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August 31, 2016

VIA ELECTRONIC FILING
Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: TransCanada Hydro Northeast Inc.'s May 16, 2016 Updated Study Report – Supplemental Data
Project Nos. 1892-026, 1855-045, and 1904-073

Dear Secretary Bose:

TransCanada Hydro Northeast Inc. ("TransCanada") is the owner and licensee of the Wilder Hydroelectric Project (FERC No. 1892), the Bellows Falls Hydroelectric Project (FERC No. 1855), and the Vernon Hydroelectric Project (FERC No. 1904). The current licenses for these projects each expire on April 30, 2019. On October 31, 2012, TransCanada initiated the Integrated Licensing Process by filing with the Federal Energy Regulatory Commission ("FERC" or "Commission") its Notice of Intent to seek new licenses for each project, along with a separate Pre-Application Document for each project.

TransCanada submitted an Updated Study Report ("USR") for the three projects, as required by 18 C.F.R. §5.15(f) on May 16, 2016 and in accordance with the Revised Process Plan and Schedule for the ILP issued May 5, 2016 by the Commission. The USR meeting was held on June 1, 2016 in accordance with 18 C.F.R. §5.15(c)(3) and a meeting summary was filed June 14, 2016. Comments, Disagreements and Requests to Amend Study Plans were received on the USR and TransCanada submitted responses to those on August 15, 2016.

With this filing, TransCanada submits supplemental data requested in comment letters and as TransCanada noted in its August 15, 2016 response:

1. Study 8 – Channel Morphology and Benthic Habitat Study. Attached herein: HEC-RAS model cross sections at study site transects, and cross section selection rationale).
2. Study 19 – American Eel Downstream Passage Assessment. Attached in Excel format: project discharge by discharge point at the time of passage for each radio-tagged fish.
3. Study 22 – Downstream Migration of Juvenile American Shad at Vernon. Attached in Excel format: project operations data for the period encompassing first release to last passage of radio-tagged fish.

If there are any questions regarding the information provided in this filing or the process, please contact John Ragonese at 603-498-2851 or by emailing john_ragonese@transcanada.com.

Sincerely,

John L. Ragonese
FERC License Manager

Attachment: Supplemental Data for May 16, 2016 USR Studies 8, 19, 22
cc: Interested Parties List (distribution through email notification of availability and download from TransCanada's relicensing web site www.transcanada-relicensing.com).

TRANSCANADA HYDRO NORTHEAST INC.

ILP Study 8
Channel Morphology and Benthic Habitat Study

Supplement to Revised Study Report

In support of Federal Energy Regulatory Commission Relicensing of:

Wilder Hydroelectric Project (FERC Project No. 1892-026)
Bellows Falls Hydroelectric Project (FERC Project No. 1855-045)
Vernon Hydroelectric Project (FERC Project No. 1904-073)

Prepared for

TransCanada Hydro Northeast Inc.
4 Park Street, Suite 402
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Prepared by

Stantec Consulting Services Inc.
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and

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Bedford NH 03110

August 31, 2016

Stantec

Memo

To:	Maryalice Fischer	From:	Michael Chelminski and Robin MacEwan
	Normandeau Associates		Stantec Consulting Services Inc.
File:	195600876	Date:	August 26, 2016

Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

This memo provides the supplemental data for Study 8 (Channel Morphology and Benthic Habitat) that were identified in the August 15, 2016, Response to Comments submitted to the Federal Energy Regulatory Committee (FERC) regarding TransCanada Hydro Northeast Inc.'s May 16, 2016, Updated Study Report for Project Nos 1892-026, 1855-045, and 1904-075 (August 15, 2016, Response to Comments).

This memo provides supplemental information addressing Study 8 Comments No. 3 and No. 5 of the August 15, 2016, Response to Comments filing, including Study 4 HEC-RAS model cross sections at Study 8 study sites and information regarding cross section evaluation and selection.

HEC-RAS CROSS SECTION IDENTIFICATION PROCESS

Hydraulic parameters that were used in analyses performed as part of Study 8 were obtained from the one-dimensional, numerical hydraulic model that was developed as part of ILP Study 4 (Hydraulic Model Study) using the HEC-RAS software system developed by the U.S. Army Corps of Engineers. The first three paragraphs from Section 4.5.2 of the Study 8 Report are included below to provide context on the process that was used to identify data from the Study 4 HEC-RAS model for analyses as part of Study 8.

> ***4.5.2 Hydraulic Model Study (Study 4)***
>
> *Information obtained from Study 4, including stage-shear stress and stage- discharge curves, was used to evaluate the stability of coarse-grained substrates over a range of water surface elevations (WSEs) and flows in the vicinity of each mainstem site and applicable tributary sites. The range of evaluated flows included flows greater than the project facility MGFs. Incipient motion criteria presented in Table 4.6 were compared to calculated shear stresses based on stage-shear stress data obtained from Study 4 at each mainstem site. This comparison was developed to evaluate the stability of the median particle size class(es) at these sites.*
>
> *Information from Study 4 was obtained in the vicinity of the twelve mainstem sites and four of the tributary sites (08-T02, 08-T04, 08-T14, and 08-T16) which are located in close proximity to modeled areas of the Connecticut River. The two additional tributary sites (08-T01 and 08-T12) are located upstream from the limits of the hydraulic model developed as a part of Study 4 and as a result hydraulic model data is not available for these tributary sites.*

Information from Study 4 was obtained for between two and seven hydraulic model cross sections for the mainstem sites, with the requested number of cross sections dependent on the spatial extent of each site relative to the location of adjacent hydraulic model cross sections. Similarly, information from Study 4 was obtained for between one and six hydraulic model cross sections for the four tributary sites for which information from Study 4 is used.

SUPPLEMENTAL INFORMATION IN RESPONSE TO COMMENTS 3 AND 5

The following sections of this memo describe the HEC-RAS model cross sections at the 12 mainstem and 4 tributary study sites that were evaluated as part of Study 8 using data obtained from the ILP Study 4 HEC-RAS model. Referenced cross section (XSec) numbers are as presented in the ILP Study 4 HEC-RAS model, and increase moving upstream along the study reach of the Connecticut River.

Information provided in this memo is organized by Study 8 study site and includes:

1. Identification of evaluated Study 4 HEC-RAS model cross sections at each Study 8 study site;
2. Flow / shear stress curves for evaluated HEC-RAS model cross sections;
3. Rational for selection of HEC-RAS cross sections for use as a part of Study 8;
4. Location of selected HEC-RAS cross-sections relative to Study 8 study site transects; and
5. Plots of the HEC-RAS model cross sections evaluated as a part of Study 8 (provided as an attachment to this memo).

Factors that were used to evaluate Study 4 HEC-RAS model output data and select HEC-RAS model cross sections for use as part of Study 8 included:

- Proximity of HEC-RAS model cross sections to the respective Study 8 study site;
- Similarity of the HEC-RAS model cross-section data with data at adjacent cross sections; and
- Flow / shear stress curves.

Proximity of the HEC-RAS model cross sections to the Study 8 study sites was the sole criteria used to initially identify potential cross sections from which flow / shear stress data could potentially be used as part of Study 8. The HEC-RAS model results and associated output data can vary as a result of factors including localized geometric conditions, and flow / shear stress data for the initially identified cross sections was evaluated for similarity of the data. The objective of this comparison was to identify representative conditions based on comparison of the identified cross sections adjacent to each Study 8 study site. An additional factor that was considered was preference for monotonic flow / shear stress curves where present. In some of the evaluated flow / shear stress curves, the non-monotonic curves depict very high shear stresses at low flows that are not consistent with conditions observed during the Study 8 site visits. Except where otherwise noted, the flow / shear stress curve in closest proximity to the study sites with the highest shear stress at the MGF was selected for use as part of Study 8. The basis for selecting the curve with the highest shear stress at the MGF is that this approach allows for a conservative evaluation of substrate stability.

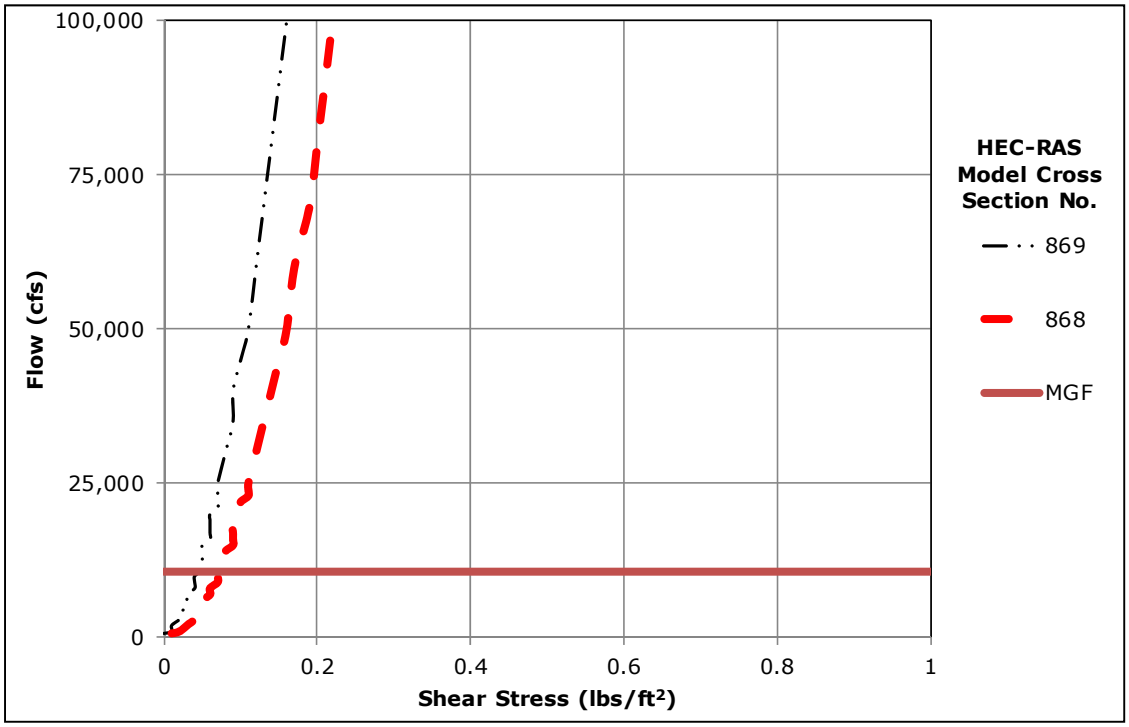
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M01

Two Study 4 cross sections (XSecs 868 and 869) were identified as the cross sections located closest to Study 8 mainstem study site 08-M01. Figure 1 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

The cross section with the greater shear stress (XSec 868) was selected for use as part of Study 8, and the cross section with lower shear stress (XSec 869) was eliminated from analysis. XSec 868 is located approximately 25 feet (ft) downstream and approximately parallel to the Study 8 transect at mainstem site 08-M01. (In the vicinity of 08-M01, XSec 869 is located approximately 100 ft upstream from XSec 868.)

Figure 1: Mainstem Site 08-M01



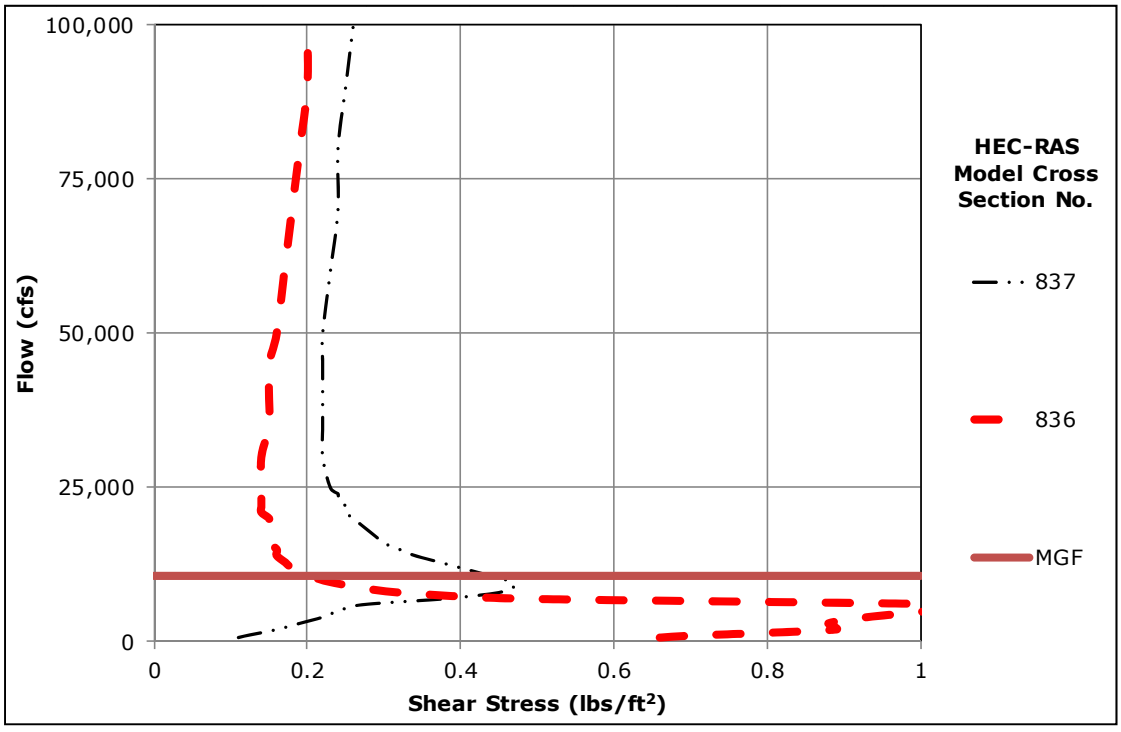
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M04

Two Study 4 cross sections (XSecs 836 and 837) were identified for evaluation in association with Study 8 mainstem site 08-M04. These cross sections were evaluated for use at this site because they both cross the multiple channels of the Connecticut River adjacent to this site. XSec 835, which is located downstream from this study site, crosses the Connecticut River where it has a single channel and was therefore not evaluated at this site. Figure 2 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

Section 4.5.2 of the Study 8 Report addresses cases where the shear stress data obtained from the Study 4 HEC-RAS model is non-monotonic; this is that case at mainstem site 08-M04. XSec 836 was selected for use as part of Study 8 because it passes through the two Study 8 transects at mainstem site 08-M04. XSec 837 is located approximately 550 ft upstream from XSec 836.

Figure 2: Mainstem Site 08-M04



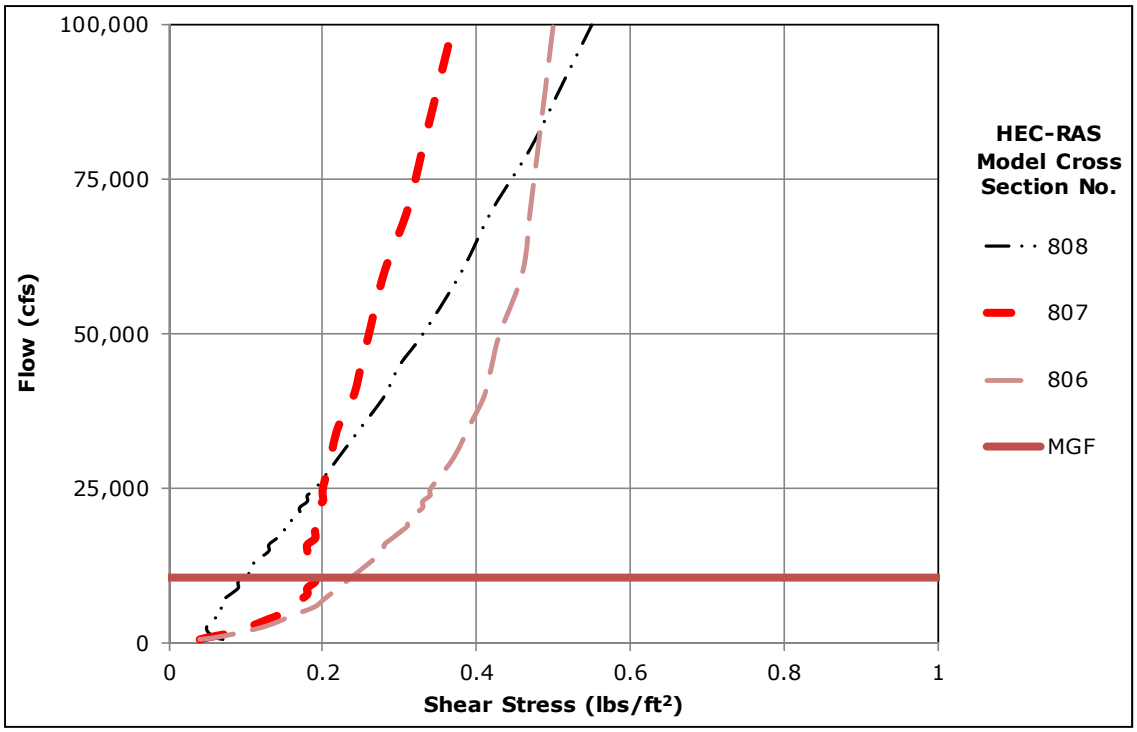
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M05

Three Study 4 cross sections (XSecs 806, 807, and 808) were identified as the cross sections located closest to Study 8 mainstem site 08-M05. Figure 3 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 806 is located over 500 ft downstream from the Study 8 transects and was eliminated based on its distance from the study site relative to XSecs 807 and 808. XSecs 807 and 808 are located in a transitional area at the upstream end of the island bar on which mainstem site 08-M05 is located. XSec 807 intersects mainstem study site 08-M05 and has a higher shear stress at the MGF relative to XSec 808 (which is located over 300 ft upstream from XSec 807); XSec 807 was therefore selected for use as a part of Study 8.

Figure 3: Mainstem Site 08-M05



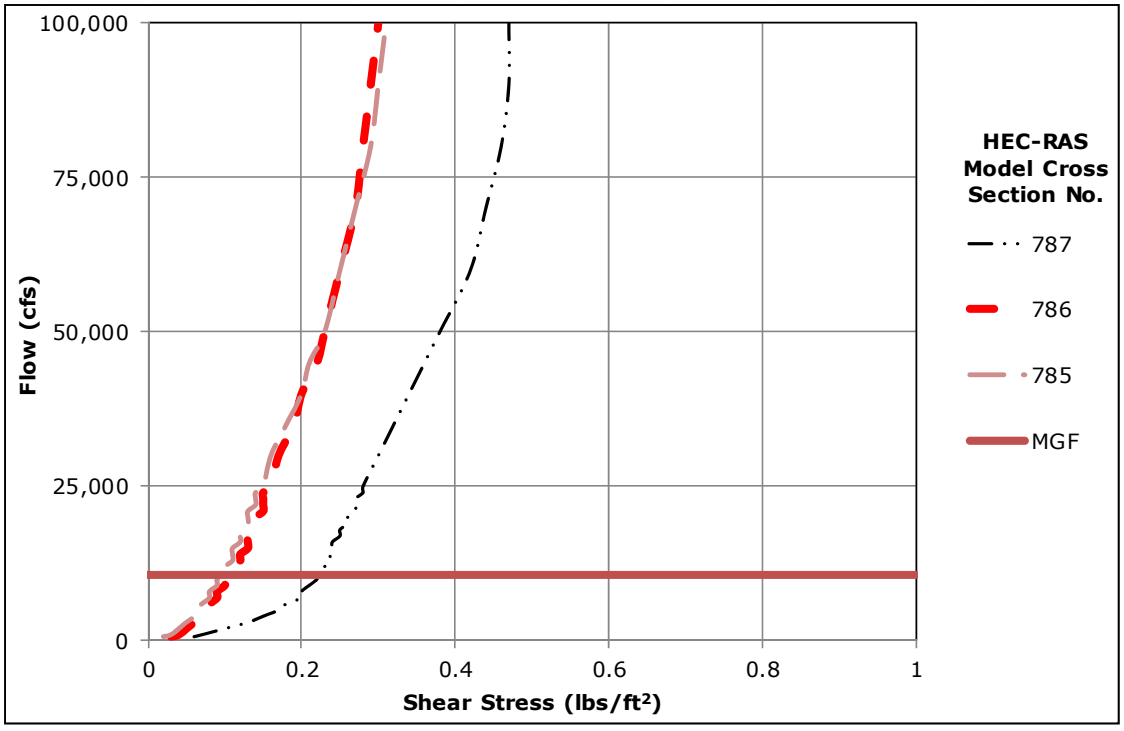
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M07

Three Study 4 cross sections (XSecs 785, 786, and 787) were identified as the cross sections located closest to Study 8 mainstem Site 08-M07. Figure 4 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 786 intersects mainstem study site 08-M07 and was therefore selected for use as a part of Study 8. (XSecs 785 and 787 are located approximately 500 ft downstream and upstream, respectively, from the selected cross section.)

Figure 4: Mainstem Site 08-M07



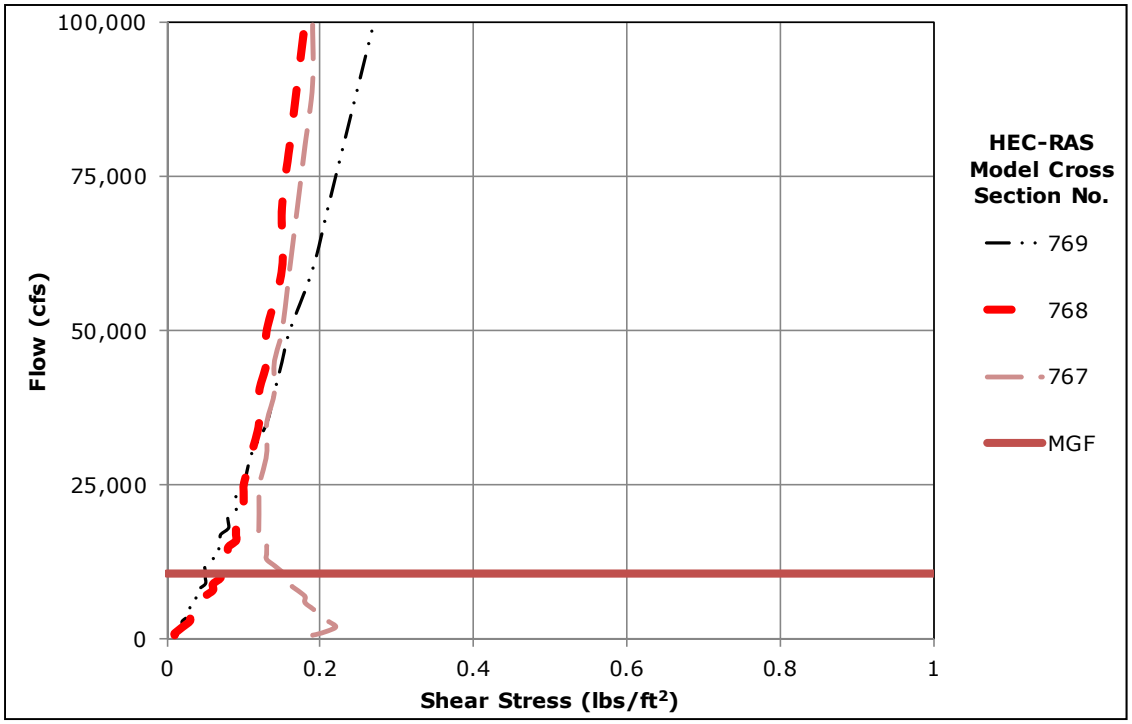
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M08

Three Study 4 cross sections (XSecs 767, 768, and 769) were identified as the cross section located closest to Study 8 mainstem Site 08-M08. Figure 5 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 768 intersects mainstem study site 08-M08 and was therefore selected for use as a part of Study 8. (XSec 767 is located over 300 ft downstream from, and XSec 769 is located over 500 ft upstream from, the selected cross section.)

Figure 5: Mainstem Site 08-M08



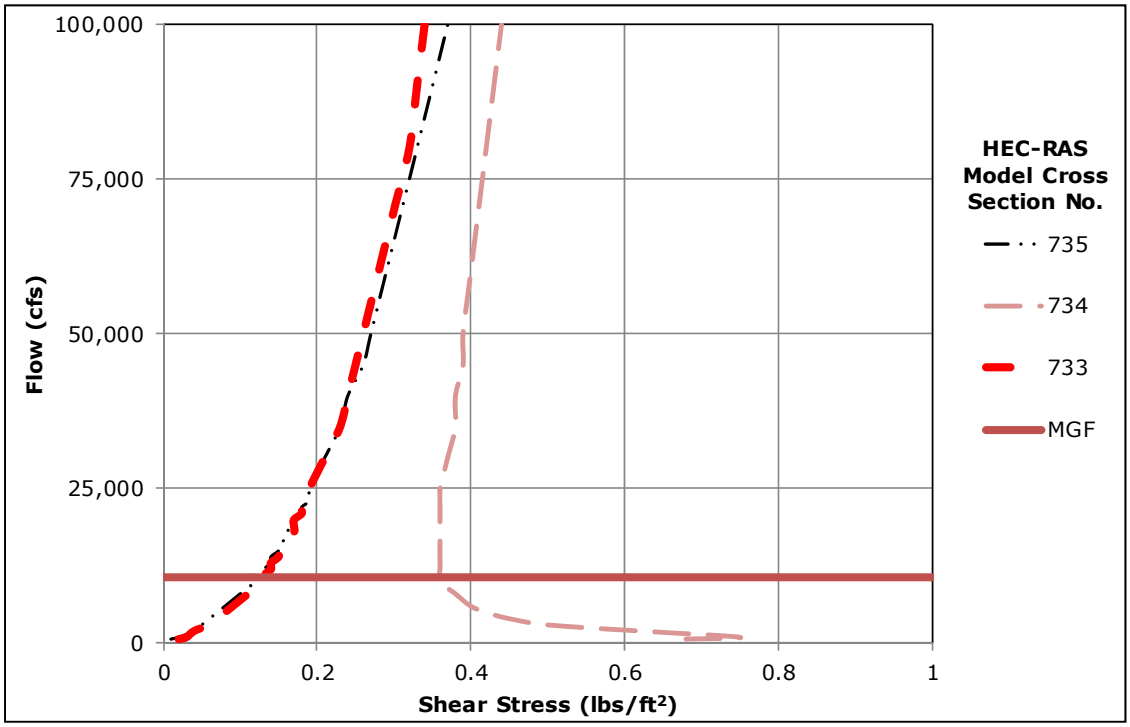
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M10

Three Study 4 cross sections (XSecs 733, 734, and 735) were identified as the cross sections located closest to Study 8 mainstem Site 08-M10. Figure 6 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 734 passes through mainstem study site 08-M10, but the flow-shear stress data at this XSec is non-monotonic and varies substantially from data at the upstream and downstream sections (XSecs 733 and 735). Based on the similarity of the data at XSecs 733 and 735 and the non-monotonic flow-shear stress curve at XSec 734, XSec 733 was selected for use as a part of Study 8. XSec 733 is the closest cross section to XSec 734 and is located approximately 540 ft downstream from XSec 734.

Figure 6: Mainstem Site 08-M10



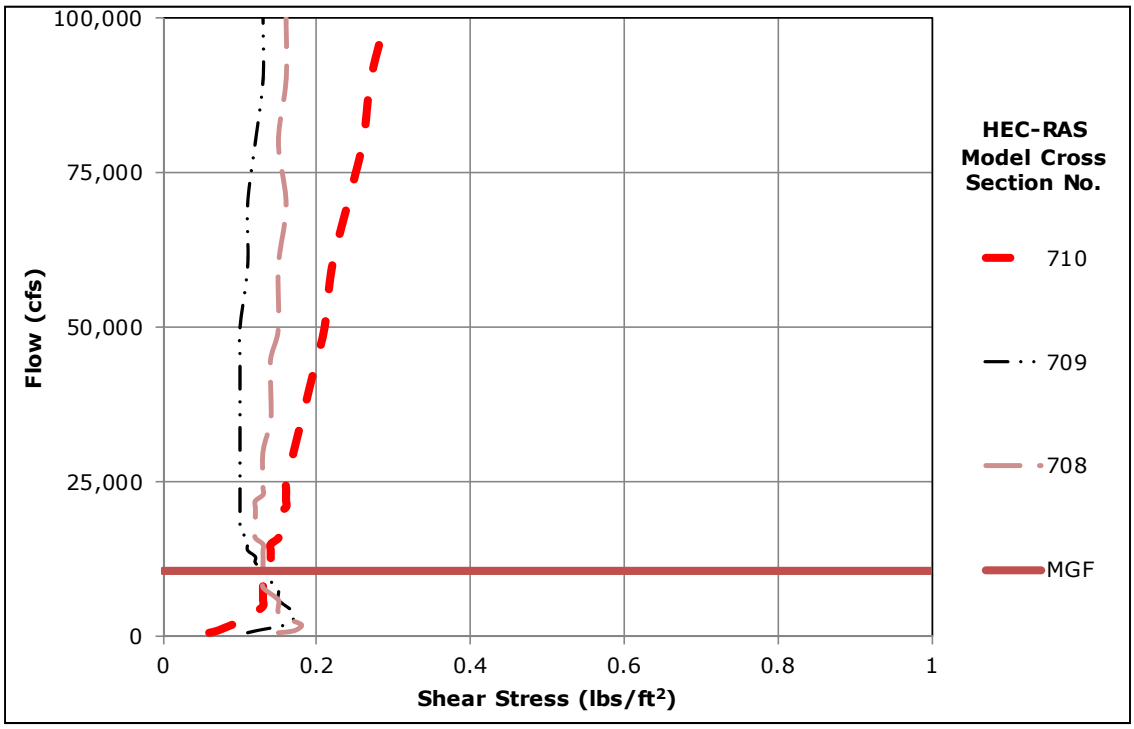
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M12

Three Study 4 cross sections (XSecs 708, 709, and 710) were identified as the cross sections located closest to Study 8 mainstem Site 08-M12. Figure 7 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 709 intersects mainstem study site 08-M12, is non-monotonic and has a relatively high shear stress at a low flow. XSec 710 is located approximately 380 ft upstream from XSec 709; this cross section has the highest shear stress at the MGF and is monotonic, and it was therefore selected for use as a part of Study 8.

Figure 7: Mainstem Site 08-M12



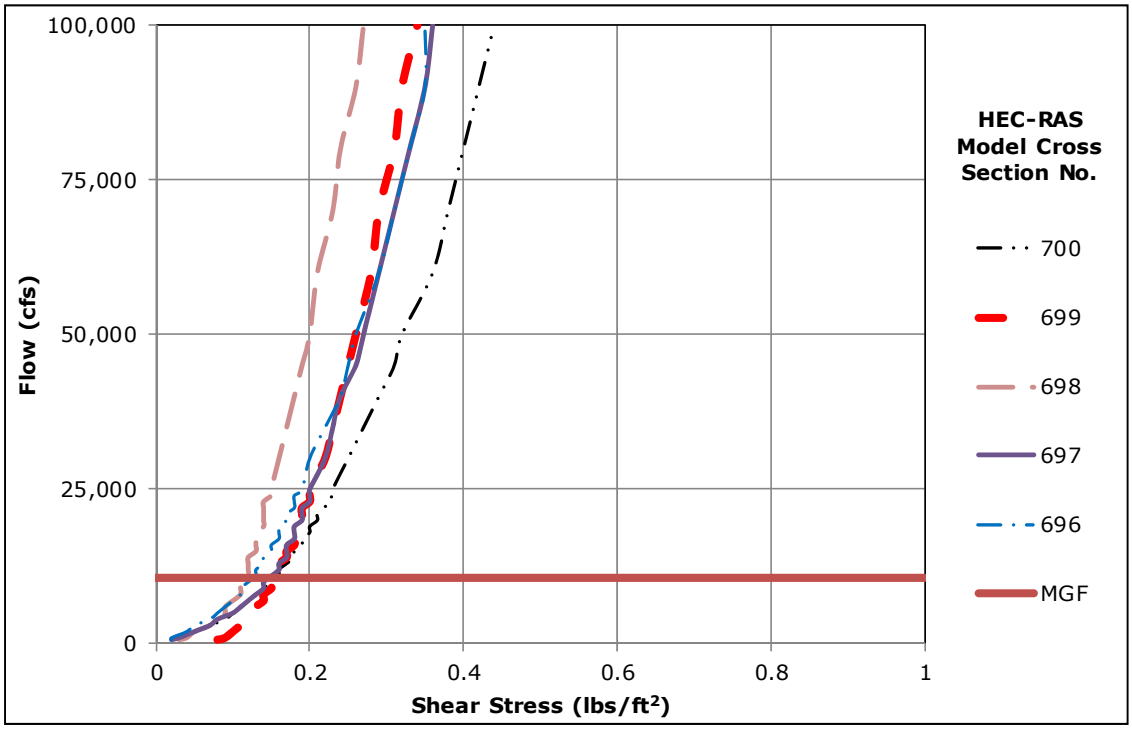
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M13

Five Study 4 cross sections (XSecs 696, 697, 698, 699, and 700) were identified as the cross sections located closest to Study 8 mainstem site 08-M13. Figure 8 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 698 passes through mainstem study site 08-M13, but the shear stress data is lower than that at the three adjacent sections (XSecs 696, 697, and 699), which have very similar curves and bound the study site. While XSec 700 has higher shear stresses relative to the downstream sections, XSec 699 was selected for evaluations as part of Study 8 as it is closer to the study site. XSec 699 crosses the river approximately 200 ft upstream from mainstem study site 08-M13.

