Appendix C – Hydraulic Calculations

- Normal Depth Calculations – Streets
- Normal Depth Calculations – Onsite
- Normal Depth Calculations – Easements
- Finished Floor Elevation Table Check

Worksheet for DON1 (min%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.50 %
Discharge	3.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.54
0+05.00	0.44
0+08.00	0.38
0+08.36	0.38
0+09.33	0.06
0+09.33	0.00
0+10.50	0.13
0+10.50	0.17
0+23.50	0.43
0+36.50	0.17
0+36.50	0.13
0+37.67	0.00
0+37.67	0.06
0+38.64	0.38
0+39.00	0.38
0+42.00	0.44
0+47.00	0.54

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.54)	(0+05.00, 0.44)	0.013
(0+05.00, 0.44)	(0+08.00, 0.38)	0.025
(0+08.00, 0.38)	(0+10.50, 0.13)	0.013
(0+10.50, 0.13)	(0+36.50, 0.13)	0.016
(0+36.50, 0.13)	(0+39.00, 0.38)	0.013
(0+39.00, 0.38)	(0+42.00, 0.44)	0.025
(0+42.00, 0.44)	(0+47.00, 0.54)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for DON1 (min%)

Results	
Normal Depth	0.32 ft
Roughness Coefficient	0.015
Elevation	0.32 ft
Elevation Range	0.00 to 0.54 ft
Flow Area	2.0 ft²
Wetted Perimeter	19.70 ft
Hydraulic Radius	0.10 ft
Top Width	19.40 ft
Normal Depth	0.32 ft
Critical Depth	0.31 ft
Critical Slope	0.77 %
Velocity	1.49 ft/s
Velocity Head	0.03 ft
Specific Energy	0.36 ft
Froude Number	0.815
Flow Type	Subcritical

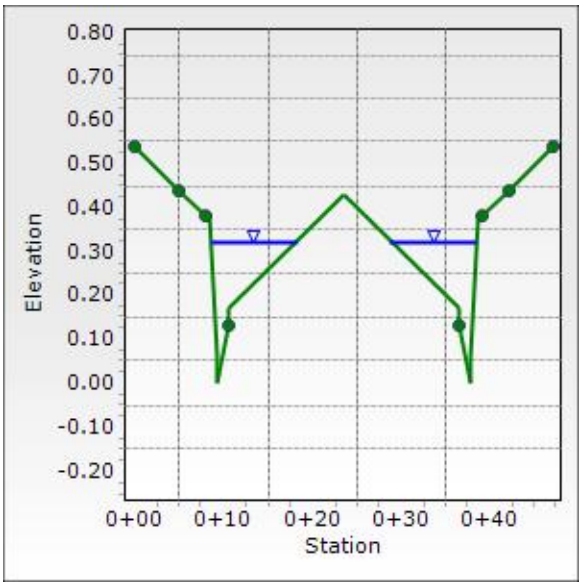
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.32 ft
Critical Depth	0.31 ft
Channel Slope	0.50 %
Critical Slope	0.77 %

XS for DON1 (min%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.50 %
Normal Depth	0.32 ft
Discharge	3.00 cfs



Worksheet for DON1 (max%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.69 %
Discharge	3.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.54
0+05.00	0.44
0+08.00	0.38
0+08.36	0.38
0+09.33	0.06
0+09.33	0.00
0+10.50	0.13
0+10.50	0.17
0+23.50	0.43
0+36.50	0.17
0+36.50	0.13
0+37.67	0.00
0+37.67	0.06
0+38.64	0.38
0+39.00	0.38
0+42.00	0.44
0+47.00	0.54

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.54)	(0+05.00, 0.44)	0.013
(0+05.00, 0.44)	(0+08.00, 0.38)	0.025
(0+08.00, 0.38)	(0+10.50, 0.13)	0.013
(0+10.50, 0.13)	(0+36.50, 0.13)	0.016
(0+36.50, 0.13)	(0+39.00, 0.38)	0.013
(0+39.00, 0.38)	(0+42.00, 0.44)	0.025
(0+42.00, 0.44)	(0+47.00, 0.54)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for DON1 (max%)

Results	
Normal Depth	0.31 ft
Roughness Coefficient	0.015
Elevation	0.31 ft
Elevation Range	0.00 to 0.54 ft
Flow Area	1.8 ft²
Wetted Perimeter	18.32 ft
Hydraulic Radius	0.10 ft
Top Width	18.03 ft
Normal Depth	0.31 ft
Critical Depth	0.31 ft
Critical Slope	0.77 %
Velocity	1.69 ft/s
Velocity Head	0.04 ft
Specific Energy	0.36 ft
Froude Number	0.952
Flow Type	Subcritical

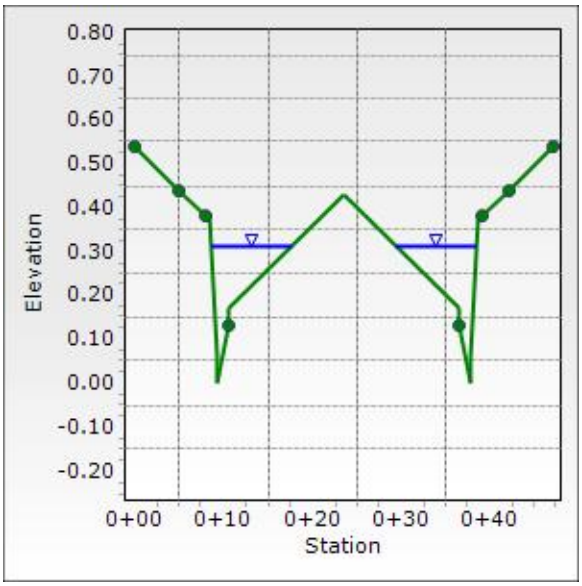
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.31 ft
Critical Depth	0.31 ft
Channel Slope	0.69 %
Critical Slope	0.77 %

XS for DON1 (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.69 %
Normal Depth	0.31 ft
Discharge	3.00 cfs



Worksheet for DON2 (min%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.40 %
Discharge	9.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.54
0+05.00	0.44
0+08.00	0.38
0+08.36	0.38
0+09.33	0.06
0+09.33	0.00
0+10.50	0.13
0+10.50	0.17
0+23.50	0.43
0+36.50	0.17
0+36.50	0.13
0+37.67	0.00
0+37.67	0.06
0+38.64	0.38
0+39.00	0.38
0+42.00	0.44
0+47.00	0.54

