

Servicio de Asistencia a Municipios. Sección de Urbanismo



**PLAN GENERAL DE ORDENACIÓN URBANÍSTICA DE
ALMEGÍJAR**

Aprobación Inicia

DOCUMENTO: **ANEXO
ADENDA AL ESTUDIO HIDROLÓGICO E HIDRÁULICO**

EQUIPO REDACTOR:



Juan Carlos García de los Reyes, arquitecto

FECHA:

ENERO DE 2018

**ADENDA AL ESTUDIO HIDROLÓGICO E HIDRÁULICO DE LOS
CAUCES QUE AFECTAN A LOS NUEVOS DESARROLLOS URBANOS
DEL MUNICIPIO DE ALMEGÍJAR
T.M. ALMEGÍJAR (GRANADA)**

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APENDICE 1. SALIDAS HEC-RAS

SITUACIÓN ACTUAL

ALMEGÍJAR

NOTÁEZ

SITUACIÓN PROPUESTA (MEDIDAS CORRECTORAS)

ALMEGÍJAR

NOTÁEZ

1. DOCUMENTO N°1: MEMORIA Y APÉNDICE

1.1. ANTECEDENTES

Con fecha de 23 de marzo de 2011 se presentó en la Agencia Andaluza del Agua el “Estudio Hidrológico e Hidráulico de los cauces que afectan a los nuevos desarrollos urbanos del municipio de Almegíjar”, documento anejo al Nuevo Plan de Ordenación Urbana (P.G.O.U.) del término municipal de Almegíjar llevado a cabo por el Área de Obras Servicios y Desarrollo, Delegación de Obras y Servicios de la Diputación de Granada.

Posteriormente, en respuesta a dicho estudio se recibió un informe de requerimiento de documentación con referencia 17/11-URB/RCN/chc y fecha de 19 de Abril de 2011, solicitando la definición de las obras de defensa necesarias para la protección de los núcleos afectados frente a avenidas descritas en el estudio anteriormente mencionado.

Con objeto de dar respuesta a dicho informe se redacta la presente Adenda.

1.2. OBJETO DE LA ADENDA

La presente Adenda tiene por objeto planificar y dimensionar las actuaciones de defensa contra inundaciones en los núcleos urbanos de Almegíjar y Notáez.

1.3. ESTUDIO COMPLEMENTARIO

Con objeto de definir las defensas contra inundaciones se han realizado las siguientes simulaciones hidráulicas, siguiendo la metodología y partiendo de los caudales del estudio inicial:

- Nueva simulación de la situación actual incluyendo en ésta las obras de drenaje existentes y los bloques de obstrucción (edificaciones próximas a los cauces).

Esta simulación ha permitido delimitar con mayor precisión las llanuras de inundación en la situación actual y localizar los factores causantes de la misma.

- Simulación de la situación propuesta, con las medidas correctoras incorporadas al modelo.

La simulación del modelo con las medidas correctoras ha permitido el dimensionamiento de las mismas, constatando su validez.

1.3.1 Simulación hidráulica de la situación actual

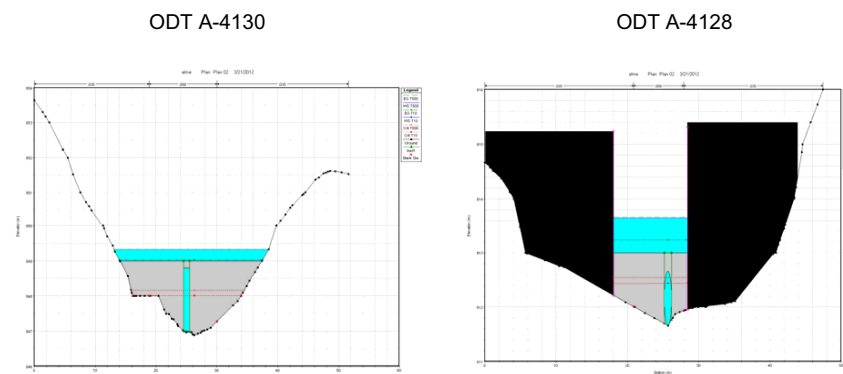
La simulación hidráulica de la situación actual se ha vuelto a realizar incluyendo en ésta las obras de drenaje existentes y los bloques de obstrucción correspondientes a edificaciones.

La ubicación, tanto de las obras de drenaje como de los bloques de obstrucción, se puede identificar en el apartado 2.3 del Documento Nº 2 Planos.

A continuación se analizan los resultados obtenidos para ambos núcleos de población:

1.3.1.1 Almegíjar

En el caso de Almegíjar se comprueba que tanto la obra de drenaje situada sobre la carretera A-4130 (equivalente a un marco de 1 X 1,8 m) como la situada en la travesía urbana de la carretera A-4128 a la altura de Almegíjar (\varnothing 1.000 mm) no tienen sección suficiente para evacuar los caudales de 500 años de periodo de retorno, produciendo la última de ellas un ensanchamiento de la llanura de inundación y la sobreelevación de la lamina de agua entre edificaciones aguas arriba, afectando a suelo urbano consolidado.



Asimismo, es de destacar que la simulación ha requerido introducir unos parámetros de rugosidad muy elevados para el cauce ($n=0,058$), como consecuencia de la presencia de cultivos en terrazas establecidos en el propio cauce y las múltiples obstrucciones que podemos encontrar:

Cultivos en el cauce

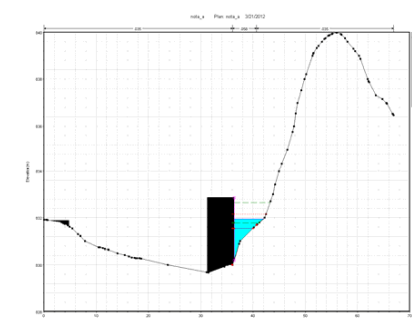
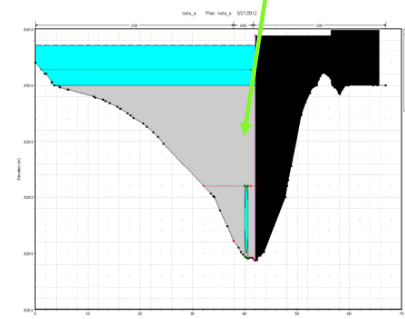


Obstrucciones en el cauce



1.3.1.2 Notáez

En la simulación hidráulica del arroyo de Notáez en el estado actual pone de manifiesto la incapacidad de la obra de drenaje existente (\varnothing 600 mm) y del tramo semi-encauzado aguas arriba de ésta. La escasa capacidad de la obra de drenaje produce que la llanura de inundación invada la calle Real y el parque situado en sus inmediaciones, mientras que aguas arriba de ésta la escasa sección del tramo semi-encauzado produce una sobre elevación de la lámina de agua.



En la obra de drenaje situada sobre la carretera A-4130 (equivalente a un marco de 1 X 1,8 m) no se plantea ninguna medida, puesto que aun siendo sus dimensiones insuficientes para evacuar el caudal de 500 años de periodo de retorno la llanura de inundación no afecta a suelo urbano consolidado.

Por otra parte, también podemos apreciar gran cantidad de vegetación y numerosas obstrucciones en el cauce. Lo cual ha requerido incrementar el valor de rugosidad en el cauce ($n=0,058$).



1.3.2 Medidas correctoras propuestas

Las medias correctoras propuestas para evitar la expansión de las llanuras de inundación, de 500 años de periodo de retorno, en suelo urbano consolidado son:

1.3.2.1 Almegíjar

- Sustitución de la obra de drenaje situada en la travesía urbana de la carretera A-4128 (\varnothing 1.000 mm) por un marco 3 x 2,5 m.
- Ampliación de la sección del cauce 20 m aguas arriba del marco. En dicho tramo se igualara la sección a la del marco propuesto (3X2,5 m).
- Erradicación de cultivos del cauce y eliminación de restos de vegetación que contribuyen a su obstrucción. Esta medida se traduce en pasar de un número de Manning en el cauce de 0,058 a 0,04.

1.3.2.2 Notáez

- Sustitución de la obra de drenaje situada en la calle Real (\varnothing 600 mm) por un marco de 3 x 2 m. Dicho marco se prolongará en 5 m aguas arriba de la actual obra de drenaje con objeto de mejorar las condiciones hidráulicas y de no interrumpir la continuidad de la red viaria urbana.
- Ampliación de la sección del cauce 20 m aguas arriba del marco. En dicho tramo se igualara la sección a la del marco propuesto (3X2 m).
- Eliminación de restos de vegetación que contribuyen a la obstrucción del cauce. Esta medida se traduce en pasar de un número de Manning en el cauce de 0,058 a 0,04.

1.3.3 Simulación hidráulica de la situación propuesta (con medidas correctoras)

1.3.3.1 Almegíjar

La simulación hidráulica con las medidas planteadas reduce notablemente la extensión de la llanura de inundación, de 500 años de periodo de retorno, evitando que ésta llegue a afectar a suelo urbano consolidado.

Dicho resultado quedan de manifiesto en la sección transversal del marco propuesto, que sustituye al actual tubo de 1.000 mm de diámetro y en la planta de la nueva llanura de inundación.



1.4. CONCLUSIONES DEL ESTUDIO

Tras este análisis de los efectos de las medidas correctoras propuesta queda de manifiesto que dichas medidas son suficientes para reducir tanto las sobreelevaciones de la lamina de agua como la llanura de inundación, de 500 años de periodo de retorno, hasta fuera de los límites del suelo urbano consolidado de los núcleos urbanos de Almegíjar y Notáez.

1.3.3.2 Notáez

Al igual que en el caso del núcleo Urbano de Almegíjar la simulación hidráulica con las medidas planteadas reduce notablemente la extensión de llanura de inundación, de 500 años de periodo de retorno, evitando que ésta llegue a afectar a suelo urbano consolidado.

Los mencionados efectos quedan de manifiesto en los resultados obtenidos en la nueva simulación hidráulica realizada con las medidas correctoras.

**NOMBRE
ORDOÑEZ
PEREIRA
RAFAEL - NIF
31727179J**

Firmado digitalmente por
NOMBRE ORDOÑEZ PEREIRA
RAFAEL - NIF 31727179J
Nombre de reconocimiento
(DN): c=ES, o=FNMT,
ou=FNMT Clase 2 CA,
ou=500070015, cn=NOMBRE
ORDOÑEZ PEREIRA RAFAEL -
NIF 31727179J
Fecha: 2012.03.26 16:26:03
+02'00'

Granada, marzo de 2012

Fdo.: Rafael Ordóñez Pereira

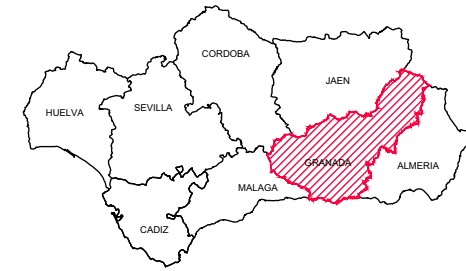
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2. DOCUMENTO N°2: PLANOS

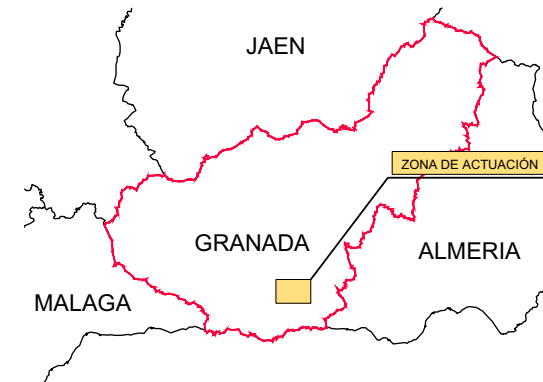
- 2.1. SITUACIÓN E ÍNDICE
 - 2.1.1. Almegijar
 - 2.1.2. Notáez
- 2.2. SECCIONES DE CÁLCULO
 - 2.2.1. Almegijar
 - 2.2.2. Notáez
- 2.3. BLOQUES DE OBSTRUCCIÓN Y OBRAS DE DRENAJE.
 - 2.3.1. Situación actual
 - 2.3.1.1. Almegijar
 - 2.3.1.2. Notáez
 - 2.3.2. Situación propuesta (medidas correctoras)
 - 2.3.2.1. Almegijar
 - 2.3.2.2. Notáez
- 2.4. ZONAS INUNDABLES
 - 2.4.1. Situación actual
 - 2.4.1.1. Almegijar
 - 2.4.1.2. Notáez
 - 2.4.2. Situación propuesta (medidas correctoras)
 - 2.4.2.1. Almegijar
 - 2.4.2.2. Notáez



PLANO DE SITUACIÓN
S/E

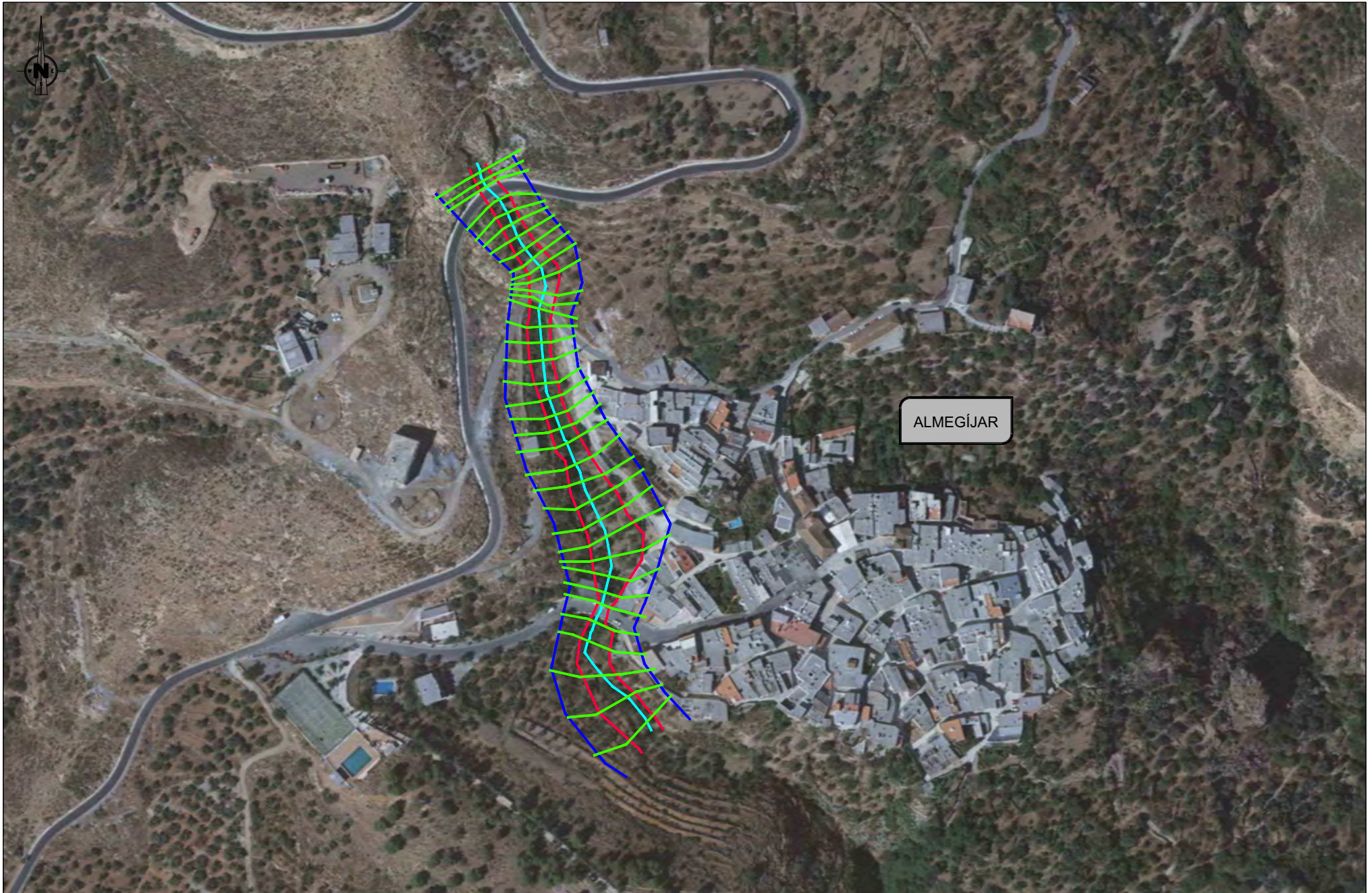


COMUNIDAD ANDALUZA
S/E



PROVINCIA DE GRANADA
S/E

ÍNDICE DE PLANOS	
2.1	SITUACIÓN E ÍNDICE
2.2	SECCIONES DE CÁLCULO
2.2.1	ALMEGIJAR
2.2.1	NOTÁEZ
2.3	BLOQUES DE OBSTRUCCIÓN Y ODT
2.3.1	SITUACIÓN ACTUAL
2.3.1.1	ALMEGIJAR
2.3.1.2	NOTÁEZ
2.3.2	SITUACIÓN PROPUESTA
2.3.2.1	ALMEGIJAR
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2.4.2	SITUACIÓN PROPUESTA
2.4.2.1	ALMEGIJAR
2.4.2.2	NOTÁEZ



ALMEGÍJAR

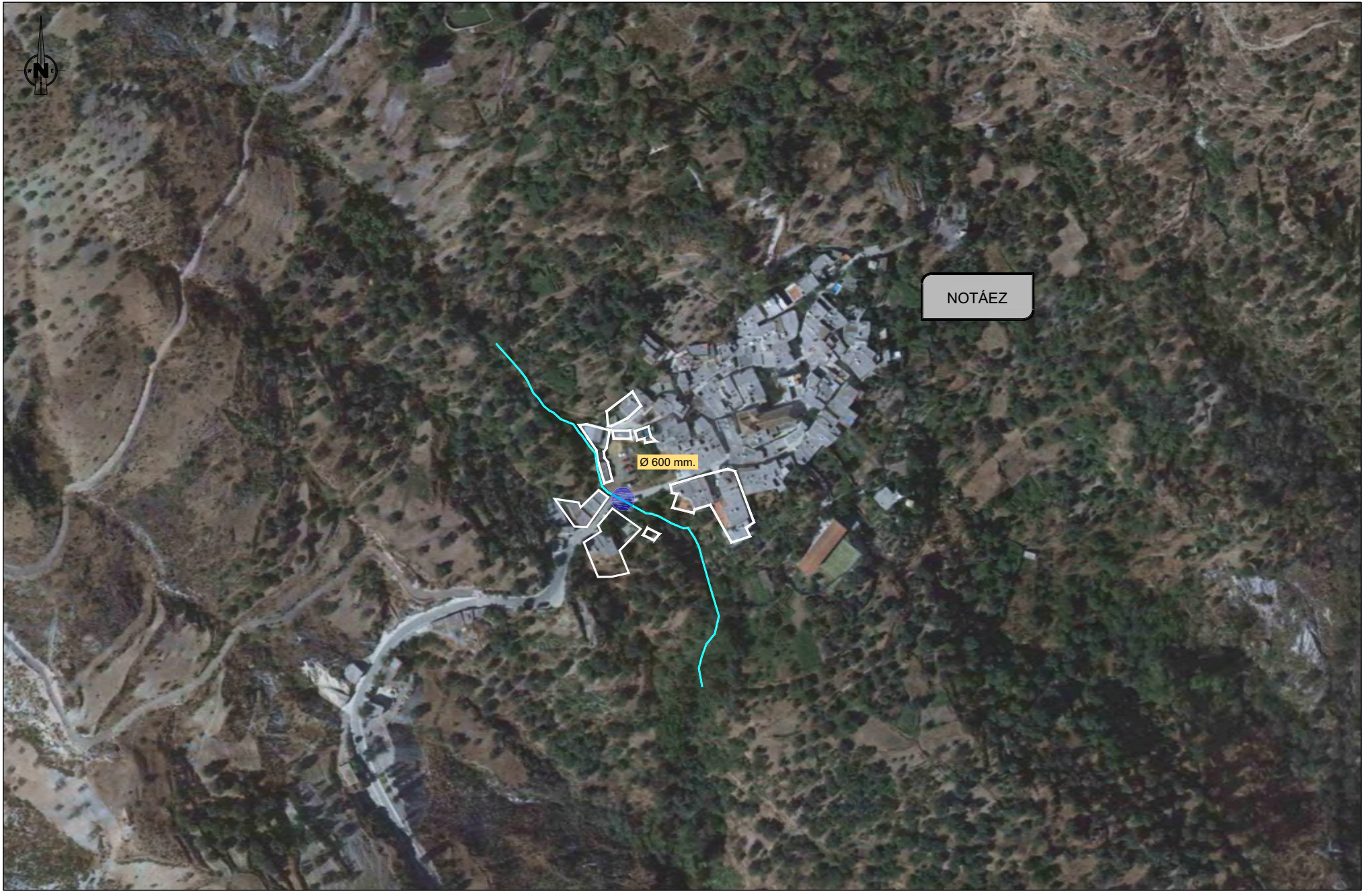
— BANKS — RIVER — FLOWPATHS — XSCUTLINES



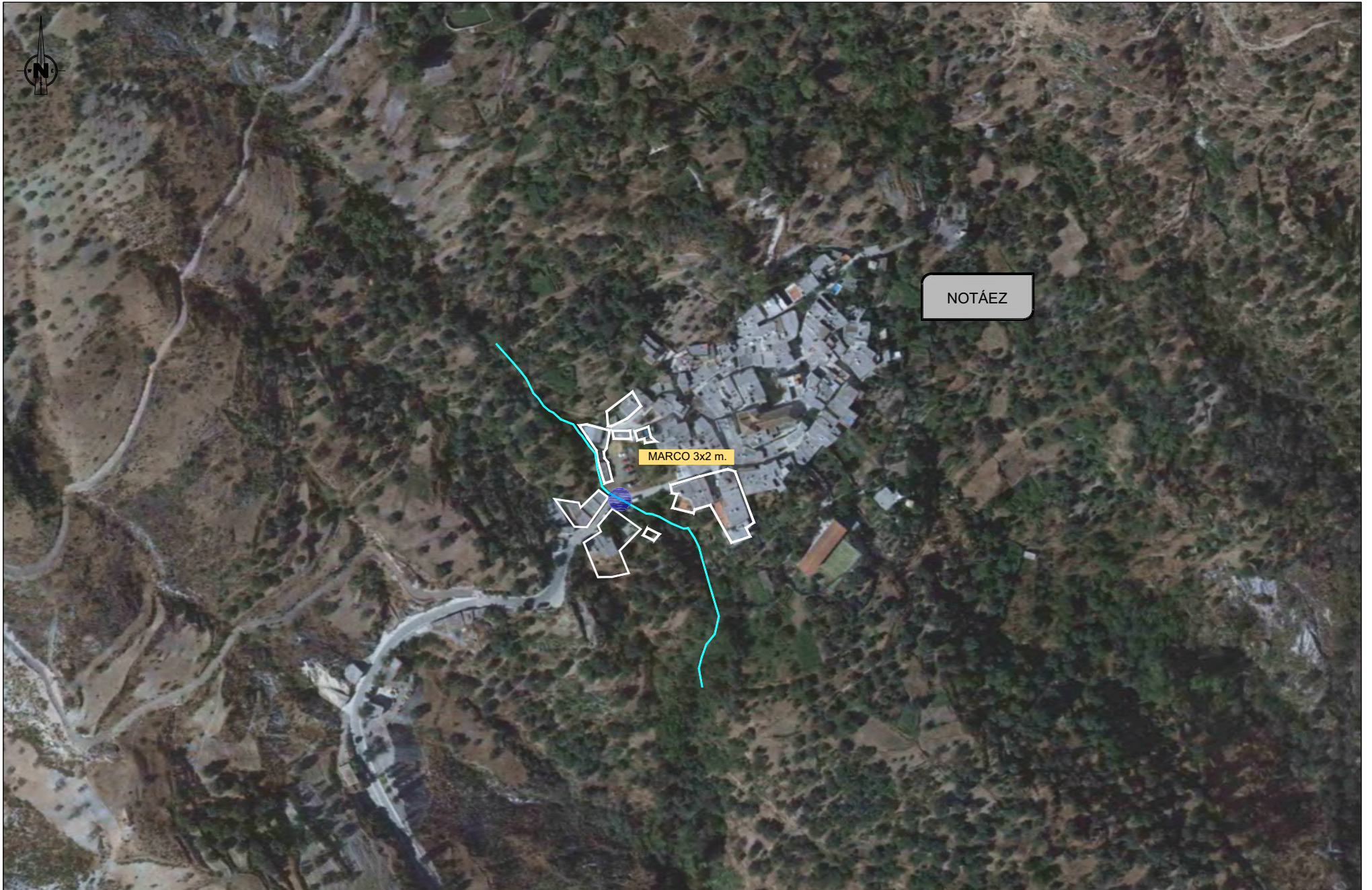
NOTÁEZ

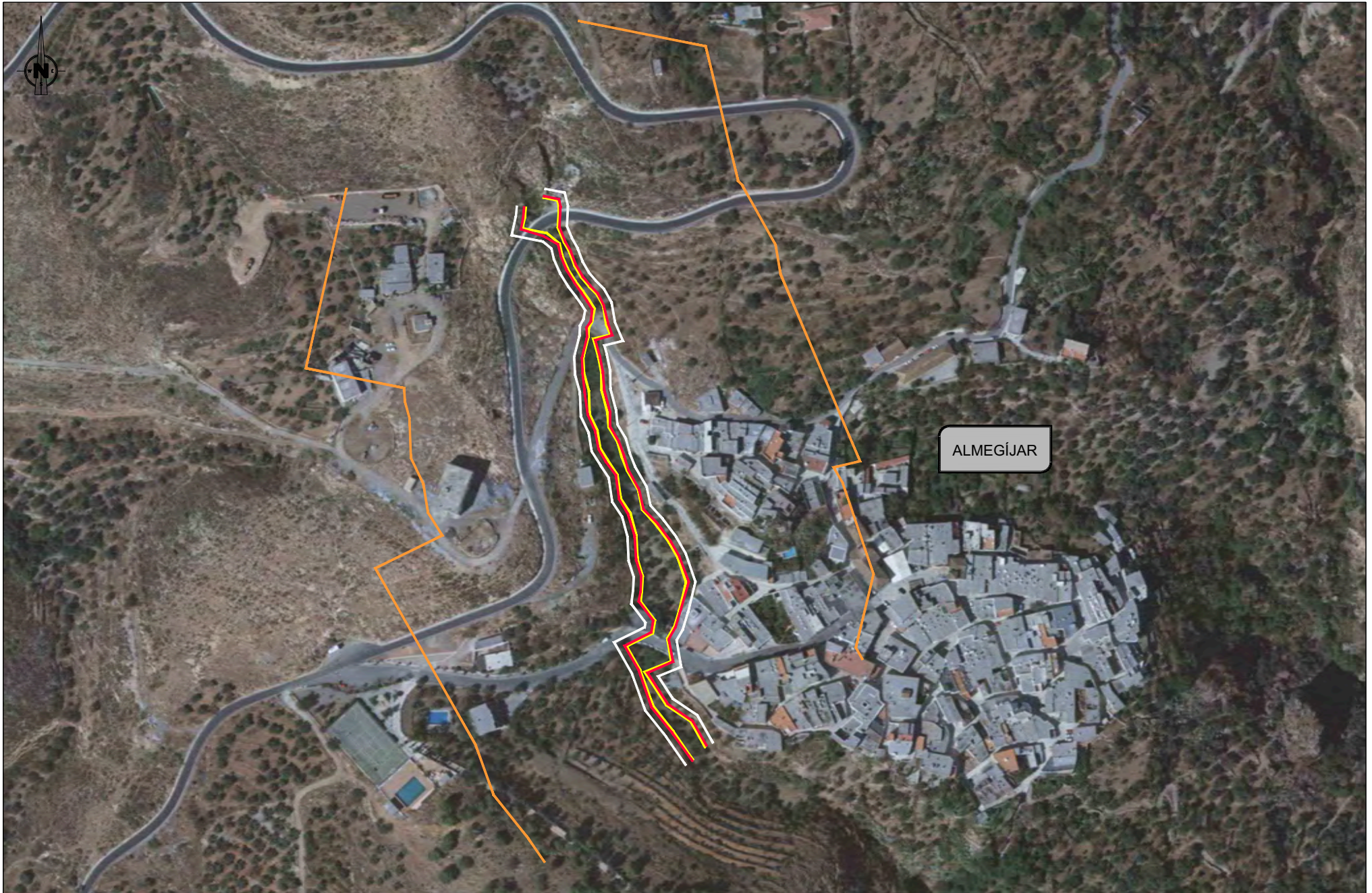
— BANKS — RIVER — FLOWPATHS — XSCUTLINES





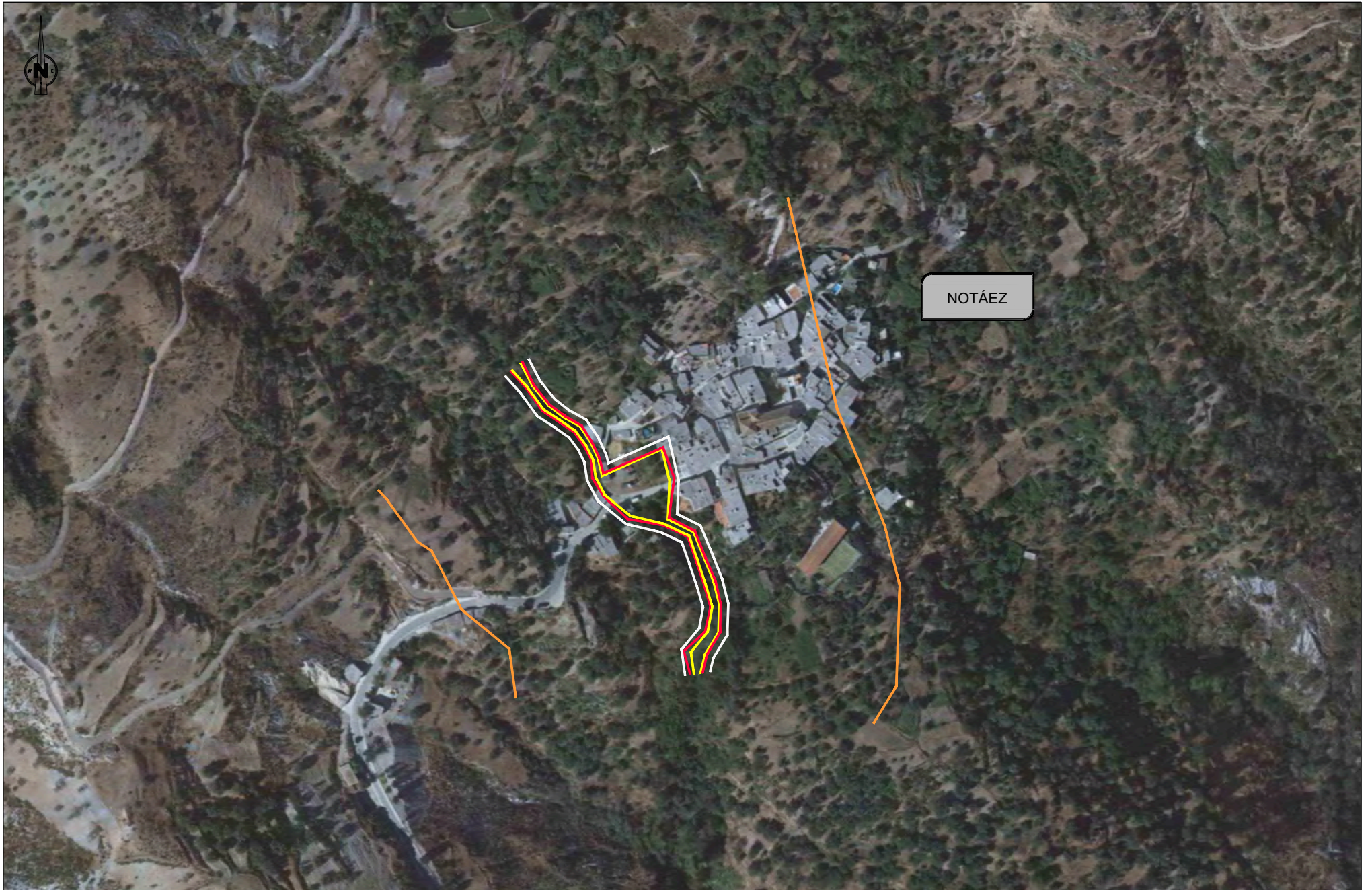




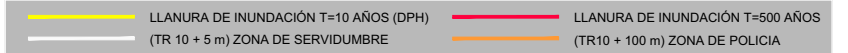


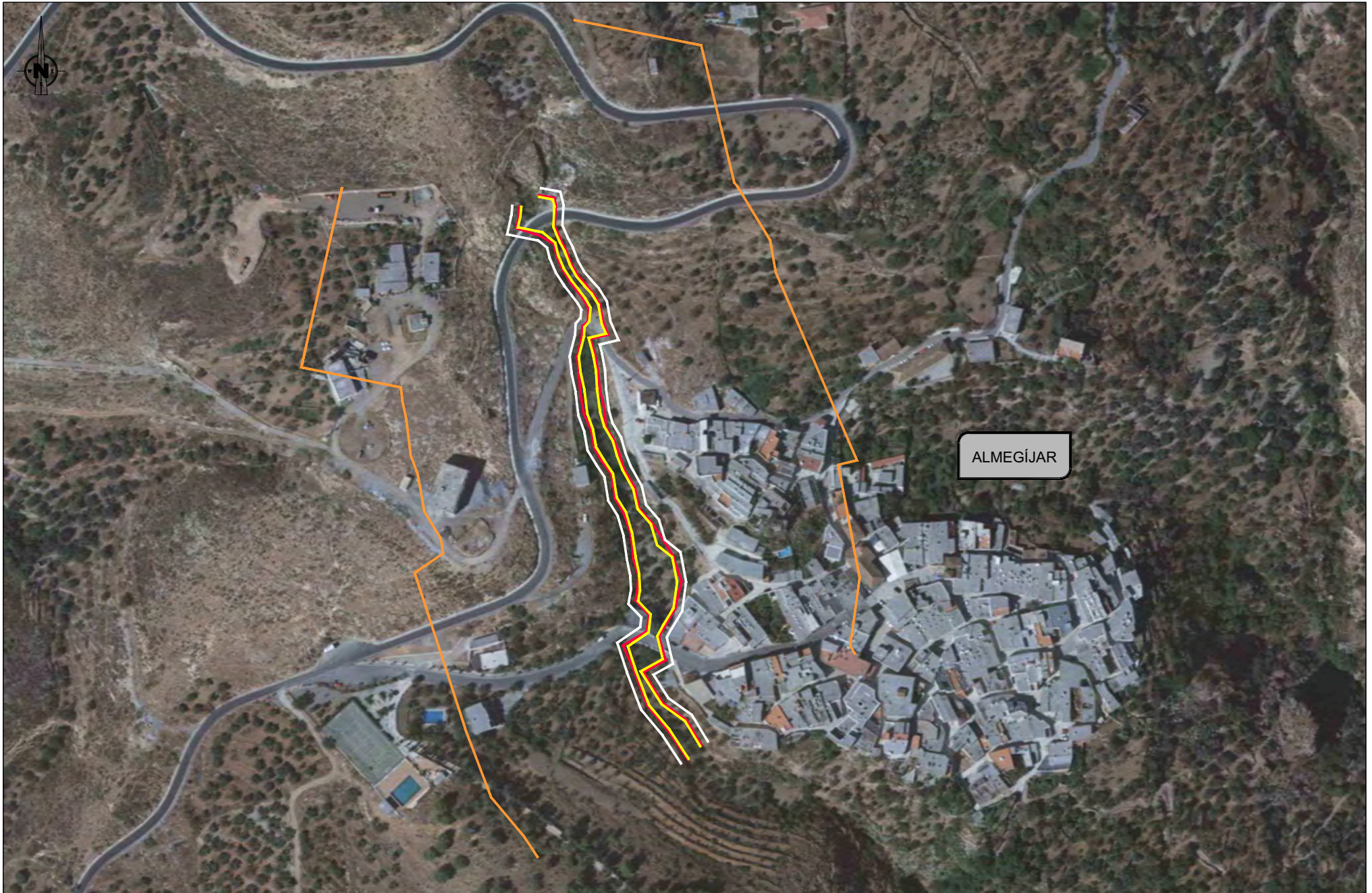
ALMEGÍJAR

— LLANURA DE INUNDACIÓN T=10 AÑOS (DPH) — LLANURA DE INUNDACIÓN T=500 AÑOS
— (TR 10 + 5 m) ZONA DE SERVIDUMBRE — (TR10 + 100 m) ZONA DE POLICIA



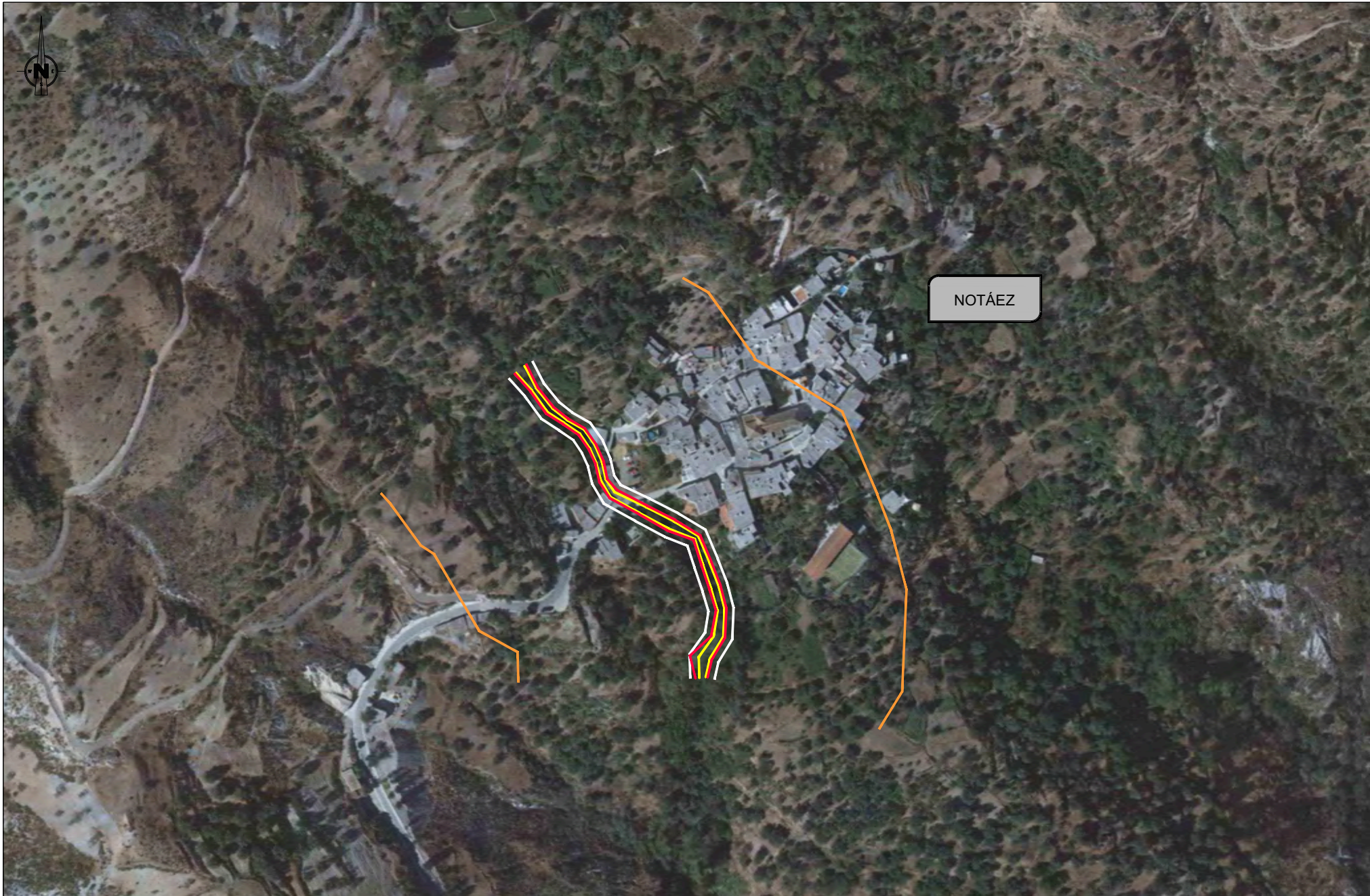
NOTÁEZ





ALMEGÍJAR

- LLANURA DE INUNDACIÓN T=10 AÑOS (DPH)
- LLANURA DE INUNDACIÓN T=500 AÑOS
- (TR 10 + 5 m) ZONA DE SERVIDUMBRE
- (TR10 + 100 m) ZONA DE POLICIA



NOTÁEZ

— LLANURA DE INUNDACIÓN T=10 AÑOS (DPH) — LLANURA DE INUNDACIÓN T=500 AÑOS
— (TR 10 + 5 m) ZONA DE SERVIDUMBRE — (TR10 + 100 m) ZONA DE POLICIA

APENDICE 1
SALIDAS HEC-RAS

SITUACIÓN ACTUAL

ALMEGÍJAR

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X   X  XXXXXX   XXXX       XXXX       XX       XXXX
X   X  X        X   X      X   X      X  X      X
X   X  X        X         X   X      X   X      X
XXXXXXXX XXXX   X         XXX XXXX   XXXXXX   XXXX
X   X  X  X     X         X  X      X   X      X
X   X  X        X   X     X   X      X   X      X
X   X  XXXXXX   XXXX       X   X      X   X      XXXXX
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PROJECT DATA

Project Title: alme
Project File : alme.prj
Run Date and Time: 3/21/2012 2:25:16 PM

Project in SI units

Project Description:
ALMEGÍJAR - SITUACIÓN ACTUAL

PLAN DATA

Plan Title: Plan 02
Plan File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\ACTUAL\alme.p02

Geometry Title: alme
Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\ACTUAL\alme.g01

Flow Title : Flow 01
Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\ACTUAL\alme.f01

Plan Summary Information:

Number of:	Cross Sections =	36	Multiple Openings =	0
	Culverts =	2	Inline Structures =	0
	Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.003
Critical depth calculation tolerance =	0.003
Maximum number of iterations =	20
Maximum difference tolerance =	0.1
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Mixed Flow

FLOW DATA

Flow Title: Flow 01

Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\ACTUAL\alme.f01

Flow Data (m3/s)

```
*****
* River      Reach      RS      *      T500      T10 *
* Alme      Alme      346.0286*      10.35      3.442 *
*****
```

Boundary Conditions

```
*****
* River      Reach      Profile      *      Upstream      Downstream *
* Alme      Alme      T500      *      Critical      Normal S = 0.05 *
*****
```

GEOMETRY DATA

Geometry Title: alme

Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\ACTUAL\alme.g01

CROSS SECTION

RIVER: Alme

REACH: Alme

RS: 346.0286

INPUT

Description:

Station Elevation Data		num= 85		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	854	.745	853.152	.819	853	1.079	852.643	1.605	852		
2.18	851.498	2.51	851.221	2.719	851	2.895	850.769	3.697	850		
6.192	849.805	8.785	849.622	9.044	849.61	9.286	849.601	9.528	849.594		
9.905	849.588	10.413	849.584	10.593	849.584	10.746	849.587	10.888	849.592		
11.123	849.603	11.406	849.621	12.637	849.72	15.646	850	16.829	850.925		
17.096	851	17.283	851	18.004	851	18.053	850.972	18.724	850.506		
19.107	850	19.478	849.689	20.366	849	20.549	848.162	20.604	848		
20.796	847.89	20.874	847.852	21.035	847.775	21.764	847.414	22.85	847		
22.963	846.973	23.983	846.846	25.642	846.622	25.73	846.613	25.764	846.61		
25.817	846.606	25.829	846.606	25.902	846.614	26.314	846.716	27.419	847		
29.47	847.993	29.484	848	29.54	848.036	30.402	848.601	31.012	849		
31.239	849.255	31.912	850	32.498	850.342	33.906	851	36.673	851.993		
36.692	852	37.749	852.366	38.209	852.5	39.82	853	41.035	853.431		
41.722	853.649	42.303	853.855	42.931	854	42.973	854.007	44.36	854.177		
44.538	854.204	45.116	854.256	45.327	854.283	46.323	854.346	46.547	854.368		
46.994	854.384	47.271	854.399	48.034	854.4	48.792	854.402	50.28	854.316		
50.485	854.305	50.745	854.278	52.879	854.136	53.111	854.11	54.76	854		

Manning's n Values

num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	20.874	.058	30.402	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

20.874 30.402 5.933 5.167 5.71 .1 .3
 Left Levee Station= 17.7 Elevation= 850.99

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 340.8620

INPUT

Description:

Station Elevation Data num= 78

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	855	1.274	854	2.817	853.437	3.922	853	3.984	852.911
4.068	852.819	4.92	852.07	4.98	852.012	4.986	852.005	5.012	852
5.935	851.298	6.407	851.19	6.725	851	7.079	850.794	8.481	850
9.013	849.984	10.014	849.718	11.413	849.408	11.913	849.283	12.585	849
12.89	849	13.173	849	13.906	849	15.083	849	15.507	849.14
15.632	849.142	16.374	849.2	17.041	849.162	17.13	849.139	17.845	849
18.962	848.106	19.094	848	19.22	847.925	20.678	847	21.603	846.549
22.441	846.19	22.666	846.089	22.754	846.054	22.934	846	23.257	846
23.473	846	23.59	846	25.199	846.376	25.432	846.371	25.83	846.335
26.675	846.196	27.748	846	27.754	846.005	28.528	846.757	28.819	847
29.273	847.239	29.507	847.361	29.816	847.54	30.769	848	31.814	848.567
32.978	849	34.569	849.774	34.76	849.861	35.156	850	36.751	850.628
37.973	851	38.881	851.284	40.161	851.674	40.769	851.842	41.232	852
42.243	852.301	42.741	852.358	43.642	852.542	44.912	852.609	45.727	852.719
45.911	852.739	47.022	852.764	47.337	852.783	47.482	852.787	49.186	852.795
49.478	852.793	49.938	852.776	50.972	852.76				

Manning's n Values num= 3

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Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 18.962 29.273 5.349 3.671 3.923 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	24.5	849	F
25.5	50.972	849	F

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 337.1913

INPUT

Description:

Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	853.646	1.371	853.298	1.825	853.175	2.487	853	4.723	852.222
5.485	852	6.373	851.515	7.562	851	8.478	850.724	8.991	850.599
9.382	850.48	11.294	850	11.467	849.921	11.959	849.694	12.871	849.435
13.224	849.259	14.067	849	14.117	848.984	15.344	848.569	15.865	848.171
16.016	848.095	16.174	848	16.4	848	16.588	848	16.748	848
17.348	848	18.133	848	18.869	848	19.043	848	20.405	848
21.291	847.611	21.663	847.495	22.113	847.482	22.583	847.359	22.852	847.334
23.476	847.193	23.627	847.149	24.407	847.026	24.607	847	24.993	846.962

25.032	846.983	25.553	846.976	25.837	846.97	25.996	846.902	26.291	846.884
26.85	846.925	27.31	846.954	27.574	847	27.899	847.014	28.438	847.051
28.976	847.1	30.035	847.28	32.693	847.732	33.403	847.853	33.958	848
34.257	848.097	34.903	848.28	35.361	848.426	36.3	848.681	36.727	848.806
37.414	849	38.507	849.329	39.793	850	40.452	850.184	41.265	850.361
42.083	850.562	42.404	850.635	44.033	850.918	44.235	850.955	44.524	851
46.196	851.373	46.771	851.433	47.529	851.553	47.916	851.571	48.233	851.6
48.576	851.614	49.451	851.613	50.486	851.578	51.624	851.528		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 18.869 .058 30.035 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 18.869 30.035 14.586 10.243 14.287 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 24.5 849 F
 25.5 51.624 849 F

CULVERT

RIVER: Alme
 REACH: Alme RS: 332.0697

INPUT
 Description:
 Distance from Upstream XS = 2
 Deck/Roadway Width = 5
 Weir Coefficient = 1.4
 Upstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 10 849 846 40 849 846

Upstream Bridge Cross Section Data
 Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	853.646	1.371	853.298	1.825	853.175	2.487	853	4.723	852.222
5.485	852	6.373	851.515	7.562	851	8.478	850.724	8.991	850.599
9.382	850.48	11.294	850	11.467	849.921	11.959	849.694	12.871	849.435
13.224	849.259	14.067	849	14.117	848.984	15.344	848.569	15.865	848.171
16.016	848.095	16.174	848	16.4	848	16.588	848	16.748	848
17.348	848	18.133	848	18.869	848	19.043	848	20.405	848
21.291	847.611	21.663	847.495	22.113	847.482	22.583	847.359	22.852	847.334
23.476	847.193	23.627	847.149	24.407	847.026	24.607	847	24.993	846.962
25.032	846.983	25.553	846.976	25.837	846.97	25.996	846.902	26.291	846.884
26.85	846.925	27.31	846.954	27.574	847	27.899	847.014	28.438	847.051
28.976	847.1	30.035	847.28	32.693	847.732	33.403	847.853	33.958	848
34.257	848.097	34.903	848.28	35.361	848.426	36.3	848.681	36.727	848.806
37.414	849	38.507	849.329	39.793	850	40.452	850.184	41.265	850.361
42.083	850.562	42.404	850.635	44.033	850.918	44.235	850.955	44.524	851
46.196	851.373	46.771	851.433	47.529	851.553	47.916	851.571	48.233	851.6
48.576	851.614	49.451	851.613	50.486	851.578	51.624	851.528		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

0 .035 18.869 .058 30.035 .035

Bank Sta: Left Right Coeff Contr. Expan.
18.869 30.035 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 24.5 849 F
25.5 51.624 849 F

Downstream Deck/Roadway Coordinates
num= 2
Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

0 848.9 839 50 848.9 839

Downstream Bridge Cross Section Data
Station Elevation Data num= 113
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 849.144 3.222 849 3.495 848.929 3.682 848.877 4.379 848.795
4.865 848.702 5.336 848.555 5.687 848.43 6.858 848.075 6.925 848.045
6.95 848.029 7.125 848 7.595 847.59 8.353 847 8.489 846.904
8.668 846.758 9.166 846.427 9.342 846.254 9.498 846.223 9.663 846
9.95 845.722 10.338 845 10.657 844.886 10.745 844.858 11.541 844.888
11.624 844.865 12.233 845 12.743 845.196 12.83 845.196 13.231 845.328
13.492 845.385 13.876 845.503 14.191 845.567 14.598 845.65 14.851 845.719
15.81 845.903 15.911 845.929 15.943 845.937 16.317 846 16.828 845.731
16.956 845.673 17.129 845.587 17.36 845.47 17.533 845.382 17.791 845.255
18.231 845.039 18.263 845.027 18.31 845 18.596 844.666 18.781 844.492
18.956 844.302 19.302 844 19.325 843.986 19.332 843.981 19.717 843.741
19.85 843.21 20.201 842.705 20.72 840.783 20.829 840.499 20.872 840.455
20.966 840 21.547 839.945 22.089 839.912 22.837 839.91 23.199 839.935
23.754 839.972 23.838 840 25.1 840.49 25.974 840.879 25.984 840.842
26.624 840.876 26.98 840.92 27.383 841 27.843 842.333 28.033 842.274
28.732 841.844 28.845 841.926 29.492 841.958 29.536 841.981 29.738 842
30.038 842.308 30.057 842.328 30.281 842.433 30.382 842.48 30.615 842.795
31.01 843 31.201 843.127 31.262 843.15 31.402 843.236 31.767 843.526
32.149 843.902 32.193 843.964 32.225 844 32.821 844.472 33.687 845
33.856 845.082 34.037 845.084 36.005 845.606 37.503 845.685 38.183 845.809
40.422 845.85 40.766 845.891 42.904 845.889 43.064 845.902 43.124 845.904
43.264 845.905 44.735 845.874 45.414 845.848 45.879 845.85 46.577 845.818
47.29 845.745 48.064 845.748 48.315 845.726

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0 .035 17.36 .058 30.038 .035

Bank Sta: Left Right Coeff Contr. Expan.
17.36 30.038 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 23 848.9 F
24 48.315 848.9 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
Downstream Embankment side slope = 0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 318.2890

INPUT

Description:

Station Elevation Data		num= 64		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	848	1.228	847.422	2.116	847	3.099	846.591	4.719	846
4.824	845.96	4.969	845.906	5.806	845.593	6.438	845.344	7.401	845
8.041	844.706	8.944	844	9.363	843.798	9.553	843.652	10.092	843.31
10.36	843	11.316	842.435	12.105	842	13.155	841.328	13.619	841
15.621	840.003	15.628	840	16.526	839.547	17.056	839.261	17.133	839.219
17.722	839	18.991	838.309	19.694	838	20.112	837.642	20.578	837.442
21.071	837.162	21.79	837.038	21.839	837.024	22.192	837.011	22.495	837
22.579	837	23.285	837.201	24.799	838	25.466	838.373	26.518	839
27.445	839.493	28.43	840	28.717	840.11	29.072	840.254	29.364	840.373
29.418	840.396	31.265	841	31.287	841.005	33.146	841.443	34.053	841.638
34.542	841.74	35.631	841.961	35.85	842	36.297	842.142	36.852	842.28
37.582	842.394	38.89	842.538	40.822	842.795	43.26	842.927	43.45	842.952
45.532	842.996	45.535	842.997	45.54	842.997	46.322	843		

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.056	.058	29.072	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17.056	29.072		4.115	6.649	5.653	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 311.6395

INPUT

Description:

Station Elevation Data		num= 63		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	846	.296	845.866	2.088	845.05	2.173	845.012	2.199	845
4.14	844.282	4.556	844.143	4.883	844	6.585	843.486	7.953	843
8.066	842.943	9.86	842	10.043	841.885	10.204	841.79	11.414	841
11.579	840.883	12.624	840.13	12.827	840	14.483	839.123	14.708	839
15.031	838.665	15.715	838	16.453	837.424	16.474	837.408	17.04	837
17.572	836.643	17.839	836.405	18.375	836	18.903	835.652	19.384	835.35
20.154	835	20.433	834.938	21.184	834.805	21.695	834.727	22.008	834.736
22.336	834.68	23.216	834.793	24.365	835	24.711	835.15	25.798	836
25.943	836.085	27.535	837	28.176	837.494	28.834	838	29.279	838.279
30.549	839	30.65	839.091	30.971	839.316	31.682	839.849	31.973	840
33.318	840.271	33.766	840.325	34.981	840.525	36.56	840.65	36.802	840.676
37.598	840.728	39.26	840.93	39.871	841	41.065	841.154	41.69	841.222
41.861	841.239	42.785	841.323	42.802	841.324				

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	16.474	.058	28.176	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 16.474 28.176 5.922 7.796 5.673 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 303.8436

INPUT

Description:

Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	844.68	1.146	844.293	2.016	844	2.061	843.979	4.307	843
5.889	842.203	6.159	842.066	6.282	842	6.456	841.871	7.773	841
8.828	840.365	9.402	840	10.173	839.809	12.634	839	12.8	838.853
14.165	838	14.226	837.967	15.986	837	16.442	836.858	16.858	836.72
17.316	836.565	18.982	836	19.368	835.731	20.281	835	20.634	834.284
20.792	834	21.582	833.572	22.497	833	23.589	832.773	23.803	832.731
23.883	832.721	23.951	832.723	24.006	832.728	24.563	832.797	26.143	833
26.836	833.477	27.608	834	27.844	834.191	28.512	835	28.983	835.182
29.535	835.387	30.299	835.67	31.334	836	32.422	836.588	33.048	837
33.573	837.228	34.951	837.647	35.631	837.862	36.133	838	38.187	838.662
39.205	838.896	39.385	838.937	39.738	839	42.019	839.354		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.316	.058	29.535	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17.316 29.535 6.316 7.905 7.002 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 295.9385

INPUT

Description:

Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	843	.044	842.983	.492	842.782	2.141	842.053	2.246	842
4.231	841.123	4.512	841	4.519	840.99	5.434	840	5.729	839.925
7.154	839.583	9.057	839.121	9.564	839	10.019	838.584	10.73	838
10.992	837.864	12.527	837	13.008	836.781	15.005	836	15.691	835.458
15.919	835.296	16.628	835	17.325	834.83	19.24	834.361	19.734	834
21.336	833.237	21.735	833	22.554	832.311	22.972	832	23.605	831.761
23.938	831.62	24.978	831.821	25.942	832	26.201	832.097	28.097	833
29.002	833.389	30.239	833.861	30.602	834	31.921	834.444	33.019	834.83
33.871	835	35.839	835.668	36.694	836	37.846	836.352	38.8	836.608
39.457	836.787	40.356	837						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.325	.058	30.239	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17.325 30.239 6.041 6.848 8.121 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 289.0909

INPUT

Description:

Station Elevation Data num= 53

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	842.518	.998	842.213	1.622	842	2.526	841.599	3.77	841
4.233	840.574	4.671	840	5.671	839.667	8.102	839	9.039	838.475
9.95	838	11.772	837.318	12.513	837	13.123	836.589	14.044	836
15.431	835.038	15.48	835	15.576	834.977	15.642	834.964	15.705	834.949
18.094	834.402	18.971	834.201	19.832	834	20.972	833.457	22.196	833
22.349	832.869	23.016	832	23.299	831.73	24.177	831	24.923	830.876
25.262	830.832	25.391	830.828	25.588	830.836	26.039	830.894	26.859	830.994
26.908	831	29.567	831.632	31.659	832	31.82	832.134	32.028	832.339
32.274	832.536	32.855	833	34.496	833.532	35.013	833.717	35.24	833.784
35.956	834	36.283	834.044	37.327	834.156	37.511	834.18	38.774	834.302
39.43	834.352	40.185	834.459	40.734	834.501				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.094	.058	32.274	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 18.094 32.274 7.422 5.888 4.713 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 283.2029

INPUT

Description:

Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	840.564	1.618	840	2.522	839.726	4.649	839	6.83	838.395
7.421	838.186	7.916	838	8.541	837.709	9.811	837	10.873	836.407
11.671	836	12.26	835.471	12.825	835	13.51	834.771	14.327	834.541
15.409	834.21	16.301	834	16.439	833.942	18.644	833.022	18.689	833
18.834	832.906	20.333	832	20.509	831.833	21.392	831	21.556	830.943
24.14	830.175	24.331	830.175	24.383	830.179	26.19	830.509	28.494	831
29.442	831.175	31.449	831.502	31.762	831.56	34.13	832	35.656	832.571
38.281	833	38.573	833.073	38.638	833.084	39.198	833.164	41.358	833.536
41.819	833.609								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	16.439	.058	31.762	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 16.439 31.762 9.548 6.58 2.935 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 276.6229

INPUT

Description:

Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	838.346	.724	838.178	1.499	838	6.41	837.006	6.431	837
6.451	836.971	7.19	836	7.389	835.698	7.88	835	10.842	834.024
10.893	834.007	10.92	834	10.961	833.986	14.165	833.028	14.26	833
16.173	832.38	17.263	832	17.899	831.525	18.613	831	19.775	830.178
20.033	830	21.758	829.744	22.949	829.516	24.118	829.885	24.512	830
25.016	830.125	25.22	830.169	26.881	830.549	29.304	831	29.632	831.057
29.717	831.075	30.793	831.258	31.443	831.36	31.55	831.377	31.895	831.455
32.416	831.535	32.671	831.59	33.211	831.721	33.765	831.831	34.413	832
34.698	832.055	35.456	832.189	36.257	832.312	36.997	832.429	38.12	832.586
40.901	833	42.12	833.255						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.165	.058	31.443	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	14.165	31.443		17.315	8.993	2.5	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 267.6301

INPUT

Description:

Station Elevation Data num= 40

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	835.674	3.087	835.146	3.933	835	4.341	834.747	5.671	834
7.605	833.276	8.308	833	8.995	832.792	11.859	832	13.906	831.397
14.054	831.357	15.224	831.02	15.294	831	15.457	830.866	16.557	830
16.666	829.892	17.722	829	21.258	828.332	21.909	828.241	22.063	828.232
22.09	828.234	22.094	828.159	22.121	828.235	22.31	828.269	22.457	828.311
23.018	828.474	24.78	829	25.287	829.178	25.914	829.416	30.099	829.886
31.118	830	32.129	830.398	33.018	831	33.7	831.162	34.033	831.297
34.807	831.524	35.228	831.679	35.912	832	40.225	832.746	41.493	833

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.224	.058	30.099	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.224	30.099		7.105	4.996	3.195	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 262.6338

INPUT

Description:

Station Elevation Data num= 54											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	834	.744	833.758	2.957	833	4.213	832.69	7.062	832		
8.939	831.386	9.571	831.172	10.169	831	11.471	830.119	11.654	830		
11.691	829.939	12.13	829	13.513	829	13.664	829	16.819	828.975		
17.087	828.98	18.735	828.997	19.21	829	19.507	829	19.554	829		
19.937	829	19.955	828.732	20.538	828.613	21.143	828.704	21.247	827.028		
21.46	827.369	22.007	829	22.677	829	22.85	829	23.456	829		
23.62	829	23.967	829	24.286	829	24.6	829	25.675	829.169		
27.384	829.393	27.796	829.424	28.036	829.442	28.758	829.494	30.943	830		
31.709	830	32.339	830	32.975	830	33.329	830	33.603	830.225		
34.783	830.9	34.885	830.964	34.954	831	36.149	831.585	36.462	831.748		
37.001	832	38.258	832.264	38.579	832.343	39.294	832.527				

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	13.513	.058	28.036	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 13.513 28.036 8.083 4.082 2.971 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 258.5520

INPUT

Description:

Station Elevation Data num= 62											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	832.73	.276	832.666	1.396	832.42	3.006	832.072	3.349	832		
5.308	831.364	6.432	831	6.774	830.864	8.985	830	10.639	829.273		
11.038	829	11.479	829	12.17	829	12.377	829	14.685	829		
15.712	829	16.238	829	16.941	829	16.963	829	17.092	829		
17.599	829	17.924	829	19.216	829	19.465	828.343	19.647	828		
20.572	827.455	21.039	827	21.513	826.724	21.77	826.601	22.301	826.256		
22.469	826.166	22.505	826.146	22.521	826.082	22.53	826.133	23.308	826.04		
23.353	826.026	23.948	826.042	23.971	826.038	23.994	826.041	24.523	826.149		
24.727	826.219	24.99	826.34	25.427	826.498	26.272	827	26.819	827.616		
27.088	828	27.454	828.42	27.596	828.582	27.919	829	28.803	829.748		
29.024	830	30.124	830	30.416	830	32.501	830.282	32.794	830.332		
34.498	830.37	35.653	830.731	35.899	830.763	36.442	831	37.898	831.649		
38.71	832	40.565	832.604								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.685	.058	27.454	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 14.685 27.454 4.997 10.129 12.281 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 248.4231

INPUT

Description:

Station Elevation Data num= 47											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	832.564	2.045	832.099	2.47	832	3.417	831.577	4.616	831		
5.646	830.122	5.826	830	5.87	830	5.911	830	6.479	830		
8.02	830	11.994	829.149	12.527	829	12.959	828.728	14.005	828		
14.933	828	15.18	828	15.93	828	16.26	828	16.559	828		
16.874	827.644	17.468	827	18.03	826.602	18.864	826	19.203	825.939		
20.881	825.695	24.142	825.891	26.817	826	27.213	826.923	27.229	827		
27.308	827.101	27.977	828	28.311	828.628	28.509	829	28.631	829.086		
29.963	830	30.087	830.13	30.828	831	32.019	831.224	34.844	831.473		
38.307	831.918	38.663	831.962	38.849	831.973	38.871	831.974	38.948	832		
39.04	832.063	40.339	833								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.18	.058	27.977	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.18	27.977		5.62	8.75	10.992	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 239.6731

INPUT

Description:

Station Elevation Data num= 43											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	831	.958	831	1.165	831	1.44	831	1.997	831		
2.912	830.817	3.662	830.752	4.811	830.639	7.589	830.154	7.858	830.117		
8.461	830	8.588	829.901	9.872	829	11.373	828.158	11.685	828		
13.381	828	14.093	828	14.609	828	14.894	828	15.227	827.366		
15.387	827.039	15.41	827	15.861	826.561	16.428	826	16.679	825.954		
18.81	825.565	19.581	825.423	20.192	825.385	23.901	825.754	25.967	826		
26.281	826.34	26.627	827	26.913	827.492	27.208	828	28.312	829		
28.812	829.422	29.451	830	31.354	830.51	33.538	831	34.689	831.594		
35.436	832	39.356	832.625	40.102	832.741						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.609	.058	26.913	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	14.609	26.913		8.088	9.854	10.223	.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme RS: 229.8189

INPUT

Description:

Station Elevation Data num= 47											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	831	5.205	830.334	6.821	830.136	7.711	830	7.822	829.912		
8.699	829	8.82	828.936	10.815	828	11.631	827.614	12.779	827		
13.212	827	13.908	827	14.703	827	15.305	827	15.416	827		
16.07	826.316	16.536	826	18.252	825.638	20.419	825.117	23.171	825.436		
27.412	826	27.551	826.249	27.637	826.423	27.856	826.798	27.974	827		
29.262	827.845	29.502	828	29.578	828.074	30.124	828.547	30.646	829		
30.871	829.178	31.839	830	32.026	830	32.249	830	32.763	830		
33.037	830	34.7	830.228	34.967	830.294	35.534	830.444	36.209	830.603		
37.615	831	38.554	831.353	39.993	832	41.022	832.734	41.366	833		
42.204	833	42.763	833.109								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.305	.058	27.856	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.305	27.856		10.383	12.81	11.867	.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme RS: 217.0088

INPUT

Description:

Station Elevation Data num= 45											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830.21	.325	830.146	1.396	830	1.417	830	1.747	830		
1.897	830	3.482	829.769	6.54	829.469	7.016	829.419	7.716	829		
9.238	828.217	9.646	828	11.206	827.334	11.961	827	13.371	826.08		
13.496	826	13.555	826	14.473	826	15.452	826	15.473	826		
15.69	826	16.281	825.189	16.427	825	21.168	824.703	21.917	824.579		
22.207	824.349	23.692	824.542	28.143	824.945	28.754	825	30.396	825.977		
30.444	826	30.464	826.023	31.197	827	33.163	828	33.362	828.183		
34.248	829	37.292	829.619	39.252	830	39.816	830.326	41.083	831		
44.082	831.956	44.147	831.976	44.217	832	44.255	832.023	45.947	833		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.452	.058	28.143	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.452	28.143		6.905	8.902	13.813	.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme RS: 208.1064

INPUT

Description:

Station Elevation Data num= 68											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830.377	1.809	830	4.847	829.603	5.869	829.487	6.632	829.402		
8.725	829.184	10.133	829	10.273	829	10.564	829	11.041	828.612		
12.019	828	13.723	827.149	14.028	827	15.289	826.367	16.027	826		
16.562	826	16.931	826	17.751	826	18.031	826	18.48	826		
18.602	826	18.777	825.529	18.986	825	19.793	824.21	20.073	824		
20.788	823.722	21.195	823.603	22.126	823.296	22.735	823.159	22.894	823.12		
23.472	823.057	23.526	823.047	23.586	823.04	24.704	823.072	24.8	823.064		
25.043	823.07	25.089	823.067	25.482	823.089	26.087	823.116	26.165	823.112		
26.314	823.11	27.523	823.178	27.638	823.18	27.816	823.189	27.999	823.205		
28.181	823.231	28.413	823.275	28.66	823.328	29.231	823.385	29.592	823.479		
30.054	823.554	30.203	823.578	31.497	824	32.647	824.467	33.971	825		
34.915	825.653	35.398	826	36.418	827	36.419	827	37.917	828		
38.301	828.311	39.015	829	41.754	829.467	45.134	830	46.645	830.625		
47.523	831	48.997	831.64	49.866	832						

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.48	.058	30.054	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.48	30.054		8.46	9.634		.1	.3

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 198.4724

INPUT

Description:

Station Elevation Data num= 52											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830.208	1.164	830	5.385	829.007	5.413	829	5.415	829		
5.416	829	5.422	828.999	10.104	828.564	13.941	828.028	14.08	828.014		
14.135	828	14.163	827.977	14.216	827.919	15.019	827	15.947	826.057		
16.001	826	16.016	825.978	16.717	825	17.301	825	17.391	825		
18.262	824.823	18.884	824.753	18.948	824.745	19.898	824	19.9	823.999		
20.517	823.269	20.792	823	22.231	822.878	25.263	822.616	25.399	822.613		
25.948	822.643	30.522	823	30.644	823.056	32.382	823.855	32.724	824		
34.735	824.856	35.054	825	35.432	825.201	37.001	826	38.742	826.978		
38.779	827	38.811	827.022	40.479	828	40.878	828.33	41.243	828.414		
41.579	828.429	44.15	829	44.61	829	46.08	829.313	48.043	830		
49.964	830.605	50.996	831								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.884	.058	30.644	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.884	30.644		7.595	8.041		.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme RS: 190.4317

INPUT

Description:

Station Elevation Data num= 52											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	829.567	.93	829.36	2.5	829.037	2.564	829.025	2.692	829		
3.385	828.911	7.996	828.321	9.97	828.078	10.068	828.068	10.136	828.062		
10.201	828.056	10.359	828.042	10.933	828	11.99	827.698	12.349	827.619		
15.361	827	15.557	826.381	15.731	826	16.043	825.327	16.195	825		
16.39	824.898	17.621	824	19.383	824	19.733	824	19.964	824		
20.517	824	20.72	824	21.297	823.159	21.372	823.048	21.406	823		
24.782	822.533	26.928	822.281	28.471	822.451	31.894	823	32.596	823.4		
32.682	823.452	33.594	824	34.41	824.33	34.793	824.475	36.13	825		
39.089	825.886	39.47	826	39.589	826.077	40.823	827	42.062	827.562		
43.055	828	44.132	828.199	45.671	828.489	48.416	829	49.571	829.585		
50.727	830	52.96	830.548								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	19.733	.058	32.682	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	19.733	32.682		9.457	9.058	9.677	.1	.3

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 181.3740

INPUT

Description:

Station Elevation Data num= 56											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	829.675	.848	829.564	5.435	829	5.936	828.88	9.165	828		
9.285	827.581	9.552	827	10.997	826.723	14.71	826	14.924	825.315		
15.056	825	15.348	824.308	15.56	824	16.245	823.427	16.733	823		
17.522	823	18.648	823	19.185	823	19.432	823	20.401	823		
20.766	822.459	21.335	822.089	21.523	822	22.393	821.473	23.192	821		
23.393	820.989	24.455	820.944	25.151	820.919	25.615	820.904	25.74	820.902		
26.558	820.901	26.595	820.903	28.165	820.982	28.468	821	28.875	821.149		
28.992	821.187	29.414	821.422	30.024	821.735	30.34	822	31.827	822.768		
32.2	823	32.448	823.186	33.428	824	33.569	824.043	36.728	825		
37.241	825.162	39.646	826	40.921	826.588	42.032	827	43.698	827.906		
43.858	828	45.33	828.234	50.115	829	51.48	829.32	54.362	830		
55.633	830.28										

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.648	.058	33.569	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.648	33.569		10.918	12.685	13.372	.1	.3

Blocked Obstructions num= 2					
Sta L	Sta R	Elev	Sta L	Sta R	Elev
42.215	50.615	829.1171	6.362	10.312	828.7635

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 168.6892

INPUT

Description:

Station Elevation Data num= 78

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830	1.977	829	3.753	828.572	4.606	828.386	5.638	828.069
5.717	828.054	5.874	828	7.611	827.518	8.443	827.306	9.578	827
11.158	826.281	11.848	826	11.991	825.874	12.913	825	13.784	825
16.026	824.564	17.387	824.14	17.64	824.126	17.835	824	18.076	823.761
18.958	823	21.024	822	21.194	821.87	22.235	821.077	22.353	821
22.606	820.833	24.129	820	25.68	819.218	25.864	819.187	25.975	819.185
26.685	819.053	26.759	819.053	27.285	819	27.587	818.969	27.609	818.965
28.839	818.947	28.918	818.946	30.355	819	30.666	819.012	30.672	819.012
31.18	819.031	31.283	819.033	33.641	819.054	35.035	819.118	35.32	819.13
35.952	819.185	36.164	819.214	36.324	819.249	36.839	819.36	37.132	819.429
37.544	819.548	38.688	820	38.992	821	39.138	821.18	39.577	821.719
39.748	822	40.001	822.339	40.567	823	41.064	823.613	41.32	824
41.54	824.486	41.703	825	42.317	825.513	42.873	826	43.435	826.283
45.206	827	45.54	827.378	46.023	827.996	46.027	828	46.248	828
46.684	828	46.905	828	47.134	828	55.65	828.832	56.227	828.868
57.114	829	57.306	829	59.684	829.388				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	21.194	.058	36.324	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 21.194 36.324 14.104 10.23 9.802 .1 .3

Blocked Obstructions num= 1

Sta L	Sta R	Elev
18.406	22.093823	4763

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 158.4595

INPUT

Description:

Station Elevation Data num= 80

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	826.627	.436	826.575	1.93	826.358	2.445	826.296	2.789	826.26
3.043	826.237	3.459	826.213	4.1	826.082	4.24	826.078	4.592	826
7.241	825.524	7.924	825.411	8.853	825.292	9.057	825.257	9.825	825
10.708	824.189	10.895	824	11.761	824	15.824	823.403	16.578	823
19.055	822	19.916	821	20.043	820.796	20.103	820.7	20.544	820
20.729	819.862	21.045	819.635	21.598	819.231	21.927	819	22.7	818.448
23.388	818	23.873	817.684	24.808	817	26.082	816.061	26.164	816
26.257	815.932	27.233	815.201	27.482	815	28.924	814.751	30.661	814.626
31.542	814.617	32.052	814.631	32.152	814.63	33.036	814.637	33.965	814.666
34.468	814.69	34.906	814.702	35.459	814.739	36.061	814.789	36.718	814.851

37.444	814.929	37.498	814.932	38.021	815	38.264	815.198	39.015	816
39.591	816.719	39.809	816.969	39.836	817	40.342	817.705	40.562	818
40.679	818.16	41.28	819	41.798	820	42.543	821	42.989	821.4
43.76	822	44.033	822.304	44.59	823	45.529	823.54	46.182	824
47.151	824.868	47.278	825	47.642	825.355	48.319	826	48.898	826.392
49.782	827	51.408	827.992	51.423	828	58.621	828.615	60.28	828.758

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.103 .058 39.809 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.103 39.809 8.862 11.849 11.254 .1 .3

Blocked Obstructions num= 1
 Sta L Sta R Elev

 16.259 20.162823.1701

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 146.6102

INPUT

Description:
 Station Elevation Data num= 80
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 826.535 3.368 826 7.342 825.157 8.056 825 8.25 824.743
 8.426 824.518 8.888 824 9.048 823.138 9.079 823 10.65 823
 10.779 823 10.876 823.033 11.082 823 14.209 823 14.565 822.567
 15.042 822 15.167 821.932 15.546 821.721 16.65 821.129 16.877 821
 17.451 820.722 17.761 820.599 19.273 820 19.807 819.305 20.012 819
 20.097 818.883 20.295 818.609 20.751 818 21.224 817.356 21.513 817
 22.005 816.389 22.308 816 22.887 815.253 23.069 815 23.591 814.773
 24.428 814.394 25.345 814 25.722 813.922 25.817 813.915 26.613 813.791
 28.747 813.486 29.186 813.481 32.826 813.398 34.306 813.384 34.592 813.333
 37.268 813.505 39.394 813.584 42.015 814 43.099 814.672 43.402 814.844
 43.678 815 44.658 815.871 44.802 816 45.193 816.404 45.767 817
 46.023 817.257 46.763 818 47.636 818.856 47.784 819 48.232 819.451
 48.779 820 49.572 820.918 49.641 821 49.729 821.082 50.755 822
 51.397 822.7 51.688 823 52.588 823.59 53.22 824 54.351 824.609
 55.016 825 55.771 825.659 56.134 826 57.153 826.882 57.29 827
 57.317 827.047 58.135 828 60.634 828.243 61.657 828.311 62.413 828.368

