

# STONEFIELD

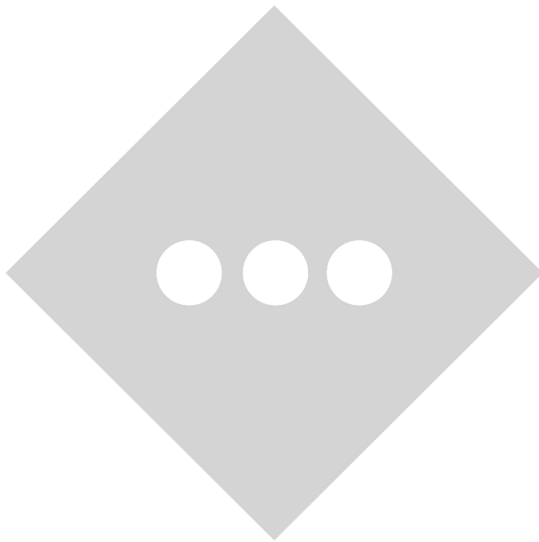
## STORMWATER MANAGEMENT REPORT PENINSULA VIEW URBAN RENEWAL, LLC

PROPOSED MULTI-FAMILY RESIDENTIAL BUILDING  
BLOCK 411, LOT 2.01  
75-87 EAST 31<sup>ST</sup> STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NJ

**PREPARED FOR:**  
PENINSULA VIEW URBAN RENEWAL, LLC

**PREPARED BY:**  
STONEFIELD ENGINEERING & DESIGN, LLC  
92 PARK AVENUE  
RUTHERFORD, NJ

**REPORT DATE:**  
12/22/2025



Handwritten signature of Afton Savitz.

**AFTON SAVITZ, PE**  
**NJ PE LICENSE #57674**

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## **I.0 PROJECT DESCRIPTION**

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Peninsula View Urban Renewal, LLC is proposing to redevelop Block 411, Lot 2.01, commonly known as 75-87 East 31<sup>st</sup> Street, which fronts NJ State Route 440, East 31<sup>st</sup> Street, East 32<sup>nd</sup> Street, and Prospect Avenue (herein referred to as the “project site”) to accommodate a proposed multi-family building with 165 residential units. Additional improvements include an off-street parking structure, lighting, landscaping, utility services, and stormwater conveyance systems.

The property is located within the 2016 Redevelopment Plan (Penn View) and Transit Development District. The proposed development is surrounded by single-family residential lots, a newly constructed multi-family building to the south, and Route 440 along the eastern property line. The proposed parking structure will be accessed via a full-movement driveway from East 31<sup>st</sup> Street and another from East 32<sup>nd</sup> Street. There is a second driveway along East 31<sup>st</sup> Street for access to an internal loading bay. No vehicular access is proposed from Route 440 or Prospect Avenue. Refer to **APPENDIX A** for project maps of the project site.

**The project site is 44,914 SF (1.03 acres), the extent of land disturbance is 69,165 SF (1.59 acres), and 36,183 SF (0.83 acres) of new impervious surface will be created by the project. In addition, the project proposes the addition of 4,963 SF (0.11 acres) of new motor vehicle surface. The overall drainage area was modeled as 44,914 SF (1.03 acres).**

This Report has been prepared to analyze the potential stormwater runoff impacts of the proposed project site and outline proposed measures to conform to the stormwater management regulations set forth by the City of Bayonne, Hudson-Essex-Passaic County Soil Conservation District (HEP SCD), the New Jersey Administrative Code (NJAC), and the New Jersey Department of Environmental Protection (NJDEP).

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## **2.0 EXISTING CONDITIONS**

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### **EXISTING SITE DEVELOPMENT**

The project site fronts NJ State Route 440 to the east, East 31<sup>st</sup> Street to the south, East 32<sup>nd</sup> Street to the north, and Prospect Avenue to the west. The project site has been historically developed with five (5) single-family houses ranging from two to three stories, with the remainder of the site vacant. The houses have since been removed. The existing site is currently vacant with some driveway remnants off of East 31<sup>st</sup> Street and East 32<sup>nd</sup> Street. All existing driveway remnants will be removed as part of the proposed redevelopment. An Aerial Map depicting the existing site conditions can be found in **APPENDIX A**.

**EXISTING TOPOGRAPHY**

Overall, site topography slopes toward Route 440 and East 32nd Street, with grades generally ranging from 2% to 15%. Areas where former buildings were demolished exhibit slopes up to 25%. Slopes gradually flatten near all roadway frontages. The high point of the project site, at approximately elevation 26.5 FT NAVD88, is located along the western property line adjacent to Block 411, Lot 1. The majority of the project site slopes in the eastern direction, with runoff ultimately flowing overland towards the southbound side of Route 440. The northern portion of the project site slopes north where runoff flows overland towards the East 32<sup>nd</sup> Street branch road. A small westerly portion of the project site adjacent to Prospect Avenue slopes west towards the roadway.

Existing stone and wood retaining walls up to approximately 12 feet tall are present just west of the project site within the Route 440 right-of-way. The existing walls are to be removed and replaced as part of the proposed development. Refer to the Proposed Topography section for additional information.

**PROJECT SITE SOILS**

Soil mapping was obtained from the National Resource Conservation Service (NRCS) for the project site and immediate area. Generally, the project site is underlain with one (1) major soil group: urban land. Overall, the existing soils are expected to exhibit poor drainage. The table below provides a summary of soils for the project site:

**TABLE 1: NRCS SOIL MAPPING RESULTS**

Soil Unit Code	Soil Description	Approximate Project Coverage	Drainage Class	Hydrologic Soil Group
URTILB	Urban Land, Till Substratum 0% to 8% Slopes	96.9%	Unranked	D *
URWETB	Urban Land, Wet Substratum 0% to 8% Slopes	3.1%	Unranked	D *

\* URTILB & URWETB are unranked, so a hydrologic soil group of D was utilized for the analysis.

Additional information regarding the NRCS soil mapping can be found in **APPENDIX B**.

**WATERSHED / RECEIVING WATERS – TMDL DESIGNATION**

Under existing conditions, the site drains to the Hudson River, the Southbound side of Route 440, and Prospect Avenue, which all ultimately discharge to the Upper NY Bay / Kill Van Kull [Assessment Unit ID: NJ02030104010030-01]. The watershed for the development is part of the Upper Bay – The Narrows Watershed [HUC-12 ID: 020301040205] as defined by the United States Environmental Protection Agency for Community Waterway Mapping.

## **EXISTING ENVIRONMENTAL INVENTORY**

Based on the preliminary FEMA flood insurance rate mapping (FEMA Map #34017C0111E issued December 20, 2013), the entirety of the site is not located within the 100-year flood plain. The FEMA Map can be found in **APPENDIX A** of this Report.

There are no federal (US Army Corps of Engineers) or state (NJDEP) regulated freshwater wetlands mapped within proximity to the project site. As such, impacts to freshwater wetlands are not anticipated with the proposed development. The Hudson River is located approximately 180 feet northeast of the project site. No records of endangered or threatened species sightings / suitable habitats are located within the vicinity of the proposed improvements.

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## **3.0 PROPOSED CONDITIONS**

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### **PROPOSED SITE DEVELOPMENT**

The proposed redevelopment will consist of a multi-family building with 165 residential units. Additional improvements include an off-street parking structure, lighting, landscaping, utility services, and stormwater management and conveyance systems. The parking structure will be accessed via a full-movement driveway from East 31<sup>st</sup> Street and another from East 32<sup>nd</sup> Street. Refer to **APPENDIX A** for a half-size Overall Site Plan depicting the proposed project improvements.

### **PROPOSED TOPOGRAPHY**

Project site topography and drainage patterns will generally remain similar to the existing conditions; however, to accommodate the proposed building footprint and ADA compliant grades, retaining walls and ramping will be implemented throughout the project site.

In the proposed condition, the existing retaining wall along the west side of the Route 440 right-of-way will be replaced by building foundation and block retaining wall following the project site's eastern property line. No adverse impacts are anticipated as part of this redevelopment.

### **ANTICIPATED ENVIRONMENTAL INVENTORY IMPACTS**

The proposed redevelopment will not disturb land within environmentally regulated areas. As such, permits for floodplain development, riparian zone disturbances, freshwater wetland development, and transition area disturbance will not be sought from the NJDEP.

## **4.0 STORMWATER MANAGEMENT METHODOLOGY & PARAMETERS**

### **HYDROLOGIC METHODOLOGY**

The analysis program “HydroCAD” Version 10.20-6a by HydroCAD Software Solutions was utilized to calculate and plot the runoff hydrographs. The program incorporates the time of concentration, C values, rainfall data, and project drainage areas to calculate the runoff characteristics. The existing and proposed drainage areas have been analyzed utilizing Intensity-Duration-Frequency data obtained from NOAA for the project area; specifics of the rainfall distribution can be found in **APPENDIX C**. Additional key variables utilized in the analysis include:

**TABLE 2: HYDROCAD DESIGN VARIABLES**

<b>Variable</b>	<b>Input</b>	<b>Variable</b>	<b>Input</b>
Runoff Calculation Method	SCS TR-20	NRCS Rainfall Frequency Data Set	Hudson
Pervious/Impervious CN Calculations	Separate	Storm Intervals (Year Events)	2, 10, 100 Current (2020-2049) & Future (2050-2099) Projections
Stage-Storage Relationship	Dynamic	Storm Duration	24 Hours
Minimum time of concentration	N/A	Storm Curve	NOAA D

Additional information regarding the hydrologic calculations can be found in **APPENDIX C**.

## **5.0 STORMWATER ANALYSIS**

### **EXISTING DRAINAGE AREAS**

Under current conditions, the project site is subdivided into three Points of Interest (POIs). POI-1 (E-1) is located where overland runoff exits the northeastern property line with frontage on East 32<sup>nd</sup> Street. This runoff then flows overland within the East 32<sup>nd</sup> Street branch, being captured by an existing inlet at the east end of the road. The runoff is conveyed east across Route 440 where it directly discharges into the tidally influenced Hudson River. POI-2 (E-2) is located where overland runoff exits the southeast property corner along East 31<sup>st</sup> Street. The runoff traverses an existing retaining wall, flows overland across the Route 440 Southbound lanes, eventually being captured by an inlet. A majority of the existing drainage area exits the property from E-2. POI-3 (E-3) represents a point along the western property line with frontage on Prospect Avenue where a small portion of the project site’s runoff exits the property. Runoff then flows overland to an existing inlet within Prospect Avenue. See below for a summary of each area:

**TABLE 4: SUMMARY OF EXISTING DRAINAGE AREAS**

<b>Drainage Area</b>	<b>Description</b>	<b>Area Extents</b>	<b>Impervious Area</b>	<b>Time of Concentration</b>
E-1A	Existing Drainage Towards East 32 <sup>nd</sup> Street	7,329 SF	0 SF	2.9 Minutes
E-1B	Existing Drainage Towards Northern Property Lines	2,830 SF	0 SF	3.2 Minutes
POI (E-1)	Existing Drainage to East 32 <sup>nd</sup> Street Inlet and Hudson River Outfall	<b>10,159 SF</b>	<b>0 SF</b>	N/A
POI (E-2)	Existing Drainage to Route 440 Southbound	<b>31,941 SF</b>	<b>1,601 SF</b>	4.1 Minutes
POI (E-3)	Existing Drainage to Prospect Avenue	<b>1,213 SF</b>	<b>0 SF</b>	6.1 Minutes

All existing drainage areas were delineated based on field surveying data. Hydrologic calculations and parameters for each drainage area can be found in **APPENDIX C**; specific drainage area delineations and land cover can be found in **APPENDIX E**.

**PROPOSED DRAINAGE AREAS**

Under proposed conditions, the general drainage patterns and ultimate points of interest will be maintained. POI-1 (P-1) remains where runoff discharges towards East 32<sup>nd</sup> Street. This POI receives runoff from the building roof, driveway, walkways, and yard areas that are captured on-site and conveyed directly into the City’s conveyance system within the East 32<sup>nd</sup> Street branch. POI (P-2) receives runoff from the terrace-level roof of the proposed building, southwestern, and northeastern yard areas, which will continue to drain overland toward Route 440 Southbound. POI-3 (P-3) remains unchanged where overland runoff from the undisturbed yard area adjacent to Prospect Avenue discharges west towards said street. See below for a summary of each area:

**TABLE 5: SUMMARY OF PROPOSED DRAINAGE AREAS**

<b>Drainage Area</b>	<b>Description</b>	<b>Area Extents</b>	<b>Impervious Area</b>	<b>Time of Concentration</b>
P-1A	Proposed Building Roof Area	24,962 SF	24,962 SF	0.2 Minutes
P-1B	Proposed Driveway, Walkway and Yards	10,112 SF	6,378 SF	1.8 Minutes
POI (P-1)	Proposed Drainage to East 32 <sup>nd</sup> Street Inlet and Hudson River Outfall	<b>35,074 SF</b>	<b>31,340 SF</b>	N/A
P-2A	Proposed Building 2 <sup>nd</sup> Floor Terrace Area	6,131 SF	6,131 SF	0.2 Minutes
P-2B	Proposed North Yard Area	324 SF	0 SF	8.8 Minutes
P-2C	Proposed East Yard Area	1,859 SF	313 SF	1.9 Minutes
POI (P-2)	Proposed Drainage to Route 440 Southbound	<b>8,627 SF</b>	<b>6,444 SF</b>	N/A
POI (P-3)	Proposed Drainage to Prospect Avenue	<b>1,213 SF</b>	<b>0 SF</b>	6.1 Minutes

All proposed drainage areas were delineated based on the proposed grading design overlain on field survey data. Hydrologic calculations and parameters for each drainage area can be found in **APPENDIX C**; specific drainage area delineations and land cover can be found in **APPENDIX E**.

**STORMWATER MANAGEMENT DESIGN PARAMETERS**

The extent of redevelopment proposes to disturb more than one acre of land and add more than one-quarter acre of new impervious surfaces; as such, the project is considered a Major Development as defined in the City of Bayonne Land Development Ordinance and NJAC 7:8-1.2. A Major Development is subject to stormwater quantity, quality, and groundwater recharge requirements. See below for a summary of each design parameter and compliance requirements:

**TABLE 6: STORMWATER MANAGEMENT DESIGN TARGET SUMMARY TABLE**

Design Parameter	Design Target for Compliance
Stormwater Runoff Quantity	<p><u>Areas discharging to tidal waterway:</u> Such areas are <b>exempt</b> from runoff quantity reductions as the project site discharges directly into a tidal waterway (the Hudson River); therefore, no analysis is required.</p> <p><u>Areas not discharging to tidal waterway:</u> Design stormwater management measures so that the post-construction peak runoff rates for the 2-, 10-, and 100-year storm events are 50, 75 and 80 percent, respectively, of the pre-construction peak runoff rates. The percentages apply only to the post-construction stormwater runoff that is attributable to the portion of the site on which the proposed development or project is to be constructed.</p> <p><u>Areas remaining undisturbed:</u> Such areas are <b>exempt</b> from runoff quantity reductions.</p>
Stormwater Runoff Quality	The project is <b>exempt</b> from water quality requirements as the project does not increase motor vehicle surfaces by more than one-quarter acre.
Groundwater Recharge	The project is <b>exempt</b> from groundwater recharge requirements as the project site is located within State Planning Area PA-I (Metropolitan).

**STORMWATER RUNOFF QUANTITY**

No BMPs or stormwater detention systems are proposed as part of the development. However, stormwater conveyance systems are proposed to manage and reduce overland flow. The tables below summarize the various drainage areas in relation to flow rates and runoff volume during regulatory storm events:

**TABLE 7: SUMMARY OF EXISTING DRAINAGE AREA FLOW RATES**

Drainage Area	2-Year Flow Rate		10-Year Flow Rate		100-Year Flow Rate	
	Current	Future	Current	Future	Current	Future
E-1A	0.34 CFS	0.44 CFS	0.67 CFS	0.81 CFS	1.37 CFS	1.60 CFS
E-1B	0.13 CFS	0.17 CFS	0.26 CFS	0.31 CFS	0.53 CFS	0.61 CFS
POI-1 (E-1)	0.47 CFS	0.60 CFS	0.93 CFS	1.12 CFS	1.90 CFS	2.21 CFS
POI-2 (E-2)	1.47 CFS	1.90 CFS	2.92 CFS	3.53 CFS	5.98 CFS	7.01 CFS
POI-3 (E-3)	0.05 CFS	0.06 CFS	0.10 CFS	0.12 CFS	0.20 CFS	0.23 CFS

**TABLE 8: SUMMARY OF PROPOSED DRAINAGE AREA FLOW RATES**

Drainage Area	2-Year Flow Rate		10-Year Flow Rate		100-Year Flow Rate	
	Current	Future	Current	Future	Current	Future
P-1A	2.04 CFS	2.36 CFS	3.17 CFS	3.59 CFS	5.46 CFS	6.16 CFS
P-1B	0.69 CFS	0.83 CFS	1.15 CFS	1.33 CFS	2.07 CFS	2.38 CFS
POI-1 (P-1)	2.59 CFS	3.04 CFS	4.10 CFS	4.69 CFS	7.16 CFS	8.13 CFS
P-2A	0.50 CFS	0.58 CFS	0.78 CFS	0.88 CFS	1.34 CFS	1.51 CFS
P-2B	0.01 CFS	0.02 CFS	0.02 CFS	0.03 CFS	0.05 CFS	0.06 CFS
P-2C	0.11 CFS	0.14 CFS	0.21 CFS	0.25 CFS	0.42 CFS	0.49 CFS
POI-2 (P-2)	0.60 CFS	0.71 CFS	0.98 CFS	1.12 CFS	1.75 CFS	1.99 CFS
POI-3 (P-3)	0.05 CFS	0.06 CFS	0.10 CFS	0.12 CFS	0.20 CFS	0.23 CFS

POI-1 experiences an increase to the peak runoff flow rate due to an increase in impervious area and an increase to its overall drainage area. This POI is exempt from stormwater quantity reduction standards as runoff is discharged directly to the Hudson River, a tidally influenced waterbody. POI-2 experiences reductions to the peak runoff flow rates due to a decrease in its overall drainage area. This POI is subject to stormwater quantity reduction standards as the proposed development is a Major Development, and the associated drainage areas are impacted as part of the proposed development. The diverted runoff from the terrace roof level (P-2A) discharges at grade. Like the existing condition, drainage areas P-2A, P-2B, and P-2C flow overland, eventually being captured by the inlet within Route 440 Southbound infrastructure. POI-3 does not experience an increase or decrease to the peak runoff flow rates, as drainage areas E-3 and P-3 remain unchanged as part of the proposed development. Thus, POI-3 is exempt from stormwater quantity reduction standards. Pre-construction runoff flow rates are equal to the post-construction peak runoff flow rates. Refer to Table 6 Design Parameter “Stormwater Runoff Quantity” for additional information.

The tables below outline the regulatory compliance parameters for runoff quantity on the project site:

**TABLE 9: STORMWATER RUNOFF QUANTITY COMPLIANCE SUMMARY POI-1 (E-1 / P-1)**

Rainfall Event	Existing Flow Rate	Proposed Flow Rate
<b>2020-2059 Projection</b>		
2-Year Storm	0.47 CFS	2.59 CFS
10-Year Storm	0.93 CFS	4.10 CFS
100-Year Storm	1.90 CFS	7.16 CFS
<b>2050-2099 Projection</b>		
2-Year Storm	0.60 CFS	3.04 CFS
10-Year Storm [2050]	1.12 CFS	4.69 CFS
100-Year Storm [2050]	2.21 CFS	8.13 CFS

**TABLE 10: STORMWATER RUNOFF QUANTITY COMPLIANCE SUMMARY POI-2 (E-2 / P-2)**

Rainfall Event	Existing Flow Rate	Required % Reduction	Required Flow Rate	Proposed Flow Rate	Proposed % Reduction
<b>2020-2059 Projection</b>					
2-Year Storm	1.47 CFS	50%	0.73 CFS	0.60 CFS	59.18%
10-Year Storm	2.92 CFS	25%	2.19 CFS	0.98 CFS	66.44%
100-Year Storm	5.98 CFS	20%	4.78 CFS	1.75 CFS	70.74%
<b>2050-2099 Projection</b>					
2-Year Storm	1.90 CFS	50%	0.95 CFS	0.71 CFS	62.63%
10-Year Storm	3.53 CFS	25%	2.64 CFS	1.12 CFS	68.27%
100-Year Storm	7.01 CFS	20%	5.60 CFS	1.99 CFS	71.61%

**TABLE 11: STORMWATER RUNOFF QUANTITY COMPLIANCE SUMMARY POI-3 (E-3 / P-3)**

Rainfall Event	Existing Flow Rate	Required % Reduction	Required Flow Rate	Proposed Flow Rate	Proposed % Reduction
<b>2020-2059 Projection</b>					
2-Year Storm	0.05 CFS	0%	0.05 CFS	0.05 CFS	0.00%
10-Year Storm	0.10 CFS	0%	0.10 CFS	0.10 CFS	0.00%
100-Year Storm	0.20 CFS	0%	0.20 CFS	0.20 CFS	0.00%
<b>2050-2099 Projection</b>					
2-Year Storm	0.06 CFS	0%	0.06 CFS	0.06 CFS	0.00%
10-Year Storm	0.12 CFS	0%	0.12 CFS	0.12 CFS	0.00%
100-Year Storm	0.23 CFS	0%	0.23 CFS	0.23 CFS	0.00%

**STORMWATER RUNOFF QUALITY**

As indicated in NJAC 7:8-5.5, the project site is **exempt** from water quality requirements as the site does not increase motor vehicle surfaces by more than one-quarter acre.

**GROUNDWATER RECHARGE**

As indicated in the City of Bayonne Ordinance and NJAC 7:8-5.4, the project site is **exempt** from groundwater recharge requirements as the site is located within the Metropolitan Planning Area (PA-1) per the State Plan Policy Map and thus qualifies as an Urban Redevelopment Area (which is exempt from groundwater recharge requirements).

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**6.0 STORMWATER FACILITY OPERATIONS & MAINTENANCE**

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A Stormwater Operations & Maintenance Manual will be submitted for review to the City and forwarded to the relevant jurisdictional agencies prior to obtaining final land use approvals and permits. Any necessary easements or covenants associated with the stormwater improvements will be recorded prior to the start of construction.

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**7.0 EROSION & SEDIMENT CONTROL**

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A Soil Erosion & Sediment Control Plan has been prepared in accordance with the latest edition of the Standards for Soil Erosion and Sediment Control in New Jersey. This plan can be found within the Amended Preliminary & Final Major Site Plan prepared by Stonefield in conjunction with this Report. Proposed temporary measures during construction include silt fencing, super silt fencing, two (2) stabilized construction entrances, inlet filters, and street cleaning. No land disturbance will occur until certification and permits have been obtained from the Hudson-Passaic-Essex Soil Conservation District (HEP SED).

## **8.0 CONCLUSIONS**

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As demonstrated in this Report, the increase in runoff flow rate and volume generated by the proposed redevelopment will be satisfactorily managed by the on-site stormwater conveyance systems. The project site meets water quantity reduction requirements for the disturbed areas that do not directly discharge to the tidally influenced Hudson River. The project site is exempt from water quality measures. The project site is exempt from groundwater recharge measures as the site is located within the Metropolitan Planning Area (PA-I).

The proposed project complies with all applicable stormwater management regulations and standards. As such, the project is not anticipated to have any adverse drainage impacts on neighboring properties, downstream watercourses, or adjoining conveyance systems.

## **9.0 REFERENCES**

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1. New Jersey Administrative Code Title 7, Chapter 8 Stormwater Management, last amended March 2, 2020  
[https://www.nj.gov/dep/rules/rules/njac7\\_8.pdf](https://www.nj.gov/dep/rules/rules/njac7_8.pdf)
2. New Jersey Stormwater Best Management Practices Manual, last revised March 2, 2020  
[https://www.njstormwater.org/bmp\\_manual2.htm](https://www.njstormwater.org/bmp_manual2.htm)
3. City of Bayonne Zoning Regulations, last amended October 19, 2022  
<https://ecode360.com/35730904>
4. City of Bayonne Planning and Development Regulations, last amended May 18, 2022  
<https://ecode360.com/35728127>

# **APPENDIX A PROJECT FIGURES**

## **INVENTORY**

**FIGURE 1: AERIAL MAP**

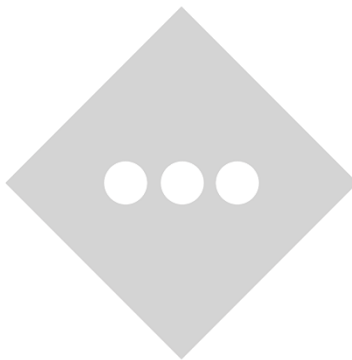
**FIGURE 2: TAX & ZONING MAP**

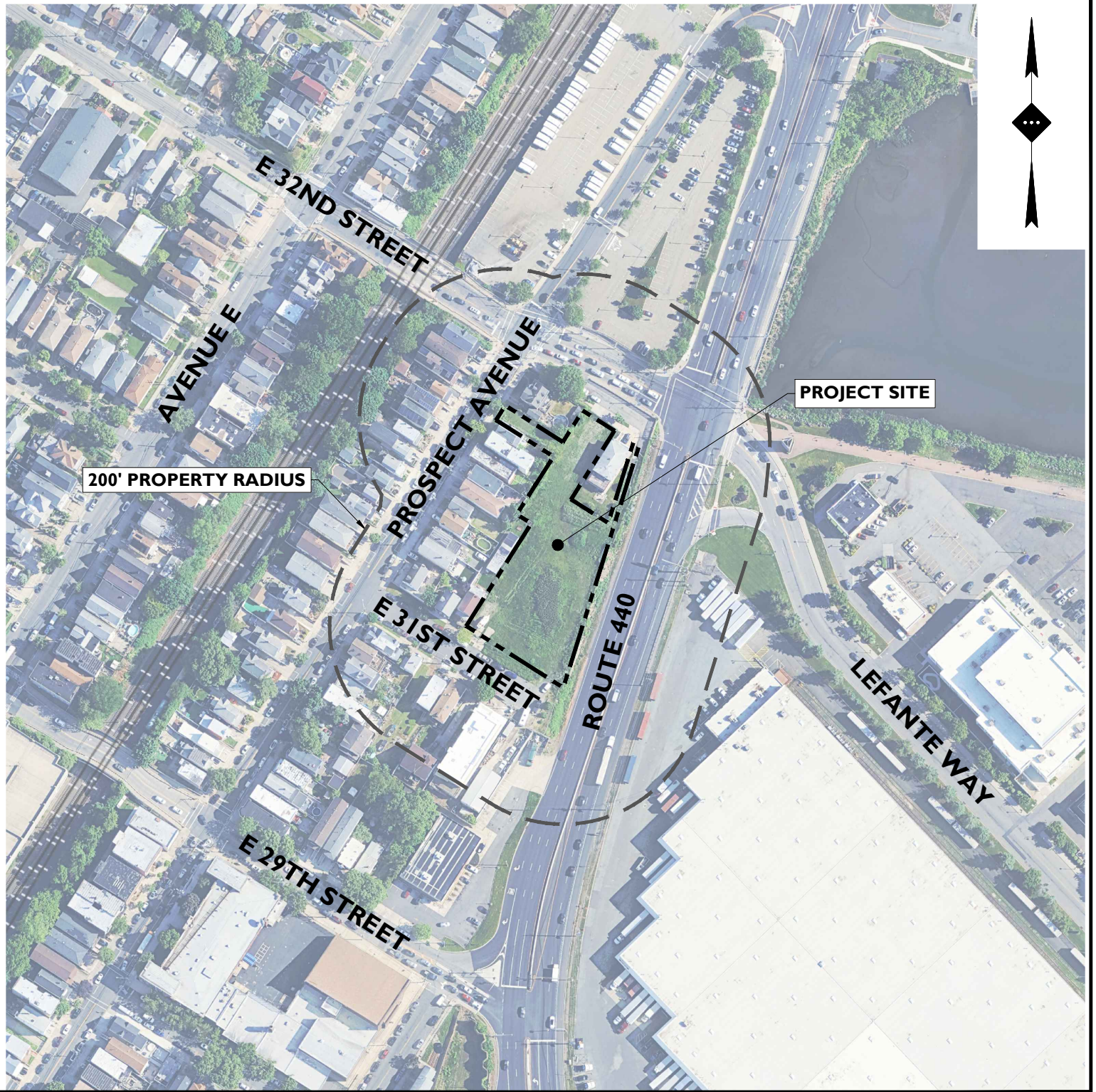
**FIGURE 3: USGS LOCATION MAP**

**FIGURE 4: EFFECTIVE FEMA MAP**

**FIGURE 5: PRELIMINARY FEMA MAP**

**FIGURE 6: OVERALL SITE PLAN (NOT TO SCALE)**





200' PROPERTY RADIUS

PROJECT SITE



GRAPHIC SCALE IN FEET  
1" = 200'

# AERIAL MAP

SOURCE: GOOGLE EARTH PRO, DATED JUNE 2023

## PENINSULA VIEW URBAN RENEWAL, LLC PROPOSED APARTMENT BUILDING WITH STRUCTURED PARKING

BLOCK 411, LOT 2.01  
75-87 EAST 31ST STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NEW JERSEY

<b>DRAWN BY:</b>	JG
<b>CHECKED BY:</b>	AS
<b>DATE:</b>	05/28/2025
<b>SCALE:</b>	1" = 200'
<b>PROJECT ID:</b>	RUT-250176



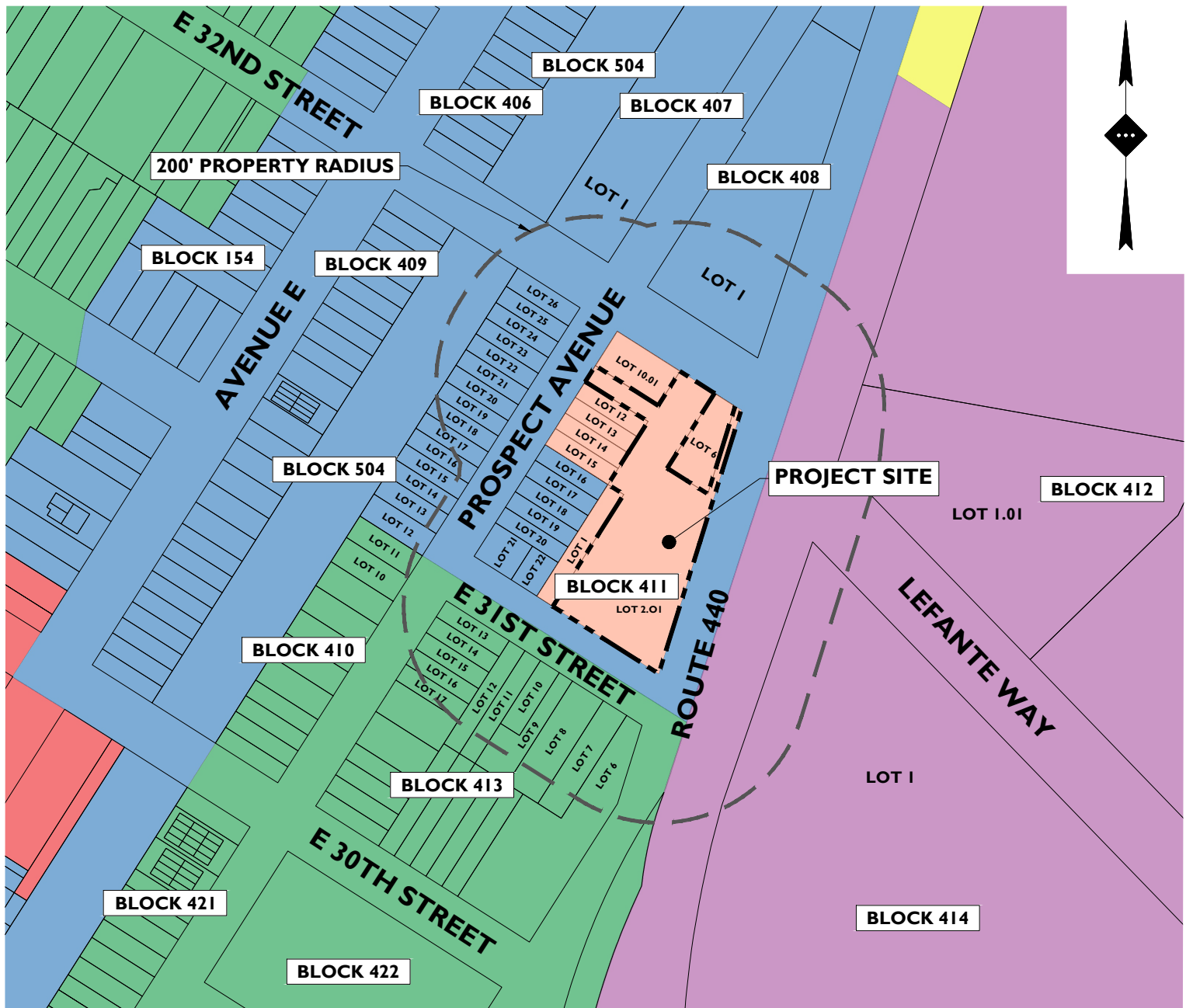
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Headquarters: 92 Park Avenue, Rutherford, NJ 07070  
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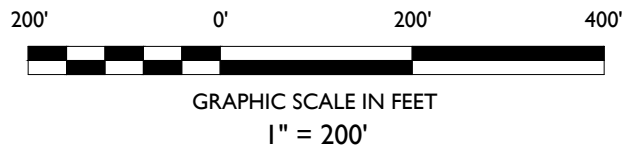
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**ZONING LEGEND**

-   
 2016 REDEVELOPMENT PLAN  
 (PENN VIEW)
-   
 TRANSIT  
 DEVELOPMENT  
 DISTRICT
-   
 R-2: DETACHED/ATTACHED  
 RESIDENTIAL DISTRICT
-   
 H-1: HOSPITAL  
 DISTRICT ZONE
-   
 H-C: HIGHWAY  
 COMMERCIAL/SELECTED LIGHT  
 INDUSTRIAL DISTRICT
-   
 BMHO: BAYONNE  
 METROPOLITAN  
 HARBOR DISTRICT



**TAX & ZONING MAP**

SOURCE: CITY OF BAYONNE CITY TAX MAP SHEETS 36, 39, 114, 115, 125, & 130 DATED DECEMBER, 2018 & CITY OF BAYONNE ZONING DISTRICTS MAP, DATED DECEMBER 2020

**PENINSULA VIEW URBAN RENEWAL, LLC  
PROPOSED APARTMENT BUILDING WITH STRUCTURED PARKING**

BLOCK 411, LOT 2.01  
75-87 EAST 31ST STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NEW JERSEY

<b>DRAWN BY:</b>	JG
<b>CHECKED BY:</b>	AS
<b>DATE:</b>	05/28/2025
<b>SCALE:</b>	1" = 200'
<b>PROJECT ID:</b>	RUT-250176

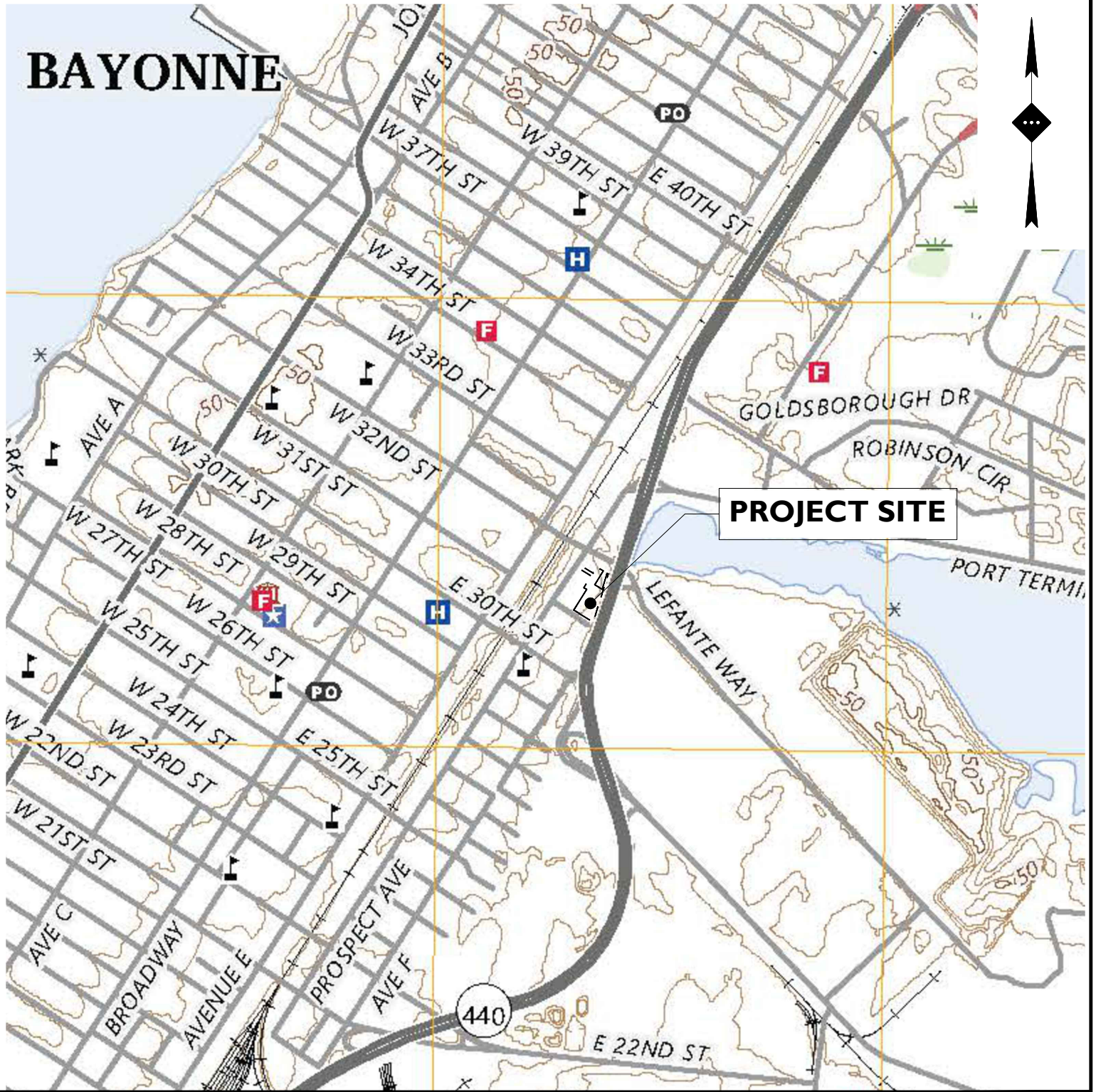


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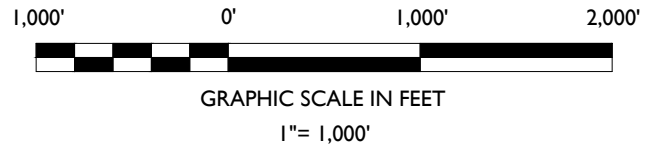
Headquarters: 92 Park Avenue, Rutherford, NJ 07070  
Phone 201.340.4468 · Fax 201.340.4472

# BAYONNE



**PROJECT SITE**

## USGS MAP



SOURCE: USGS QUADRANGLE MAP 7.5 MINUTE SERIES, JERSEY CITY, NJ, DATED 2023

### PENINSULA VIEW URBAN RENEWAL, LLC PROPOSED APARTMENT BUILDING WITH STRUCTURED PARKING

BLOCK 411, LOT 2.01  
75-87 EAST 31ST STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NEW JERSEY

<b>DRAWN BY:</b>	JG
<b>CHECKED BY:</b>	AS
<b>DATE:</b>	05/28/2025
<b>SCALE:</b>	1" = 1,000'
<b>PROJECT ID:</b>	RUT-250176

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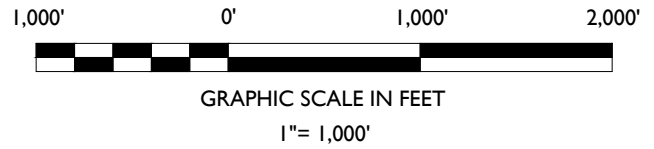
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# FEMA EFFECTIVE MAP



SOURCE: FEMA EFFECTIVE FLOOD INSURANCE MAP 34017C0104D, DATED 08/16/2006

## PENINSULA VIEW URBAN RENEWAL, LLC PROPOSED APARTMENT BUILDING WITH STRUCTURED PARKING

BLOCK 411, LOT 2.01  
75-87 EAST 31ST STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NEW JERSEY

<b>DRAWN BY:</b>	JG
<b>CHECKED BY:</b>	AS
<b>DATE:</b>	05/28/2025
<b>SCALE:</b>	1" = 1,000'
<b>PROJECT ID:</b>	RUT-250176

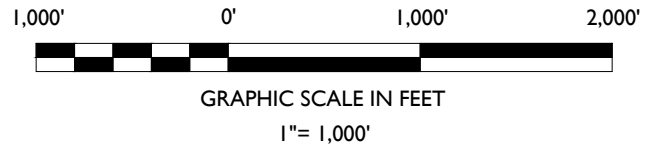
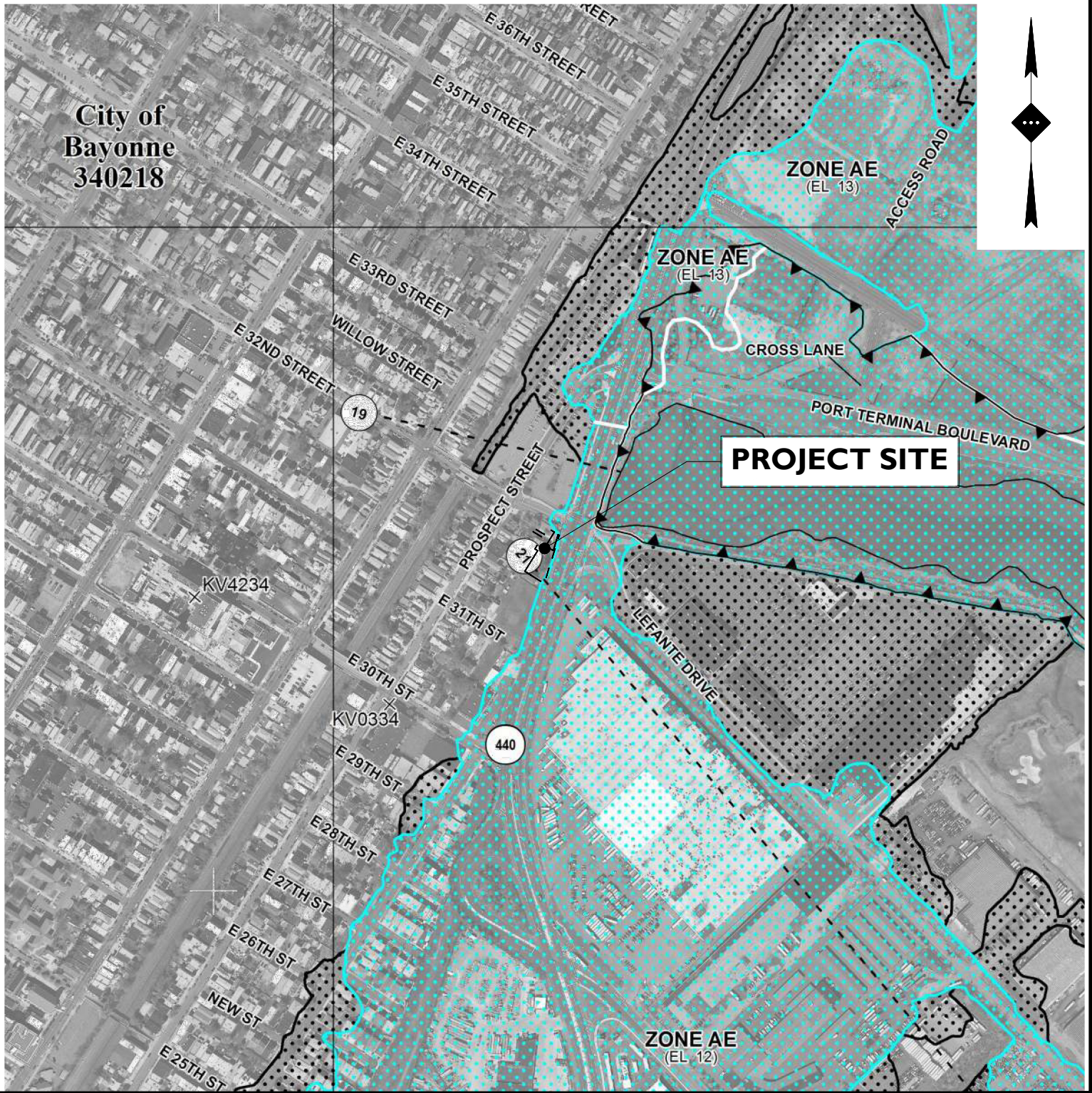
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City of  
Bayonne  
340218



