

PROJECT	DESIGNATION
0301136	0301136
CONTRACT	BRIDGE FILE
R-33560	---

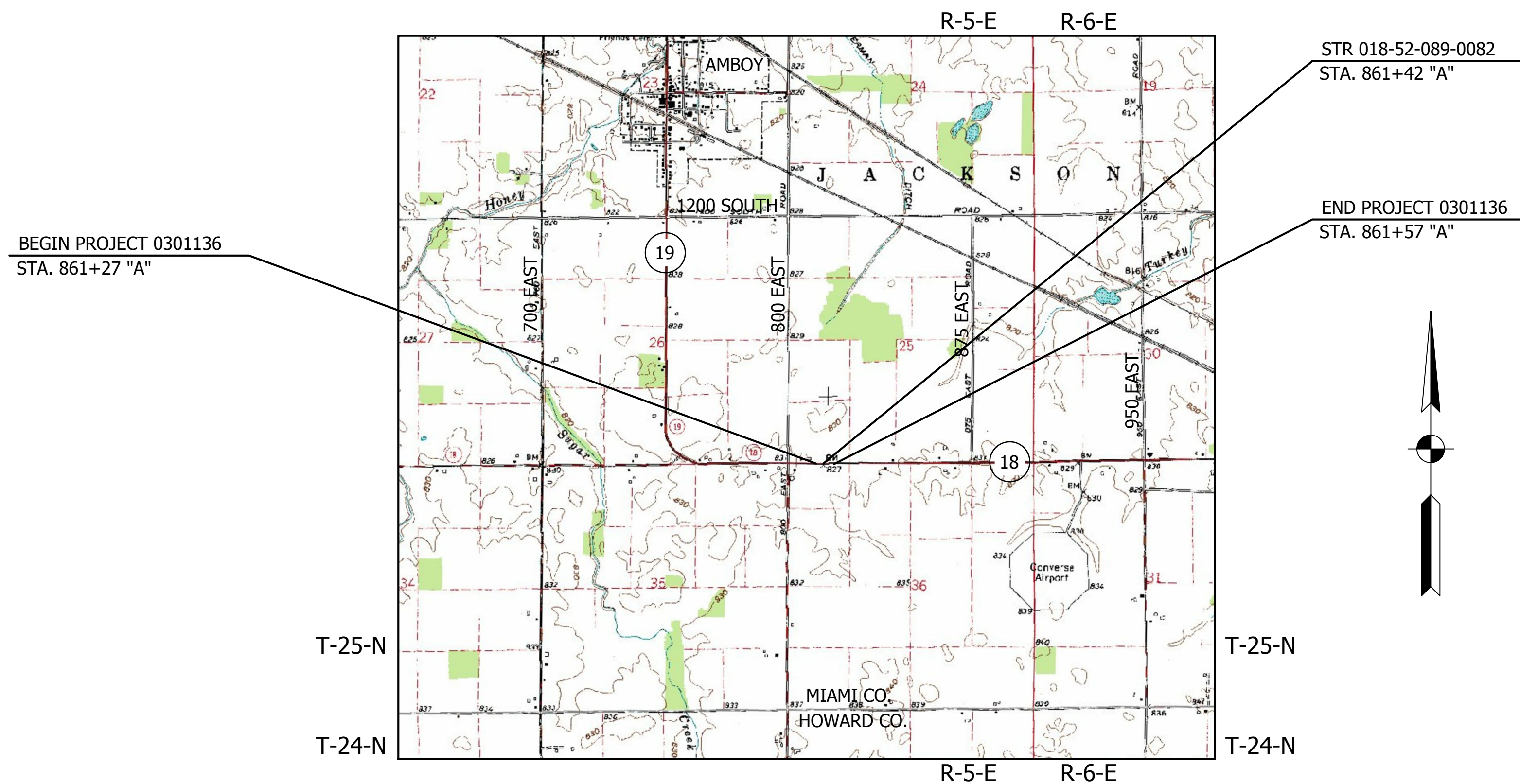
INDIANA  
DEPARTMENT OF  
TRANSPORTATION

# SMALL STRUCTURE REPLACEMENT PLANS

## SR 18 OVER EQUALIZER PIPE

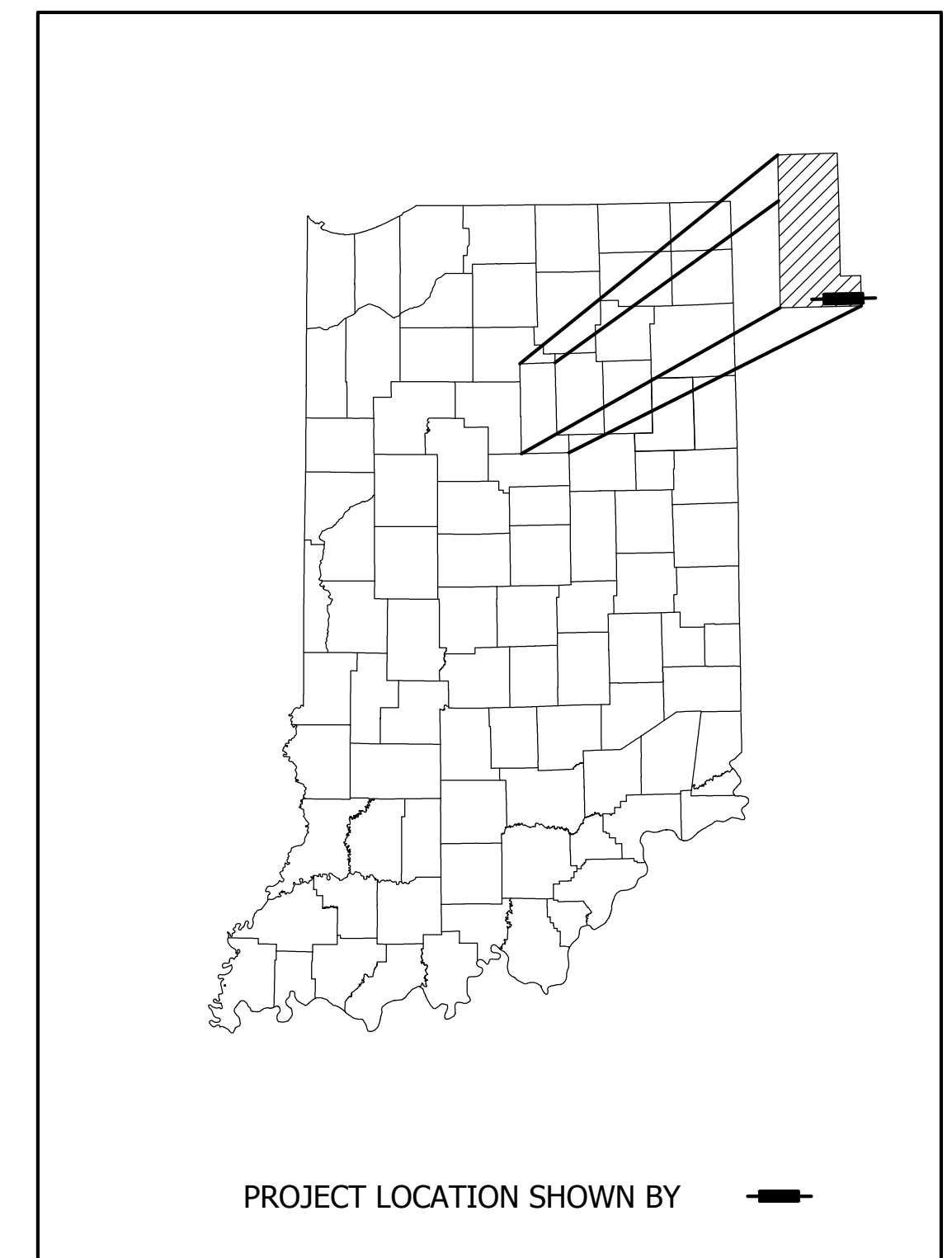
PROJECT NO.      0301136      P.E.  
                                  0301136      R/W  
                                  0301136      CONST.

SMALL STRUCTURE REPLACEMENT (STR 018-52-089-0082) ON SR 18 OVER  
 EQUALIZER PIPE, LOCATED APPROXIMATELY 0.59 MILES EAST OF SR 19 IN  
 SECTIONS 25 AND 36, T-25-N, R-5-E, JACKSON TOWNSHIP, MIAMI COUNTY,  
 INDIANA AT RP 89+0.82.



**LOCATION IN MIAMI COUNTY**  
 SCALE: 1" = 2000'

TRAFFIC DATA	SR 18
A.A.D.T. (2011)	2090 V.P.D.
A.A.D.T. (2034)	2090 V.P.D.
D.H.V.	184 V.P.H.
DIRECTIONAL DISTRIBUTION	47.4%
TRUCKS	10.2% D.H.V. 17.5% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	55 MPH
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	MINOR ARTERIAL
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



LATITUDE: 40°34'46" N      LONGITUDE: -85°55'01" W

GROSS LENGTH:                      0.006 MI.  
 NET LENGTH:                            0.006 MI.  
 MAXIMUM GRADE:                      0.08 %

HUC:                                      05120101170050

INDIANA DEPARTMENT OF TRANSPORTATION  
 STANDARD SPECIFICATIONS DATED 2014 TO  
 BE USED WITH THESE PLANS

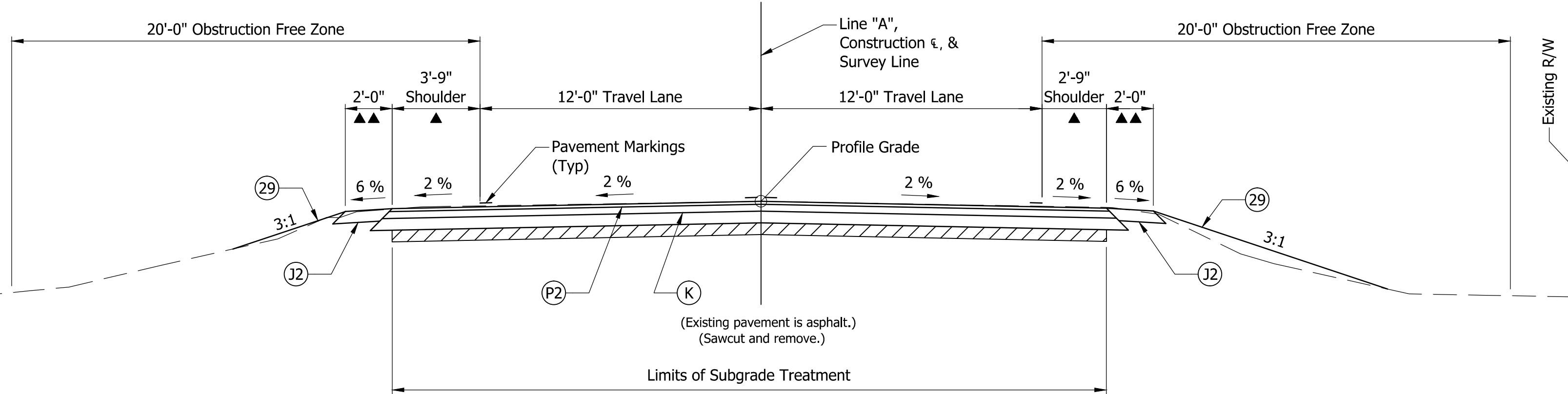
 Ph: (260) 490-1025      9835 Auburn Road Fax: (260) 490-1026      Fort Wayne, Indiana 46825	PLANS PREPARED BY: ENGINEERING RESOURCES, INC.      (260) 490-1025 <small>PHONE NUMBER</small>		BRIDGE FILE DESIGNATION 0301136 SHEETS 1 of 18
	CERTIFIED BY: <small>DATE</small> 07/16/2013		CONTRACT R-33560
APPROVED FOR LETTING: _____ <small>INDIANA DEPARTMENT OF TRANSPORTATION</small>	<small>DATE</small> _____		





Jul 17, 2013 - 2:23pm  
 S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 04 - Typical Sections.dwg

- ▲ Paved shoulder equals 5'-0" over R.C. Box Structure and Cross Slope equals 4%
- ▲▲ Taper to end of R.C. Box Structure as indicated on General Plan Sheet



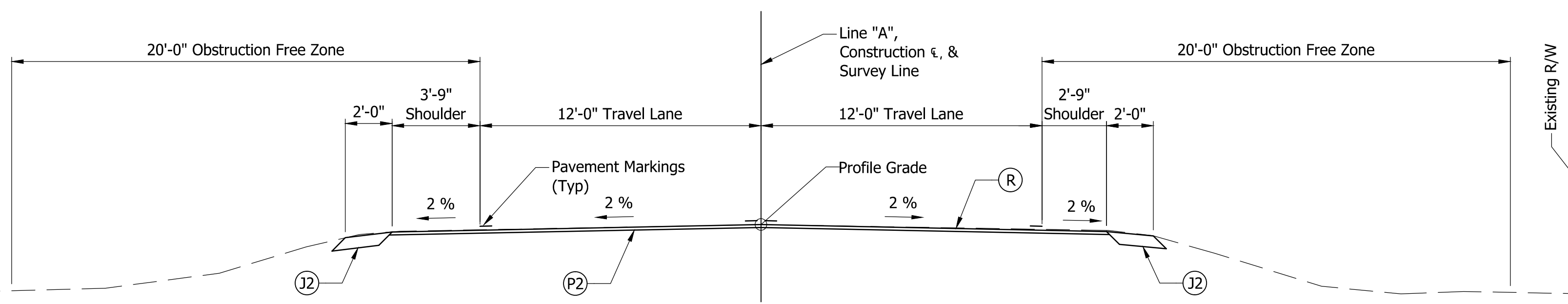
**TYPICAL CROSS SECTION - FULL DEPTH**

Scale: 1/4" = 1'-0"

Station 861+27 to 861+57  
 Station 861+79.5 to 861+89.5

**LEGEND**

- (J2) 6 In. "Compacted Aggregate, No. 73, Shoulder"
- (P2) "Asphalt for Tack Coat"
- (K) Full Depth Pavement  
 165#/SY "QC/QA-HMA, 2, 64, Surface, 9.5mm", on  
 385#/SY "QC/QA-HMA, 2, 64, Intermediate, 19mm", on  
 6 In. "Compacted Aggregate, No. 53, Base", on  
 "Subgrade Treatment, Type IIIA"
- (R) Asphalt Material for Resurfacing  
 165#/SY "QC/QA-HMA, 2, 64, Surface, 9.5mm", on  
 "Milling, Asphalt, 1.5 Inch"
- (29) "Mulched Seeding, R"



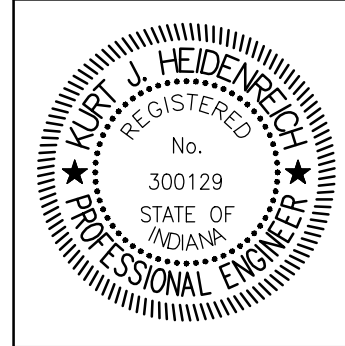
**TYPICAL CROSS SECTION - INCIDENTAL CONSTR.**

Scale: 1/4" = 1'-0"

Station 860+77 to 861+27  
 Station 861+57 to 861+79.5  
 Station 861+89.5 to 862+07



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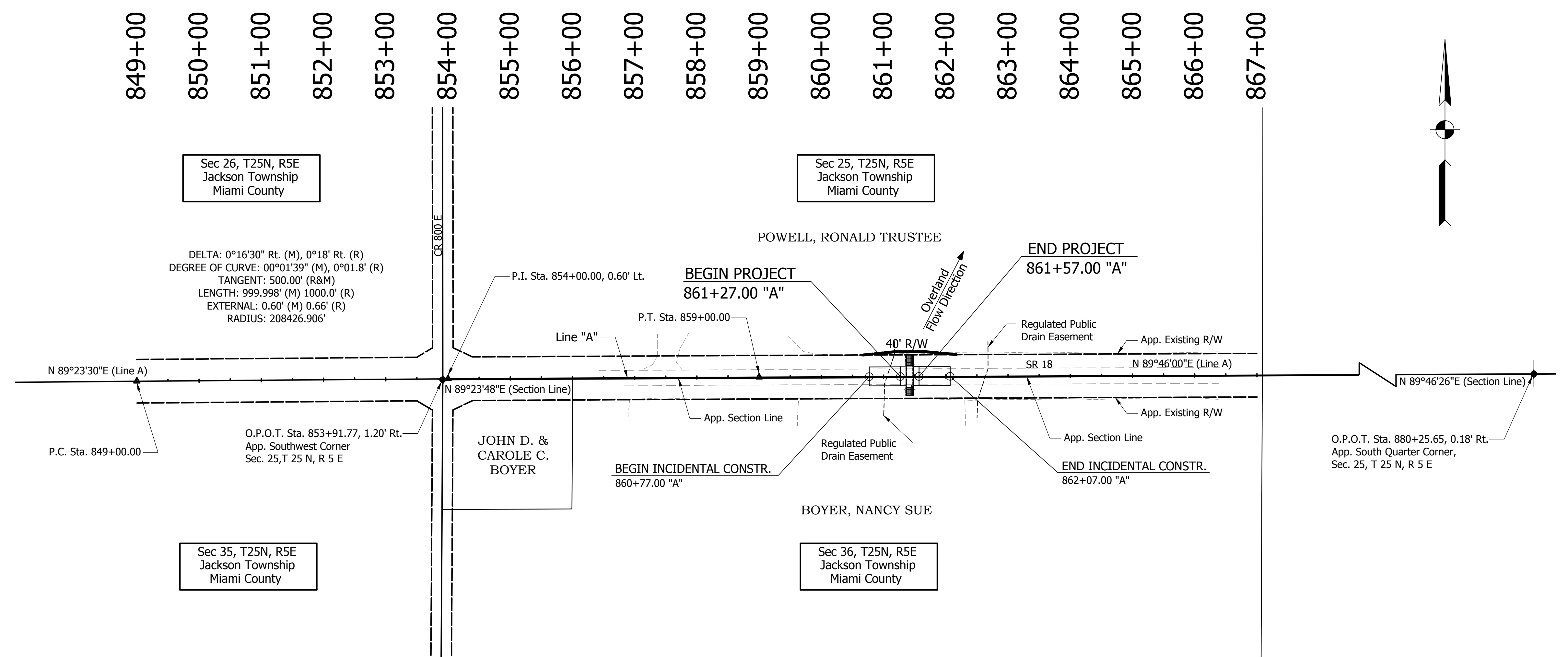
RECOMMENDED FOR APPROVAL	<i>Heidi Weick</i>	DESIGN ENGINEER	07/16/13
DESIGNED: AJI	DRAWN: AJI	CHECKED: TRL	CHECKED: TRL

INDIANA  
 DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	0301136
SURVEY BOOK	SHEETS
	3 of 18
CONTRACT	PROJECT
R-32560	0301136

Jul 17, 2013 - 10:16am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 05 - Plot 1.dwg



Sec 26, T25N, R5E  
Jackson Township  
Miami County

Sec 25, T25N, R5E  
Jackson Township  
Miami County

DELTA: 0°16'30" Rt. (M), 0°18' Rt. (R)  
DEGREE OF CURVE: 00°01'39" (M), 0°01.8' (R)  
TANGENT: 500.00' (R&M)  
LENGTH: 999.998' (M) 1000.0' (R)  
EXTERNAL: 0.60' (M) 0.66' (R)  
RADIUS: 208426.906'

POWELL, RONALD TRUSTEE

END PROJECT  
861+57.00 "A"

BEGIN PROJECT  
861+27.00 "A"

JOHN D. &  
CAROLE C.  
BOYER

BEGIN INCIDENTAL CONSTR.  
860+77.00 "A"

BOYER, NANCY SUE

END INCIDENTAL CONSTR.  
862+07.00 "A"

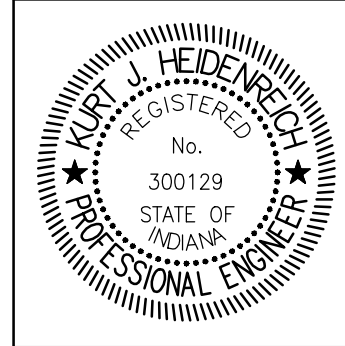
Sec 35, T25N, R5E  
Jackson Township  
Miami County

Sec 36, T25N, R5E  
Jackson Township  
Miami County

All Right-of-Way on this sheet is described from Line "A" U.N.O.

