Project Report
Flood Mitigation Study
Lower Pond Supplemental

City of Rye
Westchester County, N.Y.

Flood Control Improvements
Blind Brook at Lower Pond Site

Prepared By:

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Introduction

Chas. H. Sells, Inc. (Sells) was retained by the City of Rye to investigate additional flood storage alternatives consistent with the conclusions and recommendations for the Lower Pond as described in the "*Flood Mitigation Study - Bowman Avenue Dam Site and Lower Pond*" final report, dated March 12, 2008. This report is considered a supplement to the afore-mentioned study.

This report will evaluate two alternatives designed to maximize the storage potential of the Lower Pond, one is a gravity based while the other is mechanical.

Description of Existing Conditions

The Lower Pond site is bounded by Bowman Avenue to the north, I-287 to the south and west (latitude 41 00' 08" North by longitude 73 41' 09" West). The Lower Pond is located immediately downstream of Bowman Avenue dam. The Lower Pond serves as the confluence with East Branch Blind Brook. The Lower Pond, originally used as a quarry, was abandoned in 1976 and subsequently flooded to form the 5 ½ acre pond. The 1-acre peninsula along the northern shore of the pond has been formed as a result of dumping within the last 25-years. The maximum depth of the pond is 30-feet as determined by soundings performed by Sells.

The Lower Pond, in its current condition, provides minimal storage capacity for flood control purposes; it was not designed to do so. There is no man-made outlet control at this location. The water level in the pond is controlled by a "natural" overflow located immediately downstream of the Lower Pond approximately 300 feet upstream from the I-287 bridge.

Alternatives Analysis

The "*Flood Mitigation Study. Bowman Avenue Dam Site and Lower Pond*" final report, dated March 12, 2008 describes and presents the findings of four alternatives derived from the removal of a 1-acre "peninsula" adjacent to Bowman Avenue at the northwest side of the pond so as to create additional storage and modifications to the outlet from the pond. As described in the report, removal of the peninsula adjacent to Bowman Avenue at the northern side of the Lower Pond and modifications to the "natural" overflow section has negligible effects in reducing the peak flow rates.

Additional alternatives studied as part of this analysis include:

Alt. A. Increasing the storage area at the Lower Pond site, gravity based, providing an outlet structure with the principal spillway at elevation 31.0.

Alt. B. Increasing the storage area at the Lower Pond site, mechanical based, providing an outlet structure with the principal spillway at elevation 31.0.

Alt. C. Increasing the storage area at the Lower Pond, gravity based, providing an outlet structure with the principal spillway at elevation 35.5.

Alt. D. Increasing the storage area at the Lower Pond, gravity based, providing an outlet structure with the principal spillway at elevation 35.5. and optimizing the Bowman Avenue dam outlet.

Alternate A

This alternate consists of:

- Excavating approximately 35,000 cubic yards of material, which includes the removal of the peninsula and an area towards Bowman Avenue dam on the west up to the elevation 28.0.
- Diverting the East Branch Blind Brook via a precast concrete channel approximately 30 feet wide and 8 feet high and 830 feet long.
- Constructing an outlet structure north of I-287.

As a result, the storage volume of the Lower Pond will be increased to approximately 67 Ac-ft (measured at the top of outlet structure). The outlet structure will control the outflow from the Lower Pond and will have a bottom orifice approximately 50 feet wide x 2 feet high at elevation 27.7. The bottom of the principal spillway of the outlet structure will be approximately 100 feet in length and set at the elevation 31.0. The height of the control structure will be 7.8 feet with the top at the elevation 35.5.

With the construction of the outlet structure, the water elevation in the Lower Pond will be raised approximately 2 feet during a 100-year frequency storm. Such a raise of the water surface elevations in the Lower Pond would have a negative impact on the immediate reach of East Branch Blind Brook upstream of Bowman Avenue. In order to mitigate this backwater effect, a diversion channel would be required for the East Branch Blind Brook. A conceptual plan is shown in Figure 1. A budgetary cost of Alternate A is $9 to $11 million dollars.

Alternate B

This alternate consists of:

- Removing the existing 4-acre peninsula along the Bowman Avenue and constructing a berm to el 36.
- Regrading along the western bank
- Install a pump station with 10 centrifugal/submersible pumps (8 primary, 2 back-up) to pre-drain the pond prior to a storm event.
- Segregating the East Branch Blind Brook by constructing a precast concrete diversion channel (30 ft wide x 8 feet deep x 830 feet long). Also segregate the Blind Brook via a second precast concrete diversion channel (30 ft wide x 8 feet deep x 1,070 feet long).
- Constructing a diversion structure immediately downstream of the existing Bowman Avenue Dam and an outlet structure at the southern end.

Alternate B is a mechanical-based solution as it consists of installing 10 centrifugal submersible pumps with 9,000 gallon/minute capacity each. The purpose of which is to pre-drain the Lower Pond in advance of a storm. It is estimated that it would take approximately 6 hours to drain the pond. This alternative would allow for the entire Lower Pond volume to be utilized for flood storage. The Lower Pond, in its drained condition, provides approximately 134 Ac-feet of storage.

This alternative necessitates the construction of two diversion channels; one for the Blind Brook and one for the East Branch Blind Brook. The Blind Brook diversion structure/diversion channel combination will allow Blind Brook low flow to be conveyed through a 30 feet by 2 feet orifice located at the bottom of the diversion channel and the flows during significant storm events to be routed through the Lower Pond.
The top of the diversion structure is at the elevation 38.0, and a 97.0 feet principal spillway set at the elevation 33.0.

The Blind Brook diversion channel will be 1,070 feet long, 30 feet wide and 8 feet high. The outlet control will be 50 feet wide x 2.0 feet high with a bottom orifice at elevation 27.7. The principal spillway will be 100 feet in length set at the elevation 31.0. The top of the structure set at the elevation 35.5 will be 18 feet long. The East Branch Blind Brook diversion structure will be same as described in Alternate A.

A conceptual plan is shown in Figure 2. A budgetary cost of Alternate B is $23 to $25 million dollars.

Alternate C
This alternate is similar to Alternate A with the exception that the East Branch Blind Brook diversion channel and the outlet structure were raised to the elevations 43.0 and 37, respectively and an approximately 420 feet of a berm with the top at the elevation 43.0 was provided along Bowman Avenue (Figure 3). The bottom outlet dimensions were changed to 20 feet wide x 3.6 feet orifice at the elevation 27.7. As with Alternate A, the storage volume doesn't account for approximately 72 Ac-feet; the volume below elevation 27.7.

This alternate will provide approximately 87.0 Ac-feet of storage. A conceptual plan is shown in Figure 3. A budgetary cost of Alternate C is $12 - 14 million dollars.

Alternate D
Alternate D is a combination of Alternate C, described above, and outlet optimization at the Bowman Avenue dam by installing a sluice gate. The sluice gate is the preferred alternative as described in the "*Flood Mitigation Study - Bowman Avenue Dam Site and Lower Pond*" final report, dated March 12, 2008.

The estimated cost of Alternate D is $14 to $16 million dollars (including the installation of the sluice gate).

Methodology – Flood Routing

In the initial evaluation each of the alternatives was compared using flood routing calculations. The existing and Bowman Avenue dam outlet optimization conditions WinTR-20 models used in the March 12, 2008 report were modified to account for the new Lower Pond modifications alternates. The model is based on available TR-20 data included in the 1979 Flood Insurance Study backup information for the City of Rye. The backup information includes drainage areas, Runoff Curve Numbers and time of concentration for each sub watershed and the model schematic. Although this data is from the 1970's and might not represent existing conditions, including the extent of natural and manmade changes that have occurred in the watershed, for the purpose of determining inflow/outflow rate at the Bowman Avenue Dam, the available data is considered valid. This is the same data that was used in the April 2007 ACOE report.
A few modifications of the old model were performed, these include:

- To analyze the effect of storage at the Lower Pond site, the subbasin located north of I-287 was divided into sub-watersheds representing smaller portions of the total area. Based on Sells field survey data in the vicinity of the dam, the structure data was also updated.
- The entry of routing coefficients x and m (in the Att-Kin routing procedure) in lieu of reach cross-section rating data is no longer accepted by the newest version of WinTR-20. All reaches in the old data used cross sections instead of routing coefficients. Therefore, the analysis is based on cross section ratings developed for the 2007 FEMA Flood Insurance Study (FIS) model.
- The East Tributary located north of Hutchinson Parkway was not studied in detail and cross section data was not available in the new FIS. Therefore, the FEMA cross-section information was supplemented with Sells field survey in this area.

Flood routing calculations are used to establish inflow/outflow rates for a variety of reservoir volumes and outlet openings. The results are discharge rates for the stream.

Even though this methodology only provides for rates and not water surface elevations, it was selected for the initial calculations since it does provide a means to evaluate the magnitude of mitigation an alternative could provide with a relatively simple calculation. From these results a short list of alternatives that show meaningful mitigation potential can be established for more detailed analysis. The detailed analysis, which is described in the "Preferred Alternative" section, produces water surface elevations on Blind Brook within the study area.

In order to increase the Lower Pond site flood control potential, four new possible alternatives were analyzed. The efficiency of a flood control structure during various frequency storms depends on the difference between rates of inflow and outflow. As the water level at a control structure rise, so does its flow rate through the structure. To analyze the effects of a control structure a stage/discharge curve is established that

computes the outgoing flow rate for various water levels (stages). Stage/discharge curves (attached in the Appendix) were developed at the proposed Lower Pond outlet structure.

Output generated by WinTR-20 models for each alternate studied is also attached in the Appendix.

The flood routing was performed using the National Resources Center's (NRC) WinTR-20, Version 1 software. This software is the windows version of the original DOS based TR-20 model developed by the NRC, formerly known as the Soil Conservation Center.

The software forecasts the rate of surface water runoff and watercourse flow rates based on several factors. The input data includes information on land use, soil types, vegetation, watershed areas, times of concentration, rainfall data, storage volumes, and hydraulic capacities of the hydraulic structures. The computer model predicts the amount of runoff as a function of time, including the attenuation effect due to dams, lakes, large wetlands, and floodplains. Runoff rates during specific rainstorms may vary due to different assumptions concerning soil moisture, water levels in ponds, snowmelt, and rainfall patterns. The input data for rainfalls with statistical recurrence frequencies of 2, 5, 10, 25, 50 and 100-years were obtained from the U.S. Weather Bureau Technical Papers. The National Weather Service developed four synthetic storms to simulate rainfall patterns around the country. For analysis in Westchester County, the Type III rainfall pattern with 24-hour duration is valid. Typically, the TR-20 methodology overestimates the peak discharges for all storm events.

Findings

The results of the analysis, summarized in Table 2, indicate that the gravity-based and mechanical-based alternatives (Alts. A & B) both provide comparable flow reductions. For 2, 5 and 10-year frequency storms, there is a 2% to 6% reduction in flows (calculated at I-95). For 25, 50 and 100-year storms, flow reductions were less; from 0% to 4%.

Alternative C showed a higher flow reduction at I-95 with a 22% and 18% reduction for 5 and 10-year frequency storms, respectively. However, similar to Alternatives A and B, this alternative had less of an effect on the lower frequency events. For the 25, 50 and 100-year storms the reductions ranged from 2% to 8%.

Based on the analysis, Alternative D provides the largest discharge reduction. This was accomplished by increasing the Lower Pond storage and providing a fixed outlet structure with the principal spillway at elevation 35.5 and combining this effect with optimizing the Bowman Avenue dam outlet. Whereas Alternative D showed comparable flow reductions for the 2, 5 and 10-year storms it had a greater impact on the 25, 50 and 100-year events (10%, 23% and 9% reductions respectively). This is primarily attributed to the influence of the sluice gate. Alternative D was further analyzed to calculate downstream water surface elevations.

Table 2 - Discharges - Alternatives A, B, C and D (cfs)									
	Existing Cond.	Alt. A	Diff.	Alt. B	Diff.	Alt. C	Diff.	Alt. D	Diff.
2-Year Storm									
U/S Bowman Dam	903	903	0	903	0	903	0	903	0
D/S Bowman Dam	397	397	0	397	0	397	0	397	0
D/S I-287	558	522	-36	531	-27	482	-76	482	-76
D/S I-95	681	670	-11	696	15	639	-42	639	-42
5-Year Storm									
U/S Bowman Dam	1610	1610	0	1610	0	1610	0	1610	0
D/S Bowman Dam	1253	1253	0	1253	0	1253	0	969	-284
D/S I-287	1467	1334	-133	1371	-96	1038	-429	982	-485
D/S I-95	1413	1323	-90	1340	-73	1098	-315	1071	-342
10-Year Storm									
U/S Bowman Dam	2006	2006	0	2006	0	2006	0	2006	0
D/S Bowman Dam	1768	1768	0	1768	0	1768	0	1387	-381
D/S I-287	2079	1962	-117	1991	-88	1688	-391	1595	-484
D/S I-95	2012	1901	-111	1923	-89	1645	-367	1658	-354
25-Year Storm									
U/S Bowman Dam	2868	2868	0	2868	0	2868	0	2868	0
D/S Bowman Dam	2800	2800	0	2800	0	2800	0	2288	-512
D/S I-287	3384	3232	-152	3272	-112	3081	-303	2662	-722
D/S I-95	2994	2918	-76	2937	-57	2750	-244	2687	-307
50-Year Storm									
U/S Bowman Dam	3774	3774	0	3774	0	3774	0	3774	0
D/S Bowman Dam	3755	3755	0	3755	0	3755	0	3373	-382
D/S I-287	4490	4397	-93	4425	-65	4330	-160	3920	-570
D/S I-95	4844	4652	-192	4697	-147	4547	-297	3753	-1091
100-Year Storm									
U/S Bowman Dam	4342	4342	0	4342	0	4342	0	4342	0
D/S Bowman Dam	4322	4322	0	4322	0	4322	0	4076	-246
D/S I-287	5144	5121	-23	5144	0	5090	-54	4776	-368
D/S I-95	5621	5575	-46	5613	-8	5518	-103	5106	-515

Methodology – Water Surface Profiles

Blind Brook and East Branch Blind Brook were studied by detailed hydrologic and hydraulic methods for FEMA's preliminary FIS for Westchester County. Backup data was made available to Sells through Michael Baker, Jr., Inc. The area studied in this report on Blind Brook is from I-95 (south) to Interstate I-287 (north). For this study of this reach of Blind Brook, base data from the FIS model was used as presented with the exception of flow rates. For the analysis the discharges developed in the SELLS' August 2007 Hydrologic Report. To take into account the peak discharge reduction at Bowman Dam site for each alternative, the computed discharges were adjusted by an inflow/outflow ratio developed by the WinTR-20 software (Appendix). All other data including cross sections, distances between cross sections, Manning's n values, bridge

geometry, ineffective flow areas, etc. was applied as represented in the FEMA study. The model created was used as the baseline model for this report.

The software used for the FIS for developing water surface profiles for Blind Brook and East Branch Blind Brook is the ACOE's HEC-RAS software. HEC-RAS is an improved windows version of the DOS based HEC-2. The program is designed to perform one-dimensional hydraulic calculations of natural and manmade channels. Water surface profiles are computed using an iterative procedure called the standard step method. The water surface elevations are calculated from section to section by solving the Energy equation. The bridge modeling approach chosen in the FIS is the "momentum" for low flows and "pressure and/or weir" for high flows.

The boundary condition (starting point of the backflow analysis) for each alternative was determined from a rating curve (included in Appendix) developed from the existing FIS HEC-RAS water surface elevations at a section located approximately 850 feet downstream of Interstate I-95. The water surface elevations for the existing, recommended outlet optimization at Bowman dam and Alternate D alternatives were computed and presented in the following sections. Copies of the HEC-RAS outputs are also included in the Appendix.

Table 3.1 and Table 3.2 provide a comparison of the discharge rates and water surface elevations arrived at by the FIS and those presented in this report. Since Sells' August 2007 Hydrological Report determined that the discharge rates in this reach of Blind Brook are greater than those used by FEMA for the existing conditions our results are larger. For the alternative analyses, differences in the results stem from not only the variation in discharge rates but also from the manner in which the outlet system at the Bowman Avenue Dam was modeled. In Sells' analysis we took into account the ability of varying the orifice opening at the base of the Bowman Avenue dam as well as the other outflow features such as the weir and dam site overflow and modifications at the Lower Pond site. In the FEMA model the dam was modeled as an "in-line structure". Input for this feature is a single weir and a single orifice, a much simpler configuration than the existing conditions that Sells modeled. The differences in the manner in which the actual dam, pond, overflow, and outlet work depending upon the water surface elevation leads to the variations between our values and FEMA's.

Table 3.1 - Comparison Between the FIS and Sells Analysis

	Existing Conditions				Alternate Optimize Orifice Opening at Bowman Dam				Alternate D			
	FIS		Sells		FIS		Sells		FIS		Sells	
	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)
10-Year Storm												
I-95 (U/S)	1,521	22.93	1,982	24.59	1,521	22.93	1,789	23.89	1,521	22.93	1,633	23.33
Highland Rd. (U/S)	1,521	24.15	1,982	25.88	1,521	24.15	1,789	25.24	1,521	24.15	1,633	24.66
Purchase St. (U/S)	1,434	27.35	1,663	28.33	1,434	27.35	1,344	27.73	1,434	27.35	1,270	27.38
I-287 (U/S)	1,374	32.88	1,663	33.29	1,374	32.88	1,344	32.82	1,374	32.88	1,270	32.68
50-Year Storm												
I-95 (U/S)	2,497	26.55	3,078	30.56	2,497	26.55	2,461	26.41	2,497	26.55	2,385	26.12
Highland Rd. (U/S)	2,497	27.49	3,078	31.01	2,497	27.49	2,461	27.39	2,497	27.49	2,385	27.16
Purchase St. (U/S)	2,353	30.12	2,767	31.91	2,353	30.12	2,458	30.18	2,353	30.12	2,407	30.15
I-287 (U/S)	2,255	34.27	2,767	35.13	2,255	34.27	2,458	34.58	2,255	34.27	2,407	34.5
100-Year Storm												
I-95 (U/S)	2,984	30.33	3,583	32.17	2,984	30.33	3,274	31.12	2,984	30.33	3,255	31.06
Highland Rd. (U/S)	2,984	30.78	3,583	32.6	2,984	30.78	3,274	31.57	2,984	30.78	3,255	31.51
Purchase St. (U/S)	2,812	31.71	3,346	33.44	2,812	31.71	3,117	32.55	2,812	31.71	3,096	32.51
I-287 (U/S)	2,694	35.01	3,346	36.17	2,694	35.01	3,117	35.7	2,694	35.01	3,096	35.67

Table 3.2 - Comparison Between the FIS and Sells Analysis

	Existing Conditions				Alternate Optimize Orifice Opening at Bowman Dam				Alternate D			
	FIS		Sells		FIS		Sells		FIS		Sells	
	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)	Discharge (cfs)	WS Elev. (ft.)
2-Year Storm												
I-95 (U/S)	N/A	N/A	928	20.77	N/A	N/A	928	20.8	N/A	N/A	871	20.54
Highland Rd. (U/S)	N/A	N/A	928	21.41	N/A	N/A	928	21.43	N/A	N/A	871	21.17
Purchase St. (U/S)	N/A	N/A	781	25.65	N/A	N/A	781	25.65	N/A	N/A	666	25.4
I-287 (U/S)	N/A	N/A	781	31.51	N/A	N/A	781	31.51	N/A	N/A	666	31.09
5-Year Storm												
I-95 (U/S)	N/A	N/A	1,534	22.95	N/A	N/A	1,344	22.36	N/A	N/A	1,163	21.66
Highland Rd. (U/S)	N/A	N/A	1,534	24.19	N/A	N/A	1,344	23.35	N/A	N/A	1,163	22.66
Purchase St. (U/S)	N/A	N/A	1,275	27.2	N/A	N/A	999	26.61	N/A	N/A	850	26.16
I-287 (U/S)	N/A	N/A	1,275	32.69	N/A	N/A	999	32.1	N/A	N/A	850	31.71
25-Year Storm												
I-95 (U/S)	N/A	N/A	2,594	26.93	N/A	N/A	2,403	26.19	N/A	N/A	2,328	25.9
Highland Rd. (U/S)	N/A	N/A	2,594	27.78	N/A	N/A	2,403	27.2	N/A	N/A	2,328	26.98
Purchase St. (U/S)	N/A	N/A	2,252	30.08	N/A	N/A	1,775	29.21	N/A	N/A	1,765	29.05
I-287 (U/S)	N/A	N/A	2,252	34.26	N/A	N/A	1,775	33.48	N/A	N/A	1,765	33.47

Findings

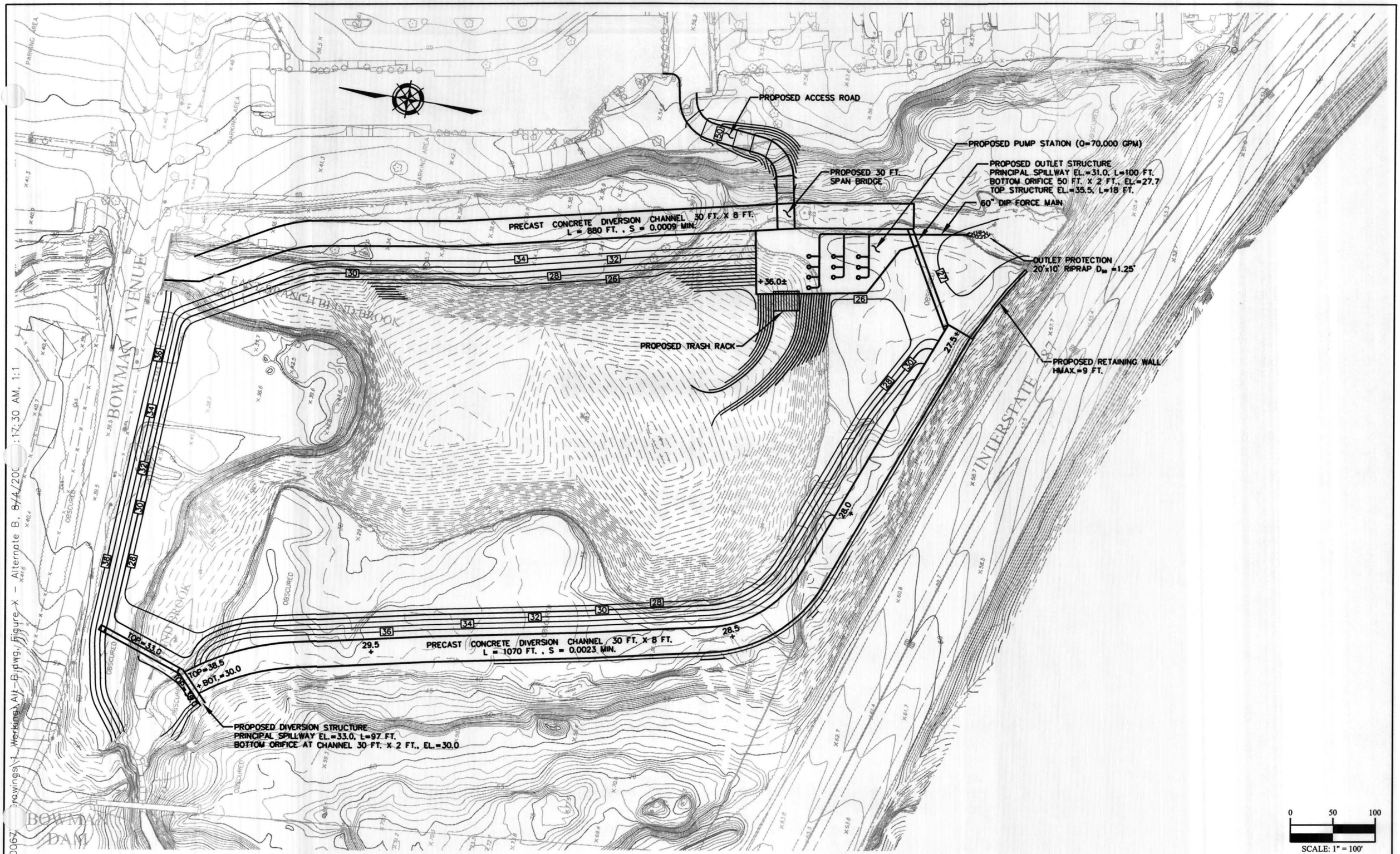
Alternative D, as previously described, consists of retrofitting the Bowman Avenue Dam with an automated sluice gate (see the "*Flood Mitigation Study, Bowman Avenue Dam Site and Lower Pond*" report, dated March 12, 2008) and providing gravity-based storage improvements at the Lower Pond site. An automated sluice gate has the ability to vary the hydraulic opening, thus providing the optimum size for the flow rate in the stream. The sluice gate would be automatically controlled based on water surface elevations measured at a gauge mounted behind the Bowman Avenue Dam. The Lower Pond site modifications consist of increasing the pond storage area, diverting the East Branch Blind Brook through a diversion channel and constructing an outlet structure. The results of this alternative are provided in Table 4.

As can be seen, the reduction in water surface elevation, measured in feet, is particularly notable during the 50-year storm event. The 4.44-foot reduction in water surface elevation upstream of I-95 is attributed to the fact that the flow is passing through the I-95 bridge with little backwater effect. During the 100-year event, the stream flow does not pass the structure thus creating backwater.

Compared with optimizing the Bowman Avenue dam's outlet alone, Alternate D will further lower the water surface at the Indian Village by 3 inches, on average, during a 2-year storm event, 8 inches during a 5- year event, and 6 inches during a 10-year event. During larger storm events, the contribution of the Lower Pond modifications is considered minimal.

Table 4 - Water Surface Elevation (ft-NAVD) Alternative D

	Orifice Size at Bowman dam (Ft^2)	Existing Cond.	Proposed Cond.	Difference
2-Year Storm				
U/S I-287		31.51	31.09	-0.42
Purchase Street	**20.2**	25.65	25.4	-0.25
Highland Road		21.41	21.17	-0.24
U/S I-95		20.77	20.54	-0.23
5-Year Storm				
U/S I-287		32.69	31.71	-0.98
Purchase Street	**45.6**	27.2	26.16	-1.04
Highland Road		24.19	22.66	-1.53
U/S I-95		22.95	21.66	-1.29
10-Year Storm				
U/S I-287		33.29	32.68	-0.61
Purchase Street	**72.1**	28.33	27.38	-0.95
Highland Road		25.88	24.66	-1.22
U/S I-95		24.59	23.33	-1.26
25-Year Storm				
U/S I-287		34.26	33.47	-0.79
Purchase Street	**105.6**	30.06	29.05	-1.01
Highland Road		27.78	27.16	-0.62
U/S I-95		26.93	25.9	-1.03
50-Year Storm				
U/S I-287		35.13	34.5	-0.63
Purchase Street	**139.1**	31.91	30.15	-1.76
Highland Road		31.01	27.16	-3.85
U/S I-95		30.56	26.12	-4.44
100-Year Storm				
U/S I-287		36.17	35.67	-0.5
Purchase Street	**139.1**	33.44	32.51	-0.93
Highland Road		32.6	31.51	-1.09
U/S I-95		32.17	31.06	-1.11



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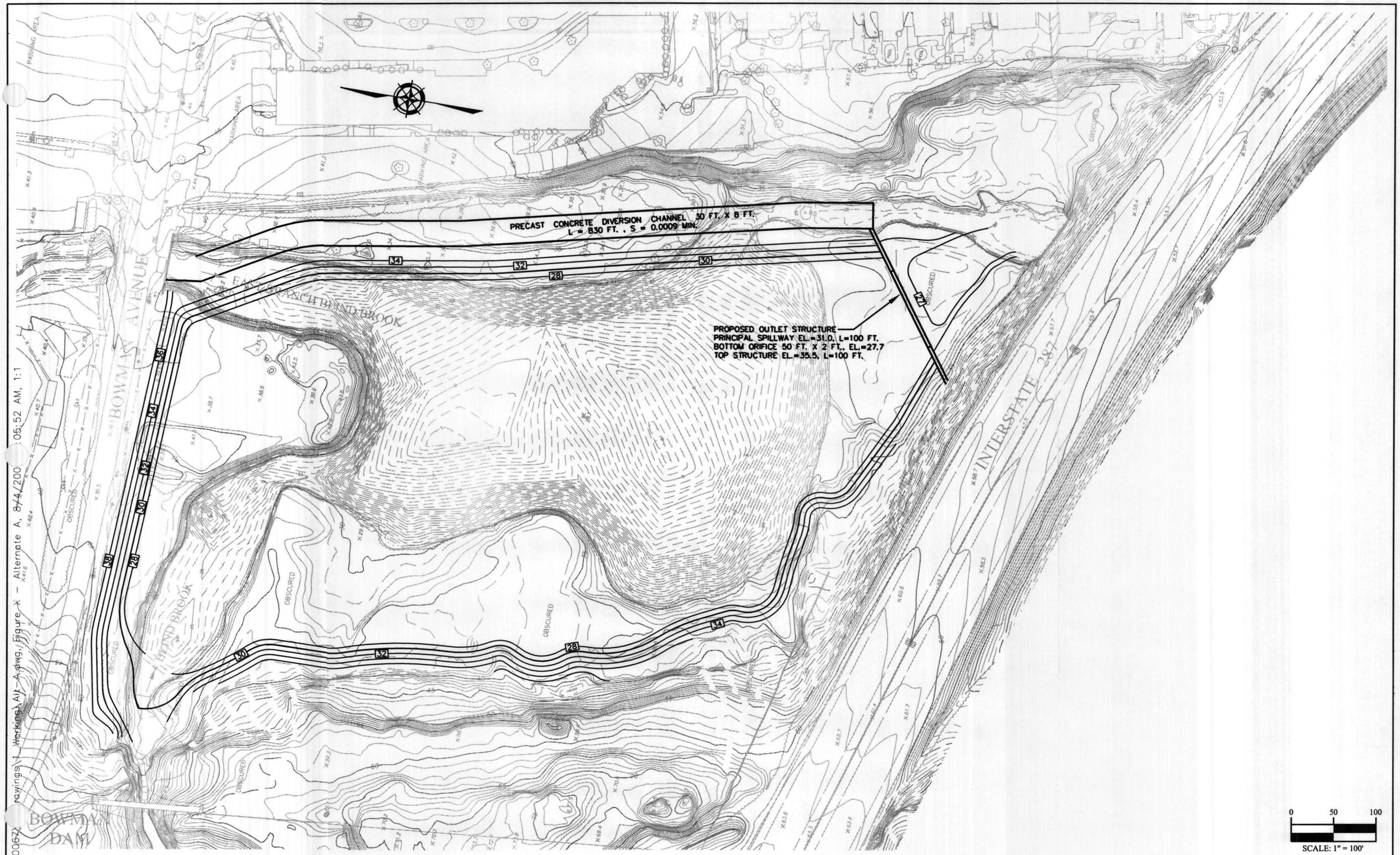
CITY OF RYE FLOOD MITIGATION MEASURES
LOWER POND - ALTERNATE B

FIGURE NO. 2



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CITY OF RYE FLOOD MITIGATION MEASURES
LOWER POND - ALTERNATE A

FIGURE NO. 1

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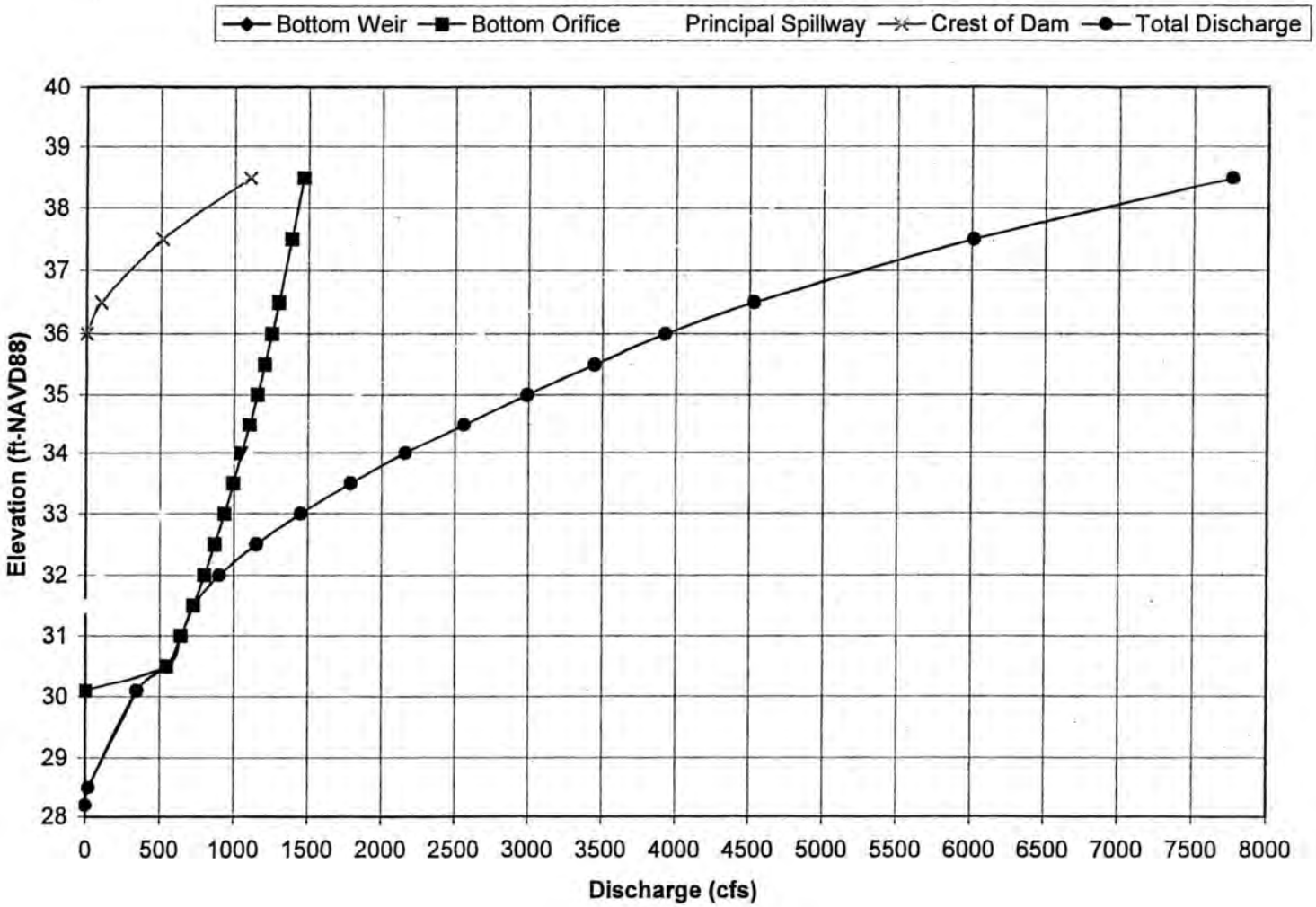
CITY OF RYE FLOOD MITIGATION MEASURES
LOWER POND - ALTERNATE C & D

FIGURE NO. 3

PROPOSED OUTLET STRUCTURE AT THE LOWER POND
STAGE/DISCHARGE CURVES
ALTERNATE A



FLOOD CONTROL IMPROVEMENTS. SUPPLEMENT
City of Rye. Westchester County, NY

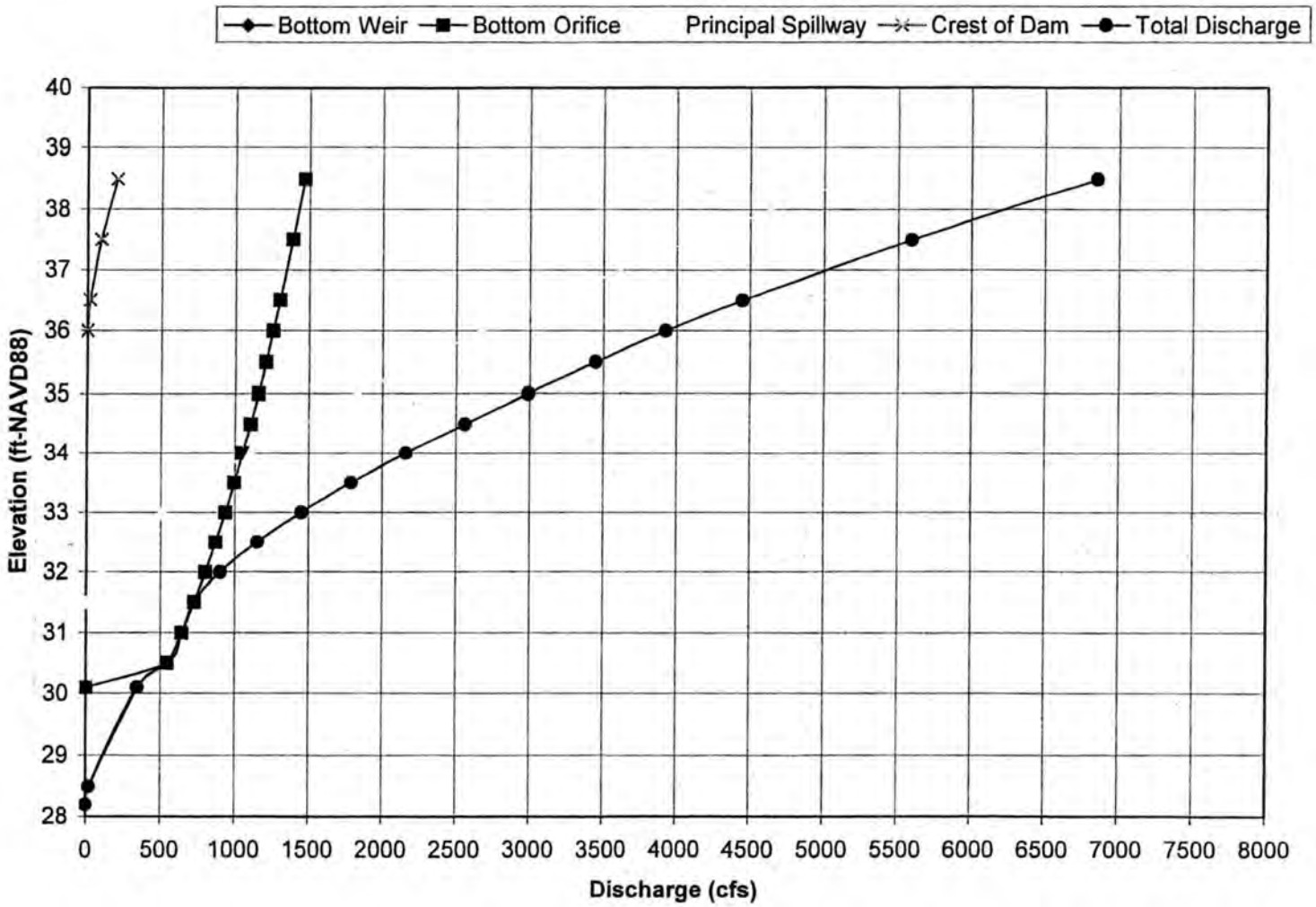
File: StageDischargeLOWERPONDOUTLET.xls
Compiled: D. Ionescu
Date: 12/06/2007

