BEALS · ASSOCIATES *PLLC*

70 Portsmouth Ave.
3rd Floor, Suite 2,
Stratham, N. H. 03885
Phone: 603–583-4860
Fax: 603-583-4863

April 25, 2014

Ms. Marcia Gasses
Town Planner and Land Use Administrator
Town of Barrington
P.O. Box 660
Barrington, New Hampshire 03825

RE: River's Peak – Cabernet Builders
Boulder Drive, Barrington – Tax Map 215, Lot 1

Dear Ms. Gasses,

We are in receipt of a review letter from DuBois & King dated April 18, 2014, concerning the above referenced project and have addressed the comments below.

1. **RESPONSE: The setback lines on sheet 1 do not reflect the exclusion of the steep slope areas as depicted on sheet 5. The final Mylar will be updated prior to submittal for signature.**
2. **RESPONSE: Pond 6 near STA 2+00 has been corrected regarding area data input and was found sufficient to contain the 50-year storm water flow.**
3. **RESPONSE: While Article 7.4.3(7) does not state "in any location", upon discussion with Dubois & King, Inc., we have prepared a waiver request to the rate of runoff increases toward Nippo Brook, and New Bow Lake Road.**
4. **RESPONSE: The worst case scenario (e.g. the interior of the cul-de-sac draining entirely to the road side swale - Subcat #10) has been modeled and as can be reviewed in the attached partial HydroCAD report the 50-year storm event the average depth at peak storage within the 2' deep swale is 0.86'.**
5. **RESPONSE: The swale has been modeled dynamically and the shallower section shows a depth at peak storage of 0.45' under a 50-year event.**
6. **RESPONSE: Pipe materials have been clarified in the gravel wetland detail as requested.**
7. **RESPONSE: Cross-sections at STA 9+00 and 17+00 have been corrected as requested.**
8. **RESPONSE: As stated previously, as part of the design to meet the requirements of the Fire and Police Departments the paved portion of the roadway is 24' wide being 2 feet wider than the normal requirement and the shoulders are all proposed at 4' wide to minimize the site disturbance. This design was approved by both departments and reviewed by the Planning Board to approve the road length waiver. However, a waiver to the 6' required shoulder width in cut sections has been prepared as suggested by the reviewer.**
9. **RESPONSE: The guardrail detail and MELT platform grading has revised as requested.**

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10. **RESPONSE: The speed limit signs have been upsized as requested.**
11. **RESPONSE: The radii have been corrected to 30' as required at the internal intersection.**
12. **RESPONSE: A sight plan and profile has been created for the internal intersection, and both now depict profiles along the horizontal sight lines depicted in plan view and begin with driver's eye 20' off the edge of pavement of the road section intersected with. (See Sheets 6a & 6b.**
13. **RESPONSE: Note 9 on sheet 6 has been updated to reference Article 12.8.4. as requested.**
14. **RESPONSE: A hard copy of the original traffic analysis is enclosed as requested.**

We trust the information and revised plans submitted here will address all cited areas of concern for this application.

If you have any questions, please feel free to contact this office.

Very truly yours,
BEALS ASSOCIATES PLLC

Christian O. Smith, PE
Principal, P.E.

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Subdivision Plan Waiver Request Form

Under Subdivision Plan Regulations 5.4-Request for Waivers, 8.5-Waivers for Specific Plan Submission Requirements and 11.1-General Waiver Provision

If there is more than one waiver requested, each waiver request is to be individually listed and described, as each waiver is considered individually by the Town of Barrington Planning Board. A petition for waiver shall be submitted in writing by the applicant with the application for review. The request shall fully state the grounds for which the waiver is requested and all facts supporting this request with reference to the applicable Barrington Subdivision Regulations article, section and paragraph. **Each waiver granted shall be listed on the approved subdivision plan which is to be recorded at the Strafford County Registry of Deeds.**

Name of Subdivision Plan (See Title Box):
River's Peak Subdivision

Case Number: _____

Site Location: Boulder Drive

Zoning District(s): General Residential

Owner (s): Cabernet Builders

Address of Owner(s): PO Box 291, Stratham, NH 03885

Address Line 2: _____

Name of Applicant (if different from owner): Beals Associates PLLC

Phone Number 583-4860 Email scole@bealsassociatesnh.com

Land Surveyor: Doucet Survey Inc.

