CITY OF RYE

NOTICE

The City Council will hold a Workshop on the proposed Bond Referendum on Wednesday, June 20, 2012, at 7:30 p.m. in the Council Room of City Hall.

AGENDA

1. Administration of the Oath of Office to the newly appointed Council member Julie Killian.

2. Pledge of Allegiance.

3. Roll Call.

4. Discussion of an Infrastructure Bond for City improvements.
   - Bowman Avenue Upper Dam Resizing Project
   - Police Station Renovations
   - Rye Free Reading Room: Fire Sprinkler and Alarm System, Flood Mitigation and ADA Access and Security Cameras
   - Central Business District and Old Post Road Wall Projects
   - Rye Shared Roadways recommended Projects
   - Review of Bond Referendum timeline and financing

5. Adjournment.

* *

The next regular meeting of the Rye City Council will be held on Wednesday, July 11, 2012 at 8:00 p.m. A special meeting of the City Council and the Rye Golf Club Commission will be held on Wednesday, June 27, 2012 at 7:00 p.m. at Whitby Castle at the Rye Golf Club.

Potential
Capital Projects
for
Bond Referendum

Potential Capital Projects for Inclusion in Possible November 2012 Bond Referendum

City of Rye, New York

Project Name	Description	Estimated Cost
Smith Street Reconstruction	Project involves the reconstruction (including paved surface and base) and curb replacement, where necessary. Other improvements as noted in the 2009 CBD Planning and Streetscape Study should also be considered.	$450,000 - $500,000
Smith/Elm/Purchase Intersection Improvements	As recommended in the 2009 CBD Capital Planning and Streetscape Study the project involves replacing existing signal with stop signs and other traffic calming measures including changes in intersection paving material, bump-outs and new crosswalks.	$225,000-$300,000
Purchase/Fremd/Purdy Signal Replacement	As recommended in the 2009 CBD Capital Planning and Streetscape Study the project involves replacing traffic signals at this intersection to meet NYSDOT requirements and adding a turning lane on Theodore Fremd Avenue to reduce intersection delays.	$425,000 - $475,000
Locust Avenue Sewer Siphon Replacement	Abandon the "siphon" under the Locust Avenue bridge and construct a new sewer line with a more reliable, straight, gravity flow sewer line to the County trunk in Blind Brook. The existing pipes are approximately 100 years old, and one of the existing 4" pipes is partially compromised with an obstruction. The siphon conveys sewage for many businesses in the CBD.	$150,000-$200,000
Boston Post Road Retaining Wall	The rock wall/embankment on Boston Post Road opposite Purdy Avenue has been shedding rocks, compromising slope and wall stability. The wall straddles private and City right-of-way property lines. A unified wall approach similar to that completed on BPR would likely provide the greatest functional and aesthetic benefit, however more detailed engineering is required to determine whether the existing wall can be salvaged or a complete reconstruction is required.	$350,000-$525,000
Sidewalk and Pedestrian Improvements	Replacement of deteriorated sidewalk on Milton Road, ADA compliance and other pedestrian improvements needs in the City.	$100,000

DRAFT

Project Name	Description	Estimated Cost
MTA Parking Lot Improvements	The City (which does not own the lot, but shares in the parking revenue with the MTA) previously discussed with the MTA possible cost/revenue sharing strategies to implement necessary repairs to the deteriorated lot. The proposed improvements would rehabilitate the lot, which has not been repaved in over 20 years, and implement pedestrian and vehicles safety improvements consistent with a preliminary concept plan prepared by MTA consultants in 2006.	$2,650,000-$3,000,000
Rye Free Reading Room Improvements	Installation of sprinklers and fire alarm system, ADA and flood control improvements and security cameras.	$199,000
Police/Court Upgrades	Project includes construction of new secured sally port, elevator, interior stairwell, expanded court clerk facilities, judges chamber, court officer facilities and prisoner holding facility.	$1,200,000
Bowman Avenue Upper Pond Flood Mitigation Improvements	Project would expand the capacity of the flood storage area of Bowman Avenue upper pond.	$7,000,000 – $13,000,000
Total		**$12,399,000-$19,399,000**

DRAFT

Bowman Avenue
Upper Dam
Resizing Project

BOWMAN AVENUE DAM SITE

UPPER POND RESIZING

WSP · SELLS
Transportation & Infrastructure

Paul C. Rizzo Associates, Inc.
ENGINEERS/CONSULTANTS/CM

AGENDA

REPRESENTATIVES

- David Weiss – WSP-SELLS
- Allan Estivalet – RIZZO Associates
- Bill Broderick – RIZZO Associates
- Todd Waldrup – WSP E&E

OUTLINE

- Introduction
- Project Background
- Data Collection Results
- Hydrology and Hydraulics
- Results
- Question and Answer

Project Background

- November 2001, City of Rye – *Flood Mitigation Plan* identified Bowman Avenue Dam site for possible flood control
- March 2008, WSP-SELLS issued *Flood Mitigation Study* that identified feasible alternatives including:
  - Orifice Optimization (Sluice Gate Project)
  - Maximizing storage potential at Upper Pond
- Recommended Further Study of Upper Pond including:
  - Conduct Subsurface Investigation – bedrock profile
  - Soil Sampling – Level of Contamination
  - Cost-Benefit – Refine costs and determine downstream benefit / upstream impacts
- April 2012, SELLS was tasked with Upper Pond Study
  - Soiltesting Inc. (rock probes and borings)
  - WSP Energy and Environmental (contamination study)
  - Rizzo Associates (Hydrology and Hydraulics)

Project Location

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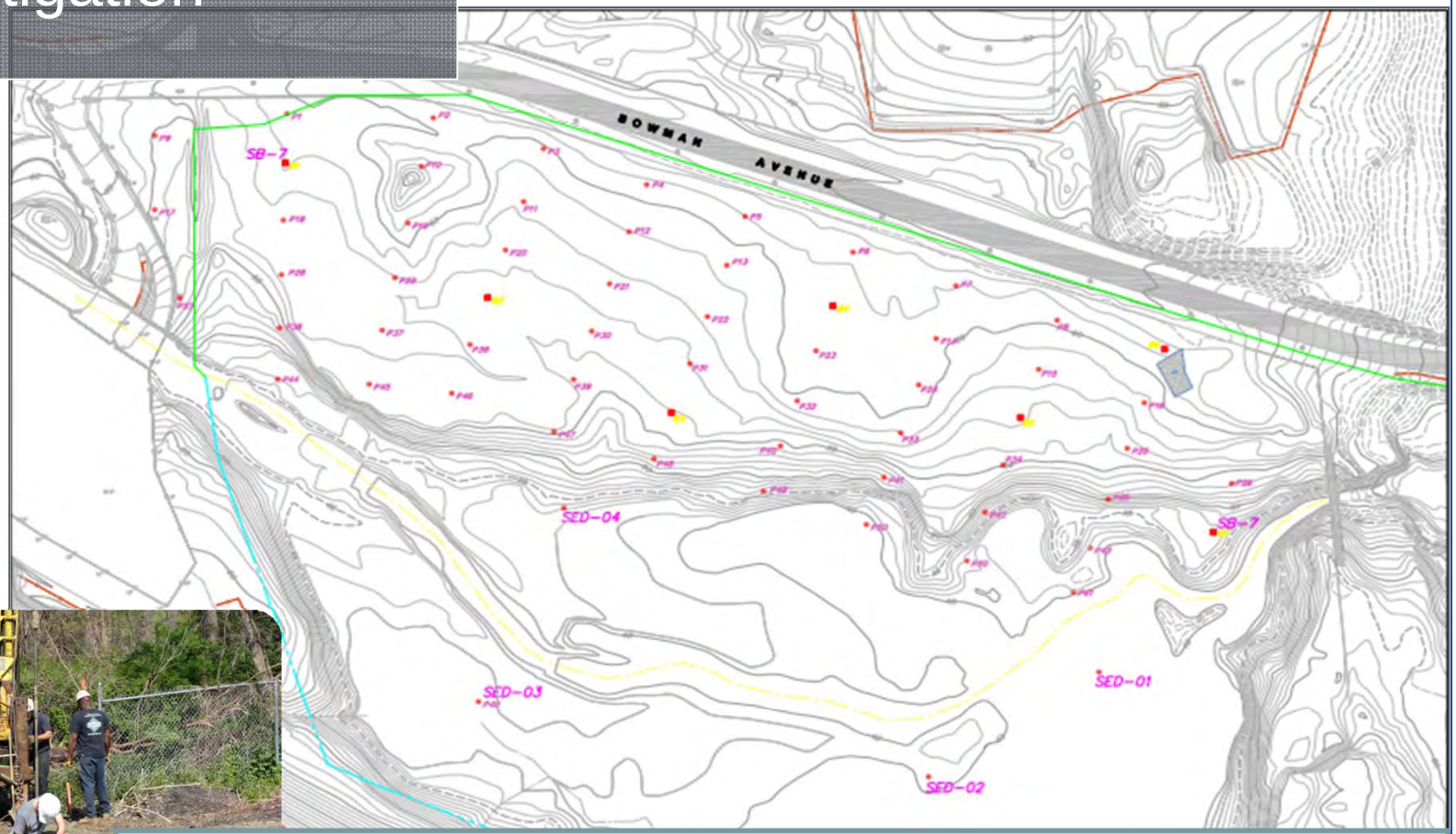
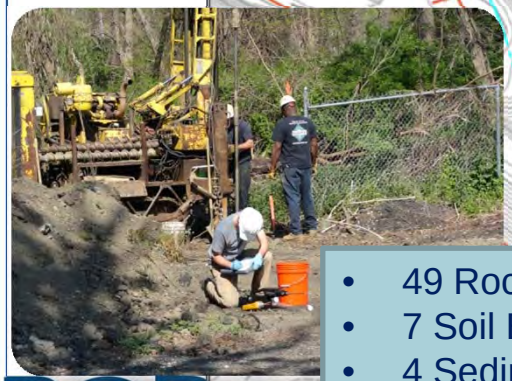
Subsurface Investigation





- 49 Rock Probes (verify depth to ledge rock)
- 7 Soil Borings (Split barrel sampler ability to reach greater depths)
- 4 Sediment Samples (shallow depth sample of deposited sediment)

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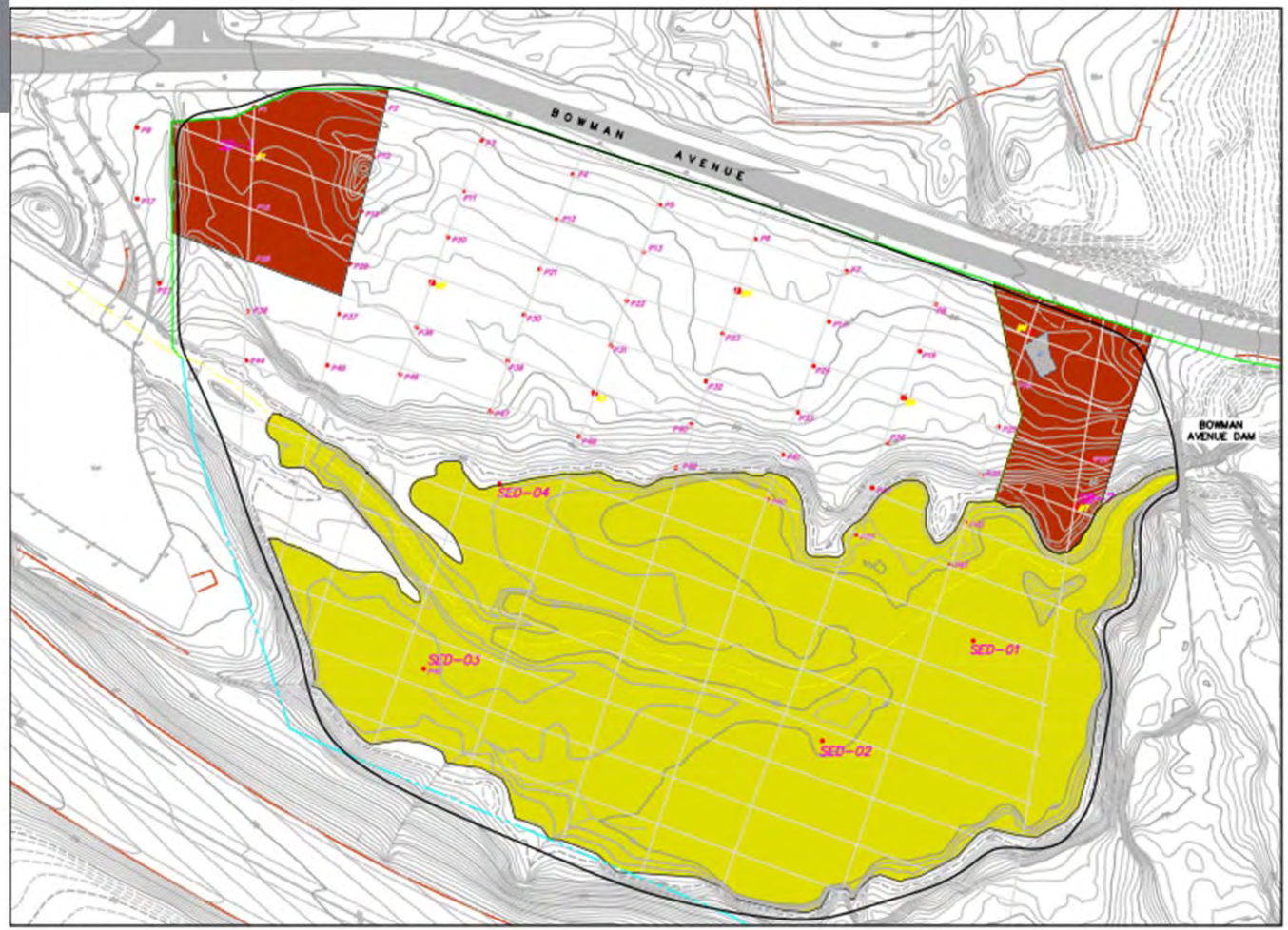
Soil Contamination Results