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.097 .058 43.402 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.097 43.402 10.508 11.695 15.079 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 134.9155

INPUT

Description:

Station Elevation Data num= 75											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	826	.949	825.792	1.574	825.645	4.262	825	7.016	824.288		
7.829	824	8.096	823.441	8.252	823	9.102	822.819	12.721	822		
13.452	821.415	14.045	821	15.85	820.254	16.427	820	16.672	819.717		
17.254	819	17.82	818.296	18.069	818	18.308	817.724	18.917	817		
19.295	816.571	19.734	816	19.943	815.757	20.07	815.609	20.565	815		
23.917	814.262	25.192	814	25.341	813.779	26.018	813	28.532	812.387		
30.565	812	31.06	811.979	34.587	811.906	35.17	811.905	35.197	811.906		
35.807	811.906	38.344	811.909	42.322	812	42.969	812	43.21	812		
43.432	812	43.873	812	44.735	812.568	44.843	812.639	45.292	813		
46.283	814	47.959	815	48.568	815.346	49.405	816	50.574	816.815		
50.81	817	50.939	817.119	51.873	817.81	52.051	817.945	52.131	818		
52.198	818.047	53.434	819	53.779	819.267	54.672	820	55.262	820.548		
55.71	821	56.538	821.891	56.644	822	56.743	822.089	57.368	822.636		
57.739	823	58.321	823.534	58.834	824	59.696	824.562	60.355	825		
60.677	825.255	61.406	825.818	61.654	826	62.025	826.227	63.23	827		

Manning's n Values

num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	19.943	.058	44.735	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	19.943	44.735	13.433	10.072	10.433	.1		.3

CROSS SECTION

RIVER: Alme

REACH: Alme

RS: 124.8436

INPUT

Description:

Station Elevation Data num= 62											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	824.371	.339	824.308	1.898	824	2.26	823.841	4.105	823		
4.87	822.637	6.118	822	9.248	821.421	11.443	821	12.03	820.732		
13.683	820	14.76	819.096	14.765	819.093	14.879	819	14.941	818.95		
16.121	818	17.067	817.242	17.361	817	18.227	816.272	18.499	816.054		
18.566	816	19.7	815.054	19.765	815	19.834	814.986	24.56	814		
24.807	813.469	25.075	813	25.386	812.336	25.645	812	26.122	812		
29.414	811.856	35.798	811.383	35.898	811.38	38.675	811.293	39.289	811.276		
43.196	811.3	44.673	811.643	44.885	811.633	45.11	811.642	46.213	812		
46.315	812.205	46.485	812.543	46.713	813	47.032	813.553	47.373	814		
48.268	814.588	48.888	815	50.127	815.548	51.135	816	52.321	816.507		
52.938	816.763	53.5	817	55.043	817.686	55.756	818	57.234	818.65		
58.031	819	58.656	819.279	60.315	820	61.69	820.767	62.061	821		
62.523	821.244	64.122	822								

Manning's n Values

num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.499	.058	46.315	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.499	46.315	17.171	11.452	5.724	.1		.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 113.3915

INPUT

Description:

Station Elevation Data num= 72											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	820	1.683	819.835	1.788	819.833	2.464	819.77	3.027	819.726		
5.299	819.565	6.248	819.539	6.767	819.505	8.426	819.422	8.879	819.381		
9.112	819.351	9.606	819.324	10.063	819.291	11.864	819	12.092	819		
13.066	818.71	13.55	818.59	14.783	818.238	15.567	818	15.802	817.891		
16.125	817.795	16.964	817.457	17.317	817.37	17.783	817.228	18.536	817		
18.684	816.729	19.309	816	19.496	815.658	19.944	815	20.817	814.233		
21.101	814	23.25	813.406	23.929	813.222	24.188	813.154	24.74	813		
25.213	812.758	26.708	812	28.034	811.22	28.373	811	28.962	811		
32.292	810.921	34.179	810.899	34.282	810.899	35.02	810.892	35.688	810.887		
36.333	810.885	37.288	810.884	42.28	810.949	43.697	810.985	44.281	811		
44.958	811.243	46.447	811.736	47.243	812	47.768	812.509	48.462	813		
49.593	813.653	50.226	814	51.493	814.841	51.712	815	52.717	815.473		
53.833	816	54.051	816.098	55.987	817	56.301	817.142	58.109	818		
58.367	818.122	58.898	818.375	60.229	819	62.027	819.866	62.315	820		
62.512	820.088	64.572	821								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.783	.058	46.447	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17.783	46.447		18.913	10.894	3.542	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 102.4974

INPUT

Description:

Station Elevation Data num= 69											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	817.852	5.179	817.761	5.305	817.769	5.326	817.77	5.333	817.771		
5.348	817.771	5.355	817.771	5.363	817.771	5.378	817.771	5.415	817.77		
5.438	817.768	5.471	817.766	5.493	817.765	5.52	817.763	5.557	817.76		
5.609	817.755	5.687	817.748	5.823	817.736	6.123	817.709	13.736	817		
15.451	816.284	16.121	816	16.64	815.871	16.962	815.798	17.605	815.65		
17.853	815.59	18.374	815.46	18.972	815.327	19.137	815.279	20.108	815		
20.312	814.646	20.653	814	20.887	813.571	21.157	813	21.359	812.226		
21.415	812	21.5	811.93	22.405	811	22.797	811	29.388	810.902		
30.09	810.907	30.245	811.016	30.331	811.016	31.362	810.915	32.259	810.923		
33.271	810.935	34.499	810.953	36.059	810.981	37.038	811	37.089	811.01		
38.774	811.33	39.808	811.526	40.401	811.673	41.725	812	42.32	812.428		
42.955	813	44.164	813.699	44.649	814	45.075	814.213	46.285	815		
48.041	815.844	48.369	816	50.459	816.979	50.504	817	50.513	817.004		
52.63	818	54.692	818.985	54.724	819	56.803	820				

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val

0 .035 19.137 .058 38.774 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19.137 38.774 15.369 9.291 9.095 .1 .3
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev

0 3.846817.8524 8.075 18.158 817.527

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 93.20643

INPUT

Description:

Station Elevation Data num= 52
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 816.355 .564 816.317 1.135 816.268 1.383 816.249 2.001 816.184
2.75 816.086 3.335 816 3.693 815.956 9.168 815 9.229 814.97
10.551 814.308 11.167 814 12.331 813.135 12.403 813.08 12.489 813
12.559 812.95 12.612 812.939 12.795 812.909 14.266 812.454 15.016 812.381
16.934 812.045 17.188 812 17.771 811.923 17.842 811.918 18.32 811.859
18.891 811.781 19.083 811.777 19.591 811.701 19.794 811.701 23.395 811.271
24.199 811.277 24.913 811.286 25.058 811.389 25.919 811.302 28.41 811.465
29.63 811.552 30.997 811.651 35.55 812 35.614 812 36.571 812.586
37.407 813 38.112 813.528 38.757 814 41.173 814.765 41.933 815
43.215 815.583 43.962 815.919 44.15 816 45.792 816.748 46.375 817
48.351 817.916 48.55 818

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0 .035 16.934 .058 29.63 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
16.934 29.63 12.131 6.754 6.462 .1 .3
Right Levee Station= 28.32 Elevation= 816
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev

0 15.471816.3551 28.33 41.56 815.992

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 86.45223

INPUT

Description:

Station Elevation Data num= 52
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 814.668 .054 814.663 .314 814.634 .698 814.576 1.127 814.511
2.282 814.376 3.481 814.133 3.568 814.116 4.053 814 4.918 813.479
5.68 813 5.881 812.99 5.89 812.99 5.945 812.988 8.397 812.862
10.394 812.753 11.083 812.738 19.726 812.089 20.846 812.011 21 812
21.007 812 22.442 811.892 23.771 811.797 25.671 811.66 26.35 811.804

26.7	811.869	27.321	811.909	27.873	811.935	27.959	811.939	28.143	811.949
29.12	811.983	29.945	812	30.927	812	30.99	812	31.178	812.024
33.684	812.061	34.595	812.089	35.114	812.109	40.401	812.976	40.853	813
41.189	813.151	41.394	813.235	41.968	813.45	42.136	813.515	43.358	814
43.417	814.026	43.631	814.214	44.451	814.856	44.561	815	45.69	815.403
46.679	815.728	47.411	816						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.846 .058 27.873 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.846 27.873 11.185 10.618 11.11 .1 .3

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 25.17 813 F
 26.17 47.411 813 F

Left Levee Station= 18 Elevation= 815.24
 Right Levee Station= 28.41 Elevation= 815.31

Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 .1 18.05815.2321 28.42 43.85815.3968

CULVERT

RIVER: Alme
 REACH: Alme RS: 81.1431

INPUT

Description:
 Distance from Upstream XS = 1
 Deck/Roadway Width = 8
 Weir Coefficient = 1.4
 Upstream Deck/Roadway Coordinates

num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 17 813 811.5 29 813 811.5

Upstream Bridge Cross Section Data

Station Elevation Data num= 52
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 814.668 .054 814.663 .314 814.634 .698 814.576 1.127 814.511
 2.282 814.376 3.481 814.133 3.568 814.116 4.053 814 4.918 813.479
 5.68 813 5.881 812.99 5.89 812.99 5.945 812.988 8.397 812.862
 10.394 812.753 11.083 812.738 19.726 812.089 20.846 812.011 21 812
 21.007 812 22.442 811.892 23.771 811.797 25.671 811.66 26.35 811.804
 26.7 811.869 27.321 811.909 27.873 811.935 27.959 811.939 28.143 811.949
 29.12 811.983 29.945 812 30.927 812 30.99 812 31.178 812.024
 33.684 812.061 34.595 812.089 35.114 812.109 40.401 812.976 40.853 813
 41.189 813.151 41.394 813.235 41.968 813.45 42.136 813.515 43.358 814
 43.417 814.026 43.631 814.214 44.451 814.856 44.561 815 45.69 815.403
 46.679 815.728 47.411 816

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.846 .058 27.873 .035

Bank Sta: Left Right Coeff Contr. Expan.
 20.846 27.873 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 25.17 813 F
 26.17 47.411 813 F
 Left Levee Station= 18 Elevation= 815.24
 Right Levee Station= 28.41 Elevation= 815.31
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 .1 18.05815.2321 28.42 43.85815.3968

Downstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 812.9 809.1 45 812.9 809.1

Downstream Bridge Cross Section Data
 Station Elevation Data num= 72
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 812.528 6.405 812.089 6.489 812.085 7.611 812.004 7.613 812.004
 7.625 812.003 7.63 812.003 7.742 812 8.111 812 8.636 811.923
 8.708 811.905 9.584 811.843 10.187 811.651 11.684 811.537 11.74 811.533
 12.239 811 12.976 810.169 13.117 810 13.153 810 13.859 809.837
 14.993 809.633 15.261 809.585 15.65 809.528 16.24 809.508 16.708 809.433
 17.665 809.464 17.72 809.456 18.098 809.404 18.878 809.38 19.726 809.414
 20.93 809.426 21.764 809.443 22.164 809.454 22.787 809.507 23.983 809.452
 24.437 809.457 25.467 809.395 26.024 809.354 26.478 809.322 28.298 809.216
 28.601 809.198 28.993 809.207 29.254 809.214 29.546 809.198 30.004 809.23
 30.065 809.23 30.203 809.216 30.614 809.239 30.766 809.232 30.942 809.231
 31.556 809.279 31.793 809.285 32.041 809.291 32.996 809.409 33.75 809.435
 34.153 809.492 34.586 809.51 35.096 809.546 35.517 809.607 36.03 809.653
 37.408 809.817 38.536 809.965 38.781 810 39.288 810.95 39.309 811
 40.807 811.95 40.837 811.971 40.914 812 41.622 812.079 42.219 812.154
 44.424 813 45.752 813.257

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 17.72 .058 28.993 .035

Bank Sta: Left Right Coeff Contr. Expan.
 17.72 28.993 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 26.1 812.9 F
 27.1 45.752 812.9 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Culverts = 1

0	811.596	.316	811.555	.687	811.498	2.805	811.188	3.902	811
4.454	810.902	4.525	810.907	5.257	810.87	8.381	810.557	9.077	810.496
10.037	810.381	11.087	810.326	12.002	810.241	12.763	810.159	13.092	810.166
13.862	810.04	14.058	810	15.617	809.566	17.47	809	19.815	808.104
20.127	808	20.305	807.97	21.988	807.69	22.448	807.657	22.723	807.631
23.015	807.588	23.826	807.512	24.179	807.472	25.194	807.32	25.45	807.298
25.886	807.269	26.067	807.253	27.119	807	29.198	806.448	30.453	806
30.589	805.957	30.652	805.936	32.044	805.576	32.45	805.452	32.765	805.379
33.174	805.316	33.403	805.294	33.49	805.299	33.579	805.304	33.763	805.341
34.046	805.438	34.357	805.435	34.53	805.532	34.55	805.541	34.868	805.592
35.385	806	35.537	806.076	36.612	807	37.113	807.368	37.714	807.863
37.881	808	38.668	808.173	42.411	809	44.918	809.566	46.769	810
47.103	810.642	47.287	811	49.816	811.723	51.083	812		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.305 .058 37.714 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.305 37.714 9.961 22.838 22.144 .1 .3
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 10.842 21.685 810.339 0 .61811.5964

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 41.72029

INPUT

Description:
 Station Elevation Data num= 58
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 810.451 .996 810.258 2.245 810 5.269 809.487 7.099 809.202
 7.584 809.124 8.339 809 9.932 808.029 9.996 808 11.811 807.745
 12.508 807.659 14.166 807.364 14.912 807.266 15.321 807.231 15.485 807.222
 16.413 807 16.72 806.869 17.025 806.769 19.359 806 21.382 805
 21.602 804.865 21.849 804.694 22.337 804.356 22.999 804 23.433 803.658
 24.597 803 25.031 802.964 25.829 802.909 26.7 802.872 27.448 802.867
 28.231 802.882 28.847 802.906 29.52 802.938 30.25 802.983 30.472 803
 31.072 803.053 33.274 803.899 33.738 804 38.951 804.691 40.317 804.884
 41.145 805 42.472 805.527 42.982 805.713 43.864 806 44.575 806.461
 45.254 807 45.677 807.649 45.89 808 47.203 808.247 51.283 809
 52.608 809.226 55.5 809.603 56.251 809.669 57.144 809.735 57.602 809.785
 58.536 809.836 58.91 809.877 59.404 809.897

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 21.849 .058 40.317 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 21.849 40.317 10.436 18.278 27.533 .1 .3
 Blocked Obstructions num= 1
 Sta L Sta R Elev

 0 7.019810.4512

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 23.44198

INPUT

Description:

Station Elevation Data num= 55									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	809.644	.107	809.6	.387	809.528	1.764	809.164	1.909	809.121
2.427	809	3.587	808.625	3.978	808.505	4.638	808.329	5.248	808
8.001	807.367	8.533	807.29	9.067	807.2	10.113	807	10.983	806.013
10.997	806	11.005	805.967	11.236	805	12.097	804.329	12.557	804
13.097	803.339	13.342	803	13.775	802.63	14.808	802	16.576	801.882
19.219	801.705	19.446	801.694	20.389	801.633	20.945	801.612	24.063	801.843
26.045	802	26.667	802.219	28.959	803	29.217	803.23	30.157	804
37.515	804.835	38.684	804.989	38.768	805	40.813	805.544	41.137	805.629
42.435	805.941	42.643	805.991	42.675	806	44.643	806.233	45.768	806.326
50.627	806.825	52.21	806.917	53.132	807	53.214	807	53.59	807
54.248	807.112	55.017	807.378	55.984	807.641	56.354	807.759	56.805	808

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	16.576	.058	38.684	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	16.576	38.684		8.606	17.731		.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 5.711110

INPUT

Description:

Station Elevation Data num= 57									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	810.2	1.339	810	2.023	809.283	2.35	809	3.025	808.593
3.657	808.212	3.999	808	5.327	807.247	5.652	807	8.395	806.101
8.734	806	8.889	805.865	9.7	805	10.163	804.717	11.6	804
12.223	803.266	12.371	803	12.94	802.355	13.295	802	13.852	801.848
14.593	801.688	15.158	801.568	17.836	801	18.079	800.984	20.218	800.897
20.496	800.891	21.07	800.886	21.48	800.886	21.903	800.888	22.352	800.894
22.827	800.901	23.352	800.912	24.414	800.94	25.142	800.965	26.003	801
26.517	801.163	28.665	802	29.614	802.755	29.98	803	30.463	803.145
33.436	804	33.477	804.009	33.516	804.019	34.312	804.217	37.46	805
42.004	806	42.682	806.099	44.975	806.408	46.209	806.552	49.002	806.812
50.37	807	50.97	807	51.374	807.52	51.646	808	52.045	808.084
55.608	808.836	56.37	809						

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.158	.058	34.312	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.158	34.312		16.759	5.711		.1	.3

```

Blocked Obstructions   num=      1
  Sta L   Sta R   Elev
*****
      0   4.211810.2004

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SUMMARY OF MANNING'S N VALUES

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River:Alme
*****
*   Reach      *   River Sta.   *   n1      *   n2      *   n3      *
*****
*Alme          *   346.0286     *   .035*   .058*   .035*
*Alme          *   340.8620     *   .035*   .058*   .035*
*Alme          *   337.1913     *   .035*   .058*   .035*
*Alme          *   332.0697     *Culvert *   *   *
*Alme          *   326.9481     *   .035*   .058*   .035*
*Alme          *   318.2890     *   .035*   .058*   .035*
*Alme          *   311.6395     *   .035*   .058*   .035*
*Alme          *   303.8436     *   .035*   .058*   .035*
*Alme          *   295.9385     *   .035*   .058*   .035*
*Alme          *   289.0909     *   .035*   .058*   .035*
*Alme          *   283.2029     *   .035*   .058*   .035*
*Alme          *   276.6229     *   .035*   .058*   .035*
*Alme          *   267.6301     *   .035*   .058*   .035*
*Alme          *   262.6338     *   .035*   .058*   .035*
*Alme          *   258.5520     *   .035*   .058*   .035*
*Alme          *   248.4231     *   .035*   .058*   .035*
*Alme          *   239.6731     *   .035*   .058*   .035*
*Alme          *   229.8189     *   .035*   .058*   .035*
*Alme          *   217.0088     *   .035*   .058*   .035*
*Alme          *   208.1064     *   .035*   .058*   .035*
*Alme          *   198.4724     *   .035*   .058*   .035*
*Alme          *   190.4317     *   .035*   .058*   .035*
*Alme          *   181.3740     *   .035*   .058*   .035*
*Alme          *   168.6892     *   .035*   .058*   .035*
*Alme          *   158.4595     *   .035*   .058*   .035*
*Alme          *   146.6102     *   .035*   .058*   .035*
*Alme          *   134.9155     *   .035*   .058*   .035*
*Alme          *   124.8436     *   .035*   .058*   .035*
*Alme          *   113.3915     *   .035*   .058*   .035*
*Alme          *   102.4974     *   .035*   .058*   .035*
*Alme          *   93.20643     *   .035*   .058*   .035*
*Alme          *   86.45223     *   .035*   .058*   .035*
*Alme          *   81.1431      *Culvert *   *   *
*Alme          *   75.83388     *   .035*   .058*   .035*
*Alme          *   64.55781     *   .035*   .058*   .035*
*Alme          *   41.72029     *   .035*   .058*   .035*
*Alme          *   23.44198     *   .035*   .058*   .035*
*Alme          *   5.711110     *   .035*   .058*   .035*
*****

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SUMMARY OF REACH LENGTHS

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River: Alme
*****
*   Reach      *   River Sta.   *   Left   *   Channel *   Right   *
*****
*Alme          *   346.0286     *   5.933*   5.167*   5.71*

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*Alme	*	340.8620	*	5.349*	3.671*	3.923*
*Alme	*	337.1913	*	14.586*	10.243*	14.287*
*Alme	*	332.0697	*Culvert	*	*	*
*Alme	*	326.9481	*	4.965*	8.659*	7.587*
*Alme	*	318.2890	*	4.115*	6.649*	5.653*
*Alme	*	311.6395	*	5.922*	7.796*	5.673*
*Alme	*	303.8436	*	6.316*	7.905*	7.002*
*Alme	*	295.9385	*	6.041*	6.848*	8.121*
*Alme	*	289.0909	*	7.422*	5.888*	4.713*
*Alme	*	283.2029	*	9.548*	6.58*	2.935*
*Alme	*	276.6229	*	17.315*	8.993*	2.5*
*Alme	*	267.6301	*	7.105*	4.996*	3.195*
*Alme	*	262.6338	*	8.083*	4.082*	2.971*
*Alme	*	258.5520	*	4.997*	10.129*	12.281*
*Alme	*	248.4231	*	5.62*	8.75*	10.992*
*Alme	*	239.6731	*	8.088*	9.854*	10.223*
*Alme	*	229.8189	*	10.383*	12.81*	11.867*
*Alme	*	217.0088	*	6.905*	8.902*	13.813*
*Alme	*	208.1064	*	8.46*	9.634*	7.5*
*Alme	*	198.4724	*	7.595*	8.041*	9.305*
*Alme	*	190.4317	*	9.457*	9.058*	9.677*
*Alme	*	181.3740	*	10.918*	12.685*	13.372*
*Alme	*	168.6892	*	14.104*	10.23*	9.802*
*Alme	*	158.4595	*	8.862*	11.849*	11.254*
*Alme	*	146.6102	*	10.508*	11.695*	15.079*
*Alme	*	134.9155	*	13.433*	10.072*	10.433*
*Alme	*	124.8436	*	17.171*	11.452*	5.724*
*Alme	*	113.3915	*	18.913*	10.894*	3.542*
*Alme	*	102.4974	*	15.369*	9.291*	9.095*
*Alme	*	93.20643	*	12.131*	6.754*	6.462*
*Alme	*	86.45223	*	11.185*	10.618*	11.11*
*Alme	*	81.1431	*Culvert	*	*	*
*Alme	*	75.83388	*	11.32*	11.276*	9.95*
*Alme	*	64.55781	*	9.961*	22.838*	22.144*
*Alme	*	41.72029	*	10.436*	18.278*	27.533*
*Alme	*	23.44198	*	8.606*	17.731*	26.12*
*Alme	*	5.711110	*	16.759*	5.711*	21.046*

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: Alme

* Reach	* River Sta.	* Contr.	* Expan.
Alme	346.0286	.1*	.3*
Alme	340.8620	.1*	.3*
Alme	337.1913	.1*	.3*
*Alme	332.0697*Culvert	*	*
Alme	326.9481	.1*	.3*
Alme	318.2890	.1*	.3*
Alme	311.6395	.1*	.3*
Alme	303.8436	.1*	.3*
Alme	295.9385	.1*	.3*
Alme	289.0909	.1*	.3*
Alme	283.2029	.1*	.3*
Alme	276.6229	.1*	.3*
Alme	267.6301	.1*	.3*
Alme	262.6338	.1*	.3*
Alme	258.5520	.1*	.3*

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*Alme      *      248.4231*      .1*      .3*
*Alme      *      239.6731*      .1*      .3*
*Alme      *      229.8189*      .1*      .3*
*Alme      *      217.0088*      .1*      .3*
*Alme      *      208.1064*      .1*      .3*
*Alme      *      198.4724*      .1*      .3*
*Alme      *      190.4317*      .1*      .3*
*Alme      *      181.3740*      .1*      .3*
*Alme      *      168.6892*      .1*      .3*
*Alme      *      158.4595*      .1*      .3*
*Alme      *      146.6102*      .1*      .3*
*Alme      *      134.9155*      .1*      .3*
*Alme      *      124.8436*      .1*      .3*
*Alme      *      113.3915*      .1*      .3*
*Alme      *      102.4974*      .1*      .3*
*Alme      *      93.20643*      .1*      .3*
*Alme      *      86.45223*      .1*      .3*
*Alme      *      81.1431 *Culvert *      *
*Alme      *      75.83388*      .1*      .3*
*Alme      *      64.55781*      .1*      .3*
*Alme      *      41.72029*      .1*      .3*
*Alme      *      23.44198*      .1*      .3*
*Alme      *      5.711110*      .1*      .3*

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Profile Output Table - Standard Table 1

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*****
* Reach      * River Sta * Profile * Q Total * Min Ch El * W.S. Elev * Crit W.S. * E.G. Elev * E.G. Slope * Vel Chnl * Flow Area * Top Width * Froude # Chl *
*           *          *        * (m3/s) * (m)        * (m)        * (m)        * (m)        * (m/m)      * (m/s)     * (m2)      * (m)        *          * #          *
*****
* Alme      * 346.0286 * T500   * 10.35 * 846.61 * 849.32 * 847.57 * 849.34 * 0.000346 * 0.50 * 21.06 * 11.35 * 0.11 *
* Alme      * 346.0286 * T10   * 3.44 * 846.61 * 849.03 * 847.19 * 849.03 * 0.000064 * 0.20 * 17.84 * 10.71 * 0.05 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 340.8620 * T500   * 10.35 * 846.00 * 849.33 * 848.55 * 849.33 * 0.000095 * 0.31 * 35.40 * 21.91 * 0.06 *
* Alme      * 340.8620 * T10   * 3.44 * 846.00 * 849.03 * 847.39 * 849.03 * 0.000017 * 0.12 * 29.40 * 18.03 * 0.02 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 337.1913 * T500   * 10.35 * 846.88 * 849.33 * 849.00 * 849.33 * 0.000096 * 0.27 * 37.70 * 25.42 * 0.06 *
* Alme      * 337.1913 * T10   * 3.44 * 846.88 * 849.03 * 848.05 * 849.03 * 0.000020 * 0.11 * 30.44 * 23.55 * 0.03 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 332.0697 *        * Culvert *      *      *      *      *      *      *      *      *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 326.9481 * T500   * 10.35 * 839.91 * 842.18 * 842.18 * 843.29 * 0.026035 * 4.67 * 2.22 * 9.17 * 1.00 *
* Alme      * 326.9481 * T10   * 3.44 * 839.91 * 841.03 * 841.03 * 841.56 * 0.033019 * 3.23 * 1.07 * 6.74 * 1.00 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 318.2890 * T500   * 10.35 * 837.00 * 837.48 * 838.12 * 842.22 * 1.525115 * 9.65 * 1.07 * 3.32 * 5.42 *
* Alme      * 318.2890 * T10   * 3.44 * 837.00 * 837.26 * 837.65 * 840.39 * 2.201467 * 7.84 * 0.44 * 2.50 * 5.98 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 311.6395 * T500   * 10.35 * 834.68 * 835.25 * 835.62 * 836.72 * 0.383624 * 5.37 * 1.93 * 5.22 * 2.82 *
* Alme      * 311.6395 * T10   * 3.44 * 834.68 * 835.06 * 835.23 * 835.63 * 0.274992 * 3.34 * 1.03 * 4.50 * 2.23 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 303.8436 * T500   * 10.35 * 832.72 * 833.41 * 833.73 * 834.45 * 0.205264 * 4.52 * 2.29 * 4.91 * 2.11 *
* Alme      * 303.8436 * T10   * 3.44 * 832.72 * 833.14 * 833.30 * 833.68 * 0.227164 * 3.27 * 1.05 * 4.06 * 2.05 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 295.9385 * T500   * 10.35 * 831.62 * 832.58 * 832.78 * 833.24 * 0.101120 * 3.60 * 2.88 * 4.98 * 1.51 *
* Alme      * 295.9385 * T10   * 3.44 * 831.62 * 832.24 * 832.32 * 832.56 * 0.087885 * 2.48 * 1.39 * 3.86 * 1.32 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 289.0909 * T500   * 10.35 * 830.83 * 831.55 * 831.82 * 832.36 * 0.162355 * 3.97 * 2.60 * 5.73 * 1.88 *
* Alme      * 289.0909 * T10   * 3.44 * 830.83 * 831.26 * 831.40 * 831.72 * 0.174801 * 3.00 * 1.15 * 4.13 * 1.82 *
*           *          *        *      *      *      *      *      *      *      *      *      *
* Alme      * 283.2029 * T500   * 10.35 * 830.17 * 831.03 * 831.18 * 831.53 * 0.100173 * 3.15 * 3.29 * 7.27 * 1.50 *
* Alme      * 283.2029 * T10   * 3.44 * 830.17 * 830.76 * 830.81 * 830.99 * 0.077678 * 2.16 * 1.60 * 5.16 * 1.24 *
*           *          *        *      *      *      *      *      *      *      *      *      *

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* Alme	* 276.6229	* T500	* 10.35 *	829.52 *	830.40 *	830.55 *	830.90 *	0.090654 *	3.13 *	3.31 *	6.80 *	1.43 *
* Alme	* 276.6229	* T10	* 3.44 *	829.52 *	830.08 *	830.17 *	830.38 *	0.109759 *	2.44 *	1.41 *	4.92 *	1.45 *
* Alme	* 267.6301	* T500	* 10.35 *	828.16 *	828.97 *	829.20 *	829.74 *	0.187662 *	3.88 *	2.67 *	6.82 *	1.98 *
* Alme	* 267.6301	* T10	* 3.44 *	828.16 *	829.22 *	828.85 *	829.25 *	0.004549 *	0.77 *	4.48 *	7.92 *	0.33 *
* Alme	* 262.6338	* T500	* 10.35 *	827.03 *	829.28 *	829.28 *	829.49 *	0.063050 *	1.92 *	5.21 *	14.54 *	1.01 *
* Alme	* 262.6338	* T10	* 3.44 *	827.03 *	829.09 *	829.09 *	829.18 *	0.070599 *	1.36 *	2.52 *	13.06 *	0.96 *
* Alme	* 258.5520	* T500	* 10.35 *	826.03 *	826.63 *	827.11 *	828.71 *	0.505131 *	6.39 *	1.62 *	3.95 *	3.19 *
* Alme	* 258.5520	* T10	* 3.44 *	826.03 *	826.32 *	826.65 *	828.21 *	1.122385 *	6.09 *	0.56 *	2.74 *	4.28 *
* Alme	* 248.4231	* T500	* 10.35 *	825.69 *	826.34 *	826.41 *	826.69 *	0.070004 *	2.64 *	3.92 *	8.56 *	1.24 *
* Alme	* 248.4231	* T10	* 3.44 *	825.69 *	826.17 *	826.12 *	826.27 *	0.030322 *	1.35 *	2.55 *	8.27 *	0.78 *
* Alme	* 239.6731	* T500	* 10.35 *	825.39 *	826.36 *	826.17 *	826.48 *	0.015004 *	1.55 *	6.68 *	10.23 *	0.61 *
* Alme	* 239.6731	* T10	* 3.44 *	825.39 *	826.03 *	826.08 *	826.08 *	0.014038 *	1.01 *	3.39 *	9.59 *	0.54 *
* Alme	* 229.8189	* T500	* 10.35 *	825.12 *	826.00 *	826.00 *	826.23 *	0.045556 *	2.13 *	4.86 *	10.88 *	1.02 *
* Alme	* 229.8189	* T10	* 3.44 *	825.12 *	825.68 *	825.68 *	825.83 *	0.052269 *	1.70 *	2.02 *	7.00 *	1.01 *
* Alme	* 217.0088	* T500	* 10.35 *	824.35 *	825.08 *	825.16 *	825.41 *	0.095075 *	2.56 *	4.06 *	12.51 *	1.40 *
* Alme	* 217.0088	* T10	* 3.44 *	824.35 *	824.91 *	824.93 *	825.05 *	0.073760 *	1.65 *	2.08 *	9.82 *	1.14 *
* Alme	* 208.1064	* T500	* 10.35 *	823.04 *	823.53 *	823.74 *	824.20 *	0.192592 *	3.62 *	2.86 *	8.52 *	2.00 *
* Alme	* 208.1064	* T10	* 3.44 *	823.04 *	823.30 *	823.44 *	823.79 *	0.337184 *	3.10 *	1.11 *	6.43 *	2.38 *
* Alme	* 198.4724	* T500	* 10.35 *	822.61 *	823.41 *	823.29 *	823.55 *	0.019932 *	1.69 *	6.17 *	11.01 *	0.70 *
* Alme	* 198.4724	* T10	* 3.44 *	822.61 *	823.12 *	823.03 *	823.18 *	0.019785 *	1.11 *	3.11 *	10.11 *	0.63 *
* Alme	* 190.4317	* T500	* 10.35 *	822.28 *	823.08 *	823.08 *	823.31 *	0.044361 *	2.13 *	4.87 *	10.69 *	1.01 *
* Alme	* 190.4317	* T10	* 3.44 *	822.28 *	822.79 *	822.79 *	822.93 *	0.052359 *	1.65 *	2.09 *	7.69 *	1.01 *
* Alme	* 181.3740	* T500	* 10.35 *	820.90 *	821.33 *	821.62 *	822.39 *	0.304358 *	4.58 *	2.26 *	6.60 *	2.50 *
* Alme	* 181.3740	* T10	* 3.44 *	820.90 *	821.12 *	821.28 *	821.78 *	0.496156 *	3.62 *	0.95 *	5.78 *	2.85 *
* Alme	* 168.6892	* T500	* 10.35 *	818.95 *	819.38 *	819.51 *	819.81 *	0.128518 *	2.90 *	3.59 *	11.56 *	1.63 *
* Alme	* 168.6892	* T10	* 3.44 *	818.95 *	819.24 *	819.27 *	819.39 *	0.089742 *	1.70 *	2.02 *	10.63 *	1.25 *
* Alme	* 158.4595	* T500	* 10.35 *	814.62 *	814.90 *	815.20 *	816.74 *	1.115002 *	6.01 *	1.72 *	9.05 *	4.40 *
* Alme	* 158.4595	* T10	* 3.44 *	814.62 *	814.75 *	814.95 *	816.54 *	3.083696 *	5.93 *	0.58 *	6.70 *	6.42 *
* Alme	* 146.6102	* T500	* 10.35 *	813.33 *	813.84 *	813.88 *	814.08 *	0.072281 *	2.18 *	4.75 *	14.65 *	1.22 *
* Alme	* 146.6102	* T10	* 3.44 *	813.33 *	813.66 *	813.67 *	813.77 *	0.062501 *	1.44 *	2.39 *	12.36 *	1.04 *
* Alme	* 134.9155	* T500	* 10.35 *	811.90 *	813.68 *	812.33 *	813.68 *	0.000226 *	0.34 *	30.63 *	20.53 *	0.09 *
* Alme	* 134.9155	* T10	* 3.44 *	811.90 *	813.24 *	812.13 *	813.24 *	0.000073 *	0.16 *	21.84 *	19.72 *	0.05 *
* Alme	* 124.8436	* T500	* 10.35 *	811.28 *	813.68 *	813.68 *	813.68 *	0.000074 *	0.23 *	44.95 *	22.41 *	0.05 *
* Alme	* 124.8436	* T10	* 3.44 *	811.28 *	813.24 *	813.24 *	813.24 *	0.000018 *	0.10 *	35.25 *	21.91 *	0.02 *
* Alme	* 113.3915	* T500	* 10.35 *	810.88 *	813.68 *	813.68 *	813.68 *	0.000037 *	0.18 *	58.66 *	27.36 *	0.04 *
* Alme	* 113.3915	* T10	* 3.44 *	810.88 *	813.24 *	813.24 *	813.24 *	0.000007 *	0.07 *	47.19 *	25.01 *	0.02 *
* Alme	* 102.4974	* T500	* 10.35 *	810.90 *	813.68 *	813.68 *	813.68 *	0.000037 *	0.19 *	54.64 *	23.29 *	0.04 *
* Alme	* 102.4974	* T10	* 3.44 *	810.90 *	813.24 *	813.24 *	813.24 *	0.000008 *	0.08 *	44.66 *	22.32 *	0.02 *
* Alme	* 93.20643	* T500	* 10.35 *	811.27 *	813.67 *	811.94 *	813.68 *	0.000235 *	0.39 *	26.70 *	12.85 *	0.08 *
* Alme	* 93.20643	* T10	* 3.44 *	811.27 *	813.24 *	811.65 *	813.24 *	0.000053 *	0.16 *	21.15 *	12.85 *	0.04 *
* Alme	* 86.45223	* T500	* 10.35 *	811.66 *	813.66 *	813.00 *	813.67 *	0.000492 *	0.57 *	18.02 *	10.36 *	0.13 *
* Alme	* 86.45223	* T10	* 3.44 *	811.66 *	813.23 *	812.76 *	813.24 *	0.000132 *	0.25 *	13.65 *	10.36 *	0.07 *

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 81.1431	* Culvert	*	*	*	*	*	*	*	*	*	*	*	*	*
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 75.83388	* T500	* 10.35 *	809.20 *	811.54 *	811.54 *	812.64 *	0.025240 *	4.66 *	2.22 *	28.48 *	1.00 *			
* Alme	* 75.83388	* T10	* 3.44 *	809.20 *	810.38 *	810.38 *	810.91 *	0.032886 *	3.25 *	1.06 *	26.19 *	1.01 *			
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 64.55781	* T500	* 10.35 *	805.29 *	805.75 *	806.36 *	811.27 *	2.209103 *	10.41 *	0.99 *	3.68 *	6.39 *			
* Alme	* 64.55781	* T10	* 3.44 *	805.29 *	805.56 *	805.93 *	809.37 *	3.134868 *	8.65 *	0.40 *	2.56 *	7.00 *			
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 41.72029	* T500	* 10.35 *	802.87 *	803.42 *	803.54 *	803.86 *	0.093740 *	2.96 *	3.50 *	8.15 *	1.44 *			
* Alme	* 41.72029	* T10	* 3.44 *	802.87 *	803.20 *	803.23 *	803.38 *	0.071020 *	1.85 *	1.86 *	7.23 *	1.16 *			
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 23.44198	* T500	* 10.35 *	801.61 *	802.19 *	802.24 *	802.47 *	0.062180 *	2.31 *	4.43 *	12.07 *	1.17 *			
* Alme	* 23.44198	* T10	* 3.44 *	801.61 *	801.99 *	802.01 *	802.12 *	0.066027 *	1.62 *	2.16 *	11.01 *	1.10 *			
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 5.711110	* T500	* 10.35 *	800.89 *	801.45 *	801.45 *	801.66 *	0.044889 *	2.08 *	4.99 *	11.50 *	1.01 *			
* Alme	* 5.711110	* T10	* 3.44 *	800.89 *	801.19 *	801.19 *	801.31 *	0.050041 *	1.48 *	2.32 *	9.67 *	0.97 *			

ERRORS WARNINGS AND NOTES

Errors Warnings and Notes for Plan : Plan 02

River: Alme Reach: Alme RS: 346.0286 Profile: T500

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.

This may indicate the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 346.0286 Profile: T10

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.

This may indicate the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 340.8620 Profile: T500

Warning:Multiple water surfaces were found that could balance the energy equation. The program selected the water surface whose main channel velocity head was the closest to the previously computed cross section.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 340.8620 Profile: T10

Warning:Multiple water surfaces were found that could balance the energy equation. The program selected the water surface whose main channel velocity head was the closest to the previously computed cross section.

Warning:Divided flow computed for this cross-section.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 337.1913 Profile: T10

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 332.0697 Profile: T500

Warning:The flow through the culvert is supercritical. However, since there is flow over the road (weir flow), the program cannot determine if the downstream cross section should be subcritical or supercritical. The program used the downstream subcritical answer, even though it may not be valid.

River: Alme Reach: Alme RS: 332.0697 Profile: T500 Culv: Culvert #1

Note: The flow in the culvert is entirely supercritical.

River: Alme Reach: Alme RS: 332.0697 Profile: T10

Warning:The flow through the culvert is supercritical. However, since there is flow over the road (weir flow), the program cannot determine if the downstream cross section should be subcritical or supercritical. The program used the downstream subcritical answer, even though it may not be valid.

River: Alme Reach: Alme RS: 332.0697 Profile: T10 Culv: Culvert #1

Warning:During the culvert inlet control computations, the program could not balance the culvert/weir flow. The reported inlet energy grade answer may not be valid.

Note: The flow in the culvert is entirely supercritical.

River: Alme Reach: Alme RS: 326.9481 Profile: T500

Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning:Divided flow computed for this cross-section.

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 326.9481 Profile: T10
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 318.2890 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 318.2890 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 311.6395 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 311.6395 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 303.8436 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 303.8436 Profile: T10
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 295.9385 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 295.9385 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 289.0909 Profile: T500

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 289.0909 Profile: T10

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 283.2029 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 283.2029 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 276.6229 Profile: T500

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 276.6229 Profile: T10

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 267.6301 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 267.6301 Profile: T10

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 262.6338 Profile: T500

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 262.6338 Profile: T10

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

River: Alme Reach: Alme RS: 258.5520 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 258.5520 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 248.4231 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Alme Reach: Alme RS: 248.4231 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 239.6731 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 239.6731 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 229.8189 Profile: T500
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.

River: Alme Reach: Alme RS: 229.8189 Profile: T10
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.

River: Alme Reach: Alme RS: 217.0088 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Alme Reach: Alme RS: 217.0088 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Alme Reach: Alme RS: 208.1064 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Alme Reach: Alme RS: 208.1064 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Alme Reach: Alme RS: 198.4724 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 198.4724 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 190.4317 Profile: T500

Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

River: Alme Reach: Alme RS: 190.4317 Profile: T10

Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

River: Alme Reach: Alme RS: 181.3740 Profile: T500

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 181.3740 Profile: T10

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 168.6892 Profile: T500

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 168.6892 Profile: T10

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 158.4595 Profile: T500

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 158.4595 Profile: T10

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 146.6102 Profile: T500

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 146.6102 Profile: T10

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate

the need for additional cross sections.

River: Alme Reach: Alme RS: 134.9155 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 134.9155 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 124.8436 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 102.4974 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 102.4974 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 93.20643 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 93.20643 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 86.45223 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 81.1431 Profile: T500
Warning: The flow through the culvert is supercritical. However, since there is flow over the road (weir flow), the program cannot determine if the downstream cross section should be subcritical or supercritical. The program used the downstream subcritical answer, even though it may not be valid.

River: Alme Reach: Alme RS: 81.1431 Profile: T500 Culv: Culvert #1
Warning: During the supercritical analysis, the program could not converge on a supercritical answer in the downstream cross section. The program used the solution with the least error.
Note: The flow in the culvert is entirely supercritical.

River: Alme Reach: Alme RS: 81.1431 Profile: T10
Warning: The flow through the culvert is supercritical. However, since there is flow over the road (weir flow), the program cannot determine if the downstream cross section should be subcritical or supercritical. The program used the downstream subcritical answer, even though it may not be valid.

River: Alme Reach: Alme RS: 81.1431 Profile: T10 Culv: Culvert #1
Note: The flow in the culvert is entirely supercritical.

River: Alme Reach: Alme RS: 75.83388 Profile: T500
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 75.83388 Profile: T10
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The

program defaulted to critical depth.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 64.55781 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 64.55781 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 41.72029 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

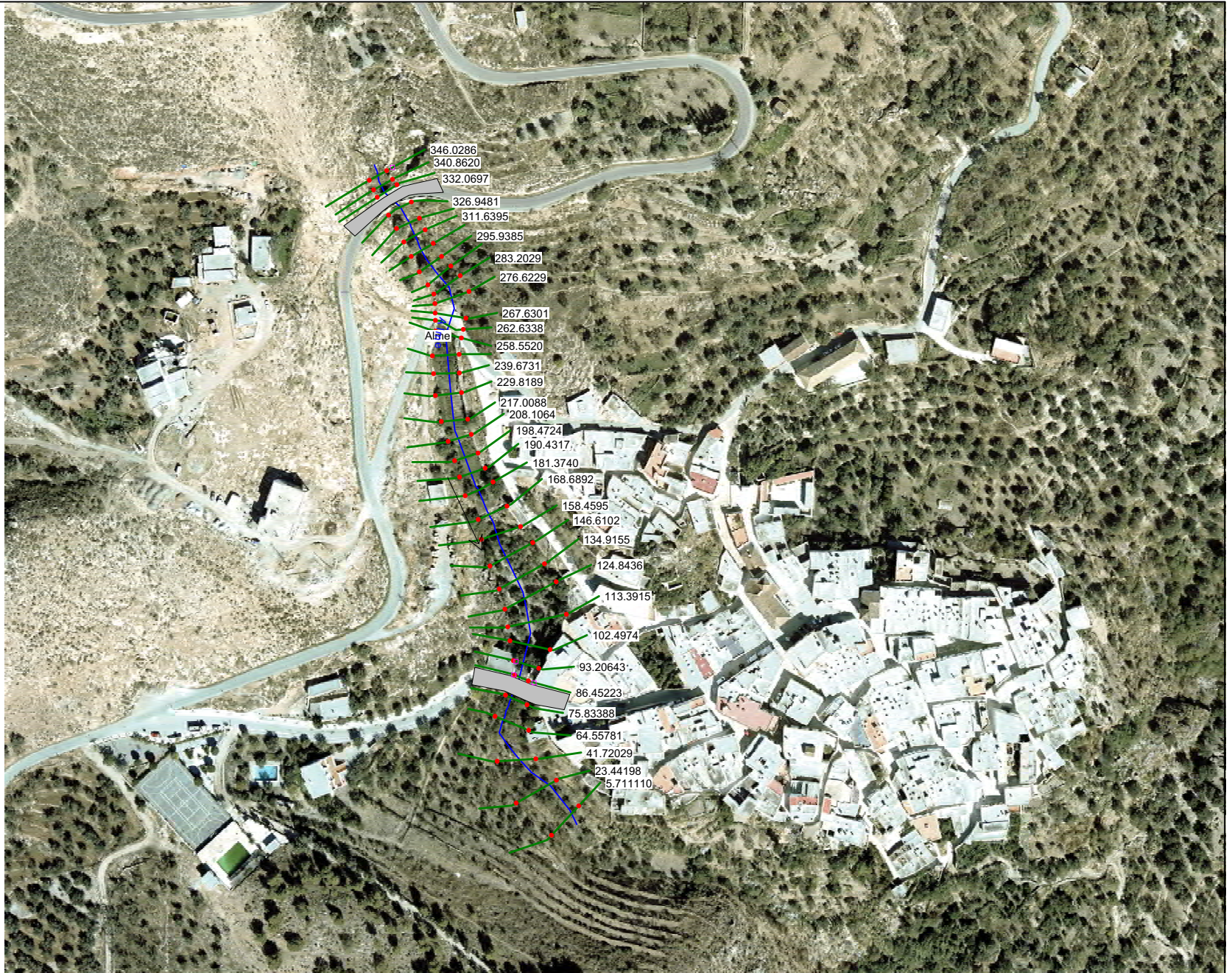
River: Alme Reach: Alme RS: 41.72029 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 23.44198 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

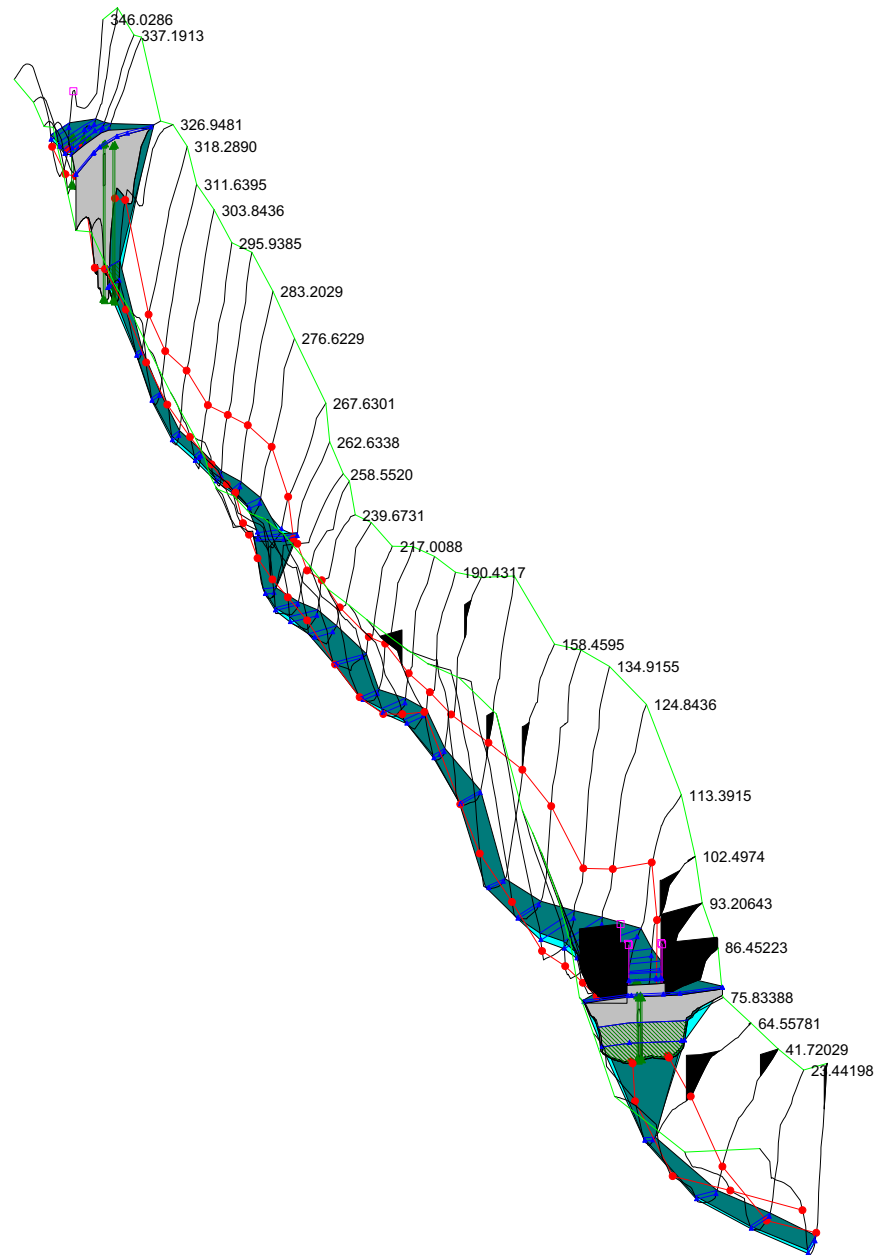
River: Alme Reach: Alme RS: 23.44198 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 5.711110 Profile: T500
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 5.711110 Profile: T10
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.



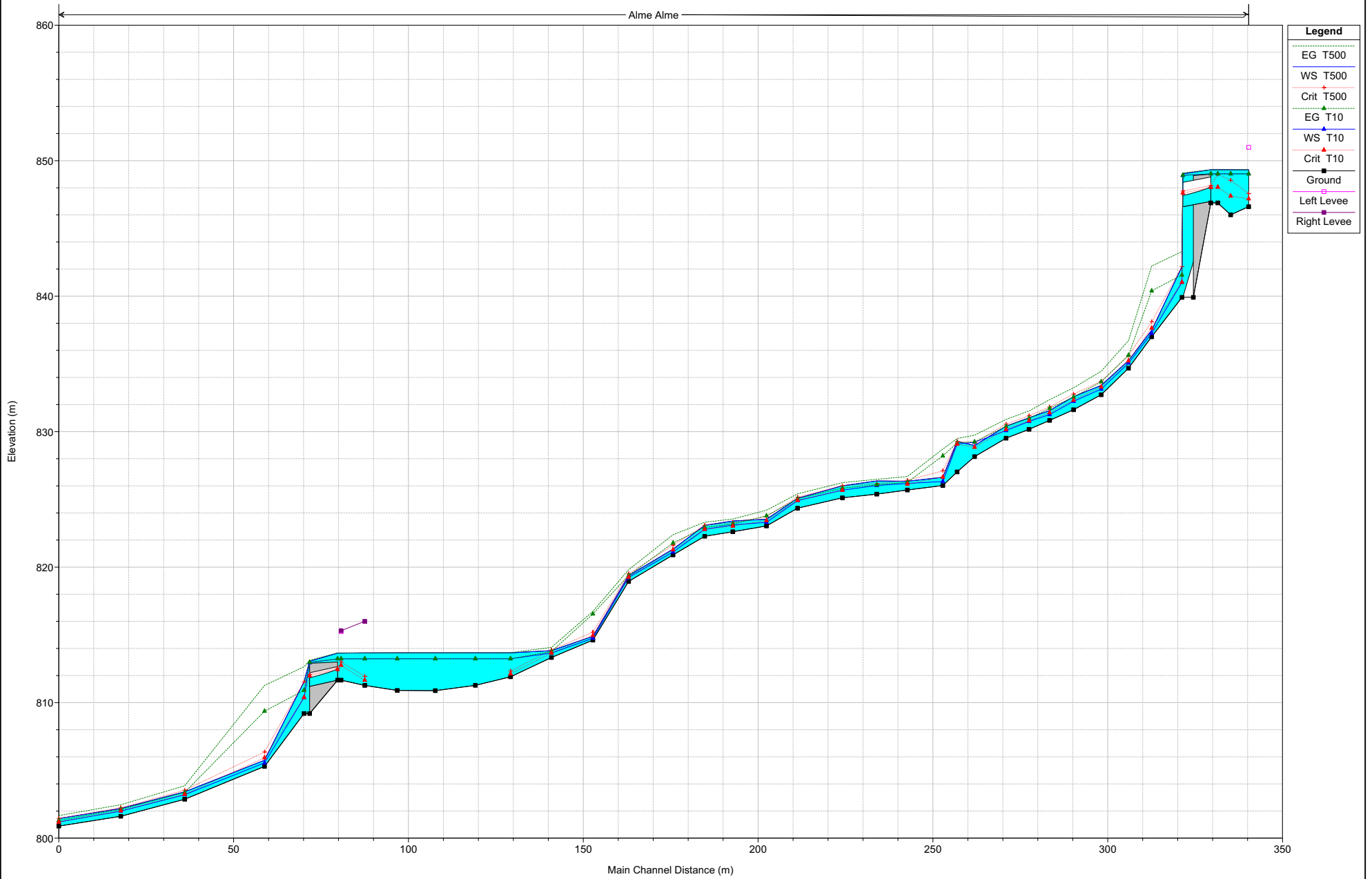
alme Plan: Plan 02
Geom: alme Flow: Flow 01



Legend	
	WS T500
	WS T10
	Ground
	Levee
	Bank Sta
	Ineff

alme Plan: Plan 02
Geom: alme Flow: Flow 01

Alme Alme



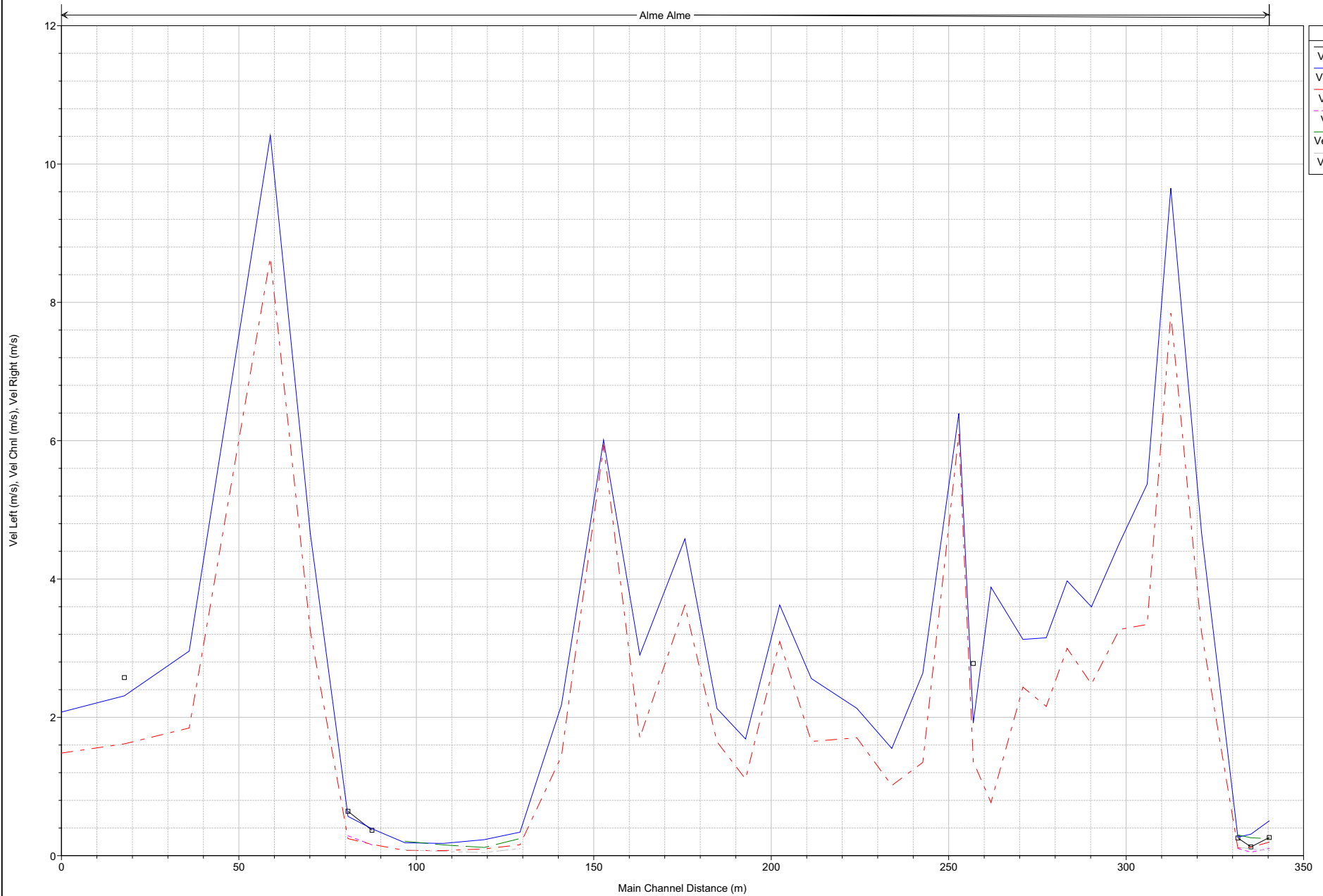
Legend	
EG T500	(dotted green line with triangle markers)
WS T500	(solid blue line with triangle markers)
Crit T500	(dashed red line with triangle markers)
EG T10	(dotted green line with triangle markers)
WS T10	(solid blue line with triangle markers)
Crit T10	(dashed red line with triangle markers)
Ground	(black line with square markers)
Left Levee	(pink line with square markers)
Right Levee	(purple line with square markers)

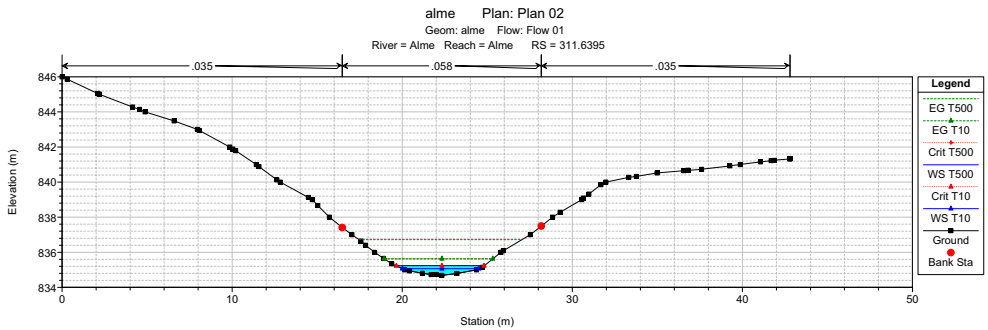
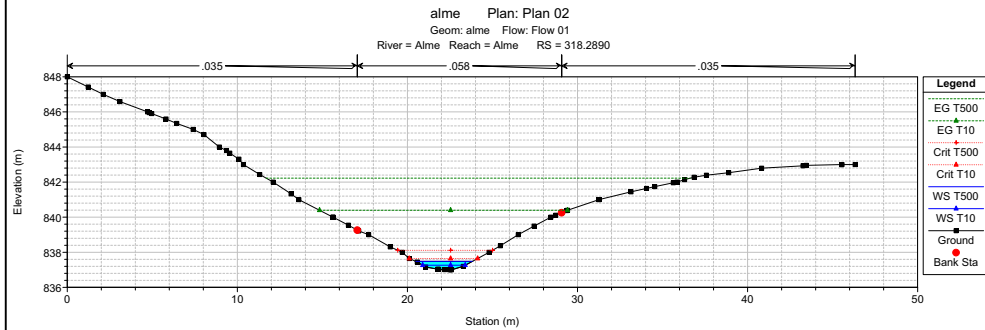
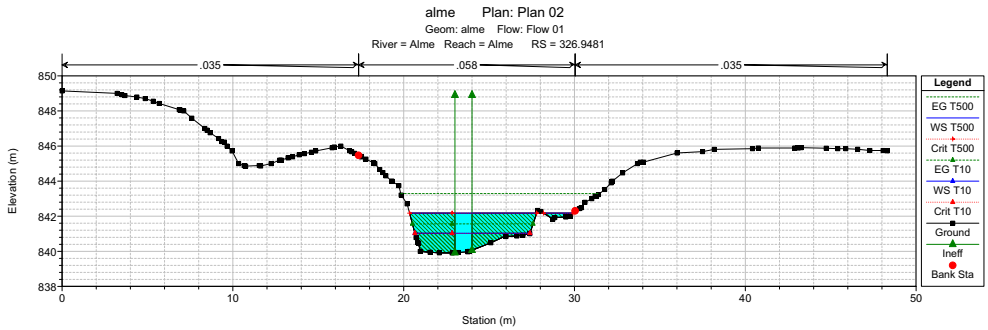
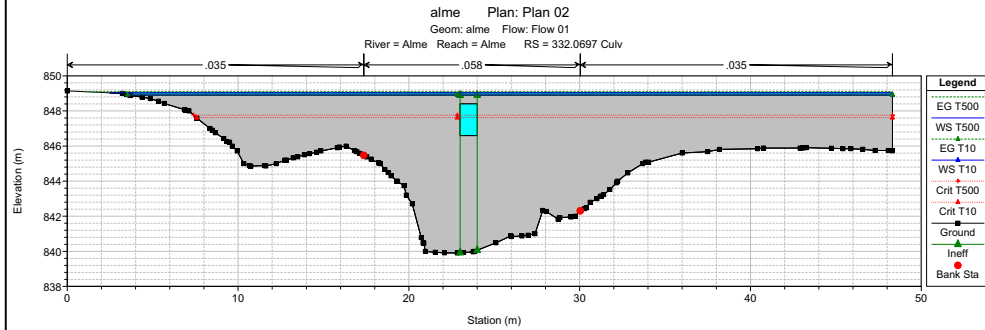
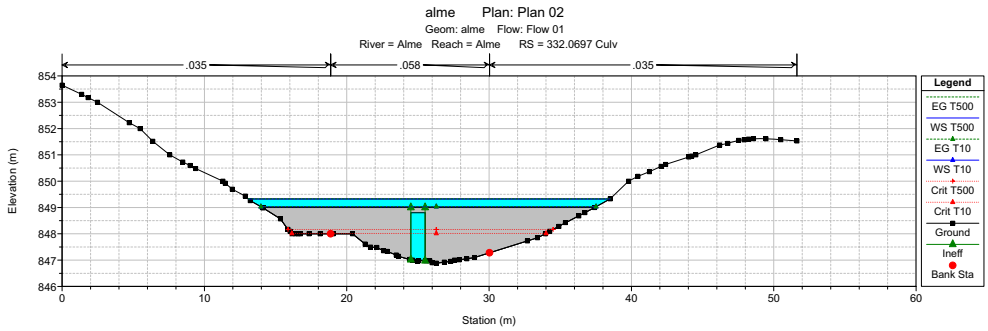
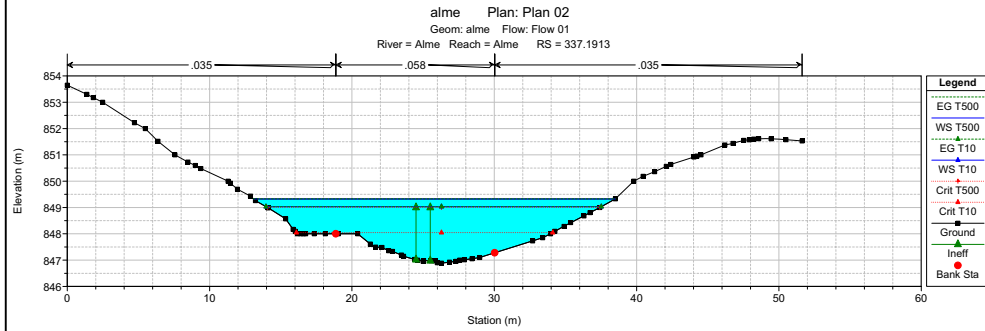
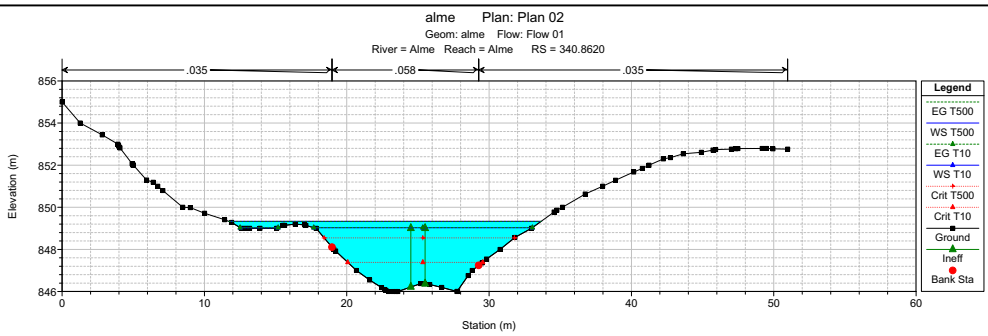
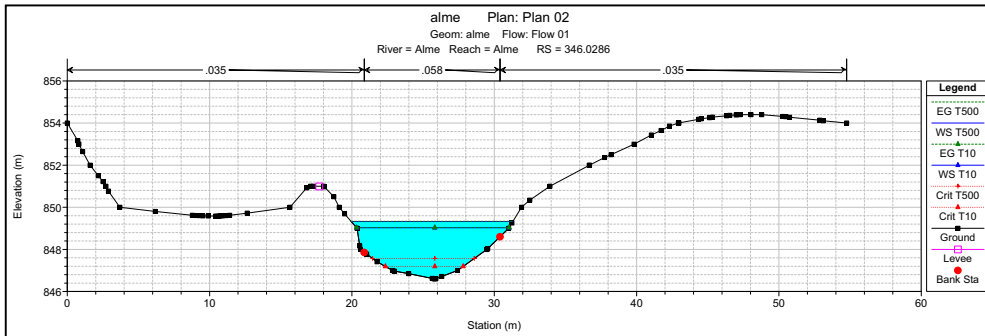
alme Plan: Plan 02
Geom: alme Flow: Flow 01

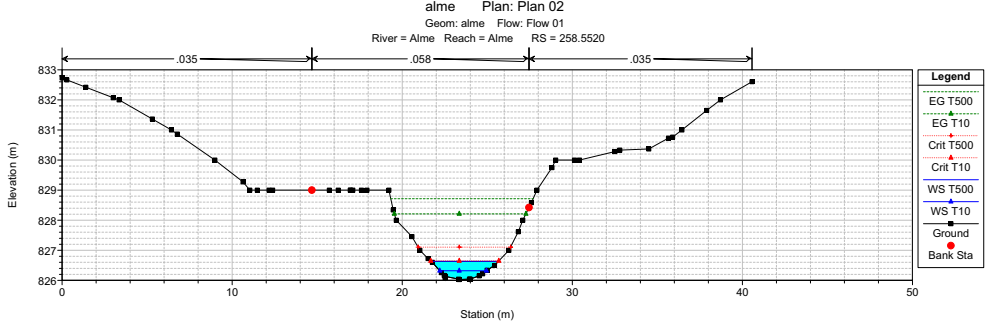
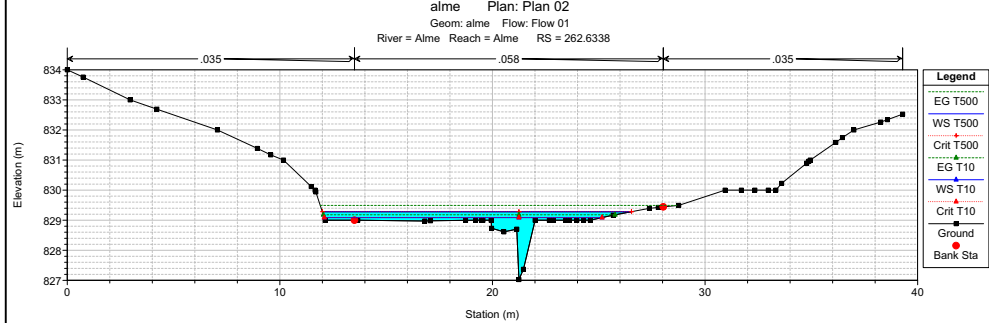
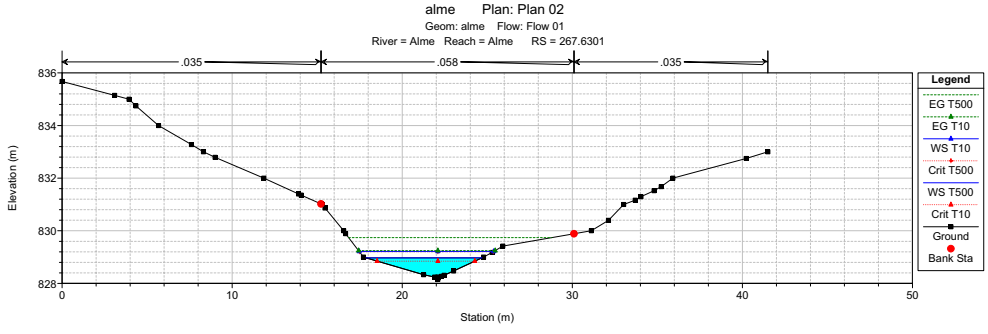
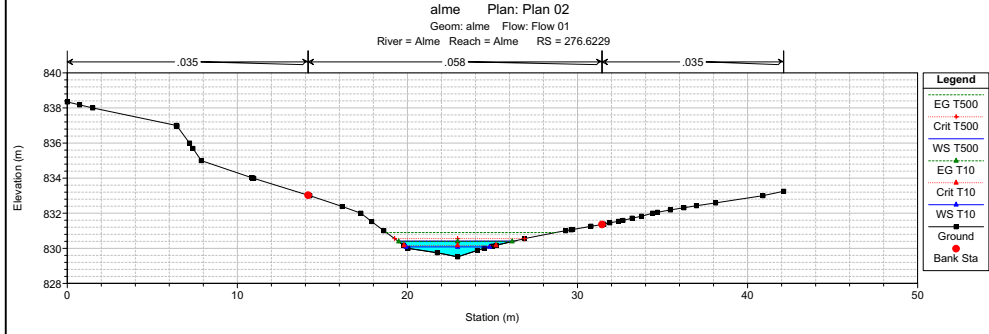
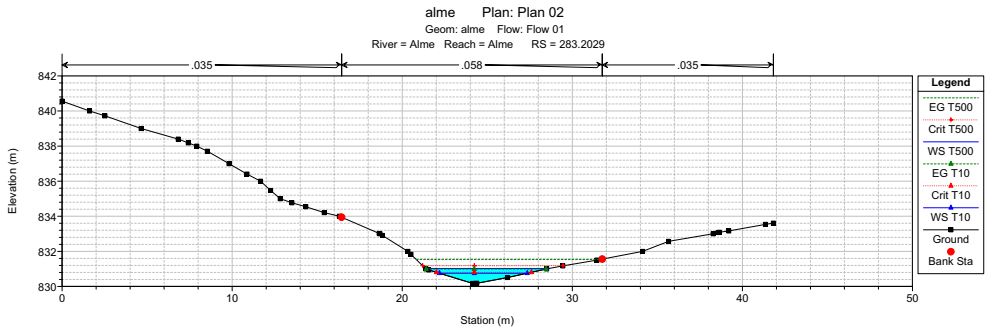
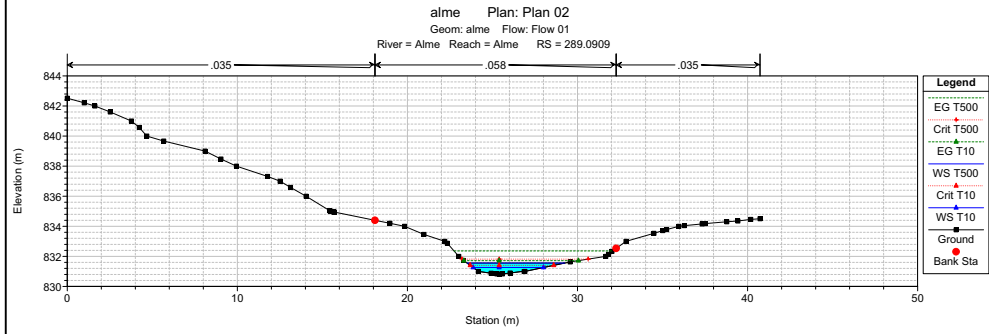
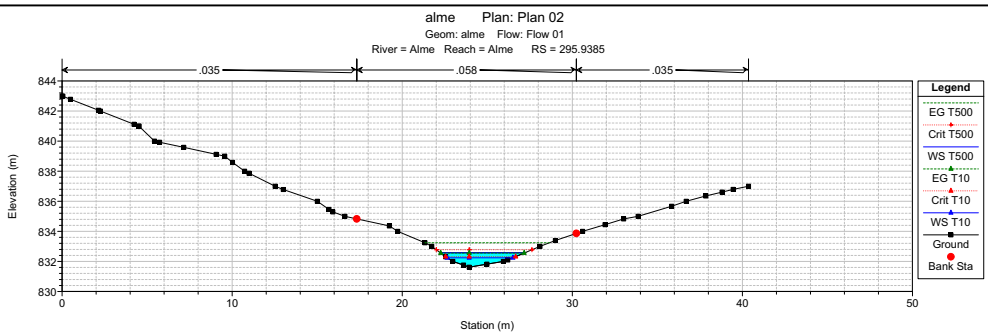
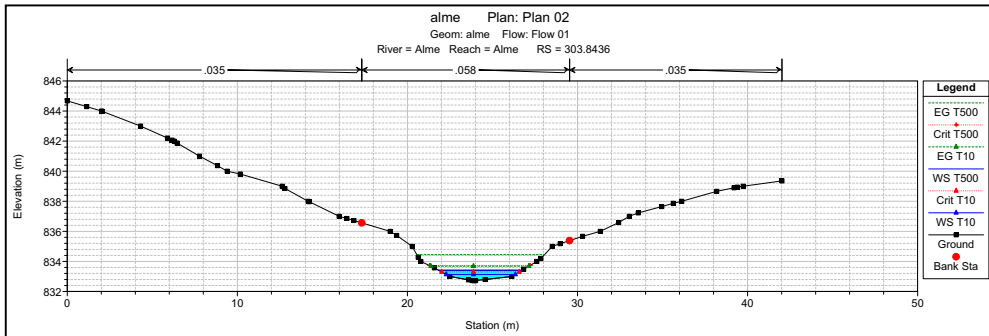
Alme Alme

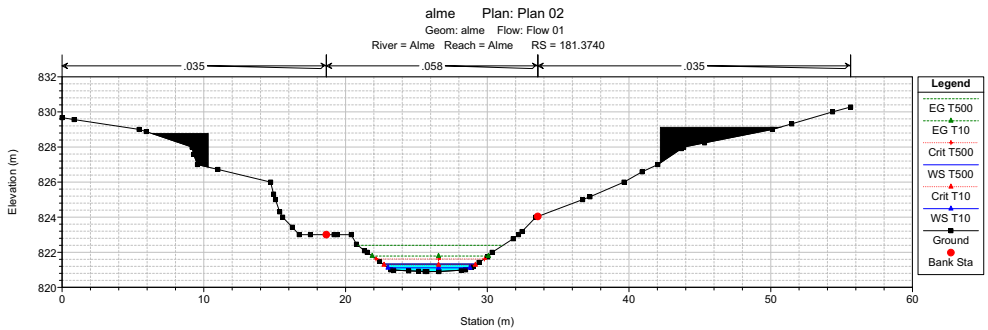
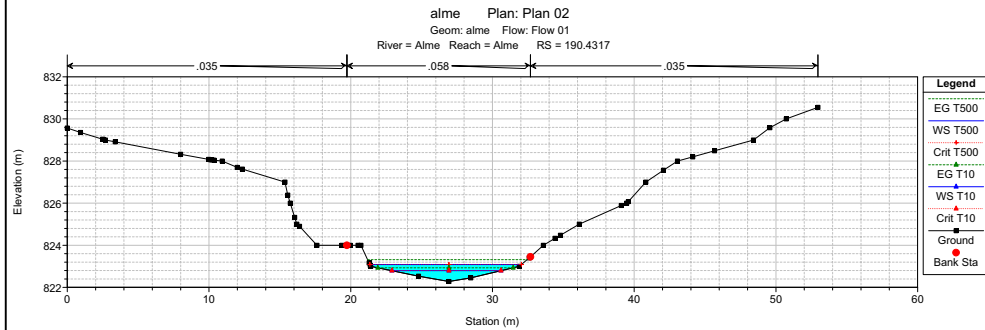
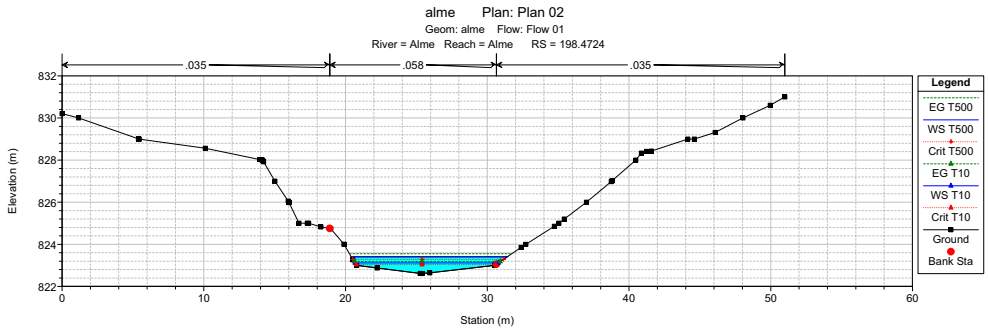
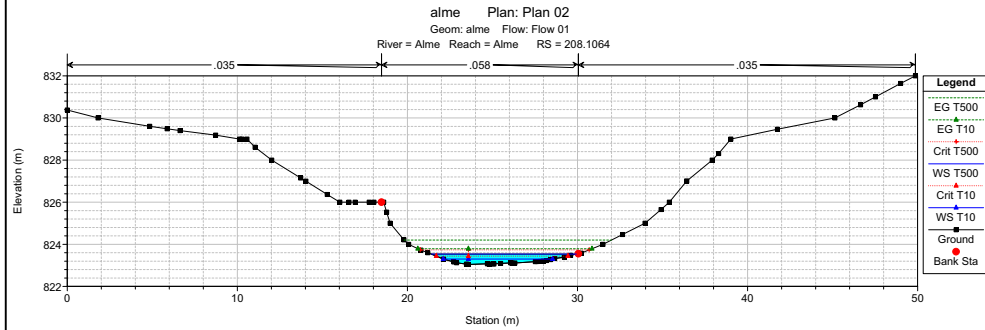
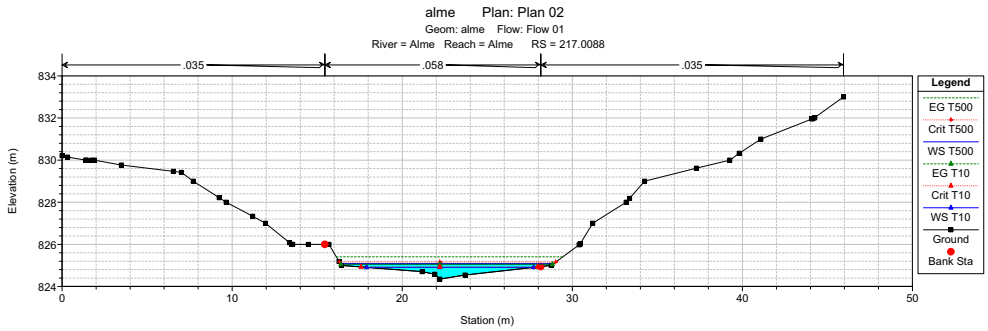
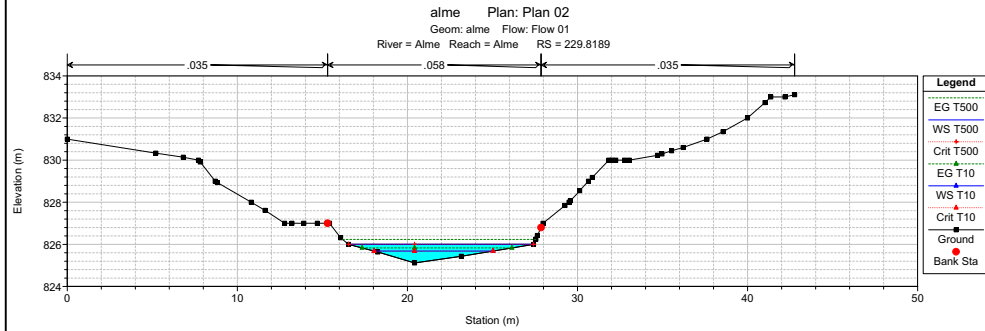
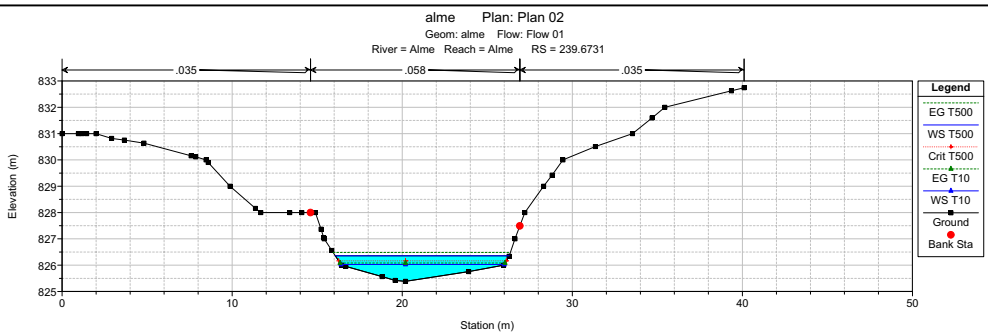
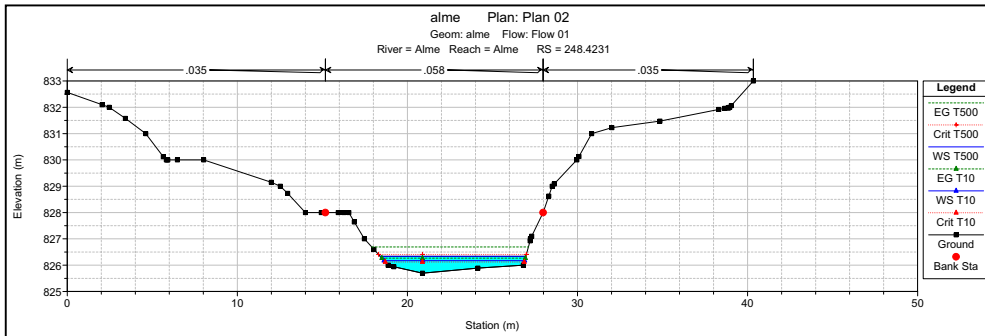
Legend

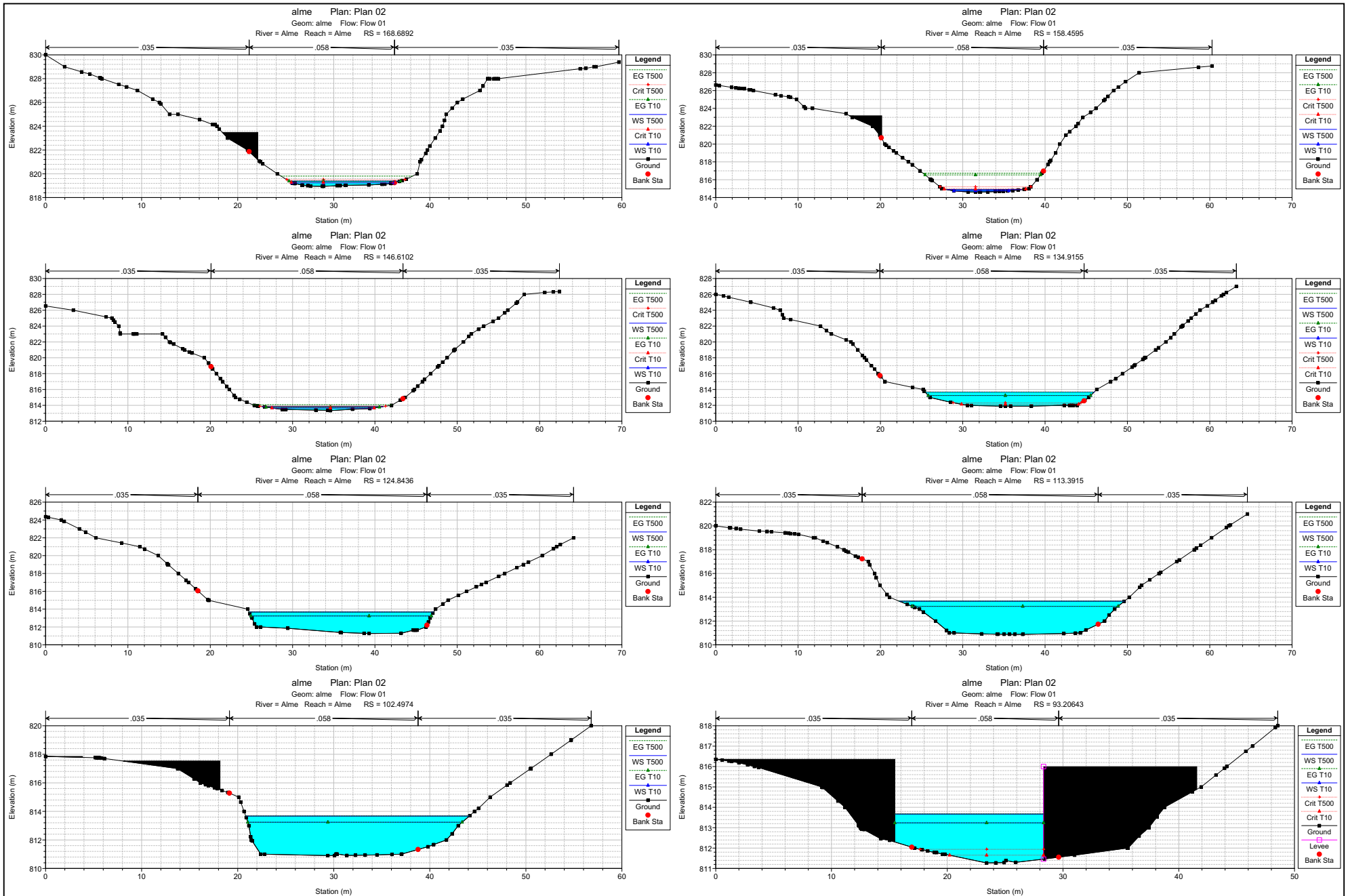
- Vel Left T500
- Vel Chnl T500
- Vel Chnl T10
- Vel Left T10
- Vel Right T500
- Vel Right T10

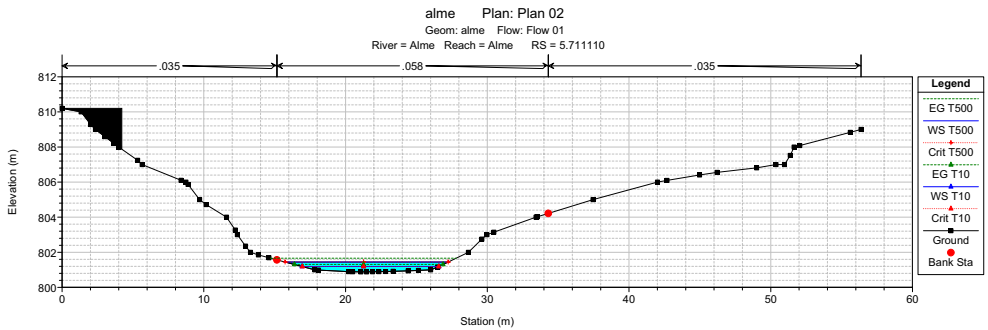
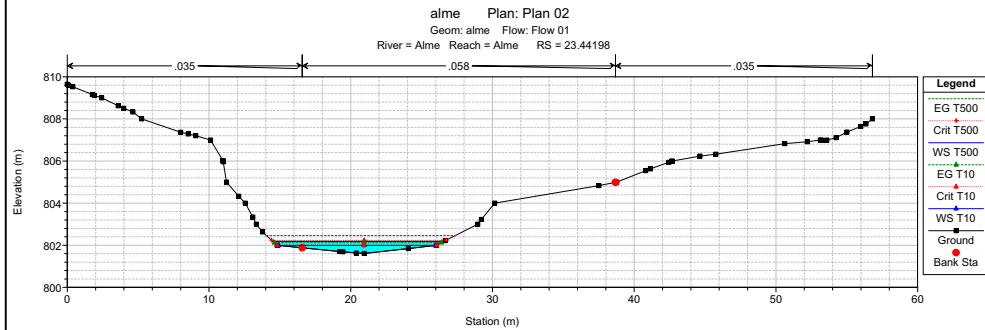
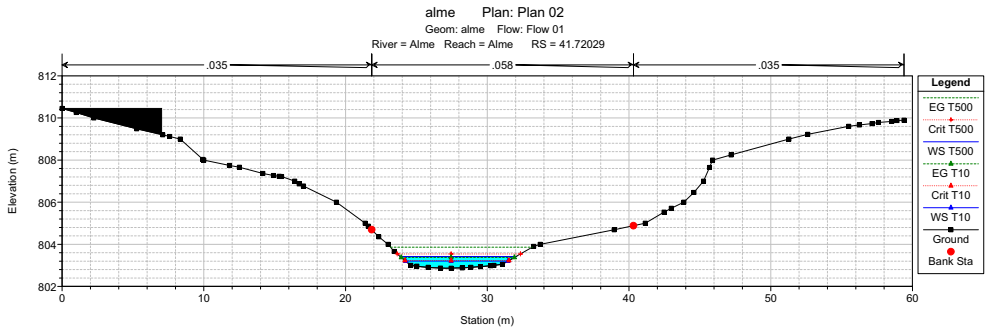
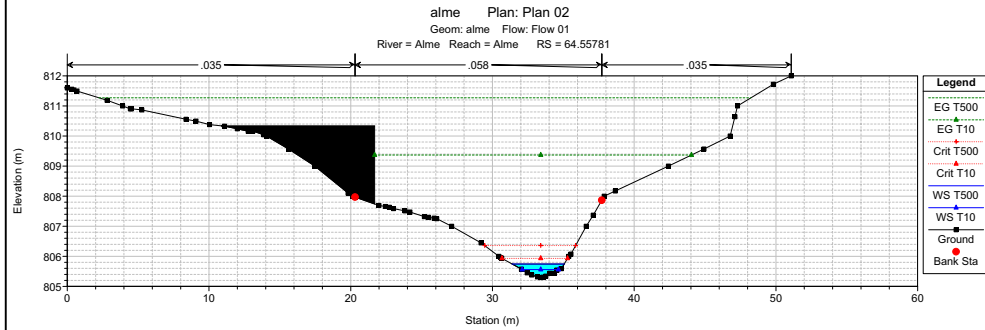
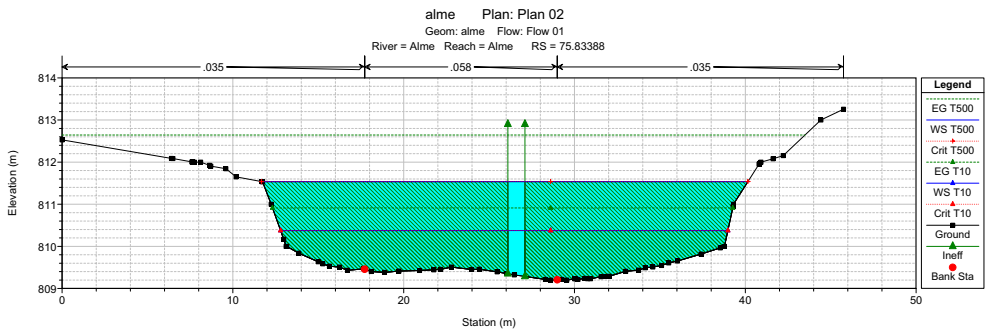
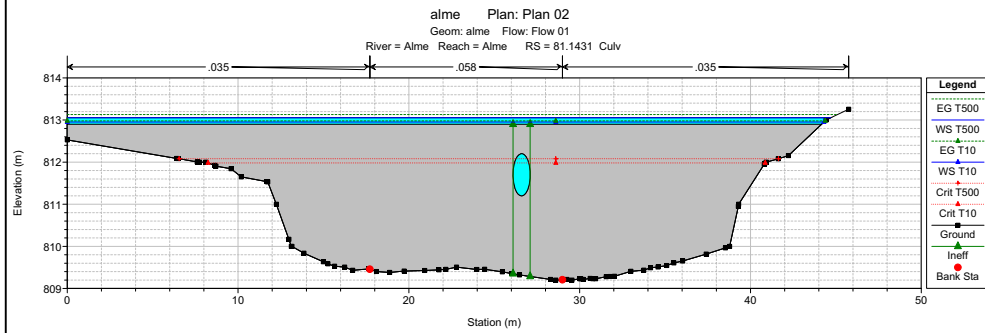
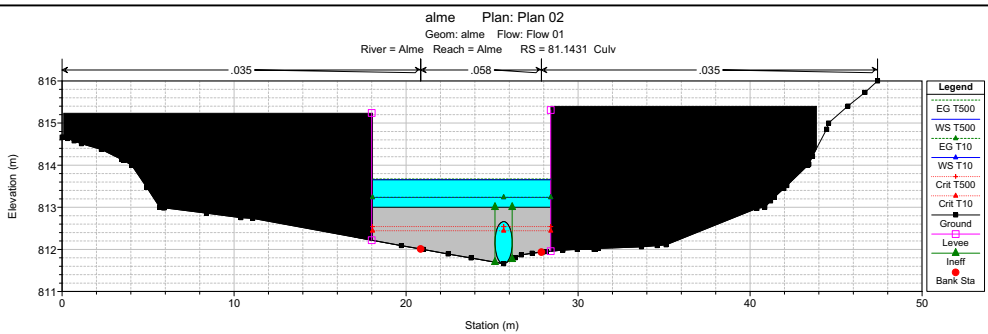
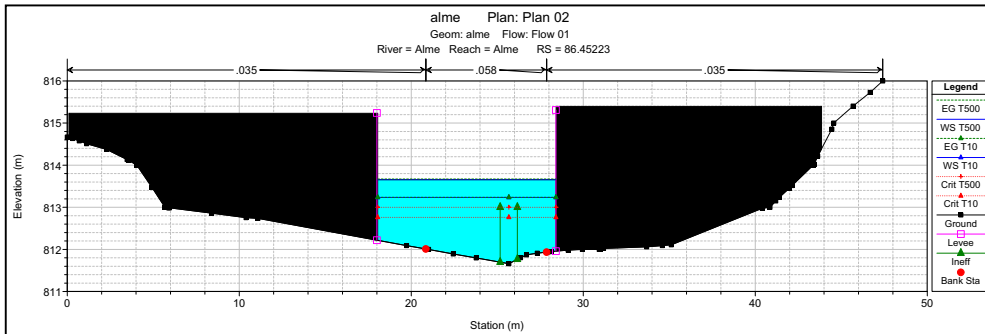


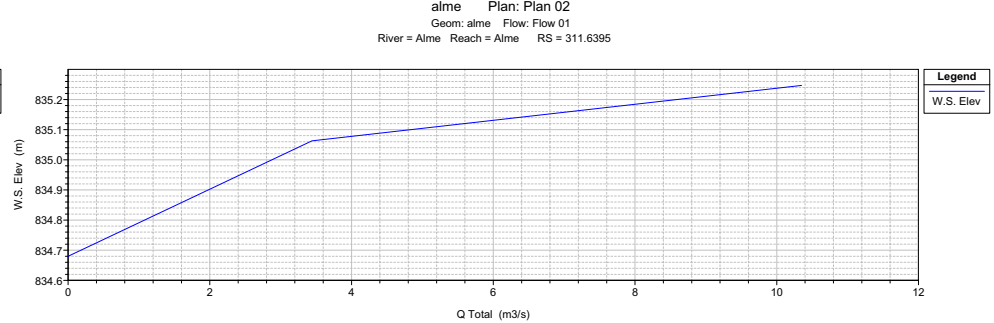
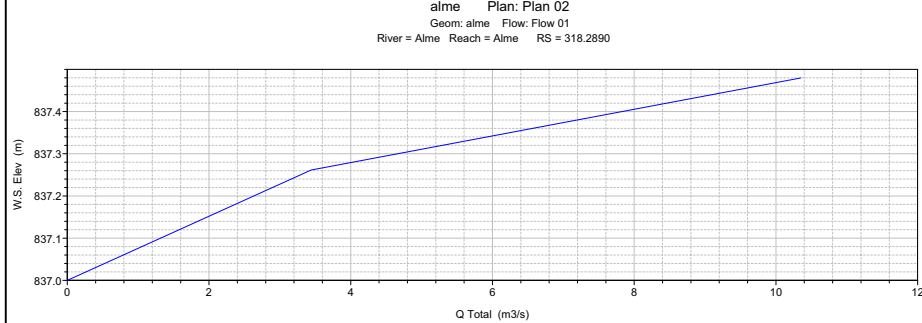
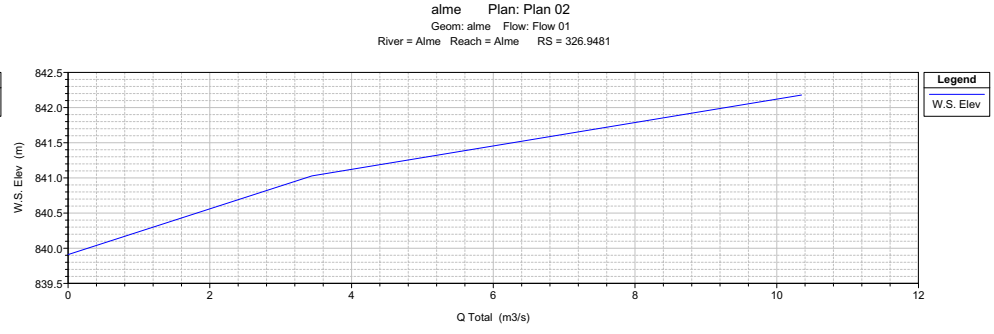
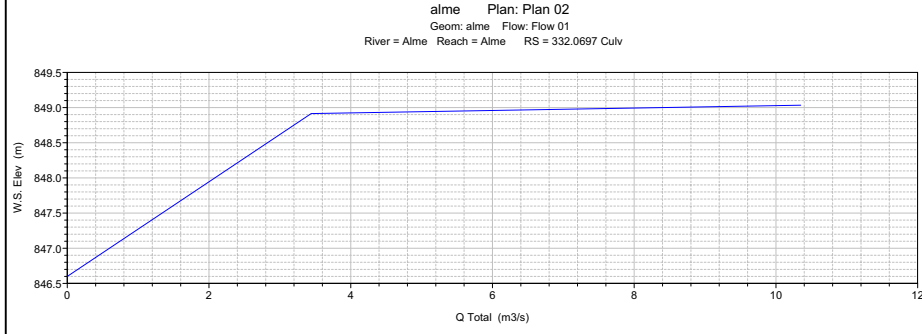
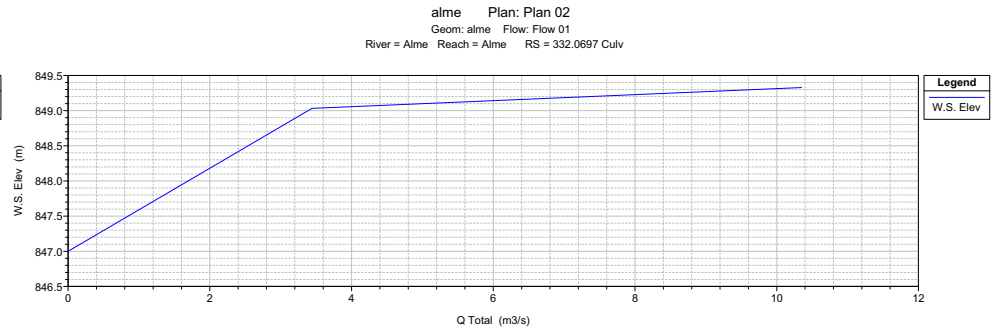
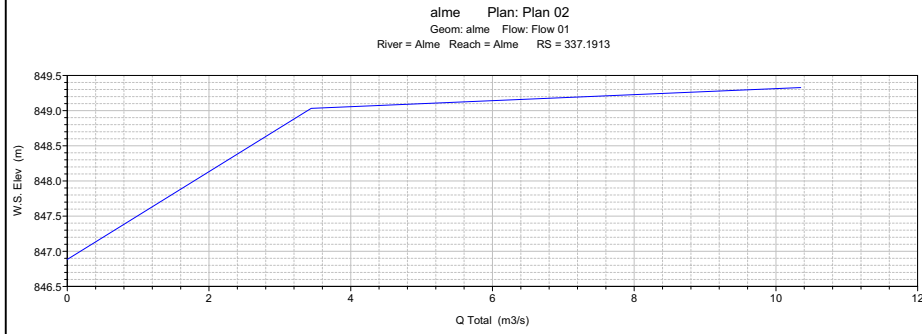
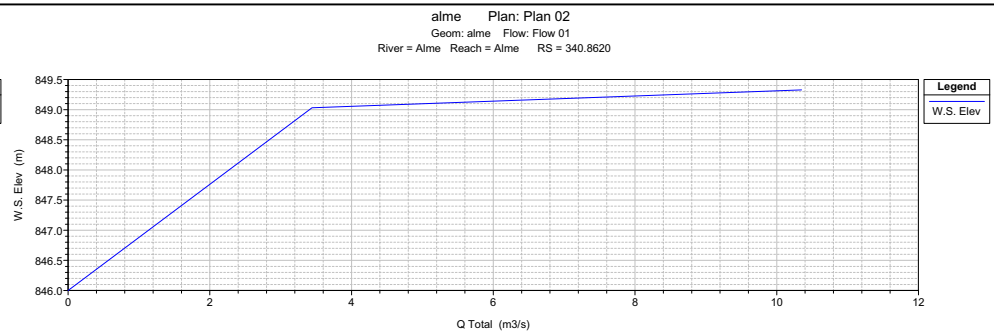
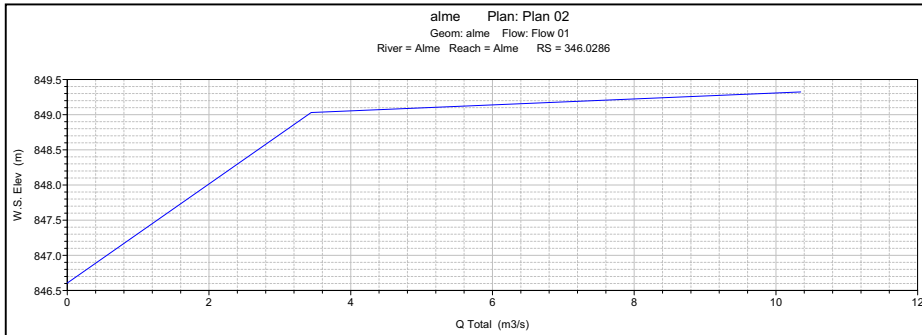




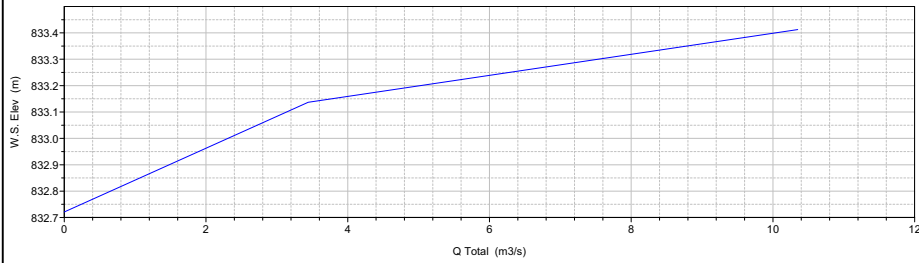






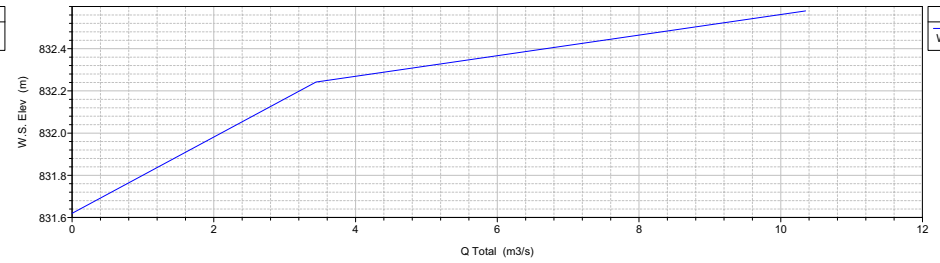


alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 303.8436



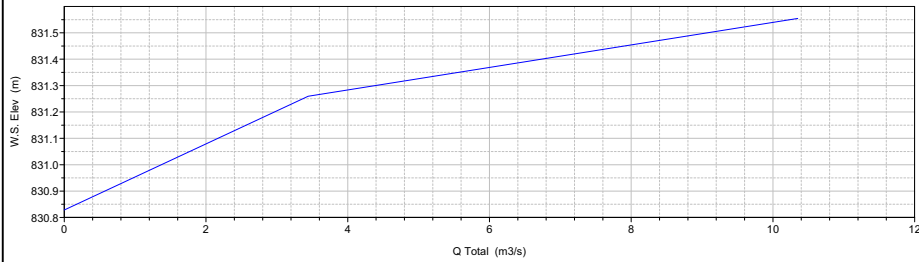
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 295.9385



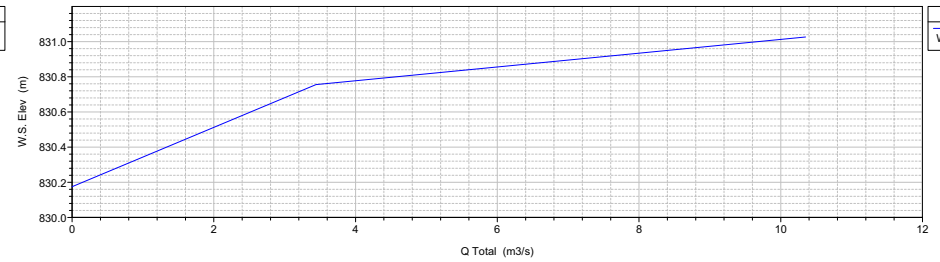
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 289.0909



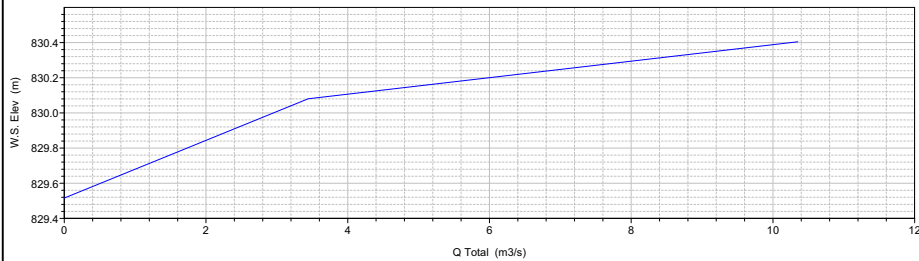
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 283.2029



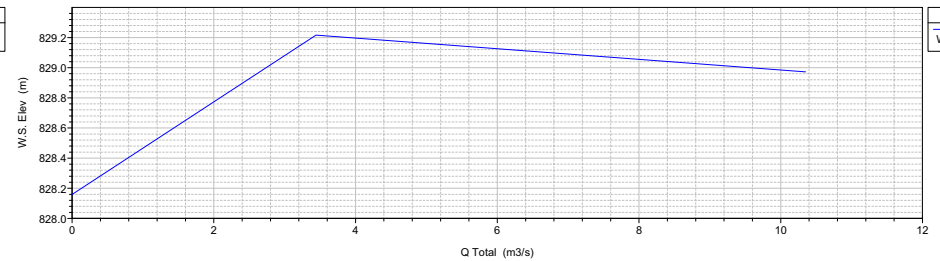
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 276.6229



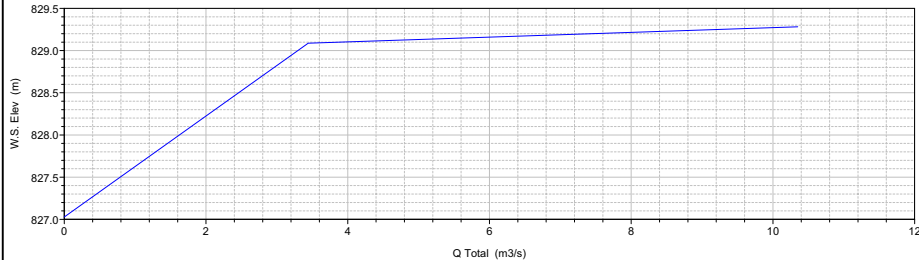
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 267.6301



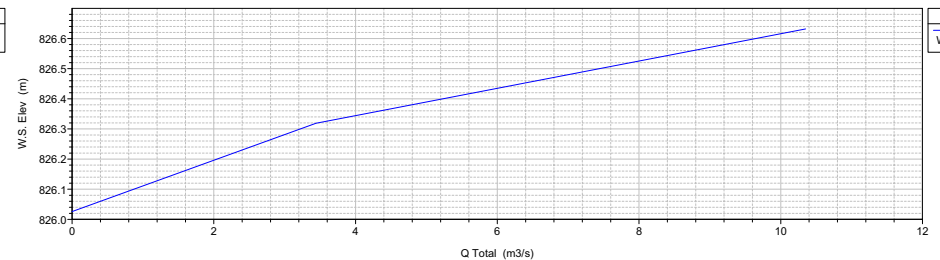
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 262.6338



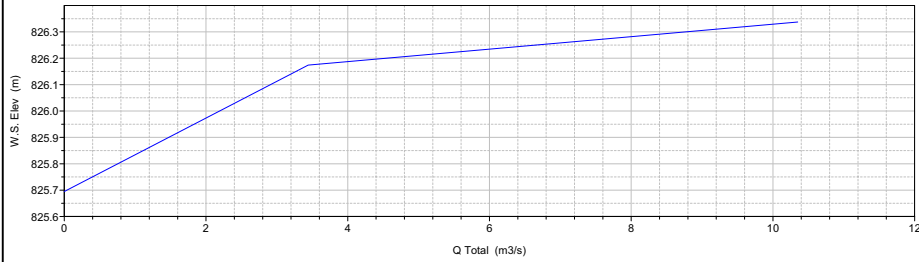
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 258.5520

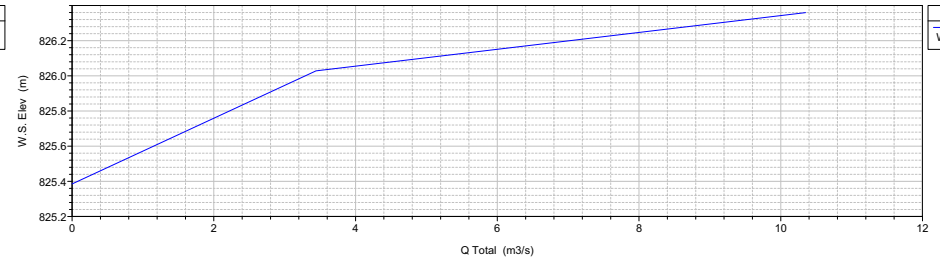


Legend
W.S. Elev

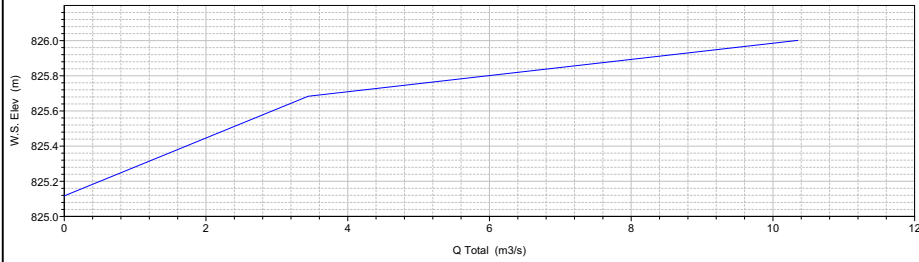
alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 248.4231



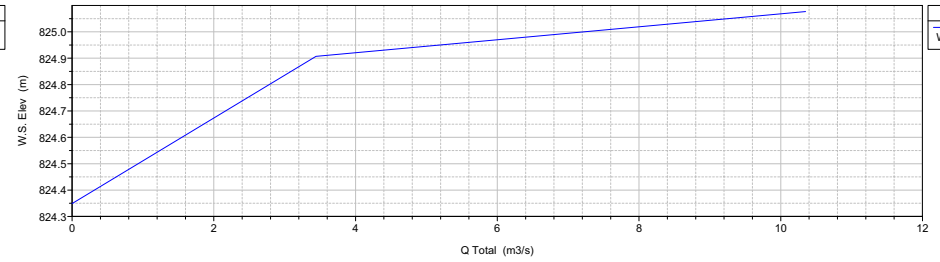
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Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 239.6731



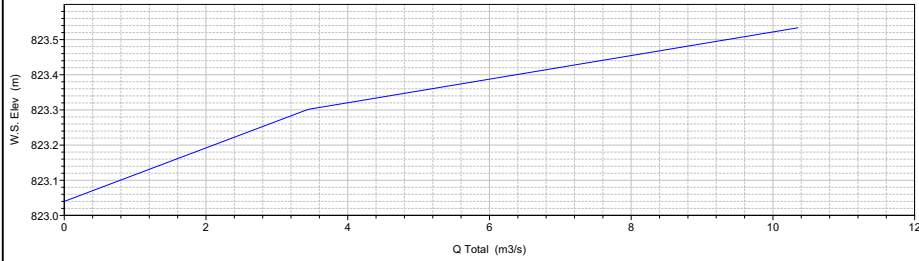
alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 229.8189



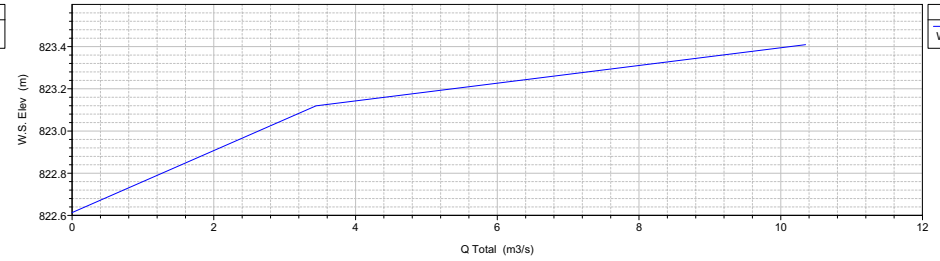
alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 217.0088



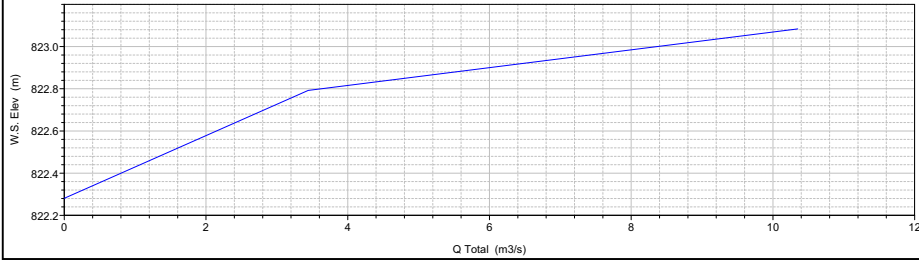
alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 208.1064



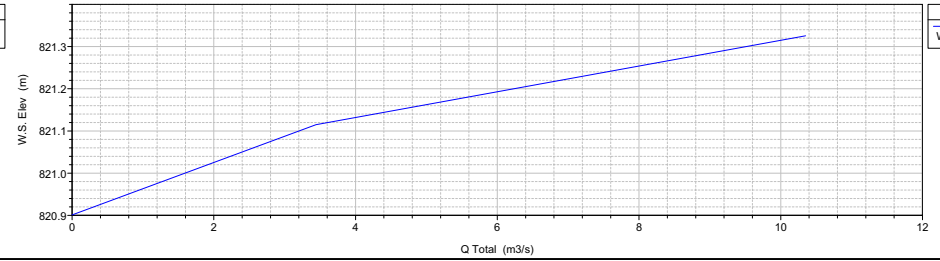
alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 198.4724



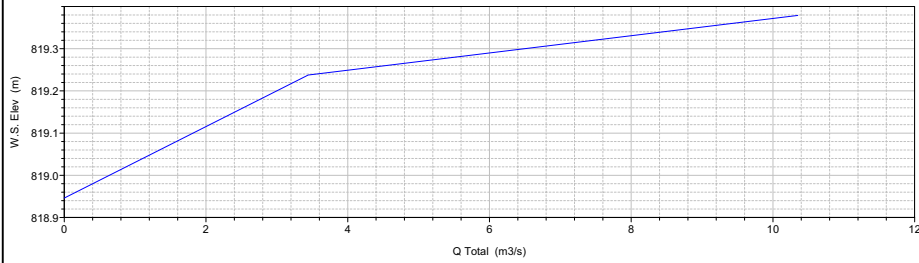
alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 190.4317



alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 181.3740

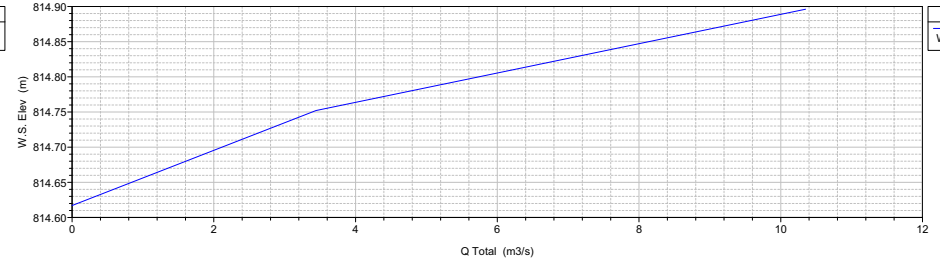


alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 168.6892



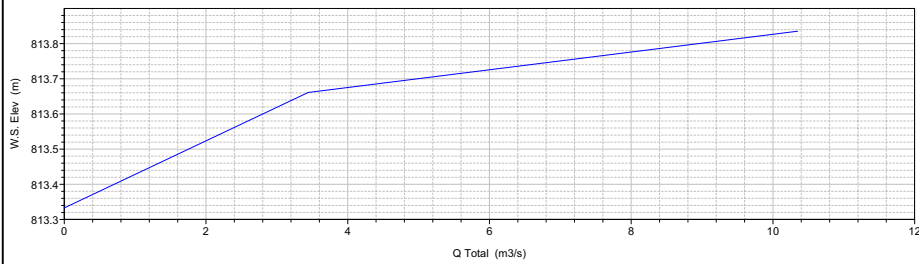
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 158.4595



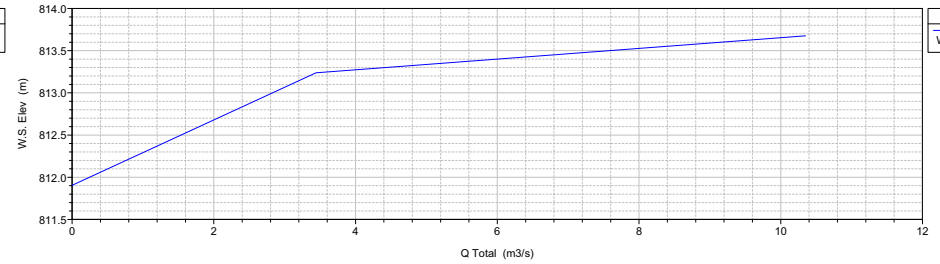
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 146.6102



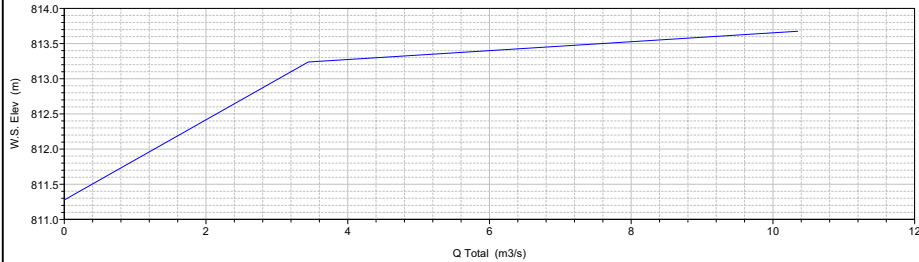
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 134.9155



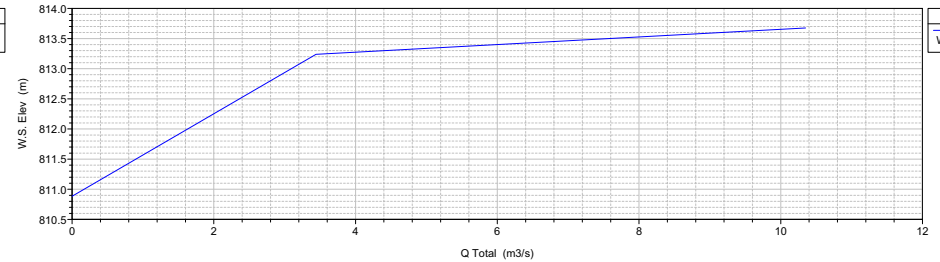
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 124.8436



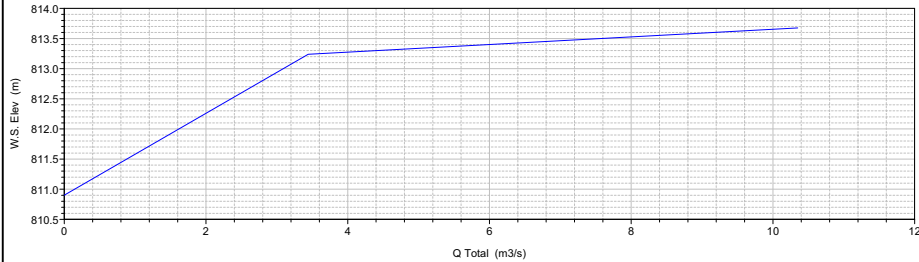
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 113.3915



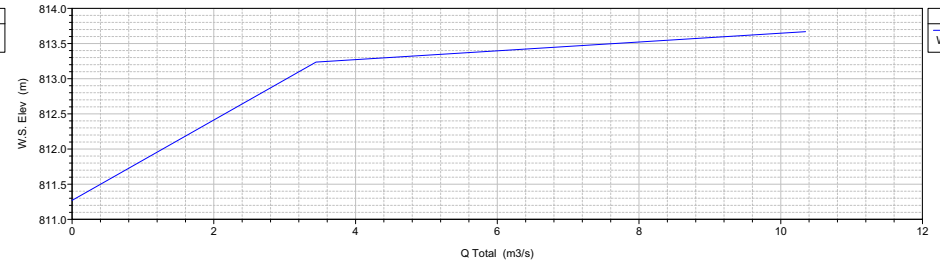
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 102.4974

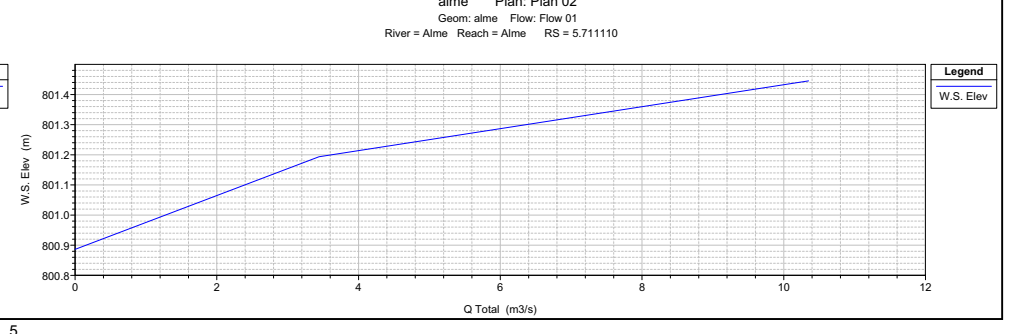
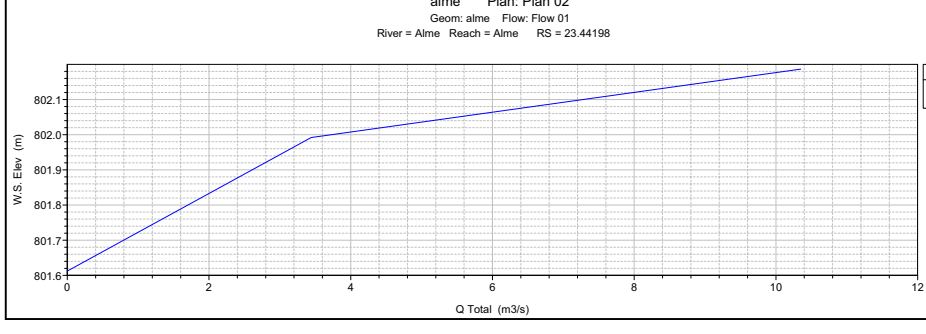
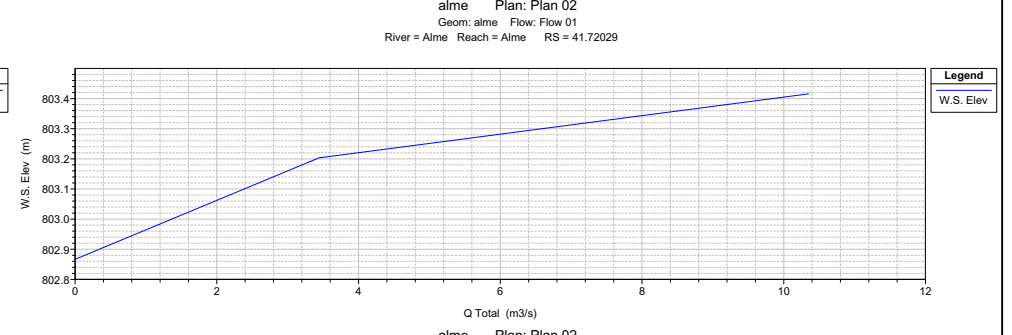
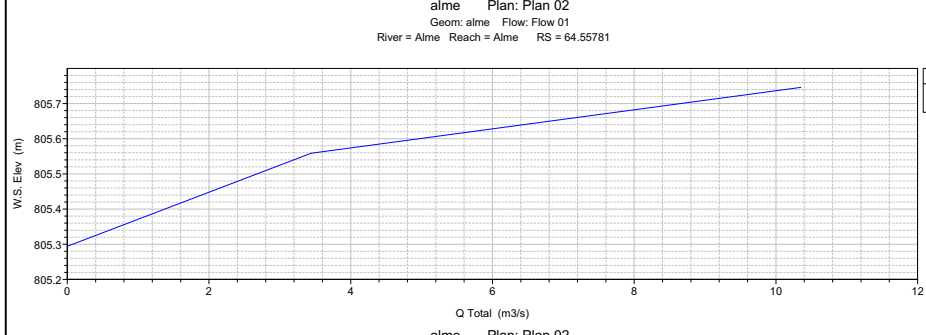
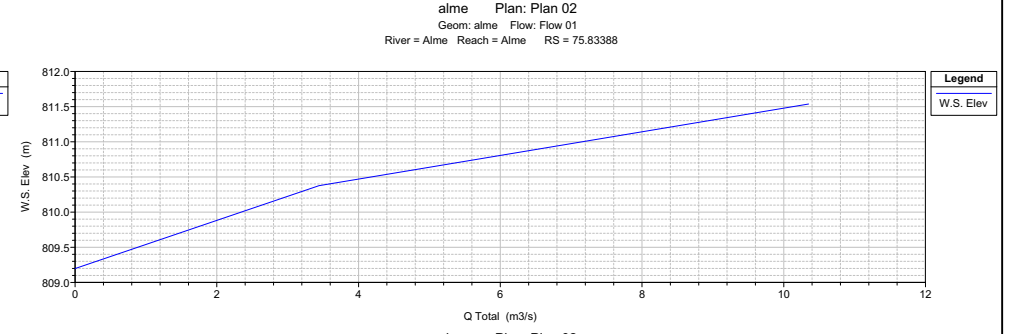
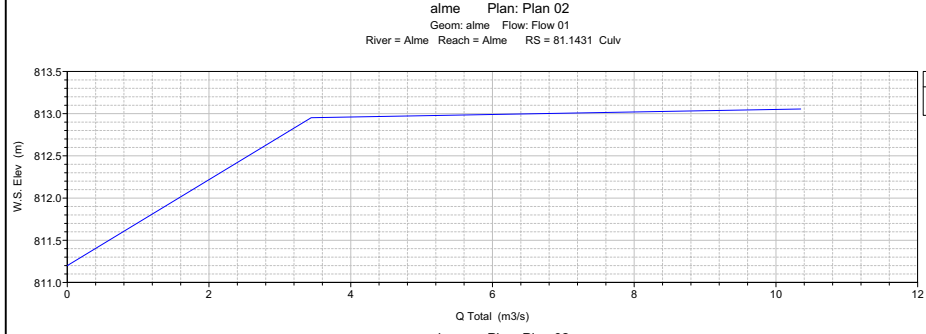
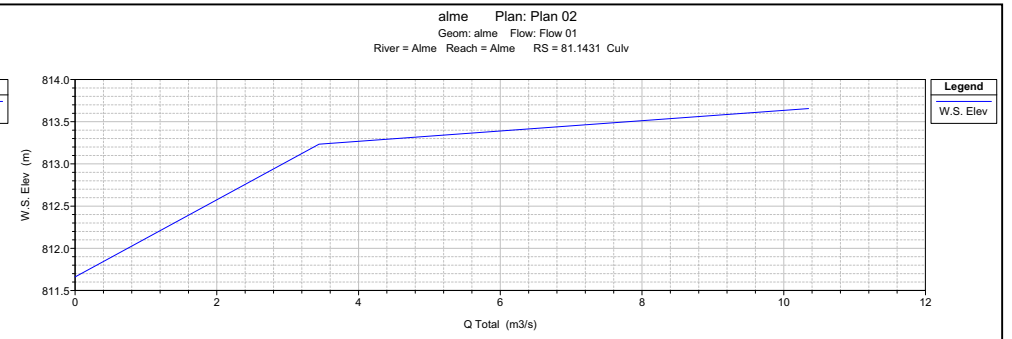
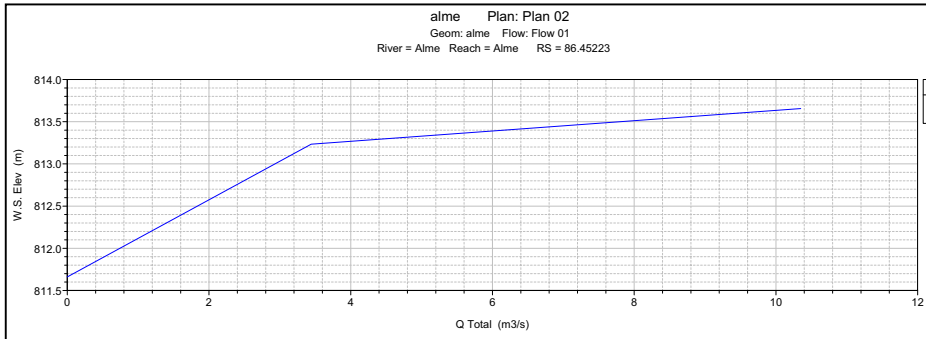


Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 93.20643



Legend
W.S. Elev



NOTÁEZ

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X   X  XXXXXX   XXXX       XXXX       XX       XXXX
X   X  X        X   X      X   X      X  X      X
X   X  X        X         X   X      X   X      X
XXXXXXXX XXXX   X         XXX XXXX   XXXXXX   XXXX
X   X  X        X         X   X      X   X
X   X  X        X   X      X   X      X   X      X
X   X  XXXXXX   XXXX       X   X      X   X   XXXXX
```

