PROPOSED SITE DEVELOPMENT

46-64 MAPLEWOOD AVENUE

PORTSMOUTH, NEW HAMPSHIRE

PERMIT SITE PLANS

REQUIRED STATE AND FEDERAL PERMITS
NHDES SEWER DISCHARGE: TO BE SUBMITTED

OWNER:
30 MAPLEWOOD, LLC
30 MAPLEWOOD AVENUE
PORTSMOUTH, N.H. 03801
Tel (603) 766–3760
Fax (603) 766–3761

LAND SURVEYOR & ENGINEER:
AMBIT ENGINEERING, INC.
200 GRIFFIN ROAD, UNIT 3
PORTSMOUTH, N.H. 03801–7114
Tel (603) 430–9282
Fax (603) 436–2315

BUILDING DESIGN:
SOMMA STUDIOS
30 MAPLEWOOD AVENUE
PORTSMOUTH, N.H. 03801
Tel (617) 766–3760
Fax (617) 766–3761

LIGHTING CONSULTING:
VISIBLE LIGHT INC.
24 STICKNEY TERRACE, SUITE 6
HAMPTON, N.H. 03842
Tel (603) 926–6049
Fax (603) 926–6708

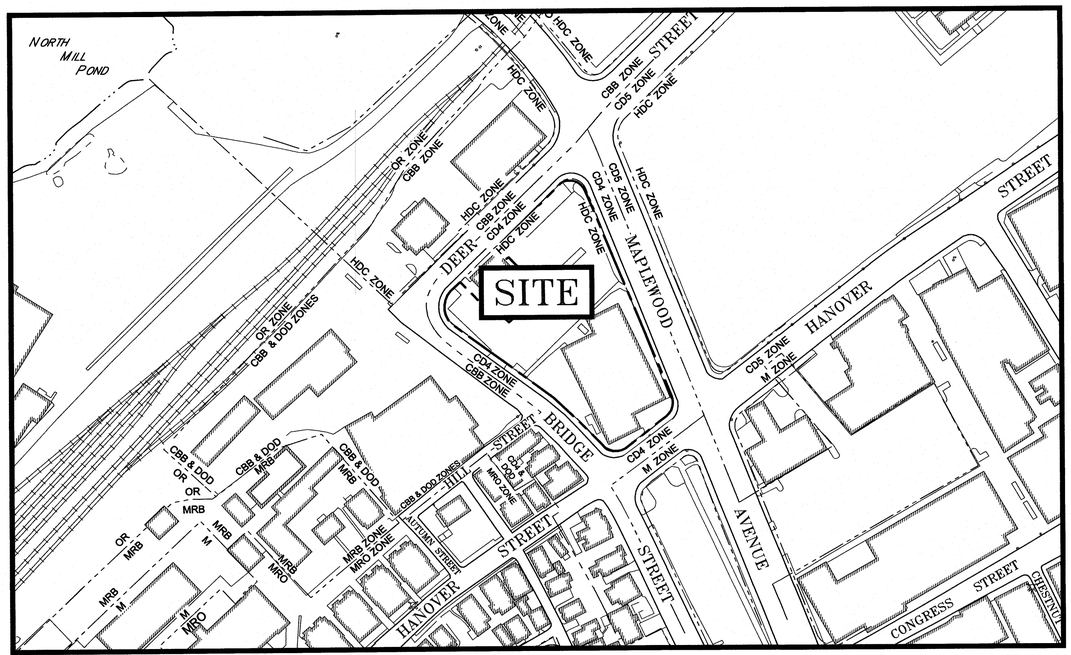
LANDSCAPE ARCHITECT:
WOODBURN & COMPANY LANDSCAPE ARCHITECTURE, LLC
103 KENT PLACE
NEWMARKET, N.H. 03857
Tel (603) 659–5949
Fax (603) 659–5939

DIG SAFE
MA – ME – NH – RI – VT
1–888–344–7233
CALL TOLL FREE

PORTSMOUTH APPROVAL CONDITIONS NOTE:
ALL CONDITIONS ON THIS PLAN SET SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE CITY OF PORTSMOUTH SITE PLAN REVIEW REGULATIONS.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____



ZONING AS OF 2013

LOCUS MAP

SCALE: 1" = 100'

INDEX OF SHEETS

UTILITY CONTACTS

ELECTRIC:
EVERSOURCE
1700 LAFAYETTE ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 436–7708, Ext. 555.5678
ATTN: MICHAEL BUSBY, P.E. (MANAGER)
MICHAEL.BUSBY@NU.COM

NATURAL GAS:
UNITIL
325 WEST ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 294–5144
ATTN: DAVE BEAULIEU

CABLE:
COMCAST
155 COMMERCE WAY
PORTSMOUTH, N.H. 03801
Tel. (603) 679–5695 (X1037)
ATTN: MIKE COLLINS

SEWER & WATER:
PORTSMOUTH DEPARTMENT OF PUBLIC WORKS
680 PEVERLY HILL ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 427–1530
ATTN: JIM TOW

COMMUNICATIONS:
FAIRPOINT COMMUNICATIONS
JOE CONSIDINE
1575 GREENLAND ROAD
GREENLAND, N.H. 03840
Tel. (603) 427–5525

LEGEND:

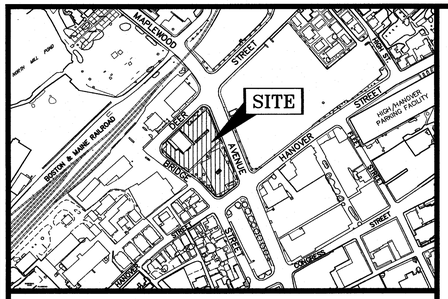
EXISTING	PROPOSED	
		PROPERTY LINE
		SETBACK
S	S	SEWER PIPE
SL	SL	SEWER LATERAL
G	G	GAS LINE
D	D	STORM DRAIN
W	W	WATER LINE
WS	WS	WATER SERVICE
UGE	UGE	UNDERGROUND ELECTRIC
OHW	OHW	OVERHEAD ELECTRIC/WIRES
	UD	FOUNDATION DRAIN
		EDGE OF PAVEMENT (EP)
100	100	CONTOUR
97x3	98x0	SPOT ELEVATION
		UTILITY POLE
		WALL MOUNTED EXTERIOR LIGHTS
		TRANSFORMER ON CONCRETE PAD
		ELECTRIC HANDHOLD
WS	WS	SHUT OFFS (WATER/GAS)
	GV	GATE VALVE
	HYD	HYDRANT
CB	CB	CATCH BASIN
S	SMH	SEWER MANHOLE
D	DMH	DRAIN MANHOLE
T	TMH	TELEPHONE MANHOLE
14	14	PARKING SPACE COUNT
PM		PARKING METER
LSA		LANDSCAPED AREA
TBD	TBD	TO BE DETERMINED
CI	CI	CAST IRON PIPE
COP	COP	COPPER PIPE
DI	DI	DUCTILE IRON PIPE
PVC	PVC	POLYVINYL CHLORIDE PIPE
RCP	RCP	REINFORCED CONCRETE PIPE
AC	–	ASBESTOS CEMENT PIPE
VC	VC	VITRIFIED CLAY PIPE
EP	EP	EDGE OF PAVEMENT
EL.	EL.	ELEVATION
FF	FF	FINISHED FLOOR
INV	INV	INVERT
S =	S =	SLOPE FT/FT
TBM	TBM	TEMPORARY BENCH MARK
TYP	TYP	TYPICAL

PROPOSED SITE DEVELOPMENT
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801–7114
Tel (603) 430–9282
Fax (603) 436–2315

PLAN SET ISSUED: 10 APRIL 2018

1808



LOCATION MAP SCALE: 1" = 300'

LEGEND:

LCA	LIMITED COMMON AREA
N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
RR SPK	RAILROAD SPIKE
11/27	MAP 11/LOT 21
○ IR FND	IRON ROD FOUND
○ IP FND	IRON PIPE FOUND
● IR SET	IRON ROD SET
▬ RR SPK SET	RAILROAD SPIKE SET
◉ DH FND	DRILL HOLE FOUND
◘ DH SET	DRILL HOLE SET
▣ BND w/DH	BOUND WITH DRILL HOLE
▣ ST BND w/DH	STONE BOUND WITH DRILL HOLE
1 A	REFERENCE TO FIFTH AMENDMENT TO BE RECORDED (HEREWITH)
(10)	PARKING COUNT (10)

NORTH
TRUE
RCRD
C-4119

PLAN REFERENCES:

1. VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R-10, PORTSMOUTH, NEW HAMPSHIRE, DISPOSITION PLAN PARCEL 7. DATED OCT. 1973 BY ANDERSON-NIHOLS & CO., INC. RCRD #D-4119.
2. VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R-10, PORTSMOUTH, NEW HAMPSHIRE, DISPOSITION PLAN PARCEL 10. DATED OCT. 1973 BY ANDERSON-NIHOLS & CO., INC. RCRD #D-4125.
3. VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R-10, PORTSMOUTH, NEW HAMPSHIRE, DISPOSITION MAP. DATED NOV. 1969 BY ANDERSON-NIHOLS & CO., INC. RCRD #D-2408.
4. EASEMENT SITE PLAN, TAX MAP 125 – LOT 2, 30 MAPLEWOOD, LLC TO PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE (PSNH), SCALE: 1" = 20', OCTOBER 2013 BY AMBIT ENGINEERING. RCRD D-38148.
5. PROPOSED EASEMENT TO CITY OF PORTSMOUTH, SCALE: 1" = 10', 9/18/13 BY AMBIT ENGINEERING. BK 5512, PG 1046.
6. CONDOMINIUM SITE PLAN, TAX MAP 125 – LOT 2, BY AMBIT ENGINEERING. RCRD D-38936; AMENDED AT RCRD D-39005.
7. SUBDIVISION PLAN, TAX MAP 125 – LOT 2, OWNER: 30 MAPLEWOOD, LLC, 30-46 MAPLEWOOD AVENUE, CITY OF PORTSMOUTH, STATE OF NEW HAMPSHIRE, DATED OCTOBER 2015. RCRD PLAN D-40246.
8. SITE PLAN, TAX MAP 125 LOT 2, 30 MAPLEWOOD AVENUE, CITY OF PORTSMOUTH, COUNTY OF ROCKINGHAM, STATE OF NEW HAMPSHIRE, DATED AUGUST 2015. RCRD PLAN D-39173.

ABUTTERS LIST:

125/1 — N/F PARADE OFFICE c/o CATHARTES PRIVATE INVESTMENTS, 262 WASHINGTON STREET, SUITE 302, BOSTON, MA 02108, 3756 / 2701

125/3 — N/F EMERSON HOVEY POST 168 VFW, 238 DEER STREET, PORTSMOUTH, N.H. 03801

125/4 — N/F SHIANG TA CHEN & JUNE LI, 60 NORTON ROAD, QUINCY, MA 02169, 3280 / 0645

125/5 — N/F CINDY LEE CARROLL, 391 MILLER AVENUE, PORTSMOUTH, N.H. 03801, 3103 / 0287

125/6 — N/F G AND N REALTY, LLC, 30074 VILLAGE PARK DRIVE, CHAPEL HILL, NC 27517, 3957 / 2586

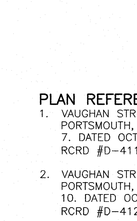
125/16 — N/F JOHN GRAY REVOC. TRUST, BRADFORD A GRAY REVOC. TRUST, 7 PATRIOTS WAY, RYE, N.H. 03870, 3895 / 0643

125/17 — N/F DEER STREET ASSOCIATES, P. O. BOX 100, YORK HARBOR, ME 03911

126/2 — N/F SHAINES AND McEACHERN CO (PORTSMOUTH) LLC, 282 CORPORATE DRIVE, PORTSMOUTH, N.H. 03801, 4496 / 0556

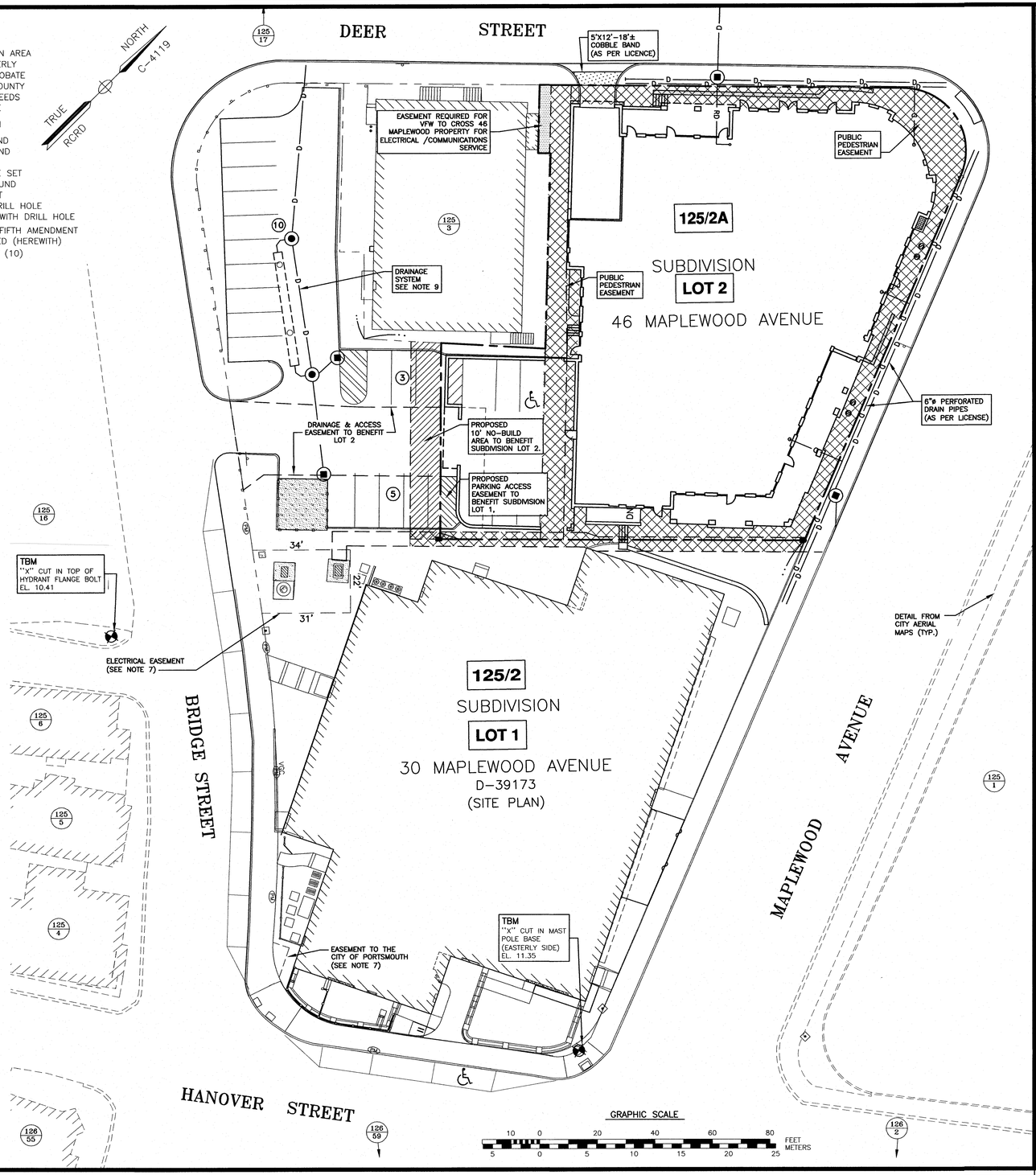
126/55 — N/F STEPHEN & CHRISTINE MAYEUX, 64 BRIDGE STREET, PORTSMOUTH, N.H. 03801, 2869 / 0647

126/59 — N/F CITY OF PORTSMOUTH, P. O. BOX 628, PORTSMOUTH, N.H. 03802, 2166 / 0388, #D-4125



APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road – Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) PARCELS ARE SHOWN ON THE CITY OF PORTSMOUTH ASSESSORS MAP 125 AS LOTS 2 & 2A.

2) OWNERS OF RECORD:
125/2:
30 MAPLEWOOD, AVENUE CONDOMINIUM ASSOCIATION
36 MAPLEWOOD AVENUE
PORTSMOUTH, N.H. 03801
5099/2424
PLAN D-38936
DECLARATION: BK 5636, BK 1930
FIRST AMENDMENT: BK 5647, PG 1038
SECOND AMENDMENT: BK 5688, PG 2226
THIRD AMENDMENT: BK 5783 PG 2443
FOURTH AMENDMENT: BK 5807, PG 2635
FIFTH AMENDMENT: BK 5835/ PG 1026
125/2A
30 MAPLEWOOD LLC
36 MAPLEWOOD AVENUE
PORTSMOUTH, N.H. 03801
5835/1026

3) PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E, MAY 17, 2005.

4) EXISTING LOT AREAS:

LOT 1	LOT 2
34,887 S.F.	21,798 S.F.
0.8009 AC.	0.5004 AC.

5) PARCELS ARE CURRENTLY LOCATED IN THE CHARACTER DISTRICT 4-L, HISTORIC DISTRICT, AND DOWNTOWN OVERLAY DISTRICT.

6) THE PURPOSE OF THIS PLAN IS TO SHOW THE LOCATION OF PROPOSED EASEMENTS AND LICENSES.

7) PARCELS ARE SUBJECT TO:
AN EASEMENT TO EVERSOURCE (PUBLIC SERVICE COMPANY OF N.H.) RECORDED AT RCRD 5516/946 (SEE D-38148)

AN EASEMENT TO THE CITY OF PORTSMOUTH AT RCRD 5512/1047. NOTE: INFRASTRUCTURE RELOCATED TO EVERSOURCE EASEMENT AREA.

8) LOT 2A HAS A DEEDED RIGHT TO USE THE DUMPSTER ON LOT 2. SEE RCRD 5835/1026

9) PER MUTUAL EASEMENT DEED BETWEEN LOT 1 AND LOT 2 THE CONSTRUCTION AND MAINTENANCE OF THIS DRAINAGE SYSTEM WILL BE THE RESPONSIBILITY OF 46 MAPLEWOOD AVENUE CONDOMINIUM ASSOCIATION.

10) EXCESS SNOW SHALL BE REMOVED FROM THE SITE AND DISPOSED OF OFF SITE. SNOW SHALL NOT BE DISPOSED OF OR STORED ON CITY PROPERTY.

NO.	DESCRIPTION	DATE
3	DRAIN PIPES IN R-O-W	3/6/18
2	SNOW REMOVAL NOTE, VFM EASEMENT	2/6/18
1	ADDED HATCHING	1/12/18
0	ISSUED FOR COMMENT	12/19/17

REVISIONS

EASEMENT AND LICENSE PLAN TAX MAP 125-LOTS 2 & 2A (SUBDIVISION LOTS 1 & 2)

OWNER:

30 MAPLEWOOD, LLC

30-64 MAPLEWOOD AVENUE
CITY OF PORTSMOUTH
COUNTY OF ROCKINGHAM
STATE OF NEW HAMPSHIRE

SCALE: 1" = 20' DECEMBER 2017

FB 220, PG 8 1808

LENGTH TABLE

LINE	BEARING	DISTANCE
L1	S46°31'15"W	4.30'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	22.00'	43.23'	36.60'	S78°04'35"E	112°35'04"

PLAN REFERENCES:

1) VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R–10, PORTSMOUTH, NEW HAMPSHIRE, DISPOSITION PLAN PARCEL 7. DATED OCT. 1973 BY ANDERSON–NIHOLS & CO., INC. RCRD #D–4119.

2) VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R–10, PORTSMOUTH, NEW HAMPSHIRE, DISPOSITION PLAN PARCEL 10. DATED OCT. 1973 BY ANDERSON–NIHOLS & CO., INC. RCRD #D–4125.

3) VAUGHAN STREET URBAN RENEWAL PROJECT N.H. R–10, PORTSMOUTH, NEW HAMPSHIRE, DISPOSITION MAP. DATED NOV. 1969 BY ANDERSON–NIHOLS & CO., INC. RCRD #D–2408.

4) SUBDIVISION PLAN, 30 MAPLEWOOD LLC, 1"=20', OCTOBER 2015 RCRD #D–40246

LEGEND:

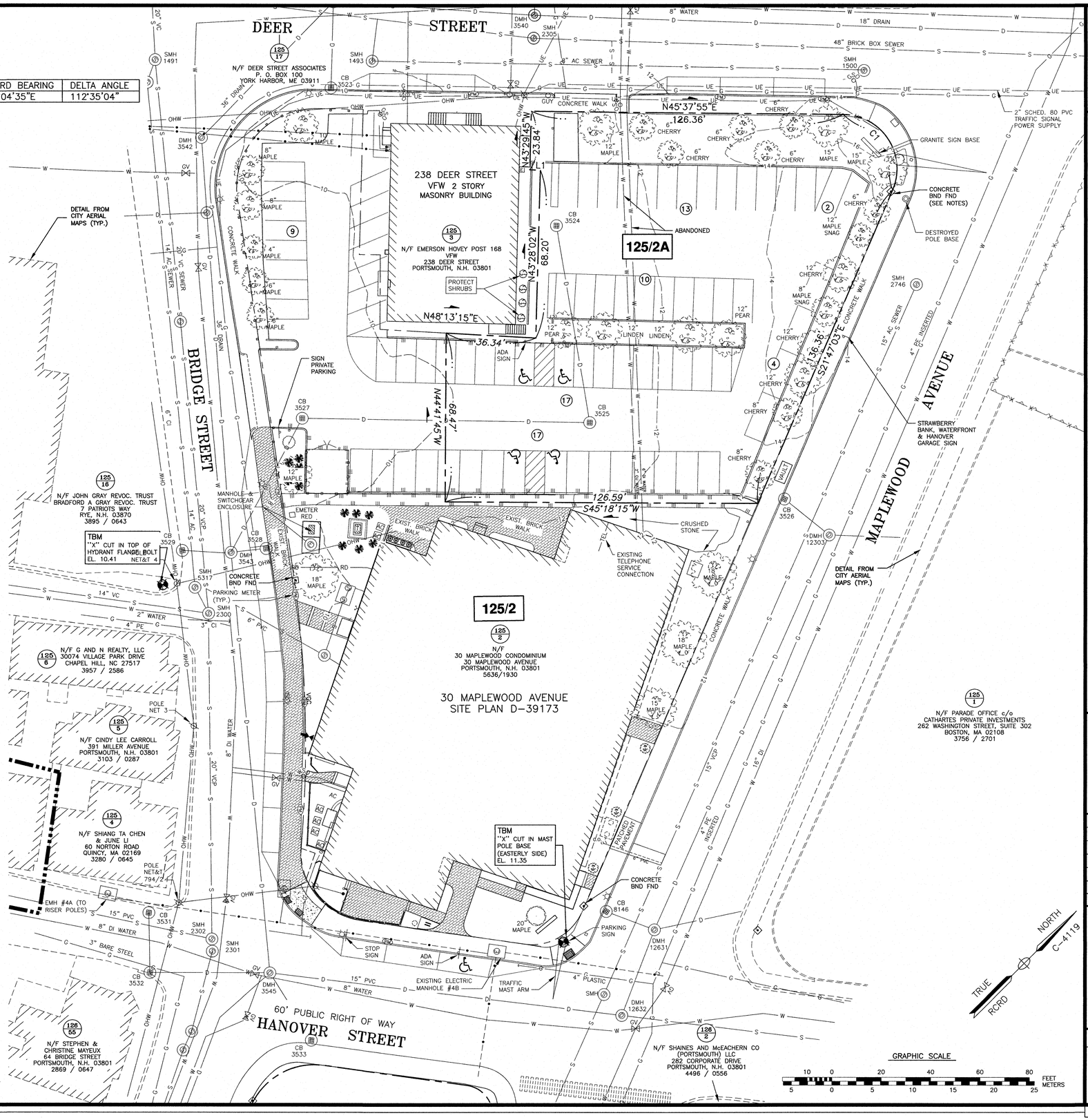
N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
RR SPK	RAILROAD SPIKE
11/21	MAP 11/LOT 21
○ IR FND	IRON ROD FOUND
○ IP FND	IRON PIPE FOUND
● IR SET	IRON ROD SET
⊙	CONCRETE BOUND FOUND

DRAIN STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INV. ELEV. IN / INV. ELEV. OUT	PIPE SIZE & TYPE
CB 3522	10.09	–	–
		7.48±	12" RCP (NE)
CB 3523	9.49	–	–
		6.29	12" (NW)
DMH 3540	10.78	NA	18" RCP (NE) 36" (SW)
		1.53	48" RCP (NW)
DMH 3541	10.23	7.48± 7.48± 2.07	12" RCP (SW) 12" RCP (SE) 36" (S)
		1.93	36"
DMH 3542	9.41	2.58	36"
		2.18	36"

SEWER STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INV. ELEV. IN / INV. ELEV. OUT	PIPE SIZE & TYPE
1491	10.10	0.60 0.50	21" VC (SE) 14" VC (S)
		0.51	21" VC (NE)
1492	11.17	3.52 ?	6" PVC 21" VC
		–1.33	48" BOX SEWER
1493	10.04	2.49	6" VC (NE)
		2.39	6" VC (NW)
1499	15.77	–1.89	48" BOX SEWER
		–1.89	48" BOX SEWER
1500	14.14	–	–
		7.31	6" VC (SW)
2305	10.87	–1.20	48" VC
5317	8.24	1.29	14" AC (ESE)
		1.18	14" AC (NW)
5318	9.85	0.60	21" VC (SE)
		0.40	21" VC (NW)



APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801–7114
Tel (603) 430–9282
Fax (603) 436–2315

NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 125 AS LOT 2A.
2. OWNER OF RECORD:
   30 MAPLEWOOD, LLC
   30 MAPLEWOOD AVENUE
   PORTSMOUTH, N.H. 03801
   5099 / 2424
   PLAN C–4119
3. PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259E. MAY 17, 2005.

EXISTING LOT AREA:
21,798 S.F.
0.5004 ACRES

4. PARCEL IS LOCATED IN CHARACTER DISTRICT 4–L (CD–4L), HISTORIC DISTRICT A, AND DOWNTOWN OVERLAY DISTRICT.
5. DIMENSIONAL REQUIREMENTS: (VESTED TO OLD ZONING – CBB)

MIN. LOT AREA:		2,000 S.F.
FRONTAGE:		NOT APPLICABLE
SETBACKS:	FRONT	0 FEET
	SIDE	0 FEET
	REAR	0 FEET
MAXIMUM STRUCTURE HEIGHT:		60 FEET
MAXIMUM BUILDING COVERAGE:		95%
MINIMUM OPEN SPACE:		0%

6. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS AT THE SITE.
7. WORK ON PHASE I IS ONGOING. PLAN MAY SHOW SOME APPROVED, BUT NOT YET CONSTRUCTED ELEMENTS.
8. DATUM: NGVD 1988 (NAD)
   MEAN SEA LEVEL
   BENCHMARK: "X" CUT IN EASTERLY SIDE OF SIGNAL MAST BASE AT NORTHWEST CORNER OF MAPLEWOOD AVENUE AND HANOVER STREET. ELEV. 11.56
9. SEE PLAN REFERENCE 2 FOR INFORMATION REGARDING RELATION OF CONCRETE BOUNDS TO PROPERTY CORNERS. CONTRACTOR RESPONSIBLE TO MAINTAIN PROPERTY CORNER AND/OR HIRE A LICENSED LAND SURVEYOR TO REPLACE PROPERTY MARKERS ON NEW SURFACES AT THE COMPLETION OF CONSTRUCTION.

TAX MAP 125 LOT 2A
46–64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
	REVISIONS	
3	UNDERGROUND ELECTRIC RELOCATION	2/6/18
2	NOTE 9	1/12/18
1	REVISED UTILITIES AND PAVEMENT TYPES	10/17/17
0	ISSUED FOR COMMENT	6/19/17

SCALE: 1" = 20' JUNE 2017

EXISTING CONDITIONS PLAN

C1

FB 220 PG 8

1808

J:\JOBS\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808MD46.dwg, C1_EXIST_COND

DEMOLITION NOTES

a) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE DESIGNER. IT IS THE CONTRACTORS' RESPONSIBILITY TO LOCATE UTILITIES AND ANTICIPATE CONFLICTS. CONTRACTOR SHALL REPAIR EXISTING UTILITIES DAMAGED BY THEIR WORK AND RELOCATE EXISTING UTILITIES THAT ARE REQUIRED TO BE RELOCATED PRIOR TO COMMENCING ANY WORK IN THE IMPACTED AREA OF THE PROJECT.

b) ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTORS UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL, OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.

c) ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO THE ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

d) THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.

e) SAWCUT AND REMOVE PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.

f) IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL THE PERMIT APPROVALS.

g) THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL CONSTRUCTION PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR ANY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK.

h) THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE, UTILITIES, VEGETATION, PAVEMENT, AND CONTAMINATED SOIL WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ANY EXISTING DOMESTIC / IRRIGATION SERVICE WELLS IN THE PROJECT AREA IDENTIFIED DURING THE CONSTRUCTION AND NOT CALLED OUT ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER FOR PROPER CAPPING / RE-USE. ANY EXISTING MONITORING WELLS IN THE PROJECT AREA IDENTIFIED DURING THE CONSTRUCTION AND NOT CALLED OUT ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER TO COORDINATE MONITORING WELL REMOVAL AND/OR RELOCATION WITH NHDES AND OTHER AUTHORITY WITH JURISDICTION PRIOR TO CONSTRUCTION.

i) ALL WORK WITHIN THE CITY OF PORTSMOUTH RIGHT OF WAY SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS (DPW).

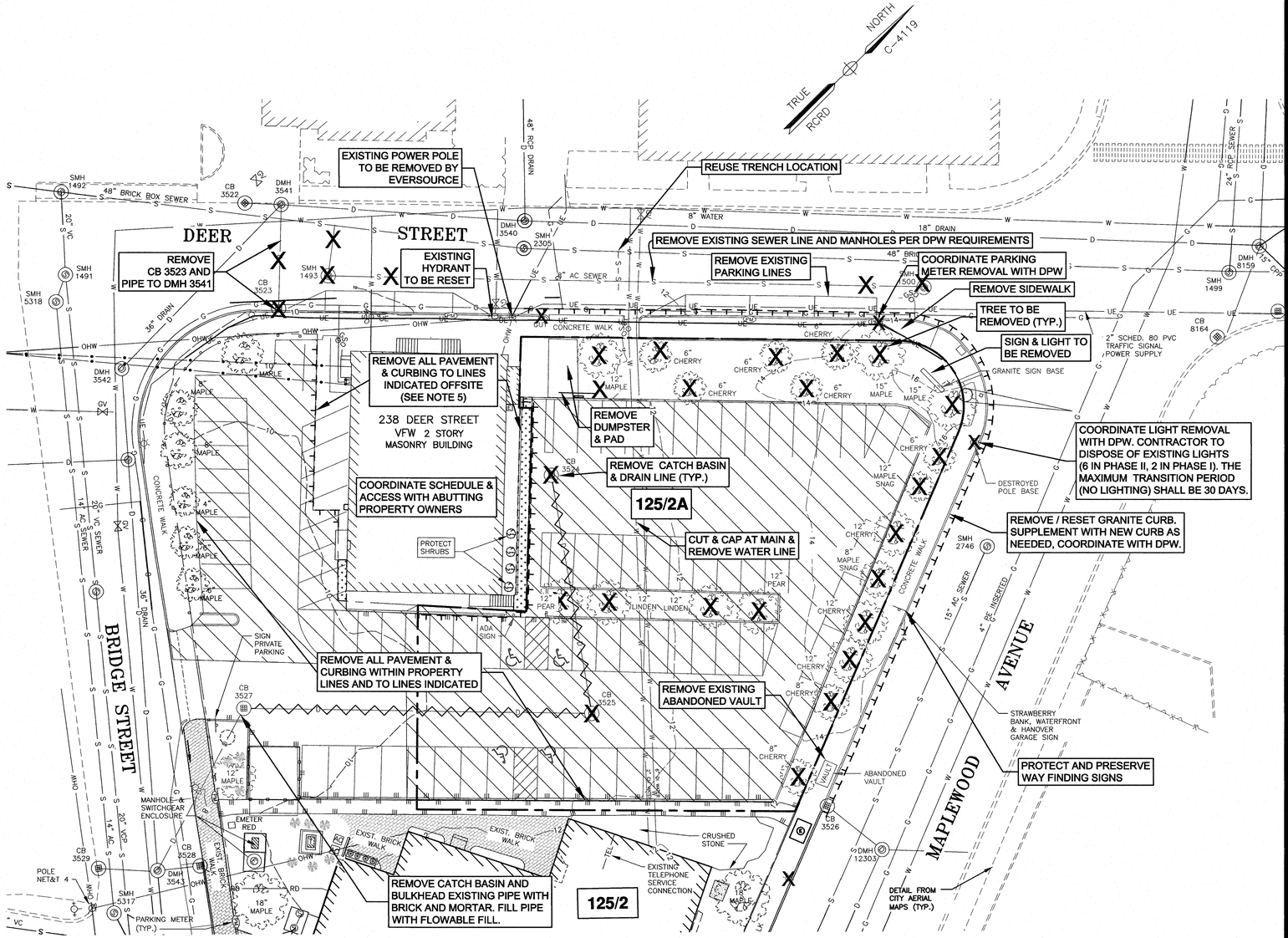
j) REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL SLUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.

k) CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED, THE CONTRACTOR SHALL EMPLOY A NH LICENSED LAND SURVEYOR TO REPLACE THEM.

l) PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS WITHIN CONSTRUCTION LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE HIGH FLOW SILT SACK BY ACF ENVIRONMENTAL OR APPROVED EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF WARRANTED OR FABRIC BECOMES CLOGGED. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.

m) THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFELY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.

n) ANY CONTAMINATED MATERIAL REMOVED DURING THE COURSE OF THE WORK WILL REQUIRE HANDLING IN ACCORDANCE WITH NHDES REGULATIONS. CONTRACTOR SHALL HAVE A HEALTH AND SAFETY PLAN IN PLACE, AND COMPLY WITH ALL APPLICABLE PERMITS, APPROVALS, AUTHORIZATIONS, AND REGULATIONS



APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

GRAPHIC SCALE

10 0 20 40 60 80 FEET

5 0 5 10 15 20 25 METERS

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors

200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

4) MAINTAIN ACCESS TO VFW EXIT DOORS DURING CONSTRUCTION.

5) OFFSITE PAVEMENT REMOVAL REQUIRES APPROVAL OF ADJACENT PROPERTY OWNER. IF APPROVAL IS NOT OBTAINED THEN LEAVE IN PLACE. COORDINATE WITH OWNER.

6) CHANGES IN THE LOCATION OF STREET LIGHT POLES SHALL BE COORDINATED WITH THE CITY'S WAYFINDING PROGRAM SO THAT THE WAYFINDING SIGNS ARE MAINTAINED.

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
5	ABANDONED VAULT, NOTE TO REMOVE CB AND PIPE	4/10/18
4	GAS LINE REMOVAL	2/6/18
3	SEWER STUB	1/12/18
2	SEWER LINE REMOVAL, DEMOLITION NOTES	12/19/17
1	ISSUED FOR APPROVAL	10/17/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

STATE OF NEW HAMPSHIRE - JOHN R. CHAGNON No. 7851 - REGISTERED PROFESSIONAL ENGINEER

SCALE: 1" = 20' *JUNE 2017*

DEMOLITION PLAN **C2**

FB 220 PG 8 1808

J:\OBS1\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808WD46.dwg, C2_DEMOLITION

DEER STREET

BRIDGE STREET

MAPLEWOOD AVENUE

Lawn

Existing trees, to remain see tree protection notes L-3

Existing granite bollards, to be reset, typ.

EXISTING VFW BUILDING

Proposed Bike Racks (5) See L-3

Proposed Brick Paving

Ua(1)

Proposed decorative brick paving, typ.

Proposed Soldier Course Typical

Proposed Street Light Typical

Proposed Granite Retaining Wall Typical

Ls

Proposed Bike Racks (2) See L-3

Soldier course at curb

Running bond pattern

Proposed granite banding & decorative brick paving, see L-3

Basket weave pattern

Proposed 6' bench, typ.

1' wide granite band

Proposed pot w. seasonal platings, typ.

Proposed Soldier Course Typical

Proposed Street Light Typical

Proposed Granite Step 1x5'

Jc

Tax(3)

Proposed Brick Paving with flush cubing

Existing plantings, to remain

Existing dumpster enclosure, to remain

Proposed Soldier Course Typical

Gt

ImP(2)

Ca(5)

Cal(20)

Proposed Brick Paving

Existing Brick to Remain

Proposed fence, to match existing dumpster enclosure

Proposed 6' Bench typ.

ImM

HyE(2)

HyE(4)

R a m p

ImP

Gt
Tree w. tree grate & guard, typical

Ig(4)

EXISTING COVE WORKSPACE BUILDING

Proposed Soldier Course Typical

Proposed Handrail - See Architectural Drawings

R a m p

Granite curb walls & steps

H2

Pa(50)

Granite band, typ.

Fg(9)

HyA(3)

H1(3)
H2(3)

Pa(300)

NOTE: See Engineer's plan for walkway associated with #30

Am
w. granite curb

Existing tree, to remain, typ.

Remove concrete pad

Proposed Bike Racks (2) See L-3

Proposed 6' bench, typ.

Proposed pot w. seasonal platings, typ.

Ls(2)

Tree w. tree grate & guard, typ

Proposed Soldier Course Typical

Plant List

TREES

Symbol	Botanical Name	Common Name	Quantity	Size			Comments
Am	*Amelanchier x grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	1	12-14' ht			B&B Multi-Stem Specimen
Gt	*Gleditsia triacanthos inermis 'Halka'*	Halka Thornless Honeylocust	2	3-3.5" cal			B&B
Ls	*Liquidambar styraciflua 'Worplesdon'*	American Sweetgum	7	3-3.5" cal			B&B
Ua	*Ulmus americana 'Princeton'*	Princeton American Elm	1	3-3.5" cal			B&B

SHRUBS

Symbol	Botanical Name	Common Name	Quantity	Size	min height	min width	Comments
Ca	*Cornus alba 'Ivory Halo'*	Ivory Halo Dogwood	5	5 gal			
Fg	*Fothergilla gardenii*	Dwarf Fothergilla	9	5 gal	2.5'	2.5'	
HyA	*Hydrangea arborescens 'Annabelle'*	Annabelle Hydrangea	3	5 gal	2.5'	2.5'	
HyE	*Hydrangea macrophylla 'Endless Summer'*	Endless Summer Hydrangea	6	5 gal	2.5'	2.5'	
Ig	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	4	3 gal	2'	2'	
ImM	*Ilex meserve 'Blue Maid'*	Blue Maid Holly (female conical)	1	5-6' ht		2.5'	B&B
ImP	*Ilex meserve 'Blue Princess'*	Blue Princess Holly (female)	3	2-2.5' ht			B&B
Jc	*Juniperus chinensis 'Mountbatten*	Mountbatten Juniper	1	7-8' Ht			B&B
Tax	*Taxus media 'Ever-Low'*	Ever-Low Yew	3	18-24" wide	18"	18"	B&B

PERENNIALS, GROUNDCOVERS, VINES and ANNUALS

Symbol	Botanical Name	Common Name	Quantity	Size	Comments
Cal	*Calamagrostis acutifolia 'Karl Foerster'*	Feather Reed Grass	20	1 gal	
H1	*Hosta sieboldiana 'Elegans'*	Elegans Hosta	3	1 gal	
H2	*Hosta 'Frances Williams'*	Frances Williams Hosta	4	1 gal	
Pa	*Pachysandra terminalis*	Japanese Spurge	4	flat of 100	plant 8" o.c.

City of Portsmouth Landscape Notes

1. The property owner and all future property owners shall be responsible for the maintenance, repair and replacement of all required screening and landscape materials.
2. All required plant materials shall be tended and maintained in a healthy growing condition, replaced when necessary, and kept free of refuse and debris. All required fences and walls shall be maintained in good repair.
3. The property owner shall be responsible to remove and replace dead or diseased plant materials immediately with the same type, size and quantity of plant materials as originally installed, unless alternative plantings are requested, justified and approved by the Planning Board or Planning Director.

PROPOSED BUILDING

0 2 5 10 20

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

46-64 Maplewood Avenue

LANDSCAPE PLAN

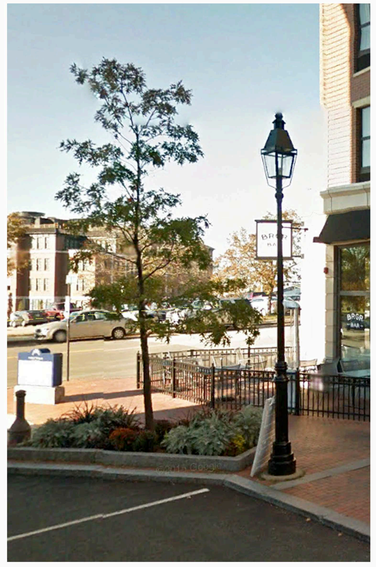
Portsmouth, New Hampshire

Drawn By:	VM
Checked By:	RW
Scale:	1" = 10' - 0"
Date:	June 19, 2017
Revisions:	July 11, 2017 October 17, 2017 December 19, 2017 January 12, 2018 February7, 2018

L-1

Sheet 1 of 3

Existing Board Fence to be repeated



Portsmouth Street Light

Bench (9) - DuMor 119, black

Trash Receptacle - DuMor 157
32 gal. with shield

Ironsmith Olympian 60” Tree Grate

Ironmith M-13 Tree Guard

Campania Sandhurst - 26”

Campania Vallarella

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

46-64 Maplewood Avenue

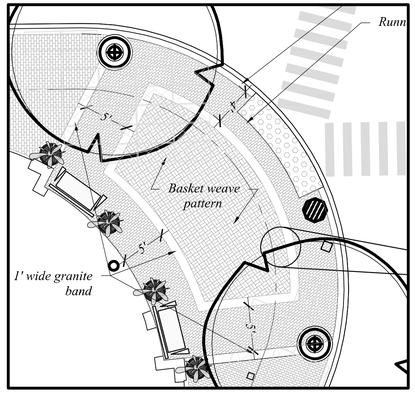
LANDSCAPE ELEMENTS

Portsmouth, New Hampshire

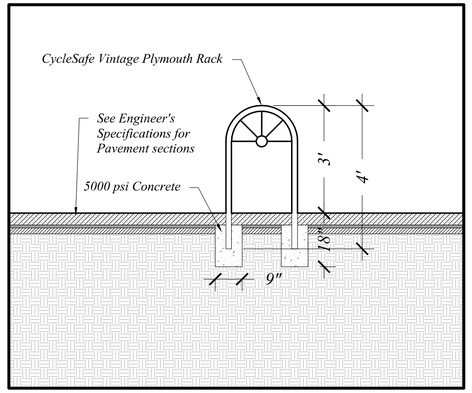
Drawn By:	VM
Checked By:	RW
Scale:	
Date:	*June 19, 2017*
Revisions:	

L-2

Sheet 2 of 3

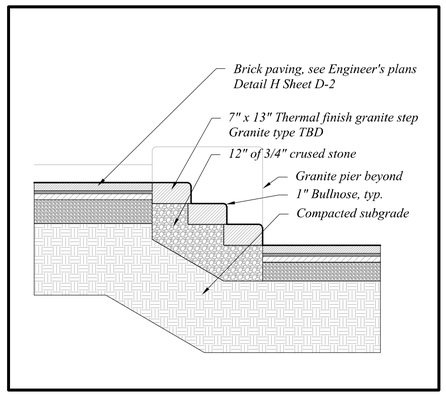


1 **ENTRY PAVING ENLARGEMENT**
Scale: 1/8"=1' - 0"



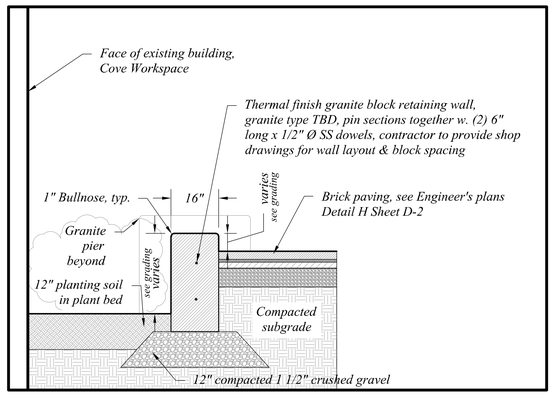
2 **BIKE RACK**
Scale: 1/2"=1' - 0"

0 1 2 4



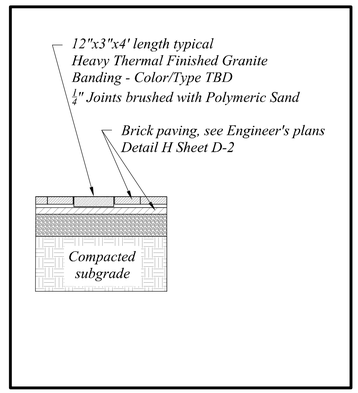
3 **GRANITE STEPS**
Scale: 1/2"=1' - 0"

0 1 2 4

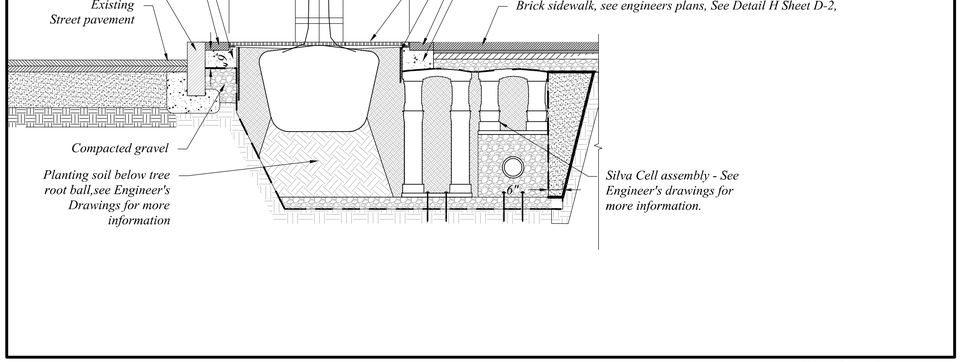


5 **RETAINING WALL AT COVE**
Scale: 1/2"=1' - 0"

0 1 2 4

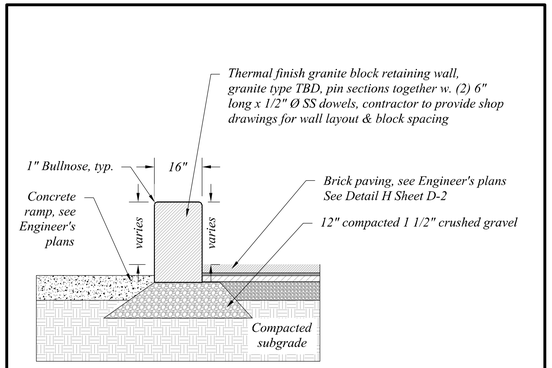


8 **GRANITE BANDING**
Scale: NTS



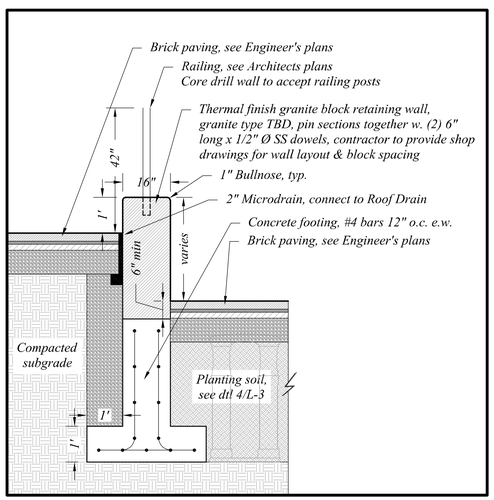
4 **PROPOSED TREE WITH TREE GRATE & GUARD & SILVA CELLS BELOW**
Scale: 1/2"=1' - 0"

0 1 2 4



6 **RETAINING WALL AT RAMP**
Scale: 1/2"=1' - 0"

0 1 2 4



7 **RETAINING WALL AT DEER STREET**
Scale: 1/2"=1' - 0"

Landscape Notes

1. Design is based on drawings by Ambit Engineering dated 1/12/2018 and may require adjustment due to actual field conditions.
2. The contractor shall follow best management practices during construction and shall take all means necessary to stabilize and protect the site from erosion.
3. Erosion Control shall be in place prior to construction.
4. The Contractor shall verify layout and grades and inform the Client's Representative of any discrepancies or changes in layout and/or grade relationships prior to construction.
5. It is the contractor's responsibility to verify drawings provided are to the correct scale prior to any bid, estimate or installation. A graphic scale bar has been provided on each sheet for this purpose. If it is determined that the scale of the drawing is incorrect, the landscape architect will provide a set of drawings at the correct scale, at the request of the contractor.
6. Trees to Remain within the construction zone shall be protected from damage for the duration of the project by snow fence or other suitable means of protection to be approved by Landscape Architect or Client's Representative. Snow fence shall be located at the drip line at a minimum and shall include any and all surface roots. Do not fill or mulch on the trunk flare. Do not disturb roots. In order to protect the integrity of the roots, branches, trunk and bark of the tree(s) no vehicles or construction equipment shall drive or park in or on the area within the drip line(s) of the tree(s). Do not store any refuse or construction materials or portalets within the tree protection area.
7. Location, support, protection, and restoration of all existing utilities and appurtenances shall be the responsibility of the Contractor.
8. The Contractor shall verify exact location and elevation of all utilities with the respective utility owners prior to construction. Call DIGSAFE at 1-888-344-7233.
9. The Contractor shall procure any required permits prior to construction.
10. Prior to any landscape construction activities Contractor shall test all existing loam and loam from off-site intended to be used for lawns and plant beds using a thorough sampling throughout the supply. Soil testing shall indicate levels of pH, nitrates, macro and micro nutrients, texture, soluble salts, and organic matter. Contractor shall provide Landscape Architect with test results and recommendations from the testing facility along with soil amendment plans as necessary for the proposed plantings to thrive. All loam to be used on site shall be amended as approved by the Landscape Architect prior to placement.
11. Contractor shall notify landscape architect or owner's representative immediately if at any point during demolition or construction a site condition is discovered which may negatively impact the completed project. This includes, but is not limited to, unforeseen drainage problems, unknown subsurface conditions, and discrepancies between the plan and the site. If a contractor is aware of a potential issue, and does not bring it to the attention of the landscape architect or owner's representative immediately, they may be responsible for the labor and materials associated with correcting the problem.
12. The Contractor shall furnish and plant all plants shown on the drawings and listed thereon. All plants shall be nursery-grown under climatic conditions similar to those in the locality of the project. Plants shall conform to the botanical names and standards of size, culture, and quality for the highest grades and standards as adopted by the American Association of Nurserymen, Inc. in the American Standard of Nursery Stock, American Standards Institute, Inc. 230 Southern Building, Washington, D.C. 20005.
13. A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the drawings. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.
14. All plants shall be legibly tagged with proper botanical name.
15. The Contractor shall guarantee all plants for not less than one year from time of acceptance.
16. Owner or Owner's Representative will inspect plants upon delivery for conformity to Specification requirements. Such approval shall not affect the right of inspection and rejection during or after the progress of the work. The Owner reserves the right to inspect and/or select all trees at the place of growth and reserves the right to approve a representative sample of each type of shrub, herbaceous perennial, annual, and ground cover at the place of growth. Such sample will serve as a minimum standard for all plants of the same species used in this work.
17. No substitutions of plants may be made without prior approval of the Owner or the Owner's Representative for any reason.
18. All landscaping shall be provided with either of the following
    a. An underground sprinkling system
    b. An outside hose attachment within 150 feet
19. Contractor shall provide an alternate price for irrigating all newly landscaped areas. Contractor shall provide irrigation design for review by Landscape Architect or Owner's Representative when awarded the project.
20. All disturbed areas will be dressed with 6" of topsoil and planted as noted on the plans or seeded except plant beds. Plant beds shall be prepared to a depth of 12" with 75% loam and 25% compost.
21. Trees, ground cover, and shrub beds shall be mulched to a depth of 2" with one-year-old, well-composted, shredded native bark not longer than 4" in length and ½" in width, free of woodchips and sawdust. Mulch for ferns and herbaceous perennials shall be no longer than 1" in length. Trees in lawn areas shall be mulched in a 5' diameter min. saucer. Color of mulch shall be black.
22. In no case shall mulch touch the stem of a plant nor shall mulch ever be more than 3" thick total (including previously applied mulch) over the root ball of any plant.
23. Secondary lateral branches of deciduous trees overhanging vehicular and pedestrian travel ways shall be pruned up to a height of 6' to allow clear and safe passage of vehicles and pedestrians under tree canopy.
24. Landscape Architect is not responsible for the means and methods of the contractor.

woodburn & company
LANDSCAPE ARCHITECTURE
103 Kent Place Newmarket, New Hampshire Phone: 603.659.5949

46-64 Maplewood Avenue

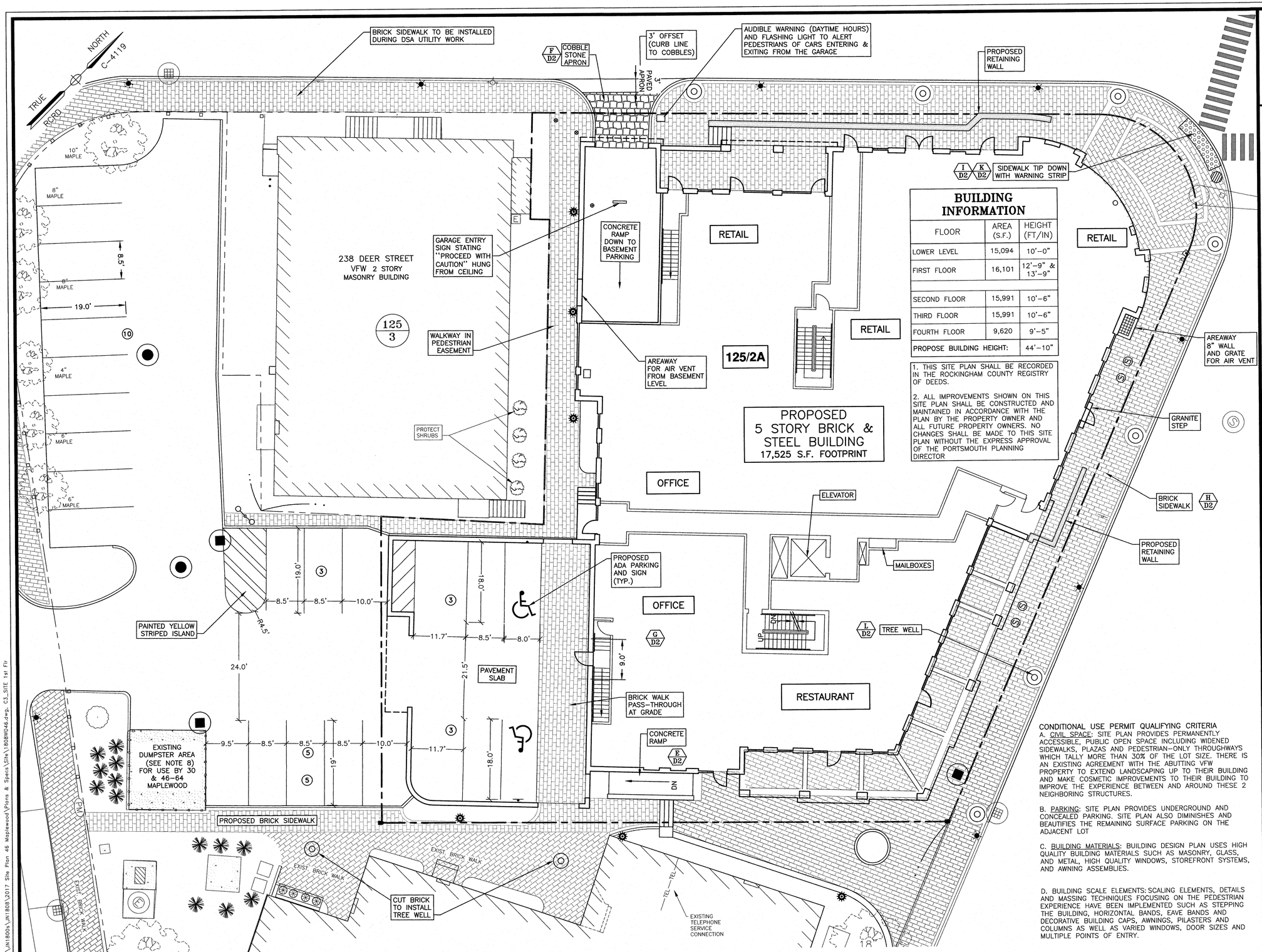
LANDSCAPE DETAILS

Portsmouth, New Hampshire

Drawn By:	VM
Checked By:	RW
Scale:	as noted
Date:	June 19, 2017
Revisions:	October 17, 2017 December 19, 2017 January 15, 2018 February 7, 2018 March 6, 2018

L-3

Sheet 3 of 3



BUILDING INFORMATION

FLOOR	AREA (S.F.)	HEIGHT (FT/IN)
LOWER LEVEL	15,094	10'–0"
FIRST FLOOR	16,101	12'–9" & 13'–9"
SECOND FLOOR	15,991	10'–6"
THIRD FLOOR	15,991	10'–6"
FOURTH FLOOR	9,620	9'–5"
PROPOSE BUILDING HEIGHT:		44'–10"

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.

2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR

CONDITIONAL USE PERMIT QUALIFYING CRITERIA

A. CIVIL SPACE: SITE PLAN PROVIDES PERMANENTLY ACCESSIBLE, PUBLIC OPEN SPACE INCLUDING WIDENED SIDEWALKS, PLAZAS AND PEDESTRIAN–ONLY THROUGHWAYS WHICH TALLY MORE THAN 30% OF THE LOT SIZE. THERE IS AN EXISTING AGREEMENT WITH THE ABUTTING VFW PROPERTY TO EXTEND LANDSCAPING UP TO THEIR BUILDING AND MAKE COSMETIC IMPROVEMENTS TO THEIR BUILDING TO IMPROVE THE EXPERIENCE BETWEEN AND AROUND THESE 2 NEIGHBORING STRUCTURES.

B. PARKING: SITE PLAN PROVIDES UNDERGROUND AND CONCEALED PARKING. SITE PLAN ALSO DIMINISHES AND BEAUTIFIES THE REMAINING SURFACE PARKING ON THE ADJACENT LOT

C. BUILDING MATERIALS: BUILDING DESIGN PLAN USES HIGH QUALITY BUILDING MATERIALS SUCH AS MASONRY, GLASS, AND METAL, HIGH QUALITY WINDOWS, STOREFRONT SYSTEMS, AND AWNING ASSEMBLIES.

D. BUILDING SCALE ELEMENTS: SCALING ELEMENTS, DETAILS AND MASSING TECHNIQUES FOCUSING ON THE PEDESTRIAN EXPERIENCE HAVE BEEN IMPLEMENTED SUCH AS STEPPING THE BUILDING, HORIZONTAL BANDS, EAVE BANDS AND DECORATIVE BUILDING CAPS, AWNINGS, PILASTERS AND COLUMNS AS WELL AS VARIED WINDOWS, DOOR SIZES AND MULTIPLE POINTS OF ENTRY.

GRAPHIC SCALE

10 5 0 10 20 30 40 FEET

3 0 5 10 METERS

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801–7114
Tel (603) 430–9282
Fax (603) 436–2315

NOTES:

1. PROPOSED BUILDING USES:

   BASEMENT:
   PARKING, MERCHANTILE, STORAGE, UTILITIES, CIRCULATION
   1st FLOOR:
   PARKING, RETAIL, OFFICE, RESTAURANT
   2nd to PENTHOUSE FLOOR: RESIDENTIAL & OFFICE
   22 RESIDENTIAL UNITS AND 1 OFFICE SPACE

   PARKING CALCULATIONS

   REQUIRED PARKING:
   22 RESIDENTIAL UNITS x 1.5 SPACE/UNIT = 33 SPACES
   33 – 4 (ORDINANCE REDUCTION) = 29 SPACES REQUIRED
   SPACES PROVIDED: 36 SPACES (SEE ALSO SHEET C4)

2. EXISTING LOT AREA: 21,798 S.F.
   PROPOSED BUILDING: 17,525 S.F.
   TOTAL BUILDING COVERAGE: 17,525/21,798 x 100% = 79%
   OPEN SPACE:
   (21,798 – 17,525 S.F.)/21,798 S.F. X 100 = 20%

3. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS. STATEMENT REQUIRED PER SECTION 2.13.3 OF THE SITE PLAN REGULATIONS SHALL BE INCLUDED ON THE SITE PLAN TO BE RECORDED.

4. IF BLASTING IS REQUIRED, A BLASTING PLAN WILL BE SUBMITTED TO THE CITY OF PORTSMOUTH FOR REVIEW AND APPROVAL (PRIOR TO ANY BLASTING).

5. EXTERIOR LIGHTING SHALL CONFORM TO THE STANDARDS IN SEC. 10.1140 OF THE CITY OF PORTSMOUTH ZONING ORDINANCE AND ARTICLE 10 OF THE SITE PLAN REVIEW REGULATIONS, INCLUDING PREVENTION OF LIGHT TRESPASS AND GLARE.

6. A CONSTRUCTION MANAGEMENT MITIGATION PLAN (CMMP) SHALL BE PREPARED FOR REVIEW AND APPROVAL BY THE CITY ATTORNEY AND PLANNING DEPARTMENT PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE PLAN SHALL INCLUDE AN ACTION PLAN FOR THE DISPOSAL OF ANY CONTAMINATED MATERIALS ENCOUNTERED DURING CONSTRUCTION.

7) EXCESS SNOW SHALL BE REMOVED FROM THE SITE AND DISPOSED OF OFF SITE. SNOW SHALL NOT BE DISPOSED OF OR STORED ON CITY PROPERTY.

8) 46–64 MAPLEWOOD TRASH DISPOSAL IS AT 30 MAPLEWOOD DUMPSTER, WITH PERMISSION. SEE RCRD 5807/2635.

9) SITE IS VESTED TO DECEMBER 2013 ZONING.

TAX MAP 125 LOT 2A
46–64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
	REVISIONS	
4	NOTE 7, ADDED BRICK SIDEWALK	2/6/18
3	INTERIOR LAYOUT, NOTES 3 & 7, CU CRITERIA	1/12/18
2	INTERIOR LAYOUT, TABLE	12/19/17
1	REVISED INTERIOR	10/17/17
0	ISSUED FOR COMMENT	6/19/17

JOHN R. CHAGNON NO. 10351 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE

SCALE: 1" = 10' JUNE 2017

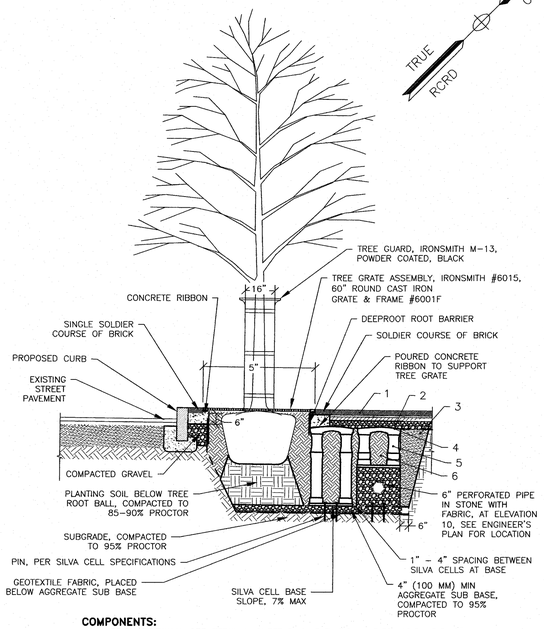
SITE PLAN FIRST FLOOR LEVEL

C3

FB 220 PG 8

1808

J:\JOBS1\JN1800s\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808W046.dwg, C3_SITE 1st Flr



COMPONENTS:

1. BRICK SIDEWALK, SEE DETAIL H SHEET D-2, ELEVATION VARIES, 12.5-15.5, 2" BITUMINOUS LAYER SHALL BE PLACED WITH MINIMAL WEIGHT CAPACITY EQUIPMENT (HAND VIBRATION) TO AVOID DAMAGE TO SILVA CELLS
2. 12" AGGREGATE (MIN.) SEE ENGINEER'S DRAWINGS
3. BACKFILL, TO WITHIN 4-6" BELOW TOP OF SILVA CELL DECKS, INSTALL IN 8" LIFTS PROCTOR EACH COMPACTED TO 95%
4. GEOTEXTILE FABRIC TO EDGE OF EXCAVATION
5. 3X SILVA CELL, SEE SHEET C4 FOR QUANTITY AND LAYOUT, TOP @ EL 11-14, BOTTOM @ EL 7.42-10.42, SYSTEM TO BE INSTALLED LEVEL, 1X CELL OVER PIPES
6. PLANTING SOIL, COMPACTED TO 70-80% PROCTOR.

NOTES ON SILVA CELLS:

1. SILVA CELL INSTALLATION SHALL BE COORDINATED WITH DEEPROOT GREEN INFRASTRUCTURE, LLC (AL KEY 212-353-8788) WOODBURN & COMPANY (ROBBI WOODBURN 603-659-5949) AND AMBIT ENGINEERING (JOHN CHAGNON 603-430-9282). ON SITE PRE-CONSTRUCTION MEETING TO BE ARRANGED BY CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION ON SYSTEM.
2. SILVA CELLS SHALL BE INSTALLED PRIOR TO CURB PLACEMENT.
3. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR SILVA CELL INSTALLATION.
4. PLANTING SOIL TO BE AS SPECIFIED BY MANUFACTURER.

A / C4 SILVA CELL DETAIL

NTS

MAP 123 LOT 2

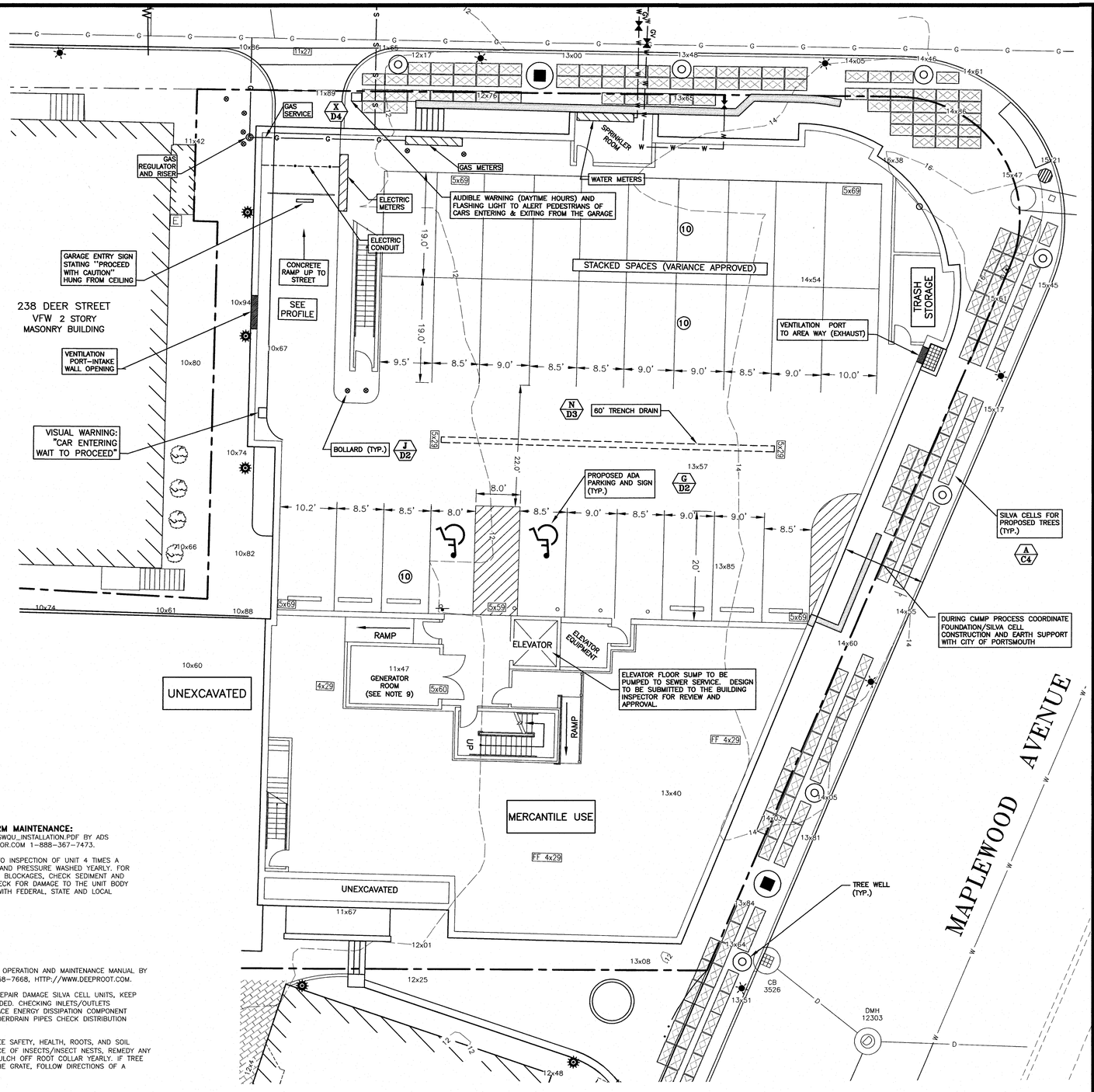
HANCOR WATER QUALITY UNIT LONG TERM MAINTENANCE:

1. FOR LONG TERM MAINTENANCE SEE 2.01H_SWQU_INSTALLATION.PDF BY ADS OCTOBER 2008, DOWNLOADED AT WWW.HANCOR.COM 1-888-367-7473.
2. MAINTENANCE INCLUDES BUT NOT LIMITED TO INSPECTION OF UNIT 4 TIMES A YEAR AND AFTER STORM EVENTS, CLEANED AND PRESSURE WASHED YEARLY. FOR COMPONENTS SUCH AS RISERS, CHECK FOR BLOCKAGES, CHECK SEDIMENT AND OIL BUILD UP, PUMP OUT ANY EXCESS, CHECK FOR DAMAGE TO THE UNIT BODY YEARLY. DISPOSAL COLLECTED TO COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS.

MAP 123 LOT 2A

SILVA CELL LONG TERM MAINTENANCE:

1. FOR LONG TERM MAINTENANCE SEE SILVA CELL OPERATION AND MAINTENANCE MANUAL BY DEEPROOT GREEN INFRASTRUCTURE, LLC, (800) 458-7668, HTTP://WWW.DEEPROOT.COM.
2. MAINTENANCE INCLUDES BUT NOT LIMITED TO REPAIR DAMAGE SILVA CELL UNITS, KEEP TREE WELL CLEAR OF TRASH AND DEBRIS AS NEEDED. CHECKING INLETS/OUTLETS STRUCTURES FOR BLOCKAGES, RESTORE OR REPLACE ENERGY DISSIPATION COMPONENT YEARLY, FLOW RESTRICTOR, DISTRIBUTION AND UNDERDRAIN PIPES CHECK DISTRIBUTION YEARLY.
3. FOR THE TREE, IN THE SILVA CELL, CHECK TREE SAFETY, HEALTH, ROOTS, AND SOIL REMOVE BROKEN BRANCHES, CHECK FOR PRESENCE OF INSECTS/INSECT NESTS, REMEDY ANY DAMAGE TO TREE AS NEEDED. CLEAN SOIL AND MULCH OFF ROOT COLLAR YEARLY. IF TREE DIES, REMOVE COMPONENTS WITHOUT DAMAGING THE GRATE, FOLLOW DIRECTIONS OF A ARBORIST.



GRAPHIC SCALE

10 5 0 10 20 30 40 FEET

3 0 5 10 METERS

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

4) PRIOR TO CONSTRUCTION, A CONSTRUCTION SITE DEWATERING PLAN WILL BE SUBMITTED TO THE CITY PUBLIC WORKS DEPARTMENT FOR REVIEW AND APPROVAL.
SAID PLAN TO OUTLINE METHODS TO PROPERTY DEAL WITH ANY GROUNDWATER ENCOUNTERED OR EXPECTED TO BE ENCOUNTERED DURING CONSTRUCTION.

5) GARAGE EGRESS TO BE COMPLIANT WITH CURRENT IBC. FINAL DESIGN APPROVAL BY THE PORTSMOUTH BUILDING INSPECTOR IS REQUIRED.

6) VENTILATION DESIGN TO BE COMPLIANT WITH CURRENT IBC; SEE PRELIMINARY VENT LOCATIONS. FINAL APPROVAL BY THE PORTSMOUTH BUILDING INSPECTOR IS REQUIRED.

7) CHAPTER 7 PROTECTED OPENINGS EXHIBIT SUBMITTED FOR REVIEW – ALSO SEE EASEMENT PLAN. FINAL APPROVAL REQUIRED BEFORE BUILDING PERMIT.

8) STREET FEATURES SHOWN FOR REFERENCE ONLY – SEE SHEET C3 FOR DETAIL.

9) GENERATOR INTAKE AIR AND EXHAUST TO BE DESIGNED BY QUALIFIED HVAC ENGINEERING PRIOR TO BUILDING PERMIT. FINAL APPROVAL REQUIRED.

10) VARIANCE FOR STACKED PARKING GRANTED BY THE PORTSMOUTH ZBA ON JUNE 27. 2017.

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
6	MISCELLANEOUS NOTES	4/10/18
5	DRAINAGE LAYOUT, DETAIL A	3/6/18
4	WATER AND GAS METERS RELOCATED, SUMP, STORAGE	2/6/18
3	REVISED INTERIOR, NOTE 4 & 10	1/12/18
2	REVISED INTERIOR, ADDED VENTILATION	12/19/17
1	REVISED INTERIOR	10/17/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 9851 LICENSED PROFESSIONAL ENGINEER

STATE OF NEW HAMPSHIRE No. 738 JOHN R. CHAGNON LAND SURVEYOR

SCALE: 1" = 10' JUNE 2017

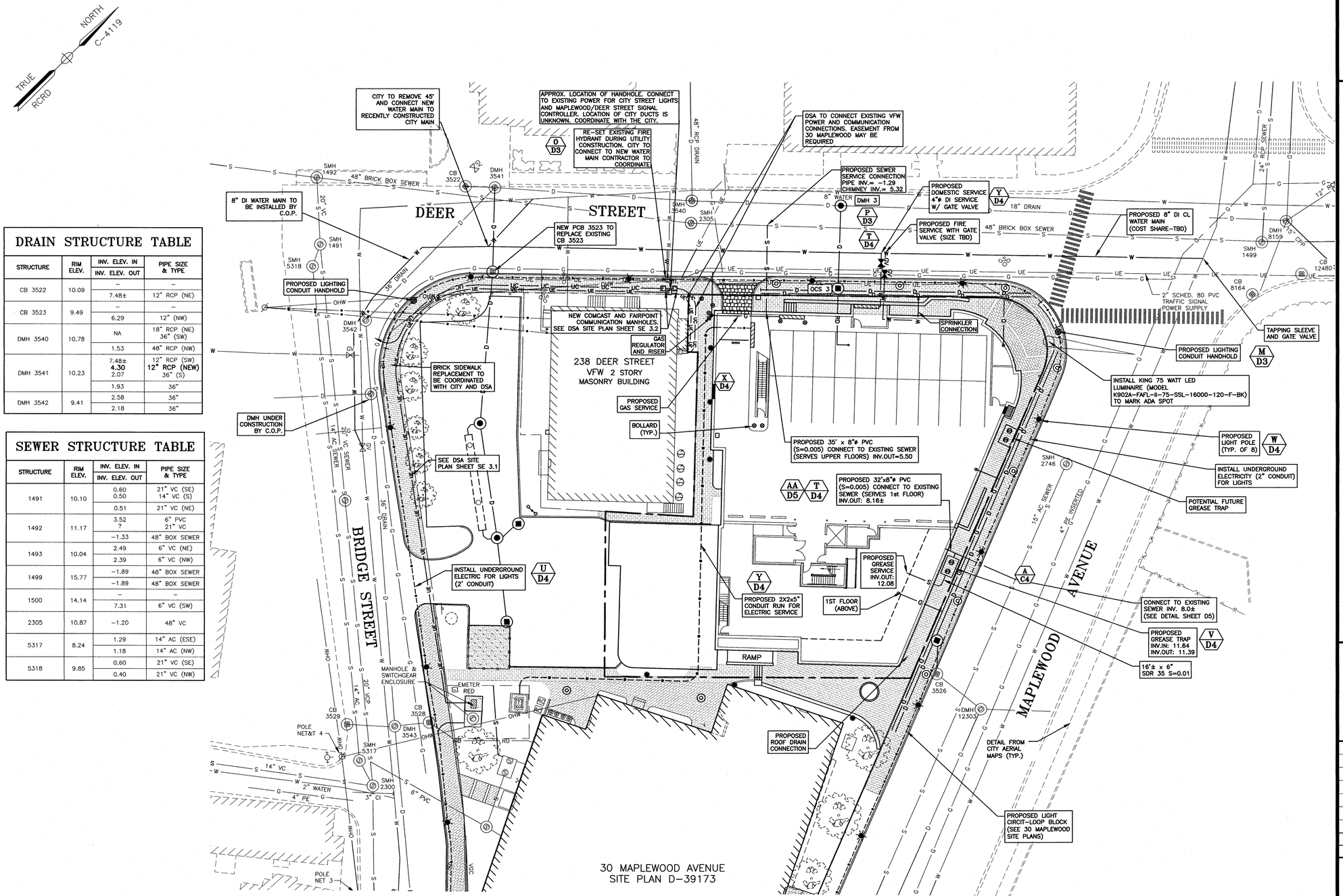
SITE PLAN
BASEMENT LEVEL

C4

FB 220 PG 8

1808

J:\JOBS\JN1800s\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808W046.dwg, C4_SITE BSMT



DRAIN STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INV. ELEV. IN / INV. ELEV. OUT	PIPE SIZE & TYPE
CB 3522	10.09	–	–
		7.48±	12" RCP (NE)
CB 3523	9.49	–	–
		6.29	12" (NW)
DMH 3540	10.78	NA	18" RCP (NE)
			36" (SW)
		1.53	48" RCP (NW)
DMH 3541	10.23	7.48±	12" RCP (SW)
		4.30	12" RCP (NEW)
		2.07	36" (S)
		1.93	36"
DMH 3542	9.41	2.58	36"
		2.18	36"

SEWER STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INV. ELEV. IN / INV. ELEV. OUT	PIPE SIZE & TYPE
1491	10.10	0.60	21" VC (SE)
		0.50	14" VC (S)
		0.51	21" VC (NE)
1492	11.17	3.52	6" PVC
		?	21" VC
		−1.33	48" BOX SEWER
1493	10.04	2.49	6" VC (NE)
		2.39	6" VC (NW)
1499	15.77	−1.89	48" BOX SEWER
		−1.89	48" BOX SEWER
1500	14.14	–	–
		7.31	6" VC (SW)
2305	10.87	−1.20	48" VC
5317	8.24	1.29	14" AC (ESE)
		1.18	14" AC (NW)
5318	9.85	0.60	21" VC (SE)
		0.40	21" VC (NW)

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

GRAPHIC SCALE
10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

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4. SEWER LOADING:
   - 22 RESIDENTIAL UNITS: 3,300 GPD (150 GPD/UNIT)
   - OFFICE RETAIL: 1,800 GPD (15 GPD/100 S.F.)
   - RESTAURANT: 2,000 GPD (50 SEATS X 40 GPH/SEAT)
   - TOTAL FLOW: 7,100 GPD
5. FIRE SPRINKLER SYSTEM:
   PRIOR TO OBTAINING BUILDING PERMIT A SPRINKLER DESIGN PLAN WILL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL. PROVIDE A SPRINKLER CONNECTION (PER FIRE DEPARTMENT SPECIFICATIONS) ON DEER STREET SIDE OF BUILDING. PROVIDE KNOX BOX AT ACCESSIBLE EXTERIOR LOCATION. COORDINATE INSTALLATION WITH PORTSMOUTH FIRE DEPARTMENT.
6. EACH ADDITIONAL RESTAURANT PROPOSED IN THIS STRUCTURE SHALL INSTALL ITS OWN EXTERNAL GREASE TRAP. GREASE TRAPS SERVICE FREQUENCY SHALL BE BASED UPON ACTUAL LOADS IMPOSED BY THE PARTICIPATING RESTAURANT.
7. BUILDING WILL HAVE ONE WATER METER – USES WILL BE SUB-METERED BY OWNER.
8. STREET LIGHTS TO BE REPLACED WITH CURRENT CITY STANDARD (DUCTILE IRON). DEVELOPER SHALL COORDINATE WITH DPW ON THE FINAL ROUTING OF THE ELECTRICAL CONDUIT TO THE STREET LIGHTS.
9. THE DEVELOPER SHALL PAY ANY NEGOTIATED CAPACITY USE SURCHARGES FOR WATER AND SEWER.
10. OVERHEAD GARAGE DOORS SHALL BE SET TO AUTOMATICALLY OPEN IN THE EVENT THAT THE FIRE ALARM IS ACTIVATED. THE APPLICANT SHALL HAVE A COMMUNICATIONS SITE SURVEY CONDUCTED BY A MOTOROLA COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE PORTSMOUTH POLICE AND FIRE RADIO SYSTEMS CONFIGURATION. IF THE SITE SURVEY INDICATES THAT IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER WILL BE REQUIRED TO MAINTAIN ANY INSTALLED EQUIPMENT. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO PAY FOR THE SITE SURVEY WHETHER OR NOT THE SURVEY INDICATES THAT EQUIPMENT IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY. THE SURVEY SHALL BE COMPLETED AND ANY REQUIRED EQUIPMENT INSTALLED, TESTED, AND ACCEPTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. EXISTING 6" FIRE SERVICE TO BE RE-USED FOR RELOCATED HYDRANT (ADD A GATE VALVE).
12. EVERSOURCE WORK ORDER: 3040225

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
	REVISIONS	
6	NOTES 4, 9, 13 (REMOVED)	4/10/18
5	DRAINAGE LAYOUT	3/6/18
4	SEWER SIZE AND SLOPE	2/6/18
3	UTILITIES, NOTES 6 & 13	1/12/18
2	UTILITIES	12/19/17
1	UTILITIES	10/17/17
0	ISSUED FOR COMMENT	6/19/17

SCALE: 1" = 20' JUNE 2017

UTILITY PLAN — C5

FB 220 PG 8

1808

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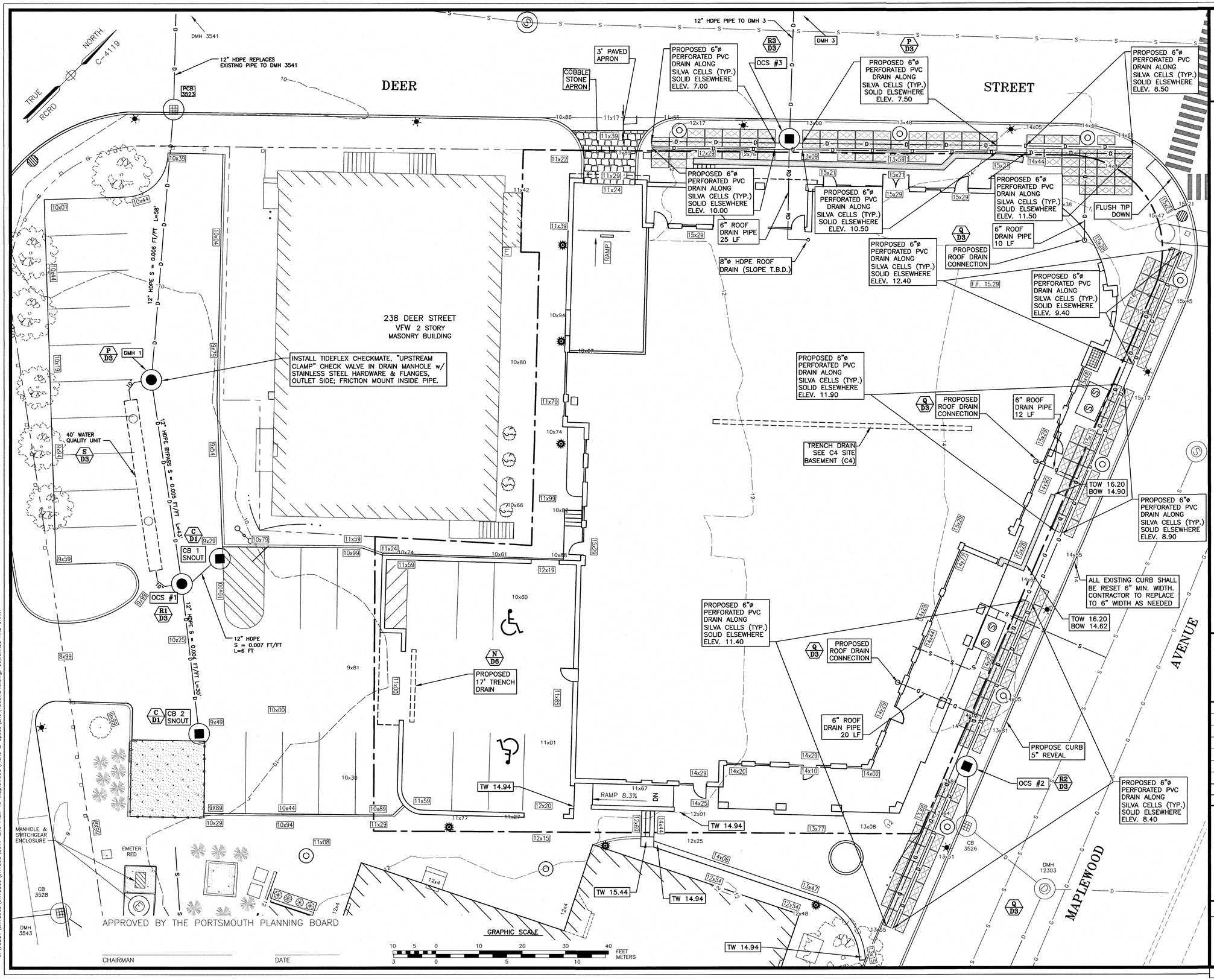

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NOTES:

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4. BUILDING ROOF WILL BE DRAINED INTERNALLY WITH CONNECTIONS AS SHOWN.
5. FOUNDATION TO BE DESIGNED (BY OTHER) GROUNDWATER DISCHARGES PROPOSED FOR THE FINAL BUILDING DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL OF CAPACITY.

PROPOSED DRAIN STRUCTURE TABLE

STRUCTURE	RIM ELEV.	INV. ELEV. IN / INV. ELEV. OUT	SUMP INV. ELEV.	DOWN STREAM STRUCTURE
PIPE	PIPE LENGTH, PIPE SLOPE			
CATCH BASIN CB 2	9.49	– / 5.40	2.40	DMH 2
12" HDPE	L = 30 L.F., SLOPE = 0.004 ft./ft.			
CATCH BASIN CB 1	9.29	– / 5.33	2.33	DMH 2
12" HDPE	L = 6 L.F., SLOPE = 0.007 ft./ft.			
ROOF DRAIN	–	– / 6.8 @ BLDG.	–	DMH 2
6" PVC	L = VARIES, SLOPE = 0.01 ft./ft.			
OUTLET CONTROL STRUCTURE (OCS #1) SEE DETAIL R1/D3	9.78±	6.17 (6") 5.33 (12") / 5.23 (12") 4.29 (10")	WEIR ELEV. 5.60	DMH 1
12" HDPE	L = 44 L.F., SLOPE = 0.005 ft./ft.			
DRAIN MANHOLE DMH 1	9.78±	5.01 (12") 5.18 (10") / 4.91 (12")	–	CB 3523
12" HDPE	L = 58 L.F., SLOPE = 0.006 ft./ft.			
DRAIN CATCH BASIN PCB 3523 REPLACES CB 3523	9.49	4.56 (12") / 4.46 (12")	1.46	DMH 3541
NEW 12" HDPE REPLACING EXISTING 12" RCP	L = 33 L.F., SLOPE = 0.005 ft./ft.			
OUTLET CONTROL STRUCTURE (OCS #2) SEE DETAIL R2/D3	13.80±	8.40 (6") 8.40 (6") / 8.30 (12")	WEIR ELEV. 11.40	CB 3526
OUTLET CONTROL STRUCTURE (OCS #3) SEE DETAIL R3/D3	13.00±	7.00 (6") 7.00 (6") / 6.90 (12")	WEIR ELEV. 10.00	DMH 3
12" HDPE	L = 30 L.F., SLOPE = 0.0083 ft./ft.			
DRAIN MANHOLE DMH 3	TBD±	6.65 (12") 2.53 (18") / 2.43 (18")	–	EXISTING 18" RCP

NOTE: PROVIDE CHECK VALVES IN DRAIN MANHOLE #1 TO PREVENT FLOW BACK INTO SYSTEM.

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
6	NOTES 2&5 AND PROPOSED DRAINAGE TABLE REVISED	4/10/18
5	NOTE 5 REVISED	3/6/18
4	CHECK VALVE NOTE	2/6/18
3	NOTE 5, CURB REVEAL	1/12/18
2	GRADING	12/19/17
1	PLAN DATUM	10/17/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

JOHN R. CHAGNON NO. 7651 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

SCALE: 1" = 10' JUNE 2017

GRADING AND DRAINAGE PLAN

C6

FB 220 PG 8

1808

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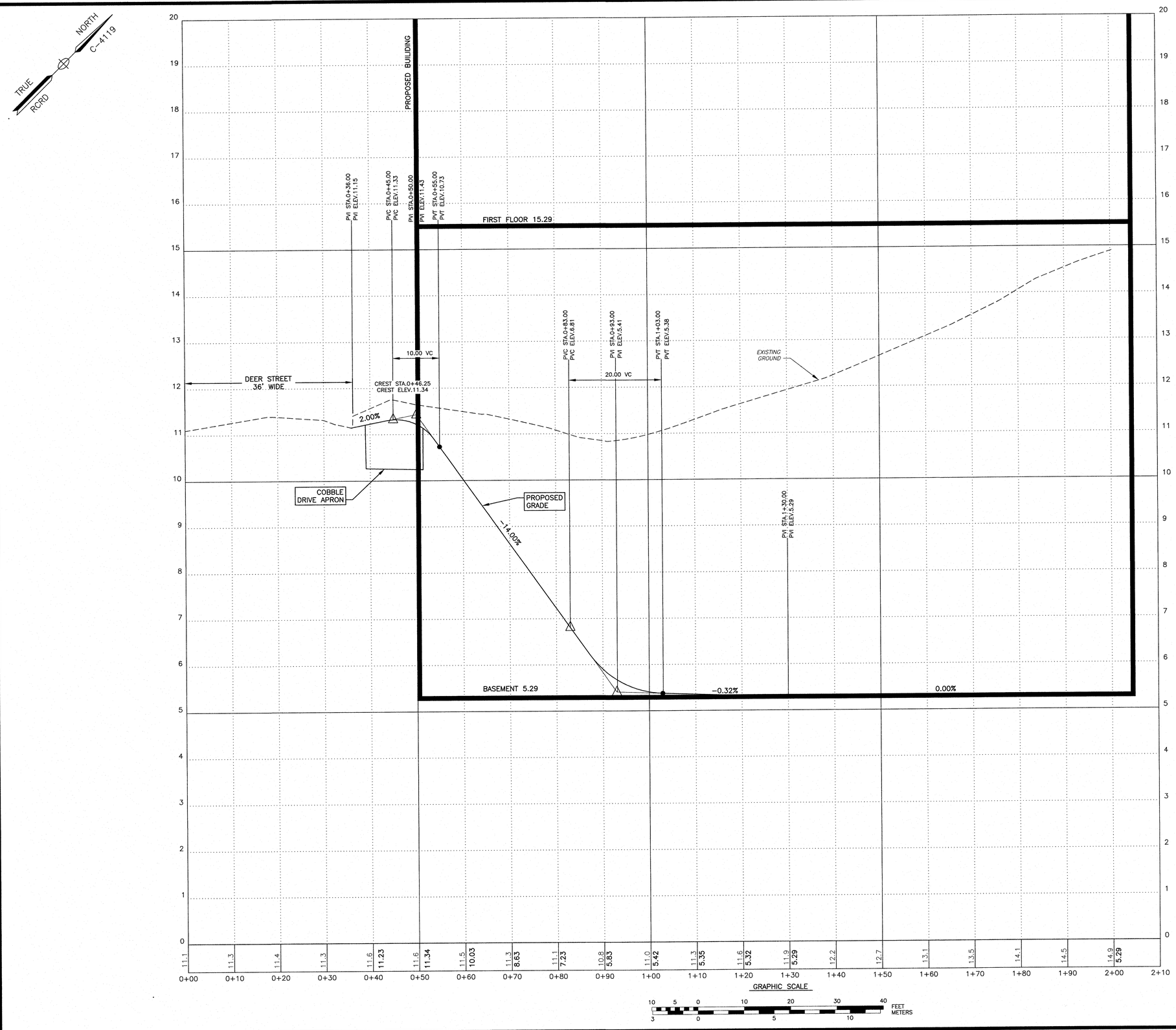

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GARAGE PROFILE
SCALE: 1" = 10' (HOR.)
1" = 1' (VERT.)

GARAGE PLAN
SEE SITE PLAN BASEMENT LEVEL FOR PLAN VIEW

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	PROFILE REVISED	1/16/18
1	PROFILE CHANGED TO 10:1	10/17/17
0	ISSUED FOR COMMENT	8/22/17

REVISIONS

STATE OF NEW HAMPSHIRE
JOHN R. CHAGNON
No. 7961
LICENSED PROFESSIONAL ENGINEER

SCALE: 1" = 10' JUNE 2017

PROFILE
GARAGE RAMP

P1

FB 220 PG 8

1808

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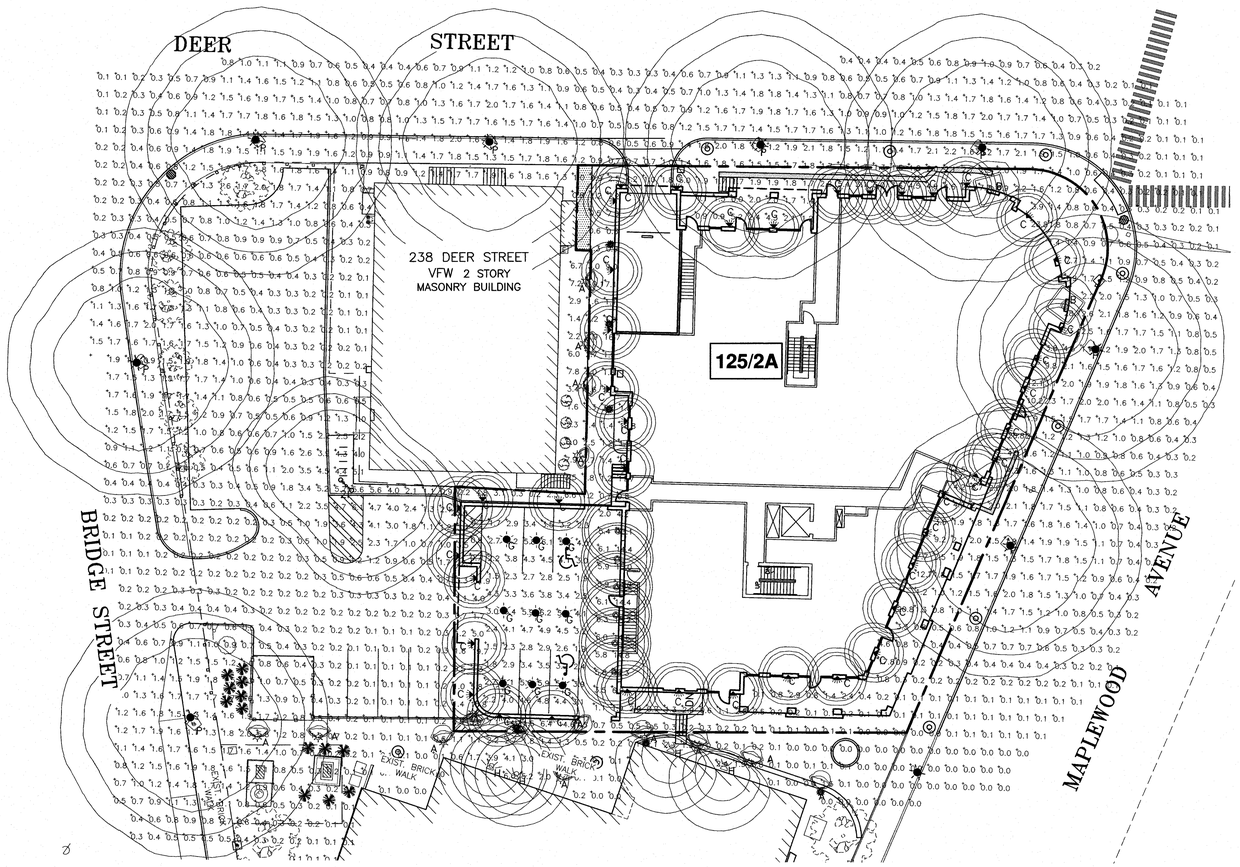
LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	CATALOG NUMBER	DESCRIPTION	LAMP	NUMBER LAMPS	LUMENS PER LAMP	LIGHT LOSS FACTOR	WATTAGE
☼	A	15	U538008	KLEIN BOLLARD; MOUNTED AT 3FT	LED	1	74	0.9	6
◎	B	2	F0801SH030805 K X A	RISE SPOT; MOUNTED AT 30FT	LED	1	746	0.9	11.5
◥	C	42	7000WKON83017Z277S	KONIAL 17 METAL EXTERIOR WALL SCONCE WITH DRIVER TO REDUCE OUTPUT; MOUNTED AT 8FT	LED	1	2315.354	0.68	22.2
⏢	D	6	C3LS-DVW-13834060-XX	EXTERIOR CYLINDER WALL SCONCE; MOUNTED AT 10FT	LED	1	1300	0.9	18
☀	G	9	7000WCQL840H	CIRQUE LARGE SURFACE MOUNT; MOUNTED AT 9.5 FT	LED	1	1042	0.9	22
⏃	H	4	XXXXXX	UNKNOWN YARD LIGHT FIXTURE; MOUNTED AT 8 FT	LED	1	1819.715	0.45	10
●	P	8	RS-TUE-177	NEWSTAMP LIGHTING PORTSMOUTH" WITH MEDIUM BASE EDISON TYPE A LED LAMPS, 60 WATT EQUIVALENT; MOUNTED AT 10FT	LED	1	5642	0.9	62.6
⁞	2I	1	S3976N UNV 14	SLOT POLE 18 WHITE NEUTRAL 4000K; MOUNTED AT 12FT	LED	1	2789	0.9	74

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Covered Parking Area	+	3.5 fc	6.2 fc	0.7 fc	8.9:1	5.0:1
Ground	+	1.4 fc	31.9 fc	0.0 fc	N/A	N/A



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4) POLE MOUNTED LIGHTS SHALL HAVE A MAXIMUM FIXTURE OF HEIGHT OF 16 FEET.

5) ALL LIGHTING SHALL BE SHIELDED TO MINIMIZE LIGHT TRESPASS AND DIRECT GLARE BEYOND THE PROPERTY.

6) LIGHTING PLAN PREPARED USING AGI32 SOFTWARE. LIGHTING DESIGN BASED ON .IES FILES THAT WERE LAB-TESTED OR COMPUTER GENERATED. ACTUAL RESULTS MAY VARY DEPENDING ON FIELD CONDITIONS, AREA GEOMETRY OR CHANGES IN ELECTRICAL SUPPLY VOLTAGE.

7) LIGHTS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

8) HOURS OF OPERATION ARE ANTICIPATED TO BE 6:00 AM TO 7:00 PM. OUTDOOR LIGHTS SHALL BE EQUIPPED WITH TIMERS TO TURN OFF LIGHTS DURING NON-OPERATIONAL HOURS.

9) LIGHTING DESIGN BY VISIBLE LIGHT, INC.
24 STICKNEY TERRACE
SUITE 6
HAMPTON, NH 03842

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
1	REMOVED VFW LIGHTS, REVISED CITY LIGHTS	1/12/18
0	ISSUED FOR COMMENT	11/22/17

REVISIONS

SCALE: 1" = 20' *NOVEMBER 2017*

LIGHTING PLAN **L1**

FB 220 PG 8 *1808*

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EROSION CONTROL NOTES

CONSTRUCTION SEQUENCE

DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

THE CONTRACTOR SHALL OBTAIN AN **NPDES** PHASE II STORMWATER PERMIT BEFORE BEGINNING CONSTRUCTION AND SHALL HAVE ON SITE A STORMWATER POLLUTION PREVENTION PLAN (**S.W.P.P.P.**) AVAILABLE FOR INSPECTION BY THE PERMITTING AUTHORITY DURING THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THE **S.W.P.P.P.** AND INSPECTING AND MAINTAINING ALL BMP'S CALLED FOR BY THE PLAN. THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (**N.O.T.**) FORM TO THE REGIONAL EPA OFFICE WITHIN 30 DAYS OF FINAL STABILIZATION OF THE ENTIRE SITE OR TURNING OVER CONTROL OF THE SITE TO ANOTHER OPERATOR.

INSTALL DEVICES TO CONTROL EROSION AND SEDIMENTATION PRIOR TO ANY EARTH MOVING ACTIVITIES. DEVICES SHALL BE OUTLINED IN THE **CMMP** PLAN WITH THE CITY OF PORTSMOUTH.

CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.

CUT AND REMOVE ALL TREES, SHRUBS, SAPLINGS, BRUSH, VINES AND OTHER DEBRIS AND RUBBISH AS REQUIRED.

REMOVE SOIL AND ANY LEDGE TO THE REQUIRED DEPTHS.

CONSTRUCT BUILDING FOUNDATION.

CONSTRUCT DRAINAGE STRUCTURES. INSTALL AND MAINTAIN EROSION CONTROL DEVICES.

LOAM AND SEED DISTURBED AREAS IN ACCORDANCE WITH VEGETATIVE PRACTICE AND GENERAL CONSTRUCTION NOTES. CUT AND FILL SLOPES SHALL BE SEEDED IMMEDIATELY AFTER THEIR CONSTRUCTION.

CONSTRUCT REMAINING UTILITIES, BUILDINGS AND PAVEMENT BASE COURSE.

COMPLETE BUILDING.

PLANT LANDSCAPING.

CONSTRUCT PAVEMENT WEARING COURSE.

REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

GENERAL CONSTRUCTION NOTES

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR,
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

DUST CONTROL: IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM OF 0.5" OR GREATER. ALL DAMAGED SILT FENCES SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

AVOID THE USE OF FUTURE OPEN SPACES (LOAM AND SEED AREAS) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ACCESS DRIVES AND PARKING AREAS.

TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS. CONSTRUCT SILT FENCE AROUND TOPSOIL STOCKPILE.

AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL. STUMPS SHALL BE DISPOSED BY GRINDING OR FILL IN AN APPROVED FACILITY.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.

FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL SHALL NOT BE INCORPORATED INTO FILLS.

FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.

DISTURBED AREAS SHALL BE SEEDED WITHIN 72 HOURS FOLLOWING FINISHED GRADING.

AT NO TIME SHALL ANY DISTURBED AREA REMAIN UNSTABILIZED FOR LONGER THAN 72 HOURS. ALL AREAS WHERE CONSTRUCTION IS NOT COMPLETE WITHIN THIRTY DAYS OF THE INITIAL DISTURBANCE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

VEGETATIVE PRACTICE

FOR PERMANENT MEASURES AND PLANTINGS:

LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE.

FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

SEED SHALL BE SOWN AT THE RATES SHOWN IN THE TABLE BELOW. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE, AND SHALL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.

A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE:

GENERAL COVER	PROPORTION	SEEDING RATE
CREEPING RED FESCUE	50%	100 LBS/ACRE
KENTUCKY BLUEGRASS	50%	

SLOPE SEED (USED ON ALL SLOPES GREATER THAN OR EQUAL TO 3:1)

CREEPING RED FESCUE	42%	
TALL FESCUE	42%	48 LBS/ACRE
BIRDSFOOT TREFOIL	16%	

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH APPLICABLE STATE AND FEDERAL SEED LAWS.

FOR TEMPORARY PROTECTION OF DISTURBED AREAS:
MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:
PERENNIAL RYE: 0.7 LBS/1,000 S.F.
MULCH: 1.5 TONS/ACRE

MAINTENANCE AND PROTECTION

THE CONTRACTOR SHALL MAINTAIN ALL LOAM & SEED AREAS UNTIL FINAL ACCEPTANCE AT THE COMPLETION OF THE CONTRACT. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REMOVAL OF STONES AND OTHER FOREIGN OBJECTS OVER 1/2 INCHES IN DIAMETER WHICH MAY APPEAR AND THE FIRST TWO (2) CUTTINGS OF GRASS NO CLOSER THEN TEN (10) DAYS APART. THE FIRST CUTTING SHALL BE ACCOMPLISHED WHEN THE GRASS IS FROM 2 1/2 TO 3 INCHES HIGH. ALL BARE AND DEAD SPOTS WHICH BECOME APPARENT SHALL BE PROPERLY PREPARED, LIMED AND FERTILIZED, AND RESEEDED BY THE CONTRACTOR AT HIS EXPENSE AS MANY TIMES AS NECESSARY TO SECURE GOOD GROWTH. THE ENTIRE AREA SHALL BE MAINTAINED, WATERED AND CUT UNTIL ACCEPTANCE OF THE LAWN BY THE OWNER'S REPRESENTATIVE.

THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO PROTECT THE GRASS WHILE IT IS DEVELOPING.

TO BE ACCEPTABLE, SEEDED AREAS SHALL CONSIST OF A UNIFORM STAND OF AT LEAST 90 PERCENT ESTABLISHED PERMANENT GRASS SPECIES, WITH UNIFORM COUNT OF AT LEAST 100 PLANTS PER SQUARE FOOT.

SEEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.

THE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATION IS ESTABLISHED.

THE SILT FENCE BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

SILT FENCING SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED, AND DISTURBED AREAS RESULTING FROM SILT FENCE REMOVAL SHALL BE PERMANENTLY SEEDED.

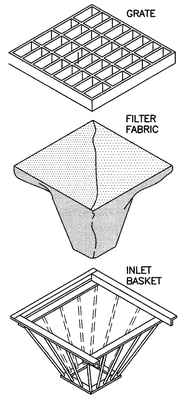
WINTER NOTES

ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.

SEE INSPECTION AND MAINTENANCE FOR STORMWATER MANAGEMENT ON SHEET D4.



1) INLET BASKETS SHALL BE INSTALLED IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION IS COMPLETE AND SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL PAVEMENT BINDER COURSE IS COMPLETE.

2) FILTER FABRIC SHALL BE PUSHED DOWN AND FORMED TO THE SHAPE OF THE BASKET. THE SHEET OF FABRIC SHALL BE LARGE ENOUGH TO BE SUPPORTED BY THE BASKET FRAME WHEN HOLDING SEDIMENT AND, SHALL EXTEND AT LEAST 6" PAST THE FRAME. THE INLET GRATE SHALL BE PLACED OVER THE BASKET/FRAME AND WILL SERVE AS THE FABRIC ANCHOR.

3) THE FILTER FABRIC SHALL BE A GEOTEXTILE FABRIC; POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE, OR POLYVINYLIDENE CHLORIDE MEETING THE FOLLOWING SPECIFICATIONS:
- -RAB STRENGTH: 45 LB. MIN. IN ANY PRINCIPAL DIRECTION (ASTM D1682)
- -MULLEN BURST STRENGTH: MIN. 60 psi (ASTM D774)

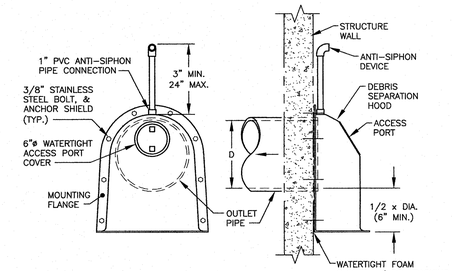
4) THE FABRIC SHALL HAVE AN OPENING NO GREATER THAN A NUMBER 20 U.S. STANDARD SIEVE AND A MINIMUM PERMEABILITY OF 120 gpm/s.f. (MULTIPLY THE PERMITTIVITY IN SEC.$^{-1}$ FROM ASTM 54491-85 CONSTANT HEAD TEST USING THE CONVERSION FACTOR OF 74.)

5) THE INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING.

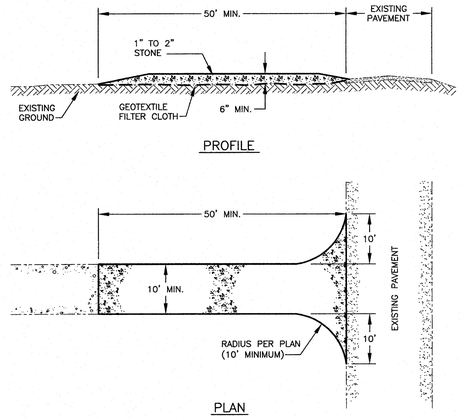
6) SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.

A — CATCH BASIN INLET BASKET
AS NEEDED — NTS

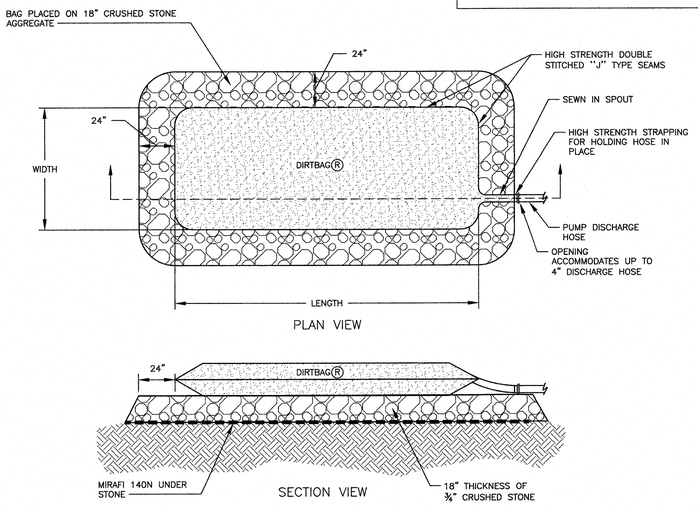
NOTES:
1) REVIEW INSTALLATION REQUIREMENTS ON OFFSITE BASINS WITH CITY DPW.



C / C6 — CATCH BASIN OUTLET HOOD DETAIL
THE "SNOUT" — NTS



D / C5 — STABILIZED CONSTRUCTION ENTRANCE
NTS



B / — DIRTBAG DETAIL
AS NEEDED — NTS

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	INSPECTION & MAINTENANCE NOTE	1/12/18
1	DETAIL D	12/19/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

STATE OF NEW HAMPSHIRE — JOHN R. CHAGNON — 9841 — LICENSED PROFESSIONAL ENGINEER

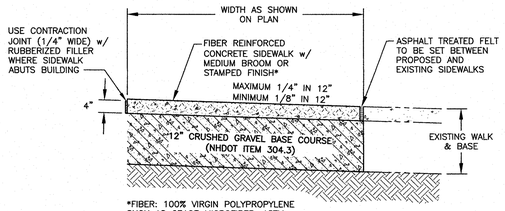
SCALE: AS NOTED — JUNE 2017

EROSION CONTROL NOTES & DETAILS

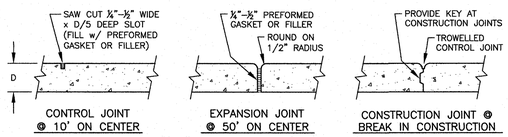
D1

1808

J:\JOBS1\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808D146.dwg, D1_EROSION_CTRL

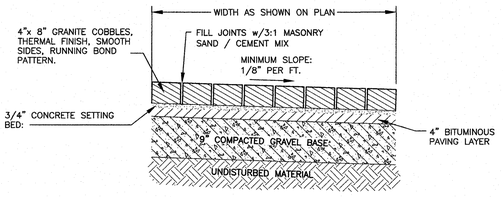


CROSS SECTION



E / C3 PORTLAND CEMENT CONCRETE SIDEWALK

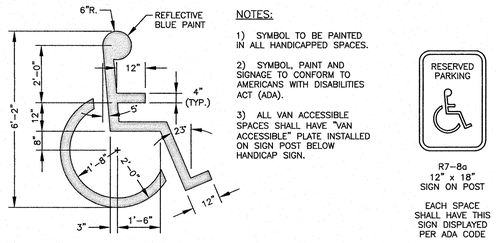
NTS



F / C3 COBBLE BAND (APRON)

NOTE: A PORTION OF COBBLE BAND IS IN CITY'S R-O-W. OWNER SHALL KEEP IN GOOD REPAIR AND REPAIR WITHIN 90 DAYS NOTICE OF DEFECT FROM THE CITY.

NTS



PAVEMENT MARKING

NOTES:

1) SYMBOL TO BE PAINTED IN ALL HANDICAPPED SPACES.

2) SYMBOL, PAINT AND SIGNAGE TO CONFORM TO AMERICANS WITH DISABILITIES ACT (ADA).

3) ALL VAN ACCESSIBLE SPACES SHALL HAVE "VAN ACCESSIBLE" PLATE INSTALLED ON SIGN POST BELOW HANDICAP SIGN.

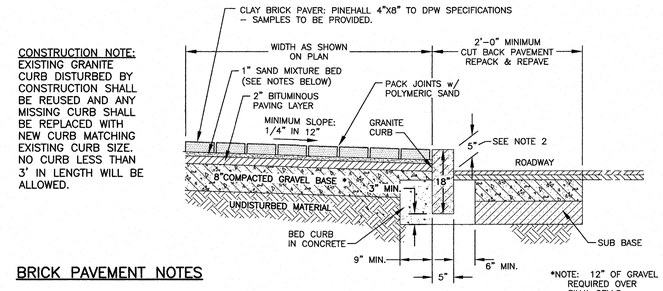
R7-8a
12" x 18"
SIGN ON POST

EACH SPACE SHALL HAVE THIS SIGN DISPLAYED PER ADA CODE

SIGNAGE

G / C4 ADA SIGN & PAVEMENT MARKING

NTS



CONSTRUCTION NOTE:
EXISTING GRANITE CURB DISTURBED BY CONSTRUCTION SHALL BE REUSED AND ANY MISSING CURB SHALL BE REPLACED WITH NEW CURB MATCHING EXISTING CURB SIZE. NO CURB LESS THAN 3' IN LENGTH WILL BE ALLOWED.

BRICK PAVEMENT NOTES

SCOPE OF WORK:

1) THE WORK SHALL CONSIST OF CONSTRUCTING/RECONSTRUCTING THE SUB-BASE AND CONSTRUCTING A NEW BRICK SIDEWALK AS DIRECTED IN THE FIELD BY THE ENGINEER.
2) REVEAL SHALL BE 5" (COORDINATE WITH PORTSMOUTH DPW).

METHODS OF CONSTRUCTION:

A) ALL LABOR AND MATERIALS SHALL CONFORM TO THE STATE OF NEW HAMPSHIRE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 608, AND CITY OF PORTSMOUTH SPECIFICATIONS FOR NEW BRICK SIDEWALK, SECTION 6.

B) ALL BRICKS SHALL CONFORM TO THE REQUIREMENTS OF ASTM STANDARD SPECIFICATIONS FOR BUILDING BRICKS: CLASS SX, TYPE 1, APPLICATION PX. THE BRICKS SHALL BE NO. 1, WIRE CUT TYPE FOR PAVING, WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 6,000 POUNDS PER SQUARE INCH. THE BRICKS SHALL NOT BE CORED OR HAVE FROGS AND SHALL BE OF A STANDARD SIZE (2.25" X 4"X 8").

C) EXCAVATION FOR SIDEWALKS SHALL BE AT A DEPTH OF 10 INCHES BELOW FINISH GRADE. IN AREAS NOT BUTTING CURBING OR BUILDINGS, THE EXCAVATION SHALL BE 6 INCHES WIDER THAN THE FINISHED SIDEWALK WIDTH. AT ALL DRIVE CROSSINGS, THE DEPTH OF EXCAVATION SHALL BE INCREASED ACCORDINGLY. THE CONTRACTOR SHALL PROVIDE NEAT AND SQUARE CUTTING OF EXISTING ASPHALT ROAD SURFACE AS NEEDED. ALL UNSUITABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF OFF-SITE AT THE CONTRACTOR'S OWN EXPENSE.

D) THE BASE MATERIAL SHALL CONSIST OF A MIXTURE OF STONES OR ROCK FRAGMENTS AND PARTICLES WITH 100% PASSING THE 3 INCH SIEVE, 95% TO 100% PASSING THE 2 INCH SIEVE, 55% TO 85% PASSING THE 1 INCH SIEVE, AND 27% TO 52% PASSING THE NO. 4 SIEVE. AT LEAST 50% OF THE MATERIALS RETAINED ON THE 1 INCH SIEVE SHALL HAVE A FRACTURED FACE. THE BASE MATERIAL SHALL BE THOROUGHLY COMPACTED TO THE DEPTH SPECIFIED OR DIRECTED, IN THE WAY OF ALL DRIVE CROSSINGS THE BASE WILL BE INCREASED TO A COMPACTED DEPTH OF 12 INCHES. GRAVEL REQUIREMENTS FOR RECONSTRUCTION WILL BE AS DIRECTED, BASED ON SITE CONDITIONS. THE WORK INCLUDES BACKING UP ANY AND ALL CURB BEING INSTALLED BY OTHERS ON BOTH SIDES.

E) THE CLAY BRICK PAVERS SHALL BE LAID IN A 1 INCH BED OF A SAND MIXTURE COMPRISED OF: 3 PARTS SAND MIXED WITH 1 PART PORTLAND CEMENT.

F) THE CONTRACTOR SHALL LAY THE BRICKS SO THAT APPROXIMATELY 5.2 BRICKS SHALL COVER ONE SQUARE FOOT.

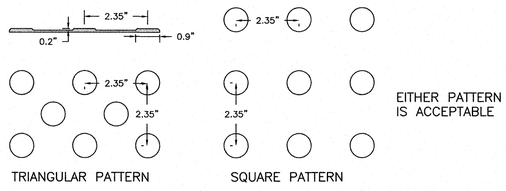
G) THE SIDEWALK SHALL PITCH TOWARDS THE STREET AS SHOWN ON THE GRADING PLAN.

