Exhibit E

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LAWRENCE
& ASSOCIATES
ENGINEERS & GEOLOGISTS

April 30, 2020

19038.00
Task 2

Keith Day
Keith Day Trucking, Inc.
1091 Madison Lane
Salinas, CA 93907

Dear Keith:

SUBJECT: HYDRAULIC ASSESSMENT REPORT, COMPOSTING FACILITY, GONZALES, MONTEREY COUNTY, CALIFORNIA

Attached is the revised hydraulic analysis requested for the composting facility near Gonzales, in Monterey County, California. The hydraulic analysis is specific to the existing composting operation and proposed expansion to the northwest. Background information specific to the analysis is included in the attached text. This revision includes extending the cross sections towards the City of Gonzales and minor edits to the summary tables to reflect hydraulic conditions. These changes were requested by Tom Moss in a conference call with myself and Shawn Mixan (WHA) earlier this week.

It is understood in talking with Mr. Moss, that these edits will finalize the report for acceptance by the County for the project. Should you have any questions regarding this report or require further assistance, please contact me at (530) 275-4800 or by email at dbrown@lwrnc.com.

Sincerely,

David Brown, P.E.
Senior Civil Engineer

enc.: Hydraulic Assessment Report

INTRODUCTION

Keith Day Trucking (Owner), operates an existing composting facility, located south of Gonzales and adjacent to the Salinas River, in Monterey County, California. The facility is located west of Gonzales River Road, and along the north side of the Salinas River. The Gonzales waste water treatment plant is north and adjacent to the facility.

The composting facility operations includes placement of materials into windrowed lines which are managed (turned, or rotated) as needed, until the materials are ready for loading and removal from the facility. Currently the facility is in the process of obtaining permits for continued operation and expansion of the existing operation to the northwest.

The Facility is subject to permits which include, but is not limited to, the *State Water Resources Control Board Order WQ 2015-0121-DWQ General Waste Discharge Requirements for Composting Operations*, dated August 4, 2015 and referred to as the "General Permit." The General Permit includes requirements pertaining to the operation setbacks from water bodies, and requirements for a detention pond, based on the Tier of facility.

The Owner has identified a planned retention pond area for the facility located in the general northwestern third of the site. The pond will be subject to a Monterey County (County) grading permit. As a condition of approval for the grading permit, the County has indicated that the facility is within an existing floodplain area where the base flood elevation has not been established. The County has requested that the facility provide a hydraulic analysis to determine impacts, if any, on the 100-year floodplain, based on improvements related to the future development of the parcel, and to ensure that the improvements do not raise the water surface elevation of the floodplain more than 1-foot from pre-project conditions.

This document is intended to provide a hydrologic and hydraulic background related to the subject parcels and location of the project within the Salinas River drainage basin. This document further assesses the existing 100-year floodplain, including specific comparisons to pre- and post- project conditions, as requested by Tom Moss of the Monterey County Resource Management Agency (County).

BACKGROUND

The facility is located adjacent to the Salinas River, which is included as part of the Flood Insurance Study (FIS) for Monterey County and incorporated areas, California, as prepared by the Federal Emergency Management Agency (FEMA), revised June 21, 2017. The FIS is a source document for Flood Insurance Rate Maps (FIRM) panels, that graphically depict the 100-year base flood elevation (BFE) within certain areas. While the FIRM panel for this project

shows an approximately floodplain width, no base flood elevation (BFE) is established for the area.

Hydrology

Flow rates from the FIS were used to calculate the 100-year floodplain elevation. The FIS indicates peak flow rates both upstream and downstream of the facility as shown in **Table 1** below. The 10-year, 50-year and 100-year flow rates are used for this study, however, the 100-year recurrence is the primary flow rate used for comparison of water surface elevations.

Table 1 – Summary of Peak Flow (cfs)
for the Salinas River based on precipitation events

Location	Drainage Area (square miles)	10-year	50-year	100-year	500-year
At King City (upstream of Site)	4,156	35,000	64,000	86,000	123,000
At Spreckels (downstream of Site)	4,156	35,000	64,000	85,000	121,000
Site	**4,156**	**35,000**	**64,000**	**86,000**	**n/a**

Note: For all flow rates shown, the 2017 FIS indicates flows are constant or reduced due to infiltration into the riverbed.

It is noted that 10-year and 50-year design storm events show no difference in peak flow rates between the upstream and downstream locations. For the 100-year and 500-year design storm events, there is a slight difference in peak flow between the upstream and downstream areas. However, to be conservative, this assessment utilized the higher peak flow related to King City for purposes of hydraulic assessment.

For hydraulic modeling purposes, we have included the 10-year, 50-year and 100-year peak flow rates for consistency and future comparison to the 2017 FIS.

Hydraulic Modeling

Hydraulic modeling is based on the 100-year peak flow rate as presented above, and utilizes the U.S. Army Corps of Engineers (USACE) HEC-RAS software for hydraulic modeling of the riverine system. HEC-RAS is one of the more common tools to assess river hydraulics and is acceptable to the USACE and FEMA when submitting applications (not included as part of this document).

The County has requested an assessment of pre-project and post-project conditions for the 100-year peak flow rate. Typically, pre-project is defined as existing conditions, or existing topography, prior to the development proposed. At this site, however, the existing conditions and topography include a levee on the north side of the Salinas river, which is not currently documented as constructed by, or with the approval, of the USACE. Based on this, the County

has requested that "pre-project" hydraulic modeling to be based on existing topography and excluding the levee within the subject property. For comparison purposes, pre-project conditions are the same as the No-Levee conditions model further described later in this document.

Existing Conditions

For existing conditions, a digital copy of LiDAR topography was obtained through Monterey County from the Monterey County Flood Control and Water Conservation District (MCFCWCD). The LiDAR topography date is anticipated between 2010 and 2016. River stationing was estimated for the added cross-sections based on the river length from the outlet to the Pacific Ocean using Google Earth. HECRAS cross-sections were established, beginning approximately 1,000 feet downgradient of the property (section A, station 170569), and continuing approximately 7,000 feet to a point approximately 1,000 feet upgradient of the property (section H, station 178269). A total of eight (8) cross-sections were established, generally 1,000 feet or less part, with sections C, D, E, and F, crossing the subject parcel. See **Figure 1** for a layout of the HECRAS cross-sections, LiDAR topography, and parcel area.

AutoCAD Civil 3d (2017) was used to create a digital terrain map (DTM) or "surface" of the LiDAR data, from which the cross-section could be exported to HECRAS. The generic cross-section locations and centerline of the river were imported into HECRAS as shown in **Appendix A**. One of the limitations with the HECRAS software is a maximum station/elevation point file for the cross-sections (limit of 500 points). Given the density of the LiDAR data, in some cross-sections, more than 500 points were automatically generated and were truncated for purposes of running the HECRAS models.

Additional inputs for the modeling included channel bank stations and distances between stations. Roughness coefficients (manning's N values) were added, based on field conditions.

The Existing Conditions model was run in steady flow analysis and summarized in **Table 2**.

Baseline Conditions (Pre-Project with no levee)

Typically, pre-project conditions and hydraulic modeling are based on existing topography or an existing effective model. For this site, no effective model currently exists and the baseline conditions are intended to reflect pre-project conditions. As this relates to existing topography, the County has requested that a "no levee" condition be prepared, that modifies the *Existing Conditions* model to remove the levee adjacent to the facility. While the existing levee is shown on historic aerial photography prior to any composting operations at the facility, the existing levee is not identified or reflected on the National Levee Database (NLD), administered by the USACE. The levee immediately northwest (downgradient) of the facility is shown as Monterey County Levee 35 on NLD. Similarly, the levee on the south side of the Salinas River, across the subject property, is shown as Monterey County Levee 12.

For purposes of the Baseline Conditions model, the *Existing Conditions* model was modified to fully remove the levee on the north side of the river for cross-sections, C, D, E, and F. Cross-sections A and B were unchanged and reflect a portion of Levee 35. Similarly, cross-sections G, and H currently do not reflect a levee and were unchanged in the Baseline Conditions model.

The *Baseline Conditions* model was run in a steady flow analysis, added to the summary, and compared to the *Existing Conditions* model for differences in 100-year peak flow water surface elevations, as shown on **Table 2**.

Future Developed Conditions

The facility intends to expand composting operations to the northwest and continue existing operations in that area, including; receiving materials, placing in windrowed piles, rotating/turning piles, and exporting from the facility. The County has requested that a HECRAS model be prepared to reflect the composting area as a "fill" area for purposes of assessing impacts to the 100-year floodplain.

Based on direction from the client, the *Existing Conditions* model was used to reflect the LiDar levee, then modified to reflect field survey of the levee through cross Sections C through G along the subject property, and further modified to reflect composting piles (as fill) from the ground surface to above the 100-year elevation, shown as the *Future Developed Conditions* model. Field survey included top-edge-of-levee location and elevation for cross-sections C, D, E, and F, with additional points at sections B and G. Section B and G are beyond the facility and reflect levee improvements unaffected by the owner. The survey results indicate less than a 1-foot vertical difference in levee elevation at cross-sections C, D, E, and G, which is within the accuracy of the LiDar data and reflects no additional levee improvements by the facility at these cross-sections. Survey data for cross-section E reflects a 1.2-2.5 vertical difference with cross-section F reflecting a 1.3-1.4 foot vertical difference. These vertical differences are interpreted as minor levee improvements (fills) since the data of the LiDar data. Overall levee width interpolated by the survey points is similar to the LiDar topography. A copy of the survey point data is attached.

The composting pile locations are shown approximately 200-foot offset from the existing levee, as required for the facility, and then shown with vertical slopes to reflect a worst-case, or maximum impact for comparison purposes.

Water surface elevations for the Future Developed conditions model are shown on **Table 2**.

Comparison Summary

Table 2 presents a summary and comparison of the cross sections, river stations, and water surface elevations (wsels) for each of the Lidar (*Existing Conditions*), *Baseline Conditions*, and *Future Developed* models. The County requested the Owner show the difference between

Future Developed (post-project) conditions and the *Baseline* (pre-project) conditions model, with a maximum 1-foot vertical difference between the two for the 100-year recurrence. The attached table includes comparison of the 10-year, 50-year, and 100-year return events.

Review of the data indicates one modeling result that is not considered to be representative of anticipated actual conditions. This anomaly is related to the 50-year return frequency at cross-sections B and C as shown on the attached summary table. Both the LiDAR and (post-project) Future Developed HECRAS models reflect the presence of a levee on the right bank of the river. The modeling calculations consider areas outside (beyond) the levee as ineffective flow areas until the wsel is above the levee height. This creates a temporary raise in wsel up to the height of the levee, which also increases channel velocity (and decreases required flow area) at this location. The Baseline conditions model specifically excluded the levee on the right bank, which results in the extended areas being shown (and calculated) as flow area. This also results in a relatively low velocity across this section. The overall result is a raise in the wsel for the "no-levee" baseline condition attributed to the velocity/flow area relationship between cross-sections B and C. For the 100-year event, which is the main focus of this study and assessment, the anomaly is not present.

The maximum vertical differences are summarized on the attached and show a 0.05-foot rise in the 100-year wsel for (post-project) Future Developed conditions. This is well within the 1-foot maximum threshold set by the County.

Table 2 – Summary Comparison of HECRAS Models
(LiDar – Existing Conditions, Baseline Conditions (No Levee), and Future Developed Conditions)

10-year Recurrence (10%)				LiDar		Baseline		Future Developed
Cross Section	**River Sta**	**Q (cfs)**	**Min Ch El**	**W.S. Elev**	***difference***	**W.S. Elev**	***difference***	**W.S. Elev**
A	170569	35000	98	108.04	***0***	108.04	***0***	108.04
B	171569	35000	99	118.71	***0***	118.71	***0***	118.71
C	172569	35000	99	119.09	***0***	119.09	***0.01***	119.10
D	173743	35000	101	119.11	***0***	119.11	***0.01***	119.12
E	174801	35000	102	119.14	***0***	119.14	***0.01***	119.15
F	176134	35000	103	119.18	***0***	119.18	***0.02***	119.20
G	177252	35000	104	119.26	***-0.01***	119.25	***0.02***	119.27
H	178269	35000	105	119.40	***-0.01***	119.39	***0.02***	119.41
50-year Recurrence (2%)				**LiDar**		**Baseline**		**Future Developed**
Cross Section	**River Sta**	**Q (cfs)**	**Min Ch El**	**W.S. Elev**	***difference***	**W.S. Elev**	***difference***	**W.S. Elev**
A	170569	66000	98	112.00	***0***	112.00	***0***	112.00
B	171569	66000	99	111.46	***0***	111.46	***0***	111.46
C	172569	66000	99	111.74	***4.60***	116.34	***-4.06***	111.74
D	173743	66000	101	116.40	***0.13***	116.53	***-0.03***	116.50
E	174801	66000	102	116.63	***0.11***	116.74	***0.01***	116.75
F	176134	66000	103	116.98	***0.09***	117.07	***0.03***	117.10
G	177252	66000	104	117.63	***0.05***	117.68	***0.03***	117.71
H	178269	66000	105	118.50	***0.04***	118.54	***0.02***	118.56
100-year Recurrence (100%)				**LiDar**		**Baseline**		**Future Developed**
Cross Section	**River Sta**	**Q (cfs)**	**Min Ch El**	**W.S. Elev**	***difference***	**W.S. Elev**	***difference***	**W.S. Elev**
A	170569	86000	98	114.05	***0***	114.05	***0***	114.05
B	171569	86000	99	119.87	***0***	119.87	***0***	119.87
C	172569	86000	99	119.95	***0***	119.95	***0.01***	119.96
D	173743	86000	101	120.06	***0***	120.06	***0.02***	120.08
E	174801	86000	102	120.17	***0***	120.17	***0.03***	120.20
F	176134	86000	103	120.36	***-0.01***	120.35	***0.04***	120.39
G	177252	86000	104	120.67	***-0.01***	120.66	***0.05***	120.71
H	178269	86000	105	121.14	***-0.01***	121.13	***0.04***	121.17

FEMA CLOMR / LOMR Application

This hydraulic analysis is intended to reflect potential impacts to the 100-year floodplain for purposes of assessing the composting expansion project and providing that information to the County. No change to the existing FIRM panel is proposed, nor required. Typically, FIRM panels are updated through a Letter of Map Revision (LOMR) or Conditional Letter of Map Revision (CLOMR) process, both regulated by FEMA, and based on actual conditions or proposed "fill" conditions. The composting operations, including the actual compost materials, do not meet the definition of 'fill' for FEMA purposes, and while they are shown as impoundments in the *Future Developed* conditions model, this is at the specific request by the County for assessment and potential impacts purposes only.

Summary

The facility is required to assess the vertical difference in water surface elevation (wsel) between baseline (pre-project) to future developed (post-project) conditions, for the composting operation near Gonzales. A maximum of 1-foot vertical rise in wsel from baseline conditions has been indicated as a threshold for this reach of the river by the County. Baseline conditions include no levee, and pre-composting operations. Post-project conditions, shown as future-developed, include the existing levee and maximum size (height and length) composting piles. The wsel difference between the pre- and post-project hydraulic modeling is shown as 0.05-feet, well within (and below) the 1-foot maximum indicated for this facility.

If there are any questions regarding this hydraulic assessment, please do not hesitate to contact me at 530.275.4800 or by email at dbrown@lwrnc.com.

