

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 562	17-15145-00-BR	WAYNE	20	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 95860		

INDEX OF SHEETS

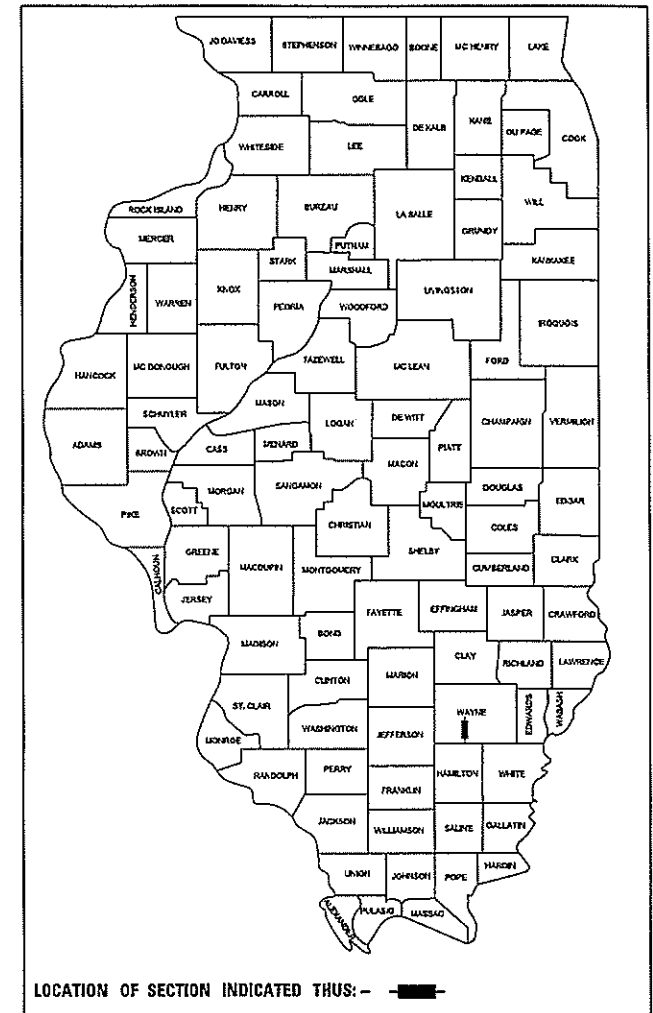
SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5-9.	CULVERT PLANS
10-11.	BORINGS
12-20.	STATION CROSS SECTIONS

HIGHWAY STANDARDS:

000001-07	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
701901-08	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

PLANS FOR PROPOSED  
SURFACE TRANSPORTATION PROGRAM  
OFF SYSTEM BRIDGE

PROJECT 3RVR(557)  
SECTION 17-15145-00-BR  
LEECH ROAD DISTRICT  
WAYNE COUNTY  
T.R. 562  
PROPOSED STRUCTURE NO. 096-5012  
C-97-024-19



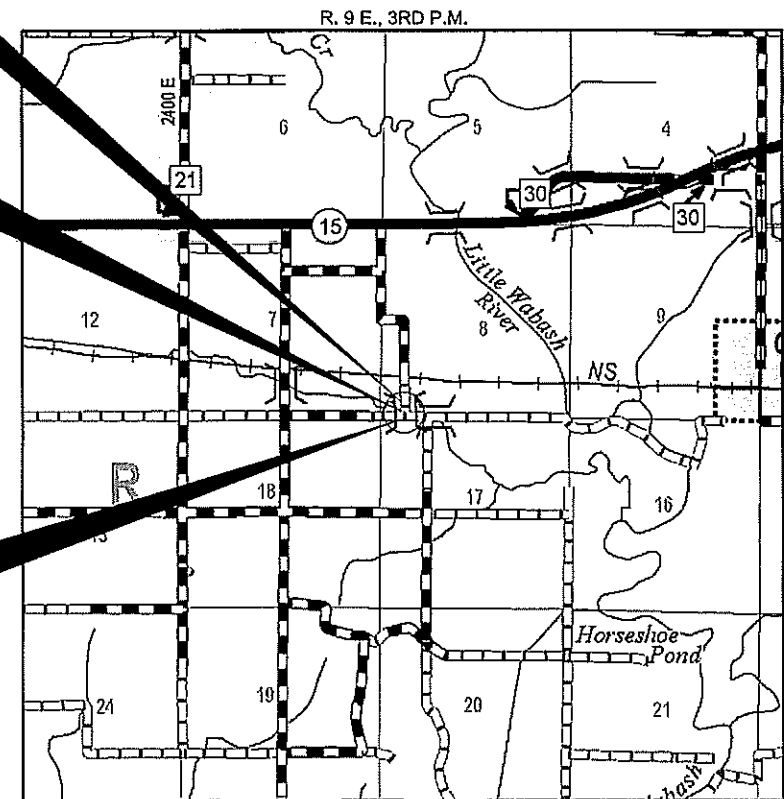
UTILITIES

WAYNE-WHITE ELECTRIC CO-OP  
1501 W MAIN ST.  
FAIRFIELD, IL 62837

STA. 10+05  
SINGLE 18"X7" CAST-IN-PLACE CONCRETE BOX CULVERT.  
37'-0" LENGTH; SKEW = 35°  
EXISTING STRUCTURE NO. 096-3205  
PROPOSED STRUCTURE NO. 096-5012

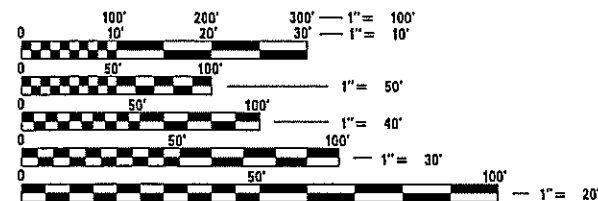
IMPROVEMENT ENDS  
STATION 12+00

IMPROVEMENT BEGINS  
STATION 9+20



LOCATION MAP

APPROXIMATE SCALE: 0 1/2 MILE  
NET LENGTH OF SECTION = 280 FEET = 0.053 MILES



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

FUNCTIONAL CLASSIFICATION: LOCAL ROAD  
DESIGN SPEED: 20 MPH  
DESIGN TRAFFIC: 25 ADT



**WARNING**

CALL 811  
BEFORE YOU DIG  
DIG NO: X2881752

ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED 6-07-19  
*[Signature]*  
COUNTY ENGINEER

APPROVED 6-13-19  
*[Signature]*  
TOWNSHIP COMMISSIONER

PASSED 7-18-19  
*[Signature]*

Releasing For Bid Based on Limited Review  
7-18-19  
*[Signature]*  
REGION FOUR ENGINEER

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE: 05/31/19

EXPIRES: 11/30/2018

HAMPTON, LENZINI AND RENWICK, INC.  
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
217.546.3400 www.hlrengineering.com

184.00959  
ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORPORATION

PROJECT NUMBER: 17.0371.130 DATE: 05/31/19

**SUMMARY OF QUANTITIES**

CODE NO.	ITEM	UNIT	TOTAL
			CONSTRUCTION TYPE CODE 0010
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	75
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	100
20200100	EARTH EXCAVATION	CU YD	269
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	140
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	330
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	27,370
* 50900205	STEEL RAILING, TYPE 51	FOOT	40
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	106.3
67100100	MOBILIZATION	L SUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
^ X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	89
X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	430
X2090210	POROUS GRANULAR BACKFILL, SPECIAL	CU YD	16
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.75

^ SEE SPECIAL PROVISIONS

\* SPECIALTY ITEM

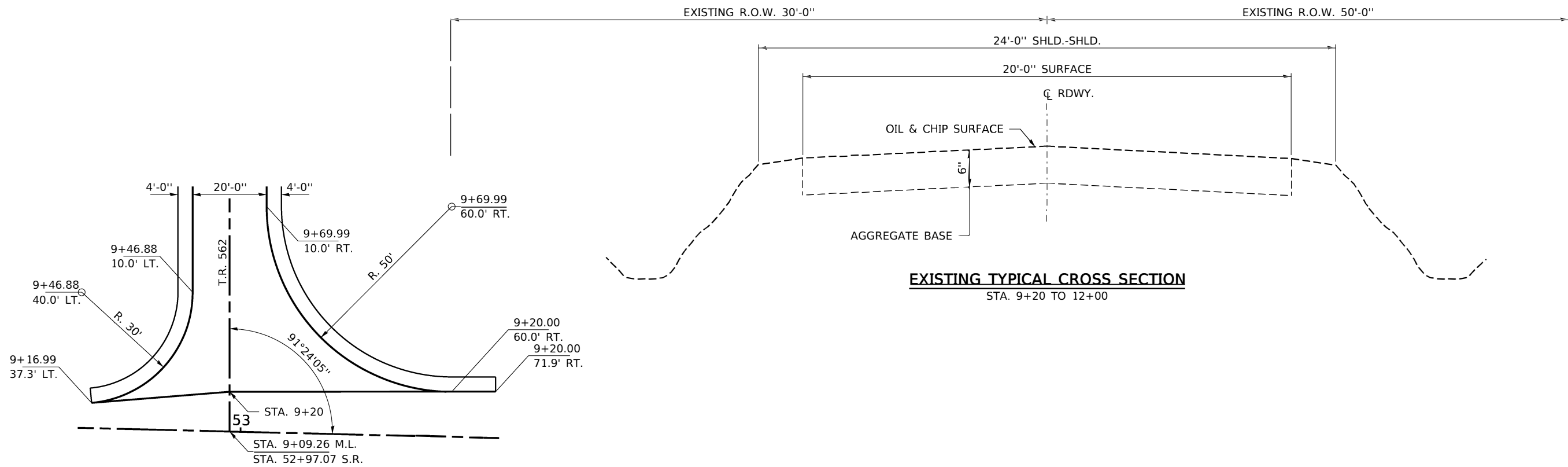
**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL AND DISPOSAL OF EXISTING BITUMINOUS & AGGREGATE PAVEMENT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:  
 AGGREGATE SURFACE COURSE 2.05 TON/CU YD  
 STONE DUMPED RIPRAP 1.75 TON/CU YD  
 POROUS GRANULAR EMBANKMENT 1.50 TON/CU YD
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 0.75 ACRES
- COMMITMENTS:  
 1) ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH NATIONWIDE PERMIT NO. 14 INCLUDED IN SPECIAL PROVISIONS.
- ALL WASTE MATERIAL FROM EXCAVATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- TREES SHALL BE REMOVED AT THE DIRECTION OF THE ENGINEER. SEE SPECIAL PROVISIONS.
- THE CONTRACTOR HAS THE OPTION TO CONSTRUCT PRECAST CONCRETE BOX CULVERT, HEADWALLS, AND TOEWALLS IN PLACE OF THE CAST-IN-PLACE OPTION DETAILED IN THESE PLANS. SEE SPECIAL PROVISIONS

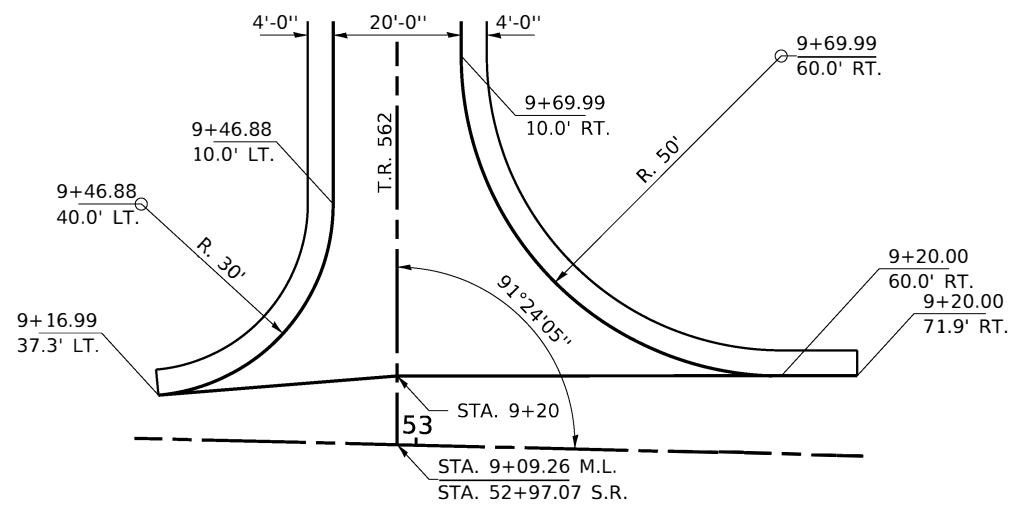
**EARTHWORK SCHEDULE**

LOCATION	EARTH EXCAVATION	INCIDENTAL EXCAVATION FROM CULVERT	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100 CU.YD.	CU.YD.			CU.YD.		
T.R. 562							
STA 9+20 to 9+92.09	92		25.00%	100.00%	69	35	34
STA 9+92.09 TO STA. 10+16.90	81		25.00%	100.00%	61	2	59
STA 10+16.90 to STA 12+00	96		25.00%	100.00%	72	62	10
		309	25.00%	70.00%	162	0	162
<b>TOTAL</b>	269	309			364	98	265
<b>USE</b>	269						265