PROPOSED OUTLET AT THE LOWER POND. STAGE-DISCHARGE CALCULATION
GRAVITY ALTERNATIVE. ALTERNATE A

ELEV. (ft-NAVD88)	H1 (ft)	H2 (ft)	H3 (ft)	H4 (ft)	Q1 (ft^3/s)	Q2 (ft3/s)	Q3 (ft3/s)	Q4 (ft3/s)	Qtotal (ft3/s)
27.7	0	0	0	0	0	0	0	0	0
28.0	0.3	0	0	0	22	0	0	0	22
29.6	1.9	0	0	0	347	0	0	0	347
30.0	0	1.3	0	0	0	549	0	0	549
30.5	0	1.8	0	0	0	646	0	0	646
31.0	0	2.3	0	0	0	730	0	0	730
31.5	0	2.8	0.5	0	0	806	99	0	905
32.0	0	3.3	1.0	0	0	875	280	0	1155
32.5	0	3.8	1.5	0	0	939	514	0	1453
33.0	0	4.3	2.0	0	0	998	792	0	1790
33.5	0	4.8	2.5	0	0	1055	1107	0	2162
34.0	0	5.3	3.0	0	0	1108	1455	0	2563
34.5	0	5.8	3.5	0	0	1160	1833	0	2993
35.0	0	6.3	4.0	0	0	1209	2240	0	3449
35.5	0	6.8	4.5	0	0	1256	2673	0	3928
36.0	0	7.3	5.0	0.5	0	1301	3130	99	4530
37.0	0	8.3	6.0	1.5	0	1387	4115	514	6017
38.0	0	9.3	7.0	2.5	0	1468	5186	1107	7761

H1 Broad crested weir head (ft) - Length = 50 ft; EL = 27.7
H2 Orifice head (ft); CL EL = 28.7
H3 Principal Spillway head (ft) - Length = 100 ft; EL = 31.0
H4 Crest of dam - L = 100 ft; EL = 35.5

PROPOSED OUTLET STRUCTURE AT THE LOWER POND
STAGE/DISCHARGE CURVES
ALTERNATIVE B



FLOOD CONTROL IMPROVEMENTS. SUPPLEMENT
City of Rye. Westchester County, NY

File: StageDischargeLOWERPONDOUTLETps.xls
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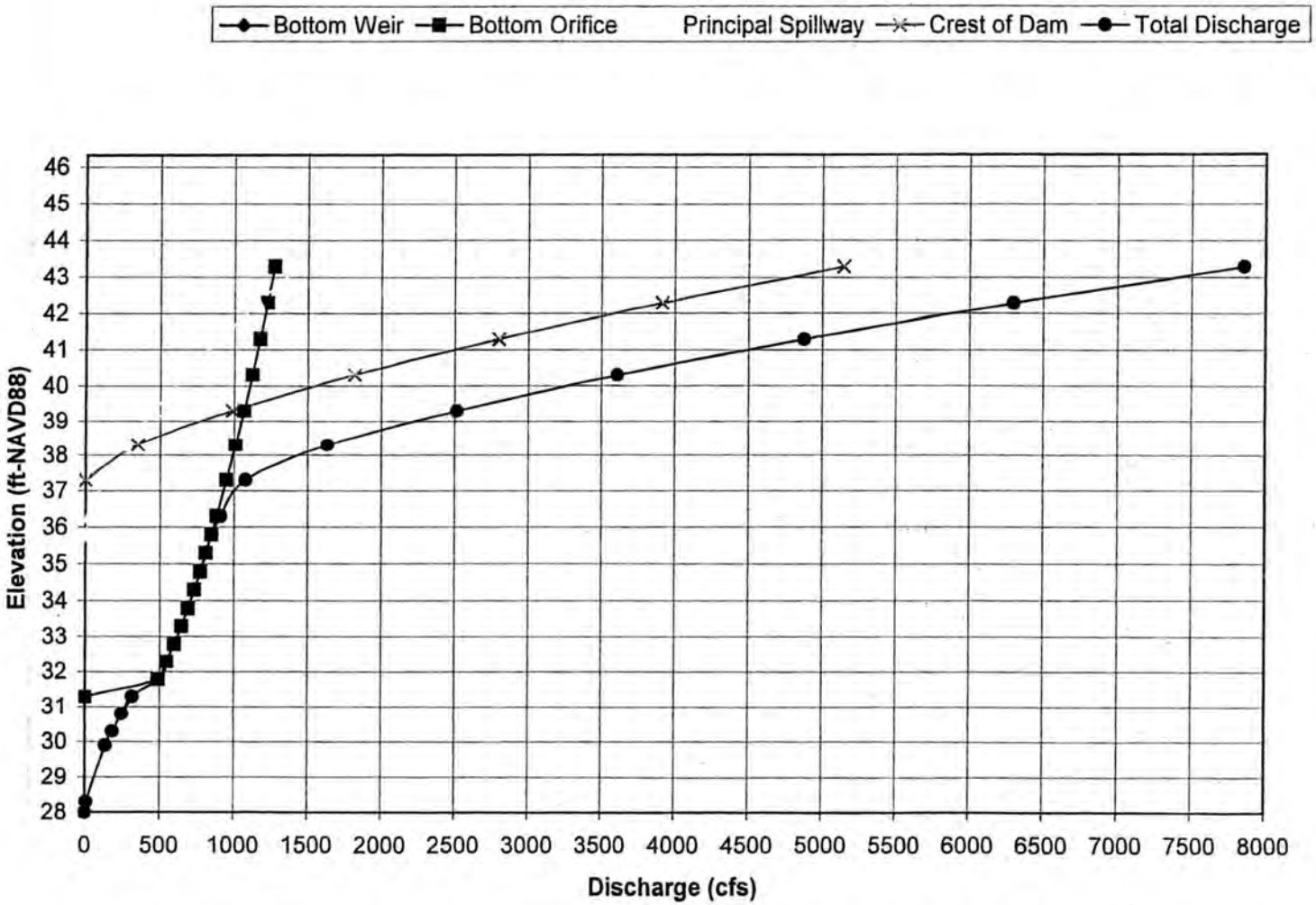
Date: 12/06/2007

PROPOSED OUTLET AT THE LOWER POND. STAGE-DISCHARGE CALCULATION
ALTERNATIVE B

ELEV. (ft-NAVD88)	H1 (ft)	H2 (ft)	H3 (ft)	H4 (ft)	Q1 (ft^3/s)	Q2 (ft3/s)	Q3 (ft3/s)	Q4 (ft3/s)	Qtotal (ft3/s)
27.7	0	0	0	0	0	0	0	0	0
28.0	0.3	0	0	0	22	0	0	0	22
29.6	1.9	0	0	0	347	0	0	0	347
30.0	0	1.3	0	0	0	549	0	0	549
30.5	0	1.8	0	0	0	646	0	0	646
31.0	0	2.3	0	0	0	730	0	0	730
31.5	0	2.8	0.5	0	0	806	99	0	905
32.0	0	3.3	1.0	0	0	875	280	0	1155
32.5	0	3.8	1.5	0	0	939	514	0	1453
33.0	0	4.3	2.0	0	0	998	792	0	1790
33.5	0	4.8	2.5	0	0	1055	1107	0	2162
34.0	0	5.3	3.0	0	0	1108	1455	0	2563
34.5	0	5.8	3.5	0	0	1160	1833	0	2993
35.0	0	6.3	4.0	0	0	1209	2240	0	3449
35.5	0	6.8	4.5	0	0	1256	2673	0	3928
36.0	0	7.3	5.0	0.5	0	1301	3130	18	4449
37.0	0	8.3	6.0	1.5	0	1387	4115	93	5595
38.0	0	9.3	7.0	2.5	0	1468	5186	199	6853

H1 Broad crested weir head (ft) - Length = 50 ft; EL = 27.7
H2 Orifice head (ft); CL EL = 28.7
H3 Principal Spillway head (ft) - Length = 100 ft; EL = 31.0
H4 Crest of dam - L = 18 ft; EL = 35.5

PROPOSED OUTLET STRUCTURE AT THE LOWER POND
Prinipal Spillway El = 35.5
STAGE/DISCHARGE CURVES. ALTERNATIVE C



FLOOD CONTROL IMPROVEMENTS. SUPPLEMENT
City of Rye. Westchester County, NY

File: StageDischargeLOWERPONDOUTLET35.5.xls
Compiled: D. Ionescu
Date: 2/1/2008

PROPOSED OUTLET AT THE LOWER POND. STAGE-DISCHARGE CALCULATION

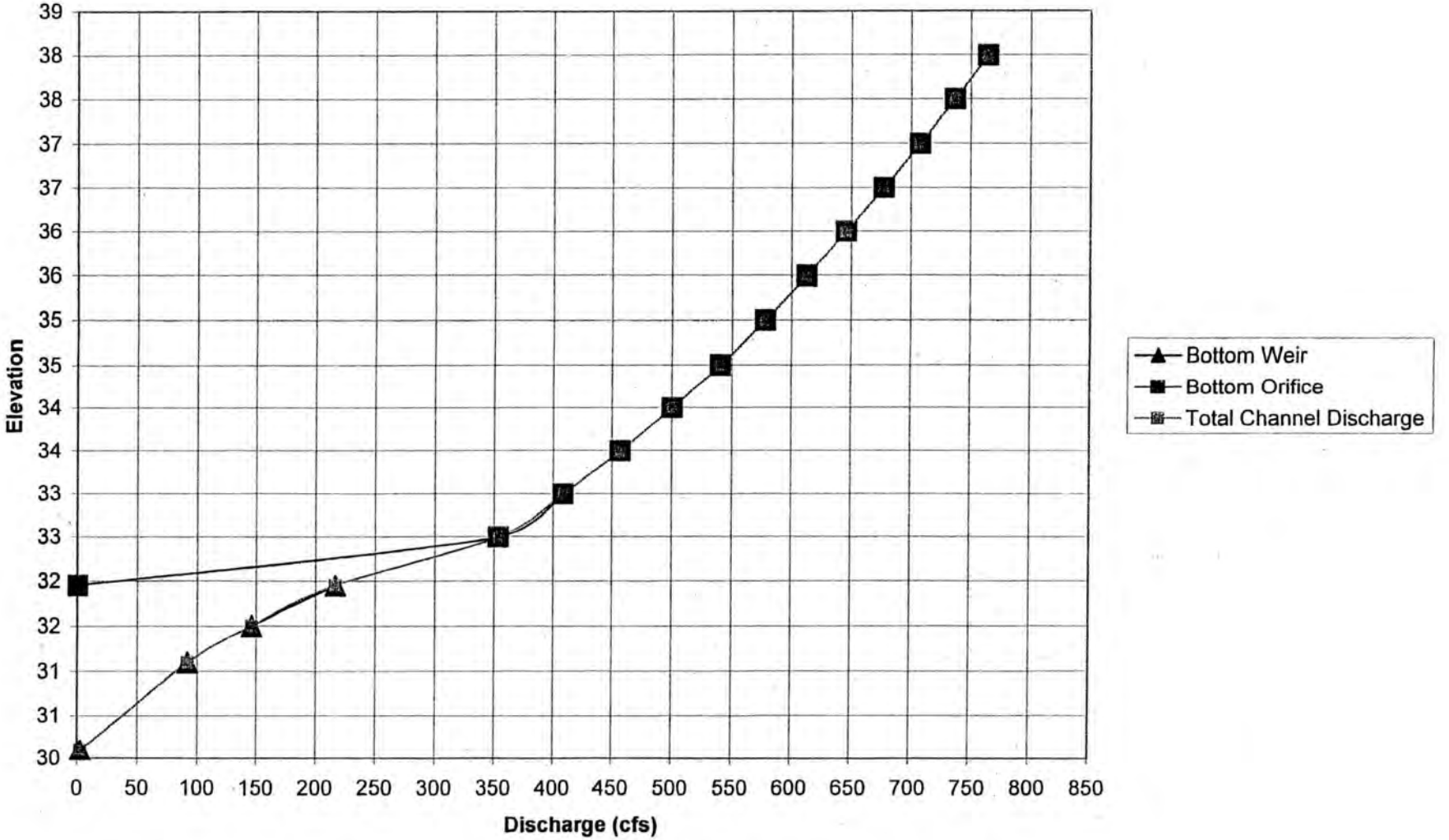
Principal Spillway EL = 35.5

ALTERNATIVE C

ELEV. (ft-NAVD88)	H1 (ft)	H2 (ft)	H3 (ft)	H4 (ft)	Q1 (ft^3/s)	Q2 (ft3/s)	Q3 (ft3/s)	Q4 (ft3/s)	Qtotal (ft3/s)
27.7	0	0	0	0	0	0	0	0	0
28.0	0.3	0	0	0	9	0	0	0	9
29.6	1.9	0	0	0	139	0	0	0	139
30.0	2.3	0	0	0	185	0	0	0	185
30.5	2.8	0	0	0	248	0	0	0	248
31.0	3.3	0	0	0	318	0	0	0	318
31.5	0	2.0	0	0	0	490	0	0	490
32.0	0	2.5	0	0	0	548	0	0	548
32.5	0	3.0	0	0	0	600	0	0	600
33.0	0	3.5	0	0	0	649	0	0	649
33.5	0	4.0	0	0	0	693	0	0	693
34.0	0	4.5	0	0	0	735	0	0	735
34.5	0	5.0	0	0	0	775	0	0	775
35.0	0	5.5	0	0	0	813	0	0	813
35.5	0	6.0	0	0	0	849	0	0	849
36.0	0	6.5	0.5	0	0	884	25	0	909
37.0	0	7.5	1.5	0	0	949	129	0	1078
38.0	0	8.5	2.5	1.0	0	1011	277	350	1637
39.0	0	9.5	3.5	2.0	0	1069	458	990	2517
40.0	0	10.5	4.5	3.0	0	1123	668	1819	3610
41.0	0	11.5	5.5	4.0	0	1176	903	2800	4879
42.0	0	12.5	6.5	5	0	1226	1160	3913	6299
43.0	0	13.5	7.5	6	0	1274	1438	5144	7855

H1 Broad crested weir head (ft) - Length = 20 ft; EL = 27.7
H2 Orifice head (ft); CL EL = 29.5, 20 ft x 3.6 ft orifice
H3 Principal Spillway head (ft) - Length = 25 ft; EL = 35.5
H4 Crest of dam - L = 125 ft; EL = 37.0

PROPOSED BLIND BROOK DIVERSION CHANNEL
ALTERNATE B



FLOOD CONTROL IMPROVEMENTS. SUPPLEMENT
City of Rye. Westchester County, NY

File: StageDischargeLOWERPONDINLET.xls
Compiled: D. Ionescu
Date: 12/07/2007

PROPOSED BLIND BROOK DIVERSION STRUCTURE AT THE LOWER POND
STAGE-DISCHARGE CALCULATION
ALTERNATIVE B

ELEV. (ft-NAVD88)	H1 (ft)	H2 (ft)	H3 (ft)	H4 (ft)	Q1 (ft^3/s)	Q2 (ft3/s)	Q3 (ft3/s)	Q4 (ft3/s)	Qtotal (ft3/s)
30.10	0.10	0	0	0	3	0	0	0	3
31.10	1.10	0	0	0	92	0	0	0	92
31.50	1.50	0	0	0	146	0	0	0	146
31.95	1.95	0	0	0	216	0	0	0	216
32.50	0	1.50	0	0	0	354	0	0	354
33.00	0	2.00	0	0	0	409	0	0	409
33.50	0	2.50	0.50	0	0	457	99	0	556
34.00	0	3.00	1.00	0	0	500	280	0	780
34.50	0	3.50	1.50	0	0	540	514	0	1055
35.00	0	4.00	2.00	0	0	578	792	0	1370
35.50	0	4.50	2.50	0	0	613	1107	0	1720
36.00	0	5.00	3.00	0	0	646	1455	0	2101
36.50	0	5.50	3.50	0	0	678	1833	0	2511
37.00	0	6.00	4.00	0	0	708	2240	0	2948
37.50	0	6.50	4.50	0	0	737	2673	0	3409
38.00	0	7.00	5.00	0	0	764	3130	0	3895

H1 Broad crested weir head (ft) - Length = 30 ft; EL = 30.0
H2 Orifice head (ft); CL EL = 31.0, 30 ft x2 ft
H3 Principal Spillway head (ft) - Length = 100 ft; EL = 33.0
H4 Crest of dam - L = 50 ft; EL = 38.0

Broad-Crested Weir Coefficient C Values As A Function Of Weir Crest Breadth And Head

Measured Head, H[1] (mm)	Breadth Of The Crest Of Weir (m)										
	0.15	0.23	0.3	0.45	0.60	0.75	0.90	1.20	1.50	3.00	4.50
60	2.80	2.75	2.69	2.62	2.54	2.48	2.44	2.38	2.34	2.49	2.68
120	2.92	2.80	2.72	2.64	2.61	2.60	2.58	2.54	2.50	2.56	2.70
180	3.08	2.89	2.75	2.64	2.61	2.60	2.68	2.69	2.70	2.70	2.70
240	3.30	3.04	2.85	2.68	2.60	2.60	2.67	2.68	2.68	2.69	2.64
300	3.32	3.14	2.98	2.75	2.66	2.64	2.65	2.67	2.68	2.68	2.63
360	3.32	3.20	3.08	2.86	2.70	2.65	2.64	2.67	2.66	2.69	2.64
420	3.32	3.26	3.20	2.92	2.77	2.68	2.64	2.65	2.65	2.67	2.64
480	3.32	3.29	3.28	3.07	2.89	2.75	2.68	2.66	2.65	2.64	2.63
240	3.32	3.32	3.31	3.07	2.88	2.74	2.68	2.66	2.65	2.64	2.63
600	3.32	3.31	3.30	3.03	2.85	2.76	2.27	2.68	2.65	2.64	2.63
750	3.32	3.32	3.31	3.28	3.07	2.89	2.81	2.72	2.67	2.64	2.63
900	3.32	3.32	3.32	3.32	3.20	3.05	2.92	2.73	2.66	2.64	2.63
1,050	3.32	3.32	3.32	3.32	3.32	3.19	2.97	2.76	2.68	2.64	2.63
1,200	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.70	2.64	2.63
1,350	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.74	2.64	2.63
1,500	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.64	2.63
1,650	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.64	2.63

Measured Head, H[1] (ft)	Breadth Of The Crest Of Weir (ft)										
	0.50	0.75	1.00	1.50	2.00	2.50	3.00	4.00	5.00	10.00	15.00
0.2	2.80	2.75	2.69	2.62	2.54	2.48	2.44	2.38	2.34	2.49	2.68
0.4	2.92	2.80	2.72	2.64	2.61	2.60	2.58	2.54	2.50	2.56	2.70
0.6	3.08	2.89	2.75	2.64	2.61	2.60	2.68	2.69	2.70	2.70	2.70
0.8	3.30	3.04	2.85	2.68	2.60	2.60	2.67	2.68	2.68	2.69	2.64
1.0	3.32	3.14	2.98	2.75	2.66	2.64	2.65	2.67	2.68	2.68	2.63
1.2	3.32	3.20	3.08	2.86	2.70	2.65	2.64	2.67	2.66	2.69	2.64
1.4	3.32	3.26	3.20	2.92	2.77	2.68	2.64	2.65	2.65	2.67	2.64
1.6	3.32	3.29	3.28	3.07	2.89	2.75	2.68	2.66	2.65	2.64	2.63
1.8	3.32	3.32	3.31	3.07	2.88	2.74	2.68	2.66	2.65	2.64	2.63
2.0	3.32	3.31	3.30	3.03	2.85	2.76	2.27	2.68	2.65	2.64	2.63
2.5	3.32	3.32	3.31	3.28	3.07	2.89	2.81	2.72	2.67	2.64	2.63
3.0	3.32	3.32	3.32	3.32	3.20	3.05	2.92	2.73	2.66	2.64	2.63
3.5	3.32	3.32	3.32	3.32	3.32	3.19	2.97	2.76	2.68	2.64	2.63
4.0	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.70	2.64	2.63
4.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.74	2.64	2.63
5.0	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.07	2.79	2.64	2.63
5.5	3.32	3.32	3.32	3.32	3.32	3.32	3.32	3.32	2.88	2.64	2.63

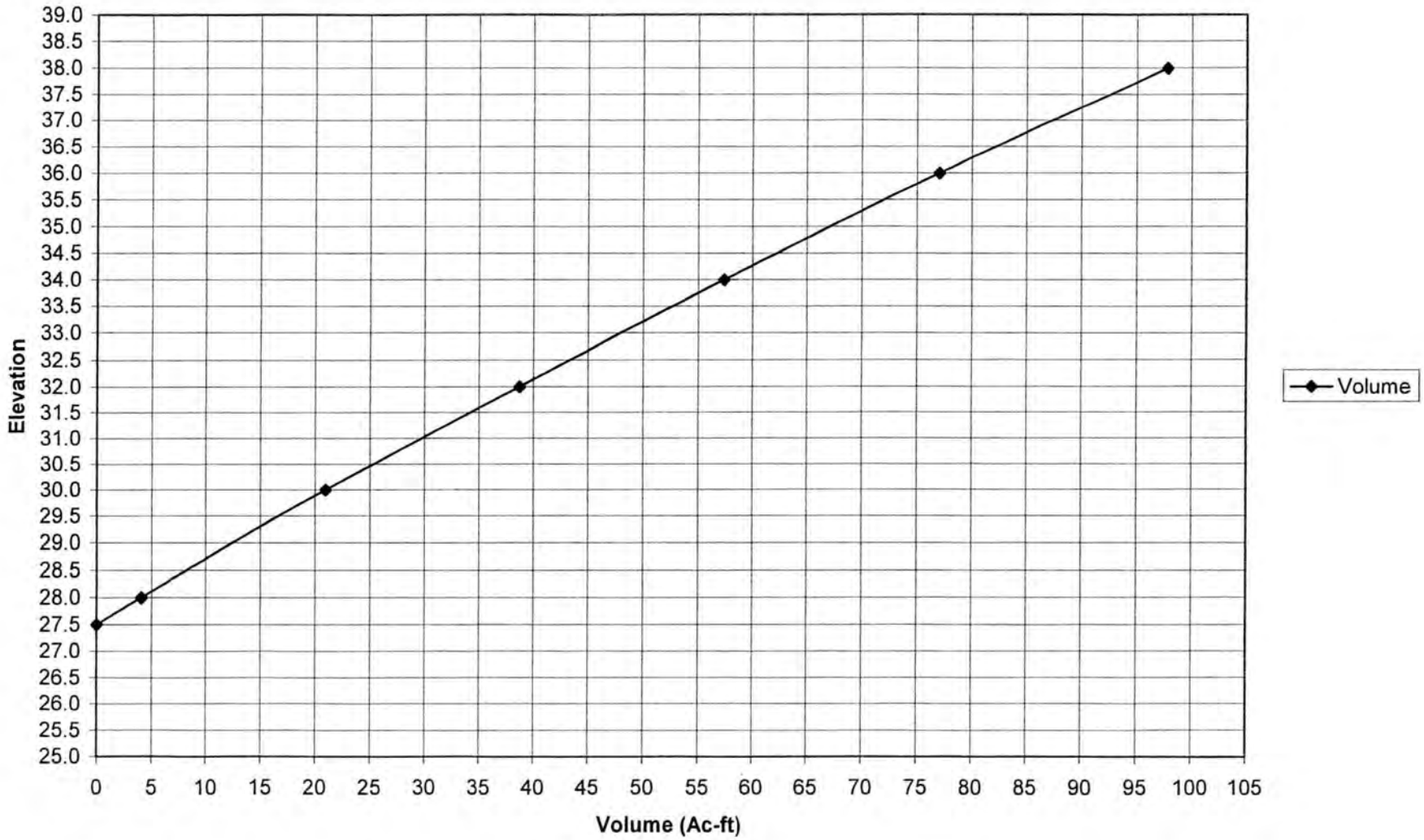
[1]Measured at least 2.5H upstream of the weir.

Reference: Brater and King (1976).

Broad-Crested Weir Coefficients

Figure 9-02.15

Lower Pond Storage. Alternative A
Principal Spillway Elevation = 31.0



Flood Control Improvements
City of Rye, NY

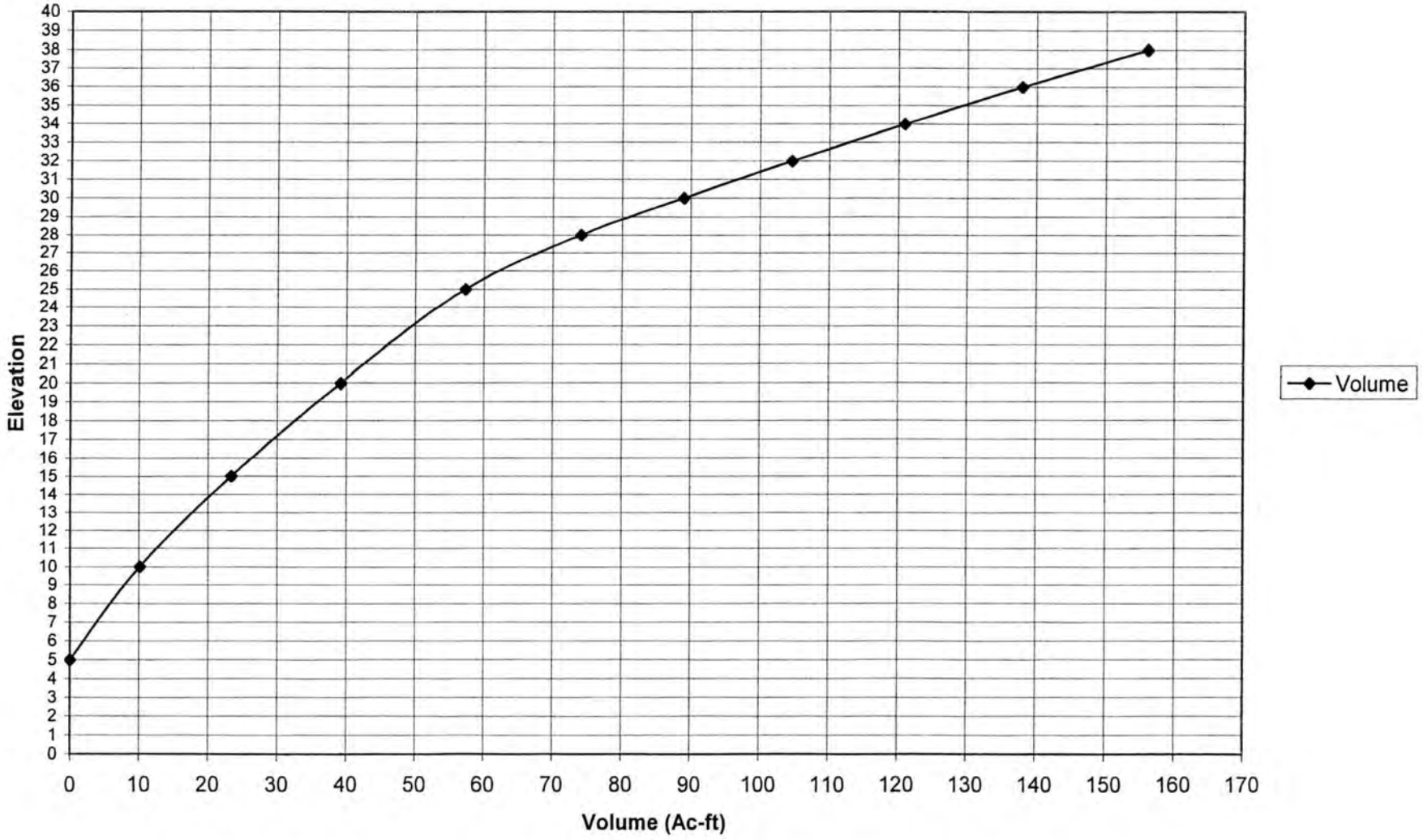
File: StorageAltA.xls
Compiled: Dan Ionescu
Date: Dec. 10, 2007

Storage Volume. Alternate A

Principal Spillway El = 31.0

Elevation	Area (Ac.)	Volume (Ac-ft)
27.5	8.00	0.00
28.0	8.23	4.06
30.0	8.67	20.96
32.0	9.12	38.75
34.0	9.50	57.37
36.0	10.19	77.06
38.0	10.55	97.80

Lower Pond Storage. Alternative B



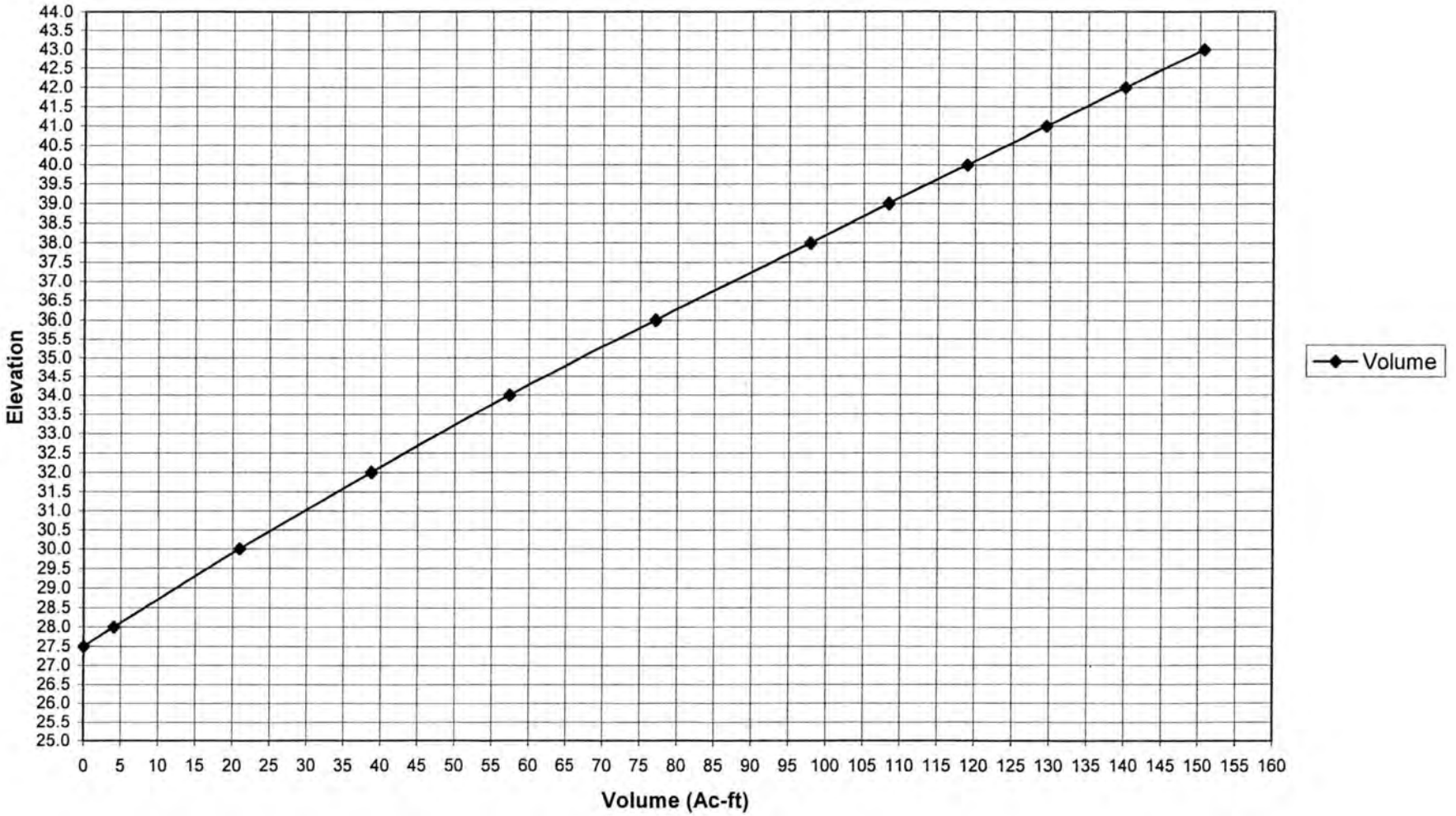
Flood Control Improvements
City of Rye, NY

File: StorageAltB.xls
Compiled: Dan Ionescu
Date: Dec. 10, 2007

Storage Volume. Alternative B

Elevation	Area (Ac.)	Volume (Ac-ft)
5.0	1.70	0.00
10.0	2.36	10.15
15.0	2.93	23.38
20.0	3.39	39.18
25.0	3.87	57.33
28.0	7.29	74.07
30.0	7.65	89.01
32.0	7.97	104.63
34.0	8.30	120.90
36.0	8.74	137.94
38.0	9.34	156.02

Lower Pond Storage. Alternative C
Principal Spillway EL= 35.5



Flood Control Improvements
City of Rye, NY

File: StorageAltA35.5.xls
Compiled: Dan Ionescu
Date: Febr. 1, 2008

Storage Volume. Alternative C
Principal Spillway Elevation = 35.5

Elevation	Area (Ac.)	Volume (Ac-ft)
27.5	8.00	0.00
28.0	8.23	4.06
30.0	8.67	20.96
32.0	9.12	38.75
34.0	9.50	57.37
36.0	10.19	77.06
38.0	10.55	97.80
39.0	10.55	108.35
40.0	10.55	118.90
41.0	10.55	129.45
42.0	10.55	140.00
43.0	10.55	150.55

Blind Brook Watershed.
Downstream limit: I-95

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	46.04	16.23	285.45	41.92
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	31.58	16.11	289.94	41.42
R031	7.000	Downstream	0.562	31.58	16.13	289.94	41.42
IV-A	1.090		0.934		13.54	177.93	163.24
R04B	8.090	Upstream	0.612		13.85	414.93	51.29
R04B	8.090	Downstream	0.612	30.86	14.01	405.81	50.16
IV-B	0.061		1.664		12.26	50.05	820.51
R04	8.151	Upstream	0.620	18.72	14.01	411.07	50.43
R04	8.151	Downstream	0.618	18.65	14.54	399.37	49.00
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.668		14.38	477.25	51.65
R05	9.240	Downstream	0.668		14.91	473.50	51.25
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.753		13.32	771.11	70.68

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	53.62	16.60	396.76	58.26
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.948	31.97	16.49	402.93	57.56
R031	7.000	Downstream	0.948	31.97	16.51	402.93	57.56
IV-A	1.090		1.429		13.51	282.19	258.89
R04B	8.090	Upstream	1.013		13.73	561.25	69.38
R04B	8.090	Downstream	1.013	31.11	13.83	557.68	68.93
IV-B	0.061		2.329		12.26	68.23	1118.51
R04	8.151	Upstream	1.023	19.55	13.83	565.10	69.33
R04	8.151	Downstream	1.020	19.48	14.40	550.85	67.58
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.085		14.00	680.51	73.65
R05	9.240	Downstream	1.084		14.50	677.34	73.31
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.191		13.38	1240.23	113.68

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.589	58.43	14.93	1252.98	183.99
III-B	0.190		1.744		12.20	179.33	943.85
R031	7.000	Upstream	1.594	33.74	14.93	1267.46	181.07
R031	7.000	Downstream	1.594	33.74	14.93	1267.29	181.04
IV-A	1.090		2.209		13.48	445.51	408.72
R04B	8.090	Upstream	1.676		14.88	1481.83	183.17
R04B	8.090	Downstream	1.676	32.15	14.99	1466.59	181.28
IV-B	0.061		3.266		12.27	94.25	1545.15

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R04	8.151	Upstream	1.688	24.03	14.99	1473.38	180.76
R04	8.151	Downstream	1.684	23.23	15.52	1308.34	160.51
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.766	2.61	15.51	1413.26	152.95
R05	9.240	Downstream	1.765	2.52	16.04	1393.85	150.85
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.898		13.33	1960.53	179.70

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	59.01	14.52	1767.76	259.58
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.26	14.53	1786.92	255.27
R031	7.000	Downstream	1.947	34.26	14.54	1786.65	255.24
IV-A	1.090		2.622		13.45	531.63	487.73
R04B	8.090	Upstream	2.038		14.53	2096.64	259.16
R04B	8.090	Downstream	2.038	32.66	14.61	2079.20	257.01
IV-B	0.061		3.743		12.25	107.30	1759.09
R04	8.151	Upstream	2.051	26.19	14.61	2087.66	256.12
R04	8.151	Downstream	2.047	25.47	15.14	1874.90	230.02
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.136	3.87	15.10	2012.42	217.79
R05	9.240	Downstream	2.136	3.87	15.55	2002.35	216.70
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.280		13.24	2409.94	220.89

STORM 25YR

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.693	59.65	14.05	2799.82	411.13
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	35.55	14.04	2827.60	403.94
R031	7.000	Downstream	2.699	35.55	14.06	2827.42	403.92
IV-A	1.090		3.478		13.47	707.38	648.97
R04B	8.090	Upstream	2.804		14.01	3396.52	419.84
R04B	8.090	Downstream	2.804	33.45	14.06	3383.81	418.27
IV-B	0.061		4.706		12.27	133.45	2187.71
R04	8.151	Upstream	2.818	32.37	14.06	3396.18	416.66
R04	8.151	Downstream	2.812	29.49	14.67	2783.07	341.44
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.914	4.06	14.62	2994.03	324.03
R05	9.240	Downstream	2.914	4.06	14.92	2989.88	323.58
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.078		14.80	3473.55	318.38

STORM 50YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	60.15	13.90	3755.22	551.43
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	39.74	13.89	3793.09	541.87
R031	7.000	Downstream	3.495	39.17	13.89	3727.40	532.49
IV-A	1.090		4.365		13.34	889.47	816.02
R04B	8.090	Upstream	3.612		13.83	4510.03	557.48
R04B	8.090	Downstream	3.612	34.02	13.91	4490.14	555.02
IV-B	0.061		5.681		12.26	159.31	2611.60
R04	8.151	Upstream	3.627	37.92	13.91	4505.69	552.78
R04	8.151	Downstream	3.546	37.20	13.91	4398.72	539.65
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.668	4.65	13.78	4844.41	524.29
R05	9.240	Downstream	3.668	4.65	14.02	4838.52	523.65
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.859		13.94	5931.34	543.66

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	60.37	13.73	4322.36	634.71
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	44.72	13.72	4366.77	623.82
R031	7.000	Downstream	3.898	44.01	13.72	4285.28	612.18
IV-A	1.090		4.817		13.44	980.86	899.87
R04B	8.090	Upstream	4.022		13.67	5213.48	644.43
R04B	8.090	Downstream	4.021	34.87	13.80	5144.25	635.88
IV-B	0.061		6.171		12.26	172.20	2823.00
R04	8.151	Upstream	4.038	42.35	13.80	5161.73	633.26
R04	8.151	Downstream	3.975	41.96	13.80	5103.60	626.13
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.101	4.94	13.72	5621.40	608.38
R05	9.240	Downstream	4.101	4.94	13.91	5619.00	608.12