I Scott Cole seek the following waiver to the Town of Barrington Subdivision Regulations for the above case submittal:

Your petitioner seeks the following relief:
1.)A waiver to Subdivision Regulations Article 7.4.3(7) citing no increase in runoff from the subject parcel. Minor increases are shown under larger storm events toward Nippo Brook and New Bow Lake Road. It should be noted that the overall site flow to the analysis point (Isinglass River) shows peak flow reductions under all storm events. The increase is caused by the back lots and impervious surfaces proposed on lots 12 thru 17. To avoid the increase the developer would have to cut down far more trees currently providing a substantial buffer to construct diversion berms to redirect the storm water to detention areas to be released slowly. We feel the increase in negligible due to the proximity of the abutting river. This is consistent with the original permitting (NHDES AoT & 401 Water Quality Cert.) Finally, granting of the waiver will not be detrimental to the public safety, health or welfare or injurious to other property and will promote the public interest. The waiver will not, vary the provisions of the Barrington Zoning Ordinance, Master Plan, or Official Maps. Finally, the waiver will substantially secure the objectives, standards and requirements of the regulations.

Signature of Owner/Applicant

Date

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Revised 07/27/2011

Subdivision Plan Waiver Request Form

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Land Surveyor: Doucet Survey Inc.

I Scott Cole seek the following waiver to the Town of Barrington Subdivision Regulations for the above case submittal:

Your petitioner seeks the following relief:

1.)A waiver to Subdivision Regulations Table I Roadway Design, Shoulder width in cut section of 6 feet. As part of the requirements of the Fire and Police Departments the pavement width is designed to be 24' wide being 2 feet wider than is normally required. The proposed 4' shoulders will provide the normal overall road width and create less disturbance for the project.

Signature of Owner/Applicant Date

Revised 07/27/2011

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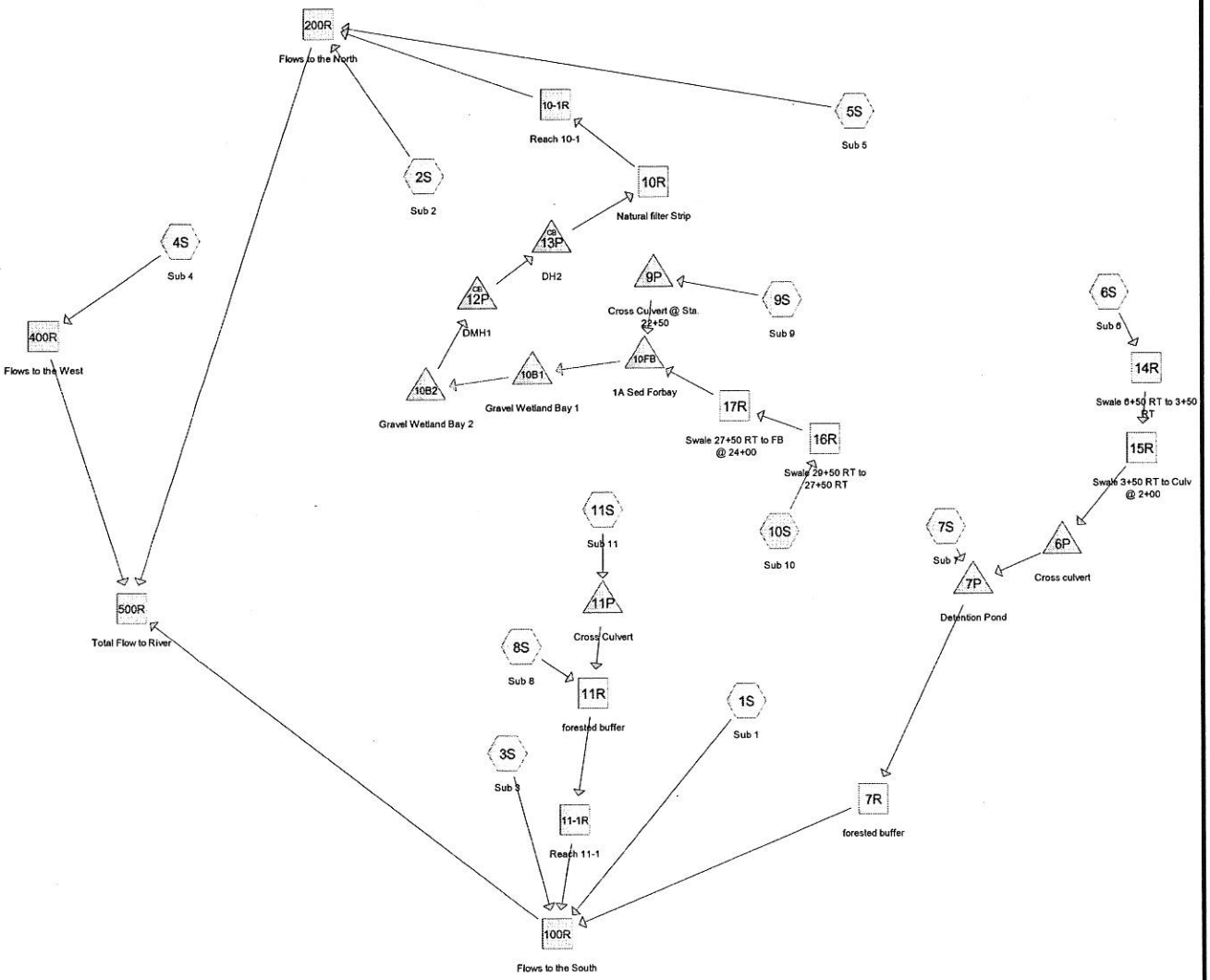