**ENGINEERING Resources, Inc.**

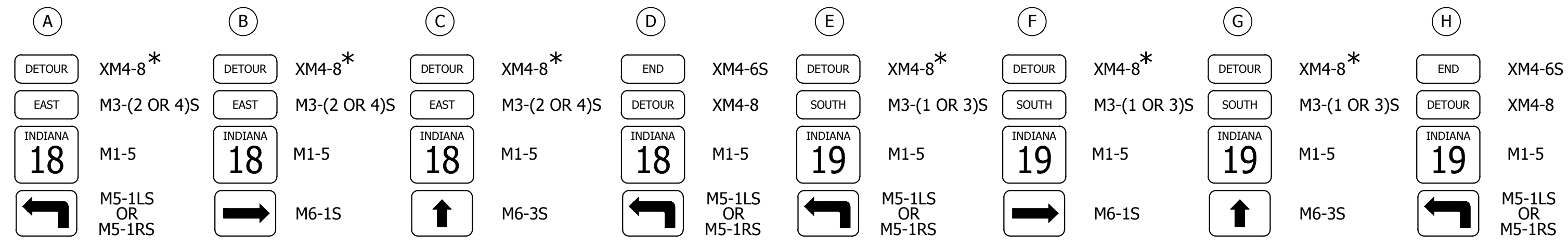
Ph: (260) 490-1025 9835 Auburn Road  
Fax: (260) 490-1026 Fort Wayne, Indiana 46825



RECOMMENDED FOR APPROVAL *Heidi K. Heidt* 07/16/13  
DESIGN ENGINEER DATE  
DESIGNED: AJI DRAWN: AJI  
CHECKED: TRL CHECKED: TRL

INDIANA DEPARTMENT OF TRANSPORTATION  
PLAT NO. 1

HORIZONTAL SCALE 1" = 100'	BRIDGE FILE
VERTICAL SCALE N/A	DESIGNATION 0301136
SURVEY BOOK R-32560	SHEETS 4 of 18 PROJECT 0301136



\* Where 2 Detour Route Marker Assemblies are side by side, only one XM4-8 is required

### DETOUR ROUTE MARKER ASSEMBLY

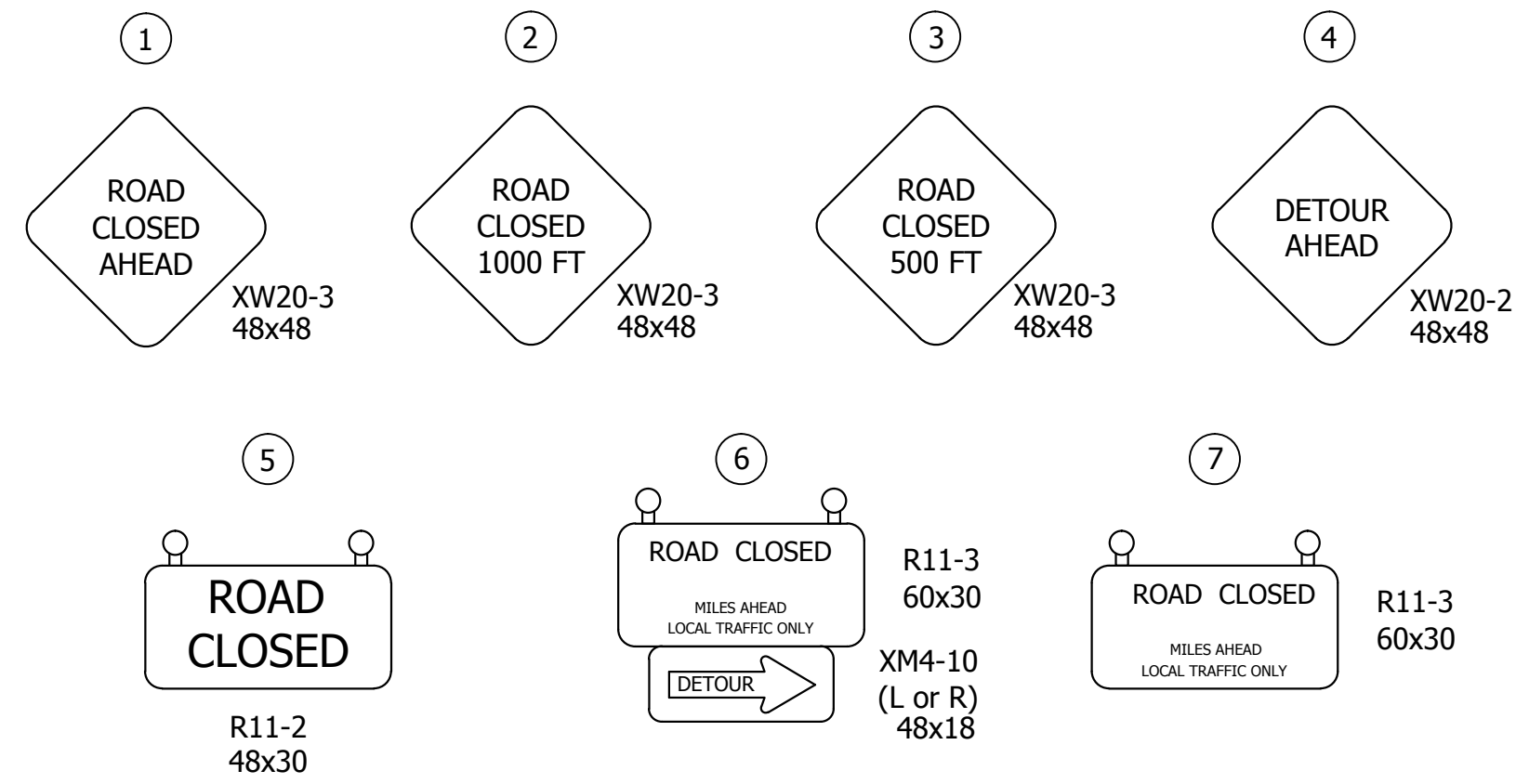
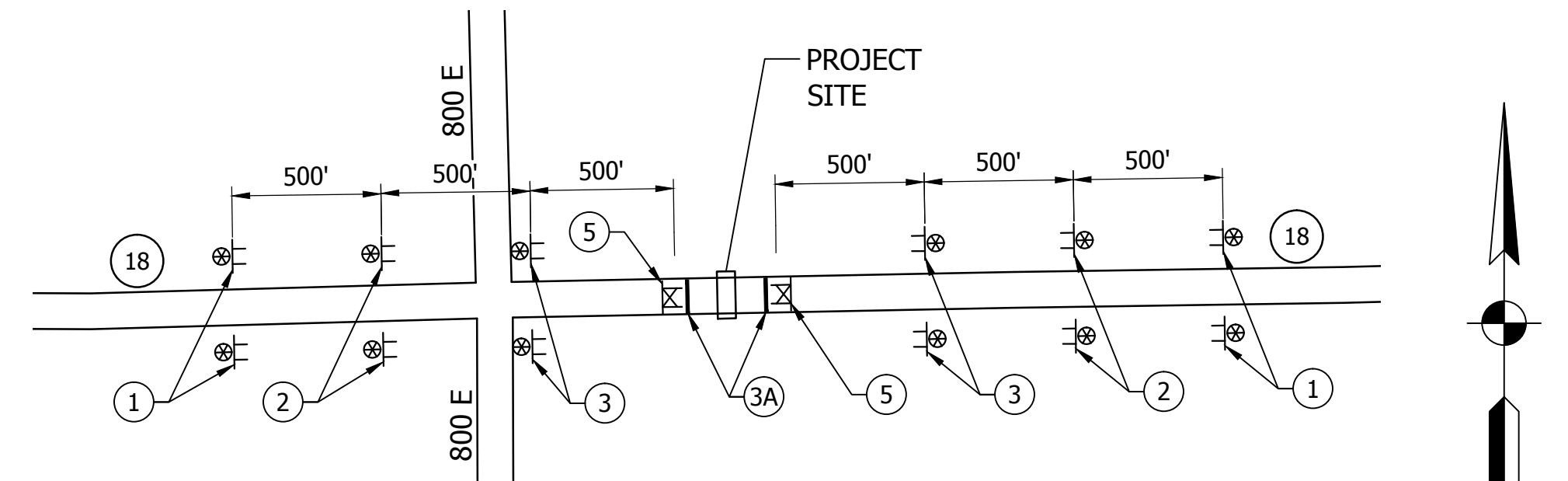
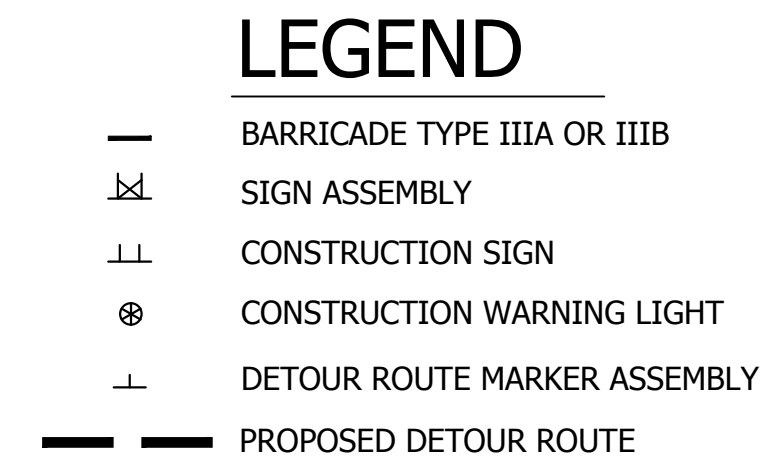
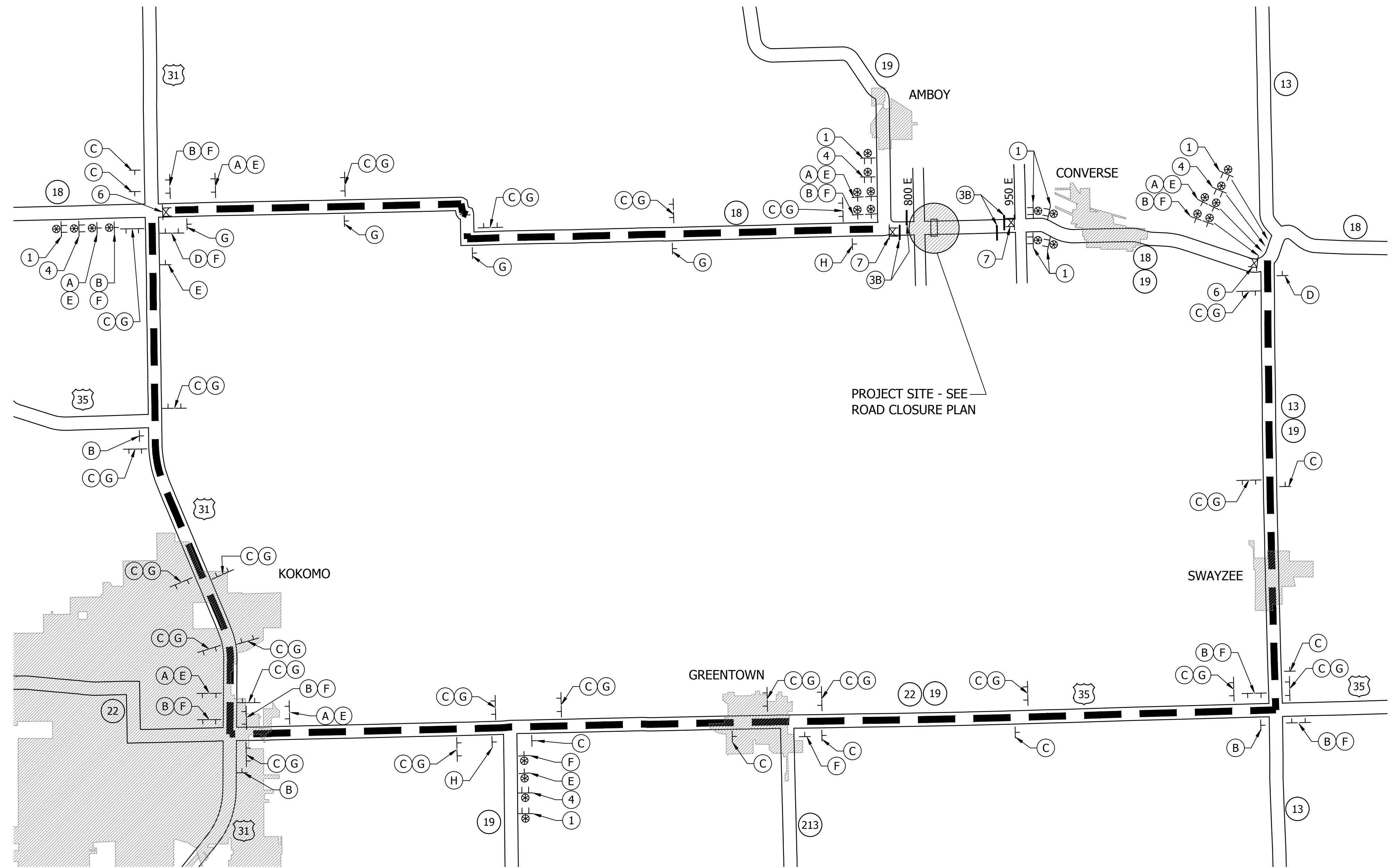


TABLE OF QUANTITIES				
SYMBOL	DESCRIPTION	NUMBER	TYPE	QTY.
(1)	Road Closed Ahead	XW20-3	A	12
(2)	Road Closed 1000 Ft	XW20-3	A	4
(3)	Road Closed 500 Ft	XW20-3	A	4
(4)	Detour Ahead	XW20-2	A	4
(5)	Road Closure Sign Assembly w/ "Road Closed" Sign	R11-2	**	2
(6)	Road Closure Sign Assembly w/ "Road Closed, Local Traffic Only" and "Detour" Signs	R11-3 XM4-10(L or R)	**	2
(7)	Road Closure Sign Assembly w/ "Road Closed, Local Traffic Only" Sign	R11-3	**	2
(A) (E)	Advance Turn Detour Route Marker Assembly	XM4-8 M3-(1 - 4)S M1-5 M5-1LS (OR 1RS)	**	14
(B) (F)	Directional Detour Route Marker Assembly	XM4-8 M3-(1 - 4)S M1-5 M6-1S	**	22
(C) (G)	Confirming Detour Route Marker Assembly	XM4-8 M3-(1 - 4)S M1-5 M6-3S	**	58
(D) (H)	End Detour Route Marker Assembly	XM4-6S XM4-8 M1-5 M5-1LS (OR 1RS)	**	4
(3A)	Standard Barricade III-A		**	72 Lft
(3B)	Standard Barricade III-B		**	72 Lft

\*\* Included in pay item other than Construction Sign, Type A, B, or C



Jul 17, 2013 10:18am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 07 - MOT.dwg

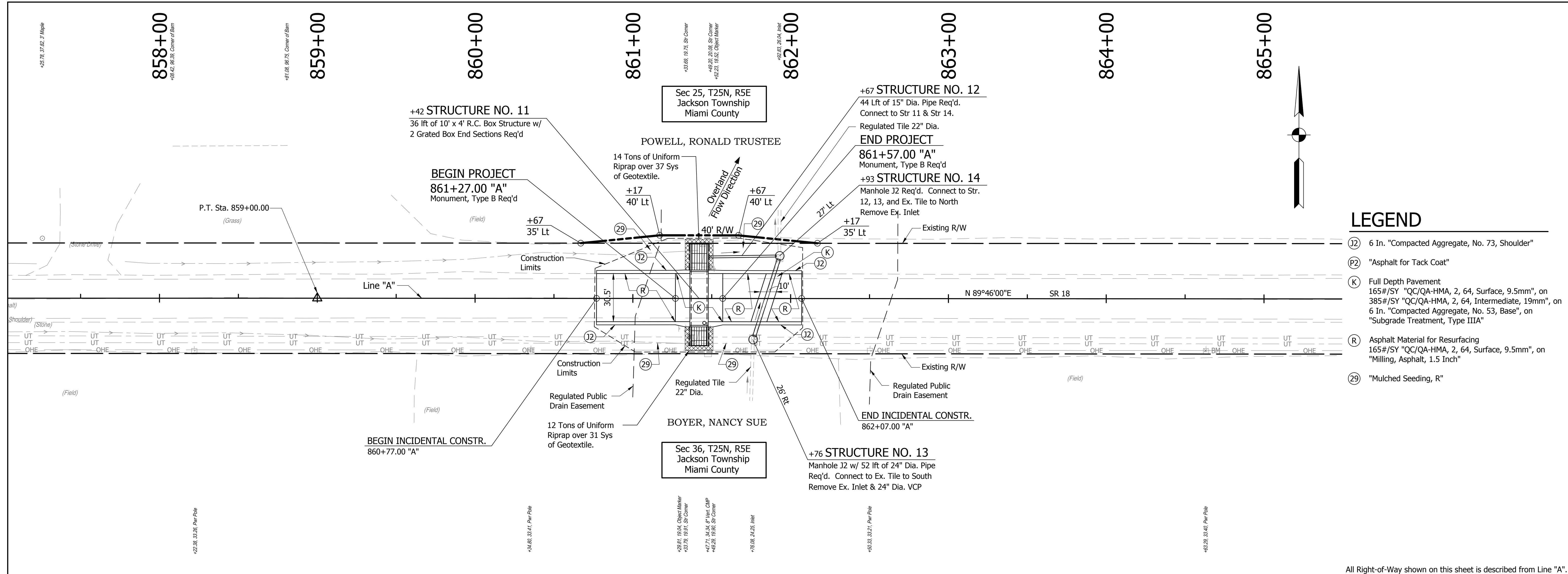
**ENGINEERING Resources, Inc.**  
Ph: (260) 490-1025 9835 Auburn Road  
Fax: (260) 490-1026 Fort Wayne, Indiana 46825



RECOMMENDED FOR APPROVAL: *Heidi K. Heidt* DESIGN ENGINEER 07/16/13 DATE  
DESIGNED: AJI DRAWN: AJI  
CHECKED: TRL CHECKED: TRL

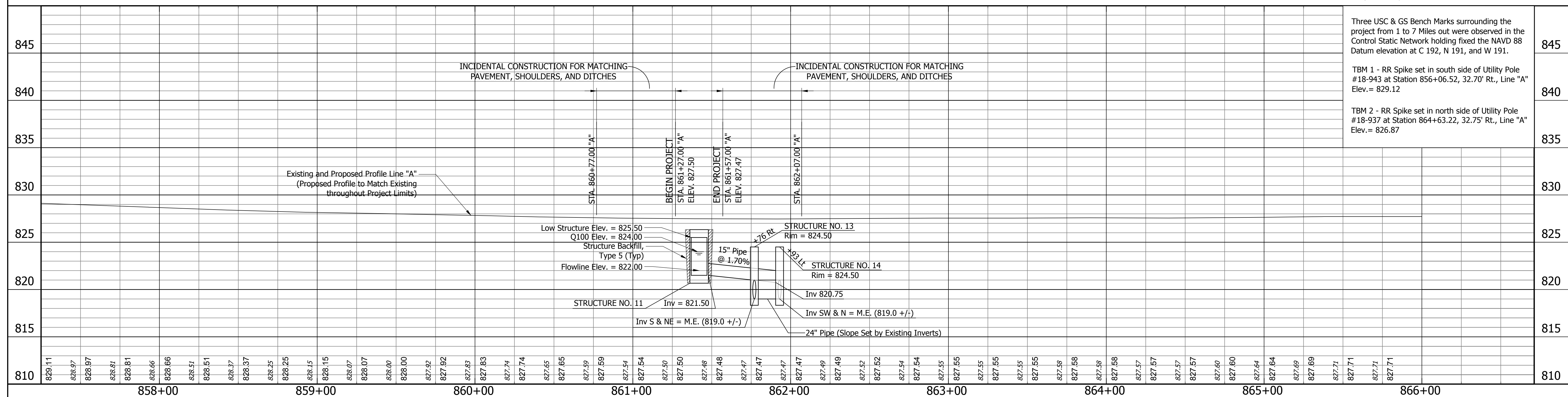
INDIANA DEPARTMENT OF TRANSPORTATION  
MAINTENANCE OF TRAFFIC

HORIZONTAL SCALE	BRIDGE FILE
NO SCALE	DESIGNATION
VERTICAL SCALE	0301136
NO SCALE	SHEETS
SURVEY BOOK	5 of 18
CONTRACT	PROJECT
R-32560	0301136



- ### LEGEND
- (J2) 6 In. "Compacted Aggregate, No. 73, Shoulder"
  - (P2) "Asphalt for Tack Coat"
  - (K) Full Depth Pavement  
165#/SY "QC/QA-HMA, 2, 64, Surface, 9.5mm", on  
385#/SY "QC/QA-HMA, 2, 64, Intermediate, 19mm", on  
6 In. "Compacted Aggregate, No. 53, Base", on  
"Subgrade Treatment, Type IIIA"
  - (R) Asphalt Material for Resurfacing  
165#/SY "QC/QA-HMA, 2, 64, Surface, 9.5mm", on  
"Milling, Asphalt, 1.5 Inch"
  - (29) "Mulched Seeding, R"

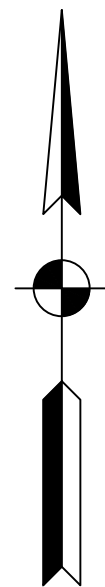
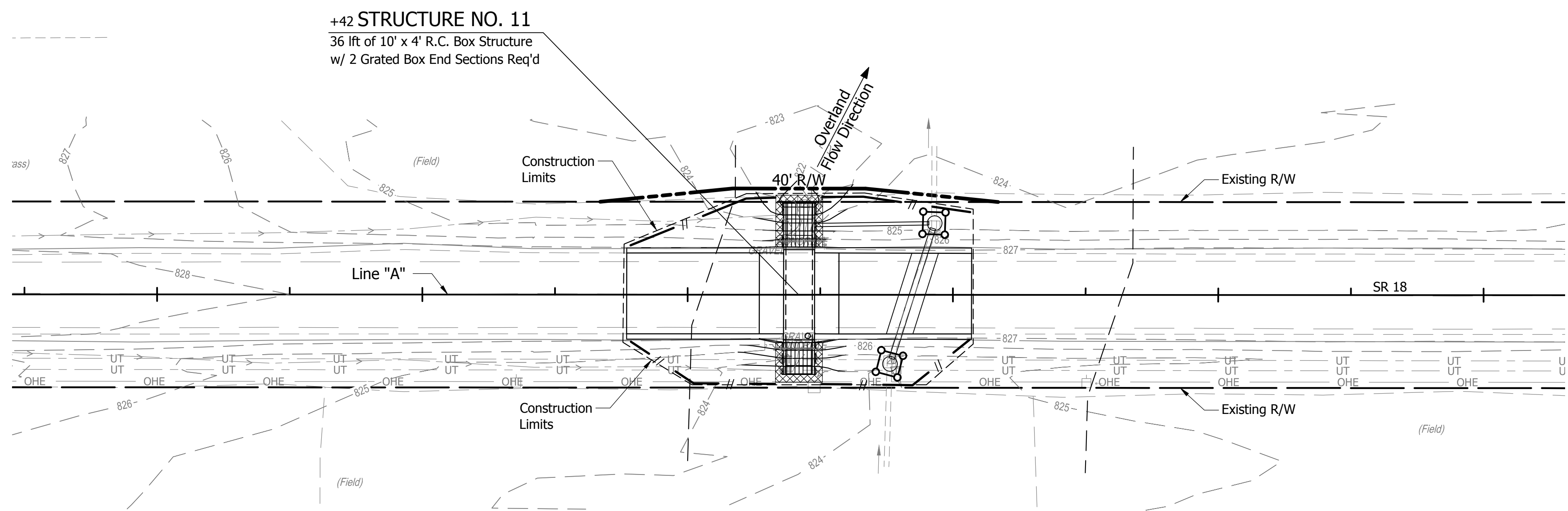
All Right-of-Way shown on this sheet is described from Line "A".