H) IN AREAS WHERE THE FRONT OF THE BRICK SIDEWALK IS NOT ADJACENT TO GRANITE CURBING, THE CONTRACTOR SHALL INSTALL EDGING TO HOLD THE BRICKS IN PLACE. SUCH EDGING SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

I) THE CONTRACTOR SHALL SUBMIT A SAMPLE OF THE BRICKS FOR APPROVAL BY THE CITY BEFORE BRICKS ARE INSTALLED.

H / C3 BRICK SIDEWALK w/ VERTICAL GRANITE CURB

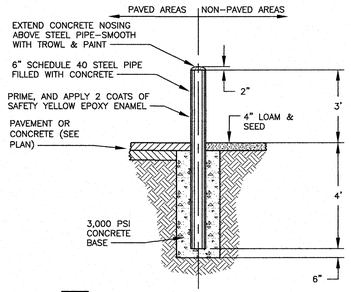
(STONE DUST BEDDING OVER BITUMINOUS PAVING) NTS



NOTE:
1. CURB RAMPS MUST HAVE A DETECTABLE WARNING FEATURE EXTENDING THE FULL WIDTH OF THE RAMP, A HEIGHT OF NOMINAL 0.2", THE DETECTABLE SURFACE MUST CONSIST OF RAISED TRUNCATED SPACING OF NOMINAL 2.35". THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST VISUALLY WITH THE SURROUNDING SURFACES (LIGHT-ON-DARK OR DARK-ON-LIGHT).
2. DETECTABLE WARNING SURFACE SHALL BE IRON PANEL TO FILL THE SPACE SHOWN ON THE SITE PLAN.

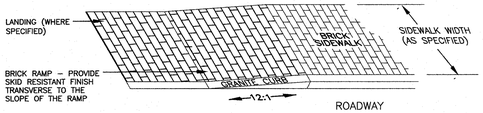
I / C3 DETECTABLE WARNING SURFACE

NTS

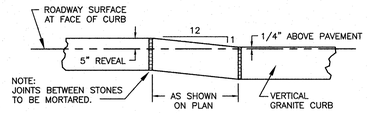


J / C4 PIPE BOLLARD DETAIL

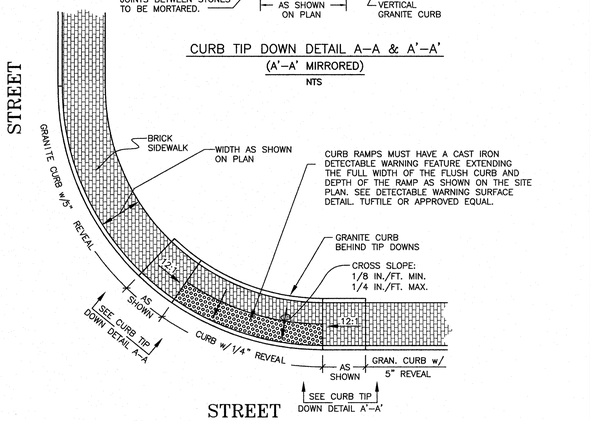
NTS



SIDEWALK TIP DOWN
(NON INTERSECTION) NTS



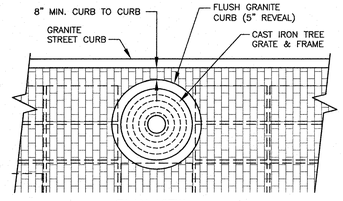
CURB TIP DOWN DETAIL A–A & A'–A'
(A'–A' MIRRORED)
NTS



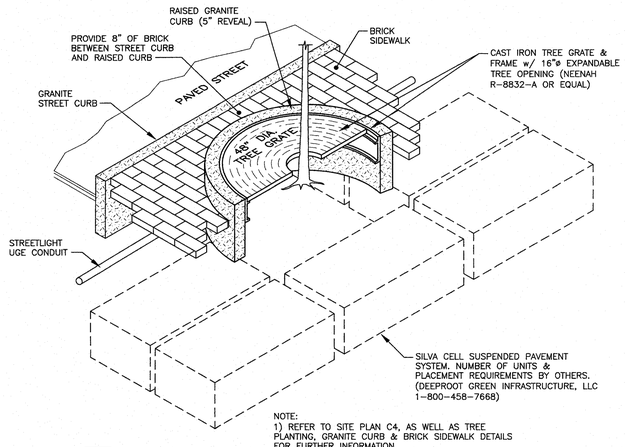
SIDEWALK TIP DOWN AT INTERSECTION

NTS

K / C3 TYPICAL SIDEWALK TIP DOWNS



PLAN VIEW



NOTE:
1) REFER TO SITE PLAN C4, AS WELL AS TREE PLANTING, GRANITE CURB & BRICK SIDEWALK DETAILS FOR FURTHER INFORMATION.

L / C3 TREE WELL w/ GRANITE CURB

5' DIA. OUTSIDE CURB DIMENSION NTS

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

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APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
4	DETAIL H	2/6/18
3	DETAILS H & F	1/12/18
2	DETAILS E, H, I, J AND K	12/19/17
1	DETAILS F/C3, G/C4, I/C3, K/C3 & L/C3	10/17/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

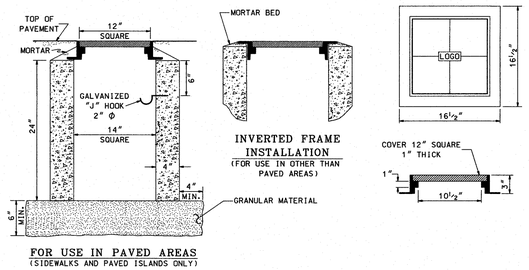
SCALE: AS NOTED JUNE 2017

DETAILS

D2

1808

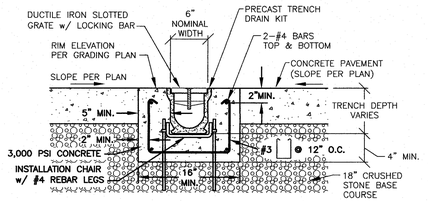
J:\JOBS\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808D746.dwg, D2_DETAILS



FOR USE IN PAVED AREAS
(SIDEWALKS AND PAVED ISLANDS ONLY)

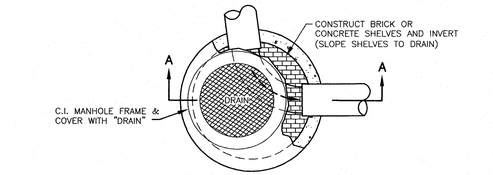
CONCRETE PULL BOX 14" x 14"
ITEM 614.511

M C5 SITE LIGHTING PULL BOX
NHDOT NTS

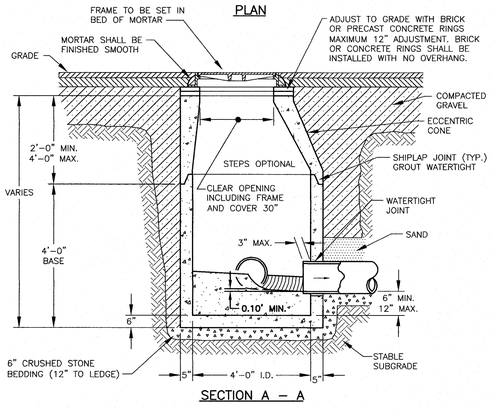


SECTION

N C4 N C6 GARAGE EVAPORATIVE TRENCH DRAIN
NTS



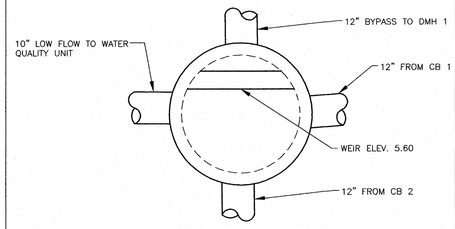
PLAN



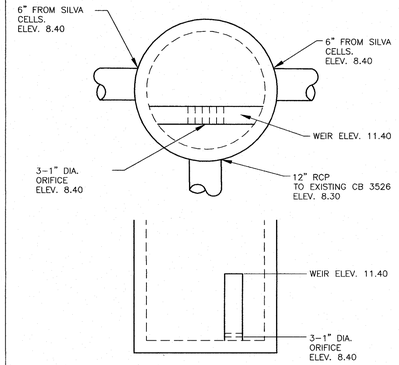
SECTION A – A

NOTES:
1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT..
4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.

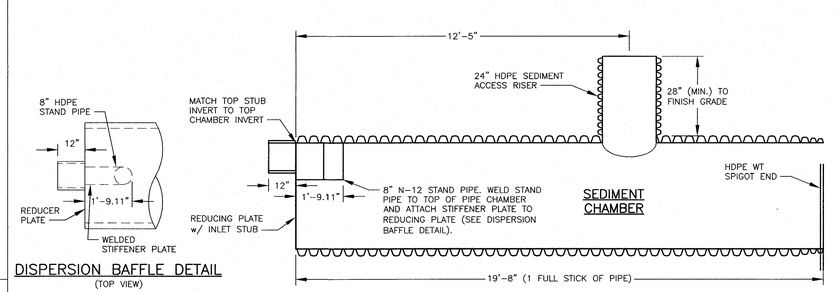
P C6 DRAIN MANHOLE DETAIL
NTS



R1 C6 OCS #1 WEIR DETAIL
CONCRETE WEIR INSIDE CONCRETE STRUCTURE
NTS

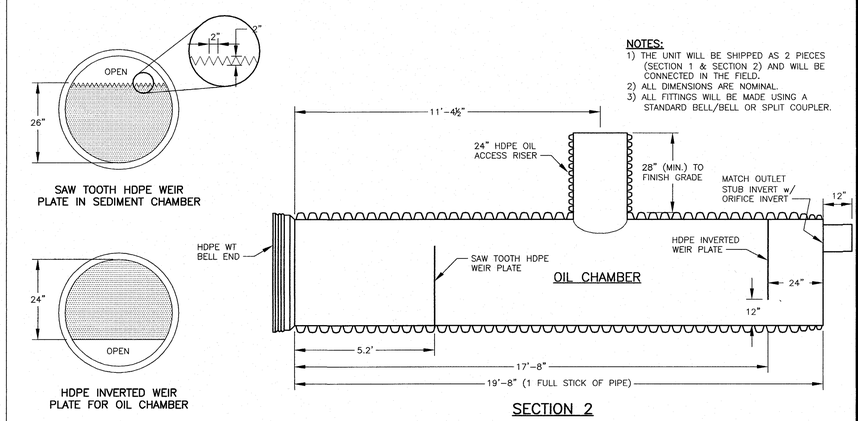


R2 C6 OCS #2 WEIR DETAIL
CONCRETE WEIR INSIDE CONCRETE STRUCTURE
NTS



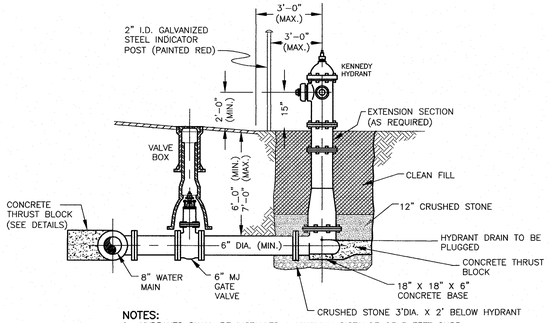
DISPERSION BAFFLE DETAIL
(TOP VIEW)

SECTION 1



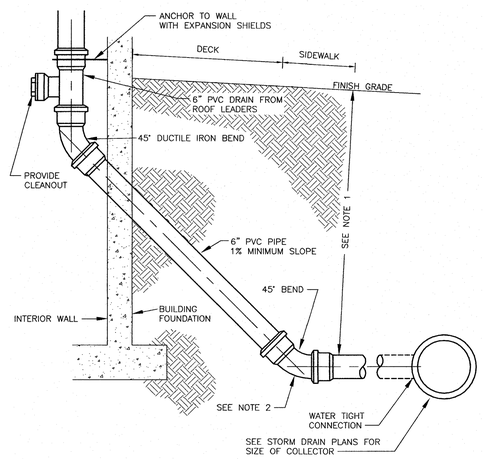
SECTION 2

S C6 HANCOR 3640WQA12 STORMWATER WATER QUALITY UNIT
FOLLOW MANUFACTURER'S RECOMMENDED INSPECTION/MAINTENANCE GUIDELINES NTS



NOTES:
1. HYDRANTS SHALL BE INSTALLED A MAXIMUM DISTANCE OF 3 FEET CURB LINE TO OPERATING NUT, UNLESS OTHERWISE SPECIFIED BY CITY OF PORTSMOUTH.
2. THE PUMPER OUTLET NOZZLE SHALL FACE THE STREET.
3. CENTERLINE OF NOZZLES SHALL BE A MINIMUM OF 2 FEET ABOVE FINISHED GRADE OF STREET.
4. AREA AROUND HYDRANT SHALL BE GRADED TO ALLOW ANY SURFACE WATER TO DRAIN AWAY FROM HYDRANT.
5. HYDRANT SHALL BE FIRMLY SUPPORTED ALL AROUND THE STANDPIPE.
6. EARTH FILL SHALL BE TAMPED TO GIVE FIRM SUPPORT TO THE HYDRANT BARREL.
7. A GATE VALVE SHALL BE INSTALLED BETWEEN THE HYDRANT AND THE MAIN ON THE LATERAL.
8. HYDRANT LATERALS SHALL BE 6" INSIDE DIAMETER (MINIMUM).
9. HYDRANT LATERALS SHALL BE CONNECTED TO WATER MAINS 8 INCHES IN DIAMETER OR LARGER.
10. ALL JOINTS AT HYDRANT CONNECTION SHALL BE RESTRAINED MECHANICAL JOINTS.
11. INSTALLATION OF HYDRANTS IN AREAS OF HEAVY VEGETATIVE GROWTH SHALL HAVE A 10 FOOT RADIUS CLEAR AREA ALL AROUND THE OPERATING NUT OF THE HYDRANT.
12. THERE SHALL ALSO BE AN INDICATOR POST FABRICATED FROM 2 INCH INSIDE DIAMETER GALVANIZED STEEL PIPE, 7 FEET ABOVE FINISHED GRADE, AND SET 2 FEET BELOW GRADE IN CLASS "A" CONCRETE CONCRETE 6 INCHES ALL AROUND POST. THIS POST SHALL BE COATED WITH ZINC CHROMATE PRIMER AND PAINTED WITH HIGH VISIBILITY RED. THE INDICATOR POST SHALL BE NO CLOSER THAN 3 FEET FROM THE OPERATING NUT, AND SET ON THE SIDE OF THE HYDRANT FACING ONCOMING TRAFFIC. TOP OF POST SHALL BE THREADED AND CAPPED.
13. INSTALLATION OF HYDRANTS IN HEAVY GROWTH AREAS SHALL HAVE GATE BOXES RAISED 6 INCHES ABOVE GRADE AND SHALL BE PAINTED ORANGE FOR HIGH VISIBILITY.
14. HYDRANT INSTALLATION AND OPERATION, MANUFACTURE AND MODEL, AND STANDARD DIMENSIONAL REQIREMENTS SHALL BE IN ACCORDANCE WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT AND FIRE DEPARTMENT.

0 C5 FIRE HYDRANT INSTALLATION DETAIL
PORTSMOUTH NTS



NOTES:
1) FOR ALL DEPTHS OF COVER LESS THAN 2 FEET, PIPE MUST BE SCHEDULE 40 PVC, FOR DEPTHS OF COVER GREATER THAN 2 FEET, FLEXIBLE PIPE MAY BE USED.

2) A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.

3) THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWNSPOUTS ARE INSTALLED ON THE BUILDING. SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE FOUNDATION PENETRATION. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE INTERIOR CONNECTION.

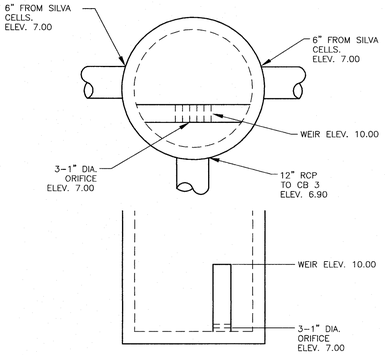
Q C6 ROOF DRAIN DETAIL
NTS

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:
1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).



R3 C6 OCS #3 WEIR DETAIL
CONCRETE WEIR INSIDE CONCRETE STRUCTURE
NTS

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
6	DETAIL O	4/10/18
5	DETAILS M, O, R2 AND R3	3/6/18
4	DETAILS M & O	2/6/18
3	DETAIL M	1/12/18
2	DETAILS M, N, O, P, R1 & R2	12/19/17
1	DETAIL M/C6, P/C5 & Q/C6	10/17/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 7863 LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED JUNE 2017

DETAILS D3

1808

TRENCH NOTES:

A) TRENCH BACKFILL:

– IN PAVED AREAS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIALS DEEMED TO BE UNACCEPTABLE BY THE ENGINEER.

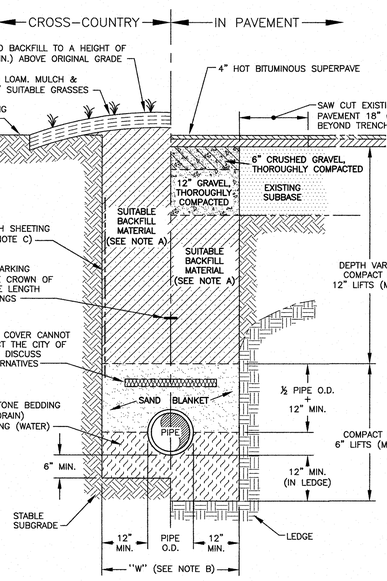
– IN CROSS–COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE.

B) "W" = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D..

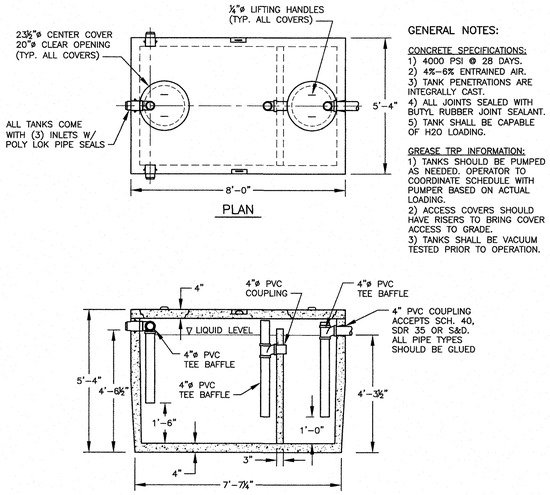
C) TRENCH SHEETING:
IF REQUIRED, WHERE SHEETING IS PLACED ALONGSIDE THE PIPE AND EXTENDS BELOW SPRING LINE, IT SHALL BE CUT OFF AND LEFT IN PLACE TO AN ELEVATION NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE. WHERE SHEETING IS ORDERED BY THE ENGINEER TO BE LEFT IN PLACE, IT SHALL BE CUT OFF AT LEAST 3 FEET BELOW FINISHED GRADE, BUT NOT LESS THAN 1 FOOT ABOVE THE TOP OF THE PIPE.

D) MINIMUM PIPE COVER FOR UTILITY MAINS (UNLESS GOVERNED BY OTHER CODES):
- 6' MINIMUM FOR SEWER (IN PAVEMENT)
- 4' MINIMUM FOR SEWER (CROSS COUNTRY)
- 3' MINIMUM FOR STORMWATER DRAINS
- 5' MINIMUM FOR WATER MAINS

E) ALL PAVEMENT CUTS SHALL BE REPAIRED BY THE INFRARED HEAT METHOD.



T C5 TYPICAL PIPE TRENCH
NTS

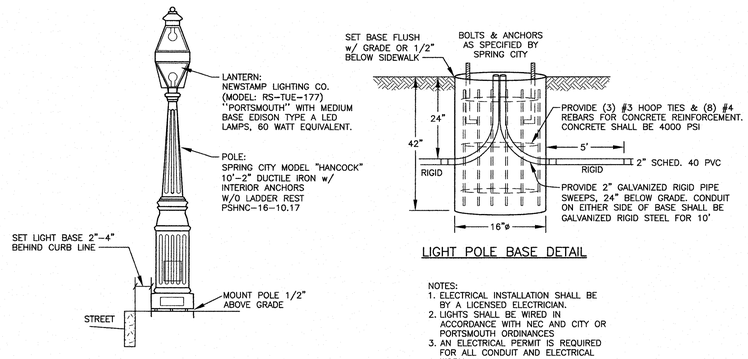


GENERAL NOTES:

CONCRETE SPECIFICATIONS:
1) 4000 PSI @ 28 DAYS.
2) 4%–6% ENTRAINED AIR.
3) TANK PENETRATIONS ARE INTEGRALLY CAST.
4) ALL JOINTS SEALED WITH BUTYL RUBBER JOINT SEALANT.
5) TANK SHALL BE CAPABLE OF H2O LOADING.

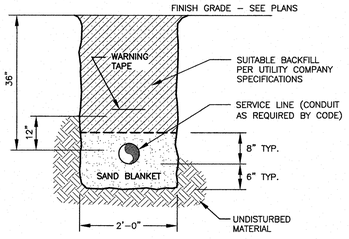
GREASE TRP INFORMATION:
1) TANKS SHOULD BE PUMPED AS NEEDED. OPERATOR TO COORDINATE SCHEDULE WITH PUMPER BASED ON ACTUAL LOADING.
2) ACCESS COVERS SHOULD HAVE RISERS TO BRING COVER ACCESS TO GRADE.
3) TANKS SHALL BE VACUUM TESTED PRIOR TO OPERATION.

V C5 1000 GALLON 2 COMPARTMENT GREASE TRAP
AMERICAN CONCRETE INDUSTRIES
9,200 Lbs TEM # 8827(H20)
NTS



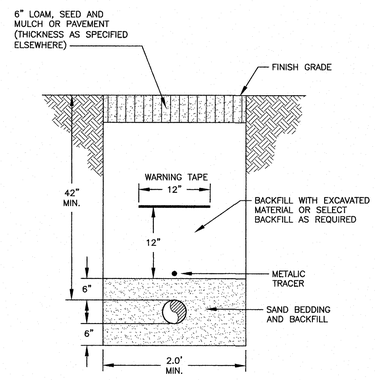
NOTES:
1. ELECTRICAL INSTALLATION SHALL BE BY A LICENSED ELECTRICIAN.
2. LIGHTS SHALL BE WIRED IN ACCORDANCE WITH NEC AND CITY OR PORTSMOUTH ORDINANCES
3. AN ELECTRICAL PERMIT IS REQUIRED FOR ALL CONDUIT AND ELECTRICAL WORK.

W C5 LIGHT POLE & BASE DETAILS
CITY STANDARD
NTS



NOTES:
1. ALL CONDUIT TO BE U.L. LISTED, SCHED. 80 UNDER ALL TRAVEL WAYS AND ON PUBLIC PROPERTY & SCHED. 40 FOR THE REMAINDER.
2. NORMAL CONDUIT SIZES FOR PSNH ARE 3 INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4 INCH FOR THREE PHASE SECONDARY, AND 5 INCH FOR THREE PHASE PRIMARY. CONFIRM CONDUIT SIZE & TYPE WITH UTILITY COMPANY PRIOR TO INSTALLATION.
3. ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE (LATEST REVISION)
4. INSTALL A 200# PULL ROPE FOR EACH CONDUIT

U C6 ELECTRIC SERVICE TRENCH
NTS



NOTE:
1) COORDINATE WITH GAS COMPANY REGARDING CONSTRUCTION RESPONSIBILITIES. (TRENCH AND BACKFILL/INSTALLATION)

X C5 GAS SERVICE TRENCH
NTS

INSPECTION & MAINTENANCE PLAN

The following inspection and maintenance program is necessary to keep the stormwater management system functioning properly. These measures will also help minimize potential environmental impacts. By following the enclosed procedures, the Owner will be able to maintain the functional design of the stormwater management system and maximize its ability to remove sediment and other contaminants from site generated stormwater runoff. By installing and maintaining the drainage as shown on the approved site plan, the Owner will be able to maximize the system's ability to control the volume of runoff and remove sediment from site generated stormwater runoff.

Annual Report

The Owner shall prepare an annual Inspection & Maintenance Report. The report shall include a summary of the system's maintenance and repair by transmission of the Inspection & Maintenance Log and other information as required. A copy of the report shall be delivered annually to the City of Portsmouth Building Inspector, if required.

Inspection & Maintenance Checklist/Log

The Inspection & Maintenance Checklist and a Stormwater Management System Inspection & Maintenance Log shall be included in the annual report.

Inspection and Maintenance Requirements

The following summarizes the inspection and maintenance requirements for the various BMP's that may be found on this project. In general, during construction and until the threat of erosion is minimal, rain events of 0.25" or more shall trigger close inspections of all related sediment and erosion control measures. It is only after construction is complete and the site is stable (safe from erosion) that larger rain events will trigger inspections (see attached Inspection & Maintenance Form).

1. **Seeded areas**: After each rain event of 0.5" or more during a 24 hour period, inspect newly seeded areas for signs of disturbance, such as erosion or lost mulch. If damaged areas are discovered, immediately repair the damage. Repairs may include adding new topsoil, lime, seed, fertilizer and mulch, or may simply require the addition of more mulch. If mulch is constantly being blown away or washed away, then it shall be anchored with jute mesh. Continue inspections until grass growth is permanently established and threats of erosion have ceased.

2. **Other Plantings**: Other planting and landscaping (trees, shrubs,) shall be monitored bi-monthly during the first year to insure viability and vigorous growth. Replace dead or dying vegetation with new stock and make adjustments to the conditions that caused the dead or dying vegetation. During dryer times of the year, provide weekly watering or irrigation during the establishment period of the first year. Make the necessary adjustments to insure long-term health of the vegetated covers, i.e. provide more permanent mulch or compost or other means of protection.

3. **Storm Drain, Trench Drain Inlets/Outlets:** Monitor drain inlets and outlet aprons for excessive accumulation of sediments. Remove sediments as required to maintain flows to the infiltration (Silva Cell) area.

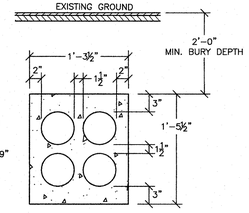
1. **Stabilized Construction Entrance:** Monitor for signs of excessive clogging and tracking of mud onto the paved roadway. If necessary, replace the entire structure with new, clean stone, and remove tracked sediments from road surface.

2. **Dust Control:** Monitor fugitive dust and if evident, apply water to graveled surfaces or mulch and water to exposed, droughty soils.

3. **Hancor Water Quality Unit:** Remove sediment the more frequent of every six months or when sediment has reached 25% of the diameter of the structure. Furthermore, the system may need cleaning in the event a spill of foreign substance enters the unit.

4. **Parking Lot maintenance:** Sweep Parking areas twice per year to remove sediments.

CONDUIT BANK NOTES:
1) MINIMUM COVER FROM TOP OF A CONDUIT BANK TO THE SURFACE OF PAVEMENT OR EARTH SHALL BE 24". THE CONTRACTOR WILL ENSURE THAT THE DUCT BANK IS LAIN WITH POSITIVE SLOPE SO THAT NO LOW POINTS DEVELOP IN THE CONDUIT THEREBY ELIMINATING THE POSSIBILITY OF WATER TO COLLECT.
2) CONCRETE SHALL BE 2500 PSI, 1/2" MAXIMUM STONE, 6"–9" SLUMP OF SUCH CONSISTENCY THAT SPADING WILL ENSURE THE FLOW OF CONCRETE BETWEEN AND UNDER THE INDIVIDUAL DUCTS, BUT NOT SO WET AS TO FLOAT THE DUCTS. FOR TIER BUILUP CONSTRUCTION, A STIFFER CONSISTENCY SHOULD BE USED.



Y C5 ELECTRICAL CONDUIT BANK
NTS

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801–7114
Tel (603) 430–9282
Fax (603) 436–2315

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APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

TAX MAP 125 LOT 2A
46–64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
	REVISIONS	
4	DETAIL V	2/6/18
3	INSPECTION & MAINTENANCE NOTES, DETAILS V & W	1/12/18
2	DETAIL Y REMOVED, DETAIL W	12/19/17
1	DETAIL X/C5, ADDED DETAIL Y/C4	10/17/17
0	ISSUED FOR COMMENT	6/19/17

JOHN R. CHAGNON NO. 9951 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

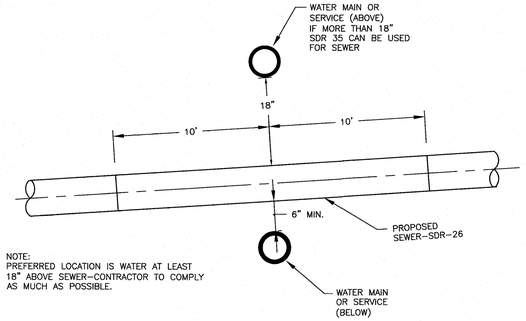
SCALE: AS NOTED JUNE 2017

DETAILS & STORM WATER MANAGEMENT

D4

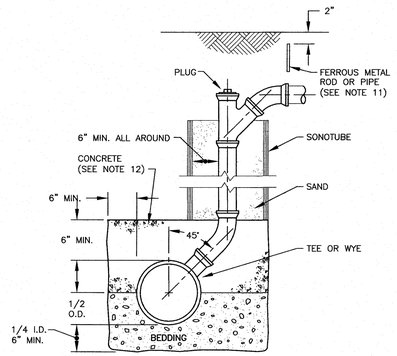
1808

J:\JOBS\1JN1800s\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808D146.dwg, D4_DETAILS



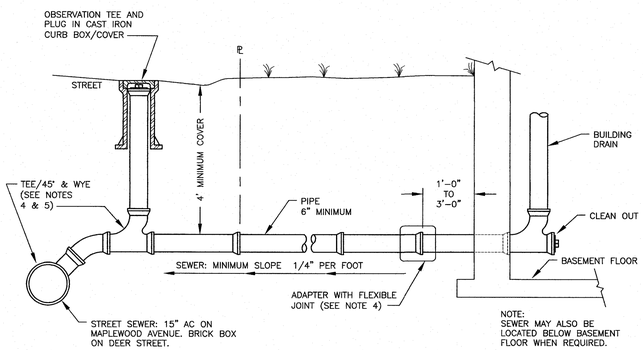
NOTE:
PREFERRED LOCATION IS WATER AT LEAST 18" ABOVE SEWER-CONTRACTOR TO COMPLY AS MUCH AS POSSIBLE.

W/S WATER CROSSING
IF NEEDED-WHERE WATER LINE IS LESS THAN 18" ABOVE (OR IS BELOW) SEWER. NTS



NO BACKFILLING BEFORE CONCRETE HAS TAKEN INITIAL SET (7 HRS. MIN.). BACKFILLING TO BE BROUGHT UP EVENLY ON ALL SIDES.

Z/- CHIMNEY (SEE NOTE 13)
NOT TO SCALE IF NEEDED



AA/C5 SEWER SERVICE
NOT TO SCALE

GENERAL NOTES

1) MINIMUM PIPE SIZE FOR COMMERCIAL SERVICE SHALL BE SIX INCHES.

2) PIPE AND JOINT MATERIALS:

A. PLASTIC SEWER PIPE

1. PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034	*PVC (SOLID WALL)	8" THROUGH 15" (SDR 35)
F679	PVC (SOLID WALL)	18" THROUGH 27" (T-1 & T-2)
F789	PVC (SOLID WALL)	4" THROUGH 18" (T-1 To T-3)
F794	PVC (RIBBED WALL)	8" THROUGH 36"
AWWA C900	PVC (SOLID WALL)	8" THROUGH 18"

*PVC: POLYVINYL CHLORIDE

2. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON BELL AND SPIGOT TYPE.

B. DUCTILE IRON PIPE, FITTINGS AND JOINTS.

1. DUCTILE IRON PIPE AND FITTINGS FOR SEWERS SHALL CONFORM TO THE FOLLOWING STANDARDS OF THE UNITED STATES OF AMERICA STANDARDS INSTITUTE:

A21.50 THICKNESS DESIGN OF DUCTILE IRON PIPE AND WITH ASTM A-536 DUCTILE IRON CASTINGS.

A21.51 DUCTILE IRON PIPE, CENTRIFUGALLY CAST IN METAL MOULDS OR SAND LINED MOULDS FOR SEWER APPLICATIONS.

2. JOINTS SHALL BE OF THE MECHANICAL OR PUSH ON TYPE. JOINTS AND GASKETS SHALL CONFORM TO:

A21.11 RUBBER GASKET JOINTS FOR CAST IRON PRESSURE PIPE & FITTINGS.

3) DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

4) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.

5) TEES AND WYES: WHERE A TEE OR WYE IS NOT AVAILABLE IN THE EXISTING STREET SEWER, AN APPROPRIATE CONNECTION SHALL BE MADE DEPENDING ON THE PIPE ENCOUNTERED, FOR PVC PIPE, USE PVC SADDLES OR INSERT-A-TEE, OR CUT IN A SANITARY TEE. FOR CLAY PIPE, USE INSERT-A-TEE OR CUT IN A SANITARY TEE. ALL WORK TO BE APPROVED BY GOVERNING BODY.

6) HOUSE SEWER INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND REFILL FOR DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE FOUNDATION AT A GRADE OF NOT LESS THAN 1/4 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.

7) TESTING: WHEN REQUIRED BY THE GOVERNING AUTHORITY, TESTING SHALL CONFORM TO ENV-WQ 704.07.

8) ILLEGAL CONNECTIONS: NOTHING BUT SANITARY WASTE FLOW FROM DWELLING TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR OTHER SIMILAR CONNECTIONS CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.

9) WATER SERVICE SHALL NOT BE LAID IN SAME TRENCH AS SEWER SERVICE, UNLESS IT IS ON A SHELF 12" HIGHER, AND 18" APART.

10) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE, FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90%-100% PASSING	3/4 INCH SCREEN
20%- 55% PASSING	3/8 INCH SCREEN
0%- 10% PASSING	#4 SIEVE
0%- 5% PASSING	#8 SIEVE

WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.

11) LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPE FINDER.

12) CAST-IN-PLACE CONCRETE: SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

CEMENT: 6.0 BAGS PER CUBIC YARD
WATER: 5.75 GALLONS PER BAG OF CEMENT
MAXIMUM AGGREGATE SIZE: 3/4 INCH

13) CHIMNEYS: IF VERTICAL DROP INTO SEWER IS GREATER THAN 4 FEET, A CHIMNEY SHALL BE CONSTRUCTED FOR THE HOUSE CONNECTION. CHIMNEY INSTALLATION AS RECOMMENDED BY THE PIPE MANUFACTURER MAY BE USED IF APPROVED BY THE ENGINEER.

14) BACKFILL UP TO SUBBASE GRAVEL SHALL BE WITH EXCAVATED SOIL FROM TRENCHING OPERATIONS. COMPACT IN 8" LIFTS WITH VIBRATORY PLATE COMPACTORS TO 90% OF MODIFIED PROCTOR DENSITY. IF FINE-GRAINED, COMPACT WITH POGO STICKS OR SHEEPSFOOT ROLLERS. PLACE NO LARGE ROCKS WITHIN 24" OF PIPE. TRENCHES THAT ARE NOT ADEQUATELY COMPACTED SHALL BE RE-EXCAVATED AND BACKFILLED UNDER THE SUPERVISION OF THE DESIGN ENGINEER OR GOVERNING BODY. UNSUITABLE BACKFILL MATERIAL INCLUDES CHUNKS OF PAVEMENT, TOPSOIL, ROCKS OVER 6" IN SIZE, MUCK, PEAT OR PIECES OF PAVEMENT.

15) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB-SITE SAFETY AND COMPLIANCE WITH GOVERNING REGULATIONS.

GENERAL NOTES, cont'd

16) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. FOR TRENCH WIDTH SEE TRENCH DETAIL.

17) SAND BLANKET: CLEAN SAND, FREE FROM ORGANIC MATTER, SO GRADED THAT 90% - 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.

18) BASE COURSE GRAVEL, IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE:

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION.

19) FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.

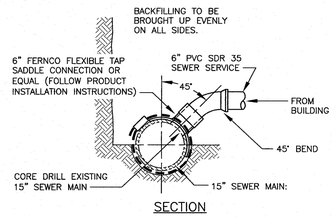
20) IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.

21) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

22) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION.

23) THE PURPOSE OF THIS PLAN IS TO SHOW STANDARDS FOR SEWER CONSTRUCTION.

24) ALL WORK SHALL BE IN COMPLIANCE WITH NHDES CODE OF ADMINISTRATIVE RULES PART ENV-WQ 704 DESIGN OF SEWERS.



SECTION

T/C5 SEWER SERVICE CONNECTION DETAIL
(AC PIPE) NTS

NOTE: COORDINATE DESIGN OF BRICK BOX SEWER CONNECTION WITH CITY OF PORTSMOUTH DPW. PROVIDE SHOP DRAWINGS FOR REVIEW.

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

TAX MAP 125 LOT 2A
46-64 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	DETAIL Y; REMOVE DETAIL MM	1/12/18
1	DETAIL Y	12/19/17
0	ISSUED FOR COMMENT	6/19/17

REVISIONS

STATE OF NEW HAMPSHIRE
JOHN R. CHAGNON
No. 7951
LICENSED PROFESSIONAL ENGINEER

SCALE: AS NOTED JUNE 2017

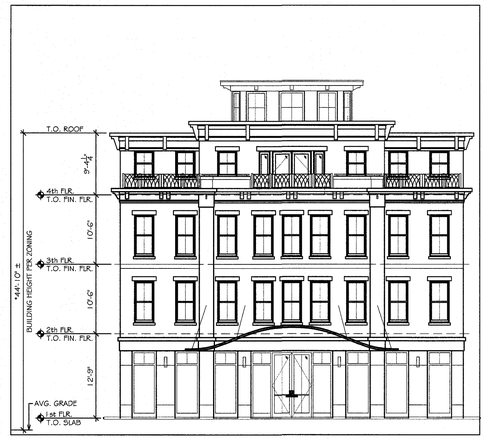
SEWER DETAILS

D5

1808

J:\JOBS\1808s\1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\1808D746.dwg, D5_SWH_DETAILS

Maplewood Avenue
3/32"= 1'-0"



Maplewood Intersection
3/32"= 1'-0"

Deer Street
3/32"= 1'-0"

Pedestrian Way Between Phase 1 and 2
3/32"= 1'-0"

Pedestrian Way Between Phase 2 and VFW (BRIDGE ST.)
3/32"= 1'-0"

REVISIONS:

SOMMA

36 Maplewood Avenue
Portsmouth, NH 03801
PH: 603.766.3760

46-64 Maplewood Avenue Portsmouth, NH

TITLE:

ELEVATIONS

SCALE: AS NOTED
DRAWN BY: SOMMA
CHECKED BY:
PROJECT NO.: -
DATE: JANUARY 30, 2018

ARCH

1808

LETTER OF TRANSMITTAL

TO: **City of Portsmouth Planning Department**
1 Junkins Avenue
Portsmouth, NH
03801

FROM:
AMBIT ENGINEERING, INC.
Civil Engineers and Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, NH 03801
Phone (603) 430-9282 Fax 436-2315

DATE: **4/10/2018**	JOB NO. **1808**
ATTENTION: **Planning Board**	
RE: **Site Plan Approval**	
36-64 Maplewood	

WE ARE SENDING YOU
☒ ATTACHED ☐ UNDER SEPARATE COVER VIA
☐ SHOP DRAWING ☐ COPY OF LETTER ☐ PRINTS
☐ PLANS ☐ CHANGE ORDER ☐ SPECIFICATIONS
☐ SAMPLES ☐ OTHER

COPIES	DATE	REVISION	DESCRIPTION
2	**4/10/18**		**Site Plans - Full Size**
10	**4/10/18**		**11X17 of same**
12			**Supplemental Information**
1			**PDF of site plans & Documents**

THESE ARE TRANSMITTED AS CHECKED BELOW

☒ FOR YOUR APPROVAL ☐ FOR YOUR USE ☐ AS REQUESTED
☐ FOR BIDS DUE
☐ FOR REVIEW AND COMMENT ☐ RETURNED AFTER LOAN TO US

REMARKS

COPY TO **Steve Kelm, Paul McEachern, Somma Studios, Woodburn & Co.**

If enclosures are not as noted, kindly notify us at once.

AMBIT ENGINEERING, INC. CIVIL ENGINEERS AND LAND SURVEYORS
801 Islington Street, Suite 31, Portsmouth, NH 03801 Phone (603) 430-9282 Fax 436-2315

10 April, 2018

Mr. Dexter Legg, Chair
City of Portsmouth Planning Board
1 Junkins Avenue
Portsmouth, NH 03801

RE: Application for Site Plan Review for 46 – 64 Maplewood Avenue, Portsmouth Tax Map 154 – Lot 2

Dear Chairman Legg and Planning Board Members:

On behalf of 30 Maplewood, LLC, we hereby submit Site Plans for the 46 - 64 Maplewood Avenue project for Planning Board approval. The applicant has worked to address comments throughout the process. We submitted revised plans and supporting material on February 6th to address the Technical Advisory Committee Site Plan Conditions of Approval from their January 30, 2018 meeting. The plan set has also been revised to address the Stipulations and Conditions proposed from the February 15 Staff memo. The Planning Board, at your meeting on March 15, 2018, voted to table the application to your April meeting to address the following:

1. To require that the applicant submit a revised and updated drainage study to the Planning Department for technical review and approval by City staff.

2. To modify the drainage analysis using rainfall data that is based on the latest extreme precipitation tables from the Northeast Regional Climate Center (Cornell Study).

These tasks were completed, information submitted, and based on our submission additional comments were received at a meeting with staff on March 21. The comments are highlighted below, with response in **bold text**:

1. The Silva Cells and the Trees will require a license to be in the City Right of Way. **The applicant proposes to plant street trees within the City Right-of-Way. We believe that no license is required as the trees will be the City's property once planted.**
2. Long term stormwater maintenance shall be documented on the recorded plan. It shall be noted who is responsible and what the references are. **Long Term Maintenance requirements are detailed on Sheet C4.**
3. The drainage analysis shall be updated with complete reference to the new rainfall data used. **The Drainage Analysis was based on the new rainfall data as requested by the Planning Board on March 15.**

4. Temporary Dewatering will be allowed with a permit. Building ground water dewatering with underdrains will not be allowed. Revise Note 5 on Sheet C6 to reflect this requirement. **Note 5 on Sheet C6 has been revised to reflect similar language approved by the City for the DSA Deer Street project. While we understand there is a capacity issues an outright prohibition is not fair to the applicant. As a part of the approval the City is requiring a contribution from the applicant for a Drainage Analysis of the existing drainage system. The applicant has engaged a Geo-technical Engineer who prepared a report (attached) indicating the level of groundwater discharge to be 1,000 – 1,500 gallons per day. This is an insignificant amount compared to the upstream watershed. It would be prudent to wait for the results from the study to see what capacity may exist, and hope the City could include the applicant's report in the analysis to gauge impact.**
5. The Cover Sheet should reference Jim Tow for water and sewer contacts. **The Cover Sheet was revised as requested.**
6. Why is OCS#2 shown spatially where the communication vault exists? **The vault has been abandoned and will be removed, as noted on Sheet C2.**
7. The Easement for the 238 Deer Street electric service should be part of the approval. **The new electrical service for 238 Deer Street (formerly the VFW - abutter) may be required for the elimination of a current electrical pole with overhead service to the VFW building. The elimination of the pole on Deer Street is required for the DSA project. If the pole elimination and service needs to cross on to the 30 Maplewood, LLC property then the burden is on the abutter to negotiate the terms.**
8. Both the Fire and Domestic Water Lines will have Gate Valves, not curb stops. **This has been revised on Sheet C4.**
9. The Applicant is showing a new CB3 in Deer Street. The structure conflicts with the gas main. We are not sure why it exists. **The structure has been eliminated as requested.**
10. A sewer discharge permit is required. Send Permit to The City Engineer for review and signature. **Agreed.**

We are excited to bring this project through the City approval process and look forward to working with the Planning Board to obtain final approval for this quality development. We look forward to discussing the plan at the April 19th Planning Board Meeting.

Sincerely,

John Chagnon, PE
Ambit Engineering, Inc.
CC (via email): 30 Maplewood Avenue, LLC, Paul McEachern
J:\JOBS1\JN1800s\JN1800s\JN1808\2017 Site Plan 46 Maplewood\Applications\City of Portsmouth\Planning Board Submission Letter 4-10-18.doc

14-1141.2 S

March 22, 2018

30 Maplewood, LLC
Attn: Stephen Kelm
30 Maplewood Avenue
Portsmouth, NH 03801

Subject: Hydrogeological Services Letter Report
Proposed Multi-Story Building
46 Maplewood Avenue
Portsmouth, New Hampshire

Dear Steve:

In accordance with our Agreement dated March 16, 2018, we have prepared this letter report for our hydrogeological services performed for the subject project. The purpose of our services is to discuss our hydrogeological services performed, the methodology of our evaluation, and estimated volume of transmission of site-groundwater to site-stormwater discharge. This letter report presents our findings and its contents are subject to the limitations set forth in Appendix A of our geotechnical engineering report dated August 24, 2015.

PROJECT UNDERSTANDING

The site is located at 46 Maplewood Avenue and northeast of an existing VFW building at 238 Deer Street. The site is currently occupied by paved parking area. Based on topographic information provided by Ambit Engineering, Inc. the site slopes downward from east to west from about elevation 14 to 12 feet.

We understand proposed construction includes a new 4 to 5 story building. One level of underground parking will be located below the northern portion of the building. The underground parking will have a finish elevation of about 5.5 feet, but may be raised a few feet in consideration of our hydrogeological services described hereafter.

The proposed construction is depicted on the site plans included in Appendix B.

FIELD TESTING

S.W.COLE made a site visit on Thursday, June 23, 2016 to perform hydrogeological-field testing. During previously performed geotechnical engineering services, S.W.COLE installed piezometer wells in Test Borings B-2 and B-9 for water level measurements. The piezometer well in Test Boring B-9 was paved over prior to our site visit, so our hydrogeological-field testing was performed within the piezometer well installed in Test Boring B-2.

During our site visit, we performed a rising head permeability test for the piezometer well installed in Test Boring B-2.

A site plan depicting the location of Test Boring B-2 and associated piezometer well is included in Appendix B. A graphic presentation of our hydrogeological-field testing results is included in Appendix C.

EVALUATION

Following hydrogeological-field testing, we performed an evaluation for estimated volume of transmission of site-groundwater to site-stormwater discharge. Evaluation parameters were selected based on our hydrogeological-field testing, our previously performed geotechnical engineering services, and our understanding of proposed construction.

We calculated the hydraulic conductivity using the "well point-filter in uniform soil" method as described in Figure 19.4 of Lambe, T. W., and Whitman, R. V. (1979). *Soil Mechanics: SI Version.* John Wiley & Sons, NY. We calculated the flow volume using infiltration gallery calculations as described in Anderson, K. E., (1993). *Groundwater Handbook.* National Groundwater Association.

Based on our hydrogeological-field testing, our previously performed geotechnical engineering services, and our understanding of proposed construction, we estimate a flow volume of 1,000 to 1,500 gallons per day for transmission of site-groundwater to site-stormwater discharge.

CLOSURE

We trust this letter meets your current needs. If you have any questions, please don't hesitate to contact us. We look forward to assisting you during the design phase of your project.

Sincerely,

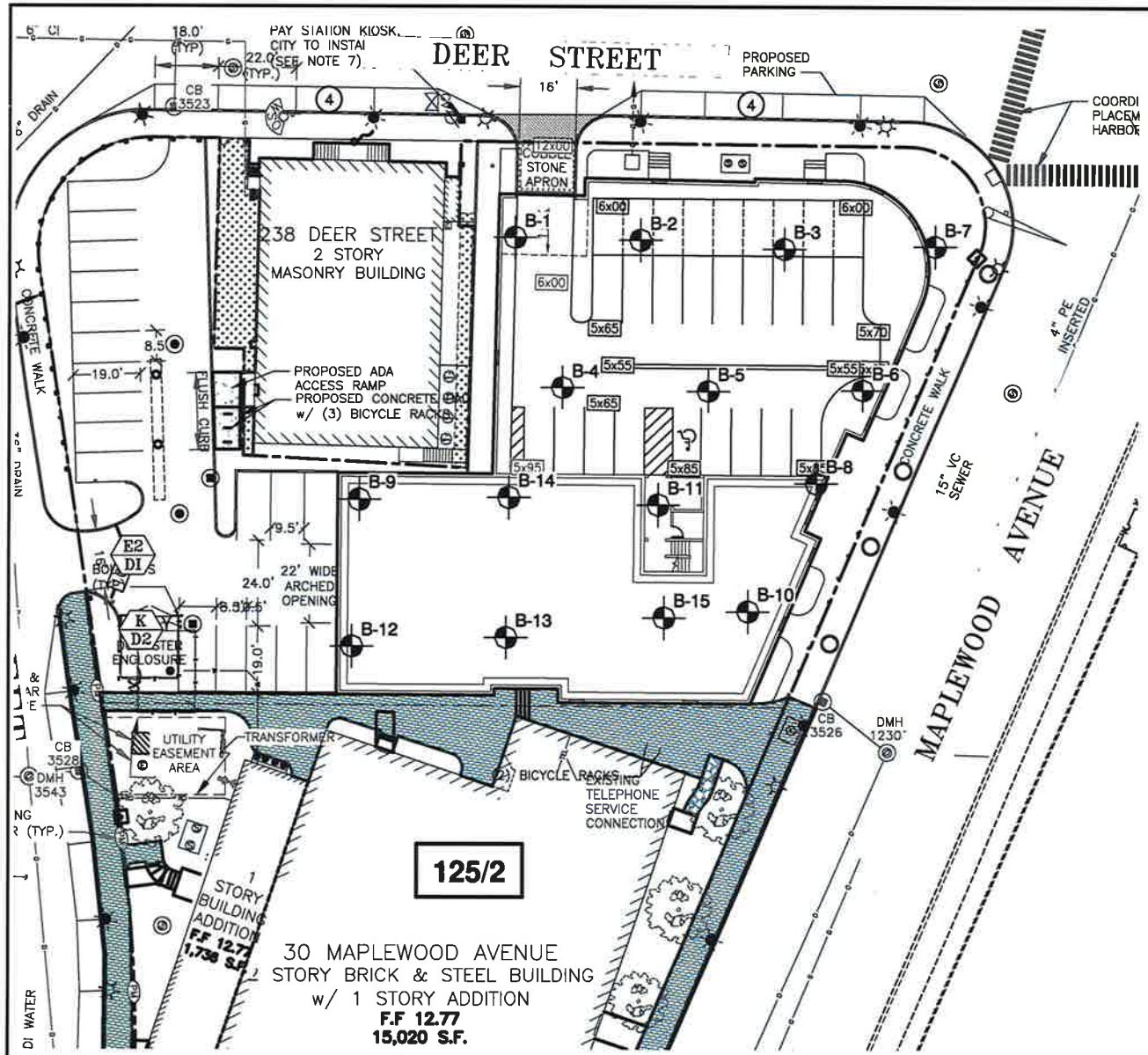
S. W. Cole Engineering, Inc.

Nathan M. Cote, P.E.
Geotechnical Engineer

NMC:crl-cbm

APPENDIX B

Figures



LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A SCALE PLAN OF THE SITE PROVIDED BY AMBIT ENGINEERING, INC., IN AUTOCAD DWG FORMAT RECEIVED 6/23/2015.
2. THE BORINGS WERE LOCATED IN THE FIELD BY TAPED MEASUREMENTS FROM EXISTING SITE FEATURES.
3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.
4. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.

0 30 60 Feet

S.W.COLE ENGINEERING, INC.

30 MAPLEWOOD, LLC

EXPLORATION LOCATION PLAN

PROPOSED PHASE II DEVELOPMENT
30 MAPLEWOOD AVENUE
PORTSMOUTH, NEW HAMPSHIRE

Job No.:	14-1141	Scale:	1" = 30'
Date :	06/26/2015	Sheet:	1

R:\2014\14-1141\CAD\Drawings\14-1141 ELP.dwg, 6/26/2015 1:28:20 PM, I.I., CEM, S. W. Cole Engineering, Inc.

APPENDIX C

Field Testing Results

Permeability Test

Variable Head

AMBIT ENGINEERING / 46 MAPLEWOOD AVE / PORTSMOUTH, NH 14-1141.2

Boring No. B-2

STRATUM

EXISTING FILL AND SILT-SAND-GRAVEL MIXTURE

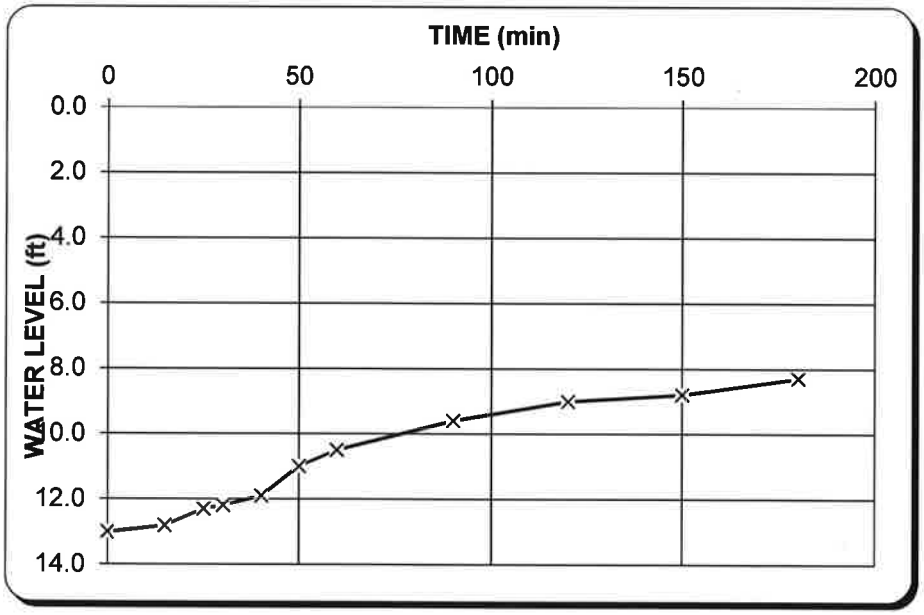
STANDPIPE DIAMETER (d)	2.00 in	5.08	cm
HOLE DIAMETER (D)	9.00 in	22.86	cm
INTAKE LENGTH (L)	6.90 ft	210.31	cm
INITIAL PIEZ. HEAD (H_1)	4.90 ft	149.35	cm
FINAL PIEZ. HEAD (H_2)	0.20 ft	6.10	cm
TIME (t)	180.00 min	10800.00	sec
TRANS. RATIO (m)	Assume =1	1.00	

PERMEABILITY **1.32E-05 cm/sec**

Source: Lambe & Whitman
Case G mL/D>4

Rev. 8/16/89

INITIAL WATER LEVEL- 8.1 ft.



S.W.COLE ENGINEERING, INC.

BORING LOG

BORING NO.: B-2
SHEET: 1 OF 1
PROJECT NO.: 14-1141
DATE START: 4/23/2015
DATE FINISH: 4/23/2015
ELEVATION: 13' ±
SWC REP.: N. COTE

PROJECT / CLIENT: PROPOSED MULTI-STORY BUILDING / 30 MAPLEWOOD, LLC
LOCATION: 30 MAPLEWOOD AVENUE (PORTSMOUTH, NEW HAMPSHIRE)
DRILLING CO.: GREAT WORKS TEST BORING, INC. DRILLER: JEFF LEE

	TYPE	SIZE I.D.	HAMMER WT.	HAMMER FALL
CASING:	HSA	2-1/4"	-	-
SAMPLER:	SS	1-3/8"	140 lbs.	30"
CORE BARREL:	-	-		

WATER LEVEL INFORMATION
PIEZOMETER: WATER AT 7.7' (4/24/2015),
WATER 8.0' (5/11/2015)

CASING BLOWS PER FOOT	SAMPLE NO.	PEN.	REC.	DEPTH @ BOT	SAMPLER BLOWS PER 6" 0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
	1D	12"	6"	1.0'	6	9	50/0"		3"	ASPHALT CONCRETE PAVEMENT
									1.0'	BROWN GRAVELLY SILTY SAND WITH COBBLES (FILL)
									6.0'	GRAY-ORANGE-BROWN-BLACK GRAVELLY SILTY SAND AND GRAVEL (FILL)
	2D	24"	16"	7.0'	12	11	14	13	10.0'	GRAY-ORANGE-BROWN GRAVELLY SILTY SAND ~MEDIUM DENSE~
	3D	24"	24"	12.0'	4	5	8	8	15.0'	BROWN FINE TO MEDIUM SAND TRACE SILT ~MEDIUM DENSE~
	4D	19"	19"	16.6'	12	16	31	50/1"	20.0'	BROWN SAND AND GRAVEL TRACE SILT ~MEDIUM DENSE TO DENSE~
	5D	24"	16"	22.0'	3	4	9	12	25.0'	GRAY GRAVELLY SILTY SAND (GLACIAL TILL) ~MEDIUM DENSE~
	6D	19"	19"	26.6'	13	35	34	50/1"	30.5'	BROWN GRAVELLY SILTY SAND (GLACIAL TILL) ~VERY DENSE~
										REFUSAL AT 30.5'
										PIEZOMETER: RISER: GS TO 5.0 FT BGS SCREEN: 5.0 TO 15.0 FT BGS BACKFILL: BENTONITE GS TO 2.0 FT BGS, CUTTINGS 2.0 TO 5.0 FT BGS, AND FILTER SAND 5.0 TO 15.0 FT BGS.

SAMPLES:
D = SPLIT SPOON
C = 2" SHELBY TUBE
S = 3" SHELBY TUBE
U = 3.5" SHELBY TUBE

SOIL CLASSIFIED BY:
[ ] DRILLER - VISUALLY
[X] SOIL TECH. - VISUALLY
[ ] LABORATORY TEST

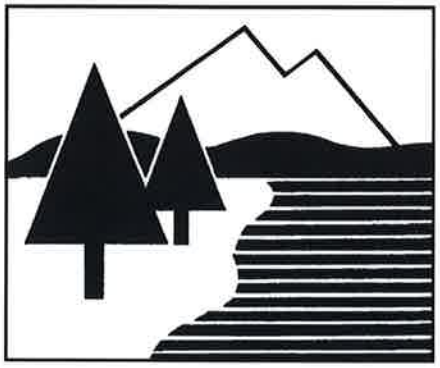
REMARKS: PIEZOMETER INSTALLED

STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES AND THE TRANSITION MAY BE GRADUAL.

BORING NO.: B-2

DRAINAGE ANALYSIS
SITE DEVELOPMENT

MAP 125, LOT 2A
46 Maplewood Avenue
For
30 Maplewood Avenue, LLC



October, 2017

Revised: December, 2017

Revised: March, 2018

Ambit Engineering, Inc.

Civil Engineers and Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, NH 03801
Phone: 603.430.9282; Fax: 436.2315
E-mail: jlm@ambitengineering.com

TABLE OF CONTENTS

EXECUTIVE SUMMARY

This analysis is meant to be used by City officials, the developer, builders, earthwork contractors and other interested parties to better understand the assumptions and intent of the stormwater management system. This drainage analysis examines and compares the existing and proposed conditions stormwater drainage patterns for a Site Development at 46 Maplewood Avenue in the City of Portsmouth, at Assessor's Map 125, Lot 2A. The total lot size is 21,798 s.f. The point of analysis is a downstream manhole located on Deer Street (DMH 3540). The existing site is primarily impervious surface of pavement and buildings. The small areas of porous surfaces are either gravel or mulch.

The "existing" conditions site plan show the condition immediately before development (i.e., as it exists today). Runoff amounts from this existing state are a function of the land cover, vegetation and soils; together those factors produce what is known as the Curve Number. The "existing" or pre-developed curve number for the entire site (excluding offsite subcatchments) is 97. Typically, highly developed areas with lots of impervious area will have curve numbers approaching 90, whereas undisturbed or undeveloped areas can have curve numbers as low as 30 if the soils are well-drained and covered with forest. The proposed development's curve number increases slightly to 98 due to the increase in impervious surface (pavement and rooftop). However, because the increase is in impervious surface is very small, post development peak runoff is unchanged. A Hancor "Water Quality Treatment Unit" is being provided within the parking lot along the Bridge Street entrance to the site. This unit is designed to divert low flows from up to the 2-Year Storm Event to provide treatment of surface runoff from the parking lot. Additionally, there are a number of "Silva Cells" that accept runoff from the proposed rooftops. This system will provide the newly planted trees with the much needed water that is lacking in an urban environment with so much hardscape.

There is one design point on this parcel which is used to compare pre and post-developed runoff amounts. This is the drain manhole in Deer Street (DMH 3540). This design point is labeled DP1. However, the system downstream from this manhole has been modeled for analysis as well.

The 2, 10, 25 and 50 year, 24 hour storm events are used to compare the peak runoff amounts at the design point (DP 1). The source of rainfall data is from the Northeast Regional Climate Center and are as follows:

Q2 = 3.20 in.
Q10 = 4.86 in.
Q25 = 6.16 in.
Q50 = 7.37 in.

DRAINAGE ANALYSIS
SITE DEVELOPMENT

MAP 125, LOT 2A
46 Maplewood Avenue
For
30 Maplewood, LLC

INTRODUCTION

This drainage report is designed to assist the owner, planning board, contractor, regulatory reviewer, and others in understanding the impact of the proposed development project on local surface water runoff and quality. The project site is shown on City of Portsmouth Assessor's Map 125 as Lot 2A. The proposed project is for the development of a 21,798 s.f. parcel for Mixed Use Residential and Commercial building.

This report includes information about the existing site and the proposed development as necessary to analyze stormwater runoff treatment and management. The report includes maps of existing and proposed subcatchments and calculations of runoff. The report will provide a brief narrative description of the storm water runoff and describe numerically and graphically the surface water runoff patterns for this site. Proposed stormwater management and treatment structures and methods will also be described. To fully understand the drainage analysis, the reader should review plans W1 and W2 which graphically show the assumptions used in the HydroCad stormwater model.

Peak-runoff amounts in the developed condition are reduced when compared to pre-developed amounts. This is achieved without constructed detention ponds due to the small net change in the impervious surface area (paved parking/buildings) and infiltration techniques utilizing "Silva Cells". Treatment of portions of the site runoff are achieved by the use of a Hancor "Water Quality Treatment Unit" that is being provided within the parking lot along the Bridge Street entrance to the site. Additionally, there are a number of "Silva Cells" that accept runoff from the proposed rooftops. This system will provide the newly planted trees with the much needed water that is lacking in an urban environment with so much hardscape.

METHODOLOGY

This report uses the US Soil Conservation Service Method for prediction of storm water runoff. The SCS method is published in The National Engineering Handbook, Section 4 "Hydrology", in Technical Release No. 20, (TR-20) "Computer Program for Project Formulation Hydrology", and Technical Release-55 (TR-55) "Urban Hydrology for Small Watersheds". This report uses the HydroCAD program, written by Applied Microcomputer Systems, Chocorua, N.H., to apply these methods. Rainfall data are taken from the Extreme Precipitation Tables published by the Northeast Climate Center.

SITE SPECIFIC INFORMATION

Located on Maplewood Avenue in Portsmouth, this site is currently developed and occupied by paved parking.

The existing site topography can be described as fairly flat that gently slopes from northwest to southeast away from Deer Street.

The majority of Soils on this site are of the "Urban land-Canton" complex. These soils can be described as being well-drained.

DRAINAGE ANALYSIS

This drainage analysis consists of two sections, an analysis of the stormwater runoff from the site in the existing condition, and an analysis of the stormwater runoff from the same area with the proposed development. Areas and drainage information were taken from an existing conditions plan and site topographic map prepared by this office. Soils information was taken from the NRCS soils maps. Vegetative cover information was determined by on-site inspection.

Existing or Pre-Developed Site Runoff

In order to study the site in greater detail and estimate peak stormwater runoff, it is necessary to divide the site into watershed subcatchments. There are 8 subcatchments that define the existing analysis. Their delineation is based on where their runoff discharges across property boundaries.

There is a single discharge point identified for analysis of stormwater runoff for this project. This point of analysis is a downstream manhole located on Deer Street (DMH 3540) and is the same location in both the existing and proposed condition. All eight pre-development subcatchments flow to this Design Point (DP 1).

Subcatchment Summaries

Subcatchment ES1:	This Subcatchment defines the existing building to the southerly end of the site near Hanover Street. It is primarily the rooftop and is unchanged in the proposed conditions.
Subcatchment ES2:	This Subcatchment defines the existing parking lot to the northerly end of the site near Deer Street. It is primarily impervious surface with very little landscape surface.
Subcatchment ES3:	This Subcatchment defines the existing parking lot to the northeasterly corner of the site near Deer Street and Maplewood Avenue. It is primarily impervious surface with very little landscape surface.
Subcatchment ES4:	This Subcatchment defines the existing building located in the northwest corner of the site near Deer Street and Bridge Street. It is primarily rooftop and is unchanged in the proposed conditions.
Subcatchment ES5:	This subcatchment defines the runoff area from the sidewalk and roadway on the south and west sides of the site along Hanover Street and Bridge Street.

Subcatchment ES6: This subcatchment defines the runoff area from the sidewalk and roadway in the northeast corner of the site near Deer Street and Maplewood Ave.

Subcatchment ES7: This subcatchment defines the runoff area from the sidewalk and roadway on the east side of the site along Maplewood Ave.

Subcatchment ES8: This subcatchment defines the runoff area from the sidewalk and roadway on the east side of the site along Maplewood Ave.

The following table summarizes the existing subcatchments. The total rainfall amounts for the 2, 10, 25 and 50 year storm are 3.20", 4.86", 6.16" and 7.37".

Table 1: Existing Watershed Subcatchment Runoff Results.

Subcatchment	Area Sf	Tc min.	CN	2 Year Peak cfs	10 Year Peak cfs	25 Year Peak cfs	50 Year Peak cfs
ES1	16,738	5	98	1.2	1.9	2.4	2.9
ES2	22,558	5	97	1.6	2.5	3.2	3.9
ES3	10,622	5	97	0.8	1.2	1.5	1.8
ES4	4,188	5	98	0.3	0.5	0.6	0.7
ES5	20,107	5	97	1.5	2.3	2.9	3.4
ES6	11,261	5	97	0.8	1.3	1.6	1.9
ES7	5,094	5	97	0.4	0.6	0.7	0.9
ES8	7,456	5	97	0.5	0.8	1.1	1.3
Totals	98,024	----	97	----	----	----	----

See "Plan of Proposed Subcatchments" – W1.

Proposed or Post-Developed Site Runoff

There are eleven subcatchments in the proposed analysis. The same Design Point (DP 1) is utilized for the developed condition. All eleven subcatchments flow to the same Design Point (DP 1).

The following is a description of the various subcatchments:

Subcatchment PS1:	This Subcatchment defines the existing building to the southerly end of the site near Hanover Street. It is primarily the rooftop and is unchanged in the proposed conditions.
Subcatchment PS2:	This Subcatchment defines the existing parking lot to the northerly end of the site near Deer Street. It is reduced in area due to the construction of the proposed building and regrading of the parking lot itself. It is primarily impervious surface with very little landscape surface.
Subcatchment PS2a:	This Subcatchment defines a portion of the proposed building. It is primarily the rooftop and discharges to the Silva Cells along Maplewood Avenue via a roof drain.
Subcatchment PS2b:	This Subcatchment defines the existing parking lot to the northerly end of the site near Deer Street. It is reduced in area due to the construction of the proposed building and regarding of the parking lot itself. It is primarily impervious surface with very little landscape surface.
Subcatchment PS3:	This Subcatchment defines a portion of the proposed building. It is primarily the rooftop and discharges to the Silva Cells along Maplewood Avenue via a roof drain.
Subcatchment PS3a:	This Subcatchment defines a portion of the proposed building. It is primarily the rooftop and discharges to the Silva Cells along Maplewood Avenue via a roof drain.
Subcatchment PS4:	This Subcatchment defines the existing building located in the northwest corner of the site near Deer Street and Bridge

Street. It is primarily rooftop and is unchanged in the proposed conditions.

Subcatchment PS5: This subcatchment defines the runoff area from the sidewalk and roadway on the south and west sides of the site along Hanover Street and Bridge Street.

Subcatchment PS6: This subcatchment defines the runoff area from the sidewalk and roadway in the northeast corner of the site near Deer Street and Maplewood Ave.

Subcatchment PS7: This subcatchment defines the runoff area from the sidewalk and roadway on the east side of the site along Maplewood Ave.

Subcatchment PS8: This subcatchment defines the runoff area from the sidewalk and roadway on the east side of the site along Maplewood Ave.

Table 2: Proposed or Developed Conditions

Subcatchment	Area Sf	Tc min *	Weighted CN	2 Year Peak cfs	10 Year Peak cfs	25 Year Peak cfs	50 Year Peak cfs
PS1	16,738	5	98	1.2	1.9	2.4	2.9
PS2	7,730	5	97	0.6	0.9	1.1	1.3
PS2a	2,509	5	98	0.2	0.3	0.4	0.40
PS2b	5,028	5	98	0.4	0.6	0.7	0.9
PS3	8,542	5	98	0.6	1.0	1.2	1.5
PS3a	4,848	5	98	0.4	0.5	0.7	0.8
PS4	4,188	5	98	0.3	0.5	0.6	0.7
PS5	20,107	5	97	1.5	2.3	2.9	3.4
PS6	12,323	5	98	0.9	1.4	1.8	2.1

PS7	8,519	5	98	0.6	1.0	1.2	1.5
PS8	7,456	5	97	0.5	0.72	1.1	1.3
Totals	97,988*						

See "Plan of Proposed Subcatchments" – W2.

* This represents a 0.04% difference when compared to the existing condition total site area.

Stormwater Quality BMP's

Even though the City does not have specific requirements for stormwater treatment, the applicant has incorporated a "Hancor Water Quality Treatment Unit" for the purpose of treating stormwater runoff from portions of the impervious surfaces of the site. There will also be a substantial quantity of rooftop runoff that is discharged in the subsurface to the proposed "Silva Cells"along Maplewood Avenue. This system will provide the newly planted trees with the much needed water that is lacking in an urban environment with so much hardscape. Additionally, there is an Operation and Maintenance plan which includes certain housekeeping BMP's such as sweeping and landscape maintenance.

Peak Flow Rates

One of the main goals of any stormwater runoff analysis has to do with maintaining peak runoff amounts to pre-developed levels. The following table summarizes and compares the peak runoff amounts for the existing and proposed conditions, at the Design Point (DP1):

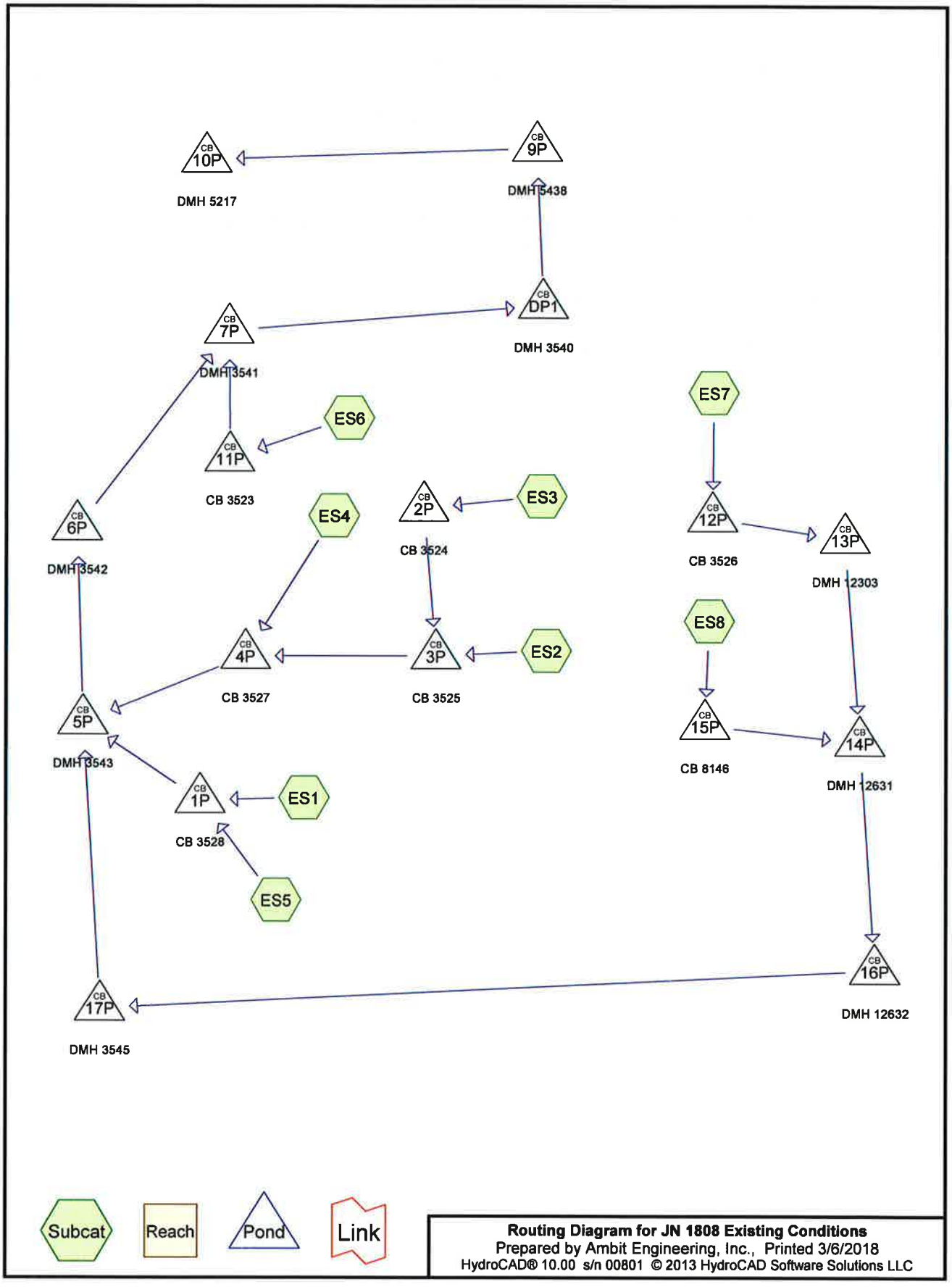
Comparison of Pre and Post Developed Discharge Rates

Design Point	Existing 2 yr/10 yr/25 yr/50 yr Peak Flow (cfs)	Proposed 2 yr/10 yr/25 yr/50 yr Peak Flow (cfs)	Change 2 yr/10 yr/25 yr/50 yr Peak Flow (cfs)
DP1	7.2/11.0/14.0/16.8	6.7/11.0/14.0/16.8	-0.5/0.0/0.0/0.0

Discussion: The design of the stormwater management system is such that no increases in peak flow are seen at the Design Point (DP1).

Conclusion

The new development can be built without increasing the risk of flooding or erosion onto neighboring properties. Given the results of the preceding analysis and compliance with known city requirements, it is our opinion that this project will not have downstream impact to the existing storm drain system.



Routing Diagram for JN 1808 Existing Conditions
Prepared by Ambit Engineering, Inc., Printed 3/6/2018

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.240	91	Fallow, bare soil, HSG C (ES2, ES3, ES5, ES6, ES7, ES8)
0.028	98	Gravel roads, HSG C (ES2, ES5, ES8)
0.572	98	Paved parking, HSG C (ES2, ES3, ES5, ES6)
0.926	98	Paved roads w/curbs & sewers, HSG C (ES2, ES3, ES5, ES6, ES7, ES8)
0.485	98	Roofs, HSG C (ES1, ES2, ES3, ES4, ES6)
2.250	**97**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.250	HSG C	ES1, ES2, ES3, ES4, ES5, ES6, ES7, ES8
0.000	HSG D	
0.000	Other	
2.250		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.240	0.000	0.000	0.240	Fallow, bare soil	ES 2, ES 3, ES 5, ES 6, ES 7, ES 8
0.000	0.000	0.028	0.000	0.000	0.028	Gravel roads	ES 2, ES 5, ES 8
0.000	0.000	0.572	0.000	0.000	0.572	Paved parking	ES 2, ES 3, ES 5, ES 6
0.000	0.000	0.926	0.000	0.000	0.926	Paved roads w/curbs & sewers	ES 2, ES 3, ES 5, ES 6, ES 7, ES 8
0.000	0.000	0.485	0.000	0.000	0.485	Roofs	ES 1, ES 2, ES 3, ES 4.

Ground Covers (selected nodes) (continued)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	**0.000**	**2.250**	**0.000**	**0.000**	**2.250**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	4.40	4.13	9.0	0.0300	0.012	12.0	0.0	0.0
2	2P	7.52	5.63	76.0	0.0249	0.012	12.0	0.0	0.0
3	3P	5.63	4.76	111.0	0.0078	0.012	12.0	0.0	0.0
4	4P	4.76	4.36	59.0	0.0068	0.012	12.0	0.0	0.0
5	5P	2.91	2.61	164.0	0.0018	0.012	36.0	0.0	0.0
6	6P	2.21	2.10	74.0	0.0015	0.012	36.0	0.0	0.0
7	7P	1.96	1.68	80.0	0.0035	0.012	36.0	0.0	0.0
8	9P	0.94	1.67	100.0	-0.0073	0.012	48.0	0.0	0.0
9	10P	1.67	-4.20	254.0	0.0231	0.012	48.0	0.0	0.0
10	11P	6.32	7.52	35.0	-0.0343	0.012	12.0	0.0	0.0
11	12P	6.18	6.09	18.5	0.0049	0.012	12.0	0.0	0.0
12	13P	6.09	5.24	170.0	0.0050	0.012	12.0	0.0	0.0
13	14P	5.24	5.08	32.0	0.0050	0.012	12.0	0.0	0.0
14	15P	5.32	5.24	16.0	0.0050	0.012	12.0	0.0	0.0
15	16P	5.08	4.39	139.0	0.0050	0.012	12.0	0.0	0.0
16	17P	4.34	2.91	166.0	0.0086	0.012	36.0	0.0	0.0
17	DP1	1.68	0.94	216.0	0.0034	0.012	48.0	0.0	0.0

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=1.2 cfs 0.095 af

Subcatchment ES2: Runoff Area=22,558 sf 87.71% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=1.6 cfs 0.123 af

Subcatchment ES3: Runoff Area=10,622 sf 81.41% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=0.8 cfs 0.058 af

Subcatchment ES4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.3 cfs 0.024 af

Subcatchment ES5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=1.5 cfs 0.110 af

Subcatchment ES6: Runoff Area=11,261 sf 83.94% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=0.8 cfs 0.062 af

Subcatchment ES7: Runoff Area=5,094 sf 89.03% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=0.4 cfs 0.028 af

Subcatchment ES8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=0.5 cfs 0.041 af

Pond 1P: CB 3528 Peak Elev=5.30' Inflow=2.7 cfs 0.205 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=2.7 cfs 0.205 af

Pond 2P: CB 3524 Peak Elev=7.92' Inflow=0.8 cfs 0.058 af
12.0" Round Culvert n=0.012 L=76.0' S=0.0249 '/' Outflow=0.8 cfs 0.058 af

Pond 3P: CB 3525 Peak Elev=6.61' Inflow=2.4 cfs 0.181 af
12.0" Round Culvert n=0.012 L=111.0' S=0.0078 '/' Outflow=2.4 cfs 0.181 af

Pond 4P: CB 3527 Peak Elev=5.79' Inflow=2.7 cfs 0.205 af
12.0" Round Culvert n=0.012 L=59.0' S=0.0068 '/' Outflow=2.7 cfs 0.205 af

Pond 5P: DMH 3543 Peak Elev=4.13' Inflow=6.3 cfs 0.479 af
36.0" Round Culvert n=0.012 L=164.0' S=0.0018 '/' Outflow=6.3 cfs 0.479 af

Pond 6P: DMH 3542 Peak Elev=3.60' Inflow=6.3 cfs 0.479 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=6.3 cfs 0.479 af

Pond 7P: DMH 3541 Peak Elev=3.37' Inflow=7.2 cfs 0.540 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=7.2 cfs 0.540 af

Pond 9P: DMH 5438 Peak Elev=2.70' Inflow=7.2 cfs 0.540 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=7.2 cfs 0.540 af

Pond 10P: DMH 5217 Peak Elev=2.49' Inflow=7.2 cfs 0.540 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=7.2 cfs 0.540 af

Pond 11P: CB 3523 Peak Elev=7.93' Inflow=0.8 cfs 0.062 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=0.8 cfs 0.062 af

Pond 12P: CB 3526 Peak Elev=6.58' Inflow=0.4 cfs 0.028 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0049 '/' Outflow=0.4 cfs 0.028 af

Pond 13P: DMH 12303 Peak Elev=6.46' Inflow=0.4 cfs 0.028 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=0.4 cfs 0.028 af

Pond 14P: DMH 12631 Peak Elev=5.85' Inflow=0.9 cfs 0.069 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=0.9 cfs 0.069 af

Pond 15P: CB 8146 Peak Elev=5.91' Inflow=0.5 cfs 0.041 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=0.5 cfs 0.041 af

Pond 16P: DMH 12632 Peak Elev=5.62' Inflow=0.9 cfs 0.069 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=0.9 cfs 0.069 af

Pond 17P: DMH 3545 Peak Elev=4.75' Inflow=0.9 cfs 0.069 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=0.9 cfs 0.069 af

Pond DP1: DMH 3540 Peak Elev=3.06' Inflow=7.2 cfs 0.540 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=7.2 cfs 0.540 af

Total Runoff Area = 2.250 ac Runoff Volume = 0.540 af Average Runoff Depth = 2.88"
10.65% Pervious = 0.240 ac 89.35% Impervious = 2.011 ac

Summary for Subcatchment ES1:

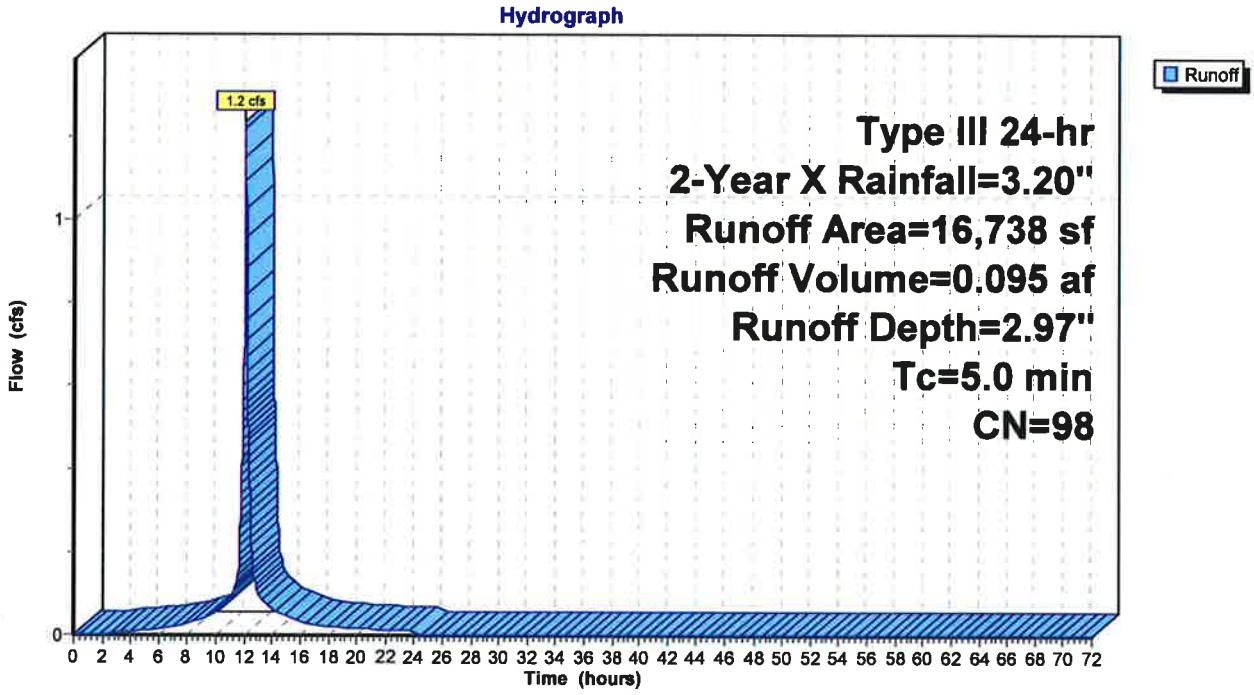
Runoff = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES1:



Summary for Subcatchment ES2:

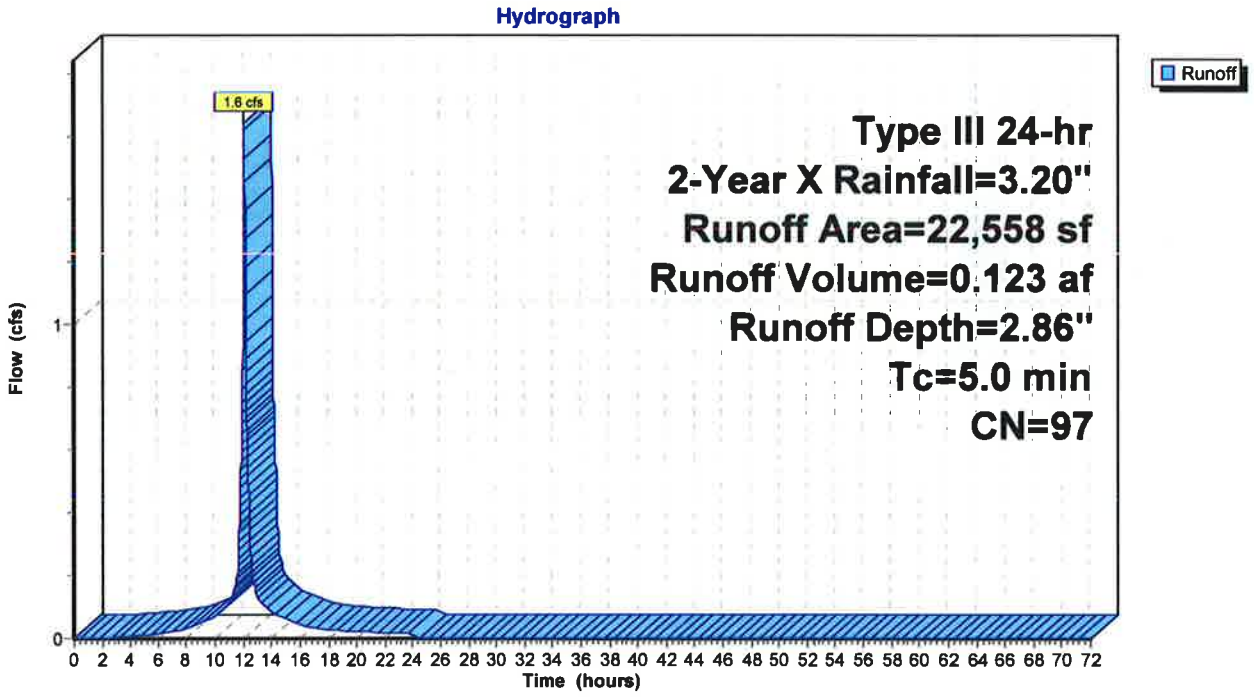
Runoff = 1.6 cfs @ 12.07 hrs, Volume= 0.123 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

	Area (sf)	CN	Description
	15,968	98	Paved parking, HSG C
	1,941	98	Paved roads w/curbs & sewers, HSG C
	990	98	Paved roads w/curbs & sewers, HSG C
	47	98	Roofs, HSG C
*	840	98	Gravel roads, HSG C
	2,772	91	Fallow, bare soil, HSG C
	22,558	97	Weighted Average
	2,772		12.29% Pervious Area
	19,786		87.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES2:



Summary for Subcatchment ES3:

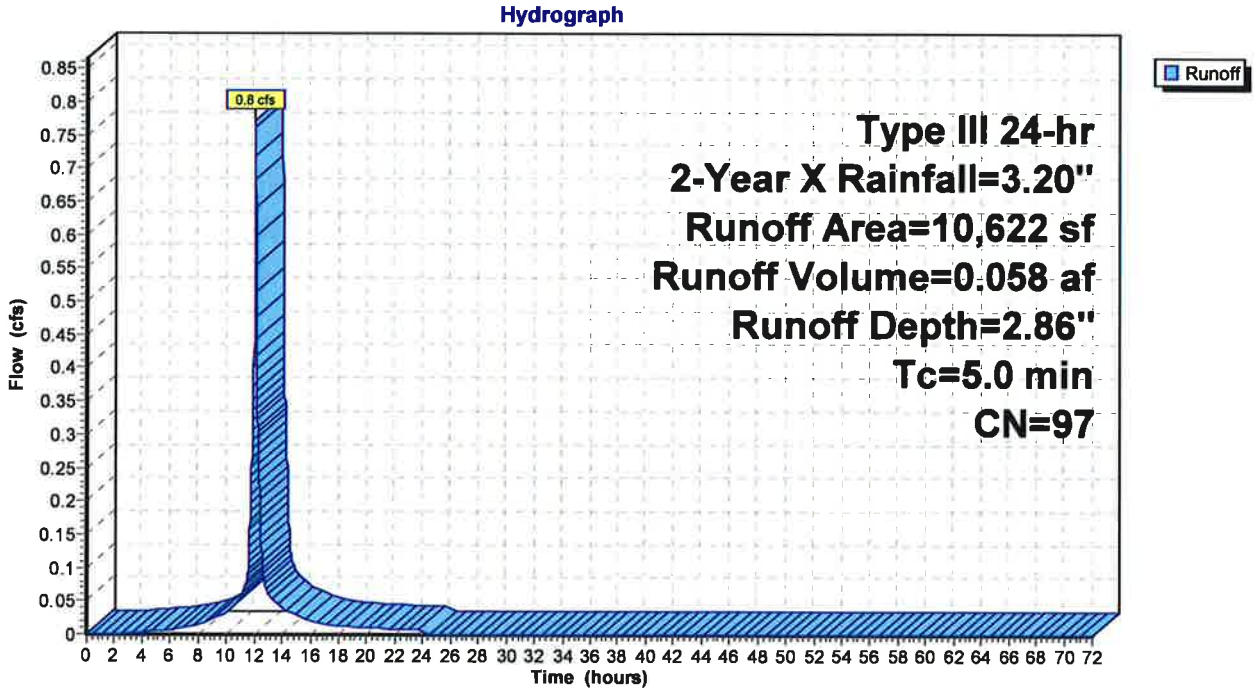
Runoff = 0.8 cfs @ 12.07 hrs, Volume= 0.058 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
8,579	98	Paved parking, HSG C
14	98	Paved roads w/curbs & sewers, HSG C
54	98	Roofs, HSG C
1,975	91	Fallow, bare soil, HSG C
10,622	97	Weighted Average
1,975		18.59% Pervious Area
8,647		81.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES3:



Summary for Subcatchment ES4:

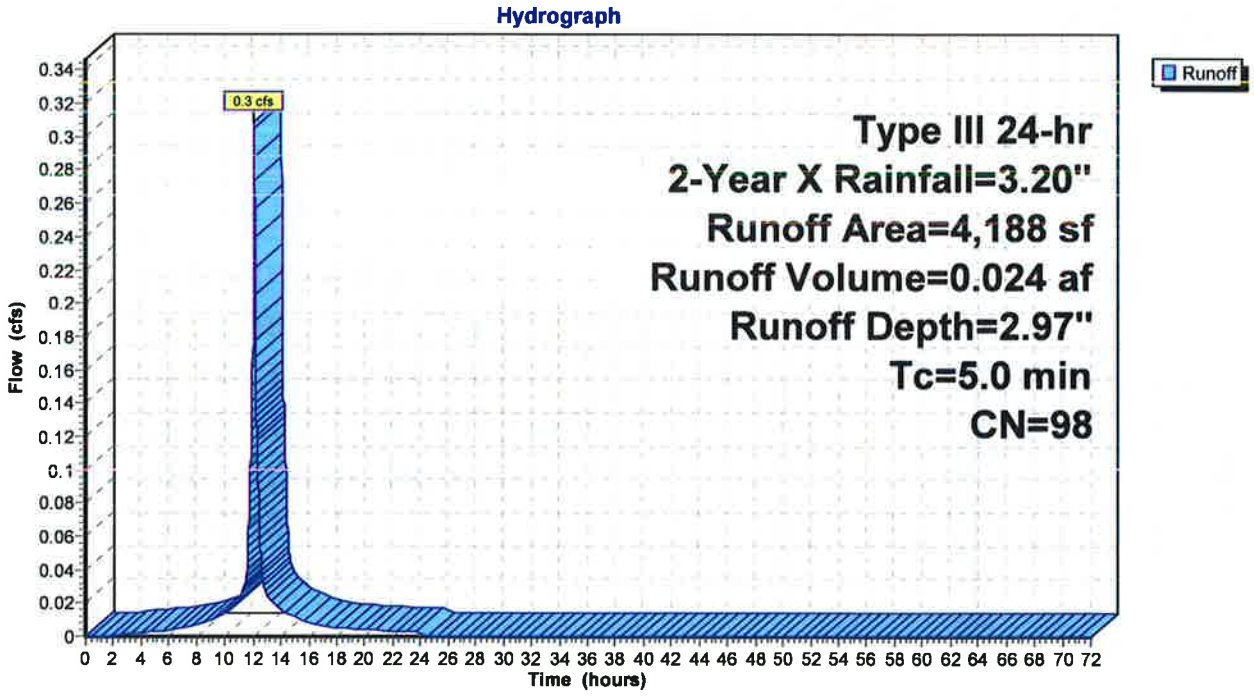
Runoff = 0.3 cfs @ 12.07 hrs, Volume= 0.024 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES4:



Summary for Subcatchment ES5:

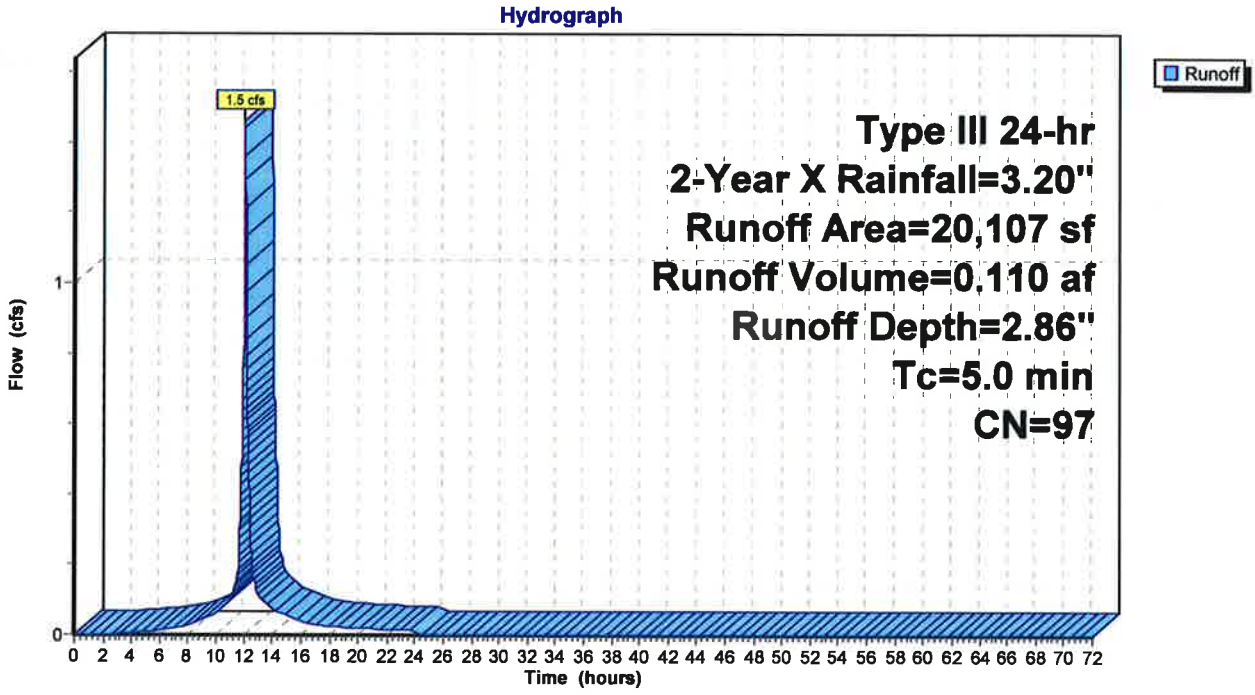
Runoff = 1.5 cfs @ 12.07 hrs, Volume= 0.110 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES5:



Summary for Subcatchment ES6:

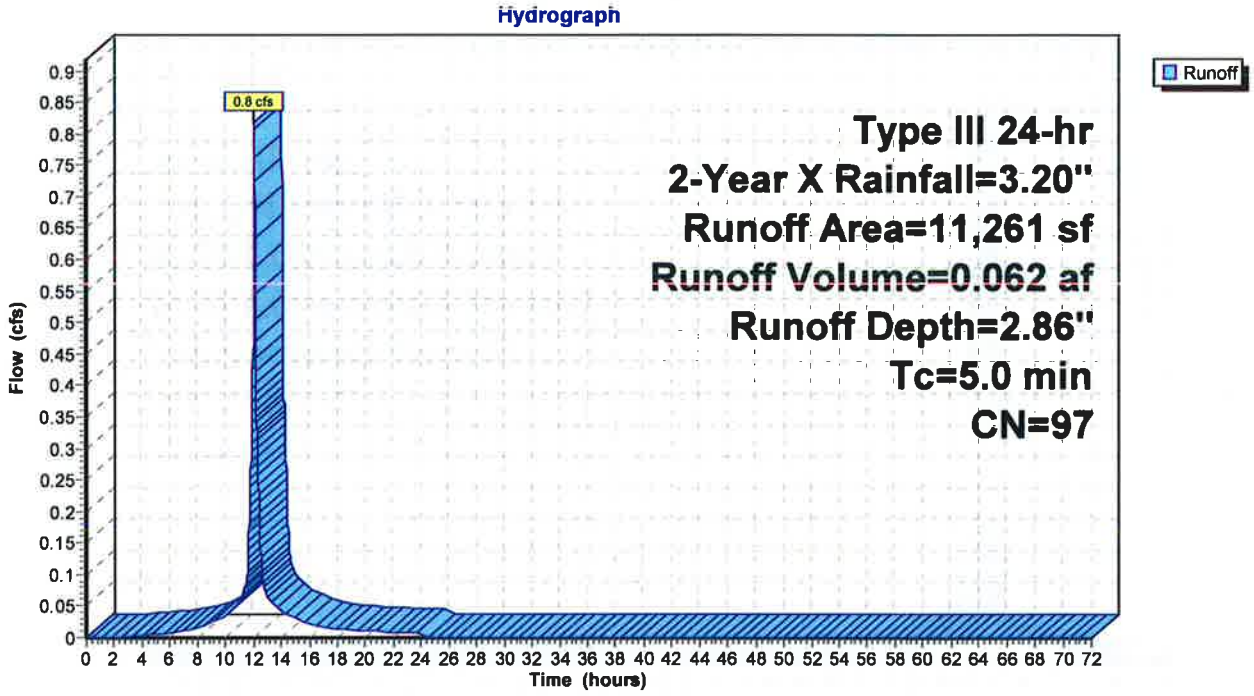
Runoff = 0.8 cfs @ 12.07 hrs, Volume= 0.062 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
86	98	Paved parking, HSG C
6,879	98	Paved roads w/curbs & sewers, HSG C
2,385	98	Paved roads w/curbs & sewers, HSG C
103	98	Roofs, HSG C
1,808	91	Fallow, bare soil, HSG C
11,261	97	Weighted Average
1,808		16.06% Pervious Area
9,453		83.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES6:



Summary for Subcatchment ES7:

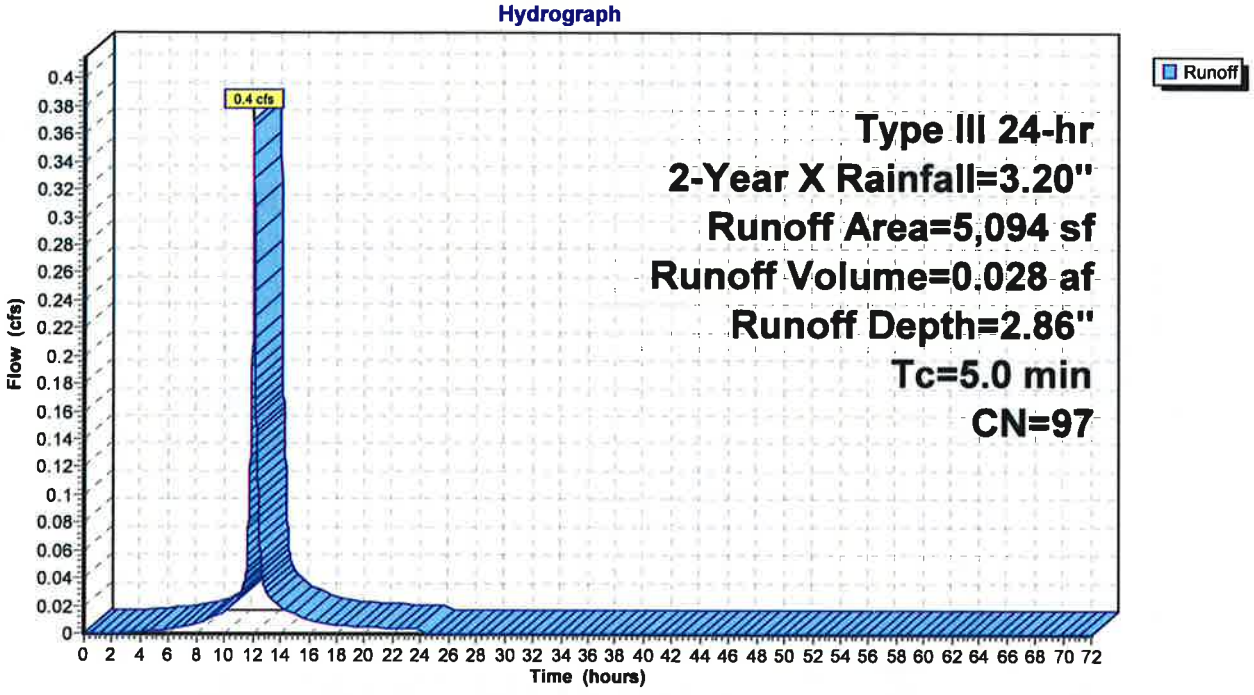
Runoff = 0.4 cfs @ 12.07 hrs, Volume= 0.028 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
3,437	98	Paved roads w/curbs & sewers, HSG C
1,098	98	Paved roads w/curbs & sewers, HSG C
559	91	Fallow, bare soil, HSG C
5,094	97	Weighted Average
559		10.97% Pervious Area
4,535		89.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES7:



Summary for Subcatchment ES8:

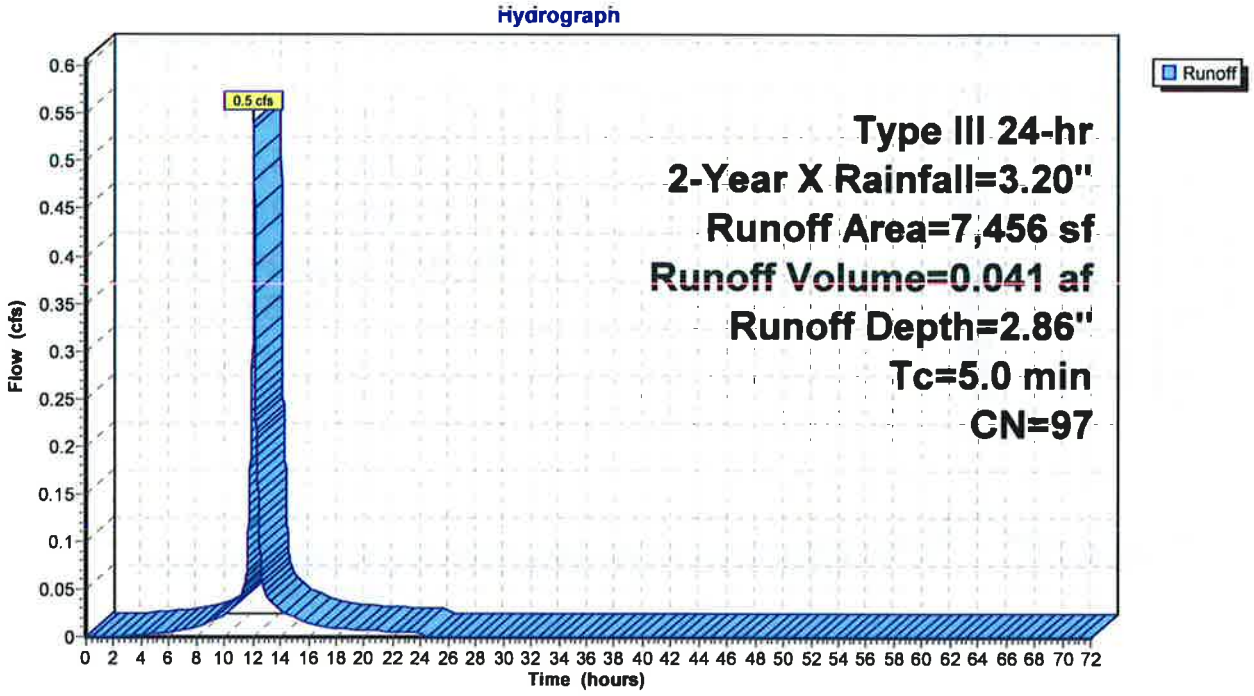
Runoff = 0.5 cfs @ 12.07 hrs, Volume= 0.041 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
4,674	98	Paved roads w/curbs & sewers, HSG C
1,563	98	Paved roads w/curbs & sewers, HSG C
121	98	Paved roads w/curbs & sewers, HSG C
* 39	98	Gravel roads, HSG C
1,059	91	Fallow, bare soil, HSG C
7,456	97	Weighted Average
1,059		14.20% Pervious Area
6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 5.30' (Flood elevation advised)

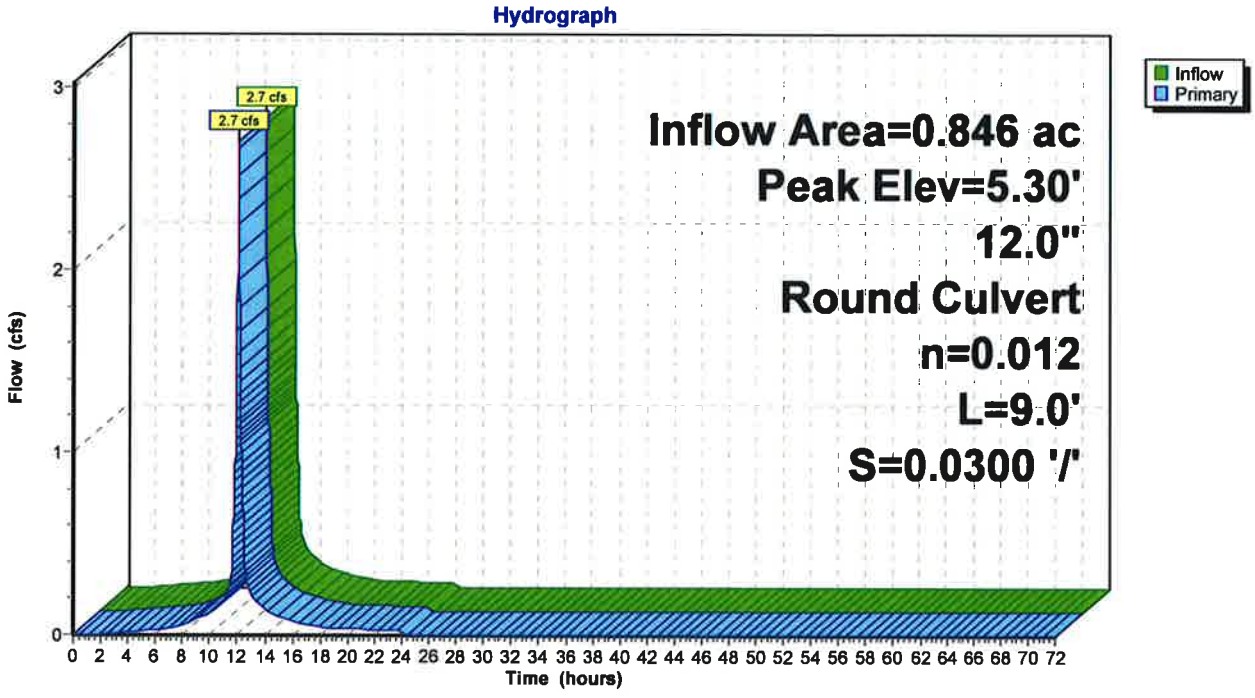
Inflow Area =	0.846 ac,	93.86% Impervious,	Inflow Depth =	2.91"	for 2-Year X event
Inflow =	2.7 cfs @	12.07 hrs, Volume=	0.205 af		
Outflow =	2.7 cfs @	12.07 hrs, Volume=	0.205 af,	Atten= 0%,	Lag= 0.0 min
Primary =	2.7 cfs @	12.07 hrs, Volume=	0.205 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.30' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.7 cfs @ 12.07 hrs HW=5.30' TW=4.13' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 2.7 cfs @ 4.78 fps)

Pond 1P: CB 3528



Summary for Pond 2P: CB 3524

[57] Hint: Peaked at 7.92' (Flood elevation advised)

Inflow Area =	0.244 ac, 81.41% Impervious, Inflow Depth = 2.86"	for 2-Year X event		
Inflow =	0.8 cfs @ 12.07 hrs, Volume=	0.058 af		
Outflow =	0.8 cfs @ 12.07 hrs, Volume=	0.058 af, Atten= 0%, Lag= 0.0 min		
Primary =	0.8 cfs @ 12.07 hrs, Volume=	0.058 af		

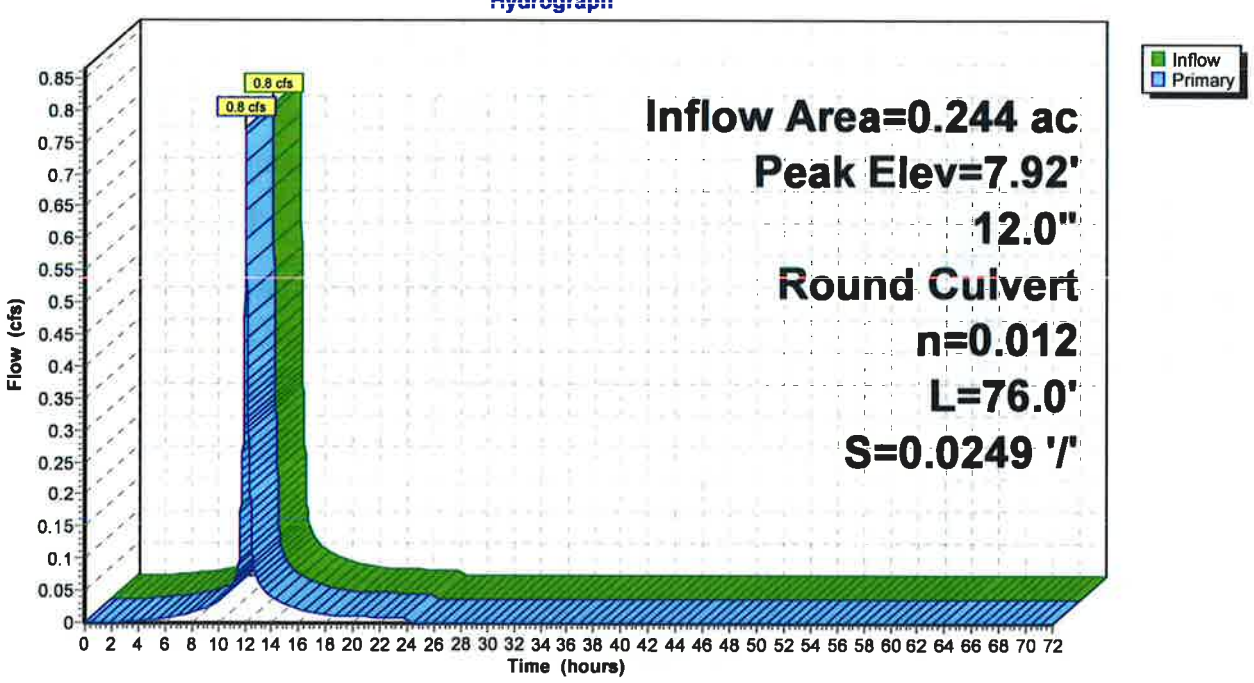
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.92' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 76.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 7.52' / 5.63' S= 0.0249 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.8 cfs @ 12.07 hrs HW=7.92' TW=6.61' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 0.8 cfs @ 2.68 fps)

Pond 2P: CB 3524

Hydrograph



Summary for Pond 3P: CB 3525

[57] Hint: Peaked at 6.61' (Flood elevation advised)

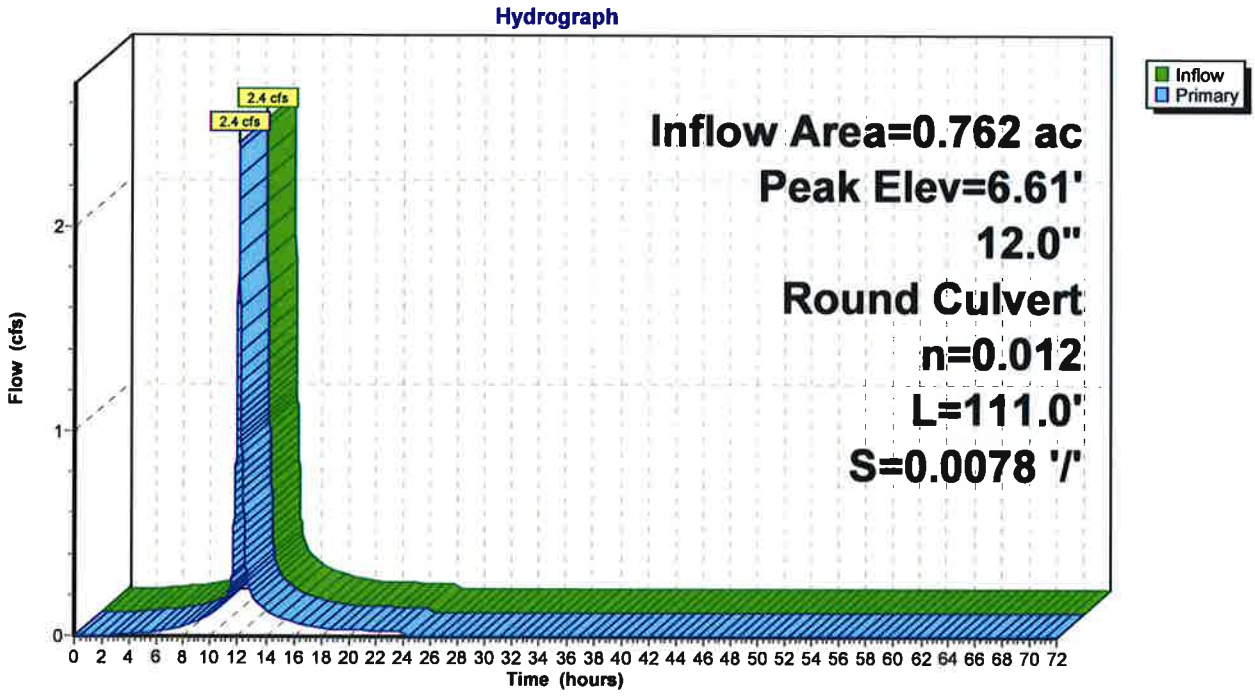
Inflow Area =	0.762 ac, 85.69% Impervious, Inflow Depth =	2.86"	for 2-Year X event		
Inflow =	2.4 cfs @	12.07 hrs, Volume=	0.181 af		
Outflow =	2.4 cfs @	12.07 hrs, Volume=	0.181 af,	Atten= 0%,	Lag= 0.0 min
Primary =	2.4 cfs @	12.07 hrs, Volume=	0.181 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.61' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.63'	**12.0" Round Culvert** L= 111.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.63' / 4.76' S= 0.0078 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.4 cfs @ 12.07 hrs HW=6.61' TW=5.79' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 2.4 cfs @ 3.88 fps)

Pond 3P: CB 3525



Summary for Pond 4P: CB 3527

[57] Hint: Peaked at 5.79' (Flood elevation advised)

Inflow Area =	0.858 ac, 87.30% Impervious,	Inflow Depth =	2.87"	for 2-Year X event
Inflow =	2.7 cfs @ 12.07 hrs,	Volume=	0.205 af	
Outflow =	2.7 cfs @ 12.07 hrs,	Volume=	0.205 af,	Atten= 0%, Lag= 0.0 min
Primary =	2.7 cfs @ 12.07 hrs,	Volume=	0.205 af	

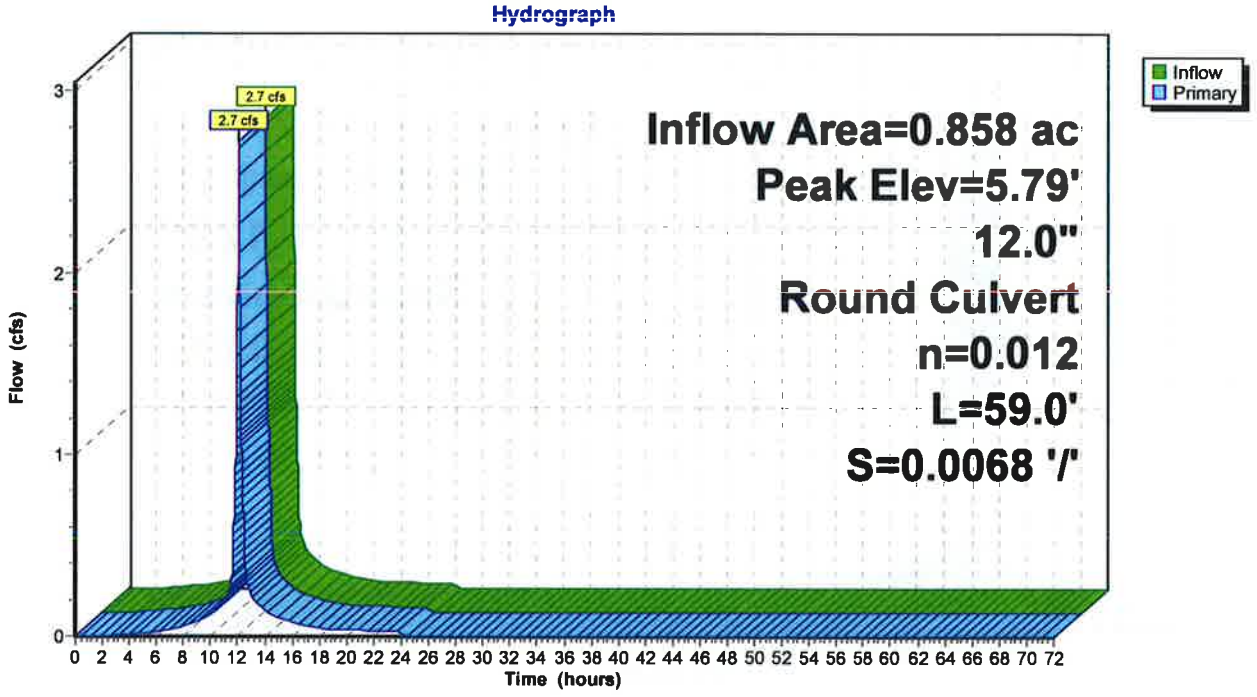
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.79' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.76'	**12.0" Round Culvert** L= 59.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.76' / 4.36' S= 0.0068 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.7 cfs @ 12.07 hrs HW=5.79' TW=4.13' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 2.7 cfs @ 4.18 fps)