Figure 8: Mainstem Site 08-M13



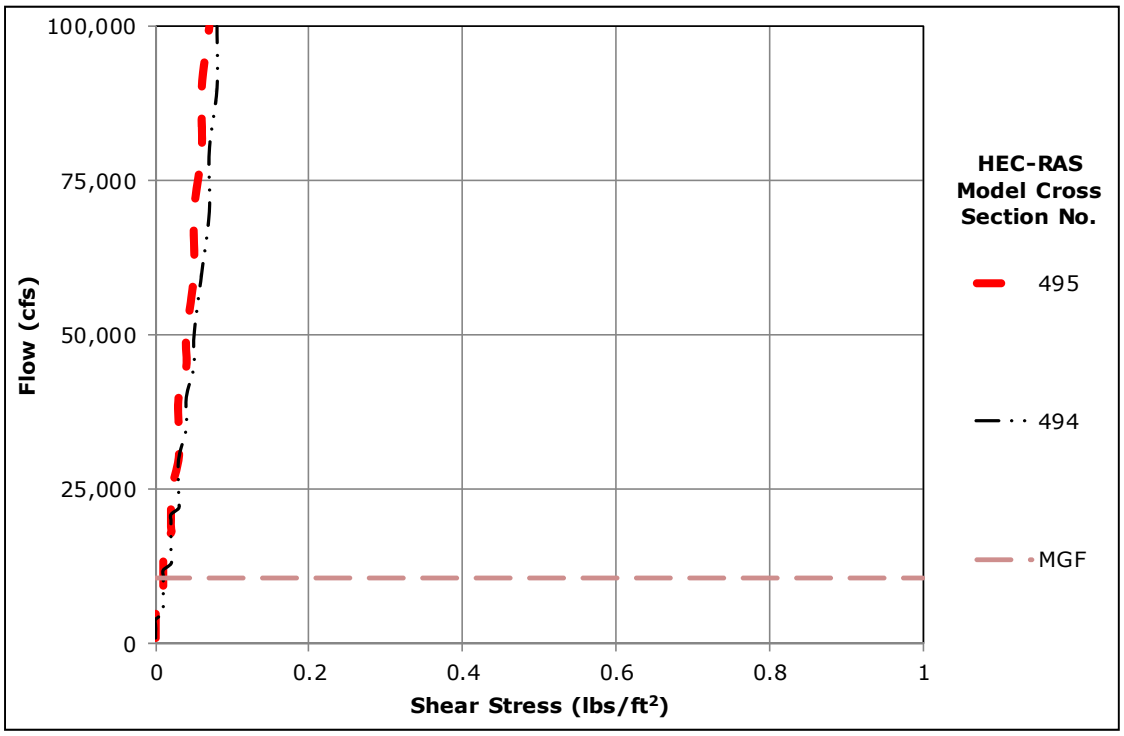
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M15

Two Study 4 cross sections (XSecs 494 and 495) were identified as the cross sections located closest to Study 8 mainstem Site 08-M15. Figure 9 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

The two evaluated cross sections have similar flow-shear stress curves, and XSec 495 was selected for use as part of Study 8 as it passes closer to mainstem study site 08-M15 (XSec 495 crosses approximately 25 ft upstream from the upstream end of the study site, whereas XSec 494 is located approximately 160 ft downstream from the downstream end of the study site).

Figure 9: Mainstem Site 08-M15



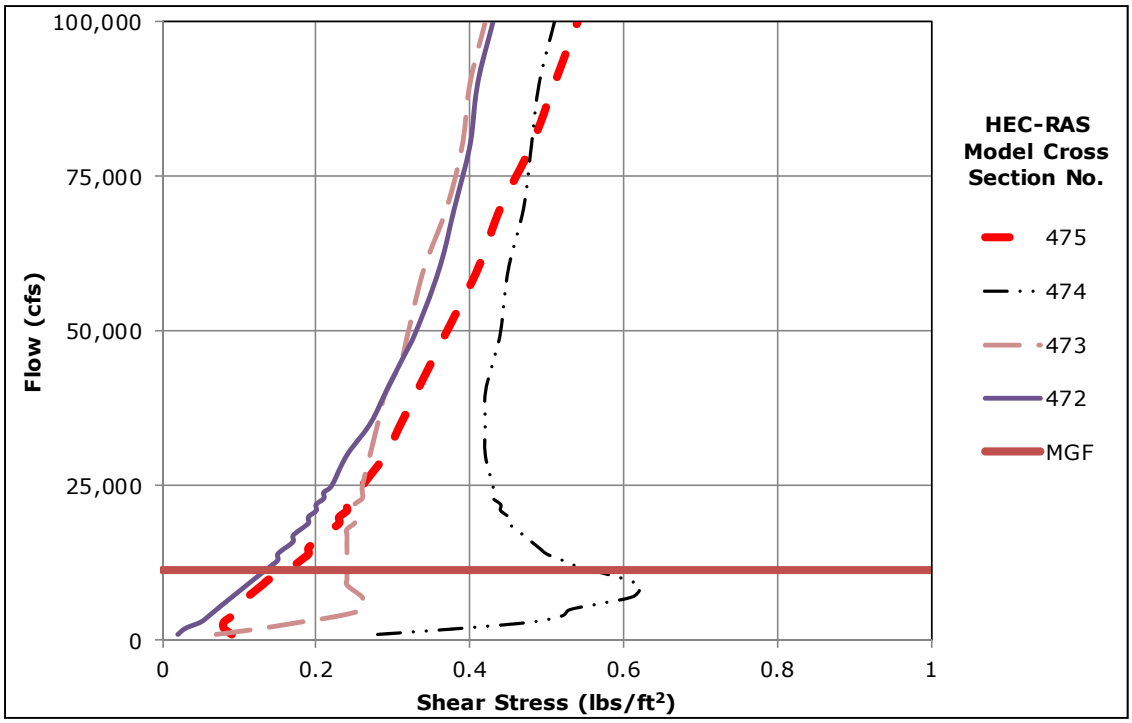
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M16

Four Study 4 cross sections (XSecs 472, 473, 474, and 475) were identified as the cross sections located closest to Study 8 mainstem Site 08-M16. Figure 10 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 474 passes through mainstem site 08-M16, but is strongly non-monotonic and differs substantially from the data at the three adjacent cross sections that were evaluated. XSec 473 is also non-monotonic and thus was eliminated from considered. XSec 475 was selected for use as part of Study 8 based on its monotonic characteristics and higher shear stress relative to XSec 472. Other than XSec 473 (rejected for reasons described above), XSec 475 is the closest cross section to the study site and is located approximately 270 ft upstream from mainstem site 08-M16.

Figure 10: Mainstem Site 08-M16

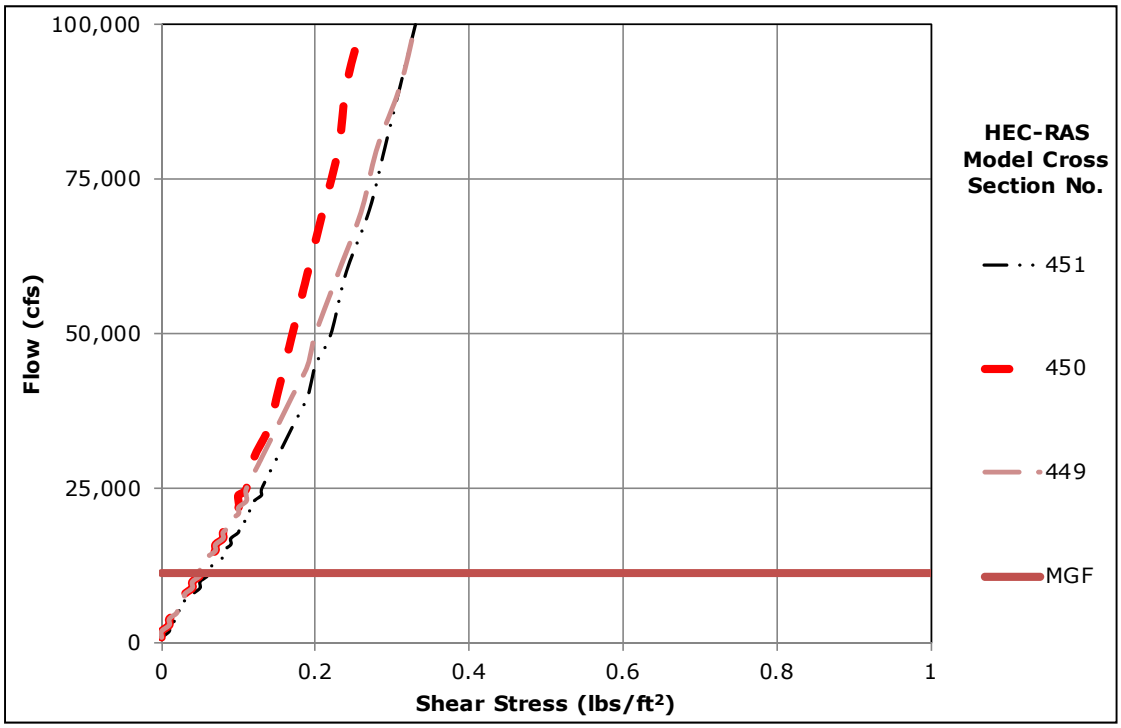


Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M17

Three Study 4 cross sections (XSecs 449, 450, and 451) were identified as the cross sections located closest to Study 8 mainstem Site 08-M17. Figure 11 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report). These three cross sections have similar characteristics, and XSec 450 was selected for use as a part of Study 8 because it passes through mainstem study site 08-M17.

Figure 11: Mainstem Site 08-M17



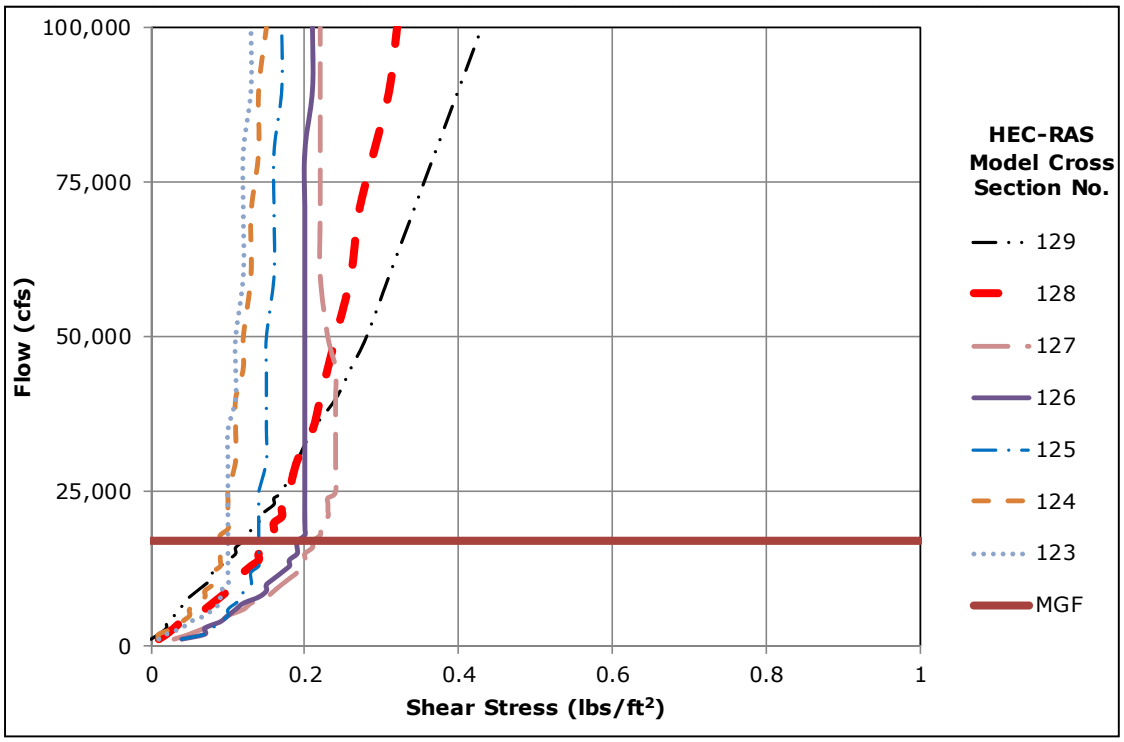
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

MAINSTEM SITE 08-M20

Seven Study 4 cross sections (XSecs 123, 124, 125, 126, 127, 128, and 129) were identified as the cross sections located closest to Study 8 mainstem Site 08-M20. Figure 12 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

The seven flow-shear stress curves associated with these cross sections are generally similar, and XSec 128 was selected for use as part of Study 8 based on it being representative of conditions at the adjacent cross sections at the MGF and because it intersects mainstem study site 08-M20.

Figure 12: Mainstem Site 08-M20



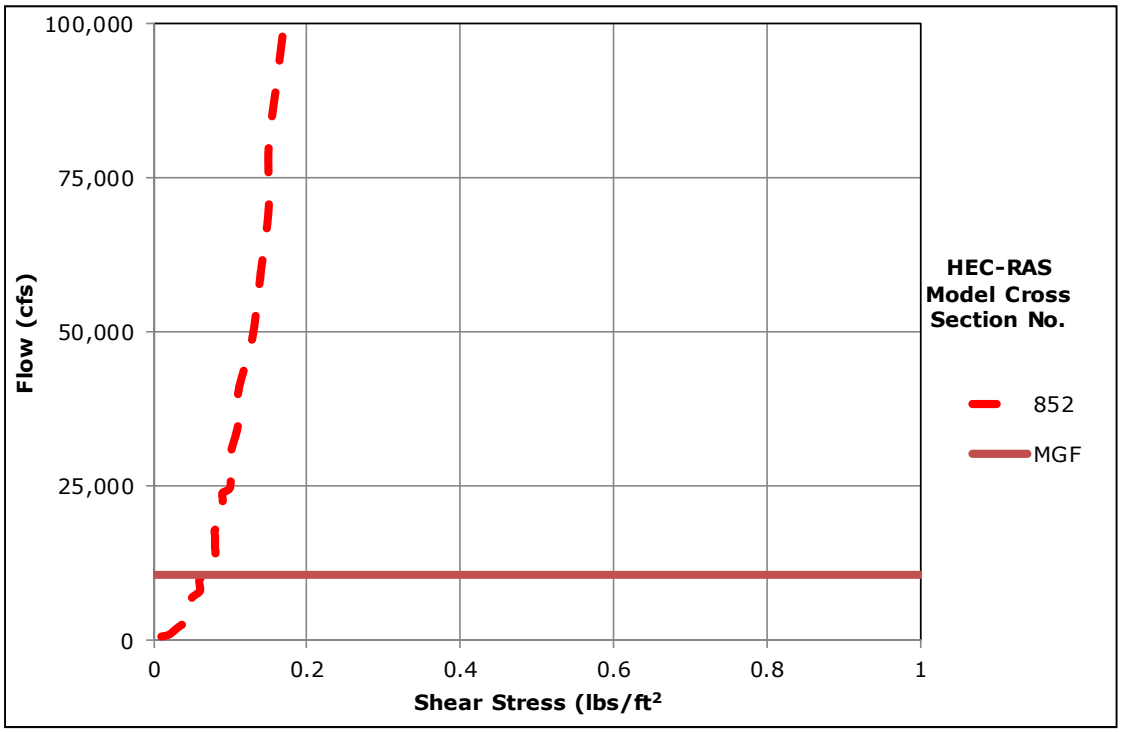
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

TRIBUTARY SITE 08-T02

One Study 4 cross section (XSec 852) was identified in the vicinity of Study 8 tributary Site 08-T02. Figure 13 is a stage-shear stress plot of data from Study 4 at this cross section (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

This cross section was selected for use as a part of Study 8 because it intersects tributary study site 08-T02.

Figure 13: Tributary Site 08-T02



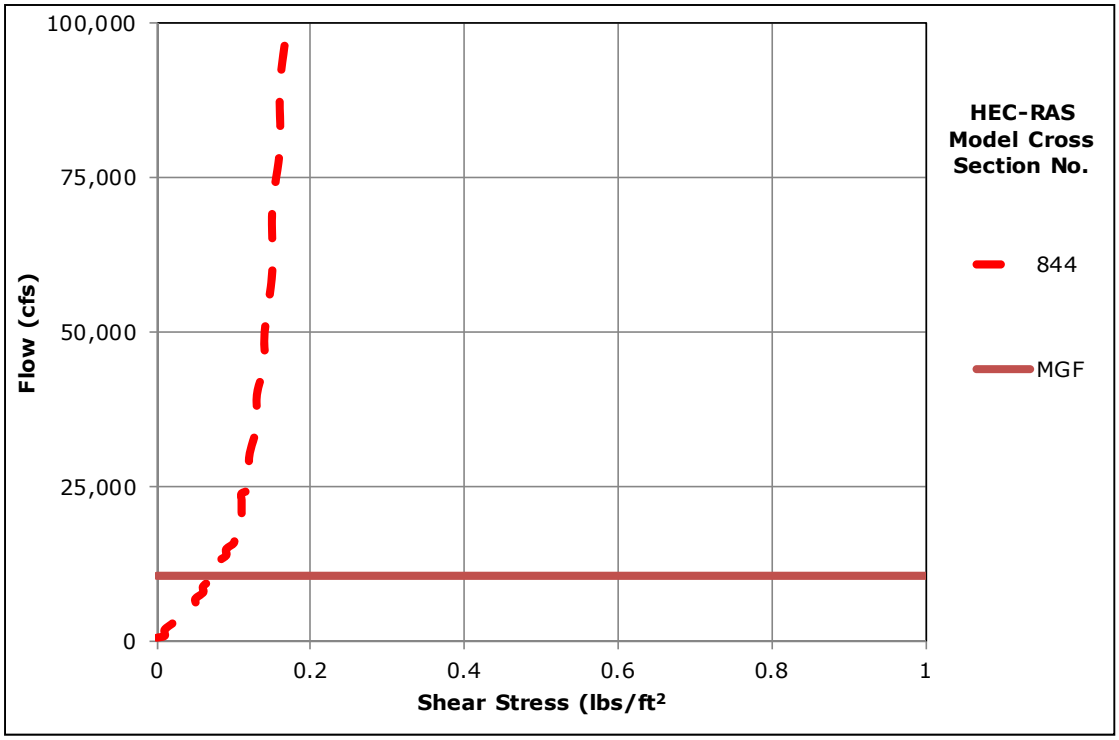
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

TRIBUTARY SITE 08-T04

One Study 4 cross section (XSec 844) was identified in the vicinity of Study 8 tributary site 08-T04. Figure 14 is a stage-shear stress plot of data from Study 4 at this cross section (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 844 crosses the Mascoma River approximately 580 ft downstream from tributary site 08-T04 and was selected for use as a part of Study 8 because it is the only cross section that crosses the Mascoma River.

Figure 14: Tributary Site 08-T04



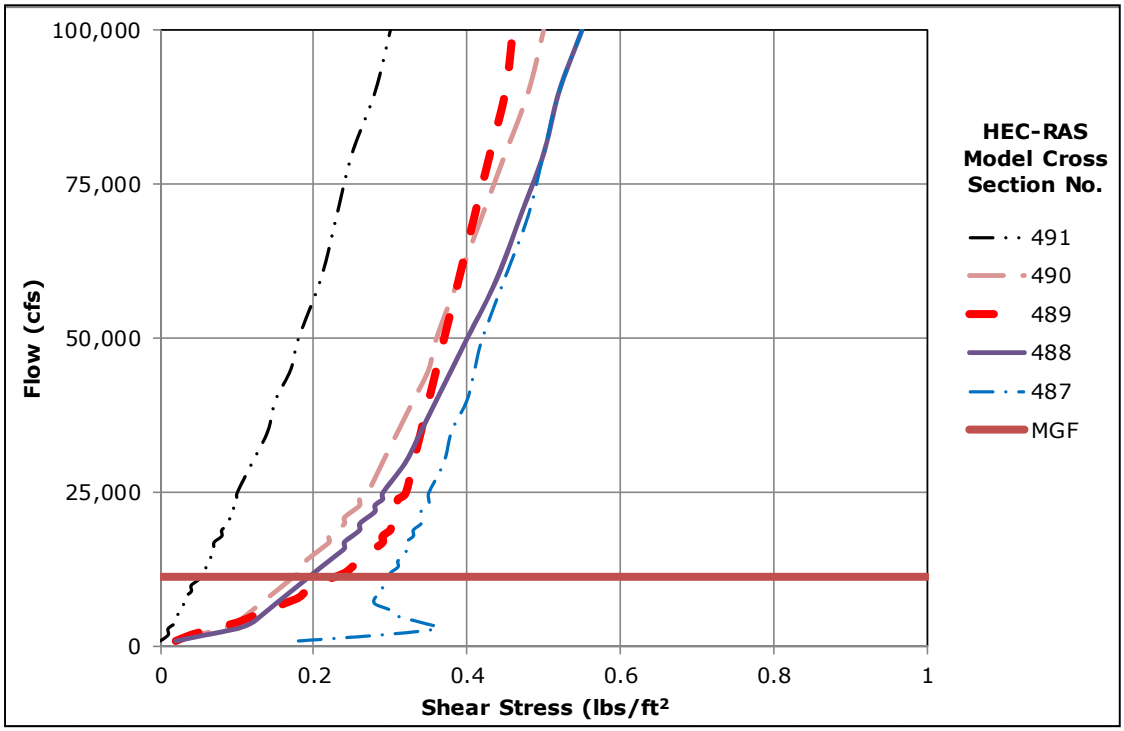
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

TRIBUTARY SITE 08-T14

Five Study 4 cross sections (XSecs 487, 488, 489, 490, and 491) were identified at Study 8 tributary Site 08-T14. Figure 15 is a stage-shear stress plot of data from Study 4 at these cross sections (in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 487 is the furthest downstream of the five evaluated cross sections (approximately 300 ft downstream from the downstream end of tributary study site 08-T14), is non-monotonic, and was eliminated from consideration. XSec 489 intersects tributary study site 08-T14, has the highest shear stress at the MGF of the four remaining sections, and was therefore selected for use as a part of Study 8.

Figure 15: Tributary Site 08-T14



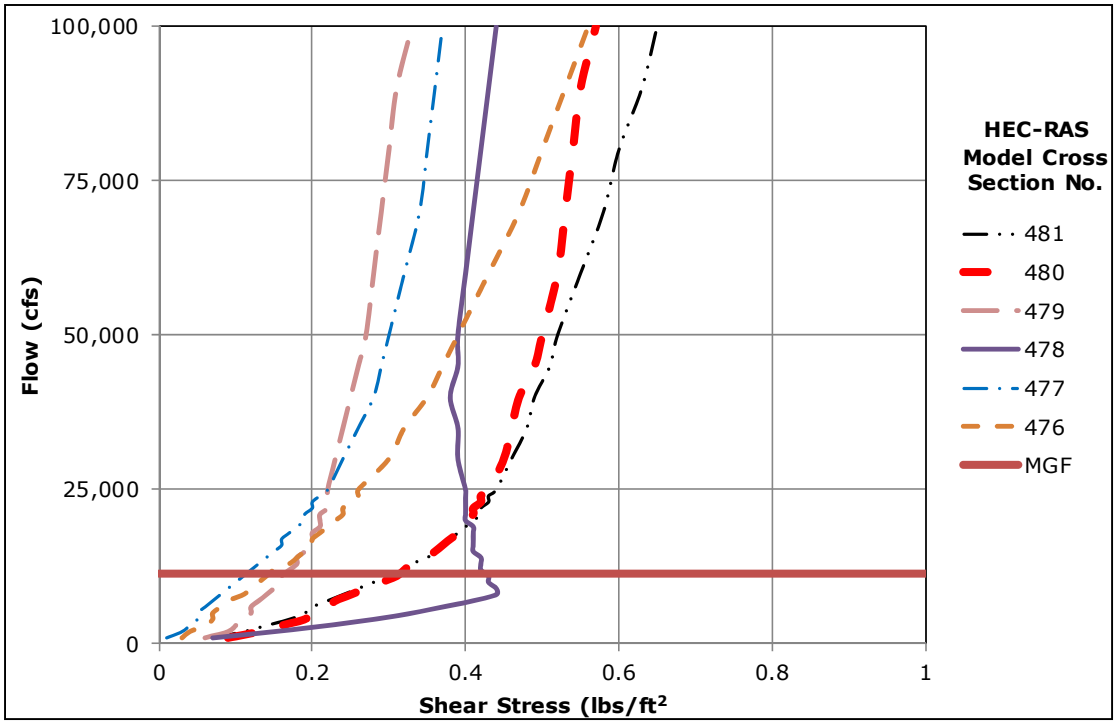
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

TRIBUTARY SITE 08-T16

Six Study 4 cross sections (XSecs 476, 477, 478, 479, 480, and 481) were identified as the cross sections located closest to Study 8 tributary site 08-T14. Figure 16 is a stage-shear stress plot of data from Study 4 at these cross sections in this figure, MGF represents the maximum nominal generating flow of the project upstream from the study site as described in Section 4.4.1 of the Study 8 report).

XSec 478 is non-monotonic and was eliminated from consideration. XSec 480 intersects the upstream end of tributary study site 08-T16, has the highest shear stress at the MGF of the five remaining sections, and was therefore selected for use as a part of Study 8.

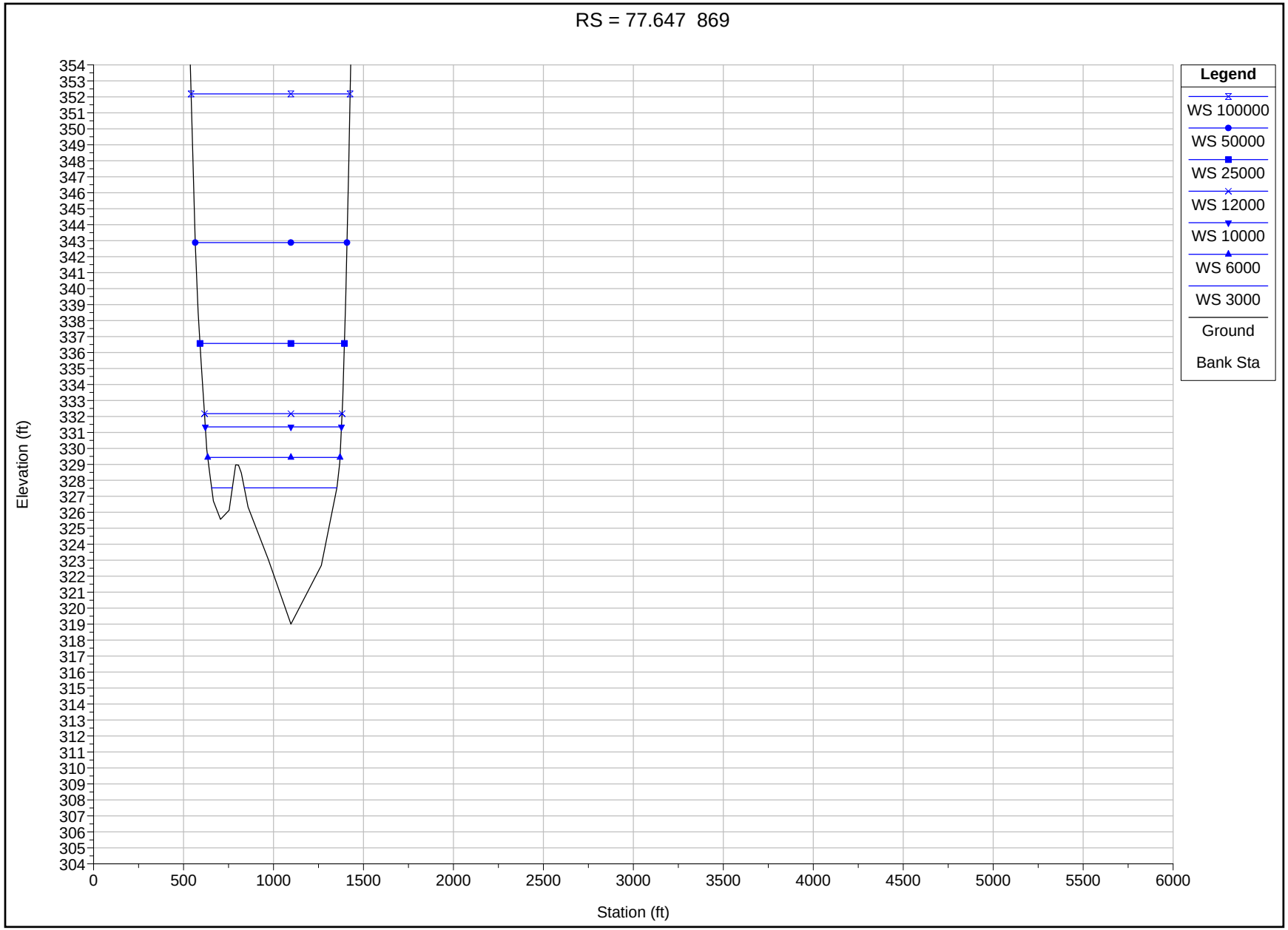
Figure 16: Tributary Site 08-T16



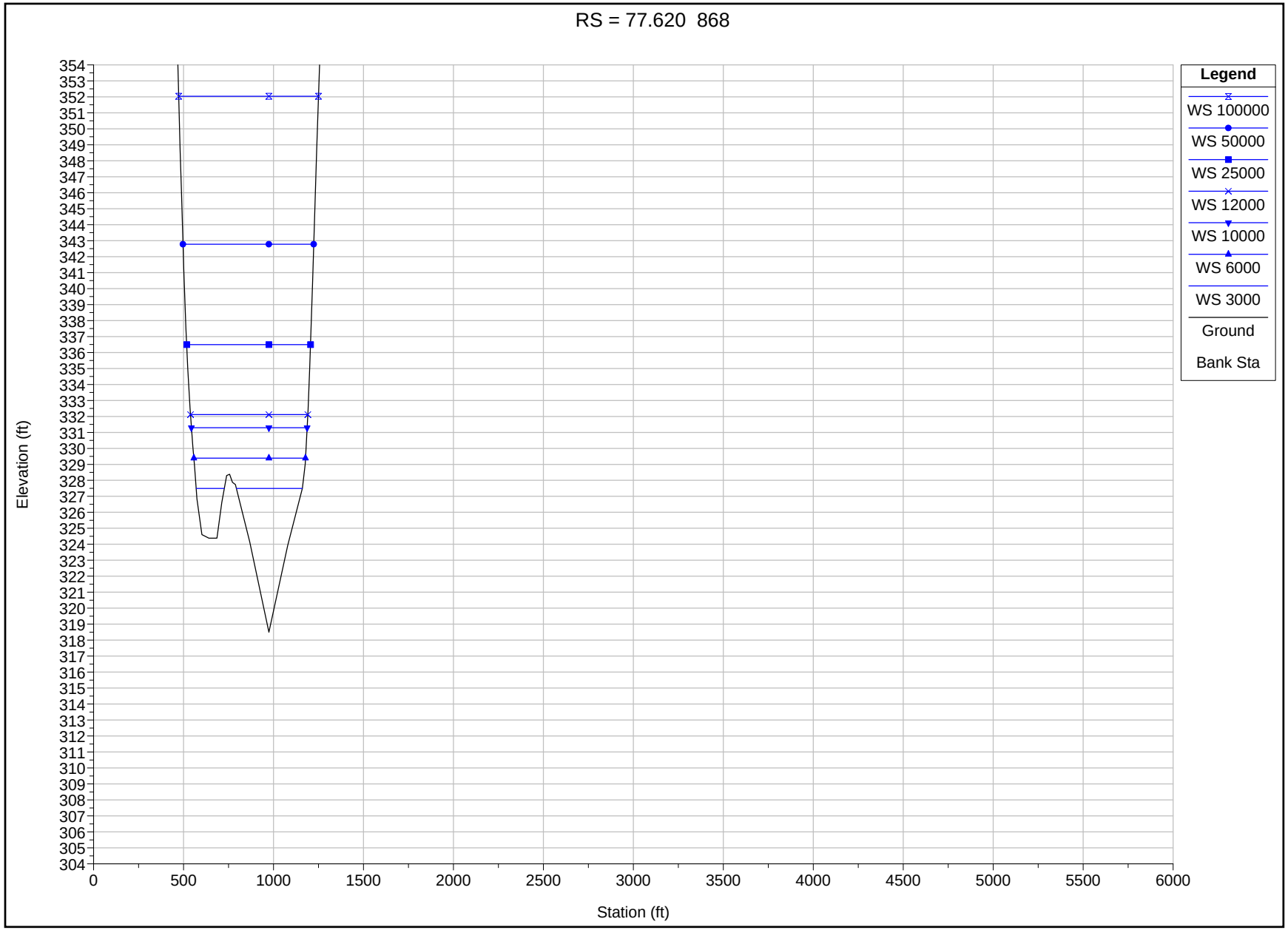
Reference: Supplemental Information in Response to Comments on Study 8 – Channel Morphology and Benthic Habitat