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.54)	(0+05.00, 0.44)	0.013
(0+05.00, 0.44)	(0+08.00, 0.38)	0.025
(0+08.00, 0.38)	(0+10.50, 0.13)	0.013
(0+10.50, 0.13)	(0+36.50, 0.13)	0.016
(0+36.50, 0.13)	(0+39.00, 0.38)	0.013
(0+39.00, 0.38)	(0+42.00, 0.44)	0.025
(0+42.00, 0.44)	(0+47.00, 0.54)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for DON2 (min%)

Results	
Normal Depth	0.46 ft
Roughness Coefficient	0.017
Elevation	0.46 ft
Elevation Range	0.00 to 0.54 ft
Flow Area	5.9 ft²
Wetted Perimeter	39.16 ft
Hydraulic Radius	0.15 ft
Top Width	38.84 ft
Normal Depth	0.46 ft
Critical Depth	0.42 ft
Critical Slope	0.86 %
Velocity	1.53 ft/s
Velocity Head	0.04 ft
Specific Energy	0.49 ft
Froude Number	0.696
Flow Type	Subcritical

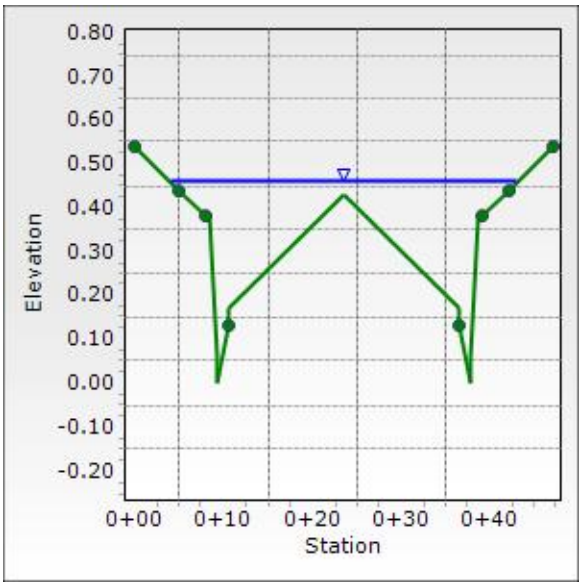
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.46 ft
Critical Depth	0.42 ft
Channel Slope	0.40 %
Critical Slope	0.86 %

XS for DON2 (min%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.40 %
Normal Depth	0.46 ft
Discharge	9.00 cfs



Worksheet for DON2 (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	1.30 %
Discharge	9.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.54
0+05.00	0.44
0+08.00	0.38
0+08.36	0.38
0+09.33	0.06
0+09.33	0.00
0+10.50	0.13
0+10.50	0.17
0+23.50	0.43
0+36.50	0.17
0+36.50	0.13
0+37.67	0.00
0+37.67	0.06
0+38.64	0.38
0+39.00	0.38
0+42.00	0.44
0+47.00	0.54

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.54)	(0+05.00, 0.44)	0.013
(0+05.00, 0.44)	(0+08.00, 0.38)	0.025
(0+08.00, 0.38)	(0+10.50, 0.13)	0.013
(0+10.50, 0.13)	(0+36.50, 0.13)	0.016
(0+36.50, 0.13)	(0+39.00, 0.38)	0.013
(0+39.00, 0.38)	(0+42.00, 0.44)	0.025
(0+42.00, 0.44)	(0+47.00, 0.54)	0.013

Options	
Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for DON2 (max%)

Results	
Normal Depth	0.38 ft
Roughness Coefficient	0.016
Elevation	0.38 ft
Elevation Range	0.00 to 0.54 ft
Flow Area	3.3 ft²
Wetted Perimeter	26.94 ft
Hydraulic Radius	0.12 ft
Top Width	26.62 ft
Normal Depth	0.38 ft
Critical Depth	0.42 ft
Critical Slope	0.71 %
Velocity	2.70 ft/s
Velocity Head	0.11 ft
Specific Energy	0.50 ft
Froude Number	1.345
Flow Type	Supercritical

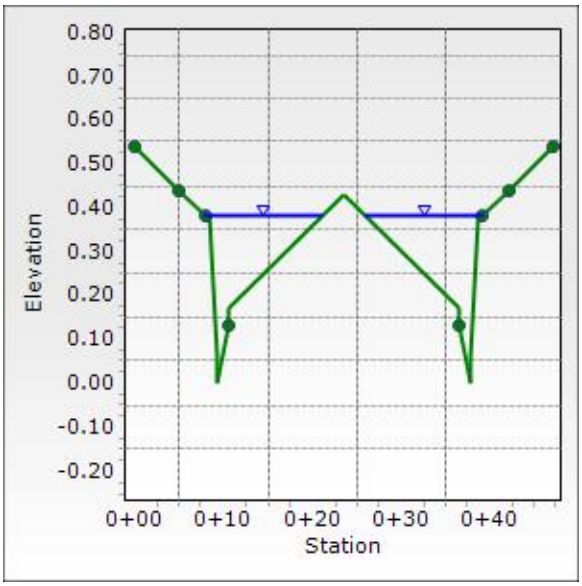
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.38 ft
Critical Depth	0.42 ft
Channel Slope	1.30 %
Critical Slope	0.71 %

XS for DON2 (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	1.30 %
Normal Depth	0.38 ft
Discharge	9.00 cfs



Worksheet for RAC1 (100 Yrs)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.16 %
Discharge	105.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.71
0+06.00	0.59
0+16.50	0.38
0+16.86	0.38
0+17.83	0.06
0+17.83	0.00
0+19.00	0.13
0+19.00	0.17
0+36.00	0.51
0+53.00	0.17
0+53.00	0.13
0+54.17	0.00
0+54.17	0.06
0+55.14	0.38
0+55.50	0.38
0+66.00	0.59

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.71)	(0+16.50, 0.38)	0.025
(0+16.50, 0.38)	(0+19.00, 0.13)	0.013
(0+19.00, 0.13)	(0+53.00, 0.13)	0.016
(0+53.00, 0.13)	(0+55.50, 0.38)	0.013
(0+55.50, 0.38)	(0+66.00, 0.59)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	1.10 ft
Roughness Coefficient	0.020

Worksheet for RAC1 (100 Yrs)

Results	
Elevation	1.10 ft
Elevation Range	0.00 to 0.71 ft
Flow Area	45.8 ft²
Wetted Perimeter	67.22 ft
Hydraulic Radius	0.68 ft
Top Width	66.00 ft
Normal Depth	1.10 ft
Critical Depth	0.83 ft
Critical Slope	0.79 %
Velocity	2.29 ft/s
Velocity Head	0.08 ft
Specific Energy	1.18 ft
Froude Number	0.486
Flow Type	Subcritical