PROJECT DATA

Project Title: nota_a
Project File : nota_a.prj
Run Date and Time: 3/21/2012 2:50:43 PM

Project in SI units

Project Description:
NOTÁEZ - SITUACIÓN ACTUAL

PLAN DATA

Plan Title: nota_a
Plan File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\ACTUAL\nota_a.p01

Geometry Title: nota_a
Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\ACTUAL\nota_a.g01

Flow Title : nota_a
Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\ACTUAL\nota_a.f01

Plan Summary Information:

Number of: Cross Sections =	18	Multiple Openings =	0
Culverts =	1	Inline Structures =	0
Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.003
Critical depth calculation tolerance =	0.003
Maximum number of iterations =	20
Maximum difference tolerance =	0.1
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Mixed Flow

FLOW DATA

Flow Title: nota_a

Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\ACTUAL\nota_a.f01

Flow Data (m3/s)

```
*****
* River      Reach      RS      *      T500      T10 *
* Nota      Nota      234.5633*      13.238      3.771 *
*****
```

Boundary Conditions

```
*****
* River      Reach      Profile      *      Upstream      Downstream *
* Nota      Nota      T500      *      Critical      Normal S = 0.35 *
*****
```

GEOMETRY DATA

Geometry Title: nota_a

Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\ACTUAL\nota_a.g01

CROSS SECTION

RIVER: Nota

REACH: Nota RS: 234.5633

INPUT

Description:

Station Elevation Data		num= 100	
Sta	Elev	Sta	Elev
0	855.71	.84	855.69
7.34	855.59	7.61	855.56
10.88	855	12	855
17.78	854.77	18.69	854.72
23.97	854.57	26.18	854.6
29.98	854	30.22	853.98
34.81	853.03	34.89	853
37.14	851.84	37.49	851.79
41.18	851.27	41.3	851.29
43.36	851.62	43.86	851.74
46.23	853	46.7	853.37
48.17	854.59	48.88	855
51.99	855.63	52.17	855.68
59.11	856.84	59.49	857
64.16	858	64.5	858.15
66.82	858.84	67.72	859
71.07	859.36	72.26	859.49
75.45	859.61	76.15	859.55
78.49	859.34	79.07	859.17
80.06	858.82	80.82	858.39

Manning's n Values

```
num= 3
Sta n Val Sta n Val Sta n Val
*****
```

0 .035 34.81 .058 47.19 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
34.81 47.19 12.36 13.67 12.35 .1 .3

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 220.8931

INPUT

Description:

Station Elevation Data num= 110									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	852.43	.32	852.48	1.97	852.68	2.67	852.8	2.84	852.8
4.18	852.81	4.34	852.81	4.91	852.79	5.33	852.77	6.39	852.69
6.99	852.68	9.86	852.59	10.61	852.58	11.68	852.55	12.56	852.51
12.91	852.46	13.56	852.3	13.77	852.28	14.71	852	15.16	851.54
15.45	851.33	15.92	851	16.62	850.63	17.21	850.49	17.85	850.22
19.12	850.02	19.23	850	19.9	849.42	20.1	849.25	20.33	849
21.42	848.64	22.14	848.4	22.33	848.34	22.47	848.29	23.04	848
24.75	847.95	24.98	847.93	27.69	847.85	27.83	847.84	28.37	847.79
28.63	847.76	30.05	847.7	30.31	847.7	30.92	847.63	31.54	847.62
32.4	847.51	33.37	847.47	36.17	847.08	36.28	847.08	36.4	847.07
36.75	847	37.56	846.15	37.71	846	39.32	845.19	39.65	845.03
39.71	845	40.34	844.72	41.62	844	43.93	844	44.02	844
44.07	844.2	44.23	845	45	845.56	45.53	846	45.73	846.12
47.67	847	47.73	847.06	47.84	847.13	48.47	847.59	49.05	848
49.42	848.58	49.62	849	50.34	849.84	50.48	850	50.6	850.09
51.6	851	52.05	851.41	52.89	852	53.53	852.63	53.86	853
54.24	853.33	54.71	853.66	55.14	854	55.31	854.14	56.19	855
57.05	855	57.13	855	57.69	855	63.92	855.29	65.57	855.28
67.29	855.23	68.63	855.18	69.04	855.19	69.86	855.15	70.31	855.13
70.5	855.14	73.03	855	73.57	854.78	74.66	854.4	75.46	854.1
75.77	854	76.9	853.43	77.71	853	78.28	852.82	79.09	852.63
80.23	852.33	81.91	852	81.93	851.99	81.97	851.97	83.09	851.52

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	36.28	.058	48.47	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
36.28 48.47 12.93 14.68 14.9 .1 .3

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 206.2115

INPUT

Description:

Station Elevation Data num= 111									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	847.15	1.87	847.35	2.78	847.34	4.15	847.44	4.98	847.5
10.42	847.61	12.02	847.6	14.15	847.56	15.79	847.5	16.91	847.45
17.55	847.42	18.78	847.4	21.53	847.25	22.05	847.24	26.27	847
26.28	847	26.3	847	28.9	846.52	31.28	846.04	31.35	846.03

31.48	846	31.59	845.79	31.98	845	32.18	844.17	32.23	844
32.42	843.96	33.96	843.65	35.33	843.43	36.08	843.33	36.71	843.23
37.84	843.08	38.4	843	38.94	842.36	39.21	842	40.63	841.34
41.28	841	41.64	840.65	42.02	840	42.5	839.77	43.7	840
45.22	840	45.33	840.26	45.64	841	46.19	841.87	46.25	842
46.5	842.36	46.91	843	47.36	843.33	48.22	844	48.42	844.6
48.52	845	48.63	845.3	48.92	846	49.39	846.12	49.59	846.17
49.92	846.19	51.04	846.41	51.43	846.42	52.59	846.62	53.15	846.71
54.18	846.76	55.84	846.89	57.14	846.93	57.27	846.94	57.32	846.94
57.41	846.94	59.1	847	59.96	847.59	60.29	848	61.29	848.31
61.75	848.42	62.91	849	63.38	849.18	63.68	849.2	64.22	849.27
64.45	849.27	65.43	849.33	65.69	849.32	66.18	849.33	66.66	849.31
66.85	849.3	67.35	849.26	67.96	849.17	68.09	849.15	68.24	849.12
68.92	849	69.75	848.53	70.24	848.2	70.27	848.18	70.55	848
70.57	847.99	71.27	847.77	71.86	847.52	72.4	847.32	73.25	847
73.91	846.58	74.47	846.4	74.93	846.18	75.81	846	76.15	845.96
78.12	845.78	79.18	845.61	80.66	845.46	80.92	845.46	80.96	845.45
81.19	845.42	81.55	845.38	81.85	845.52	83.39	845.43	83.78	845.51
83.8	845.52								

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 37.84 .058 49.39 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 37.84 49.39 13.16 10.7 8.53 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 195.5067

INPUT
 Description:

Station Elevation Data		num= 112	
Sta	Elev	Sta	Elev
0	845.91	.67	846
2.83	846.57	3.3	846.74
5.17	847	5.64	847
9.72	847	11.55	847.05
16.31	846.37	16.99	846.01
18.39	845	18.85	844.93
21.22	844.38	22.18	844
26.37	843.07	26.4	843.06
28.84	842	30.07	841.58
33.64	840.48	35.06	840.07
36.96	838.83	37.67	838.25
40.47	837	40.57	837
41.81	838	42.04	838.76
43.26	840.33	44.83	841
46.05	843	46.07	843.02
47.53	845	47.95	845.16
50.41	845.68	50.61	845.7
54.85	845.84	55.2	845.87
58.41	846.03	59.91	846.07
63.62	846.19	66.49	846.28
72.53	845.99	74.46	845
76.9	843.76	77.2	843.74
79.77	843.67	82.2	843.93

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 35.06 .058 47.22 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 35.06 47.22 8.74 11.25 17.83 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 184.2587

INPUT

Description:

Station Elevation Data num= 119
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 843.71 .01 843.71 .23 843.69 .34 843.68 .53 843.66
 .97 843.67 1.41 843.67 1.86 843.68 4.03 843.26 4.21 843.27
 4.39 843.26 4.57 843.26 4.75 843.26 5.53 843 5.94 842.95
 6.09 842.94 6.63 842.89 8.31 842.76 8.99 842.73 9.64 842.71
 10.83 842.68 11.92 842.64 12.54 842.62 14.51 842.55 14.79 842.53
 15.89 842.42 17.42 842.26 18.06 842.23 19.71 842 19.97 841.9
 20.09 841.87 20.31 841.81 20.98 841.62 22.65 841.12 23.12 841
 24.18 840.59 24.94 840.29 25.19 840.19 25.83 840 27.44 839.14
 27.6 839 27.86 838.73 28.56 838 29.12 837.79 30.1 837.41
 30.77 837.15 31.16 837 31.64 836.46 32.02 836 32.65 835.3
 32.82 835.1 32.88 835 33.46 834.86 34.44 834.64 35.92 834.34
 36.58 834.19 36.74 834.16 37.77 834 37.89 834 38.97 834.57
 39.16 834.72 39.44 835 40.16 835.84 40.28 836 40.53 836.71
 40.66 837 40.97 837.38 41.27 837.72 41.51 838 42.05 838.34
 42.54 838.63 43.21 839 43.82 839.29 45.15 839.92 45.31 840
 45.37 840.02 45.52 840.08 46.82 840.58 46.83 840.58 47.52 840.86
 47.77 841 48.17 841.24 49.32 842 49.87 842.41 51.64 843
 52.19 843.25 52.37 843.29 52.59 843.33 53 843.45 53.82 843.56
 54.4 843.68 55.63 843.8 57.42 843.96 58.03 844 58.44 844.09
 58.51 844.11 59.27 844.27 59.88 844.37 61.36 844.56 61.81 844.56
 62.66 844.49 63.93 844.56 64.88 844.48 65.84 844.49 66.6 844.42
 67.08 844.39 67.34 844.35 68.51 844.19 68.79 844.13 69.55 844
 69.57 843.99 71.79 843 71.84 842.98 71.87 842.96 72.89 842.49
 73.46 842.24 73.9 842 76.04 841.08 76.12 841.05

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 33.46 .058 43.82 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 33.46 43.82 12.93 10.02 8.57 .1 .3

Left Levee Station= 35.29 Elevation= 836.1

Blocked Obstructions num= 1

Sta L Sta R Elev

 33.98 35.29836.0971

CROSS SECTION

RIVER: Nota

REACH: Nota RS: 174.2417

INPUT

Description:

Station Elevation Data num= 110											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	837.98	.01	837.98	.04	837.98	2.74	837.98	2.77	837.98		
2.87	837.98	2.96	837.97	6.18	837.89	6.41	837.88	6.5	837.88		
9.89	837.75	10.07	837.74	10.37	837.72	10.66	837.71	11.43	837.67		
13.01	837.48	14.24	837.39	16.29	837.11	16.34	837.1	16.37	837.1		
16.57	837.08	17.07	837	18.74	836.66	19.55	836.48	20.34	836.33		
20.92	836.18	21.44	836	21.92	835.89	22.42	835.76	23.52	835.48		
24.27	835.27	25.31	835	25.66	834.32	26.04	834	26.46	833.6		
27.77	833	28.31	832.94	28.36	832.94	28.43	832.93	28.51	832.92		
28.61	832.91	33.29	832.45	33.6	832.39	34.02	832.32	35.98	832		
36.34	832	38.36	832	39.23	832.66	39.69	833	40.71	833.94		
40.79	834	40.92	834.14	41.73	835	42.18	835.65	42.47	835.98		
42.48	836	43.96	836.92	44.08	837	44.28	837.15	44.7	837.49		
45.31	838	46	838.46	46.77	839	48.35	839.85	48.63	840		
48.73	840.05	48.77	840.06	48.85	840.08	49.02	840.11	51.21	840.73		
51.3	840.76	53.93	841	54.02	841.03	54.09	841.06	56.22	842		
56.35	842.02	56.68	842.05	58.23	842.23	59.03	842.31	60.08	842.4		
60.56	842.44	61.47	842.47	61.95	842.53	62.66	842.54	63.03	842.57		
63.38	842.58	64.57	842.63	65.18	842.62	65.5	842.6	66.3	842.61		
66.98	842.53	67.32	842.51	67.74	842.44	68.05	842.4	69.27	842.15		
69.39	842.12	69.92	842	70.26	841.67	70.72	841.14	70.8	841.05		
70.85	841	71.4	840.42	71.78	840	72.23	839.85	72.93	839.53		
73.55	839.28	73.99	839	74.23	838.88	75.38	838	75.39	837.99		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	34.02	.058	42.47	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	34.02	42.47		13.27	9.8	6.46	.1	.3

Left Levee Station= 35.76 Elevation= 835.09

Blocked Obstructions num= 2					
Sta L	Sta R	Elev	Sta L	Sta R	Elev
.97	22.08837.9822	24.94	35.77835.0969		

CROSS SECTION

RIVER: Nota REACH: Nota RS: 164.4459

INPUT

Description:

Station Elevation Data num= 92											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	833.57	1.06	833.54	1.44	833.5	2.42	833.4	3.96	833.34		
4.59	833.31	5.2	833.25	5.69	833.23	7.47	833.1	7.67	833.08		
8.57	833	9.28	832.96	9.31	832.96	9.34	832.95	9.38	832.95		
9.41	832.95	9.46	832.94	9.51	832.93	10.97	832.81	11.15	832.76		
11.73	832.69	12.69	832.41	13.07	832.33	14.09	832	15.21	831.71		
16.38	831.41	17.63	831.29	18.14	831.2	18.94	831.15	19.73	831.1		
19.91	831.08	21.71	831	21.72	831	21.78	831	23.11	830.97		
23.91	830.92	25.81	830.86	27.53	830.82	29.07	830.8	30.23	830.79		

31.15	830.84	31.19	830.84	32.68	830.92	32.79	830.92	33.88	831
34	831.02	34.42	831.07	34.5	831.1	35.46	831.25	36.55	831.69
36.95	831.8	37.34	832	38.12	832.7	38.27	832.84	38.45	833
38.67	833.07	39.8	833.41	40.18	833.51	40.95	833.76	41.79	834
42.64	834.9	42.75	835	42.85	835.08	43.61	835.64	44.02	835.95
44.09	836	44.85	836.86	44.95	837	45.76	837.87	45.88	838
46.83	838.58	47.49	839	47.58	839.06	48.76	840	50.32	840.2
51.07	840.23	53.14	840.42	60.39	840.21	60.69	840.23	60.88	840.23
61.06	840.24	62.22	840	63.8	839.49	65.23	839	66.45	838.69
67.75	838.4	68.17	838.3	68.39	838.26	68.58	838.23	69.51	838
70.21	837.67	70.29	837.6						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 34 .058 38.27 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 34 38.27 8.49 9.82 6.36 .1 .3

Left Levee Station= 34.69 Elevation= 833.4

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

 5.83 9.29833.2188 12.49 14.55832.4698 30.81 34.71833.3859

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 154.6206

INPUT

Description:

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	831.92	.43	831.91	.49	831.91	.51	831.91	.66	831.9
3.35	831.81	3.6	831.78	3.74	831.76	3.95	831.73	4.54	831.68
4.9	831.61	5.43	831.54	6.49	831.31	6.93	831.23	6.95	831.23
6.98	831.22	7.85	831	10.46	830.74	10.7	830.73	11.22	830.71
11.65	830.67	12.29	830.64	14.05	830.49	15.45	830.42	16.24	830.36
16.81	830.32	17.31	830.3	17.56	830.29	17.77	830.29	18.22	830.28
18.6	830.27	23.66	830	31.08	829.69	31.41	829.67	34.52	829.93
35.05	830	35.11	830	36.02	830	36.06	830	37.32	830.89
37.48	831	40.13	831.58	40.66	831.69	40.8	831.72	41.2	831.79
42.22	832	42.45	832.15	43.32	832.7	43.77	833	44.16	833.42
44.92	834	45.47	834.4	46.52	835	47.55	835.76	47.83	836
48.16	836.55	48.45	837	49.21	837.52	49.78	838	50.13	838.2
51.33	839	51.49	839.09	51.58	839.12	52.15	839.33	52.47	839.41
53.16	839.6	53.63	839.71	53.84	839.75	54.38	839.85	54.5	839.87
54.61	839.88	55.05	839.93	55.14	839.94	55.93	839.99	55.94	839.99
56.76	839.92	56.92	839.89	57.55	839.75	58.04	839.6	59.2	839.3
59.52	839.19	60.25	839	60.5	838.87	61.89	838	62.04	837.91
62.18	837.86	63.45	837.33	64.73	837.16	65.46	837	65.53	836.98
65.57	836.96	66.69	836.53	66.73	836.52	66.83	836.48		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 36.02 .058 40.66 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

```

36.02 40.66 7.87 10 14.7 .1 .3
Left Levee Station= 36.34 Elevation= 832.86
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev
*****
1.17 4.78831.8816 31.22 36.34832.8659

```

CROSS SECTION

```

RIVER: Nota
REACH: Nota RS: 144.6175

```

INPUT

Description:

```

Station Elevation Data num= 88
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 830.2 1.79 830.1 1.92 830.1 1.96 830.1 2.04 830.1
3.11 830.03 3.15 830.02 3.59 830 4.6 829.99 4.65 829.98
6.12 829.96 6.26 829.96 11.14 829.9 11.42 829.89 12.89 829.87
12.95 829.87 13.35 829.86 14.18 829.84 15.64 829.81 16.17 829.79
16.27 829.79 17.59 829.75 18.17 829.73 18.73 829.71 20.56 829.66
21.28 829.63 22.53 829.58 23.39 829.54 24.49 829.48 33.5 829.03
33.94 829.01 34.14 829 35.22 828.88 36.61 828.74 36.65 828.74
37.82 828.61 38.79 828.55 39.26 828.51 39.65 828.49 40.03 828.47
40.3 828.46 40.66 828.45 40.95 828.46 41.36 828.46 41.6 828.45
41.83 828.44 42.03 828.44 42.12 828.44 42.32 828.44 42.65 828.48
42.99 828.48 43.69 828.51 47.75 829 48.08 829.1 48.29 829.15
48.9 829.28 50.74 829.73 50.78 829.74 51.63 829.85 52.48 829.93
52.63 829.96 53.73 830 54.12 830.05 54.15 830.06 54.18 830.06
54.38 830.08 54.41 830.08 54.97 830.11 55.02 830.11 56.33 830.06
56.36 830.06 56.39 830.06 56.57 830.02 56.58 830.02 56.69 830
57.07 829.98 57.08 829.98 57.08 829.99 57.89 829.93 57.93 829.94
58.18 829.92 59.23 830 59.61 830 59.83 830 64.52 830
65.29 830 66.88 830 66.94 830