Attachment: Study 4 HEC-RAS model cross section plots of cross sections evaluated as a part of Study 8

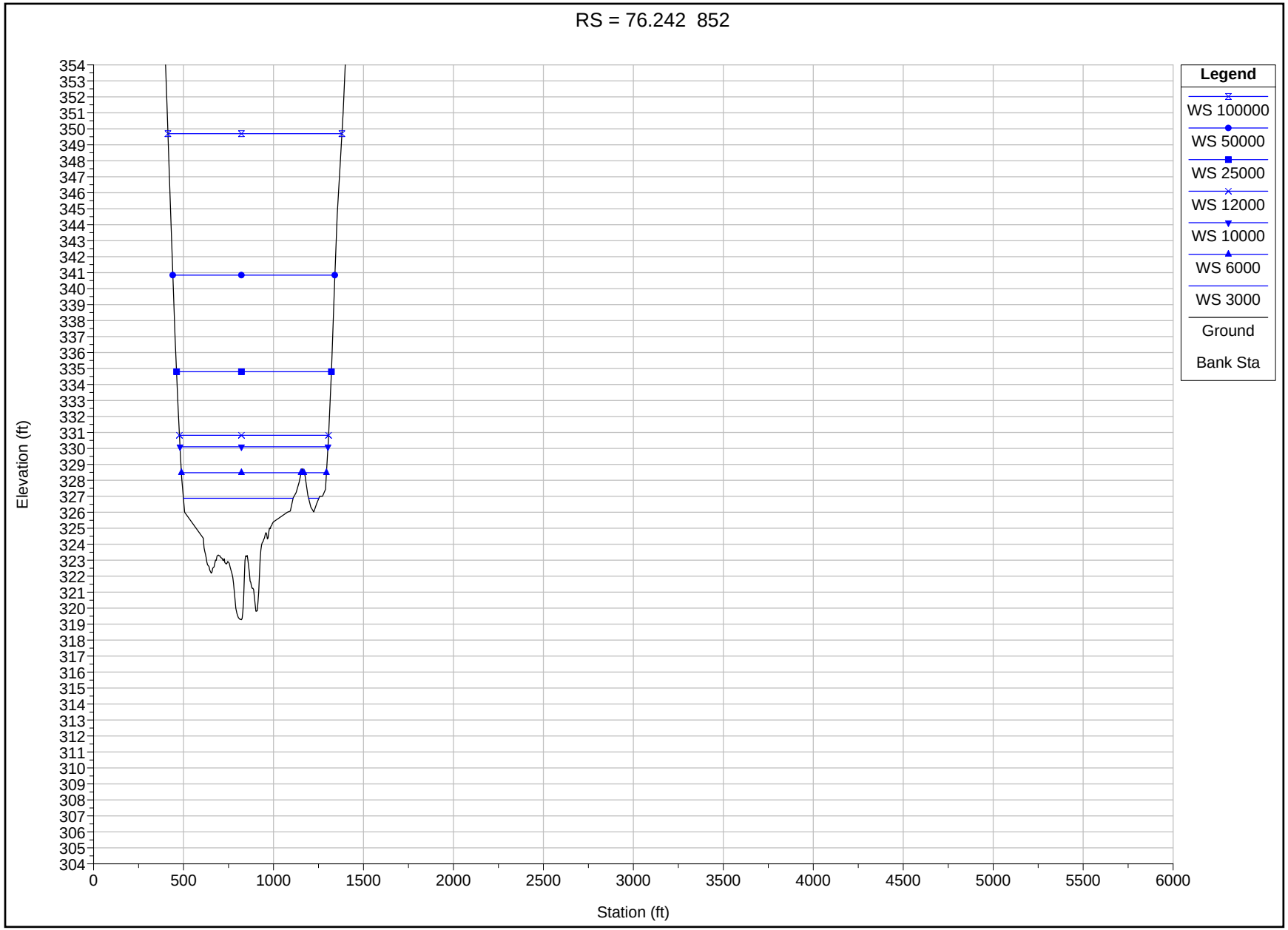
Study 4 HEC-RAS Model Cross Section Plots
XSec 869



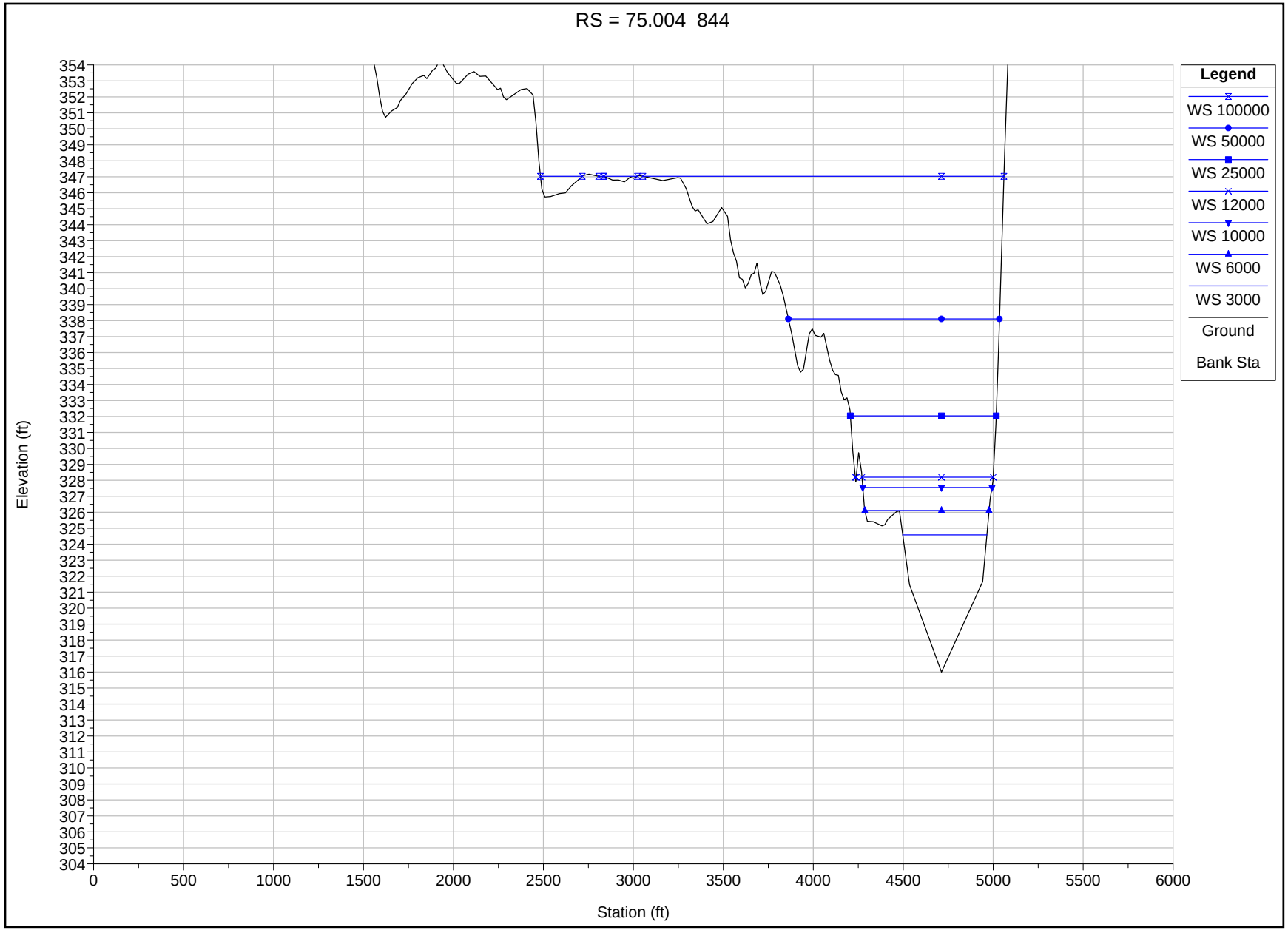
Study 4 HEC-RAS Model Cross Section Plots
XSec 868



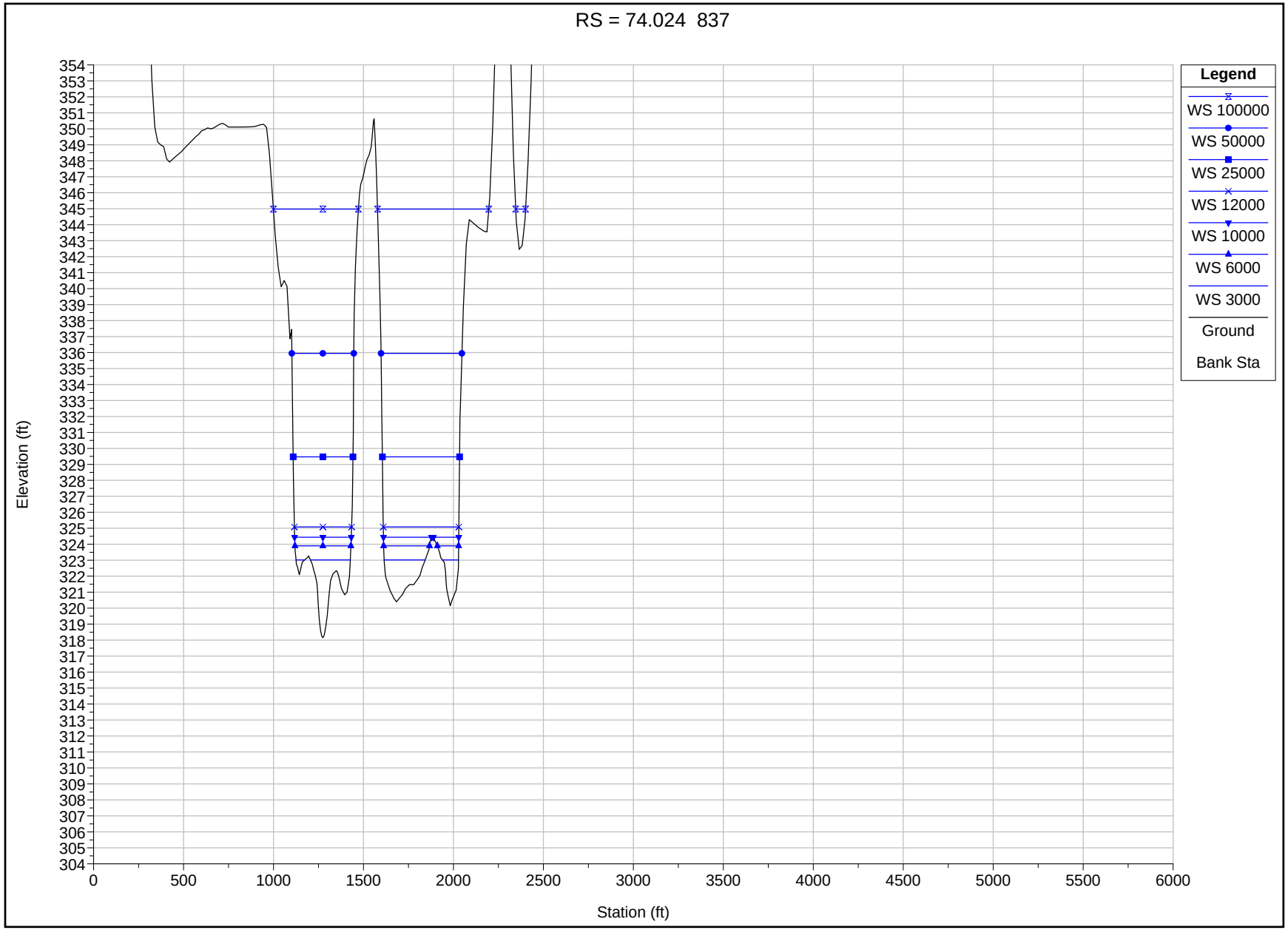
Study 4 HEC-RAS Model Cross Section Plots
XSec 852



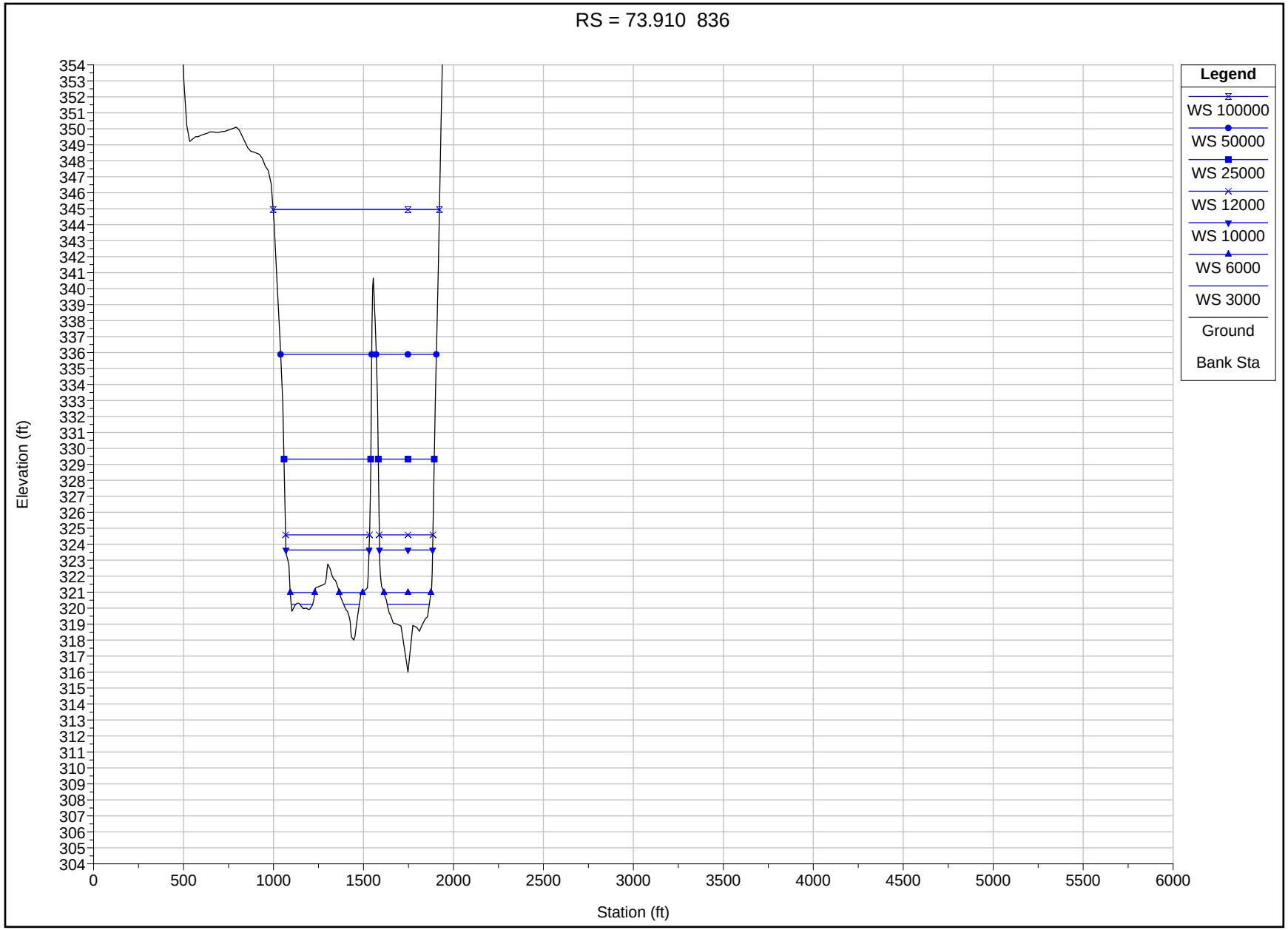
Study 4 HEC-RAS Model Cross Section Plots
XSec 844



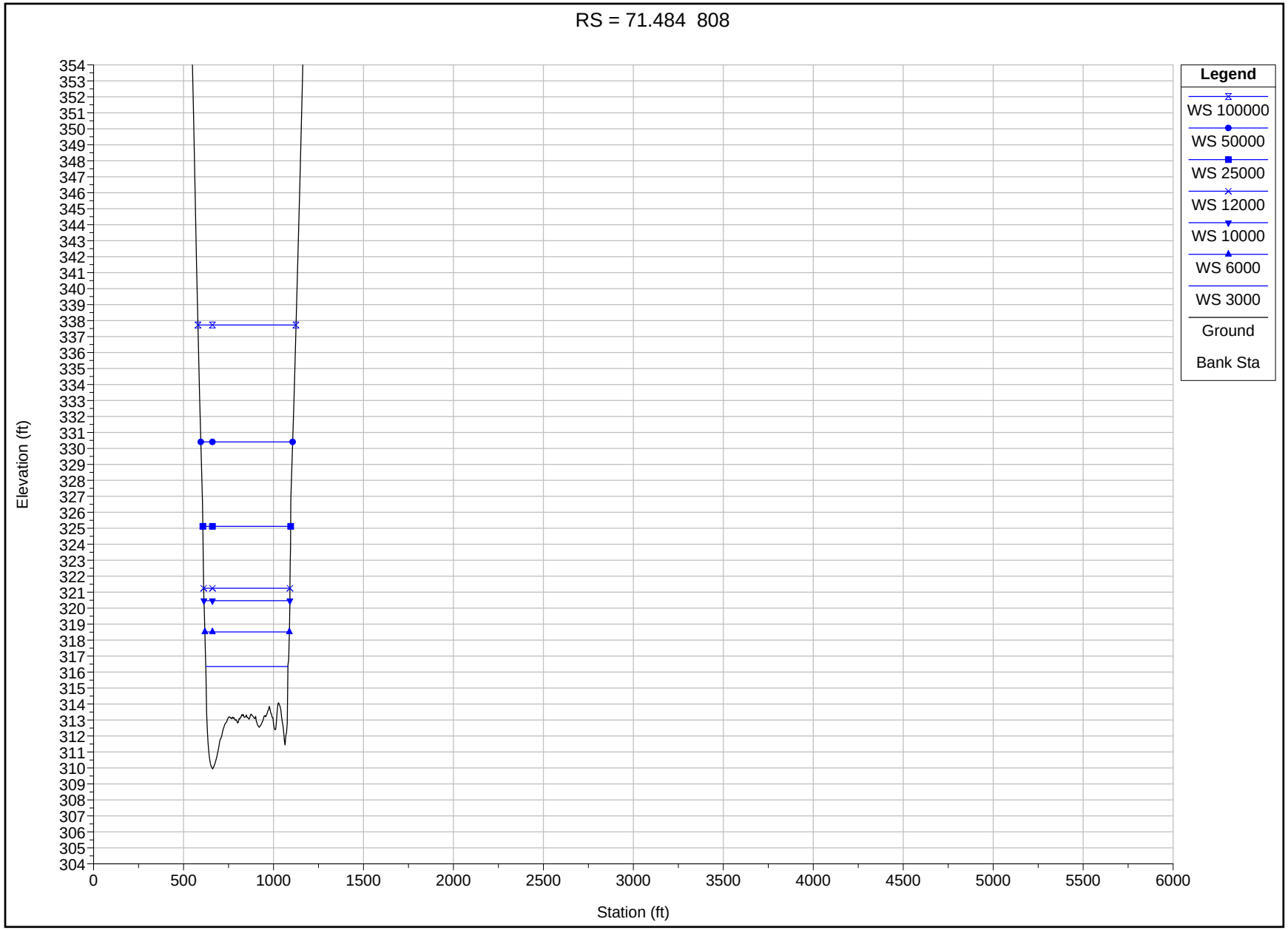
Study 4 HEC-RAS Model Cross Section Plots
XSec 837



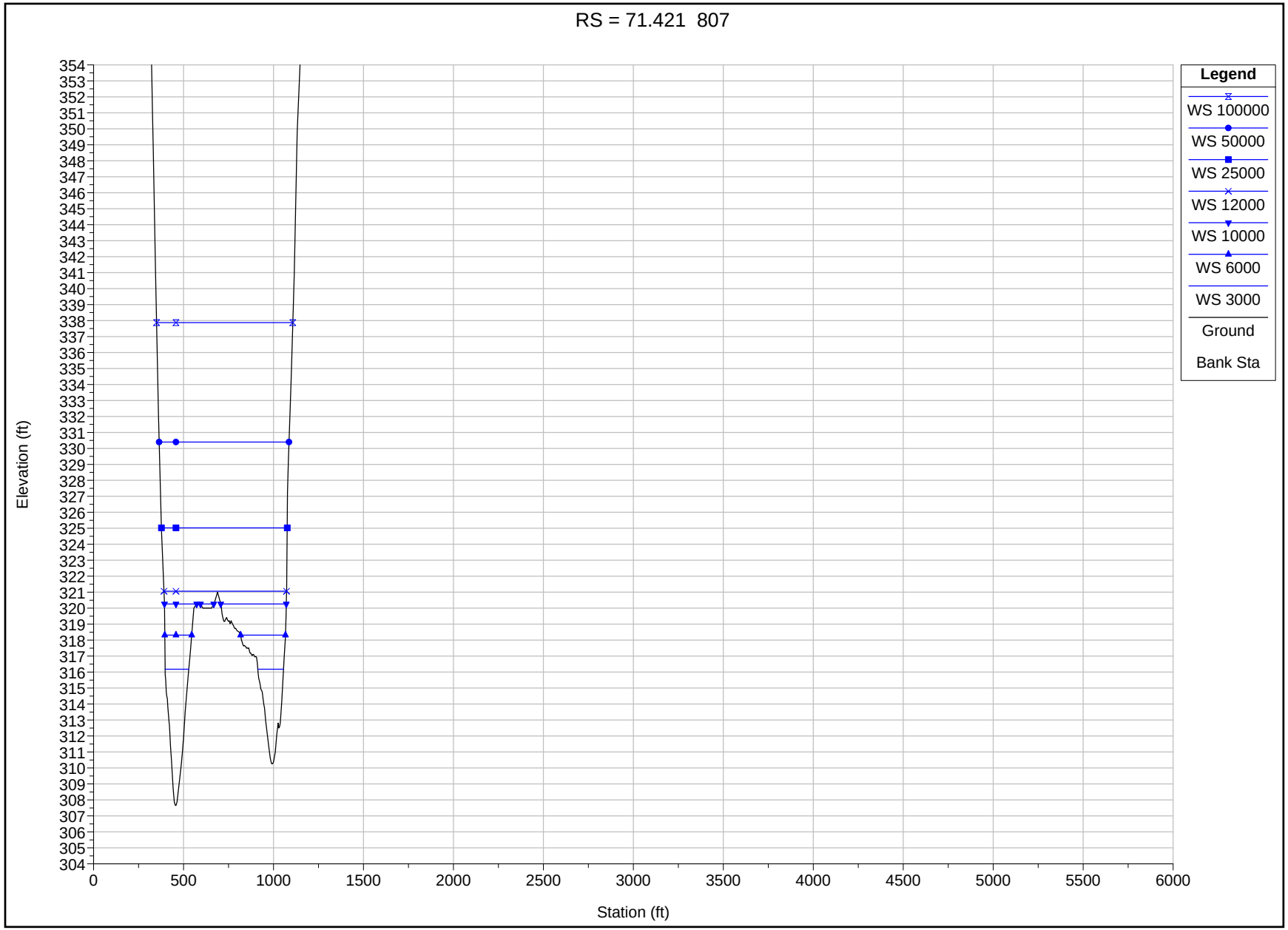
Study 4 HEC-RAS Model Cross Section Plots
XSec 836



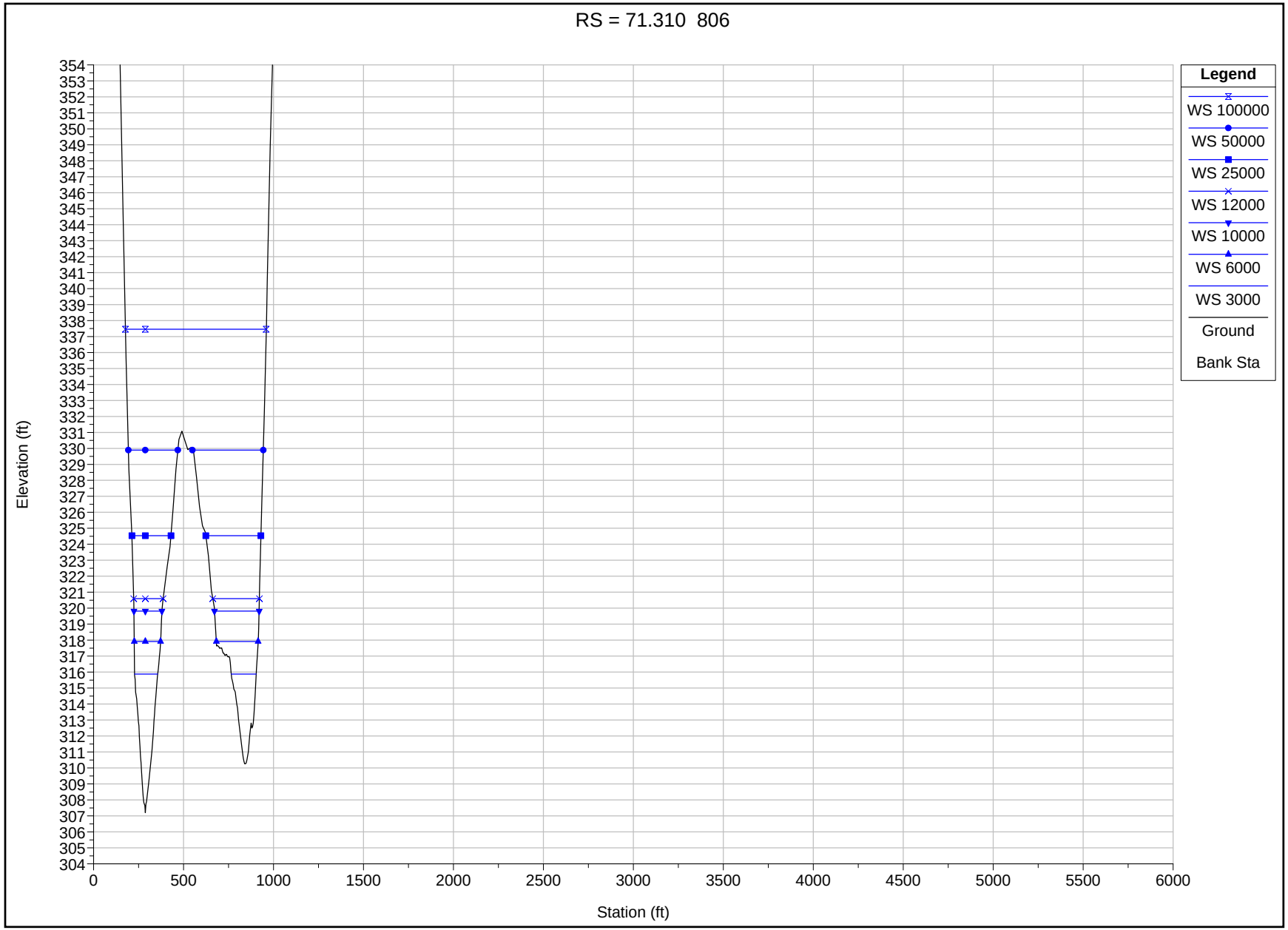
Study 4 HEC-RAS Model Cross Section Plots
XSec 808



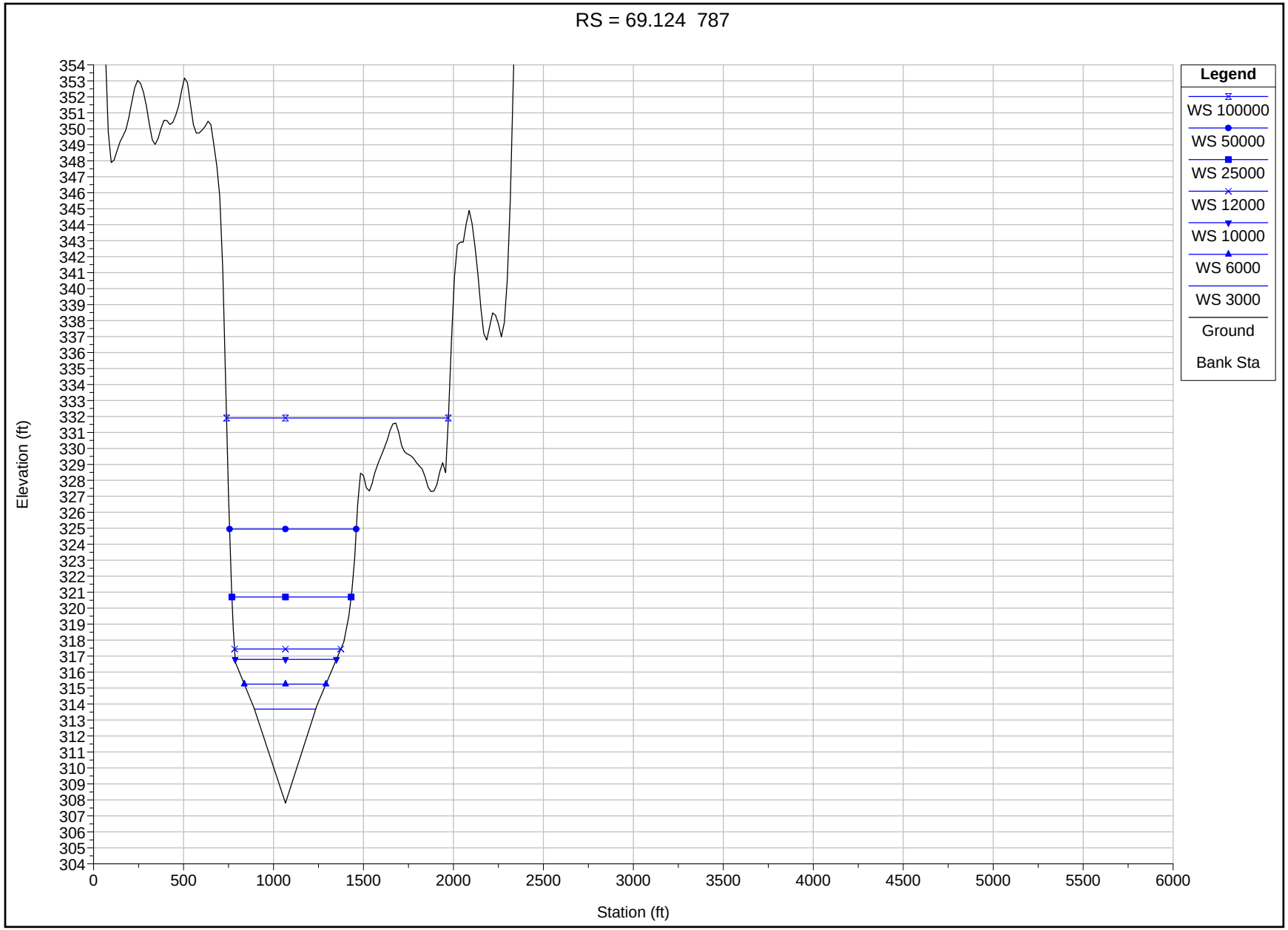
Study 4 HEC-RAS Model Cross Section Plots
XSec 807



