05:00	7	6	16	18	47
	06:00	15	20	30	30	95
	07:00	18	20	26	26	90
	08:00	15	13	32	17	77
	09:00	26	25	34	35	120
	10:00	37	36	44	38	155
	11:00	35	31	33	30	129
	12:00	38	34	39	41	152
	13:00	53	54	51	60	218
	14:00	46	61	53	67	227
	15:00	54	47	46	43	190
	16:00	57	47	50	51	205
	17:00	51	60	31	46	188
	18:00	26	36	44	28	134
	19:00	34	20	33	23	110
	20:00	21	32	27	32	112
	21:00	20	25	29	17	91
	22:00	19	20	18	9	66
	23:00	12	9	7	12	40
Day Total :						2515

AM Total :	782 (31.1%)	Peak AM Hour : 10:00 =	155 (6.2%)	Peak AM Factor : 0.881	Average Period : 26.2
PM Total :	1733 (68.9%)	Peak PM Hour : 14:15 =	235 (9.3%)	Peak PM Factor : 0.877	Average Hour : 104.8

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	5	7	1	6	19
Mon	01:00	4	3	3	1	11
	02:00	0	1	2	2	5
	03:00	0	1	1	7	9
	04:00	4	6	13	32	55
	05:00	38	39	36	39	152
	06:00	78	69	110	116	373
	07:00	107	157	160	169	593
	08:00	203	184	191	183	761
	09:00	174	150	84	100	508
	10:00	74	83	80	42	279
	11:00	43	55	53	56	207
	12:00	70	49	48	59	226
	13:00	60	57	66	70	253
	14:00	60	56	51	39	206
	15:00	52	64	53	72	241
	16:00	56	76	69	60	261
	17:00	58	70	63	73	264
	18:00	74	47	54	39	214
	19:00	25	37	21	15	98
	20:00	27	14	18	21	80
	21:00	12	17	16	16	61
	22:00	15	13	13	15	56
	23:00	8	20	14	15	57
Day Total :						4989

AM Total :	2972 (59.6%)	Peak AM Hour : 08:00 =	761 (15.3%)	Peak AM Factor : 0.937	Average Period : 52.0
PM Total :	2017 (40.4%)	Peak PM Hour : 17:15 =	280 (5.6%)	Peak PM Factor : 0.921	Average Hour : 207.9

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	9	1	0	1	11
Tue	01:00	5	4	1	0	10
	02:00	0	0	1	0	1
	03:00	1	1	2	5	9
	04:00	3	7	15	21	46
	05:00	23	27	27	44	121
	06:00	61	75	111	134	381
	07:00	127	147	165	193	632
	08:00	188	167	200	188	743
	09:00	148	127	77	104	456
	10:00	78	74	70	67	289
	11:00	66	53	57	49	225
	12:00	47	43	77	58	225
	13:00	64	67	61	68	260
	14:00	51	52	48	48	199
	15:00	44	55	52	55	206
	16:00	62	58	70	67	257
	17:00	44	54	68	61	227
	18:00	51	57	44	48	200
	19:00	25	25	18	27	95
	20:00	19	16	16	18	69
	21:00	18	19	16	16	69
	22:00	15	18	18	22	73
	23:00	18	8	9	5	40
Day Total :						4844

AM Total :	2924 (60.4%)	Peak AM Hour : 07:45 =	748 (15.4%)	Peak AM Factor : 0.935	Average Period : 50.5
PM Total :	1920 (39.6%)	Peak PM Hour : 12:30 =	266 (5.5%)	Peak PM Factor : 0.864	Average Hour : 201.8

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	2	0	3	1	6
Wed	01:00	0	2	1	2	5
	02:00	3	2	2	0	7
	03:00	2	2	1	3	8
	04:00	3	4	15	16	38
	05:00	19	22	25	32	98
	06:00	50	74	102	121	347
	07:00	112	116	124	195	547
	08:00	165	196	199	186	746
	09:00	166	124	122	87	499
	10:00	65	50	71	43	229
	11:00	52	49	54	61	216
	12:00	50	47	51	56	204
	13:00	40	42	75	68	225
	14:00	63	58	52	52	225
	15:00	42	55	61	59	217
	16:00	52	57	65	54	228
	17:00	46	81	74	68	269
	18:00	72	51	46	34	203
	19:00	31	13	23	28	95
	20:00	19	15	11	15	60
	21:00	12	20	13	14	59
	22:00	18	15	18	15	66
	23:00	9	17	9	7	42
Day Total :						4639

AM Total :	2746 (59.2%)	Peak AM Hour : 07:45 =	755 (16.3%)	Peak AM Factor : 0.948	Average Period : 48.3
PM Total :	1893 (40.8%)	Peak PM Hour : 17:15 =	295 (6.4%)	Peak PM Factor : 0.910	Average Hour : 193.3

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	0	2	2	3	7
Thu	01:00	1	1	1	0	3
	02:00	0	1	1	1	3
	03:00	2	1	0	1	4
	04:00	2	7	9	14	32
	05:00	17	25	18	36	96
	06:00	42	70	118	119	349
	07:00	124	145	169	183	621
	08:00	194	223	175	171	763
	09:00	139	90	85	82	396
	10:00	93	61	45	71	270
	11:00	43	49	61	47	200
	12:00	41	48	45	40	174
	13:00	46	53	51	44	194
	14:00	35	39	44	40	158
	15:00	46	51	60	67	224
	16:00	54	51	54	58	217
	17:00	46	66	70	56	238
	18:00	59	64	38	49	210
	19:00	26	35	26	32	119
	20:00	24	14	19	13	70
	21:00	19	16	22	14	71
	22:00	15	15	10	12	52
	23:00	9	11	9	10	39
Day Total :						4510

AM Total :	2744 (60.8%)	Peak AM Hour : 07:45 =	775 (17.2%)	Peak AM Factor : 0.869	Average Period : 47.0
PM Total :	1766 (39.2%)	Peak PM Hour : 17:15 =	251 (5.6%)	Peak PM Factor : 0.896	Average Hour : 187.9

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	4	4	1	4	13
Fri	01:00	2	2	2	1	7
	02:00	0	1	1	0	2
	03:00	0	2	1	2	5
	04:00	4	2	4	10	20
	05:00	16	24	38	41	119
	06:00	50	60	120	95	325
	07:00	103	140	162	146	551
	08:00	162	194	197	152	705
	09:00	95	98	106	103	402
	10:00	69	76	49	50	244
	11:00	62	41	58	56	217
	12:00	49	57	46	63	215
	13:00	61	54	57	61	233
	14:00	53	57	49	48	207
	15:00	48	50	45	57	200
	16:00	60	55	58	59	232
	17:00	56	61	68	65	250
	18:00	46	41	57	45	189
	19:00	31	20	22	25	98
	20:00	22	16	13	15	66
	21:00	14	17	12	13	56
	22:00	16	23	14	10	63
	23:00	20	14	12	8	54
Day Total :						4473

AM Total :	2610 (58.4%)	Peak AM Hour : 08:00 =	705 (15.8%)	Peak AM Factor : 0.895	Average Period : 46.6
PM Total :	1863 (41.6%)	Peak PM Hour : 17:00 =	250 (5.6%)	Peak PM Factor : 0.919	Average Hour : 186.4

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	8	5	6	2	21
Sat	01:00	2	0	4	4	10
	02:00	0	2	1	0	3
	03:00	1	1	1	2	5
	04:00	2	6	5	5	18
	05:00	10	6	16	17	49
	06:00	25	19	52	44	140
	07:00	21	23	29	30	103
	08:00	34	32	38	43	147
	09:00	27	37	31	44	139
	10:00	39	44	39	42	164
	11:00	40	28	40	50	158
	12:00	42	47	42	44	175
	13:00	52	55	63	69	239
	14:00	50	42	49	37	178
	15:00	45	50	53	46	194
	16:00	34	42	43	39	158
	17:00	48	40	41	37	166
	18:00	30	41	37	45	153
	19:00	23	25	36	21	105
	20:00	19	17	17	22	75
	21:00	10	15	23	18	66
	22:00	14	12	12	16	54
	23:00	14	8	22	13	57
Day Total :						2577

AM Total :	957 (37.1%)	Peak AM Hour : 09:45 =	166 (6.4%)	Peak AM Factor : 0.798	Average Period : 26.8
PM Total :	1620 (62.9%)	Peak PM Hour : 13:00 =	239 (9.3%)	Peak PM Factor : 0.866	Average Hour : 107.4

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	7	8	12	12	39
Sun	01:00	8	8	4	5	25
	02:00	1	3	5	2	11
	03:00	0	3	2	3	8
	04:00	5	2	3	5	15
	05:00	2	6	7	18	33
	06:00	15	6	16	17	54
	07:00	10	8	16	22	56
	08:00	20	18	31	36	105
	09:00	23	40	34	45	142
	10:00	40	36	46	40	162
	11:00	40	46	44	44	174
	12:00	42	39	62	50	193
	13:00	39	78	63	46	226
	14:00	57	45	49	39	190
	15:00	43	45	49	52	189
	16:00	37	47	55	54	193
	17:00	41	31	23	30	125
	18:00	34	28	23	24	109
	19:00	24	16	26	18	84
	20:00	15	11	14	19	59
	21:00	18	14	21	14	67
	22:00	13	14	15	13	55
	23:00	16	14	9	6	45
Day Total :						2359

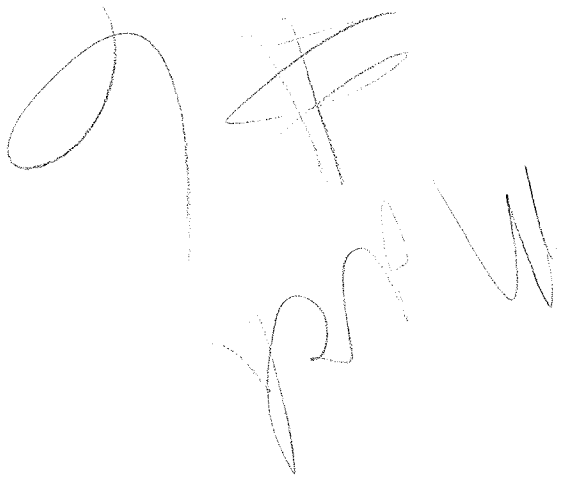
AM Total :	824 (34.9%)	Peak AM Hour : 11:00 =	174 (7.4%)	Peak AM Factor : 0.946	Average Period : 24.6
PM Total :	1535 (65.1%)	Peak PM Hour : 13:15 =	244 (10.3%)	Peak PM Factor : 0.782	Average Hour : 98.3

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	2	5	4	2	13
Mon	01:00	0	2	0	1	3
	02:00	0	2	2	0	4
	03:00	0	1	0	3	4
	04:00	1	9	6	19	35
	05:00	27	30	28	39	124
	06:00	66	71	100	113	350
	07:00	110	152	149	154	565
	08:00	173	211	180	211	775
	09:00	146	106	79	64	395
	10:00	77	64	49	55	245
	11:00	54	47	44	59	204
	12:00	41	46	38	43	168
	13:00	47	57	58	48	210
	14:00	38	51	58	31	178
	15:00	43	52	53	43	191
	16:00	56	75	54	35	220
	17:00	52	55	66	57	230
	18:00	46	51	39	26	162
	19:00	39	31	21	19	110
	20:00	17	12	12	13	54
	21:00	16	14	14	14	58
	22:00	12	23	15	14	64
	23:00	9	9	10	2	30
Day Total :						4392

AM Total :	2717 (61.9%)	Peak AM Hour : 08:00 =	775 (17.6%)	Peak AM Factor : 0.918	Average Period : 45.8
PM Total :	1675 (38.1%)	Peak PM Hour : 17:00 =	230 (5.2%)	Peak PM Factor : 0.767	Average Hour : 183.0

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	1	2	1	1	5
Tue	01:00	0	2	1	0	3
	02:00	0	1	1	1	3
	03:00	0	0	0	1	1
	04:00	4	8	4	14	30
	05:00	17	21	18	27	83
	06:00	64	66	100	109	339
	07:00	116	139	156	165	576
	08:00	179	230	179	182	770
	09:00	145	100	110	71	426
	10:00	68	86	55	50	259
	11:00	49	48	45	45	187
	12:00	45	42	52	28	167
	13:00	49	43	50	44	186
	14:00	49	33	50	48	180
	15:00	46	42	40	58	186
Day Total :						3401

AM Total :	2682 (78.9%)	Peak AM Hour : 08:00 =	770 (22.6%)	Peak AM Factor : 0.837	Average Period :	53.1
PM Total :	719 (21.1%)	Peak PM Hour : 13:00 =	186 (5.5%)	Peak PM Factor : 0.802	Average Hour :	212.6



Basic Volume Summary: SBI684 RAMP

Grand Total For Data From: 09:45 - 11/24/2008 To: 16:14 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	57258	(100.0%)	15.26	3752	39.1	156.3	30025 (52.4%)	27233 (47.6%)
ALL	57258		15.26	3752	39.1	156.3	30025 (52.4%)	27233 (47.6%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	07:45 =	775	12/04/2008	0.869	17:15 =	295	12/03/2008	0.910

Basic Volume Report: NB RTE 120

Station ID : NB RTE 120
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : NB RTE 120.DB

Last Connected Device Type : Apollo
Version Number : 1.41
Serial Number :
Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 11:15 - 11/24/2008 To: 15:59 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	11:00		37	45	66	148
Mon	12:00	41	38	63	43	185
	13:00	28	38	58	55	179
	14:00	60	61	60	69	250
	15:00	68	73	94	68	303
	16:00	95	111	91	88	385
	17:00	123	127	110	99	459
	18:00	99	105	64	65	333
	19:00	66	44	29	28	167
	20:00	45	42	27	23	137
	21:00	37	42	42	36	157
	22:00	30	17	9	8	64
	23:00	10	9	7	7	33
Day Total :						2800

AM Total :	148 (5.3%)	Peak AM Hour : 11:00 =	148 (5.3%)	Peak AM Factor : 0.561	Average Period : 54.9
PM Total :	2652 (94.7%)	Peak PM Hour : 17:00 =	459 (16.4%)	Peak PM Factor : 0.904	Average Hour : 219.6

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	6	3	2	2	13
Tue	01:00	2	0	1	4	7
	02:00	1	2	1	2	6
	03:00	2	2	2	2	8
	04:00	3	3	1	11	18
	05:00	7	9	8	13	37
	06:00	11	13	30	31	85
	07:00	26	38	45	67	176
	08:00	77	85	71	70	303
	09:00	58	38	29	44	169
	10:00	40	30	45	43	158
	11:00	34	33	38	39	144
	12:00	45	69	48	48	210
	13:00	58	62	62	62	244
	14:00	57	61	64	49	231
	15:00	68	84	92	73	317
	16:00	92	95	100	108	395
	17:00	154	168	143	164	629
	18:00	160	149	122	97	528
	19:00	102	34	26	15	177
	20:00	23	28	20	10	81
	21:00	15	14	15	20	64
	22:00	12	4	6	0	22
	23:00	3	0	0	0	3
Day Total :						4025

AM Total :	1124 (27.9%)	Peak AM Hour : 08:00 =	303 (7.5%)	Peak AM Factor : 0.891	Average Period : 41.9
PM Total :	2901 (72.1%)	Peak PM Hour : 17:15 =	635 (15.8%)	Peak PM Factor : 0.945	Average Hour : 167.7

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	0	0	0	0	0
Wed	01:00	0	4	0	0	4
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	4	3	0	2	9
	06:00	0	0	1	0	1
	07:00	0	0	1	0	1
	08:00	37	71	90	71	269
	09:00	55	45	49	42	191
	10:00	30	42	30	43	145
	11:00	46	30	43	54	173
	12:00	54	53	63	71	241
	13:00	68	65	84	90	307
	14:00	80	100	73	84	337
	15:00	107	135	172	156	570
	16:00	148	146	140	100	534
	17:00	112	111	103	90	416
	18:00	59	49	46	32	186
	19:00	41	30	34	17	122
	20:00	28	16	8	12	64
	21:00	19	13	13	14	59
	22:00	13	9	16	10	48
	23:00	12	11	3	6	32
Day Total :						3709

AM Total :	793 (21.4%)	Peak AM Hour : 08:15 =	287 (7.7%)	Peak AM Factor : 0.797	Average Period : 38.6
PM Total :	2916 (78.6%)	Peak PM Hour : 15:30 =	622 (16.8%)	Peak PM Factor : 0.904	Average Hour : 154.5

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	8	11	7	8	34
Thu	01:00	4	2	10	6	22
	02:00	3	4	1	5	13
	03:00	1	1	1	5	8
	04:00	2	3	8	13	26
	05:00	11	13	3	13	40
	06:00	6	4	12	10	32
	07:00	15	3	8	19	45
	08:00	22	7	20	8	57
	09:00	10	24	14	12	60
	10:00	12	26	14	21	73
	11:00	13	38	34	27	112
	12:00	29	24	40	38	131
	13:00	51	40	50	42	183
	14:00	35	42	27	32	136
	15:00	27	21	22	31	101
	16:00	19	16	19	12	66
	17:00	11	13	15	9	48
	18:00	16	20	9	17	62
	19:00	18	22	28	23	91
	20:00	29	32	26	29	116
	21:00	33	25	22	16	96
	22:00	19	14	14	10	57
	23:00	16	7	1	3	27
Day Total :						1636

AM Total :	522 (31.9%)	Peak AM Hour : 11:00 =	112 (6.8%)	Peak AM Factor : 0.737	Average Period : 17.0
PM Total :	1114 (68.1%)	Peak PM Hour : 13:00 =	183 (11.2%)	Peak PM Factor : 0.897	Average Hour : 68.2

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	6	2	5	3	16
Fri	01:00	2	2	1	1	6
	02:00	1	2	2	0	5
	03:00	2	1	0	1	4
	04:00	6	1	5	6	18
	05:00	8	5	5	7	25
	06:00	6	5	13	8	32
	07:00	11	20	24	23	78
	08:00	44	34	26	27	131
	09:00	34	33	23	49	139
	10:00	30	37	23	31	121
	11:00	53	33	35	40	161
	12:00	37	28	35	35	135
	13:00	46	48	49	50	193
	14:00	41	49	28	36	154
	15:00	34	42	51	54	181
	16:00	54	40	40	27	161
	17:00	38	47	35	34	154
	18:00	20	34	21	15	90
	19:00	17	11	12	17	57
	20:00	21	12	13	9	55
	21:00	19	19	10	15	63
	22:00	13	17	10	19	59
	23:00	13	7	8	9	37
Day Total :						2075

AM Total :	736 (35.5%)	Peak AM Hour : 11:00 =	161 (7.8%)	Peak AM Factor : 0.759	Average Period :	21.6
PM Total :	1339 (64.5%)	Peak PM Hour : 15:15 =	201 (9.7%)	Peak PM Factor : 0.931	Average Hour :	86.5

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	6	6	4	3	19
Sat	01:00	5	2	1	2	10
	02:00	4	15	1	1	21
	03:00	1	1	1	3	6
	04:00	1	2	7	6	16
	05:00	2	5	4	5	16
	06:00	5	5	16	12	38
	07:00	8	15	15	20	58
	08:00	32	23	25	25	105
	09:00	24	20	22	27	93
	10:00	26	35	27	37	125
	11:00	37	37	36	30	140
	12:00	28	21	22	37	108
	13:00	29	48	32	43	152
	14:00	36	27	32	33	128
	15:00	30	29	33	27	119
	16:00	36	40	34	36	146
	17:00	28	35	23	37	123
	18:00	29	14	22	19	84
	19:00	22	15	13	17	67
	20:00	9	14	18	9	50
	21:00	17	11	30	24	82
	22:00	15	10	12	22	59
	23:00	18	12	11	12	53
Day Total :						1818

AM Total :	647 (35.6%)	Peak AM Hour : 10:45 =	147 (8.1%)	Peak AM Factor : 0.993	Average Period : 18.9
PM Total :	1171 (64.4%)	Peak PM Hour : 13:15 =	159 (8.7%)	Peak PM Factor : 0.828	Average Hour : 75.8

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	10	7	3	7	27
Sun	01:00	5	1	3	13	22
	02:00	7	2	3	0	12
	03:00	1	4	3	5	13
	04:00	0	1	4	3	8
	05:00	3	6	3	5	17
	06:00	5	10	6	6	27
	07:00	10	4	11	7	32
	08:00	17	17	14	16	64
	09:00	17	15	16	19	67
	10:00	26	19	27	26	98
	11:00	28	36	41	42	147
	12:00	24	31	35	43	133
	13:00	48	32	38	47	165
	14:00	52	53	39	55	199
	15:00	42	42	58	53	195
	16:00	54	53	65	65	237
	17:00	47	50	45	51	193
	18:00	40	36	30	31	137
	19:00	22	36	27	19	104
	20:00	17	19	16	16	68
	21:00	23	23	11	16	73
	22:00	17	18	18	8	61
	23:00	13	12	5	7	37
Day Total :						2136

AM Total :	534 (25.0%)	Peak AM Hour :	11:00 =	147 (6.9%)	Peak AM Factor : 0.875	Average Period :	22.3
PM Total :	1602 (75.0%)	Peak PM Hour :	16:00 =	237 (11.1%)	Peak PM Factor : 0.912	Average Hour :	89.0

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	9	5	7	4	25
Mon	01:00	5	4	4	0	13
	02:00	3	3	3	6	15
	03:00	6	5	1	2	14
	04:00	3	4	2	6	15
	05:00	9	7	9	11	36
	06:00	16	20	29	35	100
	07:00	34	38	53	67	192
	08:00	88	62	78	65	293
	09:00	74	45	33	40	192
	10:00	35	48	32	41	156
	11:00	45	38	40	47	170
	12:00	45	47	46	53	191
	13:00	33	52	56	46	187
	14:00	56	87	69	55	267
	15:00	65	73	95	102	335
	16:00	78	92	93	77	340
	17:00	124	136	123	103	486
	18:00	96	106	68	94	364
	19:00	58	55	42	60	215
	20:00	37	41	44	35	157
	21:00	29	47	38	34	148
	22:00	22	11	14	12	59
	23:00	13	9	18	7	47
Day Total :						4017

AM Total :	1221 (30.4%)	Peak AM Hour : 07:45 =	295 (7.3%)	Peak AM Factor : 0.838	Average Period : 41.8
PM Total :	2796 (69.6%)	Peak PM Hour : 17:00 =	486 (12.1%)	Peak PM Factor : 0.893	Average Hour : 167.4

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	11	10	5	5	31
Tue	01:00	5	1	4	1	11
	02:00	1	3	2	3	9
	03:00	1	2	1	5	9
	04:00	0	0	8	6	14
	05:00	6	10	7	15	38
	06:00	17	29	29	32	107
	07:00	33	41	57	55	186
	08:00	76	86	83	66	311
	09:00	51	56	28	45	180
	10:00	44	44	40	44	172
	11:00	43	36	34	47	160
	12:00	41	30	41	62	174
	13:00	41	66	55	61	223
	14:00	78	66	52	56	252
	15:00	55	60	90	60	265
	16:00	110	102	83	100	395
	17:00	100	159	126	126	511
	18:00	102	88	64	56	310
	19:00	69	43	41	47	200
	20:00	41	47	34	25	147
	21:00	48	44	40	28	160
	22:00	34	27	10	4	75
	23:00	13	17	9	5	44
Day Total :						3984

AM Total :	1228 (30.8%)	Peak AM Hour : 08:00 =	311 (7.8%)	Peak AM Factor : 0.904	Average Period : 41.5
PM Total :	2756 (69.2%)	Peak PM Hour : 17:15 =	513 (12.9%)	Peak PM Factor : 0.807	Average Hour : 166.0

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	6	6	8	7	27
Wed	01:00	3	3	0	3	9
	02:00	3	1	1	5	10
	03:00	2	4	1	3	10
	04:00	6	2	1	6	15
	05:00	7	8	7	9	31
	06:00	14	18	26	38	96
	07:00	28	49	55	70	202
	08:00	86	80	74	87	327
	09:00	45	53	36	34	168
	10:00	33	46	47	33	159
	11:00	39	40	38	42	159
	12:00	54	54	43	38	189
	13:00	43	50	42	46	181
	14:00	47	49	54	61	211
	15:00	65	76	93	84	318
	16:00	100	112	91	83	386
	17:00	123	150	108	102	483
	18:00	92	86	76	75	329
	19:00	57	41	45	45	188
	20:00	41	50	32	47	170
	21:00	45	36	34	20	135
	22:00	35	16	18	13	82
	23:00	14	30	6	4	54
Day Total :						3939

AM Total :	1213 (30.8%)	Peak AM Hour : 08:00 =	327 (8.3%)	Peak AM Factor : 0.940	Average Period :	41.0
PM Total :	2726 (69.2%)	Peak PM Hour : 17:00 =	483 (12.3%)	Peak PM Factor : 0.805	Average Hour :	164.1

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	7	11	7	5	30
Thu	01:00	1	5	3	3	12
	02:00	2	3	1	4	10
	03:00	2	0	3	5	10
	04:00	1	3	2	7	13
	05:00	13	7	15	15	50
	06:00	11	22	27	43	103
	07:00	27	40	56	79	202
	08:00	70	75	99	69	313
	09:00	59	49	32	31	171
	10:00	38	41	41	35	155
	11:00	35	63	56	46	200
	12:00	51	53	47	57	208
	13:00	67	48	50	72	237
	14:00	70	57	76	57	260
	15:00	65	80	86	70	301
	16:00	101	96	91	91	379
	17:00	129	139	124	98	490
	18:00	122	99	92	80	393
	19:00	60	57	55	48	220
	20:00	46	40	45	26	157
	21:00	32	29	41	29	131
	22:00	24	13	21	24	82
	23:00	18	15	7	15	55
Day Total :						4182

AM Total :	1269 (30.3%)	Peak AM Hour : 07:45 =	323 (7.7%)	Peak AM Factor : 0.816	Average Period : 43.6
PM Total :	2913 (69.7%)	Peak PM Hour : 17:00 =	490 (11.7%)	Peak PM Factor : 0.881	Average Hour : 174.3

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	13	9	7	6	35
Fri	01:00	1	3	3	4	11
	02:00	14	2	2	1	19
	03:00	1	4	2	5	12
	04:00	3	3	1	9	16
	05:00	4	4	12	13	33
	06:00	14	17	22	41	94
	07:00	27	34	52	64	177
	08:00	75	70	96	76	317
	09:00	64	25	45	46	180
	10:00	43	42	43	46	174
	11:00	48	41	50	59	198
	12:00	72	85	90	53	300
	13:00	63	68	61	71	263
	14:00	72	77	88	64	301
	15:00	71	80	93	87	331
	16:00	92	113	95	106	406
	17:00	117	133	103	89	442
	18:00	85	61	58	54	258
	19:00	37	43	29	21	130
	20:00	20	24	13	21	78
	21:00	18	30	29	38	115
	22:00	22	20	28	20	90
	23:00	23	17	10	8	58
Day Total :						4038

AM Total :	1266 (31.4%)	Peak AM Hour : 08:00 =	317 (7.9%)	Peak AM Factor : 0.826	Average Period : 42.1
PM Total :	2772 (68.6%)	Peak PM Hour : 16:45 =	459 (11.4%)	Peak PM Factor : 0.863	Average Hour : 168.3

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	15	7	7	6	35
Sat	01:00	4	7	5	7	23
	02:00	1	5	1	3	10
	03:00	1	3	1	2	7
	04:00	0	5	10	7	22
	05:00	4	6	5	6	21
	06:00	9	8	9	12	38
	07:00	5	12	18	17	52
	08:00	31	23	39	22	115
	09:00	28	30	35	43	136
	10:00	19	34	32	33	118
	11:00	35	29	32	39	135
	12:00	37	45	40	46	168
	13:00	39	46	37	35	157
	14:00	36	53	39	45	173
	15:00	59	30	58	62	209
	16:00	41	54	68	48	211
	17:00	29	30	31	29	119
	18:00	40	18	26	21	105
	19:00	14	23	24	13	74
	20:00	15	14	18	17	64
	21:00	21	22	24	24	91
	22:00	29	21	16	15	81
	23:00	18	17	14	12	61
Day Total :						2225

AM Total :	712 (32.0%)	Peak AM Hour : 09:00 =	136 (6.1%)	Peak AM Factor : 0.791	Average Period : 23.2
PM Total :	1513 (68.0%)	Peak PM Hour : 15:45 =	225 (10.1%)	Peak PM Factor : 0.827	Average Hour : 92.7

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	13	10	8	6	37
Sun	01:00	4	2	3	5	14
	02:00	4	4	3	3	14
	03:00	1	3	1	1	6
	04:00	3	0	7	3	13
	05:00	3	3	1	2	9
	06:00	7	6	9	7	29
	07:00	3	11	9	13	36
	08:00	11	12	17	19	59
	09:00	9	18	13	23	63
	10:00	34	28	28	19	109
	11:00	30	25	33	38	126
	12:00	31	26	34	36	127
	13:00	30	40	32	62	164
	14:00	32	36	31	38	137
	15:00	39	52	45	34	170
	16:00	33	38	43	29	143
	17:00	33	25	28	28	114
	18:00	30	25	28	24	107
	19:00	22	44	18	20	104
	20:00	27	19	21	10	77
	21:00	11	16	13	15	55
	22:00	13	10	10	9	42
	23:00	13	9	3	5	30
Day Total :						1785

AM Total :	515 (28.9%)	Peak AM Hour : 11:00 =	126 (7.1%)	Peak AM Factor : 0.829	Average Period : 18.6
PM Total :	1270 (71.1%)	Peak PM Hour : 14:45 =	174 (9.7%)	Peak PM Factor : 0.702	Average Hour : 74.4

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	4	4	1	6	15
Mon	01:00	5	4	6	1	16
	02:00	0	0	0	1	1
	03:00	2	2	2	0	6
	04:00	3	1	5	7	16
	05:00	10	12	5	21	48
	06:00	10	24	22	33	89
	07:00	27	37	54	59	177
	08:00	64	78	65	69	276
	09:00	44	66	52	43	205
	10:00	33	41	50	26	150
	11:00	31	36	42	38	147
	12:00	28	45	44	48	165
	13:00	43	32	50	53	178
	14:00	47	72	60	60	239
	15:00	61	76	80	82	299
	16:00	83	105	91	71	350
	17:00	91	155	99	101	446
	18:00	102	93	70	74	339
	19:00	52	53	43	42	190
	20:00	42	40	40	34	156
	21:00	27	39	39	25	130
	22:00	27	14	7	10	58
	23:00	7	9	8	4	28
Day Total :						3724

AM Total :	1146 (30.8%)	Peak AM Hour : 08:00 =	276 (7.4%)	Peak AM Factor : 0.885	Average Period : 38.8
PM Total :	2578 (69.2%)	Peak PM Hour : 17:15 =	457 (12.3%)	Peak PM Factor : 0.737	Average Hour : 155.2

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	5	5	5	3	18
Tue	01:00	3	3	2	2	10
	02:00	1	3	1	1	6
	03:00	6	7	0	1	14
	04:00	2	0	4	6	12
	05:00	12	6	6	16	40
	06:00	8	19	21	27	75
	07:00	33	39	46	61	179
	08:00	82	79	84	61	306
	09:00	60	44	38	40	182
	10:00	29	38	42	35	144
	11:00	27	36	39	36	138
	12:00	48	45	50	42	185
	13:00	37	51	49	43	180
	14:00	60	59	68	54	241
	15:00	57	70	94		221
Day Total :						1951

AM Total :	1124 (57.6%)	Peak AM Hour : 07:45 =	306 (15.7%)	Peak AM Factor : 0.911	Average Period : 31.0
PM Total :	827 (42.4%)	Peak PM Hour : 14:45 =	275 (14.1%)	Peak PM Factor : 0.731	Average Hour : 123.9

#4

Basic Volume Summary: NB RTE 120

Grand Total For Data From: 11:15 - 11/24/2008 To: 15:59 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	48044	(100.0%)	15.19	3163	33.0	131.8	14198 (29.6%)	33846 (70.4%)
ALL	48044		15.19	3163	33.0	131.8	14198 (29.6%)	33846 (70.4%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	08:00 =	327	12/03/2008	0.940	17:15 =	635	11/25/2008	0.945

Basic Volume Report: SB RTE 120

Station ID : SB RTE 120
Info Line 1 :
Info Line 2 :
GPS Lat/Lon :
DB File : SB RTE 120.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 97853
Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 11:00 - 11/24/2008 To: 16:14 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	11:00	88	93	136	93	410
Mon	12:00	109	91	97	144	441
	13:00	119	99	119	111	448
	14:00	169	170	174	146	659
	15:00	173	181	189	171	714
	16:00	187	215	214	224	840
	17:00	244	214	215	192	865
	18:00	226	190	202	169	787
	19:00	119	113	96	80	408
	20:00	59	54	48	48	209
	21:00	63	64	79	71	277
	22:00	47	50	43	51	191
	23:00	36	41	54	61	192
Day Total :						6441

AM Total :	410 (6.4%)	Peak AM Hour : 11:00 =	410 (6.4%)	Peak AM Factor : 0.754	Average Period : 123.9
PM Total :	6031 (93.6%)	Peak PM Hour : 16:15 =	897 (13.9%)	Peak PM Factor : 0.919	Average Hour : 495.5

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	65	16	23	12	116
Tue	01:00	5	5	4	1	15
	02:00	1	1	3	1	6
	03:00	2	0	2	1	5
	04:00	10	7	8	16	41
	05:00	22	17	24	29	92
	06:00	54	47	69	98	268
	07:00	79	99	132	143	453
	08:00	173	160	135	112	580
	09:00	126	104	96	111	437
	10:00	84	87	111	108	390
	11:00	115	140	91	101	447
	12:00	108	117	117	125	467
	13:00	101	108	116	158	483
	14:00	169	176	146	146	637
	15:00	151	208	198	210	767
	16:00	189	194	180	250	813
	17:00	263	246	227	257	993
	18:00	234	220	219	200	873
	19:00	154	126	123	53	456
	20:00	84	71	58	99	312
	21:00	55	58	46	86	245
	22:00	100	112	74	68	354
	23:00	95	78	55	42	270
Day Total :						9520

AM Total :	2850 (29.9%)	Peak AM Hour : 07:45 =	611 (6.4%)	Peak AM Factor : 0.883	Average Period : 99.2
PM Total :	6670 (70.1%)	Peak PM Hour : 17:00 =	993 (10.4%)	Peak PM Factor : 0.944	Average Hour : 396.7

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	68	25	30	10	133
Wed	01:00	6	6	4	3	19
	02:00	4	4	4	6	18
	03:00	5	7	4	1	17
	04:00	7	6	6	19	38
	05:00	23	28	30	42	123
	06:00	57	63	63	78	261
	07:00	97	104	103	129	433
	08:00	156	137	139	120	552
	09:00	117	109	82	118	426
	10:00	131	117	108	91	447
	11:00	106	130	111	115	462
	12:00	100	170	149	138	557
	13:00	183	169	145	192	689
	14:00	199	261	232	236	928
	15:00	255	261	247	227	990
	16:00	227	248	196	240	911
	17:00	220	176	165	161	722
	18:00	154	137	153	97	541
	19:00	77	112	74	66	329
	20:00	46	78	84	64	272
	21:00	50	59	62	120	291
	22:00	62	57	39	66	224
	23:00	69	44	109	99	321
Day Total :						9704

AM Total :	2929 (30.2%)	Peak AM Hour : 07:45 =	561 (5.8%)	Peak AM Factor : 0.899	Average Period : 101.1
PM Total :	6775 (69.8%)	Peak PM Hour : 14:45 =	999 (10.3%)	Peak PM Factor : 0.957	Average Hour : 404.3

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	42	37	30	21	130
Thu	01:00	19	11	4	1	35
	02:00	4	3	2	5	14
	03:00	5	2	4	3	14
	04:00	9	3	6	25	43
	05:00	30	32	15	33	110
	06:00	43	57	50	58	208
	07:00	40	49	47	43	179
	08:00	46	41	38	34	159
	09:00	44	38	40	48	170
	10:00	46	66	78	89	279
	11:00	63	78	127	105	373
	12:00	102	87	82	115	386
	13:00	77	96	97	96	366
	14:00	151	104	90	115	460
	15:00	100	87	98	82	367
	16:00	48	67	62	32	209
	17:00	41	52	57	47	197
	18:00	46	48	75	57	226
	19:00	68	85	69	85	307
	20:00	104	71	72	62	309
	21:00	56	57	51	43	207
	22:00	50	30	29	42	151
	23:00	22	31	26	28	107
Day Total :						5006

AM Total :	1714 (34.2%)	Peak AM Hour : 11:00 =	373 (7.5%)	Peak AM Factor : 0.734	Average Period : 52.1
PM Total :	3292 (65.8%)	Peak PM Hour : 14:00 =	460 (9.2%)	Peak PM Factor : 0.762	Average Hour : 208.6

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	27	18	7	6	58
Fri	01:00	12	8	1	5	26
	02:00	3	3	1	4	11
	03:00	3	1	2	3	9
	04:00	8	3	11	7	29
	05:00	5	12	17	26	60
	06:00	26	42	38	52	158
	07:00	49	45	38	91	223
	08:00	73	79	84	88	324
	09:00	67	54	61	42	224
	10:00	73	72	106	109	360
	11:00	88	114	98	88	388
	12:00	107	107	108	105	427
	13:00	106	118	111	148	483
	14:00	146	136	162	122	566
	15:00	128	104	101	141	474
	16:00	125	89	148	130	492
	17:00	122	97	93	68	380
	18:00	92	83	89	79	343
	19:00	63	62	50	34	209
	20:00	57	60	31	23	171
	21:00	33	48	87	29	197
	22:00	46	24	62	33	165
	23:00	75	39	17	48	179
Day Total :						5956

AM Total :	1870 (31.4%)	Peak AM Hour : 10:30 =	417 (7.0%)	Peak AM Factor : 0.914	Average Period : 62.0
PM Total :	4086 (68.6%)	Peak PM Hour : 13:45 =	592 (9.9%)	Peak PM Factor : 0.914	Average Hour : 248.2

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	42	21	14	8	85
Sat	01:00	4	6	8	2	20
	02:00	0	3	3	1	7
	03:00	3	4	6	1	14
	04:00	9	9	4	8	30
	05:00	28	22	15	29	94
	06:00	38	39	75	44	196
	07:00	56	53	44	73	226
	08:00	49	57	48	52	206
	09:00	44	48	53	79	224
	10:00	65	86	86	119	356
	11:00	99	111	137	90	437
	12:00	86	74	93	109	362
	13:00	95	80	99	115	389
	14:00	105	132	132	110	479
	15:00	156	119	117	89	481
	16:00	119	85	80	111	395
	17:00	107	82	77	106	372
	18:00	90	91	73	86	340
	19:00	70	77	51	65	263
	20:00	41	38	31	27	137
	21:00	23	47	34	49	153
	22:00	64	51	68	43	226
	23:00	52	52	56	50	210
Day Total :						5702

AM Total :	1895 (33.2%)	Peak AM Hour : 10:45 =	466 (8.2%)	Peak AM Factor : 0.850	Average Period : 59.4
PM Total :	3807 (66.8%)	Peak PM Hour : 14:15 =	530 (9.3%)	Peak PM Factor : 0.849	Average Hour : 237.6

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	61	24	25	4	114
Sun	01:00	7	15	3	20	45
	02:00	14	4	2	2	22
	03:00	4	4	3	6	17
	04:00	8	4	1	15	28
	05:00	19	6	9	22	56
	06:00	46	33	52	66	197
	07:00	74	49	51	37	211
	08:00	50	48	39	32	169
	09:00	25	30	30	59	144
	10:00	53	45	87	79	264
	11:00	94	102	96	91	383
	12:00	87	88	65	81	321
	13:00	101	92	95	97	385
	14:00	125	115	112	100	452
	15:00	113	90	108	125	436
	16:00	107	93	101	101	402
	17:00	93	104	114	93	404
	18:00	95	98	96	75	364
	19:00	62	50	39	36	187
	20:00	76	50	45	33	204
	21:00	40	75	69	32	216
	22:00	63	73	52	46	234
	23:00	73	50	64	49	236
Day Total :						5491

AM Total :	1650 (30.0%)	Peak AM Hour : 11:00 =	383 (7.0%)	Peak AM Factor : 0.939	Average Period : 57.2
PM Total :	3841 (70.0%)	Peak PM Hour : 14:00 =	452 (8.2%)	Peak PM Factor : 0.904	Average Hour : 228.8

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	46	48	50	52	196
Mon	01:00	53	30	42	29	154
	02:00	15	10	3	8	36
	03:00	7	7	6	6	26
	04:00	3	7	8	21	39
	05:00	50	59	36	35	180
	06:00	63	68	85	129	345
	07:00	119	117	158	186	580
	08:00	212	175	153	167	707
	09:00	148	136	114	100	498
	10:00	107	108	95	150	460
	11:00	140	111	93	108	452
	12:00	116	120	100	142	478
	13:00	134	127	131	128	520
	14:00	172	193	200	165	730
	15:00	150	171	199	217	737
	16:00	237	270	213	247	967
	17:00	274	252	238	236	1000
	18:00	257	205	200	145	807
	19:00	151	146	111	79	487
	20:00	84	70	50	69	273
	21:00	90	43	57	54	244
	22:00	87	92	39	42	260
	23:00	62	59	67	55	243
Day Total :						10419

AM Total :	3673 (35.3%)	Peak AM Hour : 07:30 =	731 (7.0%)	Peak AM Factor : 0.862	Average Period : 108.5
PM Total :	6746 (64.7%)	Peak PM Hour : 16:45 =	1011 (9.7%)	Peak PM Factor : 0.922	Average Hour : 434.1

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	72	80	33	17	202
Tue	01:00	10	22	14	12	58
	02:00	6	2	4	8	20
	03:00	6	4	0	2	12
	04:00	4	5	15	28	52
	05:00	32	25	40	23	120
	06:00	74	68	84	94	320
	07:00	100	115	136	180	531
	08:00	176	179	152	135	642
	09:00	141	115	101	97	454
	10:00	86	126	99	105	416
	11:00	114	107	97	108	426
	12:00	112	133	127	100	472
	13:00	122	119	140	134	515
	14:00	167	152	170	193	682
	15:00	204	199	154	195	752
	16:00	224	258	213	209	904
	17:00	251	295	262	208	1016
	18:00	244	216	188	173	821
	19:00	149	139	81	65	434
	20:00	88	49	100	47	284
	21:00	84	73	44	71	272
	22:00	101	54	41	36	232
	23:00	58	76	53	23	210
Day Total :						9847

AM Total :	3253 (33.0%)	Peak AM Hour : 07:45 =	687 (7.0%)	Peak AM Factor : 0.954	Average Period : 102.6
PM Total :	6594 (67.0%)	Peak PM Hour : 16:45 =	1017 (10.3%)	Peak PM Factor : 0.862	Average Hour : 410.3

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	37	16	18	12	83
Wed	01:00	8	9	5	8	30
	02:00	3	5	2	5	15
	03:00	5	5	1	4	15
	04:00	3	7	11	10	31
	05:00	20	18	22	33	93
	06:00	51	57	71	81	260
	07:00	109	125	127	170	531
	08:00	186	203	157	134	680
	09:00	148	127	103	103	481
	10:00	106	122	74	106	408
	11:00	127	96	91	120	434
	12:00	135	102	108	125	470
	13:00	115	110	108	156	489
	14:00	189	156	180	183	708
	15:00	213	191	195	206	805
	16:00	227	200	198	227	852
	17:00	242	253	242	235	972
	18:00	193	178	181	177	729
	19:00	148	113	79	88	428
	20:00	94	100	62	82	338
	21:00	64	55	84	74	277
	22:00	64	29	76	62	231
	23:00	83	38	51	21	193
Day Total :						9553

AM Total :	3061 (32.0%)	Peak AM Hour : 07:45 =	716 (7.5%)	Peak AM Factor : 0.882	Average Period : 99.5
PM Total :	6492 (68.0%)	Peak PM Hour : 17:00 =	972 (10.2%)	Peak PM Factor : 0.960	Average Hour : 398.0

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	56	29	18	10	113
Thu	01:00	20	9	8	3	40
	02:00	5	4	1	1	11
	03:00	2	2	1	1	6
	04:00	5	2	11	11	29
	05:00	29	16	17	23	85
	06:00	48	50	72	106	276
	07:00	92	109	168	165	534
	08:00	180	179	166	127	652
	09:00	125	128	112	95	460
	10:00	87	96	112	115	410
	11:00	92	110	116	94	412
	12:00	113	131	129	133	506
	13:00	102	116	125	143	486
	14:00	144	174	168	160	646
	15:00	195	196	185	204	780
	16:00	231	231	203	258	923
	17:00	203	247	234	196	880
	18:00	209	196	155	141	701
	19:00	158	107	114	71	450
	20:00	71	69	57	65	262
	21:00	70	52	68	83	273
	22:00	44	62	53	64	223
	23:00	57	36	43	43	179
Day Total :						9337

AM Total :	3028 (32.4%)	Peak AM Hour : 07:30 =	692 (7.4%)	Peak AM Factor : 0.961	Average Period : 97.3
PM Total :	6309 (67.6%)	Peak PM Hour : 16:45 =	942 (10.1%)	Peak PM Factor : 0.913	Average Hour : 389.0

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	39	19	32	19	109
Fri	01:00	7	7	4	4	22
	02:00	5	5	2	4	16
	03:00	1	2	2	3	8
	04:00	8	4	7	13	32
	05:00	13	24	15	29	81
	06:00	42	47	60	74	223
	07:00	84	113	126	155	478
	08:00	165	158	138	145	606
	09:00	120	136	93	102	451
	10:00	91	91	107	109	398
	11:00	89	98	102	112	401
	12:00	121	114	114	132	481
	13:00	141	123	131	164	559
	14:00	169	165	189	161	684
	15:00	178	185	208	183	754
	16:00	157	201	205	214	777
	17:00	229	235	230	169	863
	18:00	178	175	151	151	655
	19:00	125	129	92	69	415
	20:00	91	63	49	42	245
	21:00	57	67	95	53	272
	22:00	52	65	72	53	242
	23:00	70	70	52	56	248
Day Total :						9020

AM Total :	2825 (31.3%)	Peak AM Hour : 07:45 =	616 (6.8%)	Peak AM Factor : 0.933	Average Period :	94.0
PM Total :	6195 (68.7%)	Peak PM Hour : 16:45 =	908 (10.1%)	Peak PM Factor : 0.966	Average Hour :	375.8

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	50	42	11	14	117
Sat	01:00	9	8	9	9	35
	02:00	4	3	2	2	11
	03:00	1	1	3	2	7
	04:00	10	7	9	12	38
	05:00	11	11	18	15	55
	06:00	29	46	41	50	166
	07:00	49	43	40	55	187
	08:00	59	66	42	50	217
	09:00	76	55	44	64	239
	10:00	96	80	101	100	377
	11:00	95	96	112	74	377
	12:00	90	97	105	122	414
	13:00	100	124	120	78	422
	14:00	113	125	98	102	438
	15:00	133	97	90	108	428
	16:00	83	85	85	76	329
	17:00	69	81	55	78	283
	18:00	99	66	61	68	294
	19:00	46	69	57	56	228
	20:00	58	39	24	30	151
	21:00	25	45	34	34	138
	22:00	67	55	26	25	173
	23:00	33	50	67	40	190
Day Total :						5314

AM Total :	1826 (34.4%)	Peak AM Hour : 10:45 =	403 (7.6%)	Peak AM Factor : 0.900	Average Period : 55.4
PM Total :	3488 (65.6%)	Peak PM Hour : 12:45 =	466 (8.8%)	Peak PM Factor : 0.876	Average Hour : 221.4

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	39	24	18	9	90
Sun	01:00	9	8	6	7	30
	02:00	5	4	2	3	14
	03:00	4	1	1	4	10
	04:00	3	6	2	4	15
	05:00	6	1	6	9	22
	06:00	21	31	15	24	91
	07:00	25	20	21	31	97
	08:00	40	31	22	33	126
	09:00	44	29	51	57	181
	10:00	54	54	93	84	285
	11:00	77	99	84	77	337
	12:00	76	81	79	82	318
	13:00	101	118	135	143	497
	14:00	136	133	132	93	494
	15:00	76	92	126	95	389
	16:00	80	101	117	100	398
	17:00	112	92	66	65	335
	18:00	82	72	73	58	285
	19:00	58	49	63	40	210
	20:00	57	47	69	47	220
	21:00	62	46	45	48	201
	22:00	42	28	40	54	164
	23:00	62	52	66	52	232
Day Total :						5041

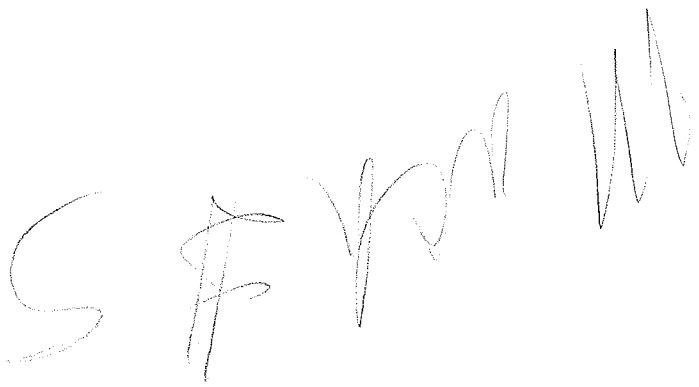
AM Total :	1298 (25.7%)	Peak AM Hour : 10:30 =	353 (7.0%)	Peak AM Factor : 0.891	Average Period : 52.5
PM Total :	3743 (74.3%)	Peak PM Hour : 13:30 =	547 (10.9%)	Peak PM Factor : 0.956	Average Hour : 210.0

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	37	22	20	21	100
Mon	01:00	18	12	7	8	45
	02:00	5	3	2	1	11
	03:00	3	4	2	2	11
	04:00	4	8	6	16	34
	05:00	24	33	31	26	114
	06:00	53	50	76	85	264
	07:00	100	93	135	174	502
	08:00	171	144	147	135	597
	09:00	133	102	107	123	465
	10:00	85	94	130	109	418
	11:00	121	127	90	108	446
	12:00	128	129	143	139	539
	13:00	82	102	104	139	427
	14:00	186	155	131	180	652
	15:00	150	175	211	202	738
	16:00	207	246	255	249	957
	17:00	209	249	226	215	899
	18:00	236	208	204	160	808
	19:00	124	111	81	61	377
	20:00	77	85	56	64	282
	21:00	57	42	61	95	255
	22:00	51	35	54	29	169
	23:00	88	41	52	31	212
Day Total :						9322

AM Total :	3007 (32.3%)	Peak AM Hour : 07:45 =	636 (6.8%)	Peak AM Factor : 0.914	Average Period : 97.1
PM Total :	6315 (67.7%)	Peak PM Hour : 16:30 =	962 (10.3%)	Peak PM Factor : 0.943	Average Hour : 388.4

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	37	18	26	12	93
Tue	01:00	5	6	0	1	12
	02:00	3	1	3	3	10
	03:00	0	2	5	4	11
	04:00	3	5	9	11	28
	05:00	14	23	15	28	80
	06:00	46	58	66	87	257
	07:00	111	109	147	193	560
	08:00	225	205	154	129	713
	09:00	164	103	111	88	466
	10:00	88	94	104	121	407
	11:00	107	110	91	81	389
	12:00	101	106	108	112	427
	13:00	89	99	106	110	404
	14:00	134	138	171	162	605
	15:00	176	179	170	212	737
Day Total :						5199

AM Total :	3026 (58.2%)	Peak AM Hour : 07:45 =	777 (14.9%)	Peak AM Factor : 0.863	Average Period : 81.2
PM Total :	2173 (41.8%)	Peak PM Hour : 15:00 =	737 (14.2%)	Peak PM Factor : 0.869	Average Hour : 324.9



Basic Volume Summary: SB RTE 120

Grand Total For Data From: 11:00 - 11/24/2008 To: 16:14 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	120872	(100.0%)	15.21	7948	82.8	331.2	38315 (31.7%)	82557 (68.3%)
ALL	120872		15.21	7948	82.8	331.2	38315 (31.7%)	82557 (68.3%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	07:45 =	777	12/09/2008	0.863	16:45 =	1017	12/02/2008	0.862

Basic Volume Report: RYE LAKE RD

Station ID : RYE LAKE RD
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : RYE LAKE RD.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 89583

Number of Lanes : 2
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 12:00 - 11/24/2008 To: 14:59 - 12/13/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	12:00	32	35	30	40	137
Mon	13:00	31	35	61	62	189
	14:00	45	62	60	58	225
	15:00	61	60	54	74	249
	16:00	62	87	72	85	306
	17:00	87	88	81	79	335
	18:00	61	72	59	40	232
	19:00	24	16	18	11	69
	20:00	18	19	14	9	60
	21:00	25	21	24	21	91
	22:00	9	17	18	15	59
	23:00	21	14	17	9	61
Day Total :						2013

AM Total :		Peak AM Hour :		Peak AM Factor :	Average Period : 41.9
PM Total :	2013 (100.0%)	Peak PM Hour : 16:45 =	341 (16.9%)	Peak PM Factor : 0.969	Average Hour : 167.8

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	3	2	1	1	7
Tue	01:00	1	1	2	1	5
	02:00	0	0	1	0	1
	03:00	0	0	0	2	2
	04:00	3	1	10	12	26
	05:00	15	10	14	26	65
	06:00	19	26	27	32	104
	07:00	33	29	31	43	136
	08:00	34	52	25	42	153
	09:00	26	34	34	26	120
	10:00	25	44	26	56	151
	11:00	53	38	38	39	168
	12:00	33	32	34	32	131
	13:00	50	44	78	49	221
	14:00	60	47	69	56	232
	15:00	63	57	58	98	276
	16:00	77	77	66	88	308
	17:00	92	72	97	94	355
	18:00	101	81	63	51	296
	19:00	41	34	20	21	116
	20:00	27	20	23	26	96
	21:00	21	24	35	23	103
	22:00	19	23	30	32	104
	23:00	20	16	17	9	62
Day Total :						3238

AM Total :	938 (29.0%)	Peak AM Hour : 10:45 =	185 (5.7%)	Peak AM Factor : 0.826	Average Period : 33.7
PM Total :	2300 (71.0%)	Peak PM Hour : 17:30 =	373 (11.5%)	Peak PM Factor : 0.923	Average Hour : 134.9

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	8	2	4	0	14
Wed	01:00	0	0	2	0	2
	02:00	2	0	0	2	4
	03:00	0	0	1	2	3
	04:00	4	7	7	14	32
	05:00	13	9	9	19	50
	06:00	17	30	29	29	105
	07:00	15	26	32	39	112
	08:00	28	24	50	28	130
	09:00	31	39	31	39	140
	10:00	49	42	34	43	168
	11:00	40	30	40	49	159
	12:00	30	59	46	63	198
	13:00	76	67	112	91	346
	14:00	121	136	109	81	447
	15:00	88	110	92	84	374
	16:00	110	109	106	80	405
	17:00	103	104	73	76	356
	18:00	67	61	44	41	213
	19:00	21	29	24	25	99
	20:00	30	22	25	15	92
	21:00	21	34	30	19	104
	22:00	22	22	20	22	86
	23:00	22	31	19	15	87
Day Total :						3726

AM Total :	919 (24.7%)	Peak AM Hour : 10:00 =	168 (4.5%)	Peak AM Factor : 0.840	Average Period : 38.8
PM Total :	2807 (75.3%)	Peak PM Hour : 13:30 =	460 (12.3%)	Peak PM Factor : 0.846	Average Hour : 155.3

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	2	4	10	1	17
Thu	01:00	2	3	0	1	6
	02:00	0	3	0	0	3
	03:00	0	0	2	4	6
	04:00	5	6	4	19	34
	05:00	23	4	17	19	63
	06:00	28	25	23	21	97
	07:00	18	14	11	20	63
	08:00	18	13	11	12	54
	09:00	16	20	22	29	87
	10:00	27	27	26	21	101
	11:00	46	46	45	32	169
	12:00	50	42	30	42	164
	13:00	48	44	48	61	201
	14:00	63	54	45	48	210
	15:00	32	24	27	24	107
	16:00	24	21	23	13	81
	17:00	26	23	33	33	115
	18:00	29	31	26	22	108
	19:00	17	34	45	41	137
	20:00	20	27	26	27	100
	21:00	24	23	24	12	83
	22:00	8	14	9	6	37
	23:00	6	3	3	13	25
Day Total :						2068

AM Total :	700 (33.8%)	Peak AM Hour : 11:00 =	169 (8.2%)	Peak AM Factor : 0.918	Average Period : 21.5
PM Total :	1368 (66.2%)	Peak PM Hour : 13:30 =	226 (10.9%)	Peak PM Factor : 0.897	Average Hour : 86.2

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	8	1	1	2	12
Fri	01:00	0	2	1	0	3
	02:00	1	0	0	0	1
	03:00	1	0	0	1	2
	04:00	8	2	2	7	19
	05:00	5	5	12	17	39
	06:00	13	28	30	24	95
	07:00	18	17	33	23	91
	08:00	32	34	28	32	126
	09:00	25	29	17	32	103
	10:00	26	43	53	51	173
	11:00	53	44	27	38	162
	12:00	53	44	27	52	176
	13:00	62	72	61	65	260
	14:00	55	54	54	56	219
	15:00	48	44	44	50	186
	16:00	51	47	64	63	225
	17:00	48	43	40	49	180
	18:00	26	30	24	31	111
	19:00	23	7	14	12	56
	20:00	11	13	9	12	45
	21:00	18	16	21	7	62
	22:00	15	19	14	17	65
	23:00	12	24	11	3	50
Day Total :						2461

AM Total :	826 (33.6%)	Peak AM Hour : 10:30 =	201 (8.2%)	Peak AM Factor : 0.948	Average Period : 25.6
PM Total :	1635 (66.4%)	Peak PM Hour : 13:00 =	260 (10.6%)	Peak PM Factor : 0.903	Average Hour : 102.5

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	2	10	0	4	16
Sat	01:00	2	6	0	0	8
	02:00	0	1	2	3	6
	03:00	0	0	0	0	0
	04:00	5	2	4	10	21
	05:00	24	12	11	17	64
	06:00	33	33	47	29	142
	07:00	35	17	26	33	111
	08:00	29	13	18	27	87
	09:00	20	21	30	28	99
	10:00	41	39	39	46	165
	11:00	50	43	40	36	169
	12:00	37	26	32	36	131
	13:00	50	35	65	76	226
	14:00	57	43	58	47	205
	15:00	44	31	23	51	149
	16:00	31	48	42	39	160
	17:00	48	44	41	46	179
	18:00	35	30	24	30	119
	19:00	18	15	18	4	55
	20:00	8	18	9	11	46
	21:00	11	8	17	18	54
	22:00	21	20	20	13	74
	23:00	18	13	10	13	54
Day Total :						2340

AM Total :	888 (37.9%)	Peak AM Hour : 10:45 =	179 (7.6%)	Peak AM Factor : 0.895	Average Period : 24.4
PM Total :	1452 (62.1%)	Peak PM Hour : 13:30 =	241 (10.3%)	Peak PM Factor : 0.793	Average Hour : 97.5

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	8	1	2	5	16
Sun	01:00	7	1	3	4	15
	02:00	1	0	0	0	1
	03:00	1	3	0	0	4
	04:00	1	1	5	7	14
	05:00	5	4	6	25	40
	06:00	25	27	41	39	132
	07:00	38	18	24	29	109
	08:00	16	10	6	14	46
	09:00	10	8	33	15	66
	10:00	22	26	38	43	129
	11:00	40	22	35	17	114
	12:00	43	28	32	38	141
	13:00	37	49	33	54	173
	14:00	54	67	54	52	227
	15:00	38	38	48	37	161
	16:00	50	61	66	64	241
	17:00	57	49	74	40	220
	18:00	35	22	22	25	104
	19:00	22	15	7	20	64
	20:00	15	17	14	19	65
	21:00	22	28	19	16	85
	22:00	10	21	19	22	72
	23:00	9	6	11	8	34
Day Total :						2273

AM Total :	686 (30.2%)	Peak AM Hour : 10:15 =	147 (6.5%)	Peak AM Factor : 0.855	Average Period : 23.7
PM Total :	1587 (69.8%)	Peak PM Hour : 16:15 =	248 (10.9%)	Peak PM Factor : 0.838	Average Hour : 94.7

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	12	7	9	9	37
Mon	01:00	8	4	3	3	18
	02:00	2	2	2	2	8
	03:00	0	0	0	1	1
	04:00	4	2	8	25	39
	05:00	48	37	24	39	148
	06:00	56	55	89	98	298
	07:00	52	45	64	65	226
	08:00	67	77	58	41	243
	09:00	38	43	47	34	162
	10:00	45	51	54	50	200
	11:00	49	42	41	46	178
	12:00	43	53	48	56	200
	13:00	59	72	62	60	253
	14:00	64	49	84	93	290
	15:00	52	81	103	150	386
	16:00	83	116	96	114	409
	17:00	124	124	104	132	484
	18:00	84	81	96	48	309
	19:00	36	44	38	31	149
	20:00	18	22	19	23	82
	21:00	30	25	33	29	117
	22:00	16	15	20	30	81
	23:00	27	22	20	14	83
Day Total :						4401

AM Total :	1558 (35.4%)	Peak AM Hour : 06:00 =	298 (6.8%)	Peak AM Factor : 0.760	Average Period : 45.8
PM Total :	2843 (64.6%)	Peak PM Hour : 17:00 =	484 (11.0%)	Peak PM Factor : 0.807	Average Hour : 183.4

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	12	11	5	5	33
Tue	01:00	4	2	2	1	9
	02:00	0	2	0	1	3
	03:00	0	0	0	0	0
	04:00	3	0	10	16	29
	05:00	30	17	15	23	85
	06:00	41	64	43	64	212
	07:00	45	55	61	70	231
	08:00	73	43	42	43	201
	09:00	39	43	55	32	169
	10:00	62	60	49	54	225
	11:00	57	58	39	32	186
	12:00	39	69	51	43	202
	13:00	68	67	66	106	307
	14:00	83	62	79	54	278
	15:00	92	70	93	110	365
	16:00	99	82	85	96	362
	17:00	111	117	108	99	435
	18:00	73	63	76	51	263
	19:00	44	28	33	20	125
	20:00	22	9	23	18	72
	21:00	10	15	24	19	68
	22:00	19	14	13	17	63
	23:00	8	21	9	5	43
Day Total :						3966

AM Total :	1383 (34.9%)	Peak AM Hour : 07:15 =	259 (6.5%)	Peak AM Factor : 0.887	Average Period : 41.3
PM Total :	2583 (65.1%)	Peak PM Hour : 17:00 =	435 (11.0%)	Peak PM Factor : 0.929	Average Hour : 165.3

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	2	3	3	2	10
Wed	01:00	1	3	2	3	9
	02:00	0	0	0	0	0
	03:00	1	0	0	1	2
	04:00	2	1	13	13	29
	05:00	26	26	13	31	96
	06:00	28	51	37	39	155
	07:00	47	36	63	61	207
	08:00	55	50	38	35	178
	09:00	36	32	35	28	131
	10:00	48	36	45	42	171
	11:00	37	32	56	29	154
	12:00	47	33	45	34	159
	13:00	47	49	63	62	221
	14:00	76	58	61	57	252
	15:00	74	39	73	93	279
	16:00	66	73	70	80	289
	17:00	92	95	81	64	332
	18:00	56	45	59	41	201
	19:00	50	26	31	14	121
	20:00	24	18	20	12	74
	21:00	16	19	13	16	64
	22:00	12	26	11	14	63
	23:00	23	14	9	11	57
Day Total :						3254

AM Total :	1142 (35.1%)	Peak AM Hour : 07:30 =	229 (7.0%)	Peak AM Factor : 0.909	Average Period : 33.9
PM Total :	2112 (64.9%)	Peak PM Hour : 16:45 =	348 (10.7%)	Peak PM Factor : 0.916	Average Hour : 135.6

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	5	0	1	1	7
Thu	01:00	1	1	0	1	3
	02:00	0	2	0	1	3
	03:00	1	1	0	1	3
	04:00	4	2	4	17	27
	05:00	17	14	6	21	58
	06:00	35	30	29	26	120
	07:00	33	36	41	57	167
	08:00	37	42	29	35	143
	09:00	50	32	40	32	154
	10:00	32	32	28	42	134
	11:00	31	40	44	37	152
	12:00	40	39	45	36	160
	13:00	47	54	49	54	204
	14:00	55	58	43	70	226
	15:00	39	54	61	108	262
	16:00	72	58	116	86	332
	17:00	100	117	109	86	412
	18:00	61	80	74	37	252
	19:00	53	31	22	18	124
	20:00	24	23	21	19	87
	21:00	23	26	22	10	81
	22:00	11	9	19	25	64
	23:00	15	10	9	6	40
Day Total :						3215

AM Total :	971 (30.2%)	Peak AM Hour : 07:30 =	177 (5.5%)	Peak AM Factor : 0.776	Average Period : 33.5
PM Total :	2244 (69.8%)	Peak PM Hour : 16:30 =	419 (13.0%)	Peak PM Factor : 0.895	Average Hour : 134.0

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	5	7	4	6	22
Fri	01:00	3	0	3	3	9
	02:00	0	2	1	1	4
	03:00	3	0	0	1	4
	04:00	3	10	2	14	29
	05:00	17	14	9	20	60
	06:00	13	25	35	42	115
	07:00	41	38	34	54	167
	08:00	55	55	33	54	197
	09:00	48	27	27	26	128
	10:00	35	36	40	48	159
	11:00	51	33	34	58	176
	12:00	35	56	50	59	200
	13:00	79	61	82	63	285
	14:00	54	63	45	78	240
	15:00	75	63	76	65	279
	16:00	88	96	106	93	383
	17:00	104	113	101	109	427
	18:00	72	72	77	38	259
	19:00	52	34	26	29	141
	20:00	13	19	21	10	63
	21:00	18	27	20	14	79
	22:00	26	11	15	19	71
	23:00	23	18	11	8	60
Day Total :						3557

AM Total :	1070 (30.1%)	Peak AM Hour : 07:30 =	198 (5.6%)	Peak AM Factor : 0.853	Average Period : 37.1
PM Total :	2487 (69.9%)	Peak PM Hour : 17:00 =	427 (12.0%)	Peak PM Factor : 0.945	Average Hour : 148.2

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	5	8	1	3	17
Sat	01:00	3	1	6	0	10
	02:00	0	1	1	0	2
	03:00	2	2	1	1	6
	04:00	2	3	5	6	16
	05:00	18	11	3	15	47
	06:00	19	31	31	23	104
	07:00	28	27	28	40	123
	08:00	32	32	12	31	107
	09:00	36	13	19	42	110
	10:00	57	56	30	38	181
	11:00	48	51	27	40	166
	12:00	48	63	53	39	203
	13:00	43	52	50	68	213
	14:00	56	42	50	29	177
	15:00	39	40	35	53	167
	16:00	30	45	28	37	140
	17:00	41	25	30	32	128
	18:00	29	31	38	30	128
	19:00	24	26	33	33	116
	20:00	31	12	20	11	74
	21:00	15	18	23	13	69
	22:00	14	13	15	14	56
	23:00	8	15	16	10	49
Day Total :						2409

AM Total :	889 (36.9%)	Peak AM Hour : 09:45 =	185 (7.7%)	Peak AM Factor : 0.811	Average Period : 25.1
PM Total :	1520 (63.1%)	Peak PM Hour : 13:15 =	226 (9.4%)	Peak PM Factor : 0.831	Average Hour : 100.4

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	4	2	3	0	9
Sun	01:00	0	2	4	3	9
	02:00	0	0	0	2	2
	03:00	0	2	2	0	4
	04:00	1	1	2	3	7
	05:00	2	4	6	10	22
	06:00	15	11	12	16	54
	07:00	21	13	17	19	70
	08:00	20	13	13	3	49
	09:00	21	32	17	27	97
	10:00	37	40	50	41	168
	11:00	33	36	34	35	138
	12:00	47	22	40	29	138
	13:00	75	85	69	53	282
	14:00	84	47	57	45	233
	15:00	49	37	37	38	161
	16:00	44	48	44	40	176
	17:00	29	43	29	38	139
	18:00	36	14	20	20	90
	19:00	19	11	18	18	66
	20:00	16	13	15	13	57
	21:00	13	23	7	16	59
	22:00	8	15	29	15	67
	23:00	17	13	24	7	61
Day Total :						2158

AM Total :	629 (29.1%)	Peak AM Hour : 10:00 =	168 (7.8%)	Peak AM Factor : 0.840	Average Period : 22.5
PM Total :	1529 (70.9%)	Peak PM Hour : 13:15 =	291 (13.5%)	Peak PM Factor : 0.856	Average Hour : 89.9

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	5	3	2	1	11
Mon	01:00	7	6	0	2	15
	02:00	1	1	0	1	3
	03:00	0	1	0	2	3
	04:00	2	6	12	13	33
	05:00	28	25	13	34	100
	06:00	35	31	54	55	175
	07:00	54	50	43	64	211
	08:00	48	62	44	41	195
	09:00	51	47	41	50	189
	10:00	41	30	46	51	168
	11:00	60	43	34	48	185
	12:00	21	58	38	43	160
	13:00	44	96	58	76	274
	14:00	49	41	57	56	203
	15:00	76	94	96	116	382
	16:00	83	119	94	122	418
	17:00	110	119	99	122	450
	18:00	83	97	107	64	351
	19:00	30	39	29	15	113
	20:00	41	36	17	20	114
	21:00	12	33	23	14	82
	22:00	9	20	17	29	75
	23:00	13	17	13	4	47
Day Total :						3957

AM Total :	1288 (32.5%)	Peak AM Hour : 07:45 =	218 (5.5%)	Peak AM Factor : 0.852	Average Period : 41.2
PM Total :	2669 (67.5%)	Peak PM Hour : 16:45 =	450 (11.4%)	Peak PM Factor : 0.922	Average Hour : 164.9

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	2	2	1	3	8
Tue	01:00	1	0	0	2	3
	02:00	0	2	0	0	2
	03:00	0	2	2	4	8
	04:00	2	0	7	15	24
	05:00	34	18	12	31	95
	06:00	35	37	44	47	163
	07:00	44	43	59	65	211
	08:00	74	75	52	33	234
	09:00	36	38	43	33	150
	10:00	34	46	61	55	196
	11:00	42	40	49	40	171
	12:00	40	40	36	32	148
	13:00	36	44	52	77	209
	14:00	69	53	78	57	257
	15:00	79	77	91	130	377
	16:00	9	0	0	0	9
	17:00	0	0	0	0	0
	18:00	1	0	0	0	1
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						2266

AM Total :	1265 (55.8%)	Peak AM Hour : 07:30 =	273 (12.0%)	Peak AM Factor : 0.910	Average Period : 23.6
PM Total :	1001 (44.2%)	Peak PM Hour : 15:00 =	377 (16.6%)	Peak PM Factor : 0.725	Average Hour : 94.4

Date	Time	:00	:15	:30	:45	Total
12/10/08	00:00	0	0	0	0	0
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Date	Time	:00	:15	:30	:45	Total
12/11/08	00:00	0	0	0	0	0
Thu	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Date	Time	:00	:15	:30	:45	Total
12/12/08	00:00	0	0	0	0	0
Fri	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Date	Time	:00	:15	:30	:45	Total
12/13/08	00:00	0	0	0	0	0
Sat	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0		0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Lane #2 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
2.			Normal	Axle	Yes	

Lane #2 Basic Volume Data From: 12:00 - 11/24/2008 To: 14:59 - 12/13/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	12:00	27	24	39	45	135
Mon	13:00	34	23	23	44	124
	14:00	71	51	62	59	243
	15:00	62	33	57	50	202
	16:00	38	35	72	59	204
	17:00	45	32	48	53	178
	18:00	40	45	39	35	159
	19:00	30	17	23	8	78
	20:00	13	14	13	24	64
	21:00	13	24	48	25	110
	22:00	11	11	28	13	63
	23:00	4	35	29	30	98
Day Total :						1658

AM Total :		Peak AM Hour :		Peak AM Factor :	Average Period : 34.5
PM Total :	1658 (100.0%)	Peak PM Hour : 14:00 =	243 (14.7%)	Peak PM Factor : 0.844	Average Hour : 138.2

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	9	2	2	1	14
Tue	01:00	0	0	1	1	2
	02:00	1	0	1	0	2
	03:00	1	2	1	0	4
	04:00	0	1	3	5	9
	05:00	14	10	13	23	60
	06:00	23	24	41	58	146
	07:00	68	73	84	91	316
	08:00	90	99	73	60	322
	09:00	63	50	67	56	236
	10:00	47	33	39	51	170
	11:00	59	33	32	23	147
	12:00	29	41	47	46	163
	13:00	42	25	55	45	167
	14:00	62	71	43	40	216
	15:00	40	54	67	46	207
	16:00	31	38	61	72	202
	17:00	38	47	49	44	178
	18:00	51	58	64	51	224
	19:00	28	35	25	16	104
	20:00	6	12	32	25	75
	21:00	13	10	15	48	86
	22:00	51	30	23	26	130
	23:00	47	33	26	16	122
Day Total :						3302

AM Total :	1428 (43.2%)	Peak AM Hour : 07:30 =	364 (11.0%)	Peak AM Factor : 0.919	Average Period : 34.4
PM Total :	1874 (56.8%)	Peak PM Hour : 13:30 =	233 (7.1%)	Peak PM Factor : 0.809	Average Hour : 137.6

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	8	6	4	1	19
Wed	01:00	0	0	0	0	0
	02:00	2	2	0	3	7
	03:00	1	0	0	1	2
	04:00	0	3	2	11	16
	05:00	9	6	10	14	39
	06:00	19	32	45	48	144
	07:00	36	58	57	66	217
	08:00	86	46	56	60	248
	09:00	53	53	30	41	177
	10:00	34	40	26	34	134
	11:00	54	55	36	31	176
	12:00	29	32	36	39	136
	13:00	34	53	40	43	170
	14:00	64	58	77	42	241
	15:00	50	53	47	42	192
	16:00	41	40	50	56	187
	17:00	52	30	43	35	160
	18:00	51	59	35	24	169
	19:00	16	33	13	12	74
	20:00	10	20	40	13	83
	21:00	10	15	28	37	90
	22:00	14	9	15	29	67
	23:00	13	22	32	20	87
Day Total :						2835

AM Total :	1179 (41.6%)	Peak AM Hour : 07:15 =	267 (9.4%)	Peak AM Factor : 0.776	Average Period : 29.5
PM Total :	1656 (58.4%)	Peak PM Hour : 13:45 =	242 (8.5%)	Peak PM Factor : 0.786	Average Hour : 118.1

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	5	9	1	3	18
Thu	01:00	0	1	1	1	3
	02:00	0	1	0	0	1
	03:00	0	0	2	1	3
	04:00	2	2	4	7	15
	05:00	8	9	11	9	37
	06:00	15	18	12	19	64
	07:00	12	11	10	7	40
	08:00	14	5	6	13	38
	09:00	9	7	16	19	51
	10:00	22	29	28	21	100
	11:00	21	29	50	29	129
	12:00	50	27	38	39	154
	13:00	37	36	37	61	171
	14:00	55	42	48	42	187
	15:00	39	31	30	11	111
	16:00	20	18	31	10	79
	17:00	11	14	11	14	50
	18:00	14	23	26	20	83
	19:00	21	17	32	25	95
	20:00	31	25	24	28	108
	21:00	26	22	22	20	90
	22:00	17	14	21	7	59
	23:00	12	12	5	4	33
Day Total :						1719

AM Total :	499 (29.0%)	Peak AM Hour : 11:00 =	129 (7.5%)	Peak AM Factor : 0.645	Average Period : 17.9
PM Total :	1220 (71.0%)	Peak PM Hour : 13:45 =	206 (12.0%)	Peak PM Factor : 0.844	Average Hour : 71.6

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	4	1	2	3	10
Fri	01:00	1	4	0	0	5
	02:00	0	0	1	0	1
	03:00	3	0	0	1	4
	04:00	0	2	3	1	6
	05:00	4	1	5	8	18
	06:00	17	12	18	34	81
	07:00	25	23	26	24	98
	08:00	30	36	32	34	132
	09:00	34	21	16	32	103
	10:00	23	28	31	28	110
	11:00	30	39	36	30	135
	12:00	45	25	37	24	131
	13:00	27	43	39	51	160
	14:00	45	48	52	44	189
	15:00	37	23	54	26	140
	16:00	30	43	39	39	151
	17:00	46	22	42	35	145
	18:00	28	38	35	12	113
	19:00	37	24	6	13	80
	20:00	16	14	9	11	50
	21:00	5	25	25	10	65
	22:00	11	15	23	17	66
	23:00	20	10	23	12	65
Day Total :						2058

AM Total :	703 (34.2%)	Peak AM Hour : 08:15 =	136 (6.6%)	Peak AM Factor : 0.872	Average Period : 21.4
PM Total :	1355 (65.8%)	Peak PM Hour : 13:45 =	196 (9.5%)	Peak PM Factor : 0.907	Average Hour : 85.8

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	4	0	3	1	8
Sat	01:00	1	1	1	1	4
	02:00	0	1	0	2	3
	03:00	1	0	0	0	1
	04:00	2	3	0	6	11
	05:00	12	9	6	9	36
	06:00	20	20	30	31	101
	07:00	24	22	26	19	91
	08:00	30	19	6	18	73
	09:00	12	22	16	31	81
	10:00	25	35	26	32	118
	11:00	44	48	37	32	161
	12:00	38	15	24	29	106
	13:00	39	30	28	68	165
	14:00	50	49	45	39	183
	15:00	52	49	38	33	172
	16:00	46	23	34	50	153
	17:00	34	34	42	37	147
	18:00	28	38	38	27	131
	19:00	15	27	16	16	74
	20:00	9	6	11	12	38
	21:00	10	13	20	18	61
	22:00	28	15	14	11	68
	23:00	15	23	15	15	68
Day Total :						2054

AM Total :	688 (33.5%)	Peak AM Hour : 10:45 =	161 (7.8%)	Peak AM Factor : 0.839	Average Period : 21.4
PM Total :	1366 (66.5%)	Peak PM Hour : 13:45 =	212 (10.3%)	Peak PM Factor : 0.779	Average Hour : 85.6

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	13	3	3	3	22
Sun	01:00	3	2	7	8	20
	02:00	0	0	1	3	4
	03:00	0	1	0	1	2
	04:00	2	0	0	1	3
	05:00	6	1	4	8	19
	06:00	19	23	20	27	89
	07:00	21	22	19	16	78
	08:00	10	8	5	13	36
	09:00	14	16	23	18	71
	10:00	17	19	34	31	101
	11:00	38	43	28	22	131
	12:00	31	30	31	39	131
	13:00	47	42	32	44	165
	14:00	45	65	39	54	203
	15:00	40	30	36	33	139
	16:00	45	38	49	44	176
	17:00	50	39	48	53	190
	18:00	56	68	36	27	187
	19:00	31	19	18	27	95
	20:00	13	18	29	18	78
	21:00	29	33	17	21	100
	22:00	23	29	12	18	82
	23:00	29	23	19	13	84
Day Total :						2206

AM Total :	576 (26.1%)	Peak AM Hour : 10:30 =	146 (6.6%)	Peak AM Factor : 0.849	Average Period : 23.0
PM Total :	1630 (73.9%)	Peak PM Hour : 17:30 =	225 (10.2%)	Peak PM Factor : 0.827	Average Hour : 91.9

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	10	14	20	21	65
Mon	01:00	19	8	14	6	47
	02:00	1	0	5	1	7
	03:00	0	3	2	2	7
	04:00	2	5	0	12	19
	05:00	27	24	21	25	97
	06:00	43	39	66	66	214
	07:00	70	91	109	103	373
	08:00	111	97	100	78	386
	09:00	79	76	48	41	244
	10:00	35	48	50	47	180
	11:00	48	63	51	50	212
	12:00	35	44	32	44	155
	13:00	38	40	52	49	179
	14:00	65	76	61	47	249
	15:00	47	65	56	64	232
	16:00	68	62	68	74	272
	17:00	42	39	47	67	195
	18:00	47	54	42	34	177
	19:00	40	34	26	27	127
	20:00	28	13	9	28	78
	21:00	17	9	14	17	57
	22:00	27	17	7	15	66
	23:00	25	28	28	18	99
Day Total :						3737

AM Total :	1851 (49.5%)	Peak AM Hour : 07:30 =	420 (11.2%)	Peak AM Factor : 0.946	Average Period : 38.9
PM Total :	1886 (50.5%)	Peak PM Hour : 16:00 =	272 (7.3%)	Peak PM Factor : 0.895	Average Hour : 155.7

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	33	24	8	2	67
Tue	01:00	3	5	1	1	10
	02:00	2	0	0	1	3
	03:00	0	1	0	0	1
	04:00	1	2	2	6	11
	05:00	19	14	11	22	66
	06:00	30	35	50	69	184
	07:00	69	91	93	108	361
	08:00	102	87	81	96	366
	09:00	62	48	33	48	191
	10:00	40	44	44	50	178
	11:00	59	39	48	39	185
	12:00	38	30	35	31	134
	13:00	36	49	58	60	203
	14:00	52	56	57	49	214
	15:00	73	41	51	44	209
	16:00	52	54	54	49	209
	17:00	60	55	39	39	193
	18:00	49	37	37	37	160
	19:00	39	18	17	8	82
	20:00	7	8	15	25	55
	21:00	22	21	15	29	87
	22:00	28	12	21	6	67
	23:00	26	31	12	13	82
Day Total :						3318

AM Total :	1623 (48.9%)	Peak AM Hour : 07:15 =	394 (11.9%)	Peak AM Factor : 0.912	Average Period : 34.6
PM Total :	1695 (51.1%)	Peak PM Hour : 14:15 =	235 (7.1%)	Peak PM Factor : 0.805	Average Hour : 138.3

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	4	3	2	3	12
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	1	1	4	8	14
	05:00	6	19	7	19	51
	06:00	18	35	39	54	146
	07:00	68	80	77	106	331
	08:00	99	79	87	74	339
	09:00	71	61	48	43	223
	10:00	34	26	38	25	123
	11:00	37	36	44	49	166
	12:00	36	39	34	43	152
	13:00	47	33	33	48	161
	14:00	56	68	66	52	242
	15:00	59	55	48	46	208
	16:00	42	42	79	48	211
	17:00	28	48	48	49	173
	18:00	41	33	47	24	145
	19:00	25	17	13	11	66
	20:00	27	24	17	19	87
	21:00	9	26	26	13	74
	22:00	5	19	31	23	78
	23:00	20	19	18	18	75
Day Total :						3077

AM Total :	1405 (45.7%)	Peak AM Hour : 07:45 =	371 (12.1%)	Peak AM Factor : 0.875	Average Period : 32.1
PM Total :	1672 (54.3%)	Peak PM Hour : 14:15 =	245 (8.0%)	Peak PM Factor : 0.775	Average Hour : 128.2

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	9	2	2	3	16
Thu	01:00	0	1	0	1	2
	02:00	0	1	1	1	3
	03:00	0	1	0	0	1
	04:00	0	1	2	7	10
	05:00	13	9	9	22	53
	06:00	25	32	45	56	158
	07:00	60	89	106	98	353
	08:00	101	79	77	77	334
	09:00	64	45	32	50	191
	10:00	32	26	33	40	131
	11:00	27	26	38	37	128
	12:00	37	29	34	29	129
	13:00	34	33	50	59	176
	14:00	33	73	41	49	196
	15:00	43	52	56	31	182
	16:00	49	59	51	35	194
	17:00	41	37	52	52	182
	18:00	43	55	20	35	153
	19:00	25	24	24	24	97
	20:00	16	16	9	23	64
	21:00	24	11	41	21	97
	22:00	13	23	8	21	65
	23:00	18	19	19	11	67
Day Total :						2982

AM Total :	1380 (46.3%)	Peak AM Hour : 07:15 =	394 (13.2%)	Peak AM Factor : 0.929	Average Period : 31.1
PM Total :	1602 (53.7%)	Peak PM Hour : 13:30 =	215 (7.2%)	Peak PM Factor : 0.736	Average Hour : 124.3

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	8	2	7	3	20
Fri	01:00	1	1	5	1	8
	02:00	0	0	1	0	1
	03:00	0	0	0	0	0
	04:00	1	3	1	2	7
	05:00	7	11	15	8	41
	06:00	26	26	38	49	139
	07:00	54	79	98	100	331
	08:00	95	85	90	66	336
	09:00	68	35	33	41	177
	10:00	42	39	43	29	153
	11:00	44	33	33	32	142
	12:00	29	28	52	39	148
	13:00	23	42	41	60	166
	14:00	40	66	45	27	178
	15:00	37	58	44	27	166
	16:00	34	46	53	44	177
	17:00	43	39	37	43	162
	18:00	46	29	31	43	149
	19:00	22	25	7	23	77
	20:00	22	17	12	3	54
	21:00	16	22	41	10	89
	22:00	22	11	23	17	73
	23:00	27	26	16	6	75
Day Total :						2869

AM Total :	1355 (47.2%)	Peak AM Hour : 07:30 =	378 (13.2%)	Peak AM Factor : 0.945	Average Period : 29.9
PM Total :	1514 (52.8%)	Peak PM Hour : 13:45 =	211 (7.4%)	Peak PM Factor : 0.799	Average Hour : 119.5

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	18	3	5	2	28
Sat	01:00	0	1	0	1	2
	02:00	0	2	1	1	4
	03:00	2	0	0	1	3
	04:00	0	0	2	1	3
	05:00	6	5	3	9	23
	06:00	9	14	14	33	70
	07:00	17	10	18	25	70
	08:00	36	36	18	22	112
	09:00	14	17	18	22	71
	10:00	27	34	25	32	118
	11:00	31	29	27	31	118
	12:00	32	36	25	27	120
	13:00	26	35	40	32	133
	14:00	47	34	35	43	159
	15:00	33	35	39	39	146
	16:00	29	27	28	41	125
	17:00	33	35	18	39	125
	18:00	32	15	15	35	97
	19:00	16	29	32	7	84
	20:00	13	13	9	12	47
	21:00	6	12	17	17	52
	22:00	32	11	7	10	60
	23:00	11	19	15	8	53
Day Total :						1823

AM Total :	622 (34.1%)	Peak AM Hour : 10:15 =	122 (6.7%)	Peak AM Factor : 0.847	Average Period :	19.0
PM Total :	1201 (65.9%)	Peak PM Hour : 14:00 =	159 (8.7%)	Peak PM Factor : 0.846	Average Hour :	76.0

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	6	2	3	3	14
Sun	01:00	4	4	0	4	12
	02:00	2	2	3	1	8
	03:00	0	1	2	2	5
	04:00	0	1	1	1	3
	05:00	0	1	0	8	9
	06:00	7	8	5	13	33
	07:00	15	8	10	13	46
	08:00	15	12	18	25	70
	09:00	12	19	23	19	73
	10:00	21	30	31	34	116
	11:00	40	42	12	20	114
	12:00	17	23	33	33	106
	13:00	26	32	60	45	163
	14:00	39	47	51	20	157
	15:00	25	46	51	22	144
	16:00	38	38	47	36	159
	17:00	40	22	17	19	98
	18:00	35	28	12	30	105
	19:00	18	20	15	8	61
	20:00	14	14	27	24	79
	21:00	16	20	28	14	78
	22:00	11	9	12	29	61
	23:00	18	38	29	25	110
Day Total :						1824

AM Total :	503 (27.6%)	Peak AM Hour : 10:30 =	147 (8.1%)	Peak AM Factor : 0.875	Average Period : 19.0
PM Total :	1321 (72.4%)	Peak PM Hour : 13:30 =	191 (10.5%)	Peak PM Factor : 0.796	Average Hour : 76.0

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	3	10	9	0	22
Mon	01:00	4	6	0	0	10
	02:00	0	2	0	0	2
	03:00	0	0	0	1	1
	04:00	0	3	3	8	14
	05:00	6	13	14	19	52
	06:00	34	24	46	58	162
	07:00	57	87	102	90	336
	08:00	92	80	81	84	337
	09:00	82	51	46	48	227
	10:00	27	38	37	27	129
	11:00	45	36	33	30	144
	12:00	35	22	33	24	114
	13:00	28	42	43	60	173
	14:00	32	47	41	31	151
	15:00	44	51	58	33	186
	16:00	37	61	42	38	178
	17:00	40	44	44	33	161
	18:00	45	32	22	20	119
	19:00	35	16	17	13	81
	20:00	30	16	9	24	79
	21:00	15	14	30	18	77
	22:00	11	12	18	14	55
	23:00	37	12	19	9	77
Day Total :						2887

AM Total :	1436 (49.7%)	Peak AM Hour : 07:15 =	371 (12.9%)	Peak AM Factor : 0.909	Average Period : 30.1
PM Total :	1451 (50.3%)	Peak PM Hour : 15:30 =	189 (6.5%)	Peak PM Factor : 0.775	Average Hour : 120.3

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	2	5	1	0	8
Tue	01:00	0	1	0	0	1
	02:00	0	0	1	1	2
	03:00	0	0	2	1	3
	04:00	1	2	5	1	9
	05:00	9	9	9	14	41
	06:00	15	25	27	56	123
	07:00	63	96	95	94	348
	08:00	94	99	72	80	345
	09:00	68	36	33	34	171
	10:00	33	42	36	32	143
	11:00	31	29	31	29	120
	12:00	37	44	29	15	125
	13:00	26	21	21	45	113
	14:00	46	50	40	48	184
	15:00	47	52	75	52	226
	16:00	2	0	0	0	2
	17:00	0	0	0	0	0
	18:00	2	0	0	0	2
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						1966

AM Total :	1314 (66.8%)	Peak AM Hour : 07:30 =	382 (19.4%)	Peak AM Factor : 0.965	Average Period : 20.5
PM Total :	652 (33.2%)	Peak PM Hour : 15:00 =	226 (11.5%)	Peak PM Factor : 0.753	Average Hour : 81.9

Date	Time	:00	:15	:30	:45	Total
12/10/08	00:00	0	0	0	0	0
Wed	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Date	Time	:00	:15	:30	:45	Total
12/11/08	00:00	0	0	0	0	0
Thu	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						0

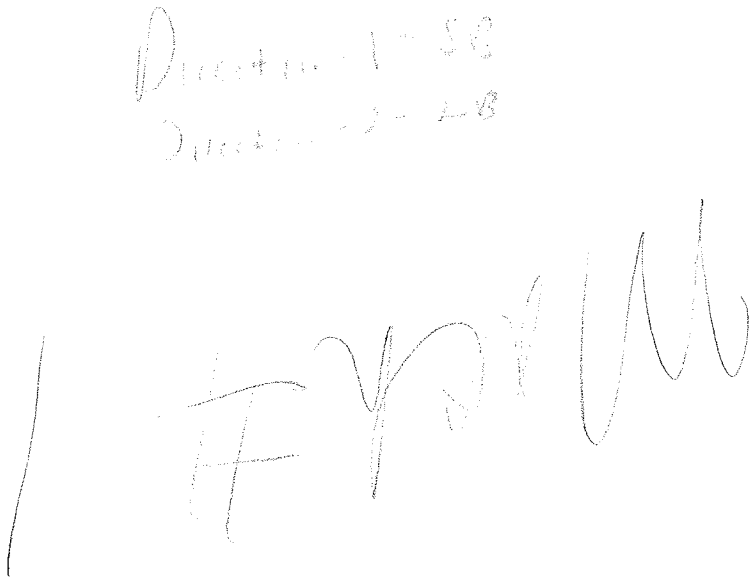
AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Date	Time	:00	:15	:30	:45	Total
12/12/08	00:00	0	0	0	0	0
Fri	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0

Date	Time	:00	:15	:30	:45	Total
12/13/08	00:00	0	0	0	0	0
Sat	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	0	0	0	0
	10:00	0	0	0	0	0
	11:00	0	0	0	0	0
	12:00	0	0	0	0	0
	13:00	0	0	0	0	0
	14:00	0	0	0		0
Day Total :						0

AM Total :	0 (0.0%)	Peak AM Hour :	Peak AM Factor :	Average Period :	0.0
PM Total :	0 (0.0%)	Peak PM Hour :	Peak PM Factor :	Average Hour :	0.0



Basic Volume Summary: RYE LAKE RD

Grand Total For Data From: 12:00 - 11/24/2008 To: 14:59 - 12/13/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	47302	(54.0%)	19.11	2475	25.8	103.1	15152 (32.0%)	32150 (68.0%)
#2.	40315	(46.0%)	19.11	2109	22.0	87.9	16562 (41.1%)	23753 (58.9%)
ALL	87617		19.11	4584	47.8	191.0	31714 (36.2%)	55903 (63.8%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	06:00 =	298	12/01/2008	0.760	17:00 =	484	12/01/2008	0.807
#2.	07:30 =	420	12/01/2008	0.946	16:00 =	272	12/01/2008	0.895

Basic Volume Report: WBAIR RD

Station ID : WBAIR RD
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 :
GPS Lat/Lon :
DB File : WBAIR RD.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 98953

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 10:45 - 11/24/2008 To: 16:14 - 12/09/2008

Date	Time	:00	:15	:30	:45	Total
11/24/08	10:00				54	54
Mon	11:00	62	95	65	57	279
	12:00	55	48	64	84	251
	13:00	80	59	68	90	297
	14:00	153	103	114	90	460
	15:00	135	78	117	113	443
	16:00	107	107	154	138	506
	17:00	117	116	112	93	438
	18:00	114	129	135	67	445
	19:00	70	64	61	35	230
	20:00	46	24	32	46	148
	21:00	48	70	73	40	231
	22:00	26	45	45	32	148
	23:00	26	56	59	62	203
Day Total :						4133

AM Total :	333 (8.1%)	Peak AM Hour : 11:00 =	279 (6.8%)	Peak AM Factor : 0.734	Average Period : 78.0
PM Total :	3800 (91.9%)	Peak PM Hour : 16:30 =	525 (12.7%)	Peak PM Factor : 0.852	Average Hour : 311.9

Date	Time	:00	:15	:30	:45	Total
11/25/08	00:00	38	13	17	4	72
Tue	01:00	8	5	1	1	15
	02:00	0	2	0	0	2
	03:00	0	1	0	1	2
	04:00	10	7	13	15	45
	05:00	19	22	18	24	83
	06:00	41	34	63	46	184
	07:00	35	47	58	50	190
	08:00	69	70	35	49	223
	09:00	37	45	52	33	167
	10:00	51	70	58	69	248
	11:00	120	74	61	66	321
	12:00	58	78	91	72	299
	13:00	68	66	98	111	343
	14:00	150	106	117	78	451
	15:00	121	115	136	150	522
	16:00	116	83	140	153	492
	17:00	115	98	133	125	471
	18:00	120	134	135	89	478
	19:00	83	75	58	33	249
	20:00	58	29	54	64	205
	21:00	34	26	55	73	188
	22:00	101	71	57	64	293
	23:00	96	59	37	46	238
Day Total :						5781

AM Total :	1552 (26.8%)	Peak AM Hour : 10:45 =	324 (5.6%)	Peak AM Factor : 0.675	Average Period : 60.2
PM Total :	4229 (73.2%)	Peak PM Hour : 15:00 =	522 (9.0%)	Peak PM Factor : 0.853	Average Hour : 240.9

Date	Time	:00	:15	:30	:45	Total
11/26/08	00:00	45	17	21	4	87
Wed	01:00	6	4	1	0	11
	02:00	7	4	2	6	19
	03:00	3	5	3	2	13
	04:00	7	7	17	14	45
	05:00	23	20	23	31	97
	06:00	40	41	40	46	167
	07:00	47	41	45	38	171
	08:00	58	46	55	50	209
	09:00	40	49	52	62	203
	10:00	53	75	59	50	237
	11:00	80	87	52	50	269
	12:00	95	110	78	102	385
	13:00	96	98	95	139	428
	14:00	116	168	173	123	580
	15:00	162	120	131	116	529
	16:00	141	104	125	128	498
	17:00	121	98	110	86	415
	18:00	112	123	70	58	363
	19:00	52	83	37	28	200
	20:00	42	55	58	32	187
	21:00	23	20	75	74	192
	22:00	50	23	38	64	175
	23:00	45	42	126	50	263
Day Total :						5743

AM Total :	1528 (26.6%)	Peak AM Hour : 10:30 =	276 (4.8%)	Peak AM Factor : 0.793	Average Period :	59.8
PM Total :	4215 (73.4%)	Peak PM Hour : 14:15 =	626 (10.9%)	Peak PM Factor : 0.905	Average Hour :	239.3

Date	Time	:00	:15	:30	:45	Total
11/27/08	00:00	42	25	29	16	112
Thu	01:00	7	3	2	2	14
	02:00	1	1	1	1	4
	03:00	1	1	5	1	8
	04:00	7	3	13	23	46
	05:00	31	18	20	26	95
	06:00	47	45	50	40	182
	07:00	34	37	28	32	131
	08:00	36	24	19	23	102
	09:00	31	22	36	37	126
	10:00	41	51	46	33	171
	11:00	50	75	72	79	276
	12:00	68	51	63	76	258
	13:00	65	57	60	85	267
	14:00	91	55	77	78	301
	15:00	67	53	69	42	231
	16:00	35	39	36	24	134
	17:00	30	41	38	37	146
	18:00	28	39	52	31	150
	19:00	49	36	38	43	166
	20:00	41	27	28	23	119
	21:00	31	27	18	15	91
	22:00	17	11	20	18	66
	23:00	20	15	19	23	77
Day Total :						3273