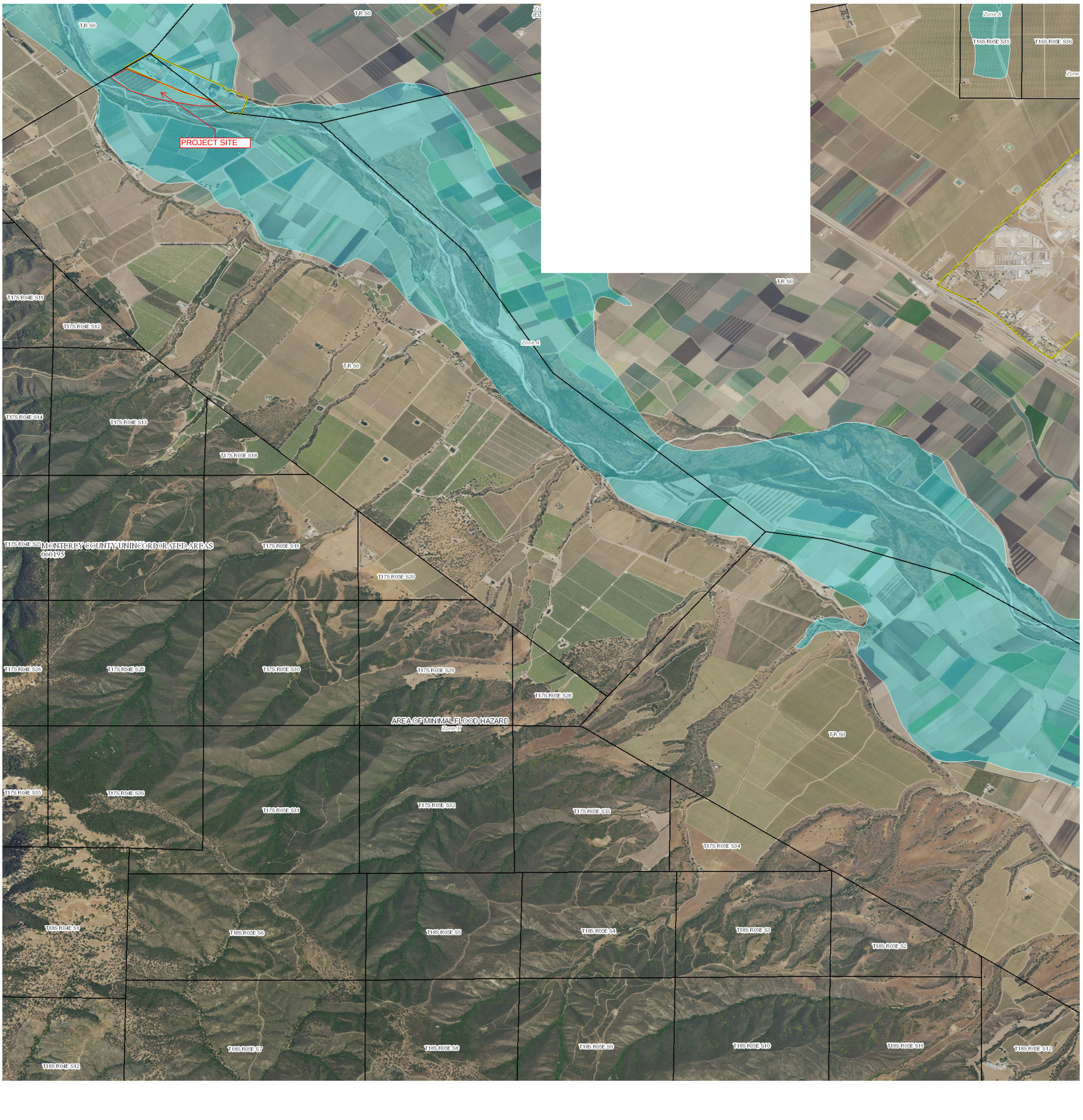
Sincerely,

David Brown, P.E.
Senior Civil Engineer

Attachments:
FEMA FIRM Panel 06053C0600G with Site Location
Figure 1 – Cross Section Location Map
Appendix A: HECRAS Data Tables and Cross-Sections

36°30'26.65"N

121°30'2.01"W



USGS The National Map: Orthoimagery. Data refreshed October, 2017.

121°22'38.08"W

36°22'3.38"N

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can beordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by USDA, Farm Service Agency (FSA). This information was derived from NAIP, dated April 11, 2018.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **4/29/2019 2:09:31 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

N

Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: No elevation features on this FIRM
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map please see the Flood Insurance Study(FIS) Report for your community at https://msc.fema.gov

1 inch = 2,000 feet 1:24,000

0 1,000 2,000 4,000 6,000 8,000 Feet

0 210 420 840 1,260 1,680 Meters

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

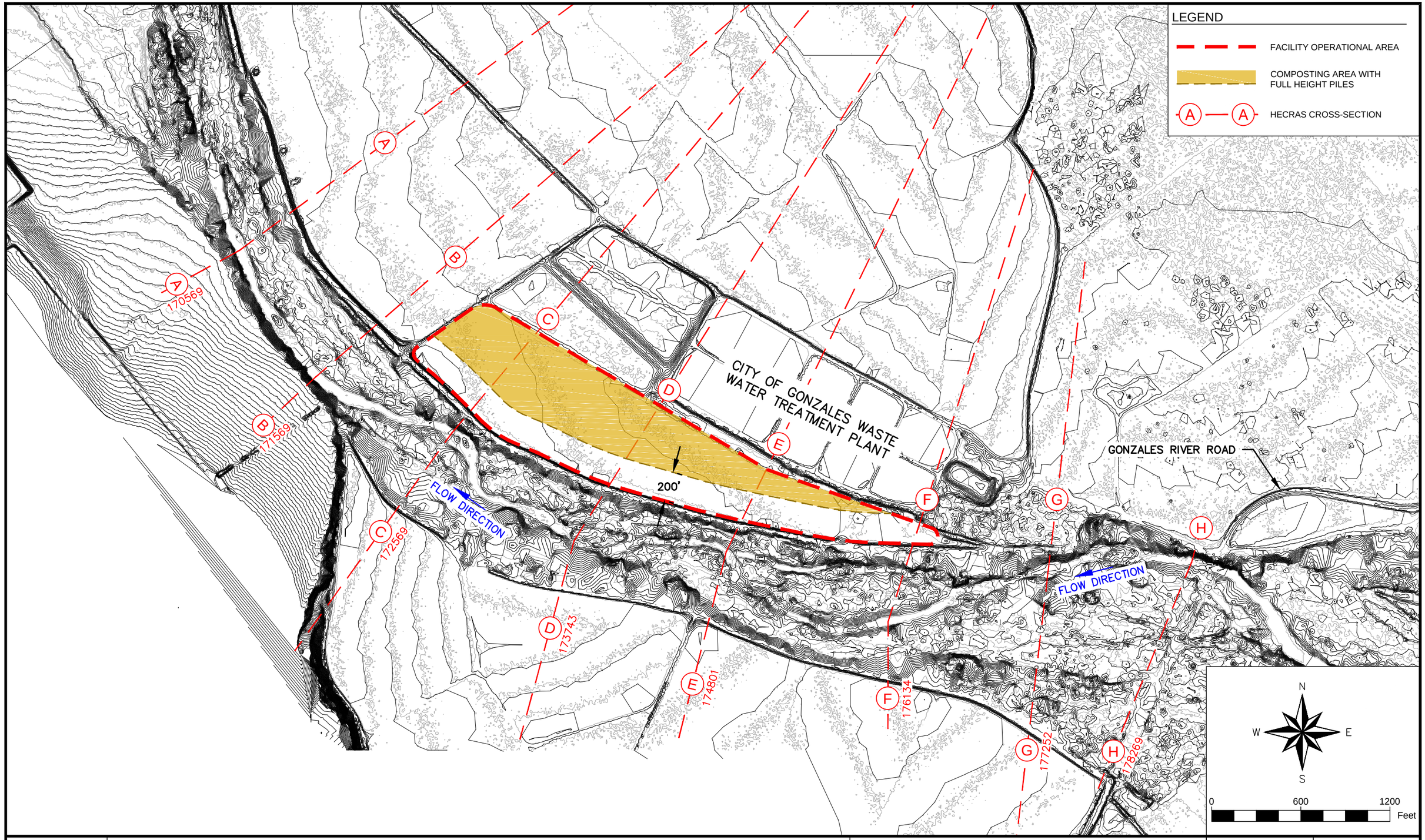
MONTEREY_CO_CA
CITY AND COUNTY OF CALIFORNIA
AND INCORPORATED AREAS

PANEL 600 OF 2025

Panel Contains:

COMMUNITY	NUMBER	PANEL
CITY OF GONZALES CALIFORNIA	060198	0600
MONTEREY COUNTY UNINCORPORATED AREAS CALIFORNIA	060195	0600

MAP NUMBER
06053C0600G
EFFECTIVE DATE
04/02/2009



LAWRENCE & ASSOCIATES
ENGINEERS & GEOLOGISTS

SALINAS RIVER – CROSS-SECTION LOCATIONS

GONZALES-FLOODPLAIN ANALYSIS

COMPOSTING FACILITY
KEITH DAY TRUCKING

PROJECT NO: 019038.00	SCALE: 1" = 600'
DRAWN BY: J. BEERS	DATE: 2/20/2020
CHECKED BY: D. BROWN	FIGURE 1

p:\019038.00_webber-hayes gonzales compost\compost_facility_2-20.dwg J.R.B. 2/20/2020

Appendix A

HECRAS Output Tables

HECRAS Cross-Sections

LiDar - Existing Conditions Model
Profiles and Flow Rates from FIS: PF1 (10-year), PF2 (50-year), PF3 (100-year)

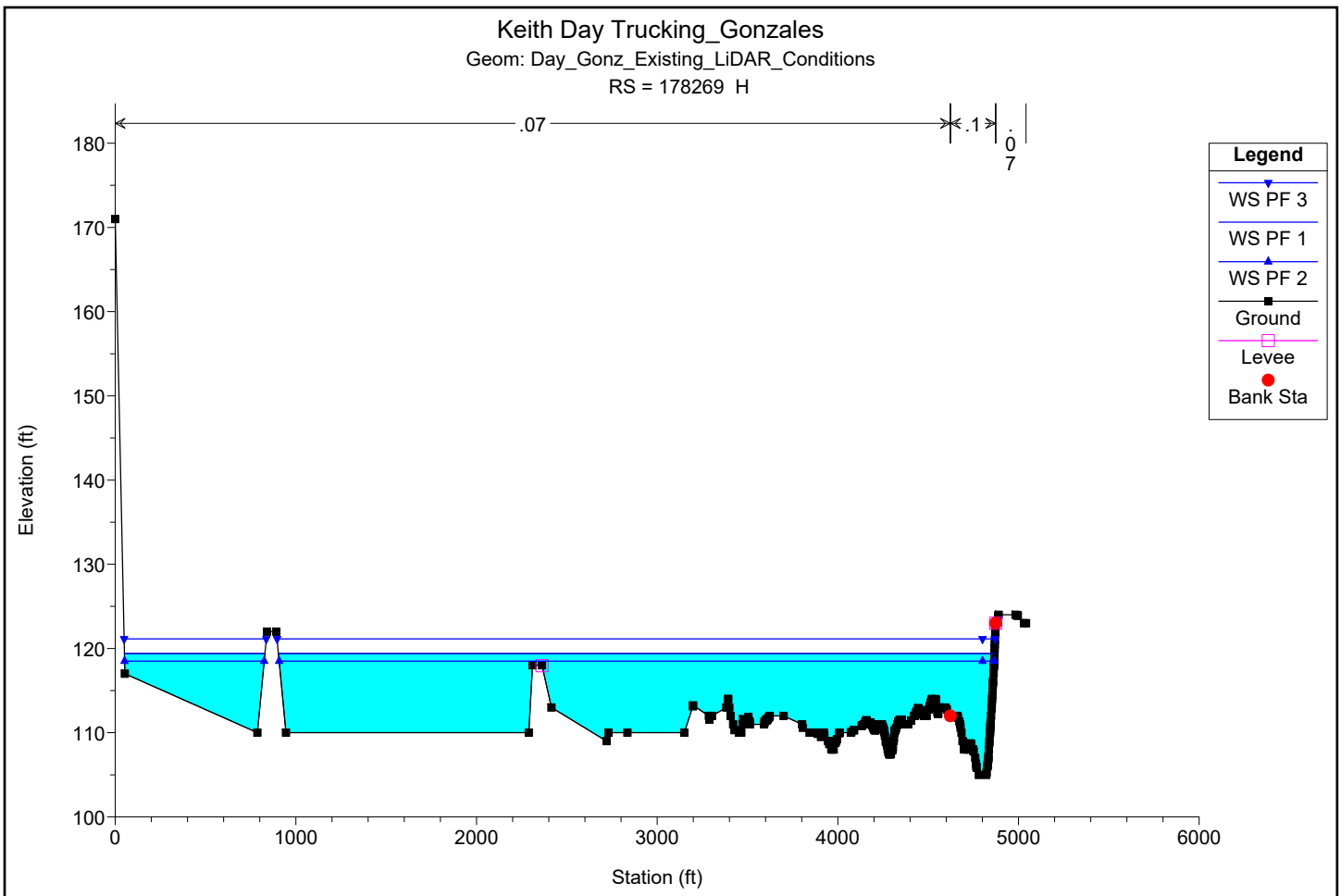
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude #
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	Channel
Salinas River	178269	PF 1	35000	105	119.4	112.44	119.41	0.000111	0.74	38963.64	4741.56	0.04
Salinas River	178269	PF 2	66000	105	118.5	113.54	118.56	0.000575	1.61	34730.33	4731.07	0.09
Salinas River	178269	PF 3	86000	105	121.14	114.1	121.19	0.000356	1.46	47234.63	4761.74	0.07
Salinas River	177252	PF 1	35000	104	119.26		119.28	0.000171	0.84	33586.9	4504.4	0.05
Salinas River	177252	PF 2	66000	104	117.63		117.72	0.00135	2.11	26362.13	4384.42	0.13
Salinas River	177252	PF 3	86000	104	120.67		120.75	0.000584	1.72	40093.11	4706.22	0.09
Salinas River	176134	PF 1	35000	103	119.18	112.28	119.19	0.000041	0.44	62849.38	8068.34	0.02
Salinas River	176134	PF 2	66000	103	116.98	114.66	117.01	0.000339	1.08	46921.36	6595.46	0.07
Salinas River	176134	PF 3	86000	103	120.36	116	120.38	0.000185	1.01	73249.77	9534.01	0.05
Salinas River	174801	PF 1	35000	102	119.14	110.48	119.14	0.000027	0.42	79307.64	9749.16	0.02
Salinas River	174801	PF 2	66000	102	116.63	113.16	116.65	0.000222	1.02	57236.29	7779.48	0.06
Salinas River	174801	PF 3	86000	102	120.17	114.66	120.19	0.000114	0.9	89516.84	9985.41	0.04
Salinas River	173743	PF 1	35000	101	119.11	110.45	119.12	0.000021	0.36	83597.88	9605.95	0.02
Salinas River	173743	PF 2	66000	101	116.4	113.7	116.42	0.000211	0.96	58946.94	8371.58	0.06
Salinas River	173743	PF 3	86000	101	120.06	115	120.07	0.000104	0.84	92930.77	10108.86	0.04
Salinas River	172569	PF 1	35000	99	119.09	109.18	119.09	0.000017	0.34	88146.03	8807.02	0.02
Salinas River	172569	PF 2	66000	99	111.74	111.74	115.19	0.077025	14.88	4436.04	645.1	1
Salinas River	172569	PF 3	86000	99	119.95	113.16	119.96	0.000084	0.78	95901.69	9241.51	0.04
Salinas River	171569	PF 1	35000	99	118.71	108.6	119.01	0.002521	4.35	8038.66	562.14	0.2
Salinas River	171569	PF 2	66000	99	111.46	111.46	115.47	0.073817	16.05	4110.92	513.03	1
Salinas River	171569	PF 3	86000	99	119.87	113.1	119.88	0.000087	0.85	92620.4	8690.21	0.04
Salinas River	170569	PF 1	35000	98	108.04	108.04	111.45	0.07768	14.83	2360.7	345.23	1
Salinas River	170569	PF 2	66000	98	112	112	116.53	0.070604	17.08	3864.1	425.68	1
Salinas River	170569	PF 3	86000	98	114.05	114.05	119.06	0.068324	17.96	4789.68	477.89	1