# FEMA PRELIMINARY MAP

SOURCE: FEMA PRELIMINARY FLOOD INSURANCE MAP 34017C011 IE, DATED 12/20/2013

## PENINSULA VIEW URBAN RENEWAL, LLC PROPOSED APARTMENT BUILDING WITH STRUCTURED PARKING

BLOCK 411, LOT 2.01  
75-87 EAST 31ST STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NEW JERSEY

<b>DRAWN BY:</b>	JG
<b>CHECKED BY:</b>	AS
<b>DATE:</b>	05/28/2025
<b>SCALE:</b>	1" = 1,000'
<b>PROJECT ID:</b>	RUT-250176



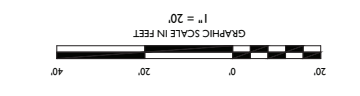
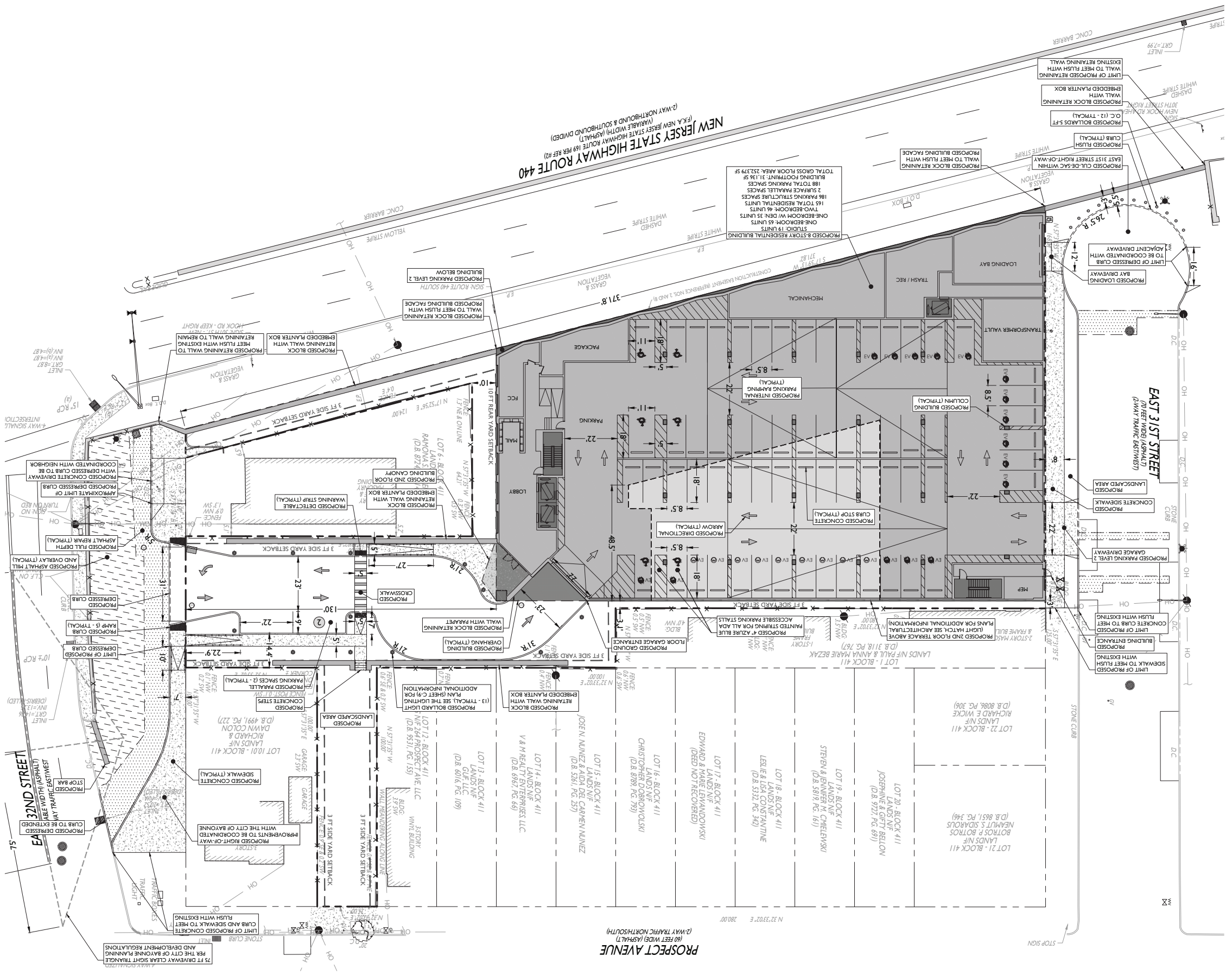
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DATE PLOTTED: 02/20/2025 10:00:00 AM PROJECT: PENINSULA VIEW URBAN RENEWAL, LLC (OVERALL) SITE PLAN



- GENERAL NOTES**
1. THE CONTRACTOR SHALL VERIFY AND FAMILIARIZE THEMSELVES WITH THE EXISTING AND THE PROPOSED SCOPES OF WORK (INCLUDING DIMENSIONS, LAYOUT, ETC.) PRIOR TO INITIATING THE IMPROVEMENTS IDENTIFIED WITHIN THE DOCUMENTS. SHOULD ANY DISCREPANCY BE FOUND BETWEEN THE EXISTING SITE CONDITIONS AND THE PROPOSED WORK THE CONTRACTOR SHALL NOTIFY STONEFIELD ENGINEERING & DESIGN, LLC PRIOR TO THE START OF CONSTRUCTION. COMES OF ALL REQUIRED PERMITS AND APPROVALS. ENSURE THAT ALL REQUIRED APPROVALS HAVE BEEN OBTAINED PRIOR TO THE START OF CONSTRUCTION. COMES OF ALL REQUIRED PERMITS AND APPROVALS.
  2. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF BAYONNE AND HUDSON COUNTY, NEW JERSEY.
  3. ALL CONTRACTORS WILL TO THE FULLEST EXTENT PERMITTED BY LAW, INHERENT AND HANDLED STRENGTH ENGINEERING & DESIGN, LLC AND ITS SUB-CONSULTANTS FROM AND AGAINST ANY DAMAGES AND LIABILITIES INCLUDING ATTORNEY'S FEES ARISING OUT OF CLAIMS OR ACTIONS OF THE CONTRACTOR IN ADDITION TO THE CLAIMS CONNECTED TO THIS PROJECT AS A RESULT OF NOT CARRYING THE PROPER INSURANCE FOR WORKERS COMPENSATION, LIABILITY INSURANCE AND LIMITS OF COMMERCIAL GENERAL LIABILITY.
  4. THE CONTRACTOR SHALL NOT DEVIATE FROM THE PROPOSED IMPROVEMENTS IDENTIFIED WITHIN THIS PLAN SET UNLESS APPROVAL IS PROVIDED IN WRITING BY STONEFIELD ENGINEERING & DESIGN, LLC.
  5. THE CONTRACTOR IS RESPONSIBLE TO DETERMINE THE MEANS AND METHODS OF CONSTRUCTION.
  6. THE CONTRACTOR SHALL NOT PERFORM ANY WORK OR CAUSE PERSON OR ENTRY WHO HAS AUTHORIZED THE WORK WITHOUT DISTURBANCE ON A PRIVATE PROPERTY NOT CONTROLLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SITE TRAFFIC CONTROL.
  7. THE CONTRACTOR IS RESPONSIBLE TO RESTORE ANY DAMAGED OR LANDSCAPED SITE TRAFFIC CONTROL TO ORIGINAL CONDITIONS OR BETTER. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE ANY DAMAGED OR LANDSCAPED SITE TRAFFIC CONTROL TO ORIGINAL CONDITIONS OR BETTER.
  8. CONTRACTORS EXPENSE.
  9. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE APPROPRIATE SHOP DRAWINGS, PRODUCT DATA, AND OTHER REQUIRED SUBMITTALS FOR REVIEW. STONEFIELD ENGINEERING & DESIGN, LLC WILL REVIEW THE SUBMITTALS IN ACCORDANCE WITH THE DESIGN INTENT AS REFLECTED WITHIN THE PLAN SET.
  10. THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
  11. THE CONTRACTOR IS REQUIRED TO PERFORM ALL WORK IN THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE APPROPRIATE PERMITS AND REGULATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACQUISITION OF STREET CLOSING PERMITS.
  12. SHOULD AN EMPLOYEE OF STONEFIELD ENGINEERING & DESIGN, LLC BE PRESENT ON SITE AT ANY TIME DURING CONSTRUCTION, IT DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO MAINTAIN THE SITE TRAFFIC CONTROL AT ALL TIMES DURING CONSTRUCTION & DEMOLITION ACTIVITIES.

SYMBOL	DESCRIPTION
	PROPOSED RETAINING WALL
	PROPOSED HANDRAIL
	PROPOSED BOLLARD LIGHT
	PROPOSED ASPHALT MILL AND OVERLAY
	PROPOSED ASPHALT REPAIR
	PROPOSED CONCRETE
	PROPOSED BUILDING OVERHANG
	PROPOSED BUILDING TERRACE (2ND FLOOR)
	PROPOSED BUILDING (PARKING LEVEL 2)
	PROPOSED BUILDING
	PROPOSED SIGNS / BOLLARDS
	PROPOSED FLUSH CURBS
	PROPOSED DEPRESSED CURBS
	PROPOSED CURBS
	SAWCUT LINE
	SETBACK LINE
	PROPERTY LINE



**C-4**

**STONEFIELD**  
engineering & design

AFTON M. SAVITZ P.E.  
LICENSED PROFESSIONAL ENGINEER  
NEW JERSEY LICENSE NO. 5174

SCALE: 1" = 20'  
PROJECT ID: RUT-150176

TITLE: SITE PLAN (OVERALL)

DRAWING:

**AMENDED PRELIMINARY & FINAL MAJOR SITE PLAN**

**PENINSULA VIEW**

**URBAN RENEWAL, LLC**

**PROPOSED MULTI-FAMILY RESIDENTIAL BUILDING**

75 EAST 31ST STREET  
CITY OF BAYONNE  
HUDSON COUNTY, NEW JERSEY

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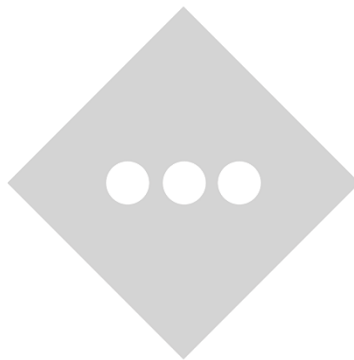
NOT APPROVED FOR CONSTRUCTION			
ISSUE	DATE	BY	DESCRIPTION
1	12/22/2023	AI	FOR MUNICIPAL SUBMISSION
2	06/13/2025	AI	FOR MUNICIPAL TRC SUBMISSION



# **APPENDIX B PROJECT SOILS**

## **INVENTORY**

### **B-1: NRCS SOILS REPORT**

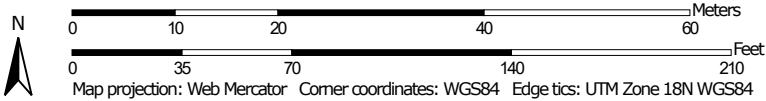


# Custom Soil Resource Report Soil Map




Soil Map may not be valid at this scale.

Map Scale: 1:734 if printed on A portrait (8.5" x 11") sheet.



### MAP LEGEND

**Area of Interest (AOI)**

 Area of Interest (AOI)




















**Soils**







 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

**Special Point Features**






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features


**Water Features**

 Streams and Canals

**Transportation**

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

**Background**

 Aerial Photography

### MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hudson County, New Jersey  
 Survey Area Data: Version 15, Aug 28, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 9, 2022—Oct 16, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
URTILB	Urban land, till substratum, 0 to 8 percent slopes	1.0	96.9%
URWETB	Urban land, wet substratum, 0 to 8 percent slopes	0.0	3.1%
<b>Totals for Area of Interest</b>		<b>1.0</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

## Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Hudson County, New Jersey

### URTILB—Urban land, till substratum, 0 to 8 percent slopes

#### Map Unit Setting

*National map unit symbol:* 2qjwr  
*Elevation:* 0 to 520 feet  
*Mean annual precipitation:* 30 to 56 inches  
*Mean annual air temperature:* 47 to 63 degrees F  
*Frost-free period:* 179 to 217 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Urban land, till substratum:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Urban Land, Till Substratum

##### Setting

*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Asphalt over human-transported material

##### Typical profile

*M - 0 to 15 inches:* material  
*2^C - 15 to 79 inches:* gravelly sandy loam

##### Properties and qualities

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* 0 inches to manufactured layer  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 to 0.00 in/hr)  
*Calcium carbonate, maximum content:* 10 percent  
*Available water supply, 0 to 60 inches:* Very low (about 0.0 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8s  
*Hydric soil rating:* Unranked

#### Minor Components

##### Greenbelt

*Percent of map unit:* 10 percent  
*Landform position (two-dimensional):* Summit, backslope, footslope  
*Landform position (three-dimensional):* Crest, side slope, base slope, talf  
*Down-slope shape:* Linear, convex  
*Across-slope shape:* Linear, convex  
*Hydric soil rating:* No

## **URWETB—Urban land, wet substratum, 0 to 8 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 13q0j  
*Elevation:* 0 to 520 feet  
*Mean annual precipitation:* 30 to 64 inches  
*Mean annual air temperature:* 46 to 79 degrees F  
*Frost-free period:* 131 to 213 days  
*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*Urban land, wet substratum:* 90 percent  
*Minor components:* 10 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Urban Land, Wet Substratum**

#### **Setting**

*Landform position (two-dimensional):* Summit  
*Landform position (three-dimensional):* Talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Asphalt over human-transported material

#### **Typical profile**

*M1 - 0 to 6 inches:* material  
*M2 - 6 to 20 inches:* material  
*2<sup>^</sup>Cu - 20 to 79 inches:* very artifactual coarse sandy loam

#### **Properties and qualities**

*Slope:* 0 to 8 percent  
*Depth to restrictive feature:* 0 inches to manufactured layer  
*Runoff class:* Very high  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low (0.00 to 0.00 in/hr)  
*Depth to water table:* About 20 inches  
*Calcium carbonate, maximum content:* 19 percent  
*Available water supply, 0 to 60 inches:* Very low (about 0.0 inches)

#### **Interpretive groups**

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 8s  
*Hydric soil rating:* Unranked

### **Minor Components**

#### **Parsippany, frequently flooded**

*Percent of map unit:* 5 percent  
*Landform:* Lake terraces  
*Landform position (two-dimensional):* Toeslope

## Custom Soil Resource Report

*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

### **Whippany**

*Percent of map unit:* 5 percent  
*Landform:* Lake terraces  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

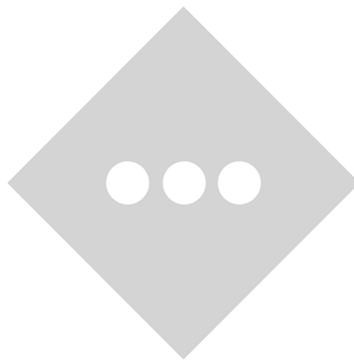
# **APPENDIX C**

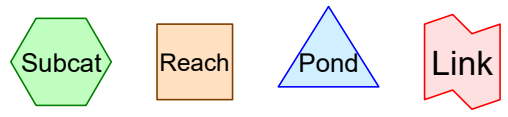
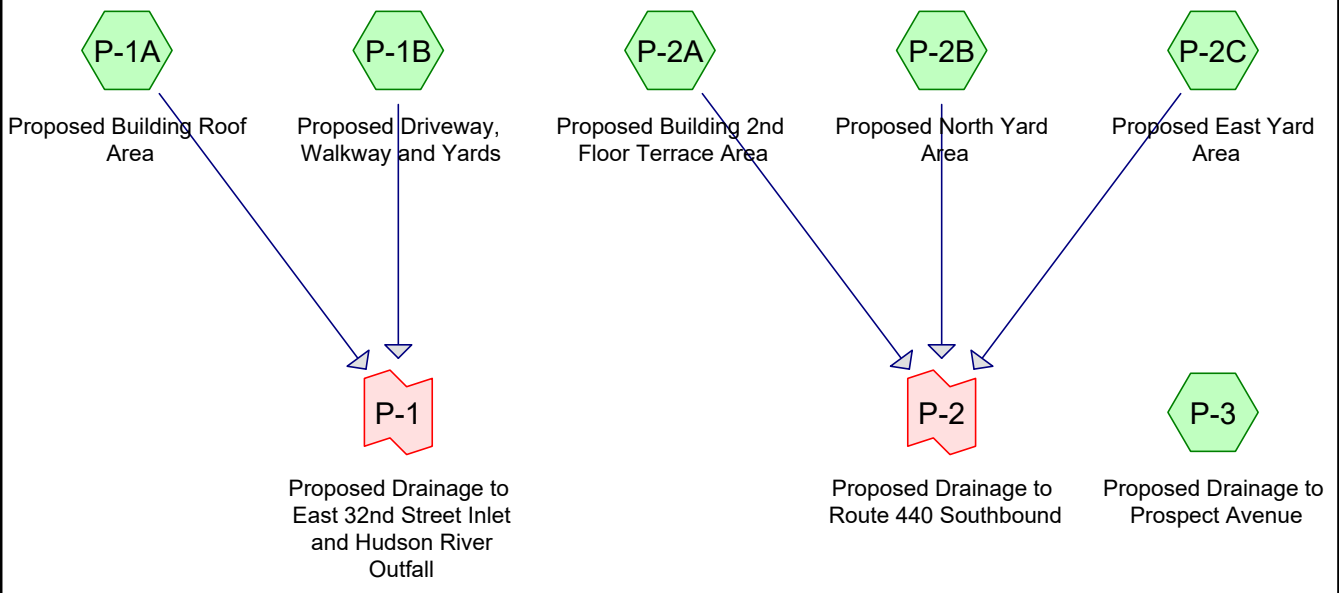
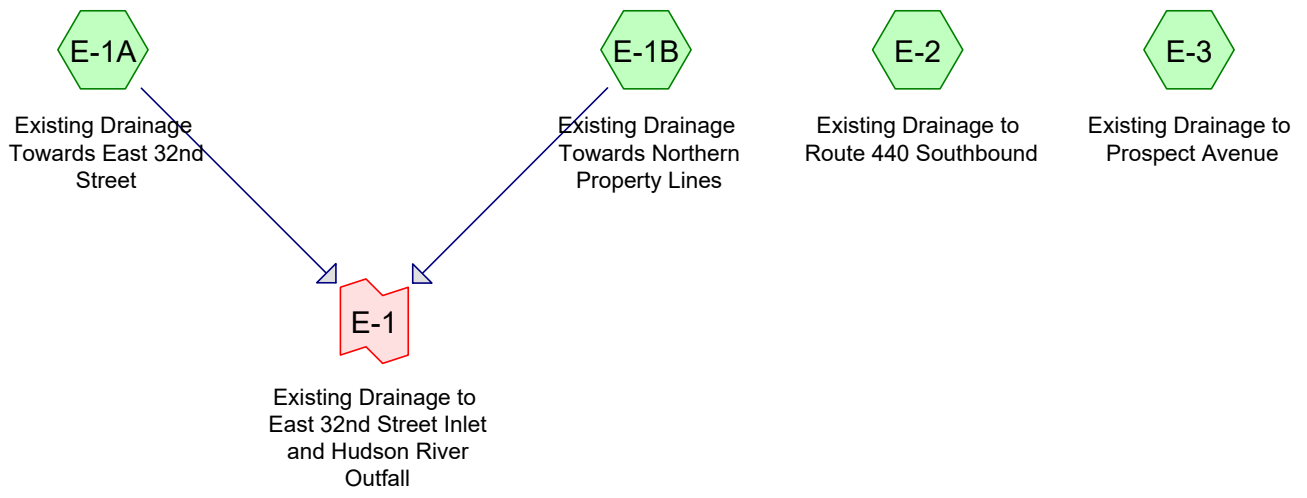
## **HYDROLOGIC & HYDRAULIC CALCULATIONS**

### **INVENTORY**

**C-1: HYDROCAD NODE SCHEMATIC DIAGRAM**

**C-2: HYDROCAD HYDROLOGIC CALCULATIONS**





**Routing Diagram for 2025-12-22 HydroCAD - Phase 1**  
 Prepared by Stonefield Engineering & Design, Printed 12/22/2025  
 HydroCAD® 10.20-6a s/n 10626 © 2024 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentE-1A: Existing Drainage** Runoff Area=7,329 sf 0.00% Impervious Runoff Depth>1.43"  
Flow Length=138' Tc=2.9 min CN=80 Runoff=0.34 cfs 870 cf

**SubcatchmentE-1B: Existing Drainage** Runoff Area=2,830 sf 0.00% Impervious Runoff Depth>1.42"  
Flow Length=44' Slope=0.0616 '/' Tc=3.1 min CN=80 Runoff=0.13 cfs 336 cf

**SubcatchmentE-2: Existing Drainage to** Runoff Area=33,542 sf 4.77% Impervious Runoff Depth>1.42"  
Flow Length=174' Tc=4.1 min UI Adjusted CN=80 Runoff=1.47 cfs 3,981 cf

**SubcatchmentE-3: Existing Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>1.42"  
Flow Length=57' Slope=0.0160 '/' Tc=6.1 min CN=80 Runoff=0.05 cfs 144 cf

**SubcatchmentP-1A: Proposed Building** Runoff Area=24,962 sf 100.00% Impervious Runoff Depth>2.91"  
Flow Length=30' Slope=0.0100 '/' Tc=0.2 min CN=98 Runoff=2.04 cfs 6,048 cf

**SubcatchmentP-1B: Proposed Driveway,** Runoff Area=10,112 sf 63.07% Impervious Runoff Depth>2.29"  
Flow Length=192' Tc=3.5 min CN=91 Runoff=0.69 cfs 1,926 cf

**SubcatchmentP-2A: Proposed Building** Runoff Area=6,131 sf 100.00% Impervious Runoff Depth>2.91"  
Flow Length=30' Slope=0.0100 '/' Tc=0.2 min CN=98 Runoff=0.50 cfs 1,485 cf

**SubcatchmentP-2B: Proposed North Yard** Runoff Area=324 sf 0.00% Impervious Runoff Depth>1.42"  
Flow Length=103' Tc=9.4 min CN=80 Runoff=0.01 cfs 38 cf

**SubcatchmentP-2C: Proposed East Yard** Runoff Area=2,172 sf 14.41% Impervious Runoff Depth>1.49"  
Flow Length=75' Tc=2.1 min UI Adjusted CN=81 Runoff=0.11 cfs 270 cf

**SubcatchmentP-3: Proposed Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>1.42"  
Flow Length=57' Slope=0.0160 '/' Tc=6.1 min CN=80 Runoff=0.05 cfs 144 cf

**Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall** Inflow=0.47 cfs 1,206 cf  
Primary=0.47 cfs 1,206 cf

**Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River** Inflow=2.59 cfs 7,974 cf  
Primary=2.59 cfs 7,974 cf

**Link P-2: Proposed Drainage to Route 440 Southbound** Inflow=0.60 cfs 1,794 cf  
Primary=0.60 cfs 1,794 cf

**Summary for Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Runoff = 0.34 cfs @ 12.09 hrs, Volume= 870 cf, Depth> 1.43"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

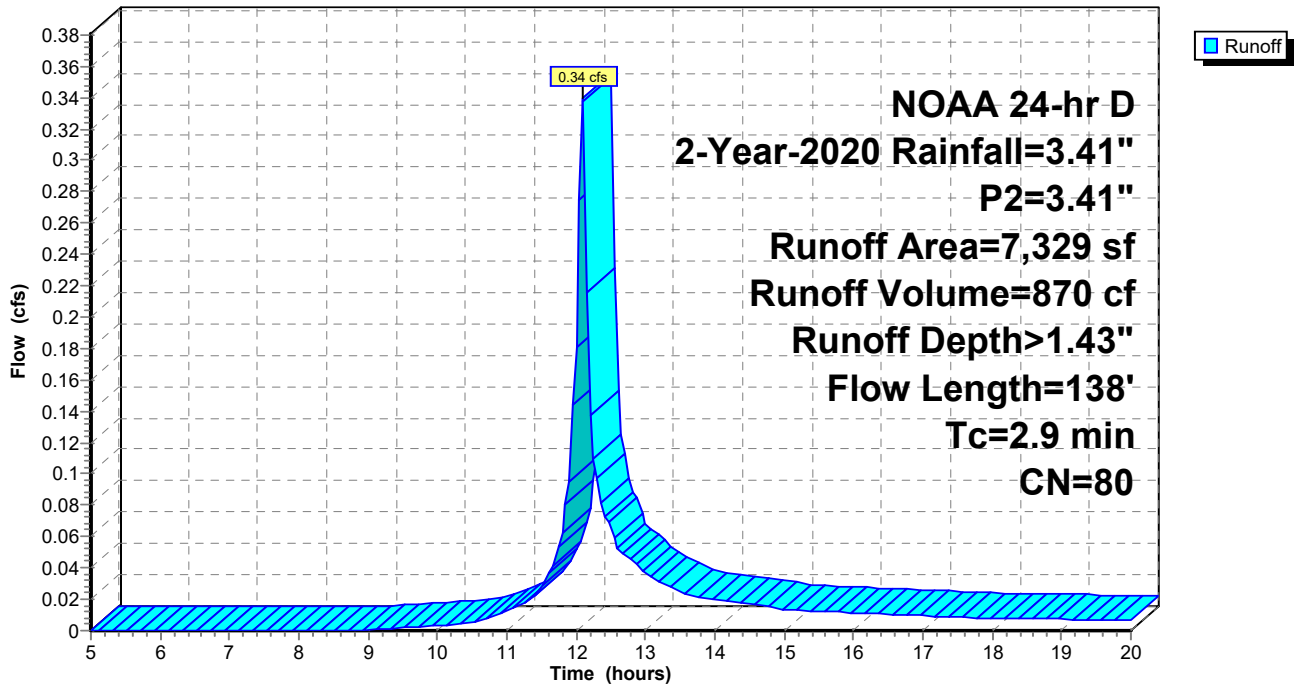
Area (sf)	CN	Description
7,329	80	>75% Grass cover, Good, HSG D
7,329		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	35	0.0687	0.23		<b>Sheet Flow, 1A-1B</b> Grass: Short n= 0.150 P2= 3.41"
0.2	48	0.0650	3.82		<b>Shallow Concentrated Flow, 1B-1C</b> Grassed Waterway Kv= 15.0 fps
0.2	55	0.0639	3.79		<b>Shallow Concentrated Flow, 1C-1D</b> Grassed Waterway Kv= 15.0 fps
2.9	138	Total			

**Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Hydrograph



**Summary for Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Runoff = 0.13 cfs @ 12.09 hrs, Volume= 336 cf, Depth> 1.42"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

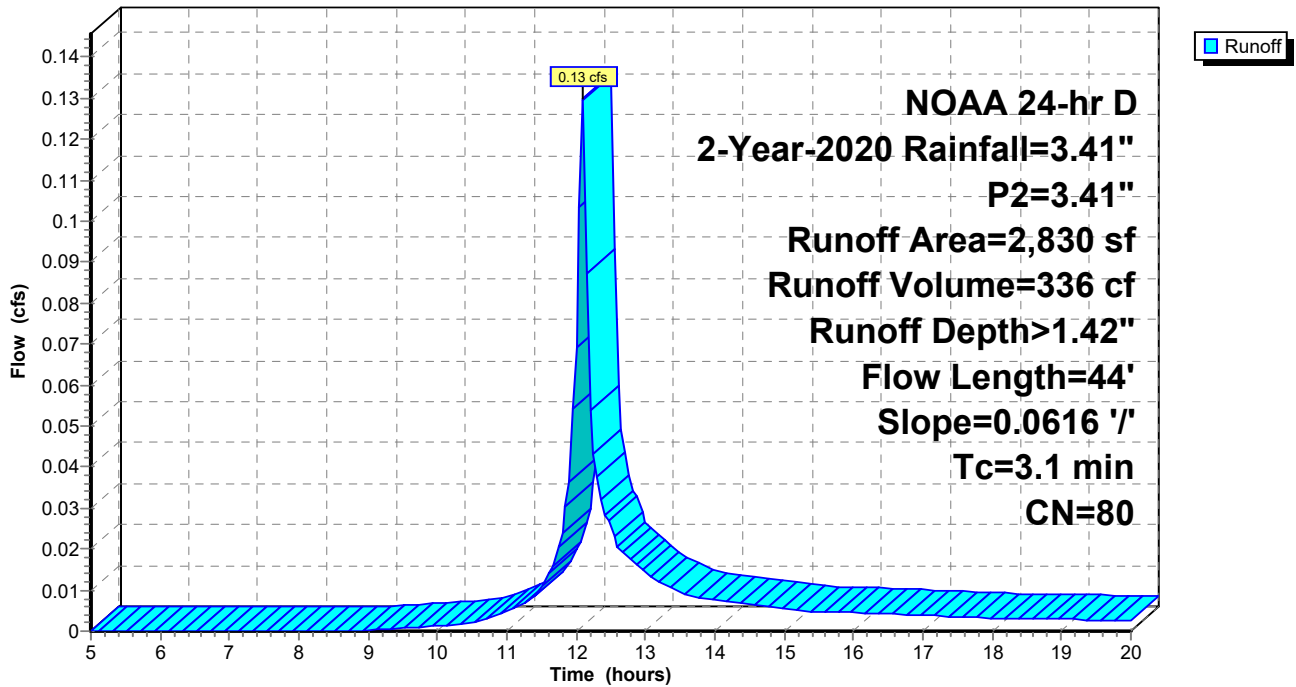
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

Area (sf)	CN	Description
2,830	80	>75% Grass cover, Good, HSG D
2,830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	44	0.0616	0.23		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.41"

**Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Hydrograph



### Summary for Subcatchment E-2: Existing Drainage to Route 440 Southbound

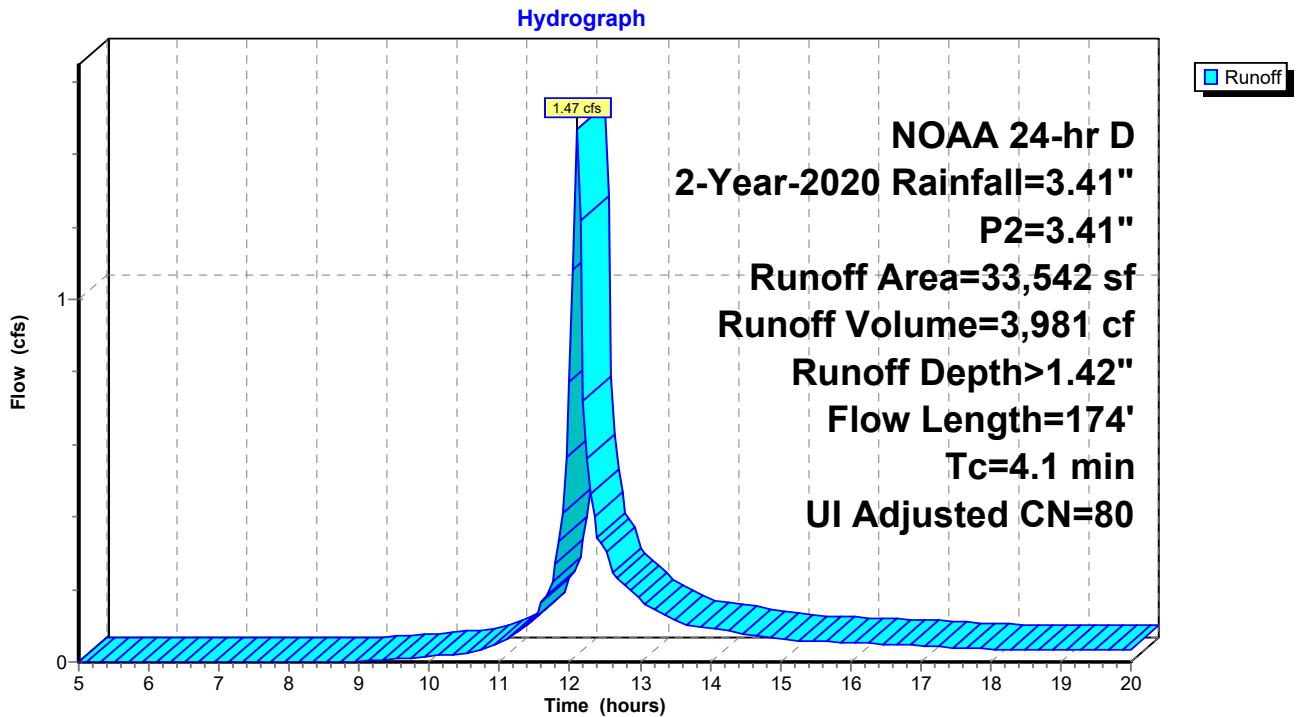
Runoff = 1.47 cfs @ 12.11 hrs, Volume= 3,981 cf, Depth> 1.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

Area (sf)	CN	Adj	Description
1,601	98		Unconnected pavement, HSG D
31,941	80		>75% Grass cover, Good, HSG D
33,542	81	80	Weighted Average, UI Adjusted
31,941			95.23% Pervious Area
1,601			4.77% Impervious Area
1,601			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	47	0.0500	0.22		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.41"
0.1	39	0.1300	5.41		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.4	88	0.0675	3.90		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
4.1	174	Total			

### Subcatchment E-2: Existing Drainage to Route 440 Southbound



**Summary for Subcatchment E-3: Existing Drainage to Prospect Avenue**

Runoff = 0.05 cfs @ 12.13 hrs, Volume= 144 cf, Depth> 1.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

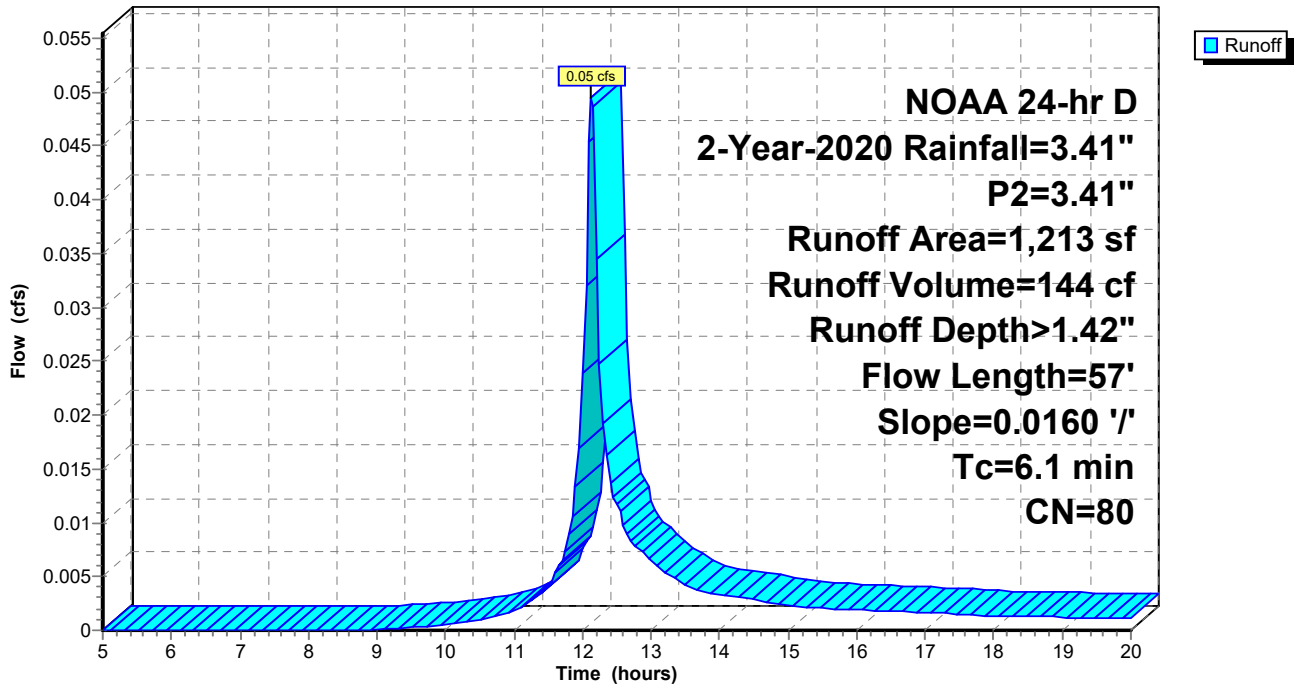
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.0160	0.14		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
6.1	57	Total			

**Subcatchment E-3: Existing Drainage to Prospect Avenue**

Hydrograph



### Summary for Subcatchment P-1A: Proposed Building Roof Area

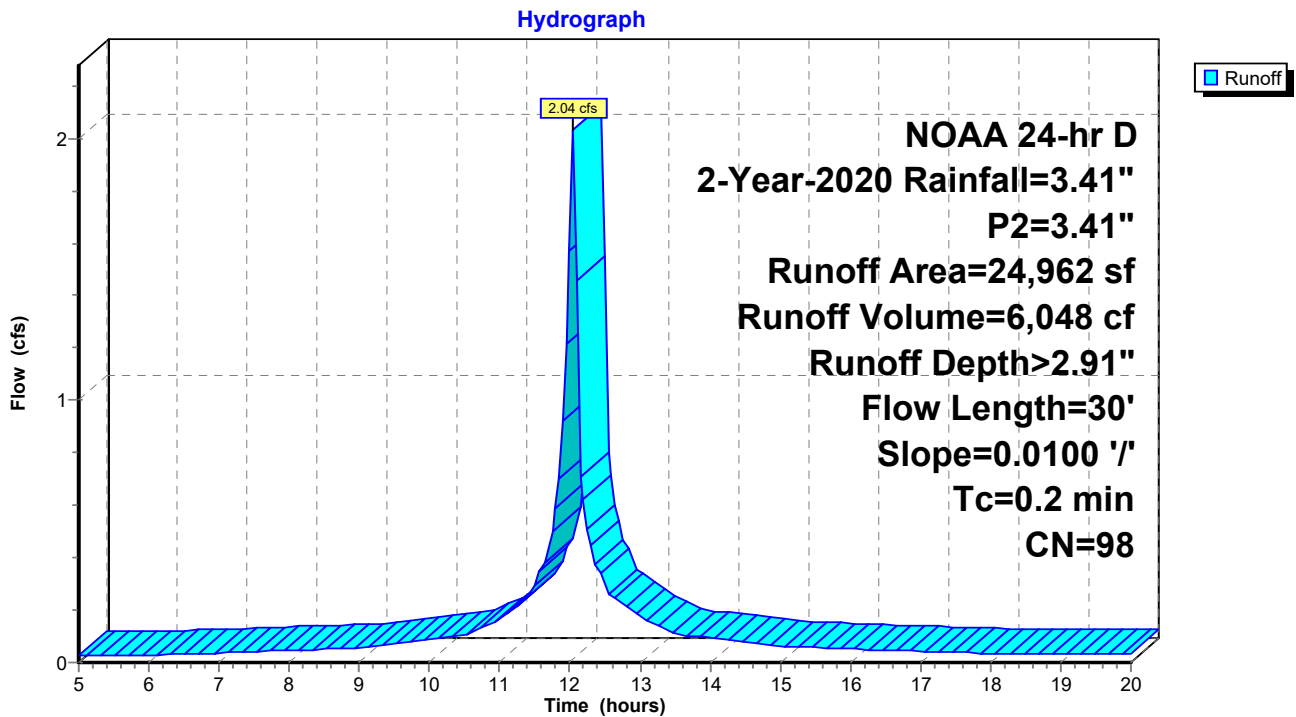
Runoff = 2.04 cfs @ 12.05 hrs, Volume= 6,048 cf, Depth> 2.91"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

Area (sf)	CN	Description
24,962	98	Unconnected roofs, HSG D
24,962		100.00% Impervious Area
24,962		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 1A - 1B</b> Paved Kv= 20.3 fps

### Subcatchment P-1A: Proposed Building Roof Area



### Summary for Subcatchment P-1B: Proposed Driveway, Walkway and Yards

Runoff = 0.69 cfs @ 12.10 hrs, Volume= 1,926 cf, Depth> 2.29"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

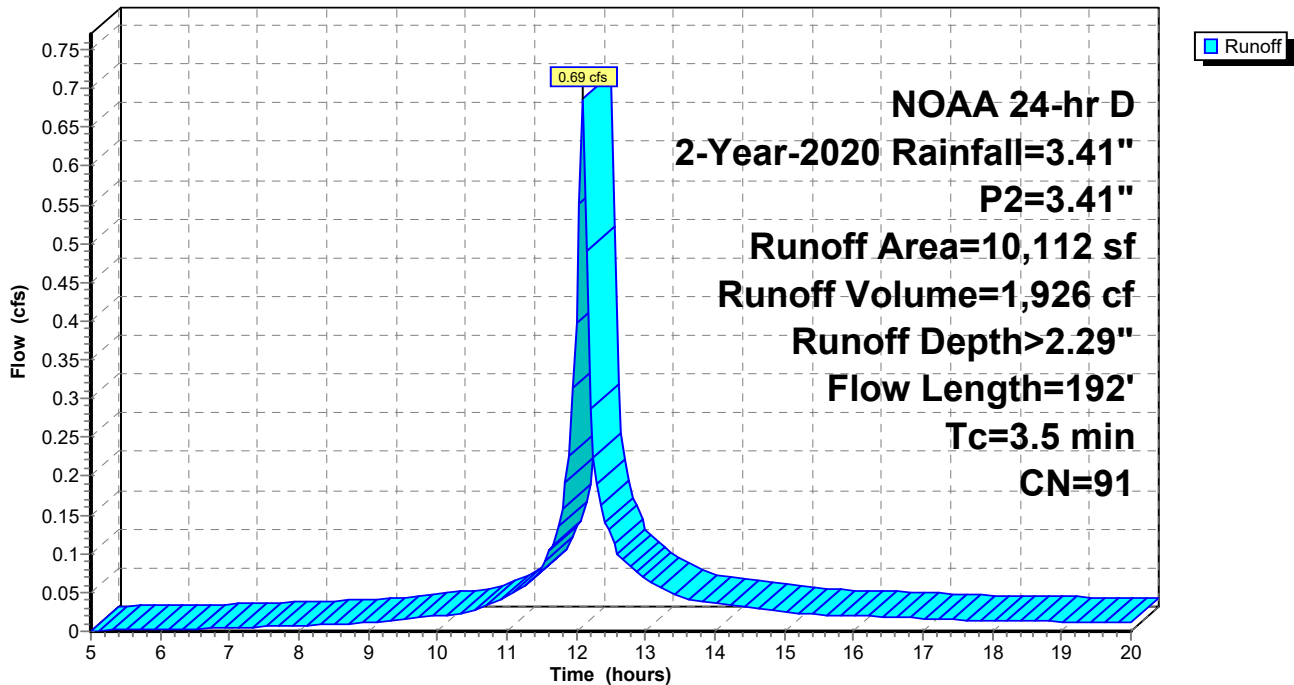
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