<p><b>ENGINEERING Resources, Inc.</b></p> <p>Ph: (260) 490-1025 Fax: (260) 490-1026</p> <p>9835 Auburn Road Fort Wayne, Indiana 46825</p>	<p>RECOMMENDED FOR APPROVAL: <i>Ka Lin</i> DESIGN ENGINEER 07/16/13 DATE</p> <p>DESIGNED: AJI DRAWN: AJI</p> <p>CHECKED: TRL CHECKED: TRL</p>	<p style="text-align: center;"><b>INDIANA DEPARTMENT OF TRANSPORTATION</b></p> <p style="text-align: center;"><b>PLAN AND PROFILE</b></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>HORIZONTAL SCALE</td> <td>BRIDGE FILE</td> </tr> <tr> <td>1" = 30'</td> <td></td> </tr> <tr> <td>VERTICAL SCALE</td> <td>DESIGNATION</td> </tr> <tr> <td>1" = 5'</td> <td>0301136</td> </tr> <tr> <td>SURVEY BOOK</td> <td>SHEETS</td> </tr> <tr> <td></td> <td>6 of 18</td> </tr> <tr> <td>CONTRACT</td> <td>PROJECT</td> </tr> <tr> <td>R-33560</td> <td>0301136</td> </tr> </table>	HORIZONTAL SCALE	BRIDGE FILE	1" = 30'		VERTICAL SCALE	DESIGNATION	1" = 5'	0301136	SURVEY BOOK	SHEETS		6 of 18	CONTRACT	PROJECT	R-33560	0301136
HORIZONTAL SCALE	BRIDGE FILE																		
1" = 30'																			
VERTICAL SCALE	DESIGNATION																		
1" = 5'	0301136																		
SURVEY BOOK	SHEETS																		
	6 of 18																		
CONTRACT	PROJECT																		
R-33560	0301136																		

Jul 17, 2013 - 2:26pm S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 08 - Plan and Profile.dwg

859+00                      860+00                      861+00                      862+00                      863+00                      864+00



**EROSION CONTROL PLAN**  
Scale: 1" = 30'

TEMPORARY EROSION CONTROL																
LOCATION		LEFT	RIGHT	TEMPORARY SILT FENCE	TEMPORARY CHECK DAMS STRAW BALES	TEMPORARY CHECK DAM REVETMENT RIPRAP	GEOTEXTILES	TEMPORARY SEDIMENT TRAP	TEMPORARY SLOPE DRAIN	SPWASHPAD RIPRAP	SEED MIXTURE, T	MULCHING MATERIAL	FERTILIZER	TEMPORARY DITCH INLET PROTECTION	INTERCEPTOR DITCH (NOT A PAY ITEM)	NO. 2 STONE FOR CONSTRUCTION ENTRANCE *
FROM STATION	TO STATION															
860+77	861+34	X		57												
860+77	861+34		X	57												
861+50	862+07	X		57										1		
861+50	862+07		X	57										1		
861+76	861+76	X														
861+93	861+93	X														
TOTALS				228										2		100

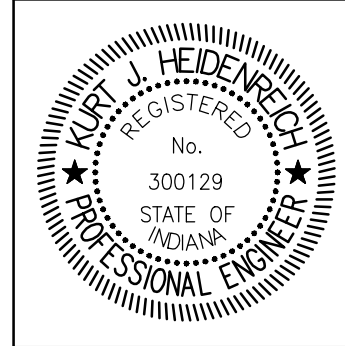
\* Undistributed Quantity To be Used at the Direction of the Engineer

**LEGEND**

- SILT FENCE (PER STANDARD DRAWING E 205-TECP-02)
- TEMPORARY DITCH INLET PROTECTION (PER STANDARD DRAWING E 205-TECI-01 TO 03)

Jul 17, 2013 - 10:40am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 18 - Erosion Control.dwg

**ENGINEERING Resources, Inc.**  
Ph: (260) 490-1025      9835 Auburn Road  
Fax: (260) 490-1026      Fort Wayne, Indiana 46825

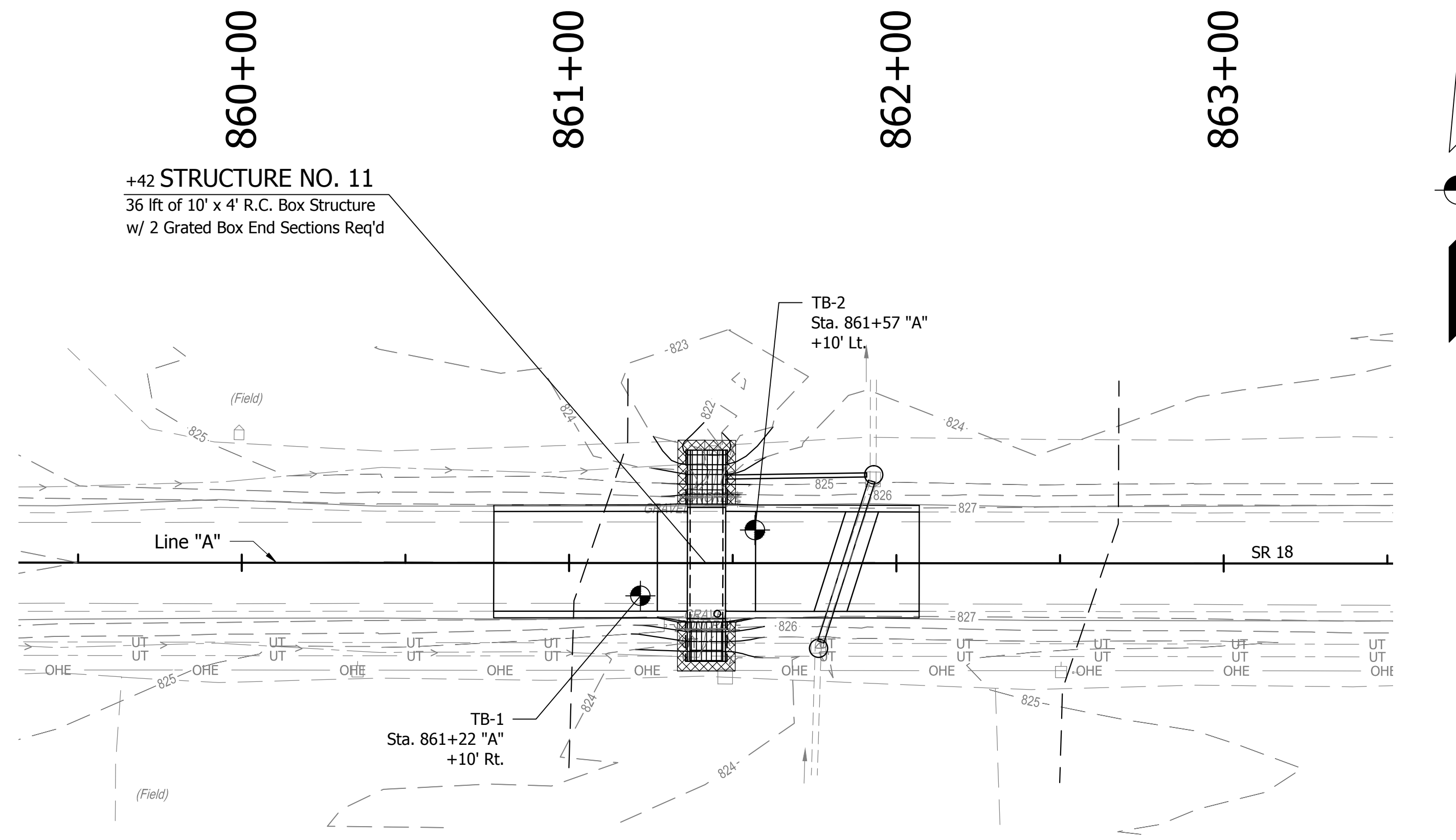


RECOMMENDED FOR APPROVAL: *Heidi Kline* DESIGN ENGINEER      07/16/13 DATE  
DESIGNED: AJI      DRAWN: AJI  
CHECKED: TRL      CHECKED: TRL

INDIANA DEPARTMENT OF TRANSPORTATION  
**EROSION CONTROL PLAN**

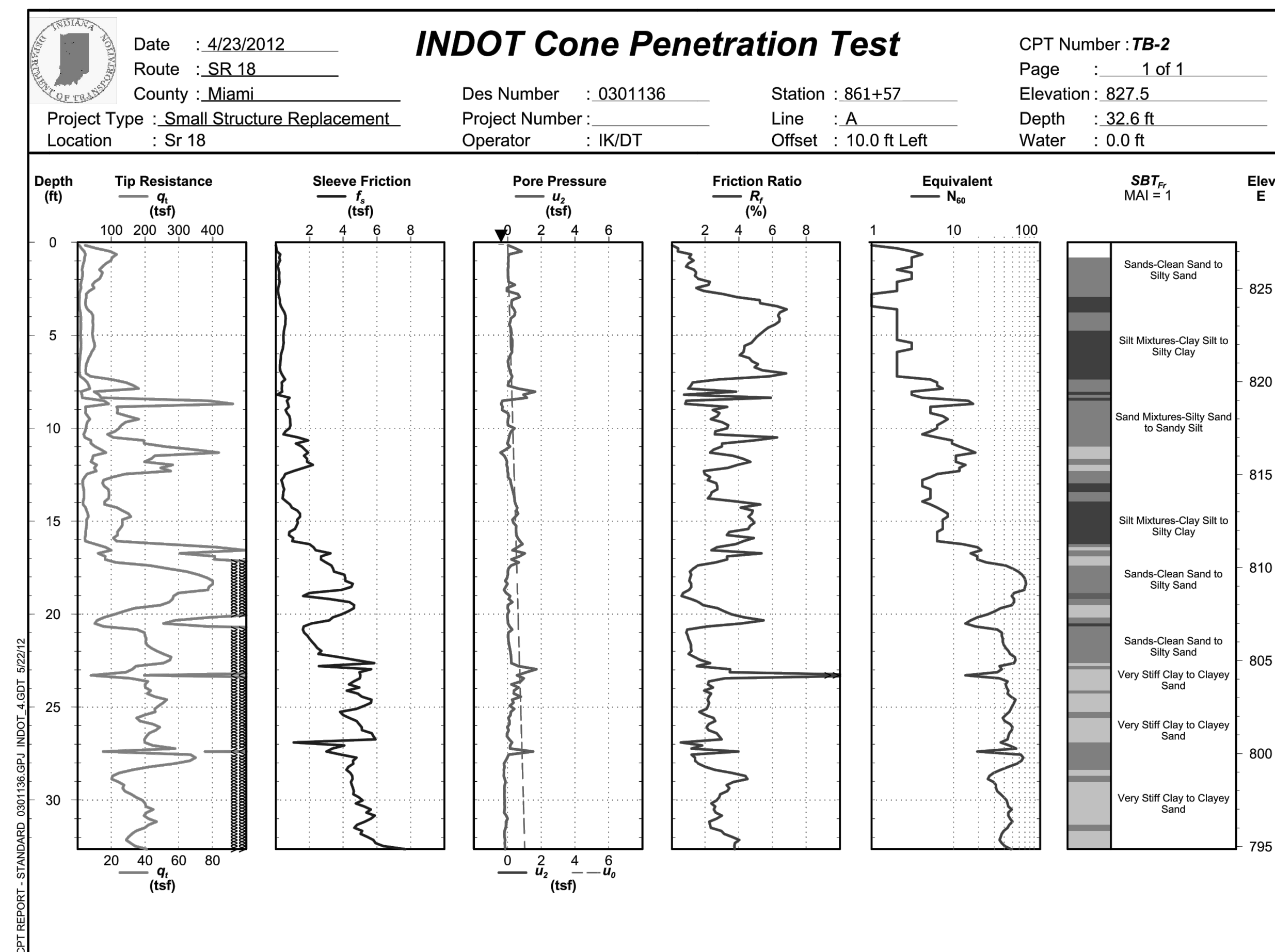
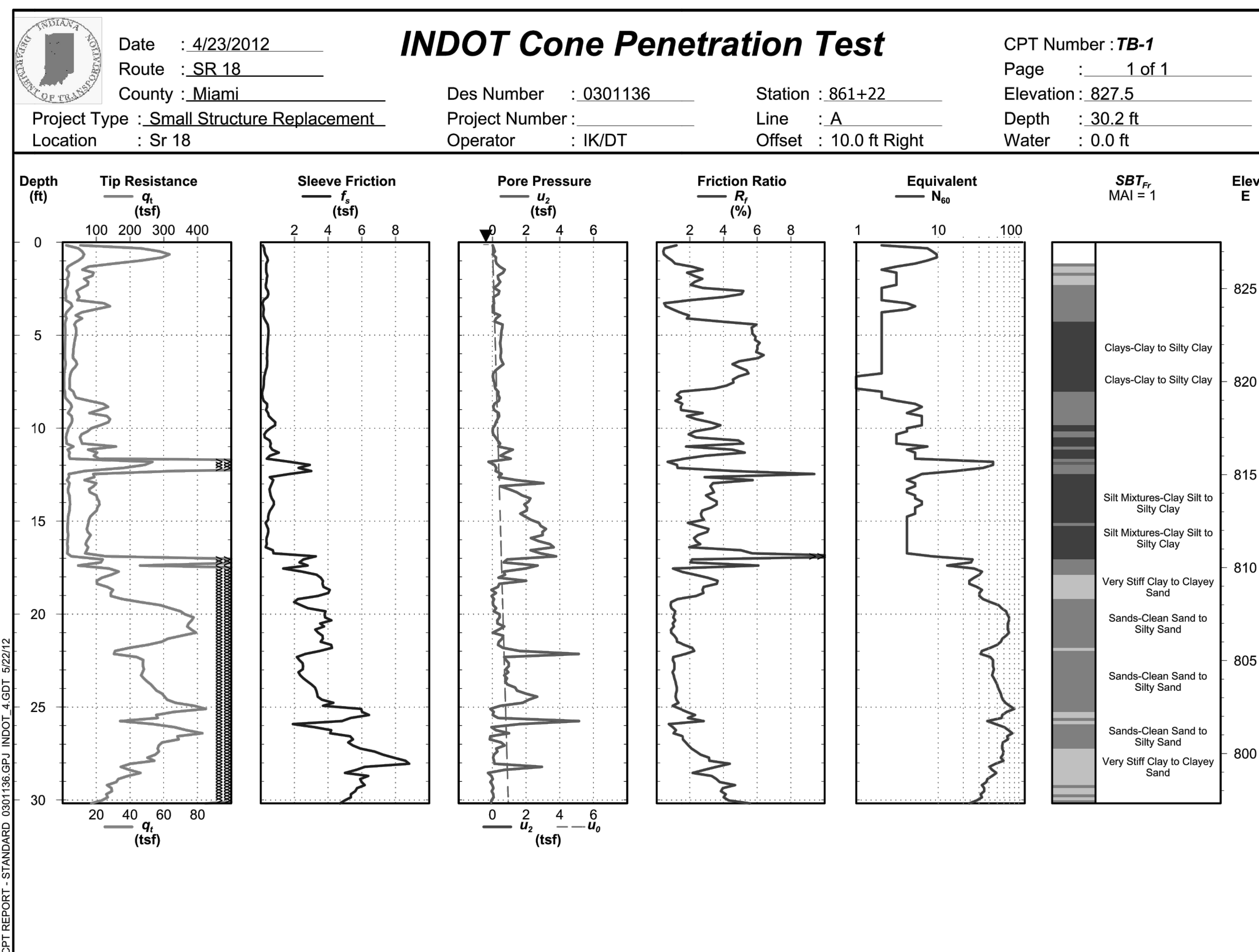
HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
N/A	0301136
SURVEY BOOK	SHEETS
	7 of 18
CONTRACT	PROJECT
R-32560	0301136





**PLAN**

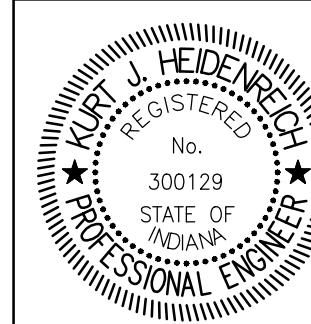
Scale: 1" = 30'



Jul 17, 2013 - 10:41am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 25 - Soil Borings.dwg

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RECOMMENDED FOR APPROVAL: *Heidi Kline* DESIGN ENGINEER 07/16/13 DATE

DESIGNED: JFW DRAWN: JFW

CHECKED: AJI CHECKED: AJI

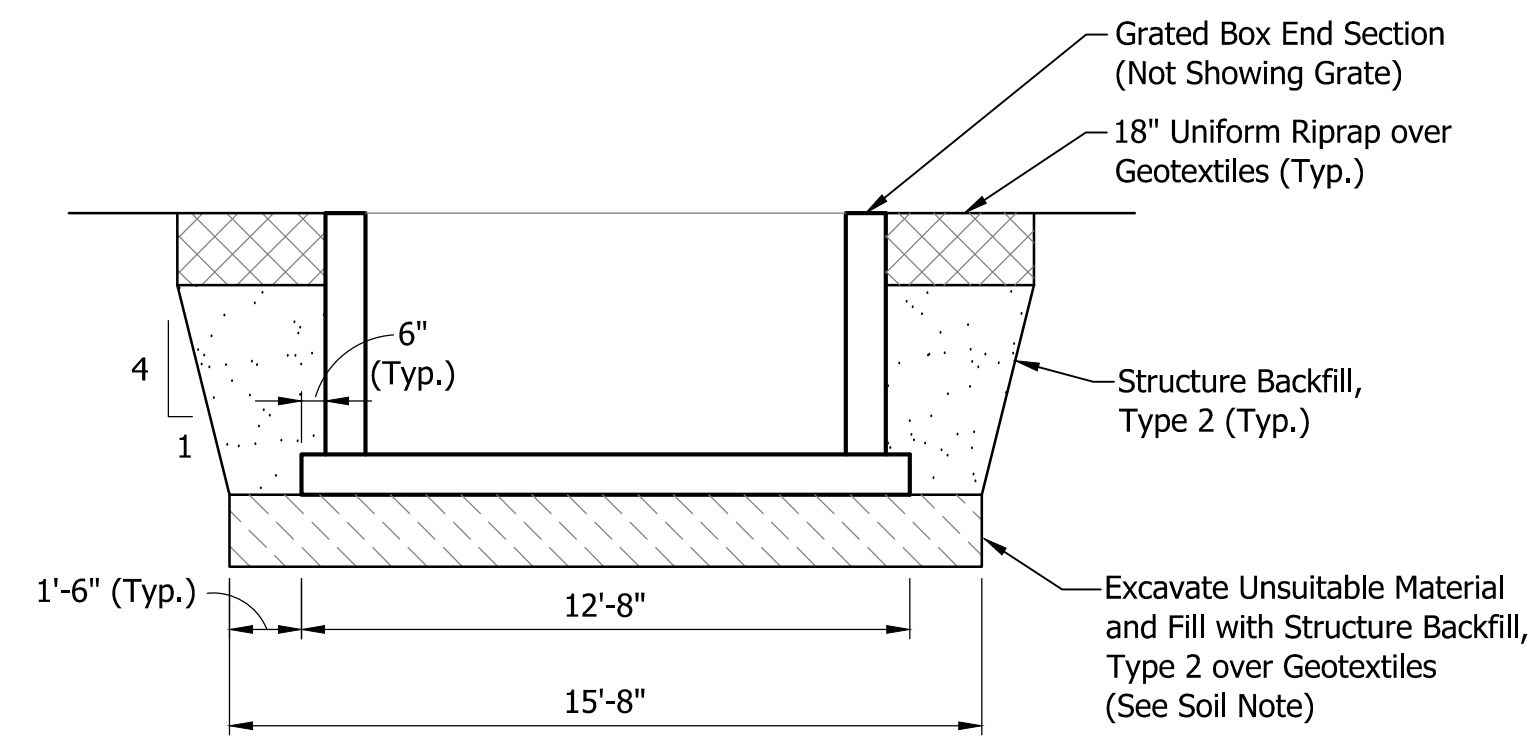
INDIANA DEPARTMENT OF TRANSPORTATION

SOIL BORINGS

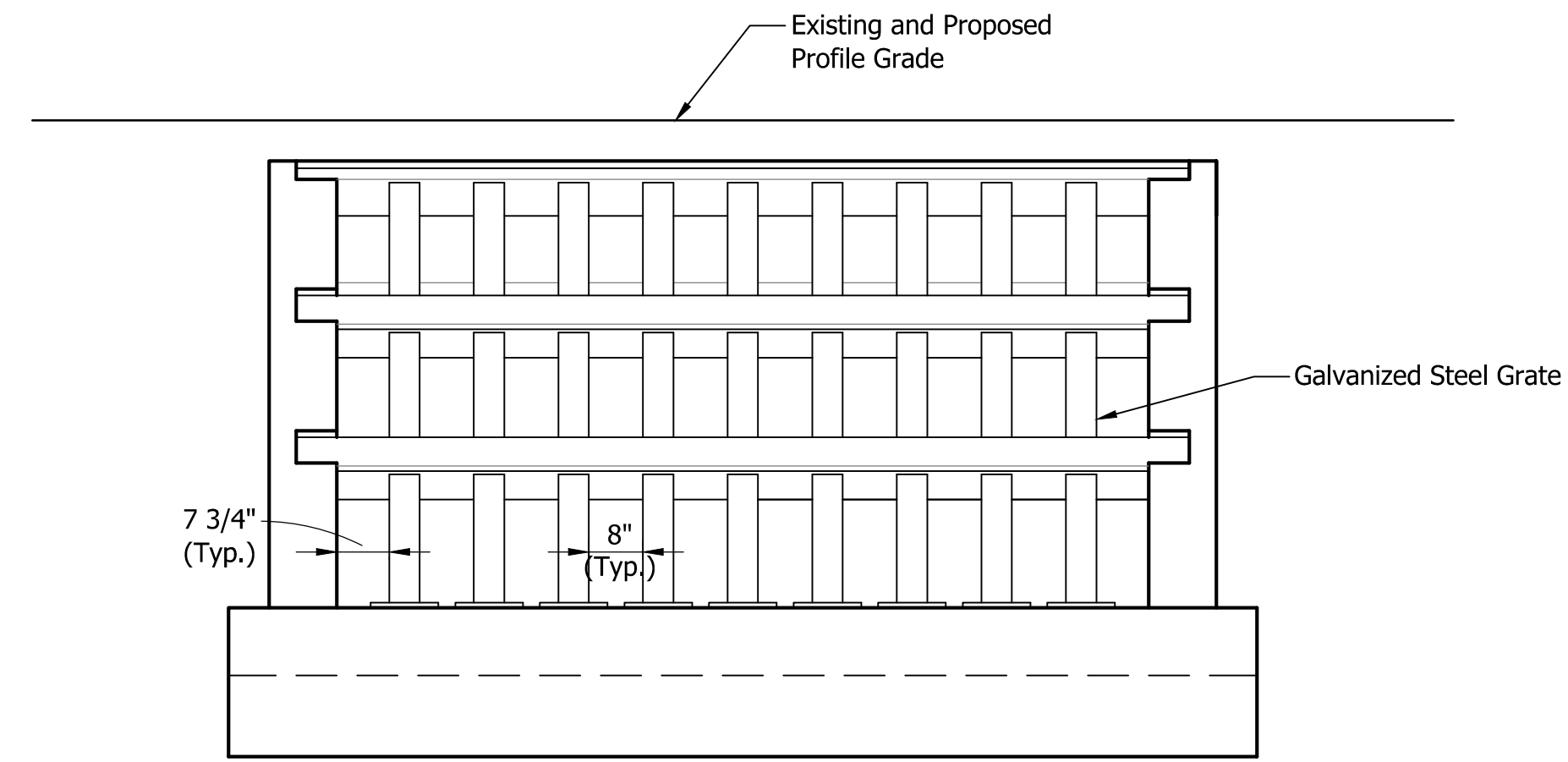
HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	
VERTICAL SCALE	DESIGNATION
NO SCALE	0301136
SURVEY BOOK	SHEETS
	8 of 18
CONTRACT	PROJECT
R-32560	0301136







