

PROJECT	DESIGNATION
1702957	1900406
CONTRACT	BRIDGE FILE
R-40890	----

STRUCTURE INFORMATION				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
----	Composite Prestressed Concrete Bulb-T Beam	1 Span: 137'-6" Skew: 37°45'00" Rt.	CSX Railroad	9+44.48 Line "PR-S"

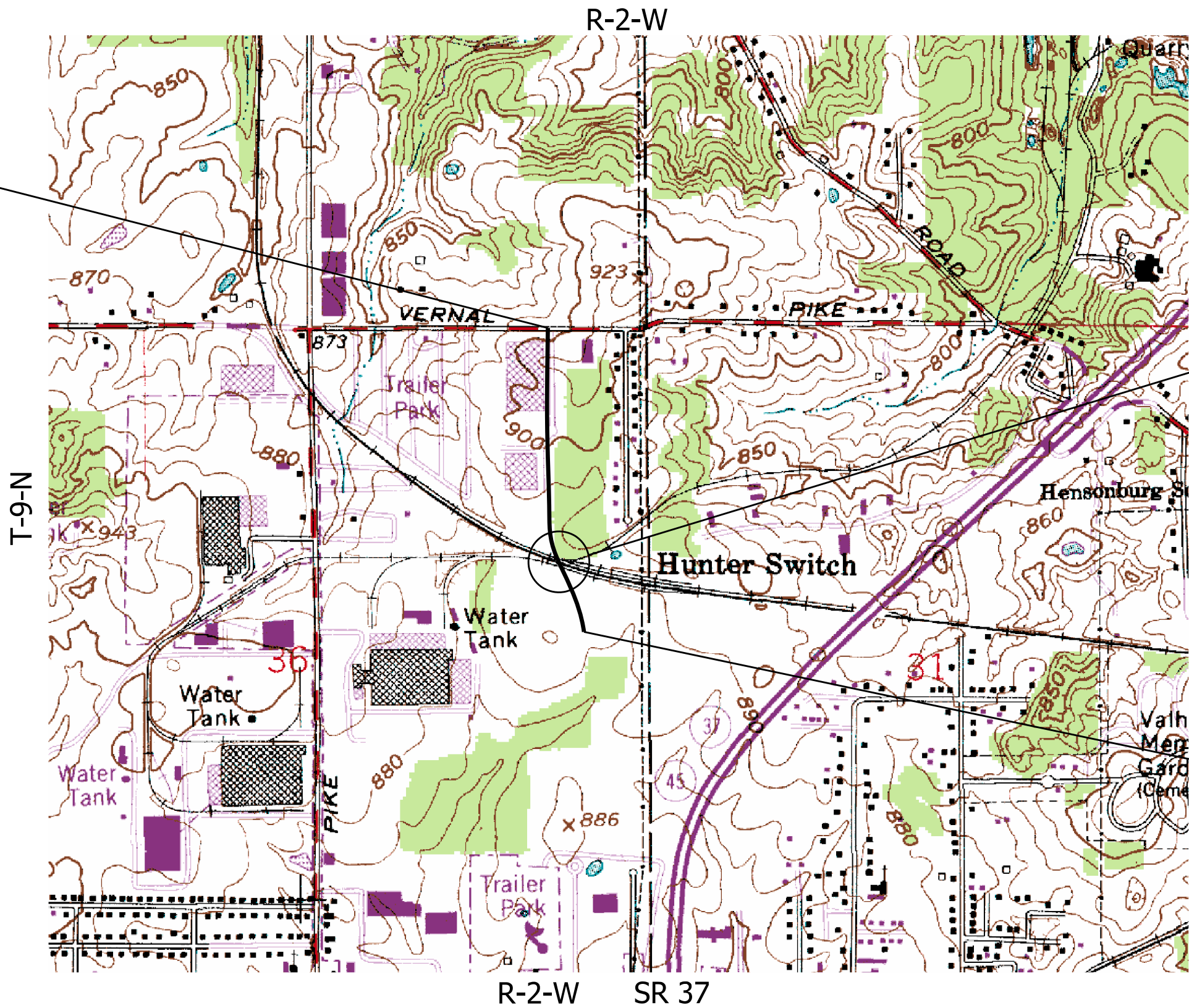
KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
1702957	VERNAL PIKE CONNECTOR ROAD (LEAD)
1900406	VERNAL PIKE CONNECTOR BRIDGE OVER RAILROAD
1092093	VERNAL PIKE CONNECTOR PARKING LOT CONNECTOR TUNNEL

MONROE COUNTY
BOARD OF COMMISSIONERS

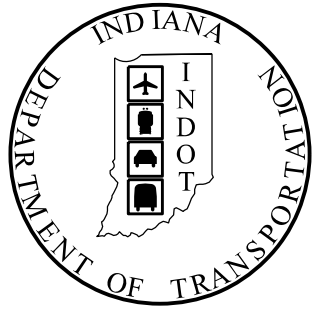
JULIE THOMAS, PRESIDENT	DATE
LEE JONES, VICE PRESIDENT	DATE
PENNY GITHENS, COMMISSIONER	DATE
CATHERINE SMITH, AUDITOR	DATE
LISA RIDGE, HIGHWAY DIRECTOR	DATE

ADDITIONAL RIGHT-OF-WAY
REQUIRED FOR THIS PROJECT

End Project
Sta. 28+10.89 Line "PR-S"



INDIANA DEPARTMENT
OF TRANSPORTATION



BRIDGE PLANS
FOR SPANS OVER 20 FEET
ROUTE: VERNAL PIKE CONNECTOR

PROJECT NO. 1900406 P.E.
1702957 R/W
1702957 CONST.

New Bridge Construction on Vernal Pike Connector over CSX Railroad
Located Approx. 0.5 miles west of SR 37 in
Section 36, T-9-N, R-2-W, Richland Township, Monroe County, Indiana

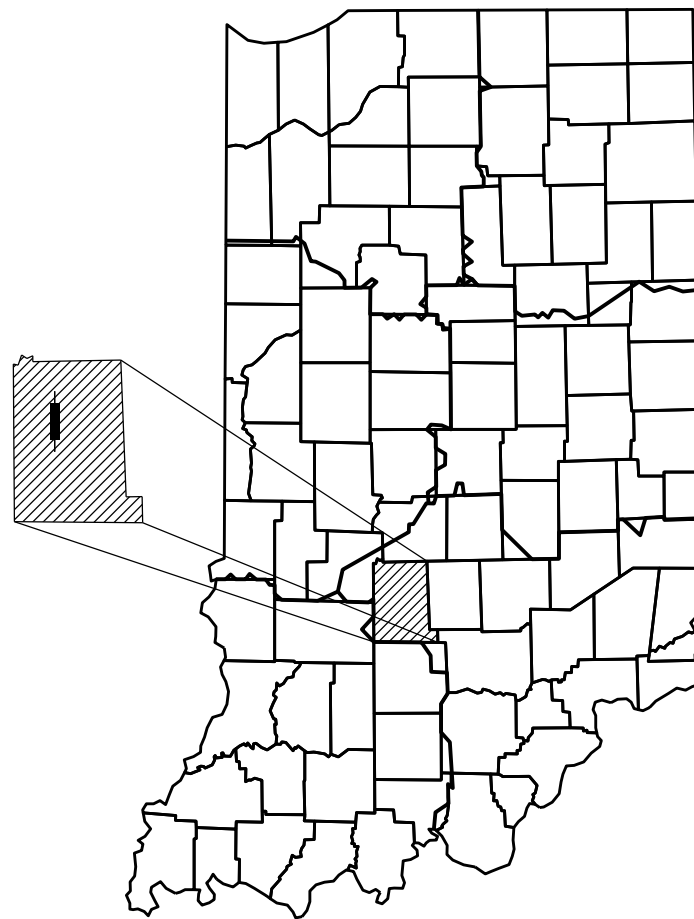
STAGE 2 PLANS
APRIL 7, 2020

TRAFFIC DATA - VERNAL PIKE CONNECTOR

A.A.D.T.	(2041)	5,530	V.P.D.
D.H.V	(2041)		V.P.H.
DIRECTIONAL DISTRIBUTION			50%
TRUCKS		10% A.A.D.T.	% D.H.V.

DESIGN DATA - VERNAL PIKE CONNECTOR

DESIGN SPEED	35 M.P.H.
PROJECT DESIGN CRITERIA	NEW CONSTRUCTION (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	LOCAL AGENCY COLLECTOR
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY
Monroe County

LATITUDE: 39°10'26" LONGITUDE: 86°34'34"

BRIDGE LENGTH:	0.027	MI.
TUNNEL LENGTH:	0.007	MI.
ROADWAY LENGTH:	0.384	MI.
TOTAL LENGTH:	0.418	MI.
MAX. GRADE:	8.94	%

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS.