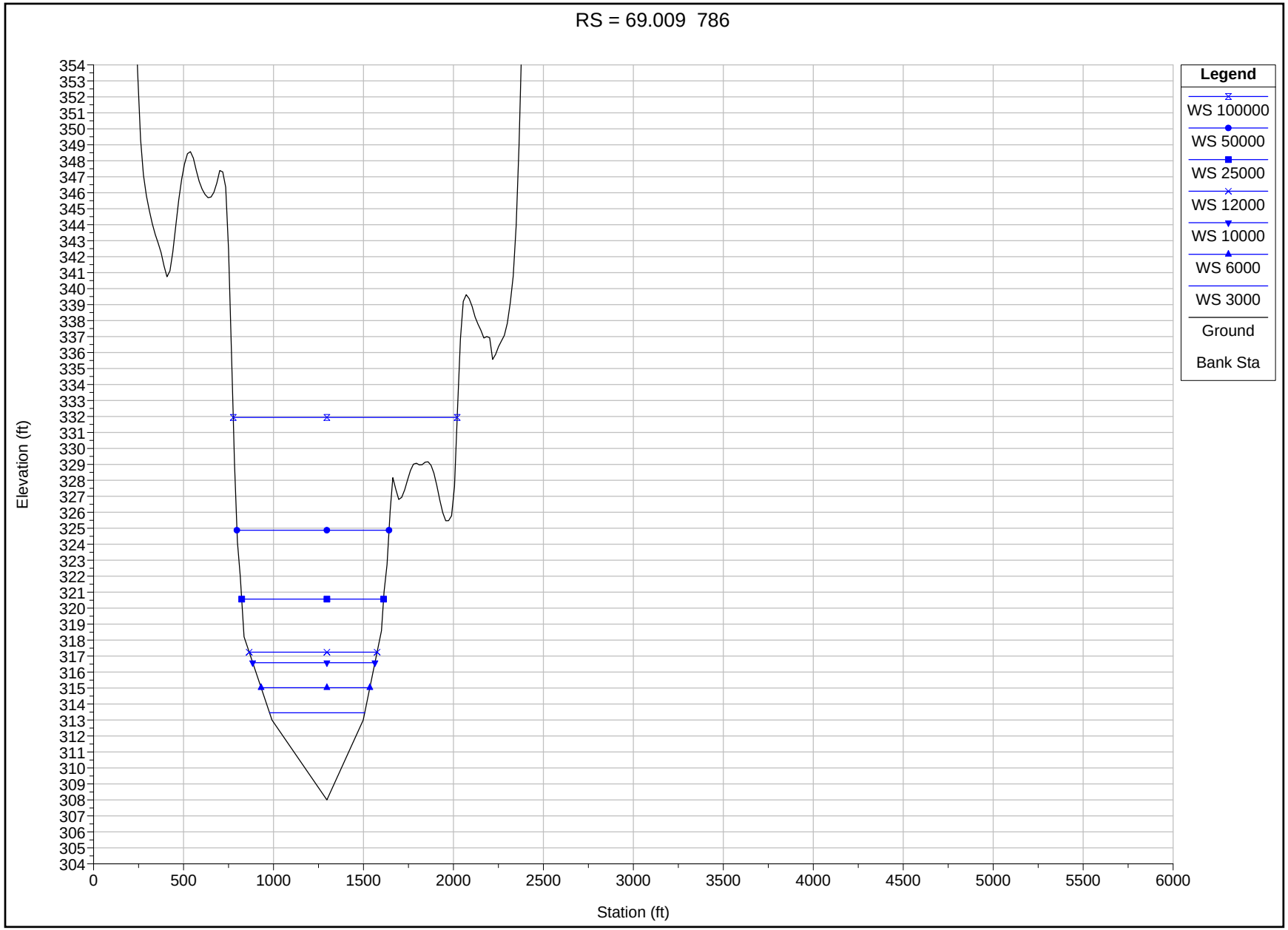
Study 4 HEC-RAS Model Cross Section Plots
XSec 806



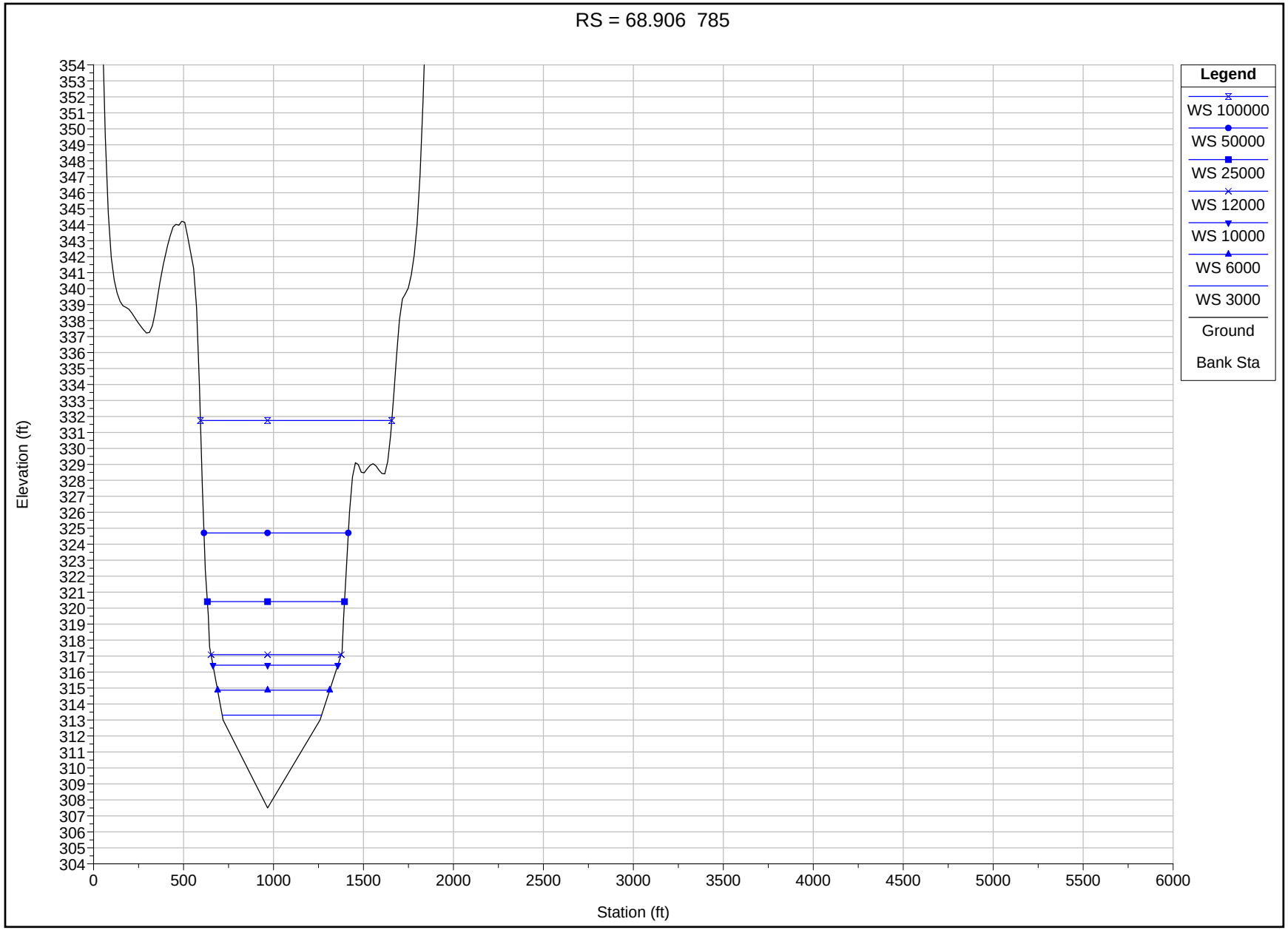
Study 4 HEC-RAS Model Cross Section Plots
XSec 787



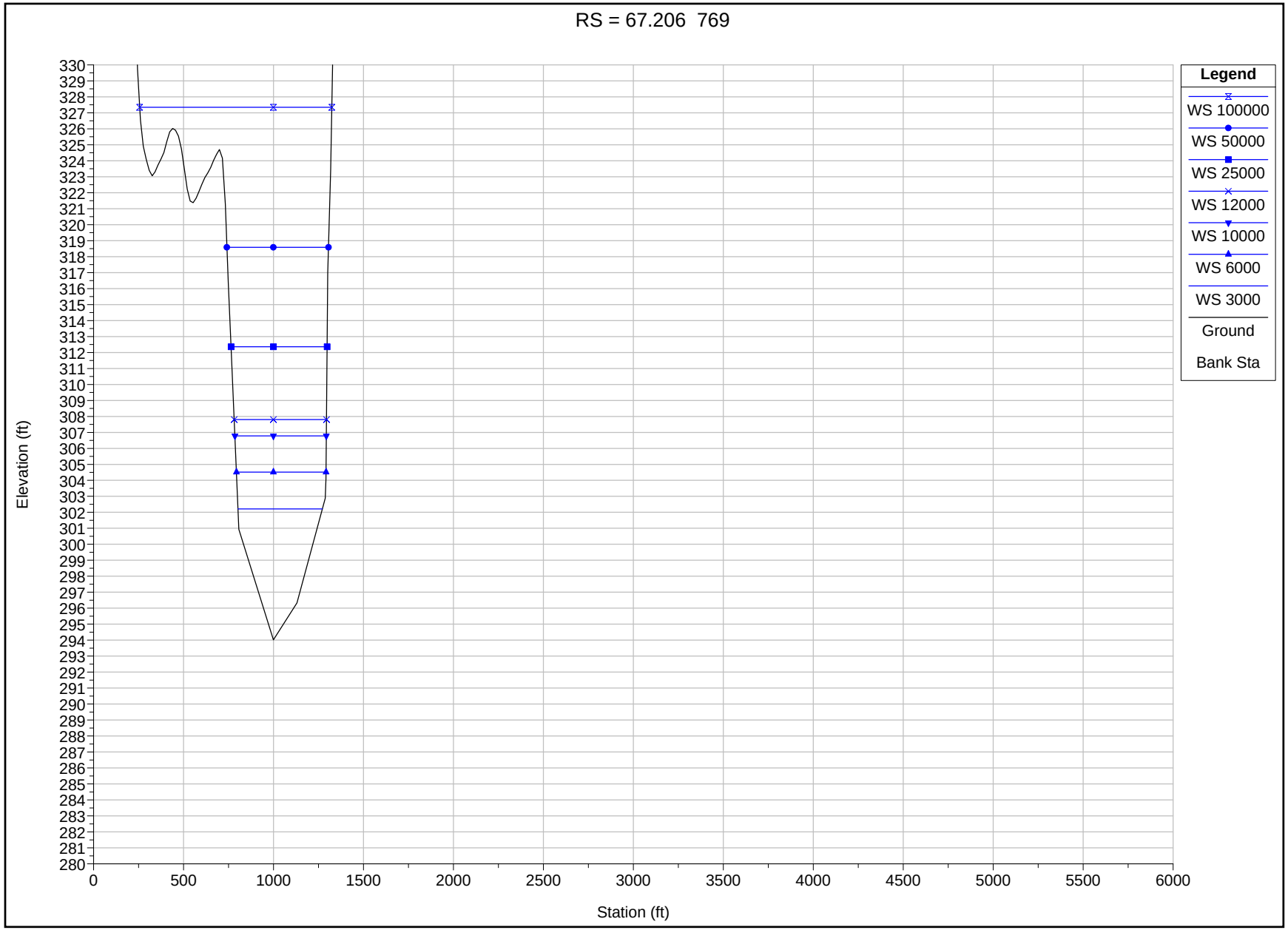
Study 4 HEC-RAS Model Cross Section Plots
XSec 786



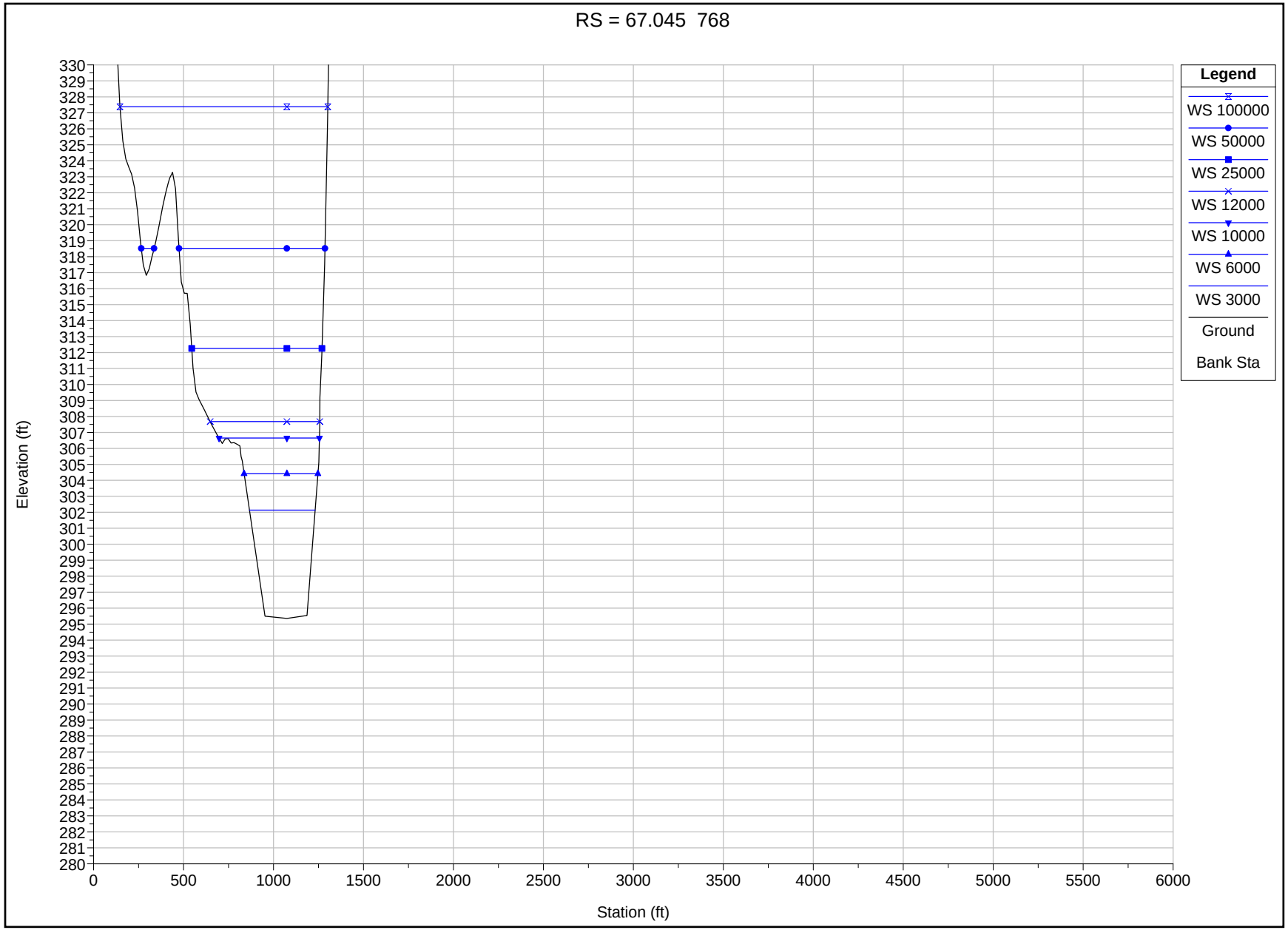
Study 4 HEC-RAS Model Cross Section Plots
XSec 785



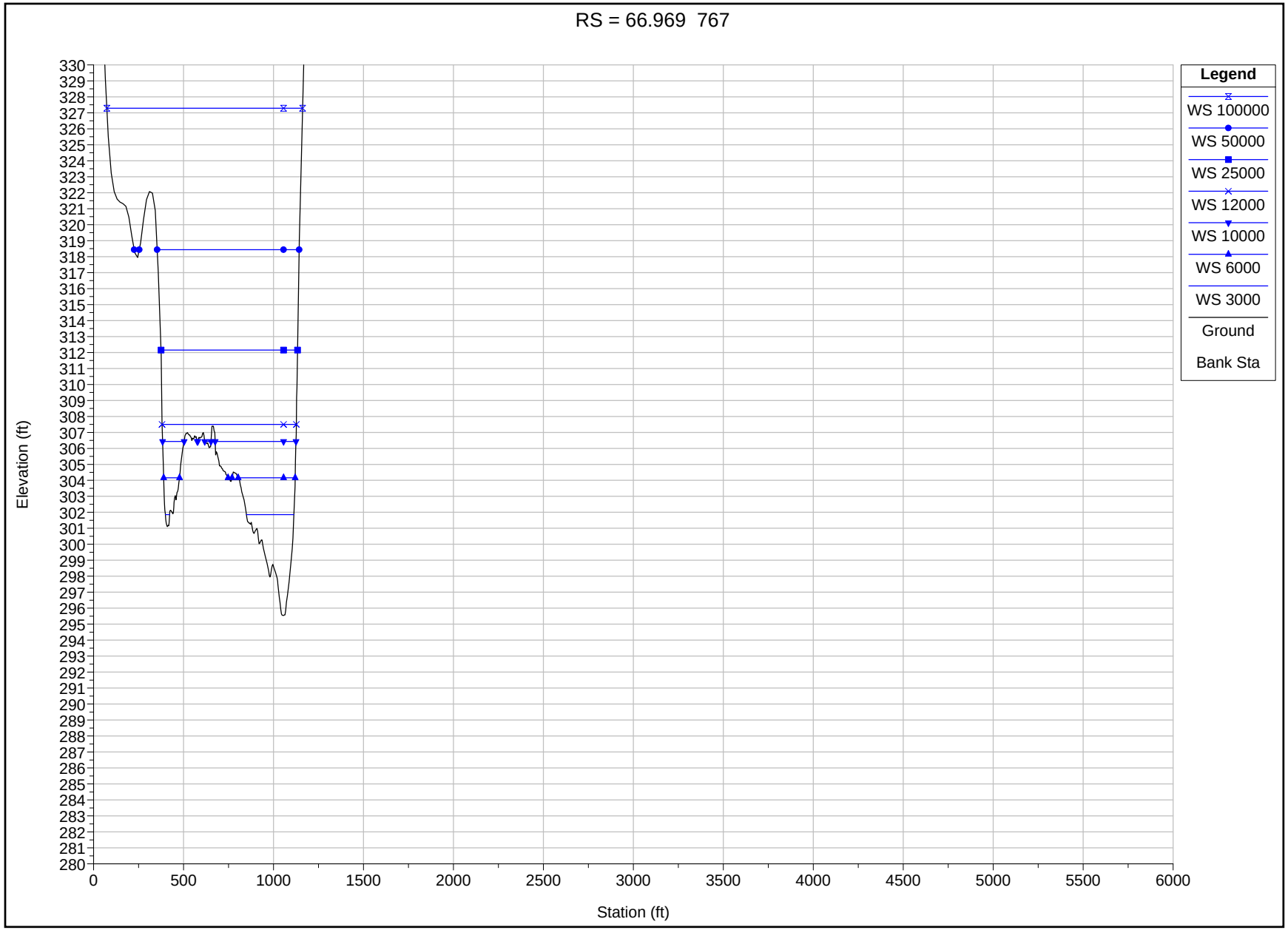
Study 4 HEC-RAS Model Cross Section Plots
XSec 769



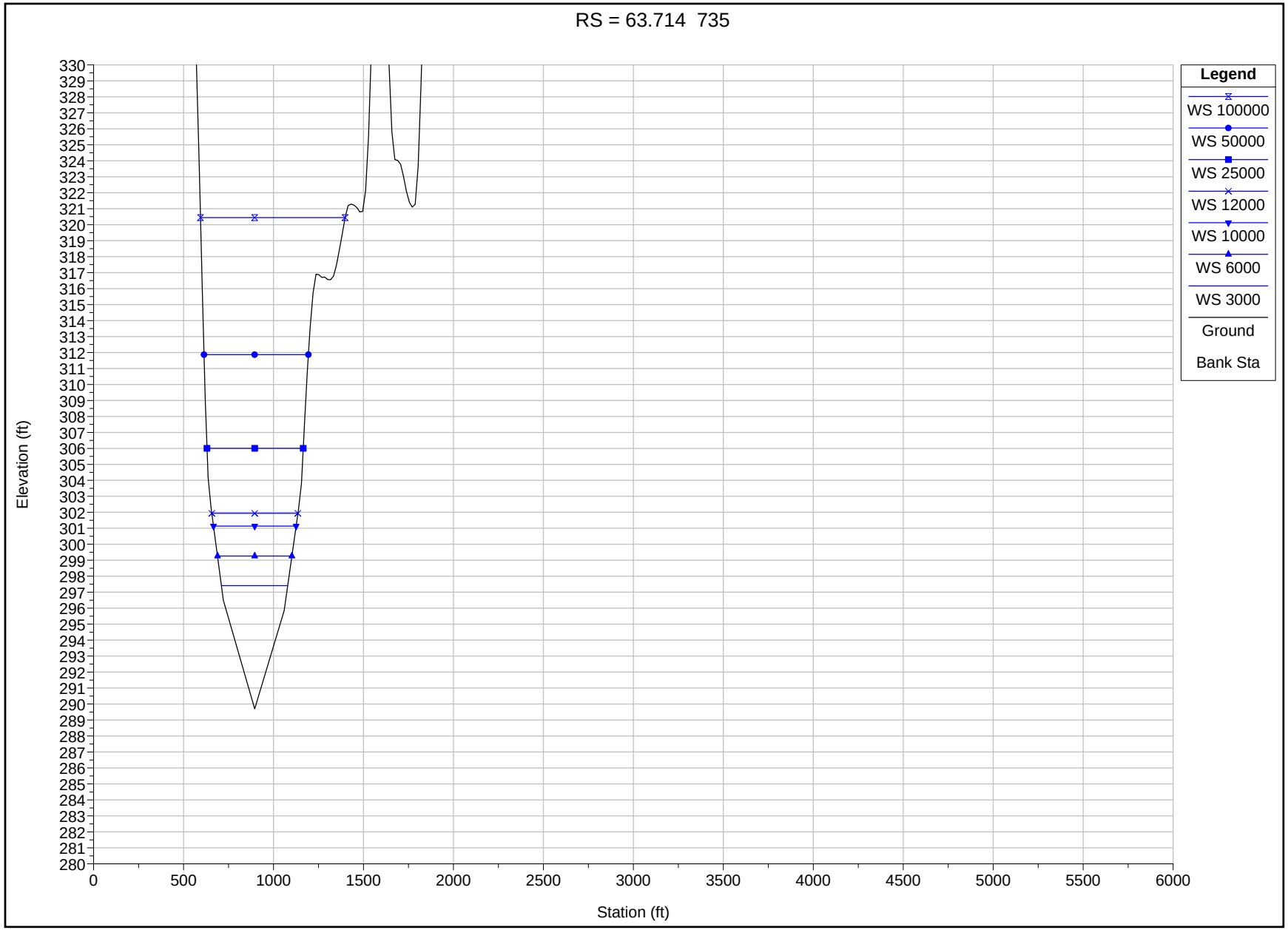
Study 4 HEC-RAS Model Cross Section Plots
XSec 768



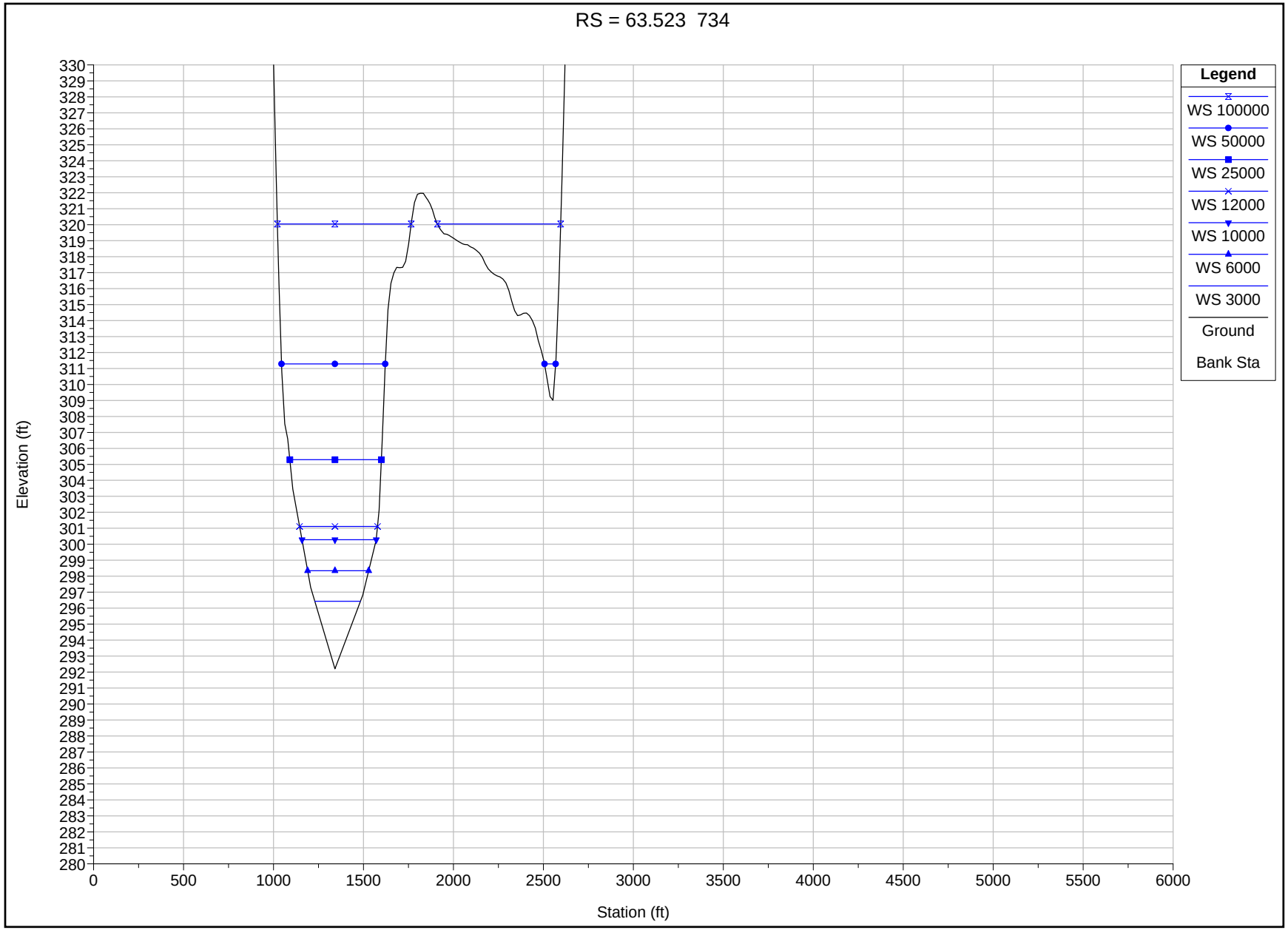
Study 4 HEC-RAS Model Cross Section Plots
XSec 767



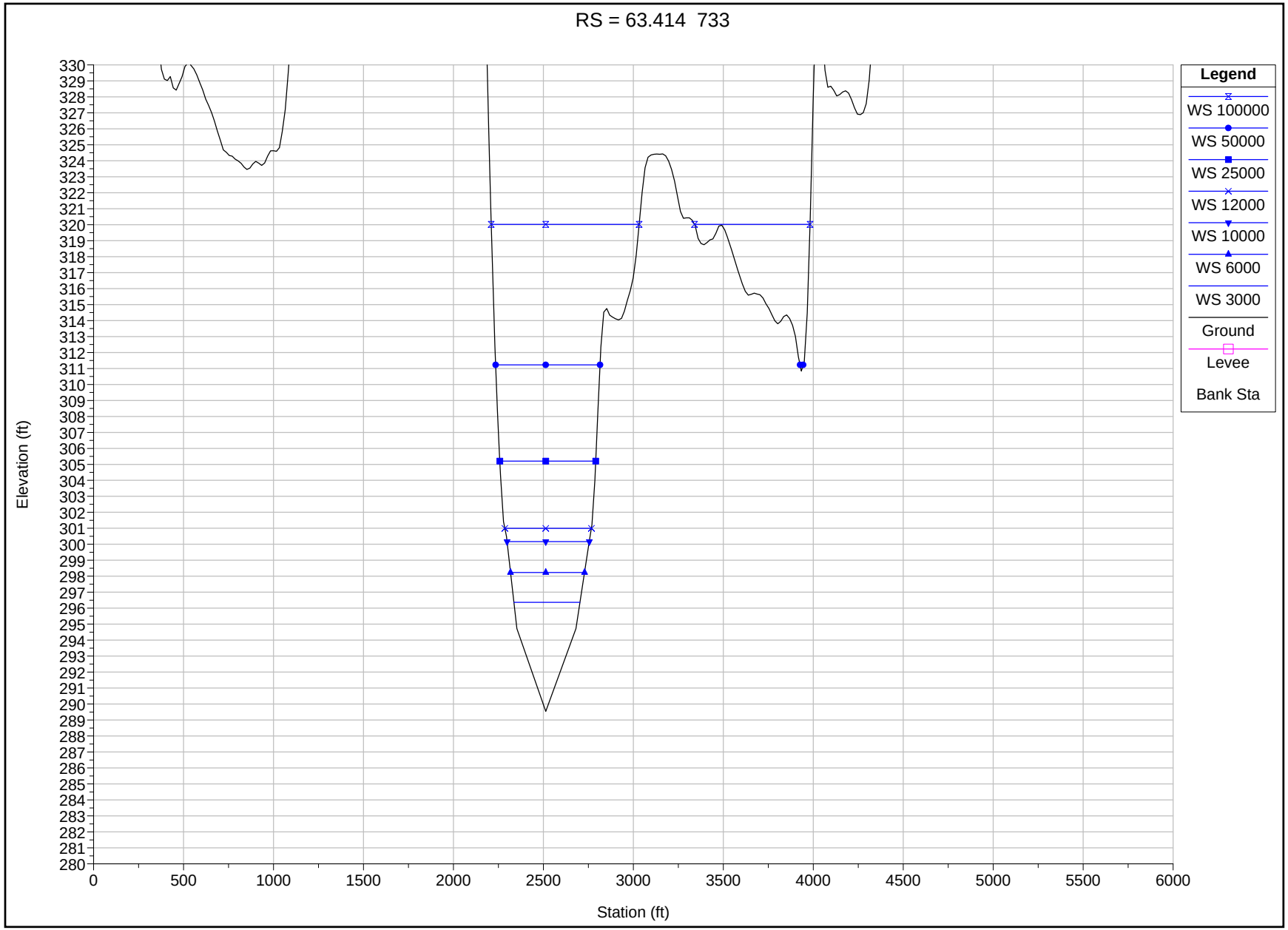
Study 4 HEC-RAS Model Cross Section Plots
XSec 735