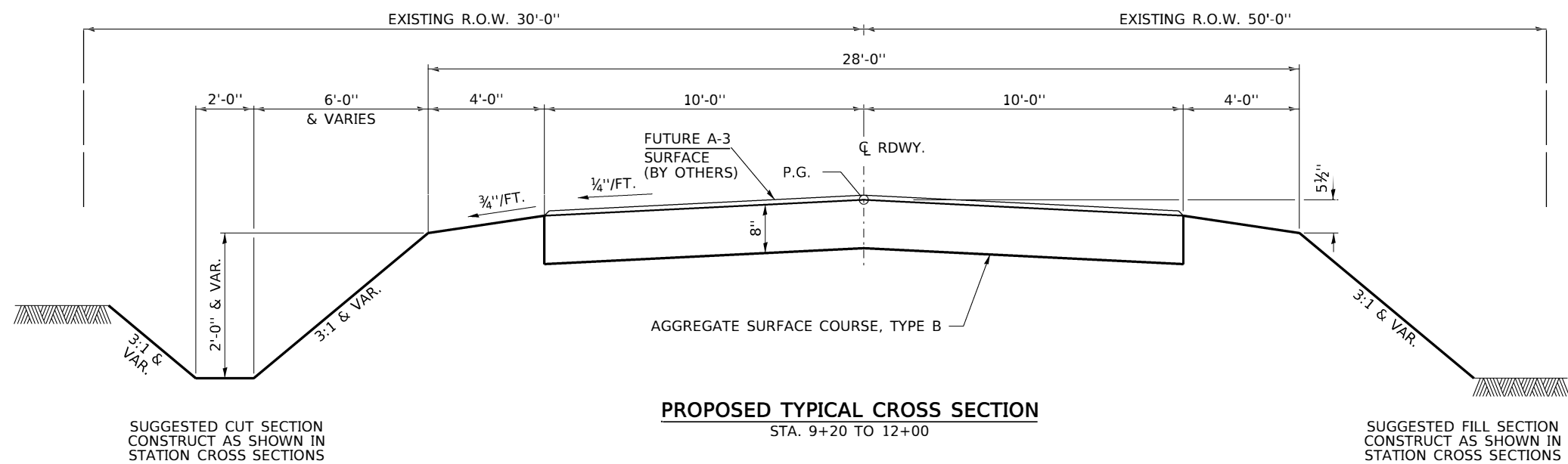
WASTE EXCAVATION 265 CU YDS



**EXISTING TYPICAL CROSS SECTION**  
STA. 9+20 TO 12+00



**INTERSECTION DETAIL**



**PROPOSED TYPICAL CROSS SECTION**  
STA. 9+20 TO 12+00

SUGGESTED CUT SECTION  
CONSTRUCT AS SHOWN IN  
STATION CROSS SECTIONS

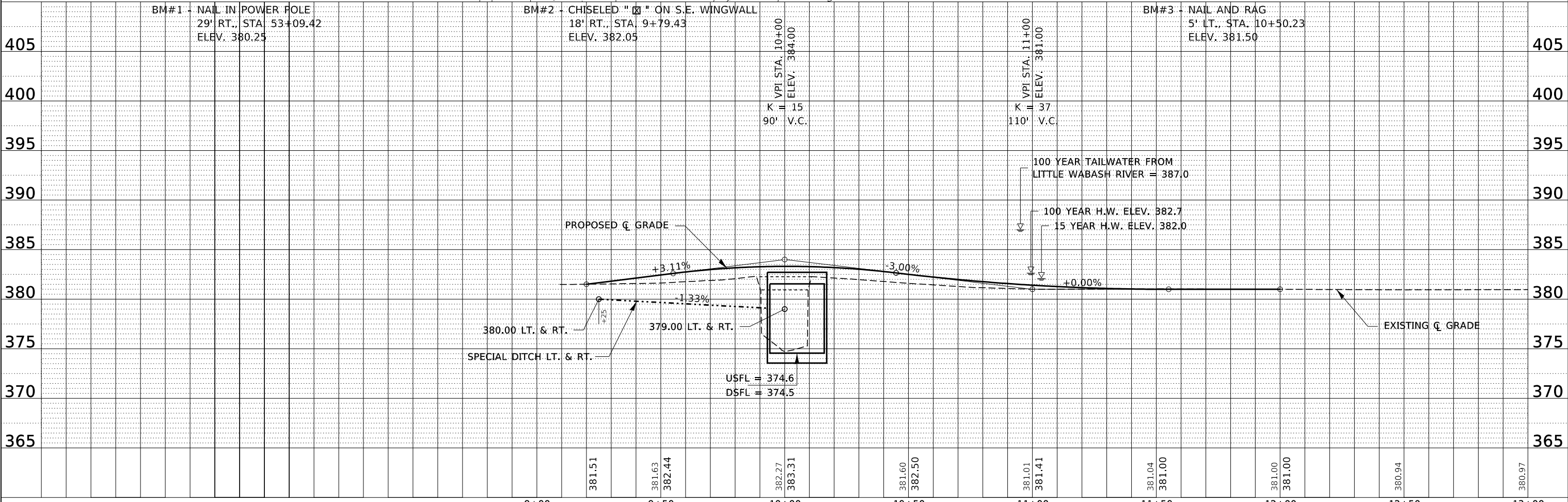
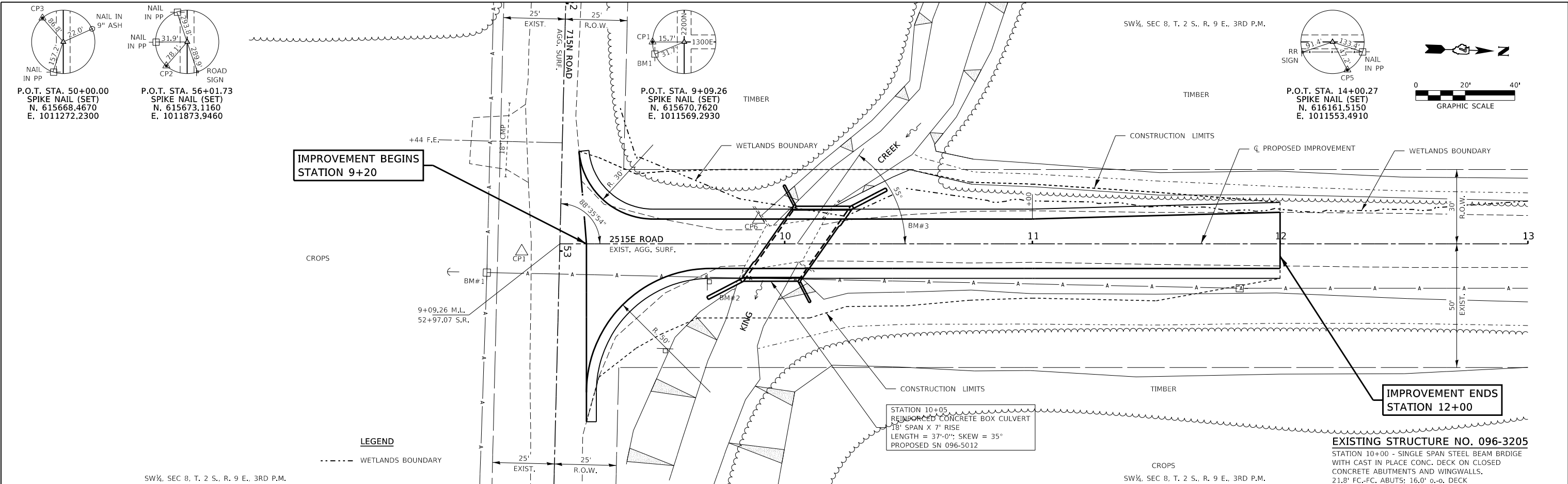
SUGGESTED FILL SECTION  
CONSTRUCT AS SHOWN IN  
STATION CROSS SECTIONS

TRANSITION FROM THE PROPOSED SURFACE TO THE  
EXISTING SURFACE FROM STA. 11+00 TO 12+00.

FILE NAME = 170371-shi-typsections.dgn	USER NAME = mpaul	DESIGNED - S.W.M.	REVISED -	<b>STATE OF ILLINOIS WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>TYPICAL CROSS SECTIONS</b>		T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / BE CORP. 184.000959	PLOT SCALE = \$SCALE\$	DRAWN - R.D.H.	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	562	17-15145-00-BR	WAYNE	20	3
PLOT DATE = 5/31/2019	DATE = 05/31/19	CHECKED - S.W.M.	REVISED -						LEECH ROAD DISTRICT		CONTRACT NO. 95860		
		REVIS	REVISED -						ILLINOIS		FED. AID PROJECT		

DATE	
BY	
REVIEWED	
PLANNED	
ALIGNED	
CHECKED	
FILE NAME	
NO.	

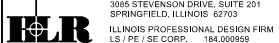
DATE	
BY	
REVIEWED	
PLANNED	
GRADES CHECKED	
STRUCTURE NOTATING CHECKED	
NO.	

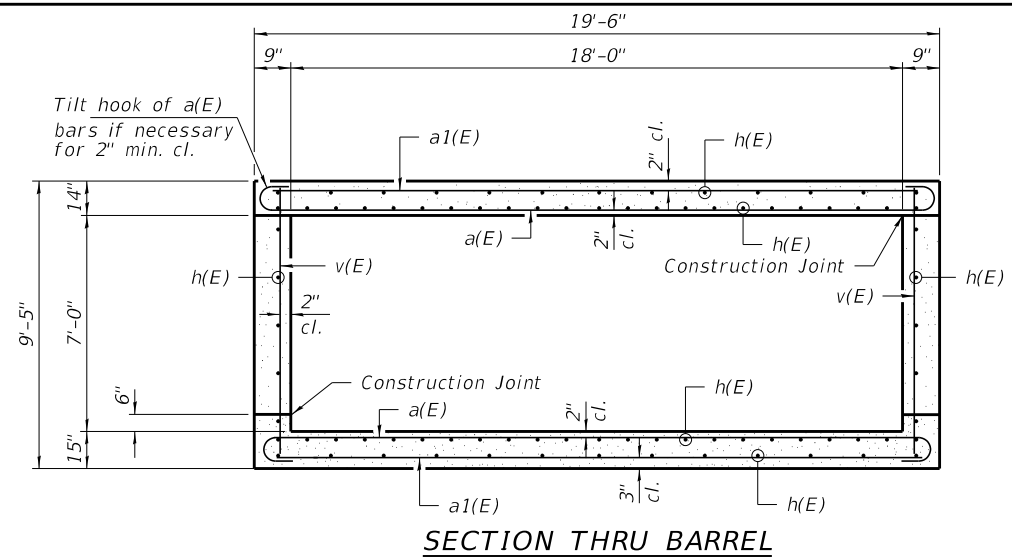
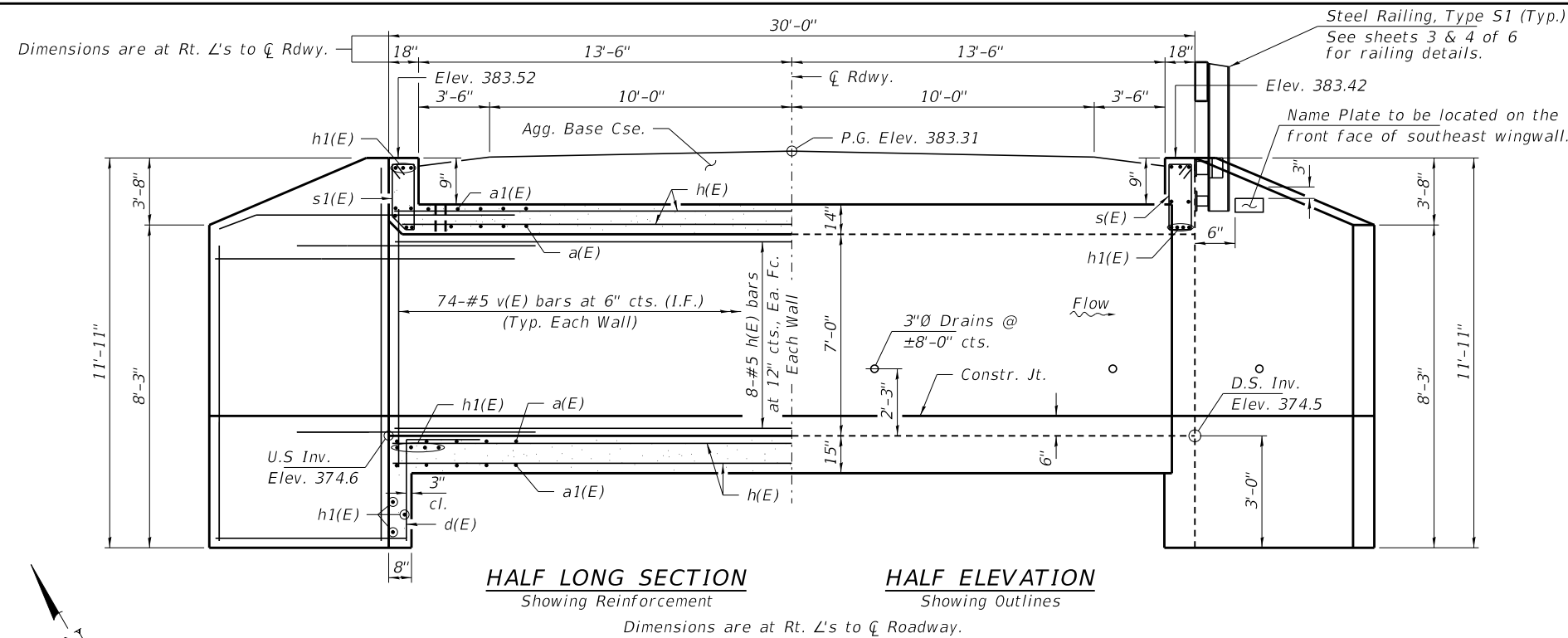


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HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	DESIGNED - J.W.F.	DRAWN - M.M.P.	REVISED -	562	17-15145-00-BR	WAYNE	20	4
PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	DATE - 05/31/19	REVISED -	LEECH ROAD DISTRICT		CONTRACT NO. 95860		
PLOT DATE = 5/31/2019	DATE - 05/31/19	REVISED -	SCALE: 20H:5V	SHEET NO. 1	OF 1 SHEETS	STA. 9+09.26	TO STA. 13+00.00	ILLINOIS FED. AID PROJECT 3RVR(557)

**STATE OF ILLINOIS  
WAYNE COUNTY HIGHWAY DEPARTMENT**

**PLAN & PROFILE**





**NOTES**

Exposed edges shall be beveled 3/4\"/>

For backfilling and embankment, see Standard Specifications, except that Porous Granular Embankment shall be placed as shown in backfill detail for the full length of the culvert. Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60. See Special Provisions.