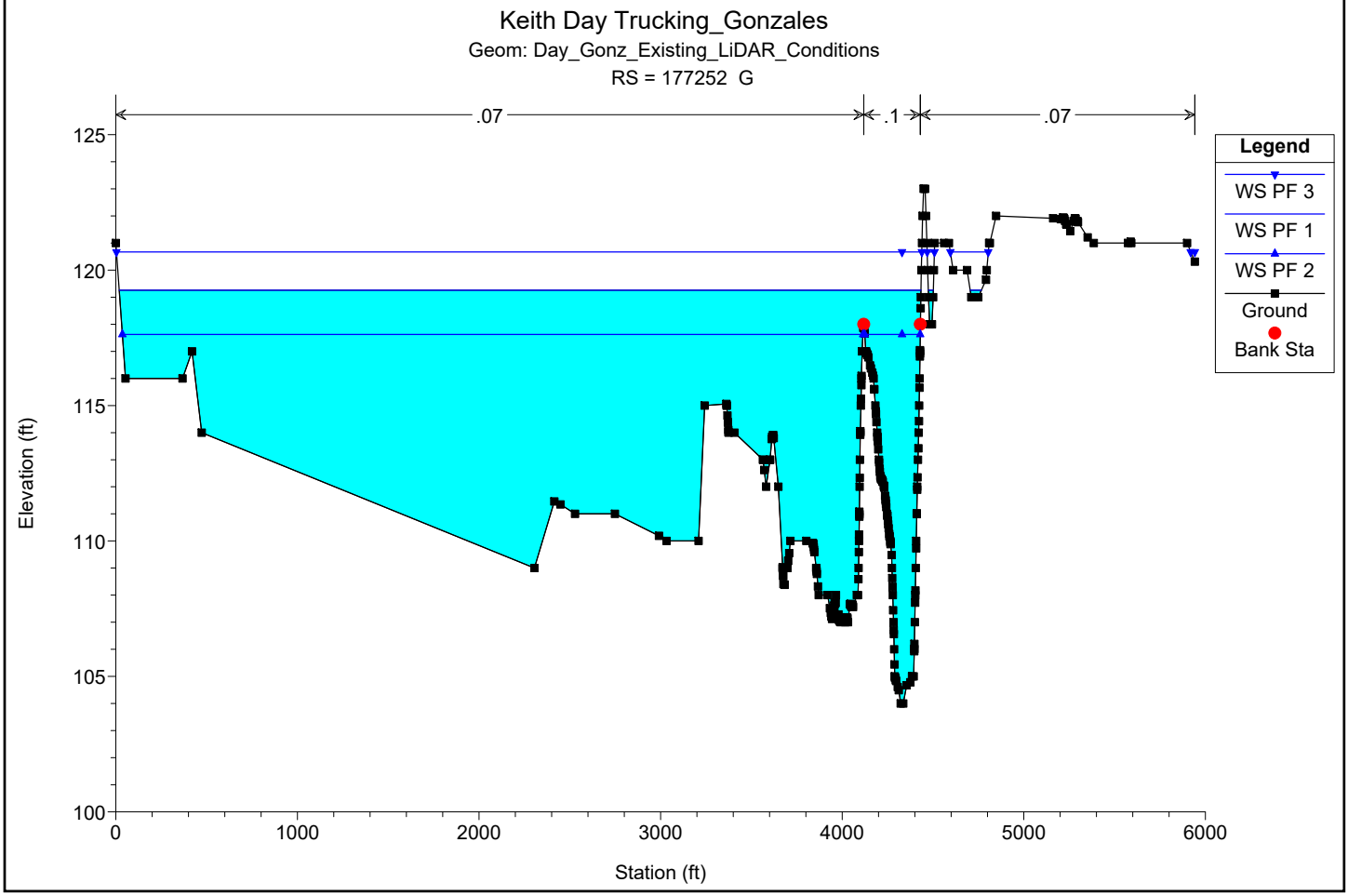
Baseline Conditions (Pre-Project with no levee)
Profiles and Flow Rates from FIS: PF1 (10-year), PF2 (50-year), PF3 (100-year)

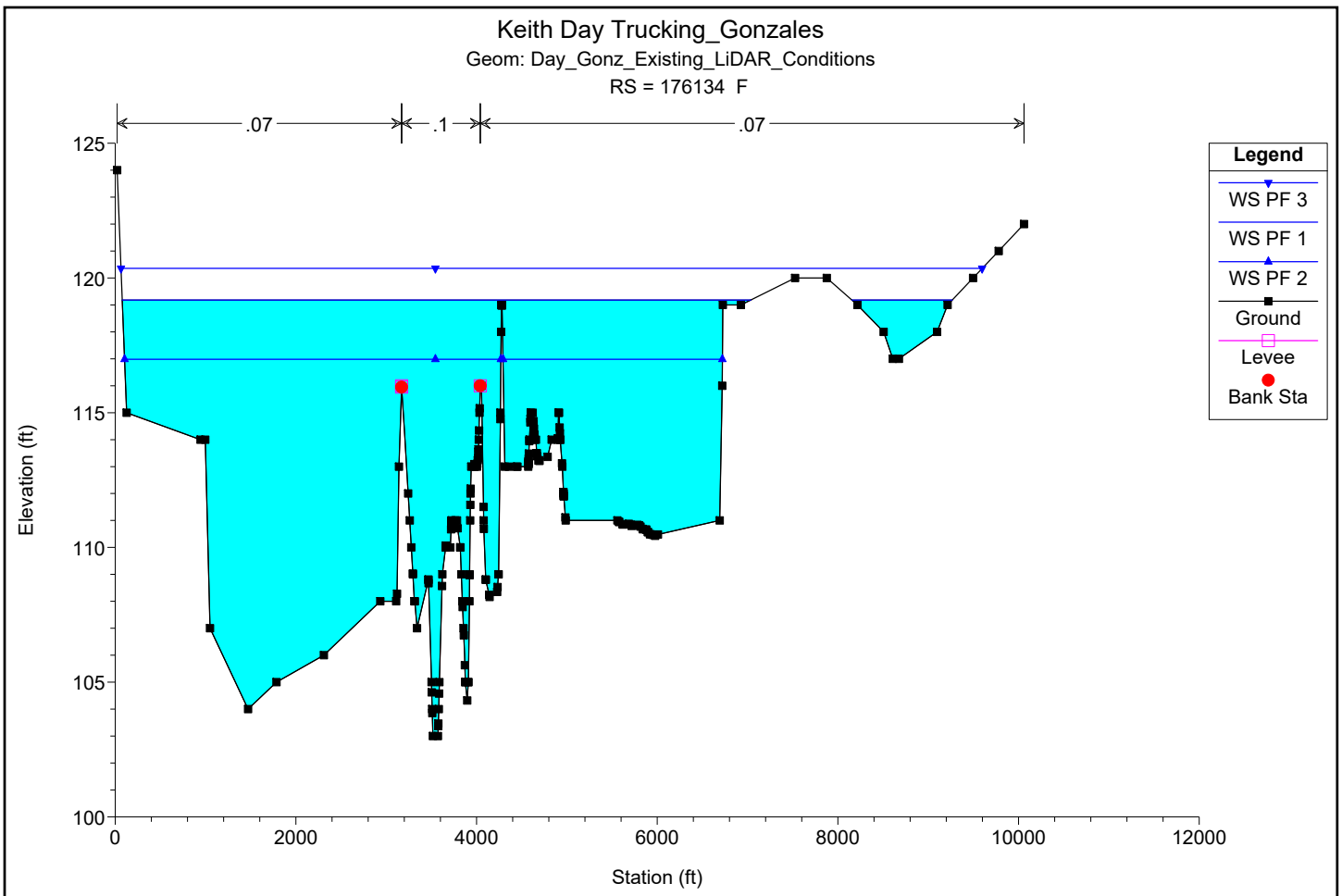
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude #
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	Channel
Salinas River	178269	PF 1	35000	105	119.39		119.41	0.000111	0.75	38941.04	4741.5	0.04
Salinas River	178269	PF 2	66000	105	118.54		118.59	0.000567	1.6	34888.11	4731.47	0.09
Salinas River	178269	PF 3	86000	105	121.13		121.18	0.000357	1.47	47186.02	4761.62	0.07
Salinas River	177252	PF 1	35000	104	119.25		119.27	0.000171	0.84	33621.39	4544.27	0.05
Salinas River	177252	PF 2	66000	104	117.68		117.77	0.001313	2.09	26585.77	4385.96	0.13
Salinas River	177252	PF 3	86000	104	120.66		120.73	0.000585	1.72	40146.66	4734.48	0.09
Salinas River	176134	PF 1	35000	103	119.18	111.76	119.18	0.00004	0.45	63202.31	8062.84	0.02
Salinas River	176134	PF 2	66000	103	117.07	112.64	117.1	0.000319	1.08	47872.28	6700.27	0.07
Salinas River	176134	PF 3	86000	103	120.35	113.2	120.37	0.000183	1.02	73550.83	9531.44	0.05
Salinas River	174801	PF 1	35000	102	119.14	109.08	119.14	0.000027	0.42	79726.08	9748.4	0.02
Salinas River	174801	PF 2	66000	102	116.74	110.14	116.76	0.000206	1.01	58529.5	7787.59	0.06
Salinas River	174801	PF 3	86000	102	120.17	110.57	120.18	0.000112	0.9	89904.02	9983.95	0.04
Salinas River	173743	PF 1	35000	101	119.11	108.74	119.11	0.000021	0.37	84173.3	9604.37	0.02
Salinas River	173743	PF 2	66000	101	116.53	109.52	116.55	0.000193	0.96	60610.61	8479.56	0.05
Salinas River	173743	PF 3	86000	101	120.06	109.86	120.07	0.000102	0.85	93488.17	10107.95	0.04
Salinas River	172569	PF 1	35000	99	119.09	106.72	119.09	0.000017	0.35	89276.42	8805.95	0.02
Salinas River	172569	PF 2	66000	99	116.34	107.67	116.36	0.000133	0.84	66697.23	7725.96	0.04
Salinas River	172569	PF 3	86000	99	119.95	108.11	119.96	0.000081	0.79	97039.12	9240.87	0.04
Salinas River	171569	PF 1	35000	99	118.71	108.6	119.01	0.002521	4.35	8038.66	562.14	0.2
Salinas River	171569	PF 2	66000	99	111.46	111.46	115.47	0.073817	16.05	4110.92	513.03	1
Salinas River	171569	PF 3	86000	99	119.87	113.1	119.88	0.000087	0.85	92620.4	8690.21	0.04
Salinas River	170569	PF 1	35000	98	108.04	108.04	111.45	0.07768	14.83	2360.7	345.23	1
Salinas River	170569	PF 2	66000	98	112	112	116.53	0.070604	17.08	3864.1	425.68	1
Salinas River	170569	PF 3	86000	98	114.05	114.05	119.06	0.068324	17.96	4789.68	477.89	1

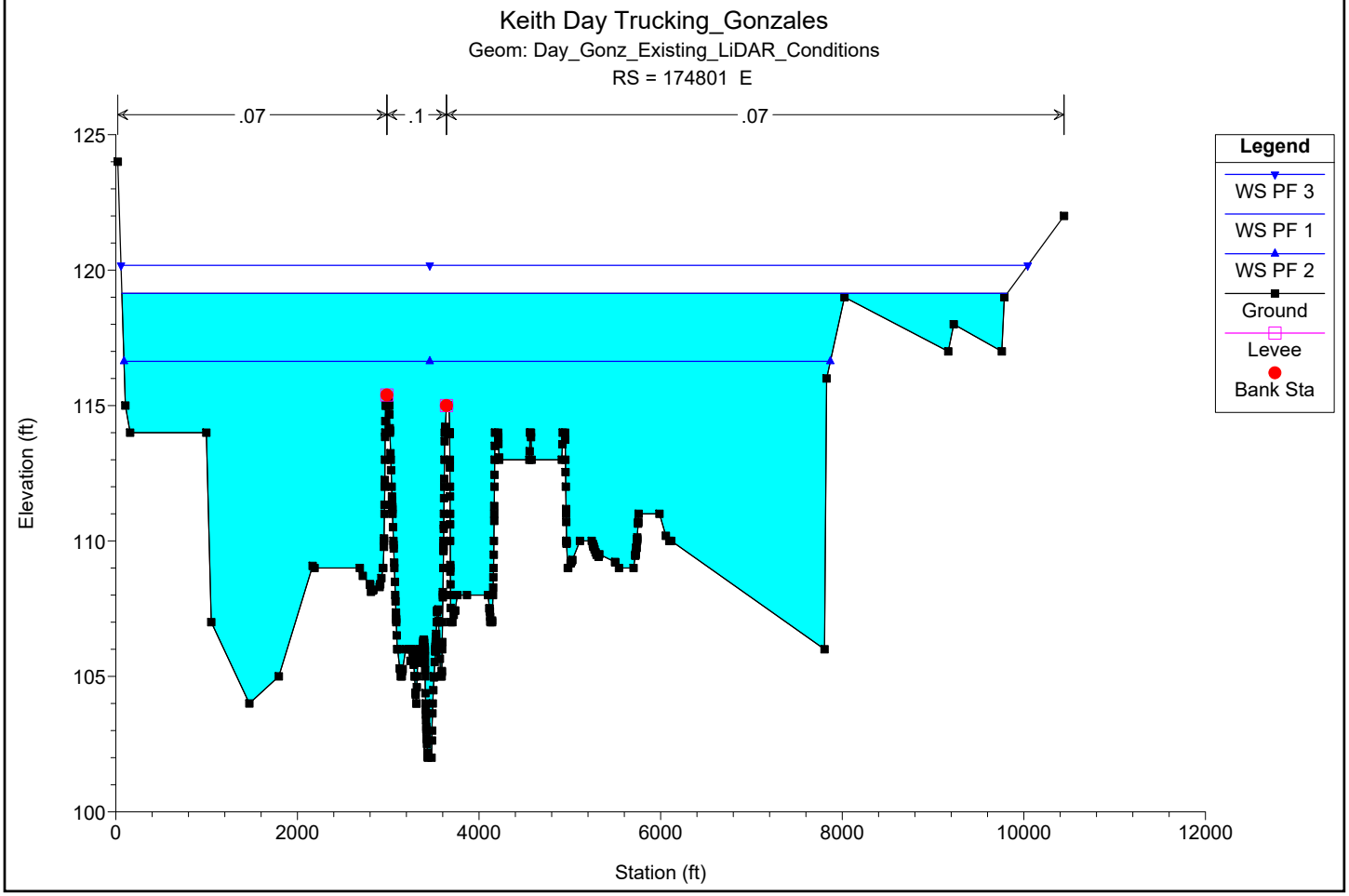
Future Developed Conditions Model
Profiles and Flow Rates from FIS: PF1 (10-year), PF2 (50-year), PF3 (100-year)