AM Total :	1267 (38.7%)	Peak AM Hour : 11:00 =	276 (8.4%)	Peak AM Factor : 0.873	Average Period : 34.1
PM Total :	2006 (61.3%)	Peak PM Hour : 13:45 =	308 (9.4%)	Peak PM Factor : 0.846	Average Hour : 136.4

Date	Time	:00	:15	:30	:45	Total
11/28/08	00:00	19	6	6	2	33
Fri	01:00	3	3	2	1	9
	02:00	2	1	2	1	6
	03:00	2	0	0	4	6
	04:00	6	5	5	6	22
	05:00	8	8	12	25	53
	06:00	20	30	36	33	119
	07:00	34	17	38	45	134
	08:00	46	41	44	41	172
	09:00	31	26	23	35	115
	10:00	39	44	75	54	212
	11:00	79	75	61	61	276
	12:00	67	59	67	71	264
	13:00	78	65	60	97	300
	14:00	99	76	94	71	340
	15:00	72	49	87	65	273
	16:00	59	73	99	62	293
	17:00	54	51	47	31	183
	18:00	66	58	70	43	237
	19:00	35	24	33	22	114
	20:00	45	28	25	7	105
	21:00	25	50	41	19	135
	22:00	35	36	35	43	149
	23:00	43	15	31	36	125
Day Total :						3675

AM Total :	1157 (31.5%)	Peak AM Hour : 10:30 =	283 (7.7%)	Peak AM Factor : 0.896	Average Period : 38.3
PM Total :	2518 (68.5%)	Peak PM Hour : 13:45 =	366 (10.0%)	Peak PM Factor : 0.924	Average Hour : 153.1

Date	Time	:00	:15	:30	:45	Total
11/29/08	00:00	19	15	11	4	49
Sat	01:00	2	8	4	0	14
	02:00	2	1	1	1	5
	03:00	1	1	2	4	8
	04:00	5	1	4	8	18
	05:00	26	16	21	21	84
	06:00	29	52	47	41	169
	07:00	41	33	36	45	155
	08:00	40	38	22	25	125
	09:00	30	23	45	33	131
	10:00	43	57	58	54	212
	11:00	76	88	56	56	276
	12:00	47	57	46	68	218
	13:00	58	61	65	81	265
	14:00	98	83	76	86	343
	15:00	116	72	50	79	317
	16:00	66	53	57	79	255
	17:00	45	47	54	60	206
	18:00	48	63	48	39	198
	19:00	47	36	41	37	161
	20:00	20	17	14	6	57
	21:00	24	29	38	30	121
	22:00	39	46	36	27	148
	23:00	37	42	32	35	146
Day Total :						3681

AM Total :	1246 (33.8%)	Peak AM Hour : 10:30 =	276 (7.5%)	Peak AM Factor : 0.784	Average Period : 38.3
PM Total :	2435 (66.2%)	Peak PM Hour : 14:15 =	361 (9.8%)	Peak PM Factor : 0.778	Average Hour : 153.4

Date	Time	:00	:15	:30	:45	Total
11/30/08	00:00	40	16	11	4	71
Sun	01:00	11	3	6	20	40
	02:00	5	1	3	1	10
	03:00	3	2	1	3	9
	04:00	6	1	3	13	23
	05:00	8	11	6	26	51
	06:00	40	29	58	52	179
	07:00	45	38	29	49	161
	08:00	37	25	23	12	97
	09:00	16	10	18	30	74
	10:00	29	39	55	68	191
	11:00	86	71	67	33	257
	12:00	80	34	49	71	234
	13:00	82	49	45	62	238
	14:00	100	78	77	69	324
	15:00	71	72	109	69	321
	16:00	87	81	86	66	320
	17:00	88	99	95	69	351
	18:00	63	102	59	39	263
	19:00	55	26	29	43	153
	20:00	50	30	41	16	137
	21:00	47	77	34	48	206
	22:00	67	65	30	61	223
	23:00	61	58	59	29	207
Day Total :						4140

AM Total :	1163 (28.1%)	Peak AM Hour : 10:45 =	292 (7.1%)	Peak AM Factor : 0.849	Average Period : 43.1
PM Total :	2977 (71.9%)	Peak PM Hour : 17:00 =	351 (8.5%)	Peak PM Factor : 0.805	Average Hour : 172.5

Date	Time	:00	:15	:30	:45	Total
12/01/08	00:00	52	39	62	37	190
Mon	01:00	42	44	45	17	148
	02:00	14	3	7	2	26
	03:00	8	7	7	3	25
	04:00	7	7	11	26	51
	05:00	40	38	34	33	145
	06:00	40	66	72	84	262
	07:00	71	59	76	76	282
	08:00	99	73	53	60	285
	09:00	56	72	47	44	219
	10:00	69	58	92	101	320
	11:00	103	75	90	78	346
	12:00	65	58	76	83	282
	13:00	94	76	95	101	366
	14:00	138	125	109	103	475
	15:00	112	112	130	156	510
	16:00	164	143	108	165	580
	17:00	154	138	95	153	540
	18:00	119	121	77	78	395
	19:00	106	85	67	39	297
	20:00	58	29	38	65	190
	21:00	52	24	45	46	167
	22:00	73	49	27	37	186
	23:00	51	68	49	60	228
Day Total :						6515

AM Total :	2299 (35.3%)	Peak AM Hour :	10:30 =	371 (5.7%)	Peak AM Factor :	0.900	Average Period : 67.9
PM Total :	4216 (64.7%)	Peak PM Hour :	15:30 =	593 (9.1%)	Peak PM Factor :	0.898	Average Hour : 271.5

Date	Time	:00	:15	:30	:45	Total
12/02/08	00:00	85	48	23	11	167
Tue	01:00	19	17	9	6	51
	02:00	4	2	10	8	24
	03:00	4	2	2	1	9
	04:00	3	6	21	20	50
	05:00	24	35	20	30	109
	06:00	55	48	62	47	212
	07:00	48	49	62	68	227
	08:00	84	51	34	44	213
	09:00	46	45	51	43	185
	10:00	63	75	60	61	259
	11:00	84	61	68	61	274
	12:00	102	77	61	49	289
	13:00	86	87	104	109	386
	14:00	125	105	98	114	442
	15:00	151	97	106	129	483
	16:00	125	141	146	125	537
	17:00	169	126	124	124	543
	18:00	108	106	98	72	384
	19:00	77	54	31	43	205
	20:00	31	35	59	62	187
	21:00	43	51	43	62	199
	22:00	64	41	26	36	167
	23:00	64	68	38	18	188
Day Total :						5790

AM Total :	1780 (30.7%)	Peak AM Hour : 10:15 =	280 (4.8%)	Peak AM Factor : 0.824	Average Period : 60.3
PM Total :	4010 (69.3%)	Peak PM Hour : 16:15 =	581 (10.0%)	Peak PM Factor : 0.859	Average Hour : 241.3

Date	Time	:00	:15	:30	:45	Total
12/03/08	00:00	21	10	18	4	53
Wed	01:00	6	8	7	4	25
	02:00	5	1	4	5	15
	03:00	4	4	2	3	13
	04:00	7	9	7	12	35
	05:00	16	21	20	24	81
	06:00	35	58	52	52	197
	07:00	52	41	54	67	214
	08:00	78	54	39	40	211
	09:00	59	52	41	50	202
	10:00	58	49	66	67	240
	11:00	65	38	81	90	274
	12:00	77	59	74	76	286
	13:00	68	73	63	121	325
	14:00	117	123	118	110	468
	15:00	139	95	131	123	488
	16:00	120	92	139	135	486
	17:00	126	115	94	95	430
	18:00	100	70	112	73	355
	19:00	71	36	50	40	197
	20:00	71	58	42	43	214
	21:00	44	58	72	36	210
	22:00	37	30	66	61	194
	23:00	47	32	36	42	157
Day Total :						5370

AM Total :	1560 (29.1%)	Peak AM Hour : 11:00 =	274 (5.1%)	Peak AM Factor : 0.761	Average Period : 55.9
PM Total :	3810 (70.9%)	Peak PM Hour : 16:30 =	515 (9.6%)	Peak PM Factor : 0.926	Average Hour : 223.8

Date	Time	:00	:15	:30	:45	Total
12/04/08	00:00	28	15	17	20	80
Thu	01:00	9	9	5	6	29
	02:00	1	2	0	3	6
	03:00	1	1	0	2	4
	04:00	5	8	3	17	33
	05:00	19	19	8	22	68
	06:00	38	42	40	65	185
	07:00	44	48	59	52	203
	08:00	67	55	38	37	197
	09:00	59	50	47	40	196
	10:00	58	64	60	47	229
	11:00	74	65	76	44	259
	12:00	85	67	71	55	278
	13:00	62	85	112	86	345
	14:00	105	94	94	109	402
	15:00	97	89	115	138	439
	16:00	120	112	148	111	491
	17:00	124	122	109	102	457
	18:00	122	97	68	76	363
	19:00	77	49	58	29	213
	20:00	61	38	24	52	175
	21:00	61	39	66	53	219
	22:00	44	61	30	61	196
	23:00	40	30	42	32	144
Day Total :						5211

AM Total :	1489 (28.6%)	Peak AM Hour : 10:45 =	262 (5.0%)	Peak AM Factor : 0.862	Average Period : 54.3
PM Total :	3722 (71.4%)	Peak PM Hour : 15:45 =	518 (9.9%)	Peak PM Factor : 0.875	Average Hour : 217.1

Date	Time	:00	:15	:30	:45	Total
12/05/08	00:00	25	17	34	14	90
Fri	01:00	4	4	3	3	14
	02:00	5	2	3	1	11
	03:00	3	0	0	1	4
	04:00	8	7	6	11	32
	05:00	16	13	14	20	63
	06:00	23	46	37	51	157
	07:00	45	45	40	45	175
	08:00	73	57	43	54	227
	09:00	43	41	31	40	155
	10:00	50	62	49	46	207
	11:00	65	64	54	68	251
	12:00	73	60	103	85	321
	13:00	97	81	98	127	403
	14:00	115	119	89	82	405
	15:00	110	128	108	98	444
	16:00	83	118	119	100	420
	17:00	127	128	99	77	431
	18:00	98	77	92	70	337
	19:00	86	72	38	63	259
	20:00	55	42	36	17	150
	21:00	58	56	71	24	209
	22:00	47	58	47	32	184
	23:00	48	49	40	37	174
Day Total :						5123

AM Total :	1386 (27.1%)	Peak AM Hour : 11:00 =	251 (4.9%)	Peak AM Factor : 0.860	Average Period : 53.4
PM Total :	3737 (72.9%)	Peak PM Hour : 16:30 =	474 (9.3%)	Peak PM Factor : 0.926	Average Hour : 213.5

Date	Time	:00	:15	:30	:45	Total
12/06/08	00:00	33	19	12	3	67
Sat	01:00	9	8	4	0	21
	02:00	2	3	2	2	9
	03:00	0	1	1	6	8
	04:00	6	6	4	5	21
	05:00	16	17	15	14	62
	06:00	35	39	37	32	143
	07:00	40	28	30	48	146
	08:00	50	29	26	29	134
	09:00	34	20	20	41	115
	10:00	52	61	43	58	214
	11:00	63	56	34	41	194
	12:00	55	63	77	55	250
	13:00	61	76	59	59	255
	14:00	85	58	64	74	281
	15:00	81	57	76	61	275
	16:00	50	54	48	45	197
	17:00	49	29	35	60	173
	18:00	48	35	25	26	134
	19:00	32	42	38	43	155
	20:00	35	21	17	19	92
	21:00	21	28	14	34	97
	22:00	55	22	16	13	106
	23:00	23	41	32	20	116
Day Total :						3265

AM Total :	1134 (34.7%)	Peak AM Hour : 10:15 =	225 (6.9%)	Peak AM Factor : 0.893	Average Period : 34.0
PM Total :	2131 (65.3%)	Peak PM Hour : 14:45 =	288 (8.8%)	Peak PM Factor : 0.847	Average Hour : 136.0

Date	Time	:00	:15	:30	:45	Total
12/07/08	00:00	26	13	9	3	51
Sun	01:00	8	2	4	2	16
	02:00	0	6	1	3	10
	03:00	3	2	2	1	8
	04:00	5	1	1	3	10
	05:00	4	1	7	16	28
	06:00	29	17	15	19	80
	07:00	19	16	18	27	80
	08:00	34	20	18	13	85
	09:00	22	23	26	27	98
	10:00	34	38	75	37	184
	11:00	63	54	57	43	217
	12:00	33	49	34	55	171
	13:00	70	75	94	87	326
	14:00	118	96	80	42	336
	15:00	59	68	91	48	266
	16:00	62	70	87	77	296
	17:00	83	42	42	50	217
	18:00	70	55	45	39	209
	19:00	40	52	17	31	140
	20:00	27	50	47	39	163
	21:00	46	34	52	19	151
	22:00	32	32	27	51	142
	23:00	67	51	70	35	223
Day Total :						3507

AM Total :	867 (24.7%)	Peak AM Hour : 10:30 =	229 (6.5%)	Peak AM Factor : 0.763	Average Period : 36.5
PM Total :	2640 (75.3%)	Peak PM Hour : 13:30 =	395 (11.3%)	Peak PM Factor : 0.837	Average Hour : 146.1

Date	Time	:00	:15	:30	:45	Total
12/08/08	00:00	28	15	26	14	83
Mon	01:00	18	11	5	5	39
	02:00	4	4	1	2	11
	03:00	0	3	0	1	4
	04:00	9	1	6	16	32
	05:00	29	22	19	25	95
	06:00	44	49	54	49	196
	07:00	42	37	50	62	191
	08:00	53	64	36	52	205
	09:00	31	50	41	54	176
	10:00	36	59	76	68	239
	11:00	80	50	66	77	273
	12:00	70	73	84	55	282
	13:00	60	49	76	112	297
	14:00	118	70	104	90	382
	15:00	108	108	136	115	467
	16:00	102	134	161	112	509
	17:00	107	127	114	99	447
	18:00	114	103	70	64	351
	19:00	61	43	47	42	193
	20:00	68	48	29	52	197
	21:00	39	23	65	65	192
	22:00	23	42	33	48	146
	23:00	68	41	45	19	173
Day Total :						5180

AM Total :	1544 (29.8%)	Peak AM Hour : 10:15 =	283 (5.5%)	Peak AM Factor : 0.884	Average Period : 54.0
PM Total :	3636 (70.2%)	Peak PM Hour : 16:15 =	514 (9.9%)	Peak PM Factor : 0.798	Average Hour : 215.8

Date	Time	:00	:15	:30	:45	Total
12/09/08	00:00	25	18	19	2	64
Tue	01:00	3	4	1	2	10
	02:00	1	2	2	0	5
	03:00	0	3	1	3	7
	04:00	2	7	6	10	25
	05:00	16	22	9	22	69
	06:00	29	49	44	47	169
	07:00	53	40	47	64	204
	08:00	54	54	36	35	179
	09:00	50	42	35	37	164
	10:00	59	61	59	64	243
	11:00	68	39	44	36	187
	12:00	67	51	48	44	210
	13:00	56	44	57	65	222
	14:00	78	95	92	90	355
	15:00	122	79	111	150	462
Day Total :						2575

AM Total :	1326 (51.5%)	Peak AM Hour : 10:15 =	252 (9.8%)	Peak AM Factor : 0.926	Average Period : 40.2
PM Total :	1249 (48.5%)	Peak PM Hour : 15:00 =	462 (17.9%)	Peak PM Factor : 0.770	Average Hour : 160.9

#10 [illegible]

Basic Volume Summary: WBAIR RD

Grand Total For Data From: 10:45 - 11/24/2008 To: 16:14 - 12/09/2008

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	72962	(100.0%)	15.22	4794	49.9	199.8	21631 (29.6%)	51331 (70.4%)
ALL	72962		15.22	4794	49.9	199.8	21631 (29.6%)	51331 (70.4%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	10:30 =	371	12/01/2008	0.900	14:15 =	626	11/26/2008	0.905

Basic Volume Report: AIRPORT DRIVE

Station ID : AIRPORT DRIVE
Info Line 1 : J. RAP & ASSOCIATES INC.
Info Line 2 : Mach #5
GPS Lat/Lon :
DB File : AIRPORT DRIVE.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 97853
Number of Lanes : 2
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 10:00 - 09/08/2009 To: 18:14 - 09/15/2009

Date	Time	:00	:15	:30	:45	Total
09/08/09	10:00	59	62	59	74	254
Tue	11:00	61	55	65	71	252
	12:00	71	75	71	79	296
	13:00	101	123	122	120	466
	14:00	159	143	103	92	497
	15:00	146	125	100	84	455
	16:00	77	132	134	94	437
	17:00	74	86	87	79	326
	18:00	67	51	36	49	203
	19:00	53	65	59	80	257
	20:00	74	88	69	26	257
	21:00	42	68	50	32	192
	22:00	41	63	70	38	212
	23:00	68	110	79	27	284
Daily Total:						4388

AM Total:	506	(11.5%)	Peak AM Hour: 10:15 = 256 (5.8%)	Peak AM Factor: 0.865	Average Period: 78.4
PM Total:	3882	(88.5%)	Peak PM Hour: 13:30 = 544 (12.4%)	Peak PM Factor: 0.855	Average Hour: 313.4

Date	Time	:00	:15	:30	:45	Total
09/09/09	00:00	10	12	6	2	30
Wed	01:00	2	0	1	2	5
	02:00	1	2	2	2	7
	03:00	5	1	4	8	18
	04:00	15	13	21	37	86
	05:00	73	58	56	66	253
	06:00	89	132	129	108	458
	07:00	68	72	86	77	303
	08:00	65	52	67	56	240
	09:00	64	62	76	68	270
	10:00	91	108	128	125	452
	11:00	116	128	130	104	478
	12:00	96	89	59	86	330
	13:00	79	100	98	105	382
	14:00	112	108	86	82	388
	15:00	90	53	62	84	289
	16:00	62	83	120	89	354
	17:00	122	76	53	59	310
	18:00	71	34	31	35	171
	19:00	43	26	53	36	158
	20:00	51	47	36	36	170
	21:00	59	48	20	36	163
	22:00	47	62	41	28	178
	23:00	35	58	51	49	193
Daily Total:						5686

AM Total:	2600	(45.7%)	Peak AM Hour: 10:45 = 499 (8.8%)	Peak AM Factor: 0.960	Average Period: 59.2
PM Total:	3086	(54.3%)	Peak PM Hour: 13:30 = 423 (7.4%)	Peak PM Factor: 0.944	Average Hour: 236.9

Date	Time	:00	:15	:30	:45	Total
9/10/09	00:00	15	17	5	2	39
Thu	01:00	0	2	0	2	4
	02:00	2	0	3	3	8
	03:00	0	0	5	9	14
	04:00	7	17	21	63	108
	05:00	56	52	43	61	212
	06:00	98	109	105	99	411
	07:00	70	55	55	64	244
	08:00	55	48	41	53	197
	09:00	44	33	50	92	219
	10:00	68	100	83	116	367
	11:00	166	104	92	80	442
	12:00	73	61	83	101	318
	13:00	88	101	132	136	457
	14:00	145	86	96	116	443
	15:00	92	68	92	103	355
	16:00	84	97	122	108	411
	17:00	90	82	57	92	321
	18:00	83	55	44	45	227
	19:00	24	59	59	45	187
	20:00	49	40	24	16	129
	21:00	24	23	28	31	106
	22:00	34	67	59	35	195
	23:00	32	57	60	33	182
Daily Total:						5596

AM Total:	2265	(40.5%)	Peak AM Hour: 10:45 = 478 (8.5%)	Peak AM Factor: 0.720	Average Period: 58.3
PM Total:	3331	(59.5%)	Peak PM Hour: 13:15 = 514 (9.2%)	Peak PM Factor: 0.886	AverageHour: 233.2

Date	Time	:00	:15	:30	:45	Total
9/11/09	00:00	23	14	20	25	82
Fri	01:00	3	2	2	0	7
	02:00	1	3	4	2	10
	03:00	3	2	1	8	14
	04:00	12	11	14	37	74
	05:00	42	41	39	63	185
	06:00	66	70	72	55	263
	07:00	56	41	41	35	173
	08:00	47	45	35	32	159
	09:00	33	23	44	51	151
	10:00	52	68	71	74	265
	11:00	93	50	59	35	237
	12:00	61	51	92	83	287
	13:00	68	92	106	117	383
	14:00	82	74	92	72	320
	15:00	64	89	79	86	318
	16:00	55	69	75	74	273
	17:00	56	61	71	62	250
	18:00	50	38	24	56	168
	19:00	37	26	41	58	162
	20:00	72	53	42	32	199
	21:00	31	33	39	32	135
	22:00	16	40	40	23	119
	23:00	26	14	47	29	116
Daily Total:						4350

AM Total:	1620	(37.2%)	Peak AM Hour: 10:15 = 306 (7.0%)	Peak AM Factor: 0.823	Average Period: 45.3
PM Total:	2730	(62.8%)	Peak PM Hour: 13:15 = 397 (9.1%)	Peak PM Factor: 0.848	AverageHour: 181.3

Date	Time	:00	:15	:30	:45	Total
9/12/09	00:00	18	5	8	5	36
Sun	01:00	11	3	0	5	19
Sat	02:00	4	0	0	2	6
	03:00	2	1	2	6	11
	04:00	11	14	8	34	67
	05:00	30	28	26	37	121
	06:00	50	72	81	56	259
	07:00	47	29	36	41	153
	08:00	41	31	23	24	119
	09:00	22	23	39	44	128
	10:00	48	52	83	65	248
	11:00	74	50	44	40	208
	12:00	50	54	75	53	232
	13:00	47	39	82	67	235
	14:00	72	71	59	53	255
	15:00	75	67	74	46	262
	16:00	33	51	59	41	184
	17:00	23	23	28	34	108
	18:00	34	21	32	36	123
	19:00	23	15	23	17	78
	20:00	20	10	8	26	64
	21:00	24	65	30	26	145
	22:00	25	38	35	11	109
	23:00	19	16	34	12	81
Daily Total:						3251

AM Total:	1375	42.3%	Peak AM Hour: 10:15 = 274 (8.4%)	Peak AM Factor: 0.825	Average Period: 33.9
PM Total:	1876	57.7%	Peak PM Hour: 13:30 = 292 (9.0%)	Peak PM Factor: 0.890	AverageHour: 135.5

Date	Time	:00	:15	:30	:45	Total
9/13/09	00:00	9	2	12	0	23
Sun	01:00	2	2	0	1	5
	02:00	4	0	0	2	6
	03:00	1	0	3	2	6
	04:00	13	9	11	21	54
	05:00	21	29	27	46	123
	06:00	57	48	75	44	224
	07:00	32	44	33	55	164
	08:00	39	28	13	26	106
	09:00	20	26	28	51	125
	10:00	52	75	58	92	277
	11:00	91	81	56	59	287
	12:00	64	54	84	65	267
	13:00	54	64	95	94	307
	14:00	92	93	107	92	384
	15:00	76	71	87	79	313
	16:00	52	58	97	89	296
	17:00	65	62	51	39	217
	18:00	43	64	36	35	178
	19:00	29	21	53	46	149
	20:00	58	52	35	18	163
	21:00	26	30	52	33	141
	22:00	26	51	32	26	135
	23:00	41	23	41	29	134
Daily Total:						4084

AM Total:	1400	34.3%	Peak AM Hour: 10:30 = 322 (7.9%)	Peak AM Factor: 0.875	Average Period: 42.6
PM Total:	2684	65.7%	Peak PM Hour: 13:45 = 386 (9.5%)	Peak PM Factor: 0.902	AverageHour: 170.2

Date	Time	:00	:15	:30	:45	Total
9/14/09	00:00	20	20	8	2	50
Mon	01:00	12	8	5	3	28
	02:00	5	2	5	4	16
	03:00	2	2	5	5	14
	04:00	13	12	23	43	91
	05:00	59	56	55	62	232
	06:00	93	121	113	95	422
	07:00	83	47	61	56	247
	08:00	54	41	40	36	171
	09:00	29	47	38	62	176
	10:00	64	86	86	90	326
	11:00	77	68	88	58	291
	12:00	71	41	71	86	269
	13:00	79	87	106	115	387
	14:00	82	71	98	59	310
	15:00	63	68	71	69	271
	16:00	57	60	53	72	242
	17:00	62	49	42	38	191
	18:00	39	50	31	47	167
	19:00	24	25	26	20	95
	20:00	47	28	29	21	125
	21:00	15	34	32	23	104
	22:00	34	42	38	18	132
	23:00	20	35	38	16	109
Daily Total:						4466

AM Total:	2064	46.2%	Peak AM Hour: 06:00 = 422 (9.5%)	Peak AM Factor: 0.872	Average Period: 46.5
PM Total:	2402	53.8%	Peak PM Hour: 13:15 = 390 (8.7%)	Peak PM Factor: 0.848	AverageHour: 186.1

Date	Time	:00	:15	:30	:45	Total
9/15/09	00:00	6	5	4	2	17
Tue	01:00	2	3	1	2	8
	02:00	0	0	2	3	5
	03:00	0	1	2	7	10
	04:00	11	12	14	44	81
	05:00	41	45	38	56	180
	06:00	71	81	76	75	303
	07:00	49	53	52	47	201
	08:00	55	47	58	47	207
	09:00	52	42	29	60	183
	10:00	64	59	81	72	276
	11:00	91	60	47	45	243
	12:00	57	44	67	60	228
	13:00	29	54	35	62	180
	14:00	75	73	62	48	258
	15:00	47	48	59	52	206
	16:00	54	78	80	66	278
	17:00	50	45	46	55	196
Daily Total:						3060

AM Total:	1714	56.0%	Peak AM Hour: 10:30 = 304 (10.0%)	Peak AM Factor: 0.835	Average Period: 42.5
PM Total:	1346	44.0%	Peak PM Hour: 16:00 = 278 (9.1%)	Peak PM Factor: 0.869	AverageHour: 170.0

Lane #2 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
2.		Out	Normal	Axle	Yes	

Lane #2 Basic Volume Data From: 10:00 - 09/08/2009 To: 18:14 - 09/15/2009

Date	Time	:00	:15	:30	:45	Total
09/08/09	10:00	59	48	58	124	289
Tue	11:00	107	52	79	88	326
	12:00	65	104	67	108	344
	13:00	79	66	105	73	323
	14:00	94	103	112	74	383
	15:00	102	121	96	79	398
	16:00	62	71	137	120	390
	17:00	93	70	66	61	290
	18:00	81	58	37	34	210
	19:00	43	47	62	47	199
	20:00	39	90	85	27	241
	21:00	19	57	85	32	193
	22:00	11	42	87	49	189
	23:00	44	77	122	47	290
Day Total :						4065

AM Total :	615 (15.1%)	Peak AM Hour :	10:45 =	362 (8.9%)	Peak AM Factor :	0.730	Average Period : 72.6
PM Total :	3450 (84.9%)	Peak PM Hour :	16:15 =	421 (10.4%)	Peak PM Factor :	0.768	Average Hour : 290.4

Date	Time	:00	:15	:30	:45	Total
09/09/09	00:00	18	11	16	4	49
Wed	01:00	1	0	0	1	2
	02:00	2	1	1	0	4
	03:00	2	3	0	1	6
	04:00	1	2	4	6	13
	05:00	18	28	23	35	104
	06:00	33	56	63	57	209
	07:00	31	44	51	44	170
	08:00	28	40	28	29	125
	09:00	32	32	39	54	157
	10:00	63	74	76	85	298
	11:00	85	85	119	96	385
	12:00	74	83	62	68	287
	13:00	44	58	97	57	256
	14:00	68	70	96	75	309
	15:00	98	31	64	41	234
	16:00	39	45	81	101	266
	17:00	128	93	41	49	311
	18:00	63	35	24	27	149
	19:00	72	40	31	65	208
	20:00	37	63	58	25	183
	21:00	23	96	21	26	166
	22:00	43	62	71	35	211
	23:00	27	70	41	55	193
Day Total :						4295

AM Total :	1522 (35.4%)	Peak AM Hour :	11:00 =	385 (9.0%)	Peak AM Factor : 0.809	Average Period :	44.7
PM Total :	2773 (64.6%)	Peak PM Hour :	16:30 =	403 (9.4%)	Peak PM Factor : 0.787	Average Hour :	179.0

Date	Time	:00	:15	:30	:45	Total
09/10/09	00:00	63	13	13	5	94
Thu	01:00	2	0	3	1	6
	02:00	1	3	2	2	8
	03:00	1	0	0	1	2
	04:00	1	2	3	10	16
	05:00	19	22	25	27	93
	06:00	37	54	59	47	197
	07:00	49	28	32	33	142
	08:00	36	39	25	30	130
	09:00	38	30	27	54	149
	10:00	54	54	63	54	225
	11:00	85	82	87	66	320
	12:00	61	67	74	76	278
	13:00	55	79	98	113	345
	14:00	77	79	76	100	332
	15:00	117	66	63	75	321
	16:00	66	61	66	117	310
	17:00	89	72	58	51	270
	18:00	88	83	65	62	298
	19:00	24	46	91	45	206
	20:00	57	67	25	15	164
	21:00	15	45	17	46	123
	22:00	14	48	122	47	231
	23:00	50	24	69	51	194
Day Total :						4454

AM Total :	1382 (31.0%)	Peak AM Hour : 11:00 =	320 (7.2%)	Peak AM Factor : 0.920	Average Period : 46.4
PM Total :	3072 (69.0%)	Peak PM Hour : 14:15 =	372 (8.4%)	Peak PM Factor : 0.762	Average Hour : 185.6

Date	Time	:00	:15	:30	:45	Total
09/11/09	00:00	54	17	16	32	119
Fri	01:00	20	10	1	4	35
	02:00	0	3	1	2	6
	03:00	1	3	0	0	4
	04:00	2	1	5	15	23
	05:00	25	32	20	37	114
	06:00	33	51	47	42	173
	07:00	42	32	37	31	142
	08:00	36	46	26	34	142
	09:00	24	43	29	53	149
	10:00	33	49	59	73	214
	11:00	91	114	64	37	306
	12:00	46	65	61	116	288
	13:00	99	66	119	99	383
	14:00	74	84	89	74	321
	15:00	87	114	105	97	403
	16:00	60	49	95	110	314
	17:00	57	52	63	94	266
	18:00	101	83	57	44	285
	19:00	50	37	37	64	188
	20:00	65	125	85	45	320
	21:00	47	84	78	63	272
	22:00	16	36	79	38	169
	23:00	67	32	45	85	229
Day Total :						4865

AM Total :	1427 (29.3%)	Peak AM Hour : 10:45 =	342 (7.0%)	Peak AM Factor : 0.750	Average Period : 50.7
PM Total :	3438 (70.7%)	Peak PM Hour : 15:00 =	403 (8.3%)	Peak PM Factor : 0.806	Average Hour : 202.7

Date	Time	:00	:15	:30	:45	Total
09/12/09	00:00	54	15	11	3	83
Sat	01:00	26	20	2	5	53
	02:00	3	1	1	1	6
	03:00	1	1	0	0	2
	04:00	1	5	2	9	17
	05:00	22	18	19	24	83
	06:00	32	49	66	67	214
	07:00	41	32	32	29	134
	08:00	32	31	30	28	121
	09:00	22	18	39	50	129
	10:00	43	41	60	62	206
	11:00	104	73	41	42	260
	12:00	48	36	70	66	220
	13:00	56	32	73	82	243
	14:00	52	67	75	63	257
	15:00	67	103	106	69	345
	16:00	37	34	64	56	191
	17:00	38	24	20	17	99
	18:00	85	26	18	32	161
	19:00	73	25	22	31	151
	20:00	40	14	9	9	72
	21:00	20	32	68	27	147
	22:00	20	30	79	25	154
	23:00	18	12	41	32	103
Day Total :						3451

AM Total :	1308 (37.9%)	Peak AM Hour : 10:30 =	299 (8.7%)	Peak AM Factor : 0.719	Average Period :	35.9
PM Total :	2143 (62.1%)	Peak PM Hour : 15:00 =	345 (10.0%)	Peak PM Factor : 0.814	Average Hour :	143.8

Date	Time	:00	:15	:30	:45	Total
09/13/09	00:00	27	7	8	3	45
Sun	01:00	3	3	1	1	8
	02:00	1	3	0	0	4
	03:00	1	0	1	0	2
	04:00	1	1	7	8	17
	05:00	8	7	14	30	59
	06:00	28	38	62	33	161
	07:00	33	31	31	39	134
	08:00	34	34	11	21	100
	09:00	20	18	23	26	87
	10:00	48	51	49	90	238
	11:00	81	103	57	49	290
	12:00	59	53	77	92	281
	13:00	52	59	57	124	292
	14:00	88	85	104	101	378
	15:00	126	72	62	132	392
	16:00	53	48	88	126	315
	17:00	97	58	66	64	285
	18:00	39	88	70	41	238
	19:00	45	16	31	60	152
	20:00	69	121	52	22	264
	21:00	22	19	55	57	153
	22:00	29	50	84	19	182
	23:00	77	21	47	73	218
Day Total :						4295

AM Total :	1145 (26.7%)	Peak AM Hour : 10:45 =	331 (7.7%)	Peak AM Factor : 0.803	Average Period : 44.7
PM Total :	3150 (73.3%)	Peak PM Hour : 14:15 =	416 (9.7%)	Peak PM Factor : 0.788	Average Hour : 179.0

Date	Time	:00	:15	:30	:45	Total
09/14/09	00:00	33	59	15	9	116
Mon	01:00	8	23	11	5	47
	02:00	3	3	1	6	13
	03:00	2	2	2	2	8
	04:00	0	2	5	10	17
	05:00	27	33	31	27	118
	06:00	39	70	80	69	258
	07:00	54	34	46	42	176
	08:00	50	37	28	30	145
	09:00	27	44	40	65	176
	10:00	56	49	57	80	242
	11:00	107	117	66	45	335
	12:00	88	97	55	66	306
	13:00	51	53	119	113	336
	14:00	75	81	130	92	378
	15:00	84	71	81	49	285
	16:00	80	57	104	83	324
	17:00	90	77	51	33	251
	18:00	54	69	54	49	226
	19:00	55	40	49	20	164
	20:00	57	69	24	34	184
	21:00	30	15	65	49	159
	22:00	17	32	66	55	170
	23:00	31	16	75	45	167
Day Total :						4601

AM Total :	1651 (35.9%)	Peak AM Hour : 10:45 =	370 (8.0%)	Peak AM Factor : 0.791	Average Period : 47.9
PM Total :	2950 (64.1%)	Peak PM Hour : 13:45 =	399 (8.7%)	Peak PM Factor : 0.767	Average Hour : 191.7

Date	Time	:00	:15	:30	:45	Total
09/15/09	00:00	17	9	12	6	44
Tue	01:00	1	6	1	2	10
	02:00	0	0	0	2	2
	03:00	3	1	1	1	6
	04:00	1	3	5	4	13
	05:00	24	22	26	32	104
	06:00	30	50	62	47	189
	07:00	50	36	44	35	165
	08:00	31	45	34	29	139
	09:00	47	38	35	46	166
	10:00	61	62	87	65	275
	11:00	79	96	65	39	279
	12:00	39	79	74	77	269
	13:00	50	35	56	35	176
	14:00	77	93	91	73	334
	15:00	48	49	64	39	200
	16:00	38	57	124	97	316
	17:00	97	61	46	49	253
Day Total :						2940

AM Total :	1392 (47.3%)	Peak AM Hour : 10:30 =	327 (11.1%)	Peak AM Factor : 0.852	Average Period : 40.8
PM Total :	1548 (52.7%)	Peak PM Hour : 16:30 =	379 (12.9%)	Peak PM Factor : 0.764	Average Hour : 163.3

Basic Volume Summary: AIRPORT DRIVE

Grand Total For Data From: 10:00 - 09/08/2009 To: 18:14 - 09/15/2009

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	46398	(58.5%)	7.33	6327	65.9	263.6	18003 (38.8%)	28395 (61.2%)
#2.	32966	(41.5%)	7.33	4495	46.8	187.3	10442 (31.7%)	22524 (68.3%)
ALL	79364		7.33	10822	112.7	450.9	28445 (35.8%)	50919 (64.2%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	10:45 =	663	09/09/2009	0.942	13:30 =	724	09/08/2009	0.854
#2.	11:00 =	385	09/09/2009	0.809	16:15 =	421	09/08/2009	0.768

Basic Volume Report: GARAGE IN

Station ID : GARAGE IN
Info Line 1 :
Info Line 2 :
GPS Lat/Lon :
DB File : GARAGE IN.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 97853

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 09:30 - 11/23/2009 To: 07:59 - 12/03/2009

Date	Time	:00	:15	:30	:45	Total
11/23/09	09:00			8	12	20
Mon	10:00	7	26	30	16	79
	11:00	22	14	8	19	63
	12:00	11	15	0	0	26
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						188

AM Total :	162 (86.2%)	Peak AM Hour : 10:15 =	94 (50.0%)	Peak AM Factor : 0.783	Average Period : 3.2
PM Total :	26 (13.8%)	Peak PM Hour : 12:00 =	26 (13.8%)	Peak PM Factor : 0.433	Average Hour : 13.0

Date	Time	:00	:15	:30	:45	Total	
11/24/09	00:00	0	0	0	0	0	
Tue	01:00	0	0	0	0	0	
	02:00	0	0	0	0	0	
	03:00	0	0	0	0	0	
	04:00	0	0	0	0	0	
	05:00	0	0	0	0	0	
	06:00	0	0	0	0	0	
	07:00	0	0	0	0	0	
	08:00	0	0	0	0	0	
	09:00	3	12	8	24	47	110
	10:00	20	28	33	29	110	
	11:00	19	19	26	28	92	
	12:00	38	12	20	28	98	
	13:00	23	30	28	18	99	
	14:00	41	30	52	16	139	
	15:00	27	13	11	25	76	
	16:00	19	22	26	19	86	93
	17:00	18	36	23	16	93	
	18:00	20	11	22	12	65	
	19:00	32	33	8	16	89	
	20:00	16	9	8	18	51	
	21:00	11	16	9	3	39	
	22:00	4	7	5	14	30	
	23:00	31	16	22	3	72	
Day Total :						1186	

AM Total :	249 (21.0%)	Peak AM Hour : 10:00 =	110 (9.3%)	Peak AM Factor : 0.833	Average Period : 12.4
PM Total :	937 (79.0%)	Peak PM Hour : 13:45 =	141 (11.9%)	Peak PM Factor : 0.678	Average Hour : 49.4

Date	Time	:00	:15	:30	:45	Total	
11/25/09	00:00	0	6	6	2	14	
Wed	01:00	0	0	0	0	0	
	02:00	0	2	2	0	4	
	03:00	2	0	0	6	8	
	04:00	3	1	11	12	27	
	05:00	17	11	13	12	53	
	06:00	17	18	19	18	72	
	07:00	19	27	13	21	80	
	08:00	15	13	16	13	57	116
	09:00	17	23	25	20	85	
	10:00	14	26	41	35	116	
	11:00	26	20	20	20	86	
	12:00	16	25	27	15	83	
	13:00	28	22	31	48	129	
	14:00	37	52	31	14	134	
	15:00	20	21	16	30	87	
	16:00	35	18	23	12	88	88
	17:00	23	13	20	15	71	
	18:00	18	30	30	16	94	
	19:00	16	7	14	7	44	
	20:00	10	9	3	4	26	
	21:00	7	6	3	3	19	
	22:00	18	18	17	5	58	
	23:00	6	5	13	4	28	
Day Total :						1463	

AM Total :	602 (41.1%)	Peak AM Hour : 10:15 =	128 (8.7%)	Peak AM Factor : 0.780	Average Period : 15.2
PM Total :	861 (58.9%)	Peak PM Hour : 13:30 =	168 (11.5%)	Peak PM Factor : 0.808	Average Hour : 61.0

Date	Time	:00	:15	:30	:45	Total
11/26/09	00:00	11	4	5	0	20
Thu	01:00	0	0	0	0	0
	02:00	0	1	2	0	3
	03:00	0	2	2	2	6
	04:00	1	7	9	12	29
	05:00	25	19	10	19	73
	06:00	30	26	33	10	99
	07:00	20	17	16	32	85
	08:00	20	5	4	10	39
	09:00	4	5	11	13	33
	10:00	13	13	11	12	49
	11:00	8	6	2	8	24
	12:00	13	5	14	9	41
	13:00	22	8	12	8	50
	14:00	12	3	9	9	33
	15:00	3	2	3	7	15
	16:00	5	5	0	4	14
	17:00	5	2	5	7	19
	18:00	9	5	7	2	23
	19:00	4	0	0	0	4
	20:00	0	1	0	0	1
	21:00	2	0	0	0	2
	22:00	0	0	0	0	0
	23:00	0	2	0	0	2
Day Total :						664

85

19

AM Total :	460 (69.3%)	Peak AM Hour : 05:45 =	108 (16.3%)	Peak AM Factor : 0.818	Average Period : 6.9
PM Total :	204 (30.7%)	Peak PM Hour : 12:30 =	53 (8.0%)	Peak PM Factor : 0.602	Average Hour : 27.7

Date	Time	:00	:15	:30	:45	Total
11/27/09	00:00	0	0	0	0	0
Fri	01:00	0	1	0	0	1
	02:00	0	0	0	2	2
	03:00	0	0	0	2	2
	04:00	0	0	0	3	3
	05:00	2	2	6	10	20
	06:00	12	25	21	14	72
	07:00	17	3	4	11	35
	08:00	8	6	0	4	18
	09:00	7	7	2	0	16
	10:00	2	3	8	4	17
	11:00	9	4	4	1	18
	12:00	4	1	9	7	21
	13:00	4	9	15	3	31
	14:00	15	13	15	2	45
	15:00	13	7	8	10	38
	16:00	5	9	13	7	34
	17:00	0	4	8	6	18
	18:00	8	13	8	2	31
	19:00	10	15	7	4	36
	20:00	4	2	1	4	11
	21:00	0	0	0	0	0
	22:00	5	3	2	5	15
	23:00	10	4	0	0	14
Day Total :						498

AM Total :	204 (41.0%)	Peak AM Hour : 06:15 =	77 (15.5%)	Peak AM Factor : 0.770	Average Period : 5.2
PM Total :	294 (59.0%)	Peak PM Hour : 13:30 =	46 (9.2%)	Peak PM Factor : 0.767	Average Hour : 20.8

Date	Time	:00	:15	:30	:45	Total
11/28/09	00:00	0	2	0	0	2
Sat	01:00	0	0	0	0	0
	02:00	0	0	2	1	3
	03:00	0	0	2	0	2
	04:00	0	4	3	5	12
	05:00	3	10	19	2	34
	06:00	16	17	16	12	61
	07:00	3	12	4	16	35
	08:00	13	5	11	3	32
	09:00	5	8	14	14	41
	10:00	7	16	13	18	54
	11:00	10	6	3	10	29
	12:00	8	13	10	8	39
	13:00	8	7	12	15	42
	14:00	20	24	24	11	79
	15:00	13	6	4	15	38
	16:00	8	4	8	5	25
	17:00	10	6	12	11	39
	18:00	2	5	17	7	31
	19:00	7	9	4	3	23
	20:00	7	6	2	2	17
	21:00	7	4	3	4	18
	22:00	0	4	0	1	5
	23:00	3	3	4	2	12
Day Total :						673

AM Total :	305 (45.3%)	Peak AM Hour : 06:00 =	61 (9.1%)	Peak AM Factor : 0.803	Average Period : 7.0
PM Total :	368 (54.7%)	Peak PM Hour : 13:45 =	83 (12.3%)	Peak PM Factor : 0.865	Average Hour : 28.0

Date	Time	:00	:15	:30	:45	Total
11/29/09	00:00	1	0	0	0	1
Sun	01:00	0	0	2	0	2
	02:00	0	0	0	2	2
	03:00	0	0	1	0	1
	04:00	2	6	5	15	28
	05:00	12	10	8	14	44
	06:00	15	14	16	18	63
	07:00	16	8	15	19	58
	08:00	8	6	1	4	19
	09:00	10	16	15	12	53
	10:00	19	20	27	23	89
	11:00	12	15	8	6	41
	12:00	9	8	23	6	46
	13:00	13	8	19	28	68
	14:00	33	19	14	19	85
	15:00	21	6	10	14	51
	16:00	16	21	7	13	57
	17:00	31	13	25	6	75
	18:00	8	13	5	13	39
	19:00	10	13	6	4	33
	20:00	4	3	10	0	17
	21:00	1	4	10	3	18
	22:00	9	5	8	3	25
	23:00	9	4	4	3	20
Day Total :						935

AM Total :	401 (42.9%)	Peak AM Hour : 10:00 =	89 (9.5%)	Peak AM Factor : 0.824	Average Period :	9.7
PM Total :	534 (57.1%)	Peak PM Hour : 13:30 =	99 (10.6%)	Peak PM Factor : 0.750	Average Hour :	39.0

Date	Time	:00	:15	:30	:45	Total
11/30/09	00:00	0	2	0	0	2
Mon	01:00	0	0	0	0	0
	02:00	0	2	2	0	4
	03:00	0	0	0	0	0
	04:00	0	1	11	21	33
	05:00	41	36	19	24	120
	06:00	35	51	50	18	154
	07:00	8	25	24	10	67
	08:00	10	15	22	9	56
	09:00	28	15	16	25	84
	10:00	21	18	24	23	86
	11:00	25	15	19	16	75
	12:00	10	15	10	24	59
	13:00	32	38	30	24	124
	14:00	20	24	16	15	75
	15:00	16	22	28	16	82
	16:00	15	20	18	29	82
	17:00	13	10	24	7	54
	18:00	4	11	20	16	51
	19:00	12	9	9	16	46
	20:00	6	7	1	7	21
	21:00	2	2	1	4	9
	22:00	0	2	4	2	8
	23:00	6	4	3	8	21
Day Total :						1313

AM Total :	681 (51.9%)	Peak AM Hour : 05:45 =	160 (12.2%)	Peak AM Factor : 0.784	Average Period : 13.7
PM Total :	632 (48.1%)	Peak PM Hour : 12:45 =	124 (9.4%)	Peak PM Factor : 0.816	Average Hour : 54.7

Date	Time	:00	:15	:30	:45	Total	
12/01/09	00:00	1	0	2	0	3	
Tue	01:00	0	0	0	0	0	
	02:00	0	0	2	0	2	
	03:00	0	0	0	0	0	
	04:00	2	9	4	30	45	
	05:00	28	20	35	24	107	
	06:00	28	50	34	35	147	
	07:00	32	23	22	23	100	
	08:00	23	14	24	12	73	(60
	09:00	26	25	21	18	90	
	10:00	10	42	22	20	94	
	11:00	17	19	10	8	54	
	12:00	11	10	13	20	54	
	13:00	26	22	25	29	102	
	14:00	33	31	23	13	100	
	15:00	6	8	14	36	64	
	16:00	26	15	15	8	64	
	17:00	13	12	10	19	54	64
	18:00	9	23	8	13	53	
	19:00	1	6	6	6	19	
	20:00	7	3	5	14	29	
	21:00	10	2	2	11	25	
	22:00	4	7	9	5	25	
	23:00	8	10	2	0	20	
Day Total :						1324	

AM Total :	715 (54.0%)	Peak AM Hour : 06:15 =	151 (11.4%)	Peak AM Factor : 0.755	Average Period : 13.8
PM Total :	609 (46.0%)	Peak PM Hour : 13:30 =	118 (8.9%)	Peak PM Factor : 0.819	Average Hour : 55.2

Date	Time	:00	:15	:30	:45	Total	
12/02/09	00:00	0	0	0	0	0	
Wed	01:00	0	0	0	0	0	
	02:00	2	0	0	0	2	
	03:00	0	0	0	0	0	
	04:00	5	0	11	16	32	
	05:00	26	28	30	23	107	
	06:00	34	25	38	27	124	
	07:00	16	31	27	22	96	
	08:00	9	14	18	6	47	96
	09:00	14	13	16	8	51	
	10:00	23	29	32	11	95	
	11:00	30	19	25	21	95	
	12:00	20	11	16	12	59	
	13:00	26	23	22	31	102	
	14:00	17	32	23	15	87	
	15:00	16	12	15	13	56	
	16:00	14	7	30	17	68	
	17:00	15	16	14	5	50	68
	18:00	15	8	11	12	46	
	19:00	8	5	10	6	29	
	20:00	7	1	3	9	20	
	21:00	6	11	3	12	32	
	22:00	7	4	0	6	17	
	23:00	6	6	0	2	14	
Day Total :						1229	

AM Total :	649 (52.8%)	Peak AM Hour : 06:00 =	124 (10.1%)	Peak AM Factor : 0.816	Average Period : 12.8
PM Total :	580 (47.2%)	Peak PM Hour : 13:45 =	103 (8.4%)	Peak PM Factor : 0.805	Average Hour : 51.2

Other Garages
55 ≈ AM
25 ≈ PM

ATR
IN
101 - AM
86 - PM

Date	Time	:00	:15	:30	:45	Total
12/03/09	00:00	1	0	0	0	1
Thu	01:00	0	0	2	0	2
	02:00	0	0	1	0	1
	03:00	2	0	2	0	4
	04:00	0	2	14	11	27
	05:00	30	18	22	25	95
	06:00	22	28	23	27	100
	07:00	16	34	21		71
Day Total :						301

AM Total :	301 (100.0%)	Peak AM Hour : 06:00 =	100 (33.2%)	Peak AM Factor : 0.735	Average Period : 9.7
PM Total :		Peak PM Hour :		Peak PM Factor :	Average Hour : 38.8

Basic Volume Summary: GARAGE IN

Grand Total For Data From: 09:30 - 11/23/2009 To: 07:59 - 12/03/2009

Lane	Total Count	# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	9774 (100.0%)	9.93	985	10.3	41.0	4729 (48.4%)	5045 (51.6%)
ALL	9774	9.93	985	10.3	41.0	4729 (48.4%)	5045 (51.6%)

Lane	Peak AM Hour	Date	Peak AM Factor	Peak PM Hour	Date	Peak PM Factor
#1.	05:45 = 160	11/30/2009	0.784	13:30 = 168	11/25/2009	0.808

Basic Volume Report: GARAGE OUT

Station ID : GARAGE OUT
Info Line 1 :
Info Line 2 :
GPS Lat/Lon :
DB File : GARAGE OUT.DB

Last Connected Device Type : Apollo
Version Number : 1.45
Serial Number : 97854

Number of Lanes : 1
Posted Speed Limit :

Lane #1 Configuration

#	Dir.	Information	Volume Mode	Volume Sensors	Divide By 2	Comment
1.			Normal	Axle	Yes	

Lane #1 Basic Volume Data From: 10:15 - 11/23/2009 To: 07:59 - 12/03/2009

Date	Time	:00	:15	:30	:45	Total
11/23/09	10:00		10	9	6	25
Mon	11:00	13	8	5	12	38
	12:00	8	6	0	0	14
	13:00	0	0	0	0	0
	14:00	0	0	0	0	0
	15:00	0	0	0	0	0
	16:00	0	0	0	0	0
	17:00	0	0	0	0	0
	18:00	0	0	0	0	0
	19:00	0	0	0	0	0
	20:00	0	0	0	0	0
	21:00	0	0	0	0	0
	22:00	0	0	0	0	0
	23:00	0	0	0	0	0
Day Total :						77

AM Total :	63 (81.8%)	Peak AM Hour : 10:15 =	38 (49.4%)	Peak AM Factor : 0.731	Average Period : 1.4
PM Total :	14 (18.2%)	Peak PM Hour : 12:00 =	14 (18.2%)	Peak PM Factor : 0.438	Average Hour : 5.6

Date	Time	:00	:15	:30	:45	Total
11/24/09	00:00	0	0	0	0	0
Tue	01:00	0	0	0	0	0
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	0	0
	05:00	0	0	0	0	0
	06:00	0	0	0	0	0
	07:00	0	0	0	0	0
	08:00	0	0	0	0	0
	09:00	0	4	12	6	22
	10:00	6	5	10	6	27
	11:00	12	22	4	3	41
	12:00	6	19	14	14	53
	13:00	5	7	22	14	48
	14:00	8	13	18	35	74
	15:00	13	11	17	6	47
	16:00	7	14	9	5	35
	17:00	4	11	8	10	33
	18:00	22	21	10	2	55
	19:00	10	22	16	27	75
	20:00	19	2	11	12	44
	21:00	14	7	12	16	49
	22:00	14	5	3	0	22
	23:00	6	10	21	26	63
Day Total :						688

AM Total :	90 (13.1%)	Peak AM Hour : 10:30 =	50 (7.3%)	Peak AM Factor : 0.568	Average Period : 7.2
PM Total :	598 (86.9%)	Peak PM Hour : 19:15 =	84 (12.2%)	Peak PM Factor : 0.600	Average Hour : 28.7

Date	Time	:00	:15	:30	:45	Total	
11/25/09	00:00	13	5	2	0	20	
Wed	01:00	4	3	0	0	7	
	02:00	0	0	2	1	3	
	03:00	0	0	0	0	0	
	04:00	0	0	0	1	1	
	05:00	1	1	2	0	4	
	06:00	5	3	1	4	13	
	07:00	2	1	2	3	8	
	08:00	1	2	2	1	6	
	09:00	10	6	7	7	30	
	10:00	14	10	5	3	32	32
	11:00	6	22	11	13	52	
	12:00	8	9	13	6	36	
	13:00	1	2	8	12	23	
	14:00	19	13	23	35	90	
	15:00	26	14	9	11	60	
	16:00	2	3	15	22	42	
	17:00	13	6	5	9	33	42
	18:00	14	17	14	12	57	
	19:00	29	11	10	6	56	
	20:00	15	5	9	8	37	
	21:00	10	4	3	1	18	
	22:00	1	1	6	21	29	
	23:00	8	8	11	6	33	
Day Total :						690	

AM Total :	176 (25.5%)	Peak AM Hour : 11:00 =	52 (7.5%)	Peak AM Factor : 0.591	Average Period : 7.2
PM Total :	514 (74.5%)	Peak PM Hour : 14:30 =	98 (14.2%)	Peak PM Factor : 0.700	Average Hour : 28.8

Date	Time	:00	:15	:30	:45	Total
11/26/09	00:00	1	1	8	9	19
Thu	01:00	1	0	0	0	1
	02:00	0	3	1	0	4
	03:00	0	0	0	1	1
	04:00	0	0	0	0	0
	05:00	1	0	0	3	4
	06:00	4	3	3	6	16
	07:00	4	4	4	1	13
	08:00	3	1	3	1	8
	09:00	3	1	4	5	13
	10:00	4	7	4	6	21
	11:00	6	13	7	3	29
	12:00	4	5	7	1	17
	13:00	0	3	10	6	19
	14:00	3	12	4	5	24
	15:00	18	9	2	3	32
	16:00	4	3	5	1	13
	17:00	2	0	3	4	9
	18:00	6	3	4	9	22
	19:00	5	1	0	0	6
	20:00	1	2	0	0	3
	21:00	1	0	0	0	1
	22:00	0	0	0	0	0
	23:00	5	3	0	0	8
Day Total :						283

21

13

AM Total :	129 (45.6%)	Peak AM Hour : 10:45 =	32 (11.3%)	Peak AM Factor : 0.615	Average Period : 2.9
PM Total :	154 (54.4%)	Peak PM Hour : 14:15 =	39 (13.8%)	Peak PM Factor : 0.542	Average Hour : 11.8

Date	Time	:00	:15	:30	:45	Total
11/27/09	00:00	0	0	0	0	0
Fri	01:00	0	0	1	0	1
	02:00	0	1	0	0	1
	03:00	0	0	1	0	1
	04:00	0	0	0	0	0
	05:00	1	0	0	1	2
	06:00	2	4	4	5	15
	07:00	8	5	2	0	15
	08:00	4	2	0	1	7
	09:00	0	2	1	0	3
	10:00	4	0	2	1	7
	11:00	4	3	1	7	15
	12:00	5	8	2	6	21
	13:00	0	11	6	5	22
	14:00	9	4	8	6	27
	15:00	3	1	7	4	15
	16:00	11	2	9	8	30
	17:00	7	2	8	2	19
	18:00	11	6	4	6	27
	19:00	9	1	6	16	32
	20:00	14	14	3	7	38
	21:00	2	4	12	0	18
	22:00	4	1	14	4	23
	23:00	4	8	13	16	41
Day Total :						380

AM Total :	67 (17.6%)	Peak AM Hour : 06:30 =	22 (5.8%)	Peak AM Factor : 0.688	Average Period :	4.0
PM Total :	313 (82.4%)	Peak PM Hour : 19:30 =	50 (13.2%)	Peak PM Factor : 0.781	Average Hour :	15.8

Date	Time	:00	:15	:30	:45	Total
11/28/09	00:00	3	1	0	0	4
Sat	01:00	0	0	0	0	0
	02:00	0	1	0	0	1
	03:00	1	0	0	1	2
	04:00	0	0	0	0	0
	05:00	1	3	2	1	7
	06:00	4	6	7	6	23
	07:00	7	1	3	2	13
	08:00	5	6	8	0	19
	09:00	1	3	11	7	22
	10:00	17	4	2	2	25
	11:00	7	21	14	8	50
	12:00	5	11	10	14	40
	13:00	1	5	5	18	29
	14:00	12	6	19	21	58
	15:00	22	20	11	13	66
	16:00	11	5	16	6	38
	17:00	7	9	5	9	30
	18:00	25	9	3	9	46
	19:00	10	17	14	5	46
	20:00	10	8	14	0	32
	21:00	1	6	9	21	37
	22:00	6	0	12	10	28
	23:00	1	1	20	37	59
Day Total :						675

AM Total :	166 (24.6%)	Peak AM Hour : 11:00 =	50 (7.4%)	Peak AM Factor : 0.595	Average Period : 7.0
PM Total :	509 (75.4%)	Peak PM Hour : 14:30 =	82 (12.1%)	Peak PM Factor : 0.554	Average Hour : 28.1

Date	Time	:00	:15	:30	:45	Total
11/29/09	00:00	3	1	0	0	4
Sun	01:00	1	1	0	0	2
	02:00	0	0	0	0	0
	03:00	0	0	1	0	1
	04:00	0	1	1	0	2
	05:00	6	6	9	5	26
	06:00	2	10	6	9	27
	07:00	8	5	5	11	29
	08:00	6	4	4	3	17
	09:00	3	3	16	14	36
	10:00	6	12	8	11	37
	11:00	20	19	15	14	68
	12:00	5	12	10	14	41
	13:00	11	10	13	2	36
	14:00	13	18	13	22	66
	15:00	14	38	14	18	84
	16:00	12	15	22	10	59
	17:00	10	14	9	24	57
	18:00	5	12	6	8	31
	19:00	9	7	8	9	33
	20:00	8	16	8	10	42
	21:00	24	6	1	3	34
	22:00	17	4	28	5	54
	23:00	3	12	23	24	62
Day Total :						848

AM Total :	249 (29.4%)	Peak AM Hour : 11:00 =	68 (8.0%)	Peak AM Factor : 0.850	Average Period :	8.8
PM Total :	599 (70.6%)	Peak PM Hour : 14:45 =	88 (10.4%)	Peak PM Factor : 0.579	Average Hour :	35.3

Date	Time	:00	:15	:30	:45	Total
11/30/09	00:00	13	6	6	0	25
Mon	01:00	0	0	0	1	1
	02:00	1	0	0	0	1
	03:00	0	0	0	0	0
	04:00	0	0	1	1	2
	05:00	3	3	2	6	14
	06:00	0	4	4	5	13
	07:00	4	9	4	4	21
	08:00	9	4	4	4	21
	09:00	2	4	14	10	30
	10:00	6	2	8	13	29
	11:00	11	20	13	11	55
	12:00	9	14	6	9	38
	13:00	15	10	8	19	52
	14:00	13	14	28	18	73
	15:00	17	4	8	22	51
	16:00	11	15	10	10	46
	17:00	13	8	5	16	42
	18:00	7	11	6	16	40
	19:00	8	14	6	13	41
	20:00	14	2	13	15	44
	21:00	4	6	12	4	26
	22:00	3	12	13	4	32
	23:00	1	2	13	11	27
Day Total :						724

AM Total :	212 (29.3%)	Peak AM Hour : 10:45 =	57 (7.9%)	Peak AM Factor : 0.713	Average Period : 7.5
PM Total :	512 (70.7%)	Peak PM Hour : 14:15 =	77 (10.6%)	Peak PM Factor : 0.688	Average Hour : 30.2

Date	Time	:00	:15	:30	:45	Total	
12/01/09	00:00	11	9	5	4	29	
Tue	01:00	1	0	0	1	2	
	02:00	1	0	1	0	2	
	03:00	0	0	0	0	0	
	04:00	0	0	0	1	1	
	05:00	3	4	1	3	11	
	06:00	5	1	1	5	12	
	07:00	8	4	3	5	20	
	08:00	6	3	3	7	19	27
	09:00	6	3	6	8	23	
	10:00	10	5	3	9	27	
	11:00	11	6	12	13	42	
	12:00	8	11	9	7	35	
	13:00	3	6	17	11	37	
	14:00	19	13	9	21	62	
	15:00	22	6	1	12	41	
	16:00	6	10	8	12	36	36
	17:00	11	10	4	7	32	
	18:00	11	22	12	7	52	
	19:00	15	14	11	2	42	
	20:00	4	14	4	8	30	
	21:00	14	36	5	3	58	
	22:00	14	10	9	13	46	
	23:00	8	5	26	10	49	
Day Total :						708	

AM Total :	188 (26.6%)	Peak AM Hour : 11:00 =	42 (5.9%)	Peak AM Factor : 0.808	Average Period : 7.4
PM Total :	520 (73.4%)	Peak PM Hour : 14:15 =	65 (9.2%)	Peak PM Factor : 0.451	Average Hour : 29.5

other Garages
5 ~ AM
30 ~ PM

ATR
out
26 AM
35 PM

Date	Time	:00	:15	:30	:45	Total
12/02/09	00:00	8	1	0	0	9
Wed	01:00	0	0	0	1	1
	02:00	0	0	0	0	0
	03:00	0	0	0	0	0
	04:00	0	0	0	1	1
	05:00	1	1	0	3	5
	06:00	3	1	2	1	7
	07:00	5	5	4	1	15
	08:00	1	2	1	6	10
	09:00	7	2	4	8	21
	10:00	1	6	3	13	23
	11:00	9	8	9	5	31
	12:00	12	6	0	2	20
	13:00	7	14	7	7	35
	14:00	12	6	10	14	42
	15:00	23	13	12	8	56
	16:00	5	12	9	4	30
	17:00	15	17	4	9	45
	18:00	15	8	25	9	57
	19:00	21	13	6	7	47
	20:00	6	4	13	3	26
	21:00	11	2	43	27	83
	22:00	12	14	9	3	38
	23:00	3	19	14	12	48
Day Total :						650

23

45

AM Total :	123 (18.9%)	Peak AM Hour : 10:45 =	39 (6.0%)	Peak AM Factor : 0.750	Average Period : 6.8
PM Total :	527 (81.1%)	Peak PM Hour : 21:30 =	96 (14.8%)	Peak PM Factor : 0.558	Average Hour : 27.1

Date	Time	:00	:15	:30	:45	Total
12/03/09	00:00	11	1	9	0	21
Thu	01:00	0	0	0	0	0
	02:00	2	0	0	1	3
	03:00	0	1	0	0	1
	04:00	0	0	0	0	0
	05:00	0	2	2	0	4
	06:00	1	1	1	4	7
	07:00	3	2	2		7
Day Total :						43

AM Total :	43 (100.0%)	Peak AM Hour : 00:00 =	21 (48.8%)	Peak AM Factor : 0.477	Average Period : 1.4
PM Total :		Peak PM Hour :		Peak PM Factor :	Average Hour : 5.5

Basic Volume Summary: GARAGE OUT

Grand Total For Data From: 10:15 - 11/23/2009 To: 07:59 - 12/03/2009

Lane	Total Count		# Of Days	ADT	Avg. Period	Avg. Hour	AM Total & Percent	PM Total & Percent
#1.	5766	(100.0%)	9.90	583	6.1	24.3	1506 (26.1%)	4260 (73.9%)
ALL	5766		9.90	583	6.1	24.3	1506 (26.1%)	4260 (73.9%)

Lane	Peak AM Hour		Date	Peak AM Factor	Peak PM Hour		Date	Peak PM Factor
#1.	11:00 =	68	11/29/2009	0.850	14:30 =	98	11/25/2009	0.700

Appendix J: Traffic Impact Study

NYSDOT Signal Timing Plans

TE-26X

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING & SAFETY DIVISION
TRAFFIC CONTROL SPECIFICATIONS

Study :
Contract : D258096
PIN: 8130.75.321
File : 55.38-120

W-586 (SIGNAL NO(S)) WESTCHESTER (COUNTY)

INTERSECTION ROUTE 120 AT GATEWAY LANE

☐ CITY ☐ VILLAGE ☒ TOWN OF NORTH CASTLE

Department Order filed 9/6/05 as Section 2055.38 Subdivision (W)

Prior specifications hereby superseded ☒ None ☐ _____

Purpose : INSTALL TRAFFIC SIGNAL UNDER CONTRACT D258096.

These specifications will be effective upon the ☒ Installation ☐ Modification of the necessary traffic control device(s) required by and conforming to the State Manual of Uniform Traffic Control Devices

I. This Signal shall

A. Operate in accordance with the Table of Operations and / of Change intervals as shown on page(s) 3 as a :

- ☐ Pretimed Signal
- ☒ Semi-traffic actuated signal
- ☐ Full-traffic actuated signal
- ☐ Pedestrian actuated signal
- ☐ Other _____

B.

- ☒ Display vehicular indications
- ☐ Display pedestrian indications
- ☒ Be equipped with vehicle detectors
- ☐ Be equipped with Pedestrian pushbuttons

as shown in the ☐ schematic ☒ scaled drawing on page 3

Be equipped with ☐ pre-emption ☒ interconnection and / or coordination which are described as follows

TBC W/ W-571

cc: ( ) ☐ Main Office
(1) ☒ Region 8 Traffic Engineer
(2) ☒ SIGNAL SHOP
(1) ☒ CONTRACT MAINTAINER

9/1/05 (Date) DILLMAN / KRF (Signature) RTE (Title)

Installation Date 9/1/05

Modification Date _____

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
Description: ROUTE 120 AT Gateway Lane

DATE: 08/29/05 TIME: 08:58:53

++

*** Phase Notes ***

Phase 1: ROUTE 120
Phase 2:
Phase 3: GATEWAY LANE
Phase 4:
Phase 5:
Phase 6:
Phase 7:
Phase 8:

* * * * * *

TURN ON
9/1/05
KR

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 08:58:25
++

TE 261 (11/95) PHASE TIMING DATA/TIMER INTERVALS

INTERVAL	PHASE/ INT. #	F1	F2	F3	F4	F5	F6	F7	F8
MEMORY/RECALL	00	004	000	000	000	000	000	000	000
WALK	01	___	___	___	___	___	___	___	___
PEDESTRIAN CLEARANCE	02	___	___	___	___	___	___	___	___
INITIAL	03	010	___	~~003~~ 005	___	___	___	___	___
VARIABLE INITIAL	04	__._	__._	__._	__._	__._	__._	__._	__._
VARIABLE INIT. LIMIT	05	050	050	050	050	050	050	050	050
TIME BEFOR REDUCTION	06	___	___	___	___	___	___	___	___
TIME TO REDUCE	07	___	___	___	___	___	___	___	___
MAXIMUM GAP	08	02.0	00.1	~~02.0~~ 03.0	00.1	00.1	00.1	00.1	00.1
MINIMUM GAP	09	__._	__._	__._	__._	__._	__._	__._	__._
GAP CLOCK	10	USED	WITH	DAA	ONLY	USED	WITH	DBB	ONLY
MAXIMUM GREEN 1	11	035	___	030	___	___	___	___	___
MAXIMUM GREEN 2	12	___	___	___	___	___	___	___	___
MAXIMUM GREEN 3	13	___	___	___	___	___	___	___	___
RECALL GREEN	14	~~035~~ 025	___	025	___	___	___	___	___
YELLOW CLEARANCE	15	~~04.0~~ 050	__._	~~04.0~~ 050	__._	__._	__._	__._	__._
RED CLEARANCE	16	01.0	__._	01.0	__._	__._	__._	__._	__._
THIRD CLEARANCE	17	__._	__._	__._	__._	__._	__._	__._	__._
FOURTH CLEARANCE	18	__._	__._	__._	__._	__._	__._	__._	__._
		F1	F2	F3	F4	F5	F6	F7	F8

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:00:11
++

TE 262-0 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

TIMING/RANGE	FUNCTION	LOC.	TIME
IN SECONDS	STARTUP CLEARANCE TIMER A	2100	002
IN SECONDS	STARTUP CLEARANCE TIMER B	2101	___
IN MINUTES	DETECTOR ANALYSIS TIME	2102	034
000 = GREEN GATING	UNCONDITIONAL DELAY/EXTENSION	2103	___
001 = UNCONDITIONAL			
IN SECONDS / 004-012	ALL RED STARTUP TIMER	2104	004
ENABLE = 000	ACLINE FATAL ERROR SWITCH	2110	___
DISABLE = 170			
ENABLE = 102	DIAGNOSTIC MESSAGE CIRCULAR	2111	___
DISABLE = 000	BUFFER (USED WITH GUARD)		
001 - 255	MAXIMUM RANDOM INPUT INTERVAL	2115	___
001 - 040	MAX NO OF PERMITTED DETECTORS	2116	___
ENABLE = 099	RANDOM INPUTS SWITCH WORD	2117	___
DISABLE = 000			

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:00:40
++

TE 262-1 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

DELAY TIMES - (DELAY TIME IN TENTHS OF SECONDS)

DETECTOR # 1	2140	__._	DETECTOR #15	214E	__._
DETECTOR # 2	2141	__._	DETECTOR #16	214F	__._
DETECTOR # 3	2142	05.0	DETECTOR #17	2150	__._
DETECTOR # 4	2143	__._	DETECTOR #18	2151	__._
DETECTOR # 5	2144	~~05.0~~	DETECTOR #19	2152	__._
DETECTOR # 6	2145	__._	DETECTOR #20	2153	__._
DETECTOR # 7	2146	__._	DETECTOR #21	2154	__._
DETECTOR # 8	2147	__._	DETECTOR #22	2155	__._
DETECTOR # 9	2148	__._	DETECTOR #23	2156	__._
DETECTOR #10	2149	__._	DETECTOR #24	2157	__._
DETECTOR #11	214A	__._	DETECTOR #25	2158	__._
DETECTOR #12	214B	__._	DETECTOR #26	2159	__._
DETECTOR #13	214C	05.0	DETECTOR #27	215A	__._
DETECTOR #14	214D	__._	DETECTOR #28	215B	__._

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:00:48

TE 262-1A (11/95) MISCELLANEOUS PROGRAMMABLE DATA

EXTENSION TIMES - (EXTENSION TIME IN TENTHS OF SECONDS)

DETECTOR # 1	2160	__._	DETECTOR #15	216E	__._
DETECTOR # 2	2161	__._	DETECTOR #16	216F	__._
DETECTOR # 3	2162	__._	DETECTOR #17	2170	__._
DETECTOR # 4	2163	__._	DETECTOR #18	2171	__._
DETECTOR # 5	2164	__._	DETECTOR #19	2172	__._
DETECTOR # 6	2165	__._	DETECTOR #20	2173	__._
DETECTOR # 7	2166	__._	DETECTOR #21	2174	__._
DETECTOR # 8	2167	__._	DETECTOR #22	2175	__._
DETECTOR # 9	2168	__._	DETECTOR #23	2176	__._
DETECTOR #10	2169	__._	DETECTOR #24	2177	__._
DETECTOR #11	216A	__._	DETECTOR #25	2178	__._
DETECTOR #12	216B	__._	DETECTOR #26	2179	__._
DETECTOR #13	216C	__._	DETECTOR #27	217A	__._
DETECTOR #14	216D	__._	DETECTOR #28	217B	__._

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:04:17
++

TE 262-2 (11/95) MISCELLANEOUS PROGRAMMABLE DATA (CONT.)

PRE-EMPTION - IN SECONDS	PREMPT A LOC.	PREMPT A TIME	PREMPT B LOC.	PREMPT B TIME	PREMPT C LOC.	PREMPT C TIME
TIME BEFORE PRE-EMPTION	2180	___	2183	___	2186	___
EXTENSION TIME	2181	___	2184	___	2187	___
GUARANTEED GREEN TIME BEFORE	2182	002	2185	002	2188	002
CALL SELECT GREEN BEFORE					2189	___

	MISCELLANEOUS		
TIMING/RANGE	FUNCTION	LOC.	TIME
IN SECONDS	PHASE SELECTION - GUARANTEED GREEN TIME	218A	002
IN SECONDS	EXCLUSIVE PED. WALK INTERVAL	218B	___
IN SECONDS	EXCLUSIVE PED. CLEARANCE INTERVAL	218C	___
IN SECONDS	@ OFFSET HOLD - SAFETY OVERRIDE	218D	___
IN SECONDS	@ OFFSET HOLD - EXTENSION	218E	050
IN SECONDS	PREEMPT C PED CLR MAX SAFETY TIMER	218F	___

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:04:26
++

TE 262-3 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

TAPS EDIT PROTECT CODE	21DE	___
NO PROTECT = 000		
TRAFFIC COUNTS = 001		
PATTERN PHASING = 002		
PATTERN TIMING = 004		
TIMECLOCK TABLES = 008		
SIGNAL PROGRAMMABLE FEATURES = 016		
SIGNAL TIMING FEATURES AND FAILURE ALARMS = 032		
EDIT ACCESS CODE - MUST BE CODED IN ORDER TO EDIT ALL OTHER PROG. FEATURES LOCATIONS	21DF	xxx
* * * MAY NOT BE IMPLEMENTED BY DESKTOP * * *		

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:04:52

++

TE 262-3A (11/95) MASTER TIMECLOCK PROGRAMMABLE DATA

001-012	BEGIN DAYLIGHT SAVINGS TIME MONTH	21EC	004
001-012	END DAYLIGHT SAVINGS TIME MONTH	21ED	010
001=FIRST 002=SECOND 003=THIRD 004=FOURTH 005=LAST OR FIFTH	BEGIN DAYLIGHT SAVINGS TIME WEEK OF MONTH	21EE	001
	END DAYLIGHT SAVINGS TIME WEEK OF MONTH	21EF	005

001 - 012	*Use "C8" and "C9" commands to display	*MONTH OF YEAR	21F0 xxx
001 - 031		*DAY OF MONTH	21F1 xxx
000 - 099		*YEAR	21F2 xxx
000 - 023		*HOUR OF DAY	21F3 xxx
000 - 059		*MINUTE OF HOUR	21F4 xxx
000 - 059		*SECOND OF MINUTE	21F5 xxx
001 - 007		DAY OF WEEK	21F6 xxx
001 - 053 (READ ONLY)		WEEK OF YEAR	21F7 xxx

001 = To portable card 002 = From portable card	TRANSFER MASTER CLOCK	21F8	xxx

* * * 21F0-21F8 NOT IMPLEMENTED. USE CLOCK DOWNLOAD FUNCTION. * * *

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:05:02
++

TE 262-F (11/95) FAILURE ALARM DATA

ALARM LOCATIONS			ALARM LOCATIONS			ALARM CODES
ALARM 00	F00	___	ALARM 16	F16	___	
ALARM 01	F01	___	ALARM 17	F17	___	099=RTCA ERROR
ALARM 02	F02	___	ALARM 18	F18	___	098=EXCL. PED
ALARM 03	F03	___	ALARM 19	F19	___	SWITCH ERROR
ALARM 04	F04	___	ALARM 20	F20	___	097=COMM. ERROR
ALARM 05	F05	___	ALARM 21	F21	___	083=TIMECLOCK
ALARM 06	F06	___	ALARM 22	F22	___	ERROR
ALARM 07	F07	___	ALARM 23	F23	___	082=AC LINE
ALARM 08	F08	___	ALARM 24	F24	___	ERROR
ALARM 09	F09	___	ALARM 25	F25	___	079=COORDINATION
ALARM 10	F10	___	ALARM 26	F26	___	CONSISTANCY
ALARM 11	F11	___	ALARM 27	F27	___	ERROR
ALARM 12	F12	___	ALARM 28	F28	___	0xx=HIGH OCC.
ALARM 13	F13	___	ALARM 29	F29	___	1xx=LOW OCC.
ALARM 14	F14	___	ALARM 30	F30	___	2xx=DETECTOR
ALARM 15	F15	___	ALARM 31	F31	___	OVERRIDE

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:05:43
++

TE 262-4 (11/95)

PROGRAMMABLE FEATURES

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
VEHICLE PHASES PERMITTED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2200	88
PEDESTRIAN PHASES PERMITTED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2201	__
	SP	SP	SP	SP	SP	SP	SP	SP		
STARTUP A OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	2202	22
STARTUP A OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	2203	__
STARTUP A OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	2204	__
STARTUP A OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	2205	02
STARTUP A OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	2206	__
STARTUP A OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	2207	__
STARTUP B OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	2208	__
STARTUP B OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	2209	__
STARTUP B OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	220A	__
STARTUP B OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	220B	__
STARTUP B OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	220C	__
STARTUP B OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	220D	__
STARTUP PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	220E	80

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:05:51
++

TE 262-4A (11/95) PROGRAMMABLE FEATURES MISCELLANEOUS CONTROL WORDS

MISCELLANEOUS FUNCTIONS	(@ = NOT IMPLEMENTED BY TAPS)	LOC.	CODE
@ MANUAL CONTROL MODIFIER	ADVANCE = 01 HOLD = 02 EXCLUSIVE PED = 04	2210	__
@ REST POINT	BEFORE GAP = 00 AFTER GAP = 01	2211	__
DUAL RING MODIFIER	QUAD LEFT TURN OPERATION = 00 SPECIAL 6 PHASE SEQUENTIAL = 01	2212	__
CLEAR TABLE SELECTOR WORD	SIGNAL OPERATION FEATURES = 01 DAY PROGRAM = 02 YEAR PROGRAMMING TABLES = 04 PATTERN TIMING = 08 PATTERN PHASING = 10 TRAFFIC COUNT = 20 DIAGNOSTIC ERROR DATA = 40	2213	xx

* * * CLEAR TABLES FUNCTION NOT IMPLEMENTED BY DESKTOP. * * *

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:11:00

++

TE 262-5 (11/95) DETECTOR INPUT WORDS

INPUT NUMBER	LOC.	FUNC CODE	INPUT NUMBER	LOC.	FUNC CODE
INPUT # 1	2214	__	INPUT #16	2223	__
INPUT # 2	2215	__	INPUT #17	2224	__
INPUT # 3	2216	38	INPUT #18	2225	__
INPUT # 4	2217	__	INPUT #19	2226	__
INPUT # 5	2218	__	INPUT #20	2227	__
INPUT # 6	2219	__	INPUT #21	2228	__
INPUT # 7	221A	__	INPUT #22	2229	__
INPUT # 8	221B	__	INPUT #23	222A	__
INPUT # 9	221C	__	INPUT #24	222B	__
INPUT #10	221D	__	INPUT #25	222C	__
INPUT #11	221E	__	INPUT #26	222D	__
INPUT #12	221F	__	INPUT #27	222E	__
INPUT #13	2220	38	INPUT #28	222F	__
INPUT #14	2221	__			
INPUT #15	2222	__			

INPUT FUNC CODES

PED BUTTON	= X2
CALLING DET	= X4
NORMAL DET	= X8
EX PED	= 02
PREEMPT C	= 21
PREEMPT B	= 41
PREEMPT A	= 81
ϕ SLCT OMT A	= B1
ϕ SLCT OMT B	= B2
ϕ SLCT OMT C	= B4
ϕ SLCT OMT D	= B8
CYCLE 1	= C8
CYCLE 2	= C9
CYCLE 3	= CA
SYNC	= CB
OFFSET 1	= CC
OFFSET 2	= CD
OFFSET 3	= CE
FREE	= CF

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:11:07

TE 262-6 (11/95) INPUT CONTROL WORDS (CONT.)

FUNCTION									LOC.	CODE
INPUT JUMPING/SWITCHING	SECONDARY FUNCTION - INPUT #1								223C	__
	SECONDARY FUNCTION - INPUT #2								223D	__
NOTE: ANY INPUT	SECONDARY FUNCTION - INPUT #3								223E	__
FUNCTION CODE CAN BE	SECONDARY FUNCTION - INPUT #4								223F	__
USED AS A SECONDARY	SECONDARY FUNCTION - INPUT #5								2240	__
FUNCTION CODE.	SECONDARY FUNCTION - INPUT #6								2241	__
	SECONDARY FUNCTION - INPUT #7								2242	__
	SECONDARY FUNCTION - INPUT #8								2243	__
INPUT #1 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2244	__
INPUT #2 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2245	__
INPUT #3 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2246	__
INPUT #4 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2247	__
INPUT #5 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2248	__
INPUT #6 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2249	__
INPUT #7 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224A	__
INPUT #8 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224B	__
DETECTOR ANALYSIS										
LOW OCCUPANCY OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224C	__
HIGH OCCUPANCY OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224D	__
MISCELLANEOUS (@ = NOT IMPLEMENTED)										
@ OFFSET HOLD-PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224E	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:11:32
++

TE 262-7 (10/96) OUTPUT CONTROL WORDS
COMBINE FUNCTION (X) AND SPECIFIER (Y) TO FORM CODE WORD (XY)

FUNCTION (X)	SPECIFIER (Y)	SWITCH PACK	LOC.	CODE
0 = PHASE	1-8 = PHASE			
		SP1	2270	01
1 = PED ***	1 (9) = PEDA 4 (C) = PEDD	SP2	2271	__
	2 (A) = PEDB 5 (D) = PEDE	SP3	2272	03
	3 (B) = PEDC 6 (E) = PEDF	SP4	2273	__
2 = OVERLAP	1 = OVLA 4 = OVLD	SP5	2274	__
	2 = OVLB 5 = OVLE	SP6	2275	__
	3 = OVLC 6 = OVLF	SP7	2276	__
		SP8	2277	__
4 = DOUBLE CLR	1 = DCA 2 = DCB	SP9*	2278	__
	3 = DCC 4 = DCD	SP10	2279	01
	5 = DCE 6 = DCF			
6 = DC/OVL	1 = DC/OVLA 2 = DC/OVLB	SP11**	227A	__
		SP12	227B	__
C = MASTER OUTPUTS (R/Y/G)	0 = UNUSED/OFF2/OFF3	SP13	227C	__
	C = CYC1/CYC2/CYC3	SP14	227D	__
	F = FREE/SYNC/OFF1			

NOTES: * SP9 (YELLOW) Outputs Aux Output by Timeclock
** SP11 (YELLOW) Outputs Blue Light
*** Choose value in () for solid yellow output during DON'T WALK

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:11:54
++

TE 262-7A (11/95)

OVERLAPS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
OVERLAP A GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	227E	__
OVERLAP B GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	227F	__
OVERLAP C GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2280	__
OVERLAP D GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2281	__
OVERLAP E GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2282	__
OVERLAP F GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2283	__
OVERLAP A CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2284	__
OVERLAP B CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2285	__
OVERLAP C CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2286	__
OVERLAP D CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2287	__
OVERLAP E CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2288	__
OVERLAP F CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2289	__
DC/OVL A DBL. CLEAR PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228A	__
DC/OVL B DBL. CLEAR PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228B	__
DC/OVL A OVL GREEN PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228C	__
DC/OVL B OVL GREEN PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228D	__
DC/OVL A CLEARANCE PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228E	__
DC/OVL B CLEARANCE PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228F	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:12:02
++

TE 262-8 (11/95)

OUTPUT CONTROL WORDS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
PEDESTRIAN										
PEDESTRIAN A PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2290	
PEDESTRIAN B PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2291	
PEDESTRIAN C PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2292	
PEDESTRIAN D PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2293	
PEDESTRIAN E PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2294	
PEDESTRIAN F PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2295	
FLASHING WALK PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2296	
PEDESTRIAN PHASE REST N WALK	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2297	
EXTENDED PED CLEARANCE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2298	
DOUBLE CLEARANCE										
DOUBLE CLEARANCE A PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2299	
DOUBLE CLEARANCE B PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229A	
DOUBLE CLEARANCE C PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229B	
DOUBLE CLEARANCE D PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229C	
DOUBLE CLEARANCE E PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229D	
DOUBLE CLEARANCE F PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229E	

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:12:10
++

TE 262-8A (11/95) OUTPUT CONTROL WORDS (CONT.)