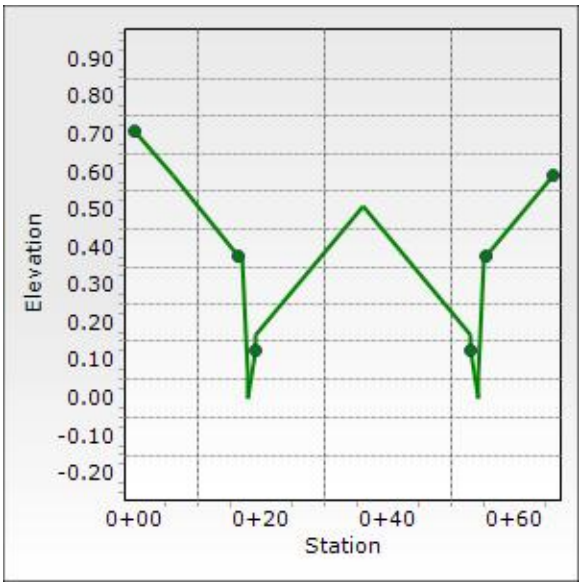
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	1.10 ft
Critical Depth	0.83 ft
Channel Slope	0.16 %
Critical Slope	0.79 %

XS for RAC1 (100 Yrs)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.16 %
Normal Depth	1.10 ft
Discharge	105.00 cfs



Worksheet for RAC2 (100 Yrs) (min%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.05 %
Discharge	121.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.71
0+06.00	0.59
0+16.50	0.38
0+16.86	0.38
0+17.83	0.06
0+17.83	0.00
0+19.00	0.13
0+19.00	0.17
0+36.00	0.51
0+53.00	0.17
0+53.00	0.13
0+54.17	0.00
0+54.17	0.06
0+55.14	0.38
0+55.50	0.38
0+66.00	0.59

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.71)	(0+16.50, 0.38)	0.025
(0+16.50, 0.38)	(0+19.00, 0.13)	0.013
(0+19.00, 0.13)	(0+53.00, 0.13)	0.016
(0+53.00, 0.13)	(0+55.50, 0.38)	0.013
(0+55.50, 0.38)	(0+66.00, 0.59)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	1.48 ft
Roughness Coefficient	0.020

Worksheet for RAC2 (100 Yrs) (min%)

Results	
Elevation	1.48 ft
Elevation Range	0.00 to 0.71 ft
Flow Area	71.1 ft²
Wetted Perimeter	67.99 ft
Hydraulic Radius	1.05 ft
Top Width	66.00 ft
Normal Depth	1.48 ft
Critical Depth	0.87 ft
Critical Slope	0.77 %
Velocity	1.70 ft/s
Velocity Head	0.04 ft
Specific Energy	1.52 ft
Froude Number	0.289
Flow Type	Subcritical

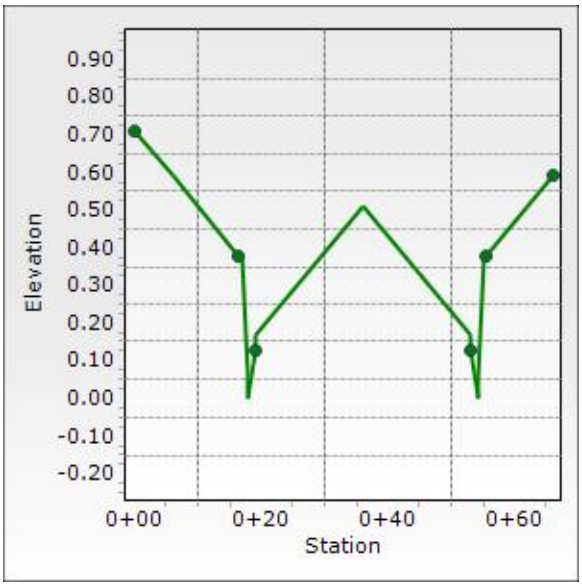
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	1.48 ft
Critical Depth	0.87 ft
Channel Slope	0.05 %
Critical Slope	0.77 %

XS for RAC2 (100 Yrs) (min%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.05 %
Normal Depth	1.48 ft
Discharge	121.00 cfs



Worksheet for RAC2 (100 Yrs) (max%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.61 %
Discharge	121.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.71
0+06.00	0.59
0+16.50	0.38
0+16.86	0.38
0+17.83	0.06
0+17.83	0.00
0+19.00	0.13
0+19.00	0.17
0+36.00	0.51
0+53.00	0.17
0+53.00	0.13
0+54.17	0.00
0+54.17	0.06
0+55.14	0.38
0+55.50	0.38
0+66.00	0.59

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.71)	(0+16.50, 0.38)	0.025
(0+16.50, 0.38)	(0+19.00, 0.13)	0.013
(0+19.00, 0.13)	(0+53.00, 0.13)	0.016
(0+53.00, 0.13)	(0+55.50, 0.38)	0.013
(0+55.50, 0.38)	(0+66.00, 0.59)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.91 ft
Roughness Coefficient	0.020

Worksheet for RAC2 (100 Yrs) (max%)

Results	
Elevation	0.91 ft
Elevation Range	0.00 to 0.71 ft
Flow Area	33.2 ft²
Wetted Perimeter	66.84 ft
Hydraulic Radius	0.50 ft
Top Width	66.00 ft
Normal Depth	0.91 ft
Critical Depth	0.87 ft
Critical Slope	0.76 %
Velocity	3.64 ft/s
Velocity Head	0.21 ft
Specific Energy	1.11 ft
Froude Number	0.904
Flow Type	Subcritical

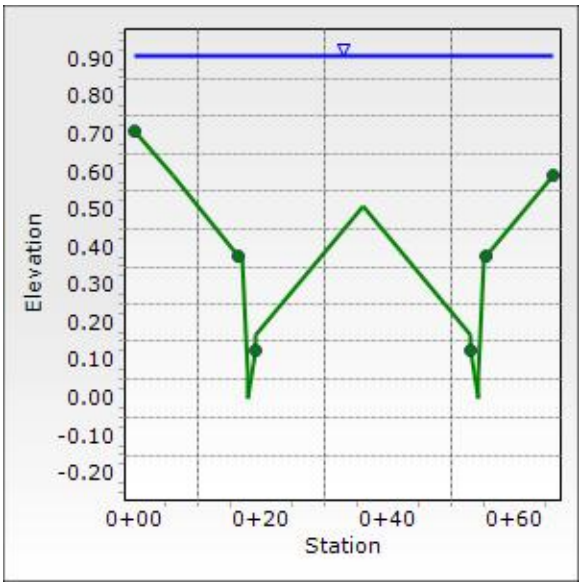
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.91 ft
Critical Depth	0.87 ft
Channel Slope	0.61 %
Critical Slope	0.76 %

XS for RAC2 (100 Yrs) (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.61 %
Normal Depth	0.91 ft
Discharge	121.00 cfs