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Subcat Reach Pond Link

Routing Diagram for Proposed 02-2014
Prepared by Microsoft, Printed 4/25/2014
HydroCAD® 10.00-12 s/n 01754 © 2014 HydroCAD Software Solutions LLC

Time span=5.00-50.00 hrs, dt=0.05 hrs, 901 points
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 1S: Sub 1 Runoff Area=13.930 ac 6.32% Impervious Runoff Depth=3.57"
Flow Length=305' Tc=6.5 min CN=71 Runoff=56.46 cfs 4.147 af

Subcatchment 2S: Sub 2 Runoff Area=11.750 ac 2.98% Impervious Runoff Depth=3.47"
Flow Length=657' Tc=21.6 min CN=70 Runoff=31.05 cfs 3.397 af

Subcatchment 3S: Sub 3 Runoff Area=3.370 ac 2.37% Impervious Runoff Depth=3.57"
Flow Length=657' Tc=21.5 min CN=71 Runoff=9.20 cfs 1.003 af

Subcatchment 4S: Sub 4 Runoff Area=6.220 ac 0.00% Impervious Runoff Depth=3.27"
Flow Length=494' Tc=12.2 min CN=68 Runoff=19.21 cfs 1.692 af

Subcatchment 5S: Sub 5 Runoff Area=18.400 ac 0.60% Impervious Runoff Depth=2.96"
Flow Length=1,015' Tc=38.5 min CN=65 Runoff=31.64 cfs 4.545 af

Subcatchment 6S: Sub 6 Runoff Area=2.060 ac 20.39% Impervious Runoff Depth=4.31"
Flow Length=530' Tc=14.2 min CN=78 Runoff=7.98 cfs 0.740 af

Subcatchment 7S: Sub 7 Runoff Area=0.670 ac 34.33% Impervious Runoff Depth=4.42"
Flow Length=630' Tc=5.3 min CN=79 Runoff=3.43 cfs 0.247 af

Subcatchment 8S: Sub 8 Runoff Area=0.350 ac 48.57% Impervious Runoff Depth>5.19"
Flow Length=450' Slope=0.0200 '/' Tc=12.6 min CN=86 Runoff=1.66 cfs 0.151 af

Subcatchment 9S: Sub 9 Runoff Area=1.640 ac 45.12% Impervious Runoff Depth>5.08"
Flow Length=1,062' Tc=17.2 min CN=85 Runoff=6.82 cfs 0.694 af