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.297		13.74	6977.14	639.52

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV-B	0.06		50.1	68.2	94.3	107.3	133.5
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		289.9	402.9	1267.5	1786.9	2827.6
DOWNSTREAM			289.9	402.9	1267.3	1786.7	2827.4
R04B	8.09		414.9	561.3	1481.8	2096.6	3396.5
DOWNSTREAM			405.8	557.7	1466.6	2079.2	3383.8
R04	8.15		411.1	565.1	1473.4	2087.7	3396.2
DOWNSTREAM			399.4	550.9	1308.3	1874.9	2783.1
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			285.4	396.8	1253.0	1767.8	2799.8
R05	9.24		477.2	680.5	1413.3	2012.4	2994.0
DOWNSTREAM			473.5	677.3	1393.8	2002.3	2989.9
OUTLET	10.91		771.1	1240.2	1960.5	2409.9	3473.5

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV-B	0.06		159.3	172.2			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3793.1	4366.8			
DOWNSTREAM			3727.4	4285.3			
R04B	8.09		4510.0	5213.5			
DOWNSTREAM			4490.1	5144.2			
R04	8.15		4505.7	5161.7			
DOWNSTREAM			4398.7	5103.6			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3755.2	4322.4			
R05	9.24		4844.4	5621.4			
DOWNSTREAM			4838.5	5619.0			
OUTLET	10.91		5931.3	6977.1			

Blind Brook Watershed.
Downstream limit: I-95

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	46.04	16.23	285.45	41.92
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	31.58	16.11	289.94	41.42
R031	7.000	Downstream	0.562	31.58	16.13	289.94	41.42
R04B	7.000	Upstream	0.562		16.13	289.94	41.42
R04B	7.000	Downstream	0.562	29.20	16.53	289.34	41.33
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	18.44	14.08	361.51	44.35
R04	8.151	Downstream	0.617	18.43	15.49	359.93	44.16
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.667		14.41	430.27	46.57
R05	9.240	Downstream	0.666		14.98	428.50	46.37
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.751		13.35	796.92	73.04

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	53.62	16.60	396.76	58.26
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.948	31.97	16.49	402.93	57.56
R031	7.000	Downstream	0.948	31.97	16.51	402.93	57.56
R04B	7.000	Upstream	0.948		16.51	402.93	57.56
R04B	7.000	Downstream	0.948	29.55	16.84	402.27	57.47
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.021	19.33	13.91	522.34	64.08
R04	8.151	Downstream	1.019	19.28	14.53	511.35	62.74
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083		12.91	669.89	72.50
R05	9.240	Downstream	1.083		13.52	650.35	70.38
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.190		13.35	1244.91	114.11

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.589	58.43	14.93	1252.98	183.99
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	33.74	14.93	1267.46	181.07
R031	7.000	Downstream	1.594	33.74	14.93	1267.29	181.04
R04B	7.000	Upstream	1.594		14.93	1267.29	181.04
R04B	7.000	Downstream	1.593	31.98	15.31	1146.30	163.76
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.687	23.36	15.27	1334.21	163.69
R04	8.151	Downstream	1.683	22.83	15.77	1225.10	150.30
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.764	2.17	15.74	1322.60	143.14
R05	9.240	Downstream	1.764	2.09	16.28	1306.76	141.42
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.897		13.32	1940.15	177.83

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	59.01	14.52	1767.76	259.58
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.26	14.53	1786.92	255.27
R031	7.000	Downstream	1.947	34.26	14.54	1786.65	255.24
R04B	7.000	Upstream	1.947		14.54	1786.65	255.24
R04B	7.000	Downstream	1.947	32.83	14.85	1684.47	240.64
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.049	25.77	14.80	1962.42	240.76
R04	8.151	Downstream	2.046	25.12	15.32	1772.80	217.49

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.135	3.85	15.29	1901.23	205.76
R05	9.240	Downstream	2.134	3.85	15.76	1891.39	204.70
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.279		13.29	2369.40	217.18

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.693	59.65	14.05	2799.82	411.13
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	35.55	14.04	2827.60	403.94
R031	7.000	Downstream	2.699	35.55	14.06	2827.42	403.92
R04B	7.000	Upstream	2.699		14.06	2827.42	403.92
R04B	7.000	Downstream	2.698	34.19	14.30	2729.42	389.92
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.816	31.76	14.24	3232.28	396.55
R04	8.151	Downstream	2.811	29.08	14.81	2721.28	333.86
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.913	4.05	14.77	2918.03	315.80
R05	9.240	Downstream	2.913	4.04	15.09	2913.59	315.32
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.077		14.98	3351.11	307.16

STORM 50YR

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	60.15	13.90	3755.22	551.43
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	39.74	13.89	3793.09	541.87
R031	7.000	Downstream	3.495	39.17	13.89	3727.40	532.49
R04B	7.000	Upstream	3.495		13.89	3727.40	532.49
R04B	7.000	Downstream	3.495	35.20	14.07	3668.31	524.04
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.626	37.18	14.01	4396.57	539.39
R04	8.151	Downstream	3.506	36.29	14.01	4263.74	523.09
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.633	4.58	13.97	4652.39	503.51
R05	9.240	Downstream	3.633	4.58	14.19	4647.55	502.98
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.829		14.11	5597.97	513.10

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	60.37	13.73	4322.36	634.71
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	44.72	13.72	4366.77	623.82
R031	7.000	Downstream	3.898	44.01	13.72	4285.28	612.18
R04B	7.000	Upstream	3.898		13.72	4285.28	612.18
R04B	7.000	Downstream	3.898	35.72	13.86	4229.78	604.25
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.036	42.08	13.81	5121.49	628.33
R04	8.151	Downstream	3.995	41.70	13.81	5065.91	621.51
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.119	4.92	13.75	5575.22	603.38
R05	9.240	Downstream	4.119	4.92	13.94	5571.83	603.01
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.313		13.85	6846.06	627.50

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		289.9	402.9	1267.5	1786.9	2827.6
DOWNSTREAM			289.9	402.9	1267.3	1786.7	2827.4
R04B	7.00		289.9	402.9	1267.3	1786.7	2827.4
DOWNSTREAM			289.3	402.3	1146.3	1684.5	2729.4
R04	8.15		361.5	522.3	1334.2	1962.4	3232.3
DOWNSTREAM			359.9	511.4	1225.1	1772.8	2721.3
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			285.4	396.8	1253.0	1767.8	2799.8
R05	9.24		430.3	669.9	1322.6	1901.2	2918.0
DOWNSTREAM			428.5	650.3	1306.8	1891.4	2913.6
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		796.9	1244.9	1940.1	2369.4	3351.1

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3793.1	4366.8			
DOWNSTREAM			3727.4	4285.3			
R04B	7.00		3727.4	4285.3			
DOWNSTREAM			3668.3	4229.8			
R04	8.15		4396.6	5121.5			
DOWNSTREAM			4263.7	5065.9			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3755.2	4322.4			
R05	9.24		4652.4	5575.2			
DOWNSTREAM			4647.6	5571.8			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		5598.0	6846.1			

Blind Brook Watershed.
Downstream limit: I-95

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	46.04	16.23	285.45	41.92
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	31.58	16.11	289.94	41.42
R031	7.000	Downstream	0.562	31.58	16.13	289.94	41.42
R04B	7.000	Upstream	0.562		16.13	289.94	41.42
R04B	7.000	Downstream	0.562	29.20	16.47	289.50	41.36
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	18.48	14.04	369.94	45.39
R04	8.151	Downstream	0.617	18.46	14.74	365.77	44.87
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.667		14.35	440.76	47.70
R05	9.240	Downstream	0.666		14.89	438.95	47.51
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.752		13.39	809.23	74.17

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	53.62	16.60	396.76	58.26
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.948	31.97	16.49	402.93	57.56
R031	7.000	Downstream	0.948	31.97	16.51	402.93	57.56
R04B	7.000	Upstream	0.948		16.51	402.93	57.56
R04B	7.000	Downstream	0.948	29.55	16.79	402.43	57.49
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.022	19.37	13.86	530.74	65.11
R04	8.151	Downstream	1.019	19.31	14.43	518.54	63.62
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083		12.91	695.09	75.23
R05	9.240	Downstream	1.083		13.52	674.03	72.95
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.190		13.35	1267.78	116.20

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.589	58.43	14.93	1252.98	183.99
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	33.74	14.93	1267.46	181.07
R031	7.000	Downstream	1.594	33.74	14.93	1267.29	181.04
R04B	7.000	Upstream	1.594		14.93	1267.29	181.04
R04B	7.000	Downstream	1.593	32.04	15.25	1177.89	168.27
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.687	23.54	15.22	1371.26	168.23
R04	8.151	Downstream	1.683	22.90	15.72	1240.83	152.23
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.764	2.25	15.70	1339.78	145.00
R05	9.240	Downstream	1.764	2.17	16.23	1322.46	143.12
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.897		13.32	1962.54	179.88

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	59.01	14.52	1767.76	259.58
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.26	14.53	1786.92	255.27
R031	7.000	Downstream	1.947	34.26	14.54	1786.65	255.24
R04B	7.000	Upstream	1.947		14.54	1786.65	255.24
R04B	7.000	Downstream	1.947	32.87	14.80	1706.64	243.81
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.049	25.86	14.75	1991.32	244.30
R04	8.151	Downstream	2.046	25.19	15.28	1792.86	219.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.135	3.86	15.27	1922.89	208.11
R05	9.240	Downstream	2.135	3.85	15.72	1912.92	207.03
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.279		13.29	2394.37	219.47

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.693	59.65	14.05	2799.82	411.13
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	35.55	14.04	2827.60	403.94
R031	7.000	Downstream	2.699	35.55	14.06	2827.42	403.92
R04B	7.000	Upstream	2.699		14.06	2827.42	403.92
R04B	7.000	Downstream	2.699	34.22	14.27	2755.05	393.58
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.817	31.91	14.21	3271.61	401.38
R04	8.151	Downstream	2.810	29.19	14.79	2737.97	335.91
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.913	4.05	14.75	2937.10	317.87
R05	9.240	Downstream	2.913	4.05	15.06	2932.67	317.39
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.077		14.95	3378.04	309.63

STORM 50YR

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	60.15	13.90	3755.22	551.43
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	39.74	13.89	3793.09	541.87
R031	7.000	Downstream	3.495	39.17	13.89	3727.40	532.49
R04B	7.000	Upstream	3.495		13.89	3727.40	532.49
R04B	7.000	Downstream	3.495	35.23	14.05	3683.91	526.27
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.626	37.38	13.97	4425.16	542.90
R04	8.151	Downstream	3.507	36.52	13.97	4298.05	527.30
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.634	4.60	13.92	4696.67	508.30
R05	9.240	Downstream	3.634	4.60	14.15	4692.32	507.83
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.830		14.07	5669.86	519.69

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	60.37	13.73	4322.36	634.71
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	44.72	13.72	4366.77	623.82
R031	7.000	Downstream	3.898	44.01	13.72	4285.28	612.18
R04B	7.000	Upstream	3.898		13.72	4285.28	612.18
R04B	7.000	Downstream	3.898	35.79	13.85	4243.70	606.24
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.036	42.23	13.79	5144.37	631.13
R04	8.151	Downstream	3.996	41.86	13.79	5089.69	624.43
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.119	4.94	13.72	5613.22	607.49
R05	9.240	Downstream	4.119	4.94	13.91	5609.38	607.08
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.313		13.83	6916.18	633.93

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		289.9	402.9	1267.5	1786.9	2827.6
DOWNSTREAM			289.9	402.9	1267.3	1786.7	2827.4
R04B	7.00		289.9	402.9	1267.3	1786.7	2827.4
DOWNSTREAM			289.5	402.4	1177.9	1706.6	2755.0
R04	8.15		369.9	530.7	1371.3	1991.3	3271.6
DOWNSTREAM			365.8	518.5	1240.8	1792.9	2738.0
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			285.4	396.8	1253.0	1767.8	2799.8
R05	9.24		440.8	695.1	1339.8	1922.9	2937.1
DOWNSTREAM			439.0	674.0	1322.5	1912.9	2932.7
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		809.2	1267.8	1962.5	2394.4	3378.0

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3793.1	4366.8			
DOWNSTREAM			3727.4	4285.3			
R04B	7.00		3727.4	4285.3			
DOWNSTREAM			3683.9	4243.7			
R04	8.15		4425.2	5144.4			
DOWNSTREAM			4298.1	5089.7			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3755.2	4322.4			
R05	9.24		4696.7	5613.2			
DOWNSTREAM			4692.3	5609.4			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		5669.9	6916.2			

Blind Brook Watershed.
Downstream limit: I-95

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	46.04	16.23	285.45	41.92
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	31.58	16.11	289.94	41.42
R031	7.000	Downstream	0.562	31.58	16.13	289.94	41.42
R04B	7.000	Upstream	0.562		16.13	289.94	41.42
R04B	7.000	Downstream	0.561	30.75	17.27	284.93	40.70
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	18.29	16.13	335.58	41.17
R04	8.151	Downstream	0.616	18.28	16.64	334.81	41.08
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.666		12.83	398.48	43.13
R05	9.240	Downstream	0.666		13.41	379.42	41.06
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.751		13.32	789.67	72.38

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

L-21

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	53.62	16.60	396.76	58.26
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.948	31.97	16.49	402.93	57.56
R031	7.000	Downstream	0.948	31.97	16.51	402.93	57.56
R04B	7.000	Upstream	0.948		16.51	402.93	57.56
R04B	7.000	Downstream	0.947	31.36	17.18	400.42	57.20
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.021	19.11	15.83	481.09	59.02
R04	8.151	Downstream	1.019	19.11	16.30	479.74	58.86
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083		12.85	638.87	69.14
R05	9.240	Downstream	1.082		13.43	613.75	66.42
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.189		13.34	1216.34	111.49

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.589	58.43	14.93	1252.98	183.99
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	33.74	14.93	1267.46	181.07
R031	7.000	Downstream	1.594	33.74	14.93	1267.29	181.04
R04B	7.000	Upstream	1.594		14.93	1267.29	181.04
R04B	7.000	Downstream	1.592	35.79	15.92	889.31	127.04
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.686	21.92	15.71	1037.54	127.29
R04	8.151	Downstream	1.682	21.80	16.23	1012.16	124.18
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.763	1.08	16.12	1097.69	118.80
R05	9.240	Downstream	1.763	1.06	16.65	1093.32	118.32
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.896		13.31	1888.85	173.13

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	59.01	14.52	1767.76	259.58
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.26	14.53	1786.92	255.27
R031	7.000	Downstream	1.947	34.26	14.54	1786.65	255.24
R04B	7.000	Upstream	1.947		14.54	1786.65	255.24
R04B	7.000	Downstream	1.946	37.68	15.22	1458.72	208.39
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.049	24.83	15.17	1688.19	207.11
R04	8.151	Downstream	2.044	24.29	15.67	1529.52	187.65

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.134	3.74	15.65	1644.80	178.01
R05	9.240	Downstream	2.133	3.63	16.18	1622.35	175.58
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.278		13.31	2236.53	205.00

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.693	59.65	14.05	2799.82	411.13
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	35.55	14.04	2827.60	403.94
R031	7.000	Downstream	2.699	35.55	14.06	2827.42	403.92
R04B	7.000	Upstream	2.699		14.06	2827.42	403.92
R04B	7.000	Downstream	2.698	39.10	14.43	2623.85	374.84
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.816	31.19	14.39	3081.41	378.04
R04	8.151	Downstream	2.809	28.03	14.94	2563.57	314.51
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.912	4.00	14.91	2749.81	297.60
R05	9.240	Downstream	2.912	4.00	15.24	2744.81	297.06
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.076		15.15	3145.22	288.29

STORM 50YR

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	60.15	13.90	3755.22	551.43
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	39.74	13.89	3793.09	541.87
R031	7.000	Downstream	3.495	39.17	13.89	3727.40	532.49
R04B	7.000	Upstream	3.495		13.89	3727.40	532.49
R04B	7.000	Downstream	3.494	40.02	14.13	3631.56	518.79
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.625	36.73	14.07	4330.05	531.23
R04	8.151	Downstream	3.529	35.73	14.07	4180.99	512.94
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.654	4.54	14.04	4547.39	492.14
R05	9.240	Downstream	3.654	4.54	14.28	4541.52	491.51
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.847		14.21	5428.92	497.61

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	60.37	13.73	4322.36	634.71
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	44.72	13.72	4366.77	623.82
R031	7.000	Downstream	3.898	44.01	13.72	4285.28	612.18
R04B	7.000	Upstream	3.898		13.72	4285.28	612.18
R04B	7.000	Downstream	3.897	40.47	13.90	4211.54	601.65
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.036	41.86	13.85	5089.69	624.43
R04	8.151	Downstream	3.994	41.48	13.85	5032.79	617.44
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.118	4.90	13.81	5517.88	597.17
R05	9.240	Downstream	4.118	4.90	14.00	5513.19	596.67
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.312		13.94	6711.46	615.17

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		289.9	402.9	1267.5	1786.9	2827.6
DOWNSTREAM			289.9	402.9	1267.3	1786.7	2827.4
R04B	7.00		289.9	402.9	1267.3	1786.7	2827.4
DOWNSTREAM			284.9	400.4	889.3	1458.7	2623.9
R04	8.15		335.6	481.1	1037.5	1688.2	3081.4
DOWNSTREAM			334.8	479.7	1012.2	1529.5	2563.6
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			285.4	396.8	1253.0	1767.8	2799.8
R05	9.24		398.5	638.9	1097.7	1644.8	2749.8
DOWNSTREAM			379.4	613.8	1093.3	1622.3	2744.8
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		789.7	1216.3	1888.9	2236.5	3145.2

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3793.1	4366.8			
DOWNSTREAM			3727.4	4285.3			
R04B	7.00		3727.4	4285.3			
DOWNSTREAM			3631.6	4211.5			
R04	8.15		4330.0	5089.7			
DOWNSTREAM			4181.0	5032.8			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3755.2	4322.4			
R05	9.24		4547.4	5517.9			
DOWNSTREAM			4541.5	5513.2			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		5428.9	6711.5			

Blind Brook Watershed.
Downstream limit: I-95

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	42.49	15.09	418.46	61.45
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	32.05	15.09	424.79	60.68
R031	7.000	Downstream	0.562	32.05	15.10	424.78	60.68
R04B	7.000	Upstream	0.562		15.10	424.78	60.68
R04B	7.000	Downstream	0.561	31.38	15.82	406.30	58.04
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	19.09	15.53	477.62	58.60
R04	8.151	Downstream	0.616	19.07	16.01	473.86	58.13
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.666		15.87	520.56	56.34
R05	9.240	Downstream	0.666		16.40	518.74	56.14
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.751		13.32	795.54	72.92

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	47.81	15.35	624.99	91.78
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.949	32.77	15.35	633.83	90.55
R031	7.000	Downstream	0.949	32.77	15.37	633.82	90.55
R04B	7.000	Upstream	0.949		15.37	633.82	90.55
R04B	7.000	Downstream	0.947	32.55	16.31	603.52	86.22
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.021	20.24	14.82	703.12	86.26
R04	8.151	Downstream	1.019	20.23	15.75	699.58	85.83
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083		15.32	773.87	83.75
R05	9.240	Downstream	1.082		15.89	772.39	83.59
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.189		13.34	1224.87	112.27

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.590	56.75	15.49	968.55	142.22
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	33.36	15.49	981.24	140.18
R031	7.000	Downstream	1.594	33.36	15.49	981.21	140.17
R04B	7.000	Upstream	1.594		15.49	981.21	140.17
R04B	7.000	Downstream	1.593	35.52	16.58	862.83	123.26
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.686	21.65	16.18	981.96	120.47
R04	8.151	Downstream	1.683	21.62	16.60	976.01	119.74
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.765	0.95	14.35	1070.99	115.91
R05	9.240	Downstream	1.764	0.93	14.93	1066.99	115.47
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.898		13.32	1891.48	173.37

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	58.28	14.81	1587.95	233.18
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.08	14.81	1605.26	229.32
R031	7.000	Downstream	1.947	34.08	14.81	1605.19	229.31
R04B	7.000	Upstream	1.947		14.81	1605.19	229.31
R04B	7.000	Downstream	1.946	37.48	15.39	1343.63	191.95
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.048	24.37	15.34	1554.46	190.71
R04	8.151	Downstream	2.044	23.87	15.88	1439.56	176.61

A-51

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.133	3.27	15.84	1548.26	167.56
R05	9.240	Downstream	2.133	3.19	16.37	1532.66	165.87
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.277		13.31	2249.29	206.17

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.694	59.31	14.16	2729.70	400.84
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.700	35.38	14.17	2755.91	393.70
R031	7.000	Downstream	2.700	35.38	14.17	2755.80	393.69
R04B	7.000	Upstream	2.700		14.17	2755.80	393.69
R04B	7.000	Downstream	2.698	39.04	14.51	2564.89	366.41
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.816	30.90	14.47	3003.94	368.54
R04	8.151	Downstream	2.810	27.78	15.00	2525.68	309.86
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.912	4.00	14.96	2707.60	293.03
R05	9.240	Downstream	2.912	3.99	15.30	2701.76	292.40
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.076		13.19	3137.45	287.58

STORM 50YR

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	59.93	13.95	3722.26	546.59
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	39.44	13.96	3758.88	536.98
R031	7.000	Downstream	3.495	38.91	13.96	3697.24	528.18
R04B	7.000	Upstream	3.495		13.96	3697.24	528.18
R04B	7.000	Downstream	3.494	40.00	14.18	3607.75	515.39
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.625	36.42	14.12	4283.44	525.51
R04	8.151	Downstream	3.549	35.32	14.12	4120.50	505.52
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.671	4.52	14.09	4474.18	484.22
R05	9.240	Downstream	3.671	4.52	14.33	4468.11	483.56
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.861		14.28	5320.29	487.65

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	60.19	13.73	4314.67	633.58
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	44.64	13.72	4358.13	622.59
R031	7.000	Downstream	3.898	43.93	13.72	4275.99	610.86
R04B	7.000	Upstream	3.898		13.72	4275.99	610.86
R04B	7.000	Downstream	3.897	40.46	13.93	4190.49	598.64
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.036	41.63	13.88	5055.48	620.23
R04	8.151	Downstream	3.993	41.24	13.88	4997.12	613.07
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.117	4.88	13.85	5470.00	591.99
R05	9.240	Downstream	4.117	4.88	14.04	5464.49	591.40
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.311		13.99	6624.11	607.16

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		424.8	633.8	981.2	1605.3	2755.9
DOWNSTREAM			424.8	633.8	981.2	1605.2	2755.8
R04B	7.00		424.8	633.8	981.2	1605.2	2755.8
DOWNSTREAM			406.3	603.5	862.8	1343.6	2564.9
R04	8.15		477.6	703.1	982.0	1554.5	3003.9
DOWNSTREAM			473.9	699.6	976.0	1439.6	2525.7
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			418.5	625.0	968.5	1587.9	2729.7
R05	9.24		520.6	773.9	1071.0	1548.3	2707.6
DOWNSTREAM			518.7	772.4	1067.0	1532.7	2701.8
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		795.5	1224.9	1891.5	2249.3	3137.5

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3758.9	4358.1			
DOWNSTREAM			3697.2	4276.0			
R04B	7.00		3697.2	4276.0			
DOWNSTREAM			3607.8	4190.5			
R04	8.15		4283.4	5055.5			
DOWNSTREAM			4120.5	4997.1			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3722.3	4314.7			
R05	9.24		4474.2	5470.0			
DOWNSTREAM			4468.1	5464.5			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		5320.3	6624.1			

Blind Brook Watershed.
Downstream limit: I-95 ALT D Δ=72.1

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	41.93	14.87	447.42	65.70
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	32.15	14.86	454.10	64.87
R031	7.000	Downstream	0.562	32.15	14.88	454.09	64.87
R04B	7.000	Upstream	0.562		14.88	454.09	64.87
R04B	7.000	Downstream	0.561	31.45	15.54	421.84	60.26
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	19.22	15.36	500.15	61.36
R04	8.151	Downstream	0.616	19.18	15.81	493.25	60.51
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.666		15.72	542.47	58.71
R05	9.240	Downstream	0.666		16.25	539.63	58.40
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.751		13.33	796.33	72.99

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	44.29	14.72	797.70	117.14
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.949	33.14	14.73	808.10	115.44
R031	7.000	Downstream	0.949	33.14	14.74	808.07	115.44
R04B	7.000	Upstream	0.949		14.74	808.07	115.44
R04B	7.000	Downstream	0.947	33.77	15.72	714.90	102.13
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.021	20.87	15.31	827.79	101.56
R04	8.151	Downstream	1.018	20.85	15.70	823.59	101.04
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083	0.10	15.46	896.17	96.99
R05	9.240	Downstream	1.082	0.09	15.97	894.84	96.84
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.189		13.34	1225.27	112.31

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.590	50.96	15.04	1199.85	176.19
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	33.67	14.99	1214.47	173.50
R031	7.000	Downstream	1.594	33.67	15.01	1214.46	173.49
R04B	7.000	Upstream	1.594		15.01	1214.46	173.49
R04B	7.000	Downstream	1.593	37.13	15.80	1151.77	164.54
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.686	23.21	15.70	1304.41	160.03
R04	8.151	Downstream	1.682	23.04	16.12	1268.49	155.62
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.764	2.34	16.04	1356.66	146.82
R05	9.240	Downstream	1.763	2.31	16.56	1350.65	146.17
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.897		13.32	1897.87	173.96

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	54.98	15.09	1386.67	203.62
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	33.89	15.09	1403.39	200.48
R031	7.000	Downstream	1.947	33.89	15.10	1403.37	200.48
R04B	7.000	Upstream	1.947		15.10	1403.37	200.48
R04B	7.000	Downstream	1.946	37.55	15.49	1385.33	197.90
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.048	24.51	15.28	1594.81	195.66
R04	8.151	Downstream	2.044	24.35	15.86	1548.54	189.98

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.133	3.80	15.79	1658.03	179.44
R05	9.240	Downstream	2.133	3.77	16.32	1650.79	178.66
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.277		13.34	2261.21	207.26

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.694	58.63	14.39	2532.32	371.85
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	34.95	14.40	2557.69	365.38
R031	7.000	Downstream	2.699	34.95	14.41	2557.13	365.30
R04B	7.000	Upstream	2.699		14.41	2557.13	365.30
R04B	7.000	Downstream	2.698	38.95	14.62	2471.62	353.09
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.816	30.15	14.57	2882.50	353.64
R04	8.151	Downstream	2.810	27.79	15.04	2526.45	309.96
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.912	4.00	15.01	2705.74	292.83
R05	9.240	Downstream	2.912	3.99	15.34	2699.25	292.13
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.077		13.21	3182.69	291.72

STORM 50YR

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	59.50	14.01	3672.33	539.26
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	38.99	14.02	3707.15	529.59
R031	7.000	Downstream	3.496	38.50	14.02	3650.26	521.47
R04B	7.000	Upstream	3.496		14.02	3650.26	521.47
R04B	7.000	Downstream	3.494	39.96	14.21	3570.02	510.00
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.626	36.05	14.16	4227.88	518.70
R04	8.151	Downstream	3.569	34.80	14.16	4044.13	496.15
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.689	4.49	14.14	4386.65	474.75
R05	9.240	Downstream	3.689	4.49	14.36	4379.88	474.01
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.877		14.31	5205.20	477.10

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	59.86	13.78	4260.18	625.58
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	44.17	13.78	4303.65	614.81
R031	7.000	Downstream	3.899	43.50	13.83	4226.47	603.78
R04B	7.000	Upstream	3.899		13.83	4226.47	603.78
R04B	7.000	Downstream	3.898	40.43	13.98	4160.44	594.35
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.036	41.28	13.93	5002.92	613.78
R04	8.151	Downstream	3.992	40.87	13.93	4942.12	606.32
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.116	4.86	13.89	5395.79	583.96
R05	9.240	Downstream	4.116	4.85	14.08	5391.17	583.46
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.310		14.03	6512.50	596.93

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		454.1	808.1	1214.5	1403.4	2557.7
DOWNSTREAM			454.1	808.1	1214.5	1403.4	2557.1
R04B	7.00		454.1	808.1	1214.5	1403.4	2557.1
DOWNSTREAM			421.8	714.9	1151.8	1385.3	2471.6
R04	8.15		500.2	827.8	1304.4	1594.8	2882.5
DOWNSTREAM			493.3	823.6	1268.5	1548.5	2526.4
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			447.4	797.7	1199.9	1386.7	2532.3
R05	9.24		542.5	896.2	1356.7	1658.0	2705.7
DOWNSTREAM			539.6	894.8	1350.6	1650.8	2699.3
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		796.3	1225.3	1897.9	2261.2	3182.7

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3707.1	4303.6			
DOWNSTREAM			3650.3	4226.5			
R04B	7.00		3650.3	4226.5			
DOWNSTREAM			3570.0	4160.4			
R04	8.15		4227.9	5002.9			
DOWNSTREAM			4044.1	4942.1			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3672.3	4260.2			
R05	9.24		4386.7	5395.8			
DOWNSTREAM			4379.9	5391.2			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		5205.2	6512.5			

Blind Brook Watershed.
Downstream limit: I-95 ALT D A = 105.6

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	41.48	14.81	455.18	66.84
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	32.18	14.80	461.95	65.99
R031	7.000	Downstream	0.562	32.18	14.81	461.94	65.99
R04B	7.000	Upstream	0.562		14.81	461.94	65.99
R04B	7.000	Downstream	0.561	31.48	15.46	428.31	61.19
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	19.27	15.27	509.00	62.45
R04	8.151	Downstream	0.616	19.22	15.73	500.20	61.37
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.666		15.66	550.50	59.58
R05	9.240	Downstream	0.666		16.18	547.61	59.26
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.751		13.33	797.04	73.06

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	44.22	14.61	828.45	121.65
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.949	33.18	14.61	839.09	119.87
R031	7.000	Downstream	0.949	33.18	14.63	839.01	119.86
R04B	7.000	Upstream	0.949		14.63	839.01	119.86
R04B	7.000	Downstream	0.947	33.71	15.54	710.47	101.50
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.021	20.89	15.16	831.20	101.98
R04	8.151	Downstream	1.018	20.86	15.60	824.99	101.21
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083	0.11	15.43	899.23	97.32
R05	9.240	Downstream	1.082	0.10	15.94	897.20	97.10
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.189		13.34	1226.12	112.38

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.590	48.35	14.70	1377.40	202.26
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	33.87	14.69	1393.16	199.02
R031	7.000	Downstream	1.594	33.87	14.71	1393.14	199.02
R04B	7.000	Upstream	1.594		14.71	1393.14	199.02
R04B	7.000	Downstream	1.593	37.45	15.23	1329.52	189.93
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.686	24.28	15.16	1527.32	187.38
R04	8.151	Downstream	1.682	23.93	15.65	1451.99	178.14
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.764	3.29	15.61	1553.40	168.12
R05	9.240	Downstream	1.763	3.24	16.13	1541.93	166.88
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.897		13.34	1896.72	173.85

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	51.31	14.75	1631.85	239.63
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.13	14.75	1650.13	235.73
R031	7.000	Downstream	1.947	34.13	14.75	1650.07	235.72
R04B	7.000	Upstream	1.947		14.75	1650.07	235.72
R04B	7.000	Downstream	1.946	37.98	15.09	1623.59	231.94
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.049	25.48	14.90	1877.47	230.34
R04	8.151	Downstream	2.045	25.25	15.46	1811.69	222.27

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.134	3.86	15.41	1935.27	209.44
R05	9.240	Downstream	2.133	3.86	15.86	1931.44	209.03
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.278		13.30	2323.61	212.98

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.694	57.34	14.62	2287.64	335.92
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	34.75	14.62	2312.15	330.31
R031	7.000	Downstream	2.699	34.75	14.64	2312.15	330.31
R04B	7.000	Upstream	2.699		14.64	2312.15	330.31
R04B	7.000	Downstream	2.698	38.74	14.80	2287.15	326.74
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.816	28.69	14.70	2661.72	326.55
R04	8.151	Downstream	2.810	27.69	15.11	2511.72	308.15
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.913	3.99	15.05	2687.27	290.83
R05	9.240	Downstream	2.912	3.99	15.39	2683.63	290.44
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.077		13.21	3202.81	293.57

STORM 50YR

A-68

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	58.96	14.12	3568.47	524.00
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	38.08	14.13	3601.97	514.57
R031	7.000	Downstream	3.496	37.74	14.13	3562.75	508.96
R04B	7.000	Upstream	3.496		14.13	3562.75	508.96
R04B	7.000	Downstream	3.495	39.90	14.31	3505.74	500.82
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.627	35.37	14.24	4128.08	506.45
R04	8.151	Downstream	3.598	34.22	14.24	3889.26	477.15
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.715	4.43	14.21	4213.95	456.06
R05	9.240	Downstream	3.715	4.43	14.45	4208.02	455.41
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.898		14.39	4988.93	457.28

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	59.40	13.90	4209.91	618.20
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	43.72	13.85	4251.98	607.43
R031	7.000	Downstream	3.899	43.10	13.90	4180.28	597.18
R04B	7.000	Upstream	3.899		13.90	4180.28	597.18
R04B	7.000	Downstream	3.898	40.40	14.03	4118.27	588.32
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.037	40.86	13.96	4940.98	606.18
R04	8.151	Downstream	3.996	40.43	13.96	4877.05	598.34
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.119	4.83	13.93	5314.08	575.12
R05	9.240	Downstream	4.119	4.82	14.13	5309.18	574.59
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.313		14.07	6390.68	585.76

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		461.9	839.1	1393.2	1650.1	2312.2
DOWNSTREAM			461.9	839.0	1393.1	1650.1	2312.2
R04B	7.00		461.9	839.0	1393.1	1650.1	2312.2
DOWNSTREAM			428.3	710.5	1329.5	1623.6	2287.2
R04	8.15		509.0	831.2	1527.3	1877.5	2661.7
DOWNSTREAM			500.2	825.0	1452.0	1811.7	2511.7
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			455.2	828.5	1377.4	1631.8	2287.6
R05	9.24		550.5	899.2	1553.4	1935.3	2687.3
DOWNSTREAM			547.6	897.2	1541.9	1931.4	2683.6
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		797.0	1226.1	1896.7	2323.6	3202.8

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3602.0	4252.0			
DOWNSTREAM			3562.8	4180.3			
R04B	7.00		3562.8	4180.3			
DOWNSTREAM			3505.7	4118.3			
R04	8.15		4128.1	4941.0			
DOWNSTREAM			3889.3	4877.1			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3568.5	4209.9			
R05	9.24		4213.9	5314.1			
DOWNSTREAM			4208.0	5309.2			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		4988.9	6390.7			

Blind Brook Watershed.
Downstream limit: I-95

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STORM 1YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.488		13.62	135.17	73.87
R01	1.830	Upstream	0.488	162.45	13.62	135.17	73.87
R01	1.830	Downstream	0.487	162.44	14.12	134.66	73.59
I	1.310		0.736		13.30	187.17	142.88
II	0.500		0.690		13.24	65.67	131.33
II-2	1.900		0.488		14.33	109.69	57.73
R02	1.900	Upstream	0.488	131.52	14.33	109.69	57.73
R02	1.900	Downstream	0.488	131.51	14.51	109.53	57.65
R03A	5.540	Upstream	0.565	83.17	13.72	421.22	76.03
R03A	5.540	Downstream	0.565	83.17	13.93	421.06	76.00
III-A	0.520		0.564		12.71	77.84	149.70
R03	6.060	Upstream	0.565	58.47	13.96	448.12	73.95
R03	6.060	Downstream	0.564	58.45	14.41	439.77	72.57
III	0.750		0.525		13.36	68.93	91.91
R032	6.810	Upstream	0.560		14.30	482.35	70.83
R032	6.810	Downstream	0.560	41.43	14.81	456.07	66.97
III-B	0.190		0.647		12.22	59.15	311.31
R031	7.000	Upstream	0.562	32.18	14.77	462.87	66.12
R031	7.000	Downstream	0.562	32.18	14.78	462.87	66.12
R04B	7.000	Upstream	0.562		14.78	462.87	66.12
R04B	7.000	Downstream	0.561	31.48	15.44	429.15	61.31
IV-B1	0.050		1.599		12.26	41.03	820.51
IV-B2	0.011		1.047		12.16	11.13	1011.86
IV-A	1.090		0.934		13.54	177.93	163.24
R06	1.090	Upstream	0.934	30.54	13.54	177.93	163.24
R06	1.090	Downstream	0.932	30.47	13.54	175.14	160.68
R04	8.151	Upstream	0.618	19.27	15.27	510.13	62.58
R04	8.151	Downstream	0.616	19.23	15.72	501.29	61.50
IV	1.089		1.044		12.76	322.93	296.54
R05	9.240	Upstream	0.666		15.65	551.73	59.71
R05	9.240	Downstream	0.666		16.16	548.81	59.39
V	1.670		1.223		13.19	415.55	248.84
OUTLET	10.910		0.751		13.33	797.07	73.06

STORM 2YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		0.850		13.49	262.68	143.54
R01	1.830	Upstream	0.850	163.28	13.49	262.68	143.54
R01	1.830	Downstream	0.849	163.27	13.99	260.48	142.34
I	1.310		1.179		13.17	319.13	243.61
II	0.500		1.119		13.15	113.66	227.33
II-2	1.900		0.849		14.13	208.93	109.96

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R02	1.900	Upstream	0.849	132.07	14.13	208.93	109.96
R02	1.900	Downstream	0.849	132.07	14.31	208.93	109.96
R03A	5.540	Upstream	0.951	84.52	13.60	781.27	141.02
R03A	5.540	Downstream	0.951	84.51	13.92	779.16	140.64
III-A	0.520		0.953		12.68	145.25	279.33
R03	6.060	Upstream	0.951	59.50	13.87	823.27	135.85
R03	6.060	Downstream	0.951	59.50	14.16	820.22	135.35
III	0.750		0.900		13.22	131.56	175.42
R032	6.810	Upstream	0.945		14.10	902.82	132.57
R032	6.810	Downstream	0.945	44.20	14.67	816.31	119.87
III-B	0.190		1.062		12.21	104.82	551.68
R031	7.000	Upstream	0.949	33.16	14.66	826.80	118.11
R031	7.000	Downstream	0.949	33.16	14.68	826.78	118.11
R04B	7.000	Upstream	0.949		14.68	826.78	118.11
R04B	7.000	Downstream	0.947	33.73	15.56	711.68	101.67
IV-B1	0.050		2.298		12.26	55.93	1118.51
IV-B2	0.011		1.606		12.15	15.14	1376.23
IV-A	1.090		1.429		13.51	282.19	258.89
R06	1.090	Upstream	1.429	31.59	13.51	282.19	258.89
R06	1.090	Downstream	1.429	31.57	13.51	275.45	252.70
R04	8.151	Upstream	1.021	20.89	15.21	830.66	101.91
R04	8.151	Downstream	1.018	20.86	15.63	824.79	101.19
IV	1.089		1.565		12.71	494.39	453.98
R05	9.240	Upstream	1.083	0.11	15.44	898.47	97.24
R05	9.240	Downstream	1.082	0.10	15.96	896.61	97.04
V	1.670		1.782		13.23	616.16	368.96
OUTLET	10.910		1.189		13.34	1226.21	112.39