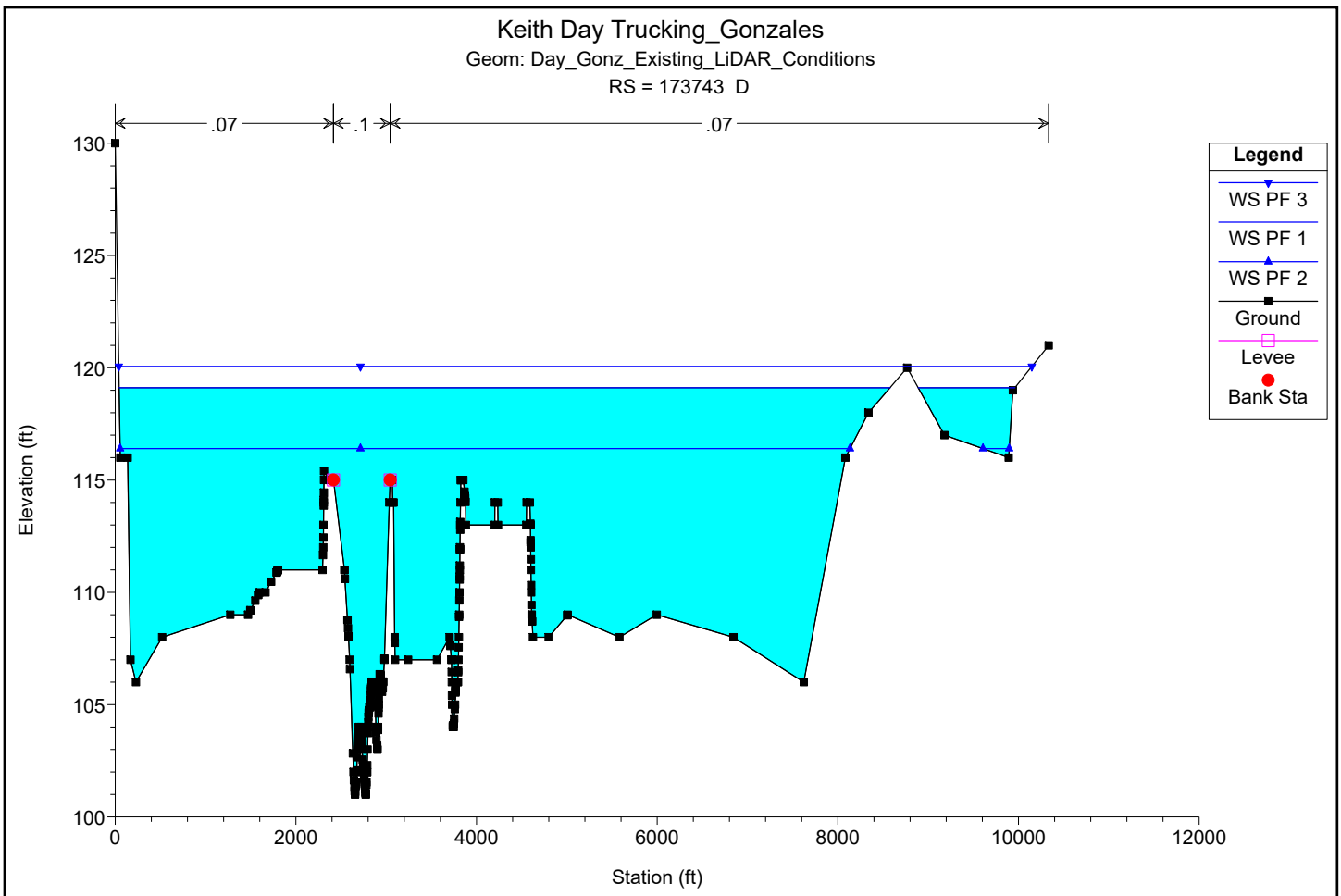
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude #
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	Channel
Salinas River	178269	PF 1	35000	105	119.41	112.44	119.42	0.00011	0.74	39028.7	4741.72	0.04
Salinas River	178269	PF 2	66000	105	118.56	113.54	118.62	0.000561	1.59	34999.29	4731.74	0.09
Salinas River	178269	PF 3	86000	105	121.17	114.1	121.22	0.000353	1.46	47371.7	4762.07	0.07
Salinas River	177252	PF 1	35000	104	119.27		119.29	0.00017	0.84	33652.37	4506.05	0.05
Salinas River	177252	PF 2	66000	104	117.71		117.81	0.001288	2.07	26742.01	4387.03	0.13
Salinas River	177252	PF 3	86000	104	120.71		120.78	0.000577	1.71	40252.56	4710.28	0.09
Salinas River	176134	PF 1	35000	103	119.2	112.29	119.2	0.000041	0.44	62777.05	8086.1	0.02
Salinas River	176134	PF 2	66000	103	117.1	114.65	117.13	0.000323	1.06	47525.92	6678.45	0.07
Salinas River	176134	PF 3	86000	103	120.39	116	120.42	0.000184	1.01	73411.66	9544.88	0.05
Salinas River	174801	PF 1	35000	102	119.15	110.48	119.16	0.000029	0.43	76913.88	9544.31	0.02
Salinas River	174801	PF 2	66000	102	116.75	113.16	116.77	0.000228	1.04	56162.68	7556.35	0.06
Salinas River	174801	PF 3	86000	102	120.2	114.66	120.22	0.000121	0.92	87085.03	9786.7	0.04
Salinas River	173743	PF 1	35000	101	119.12	110.45	119.13	0.000024	0.39	78818.3	9218.46	0.02
Salinas River	173743	PF 2	66000	101	116.5	113.69	116.52	0.000236	1.03	55968.56	8060.82	0.06
Salinas River	173743	PF 3	86000	101	120.08	115	120.09	0.000118	0.9	87867.25	9721.63	0.04
Salinas River	172569	PF 1	35000	99	119.1	109.18	119.1	0.00002	0.36	84004.05	8502.48	0.02
Salinas River	172569	PF 2	66000	99	111.74	111.74	115.19	0.077025	14.88	4436.04	645.1	1
Salinas River	172569	PF 3	86000	99	119.96	113.16	119.97	0.000094	0.83	91475.45	8937.37	0.04
Salinas River	171569	PF 1	35000	99	118.71	108.6	119.01	0.002521	4.35	8038.66	562.14	0.2
Salinas River	171569	PF 2	66000	99	111.46	111.46	115.47	0.073817	16.05	4110.92	513.03	1
Salinas River	171569	PF 3	86000	99	119.87	113.1	119.88	0.000087	0.85	92620.4	8690.21	0.04
Salinas River	170569	PF 1	35000	98	108.04	108.04	111.45	0.07768	14.83	2360.7	345.23	1
Salinas River	170569	PF 2	66000	98	112	112	116.53	0.070604	17.08	3864.1	425.68	1
Salinas River	170569	PF 3	86000	98	114.05	114.05	119.06	0.068324	17.96	4789.68	477.89	1

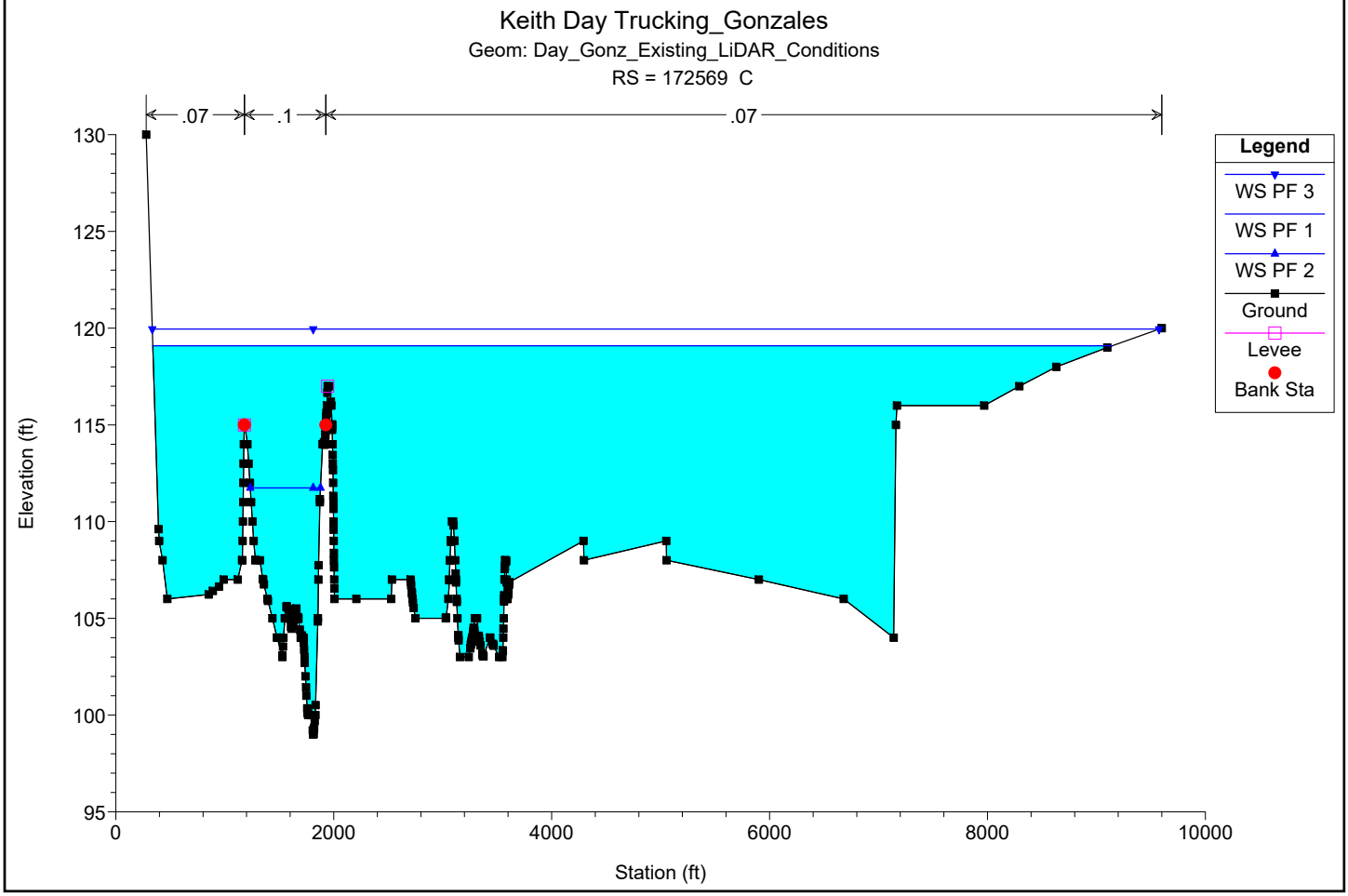

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 178269 H
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
100
110
120
130
140
150
160
170
180
0
1000
2000
3000
4000
5000
6000

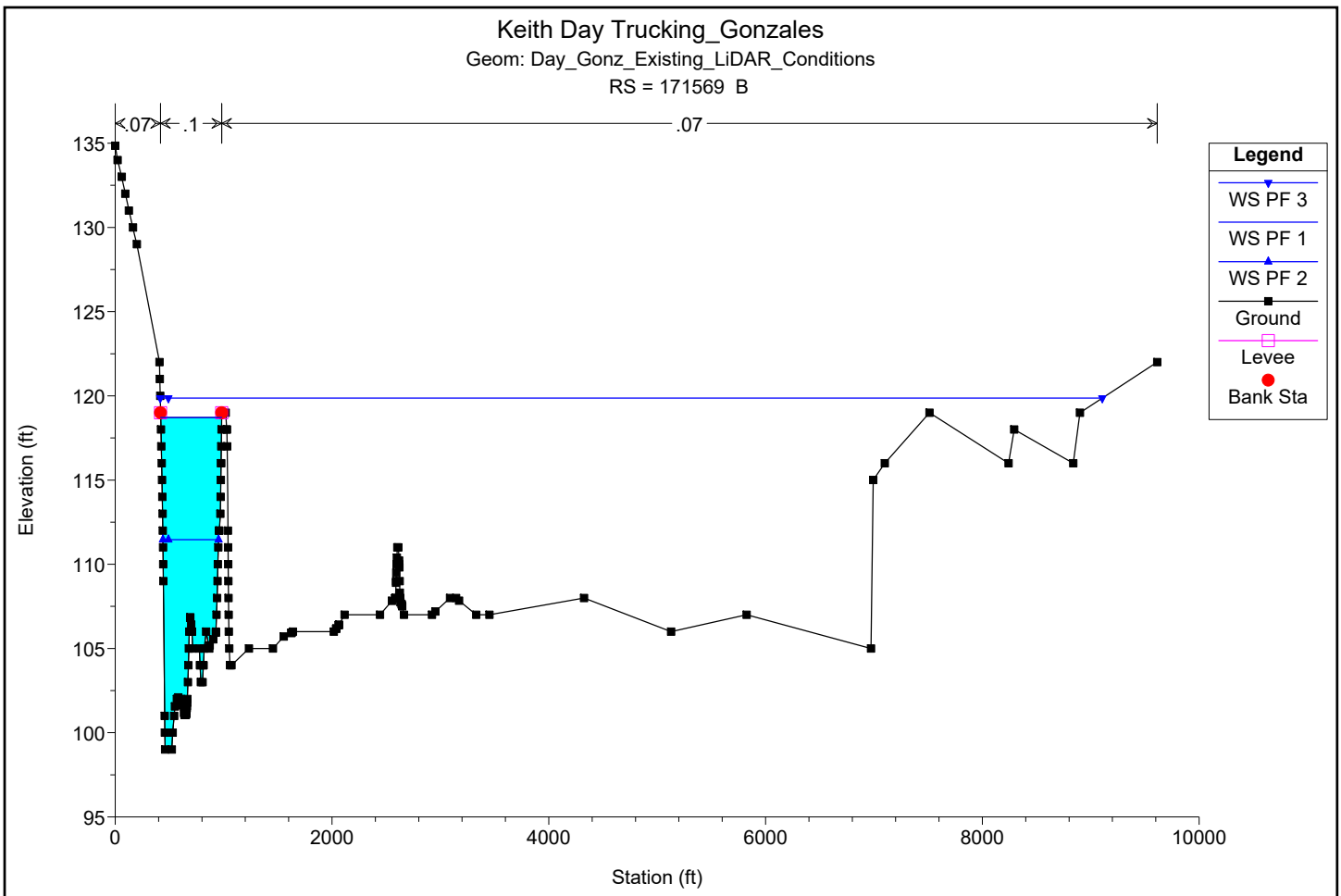

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 177252 G
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Bank Sta
Elevation (ft)
Station (ft)
100
105
110
115
120
125
0
1000
2000
3000
4000
5000
6000

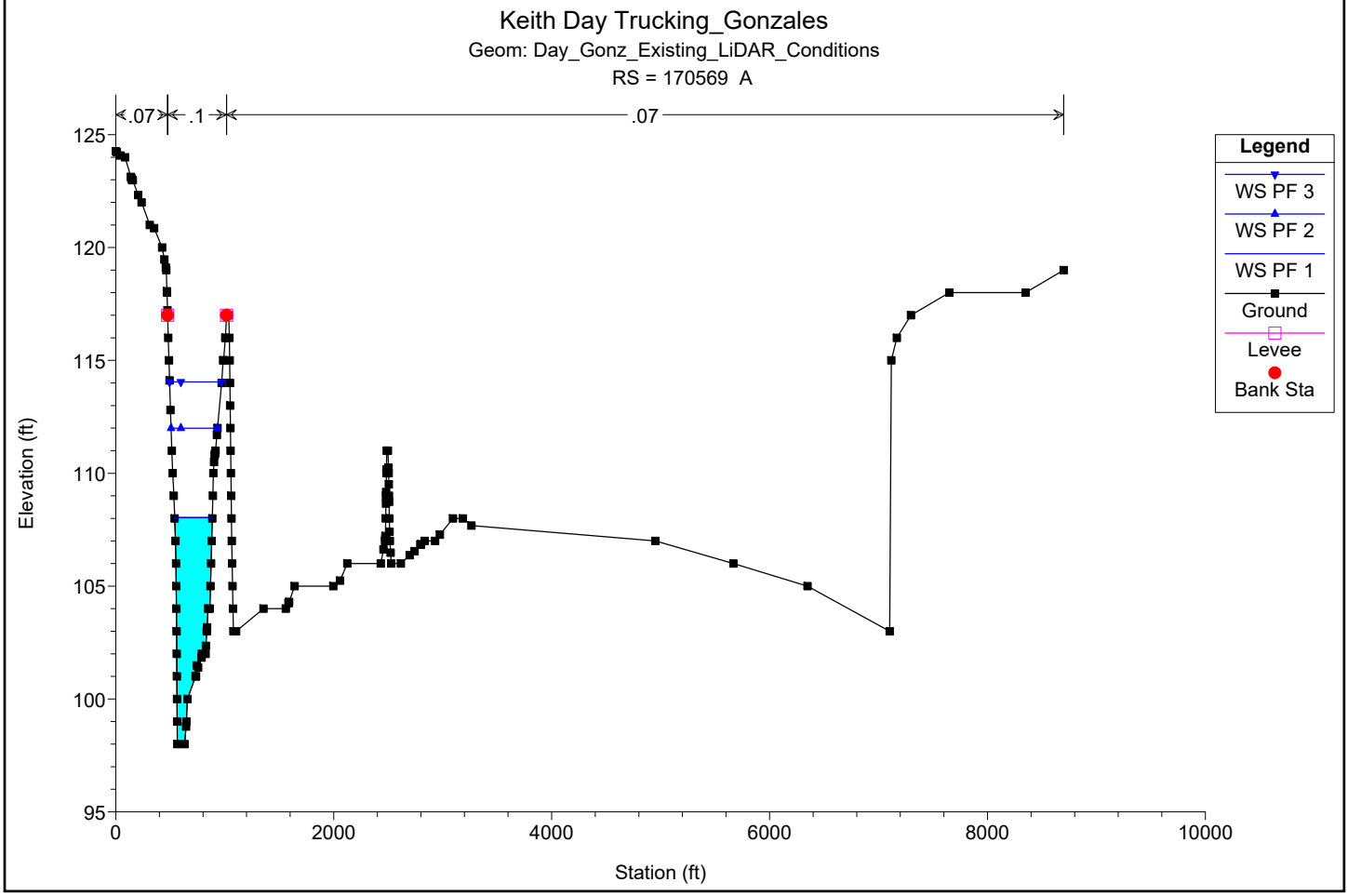

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 176134 F
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
100
105
110
115
120
125
0
2000
4000
6000
8000
10000
12000