Subcatchment 10S: Sub 10 Runoff Area=5.740 ac 11.67% Impervious Runoff Depth=3.89"
Flow Length=502' Tc=19.1 min CN=74 Runoff=17.93 cfs 1.859 af

Subcatchment 11S: Sub 11 Runoff Area=0.350 ac 45.71% Impervious Runoff Depth>5.08"
Flow Length=227' Tc=7.7 min CN=85 Runoff=1.89 cfs 0.148 af

Reach 7R: forested buffer Avg. Flow Depth=0.12' Max Vel=1.20 fps Inflow=8.82 cfs 0.986 af
n=0.055 L=125.0' S=0.0360 '/' Capacity=103.38 cfs Outflow=8.80 cfs 0.986 af

Reach 10-1R: Reach 10-1 Avg. Flow Depth=0.31' Max Vel=3.96 fps Inflow=16.30 cfs 2.293 af
n=0.055 L=223.0' S=0.1345 '/' Capacity=38.59 cfs Outflow=16.29 cfs 2.293 af

Reach 10R: Natural filter Strip Avg. Flow Depth=0.33' Max Vel=3.66 fps Inflow=16.32 cfs 2.293 af
n=0.055 L=75.0' S=0.1067 '/' Capacity=34.36 cfs Outflow=16.30 cfs 2.293 af

Reach 11-1R: Reach 11-1 Avg. Flow Depth=0.05' Max Vel=1.31 fps Inflow=3.35 cfs 0.292 af
n=0.055 L=187.0' S=0.1176 '/' Capacity=143.59 cfs Outflow=3.27 cfs 0.292 af

Reach 11R: forested buffer Avg. Flow Depth=0.08' Max Vel=1.55 fps Inflow=3.40 cfs 0.292 af
n=0.055 L=175.0' S=0.1029 '/' Capacity=80.76 cfs Outflow=3.35 cfs 0.292 af

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Reach 14R: Swale 6+50 RT to 3+50 RT Avg. Flow Depth=0.42' Max Vel=5.80 fps Inflow=7.98 cfs 0.740 af
n=0.030 L=300.0' S=0.0700 '/' Capacity=222.39 cfs Outflow=7.97 cfs 0.740 af

Reach 15R: Swale 3+50 RT to Culv @ Avg. Flow Depth=0.45' Max Vel=5.32 fps Inflow=7.97 cfs 0.740 af
n=0.030 L=150.0' S=0.0550 '/' Capacity=197.12 cfs Outflow=7.97 cfs 0.740 af

Reach 16R: Swale 29+50 RT to 27+50 Avg. Flow Depth=0.86' Max Vel=4.56 fps Inflow=17.93 cfs 1.859 af
n=0.030 L=200.0' S=0.0200 '/' Capacity=118.87 cfs Outflow=17.92 cfs 1.859 af

Reach 17R: Swale 27+50 RT to FB @ Avg. Flow Depth=0.66' Max Vel=6.79 fps Inflow=17.92 cfs 1.859 af
n=0.030 L=350.0' S=0.0587 '/' Capacity=203.67 cfs Outflow=17.85 cfs 1.859 af

Reach 100R: Flows to the South Inflow=64.90 cfs 6.428 af
Outflow=64.90 cfs 6.428 af

Reach 200R: Flows to the North Inflow=72.27 cfs 10.235 af
Outflow=72.27 cfs 10.235 af

Reach 400R: Flows to the West Inflow=19.21 cfs 1.692 af
Outflow=19.21 cfs 1.692 af

Reach 500R: Total Flow to River Inflow=129.33 cfs 18.356 af
Outflow=129.33 cfs 18.356 af

Pond 6P: Cross culvert Peak Elev=307.41' Storage=4 cf Inflow=7.97 cfs 0.740 af
15.0" Round Culvert n=0.012 L=60.0' S=0.0833 '/' Outflow=7.95 cfs 0.740 af

Pond 7P: Detention Pond Peak Elev=297.70' Storage=10,552 cf Inflow=9.83 cfs 0.987 af
Outflow=8.82 cfs 0.986 af