**SECTION C-C**  
Scale: 1/4" = 1'-0"



**NORTH ELEVATION**  
Scale: 1/2" = 1'-0"

**DESIGN DATA**

Live Load:  
Designed for HL-93 loading, in accordance with the AASHTO LRFD Bridge Design Specifications, 6th Edition, 2012, and its subsequent interims

Dead Load:  
Dead Load increased 35 Psf for Future Wearing Surface

Design Strength:  
Reinforcing Steel (Grade 60)  $f_y = 60,000$  psi  
Concrete in Headwalls and Grated Box End Sections  $f_c = 4,000$  psi

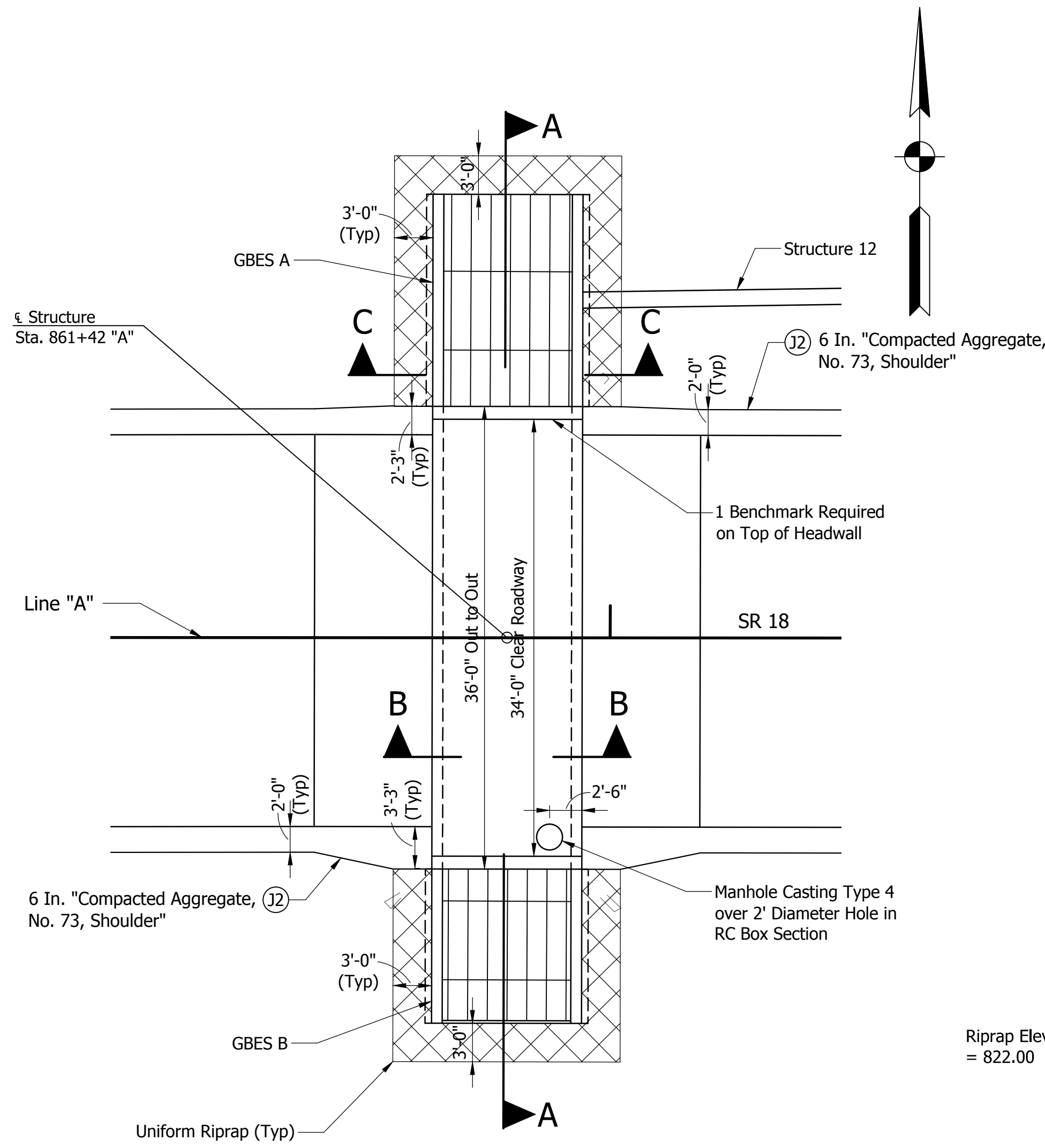
**GENERAL NOTES**

A Three-Sided Arch Structure Will Not Be Permitted At This Location.

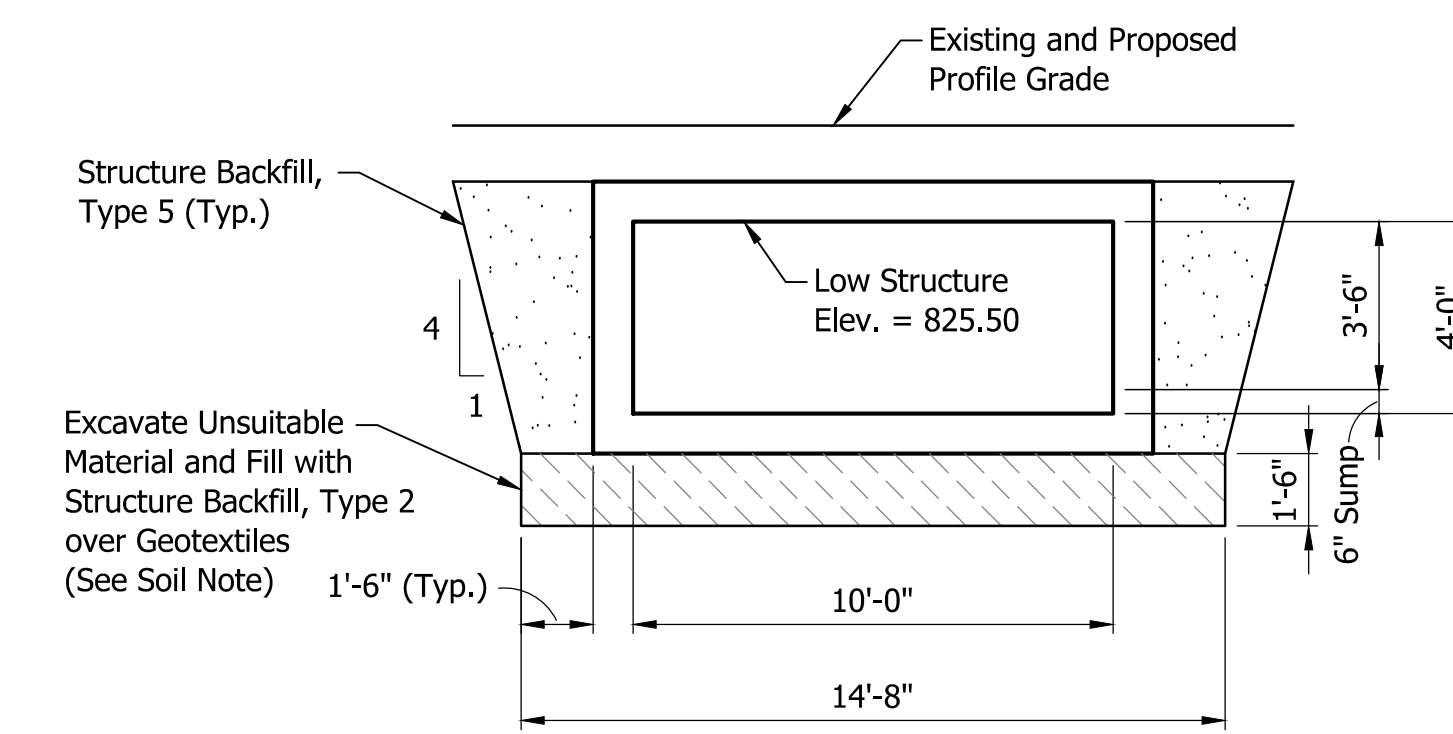
The outside ends of the outermost sections of the RC Box Structure shall be square. Bell or spigot ends will not be accepted at these locations.

**SOIL NOTE**

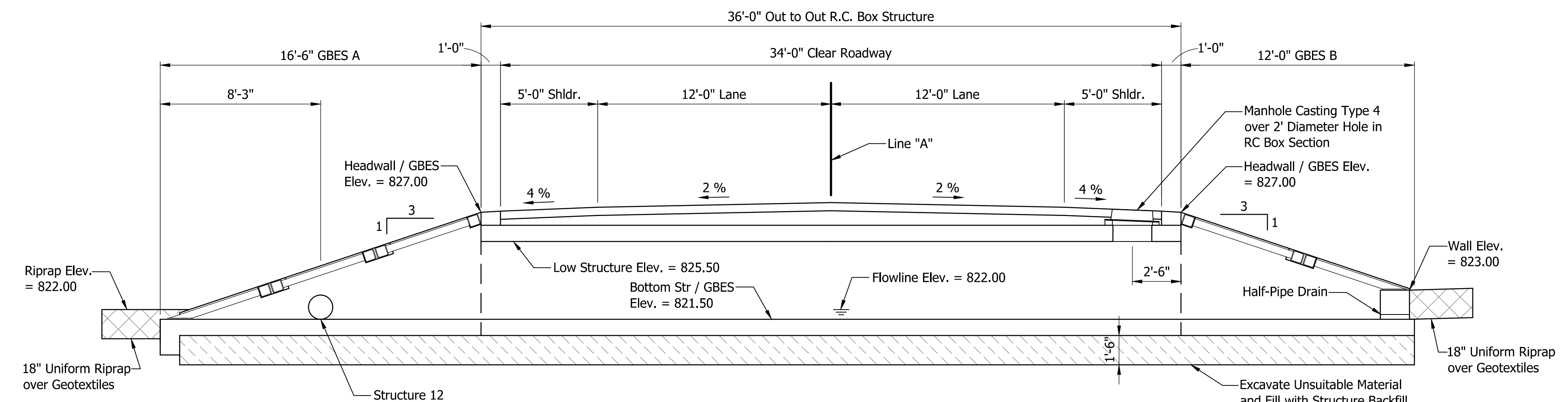
Soft soils may be encountered in the excavation for the culvert and grated box end sections. If directed by the Engineer, these unsuitable soils shall be removed 18 inches below the bottom of the culvert base and replaced with compacted Structure Backfill, Type 2 over Geotextiles to achieve a stable base. The outer 10 feet of the structure backfill shall be enveloped at the top, bottom, and outside ends with a continuous length of permeable geotextile.



**PLAN**  
Scale: 1/8" = 1'-0"



**SECTION B-B**  
Scale: 1/4" = 1'-0"

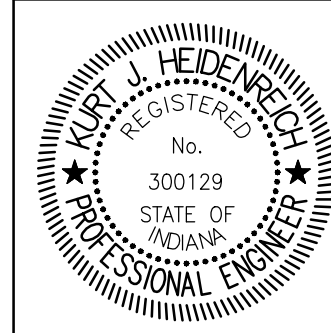


**SECTION A-A**  
Scale: 1/4" = 1'-0"

**GENERAL PLAN**  
SR 18 OVER EQUALIZER PIPE  
REINFORCED CONCRETE BOX STRUCTURE  
SPAN: 10'-0", RISE: 4'-0", SKEW: 0°  
34'-0" CLEAR ROADWAY WIDTH

Jul 17, 2013 10:47am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - SR - General Plan\GBES Details.dwg

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Fax: (260) 490-1026 Fort Wayne, Indiana 46825

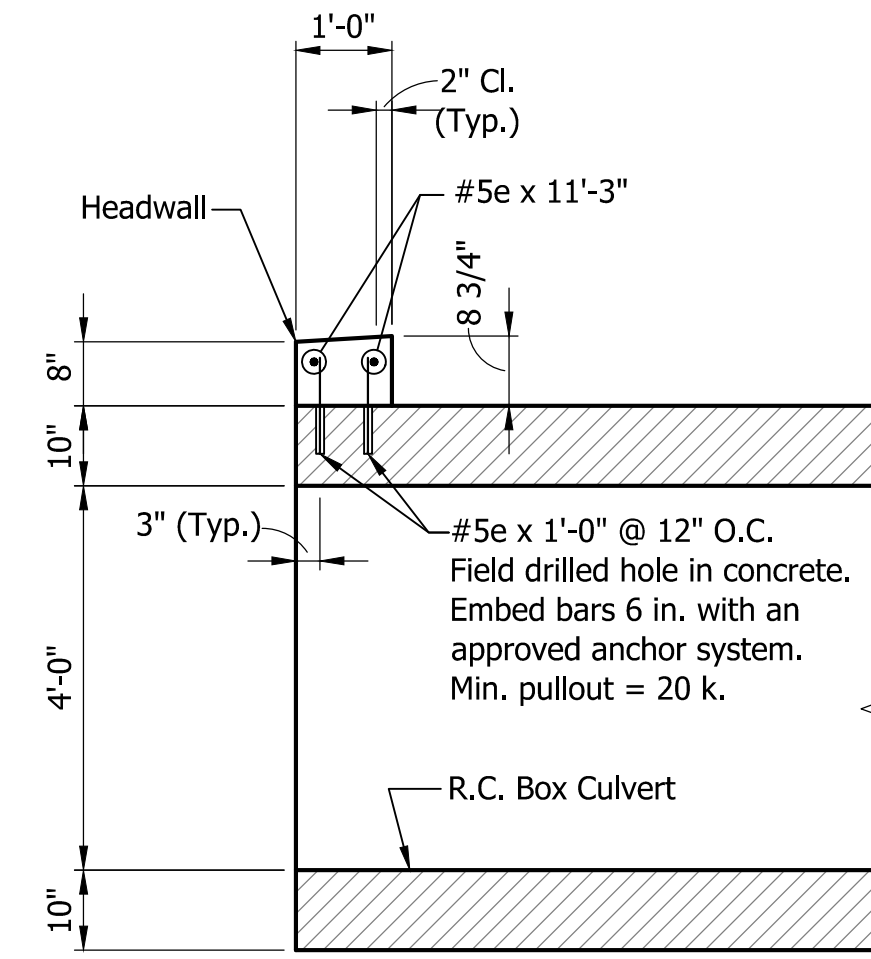


RECOMMENDED FOR APPROVAL	<i>Heidi K. K...</i>	DESIGN ENGINEER	07/16/13
DESIGNED:	AJI	DRAWN:	AJI
CHECKED:	TRL	CHECKED:	TRL

INDIANA DEPARTMENT OF TRANSPORTATION  
GENERAL PLAN

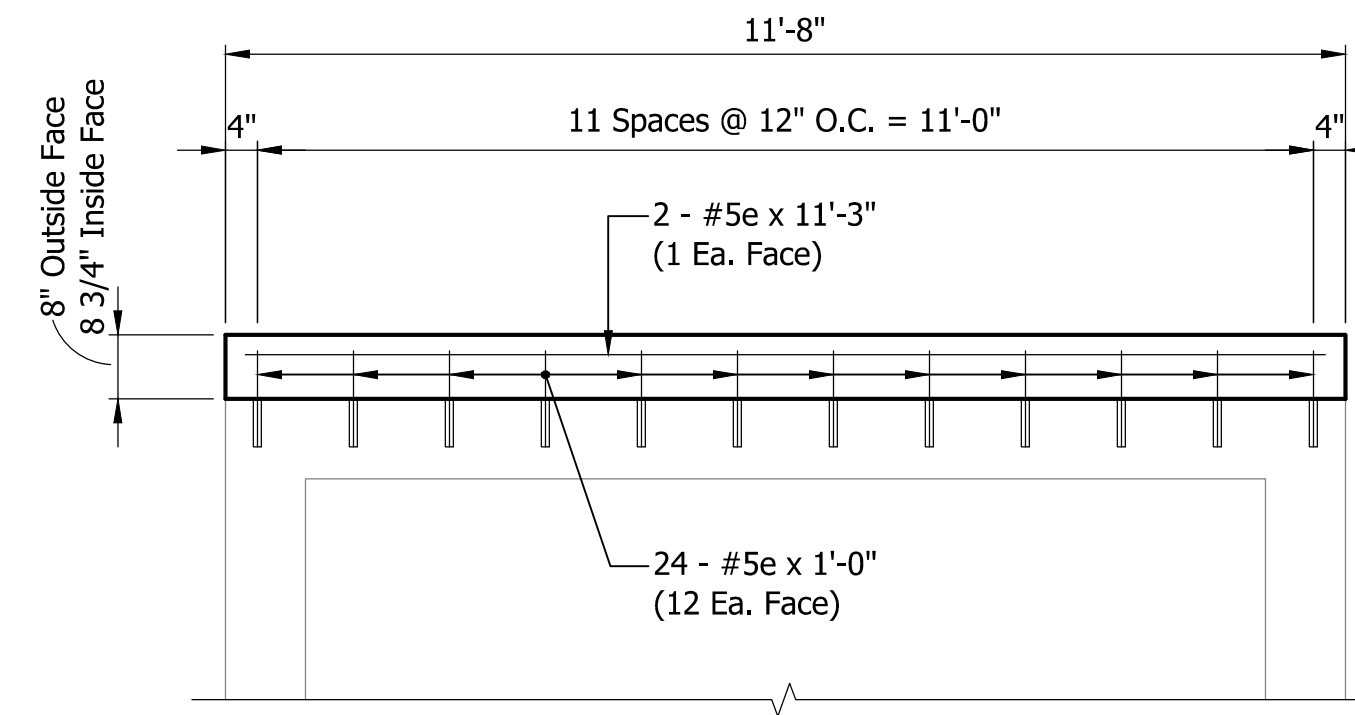
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	0301136
SURVEY BOOK	SHEETS
	10 of 18
CONTRACT	PROJECT
R-33560	0301136

S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 28 - General Plan&GBES Details.dwg  
 Jul 17, 2013 - 10:48am



**TYPICAL HEADWALL SECTION**

Scale: 1/2" = 1'-0"



**TYPICAL HEADWALL ELEVATION**

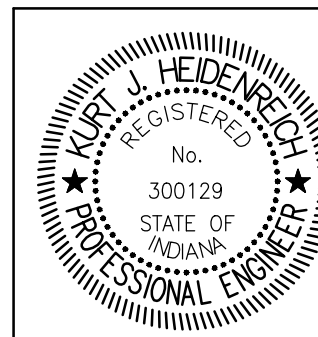
Scale: 1/2" = 1'-0"

BILL OF MATERIALS			
BOTH HEADWALLS			
MARK OR SIZE	NO. REQ'D	LENGTH	WEIGHT
#5e	4	11'-3"	
#5e	48	1'-0"	
Total #5e Bars			97#
Total Epoxy Coated Reinf. Bars			97#
CONCRETE			
Concrete Quantity			0.6 CYS

Note: These quantities are for informational purposes only and are not separate pay items.