Results:

"Non-hazardous contaminated material"



LEGEND FOR PLAN

0-12" NON-HAZARDOUS CONTAMINATED SOILS

0-24" NON-HAZARDOUS CONTAMINATED

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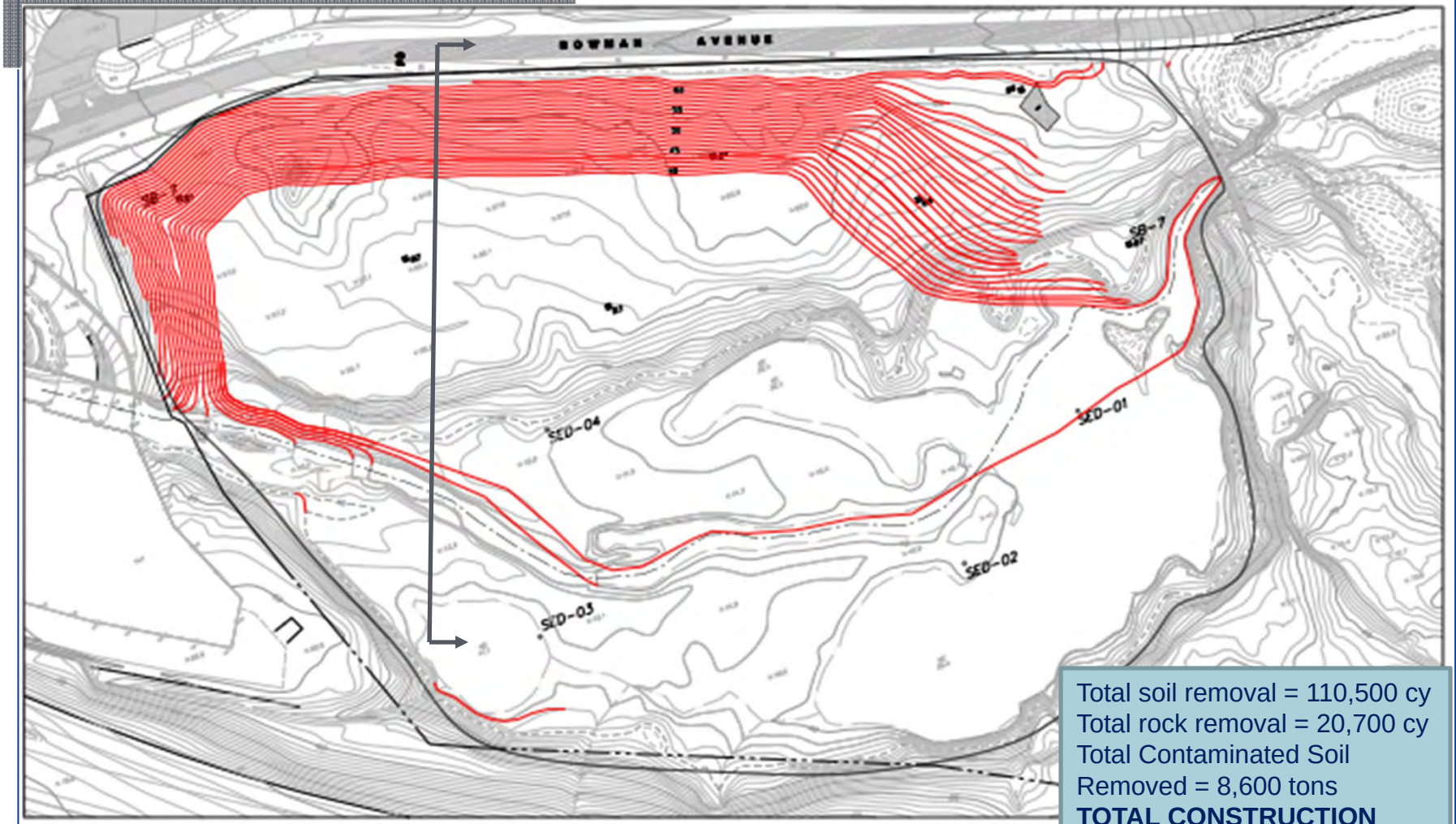
Alternatives

- **Two Alternatives were studied for cost-benefit:**
  - Alternative 1: Maximizing the Upper Pond on the North Side of the Channel **without** Dredging (bottom El. 39')
  - Alternative 2: Excavating the Upper Pond on the North Side of the Channel Above Ordinary High Water Elevation

Alternatives

Alternative 1: Maximizing the Upper Pond on the North Side of the Channel **WITHOUT** Dredging (El. 39')



Total soil removal = 110,500 cy
Total rock removal = 20,700 cy
Total Contaminated Soil Removed = 8,600 tons
TOTAL CONSTRUCTION COST = $10.3 million

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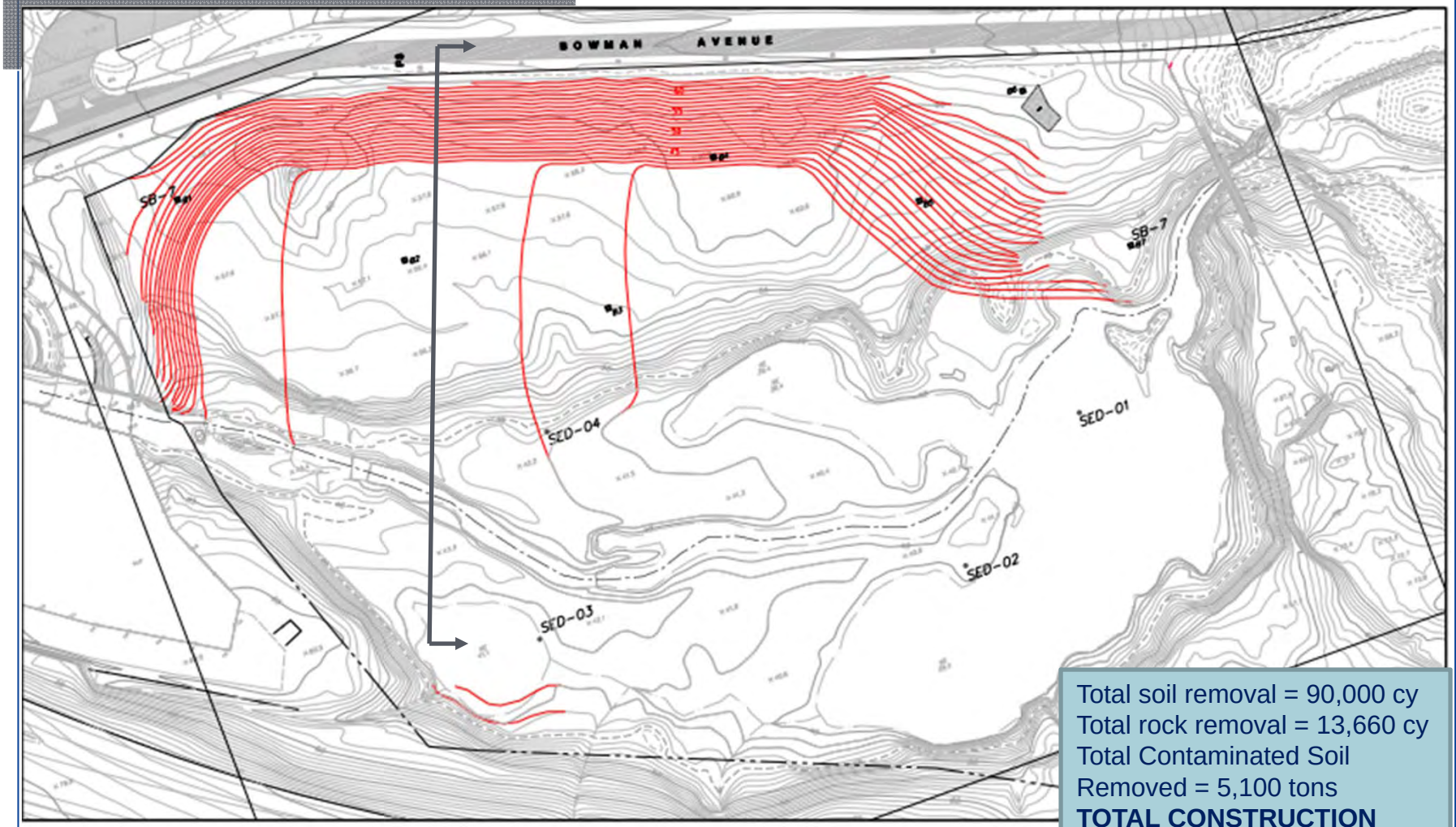
Alternatives

Alternative 2: Excavating the Upper Pond on the North Side of the Channel Above Ordinary High Water Elevation



Total soil removal = 90,000 cy
Total rock removal = 13,660 cy
Total Contaminated Soil Removed = 5,100 tons
TOTAL CONSTRUCTION COST = $7.7 million

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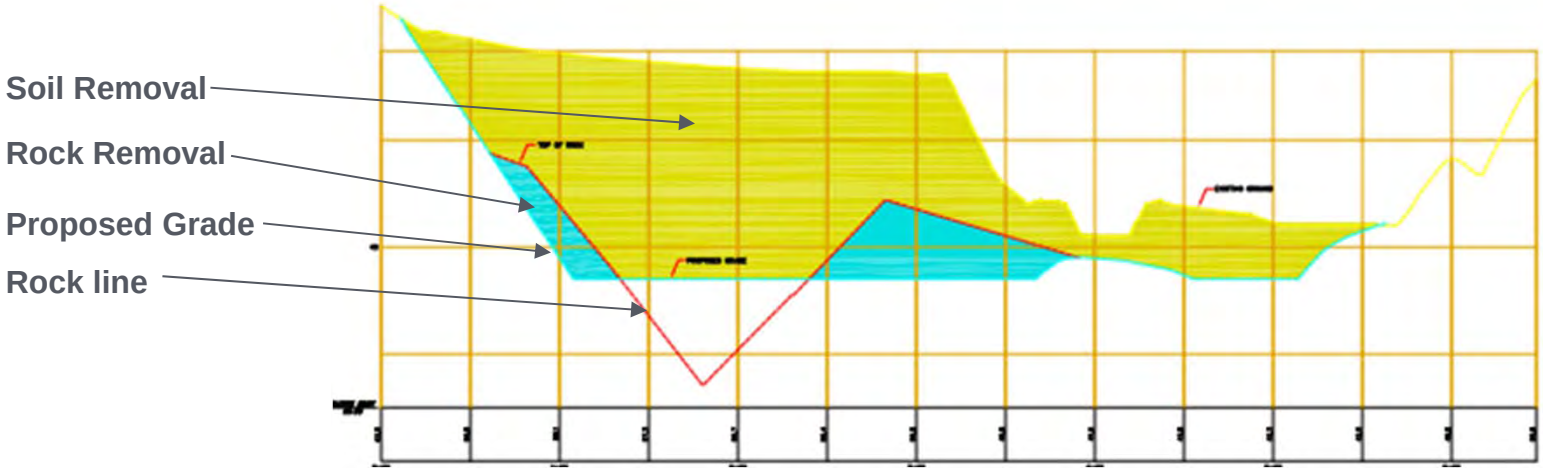
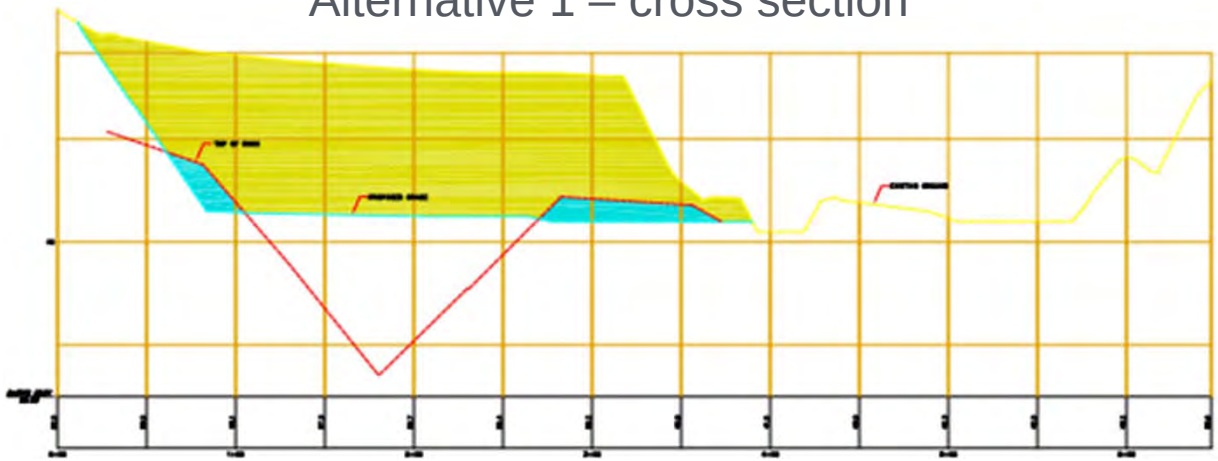
Rock Profile Results