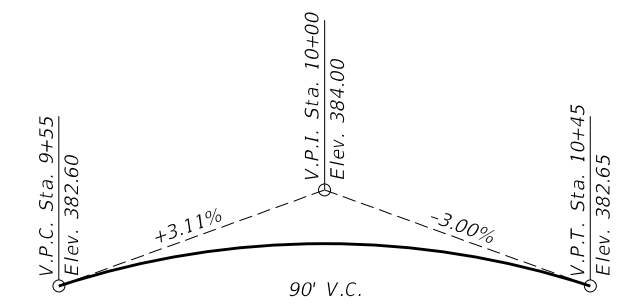
It shall be the responsibility of the Contractor to divert flow during construction in order to keep construction areas free of water. The method of water diversion shall be subject to the approval of the Engineer and shall be included in the cost of Concrete Box Culverts. All construction joints shall be bonded. Precast concrete box culverts will be allowed. All bars shall be epoxy coated. A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.

**INDEX OF STRUCTURE SHEETS**

- 1-3. Culvert Details
- 4. Steel Railing, Type S-1
- 5-6. Borings

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	146	#9	21'-8"	
a1(E)	74	#5	19'-2"	
d(E)	36	#4	4'-5"	
h(E)	130	#5	36'-8"	
h1(E)	28	#10	23'-5"	
h2(E)	42	#9	14'-8"	
h3(E)	22	#9	14'-1"	
h4(E)	20	#6	19'-6"	
h5(E)	22	#6	22'-6"	
h6(E)	22	#6	20'-11"	
s(E)	21	#5	6'-9"	
s1(E)	21	#5	6'-6"	
v(E)	148	#5	9'-1"	
v1(E)	48	#4	11'-7"	
Porous Granular Embankment, Special		Ton	430	
Stone Dumped Riprap, Class A4		Ton	140	
Reinf. Bars, Epoxy Coated		Pound	27,370	
Name Plates		Each	1	
Concrete Box Culverts		Cu. Yd.	106.3	
Membrane Waterproofing System for Buried Struct.		Sq. Yd.	89	
Porous Gran. Backfill, Spl.		Cu. Yd.	16	



**PROFILE GRADE**

T.R. 562

**MIN. BAR LAP**

#5 = 2'-7"

**DESIGN STRESSES**

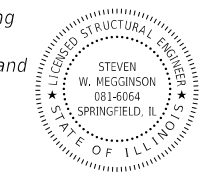
f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)

**LOADING HL-93**

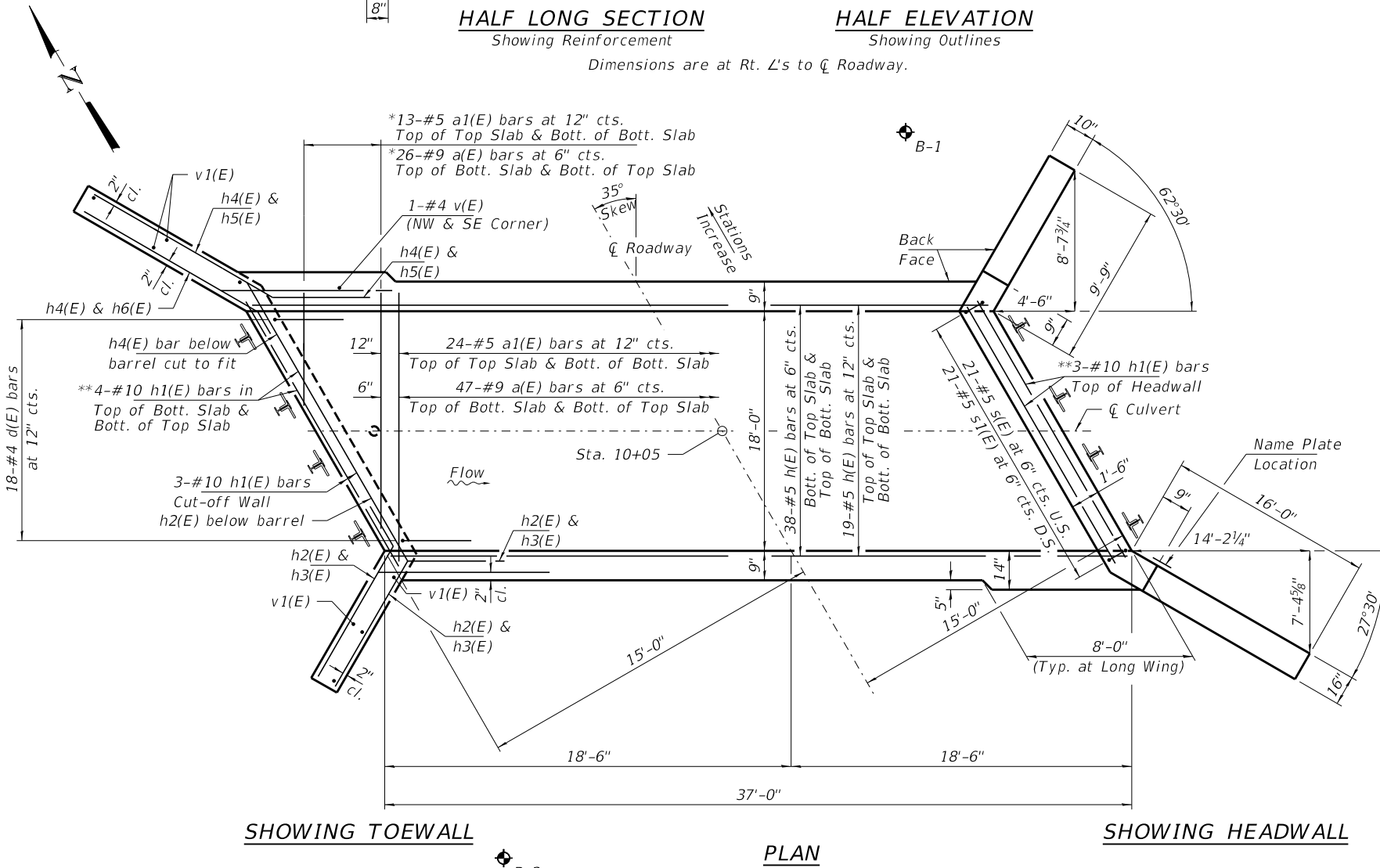
Design Specifications: 2017 AASHTO LRFD with all interims.

I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

*Steven W. Megginson* 05/31/2019  
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2020



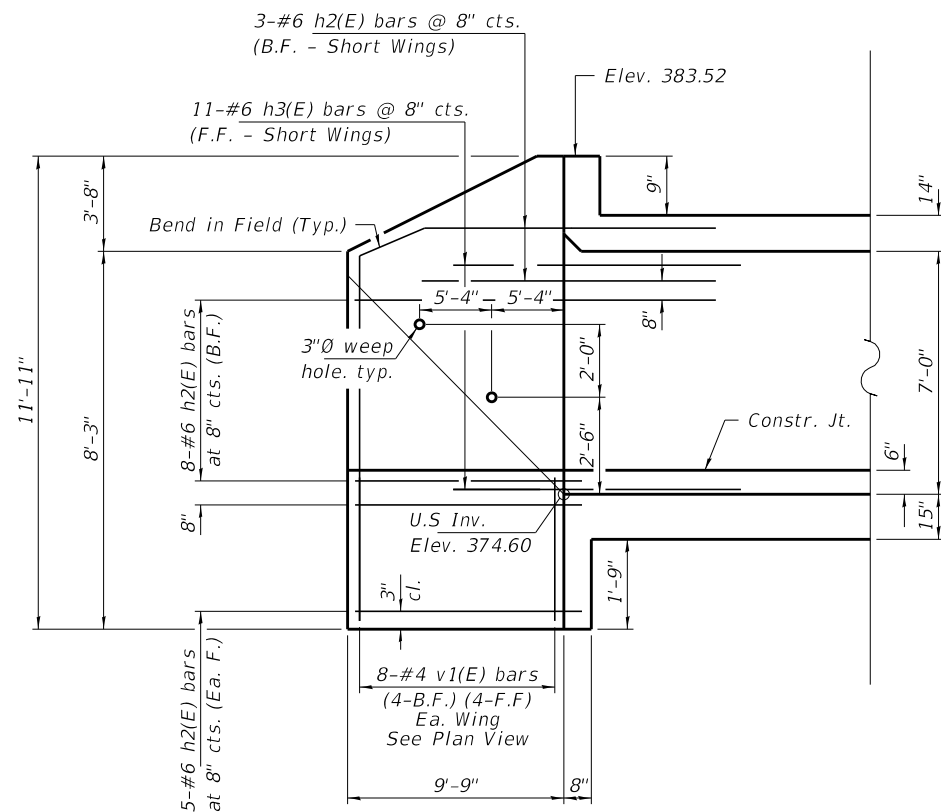
**SHOWING TOEWALL**

**PLAN**

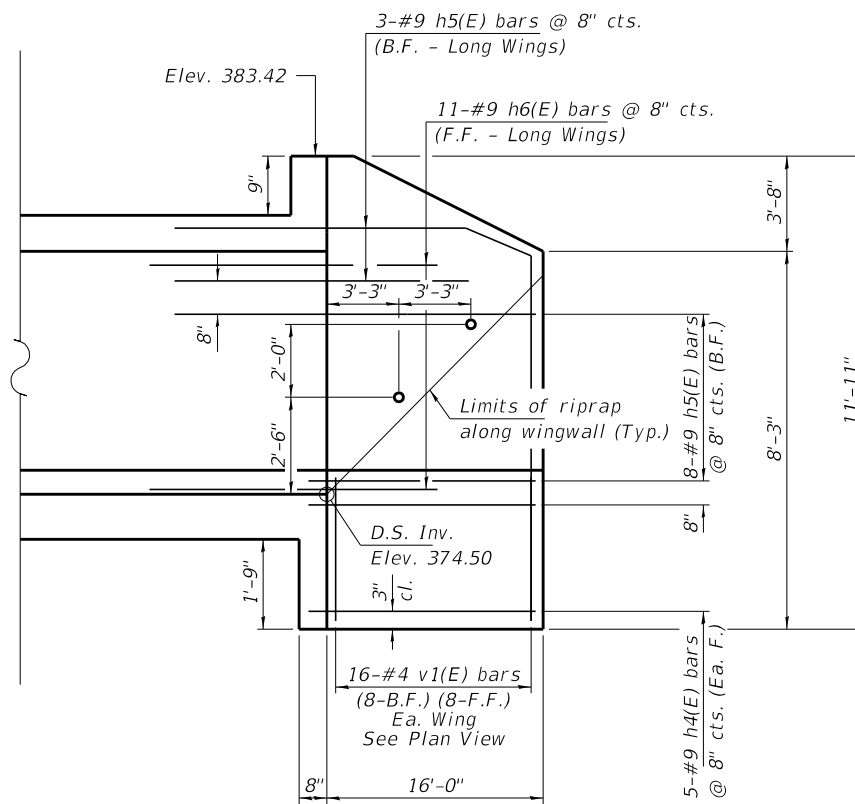
**SHOWING HEADWALL**

\*"a(E)" bars in skew portion of slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of culvert.  
\*\* See Section thru headwalls Sheet 3 of 6.

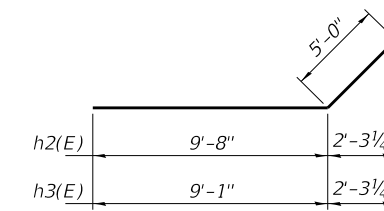
FILE NAME = 170371-shi-culvert.dgn	USER NAME = mpaul	DESIGNED - R.D.H.	REVISED -	<b>STATE OF ILLINOIS WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>CULVERT DETAILS STRUCTURE NO. 096-5012</b>	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3035 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -			562	17-15145-00-BR	WAYNE	20	5
	PLOT DATE = 5/31/2019	DRAWN - R.D.H.	REVISED -			LEECH ROAD DISTRICT		CONTRACT NO. 95860		
		CHECKED - S.W.M.	REVISED -			ILLINOIS		FED. AID PROJECT 3RVR(557)		