**ENGINEERING**  
*Resources, Inc.*

Ph: (260) 490-1025 9835 Auburn Road  
 Fax: (260) 490-1026 Fort Wayne, Indiana 46825



RECOMMENDED FOR APPROVAL *Heidi K. Heidt* 07/16/13  
 DESIGN ENGINEER DATE

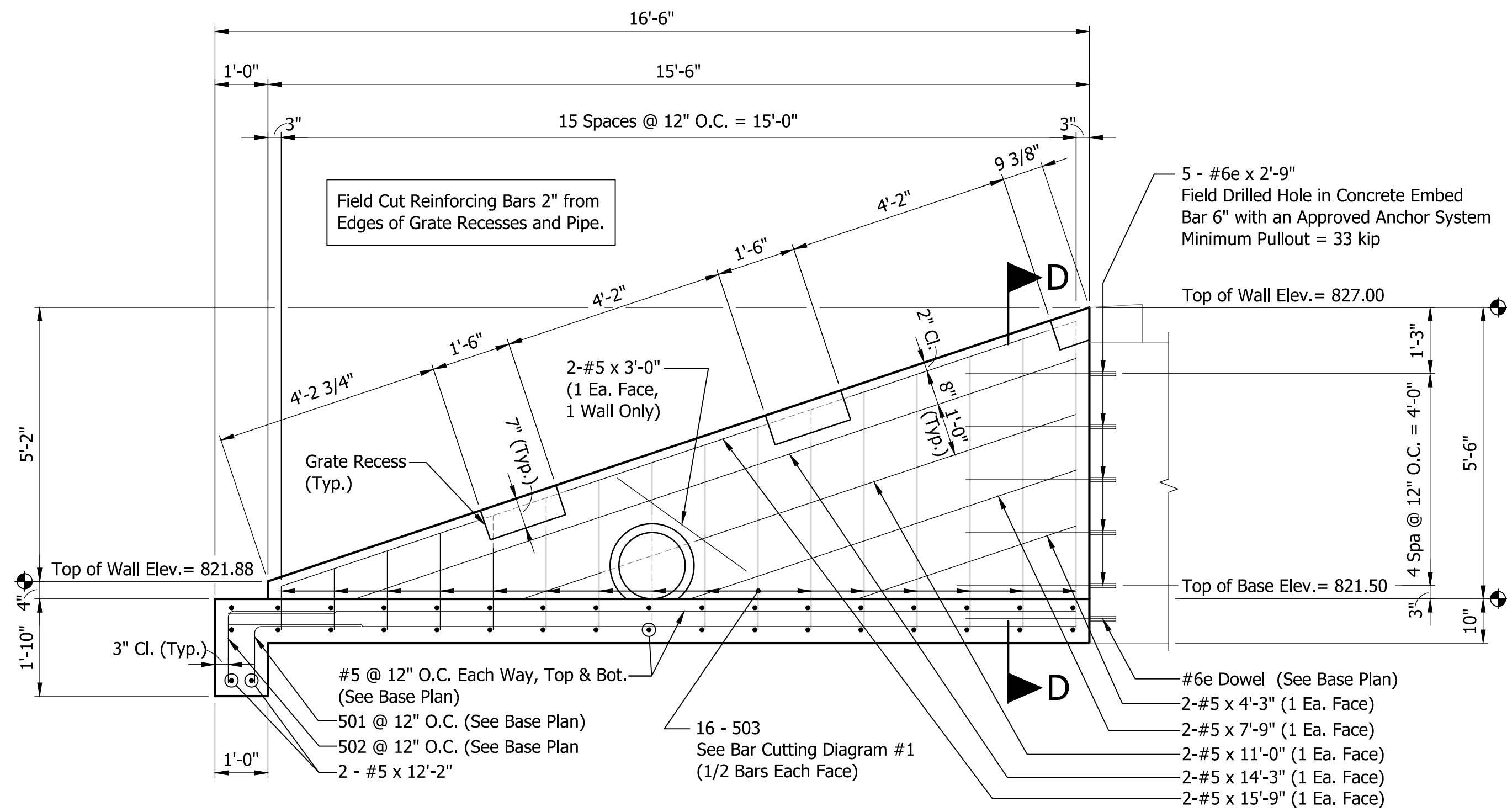
DESIGNED: AJI DRAWN: AJI  
 CHECKED: TRL CHECKED: TRL

INDIANA  
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HEADWALL DETAILS

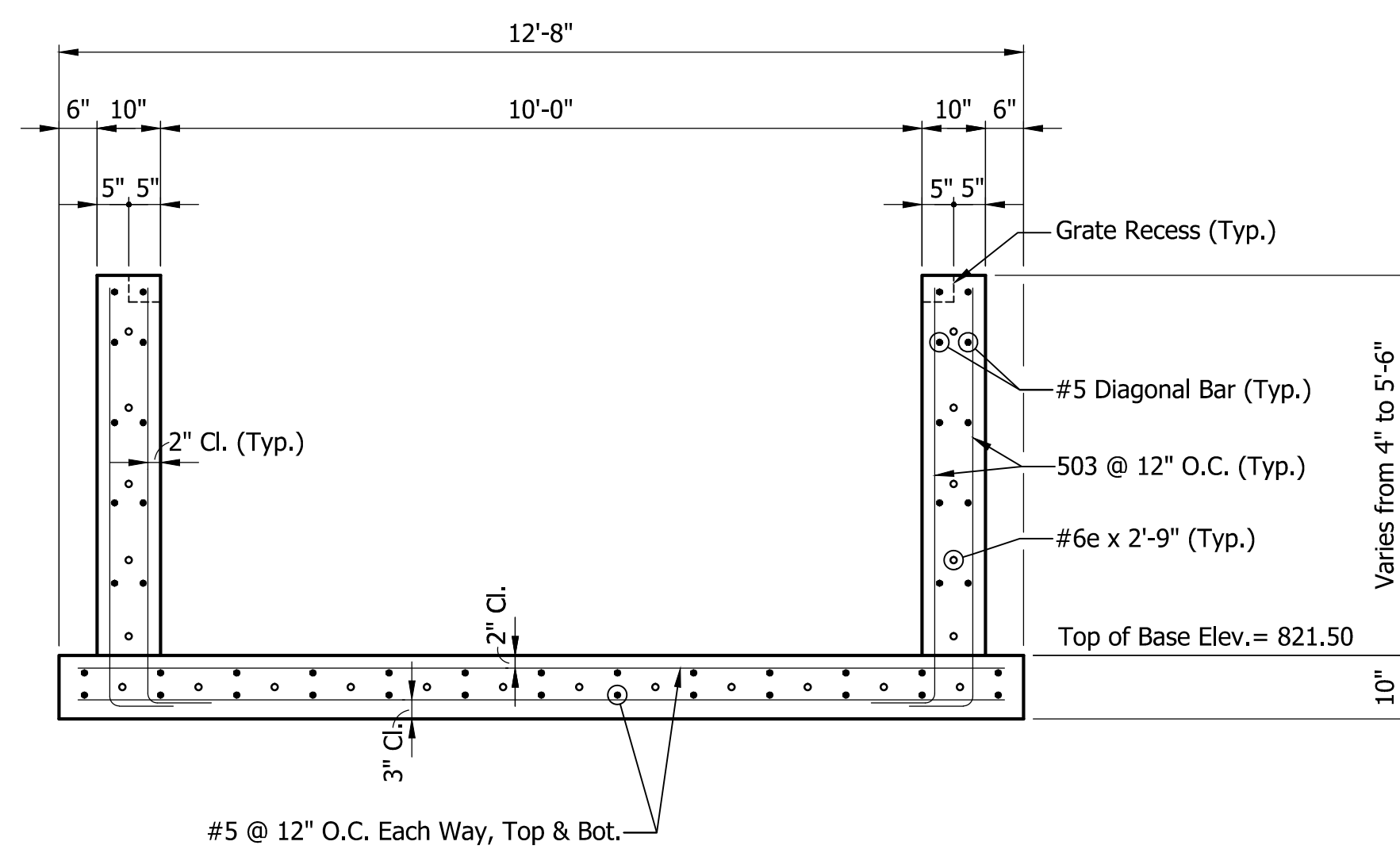
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	0301136
SURVEY BOOK	SHEETS
	11 of 18
CONTRACT	PROJECT
R-32560	0301136





**SIDEWALL ELEVATION - GBES A**

Scale: 1/2" = 1'-0"

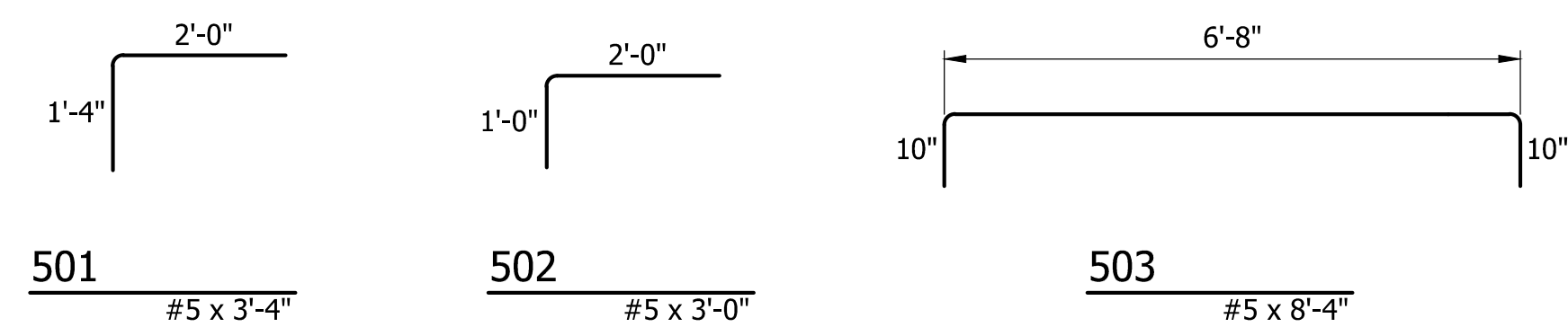


**SECTION D-D**

Scale: 1/2" = 1'-0"

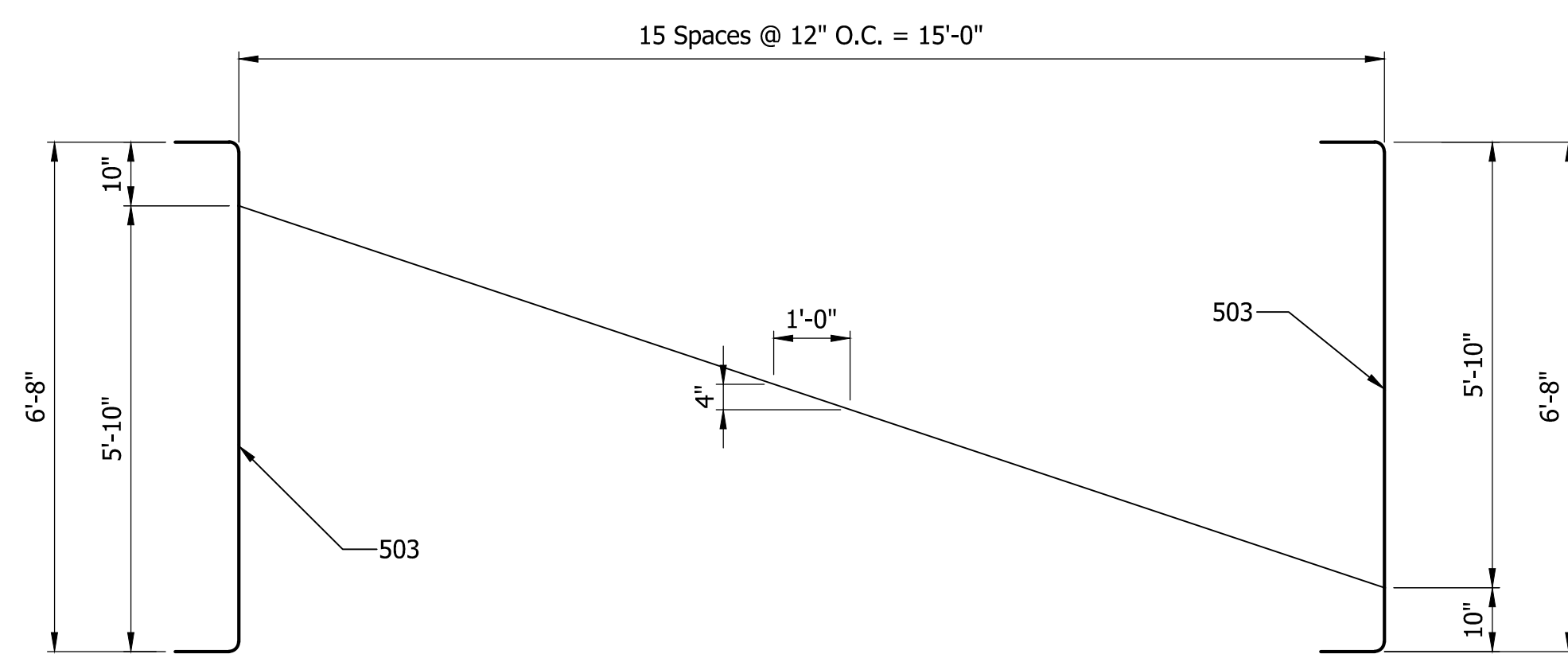
BILL OF MATERIALS			
GBES A			
MARK OR SIZE	NO. REQ'D	LENGTH	WEIGHT
#6e	22	2'-9"	
Total #6e Bars			91#
Total Epoxy Coated Reinforcing Bars			91#
501	13	3'-4"	
502	13	3'-0"	
503	32	8'-4"	
#5	13	16'-0"	
#5	4	15'-9"	
#5	4	14'-3"	
#5	19	12'-2"	
#5	4	11'-0"	
#5	4	7'-9"	
#5	4	4'-3"	
#5	2	3'-0"	
Total #5 Bars			1,050#
Total Plain Reinf. Bars			1,050#
CONCRETE			
Concrete Quantity			9.7 CYS
MISCELLANEOUS			
Galvanized Steel Grate			5,430#

Note: These quantities are for informational purposes only and are not separate pay items.



**BAR BENDING DETAILS**

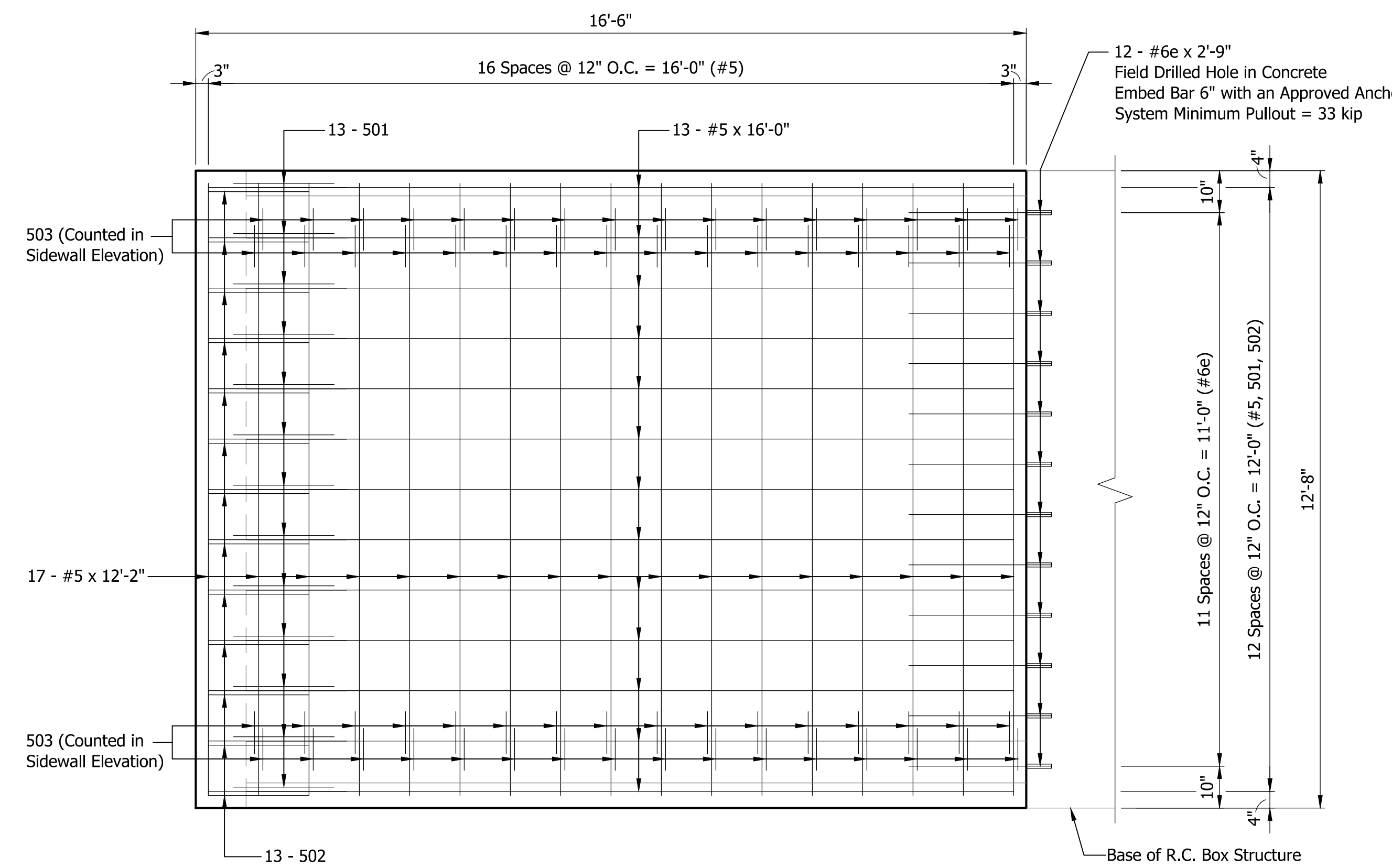
N.T.S.



**BAR CUTTING DIAGRAM #1**

Scale: N.T.S.

16 - 503 Each Sidewall



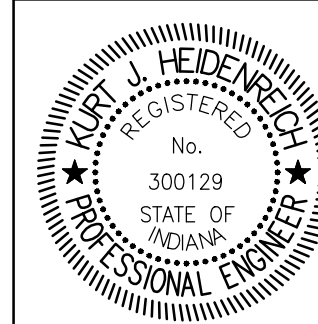
**BASE PLAN - GBES A**

Scale: 1/2" = 1'-0"

Jul 17, 2013 - 10:50am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 28 - General Plans\GBES Details.dwg

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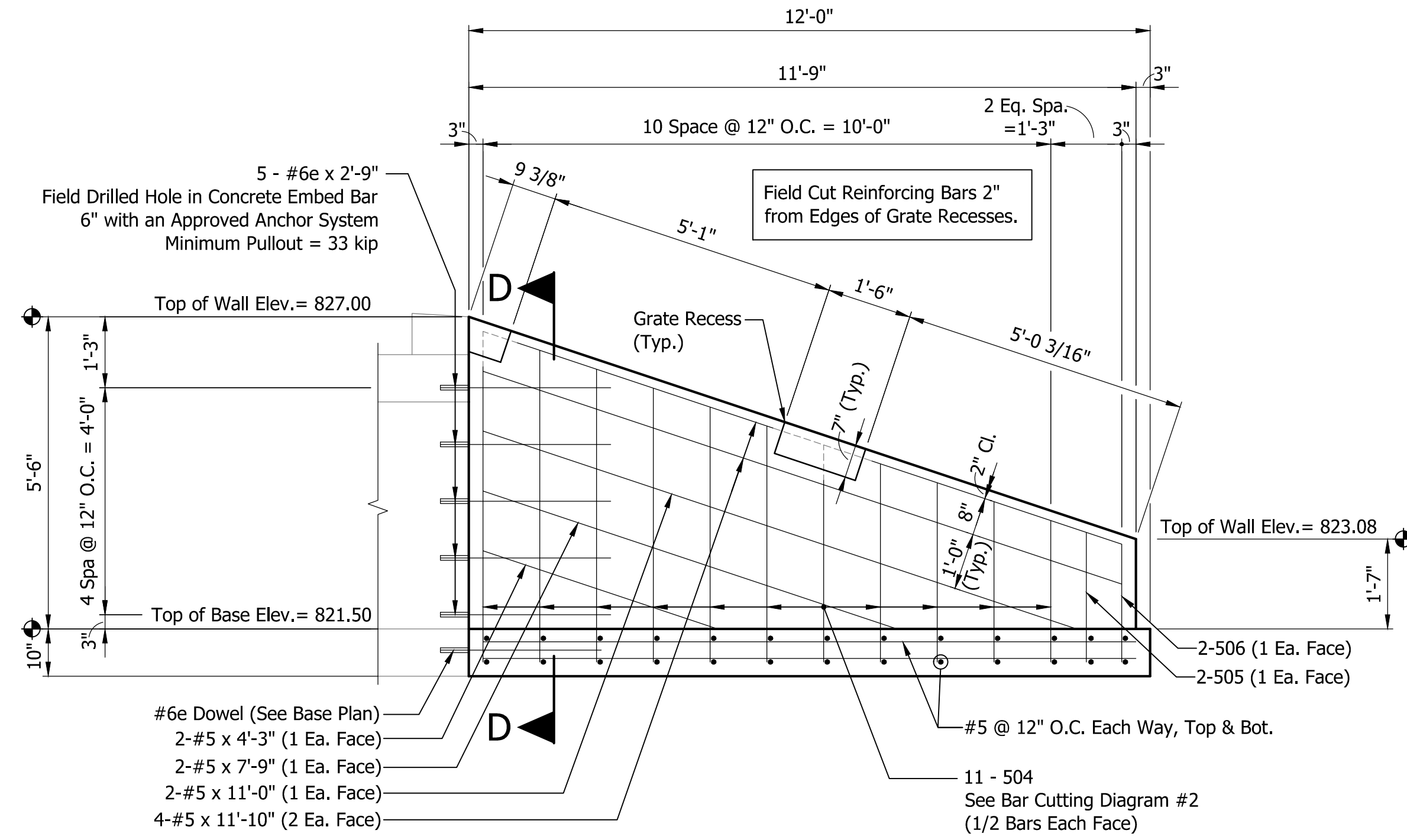
DESIGNED: AJI DRAWN: AJI

CHECKED: TRL CHECKED: TRL

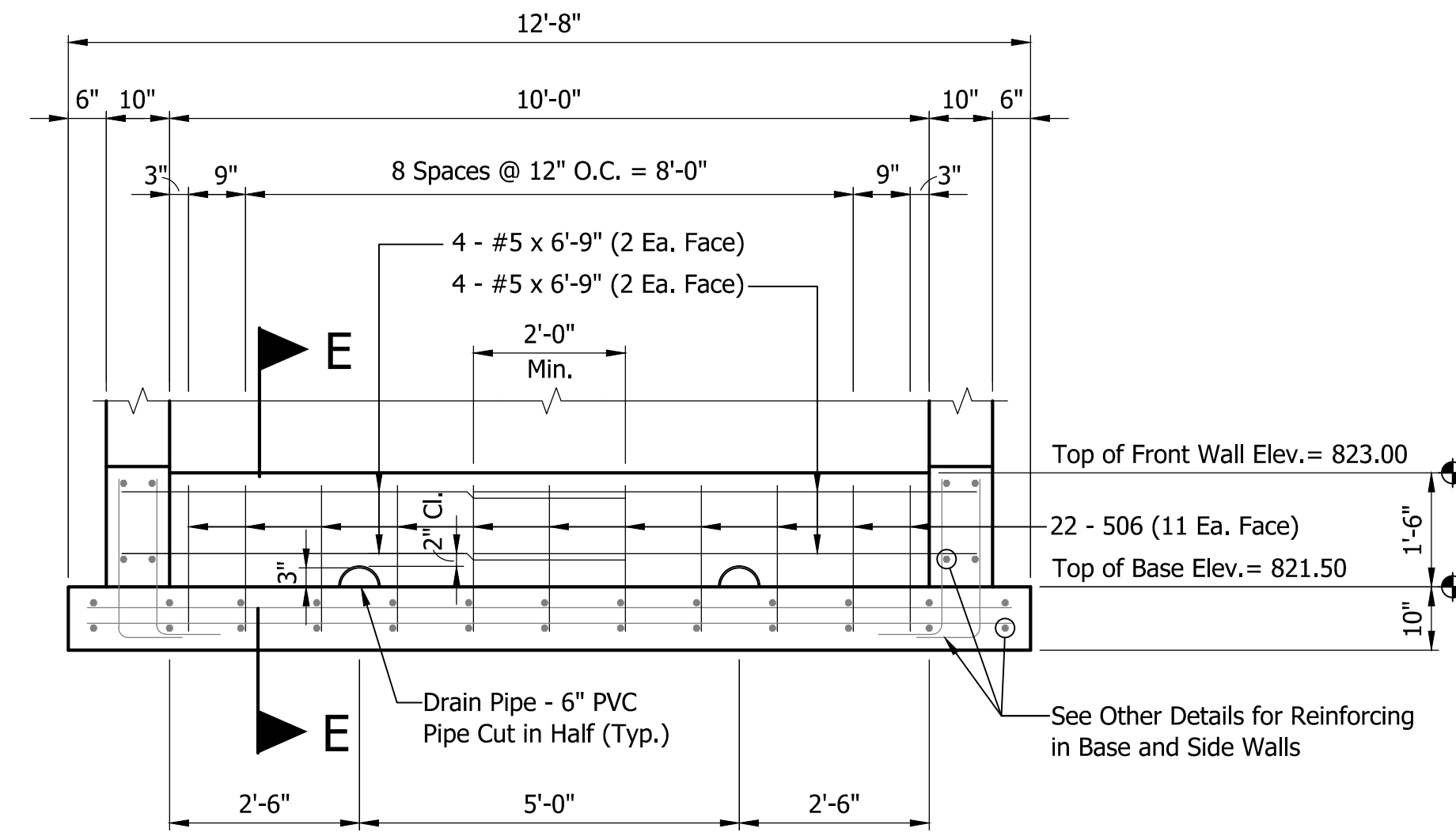
INDIANA DEPARTMENT OF TRANSPORTATION

GRATED BOX END SECTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	0301136
SURVEY BOOK	SHEETS
	12 of 18
CONTRACT	PROJECT
R-32560	0301136