STORM 5YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.463		13.43	488.33	266.85
R01	1.830	Upstream	1.463	164.13	13.43	488.33	266.85
R01	1.830	Downstream	1.462	164.12	13.81	483.43	264.17
I	1.310		1.895		13.18	532.46	406.46
II	0.500		1.818		13.18	193.33	386.66
II-2	1.900		1.463		14.05	385.55	202.92
R02	1.900	Upstream	1.463	132.76	14.05	385.55	202.92
R02	1.900	Downstream	1.463	132.76	14.24	385.32	202.80
R03A	5.540	Upstream	1.597	85.72	13.60	1401.65	253.01
R03A	5.540	Downstream	1.597	85.71	13.92	1395.06	251.82
III-A	0.520		1.601		12.65	258.50	497.12
R03	6.060	Upstream	1.597	60.63	13.90	1465.01	241.75
R03	6.060	Downstream	1.597	60.62	14.07	1462.21	241.29
III	0.750		1.531		13.21	239.47	319.29
R032	6.810	Upstream	1.590		14.02	1610.31	236.46
R032	6.810	Downstream	1.590	46.93	14.24	1565.32	229.86
III-B	0.190		1.744		12.20	179.33	943.85

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R031	7.000	Upstream	1.594	34.06	14.24	1582.69	226.10
R031	7.000	Downstream	1.594	34.06	14.26	1582.67	226.10
R04B	7.000	Upstream	1.594		14.26	1582.67	226.10
R04B	7.000	Downstream	1.593	37.57	14.87	1397.58	199.65
IV-B1	0.050		3.255		12.27	77.26	1545.15
IV-B2	0.011		2.502		12.15	20.89	1898.80
IV-A	1.090		2.209		13.48	445.51	408.72
R06	1.090	Upstream	2.209	32.01	13.48	445.51	408.72
R06	1.090	Downstream	2.208	32.00	13.48	436.76	400.70
R04	8.151	Upstream	1.686	24.65	14.80	1634.59	200.54
R04	8.151	Downstream	1.682	24.20	15.28	1507.87	184.99
IV	1.089		2.376		12.71	760.70	698.53
R05	9.240	Upstream	1.764	3.62	15.24	1621.47	175.48
R05	9.240	Downstream	1.763	3.53	15.77	1602.80	173.46
V	1.670		2.635		13.19	917.99	549.69
OUTLET	10.910		1.897		13.34	1898.46	174.01

STORM 10YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		1.802		13.42	613.71	335.36
R01	1.830	Upstream	1.802	164.61	13.42	613.71	335.36
R01	1.830	Downstream	1.802	164.59	13.80	608.13	332.31
I	1.310		2.280		13.20	644.94	492.32
II	0.500		2.196		13.20	235.50	471.00
II-2	1.900		1.802		14.04	484.45	254.97
R02	1.900	Upstream	1.802	133.13	14.04	484.45	254.97
R02	1.900	Downstream	1.802	133.13	14.23	483.27	254.35
R03A	5.540	Upstream	1.950	86.11	13.51	1743.98	314.80
R03A	5.540	Downstream	1.950	86.10	13.94	1732.22	312.68
III-A	0.520		1.956		12.65	320.38	616.11
R03	6.060	Upstream	1.951	61.48	13.84	1821.38	300.56
R03	6.060	Downstream	1.951	61.48	14.01	1817.90	299.98
III	0.750		1.878		13.13	299.30	399.07
R032	6.810	Upstream	1.943		13.96	2006.23	294.60
R032	6.810	Downstream	1.943	48.71	14.47	1821.82	267.52
III-B	0.190		2.114		12.20	219.58	1155.70
R031	7.000	Upstream	1.947	34.32	14.46	1841.36	263.05
R031	7.000	Downstream	1.947	34.32	14.45	1841.35	263.05
R04B	7.000	Upstream	1.947		14.45	1841.35	263.05
R04B	7.000	Downstream	1.946	38.20	14.73	1814.12	259.16
IV-B1	0.050		3.733		12.25	87.95	1759.09
IV-B2	0.011		2.946		12.15	23.75	2159.46
IV-A	1.090		2.622		13.45	531.63	487.73
R06	1.090	Upstream	2.622	32.14	13.45	531.63	487.73
R06	1.090	Downstream	2.621	32.13	13.45	522.83	479.66
R04	8.151	Upstream	2.048	26.29	14.62	2115.18	259.50
R04	8.151	Downstream	2.045	25.91	15.17	2004.96	245.98

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
IV	1.089		2.801		12.72	898.73	825.28
R05	9.240	Upstream	2.134	3.90	15.13	2141.10	231.72
R05	9.240	Downstream	2.134	3.89	15.53	2135.60	231.13
V	1.670		3.078		13.19	1073.14	642.60
OUTLET	10.910		2.278		15.43	2412.00	221.08

STORM 25YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		2.530		13.35	882.85	482.43
R01	1.830	Upstream	2.530	165.51	13.35	882.85	482.43
R01	1.830	Downstream	2.529	165.48	13.73	871.78	476.38
I	1.310		3.088		13.11	884.58	675.25
II	0.500		2.991		13.13	325.28	650.55
II-2	1.900		2.529		14.09	695.72	366.17
R02	1.900	Upstream	2.529	133.77	14.09	695.72	366.17
R02	1.900	Downstream	2.529	133.77	14.09	695.72	366.17
R03A	5.540	Upstream	2.703	86.78	13.53	2478.69	447.42
R03A	5.540	Downstream	2.702	86.76	13.85	2462.48	444.49
III-A	0.520		2.711		12.63	451.20	867.68
R03	6.060	Upstream	2.703	63.34	13.77	2587.59	427.00
R03	6.060	Downstream	2.703	63.32	13.88	2582.11	426.09
III	0.750		2.619		13.16	426.82	569.09
R032	6.810	Upstream	2.694		13.82	2867.70	421.10
R032	6.810	Downstream	2.694	54.04	14.56	2388.42	350.72
III-B	0.190		2.897		12.18	303.67	1598.27
R031	7.000	Upstream	2.699	34.84	14.56	2413.27	344.75
R031	7.000	Downstream	2.699	34.84	14.54	2413.24	344.75
R04B	7.000	Upstream	2.699		14.54	2413.24	344.75
R04B	7.000	Downstream	2.698	38.87	14.70	2404.47	343.50
IV-B1	0.050		4.696		12.27	109.39	2187.71
IV-B2	0.011		3.881		12.15	29.46	2677.91
IV-A	1.090		3.478		13.47	707.38	648.97
R06	1.090	Upstream	3.478	32.42	13.47	707.38	648.97
R06	1.090	Downstream	3.478	32.41	13.47	701.30	643.39
R04	8.151	Upstream	2.816	29.80	14.36	2829.73	347.16
R04	8.151	Downstream	2.810	28.84	15.03	2685.03	329.41
IV	1.089		3.679		12.73	1179.08	1082.72
R05	9.240	Upstream	2.912	4.03	14.95	2866.53	310.23
R05	9.240	Downstream	2.912	4.03	15.27	2864.68	310.03
V	1.670		3.987		13.20	1387.05	830.57
OUTLET	10.910		3.077		15.01	3274.84	300.17

STORM 50YR

A-76

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.306		13.39	1168.96	638.78
R01	1.830	Upstream	3.306	166.25	13.39	1168.96	638.78
R01	1.830	Downstream	3.306	166.21	13.76	1156.89	632.18
I	1.310		3.934		13.08	1132.03	864.14
II	0.500		3.827		13.12	418.57	837.14
II-2	1.900		3.306		14.04	922.36	485.45
R02	1.900	Upstream	3.306	134.39	14.04	922.36	485.45
R02	1.900	Downstream	3.306	134.39	14.04	922.36	485.45
R03A	5.540	Upstream	3.501	87.58	13.50	3269.28	590.12
R03A	5.540	Downstream	3.501	87.54	13.72	3238.07	584.49
III-A	0.520		3.513		12.65	588.26	1131.27
R03	6.060	Upstream	3.502	66.59	13.73	3403.52	561.64
R03	6.060	Downstream	3.502	66.55	13.84	3393.55	559.99
III	0.750		3.409		13.09	560.70	747.60
R032	6.810	Upstream	3.492		13.78	3774.44	554.25
R032	6.810	Downstream	3.492	58.20	14.30	3373.01	495.30
III-B	0.190		3.721		12.19	391.57	2060.90
R031	7.000	Upstream	3.498	36.91	14.29	3405.15	486.45
R031	7.000	Downstream	3.498	36.91	14.33	3403.42	486.20
R04B	7.000	Upstream	3.498		14.33	3403.42	486.20
R04B	7.000	Downstream	3.497	39.77	14.45	3355.95	479.42
IV-B1	0.050		5.669		12.26	130.58	2611.60
IV-B2	0.011		4.849		12.15	35.12	3193.05
IV-A	1.090		4.365		13.34	889.47	816.02
R06	1.090	Upstream	4.365	32.80	13.34	889.47	816.02
R06	1.090	Downstream	4.365	32.79	13.47	883.63	810.67
R04	8.151	Upstream	3.628	34.33	14.39	3919.08	480.81
R04	8.151	Downstream	3.620	32.81	14.79	3513.01	430.99
IV	1.089		4.584		12.73	1464.38	1344.70
R05	9.240	Upstream	3.734	4.29	14.74	3752.97	406.17
R05	9.240	Downstream	3.734	4.28	15.00	3751.27	405.98
V	1.670		4.915		13.22	1701.05	1018.60
OUTLET	10.910		3.915		14.82	4317.92	395.78

STORM 100YR

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
I-1	1.830		3.709		13.37	1317.52	719.95
R01	1.830	Upstream	3.709	166.60	13.37	1317.52	719.95
R01	1.830	Downstream	3.709	166.56	13.74	1302.60	711.81
I	1.310		4.369		13.10	1259.21	961.23
II	0.500		4.256		13.14	466.21	932.41
II-2	1.900		3.709		13.96	1041.19	547.99
R02	1.900	Upstream	3.709	134.69	13.96	1041.19	547.99
R02	1.900	Downstream	3.709	134.68	13.96	1037.61	546.11
R03A	5.540	Upstream	3.914	87.89	13.52	3667.08	661.93
R03A	5.540	Downstream	3.914	87.89	13.63	3661.49	660.92
III-A	0.520		3.927		12.65	658.63	1266.60

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Rain Gage ID or Location	Runoff Amount (in)	Peak Flow Elevation (ft)	Peak Flow Time (hr)	Peak Flow Rate (cfs)	Peak Flow Rate (csm)
R03	6.060	Upstream	3.915	67.83	13.56	3863.78	637.59
R03	6.060	Downstream	3.915	67.81	13.73	3856.24	636.34
III	0.750		3.817		13.12	631.27	841.70
R032	6.810	Upstream	3.904		13.61	4342.29	637.64
R032	6.810	Downstream	3.904	58.93	14.01	4075.63	598.48
III-B	0.190		4.146		12.18	436.65	2298.17
R031	7.000	Upstream	3.911	42.53	14.01	4115.20	587.89
R031	7.000	Downstream	3.902	42.01	14.01	4054.50	579.21
R04B	7.000	Upstream	3.902		14.01	4054.50	579.21
R04B	7.000	Downstream	3.901	40.31	14.12	4005.81	572.26
IV-B1	0.050		6.160		12.26	141.15	2823.00
IV-B2	0.011		5.328		12.15	37.97	3451.82
IV-A	1.090		4.817		13.44	980.86	899.87
R06	1.090	Upstream	4.817	32.95	13.44	980.86	899.87
R06	1.090	Downstream	4.816	32.94	13.44	976.76	896.11
R04	8.151	Upstream	4.039	39.74	14.05	4775.80	585.92
R04	8.151	Downstream	4.007	39.24	14.05	4701.44	576.79
IV	1.089		5.043		12.69	1611.03	1479.37
R05	9.240	Upstream	4.129	4.75	14.03	5105.71	552.57
R05	9.240	Downstream	4.129	4.75	14.23	5101.48	552.11
V	1.670		5.386		13.17	1864.46	1116.44
OUTLET	10.910		4.321		14.15	6103.10	559.40

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 1YR (cfs)	2YR (cfs)	5YR (cfs)	10YR (cfs)	25YR (cfs)
I-1	1.83		135.2	262.7	488.3	613.7	882.9
II-2	1.90		109.7	208.9	385.6	484.5	695.7
I	1.31		187.2	319.1	532.5	644.9	884.6
II	0.50		65.7	113.7	193.3	235.5	325.3
III-A	0.52		77.8	145.3	258.5	320.4	451.2
III	0.75		68.9	131.6	239.5	299.3	426.8
IV-A	1.09		177.9	282.2	445.5	531.6	707.4
IV	1.09		322.9	494.4	760.7	898.7	1179.1
III-B	0.19		59.1	104.8	179.3	219.6	303.7
V	1.67		415.6	616.2	918.0	1073.1	1387.1
IV-B1	0.05		41.0	55.9	77.3	88.0	109.4
IV-B2	0.01		11.1	15.1	20.9	23.8	29.5
R01	1.83		135.2	262.7	488.3	613.7	882.9
DOWNSTREAM			134.7	260.5	483.4	608.1	871.8
R02	1.90		109.7	208.9	385.6	484.5	695.7
DOWNSTREAM			109.5	208.9	385.3	483.3	695.7
R03A	5.54		421.2	781.3	1401.7	1744.0	2478.7
DOWNSTREAM			421.1	779.2	1395.1	1732.2	2462.5
R031	7.00		462.9	826.8	1582.7	1841.4	2413.3
DOWNSTREAM			462.9	826.8	1582.7	1841.3	2413.2
R04B	7.00		462.9	826.8	1582.7	1841.3	2413.2
DOWNSTREAM			429.1	711.7	1397.6	1814.1	2404.5
R04	8.15		510.1	830.7	1634.6	2115.2	2829.7
DOWNSTREAM			501.3	824.8	1507.9	2005.0	2685.0
R03	6.06		448.1	823.3	1465.0	1821.4	2587.6
DOWNSTREAM			439.8	820.2	1462.2	1817.9	2582.1
R032	6.81		482.3	902.8	1610.3	2006.2	2867.7
DOWNSTREAM			456.1	816.3	1565.3	1821.8	2388.4
R05	9.24		551.7	898.5	1621.5	2141.1	2866.5
DOWNSTREAM			548.8	896.6	1602.8	2135.6	2864.7
R06	1.09		177.9	282.2	445.5	531.6	707.4
DOWNSTREAM			175.1	275.4	436.8	522.8	701.3
OUTLET	10.91		797.1	1226.2	1898.5	2412.0	3274.8

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
I-1	1.83		1169.0	1317.5			
II-2	1.90		922.4	1041.2			
I	1.31		1132.0	1259.2			
II	0.50		418.6	466.2			
III-A	0.52		588.3	658.6			
III	0.75		560.7	631.3			
IV-A	1.09		889.5	980.9			
IV	1.09		1464.4	1611.0			
III-B	0.19		391.6	436.7			
V	1.67		1701.1	1864.5			
IV-B1	0.05		130.6	141.2			
IV-B2	0.01		35.1	38.0			

Blind Brook Watershed.
Downstream limit: I-95

Area or Reach Identifier	Drainage Area (sq mi)	Alternate	Peak Flow by Storm 50YR (cfs)	100YR (cfs)	(cfs)	(cfs)	(cfs)
R01	1.83		1169.0	1317.5			
DOWNSTREAM			1156.9	1302.6			
R02	1.90		922.4	1041.2			
DOWNSTREAM			922.4	1037.6			
R03A	5.54		3269.3	3667.1			
DOWNSTREAM			3238.1	3661.5			
R031	7.00		3405.2	4115.2			
DOWNSTREAM			3403.4	4054.5			
R04B	7.00		3403.4	4054.5			
DOWNSTREAM			3355.9	4005.8			
R04	8.15		3919.1	4775.8			
DOWNSTREAM			3513.0	4701.4			
R03	6.06		3403.5	3863.8			
DOWNSTREAM			3393.6	3856.2			
R032	6.81		3774.4	4342.3			
DOWNSTREAM			3373.0	4075.6			
R05	9.24		3753.0	5105.7			
DOWNSTREAM			3751.3	5101.5			
R06	1.09		889.5	980.9			
DOWNSTREAM			883.6	976.8			
OUTLET	10.91		4317.9	6103.1			

Flood Mitigation Study, Oct, 2007

FLOOD CONTROL IMPROVEMENTS
City of Rye, Westchester County, NY

File: Alternatives5A-8A.xls
Compiled: Dan Ionescu
Date: 9/18/2007

EXISTING BOWMAN AVENUE DAM. ORIFICE OPTIMIZATION

2-YEAR FREQUENCY STORM

Location	Discharge (cfs)									
	Exist. Condition	Exist. Condition. No Dam	Alt. 5A	Difference	Alt.6A	Difference	Alt.7A	Difference	Alt.8A	Difference
(1)	(2)	(2a)	(3)	(3)-(2)	(4)	(4)-(2)	(5)	(5)-(2)	(6)	(6)-(2)
U/S of Bowman Avenue Dam	903	903	903	0	903	0	903	0	903	0
D/S of Bowman Avenue Dam	397	854	625	228	798	401	828	431	816	419
D/S of I-287	565	1106	783	218	994	429	1014	449	1004	439
D/S of I-95	681	1148	873	192	1066	385	1070	389	1068	387

5-YEAR FREQUENCY STORM

Location	Discharge (cfs)									
	Exist. Condition	Exist. Condition. No Dam	Alt. 5A	Difference	Alt.6A	Difference	Alt.7A	Difference	Alt.8A	Difference
(1)	(2)	(2a)	(3)	(3)-(2)	(4)	(4)-(2)	(5)	(5)-(2)	(6)	(6)-(2)
U/S of Bowman Avenue Dam	1610	1610	1610	0	1610	0	1610	0	1610	0
D/S of Bowman Avenue Dam	1253	1592	969	-284	1200	-53	1377	124	1565	312
D/S of I-287	1473	1999	1154	-319	1458	-15	1669	196	1909	436
D/S of I-95	1413	2061	1238	-175	1564	151	1760	347	1928	515

10-YEAR FREQUENCY STORM

Location	Discharge (cfs)									
	Exist. Condition	Exist. Condition. No Dam	Alt. 5A	Difference	Alt.6A	Difference	Alt.7A	Difference	Alt.8A	Difference
(1)	(2)	(2a)	(3)	(3)-(2)	(4)	(4)-(2)	(5)	(5)-(2)	(6)	(6)-(2)
U/S of Bowman Avenue Dam	2006	2006	2006	0	2006	0	2006	0	2006	0
D/S of Bowman Avenue Dam	1768	1984	1593	-175	1387	-381	1632	-136	1822	54
D/S of I-287	2088	2479	1870	-218	1687	-401	1967	-121	2218	130
D/S of I-95	2012	2584	1838	-174	1816	-196	2087	75	2319	307

25-YEAR FREQUENCY STORM

Location	Discharge (cfs)									
	Exist. Condition	Exist. Condition. No Dam	Alt. 5A	Difference	Alt.6A	Difference	Alt.7A	Difference	Alt.8A	Difference
(1)	(2)	(2a)	(3)	(3)-(2)	(4)	(4)-(2)	(5)	(5)-(2)	(6)	(6)-(2)
U/S of Bowman Avenue Dam	2868	2868	2868	0	2868	0	2868	0	2868	0
D/S of Bowman Avenue Dam	2800	2805	2730	-70	2535	-265	2266	-534	2388	-412
D/S of I-287	3396	3495	3279	-117	3010	-386	2676	-720	2888	-508
D/S of I-95	2994	3410	2946	-48	2848	-146	2773	-221	2975	-19

50-YEAR FREQUENCY STORM

Location	Discharge (cfs)									
	Exist. Condition	Exist. Condition. No Dam	Alt. 5A	Difference	Alt.6A	Difference	Alt.7A	Difference	Alt.8A	Difference
(1)	(2)	(2a)	(3)	(3)-(2)	(4)	(4)-(2)	(5)	(5)-(2)	(6)	(6)-(2)
U/S of Bowman Avenue Dam	3774	3774	3774	0	3774	0	3774	0	3774	0
D/S of Bowman Avenue Dam	3755	3663	3722	-33	3673	-82	3570	-185	3381	-374
D/s of I-287	4506	4498	4455	-51	4370	-136	4233	-273	4002	-504
D/S of I-95	4844	4906	4750	-94	4616	-228	4407	-437	3873	-971

100-YEAR FREQUENCY STORM

Location	Discharge (cfs)									
	Exist. Condition	Exist. Condition. No Dam	Alt. 5A	Difference	Alt.6A	Difference	Alt.7A	Difference	Alt.8A	Difference
(1)	(2)	(2a)	(3)	(3)-(2)	(4)	(4)-(2)	(5)	(5)-(2)	(6)	(6)-(2)
U/S of Bowman Avenue Dam	4342	4342	4342	0	4342	0	4342	0	4342	0
D/S of Bowman Avenue Dam	4322	4215	4315	-7	4261	-61	4210	-112	4078	-244
D/S of I-287	5162	5118	5126	-36	5047	-115	4971	-191	4809	-353
D/S of I-95	5621	5646	5561	-60	5443	-178	5341	-280	5136	-485

Alt 5A - Existing Reservoir, Orifice Area 45.6 ft2
Alt 6A - Existing Reservoir, Orifice Area 72.1 ft2
Alt 7A - Existing Reservoir, Orifice Area 105.6 ft2
Alt 8A - Existing Reservoir, Orifice Area 139.1 ft2

Flood Mitigation Study, Oct 9, 2007

FLOOD CONTROL IMPROVEMENTS
City of Rye, Westchester County, N.Y.

File: Alt5A8ADischarges.xls
Compiled: Dan Ionescu
Date: 9/26/2007

ALTERNATE: EXISTING BOWMAN RESERVOIR AREA, OPTIMIZED ORIFICE OPENING

100 - Year Frequency Storm, Orifice Area = 139.1 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	3583	5621	5136	1.1	3274	32.17	31.12	-1.05
Highland Rd.						32.6	31.57	-1.03
Purchase St.						33.44	32.55	-0.89
I-287	3346	5162	4809	1.1	3117	34.97	34.54	-0.43
Bowman Avenue	2779	4342	4342	1	2779			

50 - Year Frequency Storm, Orifice Area = 139.1 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	3078	4844	3873	1.3	2461	30.56	26.41	-4.15
Highland Rd.						31.01	27.39	-3.62
Purchase St.						31.91	30.18	-1.73
I-287	2767	4506	4002	1.1	2458	34.11	33.66	-0.45
Bowman Avenue	2261	3774	3774	1	2261			

25 - Year Frequency Storm, Orifice Area = 105.6 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	2594	2994	2773	1.1	2403	26.93	26.19	-0.74
Highland Rd.						27.78	27.2	-0.58
Purchase St.						30.06	29.21	-0.85
I-287	2252	3396	2676	1.3	1775	33.44	32.87	-0.57
Bowman Avenue	1808	2868	2868	1	1808			

10 - Year Frequency Storm, Orifice Area = 72.1 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	1982	2012	1816	1.1	1789	24.59	23.89	-0.70
Highland Rd.						25.88	25.24	-0.64
Purchase St.						28.33	27.73	-0.60
I-287	1663	2088	1687	1.2	1344	32.73	32.27	-0.46
Bowman Avenue	1301	2006	2006	1	1301			

5 - Year Frequency Storm, Orifice Area = 45.6 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	1534	1413	1238	1.1	1344	22.95	22.36	-0.59
Highland Rd.						24.19	23.35	-0.84
Purchase St.						27.2	26.61	-0.59
I-287	1275	1473	1154	1.3	999	32.15	31.62	-0.53
Bowman Avenue	977	1610	1610	1	977			

2 - Year Frequency Storm, Orifice Area = 20.16 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	928	681	681	1.0	928	20.77	20.8	0.03
Highland Rd.						21.41	21.43	0.02
Purchase St.						25.65	25.65	0.00
I-287	781	565	565	1.0	781	31.07	31.07	0.00
Bowman Avenue	587	903	903	1	587			

Table 1 - Discharges - Alternatives A, B, C and D (cfs)									
	Existing Cond.	Alt. A	Diff.	Alt. B	Diff.	Alt. C	Diff.	Alt. D	Diff.
2-Year Storm									
U/S Bowman Dam	903	903	0	903	0	903	0	903	0
D/S Bowman Dam	397	397	0	397	0	397	0	397	0
D/S I-287	558	522	-36	531	-27	482	-76	482	-76
D/S I-95	681	670	-11	696	15	639	-42	639	-42
5-Year Storm									
U/S Bowman Dam	1610	1610	0	1610	0	1610	0	1610	0
D/S Bowman Dam	1253	1253	0	1253	0	1253	0	969	-284
D/S I-287	1467	1334	-133	1371	-96	1038	-429	982	-485
D/S I-95	1413	1323	-90	1340	-73	1098	-315	1071	-342
10-Year Storm									
U/S Bowman Dam	2006	2006	0	2006	0	2006	0	2006	0
D/S Bowman Dam	1768	1768	0	1768	0	1768	0	1387	-381
D/S I-287	2079	1962	-117	1991	-88	1688	-391	1595	-484
D/S I-95	2012	1901	-111	1923	-89	1645	-367	1658	-354
25-Year Storm									
U/S Bowman Dam	2868	2868	0	2868	0	2868	0	2868	0
D/S Bowman Dam	2800	2800	0	2800	0	2800	0	2288	-512
D/S I-287	3384	3232	-152	3272	-112	3081	-303	2662	-722
D/S I-95	2994	2918	-76	2937	-57	2750	-244	2687	-307
50-Year Storm									
U/S Bowman Dam	3774	3774	0	3774	0	3774	0	3774	0
D/S Bowman Dam	3755	3755	0	3755	0	3755	0	3373	-382
D/S I-287	4490	4397	-93	4425	-65	4330	-160	3920	-570
D/S I-95	4844	4652	-192	4697	-147	4547	-297	3753	-1091
100-Year Storm									
U/S Bowman Dam	4342	4342	0	4342	0	4342	0	4342	0
D/S Bowman Dam	4322	4322	0	4322	0	4322	0	4076	-246
D/S I-287	5144	5121	-23	5144	0	5090	-54	4776	-368
D/S I-95	5621	5575	-46	5613	-8	5518	-103	5106	-515

Alt A - Maximized Lower Pond Site, Gravity, Principal Spillway EL 31.5
Alt B - Maximized Lower Pond Site, Mechanical, Principal Spillway EL 31.5
Alt C - Maximized Lower Pond Site, Gravity, Principal Spillway EL 35.5
Alt D - Maximized Lower Pond Site, Gravity, Principal Spillway EL 35.5, Optimized Bowman Avenue Dam Outlet

FLOOD CONTROL IMPROVEMENTS
City of Rye, Westchester County, N.Y.

File: Alt5A18A1Discharges.xls
Compiled: Dan Ionescu
Date: 2/4/2008

ALTERNATE: EXISTING BOWMAN RESERVOIR AREA, OPTIMIZED ORIFICE OPENING AND ALTERNATE GRAVITY AT THE LOWER POND (PRINCIPAL SPILLWAY ELEV. = 35.5)

100 - Year Frequency Storm, Orifice Area = 139.1 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	3583	5621	5106	1.1	3255	32.17	31.06	-1.11
Highland Rd.						32.60	31.51	-1.09
Purchase St.						33.44	32.51	-0.93
I-287	3346	5162	4776	1.1	3096	34.97	34.51	-0.46
Bowman Avenue	2779	4342	4342	1	2779			

50 - Year Frequency Storm, Orifice Area = 139.1 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	3078	4844	3753	1.3	2385	30.56	26.12	-4.44
Highland Rd.						31.01	27.16	-3.85
Purchase St.						31.91	30.15	-1.76
I-287	2767	4506	3920	1.1	2407	34.11	33.60	-0.51
Bowman Avenue	2261	3774	3774	1	2261			

25 - Year Frequency Storm, Orifice Area = 105.6 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	2594	2994	2687	1.1	2328	26.93	25.90	-1.03
Highland Rd.						27.78	27.16	-0.62
Purchase St.						30.06	29.05	-1.01
I-287	2252	3396	2662	1.3	1765	33.44	32.86	-0.58
Bowman Avenue	1808	2868	2868	1	1808			

10 - Year Frequency Storm, Orifice Area = 72.1 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	1982	2012	1658	1.2	1633	24.59	23.33	-1.26
Highland Rd.						25.88	24.66	-1.22
Purchase St.						28.33	27.38	-0.95
I-287	1663	2088	1595	1.3	1270	32.73	32.15	-0.58
Bowman Avenue	1301	2006	2006	1	1301			

5 - Year Frequency Storm, Orifice Area = 45.6 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	1534	1413	1071	1.3	1163	22.95	21.66	-1.29
Highland Rd.						24.19	22.66	-1.53
Purchase St.						27.20	26.16	-1.04
I-287	1275	1473	982	1.5	850	32.15	31.25	-0.90
Bowman Avenue	977	1610	1610	1	977			

2 - Year Frequency Storm, Orifice Area = 20.16 ft2

Location	Discharge (cfs)					Water Surface Elevation (ft-NAVD)		
	Calculated Existing	WinTR-20 Existing	WinTR-20 Proposed	(3)/(4)	Calculated Proposed	Existing	Proposed	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
I-95	928	681	639	1.1	871	20.77	20.54	-0.23
Highland Rd.						21.41	21.17	-0.24
Purchase St.						25.65	25.40	-0.25
I-287	781	565	482	1.2	666	31.07	30.70	-0.37
Bowman Avenue	587	903	903	1	587			

Table A-12

	Orifice Size	Water Surface Elevation (ft-NAVD) Existing Cond.	Proposed Cond.	Difference
2-Year Storm	**20.2**			
D/S I-287		31.07	30.70	-0.37
Purchase Street		25.65	25.40	-0.25
Highland Road		21.41	21.17	-0.24
U/S I-95		20.77	20.54	-0.23
5-Year Storm	**45.6**			
D/S I-287		32.15	31.25	-0.90
Purchase Street		27.20	26.16	-1.04
Highland Road		24.19	22.66	-1.53
U/S I-95		22.95	21.66	-1.29
10-Year Storm	**72.1**			
D/S I-287		32.73	32.15	-0.58
Purchase Street		28.33	27.38	-0.95
Highland Road		25.88	24.66	-1.22
U/S I-95		24.59	23.33	-1.26
25-Year Storm	**105.6**			
D/S I-287		33.44	32.86	-0.58
Purchase Street		30.06	29.05	-1.01
Highland Road		27.78	27.16	-0.62
U/S I-95		26.93	25.90	-1.03
50-Year Storm	**139.1**			
D/S I-287		34.11	33.60	-0.51
Purchase Street		31.91	30.15	-1.76
Highland Road		31.01	27.16	-3.85
U/S I-95		30.56	26.12	-4.44
100-Year Storm	**139.1**			
D/S I-287		34.97	34.51	-0.46
Purchase Street		33.44	32.51	-0.93
Highland Road		32.60	31.51	-1.09
U/S I-95		32.17	31.06	-1.11

Flood Control Improvements File: FISRatingCurve.xls
City of Rye, NY

Flood Insurance Study Rating Curve at Section 12079.54

Q (cfs)	WS (ft)
1521	19.83
2497	20.98
2984	21.48
4042	22.43

EXIST. SELLS FLOWS

Q = 3583 ft^3/s	EL 22.05
3078	21.55
2594	21.15
1982	20.35
1534	19.75
928	19.10

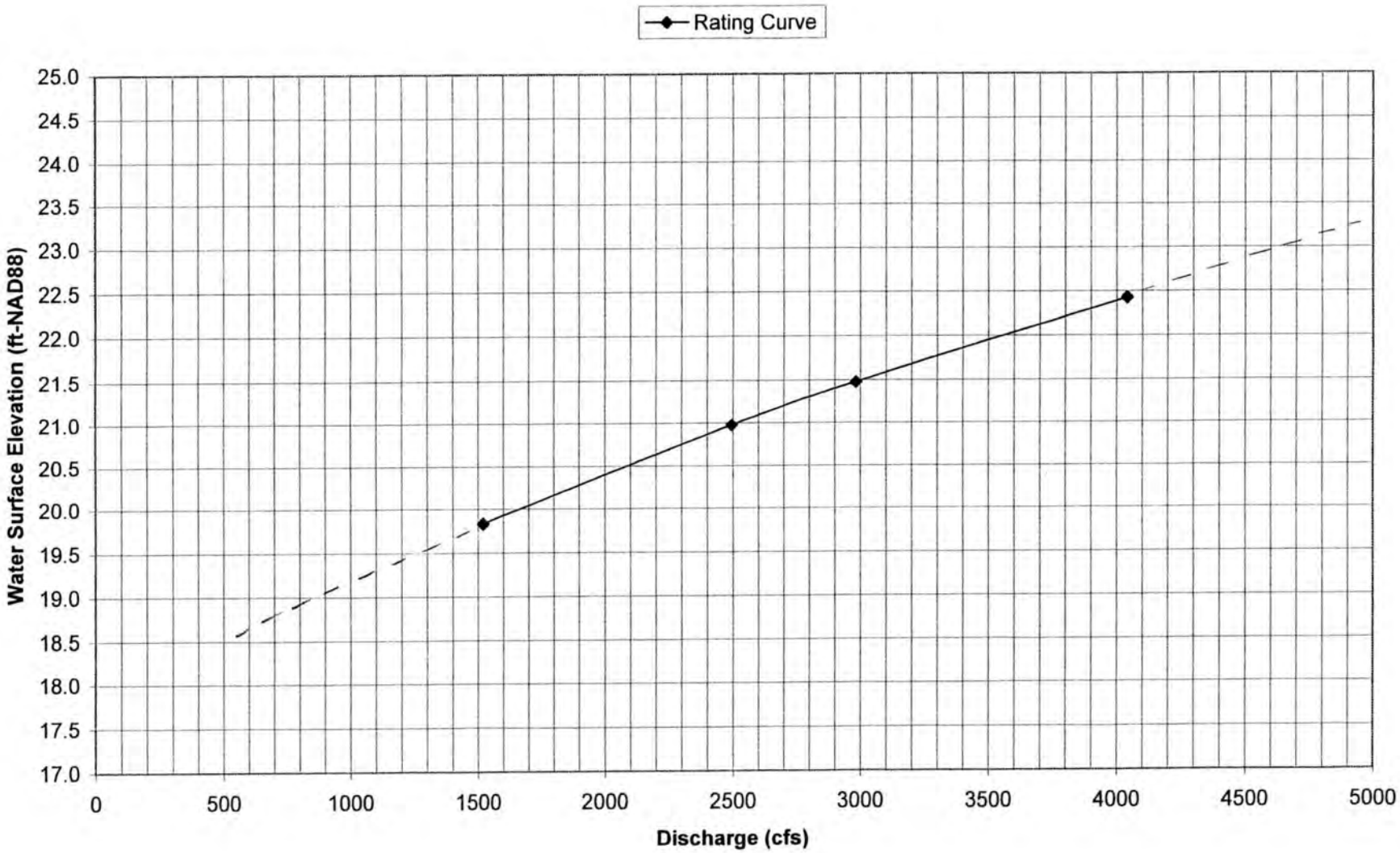
EXIST. BOWMAN AVE DAM RESERVOIR, OPTIMIZED OUTLET

Q = 3274 ft^3/s	EL 21.70
2461	20.90
2403	20.80
1789	20.20
1344	19.65
928	19.15

EXIST. BOWMAN AVE DAM RESERVOIR, OPTIMIZED OUTLET, LOWER POND PRINC. SPILLWAY EL 35.5

Q = 3255 ft^3/s	EL 21.65
2385	20.85
2328	20.75
1633	20.00
1163	19.40
871	19.00

Flood Insurance Study Rating Curve
Section 12079.54



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EXIST. SELLS FLOWS

HEC-RAS Plan: I95I287EX River: blindbrook Reach: r1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	20203.01 Inter	100 - year	3346.00	27.12	36.43		36.44	0.000035	0.96	3829.07	575.51	0.06
r1	20203.01 Inter	50 - year	2767.00	27.12	35.38		35.39	0.000038	0.92	3238.78	548.18	0.06
r1	20203.01 Inter	25 - year	2252.00	27.12	34.49		34.50	0.000039	0.86	2768.44	509.87	0.06
r1	20203.01 Inter	10 - year	1663.00	27.12	33.49		33.50	0.000037	0.75	2295.33	453.72	0.06
r1	20203.01 Inter	5 - year	1275.00	27.12	32.86		32.86	0.000032	0.65	2012.22	438.81	0.05
r1	20203.01 Inter	2 - year	781.00	27.12	31.65		31.65	0.000031	0.53	1497.18	414.96	0.05
r1	19875.51 Inter	100 - year	3346.00	27.32	36.41		36.43	0.000036	1.00	3541.81	472.31	0.06
r1	19875.51 Inter	50 - year	2767.00	27.32	35.37		35.38	0.000038	0.95	3054.07	458.65	0.06
r1	19875.51 Inter	25 - year	2252.00	27.32	34.48		34.49	0.000039	0.88	2652.44	445.19	0.06
r1	19875.51 Inter	10 - year	1663.00	27.32	33.48		33.49	0.000037	0.77	2216.87	427.68	0.06
r1	19875.51 Inter	5 - year	1275.00	27.32	32.85		32.85	0.000032	0.67	1950.33	413.40	0.05
r1	19875.51 Inter	2 - year	781.00	27.32	31.64		31.64	0.000030	0.54	1464.75	394.53	0.05
r1	19603.00 Inter	100 - year	3346.00	26.26	36.34		36.40	0.000273	2.54	1972.13	284.71	0.15
r1	19603.00 Inter	50 - year	2767.00	26.26	35.29		35.35	0.000301	2.47	1678.24	276.18	0.15
r1	19603.00 Inter	25 - year	2252.00	26.26	34.40		34.46	0.000317	2.35	1436.88	268.57	0.15
r1	19603.00 Inter	10 - year	1663.00	26.26	33.42		33.46	0.000313	2.13	1175.76	259.05	0.15
r1	19603.00 Inter	5 - year	1275.00	26.26	32.79		32.83	0.000282	1.89	1016.39	252.62	0.14
r1	19603.00 Inter	2 - year	781.00	26.26	31.59		31.62	0.000286	1.64	721.54	238.69	0.13
r1	19434.98	100 - year	3346.00	25.70	36.17	30.70	36.31	0.000578	3.13	1186.52	375.33	0.18
r1	19434.98	50 - year	2767.00	25.70	35.13	30.30	35.26	0.000622	2.99	1030.47	368.49	0.19
r1	19434.98	25 - year	2252.00	25.70	34.26	29.87	34.37	0.000634	2.79	899.52	354.27	0.19
r1	19434.98	10 - year	1663.00	25.70	33.29	29.30	33.37	0.000600	2.46	754.69	315.14	0.18
r1	19434.98	5 - year	1275.00	25.70	32.69	28.89	32.76	0.000521	2.14	664.93	281.68	0.16
r1	19434.98	2 - year	781.00	25.70	31.51	28.27	31.55	0.000491	1.77	487.88	248.66	0.15
r1	19267.87 189+20TR		Bridge	I-287								
r1	19109.74	100 - year	3346.00	25.48	34.97	30.31	35.39	0.001146	5.22	644.65	296.34	0.31
r1	19109.74	50 - year	2767.00	25.48	34.11	29.84	34.46	0.001114	4.80	579.99	286.60	0.30
r1	19109.74	25 - year	2252.00	25.48	33.44	29.39	33.72	0.000996	4.27	530.05	274.92	0.28
r1	19109.74	10 - year	1663.00	25.48	32.73	28.82	32.92	0.000771	3.51	477.13	233.58	0.24
r1	19109.74	5 - year	1275.00	25.48	32.15	28.42	32.29	0.000619	2.95	434.35	185.50	0.21
r1	19109.74	2 - year	781.00	25.48	31.07	27.80	31.14	0.000462	2.23	353.20	174.19	0.18
r1	19020.68 186+20	100 - year	3346.00	25.65	35.04		35.17	0.000642	3.28	1230.48	340.31	0.21
r1	19020.68 186+20	50 - year	2767.00	25.65	34.14		34.27	0.000720	3.20	999.63	189.84	0.21
r1	19020.68 186+20	25 - year	2252.00	25.65	33.44		33.56	0.000734	3.02	868.71	186.60	0.21
r1	19020.68 186+20	10 - year	1663.00	25.65	32.71		32.80	0.000671	2.66	733.61	183.18	0.20
r1	19020.68 186+20	5 - year	1275.00	25.65	32.13		32.20	0.000634	2.40	627.31	180.44	0.19
r1	19020.68 186+20	2 - year	781.00	25.65	31.02		31.08	0.000709	2.14	431.36	173.75	0.19