Pond 4P: CB 3527

Hydrograph



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 4.13' (Flood elevation advised)

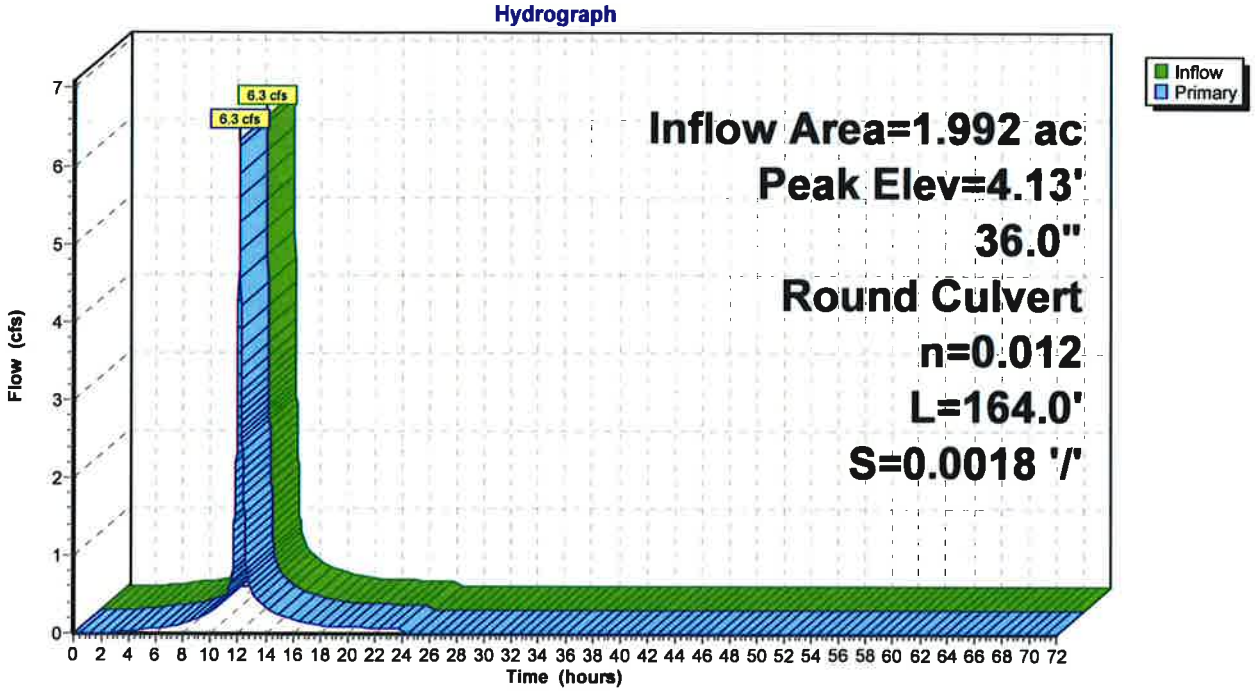
Inflow Area =	1.992 ac,	90.05% Impervious,	Inflow Depth =	2.88"	for 2-Year X event
Inflow =	6.3 cfs @	12.07 hrs,	Volume=	0.479 af	
Outflow =	6.3 cfs @	12.07 hrs,	Volume=	0.479 af,	Atten= 0%, Lag= 0.0 min
Primary =	6.3 cfs @	12.07 hrs,	Volume=	0.479 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.13' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 164.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.61' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=6.3 cfs @ 12.07 hrs HW=4.13' TW=3.60' (Dynamic Tailwater)
└─**1=Culvert** (Outlet Controls 6.3 cfs @ 3.46 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 3.60' (Flood elevation advised)

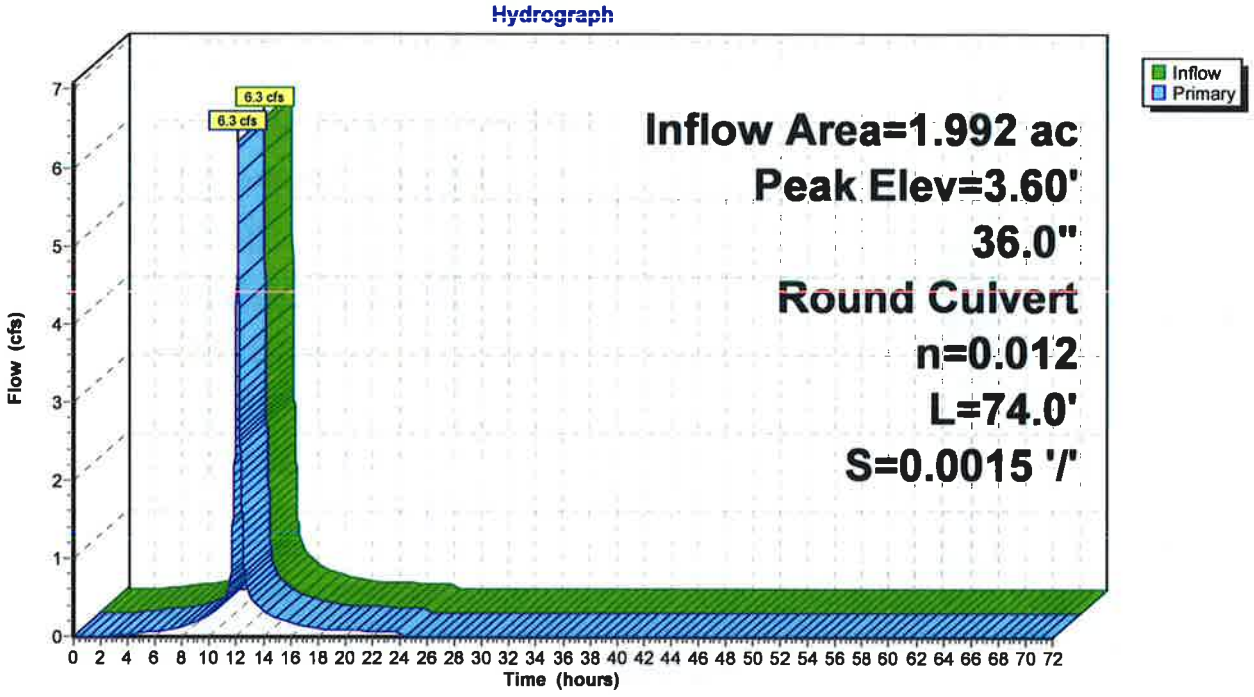
Inflow Area =	1.992 ac,	90.05% Impervious,	Inflow Depth =	2.88"	for 2-Year X event
Inflow =	6.3 cfs @	12.07 hrs,	Volume=	0.479 af	
Outflow =	6.3 cfs @	12.07 hrs,	Volume=	0.479 af,	Atten= 0%, Lag= 0.0 min
Primary =	6.3 cfs @	12.07 hrs,	Volume=	0.479 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.60' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=6.3 cfs @ 12.07 hrs HW=3.60' TW=3.36' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 6.3 cfs @ 2.87 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 3.37' (Flood elevation advised)

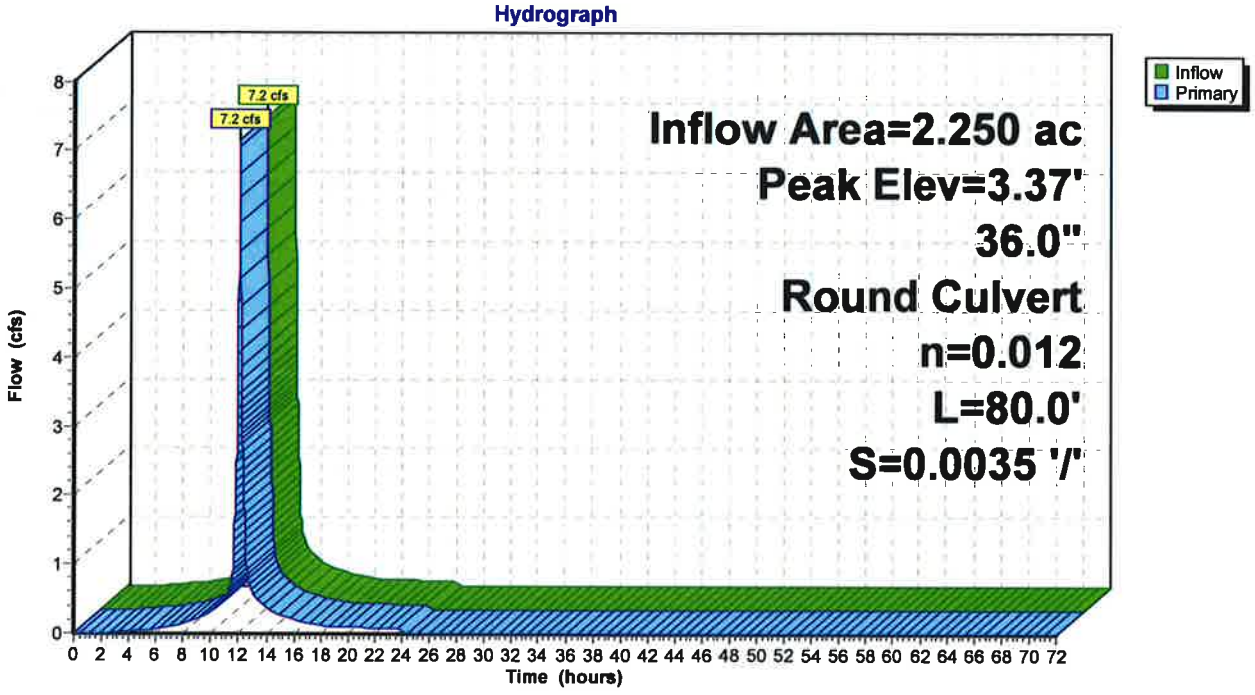
Inflow Area =	2.250 ac,	89.35% Impervious,	Inflow Depth =	2.88"	for 2-Year X event
Inflow =	7.2 cfs @	12.07 hrs, Volume=	0.540 af		
Outflow =	7.2 cfs @	12.07 hrs, Volume=	0.540 af,	Atten= 0%,	Lag= 0.0 min
Primary =	7.2 cfs @	12.07 hrs, Volume=	0.540 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.37' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=7.1 cfs @ 12.07 hrs HW=3.36' TW=3.06' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 7.1 cfs @ 3.22 fps)

Pond 7P: DMH 3541



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 2.70' (Flood elevation advised)

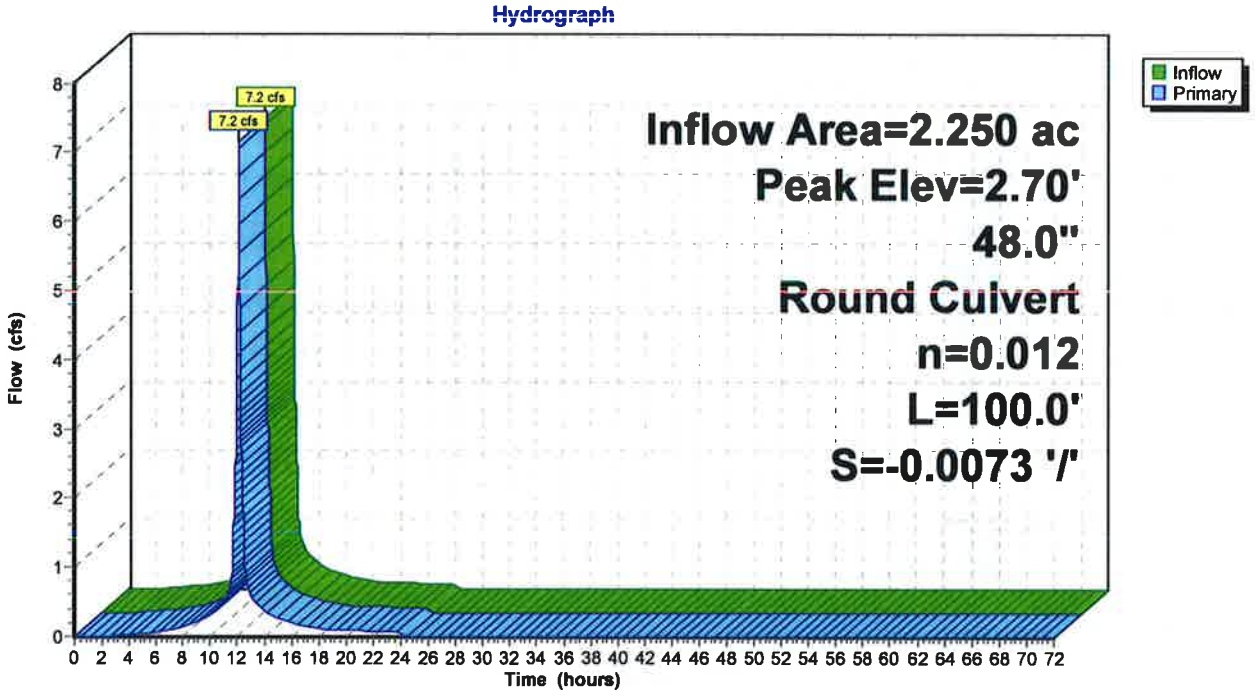
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth = 2.88"	for 2-Year X event		
Inflow =	7.2 cfs @ 12.07 hrs, Volume=	0.540 af		
Outflow =	7.2 cfs @ 12.07 hrs, Volume=	0.540 af, Atten= 0%, Lag= 0.0 min		
Primary =	7.2 cfs @ 12.07 hrs, Volume=	0.540 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.70' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=7.2 cfs @ 12.07 hrs HW=2.70' TW=2.49' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 7.2 cfs @ 2.78 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.49' (Flood elevation advised)

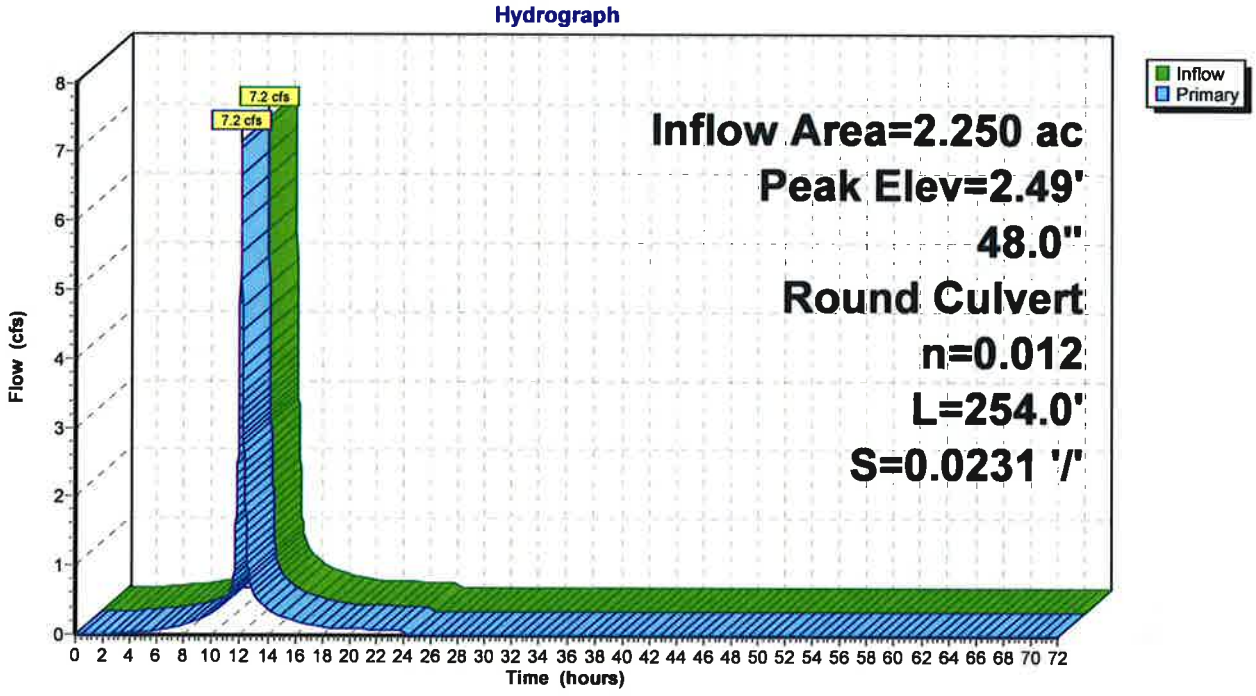
Inflow Area =	2.250 ac,	89.35% Impervious,	Inflow Depth =	2.88"	for 2-Year X event
Inflow =	7.2 cfs @	12.07 hrs,	Volume=	0.540 af	
Outflow =	7.2 cfs @	12.07 hrs,	Volume=	0.540 af,	Atten= 0%, Lag= 0.0 min
Primary =	7.2 cfs @	12.07 hrs,	Volume=	0.540 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.49' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=7.2 cfs @ 12.07 hrs HW=2.49' (Free Discharge)
1=Culvert (Inlet Controls 7.2 cfs @ 3.86 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 7.93' (Flood elevation advised)

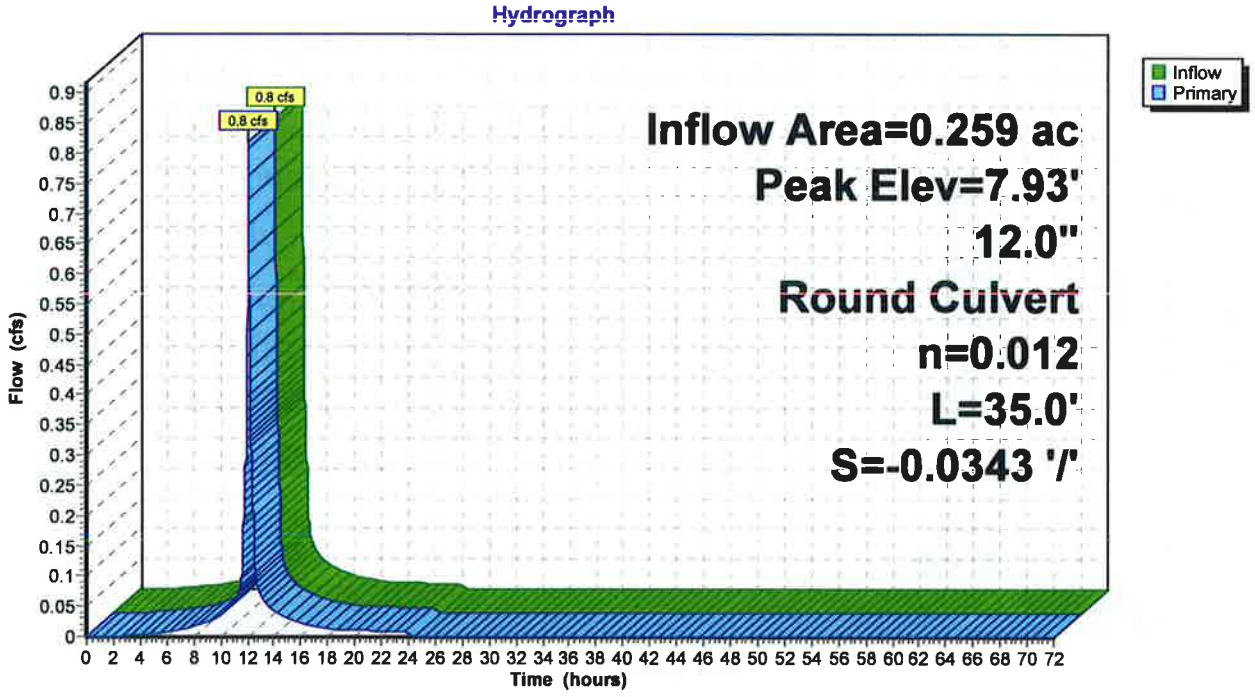
Inflow Area =	0.259 ac, 83.94% Impervious,	Inflow Depth =	2.86"	for 2-Year X event
Inflow =	0.8 cfs @	12.07 hrs, Volume=	0.062 af	
Outflow =	0.8 cfs @	12.07 hrs, Volume=	0.062 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.8 cfs @	12.07 hrs, Volume=	0.062 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.93' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.8 cfs @ 12.07 hrs HW=7.93' TW=3.36' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 0.8 cfs @ 2.72 fps)

Pond 11P: CB 3523



Summary for Pond 12P: CB 3526

[57] Hint: Peaked at 6.58' (Flood elevation advised)

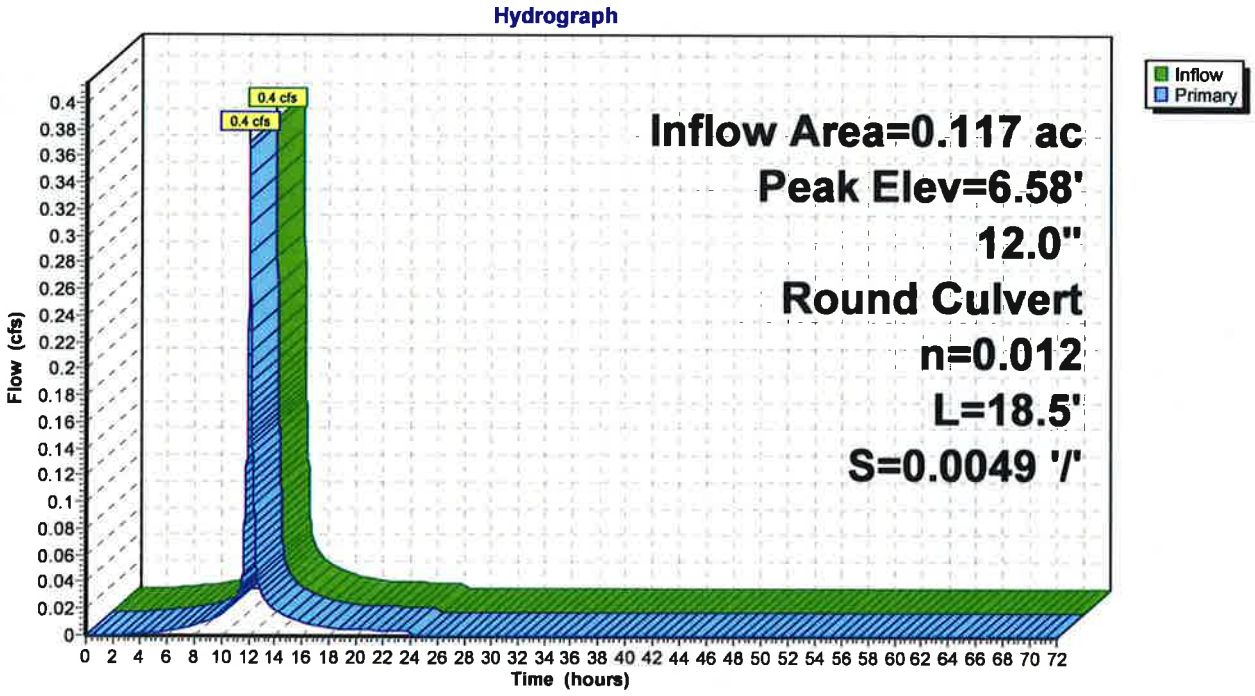
Inflow Area =	0.117 ac,	89.03% Impervious,	Inflow Depth =	2.86"	for 2-Year X event
Inflow =	0.4 cfs @	12.07 hrs,	Volume=	0.028 af	
Outflow =	0.4 cfs @	12.07 hrs,	Volume=	0.028 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.4 cfs @	12.07 hrs,	Volume=	0.028 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.58' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.18'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.18' / 6.09' S= 0.0049 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.4 cfs @ 12.07 hrs HW=6.58' TW=6.46' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 0.4 cfs @ 1.89 fps)

Pond 12P: CB 3526



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 6.46' (Flood elevation advised)

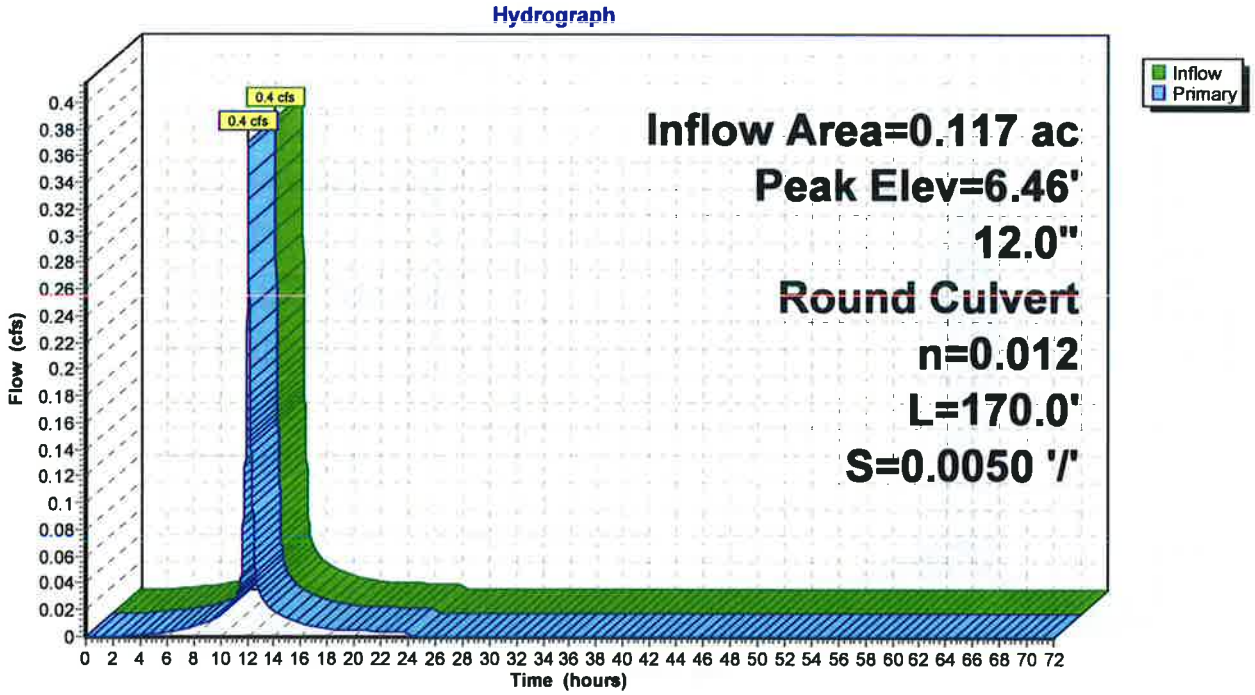
Inflow Area =	0.117 ac, 89.03% Impervious,	Inflow Depth =	2.86"	for 2-Year X event
Inflow =	0.4 cfs @ 12.07 hrs,	Volume=	0.028 af	
Outflow =	0.4 cfs @ 12.07 hrs,	Volume=	0.028 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.4 cfs @ 12.07 hrs,	Volume=	0.028 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.46' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.4 cfs @ 12.07 hrs HW=6.46' TW=5.85' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 0.4 cfs @ 2.06 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 5.85' (Flood elevation advised)

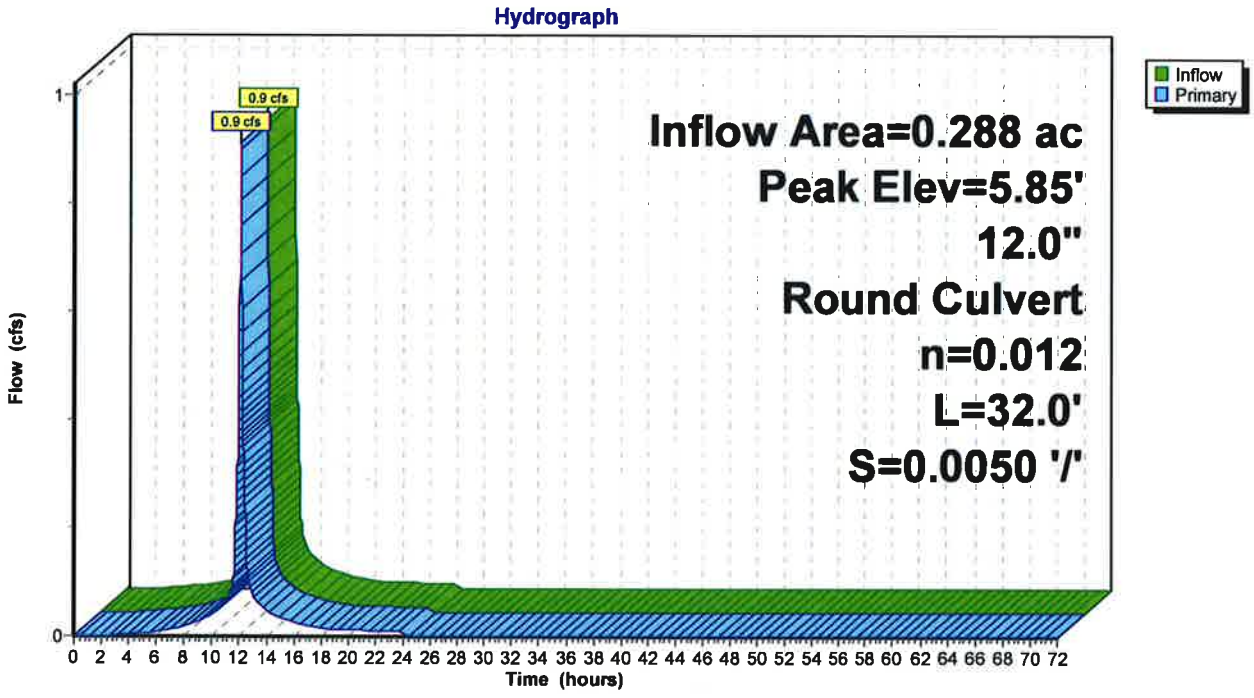
Inflow Area =	0.288 ac,	87.11% Impervious,	Inflow Depth =	2.86"	for 2-Year X event
Inflow =	0.9 cfs @	12.07 hrs,	Volume=	0.069 af	
Outflow =	0.9 cfs @	12.07 hrs,	Volume=	0.069 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.9 cfs @	12.07 hrs,	Volume=	0.069 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.85' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=5.85' TW=5.62' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.9 cfs @ 2.62 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 5.91' (Flood elevation advised)

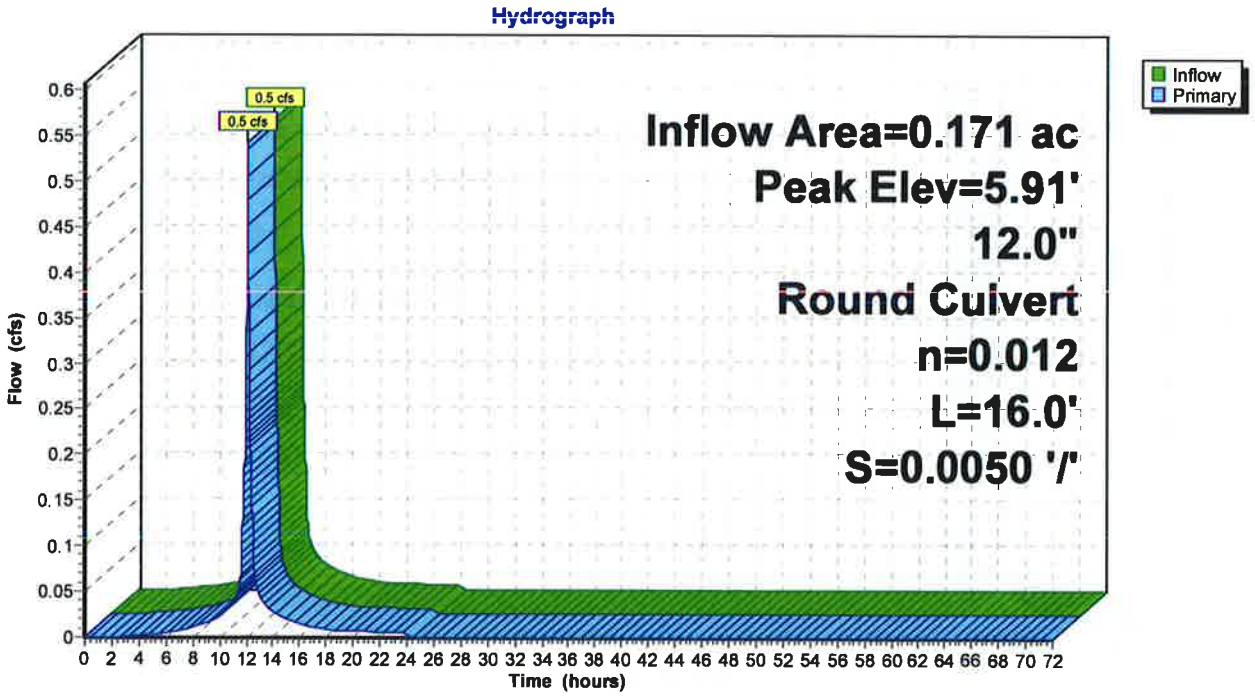
Inflow Area =	0.171 ac, 85.80% Impervious,	Inflow Depth =	2.86"	for 2-Year X event
Inflow =	0.5 cfs @ 12.07 hrs,	Volume=	0.041 af	
Outflow =	0.5 cfs @ 12.07 hrs,	Volume=	0.041 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.5 cfs @ 12.07 hrs,	Volume=	0.041 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.91' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.5 cfs @ 12.07 hrs HW=5.91' TW=5.85' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.5 cfs @ 1.59 fps)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 5.62' (Flood elevation advised)

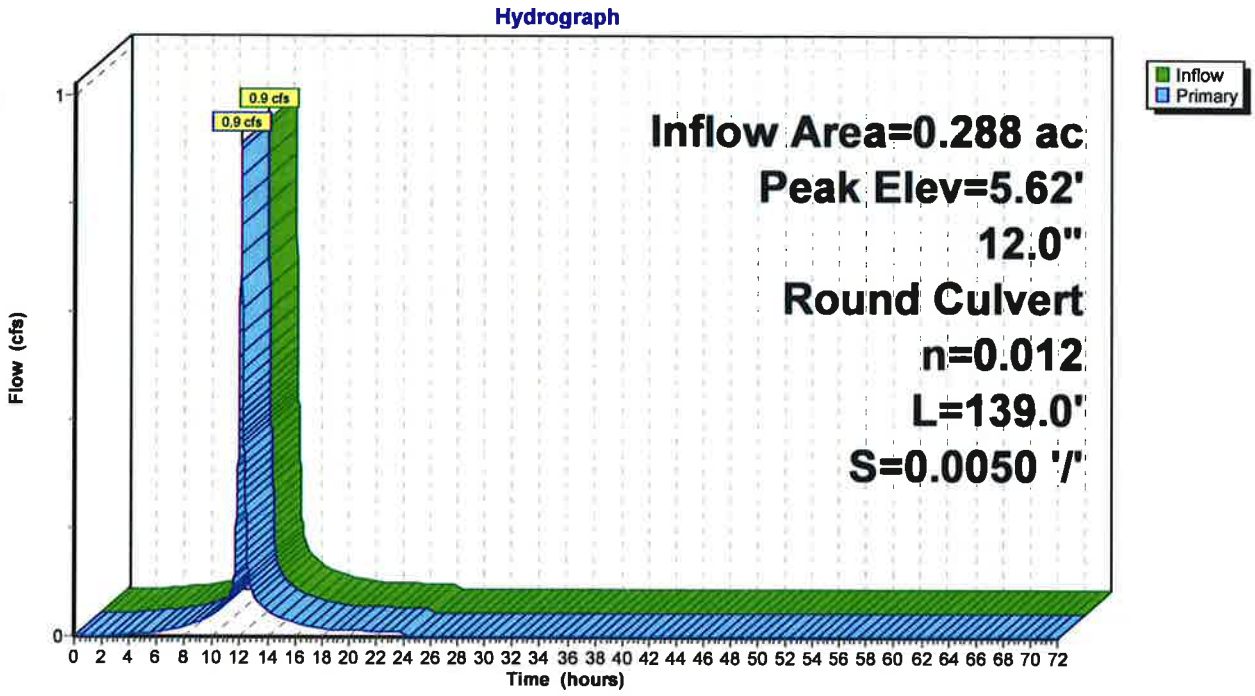
Inflow Area =	0.288 ac,	87.11% Impervious,	Inflow Depth =	2.86"	for 2-Year X event
Inflow =	0.9 cfs @	12.07 hrs,	Volume=	0.069 af	
Outflow =	0.9 cfs @	12.07 hrs,	Volume=	0.069 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.9 cfs @	12.07 hrs,	Volume=	0.069 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.62' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=5.62' TW=4.75' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 0.9 cfs @ 3.05 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 4.75' (Flood elevation advised)

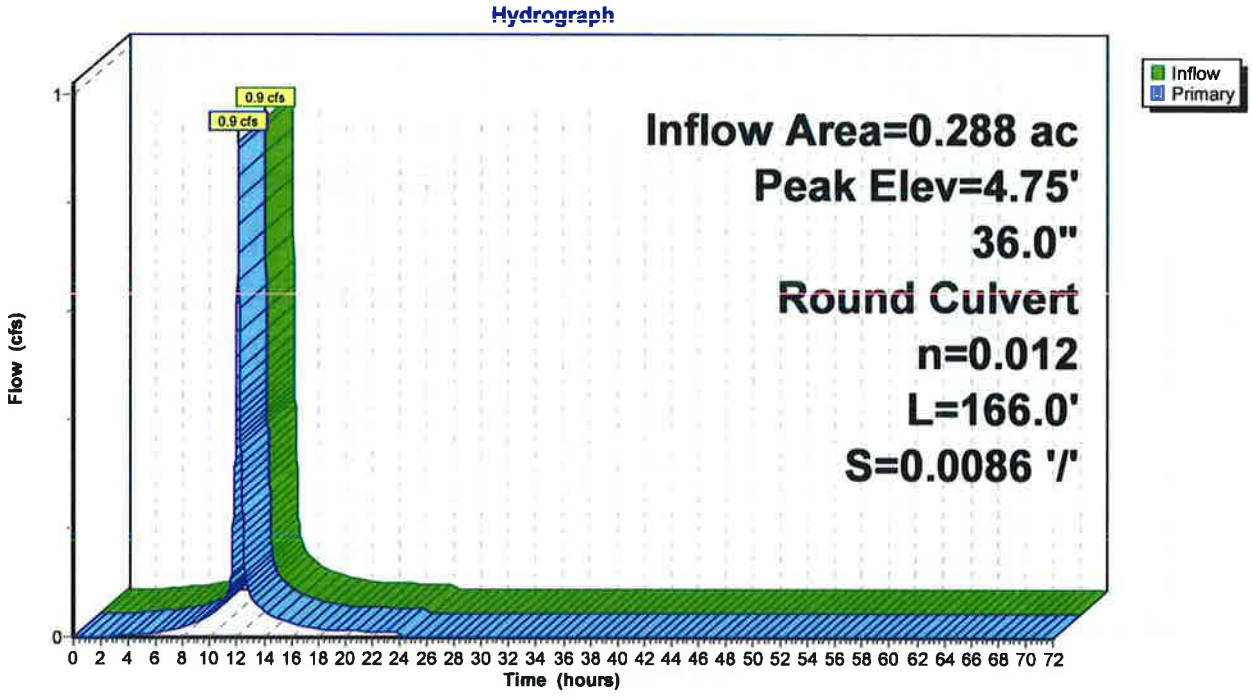
Inflow Area = 0.288 ac, 87.11% Impervious, Inflow Depth = 2.86" for 2-Year X event
Inflow = 0.9 cfs @ 12.07 hrs, Volume= 0.069 af
Outflow = 0.9 cfs @ 12.07 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.07 hrs, Volume= 0.069 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.75' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=4.75' TW=4.13' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 0.9 cfs @ 2.35 fps)

Pond 17P: DMH 3545



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.06' (Flood elevation advised)

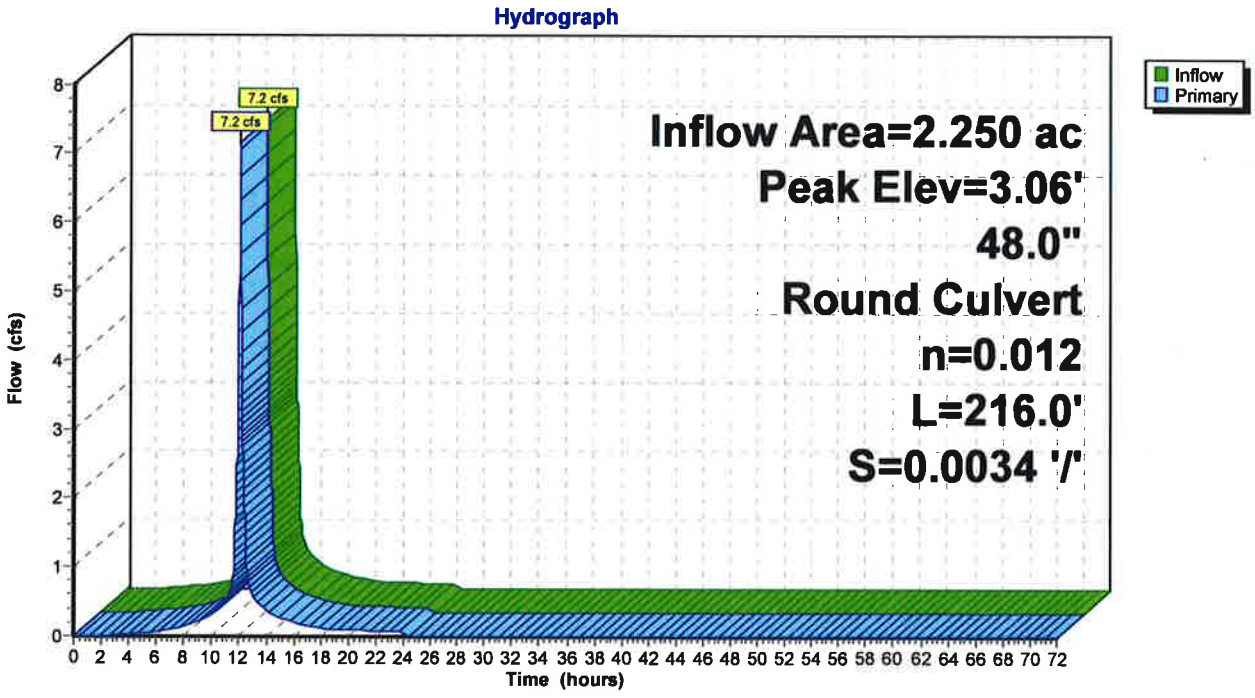
Inflow Area =	2.250 ac,	89.35% Impervious,	Inflow Depth =	2.88"	for 2-Year X event
Inflow =	7.2 cfs @	12.07 hrs,	Volume=	0.540 af	
Outflow =	7.2 cfs @	12.07 hrs,	Volume=	0.540 af,	Atten= 0%, Lag= 0.0 min
Primary =	7.2 cfs @	12.07 hrs,	Volume=	0.540 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.06' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=7.1 cfs @ 12.07 hrs HW=3.06' TW=2.70' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 7.1 cfs @ 2.77 fps)

Pond DP1: DMH 3540



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=1.9 cfs 0.148 af

Subcatchment ES2: Runoff Area=22,558 sf 87.71% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=2.5 cfs 0.195 af

Subcatchment ES3: Runoff Area=10,622 sf 81.41% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=1.2 cfs 0.092 af

Subcatchment ES4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.5 cfs 0.037 af

Subcatchment ES5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=2.3 cfs 0.173 af

Subcatchment ES6: Runoff Area=11,261 sf 83.94% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=1.3 cfs 0.097 af

Subcatchment ES7: Runoff Area=5,094 sf 89.03% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=0.6 cfs 0.044 af

Subcatchment ES8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=0.8 cfs 0.064 af

Pond 1P: CB 3528 Peak Elev=5.75' Inflow=4.1 cfs 0.321 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=4.1 cfs 0.321 af

Pond 2P: CB 3524 Peak Elev=8.31' Inflow=1.2 cfs 0.092 af
12.0" Round Culvert n=0.012 L=76.0' S=0.0249 '/' Outflow=1.2 cfs 0.092 af

Pond 3P: CB 3525 Peak Elev=8.05' Inflow=3.7 cfs 0.286 af
12.0" Round Culvert n=0.012 L=111.0' S=0.0078 '/' Outflow=3.7 cfs 0.286 af

Pond 4P: CB 3527 Peak Elev=6.59' Inflow=4.2 cfs 0.323 af
12.0" Round Culvert n=0.012 L=59.0' S=0.0068 '/' Outflow=4.2 cfs 0.323 af

Pond 5P: DMH 3543 Peak Elev=4.51' Inflow=9.8 cfs 0.753 af
36.0" Round Culvert n=0.012 L=164.0' S=0.0018 '/' Outflow=9.8 cfs 0.753 af

Pond 6P: DMH 3542 Peak Elev=4.00' Inflow=9.8 cfs 0.753 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=9.8 cfs 0.753 af

Pond 7P: DMH 3541 Peak Elev=3.74' Inflow=11.0 cfs 0.850 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=11.0 cfs 0.850 af

Pond 9P: DMH 5438 Peak Elev=2.97' Inflow=11.0 cfs 0.850 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=11.0 cfs 0.850 af

Pond 10P: DMH 5217 Peak Elev=2.70' Inflow=11.0 cfs 0.850 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=11.0 cfs 0.850 af

Pond 11P: CB 3523 Peak Elev=8.04' Inflow=1.3 cfs 0.097 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=1.3 cfs 0.097 af

Pond 12P: CB 3526 Peak Elev=6.70' Inflow=0.6 cfs 0.044 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0049 '/' Outflow=0.6 cfs 0.044 af

Pond 13P: DMH 12303 Peak Elev=6.58' Inflow=0.6 cfs 0.044 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=0.6 cfs 0.044 af

Pond 14P: DMH 12631 Peak Elev=6.03' Inflow=1.4 cfs 0.108 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=1.4 cfs 0.108 af

Pond 15P: CB 8146 Peak Elev=6.10' Inflow=0.8 cfs 0.064 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=0.8 cfs 0.064 af

Pond 16P: DMH 12632 Peak Elev=5.77' Inflow=1.4 cfs 0.108 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=1.4 cfs 0.108 af

Pond 17P: DMH 3545 Peak Elev=4.92' Inflow=1.4 cfs 0.108 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=1.4 cfs 0.108 af

Pond DP1: DMH 3540 Peak Elev=3.38' Inflow=11.0 cfs 0.850 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=11.0 cfs 0.850 af

Total Runoff Area = 2.250 ac Runoff Volume = 0.850 af Average Runoff Depth = 4.53"
10.65% Pervious = 0.240 ac 89.35% Impervious = 2.011 ac

Summary for Subcatchment ES1:

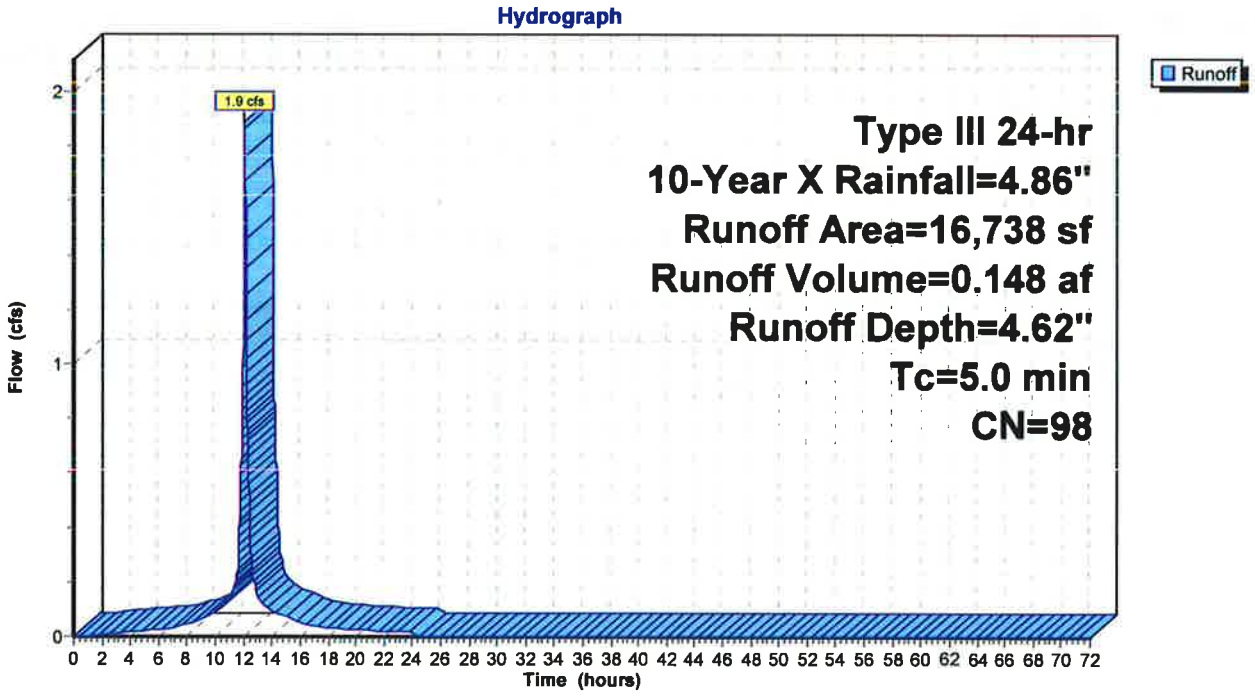
Runoff = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES1:



Summary for Subcatchment ES2:

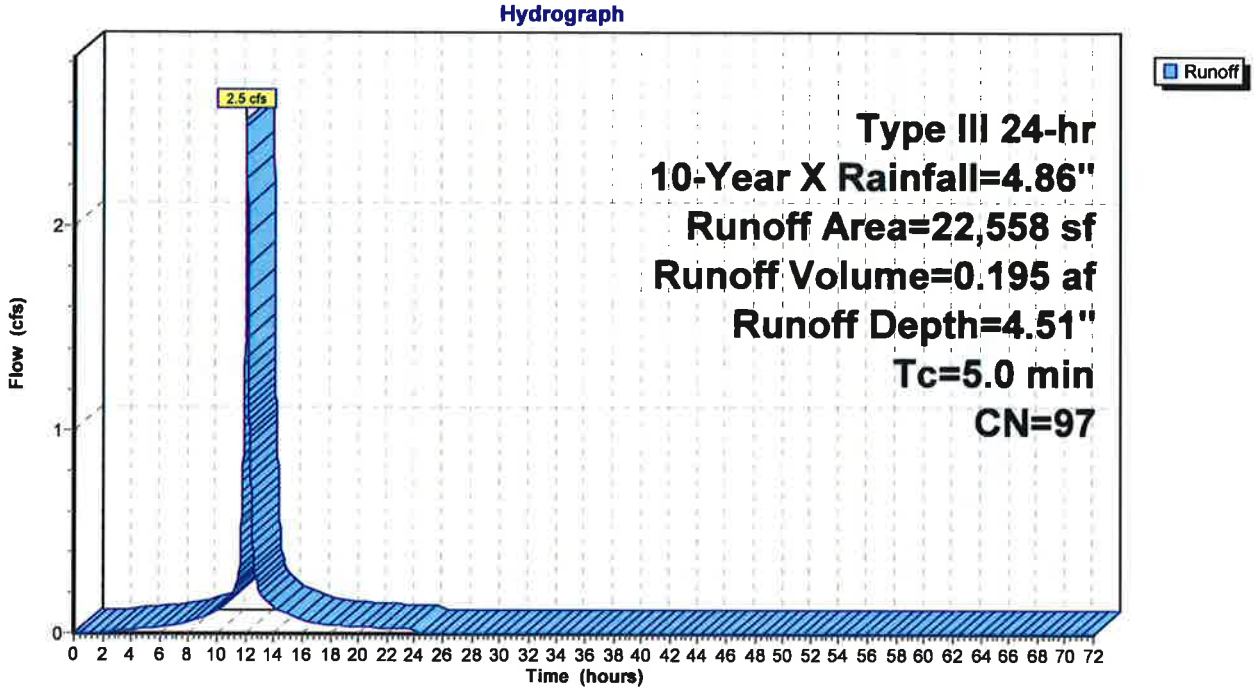
Runoff = 2.5 cfs @ 12.07 hrs, Volume= 0.195 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

	Area (sf)	CN	Description
	15,968	98	Paved parking, HSG C
	1,941	98	Paved roads w/curbs & sewers, HSG C
	990	98	Paved roads w/curbs & sewers, HSG C
	47	98	Roofs, HSG C
*	840	98	Gravel roads, HSG C
	2,772	91	Fallow, bare soil, HSG C
	22,558	97	Weighted Average
	2,772		12.29% Pervious Area
	19,786		87.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES2:



Summary for Subcatchment ES3:

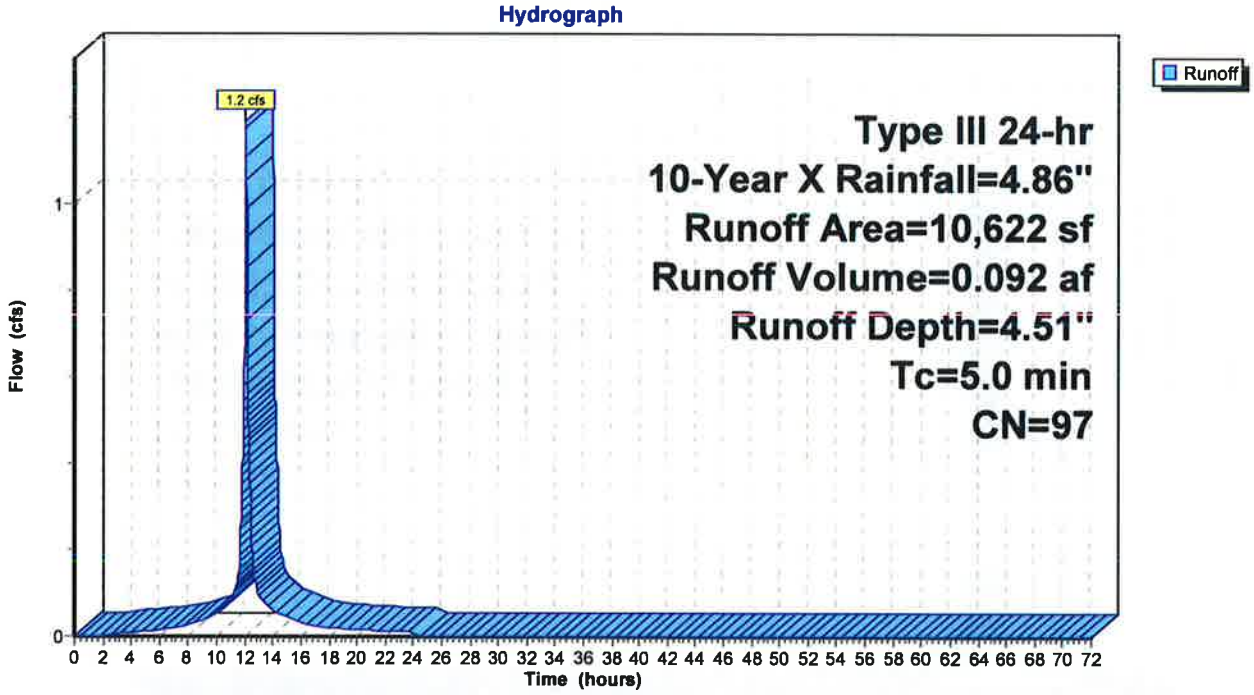
Runoff = 1.2 cfs @ 12.07 hrs, Volume= 0.092 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
8,579	98	Paved parking, HSG C
14	98	Paved roads w/curbs & sewers, HSG C
54	98	Roofs, HSG C
1,975	91	Fallow, bare soil, HSG C
10,622	97	Weighted Average
1,975		18.59% Pervious Area
8,647		81.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES3:



Summary for Subcatchment ES4:

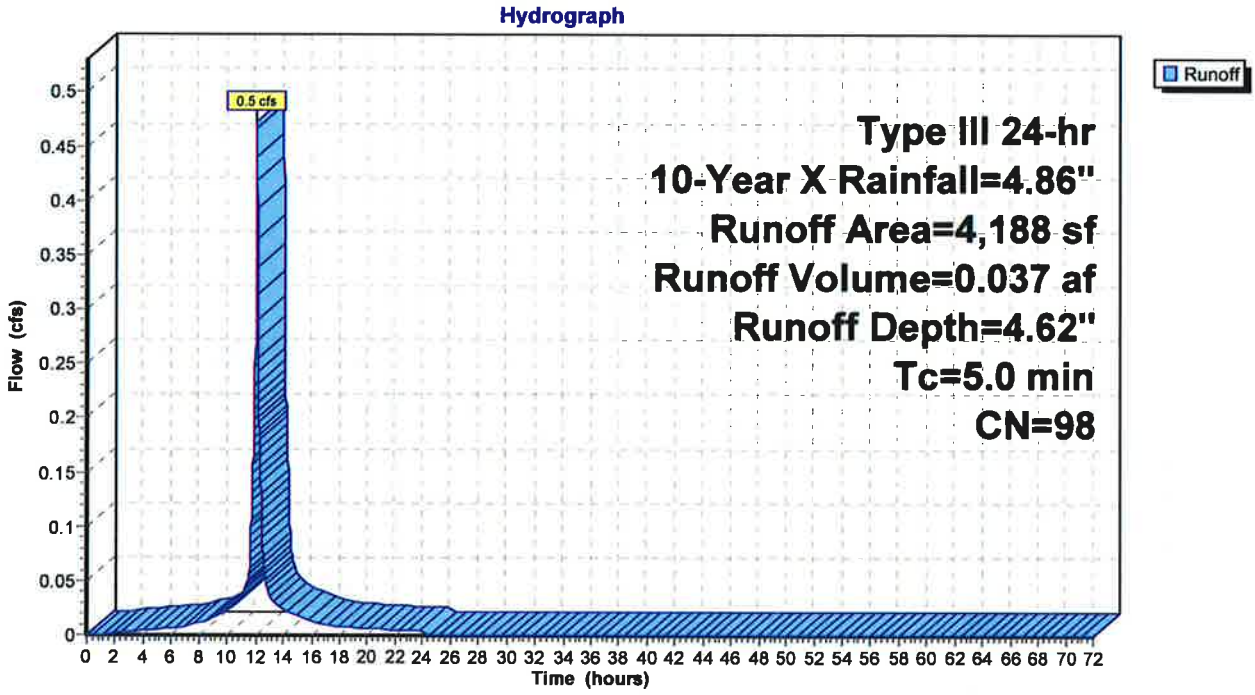
Runoff = 0.5 cfs @ 12.07 hrs, Volume= 0.037 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES4:



Summary for Subcatchment ES5:

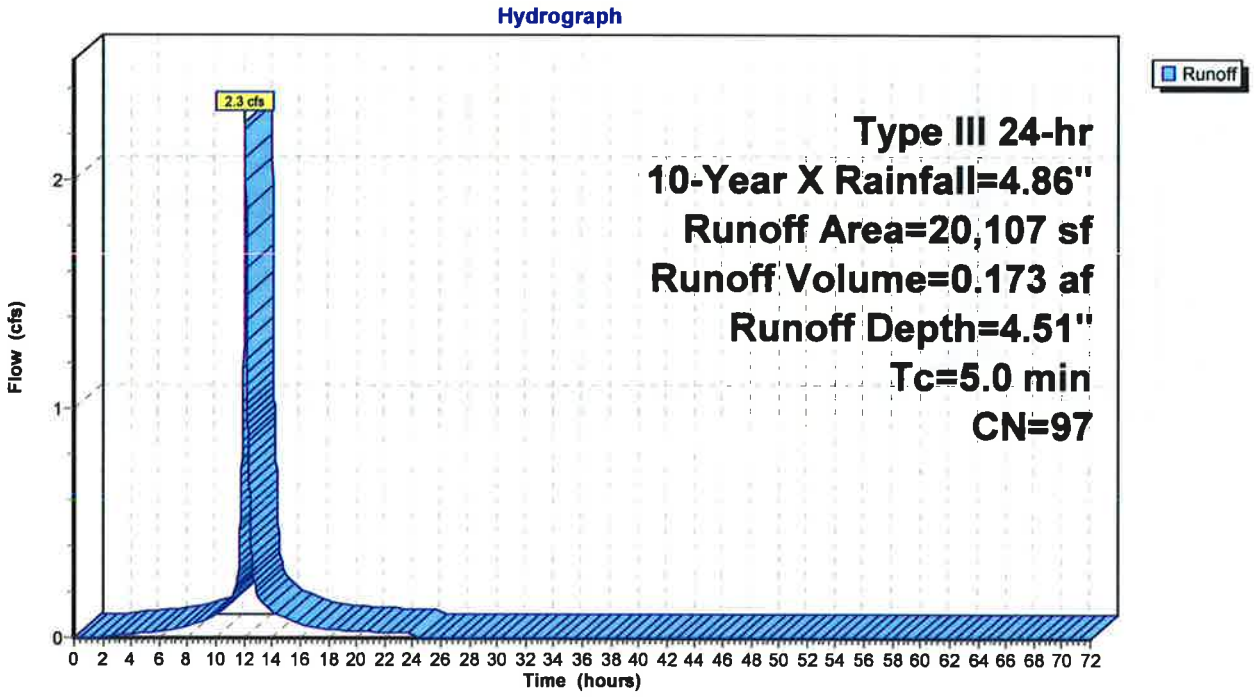
Runoff = 2.3 cfs @ 12.07 hrs, Volume= 0.173 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES5:



Summary for Subcatchment ES6:

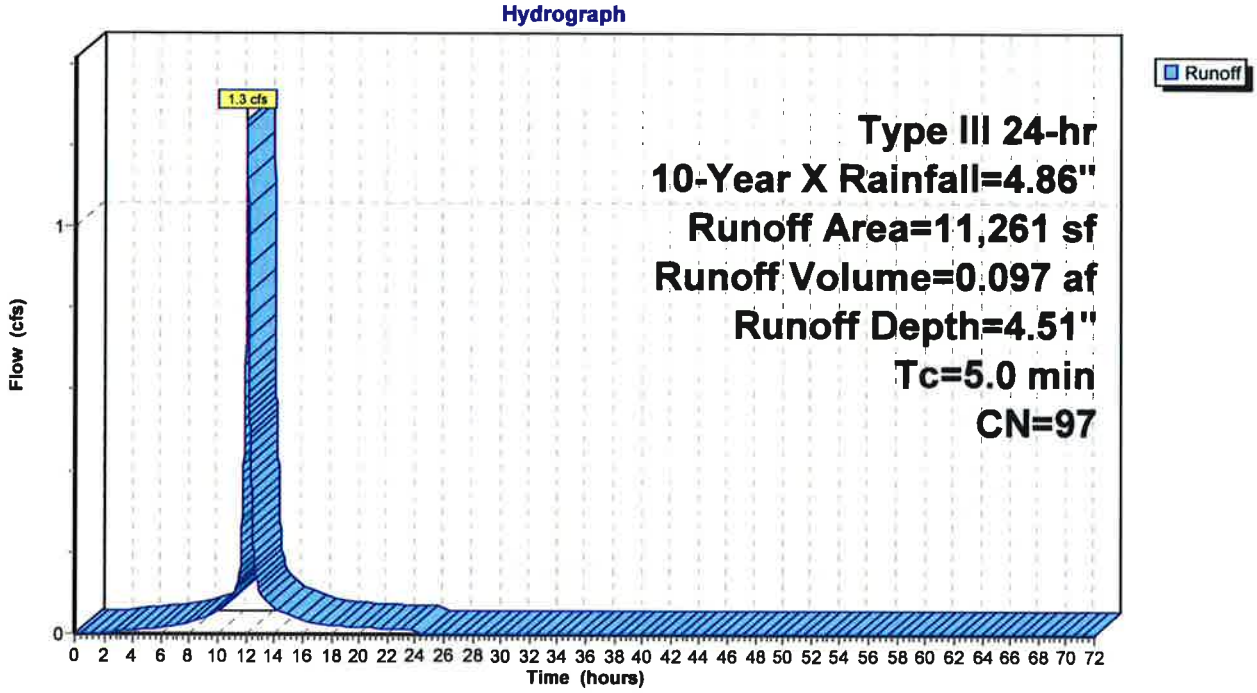
Runoff = 1.3 cfs @ 12.07 hrs, Volume= 0.097 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
86	98	Paved parking, HSG C
6,879	98	Paved roads w/curbs & sewers, HSG C
2,385	98	Paved roads w/curbs & sewers, HSG C
103	98	Roofs, HSG C
1,808	91	Fallow, bare soil, HSG C
11,261	97	Weighted Average
1,808		16.06% Pervious Area
9,453		83.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES6:



Summary for Subcatchment ES7:

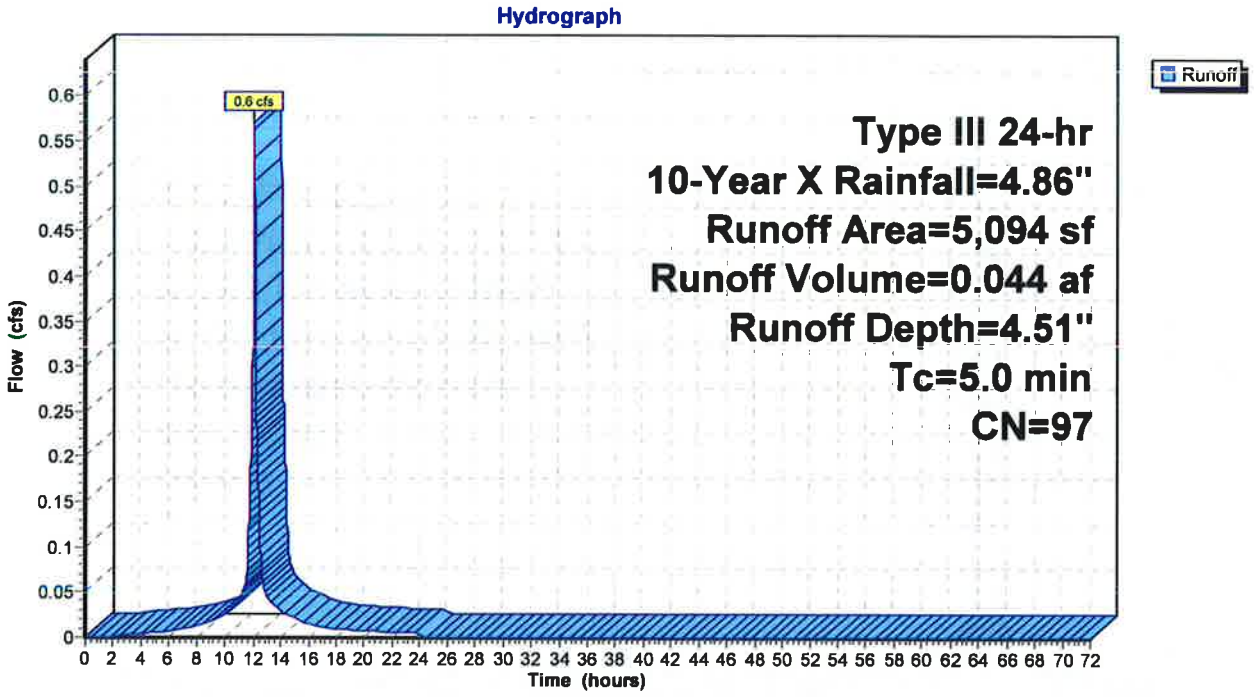
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.044 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
3,437	98	Paved roads w/curbs & sewers, HSG C
1,098	98	Paved roads w/curbs & sewers, HSG C
559	91	Fallow, bare soil, HSG C
5,094	97	Weighted Average
559		10.97% Pervious Area
4,535		89.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment ES7:



Summary for Subcatchment ES8:

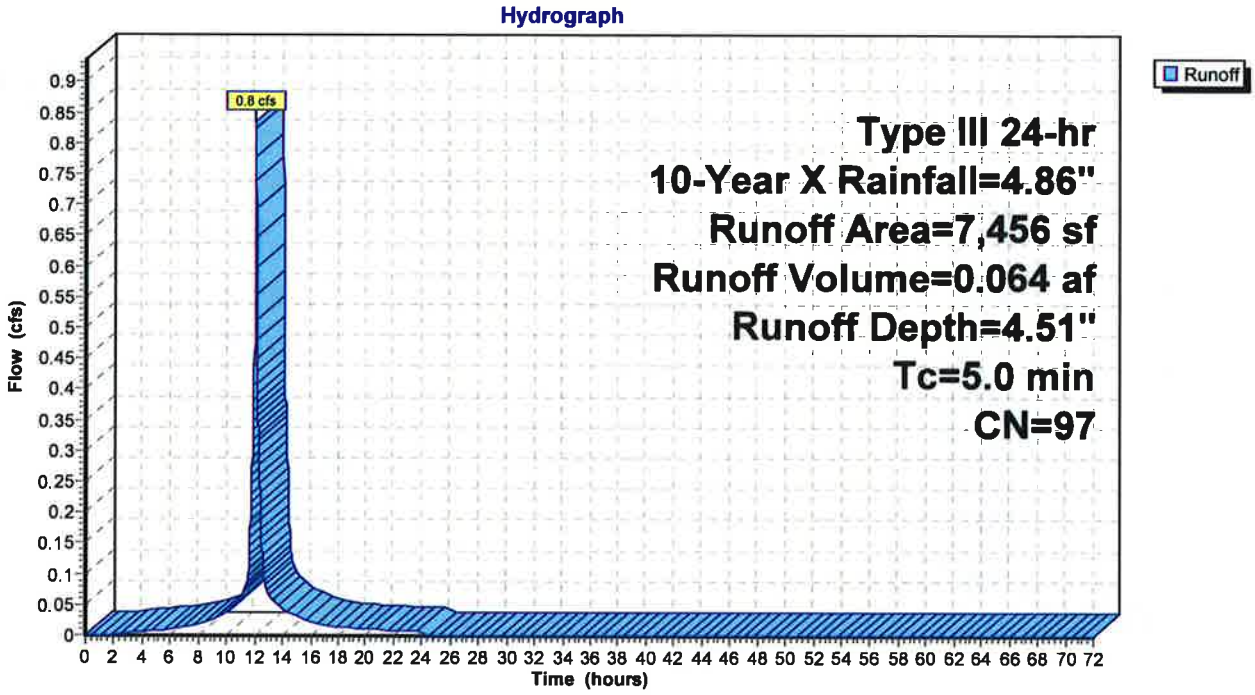
Runoff = 0.8 cfs @ 12.07 hrs, Volume= 0.064 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

	Area (sf)	CN	Description
	4,674	98	Paved roads w/curbs & sewers, HSG C
	1,563	98	Paved roads w/curbs & sewers, HSG C
	121	98	Paved roads w/curbs & sewers, HSG C
*	39	98	Gravel roads, HSG C
	1,059	91	Fallow, bare soil, HSG C
	7,456	97	Weighted Average
	1,059		14.20% Pervious Area
	6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 5.75' (Flood elevation advised)

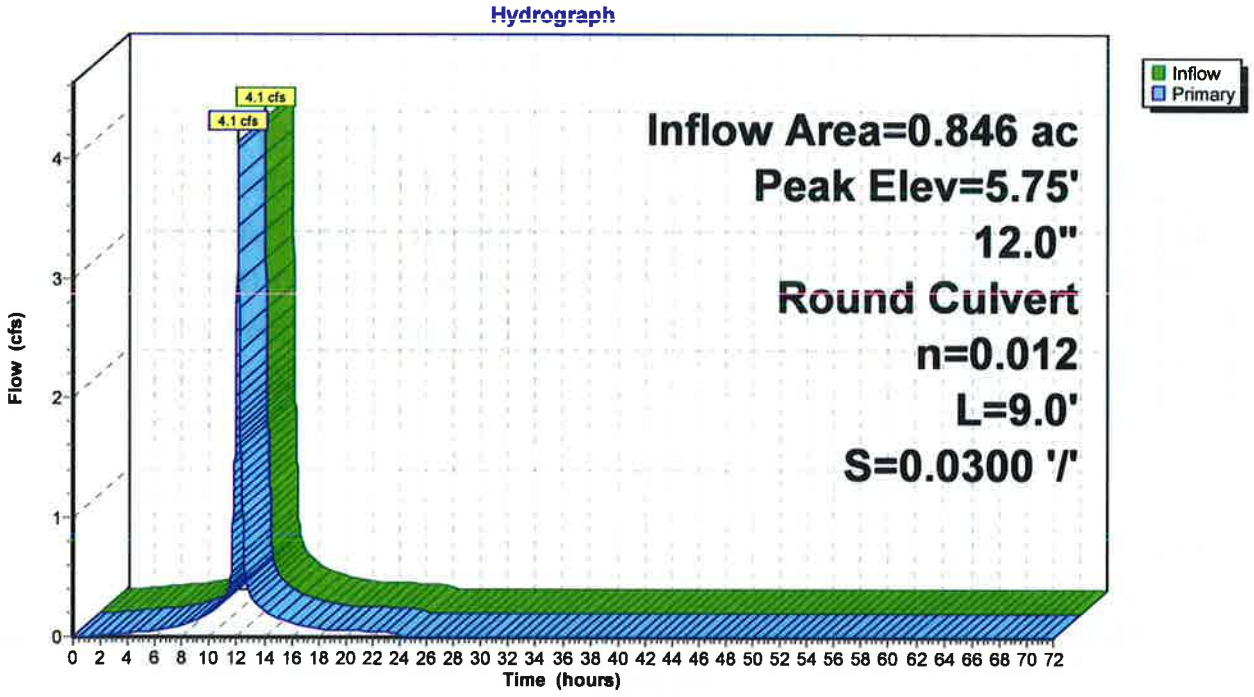
Inflow Area =	0.846 ac, 93.86% Impervious,	Inflow Depth =	4.56"	for 10-Year X event
Inflow =	4.1 cfs @ 12.07 hrs,	Volume=	0.321 af	
Outflow =	4.1 cfs @ 12.07 hrs,	Volume=	0.321 af,	Atten= 0%, Lag= 0.0 min
Primary =	4.1 cfs @ 12.07 hrs,	Volume=	0.321 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.75' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.1 cfs @ 12.07 hrs HW=5.75' TW=4.51' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 4.1 cfs @ 5.28 fps)

Pond 1P: CB 3528



Summary for Pond 2P: CB 3524

[57] Hint: Peaked at 8.31' (Flood elevation advised)

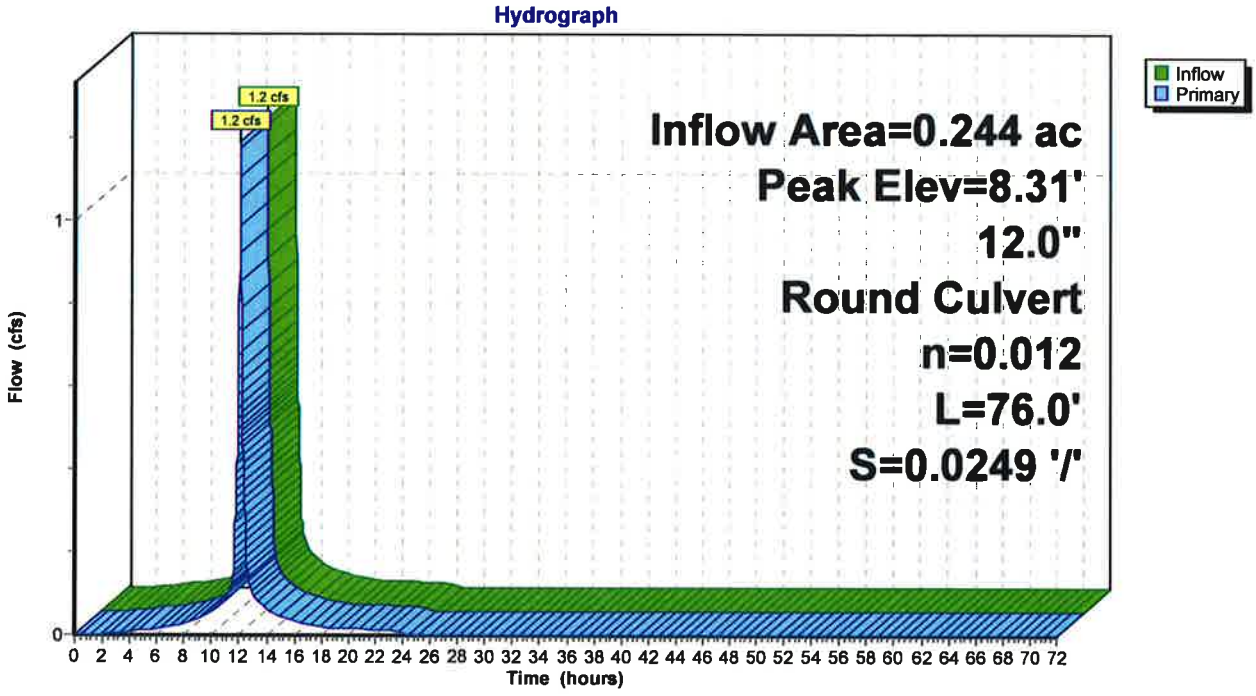
Inflow Area =	0.244 ac, 81.41% Impervious, Inflow Depth = 4.51"	for 10-Year X event		
Inflow =	1.2 cfs @ 12.07 hrs, Volume=	0.092 af		
Outflow =	1.2 cfs @ 12.07 hrs, Volume=	0.092 af,	Atten= 0%,	Lag= 0.0 min
Primary =	1.2 cfs @ 12.07 hrs, Volume=	0.092 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.31' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 76.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 7.52' / 5.63' S= 0.0249 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.1 cfs @ 12.07 hrs HW=8.31' TW=8.05' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 1.1 cfs @ 2.37 fps)

Pond 2P: CB 3524



Summary for Pond 3P: CB 3525

[57] Hint: Peaked at 8.05' (Flood elevation advised)

Inflow Area = 0.762 ac, 85.69% Impervious, Inflow Depth = 4.51" for 10-Year X event
Inflow = 3.7 cfs @ 12.07 hrs, Volume= 0.286 af
Outflow = 3.7 cfs @ 12.07 hrs, Volume= 0.286 af, Atten= 0%, Lag= 0.0 min
Primary = 3.7 cfs @ 12.07 hrs, Volume= 0.286 af

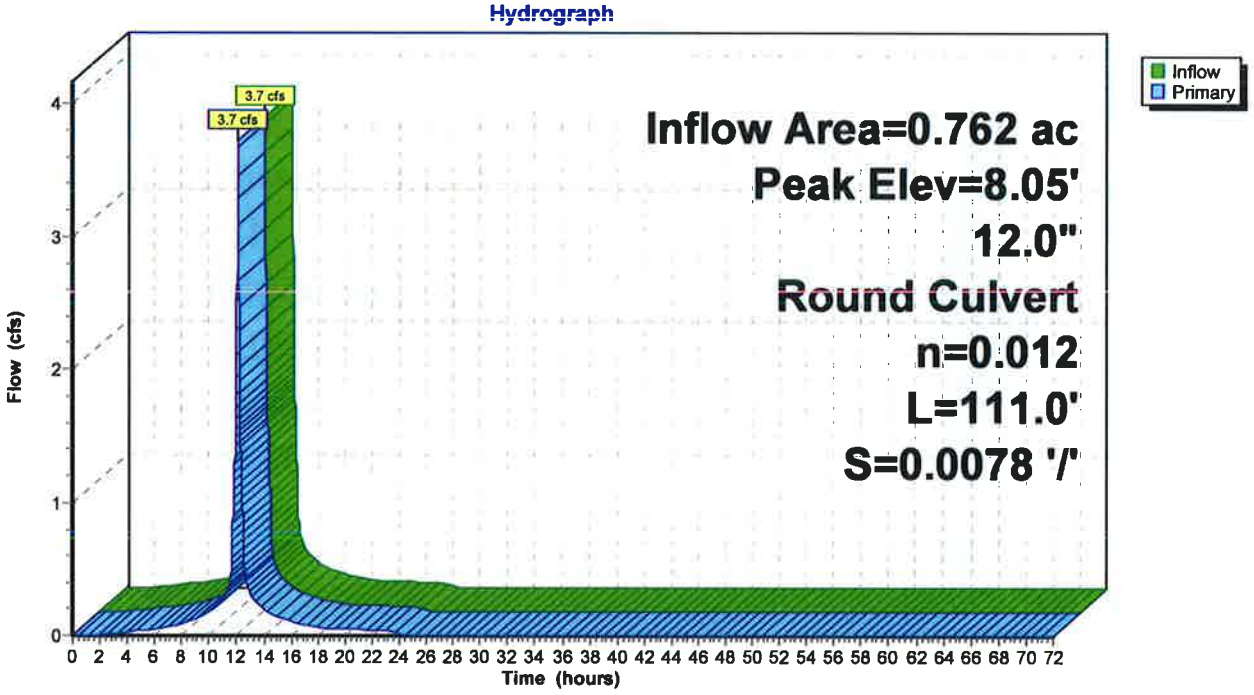
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.05' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.63'	**12.0" Round Culvert** L= 111.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.63' / 4.76' S= 0.0078 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=3.7 cfs @ 12.07 hrs HW=8.05' TW=6.59' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 3.7 cfs @ 4.74 fps)

Pond 3P: CB 3525

Hydrograph



Summary for Pond 4P: CB 3527

[57] Hint: Peaked at 6.59' (Flood elevation advised)

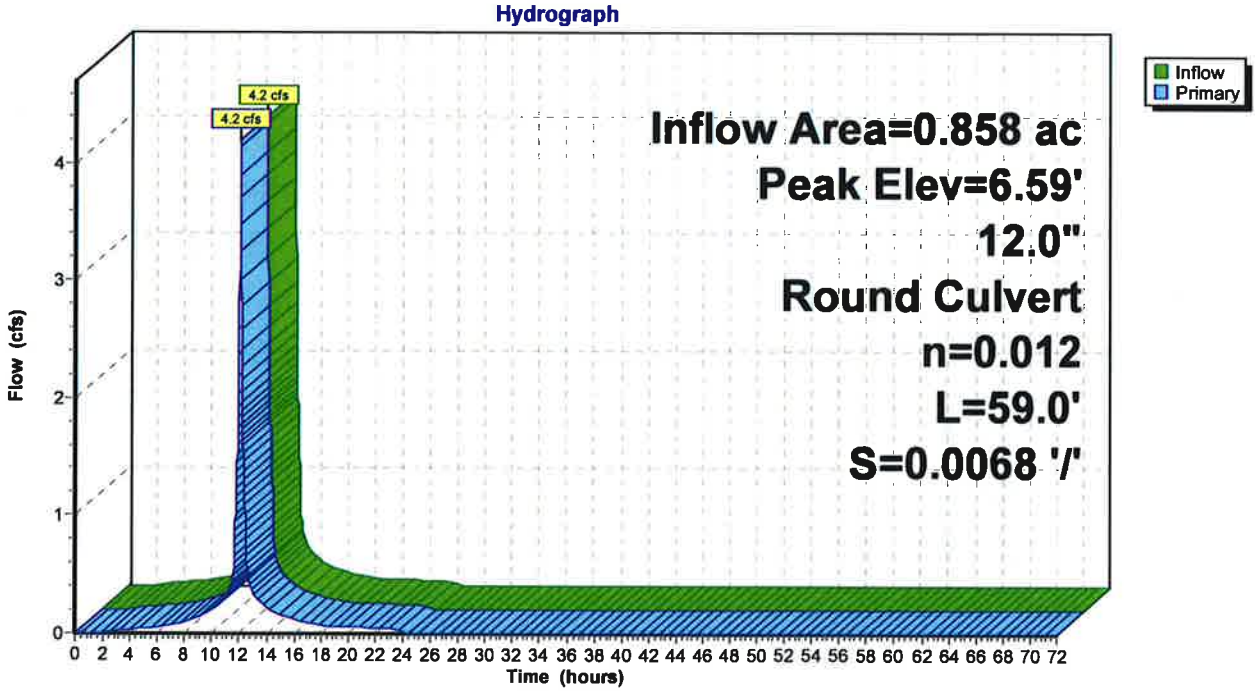
Inflow Area =	0.858 ac, 87.30% Impervious, Inflow Depth = 4.52"	for 10-Year X event			
Inflow =	4.2 cfs @ 12.07 hrs, Volume=	0.323 af			
Outflow =	4.2 cfs @ 12.07 hrs, Volume=	0.323 af, Atten= 0%, Lag= 0.0 min			
Primary =	4.2 cfs @ 12.07 hrs, Volume=	0.323 af			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.59' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.76'	**12.0" Round Culvert** L= 59.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.76' / 4.36' S= 0.0068 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.2 cfs @ 12.07 hrs HW=6.59' TW=4.51' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 4.2 cfs @ 5.34 fps)

Pond 4P: CB 3527



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 4.51' (Flood elevation advised)

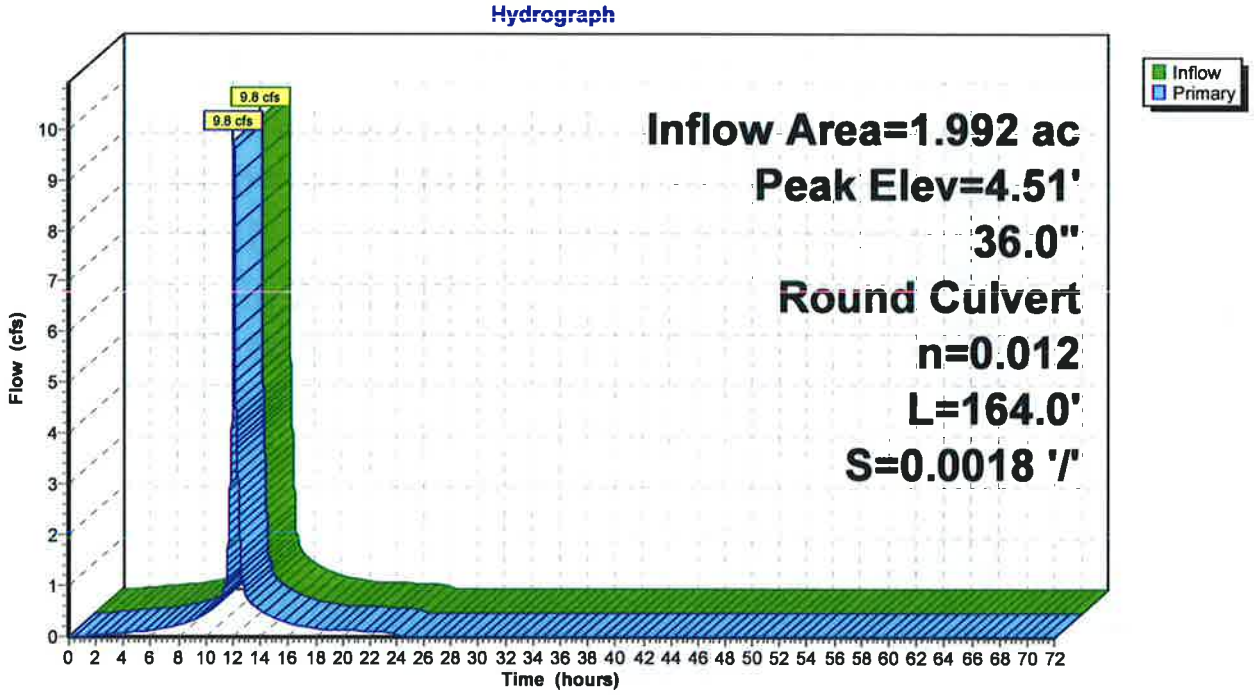
Inflow Area =	1.992 ac,	90.05% Impervious,	Inflow Depth =	4.54"	for 10-Year X event
Inflow =	9.8 cfs @	12.07 hrs,	Volume=	0.753 af	
Outflow =	9.8 cfs @	12.07 hrs,	Volume=	0.753 af,	Atten= 0%, Lag= 0.0 min
Primary =	9.8 cfs @	12.07 hrs,	Volume=	0.753 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.51' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 164.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.61' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=9.7 cfs @ 12.07 hrs HW=4.51' TW=4.00' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 9.7 cfs @ 3.67 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 4.00' (Flood elevation advised)

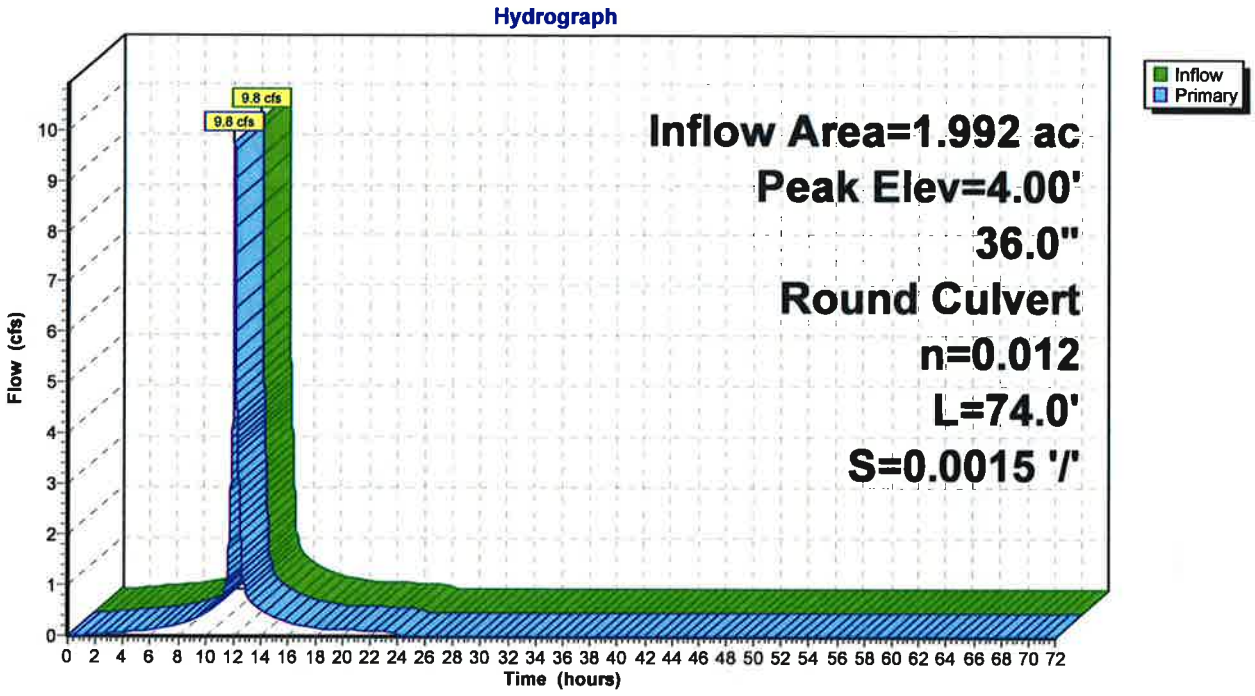
Inflow Area =	1.992 ac, 90.05% Impervious, Inflow Depth =	4.54"	for	10-Year X event
Inflow =	9.8 cfs @ 12.07 hrs, Volume=	0.753 af		
Outflow =	9.8 cfs @ 12.07 hrs, Volume=	0.753 af, Atten= 0%, Lag= 0.0 min		
Primary =	9.8 cfs @ 12.07 hrs, Volume=	0.753 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.00' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=9.6 cfs @ 12.07 hrs HW=4.00' TW=3.74' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 9.6 cfs @ 3.15 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 3.74' (Flood elevation advised)

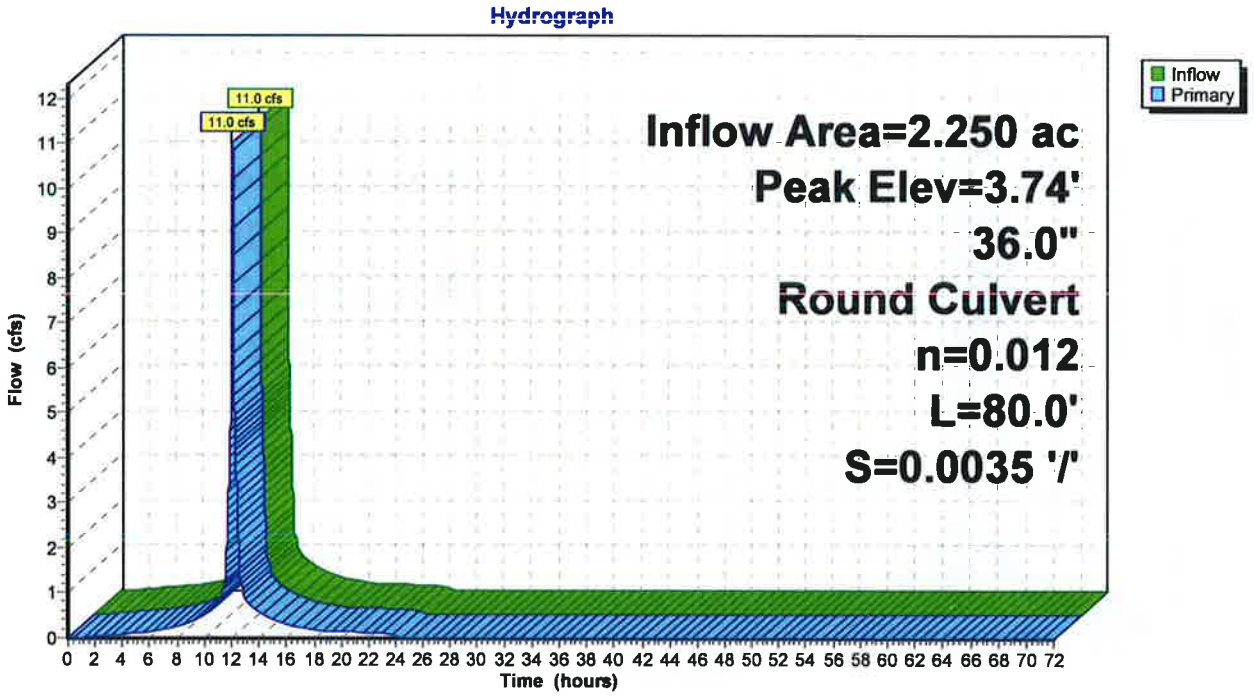
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth = 4.53"	for 10-Year X event		
Inflow =	11.0 cfs @ 12.07 hrs, Volume=	0.850 af		
Outflow =	11.0 cfs @ 12.07 hrs, Volume=	0.850 af, Atten= 0%, Lag= 0.0 min		
Primary =	11.0 cfs @ 12.07 hrs, Volume=	0.850 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.74' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=11.0 cfs @ 12.07 hrs HW=3.74' TW=3.38' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 11.0 cfs @ 3.63 fps)

Pond 7P: DMH 3541



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 2.97' (Flood elevation advised)

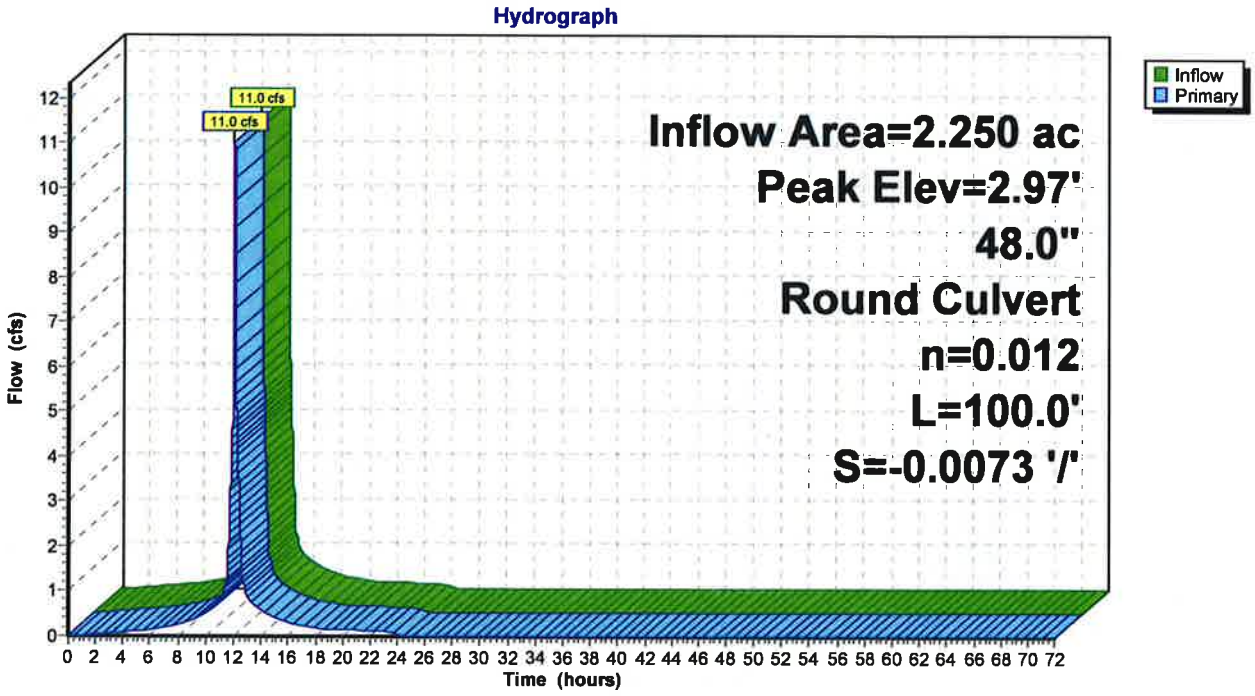
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth =	4.53"	for	10-Year X event
Inflow =	11.0 cfs @ 12.07 hrs, Volume=	0.850 af		
Outflow =	11.0 cfs @ 12.07 hrs, Volume=	0.850 af, Atten= 0%, Lag= 0.0 min		
Primary =	11.0 cfs @ 12.07 hrs, Volume=	0.850 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.97' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=11.0 cfs @ 12.07 hrs HW=2.97' TW=2.70' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 11.0 cfs @ 3.12 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.70' (Flood elevation advised)

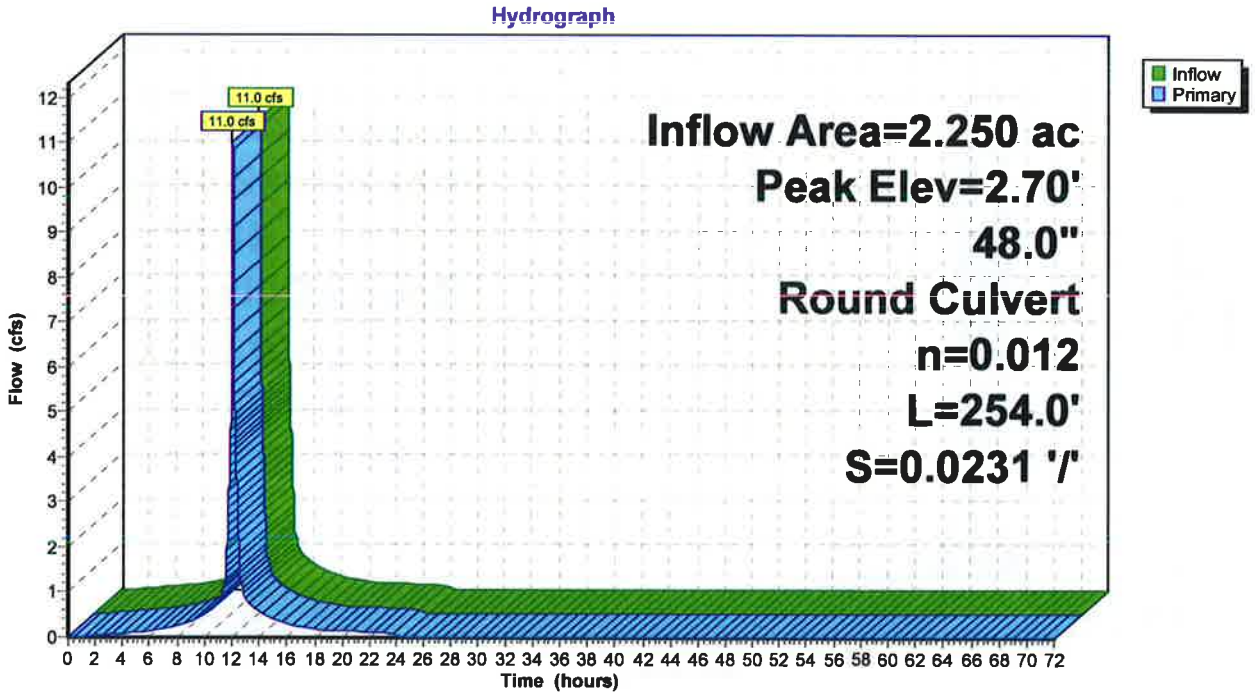
Inflow Area =	2.250 ac, 89.35% Impervious,	Inflow Depth =	4.53"	for 10-Year X event
Inflow =	11.0 cfs @ 12.07 hrs,	Volume=	0.850 af	
Outflow =	11.0 cfs @ 12.07 hrs,	Volume=	0.850 af,	Atten= 0%, Lag= 0.0 min
Primary =	11.0 cfs @ 12.07 hrs,	Volume=	0.850 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.70' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=11.0 cfs @ 12.07 hrs HW=2.70' (Free Discharge)
↳**1=Culvert** (Inlet Controls 11.0 cfs @ 4.31 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 8.04' (Flood elevation advised)

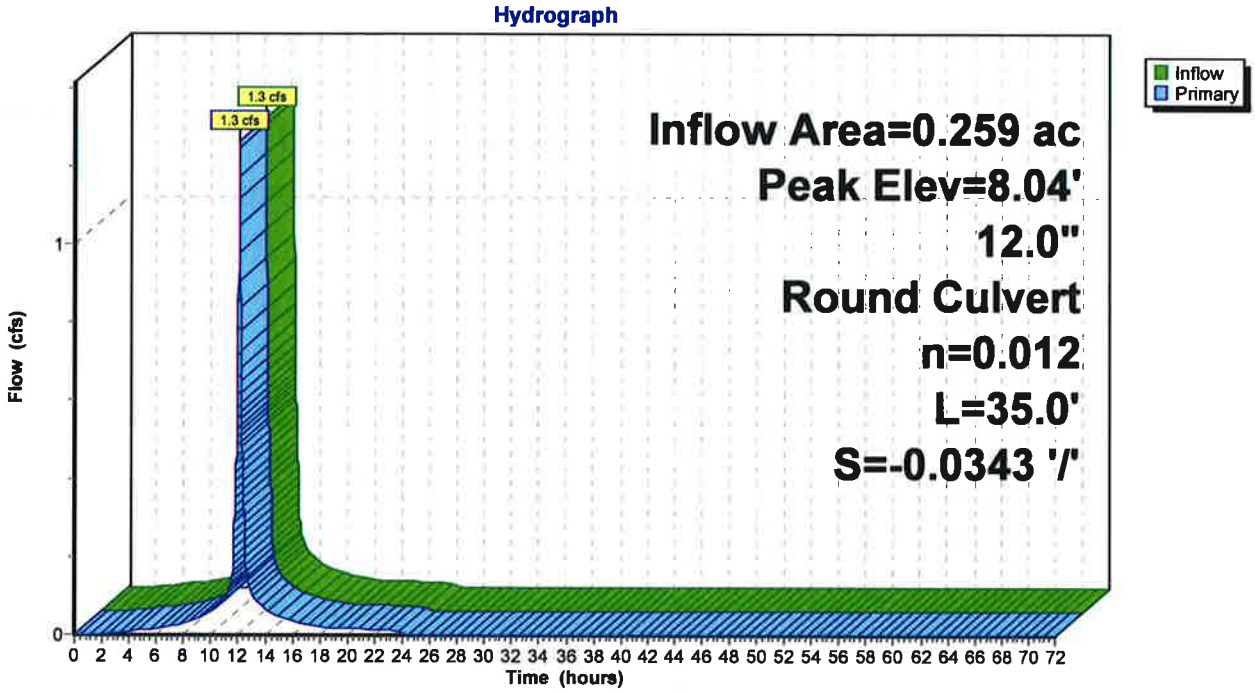
Inflow Area =	0.259 ac, 83.94% Impervious, Inflow Depth =	4.51"	for	10-Year X event
Inflow =	1.3 cfs @ 12.07 hrs, Volume=	0.097 af		
Outflow =	1.3 cfs @ 12.07 hrs, Volume=	0.097 af, Atten= 0%, Lag= 0.0 min		
Primary =	1.3 cfs @ 12.07 hrs, Volume=	0.097 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.04' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.3 cfs @ 12.07 hrs HW=8.04' TW=3.74' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 1.3 cfs @ 3.07 fps)

Pond 11P: CB 3523



Summary for Pond 12P: CB 3526

[57] Hint: Peaked at 6.70' (Flood elevation advised)

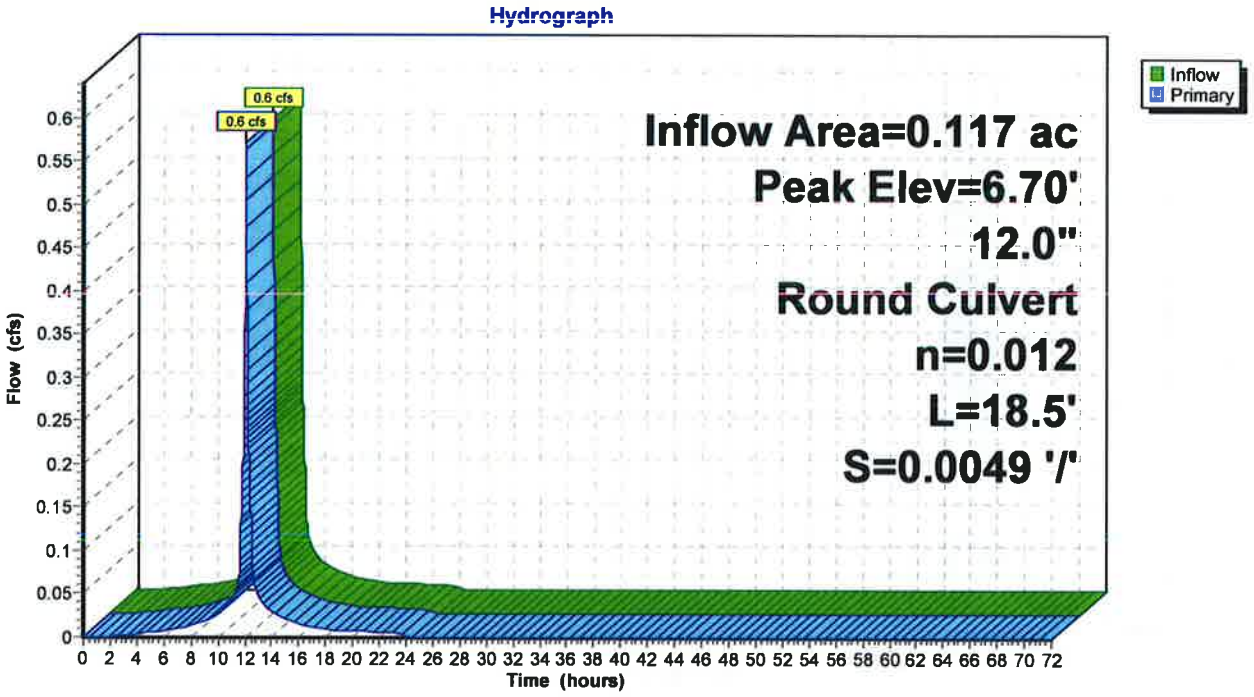
Inflow Area =	0.117 ac, 89.03% Impervious, Inflow Depth =	4.51"	for	10-Year X event
Inflow =	0.6 cfs @	12.07 hrs, Volume=	0.044 af	
Outflow =	0.6 cfs @	12.07 hrs, Volume=	0.044 af, Atten= 0%, Lag= 0.0 min	
Primary =	0.6 cfs @	12.07 hrs, Volume=	0.044 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.70' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.18'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.18' / 6.09' S= 0.0049 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.6 cfs @ 12.07 hrs HW=6.70' TW=6.58' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 0.6 cfs @ 2.04 fps)

Pond 12P: CB 3526



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 6.58' (Flood elevation advised)

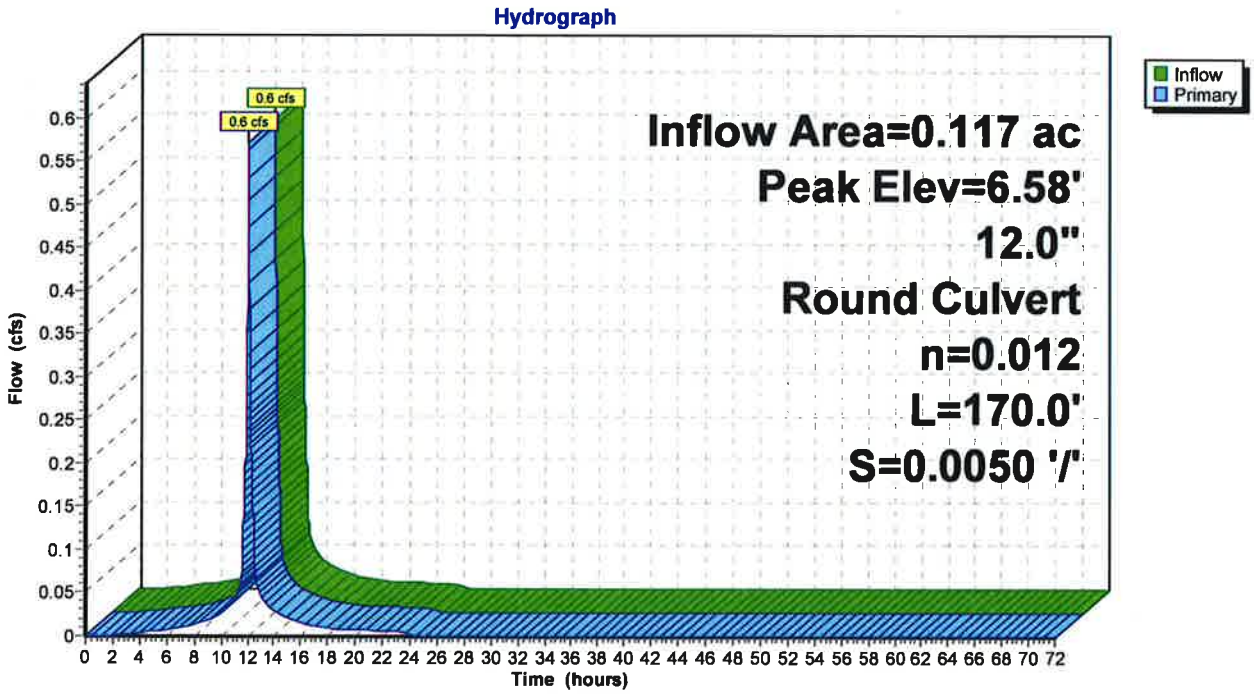
Inflow Area =	0.117 ac, 89.03% Impervious, Inflow Depth = 4.51" for 10-Year X event				
Inflow =	0.6 cfs @	12.07 hrs,	Volume=	0.044 af	
Outflow =	0.6 cfs @	12.07 hrs,	Volume=	0.044 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.6 cfs @	12.07 hrs,	Volume=	0.044 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.58' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.6 cfs @ 12.07 hrs HW=6.58' TW=6.03' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.6 cfs @ 2.19 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 6.03' (Flood elevation advised)

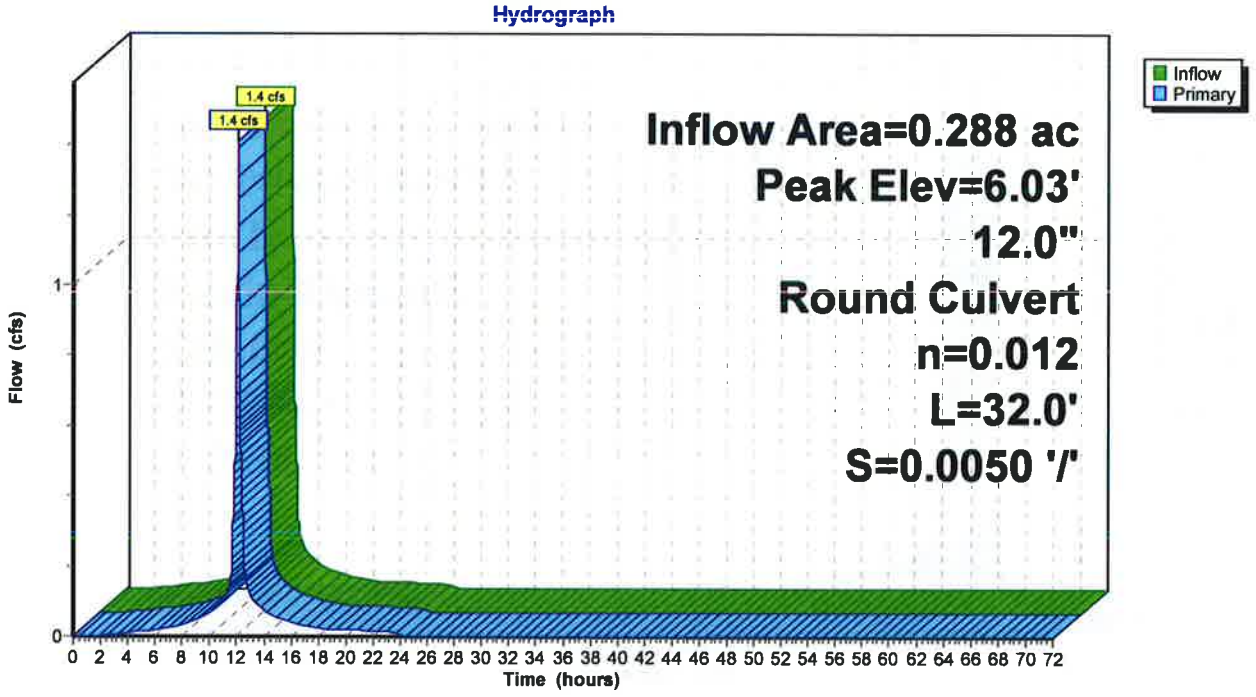
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 4.51"	for 10-Year X event		
Inflow =	1.4 cfs @ 12.07 hrs, Volume=	0.108 af		
Outflow =	1.4 cfs @ 12.07 hrs, Volume=	0.108 af, Atten= 0%, Lag= 0.0 min		
Primary =	1.4 cfs @ 12.07 hrs, Volume=	0.108 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.03' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.4 cfs @ 12.07 hrs HW=6.03' TW=5.77' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.4 cfs @ 2.90 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 6.10' (Flood elevation advised)

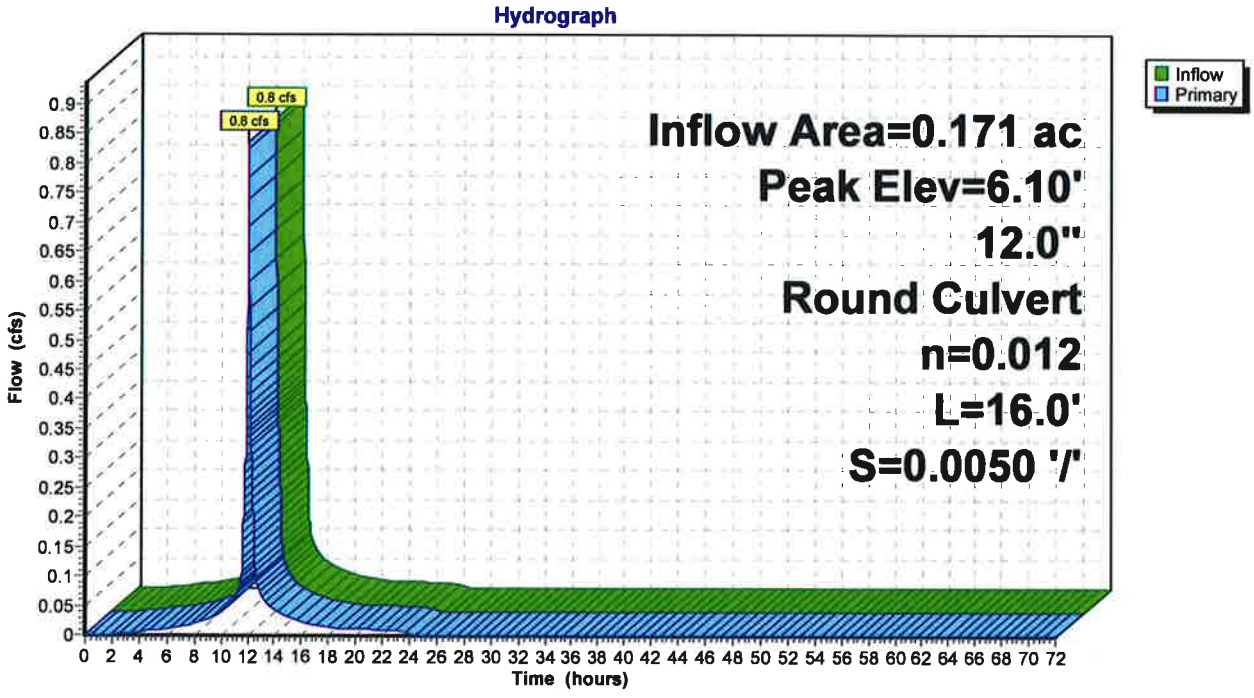
Inflow Area =	0.171 ac,	85.80% Impervious,	Inflow Depth =	4.51"	for 10-Year X event
Inflow =	0.8 cfs @	12.07 hrs, Volume=	0.064 af		
Outflow =	0.8 cfs @	12.07 hrs, Volume=	0.064 af,	Atten= 0%,	Lag= 0.0 min
Primary =	0.8 cfs @	12.07 hrs, Volume=	0.064 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.10' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.8 cfs @ 12.07 hrs HW=6.10' TW=6.03' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.8 cfs @ 1.72 fps)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 5.77' (Flood elevation advised)