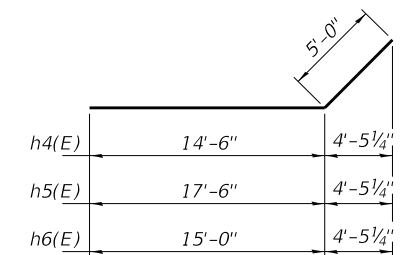
**NORTHEAST AND SOUTHWEST WINGWALL ELEV. - (SHORT WING)**



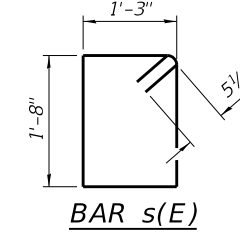
**NORTHWEST AND SOUTHEAST WINGWALL ELEV. - (LONG WING)**



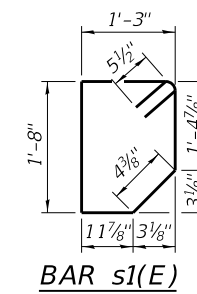
**BARS h2(E) & h3(E)**



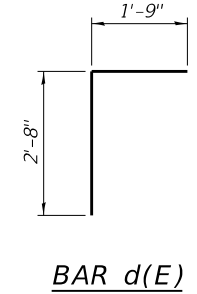
**BARS h4(E), h5(E) & h6(E)**



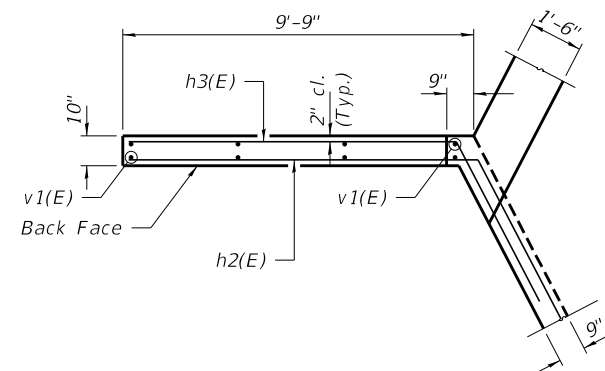
**BAR s(E)**



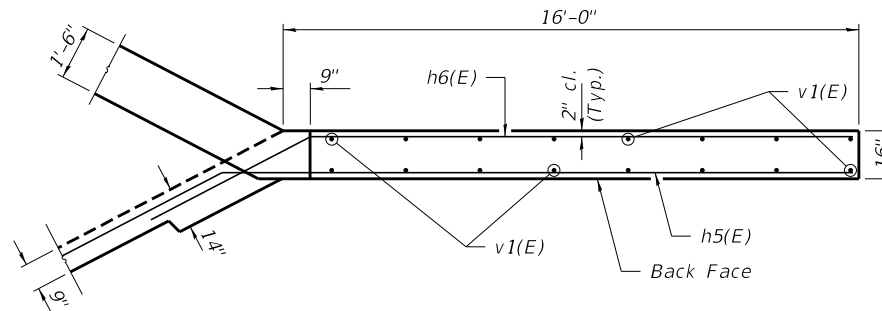
**BAR s1(E)**



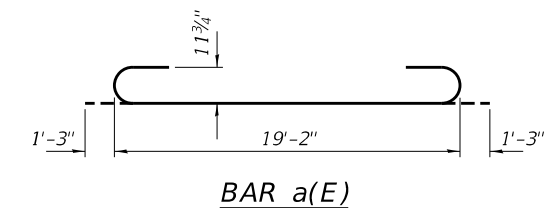
**BAR d(E)**



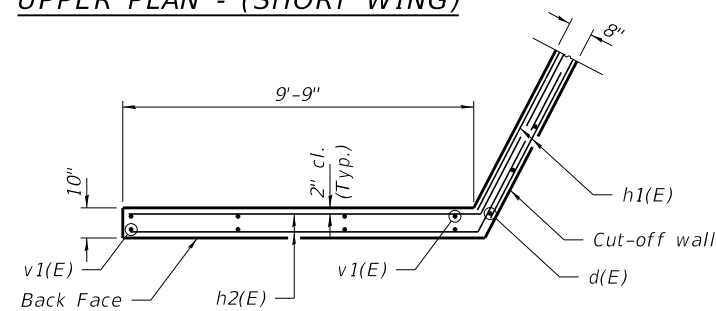
**NORTHEAST AND SOUTHWEST WINGWALL UPPER PLAN - (SHORT WING)**



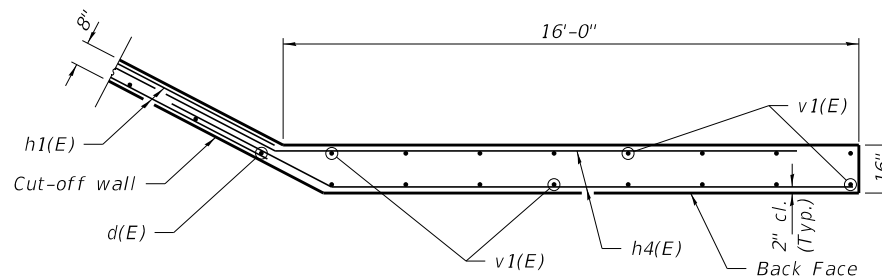
**NORTHWEST AND SOUTHEAST WINGWALL UPPER PLAN - (LONG WING)**



**BAR a(E)**



**NORTHEAST AND SOUTHWEST WINGWALL LOWER PLAN - (SHORT WING)**

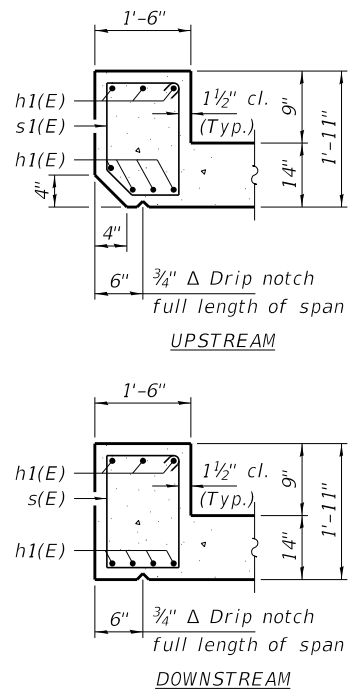


**NORTHWEST AND SOUTHEAST WINGWALL LOWER PLAN - (LONG WING)**

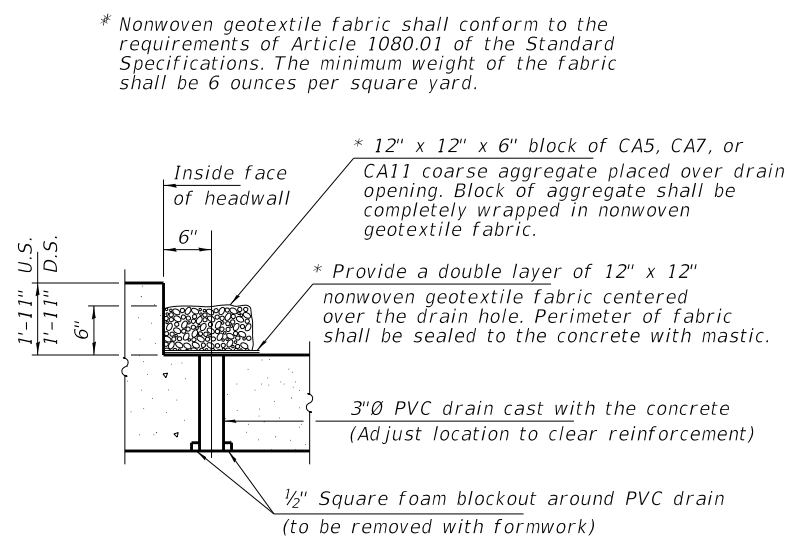
**NOTES**

1. For Bill of Material and reinforcement bars summary see sheet 1 of 6.
2. B.F. denotes Back Face; F. F. denotes Front Face; Ea. F. denotes Each Face.

FILE NAME = 170371-shi-culvert.dgn	USER NAME = mpaul	DESIGNED - R.D.H.	REVISED -	<b>STATE OF ILLINOIS WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>CULVERT DETAILS STRUCTURE NO. 096-5012</b>	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -			562	17-15145-00-BR	WAYNE	20	6
PLOT DATE = 5/31/2019		DRAWN - R.D.H.	REVISED -			LEECH ROAD DISTRICT		CONTRACT NO. 95860		
		CHECKED - S.W.M.	REVISED -			SHEET NO. 2 OF 7 SHEETS		ILLINOIS   FED. AID PROJECT 3RVR(557)		

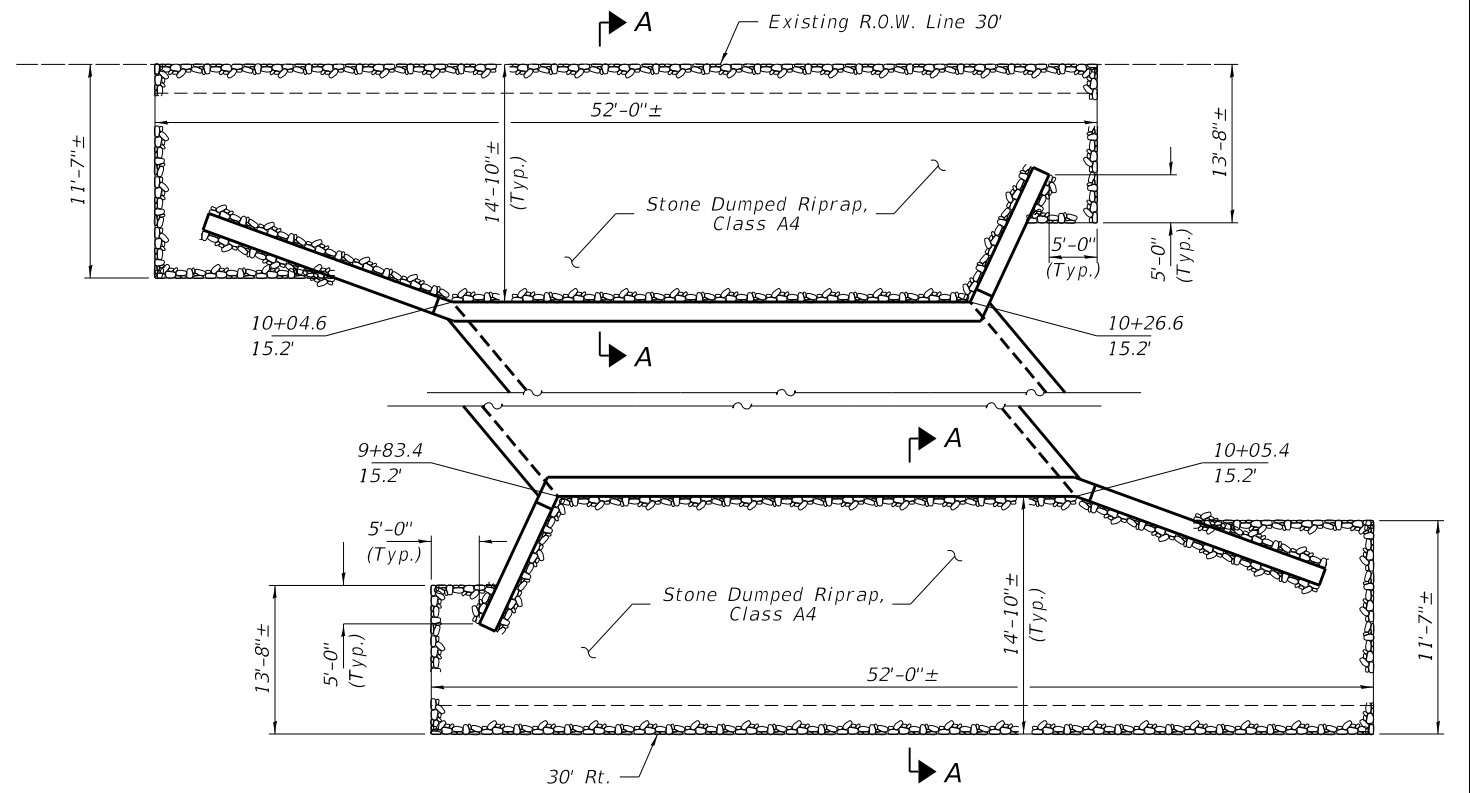


**SECTION THRU HEADWALL**

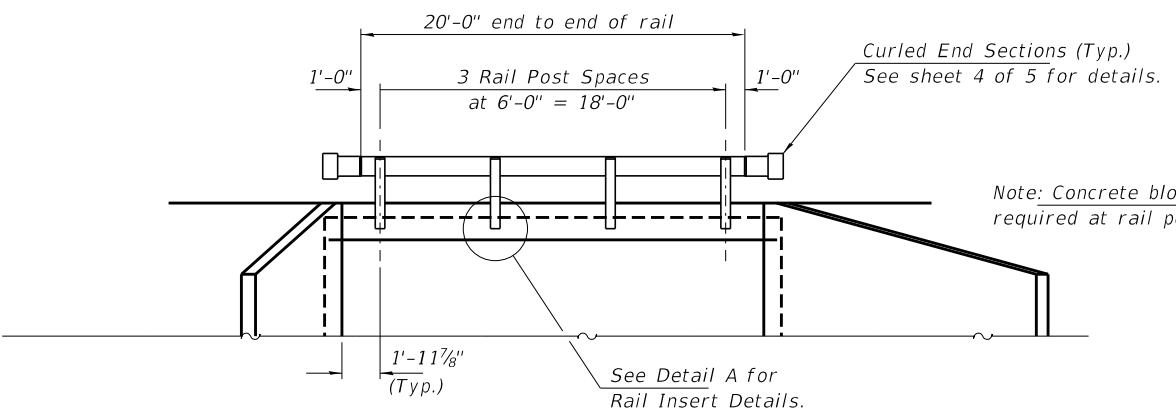


**DRAIN DETAIL**

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for Concrete Box Culverts.)

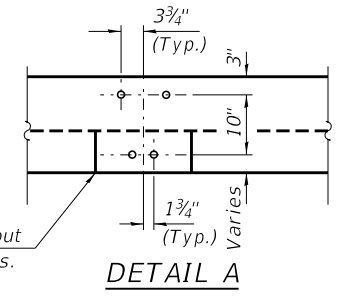


**RIPRAP LAYOUT**

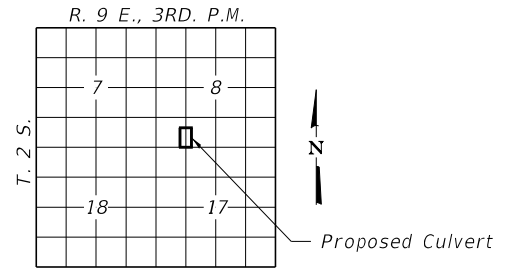


**ELEVATION**

Showing Rail Post Spaces  
See sheet 4 of 5 for Railing Details.