3 COLOR FLASH MODIFIER	NO = 00				YES = 01				229F	__
	SP	SP	SP	SP	SP	SP	SP	SP		
3 COLOR FLASH MODIFIER OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	22A0	__
3 COLOR FLASH MODIFIER OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	22A1	__
3 COLOR FLASH MODIFIER OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	22A2	__
3 COLOR FLASH MODIFIER OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	22A3	__
3 COLOR FLASH MODIFIER OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22A4	__
3 COLOR FLASH MODIFIER OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	22A5	__
LIGHT REDUCTION										
LIGHT REDUCTION OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	22A6	__
LIGHT REDUCTION OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	22A7	__
LIGHT REDUCTION OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	22A8	__
LIGHT REDUCTION OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	22A9	__
LIGHT REDUCTION OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22AA	__
LIGHT REDUCTION OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	22AB	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:12:17
++

TE 262-9 (11/95) PHASE SELECTION

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
PHASE SELECTION - OMIT A	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AC	__
PHASE SELECTION - OMIT B	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AD	__
PHASE SELECTION - OMIT C	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AE	__
PHASE SELECTION - OMIT D	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AF	__
PHASE SELECTION - MODIFIER	OMIT IN ORDER OF CALL = 00 OMIT PRIORITY A-B-C-D = 80								22B0	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:12:38
++

TE 262-9A (11/95) PREEMPTION WORDS

PREEMPT MODIFIER	PREEMPT C FLASH = 02 PREEMPT C FLASH = TC FLASH = 82 PREEMPT PRIORITY C-A-B = 20	22B1	___
BLUE LIGHT MODIFIER & SELECTOR - COMBINE BLUE LIGHT OUTPUT (X) AND PREEMPTION SPECIFIER (Y) TO FORM CODE WORD (XY)		22B2	___
BLUE LIGHT OUTPUT (X) FLASH = 0 STEADY = 8	PREEMPTION SPECIFIER (Y) NO BLUE LIGHT = 0 PREEMPT A = 1 PREEMPT B = 2 PREEMPT C = 4		

	PHASE WORD									
FUNCTION	8	4	2	1	8	4	2	1	LOC.	CODE
PREEMPT A PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B3	___
PREEMPT B PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B4	___
PREEMPT C PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B5	___
PREEMPT C CALL SELECT ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B6	___
		SP	SP		SP	SP	SP	SP		
PREEMPT C FLASH OUTPUT	-	3Y	3R	-	2Y	2R	-	1R	22B7	___
PREEMPT C FLASH OUTPUT	-	6Y	6R	-	5Y	5R	-	4R	22B8	___
PREEMPT C FLASH OUTPUT	-	9Y	9R	-	8Y	8R	-	7R	22B9	___
PREEMPT C FLASH OUTPUT	-	12Y	12R	-	11Y	11R	-	10R	22BA	___
PREEMPT C FLASH OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22BB	___
PREEMPT C FLASH OUTPUT	-	14Y	14R	-	13Y	13R	-	-	22BC	___
PREEMPT C PED CLR SW	= 00 USE EXISTING PED CLR = 01 USE PREEMPT C MAX PED CLR SAFETY TIMER (SEE 218F)								22BD	___
PREEMPT C PED CLR TIMER - PHASES TO OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22BE	___

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:12:46
++

TE 262-10 (11/95) TIMECLOCK FUNCTIONS

FUNCTION	8	4	2	1	8	4	2	1	LOC.	CODE
		SP	SP		SP	SP	SP	SP		
FLASH OUTPUT	-	3Y	3R	-	2Y	2R	-	1R	22CE	__
FLASH OUTPUT	-	6Y	6R	-	5Y	5R	-	4R	22CF	__
FLASH OUTPUT	-	9Y	9R	-	8Y	8R	-	7R	22D0	__
FLASH OUTPUT	-	12Y	12R	-	11Y	11R	-	10R	22D1	__
FLASH OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22D2	__
FLASH OUTPUT	-	14Y	14R	-	13Y	13R	-	-	22D3	__
OMIT A PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D4	__
OMIT B PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D5	__
REST IN RED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D6	__
MAX GRN II PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D7	__
MAX GRN III PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D8	__
INPUT 1-16 BY TIMECLOCK	1	3	5	7	9	11	13	15		
	2	4	6	8	10	12	14	16	22D9	__
INPUT 17-28 BY TIMECLOCK	17	19	21	23	25	27				
	18	20	22	24	26	28			22DA	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:14:13
++

TE 263-1 (11/95) SECONDARY COORDINATION TIMING INTERVALS

OLD FUNCTION (SLAVE TIMING INTERVALS)	NEW FUNCTION (TIMING PLAN INTERVALS)	LOC.	TIME (SEC.)
CYCLE #1 LENGTH	TIMING PLAN #1-2-3 CYCLE LENGTH	21C0	080
CYCLE #1 PHASE SPLIT #1	TIMING PLAN #1-2-3 PHASE SPLIT #1	21C1	035
CYCLE #1 PHASE SPLIT #2	TIMING PLAN #1-2-3 PHASE SPLIT #2	21C2	___
CYCLE #1 PHASE SPLIT #3	TIMING PLAN #1-2-3 PHASE SPLIT #3	21C3	___
	TIMING PLAN #1-2-3 PHASE SPLIT #4	21C4	___
	TIMING PLAN #1-2-3 PHASE SPLIT #5	21C5	___
CYCLE #1 OFFSET #1 LENGTH	TIMING PLAN #1 OFFSET LENGTH	21C6	___
CYCLE #1 OFFSET #2 LENGTH	TIMING PLAN #2 OFFSET LENGTH	21C7	___
CYCLE #1 OFFSET #3 LENGTH	TIMING PLAN #3 OFFSET LENGTH	21C8	___
CYCLE #2 LENGTH	TIMING PLAN #4-5-6 CYCLE LENGTH	21C9	___
CYCLE #2 PHASE SPLIT #1	TIMING PLAN #4-5-6 PHASE SPLIT #1	21CA	___
CYCLE #2 PHASE SPLIT #2	TIMING PLAN #4-5-6 PHASE SPLIT #2	21CB	___
CYCLE #2 PHASE SPLIT #3	TIMING PLAN #4-5-6 PHASE SPLIT #3	21CC	___
	TIMING PLAN #4-5-6 PHASE SPLIT #4	21CD	___
	TIMING PLAN #4-5-6 PHASE SPLIT #5	21CE	___
CYCLE #2 OFFSET #1 LENGTH	TIMING PLAN #4 OFFSET LENGTH	21CF	___
CYCLE #2 OFFSET #2 LENGTH	TIMING PLAN #5 OFFSET LENGTH	21D0	___
CYCLE #2 OFFSET #3 LENGTH	TIMING PLAN #6 OFFSET LENGTH	21D1	___
CYCLE #3 LENGTH	TIMING PLAN #7-8-9 CYCLE LENGTH	21D2	___
CYCLE #3 PHASE SPLIT #1	TIMING PLAN #7-8-9 PHASE SPLIT #1	21D3	___
CYCLE #3 PHASE SPLIT #2	TIMING PLAN #7-8-9 PHASE SPLIT #2	21D4	___
CYCLE #3 PHASE SPLIT #3	TIMING PLAN #7-8-9 PHASE SPLIT #3	21D5	___
	TIMING PLAN #7-8-9 PHASE SPLIT #4	21D6	___
	TIMING PLAN #7-8-9 PHASE SPLIT #5	21D7	___
CYCLE #3 OFFSET #1 LENGTH	TIMING PLAN #7 OFFSET LENGTH	21D8	___
CYCLE #3 OFFSET #2 LENGTH	TIMING PLAN #8 OFFSET LENGTH	21D9	___
CYCLE #3 OFFSET #3 LENGTH	TIMING PLAN #9 OFFSET LENGTH	21DA	___

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:14:26
++

TE 263-2 (11/95) SECONDARY COORDINATION PHASE WORDS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
ARTERY PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F2	80
SPLIT #1 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F3	08
SPLIT #2 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F4	__
SPLIT #3 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F5	__
SPLIT #4 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F6	__
SPLIT #5 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F7	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:14:36

TE 263-3 (11/95) COORDINATION MODE PROGRAMMABLE FEATURES

PROGRAMMING MODE WORD	00 = SECONDARY, 21 = PRIMARY	2300	00
MANUAL PATTERN SELECT	ENTER TIMING PLAN NUMBER (HEX) (NOTE: FF = FREE)	2301	__
COORDINATION BACK-UP	00 = FREE 01 = T.B.C.	2302	__
COORDINATION MODES (MAY NOT BE COMBINED)	00 = TBC 01 = SPARE 02 = 7 WIRE INPUT VIA DETECTOR FILE 04 = 9 WIRE INPUT VIA DETECTOR FILE 08 = SPARE 10 = PATT. ID/SYNC INPUT VIA MODEM 20,40 = SPARES 80 = TBC MASTER OUTPUT	2303	__
RETURN TO ARTERY WORD/ ARTERY PED RECYCLE WORD	00 = RETURN AFTER FORCE OFF #1 /NO EARLY ARTERY PED RECYCLE 01 = RETURN TO ARTERY EARLY 10 = EARLY ARTERY PED RECYCLE	2304	01

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:14:45
++

TE 263-3A (11/95) COORDINATION MODE PROGRAMMABLE FEATURES

FUNCTION	PHASE WORD 8 TP	4 TP	2 TP	1 TP	8 TP	4 TP	2 TP	1 TP	LOC.	CODE
PEDESTRIAN CONSISTANCY CHECK	8	7	6	5	4	3	2	1	2305	FF
OVERRIDE WORD T.P. 1-10	-	-	-	-	-	-	10	9	2306	FF

MASTER OUTPUT MODE (USED ONLY WHEN LOCATION $2303 IS EQUAL TO $80)	=00 ACT AS MASTER ACIA/MODEM OUTPUT =01 ACT AS MASTER 7-WIRE OUTPUT =02 ACT AS MASTER 9-WIRE OUTPUT	2307	__

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156

++

TE 264-1 (11/95) MODEL 179 TIMECLOCK EVENT TABLE

	A	B	C	D		A	B	C	D
EVENT #	DAY PROG. #	PATT. #	TIME CLOCK FUNCT	TIME HR : MIN.	EVENT #	DAY PROG. #	PATT. #	TIME CLOCK FUNCT	TIME HR : MIN.
E001	001	001	000	07:0	E007	___	___	___	__:_
E002	001	000	000	18:0	E008	___	___	___	__:_
E003	___	___	___	__:_	E009	___	___	___	__:_
E004	___	___	___	__:_	E010	___	___	___	__:_
E005	___	___	___	__:_	E011	___	___	___	__:_
E006	___	___	___	__:_	E012	___	___	___	__:_

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:17:34
++

TE 264-2 (11/95) TABLE OF WEEK PROGRAMS

WEEK #		001	002	003	004	005	006	007	008	009	010
DAY	CODE	d01	d02	d03	d04	d05	d06	d07	d08	d09	d10
SUN	1	001									
MON	2	001									
TUES	3	001									
WED	4	001									
THUR	5	001									
FRI	6	001									
SAT	7	001									

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:17:43
++

TE 264-3 (11/95) TABLE OF YEAR PROGRAMS

CODE	WEEK NO.	CODE	WEEK PROG#	CODE	WEEK NO.	CODE	WEEK PROG#	CODE	WEEK NO.	CODE	WEEK PROG#
2550	___	2551	___	2562	___	2563	___	2574	___	2575	___
2552	___	2553	___	2564	___	2565	___	2576	___	2577	___
2554	___	2555	___	2566	___	2567	___	2578	___	2579	___
2556	___	2557	___	2568	___	2569	___	257A	___	257B	___
2558	___	2559	___	256A	___	256B	___	257C	___	257D	___
255A	___	255B	___	256C	___	256D	___	257E	___	257F	___
255C	___	255D	___	256E	___	256F	___	2580	___	2581	___
255E	___	255F	___	2570	___	2571	___	2582	___	2583	___
2560	___	2561	___	2572	___	2573	___				

CCS = 87B Signal # = 586 Rte = 120 Rte Seq # = 156
DATE: 08/29/05 TIME: 09:17:50
++

TE 264-4 (11/95) TABLE OF EXCEPTION DAYS

CODE	MONTH NO.	CODE	DAY OF MONTH	CODE	DAY PROG NO.
2590	___	2591	___	2592	___
2593	___	2594	___	2595	___
2596	___	2597	___	2598	___
2599	___	259A	___	259B	___
259C	___	259D	___	259E	___
259F	___	25A0	___	25A1	___
25A2	___	25A3	___	25A4	___
25A5	___	25A6	___	25A7	___

CODE	MONTH NO.	CODE	DAY OF MONTH	CODE	DAY PROG NO.
25A8	___	25A9	___	25AA	___
25AB	___	25AC	___	25AD	___
25AE	___	25AF	___	25B0	___
25B1	___	25B2	___	25B3	___
25B4	___	25B5	___	25B6	___
25B7	___	25B8	___	25B9	___
25BA	___	25BB	___	25BC	___
25BD	___	25BE	___	25BF	___

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____
PAGE 18 OF 20

SIGNAL # W-586 COUNTY WESTCHESTER DATE 08/29/05

D259096

TABLE OF SWITCH PACKS

SWITCH PACK	FUNCTION	INDICATIONS	FACE	TERMINAL WIRING BOARD		FACE	TERMINAL WIRING BOARD	
				TERMINAL	WIRE COLOR CODE		TERMINAL	WIRE COLOR CODE
1	Ø 1	Red	1	SP 1 R	14 / 10C - C - R	2	SP 1 R	14 / 10C - D - R
		Yellow		SP 1 Y	- O		SP 1 Y	- O
		Green		SP 1 G	- G		SP 1 G	- G
		Ground Wire		Grnd Bus	- W		Grnd Bus	- W
2				SP 2 R			SP 2 R	
				SP 2 Y			SP 2 Y	
				SP 2 G			SP 2 G	
		Ground Wire		Grnd Bus			Grnd Bus	
3	Ø 3	Red	5	SP 3 R	14 / 10C - C - R / B	6	SP 3 R	14 / 10C - D - R / B
		Yellow		SP 3 Y	- O / B		SP 3 Y	- O / B
		Green		SP 3 G	- G / B		SP 3 G	- G / B
		Ground Wire		Grnd Bus	- W / B		Grnd Bus	- W / B
4				SP 4 R			SP 4 R	
				SP 4 Y			SP 4 Y	
				SP 4 G			SP 4 G	
		Ground Wire		Grnd Bus			Grnd Bus	
5				SP 5 R			SP 5 R	
				SP 5 Y			SP 5 Y	
				SP 5 G			SP 5 G	
		Ground Wire		Grnd Bus			Grnd Bus	
6				SP 6 R			SP 6 R	
				SP 6 Y			SP 6 Y	
				SP 6 G			SP 6 G	
		Ground Wire		Grnd Bus			Grnd Bus	
7				SP 7 R			SP 7 R	
				SP 7 Y			SP 7 Y	
				SP 7 G			SP 7 G	
		Ground Wire		Grnd Bus			Grnd Bus	
8				SP 8 R			SP 8 R	
				SP 8 Y			SP 8 Y	
				SP 8 G			SP 8 G	
		Ground Wire		Grnd Bus			Grnd Bus	
9				SP 9 R			SP 9 R	
				SP 9 Y			SP 9 Y	
				SP 9 G			SP 9 G	
		Ground Wire		Grnd Bus			Grnd Bus	
10	Ø 1	Red	3	SP 10 R	14 / 5C - B - R	4	SP 10 R	14 / 5C - A - R
		Yellow		SP 10 Y	- O		SP 10 Y	- O
		Green		SP 10 G	- G		SP 10 G	- G
		Ground Wire		Grnd Bus	- W		Grnd Bus	- W
11				SP 11 R			SP 11 R	
				SP 11 Y			SP 11 Y	
				SP 11 G			SP 11 G	
		Ground Wire		Grnd Bus			Grnd Bus	
12				SP 12 R			SP 12 R	
				SP 12 Y			SP 12 Y	
				SP 12 G			SP 12 G	
		Ground Wire		Grnd Bus			Grnd Bus	
13				SP 13 R			SP 13 R	
				SP 13 Y			SP 13 Y	
				SP 13 G			SP 13 G	
		Ground Wire		Grnd Bus			Grnd Bus	
14				SP 14 R			SP 14 R	
				SP 14 Y			SP 14 Y	
				SP 14 G			SP14 G	
		Ground Wire		Grnd Bus			Grnd Bus	

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____

SIGNAL # W-586 COUNTY # WESTCHSTER DATE 08/29/05

D259096

CONFLICT / CURRENT MONITOR PROGRAMMING

CONFLICT MONITOR DIODES TO BE CUT			CONFLICT MONITOR YELLOW JUMPERS TO BE INSTALLED	CURRENT MONITOR DIODES TO BE CUT
SP1 - SP10				2, 4 - 9, 11 - 14

NOTES:

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____
PAGE 20 **OF** 20

SIGNAL # W-586 **COUNTY** WESTCHESTER **DATE** 08/29/05

D259096

TABLE OF INPUT WIRING

TERM. NUMBER	FUNCTION	DET. NO.	DET. TYPE	DET. AN OVER	REMARKS
1A, 1B					
2A, 2B					
3A, 3B	Ø 3	3A	QUADRAPOLE		PRESENCE LOOP
4A, 4B					
5A, 5B					
6A, 6B					
7A, 7B					
8A, 8B					
9A, 9B					
10A, 10B					
11A, 11B					
12A, 12B					
13A, 13B	Ø 3	13A	NORMAL		PRESENCE LOOP
14A, 14B					
15A, 15B					
16A, 16B					
17A, 17B					
18A, 18B					
19A, 19B					
20A, 20B					
21A, 21B					
22A, 22B					
23A, 23B					
24A, 24B					
25A, 25B					
26A, 26B					
27A, 27B					
28A, 28B					

TAPS — MODEL 179 OPERATING INSTRUCTIONS
KEYBOARD INPUT COMMANDS — SUMMARY

D<LOCATION #>:

d a a a a x x	or	d a a a a t t t	or	d a a a a A t t t

d = DISPLAY LOCATION # COMMAND
aaaa = LOCATION # ENTERED
A = DAY PROGRAM EVENT PART (A-D)
(LOCATIONS E001 - E192 ONLY)
xx = HEX. DATA VALUE (OO-FF)
ttt = DECIMAL DATA VALUE (000-255)

DAA<TIMING INT. #>:

d A A i i F a: t t t

dAA = DISPLAY RING A INTERVAL COMMAND
ii = INTERVAL NUMBER ENTERED (00-31)
F = FAZE
a = RING A PHASE # (1-4) - DYNAMIC
ttt = INTERVAL TIMING - DYNAMIC

DBB<TIMING INT. #>:

d b b j j F b: s s s

dbb = DISPLAY RING B INTERVAL COMMAND
jj = INTERVAL NUMBER ENTERED (00-31)
F = FAZE
b = RING B PHASE # (5-8) - DYNAMIC
sss = INTERVAL TIMING - DYNAMIC

DCC<DETECTOR #>:

d C C l l x x x

dCC = DISPLAY DETECTOR COUNT COMMAND
ll = DETECTOR NUMBER ENTERED (01-40)
xxx = NUMBER OF ACTUATIONS SINCE TERMINATION OF PHASE GREEEN

CC7:

:C 7: mm:d d:y y

C7 = CHIP DATE month/day/year COMMAND
mm = MONTH (01-12)
dd = DAY (01-31)
yy = YEAR (00-99)

CC8:

:C 8: mm:d d:y y

C8 = MASTER CLOCK month/day/year COMMAND
mm = MONTH (01-12)
dd = DAY (01-31)
yy = YEAR (00-99)

CC9:

:C 9: h h:m m:s s

C9 = MASTER CLOCK hour/min/sec COMMAND
hh = HOUR (00-23)
mm = MINUTE (00-59)
ss = SECOND (00-59)

CCA:

F a:C A:z z i i: t t t

CA = RING A DYNAMIC DISPLAY COMMAND
F = FAZE
a = RING A ACTIVE PHASE # (1-4)
ii = RING A ACTIVE PHASE TIMING INTERVAL #
ttt = DYNAMIC INTERVAL TIMING
zz = PHASE TERMINATION MODE - FLASHING
FLASHING DURING CLEARANCE

CCB:

z z:C B:F b j j: s s s

CB = RING B DYNAMIC DISPLAY COMMAND
F = FAZE
b = RING B ACTIVE PHASE # (5-8)
jj = RING B ACTIVE PHASE TIMING INTERVAL #
sss = DYNAMIC INTERVAL TIMING
zz = PHASE TERMINATION MODE - FLASHING

CCC:

F a:C C:F b i i: :j j

CC = DUAL RING DYNAMIC DISPLAY COMMAND
F = FAZE
a = RING A ACTIVE PHASE # (1-4)
b = RING B ACTIVE PHASE # (5-8)
ii = RING A ACTIVE PHASE TIMING INTERVAL #
jj = RING B ACTIVE PHASE TIMING INTERVAL #
(ii and jj replaced by zz during clearance)

CCD:

i i:C D:j j t t t s s s

CD = DUAL RING DYNAMIC DISPLAY COMMAND
ii = RING A ACTIVE PHASE TIMING INTERVAL #
jj = RING B ACTIVE PHASE TIMING INTERVAL #
ttt = RING A DYNAMIC INTERVAL TIMING
sss = RING B DYNAMIC INTERVAL TIMING

CCE:

m m:C E:n n g g.g h h.h

CE = MAX GRN/GAP DUAL RING DISPLAY COMMAND
mm = RING A MAX GRN TIMER — DYNAMIC
nn = RING B MAX GRN TIMER - DYNAMIC
gg.g = RING A GAP TIMER - DYNAMIC
hh.h = RING B GAP TIMER - DYNAMIC

TAPS—MODEL 179 OPERATING INSTRUCTIONS
KEYBOARD INPUT COMMANDS—SUMMARY

CCF:

yy:CF:mm
dd:hh:tt

CF = CABINET FLASH DISPLAY COMMAND
yy = YEAR (00 - 99)
mm = MONTH (01 - 12)
dd = DAY (01 - 31)
hh = HOUR (00 - 23)
tt = MINUTE (00 - 59)

C01:

xx:00:zz
AAA

00 = PATTERN NUMBER DISPLAY COMMAND
xx = PATTERN # IN EFFECT
zz = MODE
AAA = CYCLE LENGTH IN EFFECT

C01:

OF:01:SY
bbb aaa

01 = CYLE /OFFSET DISPLAY COMMAND
OF = OFFSET
SY = SYSTEM
bbb = LOCAL CYCLE TIMER
aaa = SYSTEM CYCLE TIMER

C02:

CY:02:zz
bbb aaa

02 = VEHICLE PERMISSIVE DISPLAY COMMAND
CY = CYCLE
zz = PERMISSIVE IN EFFECT
bbb = LOCAL CYCLE TIMER
aaa = PERMISSIVE TIMER
call lights = phases not ommitted

C03:

OF:01:SY
bbb aaa

03 = PEDESTRIAN PERMISSIVE DISPLAY COMMAND
CY = CYCLE
zz = PEDESTRIAN PERMISSIVE IN EFFECT
bbb = LOCAL CYCLE TIMER
aaa = PERMISSIVE TIMER
call lights = ped phase not ommitted

C04:

CY:04:zz
bbb aaa

04 = FORCE OFF DISPLAY COMMAND
CY = CYCLE
zz = FORCE OFF COMING UP
bbb = LOCAL CYCLE TIMER
aaa = TIME TO FORCE OFF

DISPLAY COMMANDS

F<ALARM LOC#>:

F aa r nn
xxx

F = FAILURE ALARM DISPLAY COMMAND
aa = ALARM LOC NUMBER ENTERED (00 - 31)
r = RESETS OR OCCURANCES
nn = NUMBER OF RESETS
xxx = FAILURE ALARM CODE

FAILURE ALARM CODES

001 - 032 HIGH OCCUPANCY DETECTOR 01 - 32
101 - 132 LOW OCCUPANCY DETECTOR 01 - 32
210 - 232 DETECTOR ANALYSIS OVERIDE DETECTOR 01 - 32
099 MASTER CLOCK RTCA ERROR-RESET CLOCK
098 EXCLUSIVE PEDESTRIAN PUSH BUTTON ERROR
097 COMMUNICATIONS ERROR
089 MODEL 602 MODEM SETUP ERROR
088 MODEL 602 MODEM SETUP ERROR
084 RTCA ERROR
083 MASTER CLOCK DATA ERROR-RESET CLOCK
082 MAIN A.C. SERVICE ERROR-CHECK SERVICE
079 PATTERN CONSISTENCY CHECK ERROR(COORD)
078 LATE RETURN TO ARTERY (COORD)

FATAL ERROR MESSAGES: EEPRO, RA, PRO, GUARD, BORDER, COURT, AC LINE, NEORRF

FED ROAD REG. NO.	STATE	CONTRACT NO.	SHEET NO.	TOTAL SHEETS
1	N.Y.	D259096		

ROUTE 120 @ GATEWAY LANE
TOWN OF NORTH CASTLE
WESTCHESTER COUNTY

P.I.N. 8130.75 | B.I.N.

ALL FACES

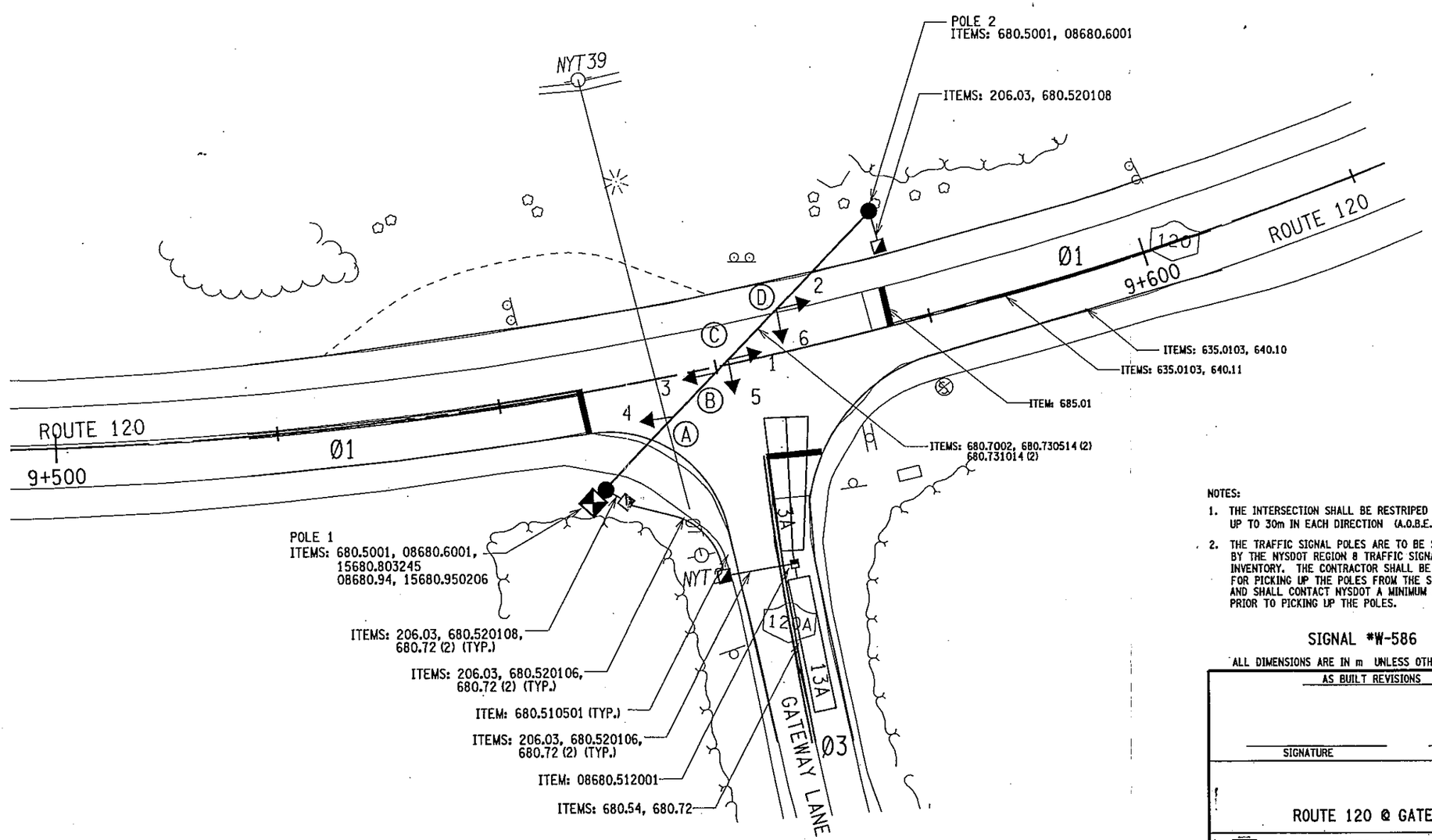
R	300mm
Y	300mm
G	300mm

TABLE OF CLEARANCES

TO \ FROM	G	R
G	X	R/R
R	Y/R	X

TABLE OF POLES

POLE	STA., OFFSET, SIDE	ELEV.	ITEM	HT	DESIGN LOAD	FOOTING MOMENT
1	9+547.825, 8.877 ℄ POLE RT.	123.533	08680.6001	9 m	30 kN	257 kN-m
2	9+577.275, 10.583 ℄ POLE LT.	122.479	08680.6001	10 m	30 kN	287 kN-m



NOTES:

1. THE INTERSECTION SHALL BE RESTRIPED UP TO 30m IN EACH DIRECTION (A.O.B.E.)
2. THE TRAFFIC SIGNAL POLES ARE TO BE SUPPLIED BY THE NYSDOT REGION 8 TRAFFIC SIGNAL POLE INVENTORY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING UP THE POLES FROM THE STOCK PILE, AND SHALL CONTACT NYSDOT A MINIMUM OF ONE WEEK PRIOR TO PICKING UP THE POLES.

SIGNAL *W-586

ALL DIMENSIONS ARE IN m UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

ROUTE 120 @ GATEWAY

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

FILENAME	REGION	DATE	DRAWING NO.
	8	2-24-05	TS-1

DESIGN SUPERVISOR ____ JOB MANAGER ____ DESIGNED BY ____ CHECKED BY ____
DRAFTED BY ____ CHECKED BY ____
ESTIMATED BY ____ CHECKED BY ____

FILE NAME = d:\PW_Norking\akaiser\dms22822\8130875h_ts-f.dgn
DATE/TIME = 24-FEB-2005 08:34
USER = akaiser

E-26X

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING & SAFETY DIVISION
TRAFFIC CONTROL SPECIFICATIONS

Study :
Contract :
PIN:
File :

PAGE 1 OF 17 PAGES

W14.4 SIGNAL NO(S)

WESTCHESTER COUNTY

INTERSECTION ROUTE 120 AT AIRPORT DR./RAMP TO I-684

☐ CITY ☐ VILLAGE ☒ TOWN OF NORTH CASTLE

Department Order filed _____ as Section 2055.38 Subdivision (K)

Prior specifications hereby superseded ☐ None ☒ 6/19/86

Purpose : Upgrade under H.W.P. # 8-96-0937 (AMMENDED)

These specifications will be effective upon the ☐ Installation ☒ Modification of the necessary traffic control device(s) required by and conforming to the State Manual of Uniform Traffic Control Devices

1. This Signal shall

A. Operate in accordance with the Table of Operations and / of Change Intervals as shown on page(s) 2 as a :

- ☐ Pretimed Signal
- ☐ Semi-traffic actuated signal
- ☒ Full-traffic actuated signal
- ☐ Pedestrian actuated signal
- ☐ Other _____

B.
- ☒ Display vehicular indications
- ☐ Display pedestrian indications
- ☒ Be equipped with vehicle detectors
- ☐ Be equipped with Pedestrian pushbuttons

as shown in the ☒ schematic ☐ scaled drawing on page 3

C. Be equipped with ☐ pre-emption ☐ interconnection and / or coordination which are described as follows

_____ Date

Wm. D. FITZPATRICK Signature

RTE Title

cc: ( ) ☐ Main Office

(1) ☒ Region 8 Traffic Engineer

(3) ☒ SIGNAL SHOP 'B'

Installation Date _____

Modification Date _____

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
Description: RTE 120 @ AIRPORT DR RAMP TO I-684

DATE: 10/04/00 TIME: 09:13:53

++

*** Phase Notes ***

Phase 1: RTE 120 (NORTHBOUND)
Phase 2:
Phase 3: I-684 RAMP (EASTBOUND)
Phase 4: AIRPORT ACCESS ROAD (WESTBOUND)
Phase 5: RTE 120 (SOUTHBOUND)
Phase 6: RTE 120 LEFT TURN (NORTHBOUND)
Phase 7:
Phase 8:

* * * * * *

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS (CONTINUED)

STUDY:
CONTRACT:
PIN:
FILE:

W144 SIGNAL NO(S) | WESTCHESTER COUNTY | _____ DATE | PAGE _____ OF _____ PAGES

TABLE OF OPERATION

PHASES	FACES							
	1	2	3	4	5	6	7	8
Ø1	GREEN	GREEN	RED	RED	RED	RED	RED	RED
Ø1 + Ø5	GREEN	GREEN	GREEN	GREEN	RED	RED	RED	RED
Ø1 + Ø6	GREEN/←	GREEN	RED	RED	RED	RED	RED	RED
Ø3	RED	RED	RED	RED/→	GREEN/ ←	GREEN/←	RED	RED
Ø4	RED	RED	RED	RED	RED	RED	GREEN	GREEN
FLASHING OPERATION	YELLOW	YELLOW	YELLOW	YELLOW	RED	RED	RED	RED

TABLE OF CLEARENCES

TO	FROM			
	GREEN	GREEN/ ←	RED/ →	RED
GREEN	GREEN	GREEN/	RED/ →	RED
	GREEN	GREEN	RED/ →	RED
GREEN/ ←	GREEN			RED
	GREEN			RED
RED/ →	YELLOW/ →			RED
	RED/ →			RED
RED	YELLOW	YELLOW/ ←		RED
	RED	RED		RED

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC AND SAFETY DIVISION
TRAFFIC CONTROL SIGNAL SPECIFICATIONS (CONTINUED)

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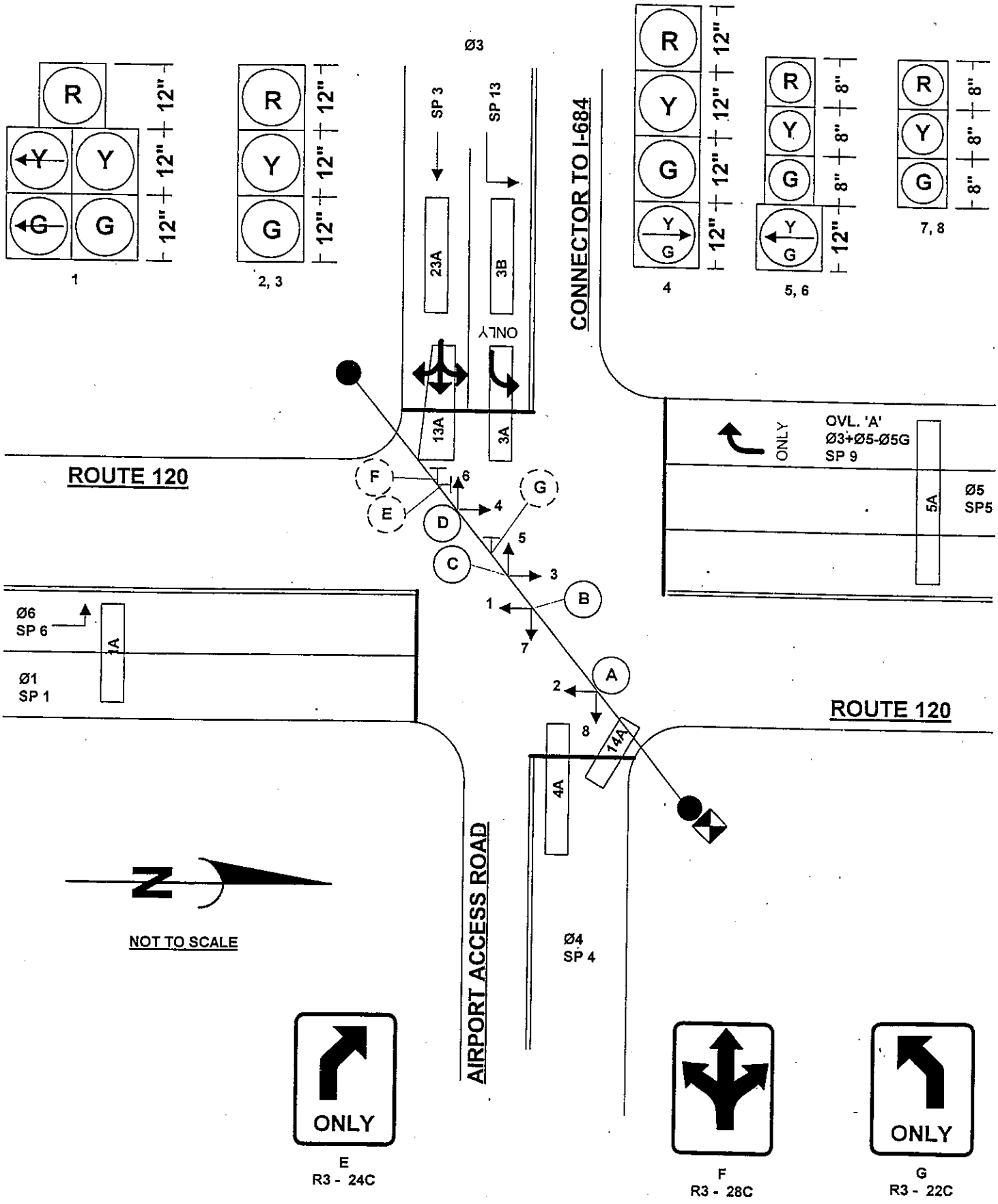
W144 SIGNAL NO(S) | WESTCHESTER COUNTY | DATE | PAGE ____ OF ____ PAGES



CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 10/04/00 TIME: 09:22:18
++

TE 261 (11/95) PHASE TIMING DATA/TIMER INTERVALS

INTERVAL	PHASE/ INT. #	F1	F2	F3	F4	F5	F6	F7	F8
MEMORY/RECALL	00	001	000	000	000	001	001	000	000
WALK	01	___	___	___	___	___	___	___	___
PEDESTRIAN CLEARANCE	02	___	___	___	___	___	___	___	___
INITIAL	03	005	___	004	004	005	003	___	___
VARIABLE INITIAL	04	02.0	__._	__._	__._	02.0	02.0	__._	__._
VARIABLE INIT. LIMIT	05	010	___	___	___	010	___	___	___
TIME BEFOR REDUCTION	06	010	___	___	___	010	___	___	___
TIME TO REDUCE	07	005	___	___	___	005	___	___	___
MAXIMUM GAP	08	04.0	__._	06.0	06.0	04.0	02.0	__._	__._
MINIMUM GAP	09	02.0	__._	__._	__._	02.0	__._	__._	__._
GAP CLOCK	10	USED	WITH	DAA	ONLY	USED	WITH	DBB	ONLY
MAXIMUM GREEN 1	11	040	___	040	040	040	010	___	___
MAXIMUM GREEN 2	12	010	___	090	025	010	005	___	___
MAXIMUM GREEN 3	13	040	___	040	050	040	015	___	___
RECALL GREEN	14	030	___	030	030	030	010	___	___
YELLOW CLEARANCE	15	04.0	__._	04.0	04.0	04.0	04.0	__._	__._
RED CLEARANCE	16	01.0	__._	01.0	01.0	01.0	01.0	__._	__._
THIRD CLEARANCE	17	__._	__._	__._	__._	__._	__._	__._	__._
FOURTH CLEARANCE	18	__._	__._	__._	__._	__._	__._	__._	__._
		F1	F2	F3	F4	F5	F6	F7	F8

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:11:40

++

TE 262-0 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

TIMING/RANGE	FUNCTION	LOC.	TIME
IN SECONDS	STARTUP CLEARANCE TIMER A	2100	002
IN SECONDS	STARTUP CLEARANCE TIMER B	2101	___
IN MINUTES	DETECTOR ANALYSIS TIME	2102	034
000 = GREEN GATING 001 = UNCONDITIONAL	UNCONDITIONAL DELAY/EXTENSION	2103	___
IN SECONDS / 004-012	ALL RED STARTUP TIMER	2104	008
ENABLE = 000 DISABLE = 170	ACLINE FATAL ERROR SWITCH	2110	___
ENABLE = 102 DISABLE = 000	DIAGNOSTIC MESSAGE CIRCULAR BUFFER (USED WITH GUARD)	2111	___
001 - 255	MAXIMUM RANDOM INPUT INTERVAL	2115	___
001 - 040	MAX NO OF PERMITTED DETECTORS	2116	___
ENABLE = 099 DISABLE = 000	RANDOM INPUTS SWITCH WORD	2117	___

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:18:22

++

TE 262-1 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

DELAY TIMES - (DELAY TIME IN TENTHS OF SECONDS)

DETECTOR # 1	2140	__._	DETECTOR #15	214E	__._
DETECTOR # 2	2141	__._	DETECTOR #16	214F	__._
DETECTOR # 3	2142	05.0	DETECTOR #17	2150	__._
DETECTOR # 4	2143	05.0	DETECTOR #18	2151	__._
DETECTOR # 5	2144	__._	DETECTOR #19	2152	__._
DETECTOR # 6	2145	__._	DETECTOR #20	2153	__._
DETECTOR # 7	2146	__._	DETECTOR #21	2154	__._
DETECTOR # 8	2147	__._	DETECTOR #22	2155	__._
DETECTOR # 9	2148	__._	DETECTOR #23	2156	[illegible]
DETECTOR #10	2149	__._	DETECTOR #24	2157	__._
DETECTOR #11	214A	__._	DETECTOR #25	2158	__._
DETECTOR #12	214B	__._	DETECTOR #26	2159	__._
DETECTOR #13	214C	05.0	DETECTOR #27	215A	__._
DETECTOR #14	214D	10.0	DETECTOR #28	215B	__._

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:18:32
++

TE 262-1A (11/95) MISCELLANEOUS PROGRAMMABLE DATA

EXTENSION TIMES - (EXTENSION TIME IN TENTHS OF SECONDS)

DETECTOR # 1	2160	__._	DETECTOR #15	216E	__._
DETECTOR # 2	2161	__._	DETECTOR #16	216F	__._
DETECTOR # 3	2162	__._	DETECTOR #17	2170	__._
DETECTOR # 4	2163	__._	DETECTOR #18	2171	__._
DETECTOR # 5	2164	__._	DETECTOR #19	2172	__._
DETECTOR # 6	2165	__._	DETECTOR #20	2173	__._
DETECTOR # 7	2166	__._	DETECTOR #21	2174	__._
DETECTOR # 8	2167	__._	DETECTOR #22	2175	__._
DETECTOR # 9	2168	__._	DETECTOR #23	2176	__._
DETECTOR #10	2169	__._	DETECTOR #24	2177	__._
DETECTOR #11	216A	__._	DETECTOR #25	2178	__._
DETECTOR #12	216B	__._	DETECTOR #26	2179	__._
DETECTOR #13	216C	__._	DETECTOR #27	217A	__._
DETECTOR #14	216D	__._	DETECTOR #28	217B	__._

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:18:43

++

TE 262-2 (11/95) MISCELLANEOUS PROGRAMMABLE DATA (CONT.)

PRE-EMPTION - IN SECONDS	PREMPT A LOC.	PREMPT A TIME	PREMPT B LOC.	PREMPT B TIME	PREMPT C LOC.	PREMPT C TIME
TIME BEFORE PRE-EMPTION	2180	___	2183	___	2186	___
EXTENSION TIME	2181	___	2184	___	2187	___
GUARANTEED GREEN TIME BEFORE	2182	002	2185	002	2188	002
CALL SELECT GREEN BEFORE					2189	___

	MISCELLANEOUS		
TIMING/RANGE	FUNCTION	LOC.	TIME
IN SECONDS	PHASE SELECTION - GUARANTEED GREEN TIME	218A	002
IN SECONDS	EXCLUSIVE PED. WALK INTERVAL	218B	___
IN SECONDS	EXCLUSIVE PED. CLEARANCE INTERVAL	218C	___
IN SECONDS	@ OFFSET HOLD - SAFETY OVERRIDE	218D	___
IN SECONDS	@ OFFSET HOLD - EXTENSION	218E	050
IN SECONDS	PREEMPT C PED CLR MAX SAFETY TIMER	218F	___

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:18:51

++

TE 262-3 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

TAPS EDIT PROTECT CODE	21DE	___
NO PROTECT = 000		
TRAFFIC COUNTS = 001		
PATTERN PHASING = 002		
PATTERN TIMING = 004		
TIMECLOCK TABLES = 008		
SIGNAL PROGRAMMABLE FEATURES = 016		
SIGNAL TIMING FEATURES AND FAILURE ALARMS = 032		
EDIT ACCESS CODE - MUST BE CODED IN ORDER TO EDIT ALL OTHER PROG. FEATURES LOCATIONS	21DF	xxx
* * * MAY NOT BE IMPLEMENTED BY DESKTOP * * *		

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:19:14
++

TE 262-3A (11/95) MASTER TIMECLOCK PROGRAMMABLE DATA

001-012	BEGIN DAYLIGHT SAVINGS TIME MONTH	21EC	004
001-012	END DAYLIGHT SAVINGS TIME MONTH	21ED	010
001=FIRST 002=SECOND 003=THIRD 004=FOURTH 005=LAST OR FIFTH	BEGIN DAYLIGHT SAVINGS TIME WEEK OF MONTH	21EE	001
	END DAYLIGHT SAVINGS TIME WEEK OF MONTH	21EF	005

001 - 012	*Use "C8" and "C9" commands to display	*MONTH OF YEAR	21F0	xxx
001 - 031		*DAY OF MONTH	21F1	xxx
000 - 099		*YEAR	21F2	xxx
000 - 023		*HOUR OF DAY	21F3	xxx
000 - 059		*MINUTE OF HOUR	21F4	xxx
000 - 059		*SECOND OF MINUTE	21F5	xxx
001 - 007		DAY OF WEEK	21F6	xxx
001 - 053 (READ ONLY)		WEEK OF YEAR	21F7	xxx

001 = To portable card 002 = From portable card	TRANSFER MASTER CLOCK	21F8	xxx

* * * 21F0-21F8 NOT IMPLEMENTED. USE CLOCK DOWNLOAD FUNCTION. * * *

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:19:22

++

TE 262-F (11/95) FAILURE ALARM DATA

ALARM LOCATIONS			ALARM LOCATIONS			ALARM CODES
ALARM 00	F00	___	ALARM 16	F16	___	
ALARM 01	F01	___	ALARM 17	F17	___	099=RTCA ERROR
ALARM 02	F02	___	ALARM 18	F18	___	098=EXCL. PED
ALARM 03	F03	___	ALARM 19	F19	___	SWITCH ERROR
ALARM 04	F04	___	ALARM 20	F20	___	097=COMM. ERROR
ALARM 05	F05	___	ALARM 21	F21	___	083=TIMECLOCK
ALARM 06	F06	___	ALARM 22	F22	___	ERROR
ALARM 07	F07	___	ALARM 23	F23	___	082=AC LINE
ALARM 08	F08	___	ALARM 24	F24	___	ERROR
ALARM 09	F09	___	ALARM 25	F25	___	079=COORDINATION
ALARM 10	F10	___	ALARM 26	F26	___	CONSISTANCY
ALARM 11	F11	___	ALARM 27	F27	___	ERROR
ALARM 12	F12	___	ALARM 28	F28	___	0xx=HIGH OCC.
ALARM 13	F13	___	ALARM 29	F29	___	1xx=LOW OCC.
ALARM 14	F14	___	ALARM 30	F30	___	2xx=DETECTOR
ALARM 15	F15	___	ALARM 31	F31	___	OVERRIDE

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:22:51
++

TE 262-4 (11/95)

PROGRAMMABLE FEATURES

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
VEHICLE PHASES PERMITTED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2200	BC
PEDESTRIAN PHASES PERMITTED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2201	__
	SP	SP	SP	SP	SP	SP	SP	SP		
STARTUP A OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	2202	22
STARTUP A OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	2203	31
STARTUP A OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	2204	20
STARTUP A OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	2205	__
STARTUP A OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	2206	__
STARTUP A OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	2207	04
STARTUP B OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	2208	__
STARTUP B OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	2209	__
STARTUP B OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	220A	__
STARTUP B OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	220B	__
STARTUP B OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	220C	__
STARTUP B OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	220D	__
STARTUP PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	220E	A0

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:23:14
++

TE 262-4A (11/95) PROGRAMMABLE FEATURES MISCELLANEOUS CONTROL WORDS

MISCELLANEOUS FUNCTIONS	(@ = NOT IMPLEMENTED BY TAPS)	LOC.	CODE
@ MANUAL CONTROL MODIFIER	ADVANCE = 01 HOLD = 02 EXCLUSIVE PED = 04	2210	__
@ REST POINT	BEFORE GAP = 00 AFTER GAP = 01	2211	__
DUAL RING MODIFIER	QUAD LEFT TURN OPERATION = 00 SPECIAL 6 PHASE SEQUENTIAL = 01	2212	__
CLEAR TABLE SELECTOR WORD	SIGNAL OPERATION FEATURES = 01 DAY PROGRAM = 02 YEAR PROGRAMMING TABLES = 04 PATTERN TIMING = 08 PATTERN PHASING = 10 TRAFFIC COUNT = 20 DIAGNOSTIC ERROR DATA = 40	2213	xx

* * * CLEAR TABLES FUNCTION NOT IMPLEMENTED BY DESKTOP. * * *

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:24:22
++

TE 262-5 (11/95) DETECTOR INPUT WORDS

INPUT NUMBER	LOC.	FUNC CODE	INPUT NUMBER	LOC.	FUNC CODE
INPUT # 1	2214	18	INPUT #16	2223	__
INPUT # 2	2215	__	INPUT #17	2224	__
INPUT # 3	2216	38	INPUT #18	2225	__
INPUT # 4	2217	48	INPUT #19	2226	__
INPUT # 5	2218	58	INPUT #20	2227	__
INPUT # 6	2219	__	INPUT #21	2228	__
INPUT # 7	221A	__	INPUT #22	2229	__
INPUT # 8	221B	__	INPUT #23	222A	~~38~~
INPUT # 9	221C	__	INPUT #24	222B	__
INPUT #10	221D	__	INPUT #25	222C	__
INPUT #11	221E	__	INPUT #26	222D	__
INPUT #12	221F	__	INPUT #27	222E	__
INPUT #13	2220	38	INPUT #28	222F	__
INPUT #14	2221	48			
INPUT #15	2222	__			

INPUT FUNC CODES

PED BUTTON	= X2
CALLING DET	= X4
NORMAL DET	= X8
EX PED	= 02
PREEMPT C	= 21
PREEMPT B	= 41
PREEMPT A	= 81
ϕ SLCT OMT A	= B1
ϕ SLCT OMT B	= B2
ϕ SLCT OMT C	= B4
ϕ SLCT OMT D	= B8
CYCLE 1	= C8
CYCLE 2	= C9
CYCLE 3	= CA
SYNC	= CB
OFFSET 1	= CC
OFFSET 2	= CD
OFFSET 3	= CE
FREE	= CF

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:25:37

++

TE 262-6 (11/95) INPUT CONTROL WORDS (CONT.)

FUNCTION									LOC.	CODE
INPUT JUMPING/SWITCHING	SECONDARY FUNCTION - INPUT #1								223C	68
	SECONDARY FUNCTION - INPUT #2								223D	__
NOTE: ANY INPUT	SECONDARY FUNCTION - INPUT #3								223E	__
FUNCTION CODE CAN BE	SECONDARY FUNCTION - INPUT #4								223F	__
USED AS A SECONDARY	SECONDARY FUNCTION - INPUT #5								2240	__
FUNCTION CODE.	SECONDARY FUNCTION - INPUT #6								2241	__
	SECONDARY FUNCTION - INPUT #7								2242	__
	SECONDARY FUNCTION - INPUT #8								2243	__
INPUT #1 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2244	FF
INPUT #2 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2245	__
INPUT #3 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2246	__
INPUT #4 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2247	__
INPUT #5 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2248	__
INPUT #6 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2249	__
INPUT #7 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224A	__
INPUT #8 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224B	__
DETECTOR ANALYSIS										
LOW OCCUPANCY OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224C	__
HIGH OCCUPANCY OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224D	__
MISCELLANEOUS (@ = NOT IMPLEMENTED)										
@ OFFSET HOLD-PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224E	__

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:27:24
++

TE 262-7 (10/96) OUTPUT CONTROL WORDS

COMBINE FUNCTION (X) AND SPECIFIER (Y) TO FORM CODE WORD (XY)

FUNCTION (X)	SPECIFIER (Y)	SWITCH PACK	LOC.	CODE
0 = PHASE	1-8 = PHASE			
		SP1	2270	01
1 = PED ***	1 (9) = PEDA 4 (C) = PEDD	SP2	2271	__
	2 (A) = PEDB 5 (D) = PEDE	SP3	2272	03
	3 (B) = PEDC 6 (E) = PEDF	SP4	2273	04
2 = OVERLAP	1 = OVLA 4 = OVLD	SP5	2274	05
	2 = OVLB 5 = OVLE	SP6	2275	06
	3 = OVLC 6 = OVLF	SP7	2276	__
		SP8	2277	__
4 = DOUBLE CLR	1 = DCA 2 = DCB	SP9*	2278	21
	3 = DCC 4 = DCD	SP10	2279	__
	5 = DCE 6 = DCF			
6 = DC/OVL	1 = DC/OVLA 2 = DC/OVLB	SP11**	227A	__
		SP12	227B	__
C = MASTER	0 = UNUSED/OFF2/OFF3	SP13	227C	03
OUTPUTS	C = CYC1/CYC2/CYC3	SP14	227D	__
(R/Y/G)	F = FREE/SYNC/OFF1			

NOTES: * SP9 (YELLOW) Outputs Aux Output by Timeclock
** SP11 (YELLOW) Outputs Blue Light
*** Choose value in () for solid yellow output during DON'T WALK

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:28:50

++

TE 262-7A (11/95)

OVERLAPS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
OVERLAP A GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	227E	08
OVERLAP B GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	227F	__
OVERLAP C GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2280	__
OVERLAP D GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2281	__
OVERLAP E GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2282	__
OVERLAP F GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2283	__
OVERLAP A CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2284	28
OVERLAP B CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2285	__
OVERLAP C CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2286	__
OVERLAP D CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2287	__
OVERLAP E CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2288	__
OVERLAP F CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2289	__
DC/OVL A DBL. CLEAR PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228A	__
DC/OVL B DBL. CLEAR PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228B	__
DC/OVL A OVL GREEN PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228C	__
DC/OVL B OVL GREEN PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228D	__
DC/OVL A CLEARANCE PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228E	__
DC/OVL B CLEARANCE PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228F	__

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:29:00
++

TE 262-8 (11/95)

OUTPUT CONTROL WORDS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
PEDESTRIAN										
PEDESTRIAN A PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2290	__
PEDESTRIAN B PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2291	__
PEDESTRIAN C PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2292	__
PEDESTRIAN D PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2293	__
PEDESTRIAN E PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2294	__
PEDESTRIAN F PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2295	__
FLASHING WALK PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2296	__
PEDESTRIAN PHASE REST N WALK	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2297	__
EXTENDED PED CLEARANCE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2298	__
DOUBLE CLEARANCE										
DOUBLE CLEARANCE A PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2299	__
DOUBLE CLEARANCE B PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229A	__
DOUBLE CLEARANCE C PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229B	__
DOUBLE CLEARANCE D PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229C	__
DOUBLE CLEARANCE E PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229D	__
DOUBLE CLEARANCE F PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229E	__

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:29:08

++

TE 262-8A (11/95) OUTPUT CONTROL WORDS (CONT.)

3 COLOR FLASH MODIFIER	NO = 00				YES = 01				229F	__
	SP	SP	SP	SP	SP	SP	SP	SP		
3 COLOR FLASH MODIFIER OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	22A0	__
3 COLOR FLASH MODIFIER OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	22A1	__
3 COLOR FLASH MODIFIER OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	22A2	__
3 COLOR FLASH MODIFIER OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	22A3	__
3 COLOR FLASH MODIFIER OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22A4	__
3 COLOR FLASH MODIFIER OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	22A5	__
LIGHT REDUCTION										
LIGHT REDUCTION OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	22A6	__
LIGHT REDUCTION OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	22A7	__
LIGHT REDUCTION OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	22A8	__
LIGHT REDUCTION OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	22A9	__
LIGHT REDUCTION OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22AA	__
LIGHT REDUCTION OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	22AB	__

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:29:15
++

TE 262-9 (11/95)

PHASE SELECTION

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
PHASE SELECTION - OMIT A	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AC	__
PHASE SELECTION - OMIT B	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AD	__
PHASE SELECTION - OMIT C	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AE	__
PHASE SELECTION - OMIT D	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AF	__
PHASE SELECTION - MODIFIER	OMIT IN ORDER OF CALL = 00 OMIT PRIORITY A-B-C-D = 80								22B0	__

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:29:32

++

TE 262-9A (11/95)

PREEMPTION WORDS

PREEMPT MODIFIER	PREEMPT C FLASH = 02 PREEMPT C FLASH = TC FLASH = 82 PREEMPT PRIORITY C-A-B = 20	22B1	___
BLUE LIGHT MODIFIER & SELECTOR - COMBINE BLUE LIGHT OUTPUT (X) AND PREEMPTION SPECIFIER (Y) TO FORM CODE WORD (XY)		22B2	___
BLUE LIGHT OUTPUT (X) FLASH = 0 STEADY = 8	PREEMPTION SPECIFIER (Y) NO BLUE LIGHT = 0 PREEMPT A = 1 PREEMPT B = 2 PREEMPT C = 4		

	PHASE WORD									
FUNCTION	8	4	2	1	8	4	2	1	LOC.	CODE
PREEMPT A PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B3	___
PREEMPT B PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B4	___
PREEMPT C PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B5	___
PREEMPT C CALL SELECT ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B6	___
		SP	SP		SP	SP	SP	SP		
PREEMPT C FLASH OUTPUT	-	3Y	3R	-	2Y	2R	-	1R	22B7	___
PREEMPT C FLASH OUTPUT	-	6Y	6R	-	5Y	5R	-	4R	22B8	___
PREEMPT C FLASH OUTPUT	-	9Y	9R	-	8Y	8R	-	7R	22B9	___
PREEMPT C FLASH OUTPUT	-	12Y	12R	-	11Y	11R	-	10R	22BA	___
PREEMPT C FLASH OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22BB	___
PREEMPT C FLASH OUTPUT	-	14Y	14R	-	13Y	13R	-	-	22BC	___
PREEMPT C PED CLR SW	= 00 USE EXISTING PED CLR = 01 USE PREEMPT C MAX PED CLR SAFETY TIMER (SEE 218F)								22BD	___
PREEMPT C PED CLR TIMER - PHASES TO OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22BE	___

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:30:42

++

TE 262-10 (11/95) TIMECLOCK FUNCTIONS

FUNCTION	8	4	2	1	8	4	2	1	LOC.	CODE
		SP	SP		SP	SP	SP	SP		
FLASH OUTPUT	-	3Y	3R	-	2Y	2R	-	1R	22CE	__
FLASH OUTPUT	-	6Y	6R	-	5Y	5R	-	4R	22CF	__
FLASH OUTPUT	-	9Y	9R	-	8Y	8R	-	7R	22D0	__
FLASH OUTPUT	-	12Y	12R	-	11Y	11R	-	10R	22D1	__
FLASH OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22D2	__
FLASH OUTPUT	-	14Y	14R	-	13Y	13R	-	-	22D3	__
OMIT A PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D4	__
OMIT B PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D5	__
REST IN RED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D6	__
MAX GRN II PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D7	A8
MAX GRN III PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D8	__
INPUT 1-16 BY TIMECLOCK	1	3	5	7	9	11	13	15		
	2	4	6	8	10	12	14	16	22D9	__
INPUT 17-28 BY TIMECLOCK	17	19	21	23	25	27				
	18	20	22	24	26	28			22DA	__

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150

++

TE 264-1 (11/95) MODEL 179 TIMECLOCK EVENT TABLE

	A	B	C	D		A	B	C	D
EVENT #	DAY PROG. #	PATT. #	TIME CLOCK FUNCT	TIME HR : MIN.	EVENT #	DAY PROG. #	PATT. #	TIME CLOCK FUNCT	TIME HR : MIN.
E001	001	000	008	07:3	E007	___	___	___	__:_
E002	001	000	000	09:3	E008	___	___	___	__:_
E003	001	000	016	16:0	E009	___	___	___	__:_
E004	001	000	000	18:0	E010	___	___	___	__:_
E005	___	___	___	__:_	E011	___	___	___	__:_
E006	___	___	___	__:_	E012	___	___	___	__:_

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 10/04/00 TIME: 09:21:35
++

TE 264-2 (11/95) TABLE OF WEEK PROGRAMS

WEEK #		001	002	003	004	005	006	007	008	009	010
DAY	CODE	d01	d02	d03	d04	d05	d06	d07	d08	d09	d10
SUN	1	___	___	___	___	___	___	___	___	___	___
MON	2	001	___	___	___	___	___	___	___	___	___
TUES	3	001	___	___	___	___	___	___	___	___	___
WED	4	001	___	___	___	___	___	___	___	___	___
THUR	5	001	___	___	___	___	___	___	___	___	___
FRI	6	001	___	___	___	___	___	___	___	___	___
SAT	7	___	___	___	___	___	___	___	___	___	___

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:32:38
++

TE 264-3 (11/95) TABLE OF YEAR PROGRAMS

CODE	WEEK NO.	CODE	WEEK PROG#	CODE	WEEK NO.	CODE	WEEK PROG#	CODE	WEEK NO.	CODE	WEEK PROG#
2550	___	2551	___	2562	___	2563	___	2574	___	2575	___
2552	___	2553	___	2564	___	2565	___	2576	___	2577	___
2554	___	2555	___	2566	___	2567	___	2578	___	2579	___
2556	___	2557	___	2568	___	2569	___	257A	___	257B	___
2558	___	2559	___	256A	___	256B	___	257C	___	257D	___
255A	___	255B	___	256C	___	256D	___	257E	___	257F	___
255C	___	255D	___	256E	___	256F	___	2580	___	2581	___
255E	___	255F	___	2570	___	2571	___	2582	___	2583	___
2560	___	2561	___	2572	___	2573	___				

CCS = 87B Signal # = 144 Rte = 120 Rte Seq # = 150
DATE: 11/21/98 TIME: 12:32:55
++

TE 264-4 (11/95) TABLE OF EXCEPTION DAYS

CODE	MONTH NO.	CODE	DAY OF MONTH	CODE	DAY PROG NO.
2590	___	2591	___	2592	___
2593	___	2594	___	2595	___
2596	___	2597	___	2598	___
2599	___	259A	___	259B	___
259C	___	259D	___	259E	___
259F	___	25A0	___	25A1	___
25A2	___	25A3	___	25A4	___
25A5	___	25A6	___	25A7	___

CODE	MONTH NO.	CODE	DAY OF MONTH	CODE	DAY PROG NO.
25A8	___	25A9	___	25AA	___
25AB	___	25AC	___	25AD	___
25AE	___	25AF	___	25B0	___
25B1	___	25B2	___	25B3	___
25B4	___	25B5	___	25B6	___
25B7	___	25B8	___	25B9	___
25BA	___	25BB	___	25BC	___
25BD	___	25BE	___	25BF	___

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____

SIGNAL # W144 COUNTY # WEST DATE _____

SWITCH PACK	FUNCTION	INDICATIONS	FACE	TERMINAL WIRING BOARD		FACE	TERMINAL WIRING BOARD	
				TERMINAL	WIRE COLOR CODE		TERMINAL	WIRE COLOR CODE
1	Ø1	RED	1	SP 1 R	14 / 15C - B - R	2	SP 1 R	14 / 10C - A - R
		YELLOW		SP 1 Y	- O		SP 1 Y	- O
		GREEN		SP 1 G	- G		SP 1 G	- G
		Ground Wire		Grnd Bus	- W		Grnd Bus	- W
2				SP 2 R			SP 2 R	
				SP 2 Y			SP 2 Y	
				SP 2 G			SP 2 G	
		Ground Wire		Grnd Bus			Grnd Bus	
3	Ø3	RED	5	SP 3 R	14 / 15C - C - R/B	6	SP 3 R	14 / 15C - D - R/W
		YELLOW		SP 3 Y	- O/B		SP 3 Y	- BL/W
		GREEN		SP 3 G	- G/B		SP 3 G	- G/W
		Ground Wire		Grnd Bus	- W/B		Grnd Bus	- B/W
4	Ø4	RED	7	SP 4 R	14 / 15C - B - R/W	8	SP 4 R	14 / 10C - A - R/B
		YELLOW		SP 4 Y	- BL/W		SP 4 Y	- O/B
		GREEN		SP 4 G	- G/W		SP 4 G	- G/B
		Ground Wire		Grnd Bus	- B/W		Grnd Bus	- W/B
5	Ø5	RED	3	SP 5 R	14 / 15C - C - R	4	SP 5 R	14 / 15C - D - R
		YELLOW		SP 5 Y	- O		SP 5 Y	- O
		GREEN		SP 5 G	- G		SP 5 G	- G
		Ground Wire		Grnd Bus	- W		Grnd Bus	- W
6	Ø6	----------	1	SP 6 R	----------		SP 6 R	
		←		SP 6 Y	14 / 15C - B - O/B		SP 6 Y	
				SP 6 G	- G/B		SP 6 G	
		Ground Wire		Grnd Bus	- W/B		Grnd Bus	
7				SP 7 R			SP 7 R	
				SP 7 Y			SP 7 Y	
				SP 7 G			SP 7 G	
		Ground Wire		Grnd Bus			Grnd Bus	
8				SP 8 R			SP 8 R	
				SP 8 Y			SP 8 Y	
				SP 8 G			SP 8 G	
		Ground Wire		Grnd Bus			Grnd Bus	
9	OVL. 'A' Ø3+Ø5-Ø5G	----------	4	SP 9 R	----------		SP 9 R	
		→		SP 9 Y	14 / 15C - D - O/B		SP 9 Y	
				SP 9 G	- G/B		SP 9 G	
		Ground Wire		Grnd Bus	- W/B		Grnd Bus	
10				SP 10 R			SP 10 R	
				SP 10 Y			SP 10 Y	
				SP 10 G			SP 10 G	
		Ground Wire		Grnd Bus			Grnd Bus	
11				SP 11 R			SP 11 R	
				SP 11 Y			SP 11 Y	
				SP 11 G			SP 11 G	
		Ground Wire		Grnd Bus			Grnd Bus	
12				SP 12 R			SP 12 R	
				SP 12 Y			SP 12 Y	
				SP 12 G			SP 12 G	
		Ground Wire		Grnd Bus			Grnd Bus	
13	Ø3	----------	5	SP 13 R	----------	6	SP 13 R	----------
		←		SP 13 Y	14 / 15C - C - BL/W		SP 13 Y	14 / 15C - D - BL/B
				SP 13 G	- G/W		SP 13 G	- BL
		Ground Wire		Grnd Bus	- B/W		Grnd Bus	- B
14				SP 14 R			SP 14 R	
				SP 14 Y			SP 14 Y	
				SP 14 G			SP14 G	
		Ground Wire		Grnd Bus			Grnd Bus	

TE 262-13 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____

SIGNAL # W144 COUNTY # WEST. DATE _____

CONFLICT/CURRENT MONITOR PROGRAMMING

CONFLICT MONITOR DIODES TO BE CUT			CONFLICT MONITOR YELLOW JUMPERS TO BE INSTALLED	CURRENT MONITOR DIODES TO BE CUT
SP1 - SP5				2, 6, 7, 8, 9 - 14
SP1 - SP6				
SP1 - SP9				
SP3 - SP9				
SP3 - SP13				
[redacted]				
SP5 - SP9				
SP9 - SP13				

NOTES: _____

TE 262-14 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____

SIGNAL # W144 COUNTY # WEST. DATE _____

TABLE OF INPUT WIRING

TERM NUMBER	FUNCTION	DET. NO.	DET. TYPE	DET. AN OVER	REMARKS
1A, 1B	Ø1	1A	LOOP		POINT
2A, 2B					
3A, 3B	Ø3	3A, 3B	LOOPS		PRESENCE
4A, 4B	Ø4	4A	LOOP		PRESENCE
5A, 5B	Ø5	5A	LOOP		POINT
6A, 6B					
7A, 7B					
8A, 8B					
9A, 9B					
10A, 10B					
11A, 11B					
12A, 12B					
13A, 13B	Ø3	13A	QUAD.		PRESENCE
14A, 14B	Ø4	14A	LOOP		PRESENCE
15A, 15B					
16A, 16B					
17A, 17B					
18A, 18B					
19A, 19B					
20A, 20B					
21A, 21B					
22A, 22B					
23A, 23B	Ø3	23A	LOOP		PRESENCE
24A, 24B					
25A, 25B					
26A, 26B					
27A, 27B					
28A, 28B					

TAPS — MODEL 179 OPERATING INSTRUCTIONS
KEYBOARD INPUT COMMANDS — SUMMARY

D<LOCATION #>:

d a a a a x x	or	d a a a a t t t	or	d a a a a A t t t

d = DISPLAY LOCATION # COMMAND
aaaa = LOCATION # ENTERED
A = DAY PROGRAM EVENT PART (A-D)
(LOCATIONS E001 - E192 ONLY)
xx = HEX. DATA VALUE (OO-FF)
ttt = DECIMAL DATA VALUE (000-255)

DAA<TIMING INT. #>:

d A A i i F a: t t t

dAA = DISPLAY RING A INTERVAL COMMAND
ii = INTERVAL NUMBER ENTERED (00-31)
F = FAZE
a = RING A PHASE # (1-4) - DYNAMIC
ttt = INTERVAL TIMING - DYNAMIC

DBB<TIMING INT. #>:

d b b j j F b: s s s

dbb = DISPLAY RING B INTERVAL COMMAND
jj = INTERVAL NUMBER ENTERED (00-31)
F = FAZE
b = RING B PHASE # (5-8) - DYNAMIC
sss = INTERVAL TIMING - DYNAMIC

DCC<DETECTOR #>:

d C C l l x x x

dCC = DISPLAY DETECTOR COUNT COMMAND
ll = DETECTOR NUMBER ENTERED (01-40)
xxx = NUMBER OF ACTUATIONS SINCE TERMINATION OF PHASE GREEEN

CC7:

:C 7: mm:d d:y y

C7 = CHIP DATE month/day/year COMMAND
mm = MONTH (01-12)
dd = DAY (01-31)
yy = YEAR (00-99)

CC8:

:C 8: mm:d d:y y

C8 = MASTER CLOCK month/day/year COMMAND
mm = MONTH (01-12)
dd = DAY (01-31)
yy = YEAR (00-99)

CC9:

:C 9: h h:m m:s s

C9 = MASTER CLOCK hour/min/sec COMMAND
hh = HOUR (00-23)
mm = MINUTE (00-59)
ss = SECOND (00-59)

CCA:

F a:C A:z z i i: t t t

CA = RING A DYNAMIC DISPLAY COMMAND
F = FAZE
a = RING A ACTIVE PHASE # (1-4)
ii = RING A ACTIVE PHASE TIMING INTERVAL #
ttt = DYNAMIC INTERVAL TIMING
zz = PHASE TERMINATION MODE - FLASHING
FLASHING DURING CLEARANCE

CCB:

z z:C B:F b j j: s s s

CB = RING B DYNAMIC DISPLAY COMMAND
F = FAZE
b = RING B ACTIVE PHASE # (5-8)
jj = RING B ACTIVE PHASE TIMING INTERVAL #
sss = DYNAMIC INTERVAL TIMING
zz = PHASE TERMINATION MODE - FLASHING

CCC:

F a:C C:F b i i: :j j

CC = DUAL RING DYNAMIC DISPLAY COMMAND
F = FAZE
a = RING A ACTIVE PHASE # (1-4)
b = RING B ACTIVE PHASE # (5-8)
ii = RING A ACTIVE PHASE TIMING INTERVAL #
jj = RING B ACTIVE PHASE TIMING INTERVAL #
(ii and jj replaced by zz during clearance)

CCD:

i i:C D:j j t t t s s s

CD = DUAL RING DYNAMIC DISPLAY COMMAND
ii = RING A ACTIVE PHASE TIMING INTERVAL #
jj = RING B ACTIVE PHASE TIMING INTERVAL #
ttt = RING A DYNAMIC INTERVAL TIMING
sss = RING B DYNAMIC INTERVAL TIMING

CCE:

m m:C E:n n g g.g h h.h

CE = MAX GRN/GAP DUAL RING DISPLAY COMMAND
mm = RING A MAX GRN TIMER — DYNAMIC
nn = RING B MAX GRN TIMER - DYNAMIC
gg.g = RING A GAP TIMER - DYNAMIC
hh.h = RING B GAP TIMER - DYNAMIC

E 260 (7/91)
REVERSE

TAPS — MODEL 179 OPERATING INSTRUCTIONS
KEYBOARD INPUT COMMANDS — SUMMARY

CCF:

```
y y:C F:m m
d d:h h:t t
```

CF = CABINET FLASH DISPLAY COMMAND
yy = YEAR (00-99)
mm = MONTH (01-12)
dd = DAY (01-31)
hh = HOUR (00-23)
tt = MINUTE (00-59)

C00:

```
x x:0 0:z z
      A A A
```

00 = PATTERN NUMBER DISPLAY COMMAND
xx = PATTERN # IN EFFECT
zz = MODE
AAA = CYCLE LENGTH IN EFFECT

C01:

```
O F:0 1:S Y
b b b a a a
```

01 = CYCLE/OFFSET DISPLAY COMMAND
OF = OFFSET
SY = SYSTEM
bbb = LOCAL CYCLE TIMER
aaa = SYSTEM CYCLE TIMER

C02:

```
CY:0 2:z z
b b b a a a
```

02 = VEHICLE PERMISSIVE DISPLAY COMMAND
CY = CYCLE
zz = PERMISSIVE IN EFFECT
bbb = LOCAL CYCLE TIMER
aaa = PERMISSIVE TIMER
call lights = phases not omitted

C03:

```
CY:0 3:z z
b b b a a a
```

03 = PEDESTRIAN PERMISSIVE DISPLAY COMMAND
CY = CYCLE
zz = PEDESTRIAN PERMISSIVE IN EFFECT
bbb = LOCAL CYCLE TIMER
aaa = PERMISSIVE TIMER
call lights = ped phase not omitted

C04:

```
CY:0 4:z z
b b b a a a
```

04 = FORCE OFF DISPLAY COMMAND
CY = CYCLE
zz = FORCE OFF COMING UP
bbb = LOCAL CYCLE TIMER
aaa = TIME TO FORCE OFF
call lights = phases forced off

DISPLAY COMMANDS

F<ALARM LOC #>:

```
F a a r n n
      x x x
```

F = FAILURE ALARM DISPLAY COMMAND
aa = ALARM LOC NUMBER ENTERED (00-31)
r = RESETS OR OCCURANCES
nn = NUMBER OF RESETS (00-12)
xxx = FAILURE ALARM CODE

FAILURE ALARM CODES

001-032 HIGH OCCUPANCY DETECTOR 01-32
101-132 LOW OCCUPANCY DETECTOR 01-32
201-232 DETECTOR ANALYSIS OVERRIDE DETECTOR 01-32
099 MASTER CLOCK RTCA ERROR-RESET CLOCK
098 EXCLUSIVE PEDESTRIAN PUSH BUTTON ERROR
097 COMMUNICATIONS ERROR
089 MODEL 602 MODEM SETUP ERROR
088 MODEL 602 MODEM SETUP ERROR
084 RTCA ERROR
083 MASTER CLOCK DATA ERROR-RESET CLOCK
082 MAIN A.C. SERVICE ERROR-CHECK SERVICE
079 PATTERN CONSISTENCY CHECK ERROR (COORD)
078 LATE RETURN TO ARTERY (COORD)

FATAL ERROR MESSAGES: EEPRO, RA, PRO, GUARD, BORDER, COURT, AC LINE, NEORRF

TE-26X

STATE OF NEW YORK - DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING & SAFETY DIVISION
TRAFFIC CONTROL SPECIFICATIONS

Study :
Contract : D258096
PIN: 8826.11.321
File : 55.37-120

W-571 (SIGNAL NO(S)) WESTCHESTER (COUNTY)

INTERSECTION ROUTE 120 AT NEW KING STREET

☐ CITY ☐ VILLAGE ☒ TOWN OF NORTH CASTLE

Department Order filed _____ as Section _____ Subdivision _____

Prior specifications hereby superseded ☒ None ☐ _____

Purpose : INSTALL TRAFFIC SIGNAL UNDER CONTRACT D258096.

These specifications will be effective upon the ☒ Installation ☐ Modification of the necessary traffic control device(s) required by and conforming to the State Manual of Uniform Traffic Control Devices

I. This Signal shall

A. Operate in accordance with the Table of Operations and / of Change intervals as shown on page(s) 3 as a :

- ☐ Pretimed Signal
- ☐ Semi-traffic actuated signal
- ☒ Full-traffic actuated signal
- ☐ Pedestrian actuated signal
- ☐ Other _____

B.

- ☐ Display vehicular indications
- ☒ Display pedestrian indications
- ☒ Be equipped with vehicle detectors
- ☐ Be equipped with Pedestrian pushbuttons

as shown in the ☐ schematic ☒ scaled drawing on page 3

Be equipped with ☐ pre-emption ☒ interconnection and / or coordination which are described as follows

TBC W/ W-586

cc: ( ) ☐ Main Office
(1) ☒ Region 8 Traffic Engineer
(2) ☒ SIGNAL SHOP
(1) ☒ CONTRACT NAINTAINER

_____ _____ RTE
Date Signature Title

Installation Date _____

Modification Date _____

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:40:34
++

TE 261 (11/95) PHASE TIMING DATA/TIMER INTERVALS

INTERVAL	PHASE/ INT. #	F1	F2	F3	F4	F5	F6	F7	F8
MEMORY/RECALL	00	003	000	000	000	003	000	000	000
WALK	01	___	___	___	___	___	___	___	___
PEDESTRIAN CLEARANCE	02	___	___	___	___	___	___	___	___
INITIAL	03	005	___	003	___	005	___	___	___
VARIABLE INITIAL	04	__._	__._	__._	__._	__._	__._	__._	__._
VARIABLE INIT. LIMIT	05	050	050	050	050	050	050	050	050
TIME BEFOR REDUCTION	06	___	___	___	___	___	___	___	___
TIME TO REDUCE	07	___	___	___	___	___	___	___	___
MAXIMUM GAP	08	03.0	00.1	02.0	00.1	03.0	00.1	00.1	00.1
MINIMUM GAP	09	__._	__._	__._	__._	__._	__._	__._	__._
GAP CLOCK	10	USED	WITH	DAA	ONLY	USED	WITH	DBB	ONLY
MAXIMUM GREEN 1	11	035	___	030	___	035	___	___	___
MAXIMUM GREEN 2	12	___	___	___	___	___	___	___	___
MAXIMUM GREEN 3	13	___	___	___	___	___	___	___	___
RECALL GREEN	14	035	___	025	___	025	___	___	___
YELLOW CLEARANCE	15	04.0	__._	04.0	__._	04.0	__._	__._	__._
RED CLEARANCE	16	01.0	__._	01.0	__._	01.0	__._	__._	__._
THIRD CLEARANCE	17	__._	__._	__._	__._	__._	__._	__._	__._
FOURTH CLEARANCE	18	__._	__._	__._	__._	__._	__._	__._	__._
		F1	F2	F3	F4	F5	F6	F7	F8

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:45:54
++

TE 262-0 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

TIMING/RANGE	FUNCTION	LOC.	TIME
IN SECONDS	STARTUP CLEARANCE TIMER A	2100	002
IN SECONDS	STARTUP CLEARANCE TIMER B	2101	___
IN MINUTES	DETECTOR ANALYSIS TIME	2102	034
000 = GREEN GATING 001 = UNCONDITIONAL	UNCONDITIONAL DELAY/EXTENSION	2103	___
IN SECONDS / 004-012	ALL RED STARTUP TIMER	2104	004
ENABLE = 000 DISABLE = 170	ACLINE FATAL ERROR SWITCH	2110	___
ENABLE = 102 DISABLE = 000	DIAGNOSTIC MESSAGE CIRCULAR BUFFER (USED WITH GUARD)	2111	___
001 - 255	MAXIMUM RANDOM INPUT INTERVAL	2115	___
001 - 040	MAX NO OF PERMITTED DETECTORS	2116	___
ENABLE = 099 DISABLE = 000	RANDOM INPUTS SWITCH WORD	2117	___

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:46:42
++

TE 262-1 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

DELAY TIMES - (DELAY TIME IN TENTHS OF SECONDS)

DETECTOR # 1	2140	__._	DETECTOR #15	214E	__._
DETECTOR # 2	2141	__._	DETECTOR #16	214F	__._
DETECTOR # 3	2142	__._	DETECTOR #17	2150	__._
DETECTOR # 4	2143	__._	DETECTOR #18	2151	__._
DETECTOR # 5	2144	__._	DETECTOR #19	2152	__._
DETECTOR # 6	2145	__._	DETECTOR #20	2153	__._
DETECTOR # 7	2146	__._	DETECTOR #21	2154	__._
DETECTOR # 8	2147	__._	DETECTOR #22	2155	__._
DETECTOR # 9	2148	__._	DETECTOR #23	2156	05.0
DETECTOR #10	2149	__._	DETECTOR #24	2157	05.0
DETECTOR #11	214A	__._	DETECTOR #25	2158	__._
DETECTOR #12	214B	__._	DETECTOR #26	2159	__._
DETECTOR #13	214C	__._	DETECTOR #27	215A	__._
DETECTOR #14	214D	__._	DETECTOR #28	215B	__._

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:46:50
++

TE 262-1A (11/95) MISCELLANEOUS PROGRAMMABLE DATA

EXTENSION TIMES - (EXTENSION TIME IN TENTHS OF SECONDS)

DETECTOR # 1	2160	__._	DETECTOR #15	216E	__._
DETECTOR # 2	2161	__._	DETECTOR #16	216F	__._
DETECTOR # 3	2162	__._	DETECTOR #17	2170	__._
DETECTOR # 4	2163	__._	DETECTOR #18	2171	__._
DETECTOR # 5	2164	__._	DETECTOR #19	2172	__._
DETECTOR # 6	2165	__._	DETECTOR #20	2173	__._
DETECTOR # 7	2166	__._	DETECTOR #21	2174	__._
DETECTOR # 8	2167	__._	DETECTOR #22	2175	__._
DETECTOR # 9	2168	__._	DETECTOR #23	2176	__._
DETECTOR #10	2169	__._	DETECTOR #24	2177	__._
DETECTOR #11	216A	__._	DETECTOR #25	2178	__._
DETECTOR #12	216B	__._	DETECTOR #26	2179	__._
DETECTOR #13	216C	__._	DETECTOR #27	217A	__._
DETECTOR #14	216D	__._	DETECTOR #28	217B	__._

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:47:08
++

TE 262-2 (11/95) MISCELLANEOUS PROGRAMMABLE DATA (CONT.)

PRE-EMPTION - IN SECONDS	PREMPT A LOC.	PREMPT A TIME	PREMPT B LOC.	PREMPT B TIME	PREMPT C LOC.	PREMPT C TIME
TIME BEFORE PRE-EMPTION	2180	___	2183	___	2186	___
EXTENSION TIME	2181	___	2184	___	2187	___
GUARANTEED GREEN TIME BEFORE	2182	002	2185	002	2188	002
CALL SELECT GREEN BEFORE					2189	___

	MISCELLANEOUS		
TIMING/RANGE	FUNCTION	LOC.	TIME
IN SECONDS	PHASE SELECTION - GUARANTEED GREEN TIME	218A	002
IN SECONDS	EXCLUSIVE PED. WALK INTERVAL	218B	___
IN SECONDS	EXCLUSIVE PED. CLEARANCE INTERVAL	218C	___
IN SECONDS	@ OFFSET HOLD - SAFETY OVERRIDE	218D	___
IN SECONDS	@ OFFSET HOLD - EXTENSION	218E	050
IN SECONDS	PREEMPT C PED CLR MAX SAFETY TIMER	218F	___

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:47:17

++

TE 262-3 (11/95) MISCELLANEOUS PROGRAMMABLE DATA

TAPS EDIT PROTECT CODE	21DE	___
NO PROTECT = 000		
TRAFFIC COUNTS = 001		
PATTERN PHASING = 002		
PATTERN TIMING = 004		
TIMECLOCK TABLES = 008		
SIGNAL PROGRAMMABLE FEATURES = 016		
SIGNAL TIMING FEATURES AND FAILURE ALARMS = 032		
EDIT ACCESS CODE - MUST BE CODED IN ORDER TO EDIT ALL OTHER PROG. FEATURES LOCATIONS	21DF	xxx
* * * MAY NOT BE IMPLEMENTED BY DESKTOP * * *		

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:48:13
++

TE 262-3A (11/95) MASTER TIMECLOCK PROGRAMMABLE DATA

001-012	BEGIN DAYLIGHT SAVINGS TIME MONTH	21EC	004
001-012	END DAYLIGHT SAVINGS TIME MONTH	21ED	010
001=FIRST 002=SECOND 003=THIRD 004=FOURTH 005=LAST OR FIFTH	BEGIN DAYLIGHT SAVINGS TIME WEEK OF MONTH	21EE	001
	END DAYLIGHT SAVINGS TIME WEEK OF MONTH	21EF	005

001 - 012	*MONTH OF YEAR	21F0	xxx
001 - 031	*DAY OF MONTH	21F1	xxx
000 - 099	*YEAR	21F2	xxx
000 - 023	*HOUR OF DAY	21F3	xxx
000 - 059	*MINUTE OF HOUR	21F4	xxx
000 - 059	*SECOND OF MINUTE	21F5	xxx
001 - 007	DAY OF WEEK	21F6	xxx
001 - 053 (READ ONLY)	WEEK OF YEAR	21F7	xxx

*Use "C8" and "C9" commands to display

001 = To portable card 002 = From portable card	TRANSFER MASTER CLOCK	21F8	xxx

* * * 21F0-21F8 NOT IMPLEMENTED. USE CLOCK DOWNLOAD FUNCTION. * * *

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:51:13
++

TE 262-F (11/95) FAILURE ALARM DATA

ALARM LOCATIONS			ALARM LOCATIONS			ALARM CODES
ALARM 00	F00	___	ALARM 16	F16	___	
ALARM 01	F01	___	ALARM 17	F17	___	099=RTCA ERROR
ALARM 02	F02	___	ALARM 18	F18	___	098=EXCL. PED
ALARM 03	F03	___	ALARM 19	F19	___	SWITCH ERROR
ALARM 04	F04	___	ALARM 20	F20	___	097=COMM. ERROR
ALARM 05	F05	___	ALARM 21	F21	___	083=TIMECLOCK
ALARM 06	F06	___	ALARM 22	F22	___	ERROR
ALARM 07	F07	___	ALARM 23	F23	___	082=AC LINE
ALARM 08	F08	___	ALARM 24	F24	___	ERROR
ALARM 09	F09	___	ALARM 25	F25	___	079=COORDINATION
ALARM 10	F10	___	ALARM 26	F26	___	CONSISTANCY
ALARM 11	F11	___	ALARM 27	F27	___	ERROR
ALARM 12	F12	___	ALARM 28	F28	___	0xx=HIGH OCC.
ALARM 13	F13	___	ALARM 29	F29	___	1xx=LOW OCC.
ALARM 14	F14	___	ALARM 30	F30	___	2xx=DETECTOR
ALARM 15	F15	___	ALARM 31	F31	___	OVERRIDE

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:52:35
++

TE 262-4 (11/95)

PROGRAMMABLE FEATURES

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
VEHICLE PHASES PERMITTED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2200	A8
PEDESTRIAN PHASES PERMITTED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2201	__
	SP	SP	SP	SP	SP	SP	SP	SP		
STARTUP A OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	2202	22
STARTUP A OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	2203	10
STARTUP A OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	2204	__
STARTUP A OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	2205	__
STARTUP A OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	2206	__
STARTUP A OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	2207	__
STARTUP B OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	2208	__
STARTUP B OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	2209	__
STARTUP B OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	220A	__
STARTUP B OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	220B	__
STARTUP B OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	220C	__
STARTUP B OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	220D	__
STARTUP PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	220E	A0

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:52:43
++

TE 262-4A (11/95) PROGRAMMABLE FEATURES MISCELLANEOUS CONTROL WORDS

MISCELLANEOUS FUNCTIONS	(@ = NOT IMPLEMENTED BY TAPS)	LOC.	CODE
@ MANUAL CONTROL MODIFIER	ADVANCE = 01 HOLD = 02 EXCLUSIVE PED = 04	2210	__
@ REST POINT	BEFORE GAP = 00 AFTER GAP = 01	2211	__
DUAL RING MODIFIER	QUAD LEFT TURN OPERATION = 00 SPECIAL 6 PHASE SEQUENTIAL = 01	2212	__
CLEAR TABLE SELECTOR WORD	SIGNAL OPERATION FEATURES = 01 DAY PROGRAM = 02 YEAR PROGRAMMING TABLES = 04 PATTERN TIMING = 08 PATTERN PHASING = 10 TRAFFIC COUNT = 20 DIAGNOSTIC ERROR DATA = 40	2213	xx

* * * CLEAR TABLES FUNCTION NOT IMPLEMENTED BY DESKTOP. * * *

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:53:35
++

TE 262-5 (11/95) DETECTOR INPUT WORDS

INPUT NUMBER	LOC.	FUNC CODE	INPUT NUMBER	LOC.	FUNC CODE
INPUT # 1	2214	18	INPUT #16	2223	__
INPUT # 2	2215	__	INPUT #17	2224	__
INPUT # 3	2216	38	INPUT #18	2225	__
INPUT # 4	2217	__	INPUT #19	2226	__
INPUT # 5	2218	58	INPUT #20	2227	__
INPUT # 6	2219	__	INPUT #21	2228	__
INPUT # 7	221A	__	INPUT #22	2229	__
INPUT # 8	221B	__	INPUT #23	222A	38
INPUT # 9	221C	__	INPUT #24	222B	38
INPUT #10	221D	__	INPUT #25	222C	__
INPUT #11	221E	18	INPUT #26	222D	__
INPUT #12	221F	__	INPUT #27	222E	__
INPUT #13	2220	38	INPUT #28	222F	__
INPUT #14	2221	__			
INPUT #15	2222	58			

INPUT FUNC CODES

PED BUTTON	= X2
CALLING DET	= X4
NORMAL DET	= X8
EX PED	= 02
PREEMPT C	= 21
PREEMPT B	= 41
PREEMPT A	= 81
ϕ SLCT OMT A	= B1
ϕ SLCT OMT B	= B2
ϕ SLCT OMT C	= B4
ϕ SLCT OMT D	= B8
CYCLE 1	= C8
CYCLE 2	= C9
CYCLE 3	= CA
SYNC	= CB
OFFSET 1	= CC
OFFSET 2	= CD
OFFSET 3	= CE
FREE	= CF

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:53:45
++

TE 262-6 (11/95) INPUT CONTROL WORDS (CONT.)

FUNCTION									LOC.	CODE
INPUT JUMPING/SWITCHING	SECONDARY FUNCTION - INPUT #1								223C	__
	SECONDARY FUNCTION - INPUT #2								223D	__
NOTE: ANY INPUT	SECONDARY FUNCTION - INPUT #3								223E	__
FUNCTION CODE CAN BE	SECONDARY FUNCTION - INPUT #4								223F	__
USED AS A SECONDARY	SECONDARY FUNCTION - INPUT #5								2240	__
FUNCTION CODE.	SECONDARY FUNCTION - INPUT #6								2241	__
	SECONDARY FUNCTION - INPUT #7								2242	__
	SECONDARY FUNCTION - INPUT #8								2243	__
INPUT #1 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2244	__
INPUT #2 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2245	__
INPUT #3 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2246	__
INPUT #4 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2247	__
INPUT #5 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2248	__
INPUT #6 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2249	__
INPUT #7 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224A	__
INPUT #8 - SECOND PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224B	__
DETECTOR ANALYSIS										
LOW OCCUPANCY OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224C	__
HIGH OCCUPANCY OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224D	__
MISCELLANEOUS (@ = NOT IMPLEMENTED)										
@ OFFSET HOLD-PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	224E	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:54:06
++

TE 262-7 (10/96) OUTPUT CONTROL WORDS
COMBINE FUNCTION (X) AND SPECIFIER (Y) TO FORM CODE WORD (XY)

FUNCTION (X)	SPECIFIER (Y)	SWITCH PACK	LOC.	CODE
0 = PHASE	1-8 = PHASE	SP1	2270	01
1 = PED ***	1 (9) = PEDA 4 (C) = PEDD	SP2	2271	__
	2 (A) = PEDB 5 (D) = PEDE	SP3	2272	03
	3 (B) = PEDC 6 (E) = PEDF	SP4	2273	__
2 = OVERLAP	1 = OVLA 4 = OVLD	SP5	2274	05
	2 = OVLB 5 = OVLE	SP6	2275	__
	3 = OVLC 6 = OVLF	SP7	2276	__
		SP8	2277	__
4 = DOUBLE CLR	1 = DCA 2 = DCB	SP9*	2278	__
	3 = DCC 4 = DCD	SP10	2279	__
	5 = DCE 6 = DCF			
6 = DC/OVL	1 = DC/OVLA 2 = DC/OVLB	SP11**	227A	__
		SP12	227B	__
C = MASTER OUTPUTS (R/Y/G)	0 = UNUSED/OFF2/OFF3	SP13	227C	__
	C = CYC1/CYC2/CYC3	SP14	227D	__
	F = FREE/SYNC/OFF1			

NOTES: * SP9 (YELLOW) Outputs Aux Output by Timeclock
** SP11 (YELLOW) Outputs Blue Light
*** Choose value in () for solid yellow output during DON'T WALK

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:54:14
++

TE 262-7A (11/95)

OVERLAPS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
OVERLAP A GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	227E	__
OVERLAP B GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	227F	__
OVERLAP C GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2280	__
OVERLAP D GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2281	__
OVERLAP E GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2282	__
OVERLAP F GREEN PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2283	__
OVERLAP A CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2284	__
OVERLAP B CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2285	__
OVERLAP C CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2286	__
OVERLAP D CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2287	__
OVERLAP E CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2288	__
OVERLAP F CLEARANCE PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2289	__
DC/OVL A DBL. CLEAR PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228A	__
DC/OVL B DBL. CLEAR PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228B	__
DC/OVL A OVL GREEN PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228C	__
DC/OVL B OVL GREEN PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228D	__
DC/OVL A CLEARANCE PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228E	__
DC/OVL B CLEARANCE PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	228F	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:54:23
++

TE 262-8 (11/95)

OUTPUT CONTROL WORDS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
PEDESTRIAN										
PEDESTRIAN A PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2290	__
PEDESTRIAN B PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2291	__
PEDESTRIAN C PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2292	__
PEDESTRIAN D PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2293	__
PEDESTRIAN E PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2294	__
PEDESTRIAN F PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2295	__
FLASHING WALK PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2296	__
PEDESTRIAN PHASE REST N WALK	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2297	__
EXTENDED PED CLEARANCE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2298	__
DOUBLE CLEARANCE										
DOUBLE CLEARANCE A PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	2299	__
DOUBLE CLEARANCE B PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229A	__
DOUBLE CLEARANCE C PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229B	__
DOUBLE CLEARANCE D PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229C	__
DOUBLE CLEARANCE E PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229D	__
DOUBLE CLEARANCE F PHASE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	229E	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:54:33
++

TE 262-8A (11/95) OUTPUT CONTROL WORDS (CONT.)