CERTIFIED BY:	REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA NO. 10100213 COVERING CIVIL DESIGN	DATE
CERTIFIED BY:	REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA NO. 910382 COVERING BRIDGE DESIGN	DATE

NOT FOR
CONSTRUCTION

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DLZ INDIANA, LLC

DLZ INDIANA, LLC



PLANS PREPARED BY:
DLZ INDIANA, LLC
157 EAST MARYLAND STREET
INDIANAPOLIS, INDIANA 46204-3608
(317) 633-4120

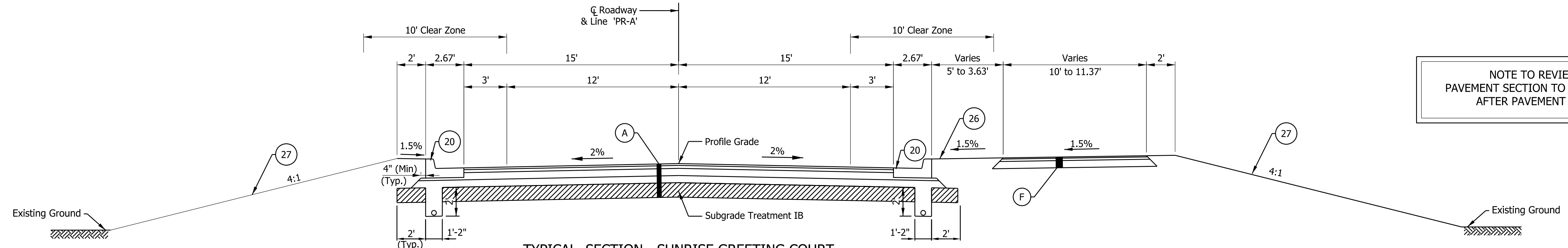
APPROVED
FOR LETTING:

INDIANA DEPARTMENT OF TRANSPORTATION

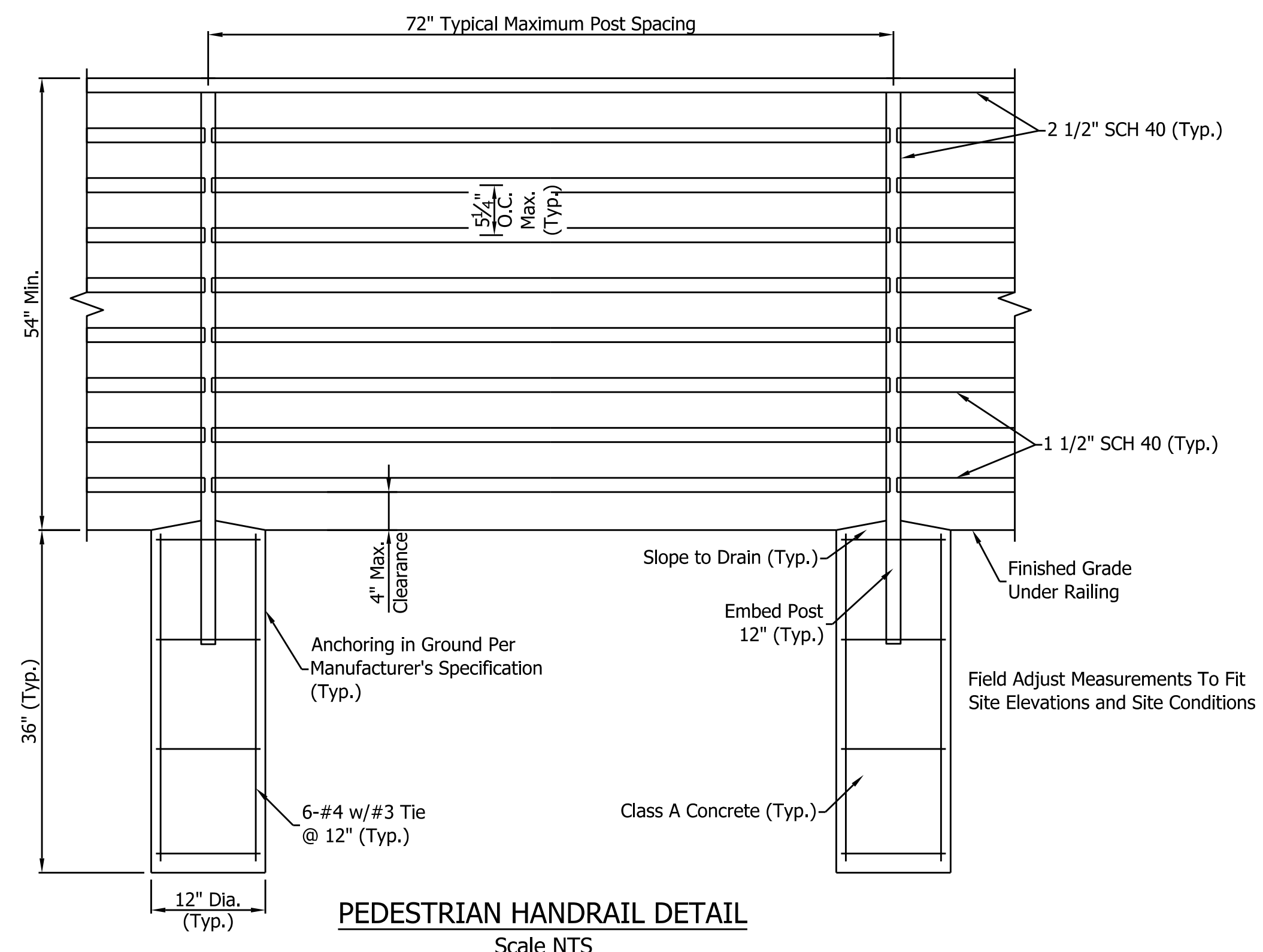
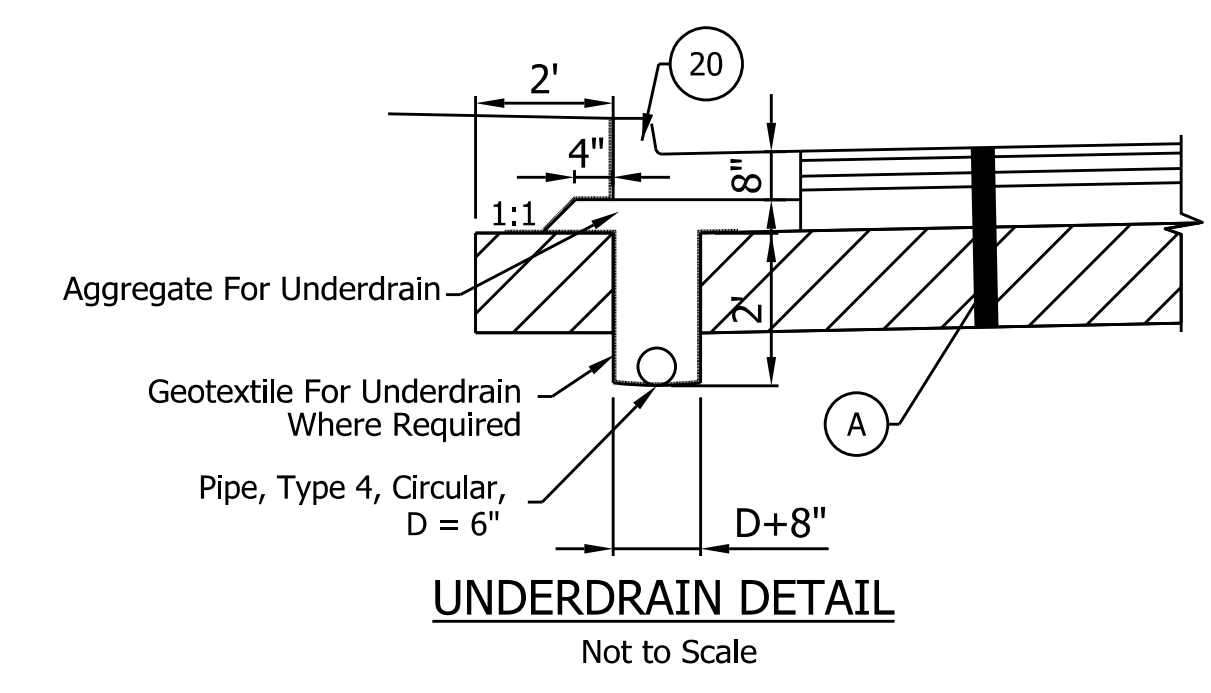
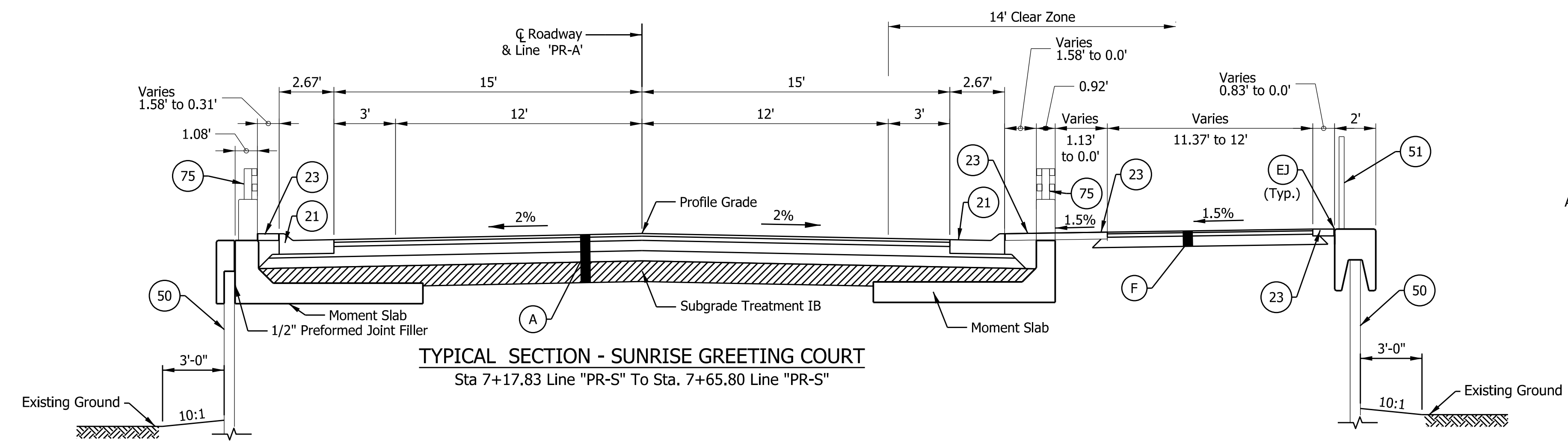
DATE