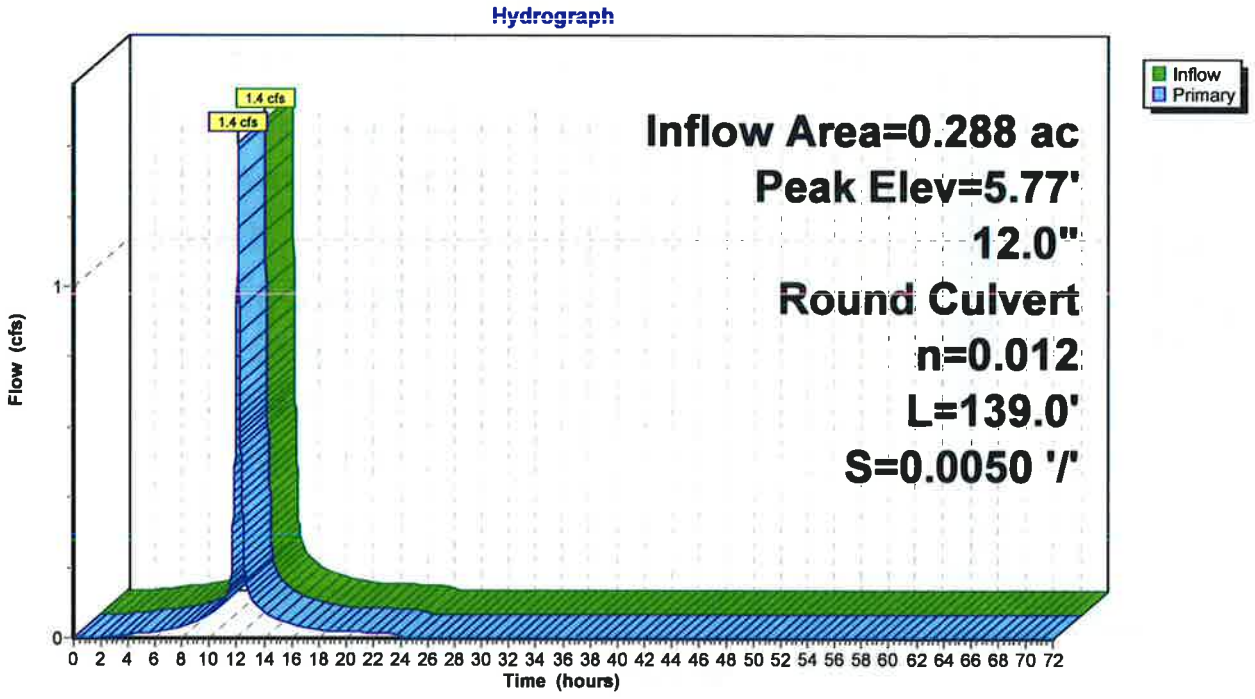
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 4.51"	for 10-Year X event		
Inflow =	1.4 cfs @ 12.07 hrs, Volume=	0.108 af		
Outflow =	1.4 cfs @ 12.07 hrs, Volume=	0.108 af, Atten= 0%, Lag= 0.0 min		
Primary =	1.4 cfs @ 12.07 hrs, Volume=	0.108 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.77' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.4 cfs @ 12.07 hrs HW=5.77' TW=4.92' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.4 cfs @ 3.40 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 4.92' (Flood elevation advised)

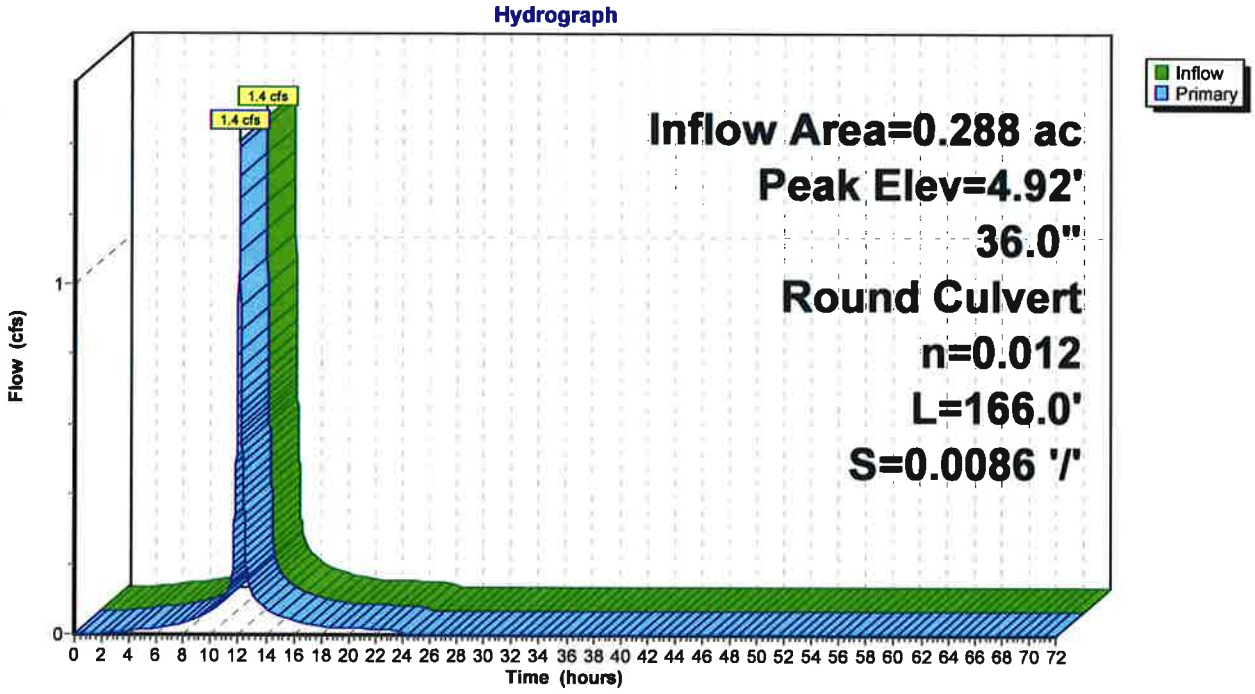
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth =	4.51"	for 10-Year X event		
Inflow =	1.4 cfs @	12.07 hrs, Volume=	0.108 af		
Outflow =	1.4 cfs @	12.07 hrs, Volume=	0.108 af,	Atten= 0%,	Lag= 0.0 min
Primary =	1.4 cfs @	12.07 hrs, Volume=	0.108 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.92' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=1.4 cfs @ 12.07 hrs HW=4.92' TW=4.51' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 1.4 cfs @ 2.23 fps)

Pond 17P: DMH 3545



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.38' (Flood elevation advised)

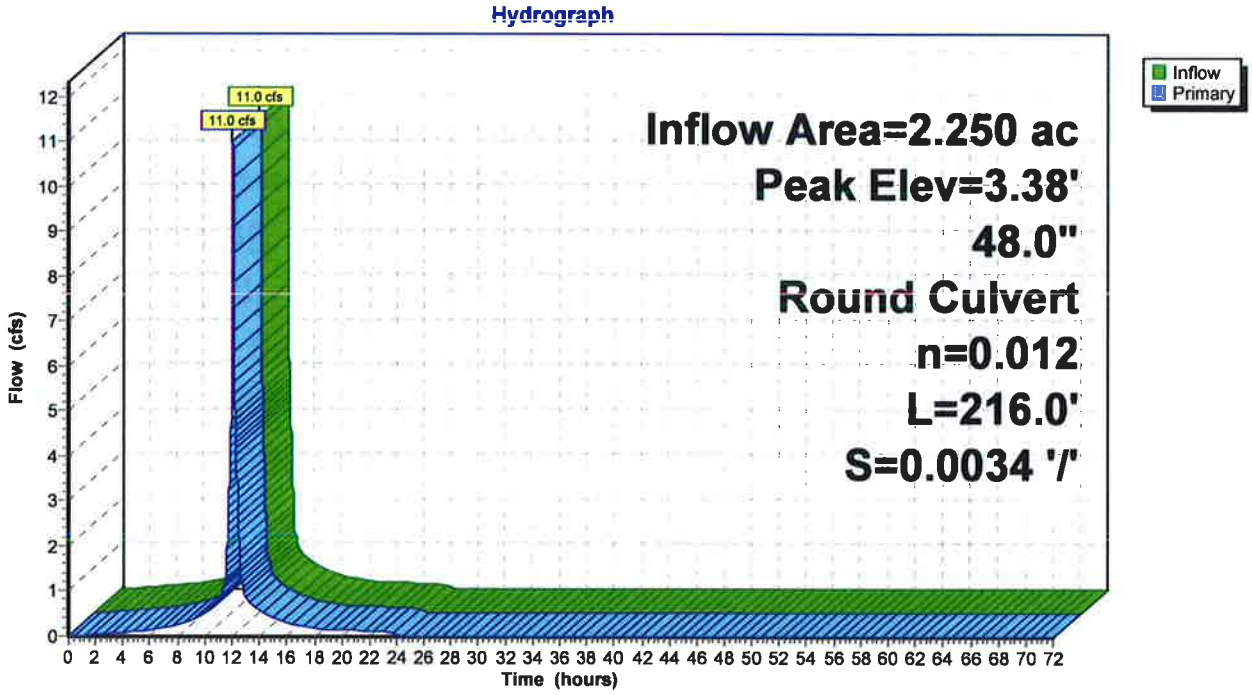
Inflow Area =	2.250 ac, 89.35% Impervious,	Inflow Depth =	4.53"	for 10-Year X event
Inflow =	11.0 cfs @ 12.07 hrs,	Volume=	0.850 af	
Outflow =	11.0 cfs @ 12.07 hrs,	Volume=	0.850 af,	Atten= 0%, Lag= 0.0 min
Primary =	11.0 cfs @ 12.07 hrs,	Volume=	0.850 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.38' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=11.0 cfs @ 12.07 hrs HW=3.38' TW=2.97' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 11.0 cfs @ 3.19 fps)

Pond DP1: DMH 3540



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=2.4 cfs 0.190 af

Subcatchment ES2: Runoff Area=22,558 sf 87.71% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=3.2 cfs 0.250 af

Subcatchment ES3: Runoff Area=10,622 sf 81.41% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=1.5 cfs 0.118 af

Subcatchment ES4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.6 cfs 0.047 af

Subcatchment ES5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=2.9 cfs 0.223 af

Subcatchment ES6: Runoff Area=11,261 sf 83.94% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=1.6 cfs 0.125 af

Subcatchment ES7: Runoff Area=5,094 sf 89.03% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=0.7 cfs 0.057 af

Subcatchment ES8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=1.1 cfs 0.083 af

Pond 1P: CB 3528 Peak Elev=6.15' Inflow=5.3 cfs 0.413 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=5.3 cfs 0.413 af

Pond 2P: CB 3524 Peak Elev=9.88' Inflow=1.5 cfs 0.118 af
12.0" Round Culvert n=0.012 L=76.0' S=0.0249 '/' Outflow=1.5 cfs 0.118 af

Pond 3P: CB 3525 Peak Elev=9.72' Inflow=4.7 cfs 0.368 af
12.0" Round Culvert n=0.012 L=111.0' S=0.0078 '/' Outflow=4.7 cfs 0.368 af

Pond 4P: CB 3527 Peak Elev=7.36' Inflow=5.3 cfs 0.416 af
12.0" Round Culvert n=0.012 L=59.0' S=0.0068 '/' Outflow=5.3 cfs 0.416 af

Pond 5P: DMH 3543 Peak Elev=4.79' Inflow=12.4 cfs 0.968 af
36.0" Round Culvert n=0.012 L=164.0' S=0.0018 '/' Outflow=12.4 cfs 0.968 af

Pond 6P: DMH 3542 Peak Elev=4.28' Inflow=12.4 cfs 0.968 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=12.4 cfs 0.968 af

Pond 7P: DMH 3541 Peak Elev=3.99' Inflow=14.0 cfs 1.093 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=14.0 cfs 1.093 af

Pond 9P: DMH 5438 Peak Elev=3.14' Inflow=14.0 cfs 1.093 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=14.0 cfs 1.093 af

Pond 10P: DMH 5217 Peak Elev=2.84' Inflow=14.0 cfs 1.093 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=14.0 cfs 1.093 af

Pond 11P: CB 3523 Peak Elev=8.12' Inflow=1.6 cfs 0.125 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=1.6 cfs 0.125 af

Pond 12P: CB 3526 Peak Elev=6.78' Inflow=0.7 cfs 0.057 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0049 '/' Outflow=0.7 cfs 0.057 af

Pond 13P: DMH 12303 Peak Elev=6.67' Inflow=0.7 cfs 0.057 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=0.7 cfs 0.057 af

Pond 14P: DMH 12631 Peak Elev=6.17' Inflow=1.8 cfs 0.139 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=1.8 cfs 0.139 af

Pond 15P: CB 8146 Peak Elev=6.25' Inflow=1.1 cfs 0.083 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=1.1 cfs 0.083 af

Pond 16P: DMH 12632 Peak Elev=5.90' Inflow=1.8 cfs 0.139 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=1.8 cfs 0.139 af

Pond 17P: DMH 3545 Peak Elev=5.06' Inflow=1.8 cfs 0.139 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=1.8 cfs 0.139 af

Pond DP1: DMH 3540 Peak Elev=3.60' Inflow=14.0 cfs 1.093 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=14.0 cfs 1.093 af

Total Runoff Area = 2.250 ac Runoff Volume = 1.093 af Average Runoff Depth = 5.83"
10.65% Pervious = 0.240 ac 89.35% Impervious = 2.011 ac

Summary for Subcatchment ES1:

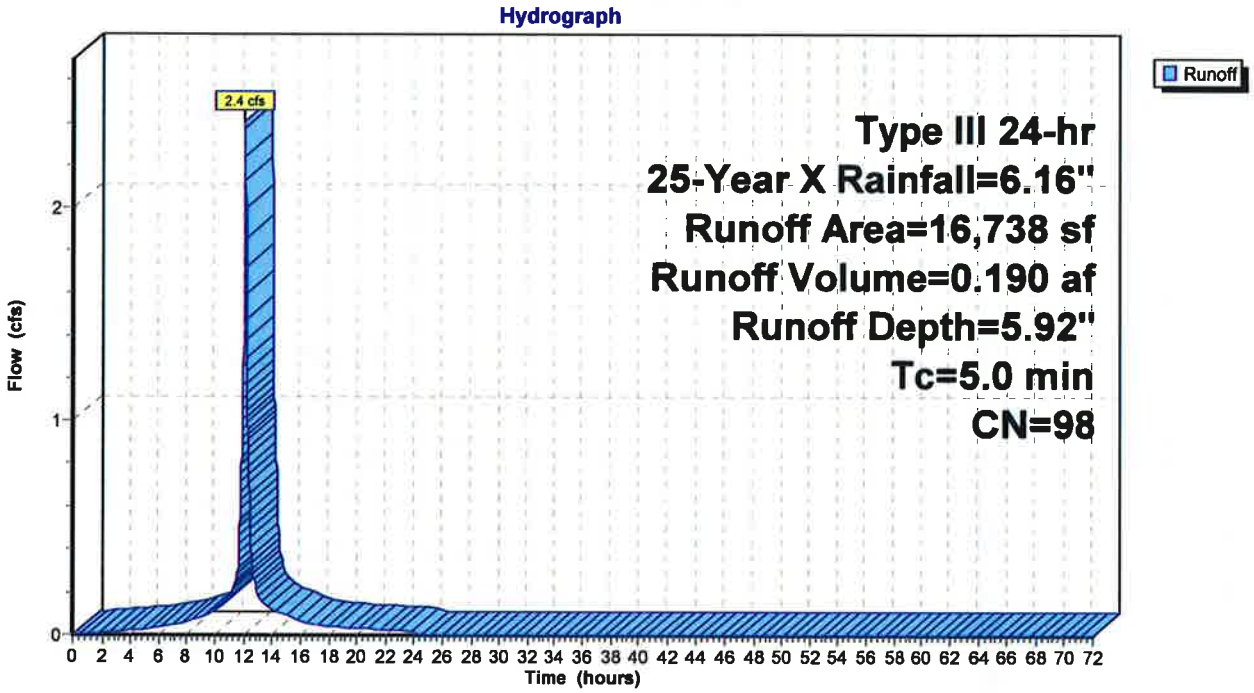
Runoff = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES1:



Summary for Subcatchment ES2:

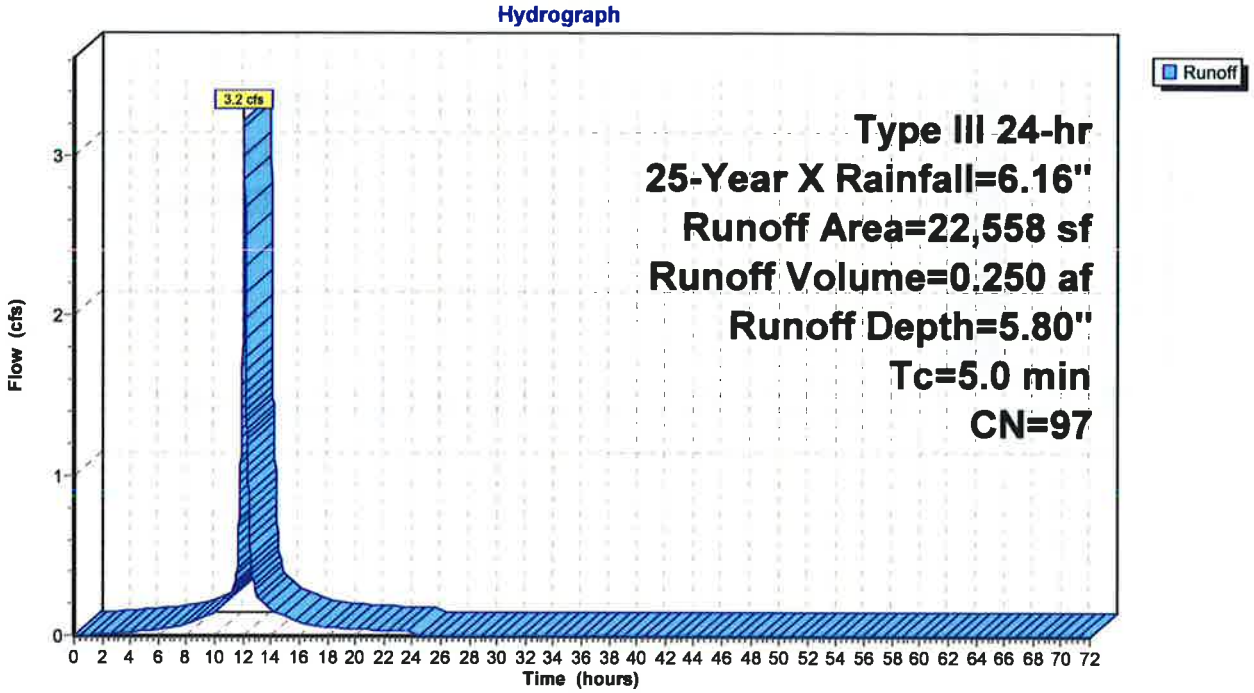
Runoff = 3.2 cfs @ 12.07 hrs, Volume= 0.250 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

	Area (sf)	CN	Description
	15,968	98	Paved parking, HSG C
	1,941	98	Paved roads w/curbs & sewers, HSG C
	990	98	Paved roads w/curbs & sewers, HSG C
	47	98	Roofs, HSG C
*	840	98	Gravel roads, HSG C
	2,772	91	Fallow, bare soil, HSG C
	22,558	97	Weighted Average
	2,772		12.29% Pervious Area
	19,786		87.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment ES2:



Summary for Subcatchment ES3:

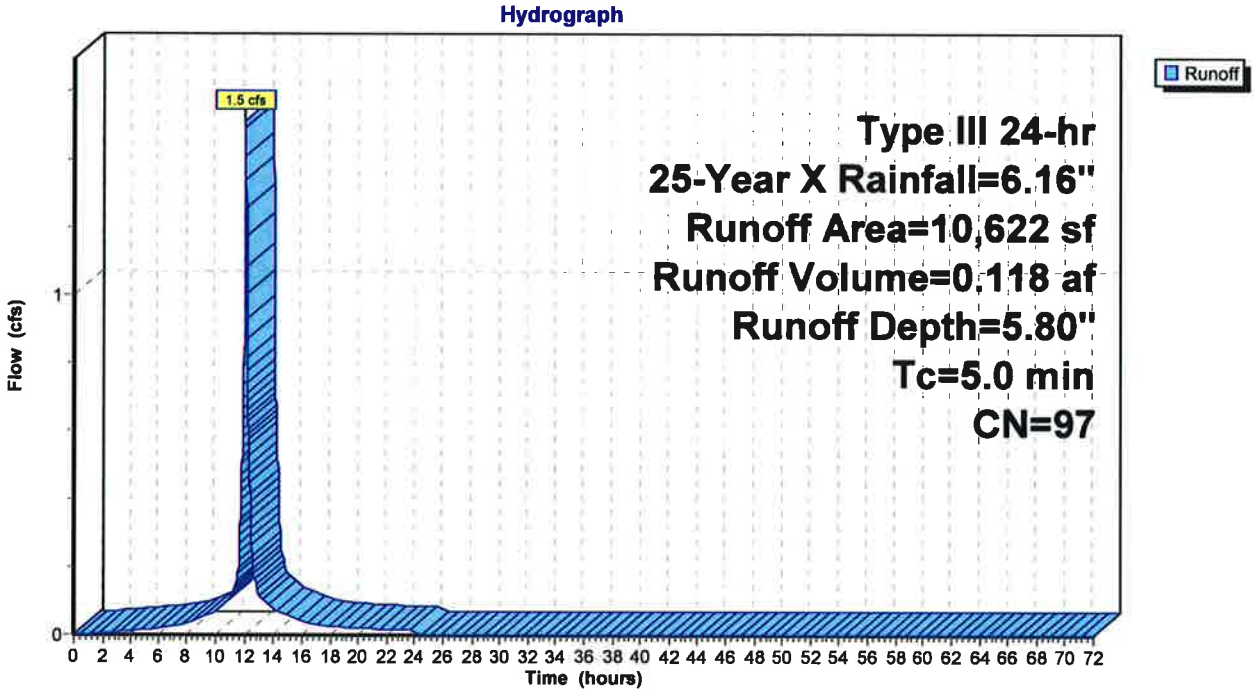
Runoff = 1.5 cfs @ 12.07 hrs, Volume= 0.118 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
8,579	98	Paved parking, HSG C
14	98	Paved roads w/curbs & sewers, HSG C
54	98	Roofs, HSG C
1,975	91	Fallow, bare soil, HSG C
10,622	97	Weighted Average
1,975		18.59% Pervious Area
8,647		81.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES3:



Summary for Subcatchment ES4:

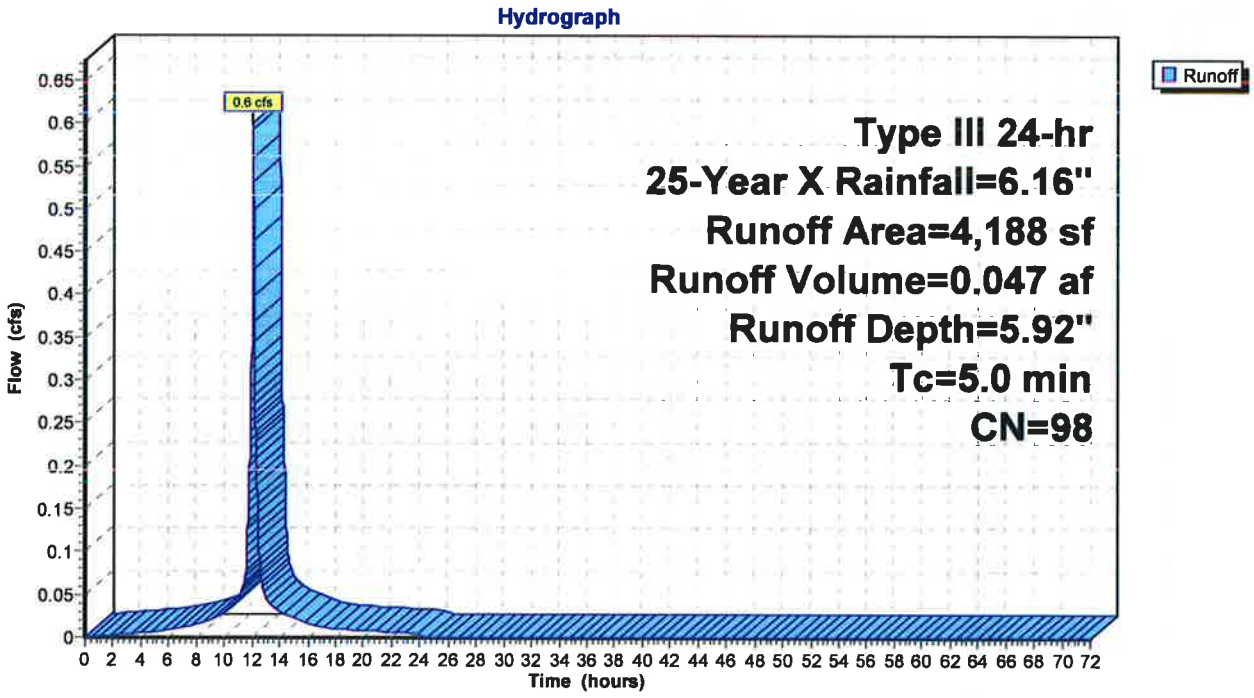
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.047 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Subcatchment ES4:



Summary for Subcatchment ES5:

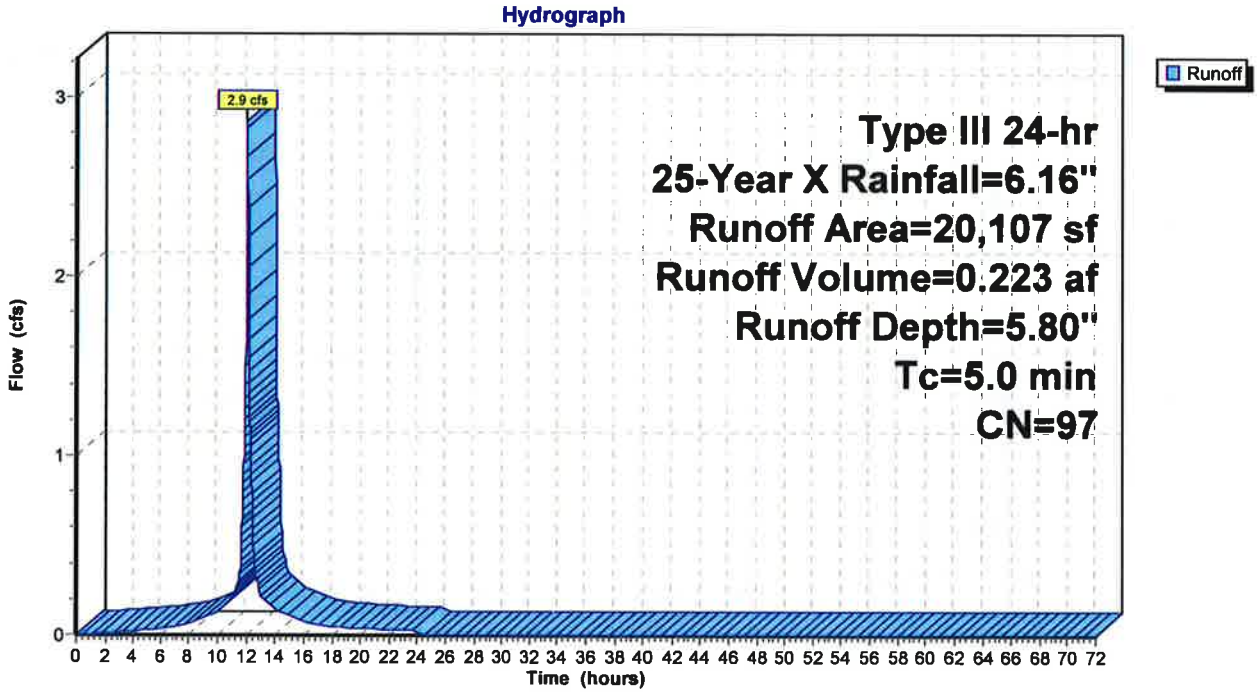
Runoff = 2.9 cfs @ 12.07 hrs, Volume= 0.223 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES5:



Summary for Subcatchment ES6:

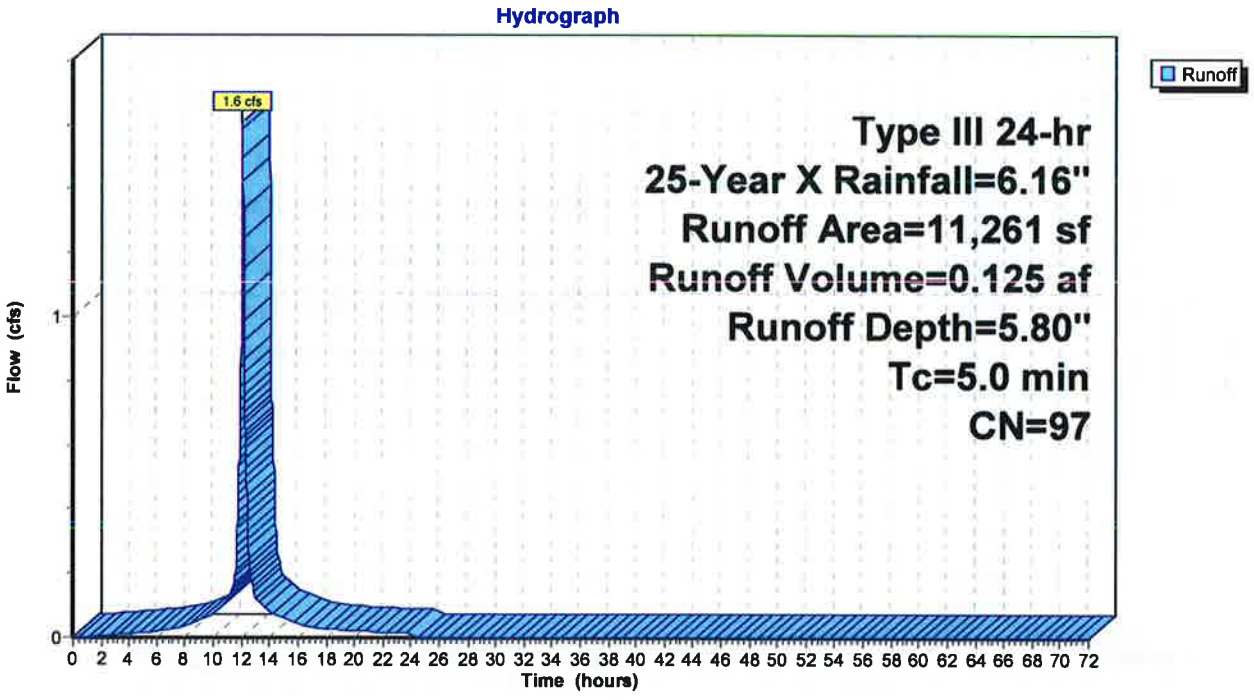
Runoff = 1.6 cfs @ 12.07 hrs, Volume= 0.125 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
86	98	Paved parking, HSG C
6,879	98	Paved roads w/curbs & sewers, HSG C
2,385	98	Paved roads w/curbs & sewers, HSG C
103	98	Roofs, HSG C
1,808	91	Fallow, bare soil, HSG C
11,261	97	Weighted Average
1,808		16.06% Pervious Area
9,453		83.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES6:



Summary for Subcatchment ES7:

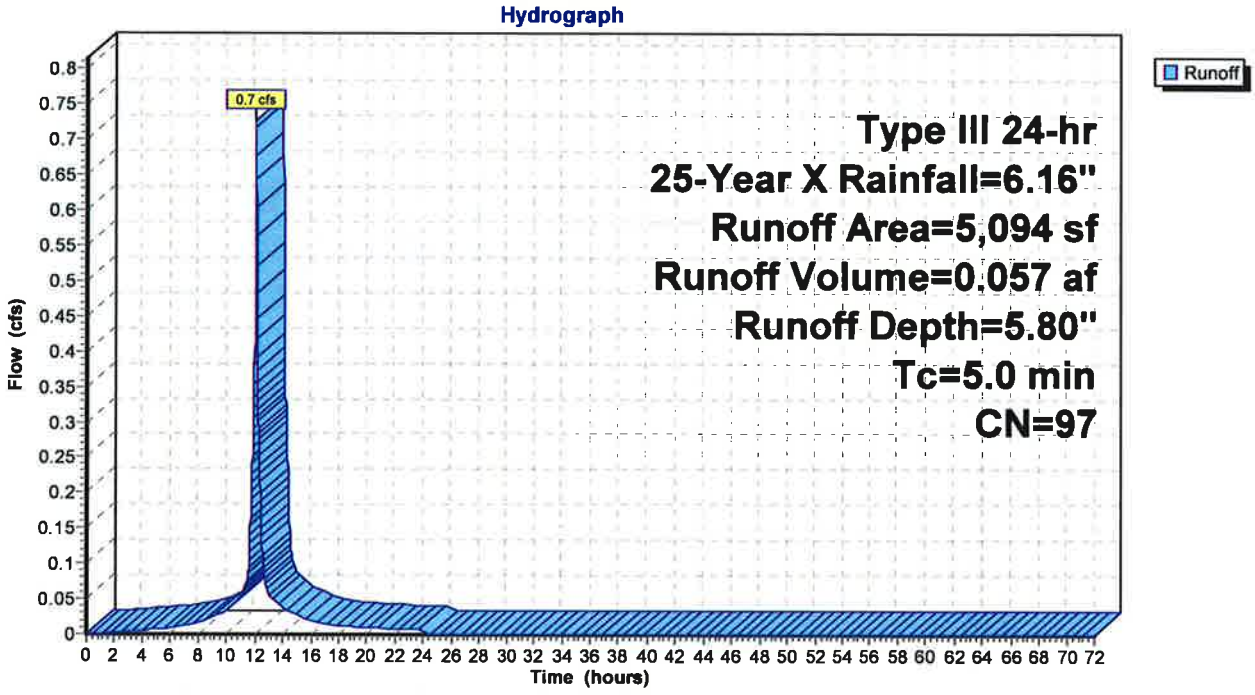
Runoff = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
3,437	98	Paved roads w/curbs & sewers, HSG C
1,098	98	Paved roads w/curbs & sewers, HSG C
559	91	Fallow, bare soil, HSG C
5,094	97	Weighted Average
559		10.97% Pervious Area
4,535		89.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES7:



Summary for Subcatchment ES8:

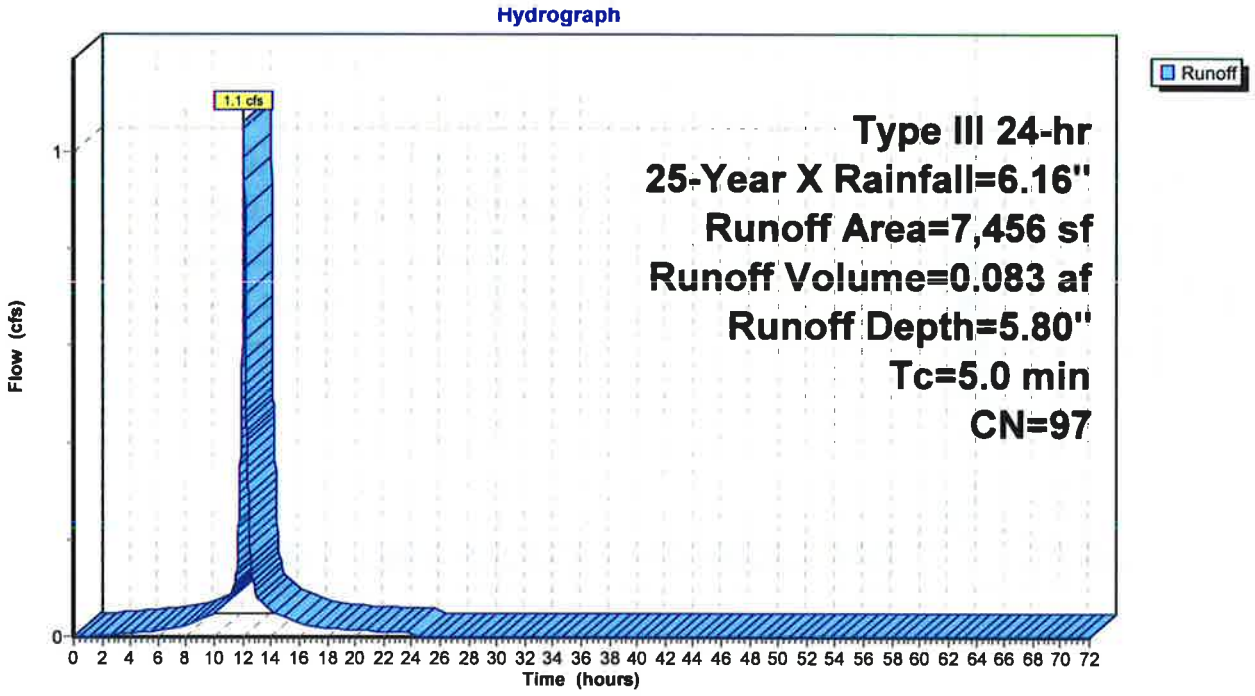
Runoff = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

	Area (sf)	CN	Description
	4,674	98	Paved roads w/curbs & sewers, HSG C
	1,563	98	Paved roads w/curbs & sewers, HSG C
	121	98	Paved roads w/curbs & sewers, HSG C
*	39	98	Gravel roads, HSG C
	1,059	91	Fallow, bare soil, HSG C
	7,456	97	Weighted Average
	1,059		14.20% Pervious Area
	6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 6.15' (Flood elevation advised)

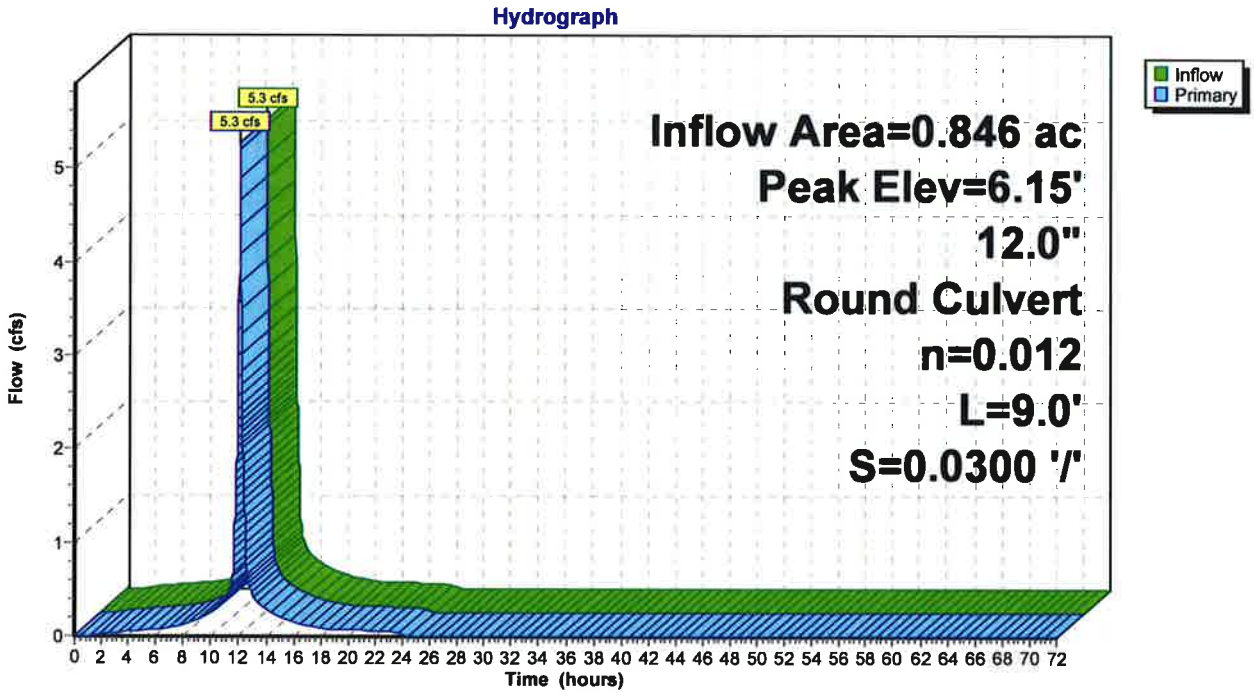
Inflow Area =	0.846 ac, 93.86% Impervious, Inflow Depth =	5.86"	for 25-Year X event		
Inflow =	5.3 cfs @	12.07 hrs, Volume=	0.413 af		
Outflow =	5.3 cfs @	12.07 hrs, Volume=	0.413 af,	Atten= 0%,	Lag= 0.0 min
Primary =	5.3 cfs @	12.07 hrs, Volume=	0.413 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.15' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.3 cfs @ 12.07 hrs HW=6.15' TW=4.78' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 5.3 cfs @ 6.72 fps)

Pond 1P: CB 3528



Summary for Pond 2P: CB 3524

[57] Hint: Peaked at 9.88' (Flood elevation advised)

Inflow Area =	0.244 ac, 81.41% Impervious,	Inflow Depth =	5.80"	for 25-Year X event
Inflow =	1.5 cfs @ 12.07 hrs,	Volume=	0.118 af	
Outflow =	1.5 cfs @ 12.07 hrs,	Volume=	0.118 af,	Atten= 0%, Lag= 0.0 min
Primary =	1.5 cfs @ 12.07 hrs,	Volume=	0.118 af	

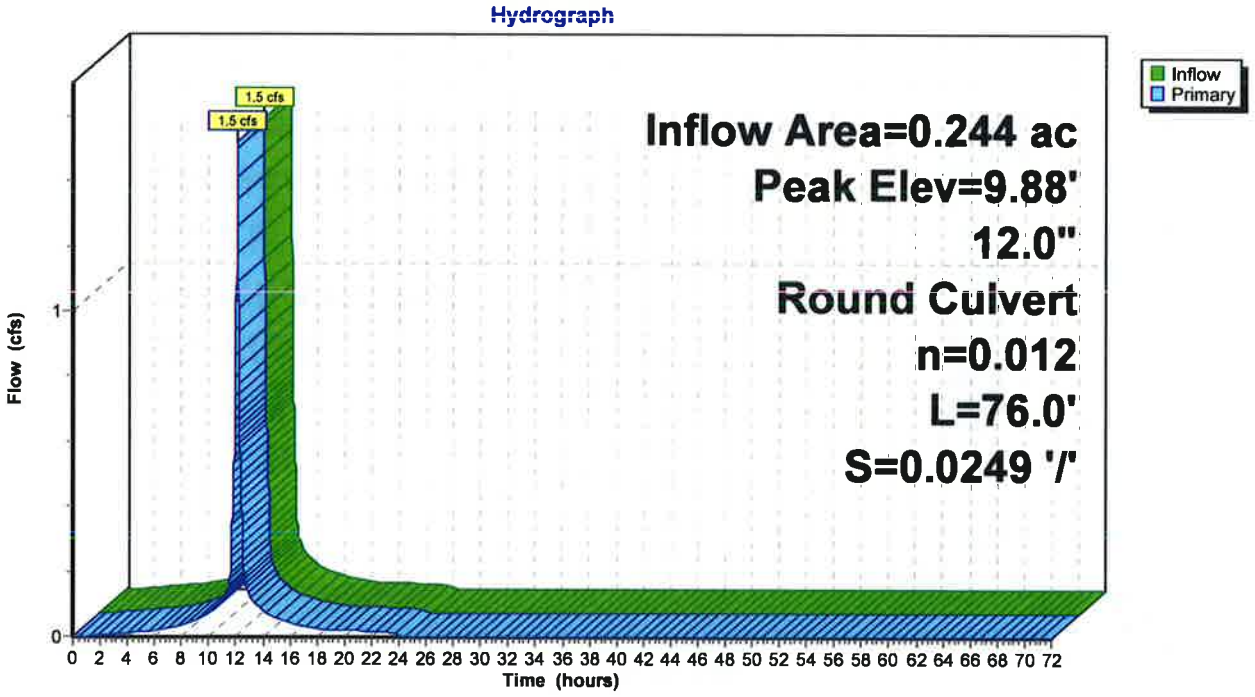
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 9.88' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 76.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 7.52' / 5.63' S= 0.0249 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.4 cfs @ 12.07 hrs HW=9.87' TW=9.72' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.4 cfs @ 1.74 fps)

Pond 2P: CB 3524

Hydrograph



Summary for Pond 3P: CB 3525

[57] Hint: Peaked at 9.72' (Flood elevation advised)
[80] Warning: Exceeded Pond 2P by 0.04' @ 12.04 hrs (0.7 cfs 0.001 af)

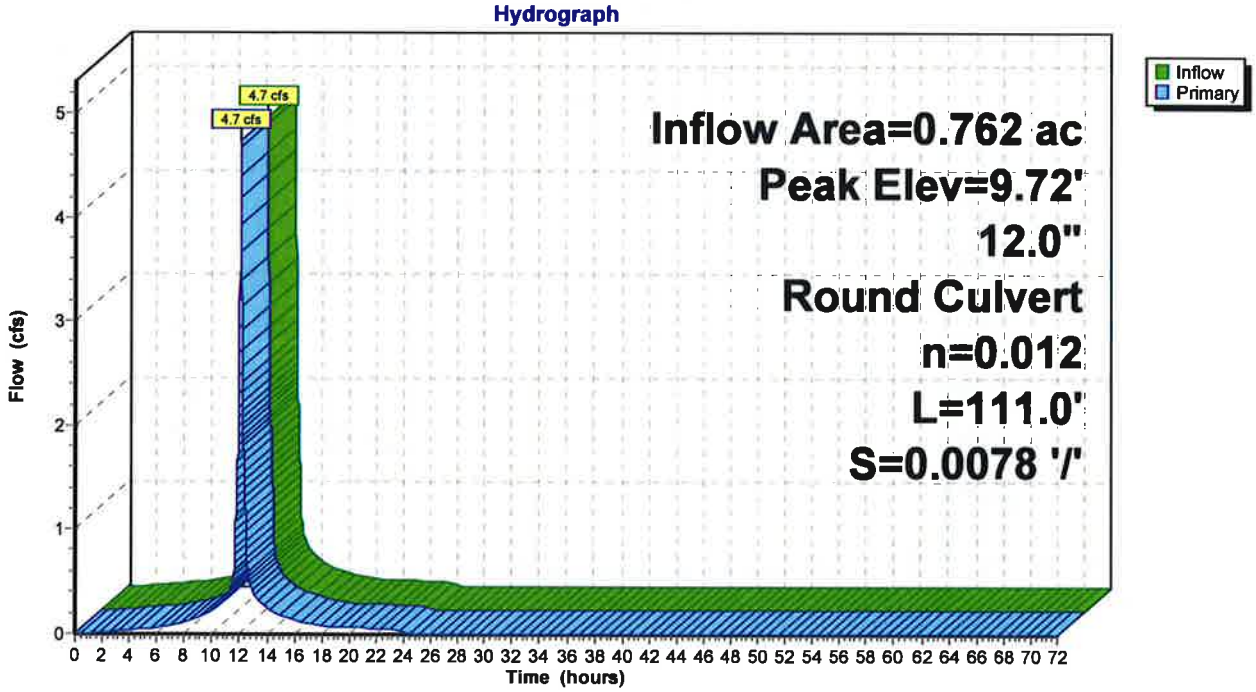
Inflow Area =	0.762 ac,	85.69% Impervious,	Inflow Depth =	5.80"	for 25-Year X event
Inflow =	4.7 cfs @	12.07 hrs,	Volume=	0.368 af	
Outflow =	4.7 cfs @	12.07 hrs,	Volume=	0.368 af,	Atten= 0%, Lag= 0.0 min
Primary =	4.7 cfs @	12.07 hrs,	Volume=	0.368 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 9.72' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.63'	**12.0" Round Culvert** L= 111.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.63' / 4.76' S= 0.0078 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.7 cfs @ 12.07 hrs HW=9.72' TW=7.36' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 4.7 cfs @ 6.04 fps)

Pond 3P: CB 3525



Summary for Pond 4P: CB 3527

[57] Hint: Peaked at 7.36' (Flood elevation advised)

Inflow Area = 0.858 ac, 87.30% Impervious, Inflow Depth = 5.82" for 25-Year X event
Inflow = 5.3 cfs @ 12.07 hrs, Volume= 0.416 af
Outflow = 5.3 cfs @ 12.07 hrs, Volume= 0.416 af, Atten= 0%, Lag= 0.0 min
Primary = 5.3 cfs @ 12.07 hrs, Volume= 0.416 af

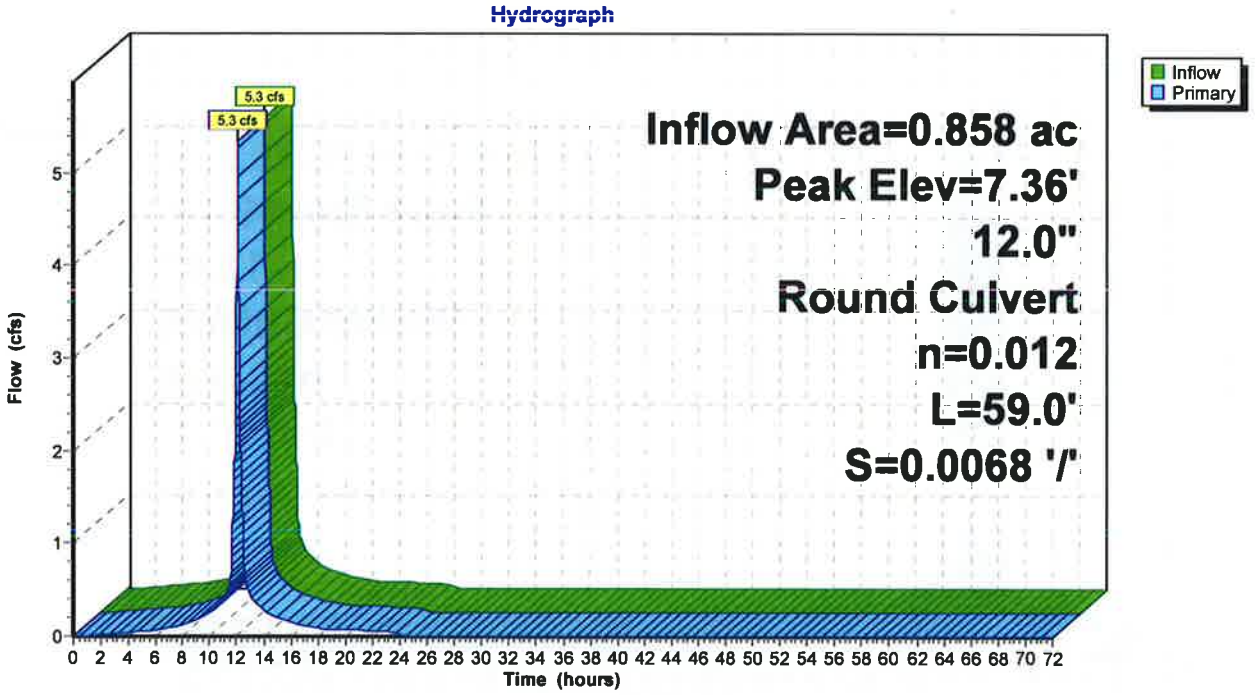
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.36' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.76'	**12.0" Round Culvert** L= 59.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.76' / 4.36' S= 0.0068 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.3 cfs @ 12.07 hrs HW=7.36' TW=4.78' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 5.3 cfs @ 6.80 fps)

Pond 4P: CB 3527

Hydrograph



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 4.79' (Flood elevation advised)

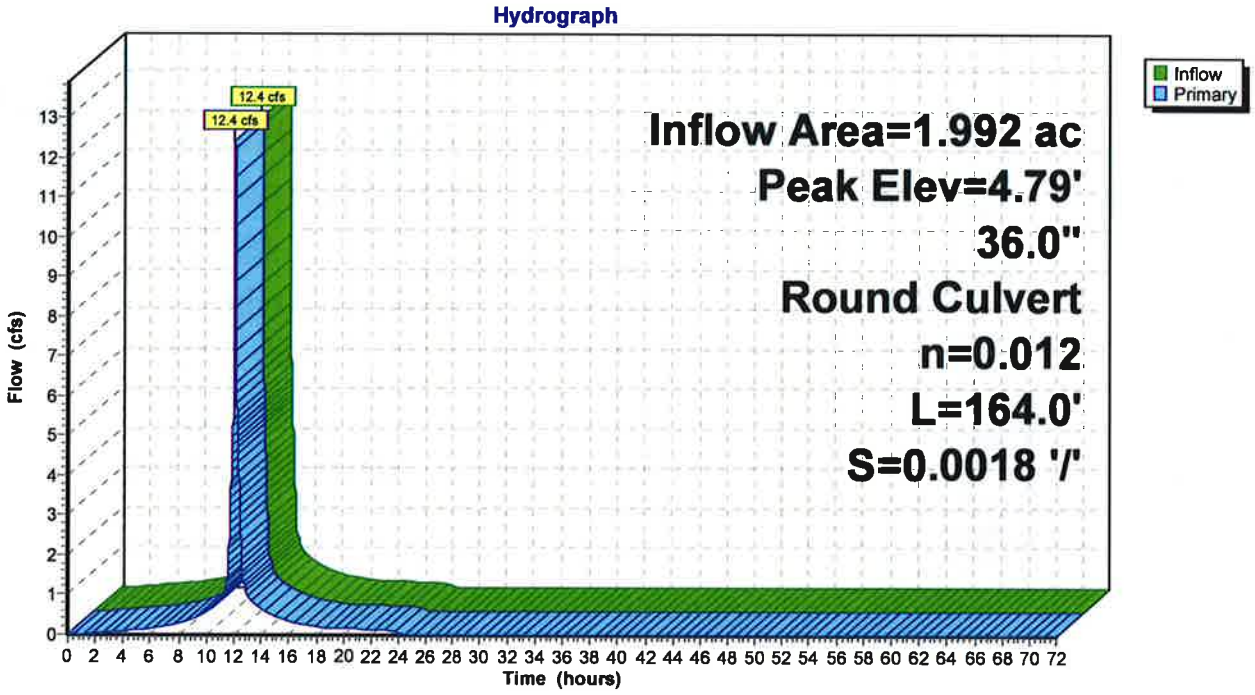
Inflow Area =	1.992 ac,	90.05% Impervious,	Inflow Depth =	5.83"	for 25-Year X event
Inflow =	12.4 cfs @	12.07 hrs,	Volume=	0.968 af	
Outflow =	12.4 cfs @	12.07 hrs,	Volume=	0.968 af,	Atten= 0%, Lag= 0.0 min
Primary =	12.4 cfs @	12.07 hrs,	Volume=	0.968 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.79' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 164.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.61' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=12.3 cfs @ 12.07 hrs HW=4.78' TW=4.27' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 12.3 cfs @ 3.80 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 4.28' (Flood elevation advised)

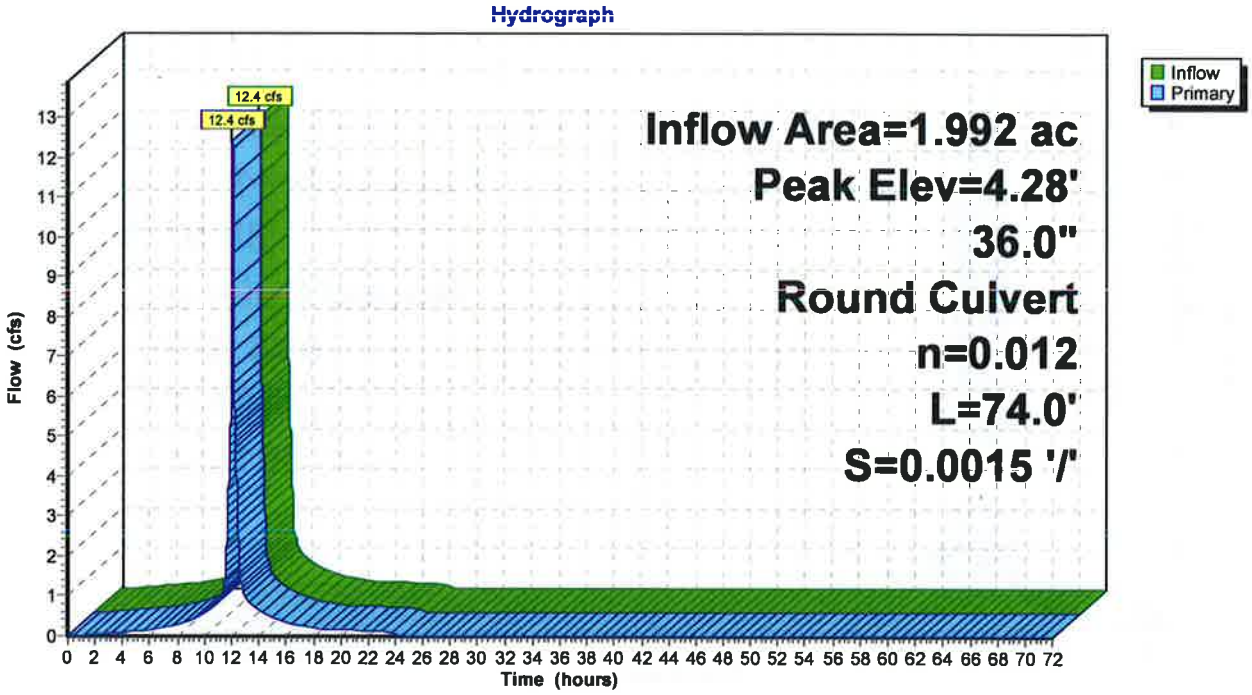
Inflow Area =	1.992 ac, 90.05% Impervious, Inflow Depth = 5.83"	for 25-Year X event		
Inflow =	12.4 cfs @ 12.07 hrs, Volume=	0.968 af		
Outflow =	12.4 cfs @ 12.07 hrs, Volume=	0.968 af, Atten= 0%, Lag= 0.0 min		
Primary =	12.4 cfs @ 12.07 hrs, Volume=	0.968 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.28' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=12.3 cfs @ 12.07 hrs HW=4.27' TW=3.99' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 12.3 cfs @ 3.33 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 3.99' (Flood elevation advised)

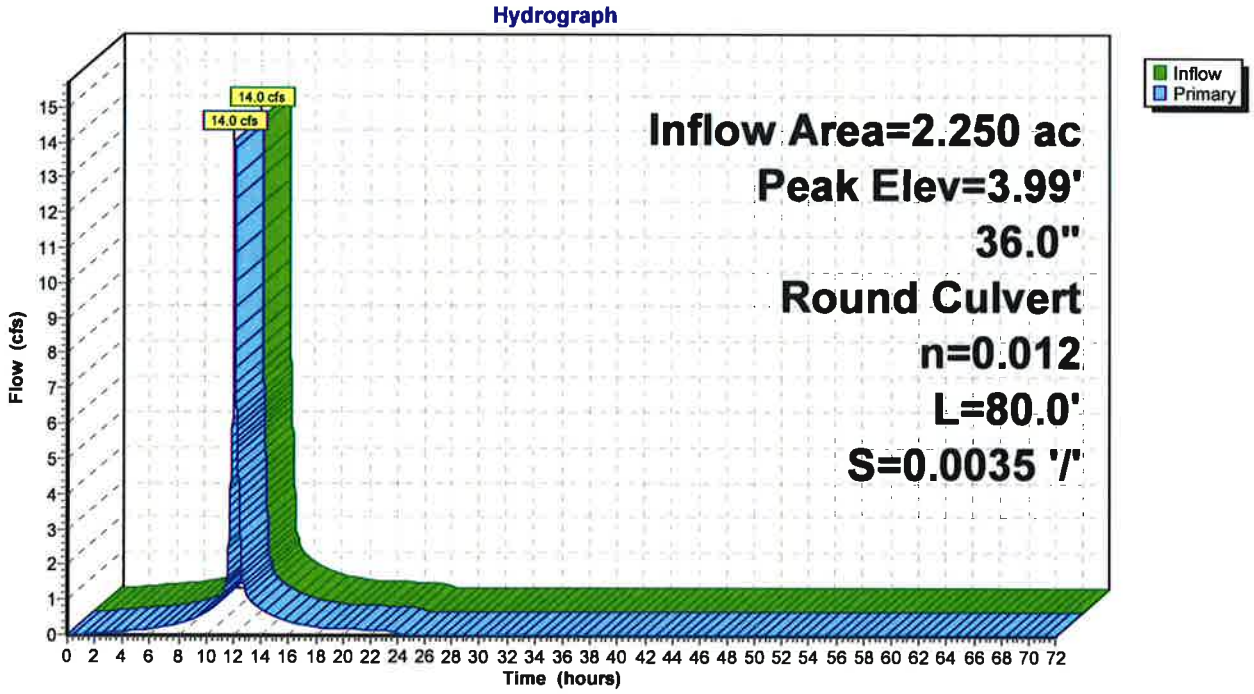
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth = 5.83"	for 25-Year X event			
Inflow =	14.0 cfs @ 12.07 hrs, Volume=	1.093 af			
Outflow =	14.0 cfs @ 12.07 hrs, Volume=	1.093 af,	Atten= 0%,	Lag= 0.0 min	
Primary =	14.0 cfs @ 12.07 hrs, Volume=	1.093 af			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.99' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=14.0 cfs @ 12.07 hrs HW=3.99' TW=3.59' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 14.0 cfs @ 3.88 fps)

Pond 7P: DMH 3541



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 3.14' (Flood elevation advised)

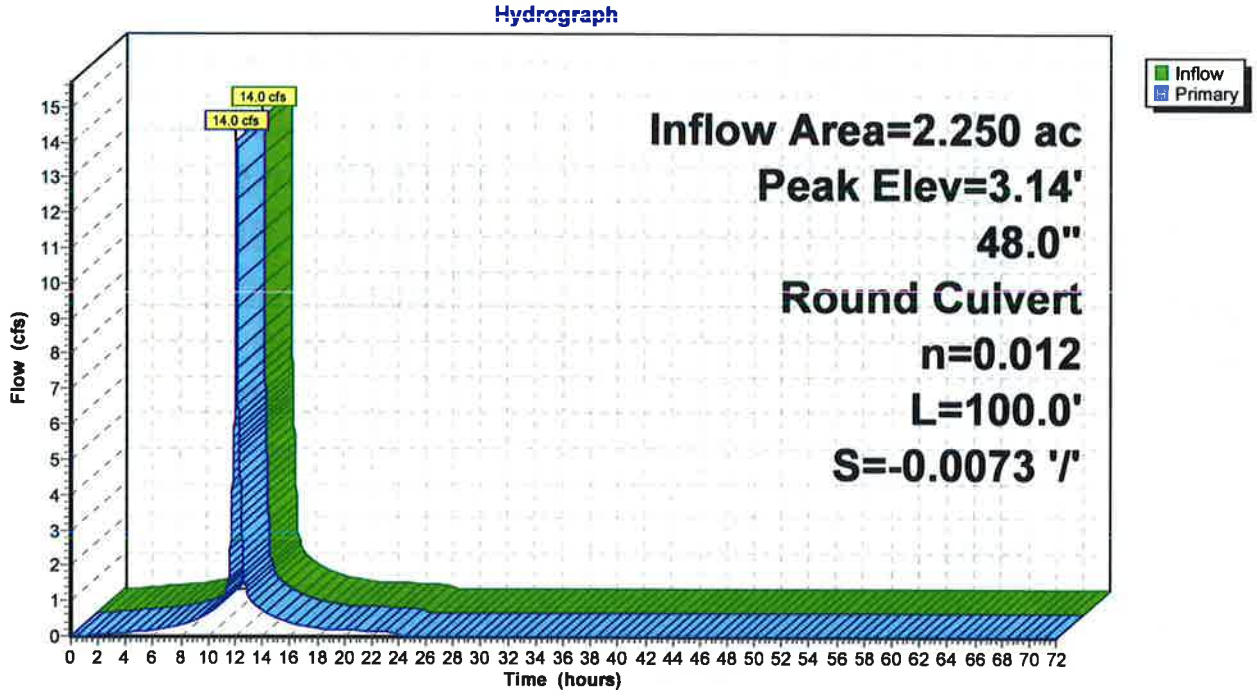
Inflow Area =	2.250 ac, 89.35% Impervious,	Inflow Depth =	5.83"	for 25-Year X event
Inflow =	14.0 cfs @ 12.07 hrs,	Volume=	1.093 af	
Outflow =	14.0 cfs @ 12.07 hrs,	Volume=	1.093 af,	Atten= 0%, Lag= 0.0 min
Primary =	14.0 cfs @ 12.07 hrs,	Volume=	1.093 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.14' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=14.0 cfs @ 12.07 hrs HW=3.14' TW=2.84' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 14.0 cfs @ 3.34 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.84' (Flood elevation advised)

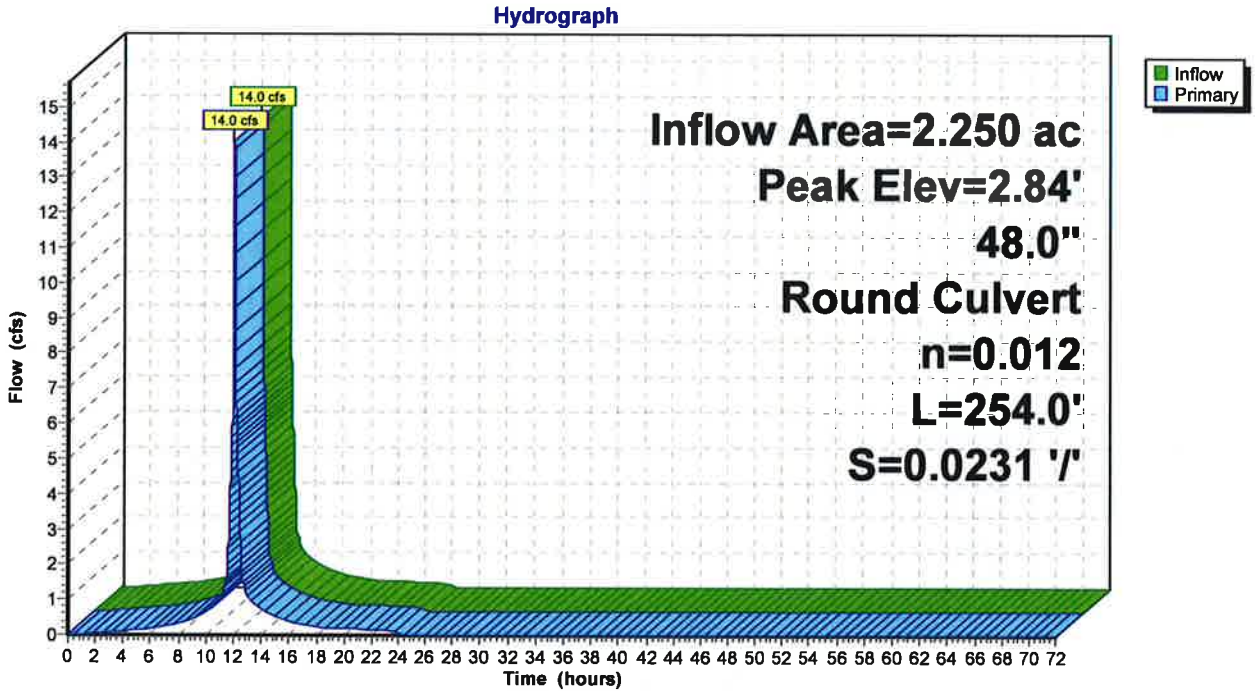
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth = 5.83" for 25-Year X event				
Inflow =	14.0 cfs @	12.07 hrs,	Volume=	1.093 af	
Outflow =	14.0 cfs @	12.07 hrs,	Volume=	1.093 af,	Atten= 0%, Lag= 0.0 min
Primary =	14.0 cfs @	12.07 hrs,	Volume=	1.093 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.84' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=14.0 cfs @ 12.07 hrs HW=2.84' (Free Discharge)
↑**1=Culvert** (Inlet Controls 14.0 cfs @ 4.60 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 8.12' (Flood elevation advised)

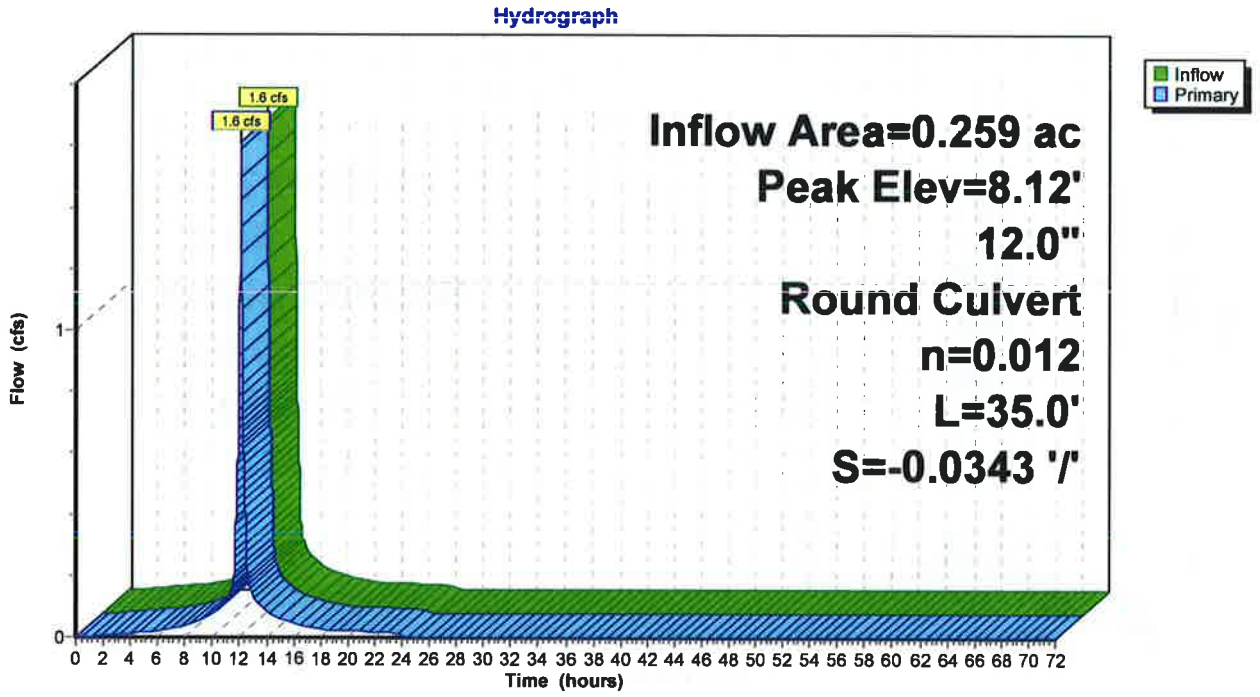
Inflow Area =	0.259 ac, 83.94% Impervious, Inflow Depth = 5.80"	for 25-Year X event		
Inflow =	1.6 cfs @ 12.07 hrs, Volume=	0.125 af		
Outflow =	1.6 cfs @ 12.07 hrs, Volume=	0.125 af, Atten= 0%, Lag= 0.0 min		
Primary =	1.6 cfs @ 12.07 hrs, Volume=	0.125 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.12' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.6 cfs @ 12.07 hrs HW=8.12' TW=3.99' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.6 cfs @ 3.29 fps)

Pond 11P: CB 3523



Summary for Pond 12P: CB 3526

[57] Hint: Peaked at 6.78' (Flood elevation advised)

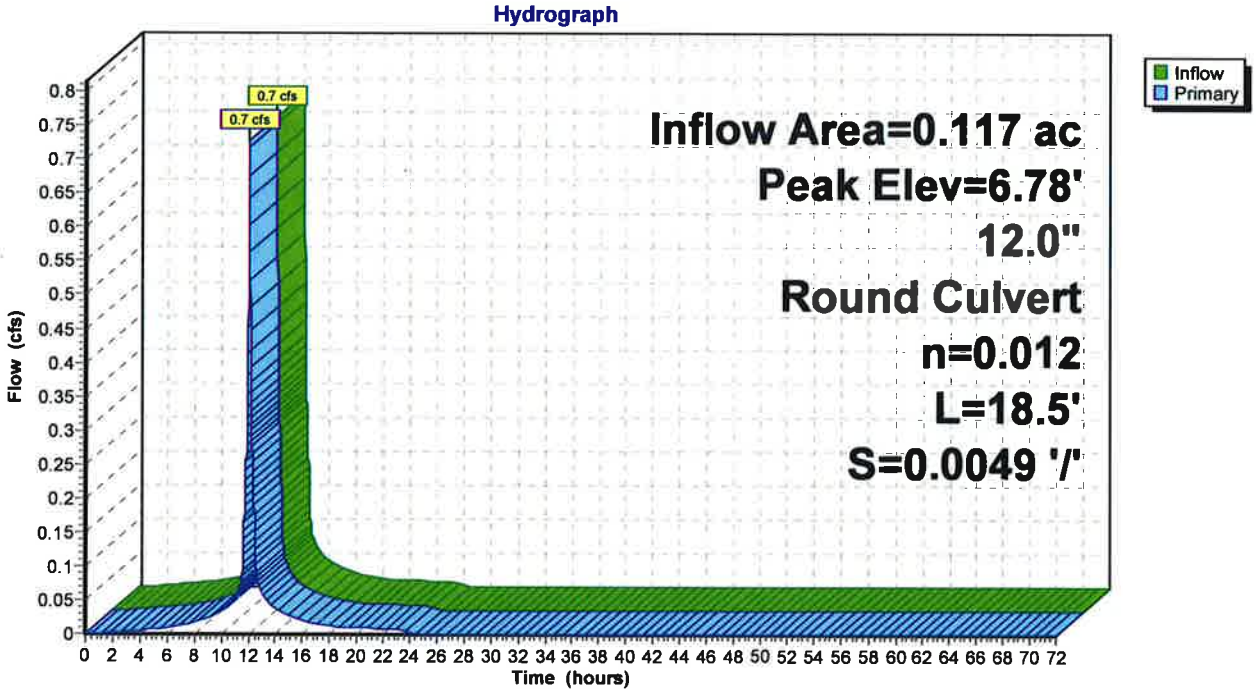
Inflow Area = 0.117 ac, 89.03% Impervious, Inflow Depth = 5.80" for 25-Year X event
Inflow = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af
Outflow = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.78' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.18'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.18' / 6.09' S= 0.0049 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.7 cfs @ 12.07 hrs HW=6.78' TW=6.67' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.7 cfs @ 2.09 fps)

Pond 12P: CB 3526



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 6.67' (Flood elevation advised)

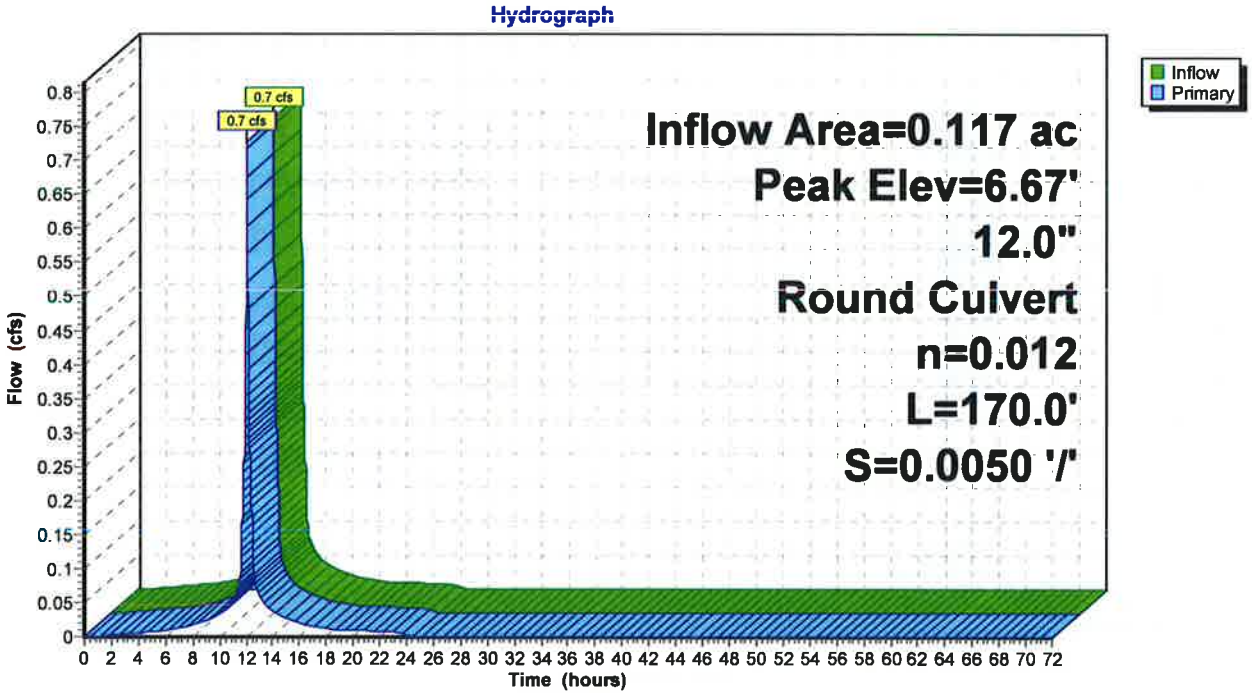
Inflow Area =	0.117 ac, 89.03% Impervious,	Inflow Depth =	5.80"	for 25-Year X event
Inflow =	0.7 cfs @ 12.07 hrs,	Volume=	0.057 af	
Outflow =	0.7 cfs @ 12.07 hrs,	Volume=	0.057 af,	Atten= 0%, Lag= 0.0 min
Primary =	0.7 cfs @ 12.07 hrs,	Volume=	0.057 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.67' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.7 cfs @ 12.07 hrs HW=6.67' TW=6.17' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 0.7 cfs @ 2.23 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 6.17' (Flood elevation advised)

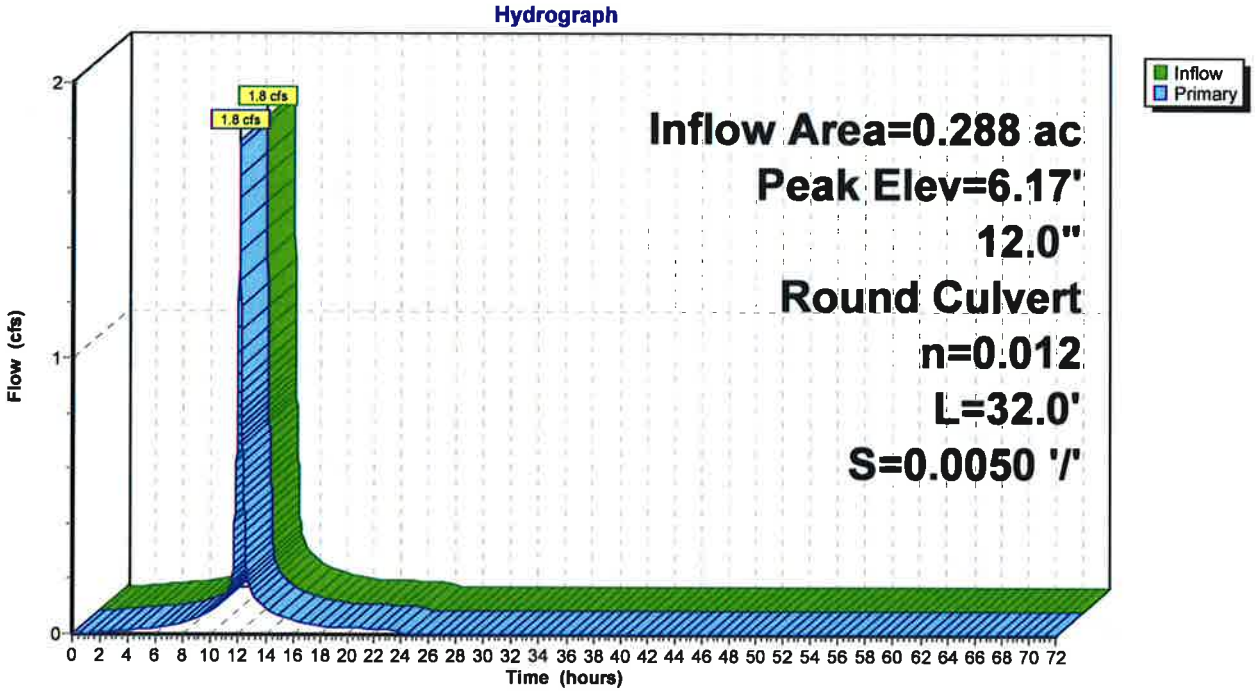
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 5.80" for 25-Year X event				
Inflow =	1.8 cfs @	12.07 hrs,	Volume=	0.139 af	
Outflow =	1.8 cfs @	12.07 hrs,	Volume=	0.139 af,	Atten= 0%, Lag= 0.0 min
Primary =	1.8 cfs @	12.07 hrs,	Volume=	0.139 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.17' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.8 cfs @ 12.07 hrs HW=6.17' TW=5.90' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 1.8 cfs @ 3.04 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 6.25' (Flood elevation advised)

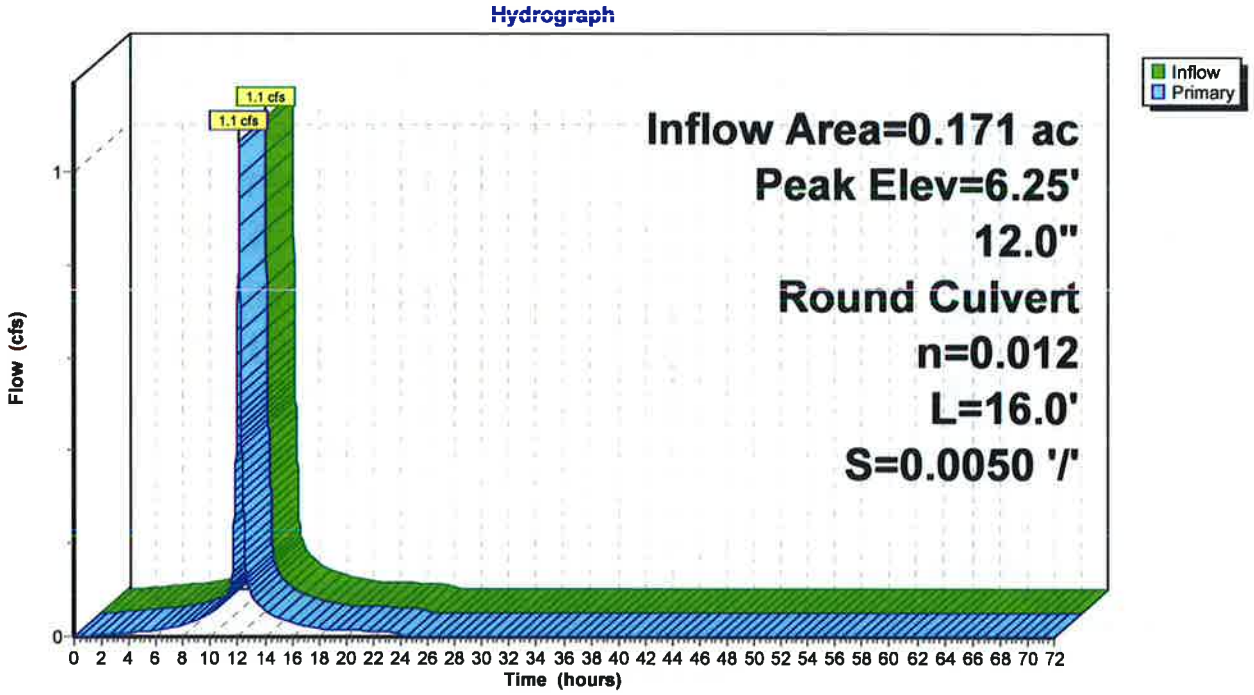
Inflow Area = 0.171 ac, 85.80% Impervious, Inflow Depth = 5.80" for 25-Year X event
Inflow = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af
Outflow = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.25' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.0 cfs @ 12.07 hrs HW=6.25' TW=6.17' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.0 cfs @ 1.78 fps)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 5.90' (Flood elevation advised)

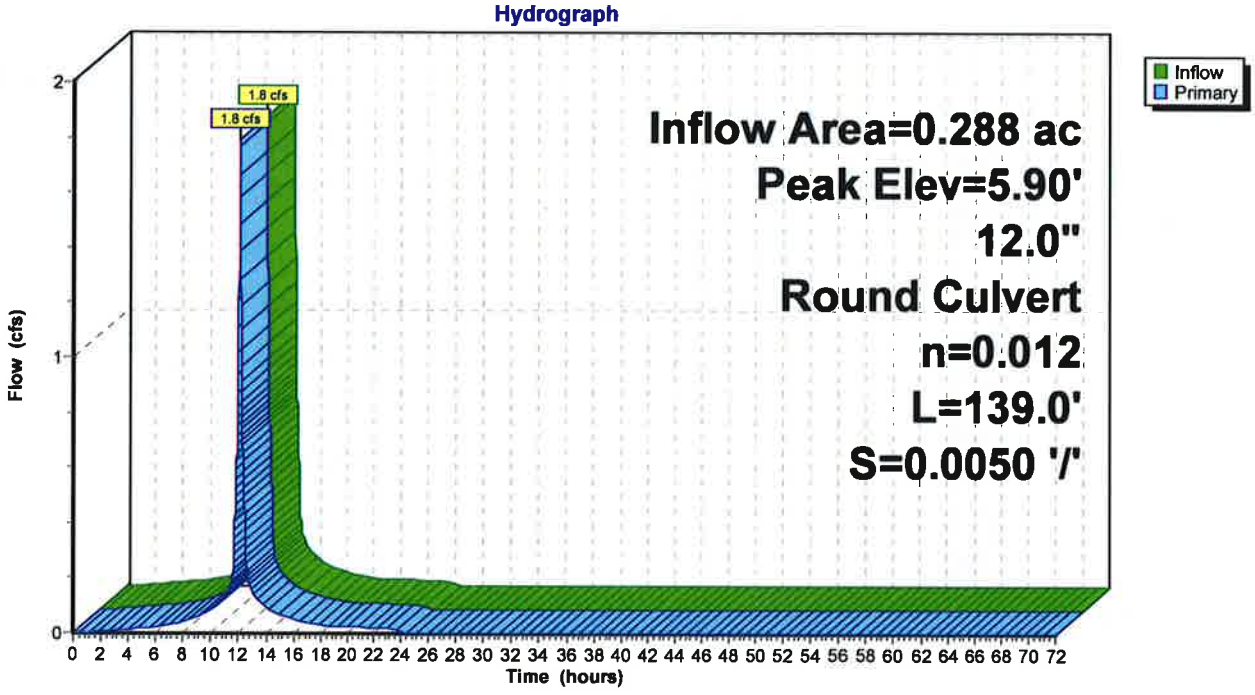
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth =	5.80"	for 25-Year X event		
Inflow =	1.8 cfs @	12.07 hrs, Volume=	0.139 af		
Outflow =	1.8 cfs @	12.07 hrs, Volume=	0.139 af,	Atten= 0%,	Lag= 0.0 min
Primary =	1.8 cfs @	12.07 hrs, Volume=	0.139 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.90' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.8 cfs @ 12.07 hrs HW=5.90' TW=5.06' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 1.8 cfs @ 3.52 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 5.06' (Flood elevation advised)

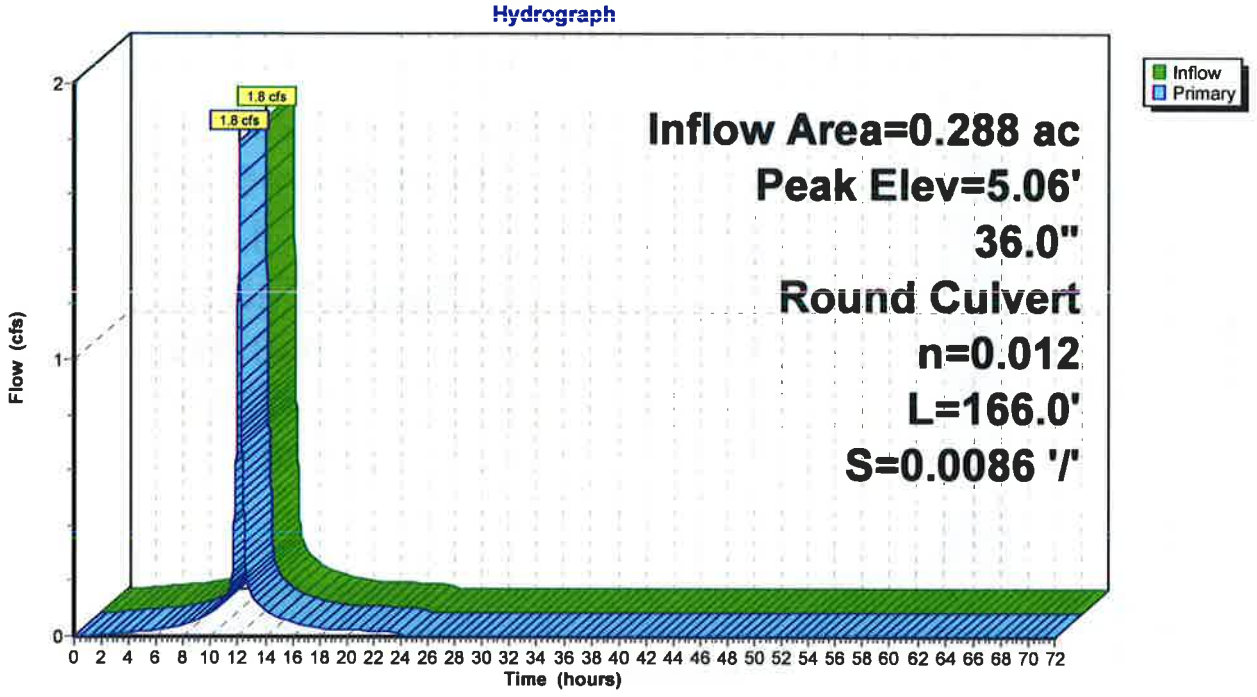
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 5.80"	for 25-Year X event		
Inflow =	1.8 cfs @ 12.07 hrs, Volume=	0.139 af		
Outflow =	1.8 cfs @ 12.07 hrs, Volume=	0.139 af, Atten= 0%, Lag= 0.0 min		
Primary =	1.8 cfs @ 12.07 hrs, Volume=	0.139 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.06' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=1.8 cfs @ 12.07 hrs HW=5.06' TW=4.78' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.8 cfs @ 2.04 fps)

Pond 17P: DMH 3545



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.60' (Flood elevation advised)

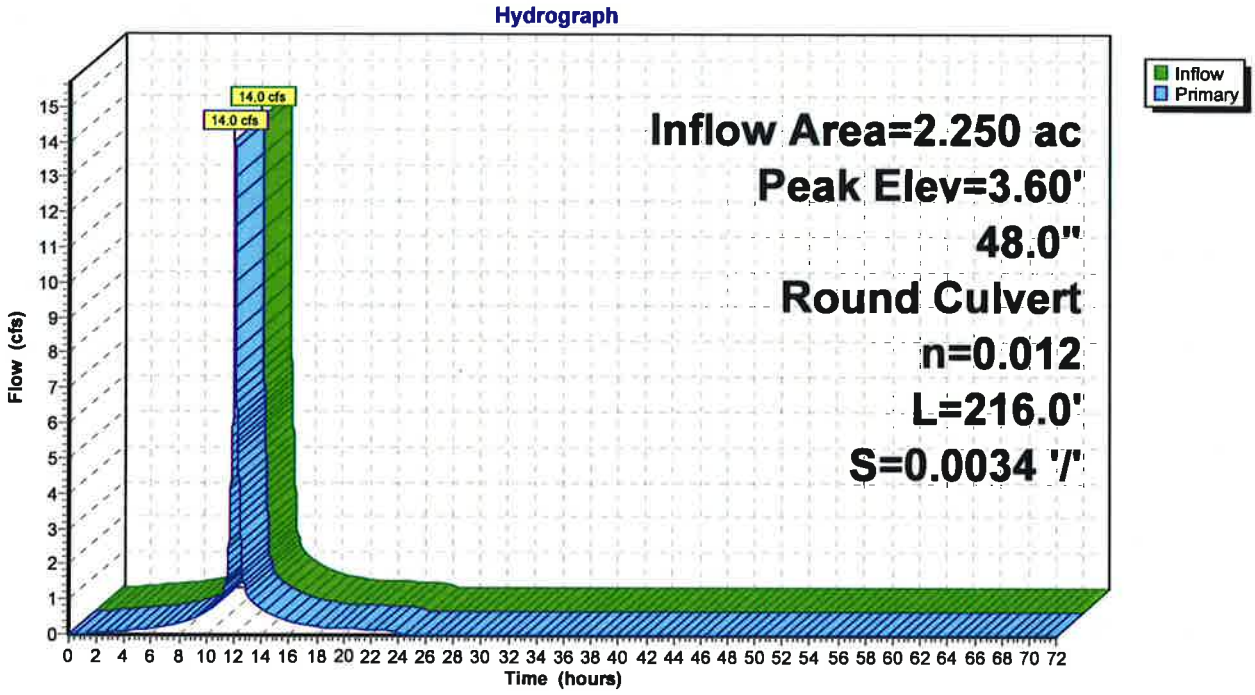
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth =	5.83"	for 25-Year X event		
Inflow =	14.0 cfs @	12.07 hrs, Volume=	1.093 af		
Outflow =	14.0 cfs @	12.07 hrs, Volume=	1.093 af,	Atten= 0%,	Lag= 0.0 min
Primary =	14.0 cfs @	12.07 hrs, Volume=	1.093 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.60' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=14.0 cfs @ 12.07 hrs HW=3.59' TW=3.14' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 14.0 cfs @ 3.44 fps)

Pond DP1: DMH 3540



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment ES1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=7.13"
Tc=5.0 min CN=98 Runoff=2.9 cfs 0.228 af

Subcatchment ES2: Runoff Area=22,558 sf 87.71% Impervious Runoff Depth=7.01"
Tc=5.0 min CN=97 Runoff=3.9 cfs 0.303 af

Subcatchment ES3: Runoff Area=10,622 sf 81.41% Impervious Runoff Depth=7.01"
Tc=5.0 min CN=97 Runoff=1.8 cfs 0.142 af

Subcatchment ES4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=7.13"
Tc=5.0 min CN=98 Runoff=0.7 cfs 0.057 af

Subcatchment ES5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=7.01"
Tc=5.0 min CN=97 Runoff=3.4 cfs 0.270 af

Subcatchment ES6: Runoff Area=11,261 sf 83.94% Impervious Runoff Depth=7.01"
Tc=5.0 min CN=97 Runoff=1.9 cfs 0.151 af

Subcatchment ES7: Runoff Area=5,094 sf 89.03% Impervious Runoff Depth=7.01"
Tc=5.0 min CN=97 Runoff=0.9 cfs 0.068 af

Subcatchment ES8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=7.01"
Tc=5.0 min CN=97 Runoff=1.3 cfs 0.100 af

Pond 1P: CB 3528 Peak Elev=6.81' Inflow=6.3 cfs 0.498 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=6.3 cfs 0.498 af

Pond 2P: CB 3524 Peak Elev=11.87' Inflow=1.8 cfs 0.142 af
12.0" Round Culvert n=0.012 L=76.0' S=0.0249 '/' Outflow=1.8 cfs 0.142 af

Pond 3P: CB 3525 Peak Elev=11.63' Inflow=5.7 cfs 0.445 af
12.0" Round Culvert n=0.012 L=111.0' S=0.0078 '/' Outflow=5.7 cfs 0.445 af

Pond 4P: CB 3527 Peak Elev=8.23' Inflow=6.4 cfs 0.502 af
12.0" Round Culvert n=0.012 L=59.0' S=0.0068 '/' Outflow=6.4 cfs 0.502 af

Pond 5P: DMH 3543 Peak Elev=5.03' Inflow=14.9 cfs 1.169 af
36.0" Round Culvert n=0.012 L=164.0' S=0.0018 '/' Outflow=14.9 cfs 1.169 af

Pond 6P: DMH 3542 Peak Elev=4.52' Inflow=14.9 cfs 1.169 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=14.9 cfs 1.169 af

Pond 7P: DMH 3541 Peak Elev=4.21' Inflow=16.8 cfs 1.320 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=16.8 cfs 1.320 af

Pond 9P: DMH 5438 Peak Elev=3.29' Inflow=16.8 cfs 1.320 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=16.8 cfs 1.320 af

Pond 10P: DMH 5217 Peak Elev=2.96' Inflow=16.8 cfs 1.320 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=16.8 cfs 1.320 af

Pond 11P: CB 3523 Peak Elev=8.19' Inflow=1.9 cfs 0.151 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=1.9 cfs 0.151 af

Pond 12P: CB 3526 Peak Elev=6.87' Inflow=0.9 cfs 0.068 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0049 '/' Outflow=0.9 cfs 0.068 af

Pond 13P: DMH 12303 Peak Elev=6.76' Inflow=0.9 cfs 0.068 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=0.9 cfs 0.068 af

Pond 14P: DMH 12631 Peak Elev=6.32' Inflow=2.2 cfs 0.168 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=2.2 cfs 0.168 af

Pond 15P: CB 8146 Peak Elev=6.40' Inflow=1.3 cfs 0.100 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=1.3 cfs 0.100 af

Pond 16P: DMH 12632 Peak Elev=6.03' Inflow=2.2 cfs 0.168 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=2.2 cfs 0.168 af

Pond 17P: DMH 3545 Peak Elev=5.22' Inflow=2.2 cfs 0.168 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=2.2 cfs 0.168 af

Pond DP1: DMH 3540 Peak Elev=3.78' Inflow=16.8 cfs 1.320 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=16.8 cfs 1.320 af

Total Runoff Area = 2.250 ac Runoff Volume = 1.320 af Average Runoff Depth = 7.04"
10.65% Pervious = 0.240 ac 89.35% Impervious = 2.011 ac

Summary for Subcatchment ES1:

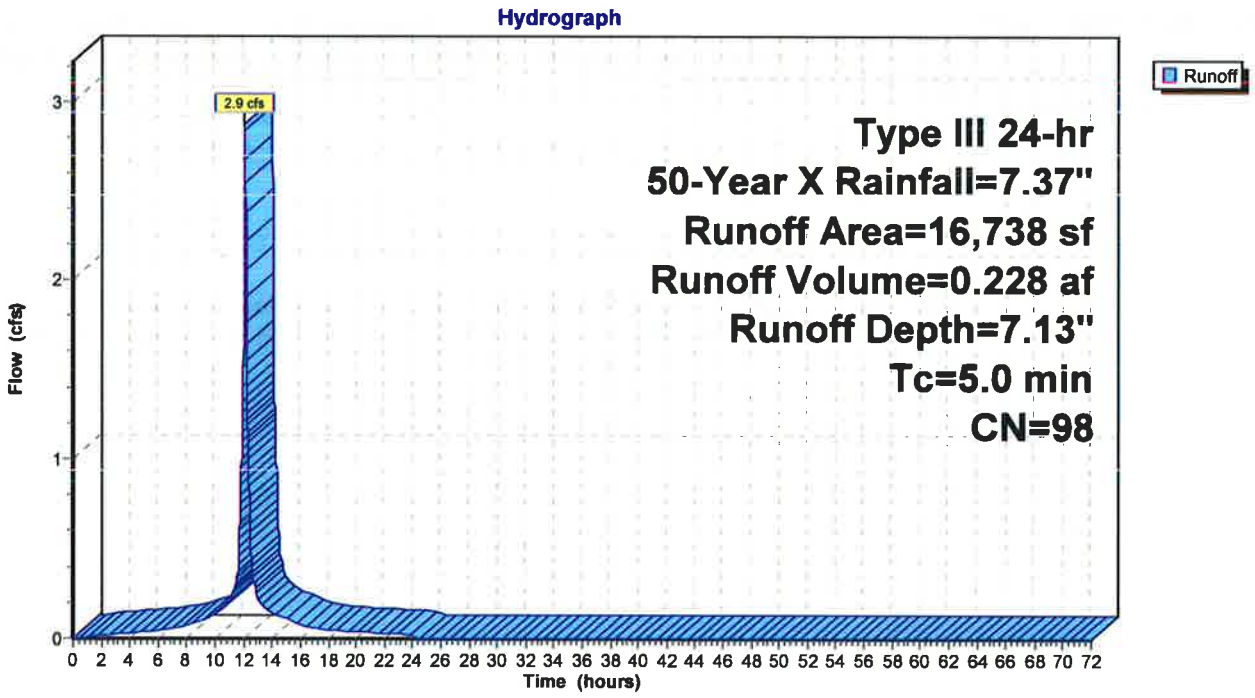
Runoff = 2.9 cfs @ 12.07 hrs, Volume= 0.228 af, Depth= 7.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES1:



Summary for Subcatchment ES2:

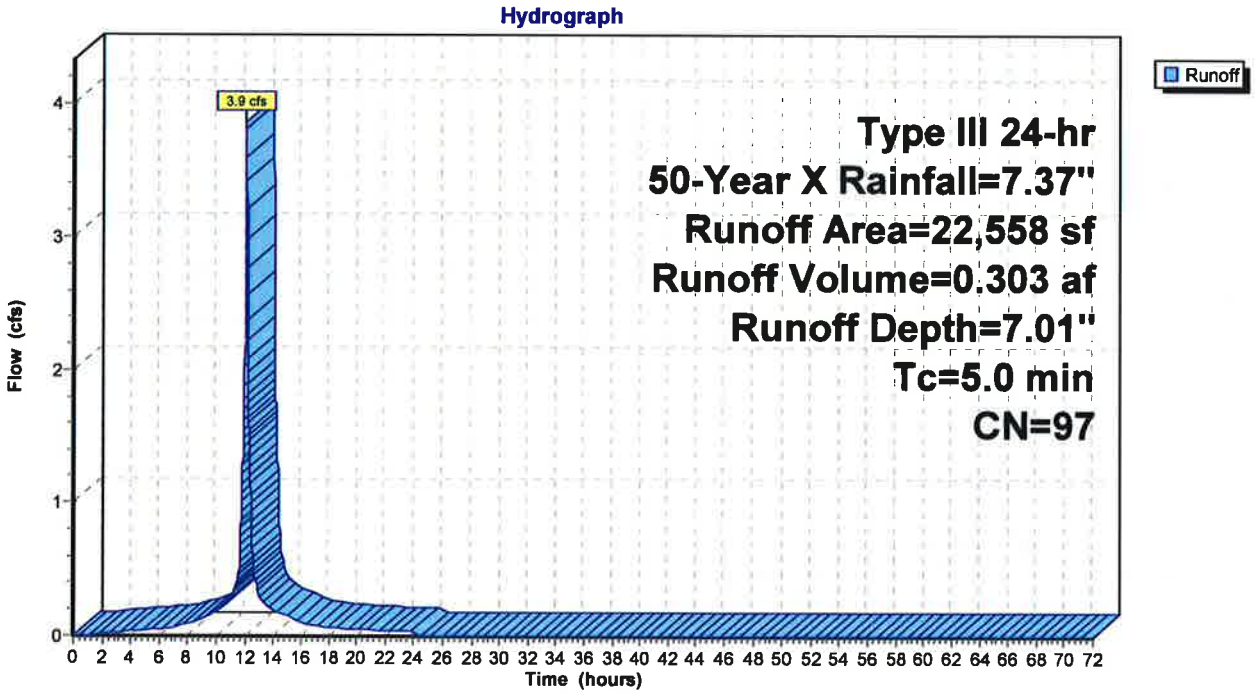
Runoff = 3.9 cfs @ 12.07 hrs, Volume= 0.303 af, Depth= 7.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

	Area (sf)	CN	Description
	15,968	98	Paved parking, HSG C
	1,941	98	Paved roads w/curbs & sewers, HSG C
	990	98	Paved roads w/curbs & sewers, HSG C
	47	98	Roofs, HSG C
*	840	98	Gravel roads, HSG C
	2,772	91	Fallow, bare soil, HSG C
	22,558	97	Weighted Average
	2,772		12.29% Pervious Area
	19,786		87.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES2:



Summary for Subcatchment ES3:

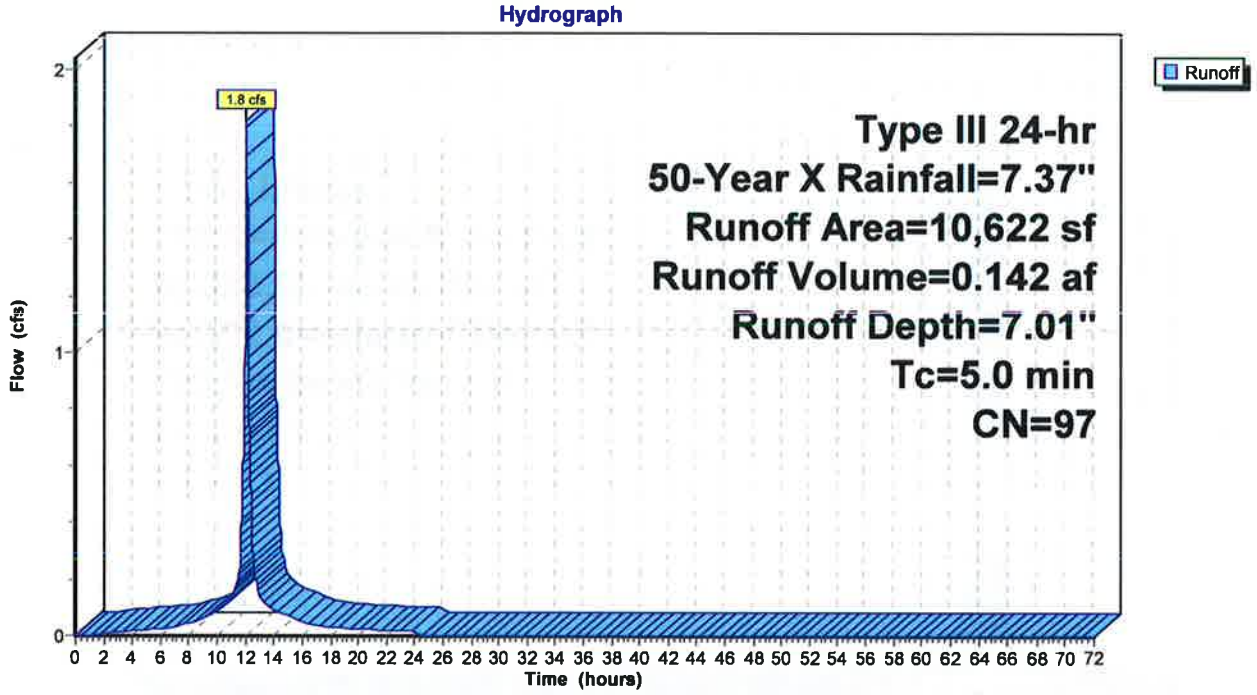
Runoff = 1.8 cfs @ 12.07 hrs, Volume= 0.142 af, Depth= 7.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

Area (sf)	CN	Description
8,579	98	Paved parking, HSG C
14	98	Paved roads w/curbs & sewers, HSG C
54	98	Roofs, HSG C
1,975	91	Fallow, bare soil, HSG C
10,622	97	Weighted Average
1,975		18.59% Pervious Area
8,647		81.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES3:



Summary for Subcatchment ES4:

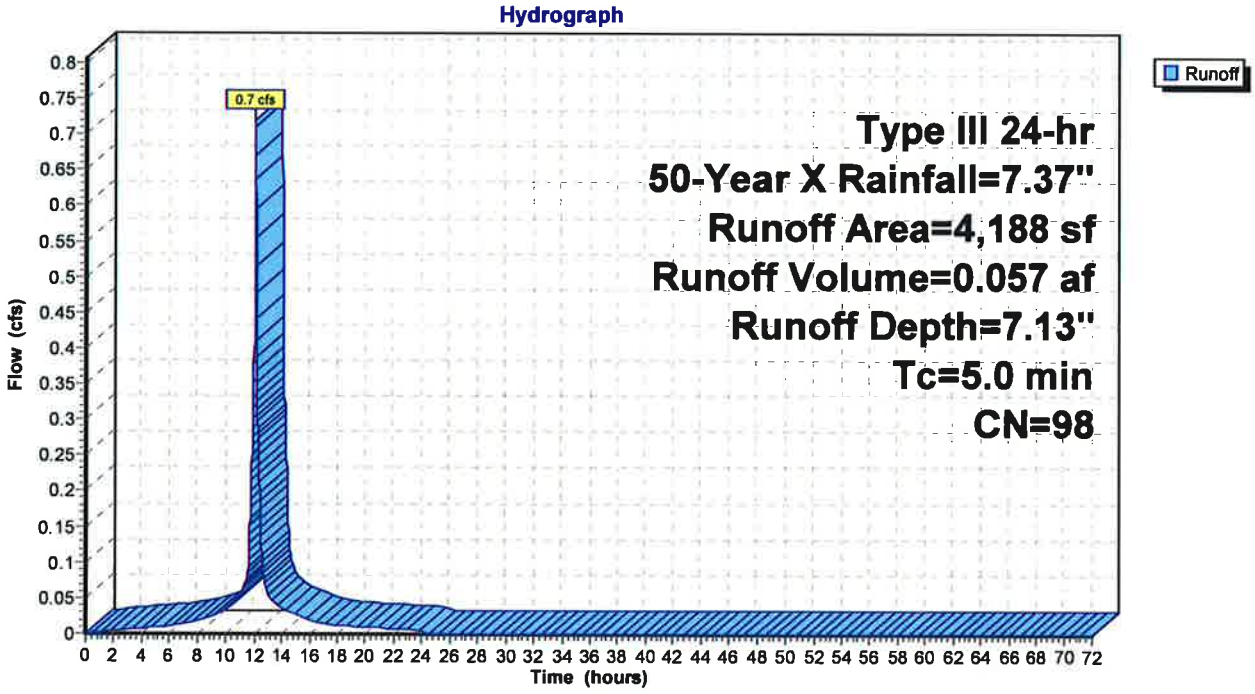
Runoff = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af, Depth= 7.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES4:



Summary for Subcatchment ES5:

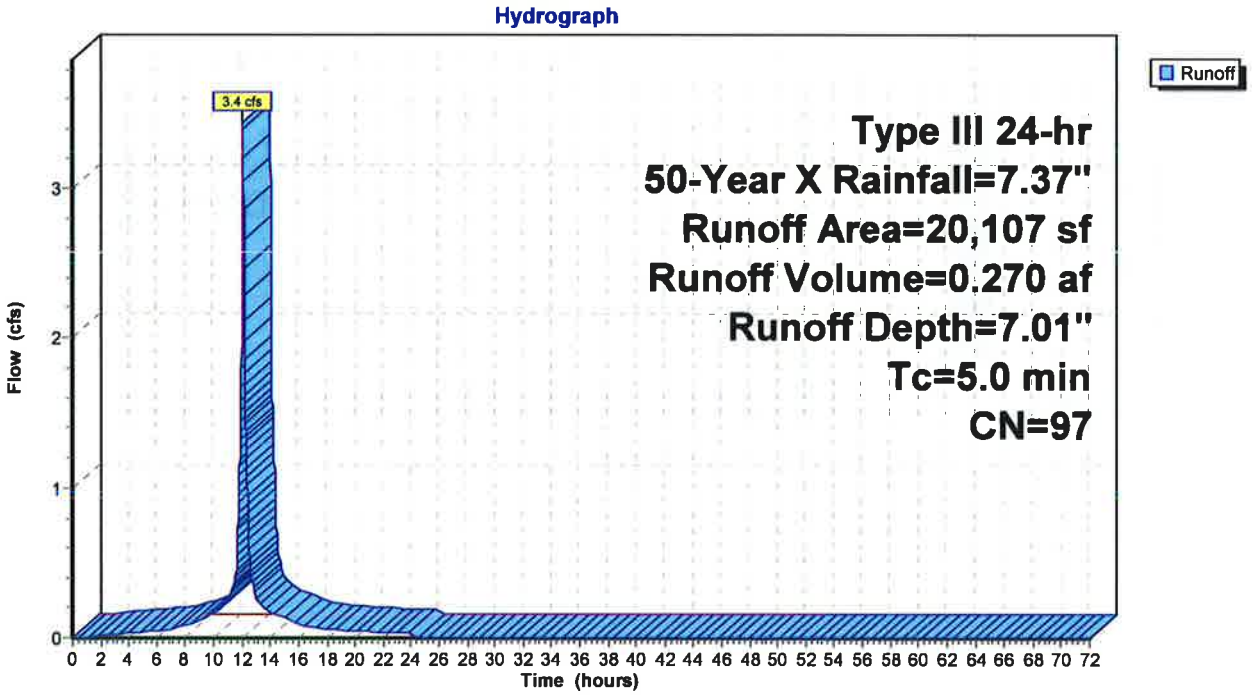
Runoff = 3.4 cfs @ 12.07 hrs, Volume= 0.270 af, Depth= 7.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES5:



Summary for Subcatchment ES6:

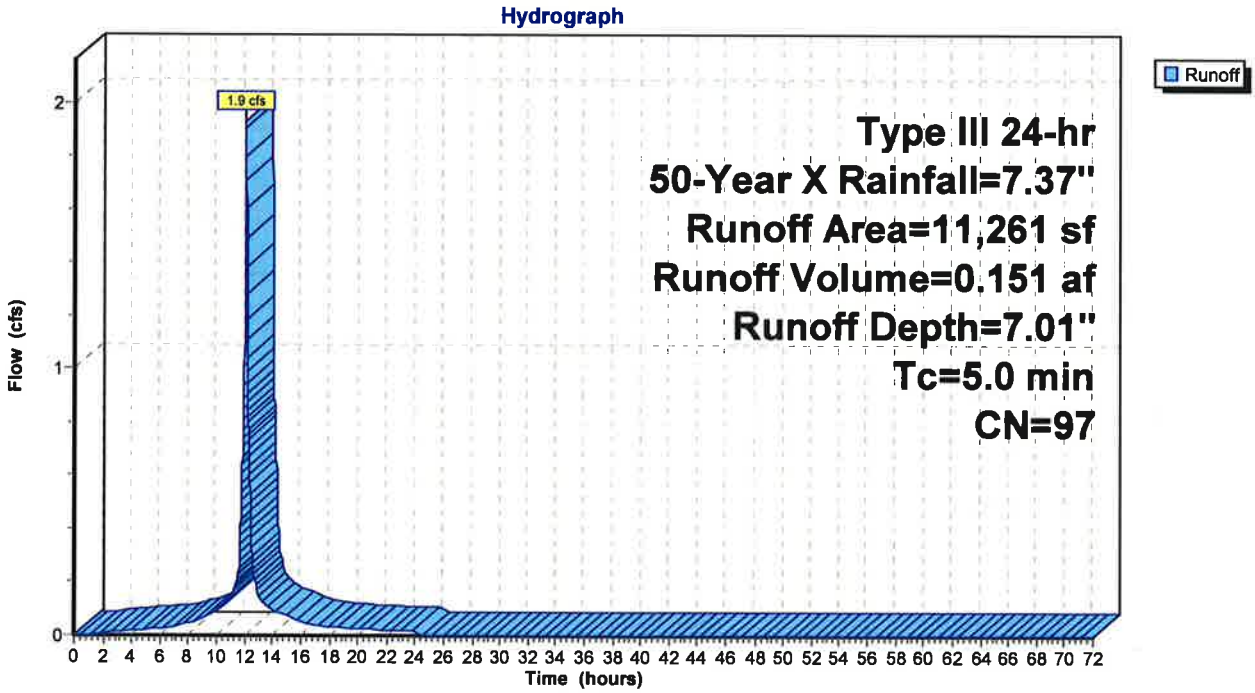
Runoff = 1.9 cfs @ 12.07 hrs, Volume= 0.151 af, Depth= 7.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

Area (sf)	CN	Description
86	98	Paved parking, HSG C
6,879	98	Paved roads w/curbs & sewers, HSG C
2,385	98	Paved roads w/curbs & sewers, HSG C
103	98	Roofs, HSG C
1,808	91	Fallow, bare soil, HSG C
11,261	97	Weighted Average
1,808		16.06% Pervious Area
9,453		83.94% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES6:



Summary for Subcatchment ES7:

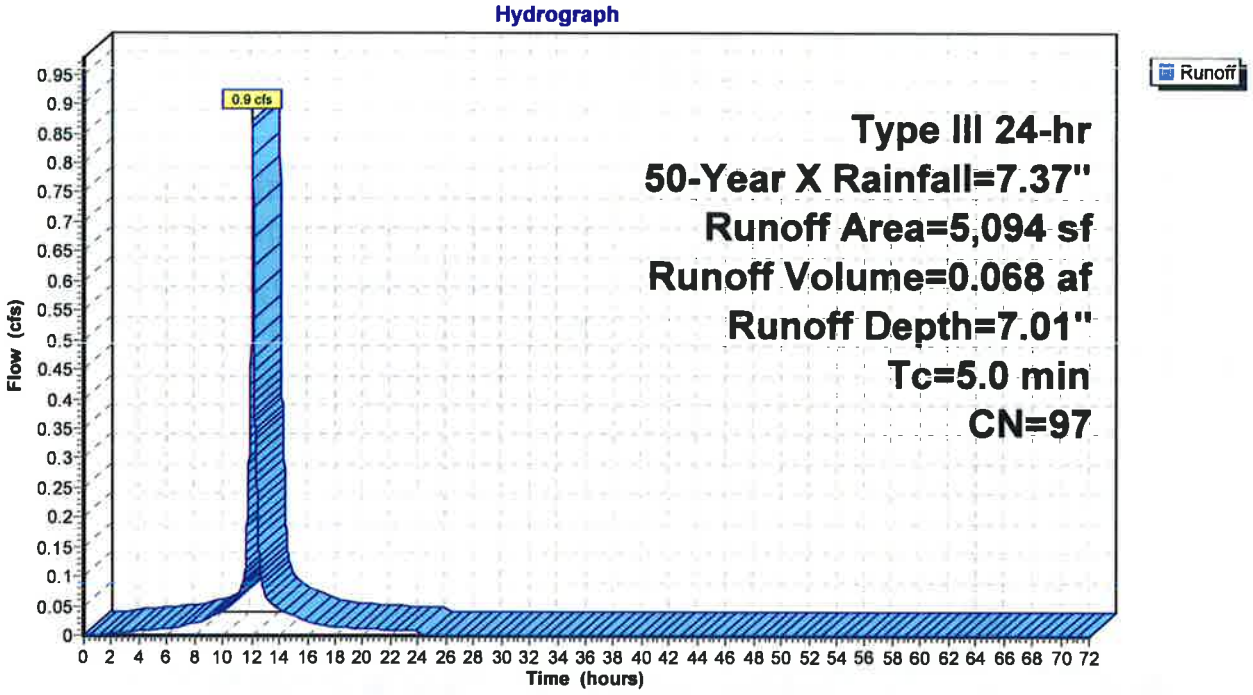
Runoff = 0.9 cfs @ 12.07 hrs, Volume= 0.068 af, Depth= 7.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

Area (sf)	CN	Description
3,437	98	Paved roads w/curbs & sewers, HSG C
1,098	98	Paved roads w/curbs & sewers, HSG C
559	91	Fallow, bare soil, HSG C
5,094	97	Weighted Average
559		10.97% Pervious Area
4,535		89.03% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES7:



Summary for Subcatchment ES8:

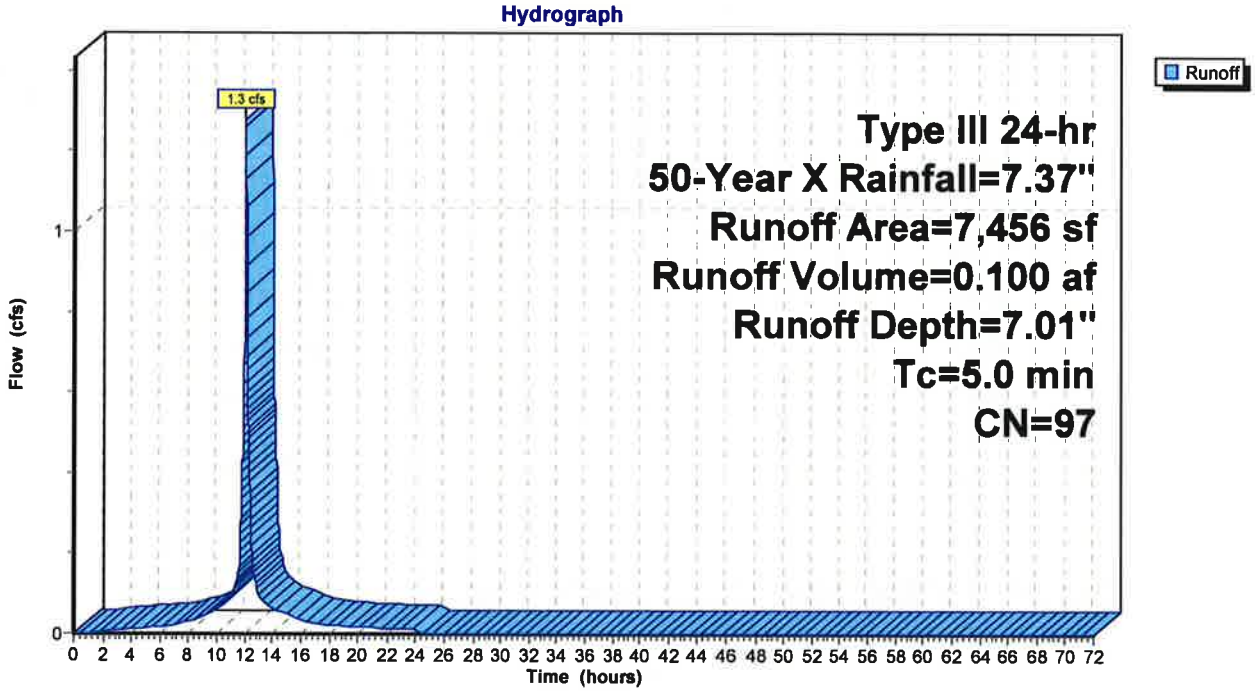
Runoff = 1.3 cfs @ 12.07 hrs, Volume= 0.100 af, Depth= 7.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 50-Year X Rainfall=7.37"

	Area (sf)	CN	Description
	4,674	98	Paved roads w/curbs & sewers, HSG C
	1,563	98	Paved roads w/curbs & sewers, HSG C
	121	98	Paved roads w/curbs & sewers, HSG C
*	39	98	Gravel roads, HSG C
	1,059	91	Fallow, bare soil, HSG C
	7,456	97	Weighted Average
	1,059		14.20% Pervious Area
	6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment ES8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 6.81' (Flood elevation advised)

Inflow Area =	0.846 ac, 93.86% Impervious, Inflow Depth = 7.07"	for 50-Year X event			
Inflow =	6.3 cfs @ 12.07 hrs, Volume=	0.498 af			
Outflow =	6.3 cfs @ 12.07 hrs, Volume=	0.498 af, Atten= 0%, Lag= 0.0 min			
Primary =	6.3 cfs @ 12.07 hrs, Volume=	0.498 af			

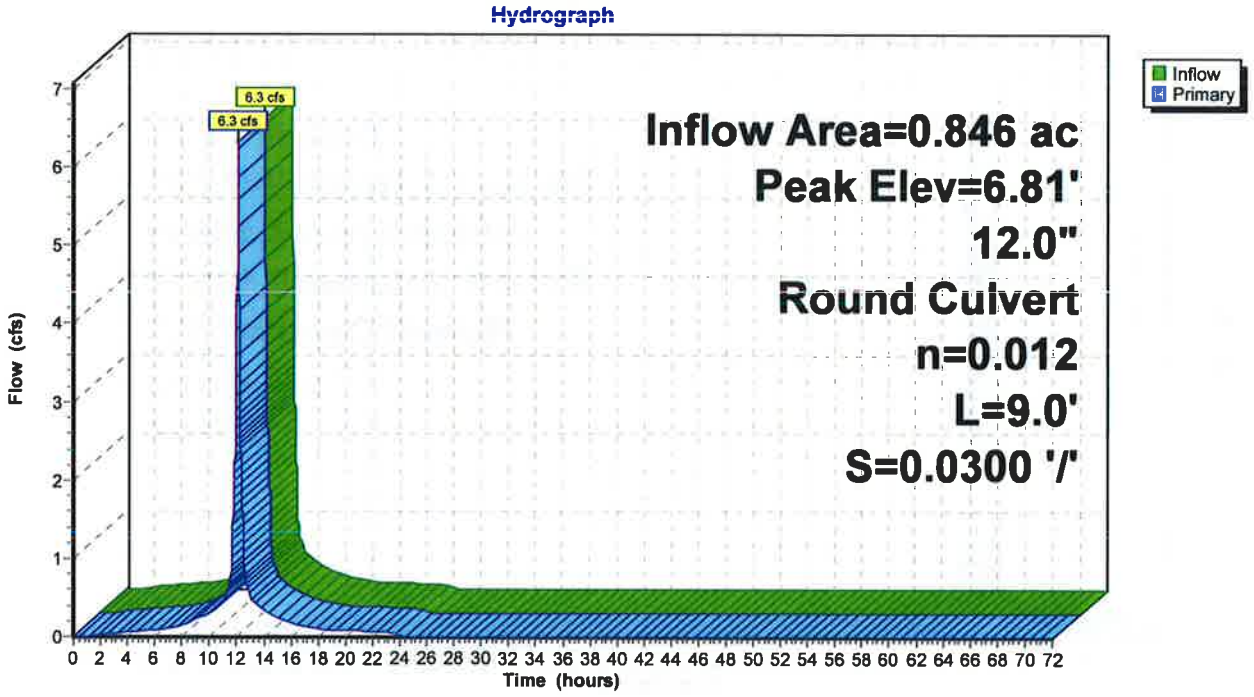
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.81' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=6.3 cfs @ 12.07 hrs HW=6.80' TW=5.02' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 6.3 cfs @ 8.03 fps)

Pond 1P: CB 3528

Hydrograph



Summary for Pond 2P: CB 3524

[57] Hint: Peaked at 11.87' (Flood elevation advised)

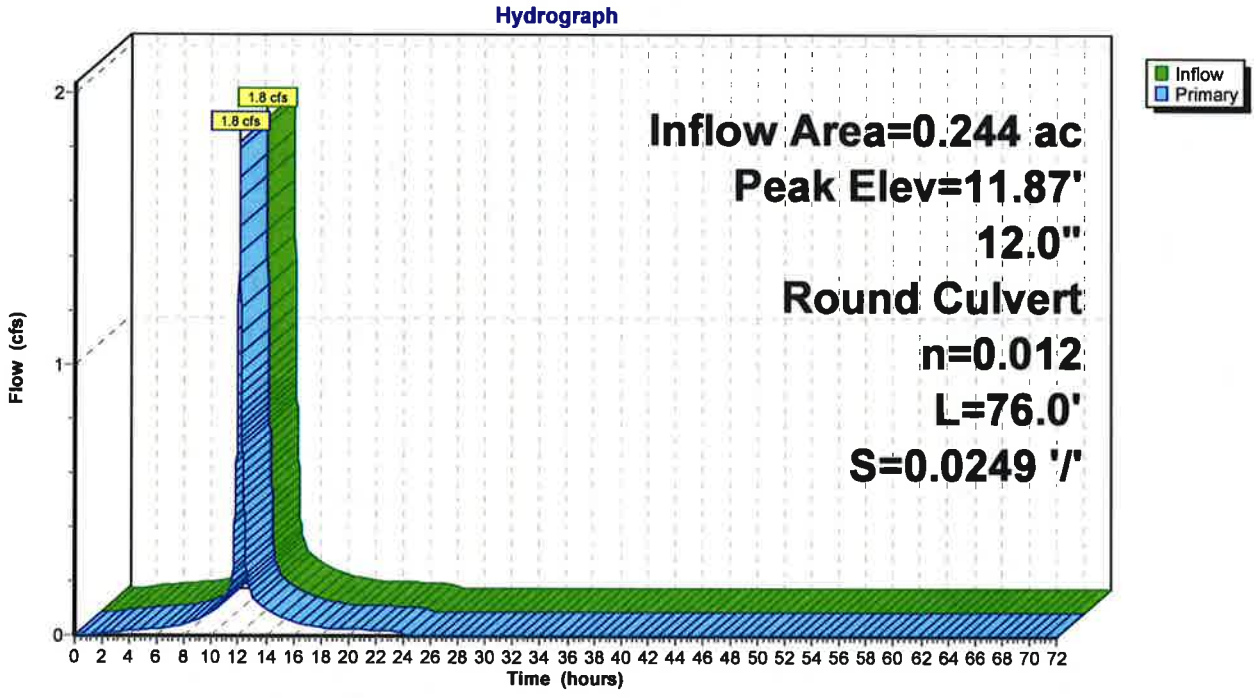
Inflow Area =	0.244 ac,	81.41% Impervious,	Inflow Depth =	7.01"	for 50-Year X event
Inflow =	1.8 cfs @	12.07 hrs, Volume=	0.142 af		
Outflow =	1.8 cfs @	12.07 hrs, Volume=	0.142 af,	Atten= 0%,	Lag= 0.0 min
Primary =	1.8 cfs @	12.07 hrs, Volume=	0.142 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 11.87' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 76.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 7.52' / 5.63' S= 0.0249 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.6 cfs @ 12.07 hrs HW=11.85' TW=11.63' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.6 cfs @ 2.09 fps)

Pond 2P: CB 3524



Summary for Pond 3P: CB 3525

[57] Hint: Peaked at 11.63' (Flood elevation advised)
[80] Warning: Exceeded Pond 2P by 0.11' @ 12.02 hrs (1.1 cfs 0.003 af)

Inflow Area =	0.762 ac, 85.69% Impervious, Inflow Depth = 7.01"	for 50-Year X event		
Inflow =	5.7 cfs @ 12.07 hrs, Volume=	0.445 af		
Outflow =	5.7 cfs @ 12.07 hrs, Volume=	0.445 af, Atten= 0%, Lag= 0.0 min		
Primary =	5.7 cfs @ 12.07 hrs, Volume=	0.445 af		

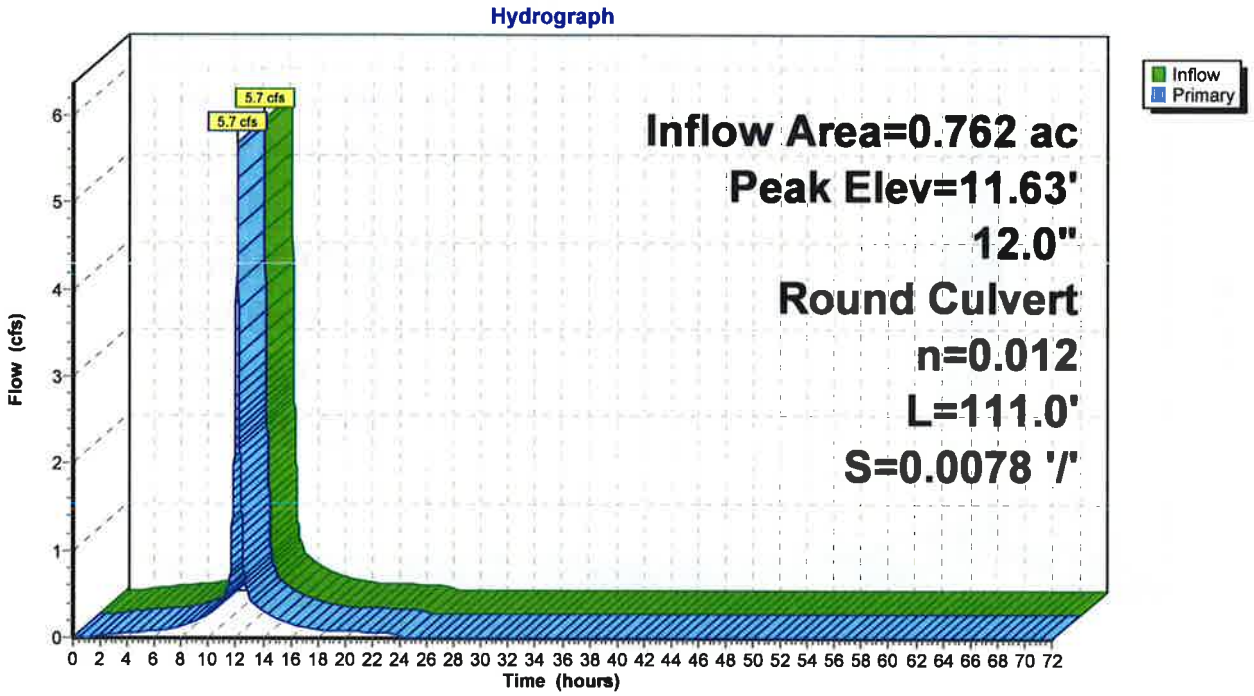
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 11.63' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.63'	**12.0" Round Culvert** L= 111.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.63' / 4.76' S= 0.0078 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.7 cfs @ 12.07 hrs HW=11.63' TW=8.23' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 5.7 cfs @ 7.24 fps)

Pond 3P: CB 3525

Hydrograph



Summary for Pond 4P: CB 3527

[57] Hint: Peaked at 8.23' (Flood elevation advised)

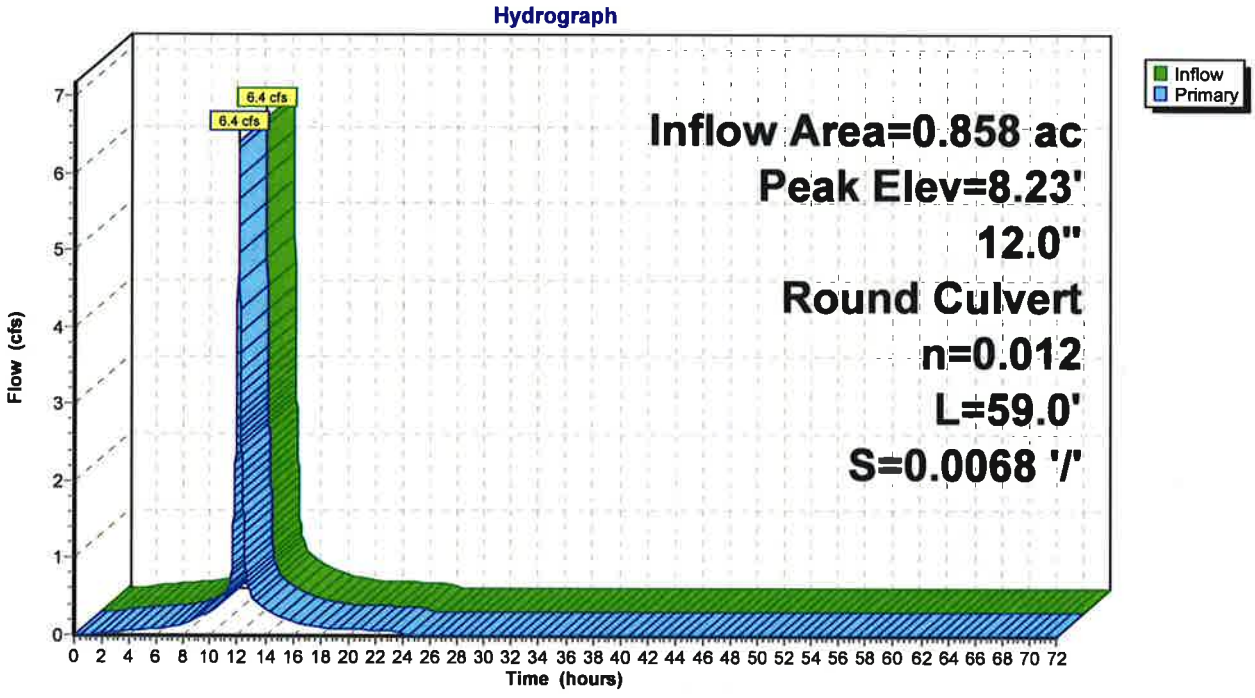
Inflow Area =	0.858 ac, 87.30% Impervious, Inflow Depth = 7.02"	for 50-Year X event		
Inflow =	6.4 cfs @ 12.07 hrs, Volume=	0.502 af		
Outflow =	6.4 cfs @ 12.07 hrs, Volume=	0.502 af,	Atten= 0%,	Lag= 0.0 min
Primary =	6.4 cfs @ 12.07 hrs, Volume=	0.502 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.23' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.76'	**12.0" Round Culvert** L= 59.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.76' / 4.36' S= 0.0068 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=6.4 cfs @ 12.07 hrs HW=8.23' TW=5.02' (Dynamic Tailwater)
↑**1=Culvert** (Barrel Controls 6.4 cfs @ 8.16 fps)

Pond 4P: CB 3527



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 5.03' (Flood elevation advised)

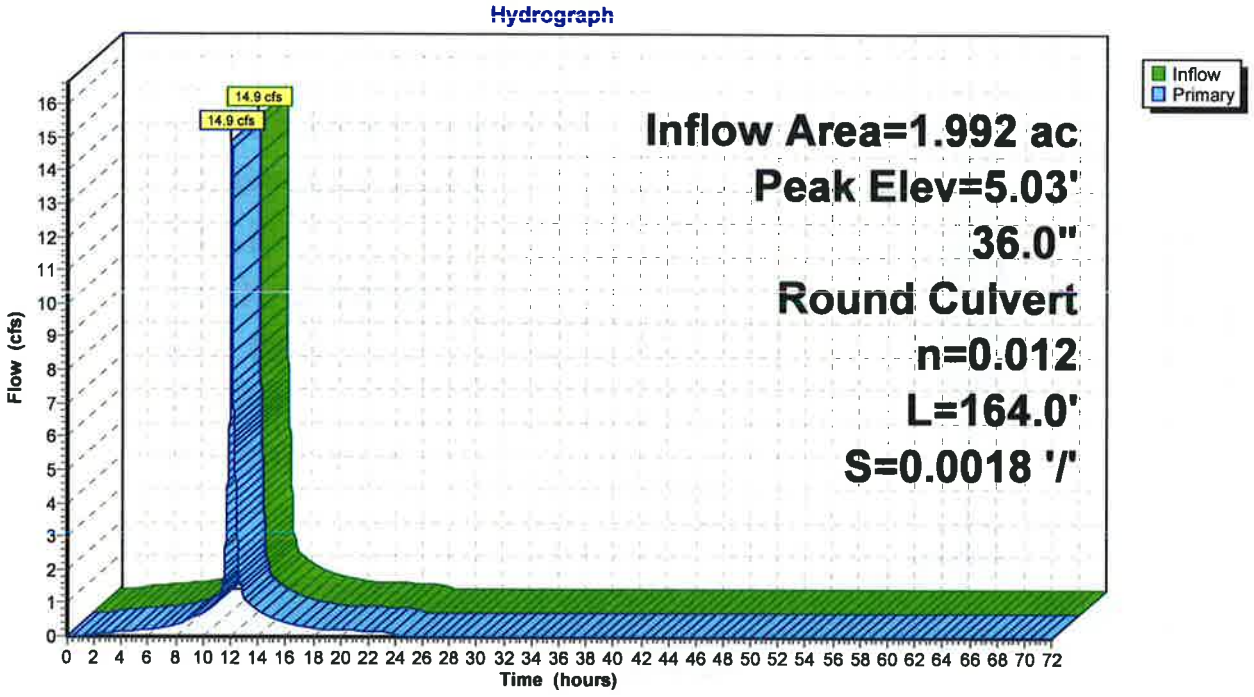
Inflow Area =	1.992 ac, 90.05% Impervious, Inflow Depth = 7.04"	for 50-Year X event		
Inflow =	14.9 cfs @ 12.07 hrs, Volume=	1.169 af		
Outflow =	14.9 cfs @ 12.07 hrs, Volume=	1.169 af, Atten= 0%, Lag= 0.0 min		
Primary =	14.9 cfs @ 12.07 hrs, Volume=	1.169 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.03' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 164.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.61' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=14.8 cfs @ 12.07 hrs HW=5.02' TW=4.51' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 14.8 cfs @ 3.90 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 4.52' (Flood elevation advised)

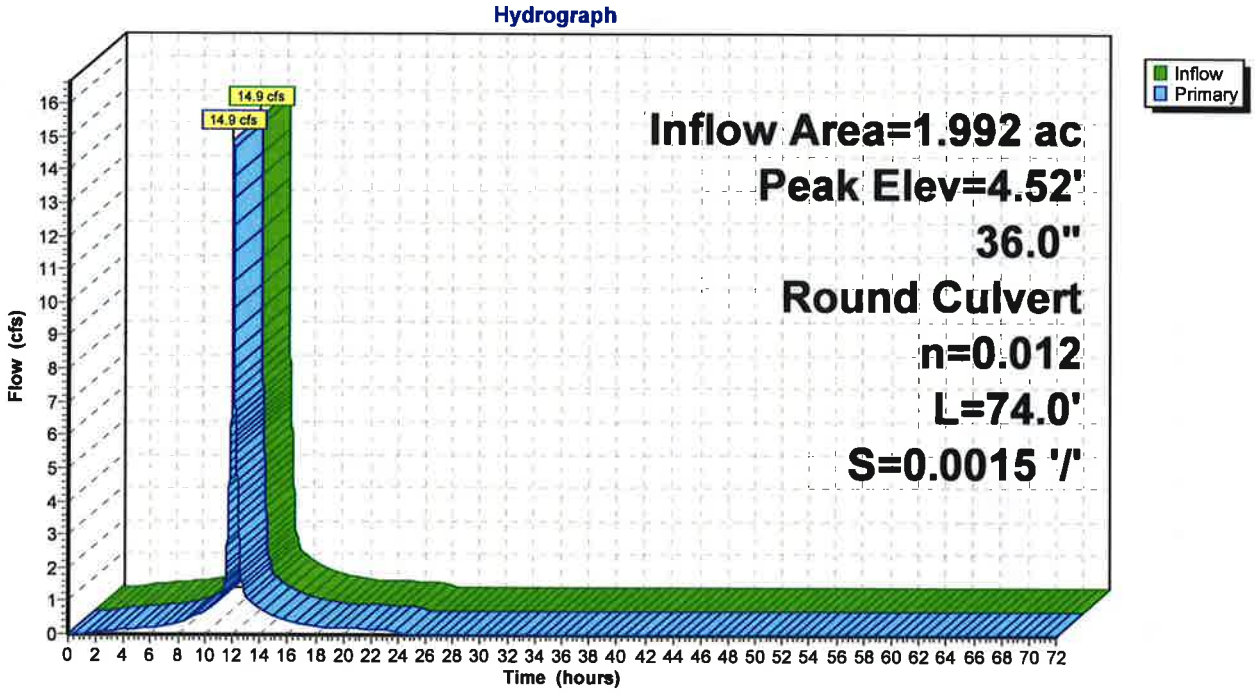
Inflow Area =	1.992 ac, 90.05% Impervious, Inflow Depth = 7.04"	for 50-Year X event		
Inflow =	14.9 cfs @ 12.07 hrs, Volume=	1.169 af		
Outflow =	14.9 cfs @ 12.07 hrs, Volume=	1.169 af, Atten= 0%, Lag= 0.0 min		
Primary =	14.9 cfs @ 12.07 hrs, Volume=	1.169 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.52' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=14.7 cfs @ 12.07 hrs HW=4.51' TW=4.21' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 14.7 cfs @ 3.49 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 4.21' (Flood elevation advised)

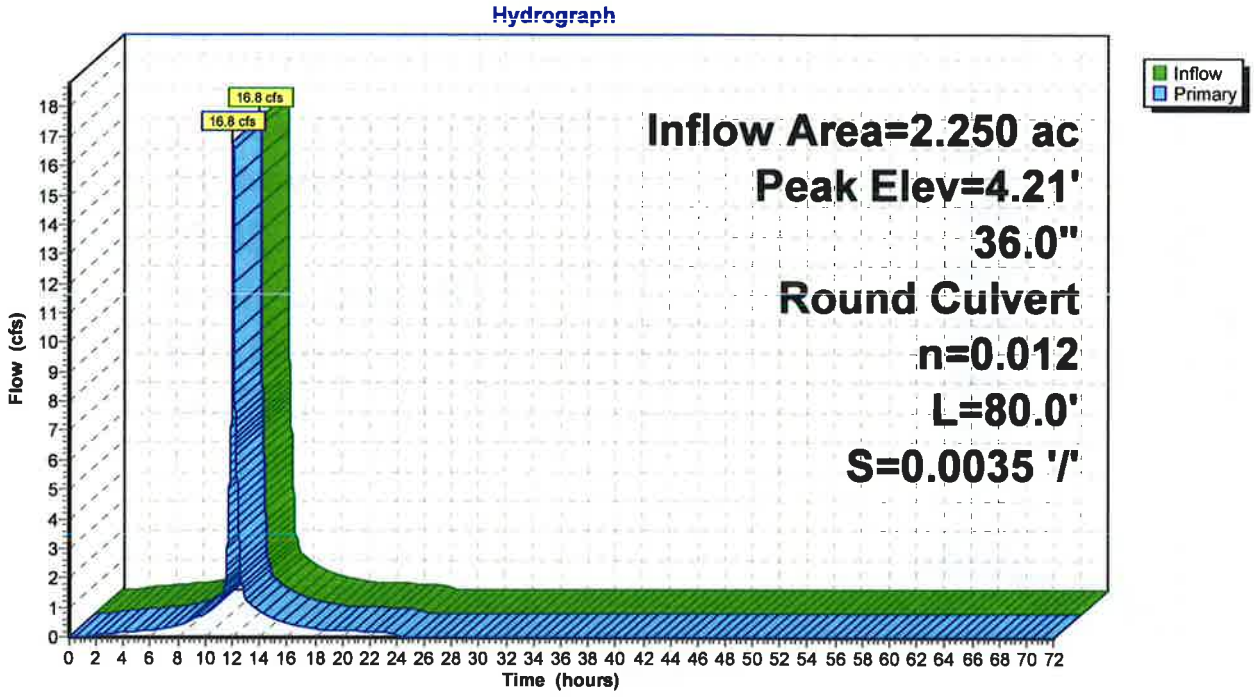
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth =	7.04"	for 50-Year X event	
Inflow =	16.8 cfs @	12.07 hrs, Volume=	1.320 af	
Outflow =	16.8 cfs @	12.07 hrs, Volume=	1.320 af, Atten= 0%, Lag= 0.0 min	
Primary =	16.8 cfs @	12.07 hrs, Volume=	1.320 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.21' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=16.8 cfs @ 12.07 hrs HW=4.21' TW=3.78' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 16.8 cfs @ 4.10 fps)

Pond 7P: DMH 3541



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 3.29' (Flood elevation advised)

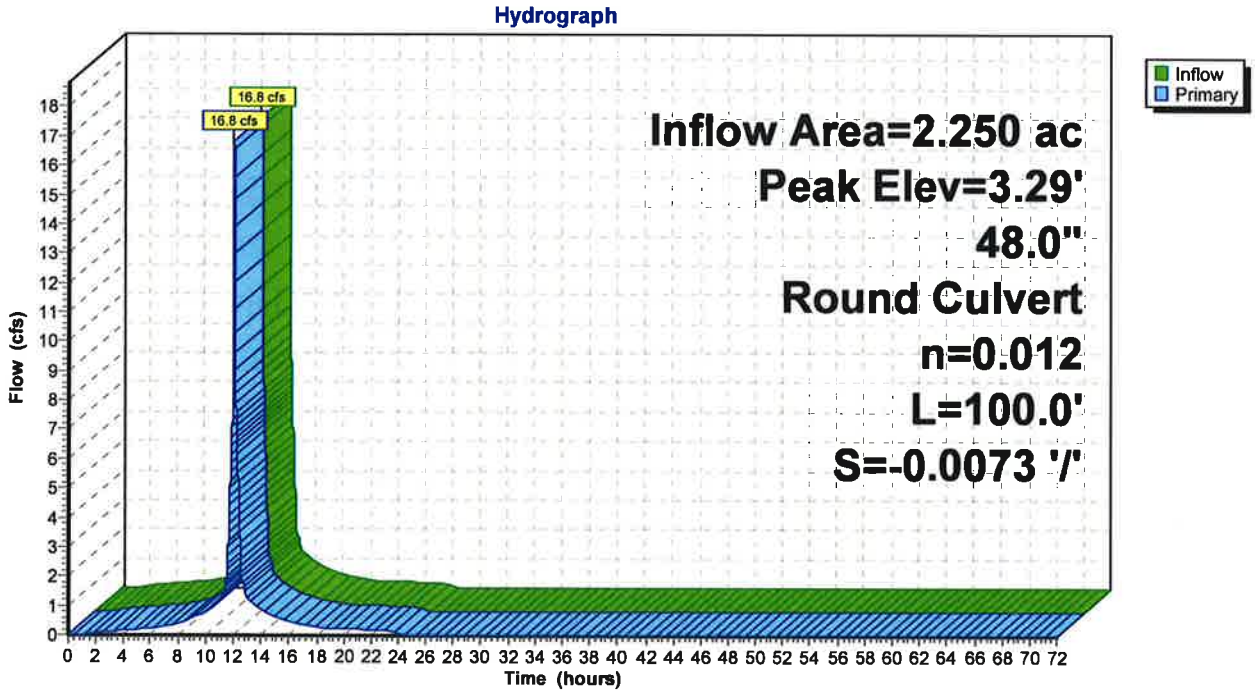
Inflow Area =	2.250 ac, 89.35% Impervious,	Inflow Depth =	7.04"	for 50-Year X event
Inflow =	16.8 cfs @ 12.07 hrs,	Volume=	1.320 af	
Outflow =	16.8 cfs @ 12.07 hrs,	Volume=	1.320 af,	Atten= 0%, Lag= 0.0 min
Primary =	16.8 cfs @ 12.07 hrs,	Volume=	1.320 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.29' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=16.8 cfs @ 12.07 hrs HW=3.29' TW=2.95' (Dynamic Tailwater)
↑**1=Culvert** (Inlet Controls 16.8 cfs @ 3.51 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.96' (Flood elevation advised)

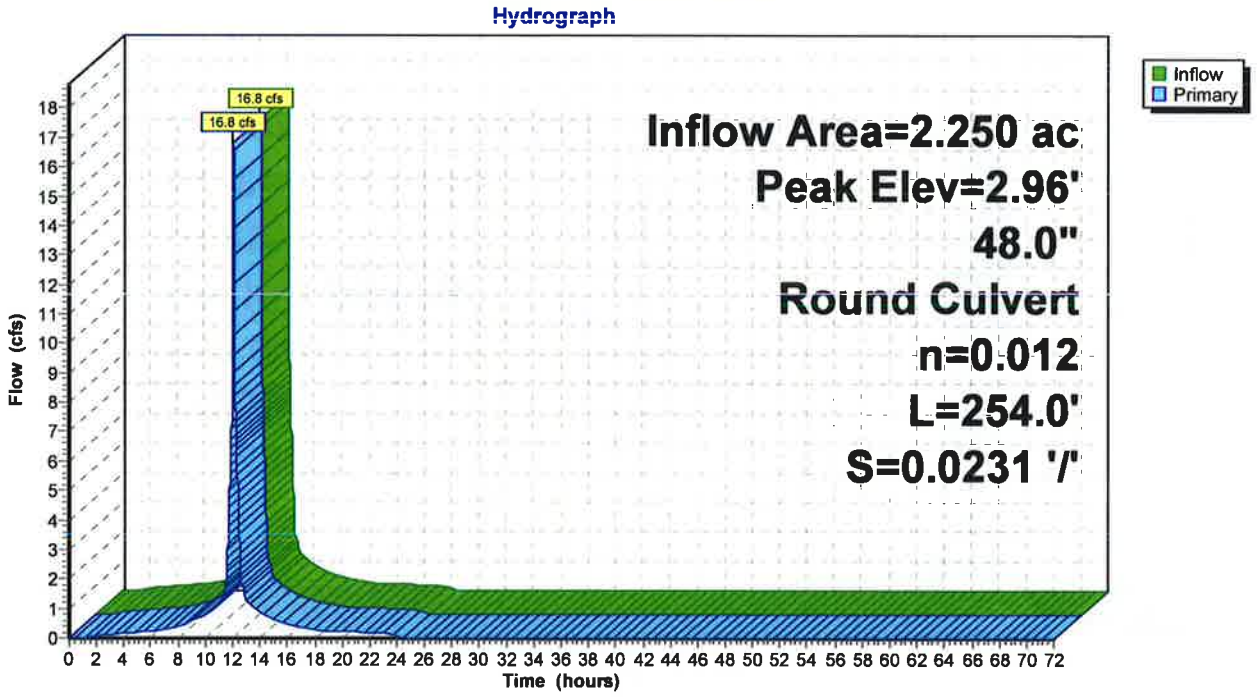
Inflow Area =	2.250 ac, 89.35% Impervious,	Inflow Depth =	7.04"	for 50-Year X event
Inflow =	16.8 cfs @ 12.07 hrs,	Volume=	1.320 af	
Outflow =	16.8 cfs @ 12.07 hrs,	Volume=	1.320 af,	Atten= 0%, Lag= 0.0 min
Primary =	16.8 cfs @ 12.07 hrs,	Volume=	1.320 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.96' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=16.8 cfs @ 12.07 hrs HW=2.95' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 16.8 cfs @ 4.82 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 8.19' (Flood elevation advised)

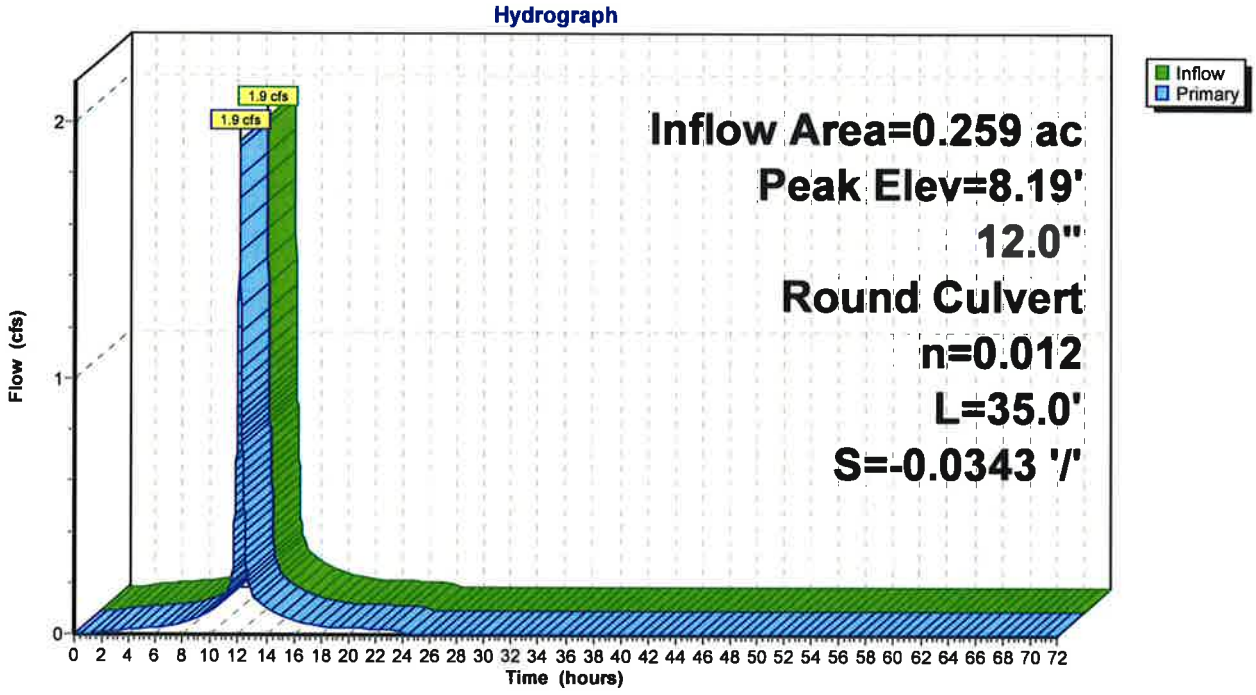
Inflow Area =	0.259 ac,	83.94% Impervious,	Inflow Depth =	7.01"	for 50-Year X event
Inflow =	1.9 cfs @	12.07 hrs, Volume=	0.151 af		
Outflow =	1.9 cfs @	12.07 hrs, Volume=	0.151 af,	Atten= 0%,	Lag= 0.0 min
Primary =	1.9 cfs @	12.07 hrs, Volume=	0.151 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.19' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.9 cfs @ 12.07 hrs HW=8.19' TW=4.21' (Dynamic Tailwater)
↳**1=Culvert** (Inlet Controls 1.9 cfs @ 3.47 fps)

Pond 11P: CB 3523



Summary for Pond 12P: CB 3526

[57] Hint: Peaked at 6.87' (Flood elevation advised)

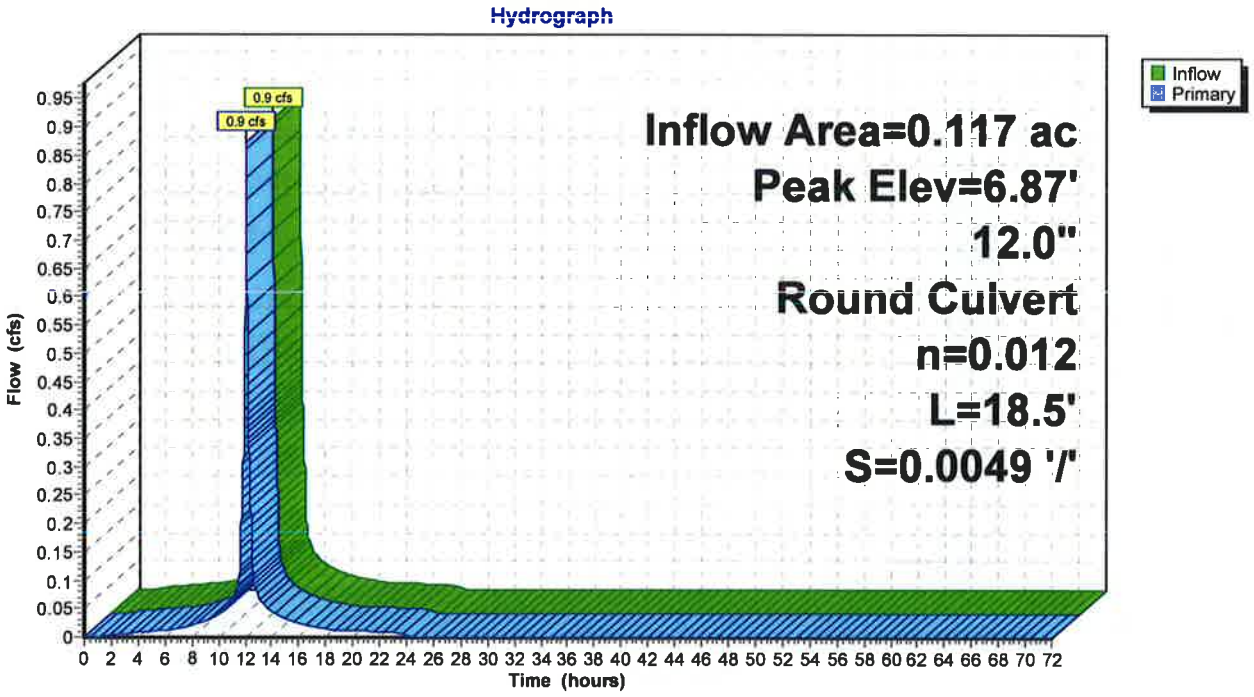
Inflow Area =	0.117 ac, 89.03% Impervious, Inflow Depth =	7.01"	for	50-Year X event
Inflow =	0.9 cfs @	12.07 hrs, Volume=	0.068 af	
Outflow =	0.9 cfs @	12.07 hrs, Volume=	0.068 af, Atten= 0%, Lag= 0.0 min	
Primary =	0.9 cfs @	12.07 hrs, Volume=	0.068 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.87' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.18'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.18' / 6.09' S= 0.0049 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=6.87' TW=6.76' (Dynamic Tailwater)
↑**1=Culvert** (Outlet Controls 0.9 cfs @ 2.10 fps)

Pond 12P: CB 3526



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 6.76' (Flood elevation advised)

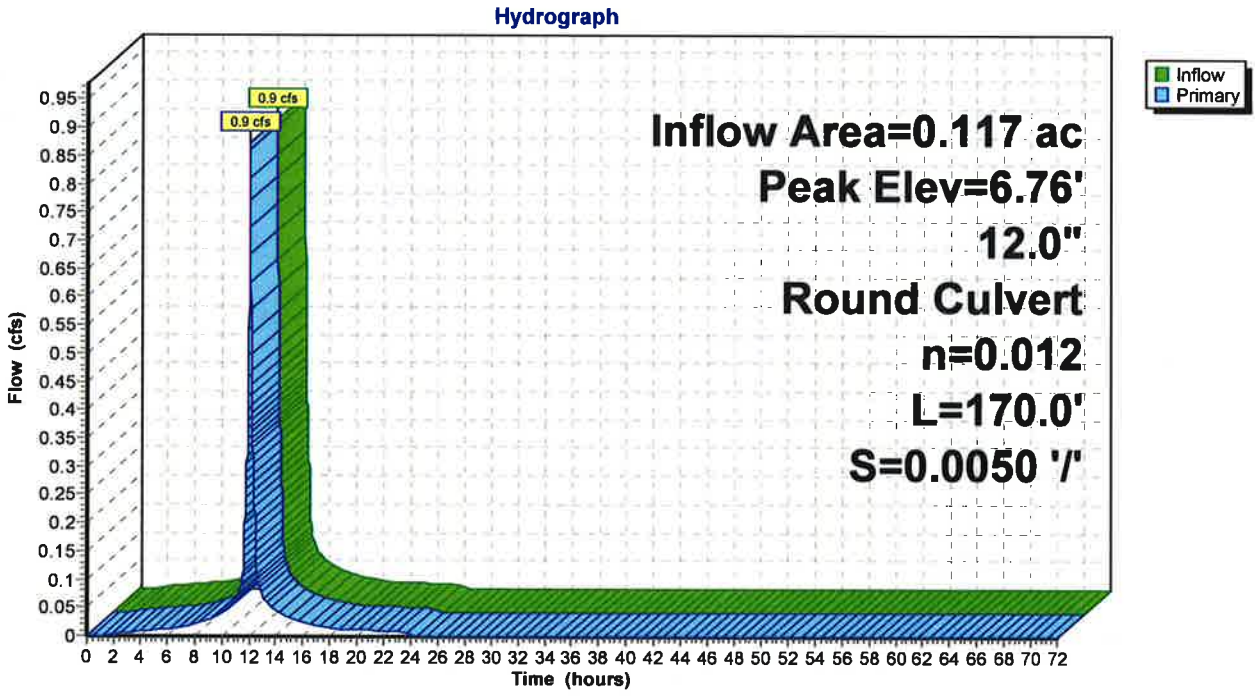
Inflow Area =	0.117 ac,	89.03% Impervious,	Inflow Depth =	7.01"	for 50-Year X event
Inflow =	0.9 cfs @	12.07 hrs, Volume=	0.068 af		
Outflow =	0.9 cfs @	12.07 hrs, Volume=	0.068 af,	Atten= 0%,	Lag= 0.0 min
Primary =	0.9 cfs @	12.07 hrs, Volume=	0.068 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.76' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=6.76' TW=6.32' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 0.9 cfs @ 2.21 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 6.32' (Flood elevation advised)

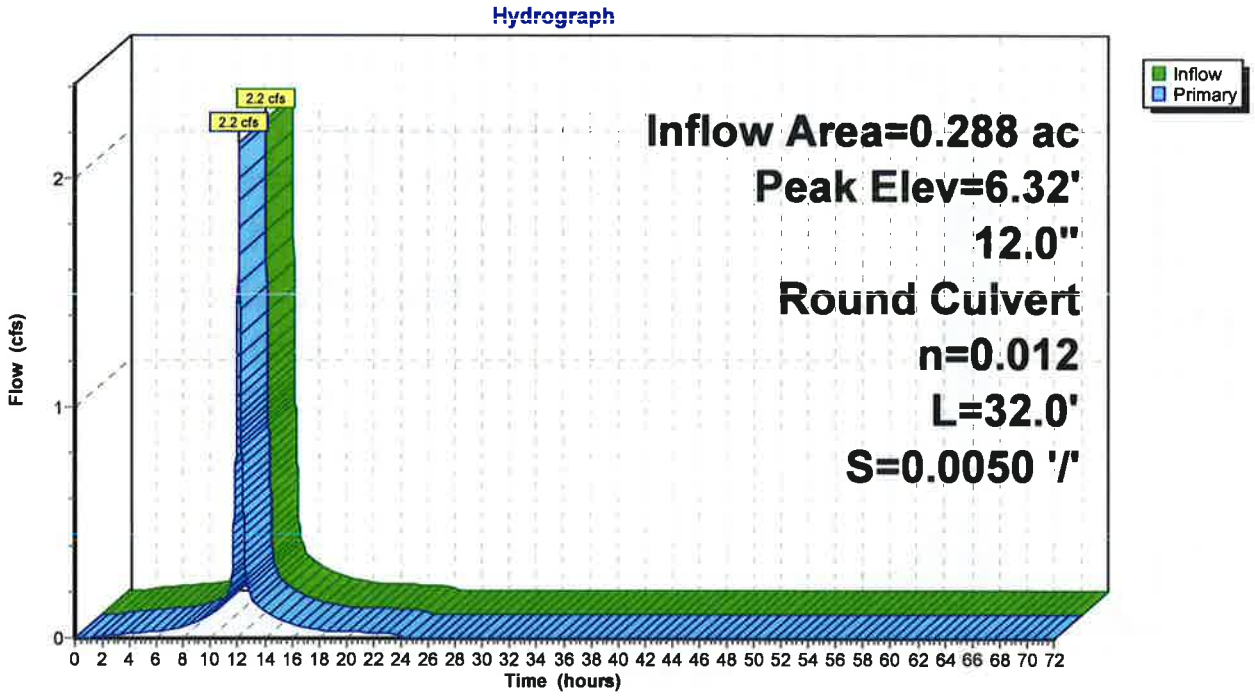
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 7.01"	for 50-Year X event		
Inflow =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af		
Outflow =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af, Atten= 0%, Lag= 0.0 min		
Primary =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.32' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.1 cfs @ 12.07 hrs HW=6.32' TW=6.03' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 2.1 cfs @ 3.14 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 6.40' (Flood elevation advised)

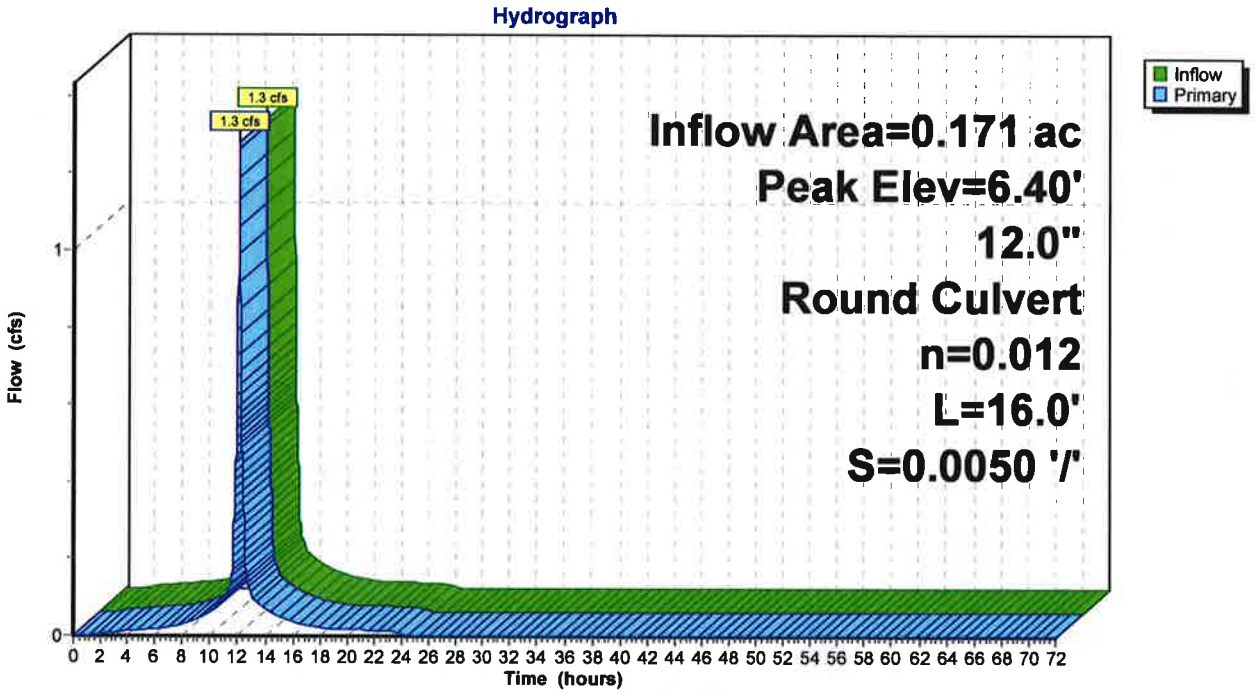
Inflow Area =	0.171 ac, 85.80% Impervious, Inflow Depth = 7.01"	for 50-Year X event		
Inflow =	1.3 cfs @ 12.07 hrs, Volume=	0.100 af		
Outflow =	1.3 cfs @ 12.07 hrs, Volume=	0.100 af, Atten= 0%, Lag= 0.0 min		
Primary =	1.3 cfs @ 12.07 hrs, Volume=	0.100 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.40' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.2 cfs @ 12.07 hrs HW=6.40' TW=6.32' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 1.2 cfs @ 1.81 fps)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 6.03' (Flood elevation advised)

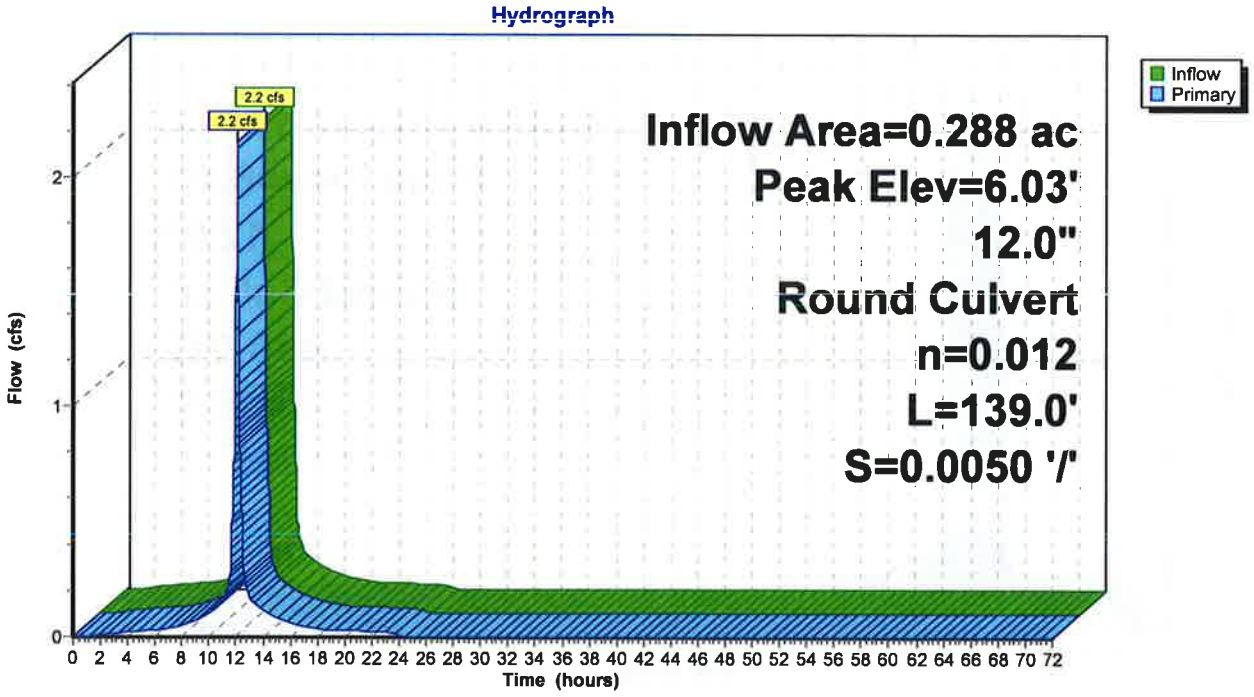
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 7.01"	for 50-Year X event		
Inflow =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af		
Outflow =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af, Atten= 0%, Lag= 0.0 min		
Primary =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.03' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.1 cfs @ 12.07 hrs HW=6.03' TW=5.21' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 2.1 cfs @ 3.57 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 5.22' (Flood elevation advised)

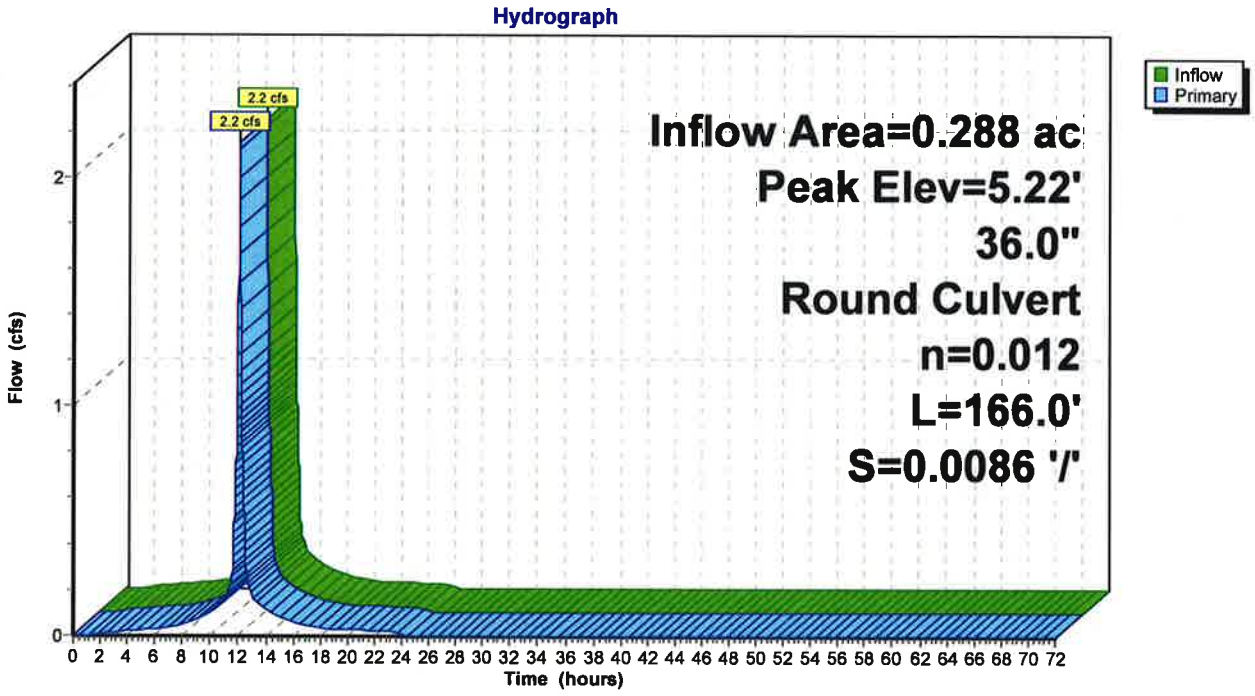
Inflow Area =	0.288 ac, 87.11% Impervious, Inflow Depth = 7.01"	for 50-Year X event		
Inflow =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af		
Outflow =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af, Atten= 0%, Lag= 0.0 min		
Primary =	2.2 cfs @ 12.07 hrs, Volume=	0.168 af		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.22' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=2.1 cfs @ 12.07 hrs HW=5.21' TW=5.02' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 2.1 cfs @ 1.83 fps)

Pond 17P: DMH 3545



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.78' (Flood elevation advised)

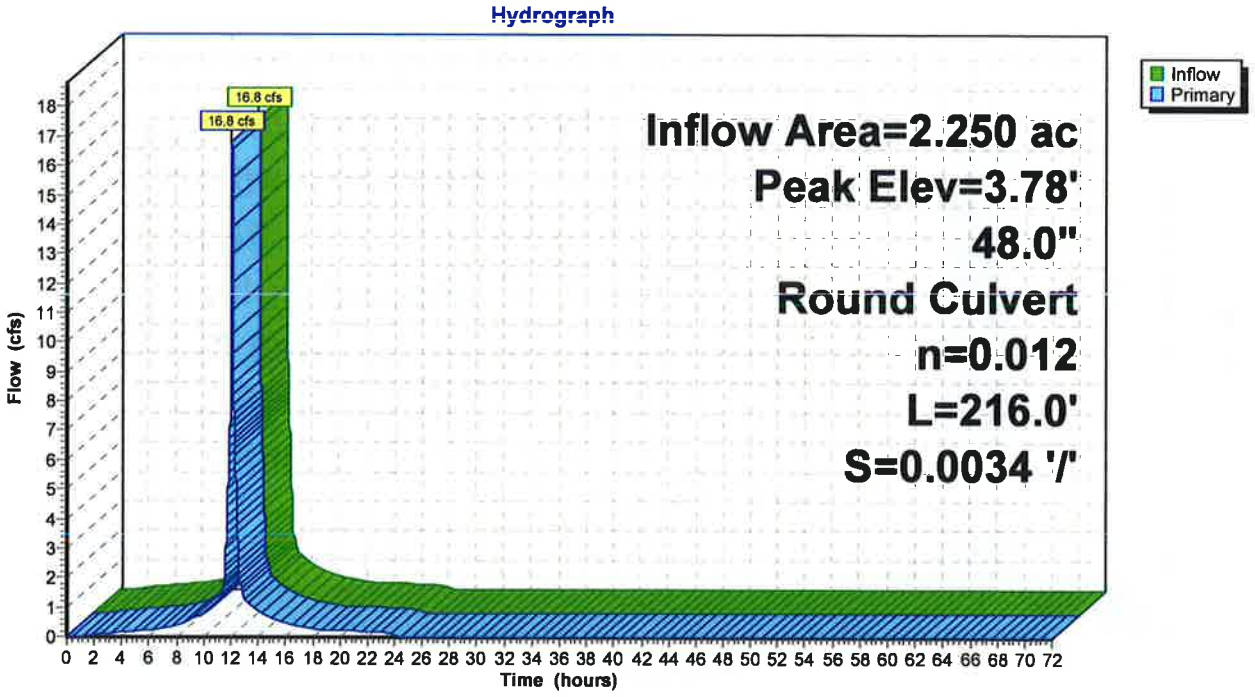
Inflow Area =	2.250 ac, 89.35% Impervious, Inflow Depth = 7.04"	for 50-Year X event		
Inflow =	16.8 cfs @ 12.07 hrs, Volume=	1.320 af		
Outflow =	16.8 cfs @ 12.07 hrs, Volume=	1.320 af, Atten= 0%, Lag= 0.0 min		
Primary =	16.8 cfs @ 12.07 hrs, Volume=	1.320 af		

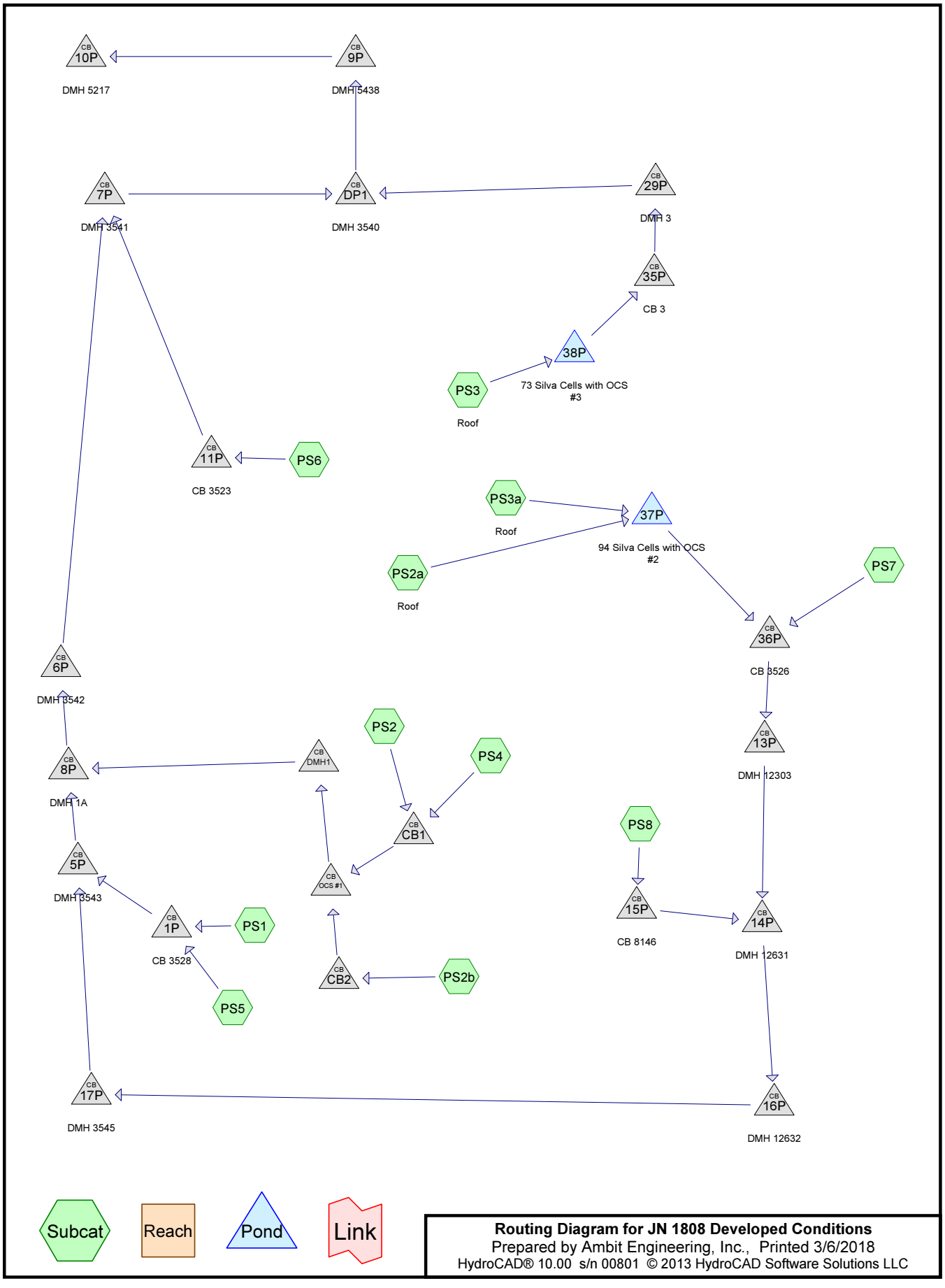
Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.78' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=16.7 cfs @ 12.07 hrs HW=3.78' TW=3.29' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 16.7 cfs @ 3.65 fps)

Pond DP1: DMH 3540





Routing Diagram for JN 1808 Developed Conditions
Prepared by Ambit Engineering, Inc., Printed 3/6/2018
HydroCAD® 10.00 s/n 00801 © 2013 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.114	91	Fallow, bare soil, HSG C (PS2, PS2b, PS5, PS8)
0.009	98	Gravel roads, HSG C (PS5, PS8)
0.261	98	Paved parking, HSG C (PS2, PS2b, PS5)
1.020	98	Paved roads w/curbs & sewers, HSG C (PS5, PS6, PS7, PS8)
0.845	98	Roofs, HSG C (PS1, PS2a, PS3, PS3a, PS4)
2.249	**98**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
2.249	HSG C	PS1, PS2, PS2a, PS2b, PS3, PS3a, PS4, PS5, PS6, PS7, PS8
0.000	HSG D	
0.000	Other	
2.249		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.114	0.000	0.000	0.114	Fallow, bare soil	PS 2, PS 2b, PS 5, PS 8
0.000	0.000	0.009	0.000	0.000	0.009	Gravel roads	PS 5, PS 8
0.000	0.000	0.261	0.000	0.000	0.261	Paved parking	PS 2, PS 2b, PS 5
0.000	0.000	1.020	0.000	0.000	1.020	Paved roads w/curbs & sewers	PS 5, PS 6, PS 7, PS 8
0.000	0.000	0.845	0.000	0.000	0.845	Roofs	PS 1, PS 2a, PS 3, PS 3a, PS 4
0.000	**0.000**	**2.249**	**0.000**	**0.000**	**2.249**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	4.40	4.13	9.0	0.0300	0.012	12.0	0.0	0.0
2	5P	2.91	2.67	131.0	0.0018	0.012	36.0	0.0	0.0
3	6P	2.21	2.10	74.0	0.0015	0.012	36.0	0.0	0.0
4	7P	1.96	1.68	80.0	0.0035	0.012	36.0	0.0	0.0
5	8P	2.66	2.61	29.0	0.0017	0.012	36.0	0.0	0.0
6	9P	0.94	1.67	100.0	-0.0073	0.012	48.0	0.0	0.0
7	10P	1.67	-4.20	254.0	0.0231	0.012	48.0	0.0	0.0
8	11P	6.32	7.52	35.0	-0.0343	0.012	12.0	0.0	0.0
9	13P	6.09	5.24	170.0	0.0050	0.012	12.0	0.0	0.0
10	14P	5.24	5.08	32.0	0.0050	0.012	12.0	0.0	0.0
11	15P	5.32	5.24	16.0	0.0050	0.012	12.0	0.0	0.0
12	16P	5.08	4.39	139.0	0.0050	0.012	12.0	0.0	0.0
13	17P	4.34	2.91	166.0	0.0086	0.012	36.0	0.0	0.0
14	29P	2.53	1.63	67.0	0.0134	0.012	18.0	0.0	0.0
15	35P	6.77	6.65	24.0	0.0050	0.012	12.0	0.0	0.0
16	36P	6.19	6.09	18.5	0.0054	0.012	12.0	0.0	0.0
17	37P	8.30	8.26	9.0	0.0044	0.012	12.0	0.0	0.0
18	38P	6.90	6.87	7.0	0.0043	0.012	12.0	0.0	0.0
19	CB1	5.33	5.29	6.0	0.0067	0.012	12.0	0.0	0.0
20	CB2	5.40	5.29	30.0	0.0037	0.012	12.0	0.0	0.0
21	DMH1	4.91	4.67	41.0	0.0059	0.012	12.0	0.0	0.0
22	DP1	1.68	0.94	216.0	0.0034	0.012	48.0	0.0	0.0
23	OCS #1	5.23	5.01	44.0	0.0050	0.012	12.0	0.0	0.0

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=1.2 cfs 0.095 af

Subcatchment PS2: Runoff Area=7,730 sf 80.78% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=0.6 cfs 0.042 af

Subcatchment PS2a: Roof Runoff Area=2,509 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.2 cfs 0.014 af

Subcatchment PS2b: Runoff Area=5,028 sf 96.72% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.4 cfs 0.029 af

Subcatchment PS3: Roof Runoff Area=8,542 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.6 cfs 0.048 af

Subcatchment PS3a: Roof Runoff Area=4,848 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.4 cfs 0.028 af

Subcatchment PS4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.3 cfs 0.024 af

Subcatchment PS5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=1.5 cfs 0.110 af

Subcatchment PS6: Runoff Area=12,323 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.9 cfs 0.070 af

Subcatchment PS7: Runoff Area=8,519 sf 100.00% Impervious Runoff Depth=2.97"
Tc=5.0 min CN=98 Runoff=0.6 cfs 0.048 af

Subcatchment PS8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=2.86"
Tc=5.0 min CN=97 Runoff=0.5 cfs 0.041 af

Pond 1P: CB 3528 Peak Elev=5.30' Inflow=2.7 cfs 0.205 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=2.7 cfs 0.205 af

Pond 5P: DMH 3543 Peak Elev=4.01' Inflow=4.0 cfs 0.314 af
36.0" Round Culvert n=0.012 L=131.0' S=0.0018 '/' Outflow=4.0 cfs 0.314 af

Pond 6P: DMH 3542 Peak Elev=3.48' Inflow=5.2 cfs 0.408 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=5.2 cfs 0.408 af

Pond 7P: DMH 3541 Peak Elev=3.28' Inflow=6.1 cfs 0.478 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=6.1 cfs 0.478 af

Pond 8P: DMH 1A Peak Elev=3.75' Inflow=5.2 cfs 0.408 af
36.0" Round Culvert n=0.012 L=29.0' S=0.0017 '/' Outflow=5.2 cfs 0.408 af

Pond 9P: DMH 5438 Peak Elev=2.67' Inflow=6.7 cfs 0.511 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=6.7 cfs 0.511 af

Pond 10P: DMH 5217 Peak Elev=2.46' Inflow=6.7 cfs 0.511 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=6.7 cfs 0.511 af

Pond 11P: CB 3523 Peak Elev=7.95' Inflow=0.9 cfs 0.070 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=0.9 cfs 0.070 af

Pond 13P: DMH 12303 Peak Elev=6.63' Inflow=0.7 cfs 0.068 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=0.7 cfs 0.068 af

Pond 14P: DMH 12631 Peak Elev=5.98' Inflow=1.3 cfs 0.109 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=1.3 cfs 0.109 af

Pond 15P: CB 8146 Peak Elev=6.03' Inflow=0.5 cfs 0.041 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=0.5 cfs 0.041 af

Pond 16P: DMH 12632 Peak Elev=5.74' Inflow=1.3 cfs 0.109 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=1.3 cfs 0.109 af

Pond 17P: DMH 3545 Peak Elev=4.80' Inflow=1.3 cfs 0.109 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=1.3 cfs 0.109 af

Pond 29P: DMH 3 Peak Elev=3.11' Inflow=0.6 cfs 0.033 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0134 '/' Outflow=0.6 cfs 0.033 af

Pond 35P: CB 3 Peak Elev=7.23' Inflow=0.6 cfs 0.033 af
12.0" Round Culvert n=0.012 L=24.0' S=0.0050 '/' Outflow=0.6 cfs 0.033 af

Pond 36P: CB 3526 Peak Elev=6.77' Inflow=0.7 cfs 0.068 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0054 '/' Outflow=0.7 cfs 0.068 af

Pond 37P: 94 Silva Cells with OCS #2 Peak Elev=11.35' Storage=367 cf Inflow=0.5 cfs 0.042 af
Discarded=0.0 cfs 0.022 af Primary=0.1 cfs 0.020 af Outflow=0.2 cfs 0.042 af

Pond 38P: 73 Silva Cells with OCS #3 Peak Elev=10.10' Storage=264 cf Inflow=0.6 cfs 0.048 af
Discarded=0.0 cfs 0.016 af Primary=0.6 cfs 0.033 af Outflow=0.6 cfs 0.048 af

Pond CB1: Peak Elev=6.01' Inflow=0.9 cfs 0.066 af
12.0" Round Culvert n=0.012 L=6.0' S=0.0067 '/' Outflow=0.9 cfs 0.066 af

Pond CB2: Peak Elev=5.95' Inflow=0.4 cfs 0.029 af
12.0" Round Culvert n=0.012 L=30.0' S=0.0037 '/' Outflow=0.4 cfs 0.029 af

Pond DMH1: Peak Elev=5.55' Inflow=1.2 cfs 0.095 af
12.0" Round Culvert n=0.012 L=41.0' S=0.0059 '/' Outflow=1.2 cfs 0.095 af

Pond DP1: DMH 3540 Peak Elev=3.01' Inflow=6.7 cfs 0.511 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=6.7 cfs 0.511 af

Pond OCS #1: Peak Elev=5.91' Inflow=1.2 cfs 0.095 af
12.0" Round Culvert n=0.012 L=44.0' S=0.0050 '/' Outflow=1.2 cfs 0.095 af

Total Runoff Area = 2.249 ac Runoff Volume = 0.549 af Average Runoff Depth = 2.93"
5.08% Pervious = 0.114 ac 94.92% Impervious = 2.135 ac

Summary for Subcatchment PS1:

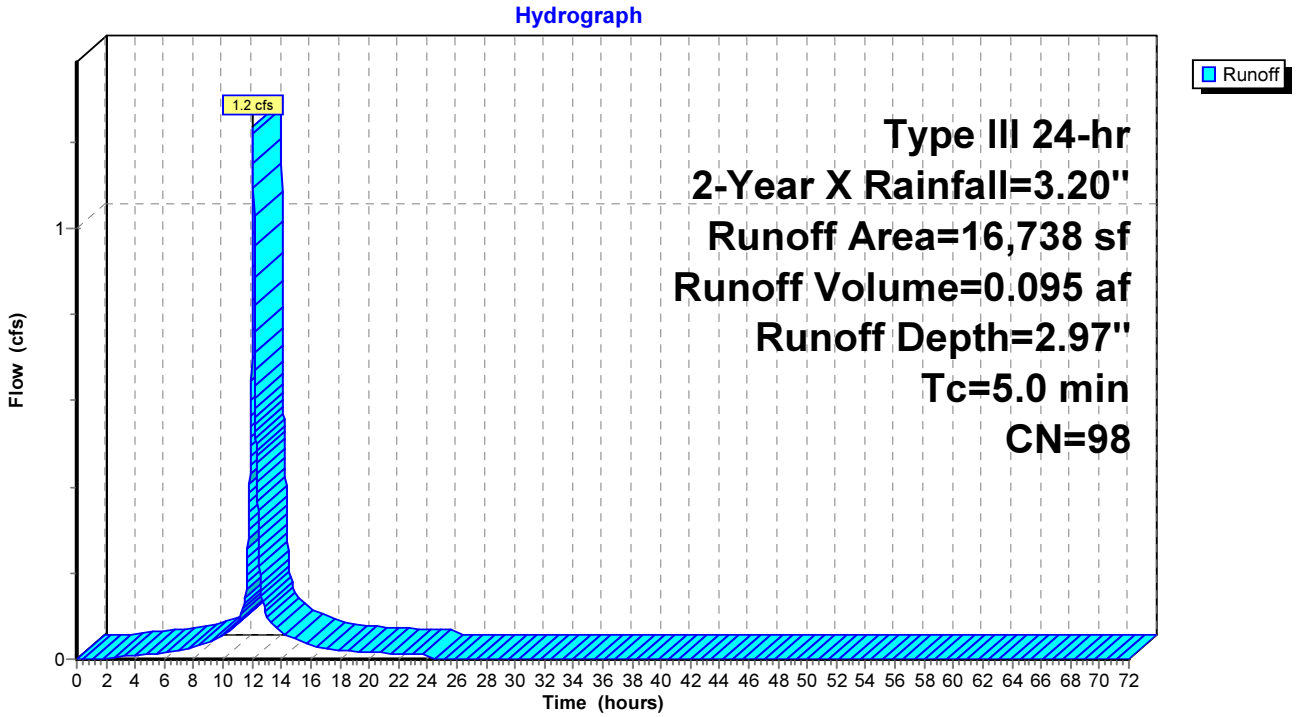
Runoff = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS1:



Summary for Subcatchment PS2:

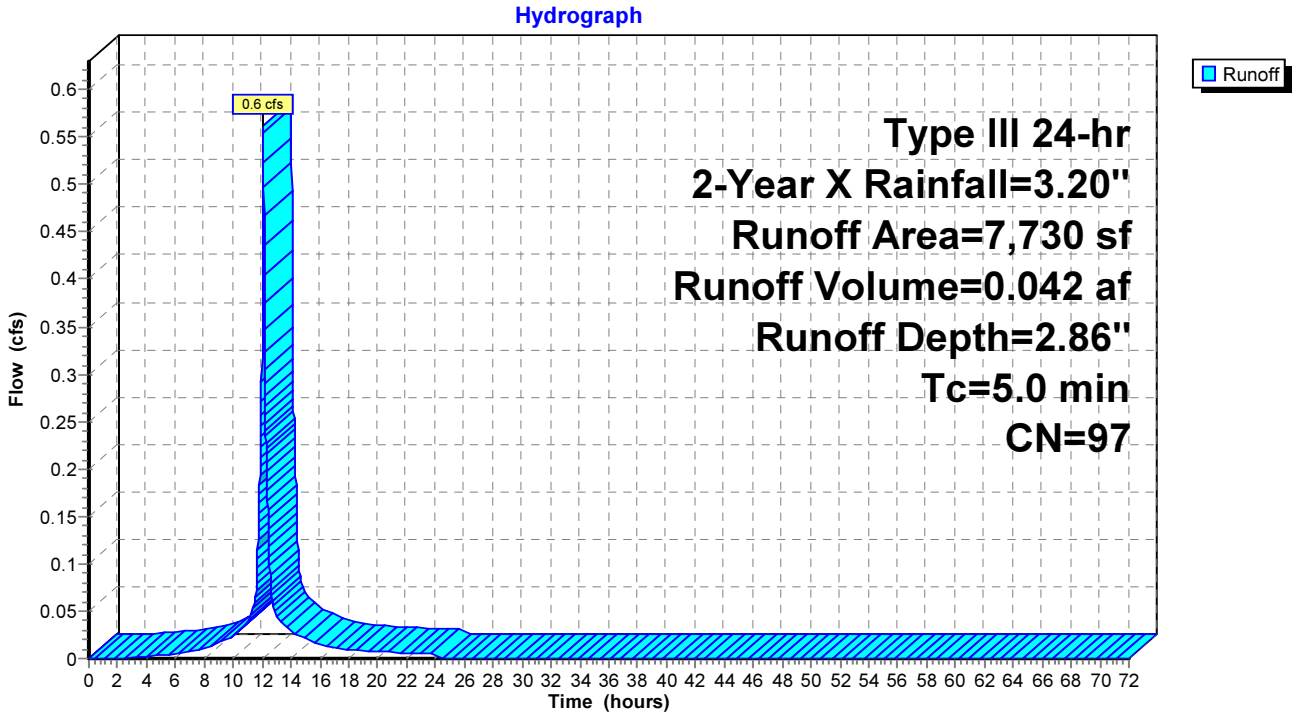
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.042 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
6,244	98	Paved parking, HSG C
1,486	91	Fallow, bare soil, HSG C
7,730	97	Weighted Average
1,486		19.22% Pervious Area
6,244		80.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2:



Summary for Subcatchment PS2a: Roof

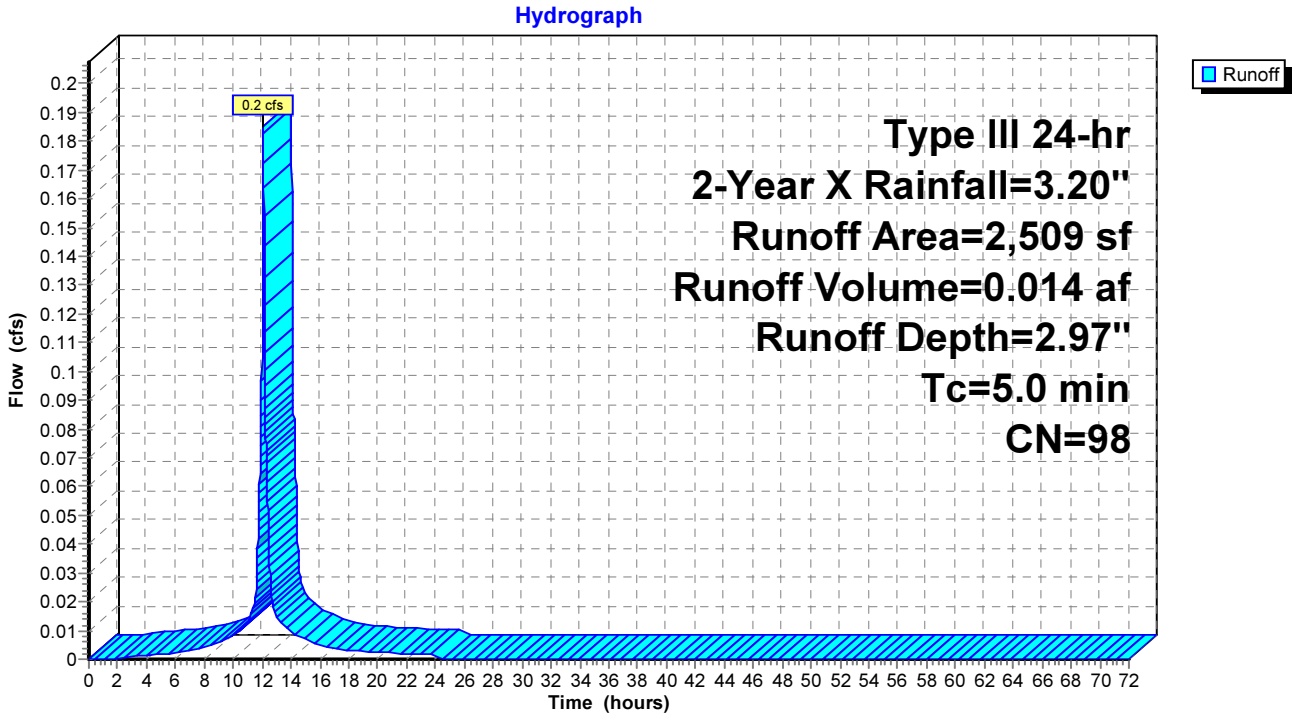
Runoff = 0.2 cfs @ 12.07 hrs, Volume= 0.014 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
2,509	98	Roofs, HSG C
2,509		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2a: Roof



Summary for Subcatchment PS2b:

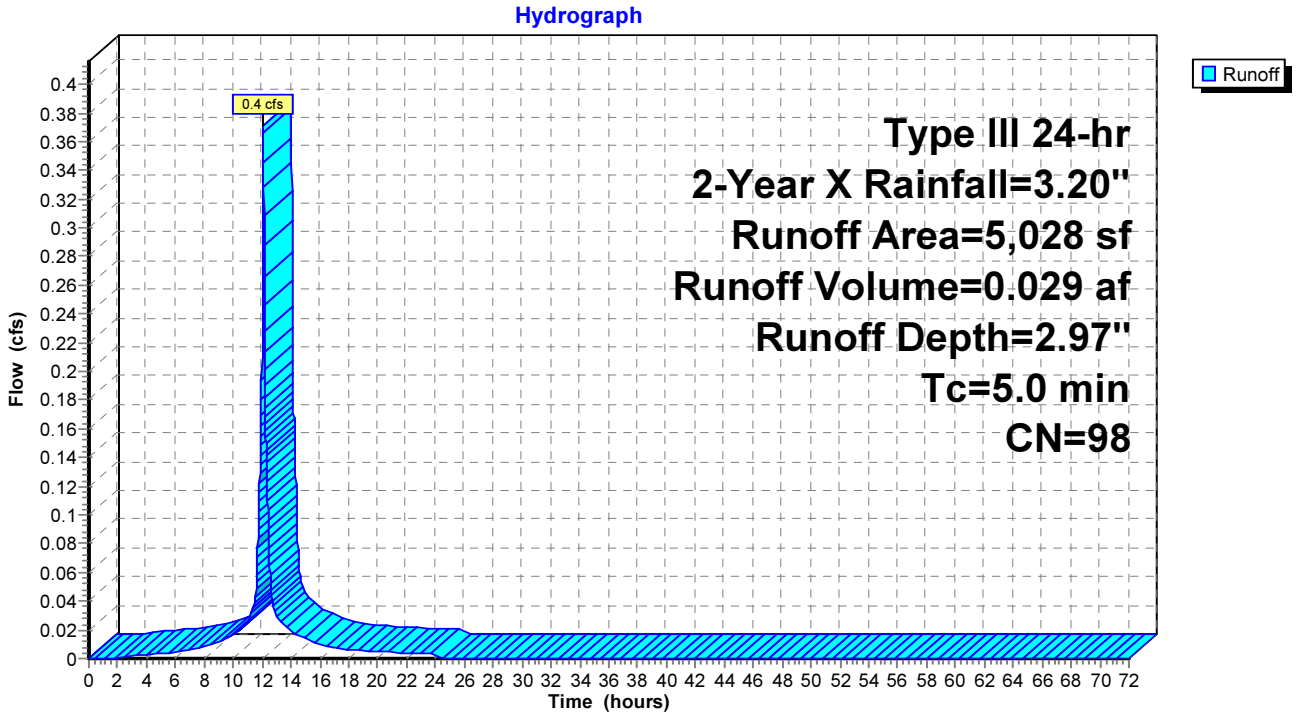
Runoff = 0.4 cfs @ 12.07 hrs, Volume= 0.029 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
4,863	98	Paved parking, HSG C
165	91	Fallow, bare soil, HSG C
5,028	98	Weighted Average
165		3.28% Pervious Area
4,863		96.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2b:



Summary for Subcatchment PS3: Roof

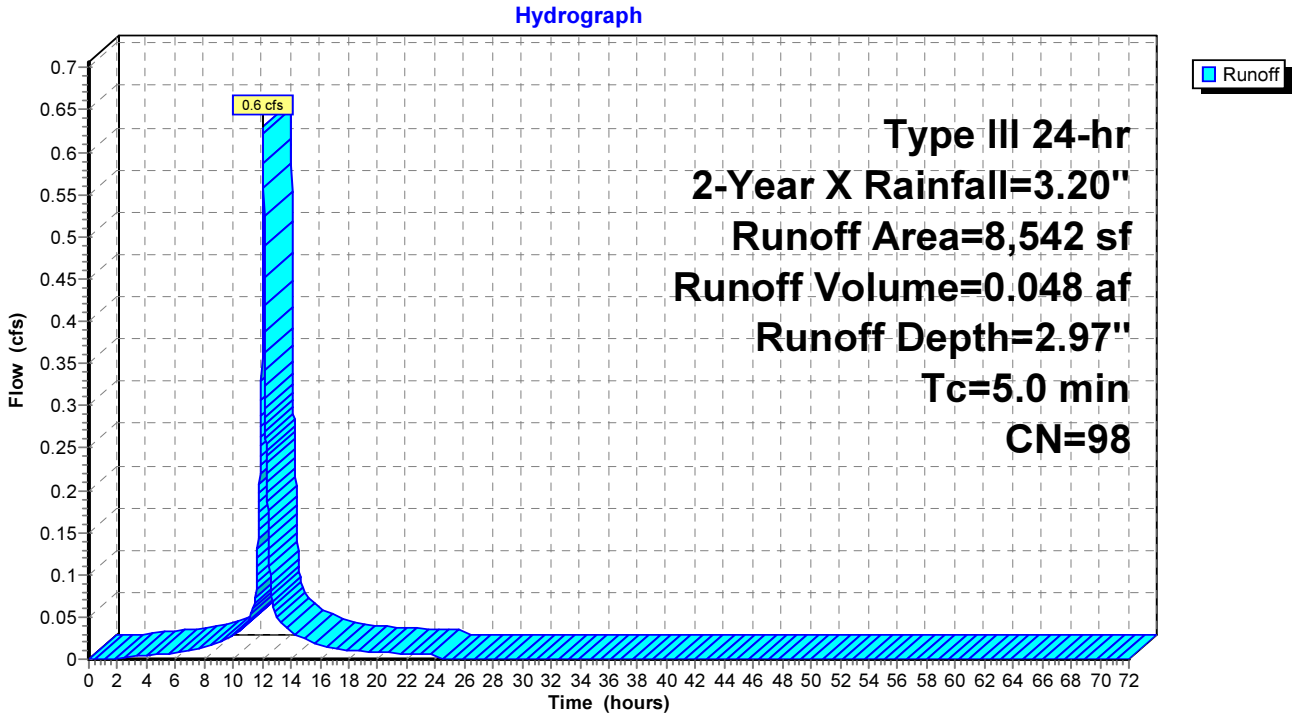
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.048 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
8,542	98	Roofs, HSG C
8,542		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS3: Roof



Summary for Subcatchment PS3a: Roof

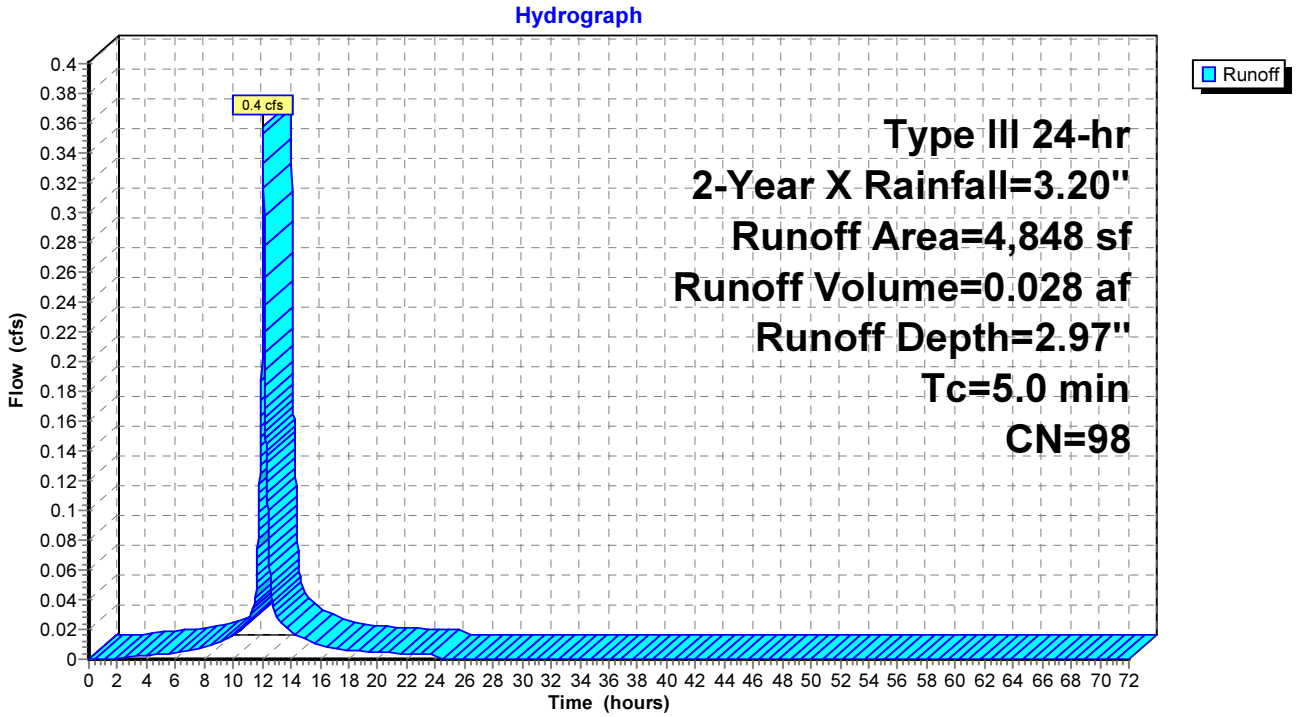
Runoff = 0.4 cfs @ 12.07 hrs, Volume= 0.028 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
4,848	98	Roofs, HSG C
4,848		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS3a: Roof



Summary for Subcatchment PS4:

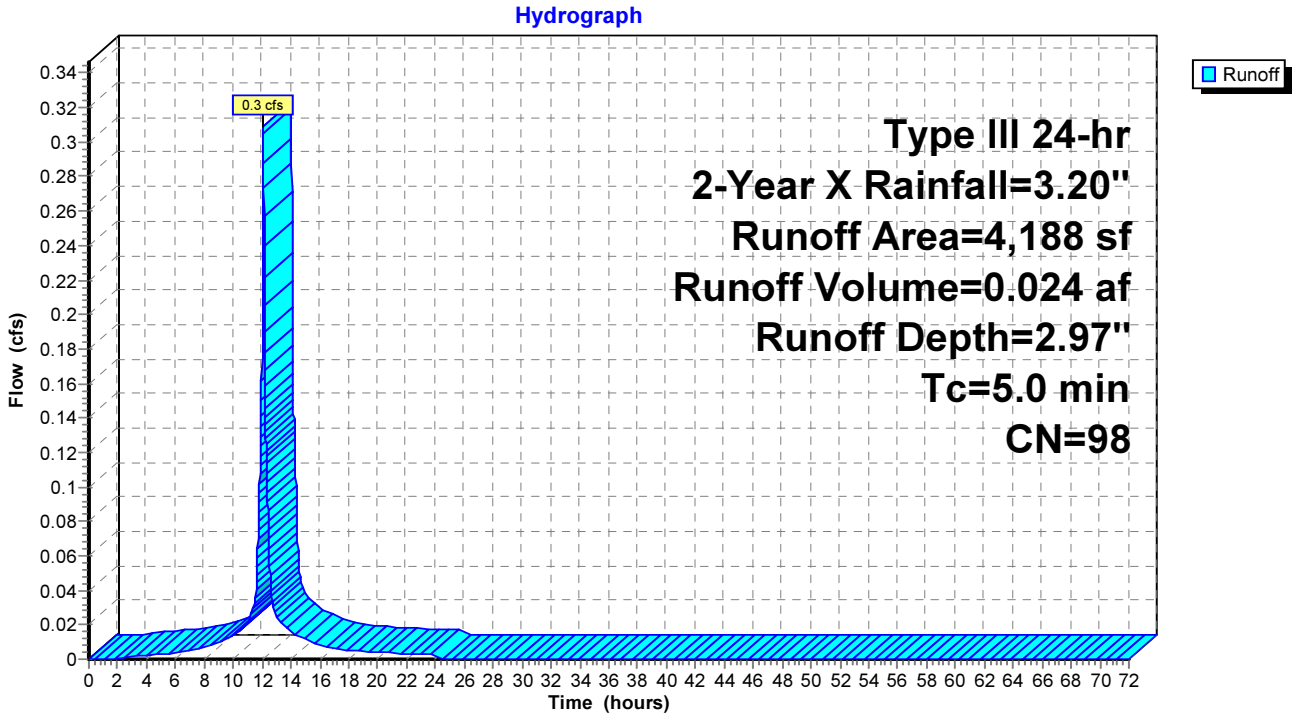
Runoff = 0.3 cfs @ 12.07 hrs, Volume= 0.024 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS4:



Summary for Subcatchment PS5:

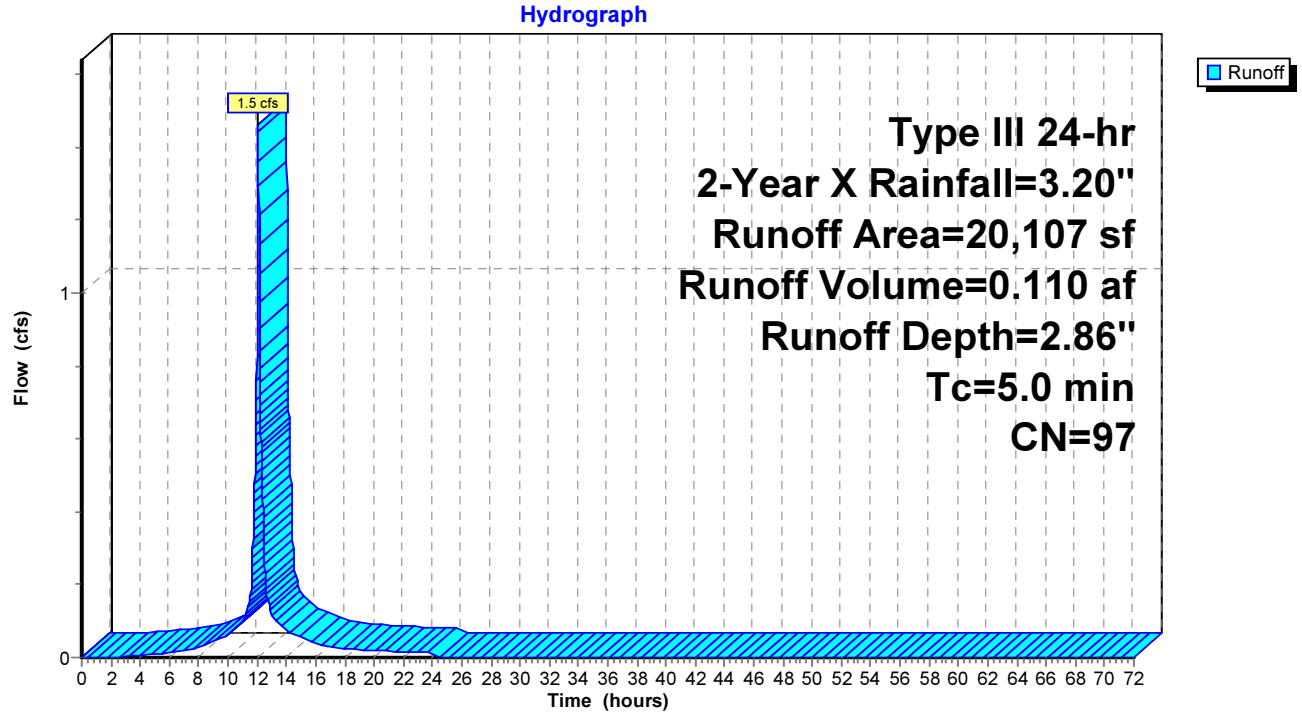
Runoff = 1.5 cfs @ 12.07 hrs, Volume= 0.110 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS5:



Summary for Subcatchment PS6:

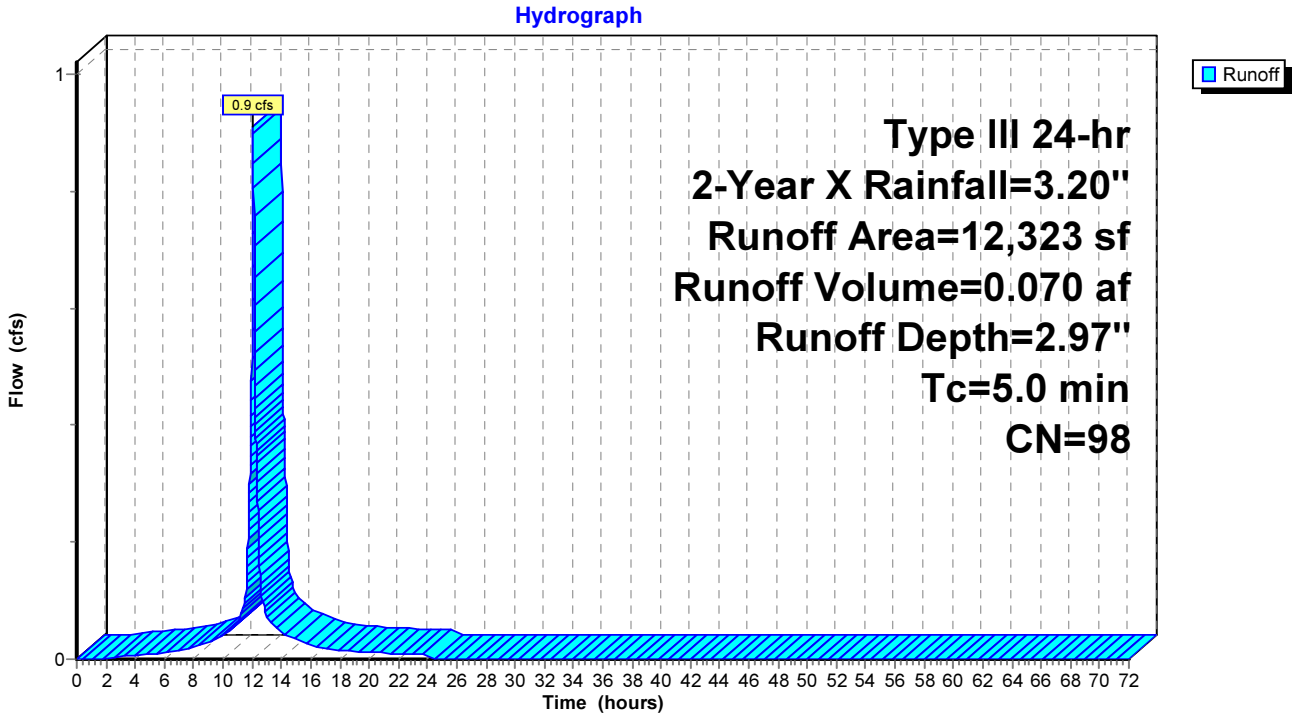
Runoff = 0.9 cfs @ 12.07 hrs, Volume= 0.070 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
12,323	98	Paved roads w/curbs & sewers, HSG C
12,323		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS6:



Summary for Subcatchment PS7:

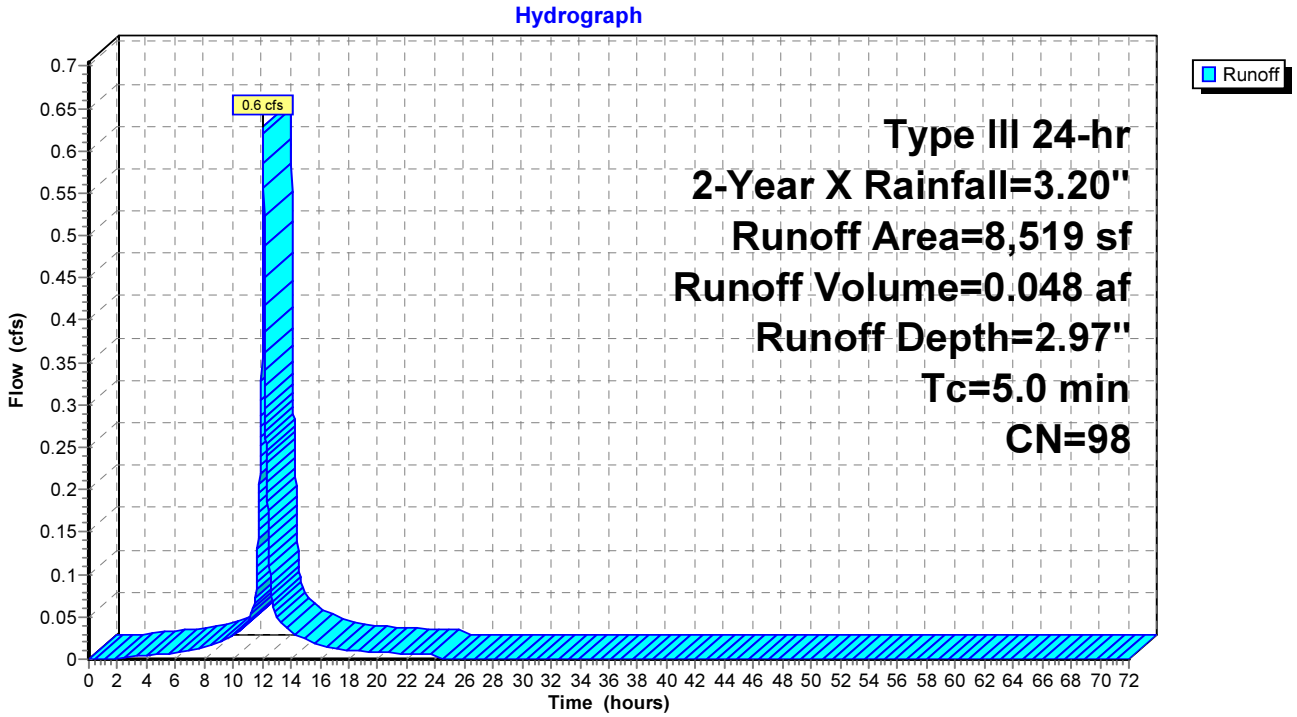
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.048 af, Depth= 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

Area (sf)	CN	Description
8,519	98	Paved roads w/curbs & sewers, HSG C
8,519		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS7:



Summary for Subcatchment PS8:

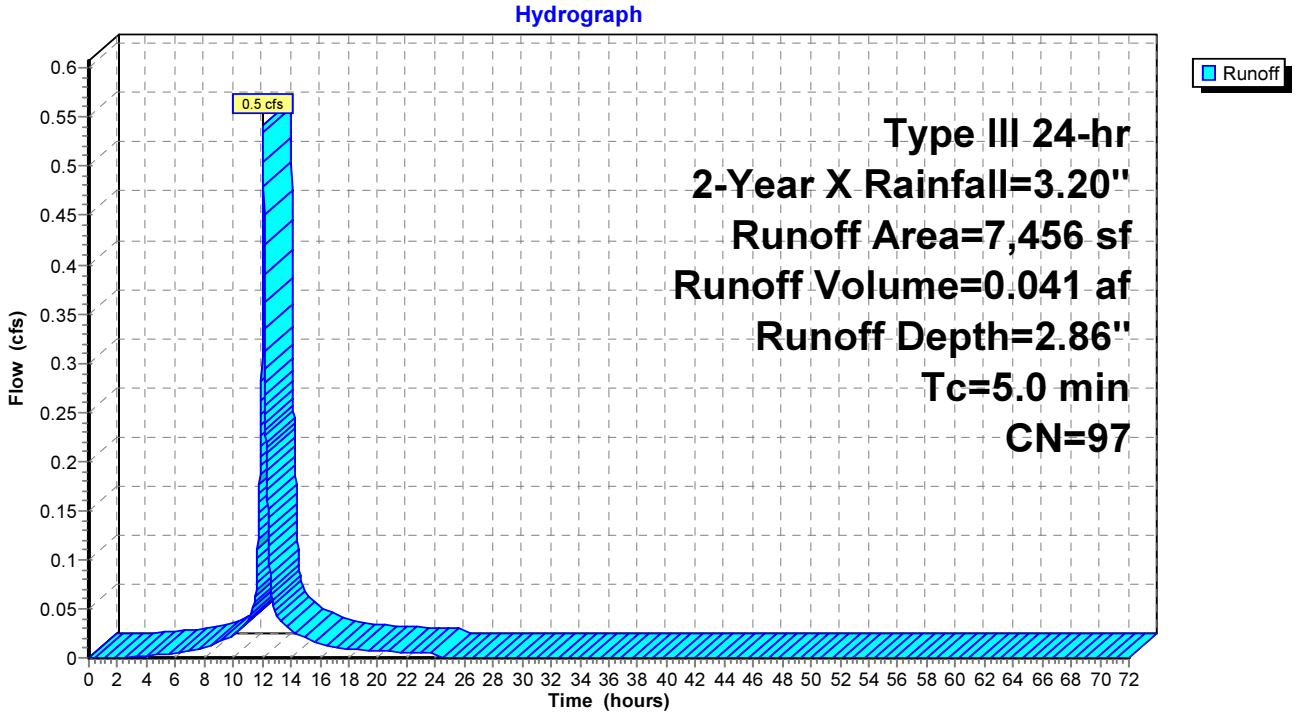
Runoff = 0.5 cfs @ 12.07 hrs, Volume= 0.041 af, Depth= 2.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year X Rainfall=3.20"

	Area (sf)	CN	Description
	4,674	98	Paved roads w/curbs & sewers, HSG C
	1,563	98	Paved roads w/curbs & sewers, HSG C
	121	98	Paved roads w/curbs & sewers, HSG C
*	39	98	Gravel roads, HSG C
	1,059	91	Fallow, bare soil, HSG C
	7,456	97	Weighted Average
	1,059		14.20% Pervious Area
	6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 5.30' (Flood elevation advised)

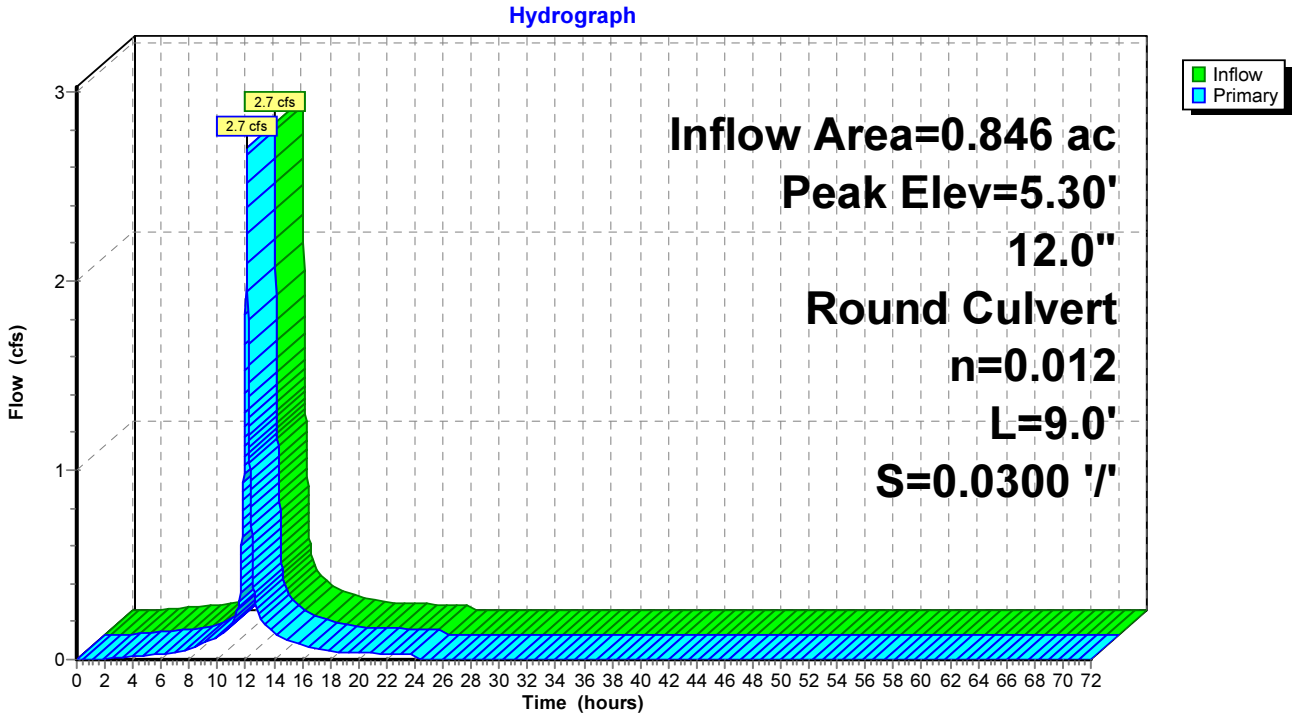
Inflow Area = 0.846 ac, 93.86% Impervious, Inflow Depth = 2.91" for 2-Year X event
Inflow = 2.7 cfs @ 12.07 hrs, Volume= 0.205 af
Outflow = 2.7 cfs @ 12.07 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.0 min
Primary = 2.7 cfs @ 12.07 hrs, Volume= 0.205 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.30' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.7 cfs @ 12.07 hrs HW=5.30' TW=4.01' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.7 cfs @ 4.78 fps)

Pond 1P: CB 3528



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 4.01' (Flood elevation advised)

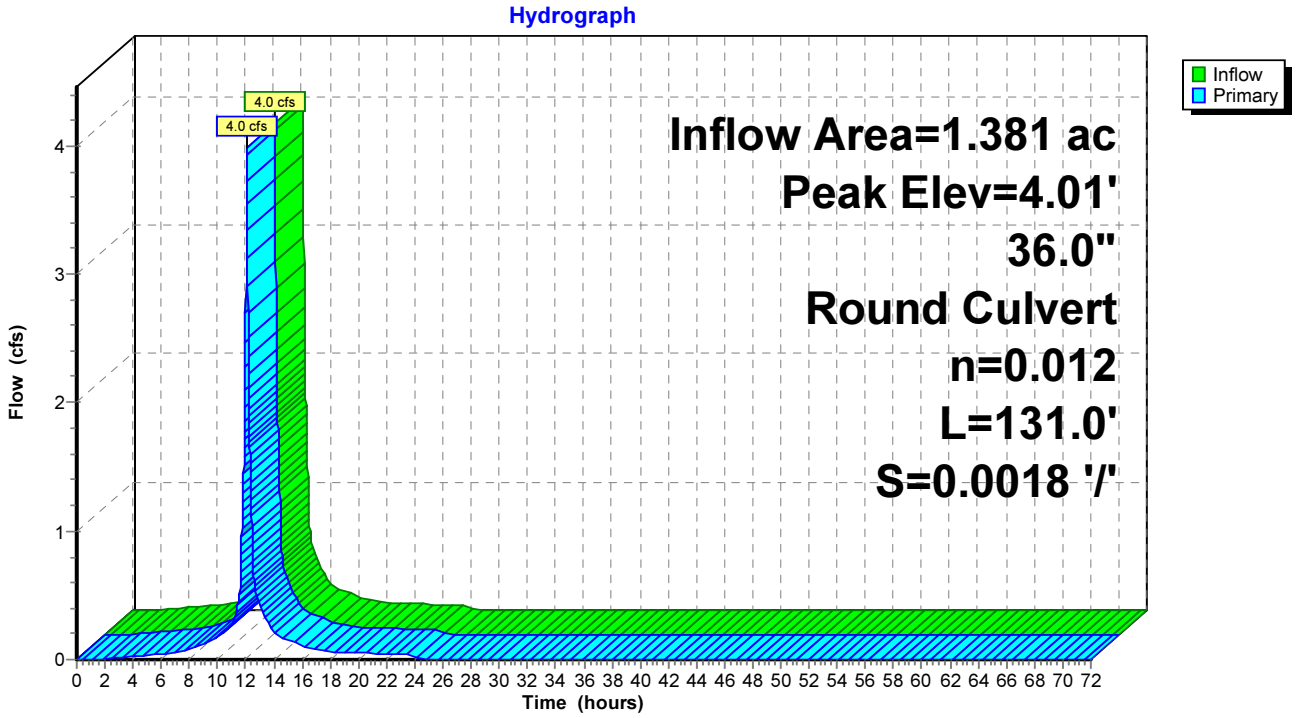
Inflow Area = 1.381 ac, 94.48% Impervious, Inflow Depth = 2.73" for 2-Year X event
Inflow = 4.0 cfs @ 12.07 hrs, Volume= 0.314 af
Outflow = 4.0 cfs @ 12.07 hrs, Volume= 0.314 af, Atten= 0%, Lag= 0.0 min
Primary = 4.0 cfs @ 12.07 hrs, Volume= 0.314 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.01' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 131.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.67' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=3.9 cfs @ 12.07 hrs HW=4.01' TW=3.74' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.9 cfs @ 2.51 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 3.48' (Flood elevation advised)

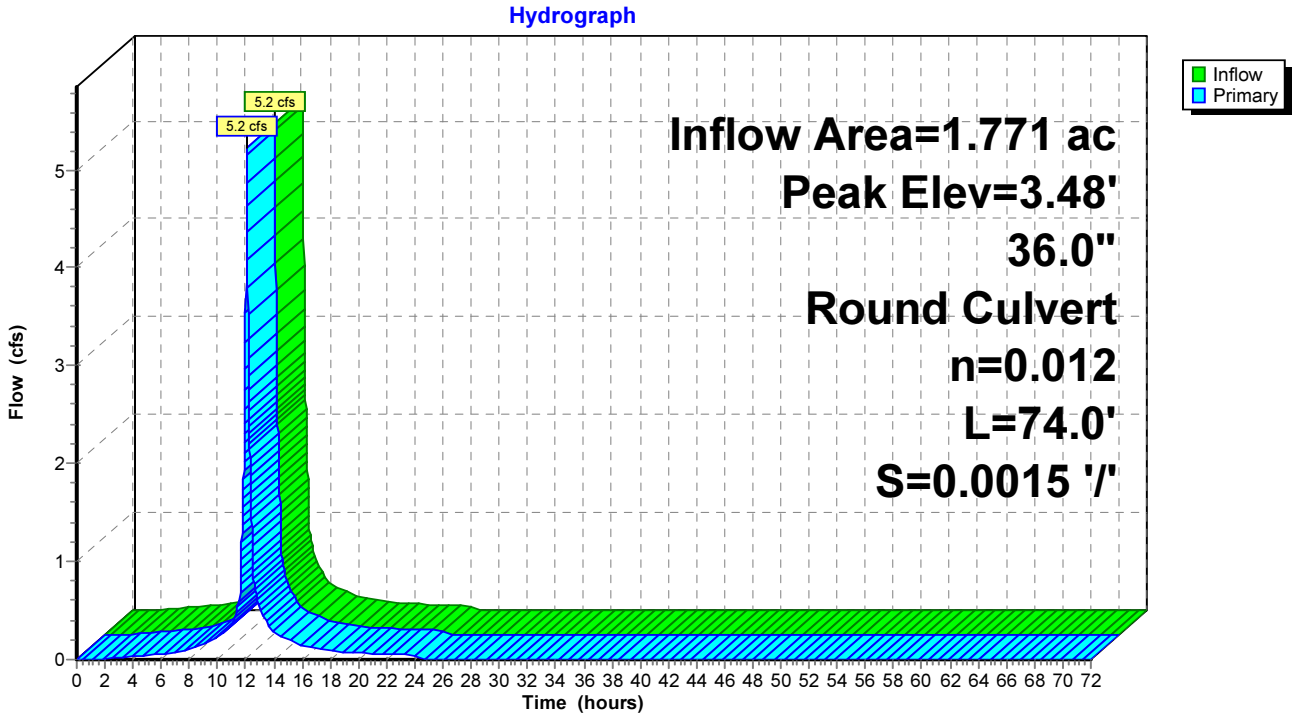
Inflow Area = 1.771 ac, 93.55% Impervious, Inflow Depth = 2.77" for 2-Year X event
Inflow = 5.2 cfs @ 12.07 hrs, Volume= 0.408 af
Outflow = 5.2 cfs @ 12.07 hrs, Volume= 0.408 af, Atten= 0%, Lag= 0.0 min
Primary = 5.2 cfs @ 12.07 hrs, Volume= 0.408 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.48' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=5.1 cfs @ 12.07 hrs HW=3.48' TW=3.27' (Dynamic Tailwater)
1=Culvert (Outlet Controls 5.1 cfs @ 2.66 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 3.28' (Flood elevation advised)