Pond 9P: Cross Culvert @ Sta. 22+50 Peak Elev=307.41' Storage=3,141 cf Inflow=6.82 cfs 0.694 af
18.0" Round Culvert n=0.013 L=49.0' S=0.0051 '/' Outflow=7.19 cfs 0.637 af

Pond 10B1: Gravel Wetland Bay 1 Peak Elev=306.39' Storage=10,104 cf Inflow=22.27 cfs 2.461 af
Primary=1.43 cfs 0.722 af Secondary=20.33 cfs 1.660 af Outflow=20.91 cfs 2.382 af

Pond 10B2: Gravel Wetland Bay 2 Peak Elev=306.25' Storage=10,868 cf Inflow=20.91 cfs 2.382 af
Outflow=16.32 cfs 2.293 af

Pond 10FB: 1A Sed Forbay Peak Elev=306.90' Storage=5,904 cf Inflow=24.68 cfs 2.496 af
Outflow=22.27 cfs 2.461 af

Pond 11P: Cross Culvert Peak Elev=330.18' Storage=509 cf Inflow=1.89 cfs 0.148 af
15.0" Round Culvert n=0.012 L=33.0' S=0.0052 '/' Outflow=1.77 cfs 0.140 af

Pond 12P: DMH1 Peak Elev=304.78' Inflow=16.32 cfs 2.293 af
24.0" Round Culvert n=0.013 L=180.0' S=0.0169 '/' Outflow=16.32 cfs 2.293 af

Pond 13P: DMH2 Peak Elev=301.45' Inflow=16.32 cfs 2.293 af
24.0" Round Culvert n=0.013 L=33.0' S=0.0782 '/' Outflow=16.32 cfs 2.293 af

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Total Runoff Area = 64.480 ac Runoff Volume = 18.624 af Average Runoff Depth = 3.47"
94.09% Pervious = 60.670 ac 5.91% Impervious = 3.810 ac

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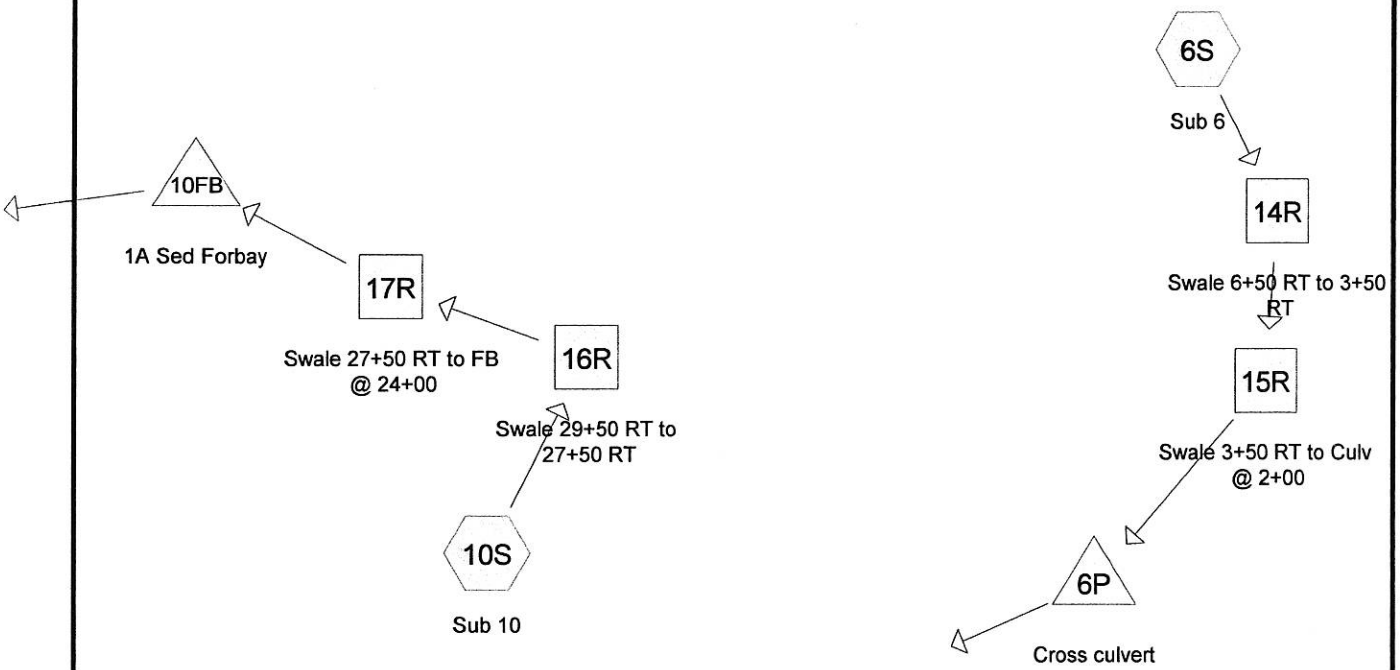