HEC-RAS Plan: I95I287EX River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	18714.22	100 - year	3346.00	25.59	34.79	32.47	34.94	0.000928	4.17	1220.58	372.48	0.25
r1	18714.22	50 - year	2767.00	25.59	33.75	32.16	33.95	0.001470	4.82	880.93	294.26	0.31
r1	18714.22	25 - year	2252.00	25.59	32.90	31.80	33.18	0.002230	5.48	636.86	277.43	0.37
r1	18714.22	10 - year	1663.00	25.59	31.97	31.01	32.37	0.003412	6.14	392.87	238.86	0.45
r1	18714.22	5 - year	1275.00	25.59	31.20	29.78	31.74	0.004740	6.57	243.63	134.51	0.52
r1	18714.22	2 - year	781.00	25.59	30.01	28.82	30.55	0.006059	6.20	140.30	54.61	0.56
r1	18434.20	100 - year	3346.00	24.54	33.24	30.91	34.38	0.003823	8.64	405.28	278.06	0.55
r1	18434.20	50 - year	2767.00	24.54	32.06	30.25	33.19	0.004722	8.58	331.77	210.68	0.60
r1	18434.20	25 - year	2252.00	24.54	31.16	29.65	32.19	0.005267	8.19	279.28	116.58	0.62
r1	18434.20	10 - year	1663.00	24.54	30.59	28.81	31.30	0.004153	6.76	247.85	103.29	0.54
r1	18434.20	5 - year	1275.00	24.54	30.07	28.19	30.59	0.003543	5.80	220.33	90.58	0.49
r1	18434.20	2 - year	781.00	24.54	28.98	27.26	29.32	0.003080	4.70	166.08	64.05	0.44
r1	18143.24 Inter	100 - year	3346.00	23.30	33.55	29.67	33.72	0.000616	3.96	1114.98	202.49	0.23
r1	18143.24 Inter	50 - year	2767.00	23.30	32.19	29.14	32.40	0.000905	4.31	854.90	192.12	0.27
r1	18143.24 Inter	25 - year	2252.00	23.30	30.99	28.55	31.27	0.001361	4.72	633.01	182.35	0.33
r1	18143.24 Inter	10 - year	1663.00	23.30	30.33	27.37	30.55	0.001228	4.18	515.64	170.93	0.30
r1	18143.24 Inter	5 - year	1275.00	23.30	29.75	26.77	29.95	0.001165	3.80	420.10	161.11	0.29
r1	18143.24 Inter	2 - year	781.00	23.30	28.56	25.88	28.73	0.001237	3.38	258.49	105.81	0.29
r1	17862.22 Inter	100 - year	3346.00	23.25	33.56	29.92	33.59	0.000184	2.13	2629.03	640.51	0.12
r1	17862.22 Inter	50 - year	2767.00	23.25	32.13	29.68	32.20	0.000396	2.80	1740.09	596.05	0.18
r1	17862.22 Inter	25 - year	2252.00	23.25	30.78	29.30	30.91	0.000917	3.75	1028.57	440.68	0.26
r1	17862.22 Inter	10 - year	1663.00	23.25	30.02	27.69	30.19	0.001202	3.95	710.23	402.17	0.29
r1	17862.22 Inter	5 - year	1275.00	23.25	29.23	27.11	29.52	0.001993	4.60	411.70	346.23	0.37
r1	17862.22 Inter	2 - year	781.00	23.25	27.86	26.18	28.19	0.003129	4.62	169.58	50.86	0.43
r1	17650.31	100 - year	3346.00	22.67	33.54	28.27	33.56	0.000070	1.42	3590.82	623.72	0.08
r1	17650.31	50 - year	2767.00	22.67	32.11	28.04	32.13	0.000110	1.60	2717.48	592.47	0.10
r1	17650.31	25 - year	2252.00	22.67	30.75	28.04	30.78	0.000198	1.90	1936.92	556.12	0.13
r1	17650.31	10 - year	1663.00	22.67	30.00	27.41	30.03	0.000214	1.82	1528.95	533.98	0.13
r1	17650.31	5 - year	1275.00	22.67	29.20	26.68	29.24	0.000368	2.17	944.06	491.09	0.17
r1	17650.31	2 - year	781.00	22.67	27.27	25.66	27.55	0.002678	4.30	203.65	287.31	0.42
r1	17574.23 171+70		Bridge	Private Drive								
r1	17543.75	100 - year	3346.00	22.09	33.49	28.89	33.52	0.000133	1.84	2689.72	548.10	0.11
r1	17543.75	50 - year	2767.00	22.09	31.99	28.01	32.03	0.000253	2.24	1897.61	506.23	0.14
r1	17543.75	25 - year	2252.00	22.09	30.26	28.20	30.35	0.000672	3.07	1127.39	408.99	0.22
r1	17543.75	10 - year	1663.00	22.09	29.05	27.28	29.22	0.001416	3.82	658.95	365.25	0.31
r1	17543.75	5 - year	1275.00	22.09	28.05	26.65	28.38	0.003129	4.82	338.95	254.40	0.45

HEC-RAS Plan: I95I287EX River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	17543.75	2 - year	781.00	22.09	25.48	25.85	26.91	0.032550	9.61	81.29	50.02	1.33
r1	17458.05 170+70	100 - year	3346.00	20.81	33.49		33.50	0.000047	1.39	3588.14	500.08	0.07
r1	17458.05 170+70	50 - year	2767.00	20.81	31.99		32.01	0.000063	1.47	2859.48	470.86	0.08
r1	17458.05 170+70	25 - year	2252.00	20.81	30.27		30.30	0.000105	1.68	2084.47	438.33	0.10
r1	17458.05 170+70	10 - year	1663.00	20.81	29.10		29.12	0.000123	1.66	1578.24	420.28	0.11
r1	17458.05 170+70	5 - year	1275.00	20.81	28.16		28.19	0.000148	1.66	1196.31	399.50	0.11
r1	17458.05 170+70	2 - year	781.00	20.81	26.47		26.50	0.000262	1.81	623.89	283.58	0.14
r1	17129.50 Inter	100 - year	3346.00	20.52	33.47	26.88	33.49	0.000067	1.36	3202.46	482.50	0.08
r1	17129.50 Inter	50 - year	2767.00	20.52	31.96	26.58	31.98	0.000089	1.41	2513.42	438.89	0.09
r1	17129.50 Inter	25 - year	2252.00	20.52	30.22	26.10	30.25	0.000163	1.64	1780.84	401.45	0.11
r1	17129.50 Inter	10 - year	1663.00	20.52	29.04	24.97	29.07	0.000216	1.66	1320.43	375.49	0.12
r1	17129.50 Inter	5 - year	1275.00	20.52	28.09	24.45	28.12	0.000308	1.75	972.93	356.88	0.14
r1	17129.50 Inter	2 - year	781.00	20.52	26.26	23.68	26.35	0.000960	2.55	376.80	243.12	0.24
r1	16796.14	100 - year	3346.00	20.25	33.45	25.90	33.46	0.000060	1.45	3654.63	657.58	0.08
r1	16796.14	50 - year	2767.00	20.25	31.92	25.45	31.95	0.000098	1.69	2670.09	635.67	0.10
r1	16796.14	25 - year	2252.00	20.25	30.12	25.03	30.18	0.000239	2.31	1552.86	588.41	0.14
r1	16796.14	10 - year	1663.00	20.25	28.89	24.49	28.96	0.000324	2.42	942.47	405.65	0.17
r1	16796.14	5 - year	1275.00	20.25	27.93	24.10	28.00	0.000346	2.27	677.21	200.03	0.17
r1	16796.14	2 - year	781.00	20.25	26.02	23.46	26.10	0.000574	2.28	367.56	128.56	0.21
r1	16734.31 Inter		Bridge	Foot Bridge								
r1	16659.66	100 - year	3346.00	20.13	33.44	25.66	33.45	0.000050	1.34	3984.11	678.80	0.07
r1	16659.66	50 - year	2767.00	20.13	31.91	25.32	31.93	0.000067	1.42	2994.70	562.21	0.08
r1	16659.66	25 - year	2252.00	20.13	30.06	24.71	30.09	0.000129	1.73	2019.09	498.24	0.11
r1	16659.66	10 - year	1663.00	20.13	28.36	24.15	28.40	0.000229	1.98	1242.80	393.47	0.14
r1	16659.66	5 - year	1275.00	20.13	27.22	23.75	27.27	0.000315	2.06	841.89	299.08	0.15
r1	16659.66	2 - year	781.00	20.13	25.69	23.16	25.75	0.000502	2.11	464.50	218.53	0.19
r1	16593.28 161+50US	100 - year	3346.00	20.08	33.44	25.62	33.45	0.000029	0.98	4891.08	716.37	0.05
r1	16593.28 161+50US	50 - year	2767.00	20.08	31.91	25.35	31.92	0.000042	1.08	3815.47	691.06	0.06
r1	16593.28 161+50US	25 - year	2252.00	20.08	30.06	25.10	30.08	0.000119	1.60	2096.31	613.51	0.09
r1	16593.28 161+50US	10 - year	1663.00	20.08	28.33	24.53	28.38	0.000257	2.04	990.96	483.23	0.13
r1	16593.28 161+50US	5 - year	1275.00	20.08	27.20	24.19	27.25	0.000336	2.08	772.19	436.57	0.15
r1	16593.28 161+50US	2 - year	781.00	20.08	25.65	23.53	25.71	0.000575	2.23	471.87	306.12	0.19
r1	16505.25 161+50		Bridge	Purchase St.								
r1	16442.38	100 - year	3583.00	20.04	33.32	26.75	33.39	0.000220	2.61	2185.13	533.18	0.14
r1	16442.38	50 - year	3078.00	20.04	31.74	26.34	31.88	0.000429	3.29	1391.48	472.32	0.19

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HEC-RAS Plan: I95I287EX River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	16442.38	25 - year	2594.00	20.04	29.16	26.01	29.46	0.001222	4.52	652.38	153.73	0.32
r1	16442.38	10 - year	1982.00	20.04	27.66	25.35	28.01	0.001840	4.76	444.94	122.26	0.38
r1	16442.38	5 - year	1534.00	20.04	26.58	24.82	26.94	0.002485	4.85	324.25	101.66	0.44
r1	16442.38	2 - year	928.00	20.04	25.14	23.93	25.48	0.003416	4.73	196.22	76.30	0.52
r1	16342.07 160+00	100 - year	3583.00	18.56	33.19	25.99	33.34	0.000303	3.50	1203.51	449.08	0.17
r1	16342.07 160+00	50 - year	3078.00	18.56	31.68	25.67	31.83	0.000366	3.54	1034.78	423.19	0.18
r1	16342.07 160+00	25 - year	2594.00	18.56	29.10	24.95	29.32	0.000742	4.24	746.67	284.96	0.25
r1	16342.07 160+00	10 - year	1982.00	18.56	27.59	24.46	27.81	0.000970	4.28	577.65	270.21	0.28
r1	16342.07 160+00	5 - year	1534.00	18.56	26.48	23.92	26.70	0.001213	4.29	453.29	257.78	0.30
r1	16342.07 160+00	2 - year	928.00	18.56	24.97	22.90	25.19	0.001582	4.07	285.23	222.19	0.33
r1	15955.76 Inter	100 - year	3583.00	18.48	33.04		33.21	0.000361	3.51	1190.62	153.45	0.18
r1	15955.76 Inter	50 - year	3078.00	18.48	31.48		31.67	0.000460	3.61	964.81	136.79	0.20
r1	15955.76 Inter	25 - year	2594.00	18.48	28.67		28.96	0.001068	4.45	621.16	107.69	0.29
r1	15955.76 Inter	10 - year	1982.00	18.48	27.03		27.34	0.001485	4.45	457.96	92.52	0.32
r1	15955.76 Inter	5 - year	1534.00	18.48	25.80		26.10	0.002002	4.41	349.83	82.06	0.36
r1	15955.76 Inter	2 - year	928.00	18.48	24.15		24.41	0.002609	4.09	226.62	67.88	0.39
r1	15689.73 Inter	100 - year	3583.00	18.43	33.03	24.27	33.12	0.000167	2.45	1503.74	599.07	0.12
r1	15689.73 Inter	50 - year	3078.00	18.43	31.47	23.93	31.56	0.000197	2.45	1303.27	544.86	0.13
r1	15689.73 Inter	25 - year	2594.00	18.43	28.62	23.52	28.75	0.000410	2.94	936.38	369.55	0.17
r1	15689.73 Inter	10 - year	1982.00	18.43	26.93	22.99	27.06	0.000555	2.97	718.92	253.66	0.19
r1	15689.73 Inter	5 - year	1534.00	18.43	25.60	22.54	25.73	0.000774	3.06	547.77	169.79	0.22
r1	15689.73 Inter	2 - year	928.00	18.43	23.73	21.81	23.88	0.001414	3.21	311.50	116.16	0.28
r1	15333.34 Inter	100 - year	3583.00	17.03	33.01	23.42	33.07	0.000098	2.05	2101.56	954.54	0.10
r1	15333.34 Inter	50 - year	3078.00	17.03	31.44	23.00	31.50	0.000121	2.10	1779.05	954.54	0.11
r1	15333.34 Inter	25 - year	2594.00	17.03	28.52	22.58	28.62	0.000282	2.70	1186.42	751.92	0.16
r1	15333.34 Inter	10 - year	1982.00	17.03	26.77	21.99	26.88	0.000418	2.88	830.52	515.83	0.19
r1	15333.34 Inter	5 - year	1534.00	17.03	25.37	21.43	25.50	0.000572	2.98	572.00	287.83	0.21
r1	15333.34 Inter	2 - year	928.00	17.03	23.36	20.51	23.49	0.000839	2.89	329.97	100.08	0.25
r1	15129.82 Inter	100 - year	3583.00	16.63	32.89	23.23	33.03	0.000225	3.04	1233.45	1224.59	0.14
r1	15129.82 Inter	50 - year	3078.00	16.63	31.33	22.78	31.46	0.000252	2.97	1085.80	1160.16	0.15
r1	15129.82 Inter	25 - year	2594.00	16.63	28.37	22.34	28.54	0.000472	3.39	806.77	896.70	0.19
r1	15129.82 Inter	10 - year	1982.00	16.63	26.62	21.75	26.78	0.000573	3.26	642.17	759.86	0.21
r1	15129.82 Inter	5 - year	1534.00	16.63	25.21	21.19	25.36	0.000712	3.18	509.20	519.68	0.22
r1	15129.82 Inter	2 - year	928.00	16.63	23.16	20.24	23.30	0.001068	3.00	316.66	95.85	0.26
r1	14830.24 145+00	100 - year	3583.00	17.36	32.74	25.10	32.93	0.000395	3.84	1045.07	676.82	0.18
r1	14830.24 145+00	50 - year	3078.00	17.36	31.15	24.25	31.35	0.000471	3.87	899.17	664.04	0.19
r1	14830.24 145+00	25 - year	2594.00	17.36	27.99	23.44	28.31	0.001122	4.91	608.76	617.01	0.28

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HEC-RAS Plan: I95I287EX River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	14830.24 145+00	10 - year	1982.00	17.36	26.09	22.52	26.48	0.001731	5.23	434.62	517.69	0.34
r1	14830.24 145+00	5 - year	1534.00	17.36	24.44	21.80	24.95	0.002945	5.76	284.59	183.11	0.42
r1	14830.24 145+00	2 - year	928.00	17.36	22.08	20.64	22.64	0.005469	5.98	155.23	41.90	0.55
r1	14298.00 Inter	100 - year	3583.00	14.23	32.74	21.31	32.83	0.000066	1.80	1618.39	384.51	0.08
r1	14298.00 Inter	50 - year	3078.00	14.23	31.15	20.88	31.23	0.000074	1.79	1439.66	331.52	0.08
r1	14298.00 Inter	25 - year	2594.00	14.23	27.98	20.43	28.08	0.000146	2.16	1083.56	298.86	0.11
r1	14298.00 Inter	10 - year	1982.00	14.23	26.08	19.62	26.17	0.000187	2.20	870.04	281.20	0.12
r1	14298.00 Inter	5 - year	1534.00	14.23	24.40	19.02	24.48	0.000267	2.35	681.42	187.63	0.14
r1	14298.00 Inter	2 - year	928.00	14.23	21.68	18.01	21.78	0.000599	2.78	386.50	94.67	0.19
r1	14095.34 Inter	100 - year	3583.00	14.16	32.65	20.45	32.81	0.000156	3.30	1153.70	693.73	0.14
r1	14095.34 Inter	50 - year	3078.00	14.16	31.07	20.00	31.21	0.000160	3.14	1044.56	664.14	0.14
r1	14095.34 Inter	25 - year	2594.00	14.16	27.87	19.44	28.04	0.000246	3.36	824.64	453.11	0.17
r1	14095.34 Inter	10 - year	1982.00	14.16	25.98	18.75	26.12	0.000251	3.06	694.42	369.08	0.16
r1	14095.34 Inter	5 - year	1534.00	14.16	24.31	18.18	24.43	0.000270	2.85	579.04	285.59	0.17
r1	14095.34 Inter	2 - year	928.00	14.16	21.60	17.30	21.69	0.000341	2.55	392.12	151.76	0.18
r1	13786.52 136+00	100 - year	3583.00	15.18	32.60	21.05	32.75	0.000215	3.21	1173.18	764.47	0.14
r1	13786.52 136+00	50 - year	3078.00	15.18	31.01	20.66	31.14	0.000225	3.08	1056.05	723.78	0.14
r1	13786.52 136+00	25 - year	2594.00	15.18	27.78	20.25	27.94	0.000374	3.40	817.78	614.44	0.17
r1	13786.52 136+00	10 - year	1982.00	15.18	25.88	19.72	26.02	0.000407	3.17	677.72	480.85	0.17
r1	13786.52 136+00	5 - year	1534.00	15.18	24.19	19.18	24.32	0.000478	3.05	552.80	226.86	0.18
r1	13786.52 136+00	2 - year	928.00	15.18	21.41	18.23	21.53	0.000797	3.06	347.70	111.41	0.22
r1	13738.57 135+00		Bridge	High Canal Rd.								
r1	13693.55 135+00DS	100 - year	3583.00	14.85	32.21	21.22	32.45	0.000356	4.09	908.52	869.06	0.18
r1	13693.55 135+00DS	50 - year	3078.00	14.85	30.60	20.74	30.83	0.000371	3.91	818.35	810.36	0.18
r1	13693.55 135+00DS	25 - year	2594.00	14.85	27.03	20.24	27.31	0.000671	4.41	617.23	574.67	0.23
r1	13693.55 135+00DS	10 - year	1982.00	14.85	24.73	19.55	24.99	0.000851	4.29	487.78	264.21	0.25
r1	13693.55 135+00DS	5 - year	1534.00	14.85	23.14	18.87	23.38	0.000989	4.10	398.47	97.56	0.26
r1	13693.55 135+00DS	2 - year	928.00	14.85	21.03	17.89	21.21	0.001141	3.57	279.42	73.54	0.26
r1	13616.62 134+00	100 - year	3583.00	14.82	32.32	20.73	32.33	0.000032	1.29	4150.69	641.71	0.06
r1	13616.62 134+00	50 - year	3078.00	14.82	30.70	20.31	30.72	0.000046	1.44	3316.38	641.23	0.07
r1	13616.62 134+00	25 - year	2594.00	14.82	27.12	19.88	27.18	0.000174	2.33	1670.69	471.95	0.12
r1	13616.62 134+00	10 - year	1982.00	14.82	24.74	19.23	24.89	0.000442	3.16	668.81	294.88	0.19
r1	13616.62 134+00	5 - year	1534.00	14.82	23.13	18.73	23.28	0.000557	3.09	526.26	171.76	0.21
r1	13616.62 134+00	2 - year	928.00	14.82	20.99	17.91	21.11	0.000753	2.81	345.34	85.25	0.23
r1	13460.62 Inter	100 - year	3583.00	13.76	32.27	19.48	32.32	0.000072	2.27	2135.12	388.61	0.10
r1	13460.62 Inter	50 - year	3078.00	13.76	30.65	19.08	30.70	0.000080	2.26	1848.85	370.40	0.10

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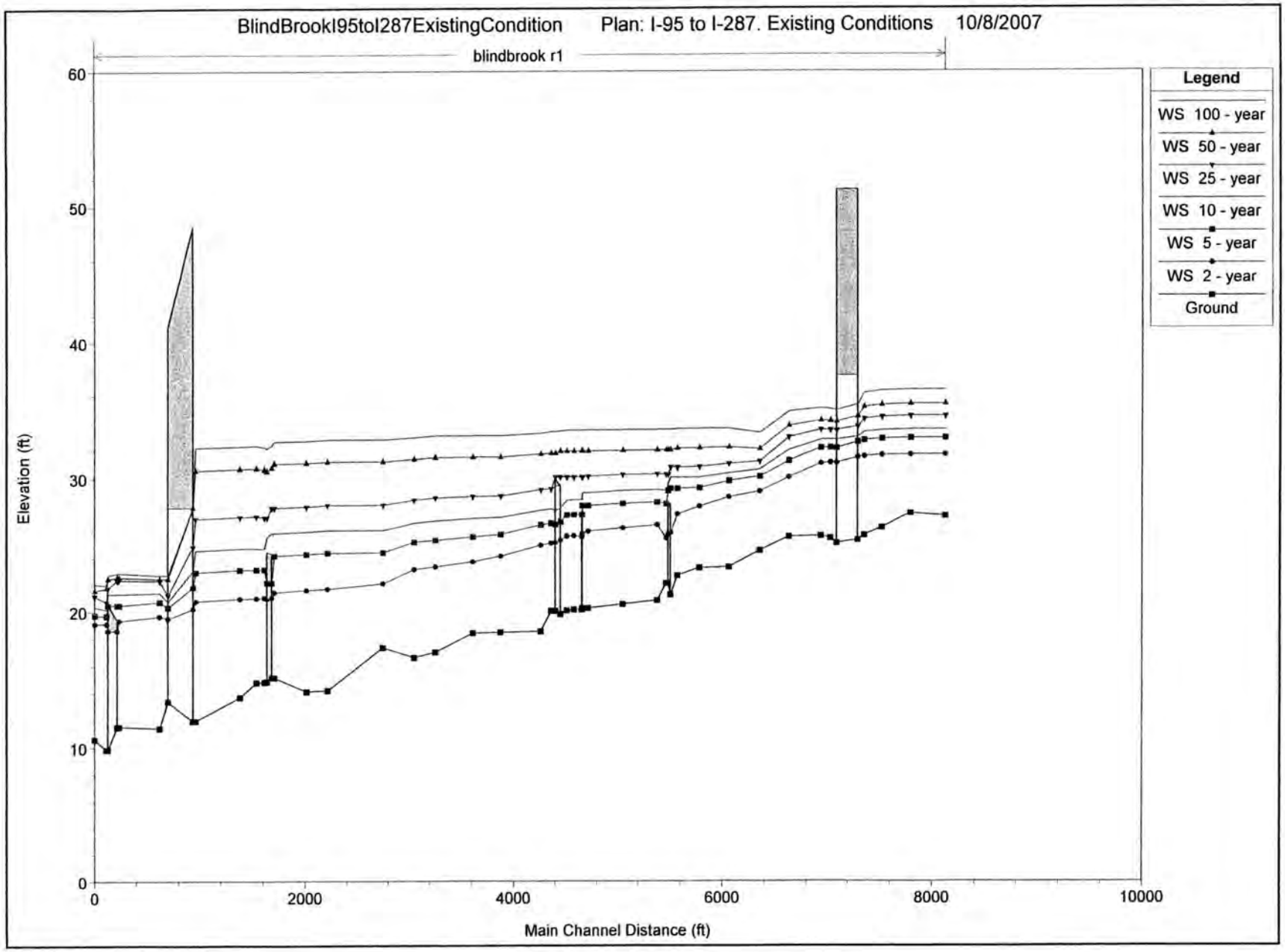
HEC-RAS Plan: I95I287EX River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	13460.62 Inter	25 - year	2594.00	13.76	27.06	18.66	27.15	0.000176	2.82	1257.09	215.54	0.14
r1	13460.62 Inter	10 - year	1982.00	13.76	24.74	18.08	24.82	0.000220	2.75	919.92	125.99	0.15
r1	13460.62 Inter	5 - year	1534.00	13.76	23.12	17.62	23.20	0.000258	2.66	724.46	116.09	0.16
r1	13460.62 Inter	2 - year	928.00	13.76	20.96	16.87	21.02	0.000289	2.31	488.20	101.45	0.16
r1	13040.06	100 - year	3583.00	11.98	32.17	19.60	32.26	0.000139	2.52	1431.97	136.87	0.11
r1	13040.06	50 - year	3078.00	11.98	30.56	19.15	30.65	0.000147	2.41	1286.66	130.27	0.11
r1	13040.06	25 - year	2594.00	11.98	26.93	18.68	27.05	0.000276	2.73	958.80	115.05	0.15
r1	13040.06	10 - year	1982.00	11.98	24.59	18.01	24.70	0.000368	2.67	746.96	104.32	0.16
r1	13040.06	5 - year	1534.00	11.98	22.95	17.44	23.05	0.000454	2.57	599.08	96.05	0.17
r1	13040.06	2 - year	928.00	11.98	20.77	16.50	20.85	0.000565	2.29	405.84	83.93	0.18
r1	12929.02 Inter		Bridge	I-95								
r1	12698.45 Inter	100 - year	3583.00	11.47	22.73	19.17	23.64	0.001935	8.70	515.08	66.03	0.48
r1	12698.45 Inter	50 - year	3078.00	11.47	22.47	18.62	23.19	0.001570	7.70	498.21	65.38	0.43
r1	12698.45 Inter	25 - year	2594.00	11.47	22.32	18.06	22.85	0.001182	6.62	488.02	64.99	0.37
r1	12698.45 Inter	10 - year	1982.00	11.47	21.40	17.29	21.80	0.000993	5.68	429.69	62.68	0.34
r1	12698.45 Inter	5 - year	1534.00	11.47	20.73	16.67	21.02	0.000797	4.83	387.97	60.87	0.30
r1	12698.45 Inter	2 - year	928.00	11.47	19.67	15.69	19.82	0.000486	3.44	325.21	58.14	0.23
r1	12310.87	100 - year	3583.00	11.57	22.90	20.51	23.04	0.000268	2.36	1261.64	429.72	0.14
r1	12310.87	50 - year	3078.00	11.57	22.57	20.35	22.69	0.000267	2.29	1155.73	426.26	0.14
r1	12310.87	25 - year	2594.00	11.57	22.36	18.38	22.46	0.000231	2.09	1091.47	424.63	0.13
r1	12310.87	10 - year	1982.00	11.57	21.30	17.58	21.40	0.000446	2.64	759.89	408.83	0.18
r1	12310.87	5 - year	1534.00	11.57	20.48	16.91	20.62	0.000842	3.32	518.05	386.78	0.24
r1	12310.87	2 - year	928.00	11.57	19.36	15.82	19.54	0.001147	3.39	273.68	173.55	0.27
r1	12247.32 120+00		Bridge									
r1	12191.57	100 - year	3583.00	9.87	21.99	21.98	22.81	0.003566	8.02	518.53	279.16	0.51
r1	12191.57	50 - year	3078.00	9.87	21.75	21.75	22.56	0.003642	7.93	454.80	239.23	0.52
r1	12191.57	25 - year	2594.00	9.87	20.70	19.62	22.45	0.008042	10.63	246.35	90.53	0.75
r1	12191.57	10 - year	1982.00	9.87	20.16	18.68	21.39	0.006359	8.91	223.39	41.27	0.66
r1	12191.57	5 - year	1534.00	9.87	19.69	17.87	20.57	0.005095	7.53	204.07	39.92	0.58
r1	12191.57	2 - year	928.00	9.87	19.10	16.58	19.51	0.002740	5.12	181.30	38.27	0.41
r1	12079.54 118+20	100 - year	3583.00	10.61	22.05	19.55	22.36	0.001050	5.60	1079.01	363.79	0.32
r1	12079.54 118+20	50 - year	3078.00	10.61	21.55	19.14	21.87	0.001128	5.60	901.42	345.75	0.33
r1	12079.54 118+20	25 - year	2594.00	10.61	21.15	18.66	21.46	0.001092	5.34	767.06	325.34	0.32
r1	12079.54 118+20	10 - year	1982.00	10.61	20.35	17.47	20.68	0.001188	5.21	530.42	238.89	0.33
r1	12079.54 118+20	5 - year	1534.00	10.61	19.75	16.41	20.04	0.001091	4.73	415.15	160.54	0.31
r1	12079.54 118+20	2 - year	928.00	10.61	19.10	14.83	19.26	0.000629	3.37	334.98	109.05	0.23


BlindBrookI95toI287ExistingCondition
Plan: I-95 to I-287. Existing Conditions
10/8/2007
blindbrook r1
Elevation (ft)
Main Channel Distance (ft)
0
10
20
30
40
50
60
0
2000
4000
6000
8000
10000
Legend
WS 100 - year
WS 50 - year
WS 25 - year
WS 10 - year
WS 5 - year
WS 2 - year
Ground

A-4H

Blind BKI95I287Opt.prj

S21CS FLOWS

HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	20203.01 Inter	100 - year	3117.00	27.12	35.96		35.97	0.000037	0.95	3561.23	565.76	0.06
r1	20203.01 Inter	50 - year	2458.00	27.12	34.82		34.83	0.000039	0.89	2938.47	524.56	0.06
r1	20203.01 Inter	25 - year	1775.00	27.12	33.69		33.70	0.000037	0.77	2386.42	458.91	0.06
r1	20203.01 Inter	10 - year	1344.00	27.12	33.00		33.00	0.000033	0.67	2073.18	441.90	0.05
r1	20203.01 Inter	5 - year	999.00	27.12	32.25		32.26	0.000031	0.58	1749.83	426.37	0.05
r1	20203.01 Inter	2 - year	781.00	27.12	31.65		31.65	0.000031	0.53	1497.18	414.96	0.05
r1	19875.51 Inter	100 - year	3117.00	27.32	35.94		35.96	0.000038	0.99	3321.41	466.45	0.06
r1	19875.51 Inter	50 - year	2458.00	27.32	34.81		34.82	0.000039	0.92	2799.45	450.41	0.06
r1	19875.51 Inter	25 - year	1775.00	27.32	33.68		33.69	0.000037	0.79	2302.53	431.50	0.06
r1	19875.51 Inter	10 - year	1344.00	27.32	32.99		32.99	0.000032	0.68	2007.73	416.99	0.05
r1	19875.51 Inter	5 - year	999.00	27.32	32.24		32.25	0.000030	0.59	1703.81	401.52	0.05
r1	19875.51 Inter	2 - year	781.00	27.32	31.64		31.64	0.000030	0.54	1464.75	394.53	0.05
r1	19603.00 Inter	100 - year	3117.00	26.26	35.87		35.93	0.000291	2.54	1838.84	280.74	0.15
r1	19603.00 Inter	50 - year	2458.00	26.26	34.73		34.78	0.000316	2.42	1524.94	271.43	0.15
r1	19603.00 Inter	25 - year	1775.00	26.26	33.61		33.66	0.000314	2.17	1227.19	261.04	0.15
r1	19603.00 Inter	10 - year	1344.00	26.26	32.93		32.96	0.000284	1.93	1051.11	254.12	0.14
r1	19603.00 Inter	5 - year	999.00	26.26	32.19		32.22	0.000276	1.74	866.61	245.74	0.13
r1	19603.00 Inter	2 - year	781.00	26.26	31.59		31.62	0.000286	1.64	721.54	238.69	0.13
r1	19434.98	100 - year	3117.00	25.70	35.70	30.54	35.83	0.000612	3.11	1115.75	372.39	0.19
r1	19434.98	50 - year	2458.00	25.70	34.58	30.07	34.69	0.000641	2.90	947.32	359.89	0.19
r1	19434.98	25 - year	1775.00	25.70	33.48	29.42	33.57	0.000608	2.53	783.65	334.64	0.18
r1	19434.98	10 - year	1344.00	25.70	32.82	28.97	32.89	0.000529	2.19	685.00	286.53	0.16
r1	19434.98	5 - year	999.00	25.70	32.10	28.56	32.15	0.000492	1.93	576.67	264.38	0.15
r1	19434.98	2 - year	781.00	25.70	31.51	28.27	31.55	0.000491	1.77	487.88	248.66	0.15
r1	19267.87 189+20TR		Bridge	I-287								
r1	19109.74	100 - year	3117.00	25.48	34.54	30.13	34.94	0.001180	5.12	612.29	291.38	0.31
r1	19109.74	50 - year	2458.00	25.48	33.66	29.57	33.97	0.001070	4.52	546.72	281.71	0.29
r1	19109.74	25 - year	1775.00	25.48	32.87	28.94	33.08	0.000814	3.66	488.03	241.34	0.25
r1	19109.74	10 - year	1344.00	25.48	32.27	28.49	32.41	0.000644	3.05	443.11	186.96	0.22
r1	19109.74	5 - year	999.00	25.48	31.62	28.09	31.72	0.000523	2.55	394.51	179.19	0.19
r1	19109.74	2 - year	781.00	25.48	31.07	27.80	31.14	0.000462	2.23	353.20	174.19	0.18
r1	19020.68 186+20	100 - year	3117.00	25.65	34.59		34.73	0.000708	3.31	1094.55	259.20	0.21
r1	19020.68 186+20	50 - year	2458.00	25.65	33.67		33.80	0.000753	3.13	912.16	187.69	0.22
r1	19020.68 186+20	25 - year	1775.00	25.65	32.86		32.96	0.000684	2.73	761.08	183.88	0.20
r1	19020.68 186+20	10 - year	1344.00	25.65	32.25		32.32	0.000636	2.44	648.92	181.00	0.19
r1	19020.68 186+20	5 - year	999.00	25.65	31.58		31.65	0.000641	2.23	530.21	177.52	0.19
r1	19020.68 186+20	2 - year	781.00	25.65	31.02		31.08	0.000709	2.14	431.36	173.75	0.19

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	18714.22	100 - year	3117.00	25.59	34.27	32.36	34.45	0.001207	4.56	1037.00	319.08	0.28
r1	18714.22	50 - year	2458.00	25.59	33.17	31.95	33.43	0.002002	5.33	713.77	282.71	0.36
r1	18714.22	25 - year	1775.00	25.59	32.17	31.20	32.54	0.003068	5.95	443.26	250.75	0.43
r1	18714.22	10 - year	1344.00	25.59	31.35	29.78	31.87	0.004490	6.52	264.17	147.14	0.51
r1	18714.22	5 - year	999.00	25.59	30.61	29.29	31.17	0.005371	6.43	181.12	80.82	0.54
r1	18714.22	2 - year	781.00	25.59	30.01	28.82	30.55	0.006059	6.20	140.30	54.61	0.56
r1	18434.20 Wyman Ave	100 - year	3117.00	24.54	32.52	30.66	33.75	0.004717	8.98	359.55	220.73	0.60
r1	18434.20	50 - year	2458.00	24.54	31.27	29.90	32.45	0.005855	8.75	285.69	123.34	0.65
r1	18434.20	25 - year	1775.00	24.54	30.75	28.98	31.50	0.004254	6.99	256.48	106.93	0.55
r1	18434.20	10 - year	1344.00	24.54	30.20	28.31	30.75	0.003565	5.93	227.27	93.97	0.49
r1	18434.20	5 - year	999.00	24.54	29.56	27.69	29.97	0.003250	5.14	194.53	78.56	0.46
r1	18434.20	2 - year	781.00	24.54	28.98	27.26	29.32	0.003080	4.70	166.08	64.05	0.44
r1	18143.24 Inter	100 - year	3117.00	23.30	32.75	29.48	32.96	0.000820	4.30	962.40	194.98	0.26
r1	18143.24 Inter	50 - year	2458.00	23.30	31.13	28.80	31.43	0.001466	4.97	657.70	184.53	0.34
r1	18143.24 Inter	25 - year	1775.00	23.30	30.52	27.53	30.75	0.001200	4.22	549.26	174.12	0.30
r1	18143.24 Inter	10 - year	1344.00	23.30	29.91	26.88	30.11	0.001129	3.81	446.12	164.05	0.29
r1	18143.24 Inter	5 - year	999.00	23.30	29.19	26.29	29.37	0.001178	3.54	333.51	146.92	0.29
r1	18143.24 Inter	2 - year	781.00	23.30	28.56	25.88	28.73	0.001237	3.38	258.49	105.81	0.29
r1	17862.22 Inter	100 - year	3117.00	23.25	32.73	29.83	32.78	0.000301	2.57	2108.06	623.97	0.16
r1	17862.22 Inter	50 - year	2458.00	23.25	30.91	29.51	31.05	0.000954	3.87	1087.11	449.67	0.27
r1	17862.22 Inter	25 - year	1775.00	23.25	30.27	27.85	30.41	0.001012	3.73	810.85	415.04	0.27
r1	17862.22 Inter	10 - year	1344.00	23.25	29.53	27.22	29.74	0.001507	4.16	516.87	372.29	0.32
r1	17862.22 Inter	5 - year	999.00	23.25	28.50	26.63	28.86	0.002818	4.90	224.42	132.80	0.42
r1	17862.22 Inter	2 - year	781.00	23.25	27.86	26.18	28.19	0.003129	4.62	169.58	50.86	0.43
r1	17650.31	100 - year	3117.00	22.67	32.72	28.18	32.73	0.000097	1.57	3079.84	608.99	0.09
r1	17650.31	50 - year	2458.00	22.67	30.88	28.04	30.91	0.000212	1.99	2008.71	559.37	0.13
r1	17650.31	25 - year	1775.00	22.67	30.25	27.55	30.27	0.000192	1.78	1660.56	541.86	0.13
r1	17650.31	10 - year	1344.00	22.67	29.52	26.85	29.54	0.000232	1.79	1273.10	513.01	0.13
r1	17650.31	5 - year	999.00	22.67	28.42	26.08	28.48	0.000550	2.38	666.58	439.62	0.20
r1	17650.31	2 - year	781.00	22.67	27.27	25.66	27.55	0.002678	4.30	203.65	287.31	0.42
r1	17574.23 171+70		Bridge									
r1	17543.75	100 - year	3117.00	22.09	32.62	28.80	32.66	0.000203	2.12	2224.46	525.09	0.13
r1	17543.75	50 - year	2458.00	22.09	30.39	28.01	30.49	0.000702	3.19	1183.47	413.46	0.23
r1	17543.75	25 - year	1775.00	22.09	29.49	27.47	29.61	0.000935	3.30	826.07	383.13	0.26
r1	17543.75	10 - year	1344.00	22.09	28.51	26.74	28.73	0.001897	4.07	470.64	330.15	0.36
r1	17543.75	5 - year	999.00	22.09	27.22	26.23	27.67	0.005568	5.41	187.53	115.13	0.57