Alternative 1 – cross section



Alternative 2 – cross section

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Alternatives

HYDROLOGY AND HYDRAULICS

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PROJECT SCOPE OF WORK:

- Site Inspection and main structures survey.
- Review/update the WSP SELLS flood flow frequency analysis of USGS gauging station 01300000.
- Assess the impacts of proposed resized Upper Pond alternatives on the water surface profiles between Interstates I-95 and I-287
- Optimize the sluice gate operattion sequencing

SITE INSPECTION AND MAIN STRUCTURES SURVEY:

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REVIEW/UPDATE THE WSP SELLS FLOOD FLOW FREQUENCY ANALYSIS OF USGS GAUGING STATION 01300000:

Year	Rank	Annual Peak Discharge	Log Discharge	Exceedance Prob.	Return Period	K Values	WL = Avg_LogX + Kt*(Stdev_LogX)	Predicted Flow
[]	[]	[cfs]	Log.		[Year]	[-]		[cfs]
2007	1	4340	3.64	0.9999	1.0001	-3.38448	1.9675177	93
2011	2	3350	3.53	0.9995	1.0005	-3.03186	2.077038411	119
	3	2320	3.37	0.9500	1.0526	-1.59680	2.522751827	333
	4	2280	3.36	0.9000	1.1111	-1.26207	2.626716199	423
	5	2120	3.33	0.8000	1.2500	-0.84769	2.755418602	569
	6	1940	3.29	0.7000	1.4286	-0.54266	2.85015584	708
	7	1440	3.16	0.6000	1.6667	-0.27791	2.93238523	856
	8	1380	3.14	0.5704	1.7532	-0.20292	2.955676832	903
	9	1250	3.10	0.5000	2.0000	-0.02680	3.010378476	1024
	10	1120	3.05	0.4296	2.3277	0.15099	3.06559688	1163
	11	980	2.99	0.4000	2.5000	0.22772	3.089428881	1229
	12	901	2.95	0.3000	3.3333	0.50378	3.17517087	1497
	13	853	2.93	0.2000	5.0000	0.83209	3.277139494	1893
	14	783	2.89	0.1000	10.0000	1.29661	3.421415489	2639
	15	726	2.86	0.0500	20.0000	1.68827	3.543060012	3492
	16	688	2.84	0.0400	25.0000	1.80387	3.578963612	3793
	17	670	2.83	0.0250	40.0000	2.03412	3.650477625	4472
	18	642	2.81	0.0200	50.0000	2.13817	3.682792188	4817
	19	494	2.69	0.0100	100.0000	2.44337	3.777586053	5992
	20	480	2.68	0.0050	200.0000	2.72649	3.865518472	7337
	21	356	2.55	0.0020	500.0000	3.07436	3.973562556	9409
	22	274	2.44	0.0010	1000.0000	3.32159	4.050350153	11229

RIZZO Log Pearson Type III Flood Flow Frequency Analysis at USGS Gauge Station 01300000

Return Period	WSP Sells Predicted Flow	RIZZO Predicted Flow
[Year]	[cfs]	
1	83	93
2	928	1024
5	1534	1893
10	1982	2639
25	2594	3793
50	3078	4817
100	3583	5992
200	-	7337
500	4851	9409

Summary of results

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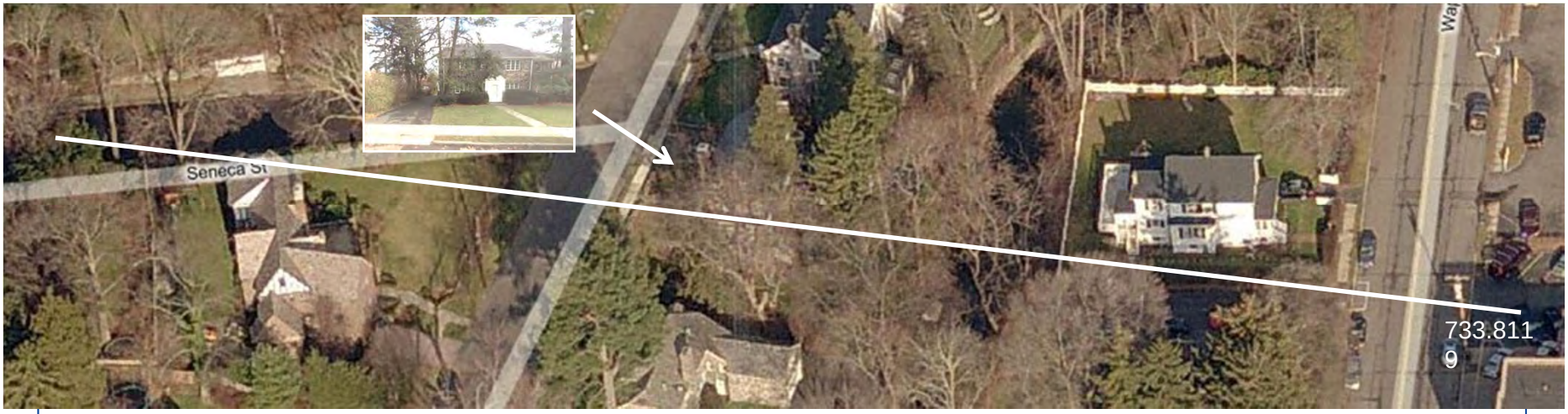
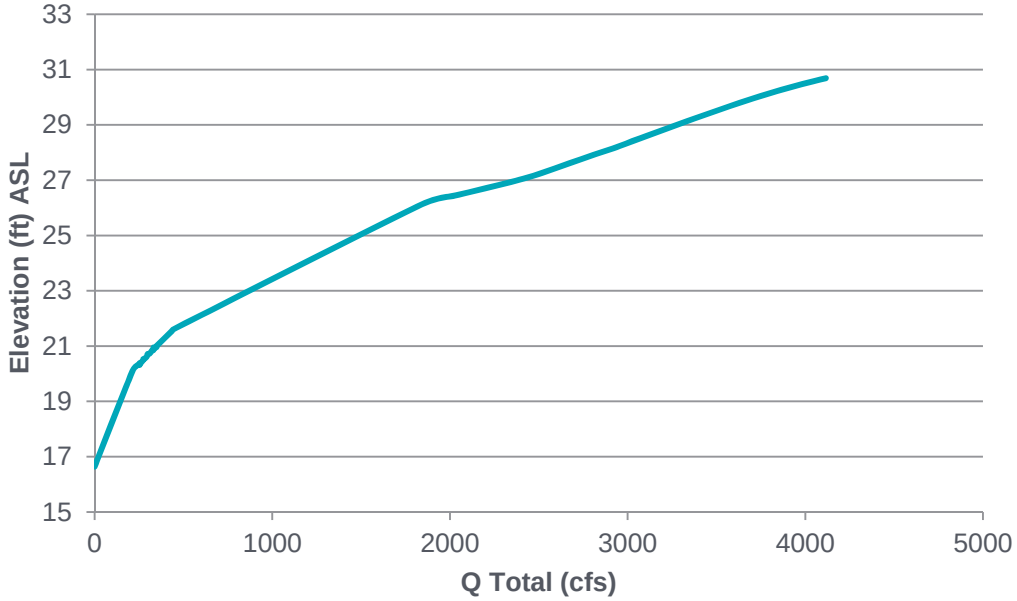


HEC-RAS Cross Section at 34 Mendota Av.



Flood Frequency Analysis – Additional Data for 2007 and 2011 Floods

2007: Event: 4340 cfs
2011: Hurricane Irene Event: 3350 cfs

Flow Rating Curve at the Cross section 733.8119

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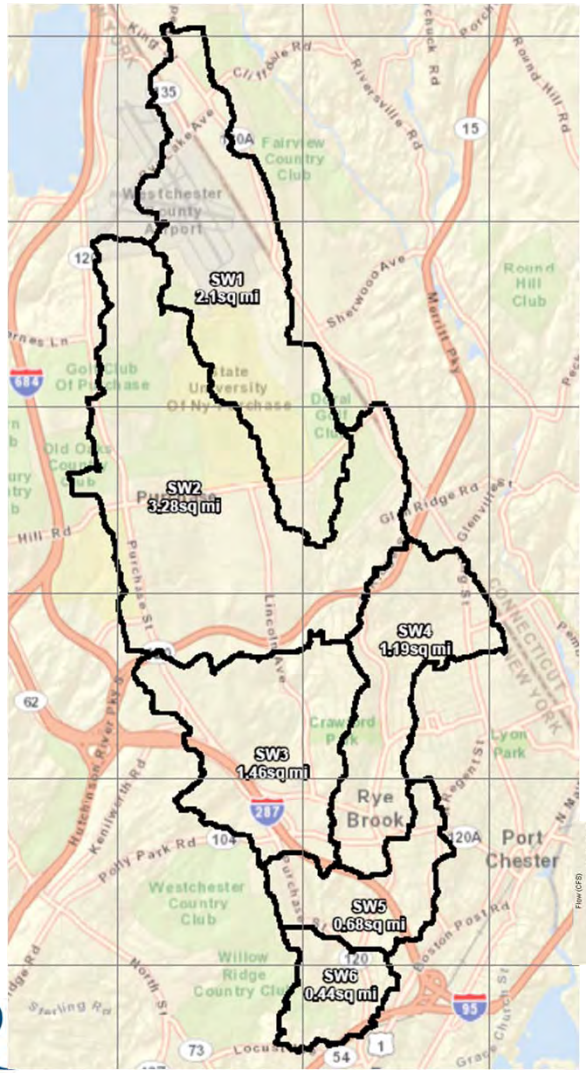
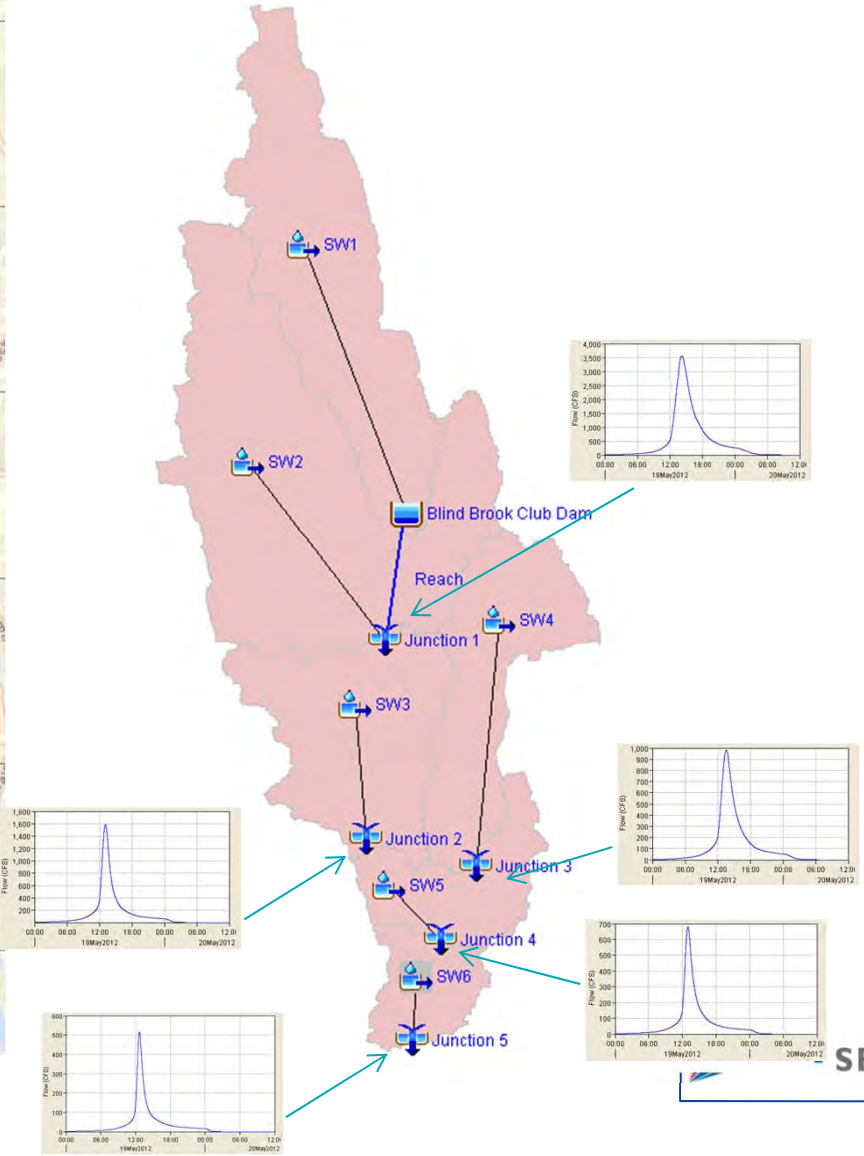
DEVELOP A HYDROLOGIC MODEL (HEC-HMS) FOR THE WATERSHED USING UP TO DATE INFORMATION:





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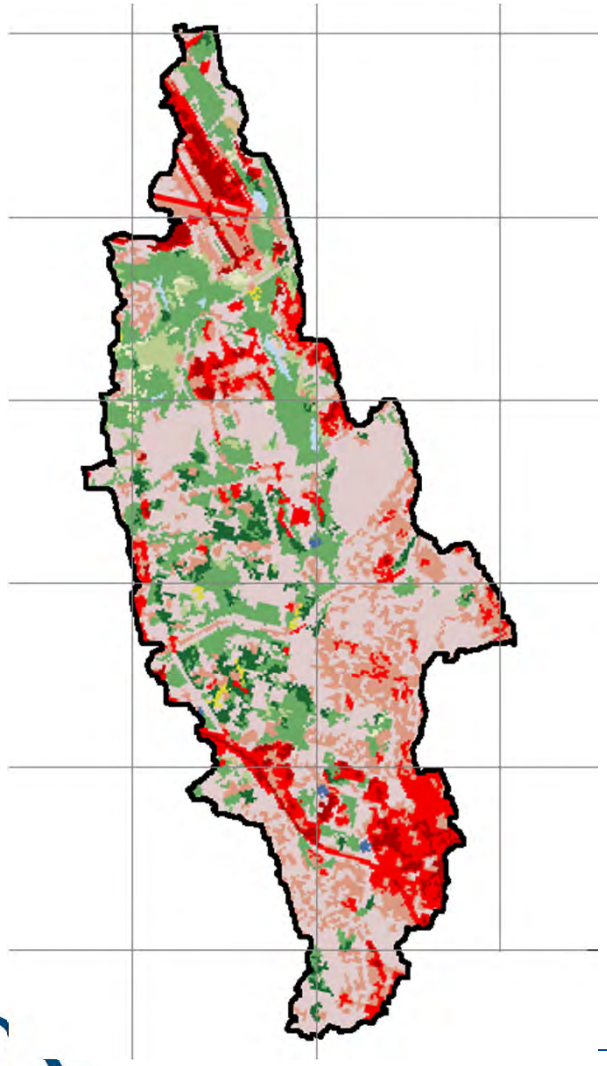
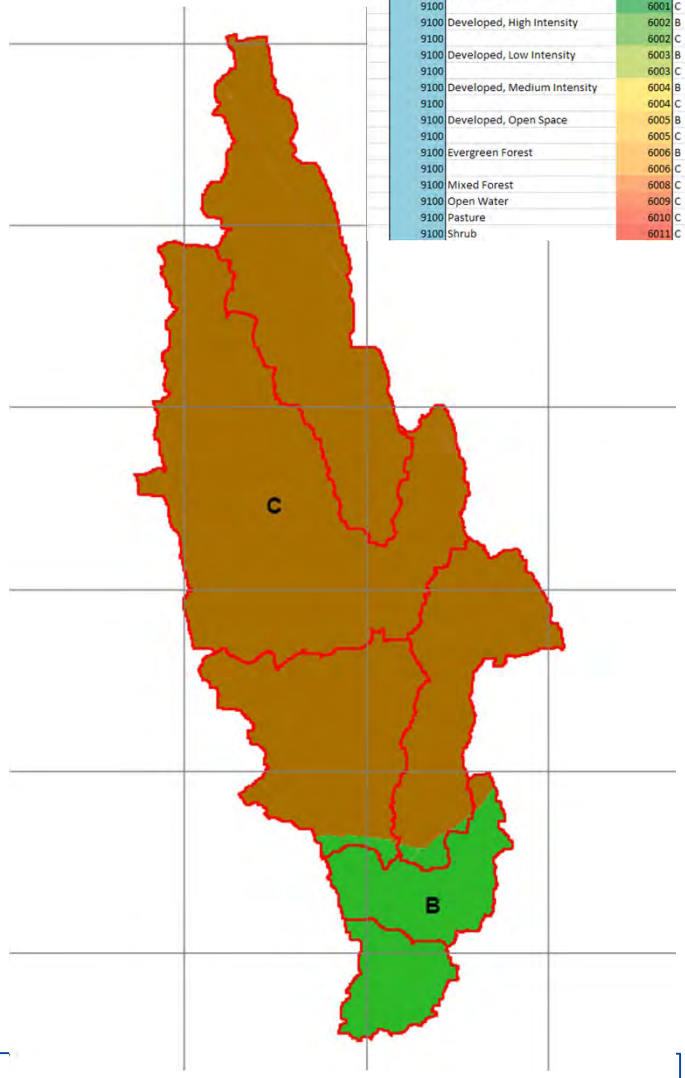
DEVELOP A HYDROLOGIC MODEL (HEC-HMS) FOR THE WATERSHED USING UP TO DATE INFORMATION (2):

Basin	Land Use			Soil		CN	Count	Area (sq mi)	% in Basin	
Bowman Dam (SW 3)										
9100	Deciduous Forest	6001	B	○	9501	55	7	0.005152956	0.354%	0.19
9100		6001	C	●	9502	70	73	0.227506413	15.614%	10.93
9100	Developed, High Intensity	6002	B	○	9501	81	3	0.00428701	0.294%	0.24
9100		6002	C	●	9502	85	28	0.059146344	4.059%	3.45
9100	Developed, Low Intensity	6003	B	○	9501	65	10	0.011303228	0.776%	0.50
9100		6003	C	●	9502	77	104	0.262683379	18.028%	13.88
9100	Developed, Medium Intensity	6004	B	○	9501	70	5	0.005986127	0.411%	0.29
9100		6004	C	●	9502	80	73	0.145051294	9.955%	7.96
9100	Developed, Open Space	6005	B	○	9501	61	9	0.027672414	1.899%	1.16
9100		6005	C	●	9502	74	83	0.550292094	37.767%	27.95
9100	Evergreen Forest	6006	B	○	9501	55	2	0.002857304	0.196%	0.11
9100		6006	C	●	9502	70	51	0.121270393	8.323%	5.83
9100	Mixed Forest	6008	C	●	9502	70	7	0.011471456	0.787%	0.55
9100	Open Water	6009	C	●	9502	100	2	0.007039751	0.483%	0.48
9100	Pasture	6010	C	●	9502	74	7	0.011522067	0.791%	0.59
9100	Shrub	6011	C	●	9502	65	3	0.003822396	0.262%	0.17



Blind Brook Watershed Land Use/Land Cover



Blind Brook Watershed STATSGO Soils Categories

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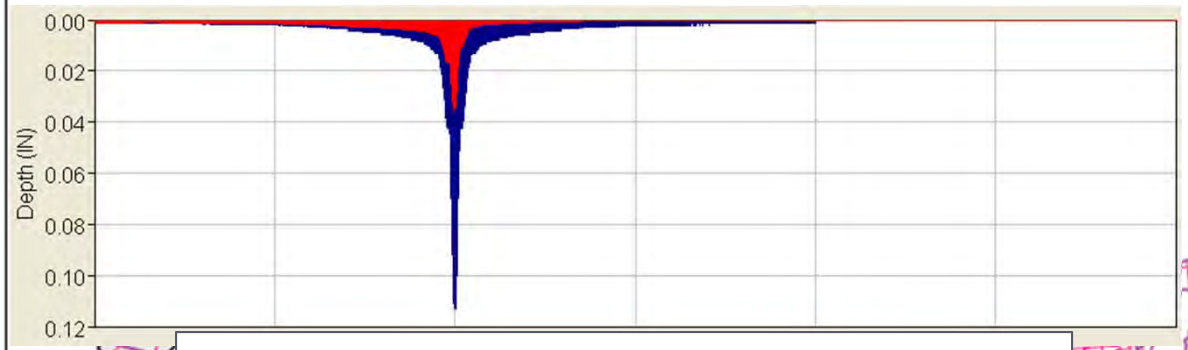
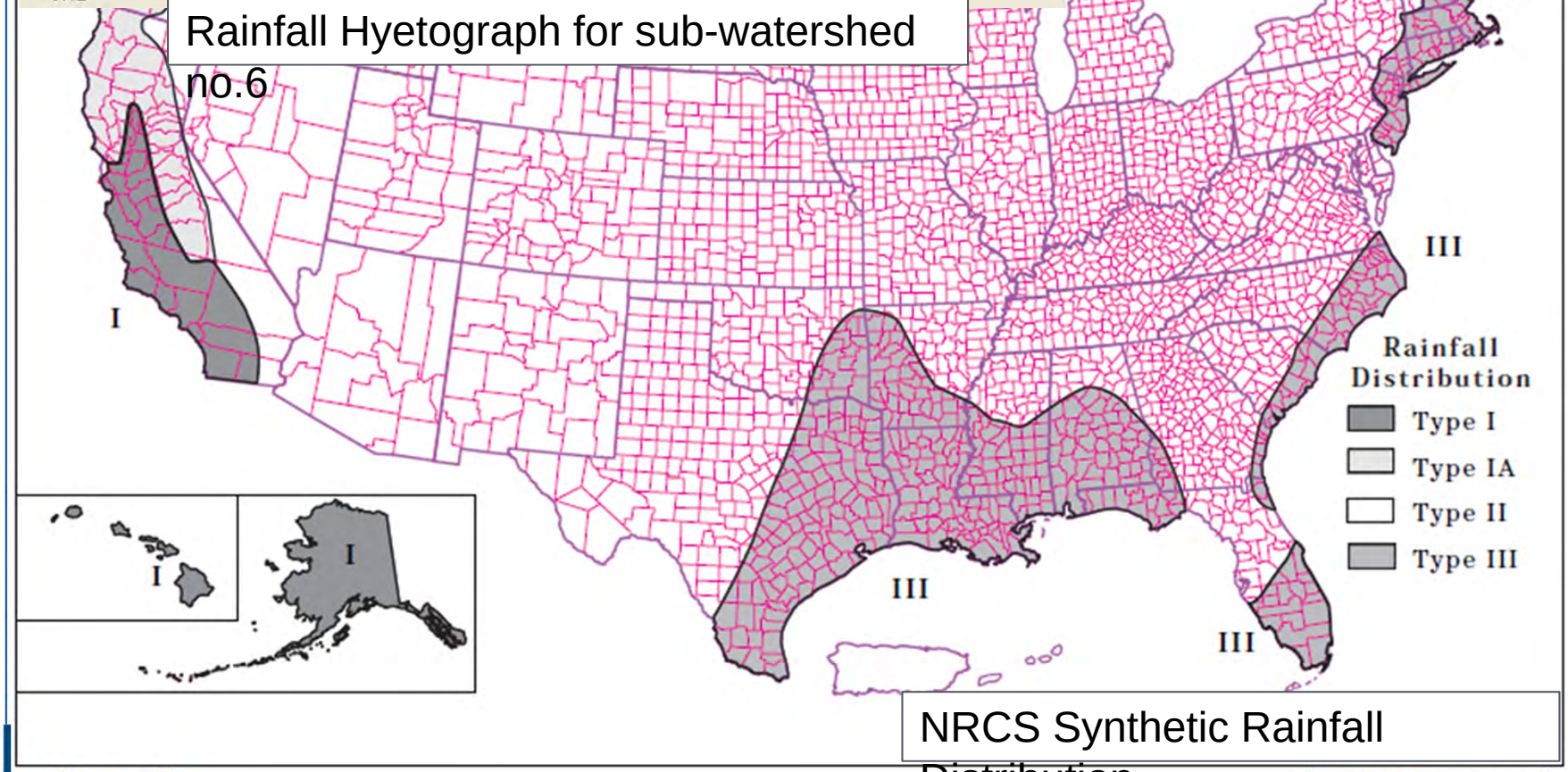


Rainfall Hyetograph for sub-watershed no.6

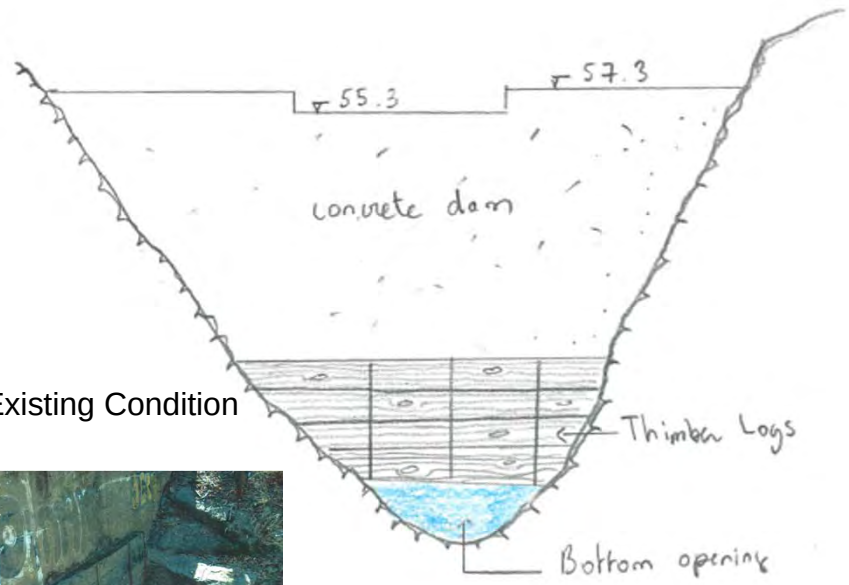


NRCS Synthetic Rainfall Distribution

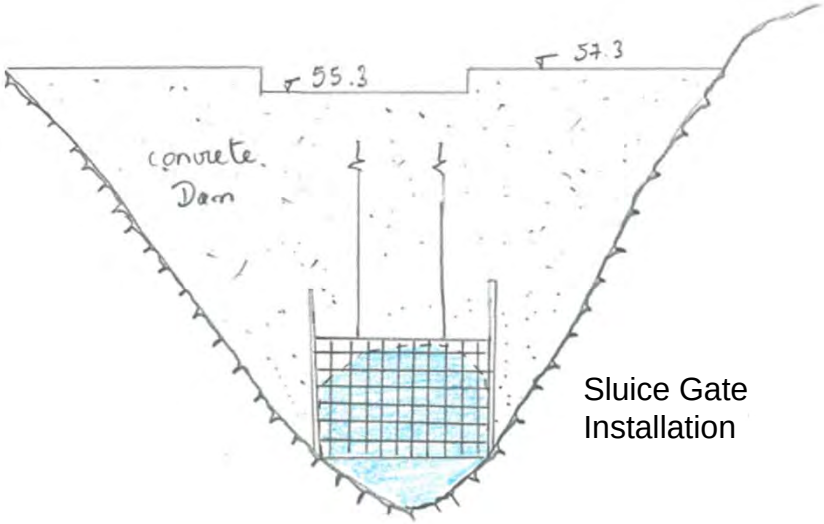
DEVELOP AN UNSTEADY HYDRAULIC MODEL (HEC-RAS) INCLUDING LIDAR DATA

Scenarios analyzed:

- Existing Condition
- Proposed Resized Upper Pond with Sluice Gate
- Proposed Maximized Resized Upper Pond with Sluice Gate
- Proposed Revised Upper Pond with Optimized Sluice Gate Operation



Existing Condition



Sluice Gate Installation

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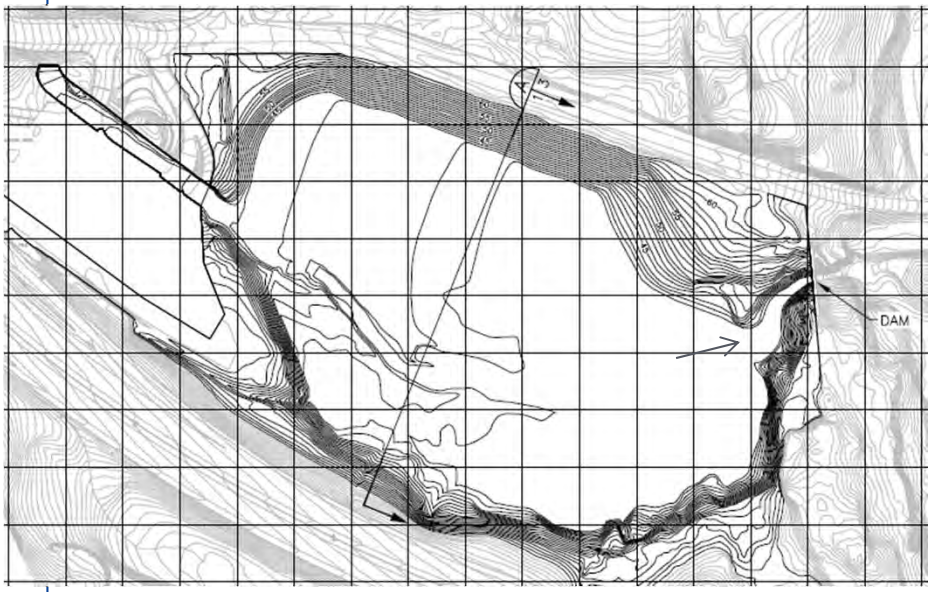
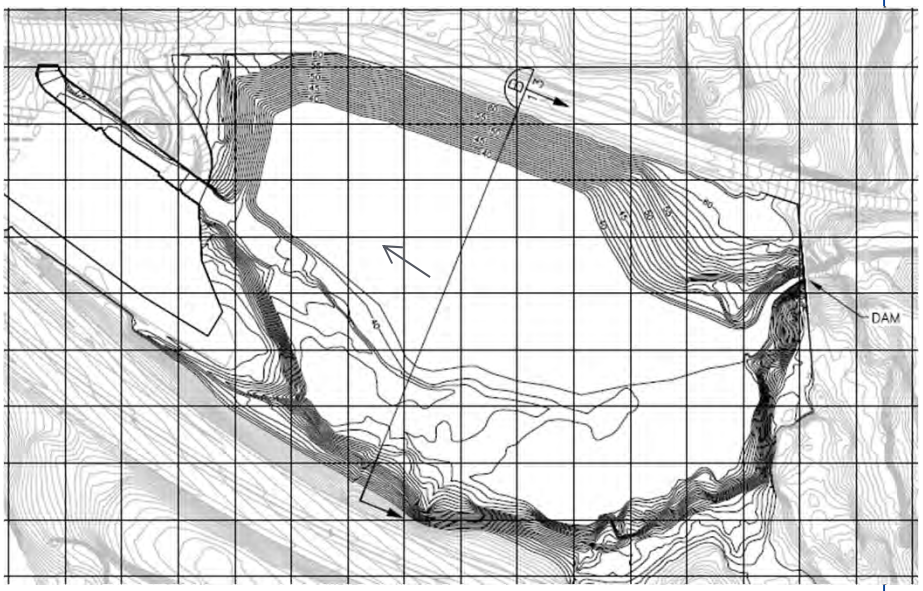
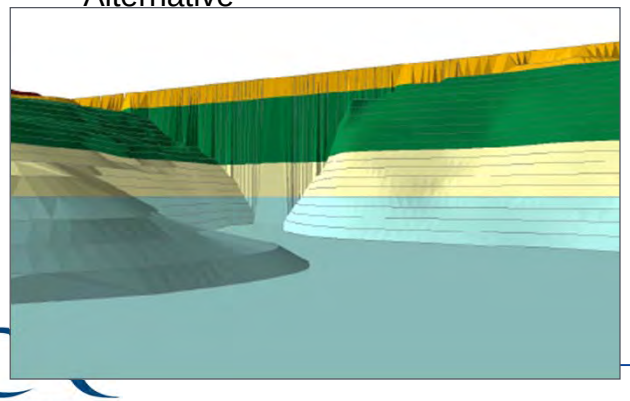
DEVELOP AN UNSTEADY HYDRAULIC MODEL (HEC-RAS) INCLUDING LIDAR DATA

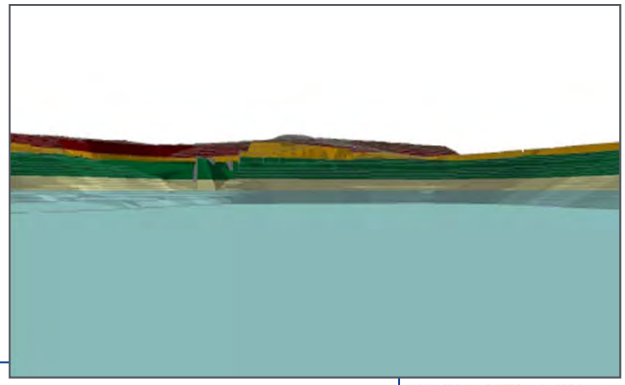




Proposed Resized Pond Alternative



Proposed Maximized Resized Pond Alternative



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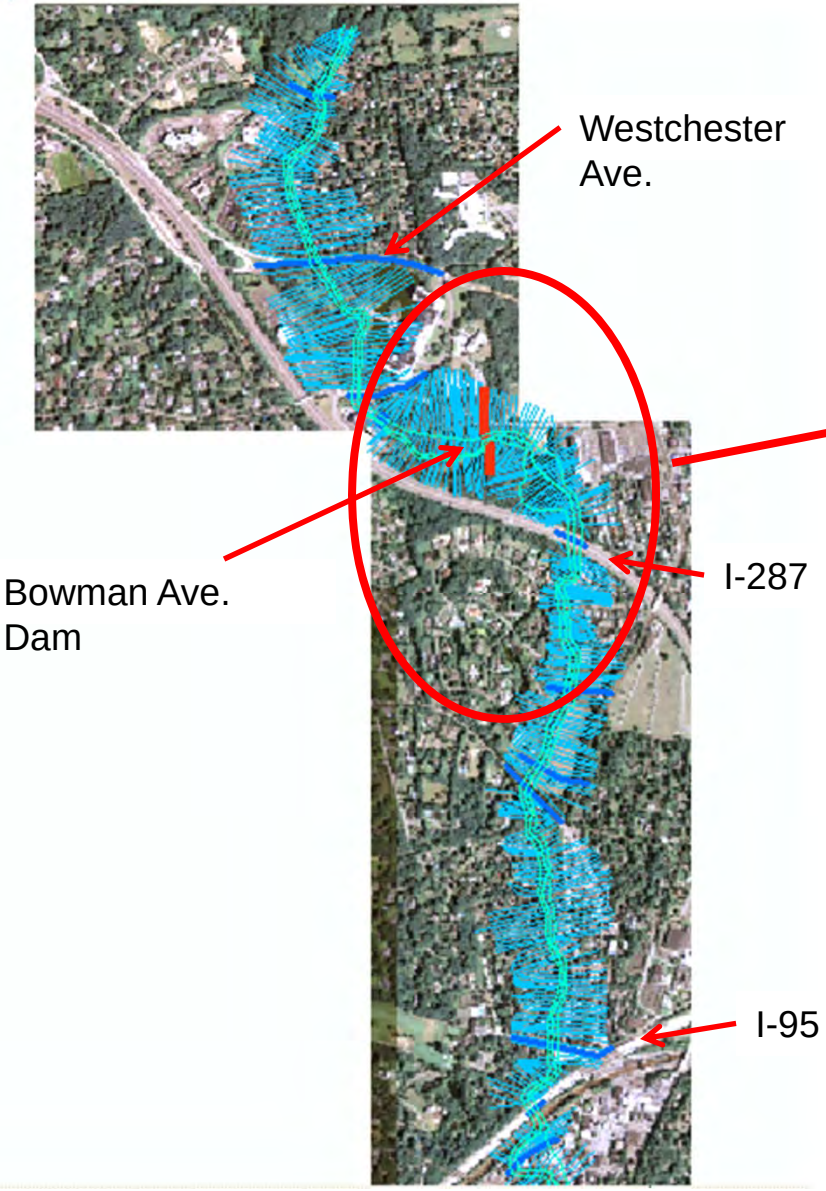
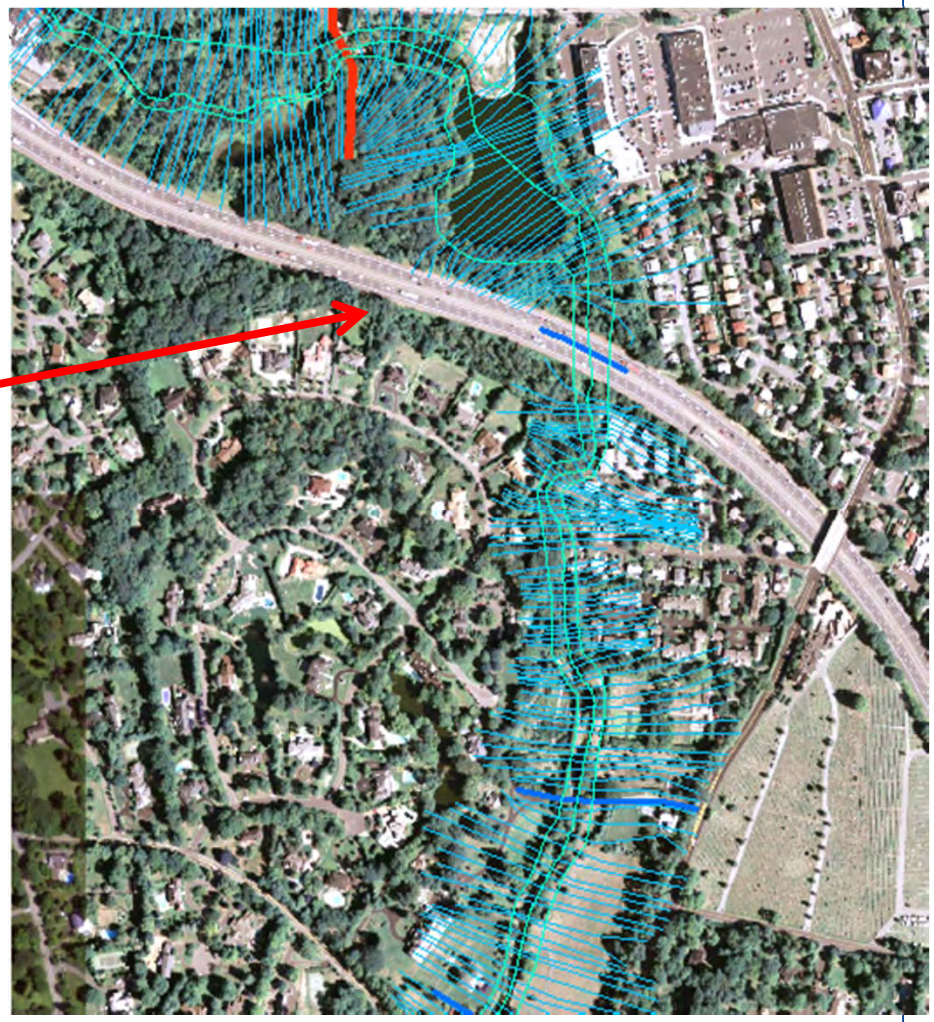
DEVELOP AN UNSTEADY HYDRAULIC MODEL (HEC-RAS) INCLUDING LIDAR DATA