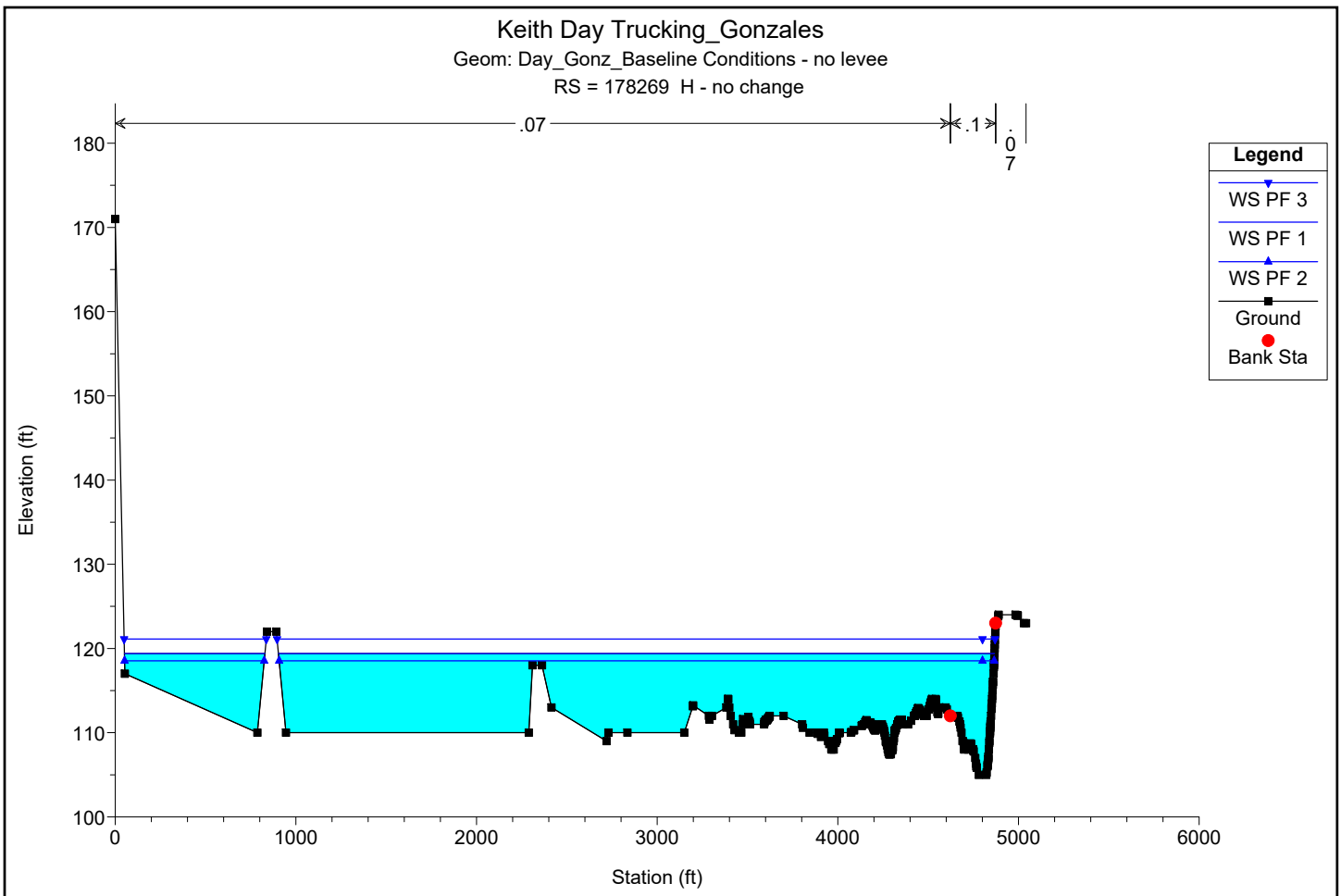

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 174801 E
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
100
105
110
115
120
125
0
2000
4000
6000
8000
10000
12000

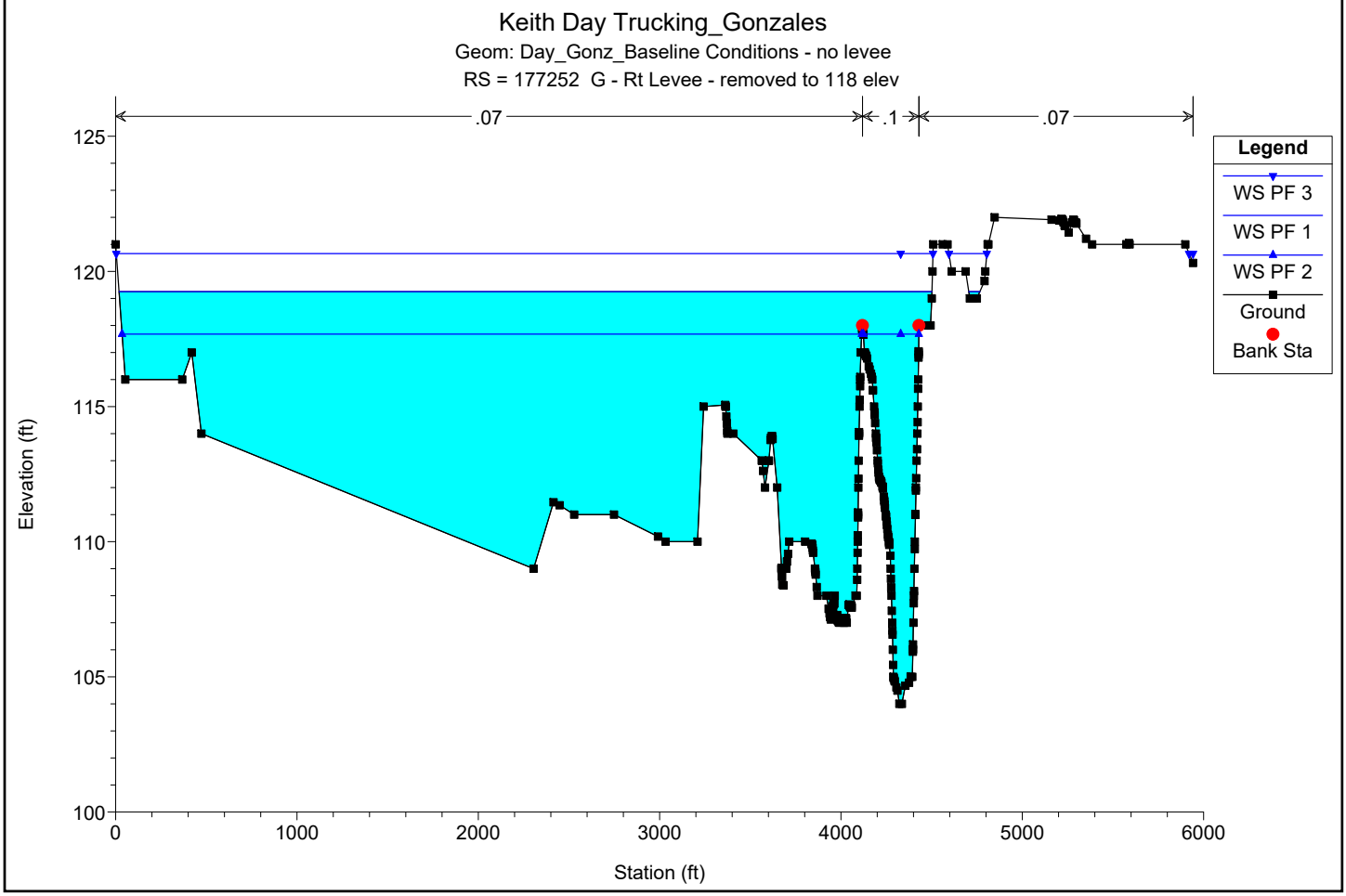

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 173743 D
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
130
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000

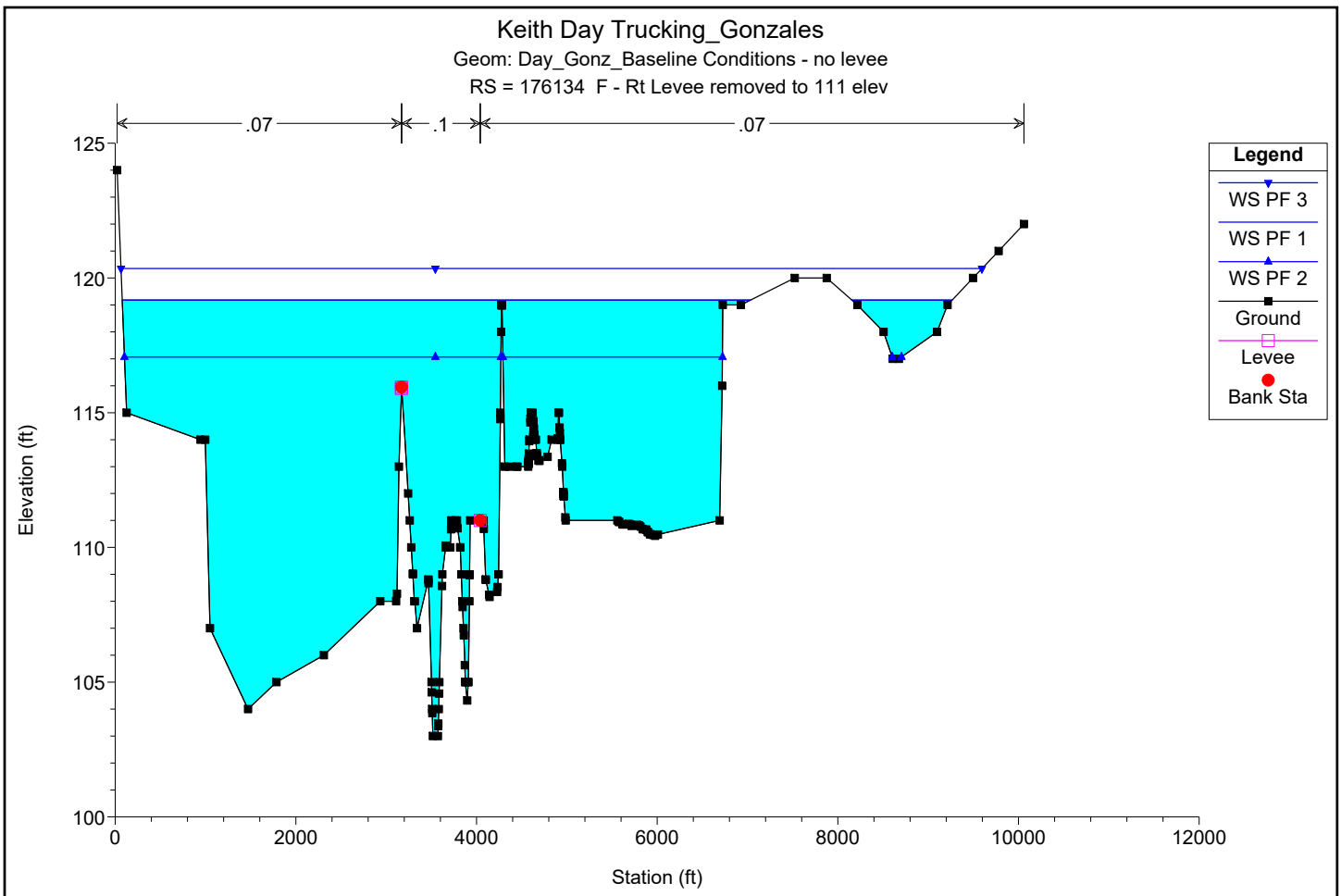

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 172569 C
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
130
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000

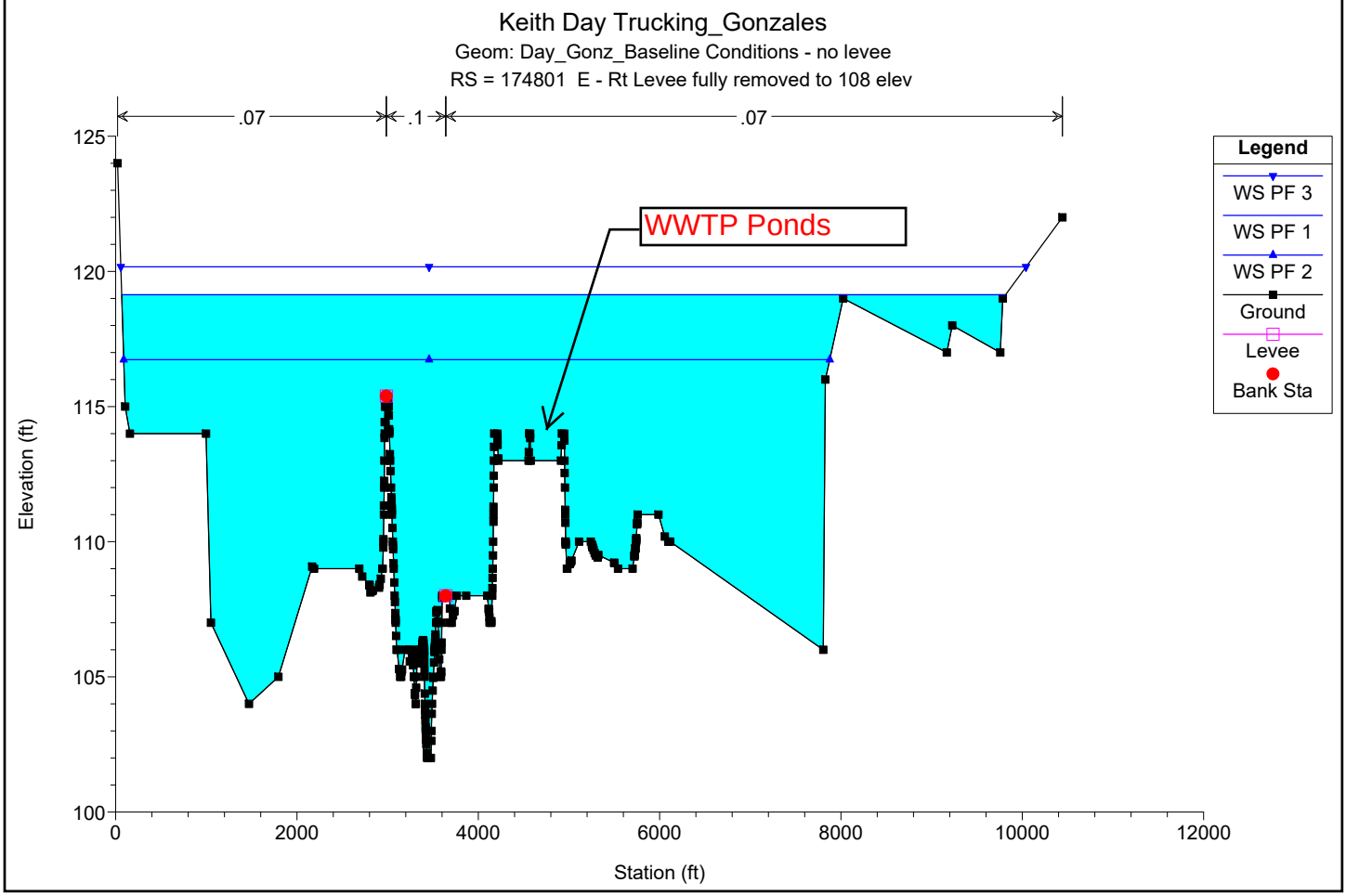

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 171569 B
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
135
130
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000