```

```

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .035 37.82 .058 41.6 .035

```

```

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
37.82 41.6 20.14 18.33 27.56 .1 .3

```

```

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 40 829.1 F
40.6 66.94 829.1 F
Right Levee Station= 41.96 Elevation= 830.44
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev
*****
41.96 56.47830.4395 56.44 65.68830.4904

```

CULVERT

```

RIVER: Nota
REACH: Nota RS: 135.4527

```

INPUT

Description:

Distance from Upstream XS = 2
 Deck/Roadway Width = 15
 Weir Coefficient = 1.4
 Upstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 830 826 50 830 826

Upstream Bridge Cross Section Data
 Station Elevation Data num= 88
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 830.2 1.79 830.1 1.92 830.1 1.96 830.1 2.04 830.1
 3.11 830.03 3.15 830.02 3.59 830 4.6 829.99 4.65 829.98
 6.12 829.96 6.26 829.96 11.14 829.9 11.42 829.89 12.89 829.87
 12.95 829.87 13.35 829.86 14.18 829.84 15.64 829.81 16.17 829.79
 16.27 829.79 17.59 829.75 18.17 829.73 18.73 829.71 20.56 829.66
 21.28 829.63 22.53 829.58 23.39 829.54 24.49 829.48 33.5 829.03
 33.94 829.01 34.14 829 35.22 828.88 36.61 828.74 36.65 828.74
 37.82 828.61 38.79 828.55 39.26 828.51 39.65 828.49 40.03 828.47
 40.3 828.46 40.66 828.45 40.95 828.46 41.36 828.46 41.6 828.45
 41.83 828.44 42.03 828.44 42.12 828.44 42.32 828.44 42.65 828.48
 42.99 828.48 43.69 828.51 47.75 829 48.08 829.1 48.29 829.15
 48.9 829.28 50.74 829.73 50.78 829.74 51.63 829.85 52.48 829.93
 52.63 829.96 53.73 830 54.12 830.05 54.15 830.06 54.18 830.06
 54.38 830.08 54.41 830.08 54.97 830.11 55.02 830.11 56.33 830.06
 56.36 830.06 56.39 830.06 56.57 830.02 56.58 830.02 56.69 830
 57.07 829.98 57.08 829.98 57.08 829.99 57.89 829.93 57.93 829.94
 58.18 829.92 59.23 830 59.61 830 59.83 830 64.52 830
 65.29 830 66.88 830 66.94 830

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 37.82 .058 41.6 .035

Bank Sta: Left Right Coeff Contr. Expan.
 37.82 41.6 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 40 829.1 F
 40.6 66.94 829.1 F
 Right Levee Station= 41.96 Elevation= 830.44
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 41.96 56.47830.4395 56.44 65.68830.4904

Downstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 830 824 50 830 824

Downstream Bridge Cross Section Data
 Station Elevation Data num= 73
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 829.08 .11 829.08 1.3 829.09 1.89 829.09 3.42 829.09
 3.86 829.08 4.01 829.08 6.54 829.06 6.64 829.06 9.93 829.03
 9.96 829.03 10.96 829.02 12.16 829 13.1 828.5 13.75 828

13.87	827.94	14.15	827.81	15.11	827.37	15.39	827.24	15.89	827
16.14	826.86	16.62	826.58	17.55	826	18.86	825.91	19.25	825.89
21.72	825.74	22.43	825.72	24.21	825.6	24.88	825.57	26.27	825.52
27.56	825.51	28.35	825.63	30.34	826	30.84	826.12	31	826.11
33.5	826.1	35.16	826.01	35.2	826.01	35.44	826	35.97	825.39
36.29	825	37.48	824.92	37.55	824.91	37.58	824.91	37.61	824.91
38.32	825	38.68	825	40.69	825	41.4	825	41.47	825
41.63	825.19	42.32	826	42.53	826.05	43.19	826.2	43.93	826.3
46.3	826.64	47.62	826.85	48.3	826.93	48.52	826.97	48.91	827
48.94	827	49.87	827.06	50.8	827.12	52.25	827.19	53.05	827.22
54.45	827.4	55.18	827.44	57.03	827.52	59.56	828	61.04	828.18
61.28	828.21	64.81	828.62	67.18	828.85				

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0 .035 37.48 .058 43.93 .035

Bank Sta: Left Right Coeff Contr. Expan.
37.48 43.93 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 40 828.2 F
40.6 67.18 828.2 F

Left Levee Station= 30.84 Elevation= 826.12
Right Levee Station= 48.3 Elevation= 831.22

Blocked Obstructions num= 1
Sta L Sta R Elev

48.3 66.95831.2229

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
Downstream Embankment side slope = 0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span
Culvert #1 Circular .6
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
2	15	.015	.015	0	1	1	

Upstream Elevation = 828.5
Centerline Station = 40.3
Downstream Elevation = 827.6
Centerline Station = 40.3

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 126.2879

INPUT
Description:
Station Elevation Data num= 73

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	829.08	.11	829.08	1.3	829.09	1.89	829.09	3.42	829.09
3.86	829.08	4.01	829.08	6.54	829.06	6.64	829.06	9.93	829.03
9.96	829.03	10.96	829.02	12.16	829	13.1	828.5	13.75	828
13.87	827.94	14.15	827.81	15.11	827.37	15.39	827.24	15.89	827
16.14	826.86	16.62	826.58	17.55	826	18.86	825.91	19.25	825.89
21.72	825.74	22.43	825.72	24.21	825.6	24.88	825.57	26.27	825.52
27.56	825.51	28.35	825.63	30.34	826	30.84	826.12	31	826.11
33.5	826.1	35.16	826.01	35.2	826.01	35.44	826	35.97	825.39
36.29	825	37.48	824.92	37.55	824.91	37.58	824.91	37.61	824.91
38.32	825	38.68	825	40.69	825	41.4	825	41.47	825
41.63	825.19	42.32	826	42.53	826.05	43.19	826.2	43.93	826.3
46.3	826.64	47.62	826.85	48.3	826.93	48.52	826.97	48.91	827
48.94	827	49.87	827.06	50.8	827.12	52.25	827.19	53.05	827.22
54.45	827.4	55.18	827.44	57.03	827.52	59.56	828	61.04	828.18
61.28	828.21	64.81	828.62	67.18	828.85				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 37.48 .058 43.93 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 37.48 43.93 7.8 18.8 15.03 .1 .3

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 40 828.2 F
 40.6 67.18 828.2 F
 Left Levee Station= 30.84 Elevation= 826.12
 Right Levee Station= 48.3 Elevation= 831.22
 Blocked Obstructions num= 1
 Sta L Sta R Elev

 48.3 66.95831.2229

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 107.4834

INPUT

Description:
 Station Elevation Data num= 104
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 827.82 .37 827.65 1.48 827.17 1.77 827 4.19 826.75
 5.15 826.62 6.93 826.43 8.62 826.2 9.14 826.14 10 826
 10.15 825.98 10.2 825.98 10.92 825.88 11.08 825.85 16.67 825
 17.11 824.97 17.28 824.96 17.31 824.96 18.43 824.86 26.86 824.21
 28.73 824.02 28.92 824 29.76 823.72 31.38 823 32.38 822.27
 32.91 822 33.37 821.31 33.58 821 35 820.03 35.03 820
 35.06 819.99 35.07 819.99 38.76 819.47 39.09 819.49 40.35 819.64
 41.06 819.78 41.73 819.92 41.8 819.93 42.06 820 42.33 820.5
 42.59 821 42.77 821.25 43.35 822 43.54 822.25 44.07 823
 44.83 823.8 45.04 824 45.24 824.16 45.69 824.54 46.24 825
 47.09 825.2 47.22 825.21 47.38 825.22 47.98 825.33 48.74 825.48
 49.18 825.51 49.65 825.53 50.77 825.7 51.09 825.7 51.19 825.7
 51.57 825.75 51.99 825.75 52.22 825.77 52.29 825.77 52.45 825.79
 52.72 825.81 52.85 825.82 52.97 825.83 53.21 825.84 53.33 825.85
 53.44 825.85 55.41 825.83 55.54 825.83 55.81 825.83 55.93 825.83

56.2	825.83	56.49	825.83	56.64	825.83	56.8	825.82	58.91	825.79
59.22	825.79	59.36	825.78	59.76	825.76	60.16	825.74	61.49	825.72
62.51	825.67	64.68	825.63	68.76	825.81	69.01	825.78	69.11	825.77
69.52	825.82	70	825.86	70.36	825.79	70.77	825.84	71.33	825.88
71.6	825.8	72.04	825.82	72.14	825.82	72.15	825.82	72.72	825.81
73.1	825.83	73.64	825.6	74.06	825.51	74.09	825.5		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 28.73 .058 45.69 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 28.73 45.69 20.46 16.7 9.05 .1 .3

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

 46.89 51.76825.7484 71.76 74.09825.8058 8.19 30.06826.2598

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 90.78275

INPUT

Description:

Station Elevation Data num= 109

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	825.84	.13	825.83	.36	825.82	2.46	825.72	4.16	825.64
6.09	825.57	7.47	825.5	8.77	825.46	9.37	825.43	11.16	825.37
13.17	825.29	14.87	825.22	16.92	825.12	17.35	825.1	18.34	825.05
19.16	825	19.8	824.96	21.51	824.84	26.43	824.5	28.72	824.34
32.44	824.07	32.83	824.04	32.97	824.03	33.36	824	33.68	823.63
34.13	823	34.23	822.46	34.32	822	34.73	821.55	35.22	821
35.91	820.58	36.47	820.27	37.1	820	37.12	819.96	37.7	819
38.36	818.16	38.49	818	39.62	817.33	40.02	817	41.58	816.24
42.13	816	42.29	815.88	42.68	815.65	42.74	815.61	43.44	815.18
43.84	815	44.13	815	44.15	815	44.66	815	45.26	815.25
45.51	815.37	46.89	816	48.1	816.8	48.49	817	48.81	817.2
49.18	817.45	50.07	818	50.53	818.15	50.85	818.26	52.52	818.8
53.13	819	53.53	819.75	53.65	820	53.89	820.1	54.16	820.22
54.47	820.35	55.53	820.79	55.98	821	56.43	821.48	56.81	822
57.47	822.36	57.79	822.52	58	822.63	58.69	823	59.75	823.34
60.36	823.51	62.17	824	62.49	824.26	62.89	824.48	63.92	825
64.14	825.01	64.16	825.01	64.96	825.04	66.45	825.07	67.17	825.08
68.63	825.09	70.17	825.08	70.97	825.08	71.81	825.06	71.97	825.06
73.35	825.03	73.97	825.01	74.36	825	75.48	824.44	76.18	824
77.25	823.7	77.94	823.47	78.74	823.23	79.35	823	81.1	822.34
81.97	822	82.85	821.87	82.98	821.85	84.17	821.69	84.45	821.66
84.53	821.65	85.03	821.59	85.61	821.56	85.76	821.55		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 32.83 .058 54.16 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 32.83 54.16 24.78 15.37 4.84 .1 .3

Blocked Obstructions num= 1
 Sta L Sta R Elev

3.94 26.52825.6541

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 75.41282

INPUT

Description:

Station Elevation Data num= 115

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	824.8	1.34	824.78	1.45	824.77	1.58	824.77	1.9	824.76
3.22	824.74	3.39	824.74	4.01	824.72	5.1	824.69	7.51	824.61
8.54	824.58	9.5	824.54	10.27	824.51	11.57	824.48	11.95	824.46
15.76	824.37	15.99	824.35	16.26	824.34	17.44	824.31	17.83	824.3
18.49	824.26	20.16	824.22	22.04	824.16	23.16	824.12	23.26	824.12
26.78	824	29.2	823.8	29.84	823.71	29.85	823.71	30.08	823.7
31.6	823.62	32.71	823.38	34.52	823	34.6	822.89	34.68	822.75
35.14	822	35.28	821.75	35.68	821	37.7	820.01	37.71	820
38.18	819	39.12	818.23	39.48	818	41.64	817	41.65	817
42.87	816	44.83	815.1	45.05	815	45.12	814.95	46.39	814
46.4	813.99	47.2	813	48.61	812.29	49.32	812	49.43	812
49.57	812	50.51	812	52.32	812	52.64	812.54	53.12	813
53.41	813.38	53.86	814	54.03	814.38	54.31	815	54.86	815.31
56.09	816	57.23	816.73	57.68	817	57.74	817.03	58.9	817.76
59.26	818	59.7	818.58	60.03	819	60.6	819.8	60.69	819.92
60.75	820	63.33	820.6	64.67	821	65.31	821.38	65.78	821.47
66.47	821.58	67.44	821.72	67.86	821.82	68.04	821.86	68.15	821.89
68.23	821.9	69.97	822	70.19	822.03	70.25	822.04	70.33	822.04
72.09	822.22	72.25	822.22	73.49	822.3	73.81	822.29	74.43	822.31
74.95	822.31	75.41	822.27	75.89	822.25	76.26	822.25	76.8	822.2
77.85	822.07	78.03	822.05	78.11	822.05	78.32	822	83.77	821.49
85.16	821.29	85.7	821.22	86.81	821.07	86.84	821.06	86.95	821.05
87.36	821	87.45	821	89.89	820.84	90.61	820.82	91.54	820.82

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	32.71	.058	57.74	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
32.71 57.74 23.24 14.16 8.1 .1 .3

Blocked Obstructions num= 1

Sta L	Sta R	Elev
19.67	25.6824	2302

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 61.25671

INPUT

Description:

Station Elevation Data num= 135

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev		
0	823.15	.57	823.16	.66	823.16	3.45	823.22	3.56	823.22

3.84	823.21	3.97	823.21	6.55	823.26	7.09	823.25	7.92	823.26
8.21	823.26	9.37	823.27	10.87	823.25	12.23	823.27	17.77	823.13
18.32	823.1	18.55	823.1	19.17	823.09	19.63	823.09	20.32	823.08
22.09	823.07	22.18	823.07	22.2	823.07	27.43	823.03	27.47	823.03
27.51	823.03	28	823	28.17	823	30.07	823	30.19	823
30.98	823	31.11	823	31.33	823	31.73	823	31.86	823
32.31	823	32.35	823	32.41	823	32.91	822.71	32.93	822.69
33.04	822.62	33.53	822	33.64	821.83	34.13	821	34.36	820.86
35.62	820	36.14	819.3	36.33	819	37.06	818.09	37.13	818
37.28	817.86	38.19	817	40.57	816.44	42.28	816	42.7	815.79
43.14	815.57	44.26	815	45	814.06	45.04	814	45.31	813.88
45.85	813.64	46.71	813.28	47.29	813	47.72	812.82	49.64	812
51.08	811.39	52.06	811	53.32	811	55.28	811	55.35	811.1
55.6	811.59	55.81	812	55.93	812.13	56.76	813	57.18	813.51
57.57	814	58.34	814.81	58.57	815	59.65	815.52	60.35	815.85
60.69	816	60.85	816.38	61.14	817	61.77	817.41	62.59	817.79
62.87	817.94	63.09	818	63.88	818.51	64.08	818.62	64.6	819
64.96	819.41	65.1	819.62	65.17	819.68	65.44	820	65.46	820
65.95	820.04	66.86	820.1	66.95	820.11	67.92	820.17	68.1	820.19
68.33	820.21	72.75	820.38	73.42	820.44	73.85	820.47	74.33	820.5
75.86	820.62	76.34	820.64	76.82	820.65	77.12	820.65	77.64	820.69
77.89	820.69	78.6	820.7	79.07	820.71	79.61	820.7	80.05	820.7
81.03	820.68	81.49	820.68	81.97	820.66	82.5	820.64	83.09	820.61
83.79	820.58	84.97	820.52	86.56	820.43	88.96	820.29	92.49	820.08
92.72	820.06	92.77	820.06	92.83	820.06	93.82	820	95.91	819.15
96.18	819	97.9	818.48	98.26	818.34	98.33	818.31	98.49	818.26

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 32.91 .058 59.65 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 32.91 59.65 23.72 12.96 9.56 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 48.29413

INPUT

Description:
 Station Elevation Data num= 133
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 817.79 .32 817.78 .89 817.77 1.12 817.76 1.31 817.74
 1.72 817.71 2.28 817.68 2.55 817.65 3.62 817.59 4.34 817.5
 4.9 817.42 5.81 817.27 6.38 817.22 7.42 817 10.39 817
 11.55 817 11.95 817 12.86 817 15.66 817.6 15.95 817.6
 16.25 817.61 16.38 817.61 16.49 817.59 17.02 817.67 17.33 817.63
 17.59 817.66 17.73 817.68 17.78 817.68 18.15 817.72 18.22 817.71
 18.31 817.71 18.68 817.73 18.89 817.74 19.83 817.65 20.48 817.66
 20.89 817.66 25.43 817.46 25.82 817.46 26.82 817.45 28.63 817.42
 29.29 817.42 31.27 817.38 32.2 817.33 38.14 817.05 38.86 817
 39.92 816.15 40.05 816 41.57 815.09 41.72 815 41.78 814.91
 42.48 814 42.49 813.95 42.83 813 43.45 812.61 44.21 812.13
 44.46 812 45.01 811.8 47.32 811 47.96 810.66 49.1 810
 51.31 810 52.16 810 52.57 810.46 53.05 811 54.13 811.55
 55.12 811.97 55.15 811.99 55.19 812 56.2 812.27 56.57 812.35
 57.26 812.51 57.96 812.66 60.25 813 61.1 813.17 61.21 813.21
 61.38 813.27 62.39 813.61 63.01 813.78 63.15 813.82 63.56 814

64.16	814.47	64.85	815	65.43	815.23	65.75	815.34	66.62	815.68
66.82	815.73	67.12	815.85	67.51	816	68.16	816.12	68.88	816.24
69.44	816.31	70.31	816.43	70.76	816.47	71.16	816.5	71.61	816.52
73.74	816.96	73.84	816.96	73.94	817	75.12	817.84	75.24	817.93
75.42	818	76.6	818.48	76.96	818.57	77.46	818.63	78.09	818.82
78.73	818.83	79.32	818.79	79.43	818.81	79.98	818.75	80.27	818.77
80.36	818.76	80.59	818.76	81.09	818.7	81.35	818.68	81.68	818.65
82.14	818.6	83.61	818.39	86.23	818	86.24	818	86.25	818
89.87	817.7	91.08	817.59	93.97	817	94.26	816.87	94.39	816.82
94.75	816.68	95.26	816.47	96.5	816	97.44	815.56	98.72	815
99.24	814.73	99.42	814.61	99.61	814.49				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 32.2 .058 61.38 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 32.2 61.38 19.38 15.29 8.32 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 33.00703

INPUT

Description:

Station Elevation Data		num= 123									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	815.53	.74	815.54	7.22	815.38	9.05	815.29	11.35	815.32		
11.45	815.31	13.54	815.11	13.63	815.11	14.77	815	16.52	814.82		
17.56	814.73	18.52	814.66	19.26	814.63	20.78	814.58	21.5	814.56		
21.77	814.55	22.11	814.54	22.33	814.53	22.63	814.53	23.09	814.51		
23.2	814.51	24.47	814.48	25.85	814.43	26.16	814.42	27.51	814.39		
27.89	814.39	29.83	814.34	34.1	814.36	34.43	814.37	36.96	814.15		
37.78	814.08	38.2	814	39.13	813.56	40.37	813	40.6	812.37		
40.72	812	42.86	811.2	43.41	811	43.8	810.45	44.12	810		
47.63	809.14	47.93	809.07	48.18	809	51.98	808.01	52.03	808		
52.05	808	52.09	808	52.82	808	53.77	808	54.82	808		
55.47	808.1	55.89	808.16	58.77	808.62	59.92	808.76	60.05	808.78		
60.22	808.8	60.41	808.82	60.56	808.83	62.37	809	64.04	809.33		
64.31	809.41	64.35	809.42	66.33	810	66.62	810.08	66.87	810.15		
68.75	810.68	69.86	811	69.93	811.03	69.98	811.06	70.2	811.16		
71.14	811.59	71.74	811.89	71.95	812	72.18	812.41	72.44	813		
72.52	813.02	73.61	813.23	74.09	813.3	74.6	813.38	75.05	813.42		
75.77	813.52	76.38	813.56	76.46	813.56	77.24	813.68	77.96	813.64		
79.22	813.85	79.38	813.86	80.36	814	82	814.46	82.29	814.52		
82.45	814.56	83.46	814.76	83.88	814.84	85.12	815	85.37	815.02		
85.42	815.04	86.14	815.05	86.85	815.05	86.88	815.06	87.24	815		
87.58	814.96	88.75	814.76	89.14	814.72	89.63	814.59	89.97	814.53		
90.31	814.41	91.52	814.03	91.55	814.02	91.6	814	92.27	813.75		
93.05	813.38	93.55	813.14	93.84	813	94.84	812.77	95.68	812.54		
96.51	812.34	96.89	812.25	97.62	812	97.92	811.84	98.05	811.86		
98.11	811.9	99.04	812	100.91	812						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 36.96 .058 64.31 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 36.96 64.31 14.36 13.89 6.66 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 19.11380

INPUT

Description:

Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	814.61	.39	814.61	1.27	814.61	3.88	814	5.56	814
12.89	813.66	13.17	813.65	17.56	813.58	19.24	813.5	19.53	813.49
20.33	813.46	22.17	813.42	24.09	813.33	24.26	813.32	24.62	813.31
24.94	813.3	25.01	813.3	26.26	813.24	26.9	813.22	27.16	813.22
27.85	813.18	28.47	813.16	29.59	813.16	30.14	813.14	31.68	813.09
32.5	813	32.58	813	32.76	813	33.72	813	33.74	813
33.82	813	34.05	813	34.12	813	34.41	812.94	34.67	812.87
35.39	812.65	35.51	812.55	36.17	812	36.45	811.9	38.51	811.17
38.62	811.13	38.86	811.05	39.06	811	43.06	810.06	43.3	810
44.46	809.31	45.02	809	45.24	808.92	47.04	808.3	47.9	808
50.6	807.26	52.42	807	55.7	806.12	56.19	806.03	56.45	806
57.05	805.83	57.68	805.74	57.9	805.67	58.01	805.67	58.48	805.65
58.5	805.65	58.76	805.61	59.19	805.63	59.56	805.64	62.34	805.9
62.49	805.91	62.66	805.93	63.95	806	64.03	806	64.36	806
64.37	806.01	66.22	806.07	67.77	806.15	68.33	806.23	70.4	806.52
71.01	806.61	71.71	806.72	72.57	806.87	73.29	807	73.34	807.01
73.96	807.16	74.81	807.36	76.05	807.68	77.27	808	78.34	808.53
78.81	808.68	78.84	808.69	79.03	808.78	79.7	809	81.71	809.5
82.58	809.8	82.76	809.85	83.18	810	84.45	810.28	84.71	810.31
85.44	810.42	86.16	810.48	86.64	810.54	87.07	810.56	87.72	810.62
88.02	810.62	88.26	810.61	88.98	810.62	89.54	810.58	89.89	810.55
90.56	810.49	90.99	810.44	91.38	810.4	91.89	810.33	93.58	810
93.95	809.85	94.01	809.84	95.63	809.9	95.75	810	98.24	810.85
98.52	811	98.75	811.3	99.26	812	99.65	812.54	99.89	812.87
99.99	813	100.69	813.87	100.79	814	100.99	814.19	101.84	815
102.49	815.67	102.7	815.87	102.84	816	103.32	816.22	103.85	816.42

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	36.45	.058	73.96	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 36.45 73.96 8.48 11.03 22.62 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 8.082387

INPUT

Description:

Station Elevation Data num= 139

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	814	.04	814	.28	814	.86	814	1.51	814
1.99	814	2.03	814	2.36	814	2.46	814	2.78	814

2.89	814	3.54	813.93	3.69	813.93	4.41	813.85	4.55	813.84
5.2	813.85	7.57	813.65	10.55	813.59	12.77	813.51	18.72	813.25
19.29	813.24	20.83	813.22	23.75	813.11	24.24	813.09	25.57	813.04
25.71	813.03	26.47	813	28.32	812.88	29.9	812.79	31.77	812.6
32.43	812.55	33.96	812.44	34.56	812.4	35.31	812.36	35.71	812.3
37.61	812	37.93	811.66	38.75	811	40.7	810.41	42.23	810
43.39	809.67	45.59	809	46.62	808.57	48.25	808	48.47	807.87
49.23	807.37	49.88	807	52.22	806.36	53.44	806	54.49	805.14
54.69	805	54.88	804.22	54.94	804	55.01	803.94	56.1	803
56.17	802.92	57	802	57.3	801.78	58.23	801	59.89	800.01
59.91	800	59.93	799.98	60.04	799.83	60.68	799	60.72	799
61.51	798.76	61.7	798.73	62.21	798.72	62.83	798.76	63.03	798.78
64.93	798.99	64.94	798.99	64.96	798.99	65.04	799	67.77	799.28
68.25	799.34	69.17	799.46	70.69	799.66	71.2	799.73	72.38	799.89
72.54	799.92	73.21	800	73.73	800.31	74.71	801	75.02	801.03
75.71	801.12	76.27	801.15	77.17	801.24	78.42	801.41	79.12	801.44
79.61	801.5	80.78	801.63	82.06	801.85	82.51	801.91	82.93	802
84.09	802.61	84.46	802.81	84.8	803	86.45	803.76	86.86	804
88.17	804.96	88.21	805	89.12	805.73	89.46	806	89.87	806.23
90.74	806.79	91.06	807	93.05	807.51	94.44	807.77	94.79	807.85
94.94	807.88	95.65	808	95.85	808.35	96.44	809	97.29	809.56
98.06	810	98.84	810.27	100.91	811	101.03	811.07	102.41	812
102.61	812.08	103.1	812.24	104.43	812.69	105.38	813	106.41	813.63
107.21	814	107.4	814.03	107.43	814.03	108.57	814.19	108.84	814.23
110.13	814.4	112.36	814.78	113	814.87	113.61	815	114.56	815.66
115.53	815.99	115.54	815.99	115.56	816	116.98	816.55		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 35.71 .058 84.09 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 35.71 84.09 24.08 8.08 7.68 .1 .3

SUMMARY OF MANNING'S N VALUES

River:Nota

 * Reach * River Sta. * n1 * n2 * n3 *

 *Nota * 234.5633 * .035* .058* .035*
 *Nota * 220.8931 * .035* .058* .035*
 *Nota * 206.2115 * .035* .058* .035*
 *Nota * 195.5067 * .035* .058* .035*
 *Nota * 184.2587 * .035* .058* .035*
 *Nota * 174.2417 * .035* .058* .035*
 *Nota * 164.4459 * .035* .058* .035*
 *Nota * 154.6206 * .035* .058* .035*
 *Nota * 144.6175 * .035* .058* .035*
 *Nota * 135.4527 *Culvert * * *
 *Nota * 126.2879 * .035* .058* .035*
 *Nota * 107.4834 * .035* .058* .035*
 *Nota * 90.78275 * .035* .058* .035*
 *Nota * 75.41282 * .035* .058* .035*
 *Nota * 61.25671 * .035* .058* .035*
 *Nota * 48.29413 * .035* .058* .035*
 *Nota * 33.00703 * .035* .058* .035*
 *Nota * 19.11380 * .035* .058* .035*
 *Nota * 8.082387 * .035* .058* .035*

SUMMARY OF REACH LENGTHS

River: Nota

* Reach	* River Sta.	* Left	* Channel	* Right
*Nota	* 234.5633	* 12.36*	13.67*	12.35*
*Nota	* 220.8931	* 12.93*	14.68*	14.9*
*Nota	* 206.2115	* 13.16*	10.7*	8.53*
*Nota	* 195.5067	* 8.74*	11.25*	17.83*
*Nota	* 184.2587	* 12.93*	10.02*	8.57*
*Nota	* 174.2417	* 13.27*	9.8*	6.46*
*Nota	* 164.4459	* 8.49*	9.82*	6.36*
*Nota	* 154.6206	* 7.87*	10*	14.7*
*Nota	* 144.6175	* 20.14*	18.33*	27.56*
*Nota	* 135.4527	*Culvert	*	*
*Nota	* 126.2879	* 7.8*	18.8*	15.03*
*Nota	* 107.4834	* 20.46*	16.7*	9.05*
*Nota	* 90.78275	* 24.78*	15.37*	4.84*
*Nota	* 75.41282	* 23.24*	14.16*	8.1*
*Nota	* 61.25671	* 23.72*	12.96*	9.56*
*Nota	* 48.29413	* 19.38*	15.29*	8.32*
*Nota	* 33.00703	* 14.36*	13.89*	6.66*
*Nota	* 19.11380	* 8.48*	11.03*	22.62*
*Nota	* 8.082387	* 24.08*	8.08*	7.68*

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: Nota

* Reach	* River Sta.	* Contr.	* Expan.
*Nota	* 234.5633*	.1*	.3*
*Nota	* 220.8931*	.1*	.3*
*Nota	* 206.2115*	.1*	.3*
*Nota	* 195.5067*	.1*	.3*
*Nota	* 184.2587*	.1*	.3*
*Nota	* 174.2417*	.1*	.3*
*Nota	* 164.4459*	.1*	.3*
*Nota	* 154.6206*	.1*	.3*
*Nota	* 144.6175*	.1*	.3*
*Nota	* 135.4527*Culvert	*	*
*Nota	* 126.2879*	.1*	.3*
*Nota	* 107.4834*	.1*	.3*
*Nota	* 90.78275*	.1*	.3*
*Nota	* 75.41282*	.1*	.3*
*Nota	* 61.25671*	.1*	.3*
*Nota	* 48.29413*	.1*	.3*
*Nota	* 33.00703*	.1*	.3*
*Nota	* 19.11380*	.1*	.3*
*Nota	* 8.082387*	.1*	.3*

Profile Output Table - Standard Table 1

* Reach	* River Sta	* Profile	* Q Total (m3/s)	* Min Ch El (m)	* W.S. Elev (m)	* Crit W.S. (m)	* E.G. Elev (m)	* E.G. Slope (m/m)	* Vel Chnl (m/s)	* Flow Area (m2)	* Top Width (m)	* Froude #	* Chl
* Nota	* 234.5633	* T500	* 13.24	* 851.25	* 852.18	* 852.18	* 852.50	* 0.041172	* 2.51	* 5.27	* 8.37	* 1.01	* 1.01
* Nota	* 234.5633	* T10	* 3.77	* 851.25	* 851.75	* 851.75	* 851.92	* 0.049907	* 1.82	* 2.07	* 6.23	* 1.01	* 1.01
* Nota	* 220.8931	* T500	* 13.24	* 844.00	* 844.44	* 845.23	* 850.27	* 1.679673	* 10.70	* 1.24	* 3.27	* 5.55	* 5.55
* Nota	* 220.8931	* T10	* 3.77	* 844.00	* 844.15	* 844.58	* 849.18	* 4.902699	* 9.94	* 0.38	* 2.70	* 8.46	* 8.46
* Nota	* 206.2115	* T500	* 13.24	* 839.77	* 840.66	* 841.09	* 842.06	* 0.216193	* 5.25	* 2.52	* 3.87	* 2.08	* 2.08
* Nota	* 206.2115	* T10	* 3.77	* 839.77	* 840.30	* 840.45	* 840.81	* 0.167728	* 3.17	* 1.19	* 3.50	* 1.74	* 1.74
* Nota	* 195.5067	* T500	* 13.24	* 837.00	* 838.07	* 838.53	* 839.60	* 0.242409	* 5.48	* 2.42	* 3.94	* 2.23	* 2.23
* Nota	* 195.5067	* T10	* 3.77	* 837.00	* 837.61	* 837.88	* 838.50	* 0.277151	* 4.18	* 0.90	* 2.50	* 2.22	* 2.22
* Nota	* 184.2587	* T500	* 13.24	* 834.00	* 834.84	* 835.32	* 836.57	* 0.297356	* 5.84	* 2.27	* 3.99	* 2.47	* 2.47
* Nota	* 184.2587	* T10	* 3.77	* 834.00	* 834.50	* 834.71	* 835.25	* 0.294571	* 3.84	* 0.98	* 3.54	* 2.33	* 2.33
* Nota	* 174.2417	* T500	* 13.24	* 832.00	* 832.84	* 833.24	* 834.11	* 0.184845	* 4.99	* 2.65	* 3.71	* 1.88	* 1.88
* Nota	* 174.2417	* T10	* 3.77	* 832.00	* 832.40	* 832.57	* 832.96	* 0.173904	* 3.32	* 1.14	* 3.12	* 1.76	* 1.76
* Nota	* 164.4459	* T500	* 13.24	* 831.13	* 832.86	* 832.86	* 833.42	* 0.059592	* 3.30	* 4.01	* 3.59	* 0.99	* 0.99
* Nota	* 164.4459	* T10	* 3.77	* 831.13	* 832.13	* 832.09	* 832.39	* 0.055011	* 2.27	* 1.66	* 2.77	* 0.93	* 0.93
* Nota	* 154.6206	* T500	* 13.24	* 830.20	* 831.95	* 832.15	* 832.64	* 0.106721	* 3.73	* 3.61	* 5.62	* 1.33	* 1.33
* Nota	* 154.6206	* T10	* 3.77	* 830.20	* 831.54	* 831.54	* 831.78	* 0.068279	* 2.16	* 1.75	* 3.62	* 0.99	* 0.99
* Nota	* 144.6175	* T500	* 13.24	* 828.45	* 830.35	* 829.33	* 830.36	* 0.000231	* 0.39	* 36.41	* 41.96	* 0.09	* 0.09
* Nota	* 144.6175	* T10	* 3.77	* 828.45	* 830.14	* 829.10	* 830.14	* 0.000046	* 0.16	* 27.44	* 40.85	* 0.04	* 0.04
* Nota	* 135.4527		* Culvert										
* Nota	* 126.2879	* T500	* 13.24	* 824.91	* 828.20	* 828.20	* 828.20	* 0.000016	* 0.13	* 78.31	* 34.81	* 0.02	* 0.02
* Nota	* 126.2879	* T10	* 3.77	* 824.91	* 826.59	* 826.59	* 827.39	* 0.028082	* 3.94	* 0.96	* 29.39	* 1.00	* 1.00
* Nota	* 107.4834	* T500	* 13.24	* 819.47	* 819.85	* 820.42	* 827.44	* 4.205957	* 12.21	* 1.08	* 5.29	* 8.61	* 8.61
* Nota	* 107.4834	* T10	* 3.77	* 819.47	* 819.68	* 820.02	* 825.07	* 6.639889	* 10.28	* 0.37	* 3.26	* 9.79	* 9.79
* Nota	* 90.78275	* T500	* 13.24	* 815.00	* 815.97	* 816.35	* 817.17	* 0.182665	* 4.84	* 2.74	* 4.66	* 2.02	* 2.02
* Nota	* 90.78275	* T10	* 3.77	* 815.00	* 815.57	* 815.74	* 816.11	* 0.148409	* 3.24	* 1.16	* 3.15	* 1.70	* 1.70
* Nota	* 75.41282	* T500	* 13.24	* 812.00	* 812.65	* 813.05	* 813.99	* 0.233641	* 5.12	* 2.59	* 4.87	* 2.24	* 2.24
* Nota	* 75.41282	* T10	* 3.77	* 812.00	* 812.30	* 812.50	* 812.99	* 0.290876	* 3.68	* 1.03	* 3.90	* 2.29	* 2.29
* Nota	* 61.25671	* T500	* 13.24	* 811.00	* 811.97	* 812.01	* 812.40	* 0.049586	* 2.92	* 4.54	* 6.09	* 1.08	* 1.08
* Nota	* 61.25671	* T10	* 3.77	* 811.00	* 811.48	* 811.48	* 811.68	* 0.050238	* 2.00	* 1.88	* 4.66	* 1.01	* 1.01
* Nota	* 48.29413	* T500	* 13.24	* 810.00	* 810.86	* 811.06	* 811.54	* 0.087401	* 3.65	* 3.62	* 5.35	* 1.42	* 1.42
* Nota	* 48.29413	* T10	* 3.77	* 810.00	* 810.40	* 810.50	* 810.75	* 0.105281	* 2.64	* 1.43	* 4.10	* 1.43	* 1.43
* Nota	* 33.00703	* T500	* 13.24	* 808.00	* 808.55	* 808.83	* 809.47	* 0.231979	* 4.24	* 3.12	* 8.45	* 2.23	* 2.23
* Nota	* 33.00703	* T10	* 3.77	* 808.00	* 808.31	* 808.43	* 808.69	* 0.178978	* 2.72	* 1.39	* 6.03	* 1.81	* 1.81
* Nota	* 19.11380	* T500	* 13.24	* 805.61	* 806.24	* 806.39	* 806.74	* 0.154294	* 3.15	* 4.20	* 13.12	* 1.78	* 1.78
* Nota	* 19.11380	* T10	* 3.77	* 805.61	* 806.00	* 806.10	* 806.29	* 0.163216	* 2.37	* 1.59	* 7.95	* 1.69	* 1.69
* Nota	* 8.082387	* T500	* 13.24	* 798.72	* 799.17	* 799.66	* 802.61	* 1.402679	* 8.22	* 1.61	* 6.16	* 5.13	* 5.13
* Nota	* 8.082387	* T10	* 3.77	* 798.72	* 798.96	* 799.25	* 801.55	* 2.363379	* 7.13	* 0.53	* 3.75	* 6.06	* 6.06

ERRORS WARNINGS AND NOTES

Errors Warnings and Notes for Plan : nota_a

River: Nota Reach: Nota RS: 220.8931 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 220.8931 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 206.2115 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 206.2115 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 195.5067 Profile: T500
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 195.5067 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 184.2587 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 184.2587 Profile: T10
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 174.2417 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 174.2417 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 164.4459 Profile: T500
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 164.4459 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 154.6206 Profile: T500
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 154.6206 Profile: T10
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 144.6175 Profile: T500
Warning: The cross section had to be extended vertically during the critical depth calculations.
Warning: The parabolic search method failed to converge on critical depth. The program will try the cross section slice/secant method to find critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.
River: Nota Reach: Nota RS: 144.6175 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.
River: Nota Reach: Nota RS: 135.4527 Profile: T500 Culv: Culvert #1
Note: Culvert critical depth exceeds the height of the culvert.
Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.
River: Nota Reach: Nota RS: 135.4527 Profile: T10 Culv: Culvert #1
Note: Culvert critical depth exceeds the height of the culvert.
Note: During the supercritical calculations a hydraulic jump occurred inside of the culvert.
Note: The culvert inlet is submerged and the culvert flows full over part or all of its length. Therefore, the culvert inlet equations are not valid and the supercritical result has been discarded. The outlet answer will be used.
River: Nota Reach: Nota RS: 126.2879 Profile: T500
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.
River: Nota Reach: Nota RS: 126.2879 Profile: T10
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated

water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Nota Reach: Nota RS: 107.4834 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Nota Reach: Nota RS: 107.4834 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Nota Reach: Nota RS: 90.78275 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 90.78275 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 75.41282 Profile: T500
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 75.41282 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 61.25671 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 61.25671 Profile: T10
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

River: Nota Reach: Nota RS: 48.29413 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 48.29413 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 33.00703 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 33.00703 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 19.11380 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

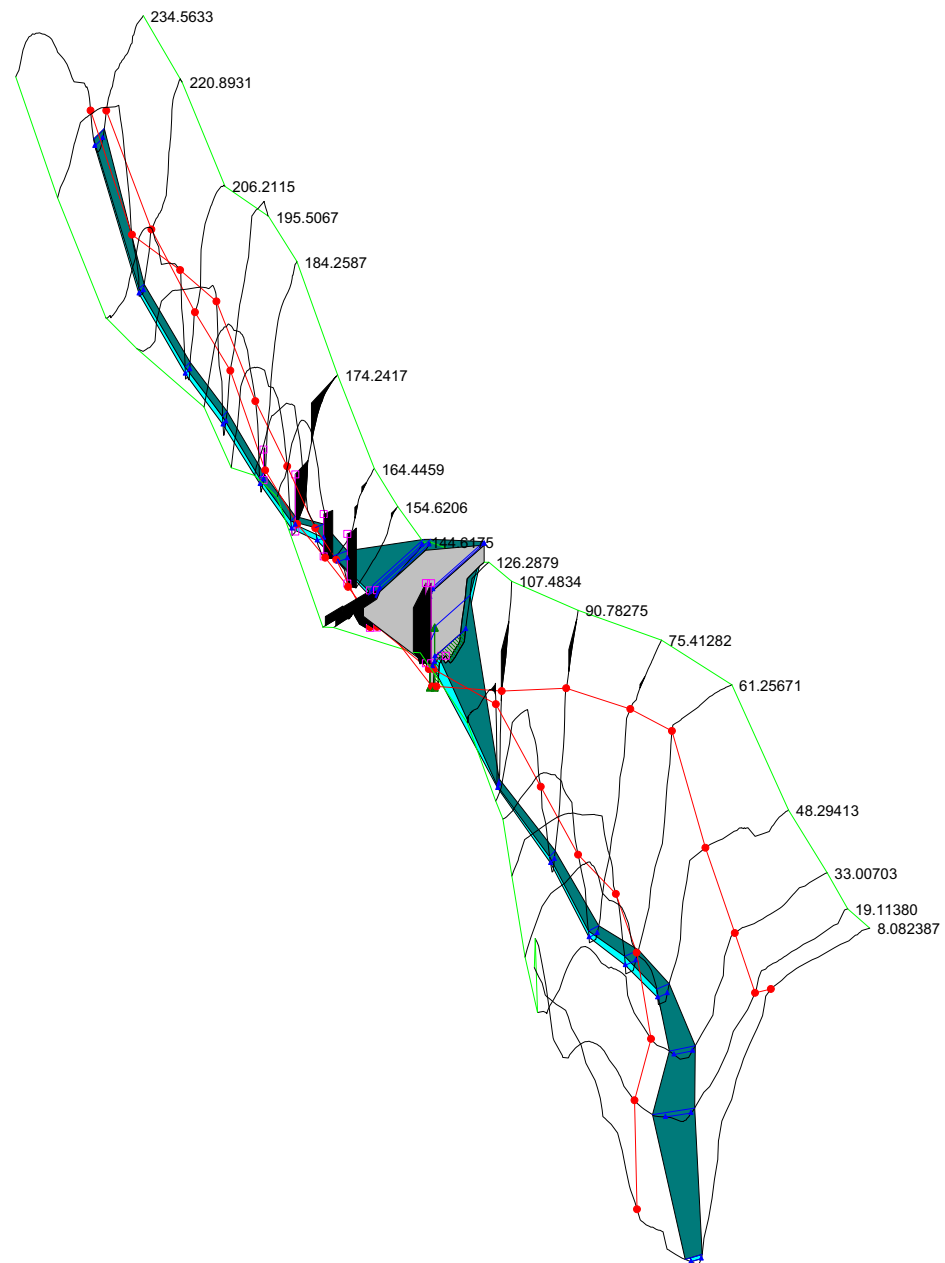
River: Nota Reach: Nota RS: 19.11380 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
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River: Nota Reach: Nota RS: 8.082387 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 8.082387 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.



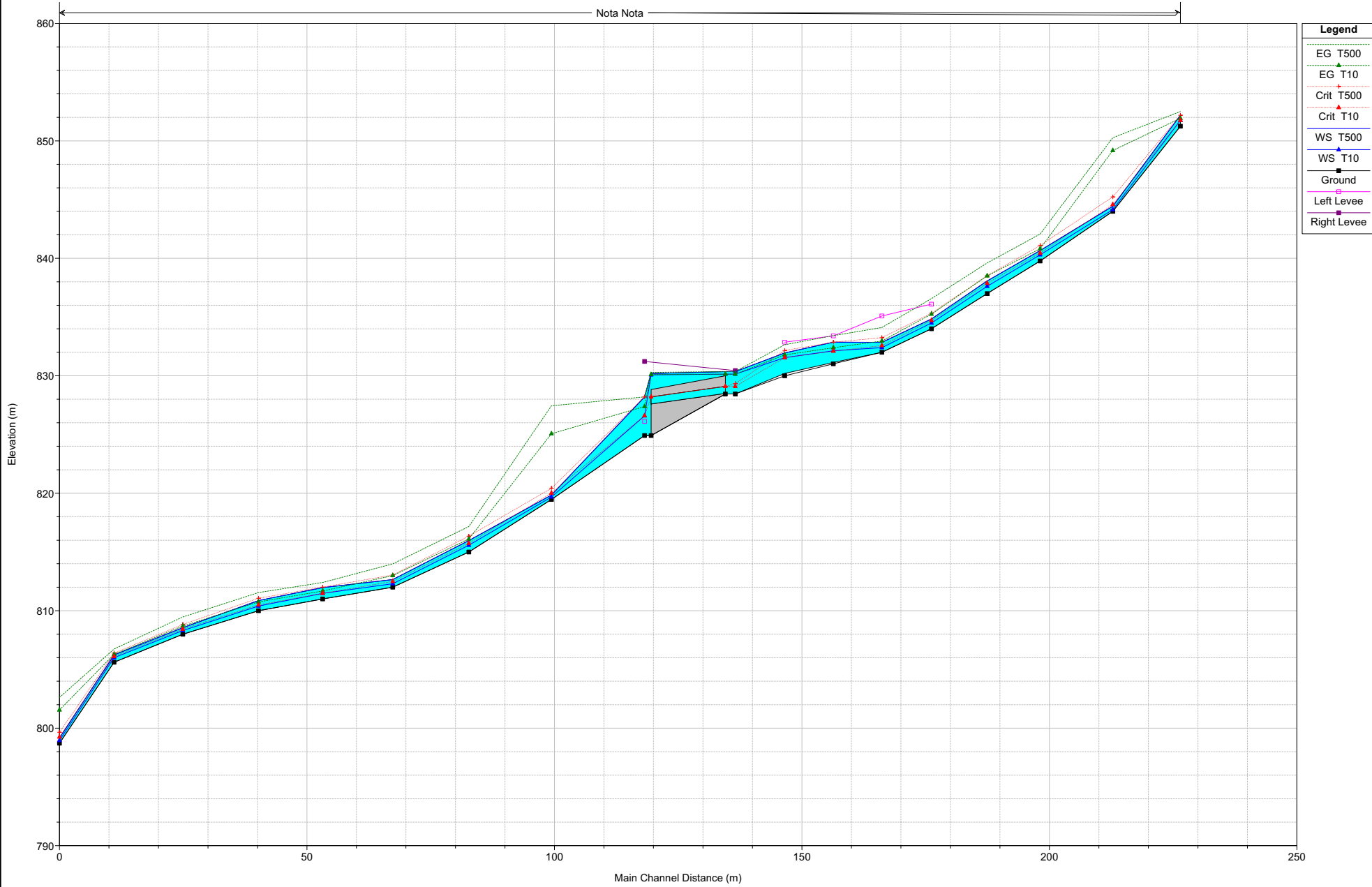
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Geom: nota_a Flow: nota_a



Legend	
	WS T500
	WS T10
	Ground
	Bank Sta
	Levee
	Ineff

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a

Nota Nota

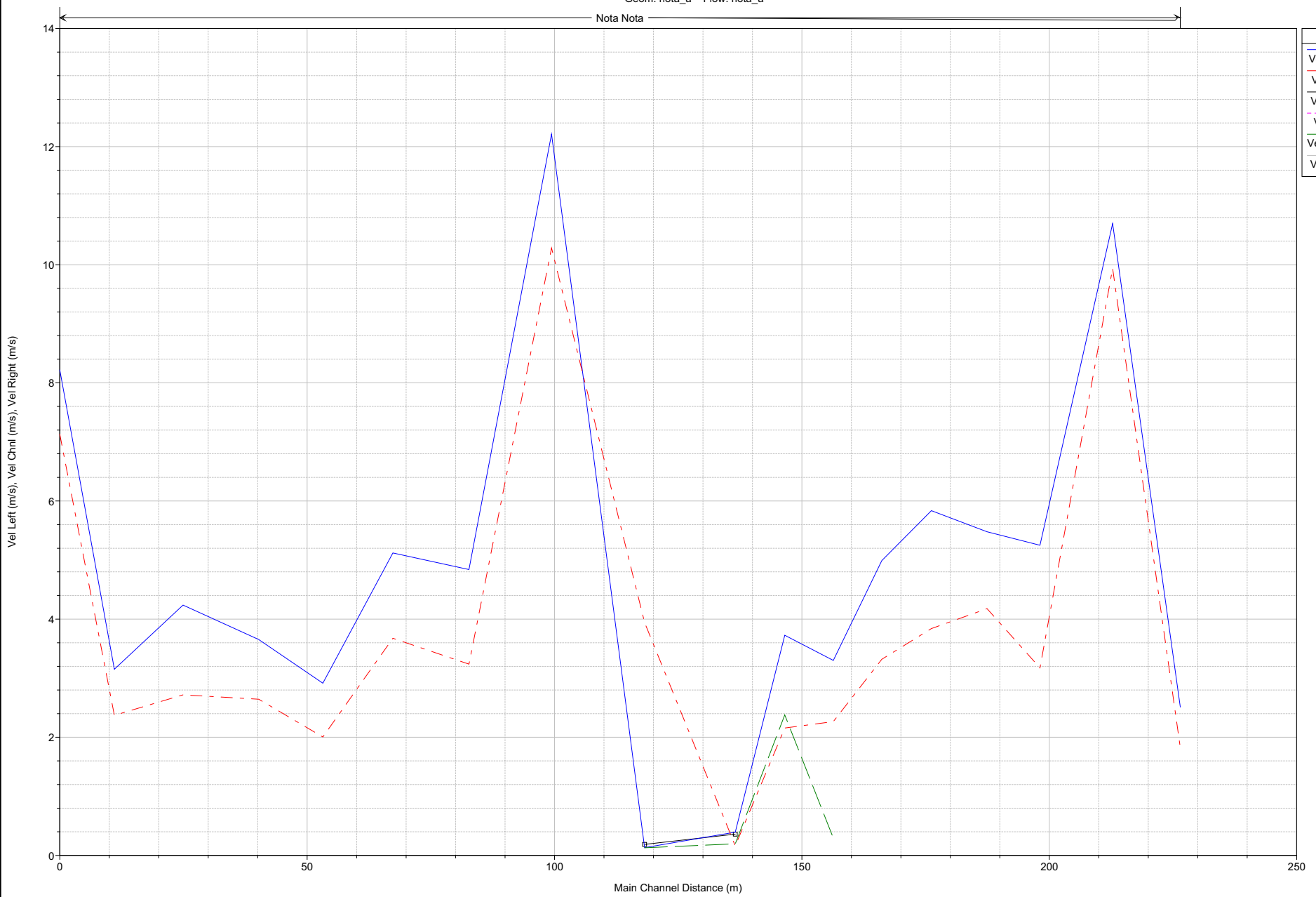


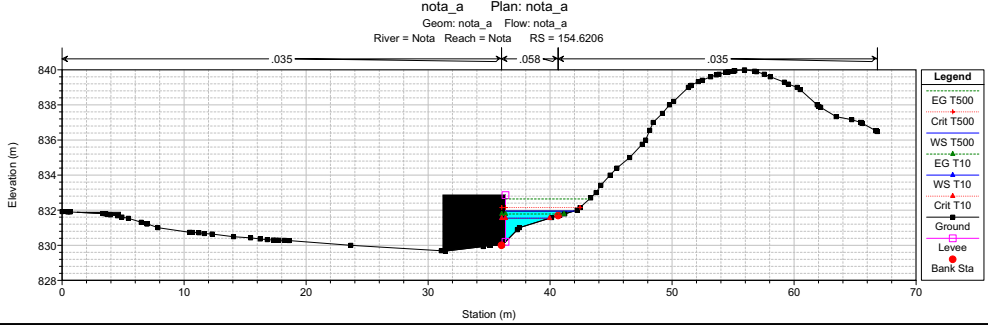
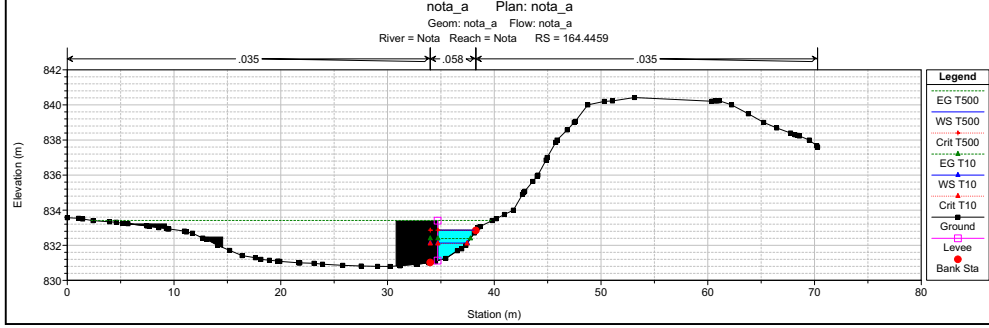
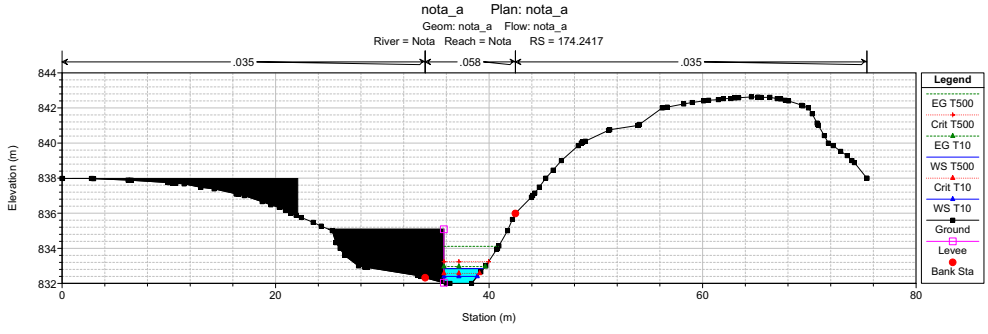
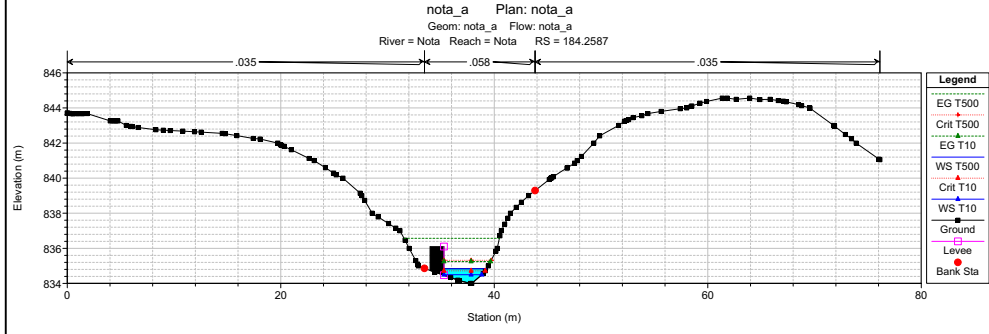
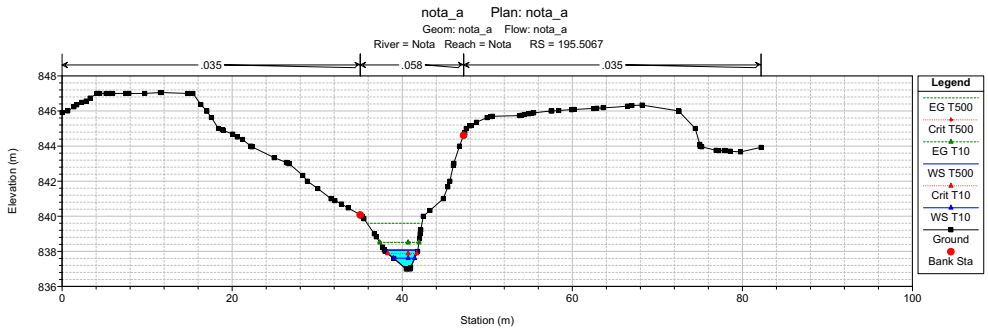
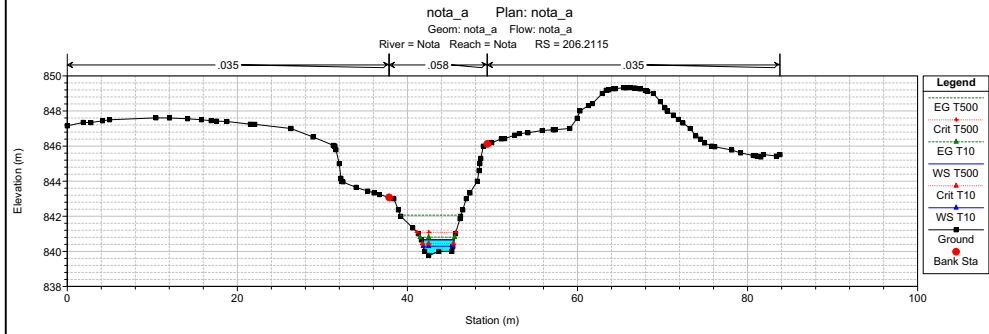
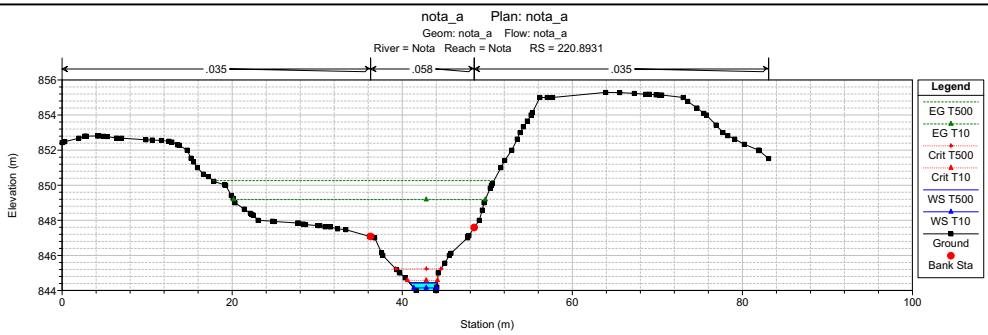
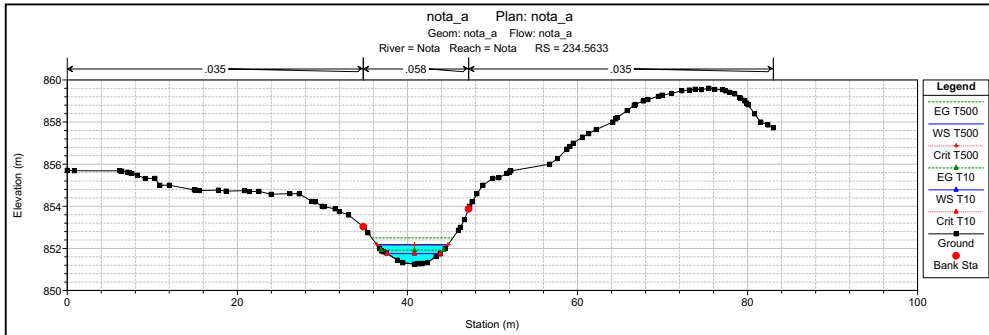
Legend	
EG T500	Green dashed line with triangle markers
EG T10	Red solid line with triangle markers
Crit T500	Blue solid line with triangle markers
Crit T10	Black solid line with square markers
WS T500	Cyan solid line with triangle markers
WS T10	Magenta solid line with square markers
Ground	Grey shaded area
Left Levee	Pink solid line with square markers
Right Levee	Purple solid line with square markers

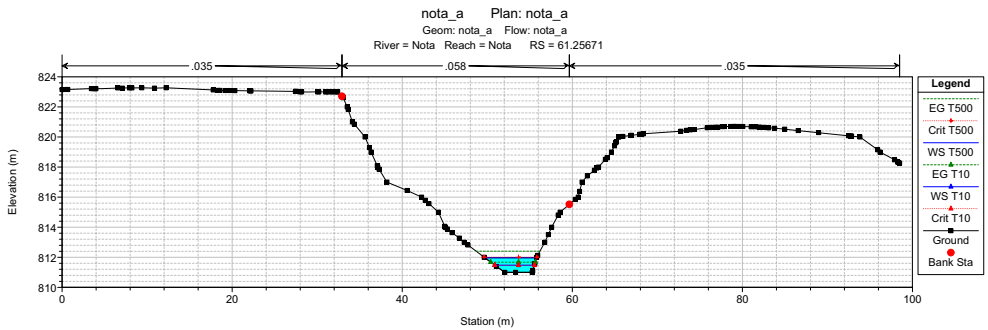
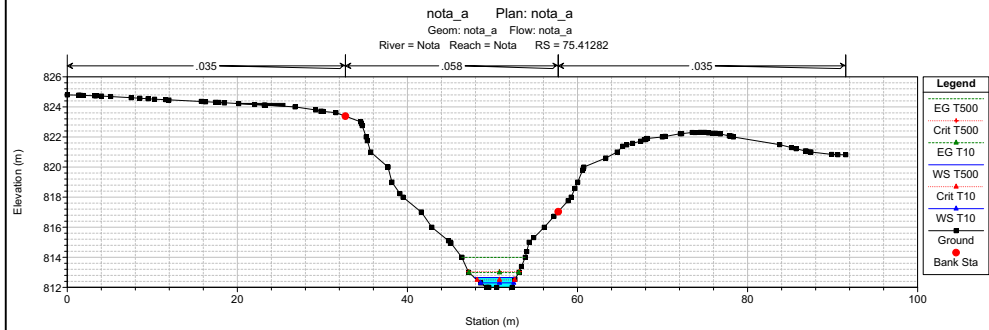
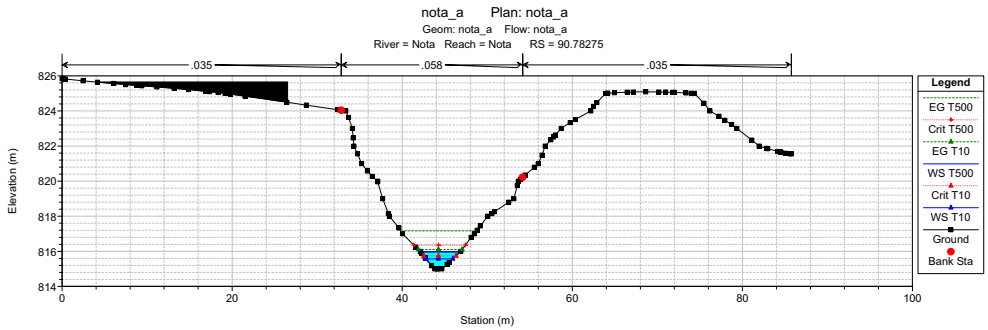
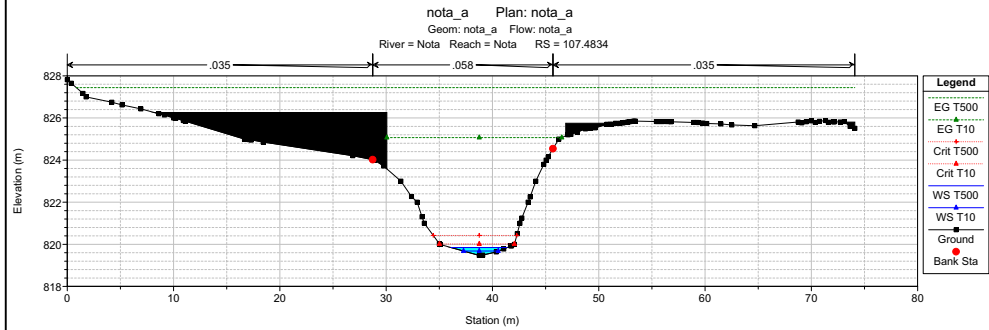
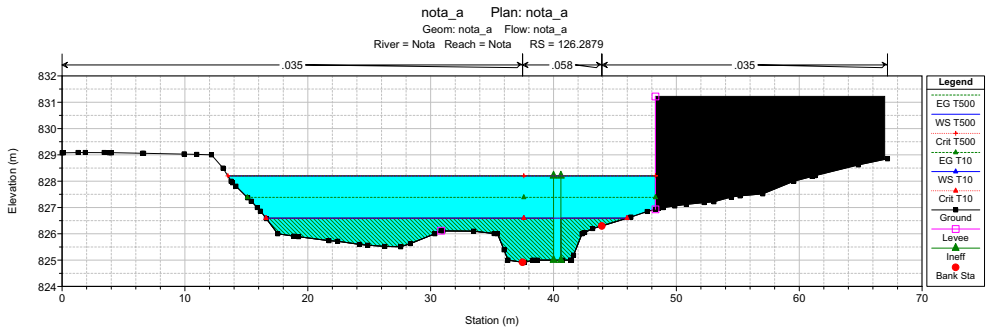
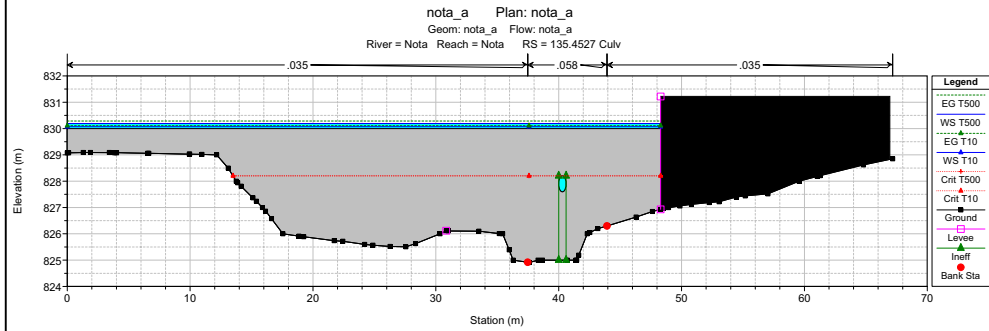
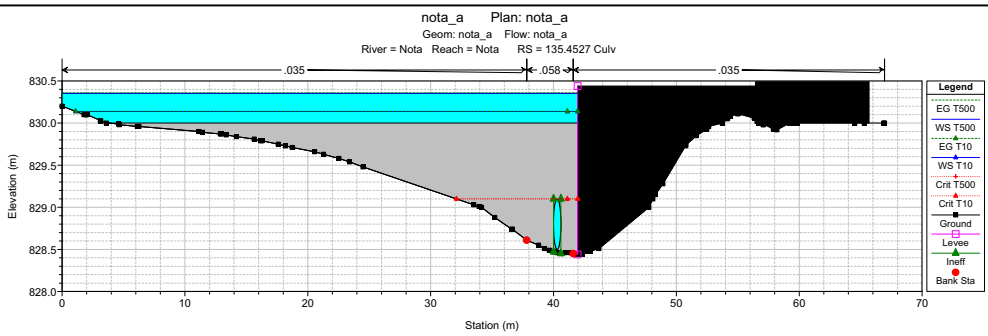
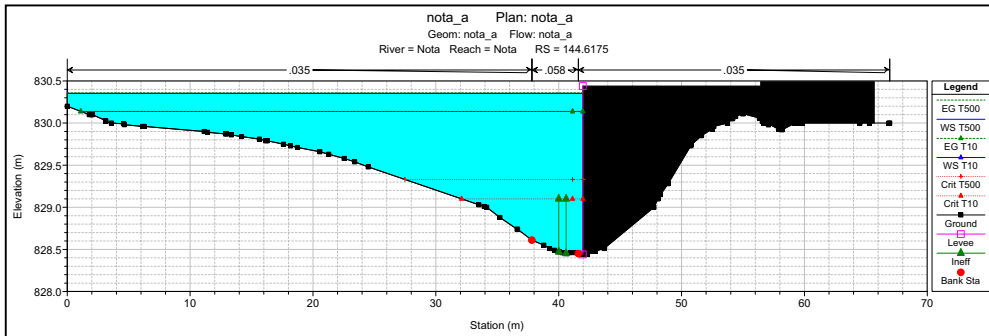
nota_a Plan: nota_a
Geom: nota_a Flow: nota_a

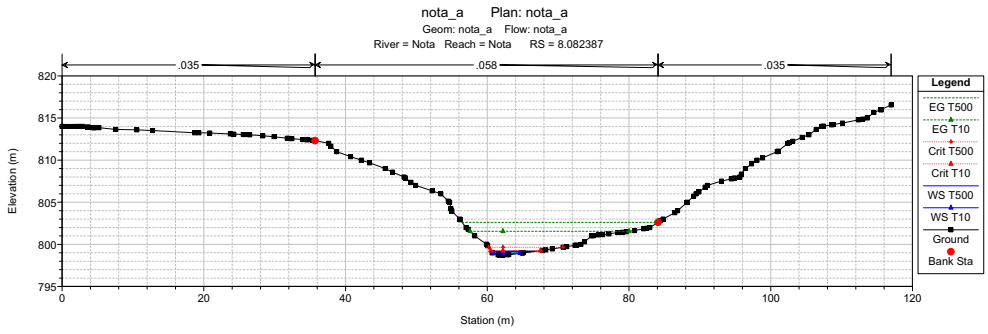
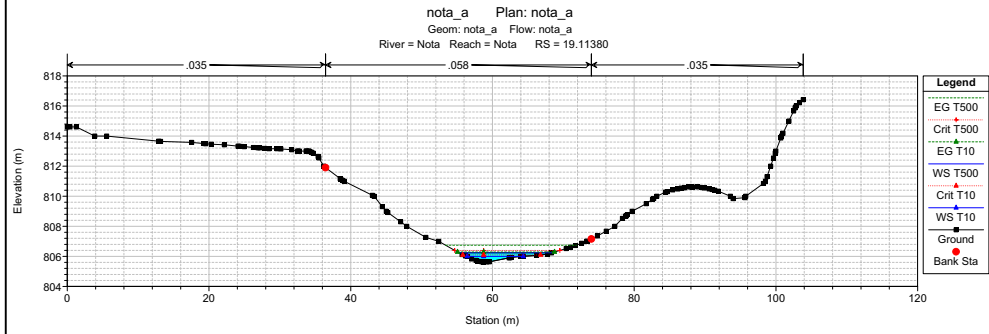
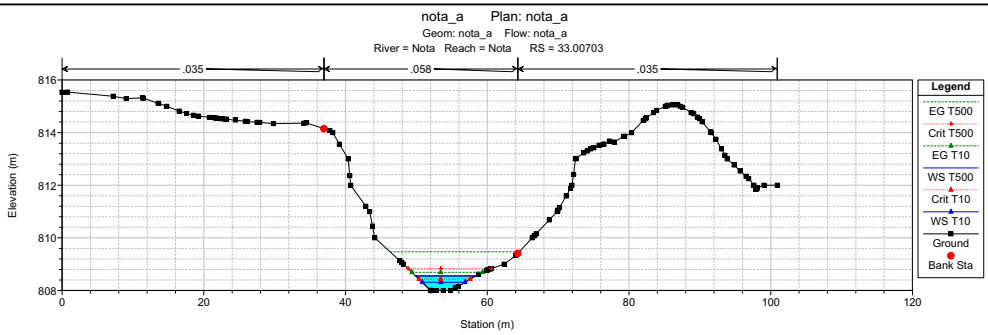
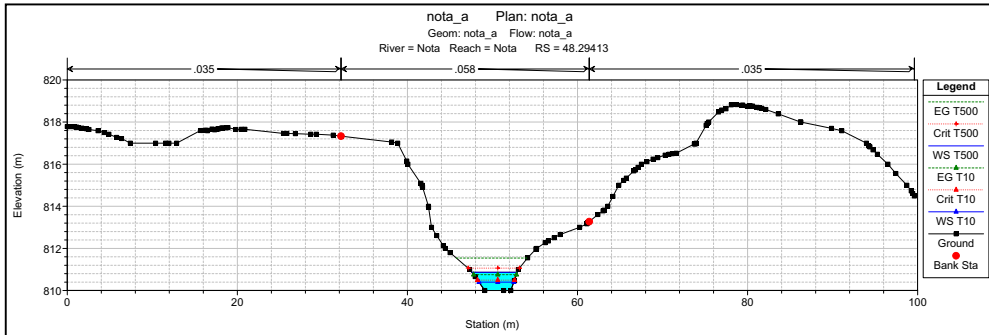
Nota Nota

Legend	
Vel Chnl T500	—
Vel Chnl T10	- - -
Vel Left T500	- - -
Vel Left T10	- - -
Vel Right T500	- - -
Vel Right T10	- - -

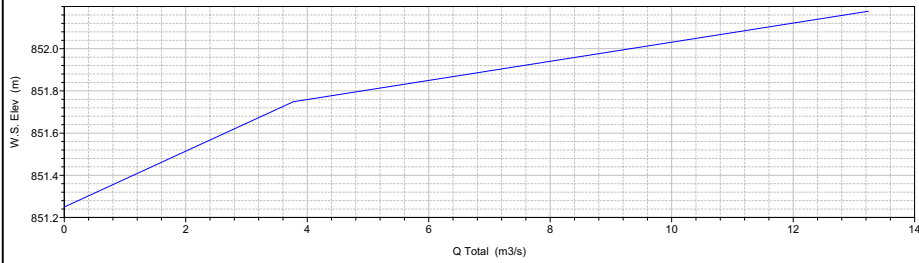






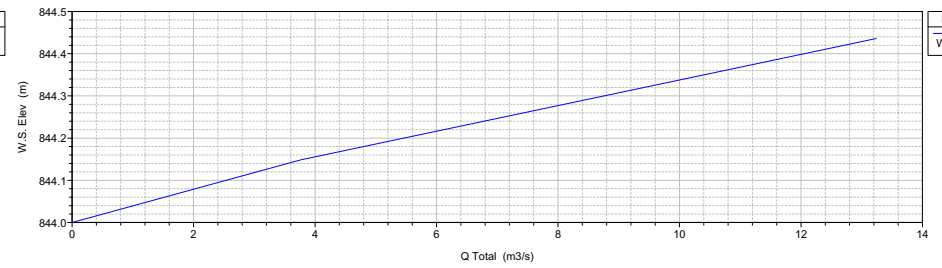


nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 234.5633



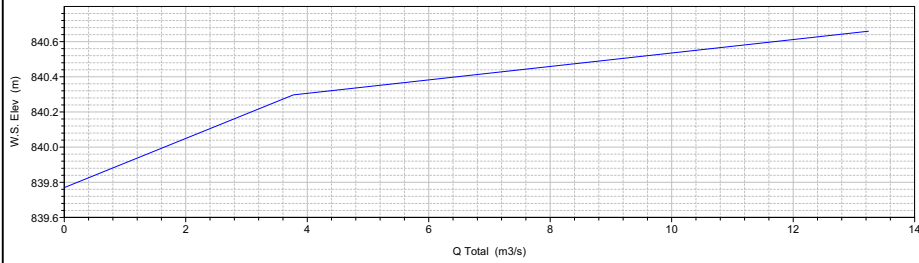
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 220.8931



