

REF. NYSDOT DRAWING
ROWMAPS_2007_0624_006
US ROUTE 9W HIGHWAY IMPROVEMENTS
ROADWAY PLAN
06/03 PL-2
SEAR BROWN/NYS DOT

PROPOSED CB #3
RIM 194.75'
INVERT IN 190.30'
INVERT OUT 190.20'
INVERT OUT 190.20'

EXISTING CB DS#021
RIM 192.21
INVERT IN 189.11' EXISTING
INVERT IN 189.21' SICPP (PROPOSED)
INVERT OUT 189.10' SICPP EXISTING

EXISTING CB DS#020
RIM 192.42'
INVERT OUT 189.35' RCP EXISTING

PROPOSED CB #4
RIM 194.30
INVERT IN 189.97'
INVERT OUT 189.87'

PROPOSED CB #2
RIM 195.50
INVERT IN 190.82'
INVERT OUT 190.72

PROPOSED CB #1
RIM 196.25'
INVERT OUT 191.50

1 STORMWATER MANAGEMENT PLAN
SCALE: 1"=20'

Summary for Pond 8P: Proposed CB#3 Detention System

Inflow Area = 19,145 sf, Inflow Depth > 5.26" for Albany Co. 50 event
Inflow = 3.91 cfs @ 11.92 hrs, Volume = 8,394 cf
Outflow = 2.98 cfs @ 11.96 hrs, Volume = 8,394 cf, Atten= 24%, Lag= 2.4 min
Primary = 2.98 cfs @ 11.96 hrs, Volume = 8,394 cf

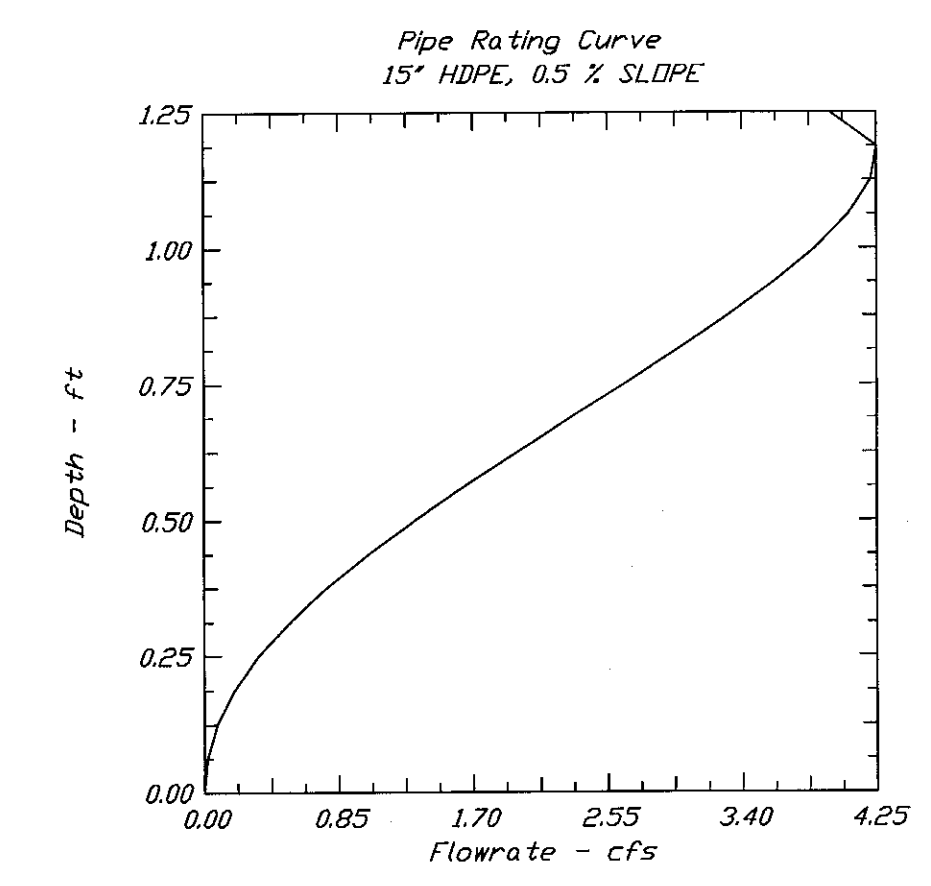
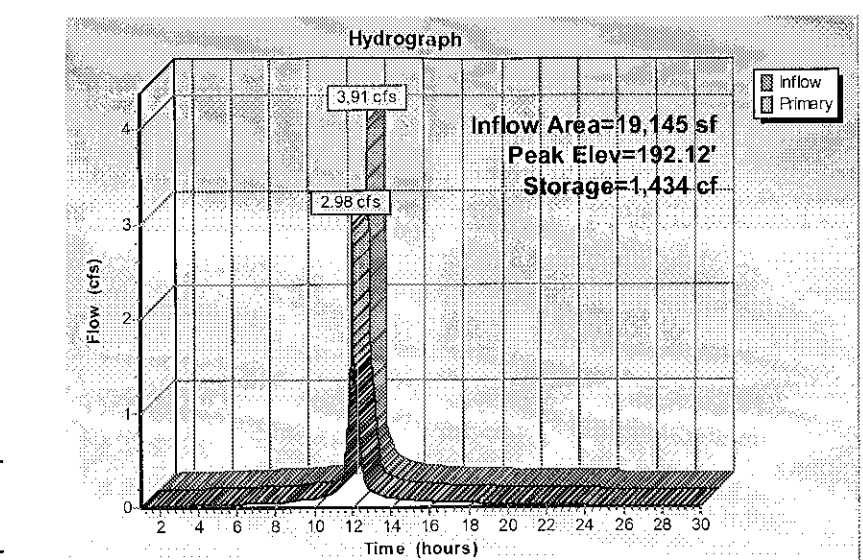
Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 192.12' @ 11.96 hrs Surf Area= 864 sf Storage= 1,434 cf
Flood Elev= 194.75' Surf Area= 0 sf Storage= 2,121 cf