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Subcat Reach Pond Link

Routing Diagram for Proposed 02-2014
Prepared by Microsoft, Printed 4/28/2014
HydroCAD® 10.00-12 s/n 01754 © 2014 HydroCAD Software Solutions LLC

Summary for Subcatchment 6S: Sub 6

Runoff = 7.98 cfs @ 12.20 hrs, Volume= 0.740 af, Depth= 4.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 50yr Rainfall=6.82"

	Area (ac)	CN	Description
*	0.420	98	Impervious
	0.990	74	>75% Grass cover, Good, HSG C
	0.650	70	Woods, Good, HSG C
	2.060	78	Weighted Average
	1.640		79.61% Pervious Area
	0.420		20.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	50	0.0600	0.10		**Sheet Flow, 1** Woods: Light underbrush n= 0.400 P2= 2.90"
2.1	140	0.0500	1.12		**Shallow Concentrated Flow, 2** Woodland Kv= 5.0 fps
0.1	40	0.4600	4.75		**Shallow Concentrated Flow, 3** Short Grass Pasture Kv= 7.0 fps
3.7	300	0.0370	1.35		**Shallow Concentrated Flow, 4** Short Grass Pasture Kv= 7.0 fps
14.2	530	Total			

Summary for Subcatchment 10S: Sub 10

Runoff = 17.93 cfs @ 12.26 hrs, Volume= 1.859 af, Depth= 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Type III 24-hr 50yr Rainfall=6.82"

	Area (ac)	CN	Description
*	0.670	98	Impervious
	1.480	74	>75% Grass cover, Good, HSG C
	3.590	70	Woods, Good, HSG C
	5.740	74	Weighted Average
	5.070		88.33% Pervious Area
	0.670		11.67% Impervious Area

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.0	50	0.0200	0.06		**Sheet Flow, 1** Woods: Light underbrush n= 0.400 P2= 2.90"
5.5	300	0.0333	0.91		**Shallow Concentrated Flow, 2** Woodland Kv= 5.0 fps
0.2	50	0.3300	4.02		**Shallow Concentrated Flow, 3** Short Grass Pasture Kv= 7.0 fps
0.4	102	0.0700	4.26		**Shallow Concentrated Flow, 4** Unpaved Kv= 16.1 fps
19.1	502	Total			

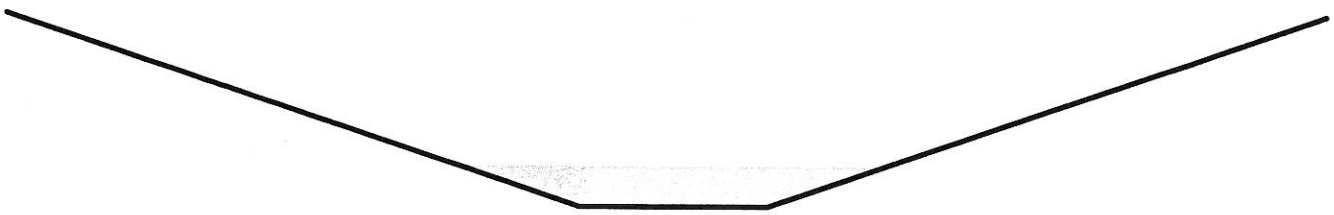
Summary for Reach 14R: Swale 6+50 RT to 3+50 RT

Inflow Area = 2.060 ac, 20.39% Impervious, Inflow Depth = 4.31" for 50yr event
Inflow = 7.98 cfs @ 12.20 hrs, Volume= 0.740 af
Outflow = 7.97 cfs @ 12.21 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.6 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.80 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 2.5 min