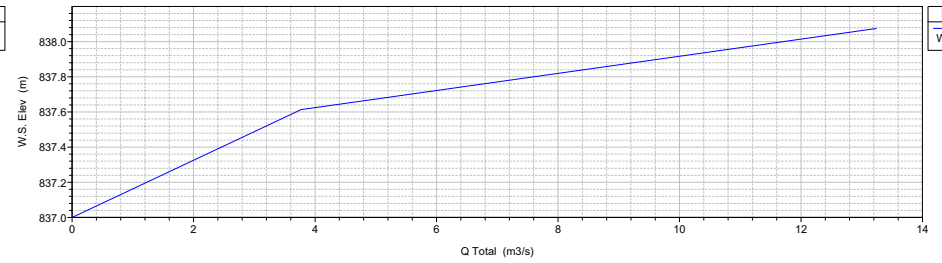
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 206.2115



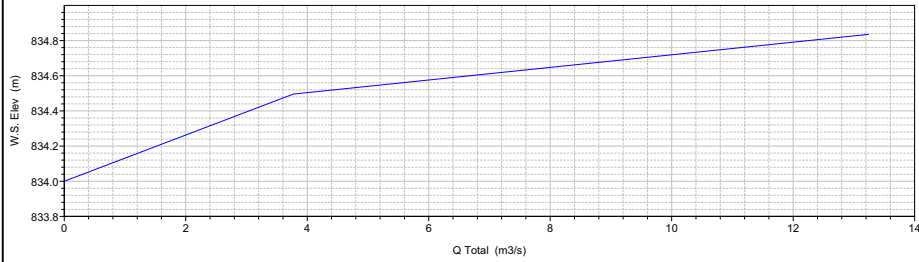
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 195.5067



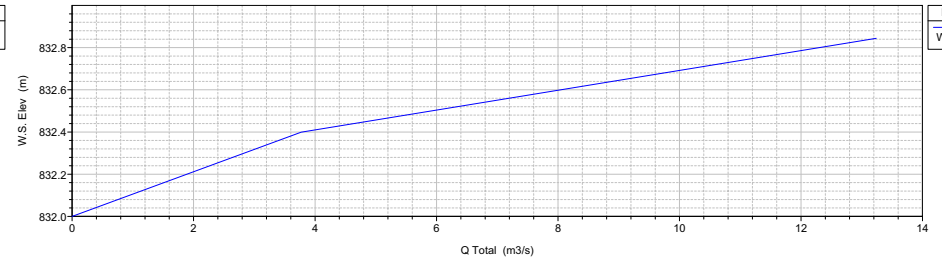
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 184.2587



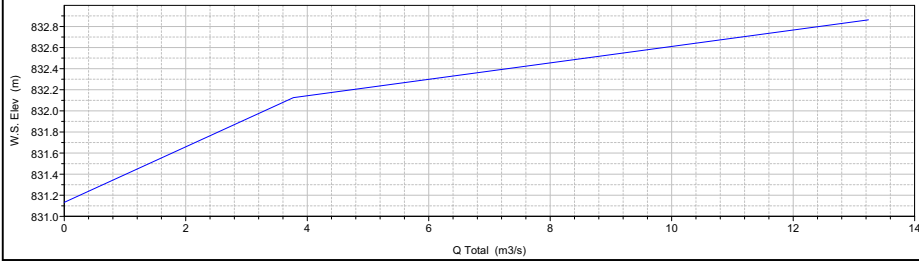
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 174.2417



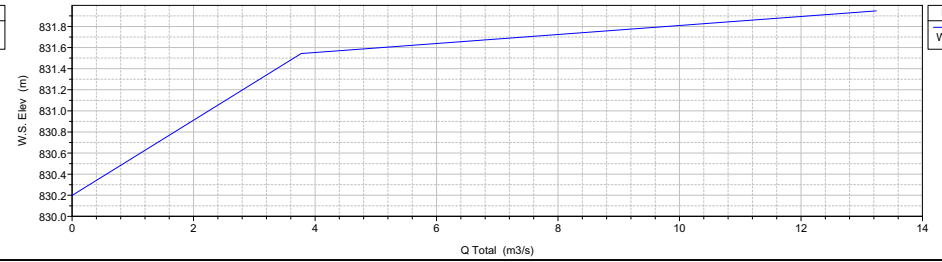
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 164.4459

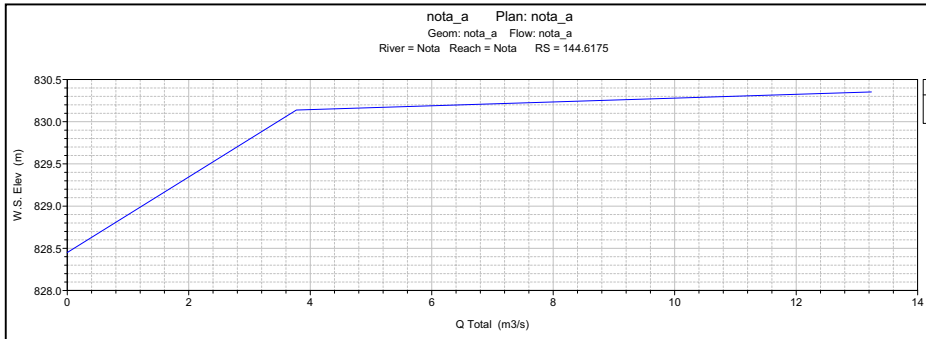


Legend
W.S. Elev

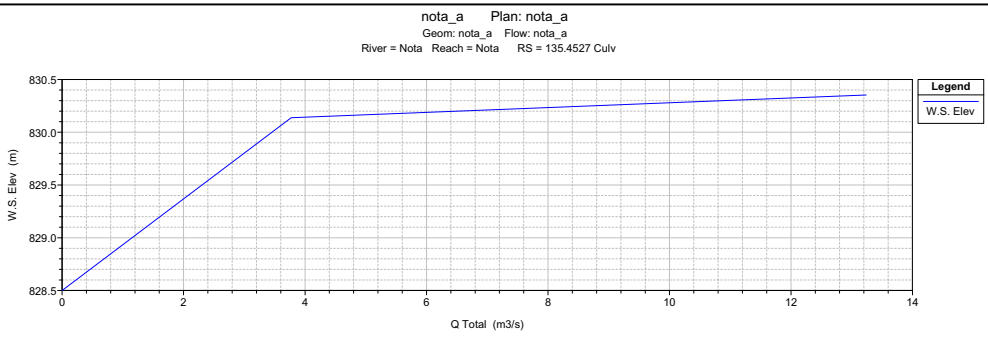
nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 154.6206



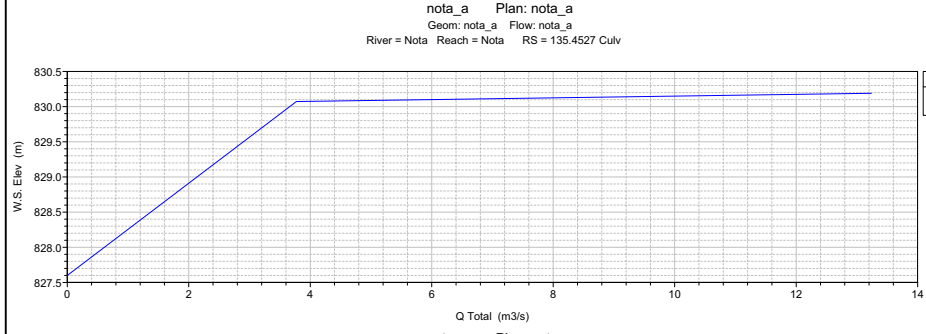
Legend
W.S. Elev



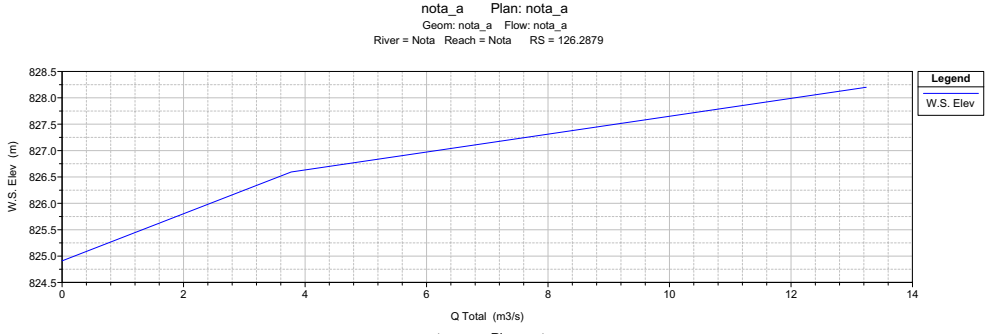
Legend
W.S. Elev



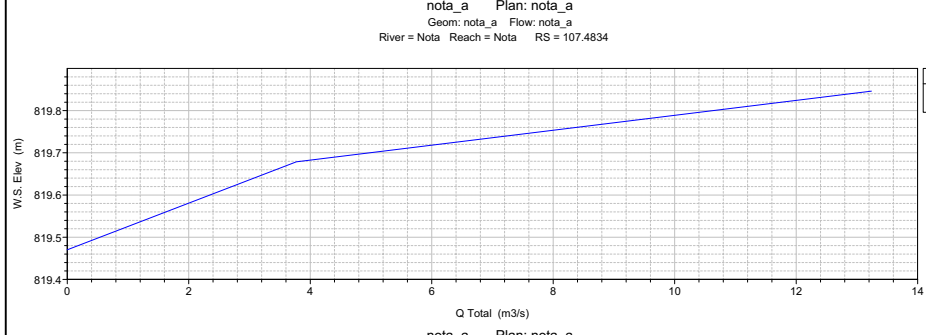
Legend
W.S. Elev



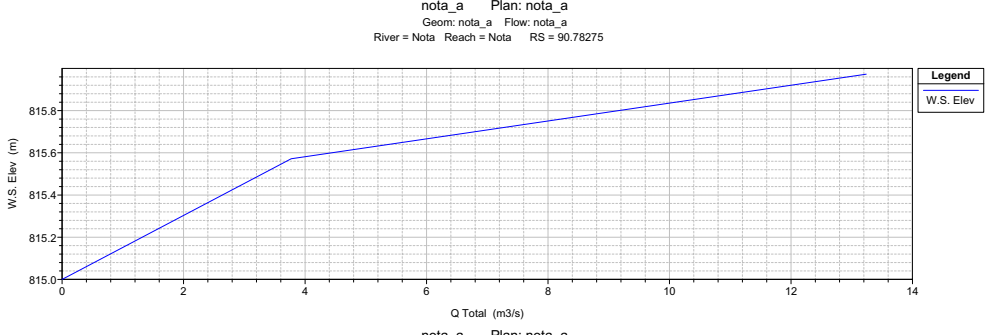
Legend
W.S. Elev



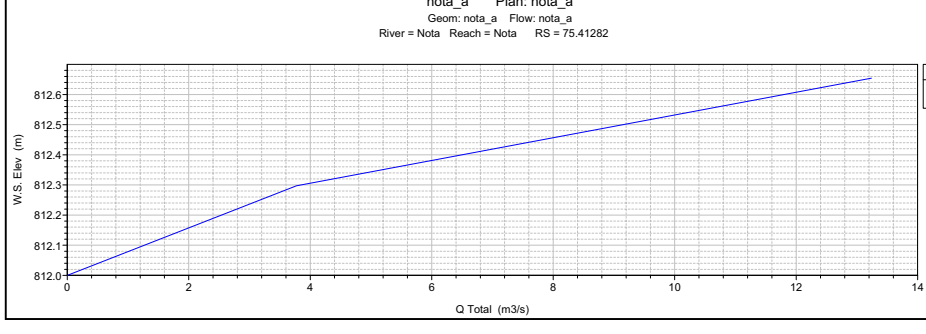
Legend
W.S. Elev



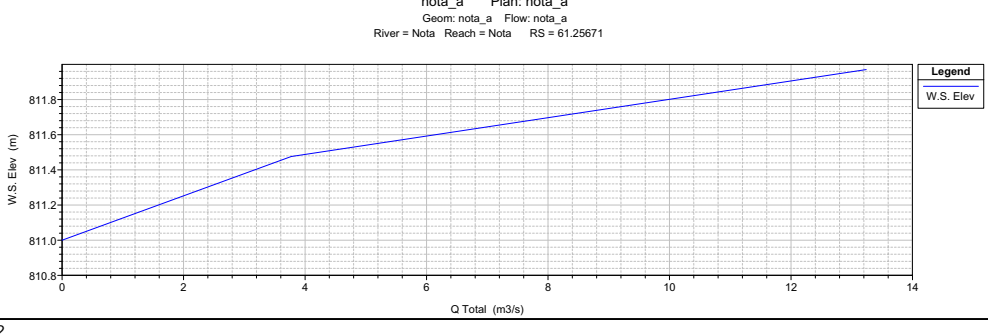
Legend
W.S. Elev



Legend
W.S. Elev

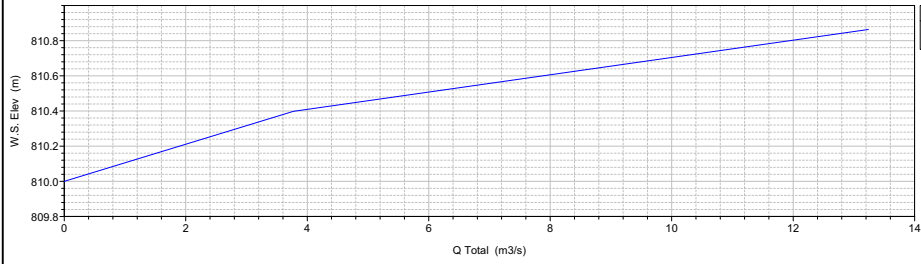


Legend
W.S. Elev



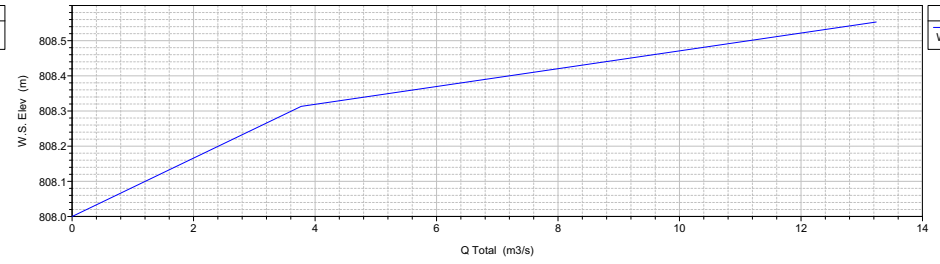
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 48.29413



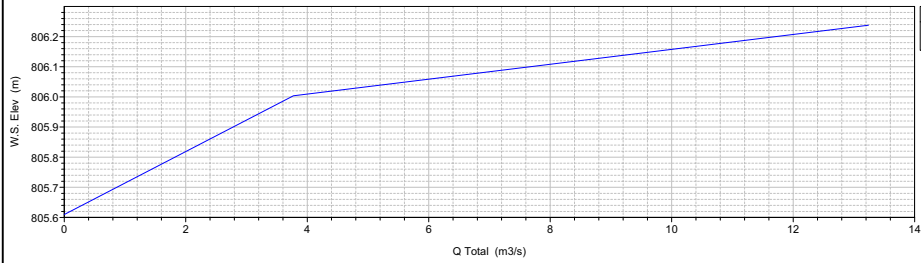
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 33.00703



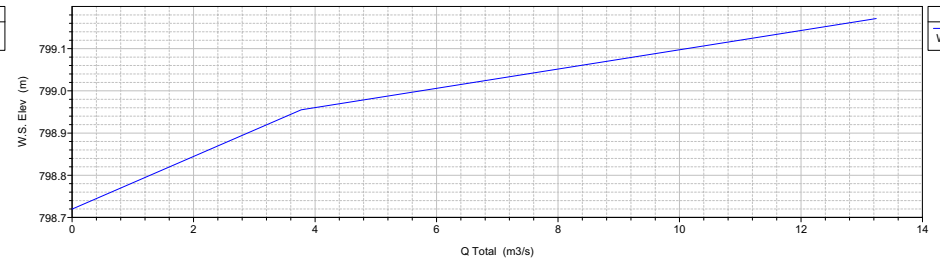
Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 19.11380



Legend
W.S. Elev

nota_a Plan: nota_a
Geom: nota_a Flow: nota_a
River = Nota Reach = Nota RS = 8.082387



Legend
W.S. Elev

SITUACIÓN PROPUESTA

ALMEGÍJAR

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X   X  XXXXXX   XXXX       XXXX       XX       XXXX
X   X  X        X   X      X   X      X  X      X
X   X  X        X         X   X      X   X      X
XXXXXXXX XXXX   X         XXX XXXX   XXXXXX   XXXX
X   X  X        X   X      X   X      X   X      X
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X   X  XXXXXX   XXXX       X   X      X   X      XXXXX
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PROJECT DATA

Project Title: alme
Project File : alme.prj
Run Date and Time: 3/22/2012 10:49:29 AM

Project in SI units

Project Description:
ALMEJÍGAR - SITUACIÓN PROPUESTA

PLAN DATA

Plan Title: Plan 02
Plan File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEJÍGAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\PROPUESTA\alme.p02

Geometry Title: alme
Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEJÍGAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\PROPUESTA\alme.g01

Flow Title : Flow 01
Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEJÍGAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\PROPUESTA\alme.f01

Plan Summary Information:

Number of: Cross Sections =	36	Multiple Openings =	0
Culverts =	2	Inline Structures =	0
Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.003
Critical depth calculation tolerance =	0.003
Maximum number of iterations =	20
Maximum difference tolerance =	0.1
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Mixed Flow

FLOW DATA

Flow Title: Flow 01

Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\PROPUESTA\alme.f01

Flow Data (m3/s)

```
*****
* River      Reach      RS      *      T500      T10 *
* Alme      Alme      346.0286*      10.35      3.442 *
*****
```

Boundary Conditions

```
*****
* River      Reach      Profile      *      Upstream      Downstream *
* Alme      Alme      T500      *      Critical      Normal S = 0.05 *
*****
```

GEOMETRY DATA

Geometry Title: alme

Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\ALME\PROPUESTA\alme.g01

CROSS SECTION

RIVER: Alme

REACH: Alme

RS: 346.0286

INPUT

Description:

Station Elevation Data		num= 85		Sta		Elev		Sta		Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	854	.745	853.152	.819	853	1.079	852.643	1.605	852		
2.18	851.498	2.51	851.221	2.719	851	2.895	850.769	3.697	850		
6.192	849.805	8.785	849.622	9.044	849.61	9.286	849.601	9.528	849.594		
9.905	849.588	10.413	849.584	10.593	849.584	10.746	849.587	10.888	849.592		
11.123	849.603	11.406	849.621	12.637	849.72	15.646	850	16.829	850.925		
17.096	851	17.283	851	18.004	851	18.053	850.972	18.724	850.506		
19.107	850	19.478	849.689	20.366	849	20.549	848.162	20.604	848		
20.796	847.89	20.874	847.852	21.035	847.775	21.764	847.414	22.85	847		
22.963	846.973	23.983	846.846	25.642	846.622	25.73	846.613	25.764	846.61		
25.817	846.606	25.829	846.606	25.902	846.614	26.314	846.716	27.419	847		
29.47	847.993	29.484	848	29.54	848.036	30.402	848.601	31.012	849		
31.239	849.255	31.912	850	32.498	850.342	33.906	851	36.673	851.993		
36.692	852	37.749	852.366	38.209	852.5	39.82	853	41.035	853.431		
41.722	853.649	42.303	853.855	42.931	854	42.973	854.007	44.36	854.177		
44.538	854.204	45.116	854.256	45.327	854.283	46.323	854.346	46.547	854.368		
46.994	854.384	47.271	854.399	48.034	854.4	48.792	854.402	50.28	854.316		
50.485	854.305	50.745	854.278	52.879	854.136	53.111	854.11	54.76	854		

Manning's n Values

Sta		n Val		num= 3		Sta		n Val	
Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val	Sta	n Val
0	.035	20.874	.04	30.402	.035				

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

20.874 30.402 5.933 5.167 5.71 .1 .3
 Left Levee Station= 17.7 Elevation= 850.99

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 340.8620

INPUT

Description:

Station Elevation Data num= 78

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	855	1.274	854	2.817	853.437	3.922	853	3.984	852.911
4.068	852.819	4.92	852.07	4.98	852.012	4.986	852.005	5.012	852
5.935	851.298	6.407	851.19	6.725	851	7.079	850.794	8.481	850
9.013	849.984	10.014	849.718	11.413	849.408	11.913	849.283	12.585	849
12.89	849	13.173	849	13.906	849	15.083	849	15.507	849.14
15.632	849.142	16.374	849.2	17.041	849.162	17.13	849.139	17.845	849
18.962	848.106	19.094	848	19.22	847.925	20.678	847	21.603	846.549
22.441	846.19	22.666	846.089	22.754	846.054	22.934	846	23.257	846
23.473	846	23.59	846	25.199	846.376	25.432	846.371	25.83	846.335
26.675	846.196	27.748	846	27.754	846.005	28.528	846.757	28.819	847
29.273	847.239	29.507	847.361	29.816	847.54	30.769	848	31.814	848.567
32.978	849	34.569	849.774	34.76	849.861	35.156	850	36.751	850.628
37.973	851	38.881	851.284	40.161	851.674	40.769	851.842	41.232	852
42.243	852.301	42.741	852.358	43.642	852.542	44.912	852.609	45.727	852.719
45.911	852.739	47.022	852.764	47.337	852.783	47.482	852.787	49.186	852.795
49.478	852.793	49.938	852.776	50.972	852.76				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.962	.04	29.273	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 18.962 29.273 5.349 3.671 3.923 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	24.5	849	F
25.5	50.972	849	F

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 337.1913

INPUT

Description:

Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	853.646	1.371	853.298	1.825	853.175	2.487	853	4.723	852.222
5.485	852	6.373	851.515	7.562	851	8.478	850.724	8.991	850.599
9.382	850.48	11.294	850	11.467	849.921	11.959	849.694	12.871	849.435
13.224	849.259	14.067	849	14.117	848.984	15.344	848.569	15.865	848.171
16.016	848.095	16.174	848	16.4	848	16.588	848	16.748	848
17.348	848	18.133	848	18.869	848	19.043	848	20.405	848
21.291	847.611	21.663	847.495	22.113	847.482	22.583	847.359	22.852	847.334
23.476	847.193	23.627	847.149	24.407	847.026	24.607	847	24.993	846.962

25.032	846.983	25.553	846.976	25.837	846.97	25.996	846.902	26.291	846.884
26.85	846.925	27.31	846.954	27.574	847	27.899	847.014	28.438	847.051
28.976	847.1	30.035	847.28	32.693	847.732	33.403	847.853	33.958	848
34.257	848.097	34.903	848.28	35.361	848.426	36.3	848.681	36.727	848.806
37.414	849	38.507	849.329	39.793	850	40.452	850.184	41.265	850.361
42.083	850.562	42.404	850.635	44.033	850.918	44.235	850.955	44.524	851
46.196	851.373	46.771	851.433	47.529	851.553	47.916	851.571	48.233	851.6
48.576	851.614	49.451	851.613	50.486	851.578	51.624	851.528		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 18.869 .04 30.035 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 18.869 30.035 14.586 10.243 14.287 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 24.5 849 F
 25.5 51.624 849 F

CULVERT

RIVER: Alme
 REACH: Alme RS: 332.0697

INPUT
 Description:
 Distance from Upstream XS = 2
 Deck/Roadway Width = 7
 Weir Coefficient = 1.4
 Upstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 10 849 846 40 849 846

Upstream Bridge Cross Section Data
 Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	853.646	1.371	853.298	1.825	853.175	2.487	853	4.723	852.222
5.485	852	6.373	851.515	7.562	851	8.478	850.724	8.991	850.599
9.382	850.48	11.294	850	11.467	849.921	11.959	849.694	12.871	849.435
13.224	849.259	14.067	849	14.117	848.984	15.344	848.569	15.865	848.171
16.016	848.095	16.174	848	16.4	848	16.588	848	16.748	848
17.348	848	18.133	848	18.869	848	19.043	848	20.405	848
21.291	847.611	21.663	847.495	22.113	847.482	22.583	847.359	22.852	847.334
23.476	847.193	23.627	847.149	24.407	847.026	24.607	847	24.993	846.962
25.032	846.983	25.553	846.976	25.837	846.97	25.996	846.902	26.291	846.884
26.85	846.925	27.31	846.954	27.574	847	27.899	847.014	28.438	847.051
28.976	847.1	30.035	847.28	32.693	847.732	33.403	847.853	33.958	848
34.257	848.097	34.903	848.28	35.361	848.426	36.3	848.681	36.727	848.806
37.414	849	38.507	849.329	39.793	850	40.452	850.184	41.265	850.361
42.083	850.562	42.404	850.635	44.033	850.918	44.235	850.955	44.524	851
46.196	851.373	46.771	851.433	47.529	851.553	47.916	851.571	48.233	851.6
48.576	851.614	49.451	851.613	50.486	851.578	51.624	851.528		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

0 .035 18.869 .04 30.035 .035

Bank Sta: Left Right Coeff Contr. Expan.
18.869 30.035 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 24.5 849 F
25.5 51.624 849 F

Downstream Deck/Roadway Coordinates
num= 2
Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

0 848.9 839 50 848.9 839

Downstream Bridge Cross Section Data
Station Elevation Data num= 113
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 849.144 3.222 849 3.495 848.929 3.682 848.877 4.379 848.795
4.865 848.702 5.336 848.555 5.687 848.43 6.858 848.075 6.925 848.045
6.95 848.029 7.125 848 7.595 847.59 8.353 847 8.489 846.904
8.668 846.758 9.166 846.427 9.342 846.254 9.498 846.223 9.663 846
9.95 845.722 10.338 845 10.657 844.886 10.745 844.858 11.541 844.888
11.624 844.865 12.233 845 12.743 845.196 12.83 845.196 13.231 845.328
13.492 845.385 13.876 845.503 14.191 845.567 14.598 845.65 14.851 845.719
15.81 845.903 15.911 845.929 15.943 845.937 16.317 846 16.828 845.731
16.956 845.673 17.129 845.587 17.36 845.47 17.533 845.382 17.791 845.255
18.231 845.039 18.263 845.027 18.31 845 18.596 844.666 18.781 844.492
18.956 844.302 19.302 844 19.325 843.986 19.332 843.981 19.717 843.741
19.85 843.21 20.201 842.705 20.72 840.783 20.829 840.499 20.872 840.455
20.966 840 21.547 839.945 22.089 839.912 22.837 839.91 23.199 839.935
23.754 839.972 23.838 840 25.1 840.49 25.974 840.879 25.984 840.842
26.624 840.876 26.98 840.92 27.383 841 27.843 842.333 28.033 842.274
28.732 841.844 28.845 841.926 29.492 841.958 29.536 841.981 29.738 842
30.038 842.308 30.057 842.328 30.281 842.433 30.382 842.48 30.615 842.795
31.01 843 31.201 843.127 31.262 843.15 31.402 843.236 31.767 843.526
32.149 843.902 32.193 843.964 32.225 844 32.821 844.472 33.687 845
33.856 845.082 34.037 845.084 36.005 845.606 37.503 845.685 38.183 845.809
40.422 845.85 40.766 845.891 42.904 845.889 43.064 845.902 43.124 845.904
43.264 845.905 44.735 845.874 45.414 845.848 45.879 845.85 46.577 845.818
47.29 845.745 48.064 845.748 48.315 845.726

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0 .035 17.36 .04 30.038 .035

Bank Sta: Left Right Coeff Contr. Expan.
17.36 30.038 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 23 848.9 F
24 48.315 848.9 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
Downstream Embankment side slope = 0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .98
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span
Culvert #1 Box 1.8 1
FHWA Chart # 8 - flared wingwalls
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef
 2 7 .015 .015 0 1 1
Upstream Elevation = 847
 Centerline Station = 25
Downstream Elevation = 846.6
 Centerline Station = 23.5

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 326.9481

INPUT

Description:

Station Elevation Data num= 113

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	849.144	3.222	849	3.495	848.929	3.682	848.877	4.379	848.795
4.865	848.702	5.336	848.555	5.687	848.43	6.858	848.075	6.925	848.045
6.95	848.029	7.125	848	7.595	847.59	8.353	847	8.489	846.904
8.668	846.758	9.166	846.427	9.342	846.254	9.498	846.223	9.663	846
9.95	845.722	10.338	845	10.657	844.886	10.745	844.858	11.541	844.888
11.624	844.865	12.233	845	12.743	845.196	12.83	845.196	13.231	845.328
13.492	845.385	13.876	845.503	14.191	845.567	14.598	845.65	14.851	845.719
15.81	845.903	15.911	845.929	15.943	845.937	16.317	846	16.828	845.731
16.956	845.673	17.129	845.587	17.36	845.47	17.533	845.382	17.791	845.255
18.231	845.039	18.263	845.027	18.31	845	18.596	844.666	18.781	844.492
18.956	844.302	19.302	844	19.325	843.986	19.332	843.981	19.717	843.741
19.85	843.21	20.201	842.705	20.72	840.783	20.829	840.499	20.872	840.455
20.966	840	21.547	839.945	22.089	839.912	22.837	839.91	23.199	839.935
23.754	839.972	23.838	840	25.1	840.49	25.974	840.879	25.984	840.842
26.624	840.876	26.98	840.92	27.383	841	27.843	842.333	28.033	842.274
28.732	841.844	28.845	841.926	29.492	841.958	29.536	841.981	29.738	842
30.038	842.308	30.057	842.328	30.281	842.433	30.382	842.48	30.615	842.795
31.01	843	31.201	843.127	31.262	843.15	31.402	843.236	31.767	843.526
32.149	843.902	32.193	843.964	32.225	844	32.821	844.472	33.687	845
33.856	845.082	34.037	845.084	36.005	845.606	37.503	845.685	38.183	845.809
40.422	845.85	40.766	845.891	42.904	845.889	43.064	845.902	43.124	845.904
43.264	845.905	44.735	845.874	45.414	845.848	45.879	845.85	46.577	845.818
47.29	845.745	48.064	845.748	48.315	845.726				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.36	.04	30.038	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

17.36	30.038	4.965	8.659	7.587	.1	.3
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Ineffective Flow num= 2

Sta L	Sta R	Elev	Permanent
0	23	848.9	F
24	48.315	848.9	F

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 318.2890

INPUT

Description:

Station Elevation Data		num= 64		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	848	1.228	847.422	2.116	847	3.099	846.591	4.719	846
4.824	845.96	4.969	845.906	5.806	845.593	6.438	845.344	7.401	845
8.041	844.706	8.944	844	9.363	843.798	9.553	843.652	10.092	843.31
10.36	843	11.316	842.435	12.105	842	13.155	841.328	13.619	841
15.621	840.003	15.628	840	16.526	839.547	17.056	839.261	17.133	839.219
17.722	839	18.991	838.309	19.694	838	20.112	837.642	20.578	837.442
21.071	837.162	21.79	837.038	21.839	837.024	22.192	837.011	22.495	837
22.579	837	23.285	837.201	24.799	838	25.466	838.373	26.518	839
27.445	839.493	28.43	840	28.717	840.11	29.072	840.254	29.364	840.373
29.418	840.396	31.265	841	31.287	841.005	33.146	841.443	34.053	841.638
34.542	841.74	35.631	841.961	35.85	842	36.297	842.142	36.852	842.28
37.582	842.394	38.89	842.538	40.822	842.795	43.26	842.927	43.45	842.952
45.532	842.996	45.535	842.997	45.54	842.997	46.322	843		

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.056	.04	29.072	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	17.056	29.072		4.115	6.649	5.653	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 311.6395

INPUT

Description:

Station Elevation Data		num= 63		Sta Elev		Sta Elev		Sta Elev	
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	846	.296	845.866	2.088	845.05	2.173	845.012	2.199	845
4.14	844.282	4.556	844.143	4.883	844	6.585	843.486	7.953	843
8.066	842.943	9.86	842	10.043	841.885	10.204	841.79	11.414	841
11.579	840.883	12.624	840.13	12.827	840	14.483	839.123	14.708	839
15.031	838.665	15.715	838	16.453	837.424	16.474	837.408	17.04	837
17.572	836.643	17.839	836.405	18.375	836	18.903	835.652	19.384	835.35
20.154	835	20.433	834.938	21.184	834.805	21.695	834.727	22.008	834.736
22.336	834.68	23.216	834.793	24.365	835	24.711	835.15	25.798	836
25.943	836.085	27.535	837	28.176	837.494	28.834	838	29.279	838.279
30.549	839	30.65	839.091	30.971	839.316	31.682	839.849	31.973	840
33.318	840.271	33.766	840.325	34.981	840.525	36.56	840.65	36.802	840.676
37.598	840.728	39.26	840.93	39.871	841	41.065	841.154	41.69	841.222
41.861	841.239	42.785	841.323	42.802	841.324				

Manning's n Values		num= 3		Sta n Val	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	16.474	.04	28.176	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 16.474 28.176 5.922 7.796 5.673 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 303.8436

INPUT

Description:

Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	844.68	1.146	844.293	2.016	844	2.061	843.979	4.307	843
5.889	842.203	6.159	842.066	6.282	842	6.456	841.871	7.773	841
8.828	840.365	9.402	840	10.173	839.809	12.634	839	12.8	838.853
14.165	838	14.226	837.967	15.986	837	16.442	836.858	16.858	836.72
17.316	836.565	18.982	836	19.368	835.731	20.281	835	20.634	834.284
20.792	834	21.582	833.572	22.497	833	23.589	832.773	23.803	832.731
23.883	832.721	23.951	832.723	24.006	832.728	24.563	832.797	26.143	833
26.836	833.477	27.608	834	27.844	834.191	28.512	835	28.983	835.182
29.535	835.387	30.299	835.67	31.334	836	32.422	836.588	33.048	837
33.573	837.228	34.951	837.647	35.631	837.862	36.133	838	38.187	838.662
39.205	838.896	39.385	838.937	39.738	839	42.019	839.354		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.316	.04	29.535	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17.316 29.535 6.316 7.905 7.002 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 295.9385

INPUT

Description:

Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	843	.044	842.983	.492	842.782	2.141	842.053	2.246	842
4.231	841.123	4.512	841	4.519	840.99	5.434	840	5.729	839.925
7.154	839.583	9.057	839.121	9.564	839	10.019	838.584	10.73	838
10.992	837.864	12.527	837	13.008	836.781	15.005	836	15.691	835.458
15.919	835.296	16.628	835	17.325	834.83	19.24	834.361	19.734	834
21.336	833.237	21.735	833	22.554	832.311	22.972	832	23.605	831.761
23.938	831.62	24.978	831.821	25.942	832	26.201	832.097	28.097	833
29.002	833.389	30.239	833.861	30.602	834	31.921	834.444	33.019	834.83
33.871	835	35.839	835.668	36.694	836	37.846	836.352	38.8	836.608
39.457	836.787	40.356	837						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.325	.04	30.239	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17.325 30.239 6.041 6.848 8.121 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 289.0909

INPUT

Description:

Station Elevation Data num= 53

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	842.518	.998	842.213	1.622	842	2.526	841.599	3.77	841
4.233	840.574	4.671	840	5.671	839.667	8.102	839	9.039	838.475
9.95	838	11.772	837.318	12.513	837	13.123	836.589	14.044	836
15.431	835.038	15.48	835	15.576	834.977	15.642	834.964	15.705	834.949
18.094	834.402	18.971	834.201	19.832	834	20.972	833.457	22.196	833
22.349	832.869	23.016	832	23.299	831.73	24.177	831	24.923	830.876
25.262	830.832	25.391	830.828	25.588	830.836	26.039	830.894	26.859	830.994
26.908	831	29.567	831.632	31.659	832	31.82	832.134	32.028	832.339
32.274	832.536	32.855	833	34.496	833.532	35.013	833.717	35.24	833.784
35.956	834	36.283	834.044	37.327	834.156	37.511	834.18	38.774	834.302
39.43	834.352	40.185	834.459	40.734	834.501				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.094	.04	32.274	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 18.094 32.274 7.422 5.888 4.713 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 283.2029

INPUT

Description:

Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	840.564	1.618	840	2.522	839.726	4.649	839	6.83	838.395
7.421	838.186	7.916	838	8.541	837.709	9.811	837	10.873	836.407
11.671	836	12.26	835.471	12.825	835	13.51	834.771	14.327	834.541
15.409	834.21	16.301	834	16.439	833.942	18.644	833.022	18.689	833
18.834	832.906	20.333	832	20.509	831.833	21.392	831	21.556	830.943
24.14	830.175	24.331	830.175	24.383	830.179	26.19	830.509	28.494	831
29.442	831.175	31.449	831.502	31.762	831.56	34.13	832	35.656	832.571
38.281	833	38.573	833.073	38.638	833.084	39.198	833.164	41.358	833.536
41.819	833.609								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	16.439	.04	31.762	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 16.439 31.762 9.548 6.58 2.935 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 276.6229

INPUT

Description:

Station Elevation Data num= 47

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	838.346	.724	838.178	1.499	838	6.41	837.006	6.431	837
6.451	836.971	7.19	836	7.389	835.698	7.88	835	10.842	834.024
10.893	834.007	10.92	834	10.961	833.986	14.165	833.028	14.26	833
16.173	832.38	17.263	832	17.899	831.525	18.613	831	19.775	830.178
20.033	830	21.758	829.744	22.949	829.516	24.118	829.885	24.512	830
25.016	830.125	25.22	830.169	26.881	830.549	29.304	831	29.632	831.057
29.717	831.075	30.793	831.258	31.443	831.36	31.55	831.377	31.895	831.455
32.416	831.535	32.671	831.59	33.211	831.721	33.765	831.831	34.413	832
34.698	832.055	35.456	832.189	36.257	832.312	36.997	832.429	38.12	832.586
40.901	833	42.12	833.255						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.165	.04	31.443	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	14.165	31.443		17.315	8.993	2.5	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 267.6301

INPUT

Description:

Station Elevation Data num= 40

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	835.674	3.087	835.146	3.933	835	4.341	834.747	5.671	834
7.605	833.276	8.308	833	8.995	832.792	11.859	832	13.906	831.397
14.054	831.357	15.224	831.02	15.294	831	15.457	830.866	16.557	830
16.666	829.892	17.722	829	21.258	828.332	21.909	828.241	22.063	828.232
22.09	828.234	22.094	828.159	22.121	828.235	22.31	828.269	22.457	828.311
23.018	828.474	24.78	829	25.287	829.178	25.914	829.416	30.099	829.886
31.118	830	32.129	830.398	33.018	831	33.7	831.162	34.033	831.297
34.807	831.524	35.228	831.679	35.912	832	40.225	832.746	41.493	833

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.224	.04	30.099	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.224	30.099		7.105	4.996	3.195	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 262.6338

INPUT

Description:

Station Elevation Data num= 54											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	834	.744	833.758	2.957	833	4.213	832.69	7.062	832		
8.939	831.386	9.571	831.172	10.169	831	11.471	830.119	11.654	830		
11.691	829.939	12.13	829	13.513	829	13.664	829	16.819	828.975		
17.087	828.98	18.735	828.997	19.21	829	19.507	829	19.554	829		
19.937	829	19.955	828.732	20.538	828.613	21.143	828.704	21.247	827.028		
21.46	827.369	22.007	829	22.677	829	22.85	829	23.456	829		
23.62	829	23.967	829	24.286	829	24.6	829	25.675	829.169		
27.384	829.393	27.796	829.424	28.036	829.442	28.758	829.494	30.943	830		
31.709	830	32.339	830	32.975	830	33.329	830	33.603	830.225		
34.783	830.9	34.885	830.964	34.954	831	36.149	831.585	36.462	831.748		
37.001	832	38.258	832.264	38.579	832.343	39.294	832.527				

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	13.513	.04	28.036	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	13.513	28.036		8.083	4.082	2.971	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 258.5520

INPUT

Description:

Station Elevation Data num= 62											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	832.73	.276	832.666	1.396	832.42	3.006	832.072	3.349	832		
5.308	831.364	6.432	831	6.774	830.864	8.985	830	10.639	829.273		
11.038	829	11.479	829	12.17	829	12.377	829	14.685	829		
15.712	829	16.238	829	16.941	829	16.963	829	17.092	829		
17.599	829	17.924	829	19.216	829	19.465	828.343	19.647	828		
20.572	827.455	21.039	827	21.513	826.724	21.77	826.601	22.301	826.256		
22.469	826.166	22.505	826.146	22.521	826.082	22.53	826.133	23.308	826.04		
23.353	826.026	23.948	826.042	23.971	826.038	23.994	826.041	24.523	826.149		
24.727	826.219	24.99	826.34	25.427	826.498	26.272	827	26.819	827.616		
27.088	828	27.454	828.42	27.596	828.582	27.919	829	28.803	829.748		
29.024	830	30.124	830	30.416	830	32.501	830.282	32.794	830.332		
34.498	830.37	35.653	830.731	35.899	830.763	36.442	831	37.898	831.649		
38.71	832	40.565	832.604								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.685	.04	27.454	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	14.685	27.454		4.997	10.129	12.281	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 248.4231

INPUT

Description:

Station Elevation Data num= 47											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	832.564	2.045	832.099	2.47	832	3.417	831.577	4.616	831		
5.646	830.122	5.826	830	5.87	830	5.911	830	6.479	830		
8.02	830	11.994	829.149	12.527	829	12.959	828.728	14.005	828		
14.933	828	15.18	828	15.93	828	16.26	828	16.559	828		
16.874	827.644	17.468	827	18.03	826.602	18.864	826	19.203	825.939		
20.881	825.695	24.142	825.891	26.817	826	27.213	826.923	27.229	827		
27.308	827.101	27.977	828	28.311	828.628	28.509	829	28.631	829.086		
29.963	830	30.087	830.13	30.828	831	32.019	831.224	34.844	831.473		
38.307	831.918	38.663	831.962	38.849	831.973	38.871	831.974	38.948	832		
39.04	832.063	40.339	833								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.18	.04	27.977	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.18	27.977		5.62	8.75	10.992	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 239.6731

INPUT

Description:

Station Elevation Data num= 43											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	831	.958	831	1.165	831	1.44	831	1.997	831		
2.912	830.817	3.662	830.752	4.811	830.639	7.589	830.154	7.858	830.117		
8.461	830	8.588	829.901	9.872	829	11.373	828.158	11.685	828		
13.381	828	14.093	828	14.609	828	14.894	828	15.227	827.366		
15.387	827.039	15.41	827	15.861	826.561	16.428	826	16.679	825.954		
18.81	825.565	19.581	825.423	20.192	825.385	23.901	825.754	25.967	826		
26.281	826.34	26.627	827	26.913	827.492	27.208	828	28.312	829		
28.812	829.422	29.451	830	31.354	830.51	33.538	831	34.689	831.594		
35.436	832	39.356	832.625	40.102	832.741						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	14.609	.04	26.913	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	14.609	26.913		8.088	9.854	10.223	.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme RS: 229.8189

INPUT

Description:

Station Elevation Data num= 47											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

0	831	5.205	830.334	6.821	830.136	7.711	830	7.822	829.912		
8.699	829	8.82	828.936	10.815	828	11.631	827.614	12.779	827		
13.212	827	13.908	827	14.703	827	15.305	827	15.416	827		
16.07	826.316	16.536	826	18.252	825.638	20.419	825.117	23.171	825.436		
27.412	826	27.551	826.249	27.637	826.423	27.856	826.798	27.974	827		
29.262	827.845	29.502	828	29.578	828.074	30.124	828.547	30.646	829		
30.871	829.178	31.839	830	32.026	830	32.249	830	32.763	830		
33.037	830	34.7	830.228	34.967	830.294	35.534	830.444	36.209	830.603		
37.615	831	38.554	831.353	39.993	832	41.022	832.734	41.366	833		
42.204	833	42.763	833.109								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val

0	.035	15.305	.04	27.856	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.305	27.856		10.383	12.81	11.867	.1	.3

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 217.0088

INPUT

Description:

Station Elevation Data num= 45											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

0	830.21	.325	830.146	1.396	830	1.417	830	1.747	830		
1.897	830	3.482	829.769	6.54	829.469	7.016	829.419	7.716	829		
9.238	828.217	9.646	828	11.206	827.334	11.961	827	13.371	826.08		
13.496	826	13.555	826	14.473	826	15.452	826	15.473	826		
15.69	826	16.281	825.189	16.427	825	21.168	824.703	21.917	824.579		
22.207	824.349	23.692	824.542	28.143	824.945	28.754	825	30.396	825.977		
30.444	826	30.464	826.023	31.197	827	33.163	828	33.362	828.183		
34.248	829	37.292	829.619	39.252	830	39.816	830.326	41.083	831		
44.082	831.956	44.147	831.976	44.217	832	44.255	832.023	45.947	833		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val

0	.035	15.452	.04	28.143	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.452	28.143		6.905	8.902	13.813	.1	.3

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 208.1064

INPUT

Description:

Station Elevation Data num= 68											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830.377	1.809	830	4.847	829.603	5.869	829.487	6.632	829.402		
8.725	829.184	10.133	829	10.273	829	10.564	829	11.041	828.612		
12.019	828	13.723	827.149	14.028	827	15.289	826.367	16.027	826		
16.562	826	16.931	826	17.751	826	18.031	826	18.48	826		
18.602	826	18.777	825.529	18.986	825	19.793	824.21	20.073	824		
20.788	823.722	21.195	823.603	22.126	823.296	22.735	823.159	22.894	823.12		
23.472	823.057	23.526	823.047	23.586	823.04	24.704	823.072	24.8	823.064		
25.043	823.07	25.089	823.067	25.482	823.089	26.087	823.116	26.165	823.112		
26.314	823.11	27.523	823.178	27.638	823.18	27.816	823.189	27.999	823.205		
28.181	823.231	28.413	823.275	28.66	823.328	29.231	823.385	29.592	823.479		
30.054	823.554	30.203	823.578	31.497	824	32.647	824.467	33.971	825		
34.915	825.653	35.398	826	36.418	827	36.419	827	37.917	828		
38.301	828.311	39.015	829	41.754	829.467	45.134	830	46.645	830.625		
47.523	831	48.997	831.64	49.866	832						

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.48	.04	30.054	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.48	30.054		8.46	9.634		.1	.3

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 198.4724

INPUT

Description:

Station Elevation Data num= 52											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830.208	1.164	830	5.385	829.007	5.413	829	5.415	829		
5.416	829	5.422	828.999	10.104	828.564	13.941	828.028	14.08	828.014		
14.135	828	14.163	827.977	14.216	827.919	15.019	827	15.947	826.057		
16.001	826	16.016	825.978	16.717	825	17.301	825	17.391	825		
18.262	824.823	18.884	824.753	18.948	824.745	19.898	824	19.9	823.999		
20.517	823.269	20.792	823	22.231	822.878	25.263	822.616	25.399	822.613		
25.948	822.643	30.522	823	30.644	823.056	32.382	823.855	32.724	824		
34.735	824.856	35.054	825	35.432	825.201	37.001	826	38.742	826.978		
38.779	827	38.811	827.022	40.479	828	40.878	828.33	41.243	828.414		
41.579	828.429	44.15	829	44.61	829	46.08	829.313	48.043	830		
49.964	830.605	50.996	831								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.884	.04	30.644	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.884	30.644		7.595	8.041		.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme RS: 190.4317

INPUT

Description:

Station Elevation Data num= 52											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	829.567	.93	829.36	2.5	829.037	2.564	829.025	2.692	829		
3.385	828.911	7.996	828.321	9.97	828.078	10.068	828.068	10.136	828.062		
10.201	828.056	10.359	828.042	10.933	828	11.99	827.698	12.349	827.619		
15.361	827	15.557	826.381	15.731	826	16.043	825.327	16.195	825		
16.39	824.898	17.621	824	19.383	824	19.733	824	19.964	824		
20.517	824	20.72	824	21.297	823.159	21.372	823.048	21.406	823		
24.782	822.533	26.928	822.281	28.471	822.451	31.894	823	32.596	823.4		
32.682	823.452	33.594	824	34.41	824.33	34.793	824.475	36.13	825		
39.089	825.886	39.47	826	39.589	826.077	40.823	827	42.062	827.562		
43.055	828	44.132	828.199	45.671	828.489	48.416	829	49.571	829.585		
50.727	830	52.96	830.548								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	19.733	.04	32.682	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	19.733	32.682		9.457	9.058	9.677	.1	.3

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 181.3740

INPUT

Description:

Station Elevation Data num= 56											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	829.675	.848	829.564	5.435	829	5.936	828.88	9.165	828		
9.285	827.581	9.552	827	10.997	826.723	14.71	826	14.924	825.315		
15.056	825	15.348	824.308	15.56	824	16.245	823.427	16.733	823		
17.522	823	18.648	823	19.185	823	19.432	823	20.401	823		
20.766	822.459	21.335	822.089	21.523	822	22.393	821.473	23.192	821		
23.393	820.989	24.455	820.944	25.151	820.919	25.615	820.904	25.74	820.902		
26.558	820.901	26.595	820.903	28.165	820.982	28.468	821	28.875	821.149		
28.992	821.187	29.414	821.422	30.024	821.735	30.34	822	31.827	822.768		
32.2	823	32.448	823.186	33.428	824	33.569	824.043	36.728	825		
37.241	825.162	39.646	826	40.921	826.588	42.032	827	43.698	827.906		
43.858	828	45.33	828.234	50.115	829	51.48	829.32	54.362	830		
55.633	830.28										

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.648	.04	33.569	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.648	33.569		10.918	12.685	13.372	.1	.3

Blocked Obstructions num= 2					
Sta L	Sta R	Elev	Sta L	Sta R	Elev
42.215	50.615	829.1171	6.362	10.312	828.7635

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 168.6892

INPUT

Description:

Station Elevation Data num= 78

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	830	1.977	829	3.753	828.572	4.606	828.386	5.638	828.069
5.717	828.054	5.874	828	7.611	827.518	8.443	827.306	9.578	827
11.158	826.281	11.848	826	11.991	825.874	12.913	825	13.784	825
16.026	824.564	17.387	824.14	17.64	824.126	17.835	824	18.076	823.761
18.958	823	21.024	822	21.194	821.87	22.235	821.077	22.353	821
22.606	820.833	24.129	820	25.68	819.218	25.864	819.187	25.975	819.185
26.685	819.053	26.759	819.053	27.285	819	27.587	818.969	27.609	818.965
28.839	818.947	28.918	818.946	30.355	819	30.666	819.012	30.672	819.012
31.18	819.031	31.283	819.033	33.641	819.054	35.035	819.118	35.32	819.13
35.952	819.185	36.164	819.214	36.324	819.249	36.839	819.36	37.132	819.429
37.544	819.548	38.688	820	38.992	821	39.138	821.18	39.577	821.719
39.748	822	40.001	822.339	40.567	823	41.064	823.613	41.32	824
41.54	824.486	41.703	825	42.317	825.513	42.873	826	43.435	826.283
45.206	827	45.54	827.378	46.023	827.996	46.027	828	46.248	828
46.684	828	46.905	828	47.134	828	55.65	828.832	56.227	828.868
57.114	829	57.306	829	59.684	829.388				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	21.194	.04	36.324	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 21.194 36.324 14.104 10.23 9.802 .1 .3

Blocked Obstructions num= 1

Sta L	Sta R	Elev
18.406	22.093823	4763

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 158.4595

INPUT

Description:

Station Elevation Data num= 80

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	826.627	.436	826.575	1.93	826.358	2.445	826.296	2.789	826.26
3.043	826.237	3.459	826.213	4.1	826.082	4.24	826.078	4.592	826
7.241	825.524	7.924	825.411	8.853	825.292	9.057	825.257	9.825	825
10.708	824.189	10.895	824	11.761	824	15.824	823.403	16.578	823
19.055	822	19.916	821	20.043	820.796	20.103	820.7	20.544	820
20.729	819.862	21.045	819.635	21.598	819.231	21.927	819	22.7	818.448
23.388	818	23.873	817.684	24.808	817	26.082	816.061	26.164	816
26.257	815.932	27.233	815.201	27.482	815	28.924	814.751	30.661	814.626
31.542	814.617	32.052	814.631	32.152	814.63	33.036	814.637	33.965	814.666
34.468	814.69	34.906	814.702	35.459	814.739	36.061	814.789	36.718	814.851

37.444	814.929	37.498	814.932	38.021	815	38.264	815.198	39.015	816
39.591	816.719	39.809	816.969	39.836	817	40.342	817.705	40.562	818
40.679	818.16	41.28	819	41.798	820	42.543	821	42.989	821.4
43.76	822	44.033	822.304	44.59	823	45.529	823.54	46.182	824
47.151	824.868	47.278	825	47.642	825.355	48.319	826	48.898	826.392
49.782	827	51.408	827.992	51.423	828	58.621	828.615	60.28	828.758

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.103 .04 39.809 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.103 39.809 8.862 11.849 11.254 .1 .3

Blocked Obstructions num= 1
 Sta L Sta R Elev

 16.259 20.162823.1701

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 146.6102

INPUT

Description:

Station Elevation Data		num= 80							
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	826.535	3.368	826	7.342	825.157	8.056	825	8.25	824.743
8.426	824.518	8.888	824	9.048	823.138	9.079	823	10.65	823
10.779	823	10.876	823.033	11.082	823	14.209	823	14.565	822.567
15.042	822	15.167	821.932	15.546	821.721	16.65	821.129	16.877	821
17.451	820.722	17.761	820.599	19.273	820	19.807	819.305	20.012	819
20.097	818.883	20.295	818.609	20.751	818	21.224	817.356	21.513	817
22.005	816.389	22.308	816	22.887	815.253	23.069	815	23.591	814.773
24.428	814.394	25.345	814	25.722	813.922	25.817	813.915	26.613	813.791
28.747	813.486	29.186	813.481	32.826	813.398	34.306	813.384	34.592	813.333
37.268	813.505	39.394	813.584	42.015	814	43.099	814.672	43.402	814.844
43.678	815	44.658	815.871	44.802	816	45.193	816.404	45.767	817
46.023	817.257	46.763	818	47.636	818.856	47.784	819	48.232	819.451
48.779	820	49.572	820.918	49.641	821	49.729	821.082	50.755	822
51.397	822.7	51.688	823	52.588	823.59	53.22	824	54.351	824.609
55.016	825	55.771	825.659	56.134	826	57.153	826.882	57.29	827
57.317	827.047	58.135	828	60.634	828.243	61.657	828.311	62.413	828.368

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.097 .04 43.402 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.097 43.402 10.508 11.695 15.079 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 134.9155

INPUT

Description:

Station Elevation Data num= 75											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	826	.949	825.792	1.574	825.645	4.262	825	7.016	824.288		
7.829	824	8.096	823.441	8.252	823	9.102	822.819	12.721	822		
13.452	821.415	14.045	821	15.85	820.254	16.427	820	16.672	819.717		
17.254	819	17.82	818.296	18.069	818	18.308	817.724	18.917	817		
19.295	816.571	19.734	816	19.943	815.757	20.07	815.609	20.565	815		
23.917	814.262	25.192	814	25.341	813.779	26.018	813	28.532	812.387		
30.565	812	31.06	811.979	34.587	811.906	35.17	811.905	35.197	811.906		
35.807	811.906	38.344	811.909	42.322	812	42.969	812	43.21	812		
43.432	812	43.873	812	44.735	812.568	44.843	812.639	45.292	813		
46.283	814	47.959	815	48.568	815.346	49.405	816	50.574	816.815		
50.81	817	50.939	817.119	51.873	817.81	52.051	817.945	52.131	818		
52.198	818.047	53.434	819	53.779	819.267	54.672	820	55.262	820.548		
55.71	821	56.538	821.891	56.644	822	56.743	822.089	57.368	822.636		
57.739	823	58.321	823.534	58.834	824	59.696	824.562	60.355	825		
60.677	825.255	61.406	825.818	61.654	826	62.025	826.227	63.23	827		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	19.943	.04	44.735	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	19.943	44.735		13.433	10.072	10.433	.1	.3

CROSS SECTION

RIVER: Alme

REACH: Alme

RS: 124.8436

INPUT

Description:

Station Elevation Data num= 62											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	824.371	.339	824.308	1.898	824	2.26	823.841	4.105	823		
4.87	822.637	6.118	822	9.248	821.421	11.443	821	12.03	820.732		
13.683	820	14.76	819.096	14.765	819.093	14.879	819	14.941	818.95		
16.121	818	17.067	817.242	17.361	817	18.227	816.272	18.499	816.054		
18.566	816	19.7	815.054	19.765	815	19.834	814.986	24.56	814		
24.807	813.469	25.075	813	25.386	812.336	25.645	812	26.122	812		
29.414	811.856	35.798	811.383	35.898	811.38	38.675	811.293	39.289	811.276		
43.196	811.3	44.673	811.643	44.885	811.633	45.11	811.642	46.213	812		
46.315	812.205	46.485	812.543	46.713	813	47.032	813.553	47.373	814		
48.268	814.588	48.888	815	50.127	815.548	51.135	816	52.321	816.507		
52.938	816.763	53.5	817	55.043	817.686	55.756	818	57.234	818.65		
58.031	819	58.656	819.279	60.315	820	61.69	820.767	62.061	821		
62.523	821.244	64.122	822								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.499	.04	46.315	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	18.499	46.315		17.171	11.452	5.724	.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 113.3915

INPUT

Description:

Station Elevation Data num= 72											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	820	1.683	819.835	1.788	819.833	2.464	819.77	3.027	819.726		
5.299	819.565	6.248	819.539	6.767	819.505	8.426	819.422	8.879	819.381		
9.112	819.351	9.606	819.324	10.063	819.291	11.864	819	12.092	819		
13.066	818.71	13.55	818.59	14.783	818.238	15.567	818	15.802	817.891		
16.125	817.795	16.964	817.457	17.317	817.37	17.783	817.228	18.536	817		
18.684	816.729	19.309	816	19.496	815.658	19.944	815	20.817	814.233		
21.101	814	23.25	813.406	23.929	813.222	24.188	813.154	24.74	813		
25.213	812.758	26.708	812	28.034	811.22	28.373	811	28.962	811		
32.292	810.921	34.179	810.899	34.282	810.899	35.02	810.892	35.688	810.887		
36.333	810.885	37.288	810.884	42.28	810.949	43.697	810.985	44.281	811		
44.958	811.243	46.447	811.736	47.243	812	47.768	812.509	48.462	813		
49.593	813.653	50.226	814	51.493	814.841	51.712	815	52.717	815.473		
53.833	816	54.051	816.098	55.987	817	56.301	817.142	58.109	818		
58.367	818.122	58.898	818.375	60.229	819	62.027	819.866	62.315	820		
62.512	820.088	64.572	821								

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	17.783	.04	46.447	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17.783 46.447 18.913 10.894 3.542 .1 .3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 102.4974

INPUT

Description:

Station Elevation Data num= 69											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	817.852	5.179	817.761	5.305	817.769	5.326	817.77	5.333	817.771		
5.348	817.771	5.355	817.771	5.363	817.771	5.378	817.771	5.415	817.77		
5.438	817.768	5.471	817.766	5.493	817.765	5.52	817.763	5.557	817.76		
5.609	817.755	5.687	817.748	5.823	817.736	6.123	817.709	13.736	817		
15.451	816.284	16.121	816	16.64	815.871	16.962	815.798	17.605	815.65		
17.853	815.59	18.374	815.46	18.972	815.327	19.137	815.279	20.108	815		
20.312	814.646	20.653	814	20.887	813.571	21.157	813	21.359	812.226		
21.415	812	21.5	811.93	22.405	811	22.797	811	29.388	810.902		
30.09	810.907	30.245	811.016	30.331	811.016	31.362	810.915	32.259	810.923		
33.271	810.935	34.499	810.953	36.059	810.981	37.038	811	37.089	811.01		
38.774	811.33	39.808	811.526	40.401	811.673	41.725	812	42.32	812.428		
42.955	813	44.164	813.699	44.649	814	45.075	814.213	46.285	815		
48.041	815.844	48.369	816	50.459	816.979	50.504	817	50.513	817.004		
52.63	818	54.692	818.985	54.724	819	56.803	820				

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val

0 .035 19.137 .04 38.774 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19.137 38.774 15.369 9.291 9.095 .1 .3
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev

0 3.846817.8524 8.075 18.158 817.527

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 93.20643

INPUT

Description:

Station Elevation Data num= 52
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 816.355 .564 816.317 1.135 816.268 1.383 816.249 2.001 816.184
2.75 816.086 3.335 816 3.693 815.956 9.168 815 9.229 814.97
10.551 814.308 11.167 814 12.331 813.135 12.403 813.08 12.489 813
12.559 812.95 12.612 812.939 12.795 812.909 14.266 812.454 15.016 812.381
16.934 812.045 17.188 812 17.771 811.923 17.842 811.918 18.32 811.859
18.891 811.781 19.083 811.777 19.591 811.701 19.794 811.701 23.395 811.271
24.199 811.277 24.913 811.286 25.058 811.389 25.919 811.302 28.41 811.465
29.63 811.552 30.997 811.651 35.55 812 35.614 812 36.571 812.586
37.407 813 38.112 813.528 38.757 814 41.173 814.765 41.933 815
43.215 815.583 43.962 815.919 44.15 816 45.792 816.748 46.375 817
48.351 817.916 48.55 818

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0 .035 16.934 .04 29.63 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
16.934 29.63 12.131 6.754 6.462 .1 .3
Right Levee Station= 28.32 Elevation= 816
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev

0 15.471816.3551 28.33 41.56 815.992

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 86.45223

INPUT

Description:

Station Elevation Data num= 52
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 814.668 .054 814.663 .314 814.634 .698 814.576 1.127 814.511
2.282 814.376 3.481 814.133 3.568 814.116 4.053 814 4.918 813.479
5.68 813 5.881 812.99 5.89 812.99 5.945 812.988 8.397 812.862
10.394 812.753 11.083 812.738 19.726 812.089 20.846 812.011 21 812
21.007 812 22.442 811.892 23.73 811.1 25.55 811.1 26.17 811.1

26.7	811.869	27.321	811.909	27.873	811.935	27.959	811.939	28.143	811.949
29.12	811.983	29.945	812	30.927	812	30.99	812	31.178	812.024
33.684	812.061	34.595	812.089	35.114	812.109	40.401	812.976	40.853	813
41.189	813.151	41.394	813.235	41.968	813.45	42.136	813.515	43.358	814
43.417	814.026	43.631	814.214	44.451	814.856	44.561	815	45.69	815.403
46.679	815.728	47.411	816						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.846 .04 27.873 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.846 27.873 11.185 10.618 11.11 .1 .3

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 23.5 813.11 F
 26.5 47.411 813.11 F

Left Levee Station= 18 Elevation= 815.24
 Right Levee Station= 28.41 Elevation= 815.31

Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 .1 18.05815.2321 28.42 43.85815.3968

CULVERT

RIVER: Alme
 REACH: Alme RS: 81.1431

INPUT

Description:
 Distance from Upstream XS = 2
 Deck/Roadway Width = 5
 Weir Coefficient = 1.4
 Upstream Deck/Roadway Coordinates

num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 813.4 810 40 813.4 810

Upstream Bridge Cross Section Data

Station Elevation Data num= 52
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 814.668 .054 814.663 .314 814.634 .698 814.576 1.127 814.511
 2.282 814.376 3.481 814.133 3.568 814.116 4.053 814 4.918 813.479
 5.68 813 5.881 812.99 5.89 812.99 5.945 812.988 8.397 812.862
 10.394 812.753 11.083 812.738 19.726 812.089 20.846 812.011 21 812
 21.007 812 22.442 811.892 23.73 811.1 25.55 811.1 26.17 811.1
 26.7 811.869 27.321 811.909 27.873 811.935 27.959 811.939 28.143 811.949
 29.12 811.983 29.945 812 30.927 812 30.99 812 31.178 812.024
 33.684 812.061 34.595 812.089 35.114 812.109 40.401 812.976 40.853 813
 41.189 813.151 41.394 813.235 41.968 813.45 42.136 813.515 43.358 814
 43.417 814.026 43.631 814.214 44.451 814.856 44.561 815 45.69 815.403
 46.679 815.728 47.411 816

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.846 .04 27.873 .035

Bank Sta: Left Right Coeff Contr. Expan.
 20.846 27.873 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 23.5 813.11 F
 26.5 47.411 813.11 F
 Left Levee Station= 18 Elevation= 815.24
 Right Levee Station= 28.41 Elevation= 815.31
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 .1 18.05815.2321 28.42 43.85815.3968

Downstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 813.3 809 50 813.3 809

Downstream Bridge Cross Section Data
 Station Elevation Data num= 72
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 812.528 6.405 812.089 6.489 812.085 7.611 812.004 7.613 812.004
 7.625 812.003 7.63 812.003 7.742 812 8.111 812 8.636 811.923
 8.708 811.905 9.584 811.843 10.187 811.651 11.684 811.537 11.74 811.533
 12.239 811 12.976 810.169 13.117 810 13.153 810 13.859 809.837
 14.993 809.633 15.261 809.585 15.65 809.528 16.24 809.508 16.708 809.433
 17.665 809.464 17.72 809.456 18.098 809.404 18.878 809.38 19.726 809.414
 20.93 809.426 21.764 809.443 22.164 809.454 22.787 809.507 23.983 809.452
 24.437 809.457 25.467 809.395 26.024 809.354 26.478 809.322 28.298 809.216
 28.601 809.198 28.993 809.207 29.254 809.214 29.546 809.198 30.004 809.23
 30.065 809.23 30.203 809.216 30.614 809.239 30.766 809.232 30.942 809.231
 31.556 809.279 31.793 809.285 32.041 809.291 32.996 809.409 33.75 809.435
 34.153 809.492 34.586 809.51 35.096 809.546 35.517 809.607 36.03 809.653
 37.408 809.817 38.536 809.965 38.781 810 39.288 810.95 39.309 811
 40.807 811.95 40.837 811.971 40.914 812 41.622 812.079 42.219 812.154
 44.424 813 45.752 813.257

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 17.72 .04 28.993 .035

Bank Sta: Left Right Coeff Contr. Expan.
 17.72 28.993 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 23.5 812.7 F
 26.5 45.752 812.7 F

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span
Culvert #1 Box 2 3
FHWA Chart # 8 - flared wingwalls
FHWA Scale # 1 - Wingwall flared 30 to 75 deg.
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist Length Top n Bottom n Depth Blocked Entrance Loss Coef Exit Loss Coef
 2 5 .015 .015 0 1 1
Upstream Elevation = 811.11
 Centerline Station = 25
Downstream Elevation = 810.7
 Centerline Station = 25

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 75.83388

INPUT

Description:

Station Elevation Data num= 72
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0 812.528 6.405 812.089 6.489 812.085 7.611 812.004 7.613 812.004
7.625 812.003 7.63 812.003 7.742 812 8.111 812 8.636 811.923
8.708 811.905 9.584 811.843 10.187 811.651 11.684 811.537 11.74 811.533
12.239 811 12.976 810.169 13.117 810 13.153 810 13.859 809.837
14.993 809.633 15.261 809.585 15.65 809.528 16.24 809.508 16.708 809.433
17.665 809.464 17.72 809.456 18.098 809.404 18.878 809.38 19.726 809.414
20.93 809.426 21.764 809.443 22.164 809.454 22.787 809.507 23.983 809.452
24.437 809.457 25.467 809.395 26.024 809.354 26.478 809.322 28.298 809.216
28.601 809.198 28.993 809.207 29.254 809.214 29.546 809.198 30.004 809.23
30.065 809.23 30.203 809.216 30.614 809.239 30.766 809.232 30.942 809.231
31.556 809.279 31.793 809.285 32.041 809.291 32.996 809.409 33.75 809.435
34.153 809.492 34.586 809.51 35.096 809.546 35.517 809.607 36.03 809.653
37.408 809.817 38.536 809.965 38.781 810 39.288 810.95 39.309 811
40.807 811.95 40.837 811.971 40.914 812 41.622 812.079 42.219 812.154
44.424 813 45.752 813.257

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val

0 .035 17.72 .04 28.993 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 17.72 28.993 11.32 11.276 9.95 .1 .3

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 23.5 812.7 F
26.5 45.752 812.7 F

CROSS SECTION

RIVER: Alme
REACH: Alme RS: 64.55781

INPUT

Description:

Station Elevation Data num= 64
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

0	811.596	.316	811.555	.687	811.498	2.805	811.188	3.902	811
4.454	810.902	4.525	810.907	5.257	810.87	8.381	810.557	9.077	810.496
10.037	810.381	11.087	810.326	12.002	810.241	12.763	810.159	13.092	810.166
13.862	810.04	14.058	810	15.617	809.566	17.47	809	19.815	808.104
20.127	808	20.305	807.97	21.988	807.69	22.448	807.657	22.723	807.631
23.015	807.588	23.826	807.512	24.179	807.472	25.194	807.32	25.45	807.298
25.886	807.269	26.067	807.253	27.119	807	29.198	806.448	30.453	806
30.589	805.957	30.652	805.936	32.044	805.576	32.45	805.452	32.765	805.379
33.174	805.316	33.403	805.294	33.49	805.299	33.579	805.304	33.763	805.341
34.046	805.438	34.357	805.435	34.53	805.532	34.55	805.541	34.868	805.592
35.385	806	35.537	806.076	36.612	807	37.113	807.368	37.714	807.863
37.881	808	38.668	808.173	42.411	809	44.918	809.566	46.769	810
47.103	810.642	47.287	811	49.816	811.723	51.083	812		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 20.305 .04 37.714 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 20.305 37.714 9.961 22.838 22.144 .1 .3
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 10.842 21.685 810.339 0 .61811.5964

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 41.72029

INPUT

Description:

Station Elevation Data num= 58

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	810.451	.996	810.258	2.245	810	5.269	809.487	7.099	809.202		
7.584	809.124	8.339	809	9.932	808.029	9.996	808	11.811	807.745		
12.508	807.659	14.166	807.364	14.912	807.266	15.321	807.231	15.485	807.222		
16.413	807	16.72	806.869	17.025	806.769	19.359	806	21.382	805		
21.602	804.865	21.849	804.694	22.337	804.356	22.999	804	23.433	803.658		
24.597	803	25.031	802.964	25.829	802.909	26.7	802.872	27.448	802.867		
28.231	802.882	28.847	802.906	29.52	802.938	30.25	802.983	30.472	803		
31.072	803.053	33.274	803.899	33.738	804	38.951	804.691	40.317	804.884		
41.145	805	42.472	805.527	42.982	805.713	43.864	806	44.575	806.461		
45.254	807	45.677	807.649	45.89	808	47.203	808.247	51.283	809		
52.608	809.226	55.5	809.603	56.251	809.669	57.144	809.735	57.602	809.785		
58.536	809.836	58.91	809.877	59.404	809.897						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 21.849 .04 40.317 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 21.849 40.317 10.436 18.278 27.533 .1 .3
 Blocked Obstructions num= 1
 Sta L Sta R Elev

 0 7.019810.4512

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 23.44198

INPUT

Description:

Station Elevation Data		num=		55	
Sta	Elev	Sta	Elev	Sta	Elev
0	809.644	.107	809.6	.387	809.528
2.427	809	3.587	808.625	3.978	808.505
8.001	807.367	8.533	807.29	9.067	807.2
10.997	806	11.005	805.967	11.236	805
13.097	803.339	13.342	803	13.775	802.63
19.219	801.705	19.446	801.694	20.389	801.633
26.045	802	26.667	802.219	28.959	803
37.515	804.835	38.684	804.989	38.768	805
42.435	805.941	42.643	805.991	42.675	806
50.627	806.825	52.21	806.917	53.132	807
54.248	807.112	55.017	807.378	55.984	807.641

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	16.576	.04	38.684	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	16.576	38.684		8.606	17.731		.1	.3

CROSS SECTION

RIVER: Alme
 REACH: Alme RS: 5.711110

INPUT

Description:

Station Elevation Data		num=		57	
Sta	Elev	Sta	Elev	Sta	Elev
0	810.2	1.339	810	2.023	809.283
3.657	808.212	3.999	808	5.327	807.247
8.734	806	8.889	805.865	9.7	805
12.223	803.266	12.371	803	12.94	802.355
14.593	801.688	15.158	801.568	17.836	801
20.496	800.891	21.07	800.886	21.48	800.886
22.827	800.901	23.352	800.912	24.414	800.94
26.517	801.163	28.665	802	29.614	802.755
33.436	804	33.477	804.009	33.516	804.019
42.004	806	42.682	806.099	44.975	806.408
50.37	807	50.97	807	51.374	807.52
55.608	808.836	56.37	809		

Manning's n Values		num=		3	
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	15.158	.04	34.312	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	15.158	34.312		16.759	5.711		.1	.3

Blocked Obstructions num= 1
 Sta L Sta R Elev

 0 4.211810.2004

SUMMARY OF MANNING'S N VALUES

River:Alme

 * Reach * River Sta. * n1 * n2 * n3 *

 *Alme * 346.0286 * .035* .04* .035*
 *Alme * 340.8620 * .035* .04* .035*
 *Alme * 337.1913 * .035* .04* .035*
 *Alme * 332.0697 *Culvert * * *
 *Alme * 326.9481 * .035* .04* .035*
 *Alme * 318.2890 * .035* .04* .035*
 *Alme * 311.6395 * .035* .04* .035*
 *Alme * 303.8436 * .035* .04* .035*
 *Alme * 295.9385 * .035* .04* .035*
 *Alme * 289.0909 * .035* .04* .035*
 *Alme * 283.2029 * .035* .04* .035*
 *Alme * 276.6229 * .035* .04* .035*
 *Alme * 267.6301 * .035* .04* .035*
 *Alme * 262.6338 * .035* .04* .035*
 *Alme * 258.5520 * .035* .04* .035*
 *Alme * 248.4231 * .035* .04* .035*
 *Alme * 239.6731 * .035* .04* .035*
 *Alme * 229.8189 * .035* .04* .035*
 *Alme * 217.0088 * .035* .04* .035*
 *Alme * 208.1064 * .035* .04* .035*
 *Alme * 198.4724 * .035* .04* .035*
 *Alme * 190.4317 * .035* .04* .035*
 *Alme * 181.3740 * .035* .04* .035*
 *Alme * 168.6892 * .035* .04* .035*
 *Alme * 158.4595 * .035* .04* .035*
 *Alme * 146.6102 * .035* .04* .035*
 *Alme * 134.9155 * .035* .04* .035*
 *Alme * 124.8436 * .035* .04* .035*
 *Alme * 113.3915 * .035* .04* .035*
 *Alme * 102.4974 * .035* .04* .035*
 *Alme * 93.20643 * .035* .04* .035*
 *Alme * 86.45223 * .035* .04* .035*
 *Alme * 81.1431 *Culvert * * *
 *Alme * 75.83388 * .035* .04* .035*
 *Alme * 64.55781 * .035* .04* .035*
 *Alme * 41.72029 * .035* .04* .035*
 *Alme * 23.44198 * .035* .04* .035*
 *Alme * 5.711110 * .035* .04* .035*