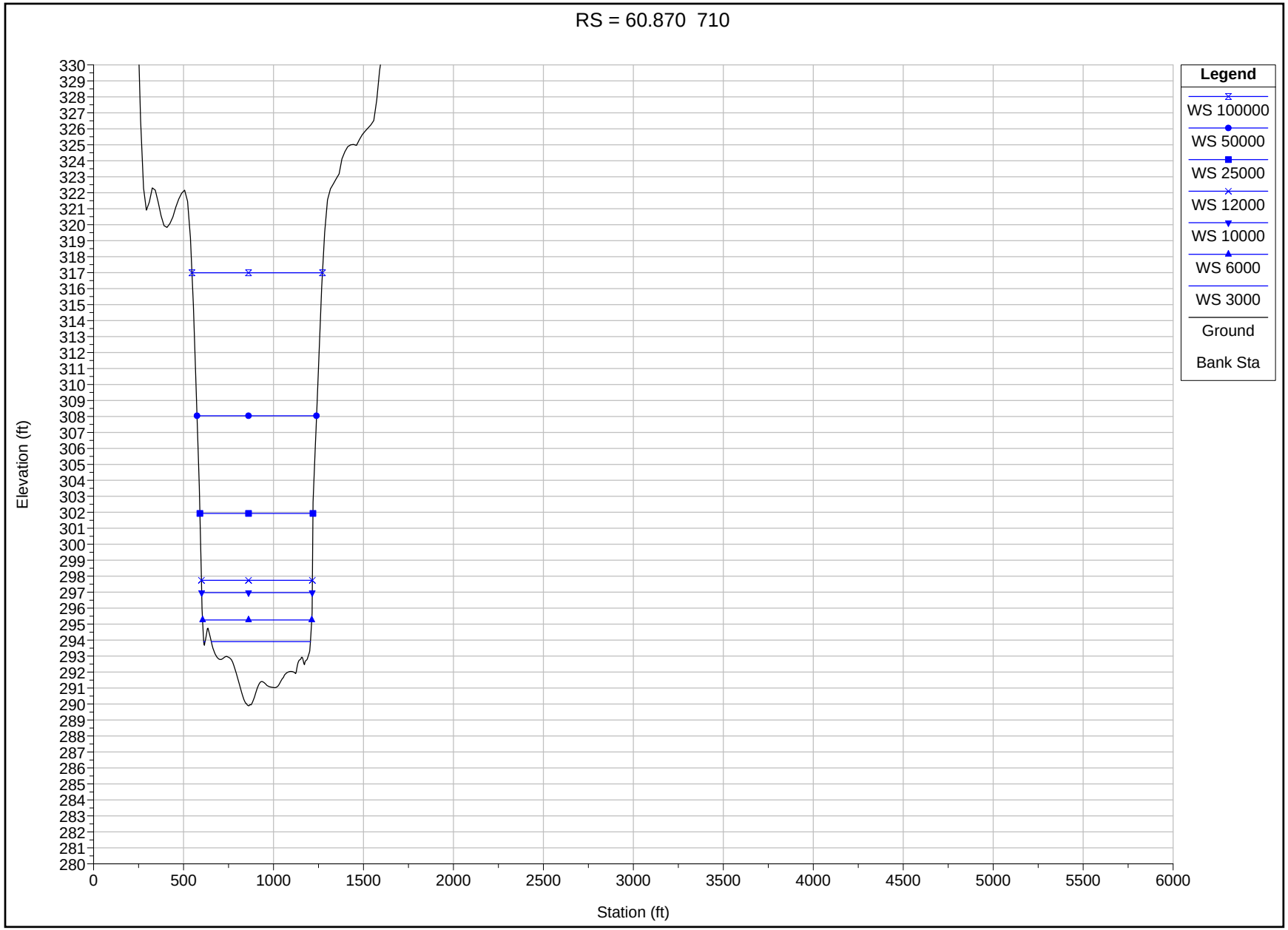
Study 4 HEC-RAS Model Cross Section Plots
XSec 734



Study 4 HEC-RAS Model Cross Section Plots
XSec 733



Study 4 HEC-RAS Model Cross Section Plots
XSec 710



Study 4 HEC-RAS Model Cross Section Plots
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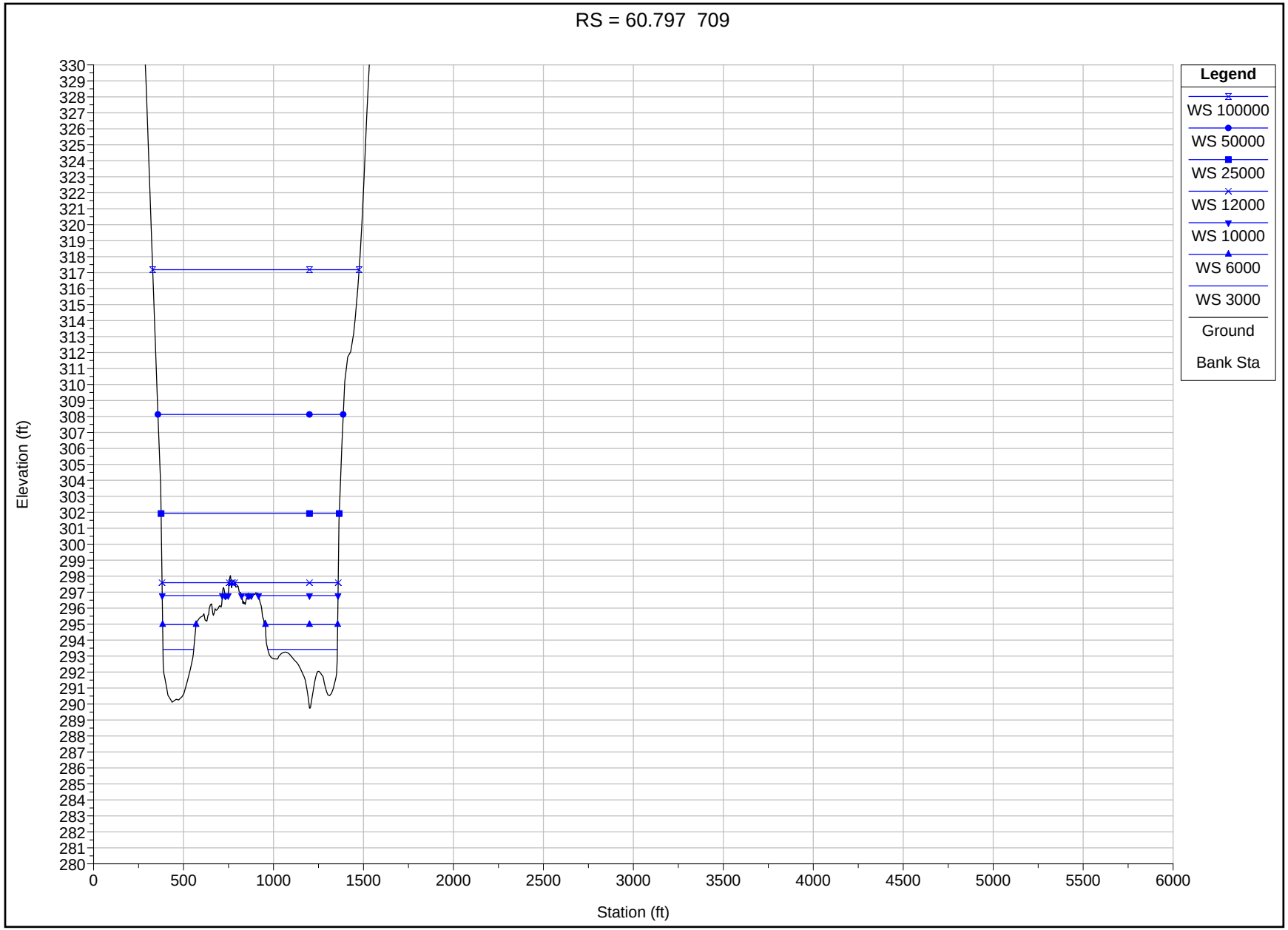

Study 4 HEC-RAS Model Cross Section Plots
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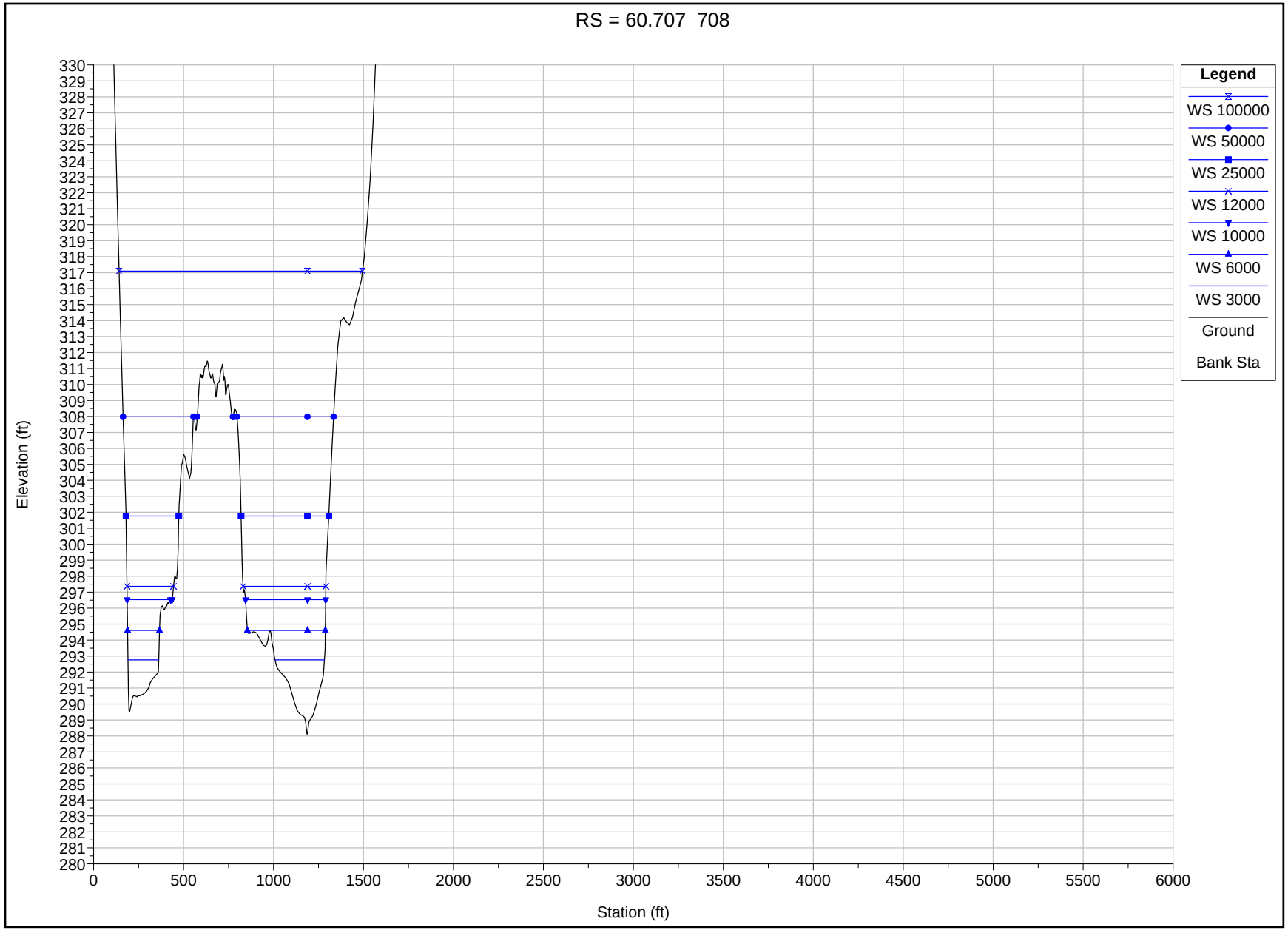
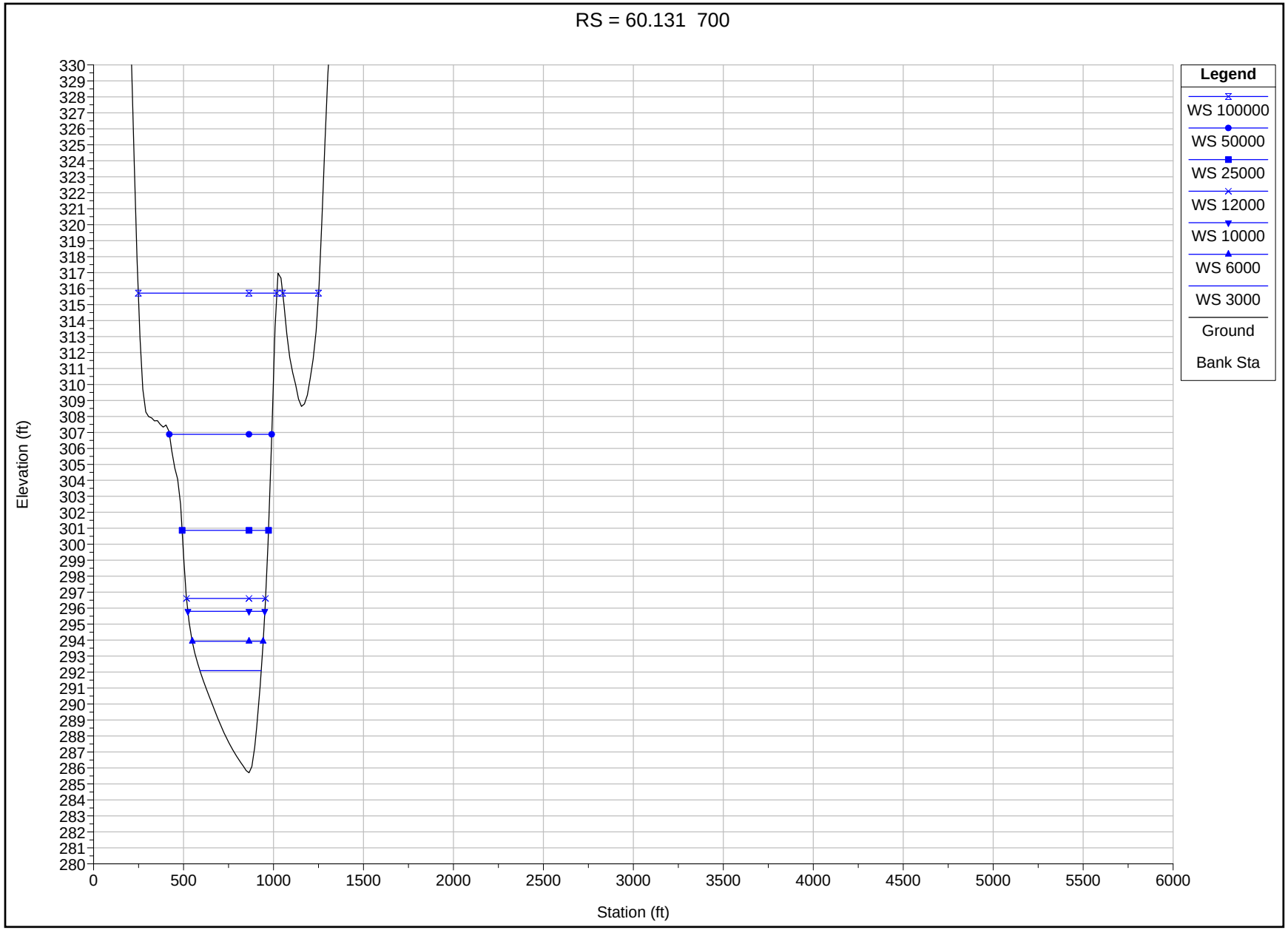


Study 4 HEC-RAS Model Cross Section Plots
XSec 700



Study 4 HEC-RAS Model Cross Section Plots
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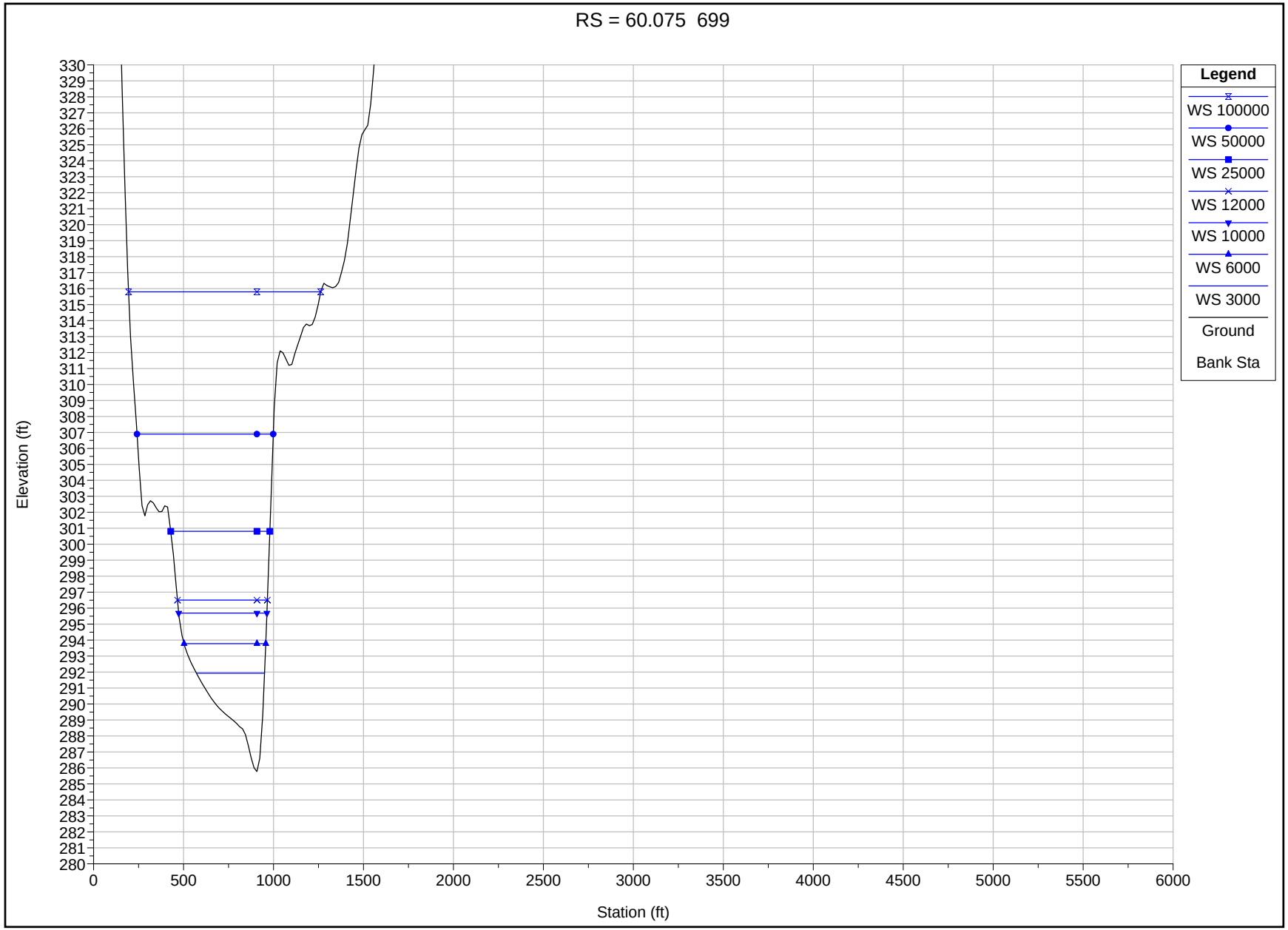
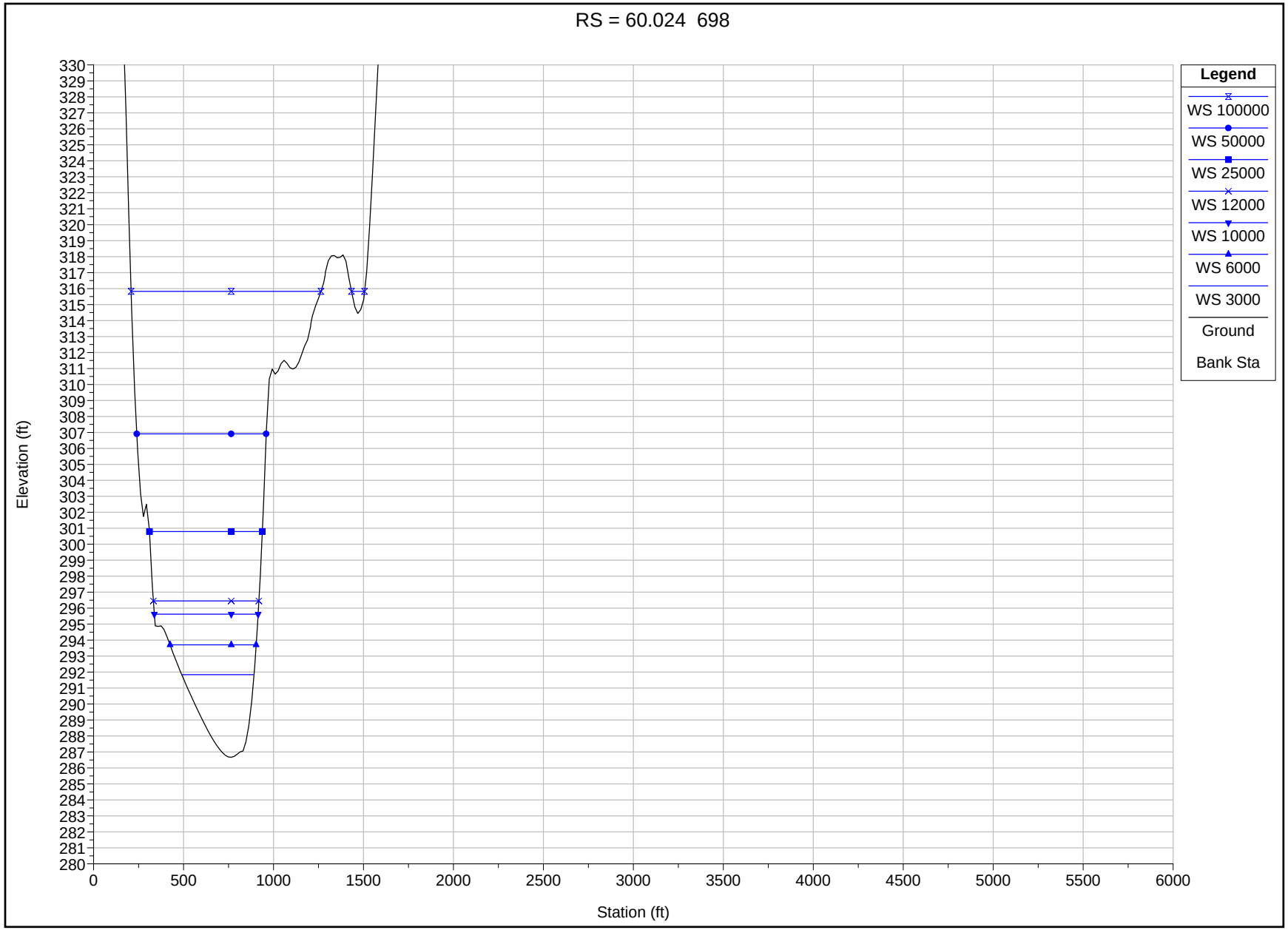


Study 4 HEC-RAS Model Cross Section Plots
XSec 698



Study 4 HEC-RAS Model Cross Section Plots
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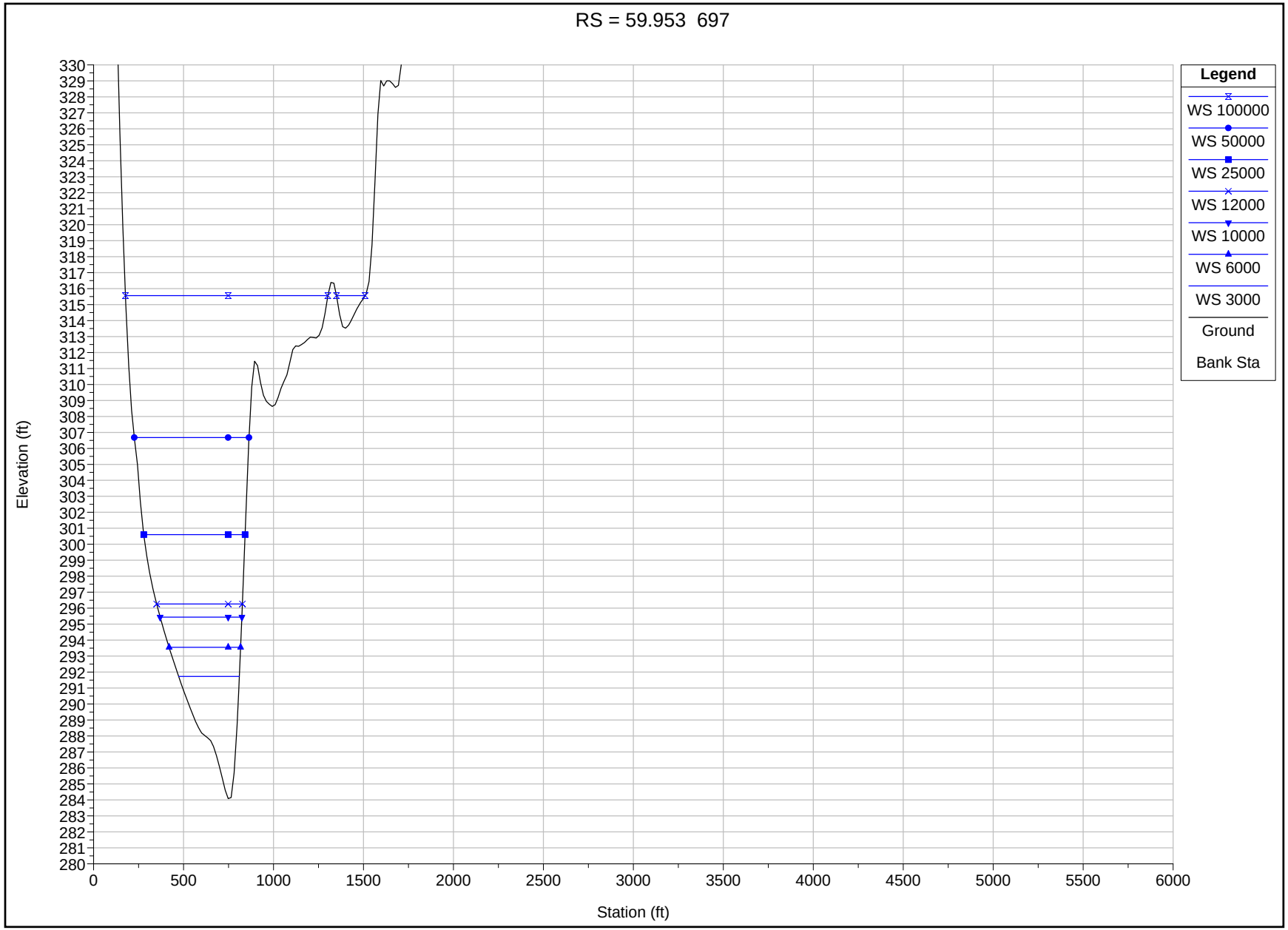
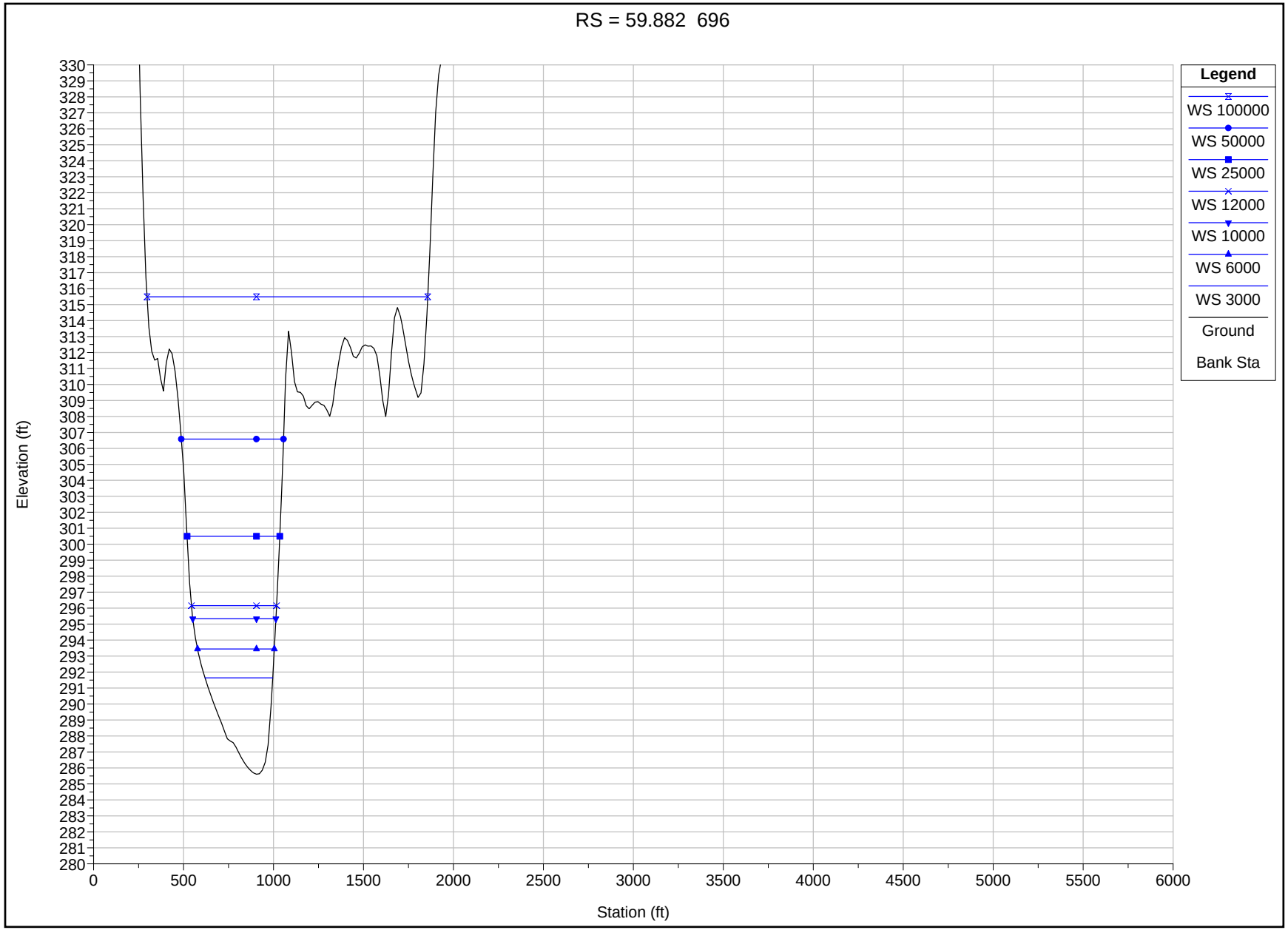
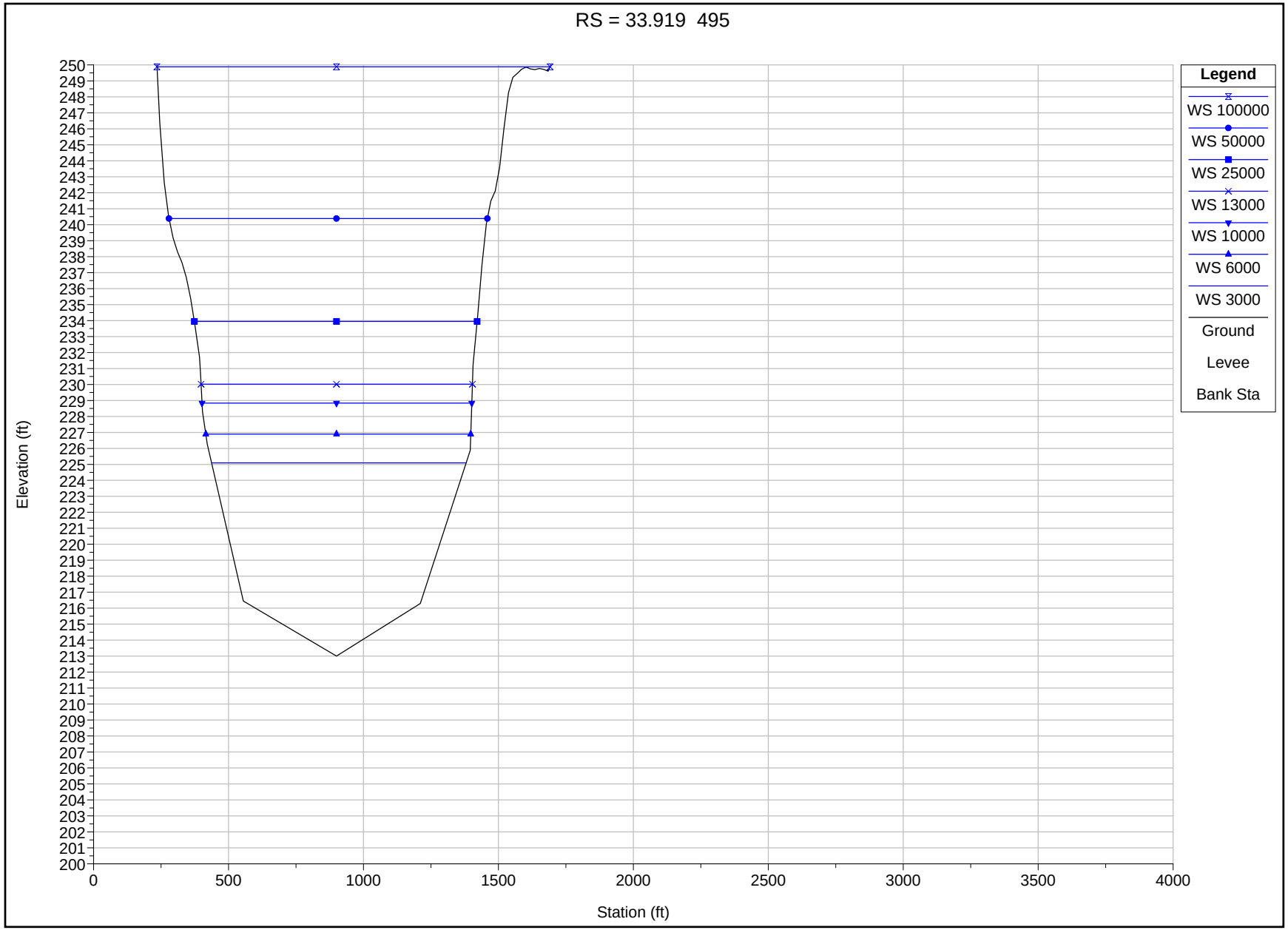