BRIDGE FILE	

DESIGNATION	
1900406	
SHEETS	
SURVEY BOOK	1 of 16
ELECTRONIC	
CONTRACT	PROJECT
R-40890	1702957



NOTE TO REVIEWER:
PAVEMENT SECTION TO BE FINALIZED
AFTER PAVEMENT DESIGN



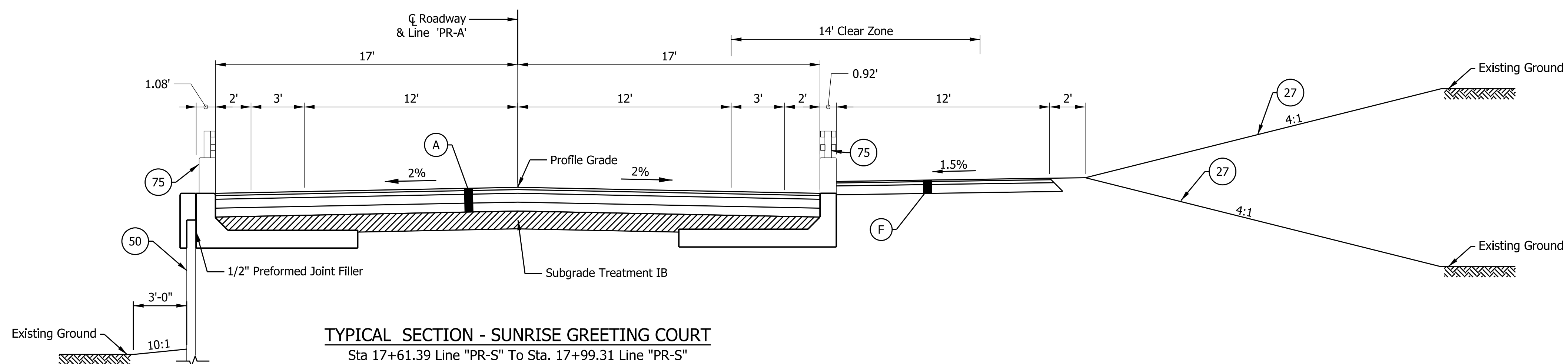
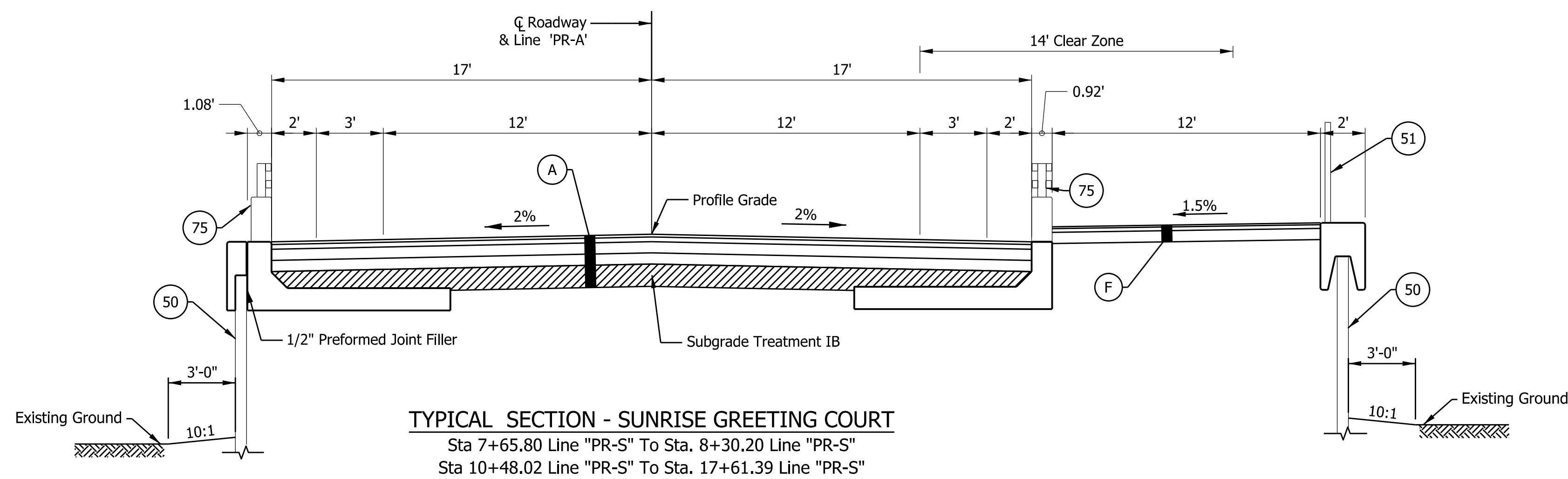
- LEGEND:**
- 21 Combined Concrete Curb and Gutter, Type B
 - 20 Combined Concrete Curb and Gutter, Type C
 - 23 4" PCCP
 - 26 Sodding, Nursery
 - 27 Seed Mixture, U
 - 50 MSE Wall
 - 51 Handrail, Pedestrian
 - 75 Modified Bridge Railing, Type PF-1
 - 77 Impact Attenuator R1-W1, TL-2
 - A HMA Pavement
165#/SYD QC/QA-HMA, 3,70, Surface, 9.5 mm, on
275#/SYD QC/QA-HMA, 3,70, Intermediate, 19.0 mm, on
770#/SYD QC/QA-HMA, 3,64, Base, 25.0 mm, on
6" Compacted Aggregate No. 53, on
Subgrade Treatment, Type IB
 - F HMA for Sidewalk
140#/SYD HMA, Surface, Type B, On
220#/SYD HMA, Intermediate, Type B On
6" Compacted Aggregate No 53, On
Subgrade Treatment Type III
 - EJ Expansion Joint (1/2" Preformed Joint Filler)
See INDOT Standard Drawing E604-CCSJ-01.