SUMMARY OF REACH LENGTHS

River: Alme

 * Reach * River Sta. * Left * Channel * Right *

 *Alme * 346.0286 * 5.933* 5.167* 5.71*

*Alme	*	340.8620	*	5.349*	3.671*	3.923*
*Alme	*	337.1913	*	14.586*	10.243*	14.287*
*Alme	*	332.0697	*Culvert	*	*	*
*Alme	*	326.9481	*	4.965*	8.659*	7.587*
*Alme	*	318.2890	*	4.115*	6.649*	5.653*
*Alme	*	311.6395	*	5.922*	7.796*	5.673*
*Alme	*	303.8436	*	6.316*	7.905*	7.002*
*Alme	*	295.9385	*	6.041*	6.848*	8.121*
*Alme	*	289.0909	*	7.422*	5.888*	4.713*
*Alme	*	283.2029	*	9.548*	6.58*	2.935*
*Alme	*	276.6229	*	17.315*	8.993*	2.5*
*Alme	*	267.6301	*	7.105*	4.996*	3.195*
*Alme	*	262.6338	*	8.083*	4.082*	2.971*
*Alme	*	258.5520	*	4.997*	10.129*	12.281*
*Alme	*	248.4231	*	5.62*	8.75*	10.992*
*Alme	*	239.6731	*	8.088*	9.854*	10.223*
*Alme	*	229.8189	*	10.383*	12.81*	11.867*
*Alme	*	217.0088	*	6.905*	8.902*	13.813*
*Alme	*	208.1064	*	8.46*	9.634*	7.5*
*Alme	*	198.4724	*	7.595*	8.041*	9.305*
*Alme	*	190.4317	*	9.457*	9.058*	9.677*
*Alme	*	181.3740	*	10.918*	12.685*	13.372*
*Alme	*	168.6892	*	14.104*	10.23*	9.802*
*Alme	*	158.4595	*	8.862*	11.849*	11.254*
*Alme	*	146.6102	*	10.508*	11.695*	15.079*
*Alme	*	134.9155	*	13.433*	10.072*	10.433*
*Alme	*	124.8436	*	17.171*	11.452*	5.724*
*Alme	*	113.3915	*	18.913*	10.894*	3.542*
*Alme	*	102.4974	*	15.369*	9.291*	9.095*
*Alme	*	93.20643	*	12.131*	6.754*	6.462*
*Alme	*	86.45223	*	11.185*	10.618*	11.11*
*Alme	*	81.1431	*Culvert	*	*	*
*Alme	*	75.83388	*	11.32*	11.276*	9.95*
*Alme	*	64.55781	*	9.961*	22.838*	22.144*
*Alme	*	41.72029	*	10.436*	18.278*	27.533*
*Alme	*	23.44198	*	8.606*	17.731*	26.12*
*Alme	*	5.711110	*	16.759*	5.711*	21.046*

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: Alme

* Reach	* River Sta.	* Contr.	* Expan.
Alme	346.0286	.1*	.3*
Alme	340.8620	.1*	.3*
Alme	337.1913	.1*	.3*
*Alme	332.0697*Culvert	*	*
Alme	326.9481	.1*	.3*
Alme	318.2890	.1*	.3*
Alme	311.6395	.1*	.3*
Alme	303.8436	.1*	.3*
Alme	295.9385	.1*	.3*
Alme	289.0909	.1*	.3*
Alme	283.2029	.1*	.3*
Alme	276.6229	.1*	.3*
Alme	267.6301	.1*	.3*
Alme	262.6338	.1*	.3*
Alme	258.5520	.1*	.3*

*Alme	*	248.4231*	.1*	.3*
*Alme	*	239.6731*	.1*	.3*
*Alme	*	229.8189*	.1*	.3*
*Alme	*	217.0088*	.1*	.3*
*Alme	*	208.1064*	.1*	.3*
*Alme	*	198.4724*	.1*	.3*
*Alme	*	190.4317*	.1*	.3*
*Alme	*	181.3740*	.1*	.3*
*Alme	*	168.6892*	.1*	.3*
*Alme	*	158.4595*	.1*	.3*
*Alme	*	146.6102*	.1*	.3*
*Alme	*	134.9155*	.1*	.3*
*Alme	*	124.8436*	.1*	.3*
*Alme	*	113.3915*	.1*	.3*
*Alme	*	102.4974*	.1*	.3*
*Alme	*	93.20643*	.1*	.3*
*Alme	*	86.45223*	.1*	.3*
*Alme	*	81.1431 *Culvert	*	*
*Alme	*	75.83388*	.1*	.3*
*Alme	*	64.55781*	.1*	.3*
*Alme	*	41.72029*	.1*	.3*
*Alme	*	23.44198*	.1*	.3*
*Alme	*	5.711110*	.1*	.3*

Profile Output Table - Standard Table 1

* Reach	* River Sta	* Profile	* Q Total	* Min Ch El	* W.S. Elev	* Crit W.S.	* E.G. Elev	* E.G. Slope	* Vel Chnl	* Flow Area	* Top Width	* Froude #	* Chl
*	*	*	(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	*	*
* Alme	* 346.0286	* T500	* 10.35	* 846.61	* 849.31	* 847.57	* 849.33	* 0.000170	* 0.51	* 20.96	* 11.33	* 0.11	*
* Alme	* 346.0286	* T10	* 3.44	* 846.61	* 849.03	* 847.19	* 849.03	* 0.000031	* 0.20	* 17.84	* 10.71	* 0.05	*
* Alme	* 340.8620	* T500	* 10.35	* 846.00	* 849.32	* 848.55	* 849.32	* 0.000050	* 0.33	* 35.22	* 21.86	* 0.06	*
* Alme	* 340.8620	* T10	* 3.44	* 846.00	* 849.03	* 847.39	* 849.03	* 0.000008	* 0.12	* 29.40	* 18.03	* 0.03	*
* Alme	* 337.1913	* T500	* 10.35	* 846.88	* 849.32	* 849.00	* 849.32	* 0.000061	* 0.31	* 37.49	* 25.37	* 0.07	*
* Alme	* 337.1913	* T10	* 3.44	* 846.88	* 849.03	* 848.05	* 849.03	* 0.000012	* 0.13	* 30.44	* 23.55	* 0.03	*
* Alme	* 332.0697	* Culvert	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 326.9481	* T500	* 10.35	* 839.91	* 842.18	* 842.18	* 843.29	* 0.012383	* 4.67	* 2.22	* 9.17	* 1.00	*
* Alme	* 326.9481	* T10	* 3.44	* 839.91	* 841.03	* 841.03	* 841.56	* 0.015705	* 3.23	* 1.07	* 6.74	* 1.00	*
* Alme	* 318.2890	* T500	* 10.35	* 837.00	* 837.47	* 838.12	* 842.56	* 0.798879	* 9.99	* 1.04	* 3.28	* 5.67	*
* Alme	* 318.2890	* T10	* 3.44	* 837.00	* 837.25	* 837.65	* 840.82	* 1.268645	* 8.37	* 0.41	* 2.46	* 6.54	*
* Alme	* 311.6395	* T500	* 10.35	* 834.68	* 835.14	* 835.62	* 837.89	* 0.462859	* 7.34	* 1.41	* 4.86	* 4.35	*
* Alme	* 311.6395	* T10	* 3.44	* 834.68	* 835.00	* 835.23	* 836.09	* 0.348006	* 4.62	* 0.74	* 4.19	* 3.50	*
* Alme	* 303.8436	* T500	* 10.35	* 832.72	* 833.29	* 833.73	* 835.16	* 0.229617	* 6.06	* 1.71	* 4.53	* 3.15	*
* Alme	* 303.8436	* T10	* 3.44	* 832.72	* 833.08	* 833.30	* 833.93	* 0.211859	* 4.08	* 0.84	* 3.90	* 2.80	*
* Alme	* 295.9385	* T500	* 10.35	* 831.62	* 832.41	* 832.78	* 833.69	* 0.122543	* 5.02	* 2.06	* 4.41	* 2.34	*
* Alme	* 295.9385	* T10	* 3.44	* 831.62	* 832.14	* 832.32	* 832.73	* 0.102531	* 3.39	* 1.02	* 3.51	* 2.01	*
* Alme	* 289.0909	* T500	* 10.35	* 830.83	* 831.45	* 831.82	* 832.76	* 0.150764	* 5.07	* 2.04	* 5.17	* 2.57	*
* Alme	* 289.0909	* T10	* 3.44	* 830.83	* 831.21	* 831.40	* 831.89	* 0.145327	* 3.65	* 0.94	* 3.86	* 2.36	*
* Alme	* 283.2029	* T500	* 10.35	* 830.17	* 830.89	* 831.18	* 831.88	* 0.118852	* 4.41	* 2.34	* 6.22	* 2.30	*
* Alme	* 283.2029	* T10	* 3.44	* 830.17	* 830.66	* 830.81	* 831.14	* 0.096413	* 3.08	* 1.12	* 4.35	* 1.94	*

* Alme	* 276.6229	* T500	* 10.35 *	829.52 *	830.28 *	830.55 *	831.15 *	0.093661 *	4.13 *	2.50 *	6.07 *	2.05 *
* Alme	* 276.6229	* T10	* 3.44 *	829.52 *	830.02 *	830.17 *	830.49 *	0.098502 *	3.03 *	1.14 *	4.60 *	1.95 *
* Alme	* 267.6301	* T500	* 10.35 *	828.16 *	828.90 *	829.20 *	830.05 *	0.154960 *	4.77 *	2.17 *	6.16 *	2.56 *
* Alme	* 267.6301	* T10	* 3.44 *	828.16 *	829.19 *	828.85 *	829.22 *	0.002536 *	0.81 *	4.24 *	7.81 *	0.35 *
* Alme	* 262.6338	* T500	* 10.35 *	827.03 *	829.26 *	829.28 *	829.49 *	0.037536 *	2.09 *	4.95 *	14.39 *	1.12 *
* Alme	* 262.6338	* T10	* 3.44 *	827.03 *	829.09 *	829.09 *	829.18 *	0.033351 *	1.36 *	2.56 *	13.08 *	0.95 *
* Alme	* 258.5520	* T500	* 10.35 *	826.03 *	826.61 *	827.11 *	828.94 *	0.280525 *	6.76 *	1.53 *	3.86 *	3.42 *
* Alme	* 258.5520	* T10	* 3.44 *	826.03 *	826.30 *	826.65 *	828.57 *	0.698695 *	6.68 *	0.52 *	2.67 *	4.85 *
* Alme	* 248.4231	* T500	* 10.35 *	825.69 *	826.21 *	826.41 *	826.90 *	0.095942 *	3.68 *	2.81 *	8.33 *	2.02 *
* Alme	* 248.4231	* T10	* 3.44 *	825.69 *	826.05 *	826.12 *	826.30 *	0.071535 *	2.22 *	1.55 *	8.05 *	1.61 *
* Alme	* 239.6731	* T500	* 10.35 *	825.39 *	826.21 *	826.17 *	826.42 *	0.015569 *	1.99 *	5.20 *	9.95 *	0.88 *
* Alme	* 239.6731	* T10	* 3.44 *	825.39 *	825.93 *	825.88 *	826.03 *	0.015739 *	1.37 *	2.51 *	8.60 *	0.81 *
* Alme	* 229.8189	* T500	* 10.35 *	825.12 *	826.00 *	826.00 *	826.23 *	0.021610 *	2.13 *	4.86 *	10.88 *	1.02 *
* Alme	* 229.8189	* T10	* 3.44 *	825.12 *	825.68 *	825.68 *	825.83 *	0.024775 *	1.70 *	2.02 *	7.00 *	1.01 *
* Alme	* 217.0088	* T500	* 10.35 *	824.35 *	824.98 *	825.16 *	825.63 *	0.129310 *	3.57 *	2.91 *	11.87 *	2.27 *
* Alme	* 217.0088	* T10	* 3.44 *	824.35 *	824.81 *	824.93 *	825.20 *	0.127109 *	2.75 *	1.25 *	7.17 *	2.10 *
* Alme	* 208.1064	* T500	* 10.35 *	823.04 *	823.48 *	823.74 *	824.40 *	0.142819 *	4.23 *	2.44 *	8.06 *	2.45 *
* Alme	* 208.1064	* T10	* 3.44 *	823.04 *	823.29 *	823.44 *	823.83 *	0.184179 *	3.24 *	1.06 *	6.36 *	2.53 *
* Alme	* 198.4724	* T500	* 10.35 *	822.61 *	823.20 *	823.29 *	823.56 *	0.041471 *	2.67 *	3.89 *	10.35 *	1.37 *
* Alme	* 198.4724	* T10	* 3.44 *	822.61 *	823.03 *	823.03 *	823.15 *	0.027586 *	1.54 *	2.23 *	9.83 *	1.03 *
* Alme	* 190.4317	* T500	* 10.35 *	822.28 *	823.06 *	823.09 *	823.32 *	0.025206 *	2.25 *	4.60 *	10.63 *	1.09 *
* Alme	* 190.4317	* T10	* 3.44 *	822.28 *	822.78 *	822.79 *	822.93 *	0.027129 *	1.70 *	2.03 *	7.58 *	1.05 *
* Alme	* 181.3740	* T500	* 10.35 *	820.90 *	821.28 *	821.62 *	822.69 *	0.221523 *	5.26 *	1.97 *	6.44 *	3.04 *
* Alme	* 181.3740	* T10	* 3.44 *	820.90 *	821.08 *	821.28 *	822.18 *	0.524999 *	4.66 *	0.74 *	5.62 *	4.10 *
* Alme	* 168.6892	* T500	* 10.35 *	818.95 *	819.29 *	819.51 *	820.09 *	0.165715 *	3.95 *	2.62 *	11.00 *	2.56 *
* Alme	* 168.6892	* T10	* 3.44 *	818.95 *	819.19 *	819.27 *	819.45 *	0.101297 *	2.25 *	1.53 *	10.15 *	1.85 *
* Alme	* 158.4595	* T500	* 10.35 *	814.62 *	814.88 *	815.20 *	816.98 *	0.640477 *	6.41 *	1.61 *	8.87 *	4.80 *
* Alme	* 158.4595	* T10	* 3.44 *	814.62 *	814.75 *	814.95 *	816.64 *	1.591070 *	6.09 *	0.56 *	6.64 *	6.67 *
* Alme	* 146.6102	* T500	* 10.35 *	813.33 *	813.74 *	813.88 *	814.21 *	0.091468 *	3.03 *	3.41 *	13.41 *	1.92 *
* Alme	* 146.6102	* T10	* 3.44 *	813.33 *	813.61 *	813.67 *	813.80 *	0.072470 *	1.92 *	1.79 *	11.69 *	1.57 *
* Alme	* 134.9155	* T500	* 10.35 *	811.90 *	813.24 *	812.33 *	813.25 *	0.000311 *	0.48 *	21.92 *	19.72 *	0.14 *
* Alme	* 134.9155	* T10	* 3.44 *	811.90 *	812.04 *	812.13 *	812.38 *	0.234446 *	2.57 *	1.34 *	13.61 *	2.62 *
* Alme	* 124.8436	* T500	* 10.35 *	811.28 *	813.25 *	813.25 *	813.25 *	0.000076 *	0.29 *	35.42 *	21.92 *	0.07 *
* Alme	* 124.8436	* T10	* 3.44 *	811.28 *	812.15 *	811.57 *	812.15 *	0.000277 *	0.29 *	12.02 *	20.76 *	0.12 *
* Alme	* 113.3915	* T500	* 10.35 *	810.88 *	813.25 *	813.25 *	813.25 *	0.000033 *	0.22 *	47.40 *	25.05 *	0.05 *
* Alme	* 113.3915	* T10	* 3.44 *	810.88 *	812.15 *	812.15 *	812.15 *	0.000034 *	0.15 *	22.44 *	20.99 *	0.05 *
* Alme	* 102.4974	* T500	* 10.35 *	810.90 *	813.25 *	813.25 *	813.25 *	0.000035 *	0.24 *	44.84 *	22.34 *	0.05 *
* Alme	* 102.4974	* T10	* 3.44 *	810.90 *	812.15 *	812.15 *	812.15 *	0.000038 *	0.17 *	21.39 *	20.56 *	0.05 *
* Alme	* 93.20643	* T500	* 10.35 *	811.27 *	813.23 *	811.94 *	813.25 *	0.000241 *	0.50 *	21.12 *	12.85 *	0.12 *
* Alme	* 93.20643	* T10	* 3.44 *	811.27 *	812.14 *	811.65 *	812.15 *	0.000778 *	0.49 *	7.10 *	11.91 *	0.20 *
* Alme	* 86.45223	* T500	* 10.35 *	811.10 *	813.22 *	812.20 *	813.24 *	0.000455 *	0.71 *	15.66 *	10.36 *	0.18 *
* Alme	* 86.45223	* T10	* 3.44 *	811.10 *	812.06 *	811.65 *	812.13 *	0.003109 *	1.24 *	2.77 *	8.20 *	0.41 *

*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 81.1431	*	* Culvert	*	*	*	*	*	*	*	*	*	*	*
* Alme	* 75.83388	* T500	* 10.35 *	809.20 *	809.97 *	810.49 *	811.94 *	0.136986 *	6.23 *	1.66 *	25.25 *	2.67 *		
* Alme	* 75.83388	* T10	* 3.44 *	809.20 *	809.62 *	809.92 *	811.12 *	0.373718 *	5.42 *	0.63 *	20.67 *	3.76 *		
* Alme	* 64.55781	* T500	* 10.35 *	805.29 *	805.82 *	806.35 *	809.13 *	0.513146 *	8.06 *	1.28 *	4.06 *	4.57 *		
* Alme	* 64.55781	* T10	* 3.44 *	805.29 *	805.65 *	805.93 *	806.99 *	0.351721 *	5.12 *	0.67 *	3.20 *	3.56 *		
* Alme	* 41.72029	* T500	* 10.35 *	802.87 *	803.32 *	803.54 *	804.06 *	0.096836 *	3.82 *	2.71 *	7.72 *	2.06 *		
* Alme	* 41.72029	* T10	* 3.44 *	802.87 *	803.14 *	803.23 *	803.44 *	0.076188 *	2.40 *	1.44 *	6.96 *	1.68 *		
* Alme	* 23.44198	* T500	* 10.35 *	801.61 *	802.11 *	802.24 *	802.56 *	0.064697 *	3.02 *	3.52 *	11.73 *	1.68 *		
* Alme	* 23.44198	* T10	* 3.44 *	801.61 *	801.95 *	802.01 *	802.16 *	0.062061 *	2.05 *	1.70 *	9.79 *	1.50 *		
* Alme	* 5.711110	* T500	* 10.35 *	800.89 *	801.37 *	801.45 *	801.69 *	0.036542 *	2.49 *	4.16 *	10.97 *	1.29 *		
* Alme	* 5.711110	* T10	* 3.44 *	800.89 *	801.16 *	801.19 *	801.31 *	0.036814 *	1.71 *	2.02 *	9.44 *	1.18 *		

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ERRORS WARNINGS AND NOTES

Errors Warnings and Notes for Plan : alme

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River: Alme Reach: Alme RS: 346.0286 Profile: T500
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Alme Reach: Alme RS: 346.0286 Profile: T10
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Alme Reach: Alme RS: 340.8620 Profile: T500
Warning:Multiple water surfaces were found that could balance the energy equation. The program selected the water surface
whose main channel velocity head was the closest to the previously computed cross section.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Alme Reach: Alme RS: 340.8620 Profile: T10
Warning:Multiple water surfaces were found that could balance the energy equation. The program selected the water surface
whose main channel velocity head was the closest to the previously computed cross section.
Warning:Divided flow computed for this cross-section.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Alme Reach: Alme RS: 337.1913 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was
used.
River: Alme Reach: Alme RS: 332.0697 Profile: T500
Warning:The flow through the culvert is supercritical. However, since there is flow over the road (weir flow), the program
cannot determine if the downstream cross section should be subcritical or supercritical. The program used the
downstream subcritical answer, even though it may not be valid.
River: Alme Reach: Alme RS: 332.0697 Profile: T500 Culv: Culvert #1
Note: The flow in the culvert is entirely supercritical.
River: Alme Reach: Alme RS: 332.0697 Profile: T10
Warning:The flow through the culvert is supercritical. However, since there is flow over the road (weir flow), the program
cannot determine if the downstream cross section should be subcritical or supercritical. The program used the
downstream subcritical answer, even though it may not be valid.
River: Alme Reach: Alme RS: 332.0697 Profile: T10 Culv: Culvert #1
Warning:During the culvert inlet control computations, the program could not balance the culvert/weir flow. The reported
inlet energy grade answer may not be valid.
Note: The flow in the culvert is entirely supercritical.
River: Alme Reach: Alme RS: 326.9481 Profile: T500
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning:Divided flow computed for this cross-section.
```

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 326.9481 Profile: T10
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 318.2890 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 318.2890 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 311.6395 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 311.6395 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 303.8436 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 303.8436 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 295.9385 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 295.9385 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate

the need for additional cross sections.

River: Alme Reach: Alme RS: 289.0909 Profile: T500
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 289.0909 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 283.2029 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 283.2029 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 276.6229 Profile: T500
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 276.6229 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 267.6301 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 267.6301 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 262.6338 Profile: T500
Warning: The energy equation could not be balanced within the specified number of iterations. The program selected the water surface that had the least amount of error between computed and assumed values.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 262.6338 Profile: T10
Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Warning: The parabolic search method failed to converge on critical depth. The program will try the cross section slice/secant method to find critical depth.

River: Alme Reach: Alme RS: 258.5520 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 258.5520 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 248.4231 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.

This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 248.4231 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 239.6731 Profile: T500

Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 239.6731 Profile: T10

Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 229.8189 Profile: T500

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

River: Alme Reach: Alme RS: 229.8189 Profile: T10

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.

River: Alme Reach: Alme RS: 217.0088 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 217.0088 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 208.1064 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 208.1064 Profile: T10

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 198.4724 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 198.4724 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 190.4317 Profile: T500

Warning: The energy equation could not be balanced within the specified number of iterations. The program selected the water

Note: Hydraulic jump has occurred between this cross section and the previous upstream section.

River: Alme Reach: Alme RS: 102.4974 Profile: T500
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 102.4974 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 93.20643 Profile: T500
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 93.20643 Profile: T10
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Alme Reach: Alme RS: 86.45223 Profile: T500
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 86.45223 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 81.1431 Profile: T500
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 81.1431 Profile: T500 Culv: Culvert #1
Note: The flow in the culvert is entirely supercritical.

River: Alme Reach: Alme RS: 81.1431 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Alme Reach: Alme RS: 81.1431 Profile: T10 Culv: Culvert #1
Note: The flow in the culvert is entirely supercritical.

River: Alme Reach: Alme RS: 64.55781 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 64.55781 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 41.72029 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 41.72029 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 23.44198 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 23.44198 Profile: T10
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

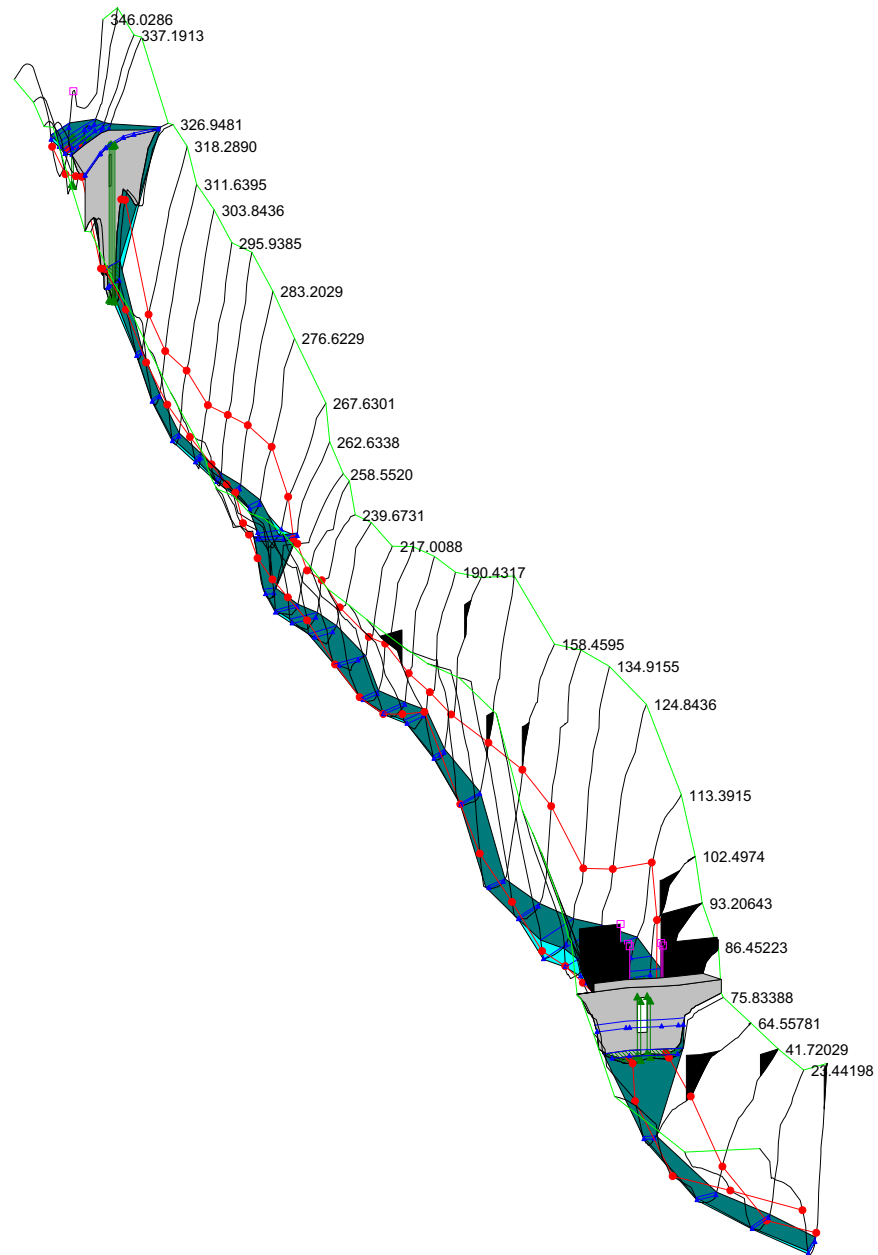
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Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Alme Reach: Alme RS: 5.711110 Profile: T10

Warning: The energy loss was greater than 1.0 ft (0.3 m) between the current and previous cross section. This may indicate the need for additional cross sections.



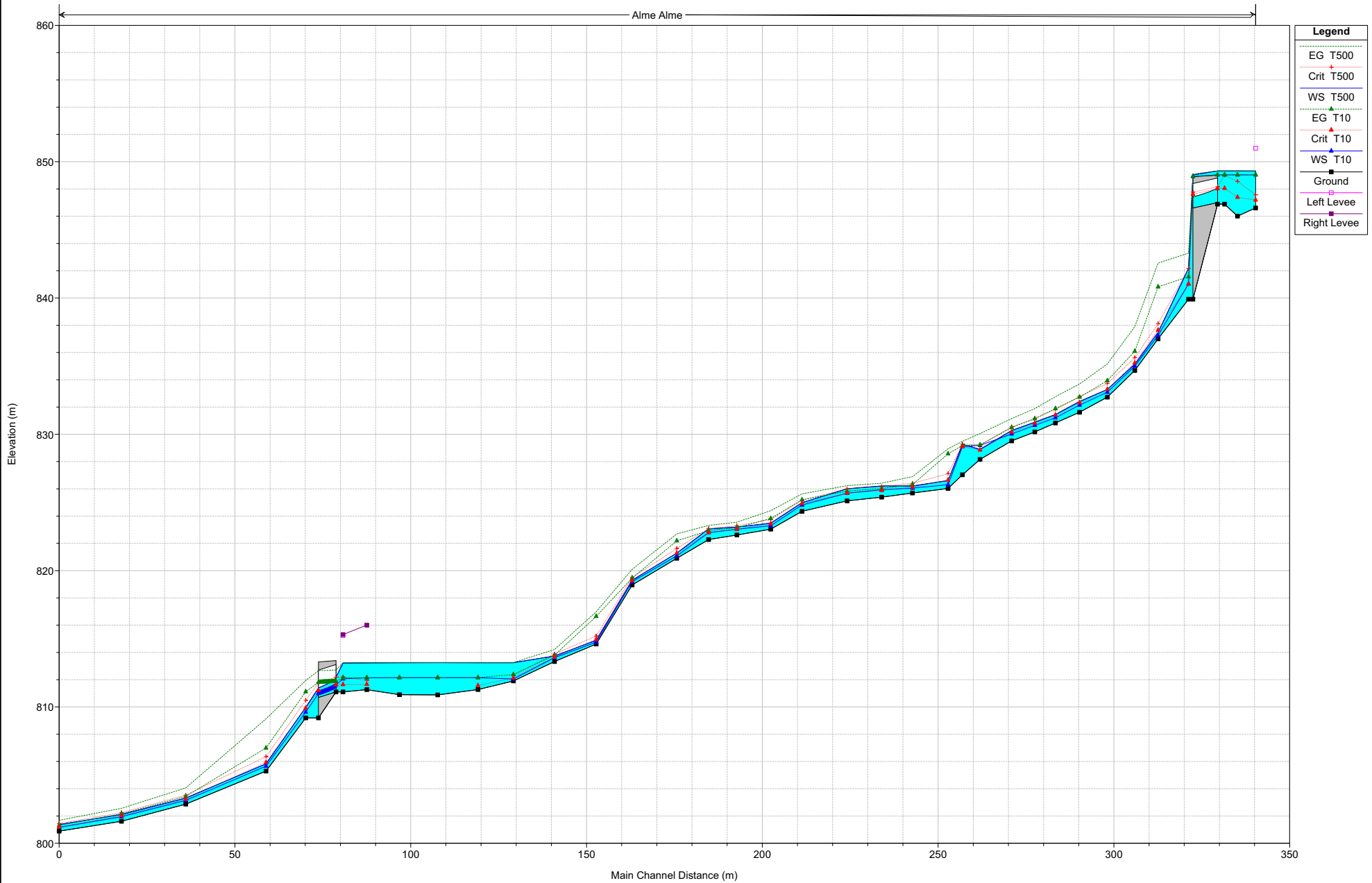
alme Plan: Plan 02
Geom: alme Flow: Flow 01



Legend	
	WS T500
	WS T10
	Ground
	Levee
	Bank Sta
	Ineff

alme Plan: Plan 02
Geom: alme Flow: Flow 01

Alme Alme



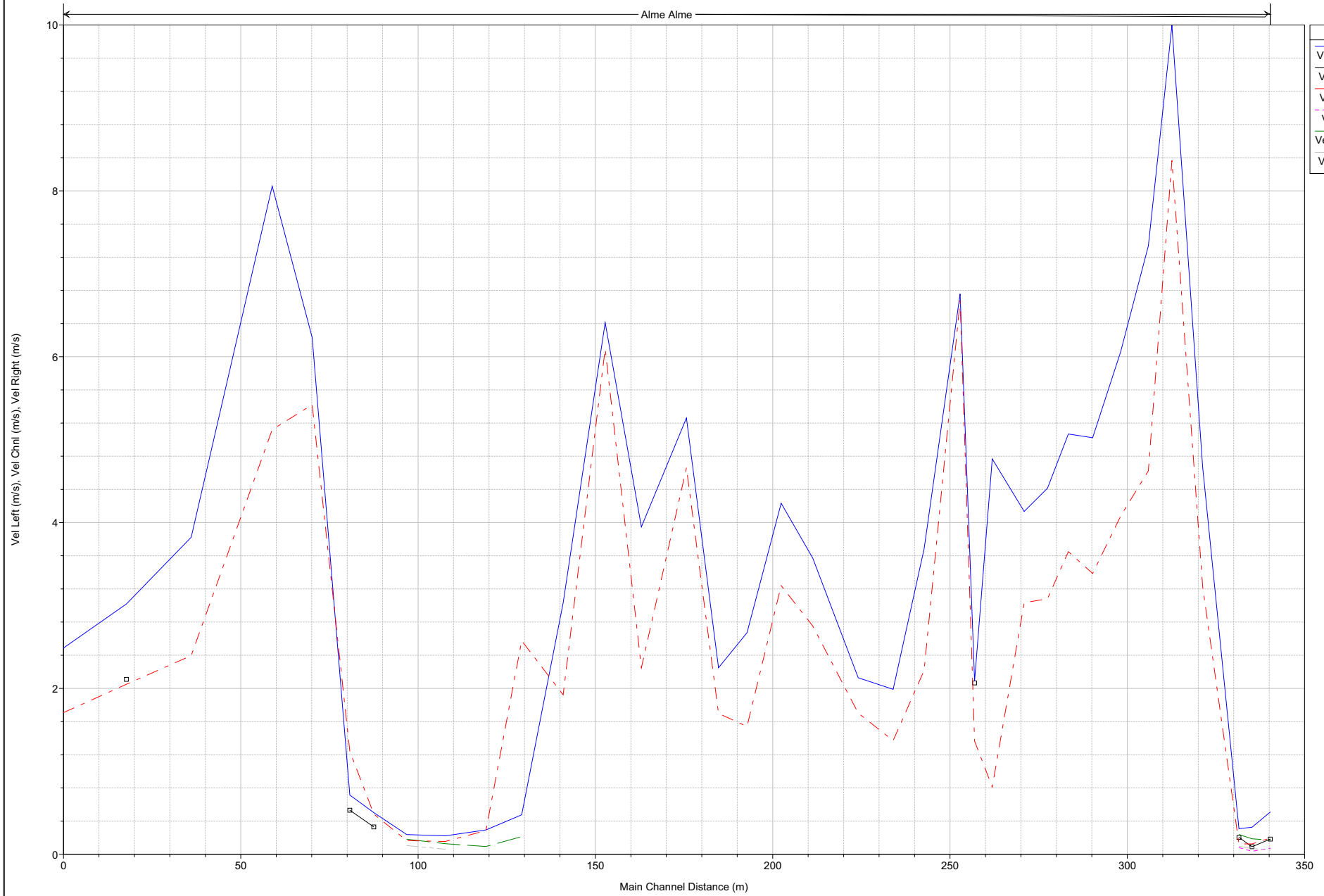
Legend	
EG T500	Green dashed line with triangle markers
Crit T500	Red dashed line with triangle markers
WS T500	Blue solid line with triangle markers
EG T10	Red dashed line with triangle markers
Crit T10	Red dashed line with triangle markers
WS T10	Red solid line with triangle markers
Ground	Black solid line with square markers
Left Levee	Pink square marker
Right Levee	Purple square marker

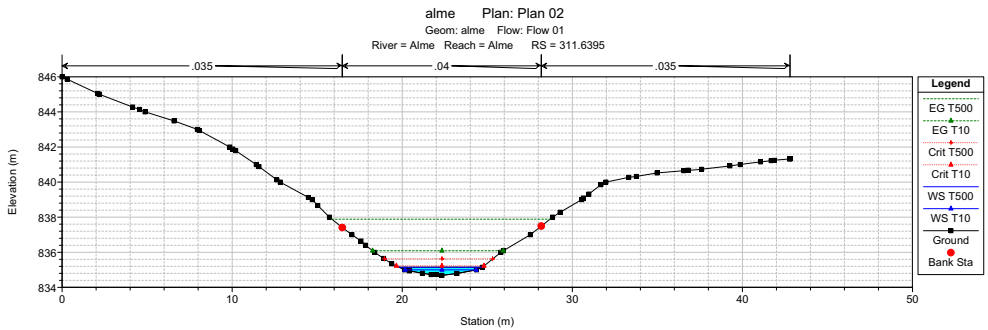
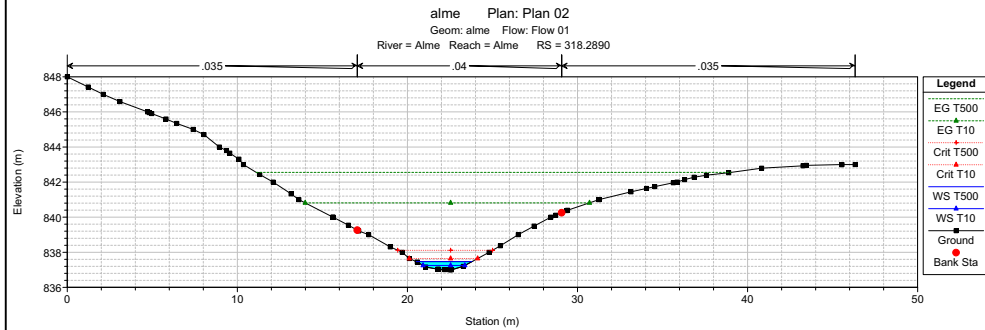
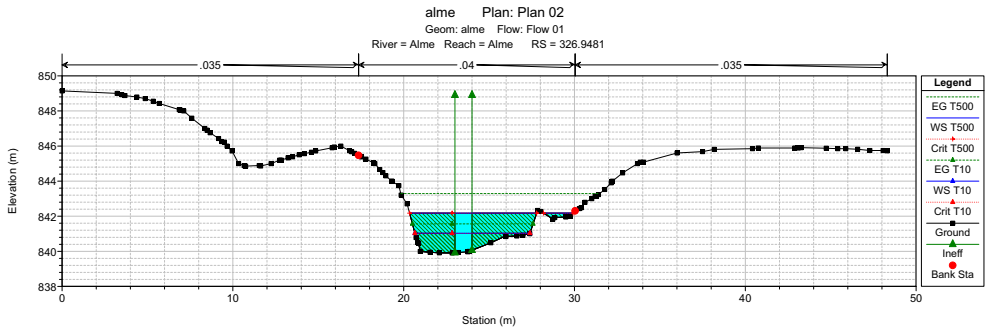
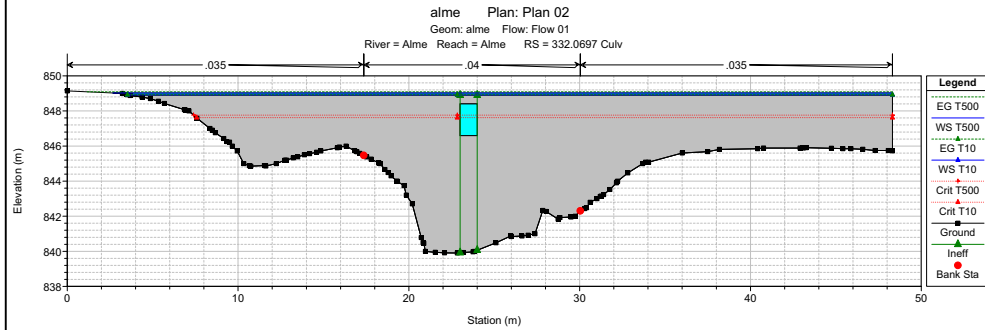
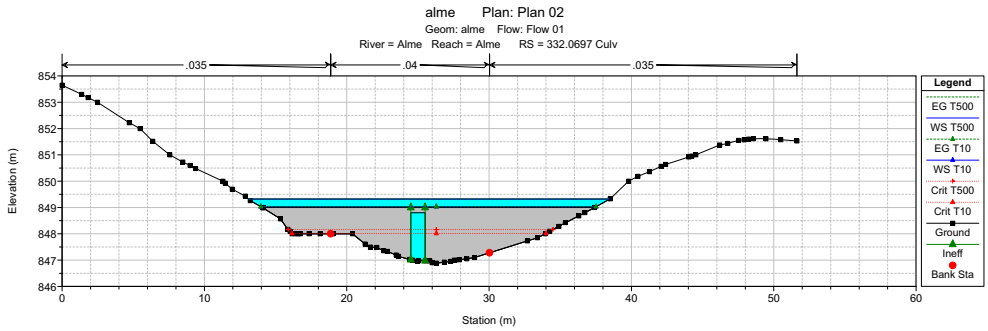
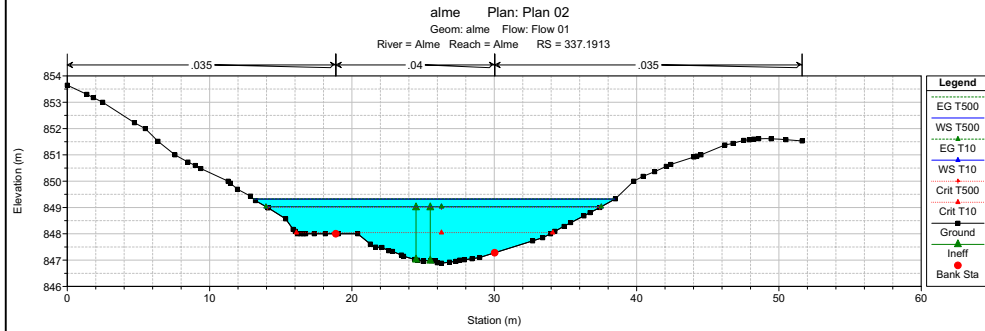
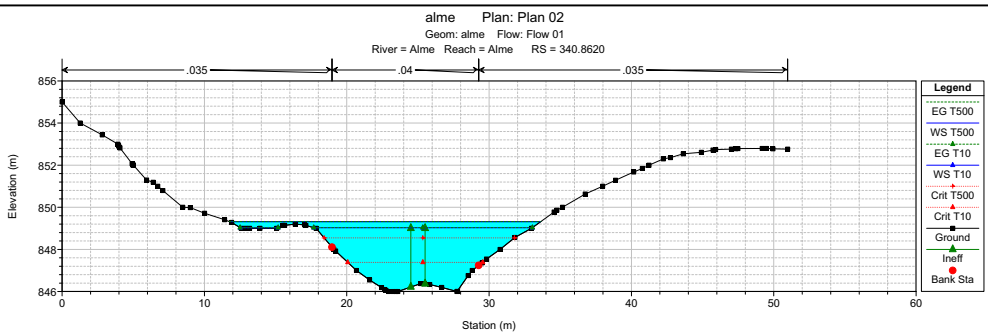
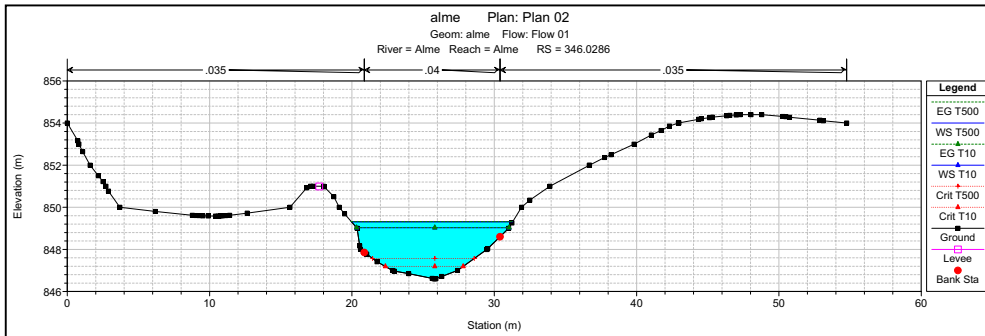
alme Plan: Plan 02
Geom: alme Flow: Flow 01

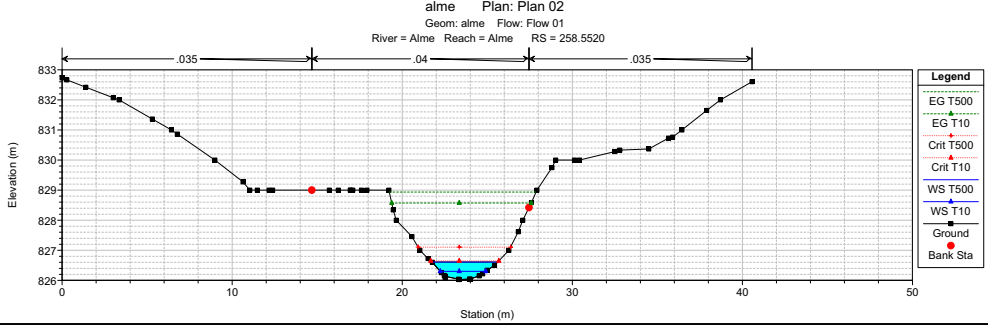
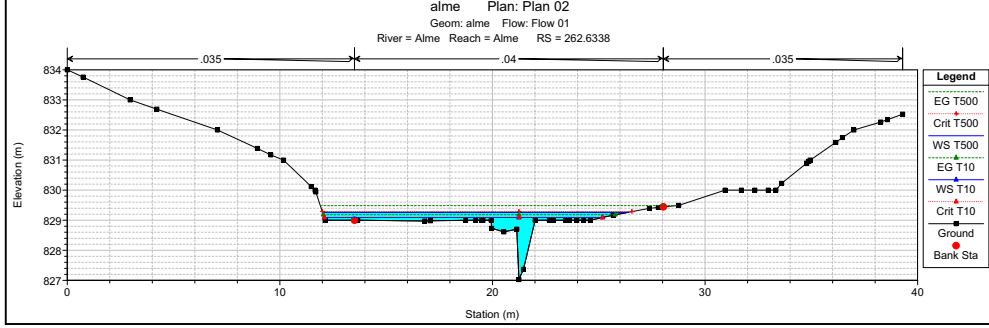
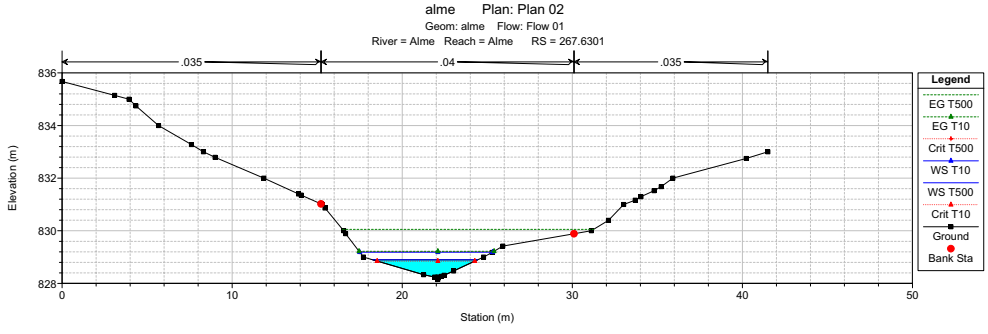
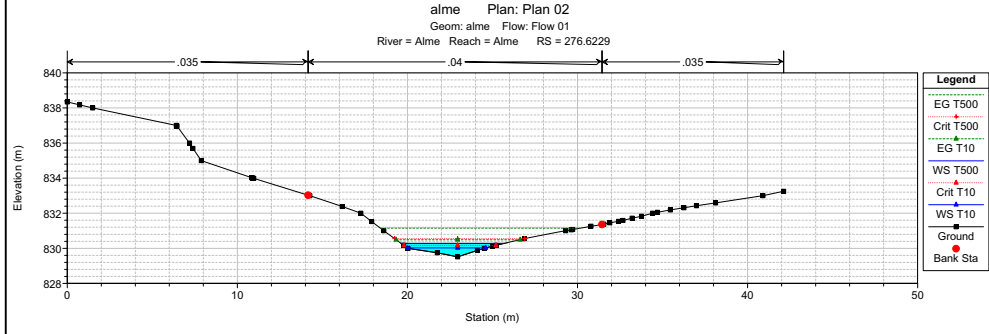
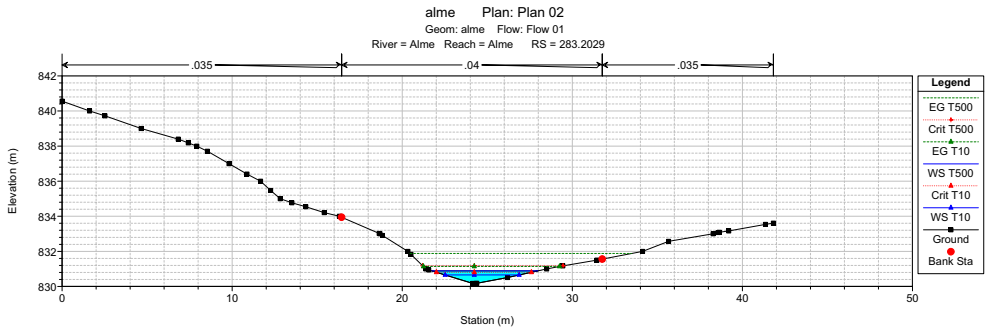
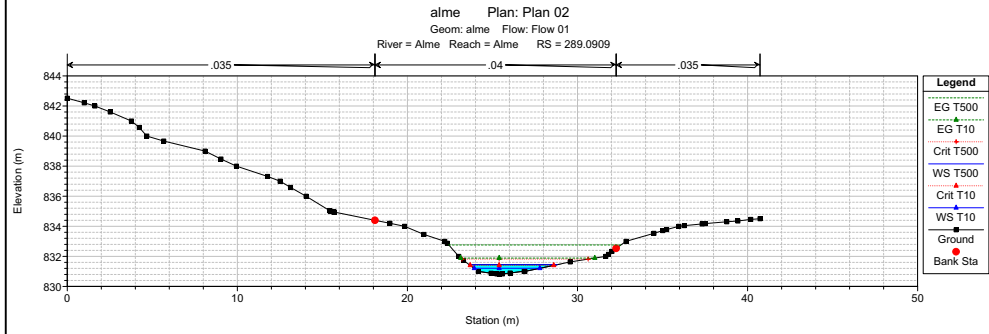
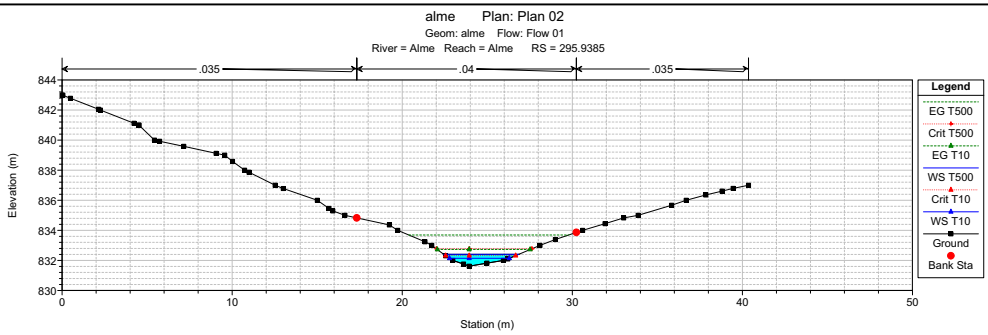
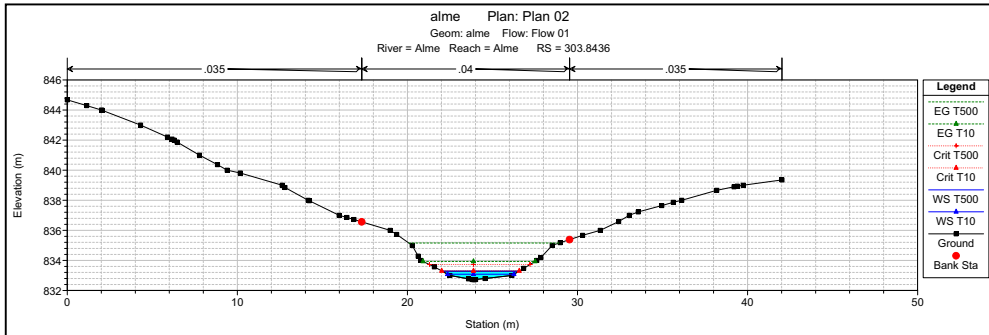
Alme Alme

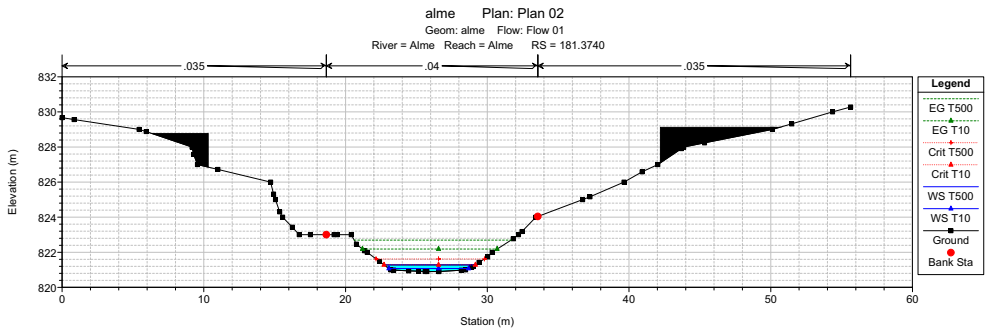
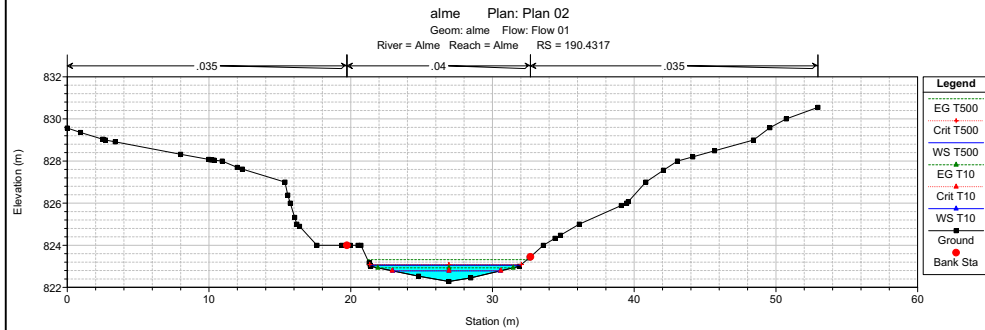
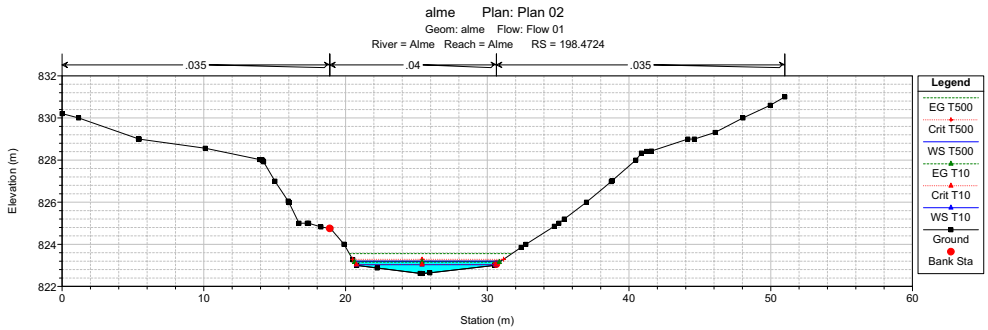
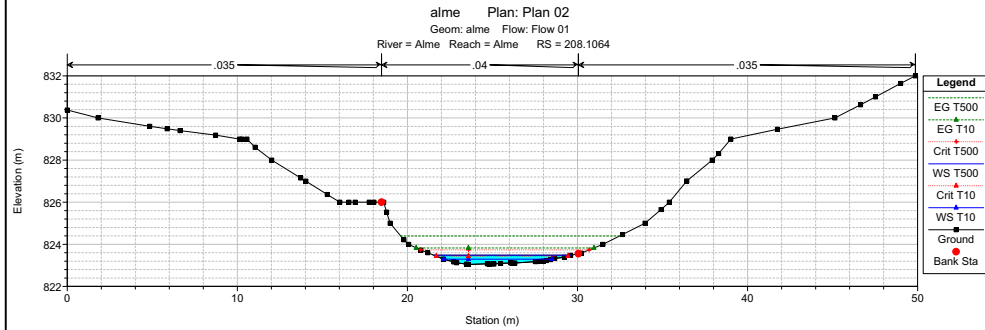
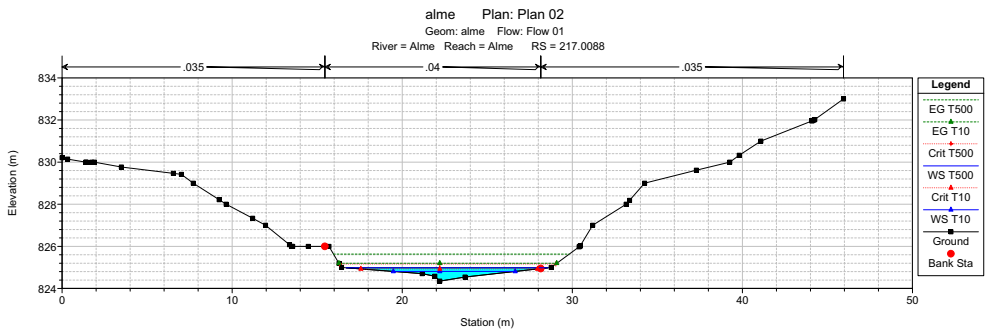
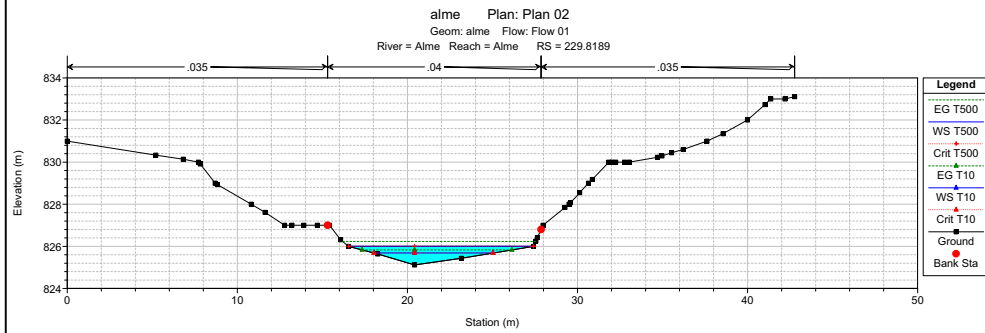
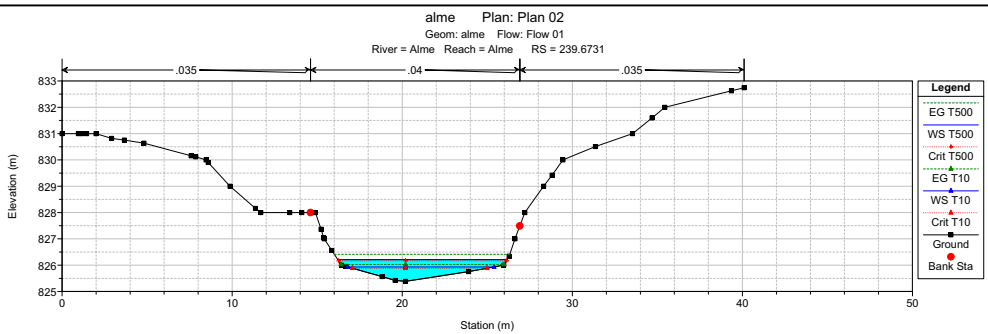
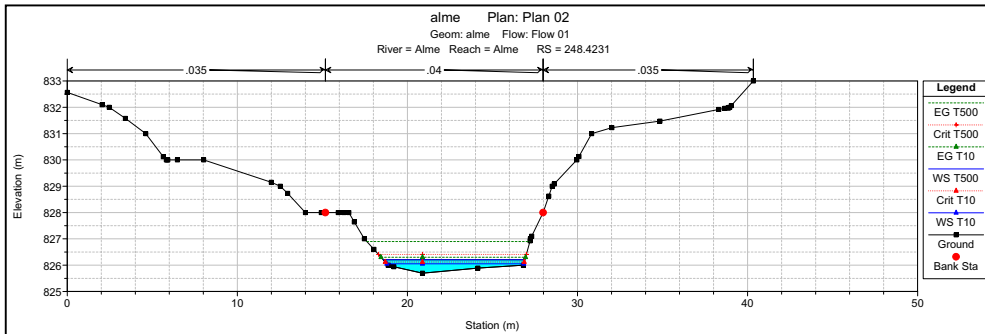
Legend

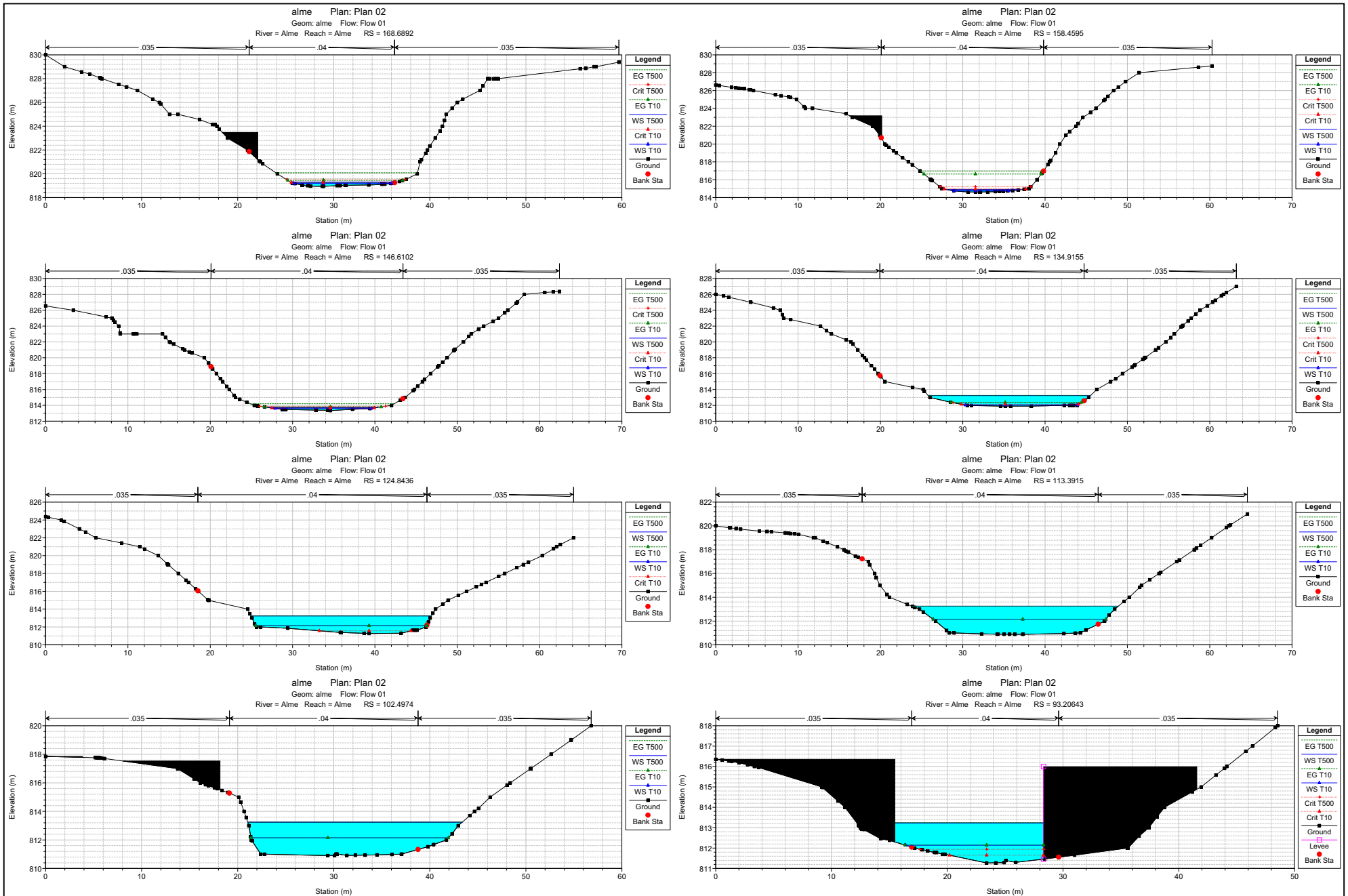
- Vel Chnl T500
- Vel Left T500
- Vel Chnl T10
- Vel Left T10
- Vel Right T500
- Vel Right T10

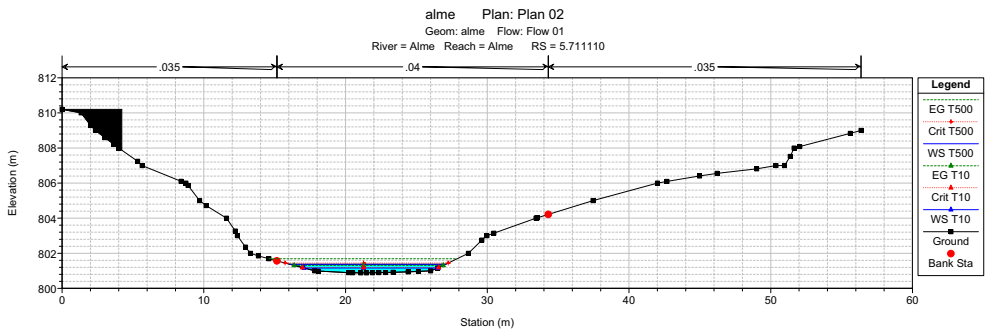
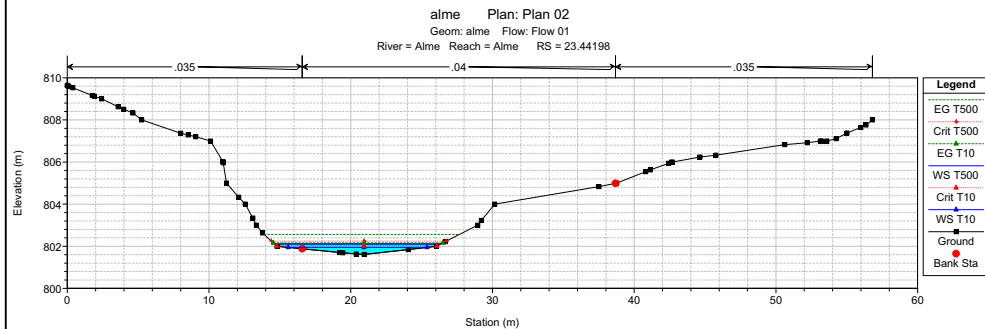
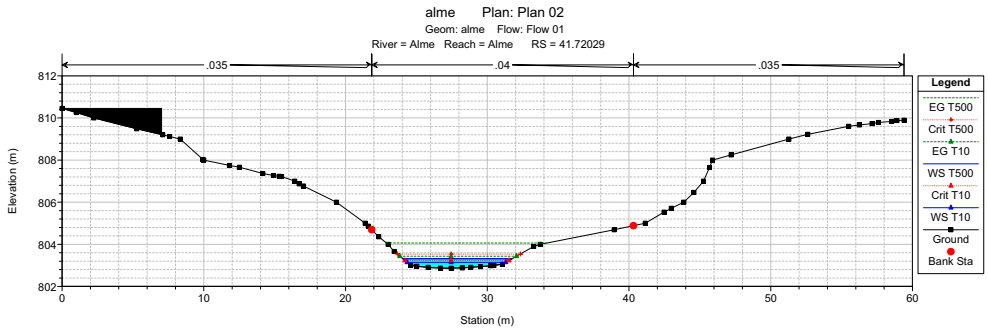
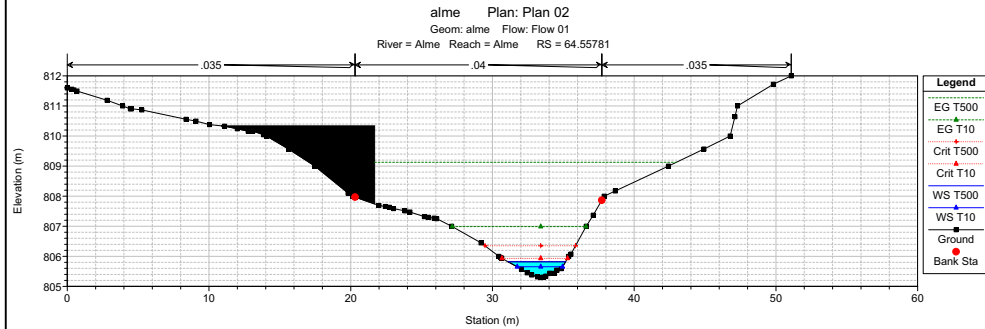
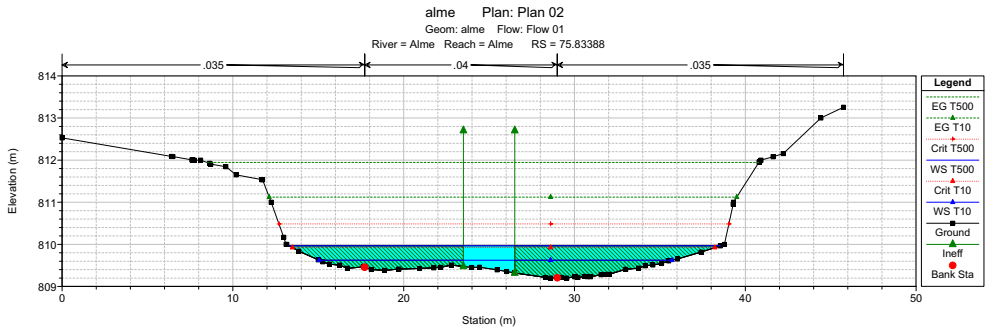
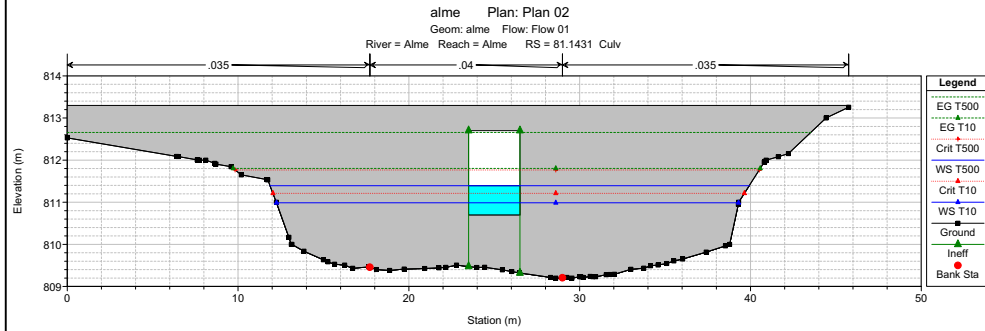
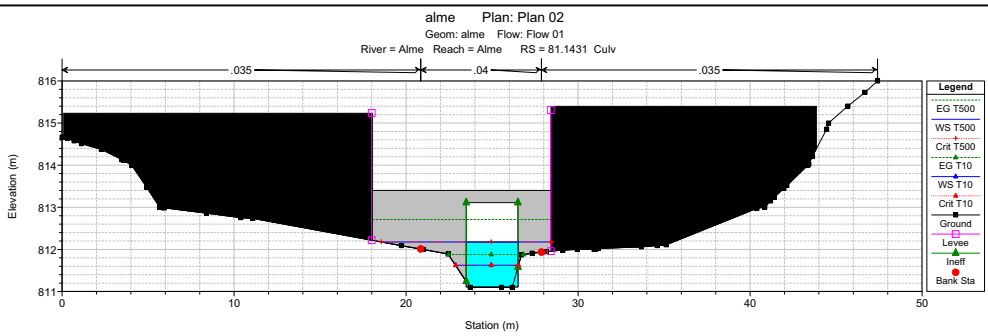
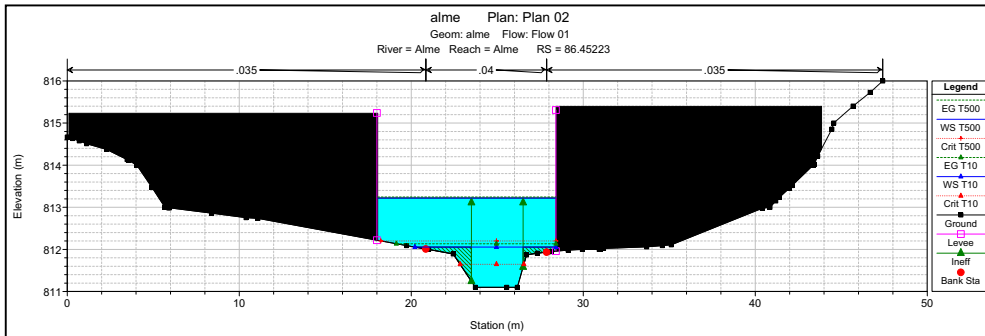


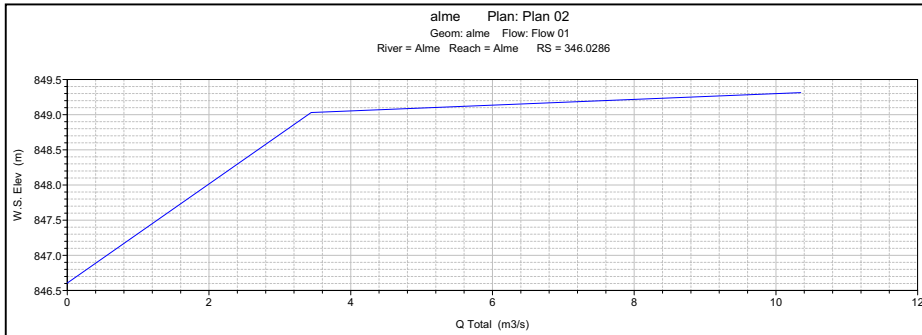




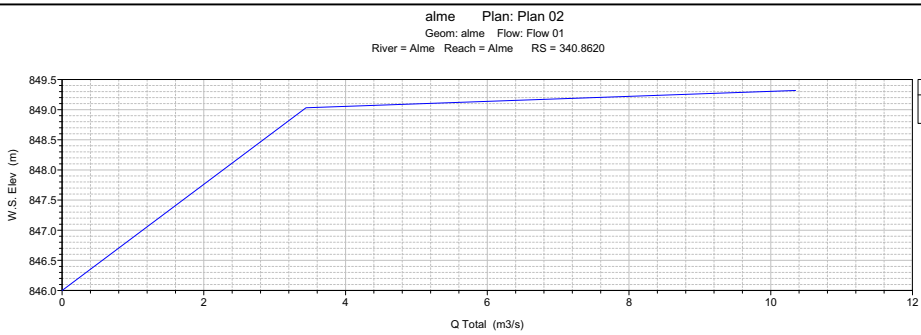




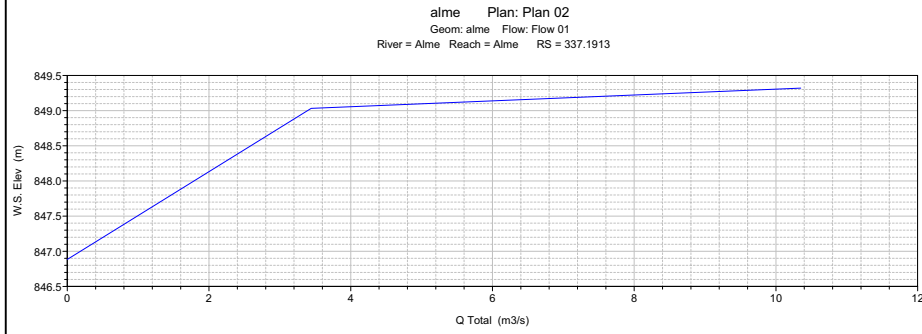




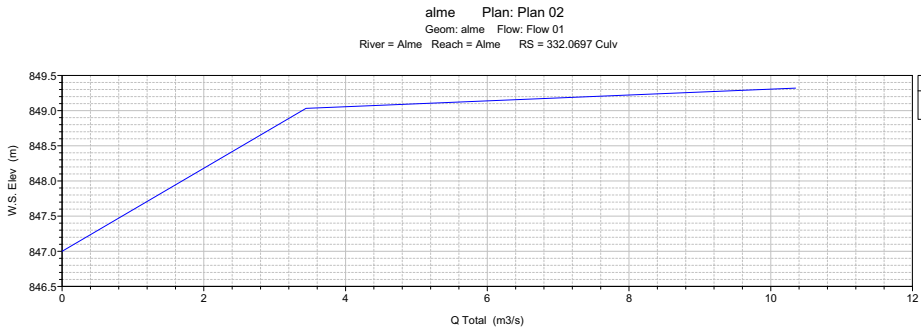
Legend
W.S. Elev



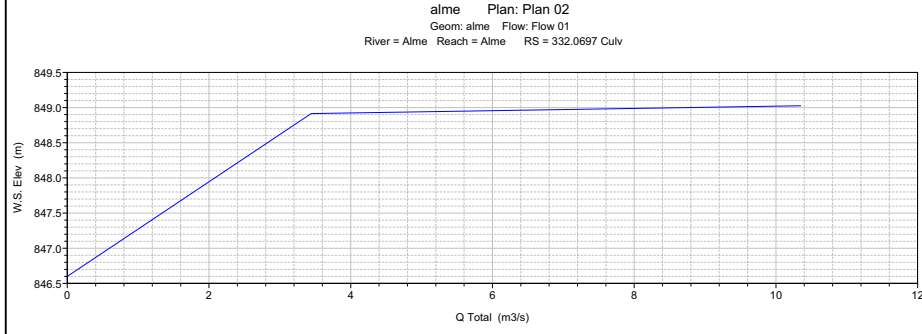
Legend
W.S. Elev



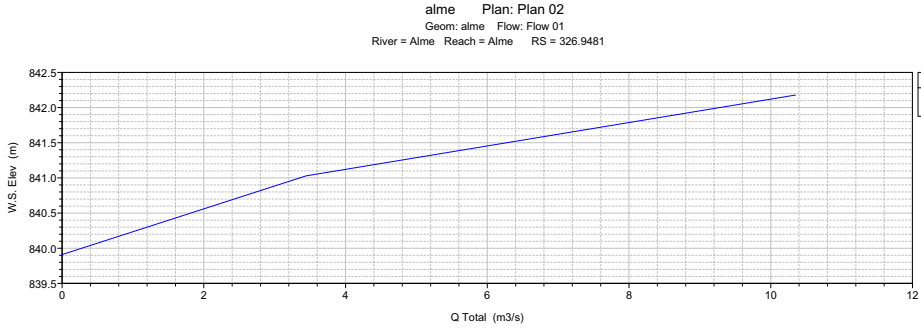
Legend
W.S. Elev



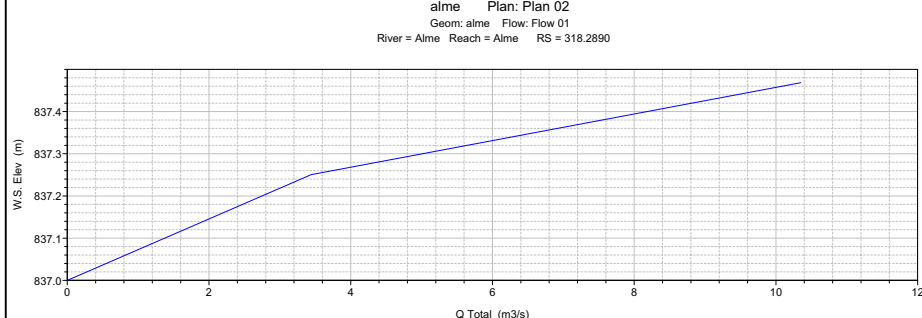
Legend
W.S. Elev



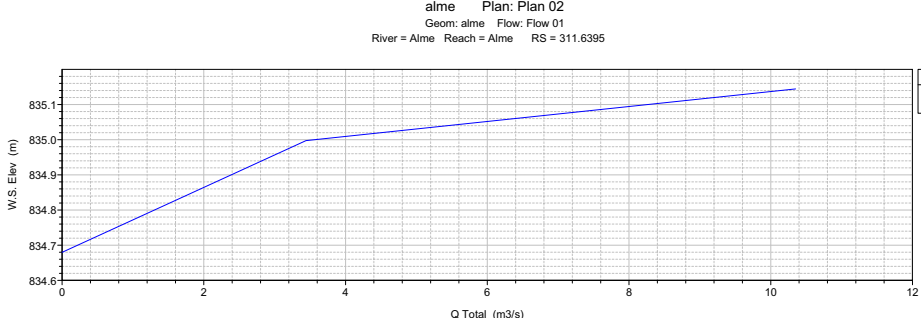
Legend
W.S. Elev



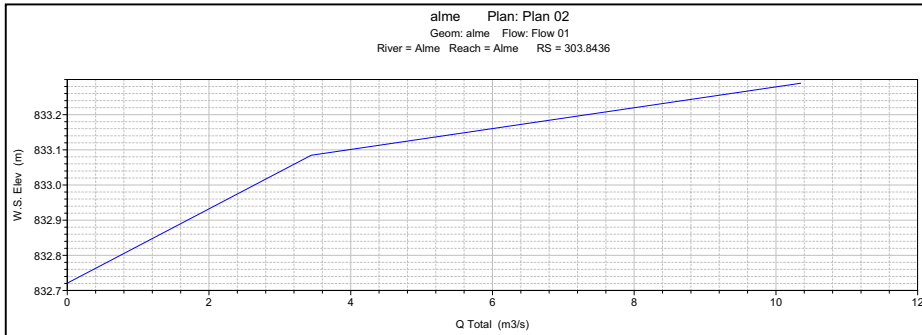
Legend
W.S. Elev



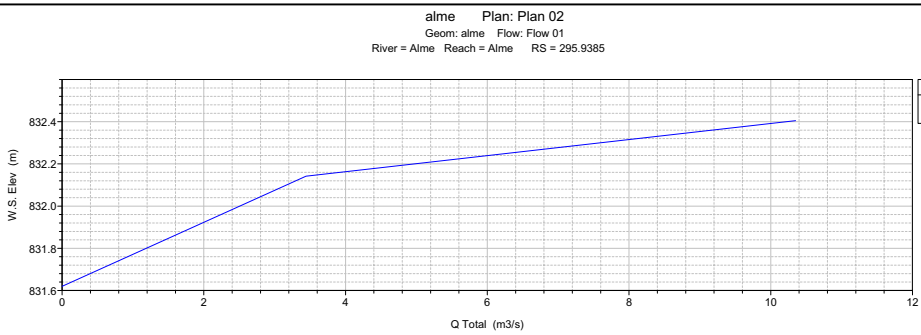
Legend
W.S. Elev



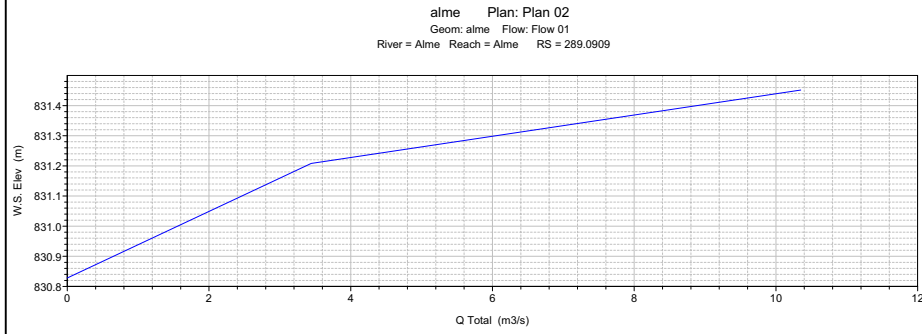
Legend
W.S. Elev



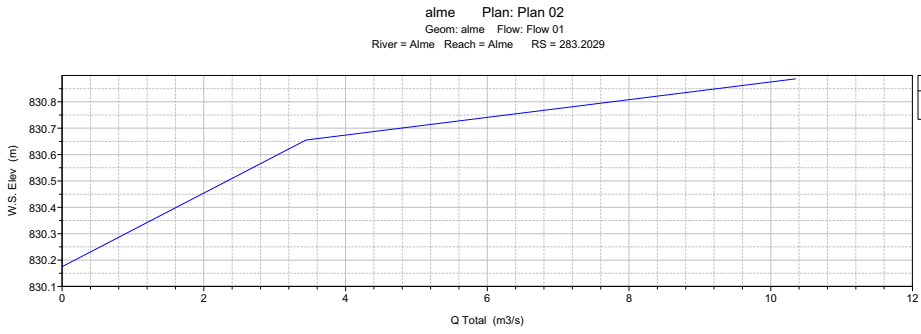
Legend
W.S. Elev



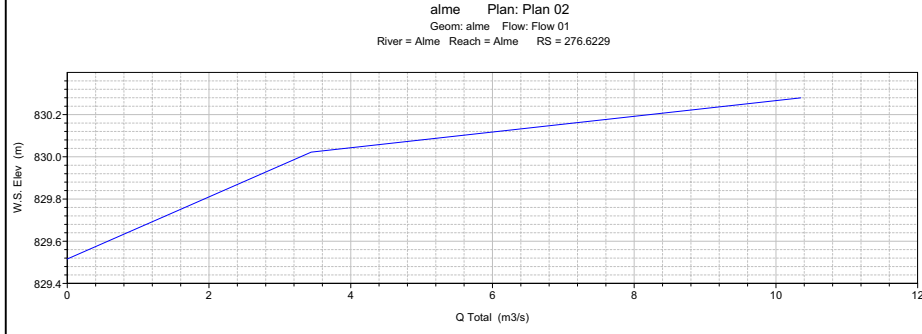
Legend
W.S. Elev



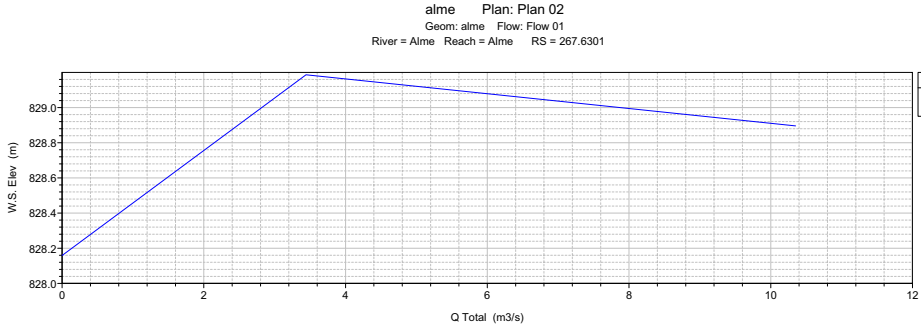
Legend
W.S. Elev



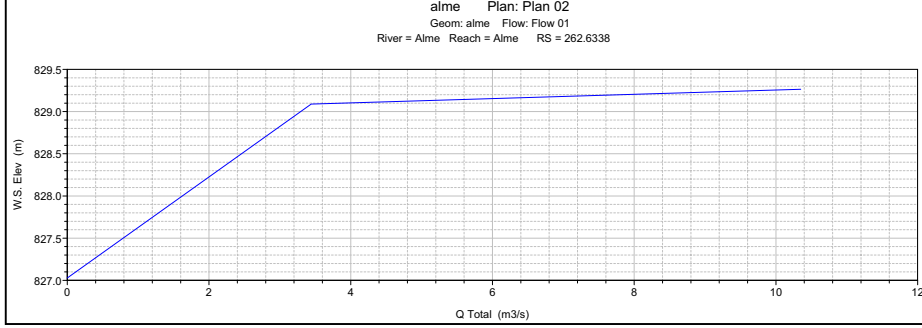
Legend
W.S. Elev



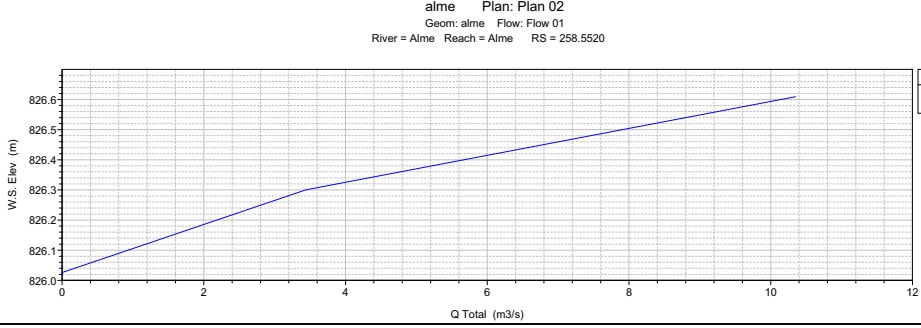
Legend
W.S. Elev



Legend
W.S. Elev

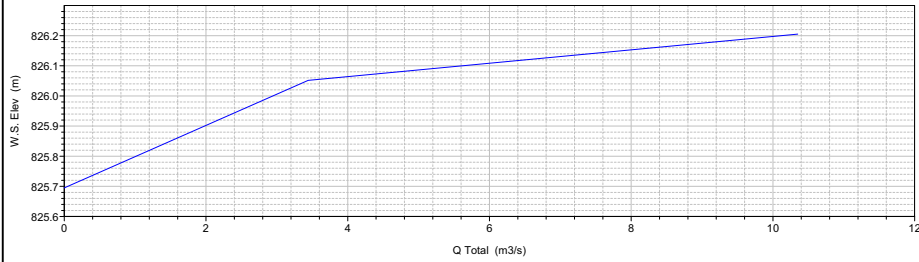


Legend
W.S. Elev



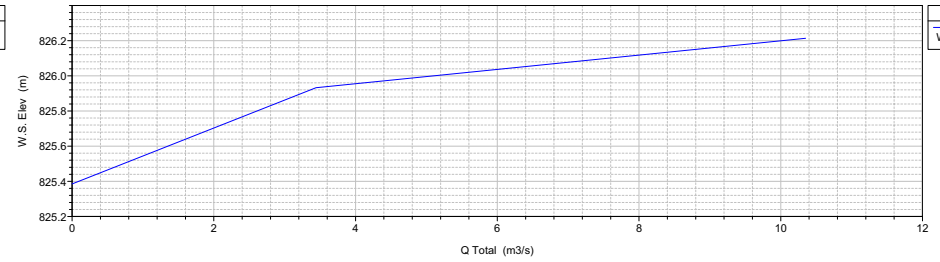
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 248.4231



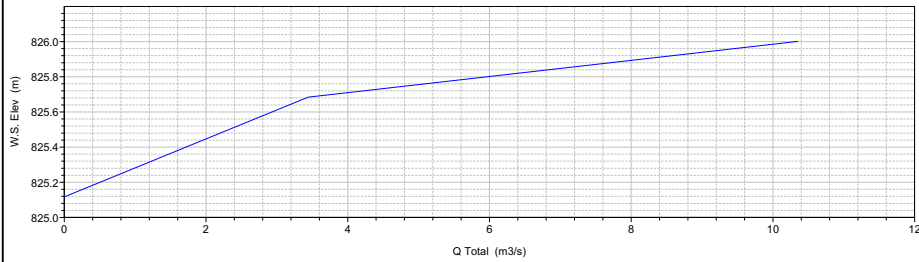
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 239.6731



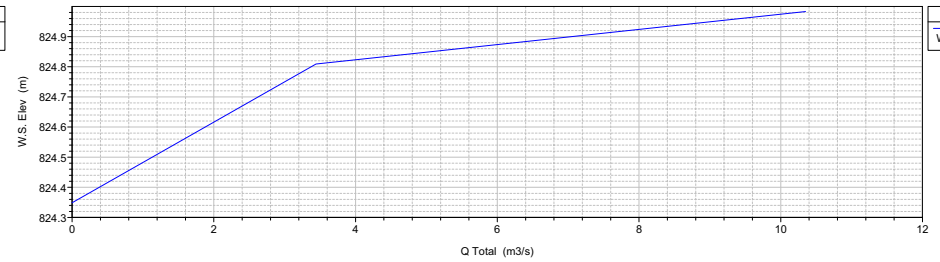
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 229.8189



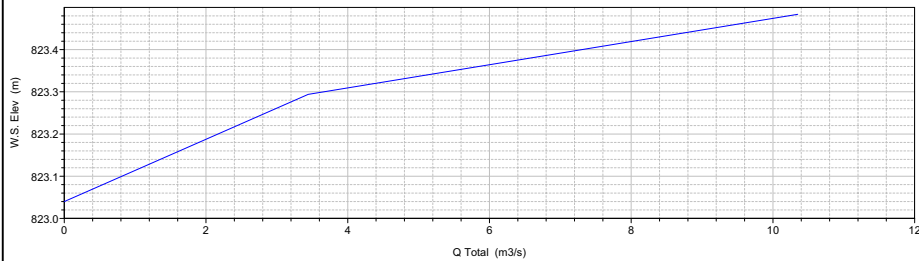
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 217.0088



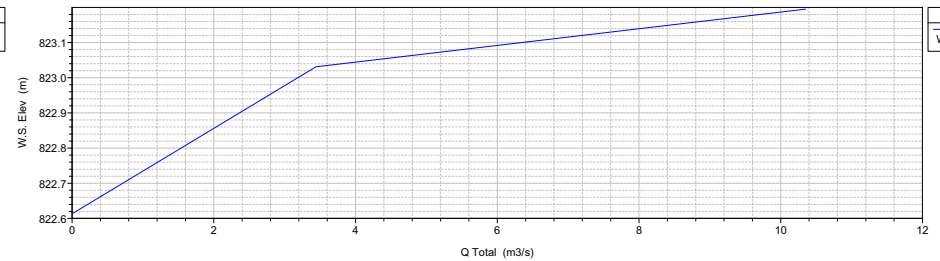
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 208.1064



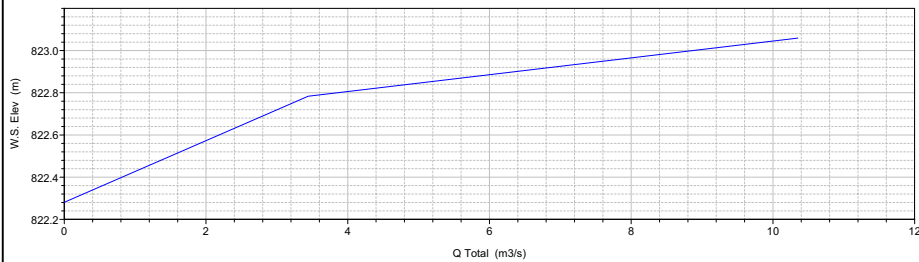
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 198.4724



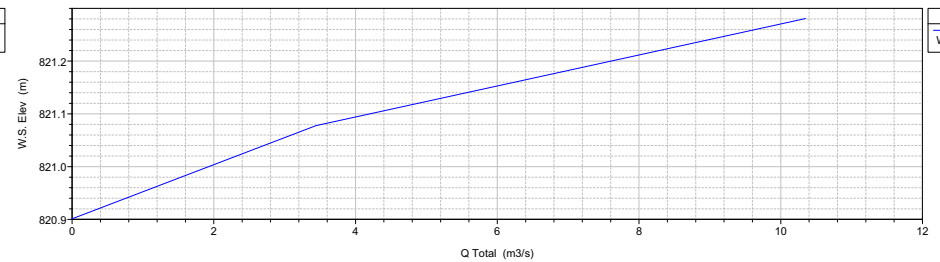
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 190.4317

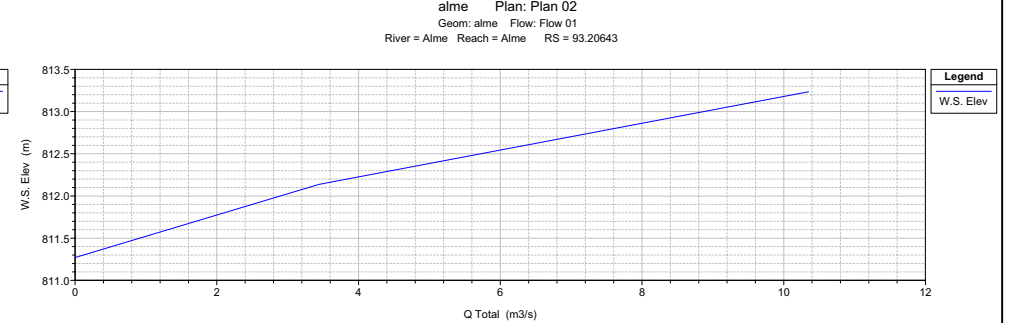
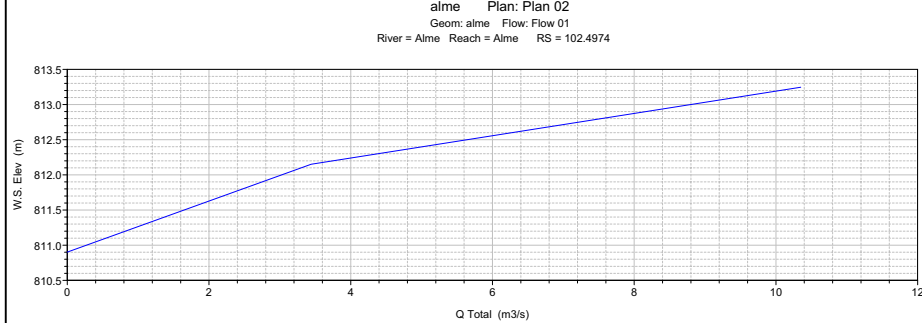
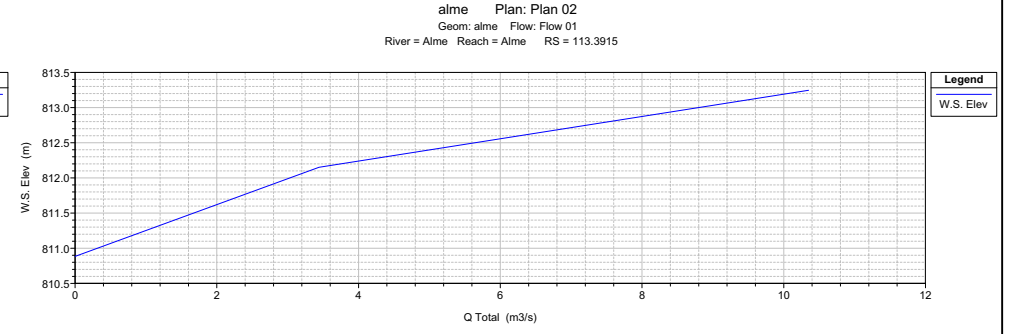
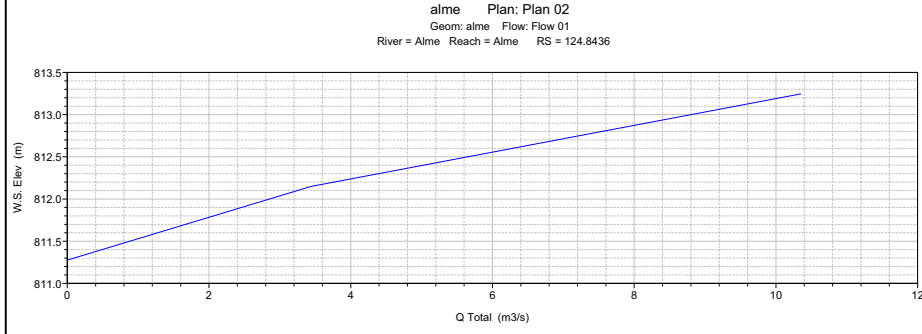
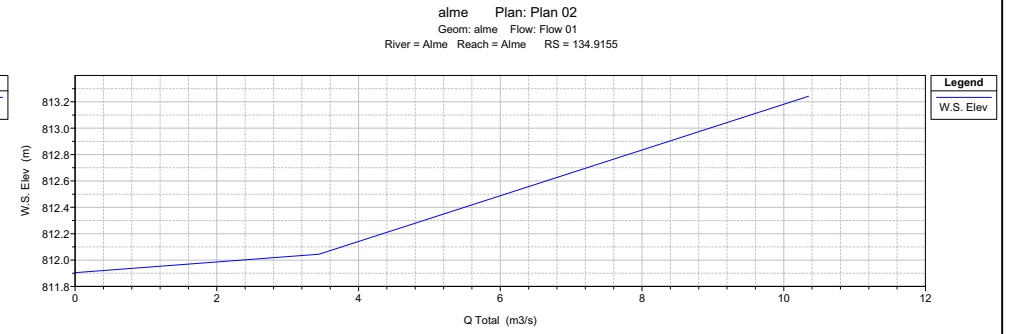
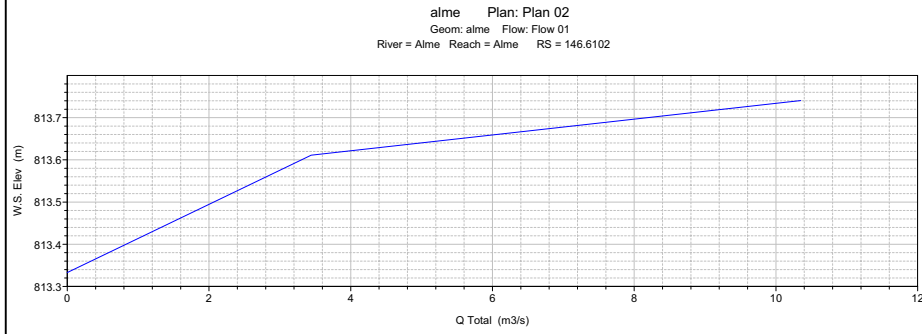
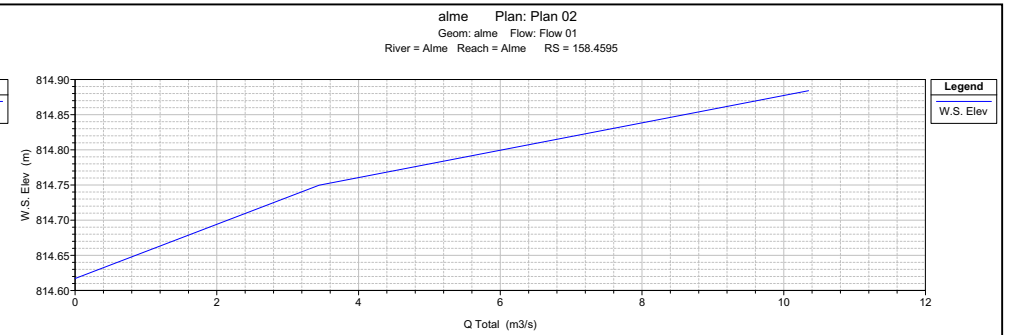
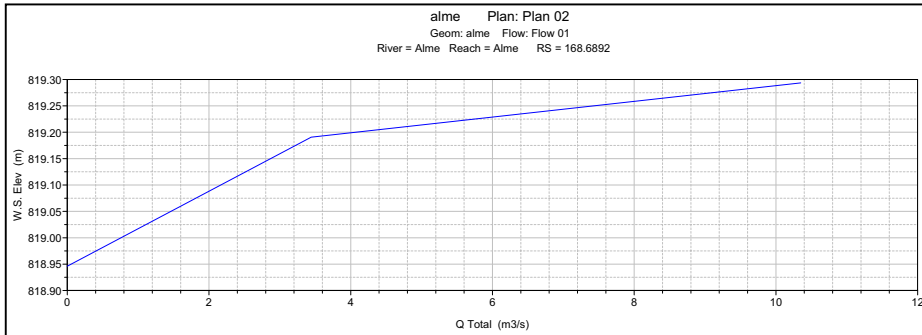


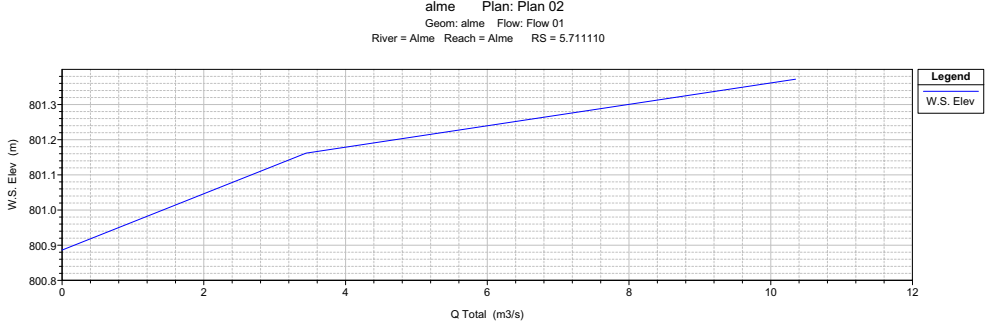
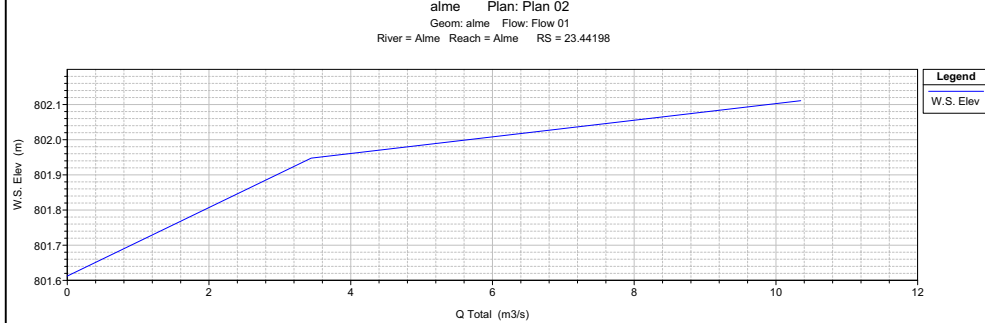
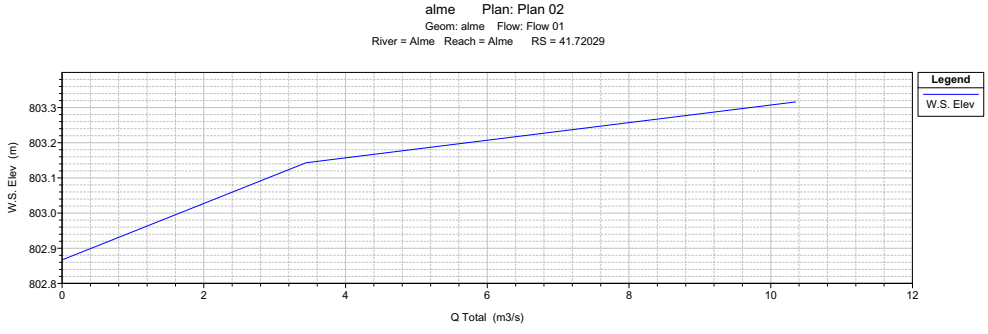
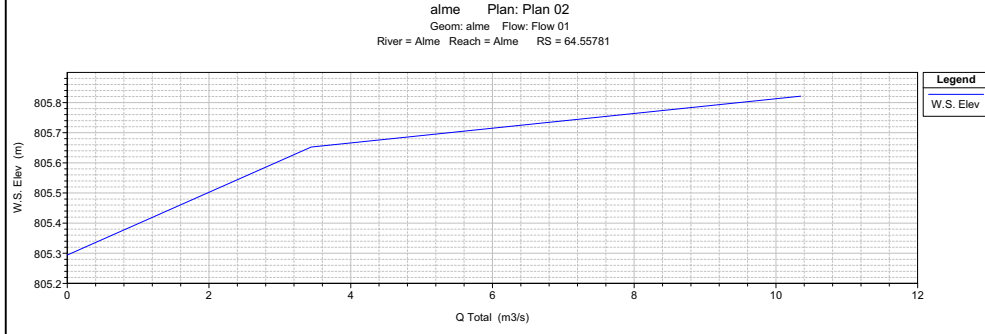
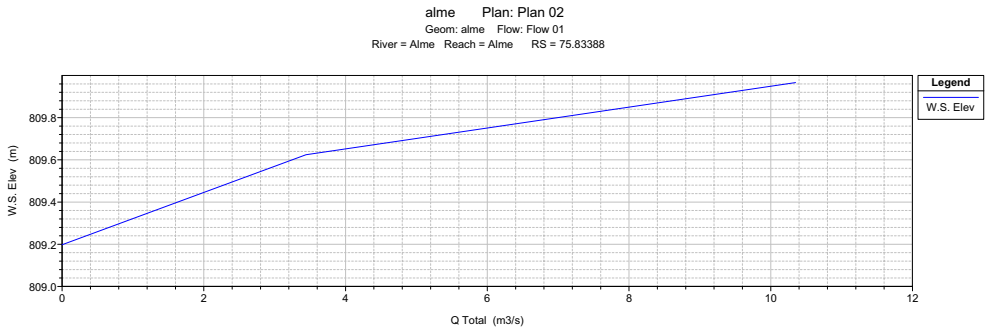
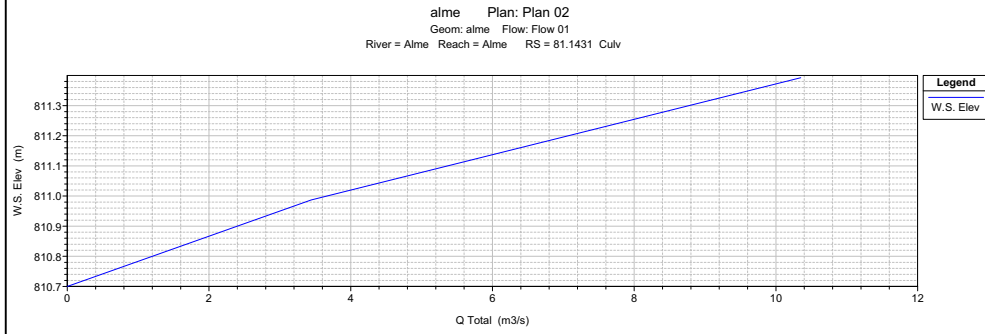
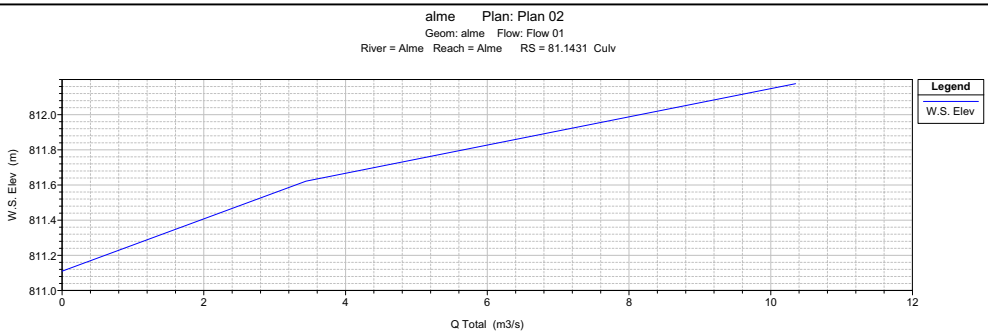
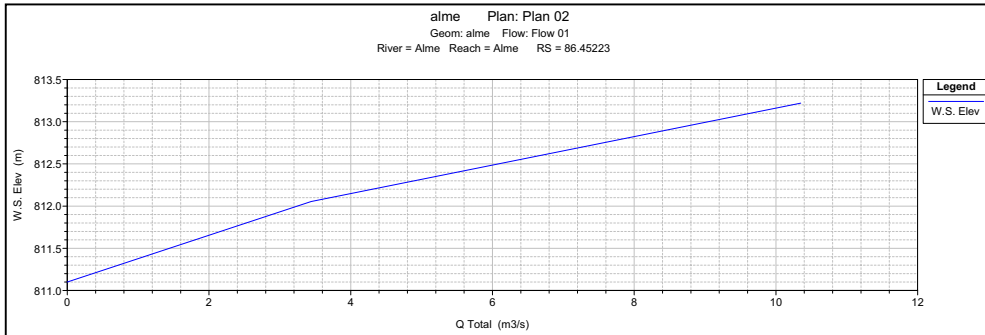
Legend
W.S. Elev

alme Plan: Plan 02
Geom: alme Flow: Flow 01
River = Alme Reach = Alme RS = 181.3740



Legend
W.S. Elev





NOTÁEZ

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X   X  XXXXXX   XXXX       XXXX       XX       XXXX
X   X  X        X   X      X   X      X  X      X
X   X  X        X         X   X      X   X      X
XXXXXXXX XXXX   X         XXX XXXX   XXXXXX   XXXX
X   X  X        X         X   X      X   X
X   X  X        X   X      X   X      X   X      X
X   X  XXXXXX   XXXX       X   X      X   X   XXXXX
```