Worksheet for MEI1 (100 Yrs)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.58 %
Discharge	24.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+10.50	0.39
0+10.86	0.39
0+11.83	0.07
0+11.83	0.01
0+13.00	0.14
0+13.00	0.18
0+30.00	0.51
0+47.50	0.17
0+47.50	0.13
0+49.00	0.00
0+49.00	0.48
0+49.50	0.50
0+60.00	0.72

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+10.50, 0.39)	0.025
(0+10.50, 0.39)	(0+13.00, 0.14)	0.013
(0+13.00, 0.14)	(0+47.50, 0.13)	0.016
(0+47.50, 0.13)	(0+49.50, 0.50)	0.013
(0+49.50, 0.50)	(0+60.00, 0.72)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.58 ft
Roughness Coefficient	0.018
Elevation	0.58 ft

Worksheet for MEI1 (100 Yrs)

Results	
Elevation Range	0.00 to 0.72 ft
Flow Area	11.1 ft²
Wetted Perimeter	53.11 ft
Hydraulic Radius	0.21 ft
Top Width	52.42 ft
Normal Depth	0.58 ft
Critical Depth	0.55 ft
Critical Slope	0.87 %
Velocity	2.16 ft/s
Velocity Head	0.07 ft
Specific Energy	0.65 ft
Froude Number	0.826
Flow Type	Subcritical

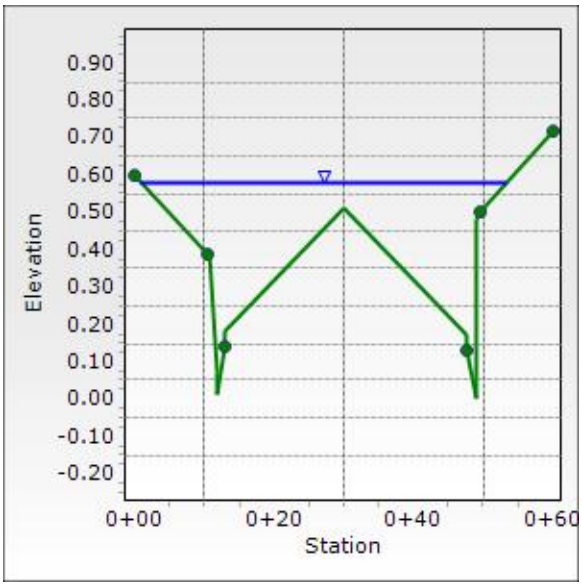
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.58 ft
Critical Depth	0.55 ft
Channel Slope	0.58 %
Critical Slope	0.87 %

XS for MEI1 (100 Yrs)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.58 %
Normal Depth	0.58 ft
Discharge	24.00 cfs



Worksheet for MEI2 (100 Yrs) (min%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.29 %
Discharge	29.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+10.50	0.39
0+10.86	0.39
0+11.83	0.07
0+11.83	0.01
0+13.00	0.14
0+13.00	0.18
0+30.00	0.51
0+47.50	0.17
0+47.50	0.13
0+49.00	0.00
0+49.00	0.48
0+49.50	0.50
0+60.00	0.72

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+10.50, 0.39)	0.025
(0+10.50, 0.39)	(0+13.00, 0.14)	0.013
(0+13.00, 0.14)	(0+47.50, 0.13)	0.016
(0+47.50, 0.13)	(0+49.50, 0.50)	0.013
(0+49.50, 0.50)	(0+60.00, 0.72)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.67 ft
Roughness Coefficient	0.019
Elevation	0.67 ft

Worksheet for MEI2 (100 Yrs) (min%)

Results	
Elevation Range	0.00 to 0.72 ft
Flow Area	16.3 ft²
Wetted Perimeter	58.59 ft
Hydraulic Radius	0.28 ft
Top Width	57.82 ft
Normal Depth	0.67 ft
Critical Depth	0.58 ft
Critical Slope	0.91 %
Velocity	1.78 ft/s
Velocity Head	0.05 ft
Specific Energy	0.72 ft
Froude Number	0.591
Flow Type	Subcritical

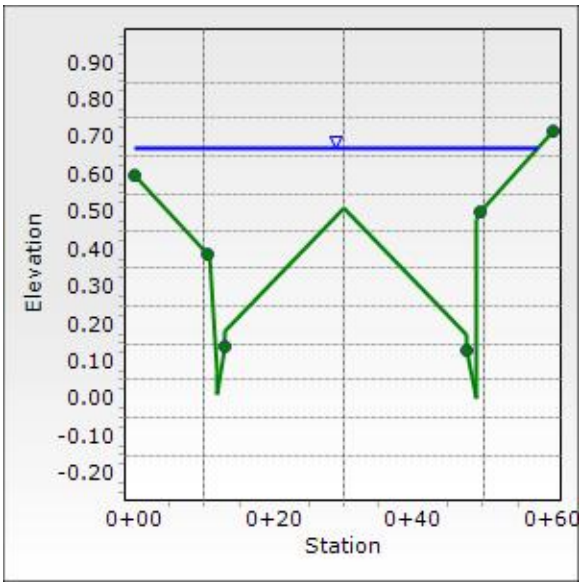
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.67 ft
Critical Depth	0.58 ft
Channel Slope	0.29 %
Critical Slope	0.91 %

XS for MEI2 (100 Yrs) (min%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.29 %
Normal Depth	0.67 ft
Discharge	29.00 cfs



Worksheet for MEI2 (100 Yrs) (max%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.82 %
Discharge	29.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+10.50	0.39
0+10.86	0.39
0+11.83	0.07
0+11.83	0.01
0+13.00	0.14
0+13.00	0.18
0+30.00	0.51
0+47.50	0.17
0+47.50	0.13
0+49.00	0.00
0+49.00	0.48
0+49.50	0.50
0+60.00	0.72

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+10.50, 0.39)	0.025
(0+10.50, 0.39)	(0+13.00, 0.14)	0.013
(0+13.00, 0.14)	(0+47.50, 0.13)	0.016
(0+47.50, 0.13)	(0+49.50, 0.50)	0.013
(0+49.50, 0.50)	(0+60.00, 0.72)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.58 ft
Roughness Coefficient	0.018
Elevation	0.58 ft

Worksheet for MEI2 (100 Yrs) (max%)

Results	
Elevation Range	0.00 to 0.72 ft
Flow Area	11.2 ft²
Wetted Perimeter	53.34 ft
Hydraulic Radius	0.21 ft
Top Width	52.64 ft
Normal Depth	0.58 ft
Critical Depth	0.58 ft
Critical Slope	0.85 %
Velocity	2.58 ft/s
Velocity Head	0.10 ft
Specific Energy	0.69 ft
Froude Number	0.984
Flow Type	Subcritical