Peak Storage= 412 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.42'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 222.39 cfs

2.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 300.0' Slope= 0.0700 '/'
Inlet Invert= 338.00', Outlet Invert= 317.00'



Summary for Reach 15R: Swale 3+50 RT to Culv @ 2+00

Inflow Area = 2.060 ac, 20.39% Impervious, Inflow Depth = 4.31" for 50yr event
Inflow = 7.97 cfs @ 12.21 hrs, Volume= 0.740 af
Outflow = 7.97 cfs @ 12.21 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.3 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.32 fps, Min. Travel Time= 0.5 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 1.4 min

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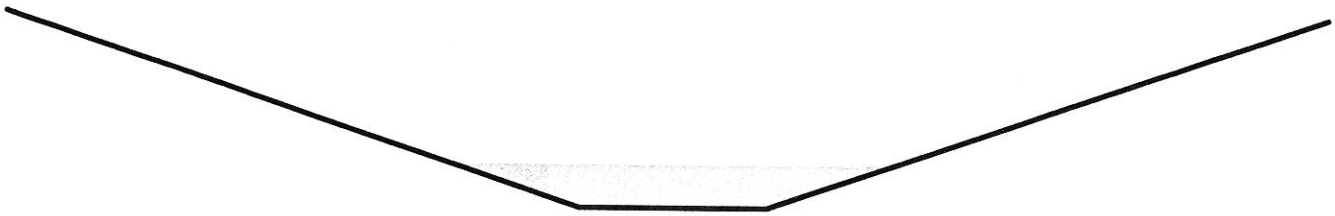
Peak Storage= 225 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 197.12 cfs

2.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 150.0' Slope= 0.0550 '/'
Inlet Invert= 317.00', Outlet Invert= 308.75'



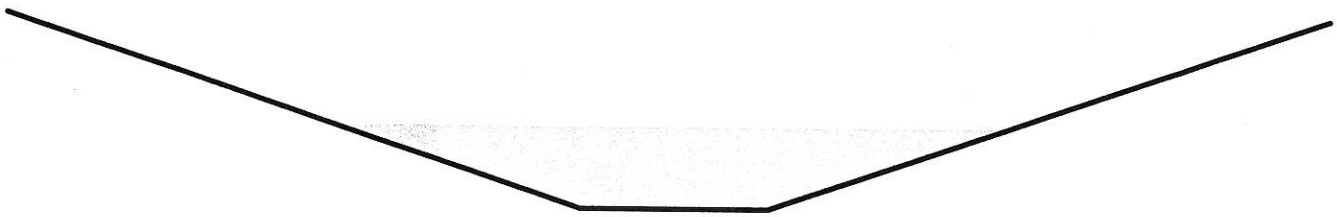
Summary for Reach 16R: Swale 29+50 RT to 27+50 RT

Inflow Area =	5.740 ac,	11.67% Impervious,	Inflow Depth =	3.89" for 50yr event
Inflow =	17.93 cfs @	12.26 hrs, Volume=	1.859 af	
Outflow =	17.92 cfs @	12.27 hrs, Volume=	1.859 af,	Atten= 0%, Lag= 0.5 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.56 fps, Min. Travel Time= 0.7 min
Avg. Velocity = 1.75 fps, Avg. Travel Time= 1.9 min

Peak Storage= 783 cf @ 12.27 hrs
Average Depth at Peak Storage= 0.86'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 118.87 cfs

2.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 200.0' Slope= 0.0200 '/'
Inlet Invert= 332.00', Outlet Invert= 328.00'



Summary for Reach 17R: Swale 27+50 RT to FB @ 24+00

Inflow Area =	5.740 ac,	11.67% Impervious,	Inflow Depth =	3.89" for 50yr event
Inflow =	17.92 cfs @	12.27 hrs, Volume=	1.859 af	
Outflow =	17.85 cfs @	12.29 hrs, Volume=	1.859 af,	Atten= 0%, Lag= 0.8 min