Plug-Flow detention time= 9.7 min calculated for 8,392 cf (100% of inflow)
Center-of-Mass det. time= 9.8 min (748.4 - 738.6)

Volume	Invert	Avail Storage	Storage Description
#1	190.20'	2,121 cf	36.0" D x 60.00' L Horizontal Cylinder x 5

Device	Routing	Invert	Outlet Devices
#1	Primary	190.20'	12.0" x 46.3' long Culvert CPP, projecting, no headwall, Ke= 0.900 Outlet Invert= 189.97' S= 0.0050 / C= 0.900 n= 0.013 Corrugated PE, smooth interior
#2	Device 1	190.20'	7.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	191.75'	1.5' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#4	Device 1	192.00'	3.0' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary Outflow: Max= 2.98 cfs @ 11.96 hrs HW= 192.12' (Free Discharge)
1= Culvert (Passes 2.98 cfs of 3.55 cfs potential flow)
2= Orifice/Grate (Orifice Controls 1.64 cfs @ 6.15 fps)
3= Broad-Crested Rectangular Weir (Weir Controls 0.98 cfs @ 1.77 fps)
4= Broad-Crested Rectangular Weir (Weir Controls 0.35 cfs @ 0.97 fps)



Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Flowrate
Diameter	1.2500 ft
Depth	1.1500 ft
Slope	0.0050 ft/ft
Manning's n	0.0150

Computed Results:

Flowrate	4.2488 cfs
Area	1.2272 ft ²
Wetted Area	1.1812 ft ²
Wetted Perimeter	3.2101 ft
Perimeter	3.9270 ft
Velocity	3.5971 fps
Hydraulic Radius	0.3680 ft
Percent Full	92.0000 %
Full flow Flowrate	3.9587 cfs
Full flow velocity	3.2259 fps

- NOTES
- CONTRACTOR SHALL VERIFY EXACT LOCATION OF UTILITIES.
 - ANY DRAINAGE WORK IN THE STATE HIGHWAY RIGHT-OF-WAY IS SUBJECT TO NYSDOT REVIEW AND APPROVAL AND WILL REQUIRE MODIFICATION TO THE HIGHWAY WORK PERMIT.

PLANNING BOARD APPROVAL

PLANNING BOARD
TOWN OF BETHLEHEM
ALBANY COUNTY, NEW YORK

This Site Plan Approved.

Barbara M. Maltbie
TWO: Chairman
Date: 4/1/07

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CRESCENT
ENVIRONMENTAL

rev.	date	description
1	5/21/07	MODIFIED CONTOURS AROUND PROPOSED CATCH BASINS PER TOWN
2	7/2/07	MODIFIED STORM SEWER ROUTING TO NYSDOT STRUCTURE PER TOWN
3	8/27/07	MODIFIED CATCHBASIN LOC., INVERTS, AND SPOT EL. PER TOWN
4	9/20/07	RE-ATTACHED MODIFIED BASE PLAN
5	1/14/08	ADDED DRYWELLS
6	1/14/08	RELOCATED STORMWATER DETENTION FACILITY
7	3/12/08	UPDATED BASE PLAN

GLENMONT MOBIL
415 ROUTE 9W
**STORMWATER
MANAGEMENT PLAN**
Town of Bethlehem, Albany County, New York

drawn AM	checked
date 10/1/07	scale AS SHOWN
project no. 07-042	sheet no. SW1A
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