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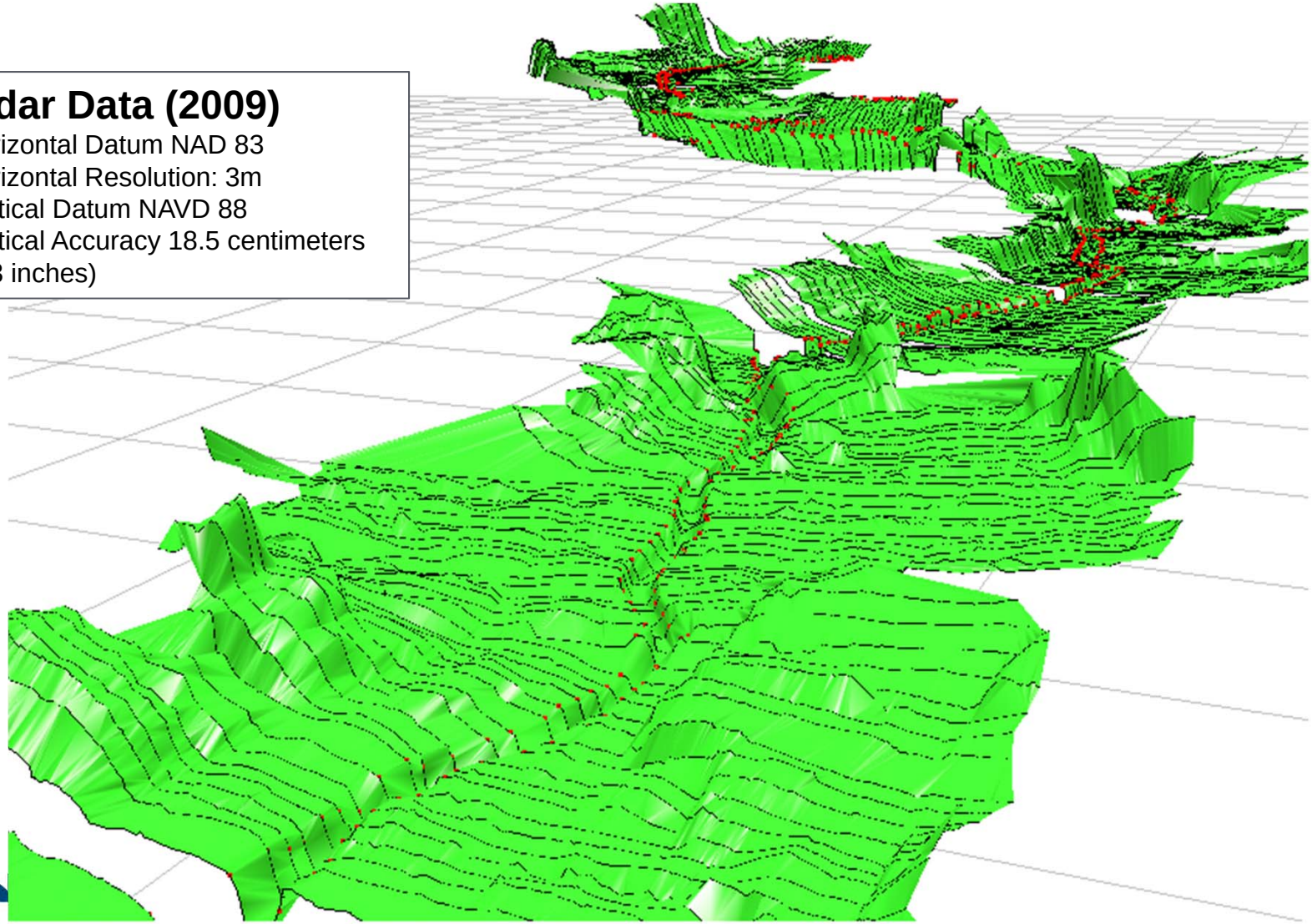
DEVELOP AN UNSTEADY HYDRAULIC MODEL (HEC-RAS) INCLUDING LIDAR DATA

Lidar Data (2009)

Horizontal Datum NAD 83
Horizontal Resolution: 3m
Vertical Datum NAVD 88
Vertical Accuracy 18.5 centimeters (7.3 inches)



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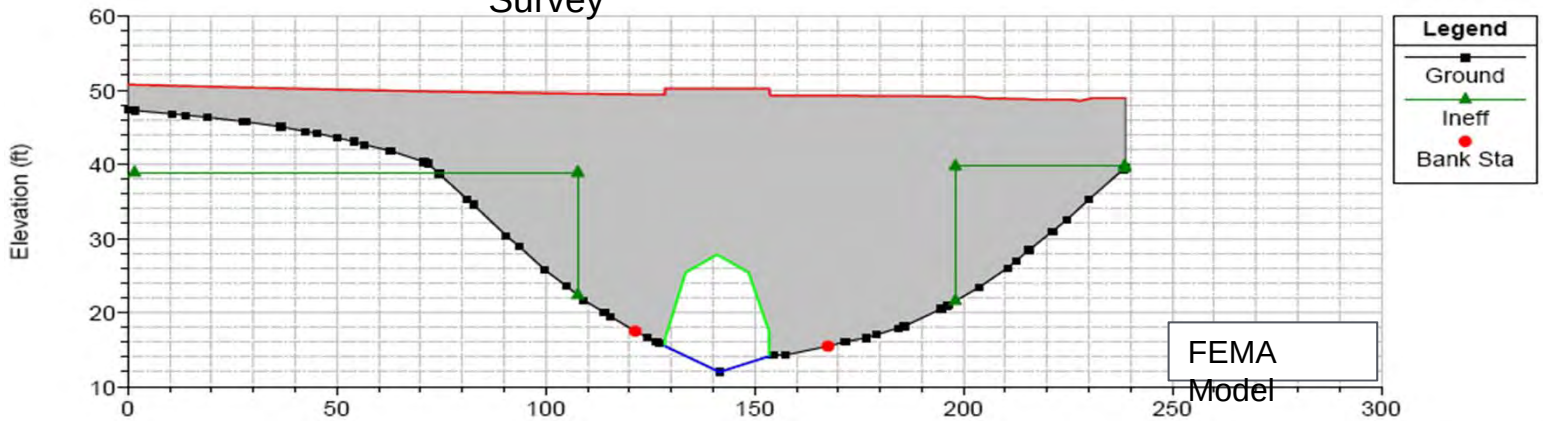
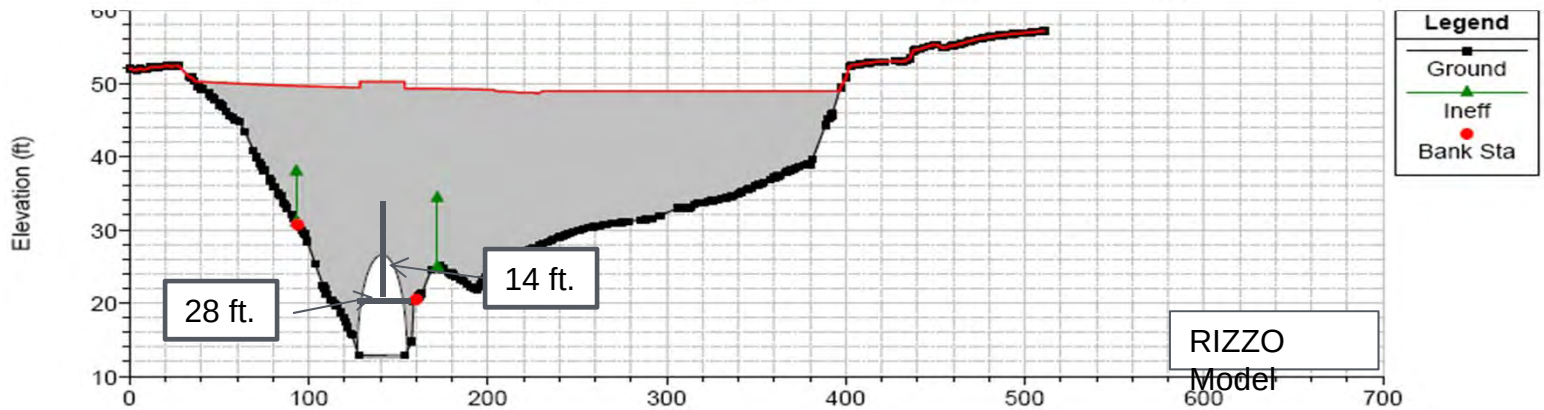
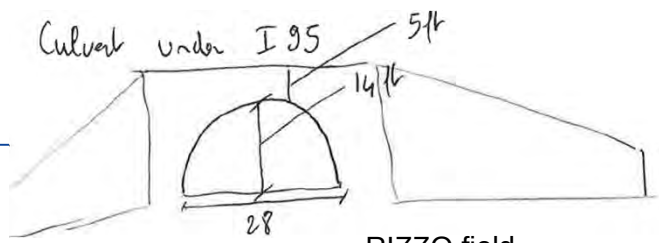
DEVELOP AN UNSTEADY HYDRAULIC MODEL (HEC-RAS) INCLUDING LIDAR DATA

Site Inspection and Main Structures Survey







RIZZO field Notes

HEC-RAS Model I-95 Cross Sections

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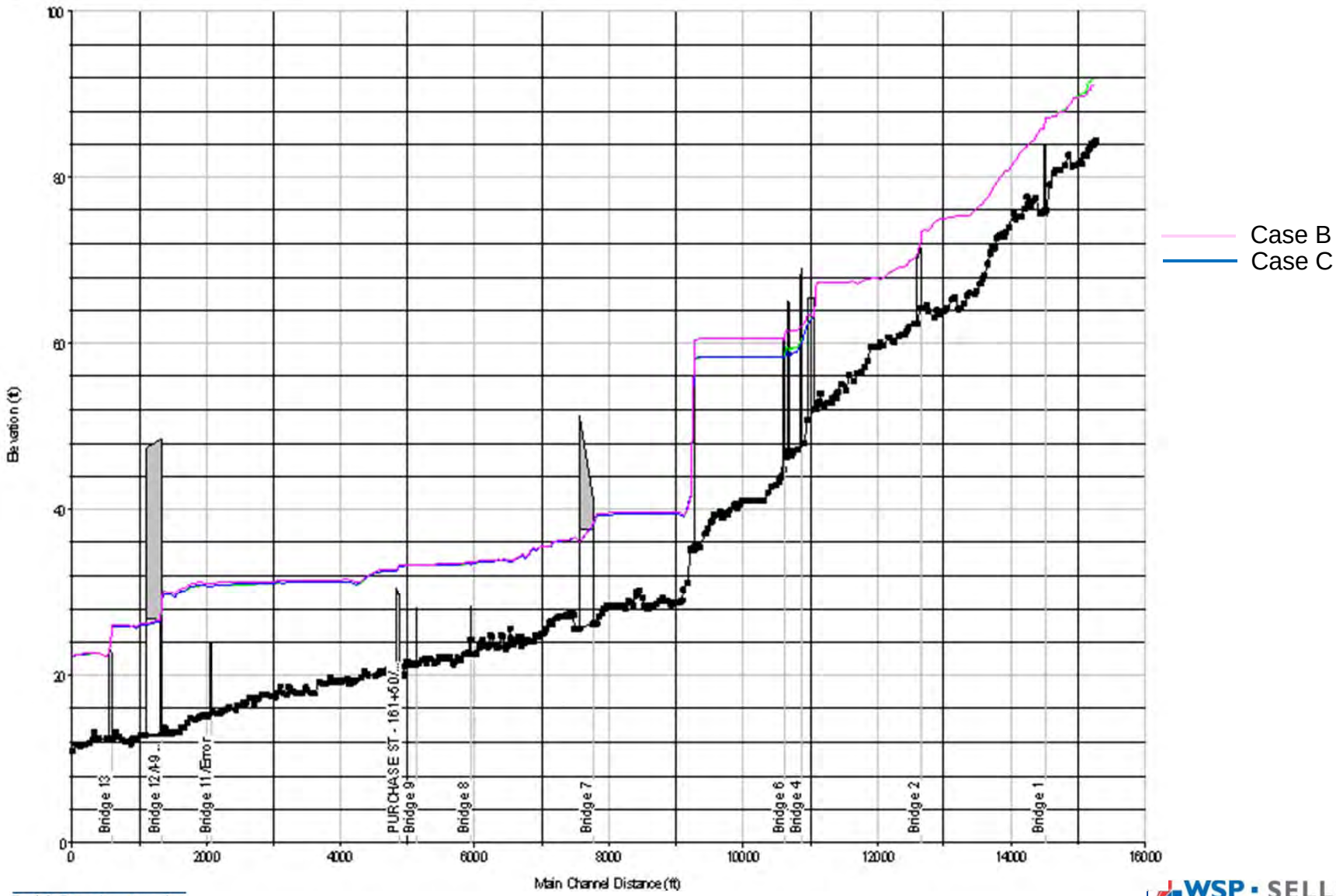
DEVELOP AN UNSTEADY HYDRAULIC MODEL (HEC-RAS) INCLUDING LIDAR DATA - RESULTS