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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER		DATE		INDIANA DEPARTMENT OF TRANSPORTATION	SCALE		BRIDGE FILE	
						1/4" = 1'-0"		----	
								DESIGNATION 1900406	
DESIGNED: AMH	4/2020	DRAWN: DPH	4/2020	TYPICAL SECTIONS	SURVEY BOOK		SHEETS		
					ELECTRONIC		3	of	16
CHECKED: DSB	4/2020	CHECKED: AMH	4/2020		CONTRACT		PROJECT		
					R-40890		1702957		



LEGEND:

- (21) Combined Concrete Curb and Gutter, Type B
- (23) 4" PCCP
- (26) Sodding, Nursery
- (27) Seed Mixture, U
- (50) MSE Wall
- (51) Handrail, Pedestrian
- (75) Modified Bridge Railing, Type PF-1
- (77) Impact Attenuator R1-W1, TL-2
- (A) HMA Pavement
165#/SYD QC/QA-HMA, 3,70, Surface, 9.5 mm, on
275#/SYD QC/QA-HMA, 3,70, Intermediate, 19.0 mm, on
770#/SYD QC/QA-HMA,3,64, Base, 25.0 mm, on
6" Compacted Aggregate No. 53, on
Subgrade Treatment, Type IB
- (F) HMA for Sidewalk
140#/SYD HMA, Surface, Type B, On
220#/SYD HMA, Intermediate, Type B On
6" Compacted Aggregate No 53, On
Subgrade Treatment Type III

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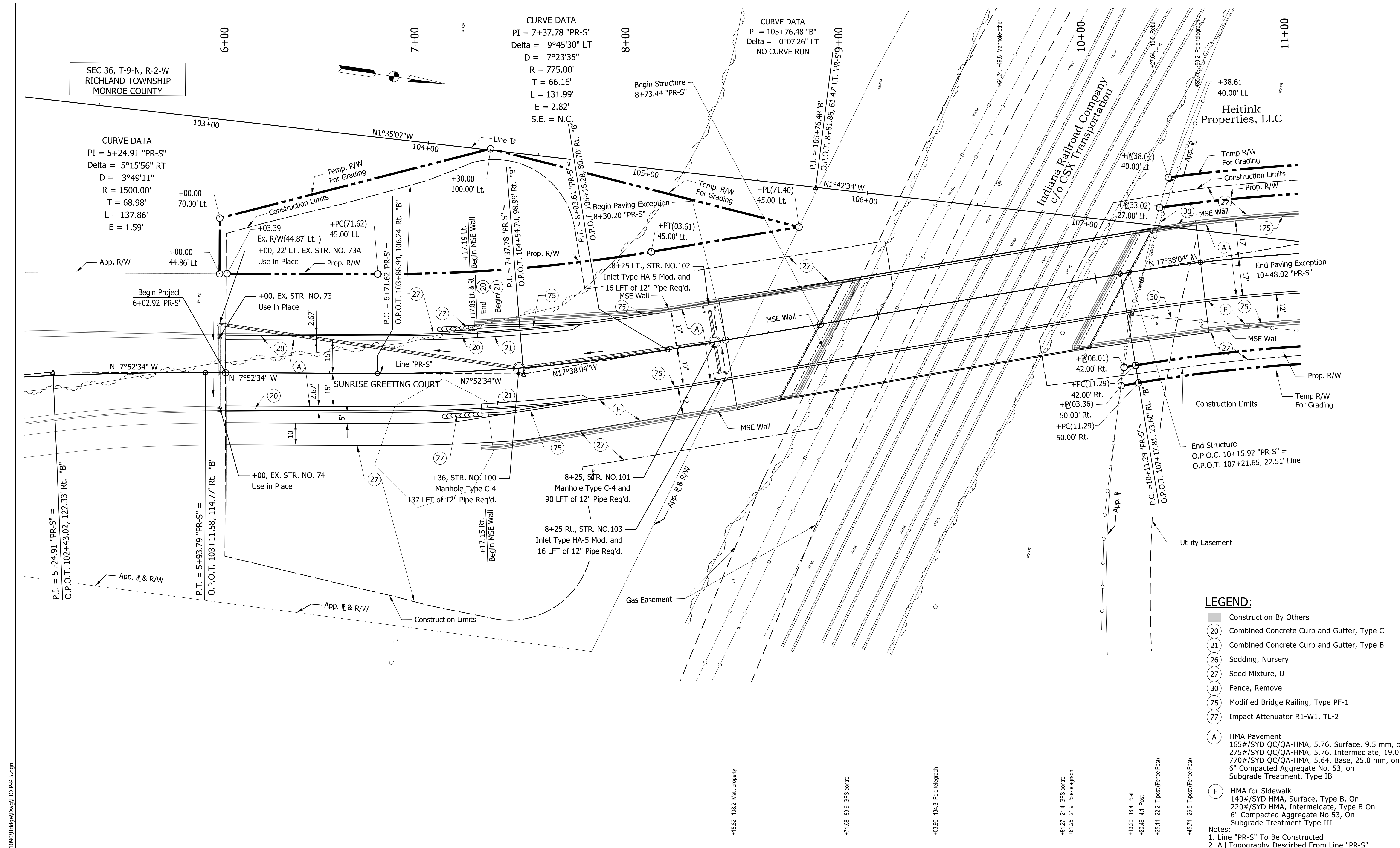
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RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE	
DESIGNED: AMH		4/2020		DRAWN: DPH	
4/2020		CHECKED: DSB		4/2020	
CHECKED: DSB		4/2020		CHECKED: AMH	
4/2020					

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TYPICAL SECTIONS

SCALE		BRIDGE FILE	
1/4" = 1'-0"		----	
		DESIGNATION	
		1900406	
SURVEY BOOK		SHEETS	
ELECTRONIC		4 of 16	
CONTRACT		PROJECT	
R-40890		1702957	



- LEGEND:**
- Construction By Others
 - 20 Combined Concrete Curb and Gutter, Type C
 - 21 Combined Concrete Curb and Gutter, Type B
 - 26 Sodding, Nursery
 - 27 Seed Mixture, U
 - 30 Fence, Remove
 - 75 Modified Bridge Railing, Type PF-1
 - 77 Impact Attenuator R1-W1, TL-2
 - A HMA Pavement
165#/SYD QC/QA-HMA, 5,76, Surface, 9.5 mm, on
275#/SYD QC/QA-HMA, 5,76, Intermediate, 19.0 mm, on
770#/SYD QC/QA-HMA, 5,64, Base, 25.0 mm, on
6" Compacted Aggregate No. 53, on
Subgrade Treatment, Type IB
 - F HMA for Sidewalk
140#/SYD HMA, Surface, Type B, On
220#/SYD HMA, Intermediate, Type B On
6" Compacted Aggregate No. 53, On
Subgrade Treatment Type III

Notes:
1. Line "PR-S" To Be Constructed
2. All Tonnage Described From Line "PR-S"

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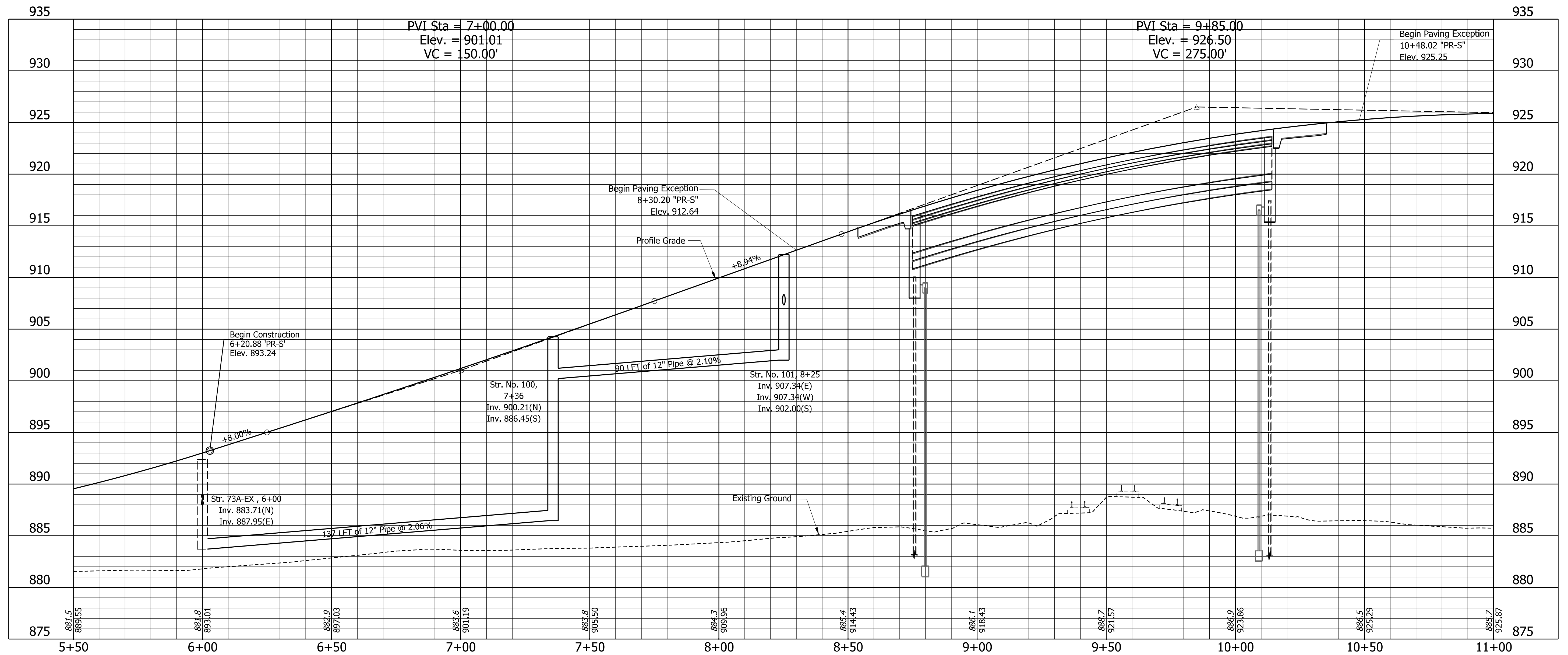
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DESIGNED: AMH 4/2020	DRAWN: DPH 4/2020	
CHECKED: DSB 4/2020	CHECKED: AMH 4/2020	