Area (sf)	CN	Description
3,734	80	>75% Grass cover, Good, HSG D
6,378	98	Paved parking, HSG D
10,112	91	Weighted Average
3,734		36.93% Pervious Area
6,378		63.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	28	0.0315	0.16		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.41"
0.6	164	0.0485	4.47		<b>Shallow Concentrated Flow, 1B - 1C</b> Paved Kv= 20.3 fps
3.5	192	Total			

### Subcatchment P-1B: Proposed Driveway, Walkway and Yards

Hydrograph



**Summary for Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Runoff = 0.50 cfs @ 12.05 hrs, Volume= 1,485 cf, Depth> 2.91"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

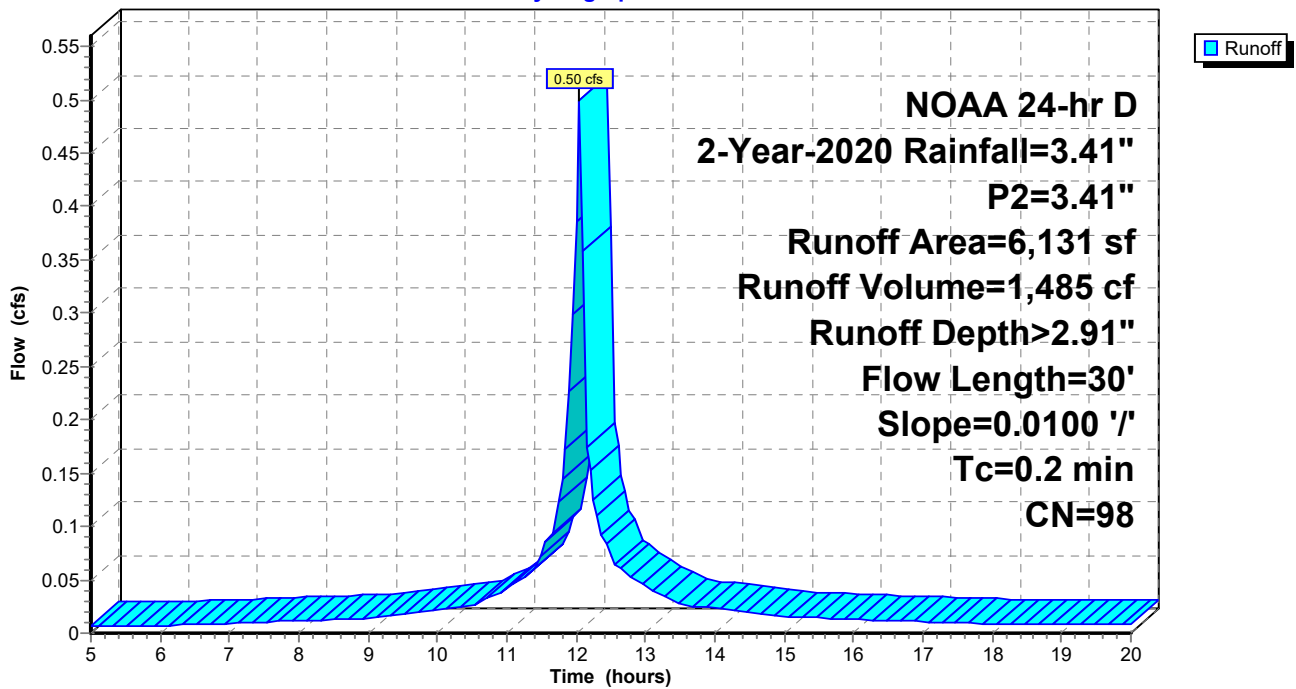
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

Area (sf)	CN	Description
6,131	98	Roofs, HSG D
6,131		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 2A-2B</b> Paved Kv= 20.3 fps

**Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Hydrograph



### Summary for Subcatchment P-2B: Proposed North Yard Area

Runoff = 0.01 cfs @ 12.17 hrs, Volume= 38 cf, Depth> 1.42"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

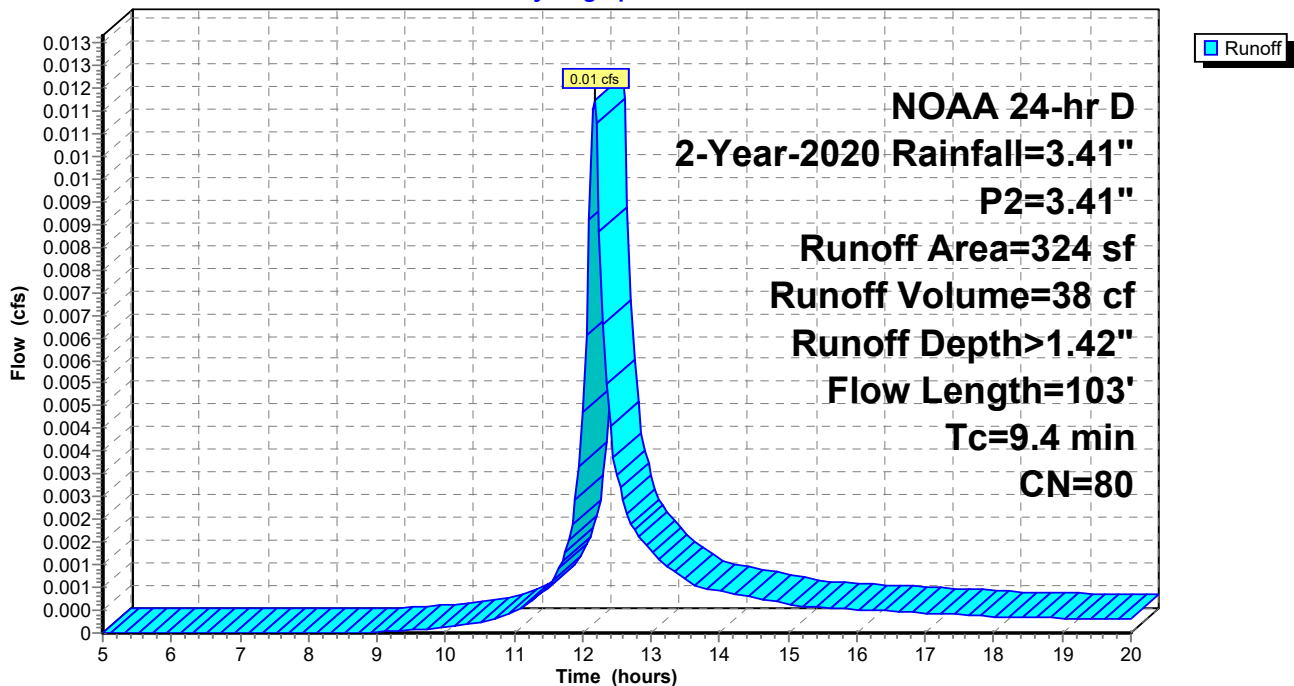
Area (sf)	CN	Description
324	80	>75% Grass cover, Good, HSG D
324		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0054	0.09		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.41"
0.2	53	0.0670	3.88		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
9.4	103	Total			

### Subcatchment P-2B: Proposed North Yard Area

Hydrograph



### Summary for Subcatchment P-2C: Proposed East Yard Area

Runoff = 0.11 cfs @ 12.08 hrs, Volume= 270 cf, Depth> 1.49"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

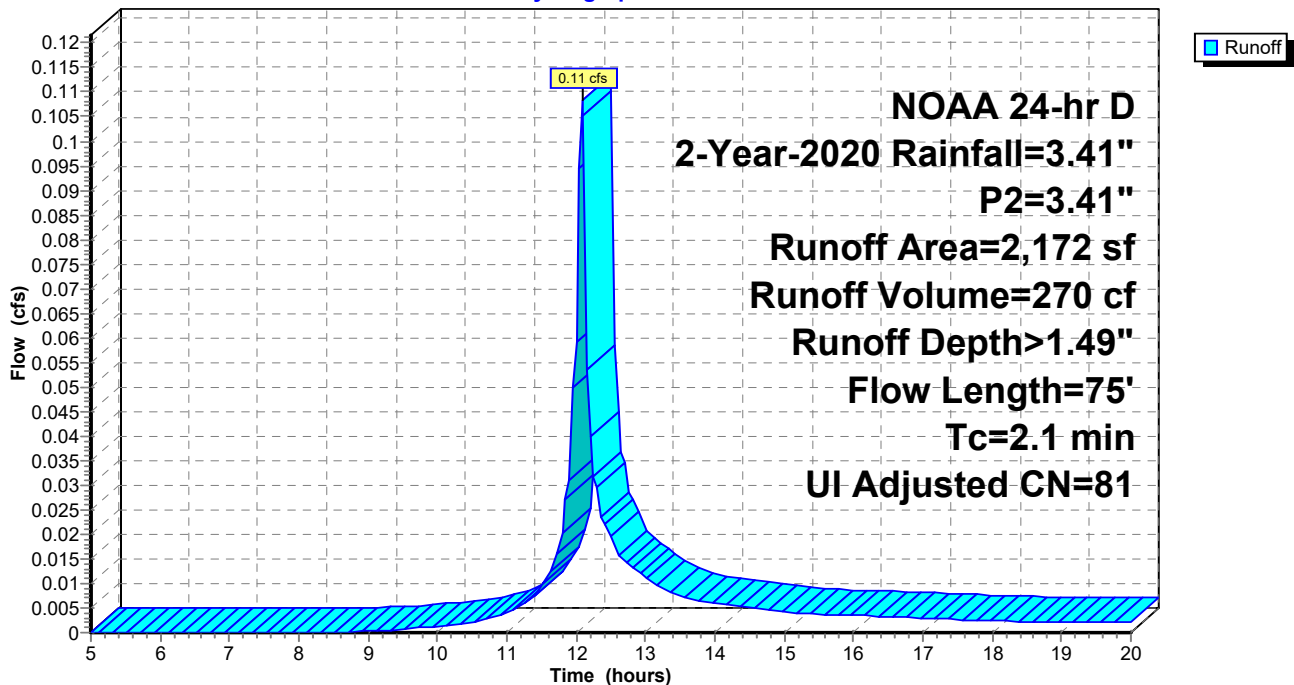
Area (sf)	CN	Adj	Description
1,859	80		>75% Grass cover, Good, HSG D
313	98		Unconnected pavement, HSG D
2,172	83	81	Weighted Average, UI Adjusted
1,859			85.59% Pervious Area
313			14.41% Impervious Area
313			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	20	0.0508	0.18		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.41"
0.2	40	0.0377	2.91		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.1	15	0.0592	3.65		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
2.1	75	Total			

### Subcatchment P-2C: Proposed East Yard Area

Hydrograph



### Summary for Subcatchment P-3: Proposed Drainage to Prospect Avenue

Runoff = 0.05 cfs @ 12.13 hrs, Volume= 144 cf, Depth> 1.42"  
 Routed to nonexistent node 1L

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2020 Rainfall=3.41", P2=3.41"

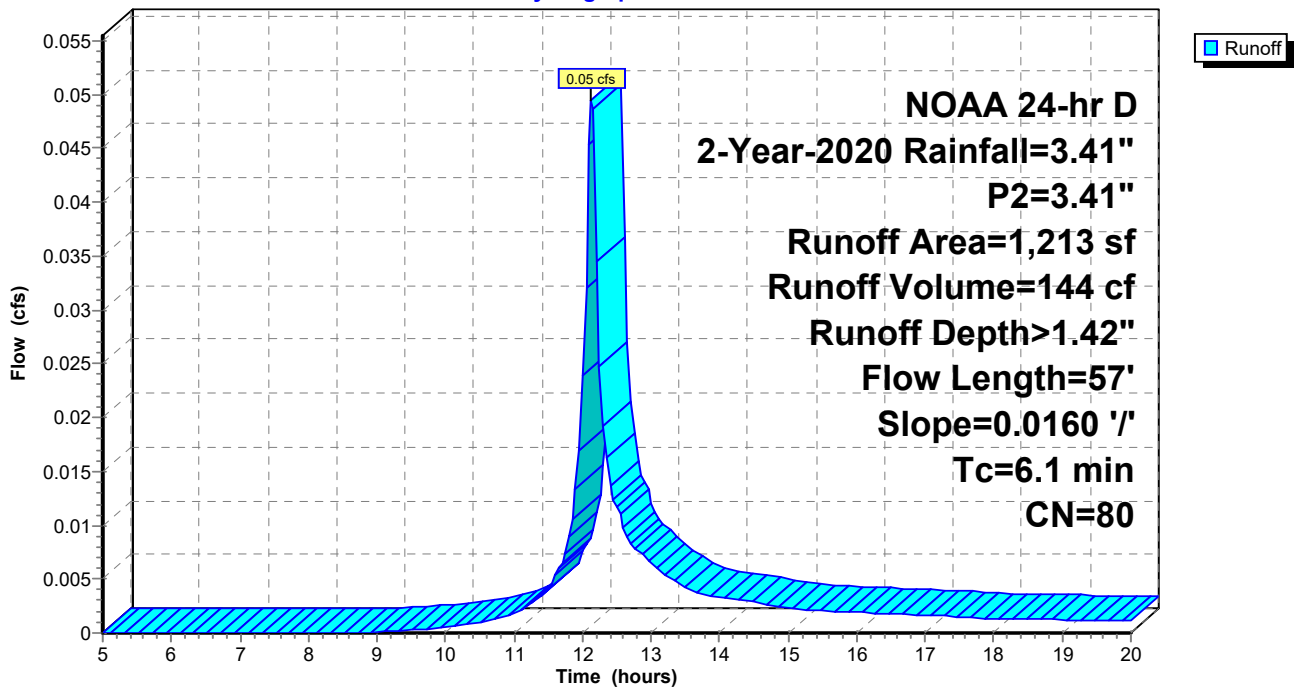
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.0160	0.14		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
6.1	57	Total			

### Subcatchment P-3: Proposed Drainage to Prospect Avenue

Hydrograph

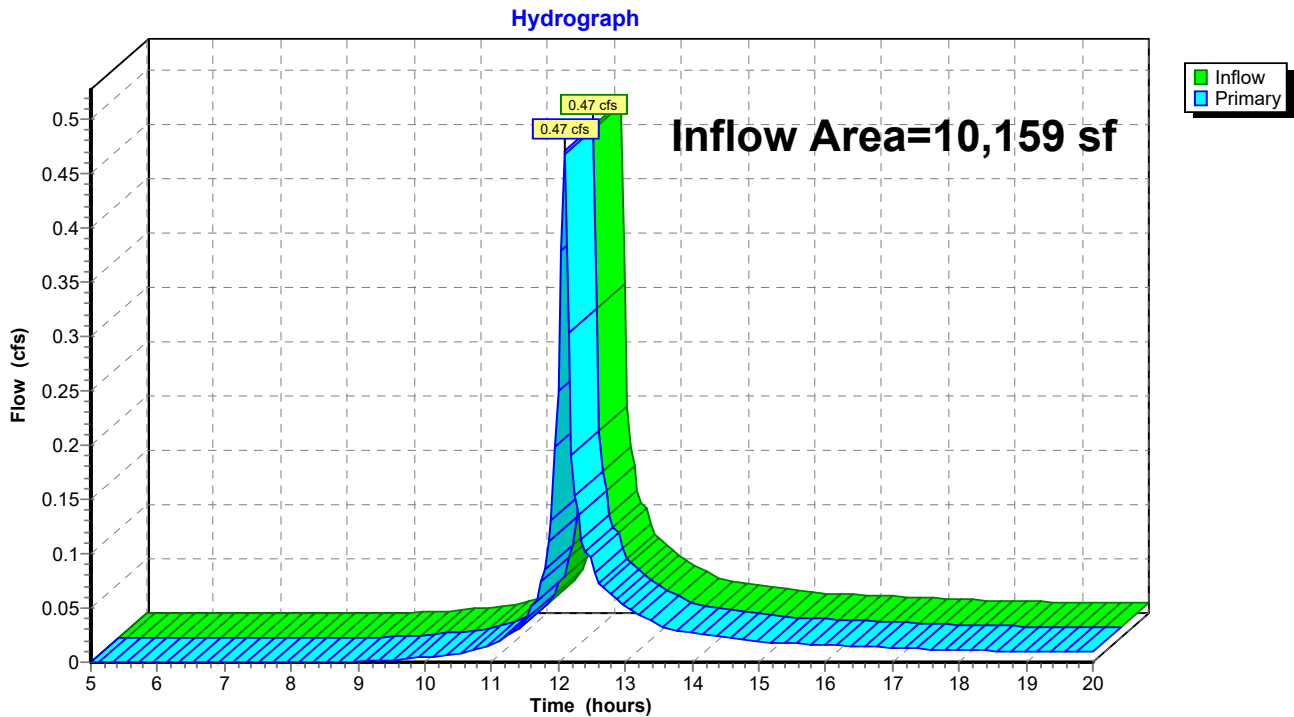


### Summary for Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 10,159 sf, 0.00% Impervious, Inflow Depth > 1.43" for 2-Year-2020 event  
Inflow = 0.47 cfs @ 12.09 hrs, Volume= 1,206 cf  
Primary = 0.47 cfs @ 12.09 hrs, Volume= 1,206 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

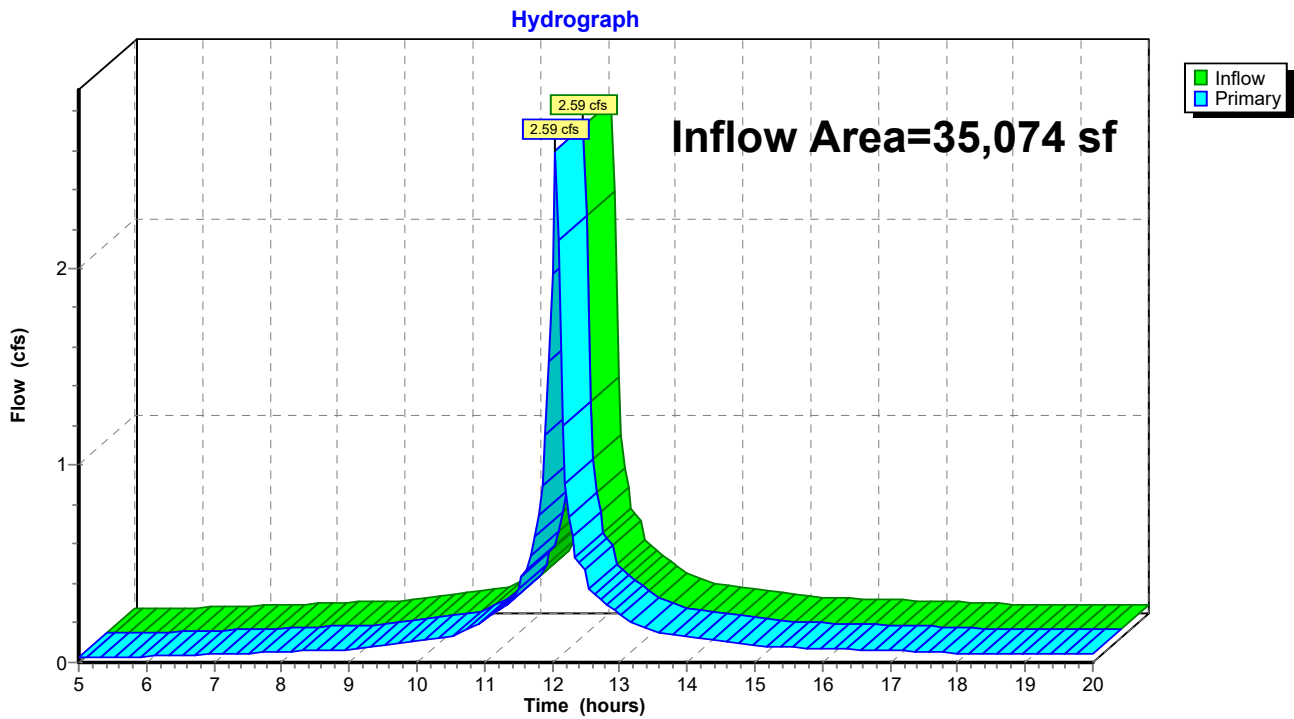


### Summary for Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 35,074 sf, 89.35% Impervious, Inflow Depth > 2.73" for 2-Year-2020 event  
Inflow = 2.59 cfs @ 12.05 hrs, Volume= 7,974 cf  
Primary = 2.59 cfs @ 12.05 hrs, Volume= 7,974 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

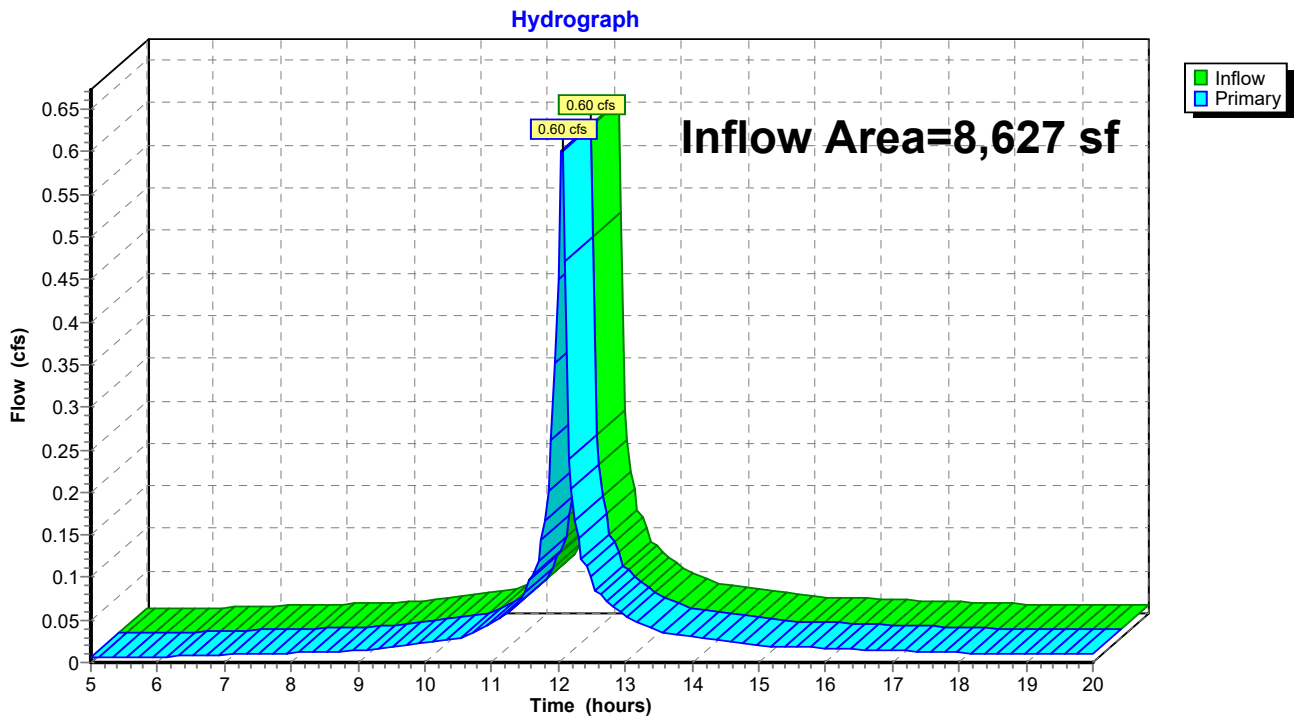


### Summary for Link P-2: Proposed Drainage to Route 440 Southbound

Inflow Area = 8,627 sf, 74.70% Impervious, Inflow Depth > 2.50" for 2-Year-2020 event  
Inflow = 0.60 cfs @ 12.05 hrs, Volume= 1,794 cf  
Primary = 0.60 cfs @ 12.05 hrs, Volume= 1,794 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-2: Proposed Drainage to Route 440 Southbound



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentE-1A: Existing Drainage** Runoff Area=7,329 sf 0.00% Impervious Runoff Depth>2.89"  
Flow Length=138' Tc=2.9 min CN=80 Runoff=0.67 cfs 1,763 cf

**SubcatchmentE-1B: Existing Drainage** Runoff Area=2,830 sf 0.00% Impervious Runoff Depth>2.89"  
Flow Length=44' Slope=0.0616 '/ Tc=3.1 min CN=80 Runoff=0.26 cfs 681 cf

**SubcatchmentE-2: Existing Drainage to** Runoff Area=33,542 sf 4.77% Impervious Runoff Depth>2.88"  
Flow Length=174' Tc=4.1 min UI Adjusted CN=80 Runoff=2.92 cfs 8,063 cf

**SubcatchmentE-3: Existing Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>2.88"  
Flow Length=57' Slope=0.0160 '/ Tc=6.1 min CN=80 Runoff=0.10 cfs 291 cf

**SubcatchmentP-1A: Proposed Building** Runoff Area=24,962 sf 100.00% Impervious Runoff Depth>4.57"  
Flow Length=30' Slope=0.0100 '/ Tc=0.2 min CN=98 Runoff=3.17 cfs 9,497 cf

**SubcatchmentP-1B: Proposed Driveway,** Runoff Area=10,112 sf 63.07% Impervious Runoff Depth>3.95"  
Flow Length=192' Tc=3.5 min CN=91 Runoff=1.15 cfs 3,331 cf

**SubcatchmentP-2A: Proposed Building** Runoff Area=6,131 sf 100.00% Impervious Runoff Depth>4.57"  
Flow Length=30' Slope=0.0100 '/ Tc=0.2 min CN=98 Runoff=0.78 cfs 2,333 cf

**SubcatchmentP-2B: Proposed North Yard** Runoff Area=324 sf 0.00% Impervious Runoff Depth>2.88"  
Flow Length=103' Tc=9.4 min CN=80 Runoff=0.02 cfs 78 cf

**SubcatchmentP-2C: Proposed East Yard** Runoff Area=2,172 sf 14.41% Impervious Runoff Depth>2.98"  
Flow Length=75' Tc=2.1 min UI Adjusted CN=81 Runoff=0.21 cfs 539 cf

**SubcatchmentP-3: Proposed Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>2.88"  
Flow Length=57' Slope=0.0160 '/ Tc=6.1 min CN=80 Runoff=0.10 cfs 291 cf

**Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall** Inflow=0.93 cfs 2,443 cf  
Primary=0.93 cfs 2,443 cf

**Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River** Inflow=4.10 cfs 12,828 cf  
Primary=4.10 cfs 12,828 cf

**Link P-2: Proposed Drainage to Route 440 Southbound** Inflow=0.98 cfs 2,950 cf  
Primary=0.98 cfs 2,950 cf

**Summary for Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Runoff = 0.67 cfs @ 12.09 hrs, Volume= 1,763 cf, Depth> 2.89"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

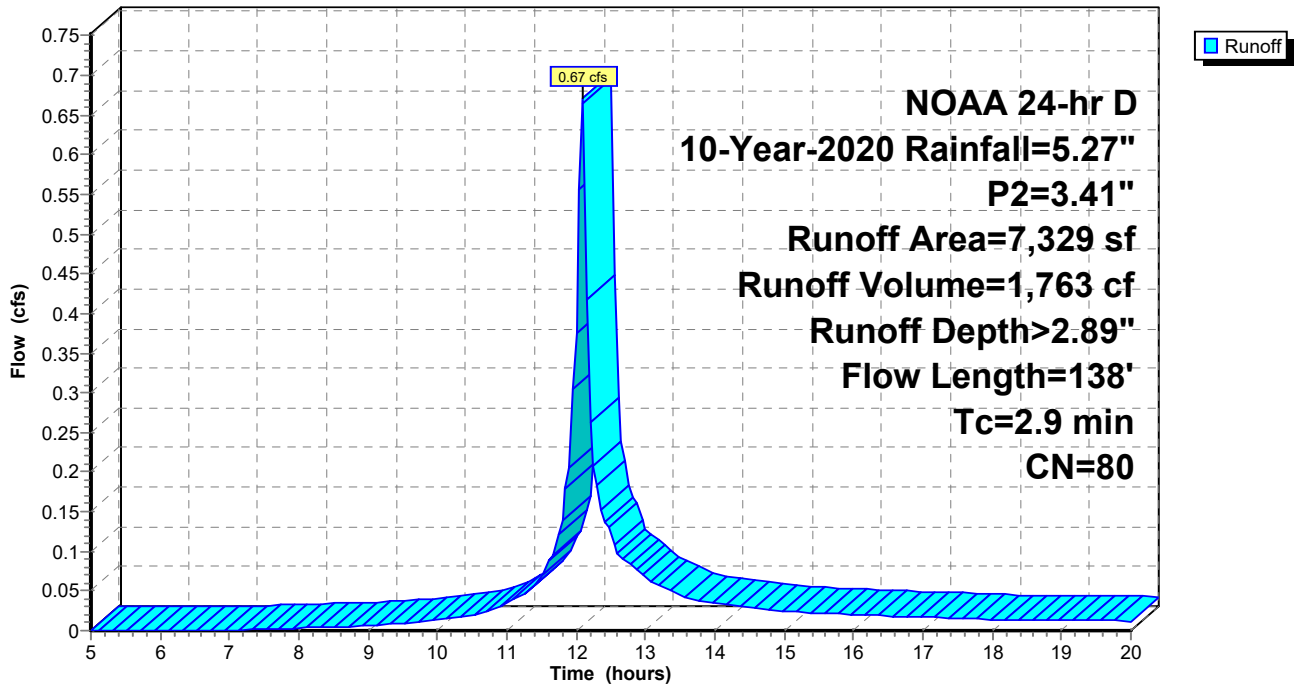
Area (sf)	CN	Description
7,329	80	>75% Grass cover, Good, HSG D
7,329		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	35	0.0687	0.23		<b>Sheet Flow, 1A-1B</b> Grass: Short n= 0.150 P2= 3.41"
0.2	48	0.0650	3.82		<b>Shallow Concentrated Flow, 1B-1C</b> Grassed Waterway Kv= 15.0 fps
0.2	55	0.0639	3.79		<b>Shallow Concentrated Flow, 1C-1D</b> Grassed Waterway Kv= 15.0 fps
2.9	138	Total			

**Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Hydrograph



**Summary for Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Runoff = 0.26 cfs @ 12.09 hrs, Volume= 681 cf, Depth> 2.89"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

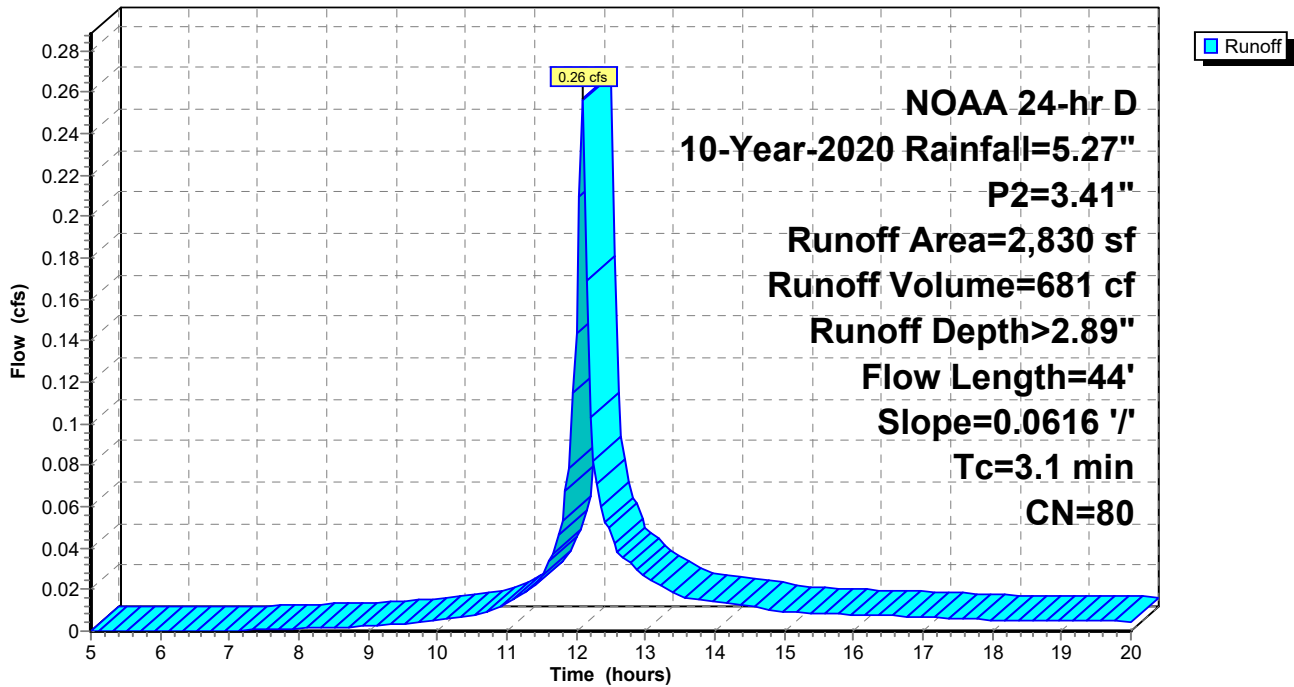
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

Area (sf)	CN	Description
2,830	80	>75% Grass cover, Good, HSG D
2,830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	44	0.0616	0.23		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.41"

**Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Hydrograph



**Summary for Subcatchment E-2: Existing Drainage to Route 440 Southbound**

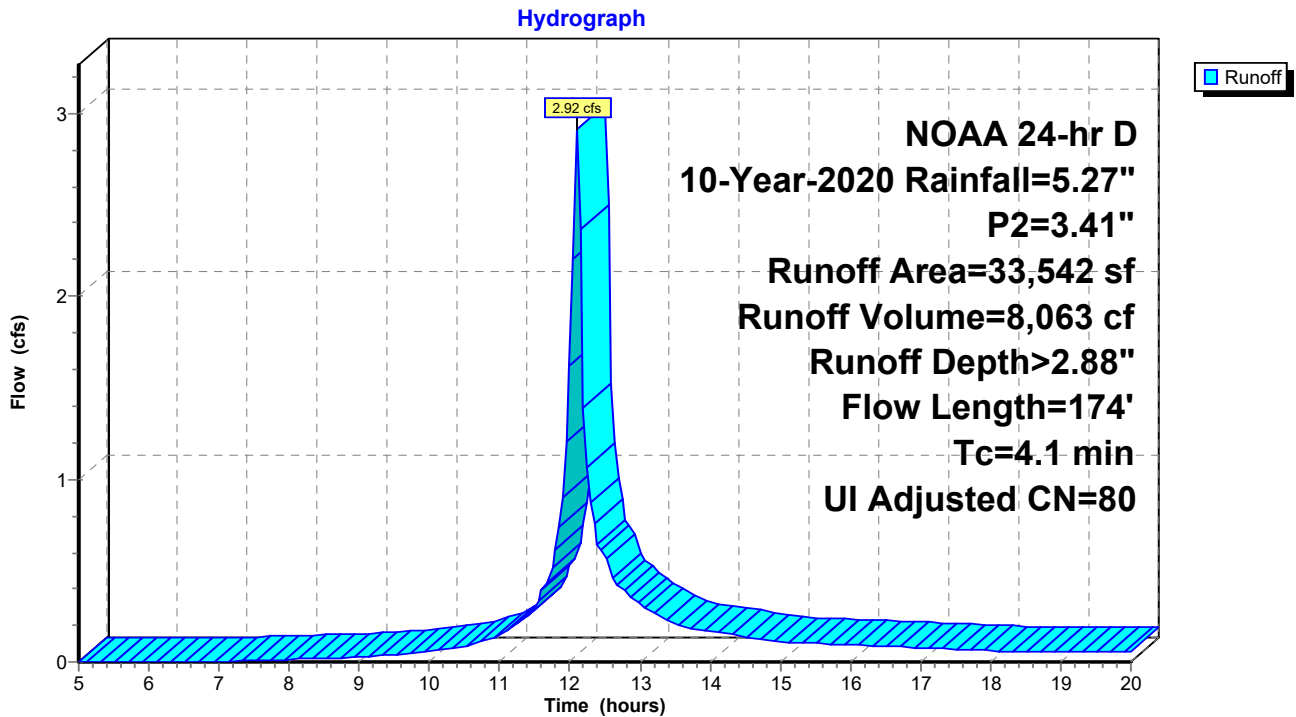
Runoff = 2.92 cfs @ 12.10 hrs, Volume= 8,063 cf, Depth> 2.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

Area (sf)	CN	Adj	Description
1,601	98		Unconnected pavement, HSG D
31,941	80		>75% Grass cover, Good, HSG D
33,542	81	80	Weighted Average, UI Adjusted
31,941			95.23% Pervious Area
1,601			4.77% Impervious Area
1,601			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	47	0.0500	0.22		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	39	0.1300	5.41		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
0.4	88	0.0675	3.90		<b>Shallow Concentrated Flow, 2C-2D</b>
					Grassed Waterway Kv= 15.0 fps
4.1	174	Total			

**Subcatchment E-2: Existing Drainage to Route 440 Southbound**



### Summary for Subcatchment E-3: Existing Drainage to Prospect Avenue

Runoff = 0.10 cfs @ 12.13 hrs, Volume= 291 cf, Depth> 2.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

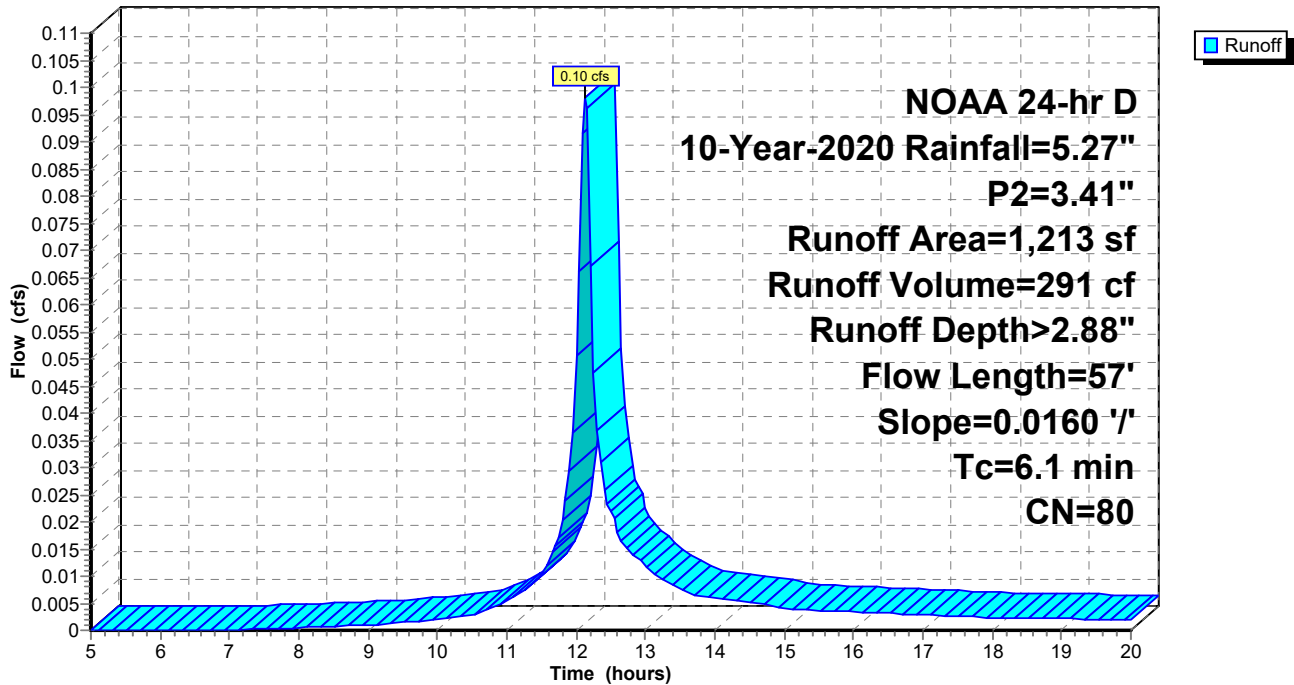
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.0160	0.14		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
6.1	57	Total			

### Subcatchment E-3: Existing Drainage to Prospect Avenue

Hydrograph



### Summary for Subcatchment P-1A: Proposed Building Roof Area

Runoff = 3.17 cfs @ 12.05 hrs, Volume= 9,497 cf, Depth> 4.57"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

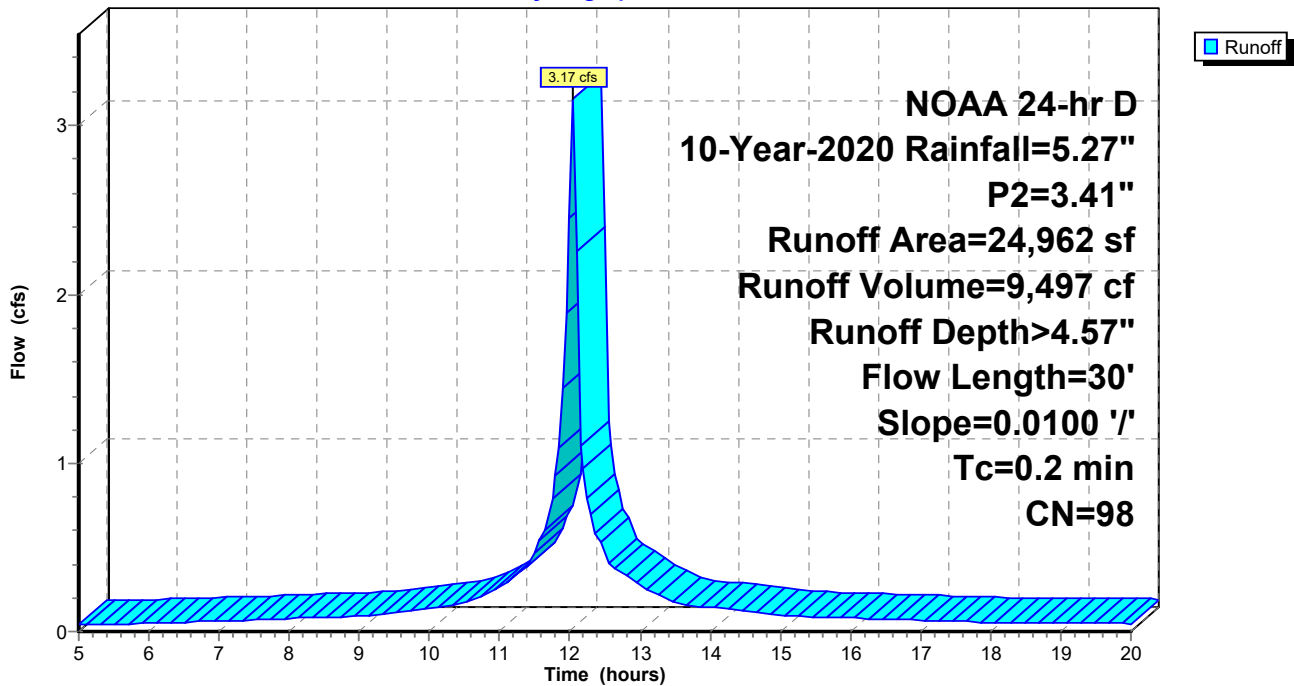
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