**DETAIL A**



**LOCATION SKETCH**

**WATERWAY INFORMATION**

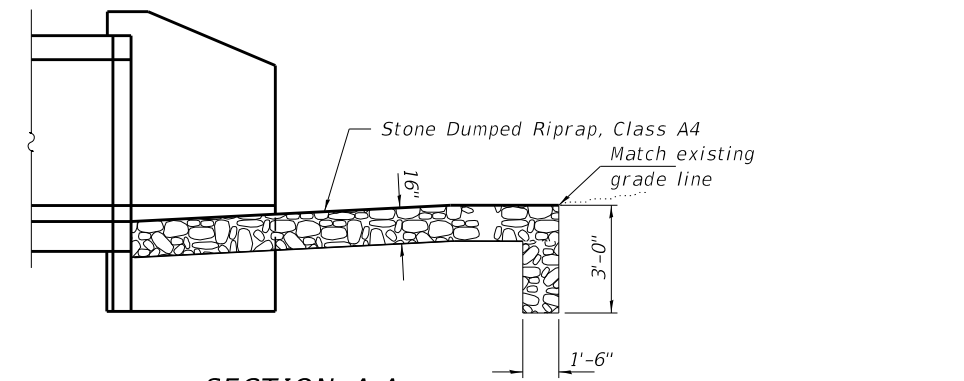
Drainage Area = 4.6 Sq. Mi. Existing Low Grade Elev. 380.9 @ Sta. 12+50  
Proposed Low Grade Elev. 380.9 @ Sta. 12+50

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Exist. Prop.	Exist. Prop.
			Exist.	Prop.		Exist.	Prop.		
Overtop	10	1280	100	126	381.91	0.15	0.00	382.06	381.91
Design	15	1470	100	126	382.04	0.16	0.00	382.20	382.04
Base	100	2470	100	126	382.68	0.16	0.00	382.84	382.68
Scour Check	200	2840	100	126	382.86	0.13	0.00	382.99	382.86
Max. Calc.	500	3390	100	126	383.12	0.12	0.00	383.24	383.12

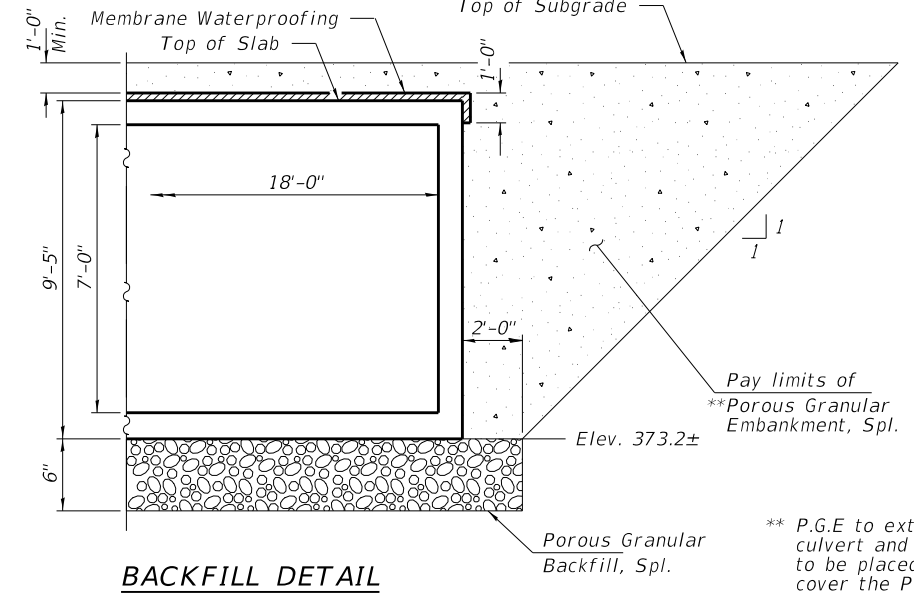
10 Year Velocity through Existing Bridge = 12.8 fps      10 Year Velocity through Proposed Bridge = 10.2 fps

KING CREEK  
BUILT 201 BY  
LEECH ROAD DISTRICT  
WAYNE COUNTY  
SEC. 17-15145-00-BR  
STR. NO. 096-5012  
LOADING HL-93

**NAME PLATE**  
See Std. 515001



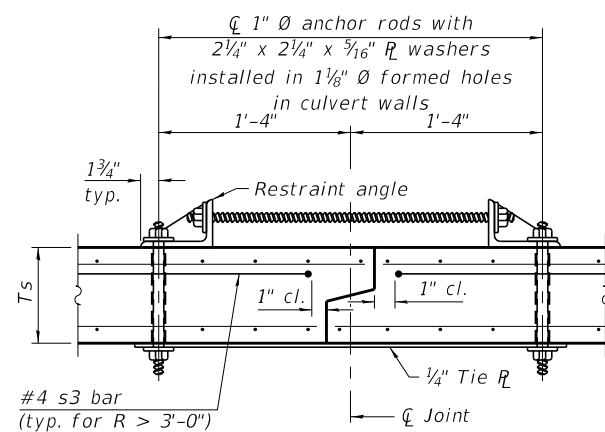
**SECTION A-A**



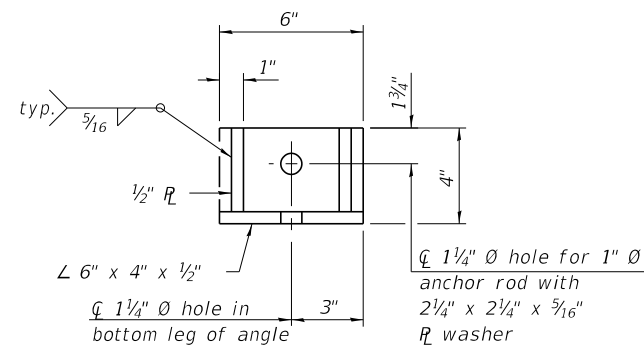
**BACKFILL DETAIL**

\*\* P.G.E to extend the full length of culvert and wings. 18" earth cap to be placed at end of wings to cover the P.G.E.

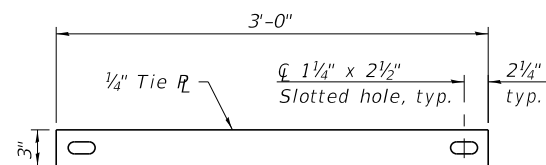
**CULVERT TIES**



**SECTION F-F**  
(Showing culvert tie details)



**RESTRAINT ANGLE DETAIL**



**TIE PLATE DETAIL**

**Notes:**

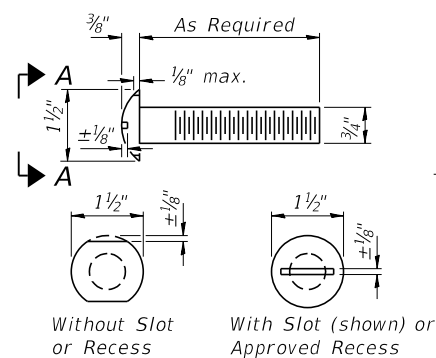
1"  $\emptyset$  anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for the tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4"x2 1/4"x5/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

Cost included with Precast Concrete Box Culverts.

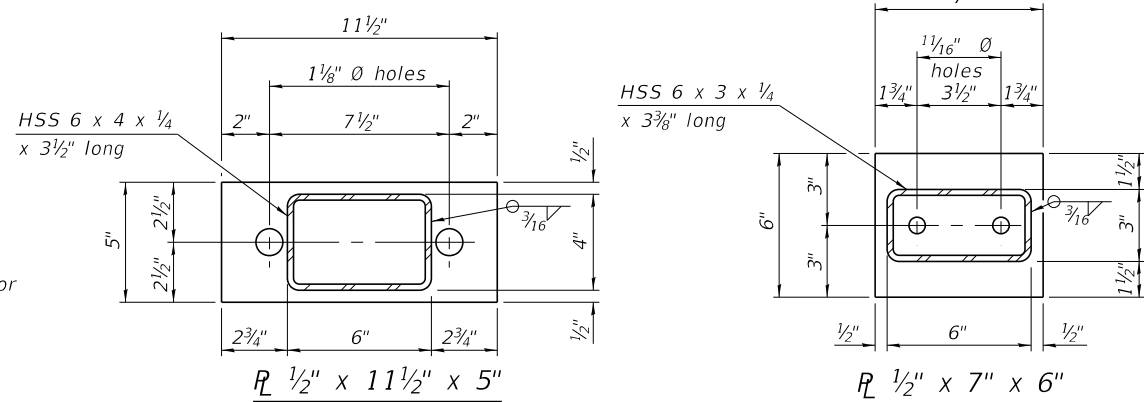
**Precast Box Culvert Schedule (ASTM C 1577)**

Station	Size (Span x Height)	Skew	Design Fill (ft.)		PGE backfill required
			Edge of shldr. (minimum)	Maximum	
10+05	18'x7'	35°	0.5'	1.0'	Yes

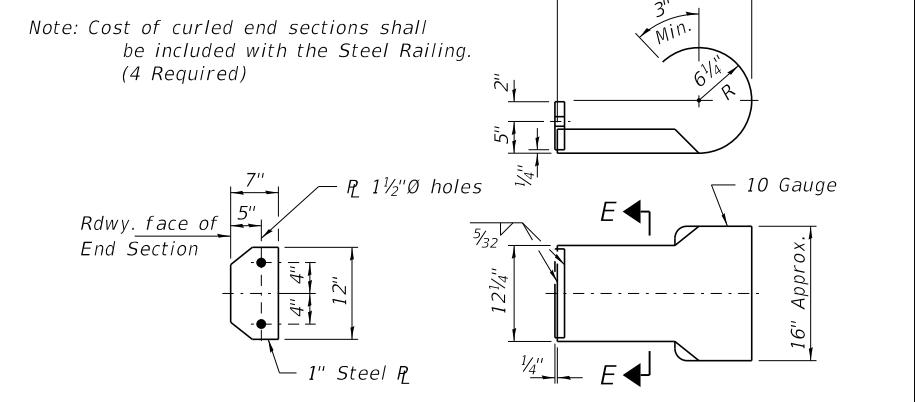




**VIEW A-A  
ROUND HEAD BOLT**



**SECTION B-B**  
**SECTION AT RAILING POST**



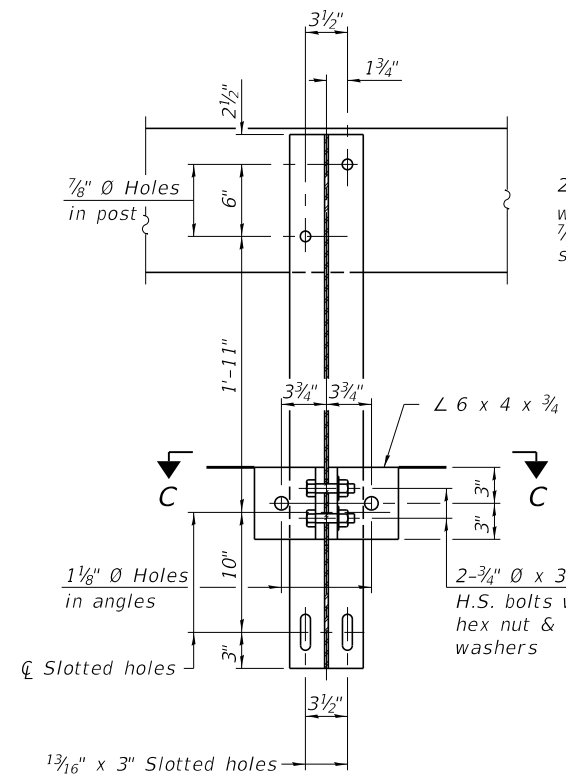
**SECTION E-E**  
**CURLED END SECTION DETAILS**

Note: Cost of curled end sections shall be included with the Steel Railing. (4 Required)

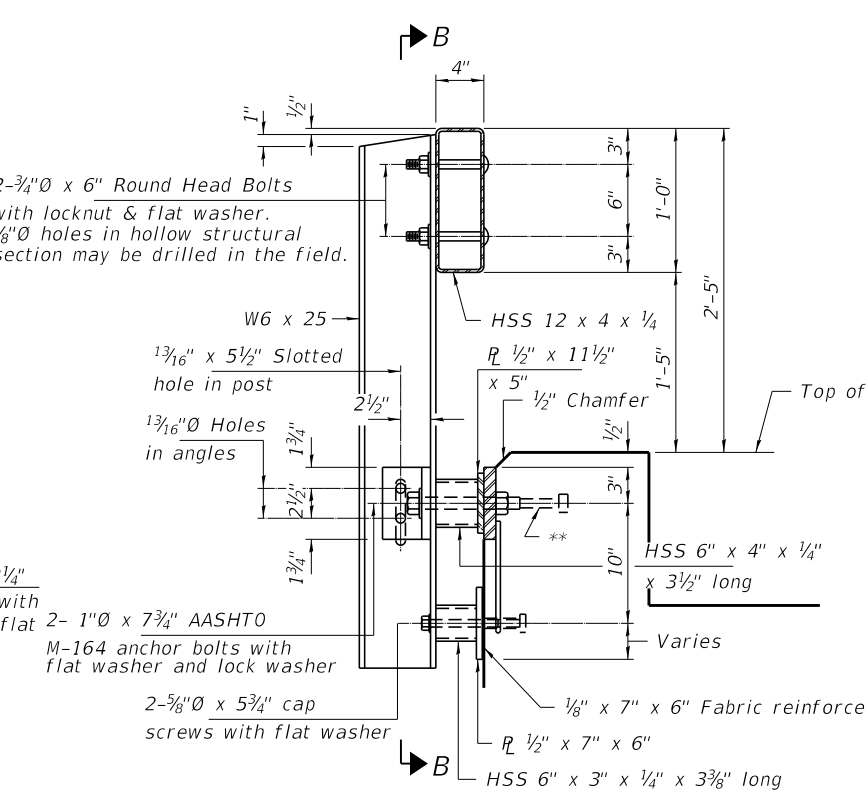
**SPLICE DIMENSIONS**

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	

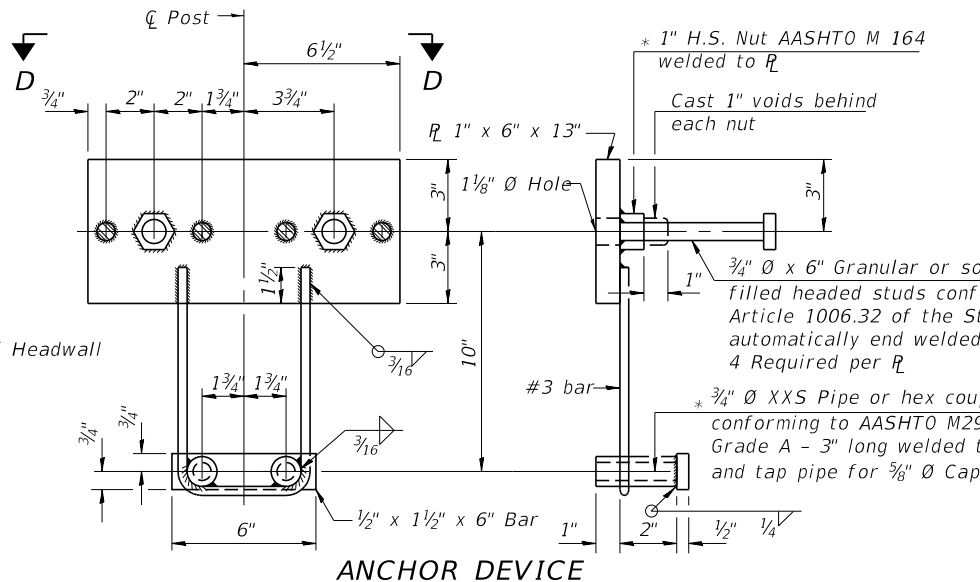
T = Total movement at expansion joint as shown on the design plans.