INDIANA DEPARTMENT OF TRANSPORTATION

PLAN LINE "PR-S"

SCALE 1" = 20'-0"	BRIDGE FILE ----
	DESIGNATION 1900406
SURVEY BOOK ELECTRONIC	SHEETS 5 of 16
CONTRACT R-40890	PROJECT 1702957

1/22/2020
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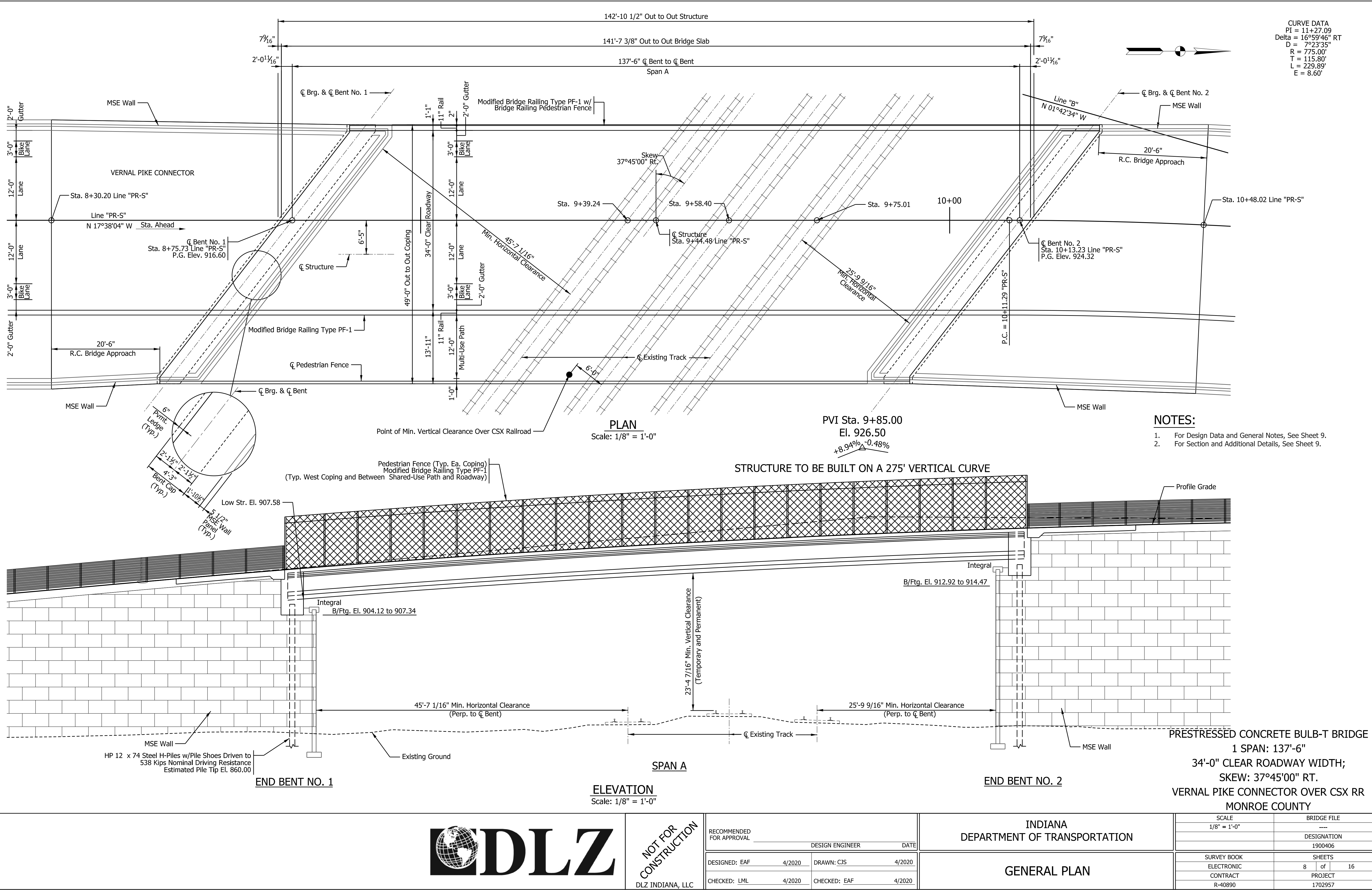
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DESIGNED:	AMH	4/2020	DRAWN:	DPH 4/2020
CHECKED:	DSB	4/2020	CHECKED:	AMH 4/2020

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PROFILE
LINE "PR-S"

HORIZONTAL SCALE		BRIDGE FILE	
1" = 20'-0"		----	
VERTICAL SCALE		DESIGNATION	
1" = 5'		1900406	
SURVEY BOOK		SHEETS	
ELECTRONIC		6	of 16
CONTRACT		PROJECT	
R-40890		1702957	

CURVE DATA
PI = 11+27.09
Delta = 16°59'46" RT
D = 7°23'35"
R = 775.00'
T = 115.80'
L = 229.89'
E = 8.60'



4/9/2020
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GENERAL NOTES

Reinforcing steel cover shall be 2 1/2" in top and 1" minimum in bottom of floor slab, 3" in footings, except bottom steel to be 4", and 2" in all other parts, unless noted.

DESIGN DATA

Designed for HL-93 loading, in accordance with AASHTO LRFD Bridge Design Specifications, Eighth Edition, 2017.

DEAD LOAD

Actual weight plus 35 lb/ft² future wearing surface and 15 lb/ft² for permanent metal deck forms.

FLOOR SLAB

Designed with 7 1/2" structural depth plus 1/2" sacrificial wearing surface.

DESIGN STRESSES

CONCRETE:

Class C Concrete	f _c = 4,000 psi
Class B Concrete	f _c = 3,000 psi
Class A Concrete	f _c = 3,500 psi
Precast	f _c = 8,000 psi

REINFORCING STEEL:

Grade 60	F _y = 60,000 psi
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CONSTRUCTION LOADING

The exterior girder has been checked for strength, deflection, and overturning using the constructions loads shown below. Cantilever overhang brackets were assumed for support of the deck overhang past the edge of the exterior girder. Finishing machine was assumed to be supported 6 in. outside the vertical coping form. The top overhang brackets were assumed to be located 6 in. past the edge of the vertical coping form. The bottom overhang brackets were assumed to be braced against the intersection of the girder bottom flange and web.

DECK FALSEWORK LOADS:

Designed for 15 lb/ft² for permanent metal stay-in place deck forms, removable deck forms, and 2-ft exterior walkway.

CONSTRUCTION LIVE LOAD:

Designed for 20 lb/ft² extending 2 ft past the edge of coping and 75 lb/ft vertical force applied at a distance of 6 in. outside the face of coping over a 30-ft length of the deck centered with the finishing machine.