Area (sf)	CN	Description
24,962	98	Unconnected roofs, HSG D
24,962		100.00% Impervious Area
24,962		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 1A - 1B</b> Paved Kv= 20.3 fps

### Subcatchment P-1A: Proposed Building Roof Area

Hydrograph



### Summary for Subcatchment P-1B: Proposed Driveway, Walkway and Yards

Runoff = 1.15 cfs @ 12.09 hrs, Volume= 3,331 cf, Depth> 3.95"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

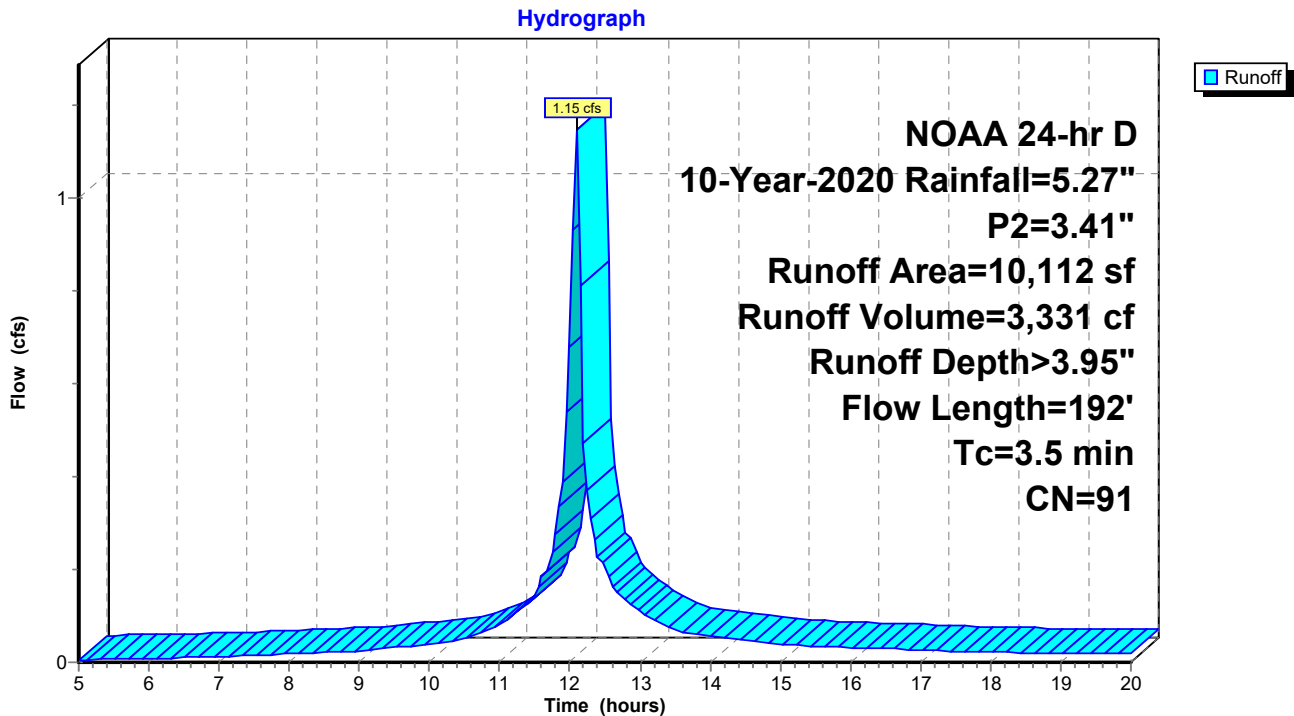
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

Area (sf)	CN	Description
3,734	80	>75% Grass cover, Good, HSG D
6,378	98	Paved parking, HSG D
10,112	91	Weighted Average
3,734		36.93% Pervious Area
6,378		63.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	28	0.0315	0.16		<b>Sheet Flow, 1A - 1B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.6	164	0.0485	4.47		<b>Shallow Concentrated Flow, 1B - 1C</b>
					Paved Kv= 20.3 fps
3.5	192	Total			

### Subcatchment P-1B: Proposed Driveway, Walkway and Yards



**Summary for Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Runoff = 0.78 cfs @ 12.05 hrs, Volume= 2,333 cf, Depth> 4.57"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

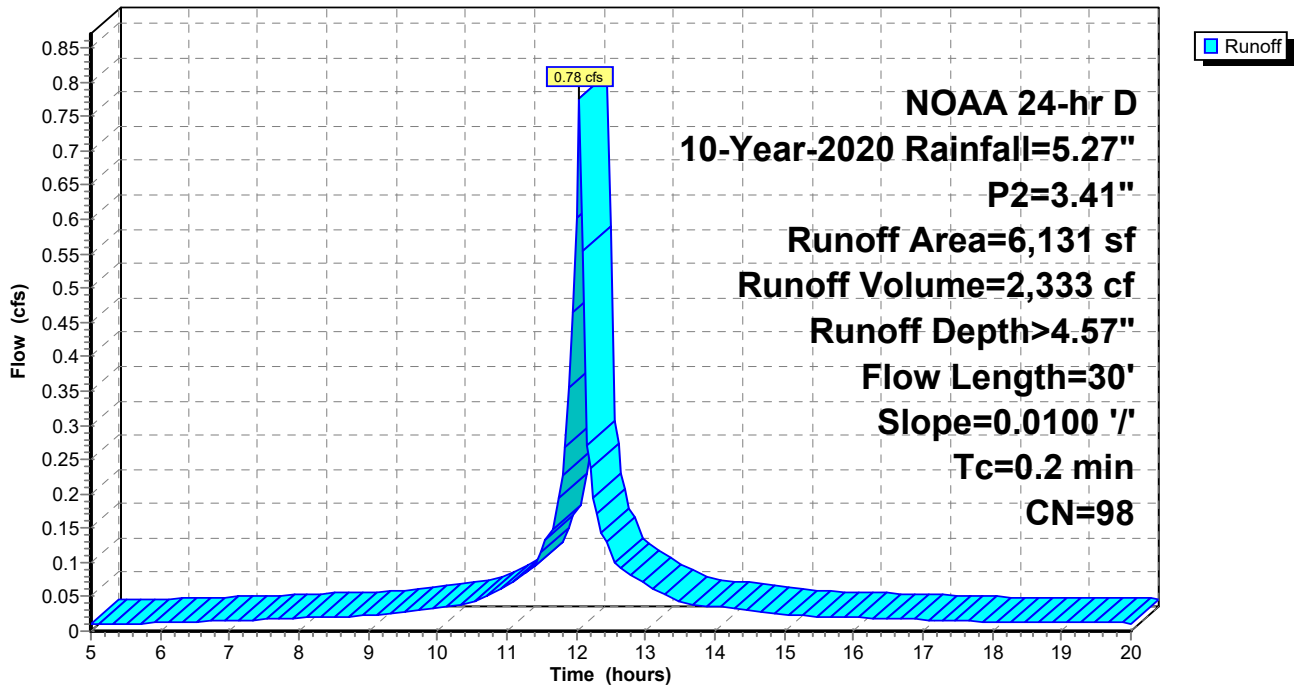
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

Area (sf)	CN	Description
6,131	98	Roofs, HSG D
6,131		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 2A-2B</b> Paved Kv= 20.3 fps

**Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Hydrograph



### Summary for Subcatchment P-2B: Proposed North Yard Area

Runoff = 0.02 cfs @ 12.17 hrs, Volume= 78 cf, Depth> 2.88"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

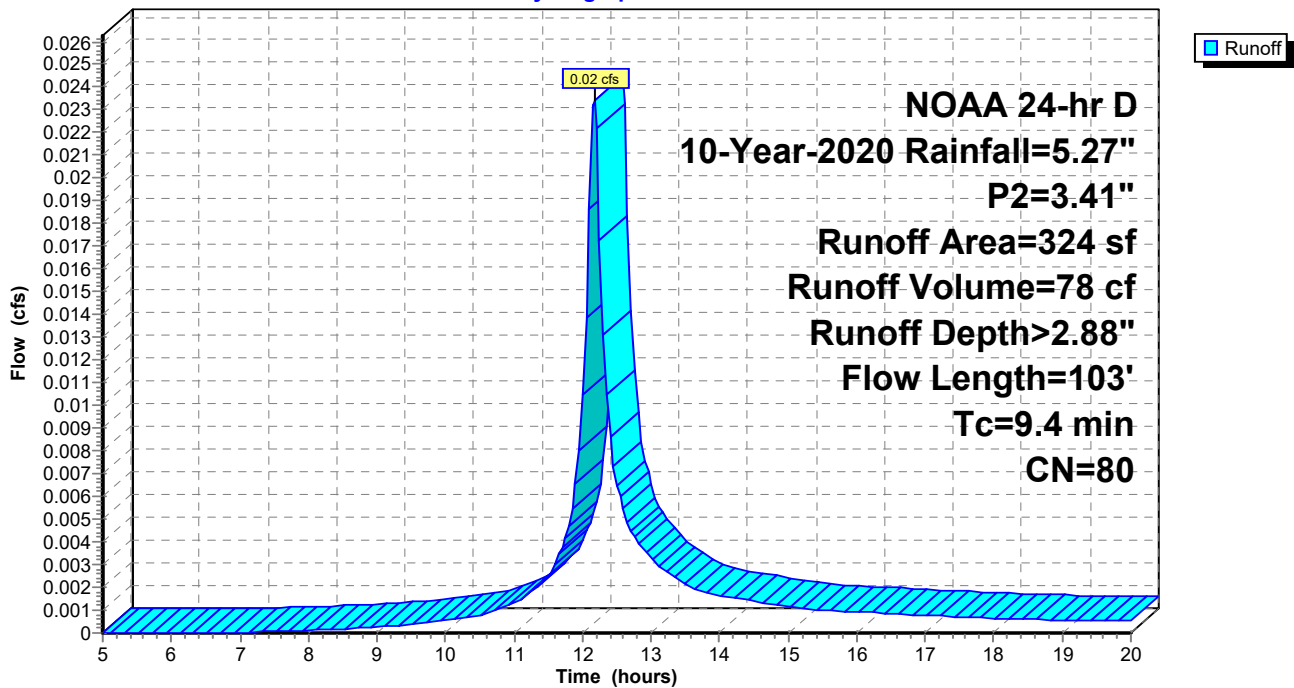
Area (sf)	CN	Description
324	80	>75% Grass cover, Good, HSG D
324		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0054	0.09		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.2	53	0.0670	3.88		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
9.4	103	Total			

### Subcatchment P-2B: Proposed North Yard Area

Hydrograph



### Summary for Subcatchment P-2C: Proposed East Yard Area

Runoff = 0.21 cfs @ 12.08 hrs, Volume= 539 cf, Depth> 2.98"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

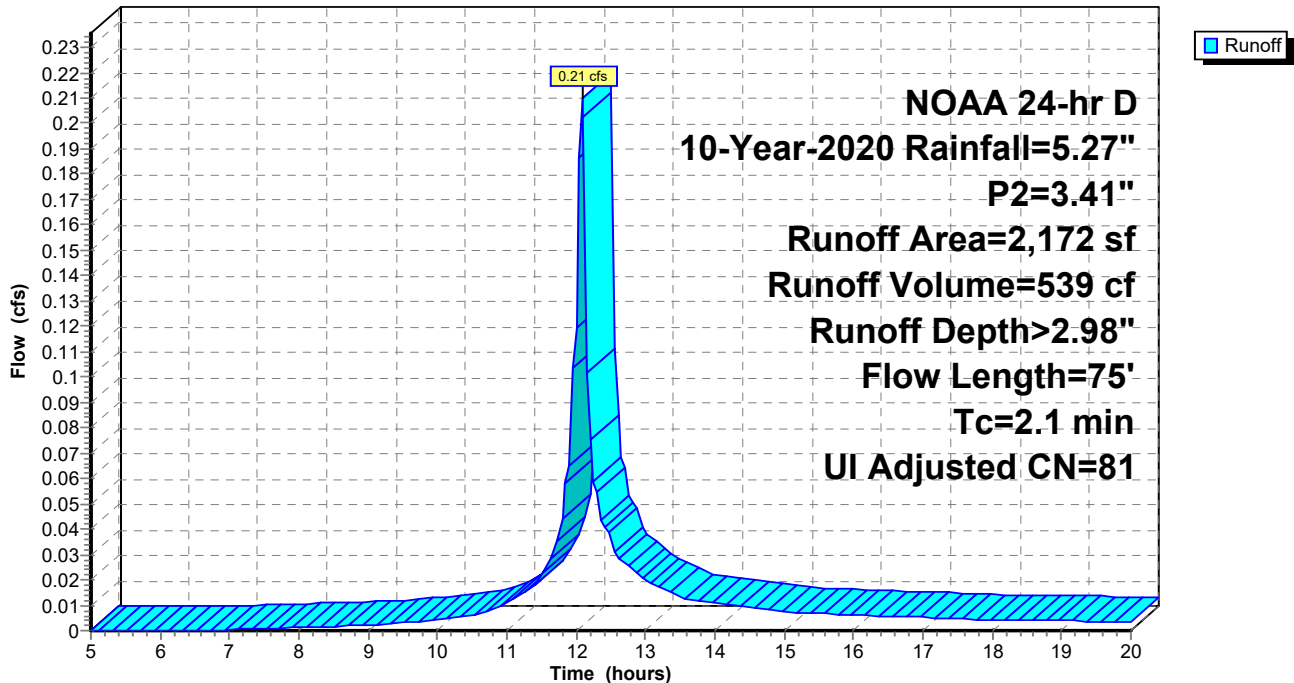
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

Area (sf)	CN	Adj	Description
1,859	80		>75% Grass cover, Good, HSG D
313	98		Unconnected pavement, HSG D
2,172	83	81	Weighted Average, UI Adjusted
1,859			85.59% Pervious Area
313			14.41% Impervious Area
313			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	20	0.0508	0.18		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.41"
0.2	40	0.0377	2.91		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.1	15	0.0592	3.65		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
2.1	75	Total			

### Subcatchment P-2C: Proposed East Yard Area

Hydrograph



**Summary for Subcatchment P-3: Proposed Drainage to Prospect Avenue**

Runoff = 0.10 cfs @ 12.13 hrs, Volume= 291 cf, Depth> 2.88"  
 Routed to nonexistent node 1L

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2020 Rainfall=5.27", P2=3.41"

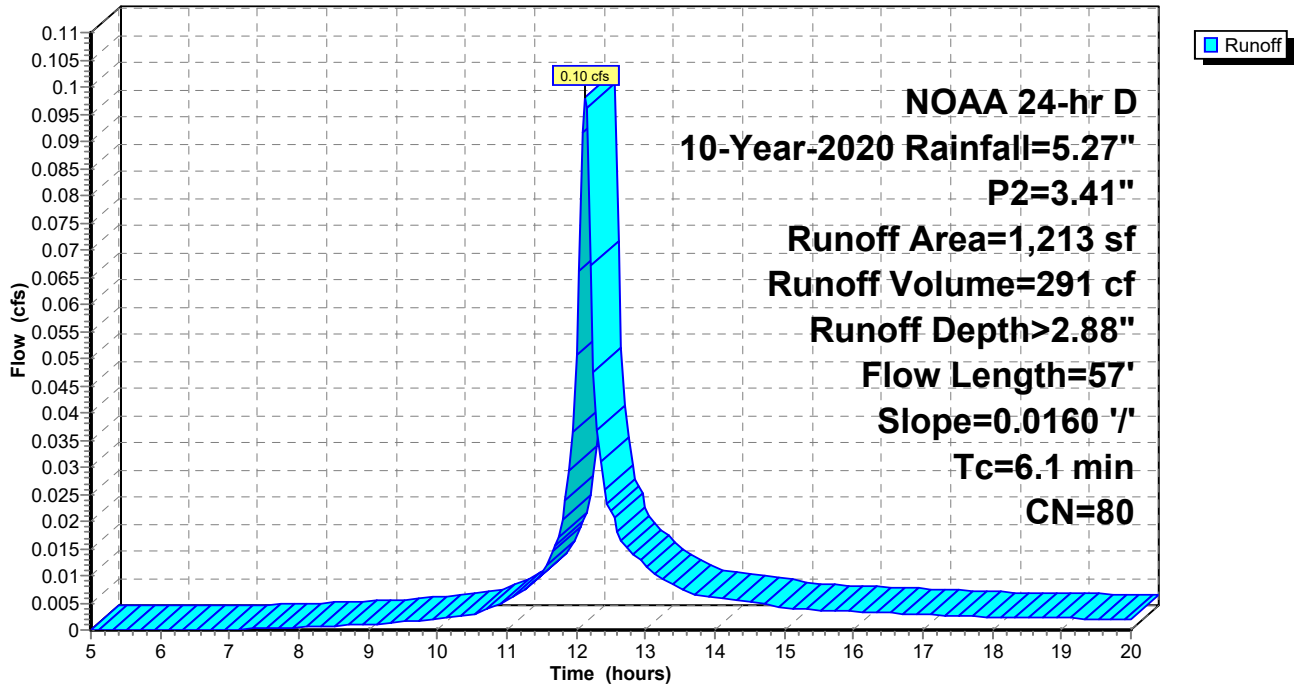
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.0160	0.14		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
6.1	57	Total			

**Subcatchment P-3: Proposed Drainage to Prospect Avenue**

Hydrograph

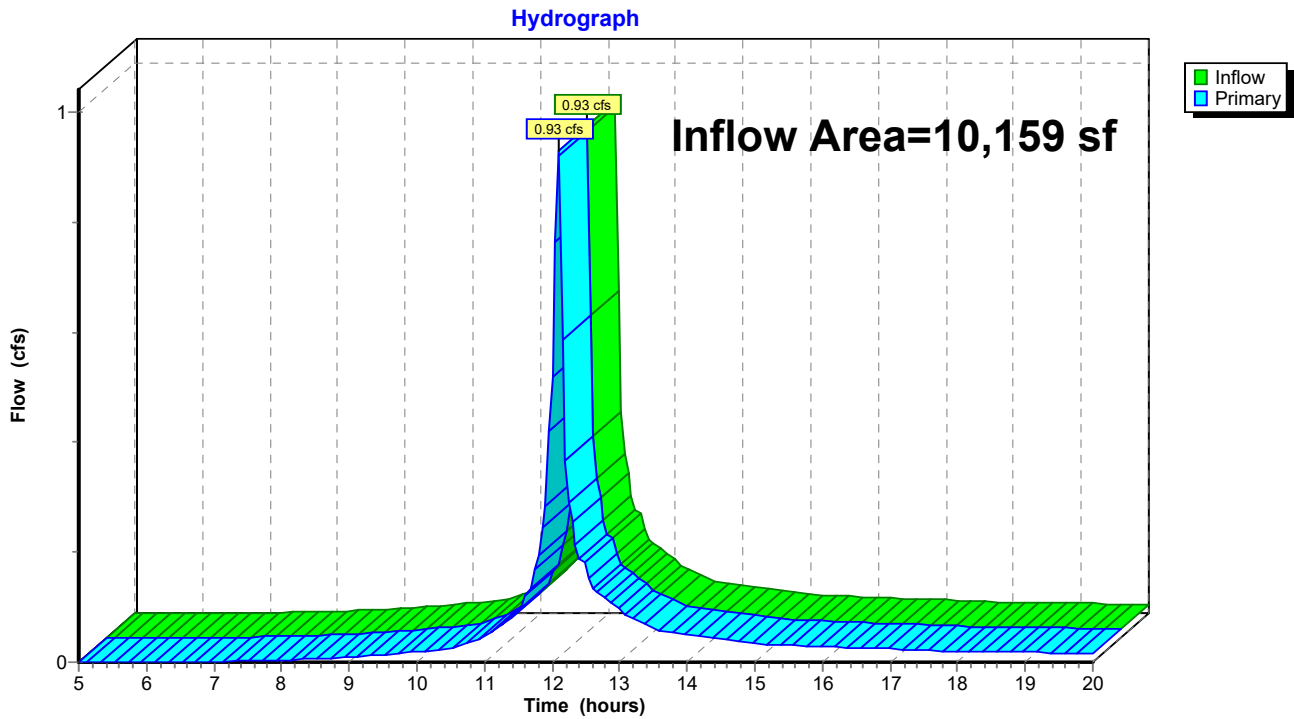


### Summary for Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 10,159 sf, 0.00% Impervious, Inflow Depth > 2.89" for 10-Year-2020 event  
Inflow = 0.93 cfs @ 12.09 hrs, Volume= 2,443 cf  
Primary = 0.93 cfs @ 12.09 hrs, Volume= 2,443 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

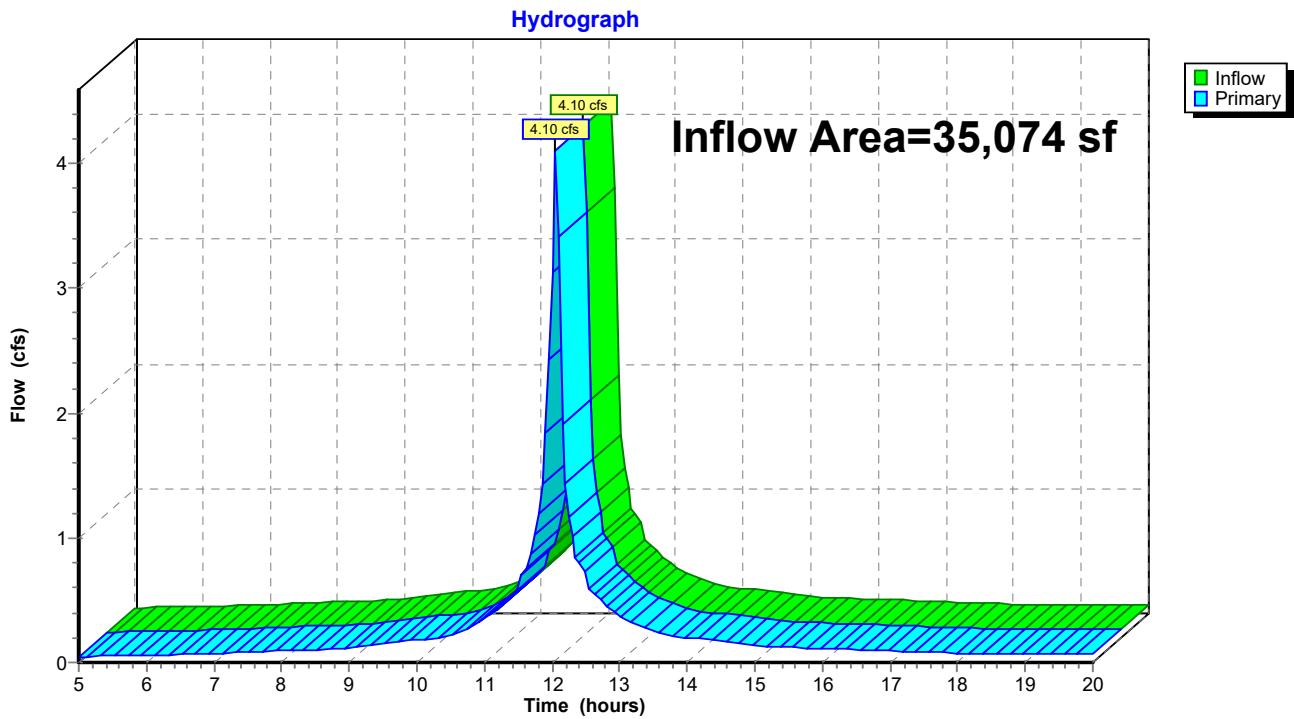


### Summary for Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 35,074 sf, 89.35% Impervious, Inflow Depth > 4.39" for 10-Year-2020 event  
Inflow = 4.10 cfs @ 12.05 hrs, Volume= 12,828 cf  
Primary = 4.10 cfs @ 12.05 hrs, Volume= 12,828 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

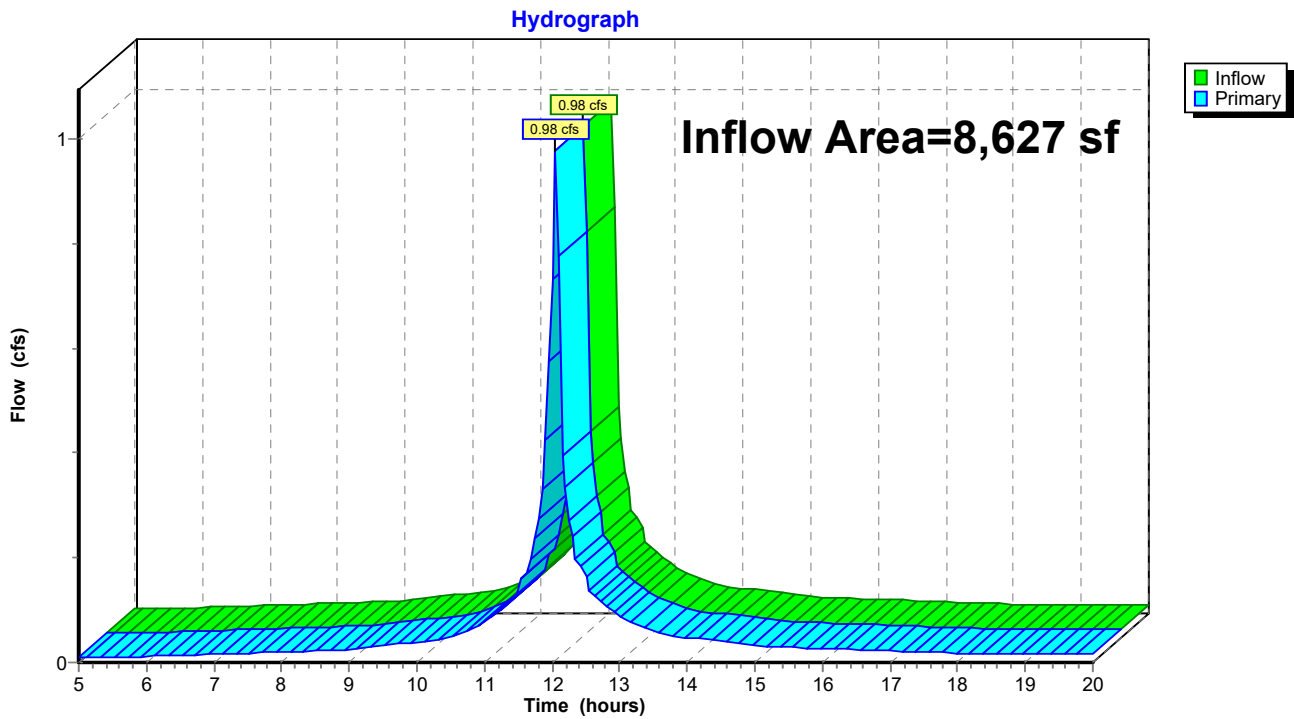


### Summary for Link P-2: Proposed Drainage to Route 440 Southbound

Inflow Area = 8,627 sf, 74.70% Impervious, Inflow Depth > 4.10" for 10-Year-2020 event  
Inflow = 0.98 cfs @ 12.05 hrs, Volume= 2,950 cf  
Primary = 0.98 cfs @ 12.05 hrs, Volume= 2,950 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-2: Proposed Drainage to Route 440 Southbound



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>SubcatchmentE-1A: Existing Drainage</b>	Runoff Area=7,329 sf   0.00% Impervious   Runoff Depth>6.17" Flow Length=138'   Tc=2.9 min   CN=80   Runoff=1.37 cfs   3,767 cf
<b>SubcatchmentE-1B: Existing Drainage</b>	Runoff Area=2,830 sf   0.00% Impervious   Runoff Depth>6.17" Flow Length=44'   Slope=0.0616 '/'   Tc=3.1 min   CN=80   Runoff=0.53 cfs   1,455 cf
<b>SubcatchmentE-2: Existing Drainage to</b>	Runoff Area=33,542 sf   4.77% Impervious   Runoff Depth>6.17" Flow Length=174'   Tc=4.1 min   UI Adjusted CN=80   Runoff=5.98 cfs   17,234 cf
<b>SubcatchmentE-3: Existing Drainage to</b>	Runoff Area=1,213 sf   0.00% Impervious   Runoff Depth>6.16" Flow Length=57'   Slope=0.0160 '/'   Tc=6.1 min   CN=80   Runoff=0.20 cfs   623 cf
<b>SubcatchmentP-1A: Proposed Building</b>	Runoff Area=24,962 sf   100.00% Impervious   Runoff Depth>7.92" Flow Length=30'   Slope=0.0100 '/'   Tc=0.2 min   CN=98   Runoff=5.46 cfs   16,483 cf
<b>SubcatchmentP-1B: Proposed Driveway,</b>	Runoff Area=10,112 sf   63.07% Impervious   Runoff Depth>7.38" Flow Length=192'   Tc=3.5 min   CN=91   Runoff=2.07 cfs   6,217 cf
<b>SubcatchmentP-2A: Proposed Building</b>	Runoff Area=6,131 sf   100.00% Impervious   Runoff Depth>7.92" Flow Length=30'   Slope=0.0100 '/'   Tc=0.2 min   CN=98   Runoff=1.34 cfs   4,048 cf
<b>SubcatchmentP-2B: Proposed North Yard</b>	Runoff Area=324 sf   0.00% Impervious   Runoff Depth>6.16" Flow Length=103'   Tc=9.4 min   CN=80   Runoff=0.05 cfs   166 cf
<b>SubcatchmentP-2C: Proposed East Yard</b>	Runoff Area=2,172 sf   14.41% Impervious   Runoff Depth>6.29" Flow Length=75'   Tc=2.1 min   UI Adjusted CN=81   Runoff=0.42 cfs   1,138 cf
<b>SubcatchmentP-3: Proposed Drainage to</b>	Runoff Area=1,213 sf   0.00% Impervious   Runoff Depth>6.16" Flow Length=57'   Slope=0.0160 '/'   Tc=6.1 min   CN=80   Runoff=0.20 cfs   623 cf
<b>Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall</b>	Inflow=1.90 cfs   5,222 cf Primary=1.90 cfs   5,222 cf
<b>Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River</b>	Inflow=7.16 cfs   22,700 cf Primary=7.16 cfs   22,700 cf
<b>Link P-2: Proposed Drainage to Route 440 Southbound</b>	Inflow=1.75 cfs   5,353 cf Primary=1.75 cfs   5,353 cf

**Summary for Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Runoff = 1.37 cfs @ 12.09 hrs, Volume= 3,767 cf, Depth> 6.17"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

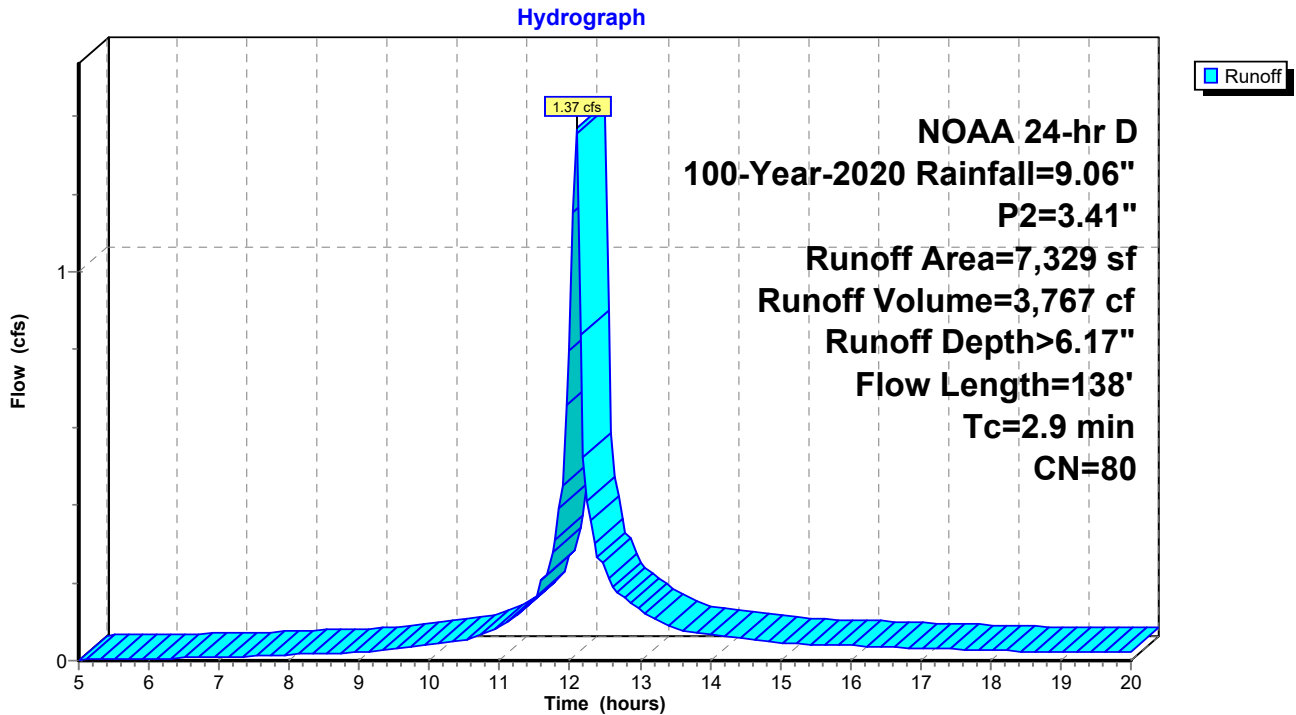
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Description
7,329	80	>75% Grass cover, Good, HSG D
7,329		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	35	0.0687	0.23		<b>Sheet Flow, 1A-1B</b> Grass: Short n= 0.150 P2= 3.41"
0.2	48	0.0650	3.82		<b>Shallow Concentrated Flow, 1B-1C</b> Grassed Waterway Kv= 15.0 fps
0.2	55	0.0639	3.79		<b>Shallow Concentrated Flow, 1C-1D</b> Grassed Waterway Kv= 15.0 fps
2.9	138	Total			

**Subcatchment E-1A: Existing Drainage Towards East 32nd Street**



**Summary for Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Runoff = 0.53 cfs @ 12.09 hrs, Volume= 1,455 cf, Depth> 6.17"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

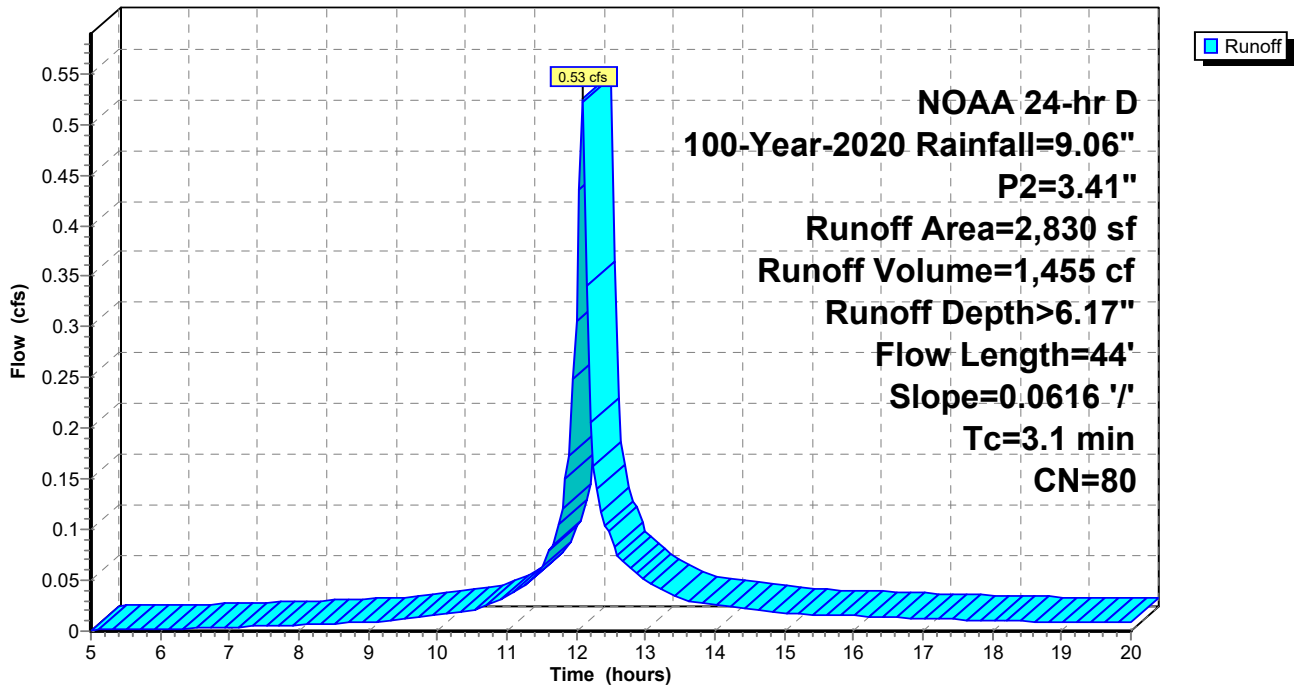
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Description
2,830	80	>75% Grass cover, Good, HSG D
2,830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.1	44	0.0616	0.23		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.41"

**Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Hydrograph



### Summary for Subcatchment E-2: Existing Drainage to Route 440 Southbound

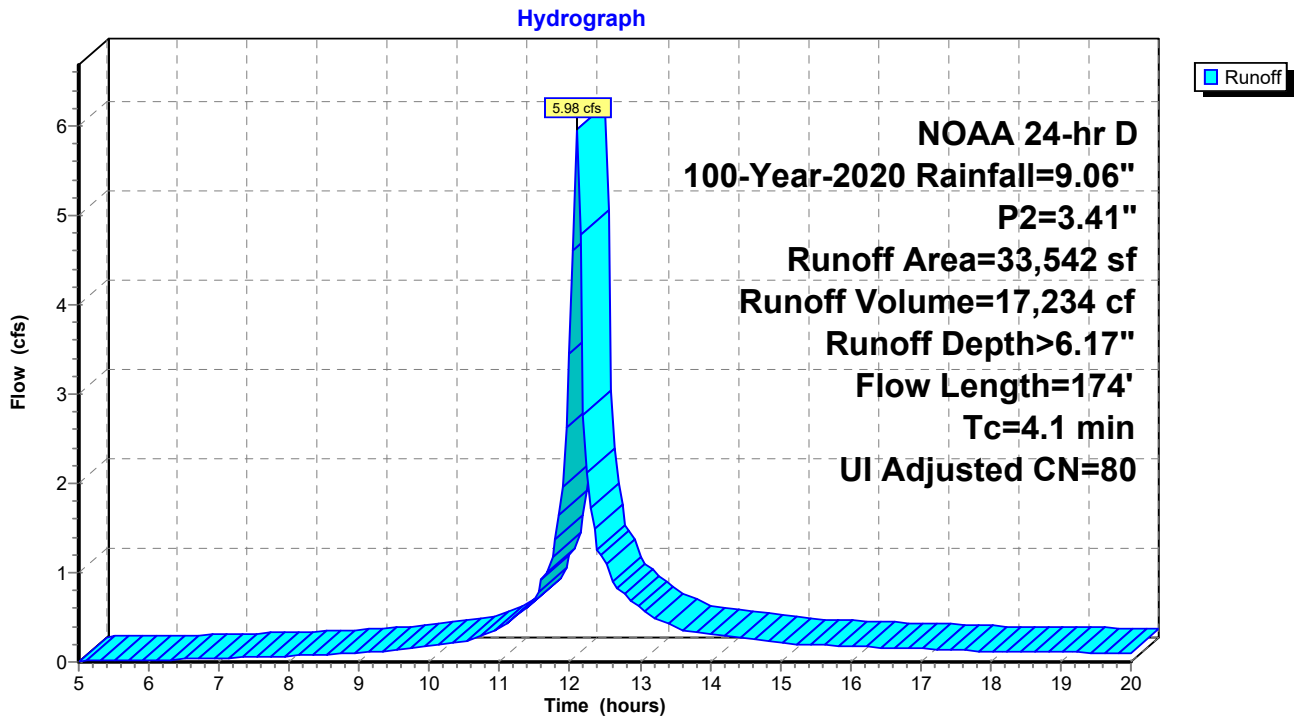
Runoff = 5.98 cfs @ 12.10 hrs, Volume= 17,234 cf, Depth> 6.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Adj	Description
1,601	98		Unconnected pavement, HSG D
31,941	80		>75% Grass cover, Good, HSG D
33,542	81	80	Weighted Average, UI Adjusted
31,941			95.23% Pervious Area
1,601			4.77% Impervious Area
1,601			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	47	0.0500	0.22		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	39	0.1300	5.41		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
0.4	88	0.0675	3.90		<b>Shallow Concentrated Flow, 2C-2D</b>
					Grassed Waterway Kv= 15.0 fps
4.1	174	Total			

### Subcatchment E-2: Existing Drainage to Route 440 Southbound



**Summary for Subcatchment E-3: Existing Drainage to Prospect Avenue**

Runoff = 0.20 cfs @ 12.13 hrs, Volume= 623 cf, Depth> 6.16"

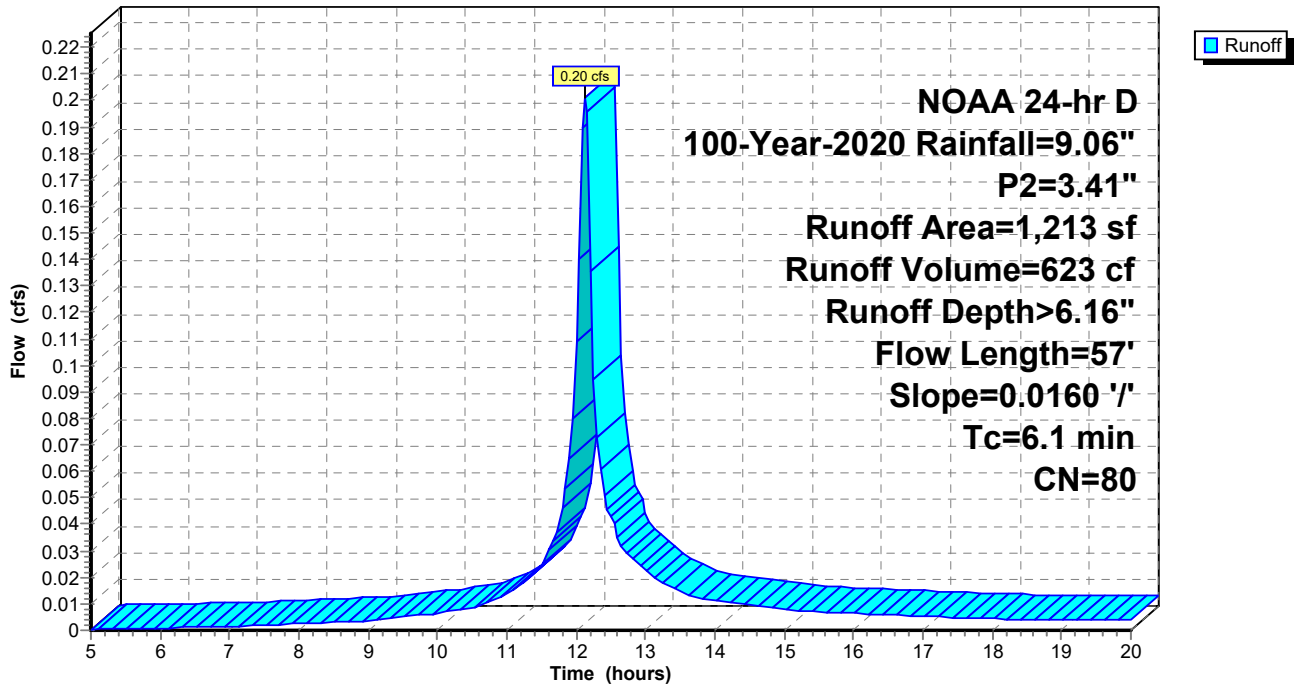
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.0160	0.14		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
6.1	57	Total			