**SECTION B-B**

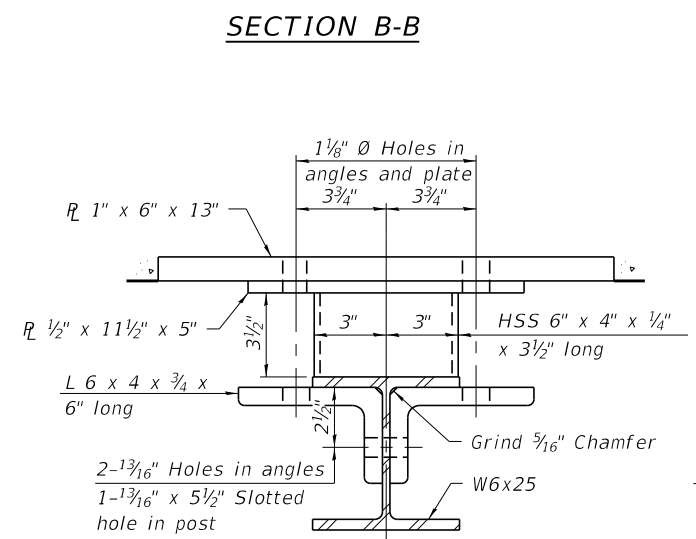


**SECTION AT RAILING POST**

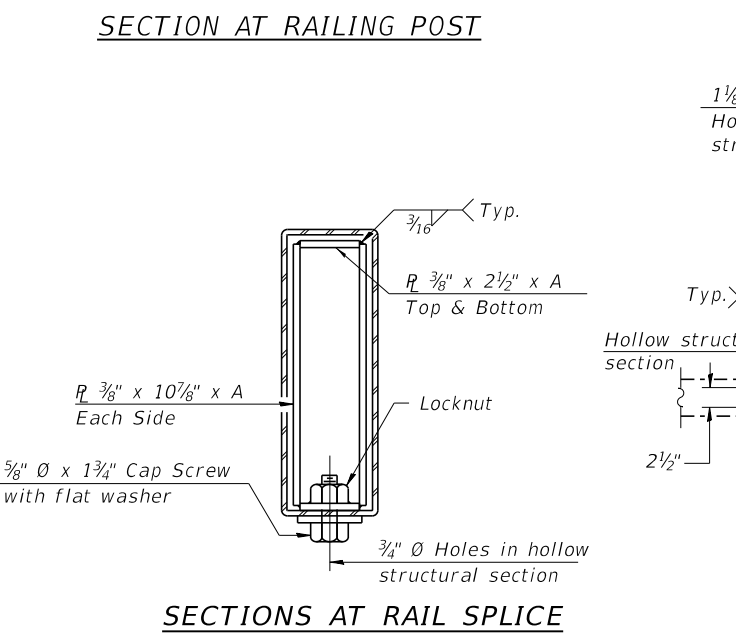


**ANCHOR DEVICE**

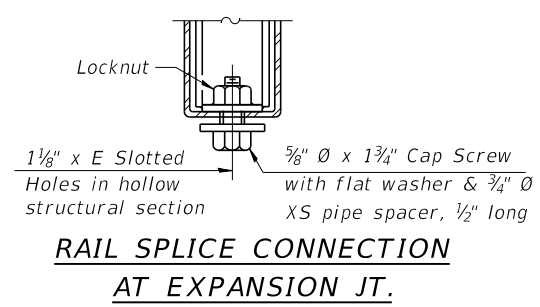
\* Threaded areas shall be plugged or blocked off during casting of beam.



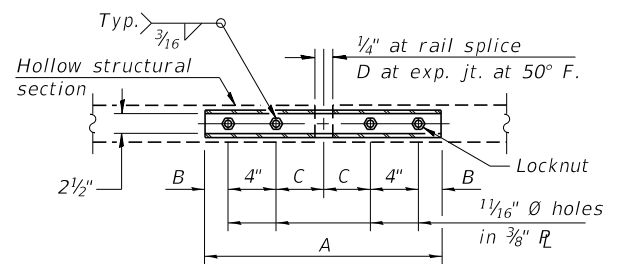
**SECTION C-C**



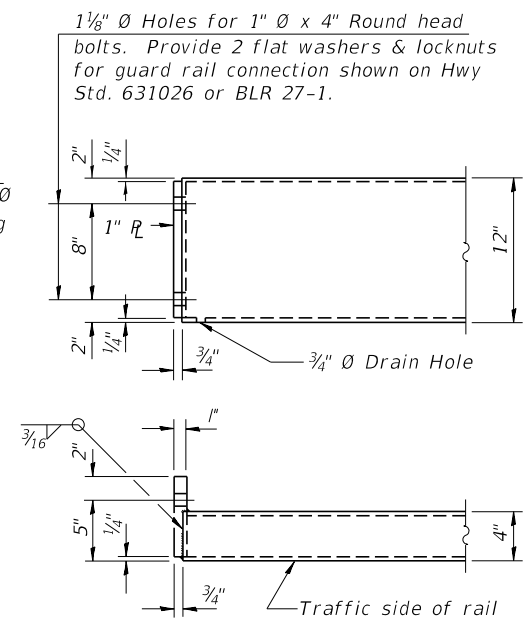
**SECTIONS AT RAIL SPLICE**



**RAIL SPLICE CONNECTION  
AT EXPANSION JT.**



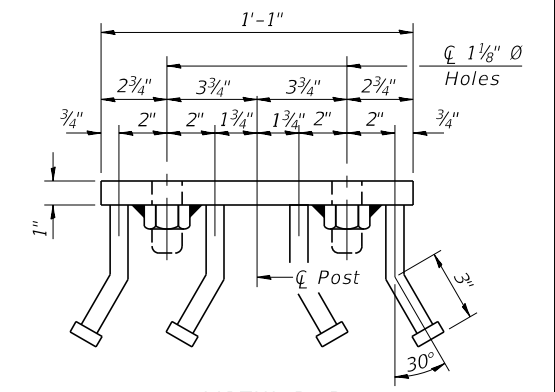
**PLAN-BOTT. SPLICE R  
TYPICAL**



**END OF RAIL DETAILS**

Notes:  
For multi-span bridges, sufficient 1/4 x 6 x 1-2 galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.  
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

\*\*The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device. The anchorage studs may be bent down 1/2 inch to accommodate the top reinforcement bar placement.



**VIEW D-D**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	40

R-23A 8-11-2017 (10'-9" Maximum Post Spacing)

FILE NAME	USER NAME	DESIGNED	REVISED
= 170371-shi-culvert.dgn	= mpaul	- R.D.H.	-
		CHECKED - S.W.M.	REVISED -
		DRAWN - R.D.H.	REVISED -
		CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS  
WAYNE COUNTY HIGHWAY DEPARTMENT**

**STEEL RAILING, TYPE S-1  
STRUCTURE NO. 096-5012**

SHEET NO. 5 OF 7 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
562	17-15145-00-BR	WAYNE	20	9
LEECH ROAD DISTRICT		CONTRACT NO. 95860		

ILLINOIS FED. AID PROJECT 3RVR(557)



Bridge Foundation Boring Log

Project: H-17231 Bridge TR-562 over Br Little Wabash Date: 10/5/2017  
 Section: 17-15145-00-BR Station \_\_\_\_\_ Bored by: B. Schwartz  
 Structure: 096-3205 Checked By: T. Holcomb  
 County: Wayne

Boring No.	Station	Offset	Elevation	N	Qu	w	Surface Water Elev.	Ground Water Elev. During Drilling	Ground Water Elev. Upon Completion	Elevation	N	Qu	w
2			99.5	0				92.5 (374.84)	89.5 (371.84)				
			(381.84) 99.5										
			3" Topsoil										
			Brown Sandy CLAY (A-6)		10	1.5S	7			-25	0	0.4B	34
			(378.34) 96.0										
			Brown Mottled Gray Silty CLAY (A-6)		6	1.1S	12						
			(374.84) 92.5										
			Gray Mottled Brown Sandy CLAY (A-6)		2	1.0B	22			(352.34) 70.0	3	0.6B	23
			(374.84) 92.5										
			Gray Mottled Brown Silty CLAY (A-6)		3	0.9B	21						
			(370.5) 86.0										
			Brown Silty CLAY (A-6)		5	1.9S	35			(348.34) 66.0	28	---	16
			(365.84) 83.5										
			Gray Mottled Brown Silty CLAY (A-6)		5	1.3S	38						
			(363.34) 81.0										
			Brown Silty CLAY (A-6)		0	1.0B	57				13	---	21
			(360.84) 78.5										
			Gray Silty CLAY (A-6)		0	0.4B	37						
			(360.84) 78.5										
			Brown Silty CLAY (A-6)		0	1.0B	43						

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
 Qu - Unconfined Compressive Strength in tons/sq.ft.  
 w - Water Content - percentage of oven dry weight - %  
 B = Bulge Failure  
 S = Shear Failure  
 E = Estimated Value  
 P = Penetrometer

Bridge Foundation Boring Log

Project: H-17231 Bridge TR-562 over Br Little Wabash Date: 10/5/2017  
 Section: 17-15145-00-BR Station \_\_\_\_\_ Bored by: B. Schwartz  
 Structure: 096-3205 Checked By: T. Holcomb  
 County: Wayne

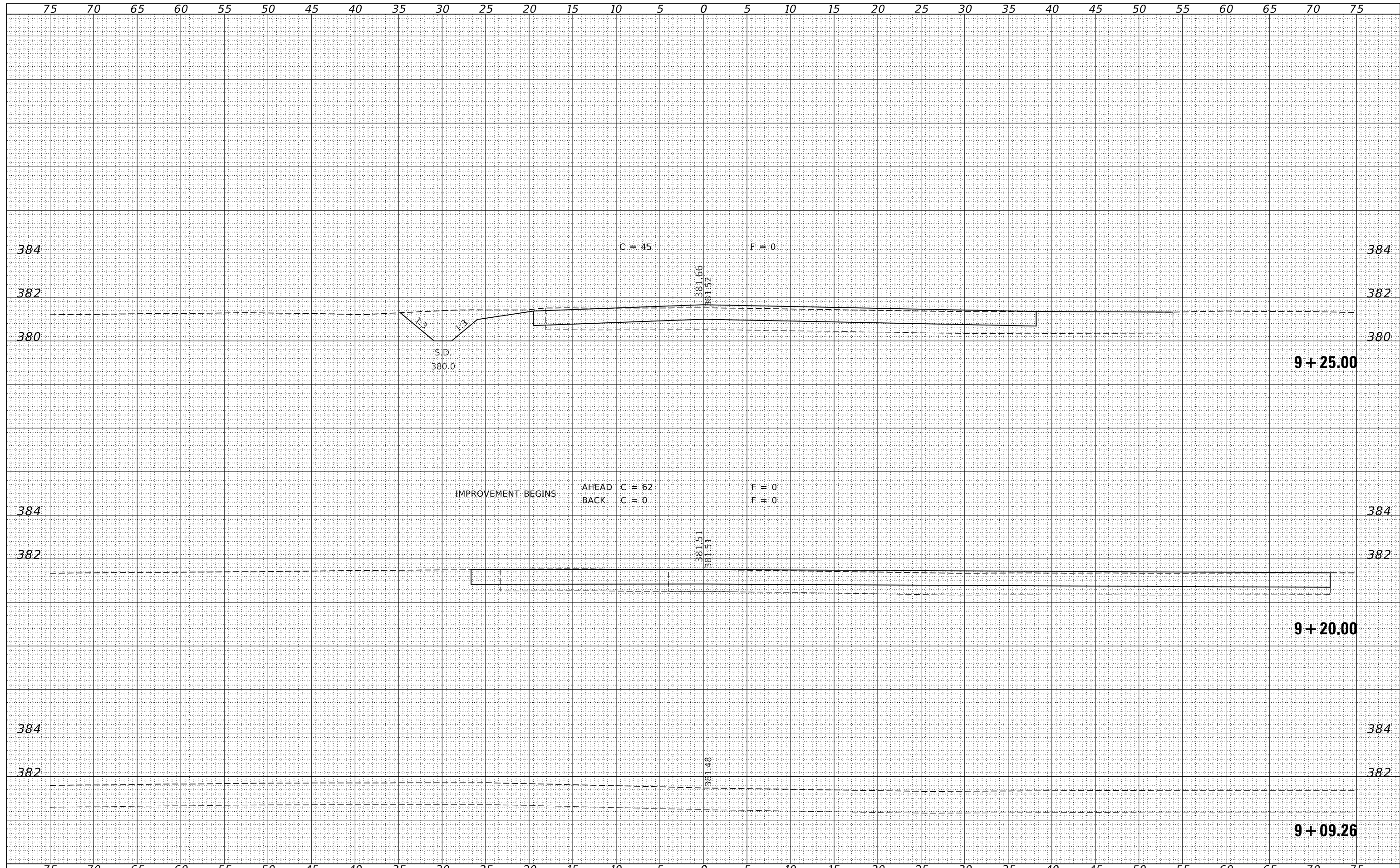
Boring No.	Station	Offset	Elevation	N	Qu	w	Surface Water Elev.	Ground Water Elev. During Drilling	Ground Water Elev. Upon Completion	Elevation	N	Qu	w
2								92.5 (374.84)	89.5 (371.84)				
			sand (continued)		45	9							
			clay (continued)							(312.8) 30.5	100	3"	13
			Gray SANDSTONE										
			(333.34) 51.0										
			Gray Sandy CLAY (A-6) with sand lenses		12	3.6B	14						
			(307.84) 25.5										
			End of Boring @ -79.0'										
			(352.34) 70.0										
			Gray Sandy CLAY (A-6) with sand lenses		3	0.6B	23						
			(348.34) 66.0										
			Brown SAND and GRAVEL (A-2-4) with sandy clay seams		28	---	16						
			(370.5) 86.0										
			Gray Mottled Brown Silty CLAY (A-6)		5	1.3S	38						
			(365.84) 83.5										
			Brown Silty CLAY (A-6)		0	1.0B	57						
			(363.34) 81.0										
			Gray Silty CLAY (A-6)		0	0.4B	37						
			(360.84) 78.5										
			Brown Silty CLAY (A-6)		0	1.0B	43						