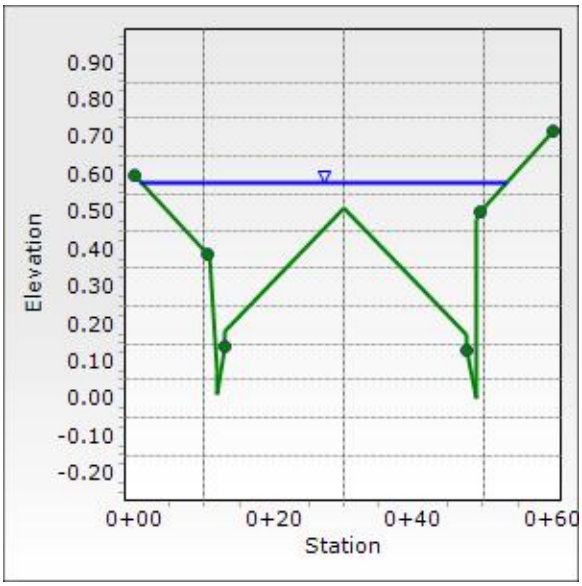
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.58 ft
Critical Depth	0.58 ft
Channel Slope	0.82 %
Critical Slope	0.85 %

XS for MEI2 (100 Yrs) (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.82 %
Normal Depth	0.58 ft
Discharge	29.00 cfs



Worksheet for RAC1 (10 Yrs)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.16 %
Discharge	32.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.71
0+06.00	0.59
0+16.50	0.38
0+16.86	0.38
0+17.83	0.06
0+17.83	0.00
0+19.00	0.13
0+19.00	0.17
0+36.00	0.51
0+53.00	0.17
0+53.00	0.13
0+54.17	0.00
0+54.17	0.06
0+55.14	0.38
0+55.50	0.38
0+66.00	0.59

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.71)	(0+16.50, 0.38)	0.025
(0+16.50, 0.38)	(0+19.00, 0.13)	0.013
(0+19.00, 0.13)	(0+53.00, 0.13)	0.016
(0+53.00, 0.13)	(0+55.50, 0.38)	0.013
(0+55.50, 0.38)	(0+66.00, 0.59)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.74 ft
Roughness Coefficient	0.020

Worksheet for RAC1 (10 Yrs)

Results	
Elevation	0.74 ft
Elevation Range	0.00 to 0.71 ft
Flow Area	22.3 ft²
Wetted Perimeter	66.51 ft
Hydraulic Radius	0.34 ft
Top Width	66.00 ft
Normal Depth	0.74 ft
Critical Depth	0.58 ft
Critical Slope	0.99 %
Velocity	1.44 ft/s
Velocity Head	0.03 ft
Specific Energy	0.77 ft
Froude Number	0.435
Flow Type	Subcritical

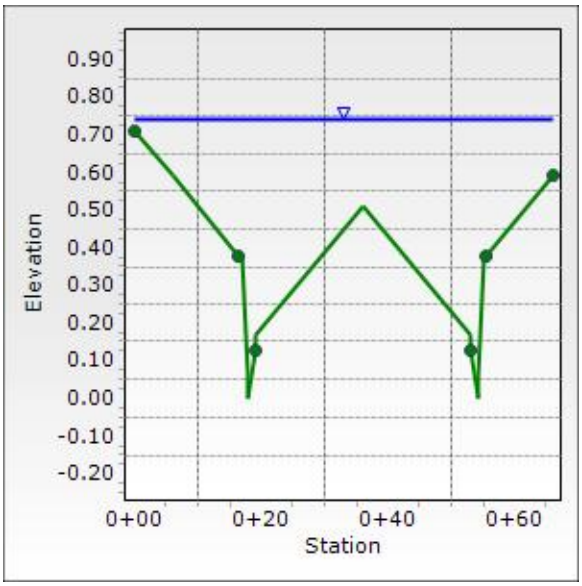
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.74 ft
Critical Depth	0.58 ft
Channel Slope	0.16 %
Critical Slope	0.99 %

XS for RAC1 (10 Yrs)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.16 %
Normal Depth	0.74 ft
Discharge	32.00 cfs



Worksheet for RAC2 (10 Yrs) (min%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.05 %
Discharge	38.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.71
0+06.00	0.59
0+16.50	0.38
0+16.86	0.38
0+17.83	0.06
0+17.83	0.00
0+19.00	0.13
0+19.00	0.17
0+36.00	0.51
0+53.00	0.17
0+53.00	0.13
0+54.17	0.00
0+54.17	0.06
0+55.14	0.38
0+55.50	0.38
0+66.00	0.59

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.71)	(0+16.50, 0.38)	0.025
(0+16.50, 0.38)	(0+19.00, 0.13)	0.013
(0+19.00, 0.13)	(0+53.00, 0.13)	0.016
(0+53.00, 0.13)	(0+55.50, 0.38)	0.013
(0+55.50, 0.38)	(0+66.00, 0.59)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.93 ft
Roughness Coefficient	0.020

Worksheet for RAC2 (10 Yrs) (min%)

Results	
Elevation	0.93 ft
Elevation Range	0.00 to 0.71 ft
Flow Area	35.2 ft²
Wetted Perimeter	66.90 ft
Hydraulic Radius	0.53 ft
Top Width	66.00 ft
Normal Depth	0.93 ft
Critical Depth	0.61 ft
Critical Slope	0.96 %
Velocity	1.08 ft/s
Velocity Head	0.02 ft
Specific Energy	0.95 ft
Froude Number	0.261
Flow Type	Subcritical

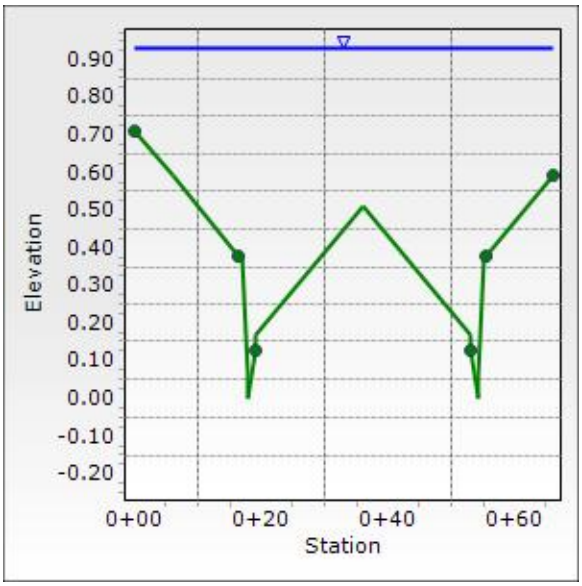
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.93 ft
Critical Depth	0.61 ft
Channel Slope	0.05 %
Critical Slope	0.96 %