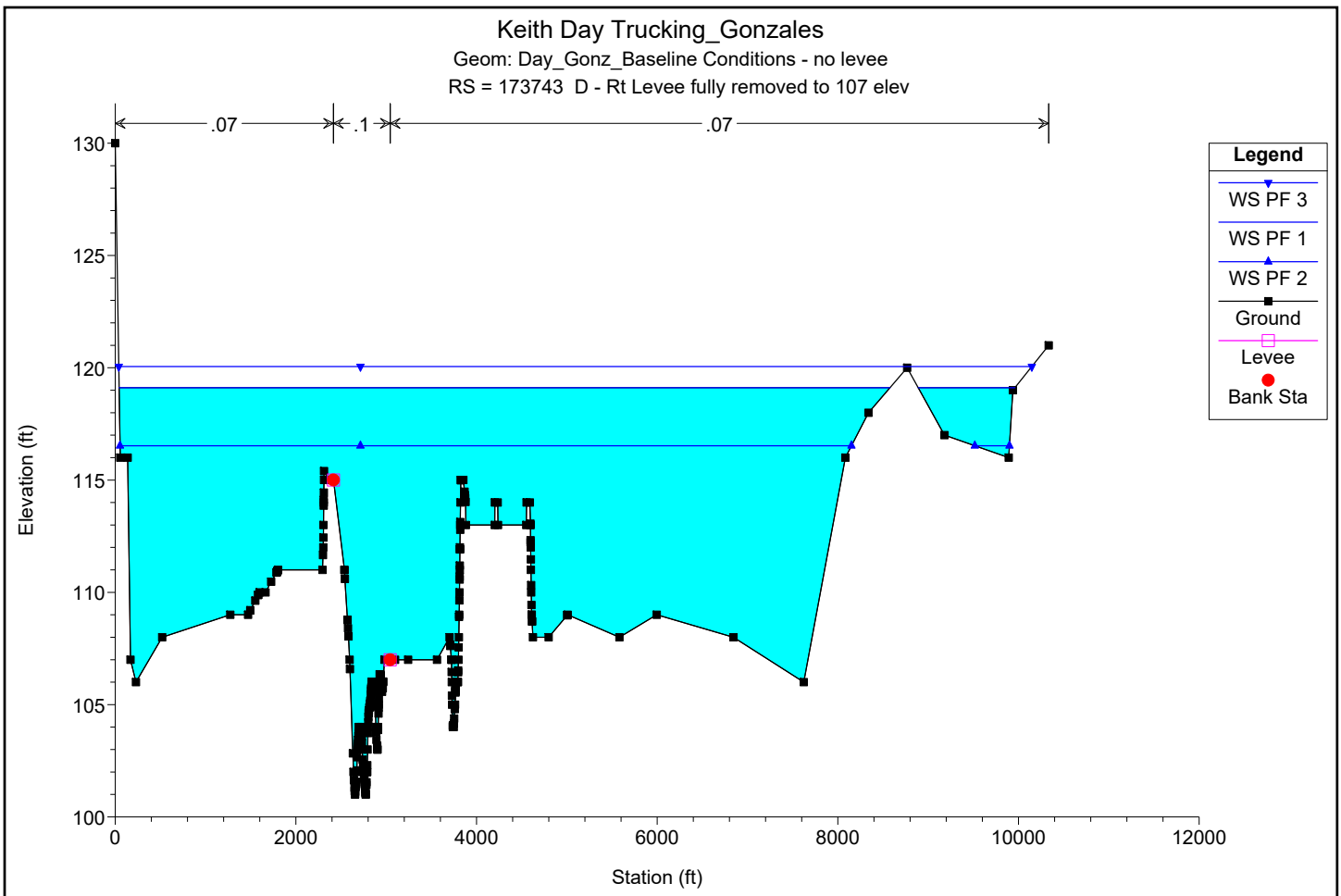

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Existing_LiDAR_Conditions
RS = 170569 A
.07
.1
.07
Legend
WS PF 3
WS PF 2
WS PF 1
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000

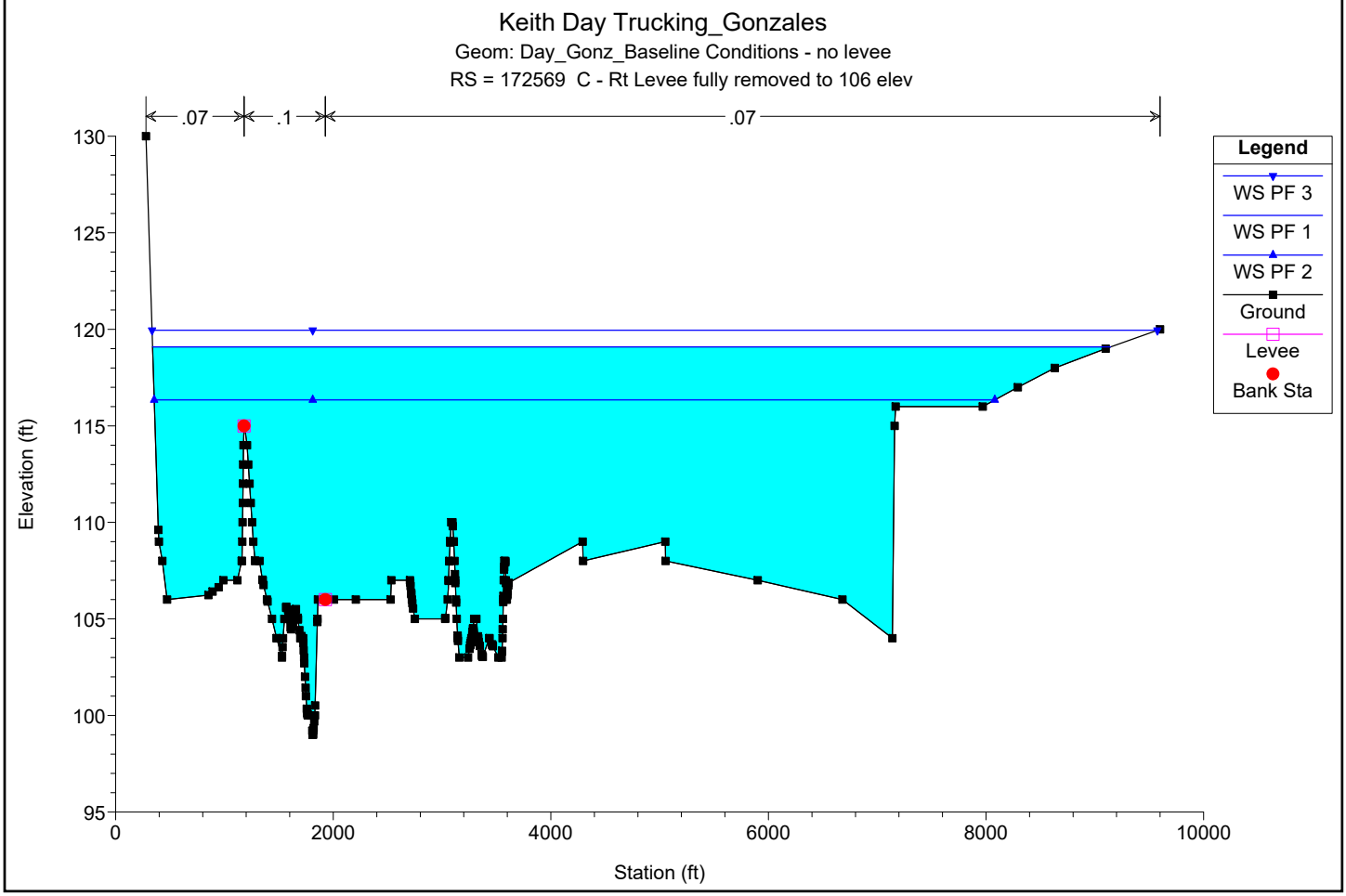

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 178269 H - no change
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Bank Sta
Elevation (ft)
Station (ft)
100
110
120
130
140
150
160
170
180
0
1000
2000
3000
4000
5000
6000

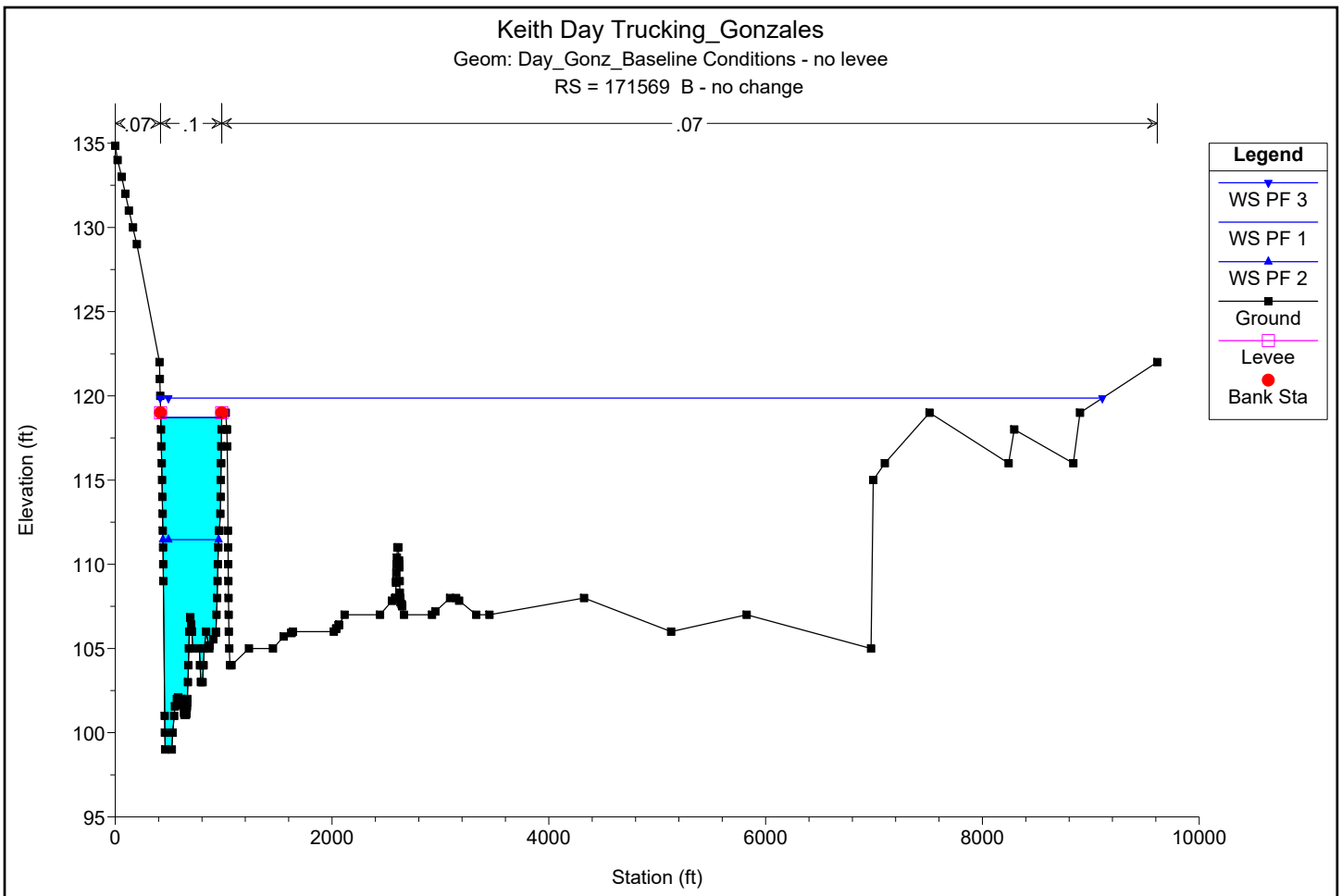

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 177252 G - Rt Levee - removed to 118 elev
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Bank Sta
Elevation (ft)
Station (ft)
100
105
110
115
120
125
0
1000
2000
3000
4000
5000
6000

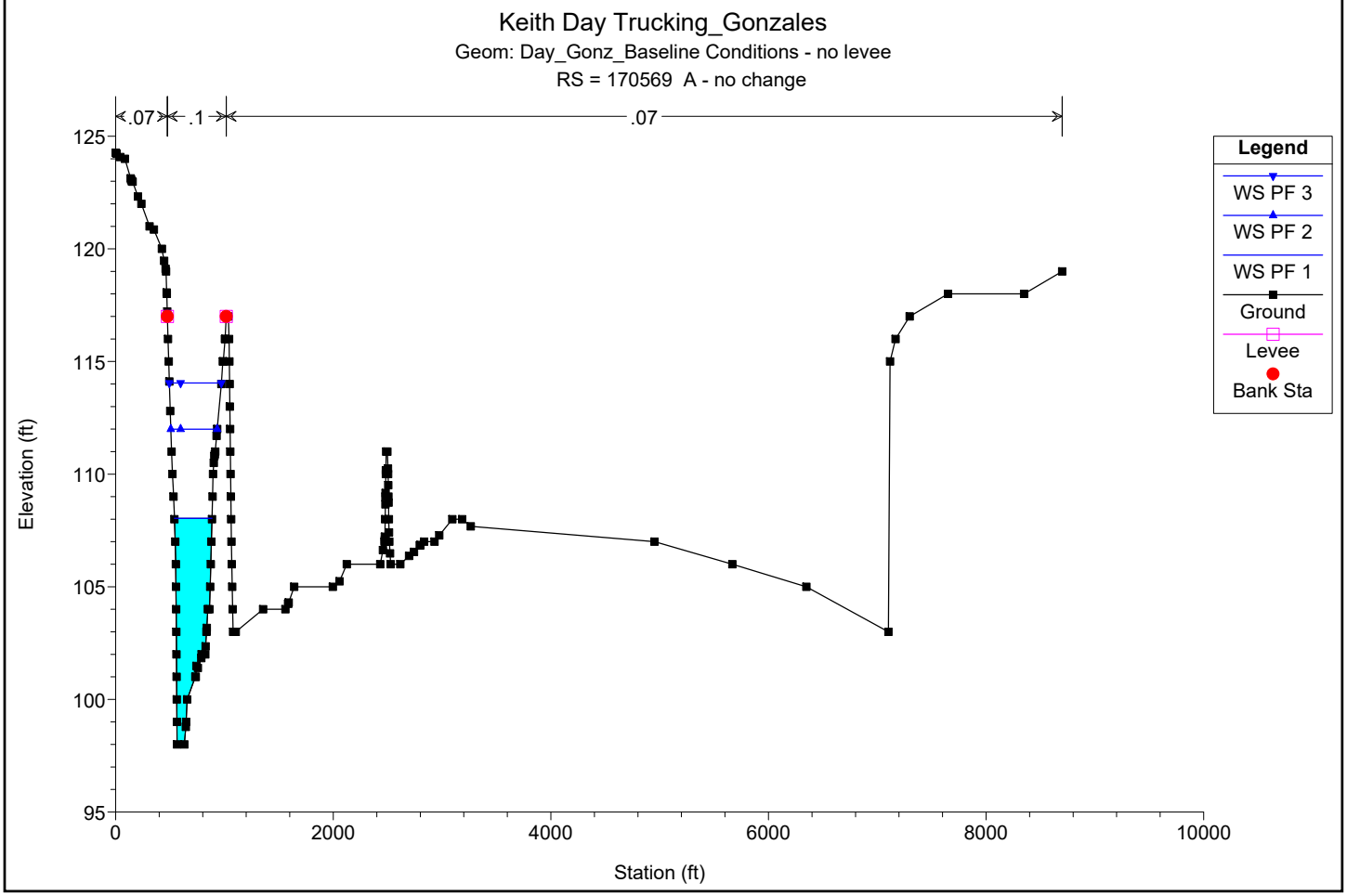

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 176134 F - Rt Levee removed to 111 elev
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000
Station (ft)