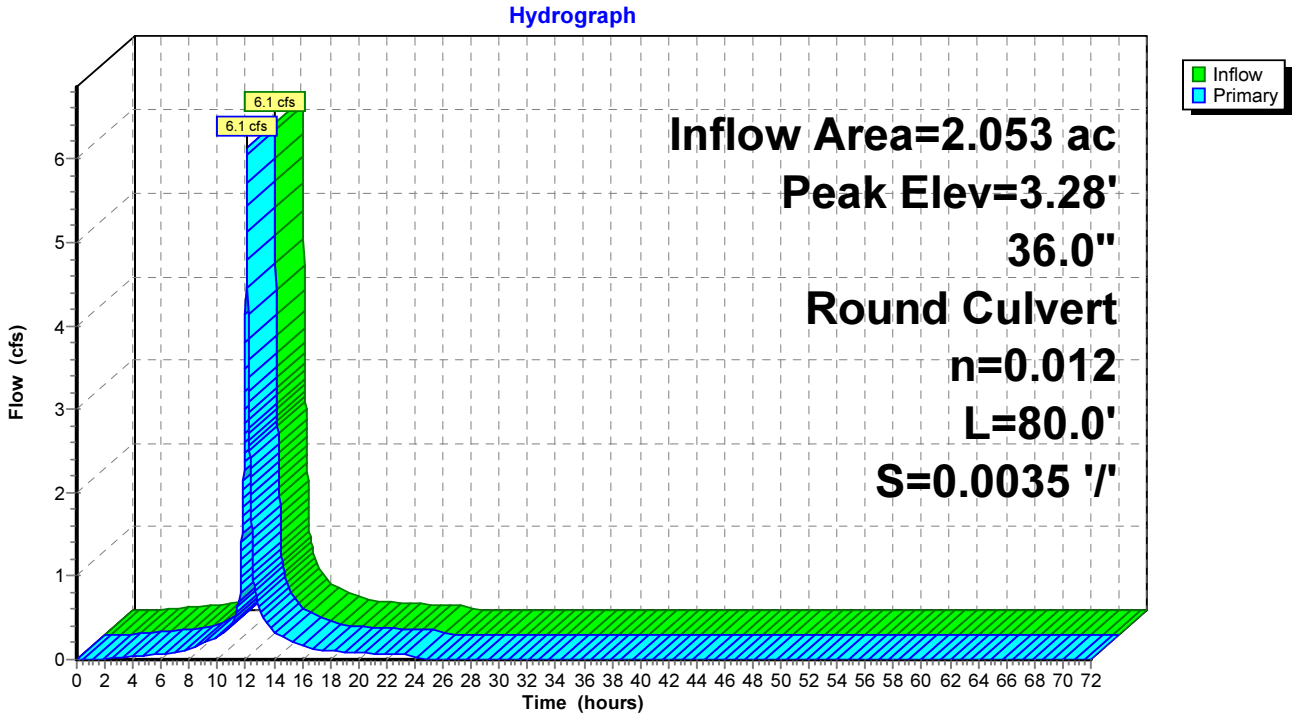
Inflow Area = 2.053 ac, 94.44% Impervious, Inflow Depth = 2.80" for 2-Year X event
Inflow = 6.1 cfs @ 12.07 hrs, Volume= 0.478 af
Outflow = 6.1 cfs @ 12.07 hrs, Volume= 0.478 af, Atten= 0%, Lag= 0.0 min
Primary = 6.1 cfs @ 12.07 hrs, Volume= 0.478 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.28' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=6.1 cfs @ 12.07 hrs HW=3.27' TW=2.99' (Dynamic Tailwater)
1=Culvert (Outlet Controls 6.1 cfs @ 3.04 fps)

Pond 7P: DMH 3541



Summary for Pond 8P: DMH 1A

[57] Hint: Peaked at 3.75' (Flood elevation advised)

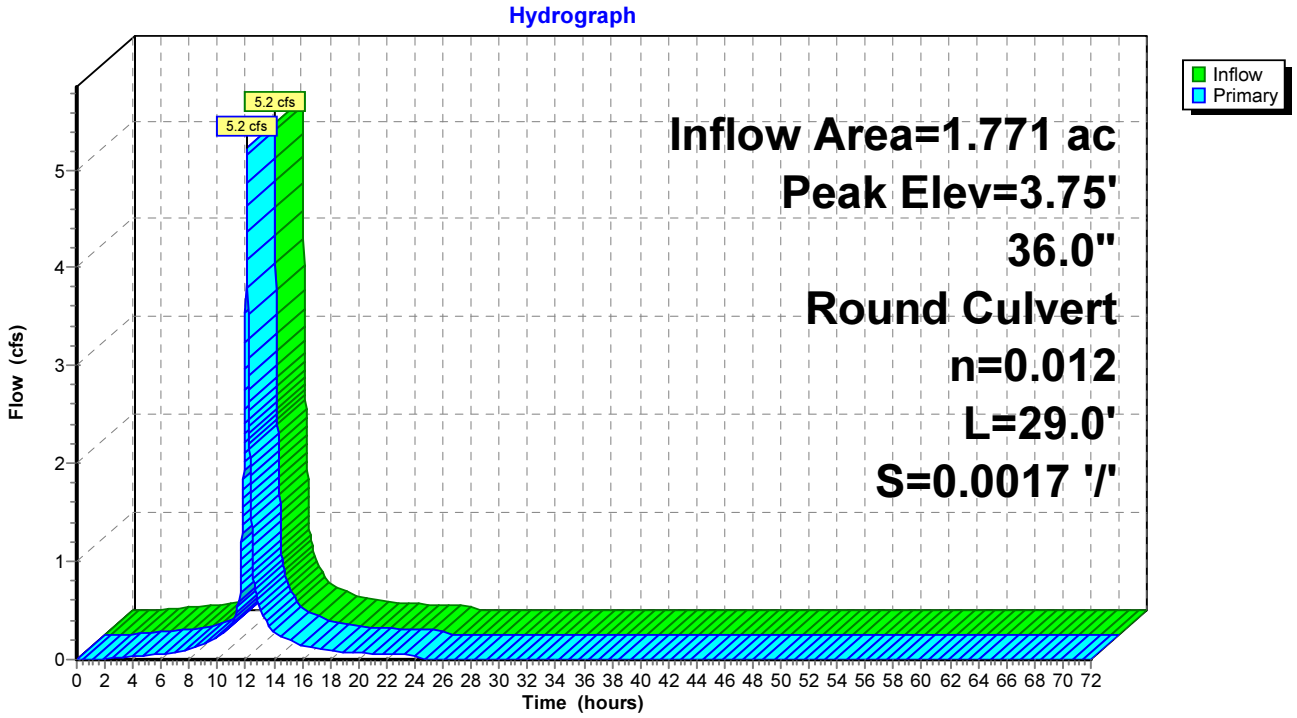
Inflow Area = 1.771 ac, 93.55% Impervious, Inflow Depth = 2.77" for 2-Year X event
Inflow = 5.2 cfs @ 12.07 hrs, Volume= 0.408 af
Outflow = 5.2 cfs @ 12.07 hrs, Volume= 0.408 af, Atten= 0%, Lag= 0.0 min
Primary = 5.2 cfs @ 12.07 hrs, Volume= 0.408 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.75' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.66'	**36.0" Round Culvert** L= 29.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.66' / 2.61' S= 0.0017 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=5.2 cfs @ 12.07 hrs HW=3.74' TW=3.48' (Dynamic Tailwater)
1=Culvert (Outlet Controls 5.2 cfs @ 3.35 fps)

Pond 8P: DMH 1A



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 2.67' (Flood elevation advised)

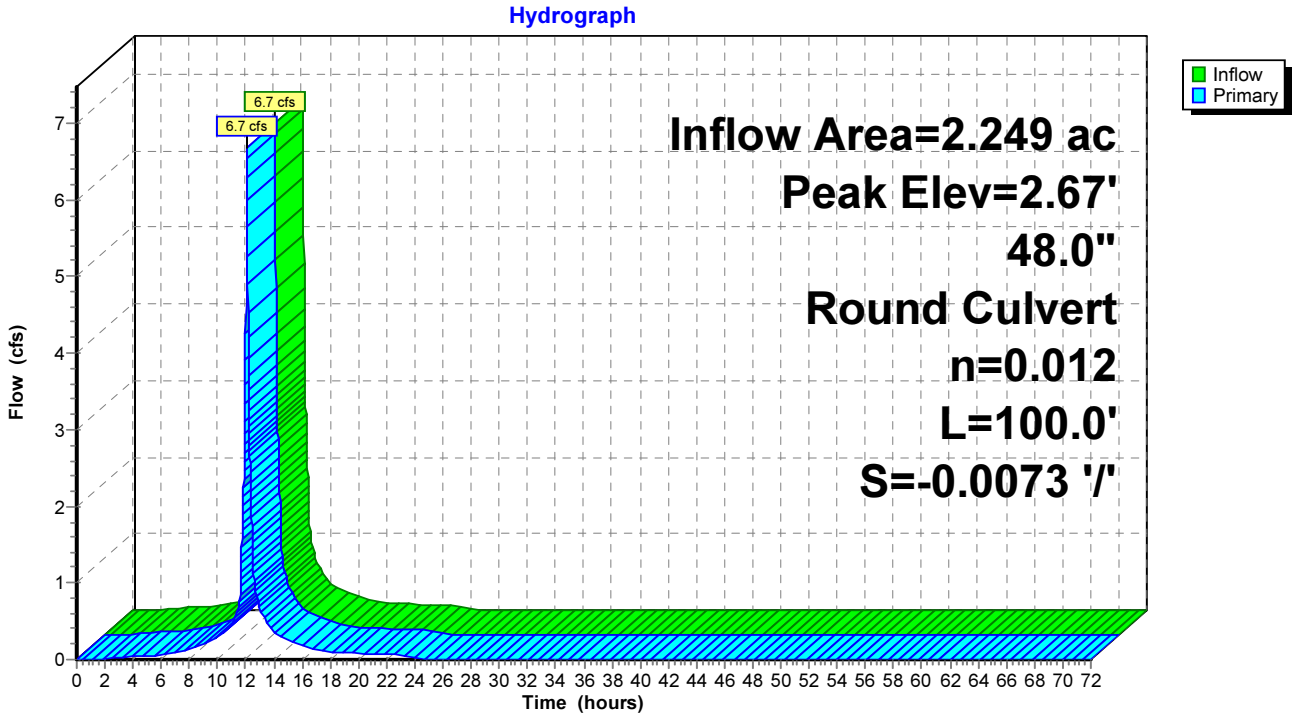
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 2.73" for 2-Year X event
Inflow = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af
Outflow = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af, Atten= 0%, Lag= 0.0 min
Primary = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.67' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=6.7 cfs @ 12.08 hrs HW=2.67' TW=2.46' (Dynamic Tailwater)
1=Culvert (Inlet Controls 6.7 cfs @ 2.73 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.46' (Flood elevation advised)

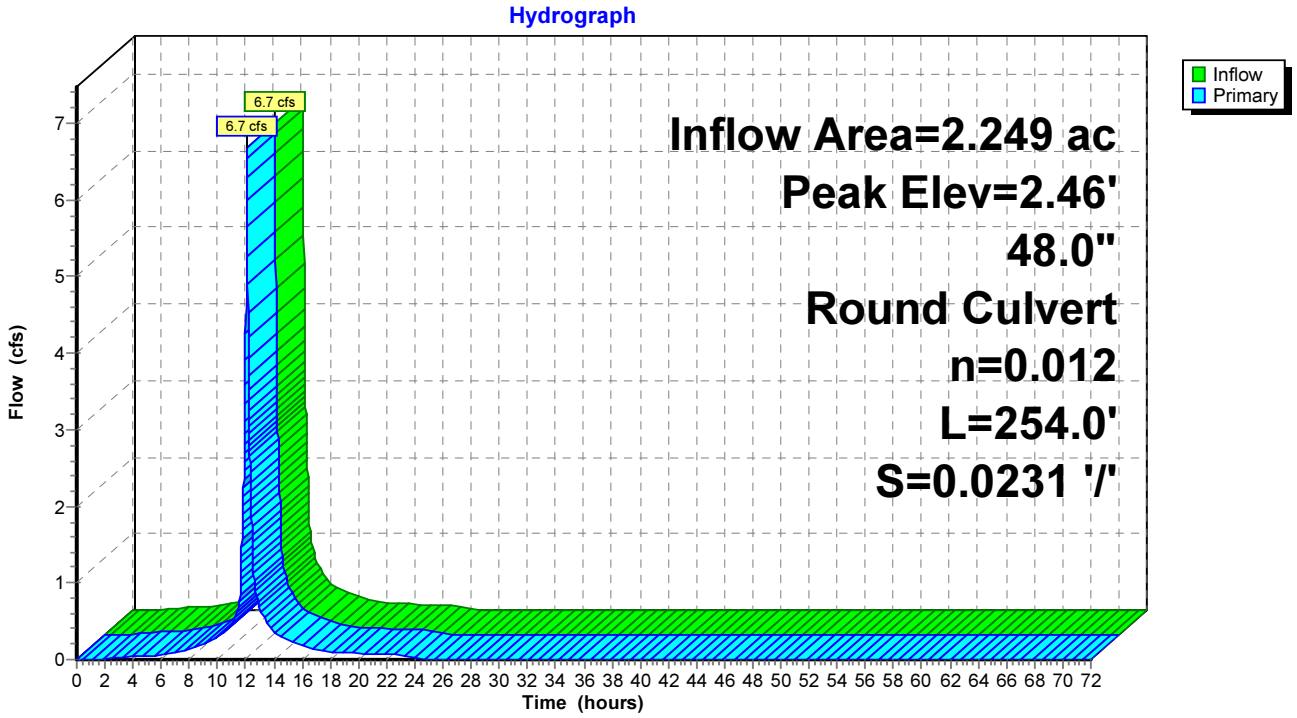
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 2.73" for 2-Year X event
Inflow = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af
Outflow = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af, Atten= 0%, Lag= 0.0 min
Primary = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.46' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=6.7 cfs @ 12.08 hrs HW=2.46' (Free Discharge)
1=Culvert (Inlet Controls 6.7 cfs @ 3.78 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 7.95' (Flood elevation advised)

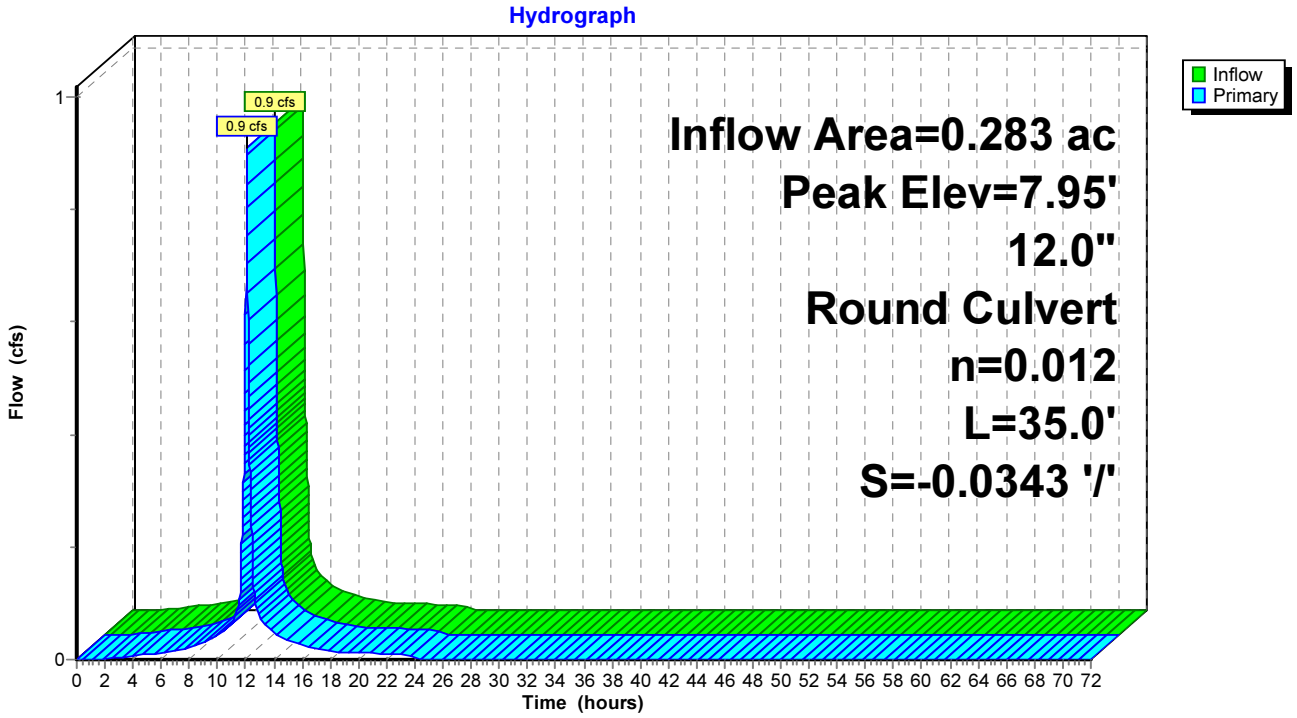
Inflow Area = 0.283 ac,100.00% Impervious, Inflow Depth = 2.97" for 2-Year X event
Inflow = 0.9 cfs @ 12.07 hrs, Volume= 0.070 af
Outflow = 0.9 cfs @ 12.07 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.07 hrs, Volume= 0.070 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.95' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=7.95' TW=3.27' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.9 cfs @ 2.80 fps)

Pond 11P: CB 3523



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 6.63' (Flood elevation advised)

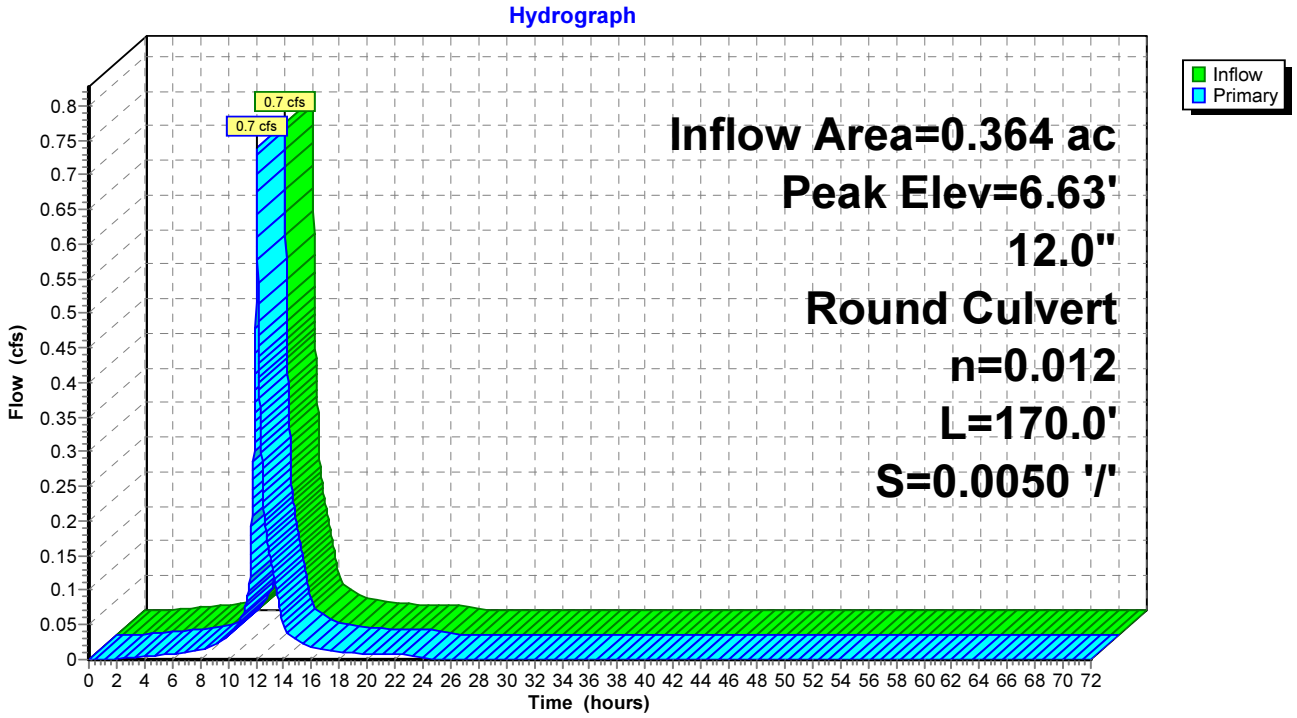
Inflow Area = 0.364 ac,100.00% Impervious, Inflow Depth = 2.25" for 2-Year X event
Inflow = 0.7 cfs @ 12.07 hrs, Volume= 0.068 af
Outflow = 0.7 cfs @ 12.07 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.07 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.63' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.7 cfs @ 12.07 hrs HW=6.63' TW=5.98' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.7 cfs @ 2.48 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 5.98' (Flood elevation advised)

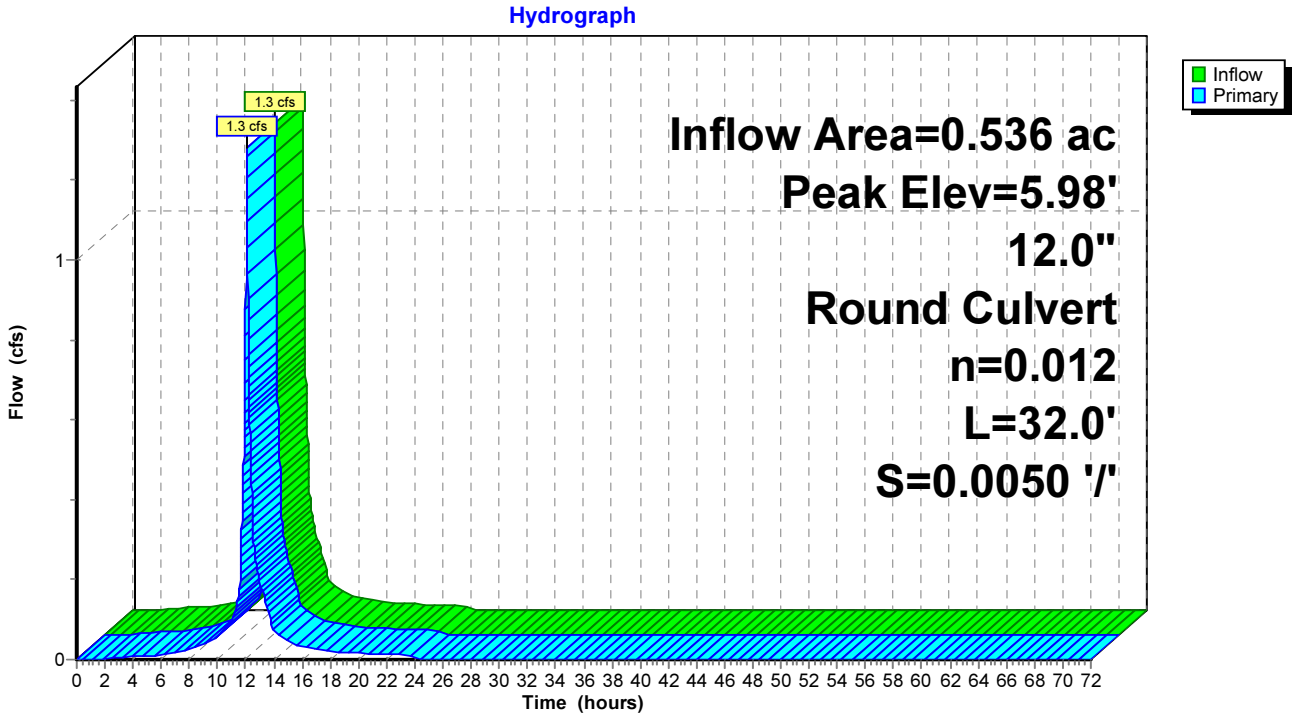
Inflow Area = 0.536 ac, 95.46% Impervious, Inflow Depth = 2.44" for 2-Year X event
Inflow = 1.3 cfs @ 12.07 hrs, Volume= 0.109 af
Outflow = 1.3 cfs @ 12.07 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min
Primary = 1.3 cfs @ 12.07 hrs, Volume= 0.109 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.98' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.3 cfs @ 12.07 hrs HW=5.98' TW=5.74' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.3 cfs @ 2.84 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 6.03' (Flood elevation advised)

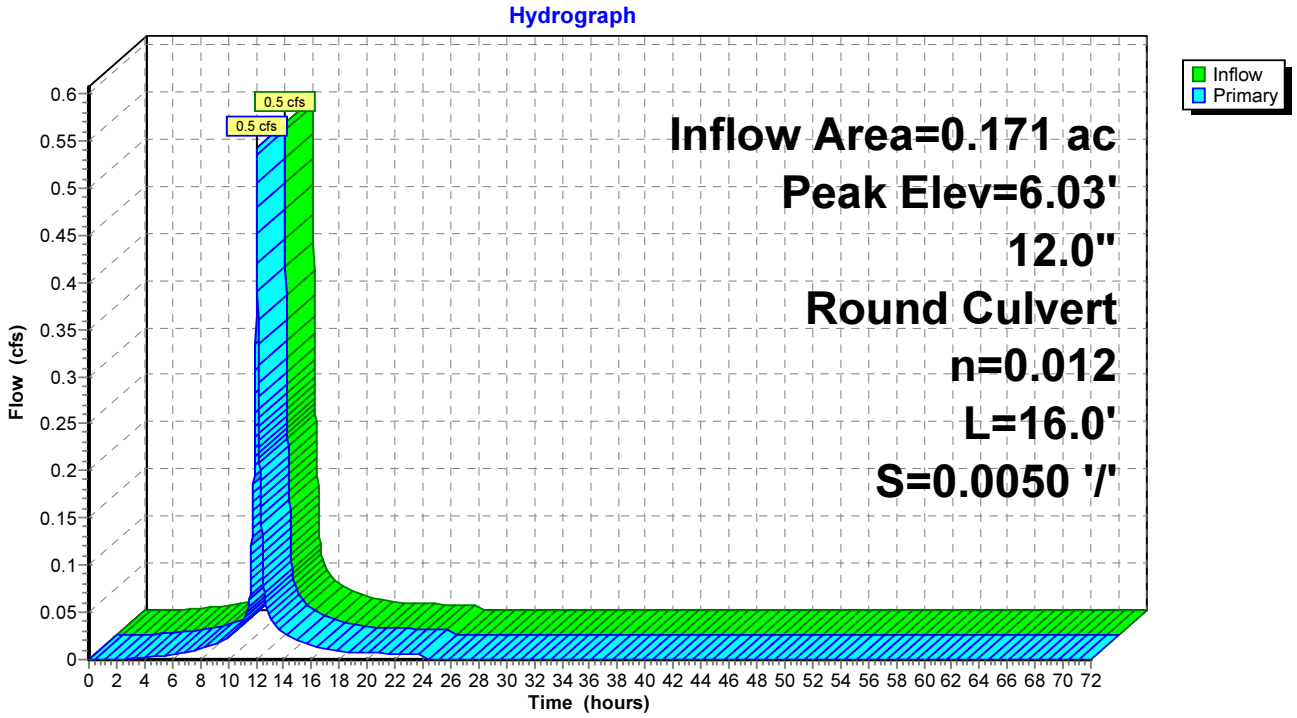
Inflow Area = 0.171 ac, 85.80% Impervious, Inflow Depth = 2.86" for 2-Year X event
Inflow = 0.5 cfs @ 12.07 hrs, Volume= 0.041 af
Outflow = 0.5 cfs @ 12.07 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
Primary = 0.5 cfs @ 12.07 hrs, Volume= 0.041 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.03' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.5 cfs @ 12.07 hrs HW=6.02' TW=5.98' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.5 cfs @ 1.26 fps)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 5.74' (Flood elevation advised)

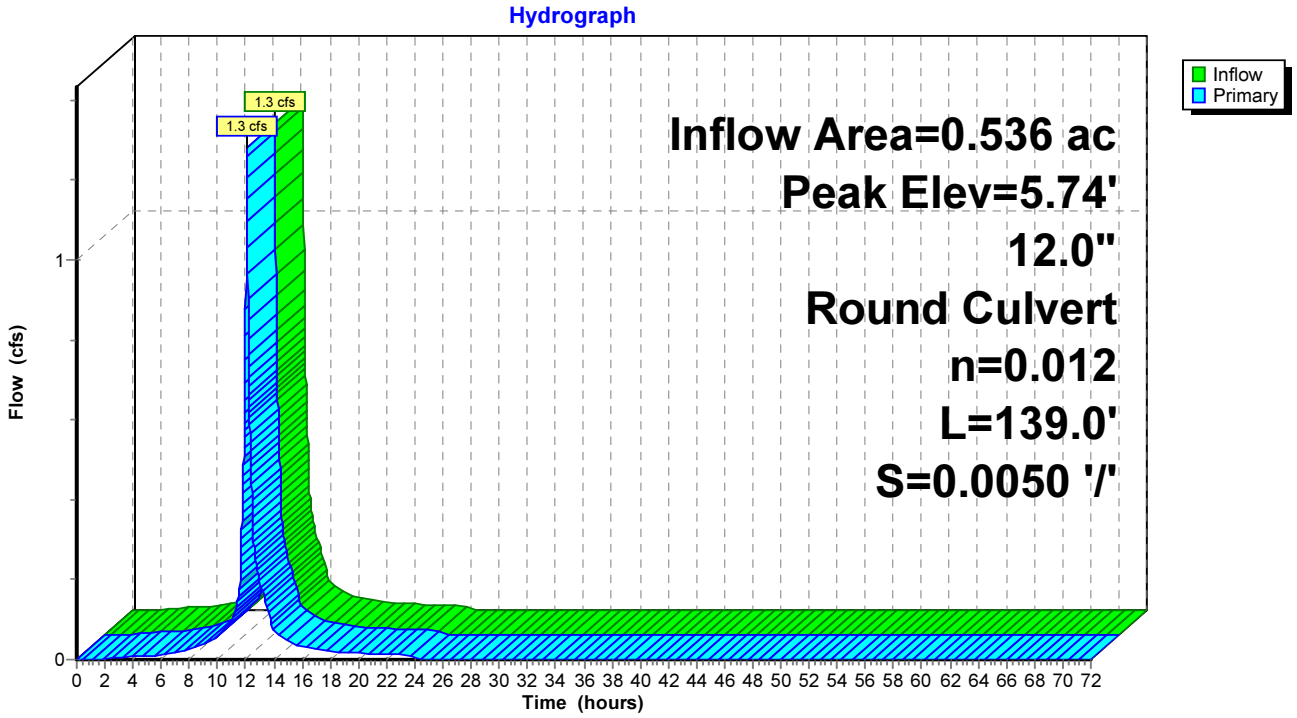
Inflow Area =	0.536 ac,	95.46% Impervious,	Inflow Depth =	2.44"	for 2-Year X event
Inflow =	1.3 cfs @	12.07 hrs,	Volume=	0.109 af	
Outflow =	1.3 cfs @	12.07 hrs,	Volume=	0.109 af,	Atten= 0%, Lag= 0.0 min
Primary =	1.3 cfs @	12.07 hrs,	Volume=	0.109 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.74' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.3 cfs @ 12.07 hrs HW=5.74' TW=4.80' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.3 cfs @ 3.33 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 4.80' (Flood elevation advised)

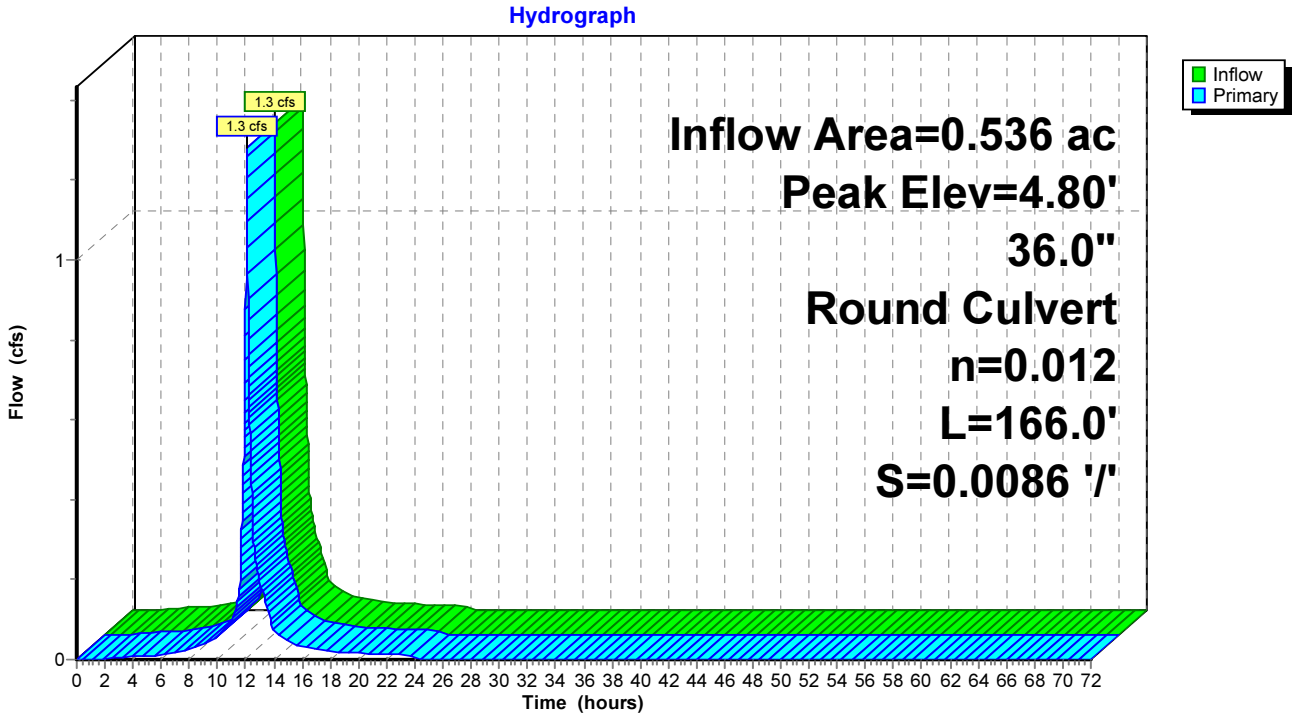
Inflow Area = 0.536 ac, 95.46% Impervious, Inflow Depth = 2.44" for 2-Year X event
Inflow = 1.3 cfs @ 12.07 hrs, Volume= 0.109 af
Outflow = 1.3 cfs @ 12.07 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min
Primary = 1.3 cfs @ 12.07 hrs, Volume= 0.109 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.80' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=1.3 cfs @ 12.07 hrs HW=4.80' TW=4.01' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.3 cfs @ 2.81 fps)

Pond 17P: DMH 3545



Summary for Pond 29P: DMH 3

[57] Hint: Peaked at 3.11' (Flood elevation advised)

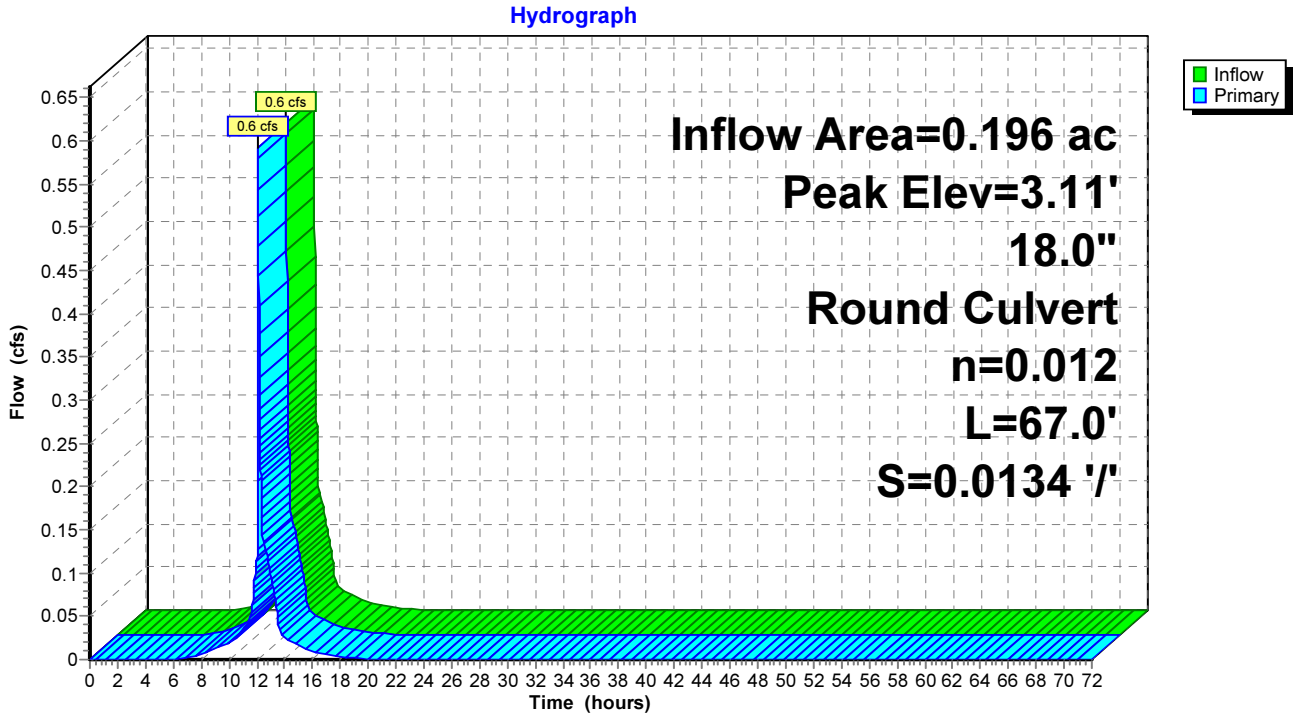
Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 2.01" for 2-Year X event
Inflow = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af
Outflow = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min
Primary = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.11' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.53'	**18.0" Round Culvert** L= 67.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 2.53' / 1.63' S= 0.0134 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=0.6 cfs @ 12.09 hrs HW=3.11' TW=3.01' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.6 cfs @ 1.40 fps)

Pond 29P: DMH 3



Summary for Pond 35P: CB 3

[57] Hint: Peaked at 7.23' (Flood elevation advised)

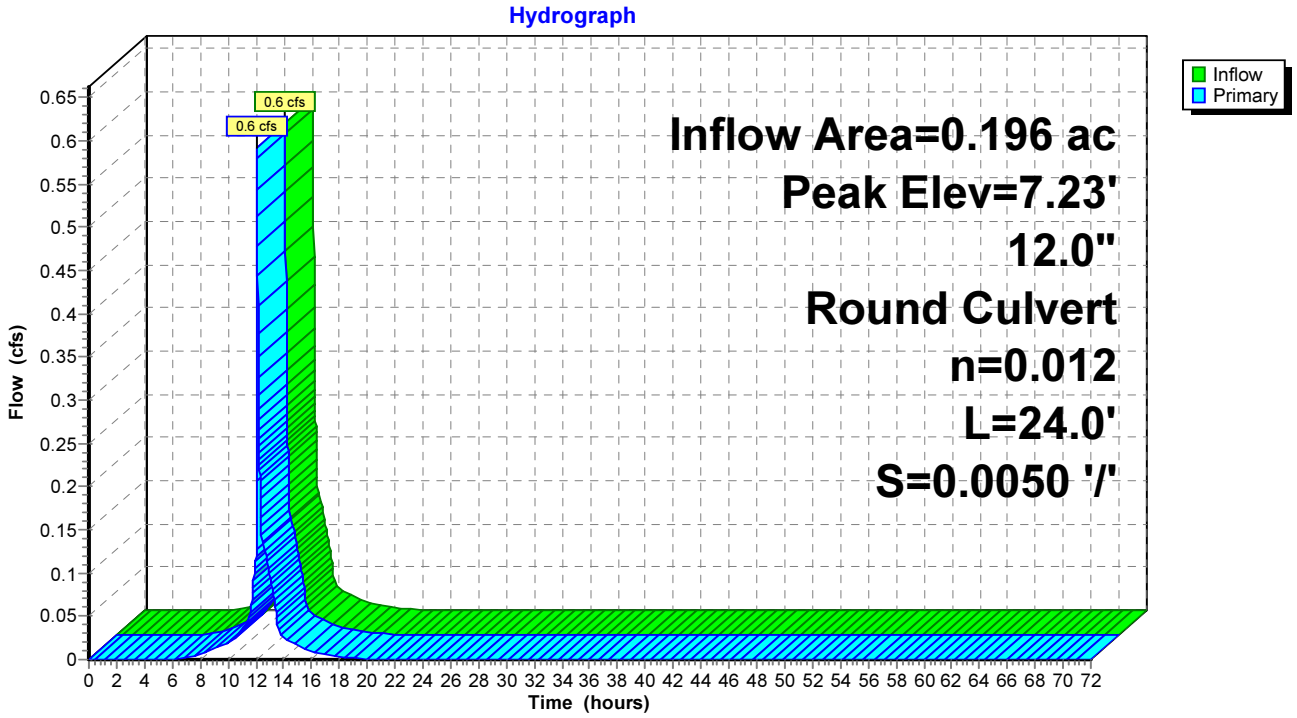
Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 2.01" for 2-Year X event
Inflow = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af
Outflow = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af, Atten= 0%, Lag= 0.0 min
Primary = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.23' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.77'	**12.0" Round Culvert** L= 24.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 6.77' / 6.65' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.6 cfs @ 12.09 hrs HW=7.22' TW=3.11' (Dynamic Tailwater)
1=Culvert (Barrel Controls 0.6 cfs @ 2.49 fps)

Pond 35P: CB 3



Summary for Pond 36P: CB 3526

[57] Hint: Peaked at 6.77' (Flood elevation advised)

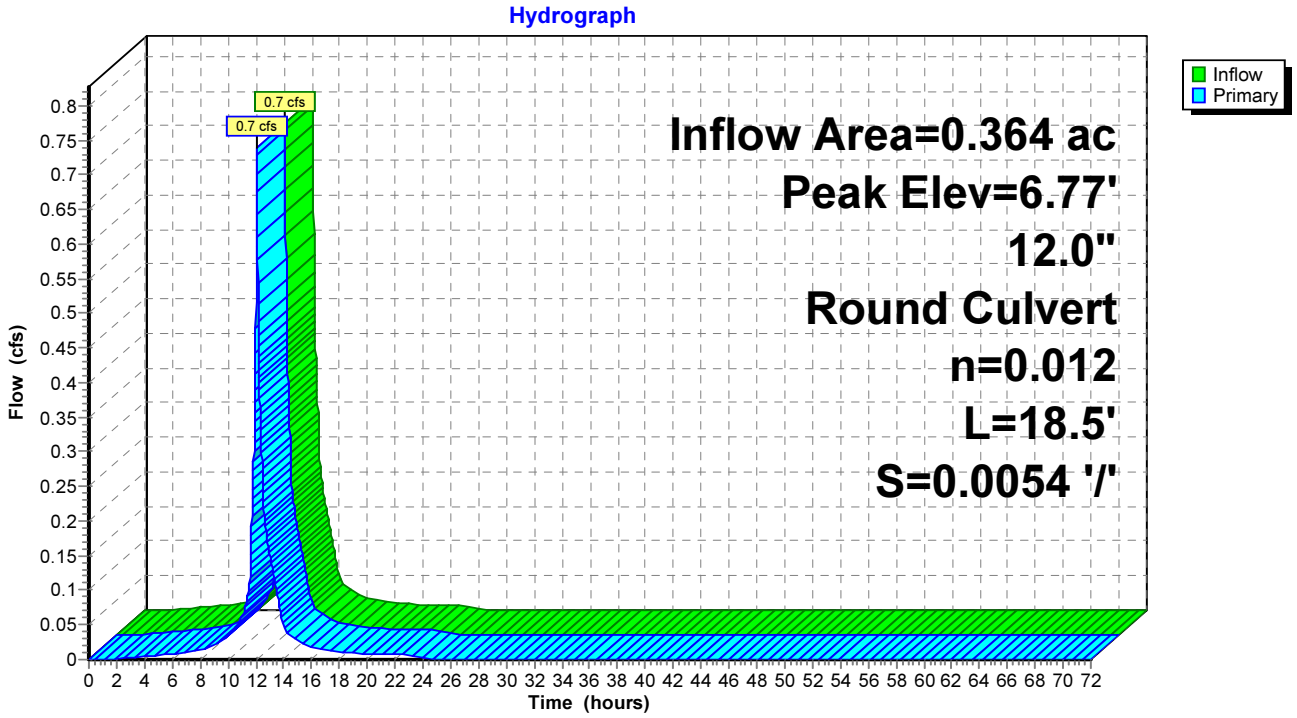
Inflow Area = 0.364 ac,100.00% Impervious, Inflow Depth = 2.25" for 2-Year X event
Inflow = 0.7 cfs @ 12.07 hrs, Volume= 0.068 af
Outflow = 0.7 cfs @ 12.07 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.07 hrs, Volume= 0.068 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.77' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.19'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.19' / 6.09' S= 0.0054 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.7 cfs @ 12.07 hrs HW=6.77' TW=6.63' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.7 cfs @ 2.26 fps)

Pond 36P: CB 3526



Summary for Pond 37P: 94 Silva Cells with OCS #2

Inflow Area = 0.169 ac,100.00% Impervious, Inflow Depth = 2.97" for 2-Year X event
Inflow = 0.5 cfs @ 12.07 hrs, Volume= 0.042 af
Outflow = 0.2 cfs @ 12.35 hrs, Volume= 0.042 af, Atten= 69%, Lag= 17.1 min
Discarded = 0.0 cfs @ 11.91 hrs, Volume= 0.022 af
Primary = 0.1 cfs @ 12.35 hrs, Volume= 0.020 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 11.35' @ 12.35 hrs Surf.Area= 774 sf Storage= 367 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 13.1 min (768.6 - 755.5)

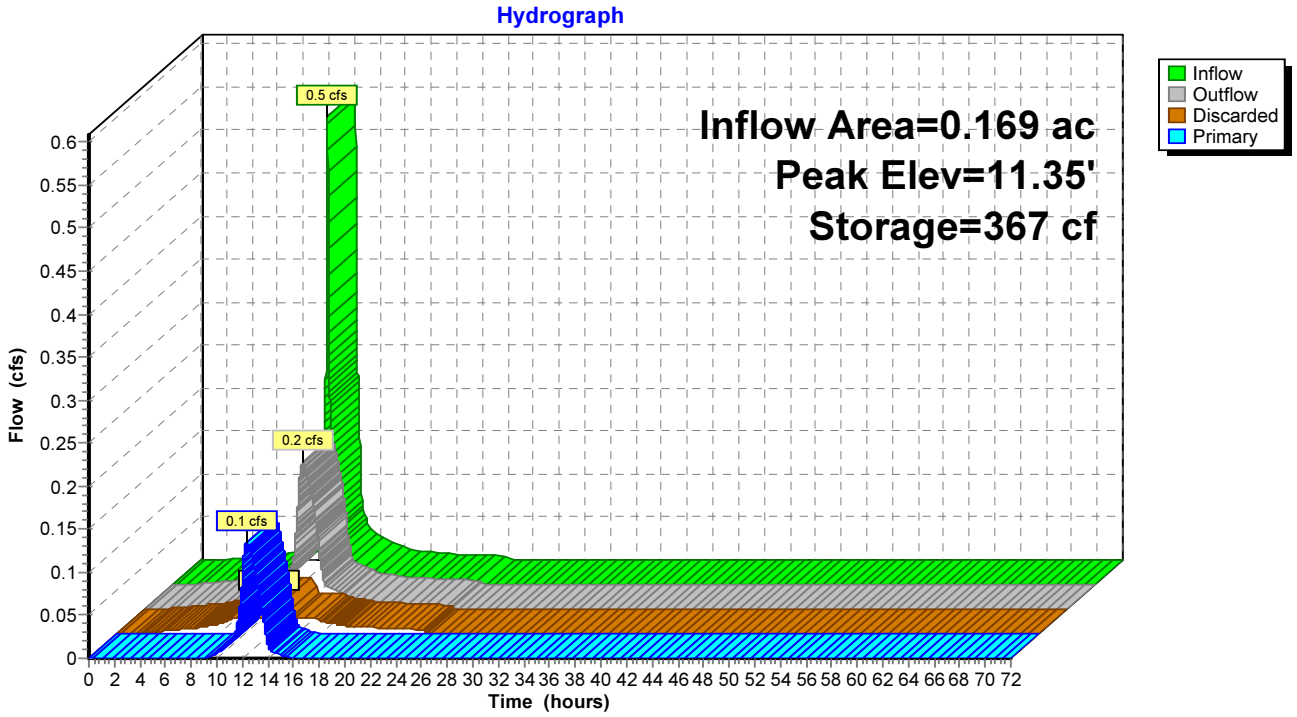
Volume	Invert	Avail.Storage	Storage Description
#1	8.40'	132 cf	**DeepRoot Silva Cell 20% x3** x 23 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#2	8.40'	137 cf	**DeepRoot Silva Cell 20% x3** x 24 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#3	8.90'	137 cf	**DeepRoot Silva Cell 20% x3** x 24 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#4	9.40'	132 cf	**DeepRoot Silva Cell 20% x3** x 23 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
		538 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	8.30'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 8.30' / 8.26' S= 0.0044 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Primary	8.40'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Device 1	11.40'	**5.0' 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
#4	Discarded	8.40'	**2.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.91 hrs HW=9.42' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.1 cfs @ 12.35 hrs HW=11.35' TW=6.55' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.0 cfs of 7.5 cfs potential flow)
│└**3=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)
└**2=Orifice/Grate** (Orifice Controls 0.1 cfs @ 8.21 fps)

Pond 37P: 94 Silva Cells with OCS #2



Summary for Pond 38P: 73 Silva Cells with OCS #3

Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 2.97" for 2-Year X event
Inflow = 0.6 cfs @ 12.07 hrs, Volume= 0.048 af
Outflow = 0.6 cfs @ 12.09 hrs, Volume= 0.048 af, Atten= 2%, Lag= 1.0 min
Discarded = 0.0 cfs @ 11.88 hrs, Volume= 0.016 af
Primary = 0.6 cfs @ 12.09 hrs, Volume= 0.033 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 10.10' @ 12.09 hrs Surf.Area= 601 sf Storage= 264 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 8.5 min (763.9 - 755.5)

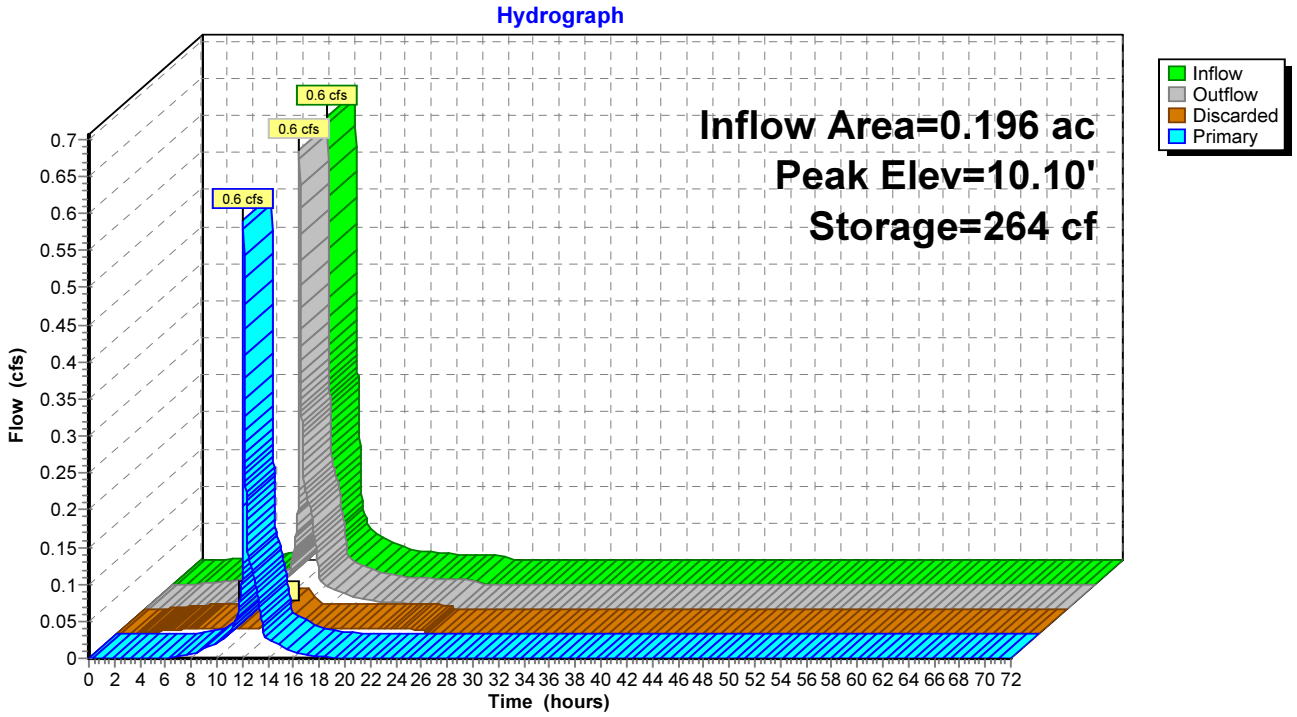
Volume	Invert	Avail.Storage	Storage Description
#1	7.00'	120 cf	**DeepRoot Silva Cell 20% x3** x 21 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#2	7.50'	149 cf	**DeepRoot Silva Cell 20% x3** x 26 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#3	8.50'	149 cf	**DeepRoot Silva Cell 20% x3** x 26 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
		418 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	6.90'	**12.0" Round Culvert** L= 7.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.90' / 6.87' S= 0.0043 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Primary	7.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Device 1	10.00'	**5.0' 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
#4	Discarded	7.00'	**2.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.88 hrs HW=8.52' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.6 cfs @ 12.09 hrs HW=10.10' TW=7.22' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.5 cfs of 7.8 cfs potential flow)
│└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.5 cfs @ 0.89 fps)
└**2=Orifice/Grate** (Orifice Controls 0.1 cfs @ 8.17 fps)

Pond 38P: 73 Silva Cells with OCS #3



Summary for Pond CB1:

[57] Hint: Peaked at 6.01' (Flood elevation advised)

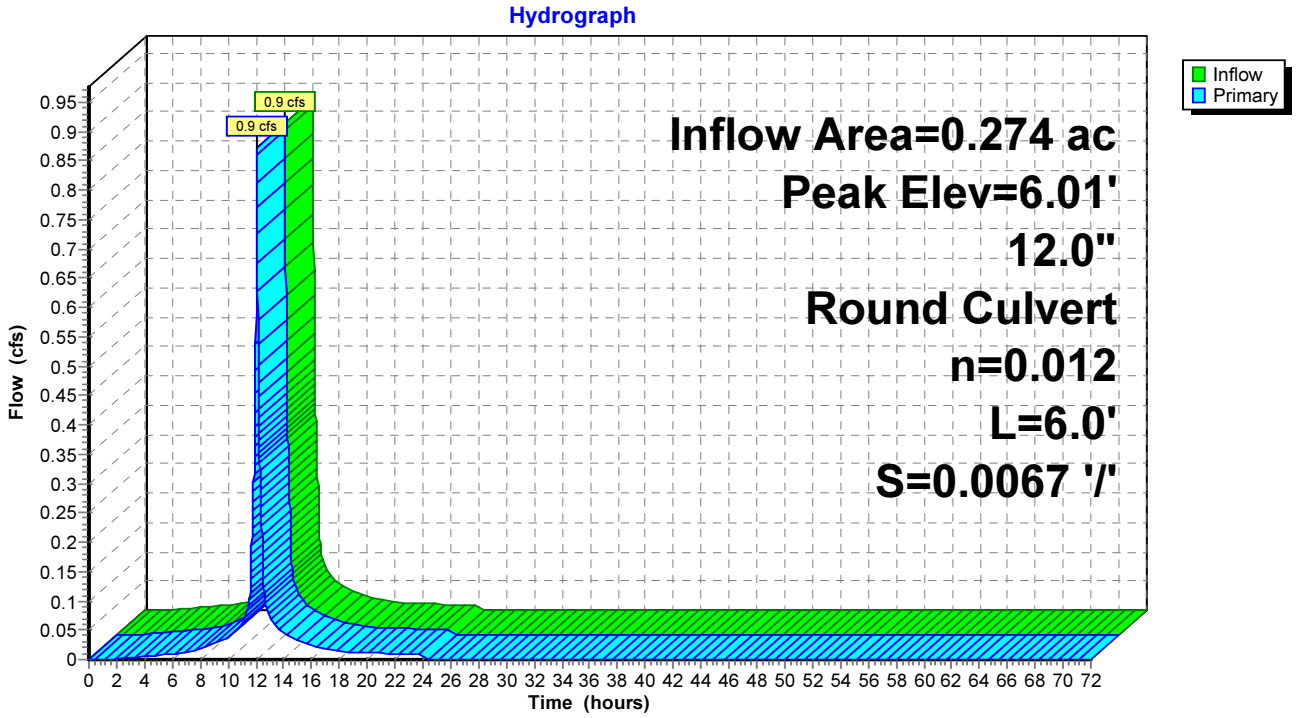
Inflow Area = 0.274 ac, 87.53% Impervious, Inflow Depth = 2.90" for 2-Year X event
Inflow = 0.9 cfs @ 12.07 hrs, Volume= 0.066 af
Outflow = 0.9 cfs @ 12.07 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.07 hrs, Volume= 0.066 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.01' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.33'	**12.0" Round Culvert** L= 6.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.33' / 5.29' S= 0.0067 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=6.01' TW=5.91' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.9 cfs @ 2.17 fps)

Pond CB1:



Summary for Pond CB2:

[57] Hint: Peaked at 5.95' (Flood elevation advised)

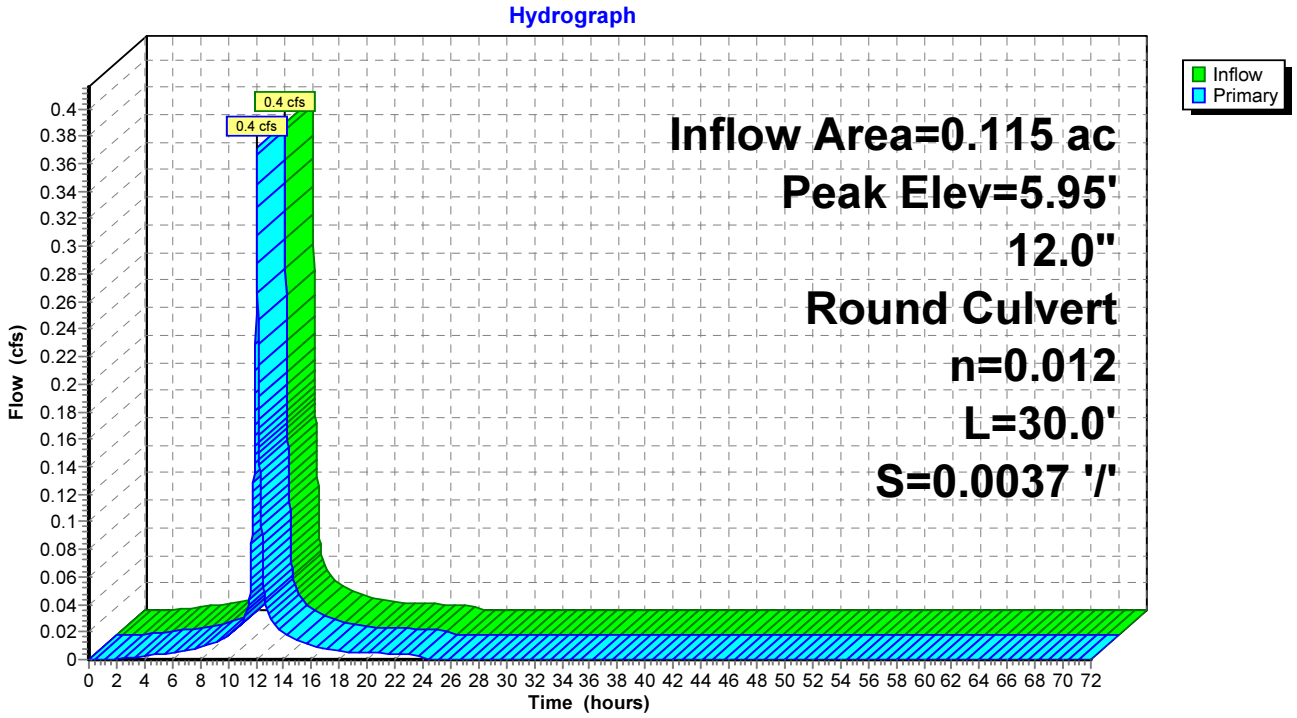
Inflow Area = 0.115 ac, 96.72% Impervious, Inflow Depth = 2.97" for 2-Year X event
Inflow = 0.4 cfs @ 12.07 hrs, Volume= 0.029 af
Outflow = 0.4 cfs @ 12.07 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min
Primary = 0.4 cfs @ 12.07 hrs, Volume= 0.029 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.95' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.40'	**12.0" Round Culvert** L= 30.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.40' / 5.29' S= 0.0037 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.4 cfs @ 12.07 hrs HW=5.95' TW=5.91' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.4 cfs @ 1.19 fps)

Pond CB2:



Summary for Pond DMH1:

[57] Hint: Peaked at 5.55' (Flood elevation advised)

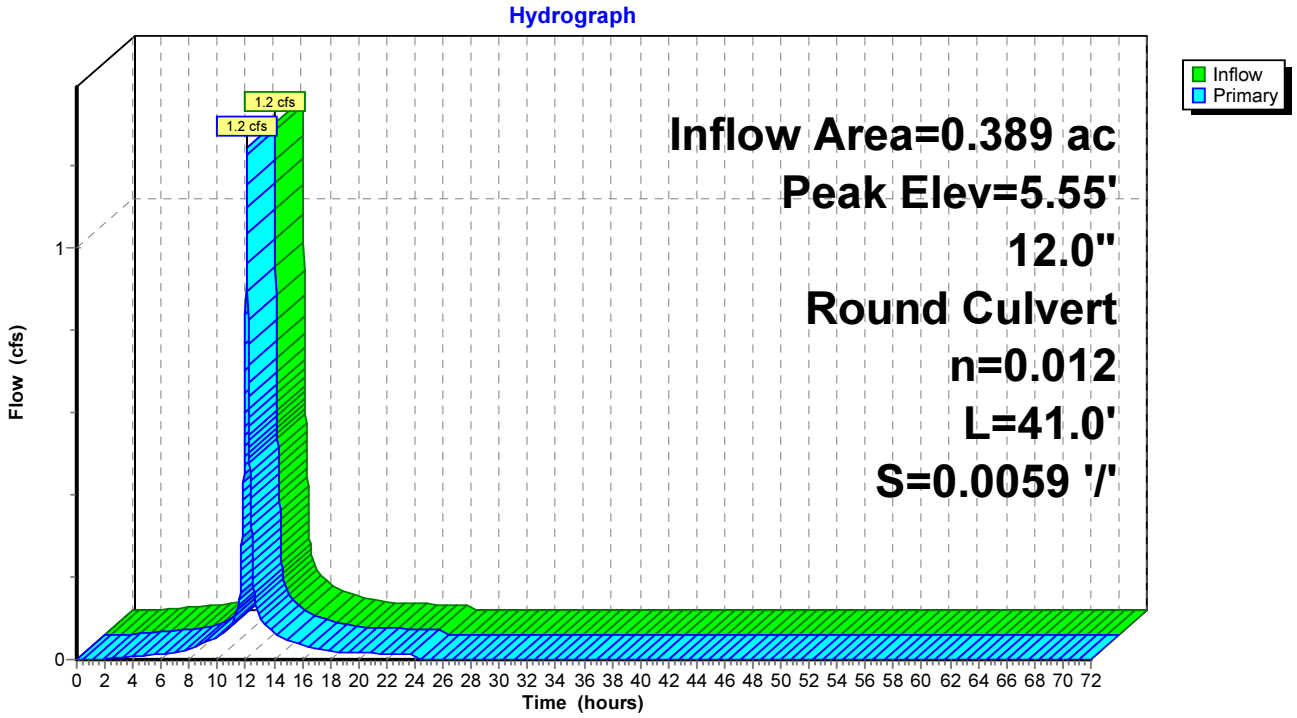
Inflow Area = 0.389 ac, 90.26% Impervious, Inflow Depth = 2.92" for 2-Year X event
Inflow = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af
Outflow = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.55' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.91'	**12.0" Round Culvert** L= 41.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.91' / 4.67' S= 0.0059 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.2 cfs @ 12.07 hrs HW=5.55' TW=3.74' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 1.2 cfs @ 3.32 fps)

Pond DMH1:



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.01' (Flood elevation advised)

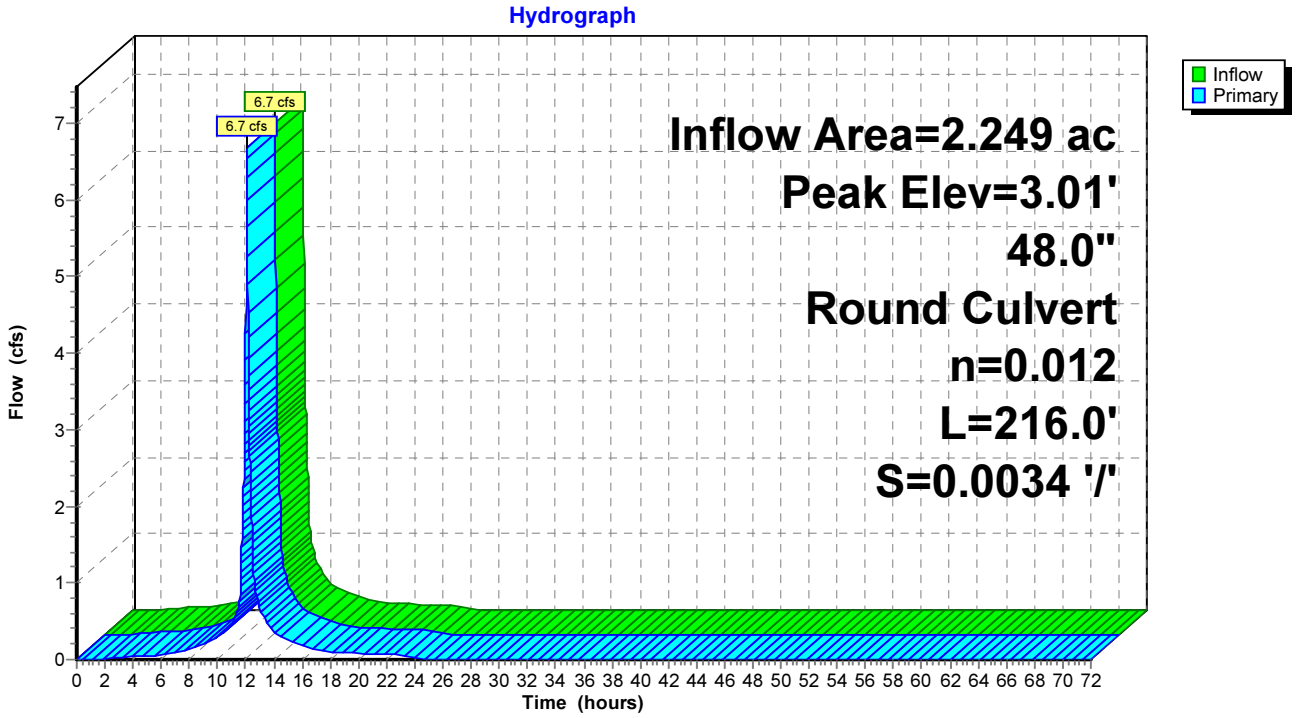
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 2.73" for 2-Year X event
Inflow = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af
Outflow = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af, Atten= 0%, Lag= 0.0 min
Primary = 6.7 cfs @ 12.08 hrs, Volume= 0.511 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.01' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=6.6 cfs @ 12.08 hrs HW=3.01' TW=2.67' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 6.6 cfs @ 2.69 fps)

Pond DP1: DMH 3540



Summary for Pond OCS #1:

[57] Hint: Peaked at 5.91' (Flood elevation advised)

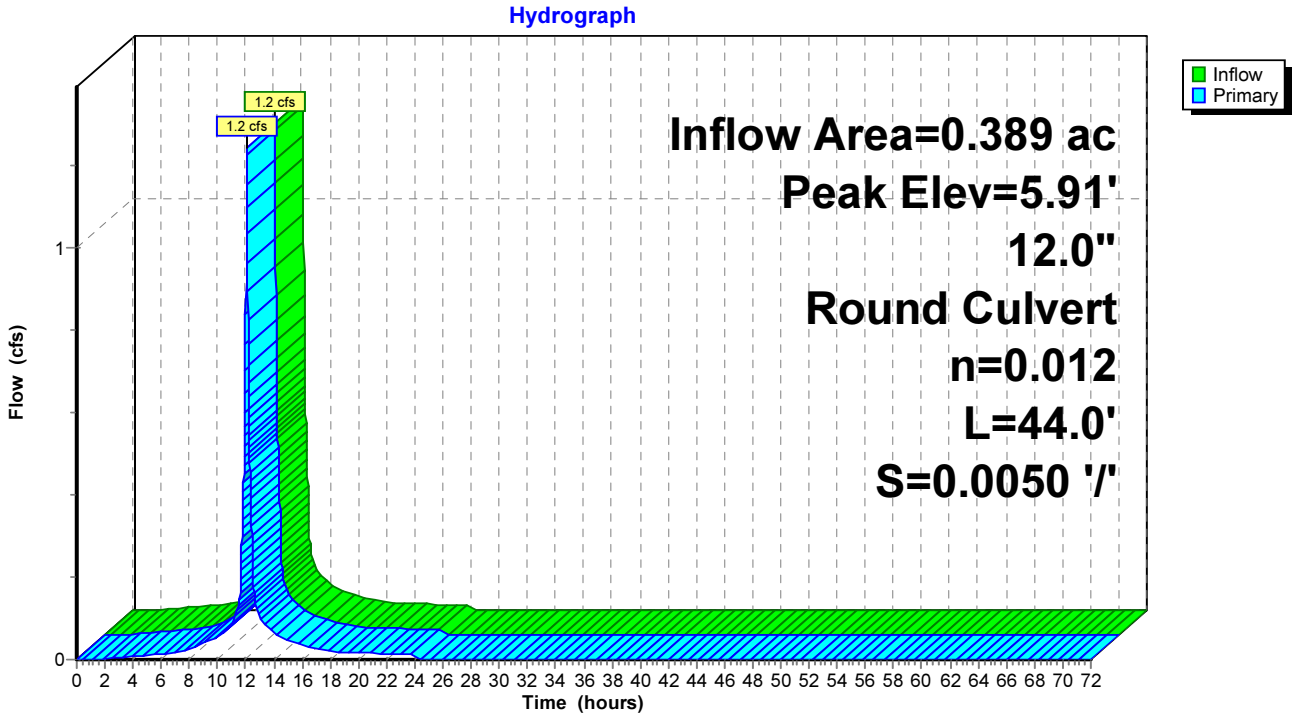
Inflow Area = 0.389 ac, 90.26% Impervious, Inflow Depth = 2.92" for 2-Year X event
Inflow = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af
Outflow = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.07 hrs, Volume= 0.095 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.91' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.23'	**12.0" Round Culvert** L= 44.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.23' / 5.01' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.2 cfs @ 12.07 hrs HW=5.91' TW=5.55' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 1.2 cfs @ 3.11 fps)

Pond OCS #1:



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=1.9 cfs 0.148 af

Subcatchment PS2: Runoff Area=7,730 sf 80.78% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=0.9 cfs 0.067 af

Subcatchment PS2a: Roof Runoff Area=2,509 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.3 cfs 0.022 af

Subcatchment PS2b: Runoff Area=5,028 sf 96.72% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.6 cfs 0.044 af

Subcatchment PS3: Roof Runoff Area=8,542 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=1.0 cfs 0.076 af

Subcatchment PS3a: Roof Runoff Area=4,848 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.5 cfs 0.043 af

Subcatchment PS4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=0.5 cfs 0.037 af

Subcatchment PS5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=2.3 cfs 0.173 af

Subcatchment PS6: Runoff Area=12,323 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=1.4 cfs 0.109 af

Subcatchment PS7: Runoff Area=8,519 sf 100.00% Impervious Runoff Depth=4.62"
Tc=5.0 min CN=98 Runoff=1.0 cfs 0.075 af

Subcatchment PS8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=4.51"
Tc=5.0 min CN=97 Runoff=0.8 cfs 0.064 af

Pond 1P: CB 3528 Peak Elev=5.75' Inflow=4.1 cfs 0.321 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=4.1 cfs 0.321 af

Pond 5P: DMH 3543 Peak Elev=4.43' Inflow=6.7 cfs 0.498 af
36.0" Round Culvert n=0.012 L=131.0' S=0.0018 '/' Outflow=6.7 cfs 0.498 af

Pond 6P: DMH 3542 Peak Elev=3.92' Inflow=8.6 cfs 0.647 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=8.6 cfs 0.647 af

Pond 7P: DMH 3541 Peak Elev=3.69' Inflow=10.0 cfs 0.756 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=10.0 cfs 0.756 af

Pond 8P: DMH 1A Peak Elev=4.18' Inflow=8.6 cfs 0.647 af
36.0" Round Culvert n=0.012 L=29.0' S=0.0017 '/' Outflow=8.6 cfs 0.647 af

Pond 9P: DMH 5438 Peak Elev=2.96' Inflow=11.0 cfs 0.813 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=11.0 cfs 0.813 af

Pond 10P: DMH 5217 Peak Elev=2.70' Inflow=11.0 cfs 0.813 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=11.0 cfs 0.813 af

Pond 11P: CB 3523 Peak Elev=8.07' Inflow=1.4 cfs 0.109 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=1.4 cfs 0.109 af

Pond 13P: DMH 12303 Peak Elev=7.06' Inflow=1.7 cfs 0.113 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=1.7 cfs 0.113 af

Pond 14P: DMH 12631 Peak Elev=6.47' Inflow=2.6 cfs 0.177 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=2.6 cfs 0.177 af

Pond 15P: CB 8146 Peak Elev=6.49' Inflow=0.8 cfs 0.064 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=0.8 cfs 0.064 af

Pond 16P: DMH 12632 Peak Elev=6.13' Inflow=2.6 cfs 0.177 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=2.6 cfs 0.177 af

Pond 17P: DMH 3545 Peak Elev=5.05' Inflow=2.6 cfs 0.177 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=2.6 cfs 0.177 af

Pond 29P: DMH 3 Peak Elev=3.43' Inflow=0.9 cfs 0.057 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0134 '/' Outflow=0.9 cfs 0.057 af

Pond 35P: CB 3 Peak Elev=7.36' Inflow=0.9 cfs 0.057 af
12.0" Round Culvert n=0.012 L=24.0' S=0.0050 '/' Outflow=0.9 cfs 0.057 af

Pond 36P: CB 3526 Peak Elev=7.23' Inflow=1.7 cfs 0.113 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0054 '/' Outflow=1.7 cfs 0.113 af

Pond 37P: 94 Silva Cells with OCS #2 Peak Elev=11.53' Storage=393 cf Inflow=0.8 cfs 0.065 af
Discarded=0.0 cfs 0.028 af Primary=0.8 cfs 0.037 af Outflow=0.8 cfs 0.065 af

Pond 38P: 73 Silva Cells with OCS #3 Peak Elev=10.15' Storage=269 cf Inflow=1.0 cfs 0.076 af
Discarded=0.0 cfs 0.018 af Primary=0.9 cfs 0.057 af Outflow=1.0 cfs 0.076 af

Pond CB1: Peak Elev=6.24' Inflow=1.3 cfs 0.104 af
12.0" Round Culvert n=0.012 L=6.0' S=0.0067 '/' Outflow=1.3 cfs 0.104 af

Pond CB2: Peak Elev=6.17' Inflow=0.6 cfs 0.044 af
12.0" Round Culvert n=0.012 L=30.0' S=0.0037 '/' Outflow=0.6 cfs 0.044 af

Pond DMH1: Peak Elev=5.75' Inflow=1.9 cfs 0.148 af
12.0" Round Culvert n=0.012 L=41.0' S=0.0059 '/' Outflow=1.9 cfs 0.148 af

Pond DP1: DMH 3540 Peak Elev=3.37' Inflow=11.0 cfs 0.813 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=11.0 cfs 0.813 af

Pond OCS #1: Peak Elev=6.13' Inflow=1.9 cfs 0.148 af
12.0" Round Culvert n=0.012 L=44.0' S=0.0050 '/' Outflow=1.9 cfs 0.148 af

Total Runoff Area = 2.249 ac Runoff Volume = 0.859 af Average Runoff Depth = 4.58"
5.08% Pervious = 0.114 ac 94.92% Impervious = 2.135 ac

Summary for Subcatchment PS1:

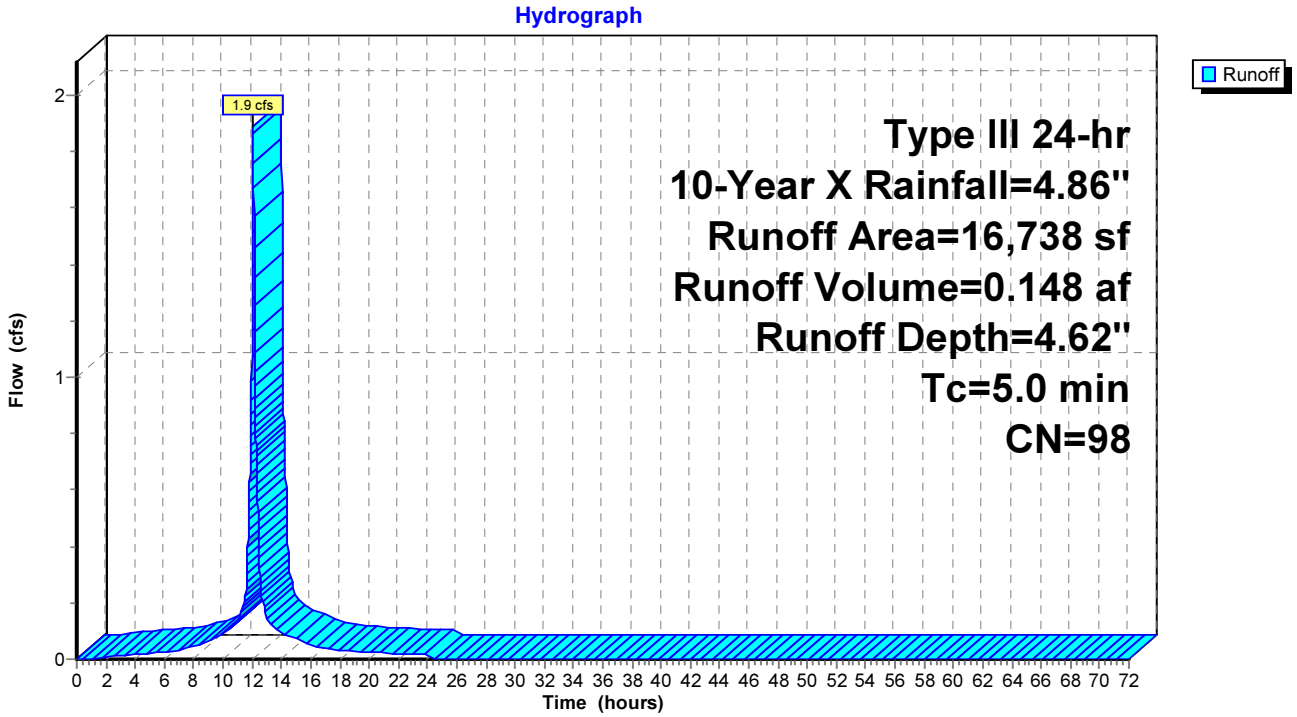
Runoff = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS1:



Summary for Subcatchment PS2:

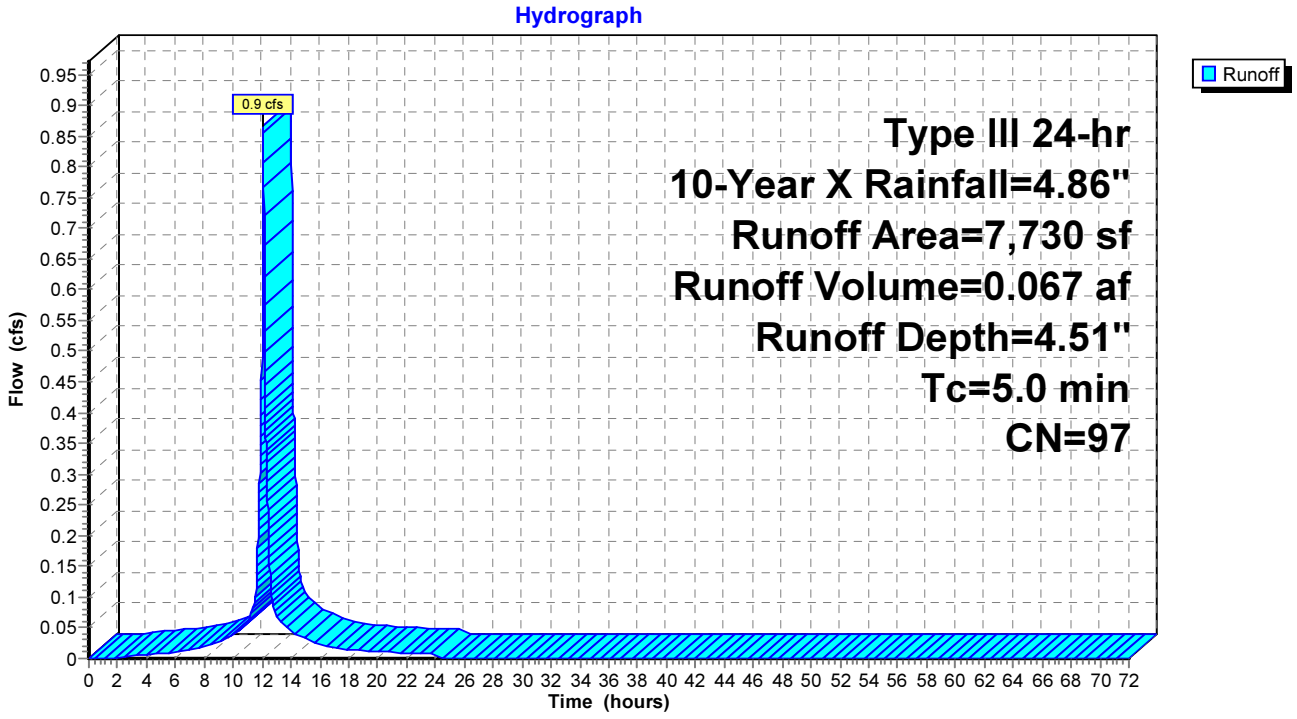
Runoff = 0.9 cfs @ 12.07 hrs, Volume= 0.067 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
6,244	98	Paved parking, HSG C
1,486	91	Fallow, bare soil, HSG C
7,730	97	Weighted Average
1,486		19.22% Pervious Area
6,244		80.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2:



Summary for Subcatchment PS2a: Roof

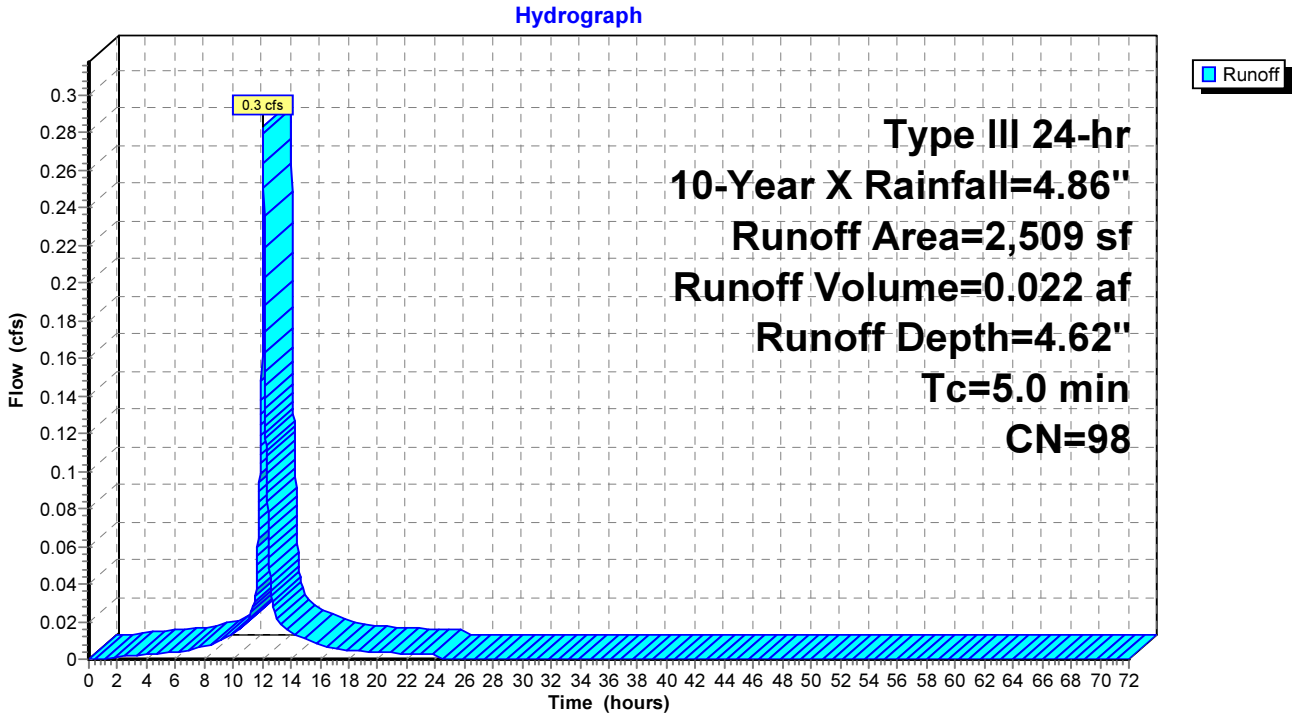
Runoff = 0.3 cfs @ 12.07 hrs, Volume= 0.022 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
2,509	98	Roofs, HSG C
2,509		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2a: Roof



Summary for Subcatchment PS2b:

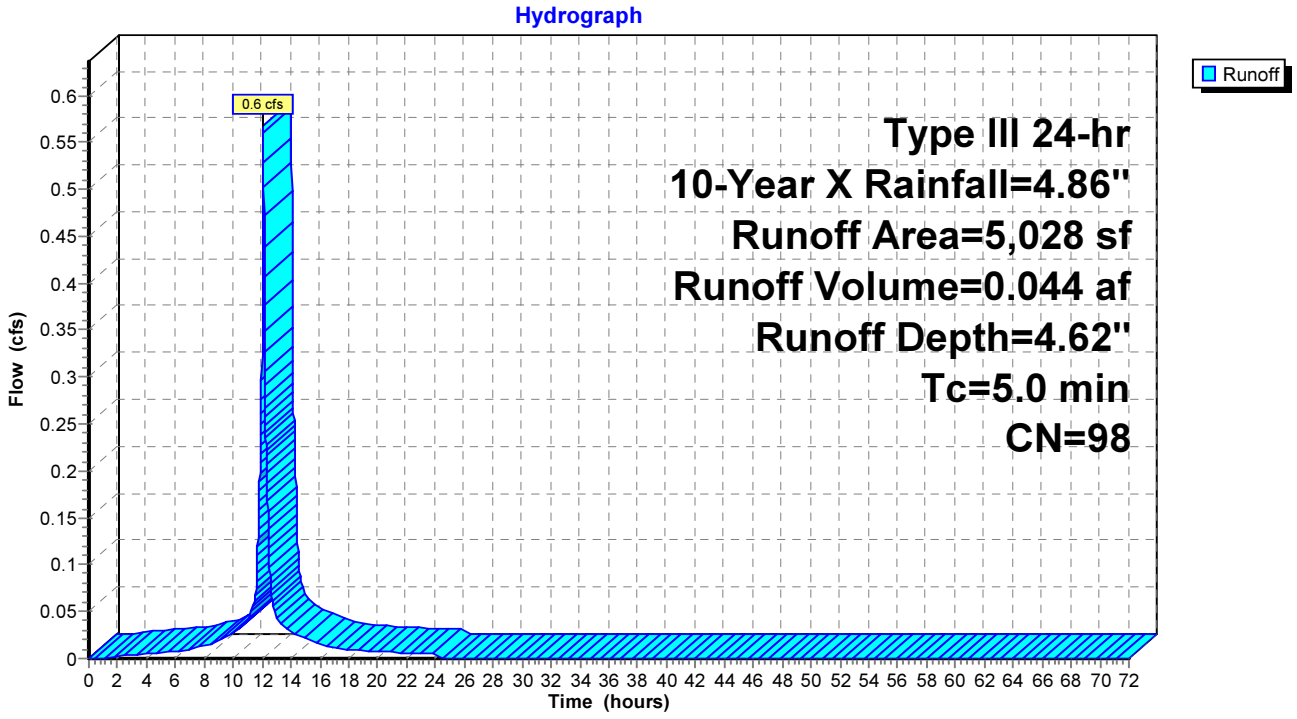
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.044 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
4,863	98	Paved parking, HSG C
165	91	Fallow, bare soil, HSG C
5,028	98	Weighted Average
165		3.28% Pervious Area
4,863		96.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2b:



Summary for Subcatchment PS3: Roof

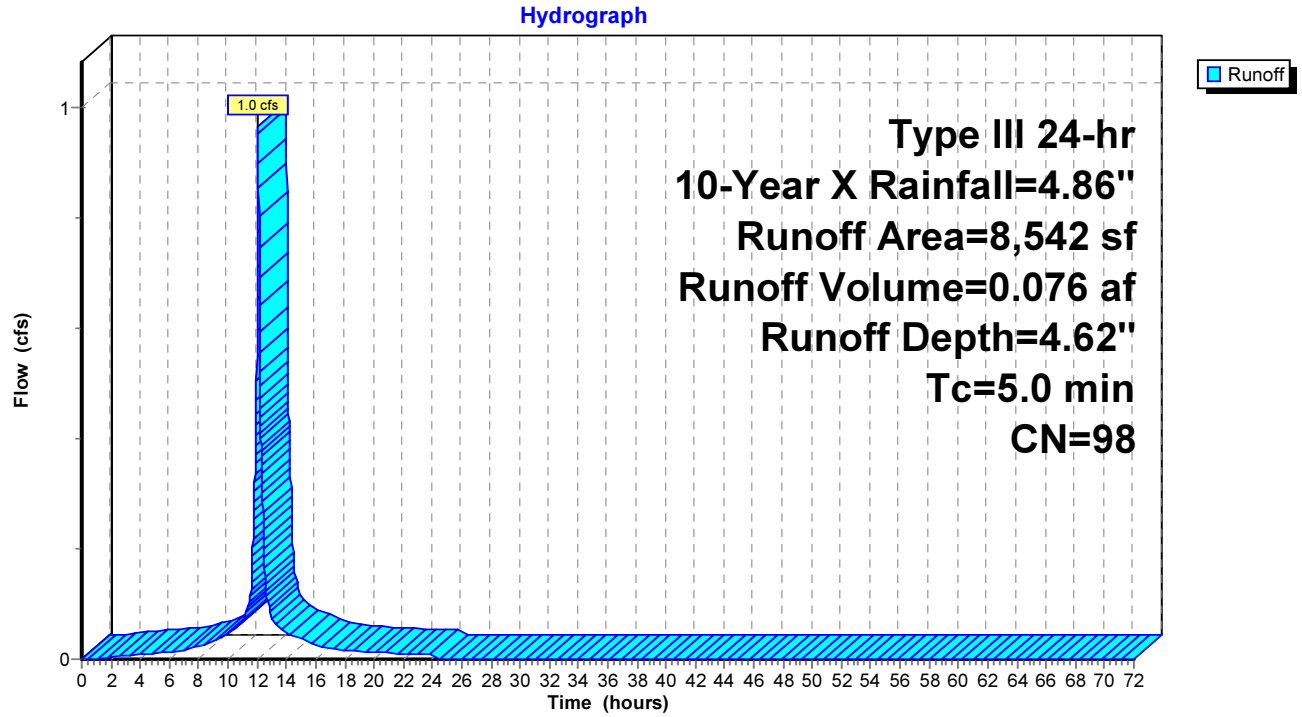
Runoff = 1.0 cfs @ 12.07 hrs, Volume= 0.076 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
8,542	98	Roofs, HSG C
8,542		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS3: Roof



Summary for Subcatchment PS3a: Roof

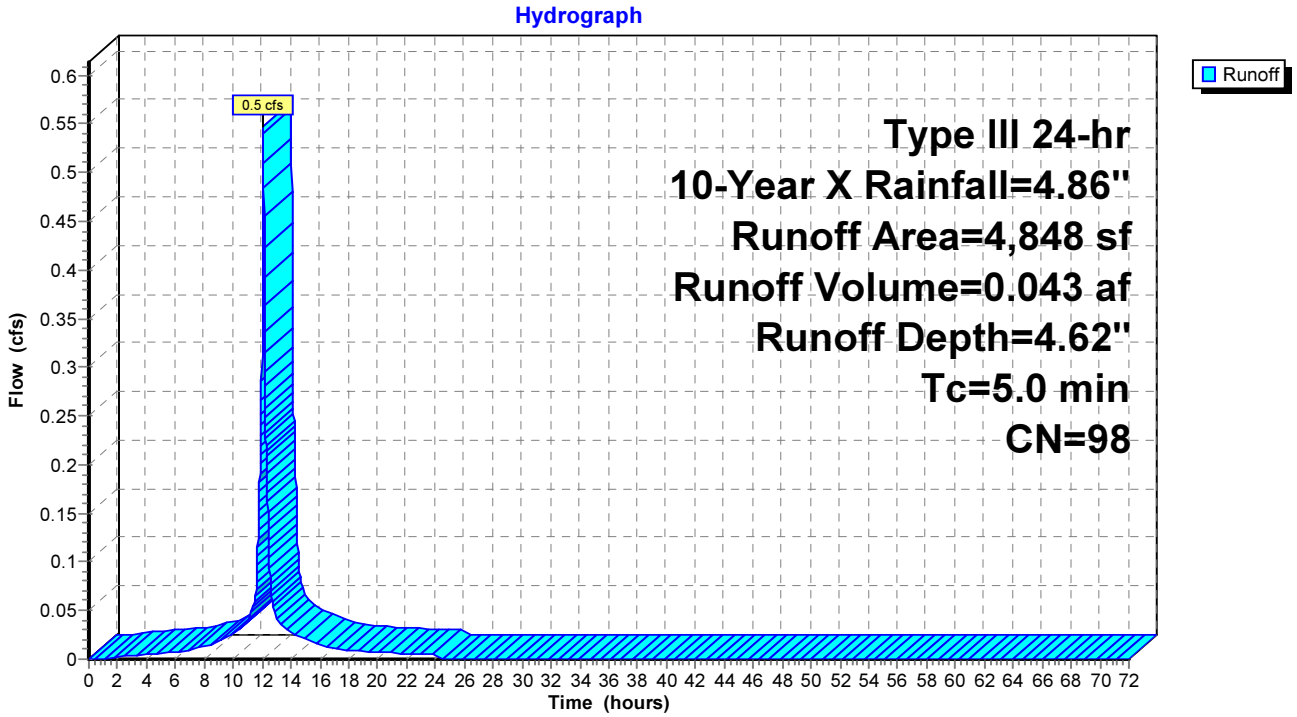
Runoff = 0.5 cfs @ 12.07 hrs, Volume= 0.043 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
4,848	98	Roofs, HSG C
4,848		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS3a: Roof



Summary for Subcatchment PS4:

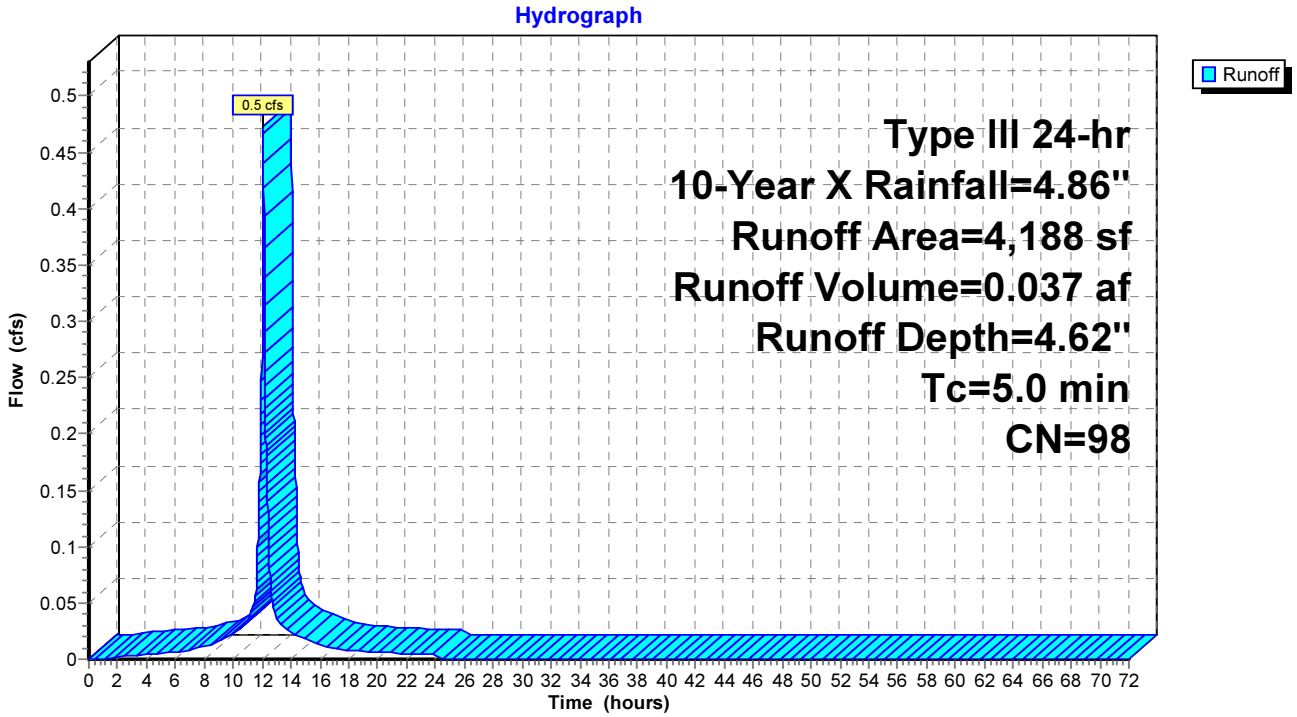
Runoff = 0.5 cfs @ 12.07 hrs, Volume= 0.037 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS4:



Summary for Subcatchment PS5:

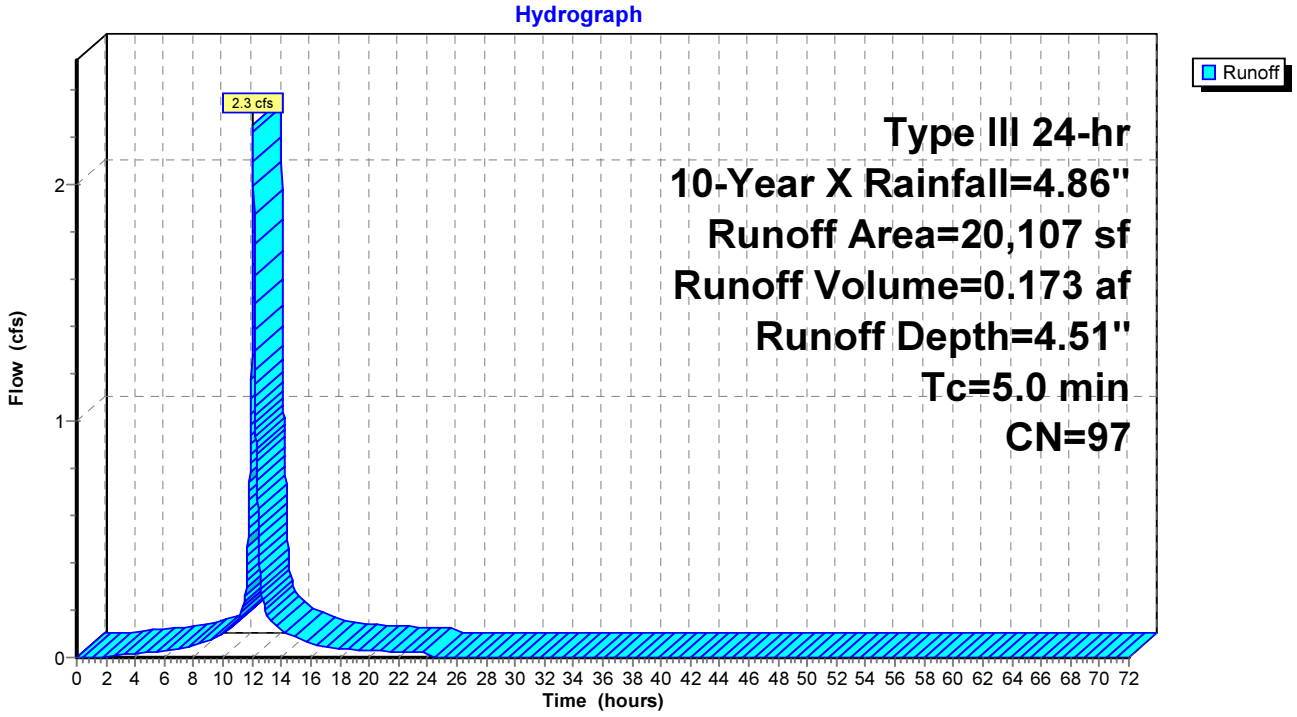
Runoff = 2.3 cfs @ 12.07 hrs, Volume= 0.173 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS5:



Summary for Subcatchment PS6:

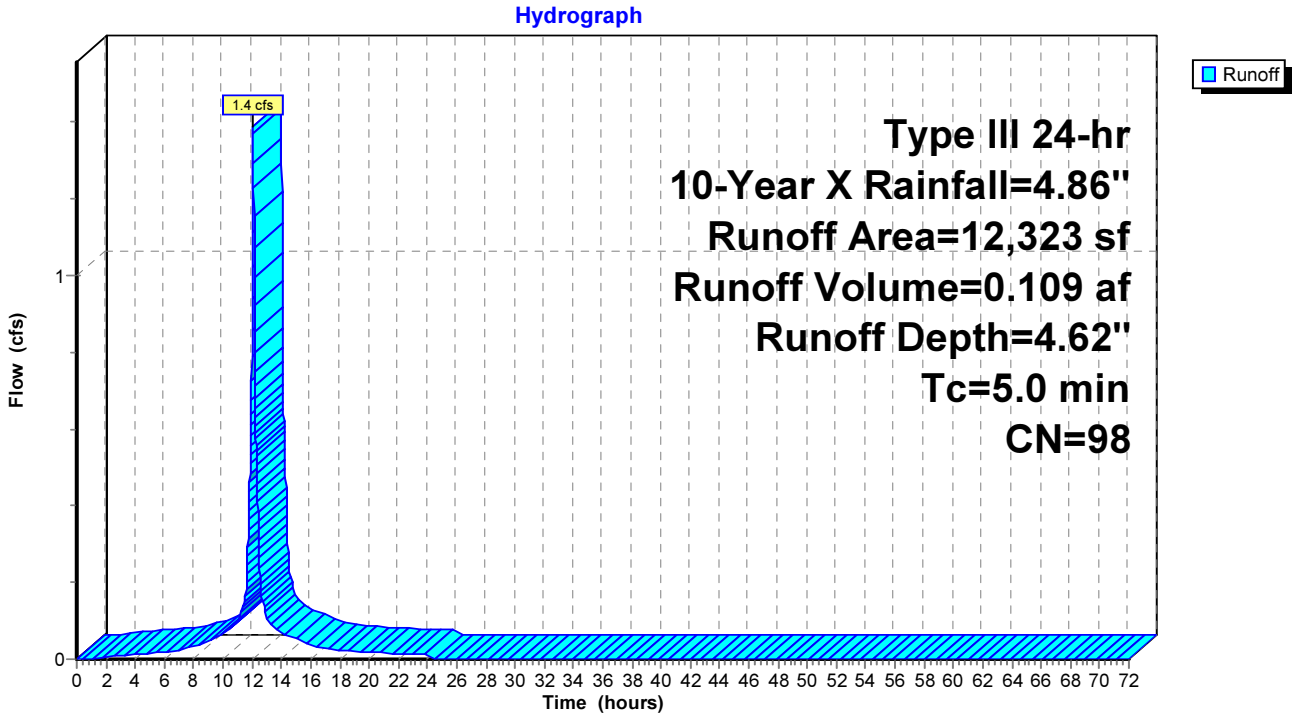
Runoff = 1.4 cfs @ 12.07 hrs, Volume= 0.109 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
12,323	98	Paved roads w/curbs & sewers, HSG C
12,323		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS6:



Summary for Subcatchment PS7:

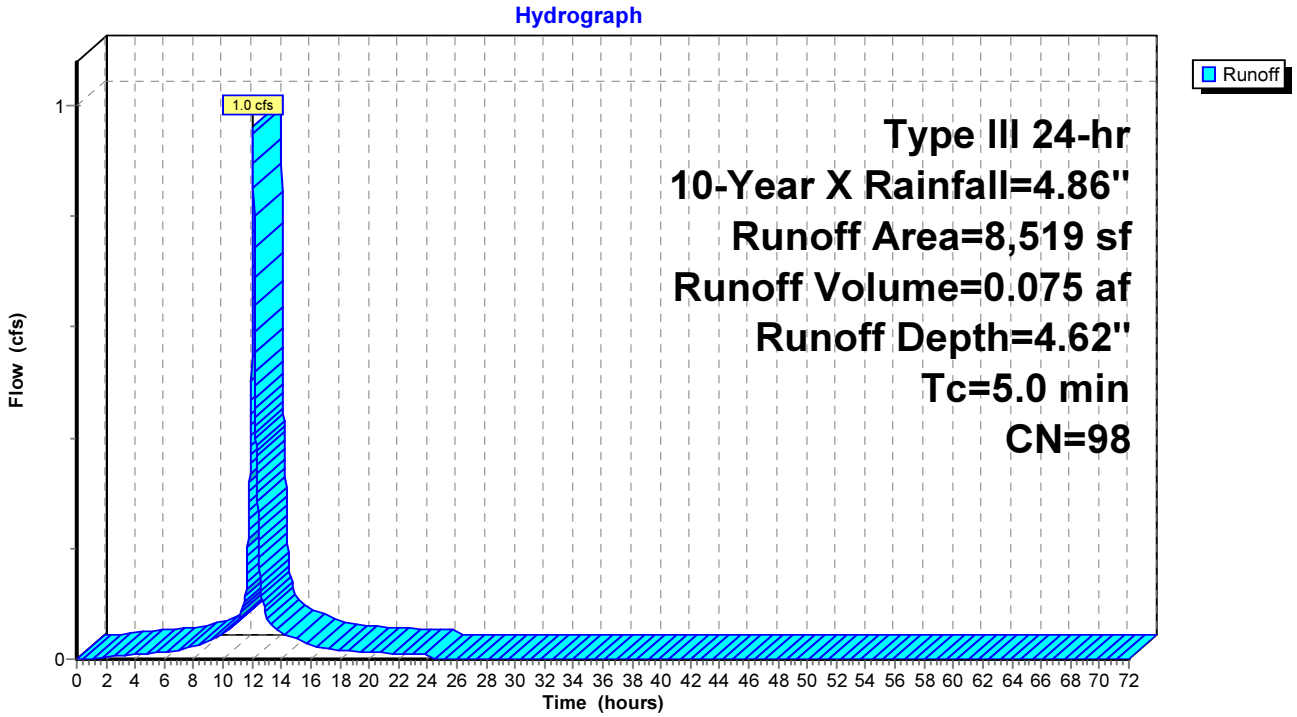
Runoff = 1.0 cfs @ 12.07 hrs, Volume= 0.075 af, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

Area (sf)	CN	Description
8,519	98	Paved roads w/curbs & sewers, HSG C
8,519		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS7:



Summary for Subcatchment PS8:

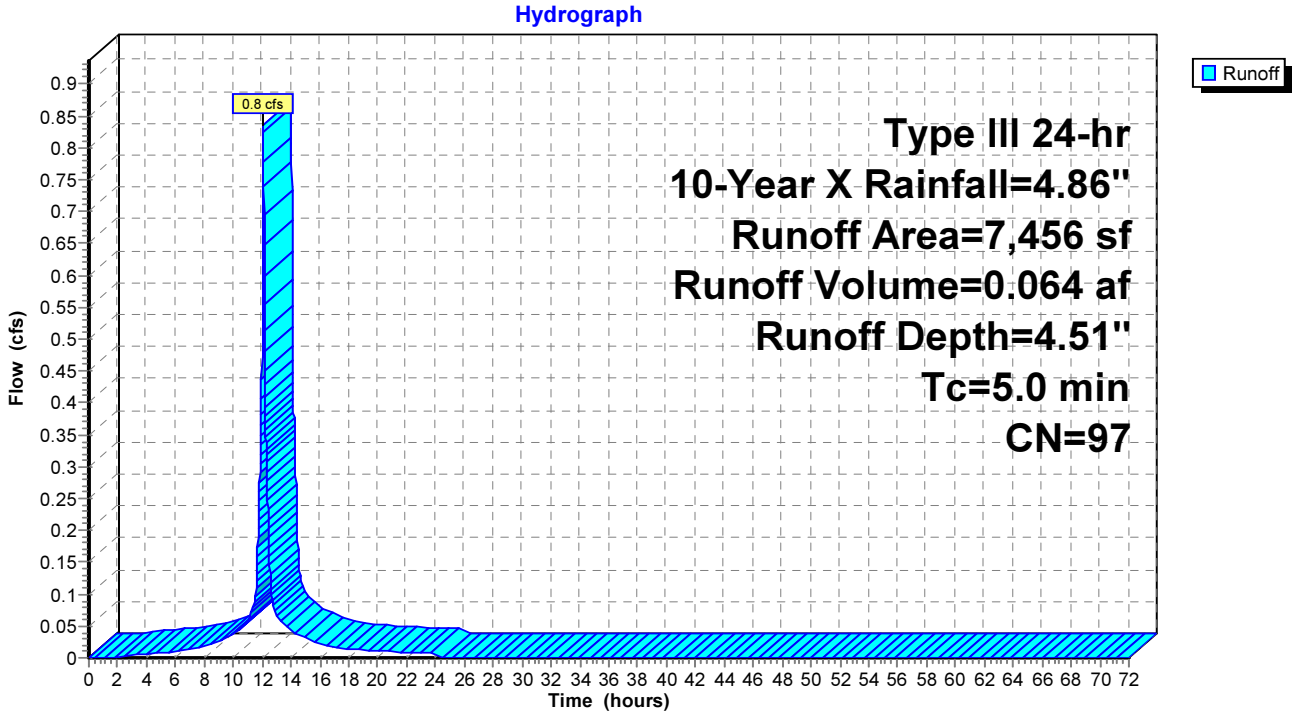
Runoff = 0.8 cfs @ 12.07 hrs, Volume= 0.064 af, Depth= 4.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year X Rainfall=4.86"

	Area (sf)	CN	Description
	4,674	98	Paved roads w/curbs & sewers, HSG C
	1,563	98	Paved roads w/curbs & sewers, HSG C
	121	98	Paved roads w/curbs & sewers, HSG C
*	39	98	Gravel roads, HSG C
	1,059	91	Fallow, bare soil, HSG C
	7,456	97	Weighted Average
	1,059		14.20% Pervious Area
	6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 5.75' (Flood elevation advised)

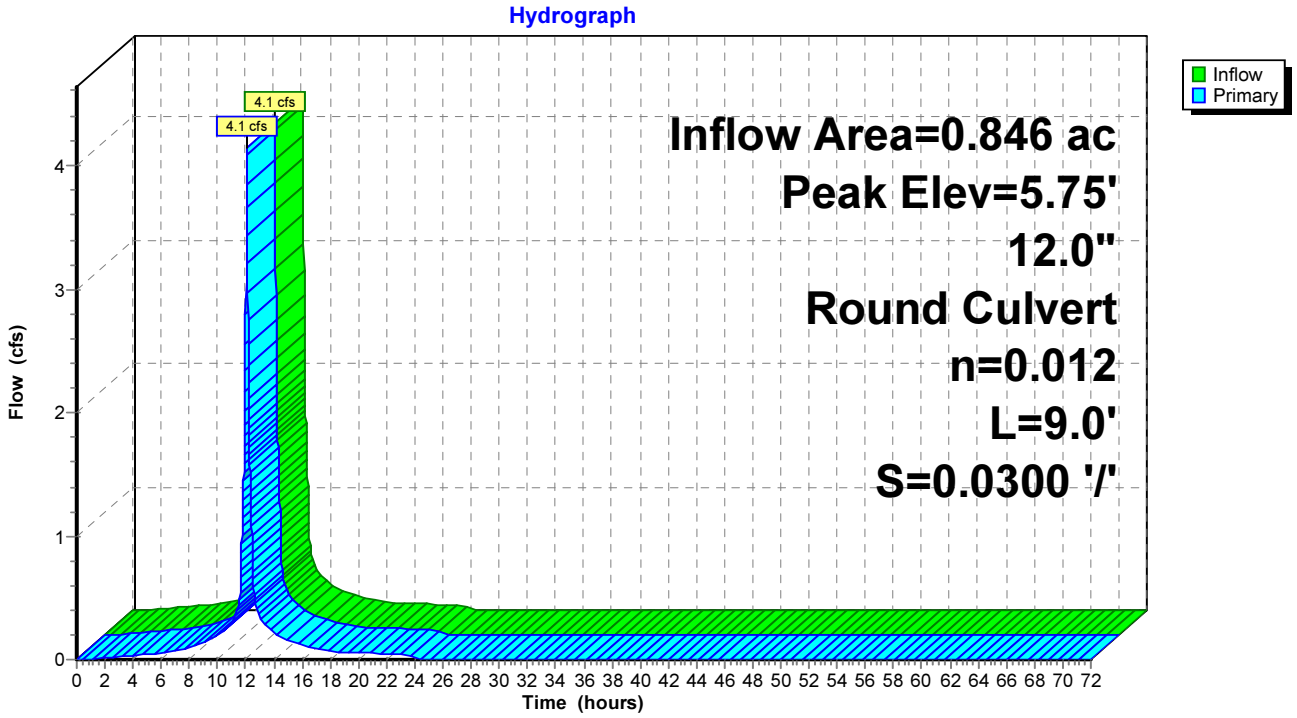
Inflow Area = 0.846 ac, 93.86% Impervious, Inflow Depth = 4.56" for 10-Year X event
Inflow = 4.1 cfs @ 12.07 hrs, Volume= 0.321 af
Outflow = 4.1 cfs @ 12.07 hrs, Volume= 0.321 af, Atten= 0%, Lag= 0.0 min
Primary = 4.1 cfs @ 12.07 hrs, Volume= 0.321 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.75' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=4.1 cfs @ 12.07 hrs HW=5.75' TW=4.41' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 4.1 cfs @ 5.28 fps)

Pond 1P: CB 3528



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 4.43' (Flood elevation advised)

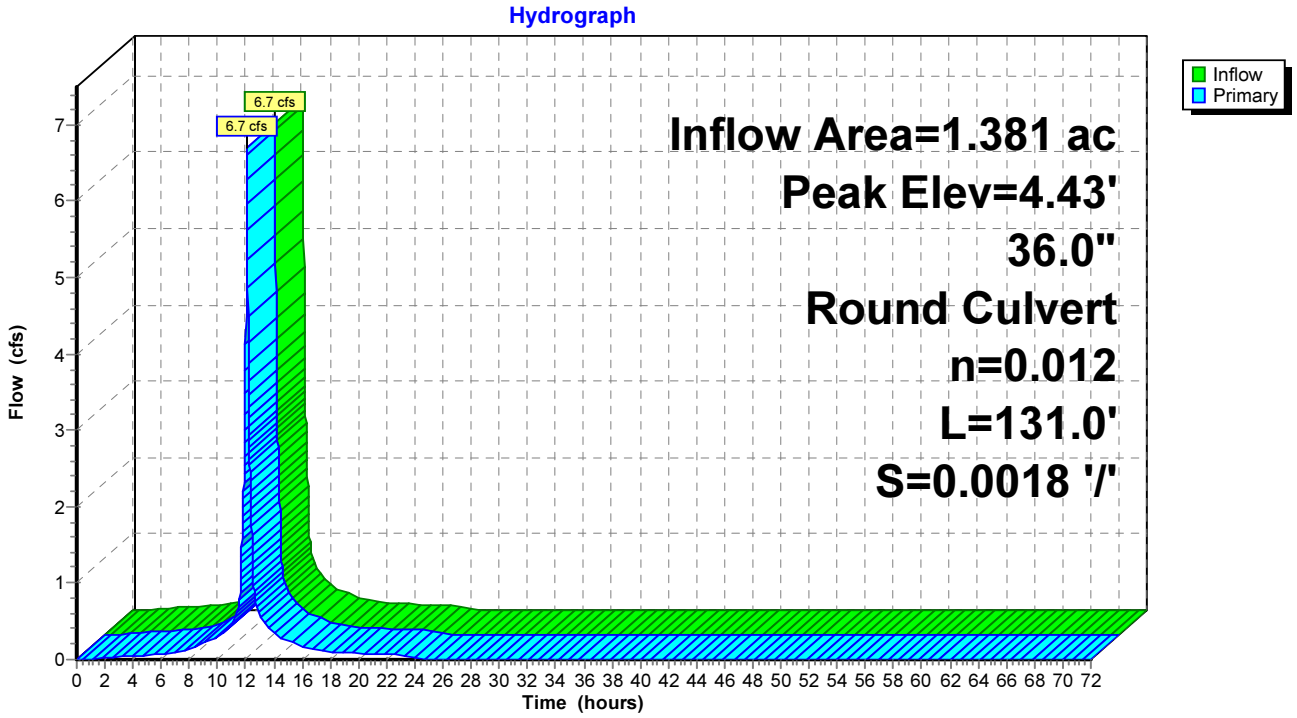
Inflow Area =	1.381 ac, 94.48% Impervious, Inflow Depth =	4.33"	for	10-Year X event
Inflow =	6.7 cfs @	12.08 hrs, Volume=	0.498 af	
Outflow =	6.7 cfs @	12.08 hrs, Volume=	0.498 af, Atten= 0%, Lag= 0.0 min	
Primary =	6.7 cfs @	12.08 hrs, Volume=	0.498 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.43' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 131.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.67' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=6.5 cfs @ 12.08 hrs HW=4.42' TW=4.17' (Dynamic Tailwater)
1=Culvert (Outlet Controls 6.5 cfs @ 2.66 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 3.92' (Flood elevation advised)