XS for RAC2 (10 Yrs) (min%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.05 %
Normal Depth	0.93 ft
Discharge	38.00 cfs



Worksheet for RAC2 (10 Yrs) (max%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.46 %
Discharge	36.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.71
0+06.00	0.59
0+16.50	0.38
0+16.86	0.38
0+17.83	0.06
0+17.83	0.00
0+19.00	0.13
0+19.00	0.17
0+36.00	0.51
0+53.00	0.17
0+53.00	0.13
0+54.17	0.00
0+54.17	0.06
0+55.14	0.38
0+55.50	0.38
0+66.00	0.59

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.71)	(0+16.50, 0.38)	0.025
(0+16.50, 0.38)	(0+19.00, 0.13)	0.013
(0+19.00, 0.13)	(0+53.00, 0.13)	0.016
(0+53.00, 0.13)	(0+55.50, 0.38)	0.013
(0+55.50, 0.38)	(0+66.00, 0.59)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.66 ft
Roughness Coefficient	0.020

Worksheet for RAC2 (10 Yrs) (max%)

Results	
Elevation	0.66 ft
Elevation Range	0.00 to 0.71 ft
Flow Area	17.0 ft²
Wetted Perimeter	63.81 ft
Hydraulic Radius	0.27 ft
Top Width	63.42 ft
Normal Depth	0.66 ft
Critical Depth	0.60 ft
Critical Slope	0.95 %
Velocity	2.12 ft/s
Velocity Head	0.07 ft
Specific Energy	0.73 ft
Froude Number	0.720
Flow Type	Subcritical

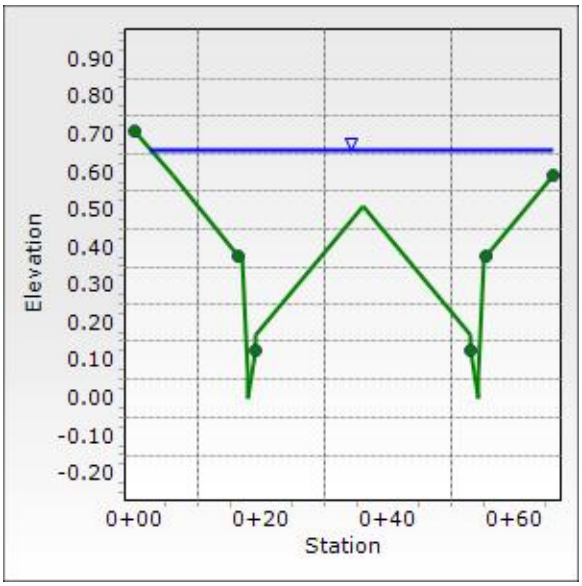
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	0.66 ft
Critical Depth	0.60 ft
Channel Slope	0.46 %
Critical Slope	0.95 %

XS for RAC2 (10 Yrs) (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.46 %
Normal Depth	0.66 ft
Discharge	36.00 cfs



Worksheet for MEI1 (10 Yrs)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.58 %
Discharge	9.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+10.50	0.39
0+10.86	0.39
0+11.83	0.07
0+11.83	0.01
0+13.00	0.14
0+13.00	0.18
0+30.00	0.51
0+47.50	0.17
0+47.50	0.13
0+49.00	0.00
0+49.00	0.48
0+49.50	0.50
0+60.00	0.72

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+10.50, 0.39)	0.025
(0+10.50, 0.39)	(0+13.00, 0.14)	0.013
(0+13.00, 0.14)	(0+47.50, 0.13)	0.016
(0+47.50, 0.13)	(0+49.50, 0.50)	0.013
(0+49.50, 0.50)	(0+60.00, 0.72)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.44 ft
Roughness Coefficient	0.016
Elevation	0.44 ft

Worksheet for MEI1 (10 Yrs)

Results	
Elevation Range	0.00 to 0.72 ft
Flow Area	4.8 ft²
Wetted Perimeter	34.11 ft
Hydraulic Radius	0.14 ft
Top Width	33.46 ft
Normal Depth	0.44 ft
Critical Depth	0.42 ft
Critical Slope	0.78 %
Velocity	1.87 ft/s
Velocity Head	0.05 ft
Specific Energy	0.49 ft
Froude Number	0.868
Flow Type	Subcritical

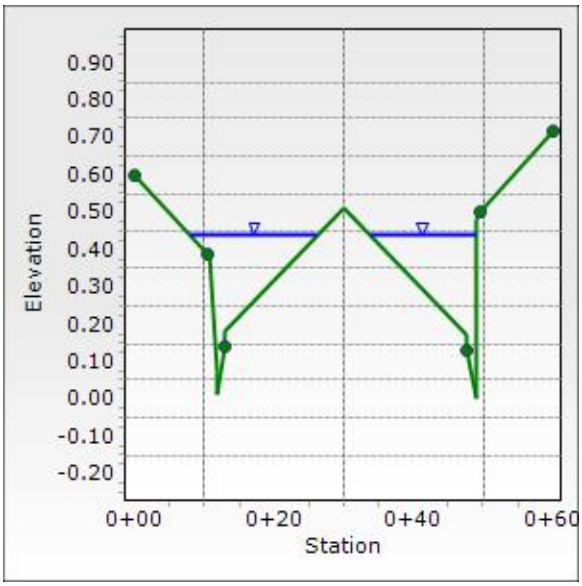
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.44 ft
Critical Depth	0.42 ft
Channel Slope	0.58 %
Critical Slope	0.78 %

XS for MEI1 (10 Yrs)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.58 %
Normal Depth	0.44 ft
Discharge	9.00 cfs



Worksheet for MEI2 (10 Yrs) (min%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.29 %
Discharge	11.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+10.50	0.39
0+10.86	0.39
0+11.83	0.07
0+11.83	0.01
0+13.00	0.14
0+13.00	0.18
0+30.00	0.51
0+47.50	0.17
0+47.50	0.13
0+49.00	0.00
0+49.00	0.48
0+49.50	0.50
0+60.00	0.72

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+10.50, 0.39)	0.025
(0+10.50, 0.39)	(0+13.00, 0.14)	0.013
(0+13.00, 0.14)	(0+47.50, 0.13)	0.016
(0+47.50, 0.13)	(0+49.50, 0.50)	0.013
(0+49.50, 0.50)	(0+60.00, 0.72)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.51 ft
Roughness Coefficient	0.017
Elevation	0.51 ft

Worksheet for MEI2 (10 Yrs) (min%)