**Subcatchment E-3: Existing Drainage to Prospect Avenue**

Hydrograph



### Summary for Subcatchment P-1A: Proposed Building Roof Area

Runoff = 5.46 cfs @ 12.05 hrs, Volume= 16,483 cf, Depth> 7.92"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

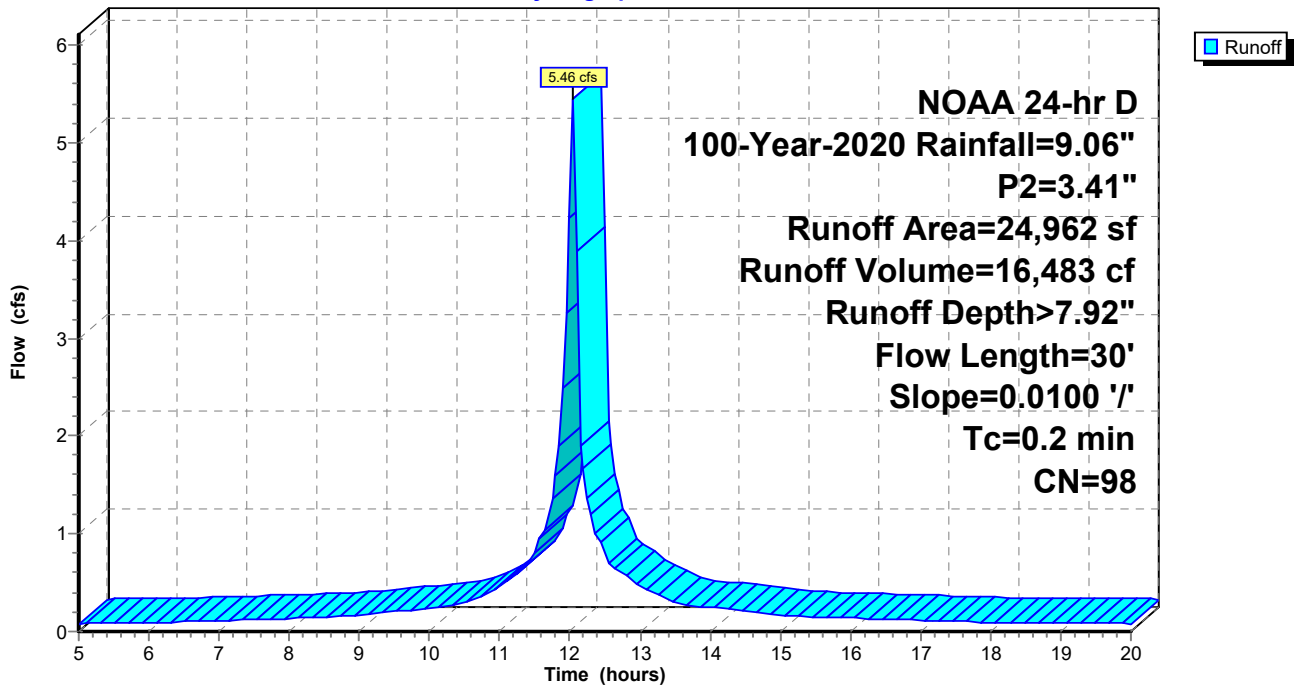
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Description
24,962	98	Unconnected roofs, HSG D
24,962		100.00% Impervious Area
24,962		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 1A - 1B</b> Paved Kv= 20.3 fps

### Subcatchment P-1A: Proposed Building Roof Area

Hydrograph



### Summary for Subcatchment P-1B: Proposed Driveway, Walkway and Yards

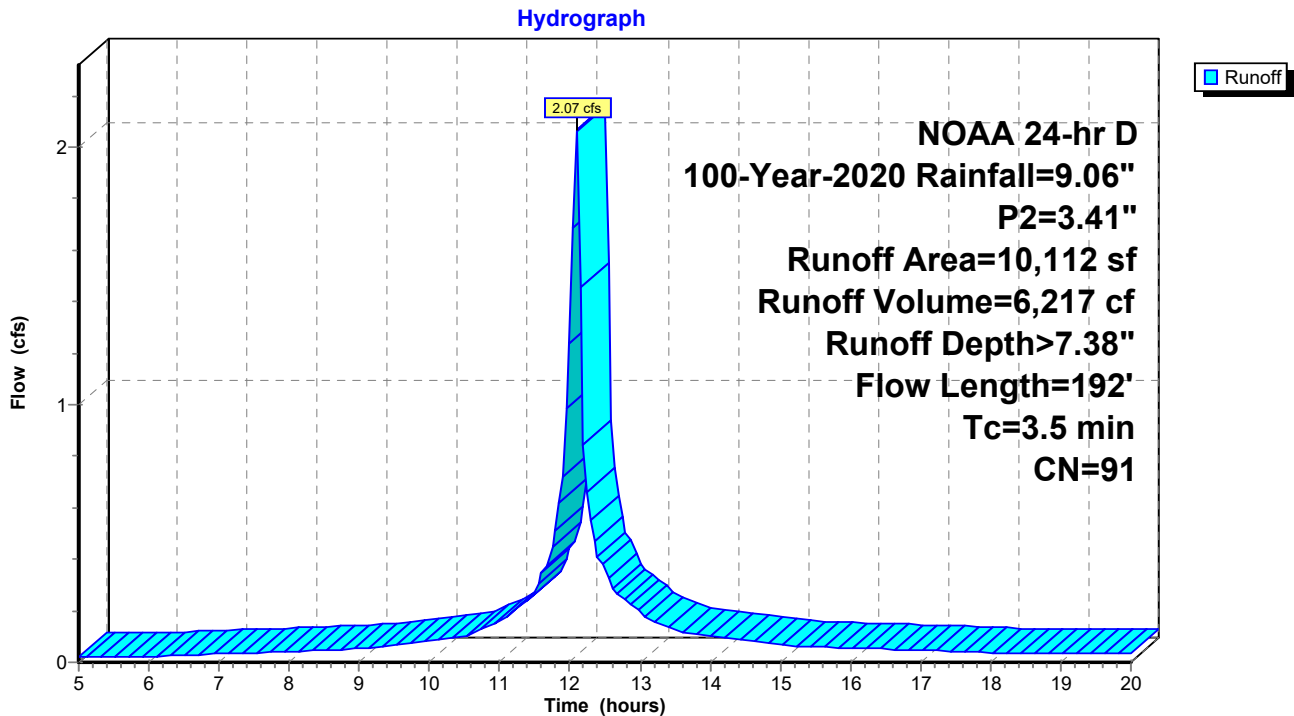
Runoff = 2.07 cfs @ 12.09 hrs, Volume= 6,217 cf, Depth> 7.38"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Description
3,734	80	>75% Grass cover, Good, HSG D
6,378	98	Paved parking, HSG D
10,112	91	Weighted Average
3,734		36.93% Pervious Area
6,378		63.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	28	0.0315	0.16		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.41"
0.6	164	0.0485	4.47		<b>Shallow Concentrated Flow, 1B - 1C</b> Paved Kv= 20.3 fps
3.5	192	Total			

### Subcatchment P-1B: Proposed Driveway, Walkway and Yards



**Summary for Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Runoff = 1.34 cfs @ 12.05 hrs, Volume= 4,048 cf, Depth> 7.92"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

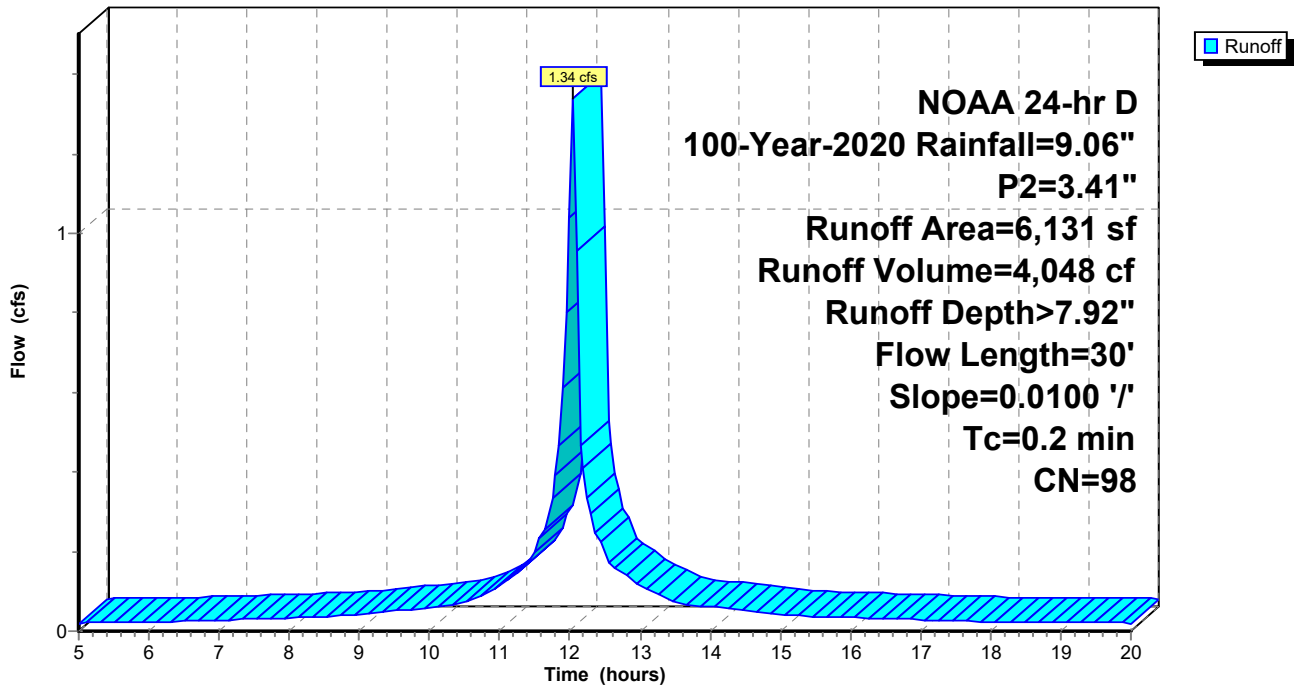
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

Area (sf)	CN	Description
6,131	98	Roofs, HSG D
6,131		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 2A-2B</b> Paved Kv= 20.3 fps

**Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Hydrograph



### Summary for Subcatchment P-2B: Proposed North Yard Area

Runoff = 0.05 cfs @ 12.16 hrs, Volume= 166 cf, Depth> 6.16"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

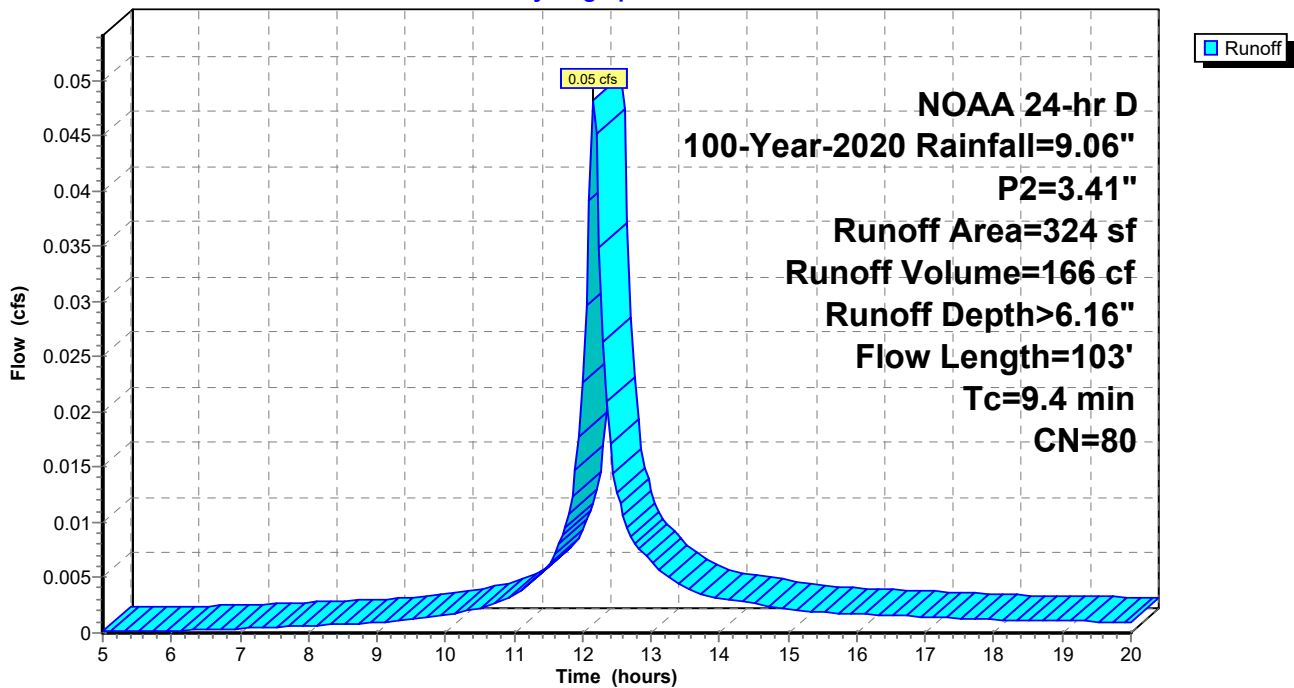
Area (sf)	CN	Description
324	80	>75% Grass cover, Good, HSG D
324		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	50	0.0054	0.09		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.2	53	0.0670	3.88		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
9.4	103	Total			

### Subcatchment P-2B: Proposed North Yard Area

Hydrograph



### Summary for Subcatchment P-2C: Proposed East Yard Area

Runoff = 0.42 cfs @ 12.08 hrs, Volume= 1,138 cf, Depth> 6.29"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

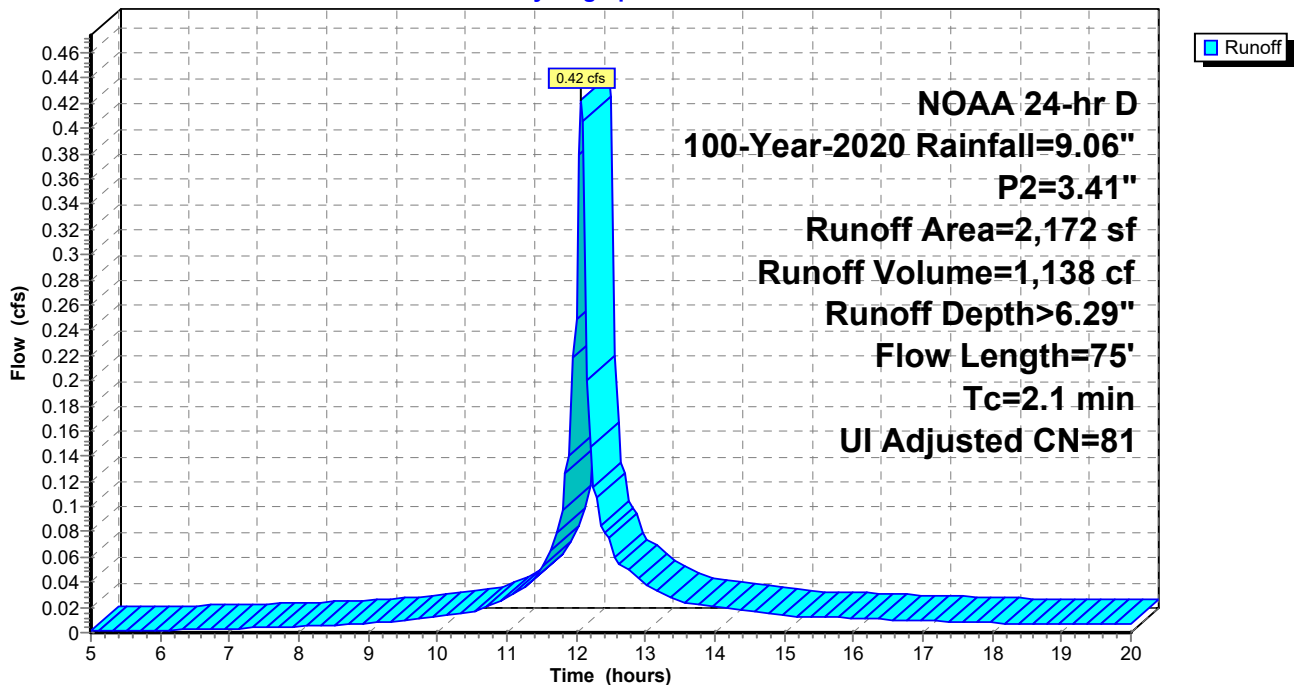
Area (sf)	CN	Adj	Description
1,859	80		>75% Grass cover, Good, HSG D
313	98		Unconnected pavement, HSG D
2,172	83	81	Weighted Average, UI Adjusted
1,859			85.59% Pervious Area
313			14.41% Impervious Area
313			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	20	0.0508	0.18		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.2	40	0.0377	2.91		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
0.1	15	0.0592	3.65		<b>Shallow Concentrated Flow, 2C-2D</b>
					Grassed Waterway Kv= 15.0 fps
2.1	75	Total			

### Subcatchment P-2C: Proposed East Yard Area

Hydrograph



### Summary for Subcatchment P-3: Proposed Drainage to Prospect Avenue

Runoff = 0.20 cfs @ 12.13 hrs, Volume= 623 cf, Depth> 6.16"  
 Routed to nonexistent node 1L

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2020 Rainfall=9.06", P2=3.41"

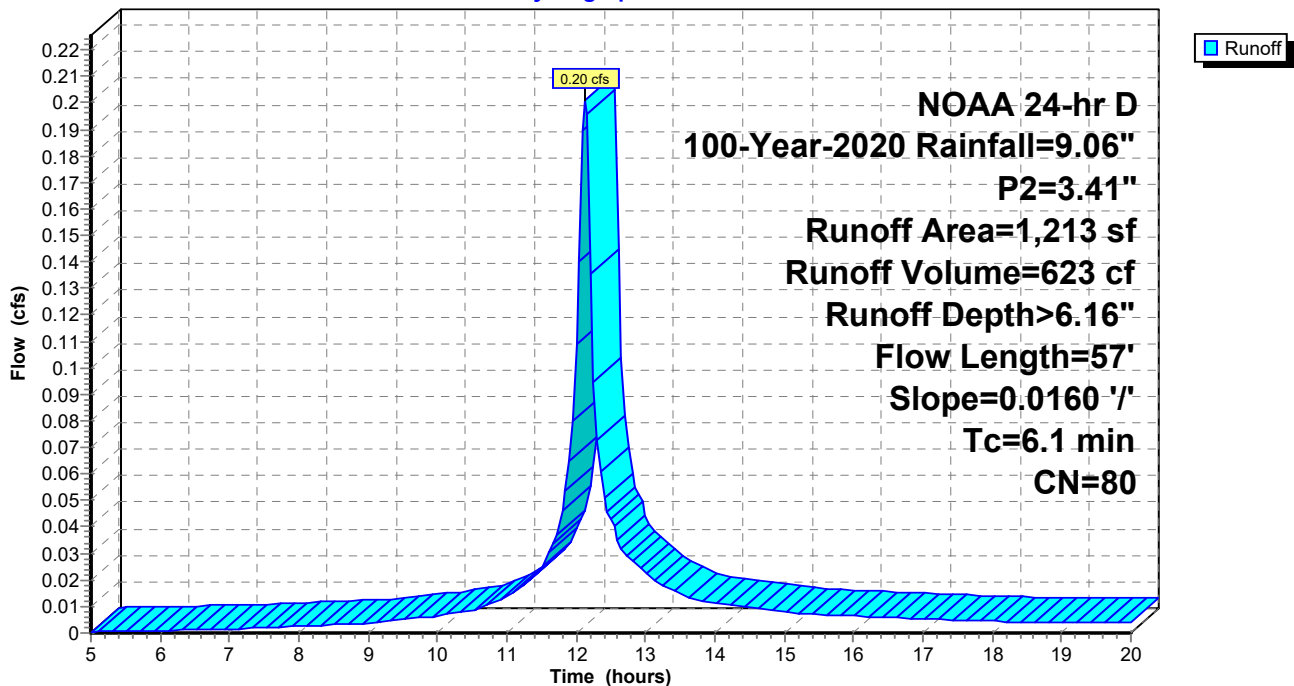
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	50	0.0160	0.14		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.41"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
6.1	57	Total			

### Subcatchment P-3: Proposed Drainage to Prospect Avenue

Hydrograph

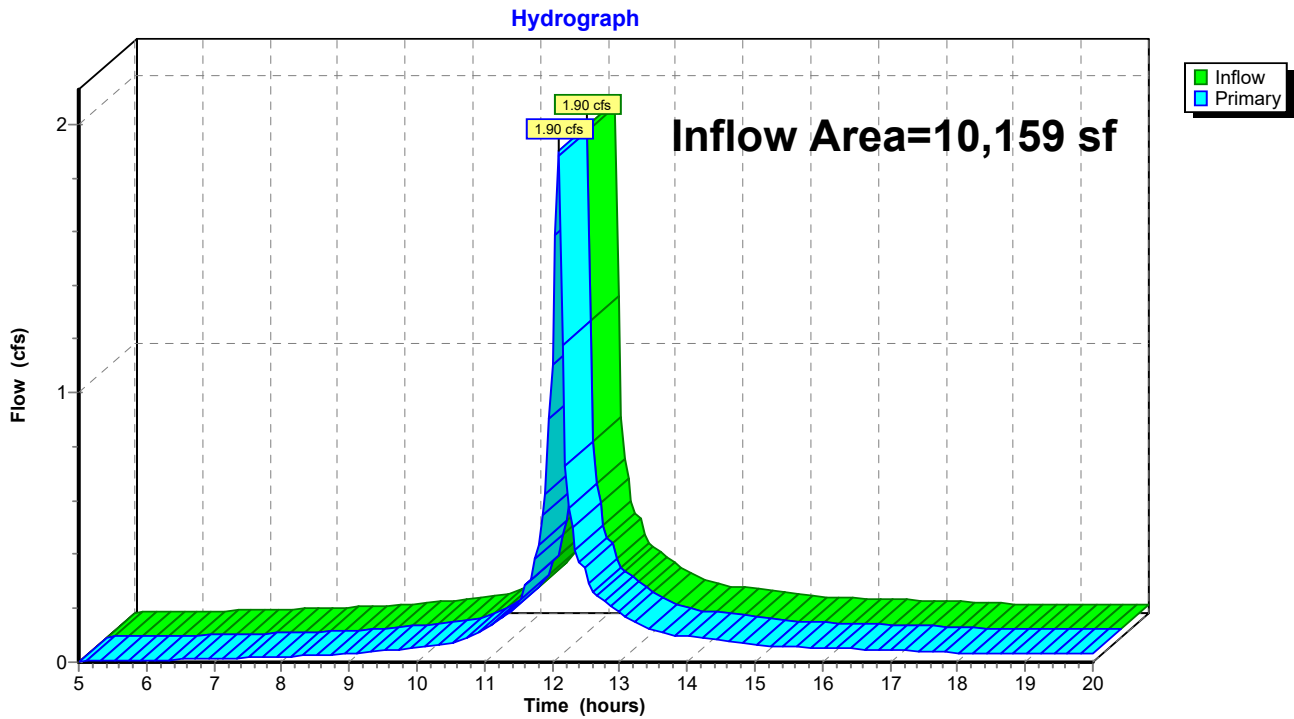


### Summary for Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 10,159 sf, 0.00% Impervious, Inflow Depth > 6.17" for 100-Year-2020 event  
Inflow = 1.90 cfs @ 12.09 hrs, Volume= 5,222 cf  
Primary = 1.90 cfs @ 12.09 hrs, Volume= 5,222 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

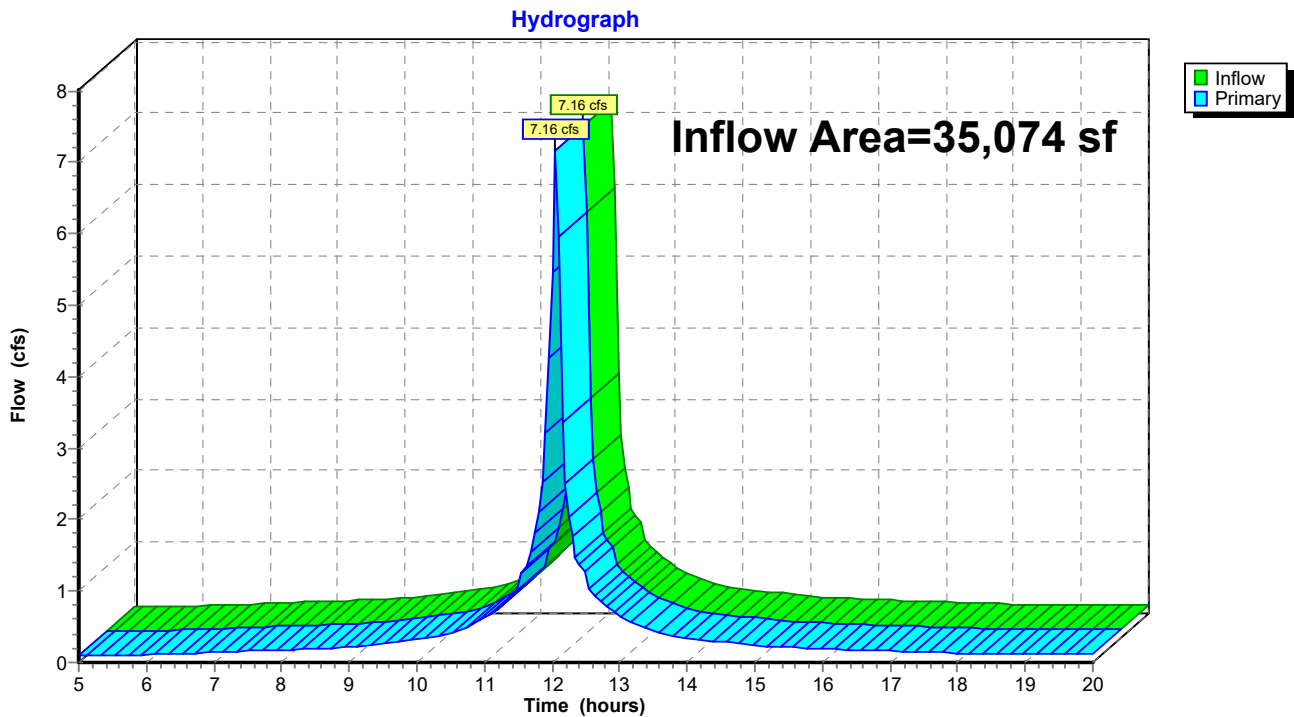


### Summary for Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 35,074 sf, 89.35% Impervious, Inflow Depth > 7.77" for 100-Year-2020 event  
Inflow = 7.16 cfs @ 12.05 hrs, Volume= 22,700 cf  
Primary = 7.16 cfs @ 12.05 hrs, Volume= 22,700 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

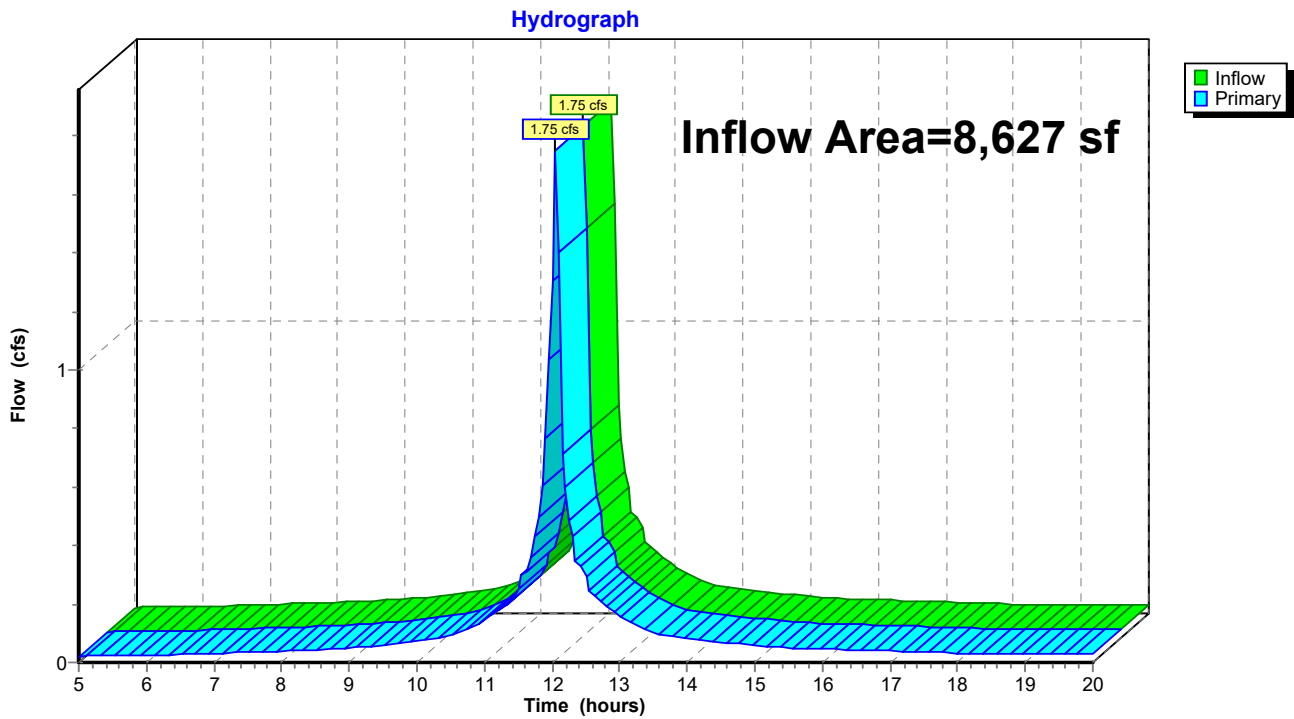


### Summary for Link P-2: Proposed Drainage to Route 440 Southbound

Inflow Area = 8,627 sf, 74.70% Impervious, Inflow Depth > 7.45" for 100-Year-2020 event  
Inflow = 1.75 cfs @ 12.05 hrs, Volume= 5,353 cf  
Primary = 1.75 cfs @ 12.05 hrs, Volume= 5,353 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-2: Proposed Drainage to Route 440 Southbound



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentE-1A: Existing Drainage** Runoff Area=7,329 sf 0.00% Impervious Runoff Depth>1.82"  
Flow Length=138' Tc=2.7 min CN=80 Runoff=0.44 cfs 1,113 cf

**SubcatchmentE-1B: Existing Drainage** Runoff Area=2,830 sf 0.00% Impervious Runoff Depth>1.82"  
Flow Length=44' Slope=0.0616 '/' Tc=2.9 min CN=80 Runoff=0.17 cfs 430 cf

**SubcatchmentE-2: Existing Drainage to** Runoff Area=33,542 sf 4.77% Impervious Runoff Depth>1.82"  
Flow Length=174' Tc=3.8 min UI Adjusted CN=80 Runoff=1.90 cfs 5,092 cf

**SubcatchmentE-3: Existing Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>1.82"  
Flow Length=57' Slope=0.0160 '/' Tc=5.6 min CN=80 Runoff=0.06 cfs 184 cf

**SubcatchmentP-1A: Proposed Building** Runoff Area=24,962 sf 100.00% Impervious Runoff Depth>3.38"  
Flow Length=30' Slope=0.0100 '/' Tc=0.2 min CN=98 Runoff=2.36 cfs 7,033 cf

**SubcatchmentP-1B: Proposed Driveway,** Runoff Area=10,112 sf 63.07% Impervious Runoff Depth>2.76"  
Flow Length=192' Tc=3.3 min CN=91 Runoff=0.83 cfs 2,323 cf

**SubcatchmentP-2A: Proposed Building** Runoff Area=6,131 sf 100.00% Impervious Runoff Depth>3.38"  
Flow Length=30' Slope=0.0100 '/' Tc=0.2 min CN=98 Runoff=0.58 cfs 1,727 cf

**SubcatchmentP-2B: Proposed North Yard** Runoff Area=324 sf 0.00% Impervious Runoff Depth>1.82"  
Flow Length=103' Tc=8.8 min CN=80 Runoff=0.02 cfs 49 cf

**SubcatchmentP-2C: Proposed East Yard** Runoff Area=2,172 sf 14.41% Impervious Runoff Depth>1.90"  
Flow Length=75' Tc=2.0 min UI Adjusted CN=81 Runoff=0.14 cfs 344 cf

**SubcatchmentP-3: Proposed Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>1.82"  
Flow Length=57' Slope=0.0160 '/' Tc=5.6 min CN=80 Runoff=0.06 cfs 184 cf

**Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall** Inflow=0.60 cfs 1,543 cf  
Primary=0.60 cfs 1,543 cf

**Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River** Inflow=3.04 cfs 9,356 cf  
Primary=3.04 cfs 9,356 cf

**Link P-2: Proposed Drainage to Route 440 Southbound** Inflow=0.71 cfs 2,120 cf  
Primary=0.71 cfs 2,120 cf

**Summary for Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Runoff = 0.44 cfs @ 12.09 hrs, Volume= 1,113 cf, Depth> 1.82"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

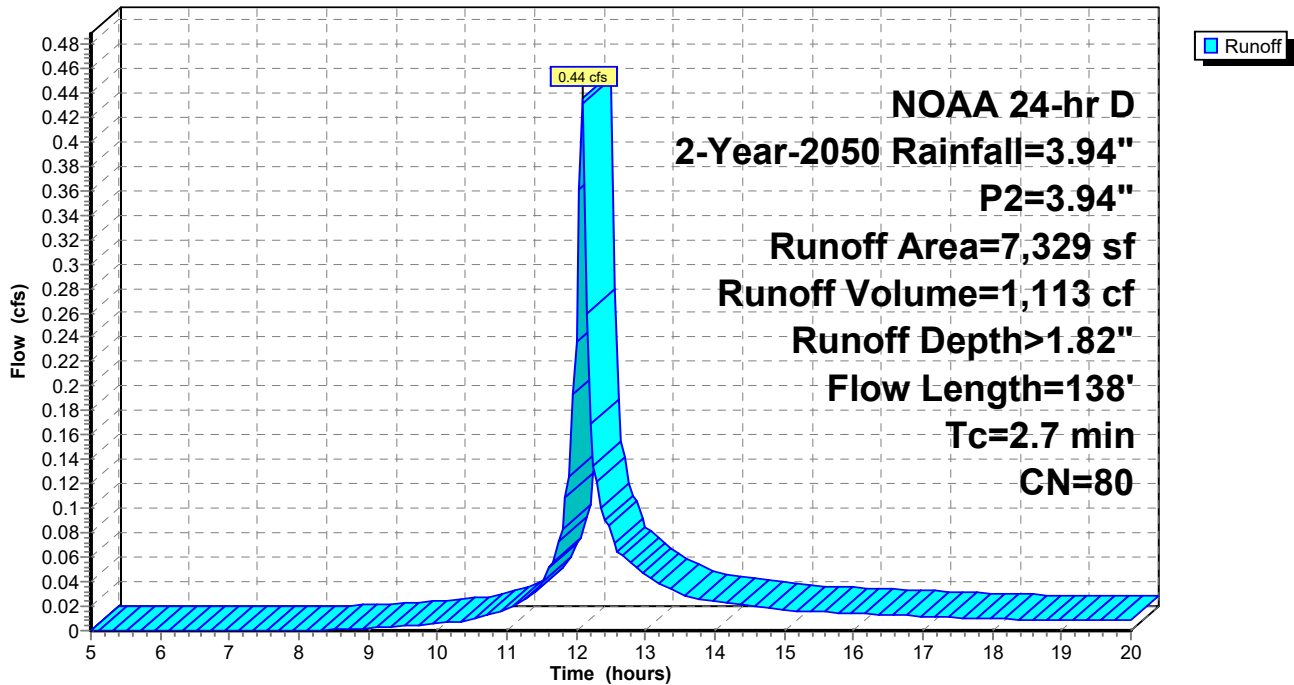
Area (sf)	CN	Description
7,329	80	>75% Grass cover, Good, HSG D
7,329		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	35	0.0687	0.25		<b>Sheet Flow, 1A-1B</b> Grass: Short n= 0.150 P2= 3.94"
0.2	48	0.0650	3.82		<b>Shallow Concentrated Flow, 1B-1C</b> Grassed Waterway Kv= 15.0 fps
0.2	55	0.0639	3.79		<b>Shallow Concentrated Flow, 1C-1D</b> Grassed Waterway Kv= 15.0 fps
2.7	138	Total			

**Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Hydrograph



**Summary for Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Runoff = 0.17 cfs @ 12.09 hrs, Volume= 430 cf, Depth> 1.82"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

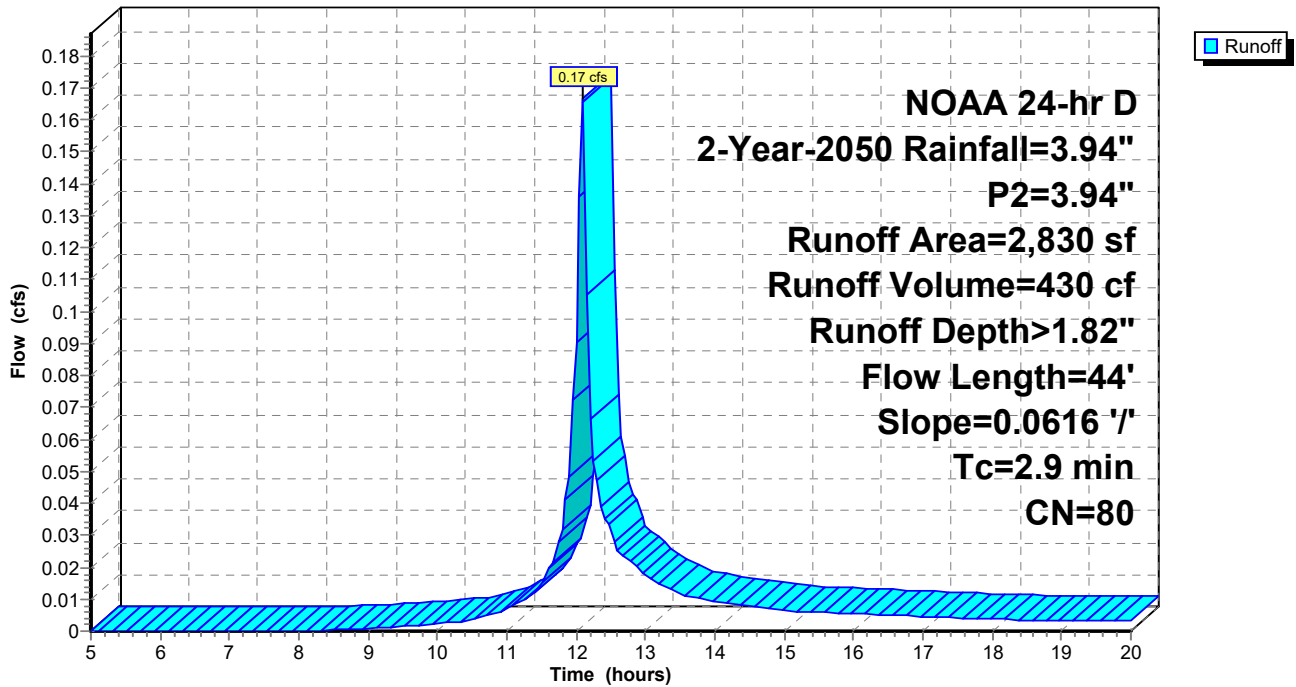
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

Area (sf)	CN	Description
2,830	80	>75% Grass cover, Good, HSG D
2,830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	44	0.0616	0.25		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.94"

**Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Hydrograph



### Summary for Subcatchment E-2: Existing Drainage to Route 440 Southbound

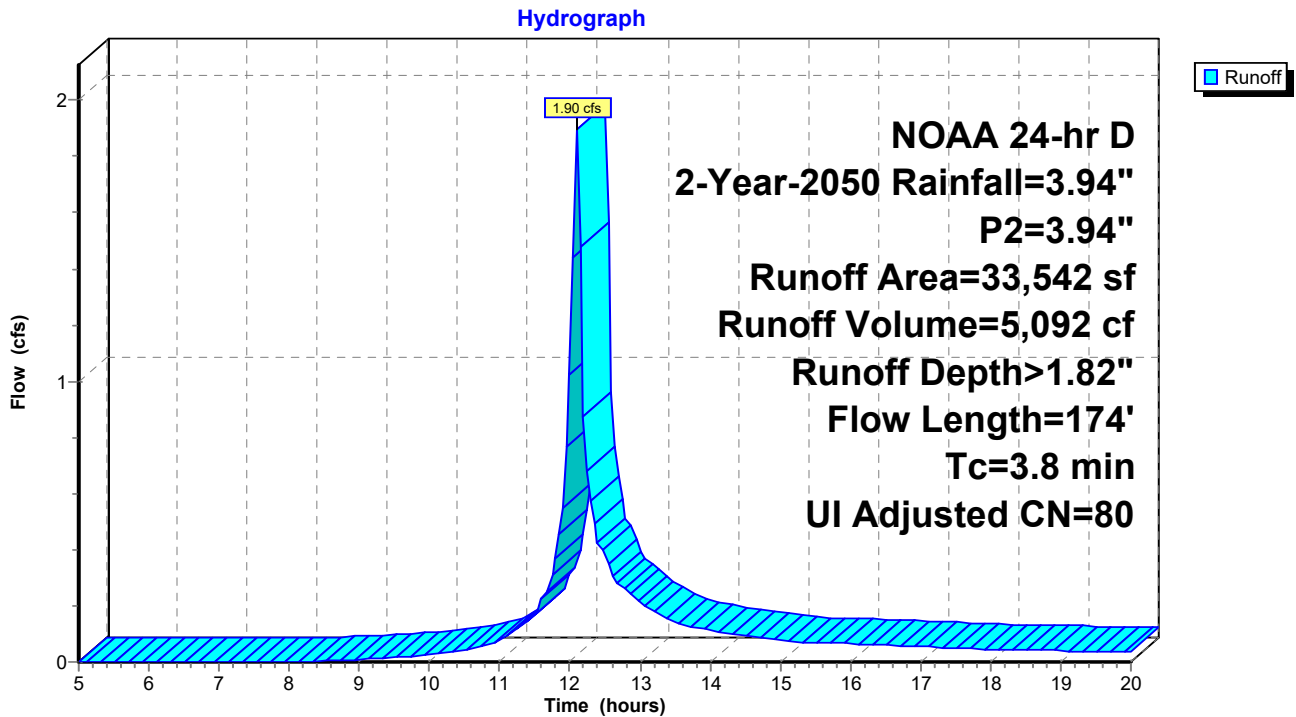
Runoff = 1.90 cfs @ 12.10 hrs, Volume= 5,092 cf, Depth> 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

Area (sf)	CN	Adj	Description
1,601	98		Unconnected pavement, HSG D
31,941	80		>75% Grass cover, Good, HSG D
33,542	81	80	Weighted Average, UI Adjusted
31,941			95.23% Pervious Area
1,601			4.77% Impervious Area
1,601			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	47	0.0500	0.23		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.94"
0.1	39	0.1300	5.41		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.4	88	0.0675	3.90		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
3.8	174	Total			