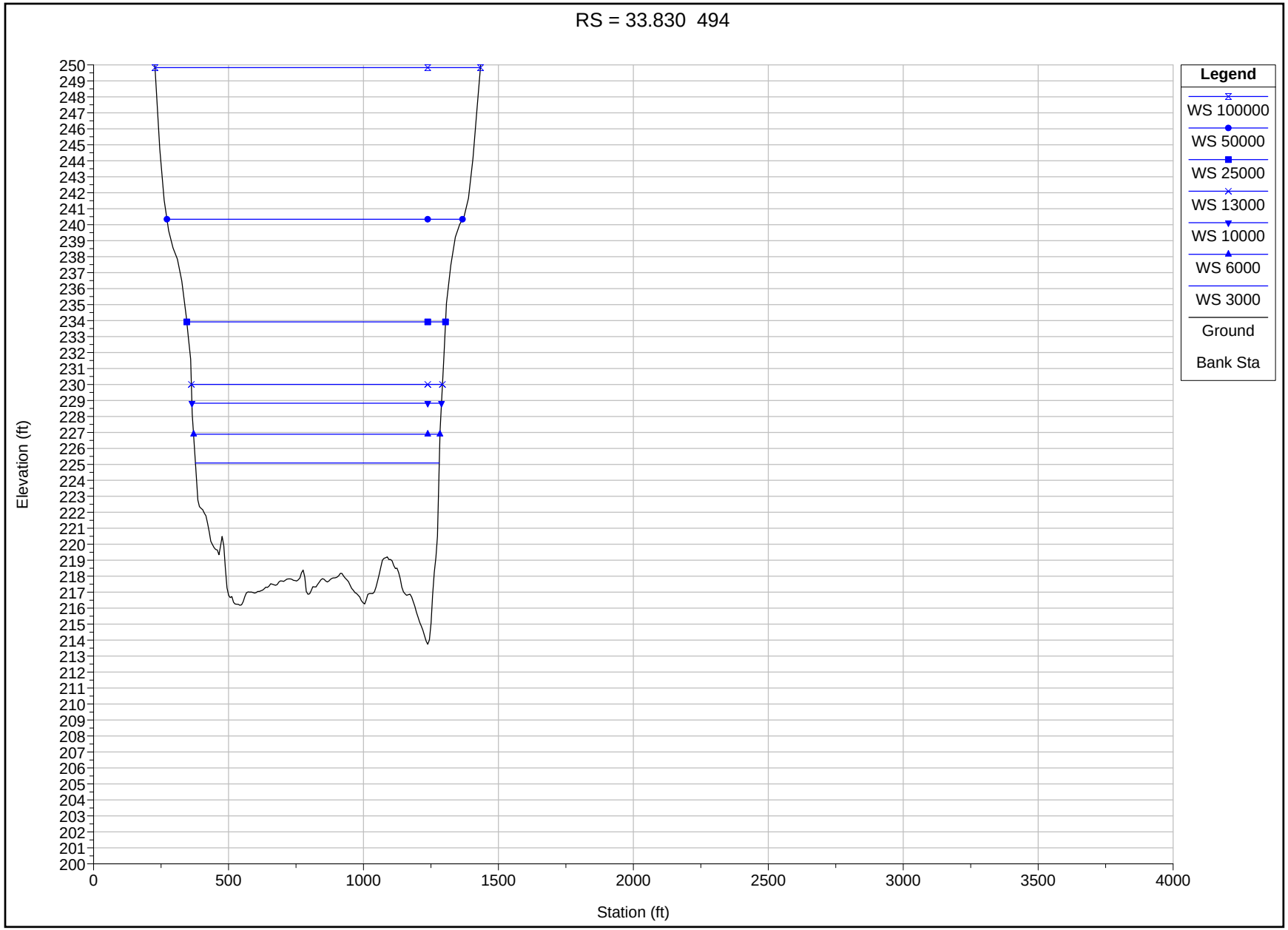
Study 4 HEC-RAS Model Cross Section Plots
XSec 696



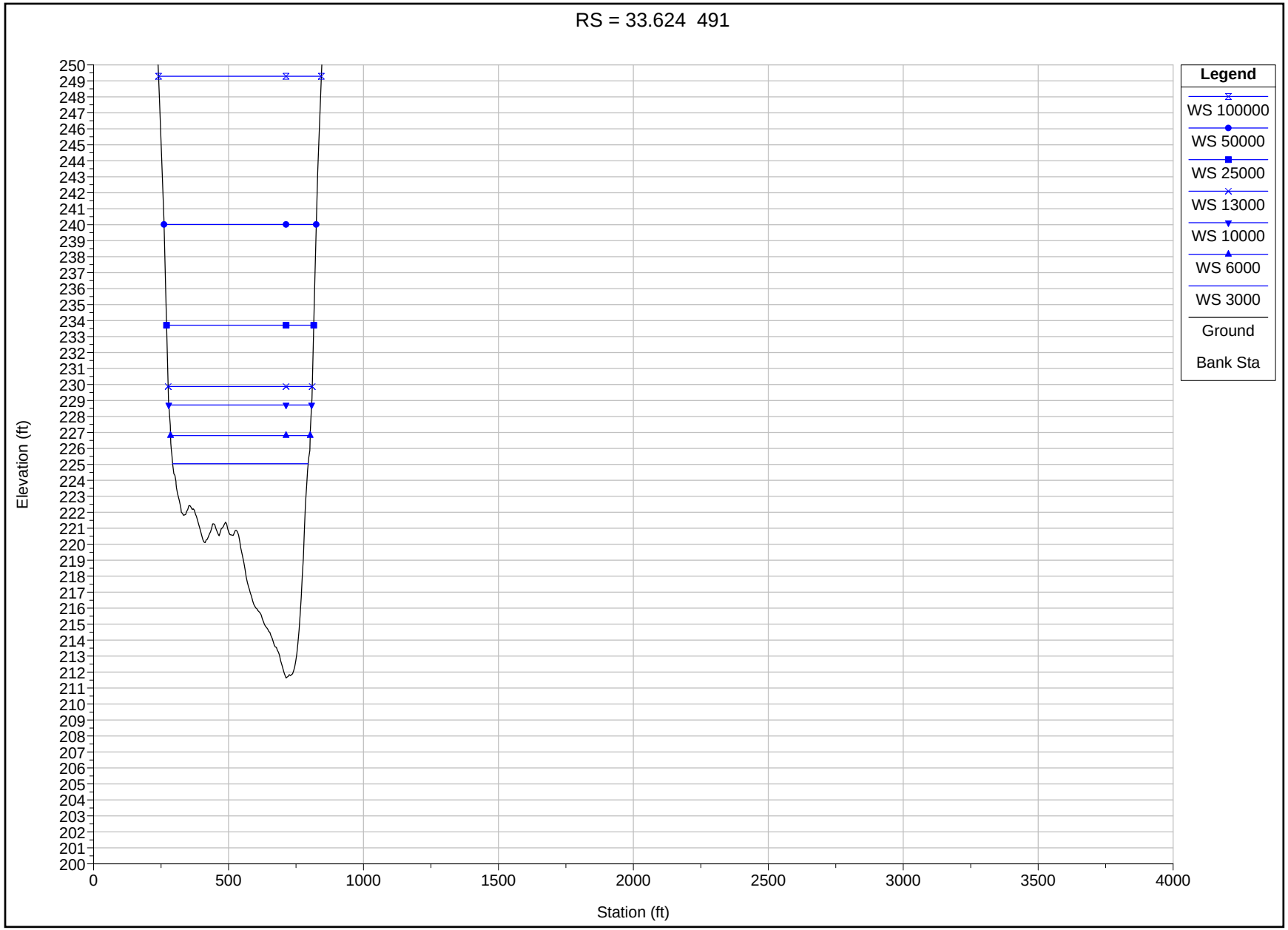
Study 4 HEC-RAS Model Cross Section Plots
XSec 495



Study 4 HEC-RAS Model Cross Section Plots
XSec 494



Study 4 HEC-RAS Model Cross Section Plots
XSec 491



Study 4 HEC-RAS Model Cross Section Plots
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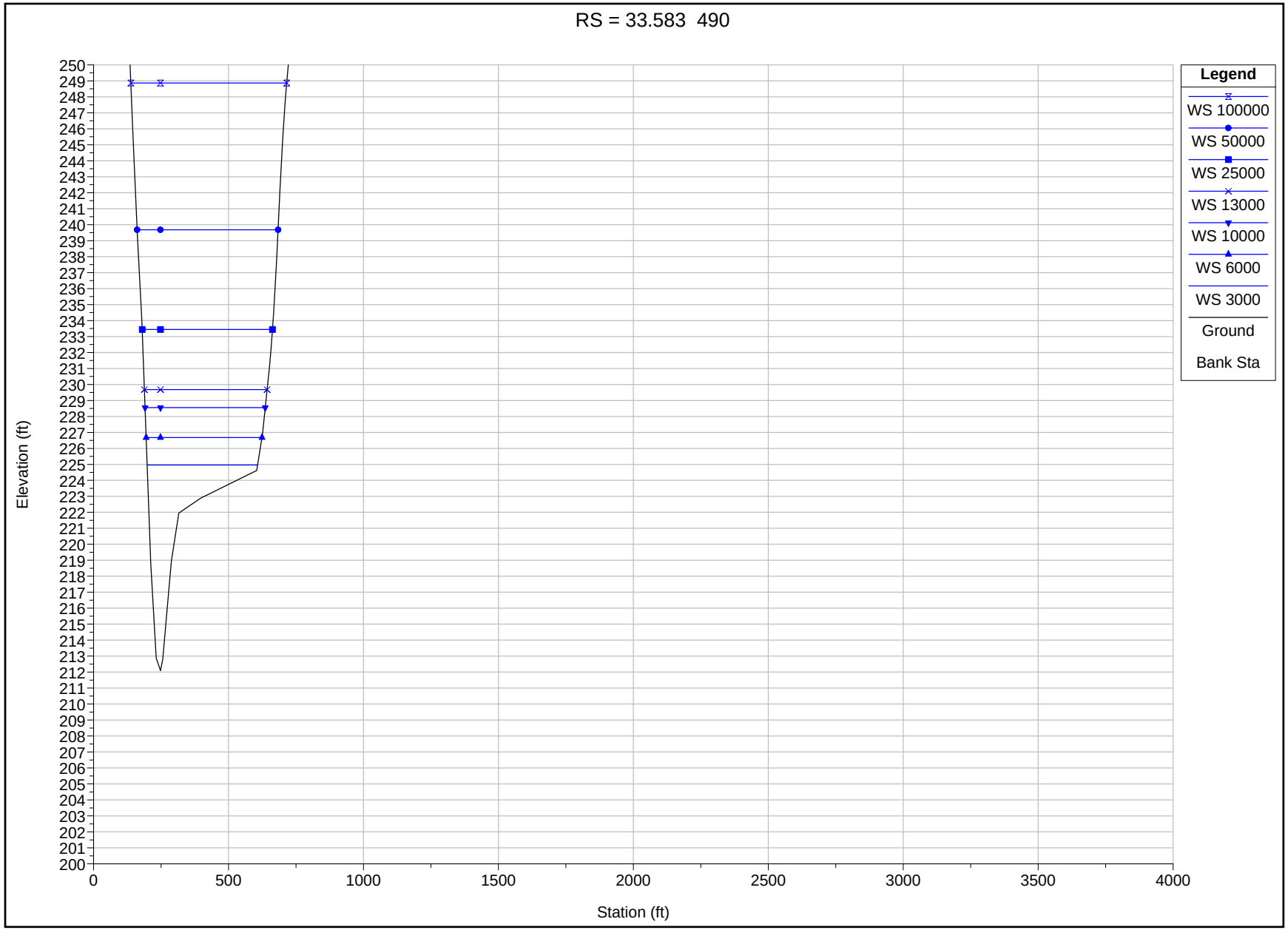

Study 4 HEC-RAS Model Cross Section Plots
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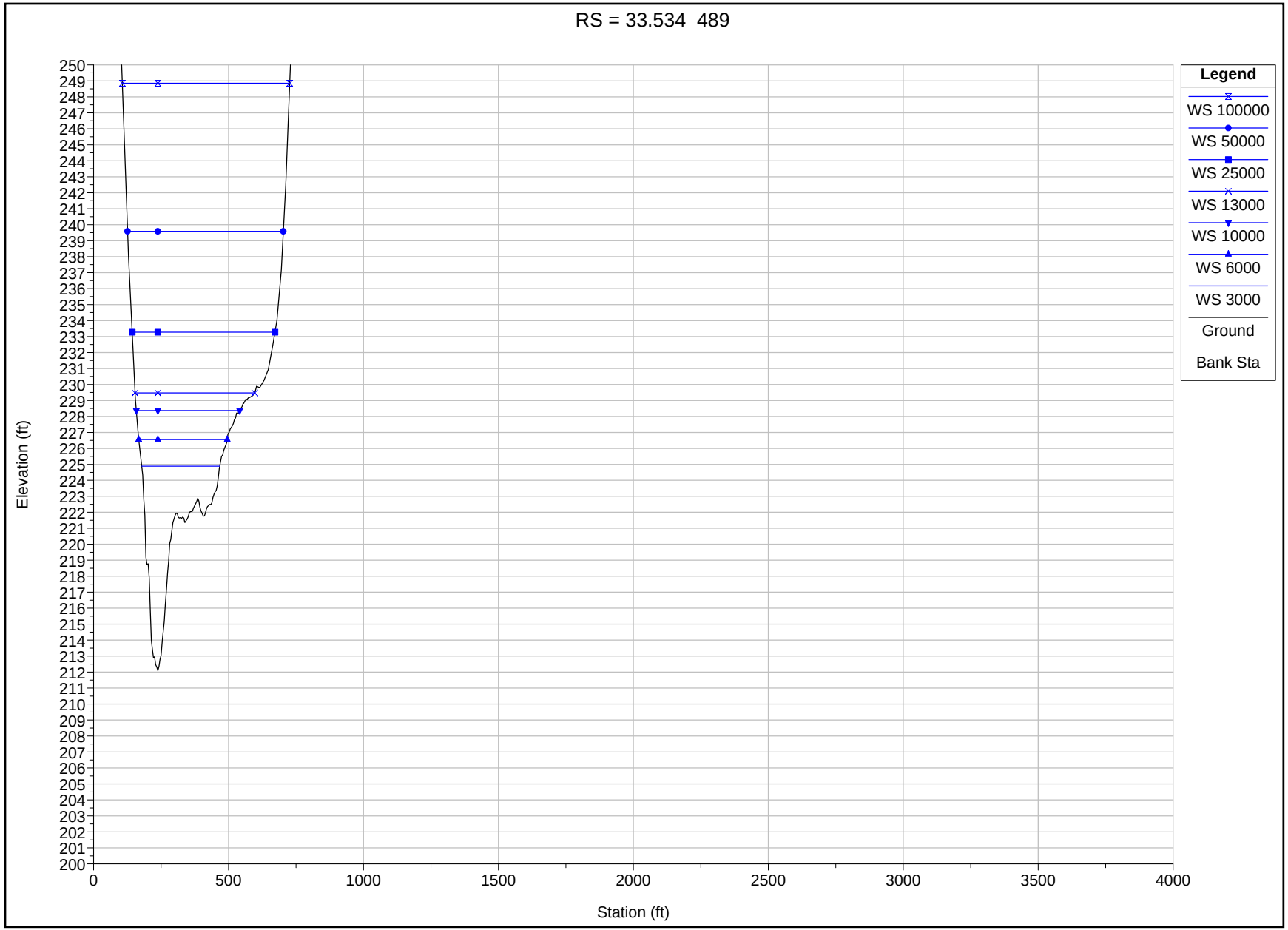

Study 4 HEC-RAS Model Cross Section Plots
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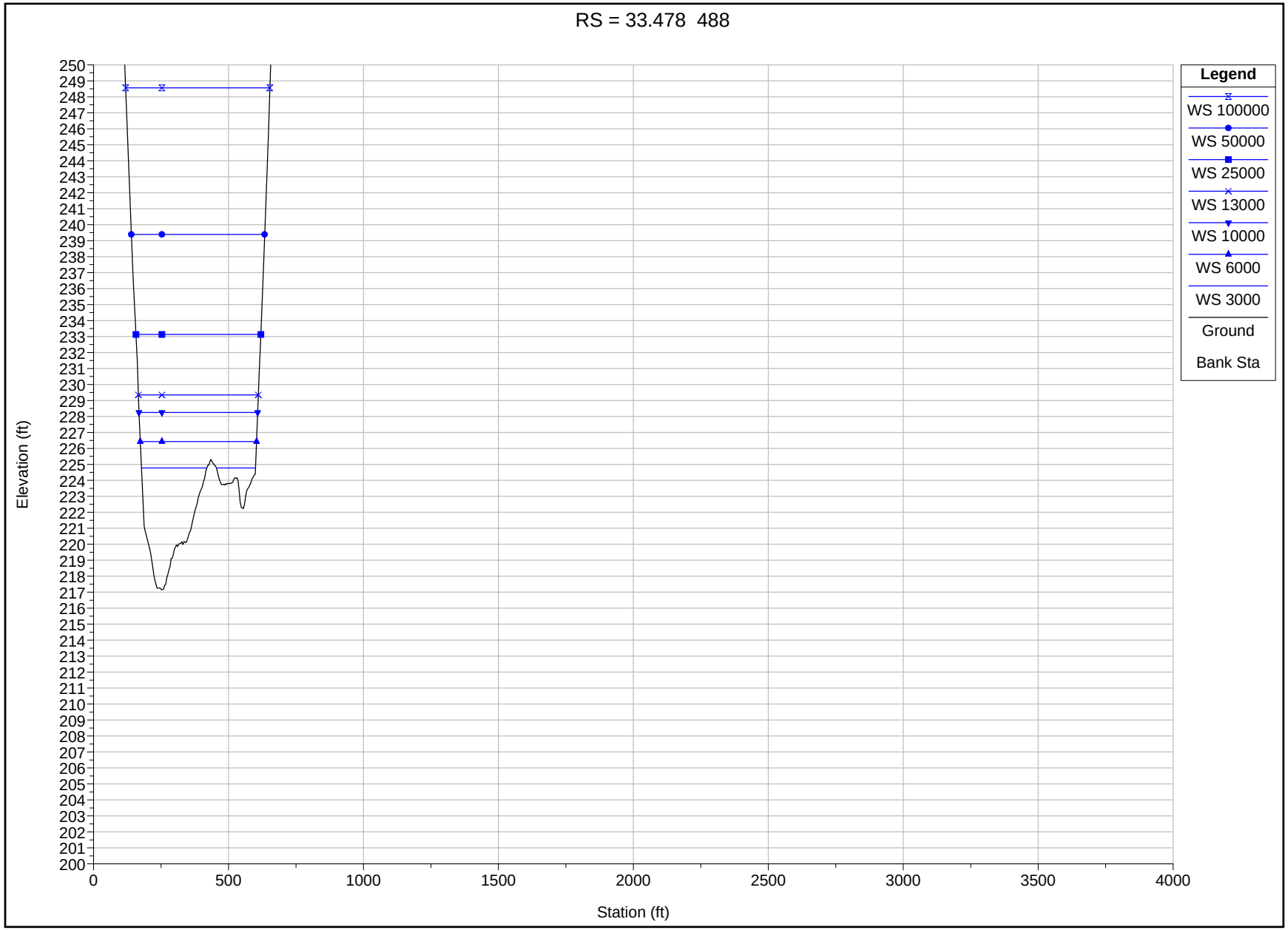
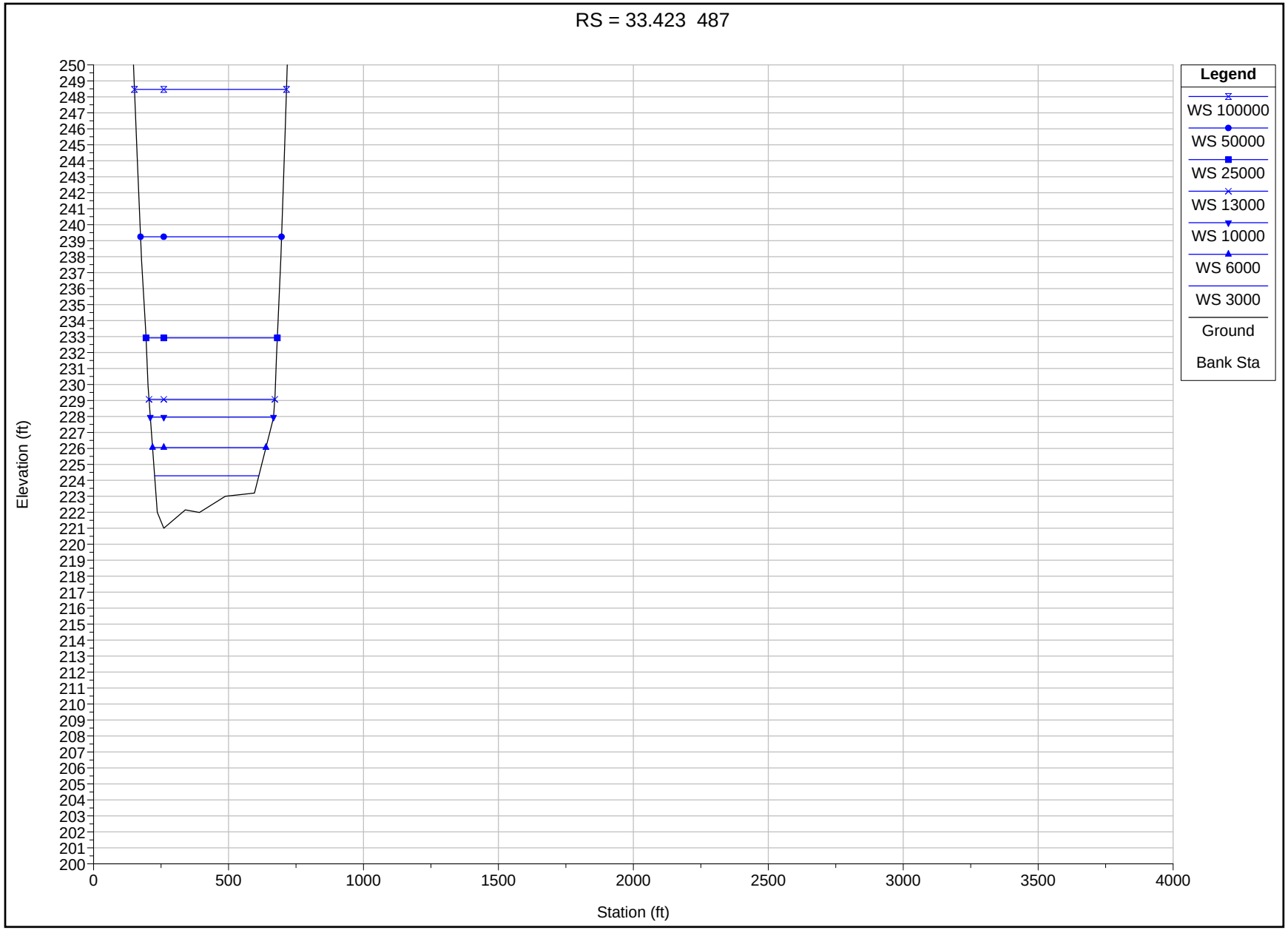
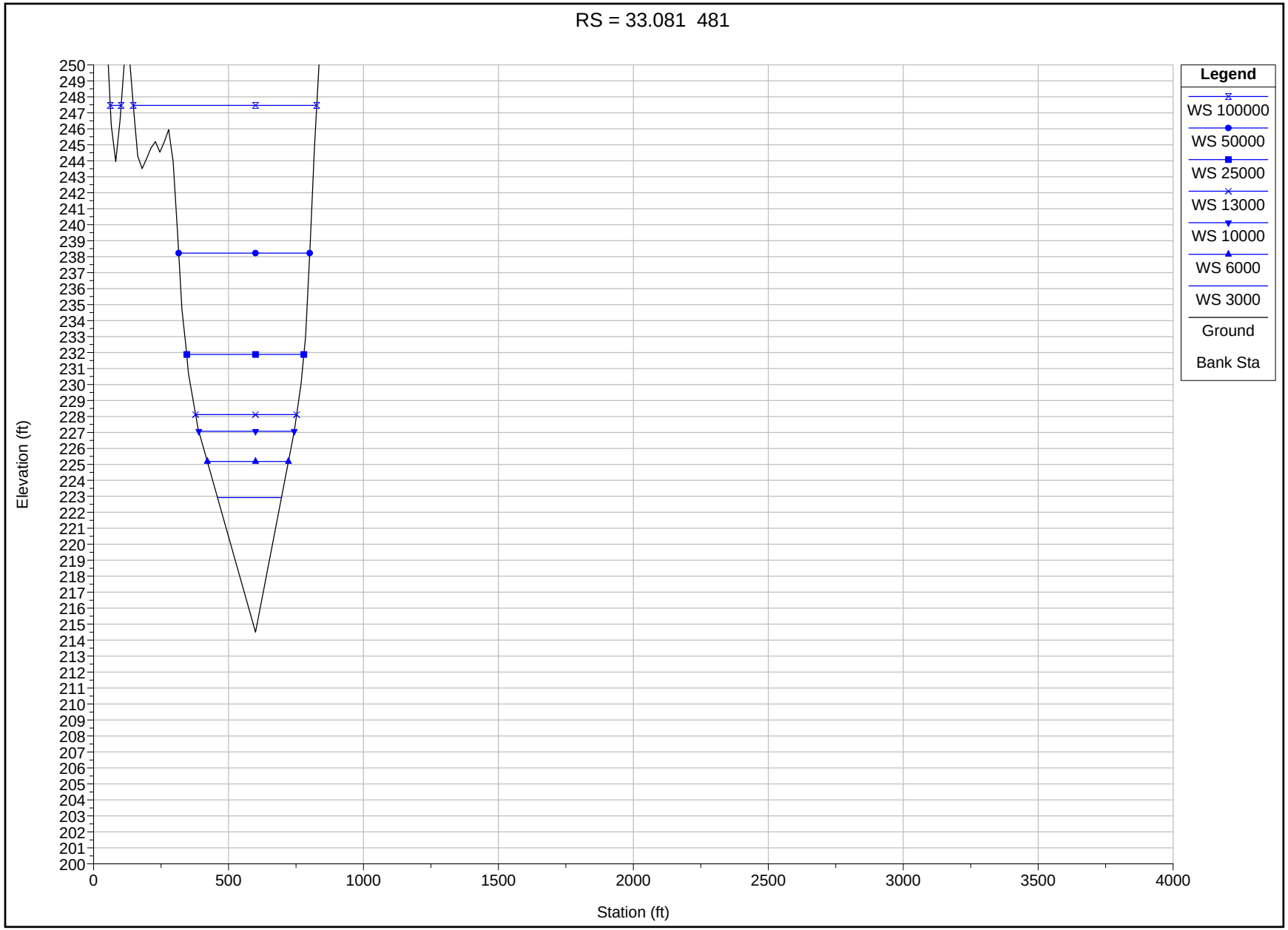


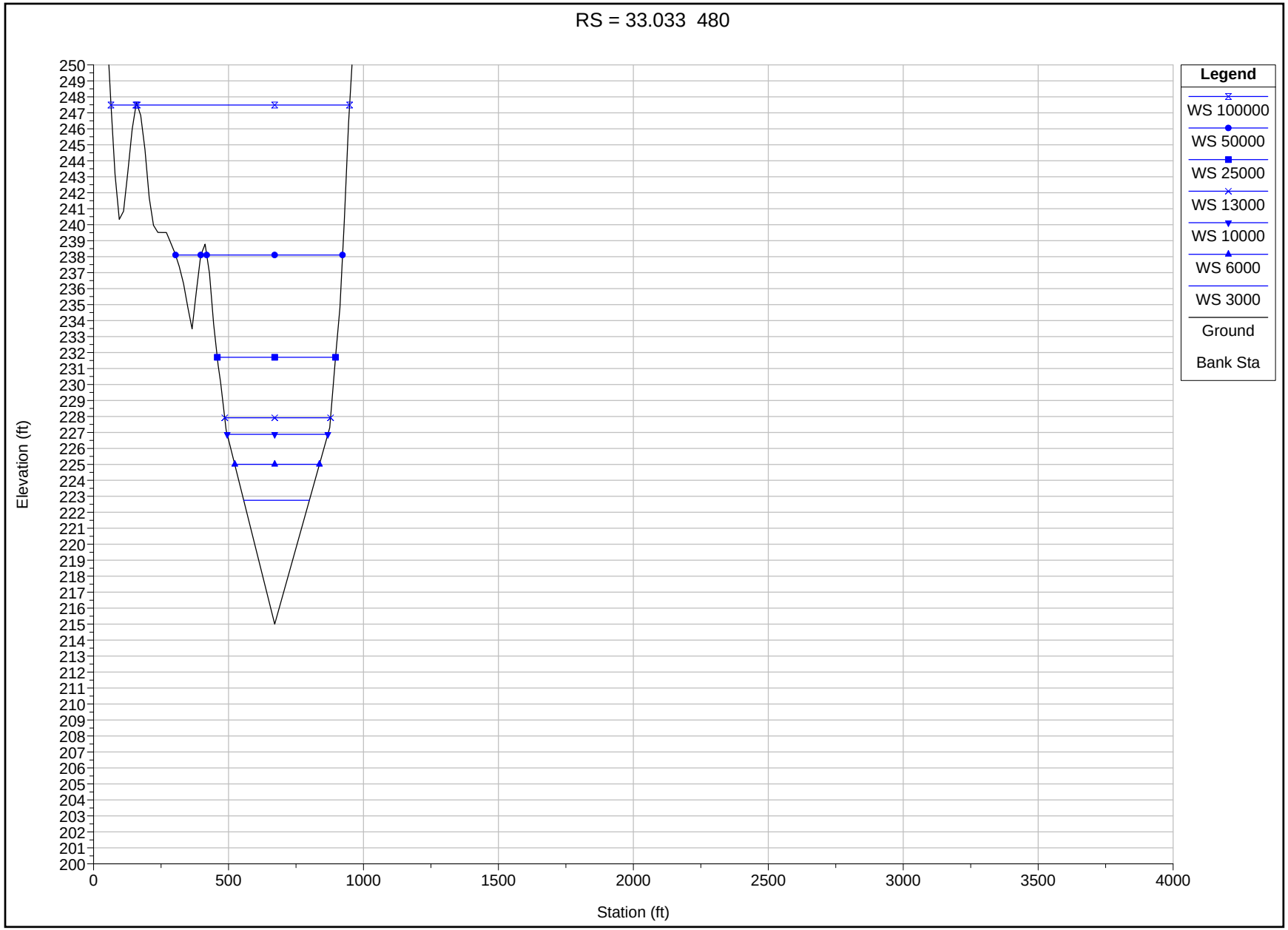
Study 4 HEC-RAS Model Cross Section Plots
XSec 487