FINISHING-MACHINE LOAD:

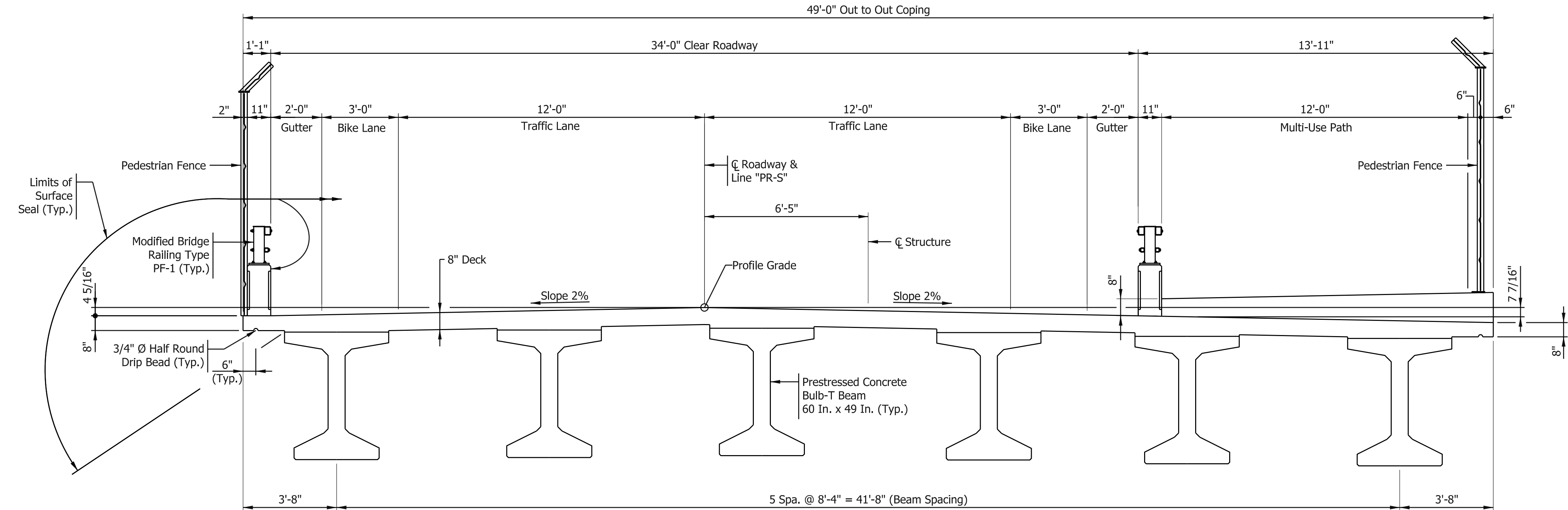
4500 lb distributed over 10 ft along the coping.

WIND LOAD:

Designed for 70 mph horizontal wind loading in accordance with LRFD 3.8.1.

SEISMIC DESIGN DATA

Seismic Performance Zone	(TBD)
Acceleration Coefficient	(TBD)
Seismic Soil Profile Type Class	(TBD)



TYPICAL SECTION

Scale: 3/8" = 1'-0"

PRESTRESSED CONCRETE BULB-T BRIDGE
1 SPAN: 137'-6"
34'-0" CLEAR ROADWAY WIDTH;
SKEW: 37°45'00" RT.
VERNAL PIKE CONNECTOR OVER CSX RR
MONROE COUNTY



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RECOMMENDED FOR APPROVAL		DESIGN ENGINEER		DATE	
DESIGNED: EAF		4/2020		DRAWN: CJS	
CHECKED: LML		4/2020		CHECKED: EAF	
				4/2020	

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GENERAL PLAN

SCALE	BRIDGE FILE
3/8" = 1'-0"	----
	DESIGNATION
	1900406
SURVEY BOOK	SHEETS
ELECTRONIC	9 of 16
CONTRACT	PROJECT
R-40890	1702957

SUMMARY OF BRIDGE QUANTITIES									
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** Estimated Quantity

NOTE TO REVIEWER:
Final Quantities will be Provided at Stage 3 Submission.



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RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE
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DESIGNED: LML	4/2020	DRAWN: CJS	4/2020
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CHECKED: 4/2020 CHECKED: LML 4/2020

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BRIDGE SUMMARY

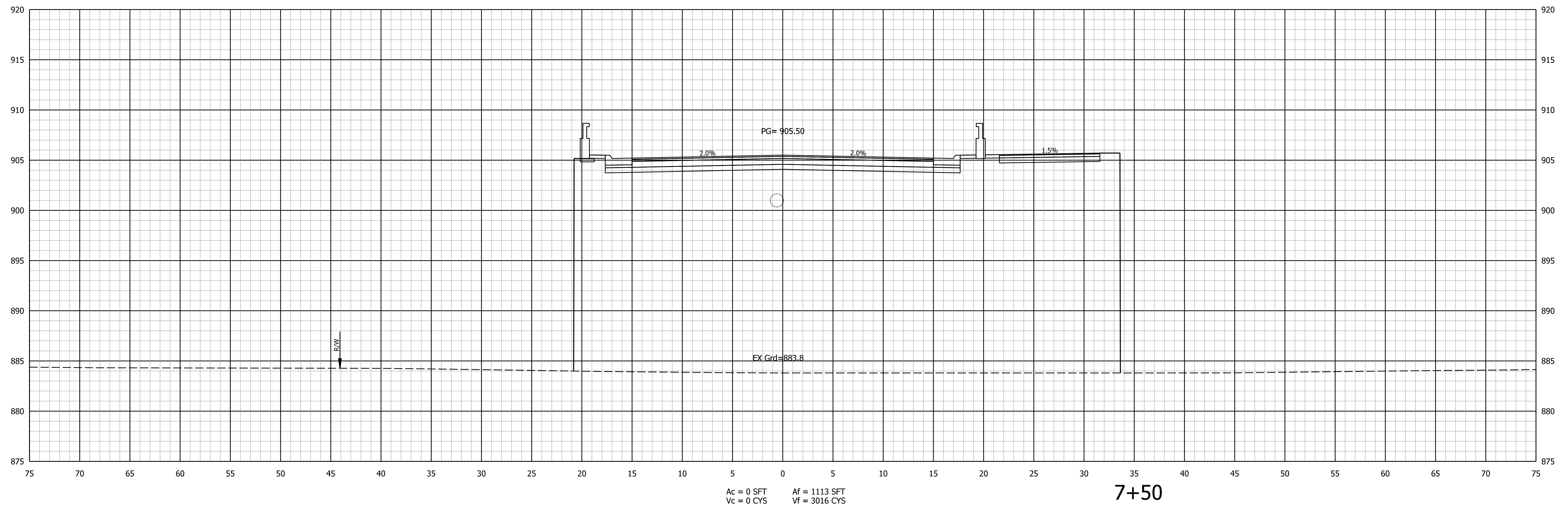
SCALE	BRIDGE FILE
NONE	---

	DESIGNATION
	1900406

SURVEY BOOK	SHEETS		
ELECTRONIC	10	of	

ELECTRONIC	10	01	
CONTRACT	PROJECT		
R-40890	1702957		

1/22/2020
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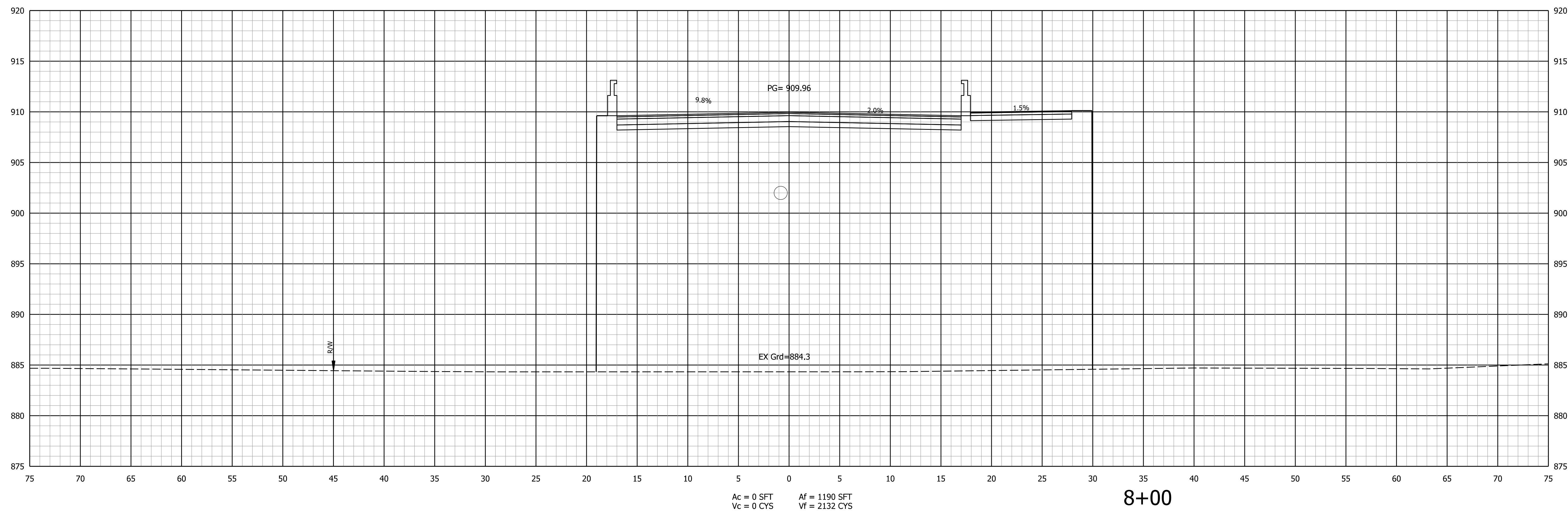
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DESIGNED: AMH		DRAWN: DPH		4/2020
CHECKED: DSB		CHECKED: AMH		4/2020