### Subcatchment E-2: Existing Drainage to Route 440 Southbound



**Summary for Subcatchment E-3: Existing Drainage to Prospect Avenue**

Runoff = 0.06 cfs @ 12.13 hrs, Volume= 184 cf, Depth> 1.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

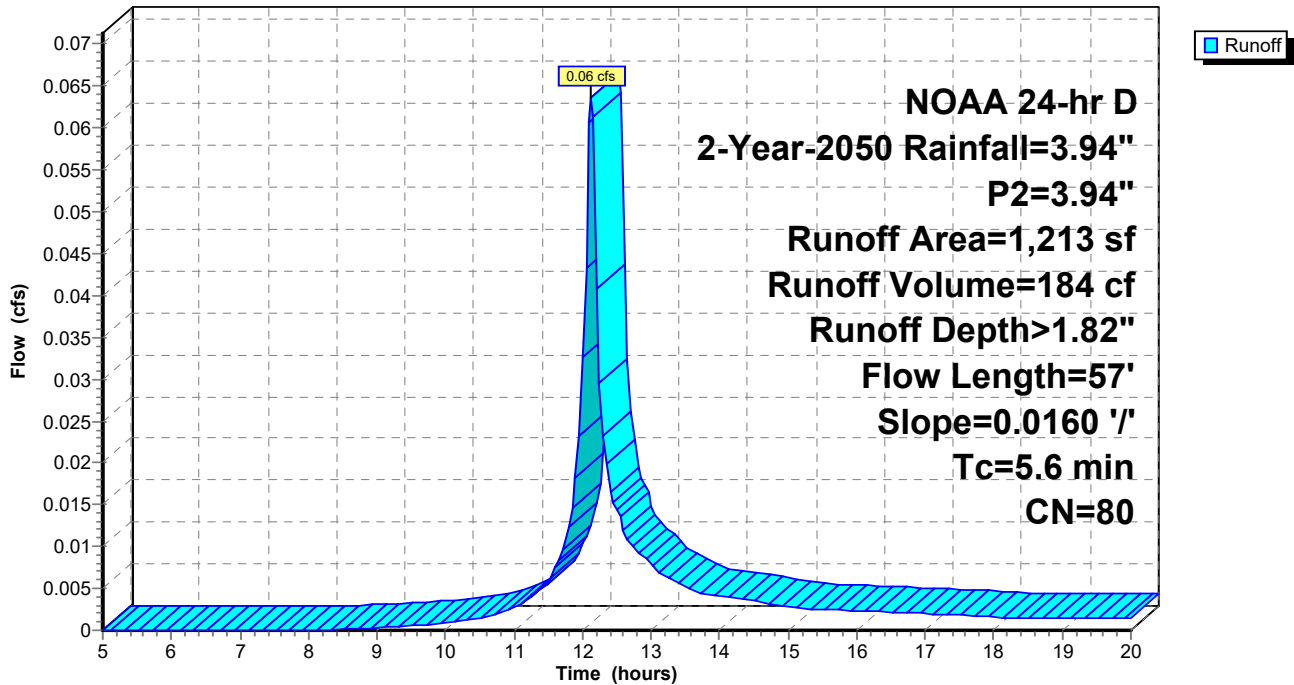
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0160	0.15		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
5.6	57	Total			

**Subcatchment E-3: Existing Drainage to Prospect Avenue**

Hydrograph



### Summary for Subcatchment P-1A: Proposed Building Roof Area

Runoff = 2.36 cfs @ 12.05 hrs, Volume= 7,033 cf, Depth> 3.38"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

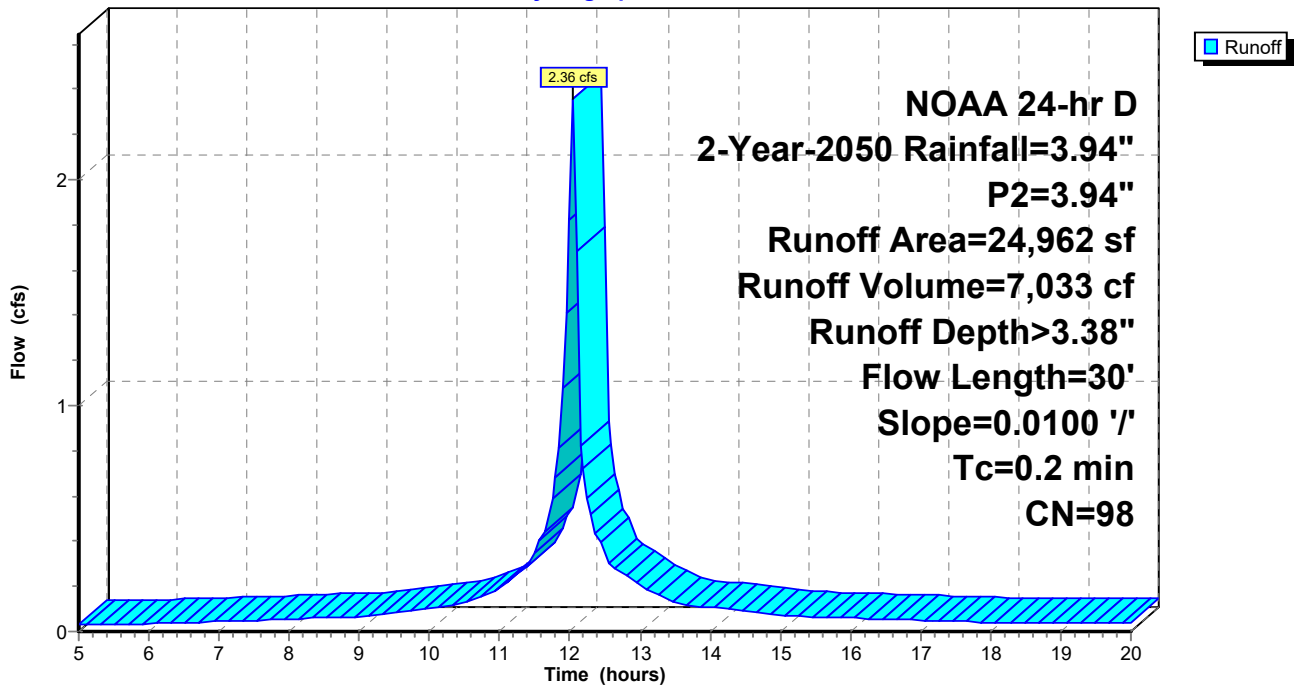
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

Area (sf)	CN	Description
24,962	98	Unconnected roofs, HSG D
24,962		100.00% Impervious Area
24,962		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 1A - 1B</b> Paved Kv= 20.3 fps

### Subcatchment P-1A: Proposed Building Roof Area

Hydrograph



**Summary for Subcatchment P-1B: Proposed Driveway, Walkway and Yards**

Runoff = 0.83 cfs @ 12.09 hrs, Volume= 2,323 cf, Depth> 2.76"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

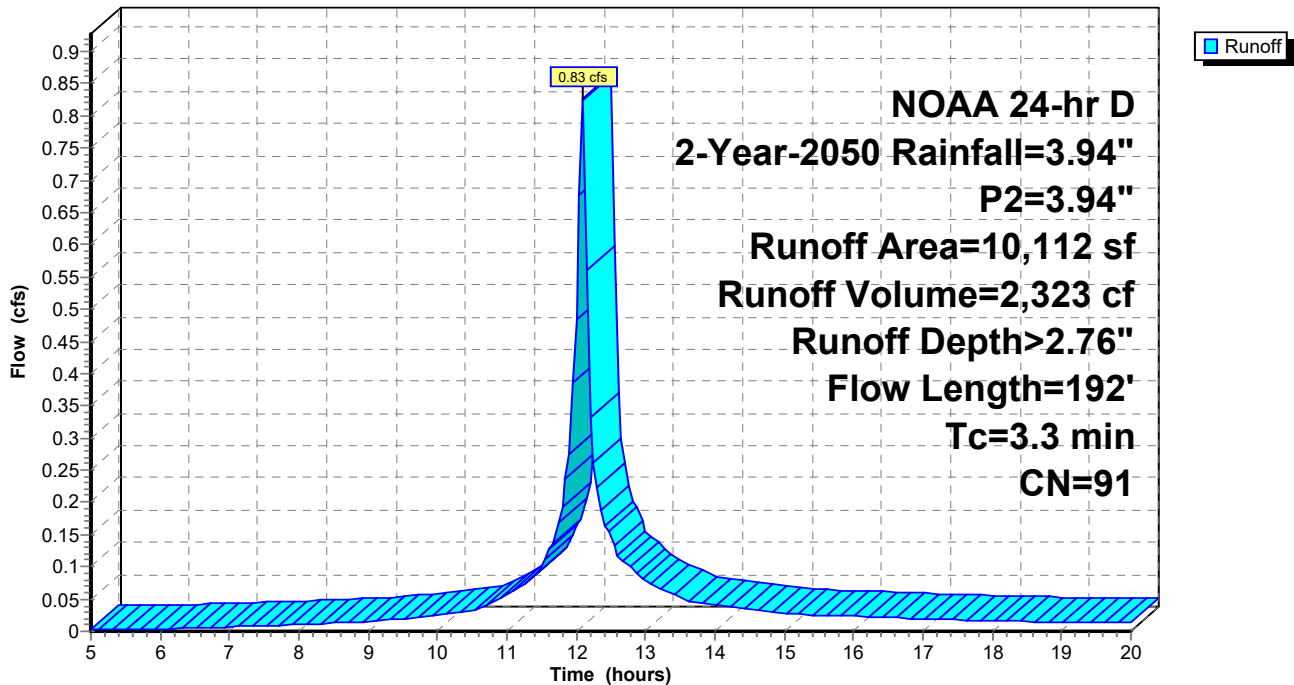
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

Area (sf)	CN	Description
3,734	80	>75% Grass cover, Good, HSG D
6,378	98	Paved parking, HSG D
10,112	91	Weighted Average
3,734		36.93% Pervious Area
6,378		63.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0315	0.18		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.94"
0.6	164	0.0485	4.47		<b>Shallow Concentrated Flow, 1B - 1C</b> Paved Kv= 20.3 fps
3.3	192	Total			

**Subcatchment P-1B: Proposed Driveway, Walkway and Yards**

Hydrograph



**Summary for Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Runoff = 0.58 cfs @ 12.05 hrs, Volume= 1,727 cf, Depth> 3.38"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

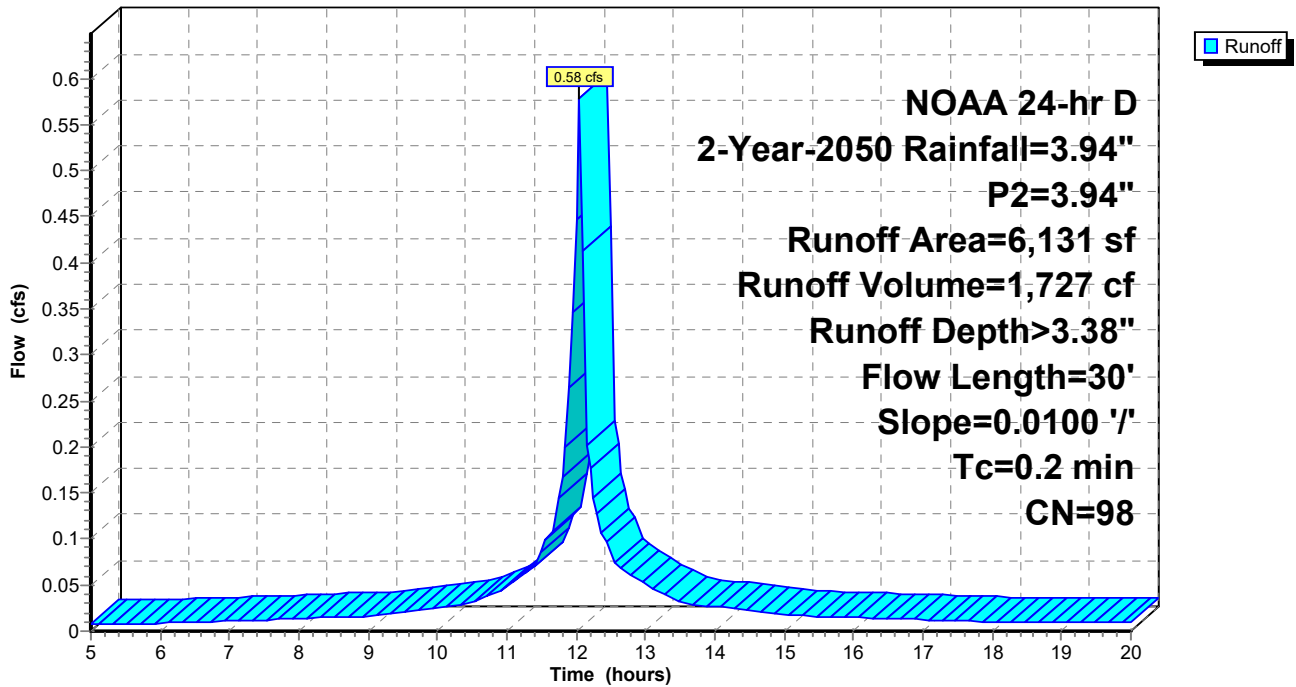
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

Area (sf)	CN	Description
6,131	98	Roofs, HSG D
6,131		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 2A-2B</b> Paved Kv= 20.3 fps

**Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Hydrograph



**Summary for Subcatchment P-2B: Proposed North Yard Area**

Runoff = 0.02 cfs @ 12.16 hrs, Volume= 49 cf, Depth> 1.82"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

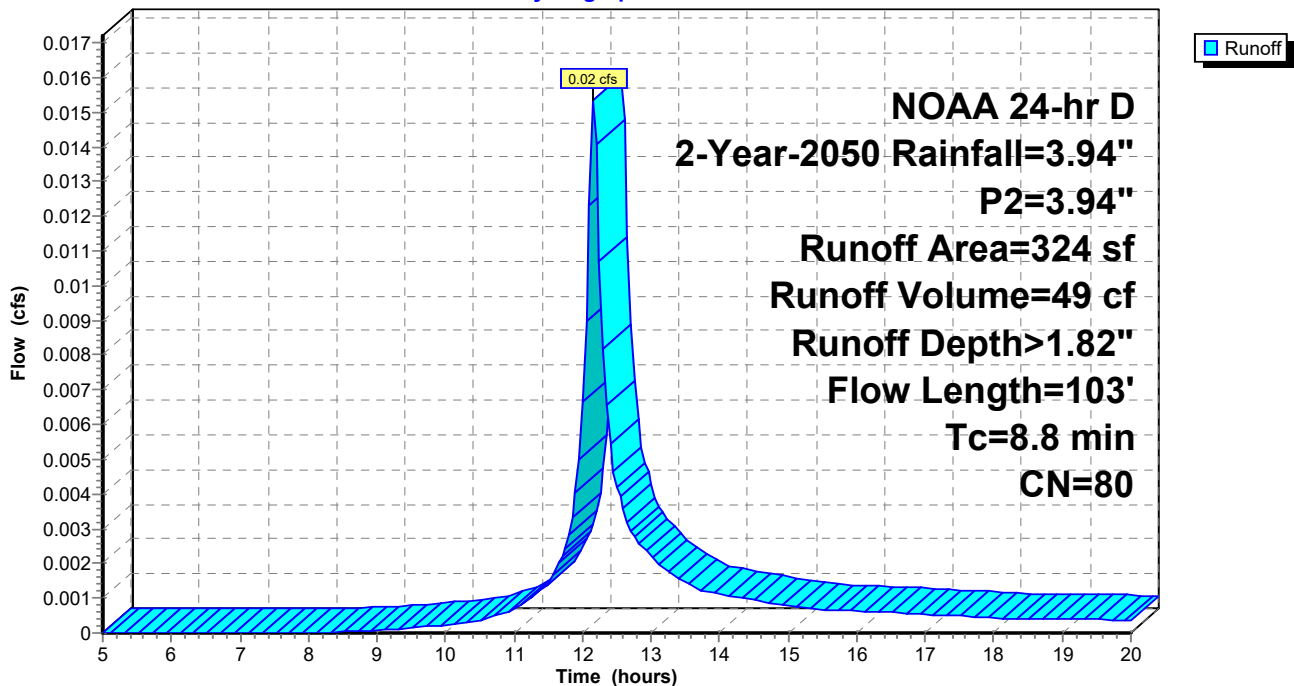
Area (sf)	CN	Description
324	80	>75% Grass cover, Good, HSG D
324		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0054	0.10		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.2	53	0.0670	3.88		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
8.8	103	Total			

**Subcatchment P-2B: Proposed North Yard Area**

Hydrograph



**Summary for Subcatchment P-2C: Proposed East Yard Area**

Runoff = 0.14 cfs @ 12.08 hrs, Volume= 344 cf, Depth> 1.90"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

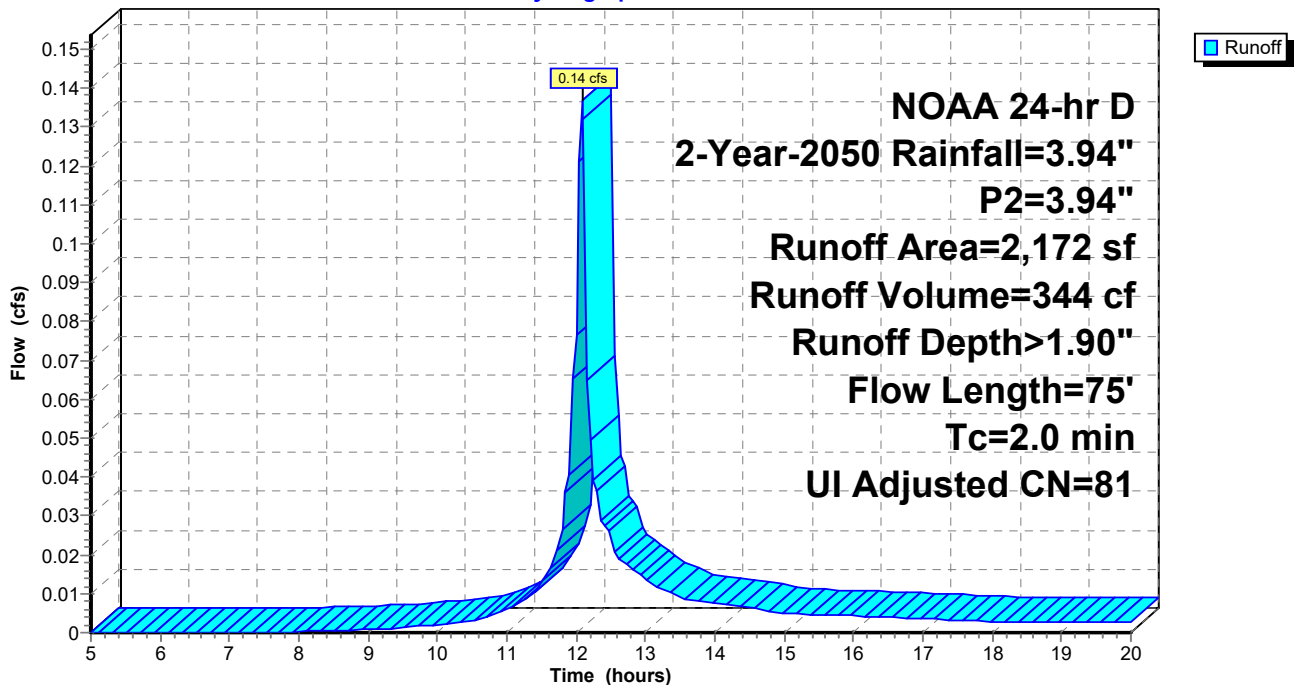
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

Area (sf)	CN	Adj	Description
1,859	80		>75% Grass cover, Good, HSG D
313	98		Unconnected pavement, HSG D
2,172	83	81	Weighted Average, UI Adjusted
1,859			85.59% Pervious Area
313			14.41% Impervious Area
313			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	20	0.0508	0.20		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.94"
0.2	40	0.0377	2.91		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.1	15	0.0592	3.65		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
2.0	75	Total			

**Subcatchment P-2C: Proposed East Yard Area**

Hydrograph



**Summary for Subcatchment P-3: Proposed Drainage to Prospect Avenue**

Runoff = 0.06 cfs @ 12.13 hrs, Volume= 184 cf, Depth> 1.82"  
 Routed to nonexistent node 1L

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 2-Year-2050 Rainfall=3.94", P2=3.94"

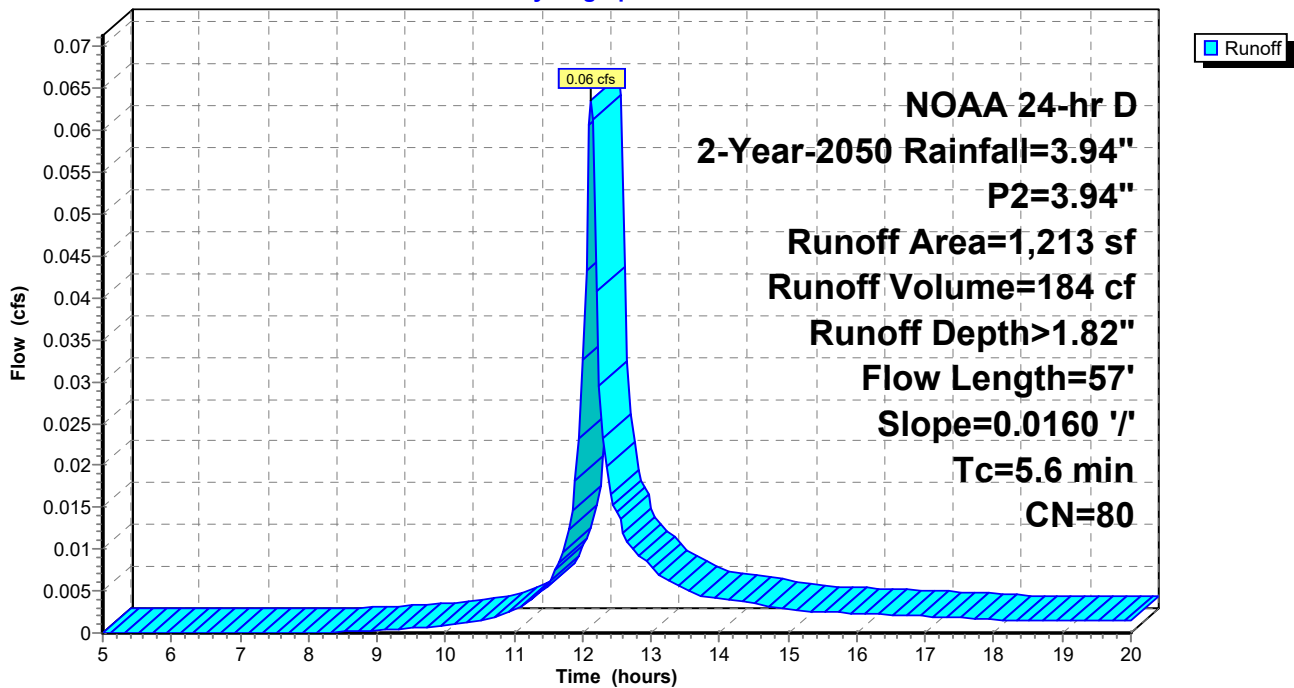
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0160	0.15		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
5.6	57	Total			

**Subcatchment P-3: Proposed Drainage to Prospect Avenue**

Hydrograph

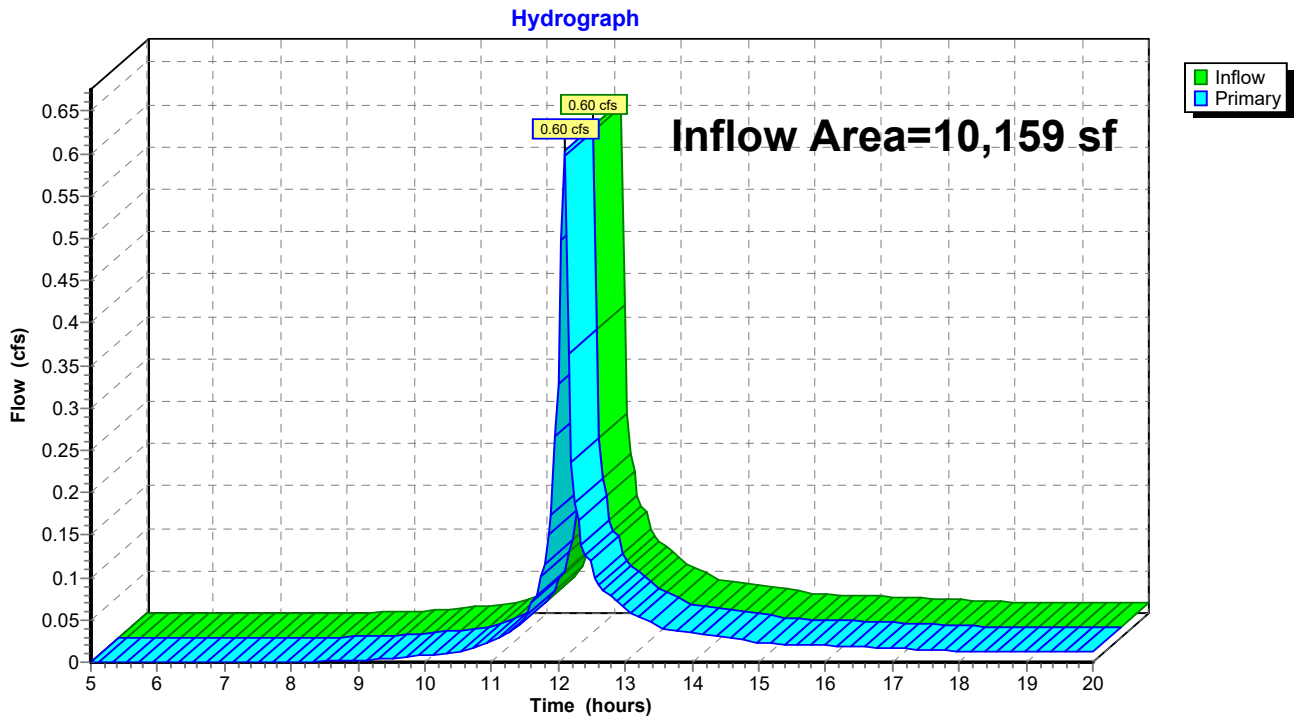


### Summary for Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 10,159 sf, 0.00% Impervious, Inflow Depth > 1.82" for 2-Year-2050 event  
Inflow = 0.60 cfs @ 12.09 hrs, Volume= 1,543 cf  
Primary = 0.60 cfs @ 12.09 hrs, Volume= 1,543 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

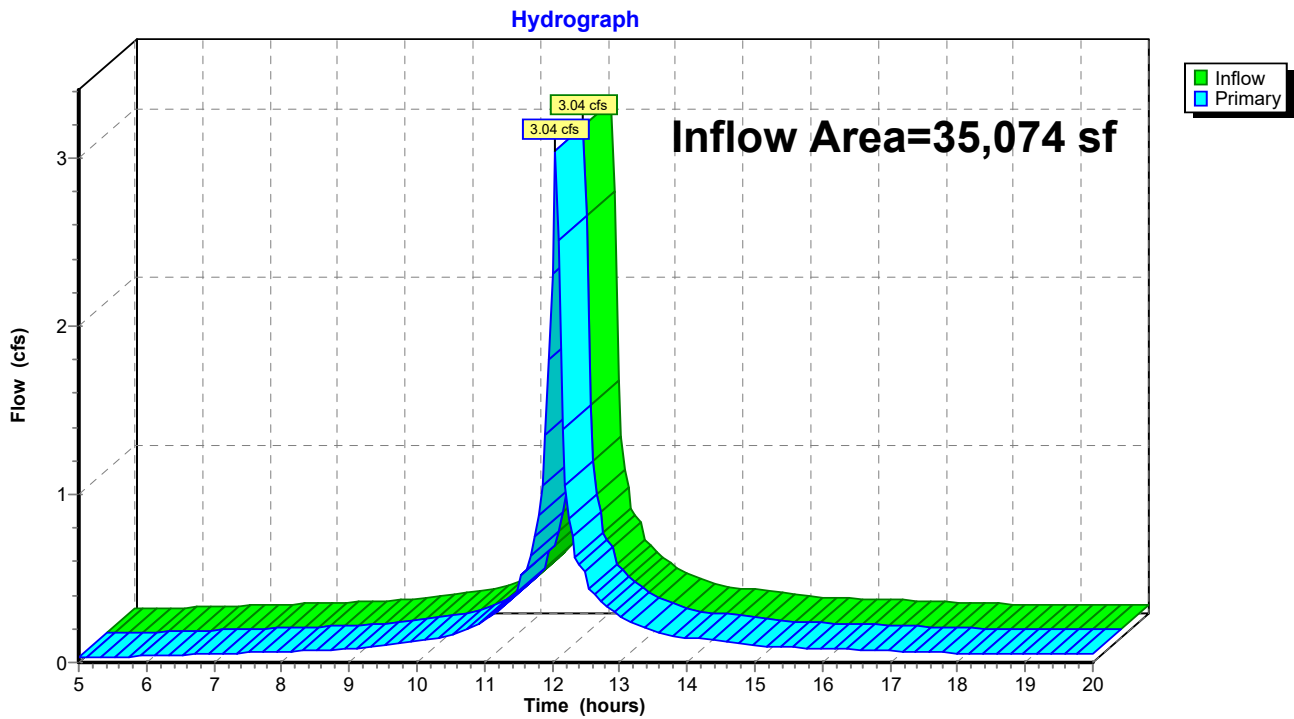


### Summary for Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 35,074 sf, 89.35% Impervious, Inflow Depth > 3.20" for 2-Year-2050 event  
Inflow = 3.04 cfs @ 12.05 hrs, Volume= 9,356 cf  
Primary = 3.04 cfs @ 12.05 hrs, Volume= 9,356 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

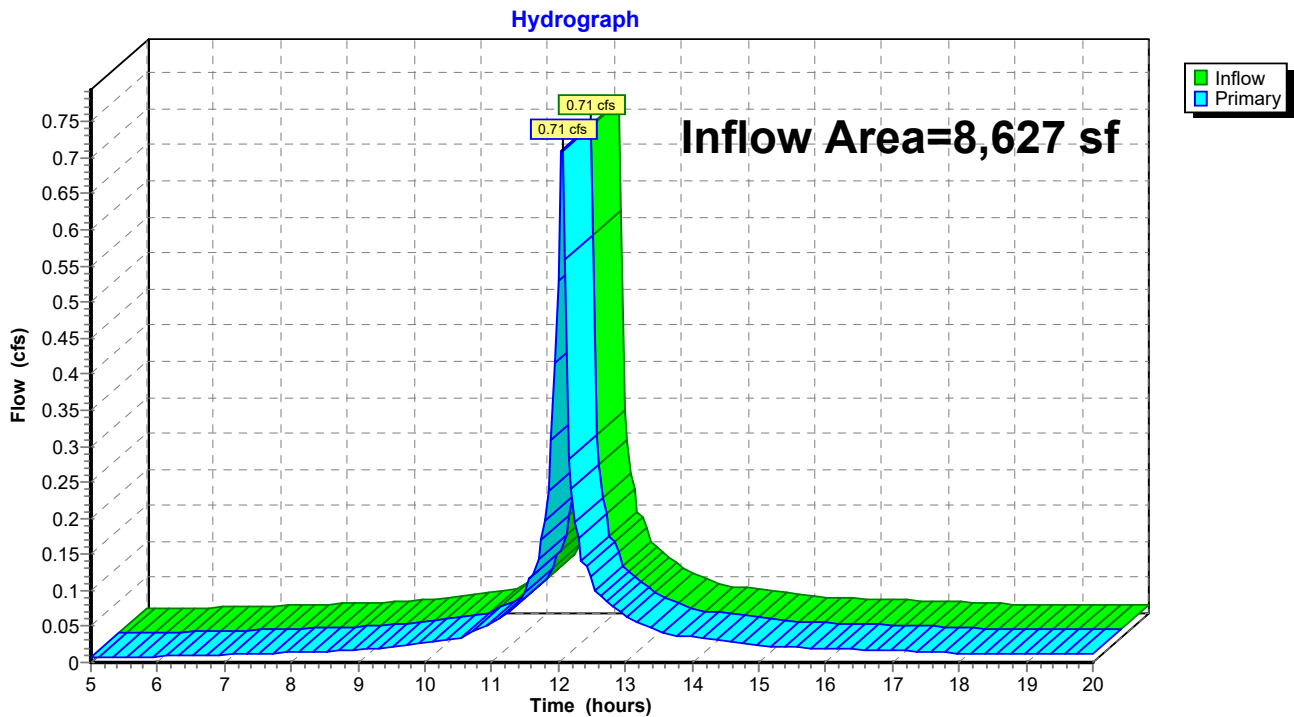


### Summary for Link P-2: Proposed Drainage to Route 440 Southbound

Inflow Area = 8,627 sf, 74.70% Impervious, Inflow Depth > 2.95" for 2-Year-2050 event  
Inflow = 0.71 cfs @ 12.05 hrs, Volume= 2,120 cf  
Primary = 0.71 cfs @ 12.05 hrs, Volume= 2,120 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-2: Proposed Drainage to Route 440 Southbound



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**SubcatchmentE-1A: Existing Drainage** Runoff Area=7,329 sf 0.00% Impervious Runoff Depth>3.47"  
Flow Length=138' Tc=2.7 min CN=80 Runoff=0.81 cfs 2,120 cf

**SubcatchmentE-1B: Existing Drainage** Runoff Area=2,830 sf 0.00% Impervious Runoff Depth>3.47"  
Flow Length=44' Slope=0.0616 '/' Tc=2.9 min CN=80 Runoff=0.31 cfs 819 cf

**SubcatchmentE-2: Existing Drainage to** Runoff Area=33,542 sf 4.77% Impervious Runoff Depth>3.47"  
Flow Length=174' Tc=3.8 min UI Adjusted CN=80 Runoff=3.53 cfs 9,700 cf

**SubcatchmentE-3: Existing Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>3.47"  
Flow Length=57' Slope=0.0160 '/' Tc=5.6 min CN=80 Runoff=0.12 cfs 351 cf

**SubcatchmentP-1A: Proposed Building** Runoff Area=24,962 sf 100.00% Impervious Runoff Depth>5.19"  
Flow Length=30' Slope=0.0100 '/' Tc=0.2 min CN=98 Runoff=3.59 cfs 10,791 cf

**SubcatchmentP-1B: Proposed Driveway,** Runoff Area=10,112 sf 63.07% Impervious Runoff Depth>4.58"  
Flow Length=192' Tc=3.3 min CN=91 Runoff=1.33 cfs 3,863 cf

**SubcatchmentP-2A: Proposed Building** Runoff Area=6,131 sf 100.00% Impervious Runoff Depth>5.19"  
Flow Length=30' Slope=0.0100 '/' Tc=0.2 min CN=98 Runoff=0.88 cfs 2,650 cf

**SubcatchmentP-2B: Proposed North Yard** Runoff Area=324 sf 0.00% Impervious Runoff Depth>3.46"  
Flow Length=103' Tc=8.8 min CN=80 Runoff=0.03 cfs 94 cf

**SubcatchmentP-2C: Proposed East Yard** Runoff Area=2,172 sf 14.41% Impervious Runoff Depth>3.57"  
Flow Length=75' Tc=2.0 min UI Adjusted CN=81 Runoff=0.25 cfs 647 cf

**SubcatchmentP-3: Proposed Drainage to** Runoff Area=1,213 sf 0.00% Impervious Runoff Depth>3.47"  
Flow Length=57' Slope=0.0160 '/' Tc=5.6 min CN=80 Runoff=0.12 cfs 351 cf

**Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall** Inflow=1.12 cfs 2,939 cf  
Primary=1.12 cfs 2,939 cf

**Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River** Inflow=4.69 cfs 14,654 cf  
Primary=4.69 cfs 14,654 cf

**Link P-2: Proposed Drainage to Route 440 Southbound** Inflow=1.12 cfs 3,390 cf  
Primary=1.12 cfs 3,390 cf

**Summary for Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Runoff = 0.81 cfs @ 12.09 hrs, Volume= 2,120 cf, Depth> 3.47"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

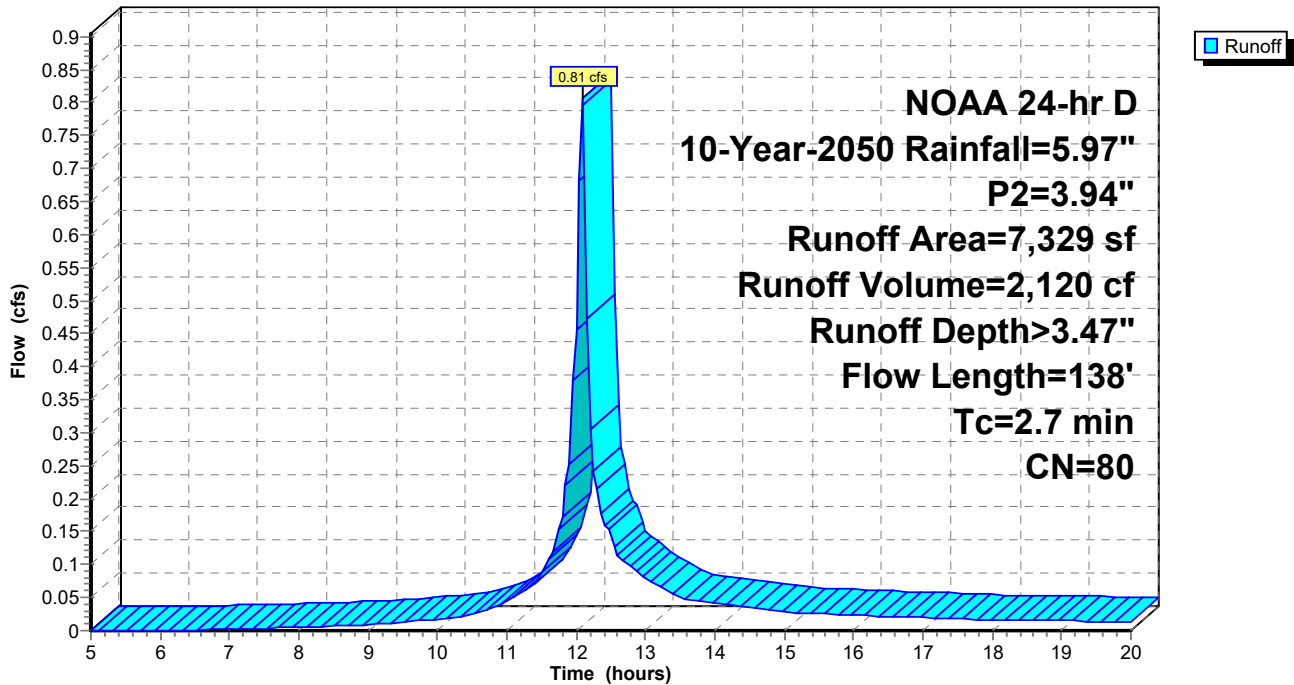
Area (sf)	CN	Description
7,329	80	>75% Grass cover, Good, HSG D
7,329		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	35	0.0687	0.25		<b>Sheet Flow, 1A-1B</b> Grass: Short n= 0.150 P2= 3.94"
0.2	48	0.0650	3.82		<b>Shallow Concentrated Flow, 1B-1C</b> Grassed Waterway Kv= 15.0 fps
0.2	55	0.0639	3.79		<b>Shallow Concentrated Flow, 1C-1D</b> Grassed Waterway Kv= 15.0 fps
2.7	138	Total			

**Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Hydrograph



**Summary for Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Runoff = 0.31 cfs @ 12.09 hrs, Volume= 819 cf, Depth> 3.47"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

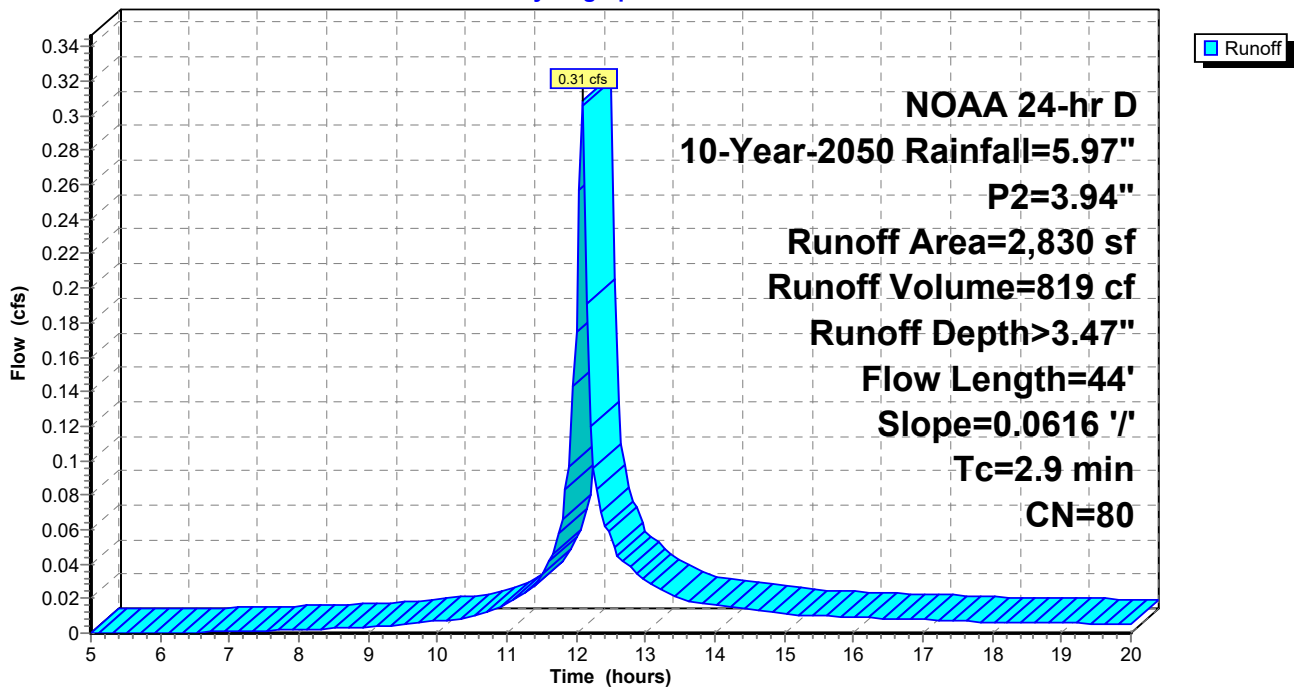
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

Area (sf)	CN	Description
2,830	80	>75% Grass cover, Good, HSG D
2,830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	44	0.0616	0.25		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.94"

**Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Hydrograph



**Summary for Subcatchment E-2: Existing Drainage to Route 440 Southbound**

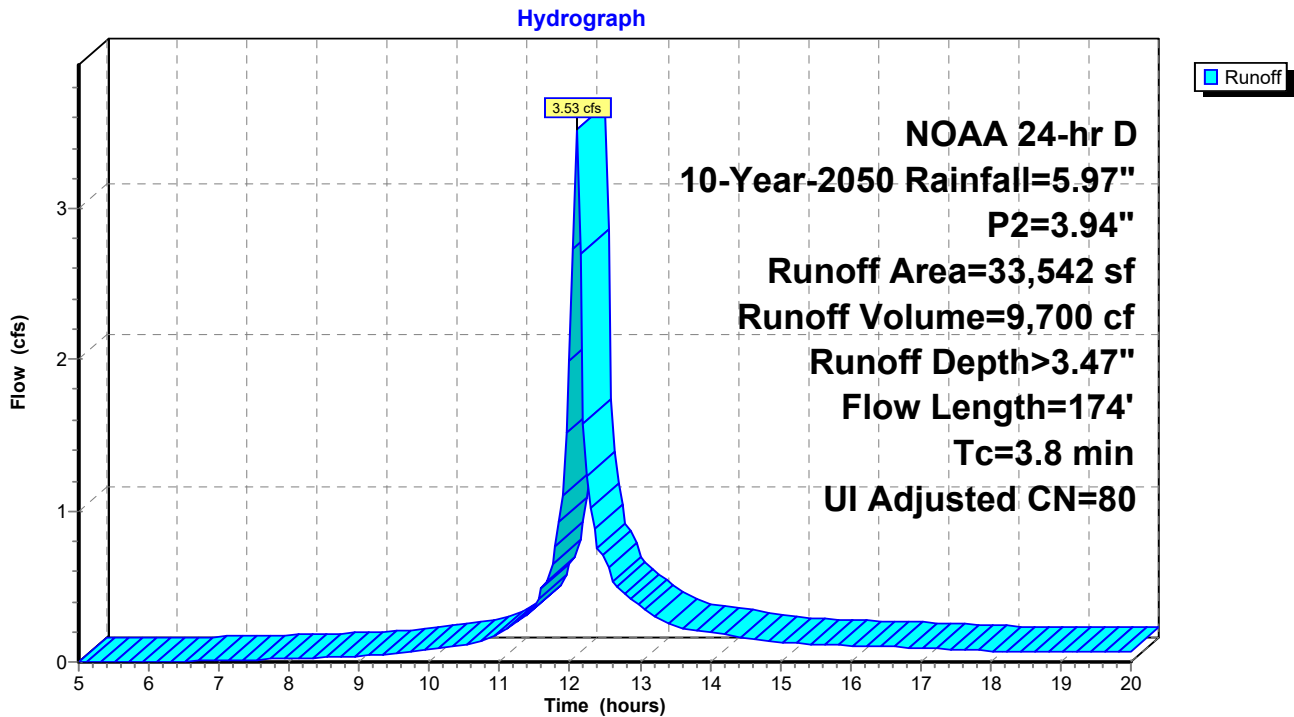
Runoff = 3.53 cfs @ 12.10 hrs, Volume= 9,700 cf, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

Area (sf)	CN	Adj	Description
1,601	98		Unconnected pavement, HSG D
31,941	80		>75% Grass cover, Good, HSG D
33,542	81	80	Weighted Average, UI Adjusted
31,941			95.23% Pervious Area
1,601			4.77% Impervious Area
1,601			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	47	0.0500	0.23		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.94"
0.1	39	0.1300	5.41		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.4	88	0.0675	3.90		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
3.8	174	Total			

**Subcatchment E-2: Existing Drainage to Route 440 Southbound**



### Summary for Subcatchment E-3: Existing Drainage to Prospect Avenue

Runoff = 0.12 cfs @ 12.12 hrs, Volume= 351 cf, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

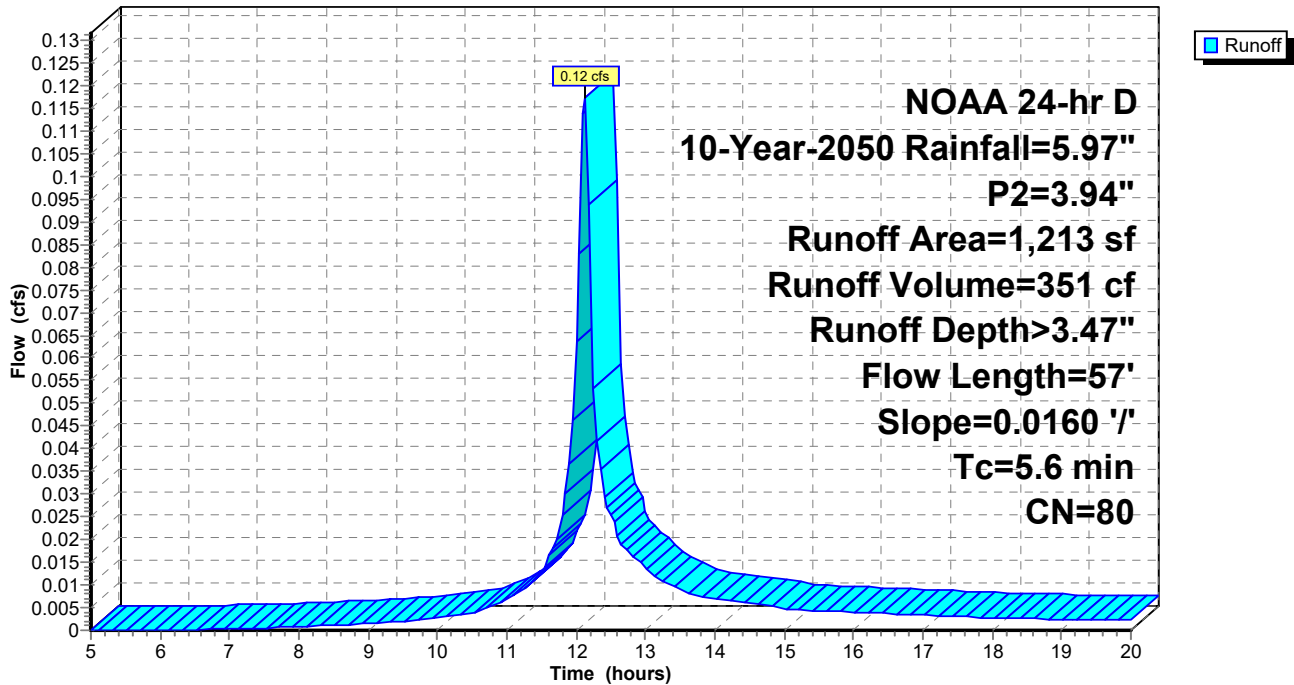
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0160	0.15		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
5.6	57	Total			

### Subcatchment E-3: Existing Drainage to Prospect Avenue

Hydrograph



### Summary for Subcatchment P-1A: Proposed Building Roof Area

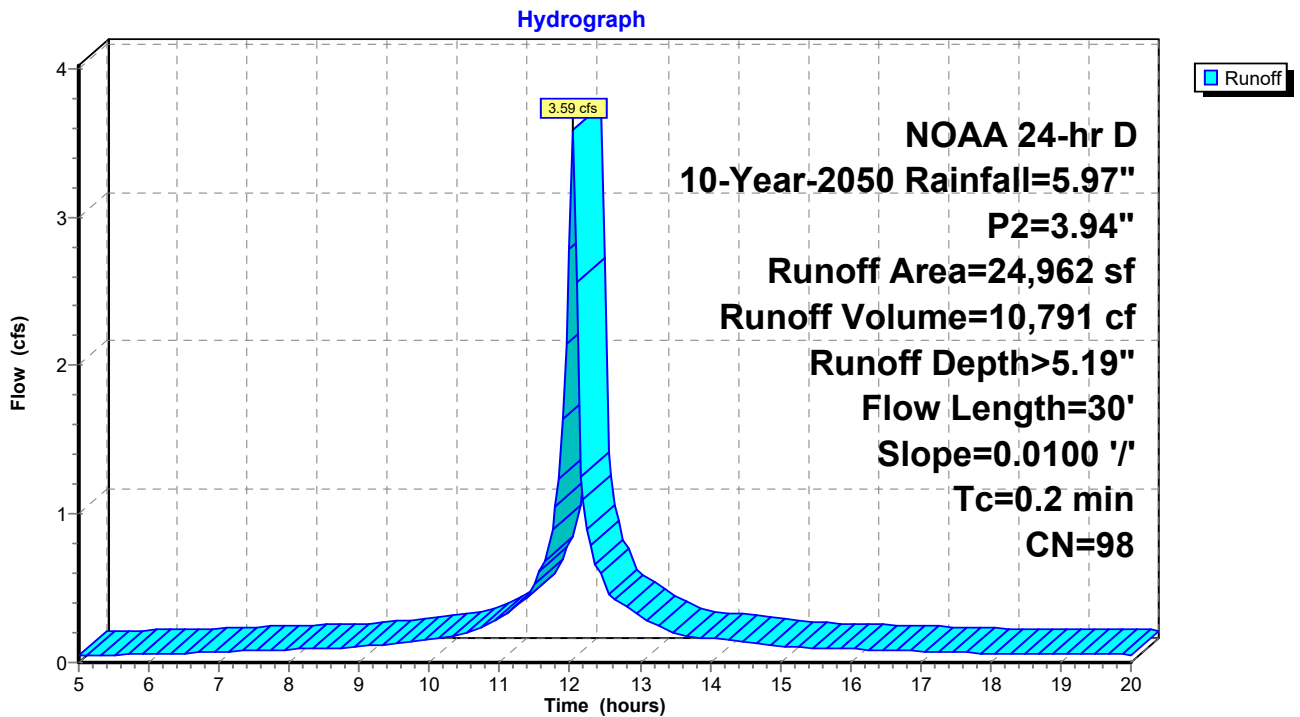
Runoff = 3.59 cfs @ 12.05 hrs, Volume= 10,791 cf, Depth> 5.19"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

Area (sf)	CN	Description
24,962	98	Unconnected roofs, HSG D
24,962		100.00% Impervious Area
24,962		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 1A - 1B</b> Paved Kv= 20.3 fps

### Subcatchment P-1A: Proposed Building Roof Area



**Summary for Subcatchment P-1B: Proposed Driveway, Walkway and Yards**

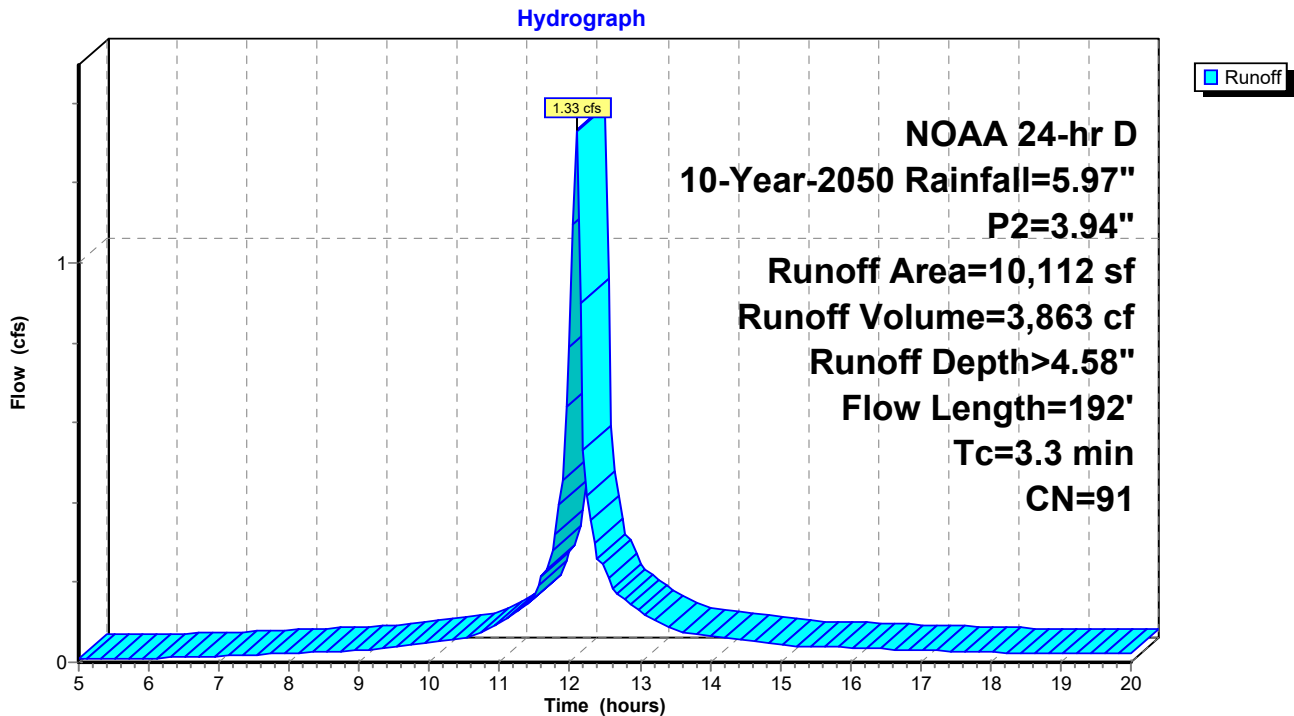
Runoff = 1.33 cfs @ 12.09 hrs, Volume= 3,863 cf, Depth> 4.58"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

Area (sf)	CN	Description
3,734	80	>75% Grass cover, Good, HSG D
6,378	98	Paved parking, HSG D
10,112	91	Weighted Average
3,734		36.93% Pervious Area
6,378		63.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0315	0.18		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.94"
0.6	164	0.0485	4.47		<b>Shallow Concentrated Flow, 1B - 1C</b> Paved Kv= 20.3 fps
3.3	192	Total			

**Subcatchment P-1B: Proposed Driveway, Walkway and Yards**



**Summary for Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Runoff = 0.88 cfs @ 12.05 hrs, Volume= 2,650 cf, Depth> 5.19"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

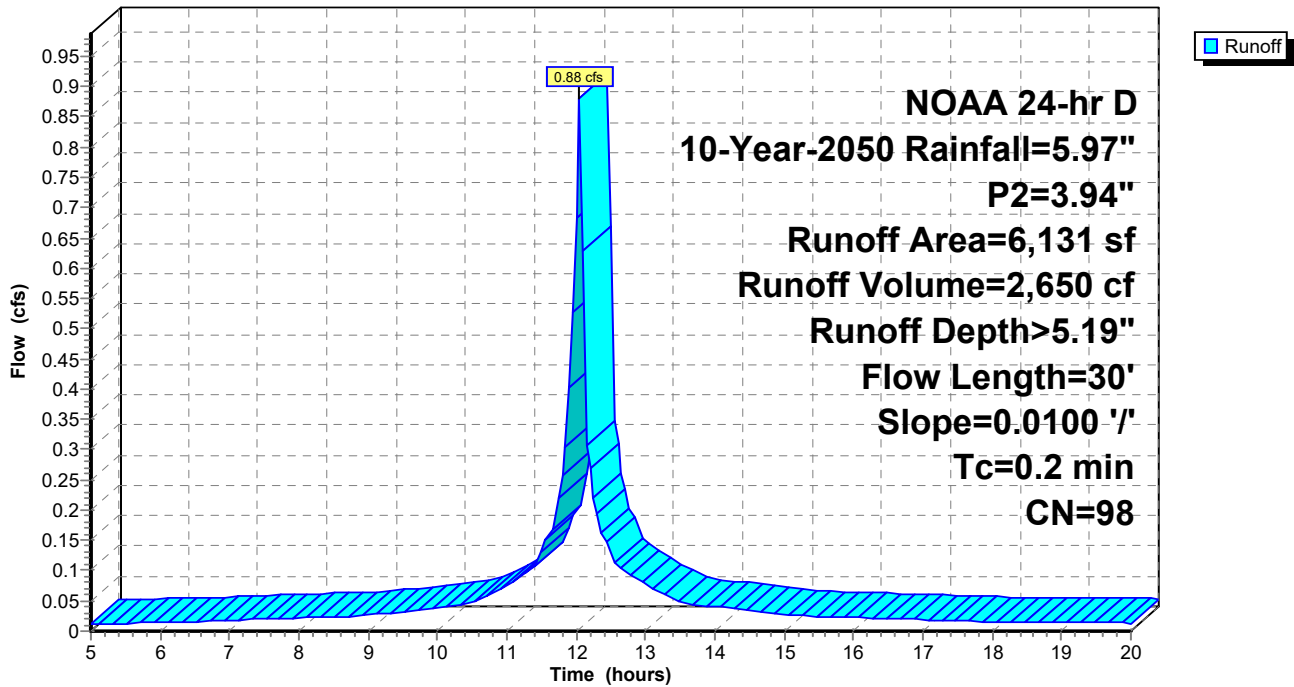
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

Area (sf)	CN	Description
6,131	98	Roofs, HSG D
6,131		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 2A-2B</b> Paved Kv= 20.3 fps

**Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Hydrograph



**Summary for Subcatchment P-2B: Proposed North Yard Area**

Runoff = 0.03 cfs @ 12.16 hrs, Volume= 94 cf, Depth> 3.46"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

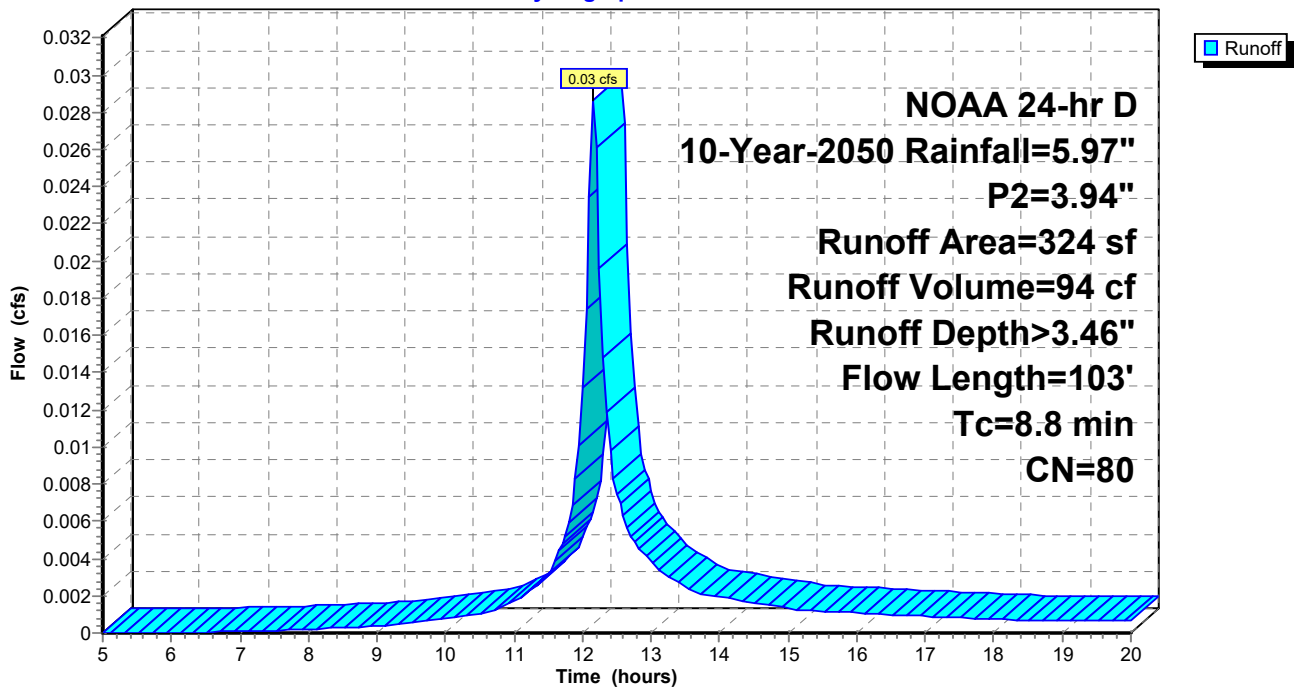
Area (sf)	CN	Description
324	80	>75% Grass cover, Good, HSG D
324		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0054	0.10		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.2	53	0.0670	3.88		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
8.8	103	Total			

**Subcatchment P-2B: Proposed North Yard Area**

Hydrograph



### Summary for Subcatchment P-2C: Proposed East Yard Area

Runoff = 0.25 cfs @ 12.08 hrs, Volume= 647 cf, Depth> 3.57"

Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

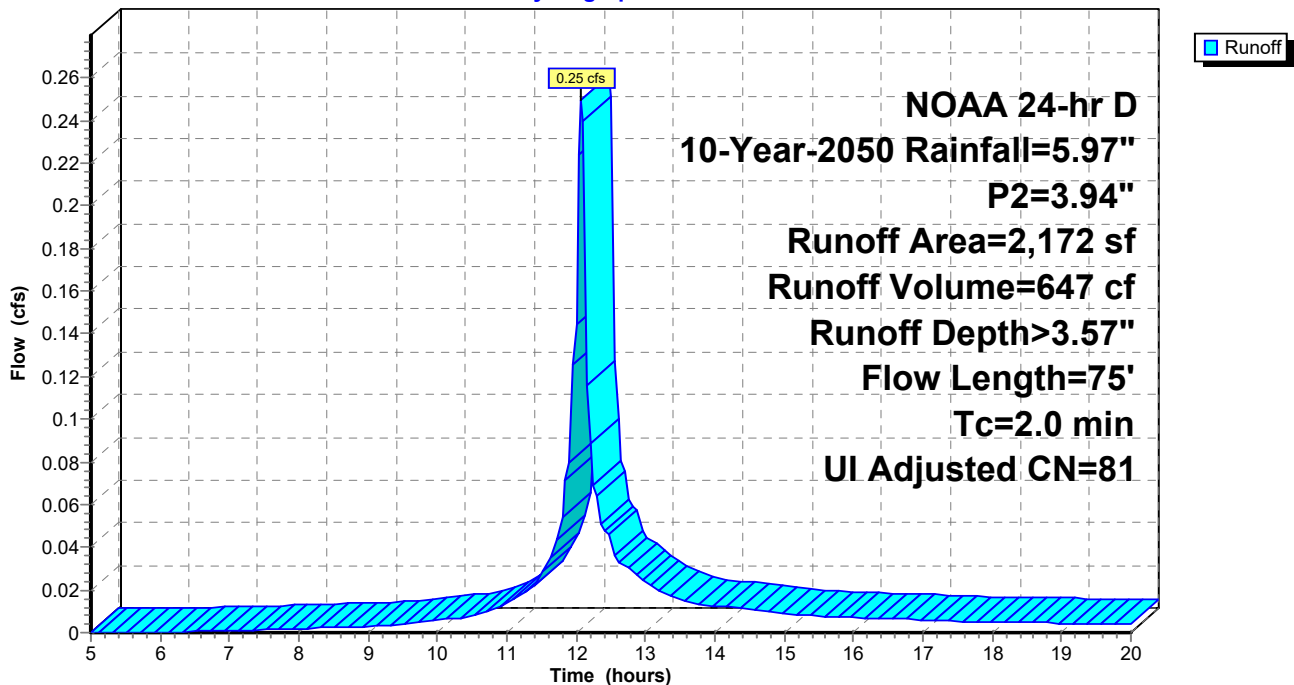
Area (sf)	CN	Adj	Description
1,859	80		>75% Grass cover, Good, HSG D
313	98		Unconnected pavement, HSG D
2,172	83	81	Weighted Average, UI Adjusted
1,859			85.59% Pervious Area
313			14.41% Impervious Area
313			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	20	0.0508	0.20		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.94"
0.2	40	0.0377	2.91		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.1	15	0.0592	3.65		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
2.0	75	Total			

### Subcatchment P-2C: Proposed East Yard Area

Hydrograph



### Summary for Subcatchment P-3: Proposed Drainage to Prospect Avenue

Runoff = 0.12 cfs @ 12.12 hrs, Volume= 351 cf, Depth> 3.47"  
 Routed to nonexistent node 1L

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 10-Year-2050 Rainfall=5.97", P2=3.94"

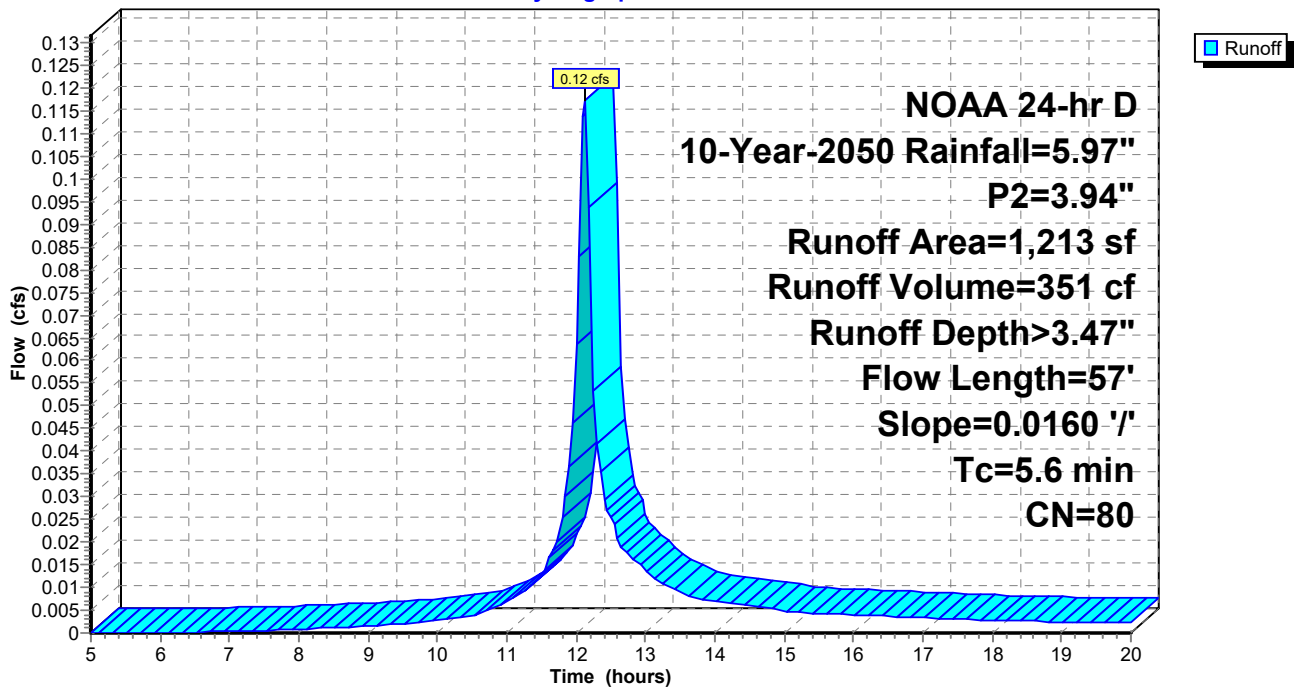
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0160	0.15		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
5.6	57	Total			

### Subcatchment P-3: Proposed Drainage to Prospect Avenue

Hydrograph

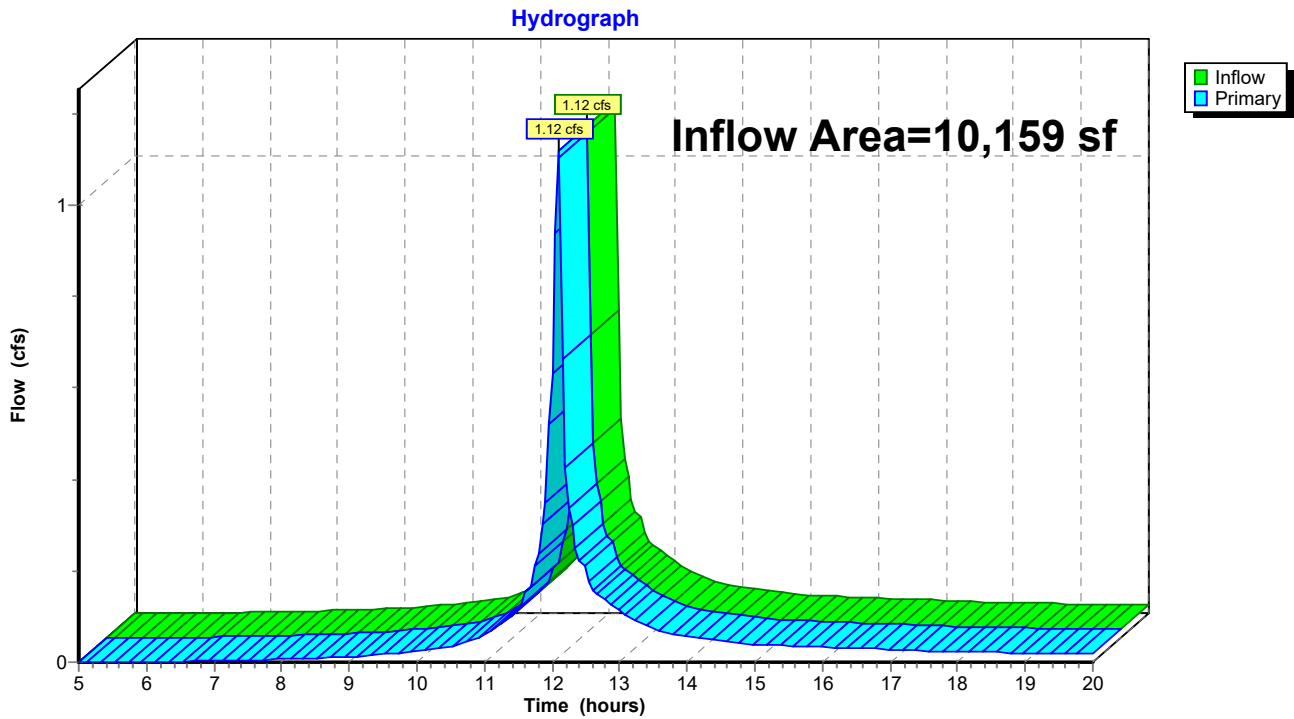


### Summary for Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 10,159 sf, 0.00% Impervious, Inflow Depth > 3.47" for 10-Year-2050 event  
Inflow = 1.12 cfs @ 12.09 hrs, Volume= 2,939 cf  
Primary = 1.12 cfs @ 12.09 hrs, Volume= 2,939 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

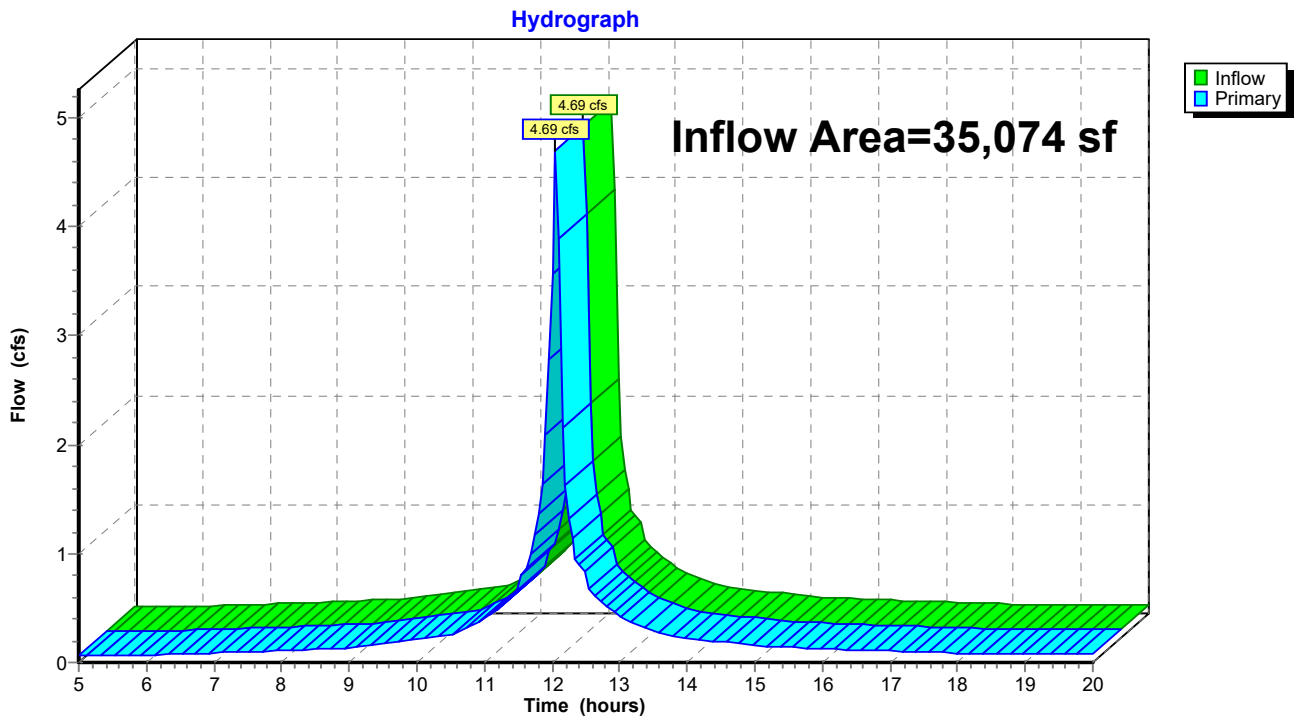


### Summary for Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 35,074 sf, 89.35% Impervious, Inflow Depth > 5.01" for 10-Year-2050 event  
Inflow = 4.69 cfs @ 12.05 hrs, Volume= 14,654 cf  
Primary = 4.69 cfs @ 12.05 hrs, Volume= 14,654 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

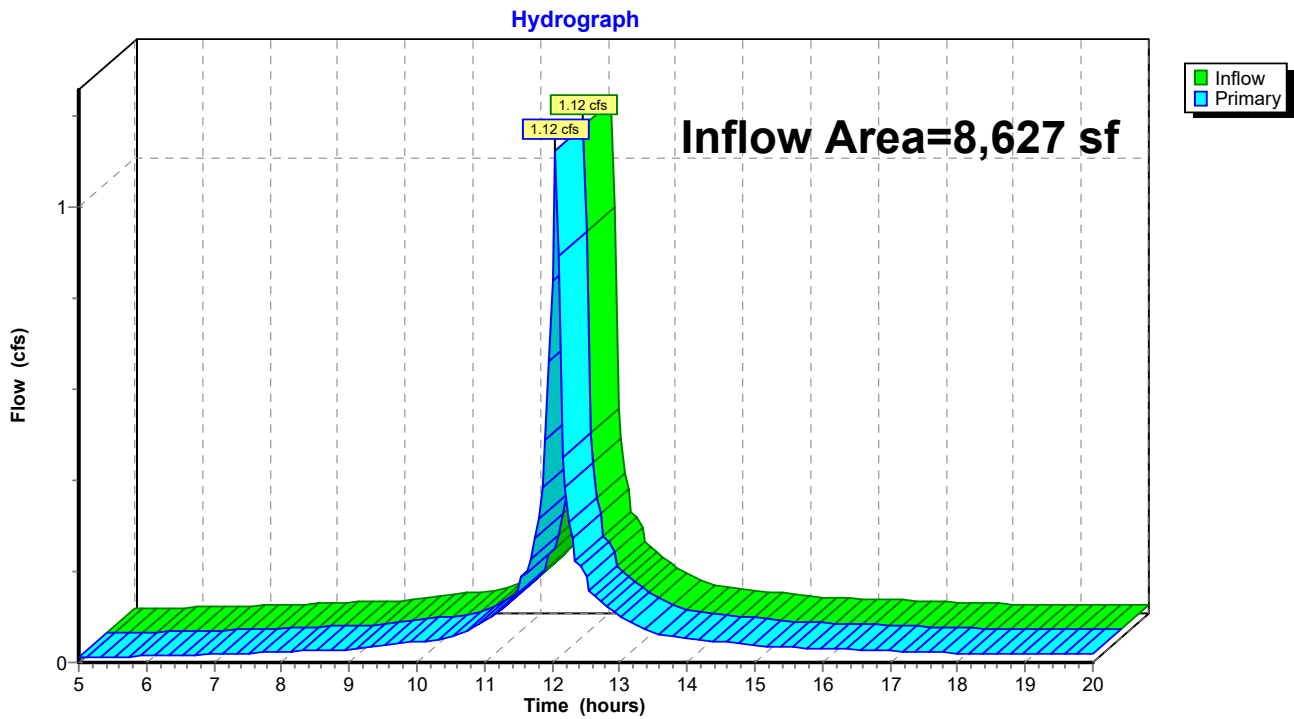


### Summary for Link P-2: Proposed Drainage to Route 440 Southbound

Inflow Area = 8,627 sf, 74.70% Impervious, Inflow Depth > 4.72" for 10-Year-2050 event  
Inflow = 1.12 cfs @ 12.05 hrs, Volume= 3,390 cf  
Primary = 1.12 cfs @ 12.05 hrs, Volume= 3,390 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-2: Proposed Drainage to Route 440 Southbound





**Summary for Subcatchment E-1A: Existing Drainage Towards East 32nd Street**

Runoff = 1.60 cfs @ 12.09 hrs, Volume= 4,399 cf, Depth> 7.20"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

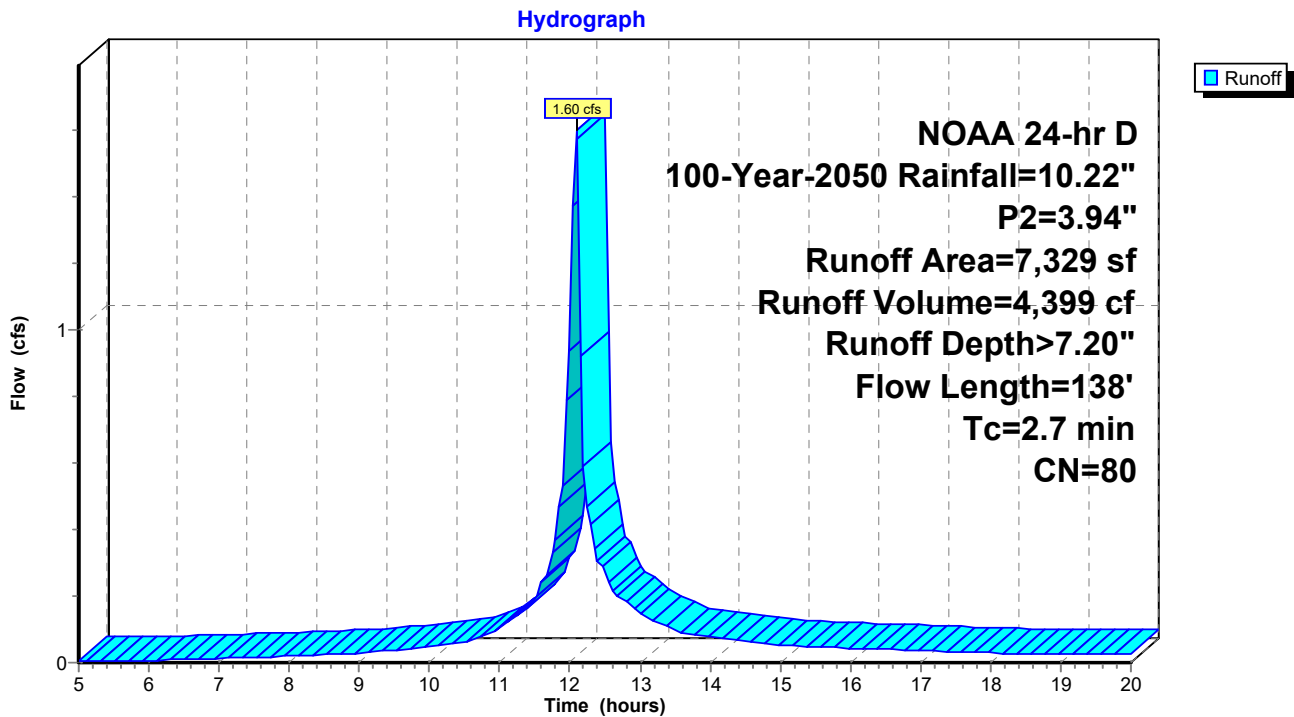
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

Area (sf)	CN	Description
7,329	80	>75% Grass cover, Good, HSG D
7,329		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.3	35	0.0687	0.25		<b>Sheet Flow, 1A-1B</b> Grass: Short n= 0.150 P2= 3.94"
0.2	48	0.0650	3.82		<b>Shallow Concentrated Flow, 1B-1C</b> Grassed Waterway Kv= 15.0 fps
0.2	55	0.0639	3.79		<b>Shallow Concentrated Flow, 1C-1D</b> Grassed Waterway Kv= 15.0 fps
2.7	138	Total			

**Subcatchment E-1A: Existing Drainage Towards East 32nd Street**



**Summary for Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Runoff = 0.61 cfs @ 12.09 hrs, Volume= 1,699 cf, Depth> 7.20"  
 Routed to Link E-1 : Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

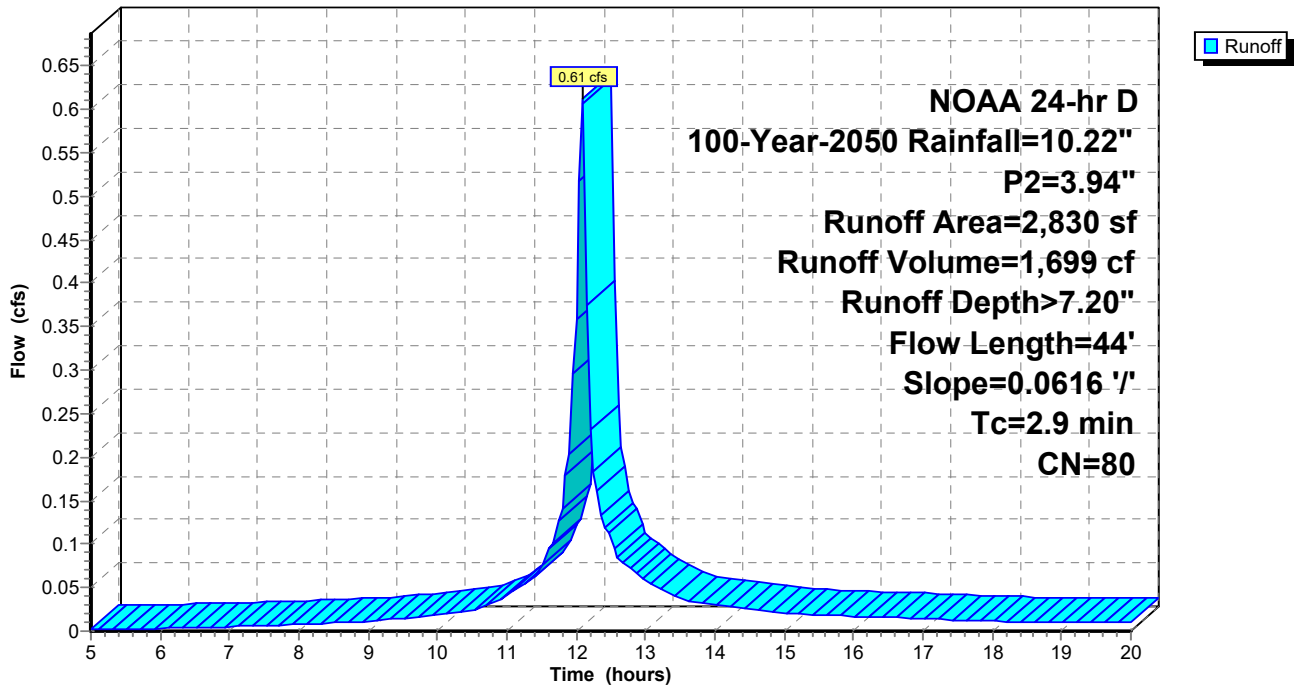
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

Area (sf)	CN	Description
2,830	80	>75% Grass cover, Good, HSG D
2,830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	44	0.0616	0.25		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.94"