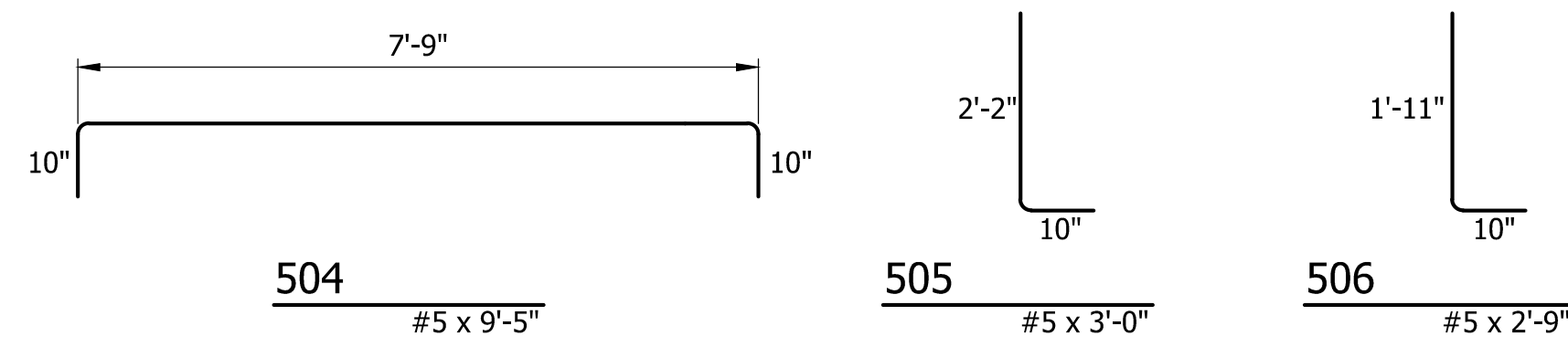
**SIDEWALL ELEVATION - GBES B**  
Scale: 1/2" = 1'-0"



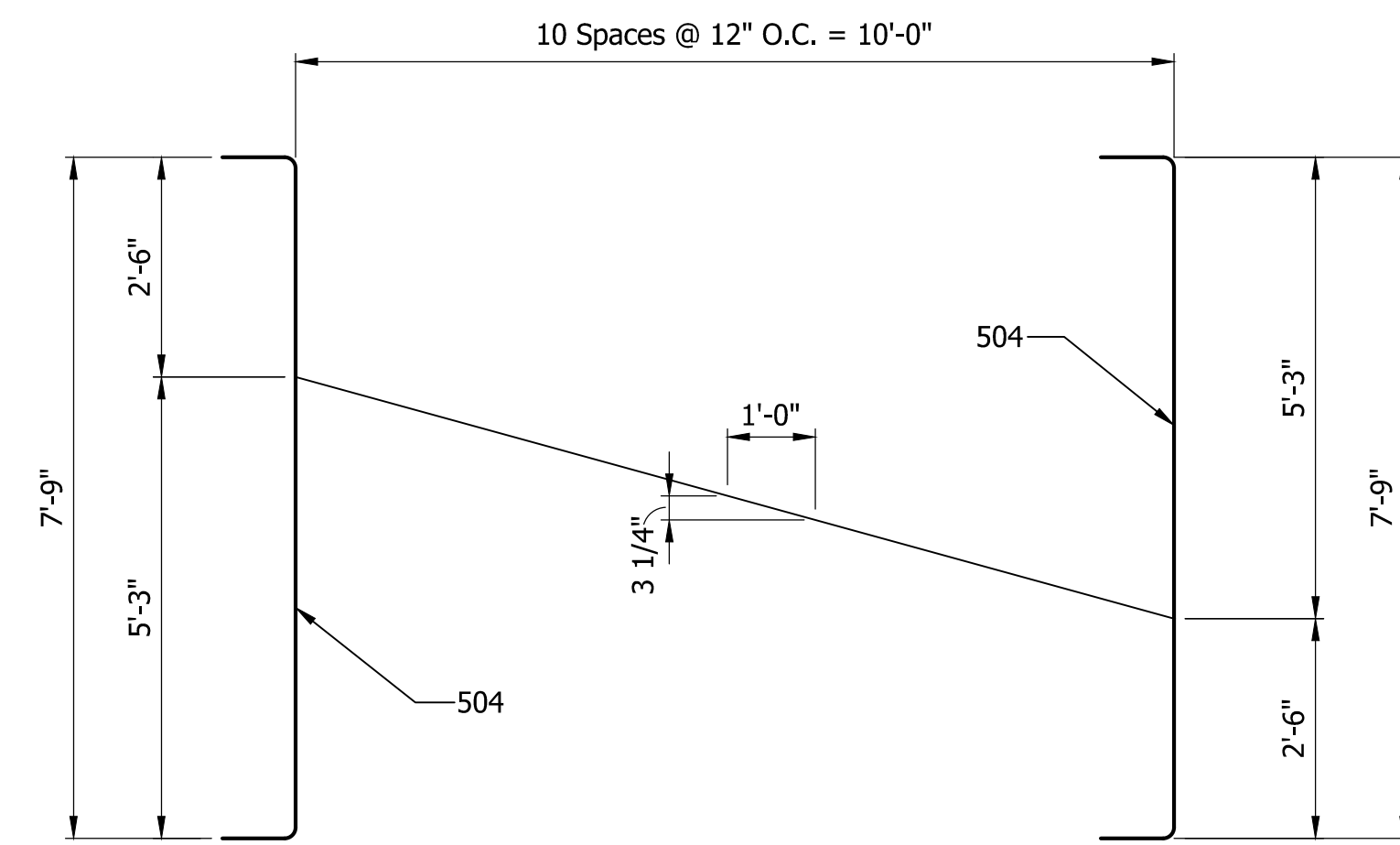
**FRONT WALL ELEVATION - GBES B**  
Scale: 1/2" = 1'-0"

BILL OF MATERIALS			
GBES B			
MARK OR SIZE	NO. REQ'D	LENGTH	WEIGHT
#6e	22	2'-9"	
Total #6e Bars			91#
Total Epoxy Coated Reinforcing Bars			91#
504	22	9'-5"	
505	4	3'-0"	
506	26	2'-9"	
#5	13	12'-2"	
#5	8	11'-10"	
#5	13	11'-6"	
#5	4	11'-0"	
#5	4	7'-9"	
#5	8	6'-9"	
#5	4	4'-3"	
Total #5 Bars			876#
Total Plain Reinf. Bars			876#
CONCRETE			
Concrete Quantity			8.1 CYS
MISCELLANEOUS			
Galvanized Steel Grate			3,752#

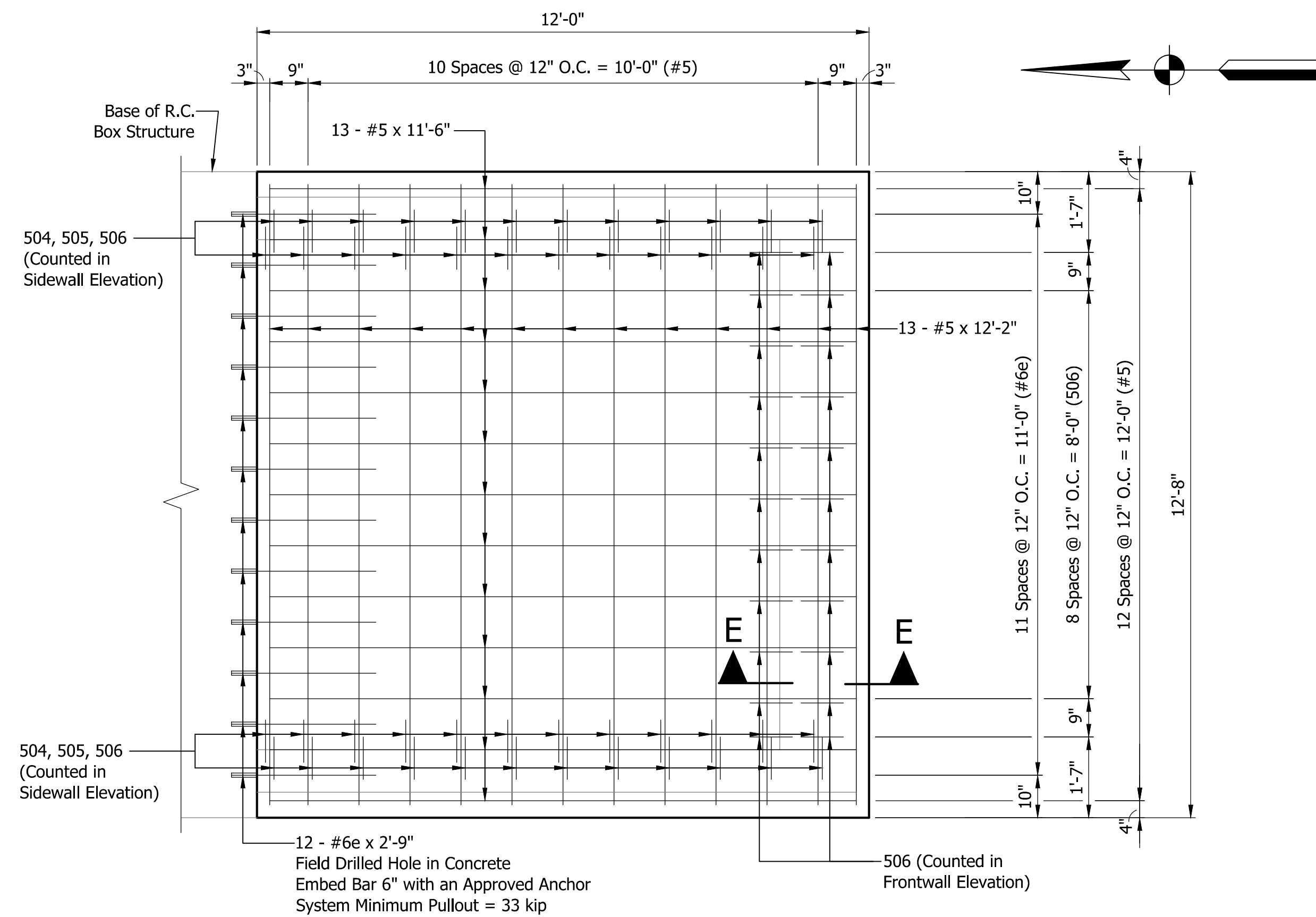
Note: These quantities are for informational purposes only and are not separate pay items.



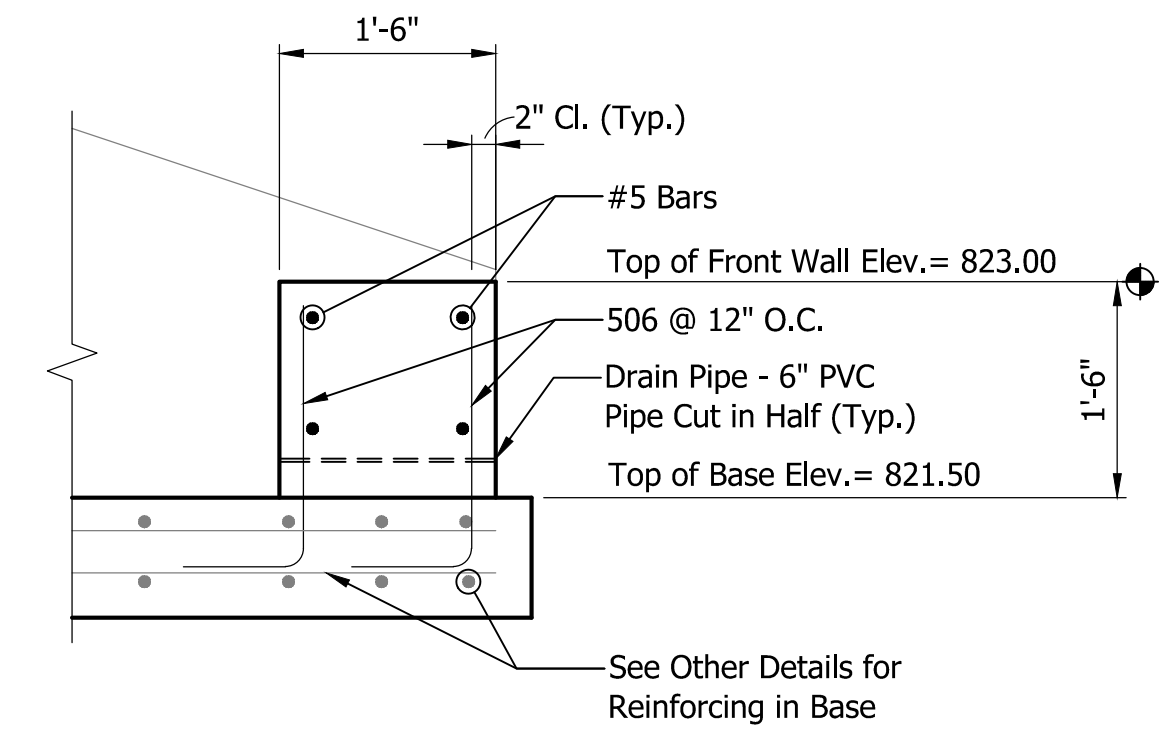
**BAR BENDING DETAILS**  
N.T.S.



**BAR CUTTING DIAGRAM #2**  
Scale: N.T.S. 11 - 504 Each Wall



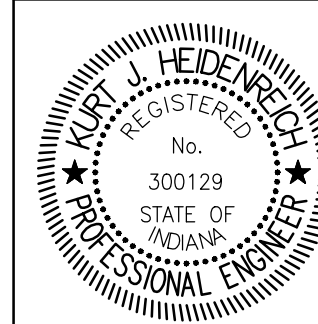
**BASE PLAN - GBES B**  
Scale: 1/2" = 1'-0"



**SECTION E-E**  
Scale: 3/4" = 1'-0"

Jul 17, 2013 - 10:51am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 28 - General Plans\GBES Details.dwg

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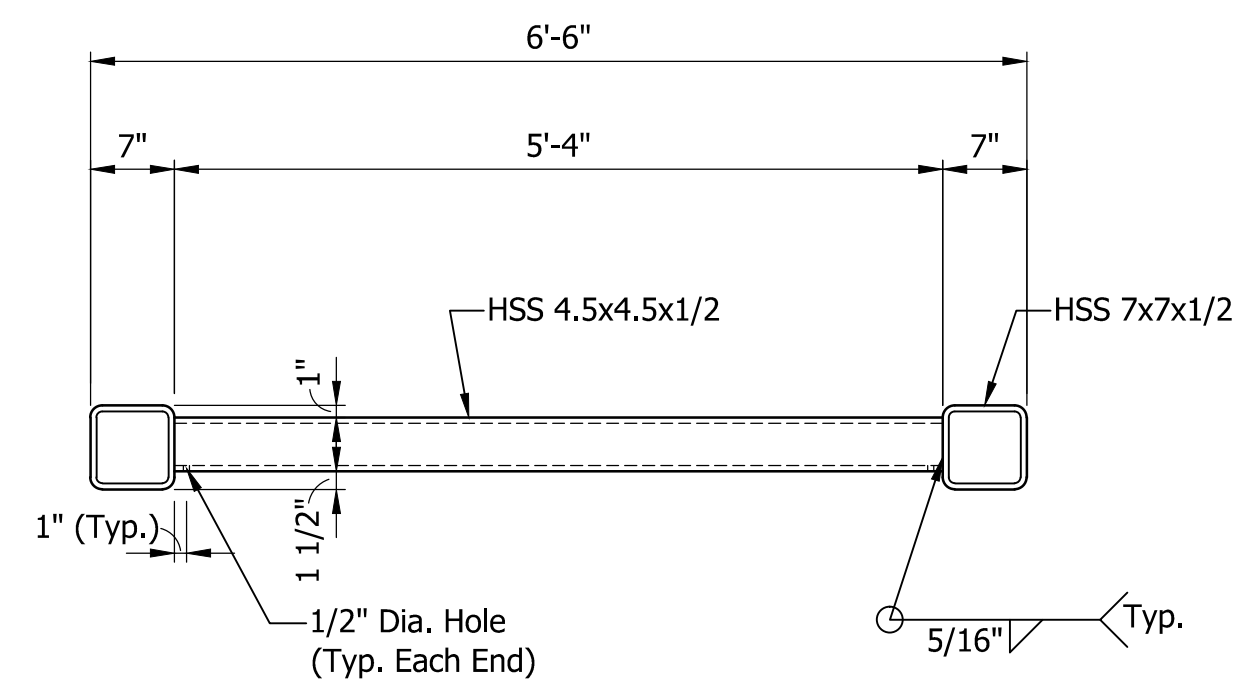
RECOMMENDED FOR APPROVAL: *Ka. Kiri* DESIGN ENGINEER 07/16/13 DATE  
DESIGNED: AJI DRAWN: AJI  
CHECKED: TRL CHECKED: TRL

INDIANA DEPARTMENT OF TRANSPORTATION

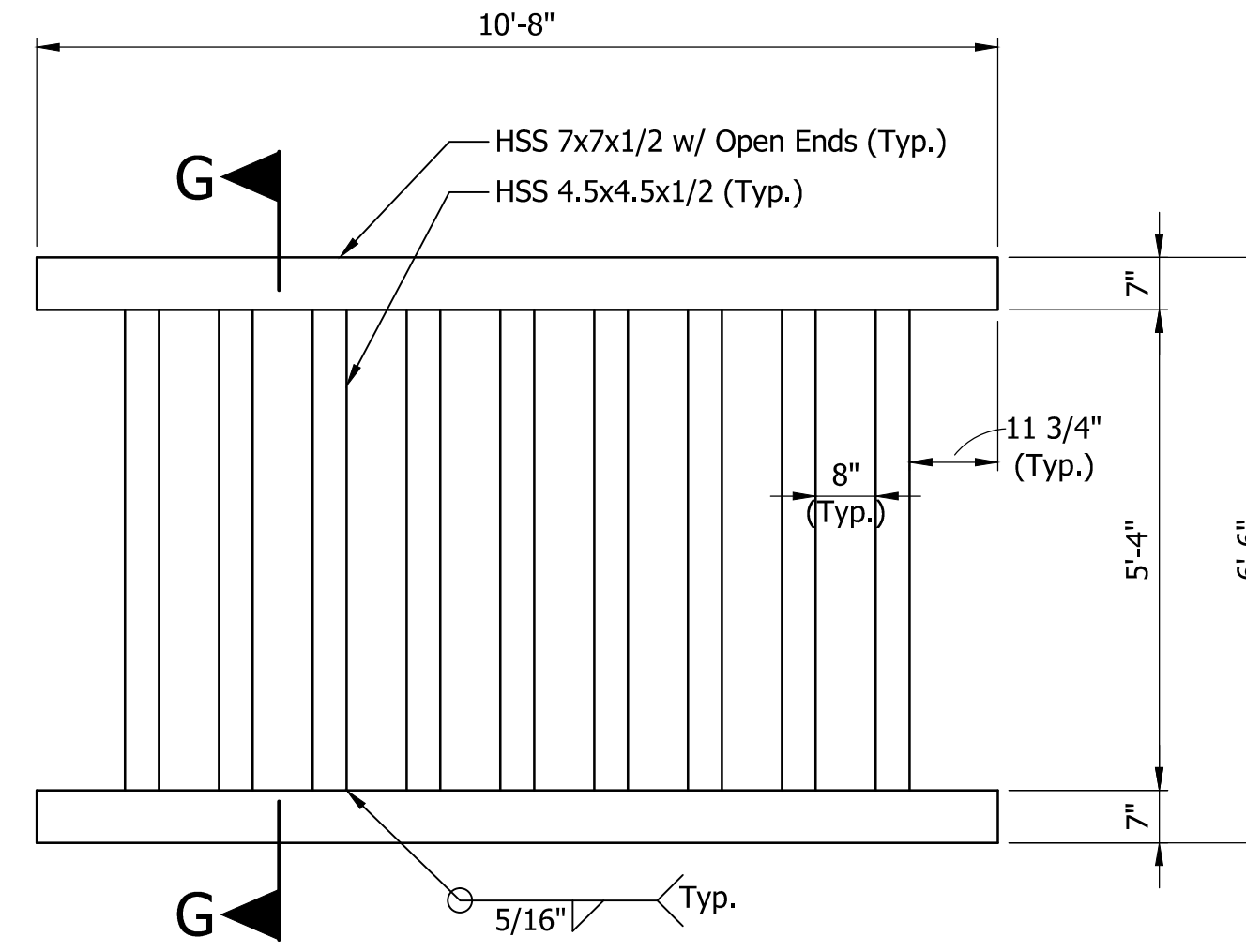
GRATED BOX END SECTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	
VERTICAL SCALE	DESIGNATION
AS NOTED	0301136
SURVEY BOOK	SHEETS
	13 of 18
CONTRACT	PROJECT
R-32560	0301136