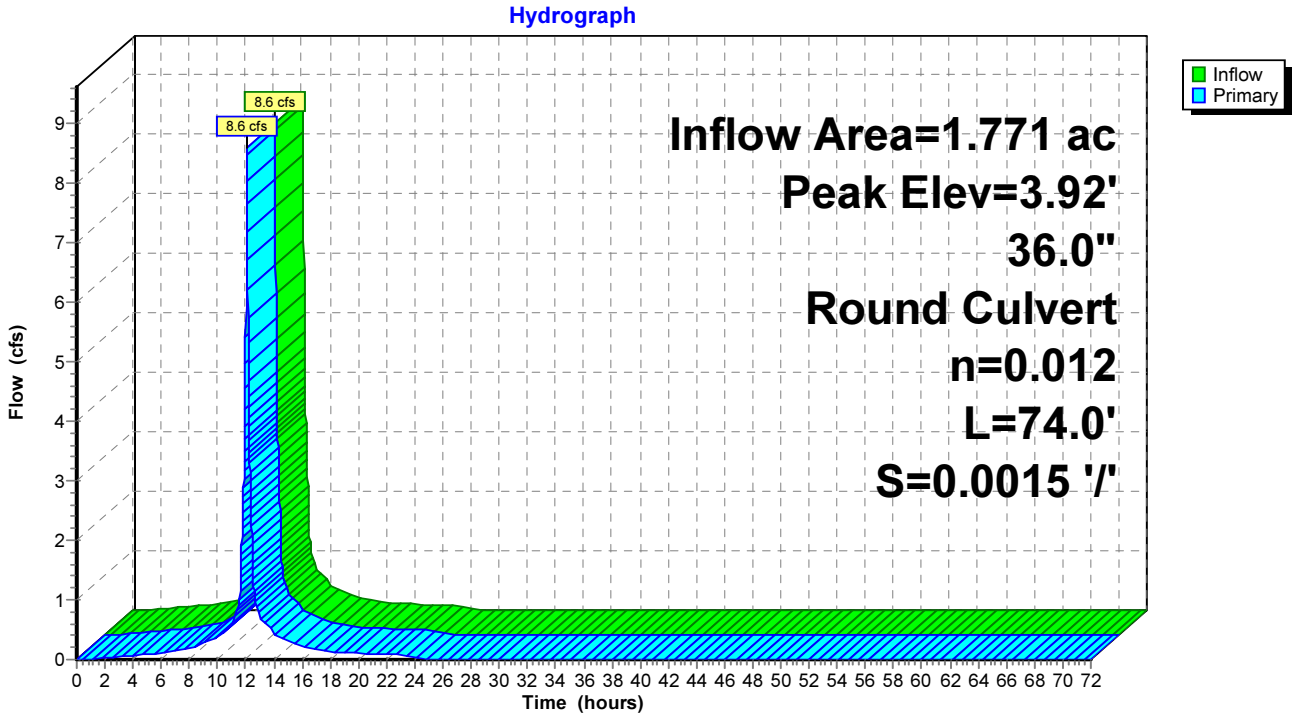
Inflow Area = 1.771 ac, 93.55% Impervious, Inflow Depth = 4.38" for 10-Year X event
Inflow = 8.6 cfs @ 12.08 hrs, Volume= 0.647 af
Outflow = 8.6 cfs @ 12.08 hrs, Volume= 0.647 af, Atten= 0%, Lag= 0.0 min
Primary = 8.6 cfs @ 12.08 hrs, Volume= 0.647 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.92' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=8.3 cfs @ 12.08 hrs HW=3.91' TW=3.68' (Dynamic Tailwater)
1=Culvert (Outlet Controls 8.3 cfs @ 2.91 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 3.69' (Flood elevation advised)

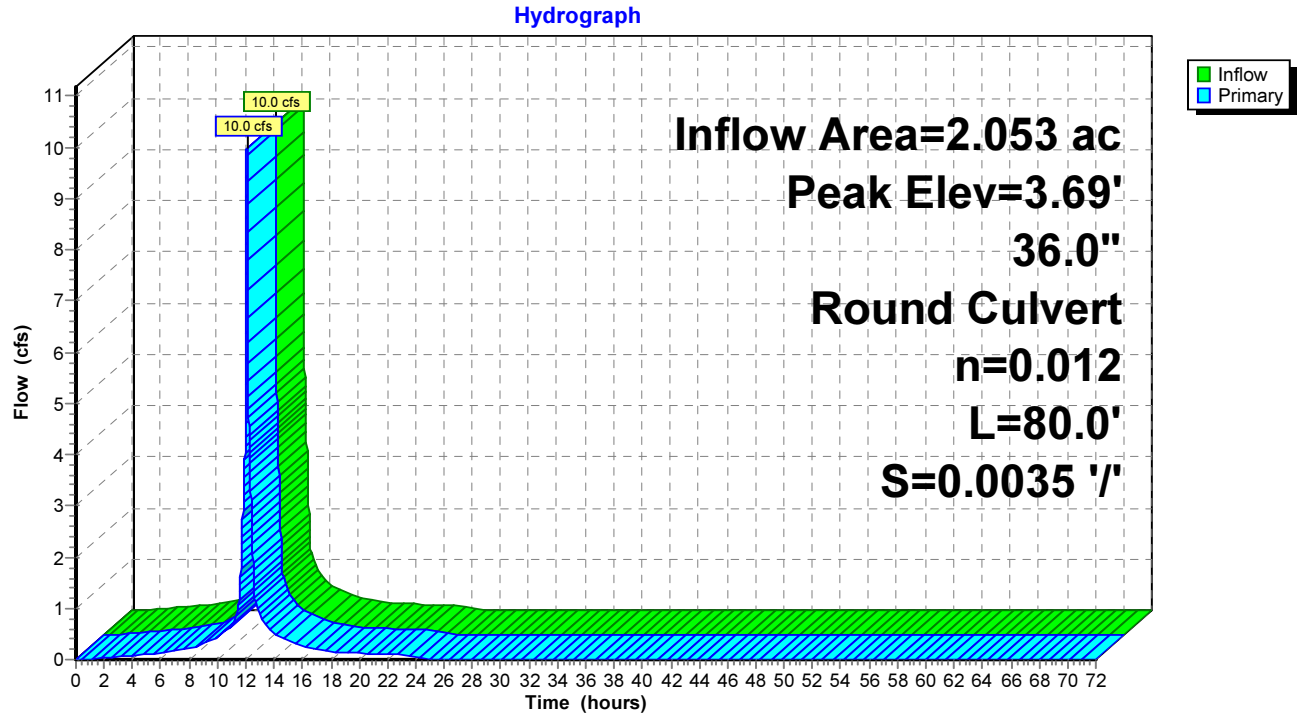
Inflow Area =	2.053 ac, 94.44% Impervious,	Inflow Depth =	4.42"	for 10-Year X event
Inflow =	10.0 cfs @ 12.08 hrs,	Volume=	0.756 af	
Outflow =	10.0 cfs @ 12.08 hrs,	Volume=	0.756 af,	Atten= 0%, Lag= 0.0 min
Primary =	10.0 cfs @ 12.08 hrs,	Volume=	0.756 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.69' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=9.9 cfs @ 12.08 hrs HW=3.68' TW=3.37' (Dynamic Tailwater)
1=Culvert (Outlet Controls 9.9 cfs @ 3.39 fps)

Pond 7P: DMH 3541



Summary for Pond 8P: DMH 1A

[57] Hint: Peaked at 4.18' (Flood elevation advised)

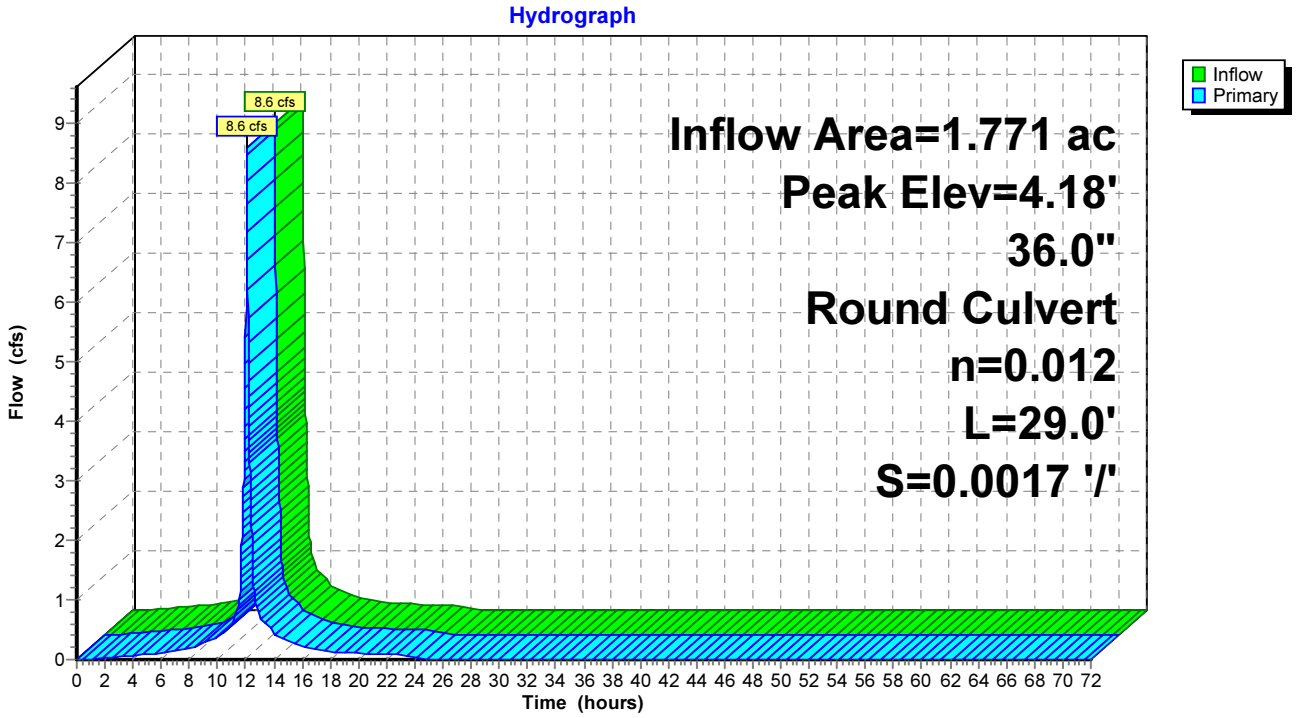
Inflow Area = 1.771 ac, 93.55% Impervious, Inflow Depth = 4.38" for 10-Year X event
Inflow = 8.6 cfs @ 12.08 hrs, Volume= 0.647 af
Outflow = 8.6 cfs @ 12.08 hrs, Volume= 0.647 af, Atten= 0%, Lag= 0.0 min
Primary = 8.6 cfs @ 12.08 hrs, Volume= 0.647 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.18' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.66'	**36.0" Round Culvert** L= 29.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.66' / 2.61' S= 0.0017 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=8.4 cfs @ 12.08 hrs HW=4.17' TW=3.91' (Dynamic Tailwater)
1=Culvert (Outlet Controls 8.4 cfs @ 3.43 fps)

Pond 8P: DMH 1A



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 2.96' (Flood elevation advised)

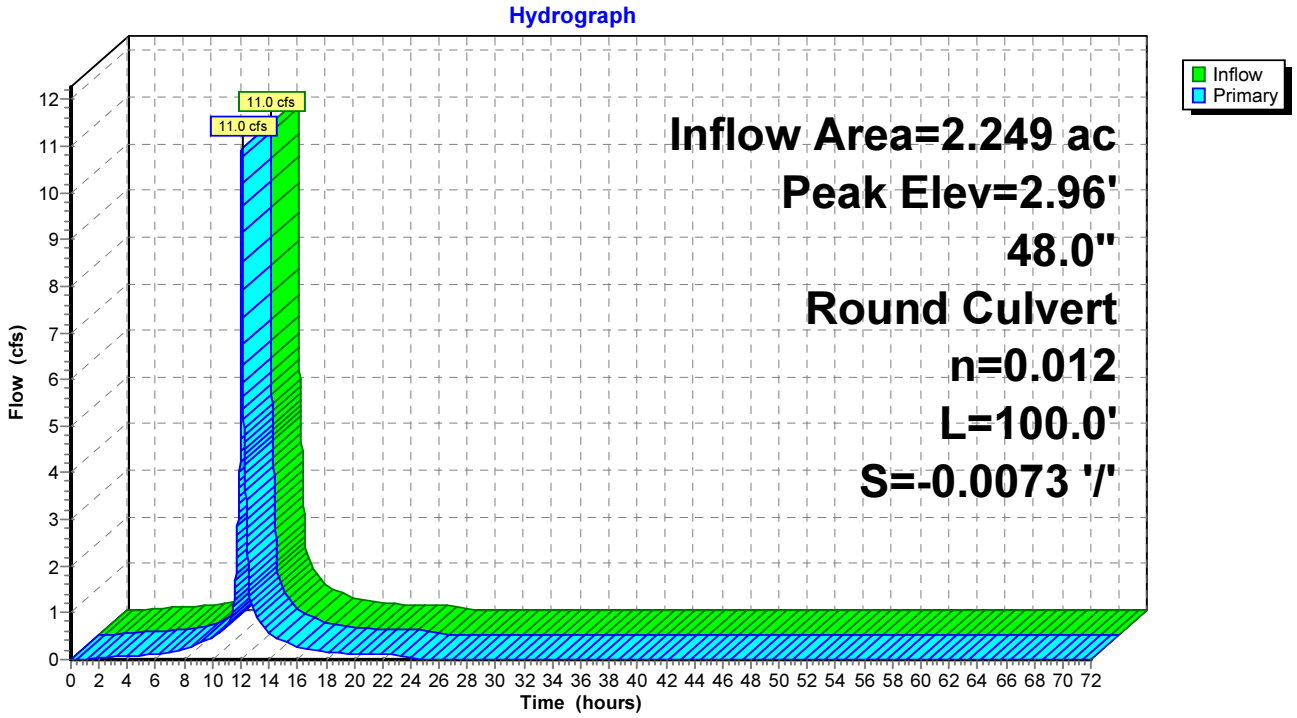
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 4.34" for 10-Year X event
Inflow = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af
Outflow = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af, Atten= 0%, Lag= 0.0 min
Primary = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.96' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=10.9 cfs @ 12.07 hrs HW=2.96' TW=2.69' (Dynamic Tailwater)
1=Culvert (Inlet Controls 10.9 cfs @ 3.11 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.70' (Flood elevation advised)

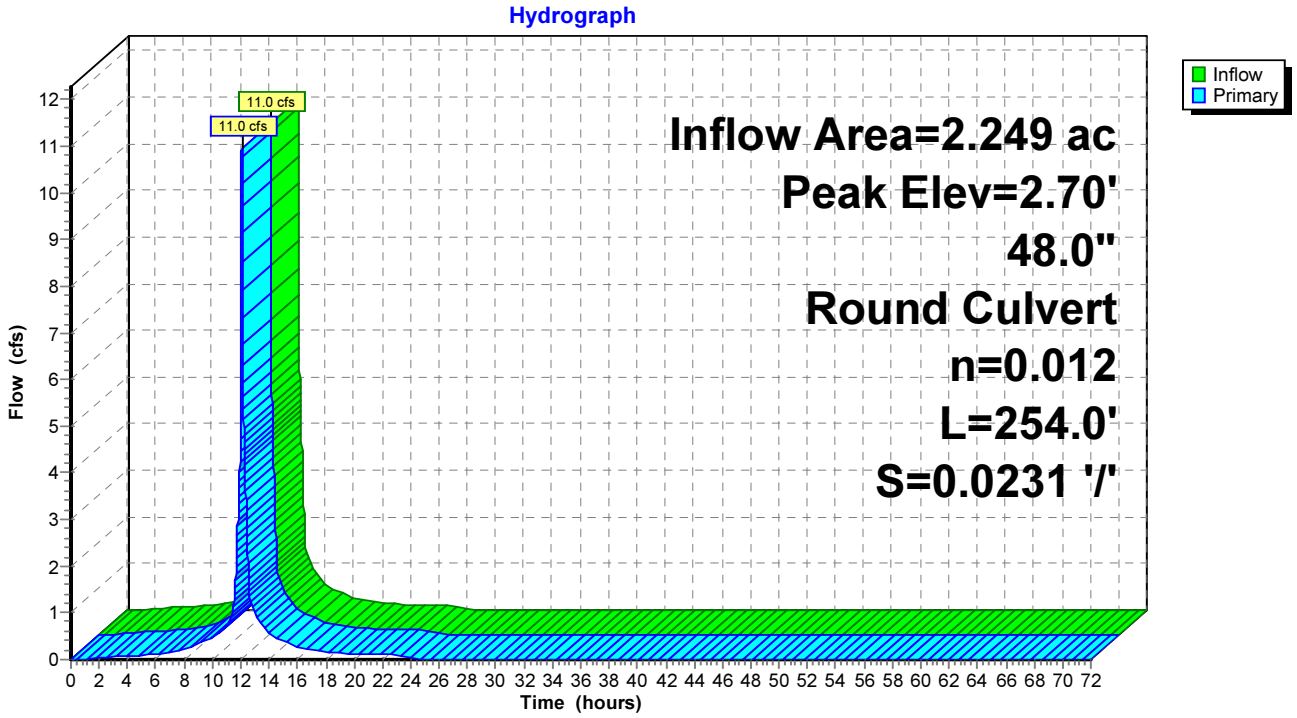
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 4.34" for 10-Year X event
Inflow = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af
Outflow = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af, Atten= 0%, Lag= 0.0 min
Primary = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.70' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=10.9 cfs @ 12.07 hrs HW=2.69' (Free Discharge)
└**1=Culvert** (Inlet Controls 10.9 cfs @ 4.30 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 8.07' (Flood elevation advised)

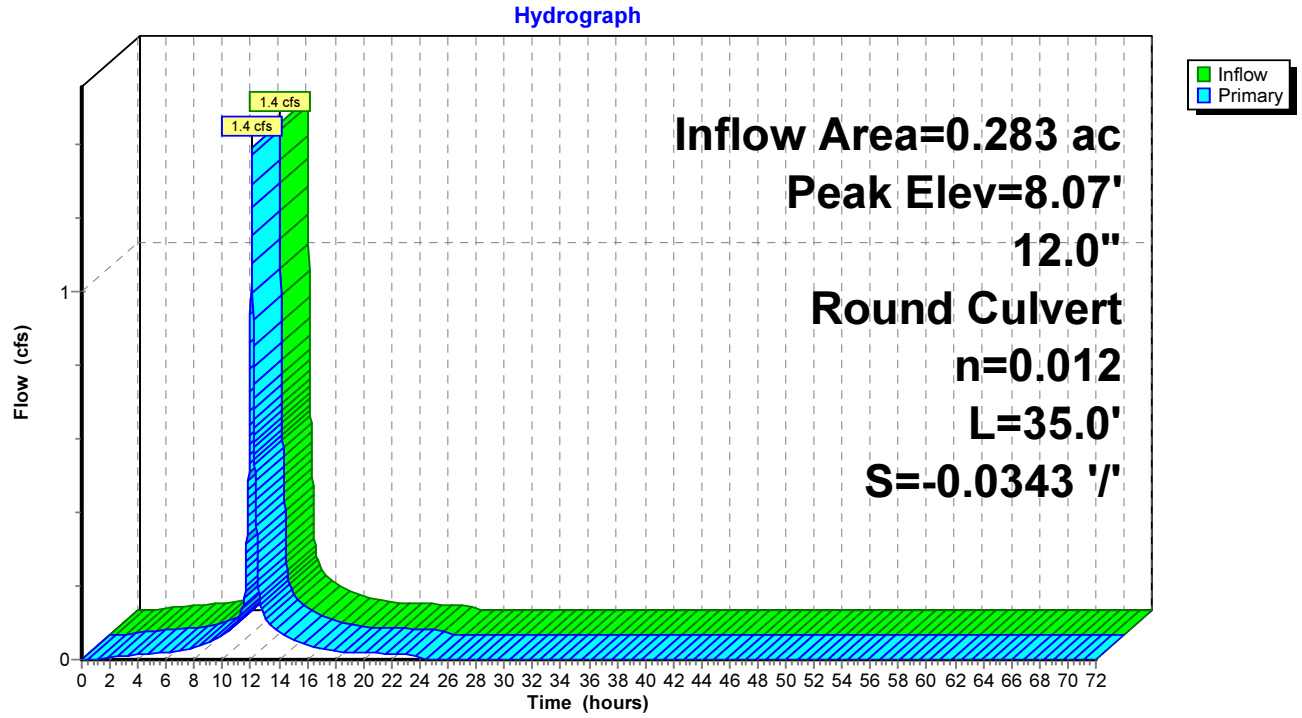
Inflow Area = 0.283 ac,100.00% Impervious, Inflow Depth = 4.62" for 10-Year X event
Inflow = 1.4 cfs @ 12.07 hrs, Volume= 0.109 af
Outflow = 1.4 cfs @ 12.07 hrs, Volume= 0.109 af, Atten= 0%, Lag= 0.0 min
Primary = 1.4 cfs @ 12.07 hrs, Volume= 0.109 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.07' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.4 cfs @ 12.07 hrs HW=8.07' TW=3.68' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.4 cfs @ 3.15 fps)

Pond 11P: CB 3523



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 7.06' (Flood elevation advised)

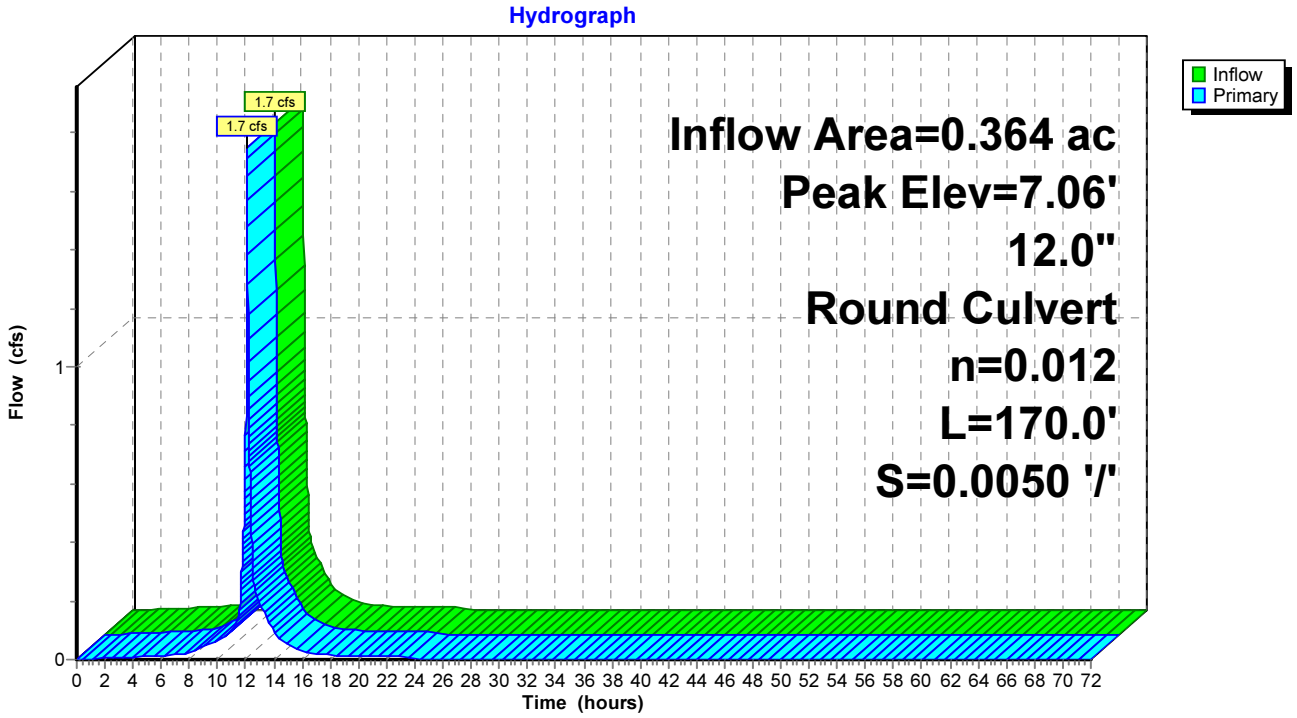
Inflow Area = 0.364 ac,100.00% Impervious, Inflow Depth = 3.71" for 10-Year X event
Inflow = 1.7 cfs @ 12.08 hrs, Volume= 0.113 af
Outflow = 1.7 cfs @ 12.08 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
Primary = 1.7 cfs @ 12.08 hrs, Volume= 0.113 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.06' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.7 cfs @ 12.08 hrs HW=7.06' TW=6.46' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.7 cfs @ 2.82 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 6.47' (Flood elevation advised)
[80] Warning: Exceeded Pond 15P by 0.06' @ 12.07 hrs (1.2 cfs 0.001 af)

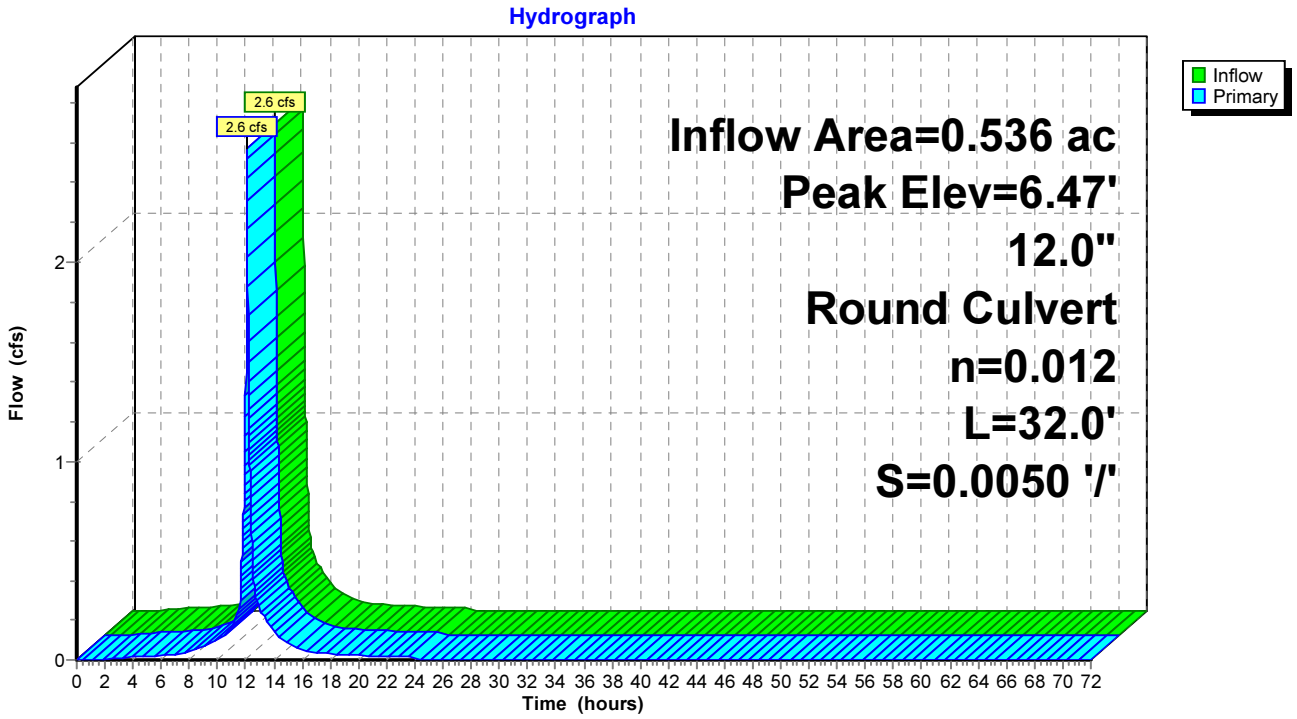
Inflow Area =	0.536 ac,	95.46% Impervious,	Inflow Depth =	3.96"	for 10-Year X event
Inflow =	2.6 cfs @	12.08 hrs,	Volume=	0.177 af	
Outflow =	2.6 cfs @	12.08 hrs,	Volume=	0.177 af,	Atten= 0%, Lag= 0.0 min
Primary =	2.6 cfs @	12.08 hrs,	Volume=	0.177 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.47' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.6 cfs @ 12.08 hrs HW=6.47' TW=6.13' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 2.6 cfs @ 3.40 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 6.49' (Flood elevation advised)

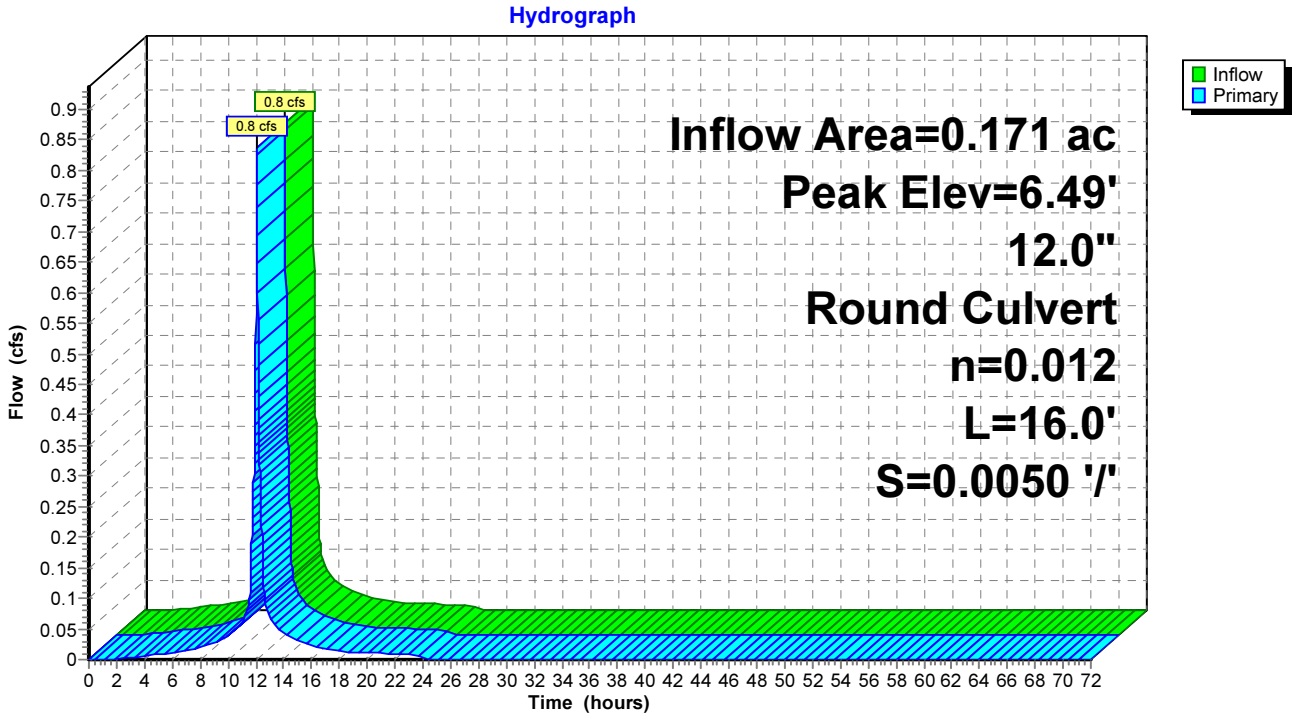
Inflow Area = 0.171 ac, 85.80% Impervious, Inflow Depth = 4.51" for 10-Year X event
Inflow = 0.8 cfs @ 12.07 hrs, Volume= 0.064 af
Outflow = 0.8 cfs @ 12.07 hrs, Volume= 0.064 af, Atten= 0%, Lag= 0.0 min
Primary = 0.8 cfs @ 12.07 hrs, Volume= 0.064 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.49' @ 12.09 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.0 cfs @ 12.07 hrs HW=6.37' TW=6.44' (Dynamic Tailwater)
1=Culvert (Controls 0.0 cfs)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 6.13' (Flood elevation advised)

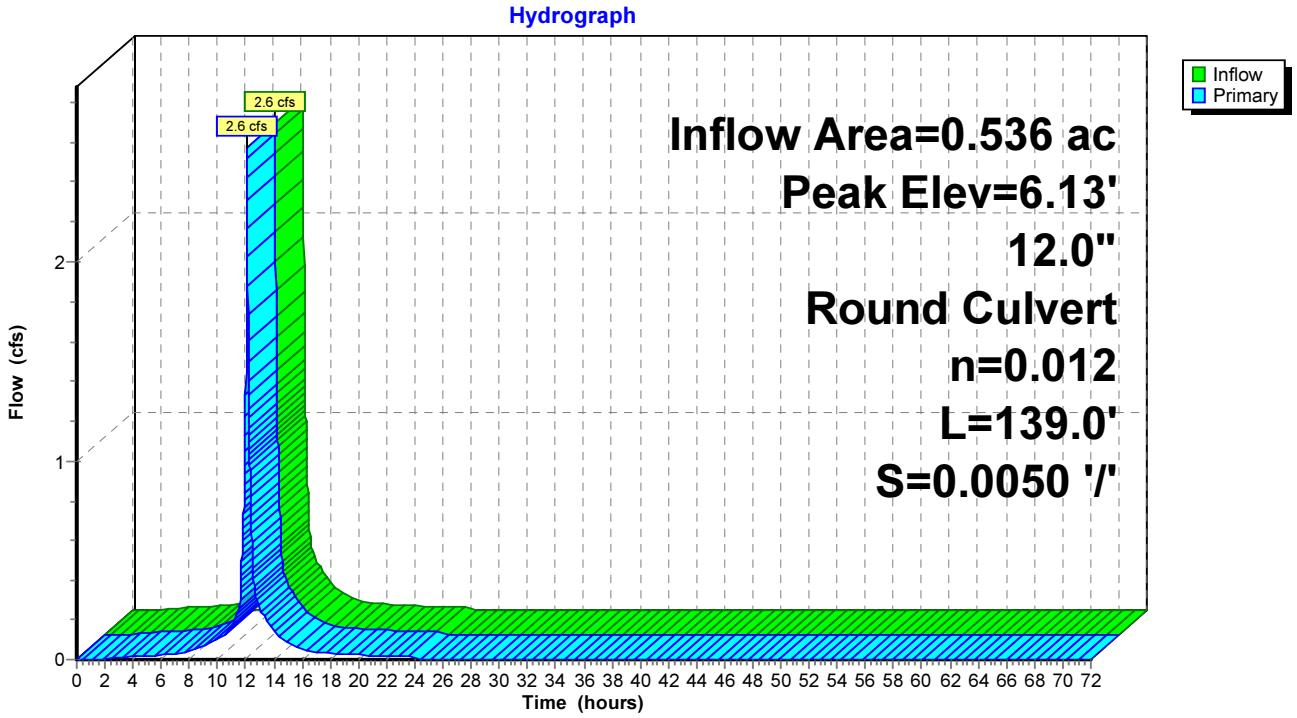
Inflow Area = 0.536 ac, 95.46% Impervious, Inflow Depth = 3.96" for 10-Year X event
Inflow = 2.6 cfs @ 12.08 hrs, Volume= 0.177 af
Outflow = 2.6 cfs @ 12.08 hrs, Volume= 0.177 af, Atten= 0%, Lag= 0.0 min
Primary = 2.6 cfs @ 12.08 hrs, Volume= 0.177 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.13' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.6 cfs @ 12.08 hrs HW=6.13' TW=5.05' (Dynamic Tailwater)
1=Culvert (Barrel Controls 2.6 cfs @ 3.88 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 5.05' (Flood elevation advised)

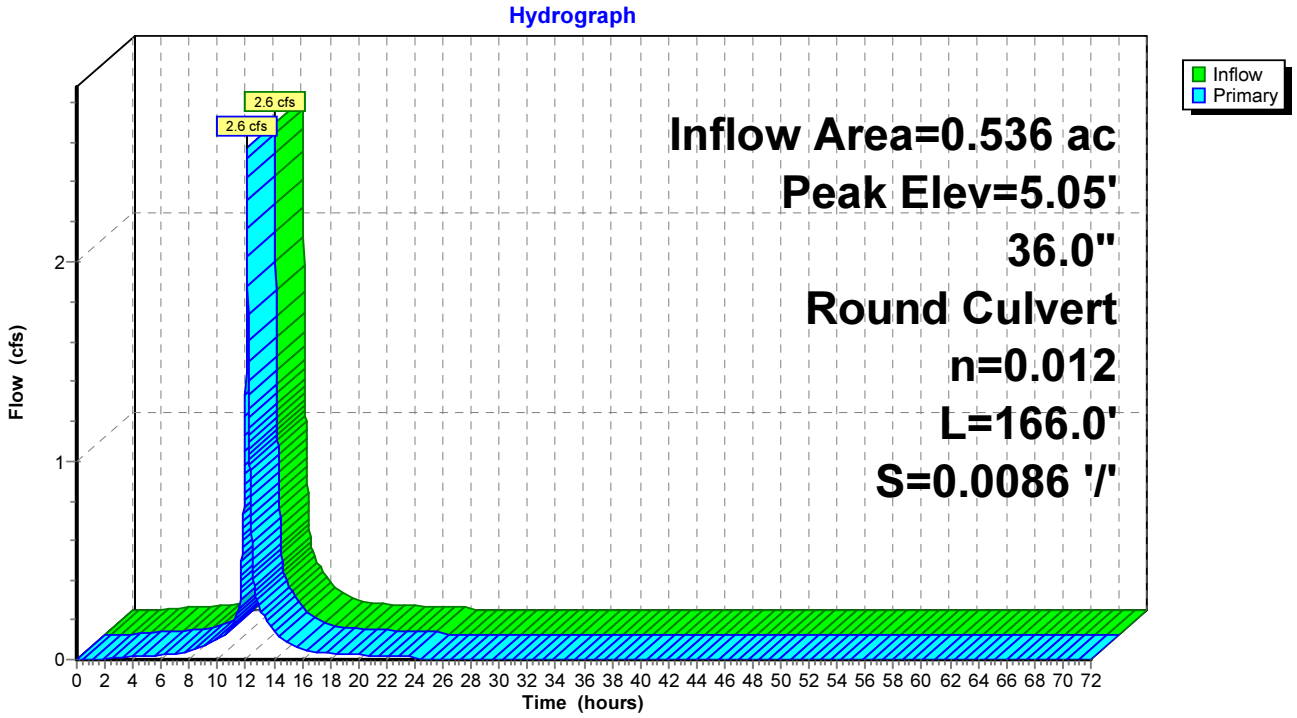
Inflow Area = 0.536 ac, 95.46% Impervious, Inflow Depth = 3.96" for 10-Year X event
Inflow = 2.6 cfs @ 12.08 hrs, Volume= 0.177 af
Outflow = 2.6 cfs @ 12.08 hrs, Volume= 0.177 af, Atten= 0%, Lag= 0.0 min
Primary = 2.6 cfs @ 12.08 hrs, Volume= 0.177 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.05' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=2.6 cfs @ 12.08 hrs HW=5.05' TW=4.43' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 2.6 cfs @ 3.03 fps)

Pond 17P: DMH 3545



Summary for Pond 29P: DMH 3

[57] Hint: Peaked at 3.43' (Flood elevation advised)

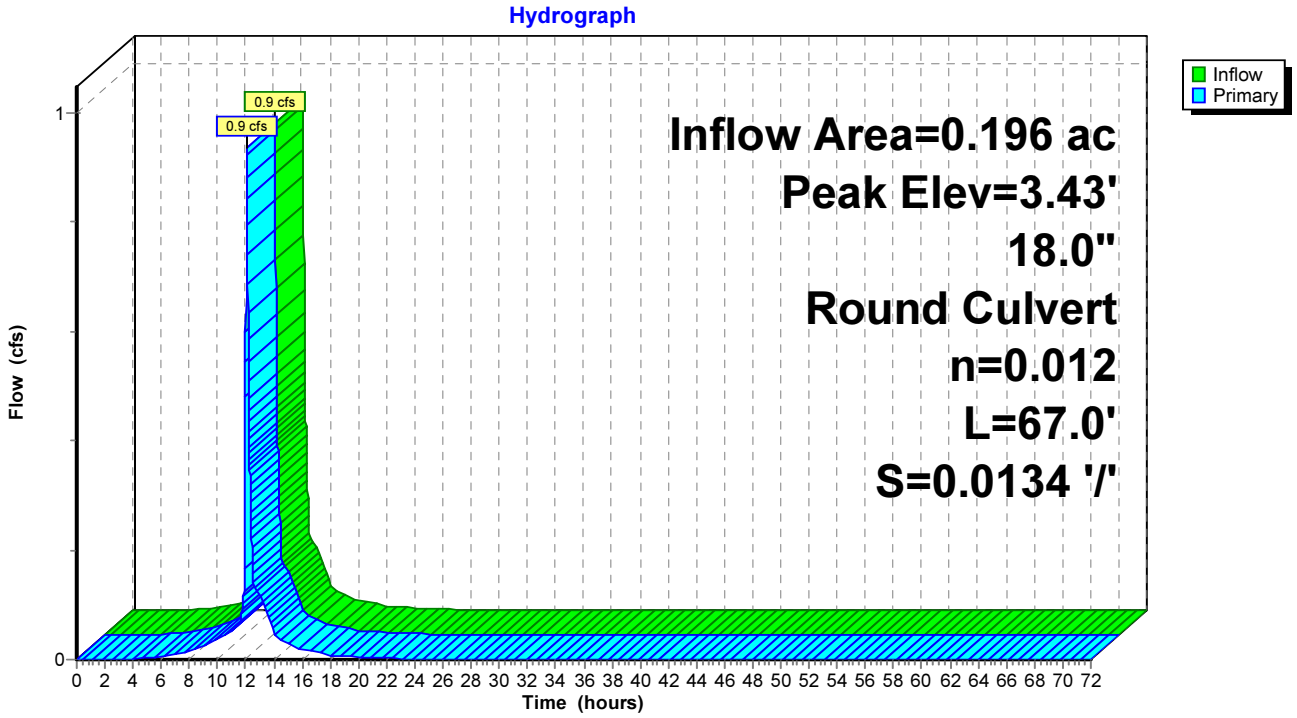
Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 3.51" for 10-Year X event
Inflow = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af
Outflow = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.43' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.53'	**18.0" Round Culvert** L= 67.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 2.53' / 1.63' S= 0.0134 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=3.42' TW=3.36' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.9 cfs @ 1.17 fps)

Pond 29P: DMH 3



Summary for Pond 35P: CB 3

[57] Hint: Peaked at 7.36' (Flood elevation advised)

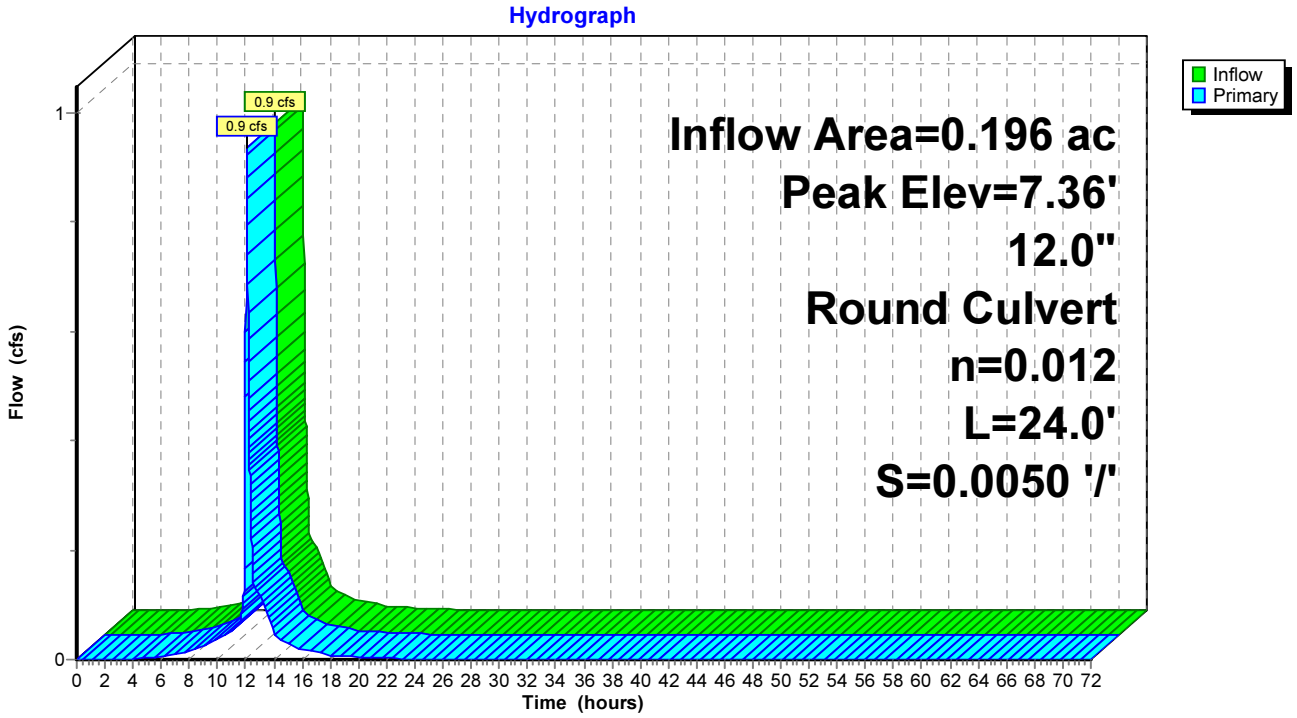
Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 3.51" for 10-Year X event
Inflow = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af
Outflow = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min
Primary = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.36' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.77'	**12.0" Round Culvert** L= 24.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 6.77' / 6.65' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=7.36' TW=3.42' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 0.9 cfs @ 2.79 fps)

Pond 35P: CB 3



Summary for Pond 36P: CB 3526

[57] Hint: Peaked at 7.23' (Flood elevation advised)

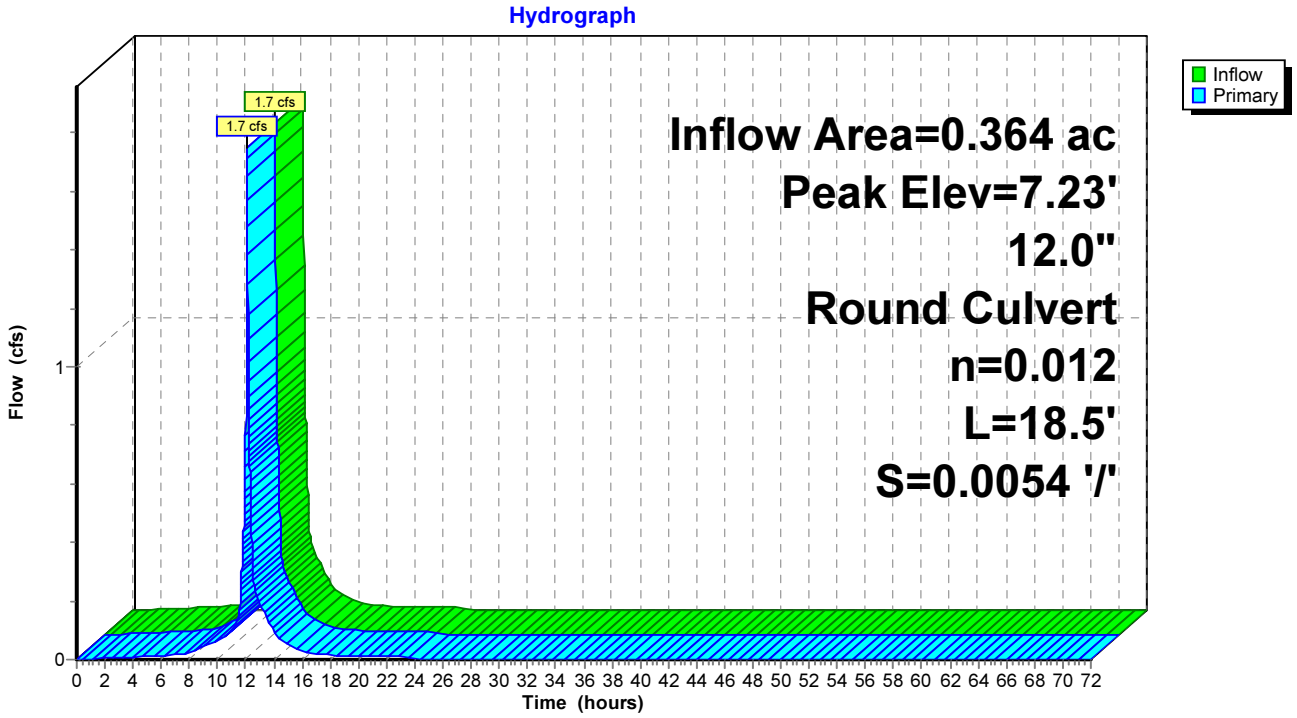
Inflow Area = 0.364 ac,100.00% Impervious, Inflow Depth = 3.71" for 10-Year X event
Inflow = 1.7 cfs @ 12.08 hrs, Volume= 0.113 af
Outflow = 1.7 cfs @ 12.08 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
Primary = 1.7 cfs @ 12.08 hrs, Volume= 0.113 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.23' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.19'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.19' / 6.09' S= 0.0054 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.7 cfs @ 12.08 hrs HW=7.22' TW=7.06' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.7 cfs @ 2.63 fps)

Pond 36P: CB 3526



Summary for Pond 37P: 94 Silva Cells with OCS #2

Inflow Area = 0.169 ac,100.00% Impervious, Inflow Depth = 4.62" for 10-Year X event
Inflow = 0.8 cfs @ 12.07 hrs, Volume= 0.065 af
Outflow = 0.8 cfs @ 12.08 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.8 min
Discarded = 0.0 cfs @ 11.77 hrs, Volume= 0.028 af
Primary = 0.8 cfs @ 12.08 hrs, Volume= 0.037 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 11.53' @ 12.08 hrs Surf.Area= 774 sf Storage= 393 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 11.9 min (759.5 - 747.6)

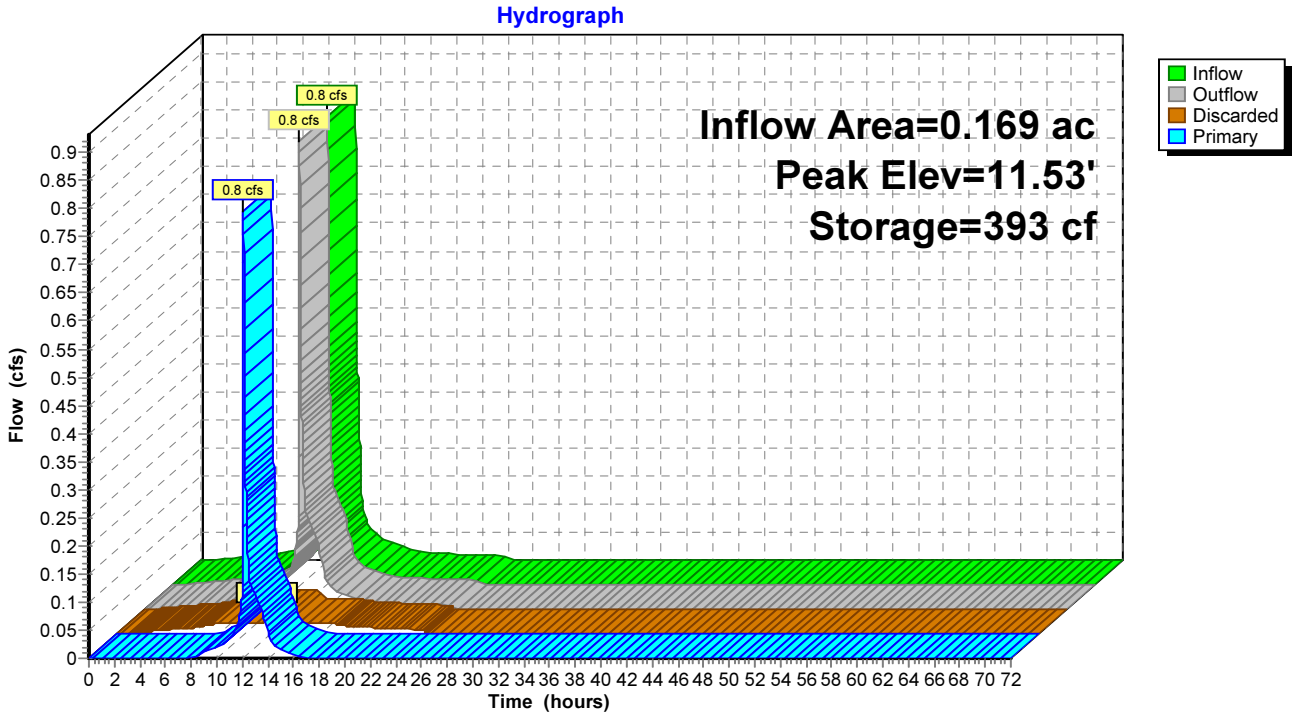
Volume	Invert	Avail.Storage	Storage Description
#1	8.40'	132 cf	**DeepRoot Silva Cell 20% x3** x 23 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#2	8.40'	137 cf	**DeepRoot Silva Cell 20% x3** x 24 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#3	8.90'	137 cf	**DeepRoot Silva Cell 20% x3** x 24 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#4	9.40'	132 cf	**DeepRoot Silva Cell 20% x3** x 23 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
		538 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	8.30'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 8.30' / 8.26' S= 0.0044 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Primary	8.40'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Device 1	11.40'	**5.0' 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
#4	Discarded	8.40'	**2.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.77 hrs HW=9.42' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.8 cfs @ 12.08 hrs HW=11.53' TW=7.22' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.6 cfs of 7.8 cfs potential flow)
│└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.6 cfs @ 1.00 fps)
└**2=Orifice/Grate** (Orifice Controls 0.1 cfs @ 8.46 fps)

Pond 37P: 94 Silva Cells with OCS #2



Summary for Pond 38P: 73 Silva Cells with OCS #3

Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 4.62" for 10-Year X event
Inflow = 1.0 cfs @ 12.07 hrs, Volume= 0.076 af
Outflow = 1.0 cfs @ 12.07 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.2 min
Discarded = 0.0 cfs @ 11.74 hrs, Volume= 0.018 af
Primary = 0.9 cfs @ 12.07 hrs, Volume= 0.057 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 10.15' @ 12.07 hrs Surf.Area= 601 sf Storage= 269 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 7.7 min (755.3 - 747.6)

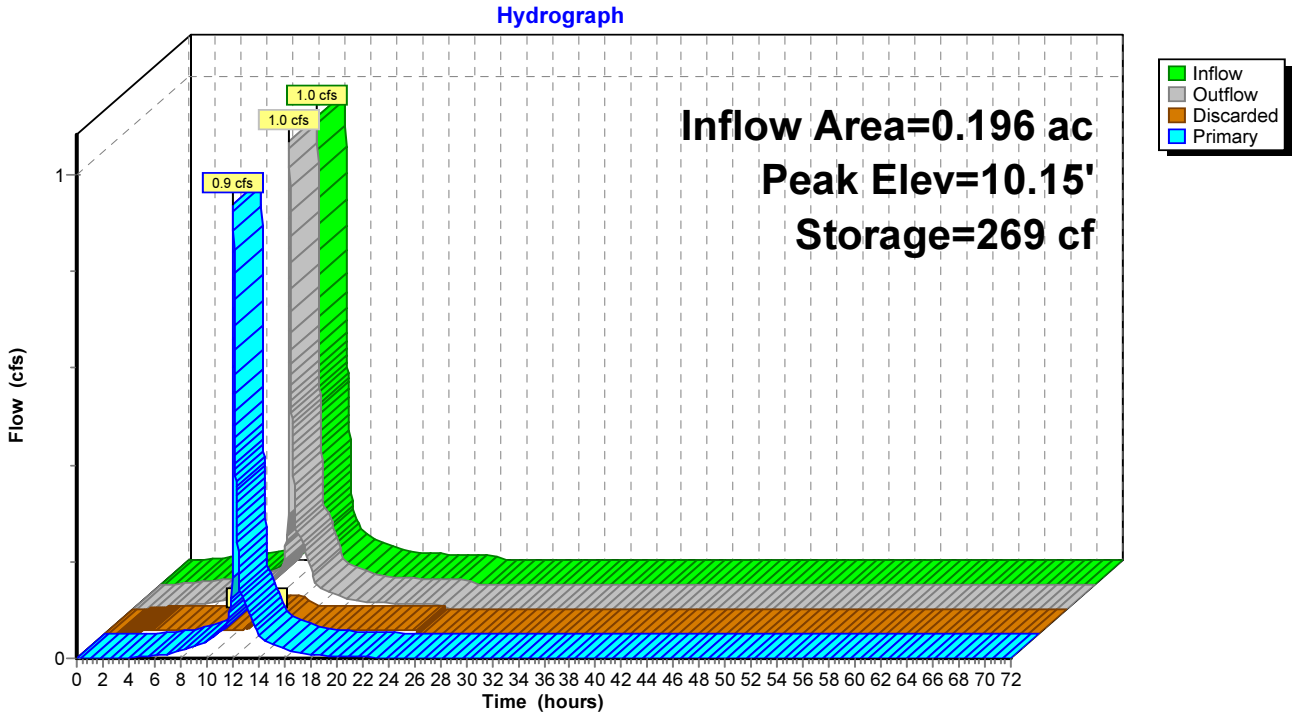
Volume	Invert	Avail.Storage	Storage Description
#1	7.00'	120 cf	**DeepRoot Silva Cell 20% x3** x 21 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#2	7.50'	149 cf	**DeepRoot Silva Cell 20% x3** x 26 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#3	8.50'	149 cf	**DeepRoot Silva Cell 20% x3** x 26 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
		418 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	6.90'	**12.0" Round Culvert** L= 7.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.90' / 6.87' S= 0.0043 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Primary	7.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Device 1	10.00'	**5.0' 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
#4	Discarded	7.00'	**2.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.74 hrs HW=8.52' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.9 cfs @ 12.07 hrs HW=10.15' TW=7.36' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.8 cfs of 7.8 cfs potential flow)
│└**3=Broad-Crested Rectangular Weir** (Weir Controls 0.8 cfs @ 1.08 fps)
└**2=Orifice/Grate** (Orifice Controls 0.1 cfs @ 8.04 fps)

Pond 38P: 73 Silva Cells with OCS #3



Summary for Pond CB1:

[57] Hint: Peaked at 6.24' (Flood elevation advised)

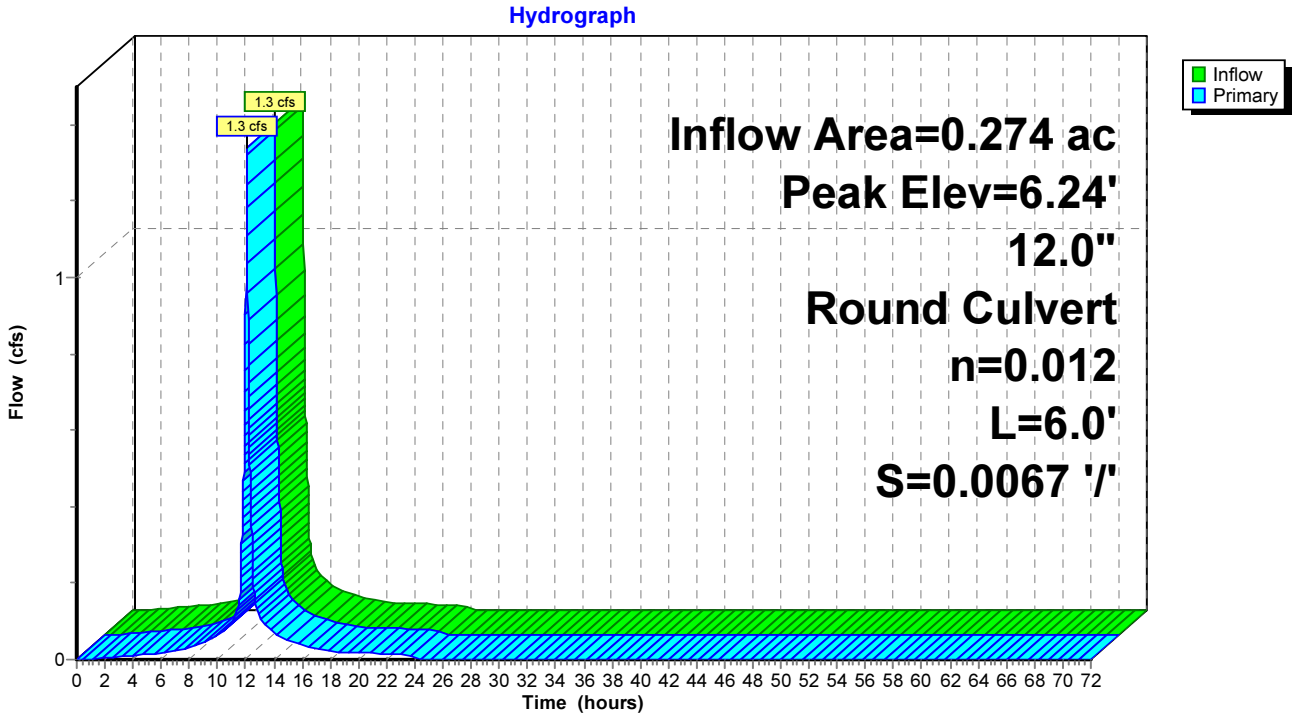
Inflow Area = 0.274 ac, 87.53% Impervious, Inflow Depth = 4.55" for 10-Year X event
Inflow = 1.3 cfs @ 12.07 hrs, Volume= 0.104 af
Outflow = 1.3 cfs @ 12.07 hrs, Volume= 0.104 af, Atten= 0%, Lag= 0.0 min
Primary = 1.3 cfs @ 12.07 hrs, Volume= 0.104 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.24' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.33'	**12.0" Round Culvert** L= 6.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.33' / 5.29' S= 0.0067 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.3 cfs @ 12.07 hrs HW=6.24' TW=6.13' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.3 cfs @ 2.32 fps)

Pond CB1:



Summary for Pond CB2:

[57] Hint: Peaked at 6.17' (Flood elevation advised)

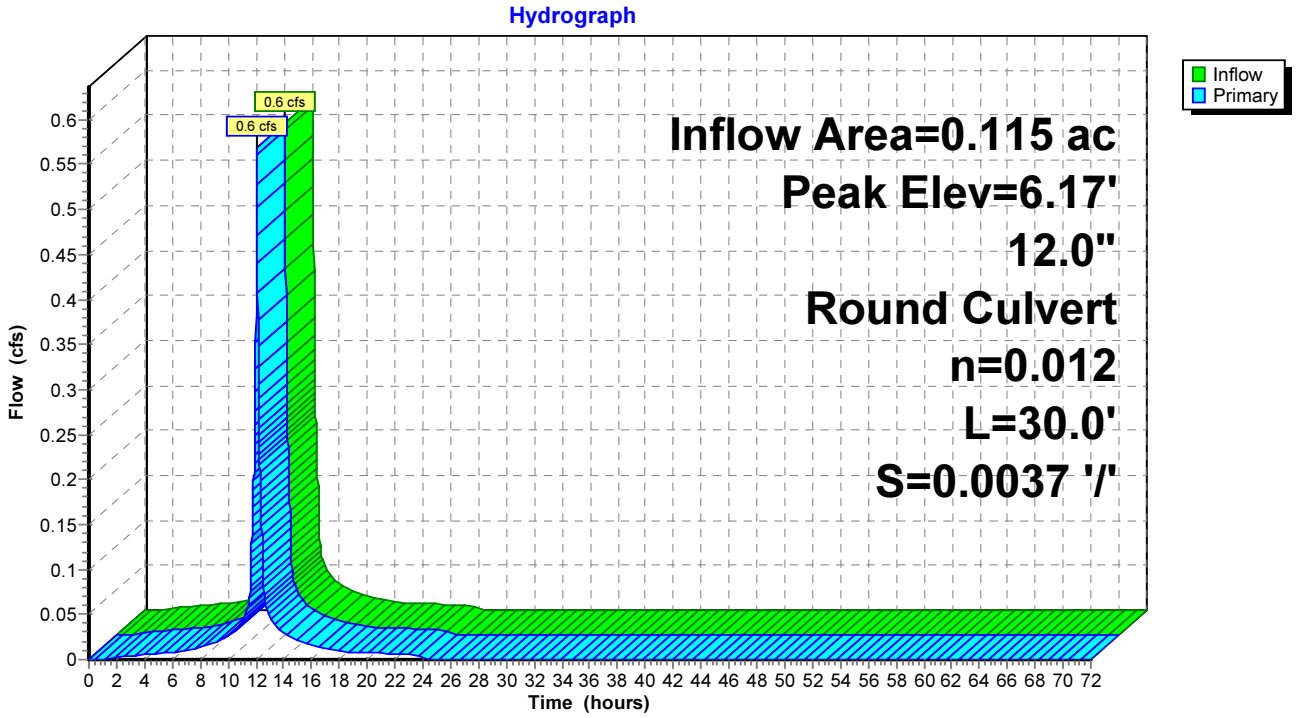
Inflow Area = 0.115 ac, 96.72% Impervious, Inflow Depth = 4.62" for 10-Year X event
Inflow = 0.6 cfs @ 12.07 hrs, Volume= 0.044 af
Outflow = 0.6 cfs @ 12.07 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.0 min
Primary = 0.6 cfs @ 12.07 hrs, Volume= 0.044 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.17' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.40'	**12.0" Round Culvert** L= 30.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.40' / 5.29' S= 0.0037 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.6 cfs @ 12.07 hrs HW=6.17' TW=6.13' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.6 cfs @ 1.17 fps)

Pond CB2:



Summary for Pond DMH1:

[57] Hint: Peaked at 5.75' (Flood elevation advised)

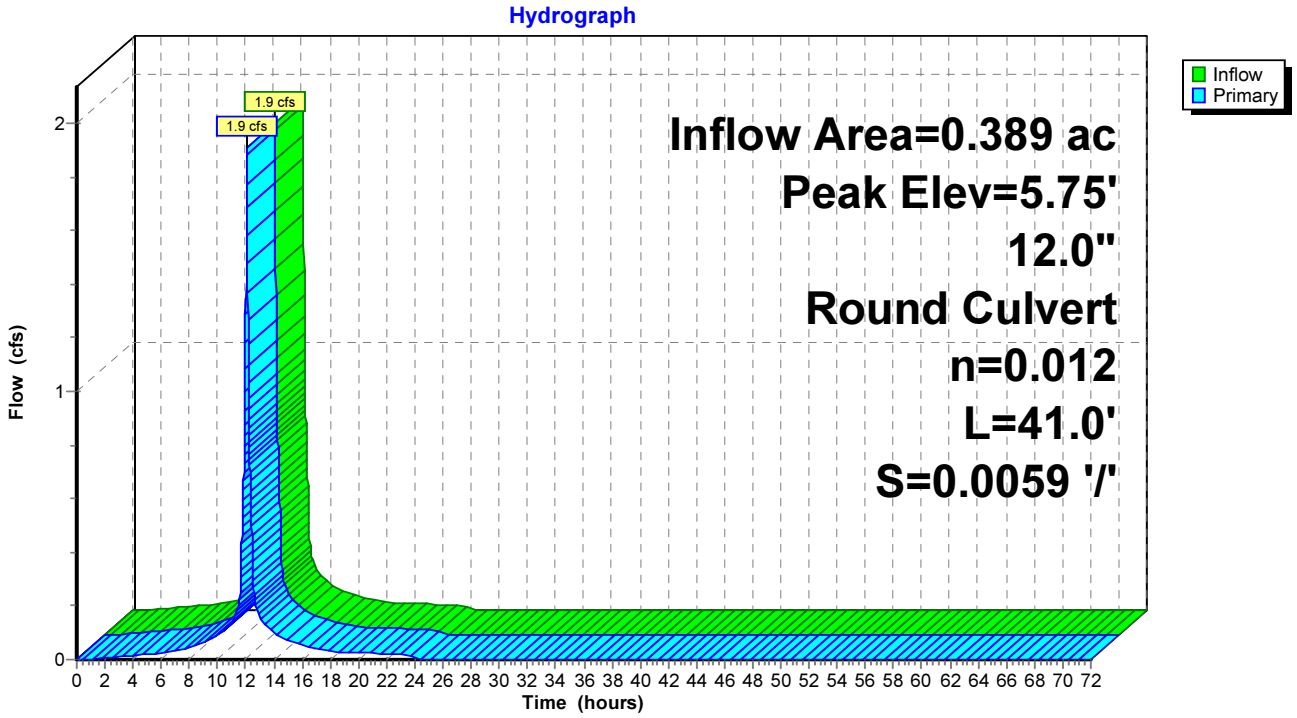
Inflow Area = 0.389 ac, 90.26% Impervious, Inflow Depth = 4.57" for 10-Year X event
Inflow = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af
Outflow = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af, Atten= 0%, Lag= 0.0 min
Primary = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.75' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.91'	**12.0" Round Culvert** L= 41.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.91' / 4.67' S= 0.0059 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.9 cfs @ 12.07 hrs HW=5.75' TW=4.16' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 1.9 cfs @ 3.69 fps)

Pond DMH1:



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.37' (Flood elevation advised)

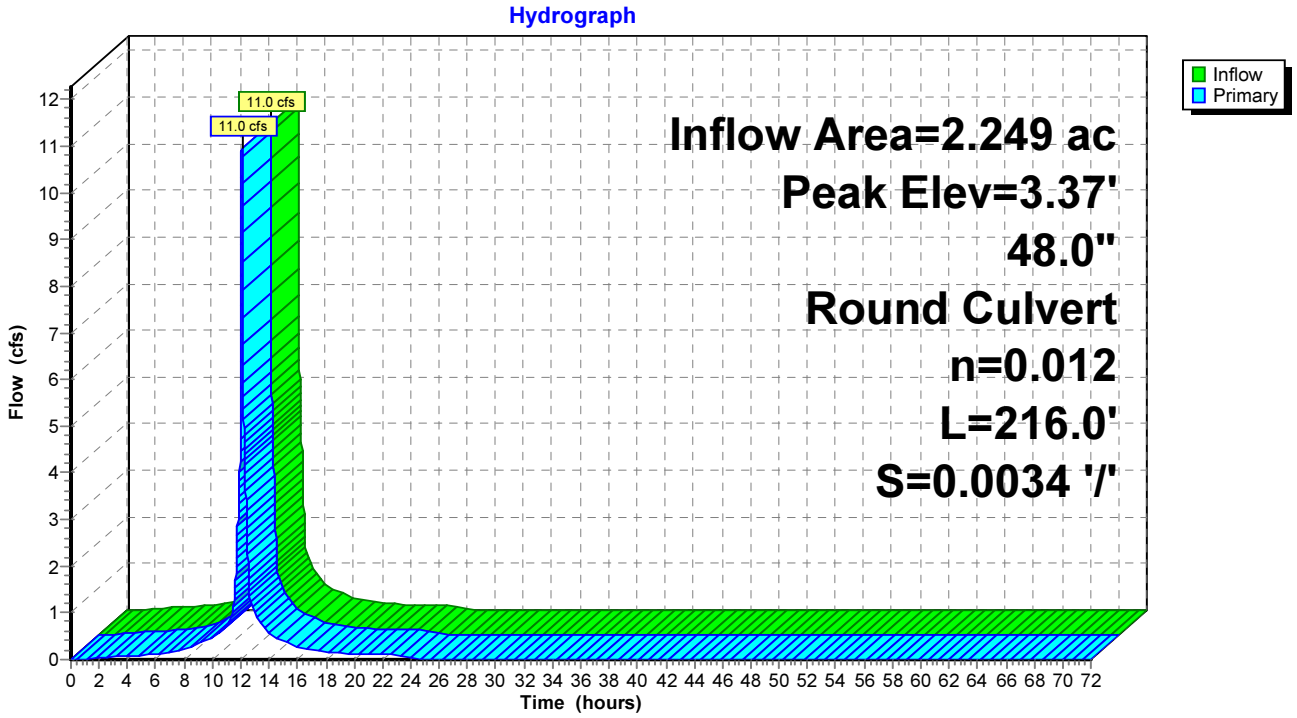
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 4.34" for 10-Year X event
Inflow = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af
Outflow = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af, Atten= 0%, Lag= 0.0 min
Primary = 11.0 cfs @ 12.07 hrs, Volume= 0.813 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.37' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=10.8 cfs @ 12.07 hrs HW=3.37' TW=2.96' (Dynamic Tailwater)
1=Culvert (Outlet Controls 10.8 cfs @ 3.16 fps)

Pond DP1: DMH 3540



Summary for Pond OCS #1:

[57] Hint: Peaked at 6.13' (Flood elevation advised)

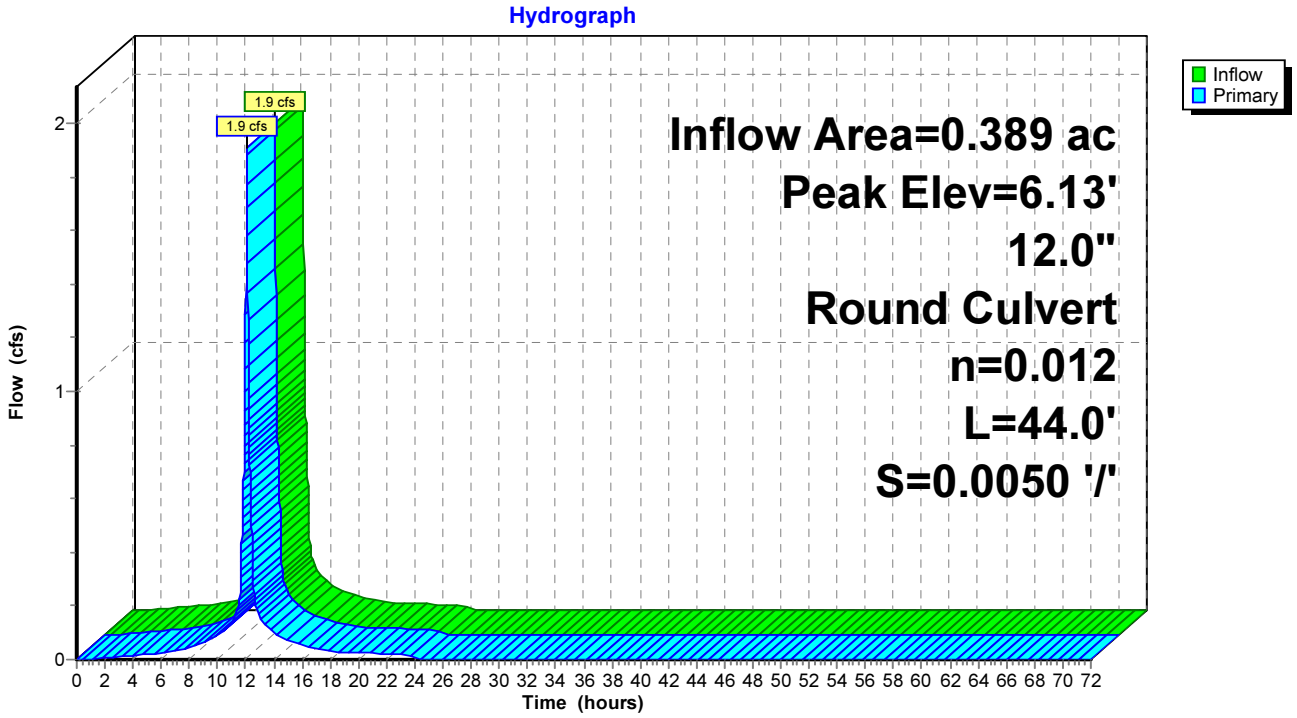
Inflow Area = 0.389 ac, 90.26% Impervious, Inflow Depth = 4.57" for 10-Year X event
Inflow = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af
Outflow = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af, Atten= 0%, Lag= 0.0 min
Primary = 1.9 cfs @ 12.07 hrs, Volume= 0.148 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.13' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.23'	**12.0" Round Culvert** L= 44.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.23' / 5.01' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.9 cfs @ 12.07 hrs HW=6.13' TW=5.75' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.9 cfs @ 3.39 fps)

Pond OCS #1:



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PS1: Runoff Area=16,738 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=2.4 cfs 0.190 af

Subcatchment PS2: Runoff Area=7,730 sf 80.78% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=1.1 cfs 0.086 af

Subcatchment PS2a: Roof Runoff Area=2,509 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.4 cfs 0.028 af

Subcatchment PS2b: Runoff Area=5,028 sf 96.72% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.7 cfs 0.057 af

Subcatchment PS3: Roof Runoff Area=8,542 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=1.2 cfs 0.097 af

Subcatchment PS3a: Roof Runoff Area=4,848 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.7 cfs 0.055 af

Subcatchment PS4: Runoff Area=4,188 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=0.6 cfs 0.047 af

Subcatchment PS5: Runoff Area=20,107 sf 88.74% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=2.9 cfs 0.223 af

Subcatchment PS6: Runoff Area=12,323 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=1.8 cfs 0.140 af

Subcatchment PS7: Runoff Area=8,519 sf 100.00% Impervious Runoff Depth=5.92"
Tc=5.0 min CN=98 Runoff=1.2 cfs 0.097 af

Subcatchment PS8: Runoff Area=7,456 sf 85.80% Impervious Runoff Depth=5.80"
Tc=5.0 min CN=97 Runoff=1.1 cfs 0.083 af

Pond 1P: CB 3528 Peak Elev=6.15' Inflow=5.3 cfs 0.413 af
12.0" Round Culvert n=0.012 L=9.0' S=0.0300 '/' Outflow=5.3 cfs 0.413 af

Pond 5P: DMH 3543 Peak Elev=4.71' Inflow=8.6 cfs 0.644 af
36.0" Round Culvert n=0.012 L=131.0' S=0.0018 '/' Outflow=8.6 cfs 0.644 af

Pond 6P: DMH 3542 Peak Elev=4.19' Inflow=11.0 cfs 0.834 af
36.0" Round Culvert n=0.012 L=74.0' S=0.0015 '/' Outflow=11.0 cfs 0.834 af

Pond 7P: DMH 3541 Peak Elev=3.94' Inflow=12.8 cfs 0.974 af
36.0" Round Culvert n=0.012 L=80.0' S=0.0035 '/' Outflow=12.8 cfs 0.974 af

Pond 8P: DMH 1A Peak Elev=4.46' Inflow=11.0 cfs 0.834 af
36.0" Round Culvert n=0.012 L=29.0' S=0.0017 '/' Outflow=11.0 cfs 0.834 af

Pond 9P: DMH 5438 Peak Elev=3.14' Inflow=14.0 cfs 1.051 af
48.0" Round Culvert n=0.012 L=100.0' S=-0.0073 '/' Outflow=14.0 cfs 1.051 af

Pond 10P: DMH 5217 Peak Elev=2.83' Inflow=14.0 cfs 1.051 af
48.0" Round Culvert n=0.012 L=254.0' S=0.0231 '/' Outflow=14.0 cfs 1.051 af

Pond 11P: CB 3523 Peak Elev=8.15' Inflow=1.8 cfs 0.140 af
12.0" Round Culvert n=0.012 L=35.0' S=-0.0343 '/' Outflow=1.8 cfs 0.140 af

Pond 13P: DMH 12303 Peak Elev=8.02' Inflow=2.2 cfs 0.148 af
12.0" Round Culvert n=0.012 L=170.0' S=0.0050 '/' Outflow=2.2 cfs 0.148 af

Pond 14P: DMH 12631 Peak Elev=7.31' Inflow=3.3 cfs 0.231 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0050 '/' Outflow=3.3 cfs 0.231 af

Pond 15P: CB 8146 Peak Elev=7.35' Inflow=1.1 cfs 0.083 af
12.0" Round Culvert n=0.012 L=16.0' S=0.0050 '/' Outflow=1.1 cfs 0.083 af

Pond 16P: DMH 12632 Peak Elev=6.74' Inflow=3.3 cfs 0.231 af
12.0" Round Culvert n=0.012 L=139.0' S=0.0050 '/' Outflow=3.3 cfs 0.231 af

Pond 17P: DMH 3545 Peak Elev=5.20' Inflow=3.3 cfs 0.231 af
36.0" Round Culvert n=0.012 L=166.0' S=0.0086 '/' Outflow=3.3 cfs 0.231 af

Pond 29P: DMH 3 Peak Elev=3.64' Inflow=1.2 cfs 0.077 af
18.0" Round Culvert n=0.012 L=67.0' S=0.0134 '/' Outflow=1.2 cfs 0.077 af

Pond 35P: CB 3 Peak Elev=7.45' Inflow=1.2 cfs 0.077 af
12.0" Round Culvert n=0.012 L=24.0' S=0.0050 '/' Outflow=1.2 cfs 0.077 af

Pond 36P: CB 3526 Peak Elev=8.25' Inflow=2.2 cfs 0.148 af
12.0" Round Culvert n=0.012 L=18.5' S=0.0054 '/' Outflow=2.2 cfs 0.148 af

Pond 37P: 94 Silva Cells with OCS #2 Peak Elev=11.56' Storage=397 cf Inflow=1.1 cfs 0.083 af
Discarded=0.0 cfs 0.032 af Primary=1.0 cfs 0.052 af Outflow=1.1 cfs 0.083 af

Pond 38P: 73 Silva Cells with OCS #3 Peak Elev=10.18' Storage=273 cf Inflow=1.2 cfs 0.097 af
Discarded=0.0 cfs 0.020 af Primary=1.2 cfs 0.077 af Outflow=1.2 cfs 0.097 af

Pond CB1: Peak Elev=6.44' Inflow=1.7 cfs 0.133 af
12.0" Round Culvert n=0.012 L=6.0' S=0.0067 '/' Outflow=1.7 cfs 0.133 af

Pond CB2: Peak Elev=6.35' Inflow=0.7 cfs 0.057 af
12.0" Round Culvert n=0.012 L=30.0' S=0.0037 '/' Outflow=0.7 cfs 0.057 af

Pond DMH1: Peak Elev=5.90' Inflow=2.4 cfs 0.190 af
12.0" Round Culvert n=0.012 L=41.0' S=0.0059 '/' Outflow=2.4 cfs 0.190 af

Pond DP1: DMH 3540 Peak Elev=3.59' Inflow=14.0 cfs 1.051 af
48.0" Round Culvert n=0.012 L=216.0' S=0.0034 '/' Outflow=14.0 cfs 1.051 af

Pond OCS #1: Peak Elev=6.31' Inflow=2.4 cfs 0.190 af
12.0" Round Culvert n=0.012 L=44.0' S=0.0050 '/' Outflow=2.4 cfs 0.190 af

Total Runoff Area = 2.249 ac Runoff Volume = 1.102 af Average Runoff Depth = 5.88"
5.08% Pervious = 0.114 ac 94.92% Impervious = 2.135 ac

Summary for Subcatchment PS1:

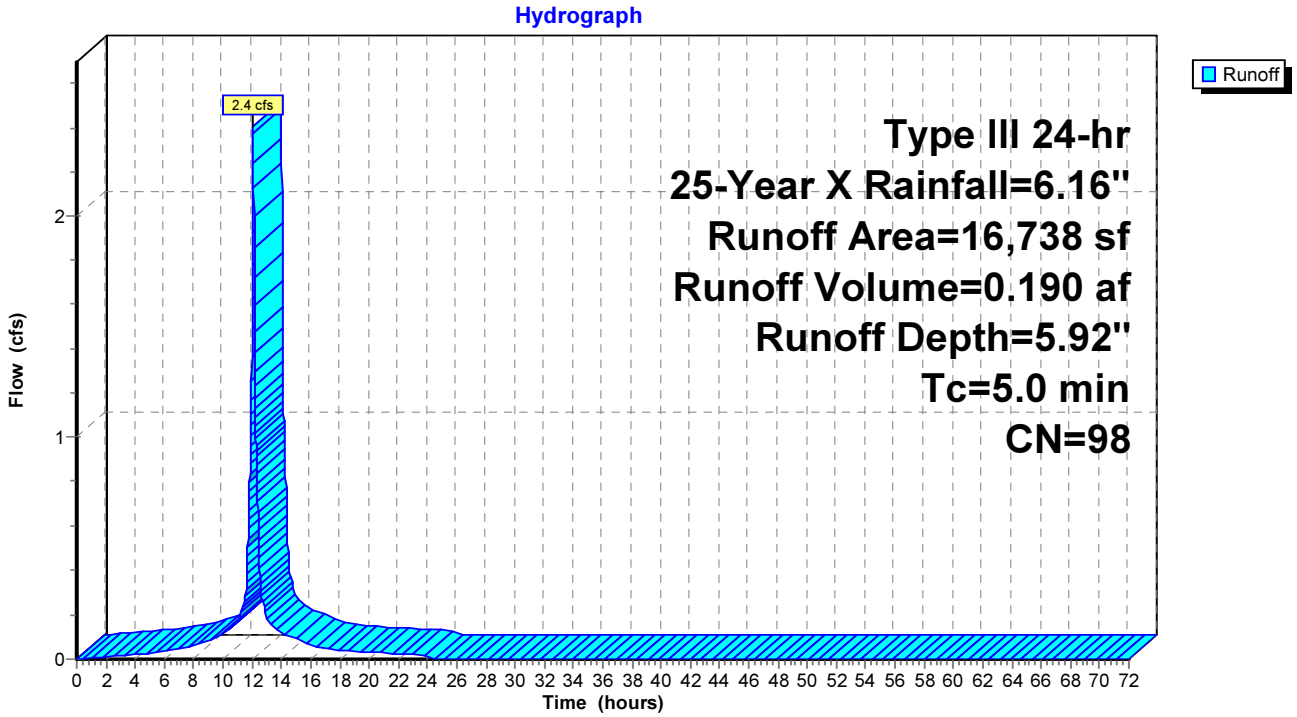
Runoff = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
16,738	98	Roofs, HSG C
16,738		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS1:



Summary for Subcatchment PS2:

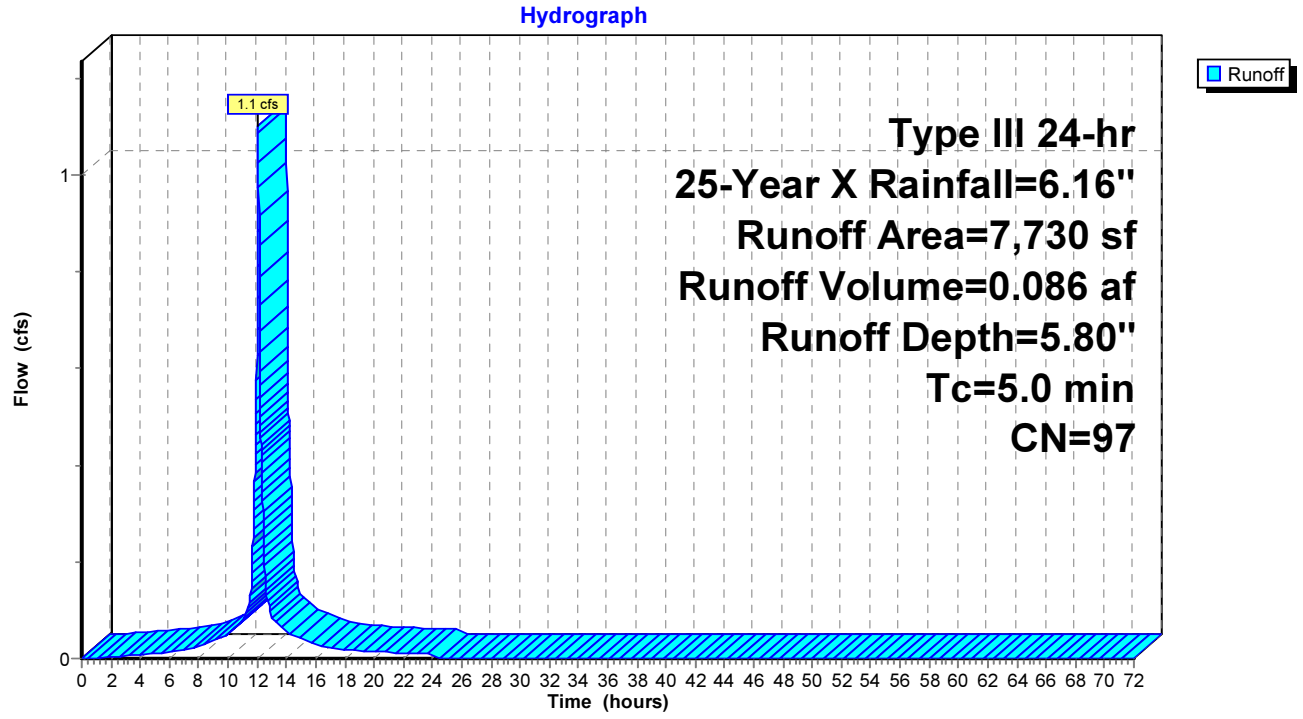
Runoff = 1.1 cfs @ 12.07 hrs, Volume= 0.086 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
6,244	98	Paved parking, HSG C
1,486	91	Fallow, bare soil, HSG C
7,730	97	Weighted Average
1,486		19.22% Pervious Area
6,244		80.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2:



Summary for Subcatchment PS2a: Roof

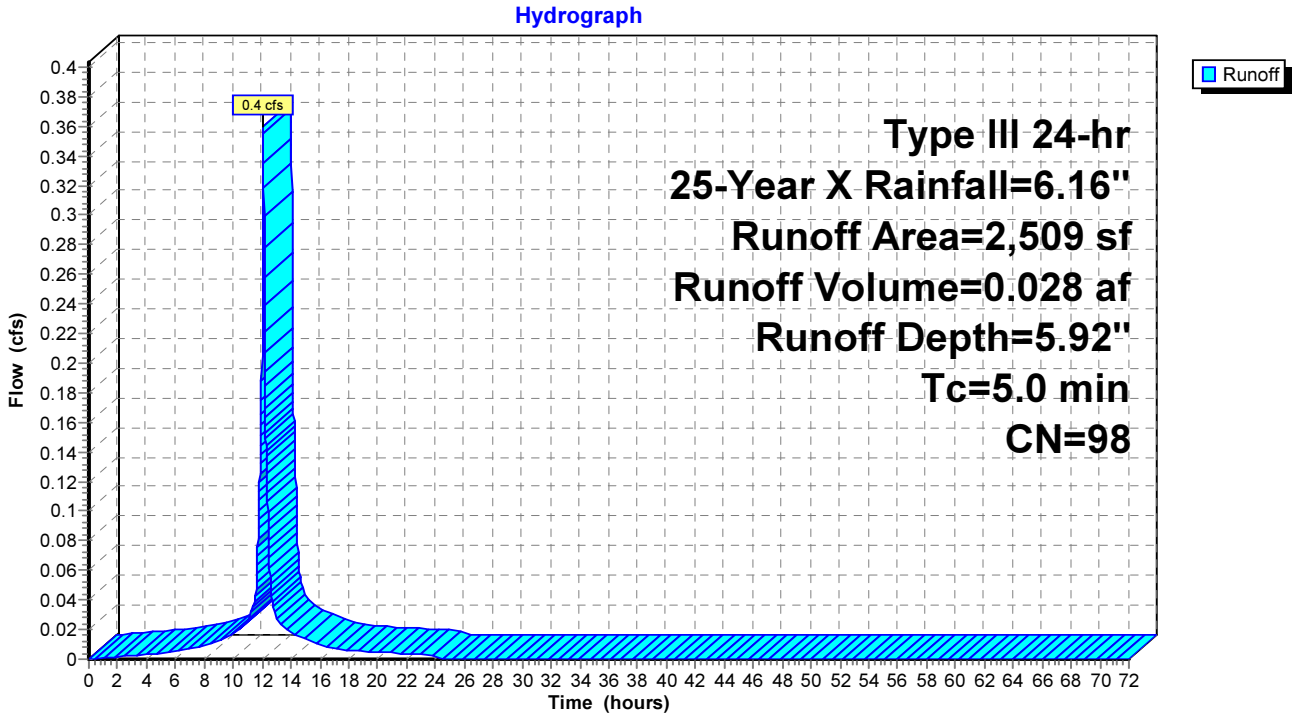
Runoff = 0.4 cfs @ 12.07 hrs, Volume= 0.028 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
2,509	98	Roofs, HSG C
2,509		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2a: Roof



Summary for Subcatchment PS2b:

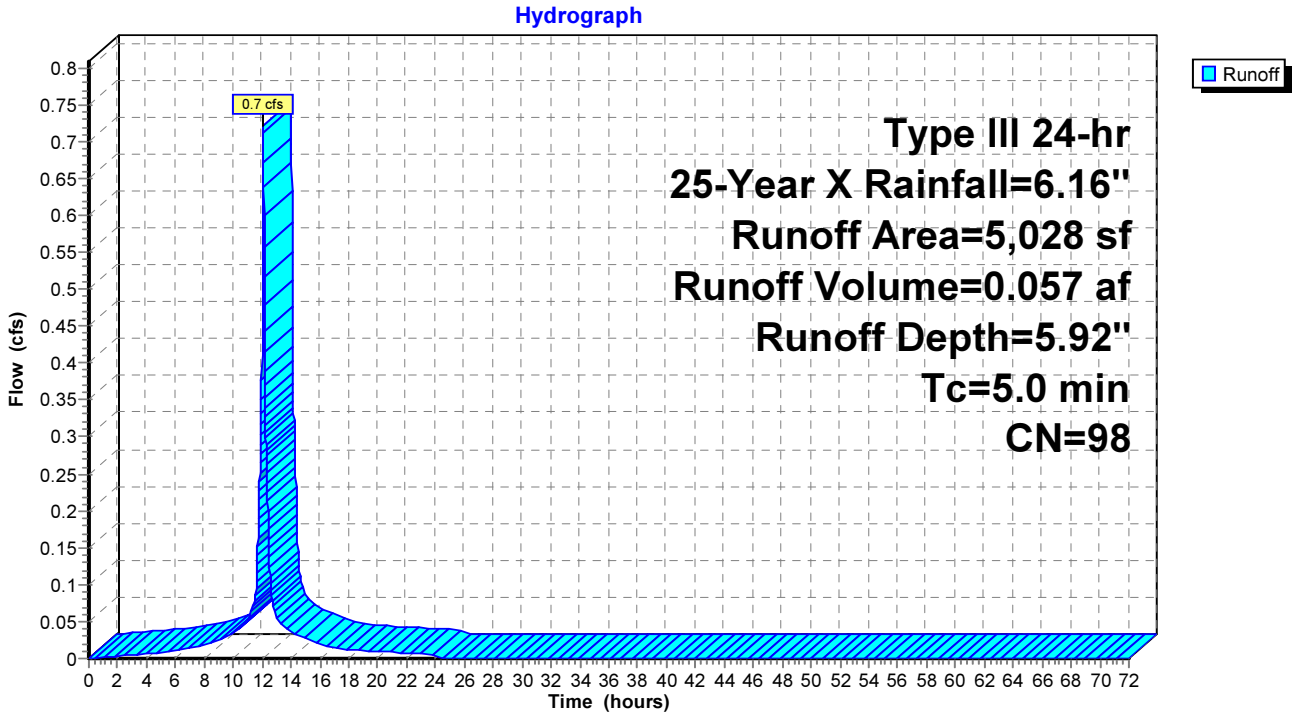
Runoff = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
4,863	98	Paved parking, HSG C
165	91	Fallow, bare soil, HSG C
5,028	98	Weighted Average
165		3.28% Pervious Area
4,863		96.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS2b:



Summary for Subcatchment PS3: Roof

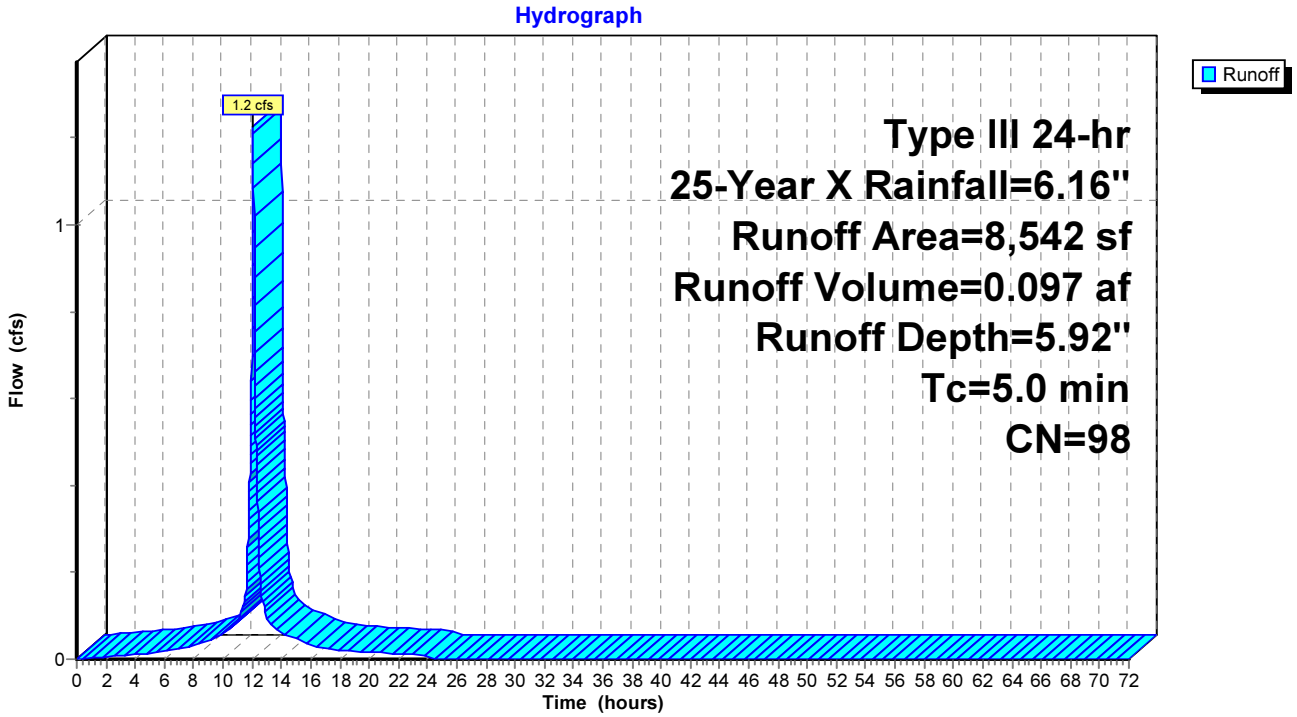
Runoff = 1.2 cfs @ 12.07 hrs, Volume= 0.097 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
8,542	98	Roofs, HSG C
8,542		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS3: Roof



Summary for Subcatchment PS3a: Roof

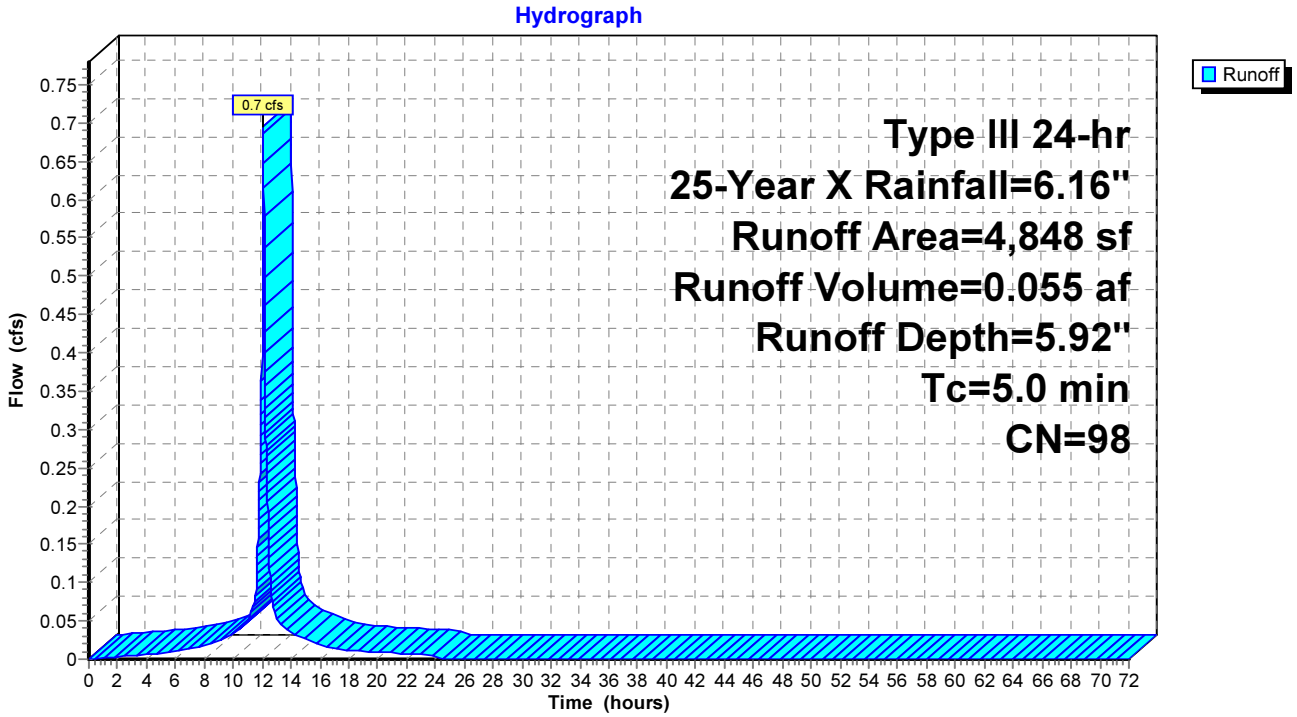
Runoff = 0.7 cfs @ 12.07 hrs, Volume= 0.055 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
4,848	98	Roofs, HSG C
4,848		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS3a: Roof



Summary for Subcatchment PS4:

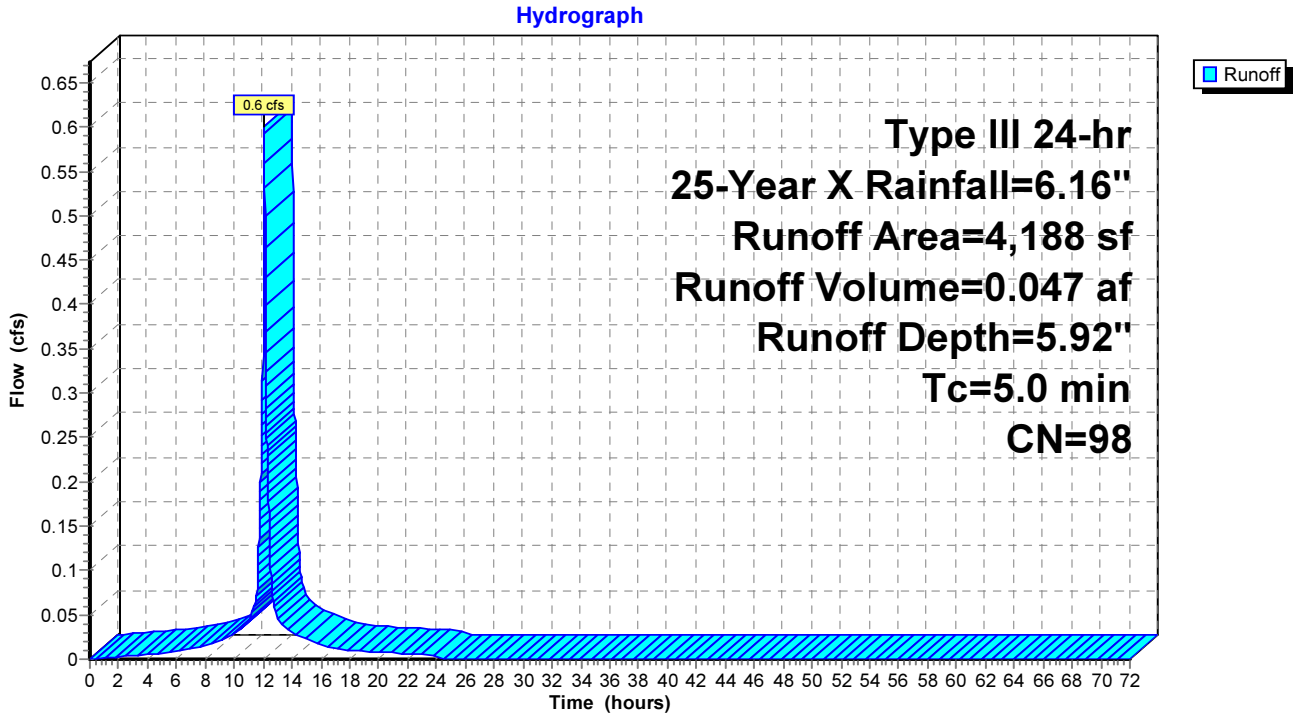
Runoff = 0.6 cfs @ 12.07 hrs, Volume= 0.047 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
4,188	98	Roofs, HSG C
4,188		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS4:



Summary for Subcatchment PS5:

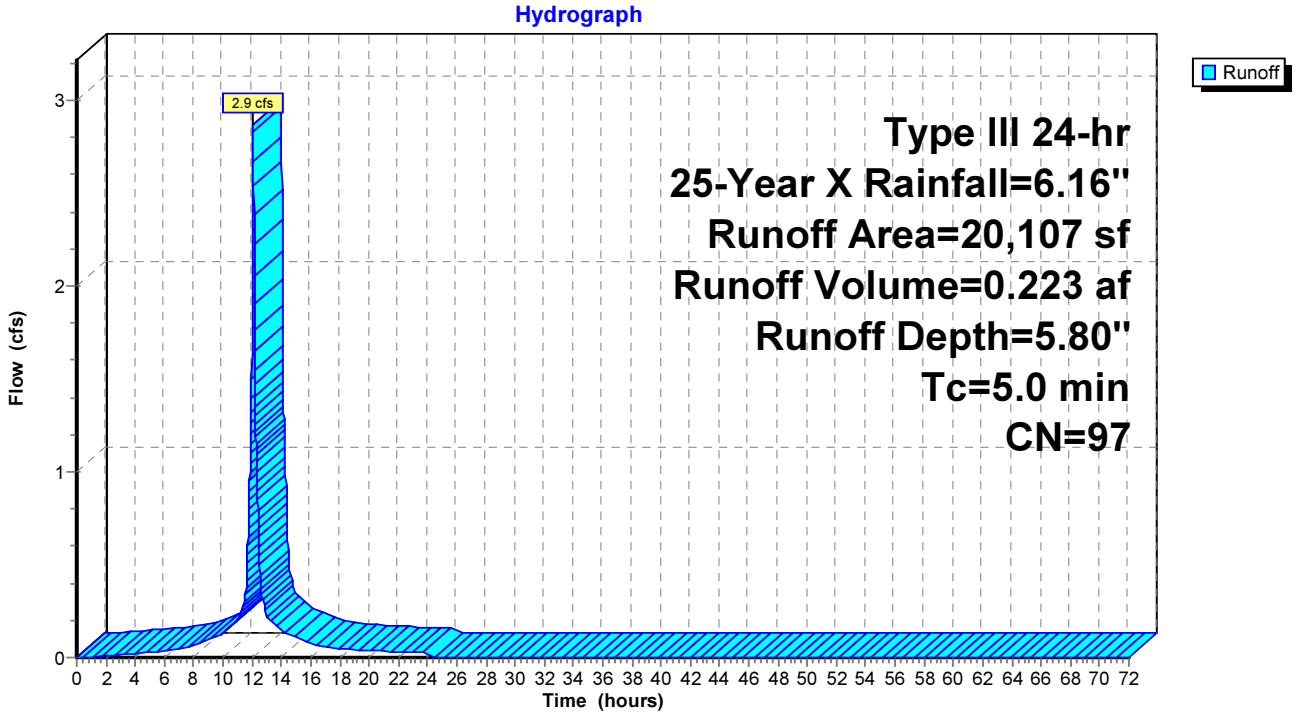
Runoff = 2.9 cfs @ 12.07 hrs, Volume= 0.223 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

	Area (sf)	CN	Description
	269	98	Paved parking, HSG C
	11,300	98	Paved roads w/curbs & sewers, HSG C
	3,499	98	Paved roads w/curbs & sewers, HSG C
	2,439	98	Paved roads w/curbs & sewers, HSG C
*	336	98	Gravel roads, HSG C
	2,264	91	Fallow, bare soil, HSG C
	20,107	97	Weighted Average
	2,264		11.26% Pervious Area
	17,843		88.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS5:



Summary for Subcatchment PS6:

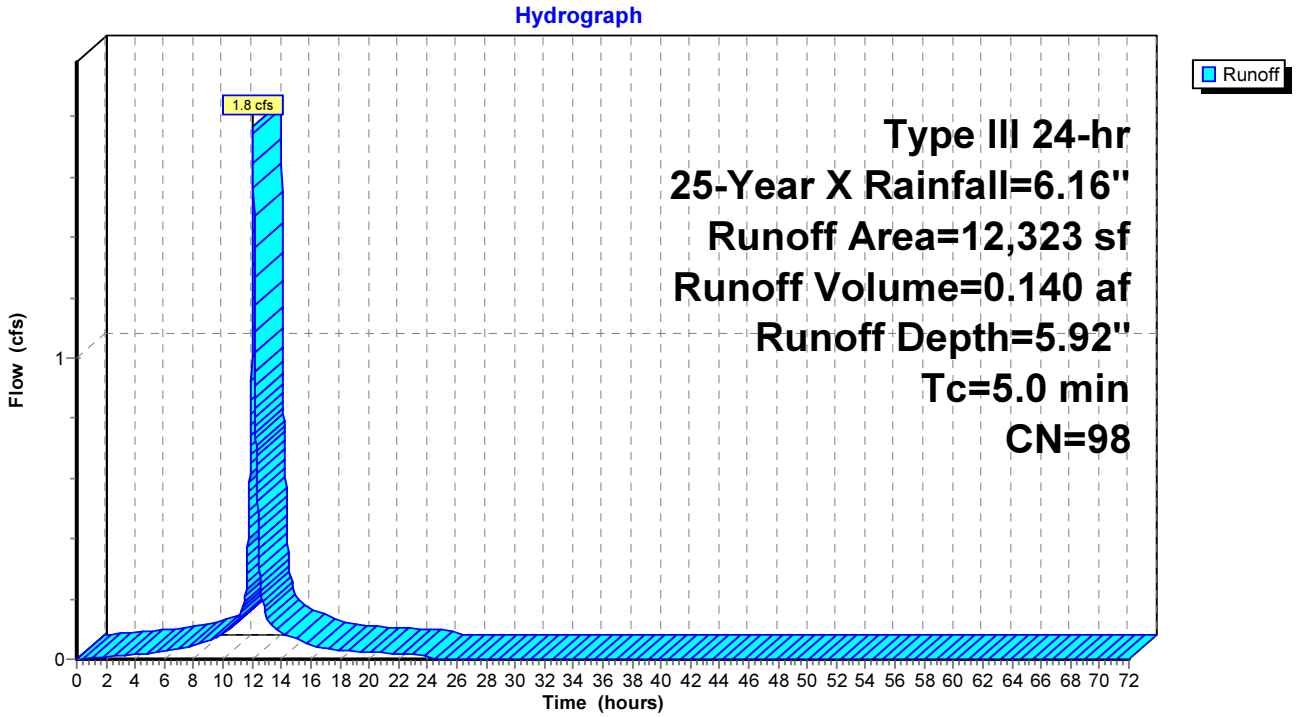
Runoff = 1.8 cfs @ 12.07 hrs, Volume= 0.140 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
12,323	98	Paved roads w/curbs & sewers, HSG C
12,323		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS6:



Summary for Subcatchment PS7:

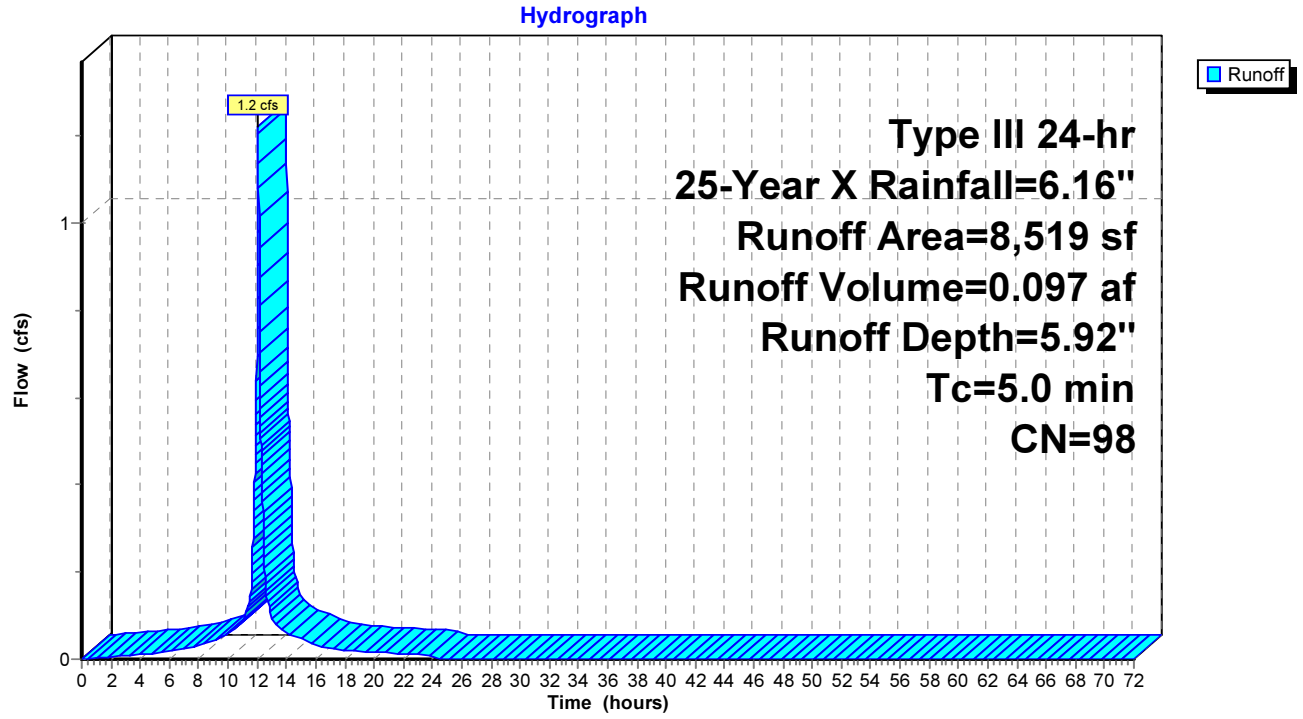
Runoff = 1.2 cfs @ 12.07 hrs, Volume= 0.097 af, Depth= 5.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

Area (sf)	CN	Description
8,519	98	Paved roads w/curbs & sewers, HSG C
8,519		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS7:



Summary for Subcatchment PS8:

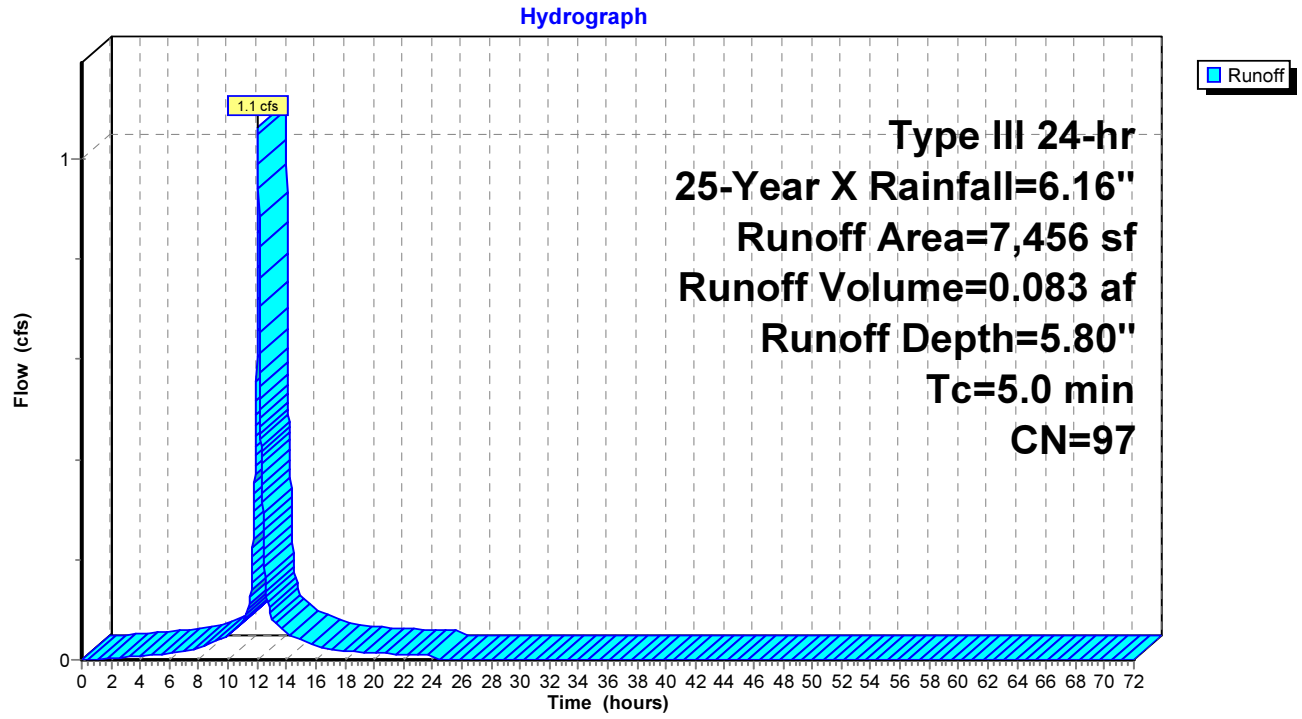
Runoff = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af, Depth= 5.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year X Rainfall=6.16"

	Area (sf)	CN	Description
	4,674	98	Paved roads w/curbs & sewers, HSG C
	1,563	98	Paved roads w/curbs & sewers, HSG C
	121	98	Paved roads w/curbs & sewers, HSG C
*	39	98	Gravel roads, HSG C
	1,059	91	Fallow, bare soil, HSG C
	7,456	97	Weighted Average
	1,059		14.20% Pervious Area
	6,397		85.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment PS8:



Summary for Pond 1P: CB 3528

[57] Hint: Peaked at 6.15' (Flood elevation advised)