3 COLOR FLASH MODIFIER	NO = 00				YES = 01				229F	__
	SP	SP	SP	SP	SP	SP	SP	SP		
3 COLOR FLASH MODIFIER OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	22A0	__
3 COLOR FLASH MODIFIER OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	22A1	__
3 COLOR FLASH MODIFIER OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	22A2	__
3 COLOR FLASH MODIFIER OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	22A3	__
3 COLOR FLASH MODIFIER OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22A4	__
3 COLOR FLASH MODIFIER OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	22A5	__
LIGHT REDUCTION										
LIGHT REDUCTION OUTPUT	3G	3Y	3R	2G	2Y	2R	1G	1R	22A6	__
LIGHT REDUCTION OUTPUT	6G	6Y	6R	5G	5Y	5R	4G	4R	22A7	__
LIGHT REDUCTION OUTPUT	9G	9Y	9R	8G	8Y	8R	7G	7R	22A8	__
LIGHT REDUCTION OUTPUT	12G	12Y	12R	11G	11Y	11R	10G	10R	22A9	__
LIGHT REDUCTION OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22AA	__
LIGHT REDUCTION OUTPUT	14G	14Y	14R	13G	13Y	13R	-	-	22AB	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:54:41
++

TE 262-9 (11/95)

PHASE SELECTION

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
PHASE SELECTION - OMIT A	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AC	__
PHASE SELECTION - OMIT B	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AD	__
PHASE SELECTION - OMIT C	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AE	__
PHASE SELECTION - OMIT D	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22AF	__
PHASE SELECTION - MODIFIER	OMIT IN ORDER OF CALL = 00 OMIT PRIORITY A-B-C-D = 80								22B0	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:54:50
++

TE 262-9A (11/95)

PREEMPTION WORDS

PREEMPT MODIFIER	PREEMPT C FLASH = 02 PREEMPT C FLASH = TC FLASH = 82 PREEMPT PRIORITY C-A-B = 20	22B1	__
BLUE LIGHT MODIFIER & SELECTOR - COMBINE BLUE LIGHT OUTPUT (X) AND PREEMPTION SPECIFIER (Y) TO FORM CODE WORD (XY)		22B2	__
BLUE LIGHT OUTPUT (X) FLASH = 0 STEADY = 8	PREEMPTION SPECIFIER (Y) NO BLUE LIGHT = 0 PREEMPT A = 1 PREEMPT B = 2 PREEMPT C = 4		

	PHASE WORD									
FUNCTION	8	4	2	1	8	4	2	1	LOC.	CODE
PREEMPT A PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B3	__
PREEMPT B PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B4	__
PREEMPT C PHASE DELETE ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B5	__
PREEMPT C CALL SELECT ϕ	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22B6	__
		SP	SP		SP	SP	SP	SP		
PREEMPT C FLASH OUTPUT	-	3Y	3R	-	2Y	2R	-	1R	22B7	__
PREEMPT C FLASH OUTPUT	-	6Y	6R	-	5Y	5R	-	4R	22B8	__
PREEMPT C FLASH OUTPUT	-	9Y	9R	-	8Y	8R	-	7R	22B9	__
PREEMPT C FLASH OUTPUT	-	12Y	12R	-	11Y	11R	-	10R	22BA	__
PREEMPT C FLASH OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22BB	__
PREEMPT C FLASH OUTPUT	-	14Y	14R	-	13Y	13R	-	-	22BC	__
PREEMPT C PED CLR SW	= 00 USE EXISTING PED CLR = 01 USE PREEMPT C MAX PED CLR SAFETY TIMER (SEE 218F)								22BD	__
PREEMPT C PED CLR TIMER - PHASES TO OVERRIDE	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22BE	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:55:35
++

TE 262-10 (11/95) TIMECLOCK FUNCTIONS

FUNCTION	8	4	2	1	8	4	2	1	LOC.	CODE
		SP	SP		SP	SP	SP	SP		
FLASH OUTPUT	-	3Y	3R	-	2Y	2R	-	1R	22CE	__
FLASH OUTPUT	-	6Y	6R	-	5Y	5R	-	4R	22CF	__
FLASH OUTPUT	-	9Y	9R	-	8Y	8R	-	7R	22D0	__
FLASH OUTPUT	-	12Y	12R	-	11Y	11R	-	10R	22D1	__
FLASH OUTPUT	-	-	-	-	7Y	1Y	10Y	4Y	22D2	__
FLASH OUTPUT	-	14Y	14R	-	13Y	13R	-	-	22D3	__
OMIT A PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D4	__
OMIT B PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D5	__
REST IN RED	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D6	__
MAX GRN II PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D7	__
MAX GRN III PHASE WORD	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22D8	__
INPUT 1-16 BY TIMECLOCK	1	3	5	7	9	11	13	15		
	2	4	6	8	10	12	14	16	22D9	__
INPUT 17-28 BY TIMECLOCK	17	19	21	23	25	27				
	18	20	22	24	26	28			22DA	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:56:28
++

TE 263-1 (11/95) SECONDARY COORDINATION TIMING INTERVALS

OLD FUNCTION (SLAVE TIMING INTERVALS)	NEW FUNCTION (TIMING PLAN INTERVALS)	LOC.	TIME (SEC.)
CYCLE #1 LENGTH	TIMING PLAN #1-2-3 CYCLE LENGTH	21C0	080
CYCLE #1 PHASE SPLIT #1	TIMING PLAN #1-2-3 PHASE SPLIT #1	21C1	035
CYCLE #1 PHASE SPLIT #2	TIMING PLAN #1-2-3 PHASE SPLIT #2	21C2	___
CYCLE #1 PHASE SPLIT #3	TIMING PLAN #1-2-3 PHASE SPLIT #3	21C3	___
	TIMING PLAN #1-2-3 PHASE SPLIT #4	21C4	___
	TIMING PLAN #1-2-3 PHASE SPLIT #5	21C5	___
CYCLE #1 OFFSET #1 LENGTH	TIMING PLAN #1 OFFSET LENGTH	21C6	___
CYCLE #1 OFFSET #2 LENGTH	TIMING PLAN #2 OFFSET LENGTH	21C7	___
CYCLE #1 OFFSET #3 LENGTH	TIMING PLAN #3 OFFSET LENGTH	21C8	___
CYCLE #2 LENGTH	TIMING PLAN #4-5-6 CYCLE LENGTH	21C9	___
CYCLE #2 PHASE SPLIT #1	TIMING PLAN #4-5-6 PHASE SPLIT #1	21CA	___
CYCLE #2 PHASE SPLIT #2	TIMING PLAN #4-5-6 PHASE SPLIT #2	21CB	___
CYCLE #2 PHASE SPLIT #3	TIMING PLAN #4-5-6 PHASE SPLIT #3	21CC	___
	TIMING PLAN #4-5-6 PHASE SPLIT #4	21CD	___
	TIMING PLAN #4-5-6 PHASE SPLIT #5	21CE	___
CYCLE #2 OFFSET #1 LENGTH	TIMING PLAN #4 OFFSET LENGTH	21CF	___
CYCLE #2 OFFSET #2 LENGTH	TIMING PLAN #5 OFFSET LENGTH	21D0	___
CYCLE #2 OFFSET #3 LENGTH	TIMING PLAN #6 OFFSET LENGTH	21D1	___
CYCLE #3 LENGTH	TIMING PLAN #7-8-9 CYCLE LENGTH	21D2	___
CYCLE #3 PHASE SPLIT #1	TIMING PLAN #7-8-9 PHASE SPLIT #1	21D3	___
CYCLE #3 PHASE SPLIT #2	TIMING PLAN #7-8-9 PHASE SPLIT #2	21D4	___
CYCLE #3 PHASE SPLIT #3	TIMING PLAN #7-8-9 PHASE SPLIT #3	21D5	___
	TIMING PLAN #7-8-9 PHASE SPLIT #4	21D6	___
	TIMING PLAN #7-8-9 PHASE SPLIT #5	21D7	___
CYCLE #3 OFFSET #1 LENGTH	TIMING PLAN #7 OFFSET LENGTH	21D8	___
CYCLE #3 OFFSET #2 LENGTH	TIMING PLAN #8 OFFSET LENGTH	21D9	___
CYCLE #3 OFFSET #3 LENGTH	TIMING PLAN #9 OFFSET LENGTH	21DA	___

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:56:36
++

TE 263-2 (11/95) SECONDARY COORDINATION PHASE WORDS

FUNCTION	PHASE WORD 8	4	2	1	8	4	2	1	LOC.	CODE
ARTERY PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F2	A06
SPLIT #1 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F3	08
SPLIT #2 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F4	
SPLIT #3 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F5	
SPLIT #4 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F6	
SPLIT #5 PHASES	ϕ 1	ϕ 2	ϕ 5	ϕ 6	ϕ 3	ϕ 4	ϕ 7	ϕ 8	22F7	

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:56:43
++

TE 263-3 (11/95) COORDINATION MODE PROGRAMMABLE FEATURES

PROGRAMMING MODE WORD	00 = SECONDARY, 21 = PRIMARY	2300	__
MANUAL PATTERN SELECT	ENTER TIMING PLAN NUMBER (HEX) (NOTE: FF = FREE)	2301	__
COORDINATION BACK-UP	00 = FREE 01 = T.B.C.	2302	__
COORDINATION MODES (MAY NOT BE COMBINED)	00 = TBC 01 = SPARE 02 = 7 WIRE INPUT VIA DETECTOR FILE 04 = 9 WIRE INPUT VIA DETECTOR FILE 08 = SPARE 10 = PATT. ID/SYNC INPUT VIA MODEM 20,40 = SPARES 80 = TBC MASTER OUTPUT	2303	__
RETURN TO ARTERY WORD/ ARTERY PED RECYCLE WORD	00 = RETURN AFTER FORCE OFF #1 /NO EARLY ARTERY PED RECYCLE 01 = RETURN TO ARTERY EARLY 10 = EARLY ARTERY PED RECYCLE	2304	(2)

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:56:51
++

TE 263-3A (11/95) COORDINATION MODE PROGRAMMABLE FEATURES

FUNCTION	PHASE WORD 8 TP	4 TP	2 TP	1 TP	8 TP	4 TP	2 TP	1 TP	LOC.	CODE
PEDESTRIAN CONSISTANCY CHECK	8	7	6	5	4	3	2	1	2305	
OVERRIDE WORD T.P. 1-10	-	-	-	-	-	-	10	9	2306	

MASTER OUTPUT MODE (USED ONLY WHEN LOCATION $2303 IS EQUAL TO $80)	=00 ACT AS MASTER ACIA/MODEM OUTPUT =01 ACT AS MASTER 7-WIRE OUTPUT =02 ACT AS MASTER 9-WIRE OUTPUT	2307	__

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155

++

TE 264-1 (11/95) MODEL 179 TIMECLOCK EVENT TABLE Page 1 of 16

	A	B	C	D		A	B	C	D
EVENT #	DAY PROG. #	PATT. #	TIME CLOCK FUNCT	TIME HR : MIN.	EVENT #	DAY PROG. #	PATT. #	TIME CLOCK FUNCT	TIME HR : MIN.
E001	001	001	000	06:0	E007	___	___	___	__:_
E002	001	000	000	19:0	E008	___	___	___	__:_
E003	___	___	___	__:_	E009	___	___	___	__:_
E004	___	___	___	__:_	E010	___	___	___	__:_
E005	___	___	___	__:_	E011	___	___	___	__:_
E006	___	___	___	__:_	E012	___	___	___	__:_

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:57:13
++

TE 264-2 (11/95) TABLE OF WEEK PROGRAMS

WEEK #		001	002	003	004	005	006	007	008	009	010
DAY	CODE	d01	d02	d03	d04	d05	d06	d07	d08	d09	d10
SUN	1	001									
MON	2	001									
TUES	3	001									
WED	4	001									
THUR	5	001									
FRI	6	001									
SAT	7	001									

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:57:20
++

TE 264-3 (11/95) TABLE OF YEAR PROGRAMS

CODE	WEEK NO.	CODE	WEEK PROG#	CODE	WEEK NO.	CODE	WEEK PROG#	CODE	WEEK NO.	CODE	WEEK PROG#
2550	___	2551	___	2562	___	2563	___	2574	___	2575	___
2552	___	2553	___	2564	___	2565	___	2576	___	2577	___
2554	___	2555	___	2566	___	2567	___	2578	___	2579	___
2556	___	2557	___	2568	___	2569	___	257A	___	257B	___
2558	___	2559	___	256A	___	256B	___	257C	___	257D	___
255A	___	255B	___	256C	___	256D	___	257E	___	257F	___
255C	___	255D	___	256E	___	256F	___	2580	___	2581	___
255E	___	255F	___	2570	___	2571	___	2582	___	2583	___
2560	___	2561	___	2572	___	2573	___				

CCS = 87C Signal # = 571 Rte = 120 Rte Seq # = 155
DATE: 10/15/03 TIME: 09:57:29
++

TE 264-4 (11/95) TABLE OF EXCEPTION DAYS

CODE	MONTH NO.	CODE	DAY OF MONTH	CODE	DAY PROG NO.
2590	___	2591	___	2592	___
2593	___	2594	___	2595	___
2596	___	2597	___	2598	___
2599	___	259A	___	259B	___
259C	___	259D	___	259E	___
259F	___	25A0	___	25A1	___
25A2	___	25A3	___	25A4	___
25A5	___	25A6	___	25A7	___

CODE	MONTH NO.	CODE	DAY OF MONTH	CODE	DAY PROG NO.
25A8	___	25A9	___	25AA	___
25AB	___	25AC	___	25AD	___
25AE	___	25AF	___	25B0	___
25B1	___	25B2	___	25B3	___
25B4	___	25B5	___	25B6	___
25B7	___	25B8	___	25B9	___
25BA	___	25BB	___	25BC	___
25BD	___	25BE	___	25BF	___

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____
PAGE 18 OF 20

SIGNAL # W-571 COUNTY WESTCHESTER DATE 09/07/03

D259096

TABLE OF SWITCH PACKS

SWITCH PACK	FUNCTION	INDICATIONS	FACE	TERMINAL WIRING BOARD		161XFA	TERMINAL WIRING BOARD	
				TERMINAL	WIRE COLOR CODE		TERMINAL	WIRE COLOR CODE
1	Ø 1	Red	1	SP 1 R	14 / 5C - B - R	2	SP 1 R	14 / 5C - A - R
		Yellow		SP 1 Y	- O		SP 1 Y	- O
		Green		SP 1 G	- G		SP 1 G	- G
		Ground Wire		Grnd Bus	- W		Grnd Bus	- W
2				SP 2 R			SP 2 R	
				SP 2 Y			SP 2 Y	
				SP 2 G			SP 2 G	
		Ground Wire		Grnd Bus			Grnd Bus	
3	Ø 3 WIRE ARROWS TO BALL GREENS	Red	5	SP 3 R	14 / 10C - D - R / B	6	SP 3 R	14 / 10C - C - R / B
		Yellow		SP 3 Y	- O / B		SP 3 Y	- O / B
		Green ◄ / ►		SP 3 G	- G / B		SP 3 G	- G / B
		Ground Wire		Grnd Bus	- W / B		Grnd Bus	- W / B
4				SP 4 R			SP 4 R	
				SP 4 Y			SP 4 Y	
				SP 4 G			SP 4 G	
		Ground Wire		Grnd Bus			Grnd Bus	
5	Ø 5	Red	3	SP 5 R	14 / 10C - C - R	4	SP 5 R	14 / 10C - D - R
		Yellow		SP 5 Y	- O		SP 5 Y	- O
		Green		SP 5 G	- G		SP 5 G	- G
		Ground Wire		Grnd Bus	- W		Grnd Bus	- W
6				SP 6 R			SP 6 R	
				SP 6 Y			SP 6 Y	
				SP 6 G			SP 6 G	
		ü Ground Wire		Grnd Bus			Grnd Bus	
7				SP 7 R			SP 7 R	
				SP 7 Y			SP 7 Y	
				SP 7 G			SP 7 G	
		Ground Wire		Grnd Bus			Grnd Bus	
8				SP 8 R			SP 8 R	
				SP 8 Y			SP 8 Y	
				SP 8 G			SP 8 G	
		Ground Wire		Grnd Bus			Grnd Bus	
9				SP 9 R			SP 9 R	
				SP 9 Y			SP 9 Y	
				SP 9 G			SP 9 G	
		Ground Wire		Grnd Bus			Grnd Bus	
10				SP 10 R			SP 10 R	
				SP 10 Y			SP 10 Y	
				SP 10 G			SP 10 G	
		Ground Wire		Grnd Bus			Grnd Bus	
11				SP 11 R			SP 11 R	
				SP 11 Y			SP 11 Y	
				SP 11 G			SP 11 G	
		Ground Wire		Grnd Bus			Grnd Bus	
12				SP 12 R			SP 12 R	
				SP 12 Y			SP 12 Y	
				SP 12 G			SP 12 G	
		Ground Wire		Grnd Bus			Grnd Bus	
13				SP 13 R			SP 13 R	
				SP 13 Y			SP 13 Y	
				SP 13 G			SP 13 G	
		Ground Wire		Grnd Bus			Grnd Bus	
14				SP 14 R			SP 14 R	
				SP 14 Y			SP 14 Y	
				SP 14 G			SP14 G	
		Ground Wire		Grnd Bus			Grnd Bus	

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____
PAGE 19 OF 20

SIGNAL # W-571 COUNTY # WESTCHESTER DATE 10/15/03

D259096

CONFLICT / CURRENT MONITOR PROGRAMMING

CONFLICT MONITOR DIODES TO BE CUT			CONFLICT MONITOR YELLOW JUMPERS TO BE INSTALLED	CURRENT MONITOR DIODES TO BE CUT
SP1 - SP5				2, 4, 6 - 14

NOTES:

TE 262-12 (7/91)

MODEL 179 SIGNAL OPERATION
PROGRAMMABLE FEATURES
SIGNAL OPERATION SPECIFICATION

TAPS _____
STUDY # _____
FILE # _____
PAGE 20 **OF** 20

SIGNAL # W-571 **COUNTY** WESTCHESTER **DATE** 09/07/03

D259096

TABLE OF INPUT WIRING

TERM. NUMBER	FUNCTION	DET. NO.	DET. TYPE	DET. AN OVER	REMARKS
1A, 1B	Ø 1	1A	QUADRAPOLE		PRESENCE LOOP
2A, 2B					
3A, 3B	Ø 3	3A	QUADRAPOLE		PRESENCE LOOP
4A, 4B					
5A, 5B	Ø 5	5A	QUADRAPOLE		PRESENCE LOOP
6A, 6B					
7A, 7B					
8A, 8B					
9A, 9B					
10A, 10B					
11A, 11B	Ø 1	11A	NORMAL		PRESENCE LOOP
12A, 12B					
13A, 13B	Ø 3	13A	NORMAL		PRESENCE LOOP
14A, 14B					
15A, 15B	Ø 5	15A	NORMAL		PRESENCE LOOP
16A, 16B					
17A, 17B					
18A, 18B					
19A, 19B					
20A, 20B					
21A, 21B					
22A, 22B					
23A, 23B	Ø 3	23A	QUADRAPOLE		PRESENCE LOOP
24A, 24B	Ø 3	24A	NORMAL		PRESENCE LOOP
25A, 25B					
26A, 26B					
27A, 27B					
28A, 28B					

TAPS—MODEL 179 OPERATING INSTRUCTIONS
KEYBOARD INPUT COMMANDS—SUMMARY

D< ALARM LOC#> :

d aaaa xx	d aaaa ttt	d aaaa A ttt

d = DISPLAY LOCATION # COMMAND
aaaa = LOCATION # ENTERED
A = DAY PROGRAM EVENT PART (A-D) (LOCATIONS E001 - E192 ONLY)
xx = HEX. DATA VALUE (OO - FF)
ttt = DECIMAL DATA VALUE (000 - 255)

DAA < TIMING INT. #> :

dAA ii
F a : ttt

dAA = DISPLAY RING A INTERVAL COMMAND
ii = INTERVAL NUMBER ENTERED (00-31)
F = FAZE
a = RING A PHASE # (1-4) - DYNAMIC
ttt = INTERVAL TIMING - DYNAMIC

DBB < TIMING INT. #> :

dbb jj
Fb : sss

dbb = CYLE /OFFSET DISPLAY COMMAND
jj = OFFSET
F = SYSTEM
b = LOCAL CYCLE TIMER
sss = SYSTEM CYCLE TIMER

DCC < TIMING INT. #> :

dCC ll
xxx

dcc = DISPLAY DETECTOR COUNT COMMAND
ll = DETECTOR NUMBER ENTERED (01-40)
xxx = NUMBER OF ACTUATIONS SINCE TERMINATION OF PHASE GREEN

CC7:

:C7:
mm:dd:yy

C7 = CHIP DATE
mm = MONTH (00-12)
dd = DAY (01-31)
yy = YEAR (00-99)

CC8:

CY:04:zz
bbb aaa

C8 = MASTER CLOCK month/day/year COMMAND
mm = MONTH (01-12)
dd = DAY (01-31)
yy = YEAR (00-99)

CC9:

C9
hh:mm:ss

C9 = MASTER CLOCK hour/min/sec COMMAND
hh = HOUR (00-23)
mm = MINUTE (00-59)
ss = SECOND (00-59)

CCA:

Fa:CA:zz
ii : ttt

CA = RING A DYNAMIC DISPLAY COMMAND
F = FAZE
a = RING A ACTIVE PHASE # (1-4)
ii = RING A ACTIVE PHASE TIMING INTERVAL #
ttt = DYNAMIC INTERVAL TIMING
zz = PHASE TERMINATION MODE - FLASHING
FLASHING DURING CLEARANCE

CCB:

zz:CB:Fb
jj : sss

CB = RING B DYNAMIC DISPLAY COMMAND
F = FAZE
b = RING B ACTIVE PHASE # (5-8)
jj = RING B ACTIVE PHASE TIMING INTERVAL #
sss = DYNAMIC INTERVAL TIMING
zz = PHASE TERMINATION MODE - FLASHING

CCC:

Fa:CC:Fb
ii : : jj

CC = DUAL RING DYNAMIC DISPLAY COMMAND
F = FAZE
a = RING A ACTIVE PHASE # (1-4)
b = RING B ACTIVE PHASE # (5-8)
ii = RING A ACTIVE PHASE TIMING INTERVAL #
jj = RING B ACTIVE PHASE TIMING INTERVAL #
(ii and jj replaced by zz during clearance)

CCD:

ii:CD:jj
ttt sss

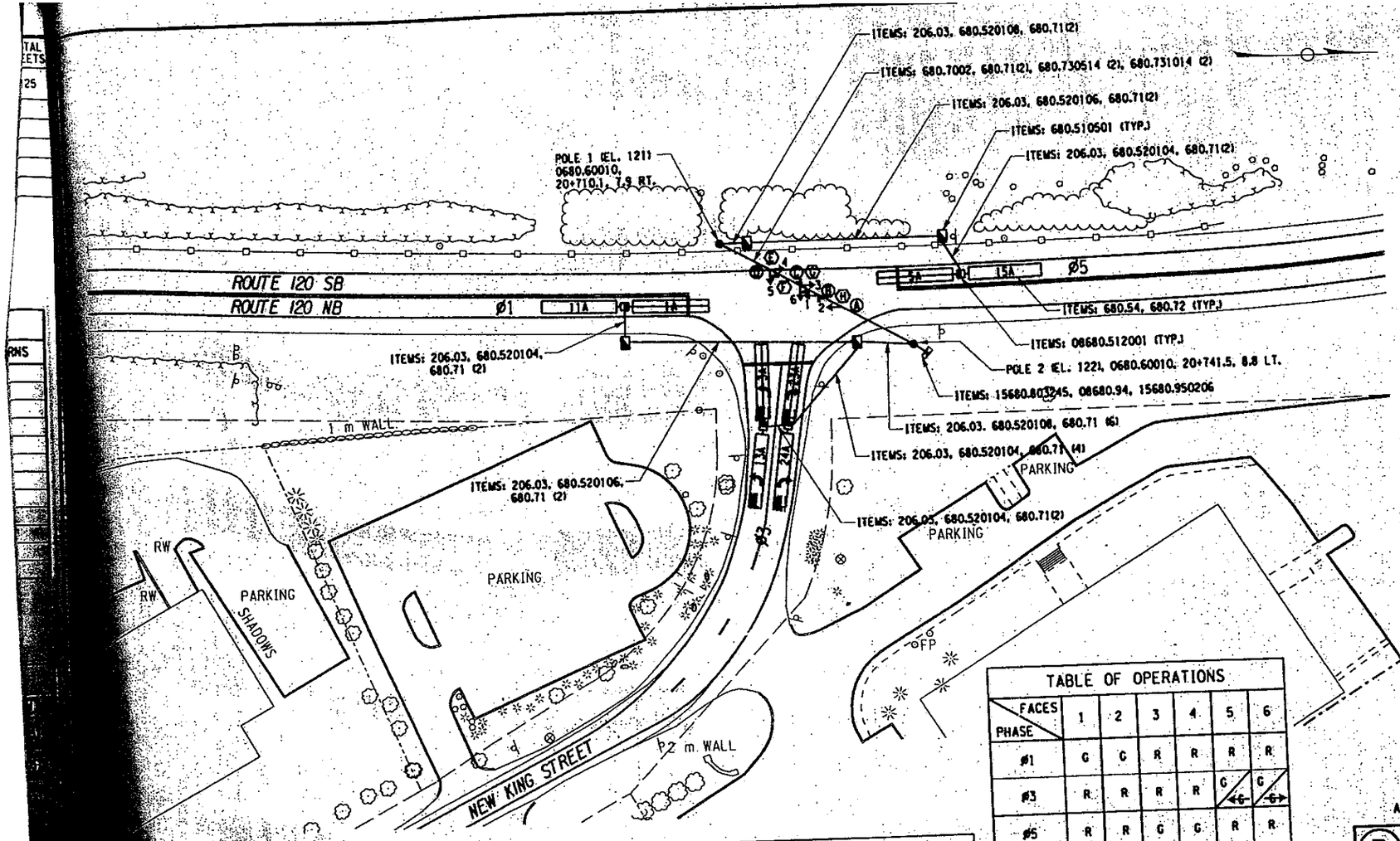
CD = DUAL RING DYNAMIC DISPLAY COMMAND
ii = RING A ACTIVE PHASE TIMING INTERVAL #
jj = RING B ACTIVE PHASE TIMING INTERVAL #
ttt = RING A DYNAMIC INTERVAL TIMIMG
sss = RING B DYNAMIC INTERVAL TIMIMG

CCE:

mm:CE:nn
gg.g hh.h

CE = MAX GRN/GAP DUAL RING DISPLAY COMMAND
mm = RING A MAX GREEN TIMER - DYNAMIC
nn = RING B MAX GREEN TIMER - DYNAMIC
gg.g = RING A GAP TIMER - DYNAMIC
hh.h = RING B GAP TIMER - DYNAMIC

1	N.Y.	D259096	107	125
S.H. 5003 ARMONK - BYRAM LAKE (ROUTE 22)				
S.H. 9248 NORTH GREENWICH ROAD (ROUTE 433)				
S.H. 5226 WHITE PLAINS - RYE LAKE (ROUTE 120)				
TOWN OF NORTH CASTLE, WESTCHESTER COUNTY				
P.I.N. 8026.11		B.I.N.		



ESTIMATE OF QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
206.03	CONDUIT EXCAVATION AND BACKFILL	m	114
680.5001	POLE EXCAVATION AND CONCRETE FOUNDATION	m^3	12
680.510501	PULL BOX - RECT. REINF. CONC. 660mm x 457mm	EA	4
08680.512001	CAST ALUMINUM JUNCTION BOX	EA	4
680.520104	CONDUIT - STEEL, ZINC COATED, 1¼ NPS	m	23
680.520106	CONDUIT - STEEL, ZINC COATED, 2 NPS	m	70
680.520108	CONDUIT - STEEL, ZINC COATED, 3 NPS	m	24
680.54	INDUCTANCE LOOP INSTALLATION	m	280
08680.6001	INSTALL TRAFFIC SIGNAL POLE	EA	2
680.7002	DUAL SPAN WIRE ASSEMBLY WITH UPPER TETHER	EA	1
680.71	SHIELDED LEAD-IN CABLE	m	300
680.72	INDUCTANCE LOOP WIRE	m	1248
680.730514	SIGNAL CABLE - 5 CONDUCTOR, 14 AWG	m	30
680.731014	SIGNAL CABLE - 10 CONDUCTOR, 14 AWG	m	45
15680.803245	INSTALL MICROCOMPUTER CABINET	EA	1
680.810101	T.S.M. 300mm, RED BALL, LED	EA	6
680.810103	T.S.M. 300mm, YELLOW BALL, LED	EA	6
680.810105	T.S.M. 300mm, GREEN BALL, LED	EA	6
680.810106	T.S.M. 300mm, GREEN ARROW, LED	EA	2
680.810107	TRAFFIC SIGNAL SECT. - TYPE 1, 300mm	EA	20
680.8111	TRAFFIC SIGNAL BRACKET ASSEMBLY - 1 WAY	EA	2
680.8112	TRAFFIC SIGNAL BRACKET ASSEMBLY - 2 WAY	EA	2
680.8201	OVERHEAD SIGN ASSEMBLY - TYPE A	EA	4
08680.94	TRAFFIC SIGNAL SERVICE ENTRANCE	EA	1
15680.950206	SERVICE CABLE - 2 CONDUCTOR, 6 AWG	m	21

TABLE OF POLES

POLE NO.	LOCATION	ITEM CODE	HEIGHT	DESIGN LOAD	FTG. MOMENT
1	20+710.1, 7.9 RT.	08680.6001	10m	40 KN	382 KN-m
2	20+741.5, 8.8 LT.	08680.6001	10m	40 KN	382 KN-m

TABLE OF OPERATIONS

PHASE \ FACES	1	2	3	4	5	6
ø1	G	G	R	R	R	R
ø3	R	R	R	R	G / ←G	G / G→
ø5	R	R	G	G	R	R
ø(1+5)	G	G	G	G	R	R
FLASHING OPERATION	FL.-Y	FL.-Y	FL.-Y	FL.-Y	FL.-R	FL.-R

TABLE OF CLEARANCES

TO \ FROM	G	G / ←G	R / ←G	R
G		G/←Y / G	R/←Y / R	R / R
G / ←G	G / G		R/←G / R/←G	R / R
R / ←G	Y / R	Y/←G / R/←G		R / R
R	Y / R	Y/←Y / R	R/←Y / R	

TABLE OF VEHICLE DETECTORS

ER	TYPE	FUNCTION	SIZE (M)	NO. OF TURNS
	LOOP	ø1 PRESENCE	2 X 12	3
	QUAD	ø1 PRESENCE	2-1 X 12	3
	LOOP	ø5 PRESENCE	2 X 12	3
	QUAD	ø5 PRESENCE	2-1 X 12	3
	QUAD	ø3 PRESENCE	2-1 X 12	3
	LOOP	ø3 PRESENCE	2 X 12	3
	LOOP	ø3 PRESENCE	2 X 12	3
	QUAD	ø3 PRESENCE	2-1 X 12	3

TABLE OF HEADS AND CABLE

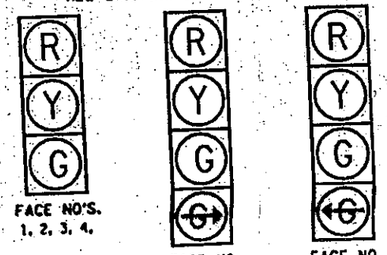
ITEM	CABLE	ITEM
680.810101(1), 680.810103(1), 680.810105(1), 680.810107(3), 680.8111	14/05 C-A-X/X	680.730514
680.810101(1), 680.810103(1), 680.810105(1), 680.810107(3), 680.8111	14/05 C-B-X/X	680.730514
680.810101(2), 681.810103(2), 680.810105(2), 680.810106(1), 680.810107(7), 680.8112	14/10 C-C-X/X	680.731014
680.810101(2), 680.810103(2), 680.810105(2), 680.810106(1), 680.810107(7), 680.8112	14/10 C-C-X/X	680.731014

TABLE OF SIGNS

SIGN	PAY ITEM	M.U.T.C.D. NO.	TEXT
E	680.8201	R3-22C	ONLY
F	680.8201	R3-1C	
G	680.8201	R3-24C	ONLY
H	680.8201	R3-2C	

SIGNAL FACE DISPLAY

ALL EXISTING 300 mm SECTIONS



FACE NO'S. 1, 2, 3, 4. FACE NO. 6. FACE NO. 5

NOTE:

TRAFFIC SIGNAL POLES ARE TO BE SUPPLIED BY NYSDOT, REGION 8 TRAFFIC SIGNAL POLE INVENTORY. THE CONTRACTOR SHALL CONTACT NYSDOT ONE WEEK IN ADVANCE OF HAVING A TRAFFIC SIGNAL POLE DELIVERED TO THE JOB SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PICKING TRAFFIC SIGNAL POLES FROM THE REGION 8 TRAFFIC SIGNAL POLE STOCKPILE.

WORK IN THIS STAGE SHALL BE COMPLETED NO LATER THAN 90 DAYS AFTER THE AWARD OF THIS CONTRACT. IF THE CONTRACTOR FAILS TO COMPLETE THIS WORK ON TIME, LIQUIDATED DAMAGES WILL BE ASSESSED AT THE RATE OF $1,000 A DAY FOR NON-COMPLIANCE.

0 10 20 30 40

SCALE

SIGNAL NO. W-571

ALL DIMENSIONS ARE IN m. UNLESS OTHERWISE NOTED

AS BUILT REVISIONS

SIGNATURE DATE

TRAFFIC SIGNAL PLAN
ROUTE 120/NEW KING STREET

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION

Frederic R. Harris, Inc
605 Third Avenue
New York, New York 10158

FILENAME	REGION	DATE	DRAWING NO.
B0261105.TRF	8	JAN 2003	TRF-5

Appendix J: Traffic Impact Study

Synchro Analysis Files

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	20	20	240	30	5	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1638	0	1835	0	0	1861
Flt Permitted	0.976					0.991
Satd. Flow (perm)	1638	0	1835	0	0	1846
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	24		15			
Link Speed (mph)	30		30			30
Link Distance (ft)	340		157			358
Travel Time (s)	7.7		3.6			8.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.78	0.78	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	48	0	346	0	0	390
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	21.0		21.0		21.0	21.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max
Act Effct Green (s)	6.9		67.1			67.1
Actuated g/C Ratio	0.09		0.87			0.87
v/c Ratio	0.28		0.22			0.24
Control Delay	25.5		2.2			2.4
Queue Delay	0.0		0.0			0.0
Total Delay	25.5		2.2			2.4
LOS	C		A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	25.5		2.2			2.4
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 77.3			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.28			
Intersection Signal Delay: 3.7		Intersection LOS: A	
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Gateway Lane & NYS Route 120

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	330	35	235	0	0	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1743	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1743	1583	1863	0	0	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		39				
Link Speed (mph)	30		30			30
Link Distance (ft)	315		909			368
Travel Time (s)	7.2		20.7			8.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.88	0.88	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	367	39	267	0	0	226
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	25.0	25.0	45.0			45.0
Total Split (s)	35.0	35.0	55.0	0.0	0.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	0.0%	0.0%	61.1%
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None			None
Act Effct Green (s)	12.5	12.5	11.5			11.5
Actuated g/C Ratio	0.36	0.36	0.33			0.33
v/c Ratio	0.58	0.06	0.43			0.36
Control Delay	13.6	3.9	11.8			11.0
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	13.6	3.9	11.8			11.0
LOS	B	A	B			B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	12.7		11.8			11.0
Approach LOS	B		B			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 34.4			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 12.0		Intersection LOS: B	
Intersection Capacity Utilization 39.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: New King Street & NYS Route 120

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	475	310	0	0	0	140	60	105	80	120	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	275		0	125		350
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25		25	25		25	50		25	50		75
Satd. Flow (prot)	1681	1573	0	0	0	0	1770	3199	0	1711	1863	1509
Flt Permitted	0.950	0.999					0.634			0.624		
Satd. Flow (perm)	1681	1573	0	0	0	0	1181	3199	0	1124	1863	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24						130				358
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			835			1433			550	
Travel Time (s)		4.3			19.0			32.6			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	183	932	0	0	0	0	173	204	0	84	126	358
Turn Type	Perm						D.P+P			pm+pt		custom
Protected Phases		4					1 2	2 3		1	3	4
Permitted Phases	4						3			3		3
Detector Phase	4	4					1 2	2 3		1	3	4
Switch Phase												
Minimum Initial (s)	25.0	25.0								10.0	35.0	25.0
Minimum Split (s)	30.0	30.0								15.0	40.0	30.0
Total Split (s)	60.0	60.0	0.0	0.0	0.0	0.0	35.0	75.0	0.0	15.0	55.0	60.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	23.3%	50.0%	0.0%	10.0%	36.7%	40.0%
Yellow Time (s)	3.0	3.0								3.0	3.0	3.0
All-Red Time (s)	2.0	2.0								2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag								Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes								Yes	Yes	Yes
Recall Mode	Min	Min								Min	None	Min
Act Effct Green (s)	55.0	55.0					60.2	50.2		45.0	35.0	95.0
Actuated g/C Ratio	0.42	0.42					0.46	0.39		0.35	0.27	0.73
v/c Ratio	0.26	1.37					0.26	0.16		0.19	0.25	0.30
Control Delay	25.7	208.9					19.3	10.1		20.0	39.1	1.2
Queue Delay	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Total Delay	25.7	208.9					19.3	10.1		20.0	39.1	1.2
LOS	C	F					B	B		C	D	A

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	15.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

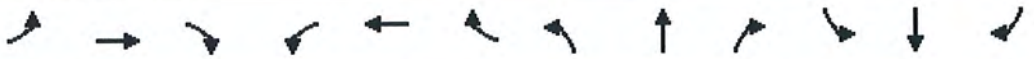
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		178.8						14.3			12.4	
Approach LOS		F						B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 130.2			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.37			
Intersection Signal Delay: 102.8		Intersection LOS: F	
Intersection Capacity Utilization 76.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Airport Road & NYS Route 120

Lane Group	ø2
Approach Delay	
Approach LOS	

Intersection Summary

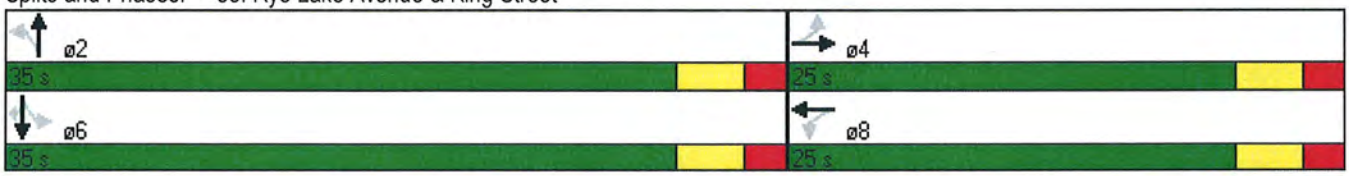


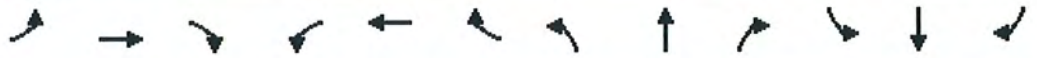
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	5	240	0	10	0	120	50	5	5	20	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	15	12	12	11	12	12	13	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		75
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		50
Satd. Flow (prot)	0	1536	0	0	2049	0	0	1667	0	0	1906	1478
Flt Permitted		0.962						0.777			0.900	
Satd. Flow (perm)	0	1485	0	0	2049	0	0	1339	0	0	1732	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		312						3				41
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			335			653			286	
Travel Time (s)		26.6			7.6			14.8			6.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.77	0.77	0.77	0.25	0.25	0.25	0.78	0.78	0.78	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	2%	2%	2%	8%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	350	0	0	40	0	0	224	0	0	29	41
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	21.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	None
Act Effct Green (s)		8.3			8.3			12.9			10.3	10.3
Actuated g/C Ratio		0.32			0.32			0.50			0.40	0.40
v/c Ratio		0.51			0.06			0.33			0.04	0.07
Control Delay		5.2			8.6			8.8			6.6	3.3
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		5.2			8.6			8.8			6.6	3.3
LOS		A			A			A			A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.2			8.6			8.8			4.7	
Approach LOS		A			A			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 25.9			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 6.5		Intersection LOS: A	
Intersection Capacity Utilization 47.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Rye Lake Avenue & King Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	530	0	0	395	85	0	0	430	0	0	0
Sign Control		Free			Free			Yield			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.42	0.90	0.92	0.92	0.90	0.70	0.92	0.92	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	12	589	0	0	439	121	0	0	478	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					190							
pX, platoon unblocked	0.92						0.92	0.92		0.92	0.92	0.92
vC, conflicting volume	560			589			1112	1173	589	1590	1112	500
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	483			589			1080	1146	589	1598	1080	417
tC, single (s)	4.2			4.1			7.1	6.5	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	99			100			100	100	5	100	100	100
cM capacity (veh/h)	979			986			179	182	501	4	199	587

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	601	560	478
Volume Left	12	0	0
Volume Right	0	121	478
cSH	979	1700	501
Volume to Capacity	0.01	0.33	0.95
Queue Length 95th (ft)	1	0	300
Control Delay (s)	0.3	0.0	58.3
Lane LOS	A		F
Approach Delay (s)	0.3	0.0	58.3
Approach LOS			F

Intersection Summary			
Average Delay	17.1		
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	395	0	0	0	535	5
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.92	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	439	0	0	0	594	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)	520					
pX, platoon unblocked						
vC, conflicting volume	0		878	0	878	878
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		878	0	878	878
tC, single (s)	4.2		6.5	6.2	7.2	6.5
tC, 2 stage (s)						
tF (s)	2.3		4.0	3.3	3.6	4.0
p0 queue free %	72		100	100	0	95
cM capacity (veh/h)	1591		208	1085	208	208

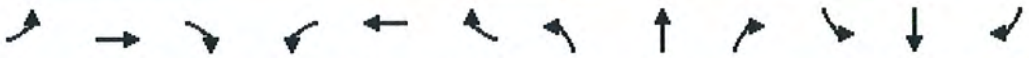
Direction, Lane #	WB 1	SB 1
Volume Total	439	604
Volume Left	439	594
Volume Right	0	0
cSH	1591	208
Volume to Capacity	0.28	2.91
Queue Length 95th (ft)	28	1344
Control Delay (s)	8.1	906.1
Lane LOS	A	F
Approach Delay (s)	8.1	906.1
Approach LOS		F

Intersection Summary			
Average Delay	528.4		
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	135	10	70	360	5	170
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.81	0.81	0.73	0.73
Hourly flow rate (vph)	153	11	86	444	7	233
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			165		554	159
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			165		554	159
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		98	73
cM capacity (veh/h)			1411		434	858

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	165	235	296	240
Volume Left	0	86	0	7
Volume Right	11	0	0	233
cSH	1700	1411	1700	835
Volume to Capacity	0.10	0.06	0.17	0.29
Queue Length 95th (ft)	0	5	0	30
Control Delay (s)	0.0	3.2	0.0	11.0
Lane LOS		A		B
Approach Delay (s)	0.0	1.4		11.0
Approach LOS				B

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	35	5	5	60	25	80	5	105	175	90	340	35
Peak Hour Factor	0.46	0.46	0.46	0.67	0.67	0.67	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	76	11	11	90	37	119	6	117	194	100	378	39
Approach Volume (veh/h)		98			246			317			517	
Crossing Volume (veh/h)		567			198			187			132	
High Capacity (veh/h)		884			1186			1196			1249	
High v/c (veh/h)		0.11			0.21			0.26			0.41	
Low Capacity (veh/h)		711			980			990			1037	
Low v/c (veh/h)		0.14			0.25			0.32			0.50	

Intersection Summary												
Maximum v/c High			0.41									
Maximum v/c Low			0.50									
Intersection Capacity Utilization			60.8%		ICU Level of Service				B			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	130	0	0	200	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.92	0.92	0.90	0.92	0.92
Hourly flow rate (vph)	144	0	0	222	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	222	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	222	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	81	100	100			
cM capacity (veh/h)	766	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	144	222
Volume Left	144	0
Volume Right	0	0
cSH	766	1700
Volume to Capacity	0.19	0.13
Queue Length 95th (ft)	17	0
Control Delay (s)	10.8	0.0
Lane LOS	B	
Approach Delay (s)	10.8	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	105.1%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	40	45	370	105	35	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1633	0	1807	0	0	1853
Flt Permitted	0.977					0.897
Satd. Flow (perm)	1633	0	1807	0	0	1671
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	58		34			
Link Speed (mph)	30		30			30
Link Distance (ft)	340		157			358
Travel Time (s)	7.7		3.6			8.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.67	0.67	0.71	0.71
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	109	0	709	0	0	493
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	21.0		21.0		21.0	21.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max
Act Effct Green (s)	8.2		61.4			61.4
Actuated g/C Ratio	0.11		0.81			0.81
v/c Ratio	0.48		0.48			0.37
Control Delay	23.8		4.8			4.1
Queue Delay	0.0		0.4			0.0
Total Delay	23.8		5.3			4.1
LOS	C		A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	23.8		5.3			4.1
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 76.2			
Natural Cycle: 55			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

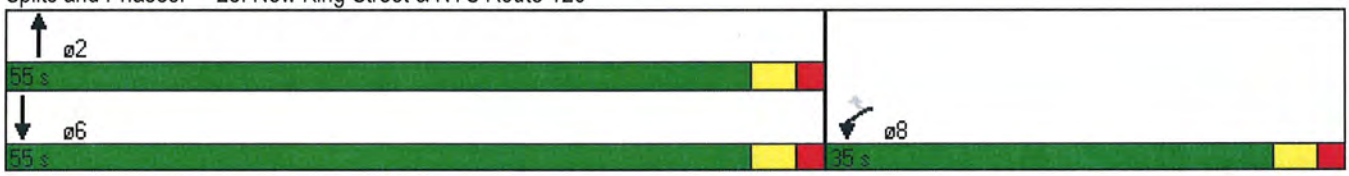
Splits and Phases: 20: Gateway Lane & NYS Route 120

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	570	90	385	0	0	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1811	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1811	1583	1863	0	0	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		86				
Link Speed (mph)	30		30			30
Link Distance (ft)	315		909			368
Travel Time (s)	7.2		20.7			8.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	606	96	414	0	0	382
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	25.0	25.0	45.0			45.0
Total Split (s)	35.0	35.0	55.0	0.0	0.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	0.0%	0.0%	61.1%
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None			None
Act Effct Green (s)	28.3	28.3	18.0			18.0
Actuated g/C Ratio	0.50	0.50	0.32			0.32
v/c Ratio	0.67	0.11	0.70			0.64
Control Delay	16.3	3.5	23.6			21.9
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	16.3	3.5	23.6			21.9
LOS	B	A	C			C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	14.6		23.6			21.9
Approach LOS	B		C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 56.4			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 18.9		Intersection LOS: B	
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 28: New King Street & NYS Route 120



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	225	330	135	0	0	0	355	160	95	65	200	660
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	275		0	125		350
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25		25	25		25	50		25	50		75
Satd. Flow (prot)	1681	1635	0	0	0	0	1770	3341	0	1711	1863	1568
Flt Permitted	0.950	0.998					0.478			0.588		
Satd. Flow (perm)	1681	1635	0	0	0	0	890	3341	0	1059	1863	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15						99				295
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			835			1433			550	
Travel Time (s)		4.3			19.0			32.6			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.96	0.96	0.96	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	211	508	0	0	0	0	370	266	0	73	225	742
Turn Type	Perm						D.P+P			pm+pt		custom
Protected Phases		4					1 2	2 3		1	3	4
Permitted Phases	4						3			3		3
Detector Phase	4	4					1 2	2 3		1	3	4
Switch Phase												
Minimum Initial (s)	25.0	25.0								10.0	35.0	25.0
Minimum Split (s)	30.0	30.0								15.0	40.0	30.0
Total Split (s)	60.0	60.0	0.0	0.0	0.0	0.0	35.0	75.0	0.0	15.0	55.0	60.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	23.3%	50.0%	0.0%	10.0%	36.7%	40.0%
Yellow Time (s)	3.0	3.0								3.0	3.0	3.0
All-Red Time (s)	2.0	2.0								2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag								Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes								Yes	Yes	Yes
Recall Mode	Min	Min								Min	None	Min
Act Effct Green (s)	47.8	47.8					63.5	53.4		45.4	35.3	88.1
Actuated g/C Ratio	0.38	0.38					0.50	0.42		0.36	0.28	0.70
v/c Ratio	0.33	0.81					0.57	0.18		0.17	0.43	0.63
Control Delay	29.3	45.3					22.2	15.3		19.1	42.6	8.3
Queue Delay	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Total Delay	29.3	45.3					22.2	15.3		19.1	42.6	8.3
LOS	C	D					C	B		B	D	A

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	15.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		40.6						19.3			16.5	
Approach LOS		D						B			B	

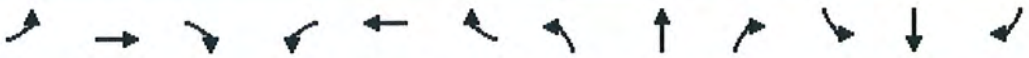
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 126.4
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 24.5 Intersection LOS: C
Intersection Capacity Utilization 82.2% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Airport Road & NYS Route 120

Lane Group	ø2
Approach Delay	
Approach LOS	

Intersection Summary

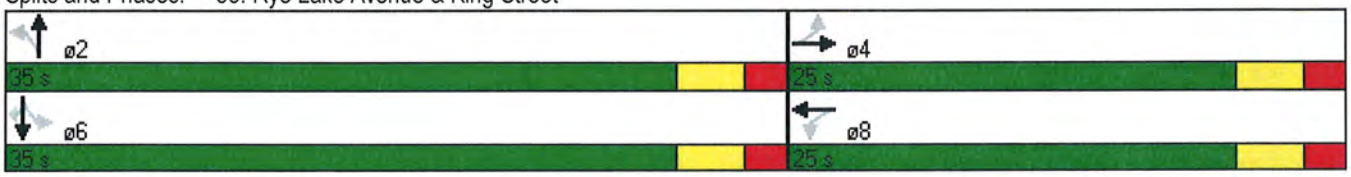


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	5	225	5	5	5	365	140	5	5	55	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	15	12	12	11	12	12	13	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		75
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		50
Satd. Flow (prot)	0	1569	0	0	1926	0	0	1736	0	0	1917	1478
Flt Permitted		0.986			0.822			0.737			0.958	
Satd. Flow (perm)	0	1550	0	0	1609	0	0	1326	0	0	1844	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		281			7			1				68
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			335			653			286	
Travel Time (s)		26.6			7.6			14.8			6.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.67	0.67	0.67	0.89	0.89	0.89	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	299	0	0	21	0	0	573	0	0	81	68
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	21.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	None
Act Effct Green (s)		7.7			7.7			23.6			23.6	23.6
Actuated g/C Ratio		0.18			0.18			0.56			0.56	0.56
v/c Ratio		0.58			0.07			0.76			0.08	0.08
Control Delay		8.5			13.7			16.4			4.7	1.9
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		8.5			13.7			16.4			4.7	1.9
LOS		A			B			B			A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		8.5			13.7			16.4			3.4	
Approach LOS		A			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 41.8			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 12.2		Intersection LOS: B	
Intersection Capacity Utilization 57.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 33: Rye Lake Avenue & King Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	15	215	0	0	655	360	0	0	475	0	0	0
Sign Control		Free			Free			Yield			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.90	0.92	0.92	0.91	0.91	0.92	0.92	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	30	239	0	0	720	396	0	0	528	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					190							
pX, platoon unblocked	0.81						0.81	0.81		0.81	0.81	0.81
vC, conflicting volume	1115			239			1216	1414	239	1744	1216	918
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1025			239			1150	1394	239	1801	1150	781
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			100	100	34	100	100	100
cM capacity (veh/h)	549			1328			136	108	800	16	152	320

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	269	1115	528
Volume Left	30	0	0
Volume Right	0	396	528
cSH	549	1700	800
Volume to Capacity	0.05	0.66	0.66
Queue Length 95th (ft)	4	0	127
Control Delay (s)	2.0	0.0	17.8
Lane LOS	A		C
Approach Delay (s)	2.0	0.0	17.8
Approach LOS			C

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	655	0	0	0	230	5
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.92	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	728	0	0	0	256	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)	520					
pX, platoon unblocked						
vC, conflicting volume	0		1456	0	1456	1456
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		1456	0	1456	1456
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	55		100	100	0	86
cM capacity (veh/h)	1617		71	1085	70	71

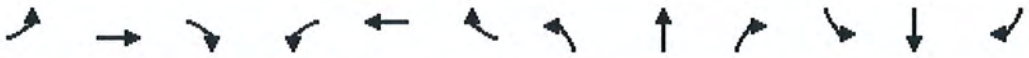
Direction, Lane #	WB 1	SB 1
Volume Total	728	266
Volume Left	728	256
Volume Right	0	0
cSH	1617	70
Volume to Capacity	0.45	3.80
Queue Length 95th (ft)	60	Err
Control Delay (s)	9.0	Err
Lane LOS	A	F
Approach Delay (s)	9.0	Err
Approach LOS		F

Intersection Summary			
Average Delay	2679.7		
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	190	15	165	170	25	420
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93
Hourly flow rate (vph)	216	17	179	185	27	452
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			233		676	224
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			233		676	224
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			87		92	42
cM capacity (veh/h)			1332		335	779

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	233	241	123	478
Volume Left	0	179	0	27
Volume Right	17	0	0	452
cSH	1700	1332	1700	725
Volume to Capacity	0.14	0.13	0.07	0.66
Queue Length 95th (ft)	0	12	0	125
Control Delay (s)	0.0	6.3	0.0	19.1
Lane LOS		A		C
Approach Delay (s)	0.0	4.2		19.1
Approach LOS				C

Intersection Summary			
Average Delay	9.9		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	5	5	10	350	20	50	5	465	50	185	300	20
Peak Hour Factor	0.60	0.60	0.60	0.69	0.69	0.69	0.90	0.90	0.90	0.88	0.88	0.88
Hourly flow rate (vph)	8	8	17	507	29	72	6	517	56	210	341	23
Approach Volume (veh/h)		33			609			578			574	
Crossing Volume (veh/h)		1058			531			227			542	
High Capacity (veh/h)		593			911			1159			903	
High v/c (veh/h)		0.06			0.67			0.50			0.64	
Low Capacity (veh/h)		458			734			957			727	
Low v/c (veh/h)		0.07			0.83			0.60			0.79	

Intersection Summary												
Maximum v/c High			0.67									
Maximum v/c Low			0.83									
Intersection Capacity Utilization			95.2%		ICU Level of Service				F			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	20	0	0	565	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.92	0.92	0.90	0.92	0.92
Hourly flow rate (vph)	22	0	0	628	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	628	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	628	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	100	100			
cM capacity (veh/h)	447	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	22	628
Volume Left	22	0
Volume Right	0	0
cSH	447	1700
Volume to Capacity	0.05	0.37
Queue Length 95th (ft)	4	0
Control Delay (s)	13.5	0.0
Lane LOS	B	
Approach Delay (s)	13.5	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	22	22	264	33	6	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1638	0	1835	0	0	1861
Flt Permitted	0.976					0.989
Satd. Flow (perm)	1638	0	1835	0	0	1842
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	26		15			
Link Speed (mph)	30		30			30
Link Distance (ft)	340		157			358
Travel Time (s)	7.7		3.6			8.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.78	0.78	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	380	0	0	430
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	21.0		21.0		21.0	21.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max
Act Effct Green (s)	7.0		66.8			66.8
Actuated g/C Ratio	0.09		0.87			0.87
v/c Ratio	0.30		0.24			0.27
Control Delay	25.3		2.3			2.5
Queue Delay	0.0		0.0			0.0
Total Delay	25.3		2.3			2.5
LOS	C		A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	25.3		2.3			2.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 77.1			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay: 3.8		Intersection LOS: A	
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Gateway Lane & NYS Route 120

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	363	39	259	0	0	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1743	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1743	1583	1863	0	0	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		43				
Link Speed (mph)	30		30			30
Link Distance (ft)	315		909			368
Travel Time (s)	7.2		20.7			8.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.88	0.88	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	403	43	294	0	0	248
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	25.0	25.0	45.0			45.0
Total Split (s)	35.0	35.0	55.0	0.0	0.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	0.0%	0.0%	61.1%
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None			None
Act Effct Green (s)	13.6	13.6	12.5			12.5
Actuated g/C Ratio	0.37	0.37	0.34			0.34
v/c Ratio	0.62	0.07	0.46			0.39
Control Delay	14.7	3.8	12.7			11.8
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	14.7	3.8	12.7			11.8
LOS	B	A	B			B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	13.7		12.7			11.8
Approach LOS	B		B			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 36.6			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 42.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: New King Street & NYS Route 120

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	523	341	0	0	0	154	66	116	88	132	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	275		0	125		350
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25		25	25		25	50		25	50		75
Satd. Flow (prot)	1681	1573	0	0	0	0	1770	3199	0	1711	1863	1509
Flt Permitted	0.950	0.999					0.611			0.612		
Satd. Flow (perm)	1681	1573	0	0	0	0	1138	3199	0	1102	1863	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24						143				394
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			835			1433			550	
Travel Time (s)		4.3			19.0			32.6			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	202	1027	0	0	0	0	190	224	0	93	139	394
Turn Type	Perm						D.P+P			pm+pt		custom
Protected Phases		4					1 2	2 3		1	3	4
Permitted Phases	4						3			3		3
Detector Phase	4	4					1 2	2 3		1	3	4
Switch Phase												
Minimum Initial (s)	25.0	25.0								10.0	35.0	25.0
Minimum Split (s)	30.0	30.0								15.0	40.0	30.0
Total Split (s)	60.0	60.0	0.0	0.0	0.0	0.0	35.0	75.0	0.0	15.0	55.0	60.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	23.3%	50.0%	0.0%	10.0%	36.7%	40.0%
Yellow Time (s)	3.0	3.0								3.0	3.0	3.0
All-Red Time (s)	2.0	2.0								2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag								Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes								Yes	Yes	Yes
Recall Mode	Min	Min								Min	None	Min
Act Effct Green (s)	55.0	55.0					60.3	50.3		45.0	35.0	95.0
Actuated g/C Ratio	0.42	0.42					0.46	0.39		0.35	0.27	0.73
v/c Ratio	0.28	1.51					0.29	0.17		0.22	0.28	0.33
Control Delay	26.2	268.7					19.7	10.0		20.3	39.6	1.2
Queue Delay	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Total Delay	26.2	268.7					19.7	10.0		20.3	39.6	1.2
LOS	C	F					B	A		C	D	A

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	15.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		228.8						14.4			12.6	
Approach LOS		F						B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 130.3			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.51			
Intersection Signal Delay: 130.0		Intersection LOS: F	
Intersection Capacity Utilization 79.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Airport Road & NYS Route 120

Lane Group	ø2
Approach Delay	
Approach LOS	

Intersection Summary

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	6	264	0	11	0	132	55	6	6	22	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	15	12	12	11	12	12	13	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		75
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		50
Satd. Flow (prot)	0	1537	0	0	2049	0	0	1667	0	0	1906	1478
Flt Permitted		0.964						0.776			0.898	
Satd. Flow (perm)	0	1489	0	0	2049	0	0	1338	0	0	1729	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		343						4				45
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			335			653			286	
Travel Time (s)		26.6			7.6			14.8			6.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.77	0.77	0.77	0.25	0.25	0.25	0.78	0.78	0.78	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	2%	2%	2%	8%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	387	0	0	44	0	0	248	0	0	33	45
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	21.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	None
Act Effct Green (s)		8.3			8.3			11.2			10.7	10.7
Actuated g/C Ratio		0.30			0.30			0.41			0.39	0.39
v/c Ratio		0.56			0.07			0.45			0.05	0.07
Control Delay		5.9			9.1			10.4			6.7	3.3
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		5.9			9.1			10.4			6.7	3.3
LOS		A			A			B			A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.9			9.1			10.4			4.7	
Approach LOS		A			A			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 27.5			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 50.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Rye Lake Avenue & King Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	583	0	0	435	94	0	0	473	0	0	0
Sign Control		Free			Free			Yield			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.42	0.90	0.92	0.92	0.90	0.70	0.92	0.92	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	14	648	0	0	483	134	0	0	526	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					190							
pX, platoon unblocked	0.91						0.91	0.91		0.91	0.91	0.91
vC, conflicting volume	618			648			1227	1294	648	1752	1227	550
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	535			648			1201	1275	648	1776	1201	462
tC, single (s)	4.2			4.1			7.1	6.5	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	98			100			100	100	0	0	100	100
cM capacity (veh/h)	926			938			146	150	463	0	166	549

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	662	618	526
Volume Left	14	0	0
Volume Right	0	134	526
cSH	926	1700	463
Volume to Capacity	0.02	0.36	1.13
Queue Length 95th (ft)	1	0	461
Control Delay (s)	0.4	0.0	112.7
Lane LOS	A		F
Approach Delay (s)	0.4	0.0	112.7
Approach LOS			F

Intersection Summary			
Average Delay	33.0		
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	435	0	0	0	589	6
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.92	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	483	0	0	0	654	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)	520					
pX, platoon unblocked						
vC, conflicting volume	0		967	0	967	967
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		967	0	967	967
tC, single (s)	4.2		6.5	6.2	7.2	6.5
tC, 2 stage (s)						
tF (s)	2.3		4.0	3.3	3.6	4.0
p0 queue free %	70		100	100	0	93
cM capacity (veh/h)	1591		177	1085	176	177

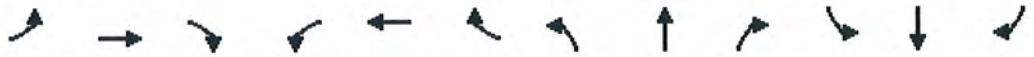
Direction, Lane #	WB 1	SB 1
Volume Total	483	666
Volume Left	483	654
Volume Right	0	0
cSH	1591	176
Volume to Capacity	0.30	3.79
Queue Length 95th (ft)	32	Err
Control Delay (s)	8.2	Err
Lane LOS	A	F
Approach Delay (s)	8.2	Err
Approach LOS		F

Intersection Summary			
Average Delay	5799.2		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	149	11	77	396	6	187
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.81	0.81	0.73	0.73
Hourly flow rate (vph)	169	12	95	489	8	256
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			182		610	176
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			182		610	176
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		98	69
cM capacity (veh/h)			1391		397	837

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	182	258	326	264
Volume Left	0	95	0	8
Volume Right	12	0	0	256
cSH	1700	1391	1700	809
Volume to Capacity	0.11	0.07	0.19	0.33
Queue Length 95th (ft)	0	5	0	36
Control Delay (s)	0.0	3.2	0.0	11.6
Lane LOS		A		B
Approach Delay (s)	0.0	1.4		11.6
Approach LOS				B

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	39	6	6	66	28	88	6	116	193	99	374	39
Peak Hour Factor	0.46	0.46	0.46	0.67	0.67	0.67	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	85	13	13	99	42	131	7	129	214	110	416	43
Approach Volume (veh/h)		111			272			350			569	
Crossing Volume (veh/h)		624			220			208			147	
High Capacity (veh/h)		845			1165			1177			1234	
High v/c (veh/h)		0.13			0.23			0.30			0.46	
Low Capacity (veh/h)		676			962			973			1025	
Low v/c (veh/h)		0.16			0.28			0.36			0.56	

Intersection Summary												
Maximum v/c High			0.46									
Maximum v/c Low			0.56									
Intersection Capacity Utilization			66.0%		ICU Level of Service				C			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	143	0	0	220	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.92	0.92	0.90	0.92	0.92
Hourly flow rate (vph)	159	0	0	244	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	244	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	244	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	100	100			
cM capacity (veh/h)	744	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	159	244
Volume Left	159	0
Volume Right	0	0
cSH	744	1700
Volume to Capacity	0.21	0.14
Queue Length 95th (ft)	20	0
Control Delay (s)	11.1	0.0
Lane LOS	B	
Approach Delay (s)	11.1	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	44	50	407	116	39	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1633	0	1807	0	0	1853
Flt Permitted	0.977					0.882
Satd. Flow (perm)	1633	0	1807	0	0	1643
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	64		34			
Link Speed (mph)	30		30			30
Link Distance (ft)	340		157			358
Travel Time (s)	7.7		3.6			8.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.67	0.67	0.71	0.71
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	780	0	0	544
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	21.0		21.0		21.0	21.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max
Act Effct Green (s)	8.4		60.5			60.5
Actuated g/C Ratio	0.11		0.80			0.80
v/c Ratio	0.50		0.54			0.41
Control Delay	23.6		5.6			4.7
Queue Delay	0.0		0.5			0.0
Total Delay	23.6		6.1			4.7
LOS	C		A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	23.6		6.1			4.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 75.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			

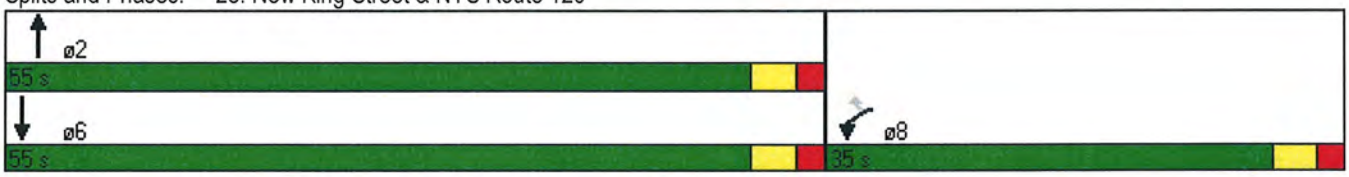
Splits and Phases: 20: Gateway Lane & NYS Route 120

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	627	99	424	0	0	391
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1811	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1811	1583	1863	0	0	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		85				
Link Speed (mph)	30		30			30
Link Distance (ft)	315		909			368
Travel Time (s)	7.2		20.7			8.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	667	105	456	0	0	420
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	25.0	25.0	45.0			45.0
Total Split (s)	35.0	35.0	55.0	0.0	0.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	0.0%	0.0%	61.1%
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None			None
Act Effct Green (s)	30.2	30.2	19.7			19.7
Actuated g/C Ratio	0.50	0.50	0.33			0.33
v/c Ratio	0.73	0.13	0.75			0.69
Control Delay	19.9	4.3	25.8			23.5
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.9	4.3	25.8			23.5
LOS	B	A	C			C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	17.8		25.8			23.5
Approach LOS	B		C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 60			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 65.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 28: New King Street & NYS Route 120



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	248	363	149	0	0	0	391	176	105	72	220	726
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	275		0	125		350
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25		25	25		25	50		25	50		75
Satd. Flow (prot)	1681	1635	0	0	0	0	1770	3341	0	1711	1863	1568
Flt Permitted	0.950	0.998					0.428			0.573		
Satd. Flow (perm)	1681	1635	0	0	0	0	797	3341	0	1032	1863	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15						109				240
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			835			1433			550	
Travel Time (s)		4.3			19.0			32.6			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.96	0.96	0.96	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	232	559	0	0	0	0	407	292	0	81	247	816
Turn Type	Perm						D.P+P			pm+pt		custom
Protected Phases		4					1 2	2 3		1	3	4
Permitted Phases	4						3			3		3
Detector Phase	4	4					1 2	2 3		1	3	4
Switch Phase												
Minimum Initial (s)	25.0	25.0								10.0	35.0	25.0
Minimum Split (s)	30.0	30.0								15.0	40.0	30.0
Total Split (s)	60.0	60.0	0.0	0.0	0.0	0.0	35.0	75.0	0.0	15.0	55.0	60.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	23.3%	50.0%	0.0%	10.0%	36.7%	40.0%
Yellow Time (s)	3.0	3.0								3.0	3.0	3.0
All-Red Time (s)	2.0	2.0								2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag								Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes								Yes	Yes	Yes
Recall Mode	Min	Min								Min	None	Min
Act Effct Green (s)	52.3	52.3					63.9	53.9		45.1	35.1	92.4
Actuated g/C Ratio	0.40	0.40					0.49	0.41		0.34	0.27	0.70
v/c Ratio	0.35	0.85					0.68	0.20		0.20	0.49	0.69
Control Delay	29.3	48.2					26.3	16.0		20.1	45.7	11.2
Queue Delay	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Total Delay	29.3	48.2					26.3	16.0		20.1	45.7	11.2
LOS	C	D					C	B		C	D	B

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	15.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		42.7						22.0			19.3	
Approach LOS		D						C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 131.2			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 27.0		Intersection LOS: C	
Intersection Capacity Utilization 84.3%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 2: Airport Road & NYS Route 120

Lane Group	ø2
Approach Delay	
Approach LOS	

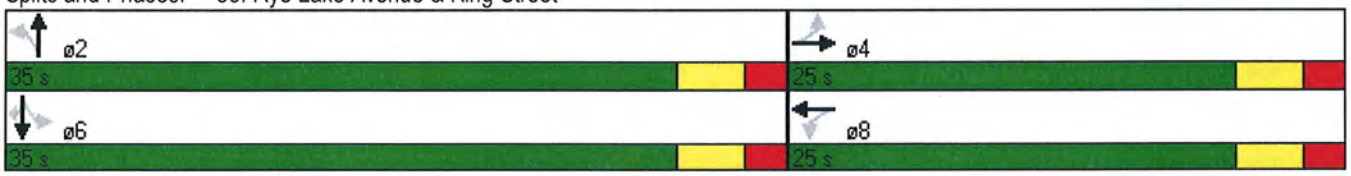
Intersection Summary

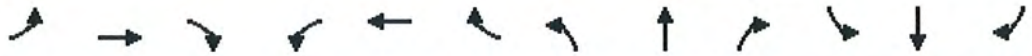
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	11	6	248	6	6	6	402	154	6	6	61	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	15	12	12	11	12	12	13	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		75
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		50
Satd. Flow (prot)	0	1571	0	0	1926	0	0	1736	0	0	1917	1478
Flt Permitted		0.985			0.697			0.731			0.954	
Satd. Flow (perm)	0	1550	0	0	1364	0	0	1315	0	0	1836	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		310			9			1				74
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			335			653			286	
Travel Time (s)		26.6			7.6			14.8			6.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.67	0.67	0.67	0.89	0.89	0.89	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	332	0	0	27	0	0	632	0	0	90	74
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	21.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	None
Act Effct Green (s)		7.9			7.9			28.3			28.3	28.3
Actuated g/C Ratio		0.17			0.17			0.61			0.61	0.61
v/c Ratio		0.64			0.11			0.79			0.08	0.08
Control Delay		9.5			14.2			18.1			4.7	1.9
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		9.5			14.2			18.1			4.7	1.9
LOS		A			B			B			A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.5			14.2			18.1			3.5	
Approach LOS		A			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.4			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 33: Rye Lake Avenue & King Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	237	0	0	721	396	0	0	523	0	0	0
Sign Control		Free			Free			Yield			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.90	0.92	0.92	0.91	0.91	0.92	0.92	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	34	263	0	0	792	435	0	0	581	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					190							
pX, platoon unblocked	0.78						0.78	0.78		0.78	0.78	0.78
vC, conflicting volume	1227			263			1341	1559	263	1922	1341	1010
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1151			263			1297	1575	263	2041	1297	873
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	25	100	100	100
cM capacity (veh/h)	474			1301			103	80	775	8	117	273

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	297	1227	581
Volume Left	34	0	0
Volume Right	0	435	581
cSH	474	1700	775
Volume to Capacity	0.07	0.72	0.75
Queue Length 95th (ft)	6	0	174
Control Delay (s)	2.5	0.0	22.2
Lane LOS	A		C
Approach Delay (s)	2.5	0.0	22.2
Approach LOS			C

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	721	0	0	0	253	6
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.92	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	801	0	0	0	281	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)	520					
pX, platoon unblocked						
vC, conflicting volume	0		1602	0	1602	1602
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		1602	0	1602	1602
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	50		100	100	0	77
cM capacity (veh/h)	1617		53	1085	52	53

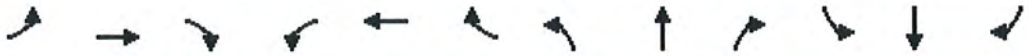
Direction, Lane #	WB 1	SB 1
Volume Total	801	293
Volume Left	801	281
Volume Right	0	0
cSH	1617	52
Volume to Capacity	0.50	5.64
Queue Length 95th (ft)	72	Err
Control Delay (s)	9.4	Err
Lane LOS	A	F
Approach Delay (s)	9.4	Err
Approach LOS		F

Intersection Summary			
Average Delay	2685.3		
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	209	17	182	187	28	462
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93
Hourly flow rate (vph)	238	19	198	203	30	497
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			257		744	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			257		744	247
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		90	34
cM capacity (veh/h)			1305		297	753

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	257	266	136	527
Volume Left	0	198	0	30
Volume Right	19	0	0	497
cSH	1700	1305	1700	692
Volume to Capacity	0.15	0.15	0.08	0.76
Queue Length 95th (ft)	0	13	0	178
Control Delay (s)	0.0	6.5	0.0	24.8
Lane LOS		A		C
Approach Delay (s)	0.0	4.3		24.8
Approach LOS				C

Intersection Summary			
Average Delay	12.5		
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	6	6	11	385	22	55	6	512	55	204	330	22
Peak Hour Factor	0.60	0.60	0.60	0.69	0.69	0.69	0.90	0.90	0.90	0.88	0.88	0.88
Hourly flow rate (vph)	10	10	18	558	32	80	7	569	61	232	375	25
Approach Volume (veh/h)		38			670			637			632	
Crossing Volume (veh/h)		1165			586			252			597	
High Capacity (veh/h)		543			872			1137			864	
High v/c (veh/h)		0.07			0.77			0.56			0.73	
Low Capacity (veh/h)		415			700			936			693	
Low v/c (veh/h)		0.09			0.96			0.68			0.91	

Intersection Summary												
Maximum v/c High			0.77									
Maximum v/c Low			0.96									
Intersection Capacity Utilization			103.1%		ICU Level of Service				G			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	22	0	0	622	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.92	0.92	0.90	0.92	0.92
Hourly flow rate (vph)	24	0	0	691	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	691	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	691	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	94	100	100			
cM capacity (veh/h)	410	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	24	691
Volume Left	24	0
Volume Right	0	0
cSH	410	1700
Volume to Capacity	0.06	0.41
Queue Length 95th (ft)	5	0
Control Delay (s)	14.3	0.0
Lane LOS	B	
Approach Delay (s)	14.3	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	22	22	257	36	6	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1638	0	1831	0	0	1861
Flt Permitted	0.976					0.989
Satd. Flow (perm)	1638	0	1831	0	0	1842
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	26		17			
Link Speed (mph)	30		30			30
Link Distance (ft)	340		157			358
Travel Time (s)	7.7		3.6			8.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.85	0.85	0.78	0.78	0.50	0.50
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	52	0	375	0	0	430
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	21.0		21.0		21.0	21.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max
Act Effct Green (s)	7.0		66.8			66.8
Actuated g/C Ratio	0.09		0.87			0.87
v/c Ratio	0.30		0.24			0.27
Control Delay	25.3		2.3			2.5
Queue Delay	0.0		0.0			0.0
Total Delay	25.3		2.3			2.5
LOS	C		A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	25.3		2.3			2.5
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 77.1			
Natural Cycle: 45			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.30			
Intersection Signal Delay: 3.8		Intersection LOS: A	
Intersection Capacity Utilization 27.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 20: Gateway Lane & NYS Route 120

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	317	34	259	0	0	230
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1743	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1743	1583	1863	0	0	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		38				
Link Speed (mph)	30		30			30
Link Distance (ft)	315		909			368
Travel Time (s)	7.2		20.7			8.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.90	0.90	0.88	0.88	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	7%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	352	38	294	0	0	247
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	25.0	25.0	45.0			45.0
Total Split (s)	35.0	35.0	55.0	0.0	0.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	0.0%	0.0%	61.1%
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None			None
Act Effct Green (s)	12.4	12.4	12.1			12.1
Actuated g/C Ratio	0.36	0.36	0.35			0.35
v/c Ratio	0.57	0.06	0.45			0.38
Control Delay	13.9	4.1	11.8			10.9
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	13.9	4.1	11.8			10.9
LOS	B	A	B			B

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	12.9		11.8			10.9
Approach LOS	B		B			B

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 34.9			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 12.1		Intersection LOS: B	
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 28: New King Street & NYS Route 120

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	517	341	0	0	0	154	66	114	101	120	326
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	275		0	125		350
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25		25	25		25	50		25	50		75
Satd. Flow (prot)	1681	1573	0	0	0	0	1770	3203	0	1711	1863	1509
Flt Permitted	0.950	0.999					0.634			0.613		
Satd. Flow (perm)	1681	1573	0	0	0	0	1181	3203	0	1104	1863	1509
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24						141				343
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			835			1433			550	
Travel Time (s)		4.3			19.0			32.6			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	6%	2%	2%	2%	2%	2%	2%	2%	2%	2%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	202	1020	0	0	0	0	190	222	0	106	126	343
Turn Type	Perm						D.P+P			pm+pt		custom
Protected Phases		4					1 2	2 3		1	3	4
Permitted Phases	4						3			3		3
Detector Phase	4	4					1 2	2 3		1	3	4
Switch Phase												
Minimum Initial (s)	25.0	25.0								10.0	35.0	25.0
Minimum Split (s)	30.0	30.0								15.0	40.0	30.0
Total Split (s)	60.0	60.0	0.0	0.0	0.0	0.0	35.0	75.0	0.0	15.0	55.0	60.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	23.3%	50.0%	0.0%	10.0%	36.7%	40.0%
Yellow Time (s)	3.0	3.0								3.0	3.0	3.0
All-Red Time (s)	2.0	2.0								2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag								Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes								Yes	Yes	Yes
Recall Mode	Min	Min								Min	None	Min
Act Effct Green (s)	55.0	55.0					60.3	50.3		45.0	35.0	95.0
Actuated g/C Ratio	0.42	0.42					0.46	0.39		0.35	0.27	0.73
v/c Ratio	0.28	1.50					0.29	0.17		0.25	0.25	0.29
Control Delay	26.2	264.2					19.6	10.1		20.7	39.1	1.2
Queue Delay	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Total Delay	26.2	264.2					19.6	10.1		20.7	39.1	1.2
LOS	C	F					B	B		C	D	A

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	15.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		224.9						14.5			13.1	
Approach LOS		F						B			B	

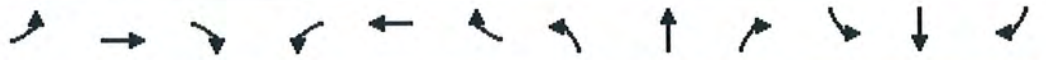
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 130.3
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.50
Intersection Signal Delay: 130.5 Intersection LOS: F
Intersection Capacity Utilization 79.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: Airport Road & NYS Route 120

Lane Group	ø2
Approach Delay	
Approach LOS	

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	6	250	0	11	0	130	55	6	6	25	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	15	12	12	11	12	12	13	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		75
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		50
Satd. Flow (prot)	0	1539	0	0	2049	0	0	1668	0	0	1906	1478
Flt Permitted		0.962						0.774			0.905	
Satd. Flow (perm)	0	1488	0	0	2049	0	0	1335	0	0	1742	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		325						4				45
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			335			653			286	
Travel Time (s)		26.6			7.6			14.8			6.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.77	0.77	0.77	0.25	0.25	0.25	0.78	0.78	0.78	0.86	0.86	0.86
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	5%	2%	2%	2%	8%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	369	0	0	44	0	0	246	0	0	36	45
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	21.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	None
Act Effct Green (s)		8.2			8.2			11.0			10.6	10.6
Actuated g/C Ratio		0.30			0.30			0.40			0.39	0.39
v/c Ratio		0.55			0.07			0.46			0.05	0.08
Control Delay		5.9			9.1			10.4			6.6	3.2
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		5.9			9.1			10.4			6.6	3.2
LOS		A			A			B			A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		5.9			9.1			10.4			4.7	
Approach LOS		A			A			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 27.4			
Natural Cycle: 45			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 49.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 33: Rye Lake Avenue & King Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	579	0	0	415	66	0	0	470	0	0	0
Sign Control		Free			Free			Yield			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.42	0.90	0.92	0.92	0.90	0.70	0.92	0.92	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	14	643	0	0	461	94	0	0	522	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					190							
pX, platoon unblocked	0.91						0.91	0.91		0.91	0.91	0.91
vC, conflicting volume	555			643			1180	1227	643	1702	1180	508
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	467			643			1150	1202	643	1721	1150	416
tC, single (s)	4.2			4.1			7.1	6.5	6.3	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.4	3.5	4.0	3.3
p0 queue free %	99			100			100	100	0	0	100	100
cM capacity (veh/h)	982			941			158	166	466	0	179	583

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	658	555	522
Volume Left	14	0	0
Volume Right	0	94	522
cSH	982	1700	466
Volume to Capacity	0.01	0.33	1.12
Queue Length 95th (ft)	1	0	448
Control Delay (s)	0.4	0.0	107.8
Lane LOS	A		F
Approach Delay (s)	0.4	0.0	107.8
Approach LOS			F

Intersection Summary			
Average Delay	32.6		
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	415	0	0	0	585	6
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.92	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	461	0	0	0	650	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)	520					
pX, platoon unblocked						
vC, conflicting volume	0		922	0	922	922
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		922	0	922	922
tC, single (s)	4.2		6.5	6.2	7.2	6.5
tC, 2 stage (s)						
tF (s)	2.3		4.0	3.3	3.6	4.0
p0 queue free %	71		100	100	0	94
cM capacity (veh/h)	1591		192	1085	191	192

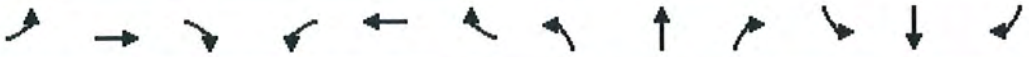
Direction, Lane #	WB 1	SB 1
Volume Total	461	662
Volume Left	461	650
Volume Right	0	0
cSH	1591	191
Volume to Capacity	0.29	3.46
Queue Length 95th (ft)	30	Err
Control Delay (s)	8.2	Err
Lane LOS	A	F
Approach Delay (s)	8.2	Err
Approach LOS		F

Intersection Summary			
Average Delay	5897.1		
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	148	11	69	392	6	186
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.81	0.81	0.73	0.73
Hourly flow rate (vph)	168	12	85	484	8	255
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			181		587	174
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			181		587	174
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		98	70
cM capacity (veh/h)			1392		414	839

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	181	247	323	263
Volume Left	0	85	0	8
Volume Right	12	0	0	255
cSH	1700	1392	1700	813
Volume to Capacity	0.11	0.06	0.19	0.32
Queue Length 95th (ft)	0	5	0	35
Control Delay (s)	0.0	3.0	0.0	11.5
Lane LOS		A		B
Approach Delay (s)	0.0	1.3		11.5
Approach LOS				B

Intersection Summary			
Average Delay	3.7		
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	39	6	6	52	28	101	6	36	177	99	307	39
Peak Hour Factor	0.46	0.46	0.46	0.67	0.67	0.67	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	85	13	13	78	42	151	7	40	197	110	341	43
Approach Volume (veh/h)		111			270			243			494	
Crossing Volume (veh/h)		529			131			208			126	
High Capacity (veh/h)		912			1250			1177			1255	
High v/c (veh/h)		0.12			0.22			0.21			0.39	
Low Capacity (veh/h)		736			1038			973			1043	
Low v/c (veh/h)		0.15			0.26			0.25			0.47	

Intersection Summary												
Maximum v/c High			0.39									
Maximum v/c Low			0.47									
Intersection Capacity Utilization			57.3%		ICU Level of Service				B			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	215	0	0	158	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.92	0.92	0.90	0.92	0.92
Hourly flow rate (vph)	239	0	0	176	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	176	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	176	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	71	100	100			
cM capacity (veh/h)	814	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	239	176
Volume Left	239	0
Volume Right	0	0
cSH	814	1700
Volume to Capacity	0.29	0.10
Queue Length 95th (ft)	31	0
Control Delay (s)	11.2	0.0
Lane LOS	B	
Approach Delay (s)	11.2	0.0
Approach LOS	B	

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	39	0	99	274	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	42	0	110	304	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					835	
pX, platoon unblocked						
vC, conflicting volume	524	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	524	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	100	93			
cM capacity (veh/h)	479	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	42	414
Volume Left	42	110
Volume Right	0	0
cSH	479	1623
Volume to Capacity	0.09	0.07
Queue Length 95th (ft)	7	5
Control Delay (s)	13.3	2.4
Lane LOS	B	A
Approach Delay (s)	13.3	2.4
Approach LOS	B	

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	44	50	402	138	39	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1633	0	1798	0	0	1853
Flt Permitted	0.977					0.877
Satd. Flow (perm)	1633	0	1798	0	0	1634
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	64		41			
Link Speed (mph)	30		30			30
Link Distance (ft)	340		157			358
Travel Time (s)	7.7		3.6			8.1
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.78	0.78	0.67	0.67	0.71	0.71
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	120	0	806	0	0	541
Turn Type					Perm	
Protected Phases	8		2			6
Permitted Phases					6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0		4.0	4.0
Minimum Split (s)	21.0		21.0		21.0	21.0
Total Split (s)	25.0	0.0	55.0	0.0	55.0	55.0
Total Split (%)	31.3%	0.0%	68.8%	0.0%	68.8%	68.8%
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.0		2.0		2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	4.0	5.0	4.0	5.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None		Max		Max	Max
Act Effct Green (s)	8.4		60.5			60.5
Actuated g/C Ratio	0.11		0.80			0.80
v/c Ratio	0.50		0.56			0.41
Control Delay	23.6		5.8			4.7
Queue Delay	0.0		0.6			0.0
Total Delay	23.6		6.4			4.7
LOS	C		A			A

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	23.6		6.4			4.7
Approach LOS	C		A			A

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 75.6			
Natural Cycle: 60			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

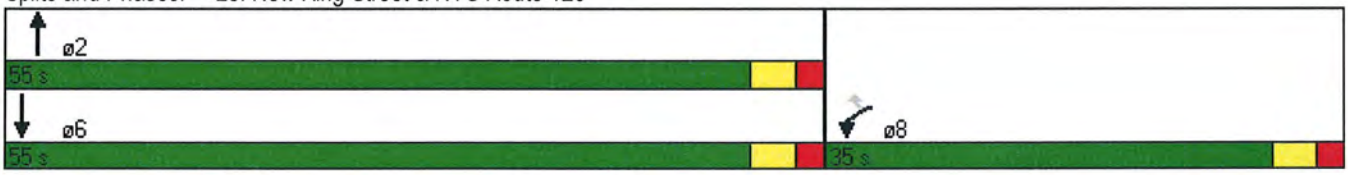
Splits and Phases: 20: Gateway Lane & NYS Route 120

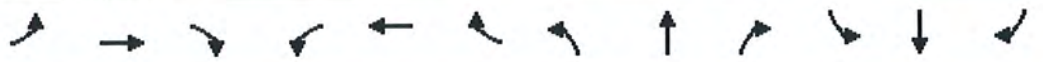
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	614	116	424	0	0	389
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	200		0	0	
Storage Lanes	1	1		0	0	
Taper Length (ft)	25	25		25	25	
Satd. Flow (prot)	1811	1583	1863	0	0	1863
Flt Permitted	0.950					
Satd. Flow (perm)	1811	1583	1863	0	0	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		102				
Link Speed (mph)	30		30			30
Link Distance (ft)	315		909			368
Travel Time (s)	7.2		20.7			8.4
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	653	123	456	0	0	418
Turn Type		Perm				
Protected Phases	8		2			6
Permitted Phases		8				
Detector Phase	8	8	2			6
Switch Phase						
Minimum Initial (s)	4.0	4.0	4.0			4.0
Minimum Split (s)	25.0	25.0	45.0			45.0
Total Split (s)	35.0	35.0	55.0	0.0	0.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	0.0%	0.0%	61.1%
Yellow Time (s)	3.0	3.0	3.0			3.0
All-Red Time (s)	2.0	2.0	2.0			2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	4.0	5.0
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	None			None
Act Effct Green (s)	30.2	30.2	19.7			19.7
Actuated g/C Ratio	0.50	0.50	0.33			0.33
v/c Ratio	0.72	0.15	0.75			0.68
Control Delay	19.3	4.0	25.8			23.4
Queue Delay	0.0	0.0	0.0			0.0
Total Delay	19.3	4.0	25.8			23.4
LOS	B	A	C			C

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach Delay	16.8		25.8			23.4
Approach LOS	B		C			C

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 60			
Natural Cycle: 80			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.0		Intersection LOS: C	
Intersection Capacity Utilization 64.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 28: New King Street & NYS Route 120





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	248	358	149	0	0	0	391	176	103	84	214	705
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	12	12	12	12	12	11	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	275		0	125		350
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (ft)	25		25	25		25	50		25	50		75
Satd. Flow (prot)	1681	1635	0	0	0	0	1770	3345	0	1711	1863	1568
Flt Permitted	0.950	0.998					0.442			0.574		
Satd. Flow (perm)	1681	1635	0	0	0	0	823	3345	0	1034	1863	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15						105				245
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		190			835			1433			550	
Travel Time (s)		4.3			19.0			32.6			12.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.96	0.96	0.96	0.92	0.92	0.92	0.96	0.96	0.96	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)	10%											
Lane Group Flow (vph)	232	554	0	0	0	0	407	290	0	94	240	792
Turn Type	Perm						D.P+P			pm+pt		custom
Protected Phases		4					1 2	2 3		1	3	4
Permitted Phases	4						3			3		3
Detector Phase	4	4					1 2	2 3		1	3	4
Switch Phase												
Minimum Initial (s)	25.0	25.0								10.0	35.0	25.0
Minimum Split (s)	30.0	30.0								15.0	40.0	30.0
Total Split (s)	60.0	60.0	0.0	0.0	0.0	0.0	35.0	75.0	0.0	15.0	55.0	60.0
Total Split (%)	40.0%	40.0%	0.0%	0.0%	0.0%	0.0%	23.3%	50.0%	0.0%	10.0%	36.7%	40.0%
Yellow Time (s)	3.0	3.0								3.0	3.0	3.0
All-Red Time (s)	2.0	2.0								2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	4.0	4.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag								Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes								Yes	Yes	Yes
Recall Mode	Min	Min								Min	None	Min
Act Effct Green (s)	51.6	51.6					63.9	53.9		45.2	35.1	91.8
Actuated g/C Ratio	0.40	0.40					0.49	0.41		0.35	0.27	0.70
v/c Ratio	0.35	0.85					0.67	0.20		0.23	0.48	0.67
Control Delay	29.4	48.2					25.8	16.2		20.3	45.1	10.4
Queue Delay	0.0	0.0					0.0	0.0		0.0	0.0	0.0
Total Delay	29.4	48.2					25.8	16.2		20.3	45.1	10.4
LOS	C	D					C	B		C	D	B

Lane Group	ø2
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	15.0
Total Split (s)	20.0
Total Split (%)	13%
Yellow Time (s)	3.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Recall Mode	Min
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		42.7						21.8			18.6	
Approach LOS		D						C			B	

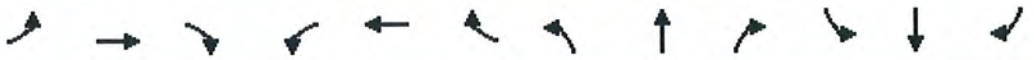
Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 130.6
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 26.7 — Intersection LOS: C
Intersection Capacity Utilization 84.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 2: Airport Road & NYS Route 120

Lane Group	ø2
Approach Delay	
Approach LOS	

Intersection Summary

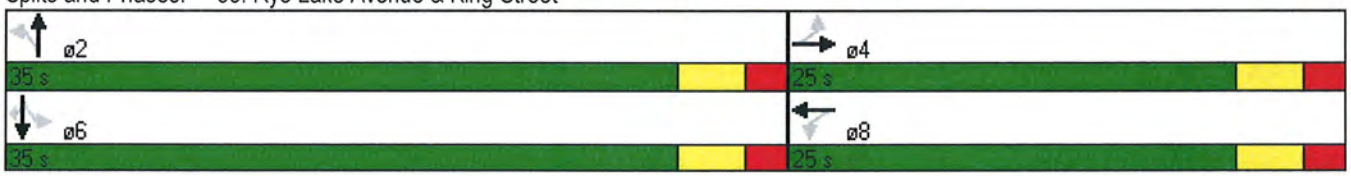


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	5	6	204	6	6	6	396	154	6	6	81	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	15	12	12	11	12	12	13	10
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		75
Storage Lanes	0		0	0		0	0		0	0		1
Taper Length (ft)	25		25	25		25	25		25	25		50
Satd. Flow (prot)	0	1569	0	0	1926	0	0	1736	0	0	1919	1478
Flt Permitted		0.992			0.750			0.716			0.965	
Satd. Flow (perm)	0	1558	0	0	1468	0	0	1287	0	0	1857	1478
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		255			9			1				73
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			335			653			286	
Travel Time (s)		26.6			7.6			14.8			6.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.80	0.80	0.80	0.67	0.67	0.67	0.89	0.89	0.89	0.74	0.74	0.74
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	269	0	0	27	0	0	625	0	0	117	73
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	21.0
Total Split (s)	25.0	25.0	0.0	25.0	25.0	0.0	35.0	35.0	0.0	35.0	35.0	35.0
Total Split (%)	41.7%	41.7%	0.0%	41.7%	41.7%	0.0%	58.3%	58.3%	0.0%	58.3%	58.3%	58.3%
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	None		None	None	None
Act Effct Green (s)		7.3			7.3			28.9			28.9	28.9
Actuated g/C Ratio		0.16			0.16			0.62			0.62	0.62
v/c Ratio		0.58			0.11			0.78			0.10	0.08
Control Delay		9.2			14.5			17.0			4.3	1.7
Queue Delay		0.0			0.0			0.0			0.0	0.0
Total Delay		9.2			14.5			17.0			4.3	1.7
LOS		A			B			B			A	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		9.2			14.5			17.0			3.3	
Approach LOS		A			B			B			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 46.3			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 12.7		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 33: Rye Lake Avenue & King Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	235	0	0	706	390	0	0	519	0	0	0
Sign Control		Free			Free			Yield			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.90	0.92	0.92	0.91	0.91	0.92	0.92	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	34	261	0	0	776	429	0	0	577	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					190							
pX, platoon unblocked	0.78						0.78	0.78		0.78	0.78	0.78
vC, conflicting volume	1204			261			1319	1534	261	1896	1319	990
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1122			261			1269	1543	261	2006	1269	848
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	26	100	100	100
cM capacity (veh/h)	487			1303			107	84	778	8	122	283

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	295	1204	577
Volume Left	34	0	0
Volume Right	0	429	577
cSH	487	1700	778
Volume to Capacity	0.07	0.71	0.74
Queue Length 95th (ft)	6	0	170
Control Delay (s)	2.4	0.0	21.7
Lane LOS	A		C
Approach Delay (s)	2.4	0.0	21.7
Approach LOS			C

Intersection Summary			
Average Delay	6.4		
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	706	0	0	0	251	6
Sign Control	Free		Stop			Stop
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.92	0.92	0.92	0.90	0.50
Hourly flow rate (vph)	784	0	0	0	279	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)	520					
pX, platoon unblocked						
vC, conflicting volume	0		1569	0	1569	1569
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		1569	0	1569	1569
tC, single (s)	4.1		6.5	6.2	7.1	6.5
tC, 2 stage (s)						
tF (s)	2.2		4.0	3.3	3.5	4.0
p0 queue free %	51		100	100	0	79
cM capacity (veh/h)	1617		57	1085	56	57

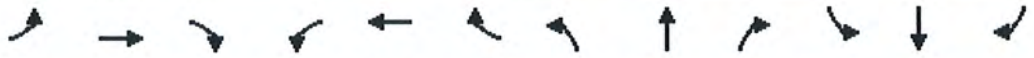
Direction, Lane #	WB 1	SB 1
Volume Total	784	291
Volume Left	784	279
Volume Right	0	0
cSH	1617	56
Volume to Capacity	0.49	5.23
Queue Length 95th (ft)	69	Err
Control Delay (s)	9.3	Err
Lane LOS	A	F
Approach Delay (s)	9.3	Err
Approach LOS		F

Intersection Summary			
Average Delay	2711.6		
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	209	17	178	186	28	461
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.92	0.92	0.93	0.93
Hourly flow rate (vph)	238	19	193	202	30	496
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			257		735	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			257		735	247
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		90	34
cM capacity (veh/h)			1305		302	753

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	257	261	135	526
Volume Left	0	193	0	30
Volume Right	19	0	0	496
cSH	1700	1305	1700	694
Volume to Capacity	0.15	0.15	0.08	0.76
Queue Length 95th (ft)	0	13	0	176
Control Delay (s)	0.0	6.4	0.0	24.5
Lane LOS		A		C
Approach Delay (s)	0.0	4.2		24.5
Approach LOS				C

Intersection Summary			
Average Delay	12.4		
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Volume (veh/h)	6	6	11	347	22	87	6	461	10	199	297	22
Peak Hour Factor	0.60	0.60	0.60	0.69	0.69	0.69	0.90	0.90	0.90	0.88	0.88	0.88
Hourly flow rate (vph)	10	10	18	503	32	126	7	512	11	226	338	25
Approach Volume (veh/h)		38			661			530			589	
Crossing Volume (veh/h)		1067			529			246			541	
High Capacity (veh/h)		589			912			1142			903	
High v/c (veh/h)		0.07			0.72			0.46			0.65	
Low Capacity (veh/h)		454			736			941			727	
Low v/c (veh/h)		0.08			0.90			0.56			0.81	

Intersection Summary					
Maximum v/c High	0.72				
Maximum v/c Low	0.90				
Intersection Capacity Utilization	95.5%	ICU Level of Service		F	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	61	0	0	607	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.92	0.92	0.90	0.92	0.92
Hourly flow rate (vph)	68	0	0	674	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	674	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	674	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	84	100	100			
cM capacity (veh/h)	420	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	68	674
Volume Left	68	0
Volume Right	0	0
cSH	420	1700
Volume to Capacity	0.16	0.40
Queue Length 95th (ft)	14	0
Control Delay (s)	15.2	0.0
Lane LOS	C	
Approach Delay (s)	15.2	0.0
Approach LOS	C	

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	64.1%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	64	0	84	583	0	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Hourly flow rate (vph)	70	0	93	648	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)					835	
pX, platoon unblocked						
vC, conflicting volume	834	0	0			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	834	0	0			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	78	100	94			
cM capacity (veh/h)	319	1085	1623			

Direction, Lane #	EB 1	NB 1
Volume Total	70	741
Volume Left	70	93
Volume Right	0	0
cSH	319	1623
Volume to Capacity	0.22	0.06
Queue Length 95th (ft)	20	5
Control Delay (s)	19.4	1.5
Lane LOS	C	A
Approach Delay (s)	19.4	1.5
Approach LOS	C	

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

Appendix J: Traffic Impact Study

Comparable Parking Facilities Counts

TRAFFIC GENERATION, COMPARABLE PARKING FACILITIES

- Columbus, OH
- Denver, CO
- Pittsburgh, PA

Columbus OH

Weekly Activity Report from 08/31/200900:00:00 to 09/06/200923:59:59

Weekday	Hour	Opened	Closed
Monday	0:00	0	6
Monday	1:00	0	2
Monday	2:00	0	0
Monday	3:00	0	0
Monday	4:00	16	0
Monday	5:00	34	0
Monday	6:00	40	0
Monday	7:00	24	0
Monday	8:00	23	0
Monday	9:00	10	6
Monday	10:00	21	5
Monday	11:00	15	2
Monday	12:00	9	5
Monday	13:00	7	4
Monday	14:00	9	9
Monday	15:00	13	9
Monday	16:00	7	13
Monday	17:00	11	11
Monday	18:00	4	13
Monday	19:00	0	9
Monday	20:00	0	6
Monday	21:00	0	9
Monday	22:00	0	13
Monday	23:00	0	5
Tuesday	0:00	0	6
Tuesday	1:00	0	1
Tuesday	2:00	0	1
Tuesday	3:00	1	0
Tuesday	4:00	5	0
Tuesday	5:00	22	0
Tuesday	6:00	24	0
Tuesday	7:00	23	0
Tuesday	8:00	12	0
Tuesday	9:00	8	2
Tuesday	10:00	10	5
Tuesday	11:00	14	1
Tuesday	12:00	4	2
Tuesday	13:00	5	2
Tuesday	14:00	12	2
Tuesday	15:00	3	4
Tuesday	16:00	4	13
Tuesday	17:00	5	9
Tuesday	18:00	1	17
Tuesday	19:00	0	9
Tuesday	20:00	0	14
Tuesday	21:00	0	12
Tuesday	22:00	0	8
Tuesday	23:00	0	8
Wednesda	0:00	0	0

Weekly Activity Report from 11/23/200900:00:00 to 11/29/200

Weekday	Hour	Opened
Monday	0:00	0
Monday	1:00	0
Monday	2:00	0
Monday	3:00	1
Monday	4:00	11
Monday	5:00	25
Monday	6:00	25
Monday	7:00	10
Monday	8:00	12
Monday	9:00	10
Monday	10:00	10
Monday	11:00	6
Monday	12:00	3
Monday	13:00	9
Monday	14:00	9
Monday	15:00	10
Monday	16:00	11
Monday	17:00	0
Monday	18:00	1
Monday	19:00	0
Monday	20:00	0
Monday	21:00	0
Monday	22:00	0
Monday	23:00	0
Tuesday	0:00	0
Tuesday	1:00	0
Tuesday	2:00	0
Tuesday	3:00	0
Tuesday	4:00	10
Tuesday	5:00	24
Tuesday	6:00	21
Tuesday	7:00	9
Tuesday	8:00	11
Tuesday	9:00	12
Tuesday	10:00	16
Tuesday	11:00	9
Tuesday	12:00	10
Tuesday	13:00	14
Tuesday	14:00	14
Tuesday	15:00	16
Tuesday	16:00	4
Tuesday	17:00	9
Tuesday	18:00	1
Tuesday	19:00	0
Tuesday	20:00	0
Tuesday	21:00	0
Tuesday	22:00	0
Tuesday	23:00	0
Wednesda	0:00	0

Wednesda	1:00	0	1
Wednesda	2:00	0	0
Wednesda	3:00	0	0
Wednesda	4:00	8	0
Wednesda	5:00	19	1
Wednesda	6:00	18	0
Wednesda	7:00	10	0
Wednesda	8:00	17	0
Wednesda	9:00	6	7
Wednesda	10:00	12	1
Wednesda	11:00	7	5
Wednesda	12:00	5	0
Wednesda	13:00	5	1
Wednesda	14:00	12	6
Wednesda	15:00	3	16
Wednesda	16:00	6	10
Wednesda	17:00	6	11
Wednesda	18:00	4	15
Wednesda	19:00	1	15
Wednesda	20:00	0	12
Wednesda	21:00	0	18
Wednesda	22:00	0	21
Wednesda	23:00	0	6
Thursday	0:00	0	2
Thursday	1:00	1	5
Thursday	2:00	0	0
Thursday	3:00	0	0
Thursday	4:00	10	0
Thursday	5:00	25	0
Thursday	6:00	18	0
Thursday	7:00	18	0
Thursday	8:00	13	1
Thursday	9:00	13	1
Thursday	10:00	21	3
Thursday	11:00	4	5
Thursday	12:00	8	5
Thursday	13:00	7	0
Thursday	14:00	14	9
Thursday	15:00	8	10
Thursday	16:00	13	11
Thursday	17:00	7	29
Thursday	18:00	3	35
Thursday	19:00	1	18
Thursday	20:00	0	19
Thursday	21:00	0	18
Thursday	22:00	0	32
Thursday	23:00	0	19
Friday	0:00	0	3
Friday	1:00	0	1
Friday	2:00	0	7
Friday	3:00	0	0
Friday	4:00	10	0

Wednesda	1:00	0
Wednesda	2:00	0
Wednesda	3:00	3
Wednesda	4:00	11
Wednesda	5:00	25
Wednesda	6:00	15
Wednesda	7:00	10
Wednesda	8:00	15
Wednesda	9:00	11
Wednesda	10:00	10
Wednesda	11:00	14
Wednesda	12:00	10
Wednesda	13:00	20
Wednesda	14:00	5
Wednesda	15:00	8
Wednesda	16:00	16
Wednesda	17:00	7
Wednesda	18:00	2
Wednesda	19:00	1
Wednesda	20:00	0
Wednesda	21:00	1
Wednesda	22:00	0
Wednesda	23:00	0
Thursday	0:00	0
Thursday	1:00	0
Thursday	2:00	0
Thursday	3:00	1
Thursday	4:00	8
Thursday	5:00	22
Thursday	6:00	18
Thursday	7:00	16
Thursday	8:00	12
Thursday	9:00	7
Thursday	10:00	7
Thursday	11:00	3
Thursday	12:00	2
Thursday	13:00	4
Thursday	14:00	6
Thursday	15:00	0
Thursday	16:00	0
Thursday	17:00	0
Thursday	18:00	0
Thursday	19:00	0
Thursday	20:00	0
Thursday	21:00	0
Thursday	22:00	0
Thursday	23:00	0
Friday	0:00	0
Friday	1:00	0
Friday	2:00	0
Friday	3:00	0
Friday	4:00	8

Friday	5:00	21	0	Friday	5:00	13
Friday	6:00	19	0	Friday	6:00	8
Friday	7:00	9	0	Friday	7:00	5
Friday	8:00	22	0	Friday	8:00	3
Friday	9:00	8	1	Friday	9:00	4
Friday	10:00	16	8	Friday	10:00	2
Friday	11:00	14	7	Friday	11:00	8
Friday	12:00	9	8	Friday	12:00	9
Friday	13:00	9	6	Friday	13:00	3
Friday	14:00	23	3	Friday	14:00	5
Friday	15:00	14	11	Friday	15:00	2
Friday	16:00	14	18	Friday	16:00	3
Friday	17:00	8	26	Friday	17:00	0
Friday	18:00	1	22	Friday	18:00	0
Friday	19:00	4	9	Friday	19:00	0
Friday	20:00	0	6	Friday	20:00	0
Friday	21:00	0	5	Friday	21:00	0
Friday	22:00	0	10	Friday	22:00	0
Friday	23:00	0	6	Friday	23:00	0
Saturday	0:00	0	5	Saturday	0:00	0
Saturday	1:00	0	0	Saturday	1:00	0
Saturday	2:00	0	0	Saturday	2:00	0
Saturday	3:00	0	0	Saturday	3:00	1
Saturday	4:00	6	0	Saturday	4:00	3
Saturday	5:00	12	0	Saturday	5:00	3
Saturday	6:00	11	0	Saturday	6:00	3
Saturday	7:00	13	0	Saturday	7:00	6
Saturday	8:00	12	1	Saturday	8:00	3
Saturday	9:00	14	0	Saturday	9:00	2
Saturday	10:00	9	3	Saturday	10:00	6
Saturday	11:00	3	0	Saturday	11:00	2
Saturday	12:00	5	4	Saturday	12:00	2
Saturday	13:00	5	0	Saturday	13:00	1
Saturday	14:00	6	0	Saturday	14:00	0
Saturday	15:00	2	5	Saturday	15:00	0
Saturday	16:00	1	2	Saturday	16:00	0
Saturday	17:00	1	6	Saturday	17:00	0
Saturday	18:00	0	5	Saturday	18:00	0
Saturday	19:00	0	6	Saturday	19:00	1
Saturday	20:00	0	5	Saturday	20:00	0
Saturday	21:00	0	2	Saturday	21:00	0
Saturday	22:00	0	8	Saturday	22:00	0
Saturday	23:00	0	3	Saturday	23:00	0
Sunday	0:00	0	0	Sunday	0:00	0
Sunday	1:00	0	0	Sunday	1:00	0
Sunday	2:00	0	0	Sunday	2:00	0
Sunday	3:00	0	0	Sunday	3:00	0
Sunday	4:00	1	0	Sunday	4:00	3
Sunday	5:00	6	0	Sunday	5:00	8
Sunday	6:00	2	0	Sunday	6:00	4
Sunday	7:00	2	1	Sunday	7:00	2
Sunday	8:00	5	1	Sunday	8:00	4

Sunday	9:00	5	1
Sunday	10:00	3	1
Sunday	11:00	2	0
Sunday	12:00	3	6
Sunday	13:00	2	6
Sunday	14:00	4	5
Sunday	15:00	1	13
Sunday	16:00	1	12
Sunday	17:00	0	5
Sunday	18:00	0	5
Sunday	19:00	0	11
Sunday	20:00	0	7
Sunday	21:00	0	13
Sunday	22:00	1	6
Sunday	23:00	0	5
SUM		1058	921

Sunday	9:00	6
Sunday	10:00	3
Sunday	11:00	4
Sunday	12:00	1
Sunday	13:00	2
Sunday	14:00	4
Sunday	15:00	2
Sunday	16:00	4
Sunday	17:00	9
Sunday	18:00	6
Sunday	19:00	0
Sunday	20:00	2
Sunday	21:00	0
Sunday	22:00	0
Sunday	23:00	0
SUM		793

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Denver Co

Weekly Activity Report from 08/31/200900:00:00 to 09/06/200923:59:59

Weekday	Hour	Opened	Closed
Monday	0:00	0	8
Monday	1:00	0	3
Monday	2:00	0	0
Monday	3:00	4	0
Monday	4:00	10	3
Monday	5:00	11	0
Monday	6:00	18	1
Monday	7:00	13	4
Monday	8:00	17	10
Monday	9:00	18	3
Monday	10:00	5	10
Monday	11:00	8	11
Monday	12:00	8	12
Monday	13:00	17	8
Monday	14:00	5	6
Monday	15:00	8	9
Monday	16:00	2	14
Monday	17:00	2	10
Monday	18:00	1	12
Monday	19:00	2	9
Monday	20:00	2	12
Monday	21:00	1	22
Monday	22:00	0	13
Monday	23:00	2	5
Tuesday	0:00	0	17
Tuesday	1:00	0	1
Tuesday	2:00	0	0
Tuesday	3:00	4	1
Tuesday	4:00	10	1
Tuesday	5:00	13	0
Tuesday	6:00	11	1
Tuesday	7:00	12	0
Tuesday	8:00	16	1
Tuesday	9:00	16	0
Tuesday	10:00	6	3
Tuesday	11:00	7	4
Tuesday	12:00	7	4
Tuesday	13:00	9	7
Tuesday	14:00	4	7
Tuesday	15:00	6	10
Tuesday	16:00	7	8
Tuesday	17:00	4	11
Tuesday	18:00	0	8
Tuesday	19:00	1	16
Tuesday	20:00	4	13
Tuesday	21:00	1	28
Tuesday	22:00	0	4
Tuesday	23:00	2	10
Wednesda	0:00	0	5