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CROSS SECTIONS "PR-S"

SCALE		BRIDGE FILE	
1" = 5'-0"		----	
		DESIGNATION	
		1900406	
SURVEY BOOK		SHEETS	
ELECTRONIC		11	of 16
CONTRACT		PROJECT	
R-40890		1702957	

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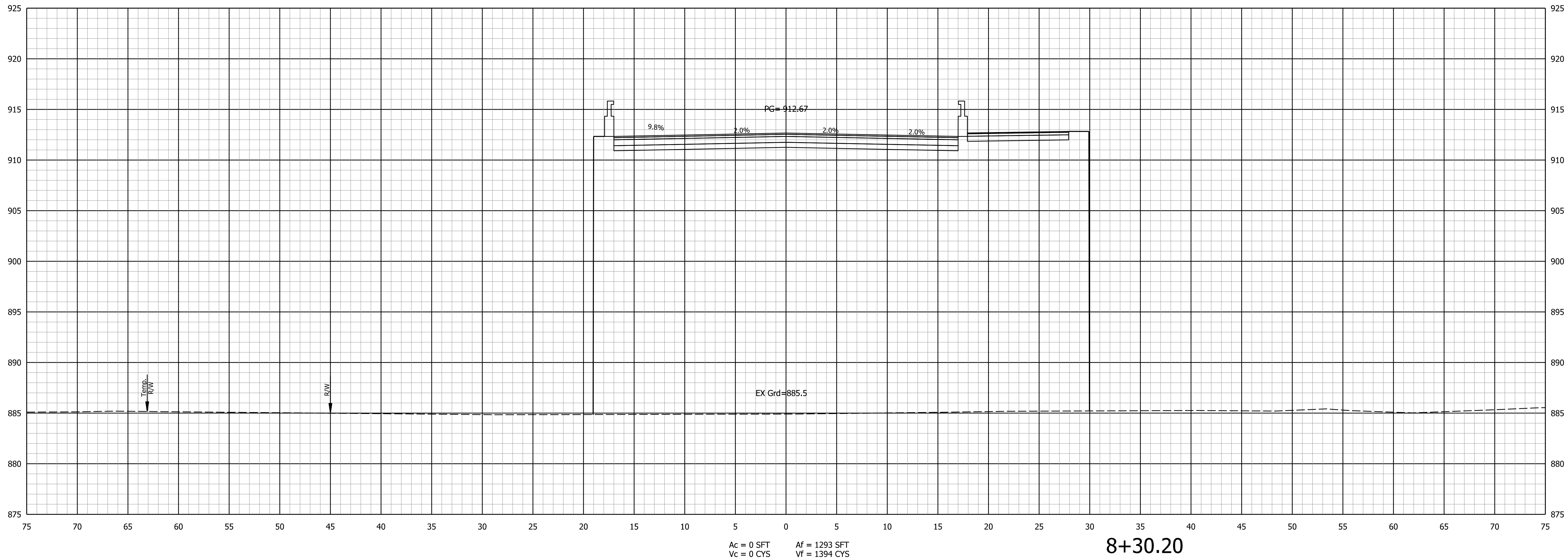
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CHECKED: DSB		CHECKED: AMH		4/2020

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CROSS SECTIONS "PR-S"

SCALE		BRIDGE FILE	
1" = 5'-0"		----	
		DESIGNATION	
		1900406	
SURVEY BOOK		SHEETS	
ELECTRONIC		12	of 16
CONTRACT		PROJECT	
R-40890		1702957	

1/22/2020
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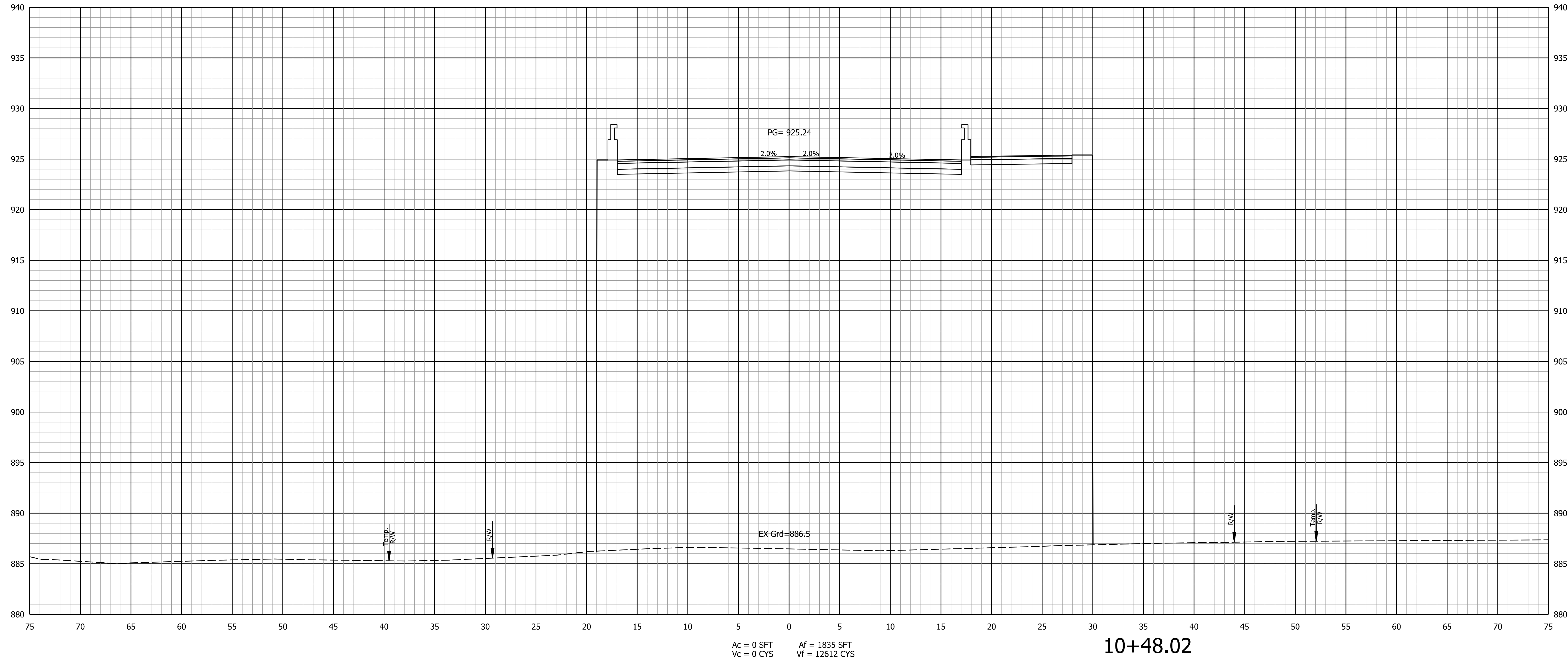
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CHECKED: DSB		CHECKED: AMH		4/2020

INDIANA DEPARTMENT OF TRANSPORTATION	
CROSS SECTIONS "PR-S"	

SCALE 1" = 5'-0"	BRIDGE FILE ----	
	DESIGNATION 1900406	
SURVEY BOOK ELECTRONIC	13	of 16
CONTRACT R-40890	PROJECT 1702957	