PROJECT DATA

Project Title: nota_p
Project File : nota_p.prj
Run Date and Time: 3/22/2012 11:00:56 AM

Project in SI units

Project Description:
NOTÁEZ - STUACIÓN PROPUESTA

PLAN DATA

Plan Title: nota_p
Plan File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\PROPUESTA\nota_p.p02

Geometry Title: nota_p
Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\PROPUESTA\nota_p.g02

Flow Title : nota_a
Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\PROPUESTA\nota_p.f01

Plan Summary Information:

Number of:	Cross Sections =	18	Multiple Openings =	0
	Culverts =	1	Inline Structures =	0
	Bridges =	0	Lateral Structures =	0

Computational Information

Water surface calculation tolerance =	0.003
Critical depth calculation tolerance =	0.003
Maximum number of iterations =	20
Maximum difference tolerance =	0.1
Flow tolerance factor =	0.001

Computation Options

Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Mixed Flow

FLOW DATA

Flow Title: nota_a

Flow File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\PROPUESTA\nota_p.f01

Flow Data (m3/s)

```
*****
* River      Reach      RS      *      T500      T10 *
* Nota      Nota      234.5633*      13.238      3.771 *
*****
```

Boundary Conditions

```
*****
* River      Reach      Profile      *      Upstream      Downstream *
* Nota      Nota      T500      *      Critical      Normal S = 0.35 *
*****
```

GEOMETRY DATA

Geometry Title: nota_p

Geometry File : i:\PROYECTOS\EI_DIPGRA\PR_DIG_005_ALMEGÍJAR\ADENDA_MARZO_2012\HIDRA\RAS\NOTA\PROPUESTA\nota_p.g02

CROSS SECTION

RIVER: Nota

REACH: Nota RS: 234.5633

INPUT

Description:

Station Elevation Data		num= 100	
Sta	Elev	Sta	Elev
0	855.71	.84	855.69
7.34	855.59	7.61	855.56
10.88	855	12	855
17.78	854.77	18.69	854.72
23.97	854.57	26.18	854.6
29.98	854	30.22	853.98
34.81	853.03	34.89	853
37.14	851.84	37.49	851.79
41.18	851.27	41.3	851.29
43.36	851.62	43.86	851.74
46.23	853	46.7	853.37
48.17	854.59	48.88	855
51.99	855.63	52.17	855.68
59.11	856.84	59.49	857
64.16	858	64.5	858.15
66.82	858.84	67.72	859
71.07	859.36	72.26	859.49
75.45	859.61	76.15	859.55
78.49	859.34	79.07	859.17
80.06	858.82	80.82	858.39

Manning's n Values

```
num= 3
Sta n Val Sta n Val Sta n Val
*****
```

0 .035 34.81 .04 47.19 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
34.81 47.19 12.36 13.67 12.35 .1 .3

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 220.8931

INPUT

Description:

Station Elevation Data num= 110									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	852.43	.32	852.48	1.97	852.68	2.67	852.8	2.84	852.8
4.18	852.81	4.34	852.81	4.91	852.79	5.33	852.77	6.39	852.69
6.99	852.68	9.86	852.59	10.61	852.58	11.68	852.55	12.56	852.51
12.91	852.46	13.56	852.3	13.77	852.28	14.71	852	15.16	851.54
15.45	851.33	15.92	851	16.62	850.63	17.21	850.49	17.85	850.22
19.12	850.02	19.23	850	19.9	849.42	20.1	849.25	20.33	849
21.42	848.64	22.14	848.4	22.33	848.34	22.47	848.29	23.04	848
24.75	847.95	24.98	847.93	27.69	847.85	27.83	847.84	28.37	847.79
28.63	847.76	30.05	847.7	30.31	847.7	30.92	847.63	31.54	847.62
32.4	847.51	33.37	847.47	36.17	847.08	36.28	847.08	36.4	847.07
36.75	847	37.56	846.15	37.71	846	39.32	845.19	39.65	845.03
39.71	845	40.34	844.72	41.62	844	43.93	844	44.02	844
44.07	844.2	44.23	845	45	845.56	45.53	846	45.73	846.12
47.67	847	47.73	847.06	47.84	847.13	48.47	847.59	49.05	848
49.42	848.58	49.62	849	50.34	849.84	50.48	850	50.6	850.09
51.6	851	52.05	851.41	52.89	852	53.53	852.63	53.86	853
54.24	853.33	54.71	853.66	55.14	854	55.31	854.14	56.19	855
57.05	855	57.13	855	57.69	855	63.92	855.29	65.57	855.28
67.29	855.23	68.63	855.18	69.04	855.19	69.86	855.15	70.31	855.13
70.5	855.14	73.03	855	73.57	854.78	74.66	854.4	75.46	854.1
75.77	854	76.9	853.43	77.71	853	78.28	852.82	79.09	852.63
80.23	852.33	81.91	852	81.93	851.99	81.97	851.97	83.09	851.52

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	36.28	.04	48.47	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
36.28 48.47 12.93 14.68 14.9 .1 .3

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 206.2115

INPUT

Description:

Station Elevation Data num= 111									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	847.15	1.87	847.35	2.78	847.34	4.15	847.44	4.98	847.5
10.42	847.61	12.02	847.6	14.15	847.56	15.79	847.5	16.91	847.45
17.55	847.42	18.78	847.4	21.53	847.25	22.05	847.24	26.27	847
26.28	847	26.3	847	28.9	846.52	31.28	846.04	31.35	846.03

31.48	846	31.59	845.79	31.98	845	32.18	844.17	32.23	844
32.42	843.96	33.96	843.65	35.33	843.43	36.08	843.33	36.71	843.23
37.84	843.08	38.4	843	38.94	842.36	39.21	842	40.63	841.34
41.28	841	41.64	840.65	42.02	840	42.5	839.77	43.7	840
45.22	840	45.33	840.26	45.64	841	46.19	841.87	46.25	842
46.5	842.36	46.91	843	47.36	843.33	48.22	844	48.42	844.6
48.52	845	48.63	845.3	48.92	846	49.39	846.12	49.59	846.17
49.92	846.19	51.04	846.41	51.43	846.42	52.59	846.62	53.15	846.71
54.18	846.76	55.84	846.89	57.14	846.93	57.27	846.94	57.32	846.94
57.41	846.94	59.1	847	59.96	847.59	60.29	848	61.29	848.31
61.75	848.42	62.91	849	63.38	849.18	63.68	849.2	64.22	849.27
64.45	849.27	65.43	849.33	65.69	849.32	66.18	849.33	66.66	849.31
66.85	849.3	67.35	849.26	67.96	849.17	68.09	849.15	68.24	849.12
68.92	849	69.75	848.53	70.24	848.2	70.27	848.18	70.55	848
70.57	847.99	71.27	847.77	71.86	847.52	72.4	847.32	73.25	847
73.91	846.58	74.47	846.4	74.93	846.18	75.81	846	76.15	845.96
78.12	845.78	79.18	845.61	80.66	845.46	80.92	845.46	80.96	845.45
81.19	845.42	81.55	845.38	81.85	845.52	83.39	845.43	83.78	845.51
83.8	845.52								

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 37.84 .04 49.39 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 37.84 49.39 13.16 10.7 8.53 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 195.5067

INPUT
 Description:

Station Elevation Data		num= 112	
Sta	Elev	Sta	Elev
0	845.91	.67	846
2.83	846.57	3.3	846.74
5.17	847	5.64	847
9.72	847	11.55	847.05
16.31	846.37	16.99	846.01
18.39	845	18.85	844.93
21.22	844.38	22.18	844
26.37	843.07	26.4	843.06
28.84	842	30.07	841.58
33.64	840.48	35.06	840.07
36.96	838.83	37.67	838.25
40.47	837	40.57	837
41.81	838	42.04	838.76
43.26	840.33	44.83	841
46.05	843	46.07	843.02
47.53	845	47.95	845.16
50.41	845.68	50.61	845.7
54.85	845.84	55.2	845.87
58.41	846.03	59.91	846.07
63.62	846.19	66.49	846.28
72.53	845.99	74.46	845
76.9	843.76	77.2	843.74
79.77	843.67	82.2	843.93

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 35.06 .04 47.22 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 35.06 47.22 8.74 11.25 17.83 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 184.2587

INPUT

Description:

Station Elevation Data num= 119
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 843.71 .01 843.71 .23 843.69 .34 843.68 .53 843.66
 .97 843.67 1.41 843.67 1.86 843.68 4.03 843.26 4.21 843.27
 4.39 843.26 4.57 843.26 4.75 843.26 5.53 843 5.94 842.95
 6.09 842.94 6.63 842.89 8.31 842.76 8.99 842.73 9.64 842.71
 10.83 842.68 11.92 842.64 12.54 842.62 14.51 842.55 14.79 842.53
 15.89 842.42 17.42 842.26 18.06 842.23 19.71 842 19.97 841.9
 20.09 841.87 20.31 841.81 20.98 841.62 22.65 841.12 23.12 841
 24.18 840.59 24.94 840.29 25.19 840.19 25.83 840 27.44 839.14
 27.6 839 27.86 838.73 28.56 838 29.12 837.79 30.1 837.41
 30.77 837.15 31.16 837 31.64 836.46 32.02 836 32.65 835.3
 32.82 835.1 32.88 835 33.46 834.86 34.44 834.64 35.92 834.34
 36.58 834.19 36.74 834.16 37.77 834 37.89 834 38.97 834.57
 39.16 834.72 39.44 835 40.16 835.84 40.28 836 40.53 836.71
 40.66 837 40.97 837.38 41.27 837.72 41.51 838 42.05 838.34
 42.54 838.63 43.21 839 43.82 839.29 45.15 839.92 45.31 840
 45.37 840.02 45.52 840.08 46.82 840.58 46.83 840.58 47.52 840.86
 47.77 841 48.17 841.24 49.32 842 49.87 842.41 51.64 843
 52.19 843.25 52.37 843.29 52.59 843.33 53 843.45 53.82 843.56
 54.4 843.68 55.63 843.8 57.42 843.96 58.03 844 58.44 844.09
 58.51 844.11 59.27 844.27 59.88 844.37 61.36 844.56 61.81 844.56
 62.66 844.49 63.93 844.56 64.88 844.48 65.84 844.49 66.6 844.42
 67.08 844.39 67.34 844.35 68.51 844.19 68.79 844.13 69.55 844
 69.57 843.99 71.79 843 71.84 842.98 71.87 842.96 72.89 842.49
 73.46 842.24 73.9 842 76.04 841.08 76.12 841.05

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 33.46 .04 43.82 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 33.46 43.82 12.93 10.02 8.57 .1 .3

Left Levee Station= 35.29 Elevation= 836.1

Blocked Obstructions num= 1

Sta L Sta R Elev

 33.98 35.29836.0971

CROSS SECTION

RIVER: Nota

REACH: Nota RS: 174.2417

INPUT

Description:

Station Elevation Data num= 110											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	837.98	.01	837.98	.04	837.98	2.74	837.98	2.77	837.98		
2.87	837.98	2.96	837.97	6.18	837.89	6.41	837.88	6.5	837.88		
9.89	837.75	10.07	837.74	10.37	837.72	10.66	837.71	11.43	837.67		
13.01	837.48	14.24	837.39	16.29	837.11	16.34	837.1	16.37	837.1		
16.57	837.08	17.07	837	18.74	836.66	19.55	836.48	20.34	836.33		
20.92	836.18	21.44	836	21.92	835.89	22.42	835.76	23.52	835.48		
24.27	835.27	25.31	835	25.66	834.32	26.04	834	26.46	833.6		
27.77	833	28.31	832.94	28.36	832.94	28.43	832.93	28.51	832.92		
28.61	832.91	33.29	832.45	33.6	832.39	34.02	832.32	36.04	831.95		
36.99	831.95	38.96	831.95	39.66	832.67	39.89	832.96	40.71	833.94		
40.79	834	40.92	834.14	41.73	835	42.18	835.65	42.47	835.98		
42.48	836	43.96	836.92	44.08	837	44.28	837.15	44.7	837.49		
45.31	838	46	838.46	46.77	839	48.35	839.85	48.63	840		
48.73	840.05	48.77	840.06	48.85	840.08	49.02	840.11	51.21	840.73		
51.3	840.76	53.93	841	54.02	841.03	54.09	841.06	56.22	842		
56.35	842.02	56.68	842.05	58.23	842.23	59.03	842.31	60.08	842.4		
60.56	842.44	61.47	842.47	61.95	842.53	62.66	842.54	63.03	842.57		
63.38	842.58	64.57	842.63	65.18	842.62	65.5	842.6	66.3	842.61		
66.98	842.53	67.32	842.51	67.74	842.44	68.05	842.4	69.27	842.15		
69.39	842.12	69.92	842	70.26	841.67	70.72	841.14	70.8	841.05		
70.85	841	71.4	840.42	71.78	840	72.23	839.85	72.93	839.53		
73.55	839.28	73.99	839	74.23	838.88	75.38	838	75.39	837.99		

Manning's n Values num= 3					
Sta	n Val	Sta	n Val	Sta	n Val
0	.035	34.02	.04	42.47	.035

Bank Sta:	Left	Right	Lengths:	Left Channel	Right	Coeff	Contr.	Expan.
	34.02	42.47		13.27	9.8	6.46	.1	.3

Left Levee Station= 35.76 Elevation= 835.09

Blocked Obstructions num= 2					
Sta L	Sta R	Elev	Sta L	Sta R	Elev
.97	22.08837.9822	24.94	35.77835.0969		

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 164.4459

INPUT

Description:

Station Elevation Data num= 92											
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	833.57	1.06	833.54	1.44	833.5	2.42	833.4	3.96	833.34		
4.59	833.31	5.2	833.25	5.69	833.23	7.47	833.1	7.67	833.08		
8.57	833	9.28	832.96	9.31	832.96	9.34	832.95	9.38	832.95		
9.41	832.95	9.46	832.94	9.51	832.93	10.97	832.81	11.15	832.76		
11.73	832.69	12.69	832.41	13.07	832.33	14.09	832	15.21	831.71		
16.38	831.41	17.63	831.29	18.14	831.2	18.94	831.15	19.73	831.1		
19.91	831.08	21.71	831	21.72	831	21.78	831	23.11	830.97		
23.91	830.92	25.81	830.86	27.53	830.82	29.07	830.8	30.23	830.79		

31.15	830.84	31.19	830.84	32.68	830.92	32.79	830.92	33.88	831
34	831.02	34.42	831.07	34.82	830.39	36.13	830.39	37.08	830.4
37.97	830.4	38.43	831.97	38.56	832.67	38.76	832.84	38.81	832.98
39.03	833.09	39.8	833.41	40.18	833.51	40.95	833.76	41.79	834
42.64	834.9	42.75	835	42.85	835.08	43.61	835.64	44.02	835.95
44.09	836	44.85	836.86	44.95	837	45.76	837.87	45.88	838
46.83	838.58	47.49	839	47.58	839.06	48.76	840	50.32	840.2
51.07	840.23	53.14	840.42	60.39	840.21	60.69	840.23	60.88	840.23
61.06	840.24	62.22	840	63.8	839.49	65.23	839	66.45	838.69
67.75	838.4	68.17	838.3	68.39	838.26	68.58	838.23	69.51	838
70.21	837.67	70.29	837.6						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 34 .04 70.29 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 34 70.29 8.49 9.82 6.36 .1 .3

Left Levee Station= 34.69 Elevation= 833.4

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

 5.83 9.29833.2188 12.49 14.55832.4698 30.81 34.71833.3859

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 154.6206

INPUT

Description:

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	831.92	.43	831.91	.49	831.91	.51	831.91	.66	831.9
3.35	831.81	3.6	831.78	3.74	831.76	3.95	831.73	4.54	831.68
4.9	831.61	5.43	831.54	6.49	831.31	6.93	831.23	6.95	831.23
6.98	831.22	7.85	831	10.46	830.74	10.7	830.73	11.22	830.71
11.65	830.67	12.29	830.64	14.05	830.49	15.45	830.42	16.24	830.36
16.81	830.32	17.31	830.3	17.56	830.29	17.77	830.29	18.22	830.28
18.6	830.27	23.66	830	31.08	829.69	31.41	829.67	34.52	829.93
35.05	830	35.11	830	36.02	830	36.06	830	36.39	828.6
39.56	828.61	39.95	829.4	40.66	831.69	40.8	831.72	41.2	831.79
42.22	832	42.45	832.15	43.32	832.7	43.77	833	44.16	833.42
44.92	834	45.47	834.4	46.52	835	47.55	835.76	47.83	836
48.16	836.55	48.45	837	49.21	837.52	49.78	838	50.13	838.2
51.33	839	51.49	839.09	51.58	839.12	52.15	839.33	52.47	839.41
53.16	839.6	53.63	839.71	53.84	839.75	54.38	839.85	54.5	839.87
54.61	839.88	55.05	839.93	55.14	839.94	55.93	839.99	55.94	839.99
56.76	839.92	56.92	839.89	57.55	839.75	58.04	839.6	59.2	839.3
59.52	839.19	60.25	839	60.5	838.87	61.89	838	62.04	837.91
62.18	837.86	63.45	837.33	64.73	837.16	65.46	837	65.53	836.98
65.57	836.96	66.69	836.53	66.73	836.52	66.83	836.48		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 36.02 .04 40.66 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

```

36.02 40.66 7.87 10 14.7 .1 .3
Left Levee Station= 36.34 Elevation= 832.86
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev
*****
1.17 4.78831.8816 31.22 36.34832.8659

```

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 144.6175

INPUT

Description:

```

Station Elevation Data num= 84
Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev
*****
0 830.2 1.79 830.1 1.92 830.1 1.96 830.1 2.04 830.1
3.11 830.03 3.15 830.02 3.59 830 4.6 829.99 4.65 829.98
6.12 829.96 6.26 829.96 11.14 829.9 11.42 829.89 12.89 829.87
12.95 829.87 13.35 829.86 14.18 829.84 15.64 829.81 16.17 829.79
16.27 829.79 17.59 829.75 18.17 829.73 18.73 829.71 20.56 829.66
21.28 829.63 22.53 829.58 23.39 829.54 24.49 829.48 33.5 829.03
33.94 829.01 34.14 829 35.22 828.88 36.61 828.74 36.65 828.74
37.53 828.6 37.91 828.51 38.21 828.43 38.82 827.74 40.01 827.74
40.83 827.74 41.9 827.74 42.03 828.44 42.12 828.44 42.32 828.44
42.65 828.48 42.99 828.48 43.69 828.51 47.75 829 48.08 829.1
48.29 829.15 48.9 829.28 50.74 829.73 50.78 829.74 51.63 829.85
52.48 829.93 52.63 829.96 53.73 830 54.12 830.05 54.15 830.06
54.18 830.06 54.38 830.08 54.41 830.08 54.97 830.11 55.02 830.11
56.33 830.06 56.36 830.06 56.39 830.06 56.57 830.02 56.58 830.02
56.69 830 57.07 829.98 57.08 829.98 57.08 829.99 57.89 829.93
57.93 829.94 58.18 829.92 59.23 830 59.61 830 59.83 830
64.52 830 65.29 830 66.88 830 66.94 830

```

```

Manning's n Values num= 3
Sta n Val Sta n Val Sta n Val
*****
0 .035 0 .04 66.94 .035

```

```

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
0 66.94 20.14 18.33 27.56 .1 .3

```

```

Ineffective Flow num= 2
Sta L Sta R Elev Permanent
0 38.8 830.2 F
41.8 66.94 830.2 F
Left Levee Station= 35.77 Elevation= 830.02
Right Levee Station= 41.96 Elevation= 830.44
Blocked Obstructions num= 2
Sta L Sta R Elev Sta L Sta R Elev
*****
41.96 56.47830.4395 56.44 65.68830.4904

```

CULVERT

RIVER: Nota
REACH: Nota RS: 135.4527

INPUT

Description:

Distance from Upstream XS = .5
 Deck/Roadway Width = 16.5
 Weir Coefficient = 1.4
 Upstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 830.5 826 50 830.5 826

Upstream Bridge Cross Section Data
 Station Elevation Data num= 84
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 830.2 1.79 830.1 1.92 830.1 1.96 830.1 2.04 830.1
 3.11 830.03 3.15 830.02 3.59 830 4.6 829.99 4.65 829.98
 6.12 829.96 6.26 829.96 11.14 829.9 11.42 829.89 12.89 829.87
 12.95 829.87 13.35 829.86 14.18 829.84 15.64 829.81 16.17 829.79
 16.27 829.79 17.59 829.75 18.17 829.73 18.73 829.71 20.56 829.66
 21.28 829.63 22.53 829.58 23.39 829.54 24.49 829.48 33.5 829.03
 33.94 829.01 34.14 829 35.22 828.88 36.61 828.74 36.65 828.74
 37.53 828.6 37.91 828.51 38.21 828.43 38.82 827.74 40.01 827.74
 40.83 827.74 41.9 827.74 42.03 828.44 42.12 828.44 42.32 828.44
 42.65 828.48 42.99 828.48 43.69 828.51 47.75 829 48.08 829.1
 48.29 829.15 48.9 829.28 50.74 829.73 50.78 829.74 51.63 829.85
 52.48 829.93 52.63 829.96 53.73 830 54.12 830.05 54.15 830.06
 54.18 830.06 54.38 830.08 54.41 830.08 54.97 830.11 55.02 830.11
 56.33 830.06 56.36 830.06 56.39 830.06 56.57 830.02 56.58 830.02
 56.69 830 57.07 829.98 57.08 829.98 57.08 829.99 57.89 829.93
 57.93 829.94 58.18 829.92 59.23 830 59.61 830 59.83 830
 64.52 830 65.29 830 66.88 830 66.94 830

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 0 .04 66.94 .035

Bank Sta: Left Right Coeff Contr. Expan.
 0 66.94 .1 .3
 Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 38.8 830.2 F
 41.8 66.94 830.2 F
 Left Levee Station= 35.77 Elevation= 830.02
 Right Levee Station= 41.96 Elevation= 830.44
 Blocked Obstructions num= 2
 Sta L Sta R Elev Sta L Sta R Elev

 41.96 56.47830.4395 56.44 65.68830.4904

Downstream Deck/Roadway Coordinates
 num= 2
 Sta Hi Cord Lo Cord Sta Hi Cord Lo Cord

 0 830 824 50 830 824

Downstream Bridge Cross Section Data
 Station Elevation Data num= 73
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 829.08 .11 829.08 1.3 829.09 1.89 829.09 3.42 829.09
 3.86 829.08 4.01 829.08 6.54 829.06 6.64 829.06 9.93 829.03
 9.96 829.03 10.96 829.02 12.16 829 13.1 828.5 13.75 828

13.87	827.94	14.15	827.81	15.11	827.37	15.39	827.24	15.89	827
16.14	826.86	16.62	826.58	17.55	826	18.86	825.91	19.25	825.89
21.72	825.74	22.43	825.72	24.21	825.6	24.88	825.57	26.27	825.52
27.56	825.51	28.35	825.63	30.34	826	30.84	826.12	31	826.11
33.5	826.1	35.16	826.01	35.2	826.01	35.44	826	35.97	825.39
36.29	825	37.48	824.92	37.55	824.91	37.58	824.91	37.61	824.91
38.32	825	38.68	825	40.69	825	41.4	825	41.47	825
41.63	825.19	42.32	826	42.53	826.05	43.19	826.2	43.93	826.3
46.3	826.64	47.62	826.85	48.3	826.93	48.52	826.97	48.91	827
48.94	827	49.87	827.06	50.8	827.12	52.25	827.19	53.05	827.22
54.45	827.4	55.18	827.44	57.03	827.52	59.56	828	61.04	828.18
61.28	828.21	64.81	828.62	67.18	828.85				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 37.48 .04 43.93 .035

Bank Sta: Left Right Coeff Contr. Expan.
 37.48 43.93 .1 .3

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 38.8 829.2 F
 41.8 67.18 829.2 F

Left Levee Station= 30.84 Elevation= 826.12
 Right Levee Station= 48.3 Elevation= 831.22

Blocked Obstructions num= 1
 Sta L Sta R Elev

 48.3 66.95831.2229

Upstream Embankment side slope = 0 horiz. to 1.0 vertical
 Downstream Embankment side slope = 0 horiz. to 1.0 vertical
 Maximum allowable submergence for weir flow = .98
 Elevation at which weir flow begins =
 Energy head used in spillway design =
 Spillway height used in design =
 Weir crest shape = Broad Crested

Number of Culverts = 1

Culvert Name Shape Rise Span
 Culvert #1 Box 2.5 3
 FHWA Chart # 8 - flared wingwalls
 FHWA Scale # 1 - Wingwall flared 30 to 75 deg.
 Solution Criteria = Highest U.S. EG

Culvert	Upstrm Dist	Length	Top n	Bottom n	Depth Blocked	Entrance Loss Coef	Exit Loss Coef
	.5	16.5	.015	.015	0	.7	.7

Upstream Elevation = 827.7
 Centerline Station = 40.3
 Downstream Elevation = 826.7
 Centerline Station = 40.3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 126.2879

INPUT
 Description:
 Station Elevation Data num= 73

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	829.08	.11	829.08	1.3	829.09	1.89	829.09	3.42	829.09
3.86	829.08	4.01	829.08	6.54	829.06	6.64	829.06	9.93	829.03
9.96	829.03	10.96	829.02	12.16	829	13.1	828.5	13.75	828
13.87	827.94	14.15	827.81	15.11	827.37	15.39	827.24	15.89	827
16.14	826.86	16.62	826.58	17.55	826	18.86	825.91	19.25	825.89
21.72	825.74	22.43	825.72	24.21	825.6	24.88	825.57	26.27	825.52
27.56	825.51	28.35	825.63	30.34	826	30.84	826.12	31	826.11
33.5	826.1	35.16	826.01	35.2	826.01	35.44	826	35.97	825.39
36.29	825	37.48	824.92	37.55	824.91	37.58	824.91	37.61	824.91
38.32	825	38.68	825	40.69	825	41.4	825	41.47	825
41.63	825.19	42.32	826	42.53	826.05	43.19	826.2	43.93	826.3
46.3	826.64	47.62	826.85	48.3	826.93	48.52	826.97	48.91	827
48.94	827	49.87	827.06	50.8	827.12	52.25	827.19	53.05	827.22
54.45	827.4	55.18	827.44	57.03	827.52	59.56	828	61.04	828.18
61.28	828.21	64.81	828.62	67.18	828.85				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 37.48 .04 43.93 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 37.48 43.93 7.8 18.8 15.03 .1 .3

Ineffective Flow num= 2
 Sta L Sta R Elev Permanent
 0 38.8 829.2 F
 41.8 67.18 829.2 F
 Left Levee Station= 30.84 Elevation= 826.12
 Right Levee Station= 48.3 Elevation= 831.22
 Blocked Obstructions num= 1
 Sta L Sta R Elev

 48.3 66.95831.2229

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 107.4834

INPUT

Description:
 Station Elevation Data num= 104
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 827.82 .37 827.65 1.48 827.17 1.77 827 4.19 826.75
 5.15 826.62 6.93 826.43 8.62 826.2 9.14 826.14 10 826
 10.15 825.98 10.2 825.98 10.92 825.88 11.08 825.85 16.67 825
 17.11 824.97 17.28 824.96 17.31 824.96 18.43 824.86 26.86 824.21
 28.73 824.02 28.92 824 29.76 823.72 31.38 823 32.38 822.27
 32.91 822 33.37 821.31 33.58 821 35 820.03 35.03 820
 35.06 819.99 35.07 819.99 38.76 819.47 39.09 819.49 40.35 819.64
 41.06 819.78 41.73 819.92 41.8 819.93 42.06 820 42.33 820.5
 42.59 821 42.77 821.25 43.35 822 43.54 822.25 44.07 823
 44.83 823.8 45.04 824 45.24 824.16 45.69 824.54 46.24 825
 47.09 825.2 47.22 825.21 47.38 825.22 47.98 825.33 48.74 825.48
 49.18 825.51 49.65 825.53 50.77 825.7 51.09 825.7 51.19 825.7
 51.57 825.75 51.99 825.75 52.22 825.77 52.29 825.77 52.45 825.79
 52.72 825.81 52.85 825.82 52.97 825.83 53.21 825.84 53.33 825.85
 53.44 825.85 55.41 825.83 55.54 825.83 55.81 825.83 55.93 825.83

56.2	825.83	56.49	825.83	56.64	825.83	56.8	825.82	58.91	825.79
59.22	825.79	59.36	825.78	59.76	825.76	60.16	825.74	61.49	825.72
62.51	825.67	64.68	825.63	68.76	825.81	69.01	825.78	69.11	825.77
69.52	825.82	70	825.86	70.36	825.79	70.77	825.84	71.33	825.88
71.6	825.8	72.04	825.82	72.14	825.82	72.15	825.82	72.72	825.81
73.1	825.83	73.64	825.6	74.06	825.51	74.09	825.5		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 28.73 .04 45.69 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 28.73 45.69 20.46 16.7 9.05 .1 .3

Blocked Obstructions num= 3
 Sta L Sta R Elev Sta L Sta R Elev Sta L Sta R Elev

 46.89 51.76825.7484 71.76 74.09825.8058 8.19 30.06826.2598

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 90.78275

INPUT

Description:

Station Elevation Data num= 109

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	825.84	.13	825.83	.36	825.82	2.46	825.72	4.16	825.64
6.09	825.57	7.47	825.5	8.77	825.46	9.37	825.43	11.16	825.37
13.17	825.29	14.87	825.22	16.92	825.12	17.35	825.1	18.34	825.05
19.16	825	19.8	824.96	21.51	824.84	26.43	824.5	28.72	824.34
32.44	824.07	32.83	824.04	32.97	824.03	33.36	824	33.68	823.63
34.13	823	34.23	822.46	34.32	822	34.73	821.55	35.22	821
35.91	820.58	36.47	820.27	37.1	820	37.12	819.96	37.7	819
38.36	818.16	38.49	818	39.62	817.33	40.02	817	41.58	816.24
42.13	816	42.29	815.88	42.68	815.65	42.74	815.61	43.44	815.18
43.84	815	44.13	815	44.15	815	44.66	815	45.26	815.25
45.51	815.37	46.89	816	48.1	816.8	48.49	817	48.81	817.2
49.18	817.45	50.07	818	50.53	818.15	50.85	818.26	52.52	818.8
53.13	819	53.53	819.75	53.65	820	53.89	820.1	54.16	820.22
54.47	820.35	55.53	820.79	55.98	821	56.43	821.48	56.81	822
57.47	822.36	57.79	822.52	58	822.63	58.69	823	59.75	823.34
60.36	823.51	62.17	824	62.49	824.26	62.89	824.48	63.92	825
64.14	825.01	64.16	825.01	64.96	825.04	66.45	825.07	67.17	825.08
68.63	825.09	70.17	825.08	70.97	825.08	71.81	825.06	71.97	825.06
73.35	825.03	73.97	825.01	74.36	825	75.48	824.44	76.18	824
77.25	823.7	77.94	823.47	78.74	823.23	79.35	823	81.1	822.34
81.97	822	82.85	821.87	82.98	821.85	84.17	821.69	84.45	821.66
84.53	821.65	85.03	821.59	85.61	821.56	85.76	821.55		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 32.83 .04 54.16 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 32.83 54.16 24.78 15.37 4.84 .1 .3

Blocked Obstructions num= 1
 Sta L Sta R Elev

3.94 26.52825.6541

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 75.41282

INPUT

Description:

Station Elevation Data num= 115

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	824.8	1.34	824.78	1.45	824.77	1.58	824.77	1.9	824.76
3.22	824.74	3.39	824.74	4.01	824.72	5.1	824.69	7.51	824.61
8.54	824.58	9.5	824.54	10.27	824.51	11.57	824.48	11.95	824.46
15.76	824.37	15.99	824.35	16.26	824.34	17.44	824.31	17.83	824.3
18.49	824.26	20.16	824.22	22.04	824.16	23.16	824.12	23.26	824.12
26.78	824	29.2	823.8	29.84	823.71	29.85	823.71	30.08	823.7
31.6	823.62	32.71	823.38	34.52	823	34.6	822.89	34.68	822.75
35.14	822	35.28	821.75	35.68	821	37.7	820.01	37.71	820
38.18	819	39.12	818.23	39.48	818	41.64	817	41.65	817
42.87	816	44.83	815.1	45.05	815	45.12	814.95	46.39	814
46.4	813.99	47.2	813	48.61	812.29	49.32	812	49.43	812
49.57	812	50.51	812	52.32	812	52.64	812.54	53.12	813
53.41	813.38	53.86	814	54.03	814.38	54.31	815	54.86	815.31
56.09	816	57.23	816.73	57.68	817	57.74	817.03	58.9	817.76
59.26	818	59.7	818.58	60.03	819	60.6	819.8	60.69	819.92
60.75	820	63.33	820.6	64.67	821	65.31	821.38	65.78	821.47
66.47	821.58	67.44	821.72	67.86	821.82	68.04	821.86	68.15	821.89
68.23	821.9	69.97	822	70.19	822.03	70.25	822.04	70.33	822.04
72.09	822.22	72.25	822.22	73.49	822.3	73.81	822.29	74.43	822.31
74.95	822.31	75.41	822.27	75.89	822.25	76.26	822.25	76.8	822.2
77.85	822.07	78.03	822.05	78.11	822.05	78.32	822	83.77	821.49
85.16	821.29	85.7	821.22	86.81	821.07	86.84	821.06	86.95	821.05
87.36	821	87.45	821	89.89	820.84	90.61	820.82	91.54	820.82

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	32.71	.04	57.74	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
32.71 57.74 23.24 14.16 8.1 .1 .3

Blocked Obstructions num= 1

Sta L	Sta R	Elev
19.67	25.6824.2302	

CROSS SECTION

RIVER: Nota
REACH: Nota RS: 61.25671

INPUT

Description:

Station Elevation Data num= 135

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev		
0	823.15	.57	823.16	.66	823.16	3.45	823.22	3.56	823.22

3.84	823.21	3.97	823.21	6.55	823.26	7.09	823.25	7.92	823.26
8.21	823.26	9.37	823.27	10.87	823.25	12.23	823.27	17.77	823.13
18.32	823.1	18.55	823.1	19.17	823.09	19.63	823.09	20.32	823.08
22.09	823.07	22.18	823.07	22.2	823.07	27.43	823.03	27.47	823.03
27.51	823.03	28	823	28.17	823	30.07	823	30.19	823
30.98	823	31.11	823	31.33	823	31.73	823	31.86	823
32.31	823	32.35	823	32.41	823	32.91	822.71	32.93	822.69
33.04	822.62	33.53	822	33.64	821.83	34.13	821	34.36	820.86
35.62	820	36.14	819.3	36.33	819	37.06	818.09	37.13	818
37.28	817.86	38.19	817	40.57	816.44	42.28	816	42.7	815.79
43.14	815.57	44.26	815	45	814.06	45.04	814	45.31	813.88
45.85	813.64	46.71	813.28	47.29	813	47.72	812.82	49.64	812
51.08	811.39	52.06	811	53.32	811	55.28	811	55.35	811.1
55.6	811.59	55.81	812	55.93	812.13	56.76	813	57.18	813.51
57.57	814	58.34	814.81	58.57	815	59.65	815.52	60.35	815.85
60.69	816	60.85	816.38	61.14	817	61.77	817.41	62.59	817.79
62.87	817.94	63.09	818	63.88	818.51	64.08	818.62	64.6	819
64.96	819.41	65.1	819.62	65.17	819.68	65.44	820	65.46	820
65.95	820.04	66.86	820.1	66.95	820.11	67.92	820.17	68.1	820.19
68.33	820.21	72.75	820.38	73.42	820.44	73.85	820.47	74.33	820.5
75.86	820.62	76.34	820.64	76.82	820.65	77.12	820.65	77.64	820.69
77.89	820.69	78.6	820.7	79.07	820.71	79.61	820.7	80.05	820.7
81.03	820.68	81.49	820.68	81.97	820.66	82.5	820.64	83.09	820.61
83.79	820.58	84.97	820.52	86.56	820.43	88.96	820.29	92.49	820.08
92.72	820.06	92.77	820.06	92.83	820.06	93.82	820	95.91	819.15
96.18	819	97.9	818.48	98.26	818.34	98.33	818.31	98.49	818.26

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 32.91 .04 59.65 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 32.91 59.65 23.72 12.96 9.56 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 48.29413

INPUT

Description:
 Station Elevation Data num= 133
 Sta Elev Sta Elev Sta Elev Sta Elev Sta Elev

 0 817.79 .32 817.78 .89 817.77 1.12 817.76 1.31 817.74
 1.72 817.71 2.28 817.68 2.55 817.65 3.62 817.59 4.34 817.5
 4.9 817.42 5.81 817.27 6.38 817.22 7.42 817 10.39 817
 11.55 817 11.95 817 12.86 817 15.66 817.6 15.95 817.6
 16.25 817.61 16.38 817.61 16.49 817.59 17.02 817.67 17.33 817.63
 17.59 817.66 17.73 817.68 17.78 817.68 18.15 817.72 18.22 817.71
 18.31 817.71 18.68 817.73 18.89 817.74 19.83 817.65 20.48 817.66
 20.89 817.66 25.43 817.46 25.82 817.46 26.82 817.45 28.63 817.42
 29.29 817.42 31.27 817.38 32.2 817.33 38.14 817.05 38.86 817
 39.92 816.15 40.05 816 41.57 815.09 41.72 815 41.78 814.91
 42.48 814 42.49 813.95 42.83 813 43.45 812.61 44.21 812.13
 44.46 812 45.01 811.8 47.32 811 47.96 810.66 49.1 810
 51.31 810 52.16 810 52.57 810.46 53.05 811 54.13 811.55
 55.12 811.97 55.15 811.99 55.19 812 56.2 812.27 56.57 812.35
 57.26 812.51 57.96 812.66 60.25 813 61.1 813.17 61.21 813.21
 61.38 813.27 62.39 813.61 63.01 813.78 63.15 813.82 63.56 814

64.16	814.47	64.85	815	65.43	815.23	65.75	815.34	66.62	815.68
66.82	815.73	67.12	815.85	67.51	816	68.16	816.12	68.88	816.24
69.44	816.31	70.31	816.43	70.76	816.47	71.16	816.5	71.61	816.52
73.74	816.96	73.84	816.96	73.94	817	75.12	817.84	75.24	817.93
75.42	818	76.6	818.48	76.96	818.57	77.46	818.63	78.09	818.82
78.73	818.83	79.32	818.79	79.43	818.81	79.98	818.75	80.27	818.77
80.36	818.76	80.59	818.76	81.09	818.7	81.35	818.68	81.68	818.65
82.14	818.6	83.61	818.39	86.23	818	86.24	818	86.25	818
89.87	817.7	91.08	817.59	93.97	817	94.26	816.87	94.39	816.82
94.75	816.68	95.26	816.47	96.5	816	97.44	815.56	98.72	815
99.24	814.73	99.42	814.61	99.61	814.49				

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 32.2 .04 61.38 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 32.2 61.38 19.38 15.29 8.32 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 33.00703

INPUT

Description:

Station Elevation Data		num= 123									
Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	815.53	.74	815.54	7.22	815.38	9.05	815.29	11.35	815.32		
11.45	815.31	13.54	815.11	13.63	815.11	14.77	815	16.52	814.82		
17.56	814.73	18.52	814.66	19.26	814.63	20.78	814.58	21.5	814.56		
21.77	814.55	22.11	814.54	22.33	814.53	22.63	814.53	23.09	814.51		
23.2	814.51	24.47	814.48	25.85	814.43	26.16	814.42	27.51	814.39		
27.89	814.39	29.83	814.34	34.1	814.36	34.43	814.37	36.96	814.15		
37.78	814.08	38.2	814	39.13	813.56	40.37	813	40.6	812.37		
40.72	812	42.86	811.2	43.41	811	43.8	810.45	44.12	810		
47.63	809.14	47.93	809.07	48.18	809	51.98	808.01	52.03	808		
52.05	808	52.09	808	52.82	808	53.77	808	54.82	808		
55.47	808.1	55.89	808.16	58.77	808.62	59.92	808.76	60.05	808.78		
60.22	808.8	60.41	808.82	60.56	808.83	62.37	809	64.04	809.33		
64.31	809.41	64.35	809.42	66.33	810	66.62	810.08	66.87	810.15		
68.75	810.68	69.86	811	69.93	811.03	69.98	811.06	70.2	811.16		
71.14	811.59	71.74	811.89	71.95	812	72.18	812.41	72.44	813		
72.52	813.02	73.61	813.23	74.09	813.3	74.6	813.38	75.05	813.42		
75.77	813.52	76.38	813.56	76.46	813.56	77.24	813.68	77.96	813.64		
79.22	813.85	79.38	813.86	80.36	814	82	814.46	82.29	814.52		
82.45	814.56	83.46	814.76	83.88	814.84	85.12	815	85.37	815.02		
85.42	815.04	86.14	815.05	86.85	815.05	86.88	815.06	87.24	815		
87.58	814.96	88.75	814.76	89.14	814.72	89.63	814.59	89.97	814.53		
90.31	814.41	91.52	814.03	91.55	814.02	91.6	814	92.27	813.75		
93.05	813.38	93.55	813.14	93.84	813	94.84	812.77	95.68	812.54		
96.51	812.34	96.89	812.25	97.62	812	97.92	811.84	98.05	811.86		
98.11	811.9	99.04	812	100.91	812						