Results	
Elevation Range	0.00 to 0.72 ft
Flow Area	7.8 ft²
Wetted Perimeter	46.58 ft
Hydraulic Radius	0.17 ft
Top Width	45.88 ft
Normal Depth	0.51 ft
Critical Depth	0.45 ft
Critical Slope	0.85 %
Velocity	1.40 ft/s
Velocity Head	0.03 ft
Specific Energy	0.54 ft
Froude Number	0.599
Flow Type	Subcritical

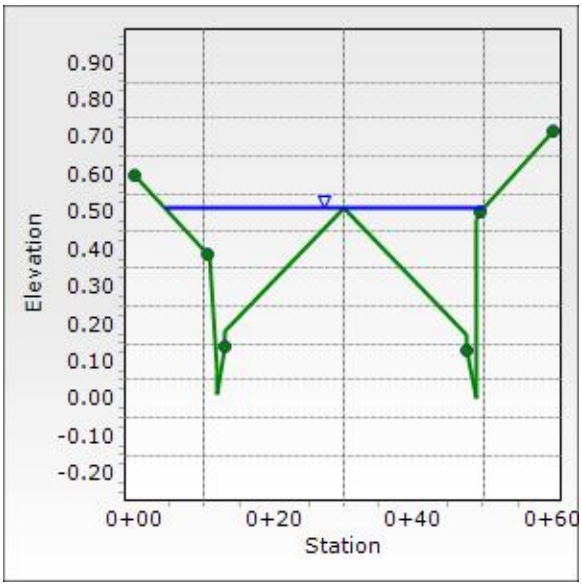
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.51 ft
Critical Depth	0.45 ft
Channel Slope	0.29 %
Critical Slope	0.85 %

XS for MEI2 (10 Yrs) (min%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.29 %
Normal Depth	0.51 ft
Discharge	11.00 cfs



Worksheet for MEI2 (10 Yrs) (max%)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.82 %
Discharge	11.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.60
0+10.50	0.39
0+10.86	0.39
0+11.83	0.07
0+11.83	0.01
0+13.00	0.14
0+13.00	0.18
0+30.00	0.51
0+47.50	0.17
0+47.50	0.13
0+49.00	0.00
0+49.00	0.48
0+49.50	0.50
0+60.00	0.72

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.60)	(0+10.50, 0.39)	0.025
(0+10.50, 0.39)	(0+13.00, 0.14)	0.013
(0+13.00, 0.14)	(0+47.50, 0.13)	0.016
(0+47.50, 0.13)	(0+49.50, 0.50)	0.013
(0+49.50, 0.50)	(0+60.00, 0.72)	0.025

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.44 ft
Roughness Coefficient	0.016
Elevation	0.44 ft

Worksheet for MEI2 (10 Yrs) (max%)

Results	
Elevation Range	0.00 to 0.72 ft
Flow Area	4.9 ft²
Wetted Perimeter	34.68 ft
Hydraulic Radius	0.14 ft
Top Width	34.03 ft
Normal Depth	0.44 ft
Critical Depth	0.45 ft
Critical Slope	0.77 %
Velocity	2.23 ft/s
Velocity Head	0.08 ft
Specific Energy	0.52 ft
Froude Number	1.029
Flow Type	Supercritical

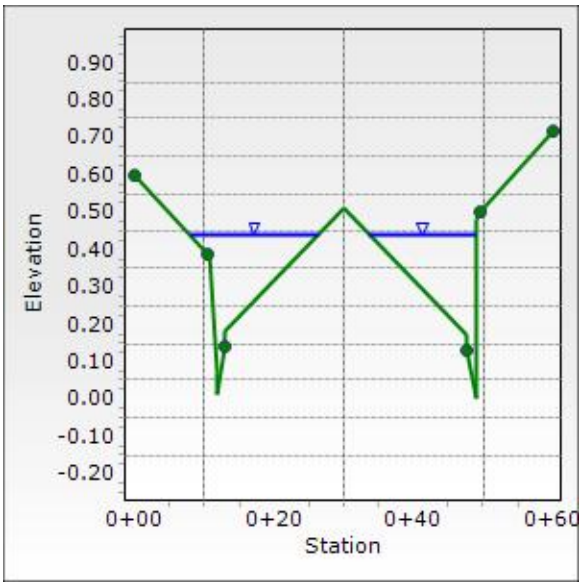
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.44 ft
Critical Depth	0.45 ft
Channel Slope	0.82 %
Critical Slope	0.77 %

XS for MEI2 (10 Yrs) (max%)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.82 %
Normal Depth	0.44 ft
Discharge	11.00 cfs



Worksheet for EA1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.59	%
Discharge	9.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	6.00
0+00.00	0.06
0+02.50	0.00
0+05.00	0.06
0+05.00	6.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 6.00)	(0+05.00, 6.00)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.44	ft
Roughness Coefficient	0.013	
Elevation	0.44	ft
Elevation Range	0.00 to 6.00	ft
Flow Area	2.0	ft²
Wetted Perimeter	5.76	ft
Hydraulic Radius	0.36	ft
Top Width	5.00	ft
Normal Depth	0.44	ft
Critical Depth	0.50	ft
Critical Slope	0.39	%
Velocity	4.40	ft/s
Velocity Head	0.30	ft
Specific Energy	0.74	ft
Froude Number	1.214	
Flow Type	Supercritical	

Worksheet for EA1

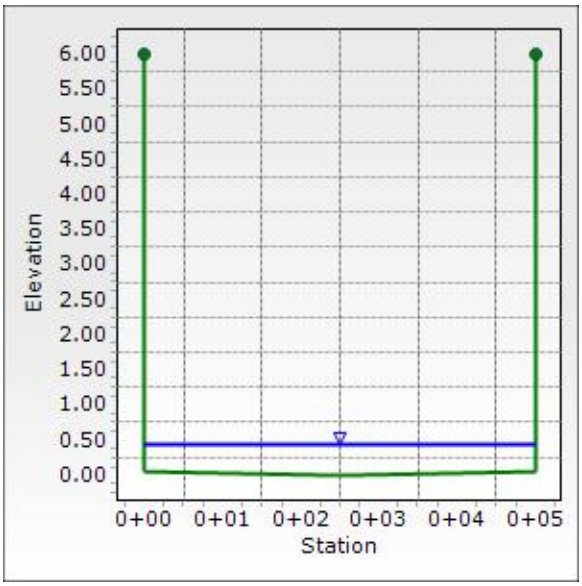
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.44 ft
Critical Depth	0.50 ft
Channel Slope	0.59 %
Critical Slope	0.39 %

XS for EA1

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.59 %
Normal Depth	0.44 ft
Discharge	9.00 cfs