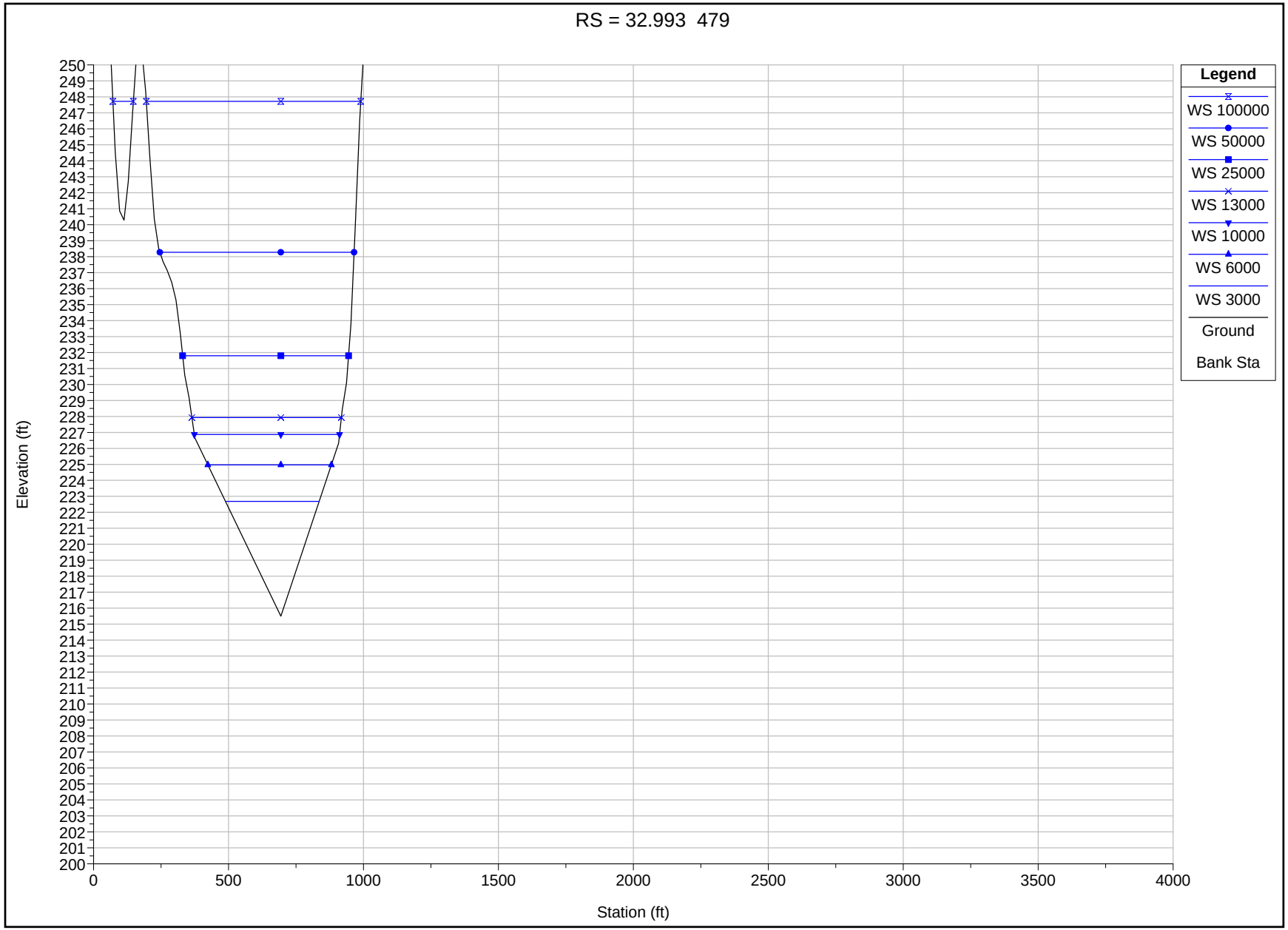
Study 4 HEC-RAS Model Cross Section Plots
XSec 481



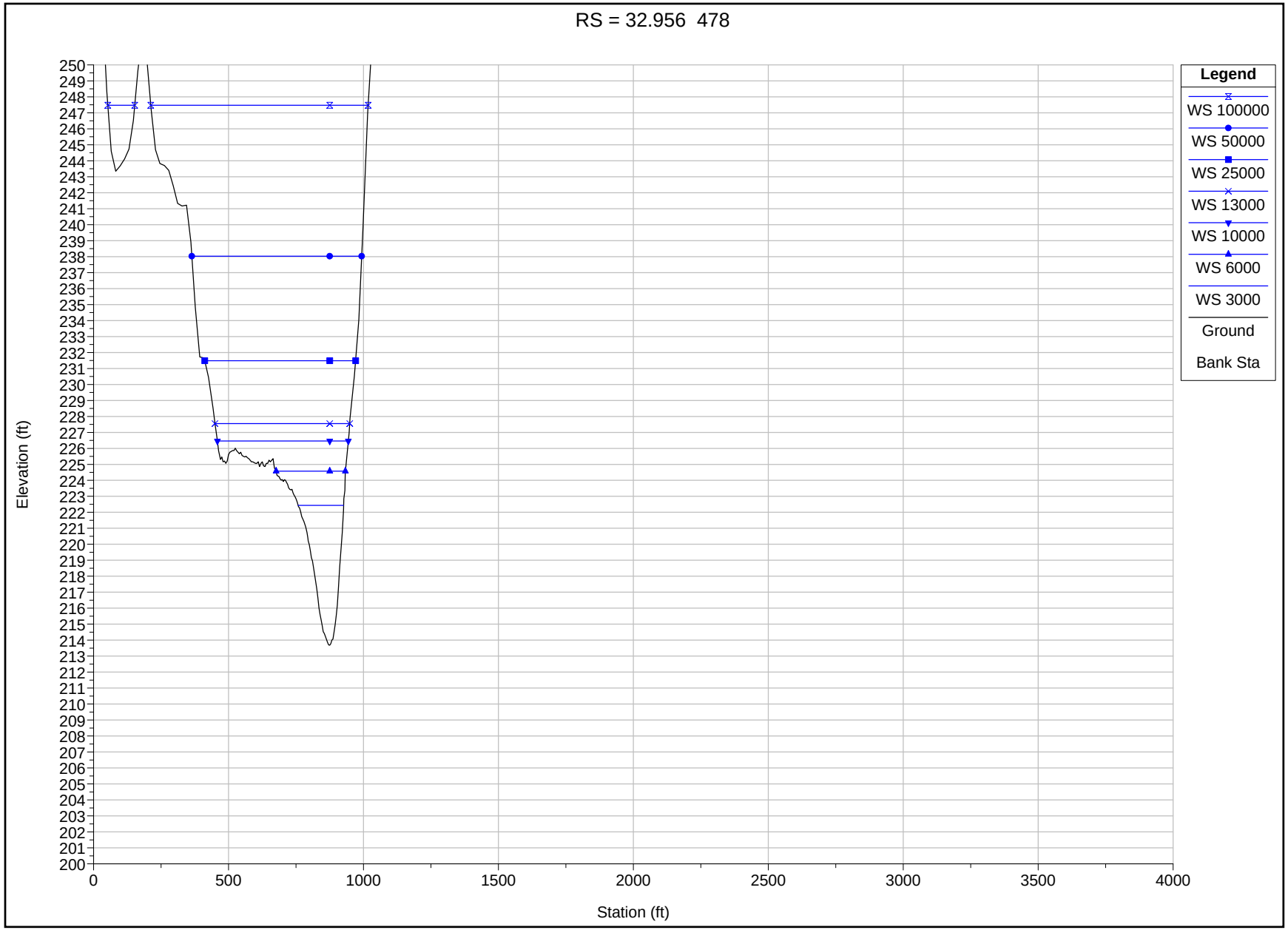
Study 4 HEC-RAS Model Cross Section Plots
XSec 480



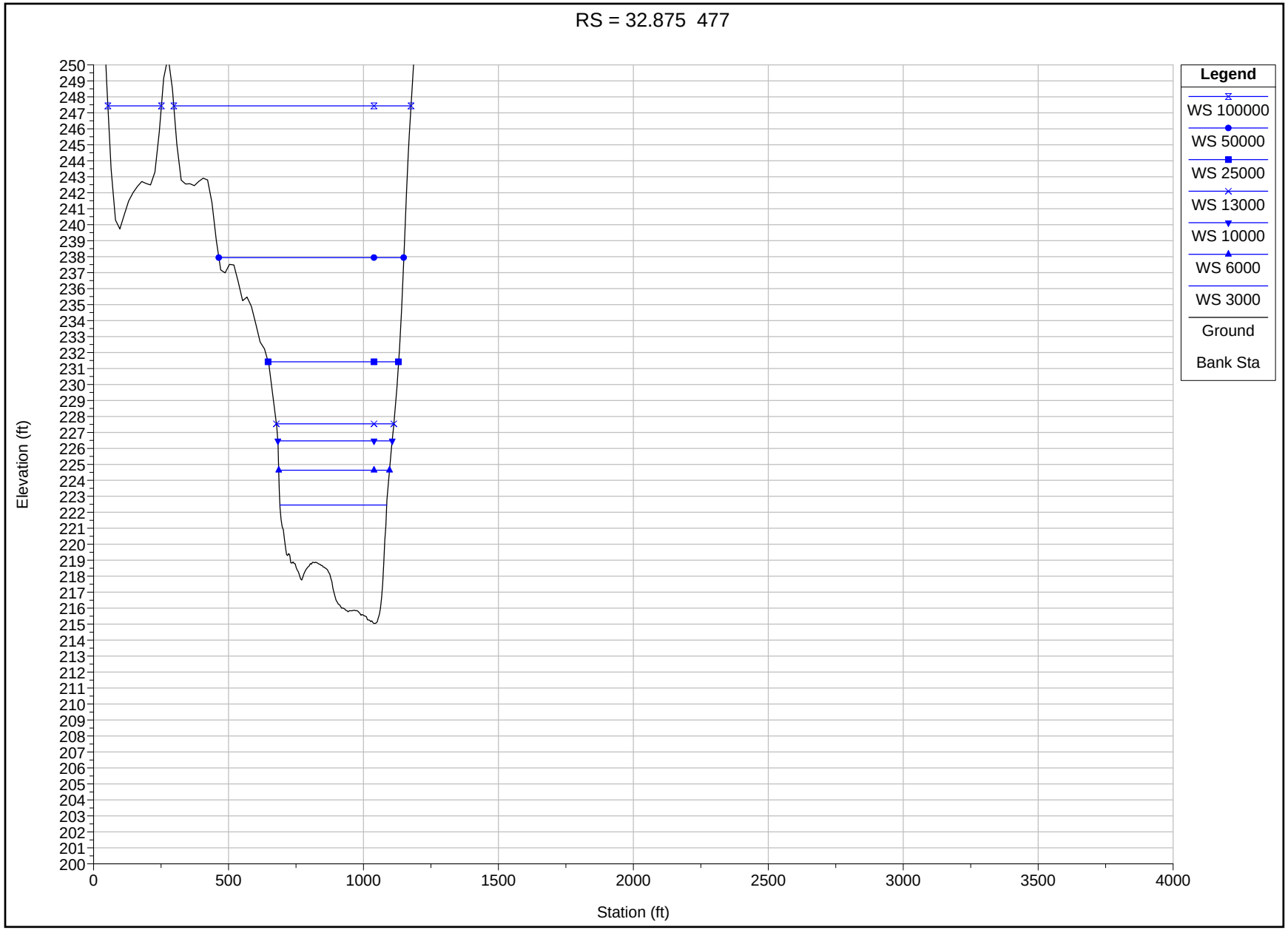
Study 4 HEC-RAS Model Cross Section Plots
XSec 479



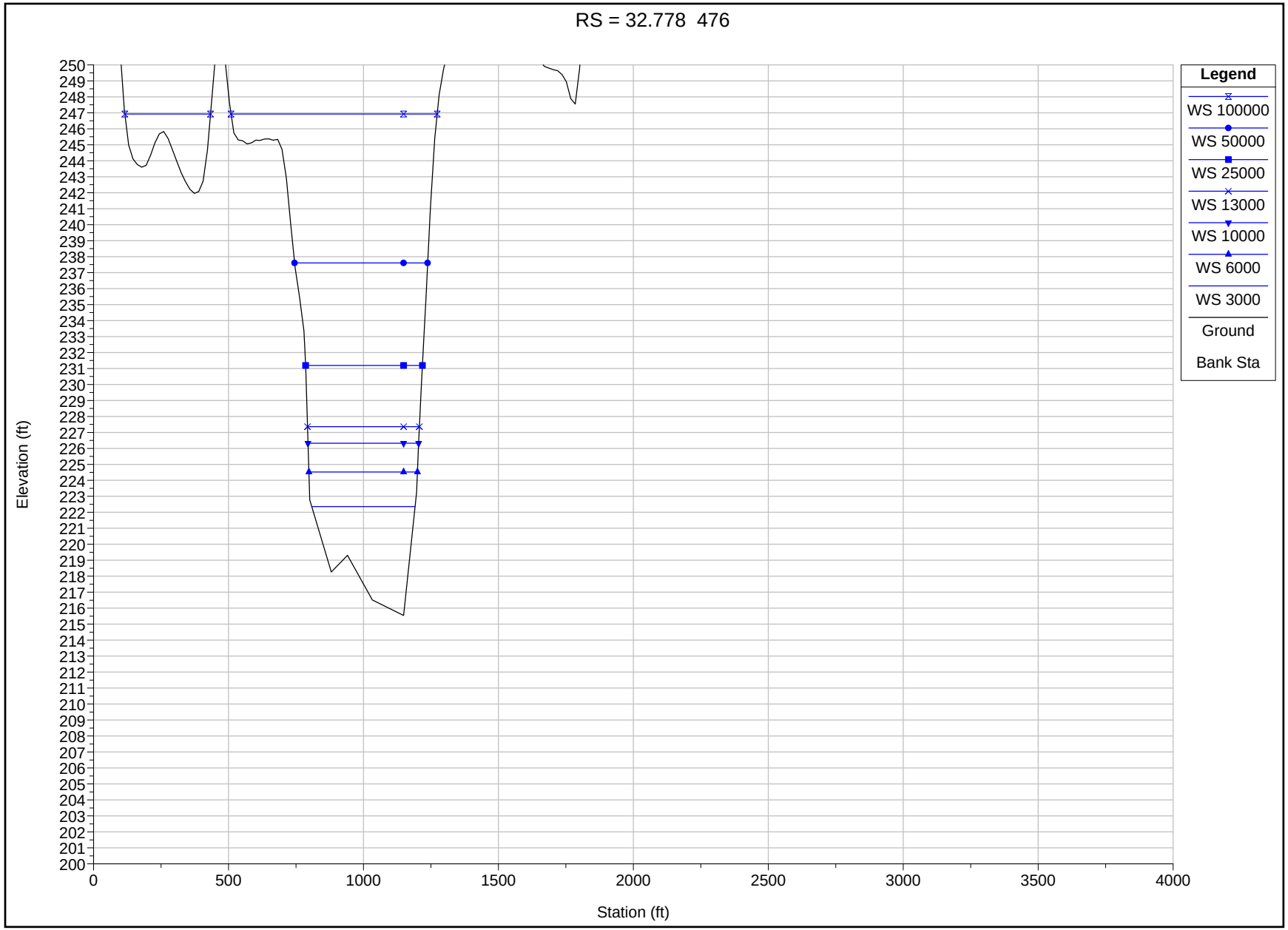
Study 4 HEC-RAS Model Cross Section Plots
XSec 478



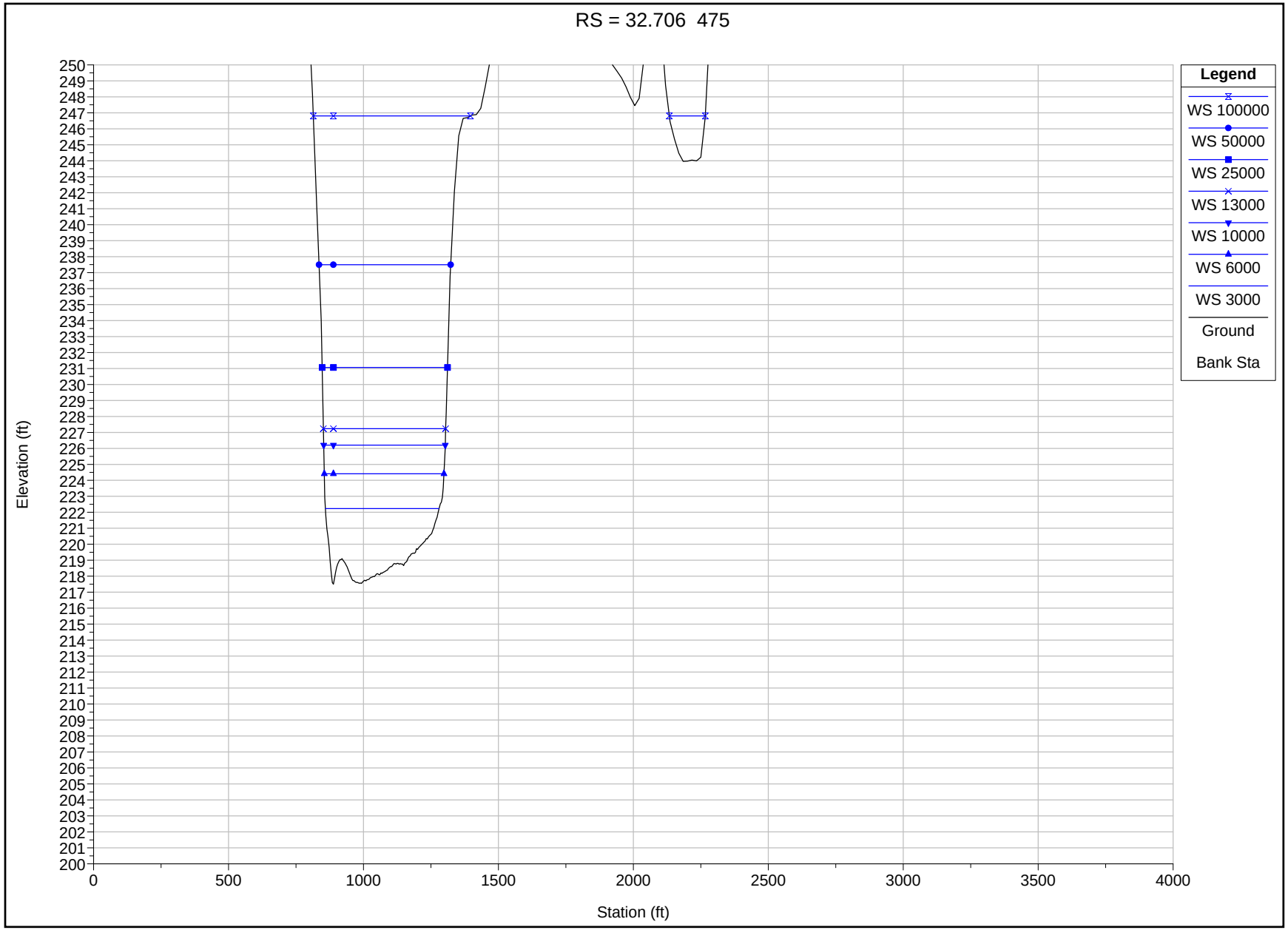
Study 4 HEC-RAS Model Cross Section Plots
XSec 477



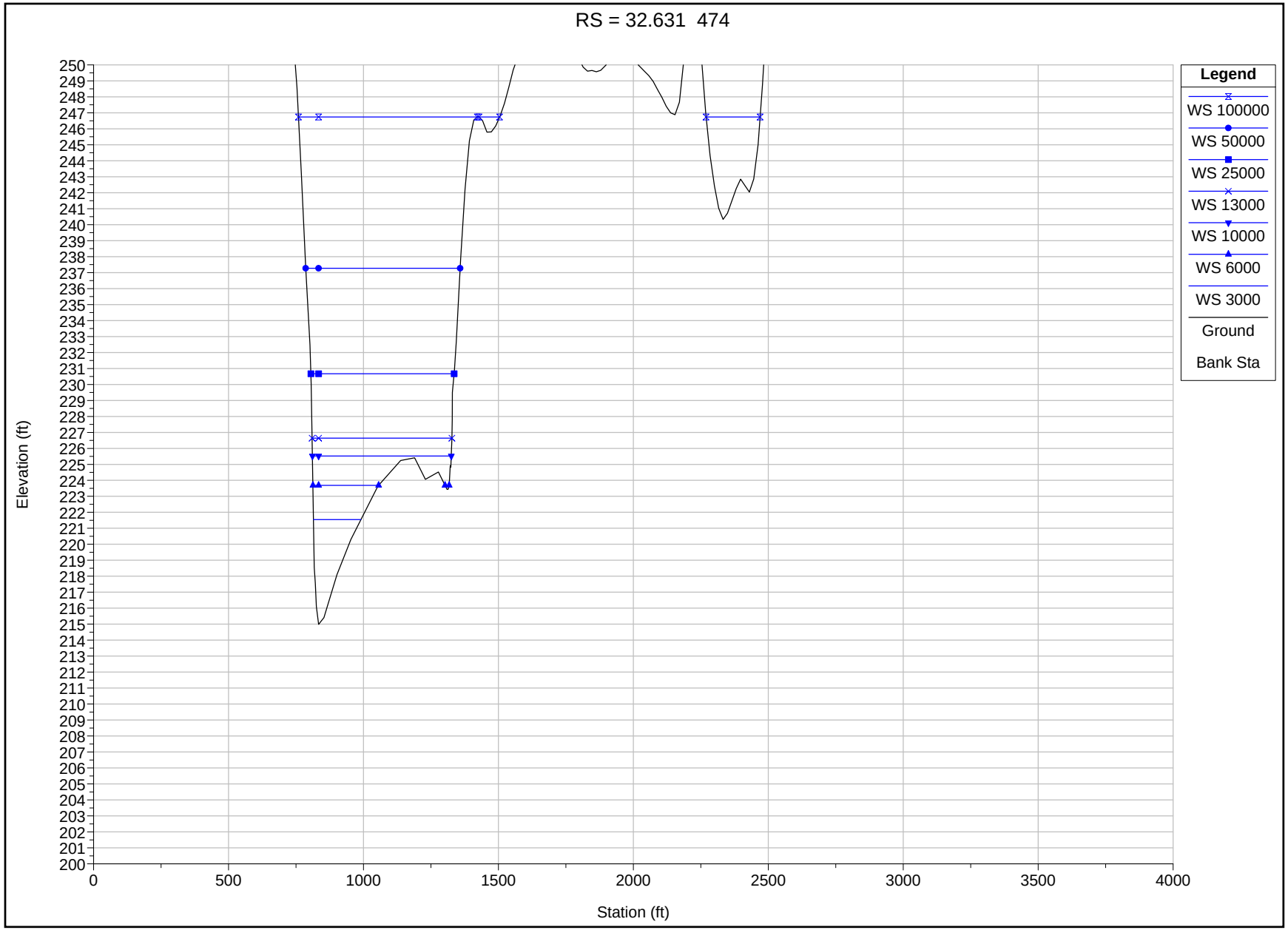
Study 4 HEC-RAS Model Cross Section Plots
XSec 476



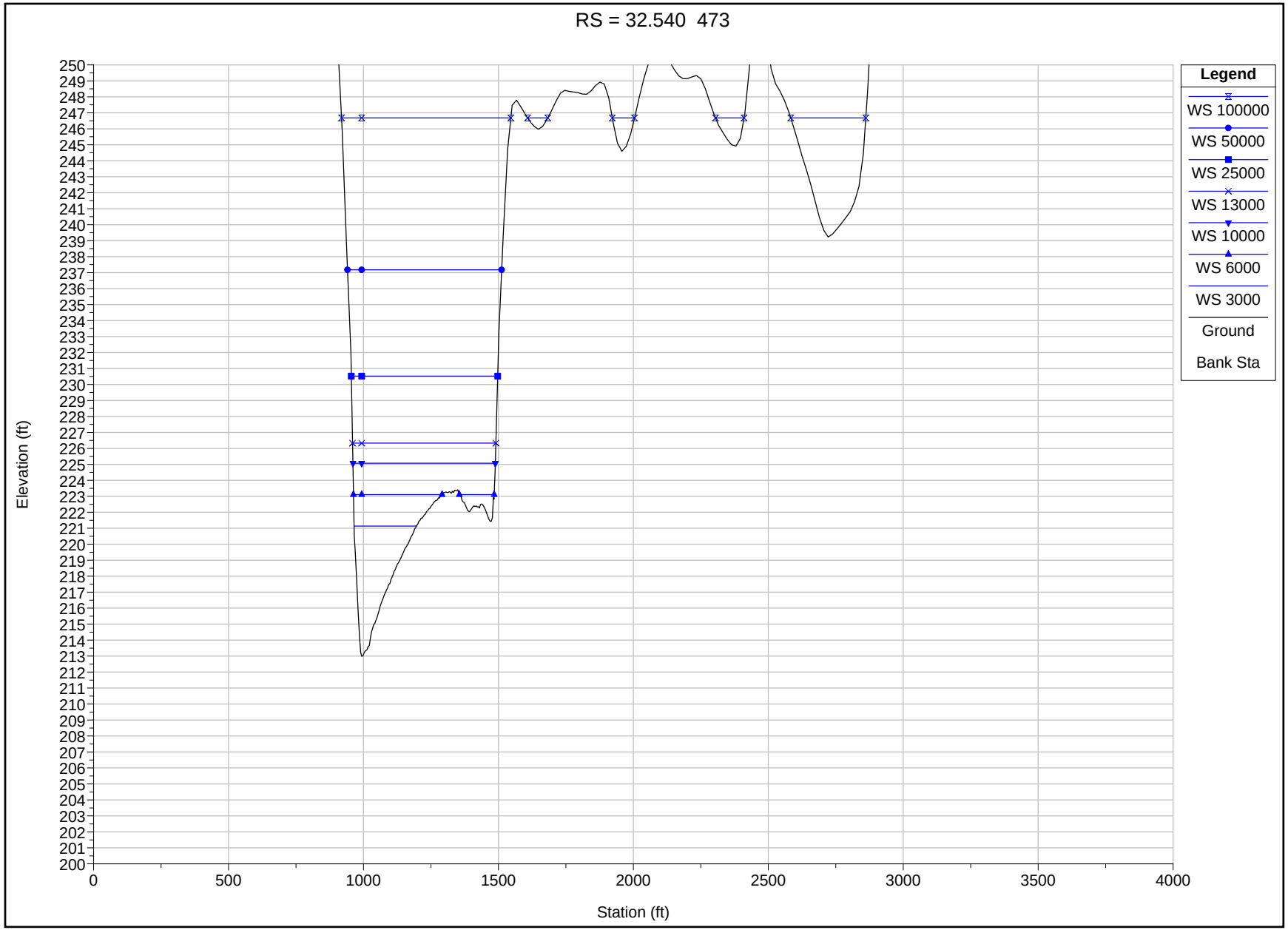
Study 4 HEC-RAS Model Cross Section Plots
XSec 475



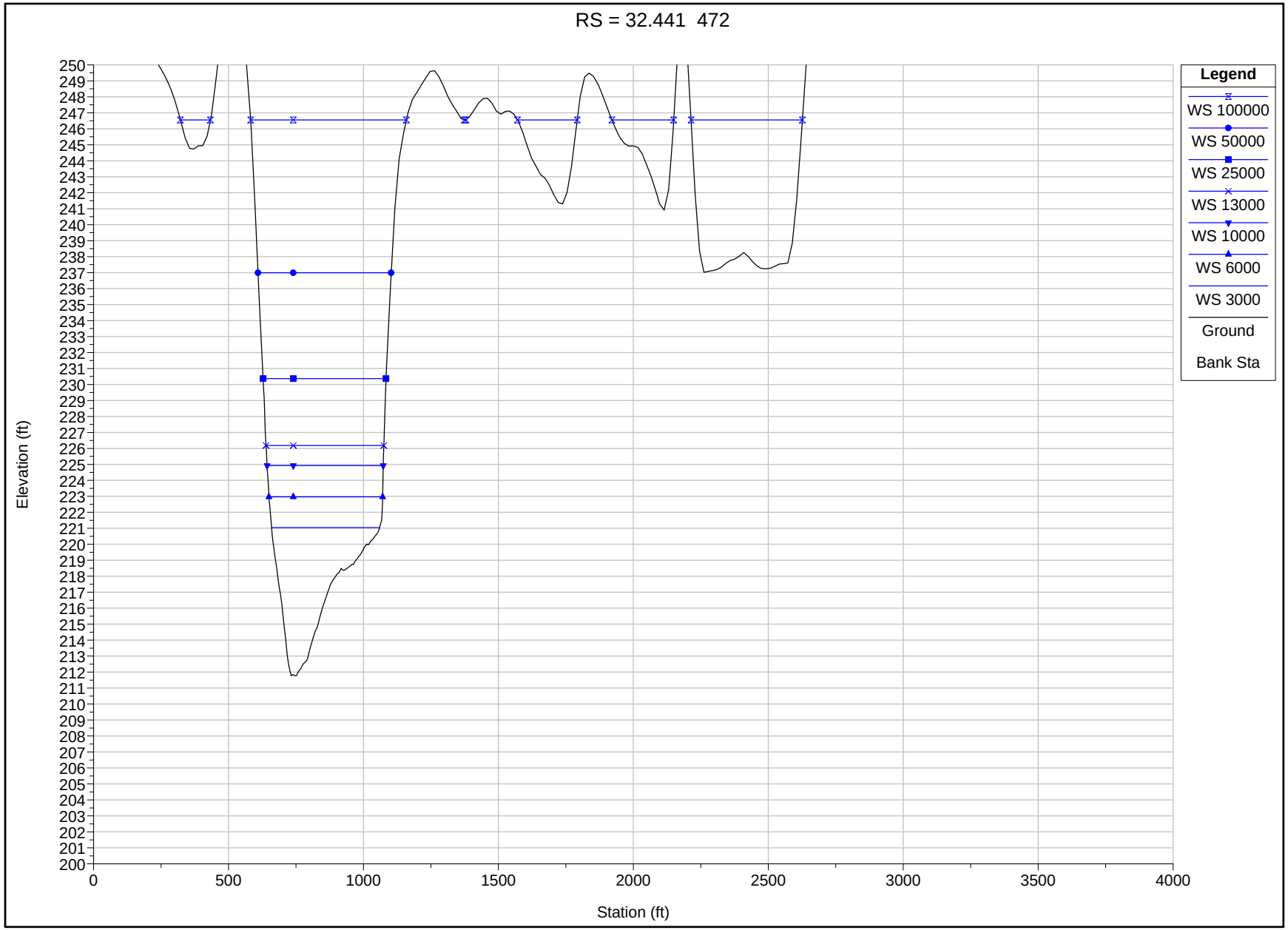
Study 4 HEC-RAS Model Cross Section Plots
XSec 474