UNSTEADY HYDRAULIC MODEL (HEC-RAS) PROFILE



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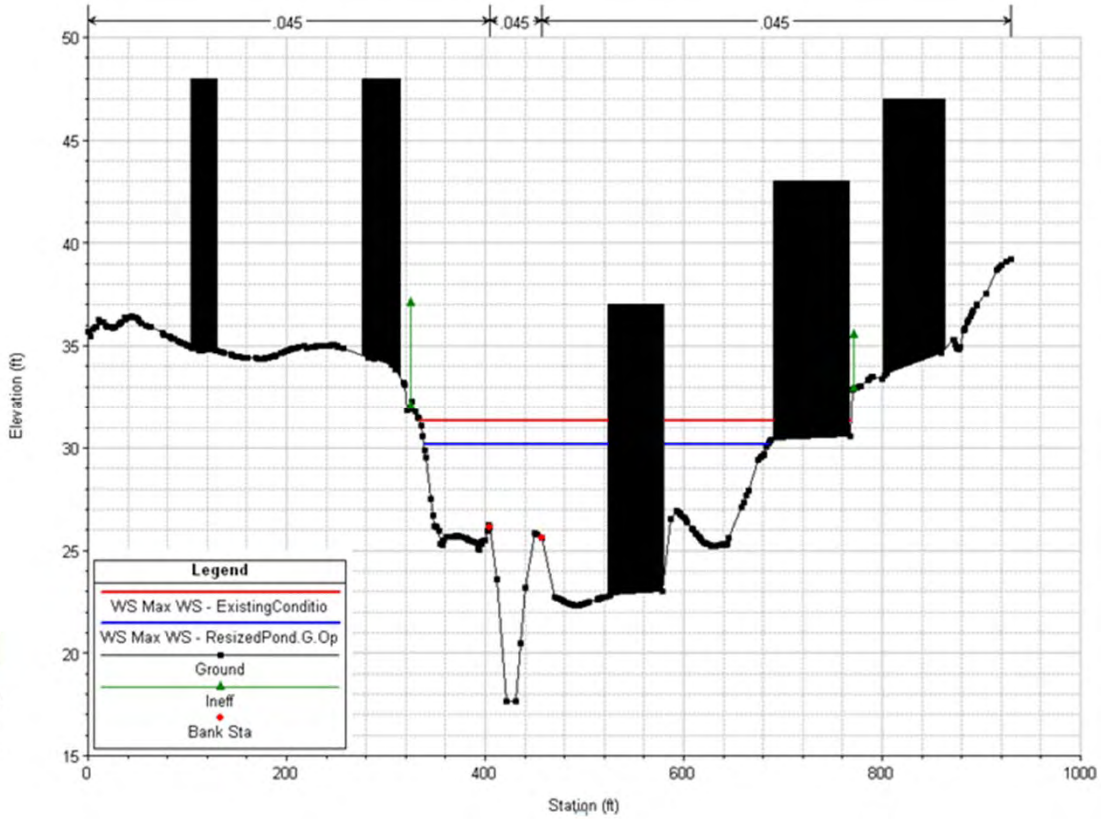

ΔEl. -1.02 ft.

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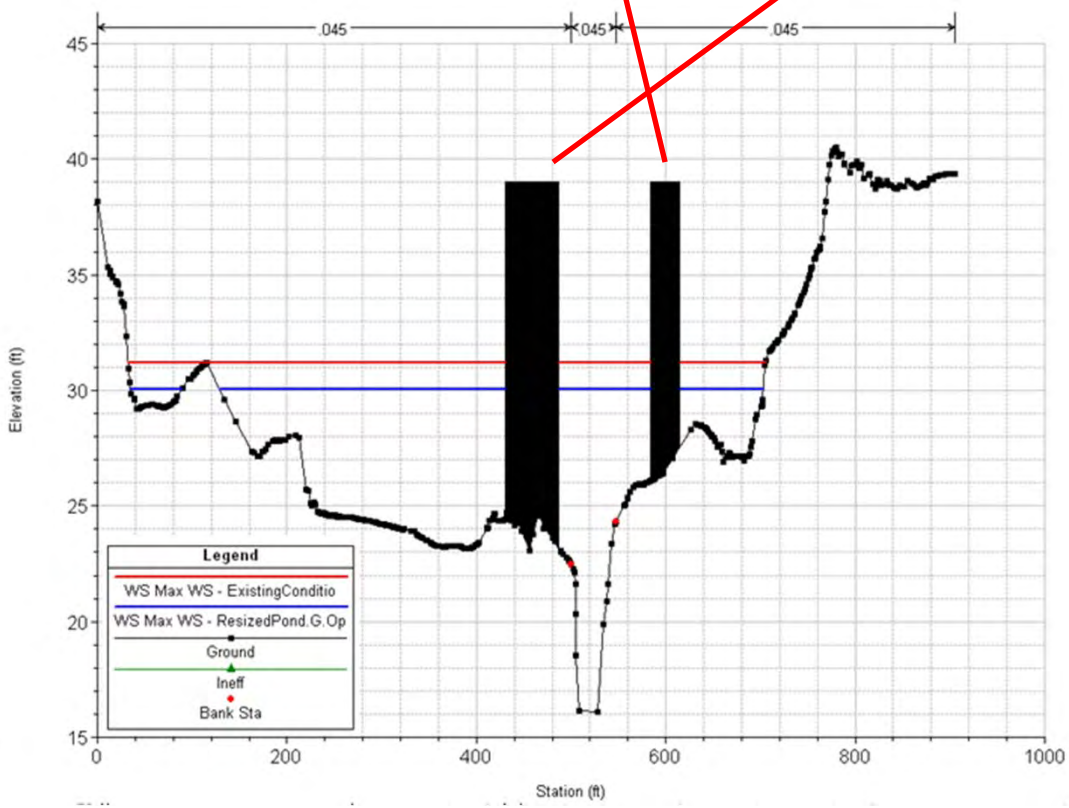

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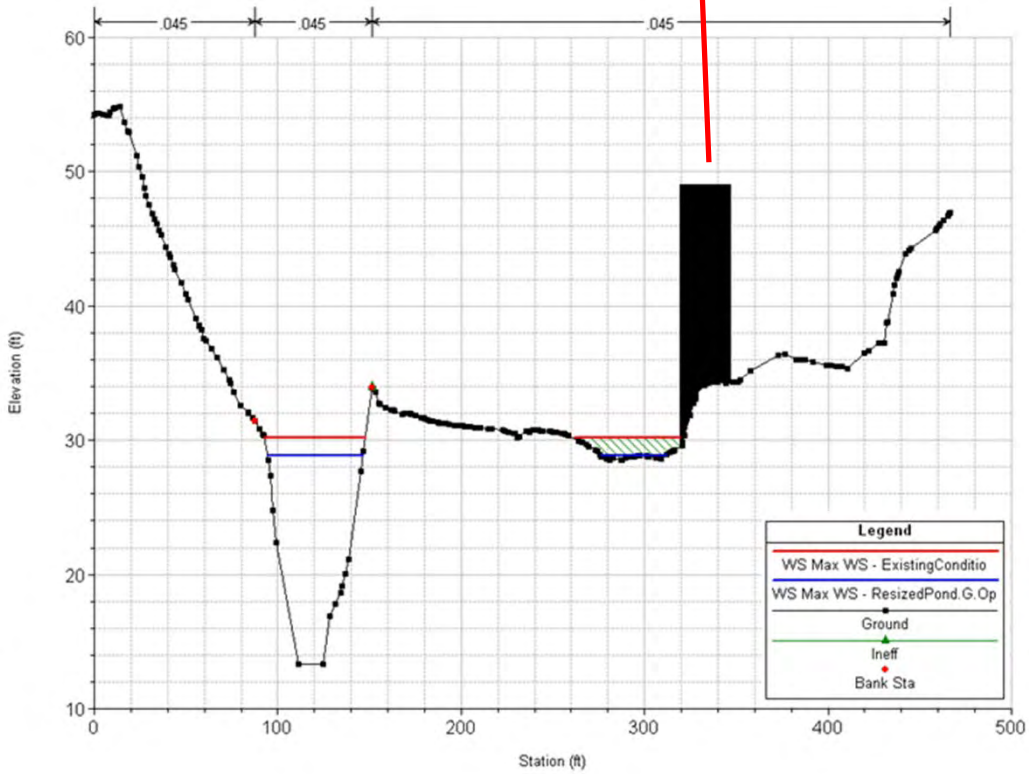

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SUMMARY OF RESULTS AT RELEVANT CROSS SECTIONS:

		Water Surface Elevation (WSE)-ft NAVD 83			Difference (ft-NAVD 83)			
Storm / Flood Condition	Locations	Existing Condition (CASE A)	Resized Upper Pond (**Alternative 2**) w/ Sluice Gate (CASE B)	Maximized Resized Upper Pond (**Alternative 1**) w/ Sluice Gate (CASE C)	CASE B w/ RIZZO Sluice Gate Optimization (CASE D)	Case A & B	Case A & C	Case A & D
2 Year Storm/Flood	U/S of Bowman Ave (XS=3348.4836)	59.17	59.17	59.17		0	0	
	D/S of I-287 (XS= 2230.179)	33.79	33.28	33.18		-0.51	-0.61	
	Purchase St (XS= 1508.0338)	28.28	27.77	27.64		-0.51	-0.64	
	Highland Road (677.1605)	24.45	23.93	23.79		-0.52	-0.66	
	US I-95 (XS= 504 .3617)	23.35	22.98	22.88		-0.37	-0.47	
	34 Mendota Av. (XS=733.8119)	24.91	24.49	24.36		-0.42	-0.55	
5 Year Storm/Flood	U/S of Bowman Ave (XS=3348.4836)	62.53	62.16	62.16		-0.37	-0.37	
	D/S of I-287 (XS= 2230.179)	34.53	34.31	34.22		-0.22	-0.31	
	Purchase St (XS= 1508.0338)	29.8	29.18	29.04		-0.62	-0.76	
	Highland Road (677.1605)	26.49	25.81	25.62		-0.68	-0.87	
	US I-95 (XS= 504 .3617)	24.65	24.05	23.92		-0.6	-0.73	
	34 Mendota Av. (XS=733.8119)	26.61	25.98	25.81		-0.63	-0.8	
10 Year Storm	U/S of Bowman Ave (XS=3348.4836)	63.92	63.67	63.67		-0.25	-0.25	
	D/S of I-287 (XS= 2230.179)	35.12	35.12	35.1		0	-0.02	
	Purchase St (XS= 1508.0338)	31.01	30.85	30.81		-0.16	-0.2	
	Highland Road (677.1605)	27.7	27.45	27.39		-0.25	-0.31	
	US I-95 (XS= 504 .3617)	26.13	25.8	25.71		-0.33	-0.42	
	34 Mendota Av. (XS=733.8119)	27.78	27.55	27.48		-0.23	-0.3	
25 Year Storm/Flood	U/S of Bowman Ave (XS=3348.4836)	64.78	64.78	64.78	64.78	0	0	0
	D/S of I-287 (XS= 2230.179)	35.51	35.52	35.53	35.28	0.01	0.02	-0.23
	Purchase St (XS= 1508.0338)	31.74	31.66	31.66	31.4	-0.08	-0.08	-0.34
	Highland Road (677.1605)	28.58	28.4	28.39	28.25	-0.18	-0.19	-0.33
	US I-95 (XS= 504 .3617)	27.32	27.09	27.08	26.89	-0.23	-0.24	-0.43
	34 Mendota Av. (XS=733.8119)	28.65	28.47	28.47	28.32	-0.18	-0.18	-0.33
50 Year Storm/Flood	U/S of Bowman Ave (XS=3348.4836)	66.16	66.16	66.16	66.16	0	0	0
	D/S of I-287 (XS= 2230.179)	35.93	35.85	35.85	35.52	-0.08	-0.08	-0.41
	Purchase St (XS= 1508.0338)	32.51	32.36	32.35	31.85	-0.15	-0.16	-0.66
	Highland Road (677.1605)	29.77	29.63	29.63	28.89	-0.14	-0.14	-0.88
	US I-95 (XS= 504 .3617)	28.67	28.52	28.52	27.71	-0.15	-0.15	-0.96
	34 Mendota Av. (XS=733.8119)	29.84	29.69	29.69	28.96	-0.15	-0.15	-0.88
100 Year Storm/Flood	U/S of Bowman Ave (XS=3348.4836)	67.34	67.34	67.34	67.34	0	0	0
	D/S of I-287 (XS= 2230.179)	36.29	36.22	36.22	35.9	-0.07	-0.07	-0.39
	Purchase St (XS= 1508.0338)	33.23	33.08	33.06	32.54	-0.15	-0.17	-0.69
	Highland Road (677.1605)	31.16	30.86	30.86	29.97	-0.3	-0.3	-1.19
	US I-95 (XS= 504 .3617)	30.15	29.85	29.81	28.88	-0.3	-0.34	-1.27
	34 Mendota Av. (XS=733.8119)	31.21	30.94	30.91	30.03	-0.27	-0.3	-1.18

In Summary

- Depth to bedrock allows for pond expansion
- Contaminated soils are considered *'non-hazardous'*
- Alternative 2: Excavating the upper pond above ordinary high water elevation provides flood relief primarily during higher frequency events
  - At Highland Avenue (6", 8", 3" w.s.e. reduction during 2, 5, 10 yr storms respectively)
- Alternative 1 provides minimal additional water surface reduction as compared to Alternative 2 and is considered cost-ineffective
- Upper pond resizing less effective during 25, 50 and 100 yr events
- Sluice gate can be optimized to work with upper pond expansion

Permitting / Agency Reviews

- WCDPW – Stream Protection Permit
- NYSDEC
  - SPDES Permit
  - Beneficial Use Determination
- ACOE Wetlands Permit
- Town / Village of Harrison
- Village of Rye Brook
- SEQRA