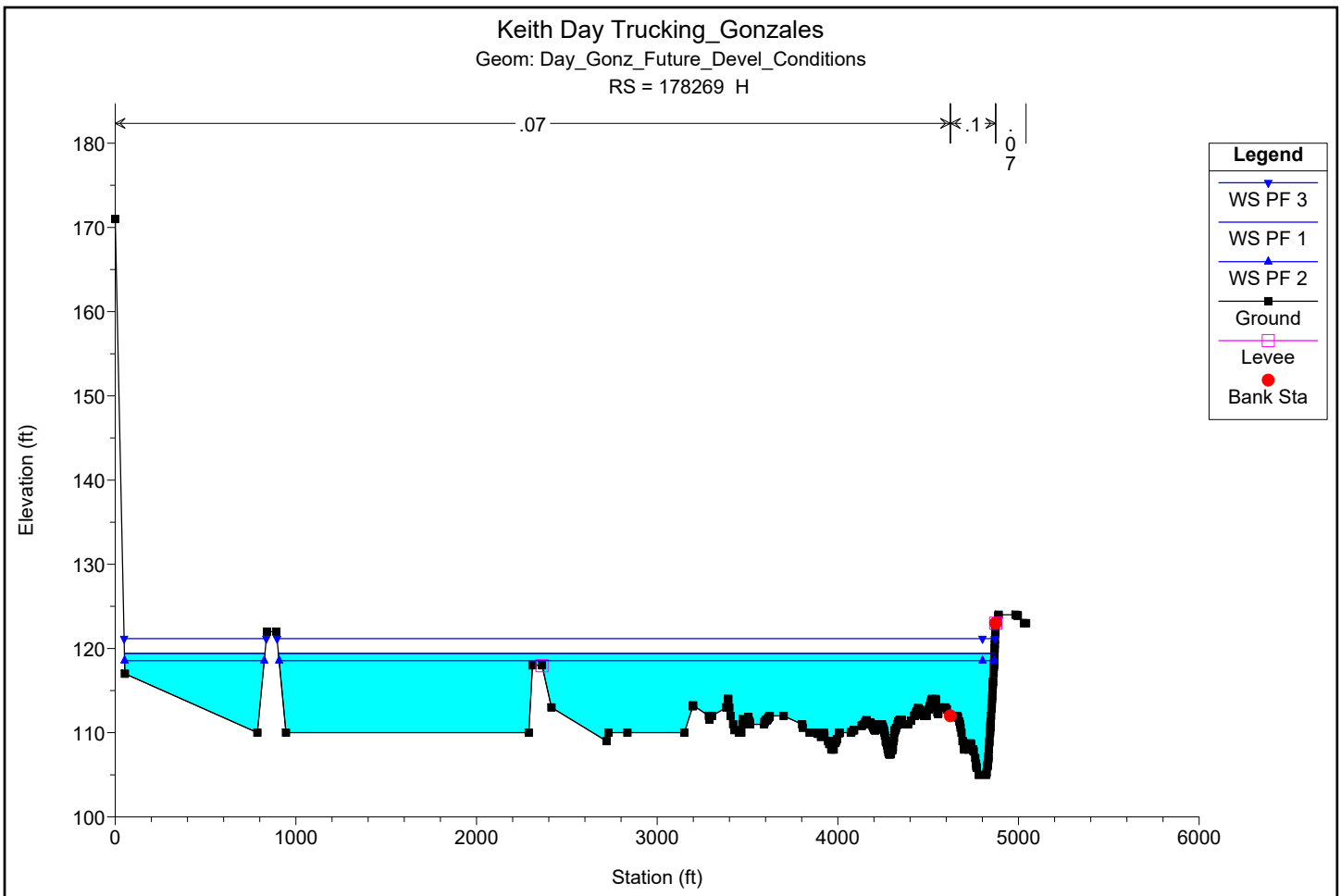

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 174801 E - Rt Levee fully removed to 108 elev
.07
.1
.07
WWTP Ponds
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000
Station (ft)

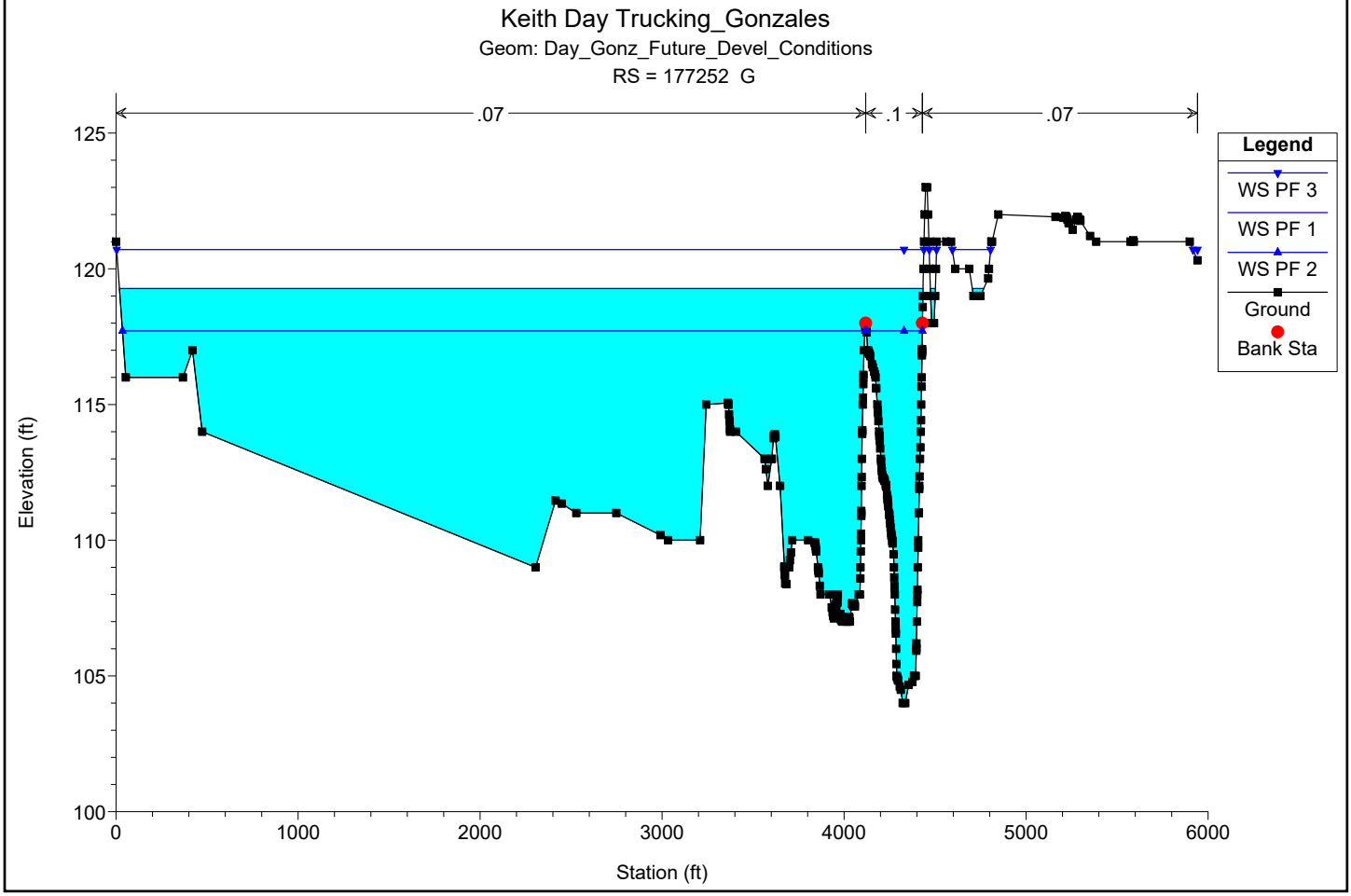

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 173743 D - Rt Levee fully removed to 107 elev
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
130
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000
Station (ft)

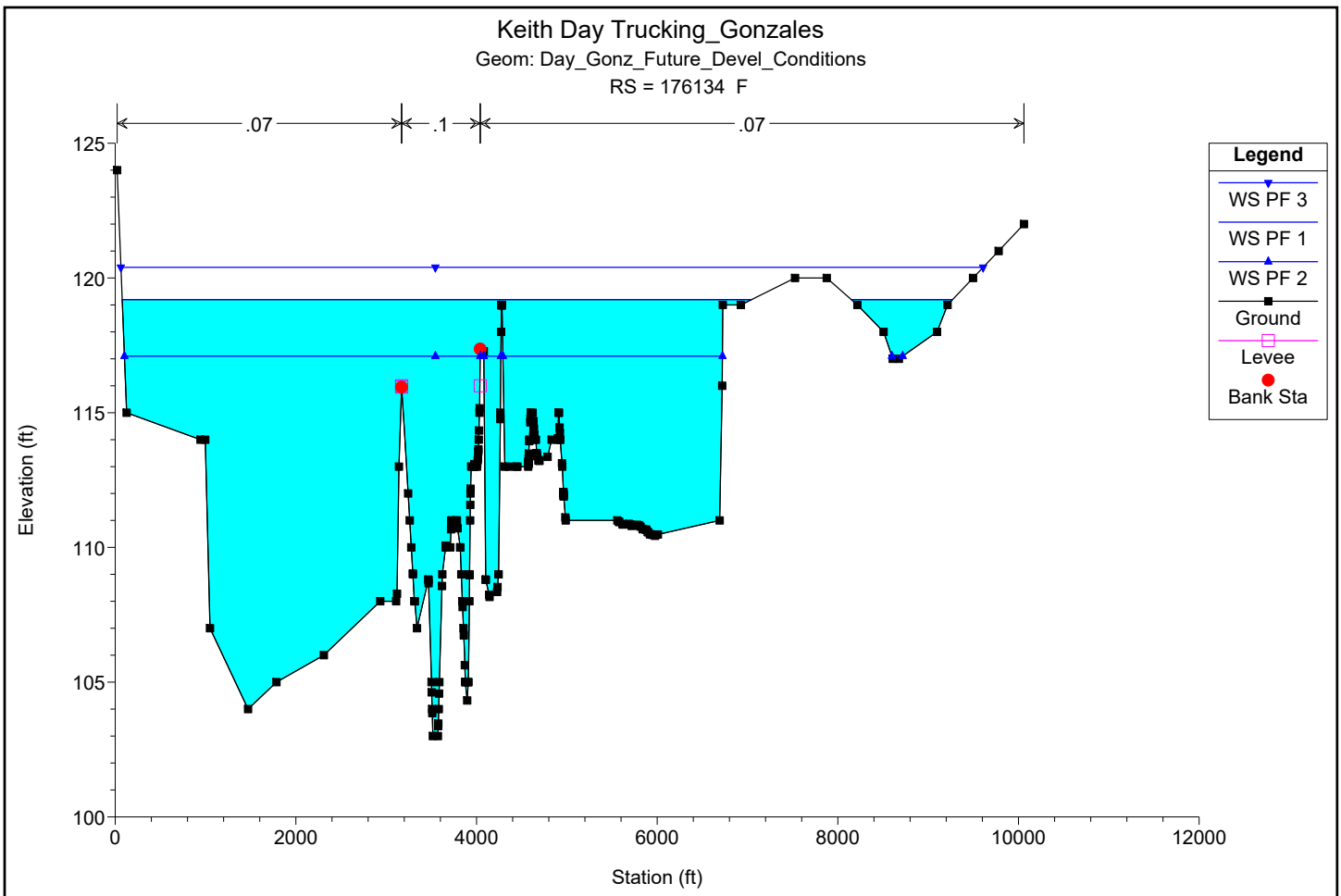

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 172569 C - Rt Levee fully removed to 106 elev
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
130
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000
Station (ft)

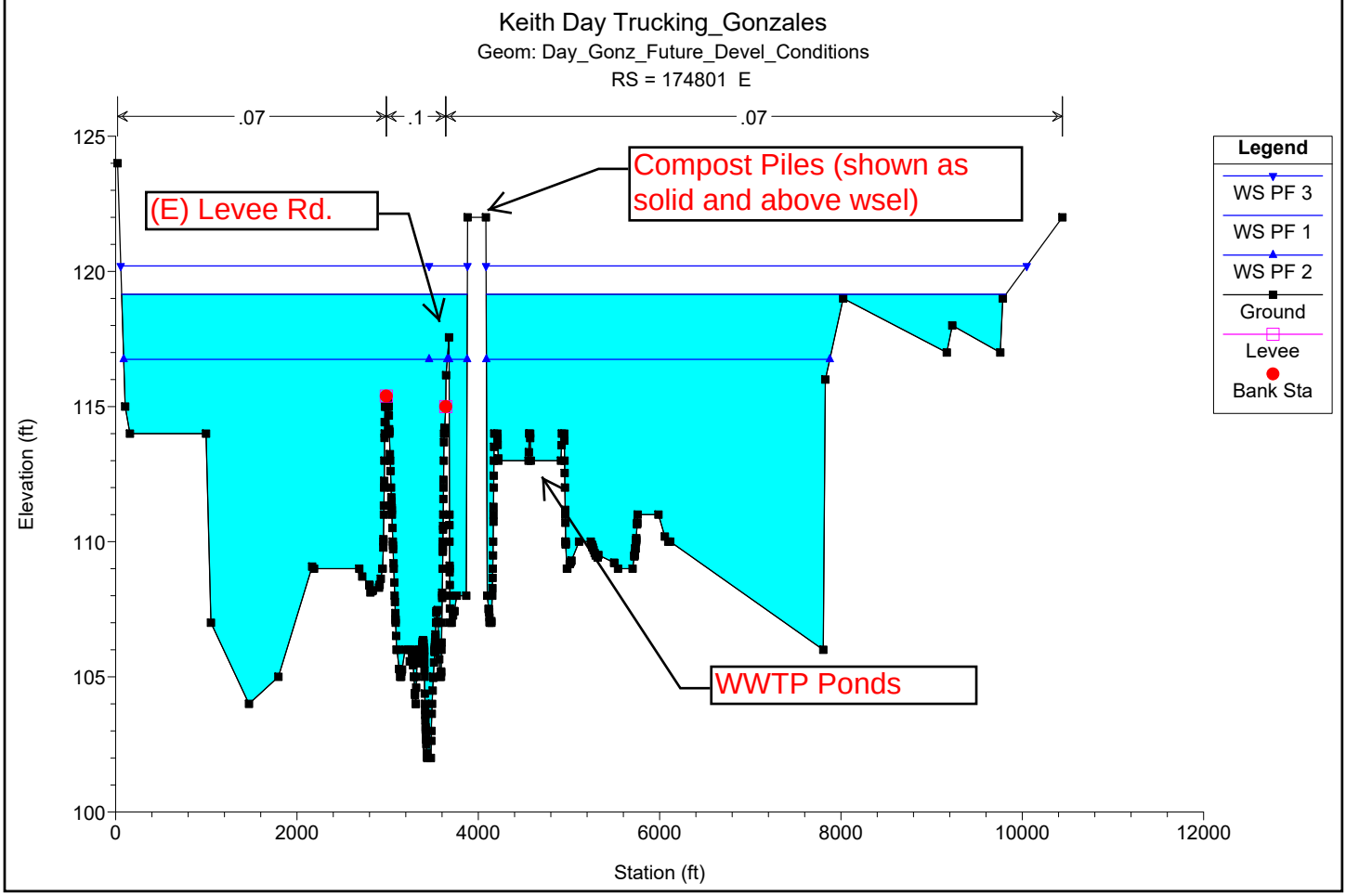

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 171569 B - no change
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
135
130
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000
Station (ft)