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	17543.75	2 - year	781.00	22.09	25.48	25.85	26.91	0.032550	9.61	81.29	50.02	1.33
Beechwood Circle												
r1	17458.05 170+70	100 - year	3117.00	20.81	32.62		32.64	0.000060	1.49	3161.68	483.30	0.08
r1	17458.05 170+70	50 - year	2458.00	20.81	30.41		30.43	0.000115	1.78	2144.41	439.94	0.11
r1	17458.05 170+70	25 - year	1775.00	20.81	29.52		29.54	0.000105	1.58	1758.91	428.21	0.10
r1	17458.05 170+70	10 - year	1344.00	20.81	28.58		28.60	0.000118	1.54	1365.01	409.65	0.10
r1	17458.05 170+70	5 - year	999.00	20.81	27.39		27.42	0.000176	1.67	907.25	331.60	0.12
r1	17458.05 170+70	2 - year	781.00	20.81	26.47		26.50	0.000262	1.81	623.95	283.59	0.14
r1	17129.50 Inter	100 - year	3117.00	20.52	32.60	26.78	32.62	0.000083	1.43	2795.17	449.83	0.08
r1	17129.50 Inter	50 - year	2458.00	20.52	30.35	26.25	30.39	0.000178	1.74	1833.86	404.65	0.12
r1	17129.50 Inter	25 - year	1775.00	20.52	29.47	25.09	29.50	0.000173	1.56	1485.98	383.89	0.11
r1	17129.50 Inter	10 - year	1344.00	20.52	28.52	24.55	28.55	0.000222	1.58	1130.50	365.26	0.12
r1	17129.50 Inter	5 - year	999.00	20.52	27.28	24.05	27.32	0.000478	1.94	691.75	336.89	0.17
r1	17129.50 Inter	2 - year	781.00	20.52	26.26	23.68	26.35	0.000959	2.55	376.87	243.15	0.24
r1	16796.14	100 - year	3117.00	20.25	32.57	25.73	32.59	0.000085	1.63	3081.03	645.45	0.09
r1	16796.14	50 - year	2458.00	20.25	30.24	25.20	30.31	0.000258	2.42	1626.09	595.71	0.15
r1	16796.14	25 - year	1775.00	20.25	29.35	24.59	29.42	0.000261	2.26	1154.96	481.77	0.15
r1	16796.14	10 - year	1344.00	20.25	28.39	24.18	28.46	0.000286	2.16	780.01	275.36	0.15
r1	16796.14	5 - year	999.00	20.25	27.11	23.75	27.17	0.000383	2.17	527.60	166.98	0.17
r1	16796.14	2 - year	781.00	20.25	26.02	23.46	26.10	0.000574	2.28	367.60	128.57	0.21
r1	16734.31 Inter		Bridge									
r1	16659.66	100 - year	3117.00	20.13	32.55	25.54	32.57	0.000068	1.48	3391.82	658.33	0.08
r1	16659.66	50 - year	2458.00	20.13	30.18	24.94	30.22	0.000142	1.83	2080.54	502.25	0.11
r1	16659.66	25 - year	1775.00	20.13	29.23	24.26	29.26	0.000141	1.69	1619.72	461.10	0.11
r1	16659.66	10 - year	1344.00	20.13	27.74	23.82	27.78	0.000235	1.88	1017.15	349.30	0.14
r1	16659.66	5 - year	999.00	20.13	26.63	23.44	26.68	0.000315	1.91	676.80	250.50	0.15
r1	16659.66	2 - year	781.00	20.13	25.69	23.16	25.75	0.000501	2.11	464.58	218.54	0.19
r1	16593.28 161+50US	100 - year	3117.00	20.08	32.55	25.51	32.56	0.000038	1.07	4263.78	702.11	0.06
r1	16593.28 161+50US	50 - year	2458.00	20.08	30.18	25.21	30.20	0.000133	1.71	2153.41	622.51	0.10
r1	16593.28 161+50US	25 - year	1775.00	20.08	29.21	24.56	29.25	0.000175	1.82	1160.63	546.07	0.11
r1	16593.28 161+50US	10 - year	1344.00	20.08	27.73	24.25	27.77	0.000252	1.90	873.69	461.38	0.13
r1	16593.28 161+50US	5 - year	999.00	20.08	26.61	23.86	26.65	0.000343	1.96	657.01	367.20	0.15
r1	16593.28 161+50US	2 - year	781.00	20.08	25.65	23.53	25.71	0.000575	2.23	471.95	306.15	0.18
r1	16505.25 161+50		Bridge	Purchase St.								
r1	16442.38	100 - year	3274.00	20.04	32.31	26.50	32.42	0.000337	3.03	1665.68	494.40	0.17
r1	16442.38	50 - year	2461.00	20.04	28.83	25.81	29.14	0.001337	4.59	602.83	147.68	0.33

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	16442.38	25 - year	2403.00	20.04	28.69	25.76	29.00	0.001394	4.62	581.37	144.77	0.33
r1	16442.38	10 - year	1789.00	20.04	27.21	25.14	27.56	0.002077	4.80	391.33	112.84	0.40
r1	16442.38	5 - year	1344.00	20.04	26.14	24.57	26.50	0.002790	4.84	280.82	93.38	0.47
r1	16442.38	2 - year	928.00	20.04	25.14	23.93	25.48	0.003414	4.73	196.27	76.31	0.52
r1	16342.07 160+00	100 - year	3274.00	18.56	32.22	25.80	32.37	0.000345	3.54	1094.54	435.09	0.18
r1	16342.07 160+00	50 - year	2461.00	18.56	28.77	24.85	28.99	0.000784	4.25	709.80	281.89	0.26
r1	16342.07 160+00	25 - year	2403.00	18.56	28.63	24.76	28.84	0.000805	4.26	693.28	280.50	0.26
r1	16342.07 160+00	10 - year	1789.00	18.56	27.12	24.23	27.34	0.001057	4.28	525.51	265.28	0.29
r1	16342.07 160+00	5 - year	1344.00	18.56	26.01	23.61	26.24	0.001331	4.27	401.38	252.01	0.31
r1	16342.07 160+00	2 - year	928.00	18.56	24.97	22.90	25.19	0.001581	4.07	285.30	222.26	0.33
r1	15955.76 Inter	100 - year	3274.00	18.48	32.03		32.22	0.000426	3.60	1041.64	142.74	0.19
r1	15955.76 Inter	50 - year	2461.00	18.48	28.31		28.61	0.001144	4.46	583.70	104.32	0.29
r1	15955.76 Inter	25 - year	2403.00	18.48	28.15		28.46	0.001182	4.46	567.15	102.80	0.30
r1	15955.76 Inter	10 - year	1789.00	18.48	26.53		26.83	0.001655	4.43	411.94	88.22	0.34
r1	15955.76 Inter	5 - year	1344.00	18.48	25.27		25.56	0.002309	4.37	307.63	77.40	0.38
r1	15955.76 Inter	2 - year	928.00	18.48	24.15		24.41	0.002605	4.09	226.73	67.89	0.39
r1	15689.73 Inter	100 - year	3274.00	18.43	32.03	24.07	32.11	0.000188	2.47	1374.18	565.75	0.12
r1	15689.73 Inter	50 - year	2461.00	18.43	28.26	23.41	28.38	0.000434	2.94	889.77	329.77	0.18
r1	15689.73 Inter	25 - year	2403.00	18.43	28.10	23.36	28.22	0.000447	2.95	868.63	324.63	0.18
r1	15689.73 Inter	10 - year	1789.00	18.43	26.40	22.80	26.52	0.000622	2.99	649.71	204.73	0.20
r1	15689.73 Inter	5 - year	1344.00	18.43	25.01	22.33	25.14	0.000935	3.14	471.13	149.63	0.24
r1	15689.73 Inter	2 - year	928.00	18.43	23.73	21.81	23.88	0.001410	3.21	311.80	116.22	0.28
r1	15333.34 Inter	100 - year	3274.00	17.03	32.00	23.16	32.05	0.000113	2.09	1893.16	954.54	0.10
r1	15333.34 Inter	50 - year	2461.00	17.03	28.15	22.46	28.25	0.000304	2.73	1110.74	673.61	0.16
r1	15333.34 Inter	25 - year	2403.00	17.03	27.98	22.41	28.08	0.000316	2.75	1076.26	647.24	0.17
r1	15333.34 Inter	10 - year	1789.00	17.03	26.20	21.76	26.32	0.000479	2.95	715.51	420.11	0.20
r1	15333.34 Inter	5 - year	1344.00	17.03	24.73	21.17	24.87	0.000656	2.99	488.54	185.60	0.23
r1	15333.34 Inter	2 - year	928.00	17.03	23.36	20.51	23.49	0.000837	2.88	330.32	100.16	0.25
r1	15129.82 Inter	100 - year	3274.00	16.63	31.88	22.95	32.01	0.000245	3.02	1137.91	1174.68	0.15
r1	15129.82 Inter	50 - year	2461.00	16.63	28.00	22.21	28.16	0.000490	3.37	771.76	856.04	0.20
r1	15129.82 Inter	25 - year	2403.00	16.63	27.83	22.16	27.99	0.000500	3.36	755.78	841.14	0.20
r1	15129.82 Inter	10 - year	1789.00	16.63	26.06	21.52	26.21	0.000614	3.21	588.99	715.15	0.21
r1	15129.82 Inter	5 - year	1344.00	16.63	24.57	20.92	24.72	0.000809	3.16	448.14	323.94	0.23
r1	15129.82 Inter	2 - year	928.00	16.63	23.16	20.24	23.30	0.001064	3.00	317.02	95.93	0.26
r1	14830.24 145+00	100 - year	3274.00	17.36	31.71	24.56	31.91	0.000447	3.88	950.54	670.28	0.19
r1	14830.24 145+00	50 - year	2461.00	17.36	27.60	23.23	27.93	0.001214	4.96	572.46	606.90	0.29
r1	14830.24 145+00	25 - year	2403.00	17.36	27.41	23.15	27.75	0.001263	4.99	555.71	601.17	0.30

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	14830.24 145+00	10 - year	1789.00	17.36	25.46	22.22	25.88	0.002072	5.39	375.88	441.45	0.37
r1	14830.24 145+00	5 - year	1344.00	17.36	23.68	21.47	24.22	0.003779	5.94	230.47	80.86	0.47
r1	14830.24 145+00	2 - year	928.00	17.36	22.09	20.64	22.64	0.005428	5.96	155.65	42.03	0.54
r1	14298.00 Inter	100 - year	3274.00	14.23	31.71	21.05	31.80	0.000072	1.80	1502.60	338.12	0.08
r1	14298.00 Inter	50 - year	2461.00	14.23	27.59	20.30	27.68	0.000152	2.16	1039.04	294.88	0.11
r1	14298.00 Inter	25 - year	2403.00	14.23	27.40	20.24	27.50	0.000156	2.17	1018.50	293.23	0.11
r1	14298.00 Inter	10 - year	1789.00	14.23	25.44	19.37	25.52	0.000208	2.22	797.95	229.14	0.12
r1	14298.00 Inter	5 - year	1344.00	14.23	23.57	18.73	23.66	0.000342	2.49	588.05	163.47	0.15
r1	14298.00 Inter	2 - year	928.00	14.23	21.70	18.01	21.80	0.000592	2.76	388.02	94.85	0.19
r1	14095.34 Inter	100 - year	3274.00	14.16	31.62	20.17	31.77	0.000160	3.22	1082.92	674.44	0.14
r1	14095.34 Inter	50 - year	2461.00	14.16	27.48	19.30	27.64	0.000247	3.30	797.50	434.71	0.17
r1	14095.34 Inter	25 - year	2403.00	14.16	27.30	19.23	27.45	0.000248	3.28	784.96	427.19	0.17
r1	14095.34 Inter	10 - year	1789.00	14.16	25.35	18.51	25.47	0.000253	2.95	650.45	343.01	0.16
r1	14095.34 Inter	5 - year	1344.00	14.16	23.48	17.92	23.59	0.000290	2.77	521.83	266.92	0.17
r1	14095.34 Inter	2 - year	928.00	14.16	21.61	17.30	21.71	0.000338	2.55	393.27	152.34	0.18
r1	13786.52 136+00	100 - year	3274.00	15.18	31.57	20.82	31.71	0.000225	3.15	1097.16	737.47	0.14
r1	13786.52 136+00	50 - year	2461.00	15.18	27.39	20.15	27.54	0.000380	3.35	788.61	597.84	0.17
r1	13786.52 136+00	25 - year	2403.00	15.18	27.20	20.10	27.36	0.000383	3.33	775.12	589.30	0.17
r1	13786.52 136+00	10 - year	1789.00	15.18	25.24	19.53	25.37	0.000421	3.09	630.32	430.37	0.17
r1	13786.52 136+00	5 - year	1344.00	15.18	23.35	18.89	23.47	0.000544	3.04	490.38	166.73	0.19
r1	13786.52 136+00	2 - year	928.00	15.18	21.43	18.23	21.55	0.000787	3.04	349.10	111.83	0.22
r1	13738.57 135+00		Bridge	Highland Rd								
r1	13693.55 135+00DS	100 - year	3274.00	14.85	31.16	20.93	31.39	0.000371	4.00	849.74	832.68	0.18
r1	13693.55 135+00DS	50 - year	2461.00	14.85	26.52	20.10	26.79	0.000708	4.39	588.40	535.69	0.23
r1	13693.55 135+00DS	25 - year	2403.00	14.85	26.30	20.03	26.57	0.000724	4.38	575.91	501.40	0.23
r1	13693.55 135+00DS	10 - year	1789.00	14.85	24.05	19.23	24.30	0.000908	4.22	449.44	116.05	0.25
r1	13693.55 135+00DS	5 - year	1344.00	14.85	22.57	18.58	22.78	0.001001	3.92	366.10	89.65	0.26
r1	13693.55 135+00DS	2 - year	928.00	14.85	21.05	17.89	21.23	0.001124	3.56	280.69	73.75	0.26
r1	13616.62 134+00	100 - year	3274.00	14.82	31.26	20.48	31.28	0.000040	1.39	3607.64	641.40	0.06
r1	13616.62 134+00	50 - year	2461.00	14.82	26.59	19.72	26.66	0.000207	2.46	1479.78	442.59	0.13
r1	13616.62 134+00	25 - year	2403.00	14.82	26.37	19.67	26.44	0.000223	2.52	1399.51	409.18	0.14
r1	13616.62 134+00	10 - year	1789.00	14.82	24.05	19.02	24.20	0.000487	3.13	607.67	237.57	0.20
r1	13616.62 134+00	5 - year	1344.00	14.82	22.55	18.51	22.68	0.000583	2.98	475.94	133.14	0.21
r1	13616.62 134+00	2 - year	928.00	14.82	21.01	17.91	21.13	0.000740	2.79	347.27	85.29	0.22
r1	13460.62 Inter	100 - year	3274.00	13.76	31.21	19.24	31.27	0.000078	2.28	1945.33	376.73	0.10
r1	13460.62 Inter	50 - year	2461.00	13.76	26.54	18.54	26.63	0.000193	2.87	1174.08	171.90	0.15

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	13460.62 Inter	25 - year	2403.00	13.76	26.32	18.49	26.41	0.000200	2.89	1138.30	161.90	0.15
r1	13460.62 Inter	10 - year	1789.00	13.76	24.04	17.89	24.13	0.000236	2.72	834.19	121.33	0.16
r1	13460.62 Inter	5 - year	1344.00	13.76	22.53	17.40	22.61	0.000262	2.55	657.35	112.76	0.16
r1	13460.62 Inter	2 - year	928.00	13.76	20.98	16.87	21.05	0.000285	2.30	490.64	101.64	0.16
r1	13040.06	100 - year	3274.00	11.98	31.12	19.33	31.21	0.000146	2.47	1337.20	132.56	0.11
r1	13040.06	50 - year	2461.00	11.98	26.41	18.53	26.53	0.000294	2.72	911.72	112.93	0.15
r1	13040.06	25 - year	2403.00	11.98	26.19	18.48	26.30	0.000302	2.72	891.32	112.00	0.15
r1	13040.06	10 - year	1789.00	11.98	23.89	17.77	23.99	0.000401	2.63	683.67	100.81	0.17
r1	13040.06	5 - year	1344.00	11.98	22.36	17.17	22.46	0.000472	2.47	546.03	92.96	0.17
r1	13040.06	2 - year	928.00	11.98	20.80	16.50	20.88	0.000557	2.27	408.10	84.09	0.18
r1	12929.02 Inter		Bridge	I-95								
r1	12698.45 Inter	100 - year	3274.00	11.47	22.57	18.84	23.37	0.001712	8.10	504.64	65.63	0.45
r1	12698.45 Inter	50 - year	2461.00	11.47	22.09	17.90	22.60	0.001160	6.45	473.42	64.43	0.37
r1	12698.45 Inter	25 - year	2403.00	11.47	21.99	17.83	22.49	0.001148	6.38	467.28	64.19	0.37
r1	12698.45 Inter	10 - year	1789.00	11.47	21.16	17.03	21.50	0.000898	5.30	414.30	62.02	0.32
r1	12698.45 Inter	5 - year	1344.00	11.47	20.62	16.38	20.85	0.000642	4.30	381.42	60.59	0.27
r1	12698.45 Inter	2 - year	928.00	11.47	19.71	15.69	19.86	0.000475	3.41	327.69	58.25	0.22
r1	12310.87	100 - year	3274.00	11.57	22.69	20.41	22.82	0.000269	2.32	1195.71	427.56	0.14
r1	12310.87	50 - year	2461.00	11.57	22.11	18.21	22.20	0.000271	2.22	1009.79	422.74	0.14
r1	12310.87	25 - year	2403.00	11.57	22.00	18.14	22.09	0.000292	2.28	974.89	421.90	0.15
r1	12310.87	10 - year	1789.00	11.57	21.01	17.30	21.12	0.000533	2.80	672.61	401.55	0.19
r1	12310.87	5 - year	1344.00	11.57	20.41	16.60	20.53	0.000721	3.05	497.27	384.77	0.22
r1	12310.87	2 - year	928.00	11.57	19.41	15.82	19.59	0.001115	3.36	276.59	180.92	0.27
r1	12247.32 120+00		Bridge									
r1	12191.57	100 - year	3274.00	9.87	21.83	21.83	22.66	0.003704	8.06	474.44	245.67	0.52
r1	12191.57	50 - year	2461.00	9.87	20.51	19.43	22.19	0.008014	10.40	238.08	42.26	0.74
r1	12191.57	25 - year	2403.00	9.87	20.44	19.35	22.08	0.007946	10.28	235.14	42.07	0.74
r1	12191.57	10 - year	1789.00	9.87	20.07	18.33	21.10	0.005487	8.18	219.40	41.00	0.61
r1	12191.57	5 - year	1344.00	9.87	19.61	17.50	20.30	0.004110	6.69	200.99	39.71	0.52
r1	12191.57	2 - year	928.00	9.87	19.15	16.58	19.55	0.002655	5.07	183.12	38.40	0.41
r1	12079.54 118+20	100 - year	3274.00	10.61	21.70	19.30	22.03	0.001138	5.68	953.74	351.82	0.33
r1	12079.54 118+20	50 - year	2461.00	10.61	20.90	18.50	21.24	0.001196	5.48	687.45	310.88	0.34
r1	12079.54 118+20	25 - year	2403.00	10.61	20.80	18.42	21.15	0.001233	5.52	656.68	304.46	0.34
r1	12079.54 118+20	10 - year	1789.00	10.61	20.20	16.93	20.50	0.001083	4.91	499.57	193.27	0.32
r1	12079.54 118+20	5 - year	1344.00	10.61	19.65	15.97	19.89	0.000897	4.25	400.27	137.14	0.28
r1	12079.54 118+20	2 - year	928.00	10.61	19.15	14.83	19.30	0.000607	3.33	340.45	110.07	0.23

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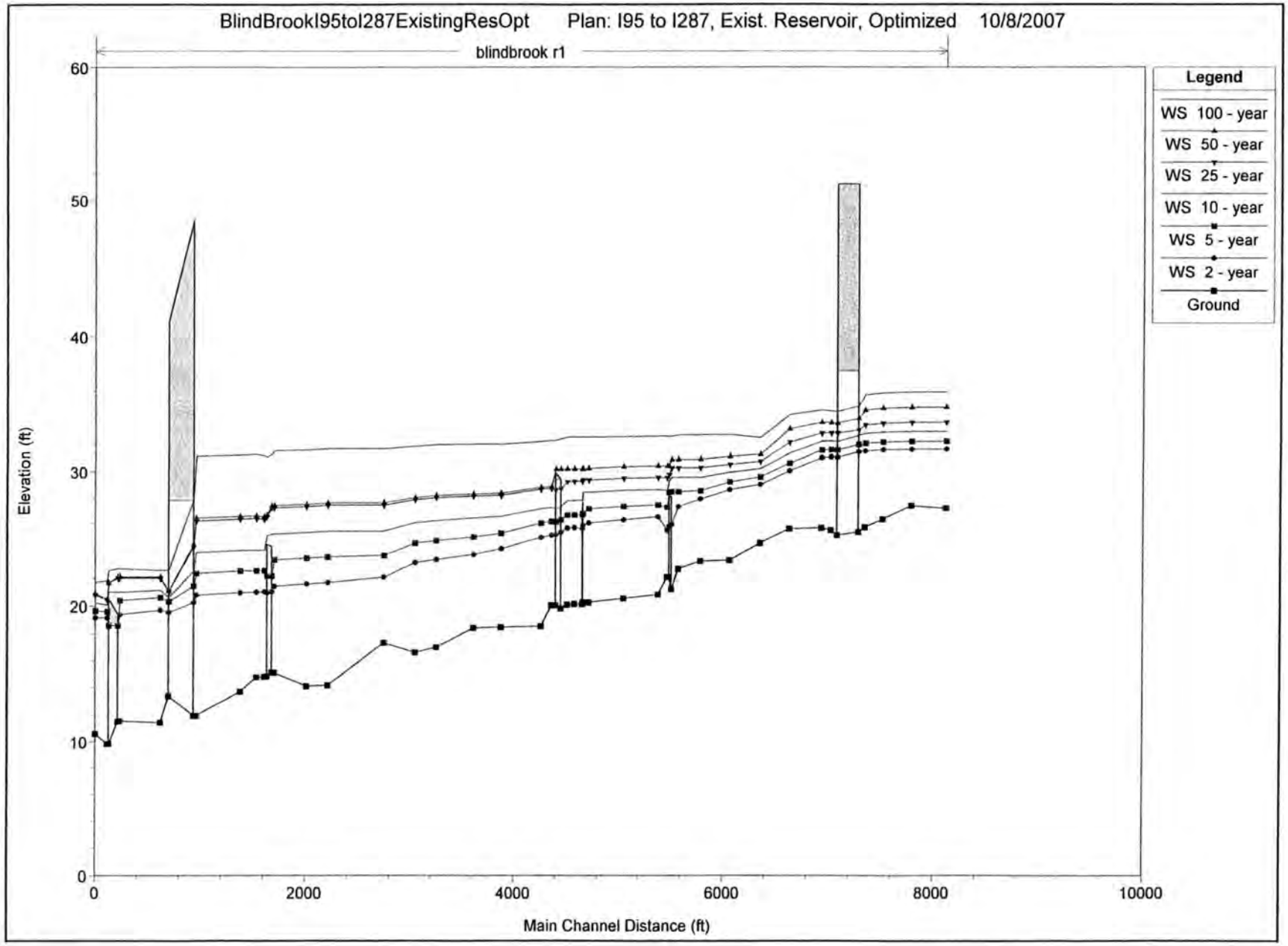
BlindBrookI95toI287ExistingResOpt Plan: I95 to I287, Exist. Reservoir, Optimized 10/8/2007
blindbrook r1
Legend
WS 100 - year
WS 50 - year
WS 25 - year
WS 10 - year
WS 5 - year
WS 2 - year
Ground
Elevation (ft)
Main Channel Distance (ft)
0
10
20
30
40
50
60
0
2000
4000
6000
8000
10000

c:\Dan I / Rye Road Control 03/Blind Bk I95 I287 Opt LP355.prj

HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	20203.01 Inter	100 - year	3096.00	27.12	35.92		35.93	0.000037	0.95	3541.05	564.83	0.06
r1	20203.01 Inter	50 - year	2407.00	27.12	34.74		34.75	0.000039	0.88	2896.21	521.21	0.06
r1	20203.01 Inter	25 - year	1765.00	27.12	33.67		33.68	0.000037	0.77	2377.96	458.43	0.06
r1	20203.01 Inter	10 - year	1270.00	27.12	32.85		32.86	0.000032	0.65	2008.40	438.62	0.05
r1	20203.01 Inter	5 - year	850.00	27.12	31.85		31.85	0.000031	0.54	1580.36	418.68	0.05
r1	20203.01 Inter	2 - year	666.00	27.12	31.24		31.24	0.000033	0.51	1326.73	407.73	0.05
r1	19875.51 Inter	100 - year	3096.00	27.32	35.91		35.92	0.000038	0.99	3304.76	465.98	0.06
r1	19875.51 Inter	50 - year	2407.00	27.32	34.72		34.74	0.000039	0.91	2763.13	449.10	0.06
r1	19875.51 Inter	25 - year	1765.00	27.32	33.66		33.67	0.000037	0.79	2294.58	431.15	0.06
r1	19875.51 Inter	10 - year	1270.00	27.32	32.84		32.84	0.000032	0.66	1946.75	413.17	0.05
r1	19875.51 Inter	5 - year	850.00	27.32	31.84		31.84	0.000030	0.56	1543.71	396.87	0.05
r1	19875.51 Inter	2 - year	666.00	27.32	31.23		31.23	0.000032	0.51	1302.05	389.48	0.05
r1	19603.00 Inter	100 - year	3096.00	26.26	35.83		35.89	0.000292	2.53	1828.82	280.45	0.15
r1	19603.00 Inter	50 - year	2407.00	26.26	34.65		34.70	0.000317	2.40	1503.18	270.72	0.15
r1	19603.00 Inter	25 - year	1765.00	26.26	33.60		33.64	0.000314	2.17	1222.41	260.86	0.15
r1	19603.00 Inter	10 - year	1270.00	26.26	32.78		32.82	0.000282	1.89	1014.24	252.52	0.14
r1	19603.00 Inter	5 - year	850.00	26.26	31.79		31.82	0.000282	1.67	769.29	241.28	0.13
r1	19603.00 Inter	2 - year	666.00	26.26	31.18		31.20	0.000315	1.62	623.16	233.26	0.14
r1	19434.98	100 - year	3096.00	25.70	35.67	30.53	35.80	0.000613	3.10	1110.46	372.17	0.19
r1	19434.98	50 - year	2407.00	25.70	34.50	30.03	34.61	0.000640	2.87	935.55	358.67	0.19
r1	19434.98	25 - year	1765.00	25.70	33.47	29.41	33.55	0.000608	2.53	780.96	333.50	0.18
r1	19434.98	10 - year	1270.00	25.70	32.68	28.88	32.75	0.000520	2.14	663.71	281.39	0.16
r1	19434.98	5 - year	850.00	25.70	31.71	28.36	31.75	0.000491	1.82	517.42	254.03	0.15
r1	19434.98	2 - year	666.00	25.70	31.09	28.10	31.13	0.000526	1.71	425.39	237.15	0.15
r1	19267.87 189+20TR		Bridge	I-287								
r1	19109.74	100 - year	3096.00	25.48	34.51	30.11	34.91	0.001178	5.10	610.20	291.07	0.31
r1	19109.74	50 - year	2407.00	25.48	33.60	29.53	33.91	0.001052	4.46	542.63	281.11	0.29
r1	19109.74	25 - year	1765.00	25.48	32.86	28.92	33.06	0.000811	3.65	487.01	240.83	0.25
r1	19109.74	10 - year	1270.00	25.48	32.15	28.41	32.28	0.000617	2.95	433.83	185.42	0.21
r1	19109.74	5 - year	850.00	25.48	31.25	27.90	31.33	0.000482	2.33	367.06	175.87	0.18
r1	19109.74	2 - year	666.00	25.48	30.70	27.62	30.76	0.000440	2.06	325.64	166.81	0.17
r1	19020.68 186+20	100 - year	3096.00	25.65	34.56		34.70	0.000710	3.31	1087.05	253.62	0.21
r1	19020.68 186+20	50 - year	2407.00	25.65	33.62		33.74	0.000749	3.10	901.46	187.42	0.21
r1	19020.68 186+20	25 - year	1765.00	25.65	32.85		32.94	0.000683	2.72	758.51	183.82	0.20
r1	19020.68 186+20	10 - year	1270.00	25.65	32.12		32.19	0.000632	2.39	626.05	180.41	0.19
r1	19020.68 186+20	5 - year	850.00	25.65	31.21		31.27	0.000682	2.17	464.29	175.01	0.19
r1	19020.68 186+20	2 - year	666.00	25.65	30.64		30.71	0.000812	2.14	366.32	170.60	0.20

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	18714.22	100 - year	3096.00	25.59	34.24	32.35	34.41	0.001223	4.58	1026.37	316.93	0.29
r1	18714.22	50 - year	2407.00	25.59	33.11	31.91	33.37	0.002053	5.37	694.90	281.38	0.36
r1	18714.22	25 - year	1765.00	25.59	32.15	31.18	32.52	0.003104	5.98	438.23	249.74	0.43
r1	18714.22	10 - year	1270.00	25.59	31.19	29.78	31.73	0.004722	6.55	243.13	134.35	0.52
r1	18714.22	5 - year	850.00	25.59	30.21	28.97	30.76	0.005869	6.31	151.84	64.29	0.56
r1	18714.22	2 - year	666.00	25.59	29.66	28.57	30.13	0.005988	5.77	123.67	42.69	0.55
r1	18434.20	100 - year	3096.00	24.54	32.48	30.63	33.71	0.004736	8.96	357.42	219.53	0.60
r1	18434.20	50 - year	2407.00	24.54	31.24	29.83	32.39	0.005703	8.61	284.22	118.30	0.64
r1	18434.20	25 - year	1765.00	24.54	30.73	28.97	31.48	0.004265	6.98	255.33	106.42	0.55
r1	18434.20	10 - year	1270.00	24.54	30.08	28.18	30.60	0.003485	5.76	220.93	90.88	0.48
r1	18434.20	5 - year	850.00	24.54	29.16	27.39	29.53	0.003171	4.86	174.73	68.60	0.45
r1	18434.20	2 - year	666.00	24.54	28.64	27.00	28.95	0.002933	4.42	150.70	53.14	0.43
r1	18143.24 Inter	100 - year	3096.00	23.30	32.71	29.46	32.92	0.000828	4.31	954.53	194.78	0.26
r1	18143.24 Inter	50 - year	2407.00	23.30	31.10	28.74	31.39	0.001439	4.91	651.99	184.03	0.34
r1	18143.24 Inter	25 - year	1765.00	23.30	30.49	27.52	30.72	0.001212	4.23	544.39	173.66	0.30
r1	18143.24 Inter	10 - year	1270.00	23.30	29.77	26.76	29.96	0.001134	3.76	423.73	161.58	0.29
r1	18143.24 Inter	5 - year	850.00	23.30	28.74	26.01	28.92	0.001252	3.47	278.28	109.20	0.29
r1	18143.24 Inter	2 - year	666.00	23.30	28.23	25.64	28.38	0.001201	3.20	224.72	98.84	0.28
r1	17862.22 Inter	100 - year	3096.00	23.25	32.69	29.83	32.74	0.000308	2.58	2080.99	622.39	0.16
r1	17862.22 Inter	50 - year	2407.00	23.25	30.88	29.48	31.02	0.000943	3.84	1073.71	447.49	0.26
r1	17862.22 Inter	25 - year	1765.00	23.25	30.23	27.83	30.38	0.001047	3.77	795.42	413.20	0.27
r1	17862.22 Inter	10 - year	1270.00	23.25	29.31	27.11	29.56	0.001793	4.41	437.62	354.86	0.35
r1	17862.22 Inter	5 - year	850.00	23.25	28.01	26.33	28.37	0.003220	4.82	177.26	51.67	0.44
r1	17862.22 Inter	2 - year	666.00	23.25	27.58	25.93	27.86	0.002990	4.28	155.81	49.37	0.42
r1	17650.31	100 - year	3096.00	22.67	32.67	28.17	32.69	0.000098	1.58	3053.31	608.13	0.09
r1	17650.31	50 - year	2407.00	22.67	30.85	28.04	30.88	0.000208	1.96	1992.41	558.70	0.13
r1	17650.31	25 - year	1765.00	22.67	30.21	27.53	30.24	0.000197	1.79	1640.37	540.62	0.13
r1	17650.31	10 - year	1270.00	22.67	29.28	26.67	29.31	0.000338	2.10	973.33	497.32	0.16
r1	17650.31	5 - year	850.00	22.67	27.43	25.80	27.71	0.002601	4.38	222.13	334.80	0.42
r1	17650.31	2 - year	666.00	22.67	26.98	25.43	27.24	0.002811	4.15	173.18	232.38	0.42
r1	17574.23 171+70		Bridge	Private Drive								
r1	17543.75	100 - year	3096.00	22.09	32.58	28.79	32.62	0.000207	2.13	2200.52	523.74	0.13
r1	17543.75	50 - year	2407.00	22.09	30.36	28.01	30.46	0.000695	3.16	1169.58	412.41	0.23
r1	17543.75	25 - year	1765.00	22.09	29.41	27.46	29.54	0.001018	3.41	794.74	380.30	0.27
r1	17543.75	10 - year	1270.00	22.09	28.20	26.65	28.47	0.002518	4.45	378.50	266.32	0.40
r1	17543.75	5 - year	850.00	22.09	25.62	25.97	27.05	0.030552	9.63	88.30	51.27	1.29

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	17543.75	2 - year	666.00	22.09	25.21	25.63	26.69	0.039449	9.74	68.40	48.25	1.44
r1	17458.05 170+70	100 - year	3096.00	20.81	32.58		32.60	0.000060	1.49	3139.69	482.64	0.08
r1	17458.05 170+70	50 - year	2407.00	20.81	30.37		30.40	0.000113	1.76	2129.61	439.55	0.10
r1	17458.05 170+70	25 - year	1765.00	20.81	29.44		29.46	0.000109	1.61	1725.41	426.75	0.10
r1	17458.05 170+70	10 - year	1270.00	20.81	28.29		28.32	0.000132	1.59	1248.06	402.60	0.11
r1	17458.05 170+70	5 - year	850.00	20.81	26.80		26.83	0.000223	1.75	719.26	297.51	0.13
r1	17458.05 170+70	2 - year	666.00	20.81	26.19		26.22	0.000253	1.72	546.17	264.89	0.14
r1	17129.50 Inter	100 - year	3096.00	20.52	32.55	26.77	32.57	0.000083	1.43	2774.61	449.05	0.08
r1	17129.50 Inter	50 - year	2407.00	20.52	30.32	26.21	30.35	0.000175	1.71	1820.75	403.86	0.12
r1	17129.50 Inter	25 - year	1765.00	20.52	29.39	25.09	29.42	0.000182	1.59	1455.07	382.18	0.11
r1	17129.50 Inter	10 - year	1270.00	20.52	28.22	24.45	28.26	0.000265	1.65	1022.72	359.47	0.13
r1	17129.50 Inter	5 - year	850.00	20.52	26.63	23.80	26.70	0.000751	2.32	480.92	308.71	0.22
r1	17129.50 Inter	2 - year	666.00	20.52	25.98	23.47	26.07	0.000958	2.48	312.74	213.74	0.24
r1	16796.14	100 - year	3096.00	20.25	32.52	25.71	32.54	0.000086	1.64	3051.16	644.78	0.09
r1	16796.14	50 - year	2407.00	20.25	30.21	25.16	30.27	0.000253	2.40	1607.90	593.75	0.15
r1	16796.14	25 - year	1765.00	20.25	29.26	24.59	29.33	0.000278	2.32	1112.54	477.60	0.15
r1	16796.14	10 - year	1270.00	20.25	28.08	24.09	28.15	0.000309	2.18	708.88	209.15	0.16
r1	16796.14	5 - year	850.00	20.25	26.43	23.55	26.50	0.000476	2.21	423.10	142.23	0.19
r1	16796.14	2 - year	666.00	20.25	25.75	23.29	25.82	0.000535	2.11	334.16	122.01	0.20
r1	16734.31 Inter		Bridge	Foot Bridge								
r1	16659.66	100 - year	3096.00	20.13	32.51	25.52	32.52	0.000068	1.49	3361.19	657.07	0.08
r1	16659.66	50 - year	2407.00	20.13	30.15	24.88	30.19	0.000139	1.80	2065.29	501.25	0.11
r1	16659.66	25 - year	1765.00	20.13	29.08	24.25	29.11	0.000155	1.74	1549.45	450.16	0.11
r1	16659.66	10 - year	1270.00	20.13	27.40	23.74	27.44	0.000276	1.97	892.74	334.67	0.15
r1	16659.66	5 - year	850.00	20.13	26.18	23.26	26.23	0.000351	1.90	574.08	235.18	0.16
r1	16659.66	2 - year	666.00	20.13	25.43	23.00	25.49	0.000486	1.99	409.85	209.87	0.18
r1	16593.28 161+50US	100 - year	3096.00	20.08	32.51	25.51	32.52	0.000039	1.08	4231.11	701.36	0.06
r1	16593.28 161+50US	50 - year	2407.00	20.08	30.15	25.18	30.17	0.000129	1.68	2139.19	620.53	0.10
r1	16593.28 161+50US	25 - year	1765.00	20.08	29.05	24.55	29.09	0.000189	1.86	1130.72	514.42	0.12
r1	16593.28 161+50US	10 - year	1270.00	20.08	27.38	24.18	27.43	0.000290	1.97	806.65	445.77	0.14
r1	16593.28 161+50US	5 - year	850.00	20.08	26.16	23.67	26.20	0.000387	1.96	569.38	335.98	0.15
r1	16593.28 161+50US	2 - year	666.00	20.08	25.40	23.36	25.45	0.000578	2.15	422.35	289.99	0.18
r1	16505.25 161+50		Bridge	Purchase St								
r1	16442.38	100 - year	3255.00	20.04	32.25	26.49	32.36	0.000345	3.06	1637.26	491.97	0.17
r1	16442.38	50 - year	2385.00	20.04	28.64	25.75	28.96	0.001409	4.62	575.35	143.90	0.34