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"  
 Qu - Unconfined Compressive Strength in tons/sq.ft.  
 w - Water Content - percentage of oven dry weight - %  
 B = Bulge Failure  
 S = Shear Failure  
 E = Estimated Value  
 P = Penetrometer

BORING 2

BY	DATE

BY	DATE



FILE NAME = 170371-shl-xsc.dgn  
 DESIGNED - J.W.F.  
 DRAWN - M.M.P.  
 CHECKED - S.W.M.  
 DATE - 05/31/19

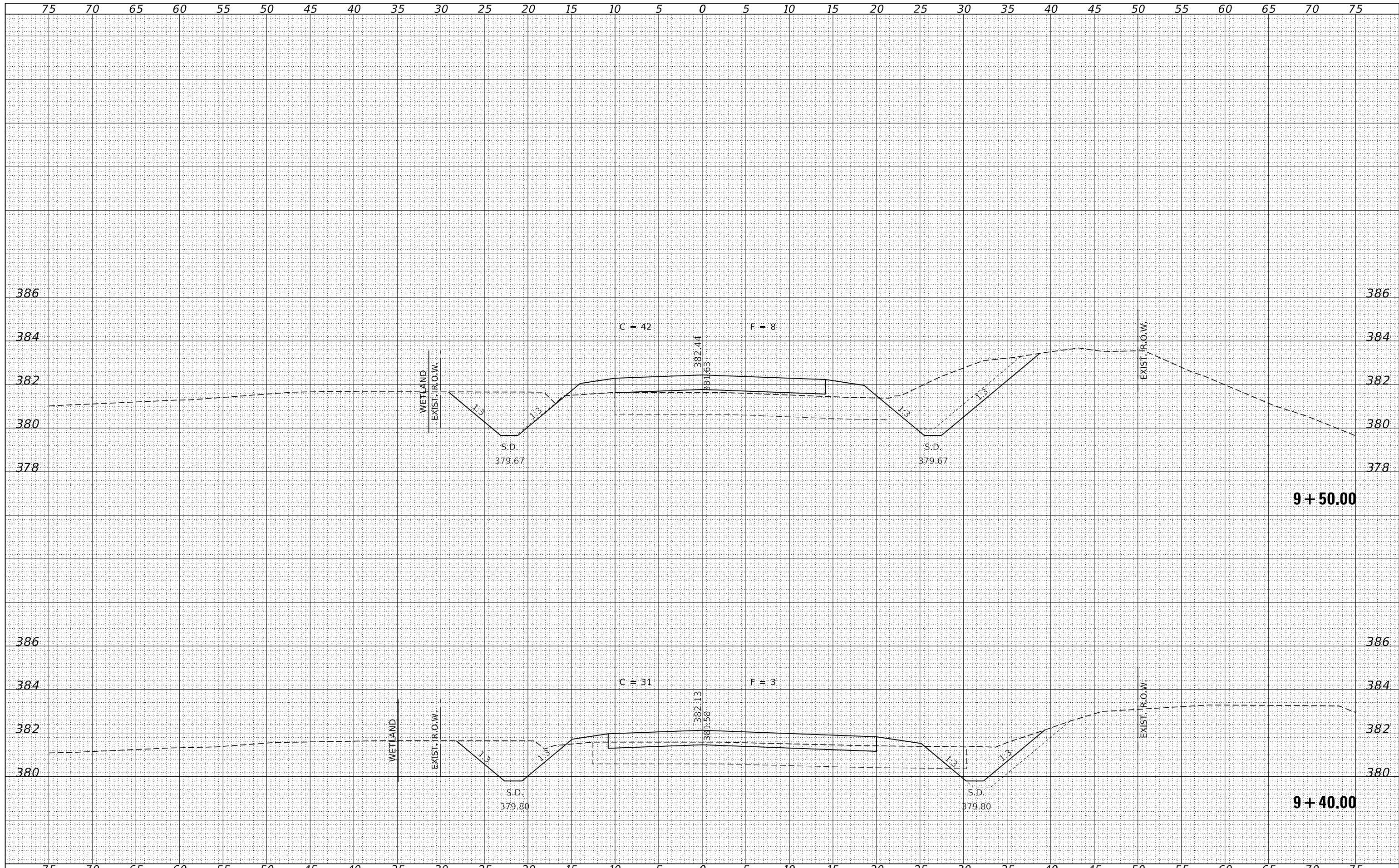
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 PLOT SCALE = \$SCALES  
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 REVISSED -

**STATE OF ILLINOIS**  
**WAYNE COUNTY HIGHWAY DEPARTMENT**

**STATION CROSS SECTIONS**  
 SCALE: 5H:2V    SHEET NO. 1 OF 9 SHEETS    STA. 9+09.26 TO STA. 9+25.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
562	17-15145-00-BR	WAYNE	20	12
LEECH ROAD DISTRICT			CONTRACT NO. 95860	
<small>ILLINOIS FED. AID PROJECT 3RVR(557)</small>				



BY	DATE

BY	DATE

FILE NAME = 170371-shl-xsc.dgn  
 DESIGNED - J.V.F.  
 DRAWN - M.M.P.  
 CHECKED - S.W.M.  
 DATE - 05/31/19

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 PLOT DATE = 5/31/2019

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STATE OF ILLINOIS  
 WAYNE COUNTY HIGHWAY DEPARTMENT

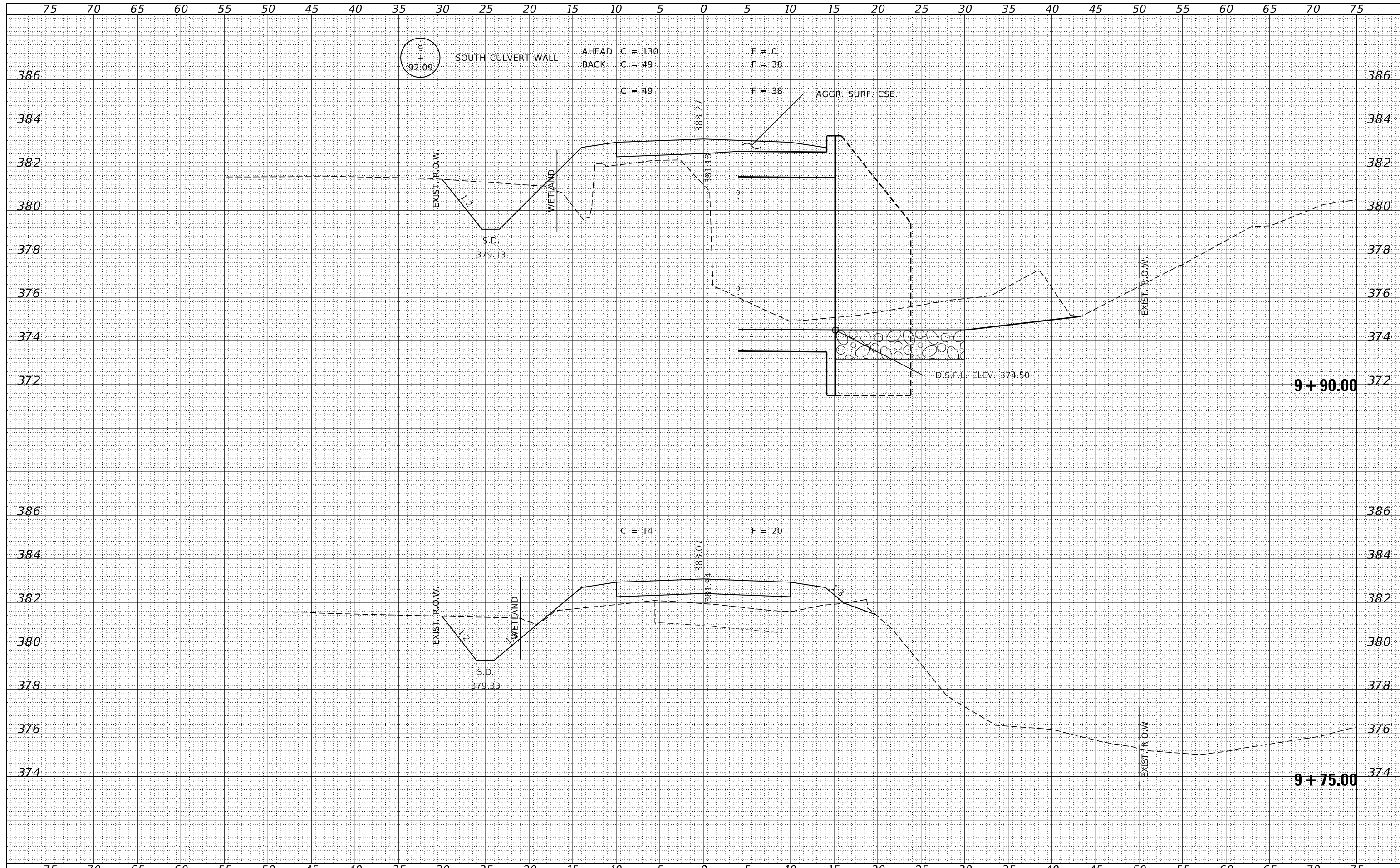
STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 2 OF 9 SHEETS STA. 9+40.00 TO STA. 9+50.00

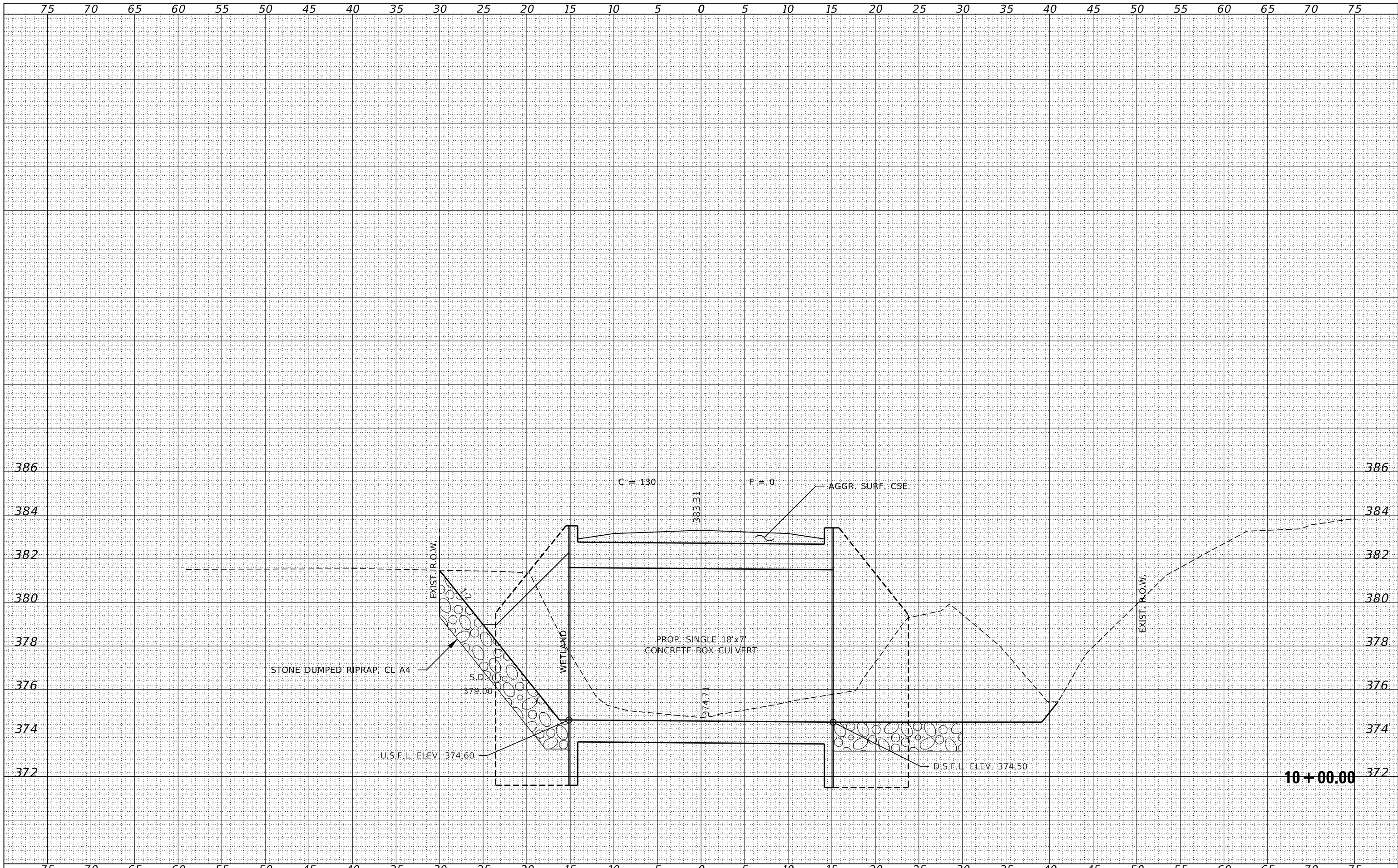
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	17-15145-00-BR	WAYNE	20	13
LEECH ROAD DISTRICT			CONTRACT NO. 95860	
ILLINOIS FED. AID PROJECT 3RVR(557)				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
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NOTE BOOK	
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FILE NAME = 170371-shl-xsc.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS</b> <b>WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>STATION CROSS SECTIONS</b>			T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958	PLOT SCALE = \$SCALES	DRAWN - M.M.P.	REVISED -					562	17-15145-00-BR	WAYNE	20	14	
PLOT DATE = 5/31/2019	DATE - 05/31/19	CHECKED - S.W.M.	REVISED -		SCALE: 5H:2V			SHEET NO. 3 OF 9 SHEETS		STA. 9+75.00 TO STA. 9+90.00		CONTRACT NO. 95860	
									ILLINOIS FED. AID PROJECT 3RVR(557)				



BY	DATE
SURVEYED	
PLOTTED	
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AREAS CHECKED	
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TEMPLATE	
AREAS CHECKED	
AREAS CHECKED	