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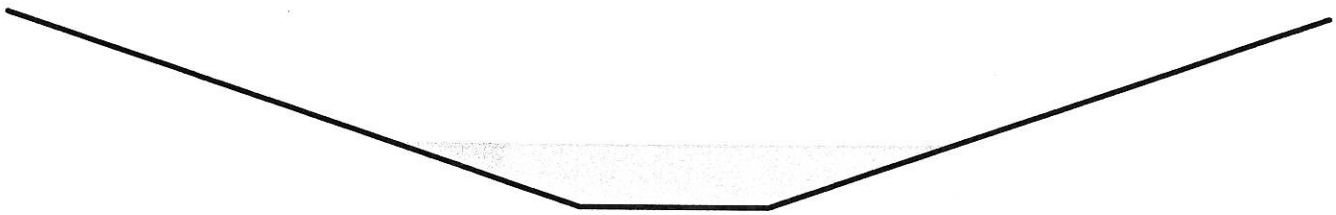
Routing by Dyn-Stor-Ind method, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.79 fps, Min. Travel Time= 0.9 min
Avg. Velocity = 2.53 fps, Avg. Travel Time= 2.3 min

Peak Storage= 920 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.66'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 203.67 cfs

2.00' x 2.00' deep channel, n= 0.030 Earth, grassed & winding
Side Slope Z-value= 3.0 '/' Top Width= 14.00'
Length= 350.0' Slope= 0.0587 '/'
Inlet Invert= 328.00', Outlet Invert= 307.45'



Summary for Pond 6P: Cross culvert

Inflow Area = 2.060 ac, 20.39% Impervious, Inflow Depth = 4.31" for 50yr event
Inflow = 7.97 cfs @ 12.21 hrs, Volume= 0.740 af
Outflow = 7.95 cfs @ 12.22 hrs, Volume= 0.740 af, Atten= 0%, Lag= 0.2 min
Primary = 7.95 cfs @ 12.22 hrs, Volume= 0.740 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Peak Elev= 307.41' @ 12.21 hrs Surf.Area= 19 sf Storage= 4 cf
Flood Elev= 311.00' Surf.Area= 275 sf Storage= 327 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (824.1 - 824.1)

Volume	Invert	Avail.Storage	Storage Description
#1	307.30'	327 cf	**Custom Stage Data (Conic)** Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
307.30	12	0	0	12
308.00	57	22	22	59
310.00	275	305	327	293

Device	Routing	Invert	Outlet Devices
#1	Primary	305.00'	**15.0" Round Culvert** L= 60.0' Ke= 0.500 Inlet / Outlet Invert= 305.00' / 300.00' S= 0.0833 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf

Primary OutFlow Max=7.85 cfs @ 12.22 hrs HW=307.39' TW=297.66' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 7.85 cfs @ 6.40 fps)

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Summary for Pond 10FB: 1A Sed Forbay

Inflow Area = 7.380 ac, 19.11% Impervious, Inflow Depth = 4.06" for 50yr event
Inflow = 24.68 cfs @ 12.29 hrs, Volume= 2.496 af
Outflow = 22.27 cfs @ 12.34 hrs, Volume= 2.461 af, Atten= 10%, Lag= 3.2 min
Primary = 22.27 cfs @ 12.34 hrs, Volume= 2.461 af

Routing by Dyn-Stor-Ind method, Time Span= 5.00-50.00 hrs, dt= 0.05 hrs
Peak Elev= 306.90' @ 12.36 hrs Surf.Area= 6,775 sf Storage= 5,904 cf
Flood Elev= 307.00' Surf.Area= 7,367 sf Storage= 6,579 cf

Plug-Flow detention time= 16.4 min calculated for 2.458 af (98% of inflow)
Center-of-Mass det. time= 7.8 min (847.0 - 839.2)

Volume	Invert	Avail.Storage	Storage Description
#1	301.50'	6,579 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
301.50	12	0	0
302.00	29	10	10
304.00	553	582	592
306.00	1,167	1,720	2,312
307.00	7,367	4,267	6,579

Device	Routing	Invert	Outlet Devices
#1	Primary	305.25'	**5.0' long x 23.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=21.69 cfs @ 12.34 hrs HW=306.90' TW=306.25' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 21.69 cfs @ 2.64 fps)

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