Weekly Activity Report from 11/23/200900:00:00 to 11/29/200

Weekday	Hour	Opened
Monday	0:00	0
Monday	1:00	0
Monday	2:00	0
Monday	3:00	2
Monday	4:00	6
Monday	5:00	17
Monday	6:00	42
Monday	7:00	20
Monday	8:00	29
Monday	9:00	28
Monday	10:00	12
Monday	11:00	7
Monday	12:00	18
Monday	13:00	14
Monday	14:00	9
Monday	15:00	13
Monday	16:00	6
Monday	17:00	2
Monday	18:00	5
Monday	19:00	2
Monday	20:00	2
Monday	21:00	0
Monday	22:00	0
Monday	23:00	3
Tuesday	0:00	0
Tuesday	1:00	0
Tuesday	2:00	0
Tuesday	3:00	3
Tuesday	4:00	25
Tuesday	5:00	21
Tuesday	6:00	37
Tuesday	7:00	26
Tuesday	8:00	52
Tuesday	9:00	34
Tuesday	10:00	30
Tuesday	11:00	27
Tuesday	12:00	29
Tuesday	13:00	22
Tuesday	14:00	14
Tuesday	15:00	23
Tuesday	16:00	23
Tuesday	17:00	18
Tuesday	18:00	7
Tuesday	19:00	8
Tuesday	20:00	1
Tuesday	21:00	2
Tuesday	22:00	3
Tuesday	23:00	3
Wednesda	0:00	0

Wednesda	1:00	0	2	Wednesda	1:00	0	
Wednesda	2:00	1	0	Wednesda	2:00	1	
Wednesda	3:00	3	0	Wednesda	3:00	11	
Wednesda	4:00	9	2	Wednesda	4:00	37	
Wednesda	5:00	11	1	Wednesda	5:00	29	
Wednesda	6:00	14	1	Wednesda	6:00	49	
Wednesda	7:00	14	1	Wednesda	7:00	35	
Wednesda	8:00	19	1	Wednesda	8:00	45	4
Wednesda	9:00	16	0	Wednesda	9:00	28	
Wednesda	10:00	7	2	Wednesda	10:00	23	
Wednesda	11:00	7	4	Wednesda	11:00	28	
Wednesda	12:00	8	8	Wednesda	12:00	32	
Wednesda	13:00	5	7	Wednesda	13:00	33	
Wednesda	14:00	5	2	Wednesda	14:00	29	
Wednesda	15:00	13	2	Wednesda	15:00	29	
Wednesda	16:00	9	7	Wednesda	16:00	36	8
Wednesda	17:00	0	7	Wednesda	17:00	23	6
Wednesda	18:00	1	4	Wednesda	18:00	16	
Wednesda	19:00	1	13	Wednesda	19:00	4	
Wednesda	20:00	2	15	Wednesda	20:00	2	
Wednesda	21:00	3	16	Wednesda	21:00	4	
Wednesda	22:00	0	8	Wednesda	22:00	3	
Wednesda	23:00	2	11	Wednesda	23:00	1	
Thursday	0:00	0	6	Thursday	0:00	0	
Thursday	1:00	0	0	Thursday	1:00	0	
Thursday	2:00	0	0	Thursday	2:00	2	
Thursday	3:00	4	0	Thursday	3:00	10	
Thursday	4:00	11	0	Thursday	4:00	20	
Thursday	5:00	22	1	Thursday	5:00	44	
Thursday	6:00	24	1	Thursday	6:00	68	
Thursday	7:00	21	0	Thursday	7:00	46	
Thursday	8:00	38	4	Thursday	8:00	59	2
Thursday	9:00	19	1	Thursday	9:00	30	
Thursday	10:00	21	1	Thursday	10:00	19	
Thursday	11:00	9	5	Thursday	11:00	11	
Thursday	12:00	18	11	Thursday	12:00	9	
Thursday	13:00	20	13	Thursday	13:00	8	
Thursday	14:00	8	4	Thursday	14:00	7	
Thursday	15:00	14	6	Thursday	15:00	4	
Thursday	16:00	20	8	Thursday	16:00	4	6
Thursday	17:00	10	10	Thursday	17:00	1	5
Thursday	18:00	12	16	Thursday	18:00	1	
Thursday	19:00	8	12	Thursday	19:00	2	
Thursday	20:00	4	9	Thursday	20:00	1	
Thursday	21:00	0	12	Thursday	21:00	1	
Thursday	22:00	5	13	Thursday	22:00	0	
Thursday	23:00	3	6	Thursday	23:00	0	
Friday	0:00	0	4	Friday	0:00	1	
Friday	1:00	0	1	Friday	1:00	0	
Friday	2:00	1	0	Friday	2:00	0	
Friday	3:00	4	0	Friday	3:00	5	
Friday	4:00	18	1	Friday	4:00	8	

Friday	5:00	27	1	Friday	5:00	13
Friday	6:00	37	1	Friday	6:00	17
Friday	7:00	27	1	Friday	7:00	13
Friday	8:00	32	2	Friday	8:00	21
Friday	9:00	23	2	Friday	9:00	6
Friday	10:00	24	2	Friday	10:00	3
Friday	11:00	17	5	Friday	11:00	10
Friday	12:00	20	7	Friday	12:00	7
Friday	13:00	25	9	Friday	13:00	10
Friday	14:00	12	8	Friday	14:00	5
Friday	15:00	15	7	Friday	15:00	2
Friday	16:00	24	8	Friday	16:00	4
Friday	17:00	16	7	Friday	17:00	0
Friday	18:00	6	6	Friday	18:00	2
Friday	19:00	8	10	Friday	19:00	1
Friday	20:00	8	12	Friday	20:00	3
Friday	21:00	3	8	Friday	21:00	0
Friday	22:00	1	2	Friday	22:00	0
Friday	23:00	2	7	Friday	23:00	0
Saturday	0:00	0	4	Saturday	0:00	0
Saturday	1:00	0	1	Saturday	1:00	0
Saturday	2:00	0	0	Saturday	2:00	0
Saturday	3:00	8	0	Saturday	3:00	6
Saturday	4:00	14	2	Saturday	4:00	7
Saturday	5:00	16	1	Saturday	5:00	8
Saturday	6:00	34	0	Saturday	6:00	12
Saturday	7:00	21	1	Saturday	7:00	8
Saturday	8:00	32	1	Saturday	8:00	9
Saturday	9:00	20	2	Saturday	9:00	5
Saturday	10:00	14	5	Saturday	10:00	2
Saturday	11:00	9	4	Saturday	11:00	7
Saturday	12:00	6	5	Saturday	12:00	3
Saturday	13:00	8	7	Saturday	13:00	2
Saturday	14:00	5	7	Saturday	14:00	5
Saturday	15:00	6	6	Saturday	15:00	1
Saturday	16:00	3	6	Saturday	16:00	6
Saturday	17:00	1	10	Saturday	17:00	1
Saturday	18:00	0	11	Saturday	18:00	0
Saturday	19:00	4	13	Saturday	19:00	1
Saturday	20:00	4	9	Saturday	20:00	3
Saturday	21:00	0	4	Saturday	21:00	1
Saturday	22:00	0	9	Saturday	22:00	1
Saturday	23:00	2	6	Saturday	23:00	1
Sunday	0:00	0	5	Sunday	0:00	0
Sunday	1:00	0	0	Sunday	1:00	0
Sunday	2:00	0	0	Sunday	2:00	0
Sunday	3:00	5	0	Sunday	3:00	3
Sunday	4:00	6	2	Sunday	4:00	9
Sunday	5:00	8	1	Sunday	5:00	7
Sunday	6:00	17	0	Sunday	6:00	8
Sunday	7:00	11	1	Sunday	7:00	7
Sunday	8:00	5	4	Sunday	8:00	6

Sunday	9:00	5	1	Sunday	9:00	5
Sunday	10:00	4	3	Sunday	10:00	4
Sunday	11:00	3	8	Sunday	11:00	3
Sunday	12:00	6	11	Sunday	12:00	9
Sunday	13:00	7	6	Sunday	13:00	4
Sunday	14:00	1	9	Sunday	14:00	8
Sunday	15:00	5	19	Sunday	15:00	2
Sunday	16:00	2	7	Sunday	16:00	5
Sunday	17:00	1	14	Sunday	17:00	1
Sunday	18:00	1	24	Sunday	18:00	1
Sunday	19:00	1	19	Sunday	19:00	3
Sunday	20:00	3	11	Sunday	20:00	2
Sunday	21:00	1	9	Sunday	21:00	1
Sunday	22:00	0	10	Sunday	22:00	0
Sunday	23:00	2	5	Sunday	23:00	2
SUM		1386	992	SUM		1800

923:59:59
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28
1660

Weekly Activity Report from
08/31/200900:00:00 to 09/06/200923:59:59

Weekday	Hour	Opened	Closed
Monday	0:00	0	12
Monday	1:00	0	3
Monday	2:00	0	0
Monday	3:00	2	1
Monday	4:00	15	0
Monday	5:00	26	0
Monday	6:00	19	2
Monday	7:00	27	0
Monday	8:00	32	1
Monday	9:00	14	1
Monday	10:00	12	2
Monday	11:00	14	9
Monday	12:00	10	3
Monday	13:00	10	8
Monday	14:00	12	5
Monday	15:00	12	7
Monday	16:00	9	14
Monday	17:00	3	11
Monday	18:00	3	10
Monday	19:00	0	13
Monday	20:00	0	5
Monday	21:00	1	11
Monday	22:00	1	9
Monday	23:00	1	13
Tuesday	0:00	1	10
Tuesday	1:00	0	0
Tuesday	2:00	0	0
Tuesday	3:00	2	0
Tuesday	4:00	7	0
Tuesday	5:00	17	0
Tuesday	6:00	25	0
Tuesday	7:00	25	2
Tuesday	8:00	21	3
Tuesday	9:00	12	0
Tuesday	10:00	7	2
Tuesday	11:00	6	5
Tuesday	12:00	15	6
Tuesday	13:00	5	3
Tuesday	14:00	9	6
Tuesday	15:00	11	5
Tuesday	16:00	5	9
Tuesday	17:00	5	12
Tuesday	18:00	0	6
Tuesday	19:00	1	10
Tuesday	20:00	0	4
Tuesday	21:00	1	7
Tuesday	22:00	2	9
Tuesday	23:00	1	11
Wednesda	0:00	0	7

Weekly Activity Report from
11/23/200900:00:00 to 11/29/200

Weekday	Hour	Opened
Monday	0:00	0
Monday	1:00	0
Monday	2:00	1
Monday	3:00	2
Monday	4:00	13
Monday	5:00	25
Monday	6:00	22
Monday	7:00	17
Monday	8:00	13
Monday	9:00	11
Monday	10:00	7
Monday	11:00	6
Monday	12:00	11
Monday	13:00	6
Monday	14:00	4
Monday	15:00	12
Monday	16:00	11
Monday	17:00	9
Monday	18:00	1
Monday	19:00	0
Monday	20:00	0
Monday	21:00	1
Monday	22:00	1
Monday	23:00	1
Tuesday	0:00	0
Tuesday	1:00	0
Tuesday	2:00	0
Tuesday	3:00	1
Tuesday	4:00	11
Tuesday	5:00	29
Tuesday	6:00	16
Tuesday	7:00	17
Tuesday	8:00	14
Tuesday	9:00	8
Tuesday	10:00	9
Tuesday	11:00	17
Tuesday	12:00	20
Tuesday	13:00	9
Tuesday	14:00	9
Tuesday	15:00	19
Tuesday	16:00	12
Tuesday	17:00	4
Tuesday	18:00	3
Tuesday	19:00	1
Tuesday	20:00	0
Tuesday	21:00	1
Tuesday	22:00	2
Tuesday	23:00	0
Wednesda	0:00	0

Wednesda	1:00	0	0
Wednesda	2:00	0	0
Wednesda	3:00	3	0
Wednesda	4:00	9	0
Wednesda	5:00	15	0
Wednesda	6:00	19	1
Wednesda	7:00	12	1
Wednesda	8:00	12	1
Wednesda	9:00	12	2
Wednesda	10:00	7	2
Wednesda	11:00	6	7
Wednesda	12:00	8	4
Wednesda	13:00	11	8
Wednesda	14:00	8	3
Wednesda	15:00	12	8
Wednesda	16:00	7	11
Wednesda	17:00	7	21
Wednesda	18:00	3	9
Wednesda	19:00	0	10
Wednesda	20:00	0	9
Wednesda	21:00	1	10
Wednesda	22:00	1	16
Wednesda	23:00	1	14
Thursday	0:00	1	1
Thursday	1:00	0	1
Thursday	2:00	0	0
Thursday	3:00	2	0
Thursday	4:00	14	0
Thursday	5:00	17	0
Thursday	6:00	24	1
Thursday	7:00	21	1
Thursday	8:00	15	2
Thursday	9:00	20	5
Thursday	10:00	11	3
Thursday	11:00	2	5
Thursday	12:00	5	10
Thursday	13:00	10	12
Thursday	14:00	11	14
Thursday	15:00	13	3
Thursday	16:00	16	19
Thursday	17:00	10	22
Thursday	18:00	0	18
Thursday	19:00	0	21
Thursday	20:00	0	9
Thursday	21:00	1	17
Thursday	22:00	1	20
Thursday	23:00	1	16
Friday	0:00	0	9
Friday	1:00	0	0
Friday	2:00	0	0
Friday	3:00	2	0
Friday	4:00	15	0

Wednesda	1:00	0
Wednesda	2:00	0
Wednesda	3:00	4
Wednesda	4:00	20
Wednesda	5:00	18
Wednesda	6:00	16
Wednesda	7:00	13
Wednesda	8:00	15
Wednesda	9:00	9
Wednesda	10:00	14
Wednesda	11:00	10
Wednesda	12:00	12
Wednesda	13:00	17
Wednesda	14:00	19
Wednesda	15:00	16
Wednesda	16:00	17
Wednesda	17:00	7
Wednesda	18:00	4
Wednesda	19:00	1
Wednesda	20:00	0
Wednesda	21:00	2
Wednesda	22:00	1
Wednesda	23:00	1
Thursday	0:00	0
Thursday	1:00	0
Thursday	2:00	0
Thursday	3:00	4
Thursday	4:00	21
Thursday	5:00	29
Thursday	6:00	17
Thursday	7:00	16
Thursday	8:00	14
Thursday	9:00	9
Thursday	10:00	9
Thursday	11:00	6
Thursday	12:00	5
Thursday	13:00	1
Thursday	14:00	3
Thursday	15:00	2
Thursday	16:00	2
Thursday	17:00	0
Thursday	18:00	0
Thursday	19:00	0
Thursday	20:00	0
Thursday	21:00	2
Thursday	22:00	1
Thursday	23:00	1
Friday	0:00	0
Friday	1:00	0
Friday	2:00	0
Friday	3:00	5
Friday	4:00	13

Friday	5:00	25	0	Friday	5:00	14
Friday	6:00	21	1	Friday	6:00	15
Friday	7:00	25	1	Friday	7:00	12
Friday	8:00	16	3	Friday	8:00	11
Friday	9:00	14	2	Friday	9:00	7
Friday	10:00	11	10	Friday	10:00	8
Friday	11:00	8	9	Friday	11:00	9
Friday	12:00	9	7	Friday	12:00	4
Friday	13:00	17	11	Friday	13:00	4
Friday	14:00	17	12	Friday	14:00	4
Friday	15:00	13	9	Friday	15:00	4
Friday	16:00	10	24	Friday	16:00	3
Friday	17:00	15	15	Friday	17:00	1
Friday	18:00	9	13	Friday	18:00	0
Friday	19:00	1	7	Friday	19:00	0
Friday	20:00	1	10	Friday	20:00	0
Friday	21:00	1	14	Friday	21:00	1
Friday	22:00	2	19	Friday	22:00	1
Friday	23:00	1	9	Friday	23:00	1
Saturday	0:00	0	15	Saturday	0:00	0
Saturday	1:00	0	0	Saturday	1:00	0
Saturday	2:00	1	0	Saturday	2:00	0
Saturday	3:00	5	0	Saturday	3:00	4
Saturday	4:00	10	0	Saturday	4:00	7
Saturday	5:00	17	0	Saturday	5:00	17
Saturday	6:00	26	1	Saturday	6:00	7
Saturday	7:00	11	1	Saturday	7:00	8
Saturday	8:00	16	2	Saturday	8:00	6
Saturday	9:00	9	2	Saturday	9:00	9
Saturday	10:00	6	0	Saturday	10:00	5
Saturday	11:00	8	2	Saturday	11:00	1
Saturday	12:00	7	1	Saturday	12:00	3
Saturday	13:00	8	12	Saturday	13:00	3
Saturday	14:00	4	6	Saturday	14:00	1
Saturday	15:00	9	6	Saturday	15:00	6
Saturday	16:00	4	7	Saturday	16:00	4
Saturday	17:00	0	10	Saturday	17:00	1
Saturday	18:00	0	6	Saturday	18:00	1
Saturday	19:00	0	7	Saturday	19:00	0
Saturday	20:00	0	8	Saturday	20:00	0
Saturday	21:00	1	2	Saturday	21:00	1
Saturday	22:00	1	6	Saturday	22:00	1
Saturday	23:00	1	9	Saturday	23:00	1
Sunday	0:00	0	5	Sunday	0:00	0
Sunday	1:00	0	0	Sunday	1:00	0
Sunday	2:00	0	0	Sunday	2:00	0
Sunday	3:00	0	0	Sunday	3:00	3
Sunday	4:00	6	0	Sunday	4:00	5
Sunday	5:00	6	0	Sunday	5:00	9
Sunday	6:00	14	0	Sunday	6:00	11
Sunday	7:00	8	2	Sunday	7:00	7
Sunday	8:00	7	1	Sunday	8:00	3

Sunday	9:00	5	1	Sunday	9:00	4
Sunday	10:00	0	2	Sunday	10:00	7
Sunday	11:00	3	5	Sunday	11:00	8
Sunday	12:00	7	0	Sunday	12:00	8
Sunday	13:00	6	6	Sunday	13:00	4
Sunday	14:00	2	14	Sunday	14:00	5
Sunday	15:00	3	13	Sunday	15:00	13
Sunday	16:00	2	5	Sunday	16:00	7
Sunday	17:00	1	9	Sunday	17:00	3
Sunday	18:00	0	7	Sunday	18:00	1
Sunday	19:00	0	14	Sunday	19:00	0
Sunday	20:00	0	16	Sunday	20:00	0
Sunday	21:00	1	7	Sunday	21:00	1
Sunday	22:00	1	11	Sunday	22:00	1
Sunday	23:00	1	11	Sunday	23:00	1
SUM		1200	1011	SUM		1038

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Appendix J: Traffic Impact Study

Processed Turning Movement Counts

Aerotech Westchester County Airport (40299-0004)

Airport Road at I-684 NB Ramps

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM															30	30	30
8:15 AM - 8:30 AM									1			1			15	15	16
8:30 AM - 8:45 AM									1			1			20	20	21
8:45 AM - 9:00 AM									3			3			19	19	22
9:00 AM - 9:15 AM																	
9:15 AM - 9:30 AM																	
9:30 AM - 9:45 AM																	
9:45 AM - 10:00 AM																	
HOURLY TOTALS																	
Minimum									5			5			84	84	89
Maximum									3			3			39	39	43
Average																	
PEAK HOUR																	
8:00 AM - 9:00 AM									5			5			84	84	89
Peak Hour Factor (PHF)									0.42			0.42			0.70	0.70	0.74

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM																	
4:15 PM - 4:30 PM									2			2			87	87	89
4:30 PM - 4:45 PM									1			1			77	77	78
4:45 PM - 5:00 PM									4			4			99	99	103
5:00 PM - 5:15 PM									7			7			98	98	105
5:15 PM - 5:30 PM																	
5:30 PM - 5:45 PM																	
5:45 PM - 6:00 PM																	
HOURLY TOTALS																	
Minimum									7			7			98	98	105
Maximum									14			14			361	361	375
Average									10			10			239	239	249
PEAK HOUR																	
4:15 PM - 5:15 PM									14			14			361	361	375
Peak Hour Factor (PHF)									0.50			0.50			0.91	0.91	0.89

Aerotech Westchester County Airport (40299-0004)

Airport Road at I-684 SB Ramps

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM																	
8:15 AM - 8:30 AM																	
8:30 AM - 8:45 AM						1		1									1
8:45 AM - 9:00 AM						1		1									1
9:00 AM - 9:15 AM																	
9:15 AM - 9:30 AM																	
9:30 AM - 9:45 AM																	
9:45 AM - 10:00 AM																	
HOURLY TOTALS																	
Minimum																	
Maximum						2		2									2
Average						1		1									1
PEAK HOUR																	
8:00 AM - 9:00 AM						2		2									2
Peak Hour Factor (PHF)						0.50		0.50									0.50

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM																	
4:15 PM - 4:30 PM						3		3									3
4:30 PM - 4:45 PM						1		1									1
4:45 PM - 5:00 PM						1		1									1
5:00 PM - 5:15 PM						1		1									1
5:15 PM - 5:30 PM																	
5:30 PM - 5:45 PM																	
5:45 PM - 6:00 PM																	
HOURLY TOTALS																	
Minimum						1		1									1
Maximum						6		6									6
Average						3		3									3
PEAK HOUR																	
4:15 PM - 5:15 PM						6		6									6
Peak Hour Factor (PHF)						0.50		0.50									0.50

Aerotech Westchester County Airport (40299-0004)

Rye Lake Avenue/Airport Driveway at Airport Road

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Northbound Thru	Northbound Right	Northbound Total	Southbound Left	Southbound Thru	Southbound Right	Southbound Total	Eastbound Left	Eastbound Thru	Eastbound Right	Eastbound Total	Westbound Left	Westbound Thru	Westbound Right	Westbound Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM							10	10		3	2	5		3		3	18
8:15 AM - 8:30 AM							6	6		3	3	6		4		4	16
8:30 AM - 8:45 AM							8	8						6		6	14
8:45 AM - 9:00 AM							5	5						3		3	8
9:00 AM - 9:15 AM							3	3						5		5	8
9:15 AM - 9:30 AM							2	2		2	4	6		3		3	11
9:30 AM - 9:45 AM							2	2		1	8	9		4		4	15
9:45 AM - 10:00 AM							1	1		2		2		4		4	7
HOURLY TOTALS																	
Minimum							8	8		2	3	6		15		15	41
Maximum							29	29		6	12	17		18		18	56
Average							18	18		4	7	11		16		16	45
PEAK HOUR																	
8:00 AM - 9:00 AM							29	29		6	5	11		16		16	56
Peak Hour Factor (PHF)							0.73	0.73		0.50	0.42	0.46		0.67		0.67	0.78

PM PEAK PERIOD

Time Period	Northbound Left	Northbound Thru	Northbound Right	Northbound Total	Southbound Left	Southbound Thru	Southbound Right	Southbound Total	Eastbound Left	Eastbound Thru	Eastbound Right	Eastbound Total	Westbound Left	Westbound Thru	Westbound Right	Westbound Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM																	
4:15 PM - 4:30 PM							6	6		1	4	5		4		4	15
4:30 PM - 4:45 PM							4	4		1	1	2		5		5	11
4:45 PM - 5:00 PM							6	6						8		8	14
5:00 PM - 5:15 PM							5	5		2	3	5		5		5	15
5:15 PM - 5:30 PM																	
5:30 PM - 5:45 PM																	
5:45 PM - 6:00 PM																	
HOURLY TOTALS																	
Minimum							5	5		2	3	5		5		5	15
Maximum							21	21		4	8	12		22		22	55
Average							14	14		3	5	7		15		15	36
PEAK HOUR																	
4:15 PM - 5:15 PM							21	21		4	8	12		22		22	55
Peak Hour Factor (PHF)							0.88	0.88		0.50	0.50	0.60		0.69		0.69	0.92

Aerotech Westchester County Airport (40299-0004)

Rye Lake Avenue/Tudor Grp. Driveway at King Street (NYS Route 120A)

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM	21	10		31		6	7	13	6	2	66	74					118
8:15 AM - 8:30 AM	27	13		40	1	5	6	12	5	1	47	53					105
8:30 AM - 8:45 AM	37	11	2	50		7	7	14	5		50	55					119
8:45 AM - 9:00 AM	20	14	1	35	1	4	11	16	5		41	46		1		1	98
9:00 AM - 9:15 AM																	
9:15 AM - 9:30 AM																	
9:30 AM - 9:45 AM																	
9:45 AM - 10:00 AM																	
HOURLY TOTALS																	
Minimum																	
Maximum	105	48	3	156	2	22	31	55	21	3	204	228		1		1	440
Average	53	25	2	80	1	11	17	29	10	1	95	106		1		1	215
PEAK HOUR																	
8:00 AM - 9:00 AM	105	48	3	156	2	22	31	55	21	3	204	228		1		1	440
Peak Hour Factor (PHF)	0.71	0.86	0.38	0.78	0.50	0.79	0.70	0.86	0.88	0.38	0.77	0.77		0.25		0.25	0.92

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM																	
4:15 PM - 4:30 PM	88	30	2	120		11	10	21			40	40			1	1	182
4:30 PM - 4:45 PM	75	54	1	130	1	17	16	34	4	1	35	40	1	1		2	206
4:45 PM - 5:00 PM	80	27	1	108	2	12	10	24	3		58	61	1	1	1	3	196
5:00 PM - 5:15 PM	75	31	1	107		13	9	22	2	1	51	54			2	2	185
5:15 PM - 5:30 PM																	
5:30 PM - 5:45 PM																	
5:45 PM - 6:00 PM																	
HOURLY TOTALS																	
Minimum	75	31	1	107		13	9	22	2	1	51	54			2	2	185
Maximum	318	142	5	465	3	53	45	101	9	2	184	195	2	2	4	8	769
Average	204	91	3	298	2	35	29	66	6	1	124	132	1	1	3	6	501
PEAK HOUR																	
4:15 PM - 5:15 PM	318	142	5	465	3	53	45	101	9	2	184	195	2	2	4	8	769
Peak Hour Factor (PHF)	0.90	0.66	0.63	0.89	0.38	0.78	0.70	0.74	0.56	0.50	0.79	0.80	0.50	0.50	0.50	0.67	0.93

Aerotech Westchester County Airport (40299-0004)

Lake Street/NYS Route 120 at NYS Route 120

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM	2		57	59						27	1	28	77	16		93	180
8:15 AM - 8:30 AM	2		49	51						30	3	33	80	13		93	177
8:30 AM - 8:45 AM	3		30	33						40		40	86	19		105	178
8:45 AM - 9:00 AM			30	30						36	4	40	107	22		129	199
9:00 AM - 9:15 AM	1		31	32						40	5	45	76	19		95	172
9:15 AM - 9:30 AM	4		31	35						25	6	31	87	28		115	181
9:30 AM - 9:45 AM	5		34	39						27		27	70	15		85	151
9:45 AM - 10:00 AM	1		22	23						28	1	29	38	22		60	112
HOURLY TOTALS																	
Minimum	6		118	129						120	8	132	271	70		355	616
Maximum	11		166	173						146	15	158	356	88		444	734
Average	8		134	143						134	12	146	333	80		413	702
PEAK HOUR																	
8:00 AM - 9:00 AM	7		166	173						133	8	141	350	70		420	734
Peak Hour Factor (PHF)	0.58		0.73	0.73						0.83	0.50	0.88	0.82	0.80		0.81	0.92

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM	1		77	78						37		37	50	30		80	195
4:15 PM - 4:30 PM	5		110	115						45		45	31	47		78	238
4:30 PM - 4:45 PM	6		88	94						40	7	47	50	40		90	231
4:45 PM - 5:00 PM	7		108	115						40	6	46	51	37		88	249
5:00 PM - 5:15 PM	6		100	106						54	1	55	30	45		75	236
5:15 PM - 5:30 PM	6		106	112						36	3	39	40	36		76	227
5:30 PM - 5:45 PM	3		99	102						44	2	46	49	37		86	234
5:45 PM - 6:00 PM	7		95	102						51	1	52	47	35		82	236
HOURLY TOTALS																	
Minimum	19		383	402						162	7	175	162	153		319	913
Maximum	25		413	435						185	17	193	182	169		336	954
Average	22		401	423						174	13	187	170	158		328	938
PEAK HOUR																	
4:15 PM - 5:15 PM	24		406	430						179	14	193	162	169		331	954
Peak Hour Factor (PHF)	0.86		0.92	0.93						0.83	0.50	0.88	0.79	0.90		0.92	0.96

Aerotech Westchester County Airport (40299-0004)

Airport Road at NYS Route 120 (Purchase Street)

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM	47	20	30	97	18	37	70	125	47	111	68	226					448
8:15 AM - 8:30 AM	30	15	36	81	29	25	91	145	48	105	66	219					445
8:30 AM - 8:45 AM	36	11	29	76	20	40	88	148	45	129	79	253					477
8:45 AM - 9:00 AM	27	15	20	62	17	35	90	142	37	150	97	284					488
9:00 AM - 9:15 AM																	
9:15 AM - 9:30 AM																	
9:30 AM - 9:45 AM																	
9:45 AM - 10:00 AM																	
HOURLY TOTALS																	
Minimum																	
Maximum	140	61	115	316	84	137	339	560	177	495	310	982					1,858
Average	65	29	54	147	41	69	175	285	85	262	165	512					944
PEAK HOUR																	
8:00 AM - 9:00 AM	140	61	115	316	84	137	339	560	177	495	310	982					1,858
Peak Hour Factor (PHF)	0.74	0.76	0.80	0.81	0.72	0.86	0.93	0.95	0.92	0.83	0.80	0.86					0.95

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM	70	31	20	121	11	41	150	202	50	77	36	163					486
4:15 PM - 4:30 PM	100	38	17	155	17	40	160	217	59	70	34	163					535
4:30 PM - 4:45 PM	80	37	19	136	10	58	150	218	47	90	28	165					519
4:45 PM - 5:00 PM	90	40	20	150	15	47	187	249	48	69	35	152					551
5:00 PM - 5:15 PM	87	40	27	154	16	48	138	202	61	69	38	168					524
5:15 PM - 5:30 PM	80	41	15	136	16	57	147	220	57	90	27	174					530
5:30 PM - 5:45 PM	90	37	18	145	17	55	107	179	50	99	30	179					503
5:45 PM - 6:00 PM	79	39	19	137	10	47	127	184	57	69	36	162					483
HOURLY TOTALS																	
Minimum	336	146	76	562	53	186	519	785	204	298	128	643					2,040
Maximum	357	158	83	595	64	210	647	889	225	327	135	683					2,129
Average	343	155	80	578	58	201	600	859	215	315	131	661					2,098
PEAK HOUR																	
4:15 PM - 5:15 PM	357	155	83	595	58	193	635	886	215	298	135	648					2,129
Peak Hour Factor (PHF)	0.89	0.97	0.77	0.96	0.85	0.83	0.85	0.89	0.88	0.83	0.89	0.96					0.97

Aerotech Westchester County Airport (40299-0004)

Gateway Lane (NYS Route 120A) at NYS Route 120

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM			8	8	2			2					6		3	9	19
8:15 AM - 8:30 AM			4	4	1			1					4		7	11	16
8:30 AM - 8:45 AM			7	7	3			3					7		5	12	22
8:45 AM - 9:00 AM			9	9									3		6	9	18
9:00 AM - 9:15 AM																	
9:15 AM - 9:30 AM																	
9:30 AM - 9:45 AM																	
9:45 AM - 10:00 AM																	
HOURLY TOTALS																	
Minimum																	
Maximum			28	28	6			6					20		21	41	75
Average			15	15	3			3					9		11	21	38
PEAK HOUR																	
8:00 AM - 9:00 AM			28	28	6			6					20		21	41	75
Peak Hour Factor (PHF)			0.78	0.78	0.50			0.50					0.71		0.75	0.85	0.85

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM																	
4:15 PM - 4:30 PM			17	17	7			7					7		11	18	42
4:30 PM - 4:45 PM			20	20	8			8					7		10	17	45
4:45 PM - 5:00 PM			30	30	7			7					11		11	22	59
5:00 PM - 5:15 PM			40	40	12			12					12		15	27	79
5:15 PM - 5:30 PM																	
5:30 PM - 5:45 PM																	
5:45 PM - 6:00 PM																	
HOURLY TOTALS																	
Minimum			40	40	12			12					12		15	27	79
Maximum			107	107	34			34					37		47	84	225
Average			75	75	23			23					25		31	57	154
PEAK HOUR																	
4:15 PM - 5:15 PM			107	107	34			34					37		47	84	225
Peak Hour Factor (PHF)			0.67	0.67	0.71			0.71					0.77		0.78	0.78	0.71

Aerotech Westchester County Airport (40299-0004)

New King Street at NYS Route 120

Survey Date: November 26, 2008

AM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
8:00 AM - 8:15 AM		66		66		47		47					70		8	78	191
8:15 AM - 8:30 AM		67		67		55		55					88		9	97	219
8:30 AM - 8:45 AM		48		48		50		50					91		10	101	199
8:45 AM - 9:00 AM		55		55		56		56					80		7	87	198
9:00 AM - 9:15 AM		41		41		57		57					76		7	83	181
9:15 AM - 9:30 AM		44		44		40		40					66		6	72	156
9:30 AM - 9:45 AM		44		44		40		40					71		8	79	163
9:45 AM - 10:00 AM		43		43		39		39					80		3	83	165
HOURLY TOTALS																	
Minimum		172		172		176		176					293		24	317	665
Maximum		236		236		218		218					335		34	368	807
Average		198		198		200		200					313		30	342	740
PEAK HOUR																	
8:00 AM - 9:00 AM		236		236		208		208					329		34	363	807
Peak Hour Factor (PHF)		0.88		0.88		0.93		0.93					0.90		0.85	0.90	0.92

PM PEAK PERIOD

Time Period	Northbound Left	Thru	Right	Total	Southbound Left	Thru	Right	Total	Eastbound Left	Thru	Right	Total	Westbound Left	Thru	Right	Total	Intersection Total
15-MINUTE VOLUMES																	
4:00 PM - 4:15 PM		87		87		80		80					130		16	146	313
4:15 PM - 4:30 PM		100		100		77		77					158		17	175	352
4:30 PM - 4:45 PM		90		90		90		90					141		18	159	339
4:45 PM - 5:00 PM		103		103		119		119					150		30	180	402
5:00 PM - 5:15 PM		107		107		80		80					136		27	163	350
5:15 PM - 5:30 PM		89		89		101		101					130		31	161	351
5:30 PM - 5:45 PM		88		88		99		99					70		25	95	282
5:45 PM - 6:00 PM		107		107		97		97					79		37	116	320
HOURLY TOTALS																	
Minimum		380		380		366		366					415		81	535	1,303
Maximum		400		400		399		399					585		120	677	1,443
Average		389		389		380		380					524		102	627	1,396
PEAK HOUR																	
4:15 PM - 5:15 PM		400		400		366		366					585		92	677	1,443
Peak Hour Factor (PHF)		0.93		0.93		0.77		0.77					0.93		0.77	0.94	0.90

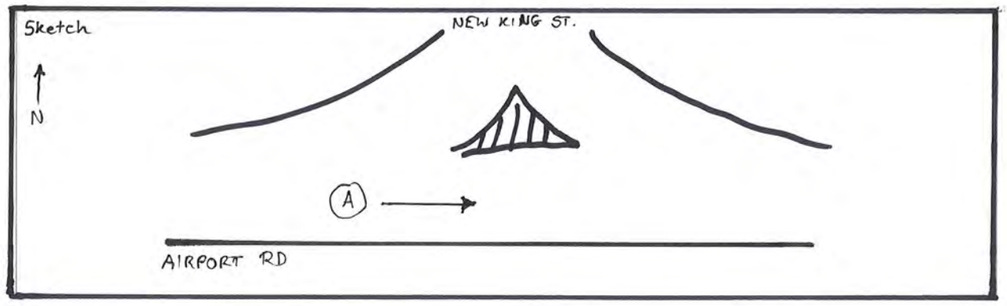
Appendix J: Traffic Impact Study

Processed Vehicle Classification Counts

Aerotech
Vehicle Classification Counts - Holiday
Location 1: Airport Road & New King Street
Movement: A (Eastbound Airport Road)
Survey Date: 11/26/08

	Vehicle Class											
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	% Bus	Truck	% Truck	Total	Total %
8:00 AM - 8:15 AM	97	86%	9	8%	1	1%	3	3%	3	3%	113	100%
8:15 AM - 8:30 AM	69	87%	2	3%	1	1%	3	4%	4	5%	79	100%
8:30 AM - 8:45 AM	74	81%	7	8%	1	1%	4	4%	5	5%	91	100%
8:45 AM - 9:00 AM	76	84%	3	3%	0	0%	7	8%	4	4%	90	100%
9:00 AM - 9:15 AM	82	84%	5	5%	1	1%	6	6%	4	4%	98	100%
9:15 AM - 9:30 AM	62	84%	5	7%	0	0%	1	1%	6	8%	74	100%
9:30 AM - 9:45 AM	55	86%	5	8%	0	0%	0	0%	4	6%	64	100%
9:45 AM - 10:00 AM	63	82%	8	10%	0	0%	2	3%	4	5%	77	100%
10:00 AM - 10:15 AM	75	83%	11	12%	0	0%	1	1%	3	3%	90	100%
10:15 AM - 10:30 AM	56	86%	8	12%	1	2%	0	0%	0	0%	65	100%
10:30 AM - 10:45 AM	53	80%	7	11%	1	2%	1	2%	4	6%	66	100%
10:45 AM - 11:00 AM	82	89%	5	5%	1	1%	1	1%	3	3%	92	100%
11:00 AM - 11:15 AM	74	85%	4	5%	0	0%	1	1%	8	9%	87	100%
11:15 AM - 11:30 AM	53	80%	5	8%	0	0%	0	0%	8	12%	66	100%
11:30 AM - 11:45 AM	63	88%	5	7%	0	0%	0	0%	4	6%	72	100%
11:45 AM - 12:00 PM	78	90%	7	8%	0	0%	1	1%	1	1%	87	100%
12:00 PM - 12:15 PM	69	91%	4	5%	0	0%	1	1%	2	3%	76	100%
12:15 PM - 12:30 PM	68	88%	6	8%	2	3%	0	0%	1	1%	77	100%
12:30 PM - 12:45 PM	66	93%	3	4%	0	0%	2	3%	0	0%	71	100%
12:45 PM - 1:00 PM	61	84%	8	11%	1	1%	1	1%	2	3%	73	100%
1:00 PM - 1:15 PM	81	84%	3	3%	1	1%	8	8%	3	3%	96	100%
1:15 PM - 1:30 PM	72	75%	13	14%	0	0%	10	10%	1	1%	96	100%
1:30 PM - 1:45 PM	100	91%	8	7%	0	0%	1	1%	1	1%	110	100%
1:45 PM - 2:00 PM	79	86%	11	12%	0	0%	1	1%	1	1%	92	100%
2:00 PM - 2:15 PM	90	83%	17	16%	0	0%	0	0%	2	2%	109	100%
2:15 PM - 2:30 PM	107	90%	9	8%	0	0%	2	2%	1	1%	119	100%
2:30 PM - 2:45 PM	113	93%	6	5%	0	0%	0	0%	2	2%	121	100%
2:45 PM - 3:00 PM	94	91%	5	5%	0	0%	1	1%	3	3%	103	100%
3:00 PM - 3:15 PM	76	89%	6	7%	0	0%	1	1%	2	2%	85	100%
3:15 PM - 3:30 PM	68	91%	5	7%	0	0%	0	0%	2	3%	75	100%
3:30 PM - 3:45 PM	84	85%	7	7%	4	4%	1	1%	3	3%	99	100%
3:45 PM - 4:00 PM	80	88%	10	11%	0	0%	1	1%	0	0%	91	100%
4:00 PM - 4:15 PM	80	87%	8	9%	1	1%	0	0%	3	3%	92	100%
4:15 PM - 4:30 PM	83	88%	6	6%	1	1%	1	1%	3	3%	94	100%
4:30 PM - 4:45 PM	66	92%	4	6%	0	0%	1	1%	1	1%	72	100%
4:45 PM - 5:00 PM	69	92%	5	7%	0	0%	1	1%	0	0%	75	100%

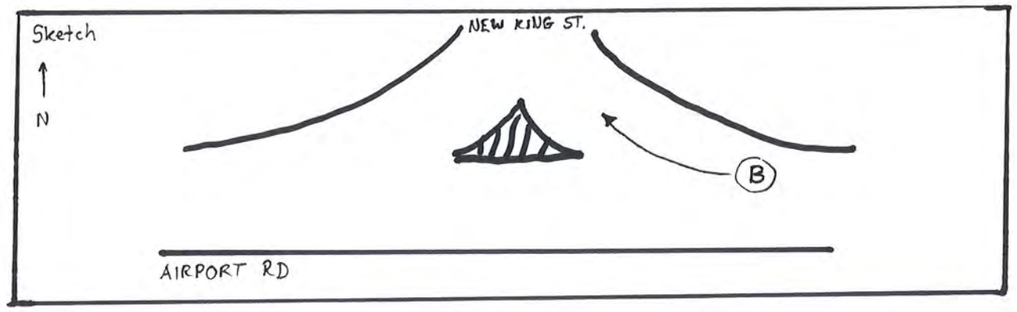
	Hourly Totals											
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	%Bus	Truck	% Truck	Total	Total %
8:00 AM - 9:00 AM	316	85%	21	6%	3	1%	17	5%	16	4%	373	100%
8:15 AM - 9:15 AM	301	84%	17	5%	3	1%	20	6%	17	5%	358	100%
8:30 AM - 9:30 AM	294	83%	20	6%	2	1%	18	5%	19	5%	353	100%
8:45 AM - 9:45 AM	275	84%	18	6%	1	0%	14	4%	18	6%	326	100%
9:00 AM - 10:00 AM	262	84%	23	7%	1	0%	9	3%	18	6%	313	100%
9:15 AM - 10:15 AM	255	84%	29	10%	0	0%	4	1%	17	6%	305	100%
9:30 AM - 10:30 AM	249	84%	32	11%	1	0%	3	1%	11	4%	296	100%
9:45 AM - 10:45 AM	247	83%	34	11%	2	1%	4	1%	11	4%	298	100%
10:00 AM - 11:00 AM	266	85%	31	10%	3	1%	3	1%	10	3%	313	100%
10:15 AM - 11:15 AM	265	85%	24	8%	3	1%	3	1%	15	5%	310	100%
10:30 AM - 11:30 AM	262	84%	21	7%	2	1%	3	1%	23	7%	311	100%
10:45 AM - 11:45 AM	272	86%	19	6%	1	0%	2	1%	23	7%	317	100%
11:00 AM - 12:00 PM	268	86%	21	7%	0	0%	2	1%	21	7%	312	100%
11:15 AM - 12:15 PM	263	87%	21	7%	0	0%	2	1%	15	5%	301	100%
11:30 AM - 12:30 PM	278	89%	22	7%	2	1%	2	1%	8	3%	312	100%
11:45 AM - 12:45 PM	281	90%	20	6%	2	1%	4	1%	4	1%	311	100%
12:00 PM - 1:00 PM	264	89%	21	7%	3	1%	4	1%	5	2%	297	100%
12:15 PM - 1:15 PM	276	87%	20	6%	4	1%	11	3%	6	2%	317	100%
12:30 PM - 1:30 PM	280	83%	27	8%	2	1%	21	6%	6	2%	336	100%
12:45 PM - 1:45 PM	314	84%	32	9%	2	1%	20	5%	7	2%	375	100%
1:00 PM - 2:00 PM	332	84%	35	9%	1	0%	20	5%	6	2%	394	100%
1:15 PM - 2:15 PM	341	84%	49	12%	0	0%	12	3%	5	1%	407	100%
1:30 PM - 2:30 PM	376	87%	45	10%	0	0%	4	1%	5	1%	430	100%
1:45 PM - 2:45 PM	389	88%	43	10%	0	0%	3	1%	6	1%	441	100%
2:00 PM - 3:00 PM	404	89%	37	8%	0	0%	3	1%	8	2%	452	100%
2:15 PM - 3:15 PM	390	91%	26	6%	0	0%	4	1%	8	2%	428	100%
2:30 PM - 3:30 PM	351	91%	22	6%	0	0%	2	1%	9	2%	384	100%
2:45 PM - 3:45 PM	322	89%	23	6%	4	1%	3	1%	10	3%	362	100%
3:00 PM - 4:00 PM	308	88%	28	8%	4	1%	3	1%	7	2%	350	100%
3:15 PM - 4:15 PM	312	87%	30	8%	5	1%	2	1%	8	2%	357	100%
3:30 PM - 4:30 PM	327	87%	31	8%	6	2%	3	1%	9	2%	376	100%
3:45 PM - 4:45 PM	309	89%	28	8%	2	1%	3	1%	7	2%	349	100%
4:00 PM - 5:00 PM	298	89%	23	7%	2	1%	3	1%	7	2%	333	100%



Aerotech
Vehicle Classification Counts - Holiday
Location 1: Airport Road & New King Street
Movement: B (Westbound Airport Road)
Survey Date: 11/26/08

Time Period	Vehicle Class										Total	Total %
	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	% Bus	Truck	% Truck		
8:00 AM - 8:15 AM	44	80%	7	13%	1	2%	2	4%	1	2%	55	100%
8:15 AM - 8:30 AM	38	83%	3	7%	0	0%	2	4%	3	7%	46	100%
8:30 AM - 8:45 AM	35	74%	5	11%	2	4%	0	0%	5	11%	47	100%
8:45 AM - 9:00 AM	34	76%	5	11%	0	0%	4	9%	2	4%	45	100%
9:00 AM - 9:15 AM	39	71%	3	5%	0	0%	10	18%	3	5%	55	100%
9:15 AM - 9:30 AM	26	68%	4	11%	1	3%	4	11%	3	8%	38	100%
9:30 AM - 9:45 AM	33	80%	2	5%	0	0%	2	5%	4	10%	41	100%
9:45 AM - 10:00 AM	48	83%	4	7%	0	0%	0	0%	6	10%	58	100%
10:00 AM - 10:15 AM	43	78%	4	7%	0	0%	2	4%	6	11%	55	100%
10:15 AM - 10:30 AM	44	76%	13	22%	0	0%	0	0%	1	2%	58	100%
10:30 AM - 10:45 AM	52	85%	6	10%	1	2%	0	0%	2	3%	61	100%
10:45 AM - 11:00 AM	34	77%	5	11%	1	2%	1	2%	3	7%	44	100%
11:00 AM - 11:15 AM	64	86%	6	8%	0	0%	1	1%	3	4%	74	100%
11:15 AM - 11:30 AM	79	89%	4	4%	0	0%	0	0%	6	7%	89	100%
11:30 AM - 11:45 AM	38	83%	7	15%	0	0%	0	0%	1	2%	46	100%
11:45 AM - 12:00 PM	41	87%	5	11%	1	2%	0	0%	0	0%	47	100%
12:00 PM - 12:15 PM	76	88%	3	3%	0	0%	2	2%	5	6%	86	100%
12:15 PM - 12:30 PM	99	90%	7	6%	2	2%	1	1%	1	1%	110	100%
12:30 PM - 12:45 PM	61	85%	6	8%	0	0%	1	1%	4	6%	72	100%
12:45 PM - 1:00 PM	66	79%	12	14%	1	1%	0	0%	5	6%	84	100%
1:00 PM - 1:15 PM	96	88%	7	6%	0	0%	1	1%	5	5%	109	100%
1:15 PM - 1:30 PM	71	87%	6	7%	1	1%	2	2%	2	2%	82	100%
1:30 PM - 1:45 PM	87	88%	9	9%	0	0%	3	3%	0	0%	99	100%
1:45 PM - 2:00 PM	105	85%	11	9%	0	0%	5	4%	3	2%	124	100%
2:00 PM - 2:15 PM	102	86%	7	6%	0	0%	7	6%	3	3%	119	100%
2:15 PM - 2:30 PM	139	88%	16	10%	0	0%	3	2%	0	0%	158	100%
2:30 PM - 2:45 PM	160	91%	9	5%	0	0%	2	1%	4	2%	175	100%
2:45 PM - 3:00 PM	88	89%	7	7%	0	0%	2	2%	2	2%	99	100%
3:00 PM - 3:15 PM	150	94%	6	4%	0	0%	2	1%	2	1%	160	100%
3:15 PM - 3:30 PM	112	94%	5	4%	0	0%	0	0%	2	2%	119	100%
3:30 PM - 3:45 PM	109	92%	8	7%	2	2%	0	0%	0	0%	119	100%
3:45 PM - 4:00 PM	102	87%	10	9%	2	2%	1	1%	2	2%	117	100%
4:00 PM - 4:15 PM	121	88%	11	8%	2	1%	2	1%	2	1%	138	100%
4:15 PM - 4:30 PM	95	91%	6	6%	0	0%	0	0%	3	3%	104	100%
4:30 PM - 4:45 PM	105	89%	12	10%	0	0%	1	1%	0	0%	118	100%
4:45 PM - 5:00 PM	101	91%	9	8%	0	0%	0	0%	1	1%	111	100%

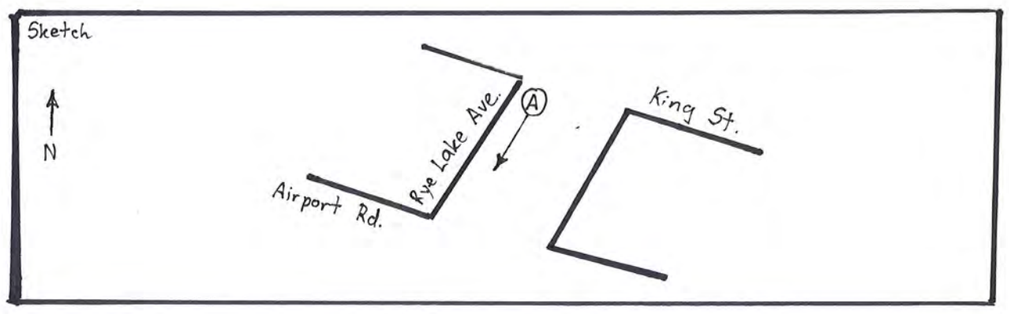
Hourly Totals											Total	Total %
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	%Bus	Truck	% Truck		
8:00 AM - 9:00 AM	151	78%	20	10%	3	2%	8	4%	11	6%	193	100%
8:15 AM - 9:15 AM	146	76%	16	8%	2	1%	16	8%	13	7%	193	100%
8:30 AM - 9:30 AM	134	72%	17	9%	3	2%	18	10%	13	7%	185	100%
8:45 AM - 9:45 AM	132	74%	14	8%	1	1%	20	11%	12	7%	179	100%
9:00 AM - 10:00 AM	146	76%	13	7%	1	1%	16	8%	16	8%	192	100%
9:15 AM - 10:15 AM	150	78%	14	7%	1	1%	8	4%	19	10%	192	100%
9:30 AM - 10:30 AM	168	79%	23	11%	0	0%	4	2%	17	8%	212	100%
9:45 AM - 10:45 AM	187	81%	27	12%	1	0%	2	1%	15	6%	232	100%
10:00 AM - 11:00 AM	173	79%	28	13%	2	1%	3	1%	12	6%	218	100%
10:15 AM - 11:15 AM	194	82%	30	13%	2	1%	2	1%	9	4%	237	100%
10:30 AM - 11:30 AM	229	85%	21	8%	2	1%	2	1%	14	5%	268	100%
10:45 AM - 11:45 AM	215	85%	22	9%	1	0%	2	1%	13	5%	253	100%
11:00 AM - 12:00 PM	222	87%	22	9%	1	0%	1	0%	10	4%	256	100%
11:15 AM - 12:15 PM	234	87%	19	7%	1	0%	2	1%	12	4%	268	100%
11:30 AM - 12:30 PM	254	88%	22	8%	3	1%	3	1%	7	2%	289	100%
11:45 AM - 12:45 PM	277	88%	21	7%	3	1%	4	1%	10	3%	315	100%
12:00 PM - 1:00 PM	302	86%	28	8%	3	1%	4	1%	15	4%	352	100%
12:15 PM - 1:15 PM	322	86%	32	9%	3	1%	3	1%	15	4%	375	100%
12:30 PM - 1:30 PM	294	85%	31	9%	2	1%	4	1%	16	5%	347	100%
12:45 PM - 1:45 PM	320	86%	34	9%	2	1%	6	2%	12	3%	374	100%
1:00 PM - 2:00 PM	359	87%	33	8%	1	0%	11	3%	10	2%	414	100%
1:15 PM - 2:15 PM	365	86%	33	8%	1	0%	17	4%	8	2%	424	100%
1:30 PM - 2:30 PM	433	87%	43	9%	0	0%	18	4%	6	1%	500	100%
1:45 PM - 2:45 PM	506	88%	43	7%	0	0%	17	3%	10	2%	576	100%
2:00 PM - 3:00 PM	489	89%	39	7%	0	0%	14	3%	9	2%	551	100%
2:15 PM - 3:15 PM	537	91%	38	6%	0	0%	9	2%	8	1%	592	100%
2:30 PM - 3:30 PM	510	92%	27	5%	0	0%	6	1%	10	2%	553	100%
2:45 PM - 3:45 PM	459	92%	26	5%	2	0%	4	1%	6	1%	497	100%
3:00 PM - 4:00 PM	473	92%	29	6%	4	1%	3	1%	6	1%	515	100%
3:15 PM - 4:15 PM	444	90%	34	7%	6	1%	3	1%	6	1%	493	100%
3:30 PM - 4:30 PM	427	89%	35	7%	6	1%	3	1%	7	1%	478	100%
3:45 PM - 4:45 PM	423	89%	39	8%	4	1%	4	1%	7	1%	477	100%
4:00 PM - 5:00 PM	422	90%	38	8%	2	0%	3	1%	6	1%	471	100%



Aerotech
Vehicle Classification Counts - Holiday
Location 2: Rye Lake Ave. b/w Airport Road and King Street
Movement: A (Westbound Rye Lake Road)
Survey Date: 11/26/08

	Vehicle Class											
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	% Bus	Truck	% Truck	Total	Total %
8:00 AM - 8:15 AM	23	85%	0	0%	1	4%	2	7%	1	4%	27	100%
8:15 AM - 8:30 AM	23	85%	0	0%	0	0%	0	0%	4	15%	27	100%
8:30 AM - 8:45 AM	34	85%	1	3%	0	0%	1	3%	4	10%	40	100%
8:45 AM - 9:00 AM	22	85%	0	0%	0	0%	3	12%	1	4%	26	100%
9:00 AM - 9:15 AM	19	73%	1	4%	0	0%	5	19%	1	4%	26	100%
9:15 AM - 9:30 AM	25	74%	1	3%	1	3%	6	18%	1	3%	34	100%
9:30 AM - 9:45 AM	29	88%	0	0%	0	0%	2	6%	2	6%	33	100%
9:45 AM - 10:00 AM	31	94%	0	0%	0	0%	0	0%	2	6%	33	100%
10:00 AM - 10:15 AM	38	88%	0	0%	0	0%	1	2%	4	9%	43	100%
10:15 AM - 10:30 AM	36	90%	2	5%	1	3%	0	0%	1	3%	40	100%
10:30 AM - 10:45 AM	37	97%	0	0%	1	3%	0	0%	0	0%	38	100%
10:45 AM - 11:00 AM	38	93%	2	5%	0	0%	0	0%	1	2%	41	100%
11:00 AM - 11:15 AM	28	90%	1	3%	0	0%	1	3%	1	3%	31	100%
11:15 AM - 11:30 AM	23	96%	0	0%	0	0%	0	0%	1	4%	24	100%
11:30 AM - 11:45 AM	35	90%	1	3%	0	0%	0	0%	3	8%	39	100%
11:45 AM - 12:00 PM	30	94%	0	0%	1	3%	1	3%	0	0%	32	100%
12:00 PM - 12:15 PM	29	97%	0	0%	0	0%	0	0%	1	3%	30	100%
12:15 PM - 12:30 PM	33	89%	2	5%	0	0%	0	0%	2	5%	37	100%
12:30 PM - 12:45 PM	35	97%	0	0%	1	3%	0	0%	0	0%	36	100%
12:45 PM - 1:00 PM	43	90%	0	0%	0	0%	0	0%	5	10%	48	100%
1:00 PM - 1:15 PM	48	94%	1	2%	1	2%	1	2%	0	0%	51	100%
1:15 PM - 1:30 PM	57	90%	3	5%	0	0%	0	0%	3	5%	63	100%
1:30 PM - 1:45 PM	69	99%	1	1%	0	0%	0	0%	0	0%	70	100%
1:45 PM - 2:00 PM	54	82%	2	3%	1	2%	6	9%	3	5%	66	100%
2:00 PM - 2:15 PM	70	86%	2	2%	3	4%	6	7%	0	0%	81	100%
2:15 PM - 2:30 PM	96	97%	1	1%	0	0%	2	2%	0	0%	99	100%
2:30 PM - 2:45 PM	82	93%	2	2%	1	1%	1	1%	2	2%	88	100%
2:45 PM - 3:00 PM	53	93%	2	4%	0	0%	1	2%	1	2%	57	100%
3:00 PM - 3:15 PM	68	99%	0	0%	0	0%	1	1%	0	0%	69	100%
3:15 PM - 3:30 PM	75	96%	2	3%	0	0%	0	0%	1	1%	78	100%
3:30 PM - 3:45 PM	74	99%	0	0%	1	1%	0	0%	0	0%	75	100%
3:45 PM - 4:00 PM	58	97%	0	0%	0	0%	0	0%	2	3%	60	100%
4:00 PM - 4:15 PM	85	98%	0	0%	0	0%	2	2%	0	0%	87	100%
4:15 PM - 4:30 PM	82	99%	1	1%	0	0%	0	0%	0	0%	83	100%
4:30 PM - 4:45 PM	80	99%	1	1%	0	0%	0	0%	0	0%	81	100%
4:45 PM - 5:00 PM	50	96%	0	0%	0	0%	0	0%	2	4%	52	100%

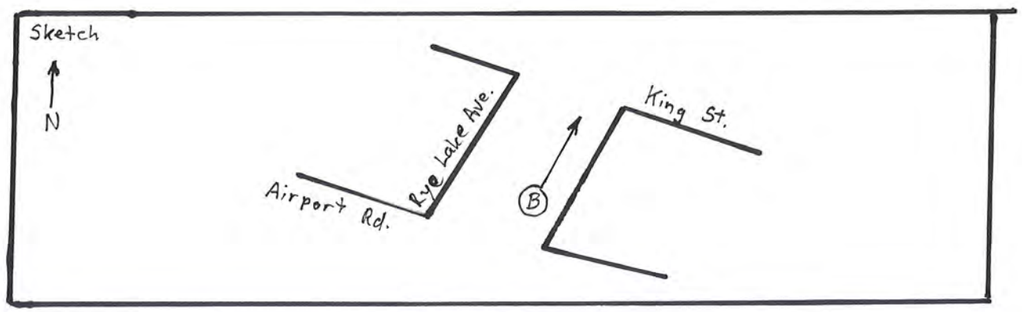
	Hourly Totals											
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	%Bus	Truck	% Truck	Total	Total %
8:00 AM - 9:00 AM	102	85%	1	1%	1	1%	6	5%	10	8%	120	100%
8:15 AM - 9:15 AM	98	82%	2	2%	0	0%	9	8%	10	8%	119	100%
8:30 AM - 9:30 AM	100	79%	3	2%	1	1%	15	12%	7	6%	126	100%
8:45 AM - 9:45 AM	95	80%	2	2%	1	1%	16	13%	5	4%	119	100%
9:00 AM - 10:00 AM	104	83%	2	2%	1	1%	13	10%	6	5%	126	100%
9:15 AM - 10:15 AM	123	86%	1	1%	1	1%	9	6%	9	6%	143	100%
9:30 AM - 10:30 AM	134	90%	2	1%	1	1%	3	2%	9	6%	149	100%
9:45 AM - 10:45 AM	142	92%	2	1%	2	1%	1	1%	7	5%	154	100%
10:00 AM - 11:00 AM	149	92%	4	2%	2	1%	1	1%	6	4%	162	100%
10:15 AM - 11:15 AM	139	93%	5	3%	2	1%	1	1%	3	2%	150	100%
10:30 AM - 11:30 AM	126	94%	3	2%	1	1%	1	1%	3	2%	134	100%
10:45 AM - 11:45 AM	124	92%	4	3%	0	0%	1	1%	6	4%	135	100%
11:00 AM - 12:00 PM	116	92%	2	2%	1	1%	2	2%	5	4%	126	100%
11:15 AM - 12:15 PM	117	94%	1	1%	1	1%	1	1%	5	4%	125	100%
11:30 AM - 12:30 PM	127	92%	3	2%	1	1%	1	1%	6	4%	138	100%
11:45 AM - 12:45 PM	127	94%	2	1%	2	1%	1	1%	3	2%	135	100%
12:00 PM - 1:00 PM	140	93%	2	1%	1	1%	0	0%	8	5%	151	100%
12:15 PM - 1:15 PM	159	92%	3	2%	2	1%	1	1%	7	4%	172	100%
12:30 PM - 1:30 PM	183	92%	4	2%	2	1%	1	1%	8	4%	198	100%
12:45 PM - 1:45 PM	217	94%	5	2%	1	0%	1	0%	8	3%	232	100%
1:00 PM - 2:00 PM	228	91%	7	3%	2	1%	7	3%	6	2%	250	100%
1:15 PM - 2:15 PM	250	89%	8	3%	4	1%	12	4%	6	2%	280	100%
1:30 PM - 2:30 PM	289	91%	6	2%	4	1%	14	4%	3	1%	316	100%
1:45 PM - 2:45 PM	302	90%	7	2%	5	1%	15	4%	5	1%	334	100%
2:00 PM - 3:00 PM	301	93%	7	2%	4	1%	10	3%	3	1%	325	100%
2:15 PM - 3:15 PM	299	96%	5	2%	1	0%	5	2%	3	1%	313	100%
2:30 PM - 3:30 PM	278	95%	6	2%	1	0%	3	1%	4	1%	292	100%
2:45 PM - 3:45 PM	270	97%	4	1%	1	0%	2	1%	2	1%	279	100%
3:00 PM - 4:00 PM	275	98%	2	1%	1	0%	1	0%	3	1%	282	100%
3:15 PM - 4:15 PM	292	97%	2	1%	1	0%	2	1%	3	1%	300	100%
3:30 PM - 4:30 PM	299	98%	1	0%	1	0%	2	1%	2	1%	305	100%
3:45 PM - 4:45 PM	305	98%	2	1%	0	0%	2	1%	2	1%	311	100%
4:00 PM - 5:00 PM	297	98%	2	1%	0	0%	2	1%	2	1%	303	100%



Aerotech
Vehicle Classification Counts - Holiday
Location 2: Rye Lake Ave. b/w Airport Road and King Street
Movement: B (Eastbound Rye Lake Road)
Survey Date: 11/26/08

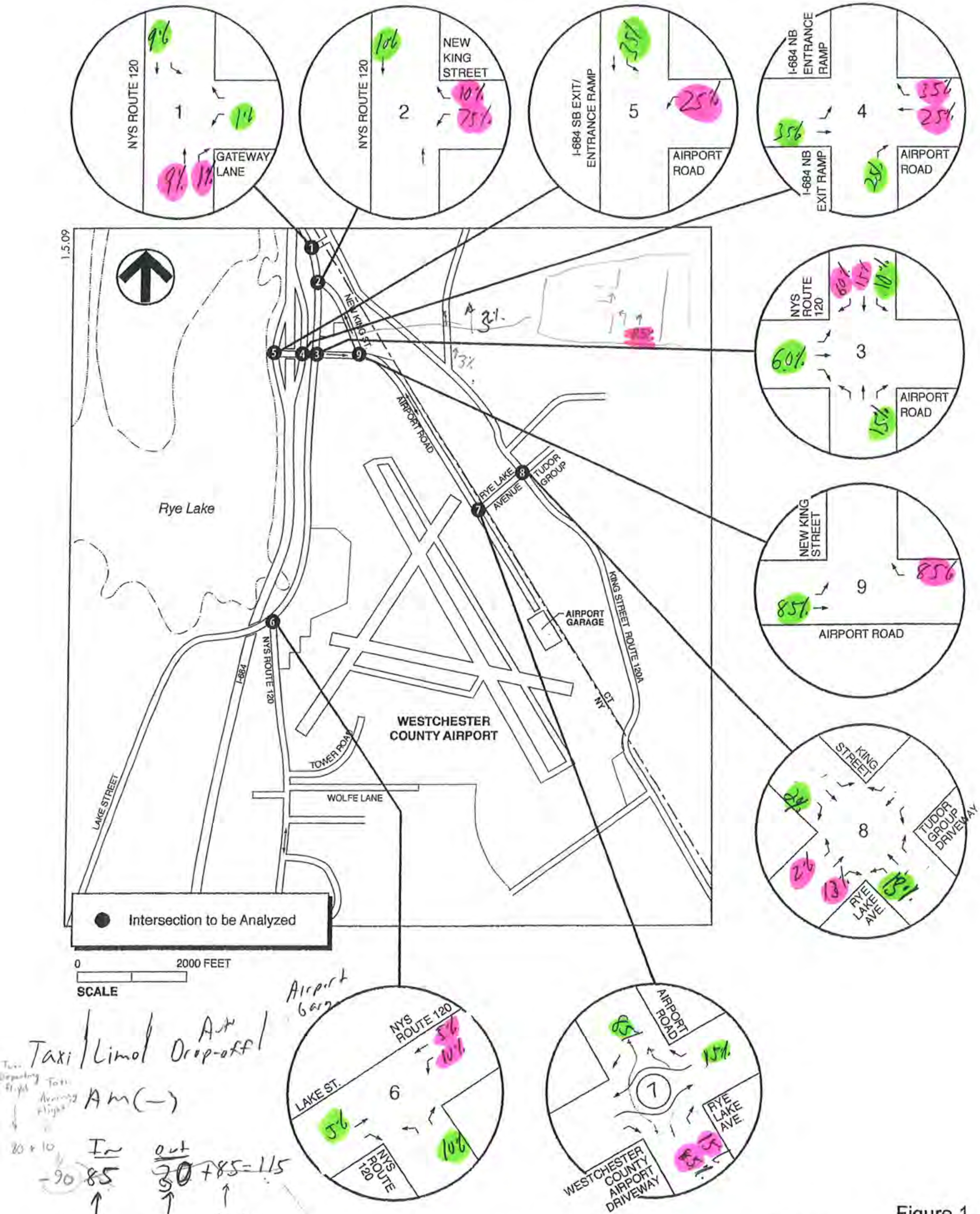
	Vehicle Class											
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	% Bus	Truck	% Truck	Total	Total %
8:00 AM - 8:15 AM	76	94%	1	1%	1	1%	1	1%	2	2%	81	100%
8:15 AM - 8:30 AM	46	98%	0	0%	0	0%	0	0%	1	2%	47	100%
8:30 AM - 8:45 AM	50	89%	1	2%	0	0%	5	9%	0	0%	56	100%
8:45 AM - 9:00 AM	49	83%	1	2%	0	0%	5	8%	4	7%	59	100%
9:00 AM - 9:15 AM	42	81%	1	2%	0	0%	5	10%	4	8%	52	100%
9:15 AM - 9:30 AM	47	90%	0	0%	1	2%	2	4%	2	4%	52	100%
9:30 AM - 9:45 AM	30	94%	0	0%	0	0%	0	0%	2	6%	32	100%
9:45 AM - 10:00 AM	37	93%	1	3%	0	0%	1	3%	1	3%	40	100%
10:00 AM - 10:15 AM	31	91%	1	3%	1	3%	0	0%	1	3%	34	100%
10:15 AM - 10:30 AM	39	98%	0	0%	1	3%	0	0%	0	0%	40	100%
10:30 AM - 10:45 AM	26	93%	0	0%	1	4%	0	0%	1	4%	28	100%
10:45 AM - 11:00 AM	30	91%	1	3%	0	0%	0	0%	2	6%	33	100%
11:00 AM - 11:15 AM	49	86%	1	2%	0	0%	1	2%	6	11%	57	100%
11:15 AM - 11:30 AM	39	87%	1	2%	0	0%	0	0%	5	11%	45	100%
11:30 AM - 11:45 AM	35	90%	1	3%	0	0%	0	0%	3	8%	39	100%
11:45 AM - 12:00 PM	24	92%	1	4%	0	0%	1	4%	0	0%	26	100%
12:00 PM - 12:15 PM	29	97%	1	3%	0	0%	0	0%	0	0%	30	100%
12:15 PM - 12:30 PM	29	94%	2	6%	0	0%	0	0%	0	0%	31	100%
12:30 PM - 12:45 PM	33	92%	2	6%	1	3%	0	0%	0	0%	36	100%
12:45 PM - 1:00 PM	37	93%	1	3%	0	0%	1	3%	1	3%	40	100%
1:00 PM - 1:15 PM	25	68%	2	5%	1	3%	5	14%	4	11%	37	100%
1:15 PM - 1:30 PM	37	74%	1	2%	1	2%	11	22%	0	0%	50	100%
1:30 PM - 1:45 PM	33	92%	0	0%	1	3%	1	3%	1	3%	36	100%
1:45 PM - 2:00 PM	41	89%	2	4%	2	4%	1	2%	0	0%	46	100%
2:00 PM - 2:15 PM	50	82%	2	3%	4	7%	3	5%	2	3%	61	100%
2:15 PM - 2:30 PM	56	90%	2	3%	1	2%	2	3%	1	2%	62	100%
2:30 PM - 2:45 PM	70	93%	2	3%	2	3%	0	0%	1	1%	75	100%
2:45 PM - 3:00 PM	38	95%	1	3%	0	0%	0	0%	1	3%	40	100%
3:00 PM - 3:15 PM	44	92%	2	4%	0	0%	1	2%	1	2%	48	100%
3:15 PM - 3:30 PM	47	92%	2	4%	0	0%	0	0%	2	4%	51	100%
3:30 PM - 3:45 PM	41	91%	1	2%	0	0%	0	0%	3	7%	45	100%
3:45 PM - 4:00 PM	42	95%	0	0%	1	2%	1	2%	0	0%	44	100%
4:00 PM - 4:15 PM	41	98%	1	2%	0	0%	0	0%	0	0%	42	100%
4:15 PM - 4:30 PM	43	98%	0	0%	0	0%	0	0%	1	2%	44	100%
4:30 PM - 4:45 PM	59	94%	0	0%	1	2%	0	0%	3	5%	63	100%
4:45 PM - 5:00 PM	40	98%	0	0%	0	0%	0	0%	1	2%	41	100%

	Hourly Totals											
Time Period	Auto	% Auto	Black Car/Limo	% Black Car/Limo	Taxi	% Taxi	Bus	%Bus	Truck	% Truck	Total	Total %
8:00 AM - 9:00 AM	221	91%	3	1%	1	0%	11	5%	7	3%	243	100%
8:15 AM - 9:15 AM	187	87%	3	1%	0	0%	15	7%	9	4%	214	100%
8:30 AM - 9:30 AM	188	86%	3	1%	1	0%	17	8%	10	5%	219	100%
8:45 AM - 9:45 AM	168	86%	2	1%	1	1%	12	6%	12	6%	195	100%
9:00 AM - 10:00 AM	156	89%	2	1%	1	1%	8	5%	9	5%	176	100%
9:15 AM - 10:15 AM	145	92%	2	1%	2	1%	3	2%	6	4%	158	100%
9:30 AM - 10:30 AM	137	94%	2	1%	2	1%	1	1%	4	3%	146	100%
9:45 AM - 10:45 AM	133	94%	2	1%	3	2%	1	1%	3	2%	142	100%
10:00 AM - 11:00 AM	126	93%	2	1%	3	2%	0	0%	4	3%	135	100%
10:15 AM - 11:15 AM	144	91%	2	1%	2	1%	1	1%	9	6%	158	100%
10:30 AM - 11:30 AM	144	88%	3	2%	1	1%	1	1%	14	9%	163	100%
10:45 AM - 11:45 AM	153	88%	4	2%	0	0%	1	1%	16	9%	174	100%
11:00 AM - 12:00 PM	147	88%	4	2%	0	0%	2	1%	14	8%	167	100%
11:15 AM - 12:15 PM	127	91%	4	3%	0	0%	1	1%	8	6%	140	100%
11:30 AM - 12:30 PM	117	93%	5	4%	0	0%	1	1%	3	2%	126	100%
11:45 AM - 12:45 PM	115	93%	6	5%	1	1%	1	1%	0	0%	123	100%
12:00 PM - 1:00 PM	128	93%	6	4%	1	1%	1	1%	1	1%	137	100%
12:15 PM - 1:15 PM	124	86%	7	5%	2	1%	6	4%	5	3%	144	100%
12:30 PM - 1:30 PM	132	81%	6	4%	3	2%	17	10%	5	3%	163	100%
12:45 PM - 1:45 PM	132	81%	4	2%	3	2%	18	11%	6	4%	163	100%
1:00 PM - 2:00 PM	136	80%	5	3%	5	3%	18	11%	5	3%	169	100%
1:15 PM - 2:15 PM	161	83%	5	3%	8	4%	16	8%	3	2%	193	100%
1:30 PM - 2:30 PM	180	88%	6	3%	8	4%	7	3%	4	2%	205	100%
1:45 PM - 2:45 PM	217	89%	8	3%	9	4%	6	2%	4	2%	244	100%
2:00 PM - 3:00 PM	214	90%	7	3%	7	3%	5	2%	5	2%	238	100%
2:15 PM - 3:15 PM	208	92%	7	3%	3	1%	3	1%	4	2%	225	100%
2:30 PM - 3:30 PM	199	93%	7	3%	2	1%	1	0%	5	2%	214	100%
2:45 PM - 3:45 PM	170	92%	6	3%	0	0%	1	1%	7	4%	184	100%
3:00 PM - 4:00 PM	174	93%	5	3%	1	1%	2	1%	6	3%	188	100%
3:15 PM - 4:15 PM	171	94%	4	2%	1	1%	1	1%	5	3%	182	100%
3:30 PM - 4:30 PM	167	95%	2	1%	1	1%	1	1%	4	2%	175	100%
3:45 PM - 4:45 PM	185	96%	1	1%	2	1%	1	1%	4	2%	193	100%
4:00 PM - 5:00 PM	183	96%	1	1%	1	1%	0	0%	5	3%	190	100%



Appendix J: Traffic Impact Study

Project Trip Distribution and Assignments



AEROTECH Westchester County Airport

Figure 1

Traffic Study Area

15 + 80 + 10 = 105

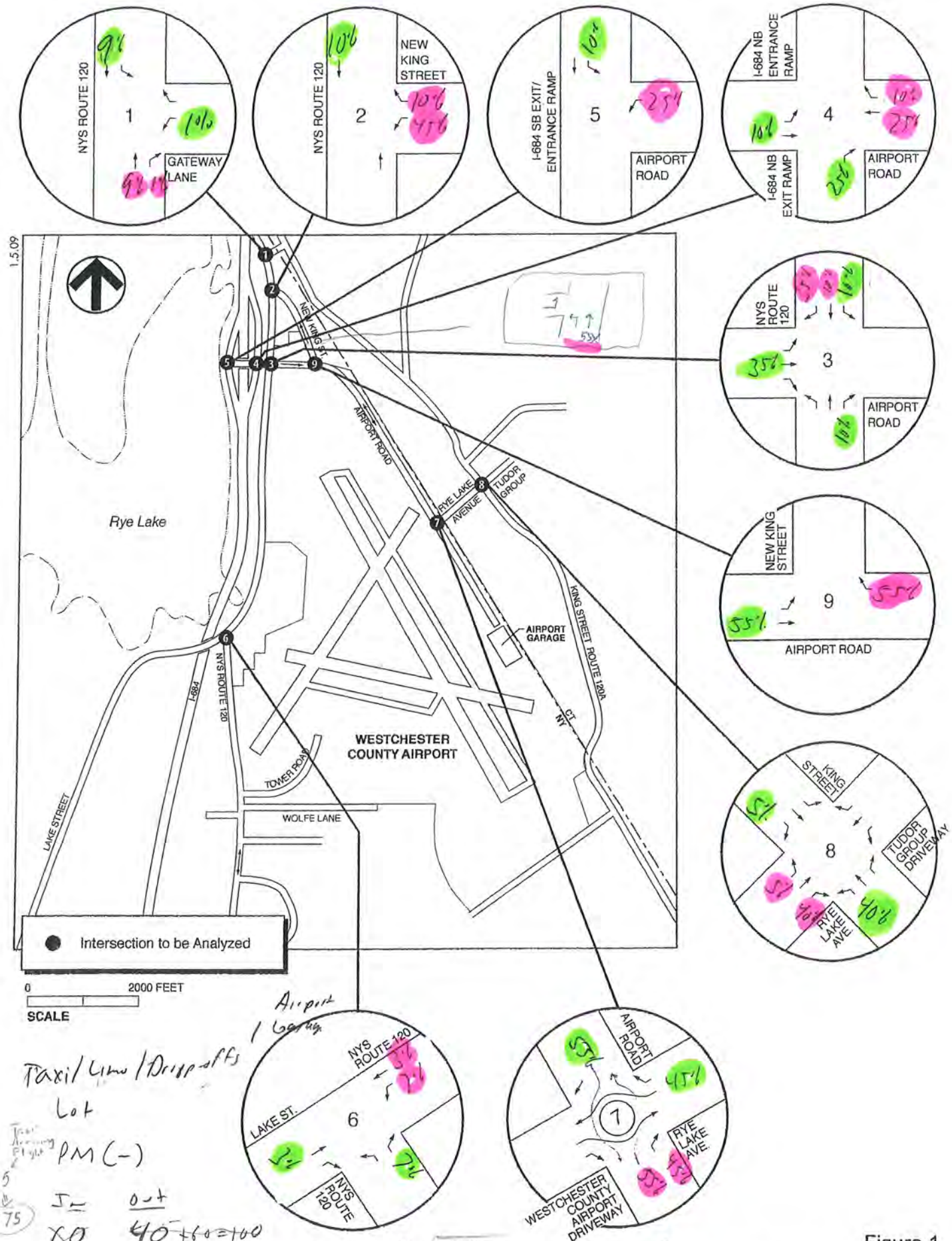
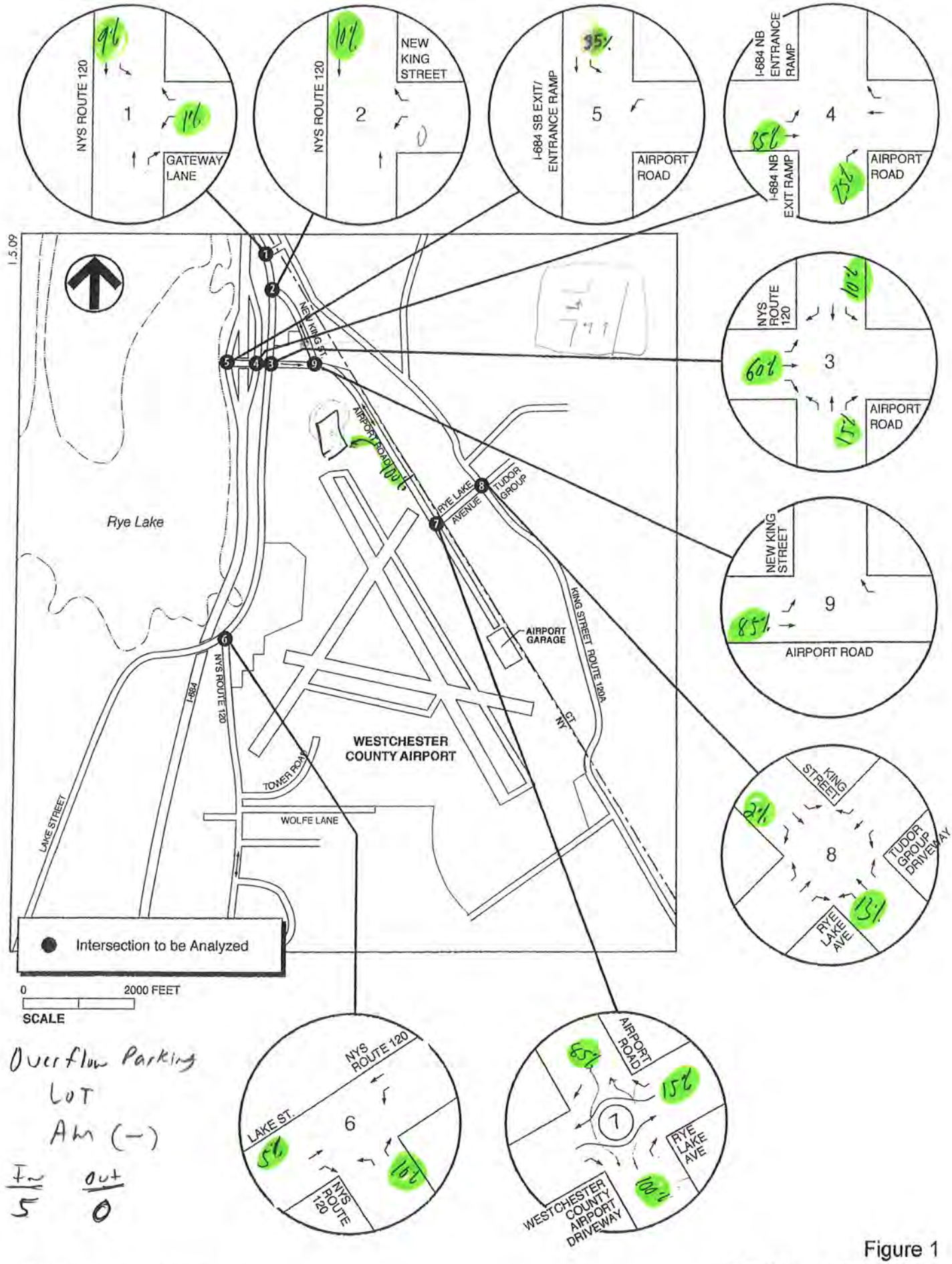


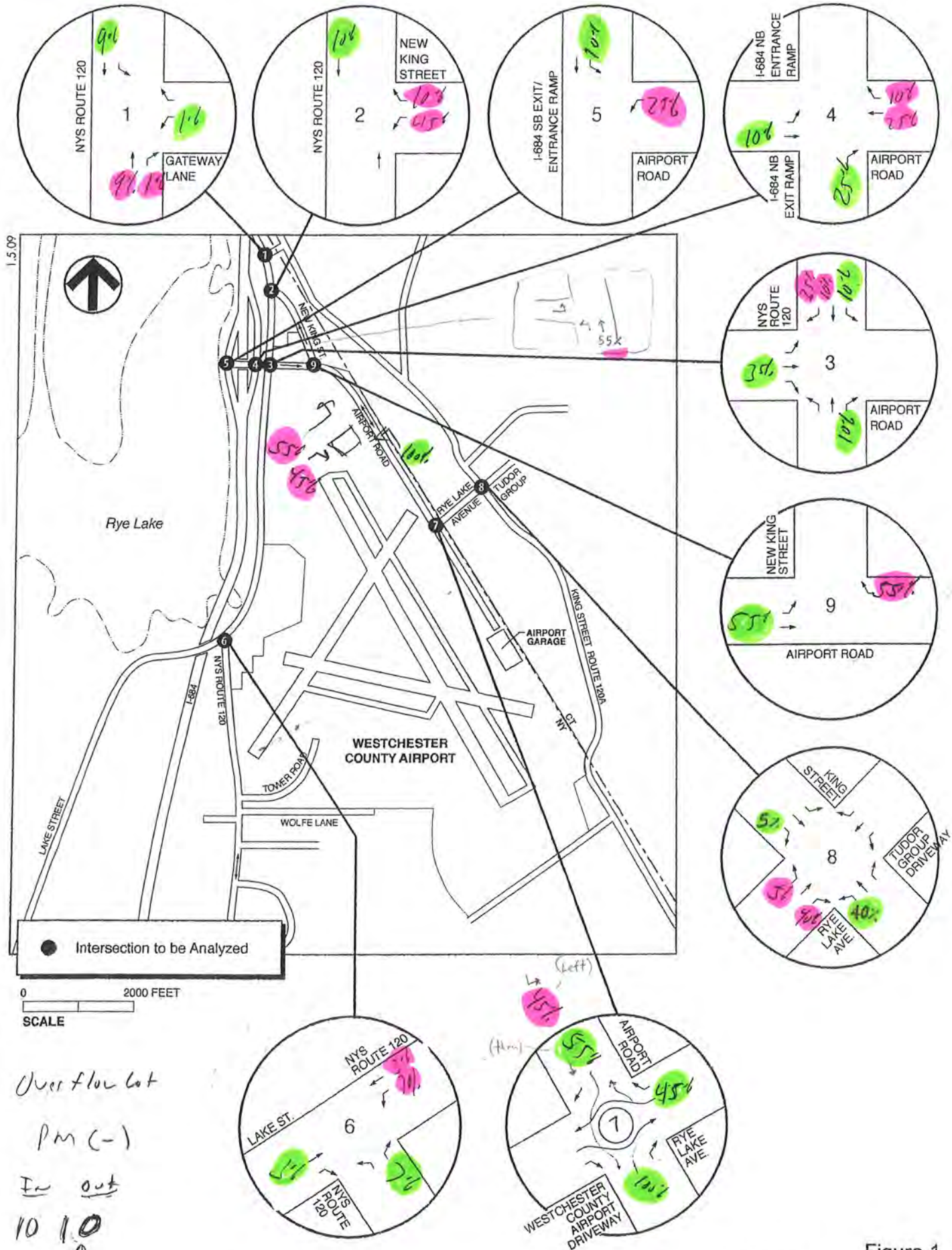
Figure 1
Traffic Study Area



Overflow Parking Lot
Am (-)

In	Out
5	0

Figure 1
Traffic Study Area



Overflow Lot

PM (-)

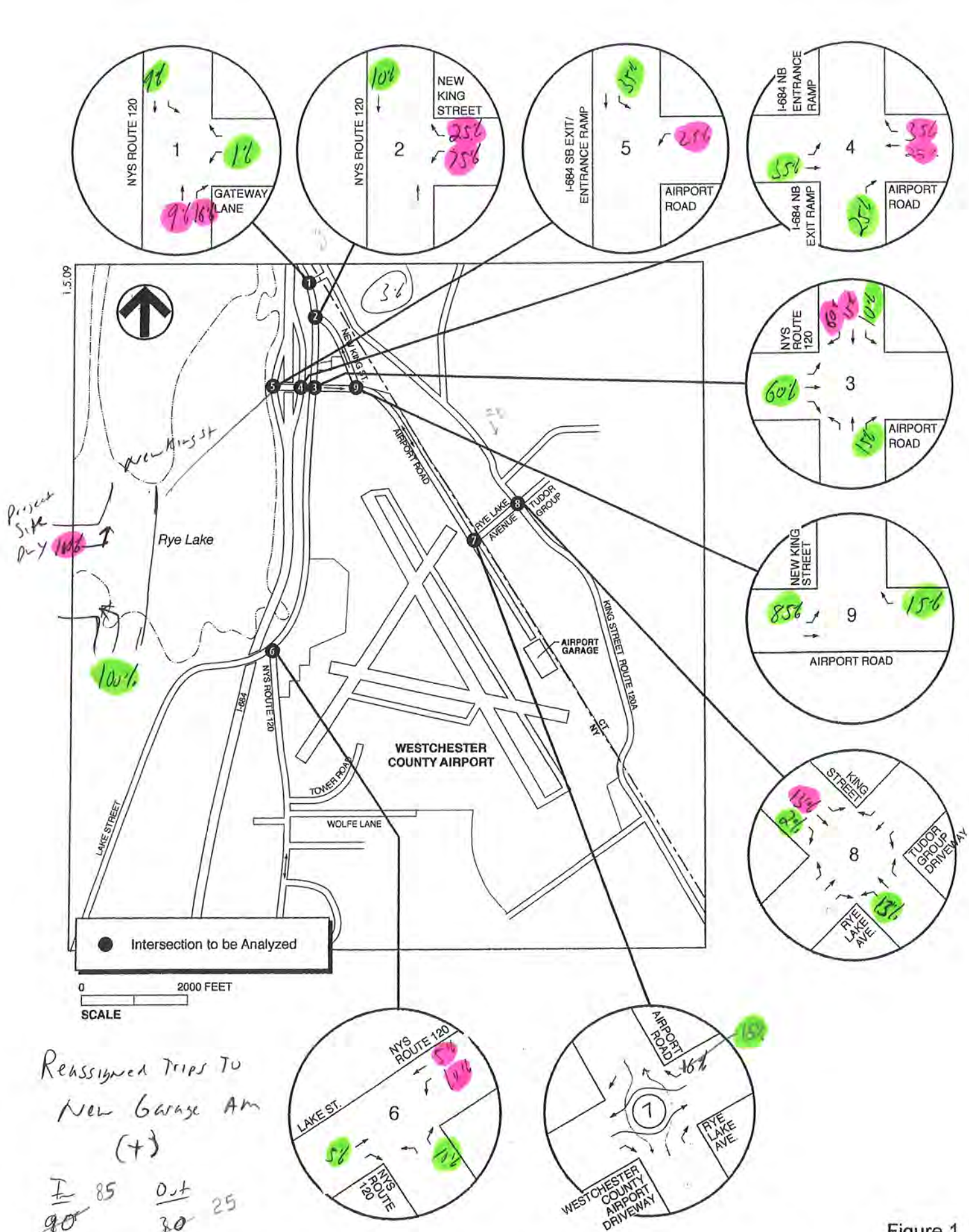
In Out

10 10

AEROTECH Westchester County Airport

Already performed with the Lot

Figure 1
Traffic Study Area



Reassigned Trips To New Garage AM (+)

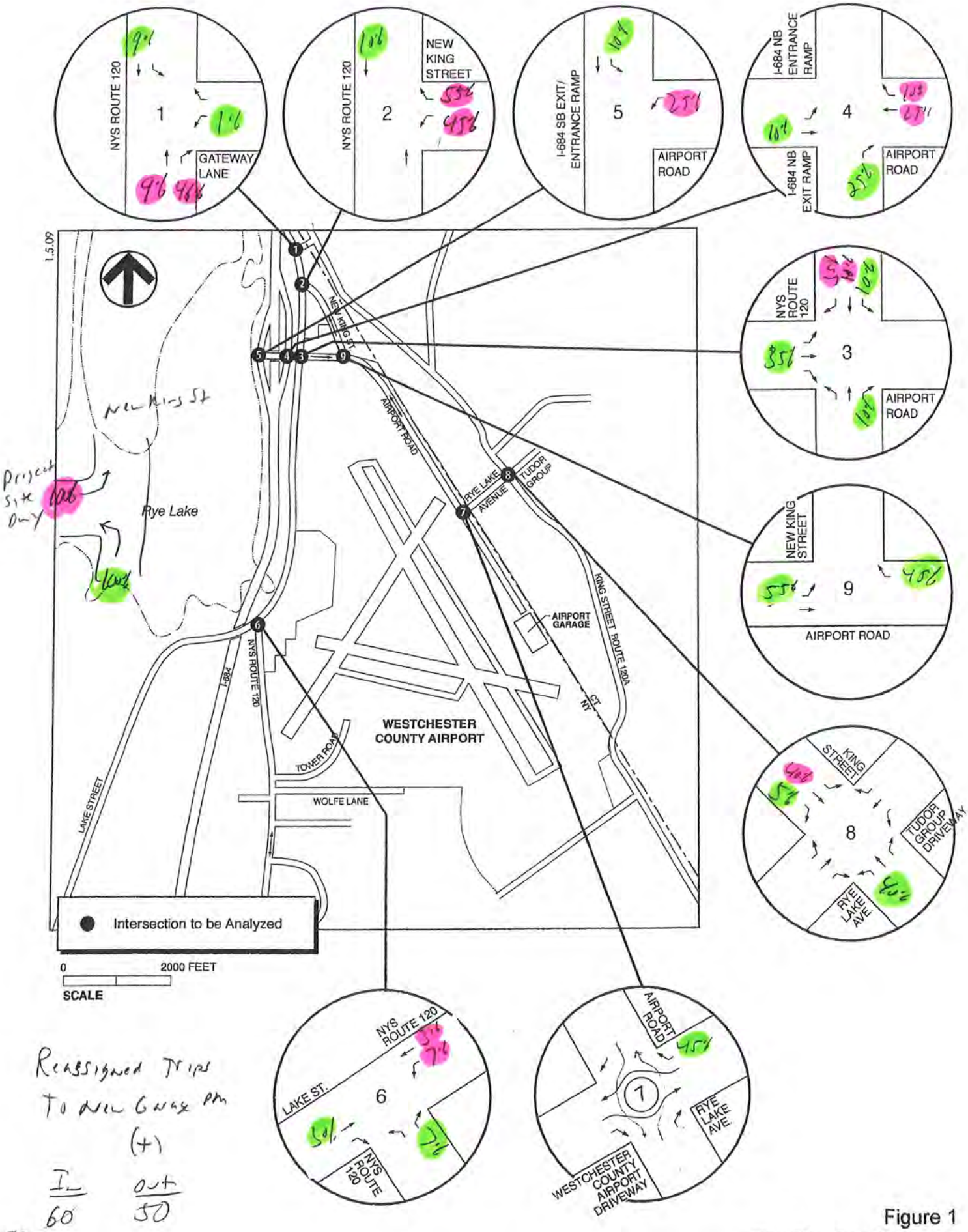
In 85 Out 25

90 30

↑ Shifted to New Garage ↑ Planes From New Garage

AEROTECH Westchester County Airport

Figure 1
Traffic Study Area



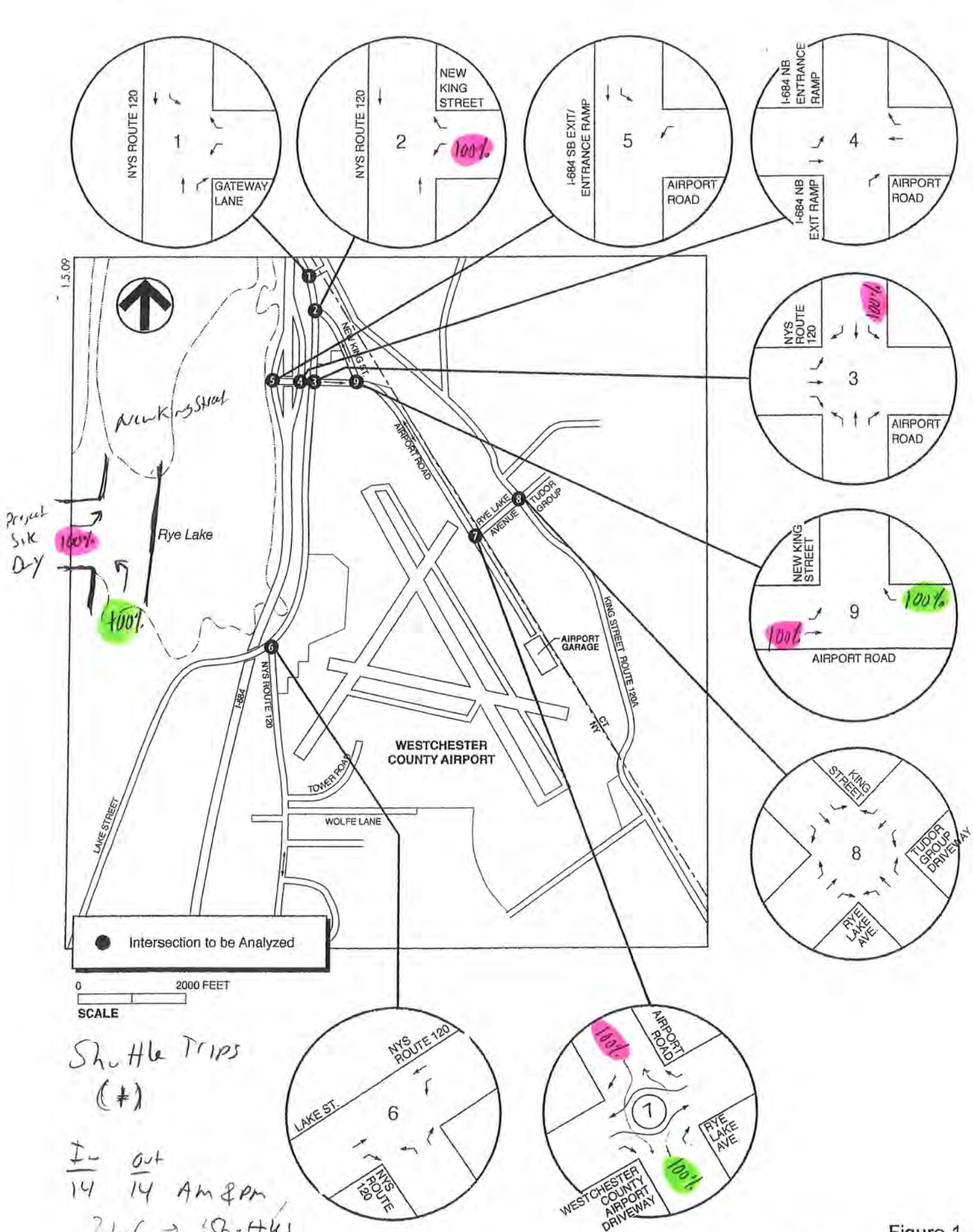
Reassigned Trips
To New Gate pm
(+)

In	Out
60	50

70

AEROTECH Westchester County Airport

Figure 1
Traffic Study Area



Shuttle Trips (#)

In 14 Out 14 AM & PM

3 to 6 → 52 shuttles

Typically 3 to 4 shuttle buses (proposed)

AEROTECH Westchester County Airport

Figure 1
Traffic Study Area

Appendix J: Traffic Impact Study

Physical Inventories

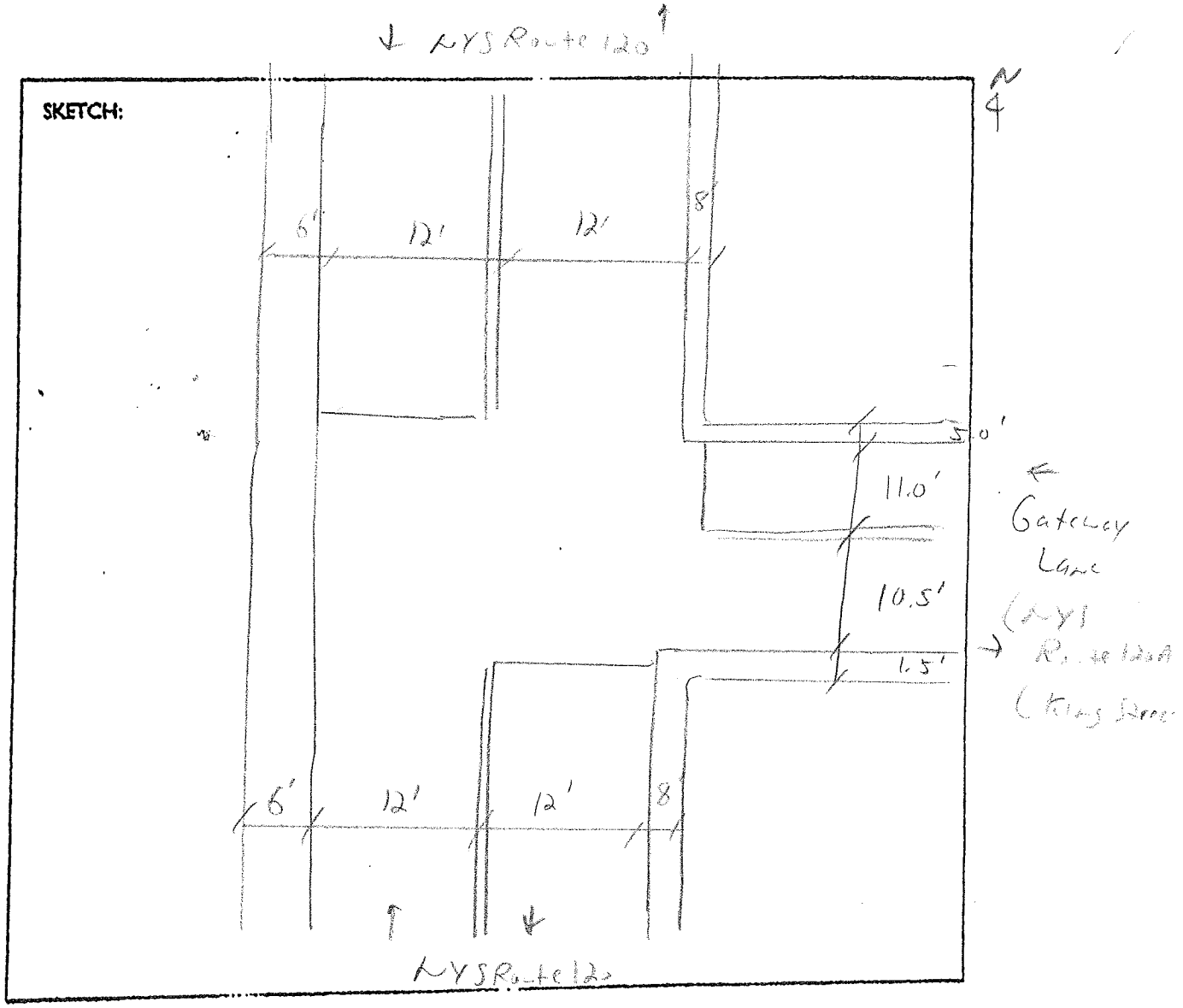
J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET (Gateway Lane)

Project WCAP Location NYS Route 120 / NYS Route 120A Date 12/08

Project No. — Weather — Surveyor's Name ZK

SKETCH:



PHASING:

1) ↑ 2) ↓

↑ ↓

SIGNAL TIMING: 6 YEAR Cycle

1) Gateway Lane 10" 5"

2) NYS Route 120 57" 5"

72"

Actuated

(2)

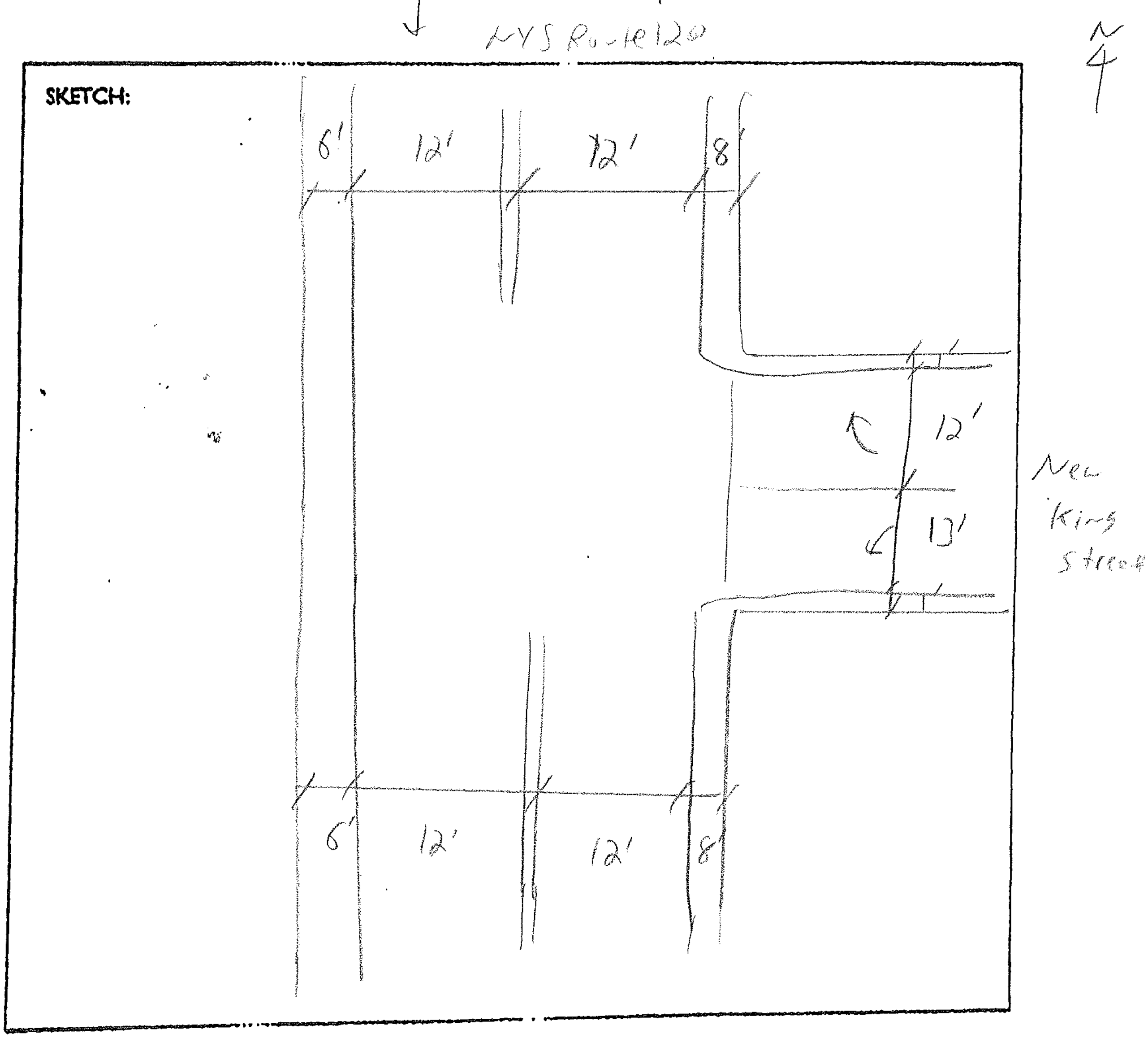
J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

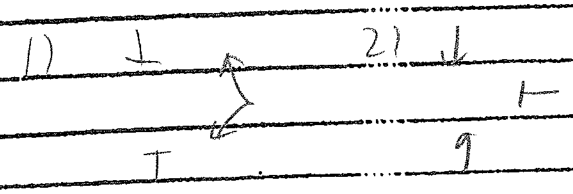
Project: WCAP Location: NYS Route 120 / New King Street Date: 12/08

Project No.: – Weather: – Surveyor's Name: ZK

SKETCH:



PHASING:



SIGNAL TIMING: G Y+AR Cycle

1) New King Street 15" 5"

2) NYS Route 120 55" 5" 80"

(3)

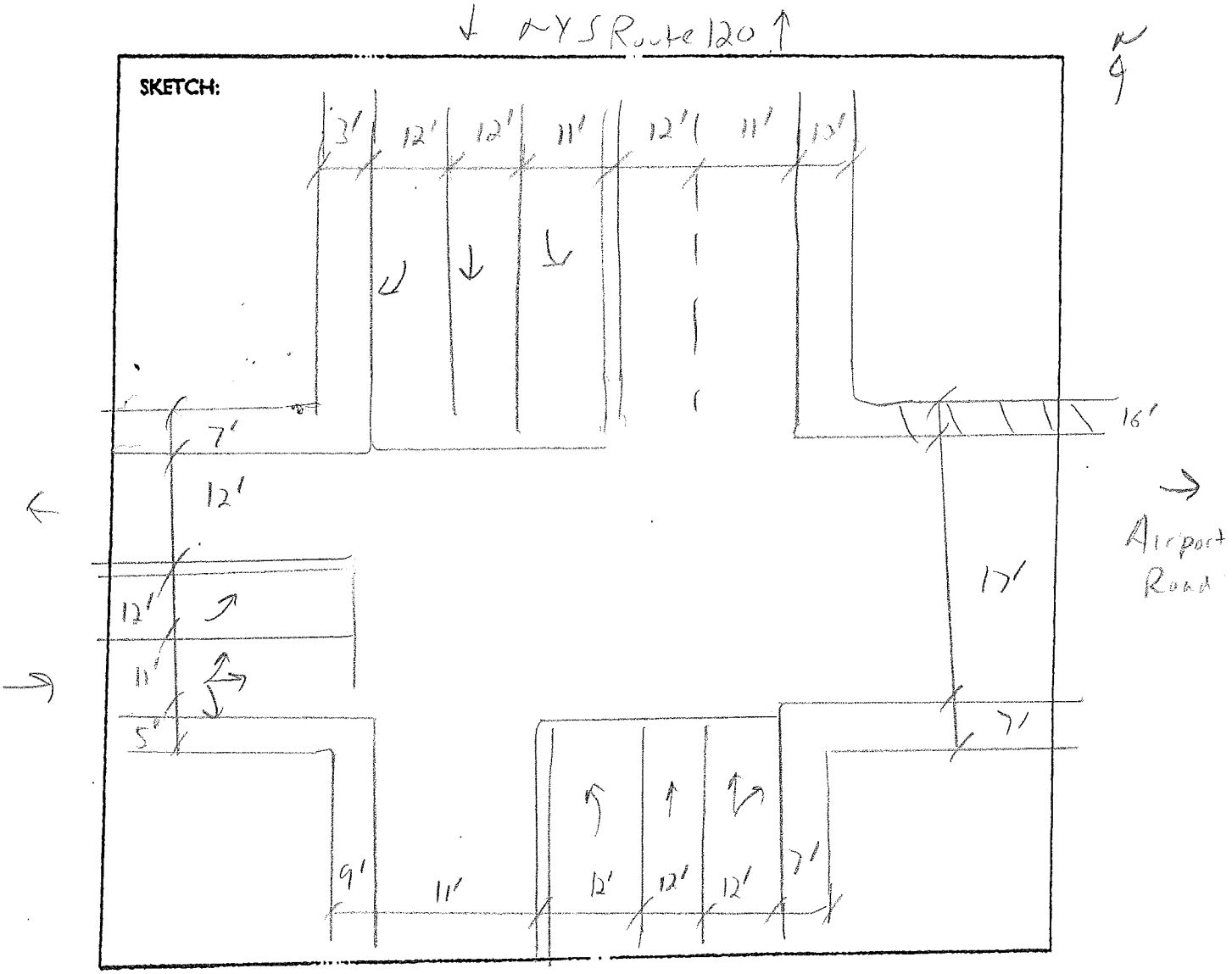
J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

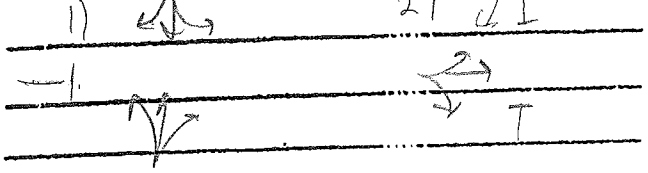
Project WCAP Location Airport Road / NYS Route 120 Date 12/08

Project No. — Weather — Surveyor's Name ZK

SKETCH:



PHASING:



SIGNAL TIMING: 6 YEAR cycle

1) NYS Route 120 17" 5"

2) Airport Road 27" 5"

50"

Actuated

(4)

J.RAP & ASSOCIATES, INC.