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 DESIGNED - J.V.F.  
 DRAWN - M.M.P.  
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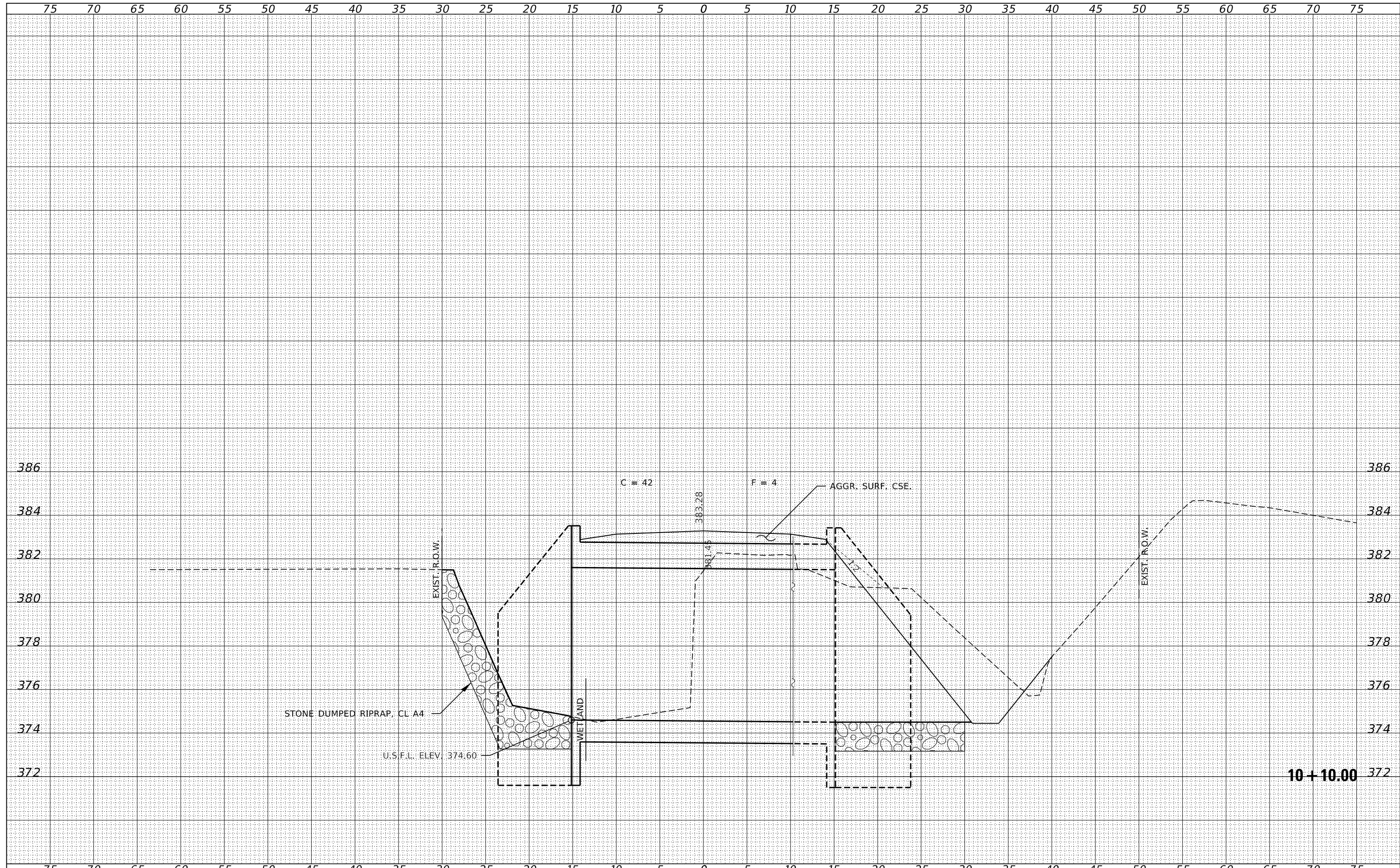
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STATE OF ILLINOIS  
 WAYNE COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 4 OF 9 SHEETS STA. 10+00.00 TO STA. 10+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
582	17-15145-00-BR	WAYNE	20	15
LEECH ROAD DISTRICT			CONTRACT NO. 95860	
ILLINOIS		FED. AID PROJECT 3RVR(557)		



BY	DATE

BY	DATE

FILE NAME = 170371-shl-xsc.dgn  
**HAMPTON, LENZINI AND RENWICK, INC.**  
 3885 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 ILLINOIS PROFESSIONAL DESIGN FIRM  
 L.S. / P.E. / S.E. CORP. 184-000958

USER NAME = mpaul  
 DESIGNED - J.W.F.  
 DRAWN - M.M.P.  
 CHECKED - S.W.M.  
 DATE - 05/31/19  
 PLOT SCALE = \$\$SCALE\$  
 PLOT DATE = 5/31/2019

DESIGNED - J.W.F.  
 DRAWN - M.M.P.  
 CHECKED - S.W.M.  
 DATE - 05/31/19

REVISED -  
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 REVISED -

**STATE OF ILLINOIS**  
**WAYNE COUNTY HIGHWAY DEPARTMENT**

**STATION CROSS SECTIONS**

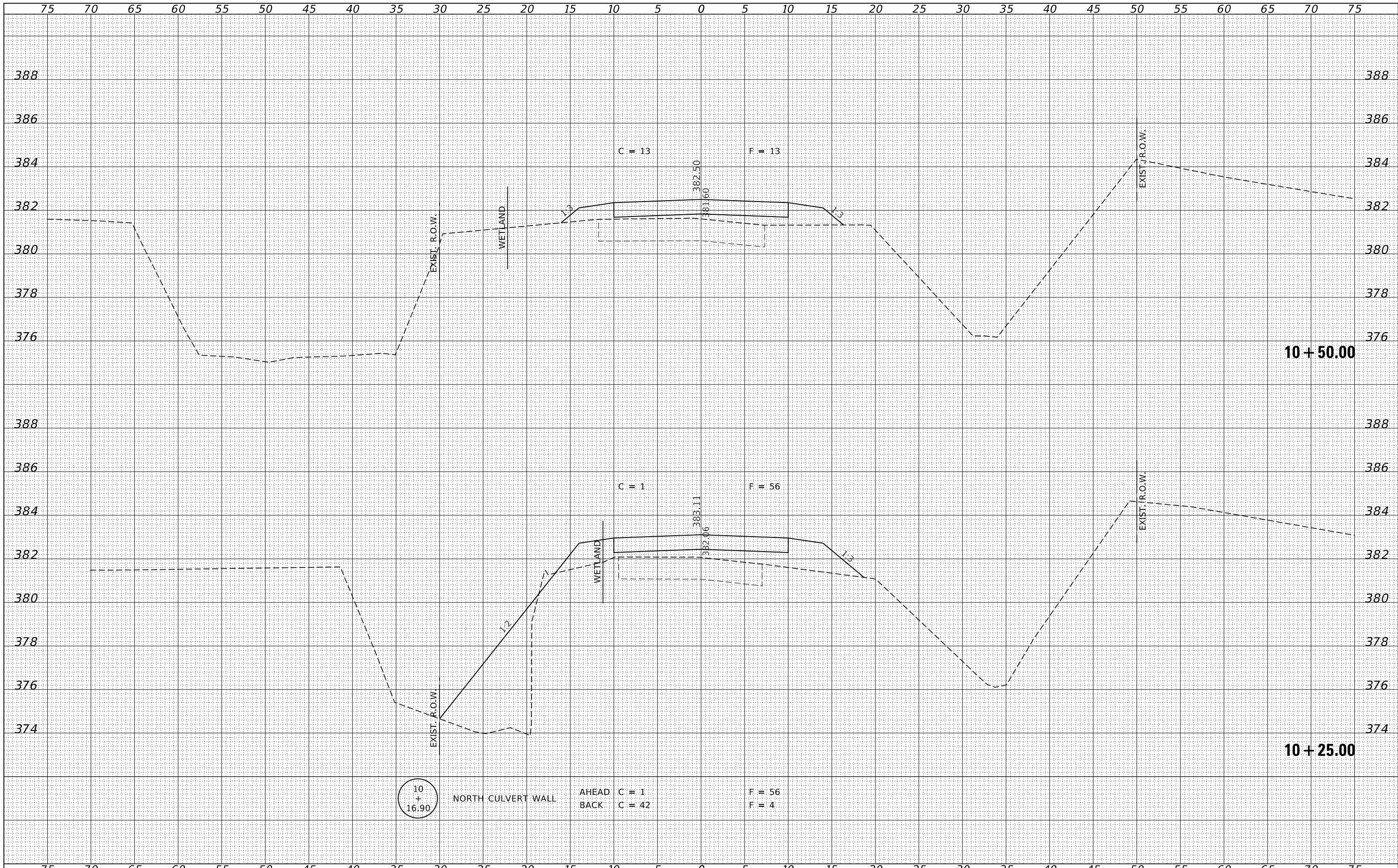
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T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
562	17-15145-00-BR	WAYNE	20	16
LEECH ROAD DISTRICT			CONTRACT NO. 95860	
ILLINOIS FED. AID PROJECT 3RVR(557)				

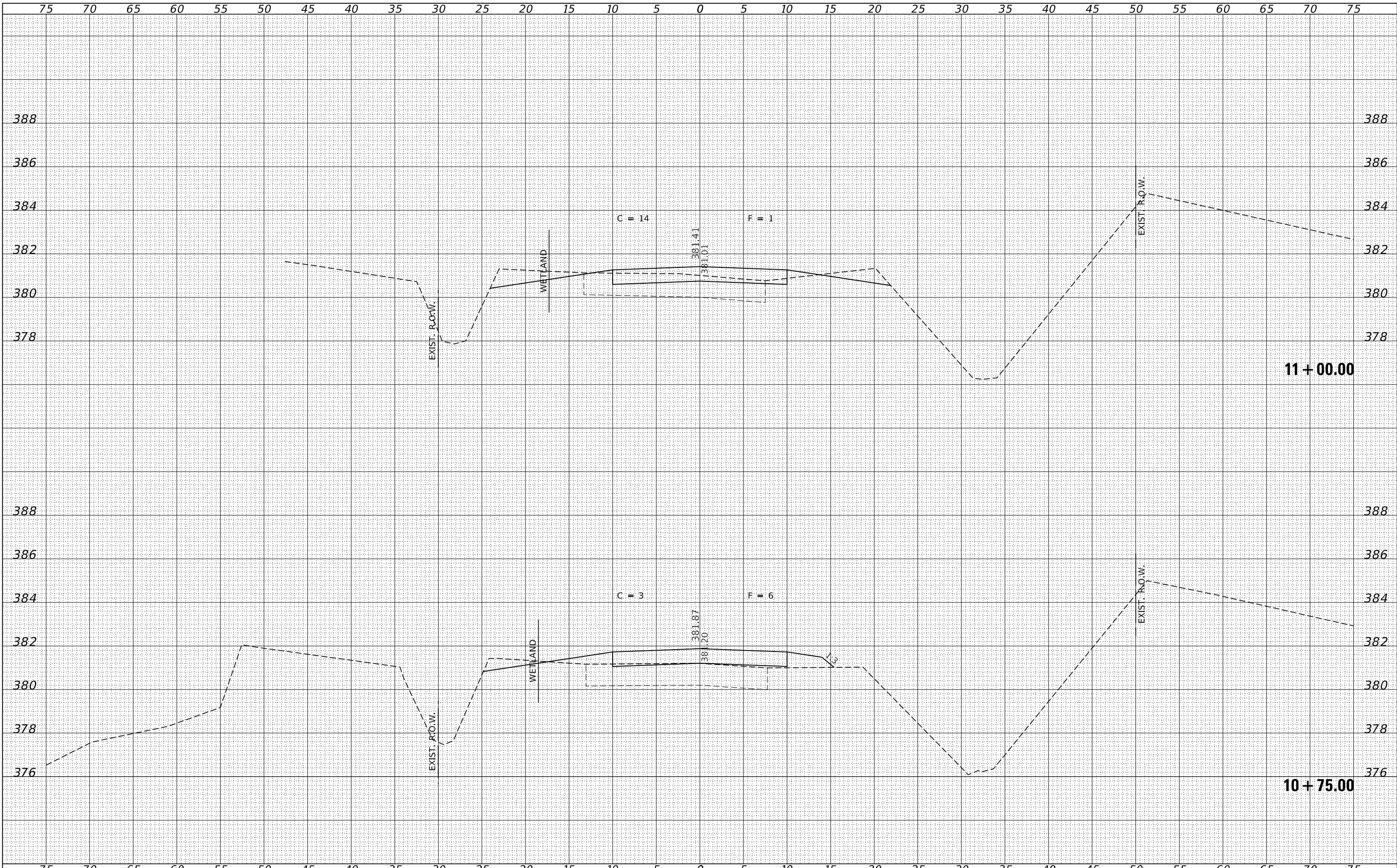


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BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED



FILE NAME = 170371-shl-xsc.dgn	USER NAME = mpaul	DESIGNED - J.W.F.	REVISED -	<b>STATE OF ILLINOIS</b> <b>WAYNE COUNTY HIGHWAY DEPARTMENT</b>	<b>STATION CROSS SECTIONS</b>			T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - M.M.P.	REVISED -		562	17-15145-00-BR	WAYNE	20	17			
3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.009958		CHECKED - S.W.M.	REVISED -		LEECH ROAD DISTRICT			CONTRACT NO. 95860				
		DATE - 05/31/19	REVISED -		SCALE: 5H:2V	SHEET NO. 6 OF 9 SHEETS	STA. 10+25.00 TO STA. 10+50.00	ILLINOIS FED. AID PROJECT 3RVR(557)				



DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

FILE NAME = 170371-shl-xsc.dgn  
**HAMPTON, LENZINI AND RENWICK, INC.**  
 3885 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 ILLINOIS PROFESSIONAL DESIGN FIRM  
 LS / PE / SE CORP. 184-009658

USER NAME = mpaul  
 DESIGNED - J.V.F.  
 DRAWN - M.M.P.  
 CHECKED - S.W.M.  
 DATE - 05/31/19  
 PLOT SCALE = \$SCALE\$  
 PLOT DATE = 5/31/2019

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 WAYNE COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 7 OF 9 SHEETS STA. 10+75.00 TO STA. 11+00.00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	17-15145-00-BR	WAYNE	20	18
LEECH ROAD DISTRICT			CONTRACT NO. 95860	
ILLINOIS FED. AID PROJECT 3RVR(557)				

BY	DATE

ORIGINAL SURVEY	NO.