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HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	16442.38	25 - year	2328.00	20.04	28.50	25.70	28.82	0.001464	4.65	555.33	140.72	0.34
r1	16442.38	10 - year	1633.00	20.04	26.83	24.95	27.19	0.002300	4.82	350.50	106.20	0.42
r1	16442.38	5 - year	1163.00	20.04	25.73	24.30	26.08	0.003045	4.77	244.30	86.13	0.49
r1	16442.38	2 - year	871.00	20.04	24.98	23.83	25.33	0.003498	4.72	184.68	73.73	0.53
r1	16342.07 160+00	100 - year	3255.00	18.56	32.16	25.79	32.31	0.000347	3.54	1088.41	434.18	0.18
r1	16342.07 160+00	50 - year	2385.00	18.56	28.58	24.77	28.80	0.000811	4.26	688.60	280.08	0.26
r1	16342.07 160+00	25 - year	2328.00	18.56	28.44	24.76	28.66	0.000831	4.26	672.75	278.67	0.26
r1	16342.07 160+00	10 - year	1633.00	18.56	26.74	24.05	26.96	0.001140	4.27	482.62	261.04	0.30
r1	16342.07 160+00	5 - year	1163.00	18.56	25.59	23.33	25.81	0.001426	4.19	354.03	245.94	0.32
r1	16342.07 160+00	2 - year	871.00	18.56	24.82	22.78	25.03	0.001587	3.98	269.64	205.52	0.33
r1	15955.76 Inter	100 - year	3255.00	18.48	31.98		32.16	0.000430	3.60	1033.58	142.12	0.19
r1	15955.76 Inter	50 - year	2385.00	18.48	28.11		28.41	0.001191	4.46	562.59	102.37	0.30
r1	15955.76 Inter	25 - year	2328.00	18.48	27.96		28.26	0.001228	4.46	547.05	100.92	0.30
r1	15955.76 Inter	10 - year	1633.00	18.48	26.10		26.40	0.001829	4.40	375.17	84.63	0.35
r1	15955.76 Inter	5 - year	1163.00	18.48	24.81		25.09	0.002476	4.26	273.23	73.34	0.39
r1	15955.76 Inter	2 - year	871.00	18.48	24.00		24.25	0.002605	4.03	216.35	66.61	0.39
r1	15689.73 Inter	100 - year	3255.00	18.43	31.97	24.06	32.06	0.000189	2.46	1366.89	564.52	0.12
r1	15689.73 Inter	50 - year	2385.00	18.43	28.05	23.35	28.17	0.000450	2.95	862.74	323.36	0.18
r1	15689.73 Inter	25 - year	2328.00	18.43	27.89	23.30	28.02	0.000463	2.95	842.45	318.28	0.18
r1	15689.73 Inter	10 - year	1633.00	18.43	25.94	22.64	26.06	0.000695	3.01	590.93	183.22	0.21
r1	15689.73 Inter	5 - year	1163.00	18.43	24.49	22.11	24.63	0.001085	3.16	404.77	134.81	0.25
r1	15689.73 Inter	2 - year	871.00	18.43	23.56	21.74	23.70	0.001487	3.20	291.71	112.41	0.29
r1	15333.34 Inter	100 - year	3255.00	17.03	31.94	23.15	32.00	0.000114	2.10	1881.42	954.54	0.10
r1	15333.34 Inter	50 - year	2385.00	17.03	27.93	22.39	28.03	0.000319	2.76	1066.70	642.58	0.17
r1	15333.34 Inter	25 - year	2328.00	17.03	27.77	22.33	27.87	0.000331	2.77	1033.57	625.61	0.17
r1	15333.34 Inter	10 - year	1633.00	17.03	25.72	21.56	25.85	0.000527	2.96	622.82	309.14	0.21
r1	15333.34 Inter	5 - year	1163.00	17.03	24.19	20.90	24.32	0.000715	2.94	421.10	123.67	0.24
r1	15333.34 Inter	2 - year	871.00	17.03	23.18	20.41	23.30	0.000857	2.85	311.91	96.11	0.26
r1	15129.82 Inter	100 - year	3255.00	16.63	31.82	22.94	31.96	0.000246	3.01	1132.54	1173.18	0.15
r1	15129.82 Inter	50 - year	2385.00	16.63	27.78	22.15	27.95	0.000502	3.35	751.38	837.69	0.20
r1	15129.82 Inter	25 - year	2328.00	16.63	27.62	22.09	27.78	0.000511	3.34	736.05	826.29	0.20
r1	15129.82 Inter	10 - year	1633.00	16.63	25.58	21.32	25.73	0.000659	3.18	543.49	577.38	0.22
r1	15129.82 Inter	5 - year	1163.00	16.63	24.01	20.64	24.15	0.000879	3.07	395.83	134.53	0.24
r1	15129.82 Inter	2 - year	871.00	16.63	22.97	20.14	23.10	0.001098	2.95	300.51	91.95	0.26
r1	14830.24 145+00	100 - year	3255.00	17.36	31.65	24.53	31.85	0.000449	3.88	945.24	669.78	0.19
r1	14830.24 145+00	50 - year	2385.00	17.36	27.36	23.11	27.70	0.001275	4.99	551.15	599.51	0.30
r1	14830.24 145+00	25 - year	2328.00	17.36	27.19	23.03	27.53	0.001325	5.02	535.06	593.10	0.30

HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	14830.24 145+00	10 - year	1633.00	17.36	24.89	21.97	25.35	0.002496	5.58	323.59	248.93	0.40
r1	14830.24 145+00	5 - year	1163.00	17.36	23.08	21.12	23.62	0.004308	5.86	198.65	57.42	0.49
r1	14830.24 145+00	2 - year	871.00	17.36	21.89	20.52	22.43	0.005606	5.92	147.10	40.86	0.55
r1	14298.00 Inter	100 - year	3255.00	14.23	31.65	21.03	31.74	0.000072	1.80	1496.11	337.38	0.08
r1	14298.00 Inter	50 - year	2385.00	14.23	27.35	20.22	27.45	0.000157	2.17	1012.92	292.78	0.11
r1	14298.00 Inter	25 - year	2328.00	14.23	27.18	20.16	27.27	0.000160	2.17	993.18	291.20	0.11
r1	14298.00 Inter	10 - year	1633.00	14.23	24.87	19.16	24.94	0.000233	2.27	733.43	201.94	0.13
r1	14298.00 Inter	5 - year	1163.00	14.23	22.89	18.43	22.97	0.000409	2.57	511.32	114.46	0.16
r1	14298.00 Inter	2 - year	871.00	14.23	21.45	17.90	21.55	0.000629	2.77	364.50	92.09	0.20
r1	14095.34 Inter	100 - year	3255.00	14.16	31.57	20.15	31.71	0.000161	3.21	1078.96	673.26	0.14
r1	14095.34 Inter	50 - year	2385.00	14.16	27.25	19.21	27.40	0.000248	3.27	781.56	425.30	0.17
r1	14095.34 Inter	25 - year	2328.00	14.16	27.07	19.15	27.22	0.000248	3.24	769.52	418.34	0.17
r1	14095.34 Inter	10 - year	1633.00	14.16	24.77	18.31	24.89	0.000258	2.87	611.02	300.17	0.16
r1	14095.34 Inter	5 - year	1163.00	14.16	22.80	17.66	22.90	0.000292	2.64	475.27	217.82	0.17
r1	14095.34 Inter	2 - year	871.00	14.16	21.36	17.21	21.45	0.000343	2.50	375.92	143.74	0.18
r1	13786.52 136+00	100 - year	3255.00	15.18	31.51	20.80	31.65	0.000225	3.14	1092.91	736.06	0.14
r1	13786.52 136+00	50 - year	2385.00	15.18	27.16	20.08	27.31	0.000384	3.32	771.48	585.94	0.17
r1	13786.52 136+00	25 - year	2328.00	15.18	26.98	20.04	27.13	0.000386	3.30	758.54	573.61	0.17
r1	13786.52 136+00	10 - year	1633.00	15.18	24.66	19.30	24.79	0.000442	3.04	587.69	332.32	0.18
r1	13786.52 136+00	5 - year	1163.00	15.18	22.66	18.61	22.78	0.000581	2.96	439.97	146.15	0.19
r1	13786.52 136+00	2 - year	871.00	15.18	21.17	18.13	21.29	0.000832	3.04	329.95	106.60	0.22
r1	13738.57 135+00		Bridge	Highland Rd								
r1	13693.55 135+00DS	100 - year	3255.00	14.85	31.10	20.91	31.34	0.000371	4.00	846.48	831.44	0.18
r1	13693.55 135+00DS	50 - year	2385.00	14.85	26.22	20.01	26.50	0.000730	4.38	571.86	497.22	0.23
r1	13693.55 135+00DS	25 - year	2328.00	14.85	26.01	19.95	26.28	0.000747	4.37	559.69	481.71	0.24
r1	13693.55 135+00DS	10 - year	1633.00	14.85	23.50	19.01	23.75	0.000953	4.14	418.85	103.68	0.25
r1	13693.55 135+00DS	5 - year	1163.00	14.85	21.89	18.30	22.10	0.001069	3.79	328.15	82.21	0.26
r1	13693.55 135+00DS	2 - year	871.00	14.85	20.80	17.79	20.98	0.001165	3.52	266.79	71.47	0.26
r1	13616.62 134+00	100 - year	3255.00	14.82	31.20	20.46	31.22	0.000041	1.40	3577.38	641.39	0.06
r1	13616.62 134+00	50 - year	2385.00	14.82	26.25	19.65	26.40	0.000374	3.23	807.91	390.87	0.18
r1	13616.62 134+00	25 - year	2328.00	14.82	26.03	19.59	26.18	0.000381	3.22	784.00	363.11	0.18
r1	13616.62 134+00	10 - year	1633.00	14.82	23.50	18.84	23.64	0.000527	3.11	558.78	201.54	0.20
r1	13616.62 134+00	5 - year	1163.00	14.82	21.87	18.26	21.99	0.000653	2.92	418.33	86.68	0.22
r1	13616.62 134+00	2 - year	871.00	14.82	20.76	17.83	20.88	0.000787	2.78	326.59	84.88	0.23
r1	13460.62 Inter	100 - year	3255.00	13.76	31.16	19.22	31.21	0.000079	2.28	1935.14	376.07	0.10
r1	13460.62 Inter	50 - year	2385.00	13.76	26.25	18.47	26.34	0.000203	2.90	1127.22	158.38	0.15

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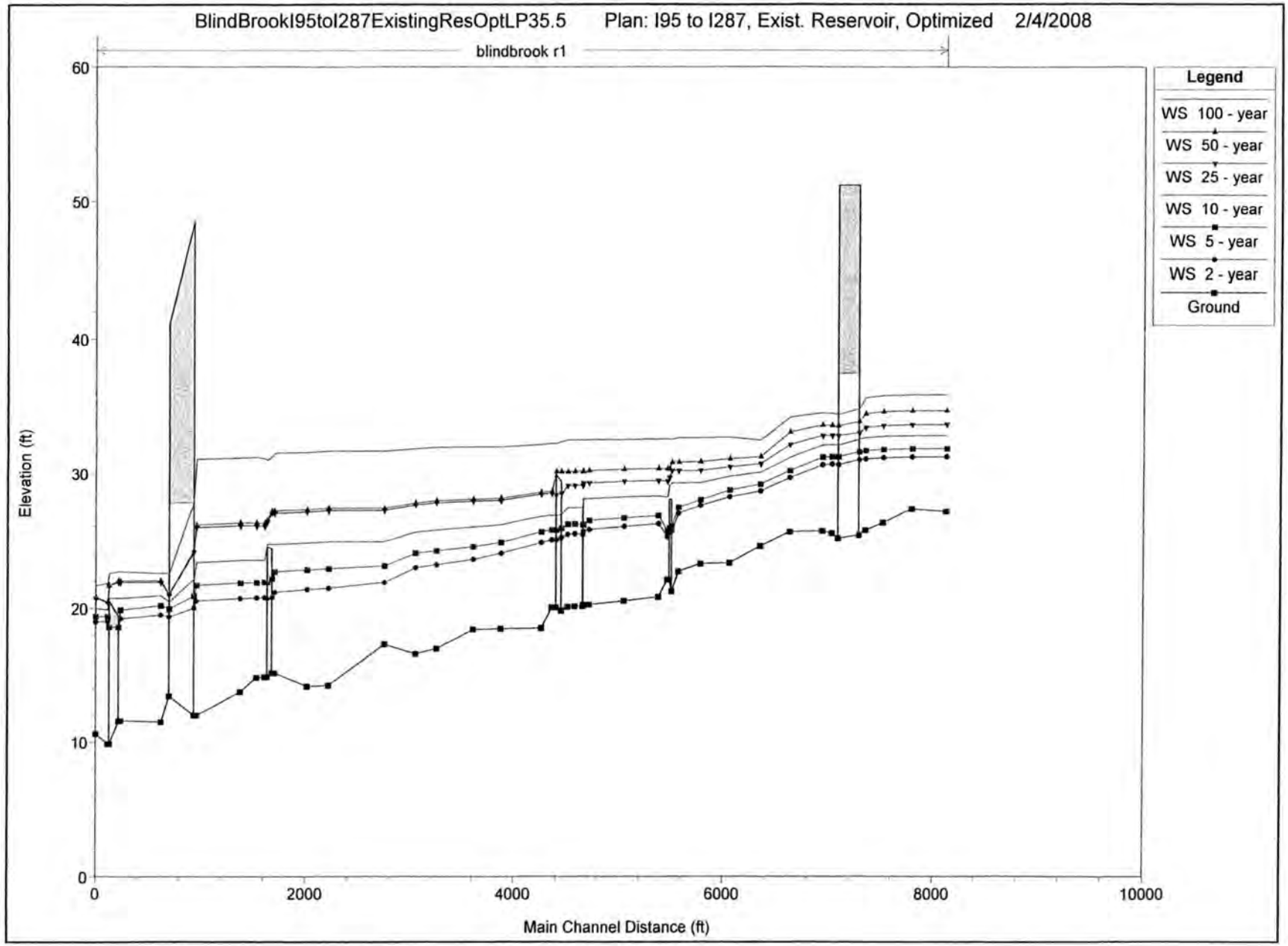
HEC-RAS Plan: ExResOpt River: blindbrook Reach: r1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
r1	13460.62 Inter	25 - year	2328.00	13.76	26.03	18.42	26.12	0.000202	2.85	1093.98	147.99	0.15
r1	13460.62 Inter	10 - year	1633.00	13.76	23.49	17.72	23.57	0.000248	2.68	767.77	118.19	0.16
r1	13460.62 Inter	5 - year	1163.00	13.76	21.84	17.18	21.92	0.000278	2.47	581.07	108.15	0.16
r1	13460.62 Inter	2 - year	871.00	13.76	20.73	16.80	20.79	0.000292	2.27	465.05	99.72	0.16
r1	13040.06	100 - year	3255.00	11.98	31.06	19.31	31.15	0.000146	2.46	1331.94	132.32	0.11
r1	13040.06	50 - year	2385.00	11.98	26.12	18.46	26.23	0.000304	2.71	884.98	111.72	0.15
r1	13040.06	25 - year	2328.00	11.98	25.90	18.40	26.01	0.000313	2.71	865.09	110.77	0.15
r1	13040.06	10 - year	1633.00	11.98	23.33	17.57	23.43	0.000430	2.59	632.99	98.02	0.17
r1	13040.06	5 - year	1163.00	11.98	21.66	16.89	21.75	0.000527	2.41	483.18	89.28	0.18
r1	13040.06	2 - year	871.00	11.98	20.54	16.38	20.62	0.000571	2.25	386.57	82.46	0.18
r1	12929.02 Inter		Bridge	I-95								
r1	12698.45 Inter	100 - year	3255.00	11.47	22.56	18.82	23.35	0.001699	8.06	503.95	65.60	0.45
r1	12698.45 Inter	50 - year	2385.00	11.47	22.00	17.81	22.49	0.001130	6.33	467.40	64.19	0.36
r1	12698.45 Inter	25 - year	2328.00	11.47	21.90	17.74	22.38	0.001118	6.25	461.27	63.95	0.36
r1	12698.45 Inter	10 - year	1633.00	11.47	20.93	16.81	21.24	0.000824	4.99	400.49	61.40	0.30
r1	12698.45 Inter	5 - year	1163.00	11.47	20.19	16.10	20.39	0.000588	3.96	355.77	59.48	0.25
r1	12698.45 Inter	2 - year	871.00	11.47	19.52	15.59	19.66	0.000463	3.31	316.50	57.75	0.22
r1	12310.87	100 - year	3255.00	11.57	22.68	20.40	22.81	0.000269	2.32	1191.45	427.42	0.14
r1	12310.87	50 - year	2385.00	11.57	22.00	18.12	22.09	0.000286	2.26	975.60	421.92	0.15
r1	12310.87	25 - year	2328.00	11.57	21.89	18.05	21.98	0.000307	2.31	940.77	419.69	0.15
r1	12310.87	10 - year	1633.00	11.57	20.74	17.06	20.86	0.000646	3.00	594.03	394.04	0.21
r1	12310.87	5 - year	1163.00	11.57	19.90	16.28	20.07	0.001096	3.54	361.20	324.17	0.27
r1	12310.87	2 - year	871.00	11.57	19.22	15.71	19.39	0.001088	3.27	266.12	161.60	0.26
r1	12247.32 120+00		Bridge									
r1	12191.57	100 - year	3255.00	9.87	21.82	21.82	22.65	0.003708	8.05	472.08	242.70	0.52
r1	12191.57	50 - year	2385.00	9.87	20.50	19.32	22.08	0.007596	10.11	237.38	42.22	0.72
r1	12191.57	25 - year	2328.00	9.87	20.43	19.24	21.97	0.007534	9.99	234.38	42.02	0.72
r1	12191.57	10 - year	1633.00	9.87	19.91	18.05	20.82	0.005026	7.68	213.02	40.55	0.58
r1	12191.57	5 - year	1163.00	9.87	19.38	17.11	19.95	0.003567	6.05	192.14	39.07	0.48
r1	12191.57	2 - year	871.00	9.87	19.01	16.44	19.38	0.002563	4.90	177.65	37.98	0.40
r1	12079.54 118+20	100 - year	3255.00	10.61	21.65	19.28	21.99	0.001169	5.74	936.20	349.80	0.34
r1	12079.54 118+20	50 - year	2385.00	10.61	20.85	18.40	21.18	0.001168	5.39	671.99	307.68	0.33
r1	12079.54 118+20	25 - year	2328.00	10.61	20.75	18.30	21.09	0.001204	5.43	641.55	301.05	0.34
r1	12079.54 118+20	10 - year	1633.00	10.61	20.00	16.62	20.29	0.001050	4.75	461.21	190.35	0.31
r1	12079.54 118+20	5 - year	1163.00	10.61	19.40	15.48	19.60	0.000798	3.91	369.10	119.11	0.27
r1	12079.54 118+20	2 - year	871.00	10.61	19.00	14.68	19.15	0.000597	3.25	324.15	107.63	0.23


BlindBrookI95toI287ExistingResOptLP35.5 Plan: I95 to I287, Exist. Reservoir, Optimized 2/4/2008
blindbrook r1
Legend
WS 100 - year
WS 50 - year
WS 25 - year
WS 10 - year
WS 5 - year
WS 2 - year
Ground
Elevation (ft)
Main Channel Distance (ft)
0
10
20
30
40
50
60
0
2000
4000
6000
8000
10000

A-108

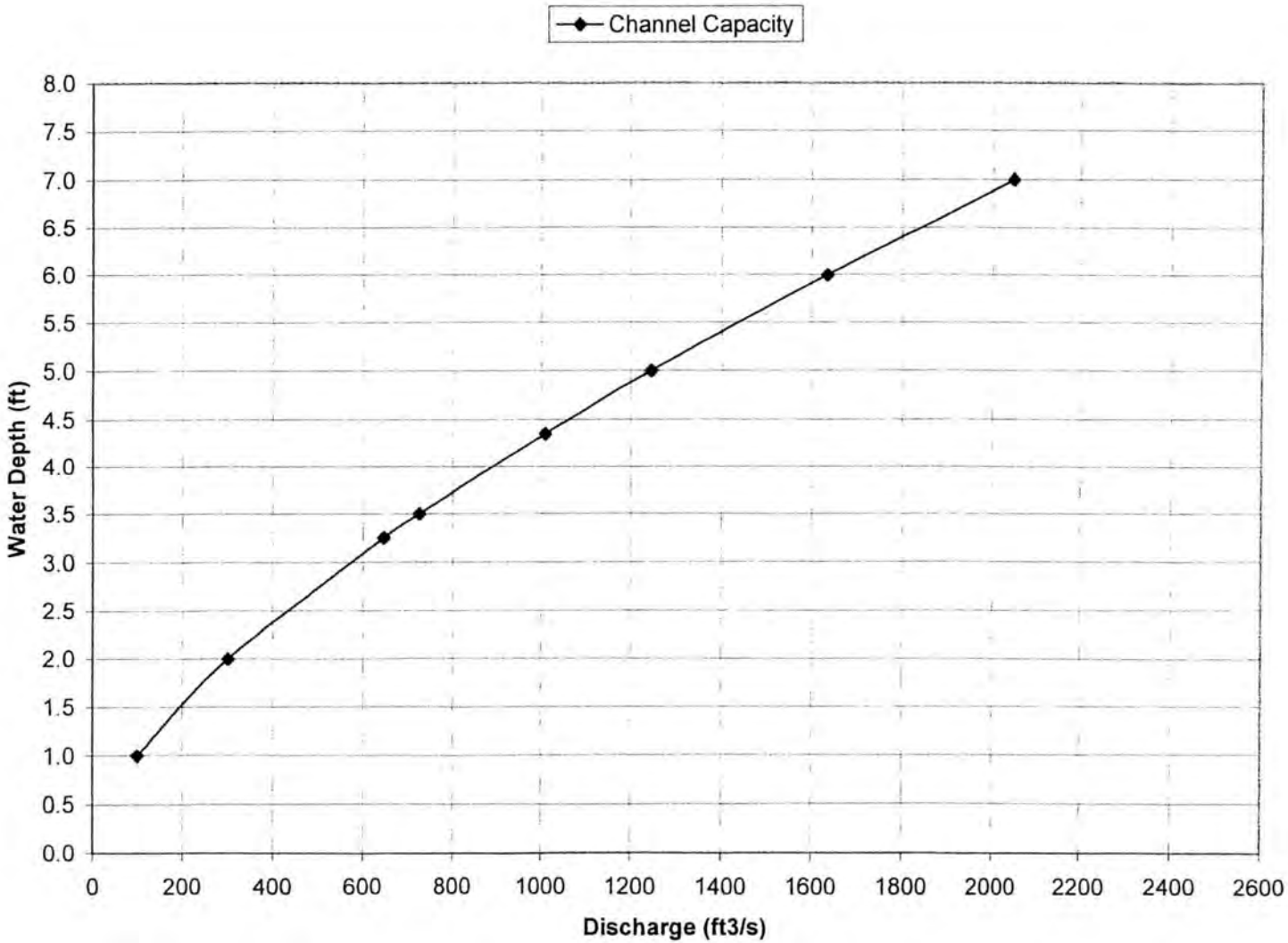
Flood Control Improvements - Supplement
City Of Rye, NY

File: EastBrCh.xls
Compiled: Dan Ionescu
Date: Dec. 5, 2007

Diversion Channel. East Branch

H (ft)	S	$S^{1/2}$	Width (ft)	n	Aria (ft^2)	P (ft)	R (ft)	$R^{2/3}$	v (ft/s)	Q (ft^3/s)
1.00	0.0009	0.03	30	0.013	30.00	32.00	0.94	0.96	3.29	99
2.00	0.0009	0.03	30	0.013	60.00	34.00	1.76	1.46	5.02	301
3.25	0.0009	0.03	30	0.013	97.50	36.50	2.67	1.93	6.62	646
3.50	0.0009	0.03	30	0.013	105.00	37.00	2.84	2.01	6.89	724
4.35	0.0009	0.03	30	0.013	130.50	38.70	3.37	2.25	7.74	1009
5.00	0.0009	0.03	30	0.013	150.00	40.00	3.75	2.41	8.30	1245
6.00	0.0009	0.03	30	0.013	180.00	42.00	4.29	2.64	9.08	1634
7.00	0.0009	0.03	30	0.013	210.00	44.00	4.77	2.84	9.75	2048

East Branch Blind Brook Diversion
30 ft x 8 ft Channel Capacity



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Exist. Cond. at Bowman Dam and reservoir

HEC-RAS Plan: Existing Con River: BlindBrookEB Reach: REACH1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH1	321 5+70	50 - year	859.00	30.95	38.53	34.78	38.62	0.000437	2.88	360.42	63.00	0.19
REACH1	321 5+70	25 - year	673.00	30.95	37.45	34.52	37.51	0.000375	2.38	413.89	137.43	0.17
REACH1	321 5+70	10 - year	487.00	30.95	36.20	34.12	36.27	0.000653	2.67	259.54	108.73	0.22
REACH1	321 5+70	5 - year	369.00	30.95	34.83	33.81	34.99	0.002091	3.75	132.23	77.35	0.37
REACH1	321 5+70	2 - year	213.00	30.95	33.93	33.26	34.11	0.003239	3.72	71.69	56.37	0.44
REACH1	280 4+70US	100 - year	1073.00	30.17	40.06	35.34	40.08	0.000128	2.05	971.82	253.63	0.12
REACH1	280 4+70US	50 - year	859.00	30.17	38.47	34.99	38.60	0.000499	3.55	329.58	60.23	0.23
REACH1	280 4+70US	25 - year	673.00	30.17	37.35	34.66	37.47	0.000577	3.43	261.92	157.59	0.24
REACH1	280 4+70US	10 - year	487.00	30.17	36.09	34.06	36.22	0.000860	3.62	186.09	112.47	0.28
REACH1	280 4+70US	5 - year	369.00	30.17	34.54	33.66	34.85	0.002864	5.19	99.27	52.39	0.48
REACH1	280 4+70US	2 - year	213.00	30.17	33.68	33.00	33.95	0.003204	4.56	60.39	39.13	0.49
REACH1	233 4+70		Bridge	Bowman Ave								
REACH1	185 4+70DS	100 - year	1073.00	25.44	33.07	29.95	33.35	0.000968	4.71	264.42	53.53	0.32
REACH1	185 4+70DS	50 - year	859.00	25.44	32.73	29.53	32.96	0.000812	4.17	229.93	40.77	0.29
REACH1	185 4+70DS	25 - year	673.00	25.44	32.34	29.13	32.49	0.000591	3.41	226.51	50.45	0.24
REACH1	185 4+70DS	10 - year	487.00	25.44	32.35	28.67	32.42	0.000309	2.47	226.75	50.47	0.18
REACH1	185 4+70DS	5 - year	369.00	25.44	31.90	28.35	31.95	0.000238	2.06	204.60	48.74	0.15
REACH1	185 4+70DS	2 - year	213.00	25.44	31.35	27.75	31.37	0.000118	1.35	178.48	46.65	0.11
REACH1	128 3+15	100 - year	1073.00	27.23	33.10	29.94	33.23	0.000619	3.15	388.46	86.51	0.24
REACH1	128 3+15	50 - year	859.00	27.23	32.75	29.67	32.86	0.000545	2.83	332.90	71.03	0.22
REACH1	128 3+15	25 - year	673.00	27.23	32.35	29.39	32.42	0.000419	2.34	324.82	83.20	0.19
REACH1	128 3+15	10 - year	487.00	27.23	32.35	29.09	32.39	0.000219	1.70	324.82	83.20	0.14
REACH1	128 3+15	5 - year	369.00	27.23	31.90	28.88	31.93	0.000182	1.44	287.82	81.22	0.12
REACH1	128 3+15	2 - year	213.00	27.23	31.35	28.55	31.36	0.000101	0.98	243.83	78.78	0.09

TW

A-11

c:\Dan I\East Br B30x8 chann.prj

HEC-RAS Plan: Existing Con River: BlindBrookEB Reach: REACH1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH1	321 5+70	50 - year	859.00	30.95	38.53	34.78	38.62	0.000437	2.88	360.42	63.00	0.19
REACH1	321 5+70	25 - year	673.00	30.95	37.45	34.52	37.51	0.000375	2.38	413.89	137.43	0.17
REACH1	321 5+70	10 - year	487.00	30.95	36.20	34.12	36.27	0.000653	2.67	259.55	108.74	0.22
REACH1	321 5+70	5 - year	369.00	30.95	34.83	33.81	34.99	0.002091	3.75	132.23	77.35	0.37
REACH1	321 5+70	2 - year	213.00	30.95	33.93	33.26	34.11	0.003239	3.72	71.69	56.37	0.44
						unchanged						
REACH1	280 4+70US	100 - year	1073.00	30.17	40.06	35.34	40.08	0.000128	2.05	971.82	253.63	0.12
REACH1	280 4+70US	50 - year	859.00	30.17	38.47	34.99	38.60	0.000499	3.55	329.58	60.23	0.23
REACH1	280 4+70US	25 - year	673.00	30.17	37.35	34.66	37.47	0.000577	3.43	261.92	157.59	0.24
REACH1	280 4+70US	10 - year	487.00	30.17	36.09	34.06	36.22	0.000860	3.62	186.10	112.48	0.28
REACH1	280 4+70US	5 - year	369.00	30.17	34.54	33.66	34.85	0.002864	5.19	99.27	52.39	0.48
REACH1	280 4+70US	2 - year	213.00	30.17	33.68	33.00	33.95	0.003204	4.56	60.39	39.13	0.49
REACH1	233 4+70		Bridge	Bridge								
REACH1	185 4+70DS	100 - year	1073.00	25.44	34.02	29.95	34.22	0.000581	3.98	317.27	57.55	0.25
REACH1	185 4+70DS	50 - year	859.00	25.44	33.42	29.53	33.60	0.000562	3.71	258.29	40.77	0.24
REACH1	185 4+70DS	25 - year	673.00	25.44	32.86	29.13	32.98	0.000429	3.07	253.50	52.66	0.21
REACH1	185 4+70DS	10 - year	487.00	25.44	32.62	28.67	32.69	0.000260	2.33	240.86	51.63	0.16
REACH1	185 4+70DS	5 - year	369.00	25.44	32.10	28.35	32.15	0.000208	1.97	214.43	49.51	0.14
REACH1	185 4+70DS	2 - year	213.00	25.44	31.44	27.75	31.47	0.000110	1.32	182.81	46.99	0.10
REACH1	128 3+15	100 - year	1073.00	27.23	34.05		34.14	0.000344	2.61	472.79	91.18	0.18
REACH1	128 3+15	50 - year	859.00	27.23	33.45		33.53	0.000343	2.44	386.59	72.64	0.18
REACH1	128 3+15	25 - year	673.00	27.23	32.88		32.93	0.000284	2.07	369.13	85.52	0.16
REACH1	128 3+15	10 - year	487.00	27.23	32.63		32.66	0.000178	1.59	348.04	84.42	0.13
REACH1	128 3+15	5 - year	369.00	27.23	32.10		32.13	0.000154	1.37	304.22	82.10	0.12
REACH1	128 3+15	2 - year	213.00	27.23	31.44		31.45	0.000092	0.95	251.15	79.19	0.09
REACH1	120	100 - year	1073.00	27.23	33.55		34.05	0.000335	5.66	189.67	30.00	0.40
REACH1	120	50 - year	859.00	27.23	33.09		33.46	0.000269	4.89	175.77	30.00	0.36
REACH1	120	25 - year	673.00	27.23	32.61		32.88	0.000213	4.17	161.27	30.00	0.32
REACH1	120	10 - year	487.00	27.23	32.48		32.63	0.000120	3.09	157.50	30.00	0.24
REACH1	120	5 - year	369.00	27.23	32.00		32.10	0.000092	2.58	143.05	30.00	0.21
REACH1	120	2 - year	213.00	27.23	31.40		31.44	0.000046	1.70	125.03	30.00	0.15
REACH1	-760	100 - year	1073.00	27.50	33.10	30.90	33.73	0.000479	6.39	168.00	30.00	0.48
REACH1	-760	50 - year	859.00	27.50	32.75	30.43	33.21	0.000372	5.45	157.50	30.00	0.42
REACH1	-760	25 - year	673.00	27.50	32.35	29.99	32.68	0.000290	4.63	145.50	30.00	0.37
REACH1	-760	10 - year	487.00	27.50	32.35	29.51	32.52	0.000152	3.35	145.50	30.00	0.27
REACH1	-760	5 - year	369.00	27.50	31.90	29.17	32.02	0.000117	2.80	132.00	30.00	0.23

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HEC-RAS Plan: Existing Con River: BlindBrookEB Reach: REACH1 (Continued)

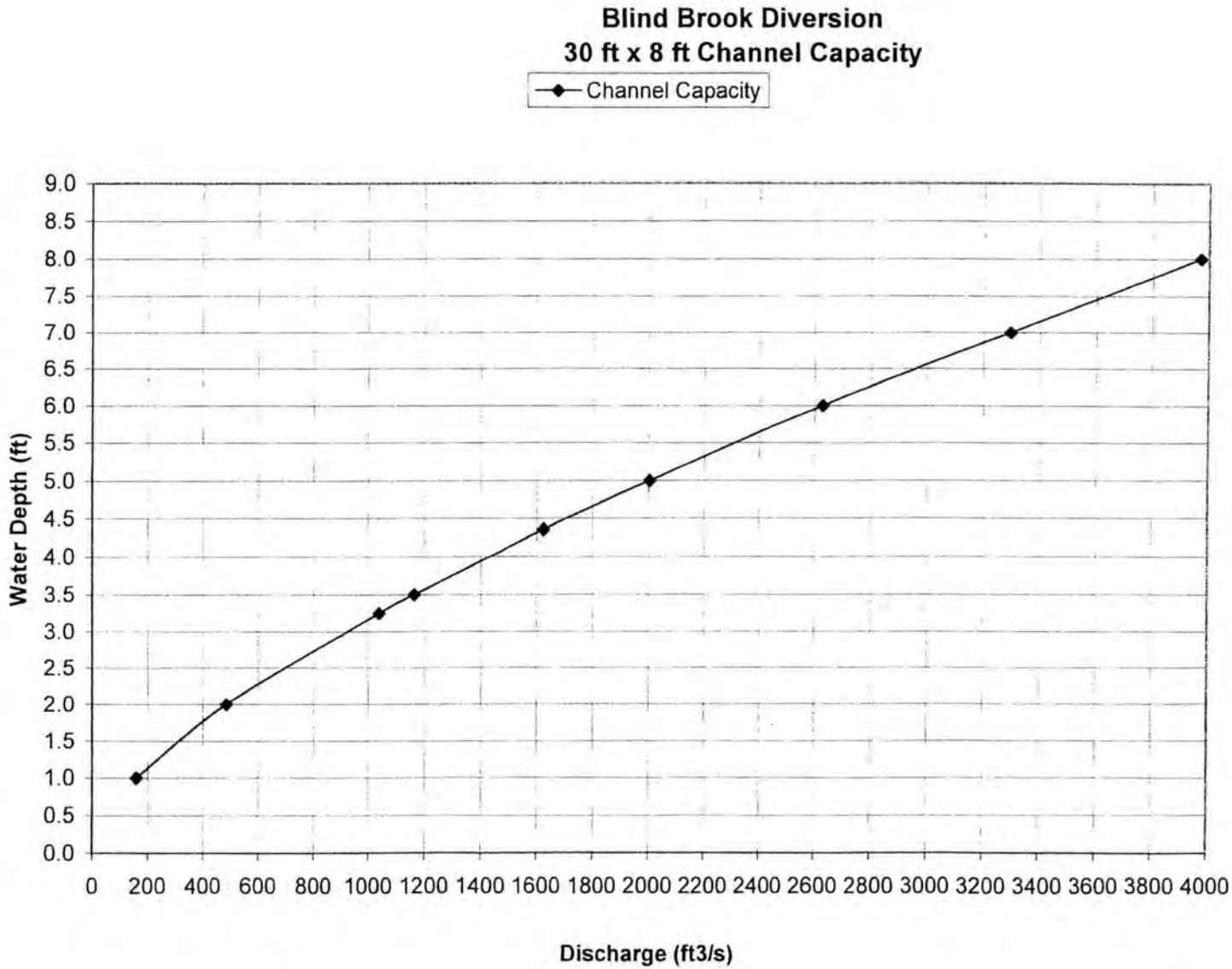
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH1	-760	2 - year	213.00	27.50	31.35	28.66	31.40	0.000059	1.84	115.50	30.00	0.17

Flood Control Improvements - Supplement
City Of Rye, NY

File: BlindBrCh.xls
Compiled: Dan Ionescu
Date: Dec. 6, 2007

Diversion Channel. Blind Brook

H (ft)	S	$S^{1/2}$	Width (ft)	n	Aria (ft^2)	P (ft)	R (ft)	$R^{2/3}$	v (ft/s)	Q (ft^3/s)
1.00	0.00233	0.04827	30	0.013	30.00	32.00	0.94	0.96	5.30	159
2.00	0.00233	0.04827	30	0.013	60.00	34.00	1.76	1.46	8.08	485
3.25	0.00233	0.04827	30	0.013	97.50	36.50	2.67	1.93	10.65	1039
3.50	0.00233	0.04827	30	0.013	105.00	37.00	2.84	2.01	11.09	1165
4.35	0.00233	0.04827	30	0.013	130.50	38.70	3.37	2.25	12.45	1624
5.00	0.00233	0.04827	30	0.013	150.00	40.00	3.75	2.41	13.36	2004
6.00	0.00233	0.04827	30	0.013	180.00	42.00	4.29	2.64	14.60	2629
7.00	0.00233	0.04827	30	0.013	210.00	44.00	4.77	2.84	15.69	3295
8.00	0.0023	0.047958	30	0.013	240.00	46.00	5.22	3.01	16.54	3971