**Subcatchment E-1B: Existing Drainage Towards Northern Property Lines**

Hydrograph



**Summary for Subcatchment E-2: Existing Drainage to Route 440 Southbound**

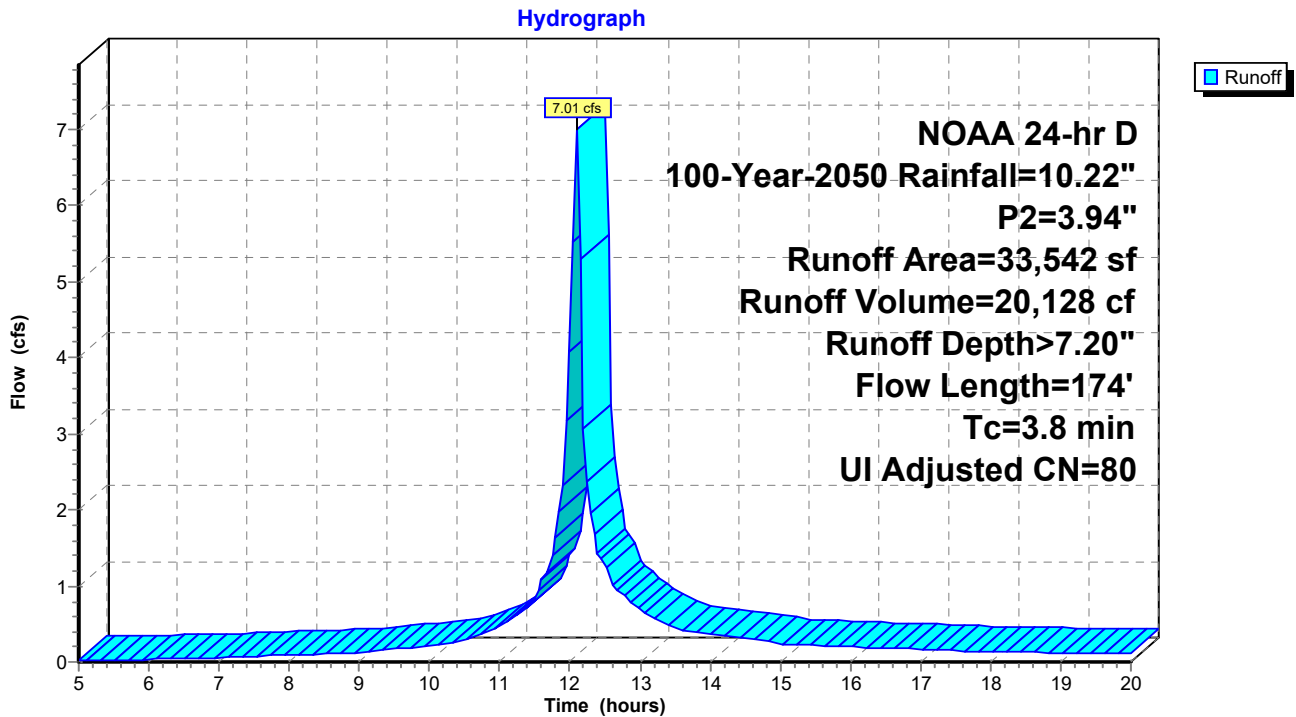
Runoff = 7.01 cfs @ 12.10 hrs, Volume= 20,128 cf, Depth> 7.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

Area (sf)	CN	Adj	Description
1,601	98		Unconnected pavement, HSG D
31,941	80		>75% Grass cover, Good, HSG D
33,542	81	80	Weighted Average, UI Adjusted
31,941			95.23% Pervious Area
1,601			4.77% Impervious Area
1,601			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.3	47	0.0500	0.23		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.94"
0.1	39	0.1300	5.41		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.4	88	0.0675	3.90		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
3.8	174	Total			

**Subcatchment E-2: Existing Drainage to Route 440 Southbound**



**Summary for Subcatchment E-3: Existing Drainage to Prospect Avenue**

Runoff = 0.23 cfs @ 12.12 hrs, Volume= 728 cf, Depth> 7.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

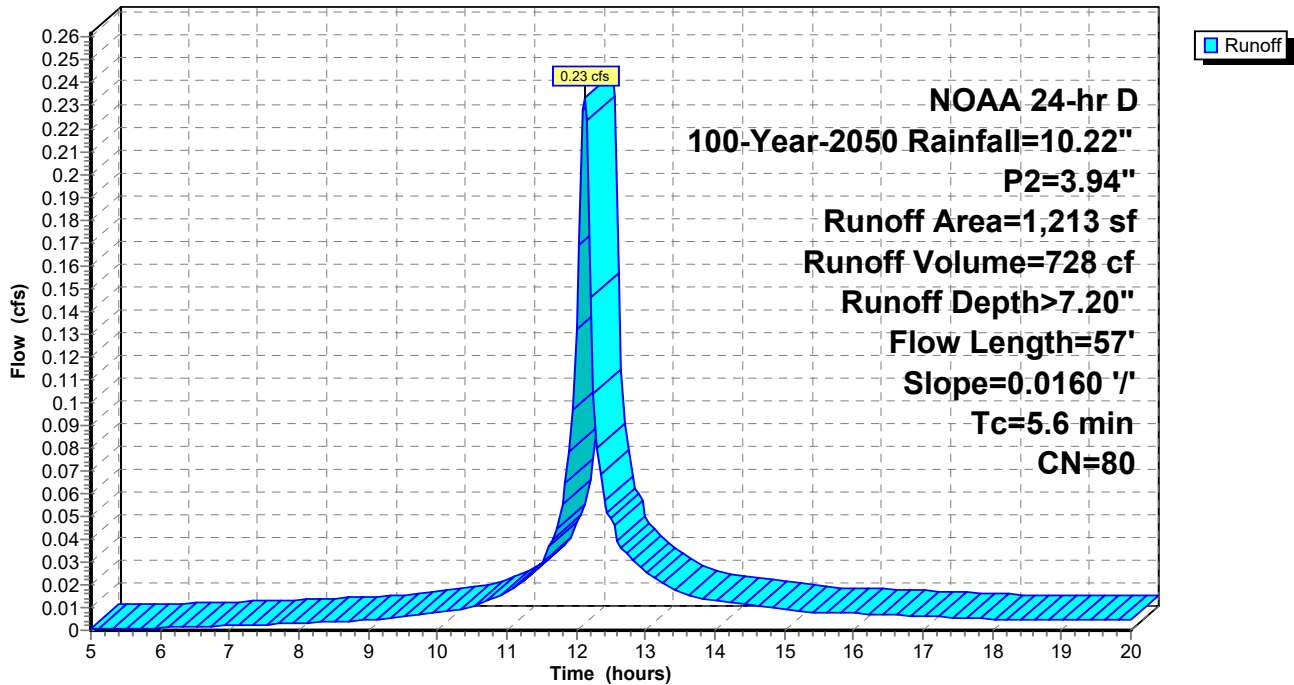
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0160	0.15		<b>Sheet Flow, 3A-3B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b>
					Grassed Waterway Kv= 15.0 fps
5.6	57	Total			

**Subcatchment E-3: Existing Drainage to Prospect Avenue**

Hydrograph



### Summary for Subcatchment P-1A: Proposed Building Roof Area

Runoff = 6.16 cfs @ 12.05 hrs, Volume= 18,615 cf, Depth> 8.95"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

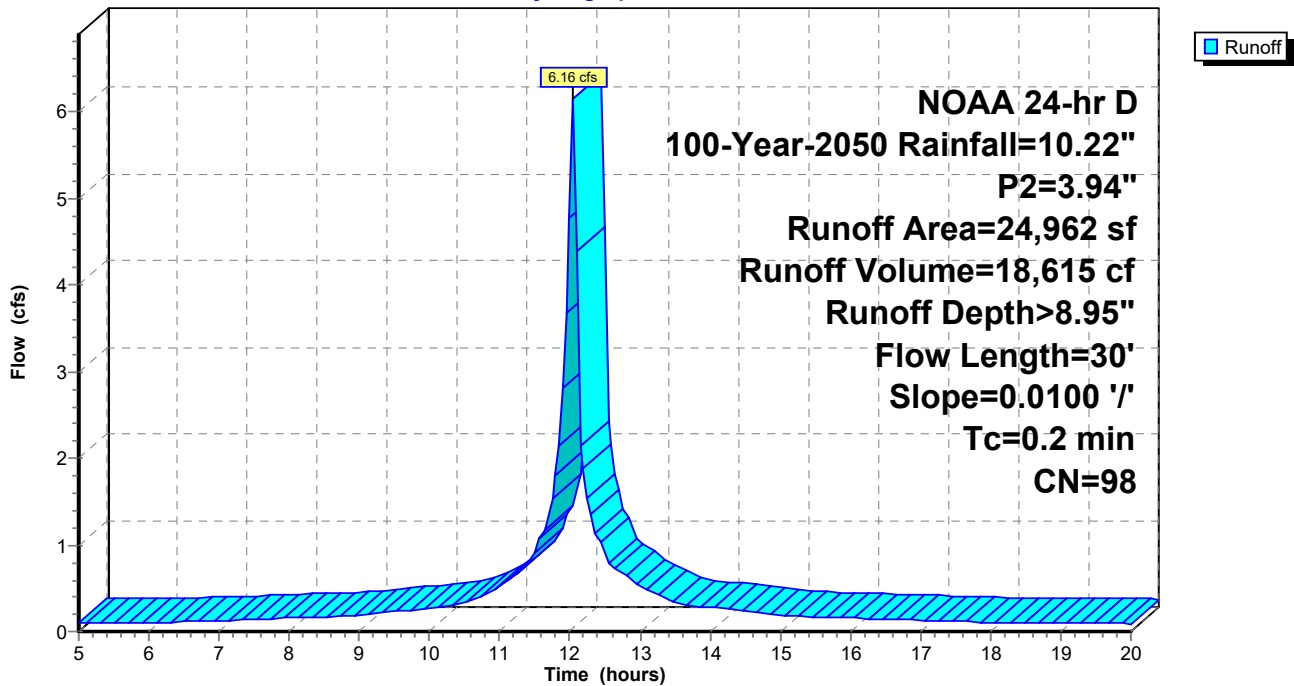
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

Area (sf)	CN	Description
24,962	98	Unconnected roofs, HSG D
24,962		100.00% Impervious Area
24,962		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 1A - 1B</b> Paved Kv= 20.3 fps

### Subcatchment P-1A: Proposed Building Roof Area

Hydrograph



**Summary for Subcatchment P-1B: Proposed Driveway, Walkway and Yards**

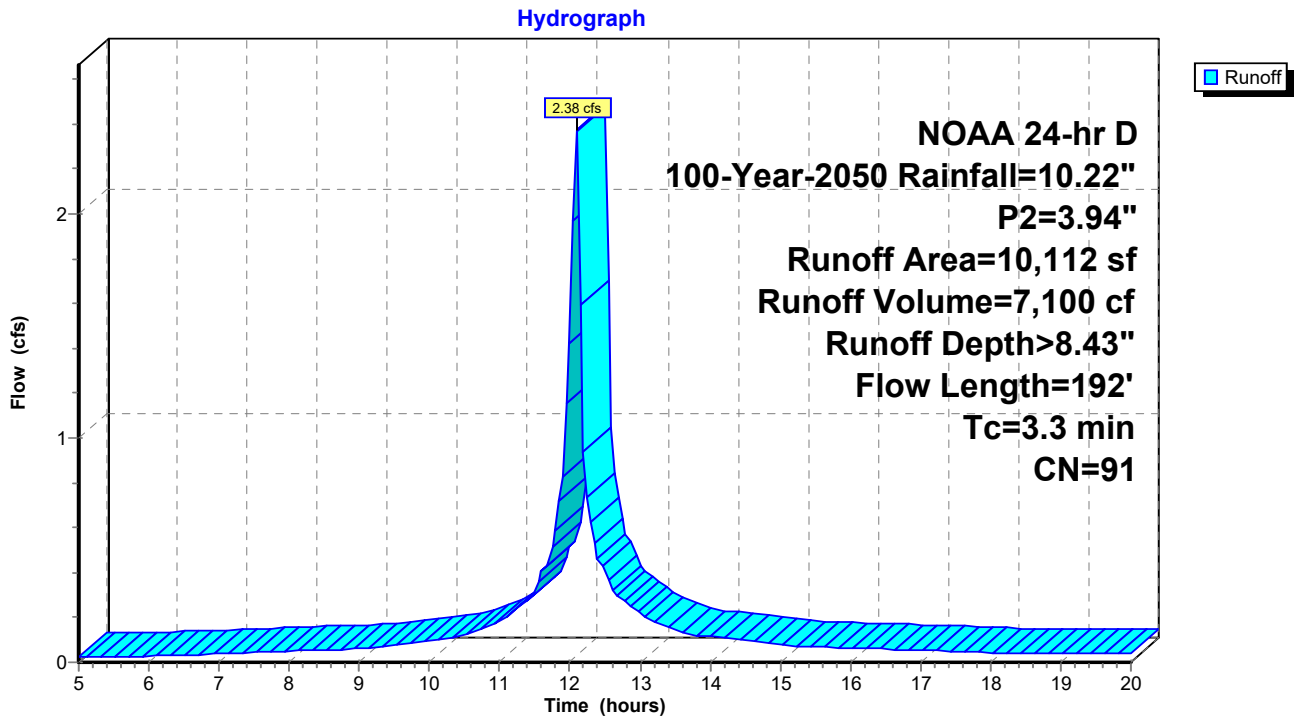
Runoff = 2.38 cfs @ 12.09 hrs, Volume= 7,100 cf, Depth> 8.43"  
 Routed to Link P-1 : Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

Area (sf)	CN	Description
3,734	80	>75% Grass cover, Good, HSG D
6,378	98	Paved parking, HSG D
10,112	91	Weighted Average
3,734		36.93% Pervious Area
6,378		63.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0315	0.18		<b>Sheet Flow, 1A - 1B</b> Grass: Short n= 0.150 P2= 3.94"
0.6	164	0.0485	4.47		<b>Shallow Concentrated Flow, 1B - 1C</b> Paved Kv= 20.3 fps
3.3	192	Total			

**Subcatchment P-1B: Proposed Driveway, Walkway and Yards**



**Summary for Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**

Runoff = 1.51 cfs @ 12.05 hrs, Volume= 4,572 cf, Depth> 8.95"  
 Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

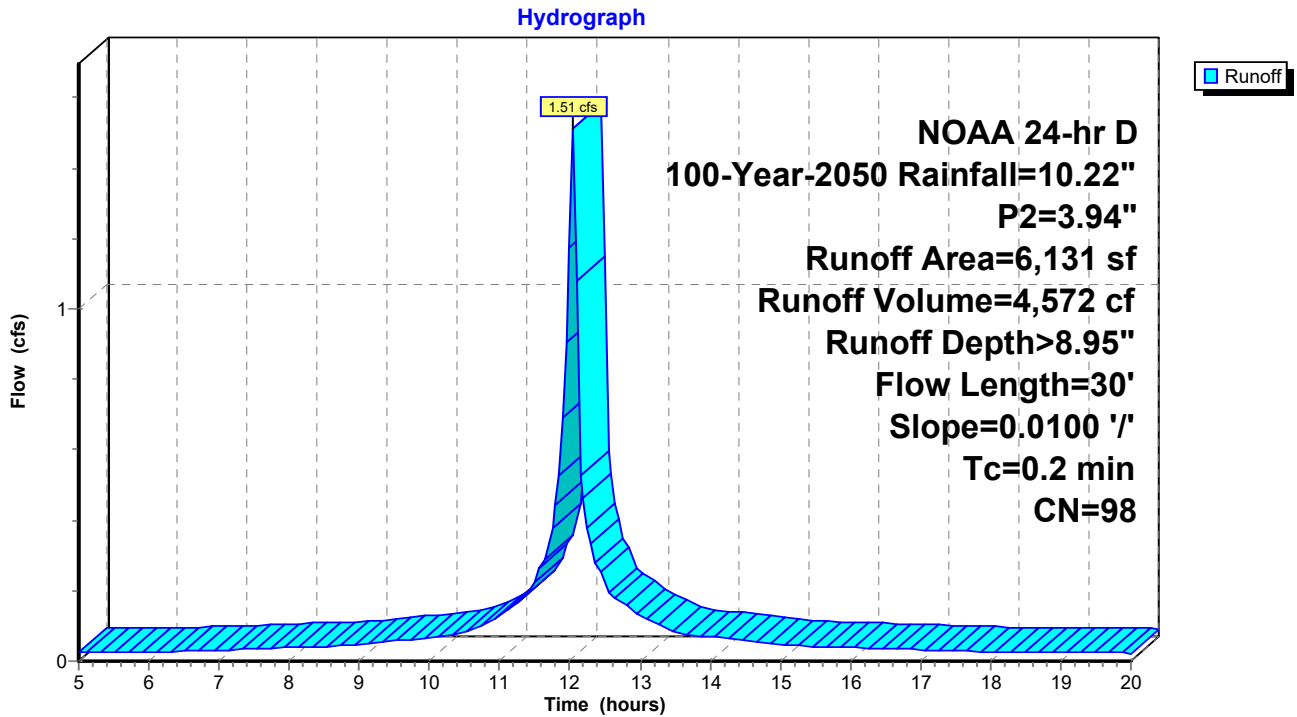
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

Area (sf)	CN	Description
6,131	98	Roofs, HSG D
6,131		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.2	30	0.0100	2.03		<b>Shallow Concentrated Flow, 2A-2B</b> Paved Kv= 20.3 fps

**Subcatchment P-2A: Proposed Building 2nd Floor Terrace Area**



**Summary for Subcatchment P-2B: Proposed North Yard Area**

Runoff = 0.06 cfs @ 12.16 hrs, Volume= 194 cf, Depth> 7.19"  
 Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

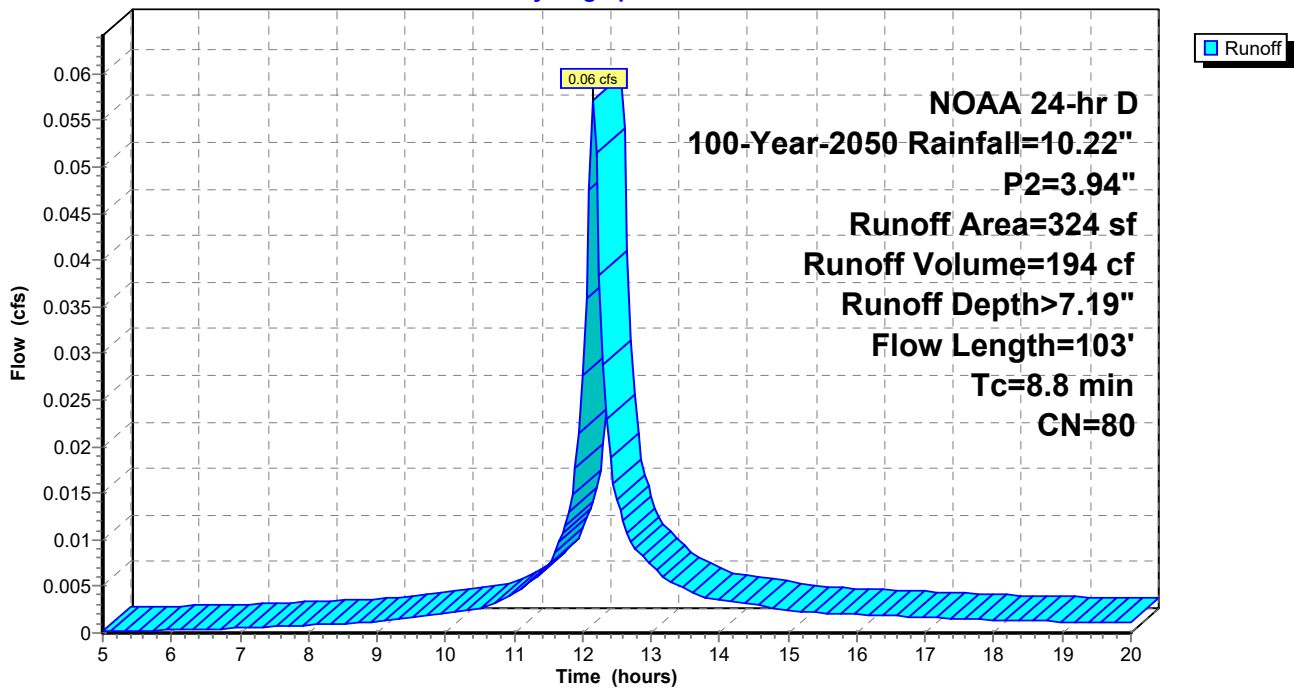
Area (sf)	CN	Description
324	80	>75% Grass cover, Good, HSG D
324		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.6	50	0.0054	0.10		<b>Sheet Flow, 2A-2B</b>
					Grass: Short n= 0.150 P2= 3.94"
0.2	53	0.0670	3.88		<b>Shallow Concentrated Flow, 2B-2C</b>
					Grassed Waterway Kv= 15.0 fps
8.8	103	Total			

**Subcatchment P-2B: Proposed North Yard Area**

Hydrograph



**Summary for Subcatchment P-2C: Proposed East Yard Area**

Runoff = 0.49 cfs @ 12.08 hrs, Volume= 1,326 cf, Depth> 7.33"  
 Routed to Link P-2 : Proposed Drainage to Route 440 Southbound

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

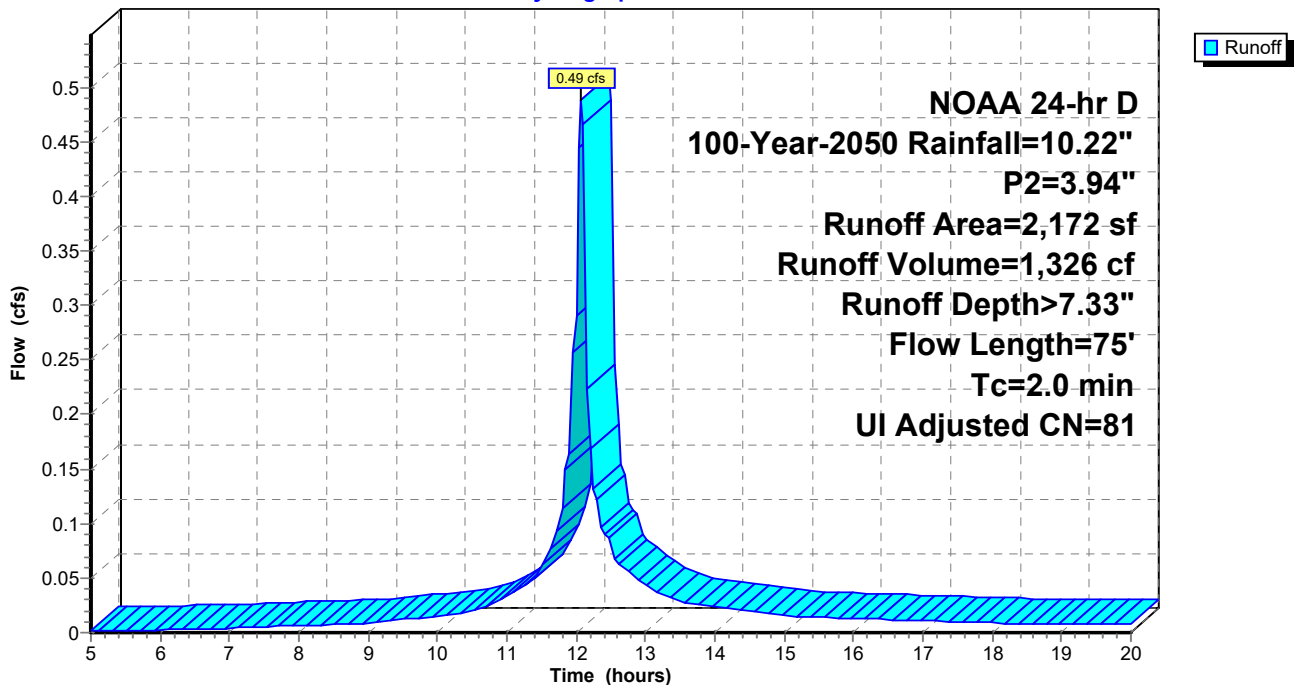
Area (sf)	CN	Adj	Description
1,859	80		>75% Grass cover, Good, HSG D
313	98		Unconnected pavement, HSG D
2,172	83	81	Weighted Average, UI Adjusted
1,859			85.59% Pervious Area
313			14.41% Impervious Area
313			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.7	20	0.0508	0.20		<b>Sheet Flow, 2A-2B</b> Grass: Short n= 0.150 P2= 3.94"
0.2	40	0.0377	2.91		<b>Shallow Concentrated Flow, 2B-2C</b> Grassed Waterway Kv= 15.0 fps
0.1	15	0.0592	3.65		<b>Shallow Concentrated Flow, 2C-2D</b> Grassed Waterway Kv= 15.0 fps
2.0	75	Total			

**Subcatchment P-2C: Proposed East Yard Area**

Hydrograph



**Summary for Subcatchment P-3: Proposed Drainage to Prospect Avenue**

Runoff = 0.23 cfs @ 12.12 hrs, Volume= 728 cf, Depth> 7.20"  
 Routed to nonexistent node 1L

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs  
 NOAA 24-hr D 100-Year-2050 Rainfall=10.22", P2=3.94"

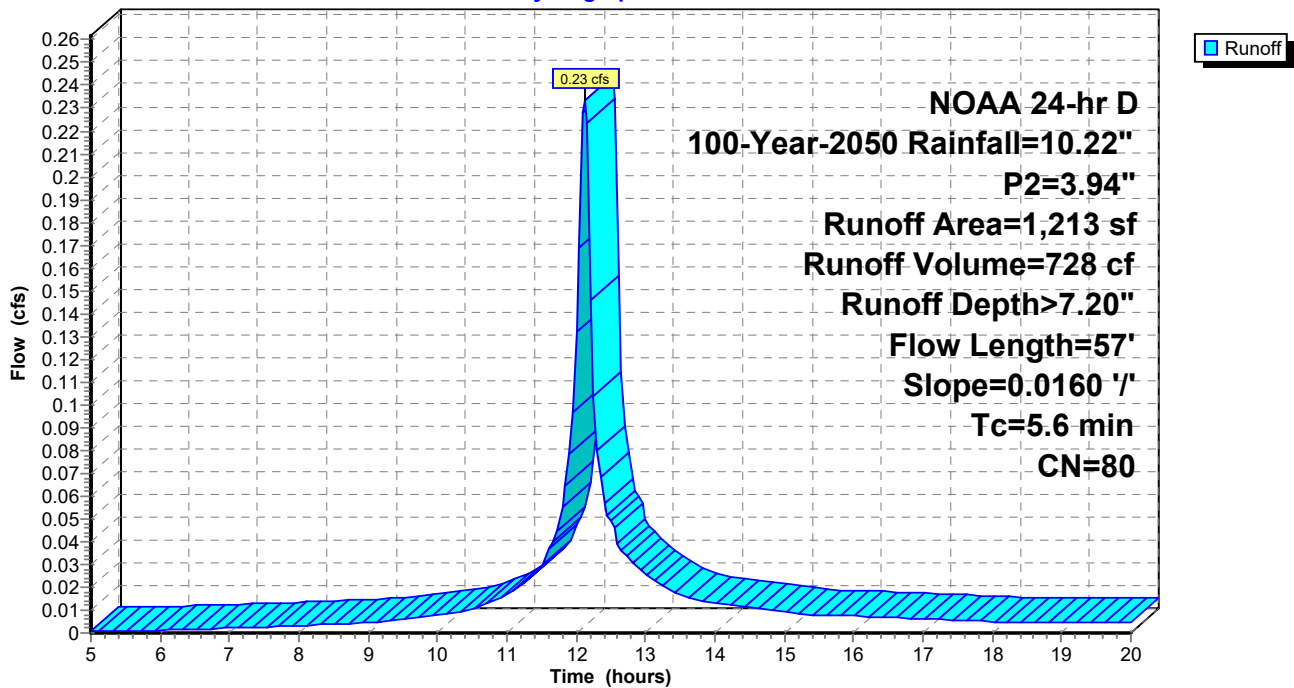
Area (sf)	CN	Description
1,213	80	>75% Grass cover, Good, HSG D
1,213		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0160	0.15		<b>Sheet Flow, 3A-3B</b> Grass: Short n= 0.150 P2= 3.94"
0.1	7	0.0160	1.90		<b>Shallow Concentrated Flow, 3B-3C</b> Grassed Waterway Kv= 15.0 fps
5.6	57	Total			

**Subcatchment P-3: Proposed Drainage to Prospect Avenue**

Hydrograph

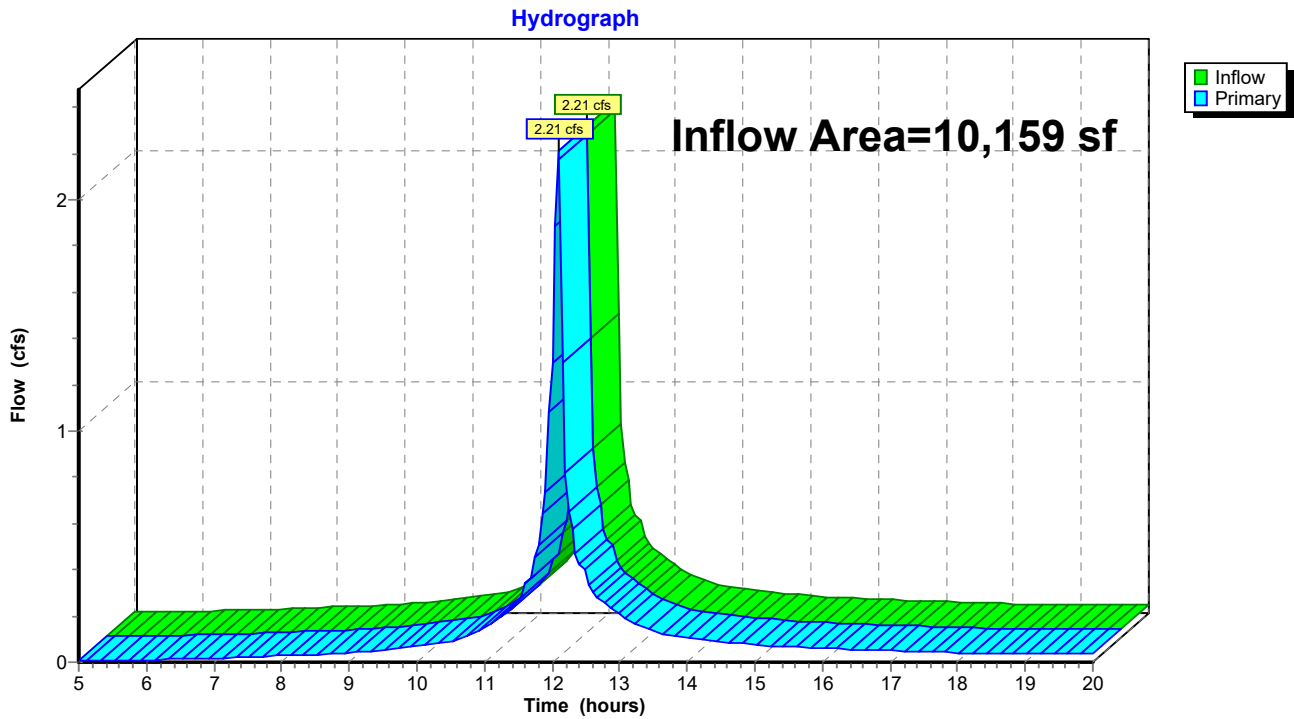


### Summary for Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

Inflow Area = 10,159 sf, 0.00% Impervious, Inflow Depth > 7.20" for 100-Year-2050 event  
Inflow = 2.21 cfs @ 12.09 hrs, Volume= 6,098 cf  
Primary = 2.21 cfs @ 12.09 hrs, Volume= 6,098 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link E-1: Existing Drainage to East 32nd Street Inlet and Hudson River Outfall

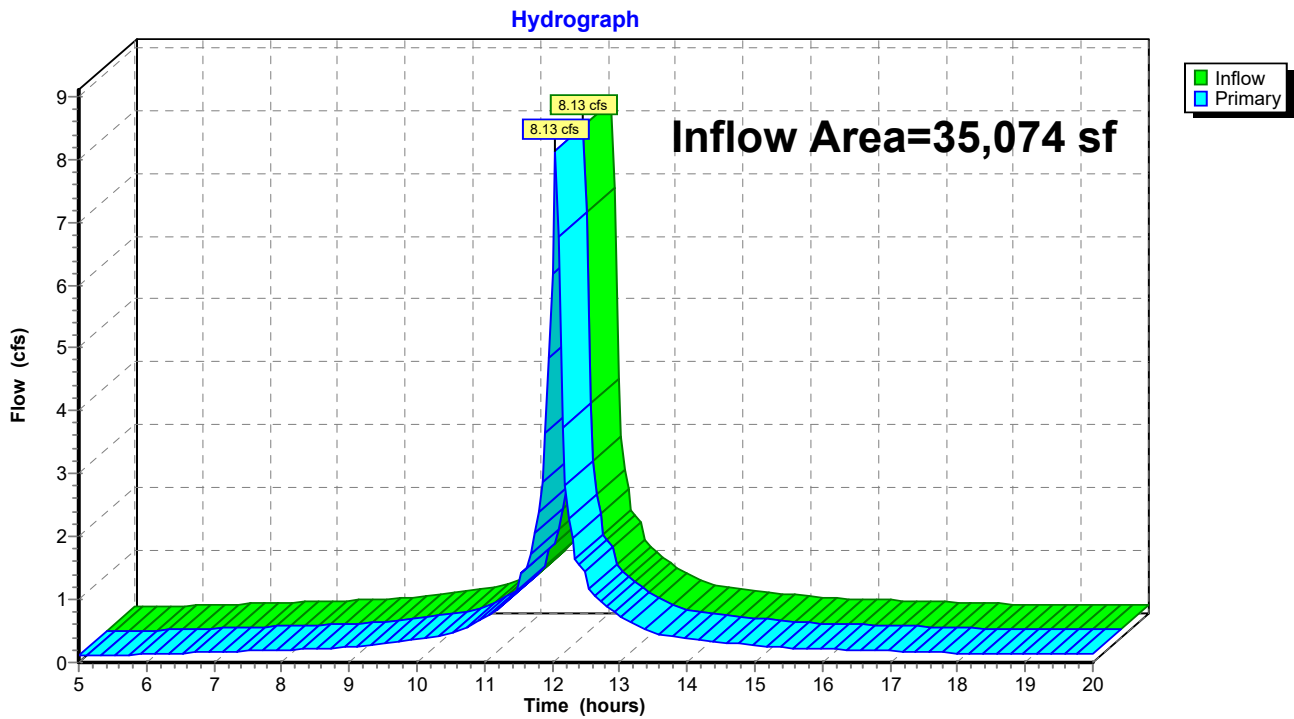


**Summary for Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall**

Inflow Area = 35,074 sf, 89.35% Impervious, Inflow Depth > 8.80" for 100-Year-2050 event  
 Inflow = 8.13 cfs @ 12.05 hrs, Volume= 25,715 cf  
 Primary = 8.13 cfs @ 12.05 hrs, Volume= 25,715 cf, Atten= 0%, Lag= 0.0 min  
 Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

**Link P-1: Proposed Drainage to East 32nd Street Inlet and Hudson River Outfall**

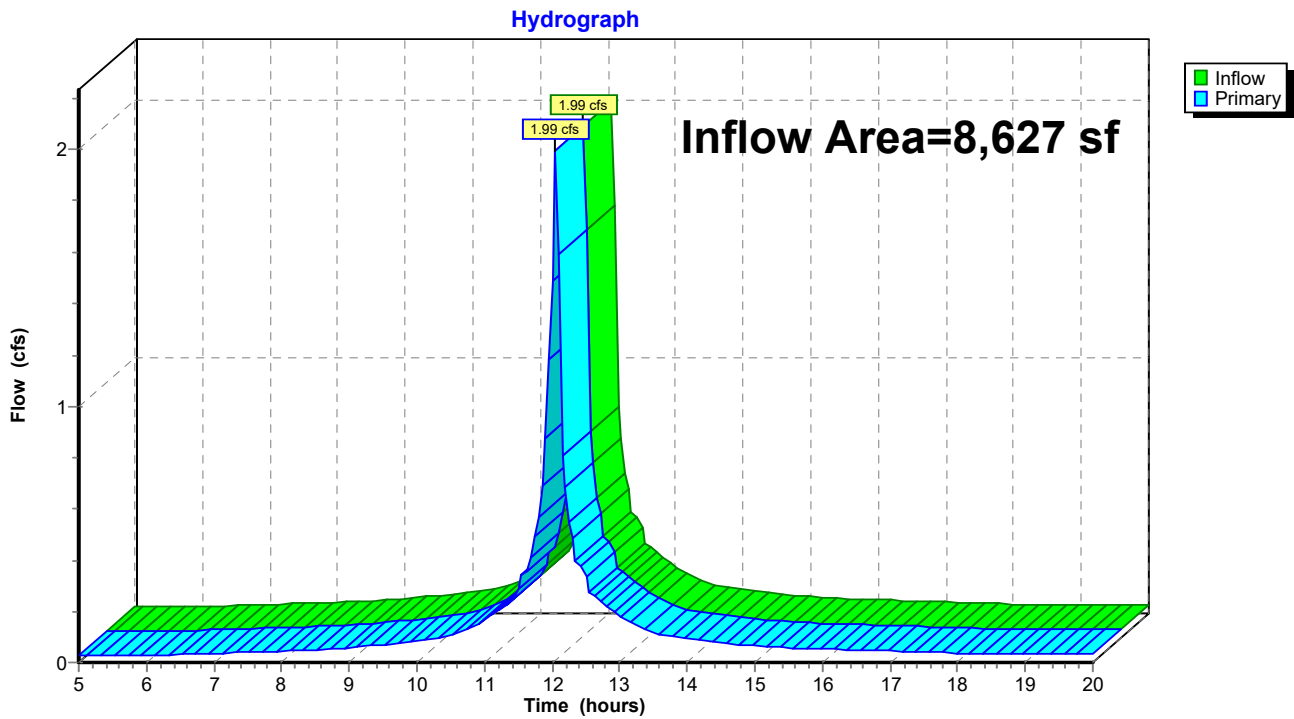


### Summary for Link P-2: Proposed Drainage to Route 440 Southbound

Inflow Area = 8,627 sf, 74.70% Impervious, Inflow Depth > 8.47" for 100-Year-2050 event  
Inflow = 1.99 cfs @ 12.05 hrs, Volume= 6,092 cf  
Primary = 1.99 cfs @ 12.05 hrs, Volume= 6,092 cf, Atten= 0%, Lag= 0.0 min  
Routed to nonexistent node 1L

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Link P-2: Proposed Drainage to Route 440 Southbound

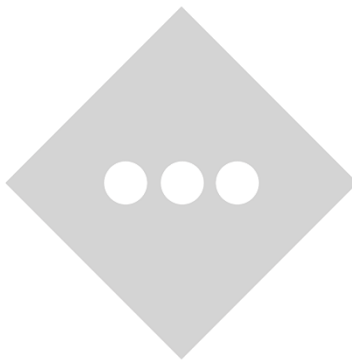


# **APPENDIX D DRAINAGE AREA MAPS**

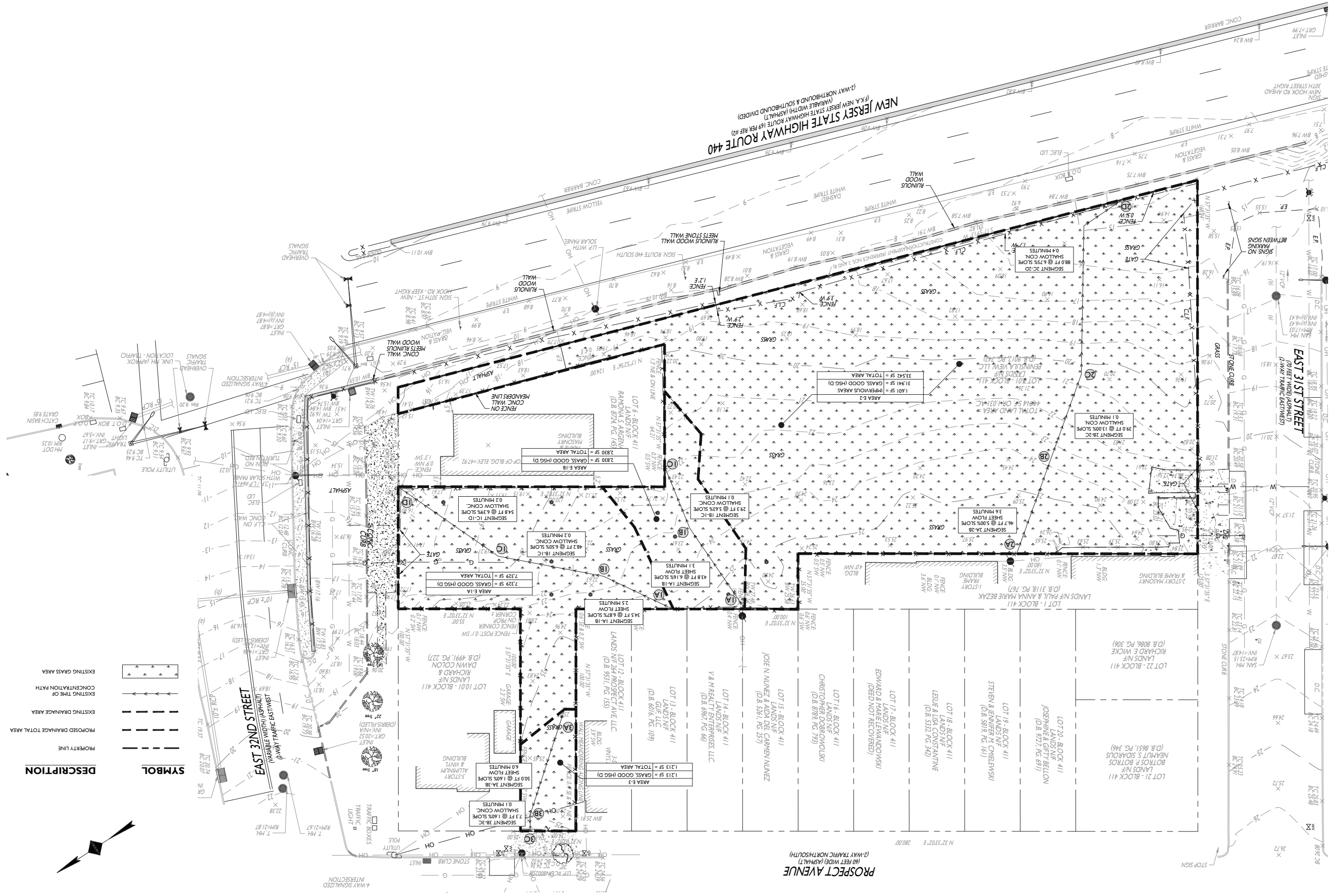
## **INVENTORY**

**SHEET 1 OF 2: EXISTING DRAINAGE AREA MAP**

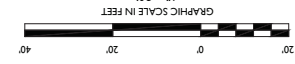
**SHEET 2 OF 2: PROPOSED DRAINAGE AREA MAP**



DATE PLOTTED: 01/11/2023 11:11:33 AM PROJECT: PENINSULA VIEW URBAN RENEWAL DRAWING: EXISTING DRAINAGE MAPS



SYMBOL	DESCRIPTION
	EXISTING GRASS AREA
	EXISTING CONCENTRATION PATH
	EXISTING DRAINAGE AREA
	PROPOSED DRAINAGE TOTAL AREA
	PROPERTY LINE



DRAWING: EXISTING DRAINAGE AREA MAPS  
 TITLE:  
 SCALE: 1" = 20'  
 PROJECT ID: RUT-130176  
**STONEFIELD**  
 engineering & design

DRAINAGE AREA MAPS  
**PENINSULA VIEW**  
 URBAN RENEWAL, LLC  
 PROPOSED MULTI-FAMILY  
 RESIDENTIAL BUILDING  
 75 EAST 31ST STREET  
 HUDSON COUNTY, NEW JERSEY

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NOT APPROVED FOR CONSTRUCTION

ISSUE	DATE	BY	DESCRIPTION
1	1/22/2023	AI	FOR MUNICIPAL SUBMISSION