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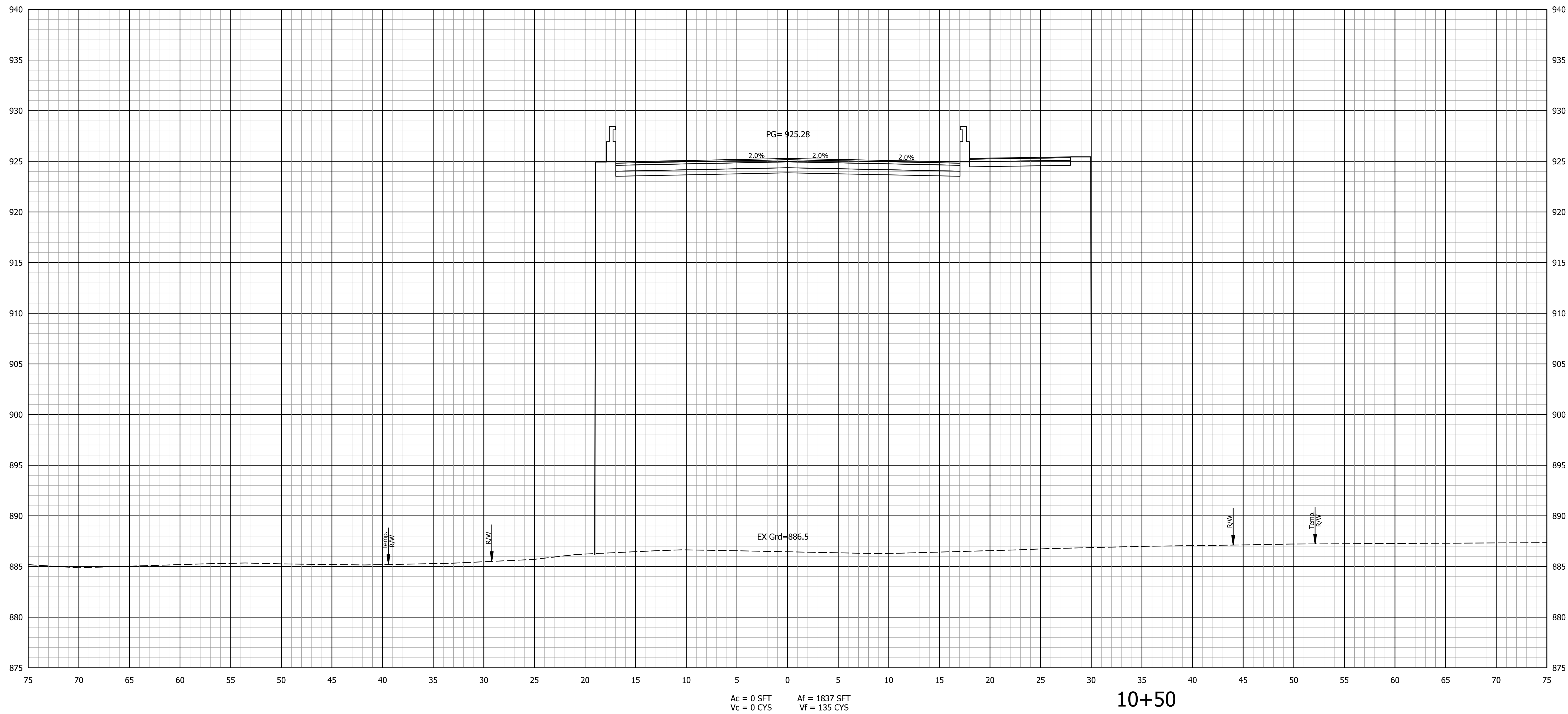
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CHECKED: DSB		CHECKED: AMH		4/2020

INDIANA DEPARTMENT OF TRANSPORTATION	
CROSS SECTIONS "PR-S"	

SCALE 1" = 5'-0"		BRIDGE FILE ----	
		DESIGNATION 1900406	
SURVEY BOOK ELECTRONIC		SHEETS 14 of 16	
CONTRACT R-40890		PROJECT 1702957	

1/22/2020
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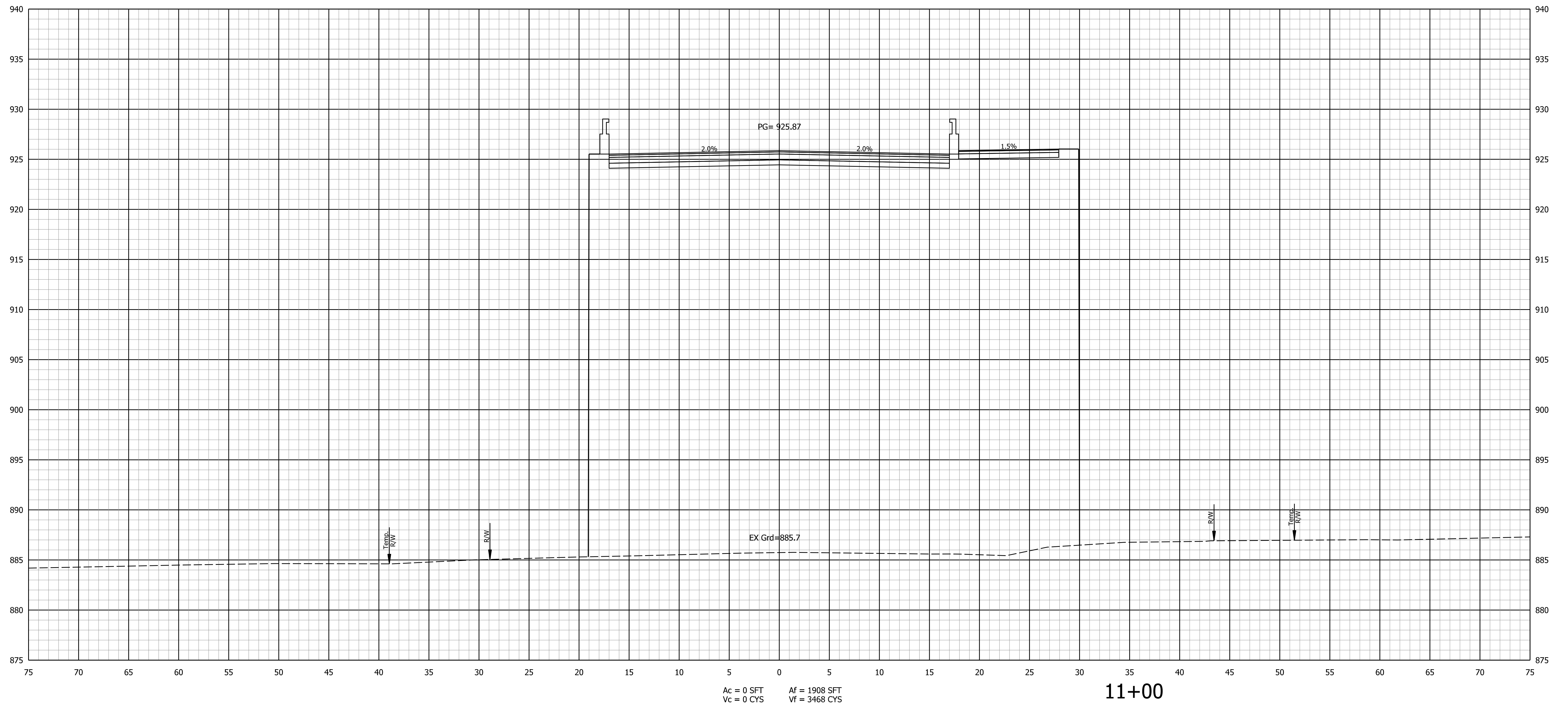
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DESIGNED:	AMH	4/2020	DRAWN:	DPH
CHECKED:	DSB	4/2020	CHECKED:	AMH

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DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS "PR-S"

SCALE		BRIDGE FILE	
1" = 5'-0"		-----	
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		1900406	
SURVEY BOOK		SHEETS	
ELECTRONIC		15	of 16
CONTRACT		PROJECT	
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1/22/2020
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RECOMMENDED FOR APPROVAL _____		DESIGN ENGINEER _____	DATE _____
DESIGNED: _____	AMH 4/2020	DRAWN: _____	DPH 4/2020
CHECKED: _____	DSB 4/2020	CHECKED: _____	AMH 4/2020

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS "PR-S"

SCALE	BRIDGE FILE	
1" = 5'-0"	----	
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	1900406	
SURVEY BOOK	SHEETS	
ELECTRONIC	16	of 16
CONTRACT	PROJECT	
R-40890	1702957	