Blind Brook Diversion
30 ft x 8 ft Channel Capacity
Channel Capacity
Water Depth (ft)
9.0
8.5
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000
Discharge (ft3/s)

Flood Control Improvements
City of Rye, NY

File: AltGPLowerPondCost.xls
Compiled: Dan Ionescu
Date: 1/9/2008 2/16/2008

LOWER POND IMPROVEMENTS - BUDGETARY ESTIMATE

A. Alternate A - Gravity Principal Spillway El = 31.5

A1 Reservoir

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	200000	$200,000
3	Rock Excavation	CY	29000	100	$2,900,000
4	Soil Excavation	CY	6000	40	$240,000
5	Water Handling	LS	1	500000	$500,000
6	Soil Erosion and Sediment Control	LS	1	200000	$200,000
			Total		$4,140,000
			Contingency 20%		$828,000
			Total		**$4,968,000**

A2 Diversion Channel

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	75000	$75,000
3	Rock Excavation	CY	6900	100	$690,000
4	Soil Excavation	CY	1700	40	$68,000
5	Water Handling	LS	1	500000	$500,000
6	Soil Erosion and Sediment Control	LS	1	100000	$100,000
7	30'x8' Concrete Channel	FT	830	2600	$2,158,000
8	5' Chain Link Fence	FT	900	45	$40,500
9	Gravel	CY	1100	25	$27,500
			Total		$3,759,000
			Contingency 20%		$751,800
			Total		**$4,510,800**

A3 Outlet Structure

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	900	100	$90,000
4	Soil Excavation	CY	200	40	$8,000
5	Water Handling	LS	1	10000	$10,000
6	Soil Erosion and Sediment Control	LS	1	30000	$30,000
7	Concrete	CY	1000	250	$250,000
8	Sluice Gate	LS	1	750000	$750,000
9	Miscellaneous Steel	LB	5000	25	$125,000
			Total		$1,383,000
			Contingency 20%		$276,600
			Total		**$1,659,600**

TOTAL ALTERNATE A **$11,138,400**

Flood Control Improvements
City of Rye, NY

File: AltGPLowerPondCost.xls
Compiled: Dan Ionescu
Date: 1/9/2008

LOWER POND IMPROVEMENTS - BUDGETARY ESTIMATE

B **Alternate B - Mechanical System**

B1 Reservoir

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	200000	$200,000
3	Rock Excavation	CY	10700	100	$1,070,000
4	Soil Excavation	CY	2600	40	$104,000
5	Water Handling	LS	1	500000	$500,000
6	Soil Erosion and Sediment Control	LS	1	200000	$200,000
			Total		$2,174,000
			Contingency 20%		$434,800
			Total		**$2,608,800**

B2 Diversion Channels

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	200000	$200,000
2	Clearing and Grubing	LS	1	150000	$150,000
3	Rock Excavation	CY	22400	100	$2,240,000
4	Soil Excavation	CY	5600	40	$224,000
5	Water Handling	LS	1	1000000	$1,000,000
6	Soil Erosion and Sediment Control	LS	1	200000	$200,000
7	30'x8' Concrete Channel	FT	1900	2600	$4,940,000
8	5' Chain Link Fence	FT	2000	45	$90,000
9	Gravel	CY	2400	25	$60,000
			Total		$9,104,000
			Contingency 20%		$1,820,800
			Total		**$10,924,800**

B3 Outlet Structure

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	900	100	$90,000
4	Soil Excavation	CY	200	40	$8,000
5	Water Handling	LS	1	10000	$10,000
6	Soil Erosion and Sediment Control	LS	1	30000	$30,000
7	Concrete	CY	1000	250	$250,000
8	Miscellaneous Steel	LB	5000	25	$125,000
			Total		$633,000
			Contingency 20%		$126,600
			Total		**$759,600**

B4 Diversion Structure

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	800	100	$80,000
4	Soil Excavation	CY	200	40	$8,000
5	Water Handling	LS	1	500000	$500,000
6	Soil Erosion and Sediment Control	LS	1	30000	$30,000
7	Concrete	CY	1000	250	$250,000
			Total		$988,000
			Contingency 20%		$197,600
			Total		**$1,185,600**

B5 Retaining Wall (9 feet High)

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	50000	$50,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	900	100	$90,000
4	Soil Excavation	CY	200	40	$8,000
5	Water Handling	LS	1	100000	$100,000
6	Soil Erosion and Sediment Control	LS	1	30000	$30,000
7	Gravel	CY	1100	25	$27,500
8	Concrete	CY	200	300	$60,000
			Total		$385,500
			Contingency 20%		$77,100
			Total		**$462,600**

B6 Access Road and Pump Station Parking

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	20000	$20,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	500	100	$50,000
4	Soil Excavation	CY	200	40	$8,000
5	Water Handling	LS	1	100000	$100,000
6	Soil Erosion and Sediment Control	LS	1	30000	$30,000
7	Clean Fill	CY	2000	20	$40,000
8	Bituminous Concrete Pavement	TO	600	110	$66,000
9	Gravel	CY	550	25	$13,750
			Total		$347,750
			Contingency 20%		$69,550
			Total		**$417,300**

B7 Pump Station

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	20000	$20,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	9000	100	$900,000
4	Soil Excavation	CY	2000	40	$80,000
5	Water Handling	LS	1	500000	$500,000
6	Concrete	CY	1200	300	$360,000
7	Pumps and Installation	EA	10	100000	$1,000,000
8	Trash Rack	EA	1	750000	$750,000
9	Miscellaneous Steel	LB	10000	25	$250,000
10	Electrical and Automation	LS	1	150000	$150,000
11	Superstructure	SF	5000	200	$1,000,000
12	Hydraulic Installation	LS	1	800000	$800,000
13	Force Main	LS	1	200000	$200,000
14	Energy Dissipator	LS	1	150000	$150,000
			Total		$6,180,000
			Contingency 20%		$1,236,000.0
			Total		**$7,416,000**

B8 Bridge

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Bridge 20' long, 30' span	LS	1	300000	$300,000
			Total		$300,000
			Contingency 20%		$60,000
			Total		**$360,000**

TOTAL ALTERNATE B **$24,134,700**

Flood Control Improvements
City of Rye, NY

File: AltGPLowerPondCost.xls
Compiled: Dan Ionescu
Date: 1/9/2008 2/16/2008

A. Alternate C (D*)- Gravity Principal Spillway El = 35.5

A1 Reservoir

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	200000	$200,000
3	Rock Excavation	CY	29000	100	$2,900,000
4	Soil Excavation	CY	6000	40	$240,000
5	Water Handling	LS	1	500000	$500,000
6	Soil Erosion and Sediment Control	LS	1	200000	$200,000
7	Clean Fill, Compacted in Place	CY	3500	70	$245,000
			Total		$4,385,000
			Contingency 20%		$877,000
			Total		**$5,262,000**

A2 Diversion Channel

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	75000	$75,000
3	Rock Excavation	CY	6900	100	$690,000
4	Soil Excavation	CY	1700	40	$68,000
5	Water Handling	LS	1	500000	$500,000
6	Soil Erosion and Sediment Control	LS	1	100000	$100,000
7	30'x8' Concrete Channel	FT	830	2600	$2,158,000
8	5' Chain Link Fence	FT	900	45	$40,500
9	Gravel	CY	1100	25	$27,500
10	Reinforced Concrete Cast in Place	CY	300	900	$270,000
			Total		$4,029,000
			Contingency 20%		$805,800
			Total		**$4,834,800**

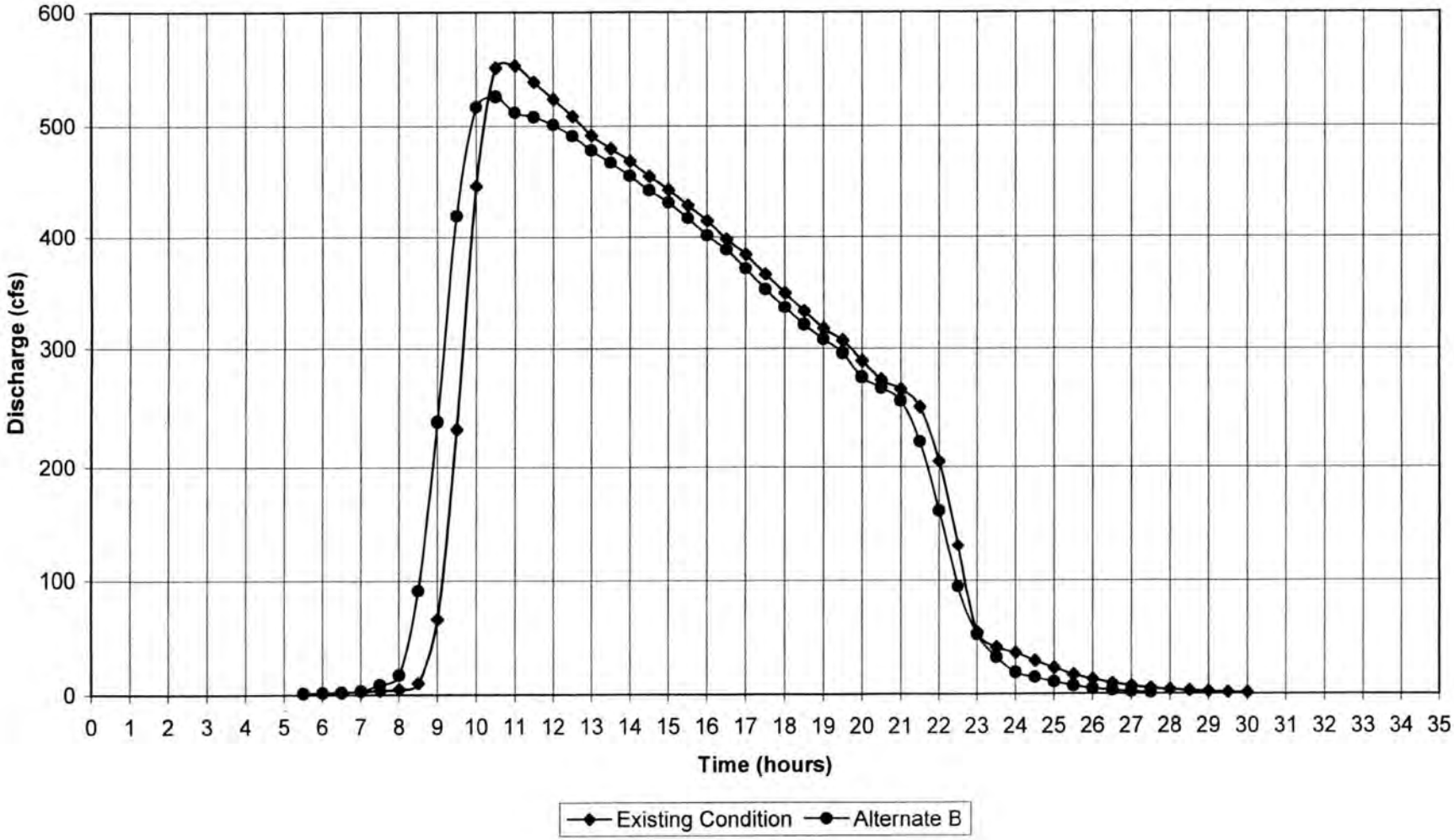
A3 Outlet Structure

Item	Description	Unit	Quantity	Unit Cost	Cost
1	Mobilization	LS	1	100000	$100,000
2	Clearing and Grubing	LS	1	20000	$20,000
3	Rock Excavation	CY	900	100	$90,000
4	Soil Excavation	CY	200	40	$8,000
5	Water Handling	LS	1	10000	$10,000
6	Soil Erosion and Sediment Control	LS	1	30000	$30,000
7	Concrete	CY	1400	250	$350,000
8	Sluice Gate	LS	1	750000	$750,000
9	Miscellaneous Steel	LB	5000	25	$125,000
			Total		$1,483,000
			Contingency 20%		$296,600
			Total		**$1,779,600**

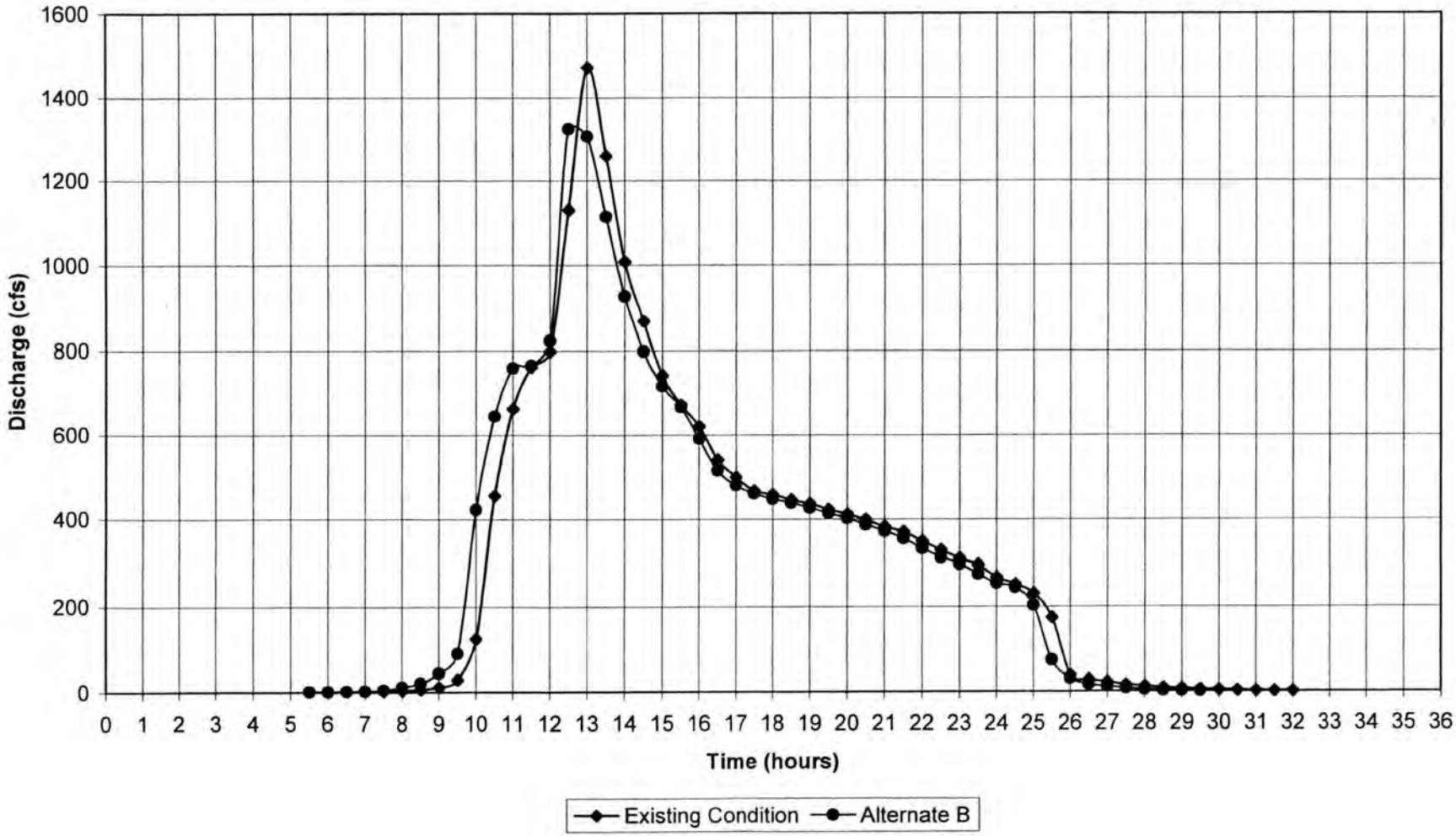
TOTAL ALTERNATE C (D*) **$11,876,400**

* Does not include the cost for optimizing the Bowman Avenue Dam Outlet

FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
2 - year storm event

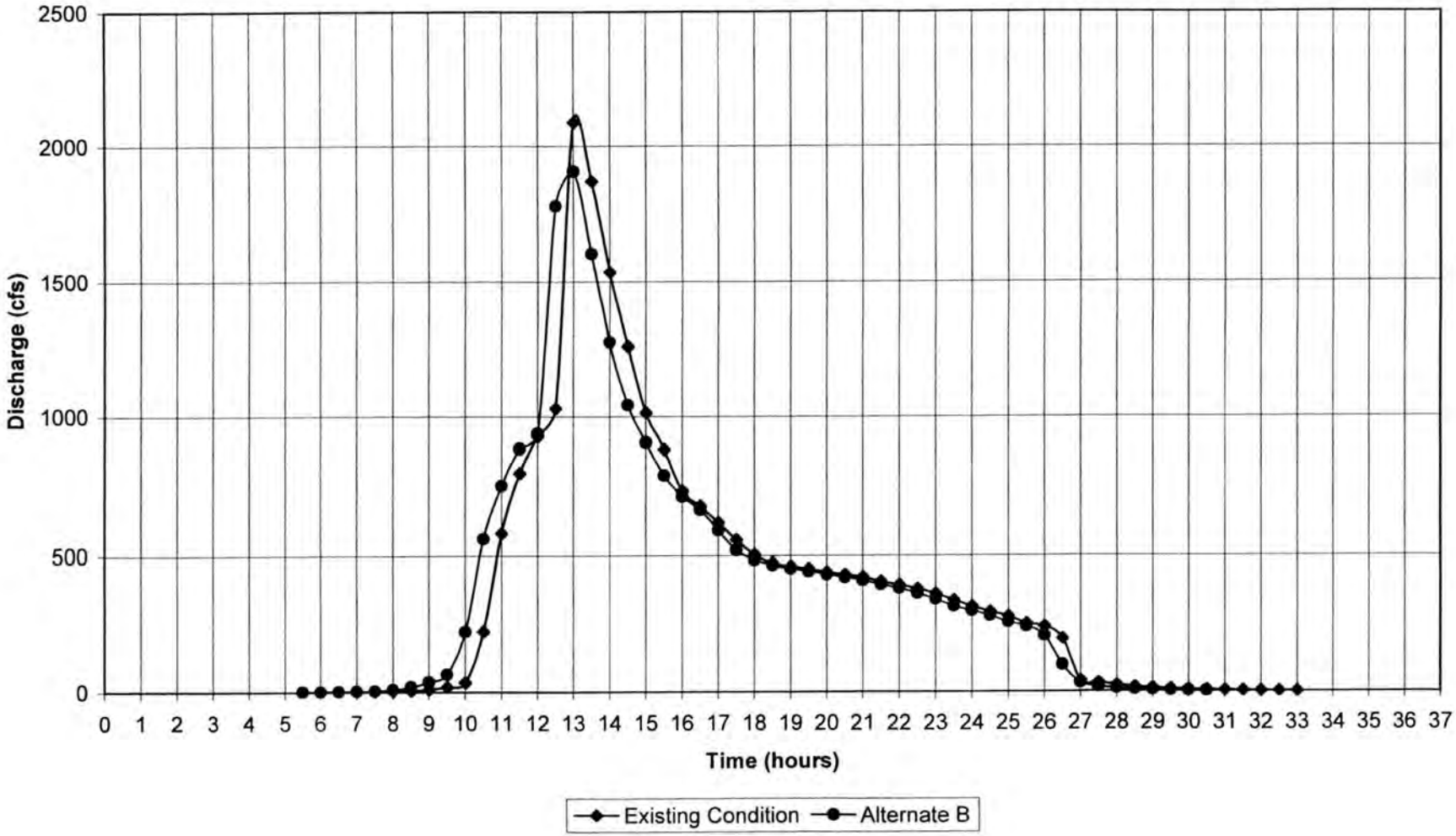


FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
5 - year storm event

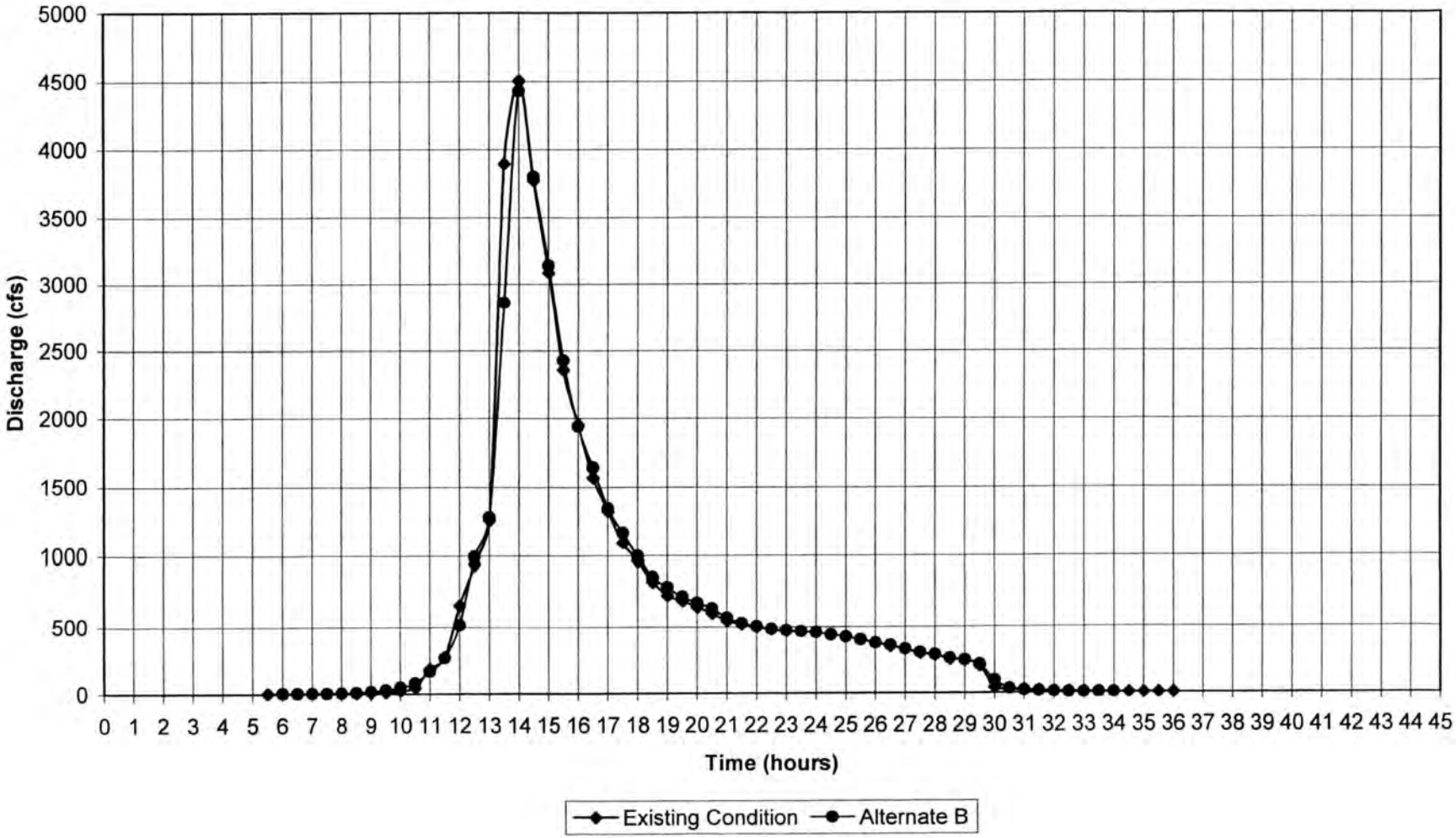


A-12

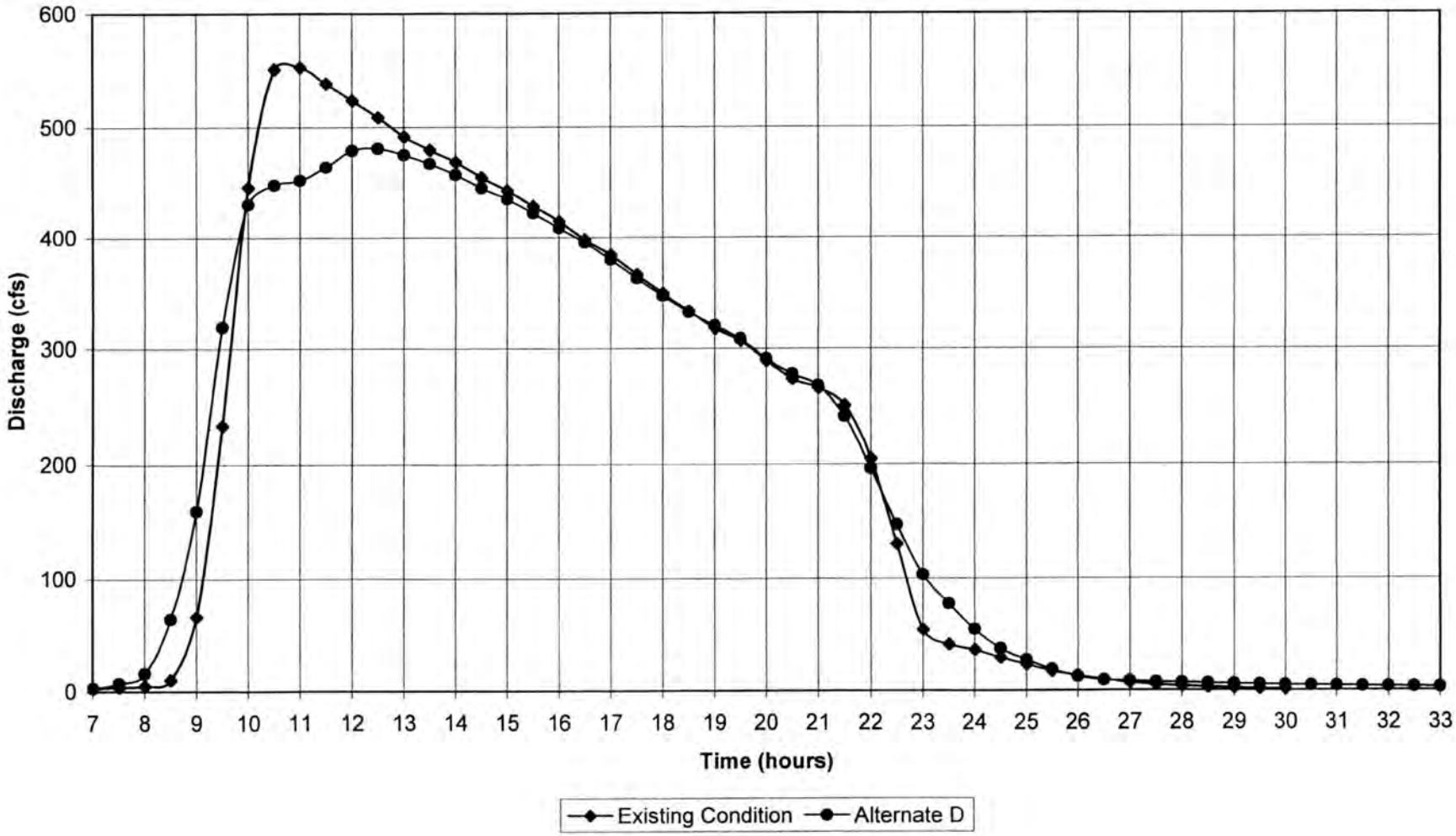
FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
10 - year storm event



FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
50 - year storm event



FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
2 - year storm event



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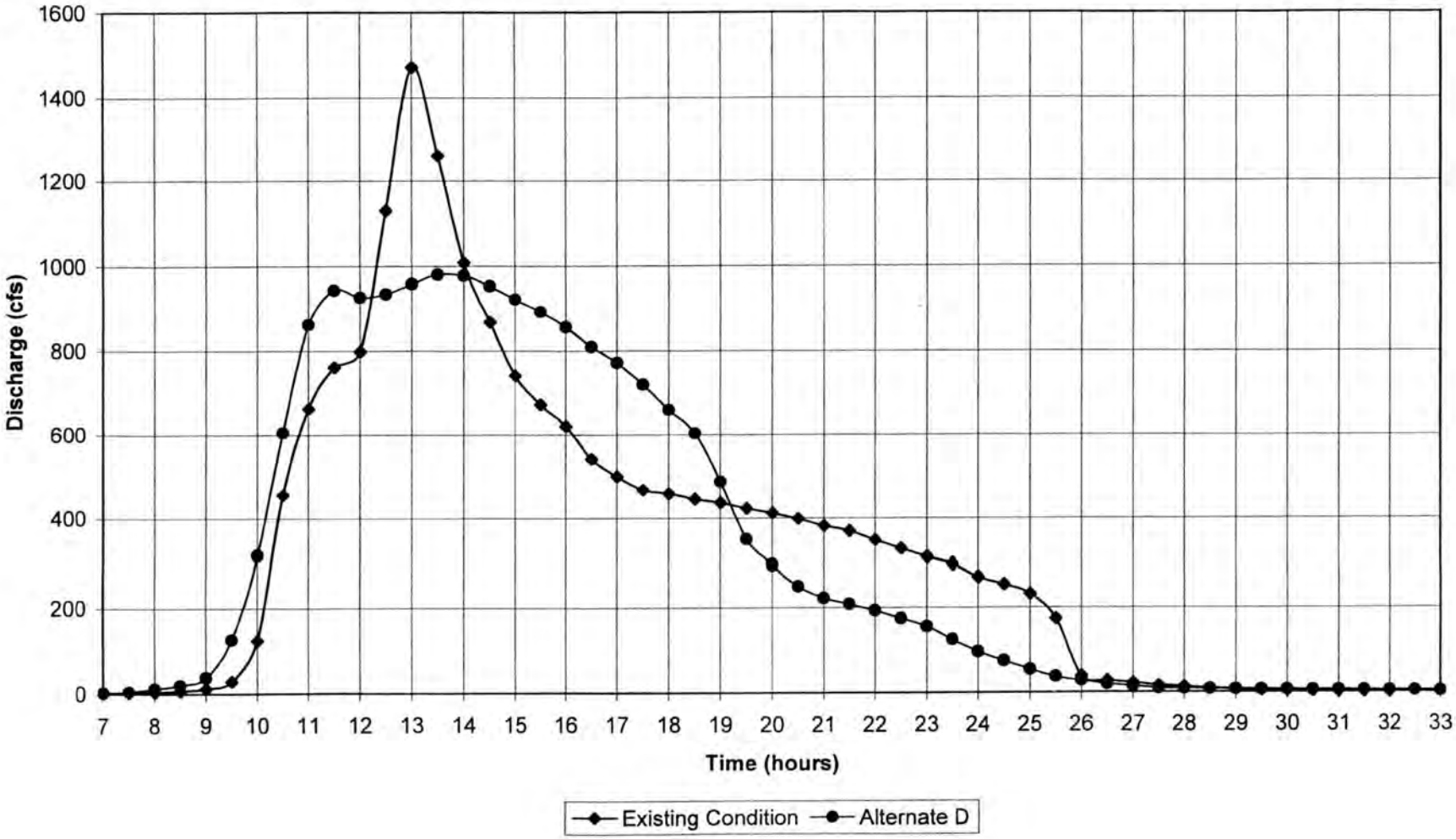
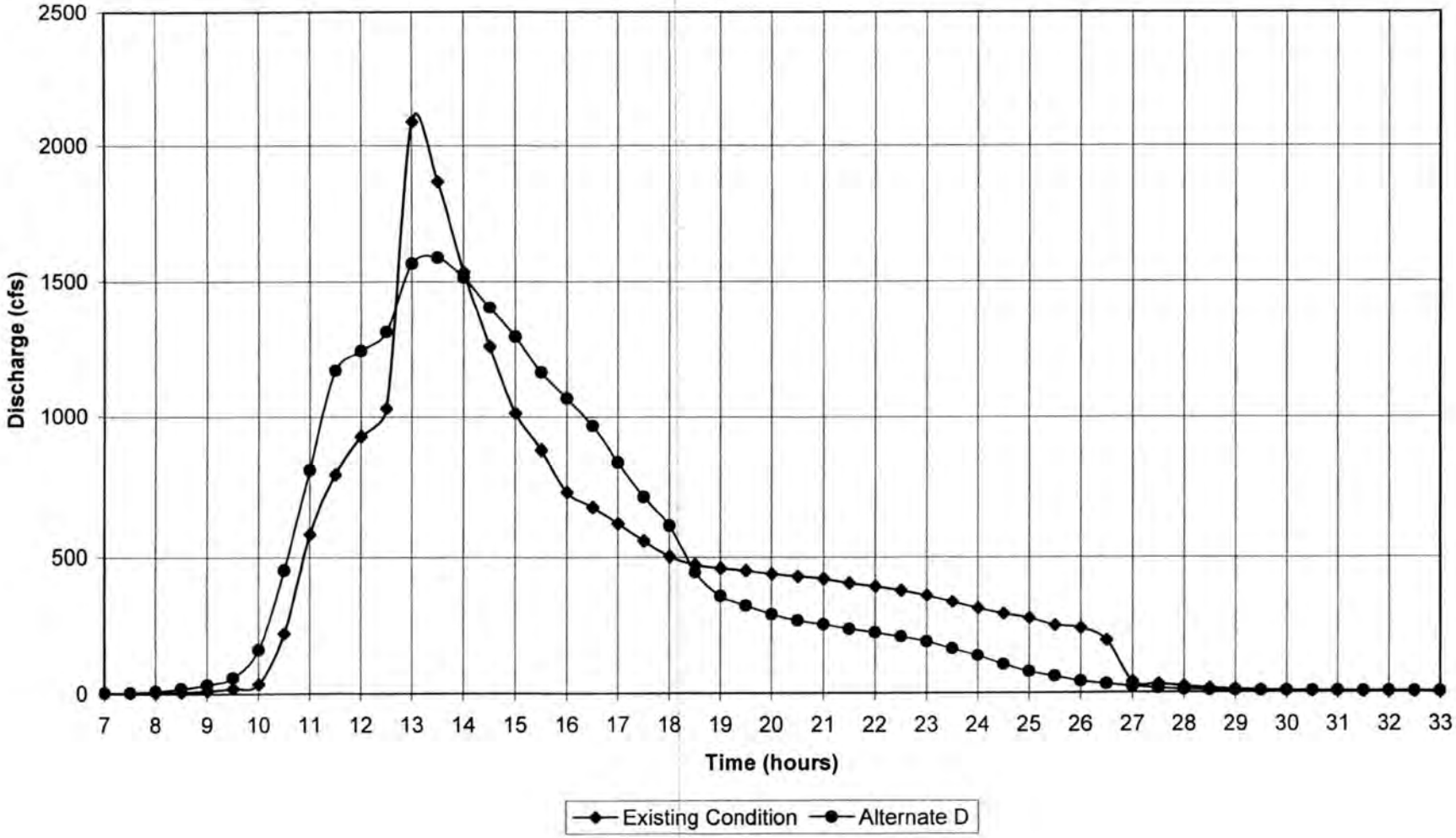
FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
5 - year storm event



FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
10 - year storm event



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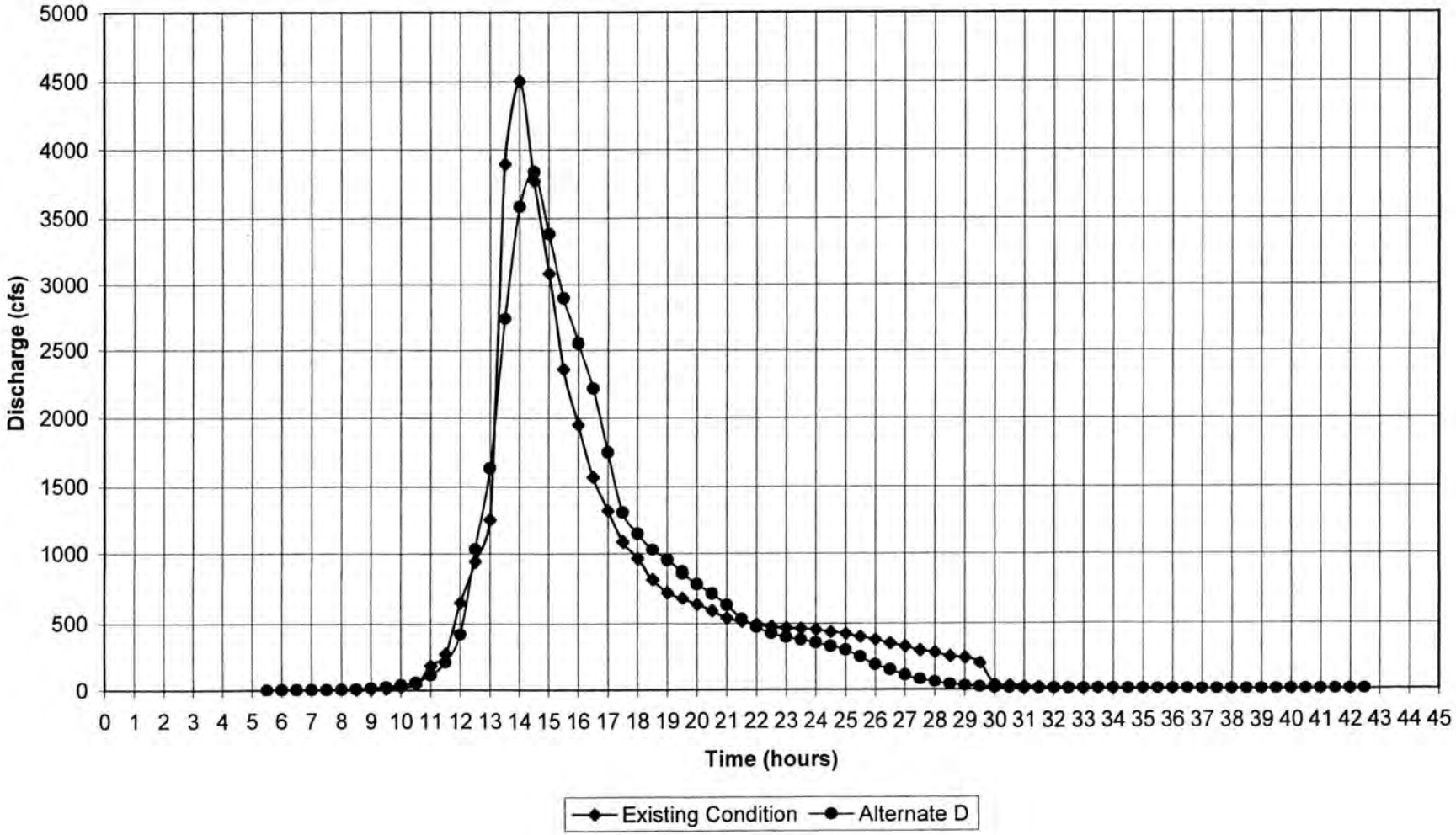
FLOOD CONTROL IMPROVEMENTS.
Hydrograph Comparison Downstream of I - 287
50 - year storm event



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