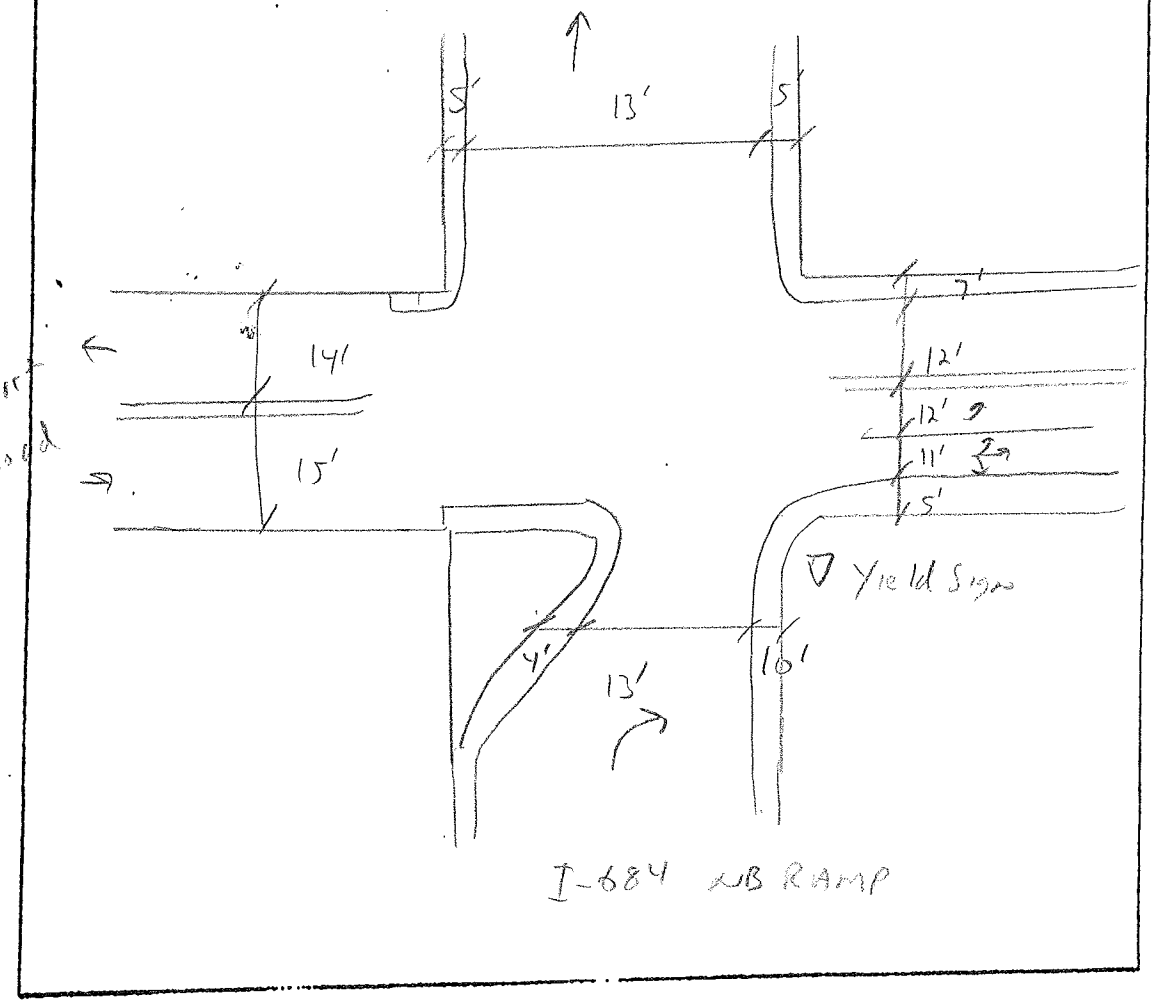
PHYSICAL INVENTORY SHEET

Project WCAP Location Airport Road / NB I-684 Ramp Date 12/08

Project No. — Weather — Surveyor's Name ZK

4

SKETCH:



PHASING: Unsignalized

SIGNAL TIMING: Unsignalized

(5)

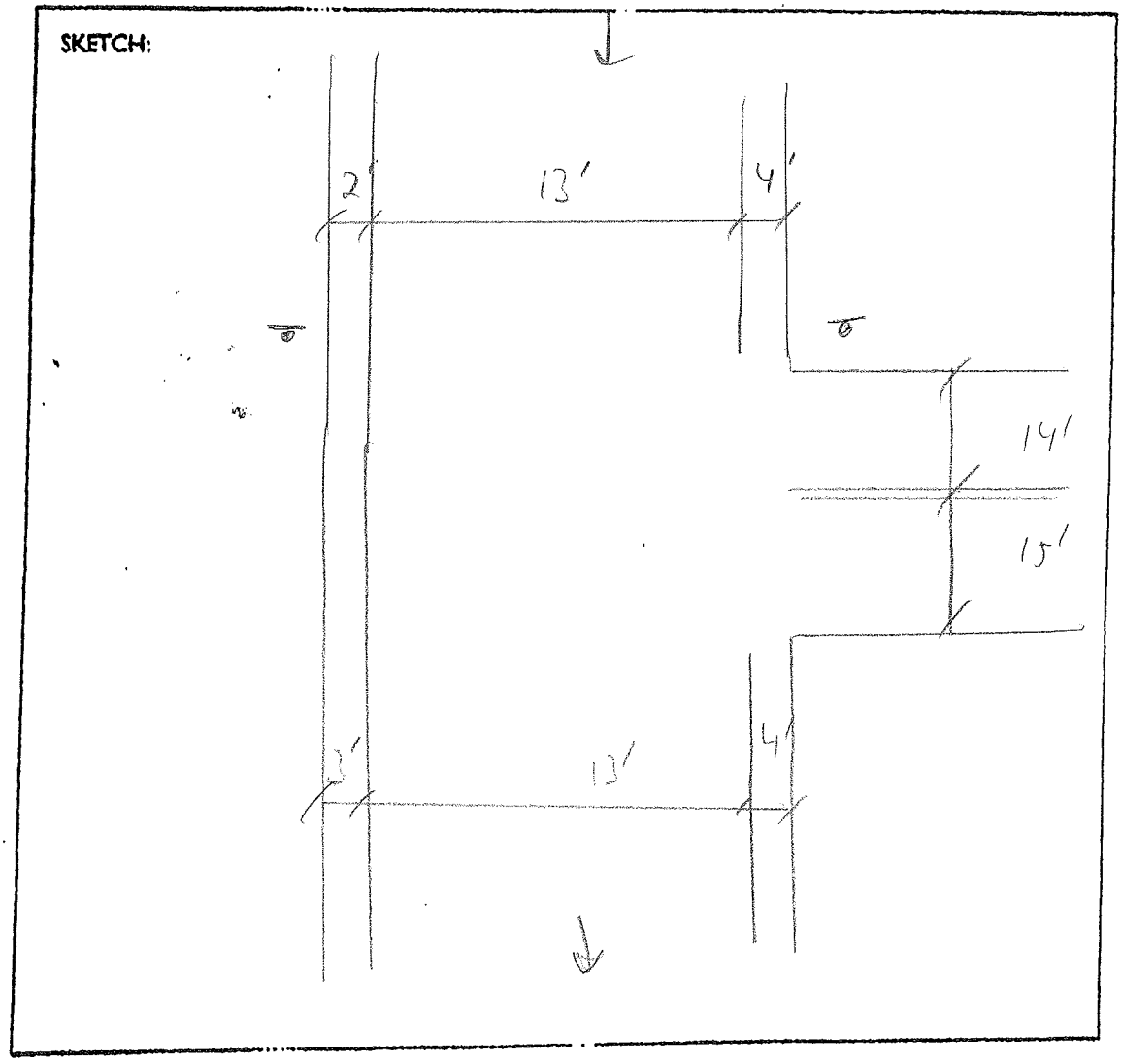
J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

Project WCAP Location I-684 SB Ramp/ Airport Rd Date 12/08

Project No. — Weather — Surveyor's Name ZK

SKETCH:



PHASING: Unsignalized

— Stop Sign

SIGNAL TIMING: Unsignalized

(6)

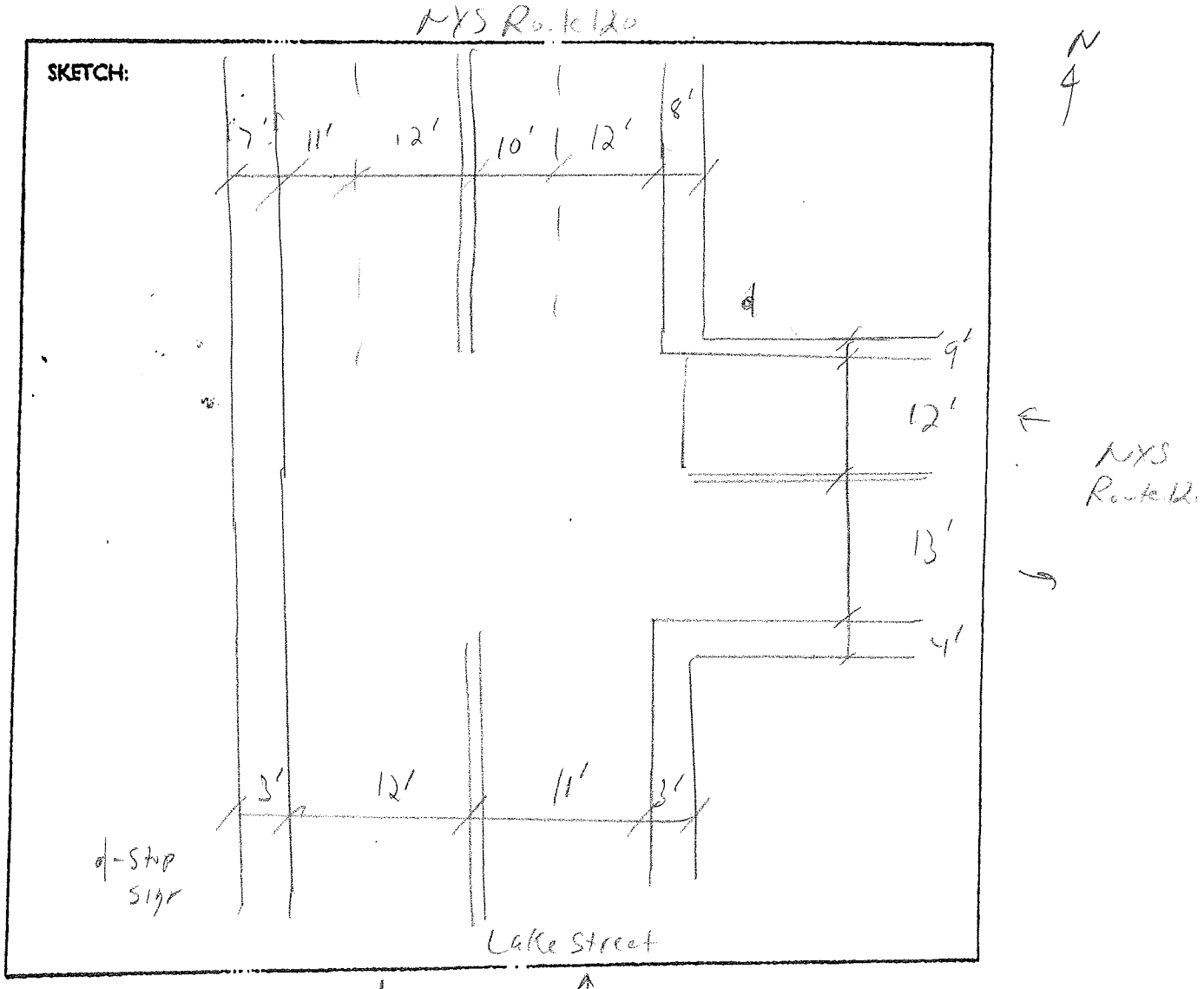
J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

Project WCAP Location NYS Route 120/ Lake Street Date 12/08

Project No. — Weather — Surveyor's Name ZK

SKETCH:



PHASING: Unsignalized

SIGNAL TIMING: Unsignalized

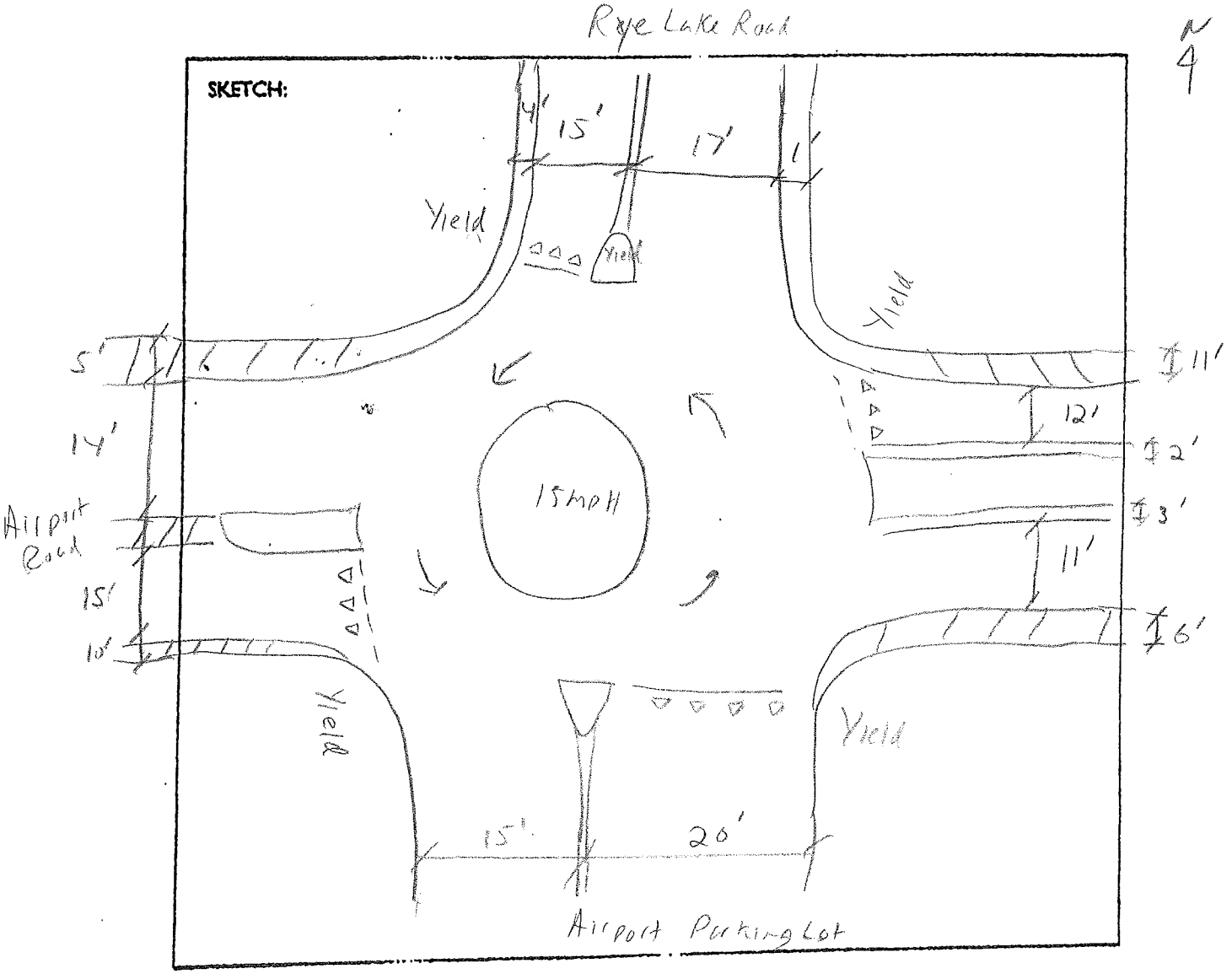
(7)

J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

Project LCAP Location Airport Road / Rye Lake Avenue Date 12/08

Project No. — Weather — Surveyor's Name ZK



PHASING: Unsignalized

SIGNAL TIMING: Unsignalized

(8)

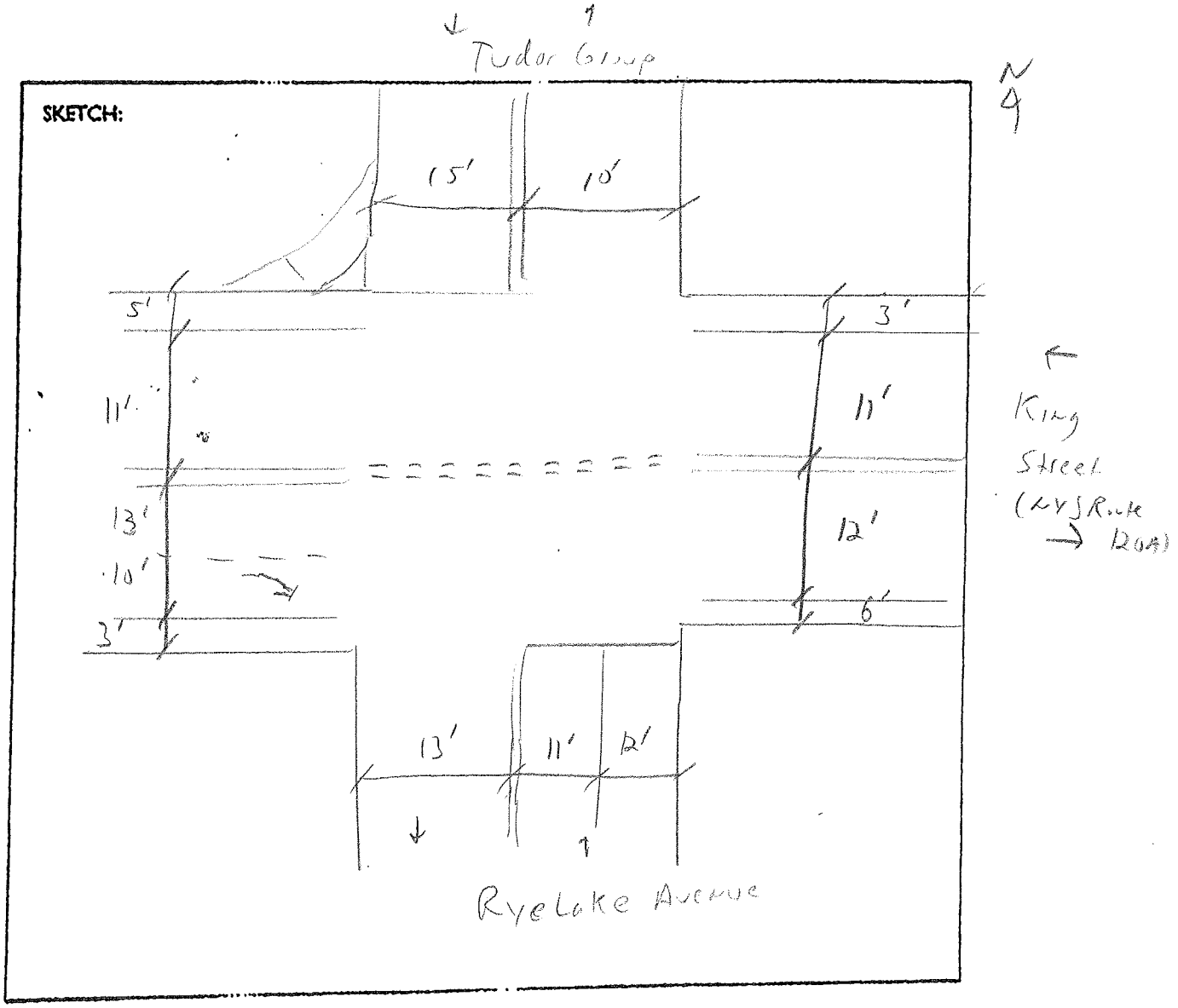
J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

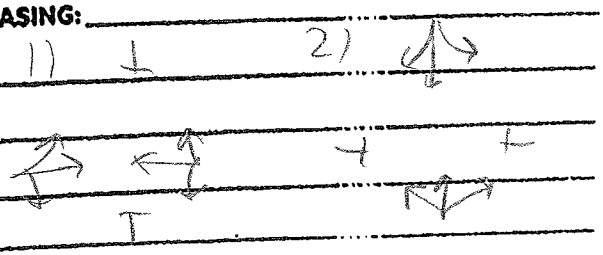
Project WCAP Location Rye Lake Avenue (King Street) / NYS Route 120A Date 12/08

Project No. — Weather — Surveyor's Name ZK

SKETCH:



PHASING:



SIGNAL TIMING: 6 YEAR Cycle

1) Rye Lake Avenue 20" 5"

2) King Street 30" 5" 60"

Actuated

(9)

J.RAP & ASSOCIATES, INC.

PHYSICAL INVENTORY SHEET

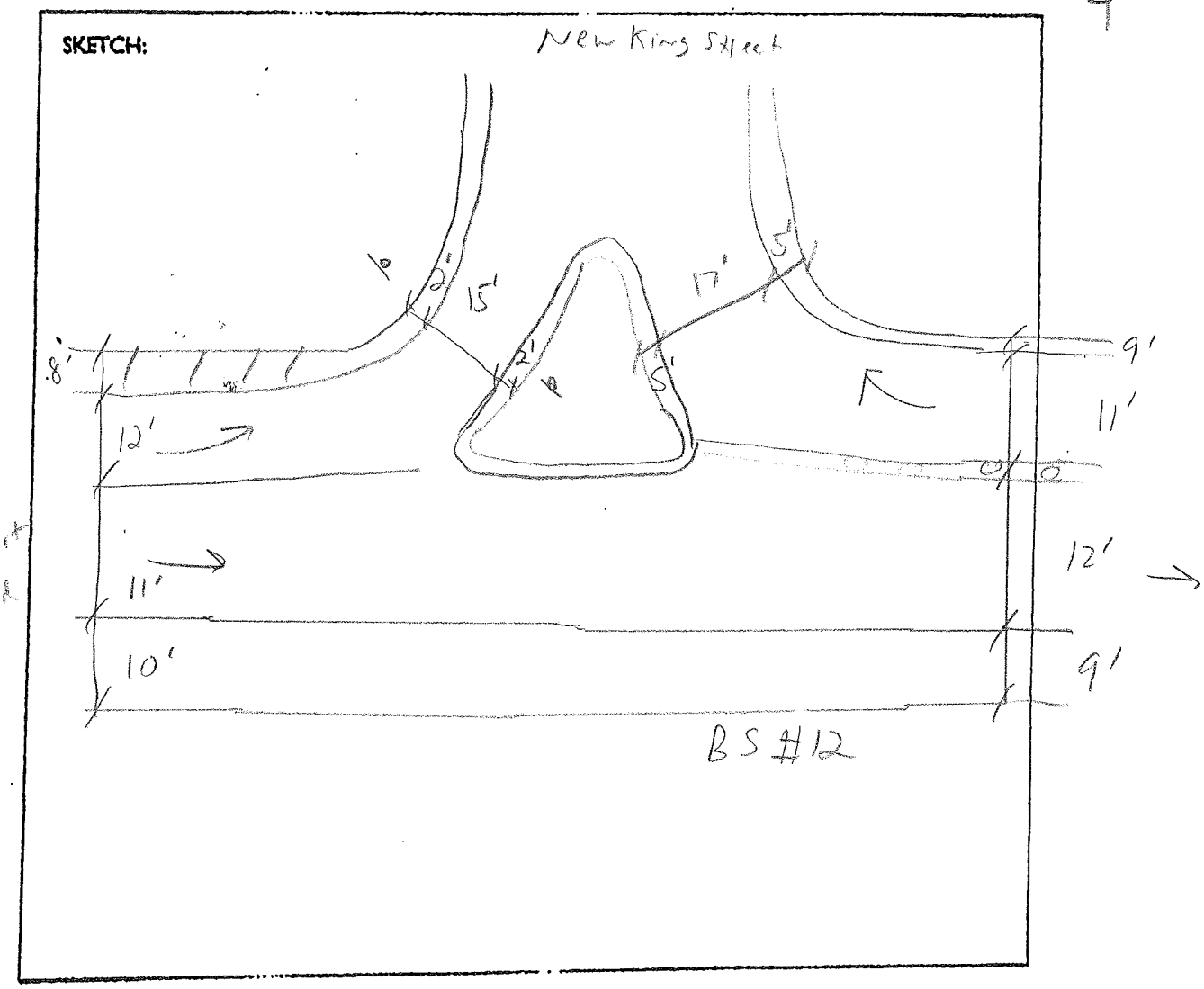
Project WCAP Location Airport Road / New King Street Date 12/08

Project No. — Weather — Surveyor's Name ZR

9

4

SKETCH:



PHASING: Unsignalized

4 - Step Size

SIGNAL TIMING: Unsignalized

Appendix J: Traffic Impact Study

Supplemental Analysis (Frederick P. Clark Associates, Inc.)

FREDERICK P. CLARK ASSOCIATES, INC.
PLANNING, TRANSPORTATION, ENVIRONMENT AND DEVELOPMENT
RYE, NEW YORK FAIRFIELD, CONNECTICUT

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December 9, 2010

Mr. Adam R. Kaufman, Town Planner
Town of North Castle
17 Bedford Road
Armonk, New York 10504

Subject: **Traffic Study for Park Place at Westchester Airport, New King Street, Town of North Castle, New York – Review of Traffic Impact Study**

Dear Mr. Kaufman:

As requested, we have conducted a review of the Traffic Access and Impact Study prepared by AKRF, dated August 2, 2010. The proposed Park Place Garage at Westchester Airport will consist of approximately 1,450 parking spaces and be constructed on the west side of New King Street and North of Airport Road. The proposal is to provide access at one point along New King Street. The traffic analysis addresses the 2008 existing traffic conditions, 2012 future no-build and builds traffic conditions during weekday morning and afternoon peak hours.

Applicant's Traffic Engineers Summary

1. *Existing Conditions* – The manual traffic volume surveys were conducted in November and December 2008, and February and November 2009. It was determined that since there has been minimal growth in the area that the existing traffic volumes utilized in those studies represent current 2010 conditions.

   The following intersections were included in the Study Area:

   - NYS Route 120 at Gateway Lane (Signalized);
   - NYS Route 120 at New King Street (Signalized);
   - NYS Route 120 at Airport Road (Signalized);
   - Airport Road at Southbound I-684 Ramps (Unsignalized);
   - Airport Road at Northbound I-684 Ramps (Unsignalized);
   - NYS Route 120 at Lake Street (Unsignalized);

- Airport Road at Rye Lake Avenue/Westchester County Airport Drive (Roundabout);
- King Street at Rye Lake Avenue/Tudor Group Driveway (Signalized); and,
- Airport Road at New King Street (Unsignalized).

These surveys were conducted during the following time periods:

- Weekday Morning – 8:00 A.M. to 10:00 A.M. ; and,
- Weekday Afternoon – 4:00 P.M. to 6:00 P.M.

Based on the results of the surveys, the following peak hour time periods were identified and were used in the analysis:

- Weekday Morning – 8:00 A.M. to 9:00 A.M.; and,
- Weekday Afternoon – 4:15 P.M. and 5:15 P.M.

Automatic Traffic Recorders (ATR's) were conducted at various locations throughout the Study Area. The dates they were conducted and exact locations were not provided.

2. *Accident History* – No Accident data was provided.

3. *Existing Parking Conditions* – The existing Westchester County Airport parking facility consists of and approximately 1,100 space parking garage adjacent to the Airport Terminal. In addition to this parking facility, there are overflow parking areas at the Airport, which provide approximately 400 additional parking spaces. Drivers must pay to park at both the parking garage and the overflow parking areas.

4. *No-Build Traffic Volumes* – For purposes of completing this analysis, a 2012 design year was used to reflect future traffic conditions, with and without the site-generated traffic. The 2008 baseline traffic volumes were increased by a growth rate of 2.5 percent per year to the horizon year 2012, or 10 percent total growth to be conservative. This factor was used to account for the normal background

traffic growth and any other developments that were not identified at the time of the Study. No other developments are in the Study Area.

5. *Site-Generated Traffic Volumes* – The Applicant's traffic consultant developed site traffic generation estimates for the proposed parking garage by considering the following:

   - Traffic generation at three similar parking facilities in Columbus, OH, Denver, CO and Pittsburgh, PA.
   - Traffic generation to and from the Airport Garage as recorded by ATR counts during the peak Thanksgiving Holiday.
   - There will be a shuttle bus provided between the Parking Garage and the Airport Terminal. There will be approximately 14 shuttle buses added to the roadway network during the peak hour. The estimated net total trips for the Study Area are -62 and -47 vehicle trip ends during the weekday morning and weekday afternoon peak hours.

6. *Site Traffic Distribution and Assignment* – The results of the Study indicated that site traffic generation was distributed and assigned throughout the network based on existing and expected travel patterns to the new parking garage.

7. *Build Traffic Volumes* – The results of the Study indicated that build traffic volumes were developed by adding the site-generated traffic to the no-build traffic volumes.

8. *Capacity Analysis Results* – The analysis was based on Synchro 7, Highway Capacity Manual (HCM) methodology. The following is a summary of the results of the analysis for each of the intersections included in the Study Area:

   a. *NYS 120 at Gateway Lane* – This traffic signal controlled intersection currently operates at an overall Level of Service "A" during both the weekday morning and weekday afternoon peak hours.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at an overall Level of Service "A" during both the weekday morning and weekday afternoon peak hours.

The results of the analysis for a build traffic condition indicate this intersection will operate at an overall Level of Service "A" during both the weekday morning and weekday afternoon peak hours.

b. *NYS 120 at New King Street* – This traffic signal controlled intersection currently operates at an overall Level of Service "B" during both the weekday morning and weekday afternoon peak hours

The results of the analysis for a no-build traffic condition indicate this intersection will operate at an overall Level of Service "B" and "C" during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate at an overall Level of Service "B" and "C" during the weekday morning and weekday afternoon peak hours, respectively.

c. *NYS 120 at Airport Road* – This traffic signal controlled intersection currently operates at an overall Level of Service "F" (102.8 Seconds) and "C" during the weekday morning and weekday afternoon peak hours, respectively. The eastbound left/through/right lane group operates at a Level of Service "F" (208.9 Seconds) during the weekday morning peak hour.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at an overall Level of Service "F" (130.0 Seconds) and "C" during the weekday morning and weekday afternoon peak hours, respectively. The eastbound left/through/right lane group operates at a Level of Service "F" (-- Seconds) during the weekday morning peak hour.

The results of the analysis for a build traffic condition indicate this intersection will operate at an overall Level of Service "F" (130.5 Seconds)

and "C" during the weekday morning and weekday afternoon peak hours, respectively. The eastbound left/through/right lane group operates at a Level of Service "F" (-- Seconds) during the weekday morning peak hour.

d. *King Street at Rye Lake Avenue/Tudor Group Driveway* – This traffic signal controlled intersection currently operates at an overall Level of Service "A" and "B" during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at an overall Level of Service "A" and "B" during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate at an overall Level of Service "A" and "B" during the weekday morning and weekday afternoon peak hours, respectively.

e. *Airport Road at I-684 Northbound Ramps* – This Stop Sign controlled intersection currently operates at a Level of Service "F" (58.3 Seconds) and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at a Level of Service "F" (112.7 Seconds) and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate at a Level of Service "F" (107.8 Seconds) and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

e. *Airport Road at I-684 Southbound Ramps* – This Stop Sign controlled intersection currently operates at a Level of Service "F" (-- Seconds) or

better during both the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at a Level of Service "F" (-- Seconds) or better during both the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate at a Level of Service "F" (-- Seconds) or better during both the weekday morning and weekday afternoon peak hours, respectively.

f. *Airport Road at Rye Lake Avenue/Westchester County Airport Driveway* – This roundabout intersection currently operates with a V/C Ratio of 0.50 and 0.83 or better during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a no-build traffic condition indicate this intersection will operate with a V/C Ratio of 0.56 and 0.96 or better during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate with a V/C Ratio of 0.47 and 0.90 or better during the weekday morning and weekday afternoon peak hours, respectively.

g. *Airport Road at New King Street* – This Stop Sign controlled intersection currently operates at a Level of Service "B" or better during both the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at a Level of Service "B" or better during both the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate at a Level of Service "B" and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

h. *Airport Road at New King Street* – This Stop Sign controlled intersection for a build traffic condition indicate this intersection will operate at a Level of Service "B" and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a no-build traffic condition indicate this intersection will operate at a Level of Service "B" or better during both the weekday morning and weekday afternoon peak hours, respectively.

The results of the analysis for a build traffic condition indicate this intersection will operate at a Level of Service "B" and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

i. *Airport Road at New King Street* – This Stop sign controlled intersection for a build traffic condition indicate this intersection will operate at a Level of Service "B" and "C" or better during the weekday morning and weekday afternoon peak hours, respectively.

9. *Sight Distance at the Proposed Site Access Drives* – The Applicant has provided information on sight distance at the proposed driveways. The Applicant states that according to AASHTO the Intersection Sight Distance (ISD) for the posted speed limit of 30 mph is 335 feet and the Stopping Sight Distance (SSD) for the posted speed limit of 30 mph is 200 feet. The measured ISD and SSD are 380 feet and 280 feet, respectively.

Review Comments

Based on the review of the Traffic Report, the following comments are provided.

1. *Existing Conditions* –The review of the manual count data sheets shows that the traffic counts were conducted on November 26, 2008 from 8:00 to 10:00 A.M. and

from 4:00 to 6:00 P.M. November 26, 2008 was the Wednesday before Thanksgiving. The Applicant should provide a graphic presentation of the number of lanes, traffic control, and lane designations and identify posted speed limits. On the existing figures, the "left turn volumes" are not shown on the roundabout.

2. *Accident Experience* – The Applicant has not addressed the accident experience in the Study Area. The Applicant should request the latest three years available of accident data from the NYSDOT, Westchester County and local municipalities, were applicable. The Applicant should identify and high accident locations and provide possible mitigation, if needed.

3. *No-Build Traffic Volumes* – The 2012 no-build traffic volumes section of the traffic study is acceptable.

4. *Site Traffic Generation* – The Applicant has determined that the proposed Garage will result in a reduction in Airport traffic. This may be the case; however, to be conservative and address the possible increase in Airport traffic in the future if this Garage attracts more travelers an analysis has been completed to determine the potential impacts. It was determined that it would be appropriate not to consider the traffic generated by the proposed Garage facility as a latent demand to represent a worst case since it may be difficult to determine that Airport-related site traffic may not actually increase with the addition of 1,450 parking spaces. It is our opinion that the proposed Garage may increase demand and result in travelers now having the option of driving to the Airport for flights. This Garage will make it more attractive for travelers to use this Airport and, therefore, have the potential to increase traffic. To be very conservative, the proposed facility could generate 200 new vehicle trips, plus 18 shuttle bus trip ends and 195 vehicle trip ends plus 18 shuttle bus trip ends during weekday morning and afternoon peak hours, respectively. These estimates are based on data provided in the Applicant's Traffic Study.

5. *Site Traffic Distribution and Assignment* – Site traffic distribution and assignment was adjusted to reflect revised site traffic generation and the shuttle bus trip ends between the proposed Parking Garage and Airport drop-off area for weekday morning and afternoon peak hours.

6. *Build Traffic Volumes* – The 2013 build traffic volumes were revised to reflect revised site traffic generation, distribution and assignment.

7. *Traffic Impact Analysis* – Capacity analysis and storage/queue analysis were performed by Frederick P. Clark Associates, Inc. at the Study Area intersections for 2008 existing conditions, 2012 no-build and build conditions. The analysis was conducted to reflect the appropriate site traffic generation, build traffic volumes, field observations and the appropriate traffic signal timing plans. The results of the analysis indicated that the generated traffic by the proposed parking garage will not significantly impact the Study Area traffic operation. Attached Tables 1 and 2 illustrating capacity analysis, storage/queue analysis and project impacts for 2008 existing conditions, 2012 no-build and build conditions during weekday morning and afternoon peak hours. This represents a worst case condition to represent the Airport becoming more attractive to travelers with the construction of the proposed parking garage.

Findings

Based upon our review of the Traffic Report and an updated analysis conducted by Frederick P. Clark Associates, Inc., the traffic generated by the proposed parking garage will not significantly impact the overall Study Area traffic operation. However, the intersection of NYS Route 120 at Airport Road will continue to operate at overall Level of Service "C," the northbound left lane group will deteriorate from Level of Service "D" to "E" during weekday morning peak hour and the southbound through lane group will deteriorate from Level of Service "E" to "F" during weekday morning peak hour. Also, the northbound right-turn movement at the Two-Way Stop Control intersection of Airport Road at I-684 Northbound Ramps will continue to operate at level of service "F" during the weekday morning peak hour and the southbound left and through movements at the Two-Way Stop Control intersection of Airport Road at I-684 Southbound Ramps will continue to operate at Level of Service "F" during the weekday morning and afternoon

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RYE, NEW YORK FAIRFIELD, CONNECTICUT

peak hours. Long-term, the I-684 ramp intersections will need to address current and future traffic and access considerations.

Sincerely,

Michael A. Galante
Executive Vice President

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Table 1
2008 EXISTING CONDITIONS – MEASURE OF EFFECTIVENESS (MOE) – PEAK HOURS
Park Place at Westchester Airport
North Castle, New York

INTERSECTION	CONTROL TYPE	PHYSICAL UNITS	2008 EXISTING CONDITIONS			
			Weekday Morning		Weekday Afternoon	
			LOS/ Delay	V/C Ratio	LOS/ Delay	V/C Ratio
1-NYS Route 120 at Gateway Lane	Traffic Signal	WB LR	B/19.3	0.22	C/20.3	0.41
		NB TR	A/0.9	0.21	A/3.0	0.49
		SB LT	A/2.1	0.24	A/6.4	0.52
		Overall	A/2.6	--	A/5.7	--
2-NYS Route 120 at New King Street	Traffic Signal	WB L	C/34.0	0.77	D/37.5	0.88
		R	A/6.1	0.08	A/3.9	0.15
		NB T	A/8.0	0.23	B/14.0	0.43
		SB T	A/6.9	0.80	B/10.9	0.40
		Overall	B/18.2	--	C/22.1	--
3-NYS Route 120 at Airport Road	Traffic Signal	EB L	A/5.6	0.19	B/16.0	0.34
		LTR	C/21.8	0.89	C/22.9	0.70
		NB L	E/58.1	0.73	C/30.2	0.68
		TR	B/19.9	0.35	C/23.5	0.48
		SB L	D/39.6	0.32	B/14.1	0.13
		T	D/51.9	0.56	D/36.4	0.63
		R	A/1.6	0.29	A/7.3	0.69
		Overall	C/22.1	--	B/19.6	--
4-Airport Road at I-684 Northbound Ramps	TWSC	EB L	A/0.2	0.01	A/0.8	0.06
		NB R	F/58.3	0.95	C/17.8	0.66
5- Airport Road at I-684 Southbound Ramps	TWSC	WB L	A/8.1	0.28	A/9.0	0.45
		SB L	F/906.1	2.91	F/--	3.80
		T	F/906.1	2.91	F/--	3.80
6-NYS Route 120 at Lake Street	TWSC	WB L	A/0.5	0.06	A/1.1	0.13
		NB L	B/11.0	0.29	C/19.1	0.66
		R	B/11.0	0.29	C/19.1	0.66
7-Airport Road at Rye Lake Avenue/ Westchester County Airport Drive	Roundabout	EB LTR	--	0.11	--	0.06
		WB LTR	--	0.21	--	0.67
		NB LTR	--	0.26	--	0.50
		SB LTR	--	0.41	--	0.64
8-King Street at Rye Lake Avenue/Tudor Group Driveway	Traffic Signal	EB LTR	A/5.3	0.46	A/5.2	0.43
		WB LTR	B/14.5	0.05	B/12.5	0.04
		NB LTR	B/11.3	0.32	C/21.1	0.78
		SB LT	A/8.6	0.03	A/7.1	0.08
		R	A/3.3	0.05	A/2.3	0.08
		Overall	A/7.8	--	B/14.1	--

Cont'd Table 1

INTERSECTION	CONTROL TYPE	PHYSICAL UNITS	2008 EXISTING CONDITIONS			
			Weekday Morning		Weekday Afternoon	
			LOS/ Delay	V/C Ratio	LOS/ Delay	V/C Ratio
9-Airport Road at New King Street	TWSC	EB L	B/10.8	0.19	B/13.5	0.05

Notes:

- Synchro 6.0 is used for capacity analysis.
- Level of Service determining parameter is called the service measure.
- For Signalized Intersections: Level of Service/Average Total delay per vehicle (seconds/vehicle).
- For Unsignalized Intersections: Level of Service/Average Control delay per vehicle (seconds/vehicle).
- TWSC = Two-Way STOP Control.
- ITE publication for Traffic Access and impact studies for site development "A Recommended Practice" indicated that overall Level of Service ratings of A to D are normally considered acceptable for signalized intersections (Level C or better are considered desirable). Levels of Service E and F are normally undesirable.
- V/C ratio indicates the amount of congestion for each Lane Group or Movement. Any V/C ratio greater than or equal to one indicates that the Lane Group or Movement is operating at above capacity.
- Physical Units consist of the following:
  1. Lane Group and Intersection Overall for Traffic Signal Controlled Intersections.
  2. Movement for TWSC Intersections.

NB = Northbound EB = Eastbound SB = Southbound WB = Westbound
L = Left Turn T = Through R = Right Turn

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Table 2
2012 FUTURE CONDITIONS – MEASURE OF EFFECTIVENESS (MOE) AND IMPACT ASSESSMENT – PEAK HOURS
Park Place at Westchester Airport
North Castle, New York

				2012 NO-BUILD CONDITIONS						2012 BUILD CONDITIONS						PROJECT IMPACTS			
				Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning		Weekday Afternoon	
INTERSECTION	CONTROL TYPE	STORAGE/ LINK LENGTH	PHYSICAL UNITS	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	Deteri-oration in LOS	Project Delay (Seconds)	Deteri-oration in LOS	Project Delay (Seconds)
1-NYS Route 120	Traffic	275	WB LR	B/19.2	0.23	35	C/20.3	0.44	53	B/19.2	0.23	36	C/20.5	0.44	54	No	0.0	No	0.2
at Gateway Lane	Signal	450	NB TR	A/0.9	0.23	18	A/3.6	0.54	36	A/1.2	0.25	22	A/3.9	0.55	39	No	0.3	No	0.3
		2,745	SB LT	A/2.2	0.26	37	B/14.7	0.74	168	A/2.8	0.29	39	B/18.7	0.80	196	No	0.6	No	4.0
		--	Overall	A/2.7	--	--	A/9.2	--	--	A/3.1	--	--	B/10.8	--	--	No	0.4	A – B	1.6
2-NYS Route 120	Traffic	1,560	WB L	D/35.2	0.80	227	C/29.7	0.85	322	D/40.6	0.89	359	C/31.9	0.90	437	No	5.4	No	2.2
at New King	Signal	200	R	A/5.8	0.09	18	A/2.5	0.14	20	A/5.2	0.09	20	A/2.2	0.14	21	No	0.0	No	0.0
Street		1,400	NB T	A/8.6	0.26	111	B/19.4	0.53	284	B/10.2	0.29	111	C/22.9	0.60	284	A – B	1.6	B – C	3.5
		450	SB T	A/7.4	0.22	73	B/19.0	0.49	221	A/8.6	0.25	76	C/22.0	0.56	205	No	1.2	B – C	3.0
		--	Overall	B/19.0	--	--	C/22.4	--	--	C/23.7	--	--	C/25.3	--	--	B – C	4.7	No	2.9
3-NYS Route 120	Traffic	435	EB L	A/6.8	0.21	80	C/20.3	0.38	186	A/6.4	0.19	80	C/20.3	0.36	190	No	0.0	No	0.0
at Airport Road	Signal	100	LTR	C/29.1	0.93	**665**	C/31.8	0.79	**451**	D/37.2	0.97	**1045**	D/35.6	0.83	**589**	C – D	8.1	C – D	3.8
		425	NB L	D/54.6	0.67	179	D/40.3	0.79	336	E/75.8	0.83	180	D/46.8	0.84	344	D – E	21.2	No	6.5
		4,165	TR	C/22.0	0.41	57	C/31.4	0.60	106	C/25.8	0.61	57	C/30.4	0.64	102	No	3.8	No	0.0
		200	SB L	D/43.1	0.33	108	B/14.4	0.12	48	D/49.7	0.44	132	B/15.6	0.16	61	No	6.6	No	1.2
		1,400	T	E/67.8	0.69	219	D/43.2	0.69	210	F/92.8	0.87	252	D/45.8	0.72	225	E – F	25.0	No	2.6
		600	R	A/1.5	0.31	35	B/14.3	0.77	372	A/2.0	0.37	53	B/17.6	0.83	494	No	0.5	No	3.3
		--	Overall	C/26.5	--	--	C/27.1	--	--	C/33.6	--	--	C/29.7	--	--	No	7.1	No	2.6
4-Airport Road at	TWSC	300	EB L	A/0.2	0.02	1	A/1.1	0.07	6	A/0.3	0.02	1	A/1.2	0.07	6	No	0.1	No	0.1
I-684 Northbound		1,250	NB R	F/112.7	1.13	461	C/22.2	0.75	174	F/169.5	1.28	598	D/29.1	0.83	231	No	56.8	C – D	6.9
Ramps																			
5- Airport Road at	TWSC	300	WB L	A/8.2	0.30	32	A/9.4	0.50	72	A/8.4	0.33	36	A/9.6	0.52	78	No	0.2	No	0.2
I-684 Southbound		1,350	SB L	F/--	3.79	--	F/--	5.64	--	F/--	4.65	--	F/--	7.49	--	No	--	No	--
Ramps		1,350	T	F/--	3.79	--	F/--	5.64	--	F/--	4.65	--	F/--	7.49	--	No	--	No	--
6-NYS Route 120	TWSC	925	WB L	A/0.6	0.07	5	A/1.3	0.15	13	A/0.7	0.08	6	A/1.4	0.15	14	No	0.1	No	0.1
at Lake Street		1,250	NB L	B/11.6	0.33	36	C/24.8	0.76	178	B/11.9	0.35	39	D/26.7	0.78	193	No	0.3	C – D	1.9
		1,250	R	B/11.6	0.33	36	C/24.8	0.76	178	B/11.9	0.35	39	D/26.7	0.78	193	No	0.3	C – D	1.9
7-Airport Road at	Roundabout	--	EB LTR	--	0.13	--	--	0.07	--	--	0.13	--	--	0.07	--	--	--	--	--
Rye Lake		--	WB LTR	--	0.23	--	--	0.77	--	--	0.23	--	--	0.77	--	--	--	--	--
Avenue/		--	NB LTR	--	0.30	--	--	0.56	--	--	0.30	--	--	0.53	--	--	--	--	--
Westchester		--	SB LTR	--	0.46	--	--	0.73	--	--	0.47	--	--	0.71	--	--	--	--	--
County Airport																			
Drive																			

Table 2 (Cont'd)

INTERSECTION	CONTROL TYPE	STORAGE/ LINK LENGTH	PHYSICAL UNITS	2012 NO-BUILD CONDITIONS						2012 BUILD CONDITIONS						PROJECT IMPACTS			
				Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning		Weekday Afternoon	
				LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	Deteri-oration in LOS	Project Delay (Seconds)	Deteri-oration in LOS	Project Delay (Seconds)
8-King Street at Rye Lake Avenue/Tudor Group Driveway	Traffic Signal	1,060	EB LTR	A/5.6	0.50	39	A/5.4	0.46	39	A/5.6	0.50	39	A/5.4	0.46	39	No	0.0	No	0.0
		530	WB LTR	B/14.5	0.06	8	B/12.2	0.05	14	B/14.5	0.06	8	B/12.2	0.05	14	No	0.0	No	0.0
		950	NB LTR	B/11.8	0.35	87	C/28.1	0.87	404	B/11.8	0.35	87	C/28.1	0.87	404	No	0.0	No	0.0
		400	SB LT	A/8.6	0.04	18	A/7.1	0.09	27	A/8.6	0.04	18	A/7.1	0.09	27	No	0.0	No	0.0
		75	R	A/3.2	0.06	13	A/2.3	0.09	10	A/3.2	0.06	13	A/2.3	0.09	10	No	0.0	No	0.0
		--	Overall	A/8.1	--	--	B/17.9	--	--	A/8.1	--	--	B/17.9	--	--	No	0.0	No	0.0
9-Airport Road at New King Street	TWSC	630	EB L	B/11.1	0.21	20	B/14.3	0.06	5	B/12.7	0.36	42	C/17.7	0.30	30	No	1.6	B – C	3.4
10-New King Street at Site Access Drive	TWSC	100	EB L	N/A	N/A	N/A	N/A	N/A	N/A	C/17.7	0.31	33	D/28.8	0.48	60	N/A	N/A	N/A	N/A

Notes:

- Synchro 6.0 is used for capacity analysis.
- Level of Service determining parameter is called the service measure.
- For Signalized Intersections: Level of Service/Average Total delay per vehicle (seconds/vehicle).
- For Unsignalized Intersections: Level of Service/Average Control delay per vehicle (seconds/vehicle).
- TWSC = Two-Way STOP Control.
- ITE publication for Traffic Access and impact studies for site development "A Recommended Practice" indicated that overall Level of Service ratings of A to D are normally considered acceptable for signalized intersections (Level C or better are considered desirable). Levels of Service E and F are normally undesirable.
- V/C ratio indicates the amount of congestion for each Lane Group or Movement. Any V/C ratio greater than or equal to one indicates that the Lane Group or Movement is operating at above capacity.
- Synchro 6 Macroscopic model is used for storage/queue analysis.
- The Queue Length rows show the 95th percentile maximum queue length in feet.
- The Queue Length is for each lane. The total queue length is divided by the number of lanes and the lane utilization factor. The 95th percentile queue is the maximum back of the queue with the 95th percentile traffic volumes.
- **Bolded** 95th percentile queue exceeds the storage available.
- N/A = Not Available.
- Physical Units consist of the following:
    1. Lane Group and Intersection Overall for Traffic Signal Controlled Intersections; and
    2. Movement for TWSC Intersections.

NB = Northbound EB = Eastbound SB = Southbound WB = Westbound
L = Left Turn T = Through R = Right Turn

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Appendix K: Phase I Environmental Site Assessment

Phase I Environmental Site Assessment

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle,
Westchester County, New York

June 6, 2002

Prepared for:

Hudson United Bank
530 High Mountain Road
North Haledon, NJ 07058

Prepared by:

The Chazen Companies
Dutchess County Office
P.O. Box 3479, 229-B Page Park
Poughkeepsie, NY 12603

Phase I Environmental Site Assessment

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle,
Westchester County, New York

June 6, 2002

THE
Chazen
COMPANIES

Emily A. Pereira
Environmental Scientist

Catherine L. Monian
Phase I ESA Program Manager

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Continued

1.0 EXECUTIVE SUMMARY

The Chazen Companies (TCC) have performed a Phase I Environmental Site Assessment ("Phase I ESA") in accordance with the scope and limitations set forth in ASTM Practice E 1527-00 of the Aerotech Realty Corp. property, located at 11 New King Street, in the Town of North Castle, Westchester County, New York.

This assessment was performed during the months of May and June 2002 and was comprised of a site reconnaissance by TCC, interviews with individuals knowledgeable of the property, and a regulatory and historical information review.

The subject property is comprised of 2.5 acres with a one-story professional building. The majority of the building is used as offices and the remainder of the building is a warehouse used for the distribution of aircraft equipment.

Based on the information obtained during the performance of this Phase I ESA, the following recognized environmental conditions (as defined by ASTM E 1527-00) have been identified:

- Two Leaking Underground Storage Tank (LUST) events identified in the New York State Department of Environmental Conservation's Spills Information database are located in close proximity to the subject property and have the potential to impact groundwater at the subject property. Additional investigation would be needed to determine if these spill events have impacted the subject property.

Although not considered recognized environmental conditions as defined by ASTM E 1527-00, the following potential environmental conditions were identified.

- A 1,000-gallon underground storage tank (UST) is located on the subject property. The tank was installed within the last two years. Records indicate that this tank had replaced a former 1,500-gallon UST which was removed in 1999.

- Suspect asbestos and/or lead based paint were identified on the subject property. While not considered not ASTM "recognized environmental conditions", their presence, however, may limit the future use of this structure. Suspect materials must be sampled and managed in accordance with all applicable New York State and Federal laws and regulations prior to any building demolition, renovation or other invasive building activities.

2.0 INTRODUCTION

2.1 Purpose

The purpose of this Phase I Environmental Site Assessment ("Phase I ESA") is to reasonably identify potential or known recognized environmental conditions as defined by ASTM E 1527-00. The ASTM Standard Practice was established to allow a lender or property owner to satisfy one of the requirements necessary to qualify for the "innocent landowner defense" for liability under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Recognized environmental conditions are defined as the presence or likely presence of any hazardous substances (including wastes) or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any such products into structures, the ground, groundwater or surface water.

2.2 Qualifications

This Phase I ESA has been conducted by a qualified environmental professional with a minimum of a Bachelor's Degree in an environmental field of study and experienced in the performance of Phase I Environmental Site Assessments and ASTM Standard requirements. The Phase I Environmental Site Assessment process has been guided and reviewed by a qualified environmental professional with years of ESA experience. These qualifications are consistent with environmental professional requirements referenced in the ASTM E 1527-00 standard.

2.3 Methodology

The methodology employed for the performance of this Phase I ESA is consistent with or exceeds the requirements of ASTM E 1527-00 and comprises the following: 1) a site reconnaissance conducted by qualified TCC personnel; 2) interviews with individuals knowledgeable of the property, including local officials, the property owner, site occupants, and regulatory officials; 3) a review of local and regional historic maps and aerial photographs; 4) a review of local municipal records; and 5) a review of ASTM and supplemental state and federal regulatory agency databases.

Information obtained from the performance of these tasks is described in this Phase I ESA in Sections 3.0 through 7.0, below. Conclusions regarding the findings of this investigation are provided in Section 8.0.

2.4 Special Terms and Conditions

In addition to the standard ASTM E 1527-00 scope, this Phase I ESA also addresses the potential presence of asbestos-containing materials (ACMs), lead-based paint (LBP), and radon gas as these issues have become common concerns and are considered prudent when completing a due-diligence pre-transaction inquiry.

2.5 Limitations and Exceptions of Assessment

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. The performance of this Phase I ESA is consistent with ASTM Standard E 1527-00 and is intended to reduce but not eliminate such uncertainty. The information presented in this report is limited to the investigation conducted and described herein, and is not necessarily all inclusive of conditions present at the subject property.

This Phase I ESA is site specific in that it relates to the assessment of environmental conditions at the subject property. Opinions and recommendations presented in this report apply to site conditions existing at the time of the TCC evaluation and may not necessarily apply to future site or surrounding area conditions.

The accuracy and completeness of the information provided by the sources referenced in this report was not independently verified. Accordingly, TCC accepts no responsibility for any deficiencies, misstatements or inaccuracies contained in this report that occur as a result of misrepresentations, omissions, or fraudulent acts of the sources questioned or documentation provided. Persons knowledgeable of the subject property were interviewed only to the extent that these individuals were available and forthcoming during the investigation period.

3.0 SITE DESCRIPTION

3.1 Site Location and Total Site Area

The Aerotech Realty Corp. property is an irregularly-shaped parcel of land located on the west side of New King Street, approximately 1,000 feet north of the intersection of County Route 35 and New King Street in the Town of North Castle, Westchester County, New York.

The site is composed of one tax lot identified on the Town of North Castle tax map as Section 3, Block 4, Lot 14B. The acreage of this lot is approximately 2.5 acres.

A map illustrating the site location is attached as Figure 1 and a copy of the Town of North Castle tax map is included as Figure 2.

3.2 Current Site Uses

The subject property currently contains a one-story, concrete block structure which is used as an office and warehouse for the distribution of aircraft equipment. Attached to the structure is a trailer which is used for the storage of office files.

3.3 General Site Configuration

The property is currently developed with a one-story professional building in the center of the property. The subject property has approximately 50 feet of frontage on the west side of New King Street. North of the building is macadam parking and on the south side of the building is maintained lawn with a small picnic area. The property is bordered by trees.

Site visit photographs, depicting existing property conditions are attached as Appendix A, and a Site Plan Map is included as Figure 3.

3.3.1 Roadways On or Adjoining the Site

The subject property is accessed on the east side via New King Street. A driveway extends from New King Street to the center of the parcel where the building is located.

3.3.2 Easements and Right of Ways

No easements or right-of-ways were identified on the subject property.

3.4 Structures

The subject property contains a one-story, concrete block structure, which was constructed in 1966. The building is approximately 9,650 square feet in size, the majority of which is utilized as office space. The remainder of the building is a warehouse, which was added onto the building in 1973. The warehouse is used to store aircraft filters, helicopter parts, and other aircraft equipment. There is also a trailer, which is attached to the northwest portion of the building. This trailer is used to store files.

3.4.1 Heating/Cooling Systems

The building is heated by an oil-fired furnace located near the center of the building on the south side. A cooling unit is located in the warehouse area.

3.4.2 Potable Water

Potable water is obtained from a private water well located outside, near the south central side of the building. Based on information provided by the site occupants, this site is considered a public water supply (PWS) system. TCC requested a copy of all recent analytical well water data for the property. Mr. Viscone of Aerotech World Trade Corp provided TCC with a copy coliform and Nitrate/Nitrite sample results. The results indicate an absence of coliform and a result of Nitrite below the laboratory detection limit. Nitrate results were reported at 0.44 parts per million (ppm) which is below the New York State Department of Health (NYS DOH) 10 NYCRR sub Part 5 drinking water standard of 1.0 ppm. A copy of these results is included in Appendix D of this report.

The nearest public water supply well is located between 0.5 to 1.0 mile south of the subject property, and is identified as Westchester Joint Water works at 1625 Mamaroneck Avenue. Surrounding properties are likely to be considered to be public water supply wells based on observations and available information.

3.4.3 Sewage Disposal Systems

Sewage generated by the property is discharged to the Town of North Castle municipal sewer system. A State Pollutant Discharge Eliminations System (SPDES) Permit Application for the subject property was provided by the NYSDEC. This permit applications suggests a proposed septic tank with design flow of 1,500 gallons. This permit expired in March of 1995. According to Mr. Louis Viscone of Aerotech World Trade Corp., the septic tank previously located on the property was removed prior to 1996; however,

he was unable to locate any paperwork to verify this. According to Mr. Viscone and Town of North Castle officials, the property is currently served with municipal water.

3.5 Topographic Description

Topography on the site is relatively flat with a gradual downward slope to the west towards I-684 and Louden Cove (Rye Lake). A review of the United States Geologic Survey (USGS) Topographic Map (Glenville, Connecticut Quadrangle) indicates that surface elevations on the subject property range from approximately 390 feet above mean sea level (msl) on the western portion of the property to 400 feet above msl on the eastern portion of the property (see Figure 1). Topography in the vicinity of the subject property slopes gently downward to the west.

3.6 Site Geology

A review of the Surficial Geologic Map of New York (Lower Hudson Sheet, 1989) indicates that surficial soils in the area of the subject property are mapped as till of variable texture (e.g. clay, silt-clay, boulder clay) which is relatively impermeable (loamy matrix). The United States Department of Agriculture Soil Conservation Service's Soil Survey of Putnam and Westchester Counties, New York maps soils on the subject property as being composed of Udorthents, smoothed (Ub) and Ridgebury loam 3 to 8 percent slopes (RdB). Soils in the Ub classification are described as very deep, excessively drained to moderately drained soils that have been altered by cutting and filling and are found mainly adjacent to urban areas, highways and burrow areas. Soils in the RdB classification are described as gently sloping, very deep and poorly drained to somewhat poorly drained soils found in the lower parts of hillsides in the uplands and along small drainageways.

Bedrock in the area of the subject property is greater than 60 inches below grade according to the above-referenced Soil Survey and Surficial Geologic Map and is mapped on the Geologic Map of New York (Lower Hudson Sheet, 1970) as Lower Paleozoic and/or Precambrian aged rocks of the New York City Group, Fordham Gneiss consisting of biotite-quartz-plagioclase, paragneiss, amphibolite, migmatite, subordinate mica schist, and marble.

3.7 Site Hydrology and Hydrogeology

A small stream flowing in a northwesterly direction extends underneath the driveway through the eastern portion of the property. No other surface water bodies were noted on the property. The surrounding water body in closest

proximity to the subject property is the Rye Lake located approximately 650 feet west of the subject property.

Based on a review of area topography, groundwater flow in the area of the subject property is expected to be westerly towards Rye Lake.

3.8 Surrounding Land Uses

The surrounding land uses, as identified during the site visit and from other available sources, are described as follows:

Direction	Adjoining	Surrounding
North	- Two structures associated with Camp Group, JMW Camp and Hyde Park Products	- Industrial/commercial -Residential
East	- Parking lot for Safe Flight Instrument Corp.	- Industrial/commercial - Residential
South	-Vacant Lands of Westchester County Airport	- Westchester County Airport
West	- I-684 and NYS Route 120	- Rye Lake

4.0 SITE AND SURROUNDING AREA HISTORICAL REVIEW

4.1 Summary

4.1.1 Subject Property

Based on the historical sources reviewed as part of this Phase I ESA as well as interviews conducted with knowledgeable individuals, the property appears to have been historically vacant prior to the construction of the current on-site building in 1966. After construction, the building was occupied by D. Stanley Concoran, Inc., a distributor of crystal glass, until 1975 when it was occupied by Aerotech World Trade Corp.

4.1.2 Adjoining/Surrounding Properties

Based on available historical information the surrounding properties appeared to be residential until commercial/industrial development in the 1960's and 1970's. I-684 was not constructed until after 1960. However, the Westchester County Airport located south of the subject property was present prior to 1960.

4.2 Title Search Information

Information available from the Town of North Castle Assessor's Office and Westchester County Real Property Tax Office indicates that the property (Section 3, Block, 4, Lot 14B) has been owned by Aerotech Realty Inc. since approximately 1986. Prior ownership history can be found in the table below. A property/deed abstract was not performed under the scope of this Phase I ESA.

Owner	Date of Ownership
Aerotech Realty, Inc.	December 31, 1986
Aerotech World Trade Corp.	August 20, 1986
Aerotech Holding Co., Inc.	May 23, 1980
Bergther F. and Rosella Endresen	December 15, 1975
D. Stanley Concoran, Inc.	Prior to December 15, 1975

4.3 Sanborn Fire Insurance Maps

EDR Inc., owner of the historic Sanborn Fire Insurance Map collection, was contacted to provide Sanborn Fire Insurance Maps of the host site. No Sanborn Maps have reportedly been produced for the subject property.

4.4 Aerial Photographs

Aerial photographs for the subject property and surrounding area for the years 1961, 1970, 1976, 1980, 1986, 1990, 1995, and 2000 were available for review at the Westchester County Planning Department. Provided below is a summary of the information obtained from a comparative analysis of these photographs. Copies of the 1961, 1970, 1980, and 2000 aerial photographs are included as Figures 4A-4D of this report.

In the 1961 photograph, the current structure is not visible, and the subject property appears wooded with a small drive or creek extending from southeast to northwest through the eastern portion of the property. The property to the south is also wooded. There appears to be a residential structure north of the subject property and some small structures on the east side of New King Street. Rye Lake and NYS Route 120 are visible to the west. I-684 has not yet been constructed. Surrounding properties to the east of the Connecticut border appear to be residential, with some agricultural lands.

In the 1970 photograph a rectangular structure is present near the center of the subject property. There appear to be parking areas on the north side of the building and wooded areas south of the building. There is one building, which adjoins the property to the north and a large building and parking lot on the east side of New King Street where Safety Flight Instrument Corp. is currently located. The Westchester County Airport is visible in the surrounding area to the south, and I-684 now exists to the west.

In the 1976 photograph an addition appears to have been made to the west side of the on-site structure. This addition may be the warehouse, which was added in 1973. The adjoining/surrounding properties appear to be in the same configuration as in the 1970 photograph.

In the 1980 photograph, the subject property and surrounding/adjoining properties appear to be in the same configuration as in the 1976 photograph.

In the 1986 photograph, the subject property appears to be in the same configuration as in the 1980 photograph. The adjoining properties are also

similar with the exception of a commercial building, which now appears to the northeast where 10 New King Street is currently located.

In the 1990 photograph, the subject property and adjoining/surrounding properties appear to be in the same configuration as in 1986; however the trailer that is currently attached to the northwest portion of the on-site building is visible.

In the 1995 and 2000 photographs the subject and surrounding properties appear to be in the same configuration as the previous photograph, with the exception of the area south of the building which appears to be maintained lawn, and the adjoining property to the south which is no longer wooded.

None of the photographs indicate the presence of land disturbance indicative of activities likely to impact the environmental integrity of the subject property.

4.5 Municipal Records

4.5.1 Assessor's Office

Information on file with the Town of North Castle Assessor's Office was reviewed by TCC. According to these records, the on-site structure was constructed in 1966 with an addition in 1973, and is constructed of cinder block and concrete walls with a flat built up roof.

4.5.2 Building Department

Information on file with the Town of North Castle Building Inspector's Office was requested by TCC. The building department has not responded to this request for information.

4.5.3 Local Historian

TCC contacted the local historian, Ms. Dory Watson. Ms. Watson reported that in 1908 the subject property area was apportion of the Otto R. Hartman Estate which consisted of 148 acres on the New York State side of King Street. She also reported that approximately seven structures were associated with the estate. Ms. Watson could not determine if these structures were present on the subject property or surrounding properties.

4.6 Property Owner/Key Site Representative

During the site visit, TCC personnel met with Angela Saponara and Louis Viscone of Aerotech World Trade Corp. Ms. Saponara and Mr. Viscone,

provided pertinent information regarding the subject property which has been included in the appropriate sections of this report.

Ms. Saponara and Mr. Viscone did not have any knowledge of: 1) previous leak, spills, or discharges of petroleum or chemicals to the soil or groundwater; 2) environmental liens or governmental notifications relating to past or recurrent violations or environmental laws with respect to the property or any facility located on the property; and 3) information regarding past, threatened, or pending lawsuits or administrative proceedings concerning a release or threatened release of any hazardous substance or petroleum product. and 4) any previous environmental site assessment of the property that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property or recommended further assessment of the property. Mr. Viscone was, however, aware of a UST removal (tank closure) letter, which was provided to the Westchester County Department of Health on March 12, 2001 (se Section 4.7 below).

4.7 Previous Environmental Investigations

Mr. Viscone provided TCC with a March 12, 2001 UST removal letter. This letter was written by National Environmental Specialists Inc. (NES) who performed the removal of the UST on January 21, 1999. The letter, dated March 21, 2001, states that NES removed a 1,500-gallon UST which was located on the western side of the building in the parking area. Reportedly all residual product and sludge was removed by a vacuum truck and disposed of at Paradise Oil Recovery located in Ossining, New York. NES reported that no petroleum-contaminated soils were encountered and that laboratory analysis of a post excavation composite soil sample revealed no detection of volatile organic compounds (VOCs) or semi-volatile organic compounds (SVOCs). It should be noted; however, that the analytical data attached to the tank closure letter is identified as a stockpile sample and not as a confirmatory post excavation sample.

NES also issued a March 1, 2001 letter to the Town of North Castle Building Department indicating that a new 1,000-gallon UST was installed to replace the removed 1,500-gallon UST and passed an air test. A June 13, 2001 no further action (NFA) letter was issued by the Westchester County Department of Health for the closure of the 1,500-gallon tank. The Town of North Castle Building Department issued a Certificate of Compliance dated May 16, 2001 for the removal of the 1,500-gallon UST and installation of a 1,000-gallon. Copies of these materials are provided in Appendix D of this report.

5.0 ENVIRONMENTAL REGULATORY AGENCY RECORD REVIEW

The environmental regulatory agency record review conducted by TCC consisted of database searches of ASTM standard sources (Section 5.1) as well as supplemental databases (Section 5.2), and interviews with regulatory agency personnel (Section 5.3). Provided in Appendix B is a copy of the database search conducted by Environmental Data Resources, Inc. (EDR) for TCC. Information obtained during the site visit or from interviews which is not consistent with the database contents is discussed where appropriate, below.

5.1 Standard Environmental Record Sources (Federal/State)

The regulatory agency record sources listed below and their corresponding search radii were reviewed per ASTM E 1527-00. Any reductions of the minimum search radii as allowed by ASTM are noted.

- USEPA NPL Site List (1.0 mile)
- USEPA CERCLIS List (0.5 mile)
- USEPA CERCLIS NFRAP List (site & adjoining properties)
- USEPA RCRA CORRACTS Facilities List (1.0 mile)
- USEPA RCRA non-CORRACTS TSD Facilities List (0.5 mile)
- USEPA RCRA Generators List (site & adjoining properties)
- USEPA ERNS List (site only)
- NYSDEC Registry of Inactive Hazardous Waste Disposal Sites (1.0 mile)
- NYSDEC and Connecticut Spills Database - Leaking Underground Storage Tank (LUST) Events (0.5 mile)
- NYSDEC Petroleum Bulk Storage Database - Underground Storage Tanks (site & adjoining properties)
- NYSDEC Chemical Bulk Storage Database - Underground Storage Tanks (site & adjoining properties)
- NYSDEC Registry of Active and Inactive State Landfills and Solid Waste Disposal Facilities List (0.5 mile)
- NYSDEC Registered Waste Tire Storage and Facility List (0.5 mile)

5.1.1 Federal

Federal NPL Site List

A review of the United States Environmental Protection Agency (USEPA) National Priorities List (NPL) for Region II has shown that the subject

property is not present on this list nor are any NPL sites located within 1.0 mile of the subject property.

Federal CERCLIS List

A review of the USEPA Comprehensive Environmental Responsibility, Compensation and Liability Information System (CERCLIS), a list of potential NPL sites, has shown that the subject property is not present on this list nor are any CERCLIS listed sites located within 0.5 mile of the subject property. Additionally, the subject property is not listed on the CERCLIS No Further Remedial Action Planned (NFRAP) list and there are no such sites located on adjoining properties.

Federal RCRA Generators, RCRA CORRACTS Facilities, & RCRA non-CORRACTS TSD Facilities Lists

The USEPA Resource Conservation and Recovery Agency (RCRA) Hazardous Waste Generators list was reviewed. This review indicates that the subject property is not listed as a generator. One RCRIS generator is located on an adjacent property. This property is identified as Safety Flight Instrument Corp. (EPA ID NYD 001221530) located at 20 New King Street adjoining to the east. No violations have been reported for this site. A listing of RCRA facilities under corrective action (CORRACTS) was also reviewed and indicates that no CORRACTS sites, including the subject property, are located within 1.0 mile of the subject property.

A review of the RCRA non-CORRACTS Treatment, Storage and/or Disposal (TSD) Facilities for Hazardous Waste list has shown that no RCRA TSD facilities, including the subject property, are located within 0.5 mile of the subject property.

Federal ERNS List

The Emergency Response Notification System (ERNS), a national computer database system that is used to store information on the sudden or accidental release of hazardous substances including petroleum into the environment, was reviewed. No such releases are reported to have occurred on the subject property or any adjacent properties.

5.1.2 State

State Hazardous Waste Site List

The subject property was not identified as a NYSDEC Inactive Hazardous Waste Disposal Site. A review of this list indicates that no such sites are located within 1.0 mile of the subject property.

State Landfills and/or Solid Waste Disposal Site Lists

The subject property was not identified on the NYSDEC's Facility Register of Solid Waste Facilities and Landfill Sites. No such sites are located within 0.5 mile of the subject property.

The subject property was not identified on the NYSDEC's Registered Waste Tire Storage and Facility List. No such sites are located within 0.5 mile of the subject property.

State Leaking Underground Storage Tanks

The NYSDEC's Spills Information database was reviewed to obtain information on Leaking Underground Storage Tank (LUST) events. LUST events are a subset of events contained in the spills database where the release originated from an underground storage tank. This review indicates that four LUST sites are located within 0.5 mile of the subject property. Out of these four, three of the events were issued a "closed" status indicating that the NYSDEC is requiring no further action.

Two of the LUST events lie approximately upgradient of the subject property and therefore may have impacted groundwater at the subject property. These two sites are identified as Safety Flight Instrument Corp. (8905415) which adjoins the property to the east and "Office Building" (9809692) located at 4 New King Street, which is less than 0.125 mile northeast of the subject property. Spill 8905415 was reported when a 3,000-gallon tank was found to be leaking. The spill was issued a "closed" status on July 30, 1992. Spill 9809692 was reported on November 2, 1998 during a tank test failure. This site remains an "active" LUST event.

The Connecticut LUST database also revealed one LUST site within 0.5 mile of the subject property. This site is identified as 23 Bedford Road in Greenwich, Connecticut located between 0.25 and 0.5 mile northeast of the subject property. No information was provided on this LUST event; however, based on location of this site, and the presumed groundwater flow direction

northwesterly, away from the subject property, this site is not likely to have had an environmental impact on the subject property.

State Registered Underground Storage Tanks

The subject property was not identified on either the NYSDEC's Petroleum Bulk Storage (PBS) database or Chemical Bulk Storage (CBS) database as being an underground storage tank (UST) site. The existing 1,000-gallon fuel oil is exempt from the Westchester County Department of Health (WCDOH) PBS registration requirements. The WCDOH is a designated administrator of the NYSDEC's PBS program. One surrounding property was identified as a PBS site and is listed as National Car Rental System, Inc. located at the Westchester County Airport located south of the subject property. This site, identified by PBS number 3-600193, is listed as having one 1,000-gallon UST for unleaded gasoline.

5.2 Supplemental Non-ASTM Environmental Record Sources

The supplemental databases listed below and their corresponding search radii were reviewed.

- USEPA Facility Index System (FINDS) List (site & adjoining properties)
- NYSDEC and Connecticut Spills Information database (including Leaking Aboveground
  Storage Tank Events)(0.5 mile)
- NYSDEC Petroleum Bulk Storage Database - Aboveground Storage Tanks (site & adjoining properties)
- NYSDEC Chemical Bulk Storage Database - Aboveground Storage Tanks (site & adjoining properties)
- NYSDEC Petroleum Bulk Storage Database - Major Oil Storage Facilities (MOSF) (0.5 mile)
- NYSDEC Voluntary Cleanup Program (VCP) (0.5 mile)
- Connecticut Leachate and Water Discharge Sites (LWDS)

5.2.1 Federal

Facility Index System

The USEPA's Facility Index System/Facility Identification Initiative Program Summary Report (FINDS) database is composed of facility information as well as "pointers" to other USEPA databases including, but not limited to the following: the PCB Activity Data System, the Aerometric Information Retrieval System, and the Toxic Chemical Release Inventory System. The subject property was not found to be present in this database.

Safety Flight Instrument Corp. located east of the subject property was identified on this database indicating that this site is listed on the RCRA database.

5.2.2 State

State Spills List

The subject property was not identified on the NYSDEC's and Connecticut Spills Information databases (including Leaking Aboveground Storage Tank events). Six spill events are recorded within 0.5 mile of the subject property (five spills in New York and one spill in Greenwich Connecticut). Based on available information, none of these spill events appear likely to have had an environmental impact on the subject property.

State Registered Aboveground Storage Tanks

The subject property was not identified on either the NYSDEC's Petroleum Bulk Storage (PBS) database or Chemical Bulk Storage (CBS) database as being an aboveground storage tank (AST) site. Additionally, no surrounding properties were identified as PBS or CBS AST sites.

Major Oil Storage Facilities

No Major Oil Storage Facility (facilities with petroleum storage capacities of 400,000 gallons or greater) sites are located within 0.5 mile of the subject property.

NYSDEC Voluntary Cleanup Program (VCP)

One NYSDEC VCP site was identified within 0.5 mile of the subject property, This site is identified as Westchester County Airport (Facility ID V0049-3) located between 0.125 and 0.25 mile south of the subject property. Presumed groundwater flow west towards Rye Lake suggests that this site is a low risk for environmental impact to the subject property.

Connecticut Leachate and Water Discharge Sites (LWDS)

One LWDS site, identified as Laurelton Convalescent Home Sewage Treatment Plant, is located over 0.5 mile southeast of the subject property. Available information suggests that this site is not likely to have had an environmental impact on the subject property.

5.3 Information from Regulatory Agency Officials

5.3.1 New York State Department of Health

Under the Freedom of Information Law (FOIL), a request for information was sent to the Westchester County Department of Health for information regarding the subject property. As of the date of this report, the Westchester County Department of Health has not responded to the request for information.

5.3.2 New York State Department of Environmental Conservation

Under the Freedom of Information Law (FOIL), a request for information was sent to the New York State Department of Environmental Conservation (NYSDEC) for information regarding the subject property. The NYSDEC Division of Water responded that their files contain information regarding a State Pollution Discharge Elimination System (SPDES) Permit, which was issued in 1989 and expired in March of 1995. The permit was issued for a proposed septic tank with a design flow of 1,500 gallons per day. A SPDES Notice of Permit Continuation was issued on March 7, 1996; however there was no indication that the permit was renewed. A copy of this information is included in Appendix C of this report.

Mr. Louis Viscone of Aerotech World Trade Corp. indicated that the on-site septic tank was closed prior to the subject property's connection the Town of North Castle municipal water supply over six years ago. Mr. Viscone was unable to locate ant records to verify that the tank was properly closed.

6.0 SITE VISIT

6.1 Conditions of Visit

6.1.1 Site Contact(s)

Access to the site was granted by Angela Saponara of Aerotech World Trade Corp. Ms. Saponara and Mr. Louis Viscone (also of Aerotech World Trace Corp.) accompanied TCC during the course of the site visit.

6.1.2 Date of Visit

TCC personnel visited the subject property on May 30, 2002.

6.1.3 Areas Observed

All exterior areas of the subject property and interior areas of the on-site structure were observed during the site inspection. Some areas of the interior of the warehouse section were obscured due to shelving and the storage of boxes.

6.2 Site Occupancy and Operations

At the time of the site visit the personnel of Aerotech World Trade Corp. were present. Operations conducted at the site include general office work and warehouse storage associated with the distribution of aircraft equipment. The warehouse operation occurs in the western portion of the building and the office work is conducted in the remainder of the building. There is a trailer, which is attached to the north side of the warehouse, which is used to store office files. The boiler room for the building is located near the kitchen area towards the center of the building. Air handling equipment is located in a room within the warehouse portion of the building.

6.3 Site Utilities

The subject property is serviced by electric, municipal sewer, private water, and oil heat. (See also Sections 3.4.1 through 3.4.3, above).

The oil-fired furnace and hot water heater were identified in a room near the center of the building. The building's cooling unit is located outside on the south side of the building. The potable water supply well is located near the south central side of the building, and the manhole for municipal septic was identified in the driveway area on the east side of the property near New King Street.

6.4 Chemical and Petroleum Substances

Provided in this section is a summary of the petroleum and chemical substances observed at the time of the site visit. Those which were believed to be associated with identified uses as well as those of alternate origin are discussed.

6.4.1 Petroleum and Chemical Bulk Storage Tanks

One petroleum underground storage tank was identified on the subject property during the site visit. This tank is located south of the building near the structure's center. Two vent pipes were observed in the ground at the location of the tank. The fill port which is reportedly connected to the tank was observed at the southeast corner of the building. This tank is reportedly 1,000-gallons in capacity and was placed on the property in 1999 after the removal of a 1,500-gallon UST.

6.4.2 Raw Product Drums and Containers

Approximately 50 boxes, each containing a cylinder of compressed oxygen, were identified in the warehouse area of the building during the site visit. These boxes are reportedly delivered on-site and never opened before being transported off-site. All of these boxes are labeled corrosive. Three small box of cutter cable were also identified in this area. These three small boxes were labeled explosive. No unidentified raw product drums or containers were noted on the subject property at the time of the site visit.

6.4.3 Waste Petroleum/Chemical Product Drums and Containers

No waste chemical substances or petroleum products were identified on the subject property during the site visit. No unidentified waste product drums or containers were noted on the subject property at the time of the site visit.

6.5 Site Waste Profile

6.5.1 Solid Wastes

Solid wastes generated by the subject property are temporarily stored in a dedicated receptacle located near the northwest corner of the building in the parking area.

6.5.2 Sludges

No waste sludge generation, storage, or disposal was identified at the subject property.

6.5.3 Liquids

No waste liquids are known to be generated, stored, or disposed of on the subject property.

6.5.4 Waste Drums and Containers

No waste product (see also Section 6.4.3, above for petroleum/chemical products specifically) drums or containers were identified on the subject property during the site visit. No unidentified waste product drums or containers were noted on the subject property at the time of the site visit.

6.5.5 Wastewater Discharges

Sanitary wastes generated at the subject property are reportedly directed to a municipal sewage collection system, according to the site representatives and Town of North Castle personnel.

6.5.6 Pits, Ponds or Lagoons

No pits, ponds, or lagoons associated with waste treatment or disposal were identified on the subject property.

6.6 Site Drainage

6.6.1 Catch Basins

No on-site catch basins were observed on the subject property during the site investigation.

6.6.2 Building Floor Drains

No floor drains were observed on the subject property during the site visit.

6.6.3 Dry Wells and Sumps

No dry wells or sumps were identified on the subject property during the site visit.

6.7 PCB-Containing Equipment

No transformers, other electrical equipment or hydraulic equipment likely to contain polychlorinated biphenyls (PCBs) were identified on the property during the site visit. However, fluorescent lights were present throughout the building. Fluorescent lighting fixtures may sometimes contain PCBs in their ballasts. In the event of remodeling or demolition, these units should be tested to make sure they do not contain PCBs. If the ballasts do contain PCBs, they should be disposed of in accordance with all applicable regulations.

6.8 Asbestos Containing Material (ACM)

Based on the age of the on-site structure asbestos containing materials may be present. These suspect ACM materials include 12"x12" floor tiles in the computer room, 2'x4' ceiling tiles throughout the building, linoleum on the kitchen floor, and the built-up roofing material.

6.9 Lead-Based Paint

Based on the age of the structure, it is possible that painted surfaces of the building may contain lead. However, no evidence of peeling paint was observed during the site investigation.

6.10 Radon

Data maintained by the New York State and the USEPA indicates that the average radon concentration for the Town of North Castle is 3.3 pCi/L (average based on 53 homes tested) and 2.3 pCi/L for the subject property's zip code of 10604 (average based on 19 homes tested). These data indicate a low potential for indoor air radon concentrations to exceed the USEPA's target concentration of 4.0 pCi/L. Radon testing would be necessary to determine actual radon levels in the site buildings; however, since the on-site structure is not residential, no testing is required at this time.

7.0 EVIDENCE OF POTENTIAL/KNOWN SITE CONTAMINATION

7.1 Evidence of Soil or Surface Contamination

No evidence of soil or surface contamination (e.g., stained soil, stained pavement, areas of corrosion) was observed during the site investigation.

7.2 Evidence of Liquid Contamination

No evidence of contaminated liquid discharges or contamination of surface water bodies was observed on the property during the site visit.

7.3 Evidence of Soil or Surface Disturbances

No evidence of soil or surface disturbances suggesting the presence of contamination was observed on the property during the site visit.