Jul 17, 2013 10:52am S:\Projects\Projects (2500-2549)\2542-SR 18 Equalizer Pipe\Construction Drawings\Plan Sheets\2542 - 28 - General Plans&GBES Details.dwg



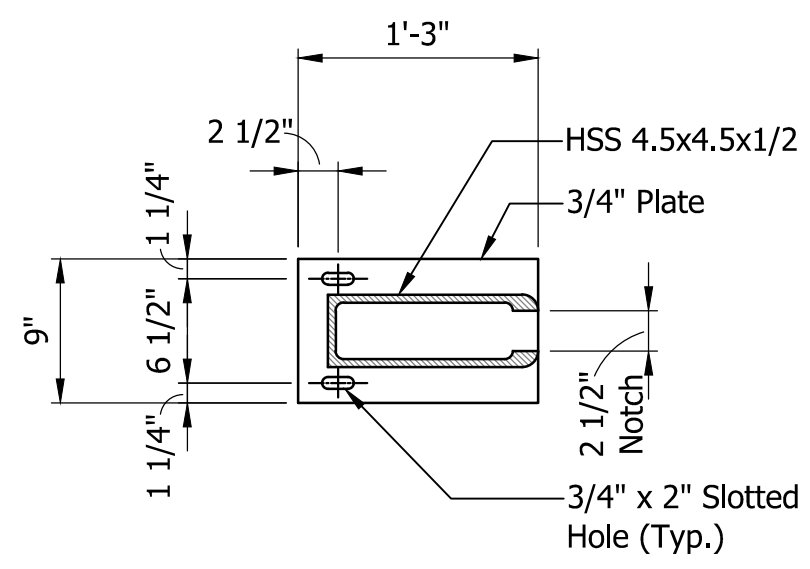
**SECTION G-G**  
Scale: 3/4" = 1'-0"



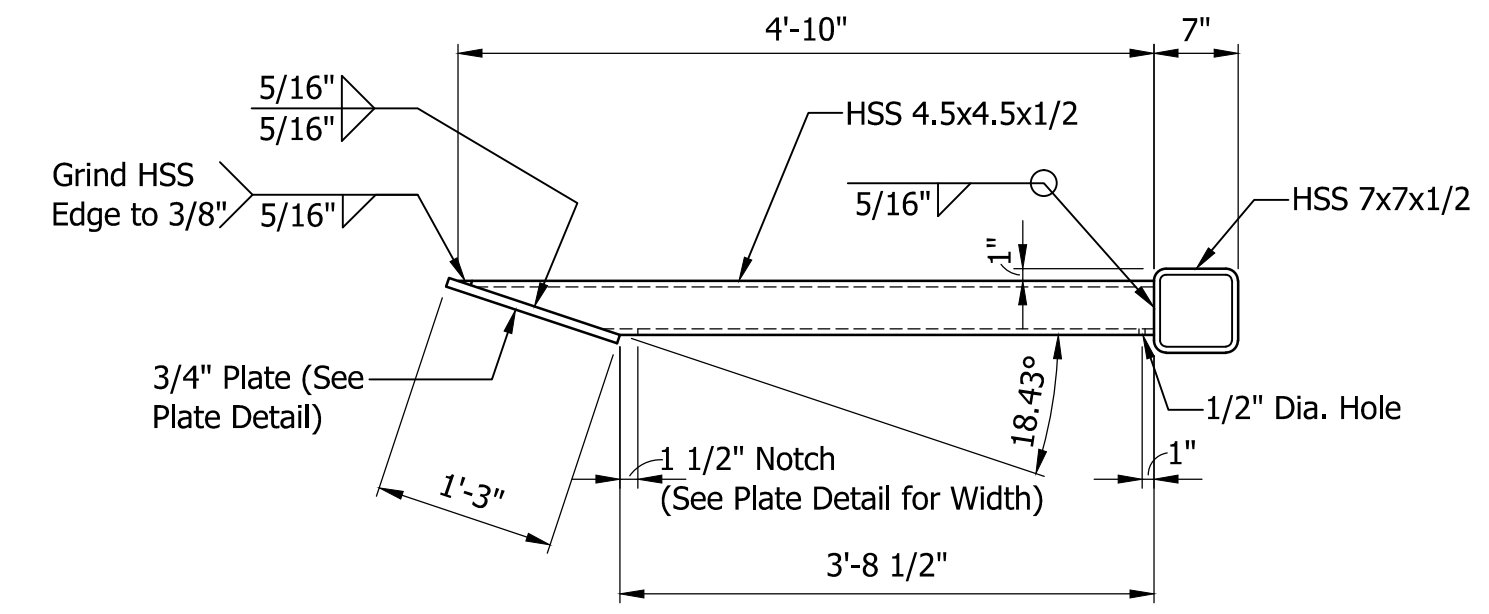
**GRATE 3 - ELEVATION**  
Scale: 1/2" = 1'-0"

**GRATE NOTES**

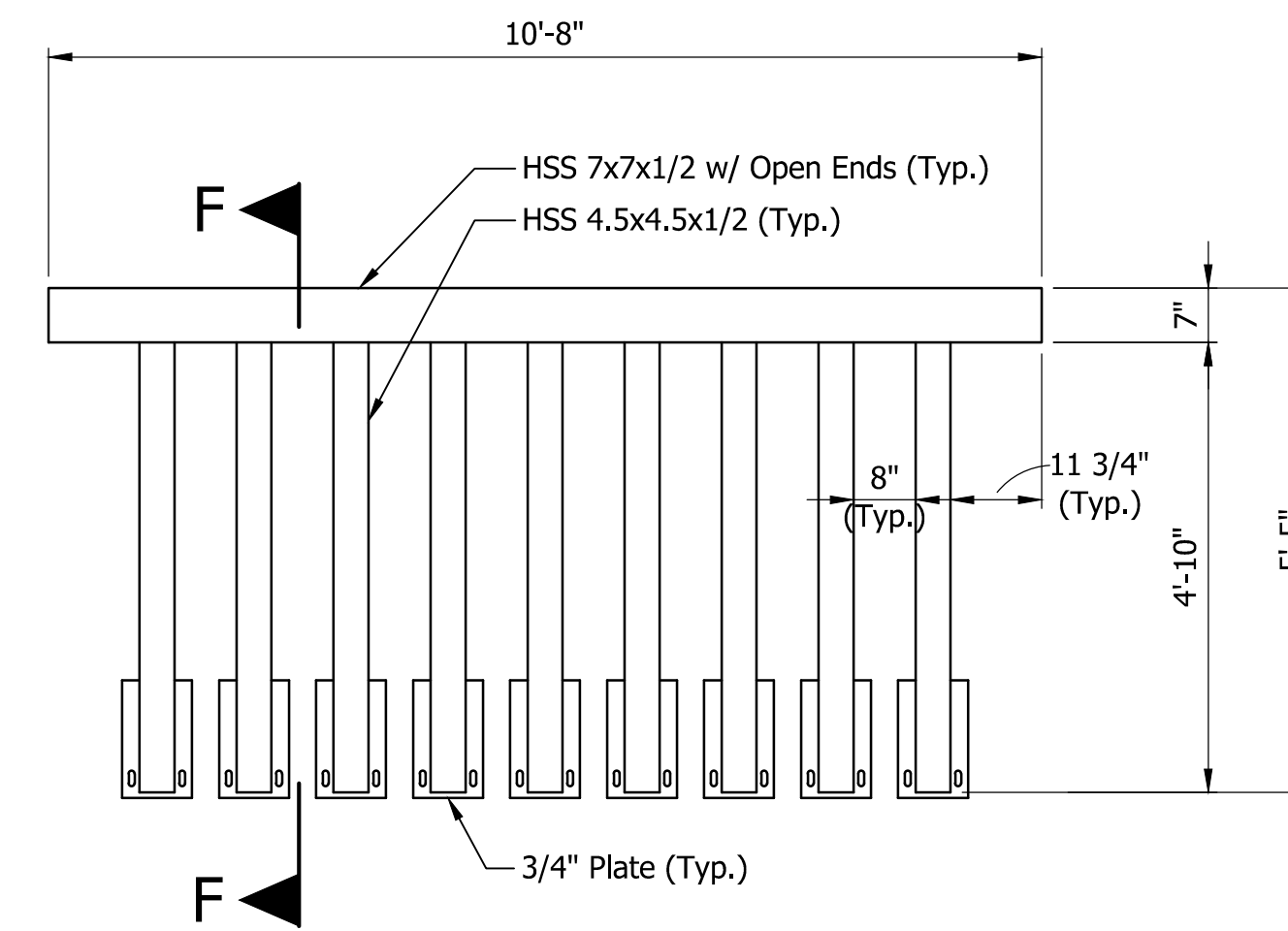
Square HSS shall be in accordance with ASTM A 500 Gr B. Plate material shall be in accordance with ASTM A 36.  
 Welding shall be performed in accordance with AWS specifications by AWS qualified welder operators using E70 electrodes.  
 All Grates and Hardware shall be Hot Dip Galvanized in Accordance with the Special Provisions



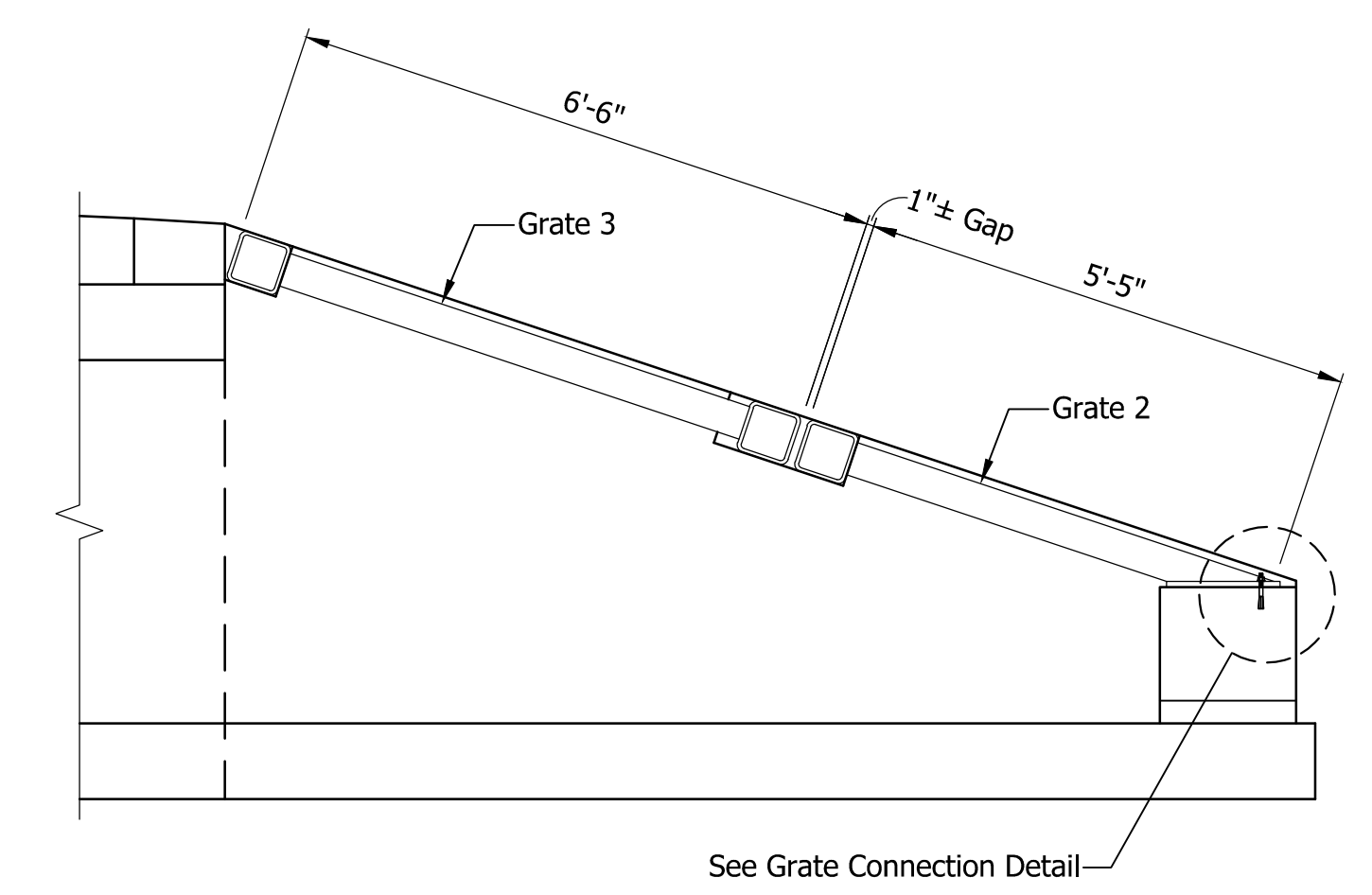
**PLATE DETAIL**  
Scale: 1" = 1'-0"



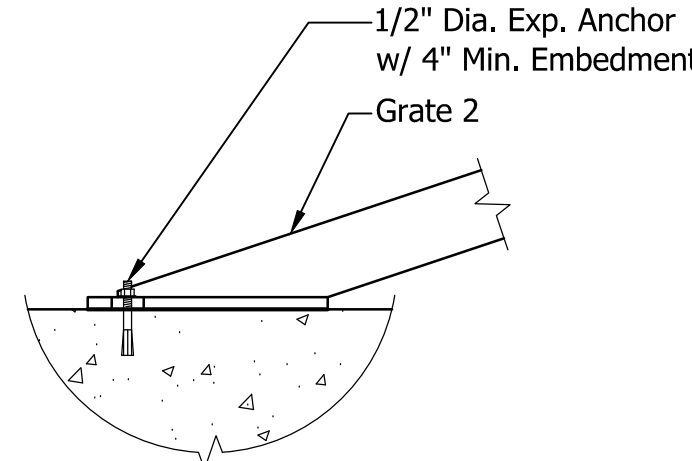
**SECTION F-F**  
Scale: 3/4" = 1'-0"



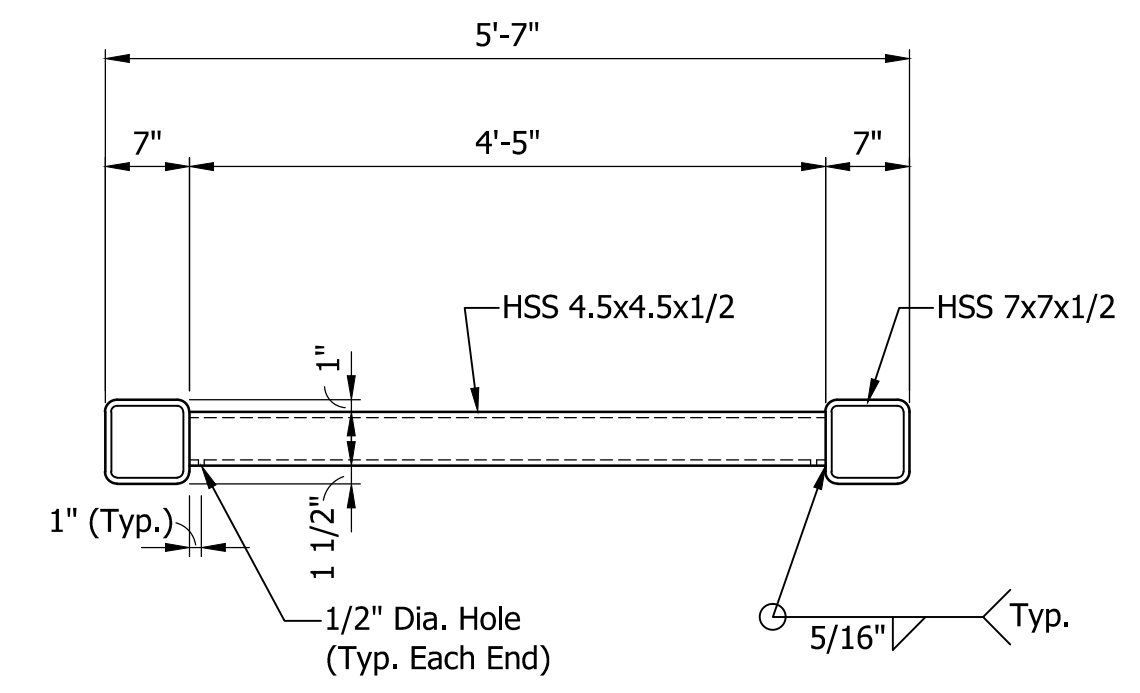
**GRATE 2 - ELEVATION**  
Scale: 1/2" = 1'-0"



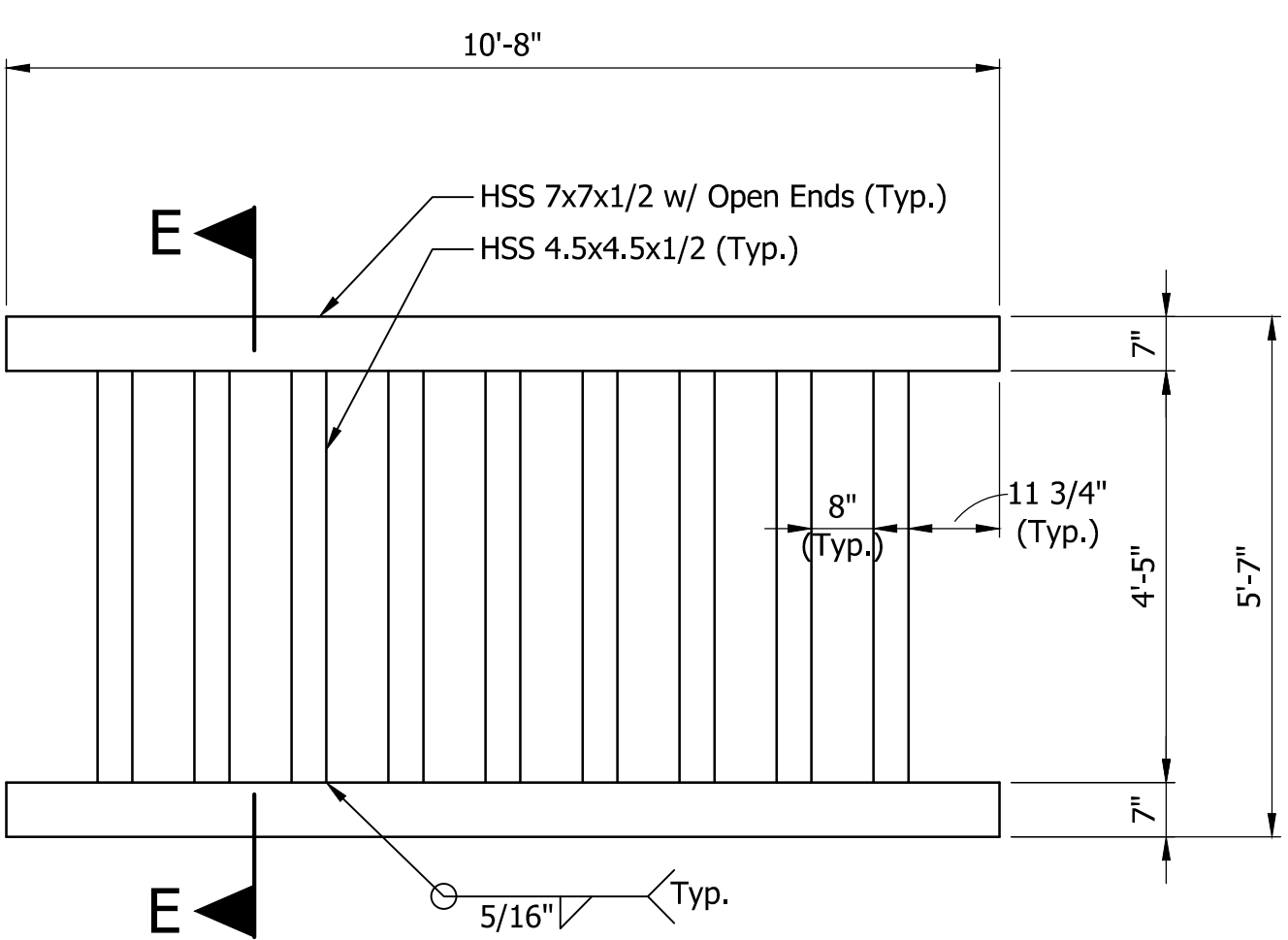
**GBES B - SECTION**  
Scale: 1/2" = 1'-0"