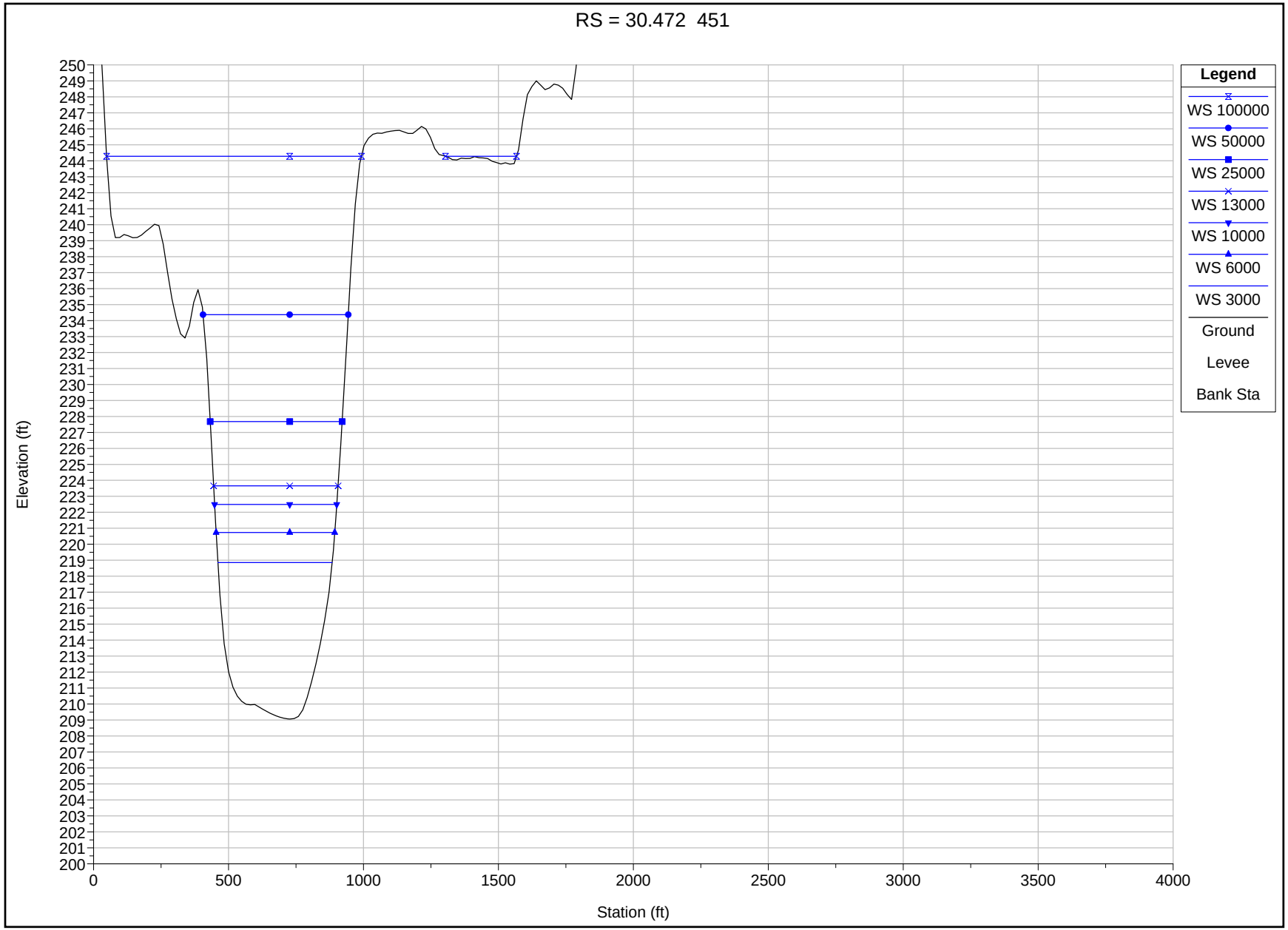
Study 4 HEC-RAS Model Cross Section Plots
XSec 473



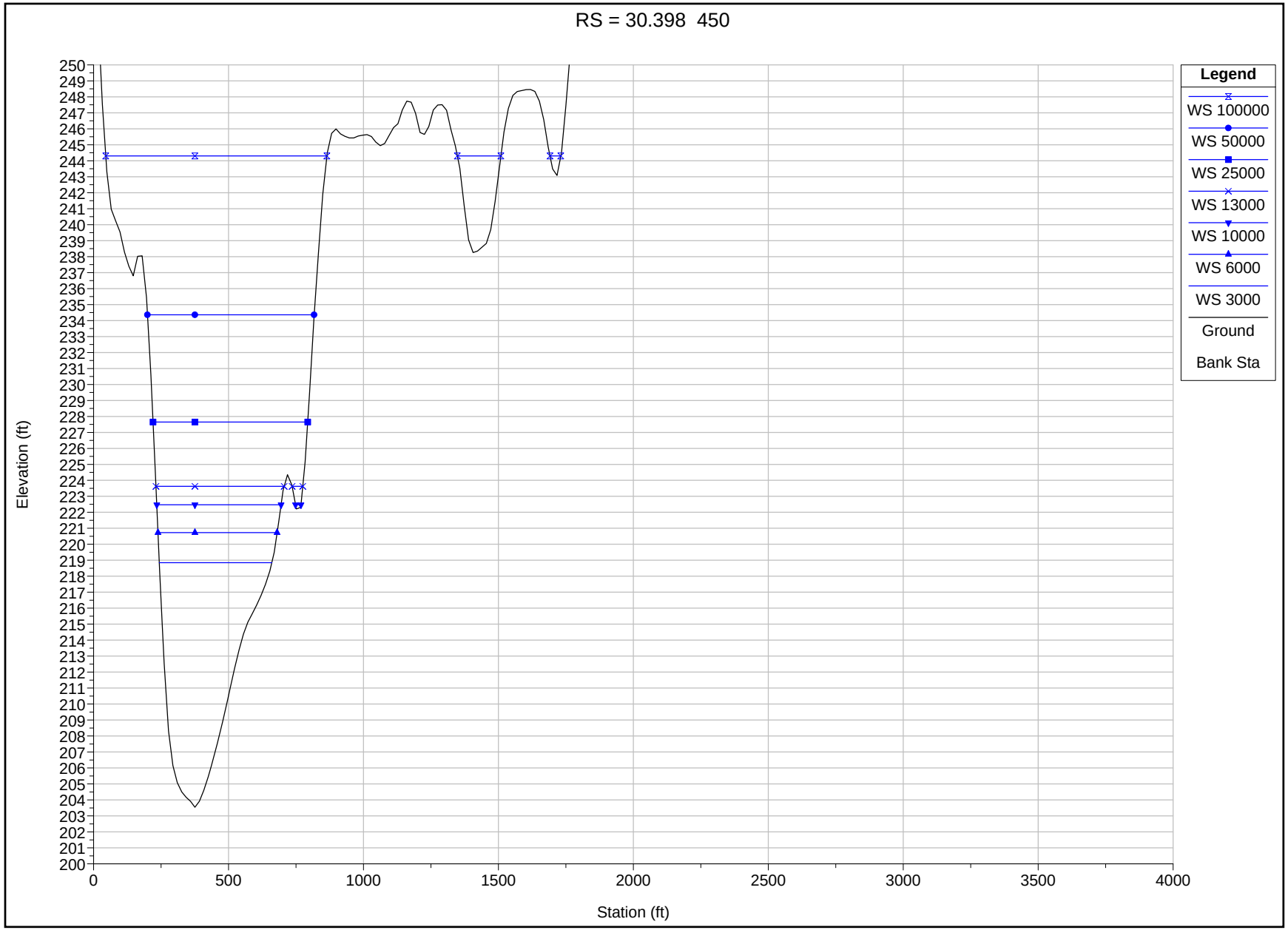
Study 4 HEC-RAS Model Cross Section Plots
XSec 472



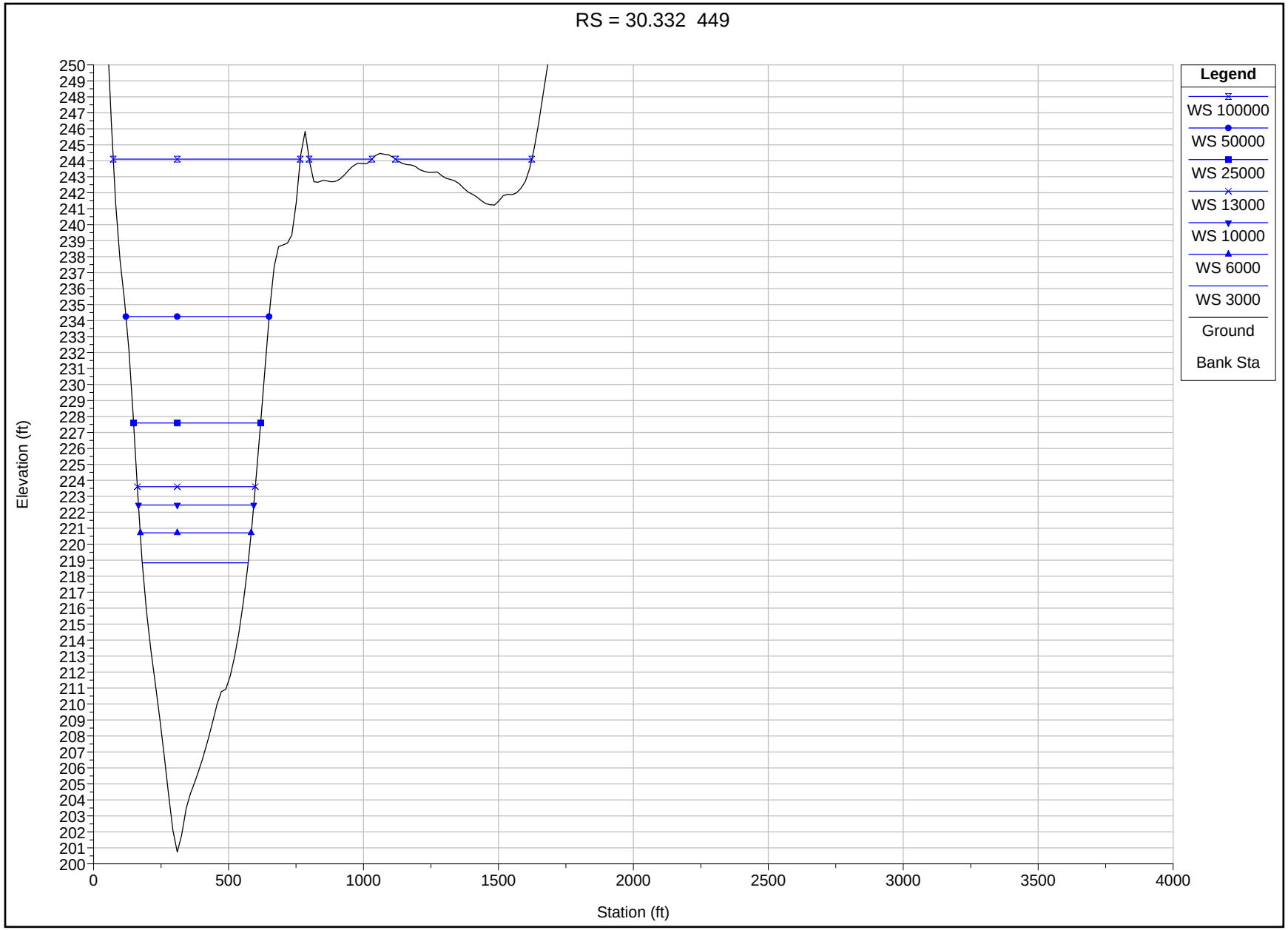
Study 4 HEC-RAS Model Cross Section Plots
XSec 451



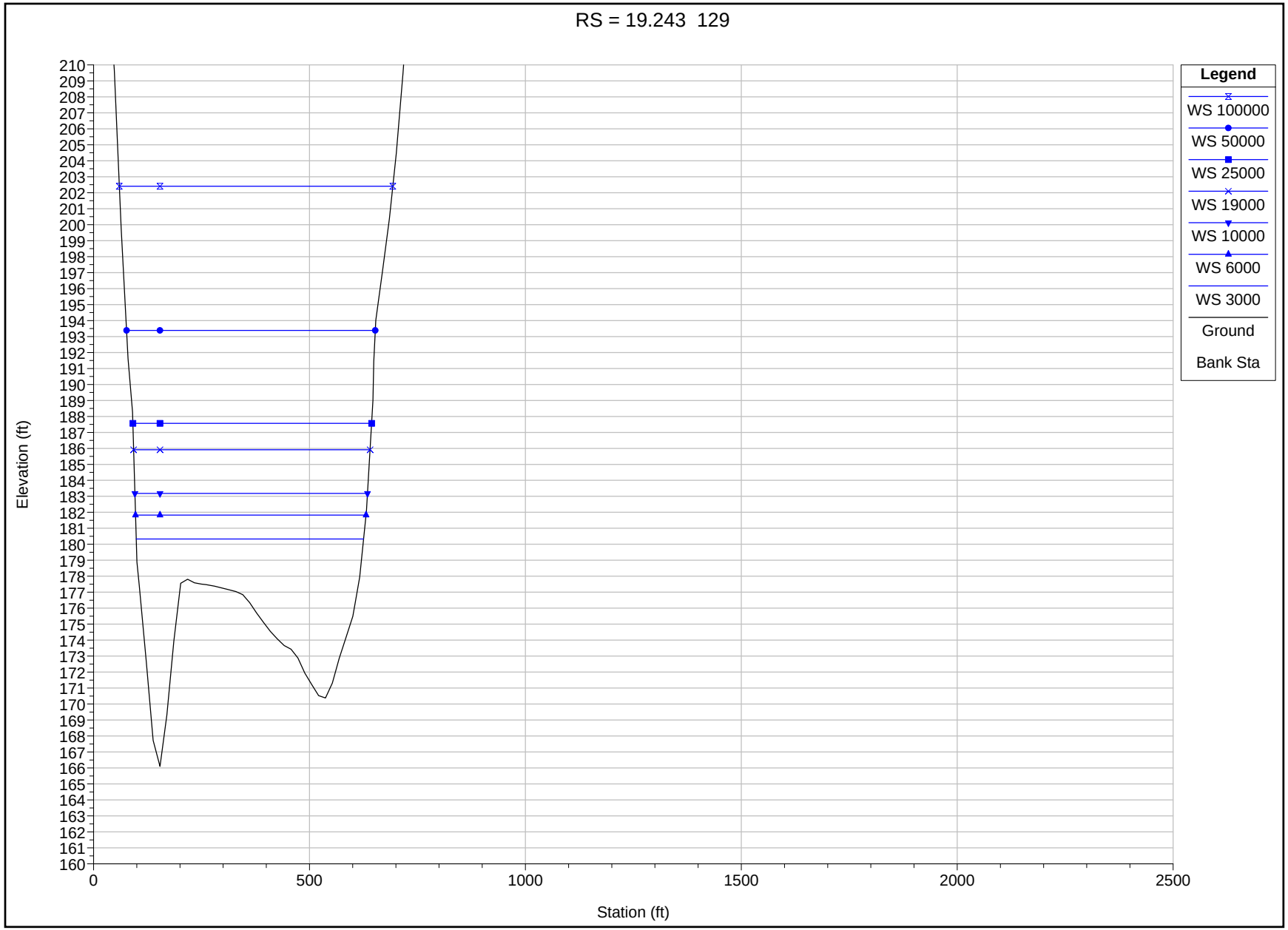
Study 4 HEC-RAS Model Cross Section Plots
XSec 450



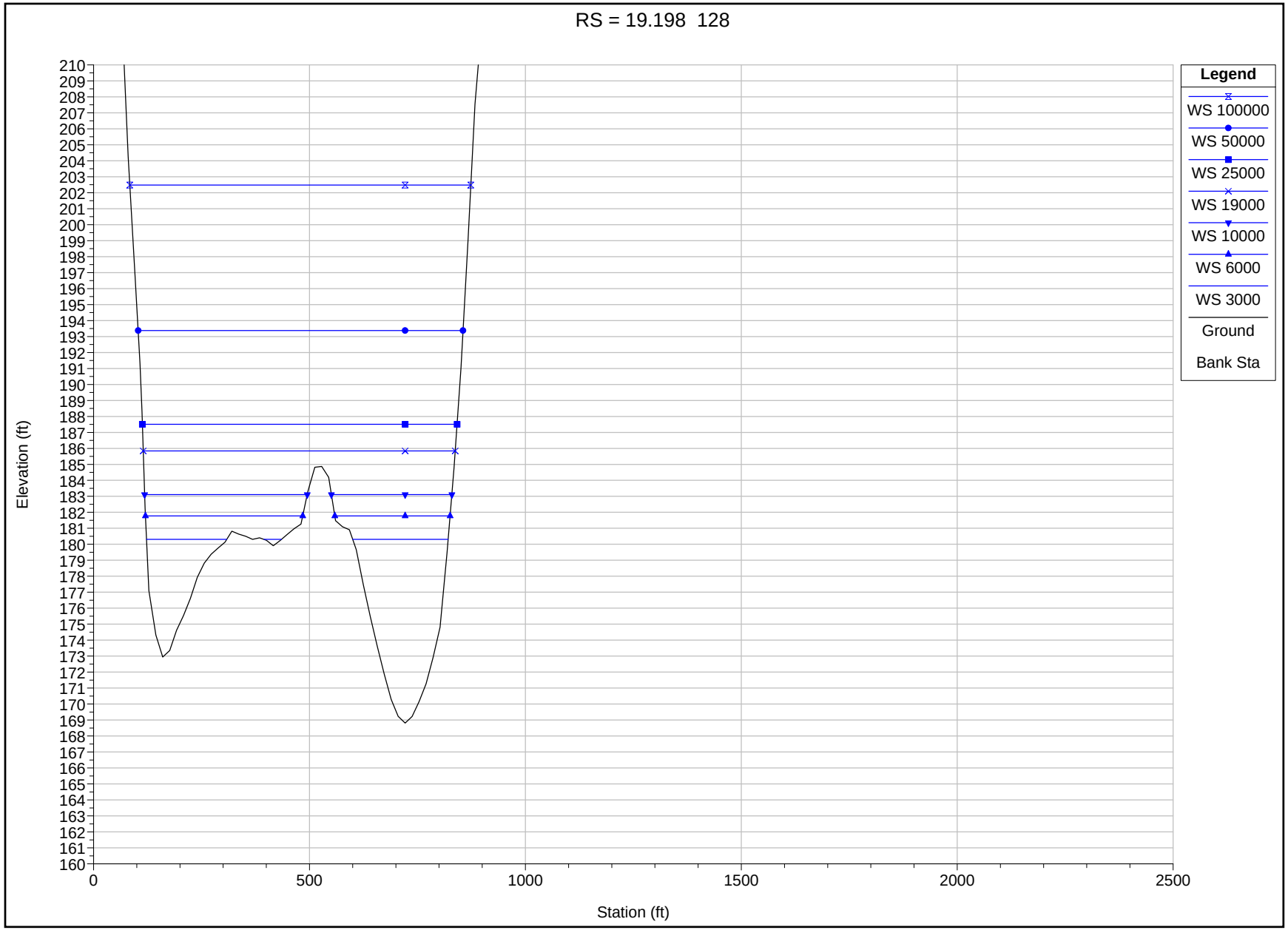
Study 4 HEC-RAS Model Cross Section Plots
XSec 449



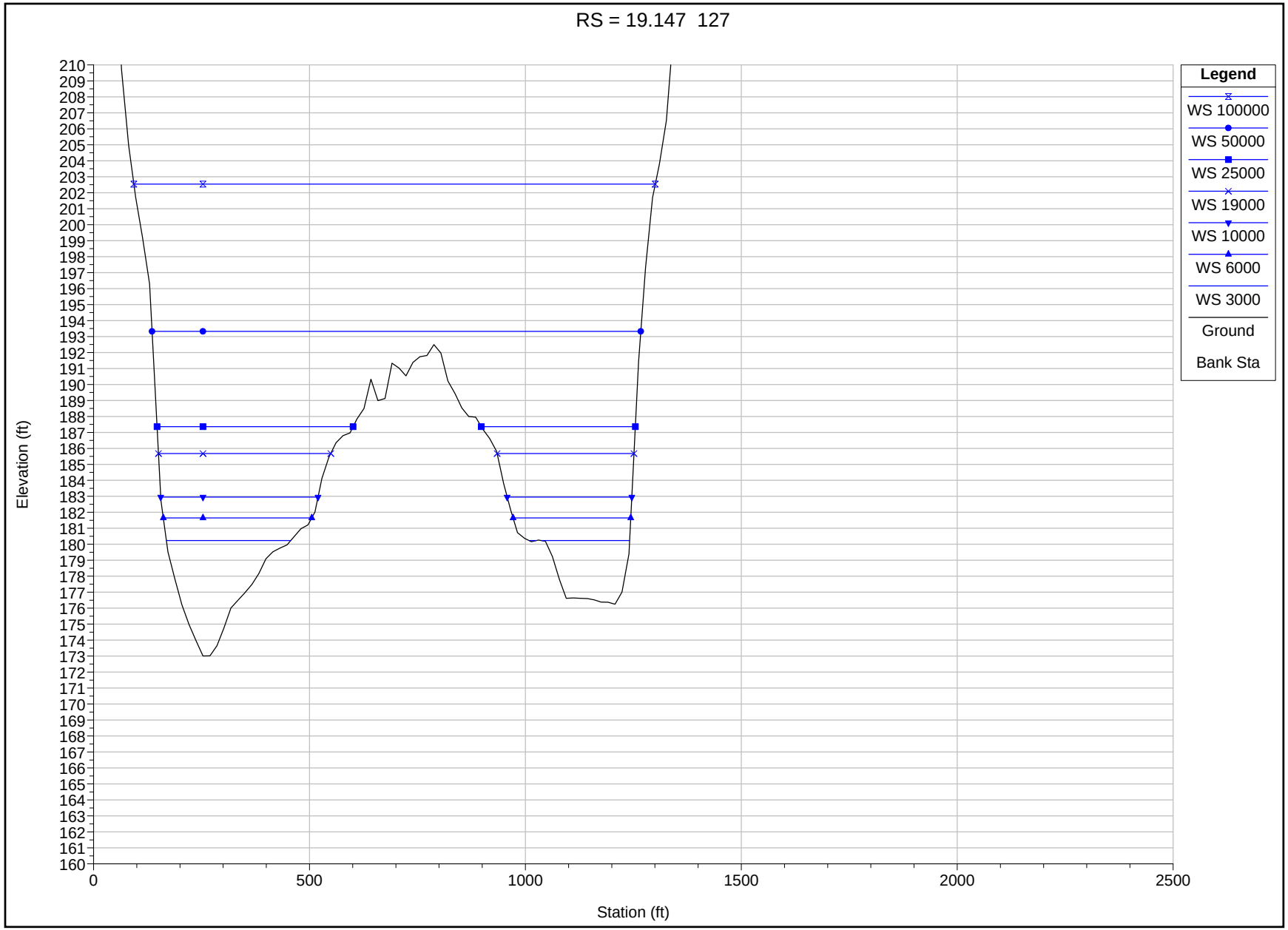
Study 4 HEC-RAS Model Cross Section Plots
XSec 129



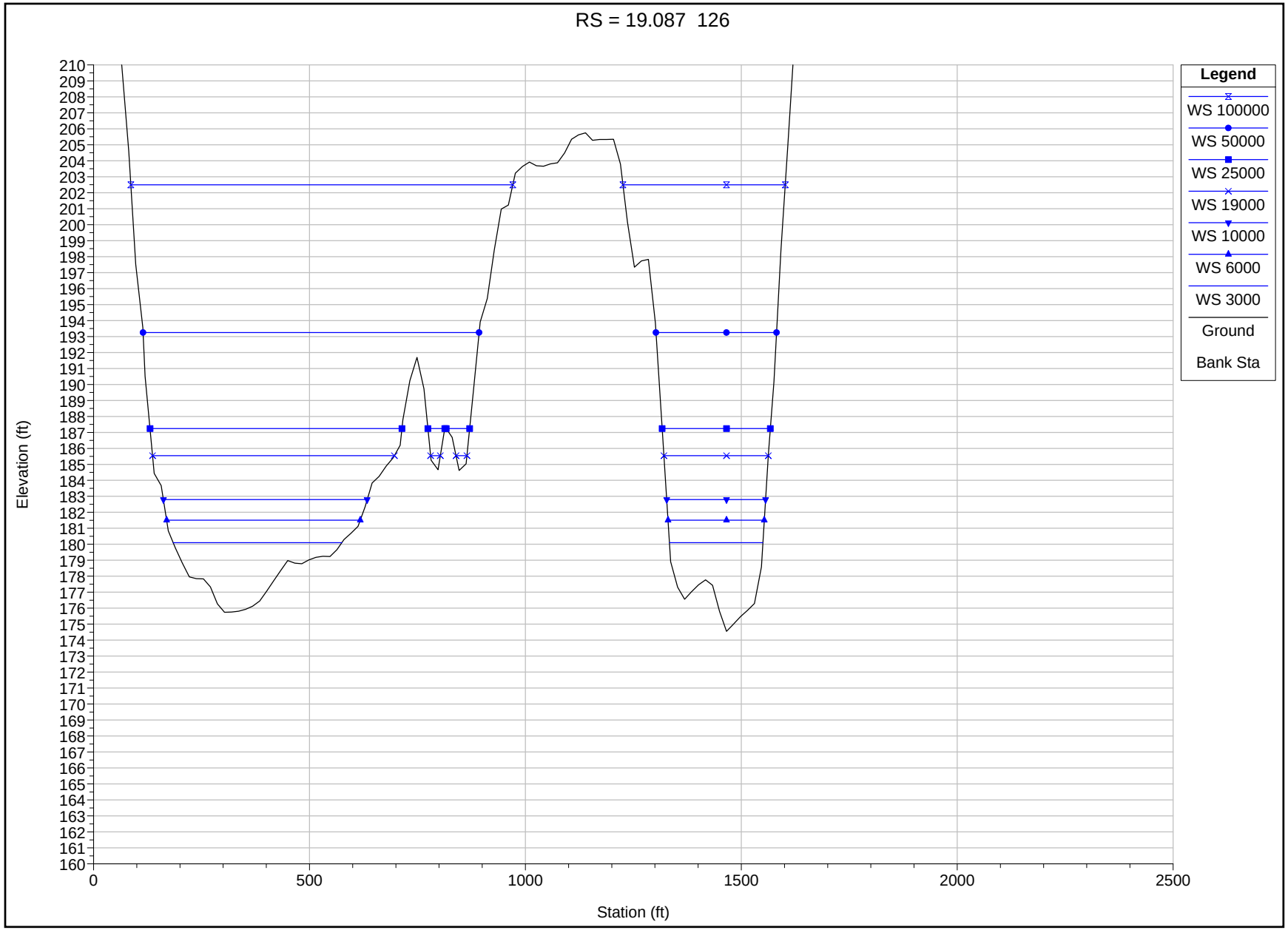
Study 4 HEC-RAS Model Cross Section Plots
XSec 128



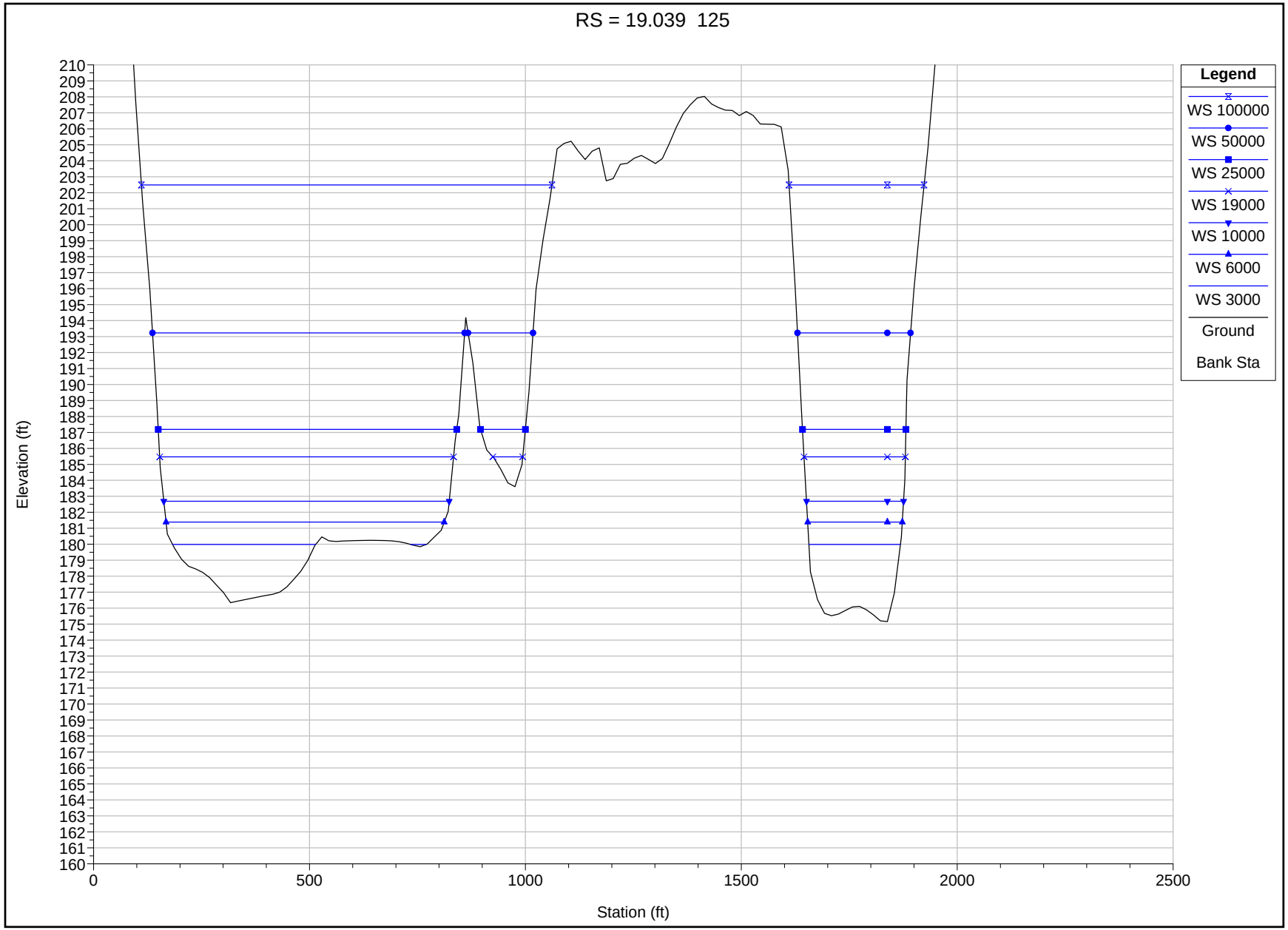
Study 4 HEC-RAS Model Cross Section Plots
XSec 127



Study 4 HEC-RAS Model Cross Section Plots
XSec 126



Study 4 HEC-RAS Model Cross Section Plots
XSec 125



Study 4 HEC-RAS Model Cross Section Plots
XSec 124