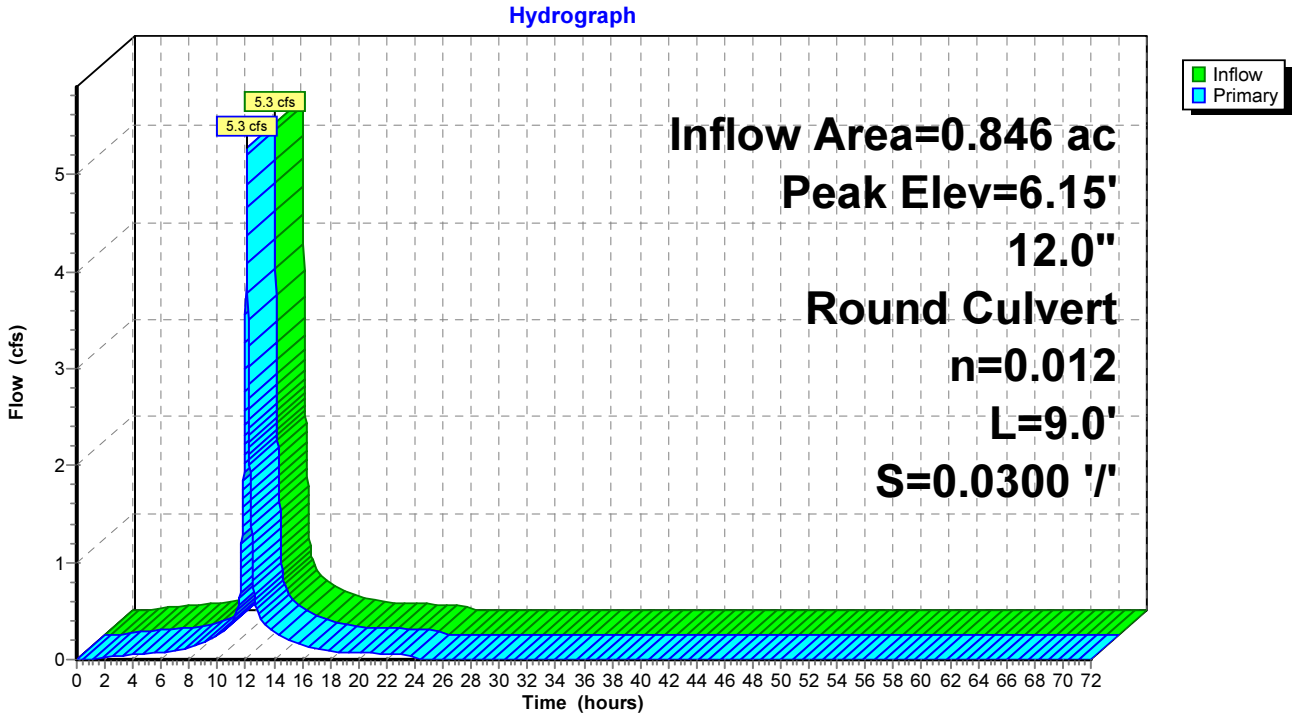
Inflow Area = 0.846 ac, 93.86% Impervious, Inflow Depth = 5.86" for 25-Year X event
Inflow = 5.3 cfs @ 12.07 hrs, Volume= 0.413 af
Outflow = 5.3 cfs @ 12.07 hrs, Volume= 0.413 af, Atten= 0%, Lag= 0.0 min
Primary = 5.3 cfs @ 12.07 hrs, Volume= 0.413 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.15' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.40'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.40' / 4.13' S= 0.0300 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=5.3 cfs @ 12.07 hrs HW=6.15' TW=4.70' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 5.3 cfs @ 6.72 fps)

Pond 1P: CB 3528



Summary for Pond 5P: DMH 3543

[57] Hint: Peaked at 4.71' (Flood elevation advised)

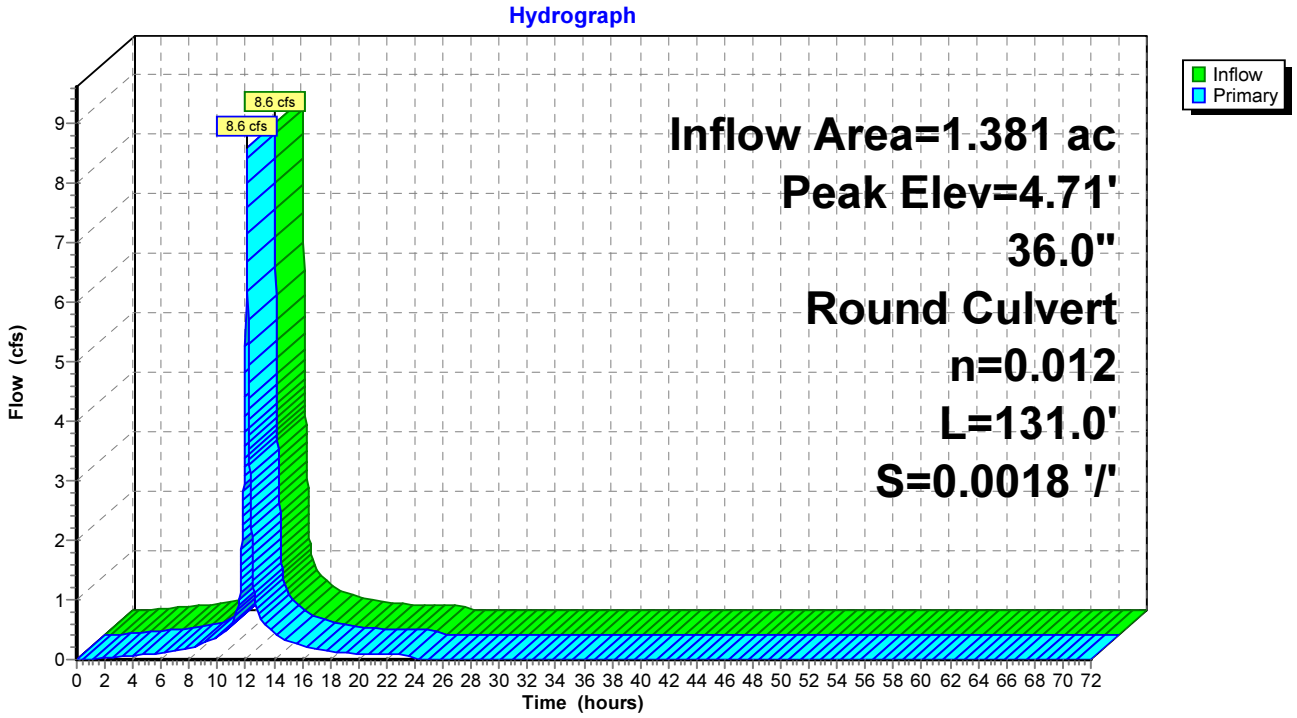
Inflow Area = 1.381 ac, 94.48% Impervious, Inflow Depth = 5.59" for 25-Year X event
Inflow = 8.6 cfs @ 12.07 hrs, Volume= 0.644 af
Outflow = 8.6 cfs @ 12.07 hrs, Volume= 0.644 af, Atten= 0%, Lag= 0.0 min
Primary = 8.6 cfs @ 12.07 hrs, Volume= 0.644 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.71' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.91'	**36.0" Round Culvert** L= 131.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.91' / 2.67' S= 0.0018 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=8.4 cfs @ 12.07 hrs HW=4.70' TW=4.46' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 8.4 cfs @ 2.73 fps)

Pond 5P: DMH 3543



Summary for Pond 6P: DMH 3542

[57] Hint: Peaked at 4.19' (Flood elevation advised)

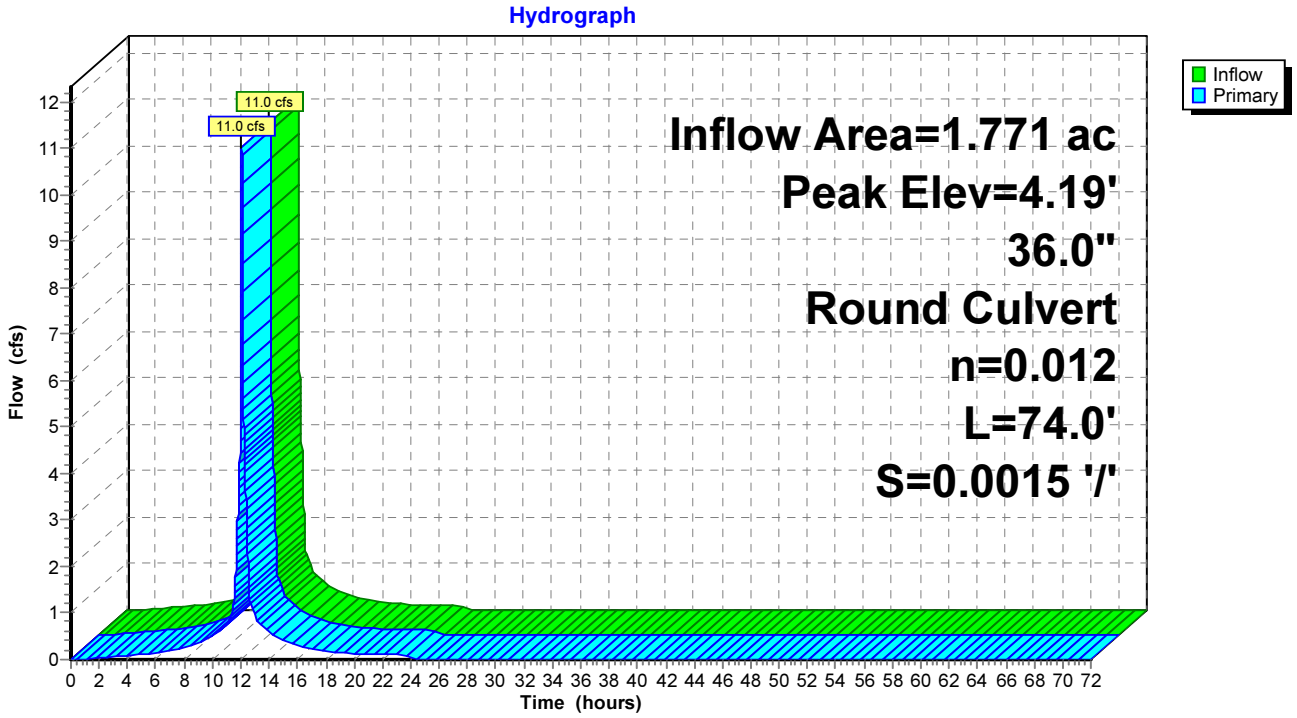
Inflow Area = 1.771 ac, 93.55% Impervious, Inflow Depth = 5.65" for 25-Year X event
Inflow = 11.0 cfs @ 12.07 hrs, Volume= 0.834 af
Outflow = 11.0 cfs @ 12.07 hrs, Volume= 0.834 af, Atten= 0%, Lag= 0.0 min
Primary = 11.0 cfs @ 12.07 hrs, Volume= 0.834 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.19' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.21'	**36.0" Round Culvert** L= 74.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.21' / 2.10' S= 0.0015 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=10.8 cfs @ 12.07 hrs HW=4.19' TW=3.94' (Dynamic Tailwater)
1=Culvert (Outlet Controls 10.8 cfs @ 3.11 fps)

Pond 6P: DMH 3542



Summary for Pond 7P: DMH 3541

[57] Hint: Peaked at 3.94' (Flood elevation advised)

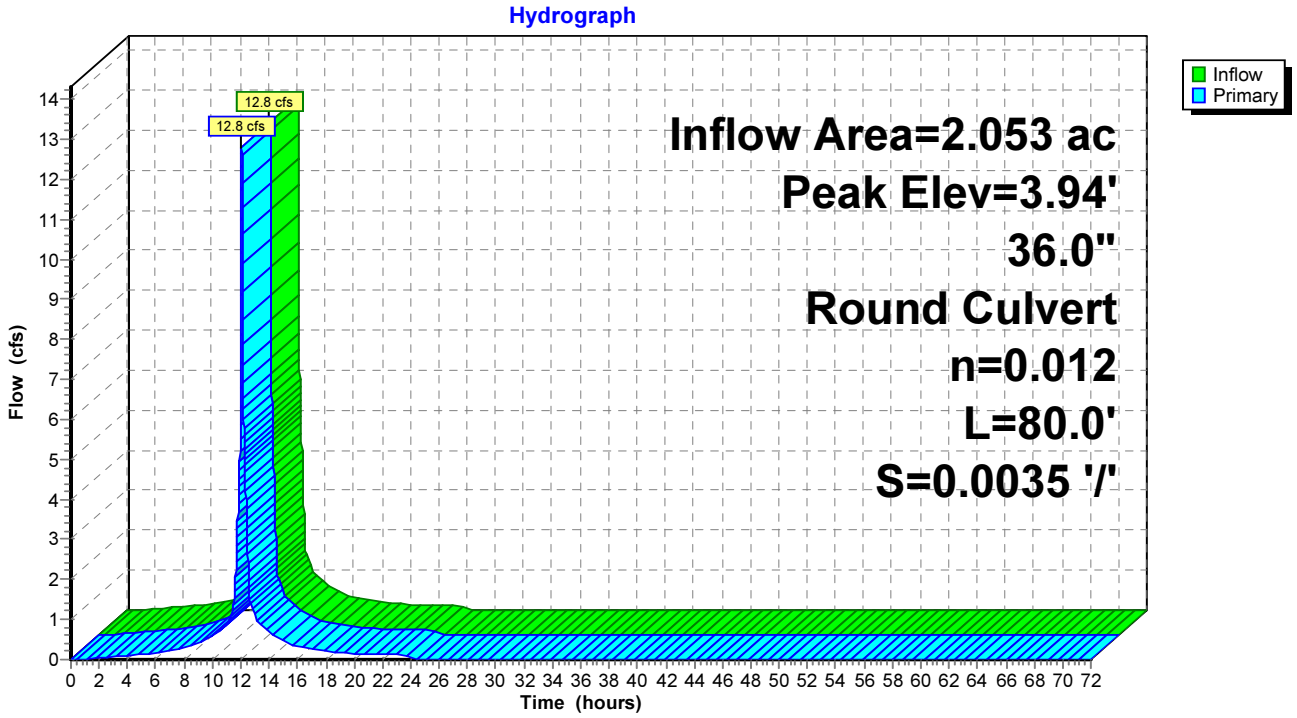
Inflow Area = 2.053 ac, 94.44% Impervious, Inflow Depth = 5.69" for 25-Year X event
Inflow = 12.8 cfs @ 12.07 hrs, Volume= 0.974 af
Outflow = 12.8 cfs @ 12.07 hrs, Volume= 0.974 af, Atten= 0%, Lag= 0.0 min
Primary = 12.8 cfs @ 12.07 hrs, Volume= 0.974 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.94' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.96'	**36.0" Round Culvert** L= 80.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.96' / 1.68' S= 0.0035 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=12.7 cfs @ 12.07 hrs HW=3.94' TW=3.59' (Dynamic Tailwater)
1=Culvert (Outlet Controls 12.7 cfs @ 3.65 fps)

Pond 7P: DMH 3541



Summary for Pond 8P: DMH 1A

[57] Hint: Peaked at 4.46' (Flood elevation advised)

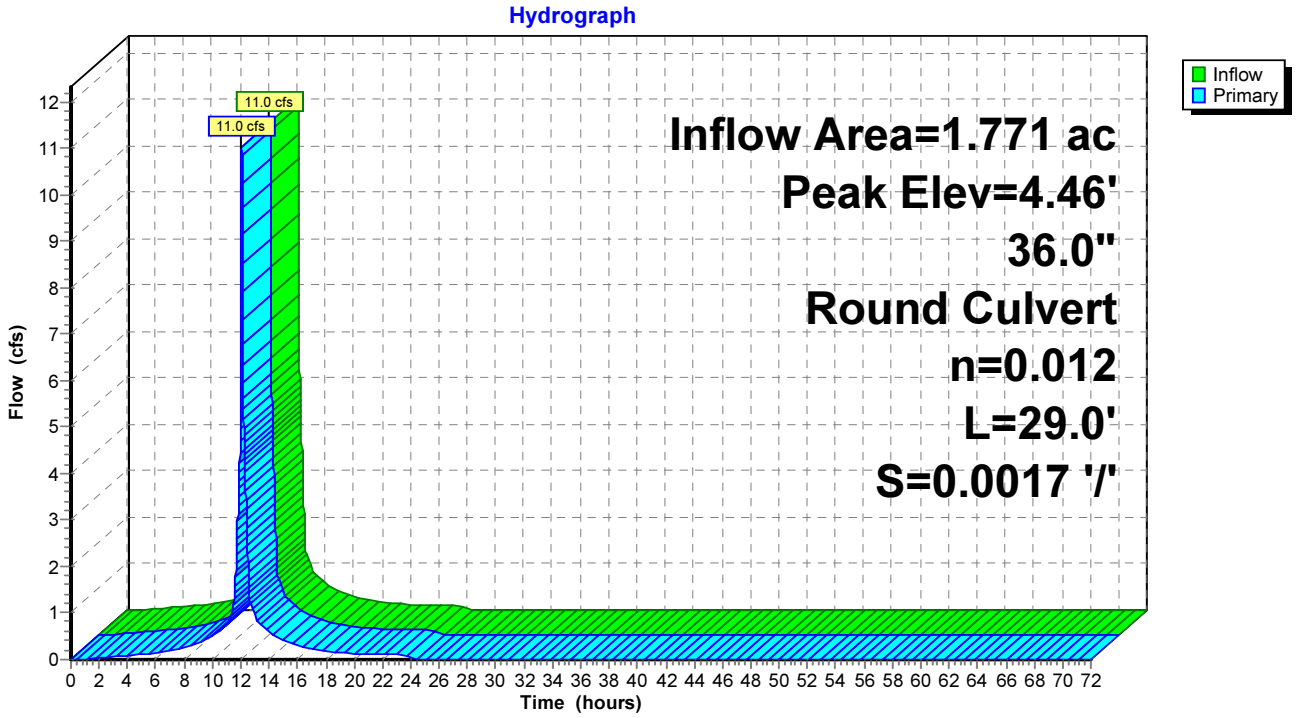
Inflow Area = 1.771 ac, 93.55% Impervious, Inflow Depth = 5.65" for 25-Year X event
Inflow = 11.0 cfs @ 12.07 hrs, Volume= 0.834 af
Outflow = 11.0 cfs @ 12.07 hrs, Volume= 0.834 af, Atten= 0%, Lag= 0.0 min
Primary = 11.0 cfs @ 12.07 hrs, Volume= 0.834 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 4.46' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.66'	**36.0" Round Culvert** L= 29.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 2.66' / 2.61' S= 0.0017 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=10.9 cfs @ 12.07 hrs HW=4.46' TW=4.19' (Dynamic Tailwater)
1=Culvert (Outlet Controls 10.9 cfs @ 3.53 fps)

Pond 8P: DMH 1A



Summary for Pond 9P: DMH 5438

[57] Hint: Peaked at 3.14' (Flood elevation advised)

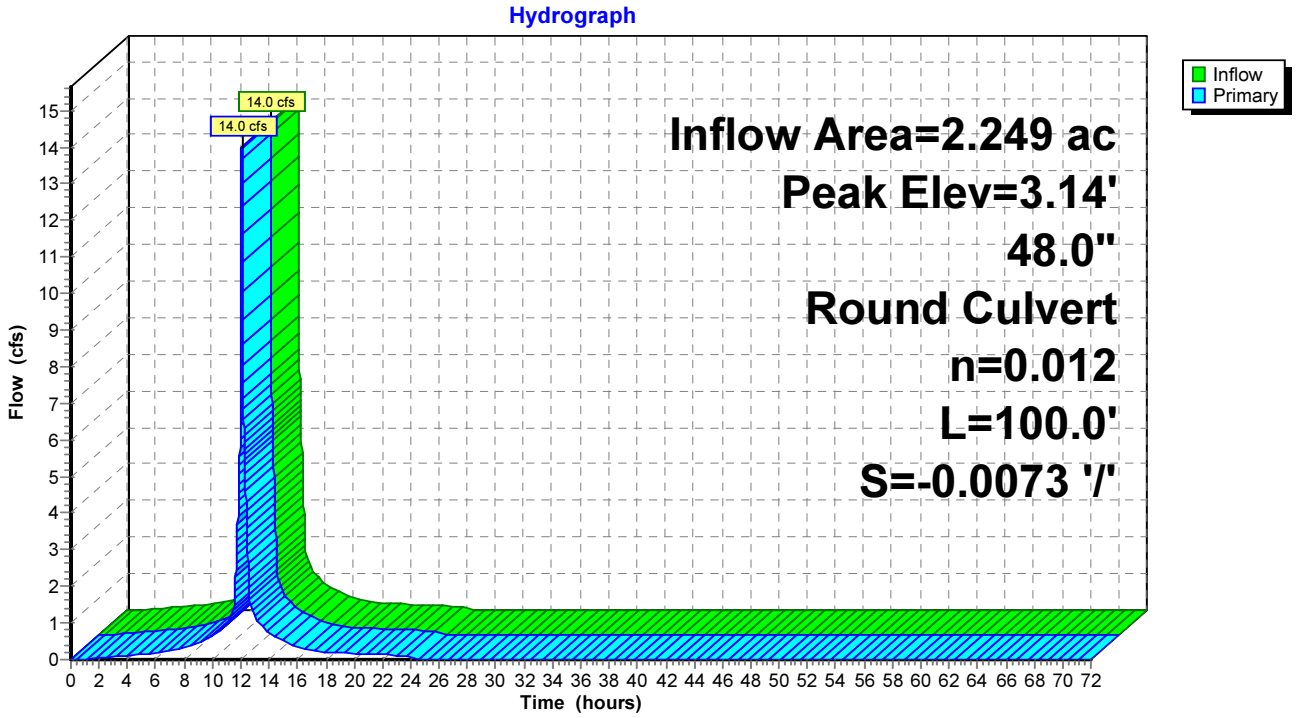
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 5.61" for 25-Year X event
Inflow = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af
Outflow = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af, Atten= 0%, Lag= 0.0 min
Primary = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.14' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 100.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 0.94' / 1.67' S= -0.0073 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=14.0 cfs @ 12.07 hrs HW=3.14' TW=2.83' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 14.0 cfs @ 3.33 fps)

Pond 9P: DMH 5438



Summary for Pond 10P: DMH 5217

[57] Hint: Peaked at 2.83' (Flood elevation advised)

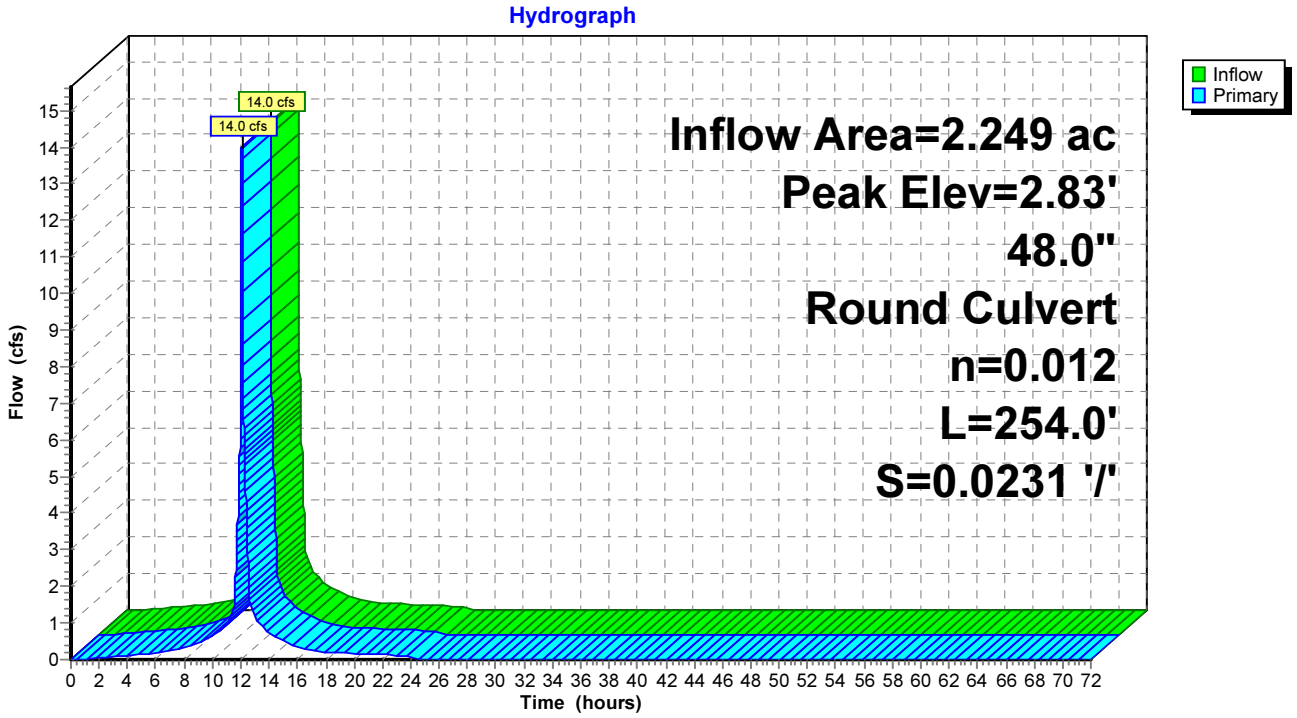
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 5.61" for 25-Year X event
Inflow = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af
Outflow = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af, Atten= 0%, Lag= 0.0 min
Primary = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 2.83' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.67'	**48.0" Round Culvert** L= 254.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.67' / -4.20' S= 0.0231 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=14.0 cfs @ 12.07 hrs HW=2.83' (Free Discharge)
└**1=Culvert** (Inlet Controls 14.0 cfs @ 4.59 fps)

Pond 10P: DMH 5217



Summary for Pond 11P: CB 3523

[57] Hint: Peaked at 8.15' (Flood elevation advised)

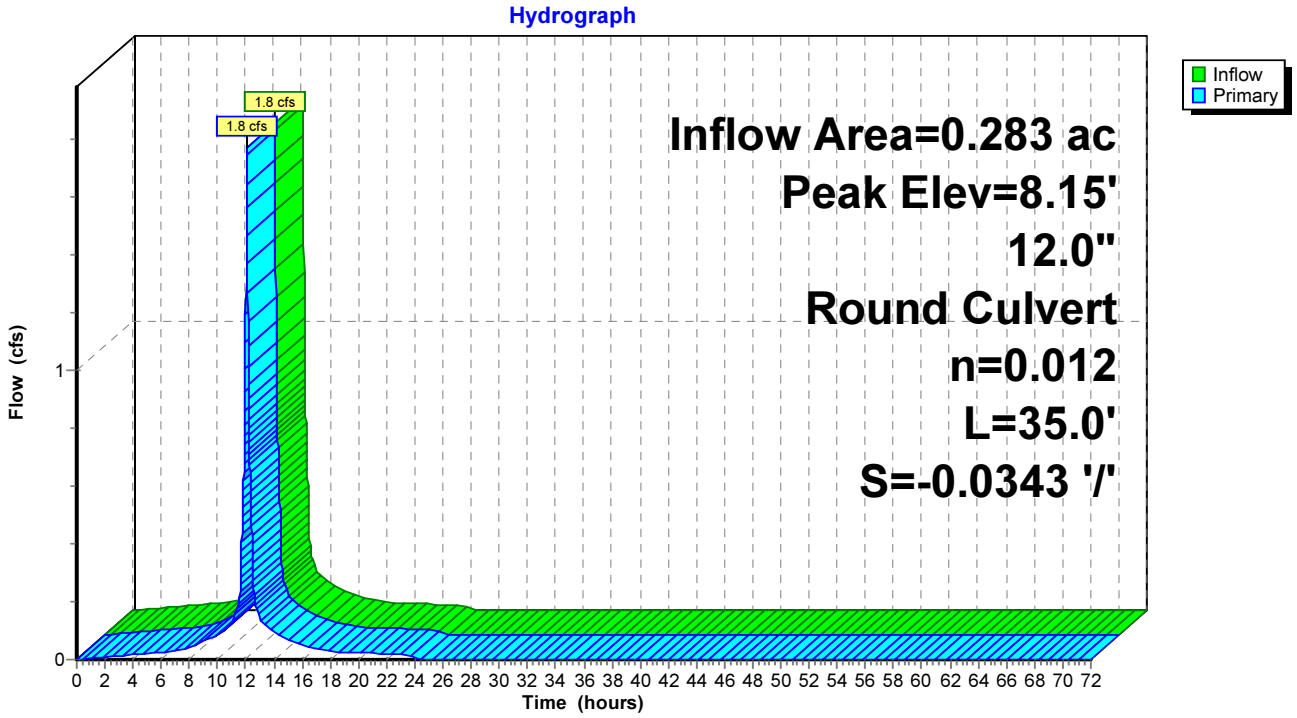
Inflow Area = 0.283 ac,100.00% Impervious, Inflow Depth = 5.92" for 25-Year X event
Inflow = 1.8 cfs @ 12.07 hrs, Volume= 0.140 af
Outflow = 1.8 cfs @ 12.07 hrs, Volume= 0.140 af, Atten= 0%, Lag= 0.0 min
Primary = 1.8 cfs @ 12.07 hrs, Volume= 0.140 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.15' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	7.52'	**12.0" Round Culvert** L= 35.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.32' / 7.52' S= -0.0343 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.8 cfs @ 12.07 hrs HW=8.15' TW=3.94' (Dynamic Tailwater)
1=Culvert (Inlet Controls 1.8 cfs @ 3.38 fps)

Pond 11P: CB 3523



Summary for Pond 13P: DMH 12303

[57] Hint: Peaked at 8.02' (Flood elevation advised)

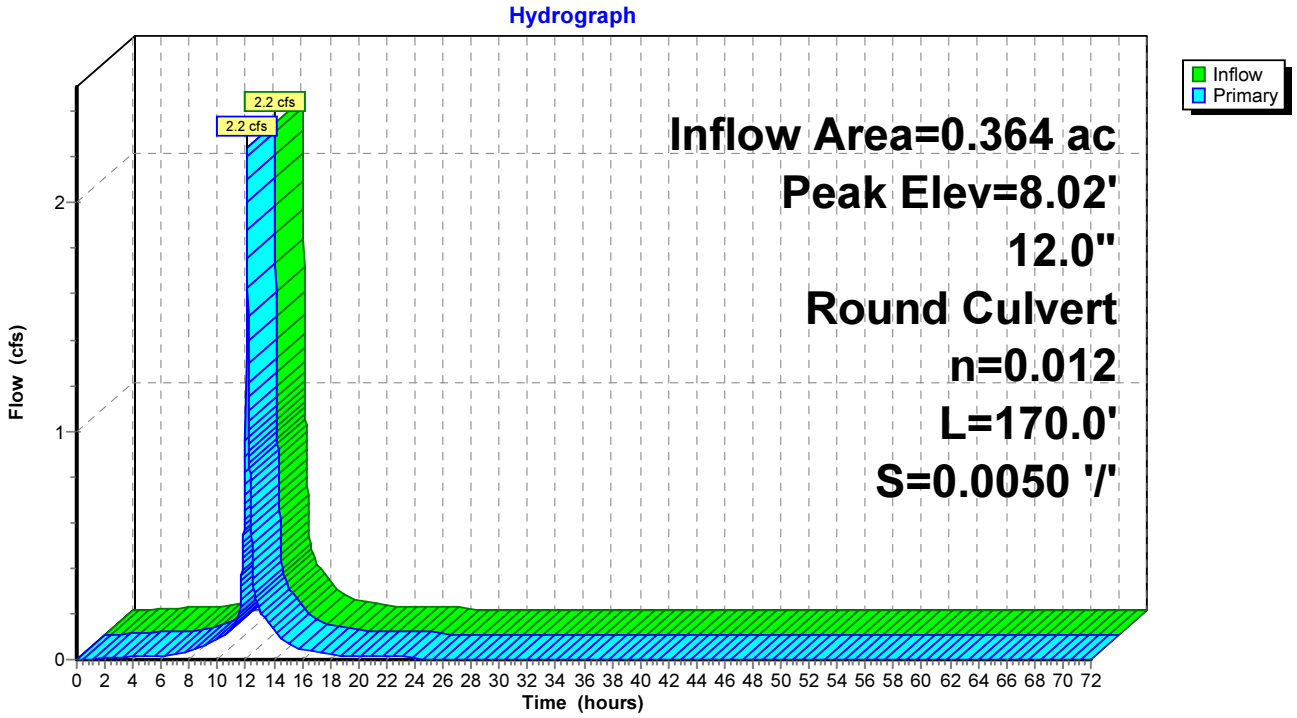
Inflow Area = 0.364 ac,100.00% Impervious, Inflow Depth = 4.88" for 25-Year X event
Inflow = 2.2 cfs @ 12.07 hrs, Volume= 0.148 af
Outflow = 2.2 cfs @ 12.07 hrs, Volume= 0.148 af, Atten= 0%, Lag= 0.0 min
Primary = 2.2 cfs @ 12.07 hrs, Volume= 0.148 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.02' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.09'	**12.0" Round Culvert** L= 170.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.09' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.2 cfs @ 12.07 hrs HW=8.01' TW=7.30' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.2 cfs @ 2.81 fps)

Pond 13P: DMH 12303



Summary for Pond 14P: DMH 12631

[57] Hint: Peaked at 7.31' (Flood elevation advised)
[80] Warning: Exceeded Pond 15P by 0.24' @ 12.04 hrs (2.3 cfs 0.006 af)

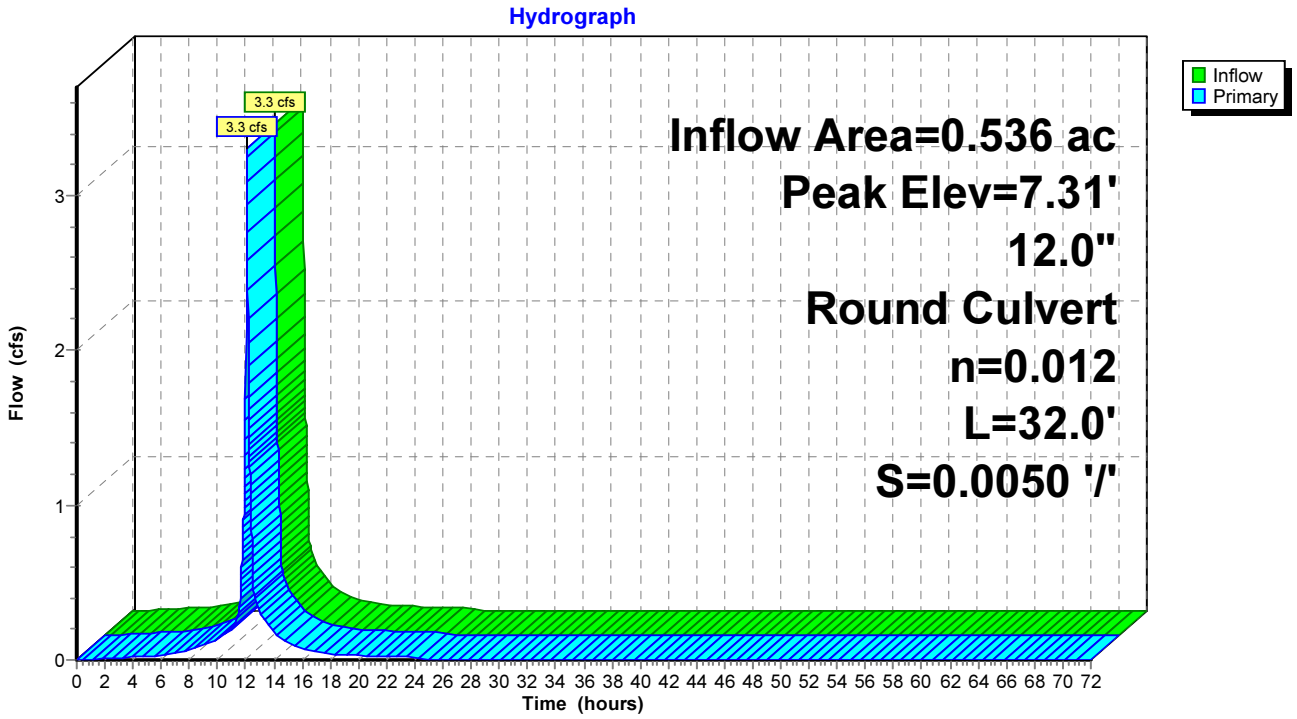
Inflow Area =	0.536 ac,	95.46% Impervious,	Inflow Depth =	5.18"	for 25-Year X event
Inflow =	3.3 cfs @	12.07 hrs,	Volume=	0.231 af	
Outflow =	3.3 cfs @	12.07 hrs,	Volume=	0.231 af,	Atten= 0%, Lag= 0.0 min
Primary =	3.3 cfs @	12.07 hrs,	Volume=	0.231 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.31' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.24'	**12.0" Round Culvert** L= 32.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.24' / 5.08' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=3.3 cfs @ 12.07 hrs HW=7.30' TW=6.74' (Dynamic Tailwater)
↳**1=Culvert** (Outlet Controls 3.3 cfs @ 4.20 fps)

Pond 14P: DMH 12631



Summary for Pond 15P: CB 8146

[57] Hint: Peaked at 7.35' (Flood elevation advised)

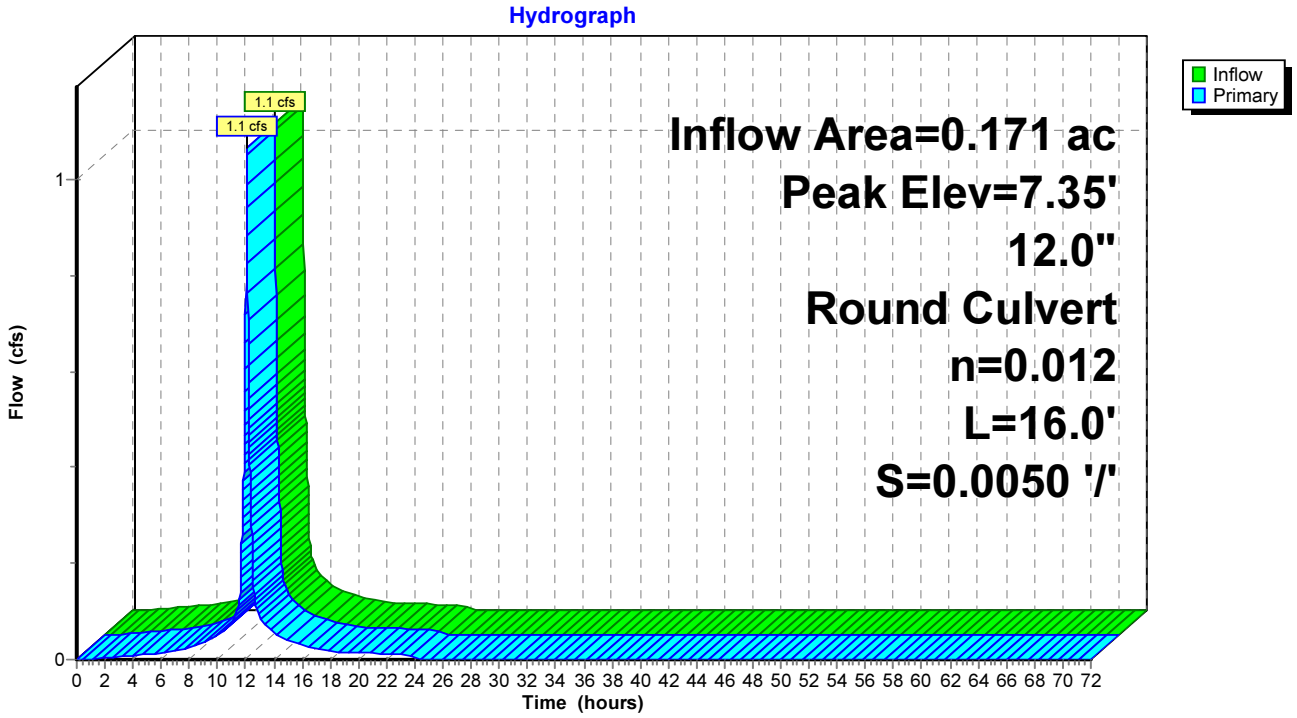
Inflow Area = 0.171 ac, 85.80% Impervious, Inflow Depth = 5.80" for 25-Year X event
Inflow = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af
Outflow = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.35' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.32'	**12.0" Round Culvert** L= 16.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.32' / 5.24' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.6 cfs @ 12.07 hrs HW=7.33' TW=7.31' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.6 cfs @ 0.82 fps)

Pond 15P: CB 8146



Summary for Pond 16P: DMH 12632

[57] Hint: Peaked at 6.74' (Flood elevation advised)

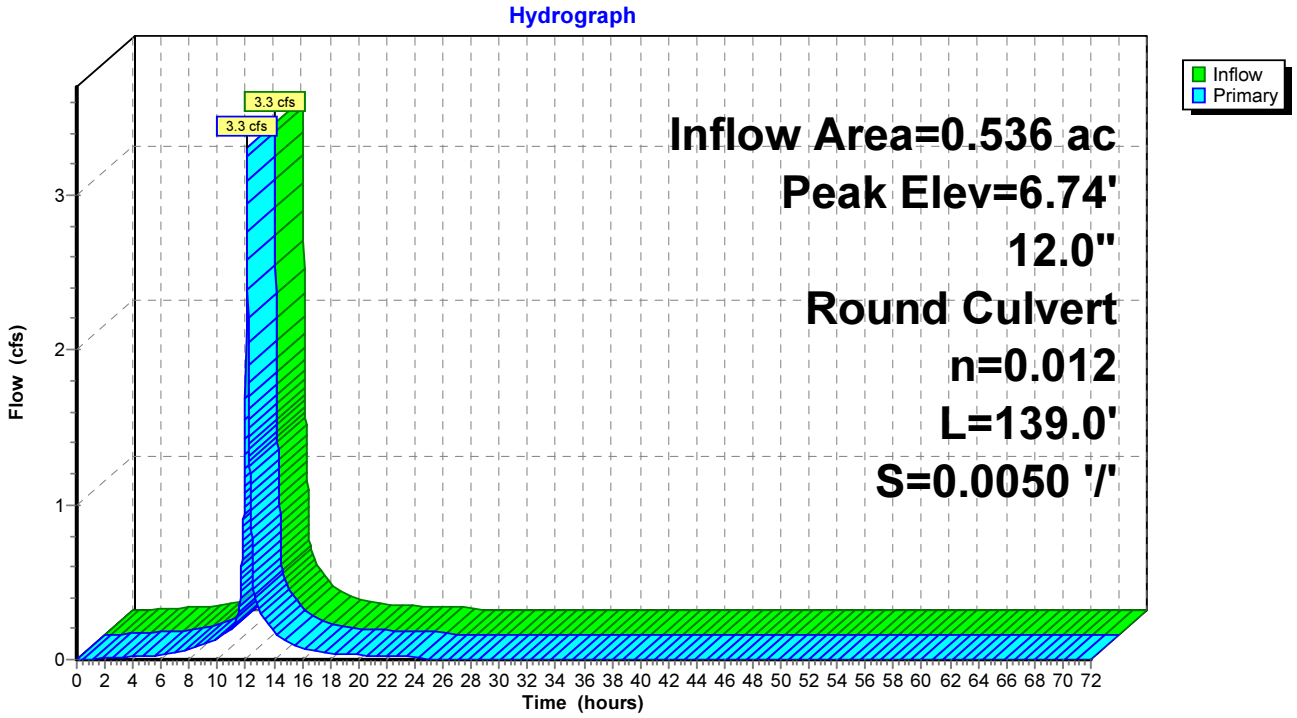
Inflow Area = 0.536 ac, 95.46% Impervious, Inflow Depth = 5.18" for 25-Year X event
Inflow = 3.3 cfs @ 12.07 hrs, Volume= 0.231 af
Outflow = 3.3 cfs @ 12.07 hrs, Volume= 0.231 af, Atten= 0%, Lag= 0.0 min
Primary = 3.3 cfs @ 12.07 hrs, Volume= 0.231 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.74' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.08'	**12.0" Round Culvert** L= 139.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.08' / 4.39' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=3.3 cfs @ 12.07 hrs HW=6.74' TW=5.20' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 3.3 cfs @ 4.20 fps)

Pond 16P: DMH 12632



Summary for Pond 17P: DMH 3545

[57] Hint: Peaked at 5.20' (Flood elevation advised)

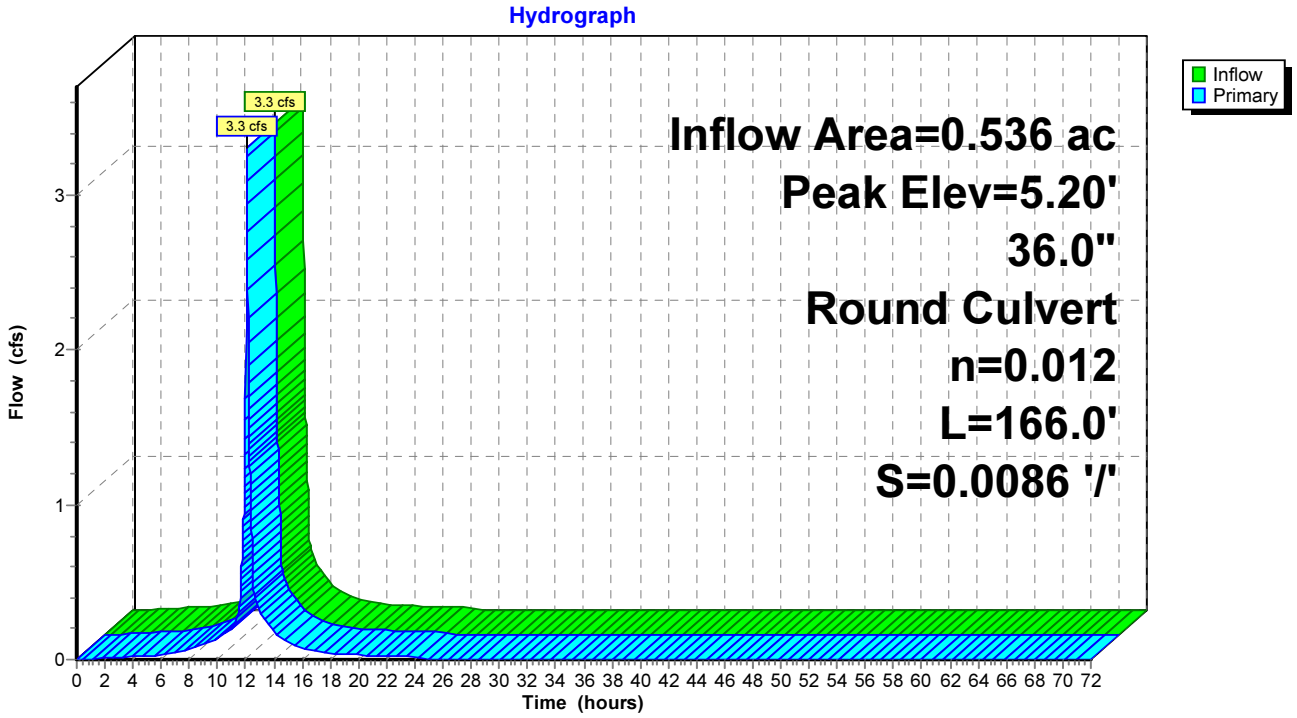
Inflow Area =	0.536 ac,	95.46% Impervious,	Inflow Depth =	5.18"	for 25-Year X event
Inflow =	3.3 cfs @	12.07 hrs,	Volume=	0.231 af	
Outflow =	3.3 cfs @	12.07 hrs,	Volume=	0.231 af,	Atten= 0%, Lag= 0.0 min
Primary =	3.3 cfs @	12.07 hrs,	Volume=	0.231 af	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.20' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.34'	**36.0" Round Culvert** L= 166.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.34' / 2.91' S= 0.0086 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf

Primary OutFlow Max=3.3 cfs @ 12.07 hrs HW=5.20' TW=4.70' (Dynamic Tailwater)
1=Culvert (Outlet Controls 3.3 cfs @ 2.94 fps)

Pond 17P: DMH 3545



Summary for Pond 29P: DMH 3

[57] Hint: Peaked at 3.64' (Flood elevation advised)

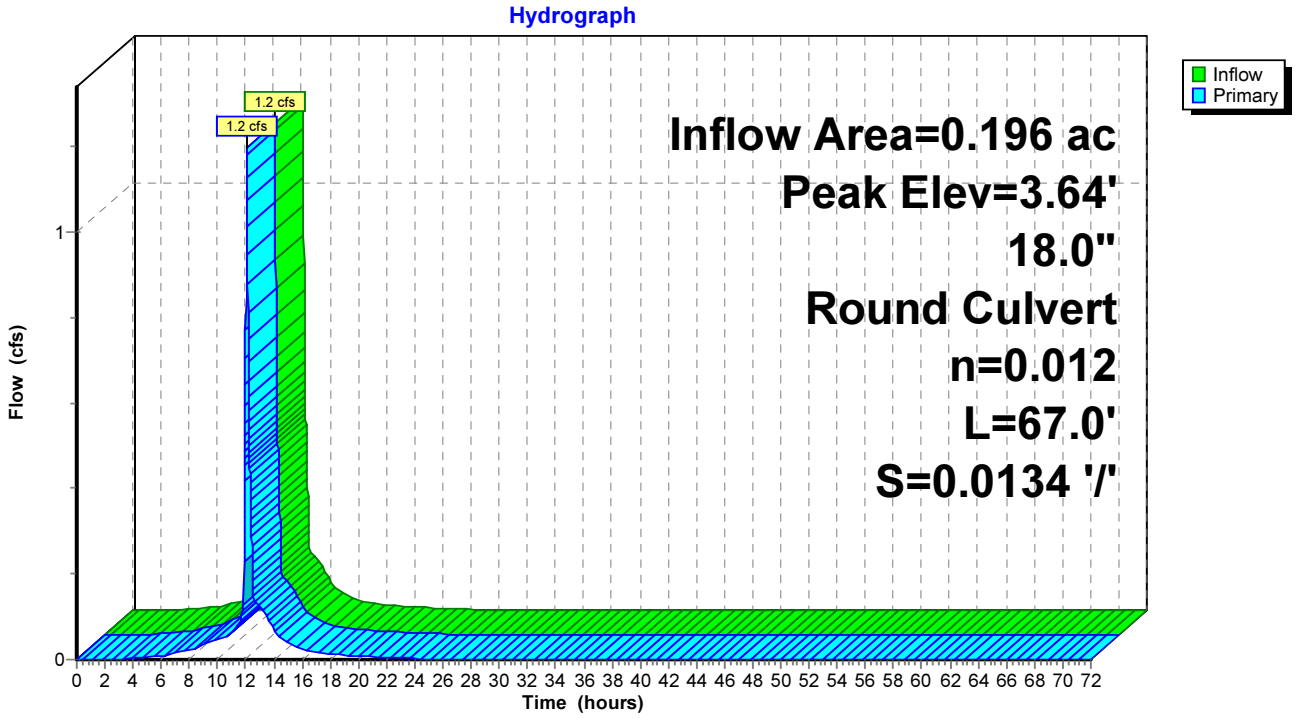
Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 4.72" for 25-Year X event
Inflow = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af
Outflow = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.64' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	2.53'	**18.0" Round Culvert** L= 67.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 2.53' / 1.63' S= 0.0134 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=1.2 cfs @ 12.07 hrs HW=3.64' TW=3.59' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 1.2 cfs @ 1.17 fps)

Pond 29P: DMH 3



Summary for Pond 35P: CB 3

[57] Hint: Peaked at 7.45' (Flood elevation advised)

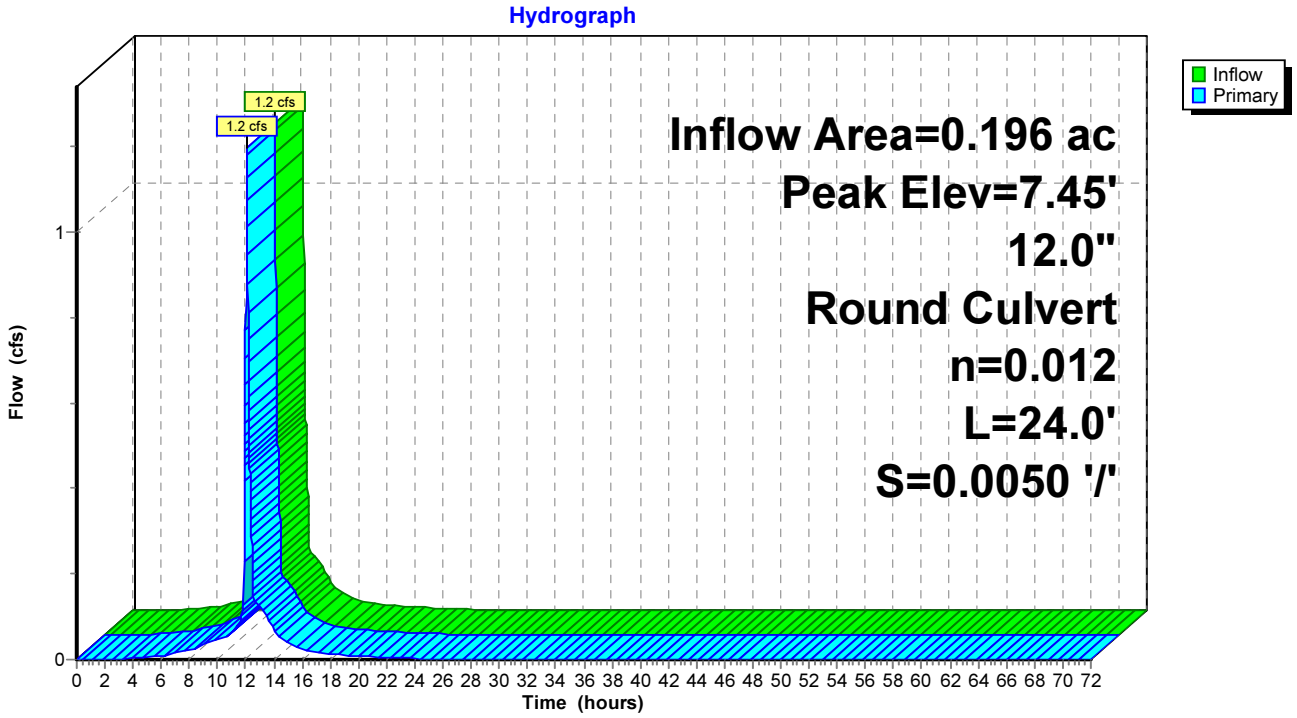
Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 4.72" for 25-Year X event
Inflow = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af
Outflow = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min
Primary = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 7.45' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.77'	**12.0" Round Culvert** L= 24.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 6.77' / 6.65' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.2 cfs @ 12.07 hrs HW=7.45' TW=3.64' (Dynamic Tailwater)
1=Culvert (Barrel Controls 1.2 cfs @ 2.96 fps)

Pond 35P: CB 3



Summary for Pond 36P: CB 3526

[57] Hint: Peaked at 8.25' (Flood elevation advised)

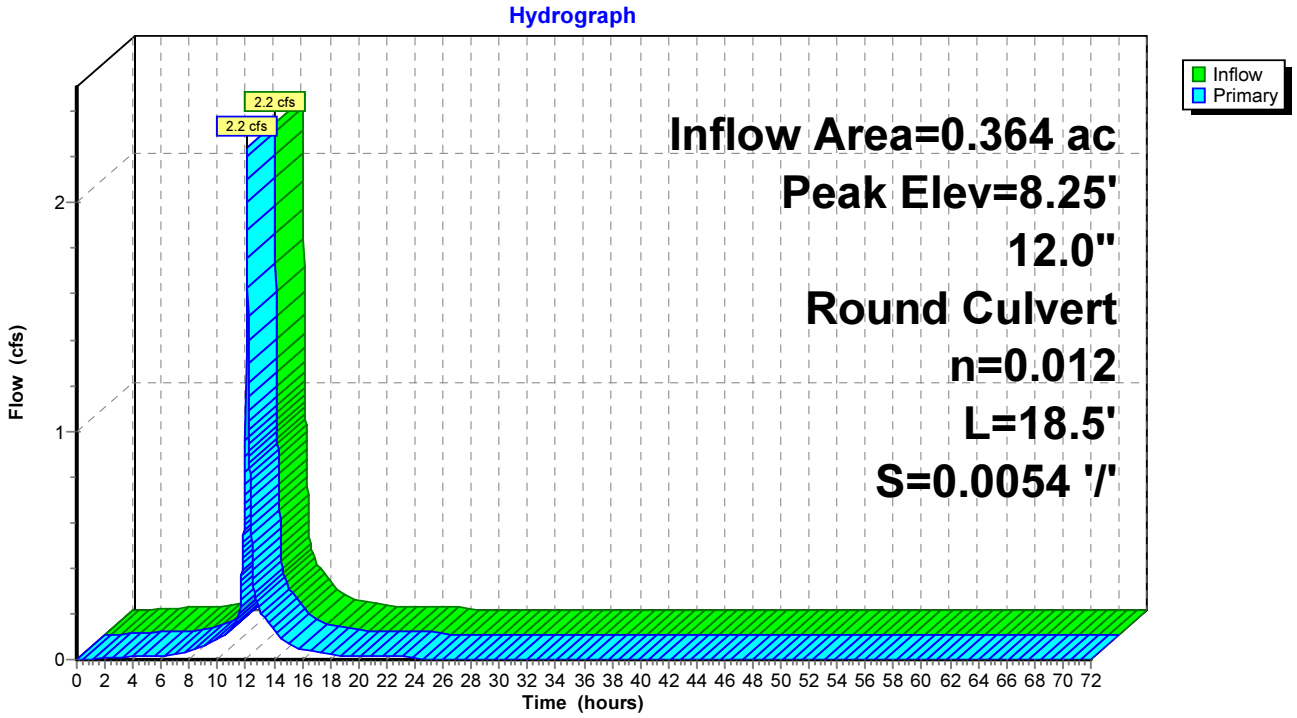
Inflow Area = 0.364 ac,100.00% Impervious, Inflow Depth = 4.88" for 25-Year X event
Inflow = 2.2 cfs @ 12.07 hrs, Volume= 0.148 af
Outflow = 2.2 cfs @ 12.07 hrs, Volume= 0.148 af, Atten= 0%, Lag= 0.0 min
Primary = 2.2 cfs @ 12.07 hrs, Volume= 0.148 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 8.25' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	6.19'	**12.0" Round Culvert** L= 18.5' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.19' / 6.09' S= 0.0054 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.2 cfs @ 12.07 hrs HW=8.22' TW=8.01' (Dynamic Tailwater)
1=Culvert (Inlet Controls 2.2 cfs @ 2.79 fps)

Pond 36P: CB 3526



Summary for Pond 37P: 94 Silva Cells with OCS #2

Inflow Area = 0.169 ac,100.00% Impervious, Inflow Depth = 5.92" for 25-Year X event
Inflow = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af
Outflow = 1.1 cfs @ 12.07 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.3 min
Discarded = 0.0 cfs @ 11.68 hrs, Volume= 0.032 af
Primary = 1.0 cfs @ 12.07 hrs, Volume= 0.052 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 11.56' @ 12.07 hrs Surf.Area= 774 sf Storage= 397 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 11.4 min (755.2 - 743.8)

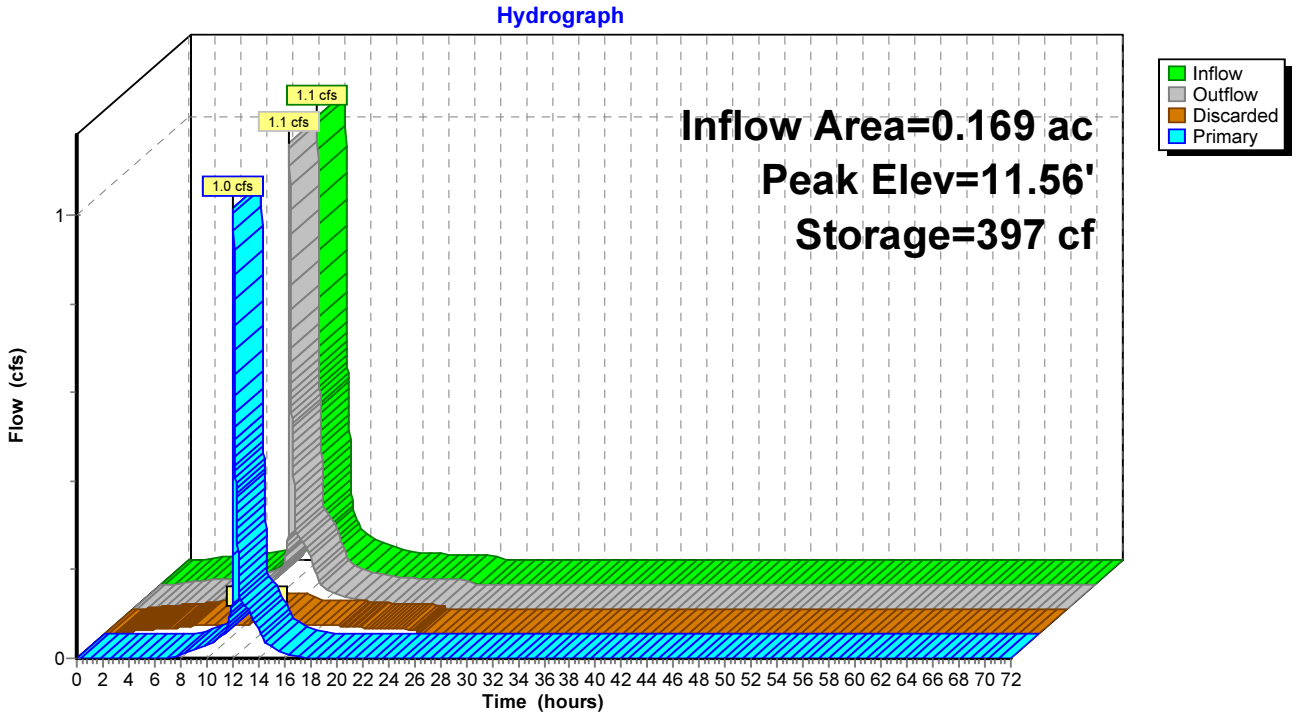
Volume	Invert	Avail.Storage	Storage Description
#1	8.40'	132 cf	**DeepRoot Silva Cell 20% x3** x 23 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#2	8.40'	137 cf	**DeepRoot Silva Cell 20% x3** x 24 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#3	8.90'	137 cf	**DeepRoot Silva Cell 20% x3** x 24 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#4	9.40'	132 cf	**DeepRoot Silva Cell 20% x3** x 23 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
		538 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	8.30'	**12.0" Round Culvert** L= 9.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 8.30' / 8.26' S= 0.0044 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Primary	8.40'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Device 1	11.40'	**5.0' 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
#4	Discarded	8.40'	**2.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.68 hrs HW=9.41' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=1.0 cfs @ 12.07 hrs HW=11.56' TW=8.23' (Dynamic Tailwater)
├**1=Culvert** (Passes 0.9 cfs of 7.9 cfs potential flow)
│ └**3=Broad-Crested Rectangular Weir** (Weir Controls 0.9 cfs @ 1.11 fps)
└**2=Orifice/Grate** (Orifice Controls 0.1 cfs @ 8.50 fps)

Pond 37P: 94 Silva Cells with OCS #2



Summary for Pond 38P: 73 Silva Cells with OCS #3

Inflow Area = 0.196 ac,100.00% Impervious, Inflow Depth = 5.92" for 25-Year X event
Inflow = 1.2 cfs @ 12.07 hrs, Volume= 0.097 af
Outflow = 1.2 cfs @ 12.07 hrs, Volume= 0.097 af, Atten= 0%, Lag= 0.2 min
Discarded = 0.0 cfs @ 11.64 hrs, Volume= 0.020 af
Primary = 1.2 cfs @ 12.07 hrs, Volume= 0.077 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 10.18' @ 12.07 hrs Surf.Area= 601 sf Storage= 273 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 7.6 min (751.4 - 743.8)

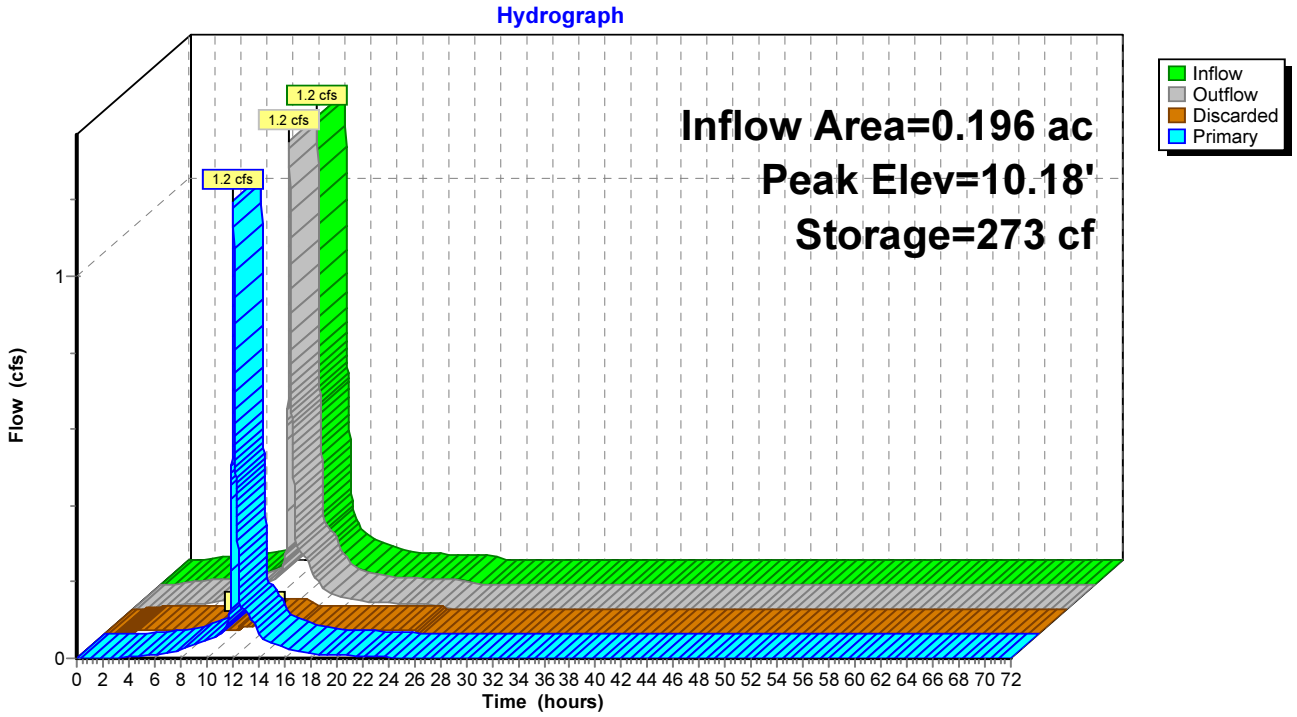
Volume	Invert	Avail.Storage	Storage Description
#1	7.00'	120 cf	**DeepRoot Silva Cell 20% x3** x 21 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#2	7.50'	149 cf	**DeepRoot Silva Cell 20% x3** x 26 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
#3	8.50'	149 cf	**DeepRoot Silva Cell 20% x3** x 26 Inside= 24.6"W x 45.3"H => 1.42 sf x 4.02'L = 5.7 cf Outside= 24.6"W x 45.3"H => 7.74 sf x 4.02'L = 31.1 cf
		418 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	6.90'	**12.0" Round Culvert** L= 7.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 6.90' / 6.87' S= 0.0043 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Primary	7.00'	**1.0" Vert. Orifice/Grate X 3.00** C= 0.600
#3	Device 1	10.00'	**5.0' 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
#4	Discarded	7.00'	**2.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.0 cfs @ 11.64 hrs HW=8.51' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=1.2 cfs @ 12.07 hrs HW=10.18' TW=7.45' (Dynamic Tailwater)
├**1=Culvert** (Passes 1.1 cfs of 7.8 cfs potential flow)
│└**3=Broad-Crested Rectangular Weir** (Weir Controls 1.1 cfs @ 1.19 fps)
└**2=Orifice/Grate** (Orifice Controls 0.1 cfs @ 7.95 fps)

Pond 38P: 73 Silva Cells with OCS #3



Summary for Pond CB1:

[57] Hint: Peaked at 6.44' (Flood elevation advised)

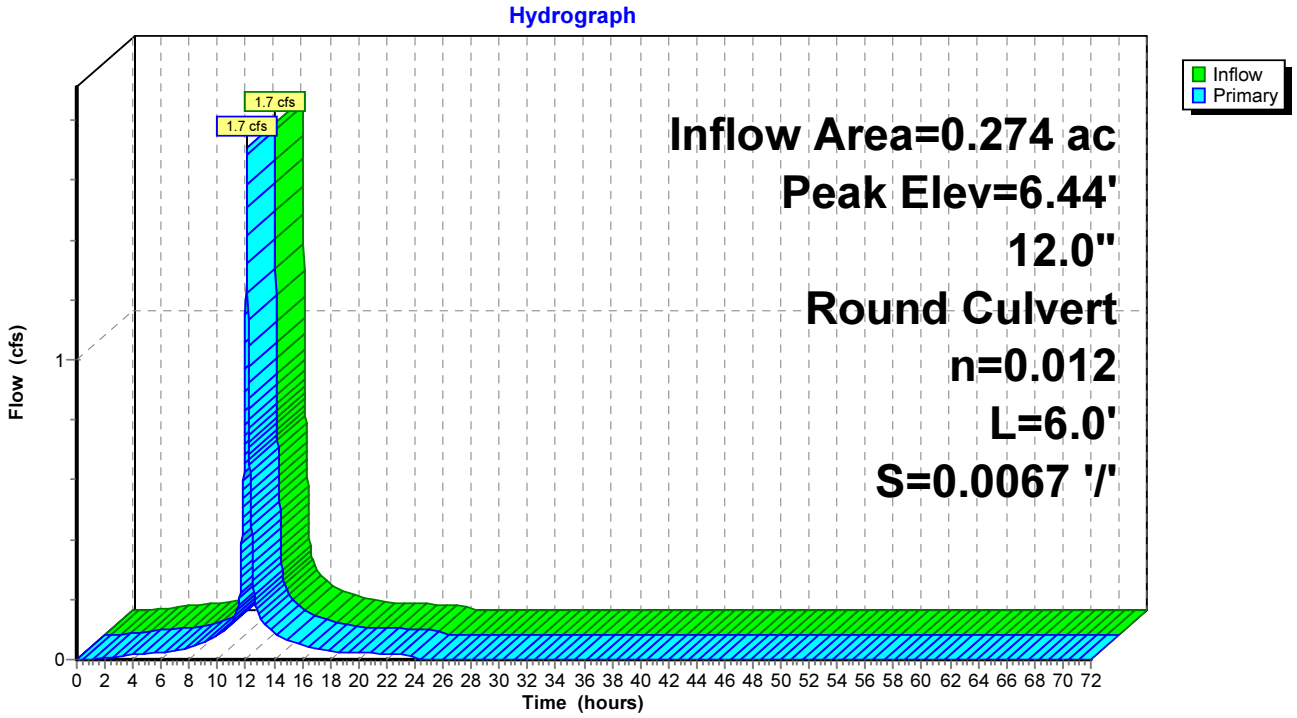
Inflow Area = 0.274 ac, 87.53% Impervious, Inflow Depth = 5.85" for 25-Year X event
Inflow = 1.7 cfs @ 12.07 hrs, Volume= 0.133 af
Outflow = 1.7 cfs @ 12.07 hrs, Volume= 0.133 af, Atten= 0%, Lag= 0.0 min
Primary = 1.7 cfs @ 12.07 hrs, Volume= 0.133 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.44' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.33'	**12.0" Round Culvert** L= 6.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.33' / 5.29' S= 0.0067 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=1.7 cfs @ 12.07 hrs HW=6.44' TW=6.31' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 1.7 cfs @ 2.14 fps)

Pond CB1:



Summary for Pond CB2:

[57] Hint: Peaked at 6.35' (Flood elevation advised)

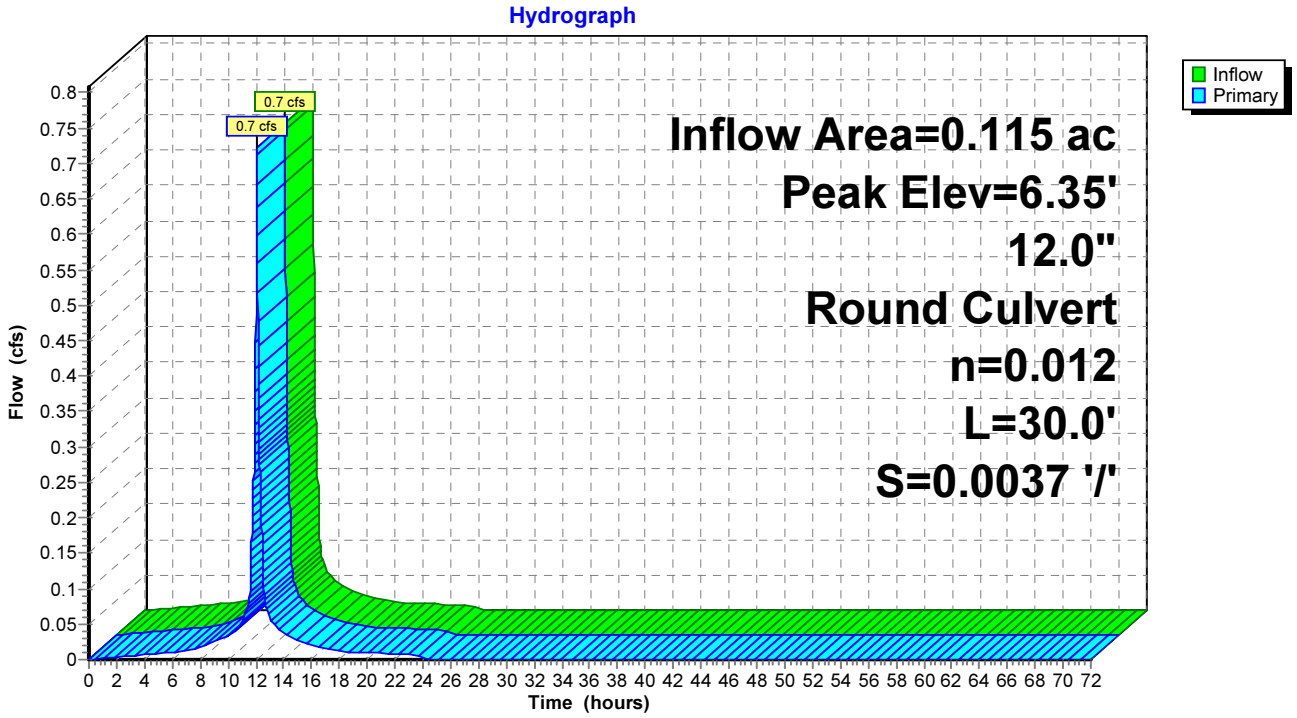
Inflow Area = 0.115 ac, 96.72% Impervious, Inflow Depth = 5.92" for 25-Year X event
Inflow = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af
Outflow = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.07 hrs, Volume= 0.057 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.35' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.40'	**12.0" Round Culvert** L= 30.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.40' / 5.29' S= 0.0037 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=0.7 cfs @ 12.07 hrs HW=6.35' TW=6.31' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 0.7 cfs @ 1.15 fps)

Pond CB2:



Summary for Pond DMH1:

[57] Hint: Peaked at 5.90' (Flood elevation advised)

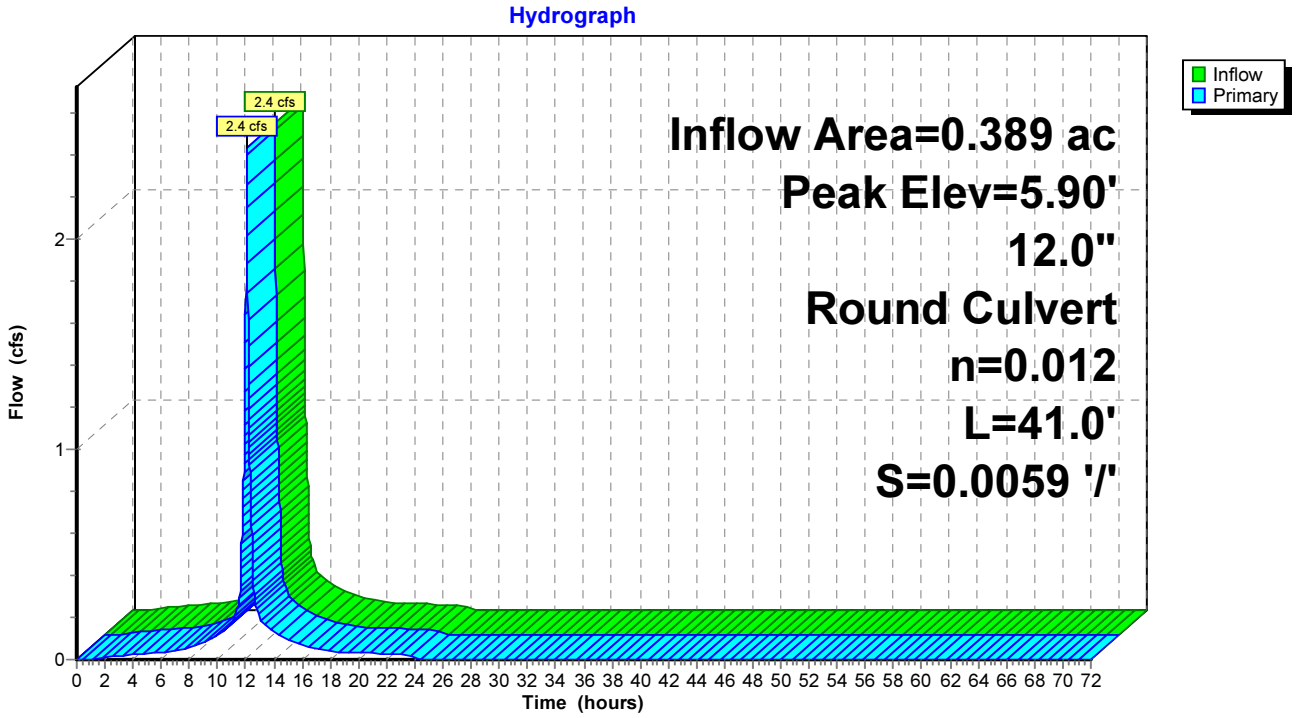
Inflow Area = 0.389 ac, 90.26% Impervious, Inflow Depth = 5.87" for 25-Year X event
Inflow = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af
Outflow = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af, Atten= 0%, Lag= 0.0 min
Primary = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 5.90' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	4.91'	**12.0" Round Culvert** L= 41.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 4.91' / 4.67' S= 0.0059 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.4 cfs @ 12.07 hrs HW=5.90' TW=4.46' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 2.4 cfs @ 3.90 fps)

Pond DMH1:



Summary for Pond DP1: DMH 3540

[57] Hint: Peaked at 3.59' (Flood elevation advised)

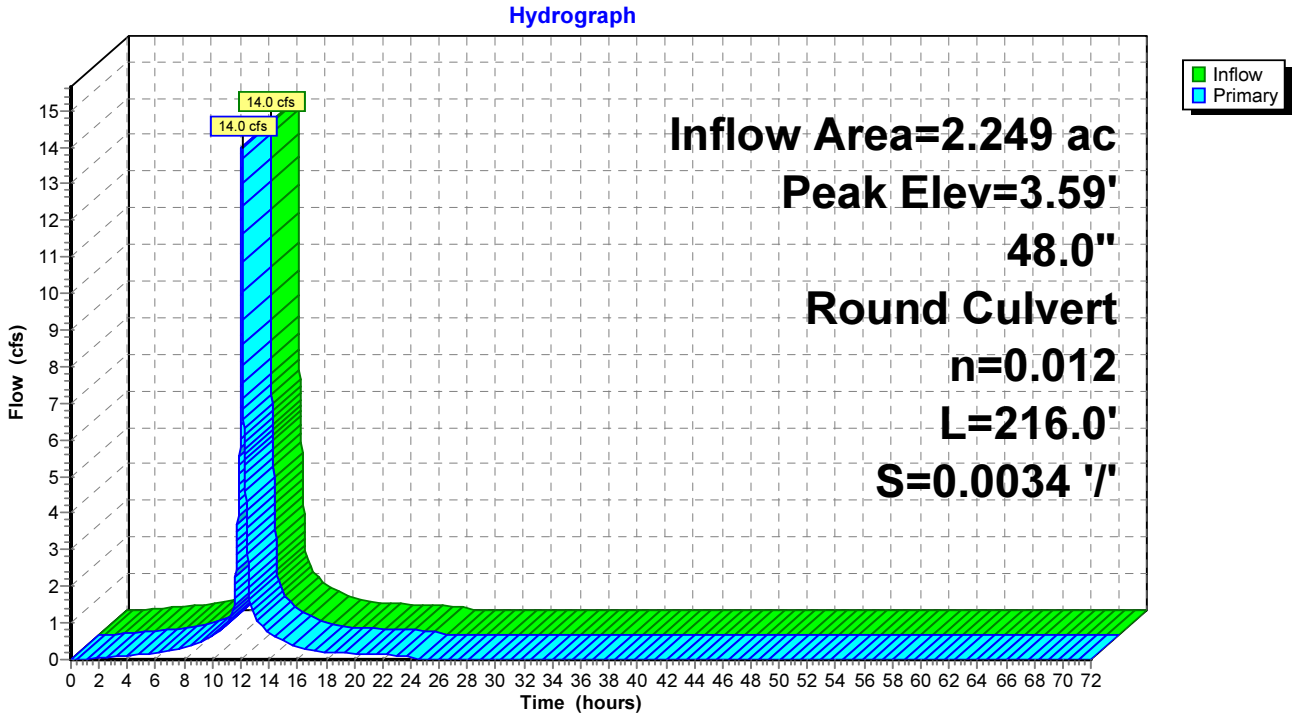
Inflow Area = 2.249 ac, 94.92% Impervious, Inflow Depth = 5.61" for 25-Year X event
Inflow = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af
Outflow = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af, Atten= 0%, Lag= 0.0 min
Primary = 14.0 cfs @ 12.07 hrs, Volume= 1.051 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 3.59' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1.68'	**48.0" Round Culvert** L= 216.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 1.68' / 0.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 12.57 sf

Primary OutFlow Max=13.9 cfs @ 12.07 hrs HW=3.59' TW=3.14' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 13.9 cfs @ 3.44 fps)

Pond DP1: DMH 3540



Summary for Pond OCS #1:

[57] Hint: Peaked at 6.31' (Flood elevation advised)

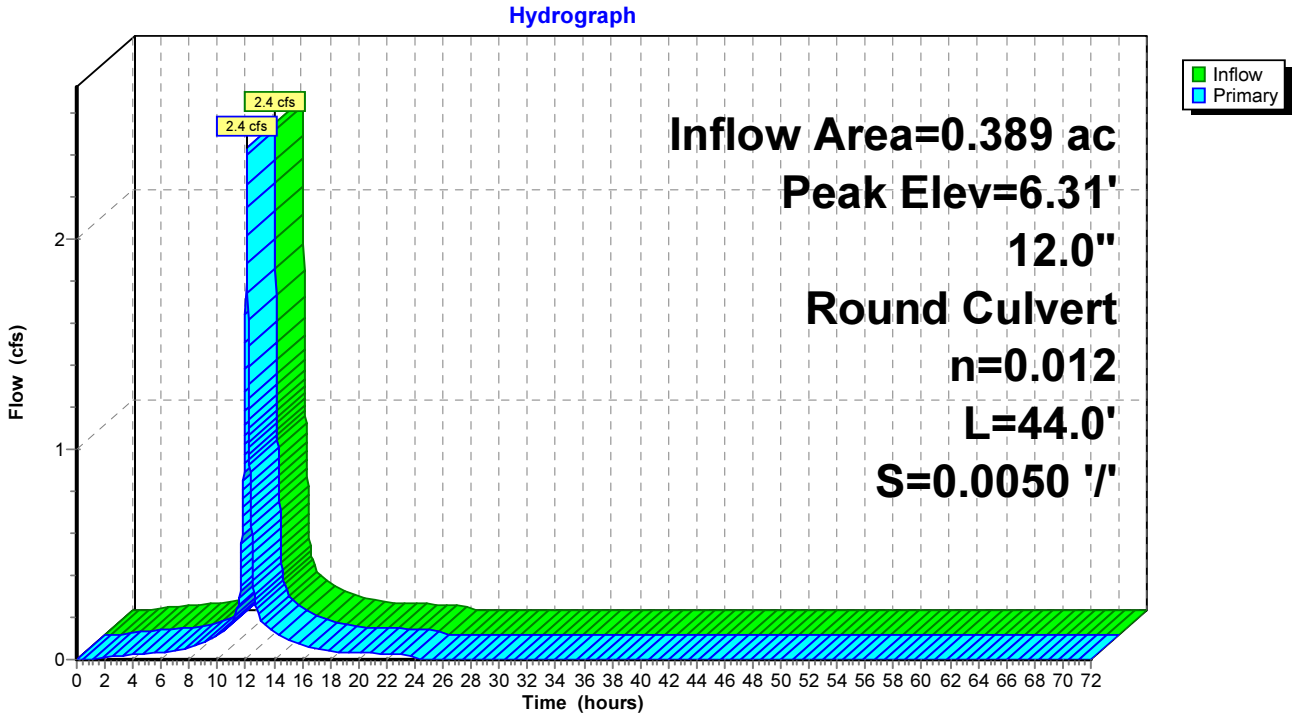
Inflow Area = 0.389 ac, 90.26% Impervious, Inflow Depth = 5.87" for 25-Year X event
Inflow = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af
Outflow = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af, Atten= 0%, Lag= 0.0 min
Primary = 2.4 cfs @ 12.07 hrs, Volume= 0.190 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 6.31' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	5.23'	**12.0" Round Culvert** L= 44.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 5.23' / 5.01' S= 0.0050 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf

Primary OutFlow Max=2.4 cfs @ 12.07 hrs HW=6.31' TW=5.90' (Dynamic Tailwater)
└**1=Culvert** (Outlet Controls 2.4 cfs @ 3.56 fps)

Pond OCS #1:



INSPECTION & MAINTENANCE PLAN

FOR

30 Maplewood Avenue, LLC

46 Maplewood Avenue
Portsmouth, NH

Introduction

The intent of this plan is to provide the developers of the proposed 46 Maplewood Avenue (herein refered to as Developer), with a list of procedures that document the inspection and maintenance requirements of the stormwater management system for this development.

The following inspection and maintenance program is necessary to keep the stormwater management system functioning properly. These measures will also help minimize potential environmental impacts. By following the enclosed procedures, the Developer will be able to maintain the functional design of the stormwater management system and maximize its ability to remove sediment and other contaminants from site generated stormwater runoff. By installing and maintaining the drainage as shown on the approved site plan, the Developer will be able to maximize the system's ability to control the volume of runoff and remove sediment from site generated stormwater runoff.

Annual Report

The Developer shall prepare an annual Inspection & Maintenance Report. The report shall include a summary of the system's maintenance and repair by transmission of the Inspection & Maintenance Log and other information as required. A copy of the report shall be delivered annually to the City of Portsmouth Code Enforcement Officer, if required.

Inspection & Maintenance Checklist/Log

The following pages contain a Stormwater Management System Inspection & Maintenance Checklist and a blank copy of the Stormwater Management System Inspection & Maintenance Log. These forms are provided to Developer as a guideline for performing the inspection and maintenance of the Stormwater Management System. This is a guideline and should be periodically reviewed for conformance with current practice and standards.

STORMWATER MANAGEMENT SYSTEM COMPONENTS

The Stormwater Management System is designed to mitigate both the quantity and quality of site-generated stormwater runoff. As a result, the design includes the following elements:

Non-Structural BMP's

Non-Structural best management practices (BMP's) include temporary and permanent measures that typically require less labor and capital inputs and are intended to provide protection against erosion of soils. Examples of non-structural BMP's on this project include but are not limited to: Temporary and permanent mulching, temporary and permanent grass cover, trees, shrubs and ground covers, miscellaneous landscape plantings, dust control, tree protection, topsoiling, sediment barriers, temporary storm drain inlet protection, and a stabilized construction entrance.

Structural BMP's

Structural BMP's are more labor and capital intensive structures or installations that require more specialized personel to install. Examples on this project include but are not limited to: Storm drains and catch basins, vegetated swales, land grading and slope protection.

Inspection and Maintenance Requirements

The following summarizes the inspection and maintenance requirements for the various BMP's that may be found on this project. In general, during construction and until the threat of erosion is minimal, rain events of 0.25" or more shall trigger close inspections of all related sediment and erosion control measures. It is only after construction is complete and the site is stable (safe from erosion) that larger rain events will trigger inspections (see attached Inspection & Maintenance Form).

1. **Seeded areas**: After each rain event of 0.5" or more during a 24 hour period, inspect newly seeded areas for signs of disturbance, such as erosion or lost mulch. If damaged areas are discovered, immediately repair the damage. Repairs may include adding new topsoil, lime, seed, fertilizer and mulch, or may simply require the addition of more mulch. If mulch is constantly being blown away or washed away, then it shall be anchored with jute mesh. Continue inspections until grass growth is permanently established and threats of erosion have ceased.

2. **Other Plantings**: Other planting and landscaping (trees, shrubs,) shall be monitored bi-monthly during the first year to insure viability and vigorous growth. Replace dead or dying vegetation with new stock and make adjustments to the conditions that caused the dead or dying vegetation. During dryer times of the year, provide weekly watering or irrigation during the establishment period of the first year. Make the necessary adjustments to insure long-term health of the vegetated covers, i.e. provide more permanent mulch or compost or other means of protection.

3. **Storm Drain, Trench Drain Inlets/Outlets:** Monitor drain inlets and outlet aprons for excessive accumulation of sediments or missing stone/riprap. Remove sediments as required to maintain filtering capabilities of the stone—replace missing riprap.

4. **Stabilized Construction Entrance:** Monitor for signs of excessive clogging and tracking of mud onto the paved roadway. If necessary, replace the entire structure with new, clean stone, and remove tracked sediments from road surface.

5. **Dust Control:** Monitor fugitive dust and if evident, apply water to graveled surfaces or mulch and water to exposed, droughty soils.

6. **Hancor Water Quality Unit:** Remove sediment the more frequent of every six months or when sediment has reached 25% of the diameter of the structure. Furthermore, the system may need cleaning in the event a spill of foreign substance enters the unit.

Invasive Species

Monitor site for signs of invasive species growth. If caught earlier enough, their eradication is much easier. The most likely places where invasions start are in wetter, disturbed soils or detention ponds. Species such as phragmites and purple loose-strife are common invaders in these wetter areas. If they are found then the Developer shall contact a wetlands scientist with experience in invasive species control to implement a plan of action to eradicate the invaders. Measures that do not require the application of chemical herbicides should be the first line of defense.

Stormwater Management System

Inspection & Maintenance Checklist for Post Construction Condition—for 30 Maplewood Avenue, LLC, 46 Maplewood Ave., Portsmouth, NH

BMP/System Component	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance/Cleanout Threshold
Ditches and Swales	*After significant rain events (>2"/day)*	Check for erosion, trash or sediment accumulations.	Repair eroded areas with new sod; remove trash/sediments and maintain grass at 4"~6".
Seeded Slopes, Lawns and other Landscaped Areas	*After significant rain events (>2"/day); and/or monthly.*	Check for erosion or dead grass growth. Check plantings for vitality or droughty soils.	Repair or re-seed & remulch as required; replant dead or dying shrubs & trees.
Hancor Water Quality Unit	*Twice Yearly*	Check for blocked baffles and inlets	Clean any accumulated sediment at the time of inspection
Closed Drainage System			
Catch Basins and Outlet Control Structures	*Twice Yearly*	Check for sediment accumulation and debris	Remove debris and sediment when they accumulate
Trench Drain	*Every other Month*	Check for sediment accumulation Check for floatable contaminents	Remove sediments when they accumulate
Drainage Pipes	*Yearly*	Check for sediment clogging, or soiled runoff.	≥ Clean entire drainage system and remove all sediments if discovered in piping.
Annual Report	*Yearly*	Prepare Annual Report, including all Inspection & Maintenance Logs. Provide to C.E.O. if required).	N/A

Stormwater Management System Maintenance Summary

Inspection & Maintenance Log—for 30 Maplewood Avenue, LLC, 46 Maplewood Ave., Portsmouth, NH

BMP/System Component	Date Inspected	Inspector	Problems Noted, Required Maintenance *(List Items/Comments)*	Date of Maintenance	Performed By

Data Sheets

NOAA Atlas 14, Volume 10, Version 2
Location name: Portsmouth, New Hampshire, USA*
Latitude: 43.0771°, Longitude: -70.762°
Elevation: 11.29 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.309** (0.234-0.407)	**0.372** (0.281-0.491)	**0.474** (0.358-0.628)	**0.559** (0.420-0.745)	**0.677** (0.495-0.940)	**0.767** (0.551-1.09)	**0.857** (0.602-1.26)	**0.971** (0.649-1.45)	**1.12** (0.725-1.74)	**1.24** (0.782-1.95)
10-min	**0.437** (0.331-0.577)	**0.526** (0.398-0.695)	**0.672** (0.507-0.890)	**0.793** (0.595-1.06)	**0.959** (0.701-1.33)	**1.09** (0.781-1.54)	**1.22** (0.852-1.78)	**1.38** (0.919-2.06)	**1.59** (1.03-2.46)	**1.75** (1.11-2.76)
15-min	**0.515** (0.390-0.679)	**0.619** (0.469-0.818)	**0.790** (0.597-1.05)	**0.932** (0.700-1.24)	**1.13** (0.825-1.57)	**1.28** (0.919-1.81)	**1.43** (1.00-2.10)	**1.62** (1.08-2.42)	**1.87** (1.21-2.89)	**2.06** (1.30-3.25)
30-min	**0.695** (0.526-0.916)	**0.836** (0.633-1.10)	**1.07** (0.806-1.41)	**1.26** (0.946-1.68)	**1.52** (1.12-2.12)	**1.73** (1.24-2.45)	**1.93** (1.36-2.84)	**2.19** (1.47-3.29)	**2.54** (1.64-3.93)	**2.81** (1.78-4.42)
60-min	**0.875** (0.663-1.15)	**1.05** (0.797-1.39)	**1.35** (1.01-1.78)	**1.59** (1.19-2.11)	**1.92** (1.41-2.67)	**2.18** (1.57-3.09)	**2.43** (1.71-3.58)	**2.77** (1.85-4.15)	**3.22** (2.08-4.97)	**3.55** (2.25-5.60)
2-hr	**1.16** (0.886-1.52)	**1.41** (1.07-1.85)	**1.81** (1.38-2.39)	**2.15** (1.62-2.84)	**2.61** (1.92-3.62)	**2.96** (2.15-4.20)	**3.32** (2.36-4.90)	**3.83** (2.56-5.71)	**4.50** (2.91-6.93)	**5.00** (3.18-7.86)
3-hr	**1.37** (1.04-1.78)	**1.66** (1.27-2.17)	**2.15** (1.64-2.82)	**2.55** (1.93-3.36)	**3.10** (2.29-4.29)	**3.53** (2.57-5.00)	**3.96** (2.82-5.83)	**4.58** (3.07-6.82)	**5.41** (3.51-8.32)	**6.03** (3.83-9.45)
6-hr	**1.78** (1.36-2.30)	**2.17** (1.67-2.82)	**2.82** (2.16-3.68)	**3.36** (2.56-4.41)	**4.10** (3.05-5.65)	**4.67** (3.42-6.58)	**5.24** (3.76-7.70)	**6.09** (4.10-9.02)	**7.20** (4.69-11.0)	**8.04** (5.13-12.6)
12-hr	**2.24** (1.73-2.89)	**2.76** (2.13-3.56)	**3.61** (2.78-4.68)	**4.31** (3.30-5.62)	**5.28** (3.94-7.23)	**6.03** (4.43-8.45)	**6.77** (4.88-9.90)	**7.87** (5.32-11.6)	**9.32** (6.09-14.2)	**10.4** (6.66-16.2)
24-hr	**2.64** (2.06-3.39)	**3.32** (2.57-4.26)	**4.41** (3.41-5.68)	**5.32** (4.10-6.89)	**6.57** (4.94-8.98)	**7.54** (5.58-10.6)	**8.50** (6.19-12.5)	**10.0** (6.80-14.8)	**12.0** (7.89-18.3)	**13.6** (8.71-21.0)
2-day	**2.95** (2.30-3.76)	**3.79** (2.96-4.83)	**5.16** (4.01-6.60)	**6.29** (4.87-8.10)	**7.86** (5.96-10.7)	**9.06** (6.79-12.7)	**10.3** (7.59-15.2)	**12.4** (8.44-18.2)	**15.3** (10.0-23.2)	**17.4** (11.2-26.9)
3-day	**3.20** (2.51-4.07)	**4.11** (3.22-5.22)	**5.59** (4.37-7.13)	**6.82** (5.30-8.75)	**8.52** (6.49-11.6)	**9.82** (7.39-13.8)	**11.1** (8.27-16.5)	**13.5** (9.22-19.8)	**16.7** (11.0-25.3)	**19.1** (12.3-29.5)
4-day	**3.46** (2.72-4.38)	**4.40** (3.45-5.57)	**5.94** (4.65-7.55)	**7.21** (5.61-9.23)	**8.97** (6.85-12.2)	**10.3** (7.78-14.5)	**11.7** (8.70-17.3)	**14.2** (9.69-20.8)	**17.6** (11.6-26.5)	**20.1** (13.0-30.9)
7-day	**4.18** (3.31-5.27)	**5.17** (4.08-6.53)	**6.79** (5.34-8.59)	**8.13** (6.36-10.4)	**9.98** (7.65-13.5)	**11.4** (8.62-15.9)	**12.8** (9.56-18.8)	**15.4** (10.6-22.5)	**18.9** (12.5-28.5)	**21.5** (13.9-33.1)
10-day	**4.88** (3.86-6.12)	**5.90** (4.67-7.41)	**7.57** (5.97-9.55)	**8.96** (7.03-11.4)	**10.9** (8.33-14.6)	**12.3** (9.32-17.1)	**13.8** (10.3-20.1)	**16.4** (11.3-23.8)	**19.8** (13.1-29.8)	**22.4** (14.5-34.3)
20-day	**6.90** (5.50-8.61)	**8.03** (6.39-10.0)	**9.86** (7.82-12.4)	**11.4** (8.98-14.4)	**13.5** (10.3-17.9)	**15.1** (11.4-20.5)	**16.7** (12.3-23.7)	**19.0** (13.1-27.4)	**22.0** (14.7-33.0)	**24.3** (15.8-37.2)
30-day	**8.57** (6.85-10.7)	**9.78** (7.81-12.2)	**11.7** (9.35-14.7)	**13.4** (10.6-16.8)	**15.6** (12.0-20.5)	**17.4** (13.0-23.3)	**19.1** (13.9-26.6)	**21.2** (14.7-30.4)	**23.9** (16.0-35.6)	**26.0** (16.9-39.6)
45-day	**10.7** (8.54-13.2)	**12.0** (9.57-14.8)	**14.1** (11.2-17.5)	**15.8** (12.6-19.8)	**18.2** (14.0-23.8)	**20.1** (15.1-26.7)	**22.0** (15.9-30.2)	**23.9** (16.6-34.1)	**26.3** (17.6-39.1)	**28.2** (18.4-42.9)
60-day	**12.4** (9.97-15.3)	**13.8** (11.1-17.0)	**16.0** (12.8-19.9)	**17.9** (14.2-22.3)	**20.4** (15.7-26.5)	**22.4** (16.8-29.6)	**24.3** (17.6-33.3)	**26.1** (18.2-37.3)	**28.5** (19.1-42.2)	**30.3** (19.8-46.0)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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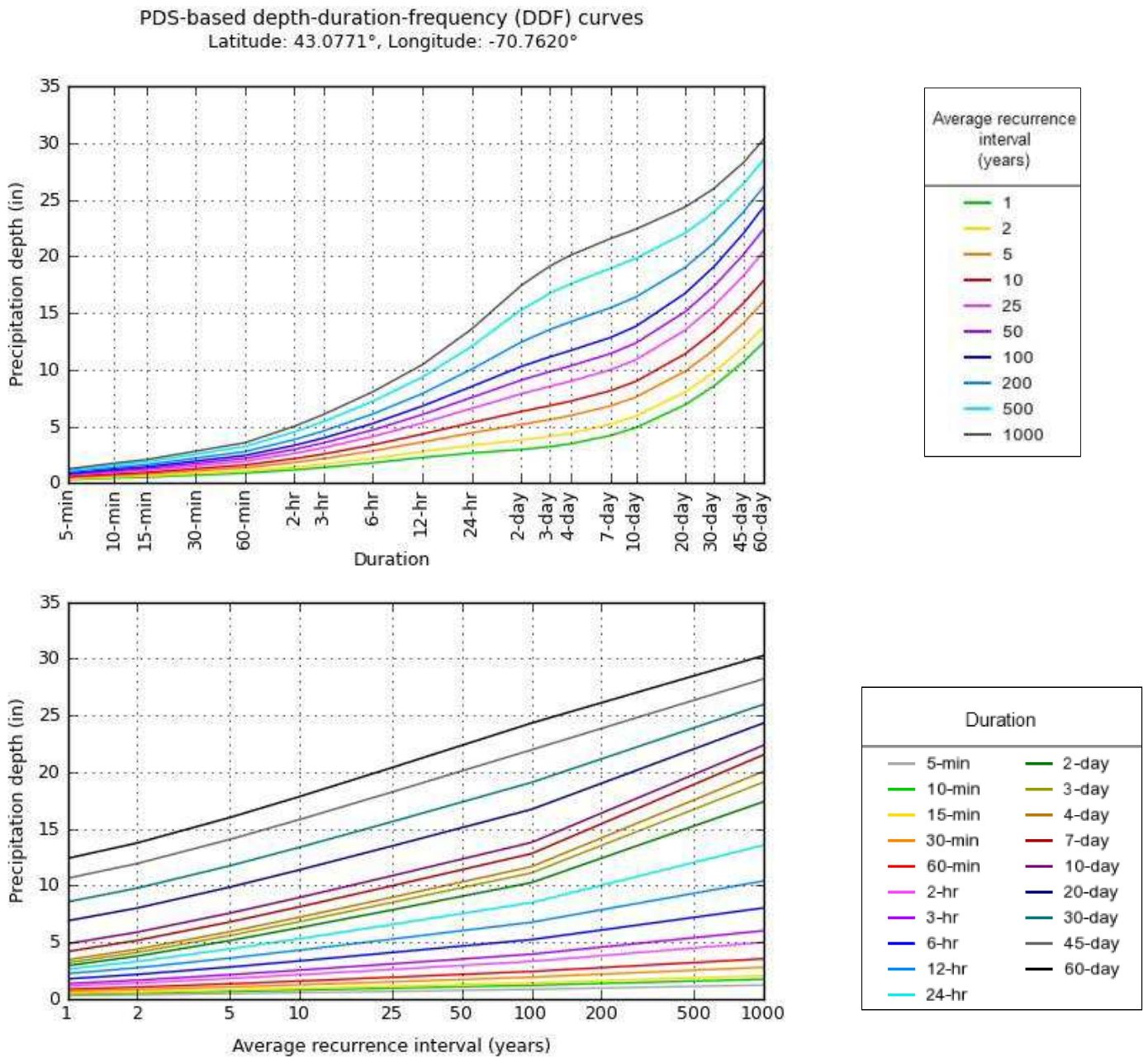
PF graphical



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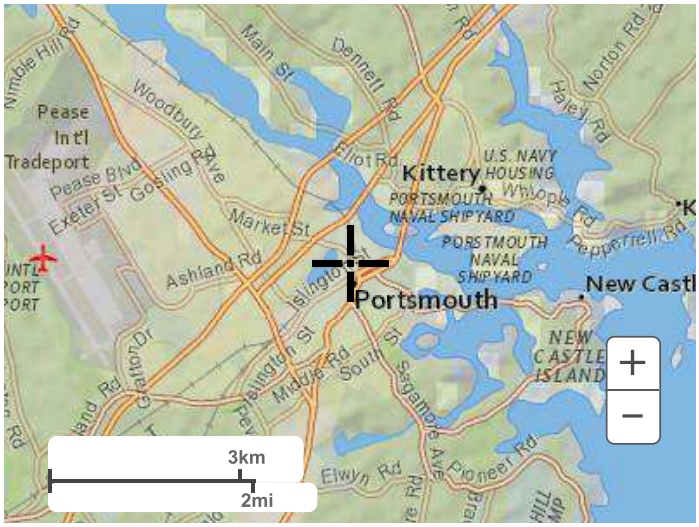
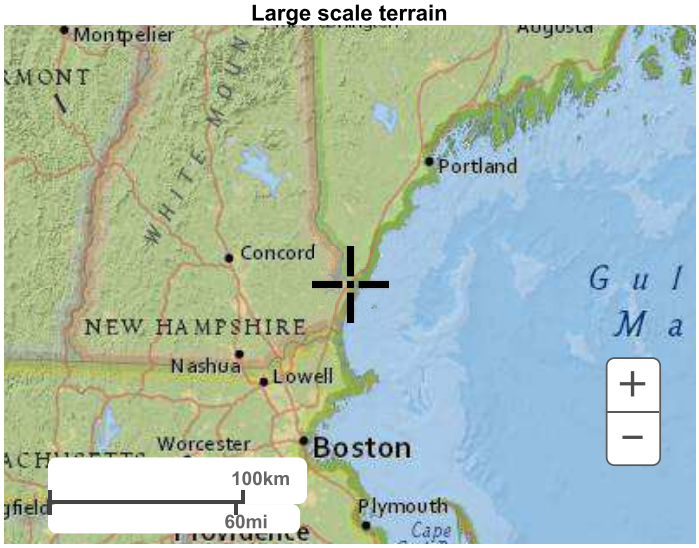
Maps & aerials

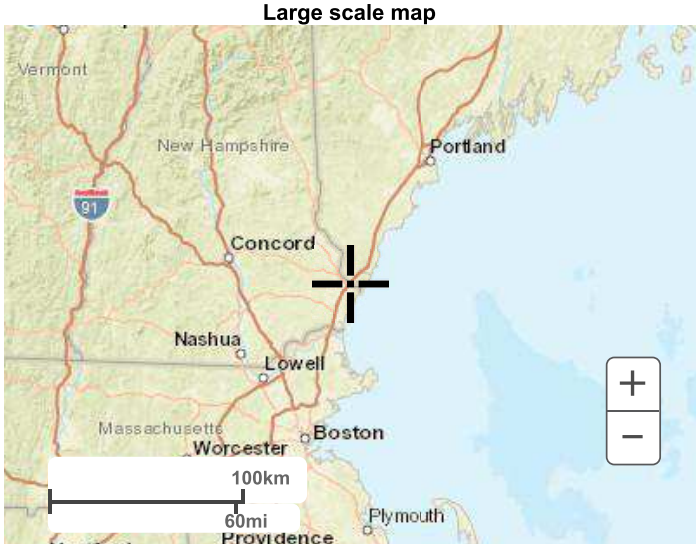
Small scale terrain



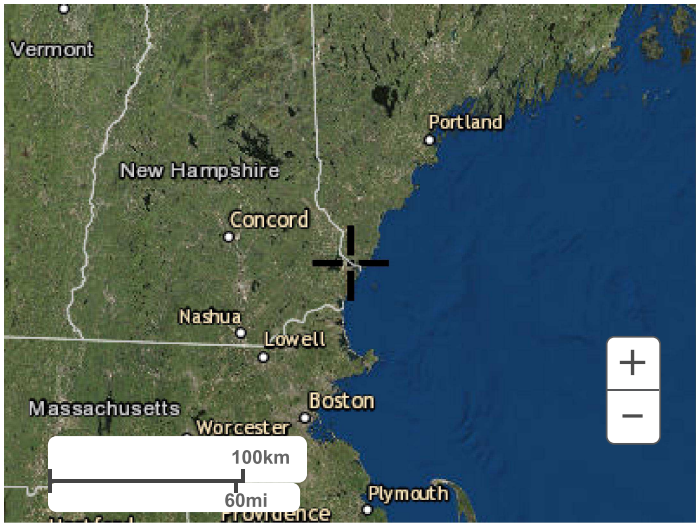
Large scale terrain



Large scale map



Large scale aerial



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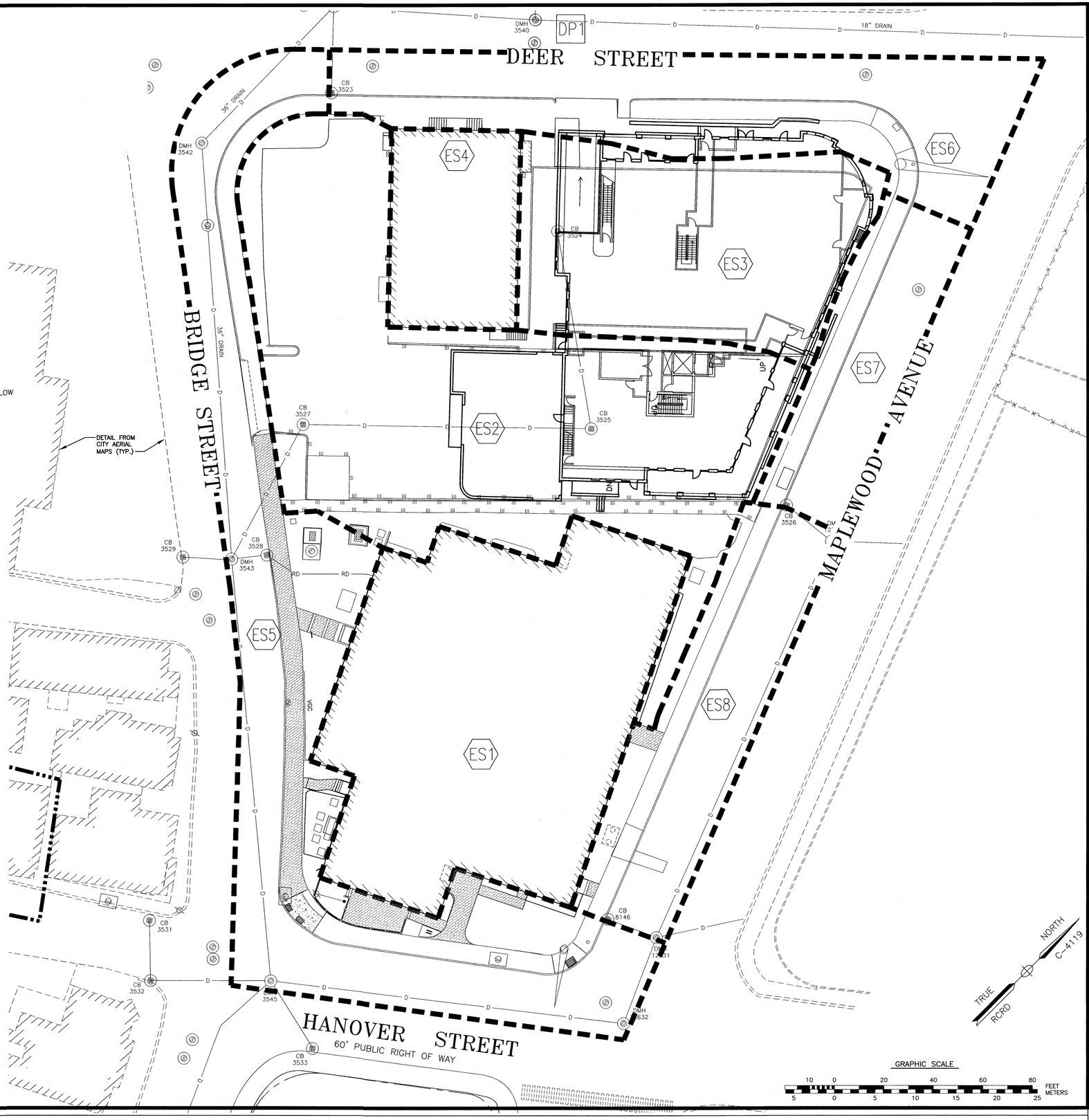
US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

LEGEND

EXISTING	PROPOSED	
D	D	STORM DRAIN
X X	X X	SILT FENCE
100	100	CONTOUR
97x3	98x0	SPOT ELEVATION
		EDGE OF PAVEMENT (EP)
		SUBCATCHMENT LINE
6	600	SUBCATCHMENT NUMBER
1234	1234	AREA IN SQUARE FEET
WOODS	WOODS	DESCRIPTION OF COVER
6	600	POND (DESIGN MODEL)
6	600	REACH (DESIGN MODEL)
		DRAINAGE VECTOR
		EDGE OF WOODS / TREES
CB	CB	CATCH BASIN
DMH	DMH	DRAIN MANHOLE
W	W	WELL
EL.	EL.	ELEVATION
EP	EP	EDGE OF PAVEMENT
FF	FF	FINISHED FLOOR
INV	INV	INVERT
TBM	TBM	TEMPORARY BENCH MARK
TYP	TYP	TYPICAL
		Tc PATH
SF	SF	SHEET FLOW
SCF	SCF	SHALLOW CONCENTRATED FLOW
CHANNEL	CHANNEL	CHANNEL FLOW
HSG	HSG	HYDROLGIC SOIL GROUP



AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
Tel (603) 430-9282
Fax (603) 436-2315

NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 125 AS LOT 2A.
2. OWNER OF RECORD:
   30 MAPLEWOOD, LLC
   117 BOW STREET, SUITE 102
   PORTSMOUTH, N.H. 03801
   5099 / 2424
   PLAN C-4119

NOTES:

1) THIS PLAN IS INTENDED FOR RUNOFF ANALYSIS ONLY AND SHALL NOT BE USED FOR CONSTRUCTION.

46 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR APPROVAL	10/17/17

REVISIONS

STATE OF NEW HAMPSHIRE
JOSEPH L. MULLEDY No. 11022 LICENSED PROFESSIONAL ENGINEER
12/18/17

SCALE: 1" = 20'

PLAN OF EXISTING SUBCATCHMENTS

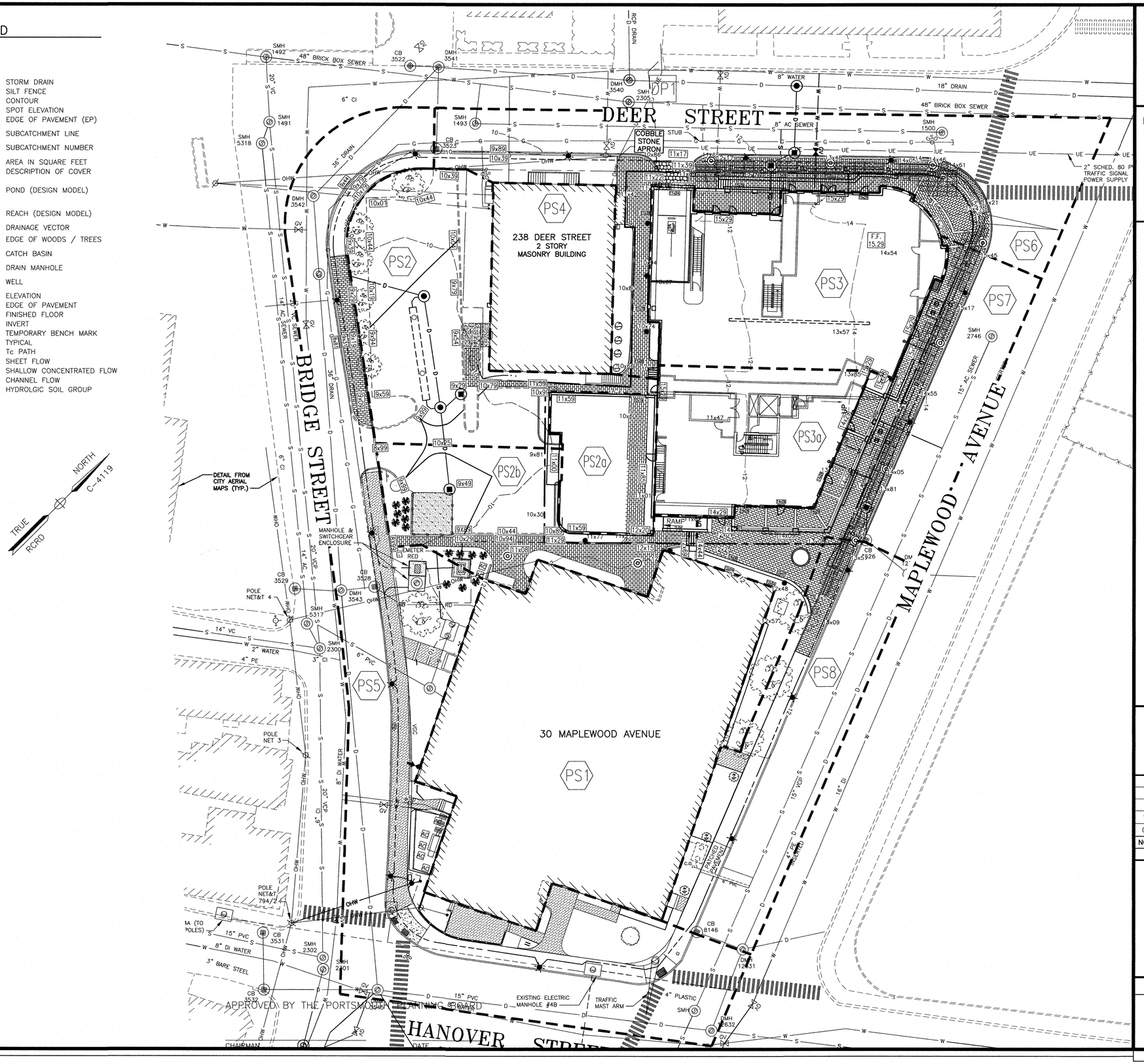
W1

1808

J:\JOBS\1800s\1808s\1808\2017 Site Plan 46 Maplewood\Plans & Specs\Site\drainage\1808DRAINAGE46.dwg, SW1

LEGEND

EXISTING	PROPOSED	
D	D	STORM DRAIN
X X	X X	SILT FENCE
100	100	CONTOUR
97x3	98x0	SPOT ELEVATION
		EDGE OF PAVEMENT (EP)
		SUBCATCHMENT LINE
6	600	SUBCATCHMENT NUMBER
1234	1234	AREA IN SQUARE FEET
WOODS	WOODS	DESCRIPTION OF COVER
6	600	POND (DESIGN MODEL)
6	600	REACH (DESIGN MODEL)
		DRAINAGE VECTOR
		EDGE OF WOODS / TREES
CB	CB	CATCH BASIN
DMH	DMH	DRAIN MANHOLE
W	W	WELL
EL.	EL.	ELEVATION
EP	EP	EDGE OF PAVEMENT
FF	FF	FINISHED FLOOR
INV	INV	INVERT
TBM	TBM	TEMPORARY BENCH MARK
TYP	TYP	TYPICAL
		Tc PATH
SF	SF	SHEET FLOW
SCF	SCF	SHALLOW CONCENTRATED FLOW
CHANNEL	CHANNEL	CHANNEL FLOW
HSG	HSG	HYDROLGIC SOIL GROUP



APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

AMBIT ENGINEERING, INC.
Civil Engineers & Land Surveyors
200 Griffin Road, Unit 3
Portsmouth, N.H. 03801-7114
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46 MAPLEWOOD AVENUE
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
1	REVISED DRAINAGE LAYOUT	3/6/18
0	ISSUED FOR APPROVAL	10/17/17

REVISIONS

STATE OF NEW HAMPSHIRE
JOSEPH L. MULLOW No. 11932 LICENSED PROFESSIONAL ENGINEER
3/6/18

SCALE: 1" = 20'

PLAN OF PROPOSED SUBCATCHMENTS

W2

1808