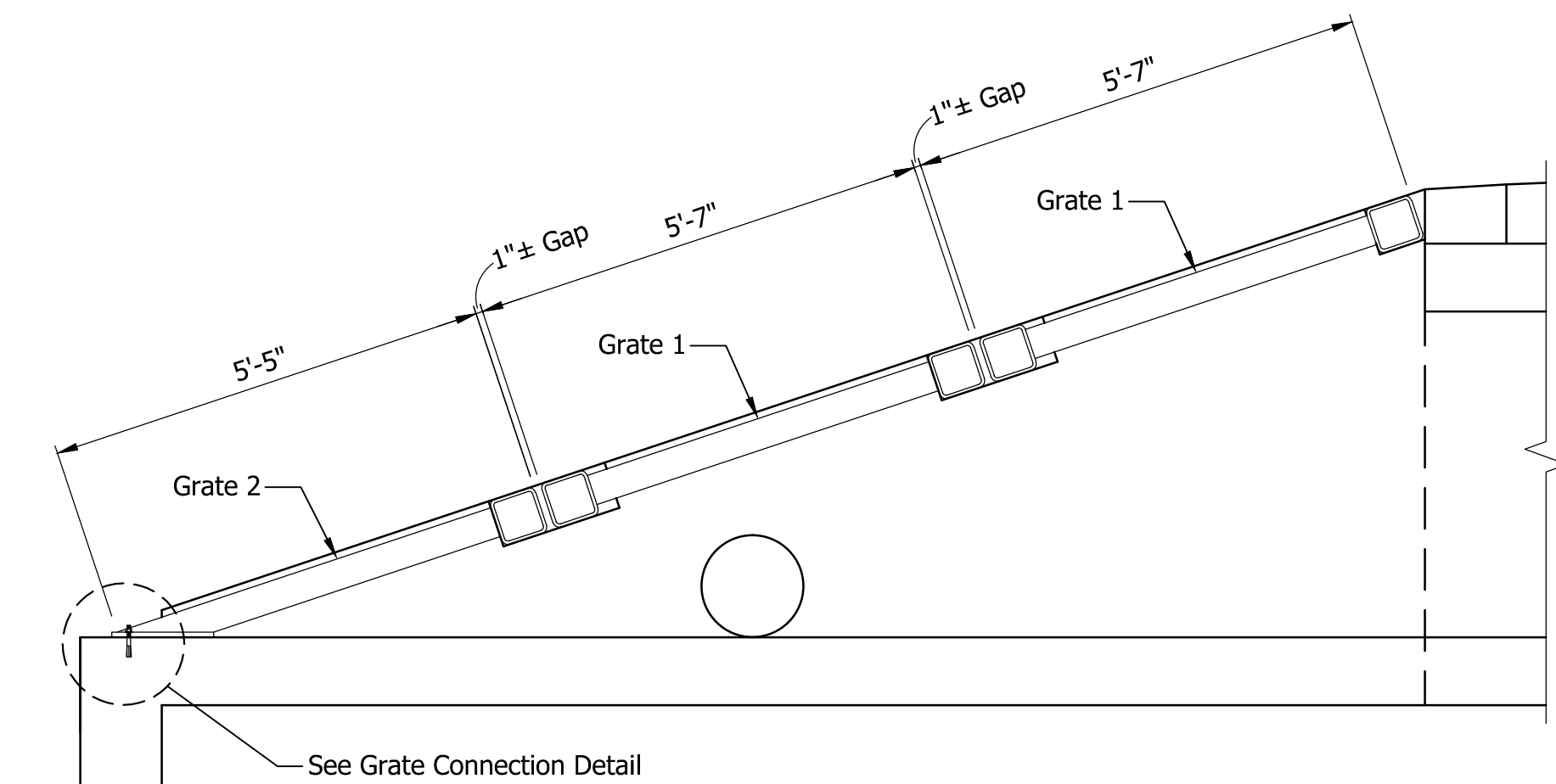
**GRATE CONNECTION**  
Scale: 1" = 1'-0"



**SECTION E-E**  
Scale: 3/4" = 1'-0"

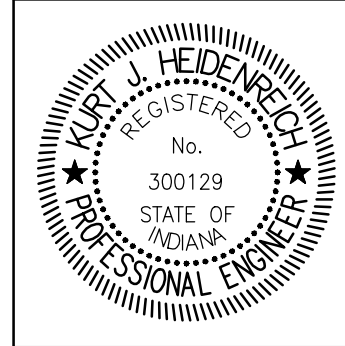


**GRATE 1 - ELEVATION**  
Scale: 1/2" = 1'-0"



**GBES A - SECTION**  
Scale: 1/2" = 1'-0"

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DESIGNED: AJI	DRAWN: AJI	CHECKED: TRL	CHECKED: TRL

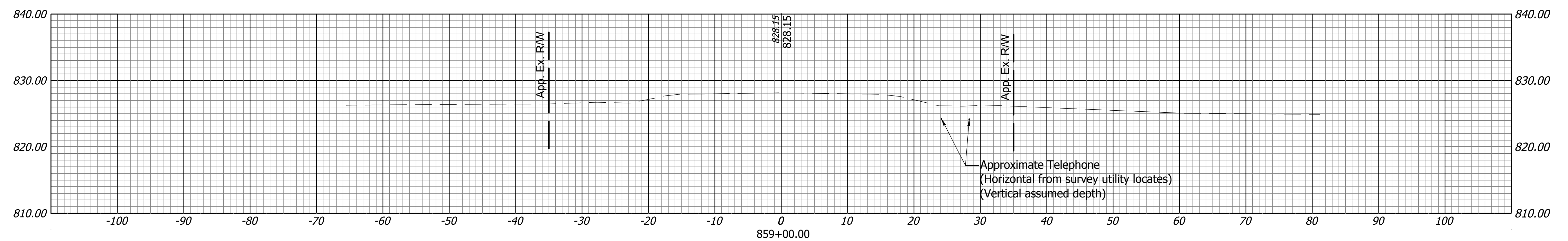
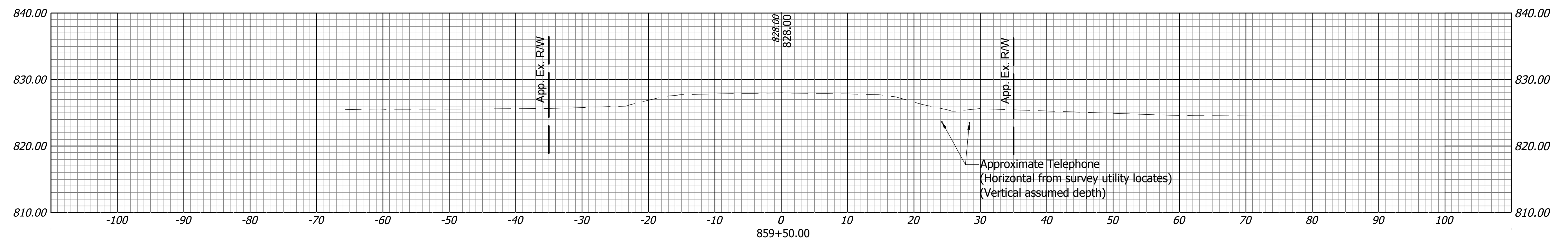
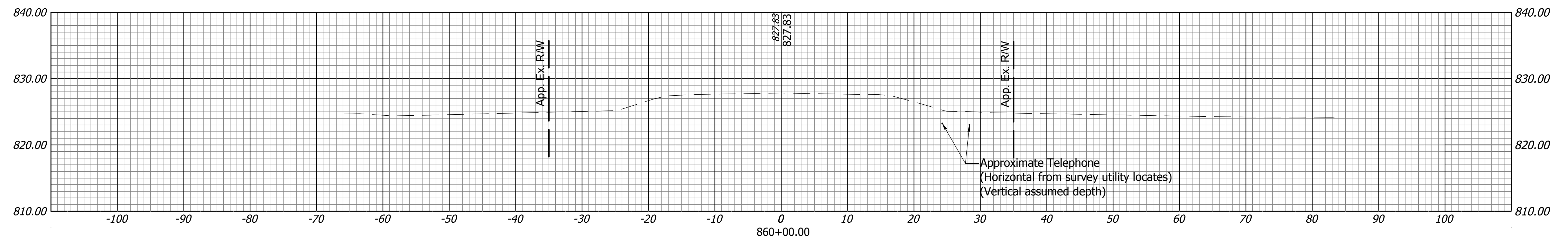
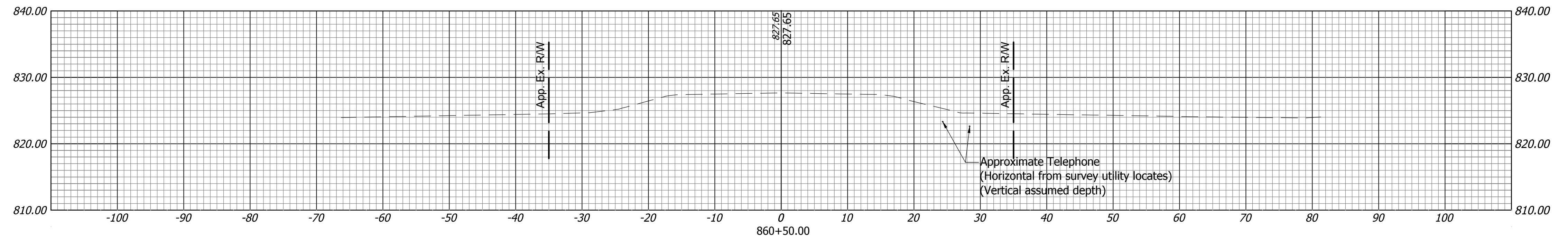
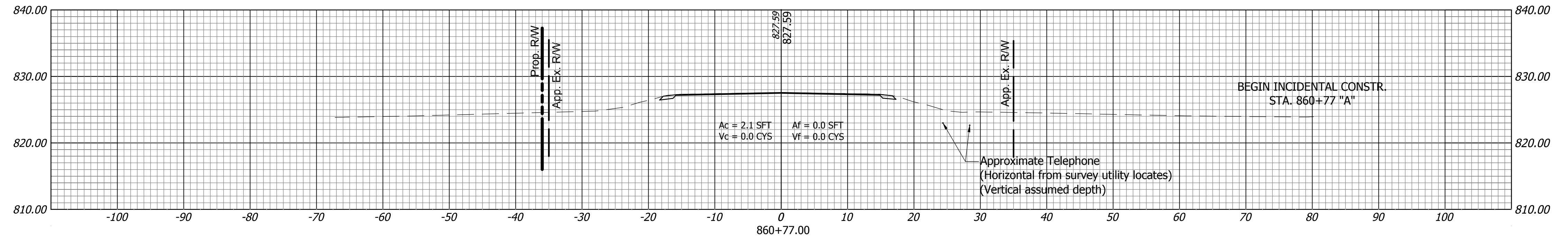
INDIANA DEPARTMENT OF TRANSPORTATION  
 GRATED BOX END SECTION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	AS NOTED
VERTICAL SCALE	DESIGNATION
AS NOTED	0301136
SURVEY BOOK	SHEETS
	14 of 18
CONTRACT	PROJECT
R-33560	0301136



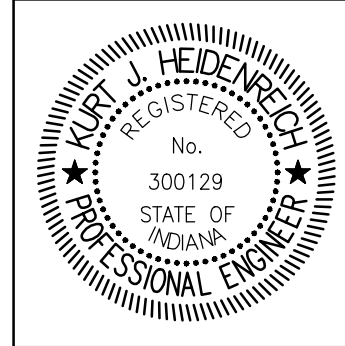


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 Jul 17, 2013 - 11:21am



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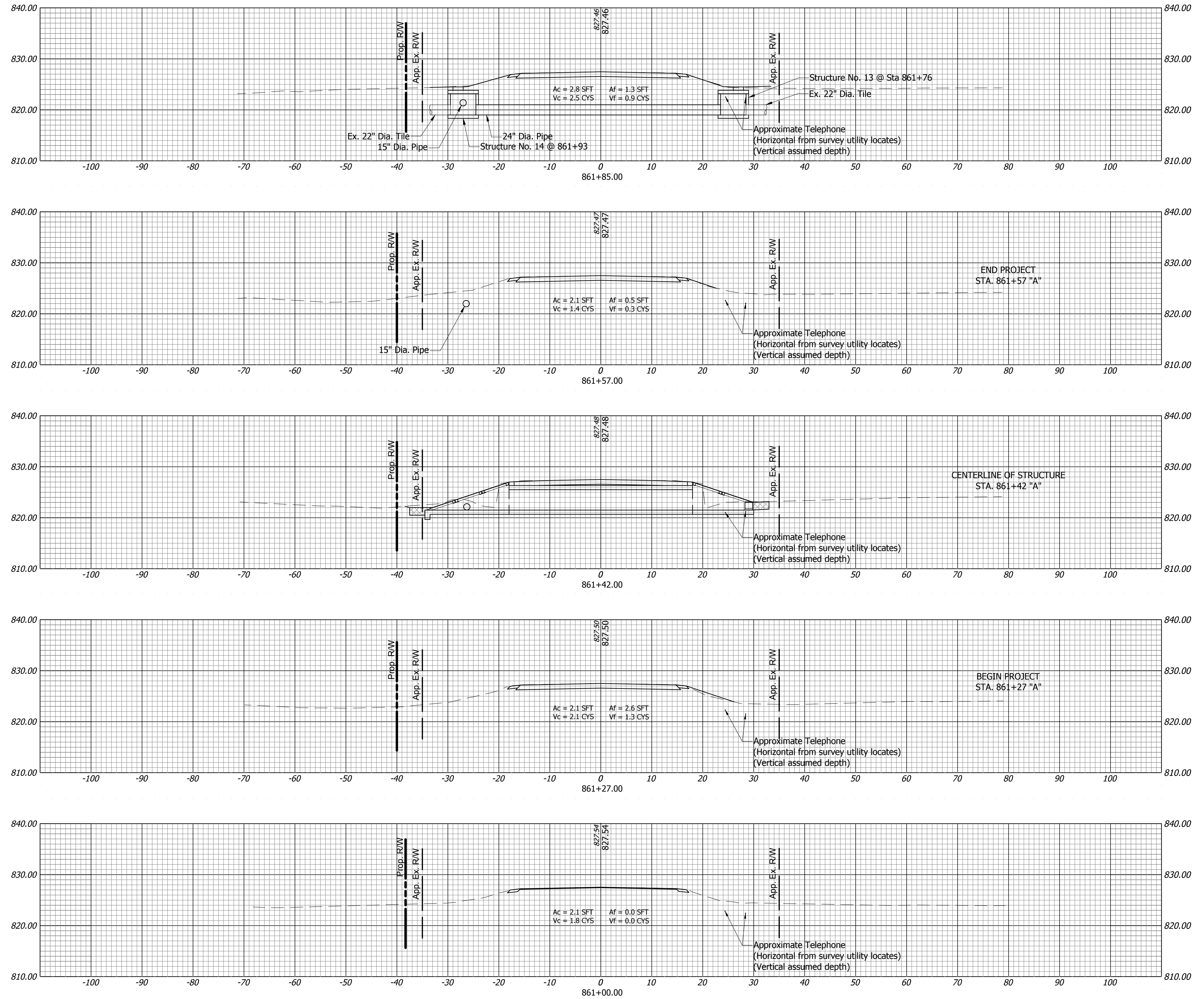
Ph: (260) 490-1025 9835 Auburn Road  
 Fax: (260) 490-1026 Fort Wayne, Indiana 46825



RECOMMENDED FOR APPROVAL: *Heidi Kiser* DESIGN ENGINEER 07/16/13 DATE  
 DESIGNED: AJI DRAWN: JFW  
 CHECKED: TRL CHECKED: AJI

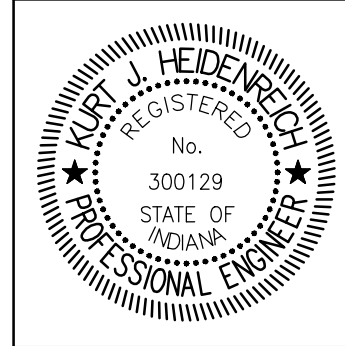
INDIANA DEPARTMENT OF TRANSPORTATION  
 CROSS SECTIONS  
 STA. 859+00 "A" to STA. 860+77 "A"

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 10'	DESIGNATION 0301136
SURVEY BOOK	SHEETS 16 of 18
CONTRACT R-33560	PROJECT 0301136



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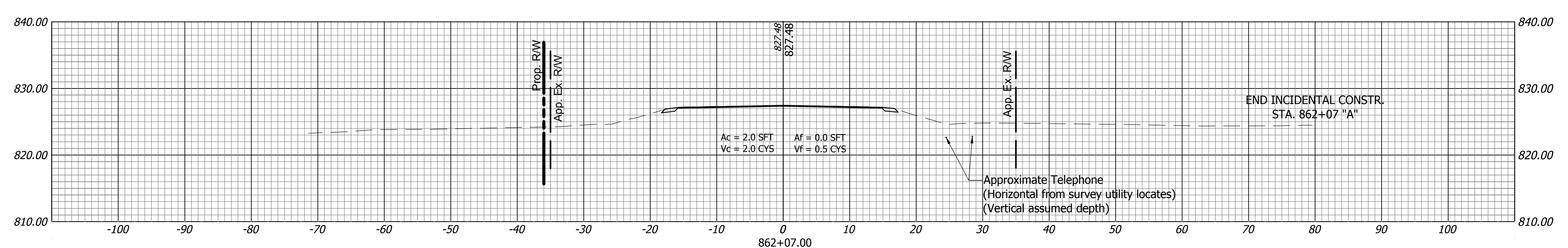
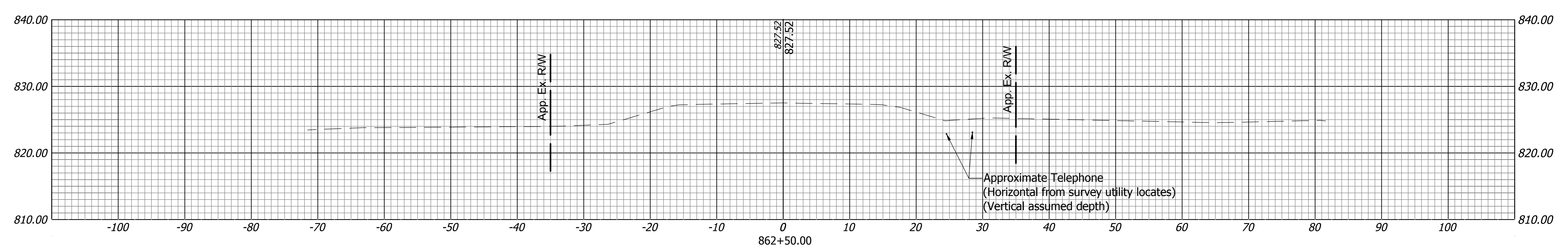
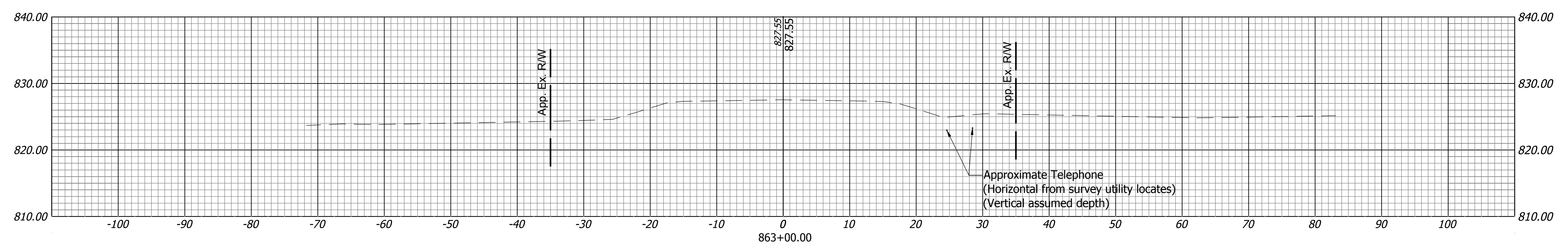
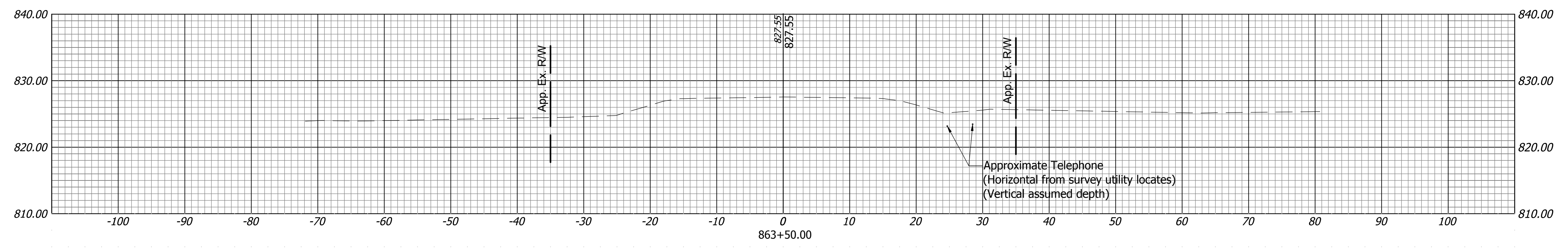
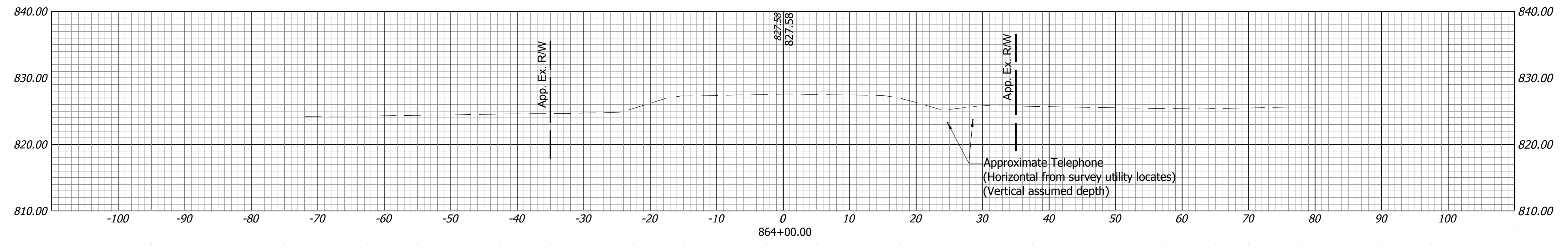
RECOMMENDED FOR APPROVAL: *Heidi Kline* DESIGN ENGINEER 07/16/13 DATE  
 DESIGNED: AJI DRAWN: JFW  
 CHECKED: TRL CHECKED: AJI

INDIANA DEPARTMENT OF TRANSPORTATION  
 CROSS SECTIONS  
 STA. 861+00 "A" to STA. 861+85 "A"

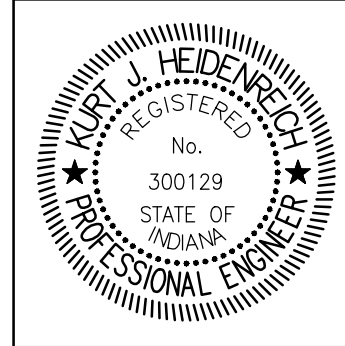
HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 10'	DESIGNATION 0301136
SURVEY BOOK	SHEETS 17 of 18
CONTRACT R-33560	PROJECT 0301136



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 DESIGN ENGINEER DATE  
 DESIGNED: AJI DRAWN: JFW  
 CHECKED: TRL CHECKED: AJI

INDIANA DEPARTMENT OF TRANSPORTATION  
 CROSS SECTIONS  
 STA. 862+07 "A" to STA. 864+00 "A"

HORIZONTAL SCALE 1" = 10'	BRIDGE FILE
VERTICAL SCALE 1" = 10'	DESIGNATION 0301136
SURVEY BOOK	SHEETS 18 of 18
CONTRACT R-33560	PROJECT 0301136