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 36.96 .04 64.31 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 36.96 64.31 14.36 13.89 6.66 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 19.11380

INPUT

Description:

Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	814.61	.39	814.61	1.27	814.61	3.88	814	5.56	814
12.89	813.66	13.17	813.65	17.56	813.58	19.24	813.5	19.53	813.49
20.33	813.46	22.17	813.42	24.09	813.33	24.26	813.32	24.62	813.31
24.94	813.3	25.01	813.3	26.26	813.24	26.9	813.22	27.16	813.22
27.85	813.18	28.47	813.16	29.59	813.16	30.14	813.14	31.68	813.09
32.5	813	32.58	813	32.76	813	33.72	813	33.74	813
33.82	813	34.05	813	34.12	813	34.41	812.94	34.67	812.87
35.39	812.65	35.51	812.55	36.17	812	36.45	811.9	38.51	811.17
38.62	811.13	38.86	811.05	39.06	811	43.06	810.06	43.3	810
44.46	809.31	45.02	809	45.24	808.92	47.04	808.3	47.9	808
50.6	807.26	52.42	807	55.7	806.12	56.19	806.03	56.45	806
57.05	805.83	57.68	805.74	57.9	805.67	58.01	805.67	58.48	805.65
58.5	805.65	58.76	805.61	59.19	805.63	59.56	805.64	62.34	805.9
62.49	805.91	62.66	805.93	63.95	806	64.03	806	64.36	806
64.37	806.01	66.22	806.07	67.77	806.15	68.33	806.23	70.4	806.52
71.01	806.61	71.71	806.72	72.57	806.87	73.29	807	73.34	807.01
73.96	807.16	74.81	807.36	76.05	807.68	77.27	808	78.34	808.53
78.81	808.68	78.84	808.69	79.03	808.78	79.7	809	81.71	809.5
82.58	809.8	82.76	809.85	83.18	810	84.45	810.28	84.71	810.31
85.44	810.42	86.16	810.48	86.64	810.54	87.07	810.56	87.72	810.62
88.02	810.62	88.26	810.61	88.98	810.62	89.54	810.58	89.89	810.55
90.56	810.49	90.99	810.44	91.38	810.4	91.89	810.33	93.58	810
93.95	809.85	94.01	809.84	95.63	809.9	95.75	810	98.24	810.85
98.52	811	98.75	811.3	99.26	812	99.65	812.54	99.89	812.87
99.99	813	100.69	813.87	100.79	814	100.99	814.19	101.84	815
102.49	815.67	102.7	815.87	102.84	816	103.32	816.22	103.85	816.42

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	36.45	.04	73.96	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 36.45 73.96 8.48 11.03 22.62 .1 .3

CROSS SECTION

RIVER: Nota
 REACH: Nota RS: 8.082387

INPUT

Description:

Station Elevation Data num= 139

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	814	.04	814	.28	814	.86	814	1.51	814
1.99	814	2.03	814	2.36	814	2.46	814	2.78	814

2.89	814	3.54	813.93	3.69	813.93	4.41	813.85	4.55	813.84
5.2	813.85	7.57	813.65	10.55	813.59	12.77	813.51	18.72	813.25
19.29	813.24	20.83	813.22	23.75	813.11	24.24	813.09	25.57	813.04
25.71	813.03	26.47	813	28.32	812.88	29.9	812.79	31.77	812.6
32.43	812.55	33.96	812.44	34.56	812.4	35.31	812.36	35.71	812.3
37.61	812	37.93	811.66	38.75	811	40.7	810.41	42.23	810
43.39	809.67	45.59	809	46.62	808.57	48.25	808	48.47	807.87
49.23	807.37	49.88	807	52.22	806.36	53.44	806	54.49	805.14
54.69	805	54.88	804.22	54.94	804	55.01	803.94	56.1	803
56.17	802.92	57	802	57.3	801.78	58.23	801	59.89	800.01
59.91	800	59.93	799.98	60.04	799.83	60.68	799	60.72	799
61.51	798.76	61.7	798.73	62.21	798.72	62.83	798.76	63.03	798.78
64.93	798.99	64.94	798.99	64.96	798.99	65.04	799	67.77	799.28
68.25	799.34	69.17	799.46	70.69	799.66	71.2	799.73	72.38	799.89
72.54	799.92	73.21	800	73.73	800.31	74.71	801	75.02	801.03
75.71	801.12	76.27	801.15	77.17	801.24	78.42	801.41	79.12	801.44
79.61	801.5	80.78	801.63	82.06	801.85	82.51	801.91	82.93	802
84.09	802.61	84.46	802.81	84.8	803	86.45	803.76	86.86	804
88.17	804.96	88.21	805	89.12	805.73	89.46	806	89.87	806.23
90.74	806.79	91.06	807	93.05	807.51	94.44	807.77	94.79	807.85
94.94	807.88	95.65	808	95.85	808.35	96.44	809	97.29	809.56
98.06	810	98.84	810.27	100.91	811	101.03	811.07	102.41	812
102.61	812.08	103.1	812.24	104.43	812.69	105.38	813	106.41	813.63
107.21	814	107.4	814.03	107.43	814.03	108.57	814.19	108.84	814.23
110.13	814.4	112.36	814.78	113	814.87	113.61	815	114.56	815.66
115.53	815.99	115.54	815.99	115.56	816	116.98	816.55		

Manning's n Values num= 3
 Sta n Val Sta n Val Sta n Val

 0 .035 35.71 .04 84.09 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
 35.71 84.09 24.08 8.08 7.68 .1 .3

SUMMARY OF MANNING'S N VALUES

River:Nota

 * Reach * River Sta. * n1 * n2 * n3 *

 *Nota * 234.5633 * .035* .04* .035*
 *Nota * 220.8931 * .035* .04* .035*
 *Nota * 206.2115 * .035* .04* .035*
 *Nota * 195.5067 * .035* .04* .035*
 *Nota * 184.2587 * .035* .04* .035*
 *Nota * 174.2417 * .035* .04* .035*
 *Nota * 164.4459 * .035* .04* .035*
 *Nota * 154.6206 * .035* .04* .035*
 *Nota * 144.6175 * .035* .04* .035*
 *Nota * 135.4527 *Culvert * * *
 *Nota * 126.2879 * .035* .04* .035*
 *Nota * 107.4834 * .035* .04* .035*
 *Nota * 90.78275 * .035* .04* .035*
 *Nota * 75.41282 * .035* .04* .035*
 *Nota * 61.25671 * .035* .04* .035*
 *Nota * 48.29413 * .035* .04* .035*
 *Nota * 33.00703 * .035* .04* .035*
 *Nota * 19.11380 * .035* .04* .035*
 *Nota * 8.082387 * .035* .04* .035*

SUMMARY OF REACH LENGTHS

River: Nota

* Reach	* River Sta.	* Left	* Channel	* Right
*Nota	* 234.5633	* 12.36*	13.67*	12.35*
*Nota	* 220.8931	* 12.93*	14.68*	14.9*
*Nota	* 206.2115	* 13.16*	10.7*	8.53*
*Nota	* 195.5067	* 8.74*	11.25*	17.83*
*Nota	* 184.2587	* 12.93*	10.02*	8.57*
*Nota	* 174.2417	* 13.27*	9.8*	6.46*
*Nota	* 164.4459	* 8.49*	9.82*	6.36*
*Nota	* 154.6206	* 7.87*	10*	14.7*
*Nota	* 144.6175	* 20.14*	18.33*	27.56*
*Nota	* 135.4527	*Culvert	*	*
*Nota	* 126.2879	* 7.8*	18.8*	15.03*
*Nota	* 107.4834	* 20.46*	16.7*	9.05*
*Nota	* 90.78275	* 24.78*	15.37*	4.84*
*Nota	* 75.41282	* 23.24*	14.16*	8.1*
*Nota	* 61.25671	* 23.72*	12.96*	9.56*
*Nota	* 48.29413	* 19.38*	15.29*	8.32*
*Nota	* 33.00703	* 14.36*	13.89*	6.66*
*Nota	* 19.11380	* 8.48*	11.03*	22.62*
*Nota	* 8.082387	* 24.08*	8.08*	7.68*

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS

River: Nota

* Reach	* River Sta.	* Contr.	* Expan.
*Nota	* 234.5633*	.1*	.3*
*Nota	* 220.8931*	.1*	.3*
*Nota	* 206.2115*	.1*	.3*
*Nota	* 195.5067*	.1*	.3*
*Nota	* 184.2587*	.1*	.3*
*Nota	* 174.2417*	.1*	.3*
*Nota	* 164.4459*	.1*	.3*
*Nota	* 154.6206*	.1*	.3*
*Nota	* 144.6175*	.1*	.3*
*Nota	* 135.4527*Culvert	*	*
*Nota	* 126.2879*	.1*	.3*
*Nota	* 107.4834*	.1*	.3*
*Nota	* 90.78275*	.1*	.3*
*Nota	* 75.41282*	.1*	.3*
*Nota	* 61.25671*	.1*	.3*
*Nota	* 48.29413*	.1*	.3*
*Nota	* 33.00703*	.1*	.3*
*Nota	* 19.11380*	.1*	.3*
*Nota	* 8.082387*	.1*	.3*

Profile Output Table - Standard Table 1

* Reach	* River Sta	* Profile	* Q Total (m3/s)	* Min Ch El (m)	* W.S. Elev (m)	* Crit W.S. (m)	* E.G. Elev (m)	* E.G. Slope (m/m)	* Vel Chnl (m/s)	* Flow Area (m2)	* Top Width (m)	* Froude #	* Chl
* Nota	* 234.5633	* T500	* 13.24	* 851.25	* 852.18	* 852.18	* 852.50	* 0.019582	* 2.51	* 5.27	* 8.37	* 1.01	*
* Nota	* 234.5633	* T10	* 3.77	* 851.25	* 851.75	* 851.75	* 851.92	* 0.023737	* 1.82	* 2.07	* 6.23	* 1.01	*
* Nota	* 220.8931	* T500	* 13.24	* 844.00	* 844.41	* 845.23	* 851.05	* 0.965599	* 11.41	* 1.16	* 3.23	* 6.07	*
* Nota	* 220.8931	* T10	* 3.77	* 844.00	* 844.14	* 844.58	* 850.23	* 3.148459	* 10.94	* 0.34	* 2.68	* 9.72	*
* Nota	* 206.2115	* T500	* 13.24	* 839.77	* 840.48	* 841.09	* 843.15	* 0.265710	* 7.24	* 1.83	* 3.68	* 3.28	*
* Nota	* 206.2115	* T10	* 3.77	* 839.77	* 840.21	* 840.45	* 841.14	* 0.201617	* 4.28	* 0.88	* 3.41	* 2.69	*
* Nota	* 195.5067	* T500	* 13.24	* 837.00	* 837.93	* 838.53	* 840.45	* 0.230900	* 7.03	* 1.88	* 3.60	* 3.11	*
* Nota	* 195.5067	* T10	* 3.77	* 837.00	* 837.55	* 837.88	* 838.85	* 0.220268	* 5.06	* 0.74	* 2.28	* 2.83	*
* Nota	* 184.2587	* T500	* 13.24	* 834.00	* 834.71	* 835.32	* 837.53	* 0.289766	* 7.43	* 1.78	* 3.86	* 3.49	*
* Nota	* 184.2587	* T10	* 3.77	* 834.00	* 834.42	* 834.71	* 835.82	* 0.335253	* 5.25	* 0.72	* 3.15	* 3.51	*
* Nota	* 174.2417	* T500	* 13.24	* 831.95	* 832.52	* 833.09	* 834.85	* 0.222396	* 6.77	* 1.96	* 3.74	* 2.99	*
* Nota	* 174.2417	* T10	* 3.77	* 831.95	* 832.22	* 832.46	* 833.13	* 0.198387	* 4.24	* 0.89	* 3.45	* 2.66	*
* Nota	* 164.4459	* T500	* 13.24	* 830.39	* 831.05	* 831.56	* 832.91	* 0.153610	* 6.05	* 2.19	* 3.45	* 2.42	*
* Nota	* 164.4459	* T10	* 3.77	* 830.39	* 830.69	* 830.91	* 831.45	* 0.143027	* 3.84	* 0.98	* 3.35	* 2.26	*
* Nota	* 154.6206	* T500	* 13.24	* 828.60	* 829.23	* 829.76	* 831.27	* 0.178134	* 6.34	* 2.09	* 3.52	* 2.63	*
* Nota	* 154.6206	* T10	* 3.77	* 828.60	* 828.88	* 829.12	* 829.79	* 0.196414	* 4.24	* 0.89	* 3.35	* 2.63	*
* Nota	* 144.6175	* T500	* 13.24	* 827.74	* 829.79	* 829.00	* 830.02	* 0.002870	* 2.15	* 6.14	* 6.19	* 0.48	*
* Nota	* 144.6175	* T10	* 3.77	* 827.74	* 828.60	* 828.29	* 828.71	* 0.004255	* 1.47	* 2.57	* 4.42	* 0.51	*
* Nota	* 135.4527		* Culvert										*
* Nota	* 126.2879	* T500	* 13.24	* 824.91	* 825.60	* 826.28	* 828.59	* 0.212311	* 7.67	* 1.73	* 6.19	* 3.23	*
* Nota	* 126.2879	* T10	* 3.77	* 824.91	* 825.21	* 825.57	* 827.40	* 0.608362	* 6.56	* 0.57	* 5.53	* 4.66	*
* Nota	* 107.4834	* T500	* 13.24	* 819.47	* 819.97	* 820.42	* 822.68	* 0.494479	* 7.29	* 1.81	* 6.71	* 4.48	*
* Nota	* 107.4834	* T10	* 3.77	* 819.47	* 819.83	* 820.02	* 820.59	* 0.216553	* 3.87	* 0.98	* 5.03	* 2.81	*
* Nota	* 90.78275	* T500	* 13.24	* 815.00	* 815.83	* 816.35	* 817.85	* 0.176690	* 6.29	* 2.10	* 4.14	* 2.82	*
* Nota	* 90.78275	* T10	* 3.77	* 815.00	* 815.43	* 815.74	* 816.73	* 0.239157	* 5.07	* 0.74	* 2.59	* 3.02	*
* Nota	* 75.41282	* T500	* 13.24	* 812.00	* 812.53	* 813.05	* 814.74	* 0.229653	* 6.59	* 2.01	* 4.50	* 3.15	*
* Nota	* 75.41282	* T10	* 3.77	* 812.00	* 812.26	* 812.50	* 813.17	* 0.210482	* 4.22	* 0.89	* 3.80	* 2.78	*
* Nota	* 61.25671	* T500	* 13.24	* 811.00	* 811.71	* 812.01	* 812.67	* 0.073395	* 4.36	* 3.04	* 5.33	* 1.84	*
* Nota	* 61.25671	* T10	* 3.77	* 811.00	* 811.38	* 811.48	* 811.72	* 0.049927	* 2.57	* 1.47	* 4.40	* 1.42	*
* Nota	* 48.29413	* T500	* 13.24	* 810.00	* 810.74	* 811.06	* 811.74	* 0.070913	* 4.42	* 3.00	* 5.02	* 1.82	*
* Nota	* 48.29413	* T10	* 3.77	* 810.00	* 810.34	* 810.50	* 810.86	* 0.088685	* 3.20	* 1.18	* 3.94	* 1.87	*
* Nota	* 33.00703	* T500	* 13.24	* 808.00	* 808.47	* 808.83	* 809.95	* 0.212688	* 5.38	* 2.46	* 7.62	* 3.02	*
* Nota	* 33.00703	* T10	* 3.77	* 808.00	* 808.25	* 808.43	* 808.92	* 0.191988	* 3.62	* 1.04	* 5.42	* 2.64	*
* Nota	* 19.11380	* T500	* 13.24	* 805.61	* 806.15	* 806.39	* 807.07	* 0.179203	* 4.24	* 3.12	* 12.21	* 2.68	*
* Nota	* 19.11380	* T10	* 3.77	* 805.61	* 805.94	* 806.10	* 806.47	* 0.157239	* 3.23	* 1.17	* 6.25	* 2.38	*
* Nota	* 8.082387	* T500	* 13.24	* 798.72	* 799.15	* 799.66	* 803.11	* 0.807161	* 8.82	* 1.50	* 5.97	* 5.61	*
* Nota	* 8.082387	* T10	* 3.77	* 798.72	* 798.94	* 799.25	* 802.21	* 1.543656	* 8.02	* 0.47	* 3.55	* 7.03	*

ERRORS WARNINGS AND NOTES

Errors Warnings and Notes for Plan : nota_p

River: Nota Reach: Nota RS: 220.8931 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 220.8931 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 206.2115 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 206.2115 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 195.5067 Profile: T500
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 195.5067 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Nota Reach: Nota RS: 184.2587 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 184.2587 Profile: T10
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 174.2417 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 174.2417 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 164.4459 Profile: T500
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

River: Nota Reach: Nota RS: 164.4459 Profile: T10
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 154.6206 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 154.6206 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Nota Reach: Nota RS: 144.6175 Profile: T500
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

Note: Hydraulic jump has occurred between this cross section and the previous upstream section.
River: Nota Reach: Nota RS: 144.6175 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

Note: Hydraulic jump has occurred between this cross section and the previous upstream section.
River: Nota Reach: Nota RS: 135.4527 Profile: T500
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Nota Reach: Nota RS: 135.4527 Profile: T500 Culv: Culvert #1
Note: The flow in the culvert is entirely supercritical.

River: Nota Reach: Nota RS: 135.4527 Profile: T10
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

River: Nota Reach: Nota RS: 135.4527 Profile: T10 Culv: Culvert #1
Note: The flow in the culvert is entirely supercritical.

River: Nota Reach: Nota RS: 107.4834 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 107.4834 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 90.78275 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 90.78275 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 75.41282 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 75.41282 Profile: T10
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 61.25671 Profile: T500
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.

This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 61.25671 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 48.29413 Profile: T500

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 48.29413 Profile: T10

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 33.00703 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 33.00703 Profile: T10

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 19.11380 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 19.11380 Profile: T10

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 8.082387 Profile: T500

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

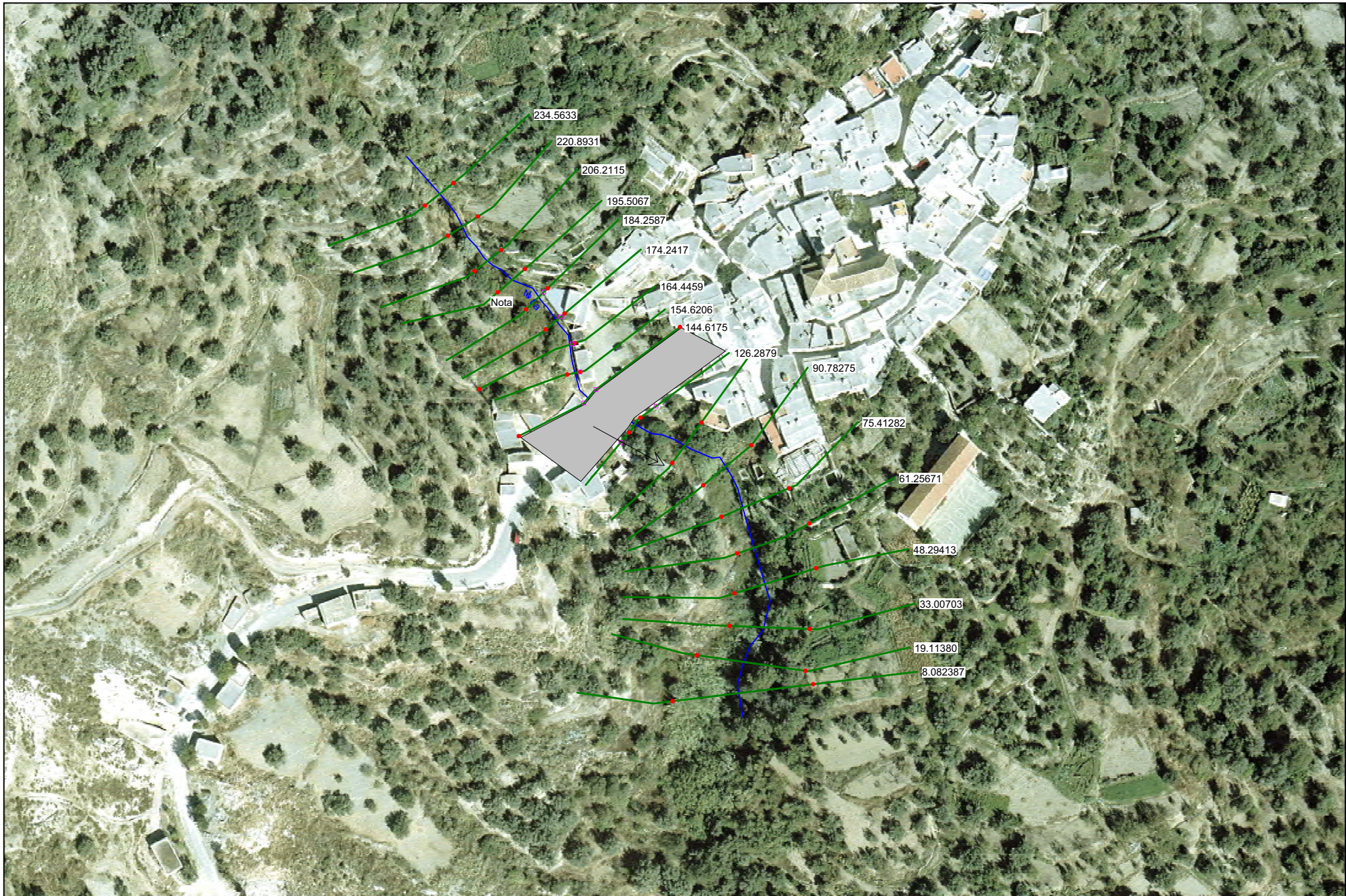
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

River: Nota Reach: Nota RS: 8.082387 Profile: T10

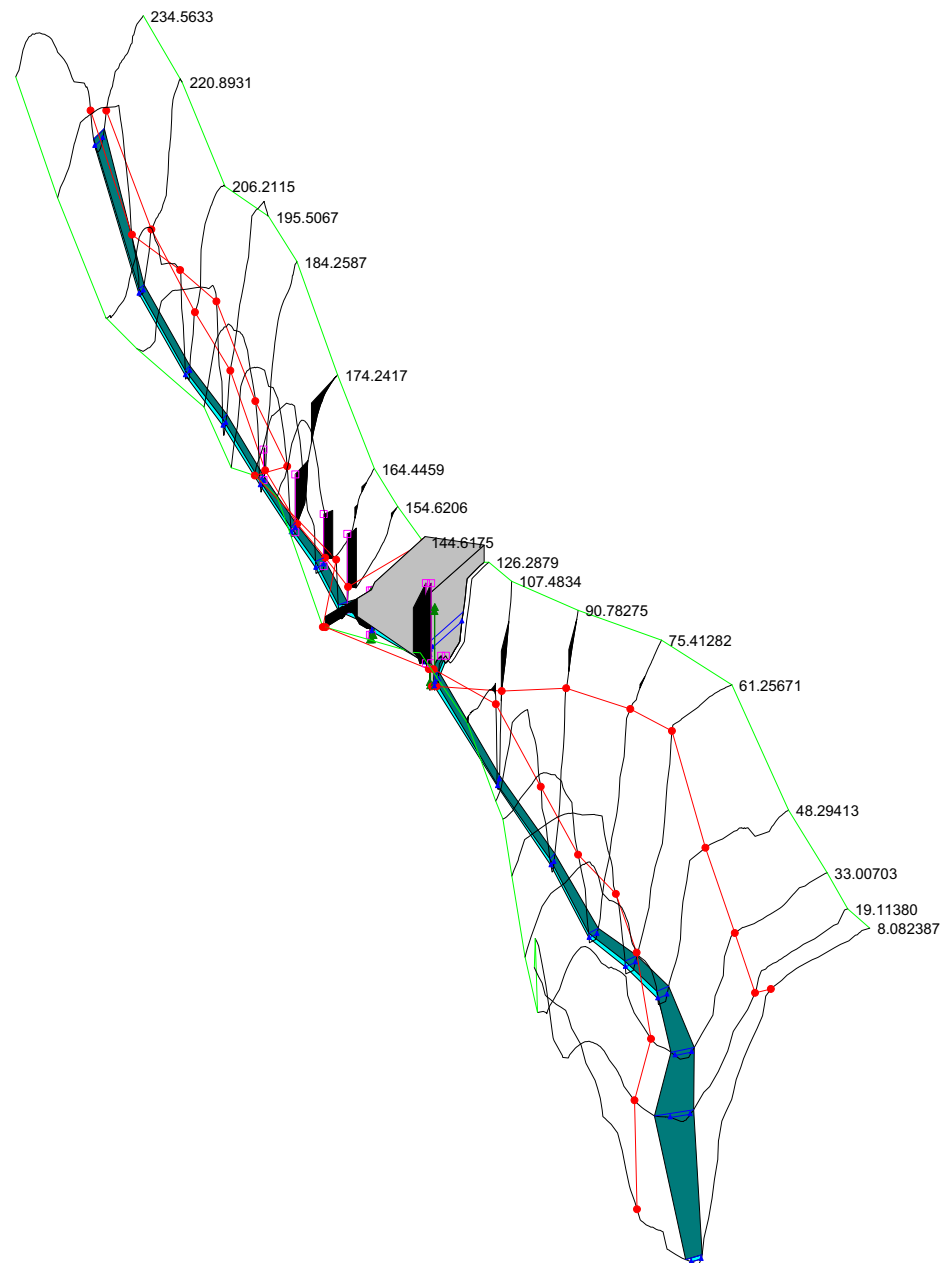
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Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.



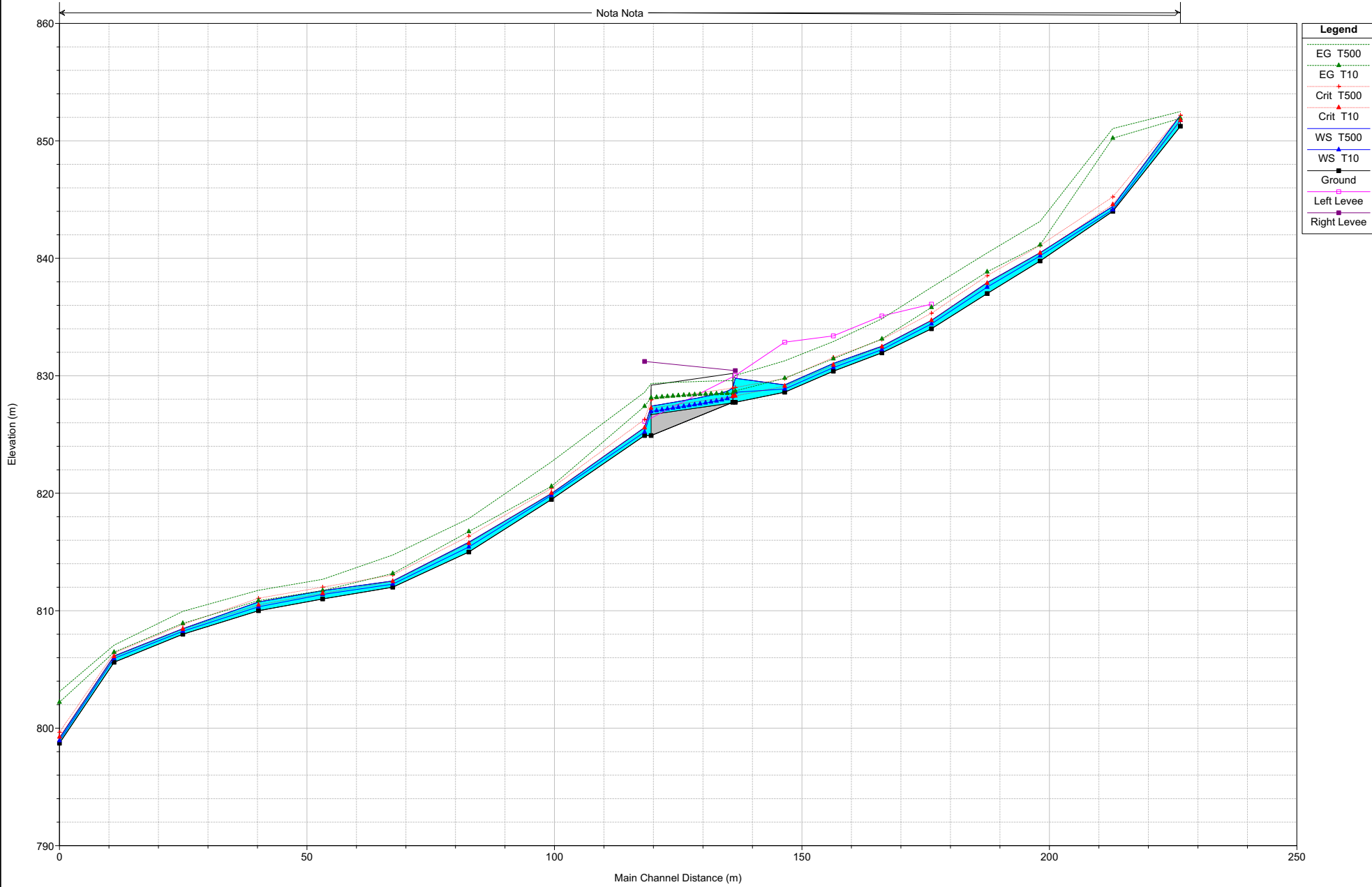
nota_p Plan: nota_p
Geom: nota_p Flow: nota_a



Legend	
	WS T500
	WS T10
	Ground
	Bank Sta
	Levee
	Ineff

nota_p Plan: nota_p
Geom: nota_p Flow: nota_a

Nota Nota

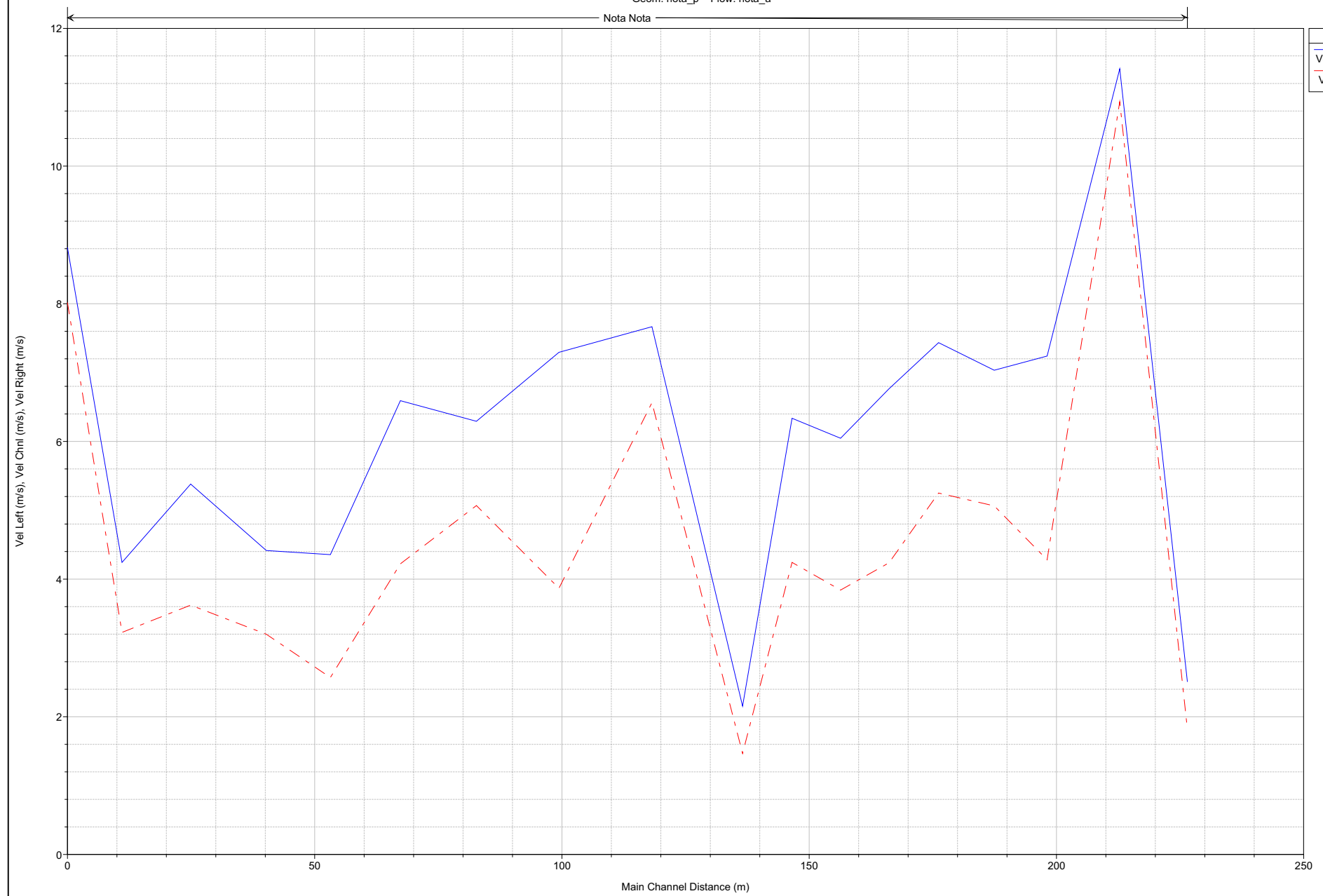


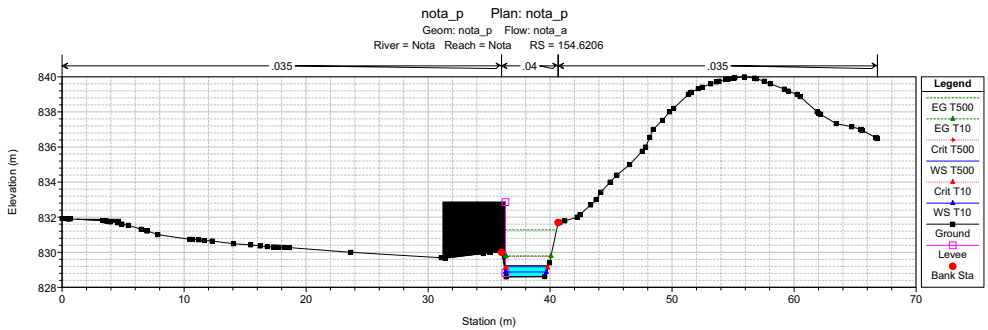
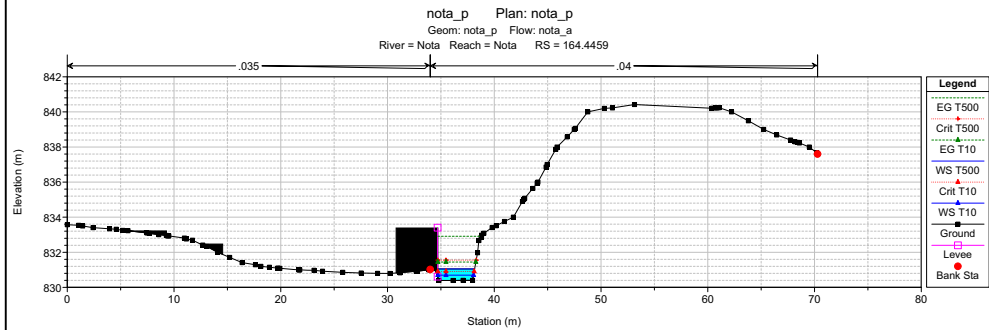
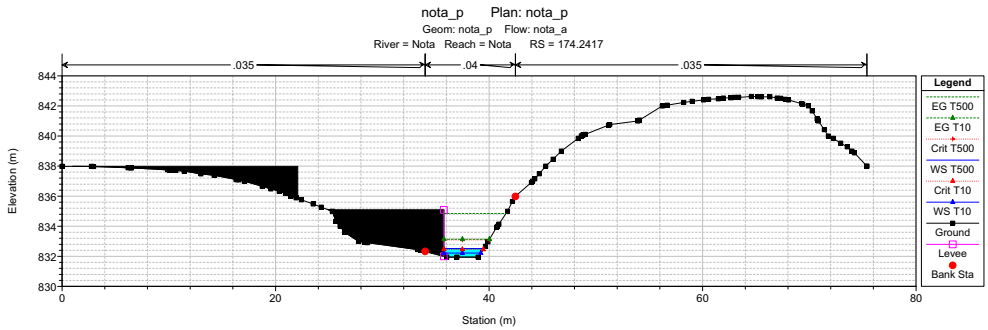
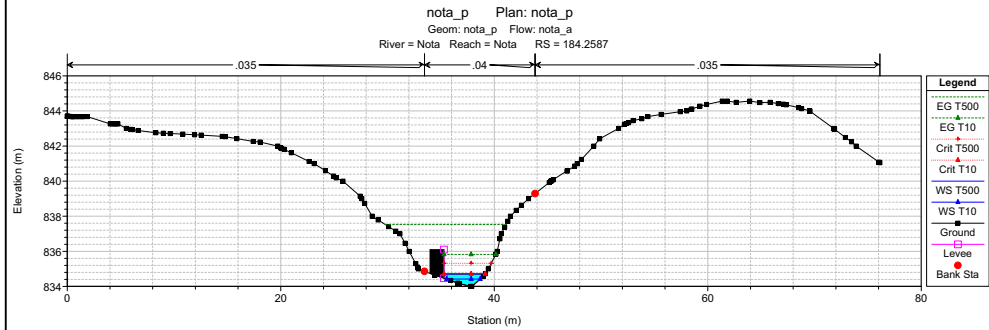
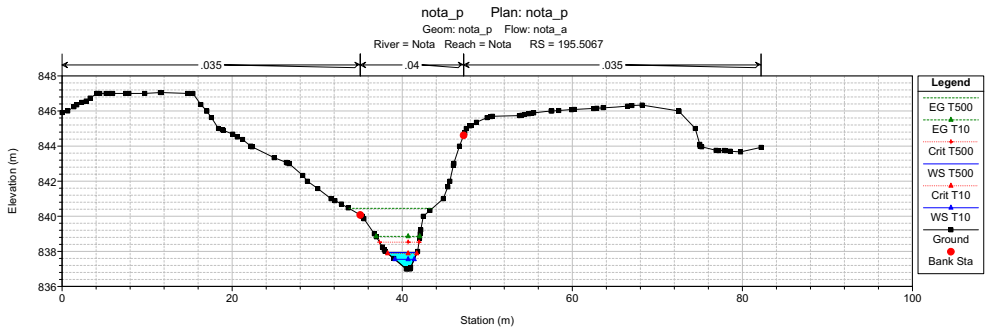
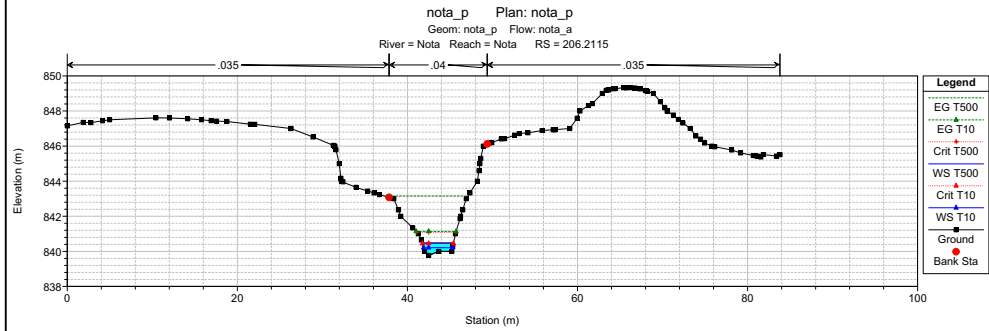
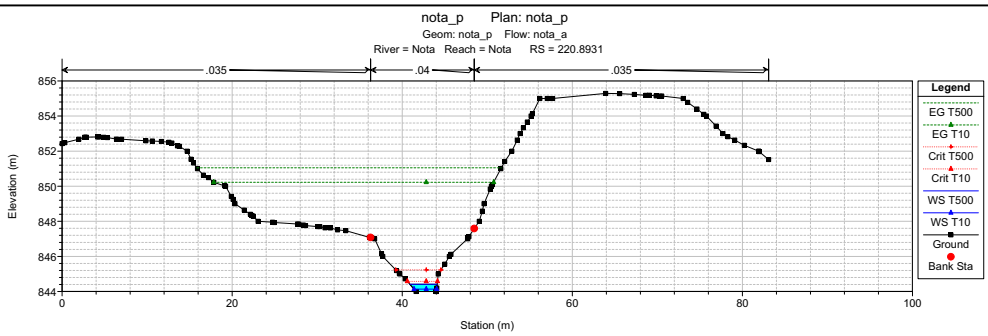
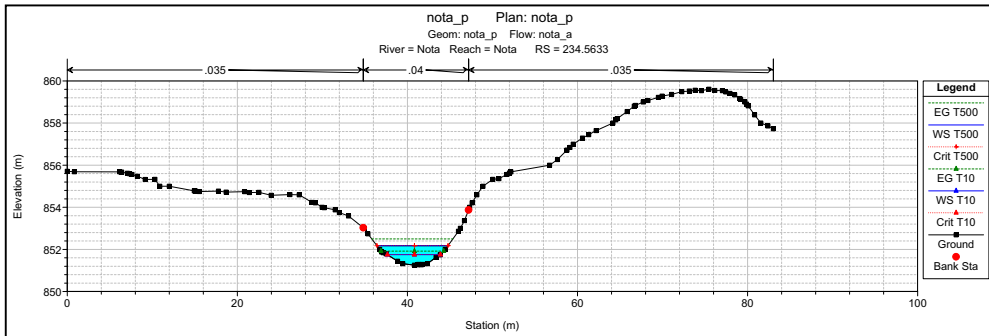
Legend	
EG T500	(Green dotted line with triangles)
EG T10	(Red dotted line with triangles)
Crit T500	(Red solid line with triangles)
Crit T10	(Red solid line with triangles)
WS T500	(Blue solid line with triangles)
WS T10	(Blue solid line with triangles)
Ground	(Black solid line with squares)
Left Levee	(Magenta solid line with squares)
Right Levee	(Magenta solid line with squares)

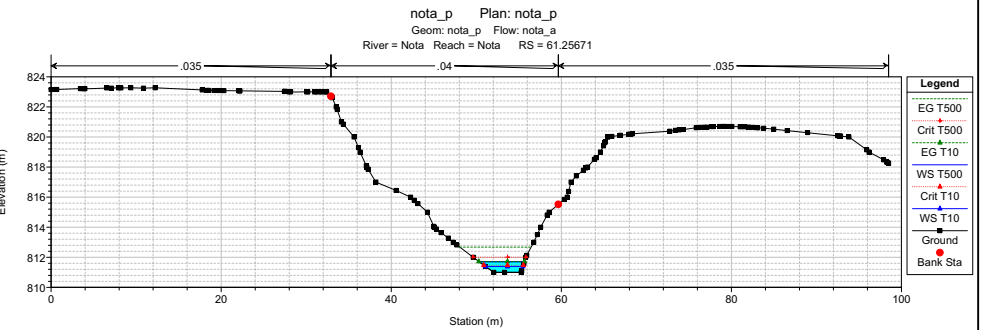
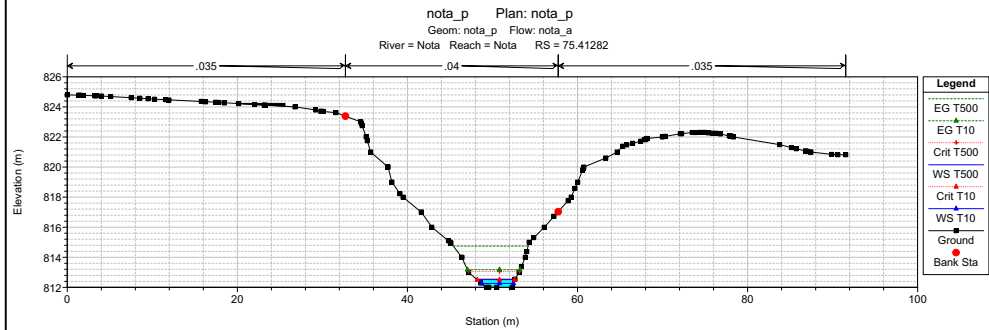
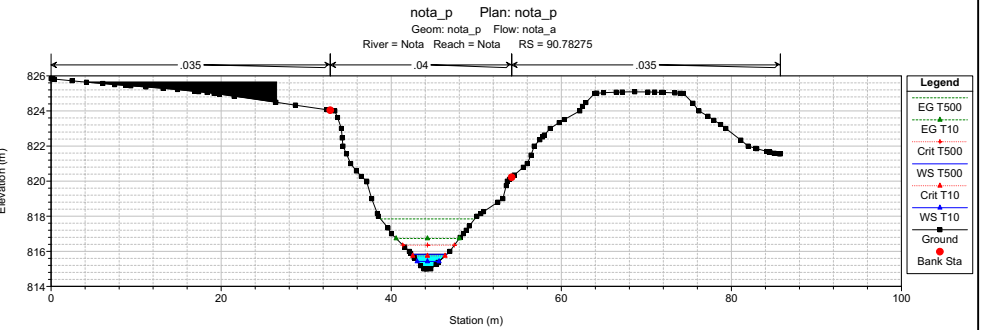
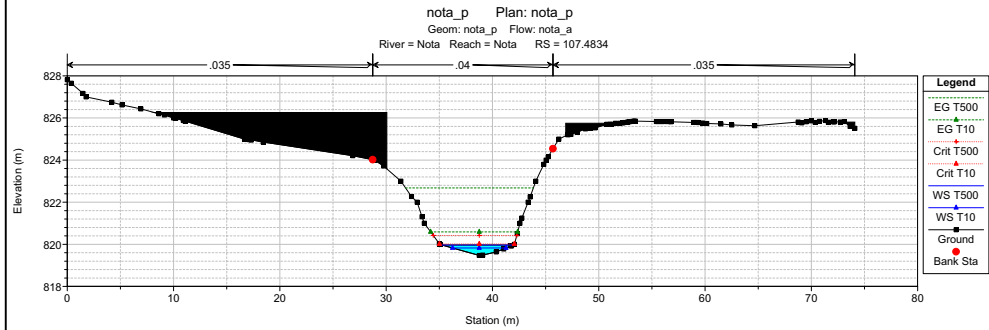
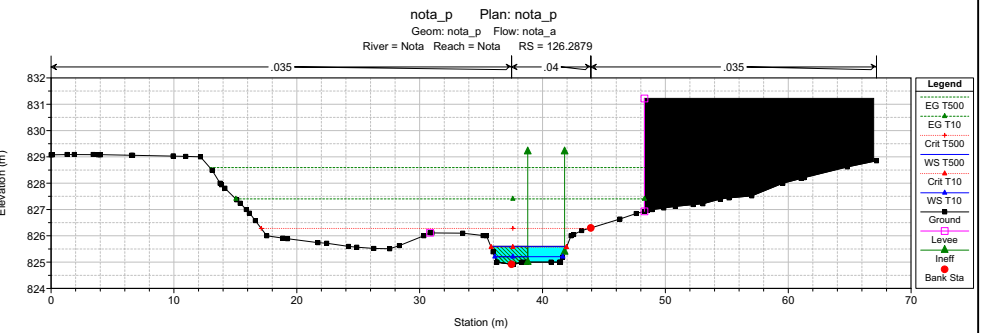
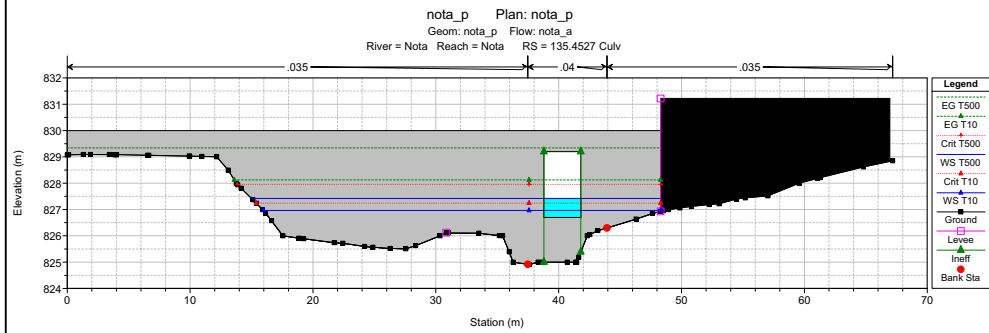
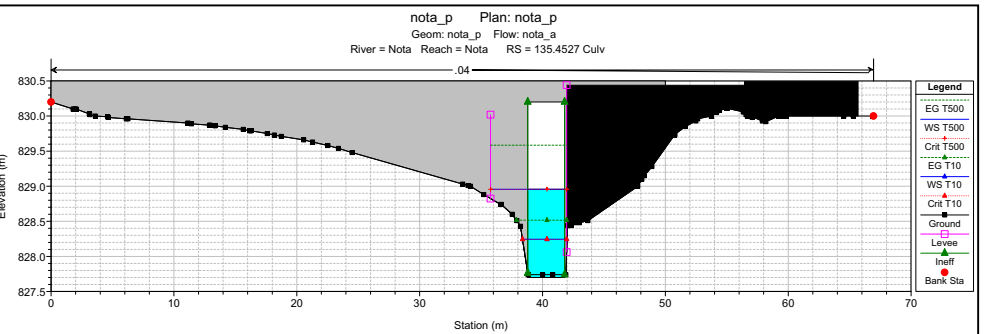
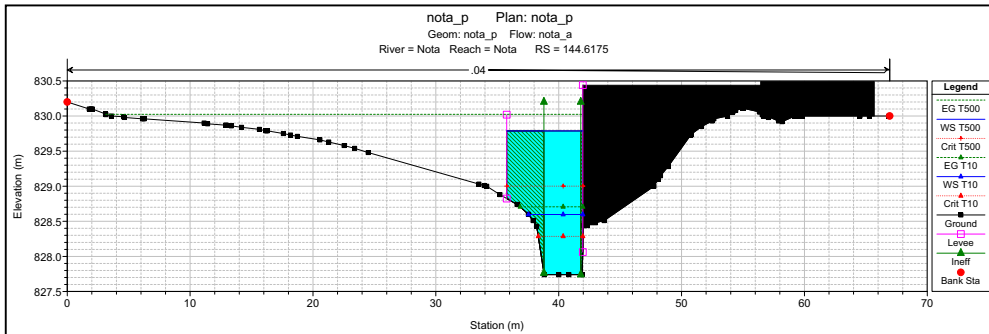
nota_p Plan: nota_p
Geom: nota_p Flow: nota_a

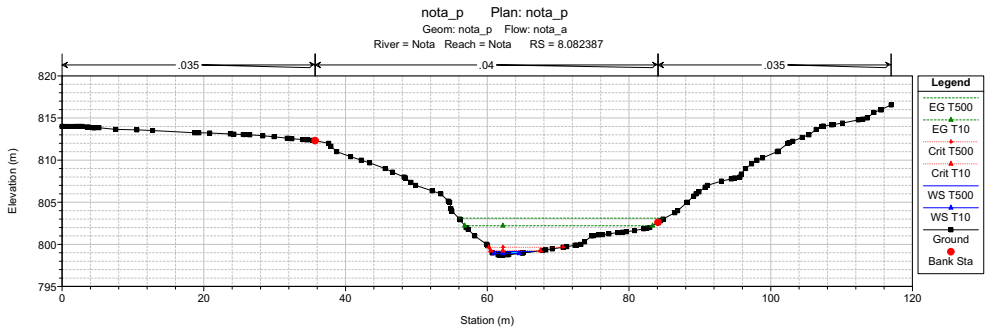
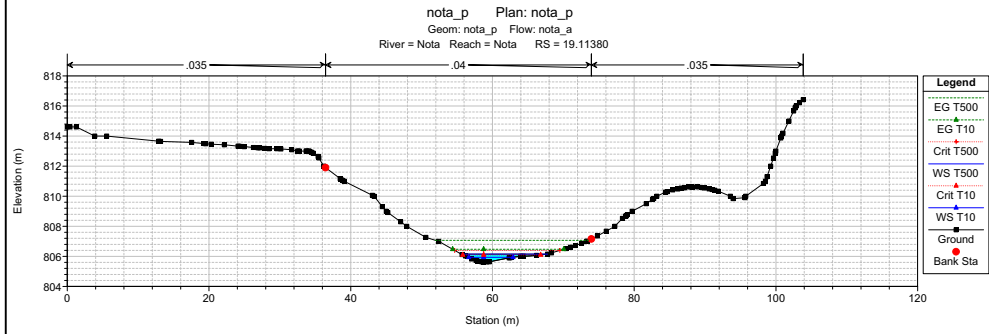
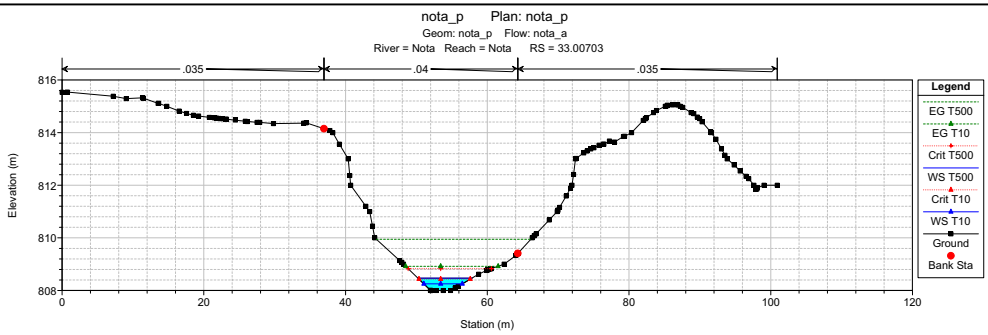
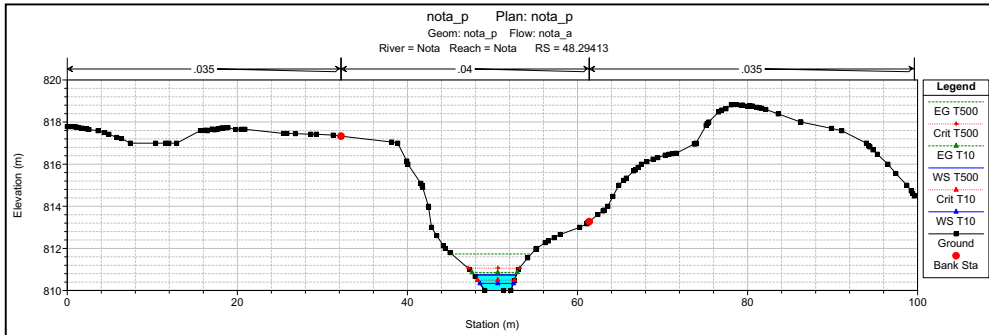
Nota Nota

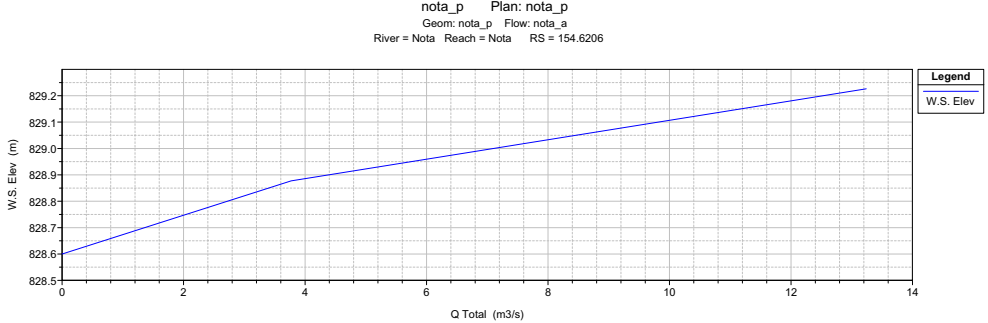
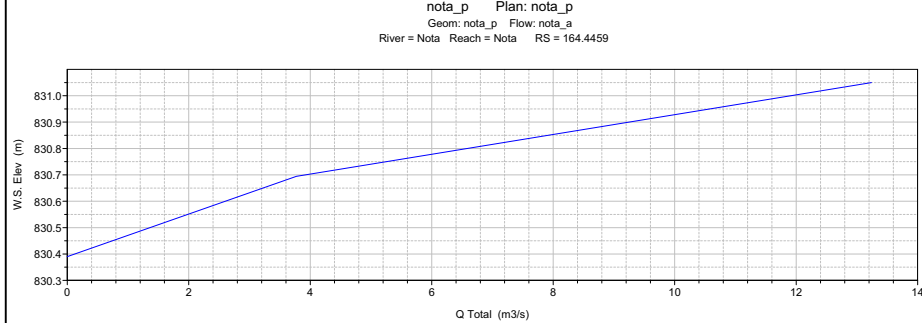
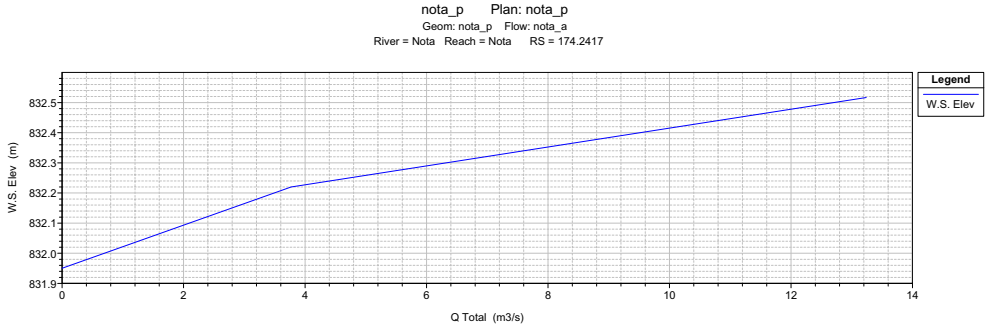
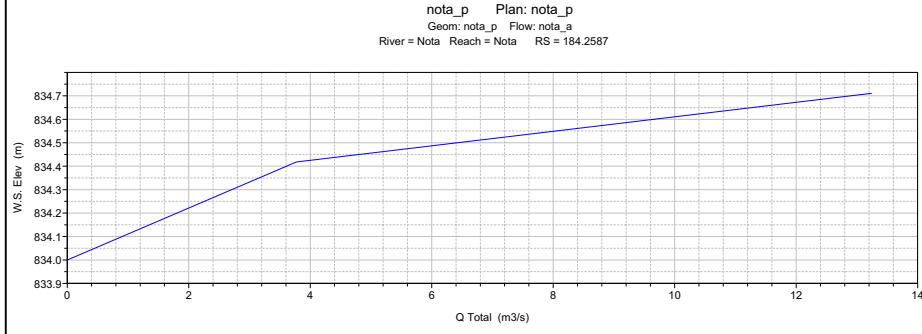
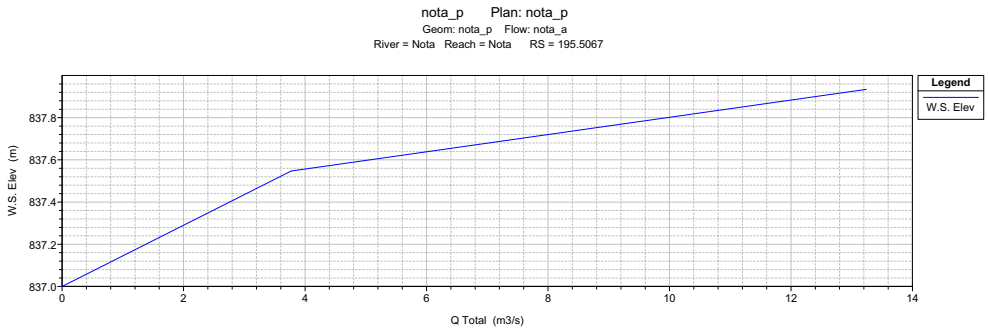
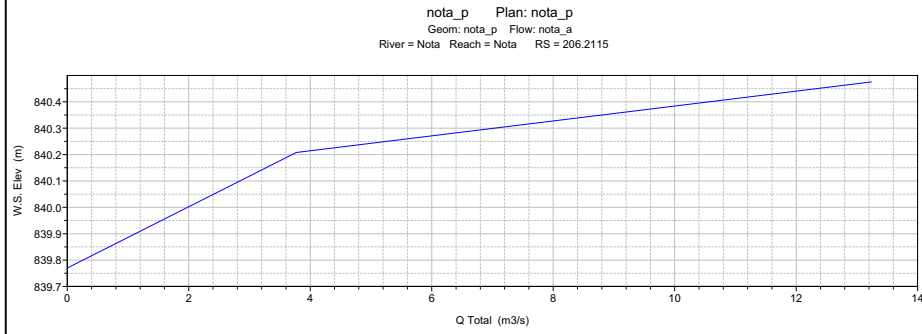
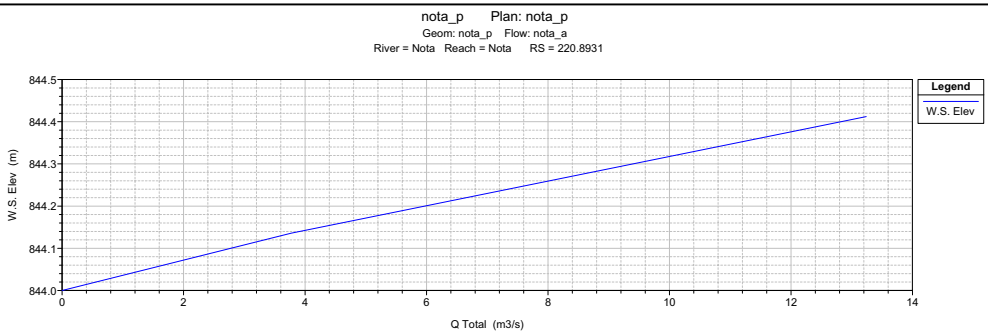
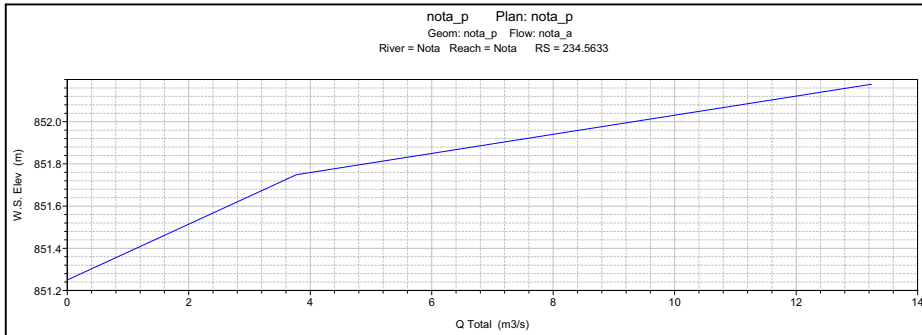
Legend
Vel Chnl T500
Vel Chnl T10

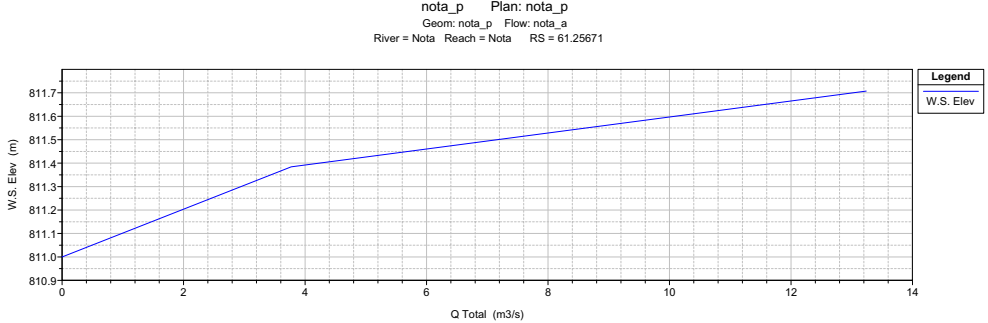
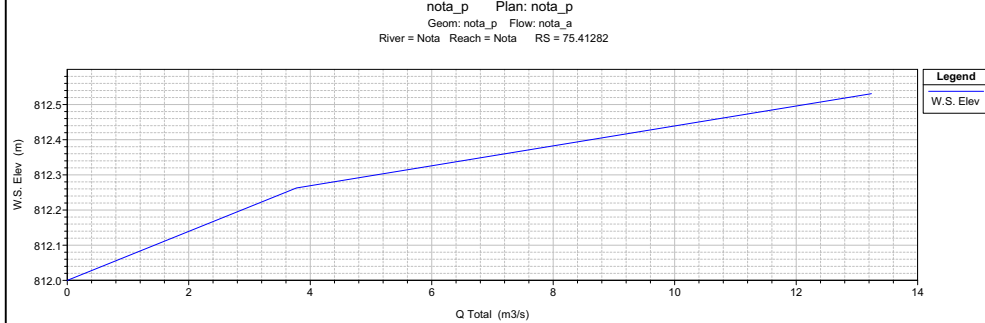
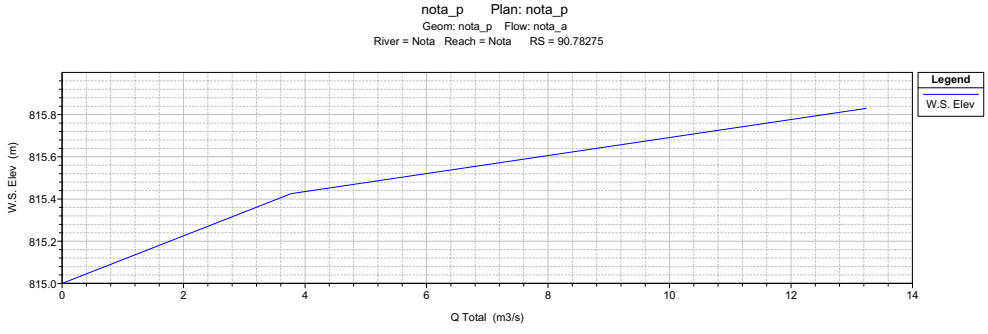
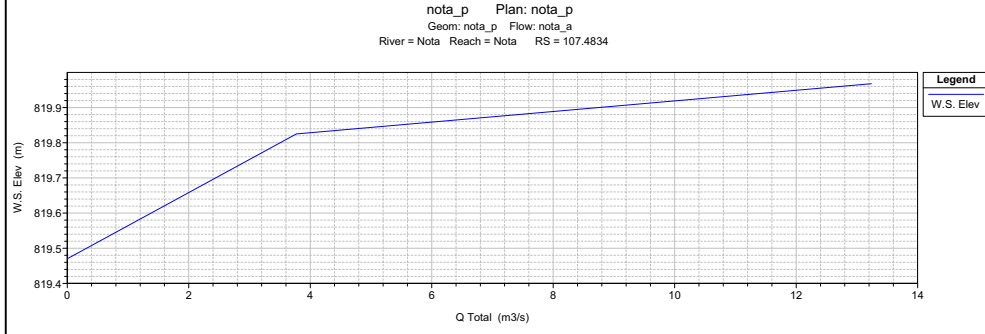
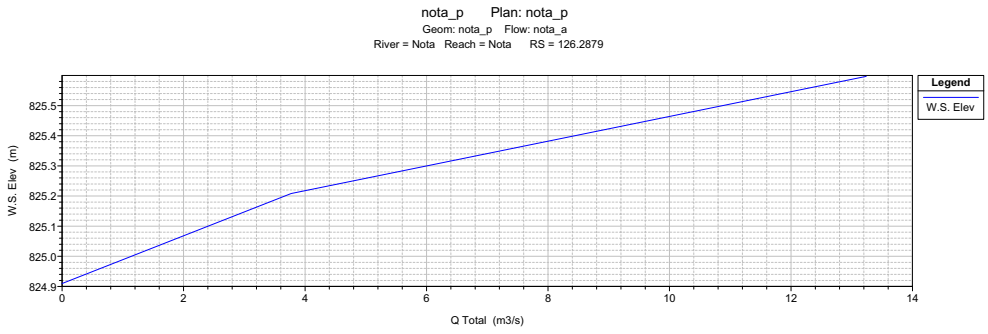
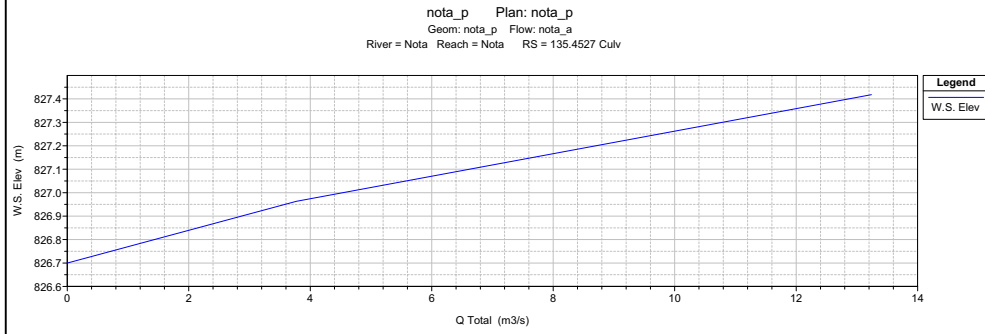
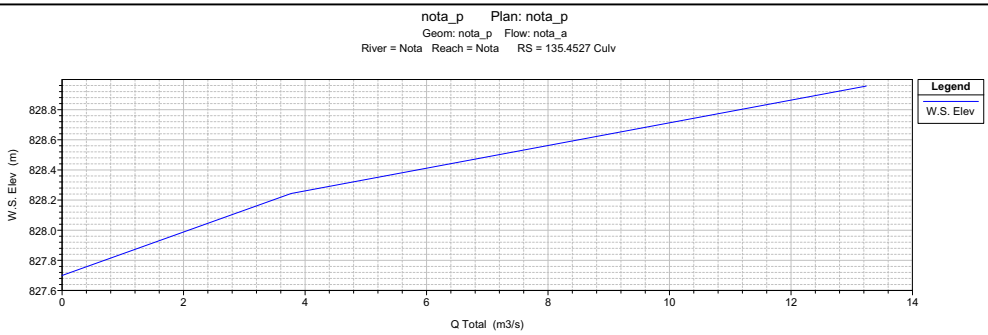
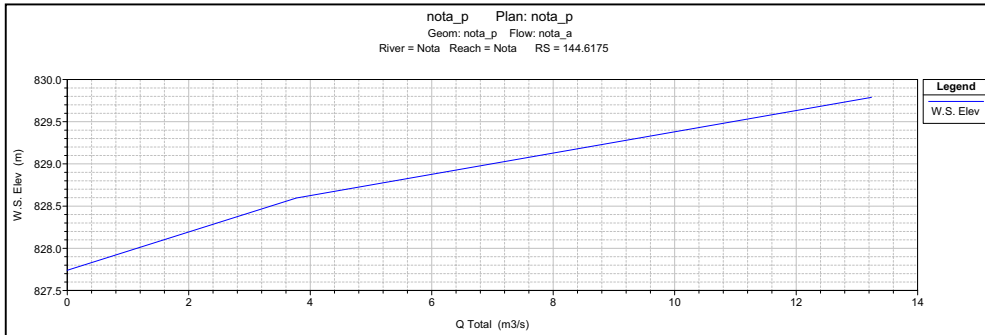




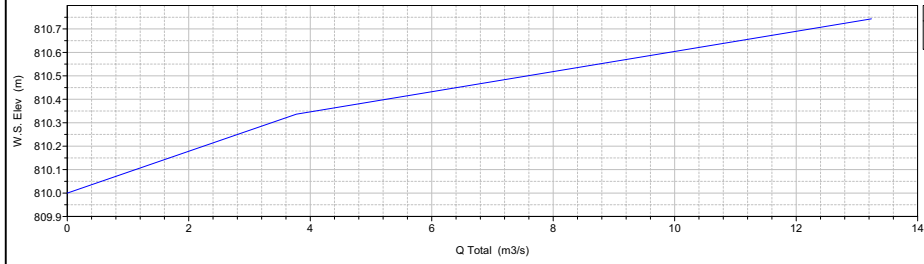






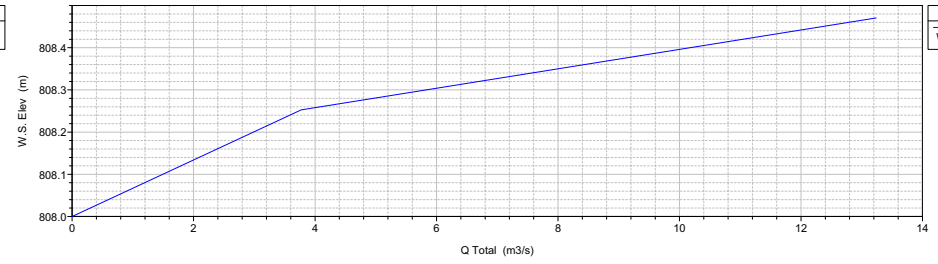


nota_p Plan: nota_p
Geom: nota_p Flow: nota_a
River = Nota Reach = Nota RS = 48.29413



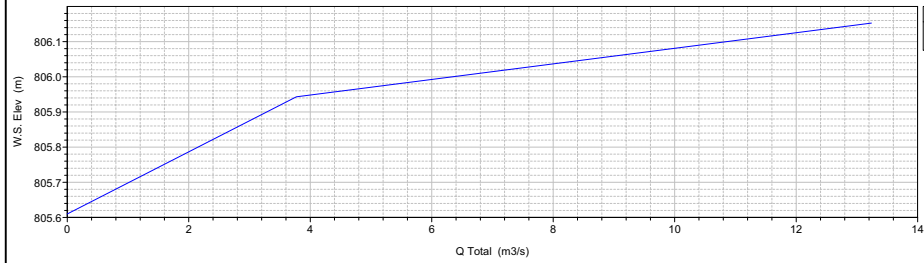
Legend
W.S. Elev

nota_p Plan: nota_p
Geom: nota_p Flow: nota_a
River = Nota Reach = Nota RS = 33.00703



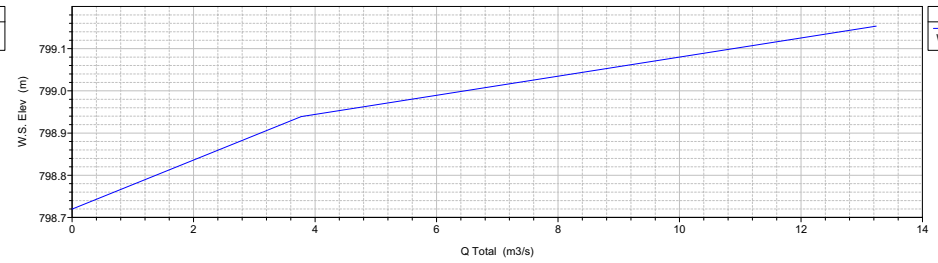
Legend
W.S. Elev

nota_p Plan: nota_p
Geom: nota_p Flow: nota_a
River = Nota Reach = Nota RS = 19.11380



Legend
W.S. Elev

nota_p Plan: nota_p
Geom: nota_p Flow: nota_a
River = Nota Reach = Nota RS = 8.082387



Legend
W.S. Elev