7.3 Evidence of Stressed Vegetation

No areas of stressed vegetation indicative of the presence of contaminants were noted during the site visit.

7.5 Evidence of Waste Deposits

No evidence of waste deposits (e.g., piles, pits, landfills, lagoons) indicative of contamination was observed on the property during the site visit.

7.6 Odors

No evidence of odors indicating the presence of contamination was identified during the site visit.

8.0 SUMMARY AND CONCLUSIONS

The Chazen Companies have completed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-00 on the Aerotech Realty Corp. Property located at 11 New King Street in the Town of North Castle, Westchester County, New York. Any exceptions to, or deletions from, this practice are described in Section 2.0 of this report.

The subject property is comprised of 2.5 acres with a one-story professional building. The majority of the building is used as offices and the remainder of the building is a warehouse used for the distribution of aircraft equipment.

Based on the information obtained during the performance of this Phase I ESA, the following "recognized environmental conditions" (as defined under ASTM E 1527-00) have been identified:

- Two Leaking Underground Storage Tank (LUST) events identified in the New York State Department of Environmental Conservation's Spills Information database are located in close proximity to the subject property and may have the potential to impact groundwater at the subject property. These sites are identified as Safety Flight Instrument Corp. and "Office Building" located at 4 New King Street. Both of these sites are located east of the subject property. Additional investigation would be needed to determine if these spill events have impacted the subject property.

Although not considered "recognized environmental conditions" as defined under ASTM E 1527-00, the following potential environmental conditions were identified.

- A 1,000-gallon underground storage tank (UST) is located on the subject property. The tank was installed within the last two years, when a 1,500-gallon fuel oil UST was removed. Records indicate that soils samples collected from the excavation of the former tank. It should be noted, however, that the analytical data attached to the tank closure letter is identified as a stockpile sample and not as a confirmatory post excavation sample. Verification that the stockpile analytical results actually represent confirmatory sampling analysis should be procured.

- Suspect asbestos containing materials, in the form of 12"x12" floor tiles in the computer room linoleum flooring in the kitchen, 2'x4' ceiling tiles throughout the building and roofing material, were identified during the site investigation. Additionally, given the age of the site structure, painted surfaces may contain lead-based paint.

  The potential presence of asbestos and/or lead based paint is not an ASTM "recognized environmental conditions", however, their presence may limit the future use of the site structure. The mitigation and management of asbestos and lead based paint are currently regulated on the State and Federal levels. Suspect materials should be sampled and managed in accordance with all applicable New York State and Federal laws and regulations prior to any building demolition, renovation or other invasive building activities.

LIST OF PEOPLE AND AGENCIES CONTACTED

1. Angela Saponara, Site Representative
2. Louis Viscone, Warehouse Manager
3. New York State Department of Environmental Conservation
4. Westchester County Department of Health
5. Building Inspector, Town of North Castle
6. town of North Castle Assessor's Office
7. Ms. Dory Watson, Historian, Town of North Castle

DOCUMENTS REVIEWED

1. Aerial Photographs for the years 1961, 1970, 1976, 1980, 1986, 1990, 1995, and 2000, provided by the Westchester County Planning Department.

2. Environmental Data Resources, Inc. Radius Map, dated May 30, 2002.

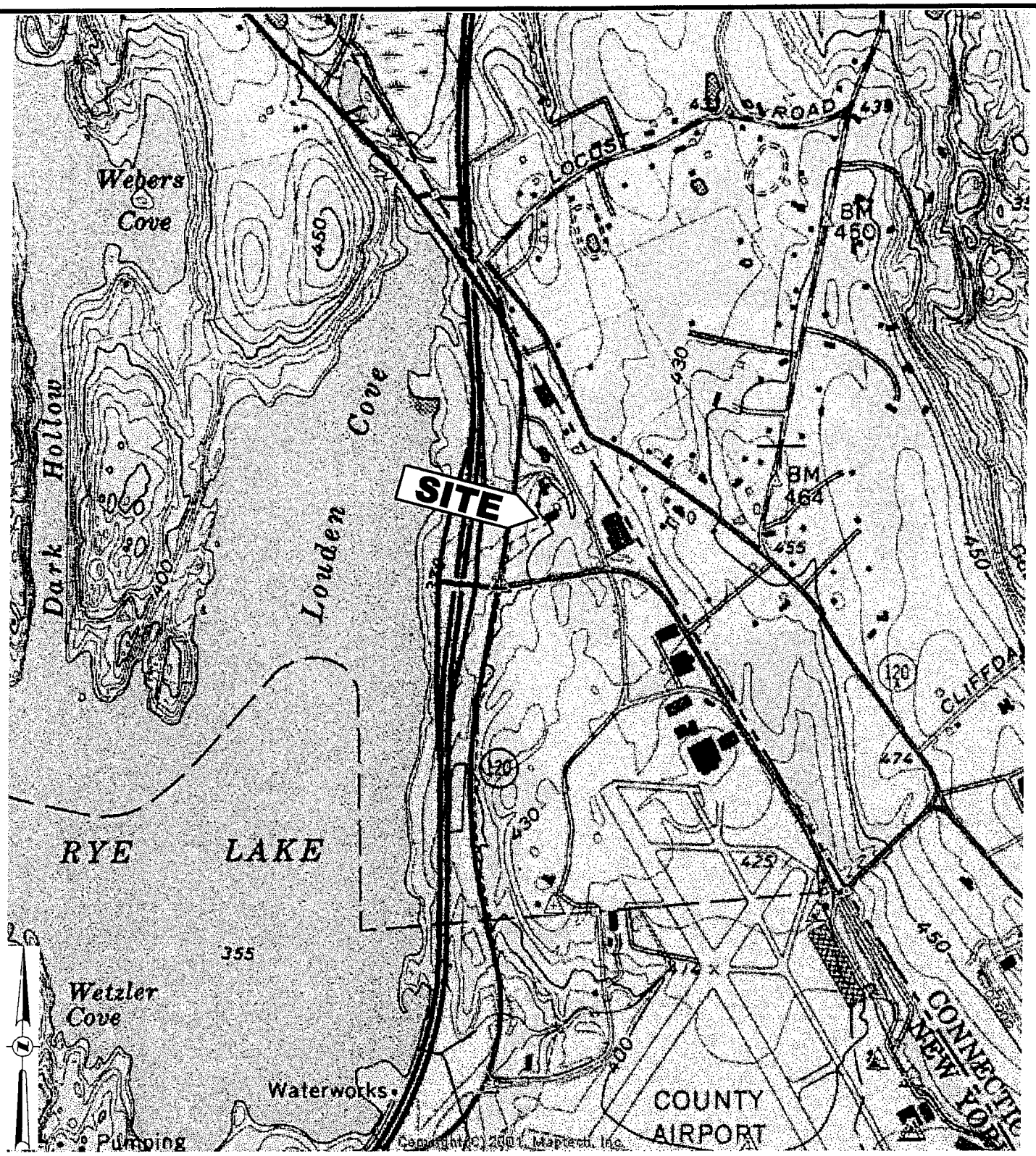
3. New York State Museum and Science Service Geologic Map of New York State, Lower Hudson Sheet, 1970.

4. New York State Museum and Science Service Surface Geologic Map of New York State, Lower Hudson Sheet, 1989.

5. United States Department of Agriculture, Soil Conservation Service in cooperation with Cornell University agricultural Experiment Station, Soil Survey of Putnam and Westchester Counties, New York, 1986.

6. United States Geological Survey Topographic Map of the Glenville, Connecticut Quadrangle, dated 1960 (photo inspected 1971).

FIGURES



THE Chazen COMPANIES

ENGINEERS/SURVEYORS
PLANNERS
ENVIRONMENTAL SCIENTISTS
LANDSCAPE ARCHITECTS

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Capital District Office:
20 Gurley Avenue, Troy, NY 12182
Glens Falls Office:
110 Olen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 1-SITE LOCATION MAP

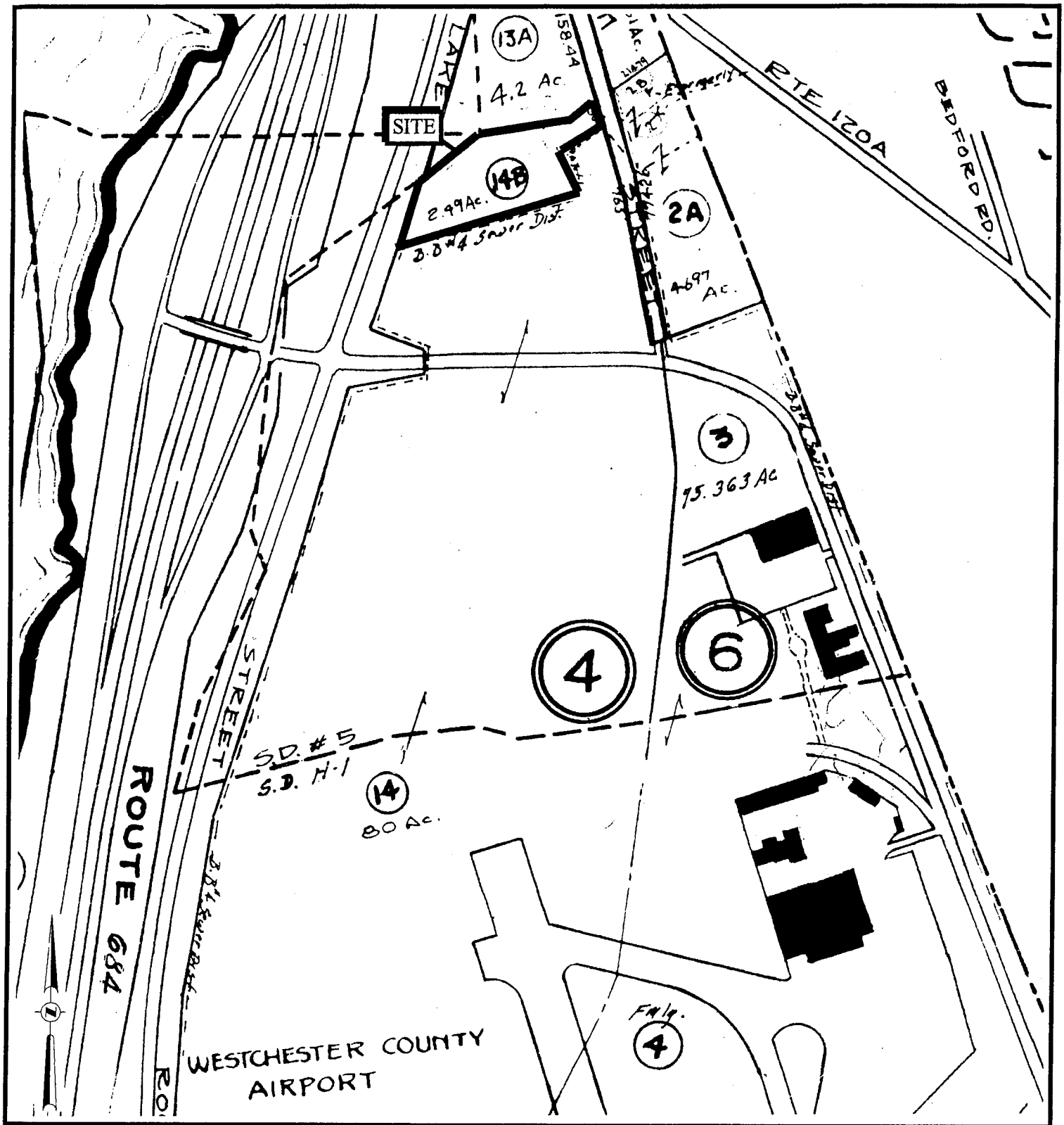
Aerotech Realty Corp. Property

11 New King Street

Town of North Castle, Dutchess County, New York

USGS Topographic Map of the Glenville, Conn. Quadrangle, 1960, photorevised 1971
7.5 Minute series

Date: June, 2002
Scale: Not to Scale
Project #: 20229.00



THE Chazen COMPANIES

ENGINEERS/SURVEYORS
PLANNERS
ENVIRONMENTAL SCIENTISTS
LANDSCAPE ARCHITECTS

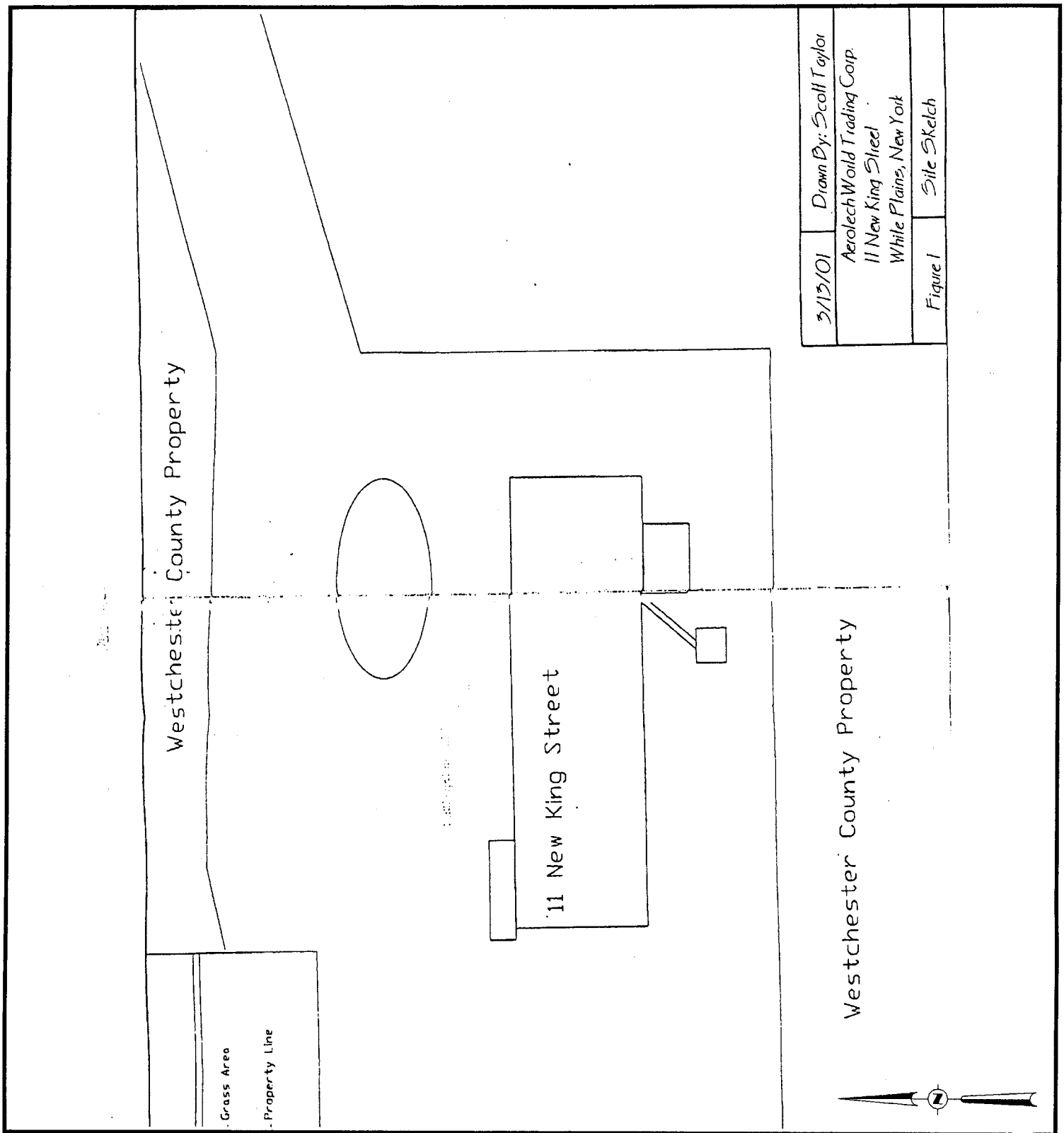
Dutchess County Office:
Manchester Rd. PO Box 3479
Poughkeepsie, NY 12603
Phone: (845) 454-3980
Orange County Office:
263 Route 17K Newburgh, NY 12550
Capital District Office:
20 Gurley Avenue, Troy, NY 12182
Glens Falls Office:
110 Glen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 2-TAX MAP

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle, Westchester County, New York

Town of North Castle Tax Map, Section 3, Block 4, Lot 14B

Date: June, 2002
Scale: Not to Scale
Project #: 20229.00



THE Chazen COMPANIES
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LANDSCAPE ARCHITECTS

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Manchester Rd. PO Box 3479
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Phone: (845) 454-3980
Orange County Office:
263 Route 17K Newburgh, NY 12550
Capital District Office:
20 Gurley Avenue, Troy, NY 12182
Glens Falls Office:
110 Glen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 3-SITE PLAN MAP

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle, Westchester County, New York

Source: Privided by Aerotech World Trade Corp.

Date: June, 2002
Scale: Not to Scale
Project #: 20229.00

THE Chazen COMPANIES

ENGINEERS/SURVEYORS
PLANNERS
ENVIRONMENTAL SCIENTISTS
LANDSCAPE ARCHITECTS

Dutchess County Office:
Manchester Rd. PO Box 3479
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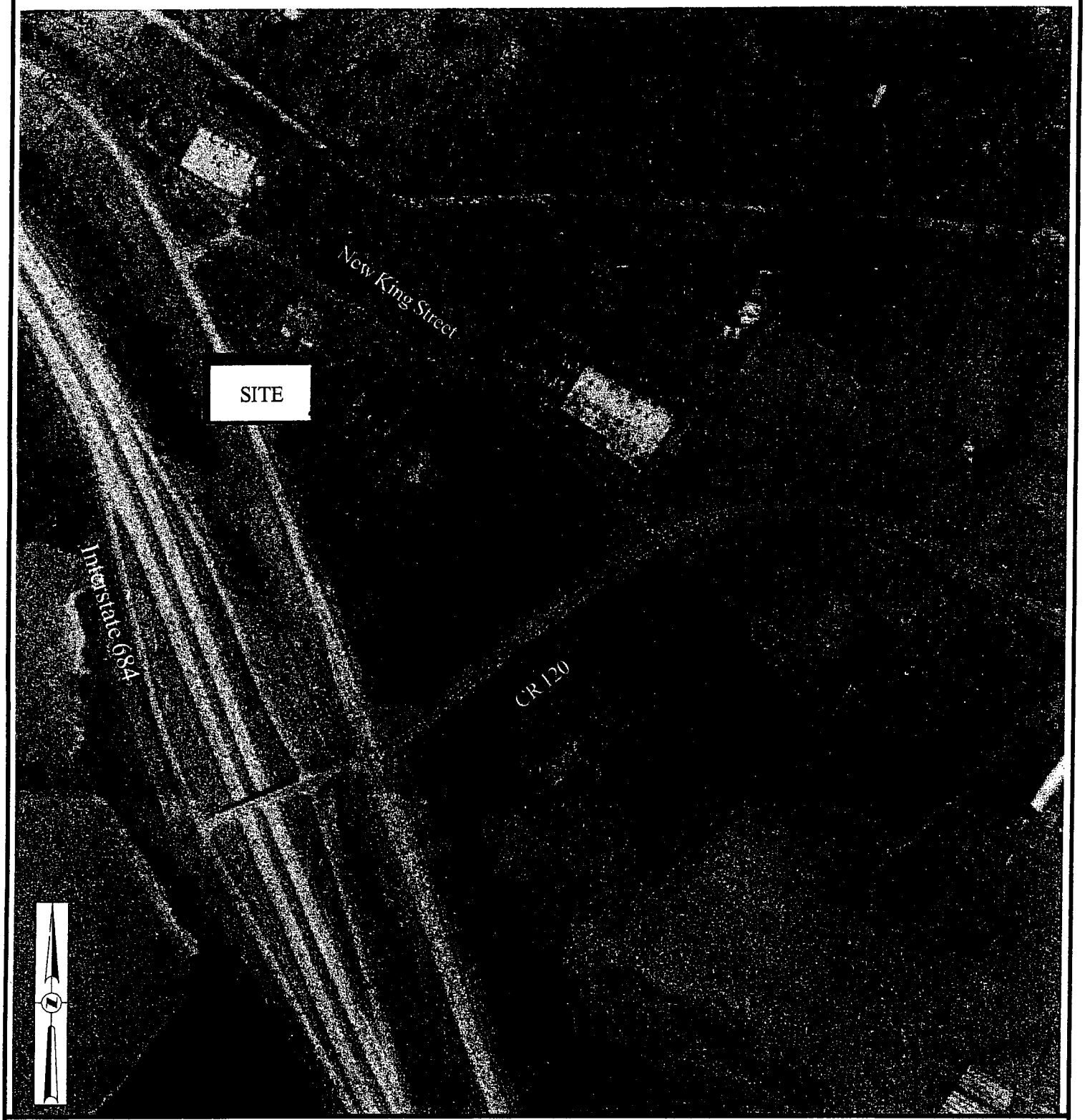
263 Route 17K Newburgh, NY 12550
Capital District Office:
20 Gurley Avenue, Troy, NY 12182
Glens Falls Office:
110 Glen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 4A-1961AERIAL PHOTOGRAPH

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle, Westchester County, New York

Photos provided by Westchester Coutny Planning Department, May 2002

Date: June, 2002
Sccale: Not to Scale
Project #: 20229.00



THE Chazen COMPANIES

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PLANNERS
ENVIRONMENTAL SCIENTISTS
LANDSCAPE ARCHITECTS

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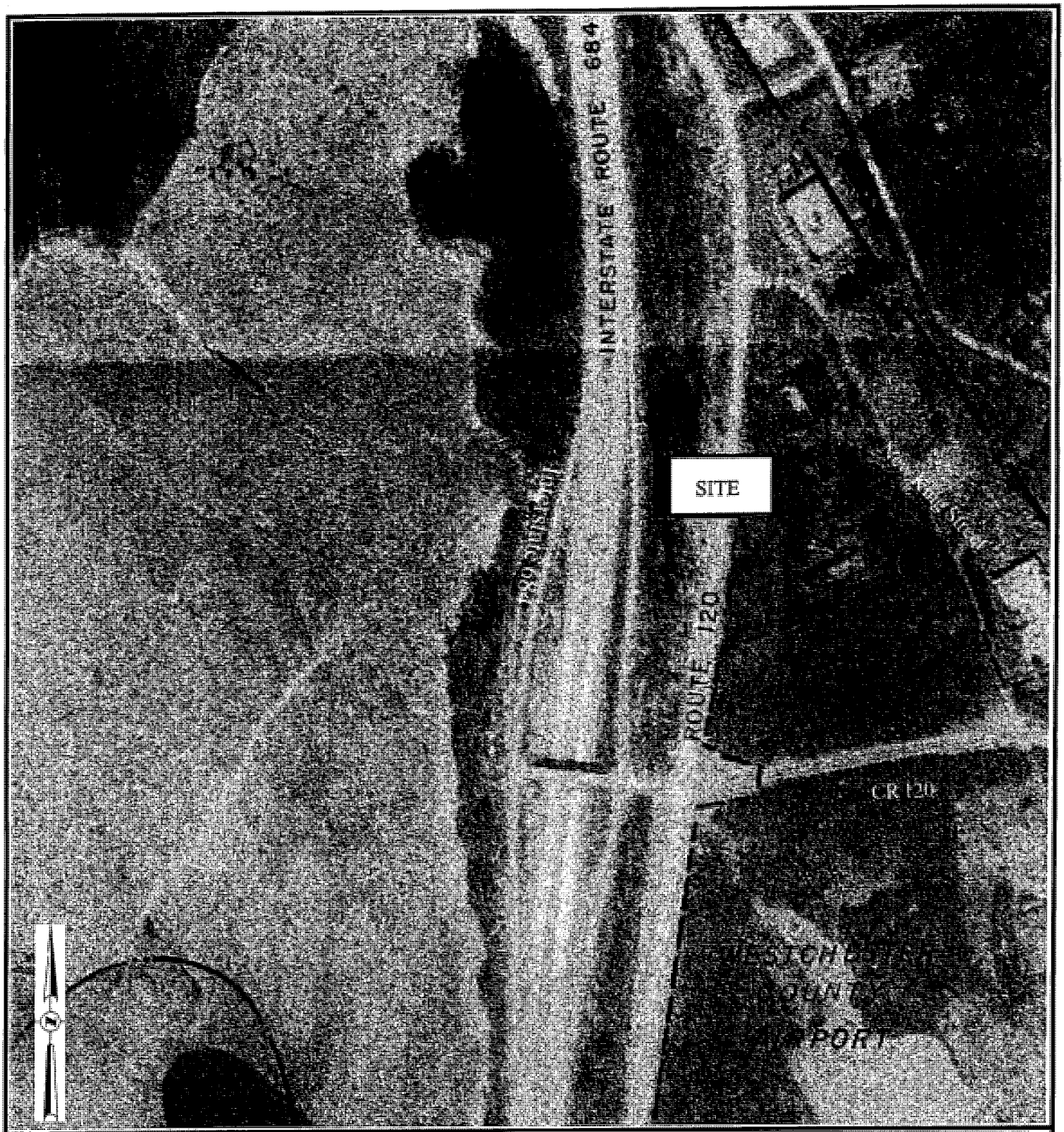
263 Route 17K Newburgh, NY 12550
Capital District Office:
20 Gurley Avenue, Troy, NY 12182
Glens Falls Office:
110 Glen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 4B-1970 AERIAL PHOTOGRAPH

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle, Westchester County, New York

Photos provided by Westchester Coutny Planning Department, May 2002

Date: June, 2002
Scale: Not to Scale
Project #: 20229.00



THE Chazen COMPANIES

ENGINEERS
PLANNERS
ENVIRONMENTAL SCIENTISTS
LANDSCAPE ARCHITECTS

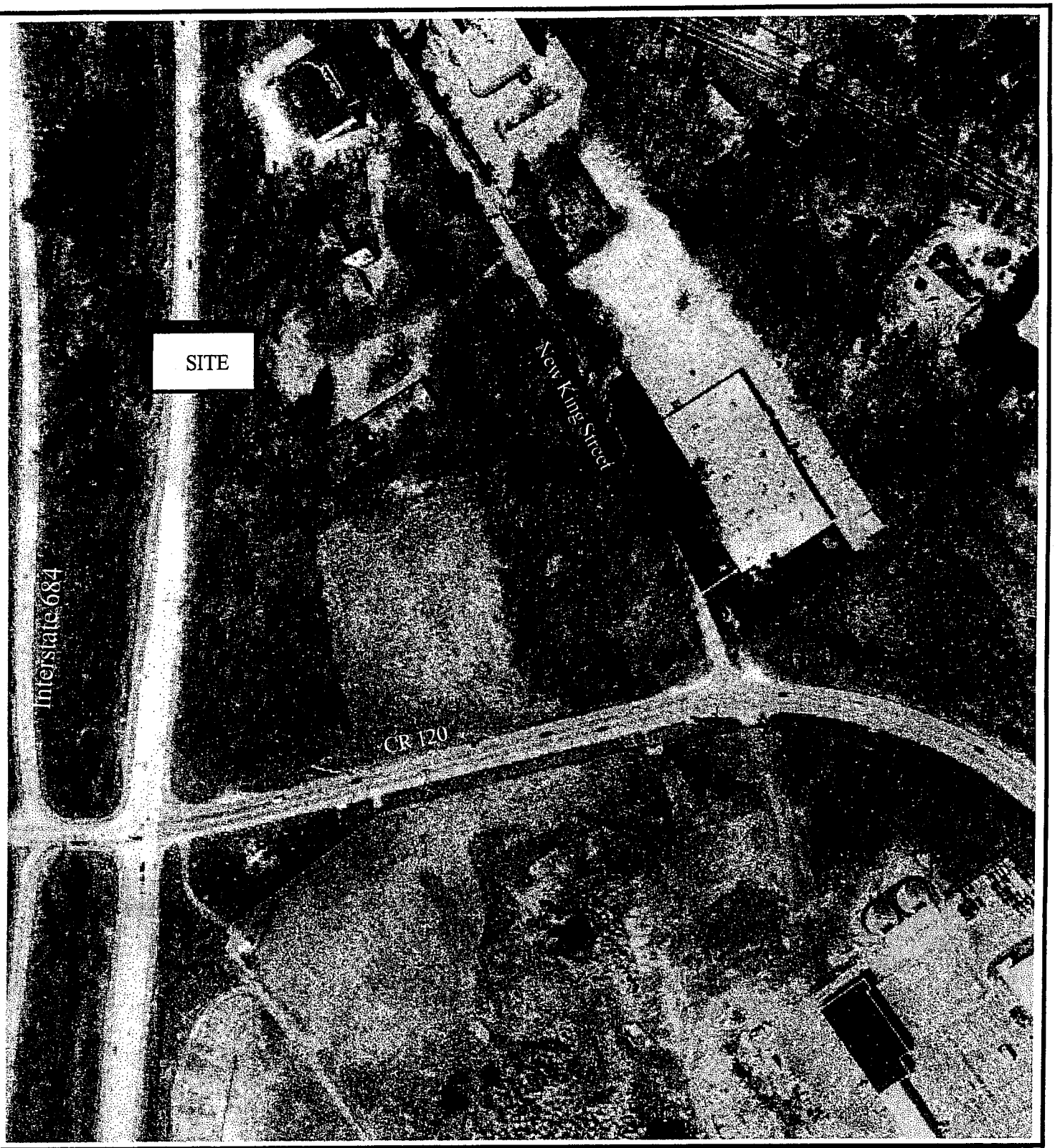
Dutchess County Office:
Manchester Rd. PO Box 3479
Poughkeepsie, NY 12603
Phone: (845) 454-3980
Orange County Office:
263 Route 17K Newburgh, NY 12550
Capital District Office:
20 Corliss Avenue, Troy, NY 12182
Glens Falls Office:
110 Glen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 4C-1980 AERIAL PHOTOGRAPH

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle, Westchester County, New York

Photos provided by Westchester County Planning Department, May 2002

Date: June, 2002
Scale: Not to Scale
Project #: 20229.00



THE Chazen COMPANIES

ENGINEERS/SURVEYORS
PLANNERS
ENVIRONMENTAL SCIENTISTS
LANDSCAPE ARCHITECTS

Dutchess County Office:
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Poughkeepsie, NY 12603
Phone: (845) 454-3980
Orange County Office:
263 Route 17K Newburgh, NY 12550
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20 Gurley Avenue, Troy, NY 12182
Glens Falls Office:
110 Glen Street Glens Falls, NY 12801
New England Office:
99 Derby Street Hingham, MA 02043

FIGURE 4D-2000 AERIAL PHOTOGRAPH

Aerotech Realty Corp. Property
11 New King Street
Town of North Castle, Westchester County, New York

Photos provided by Westchester Coutny Planning Department, May 2002

Date: June, 2002
Scale: Not to Scale
Project #: 20229.00

APPENDIX A

Site Photographs

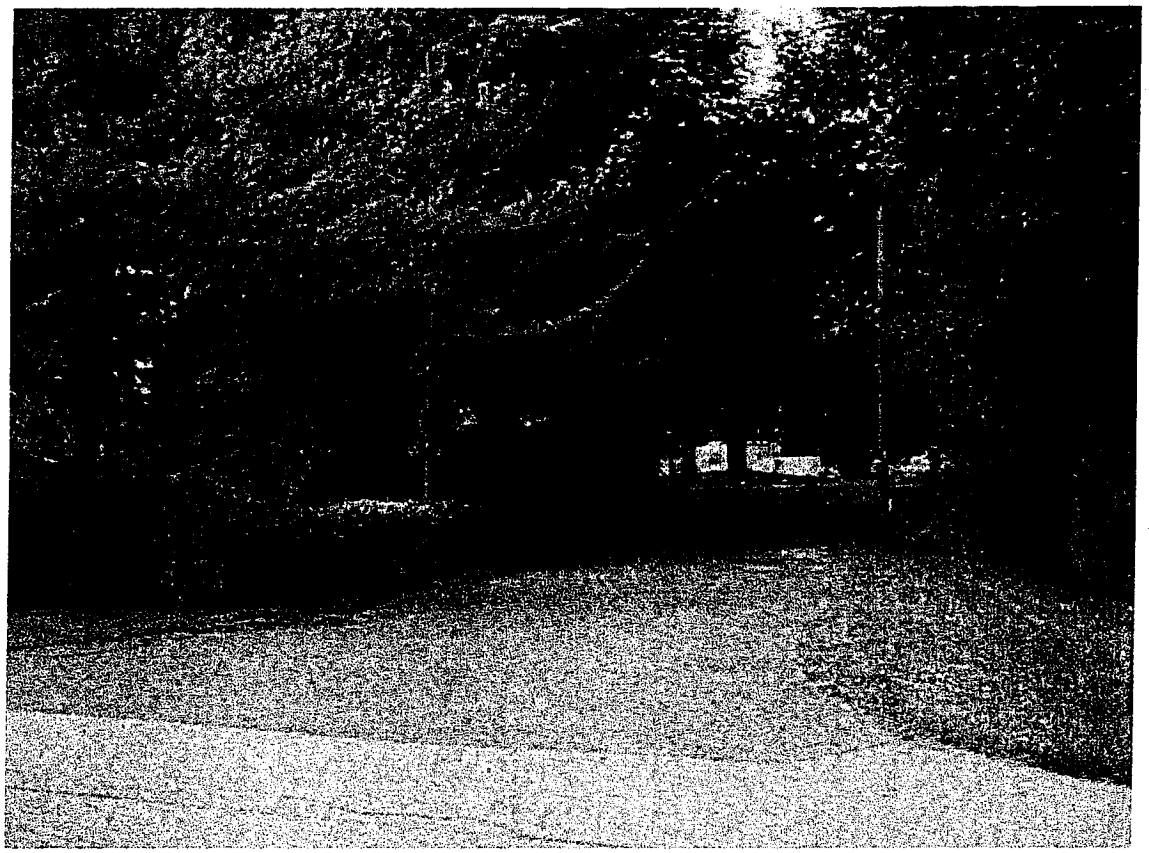

Photo #1

Description: View facing west towards subject property from New King Street.

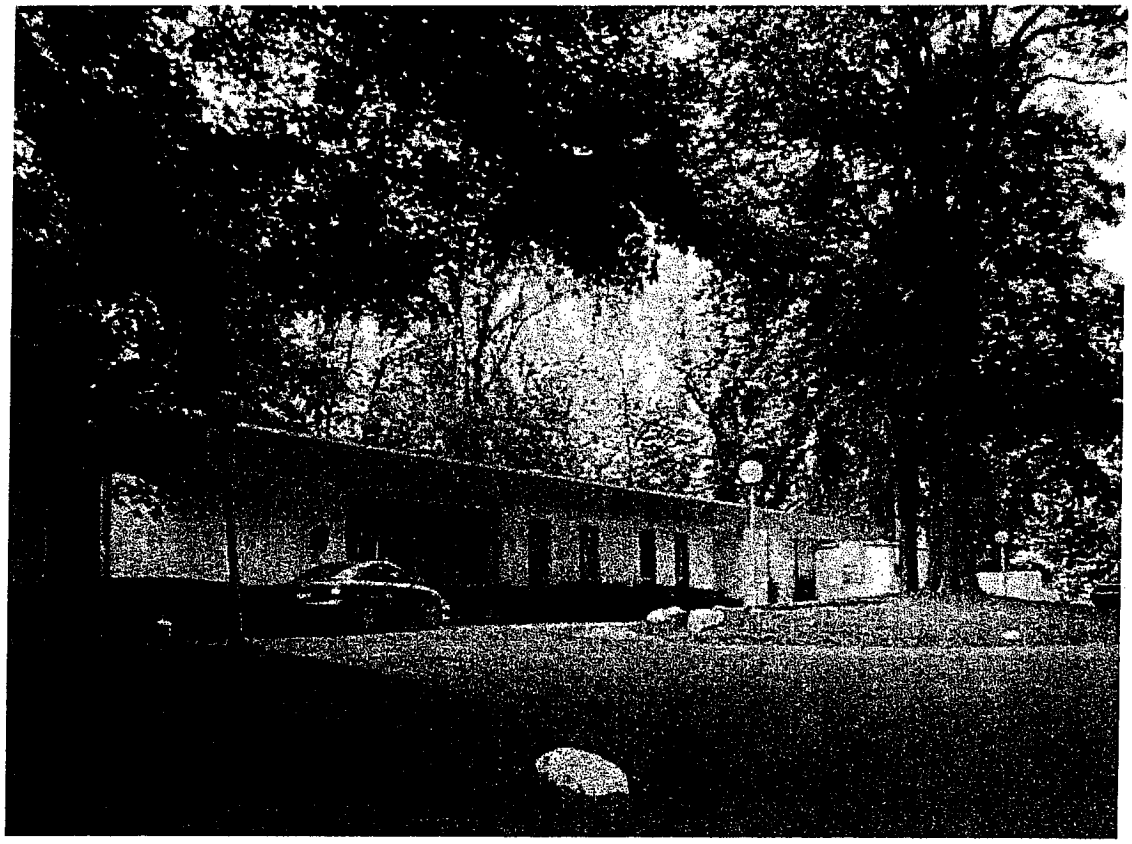

Photo #2

Description: North side of subject building.

Photo #3

Description: South side of subject building.

Photo #4

Description: Groundwater potable supply well located near central south side of building.

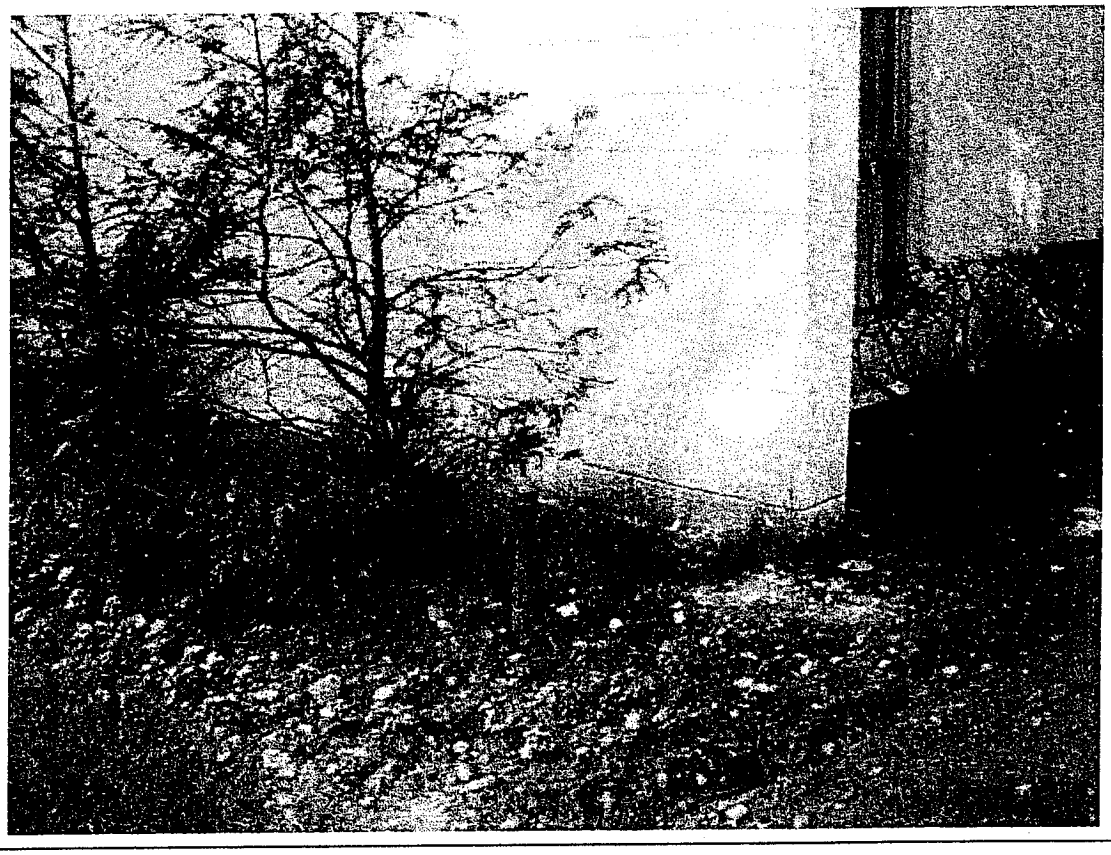

Photo #5

Description: Fill port for 1,000-gallon fuel oil UST located near southeast corner of building.

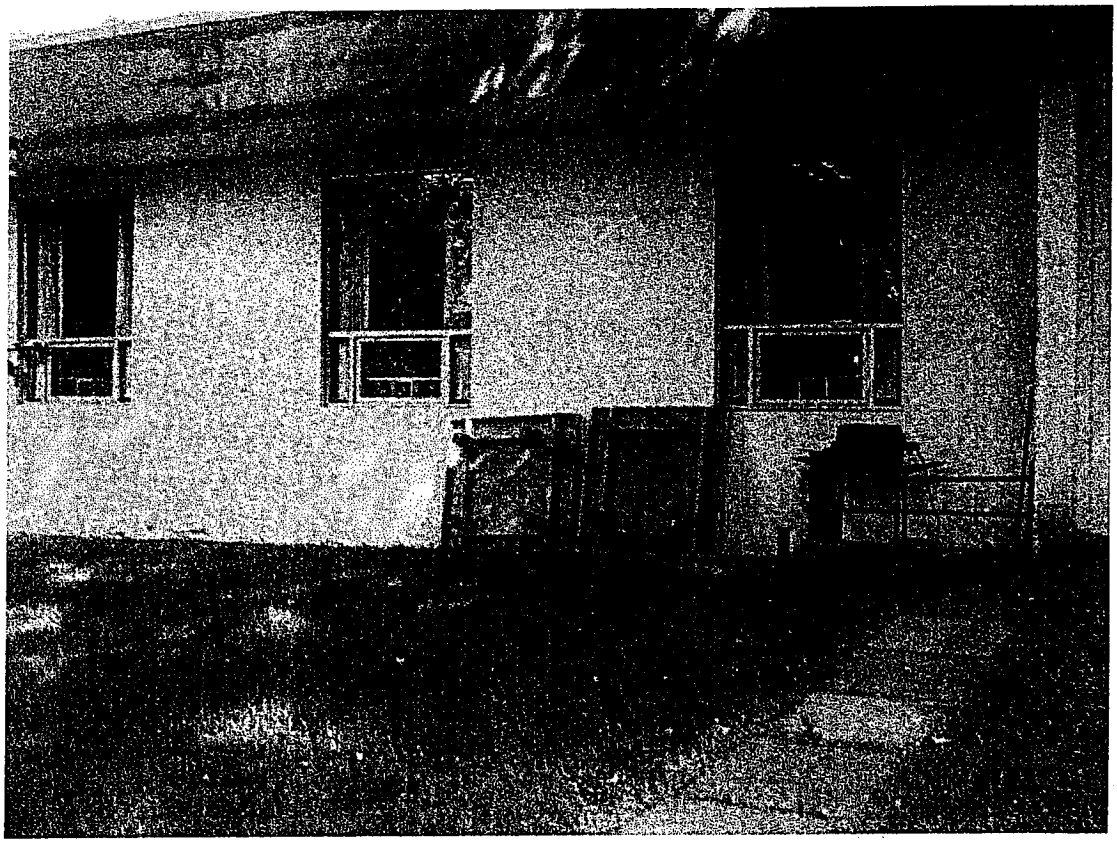

Photo #6

Description: Vent pipes for 1,000-gallon fuel oil UST located near south centertal of building on the south side.

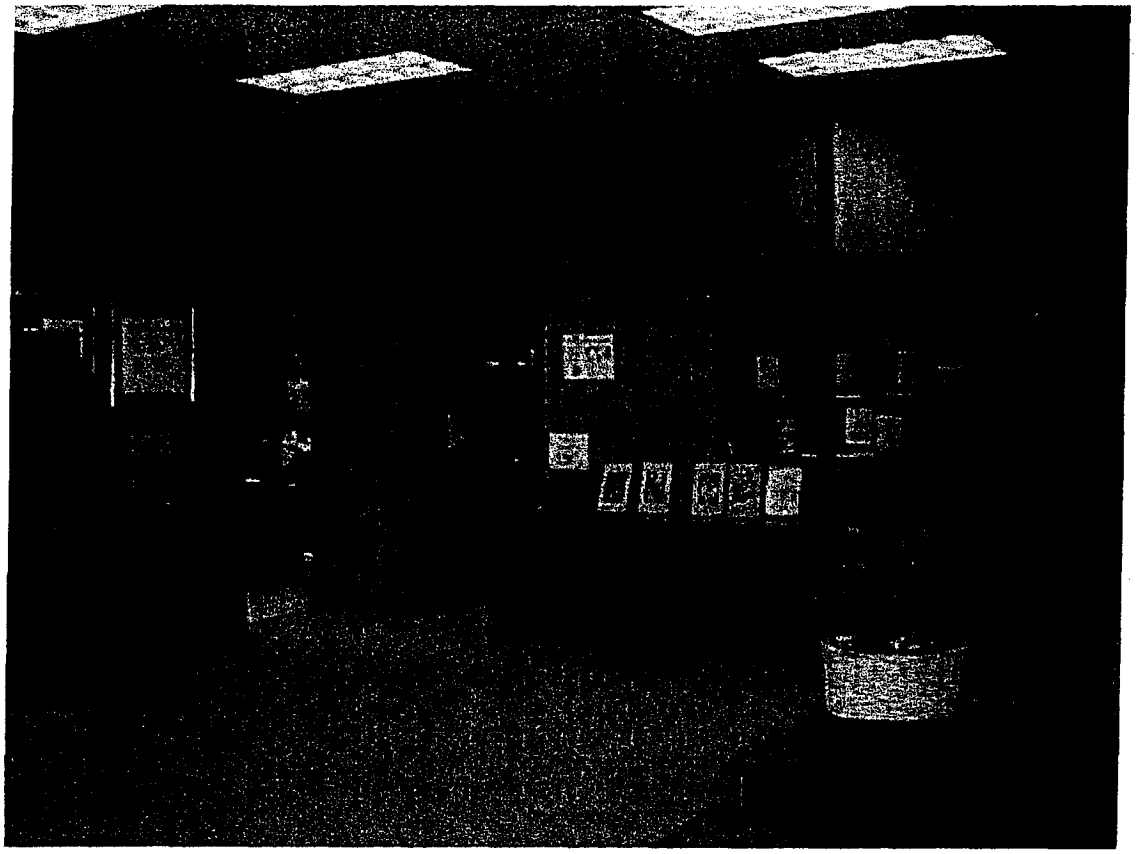

Photo #7

Description: Front entrance area of building interior.

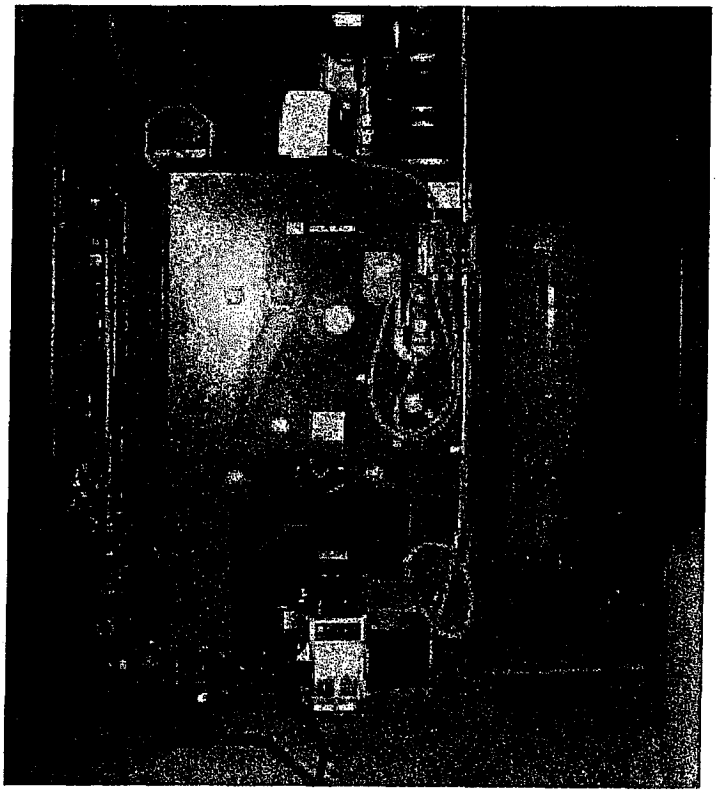

Photo #8

Description: Oil-fired boiler located of of the kitchen area near the south central area of building.

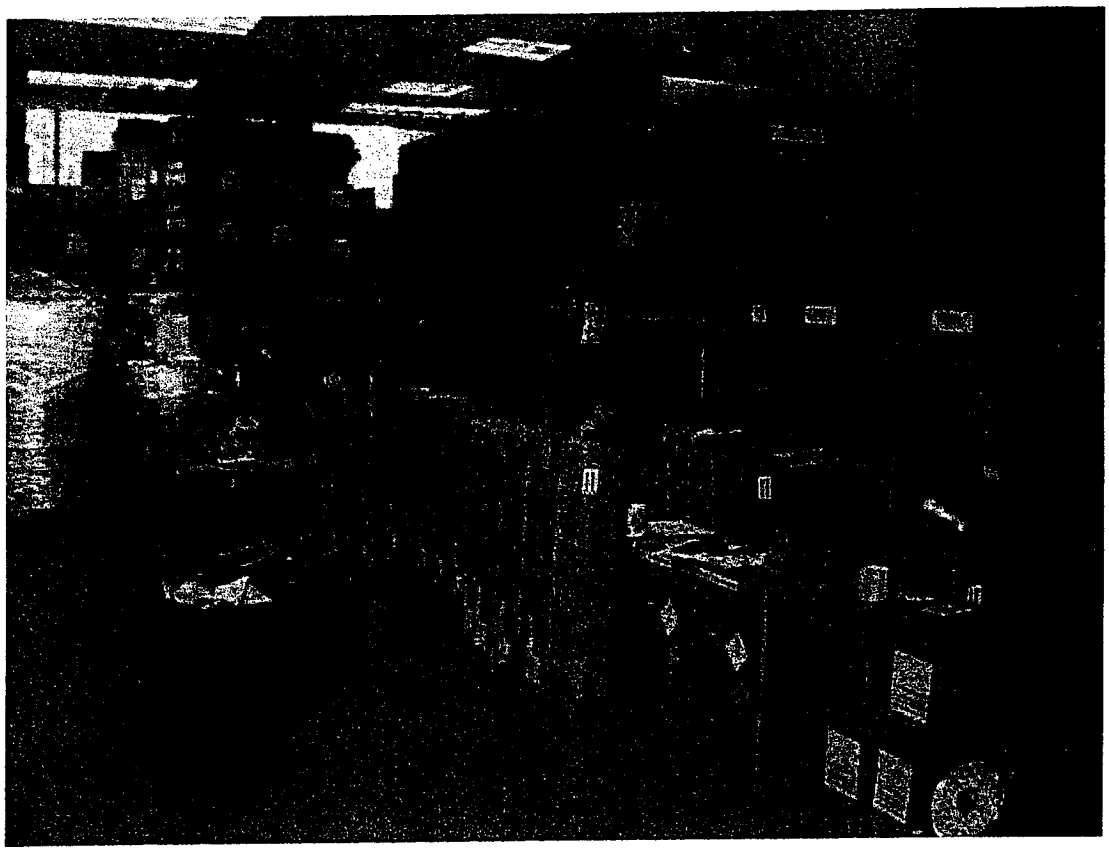

Photo #9

Description: Interior of warehouse section located at the west end ofthe building. Boxes of compressed oxygen cylinders visible at center.

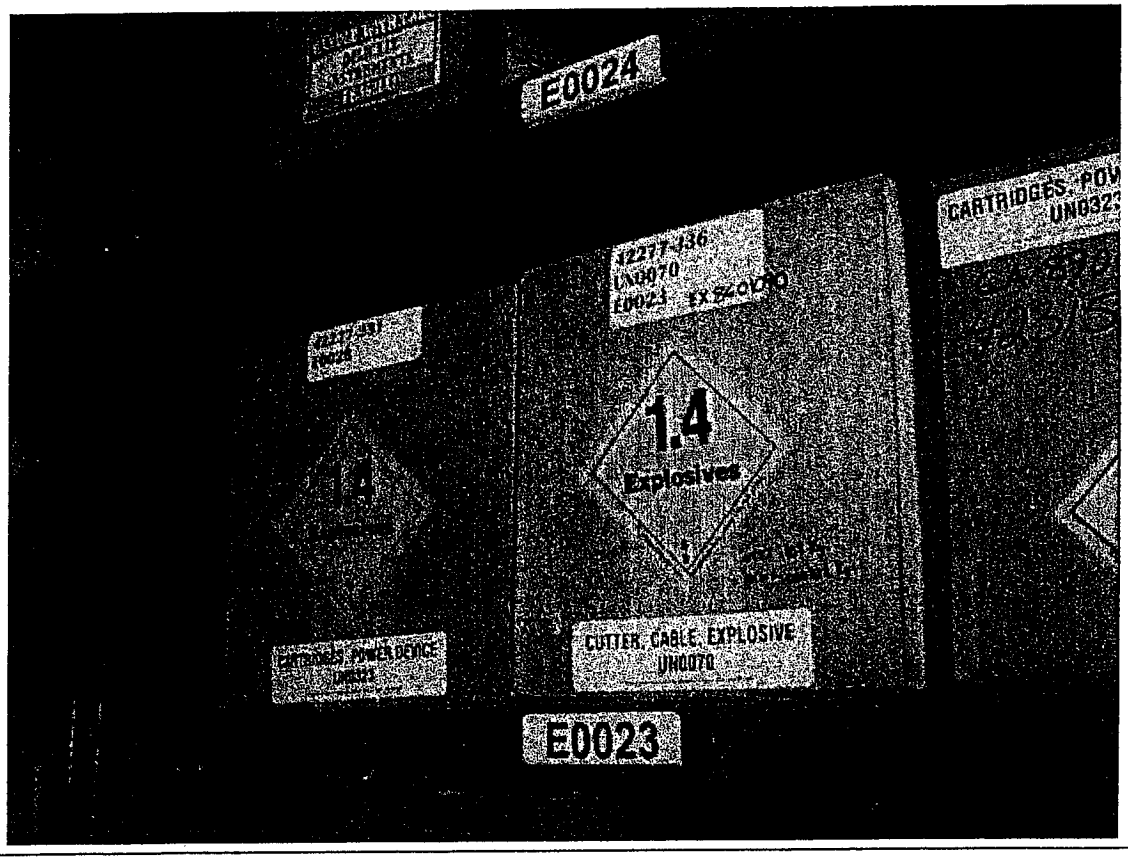

Photo #10

Description: Boxes of cartridges power server labled explosive in the wasrehouse area.

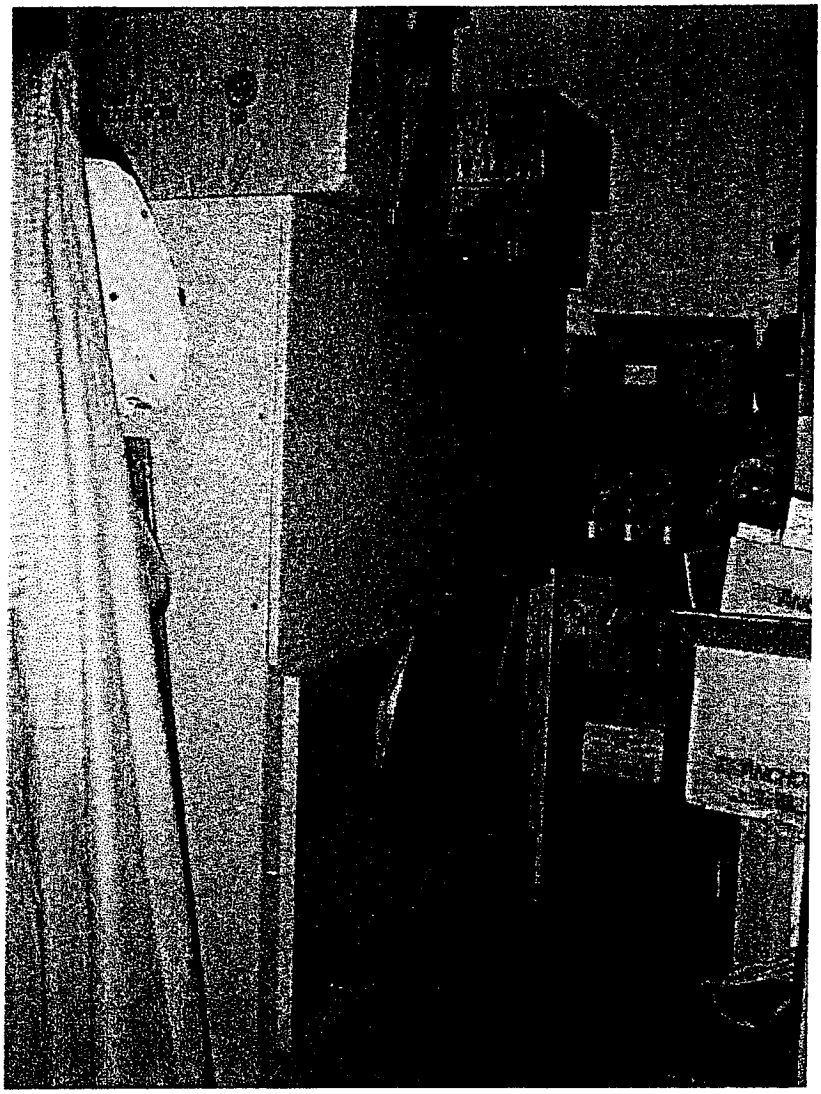

Photo #11

Description: Air handling unit located in warehouse area.

APPENDIX B

Environmental Database Report

The EDR Radius Map
with GeoCheck®

Aerotech World Trade
11 New King Street
North Castle, NY 10604

Inquiry Number: 0790355.1r

May 30, 2002

Environmental Data Resources, Inc.

The Source For Environmental Risk Management Data

3530 Post Road
Southport, Connecticut 06490

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

TARGET PROPERTY INFORMATION

ADDRESS

11 NEW KING STREET
NORTH CASTLE, NY 10604

COORDINATES

Latitude (North):	41.081700 - 41° 4' 54.1"
Longitude (West):	73.714600 - 73° 42' 52.6"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	607974.7
UTM Y (Meters):	4548410.5

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	2441073-A6 GLENVILLE, CT NY
Source:	USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

FEDERAL ASTM STANDARD

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
CERCLIS ..... Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP ..... CERCLIS No Further Remedial Action Planned
CORRACTS ..... Corrective Action Report
RCRIS-TSD ..... Resource Conservation and Recovery Information System
RCRIS-LQG ..... Resource Conservation and Recovery Information System
RCRIS-SQG ..... Resource Conservation and Recovery Information System
ERNS ..... Emergency Response Notification System

STATE ASTM STANDARD

SHWS ..... Inactive Hazardous Waste Disposal Sites in New York State
SWF/LF ..... Facility Register
UST ..... Petroleum Bulk Storage (PBS) Database
CBS UST ..... Chemical Bulk Storage Database

EXECUTIVE SUMMARY

MOSF UST..... Major Oil Storage Facilities Database
SWTIRE..... Registered Waste Tire Storage & Facility List
VCP..... Voluntary Cleanup Agreements
SWRCY..... Registered Recycling Facility List

FEDERAL ASTM SUPPLEMENTAL

CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
Delisted NPL..... National Priority List Deletions
HMIRS..... Hazardous Materials Information Reporting System
MLTS..... Material Licensing Tracking System
MINES..... Mines Master Index File
NPL Liens..... Federal Superfund Liens
PADS..... PCB Activity Database System
RAATS..... RCRA Administrative Action Tracking System
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

HSWDS..... Hazardous Substance Waste Disposal Site Inventory
AST..... Petroleum Bulk Storage
CBS AST..... Chemical Bulk Storage Database
MOSF AST..... Major Oil Storage Facilities Database

EDR PROPRIETARY HISTORICAL DATABASES

Coal Gas..... Former Manufactured Gas (Coal Gas) Sites

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS 1 degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. EDR's definition of a site with an elevation equal to the target property includes a tolerance of +/- 10 feet. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property (by more than 10 feet). Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STATE ASTM STANDARD

LTANKS: Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills

A review of the LTANKS list, as provided by EDR, and dated 01/01/2002 has revealed that there are 3

LTANKS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SAFE FLIGHT INST.	20 NEW KING ST.	1/8 - 1/4 SSE	A1	6
OFFICE BLDG	4 NEW KING ST	1/4 - 1/2 SSE	C7	11
Not reported	1 NEW KING STREET	1/4 - 1/2 SSE	C8	12

FEDERAL ASTM SUPPLEMENTAL

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 10/29/2001 has revealed that there are 2 FINDS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SAFE FLIGHT INSTRUMENT CORP	***20 NEW KING ST***	***1/8 - 1/4 SSE***	***A3***	***8***
Lower Elevation	**Address**	**Dist / Dir**	**Map ID**	**Page**
NYSDOT BIN 1052960	***CO RTE 135 AIRPORT RD***	***1/8 - 1/4 SW***	***B6***	***10***

STATE OR LOCAL ASTM SUPPLEMENTAL

SPILLS: Data collected on spills reported to NYSDEC. is required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

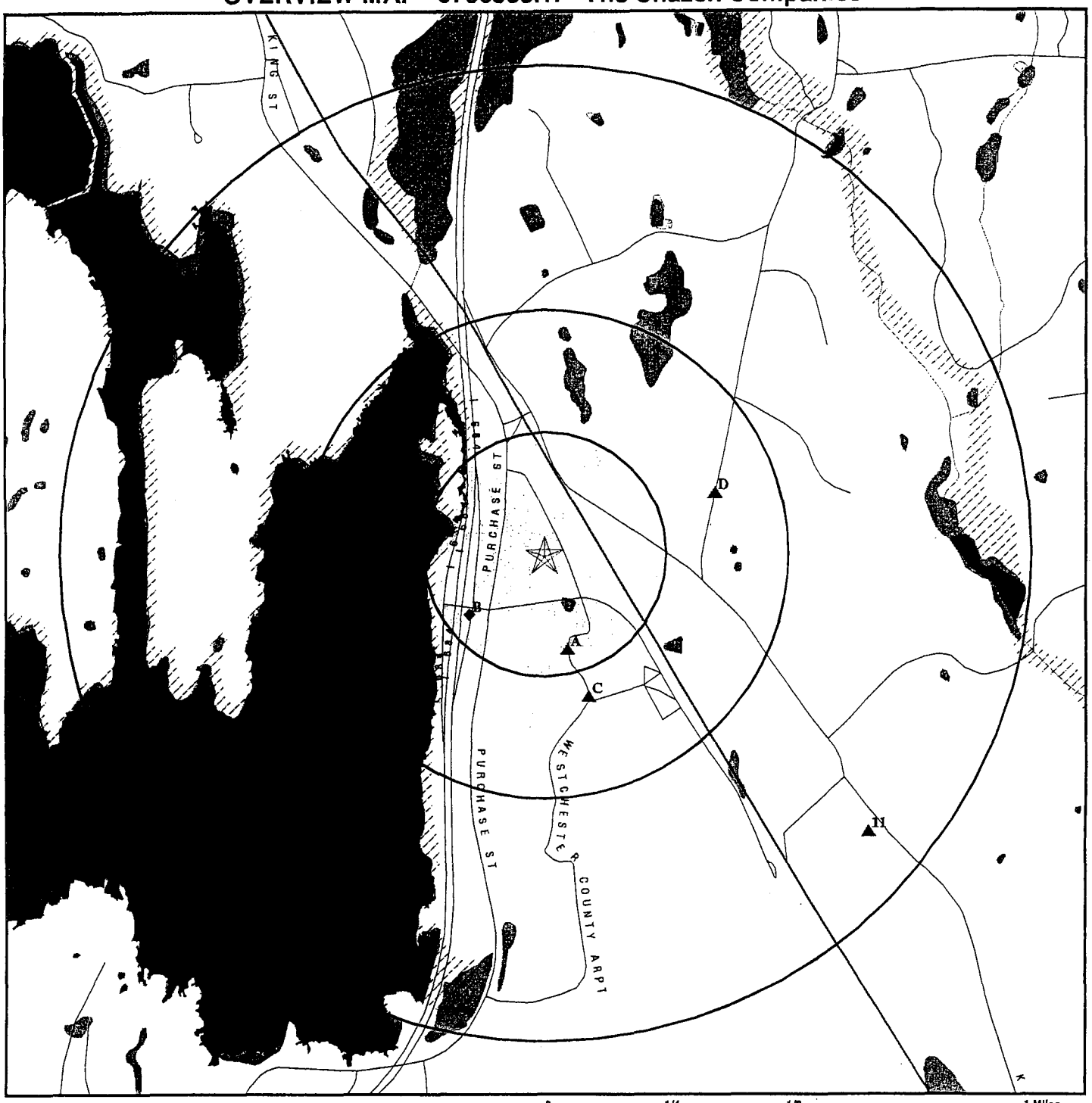
A review of the NY Spills list, as provided by EDR, has revealed that there are 3 NY Spills sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SAFE FLIGHT W.C. AIRPORT	NEW KING STREET	1/8 - 1/4 SSE	A2	7
Lower Elevation	**Address**	**Dist / Dir**	**Map ID**	**Page**
WEST SHOULDER OF RT. 684	I684 1/2 MILE S OF EXIT	1/8 - 1/4 SW	B4	8
RT 684 NORTH AT EXIT 2	RT 684 NORTH AT EXIT 2	1/8 - 1/4 SW	B5	9

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ARMONK PRIVATE WELLS	SHWS
AIRPORT FUEL FARM	LTANKS
BRADSHAW SERVICE	LUST, UST
HARRISON COURT	UST
NATIONAL CAR RENTAL SYSTEM, INC.	UST
FASHION MALL AT WHITE PLAINS	UST
WEST PARK I LLC	UST
HARRISON COURT	UST
JOSEPH E SEAGRAM & SONS	RCRIS-SQG
RT 120/GATEWAY LN	NY Spills
RESERVOIR	NY Spills
CANYON CLUB	NY Spills
IBM CORPORATION	NY Spills
IBM FACILITY	NY Spills
RT. 120	NY Spills
BUDGET RENT A CAR	NY Spills
WESTAIR FLIGHT SCHOOL	NY Spills
MANHOLE 4649	NY Spills
FORMER NYANG SEPTIC FIELD	VCP
1248 KING ST # 1252	LUST

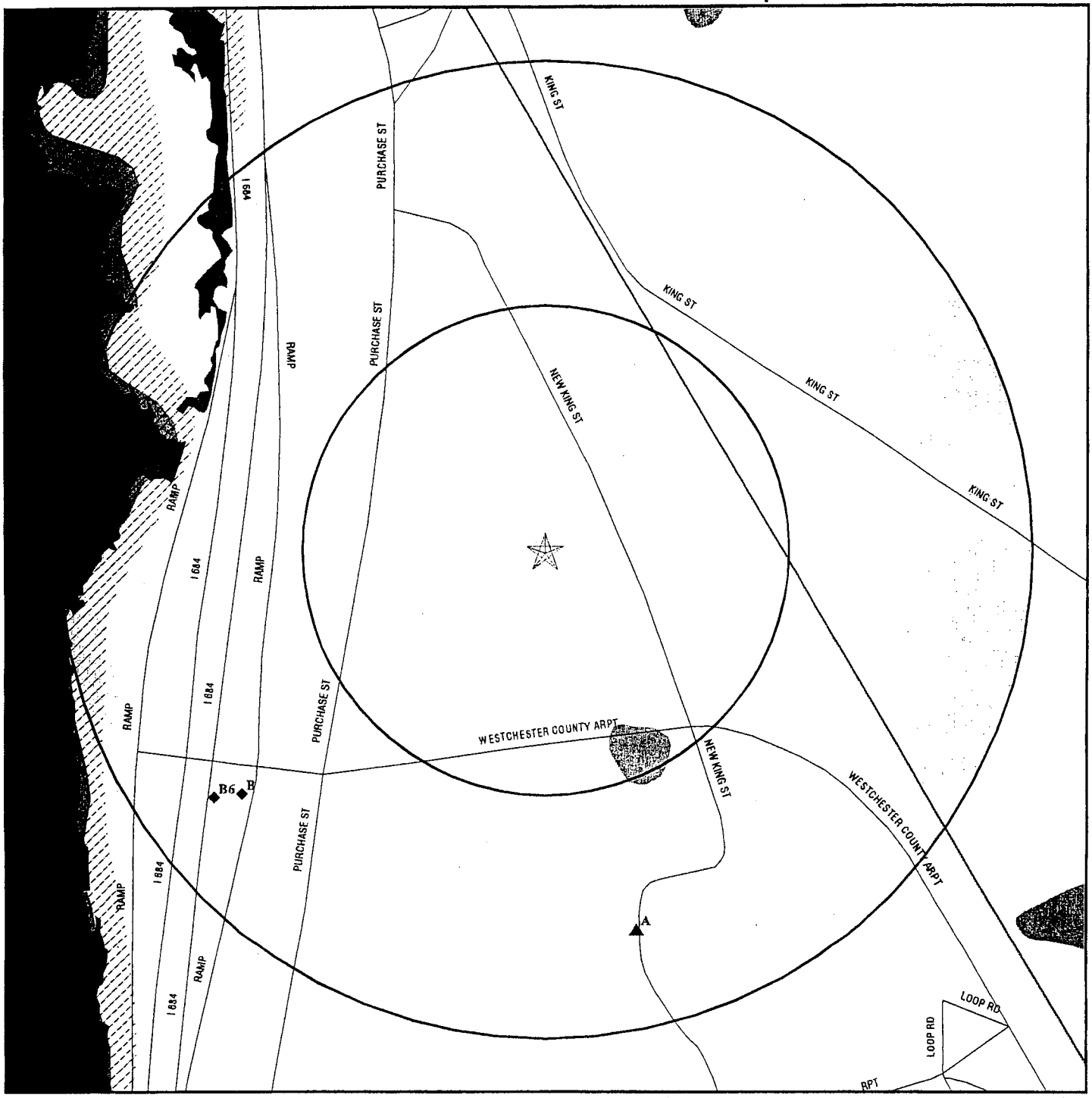
OVERVIEW MAP - 0790355.1r - The Chazen Companies



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Wetlands

TARGET PROPERTY:	Aerotech World Trade	CUSTOMER:	The Chazen Companies
ADDRESS:	11 New King Street	CONTACT:	Emily A. Pereira
CITY/STATE/ZIP:	North Castle NY 10604	INQUIRY #:	0790355.1r
LAT/LONG:	41.0817 / 73.7146	DATE:	May 30, 2002 4:49 pm

DETAIL MAP - 0790355.1r - The Chazen Companies



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- Coal Gasification Sites
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Power transmission lines
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Wetlands

TARGET PROPERTY:	Aerotech World Trade	CUSTOMER:	The Chazen Companies
ADDRESS:	11 New King Street	CONTACT:	Emily A. Pereira
CITY/STATE/ZIP:	North Castle NY 10604	INQUIRY #:	0790355.1r
LAT/LONG:	41.0817 / 73.7146	DATE:	May 30, 2002 4:49 pm

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
CERCLIS		0.500	0	0	0	NR	NR	0
CERC-NFRAP		0.125	0	NR	NR	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRIS-TSD		0.500	0	0	0	NR	NR	0
RCRIS Lg. Quan. Gen.		0.125	0	NR	NR	NR	NR	0
RCRIS Sm. Quan. Gen.		0.125	0	NR	NR	NR	NR	0
ERNS		0.125	0	NR	NR	NR	NR	0
STATE ASTM STANDARD								
State Haz. Waste		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
LTANKS		0.500	0	1	2	NR	NR	3
UST		0.125	0	NR	NR	NR	NR	0
CBS UST		0.125	0	NR	NR	NR	NR	0
MOSF UST		0.125	0	NR	NR	NR	NR	0
SWTIRE		TP	NR	NR	NR	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	0	NR	NR	0
FEDERAL ASTM SUPPLEMENTAL								
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
FINDS		0.250	0	2	NR	NR	NR	2
HMIRS		0.250	0	0	NR	NR	NR	0
MLTS		0.250	0	0	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
NPL Liens		1.000	0	0	0	0	NR	0
PADS		0.250	0	0	NR	NR	NR	0
RAATS		0.250	0	0	NR	NR	NR	0
TRIS		0.250	0	0	NR	NR	NR	0
TSCA		0.250	0	0	NR	NR	NR	0
FTTS		0.250	0	0	NR	NR	NR	0
STATE OR LOCAL ASTM SUPPLEMENTAL								
HSWDS		0.500	0	0	0	NR	NR	0
AST		0.125	0	NR	NR	NR	NR	0
CBS AST		0.125	0	NR	NR	NR	NR	0
MOSF AST		0.500	0	0	0	NR	NR	0
NY Spills		0.500	0	3	0	NR	NR	3
EDR PROPRIETARY HISTORICAL DATABASES								
Coal Gas		1.000	0	0	0	0	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

* Sites may be listed in more than one database

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

A1 **SAFE FLIGHT INST.** **LTANKS** **S101102311**
SSE **20 NEW KING ST.** **N/A**
1/8-1/4 **HARRISON, NY**
1050 ft.
Higher **Site 1 of 3 in cluster A**

LTANKS:

Spill Number:	8905415	Region of Spill:	3
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	(914) 946-9500
Spiller:	SAME		
Spiller Address:	Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	07/30/1992		
Spill Cause:	Tank Test Failure	Resource Affected:	Groundwater
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	Not reported
Spill Date:	09/01/1989 10:00	Reported to Dept:	09/01/1989 12:29
Cleanup Ceased:	07/30/1992		
Last Inspection:	Not reported		

Cleanup Meets Standard:	True
Recommended Penalty:	No Penalty
Spiller Cleanup Date:	Not reported
Enforcement Date:	Not reported
Investigation Complete:	Not reported
UST Involvement:	False
Spill Record Last Update:	07/30/1992
Is Updated:	False

Corrective Action Plan Submitted:	Not reported
Date Spill Entered In Computer Data File:	09/06/1989
Date Region Sent Summary to Central Office:	Not reported

Tank Test:

PBS Number:	Not reported
Tank Number:	Not reported
Test Method:	Not reported
Capacity of Failed Tank:	0
Leak Rate Failed Tank:	0.00
Gross Leak Rate:	Not reported

Material:

Material Class Type:	1
Quantity Spilled:	0
Units:	Not reported
Unknown Qty Spilled:	No
Quantity Recovered:	0
Unknown Qty Recovered:	False
Material:	#2 FUEL OIL
Class Type:	Petroleum
Chem Abstract Service Number:	#2 FUEL OIL
Last Date:	12/07/1994

SAFE FLIGHT INST. (Continued) **S101102311**

Num Times Material Entry In File: 24464
DEC Remarks: Not reported
Spill Cause: 3K TANK HAS GROSS LEAK. IS NOW EMPTY. USED HORNER EASY II METHOD NK TESTER WAITING FOR DEC ADVICE. PBS TO FOLLOW. TA

A2 SAFE FLIGHT W.C. AIRPORT **NY Spills** **S102151783**
SSE NEW KING STREET **N/A**
1/8-1/4 WHITE PLAINS, NY
1050 ft.
Higher Site 2 of 3 in cluster A

SPILLS:

Spill Number:	9111618	Region of Spill:	3
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	Not reported		
Spiller Address:	Not reported		
Spill Class:	Not reported		
Spill Closed Dt:	02/19/1992		
Spill Cause:	Abandoned Drums	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Local Agency	PBS Number:	Not reported
Spill Date:	02/10/1992 12:00	Reported to Dept:	02/10/1992 14:30
Cleanup Ceased:	06/18/1953		
Last Inspection:	Not reported		

Cleanup Meets Standard: True
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 03/05/1992
Is Updated: False
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 02/19/1992
Date Region Sent Summary to Central Office: Not reported
Tank Test:
- PBS Number: Not reported
- Tank Number: Not reported
- Test Method: Not reported
- Capacity of Failed Tank: Not reported
- Leak Rate Failed Tank: Not reported
- Gross Leak Rate: Not reported

Material:
- Material Class Type: 1
- Quantity Spilled: 0
- Units: Not reported
- Unknown Qty Spilled: No
- Quantity Recovered: 0
- Unknown Qty Recovered: False
- Material: UNKNOWN PETROLEUM
- Class Type: Petroleum
- Chem Abstract Service Number: UNKNOWN PETROLEUM
- Last Date: 09/29/1994

SAFE FLIGHT W.C. AIRPORT (Continued) **S102151783**

Num Times Material Entry In File: 16414
Remark: 09/27/95: This is additional information about material spilled from th e translation of the old spill file: DRUM.
DEC Remarks: 55 GAL DRUM OF UNKNOWN SUBSTANCE IS LEAKING CARLOS TORRES FROM WCHD RESP ONDED THEY OVERPACKED DRUM SAFETY-CLEAN SAMPLING AND WILL REMOVE

A3 **SAFE FLIGHT INSTRUMENT CORP** **RCRIS-SQG 1000196682**
SSE **20 NEW KING ST** **FINDS NYD001221530**
1/8-1/4 **WHITE PLAINS, NY 10602**
1050 ft.
Higher **Site 3 of 3 in cluster A**

RCRIS:
Owner: LEONARD GREENE
(212) 555-1212
EPA ID: NYD001221530
Contact: RICHARD SCHMITT
(914) 946-9500
Classification: Small Quantity Generator
Used Oil Recyc: No
TSDF Activities: Not reported

Violation Status: No violations found

NY MANIFEST
Additional detail is available in NY MANIFEST. Please contact your EDR Account Executive for more information.

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Facility Registry System (FRS)
Resource Conservation and Recovery Act Information system (RCRAINFO)

B4 **WEST SHOULDER OF RT. 684** **NY Spills S102107301**
SW **I684 1/2 MILE S OF EXIT#2** **N/A**
1/8-1/4 **HARRISON, NY**
1053 ft.
Lower **Site 1 of 3 in cluster B**

SPILLS:

Spill Number:	8904956	Region of Spill:	3
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	TODD GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	Not reported		
Spiller Address:	Not reported		
Spill Class:	Not reported		
Spill Closed Dt:	11/29/1989		
Spill Cause:	Deliberate	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Unknown
Spill Notifier:	Police Department	PBS Number:	Not reported
Spill Date:	08/17/1989 12:45	Reported to Dept:	08/18/1989 11:15
Cleanup Ceased:	11/29/1989		
Last Inspection:	Not reported		
Cleanup Meets Standard:	True		

WEST SHOULDER OF RT. 684 (Continued) **S102107301**

Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 11/29/1989
Is Updated: False
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 08/22/1989
Date Region Sent Summary to Central Office: Not reported
Tank Test:
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Capacity of Failed Tank: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported
Material:
Material Class Type: 1
Quantity Spilled: 3
Units: Gallons
Unknown Qty Spilled: 3
Quantity Recovered: 0
Unknown Qty Recovered: False
Material: UNKNOWN PETROLEUM
Class Type: Petroleum
Chem Abstract Service Number: UNKNOWN PETROLEUM
Last Date: 09/29/1994
Num Times Material Entry In File: 16414
Remarks: Not reported
DEC Remarks: ARMONK FIRE DEPT. NOTIFIED NYS POLICE STEVEN MANWINKIE, WC HAZ MAT, WC HD WERE ON SITE. CLEANED UP, MATERIAL IGNITED, SMALL GRASS FIRE, MATERIA L IS IN 3 GAL CONTAINER, DOT WILL DISPOSE.

B5 **RT 684 NORTH AT EXIT 2** **NY Spills** **S102446888**
SW **RT 684 NORTH AT EXIT 2** **N/A**
1/8-1/4 **HARRISON, NY**
1053 ft.
Lower **Site 2 of 3 in cluster B**

SPILLS:

Spill Number:	9609304	Region of Spill:	3
Facility Contact:	DISP BURESS	Facility Tele:	(914) 377-3651
Investigator:	GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	UNKNOWN		
Spiller Address:	Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	10/25/1996		
Spill Cause:	Traffic Accident	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Commercial Vehicle
Spill Notifier:	Police Department	PBS Number:	Not reported
Spill Date:	10/25/1996 07:15	Reported to Dept:	10/25/1996 07:56
Cleanup Ceased:	Not reported		

RT 684 NORTH AT EXIT 2 (Continued) **S102446888**

Last Inspection: 19961025
Cleanup Meets Standard: True
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 12/05/1996
Is Updated: False
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 10/25/1996
Date Region Sent Summary to Central Office: Not reported
Tank Test:
PBS Number: Not reported
Tank Number: Not reported
Test Method: Not reported
Capacity of Failed Tank: Not reported
Leak Rate Failed Tank: Not reported
Gross Leak Rate: Not reported
Material:
Material Class Type: 1
Quantity Spilled: 75
Units: Gallons
Unknown Qty Spilled: 75
Quantity Recovered: 0
Unknown Qty Recovered: False
Material: DIESEL
Class Type: Petroleum
Chem Abstract Service Number: DIESEL
Last Date: 07/28/1994
Num Times Material Entry In File: 10625
Remark: 10/25/96 SECOND TRACTOR TRAILER HIT AXELROD RUPTURED HIS TANK; NONRECOVERABLE, CLEANED UP.
DEC Remarks: HIT AND RUN DRIVER LOST PART OF HIS LOAD AFTER HITTING AXELROD **********REQUEST CALL - ASAP**********

B6 **NYSDOT BIN 1052960** **RCRIS-SQG 1000790475**
SW **CO RTE 135 AIRPORT RD** **FINDS NYD987019593**
1/8-1/4 **NORTH CASTLE, NY 10504**
1118 ft.
Lower **Site 3 of 3 in cluster B**

RCRIS:
Owner: NYSDOT
(914) 431-5743
EPA ID: NYD987019593
Contact: RICHARD MANNS
(914) 431-5743
Classification: Small Quantity Generator
Used Oil Recyc: No
TSDF Activities: Not reported

NYSDOT BIN 1052960 (Continued) **1000790475**

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
Resource Conservation and Recovery Act Information system (RCRAINFO)

C7 **OFFICE BLDG** **LTANKS** **S103558242**
SSE **4 NEW KING ST** **N/A**
1/4-1/2 **WHITE PLAINS, NY**
1604 ft.
Higher **Site 1 of 2 in cluster C**

LTANKS:

Spill Number:	9809692	Region of Spill:	3
Facility Contact:	TOM CAFFERTY	Facility Tele:	(914) 697-7654
Investigator:	WCHD	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	OFFICE BLDG		
Spiller Address:	4 NEW KING ST WHITE PLAINS, NY		
Spill Class:	Not reported		
Spill Closed Dt:	Not reported		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	Not reported
Spill Date:	11/02/1998 13:10	Reported to Dept:	11/02/1998 15:05
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		

Cleanup Meets Standard: False
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 02/18/1999
Is Updated: False
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 11/02/1998
Date Region Sent Summary to Central Office: Not reported

Tank Test:
PBS Number: Not reported
Tank Number: 1
Test Method: Horner EZ Check
Capacity of Failed Tank: 2000
Leak Rate Failed Tank: 0.00
Gross Leak Rate: Talk Test Failures only pass or fail

Material:
Material Class Type: 1
Quantity Spilled: 0
Units: Gallons
Unknown Qty Spilled: No
Quantity Recovered: 0
Unknown Qty Recovered: False
Material: #4 FUEL OIL

OFFICE BLDG (Continued) **S103558242**

Class Type: Petroleum
Chem Abstract Service Number: #4 FUEL OIL
Last Date: 12/05/1994
Num Times Material Entry In File: 1751
DEC Remarks: Not reported
Spill Cause: REOMMEND UNCOVER TANK - ISOLATE FOR RETEST

C8 **LTANKS** **S104621025**
SSE **1 NEW KING STREET** **N/A**
1/4-1/2 **WHITE PLAINS, NY**
1668 ft.
Higher **Site 2 of 2 in cluster C**

LTANKS:

Spill Number:	0000953	Region of Spill:	3
Facility Contact:	KAREN	Facility Tele:	(914) 681-5100
Investigator:	WCDOH	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	SAME		
Spiller Address:	Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	02/07/2001		
Spill Cause:	Tank Test Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Tank Tester	PBS Number:	3-800643
Spill Date:	04/24/2000 12:30	Reported to Dept:	04/24/2000 13:12
Cleanup Ceased:	Not reported		
Last Inspection:	Not reported		

Cleanup Meets Standard: True
Recommended Penalty: No Penalty
Spiller Cleanup Date: Not reported
Enforcement Date: Not reported
Investigation Complete: Not reported
UST Involvement: False
Spill Record Last Update: 02/26/2001
Is Updated: False
Corrective Action Plan Submitted: Not reported
Date Spill Entered In Computer Data File: 04/24/2000
Date Region Sent Summary to Central Office: Not reported

Tank Test:
- PBS Number: Not reported
- Tank Number: Not reported
- Test Method: Not reported
- Capacity of Failed Tank: Not reported
- Leak Rate Failed Tank: Not reported
- Gross Leak Rate: Not reported

Material:
- Material Class Type: 1
- Quantity Spilled: 0
- Units: Gallons
- Unknown Qty Spilled: No
- Quantity Recovered: 0
- Unknown Qty Recovered: True
- Material: #2 FUEL OIL

(Continued) **S104621025**

Class Type: Petroleum
Chem Abstract Service Number: #2 FUEL OIL
Last Date: 12/07/1994
Num Times Material Entry In File: 24464
DEC Remarks: 11/14/2000 LETTER SENT TO PITNEY BOWES, INC. BY B. MCDONALD WCDOH); CL OSURE REPORT SUBMITTED BY DUTCHESS ENV. CONSTRUCTION HAS BEEN REVIEWED - ANALYSIS INDICATES THAT PETROLEUM CONTAMINATION IN EXCESS OF STATE GUIDE LINES REMAINS IN THE EXCAVATION.02/07/2001 LETTER SENT TO PITNEY BOWES BY B. MCDONALD WCDOH);BASED ON REPORTS FROM DUTCHESS AND LBG, THE WCDOH REQUIRES NO FURTHER ACTION REGARDING THE WORK PERFORMED.
Spill Cause: tank test failure will retest later

D9 **CT Spills** **S104033118**
ENE **23 BEDFORD RD** **N/A**
1/4-1/2 **GREENWICH, CT**
1971 ft.
Higher **Site 1 of 2 in cluster D**

SPILL:

Case Number:	9807595	OCSRD Inspector:	Not reported
Year of Database:	1998	Town of Spill:	Not reported
Report Date:	11/06/98	Reported By:	ED MARIN
Work Telephone:	Not reported	Home Telephone:	Not reported
Representing:	ABSOLUTE TANK REMOVAL		
Telephone Pole#:	Not reported		
Incident Type:	Not reported		
Substance:	#2 FUEL OIL		
Qty (Gallon):	0	Qty (Yard):	0
Qty (Pound):	0	Qty (Drum):	0
Qty (Feet):	Not reported	Concentration:	Not reported
CERCLA:	Not reported		
SARA 304 Rel:	Not reported	SARA Haz Sub:	Not reported
Cross Property:	Not reported	Protective Actions:	Not reported
Action Desc:	Not reported		
Qty Reported:	Not reported	Total (Pound):	Not reported
Spill Date:	Not reported	Spill Time:	Not reported
On Going:	Not reported	Continuous Spill:	Not reported
Release Status:	Terminated		
Misc Info:	Not reported		
Water Body:	N/A		
Other Media:	Not reported		
Release Area:	Not reported		
Total (Water):	Not reported	Recovd (Water):	Not reported
Recovd (Total)::	Not reported	Dun & Bradst#:	Not reported
Polluter:	Not reported		
Polluter Phone:	Not reported		

Financial Responsibility:	Not reported
Unknown Responsibility:	Not reported
Unknown Polluter:	Not reported
Cleanup Contractor:	Not reported
Contractor Name:	Not reported
Did DEP Hire Contractor:	Not reported
Date Contractor Hired:	Not reported
When Contractor Requested:	Not reported
When Contractor Arrived:	Not reported
Who Took Spill:	914- PORTER, JOHN
Badge # of Who Recieved Spill:	Not reported
Who Assigned Spill:	0- **NO RESPONSE
Badge # of Who Assigned Spill:	Not reported

(Continued) **S104033118**

Date Assigned:	Not reported		
Spill Status:	Not reported		
Facility Status:	Closed		
Emergency Measure:	500 LUST : TANK & SOIL REMOVAL, NO WATER, NO FREE PRODUCT, 370 PPM		
Cleanup Action:	Not reported		
UST Unit:	Not reported		
Agency Notified:	Not reported		
Other Agency:	Not reported	Notify Other:	Not reported
State Agency:	Not reported	Notify Date:	Not reported
Discharge Class:	Not reported		
Other Class:	Not reported		
Cause:	Not reported		
Other Cause:	Not reported		
Actions:	Not reported		
Other Actions:	Not reported		
Notify Status:	Not reported	Case 1136:	Not reported
Case #1:	Not reported	Case #2:	Not reported
Federal 311K:	Not reported	Cost Recovery:	Not reported
Property Owner:	Not reported		
Property Other:	Not reported		
Property Name:	Not reported		
Property Addr:	Not reported		
Polluter:	Not reported		
Owner:	Not reported		
Operator:	Not reported		
Vehicle:	Not reported		
Truck Reg:	Not reported	Trail Reg:	Not reported
Updated:	Not reported	Update Date:	Not reported
Assigned To:	Not reported		
Lat/Long:	Not reported		
Add Info:	Not reported		
Discharger:	US INSPECT	Telephone:	(703)293-1466
Responsible Party:	YES		
Released Substance:	Not reported		
RP Address:	3975 FAIR RIDGE DRIVE FAIRFAX, VA		
Corrective Action:	Removed Tank Soil Removed		
Agency Notified:	Not reported		
Cause of Incident:	Inground Tank Failure		
Media:	SOIL		
Release Class:	Not reported		
Release Type:	Petroleum		
Waterbody:	Not reported		

D10
ENE **23 BEDFORD RD**
1/4-1/2 **GREENWICH, CT**
1971 ft.
Higher **Site 2 of 2 in cluster D**

LUST **S104239768**
N/A

LUST:

Facility Id:	Not reported		
Fed Regulated:	Not Reported	Release Date:	Not reported
Removal:	Not Reported	Leak:	Not Reported
Inspector:	Not reported	Tank Release:	Not Reported
Emergency:	Not Reported	Referral:	Not reported
Product:	Not reported	1136 Fund:	Not Reported
Pipe Release:	Not Reported	Overfill Release:	Not Reported

(Continued) **S104239768**

Remediation: Not reported
Complete: Not Reported
by Resp Party: Not Reported
Comment: Not reported

11
SE
1/2-1
4621 ft.
Higher

LAURELTON CONVALESCENT HOME **LWDS** **W991103086**
SEWAGE TREAT PLANT **N/A**
, CT

LWDS:
ArcView Legend Symbology: SEWAGE PLT
Leachate and Wastewater Name: SEWAGE TREAT PLANT
Leachate and Wastewater Number: 7412001
Status of the Discharge Activity: ACTIVE
Leachate and Waste Flow: SURFACE
Feature Number on Hazardous Waste List: 0
Subregional Basin Feature Number: 7412
Name: Laurelton Convalescent Home
Alias: Not reported
Description: STP
Lat/Long: 41.07348 / -73.70183
State Plane x/y: 737556 / 588945
Mercator x/y: -21523326.27234 / 13104021.75004

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)	Facility ID
ARMONK	S105140591		RT 120/GATEWAY LN	10504	NY Spills	
ARMONK	S102109388	RESERVOIR	RT. 684 / RT. 120	10504	NY Spills	
ARMONK	S102401109	CANYON CLUB	BEDFORD STATE RD	10504	NY Spills	
ARMONK	S103483841	IBM CORPORATION	NORTH CASTLE DRIVE	10504	NY Spills	
ARMONK	S102664202	IBM FACILITY	NEW ORCHARD RD	10504	NY Spills	
BRADSHAW	U003365285	BRADSHAW SERVICE	301 W HWY 34	06831	LUST, UST	
GREENWICH	S104239665		1248 KING ST # 1252	06831	LUST	
HARRISON	U003648407	HARRISON COURT	220-230 WESTCHESTER AVE.	10604	UST	
NORTH CASTLE	S102103681	RT. 120	RT. 120	10504	NY Spills	
NORTH CASTLE	S102105149	BUDGET RENT A CAR	RT. 120 / 684	10504	NY Spills	
NORTH CASTLE	S100781335	AIRPORT FUEL FARM	RT. 684	10504	LTANKS	
NORTH CASTLE	S105114264	ARMONK PRIVATE WELLS	VICINITY OF MAPLE AVE. MAIN ST	10504	SHWS	
WHITE PLAINS	S105156390	FORMER NYANG SEPTIC FIELD	AIRPORT ROAD, WESTCHESTER COUN	10604	VCP	
WHITE PLAINS	S103573173	WESTAIR FLIGHT SCHOOL	100 NEW KING STREET	10604	NY Spills	
WHITE PLAINS	1004757336	JOSEPH E SEAGRAM & SONS	WESTCHESTER CO ARPRT HANGAR 6	10604	RCRIS-SQG	
WHITE PLAINS	S104788793	MANHOLE 4649	423 WESTCHESTER AVE	10604	NY Spills	
WHITE PLAINS	U003647655	NATIONAL CAR RENTAL SYSTEM, INC.	WESTCHESTER COUNTY AIRPORT	10604	UST	
WHITE PLAINS	U003647752	FASHION MALL AT WHITE PLAINS	WESTCHESTER AVE. & PAULING ST.	10604	UST	
WHITE PLAINS	U003648112	WEST PARK I LLC	1111 WESTCHESTER AVE # 1113	10604	UST	
WHITE PLAINS	U003648387	HARRISON COURT	222 WESTCHESTER AVE # 230	10604	UST	

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in a county/local unique database

DATABASE: State/County (LOCAL)

RESERVOIR
RT. 684 / RT. 120
ARMONK, NY
EDR ID #S102109388

Database: NY SPILLS

SPILLS:

Spill Number:	9400142	Region of Spill:	3
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	Not reported		
Spiller Address:	Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	04/07/1994		
Spill Cause:	Traffic Accident	Resource Affected:	Surface Water
Water Affected:	RESERVIOR	Spill Source:	Commercial Vehicle
Spill Notifier:	Fire Department	PBS Number:	Not reported
Spill Date:	04/04/1994 18:50	Reported to Dept:	04/04/1994 19:58
Cleanup Ceased:	04/07/1994		
Last Inspection:	Not reported		

Cleanup Meets Standard:	False
Recommended Penalty:	No Penalty
Spiller Cleanup Date:	Not reported
Enforcement Date:	Not reported
Investigation Complete:	Not reported
UST Involvement:	False
Spill Record Last Update:	Not reported
Is Updated:	False
Corrective Action Plan Submitted:	Not reported
Date Spill Entered In Computer Data File:	04/07/1994
Date Region Sent Summary to Central Office:	Not reported

Tank Test:

PBS Number:	Not reported
Tank Number:	Not reported
Test Method:	Not reported
Capacity of Failed Tank:	Not reported
Leak Rate Failed Tank:	Not reported
Gross Leak Rate:	Not reported

Material:

Material Class Type:	1
Quantity Spilled:	40
Units:	Gallons
Unknown Qty Spilled:	40
Quantity Recovered:	0
Unknown Qty Recovered:	False
Material:	JET FUEL
Class Type:	Petroleum
Chem Abstract Service Number:	JET FUEL
Last Date:	07/28/1994
Num Times Material Entry In File:	1264

Remarks: Not reported

DEC Remarks: SMALL PLANE CRASHED IN RESERVOIR ARMONK PORTCHESTER PURCHASE FD ON SCE NE W.C. POLICE NYSP ON SCENE ATTEMPTING TO RECOVER AIRCRAFT NYC DEP AL SO ON SCENE PLANE WAS RAISED THIS AM

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in a county/local unique database

DATABASE: State/County (LOCAL)

BUDGET RENT A CAR
RT. 120 / 684
NORTH CASTLE, NY
EDR ID #S102105149

Database: NY SPILLS

SPILLS:

Spill Number:	9210909	Region of Spill:	3
Facility Contact:	Not reported	Facility Tele:	Not reported
Investigator:	GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	Not reported	Spiller Phone:	Not reported
Spiller:	SAME		
Spiller Address:	Not reported		
Spill Class:	Known release with minimal potential for fire or hazard. DEC Response. Willing Responsible Party. Corrective action taken.		
Spill Closed Dt:	03/08/1993		
Spill Cause:	Equipment Failure	Resource Affected:	On Land
Water Affected:	Not reported	Spill Source:	Other Commercial/Industrial
Spill Notifier:	Affected Persons	PBS Number:	Not reported
Spill Date:	12/21/1992 10:45	Reported to Dept:	12/21/1992 11:10
Cleanup Ceased:	03/08/1993		
Last Inspection:	Not reported		

Cleanup Meets Standard:	False
Recommended Penalty:	No Penalty
Spiller Cleanup Date:	Not reported
Enforcement Date:	Not reported
Investigation Complete:	Not reported
UST Involvement:	False
Spill Record Last Update:	03/08/1993
Is Updated:	False
Corrective Action Plan Submitted:	Not reported
Date Spill Entered In Computer Data File:	12/29/1992
Date Region Sent Summary to Central Office:	Not reported

Tank Test:

PBS Number:	Not reported
Tank Number:	Not reported
Test Method:	Not reported
Capacity of Failed Tank:	Not reported
Leak Rate Failed Tank:	Not reported
Gross Leak Rate:	Not reported

Material:

Material Class Type:	1
Quantity Spilled:	3
Units:	Gallons
Unknown Qty Spilled:	3
Quantity Recovered:	0
Unknown Qty Recovered:	False
Material:	GASOLINE
Class Type:	Petroleum
Chem Abstract Service Number:	GASOLINE
Last Date:	09/29/1994
Num Times Material Entry In File:	21329

Remarks: Not reported

DEC Remarks: FITTING AT DISPENSER LEAKED TO PAVEMENT SPEEDI-DRI APPLIED AND WILL DISP OSE SKID TANK AND TEMP DISPENSER SET UP

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in a county/local unique database

DATABASE: State/County (LOCAL)

FORMER NYANG SEPTIC FIELD
AIRPORT ROAD, WESTCHESTER COUNTY AIRPORT
WHITE PLAINS, NY 10604
EDR ID #S105156390

Database: NY VCP

NY VCP:

Facility ID	V00499-3
Agreement Type	VCP
Date Signed	11/02/2001
Volunteer	WESTCHESTER COUNTY AIRPORT

SECTION 2: FACILITY DETAIL REPORTS

MULTIMEDIA

Facility is listed in a county/local unique database

DATABASE: State/County (LOCAL)

WESTAIR FLIGHT SCHOOL
100 NEW KING STREET
WHITE PLAINS, NY
EDR ID #S103573173

Database: NY SPILLS

SPILLS:

Spill Number:	9809015	Region of Spill:	3
Facility Contact:	MIKE	Facility Tele:	(914) 946-0192
Investigator:	GHIOSAY	SWIS:	55
Caller Name:	Not reported	Caller Agency:	Not reported
Caller Phone:	Not reported	Caller Extension:	Not reported
Notifier Name:	Not reported	Notifier Agency:	Not reported
Notifier Phone:	Not reported	Notifier Extension:	Not reported
Spiller Contact:	MIKE CIRCOSTA	Spiller Phone:	(914) 285-2573
Spiller:	WESTCHESTER COUNTY DPW		
Spiller Address:	MARTINE AVENUE WHITE PLAINS, NY		
Spill Class:	Known release that creates potential for fire or hazard. (Highly Improbable)		
Spill Closed Dt:	03/16/2000		
Spill Cause:	Housekeeping	Resource Affected:	Groundwater
Water Affected:	Not reported	Spill Source:	Other Non Commercial/Industrial
Spill Notifier:	Other	PBS Number:	Not reported
Spill Date:	10/20/1998 09:00	Reported to Dept:	10/20/1998 09:09
Cleanup Ceased:	Not reported		
Last Inspection:	20000217		

Cleanup Meets Standard:	False
Recommended Penalty:	No Penalty
Spiller Cleanup Date:	Not reported
Enforcement Date:	Not reported
Investigation Complete:	Not reported
UST Involvement:	False
Spill Record Last Update:	03/16/2000
Is Updated:	False
Corrective Action Plan Submitted:	Not reported
Date Spill Entered In Computer Data File:	10/20/1998
Date Region Sent Summary to Central Office:	Not reported

Tank Test:

PBS Number:	Not reported
Tank Number:	Not reported
Test Method:	Not reported
Capacity of Failed Tank:	Not reported
Leak Rate Failed Tank:	Not reported
Gross Leak Rate:	Not reported

Material:

Material Class Type:	1
Quantity Spilled:	0
Units:	Gallons
Unknown Qty Spilled:	No
Quantity Recovered:	0
Unknown Qty Recovered:	True
Material:	JET FUEL
Class Type:	Petroleum
Chem Abstract Service Number:	JET FUEL
Last Date:	07/28/1994
Num Times Material Entry In File:	1264

Remark: 3-16-00 Closed by RDB, refer to spill 98-11689 Hangar B at the WCA wor kplan to be submited by 4-1-00

DEC Remarks: SOIL AND GROUNDWATER CONTAMINATION FOUND DURING REMOVAL OF TWO 3000 GALL ON TANKS. SOIL TO BE STOCKPILED AS NECESSARY. FREE PRODUCT TO BE VACUU MED OUT OF GROUNDWATER. SAMPLES TO BE TAKEN. FURTHER REMEDIATION TO FO LLOW AS NECESSARY. 12/11/98 SOOIL CLEANED UP. AWAITING REPORT OF SO IL CONTAMINATION.