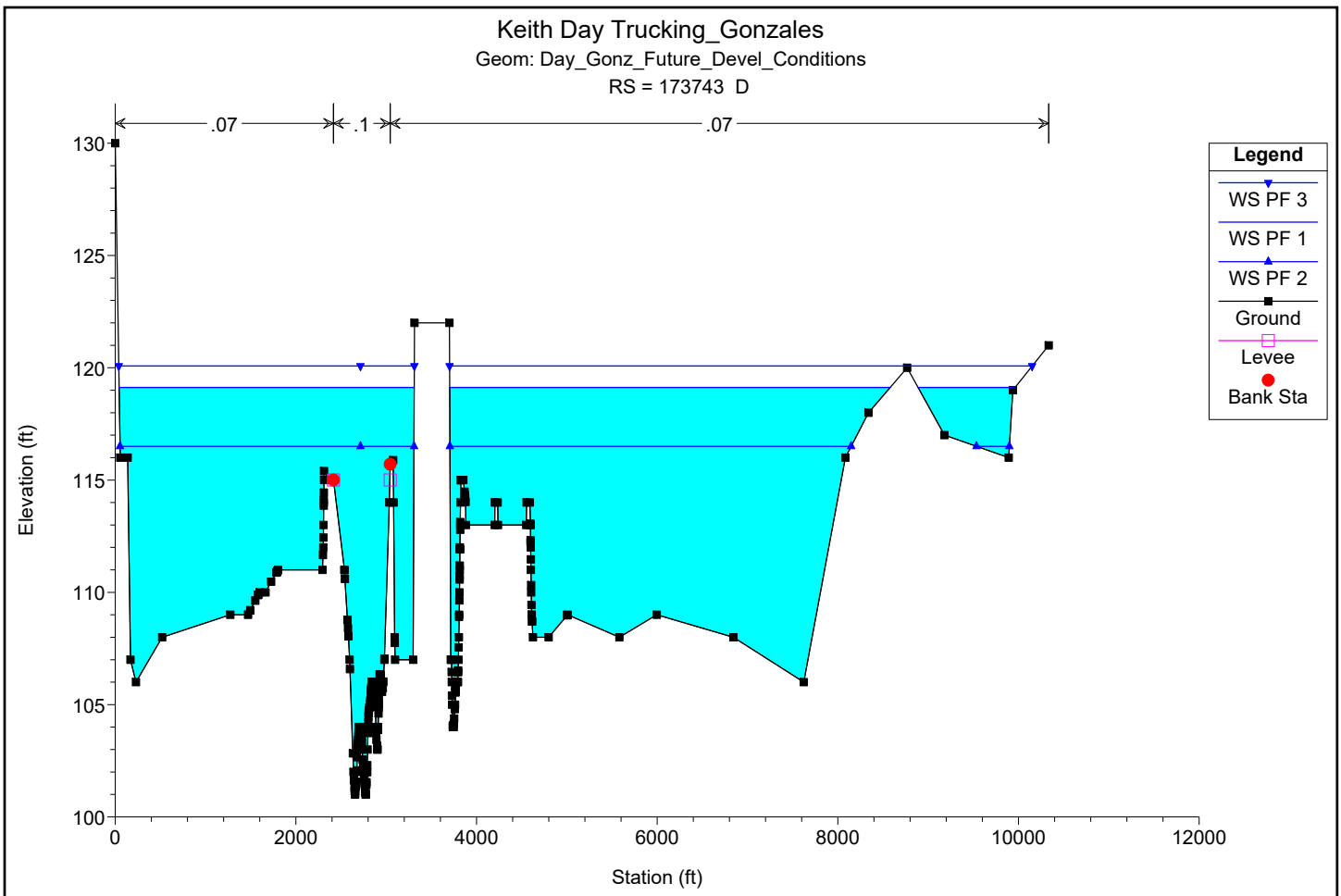

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Baseline Conditions - no levee
RS = 170569 A - no change
.07
.1
.07
Legend
WS PF 3
WS PF 2
WS PF 1
Ground
Levee
Bank Sta
Elevation (ft)
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000
Station (ft)

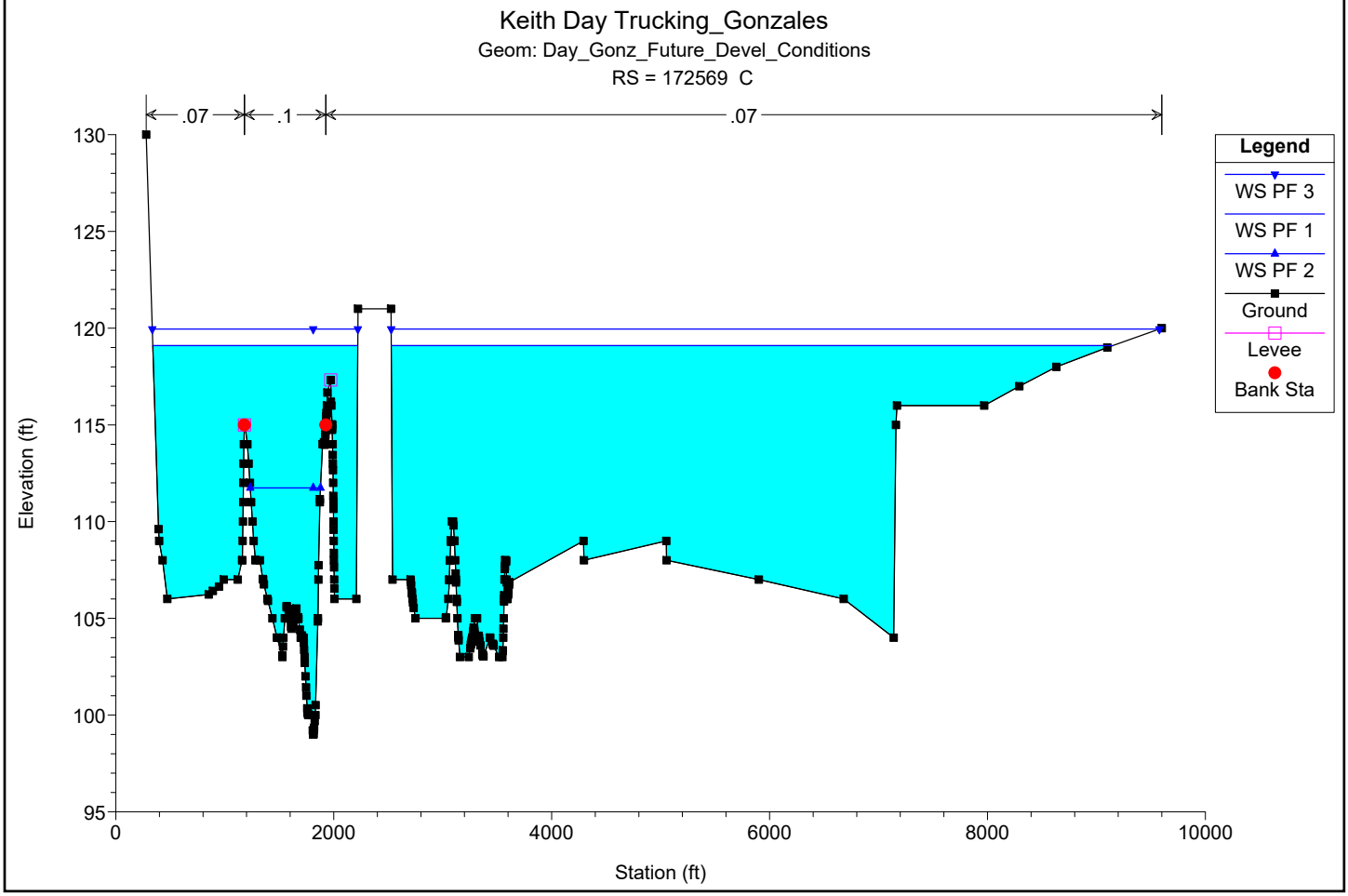

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 178269 H
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
100
110
120
130
140
150
160
170
180
0
1000
2000
3000
4000
5000
6000

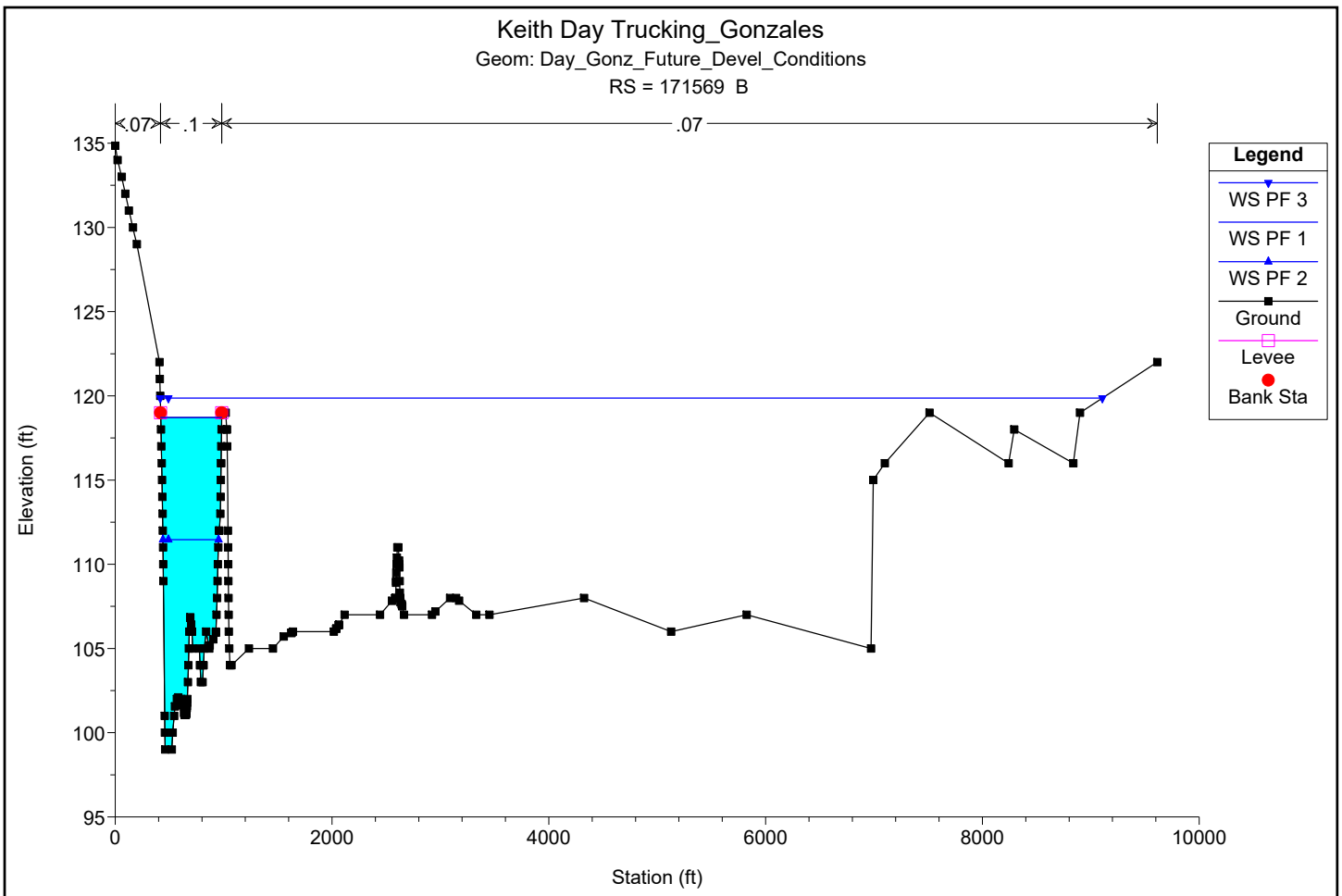

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 177252 G
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Bank Sta
Elevation (ft)
Station (ft)
100
105
110
115
120
125
0
1000
2000
3000
4000
5000
6000

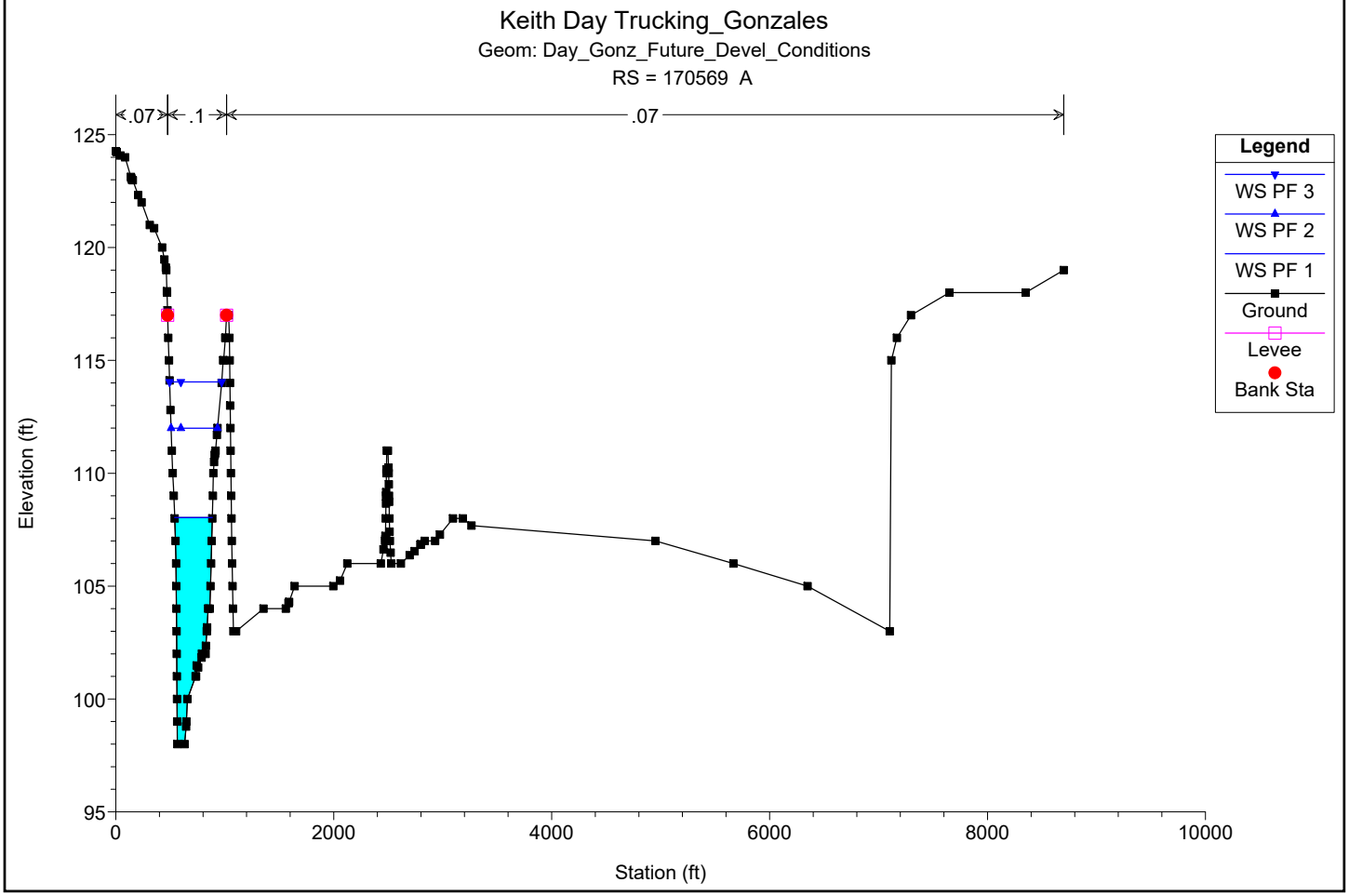

Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 176134 F
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000


Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 174801 E
.07
.1
.07
(E) Levee Rd.
Compost Piles (shown as solid and above wsel)
WWTP Ponds
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000


Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 173743 D
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
130
125
120
115
110
105
100
0
2000
4000
6000
8000
10000
12000


Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 172569 C
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
130
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000


Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 171569 B
.07
.1
.07
Legend
WS PF 3
WS PF 1
WS PF 2
Ground
Levee
Bank Sta
Elevation (ft)
135
130
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000
Station (ft)


Keith Day Trucking_Gonzales
Geom: Day_Gonz_Future_Devel_Conditions
RS = 170569 A
.07
.1
.07
Legend
WS PF 3
WS PF 2
WS PF 1
Ground
Levee
Bank Sta
Elevation (ft)
125
120
115
110
105
100
95
0
2000
4000
6000
8000
10000
Station (ft)