Worksheet for EA2

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.59	%
Discharge	9.00	cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	6.00
0+00.00	0.06
0+02.17	0.00
0+04.33	0.06
0+04.33	6.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 6.00)	(0+04.33, 6.00)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.48	ft
Roughness Coefficient	0.013	
Elevation	0.48	ft
Elevation Range	0.00 to 6.00	ft
Flow Area	2.0	ft²
Wetted Perimeter	5.18	ft
Hydraulic Radius	0.38	ft
Top Width	4.33	ft
Normal Depth	0.48	ft
Critical Depth	0.54	ft
Critical Slope	0.40	%
Velocity	4.59	ft/s
Velocity Head	0.33	ft
Specific Energy	0.81	ft
Froude Number	1.204	
Flow Type	Supercritical	

Worksheet for EA2

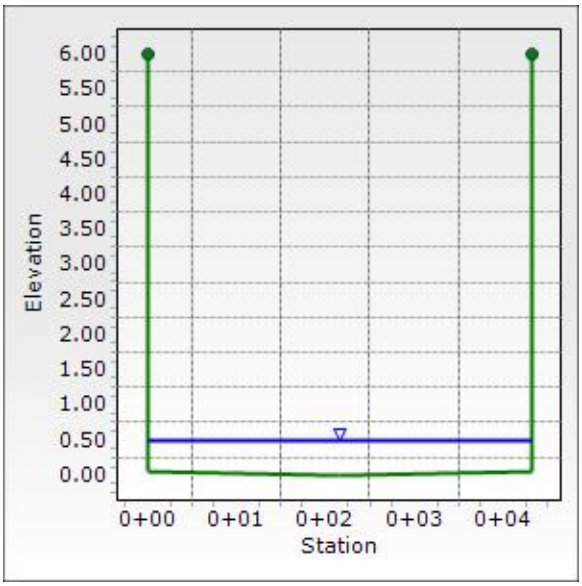
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.48 ft
Critical Depth	0.54 ft
Channel Slope	0.59 %
Critical Slope	0.40 %

XS for EA2

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.59 %
Normal Depth	0.48 ft
Discharge	9.00 cfs



Worksheet for CH1

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	1.00 %
Discharge	9.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.59
0+20.00	0.38
0+21.00	0.00
0+22.00	0.00
0+23.00	0.38
0+43.00	0.53

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.59)	(0+43.00, 0.53)	0.013

Options

Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results

Normal Depth	0.53 ft
Roughness Coefficient	0.013
Elevation	0.53 ft
Elevation Range	0.00 to 0.59 ft
Flow Area	3.7 ft²
Wetted Perimeter	36.67 ft
Hydraulic Radius	0.10 ft
Top Width	36.52 ft
Normal Depth	0.53 ft
Critical Depth	0.55 ft
Critical Slope	0.51 %
Velocity	2.46 ft/s
Velocity Head	0.09 ft
Specific Energy	0.62 ft
Froude Number	1.370

Worksheet for CH1

Results	
Flow Type	Supercritical

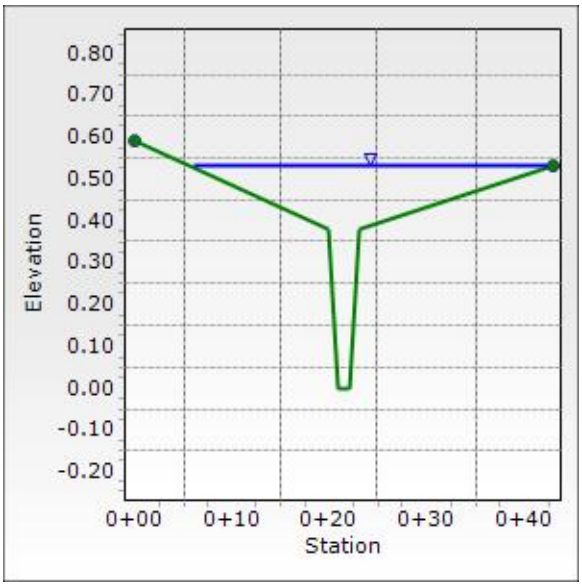
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

GVF Output Data	
Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.53 ft
Critical Depth	0.55 ft
Channel Slope	1.00 %
Critical Slope	0.51 %

XS for CH1

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	1.00 %
Normal Depth	0.53 ft
Discharge	9.00 cfs



BUILDING #	FF	High	Low	Criteria	Depth	Freeboard	Section #	Remarks
Finished Floor Elevations								
1	2375.80	2372.07	2371.83	2.96	1.48	1.27	RAC2	
2	2375.30	2371.83	2370.97	2.96	1.48	1.32	RAC2	
3	2375.30	2370.97	2370.46	2.96	1.48	2.01	RAC2	
4	2374.10	2370.46	2369.93	2.96	1.48	1.33	RAC2	
5	2373.50	2369.93	2369.32	2.96	1.48	1.30	RAC2	
6	2372.90	2369.32	2368.87	2.96	1.48	1.22	RAC2	
6	2372.90	2370.14	2369.09	0.96	0.48	2.33	EA2	FL used instead of TC
7	2379.20	2375.87	2375.42	1.16	0.58	2.78	MEI1	
7	2379.20	2375.55	2375.30	0.64	0.32	3.51	DON1	
8	2378.50	2375.40	2374.17	0.92	0.46	3.18	DON2	
9	2378.45	2374.17	2373.86	0.92	0.46	3.89	DON2	
10	2378.00	2373.86	2373.57	0.92	0.46	3.74	DON2	
11	2376.60	2373.57	2372.98	0.92	0.46	2.78	DON2	
12	2376.40	2372.98	2372.33	0.92	0.46	3.21	DON2	
13	2376.70	2372.33	2372.03	1.06	0.53	3.84	CH1	
13	2376.70	2371.59	2370.14	0.88	0.44	4.95	EA1	FL used instead of TC
14	2377.00	2372.54	2372.03	1.06	0.53	4.04	CH1	
14	2377.00	2371.59	2370.14	0.88	0.44	5.26	EA1	FL used instead of TC
15	2377.10	2374.17	2372.54	0.92	0.46	3.20	DON2	
16	2377.90	2374.42	2373.99	0.64	0.32	3.44	DON1	
16	2377.90	2373.83	2373.18	1.34	0.67	3.43	MEI2	
17	2376.50	2372.99	2372.51	0.92	0.46	3.21	DON2	
17	2376.50	2374.39	2372.51	0.92	0.46	2.51	DON2	
18	2377.10	2373.86	2372.99	0.92	0.46	3.13	DON2	
18	2377.10	2375.52	2374.20	0.92	0.46	1.70	DON2	
19	2379.80	2374.90	2374.21	1.34	0.67	4.28	MEI2	
19	2379.80	2374.42	2374.10	0.64	0.32	5.28	DON1	East of the lot
19	2379.80	2375.55	2375.17	0.64	0.32	4.18	DON1	West of the lot