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility generates hazardous waste

DATABASE: Resource Conservation and Recovery Information System (RCRIS)

JOSEPH E SEAGRAM & SONS
WESTCHESTER CO ARPRT HANGAR 6
WHITE PLAINS, NY 10604
EDR ID #1004757336

Facility Name: JOSEPH E SEAGRAM & SONS
WESTCHESTER CO ARPRT HANGAR 6
WHITE PLAINS, NY 10604

Contact: TIMOTHY ROBINSON, SUPV
(914) 683-3641

EPA-ID: NYD986929180

Rank Date: Not reported
Rank Status: Not reported

Classification: Conditionally Exempt Small Quantity Generator

Description: Handler:
- generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or
- generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time:
  - 1 kg or less of acutely hazardous waste; or
  - 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or
- generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time:
  - 1 kg or less of acutely hazardous waste; or
  - 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Legal Status: Private

Owner: JOSEPH E SEAGRAM & SONS
NOT REQUIRED
NOT REQUIRED, WY 21255 - 5121
(212) 555-1212

NY MANIFEST DATA

Document ID:	NJA0810349	Manifest Status:	K
Trans1 State ID:	NJDEPS869	Trans2 State ID:	Not reported
Generator Ship Date:	11/01/90	Trans1 Recv Date:	11/01/90
Trans2 Recv Date:	Not reported	TSD Site Recv Date:	11/07/90
Part A Recv Date:	12/04/90	Part B Recv Date:	12/26/90
Generator EPA ID:	NYD986929180	Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	Not reported	TSDF ID:	NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00950 Pounds	003	Metal drums, barrels	Burn	100

Document ID:	NJA0993485	Manifest Status:	K
Trans1 State ID:	NJDEPS869	Trans2 State ID:	NJDEPS869
Generator Ship Date:	03/14/91	Trans1 Recv Date:	03/14/91
Trans2 Recv Date:	03/19/91	TSD Site Recv Date:	03/20/91
Part A Recv Date:	08/21/91	Part B Recv Date:	04/02/91
Generator EPA ID:	NYD986929180	Trans1 EPA ID:	ILD051060408
Trans2 EPA ID:	ILD051060408	TSDF ID:	NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00465 Pounds	001	Metal drums, barrels	Burn	100

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Document ID: NJA1128157
Trans1 State ID: NJDEPS869
Generator Ship Date: 07/26/91
Trans2 Recv Date: Not reported
Part A Recv Date: 08/21/91
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 07/26/91
TSD Site Recv Date: 07/30/91
Part B Recv Date: 08/14/91
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	02222 Pounds	005	Metal drums, barrels	Burn	100

Document ID: NJA1319954
Trans1 State ID: NJDEPS869
Generator Ship Date: 12/18/91
Trans2 Recv Date: 12/19/91
Part A Recv Date: 01/17/92
Generator EPA ID: NYD986929180
Trans2 EPA ID: ILD051060408
Manifest Status: C
Trans2 State ID: NJDEPS869
Trans1 Recv Date: 12/18/91
TSD Site Recv Date: 12/19/91
Part B Recv Date: 01/06/92
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00888 Pounds	002	Metal drums, barrels	Burn	100

Document ID: NJA1067878
Trans1 State ID: NJDEPS869
Generator Ship Date: 10/18/91
Trans2 Recv Date: 10/21/91
Part A Recv Date: 11/01/91
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 10/18/91
TSD Site Recv Date: 10/22/91
Part B Recv Date: 11/25/91
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00854 Pounds	002	Metal drums, barrels	Burn	100

Document ID: NJA1375678
Trans1 State ID: NJDEPS869
Generator Ship Date: 02/21/92
Trans2 Recv Date: Not reported
Part A Recv Date: 03/03/92
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 02/21/92
TSD Site Recv Date: 02/25/92
Part B Recv Date: 03/25/92
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA1212603
Trans1 State ID: NJDEPS869
Generator Ship Date: 04/09/92
Trans2 Recv Date: Not reported
Part A Recv Date: 04/17/92
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 04/09/92
TSD Site Recv Date: 04/21/92
Part B Recv Date: 06/10/92
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA1422206
Trans1 State ID: NJDEPS869
Generator Ship Date: 11/05/92
Trans2 Recv Date: Not reported
Part A Recv Date: 11/20/92
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 11/05/92
TSD Site Recv Date: 11/11/92
Part B Recv Date: 11/23/92
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA1447355
Trans1 State ID: NJDEPS869
Generator Ship Date: 07/10/92
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 07/10/92
TSD Site Recv Date: 07/15/92
Part B Recv Date: 07/30/92
Trans1 EPA ID: ILD051060408
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00889 Pounds	002	Metal drums, barrels	Burn	100

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Document ID: NJA1438837
Trans1 State ID: NJDEPS869
Generator Ship Date: 06/03/93
Trans2 Recv Date: Not reported
Part A Recv Date: 06/17/93
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 06/03/93
TSD Site Recv Date: 06/09/93
Part B Recv Date: 06/21/93
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00888 Pounds	002	Metal drums, barrels	Burn	100

Document ID: NJA1636884
Trans1 State ID: NJDEPE086
Generator Ship Date: 03/02/94
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 03/02/94
TSD Site Recv Date: 03/07/94
Part B Recv Date: 03/18/94
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	01332 Pounds	003	Metal drums, barrels	Burn	100

Document ID: NJA1762667
Trans1 State ID: NJDEPE086
Generator Ship Date: 09/22/94
Trans2 Recv Date: Not reported
Part A Recv Date: 09/29/94
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 09/22/94
TSD Site Recv Date: 09/26/94
Part B Recv Date: 10/07/94
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00889 Pounds	002	Metal drums, barrels	Burn	100

Document ID: NJA1936422
Trans1 State ID: NJDEPES86
Generator Ship Date: 03/17/95
Trans2 Recv Date: Not reported
Part A Recv Date: 04/04/95
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 03/17/95
TSD Site Recv Date: 03/24/95
Part B Recv Date: 04/04/95
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2141269
Trans1 State ID: NJDEPES86
Generator Ship Date: 07/14/95
Trans2 Recv Date: Not reported
Part A Recv Date: 07/20/95
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 07/14/95
TSD Site Recv Date: 07/24/95
Part B Recv Date: 08/08/95
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2141282
Trans1 State ID: NJDEPE086
Generator Ship Date: 12/12/95
Trans2 Recv Date: Not reported
Part A Recv Date: 12/20/95
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 12/12/95
TSD Site Recv Date: 12/18/95
Part B Recv Date: 01/09/96
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2254192
Trans1 State ID: 8690
Generator Ship Date: 05/16/96
Trans2 Recv Date: 05/21/96
Part A Recv Date: 05/28/96
Generator EPA ID: NYD986929180
Trans2 EPA ID: NYD980769947
Manifest Status: C
Trans2 State ID: S0607
Trans1 Recv Date: 05/16/96
TSD Site Recv Date: 05/21/96
Part B Recv Date: 06/06/96
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Document ID: NJA2254258
Trans1 State ID: 08690
Generator Ship Date: 02/13/96
Trans2 Recv Date: Not reported
Part A Recv Date: 02/28/96
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 02/13/96
TSD Site Recv Date: 02/19/96
Part B Recv Date: 03/06/96
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NYC3778637
Trans1 State ID: ILP188420
Generator Ship Date: 10/03/96
Trans2 Recv Date: 10/11/96
Part A Recv Date: 10/18/96
Generator EPA ID: NYD986929180
Trans2 EPA ID: MOD095038998
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 10/03/96
TSD Site Recv Date: 10/12/96
Part B Recv Date: 11/08/96
Trans1 EPA ID: ILD984908202
TSDF ID: KYD053348108

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
D018	00133 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2505428
Trans1 State ID: 8690
Generator Ship Date: 09/20/96
Trans2 Recv Date: Not reported
Part A Recv Date: 10/11/96
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 09/20/96
TSD Site Recv Date: 09/25/96
Part B Recv Date: 10/18/96
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00445 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2706568
Trans1 State ID: 08690
Generator Ship Date: 09/10/97
Trans2 Recv Date: Not reported
Part A Recv Date: 09/26/97
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 09/10/97
TSD Site Recv Date: 09/15/97
Part B Recv Date: 10/03/97
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00439 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2666770
Trans1 State ID: 08690
Generator Ship Date: 05/28/97
Trans2 Recv Date: Not reported
Part A Recv Date: 06/09/97
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: C
Trans2 State ID: Not reported
Trans1 Recv Date: 05/28/97
TSD Site Recv Date: 06/02/97
Part B Recv Date: 06/16/97
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00439 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2666708
Trans1 State ID: 08690
Generator Ship Date: 01/31/97
Trans2 Recv Date: Not reported
Part A Recv Date: 02/28/97
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 01/31/97
TSD Site Recv Date: 02/10/97
Part B Recv Date: 02/26/97
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00439 Pounds	001	Metal drums, barrels	Burn	100

Document ID: NJA2820269
Trans1 State ID: 08690
Generator Ship Date: 12/22/97
Trans2 Recv Date: Not reported
Part A Recv Date: 01/20/98
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: K
Trans2 State ID: Not reported
Trans1 Recv Date: 12/22/97
TSD Site Recv Date: 12/29/97
Part B Recv Date: 01/20/98
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00439 Pounds	001	Metal drums, barrels	Burn	100

Document ID	TXA0306871	Manifest Status:	C
Trans1 State ID	9305	Trans2 State ID:	4355
Generator Ship Date	032397	Trans1 Recv Date	07/30/97
Trans2 Recv Date:	110197	TSD Site Recv Date:	07/30/97
Part A Recv Date	No reported	Part B Recv Date:	07/30/97
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	NC[illegible]5503993	TSDF ID	[illegible]D001736871

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0175 Tons	1	Metal drums, barrels	[illegible]	1.0

Document ID	CTF0188031	Manifest Status:	Unreported
Trans1 State ID	1[illegible]0308	Trans2 State ID:	Unreported
Generator Ship Date	031798	Trans1 Recv Date	03/17/98
Trans2 Recv Date:	No reported	TSD Site Recv Date:	03/17/98
Part A Recv Date	No reported	Part B Recv Date:	Unreported
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	No reported	TSDF ID	CT[illegible]0115003

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0175 Tons	1	Metal drums, barrels	[illegible]	[illegible]

Document ID	NJA[illegible]	Manifest Status:	Unreported
Trans1 State ID	3080	Trans2 State ID:	Unreported
Generator Ship Date	030198	Trans1 Recv Date	03/07/98
Trans2 Recv Date:	No reported	TSD Site Recv Date:	03/17/98
Part A Recv Date	No reported	Part B Recv Date:	Unreported
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	No reported	TSDF ID	NJD002182897

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0475 Tons	1	Metal drums, barrels	[illegible]	[illegible]

Document ID	NJA[illegible]718	Manifest Status:	Not reported
Trans1 State ID	3080	Trans2 State ID:	Not reported
Generator Ship Date	031798	Trans1 Recv Date	[illegible]/98
Trans2 Recv Date:	No reported	TSD Site Recv Date:	[illegible]/98
Part A Recv Date	No reported	Part B Recv Date:	Not reported
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	No reported	TSDF ID	NJD002182897

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0475 Tons	1	Metal drums, barrels	[illegible]	[illegible]

Document ID	NJA[illegible]253	Manifest Status:	Not reported
Trans1 State ID	3080	Trans2 State ID:	Not reported
Generator Ship Date	032[illegible]98	Trans1 Recv Date	[illegible]/98
Trans2 Recv Date:	No reported	TSD Site Recv Date:	[illegible]/98
Part A Recv Date	No reported	Part B Recv Date:	Not reported
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	No reported	TSDF ID	NJD002182897

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0475 Tons	1	Metal drums, barrels	[illegible]	[illegible]

Document ID	NJA[illegible]193	Manifest Status:	Not reported
Trans1 State ID	3080	Trans2 State ID:	Not reported
Generator Ship Date	1[illegible]98	Trans1 Recv Date	[illegible]/98
Trans2 Recv Date:	No reported	TSD Site Recv Date:	[illegible]/98
Part A Recv Date	No reported	Part B Recv Date:	Not reported
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	No reported	TSDF ID	NJD002182897

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0475 Tons	1	Metal drums, barrels	[illegible]	[illegible]

Document ID	NJA[illegible]194	Manifest Status:	Not reported
Trans1 State ID	3080	Trans2 State ID:	[illegible]
Generator Ship Date	121798	Trans1 Recv Date	12/[illegible]/98
Trans2 Recv Date:	122198	TSD Site Recv Date:	12/[illegible]/98
Part A Recv Date	No reported	Part B Recv Date:	Not reported
Generator EPA ID:	NYD980592910	Trans1 EPA ID	ILD984908202
Trans2 EPA ID:	SCD[illegible]745	TSDF ID	NJD002182897

Waste Code	Quantity	Units Containers	Container Type	Handling Method	Specific Gravity
F001	0.0475 Tons	1	Metal drums, barrels	[illegible]	[illegible]

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Document ID: TXA0590678
Trans1 State ID: 88888
Generator Ship Date: 09/26/97
Trans2 Recv Date: 10/01/97
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: MOD095038998
Manifest Status: K
Trans2 State ID: 40355
Trans1 Recv Date: 09/26/97
TSD Site Recv Date: 10/04/97
Part B Recv Date: 10/24/97
Trans1 EPA ID: ILD984908202
TSDF ID: TXD077603371

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00111 Pounds	001	Metal drums, barrels	Burn	100

Document ID: CTF0669890
Trans1 State ID: ILP39038
Generator Ship Date: 08/17/1998
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: Not reported
Trans2 State ID: Not reported
Trans1 Recv Date: 08/17/1998
TSD Site Recv Date: 08/19/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: CTD001156009

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00112 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2796033
Trans1 State ID: 08690
Generator Ship Date: 04/09/1998
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: Not reported
Trans2 State ID: Not reported
Trans1 Recv Date: 04/09/1998
TSD Site Recv Date: 04/16/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2797132
Trans1 State ID: 08690
Generator Ship Date: 08/17/1998
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: Not reported
Trans2 State ID: Not reported
Trans1 Recv Date: 08/17/1998
TSD Site Recv Date: 08/26/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2802584
Trans1 State ID: 08690
Generator Ship Date: 05/21/1998
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: Not reported
Trans2 State ID: Not reported
Trans1 Recv Date: 05/21/1998
TSD Site Recv Date: 05/28/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2819332
Trans1 State ID: 08690
Generator Ship Date: 10/02/1998
Trans2 Recv Date: Not reported
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: Not reported
Trans2 State ID: Not reported
Trans1 Recv Date: 10/02/1998
TSD Site Recv Date: 10/06/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2819447
Trans1 State ID: 08690
Generator Ship Date: 12/17/1998
Trans2 Recv Date: 12/21/1998
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 12/17/1998
TSD Site Recv Date: 12/28/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

SECTION 2: FACILITY DETAIL REPORTS

(Continued)

Document ID: NYC4351307 | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: 0317193 | Trans1 Recv Date: [illegible]
Trans2 Recv Date: 0321193 | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD983382819 | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: SCD98[illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	[illegible]	Metal Drums, Barrels	[illegible]	[illegible]

Document ID: TX[illegible] | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: [illegible] | Trans1 Recv Date: [illegible]
Trans2 Recv Date: [illegible] | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD983382819 | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: [illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	[illegible]	Metal Drums, Barrels	[illegible]	[illegible]

Document ID: NJA[illegible] | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: [illegible] | Trans1 Recv Date: [illegible]
Trans2 Recv Date: [illegible] | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD983382819 | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: SCD98[illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	001	Metal Drums, Barrels	Burn	[illegible]

Document ID: NJA[illegible] | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: [illegible] | Trans1 Recv Date: [illegible]
Trans2 Recv Date: [illegible] | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD98[illegible] | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: SCD98[illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	002	Metal Drums, Barrels	Burn	[illegible]

Document ID: NJA[illegible] | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: [illegible] | Trans1 Recv Date: [illegible]
Trans2 Recv Date: [illegible] | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD98[illegible] | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: SCD98[illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	001	Metal Drums, Barrels	Burn	[illegible]

Document ID: NJA[illegible] | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: [illegible] | Trans1 Recv Date: [illegible]
Trans2 Recv Date: [illegible] | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD98[illegible] | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: SCD98[illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	001	Metal Drums, Barrels	Burn	[illegible]

Document ID: TX[illegible] | Manifest Status: Unreported
Trans1 State ID: [illegible] | Trans2 State ID: [illegible]
Generator Ship Date: [illegible] | Trans1 Recv Date: [illegible]
Trans2 Recv Date: [illegible] | TSD Site Recv Date: [illegible]
Part A Recv Date: Not reported | Part B Recv Date: Unreported
Generator EPA ID: NYD98[illegible] | Trans1 EPA ID: ILD98[illegible]
Trans2 EPA ID: SCD98[illegible] | TSDF ID: [illegible]

Waste Code	Quantity	Num Containers	Container Type	Handling Method	Specific Gravity
F001	[illegible] Pounds	001	Metal Drums, Barrels	Landfill	[illegible]

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Document ID: NYC4531307
Trans1 State ID: ILP39034
Generator Ship Date: 09/17/1998
Trans2 Recv Date: 09/21/1998
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: 506TYJNJ
Trans1 Recv Date: 09/17/1998
TSD Site Recv Date: 09/25/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: OHD980587364

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00112 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: TXA0543667
Trans1 State ID: 88888
Generator Ship Date: 04/09/1998
Trans2 Recv Date: 04/15/1998
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: MOD095038998
Manifest Status: Not reported
Trans2 State ID: 40355
Trans1 Recv Date: 04/09/1998
TSD Site Recv Date: 04/18/1998
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: TXD077603371

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00113 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2819410
Trans1 State ID: 08690
Generator Ship Date: 06/28/1999
Trans2 Recv Date: 07/02/1999
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 06/28/1999
TSD Site Recv Date: 07/08/1999
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00443 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA2819459
Trans1 State ID: 08690
Generator Ship Date: 03/22/1999
Trans2 Recv Date: 03/24/1999
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: 10364
Trans1 Recv Date: 03/22/1999
TSD Site Recv Date: 03/26/1999
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00888 Pounds	002	Metal drums, barrels	Burn	01.00

Document ID: NJA3044936
Trans1 State ID: 08690
Generator Ship Date: 09/20/1999
Trans2 Recv Date: 09/23/1999
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 09/20/1999
TSD Site Recv Date: 09/27/1999
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00438 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA3044975
Trans1 State ID: 08690
Generator Ship Date: 11/05/1999
Trans2 Recv Date: 11/08/1999
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 11/05/1999
TSD Site Recv Date: 11/10/1999
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: TXA0885566
Trans1 State ID: 88888
Generator Ship Date: 05/28/1999
Trans2 Recv Date: 06/01/1999
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCD987574647
Manifest Status: Not reported
Trans2 State ID: 41747
Trans1 Recv Date: 05/28/1999
TSD Site Recv Date: 06/09/1999
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: TXD077603371

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00112 Pounds	001	Metal drums, barrels	Landfill	01.00

SECTION 2: FACILITY DETAIL REPORTS

...Continued...

Document ID: NJA3051344
Trans1 State ID: 08690
Generator Ship Date: 09/12/2000
Trans2 Recv Date: 09/14/2000
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCR000074591
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 09/12/2000
TSD Site Recv Date: 09/18/2000
Part B Recv Date: Not reported
Trans1 EPA ID: SCR000075150
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00445 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA3080375
Trans1 State ID: 08690
Generator Ship Date: 01/12/2000
Trans2 Recv Date: 01/13/2000
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCR000074591
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 01/12/2000
TSD Site Recv Date: 01/17/2000
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00445 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA3084018
Trans1 State ID: 08690
Generator Ship Date: 06/30/2000
Trans2 Recv Date: 07/03/2000
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: Not reported
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 06/30/2000
TSD Site Recv Date: 07/07/2000
Part B Recv Date: Not reported
Trans1 EPA ID: SCR000075150
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA3084130
Trans1 State ID: 08690
Generator Ship Date: 03/30/2000
Trans2 Recv Date: 04/03/2000
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCR000074591
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 03/30/2000
TSD Site Recv Date: 04/05/2000
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00444 Pounds	001	Metal drums, barrels	Recycle	01.00

Document ID: TXA0192323
Trans1 State ID: 86119
Generator Ship Date: 03/30/2000
Trans2 Recv Date: 04/03/2000
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCR000074591
Manifest Status: Not reported
Trans2 State ID: 41747
Trans1 Recv Date: 03/30/2000
TSD Site Recv Date: 04/08/2000
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: TXD077603371

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00112 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: TXA0988135
Trans1 State ID: 88888
Generator Ship Date: 01/12/2000
Trans2 Recv Date: 01/13/2000
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCR000074591
Manifest Status: Not reported
Trans2 State ID: 41747
Trans1 Recv Date: 01/12/2000
TSD Site Recv Date: 01/19/2000
Part B Recv Date: Not reported
Trans1 EPA ID: ILD984908202
TSDF ID: TXD077603371

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00115 Pounds	001	Metal drums, barrels	Burn	01.00

Document ID: NJA3163782
Trans1 State ID: 08690
Generator Ship Date: 01/04/2001
Trans2 Recv Date: 01/08/2001
Part A Recv Date: Not reported
Generator EPA ID: NYD986929180
Trans2 EPA ID: SCR000074591
Manifest Status: Not reported
Trans2 State ID: H10364
Trans1 Recv Date: 01/04/2001
TSD Site Recv Date: 01/11/2001
Part B Recv Date: Not reported
Trans1 EPA ID: SCR000075150
TSDF ID: NJD002182897

Waste Code	Quantity	Num of Containers	Container Type	Handling Method	Specific Gravity
F001	00487 Pounds	001	Metal drums, barrels	Burn	01.00

SECTION 2: FACILITY DETAIL REPORTS

WASTE MANAGEMENT

Facility manages registered underground storage tanks

DATABASE: Petroleum Storage Tank Database (UST)

NATIONAL CAR RENTAL SYSTEM, INC.
WESTCHESTER COUNTY AIRPORT
WHITE PLAINS, NY 10604
EDR ID #U003647655

NY UST WESTCHESTER COUNTY:

PBS Number:	3-600193	CBS Number:	Not reported
SWIS ID:	5517	Telephone:	(914) 946-9264
Operator:	JOHN MURPHY		
Emergency Contact:	MIKE MARINO, (516) 420-4417		
Total Tanks:	1		
Owner:	NATIONAL CAR RENTAL SYSTEM, INC. 7700 FRANCE AVENUE SOUTH MINNEAPOLIS, MN 55435		
Owner Phone	(612) 893-6280		
Owner Type:	Corporate/Commercial	Owner Mark:	Second Owner
Owner Subtype:	Not reported		
Mailing Person:	NATIONAL CAR RENTAL SYSTEMS, INC	Telephone:	(612) 893-6280
Mailing Address:	PROPERTIES LEGAL DEPARTMENT 7700 FRANCE AVENUE SOUTH MINNEAPOLIS, MN 55435 ATTN: JAMES C. LINDVALL		
Facility Status:	1 - Active PBS facility, i.e. total capacity of the PBS tanks is greater than 1,100 gallons, regardless if Subpart 360-14 tanks exist or not at the facility.		
Capacity (gals):	10000		
Tank Location:	UNDERGROUND		
Tank ID:	08405-2	Install Date:	11/92
Product Stored:	UNLEADED GASOLINE	Tank Type:	Fiberglass reinforced plastic [FRP]
Tank Internal:	NONE	Pipe Internal:	NONE
Pipe Location:	Underground	Pipe Type:	FIBERGLASS [FRP]
Tank External:	FIBERGLASS/NONE		
Tank Status:	In Service		
Tank Error Status:	No Missing Data		
Pipe External:	FIBERGLASS/NONE		
Second Containment:	DOUBLED-WALLED TANK/NONE		
Leak Detection:	INTERSTITIAL MONITORING/OTHER		
Overfill Prot:	Float Vent Valve, Catch Basin	Dispenser:	Submersible
Date Tested:	11/97	Next Test Date:	N.T.R
Date Closed:	Not reported	Test Method:	Not reported
Deleted:	False	Updated:	True
Dead Letter:	False	Owner Screen:	No data missing
FAMT:	Fiscal amount for registration fee is correct		
Total Capacity:	Not reported	Renewal Date:	/ /
Tank Screen:	No data missing	Federal ID:	Not reported
Renew Flag:	Renwal has not been printed	Facility Screen:	No data missing
Certification Flag:	False	Certification Date:	03/19/98
Old PBS Number:	Not reported	Expiration Date:	09/01/05
Inspected Date:	Not reported	Inspector:	Not reported
Inspection Result:	Not reported		
Lat/long:	Not reported		
Facility Type:	OTHER		

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Elapsed ASTM days: Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

FEDERAL ASTM STANDARD RECORDS

NPL: National Priority List
Source: EPA
Telephone: N/A
National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 01/29/02
Date Made Active at EDR: 02/25/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/04/02
Elapsed ASTM days: 21
Date of Last EDR Contact: 05/06/02

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites
Source: EPA
Telephone: N/A

Date of Government Version: 01/17/02
Date Made Active at EDR: 02/25/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 02/04/02
Elapsed ASTM days: 21
Date of Last EDR Contact: 05/06/02

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System
Source: EPA
Telephone: 703-413-0223
CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 11/21/01
Date Made Active at EDR: 02/04/02
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/01
Elapsed ASTM days: 40
Date of Last EDR Contact: 03/25/02

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned
Source: EPA
Telephone: 703-413-0223
As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/21/01
Date Made Active at EDR: 02/04/02
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/26/01
Elapsed ASTM days: 40
Date of Last EDR Contact: 03/25/02

CORRACTS: Corrective Action Report
Source: EPA
Telephone: 800-424-9346
CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 11/14/01
Date Made Active at EDR: 01/14/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 11/14/01
Elapsed ASTM days: 61
Date of Last EDR Contact: 03/11/02

RCRIS: Resource Conservation and Recovery Information System
Source: EPA/NTIS
Telephone: 800-424-9346
Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

Date of Government Version: 12/01/01
Date Made Active at EDR: 04/08/02
Database Release Frequency: Varies

Date of Data Arrival at EDR: 02/04/02
Elapsed ASTM days: 63
Date of Last EDR Contact: 03/04/02

ERNS: Emergency Response Notification System
Source: EPA/NTIS
Telephone: 202-260-2342
Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 08/08/00
Date Made Active at EDR: 09/06/00
Database Release Frequency: Varies

Date of Data Arrival at EDR: 08/11/00
Elapsed ASTM days: 26
Date of Last EDR Contact: 04/29/02

FEDERAL ASTM SUPPLEMENTAL RECORDS

BRS: Biennial Reporting System
Source: EPA/NTIS
Telephone: 800-424-9346
The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/99
Database Release Frequency: Biennially

Date of Last EDR Contact: 03/18/02
Date of Next Scheduled EDR Contact: 06/17/02

CONSENT: Superfund (CERCLA) Consent Decrees
Source: EPA Regional Offices
Telephone: Varies
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: N/A
Database Release Frequency: Varies

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

ROD: Records Of Decision
Source: EPA
Telephone: 703-416-0223
Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/30/00
Database Release Frequency: Annually

Date of Last EDR Contact: 04/09/02
Date of Next Scheduled EDR Contact: 07/08/02

DELISTED NPL: National Priority List Deletions
Source: EPA
Telephone: N/A
The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 01/29/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 05/06/02
Date of Next Scheduled EDR Contact: 08/05/02

FINDS: Facility Index System/Facility Identification Initiative Program Summary Report
Source: EPA
Telephone: N/A
Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 10/29/01
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/08/02
Date of Next Scheduled EDR Contact: 07/08/02

HMIRS: Hazardous Materials Information Reporting System
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/30/01
Database Release Frequency: Annually

Date of Last EDR Contact: 04/22/02
Date of Next Scheduled EDR Contact: 07/22/02

MLTS: Material Licensing Tracking System
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 02/14/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/08/02
Date of Next Scheduled EDR Contact: 07/08/02

MINES: Mines Master Index File
Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959

Date of Government Version: 12/14/01
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 04/01/02
Date of Next Scheduled EDR Contact: 07/01/02

NPL LIENS: Federal Superfund Liens
Source: EPA
Telephone: 205-564-4267
Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/28/02
Date of Next Scheduled EDR Contact: 08/26/02

PADS: PCB Activity Database System
Source: EPA
Telephone: 202-260-3936
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/01/01
Database Release Frequency: Annually

Date of Last EDR Contact: 05/14/02
Date of Next Scheduled EDR Contact: 08/12/02

RAATS: RCRA Administrative Action Tracking System
Source: EPA
Telephone: 202-564-4104
RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 03/11/02
Date of Next Scheduled EDR Contact: 06/10/02

TRIS: Toxic Chemical Release Inventory System
Source: EPA
Telephone: 202-260-1531
Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/99
Database Release Frequency: Annually

Date of Last EDR Contact: 03/25/02
Date of Next Scheduled EDR Contact: 06/24/02

TSCA: Toxic Substances Control Act
Source: EPA
Telephone: 202-260-5521
Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/98
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 03/11/02
Date of Next Scheduled EDR Contact: 06/10/02

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-564-2501
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/11/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/25/02
Date of Next Scheduled EDR Contact: 06/24/02

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
Source: EPA
Telephone: 202-564-2501

Date of Government Version: 01/14/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 03/25/02
Date of Next Scheduled EDR Contact: 06/24/02

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE OF NEW YORK ASTM STANDARD RECORDS

SHWS: Inactive Hazardous Waste Disposal Sites in New York State
Source: Department of Environmental Conservation
Telephone: 518-402-9553
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/01/01
Date Made Active at EDR: 10/31/01
Database Release Frequency: Annually
Date of Data Arrival at EDR: 10/11/01
Elapsed ASTM days: 20
Date of Last EDR Contact: 02/25/02

SWF/LF: Facility Register
Source: Department of Environmental Conservation
Telephone: 518-457-2051
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/31/01
Date Made Active at EDR: 04/18/02
Database Release Frequency: Semi-Annually
Date of Data Arrival at EDR: 03/28/02
Elapsed ASTM days: 21
Date of Last EDR Contact: 05/06/02

LTANKS: Spills Information Database
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Leaking Storage Tank Incident Reports. These records contain an inventory of reported leaking storage tank incidents reported from 4/1/86 through the most recent update. They can be either leaking underground storage tanks or leaking aboveground storage tanks. The causes of the incidents are tank test failures, tank failures or tank overfills.

Date of Government Version: 01/01/02
Date Made Active at EDR: 03/22/02
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 02/20/02
Elapsed ASTM days: 30
Date of Last EDR Contact: 04/29/02

UST: Petroleum Bulk Storage (PBS) Database
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Facilities that have petroleum storage capacities in excess of 1,100 gallons and less than 400,000 gallons.

Date of Government Version: 01/01/02
Date Made Active at EDR: 03/22/02
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 02/20/02
Elapsed ASTM days: 30
Date of Last EDR Contact: 04/29/02

CBS UST: Chemical Bulk Storage Database
Source: NYSDEC
Telephone: 518-402-9549
Facilities that store regulated hazardous substances in underground tanks of any size

Date of Government Version: 01/01/02
Date Made Active at EDR: 03/22/02
Database Release Frequency: Quarterly
Date of Data Arrival at EDR: 02/20/02
Elapsed ASTM days: 30
Date of Last EDR Contact: 04/29/02

MOSF UST: Major Oil Storage Facilities Database
Source: NYSDEC
Telephone: 518-402-9549
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/02
Date Made Active at EDR: 03/22/02
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/20/02
Elapsed ASTM days: 30
Date of Last EDR Contact: 04/29/02

SWTIRE: Registered Waste Tire Storage & Facility List
Source: Department of Environmental Conservation
Telephone: 518-402-8694

Date of Government Version: 09/01/01
Date Made Active at EDR: 11/30/01
Database Release Frequency: Annually

Date of Data Arrival at EDR: 11/19/01
Elapsed ASTM days: 11
Date of Last EDR Contact: 05/22/02

VCP: Voluntary Cleanup Agreements
Source: Department of Environmental Conservation
Telephone: 518-402-9711
The voluntary remedial program uses private monies to get contaminated sites r emediated to levels allowing for the sites' productive use. The program covers virtually any kind of site and contamination.

Date of Government Version: 03/26/02
Date Made Active at EDR: 05/06/02
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 03/28/02
Elapsed ASTM days: 39
Date of Last EDR Contact: 03/19/02

SWRCY: Registered Recycling Facility List
Source: Department of Environmental Conservation
Telephone: 518-402-8705
A listing of recycling facilities.

Date of Government Version: 07/17/00
Date Made Active at EDR: 09/13/00
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 08/24/00
Elapsed ASTM days: 20
Date of Last EDR Contact: 05/23/02

STATE OF NEW YORK ASTM SUPPLEMENTAL RECORDS

HSWDS: Hazardous Substance Waste Disposal Site Inventory
Source: Department of Environmental Conservation
Telephone: 518-402-9564
The list includes any known or suspected hazardous substance waste disposal sites. Also included are sites delisted from the Registry of Inactive Hazardous Waste Disposal Sites and non-registry sites which U.S. EPA Preliminary Assessment (PA) reports or Site Investigation (SI) reports were prepared.

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 03/04/02
Date of Next Scheduled EDR Contact: 06/03/02

AST: Petroleum Bulk Storage
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Registered Aboveground Storage Tanks.

Date of Government Version: 01/01/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/29/02
Date of Next Scheduled EDR Contact: 07/29/02

CBS AST: Chemical Bulk Storage Database
Source: NYSDEC
Telephone: 518-402-9549
Facilities that store regulated hazardous substances in aboveground tanks with capacities of 185 gallons or greater, and/or in underground tanks of any size.

Date of Government Version: 01/01/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/29/02
Date of Next Scheduled EDR Contact: 07/29/02

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MOSF AST: Major Oil Storage Facilities Database
Source: NYSDEC
Telephone: 518-402-9549
Facilities that may be onshore facilities or vessels, with petroleum storage capacities of 400,000 gallons or greater.

Date of Government Version: 01/01/02
Database Release Frequency: Quarterly
Date of Last EDR Contact: 04/29/02
Date of Next Scheduled EDR Contact: 07/29/02

SPILLS: Spills Information Database
Source: Department of Environmental Conservation
Telephone: 518-402-9549
Data collected on spills reported to NYSDEC as required by one or more of the following: Article 12 of the Navigation Law, 6 NYCRR Section 613.8 (from PBS regs), or 6 NYCRR Section 595.2 (from CBS regs). It includes spills active as of April 1, 1986, as well as spills occurring since this date.

Date of Government Version: 01/01/02
Database Release Frequency: Quarterly
Date of Last EDR Contact: 04/29/02
Date of Next Scheduled EDR Contact: 07/29/02

New York Facility and Manifest Data
Source: NYSDEC
Telephone: 518-457-6585
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

LOCAL RECORDS

CORTLAND COUNTY:

Cortland County Storage Tank Listing
Source: Cortland County Health Department
Telephone: 607-753-5035

Date of Government Version: 01/02/02
Database Release Frequency: Quarterly
Date of Last EDR Contact: 03/05/02
Date of Next Scheduled EDR Contact: 06/03/02

Cortland County Storage Tank Listing
Source: Cortland County Health Department
Telephone: 607-753-5035

Date of Government Version: 01/02/02
Database Release Frequency: Quarterly
Date of Last EDR Contact: 03/05/02
Date of Next Scheduled EDR Contact: 06/03/02

NASSAU COUNTY:

Registered Tank Database
Source: Nassau County Health Department
Telephone: 516-571-3314

Date of Government Version: 08/28/01
Database Release Frequency: Quarterly
Date of Last EDR Contact: 05/14/02
Date of Next Scheduled EDR Contact: 08/05/02

Registered Tank Database
Source: Nassau County Health Department
Telephone: 516-571-3314

Date of Government Version: 08/28/01
Database Release Frequency: Quarterly
Date of Last EDR Contact: 05/14/02
Date of Next Scheduled EDR Contact: 08/05/02

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Storage Tank Database
Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000

Date of Government Version: N/A
Database Release Frequency: Annually

Date of Last EDR Contact: N/A
Date of Next Scheduled EDR Contact: N/A

Storage Tank Database
Source: Nassau County Office of the Fire Marshal
Telephone: 516-572-1000

Date of Government Version: 02/19/02
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 05/13/02
Date of Next Scheduled EDR Contact: 08/12/02

ROCKLAND COUNTY:

Petroleum Bulk Storage Database
Source: Rockland County Health Department
Telephone: 914-364-2605

Date of Government Version: 04/29/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/09/02
Date of Next Scheduled EDR Contact: 07/08/02

Petroleum Bulk Storage Database
Source: Rockland County Health Department
Telephone: 914-364-2605

Date of Government Version: 01/23/02
Database Release Frequency: Quarterly

Date of Last EDR Contact: 04/09/02
Date of Next Scheduled EDR Contact: 07/08/02

SUFFOLK COUNTY:

Storage Tank Database
Source: Suffolk County Department of Health Services
Telephone: 631-854-2521

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 03/05/02
Date of Next Scheduled EDR Contact: 06/03/02

Storage Tank Database
Source: Suffolk County Department of Health Services
Telephone: 631-854-2521

Date of Government Version: 12/31/01
Database Release Frequency: Annually

Date of Last EDR Contact: 03/05/02
Date of Next Scheduled EDR Contact: 06/03/02

WESTCHESTER COUNTY:

Petroleum Bulk Storage Database
Source: Dept. of Environmental Conservation
Telephone: 914-637-4895

Date of Government Version: 06/19/98
Database Release Frequency: Varies

Date of Last EDR Contact: 03/05/02
Date of Next Scheduled EDR Contact: 06/03/02

Petroleum Bulk Storage Database
Source: Dept. of Environmental Conservation
Telephone: 914-637-4895

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/19/98
Database Release Frequency: Varies

Date of Last EDR Contact: 03/05/02
Date of Next Scheduled EDR Contact: 06/03/02

EDR PROPRIETARY HISTORICAL DATABASES

Former Manufactured Gas (Coal Gas) Sites: The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

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OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines/Electrical Transmission Lines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines and electrical transmission lines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

AEROTECH WORLD TRADE
11 NEW KING STREET
NORTH CASTLE, NY 10604

TARGET PROPERTY COORDINATES

Latitude (North):	41.081699 - 41° 4' 54.1"
Longitude (West):	73.714600 - 73° 42' 52.6"
Universal Tranverse Mercator:	Zone 18
UTM X (Meters):	607974.7
UTM Y (Meters):	4548410.5

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

USGS TOPOGRAPHIC MAP ASSOCIATED WITH THIS SITE

Target Property: 2441073-A6 GLENVILLE, CT NY
Source: USGS 7.5 min quad index

GENERAL TOPOGRAPHIC GRADIENT AT TARGET PROPERTY

Target Property: General West

Source: General Topographic Gradient has been determined from the USGS 1 Degree Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
WESTCHESTER, NY	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property:	3609230005C / CBPP
Additional Panels in search area:	0900080001B / CBPP 0900080003B / CBPP 3609230004C / CBPP 3609120005B / CBPP 3609300005B / CBPP 3609120004B / CBPP

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
GLENVILLE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Site-Specific Hydrogeological Data*:

Search Radius:	2.0 miles
Status:	Not found

AQUIFLOW®

Search Radius: 2.000 Miles.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT **GEOLOGIC AGE IDENTIFICATION**

Era:	Paleozoic	Category:	Stratified Sequence
System:	Ordovician		
Series:	Middle Ordovician (Mohawkian)		
Code:	O2 *(decoded above as Era, System & Series)*		

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Component Name: WOODBRIDGE

Soil Surface Texture: very stony - fine sandy loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained. Soils have a layer of low hydraulic conductivity, wet state high in the profile. Depth to water table is 3 to 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

Soil Layer Information

	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	3 inches	very stony - fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
2	3 inches	30 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 6.00 Min: 4.50
3	30 inches	65 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COURSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 0.20 Min: 0.00	Max: 6.00 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam
muck
sandy loam

Surficial Soil Types: fine sandy loam

muck
sandy loam

Shallow Soil Types: No Other Soil Types

Deeper Soil Types: sandy loam
gravelly - loamy sand
muck
unweathered bedrock
stratified

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	410456073425601	0 - 1/8 Mile NW
A2	410455073425001	0 - 1/8 Mile ENE
A3	410450073425601	0 - 1/8 Mile SSW
4	410424073422801	1/2 - 1 Mile SSE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
5	NY0003435	1/2 - 1 Mile SSW

Note; PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

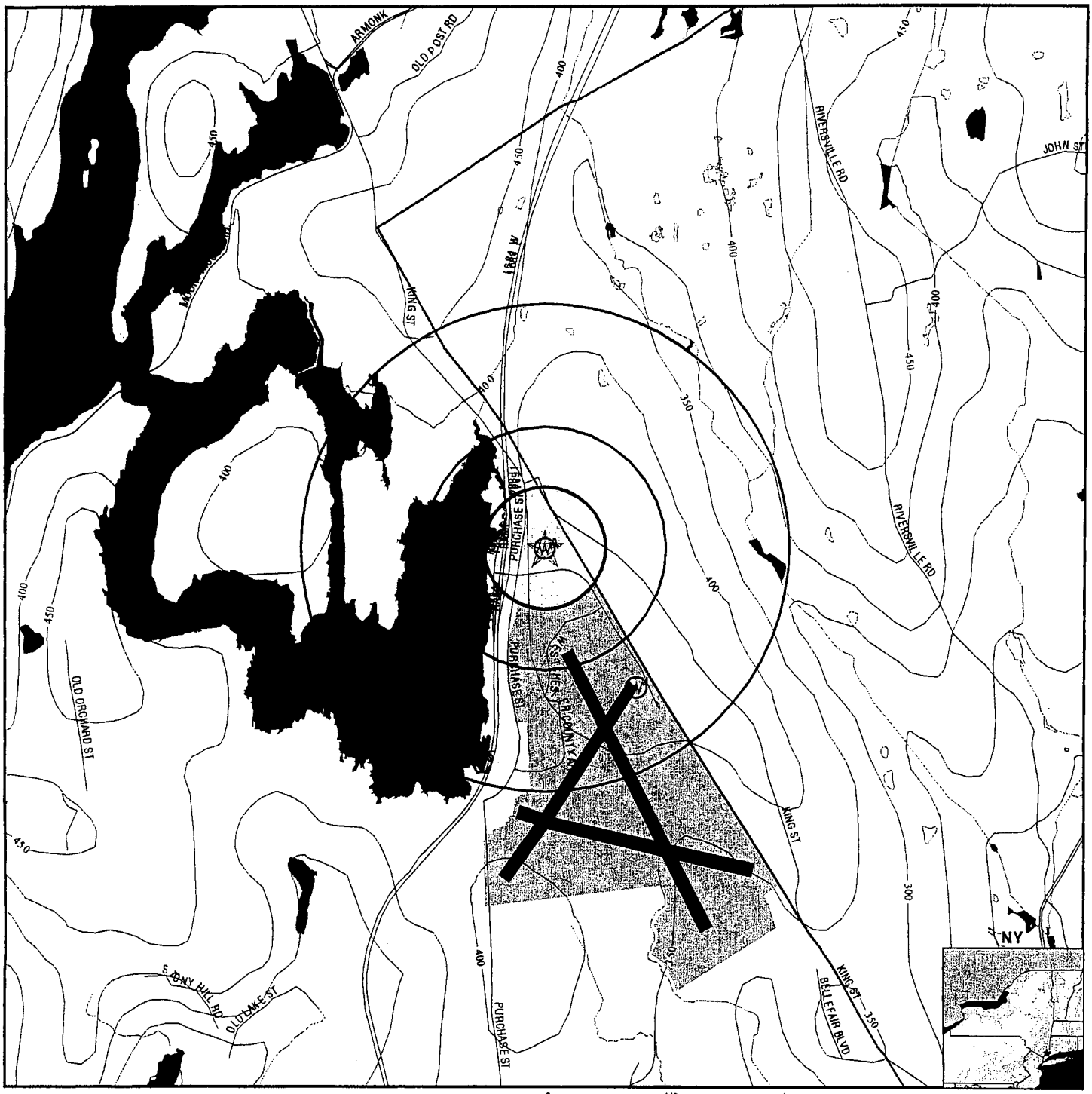
MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

PHYSICAL SETTING SOURCE MAP - 0790355.1r



- Major Roads
- Contour Lines
- Airports
- Water Wells
- Public Water Supply Wells
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Cluster of Multiple Icons
- Earthquake epicenter, Richter 5 or greater
- Closest Hydrogeological Data

TARGET PROPERTY:	Aerotech World Trade	CUSTOMER:	The Chazen Companies
ADDRESS:	11 New King Street	CONTACT:	Emily A. Pereira
CITY/STATE/ZIP:	North Castle NY 10604	INQUIRY #:	0790355.1r
LAT/LONG:	41.0817 / 73.7146	DATE:	May 30, 2002 4:49 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
A1 **NW** **0 - 1/8 Mile** **Higher**	**FED USGS**	**410456073425601**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Westchester
Altitude:	400.00 ft.	State:	New York
Well Depth:	420.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

A2 **ENE** **0 - 1/8 Mile** **Higher**	**FED USGS**	**410455073425001**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Westchester
Altitude:	410.00 ft.	State:	New York
Well Depth:	206.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	Not Reported	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Industrial (cooling)

A3 **SSW** **0 - 1/8 Mile** **Higher**	**FED USGS**	**410450073425601**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Westchester
Altitude:	380.00 ft.	State:	New York
Well Depth:	101.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	10.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

---

4 **SSE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**410424073422801**

BASIC WELL DATA

Site Type:	Single well, other than collector or Ranney type		
Year Constructed:	Not Reported	County:	Westchester
Altitude:	415.00 ft.	State:	New York
Well Depth:	173.00 ft.	Topographic Setting:	Not Reported
Depth to Water Table:	5.00 ft.	Prim. Use of Site:	Withdrawal of water
Date Measured:	Not Reported	Prim. Use of Water:	Domestic

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
5 **SSW** **1/2 - 1 Mile** **Lower**	**FRDS PWS**	**NY0003435**

PWS ID:	NY0003435	PWS Status:	Active
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	WESTCHESTER JOINT WATER WORKS 1625 MAMARONECK AVE. MAMARONECK, NY 10543		
Addressee / Facility:	System Owner/Responsible Party BALANCIA CHARLES BOARD OF WATER COMMISSIONS 1625 MAMARONECK AVE. MAMARONECK, NY 10543		
Facility Latitude:	Not Reported	Facility Longitude:	Not Reported
City Served:	MAMARONECK		
Treatment Class	Not Reported	Population:	Not Reported

PWS currently has or had major violation(s) or enforcement: No

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Radon Information for 10604:

Number of sites tested: 19

Average (pCi/L)	Geometric Mean (pCi/L)	Geometric Std Dev.	Maximum (pCi/L)	% Homes >4 pCi/L	% Homes >20 pCi/L
4.6	2.3	2.8	42.3	15.8	5.3

Federal EPA Radon Zone for WESTCHESTER County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

WESTCHESTER COUNTY, NY

Number of sites tested: 650

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area	0.930 pCi/L	97%	3%	0%
Basement	1.730 pCi/L	84%	13%	2%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 1999 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the national Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

ADDITIONAL ENVIRONMENTAL RECORD SOURCES

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-260-2805

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: In November 1971 the United States Geological Survey (USGS) implemented a national water resource information tracking system. This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on more than 900,000 wells, springs, and other sources of groundwater.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STATE RECORDS

New York Public Water Wells
Source: New York Department of Health
Telephone: 518-458-6731

New York Radon Basement Screening Results
Source: New York Department of Health
Telephone: 518-402-7556

New York Facility and Manifest Data
Source: NYSDEC
Telephone: 518-457-6585
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

RADON

Area Radon Information: The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones: Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

APPENDIX C

Regulatory Information

New York State Department of Environmental Conservation
Division of Water, Region 3
200 White Plains Road – 5th Floor, Tarrytown, New York 10591-5805
Phone: (914) 332-1835 • **FAX:** (914) 332-4670
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

May 20, 2002

MR EDWARD BUSH
CHAZEN ENVIRONMENTAL SERVICES INC
PO BOX 3479
229B PAGE PARK MANCHESTER RD
POUGHKEEPSIE NY 12603

Re: FOIL #381-3/02
Aerotech Realty Corp.
11 New King Street, White Plains

Dear Mr. Bush:

I am responding to your Foil request on behalf of the Division of Water.

Attached is a copy of the SPDES Permit issued to the above noted facility. There is no photocopying fee since there were only a few pages.

Thank you.

Very truly yours,

Beth Zicca
Division of Water

bz
Attachments
cc: Region 3 Records Access Office - New Paltz

New York State Department of Environmental Conservation
Division of Regulatory Affairs
50 Wolf Road, Albany, New York 12233 - 1750

Michael D. Zagata
Commissioner

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES)
Notice of Permit Continuation

DATE : 96/03/07

FREDERICK MONSELL
AEROTECH REALTY INC.
PO BOX 218
PURCHASE , NY 10577

AEROTECH CORP.
SPDES 023 3340 WESTCHESTER Co.
DEC # not available
expiration date : 03/01/95

Dear Permittee:

You currently hold a SPDES permit authorizing you to discharge wastewaters to either surface or groundwaters of New York State. Our records show that your permit expired on the date indicated above or will expire soon. The Department will not process renewal applications authorizing discharges of small quantities of sanitary sewage in the foreseeable future. Consequently, the purpose of this notice is to continue your existing permit for an indefinite period or until the Department notifies you of another course of action.

As a reminder, your responsibilities remain as follows:

- Operate in accord with all of the conditions of your existing permit.
- Continue to abide with all laws, regulations and standards governing your discharge.
- Pay, or follow prescribed procedures for challenging, the Regulatory Fee bill you will receive each year.
- Notify the Regional Permit Administrator, at the address below, of any change in mailing address. You must also file a Request for Permit Transfer form if you wish to transfer the permit to a new owner.
- Apply for a modification of your permit if you plan to change the quantity or characteristics of the discharge beyond that currently authorized.

Inquiries concerning your permit or requests to obtain forms for transferring or modifying your permit should be directed to the Regional Permit Administrator at the following address:

NYSDEC REGION 3
21 S PUTT CORNERS RD
NEW PALTZ , NY 12561-1696

Phone (914) 256-3059

Please attach this page to your current permit.

Sincerely,

George A. Danskin

George A. Danskin
Chief Permit Administrator

cc: Regional Permit Administrator - Region 3
Regional Water Engineer - Region 3

J. Marcoglese

91-19-1 (2/85)

West Sd

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

APPLICATION FORM "D"

for a State Pollutant Discharge Elimination System (SPDES) Permit

(A SPDES Application When Signed by a Permit Issuing Official Becomes a SPDES Permit)

PLEASE PRINT OR TYPE

APPLICATION TYPE	IF RENEWAL OR MODIFICATION, GIVE PREVIOUS NUMBER
[X] New [ ] Renewal [ ] Modification	NY—

OWNER'S NAME (Corporate, Partnership, Individual)	TYPE OF OWNERSHIP
Aerotech Realty, Inc.	[X] Corporate [ ] Individual [ ] Partnership [ ] Public

OWNER'S MAILING ADDRESS (Street, City, State, Zip Code)
P.O. Box 218, Purchase, New York

REFER ALL CORRESPONDENCE TO: (Name, Title and Address)	TELEPHONE NUMBER
Petruccelli Engineering, 392 Columbus Avenue, Valhalla, N.Y.	914 , 948-3629

FACILITY NAME	FACILITY LOCATION (Street or Road)	CITY,TOWN OR VILLAGE
Aerotech Corp.	New King Street	North Castle

COUNTY	GIVE EXPLICIT DIRECTIONS TO LOCATION
Westchester	I-684 to Westchester Airport Exit, Cross light to New King Street

NATURE OF BUSINESS OR FACILITY	POPULATION SERVED (See Instructions)
Office Building - Airplane Parts	90-100

FREQUENCY OF DISCHARGE
All Year? [X] Yes [ ] No If No, Specify Number of Months _____ | All Week? [X] Yes [ ] No If No, Specify Number of Days _____

DOES YOUR DISCHARGE CONTAIN OR IS IT POSSIBLE FOR YOUR DISCHARGE TO CONTAIN ONE OR MORE OF THE FOLLOWING SUBSTANCES ADDED AS A RESULT OF YOUR OPERATIONS, ACTIVITIES OR PROCESSES&
Please check: [ ] Aluminum [ ] Ammonia [ ] Beryllium [ ] Cadmium [ ] Chlorine [ ] Chromium [ ] Copper [ ] Cyanide [ ] Grease [ ] Lead [ ] Mercury [ ] Nickel [ ] Oil [ ] Phenols [ ] Selenium [ ] Zinc [X] None of These

DISCHARGE DATA (Use additional forms, if necessary) (See Instructions)

OUTFALL NO.		TYPE OF WASTE	TYPE OF TREATMENT	DESIGN FLOW
	[ ] Proposed [ ] Replacement [ ] Existing [ ] Expansion			Gal/Day
SURFACE DISCHARGE [ ] Yes [ ] No	If YES, Name of Receiving Waters		Classification	Waters Index Number
SUBSURFACE DISCHARGE [X] Yes [ ] No	If YES, Name of Nearest Surface Water: Rye Lake	Distance: 1000 Ft.	SOIL TYPE: Sand, gravel over 10'	Depth of Water Table
OUTFALL NO.: I-40	[XX] Proposed [ ] Replacement [ ] Existing [ ] Expansion	TYPE OF WASTE: Sanitation	TYPE OF TREATMENT: Septic Tank & Tri Galleries	DESIGN FLOW: 1500 Gal/Day
SURFACE DISCHARGE [ ] Yes [ ] No	If YES, Name of Receiving Waters		Classification	Waters Index Number
SUBSURFACE DISCHARGE [ ] Yes [ ] No	If YES, Name of Nearest Surface Water	Distance Ft.	SOIL TYPE	Depth of Water Table
OUTFALL NO.	[ ] Proposed [ ] Replacement [ ] Existing [ ] Expansion	TYPE OF WASTE	TYPE OF TREATMENT	DESIGN FLOW Gal/Day
SURFACE DISCHARGE [ ] Yes [ ] No	If YES, Name of Receiving Waters		Classification	Waters Index Number
SUBSURFACE DISCHARGE [ ] Yes [ ] No	If YES, Name of Nearest Surface Water	Distance Ft.	SOIL TYPE	Depth of Water Table

I hereby affirm under penalty of perjury that information provided on this form and any attached supplemental forms is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

APPLICANT'S SIGNATURE (see Instructions)	DATE	PRINTED NAME	TITLE
Frederick B. Monsell	11/14/89	Frederick B. Monsell	Director - Gen Products

PERMIT VALIDATION SECTION
(Department of Environmental Conservation Use Only)

This SPDES permit is issued in compliance with Title 8 of Article 17 of the Environmental Conservation Law of New York State and in compliance with the provisions of the Federal Water Pollution Control Act, as amended by the Federal Water Pollution Control Act Amendments of 1972, P.L. 92-500, October 18, 1972 (33 U.S.C. §1251 et. seq.) (hereinafter referred to as "the Act"), and subject to the attached conditions.

Signature of Permit Issuing Official — Date: FEBRUARY 12, 1990

APPLICATION NUMBER: NY— 0233340

EFFECTIVE DATE: MARCH 1, 1990 | EXPIRATION DATE: MARCH 1, 1995

ATTACHMENTS: CONDITIONS (PAGES 2-4)

CARD	Type Est	Type Own	SIC CODE	# Out Falls	Dis Class	CARD	Region	County	Major Basin	Sub Basin	Compact Area	CARD	Latitude	Longitude	CARD	Lim Ind
1	66	68	70	73	76	3	71	72	74	76	78	6	53 58	59 64	7	57

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES)

DISCHARGE PERMIT

OTHER CONDITIONS

GENERAL

This permit is issued under the provisions of Article 17 of the Environmental Conservation Law and is further subject to the following additional conditions:

1. THAT the permit shall be maintained on file by the permittee.

2. THAT the permit is revocable or subject to modification or change pursuant to Article 17 of the Environmental Conservation Law.

3. THAT issuance of this permit by the Department and the receipt thereof by the Applicant does not supersede, revoke or rescind an order of modification thereof on consent or determination by the Commissioner issued heretofore by the Department or any of the terms, conditions or requirements contained in such order or modification thereof.

4. THAT all discharges authorized by this permit shall be consistent with the provisions, terms, requirements and conditions of this permit.

5. THAT facility expansions, production increases or process modifications by the permittee which result in new or increased discharges or pollutants into the waters of the state shall be reported by the permittee by submission of a new SPDES application.

6. THAT the discharge of any pollutant not identified and authorized by this permit or the discharge of any pollutant more frequently than or at a level in excess of that permitted by this permit shall constitute a violation of the terms of the permit.

7. THAT this permit may be modified, suspended or revoked where the Department finds:

   a. a violation of any terms of the permit;
   b. that the permit was obtained by misrepresentation or failure to disclose fully all relevant facts, or;
   c. a change in conditions or the existence of a condition which requires either a temporary or permanent reduction or elimination of the authorized discharge.

8. THAT the facilities shall not receive or be committed to receive wastes beyond their design capacity as to volume and character of wastes treated, nor shall the facilities be changed or modified or otherwise altered as to type, degree or capacity of treatment provided, disposal of treated effluent, or treatment and disposal of separated scum, liquids, solids or combinations thereof resulting from the treatment process without prior written approval of the designated field office.

9. THAT the facilities shall be continuously operated and maintained to the satisfaction of the Commissioner and to comply with the Environmental Conservation Law and all applicable laws, ordinances, codes, rules and regulations.

10. THAT should any unusual situation occur, caused by a deviation from normal operation and creating a potentially hazardous condition, the permittee will immediately notify the designated field office when such condition begins and when the condition ceases.

11. THAT applicable water quality standards shall not be violated.

12. THAT no material identifiable as inadequately treated sewage shall be allowed to reach the ground surface or surface waters.

13. THAT upon the availability of public sewers connection to the municipal system shall be made.

SPECIAL CONDITIONS - PROPOSED OR EXPANDED FACILITIES

1. THAT no construction of the waste disposal facilities shall commence without written approval of the Department or its designated field office.

2. THAT the facilities shall be fully constructed and completed in compliance with the engineering report, plans and specifications as approved, and any additional standards which are consistent with the State Law and Code, as specified in writing (letter of approval) by the Department or its designated field office.

3. THAT the construction of the facilities shall be under the supervision of a person or firm qualified to practice professional engineering in the State of New York under the Education Law of the State of New York, whenever engineering services are required by such law for such purposes.

4. THAT before operation commences, where such facilities are under the supervision of a professional engineer, he shall certify to the Department or its designated field office and to the permittee that the constructed facilities have been fully completed in accordance with the approved engineering report, plans and specifications, permit and letter of approval.

SPECIAL CONDITION - FACILITIES WITH SEPTIC TANKS

1. THAT if a septic tank is installed as part of the treatment system, it shall be inspected by the permittee or his agent for scum and sludge accumulation at intervals not to exceed one year's duration, and that such accumulation will be removed before the depth of either exceeds one-fourth (1/4) of the liquid depth, so that no settleable solids or scum will leave in the septic tank effluent. Such accumulation shall be disposed of in an approved manner.

TRANSFER OF OWNERSHIP

Any permittee who intends to transfer a SPDES permit is required to notify the Department in advance of the transfer. In the case of a change of ownership only, notice to the Department is required prior to change; in the case of an ownership change accompanied by a change or proposed change in wastewater characteristics, a minimum of 180 days prior notice to the Department is required. The terms and conditions of this permit are binding on the successors or assigns in interest of the original permittee.

PERMIT RENEWAL

The permittee shall file for renewal of this permit no later than 180 days prior to the expiration date by submitting any forms, fees, or supplemental information which may be required by the Department.

ADDITIONAL CONDITIONS - SUBSURFACE SYSTEMS

1. The Final Effluent Limitation for this permit is a flow limit of 1500 gpd.

2. Monitoring, Recording and Reporting requirements: None.

3. In accordance with the Special Conditions - Proposed or Expanded Facilities, the permittee shall obtain final approval of plans for the waste disposal facilities from the : Westchester County Department of Health
   Bureau of Environmental Quality
   25 Moore Avenue
   Mount Kisco, New York 10549

4. The permitted dicharge shall consist of sanitary waste only. The discharge of industrial waste is not permitted.

SEQR NOTE: Under the State Environmental Quality Review Act (SEQR), the project associated with this permit is classified as an Unlisted Action and the Department of Environmental Conservation (DEC) has determined that it will not have a significant effect on the environment. Other involved agencies may reach an independent determination of environmental significance for this project.

Distribution:
J. Marcogliese
B. Zicca
R. Hannaford, Albany
E. Dalaney, WCDH
R. Petruccelli, Petruccelli Engineering

APPENDIX D
Previous Environmental Documentations

TOWN OF NORTH CASTLE
17 BEDFORD ROAD
ARMONK, N.Y. 10504

CERTIFICATE OF COMPLIANCE

CC No: 50548 CC Date: 05/16/2001

CO FEE: $50.00

SEC-BLK-LOT: 3/04/14.B ZONED: IND AA

Location: 11 NEW KING STREET PURCHASE, NY 10577

Building Permit No: 10889

THIS CERTIFIES that the structure described herein, conforms substantially to the approved plans and specifications heretofore filed in this office with Application for Building Permit dated: 01/20/1999, pursuant to which Building Permit was issued, and conforms to all the requirements of the applicable provisions of the law.

The structure for which this certificate is issued is as follows:

Permit Type: BUILDING Number of Families: 0

Use of Permit: COMM:TANK REM.&INSTALL Number of Bedrooms: 0

Descr of Constr: REMOVE A 1,500 GALLON U.S.T. OIL TANK & INSTALL A 1,000 GALLON U.S.T. OIL TANK.

This certificate is issued to: AEROTECH REALTY INC
for the aforesaid structure.

Leo M. Gustafson
Building Inspector

(The Certificate of Compliance will be issued only after affidavits or other competent evidence is submitted to the Superintendent of Buildings that the completion of the construction in compliance with the State Building Construction Code and with other laws, ordinances or regulations affecting the premises, and in conformity with the approved plans and specifications. A final electrical, plumbing, heating or sanitation certificate or other evidence of compliance may be required before the issuance of the Certificate of Compliance).

Westchestergov.com

Andrew J. Spano
County Executive

Department of Health

June 13, 2001

Jan Endressen
Aerotech World Trading Corp
11 New King St.
White Plains, NY 10604

Re: PBS 3-800739

Dear Mr. Endressen:

I have reviewed the Closure Report prepared by National Environmental Specialists, Inc for the 1,500 gallon fuel oil UST. The Westchester County Department of Health requires no further action regarding the work performed.

If you have any questions, please call me at (914) 813-5161.

Sincerely,

Danielle Jackson

Danielle Jackson
Sanitarian
Office of Environmental Health Risk Control

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

March 1, 2001

Town of North Castle
Building Department
17 Bedford Road
Armonk, NY 10504

Job Reference: Aerotech 11 New King Street White Plains, NY 10604
Permit #: 10889

Dear Bill Richardson,

National Environmental Specialists, Inc. was contracted to remove a 1500 gallon oil tank from the above referenced address. The tank was cut, cleaned, removed, and properly disposed of according to DEC Regulations 613.9(B). There were no holes found in the tank and no contamination impacted into the soil.

A new 1000 gallon oil tank was installed for heating purposes. The new tank was air tested with 5 pounds of air pressure and passed. Upon approvals and site inspection, the entire area was rough graded.

A copy of the liquid manifest is enclosed for your review.

Please feel free to contact me with any questions you may have.

Thank you,

Jeneen Cianflone
National Environmental Specialists, Inc.

Encl.

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

Barbara McDonald

March 12, 2001

Westchester County Department of Health
145 Huguenot
New Rochelle, New York

Re: UST removal
Aerotech World Trading Corp.
11 New King St.
White Plains, New York
W.C.P.B.S. # 3-800739

Dear Ms. McDonald:

The purpose of this letter is to summarize the underground storage tank (UST) removal activities, for the above listed site, and to provide all pertinent information required by your office.

On January 21, 1999, National Environmental Specialists, Inc. (NES) removed one 1,500-gallon UST from the above listed site. The UST was located on the western side of the building located approximately two feet below the asphalt, in the parking area (see attached map).

NES utilized a 426 CAT backhoe to unearth the UST. All residual product and sludge was removed with a vacuum truck. All liquids removed from the UST were properly disposed of at Paradise Oil Recovery located in Ossining, NY. NES then removed the UST from the excavation, cut open, and cleaned the UST of any remaining sludge. The UST was then transported off site for proper disposal at Brookfield Auto Wreckers located in Elmsford, New York.

During the entire removal activity, NES encountered no petroleum-contaminated soil.
Ground water was not encountered during said endeavor. As required, NES collected one composite post-excavation soil sample to confirm the absence of petroleum-contaminated soil. Laboratory results showed that concentrations of target analytes were below New York State Department of Environmental Conservation Guidance Values according to the Stars Memo. One composite soil sample was collected from the excavation after the UST was removed. The soil sample was collected and placed in laboratory-cleaned glass jars, labeled, placed on ice, and shipped to York Analytical Laboratories in Stamford, Connecticut for analysis. The post-excavation soil sample was analyzed for volatile organic compounds (VOCs) by EPA Method 8021 and semi-volatile organic compounds (SVOCs) by EPA Method 8270. The analytical results are summarized in **Table 1** (copies of the lab reports are attached).

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

Table 1 Soil Sample Summary
Concentration Given in Parts Per Billion
Collected January 27, 1999
Semi-Volatile

Chemical	Composite Excavation	NYSDEC TAGM
Acenaphthene	ND	**50,000**
Anthracene	ND	**50,000**
Benzo[a]anthracene	ND	**224**
Benzo[a]pyrene	ND	**61**
Benzo[b]fluoranthene	ND	**1,100**
Benzo[g,h,i]perylene	ND	**50,000**
Benzo[k]fluoranthene	ND	**1,100**
Chrysene	ND	**400**
Dibenzo[a,h]anthracene	ND	**14**
Fluoranthene	ND	**50,000**
Fluorene	ND	**50,000**
Indeno[1,2,3-cd]pyrene	ND	**3,200**
Naphthalene	ND	**13,000**
Phenanthrene	ND	**50,000**
Pyrene	ND	**50,000**

Note:
All Analytes are compared to Appendix A of TAGM #4046 and STARs Guidance Values
1) Concentrations in Bold Exceed NYSDEC Guidance Values
2) ND = None Detect
3) NA = Not Analyzed

The summary above details the removal of one 1,500-gallon UST from the above referenced site. During said endeavor, NES encountered no petroleum contaminated soil or ground water. One composite, post-excavation, soil sample was collected from the tank grave. Analysis of the soil sample showed non-detectable concentrations for all target analytes.

Aerotech World Trading Corp. elected to install a 1,000-gallon UST, thereby, eliminating their need to comply with regulation indicative of a PBS site (please find the revised, "Work Summary")

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

This report has been prepared for the use of the W.C.D.H. and Aerotech World Trading Corp. Reasonable due diligence was exercised by the staff of National Environmental Specialists, Inc. in conducting the research and investigation necessary for the development of this report. The conclusions provided by NES in this report are based solely on the information reported in this document. Results of future subsurface investigations may result in a modification of the conclusions stated above. The conclusions presented herein are based upon the current regulatory climate and may require revision if future regulatory changes occur. This investigation and preparation of this report has been conducted in accordance with generally accepted practices. No other warranty, expressed or implied, is made.

If you have any questions regarding this report, please contact me at (914)-741-5472.

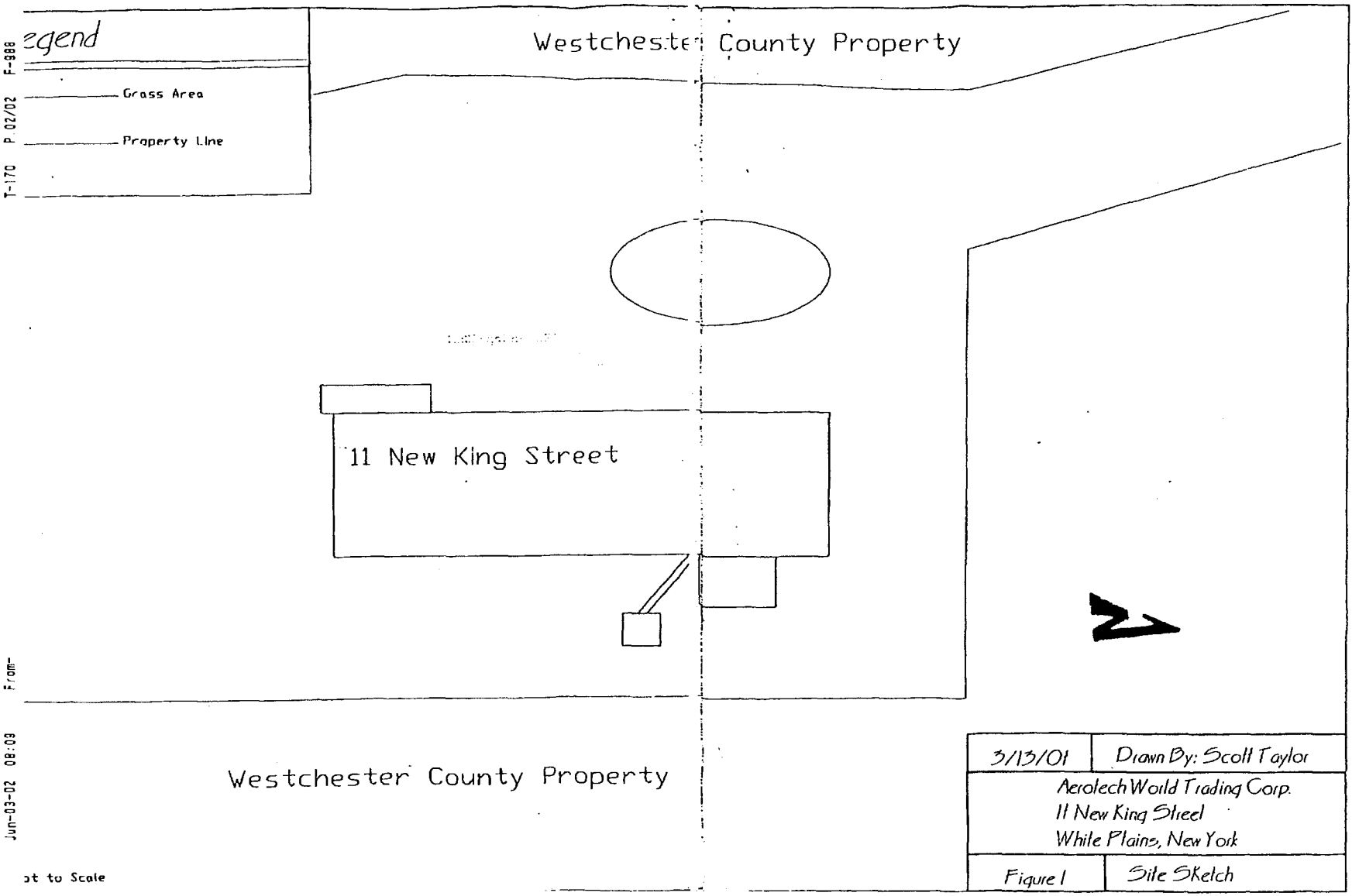
Sincerely,

Scott Taylor
Environmental Scientist
National Environmental Specialists Inc.

CC: Louis Viscome

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

FIGURES


egend
Grass Area
Property Line
Westchester County Property
11 New King Street
Westchester County Property
3/13/01
Drawn By: Scott Taylor
Aerolech World Trading Corp.
11 New King Street
White Plains, New York
Figure 1
Site Sketch

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

APPENDIX I

Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of

3. Generator's Name and Mailing Address: AREOTECH, NEW KING ST., PURCHASE, N.Y.

4. Generator's Phone ( )

DEC 3A-402

5. Transporter 1 Company Name: National Environmental Spec.

6. US EPA ID Number: NYD-987-004-850

A. Transporter's Phone: 914-741-5472

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address:
Paradise Oil Recovery
Quimby Street
Ossinig, NY 10562

10. US EPA ID Number: NY-00000-41830

C. Facility's Phone: 914-945-0528

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. VAC OUT 1500 GAL #2 OIL TANK	VAC		Truck #10	
b. OF 219 gal OF CONTAMINATED #2				
c. OIL + TANK BOTTOMS.				
d.				

D. Additional Descriptions for Materials Listed Above

E. Handling Codes for Wastes Listed Above: N-019, N-013

15. Special Handling Instructions and Additional Information

NYS D.O.T. #1993

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name: John J. Kuhn (Areotech) Signature: [signature] Month 01 Day 21 Year 99

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: John J. Kuhn Signature: [signature] Month 01 Day 21 Year 99

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: A. Mullane Signature: [signature] Month 01 Day 21 Year 99

GENERATOR'S COPY

NATIONAL
ENVIRONMENTAL
SPECIALISTS INC.

APPENDIX II

Laboratory Analytical Reports

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

National Environmental Spec.
26 Broadway
Hawthorne, NY 10532
Attention: Mr. Nick Barnaba

Report Date: 01/29/99

Re: Client Project ID: Aerotech
York Project No.: 99010387

CT License No. PH-0723 New York License No. 10854 Mass. License No. M-CT106 Rhode Island License No. 93 EPA I.D. No. CT00106

ONE RESEARCH DRIVE STAMFORD, CT 06906 (203) 325-1371 FAX (203) 357-0166

Report Date: 01/29/99
Client Project ID: Aerotech

York Project No.: 99010387

National Environmental Spec.
26 Broadway
Hawthorne, NY 10532
Attention: Mr. Nick Barnaba

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 01/27/99. The project was identifed as your project "Aerotech ".

The analysis was conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

The results of the analysis are summarized in the following table(s).

Analysis Results

Client Sample ID			Stockpile	
York ID			99010387-01	
Matrix			SOIL	
Parameter	**Method**	**Units**	**Results**	**MDL**
Volatiles-8021 STARS soil	SW846-8260	ug/Kg	---	---
Benzene			Not detected	5.0
Ethylbenzene			Not detected	5.0
Toluene			Not detected	5.0
o-Xylene			Not detected	10
p- & m-Xylenes			Not detected	10
Total Xylenes			Not detected	10
Isopropylbenzene			Not detected	5.0
n-Propylbenzene			Not detected	5.0
p-Isopropyltoluene			Not detected	5.0
1,2,4-Trimethylbenzene			Not detected	5.0
1,3,5-Trimethylbenzene			Not detected	5.0
n-Butylbenzene			Not detected	5.0
sec-Butylbenzene			Not detected	5.0
tert-Butylbenzene			Not detected	5.0

YORK

Client Sample ID			Stockpile	
York ID			99010387-01	
Matrix			SOIL	
Parameter	**Method**	**Units**	**Results**	**MDL**
Naphthalene			Not detected	5.0
Methyl-tert-butyl ether (MTBE)			Not detected	5.0
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/kG	—	—
Naphthalene			Not detected	330
Anthracene			Not detected	330
Fluorene			Not detected	330
Phenanthrene			Not detected	330
Pyrene			Not detected	330
Acenaphthene			Not detected	330
Benzo[a]anthracene			Not detected	330
Fluoranthene			Not detected	330
Benzo[b]fluoranthene			Not detected	330
Benzo[k]fluoranthene			Not detected	330
Chrysene			Not detected	330
Benzo[a]pyrene			Not detected	330
Benzo[g,h,i]perylene			Not detected	330
Indeno[1,2,3-cd]pyrene			Not detected	330
Dibenz[a,h]anthracene			Not detected	330

Units Key:

For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes:

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. If dilution factor is reported at the end of the compound list, the MDL is determined by multiplying the MDL times the listed dilution factor.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.

Approved By: Robert Bradley Date: 01/29/99

Robert Q. Bradley
Managing Director

YORK

YORK
ANALYTICAL LABORATORIES, INC.
ONE RESEARCH DRIVE
STAMFORD, CT 06906
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Company Name	Report To:	Invoice To:	Project ID/No.
N.E.S. NY	N.E.S. NY	N.E.S. NY	aerotech

Samples Collected By (Signature)

NICK BOUNDA
Name (Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
1	Stockpile	1-27-99		✓			Sbo 8021/8270	GLASS

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time

Sample Received by — Date/Time 1-27-99 9:__

Sample Received in LAB by — Date/Time 1/27/99 17__

Comments/Special Instructions

Turn-Around Time

___Standard ___RUSH(define)_____

Westchester [redacted]ov.com
[redacted] J. Spano
County Executive
Department of Health
Joshua Lipsman, M.D., M.P.H.
Commissioner

WESTCHESTER COUNTY DEPARTMENT OF HEALTH
PETROLEUM BULK STORAGE WORK PERMIT

Office of Environmental Health Risk Control
145 Huguenot Street - 7th Floor (914) 637-4890
New Rochelle, NY 10801

24 Hour Emergency Phone Number: (914) 637-4700

This work permit is good for sixty (60) days from the date of issue and must be posted on the tank at all times. Removal of this work permit prior to completion of work constitutes a violation of Article XXV of the Westchester County Sanitary Code.

In accordance with Article XXV of the Westchester County Sanitary Code, the bearer of this permit has completed an application for a work permit to perform work on the petroleum bulk storage tank located at:

Name of Establishment:	Aerotech World Trading Corp.
Street Address:	11 New King Street
Municipality:	White Plains
Applicant's Name:	National Enviromental Specialists, Inc.
Issue Date:	02/08/2001
Expiration Date:	04/09/2001
Federal Tax ID Number:	
PBS Number:	3-800739
Work to be Performed:	Remove/Close Tank (1)

this is a copy of the work permit, even though work was already done

Joshua B. Lipsman MD

Joshua Lipsman, M.D., M.P.H.
Commissioner of Health

Aquarion Management Services
Millwood Water Treatment Facility
4 Station Place
Millwood, NY 10546

Telephone
914.944.0036 or 914.944.0
Fax
914.762.1835

AQUARION
MANAGEMENT SERVICES

January 9, 2002

Mr. John Ruggerio
Westchester County Health Department
145 Huguenot Street
New Rochelle, NY 10801

Re: Aerotech World Trade Co.

Dear Mr. Ruggerio:

Enclosed please find the 2001 annual Nitrate/Nitrite sample for the above mentioned water supply.
If you have any questions please call me at 914 – 403 – 2304.

Sincerely,

Philip Derrenbacher
Operations Supervisor

Cc: Louis Viscome, Aerotech
File

REPORT OF ANALYSIS

Westchester County Department of Labs and Research 2 Dana Road Valhalla, New York 10595

Agency: AMS - Millwood Water Treatm
4 Station Place
Millwood. NY 10546

Attention: David Rambo

Received By: EP
Bottle No.: a2289,d1703
Collected By: DERENBACHER
Comment:

Report To:

Sample Location: AEROTECH WORLD TRADE CO
11 NEW KING STREET
WHITE PLAINS, N.Y.

Sample Point: ENTRY POINT
ID of Source: WATER SUPPLY
Collection Date: 12/12/2001 AT 1:05:00
Submitted On: 12/12/2001 AT 1:41:00
Sample Type: POT_DW
PWS No.: 5980034 Source Code:
Type Descriptor:
Sample chilled on arrival? : yes

Sample No. AD30413

Method	Test Description	Results	Units	MDL	Analyzed on		Validator
Inorganics							
EPA79 353.	Nitrite nitrogen as N	< MDL	mg/L	0.01	12/14/2001	8:32 AM	PAD
EPA79 353.	Nitrate nitrogen as N	0.44	mg/L	0.05	12/17/2001		PAD

Approved By: Pam Dilsizian QA Officer Date Approved: 12/18/2001

** TOTAL PAGE.03 **

SMITH LABORATORY
SCENIC DRIVE & RTE. 9
HYDE PARK, NY 12538
PHONE (845) 229-6536

LAB NO. B-01305

FORWARD REPORT TO: (PLEASE PRINT)
Aquarion Mgmt Svcs
NAME
Box 847
STREET ADDRESS
Poughkeepsie NY 12570
CITY STATE ZIP

TYPE OF FACILITY:
☒ PUBLIC WATER SUPPLY (ID # 5930039
☐ PRIVATE RESIDENCE
☐ WASTEWATER TREATMENT FACILITY
☐ OTHER:

FACILITY NAME: Aerotek World Trade Corp ADDRESS: New King St. PHONE #
SAMPLING POINT: Kitchen Sink White Plains N.Y.
☒ MONITORING SAMPL
☐ CHECK SAMPLE

SOURCE: ☑ DRINKING WATER; ☐ SURFACE WATER; ☐ WASTE WATER; ☐ OTHER:

TREATMENT: ☑ CHLORINATED (0.2 PPM ☐ FREE RESIDUAL ☐ TOTAL RESIDUAL) ☐ UV ☐ OTHER:

COLLECTED BY: P. Derenbacher
DELIVERED BY: P. Derenbacher
RECEIVED AT LAB BY: K Dean
SAMPLE BOTTLE: SLD @ 9.0°C

DATE SAMPLED	TIME	ICED	RECEIVED	TIME	ICED	EXAMINED	TIME	REPORTED	TECHNICIAN(S)
5/7/02	9:13 AM/PM	☒ YES ☐ NO	5/7/02	2:55 AM/PM	☒ YES ☐ NO	5/07/02	4:20 AM/PM	5/09/02	K

☐ MFT ☐ MPN ☒ PA TOTAL COLIFORM Absent PER 100 ML
☐ MFT ☐ MPN FECAL COLIFORM COUNT PER 100 ML
☐ MFT FECAL STREP. COUNT PER 100 ML
☐ HETEROTROPHIC PLATE COUNT COLONY FORMING UNITS PER 1 ML
☐ E. COLI ☐ OTHER

THESE RESULTS INDICATE THAT THE WATER SAMPLE ☒ DID ☐ DID NOT
MEET SATISFACTORY SANITARY QUALITY FOR ☒ DRINKING ☐ SWIMMING ☐ WASTEWATER EFFLUENT

WHEN THE SAMPLE WAS COLLECTED. FOR INFORMATION CONCERNING UNSATISFACTORY SAMPLES PLEASE CALL: SMITH LABORATORY AT (845) 229-6536

REPORT NOT VALID WITHOUT CORPORATE SEAL

LAB DIRECTOR

BACTERIOLOGICAL EXAMINATION OF WATER CUSTOMERS COPY

N.Y.S. APPROVED LAB. NO. 10924

THE *Chazen* COMPANIES

Facsimile Transmission

COMMERCIAL LOANS DEPT
RECEIVED
JUN 20 2002

To: Paul Hunter

Company: Hudson United Bank

Date: June 19, 2002

Fax No: (845) 565-3924

Regarding: Potable Water Results Letter- Aertoech Realty Corp.

Comments: Paul, I have faxed a copy of this letter to Luann, and have forwarded a hardcopy to her in the mail along with the third copy of the ESA report.

From: Emily Pereira

Company: The Chazen Companies – Dutchess County Office

Phone No: (845) 454-3980

Fax No: (845) 454-4026

Number of Pages (Including this page): 8

Approximate Time of Transmission: 3:47 PM

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Dutchess County Office:

21 Fox Street
Poughkeepsie, NY 12601
Phone: (845) 454-3980 Fax: (845) 454-4026

www.chazencompanies.com
Email: poughkeepsie@chazencompanies.com

Orange County Office:
Phone: (845) 567-1133 Fax: (845) 567-1925

New England Office:
Phone: (781) 556-1037 Fax: (781) 556-1099

Capital District Office:
Phone: (518) 235-8050 Fax: (518) 235-8051

North Country Office:
Phone: (518) 812-0513 Fax: (518) 812-2205

CHAZEN ENVIRONMENTAL SERVICES, INC.

Orange County Office
Phone: (845) 567-1133

New England Office
Phone: (781) 556-1037

21 Fox Street, Poughkeepsie, NY 12601
Phone: (845) 454-3980 Fax: (845) 454-4026
Email: Poughkeepsie@chazencompanies.com

Capital District Office
Phone: (518) 235-8050

North Country Office
Phone: (518) 812-0513

June 19, 2002

Luann DeYoung
Hudson United Bank
530 High Mountain Road
North Haledon, NJ 07058

Re: Potable Water Analytical Results for Aerotech Realty Corp., Town of North Castle, Westchester County, New York
Job # 20229.00

Dear Ms. DeYoung:

The Chazen Companies (TCC) is pleased to present the results of the above referenced potable water sampling event. This project was initiated following a recommendation in the June 6, 2002 Phase I Environmental Site Assessment (Phase I ESA) of this property prepared by TCC. The Phase I ESA identified potential impact to on-site groundwater from fuel oil releases at nearby properties. These nearby sites are identified as Safety Flight Instrument Corp. and "Office Building" located at 4 New King Street. Both of these sites are located east of and appear to be upgradient to the subject property.

One June 10, 2002 TCC collected a potable water sample from the on-site well via the building's kitchen tap. A charcoal filter was previously located underneath the sink to filter the water supplying this tap; however, this filter has been disconnected. The potable water sample was sent to York Analytical Laboratories, Inc. (NELAP I.D. 10854) of Stamford, Connecticut. The sample was analyzed for volatile organic compounds (VOCs) and semi-volatile compounds (SVOCs) using EPA methods 8021 and 8270 (PAHs only) respectively. VOCs represent the most mobile components of petroleum products, while PAHs are less mobile and are commonly associated with fuel oils. Analytical results indicate that none of the compounds analyzed for were detected in the sample (results attached).

Based on these analytical results, the potable water supply at the subject property does not appear to have been affected by the fuel oil releases at the nearby properties.

If you require further information or clarification, please contact Catherine Monian or me at (845) 454-3980.

Sincerely,

Emily A. Pereira

Emily A. Pereira
Environmental Scientist

attachments

eap.

cc:
Paul Hunter, Hudson United Bank
Catherine Monian, Chazen

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Chazen Environmental Services
P.O. Box 3479
229-B Page Park, Manchester Rd.
Poughkeepsie, NY 12603
Attention: Edward Bush

Report Date: 6/13/2002
Re: Client Project ID: 20229
York Project No.: 02060225

CT License No. PH-0723 New York License No. 10854 Mass. License No. M-CT106 Rhode Island License No. 93 EPA I.D. No. CT00106

nelac nelap

ONE RESEARCH DRIVE STAMFORD, CT 06906 (203) 325-1371 FAX (203) 357-0166

Report Date: 6/13/2002
Client Project ID: 20229
York Project No.: 02060225

Chazen Environmental Services
P.O. Box 3479
229-B Page Park, Manchester Rd.
Poughkeepsie, NY 12603
Attention: Edward Bush

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 06/10/02. The project was identifed as your project "20229 ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			AerotechDW-1	
York Sample ID			02060225-01	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
Volatiles-8021 list water	SW846-8260	ug/L	---	---
1,1,1,2-Tetrachloroethane			Not detected	1
1,1,1-Trichloroethane			Not detected	1
1,1,2,2-Tetrachloroethane			Not detected	1
1,1,2-Trichloroethane			Not detected	1
1,1-Dichloroethane			Not detected	1
1,1-Dichloroethylene			Not detected	1
1,1-Dichloropropylene			Not detected	1
1,2,3-Trichlorobenzene			Not detected	1
1,2,3-Trichloropropane			Not detected	1
1,2,4-Trichlorobenzene			Not detected	1
1,2,4-Trimethylbenzene			Not detected	1
1,2-Dibromo-3-chloropropane			Not detected	1
1,2-Dibromoethane			Not detected	1
1,2-Dichlorobenzene			Not detected	1
1,2-Dichloroethane			Not detected	1
1,2-Dichloropropane			Not detected	1

Client Sample ID			AerotechDW-1	
York Sample ID			02060225-01	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
1,2-Dichlorothylene (Total)			Not detected	1
1,3,5-Trimethylbenzene			Not detected	1
1,3-Dichlorobenzene			Not detected	1
1,3-Dichloropropane			Not detected	1
1,4-Dichlorobenzene			Not detected	1
2,2-Dichloropropane			Not detected	1
2-Chlorotoluene			Not detected	1
4-Chlorotoluene			Not detected	1
Benzene			Not detected	1
Bromobenzene			Not detected	1
Bromochloromethane			Not detected	1
Bromodichloromethane			Not detected	1
Bromoform			Not detected	1
Bromomethane			Not detected	1
Carbon tetrachloride			Not detected	1
Chlorobenzene			Not detected	1
Chloroethane			Not detected	1
Chloroform			Not detected	1
Chloromethane			Not detected	1
cis-1,3-Dichloropropylene			Not detected	1
Dibromochloromethane			Not detected	1
Dibromomethane			Not detected	1
Dichlorodifluoromethane			Not detected	1
Ethylbenzene			Not detected	1
Hexachlorobutadiene			Not detected	1
Isopropylbenzene			Not detected	1
Methylene chloride			Not detected	1
Naphthalene			Not detected	1
n-Butylbenzene			Not detected	1
n-Propylbenzene			Not detected	1
o-Xylene			Not detected	1
p- & m-Xylenes			Not detected	1
p-Isopropyltoluene			Not detected	1
sec-Butylbenzene			Not detected	1
Styrene			Not detected	1
tert-Butylbenzene			Not detected	1
Tetrachloroethylene			Not detected	1
Toluene			Not detected	1
trans-1,3-Dichloropropylene			Not detected	1
Trichloroethylene			Not detected	1
Trichlorofluoromethane			Not detected	1
Vinyl chloride			Not detected	1
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/L	---	---
Acenaphthene			Not detected	10
Acenaphthylene			Not detected	10
Anthracene			Not detected	10
Benzo[a]anthracene			Not detected	10
Benzo[a]pyrene			Not detected	10
Benzo[b]fluoranthene			Not detected	10
Benzo[g,h,i]perylene			Not detected	10
Benzo[k]fluoranthene			Not detected	10

YORK

Client Sample ID			AerotechDW-1	
York Sample ID			02060225-01	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
Chyrsene			Not detected	10
Dibenz[a,h]anthracene			Not detected	10
Fluoranthene			Not detected	10
Fluorene			Not detected	10
Indeno[1,2,3-cd]pyrene			Not detected	10
Naphthalene			Not detected	10
Phenanthrene			Not detected	10
Pyrene			Not detected	10

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 02060225

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: _____ **Date:** 6/13/2002
Robert Q. Bradley
Managing Director

YORK

CHAIN OF CUSTODY RECORD

CHAZEN ENVIRONMENTAL SERVICES, INC.

02060225.

Dutchess County Office:
P.O. Box 3479, 229-B Manchester Road
Poughkeepsie, New York 12603
Phone: (845)454-3980
Fax: (845)454-4026

Newburgh Office:
263 Route 17K
Newburgh, New York 12550
Phone: (845)567-1133
Fax: (845)567-1925

Capital District Office:
20 Gurley Avenue
Troy, New York 12182
Phone: (518)235-8050
Fax: (518)235-8051

North County Office:
110 Glen Street
Glens Falls, New York 12801
Phone: (518)812-0513
Fax: (518)812-2215

Attention: Ed Bush

Project Name: Atlantic Realty Corp.

Location: 11 New King St., North Castle

Project Number: 20229

Project Manager: CM

Please Reference P.O. # 4028

Laboratory: York

Turn Around Time: by Friday a.m. June 14th

Level:

SAMPLE ID	DATE	TIME	Composite	Grab Sample	Matrix *	Total Number of Containers	40 ml Vial: Preserved	40 ml Vial: Un-Preserved	Liter Un-Preserved: Glass - Clear	Liter Un-Preserved: Glass - Amber	Liter Un-Preserved: Plastic	Liter Preserved: Sulfuric	Liter Preserved: Nitric	Liter Preserved: Sodium Hydroxide	Liter Preserved: Other	Liter Preserved: Organic Washed	500 ml: Field Filtered Dissolved Oxygen	250 ml: Glass	250 ml: Plastic	125 ml: Sterile Plastic	Glass: Soil Sample	Other	ANALYSIS REQUESTED
Atlantic Dup-1	6/10/02	10:05		X	SO	3	2			1													8021 & 8270 (PAH's only)

* - Please Identify Matrix:
GW - Groundwater SW - Surface Water DW - Drinking Water SS - Soil Sample SD - Sediment Sample SL - Sludge PS - Process Sample Other (Please Specify)

Relinquished By:
Name: Emily Pereira (Please Print) Date: 6/10/02 Time: 11 45 Company: CES

Received By:
Name: Wayne (Please Print) Date: 6/10 Time: 1145 Company: York

Received By:
Name: (Please Print) Date: 6/10 Time: 3:20 Company: York

3.9C

PLEASE NOTE: Pink Sheet - Chazen Copy Yellow Sheet - Laboratory File Copy White Top Sheet - Report Copy (Please return along with completed Lab Results)

** TOTAL PAGE.08 **