Project Costs

Project Costs

Construction Cost	$ 7,700,000.00
Engineering*	$ 350,000.00
Construction Inpection/Support	$ 150,000.00
TOTAL	$ 8,200,000.00
Future Maintenance Dredging**	$2.0 - $2.5 million

*Includes surveying; preliminary and final design; hydraulics; permitting; agency approvals, contract documents/bidding

**Assumes removal of 1-foot of non-hazardous contaminated sediment within a 10-year period

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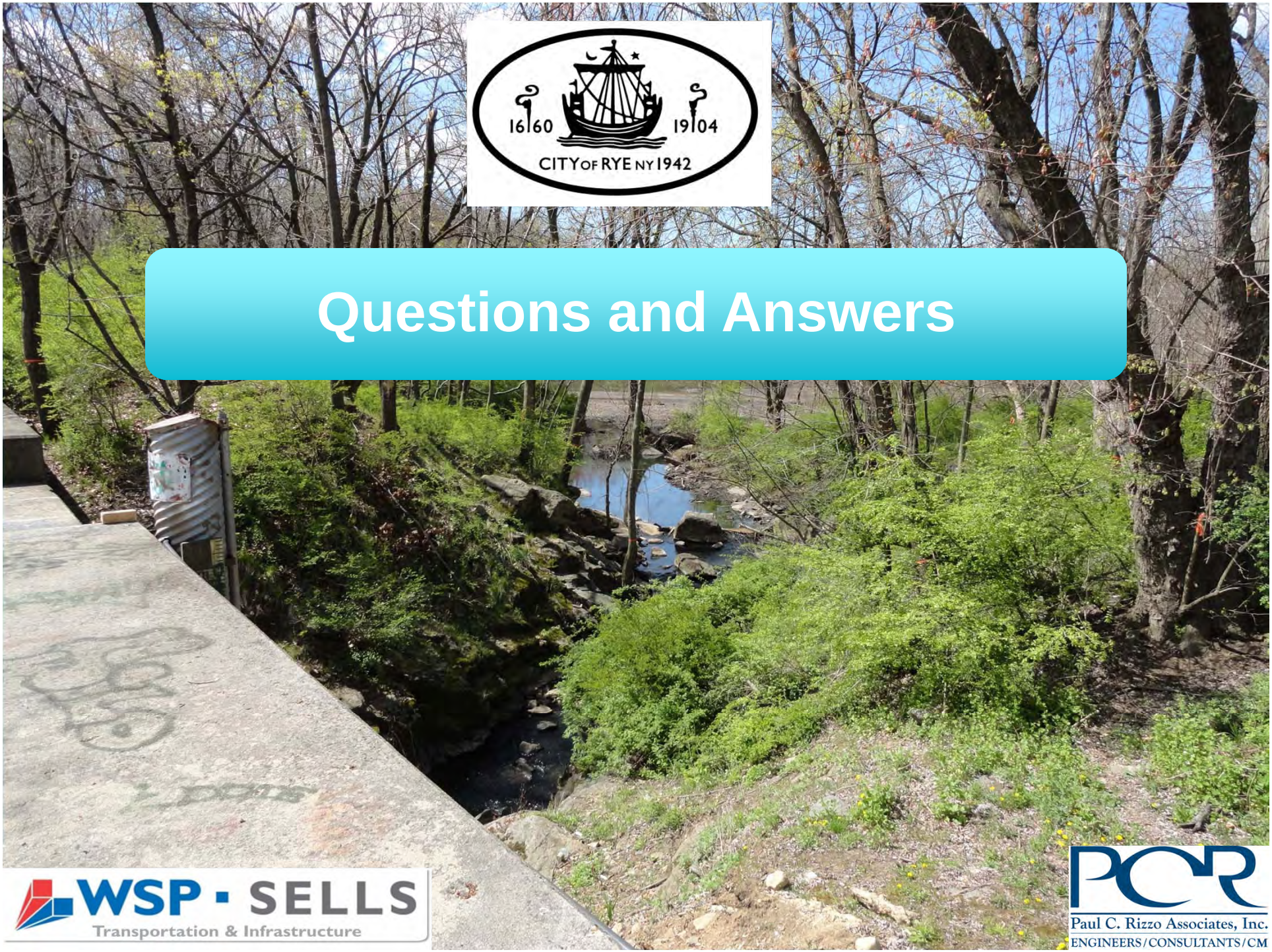

Questions and Answers

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Transportation & Infrastructure

PCR
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Rye Free Reading Room Projects:

- Fire Sprinkler and Alarm System
- Flood Mitigation & ADA Access
- Security Cameras

Rye Library in the Bond – Why?

- It is our responsibility to protect the public, library workers, the historic building, the collections and equipment:
  - People, 200,000 visits & 20,000 staff hours
  - Building, 1913
  - Books, audio-books, movies, music, furnishings, computers, value over $2 million

What could we, should we, can we do?

- Fire Sprinklers and Fire Alarm Systems in the 1913 building
- Flood Mitigation and ADA Access
- Security Cameras

Fire Sprinklers and Fire Safety Systems $127,000

–2003 expansion and renovations

- Lower level and Children's Room
- New wing, Community Meeting Room and Lobby
- Sprinkler piping sized for entire building
- Fire Alarm panel sized for entire building

–2012 renovations

- Sprinkler distribution piping installed for 1st and 2nd Floor

Flood Mitigation and ADA Access $49,000

- Parking lot entrance
  - Door Dams, (Rear exit as well)
  - New push doors – 2 doors
  - Replace sidewalk and ramp the curb
- Lobby Entrance
  - Replace push door at Lobby entrance
  - New push door between lobby and library's main floor

Security Cameras $23,000

- Monitor 3 floors, 5 points of entry
- Ability to look back over time
- 12 cameras

The Rye Free Reading strives to ensure a safe, accessible and functional library for the community to use and rely upon.

THANK YOU,

BOARD OF TRUSTEES AND STAFF

RYE FREE READING ROOM

Escape to the Library

Rye Shared Roadways Recommended Projects

Rye Shared Roadways recommendations for Projects to be funded by proceeds of an infrastructure bond

1. **Sidewalk installation and maintenance**

   New sidewalks needed
   - Nursery side of Milton Road
   - North Street's East side along Nature Center & to Playland Parkway Access road.
   - North side of Fremd from municipal parking lot to Purchase St.

   Existing sidewalks needing immediate attention
   - BPR fm Marshlands to Rye Pool
   - Locust Ave. sidewalk west of Fremd
   - Osborn home sidewalk along the Playland access road continuing along Theall Road to the Osborn home

2. **Crosswalk installation and maintenance**. There should be a standardized approach to designing new and redesigning existing crosswalks so that all crosswalks are immediately recognizable as such. Best practices include the use of raised crosswalks, alternate materials, accompanying signage and other treatments.

   New crosswalks needed or current crosswalks that need to be moved

   - Forest Avenue at Eve Lane: raised, moved
   - Forest Avenue at Hewlett: add crosswalk from Hewlett to Forest on the right-hand/ south side of the intersection; change the location of the crosswalk at Hewlett and Forest to the south side of Forest
   - Purchase Street near BPR/Square House: include bumpout and bollards
   - Billington and Platt, south side
   - Midland at approximately the mid-point of the school's basketball court on the East and Rye Rec's field on the West
   - Milton near or after Fairlawn
   - Dearborn at Halstead or Fairlawn
   - Old Post Road & BPR in front of the Osborn
   - BPR at Sonn Dr.
   - Across Parsons and across BPR at that intersection: raised with bumpout
   - BPR near Thistle/Peck
   - Fireman's Memorial

- Highland Road at Wappanocca
- Highland Road at Mendota
- Apawamis at Milton: raised
- Milton Road at Nursery Field
- BPR at Old Post Road near RM/HS
- Oakland Beach Rd entering Disbrow Park
- Purchase Street at Fremd, north side
- Rye MTA station

3. Schools

a. RHS/MS

i. Add crosswalks and a pedestrian refuge island to improve the pedestrian/bike connection across BPR to the recommended sidewalk adjacent to the Nature Center.

ii. Restripe and resign crosswalk. Add portable traffic bollards where necessary. Paint zebra stripes and place signage indicating “students X-ing”

iii. Repave and repair steps at the Eve Lane cut through.

iv. Add a sidewalk on the east side of BPR from Central Avenue north to Parsons (along the Nature Center parallel to Blind Brook).

b. Milton school

i. Modify crosswalk signals at the corner of Oakland Beach Ave/Milton Avenue. Add painted crosswalk on south side across Oakland Beach Ave.

ii. Construct a new crosswalk in the Dearborn vicinity.

c. Midland

i. Construct a new northern crosswalk bisecting Midland at approximately the mid-point of the school's basketball court on the East and Rye Rec's field on the West.

ii. Construct a new southern crosswalk at the corner of the traffic circle that crosses to Billington court.

4. CBD

- Add left turn lane from Theo Fremd north onto Purchase street with turn arrow signal
- Improve the BPR/Purchase St junction with a new crosswalk, bump-outs, safety bollards, and sharrows.
- Investigate the use of smart parking technologies
    - reduce enforcement costs.
    - enable raising parking rates during peak demand times, ensuring spaces
    - increase revenue
    - increase convenience (easier to find a spot).
    - encourage more bike and pedestrian access

5. **Rye Metro North train station**. Update and implement renovation plan for Station Plaza developed previously by MetroNorth; review for adequacy of crosswalks, signage, lighting, definition of vehicle travel lanes, bike parking,etc. Augment with features important to Rye (e.g., bike racks and lockers).

6. The **Loudon Woods embankment wall**. This is included in the current CIP. The wall needs to be reinforced or rebuilt, thereby re-opening a critical sidewalk for commuters and schoolkids.

7. **Eve Lane easement**. There is strong community demand for improving and maintaining this shortcut which needs improvements.

8. The **5 Corners intersection at Kelly's**. We recommend a conceptual study for this difficult intersection.

9. **Fireman's Memorial**. Possible redesign as a proper traffic circle, with improved crosswalks, markings, signage and signal timing.

Bond Referendum Timeline and Financing

DATE	ACTION
June 20, 2012	Workshop held on Bond Referendum
June 20 – July 3, 2012	City Staff to work with Bond Counsel on Bonding Resolution
July 6, 2012	Distribute Bond Resolution to Council for review
July 11, 2012	Close the Public Hearing regarding the projects to be bonded
July 11, 2012	Adopt the Bond resolution by 60% majority including a yes vote by the Mayor
August, 2012	Send ballot information to Board of Elections (City Staff action only)
November, 2012	General Election
November, 2012	Override the tax levy cap for the 2013 Budget to pay debt
November to December 2012	Borrow funds if Bond Referendum passes
January, 2013	Commence work on Bond projects
November, 2013	Override the tax levy cap for the 2014 Budget to pay debt
December, 2013	First interest payment is due
June, 2014	Second interest payment is due
December, 2014	First principal payment and third interest payments are due

Note 3 - Detailed Notes on All Funds (Continued)

Bonds Payable

Bonds payable at December 31, 2011 are comprised of the following individual issues:

Purpose	Year of Issue	Original Issue Amount	Final Maturity	Interest Rates	Amount Outstanding at December 31, 2011
Golf Club Improvements (Taxable)	1998	$ 1,743,000	September, 2018	6.2 to 6.300 %	$ 890,000
EFC - Land Acquisition	2004	1,708,013	August, 2024	3.761 to 4.964	1,185,000
Public Improvements	2005	6,428,000	December, 2025	3.875 to 4.000	5,020,000
Refunding Bonds	2010	8,965,000	September, 2021	2.0 to 4.000	8,080,000
Public Improvements	2010	3,534,000	September , 2030	2.0 to 4.000	3,440,000
EFC - Kirby Lane Sewer	2010	2,373,374	April, 2039	0.724 to 4.603	2,230,000
					$ 20,845,000

Interest expenditure/expense of $187,171 and $444,405 was recorded in the fund financial statements in the Debt Service Fund and the Internal Service Fund, respectively. Interest expense of $618,037 was recorded in the government-wide financial statements for governmental activities. Interest expense of $107,085 was recorded in the fund financial and government-wide financial statements for the business-type activities - Golf Club Fund.

Payments to Maturity

The annual requirements to amortize all bonded and installment purchase contract debt outstanding, including interest of $5,645,347 as of December 31, 2011 is as follows:

	Bonds					
	Governmental Activities		Business-type Activities		Total	
Year	Principal	Interest	Principal	Interest	Principal	Interest
2012	$ 1,165,000	$ 595,900	$ 320,000	$ 107,895	$ 1,485,000	$ 703,795
2013	1,195,000	568,791	330,000	97,085	1,525,000	665,876
2014	1,235,000	534,339	345,000	83,665	1,580,000	618,004
2015	1,280,000	498,378	360,000	69,415	1,640,000	567,793
2016	1,310,000	460,701	375,000	54,490	1,685,000	515,191
2017-2021	6,665,000	1,596,991	800,000	58,635	7,465,000	1,655,626
2022-2026	3,435,000	641,830	-	-	3,435,000	641,830
2027-2031	1,330,000	206,886	-	-	1,330,000	206,886
2032-2036	430,000	61,387	-	-	430,000	61,387
2037-2039	270,000	8,959	-	-	270,000	8,959
	$ 18,315,000	$ 5,174,162	$ 2,530,000	$ 471,185	$ 20,845,000	$ 5,645,347