

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 711	19-00128-00-BR	FAYETTE	18	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 95873		

INDEX OF SHEETS

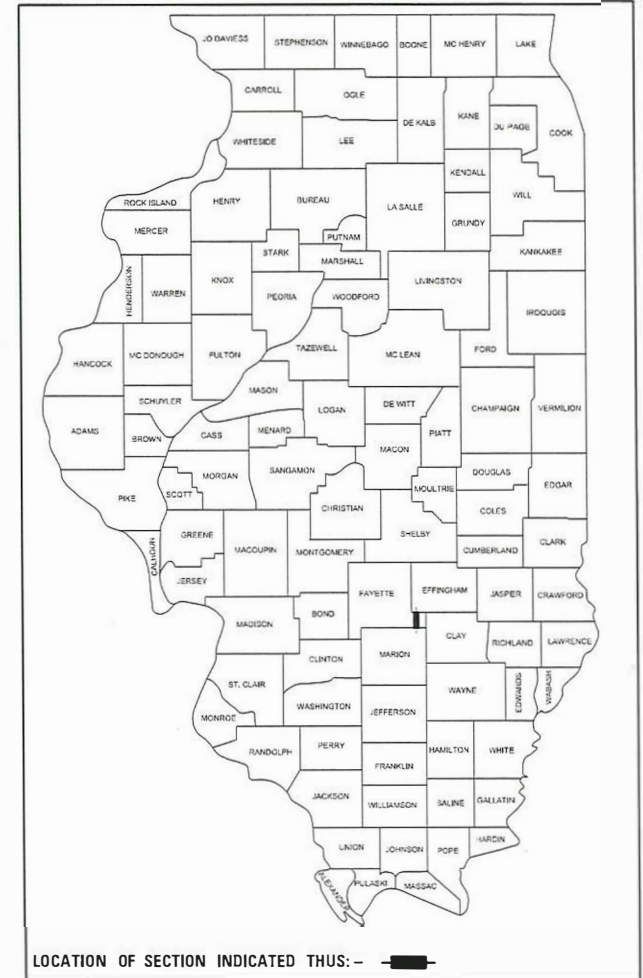
SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	TRAFFIC CONTROL PLAN
5.	PLAN AND PROFILE
6.	SHOULDER & GUARDRAIL LAYOUT
7-10.	CULVERT PLANS
11.	BORINGS
12-18.	STATION CROSS SECTIONS

HIGHWAY STANDARDS:

000001-07	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-04	NAME PLATE FOR BRIDGES
601001-05	PIPE UNDERDRAINS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAINS
630001-12	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL TYPE 6A
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-04	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE 2L, 2W, MOVING OPERATIONS DAY ONLY
701901-08	TRAFFIC CONTROL DEVICES
780001-05	TYPICAL PAVEMENT MARKINGS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM
RURAL

PROJECT DNC9(460)
SECTION 19-00128-00-BR
FAYETTE COUNTY
F.A.S. 711 / C.H. 28 / ALTAMONT ROAD
PROPOSED STRUCTURE NO. 026-5029
C-97-069-19



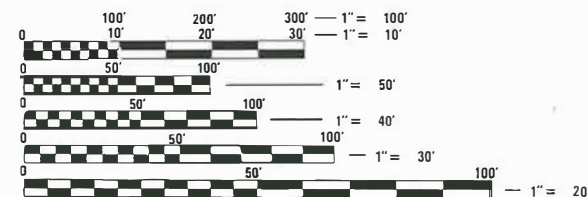
ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED 3-31-2020
[Signature]
COUNTY ENGINEER

PASSED 4-6-20
[Signature]
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review
[Signature]
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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: MAJOR COLLECTOR
DESIGN SPEED: 50 MPH
DESIGN TRAFFIC: 800 ADT

STA. 559+72
REINFORCED CONCRETE BOX CULVERT
DOUBLE 11' SPAN X 9' RISE
LENGTH = 32'-0"; SKEW = 0°
EXISTING STRUCTURE NO. 026-5017
PROPOSED STRUCTURE NO. 026-5029

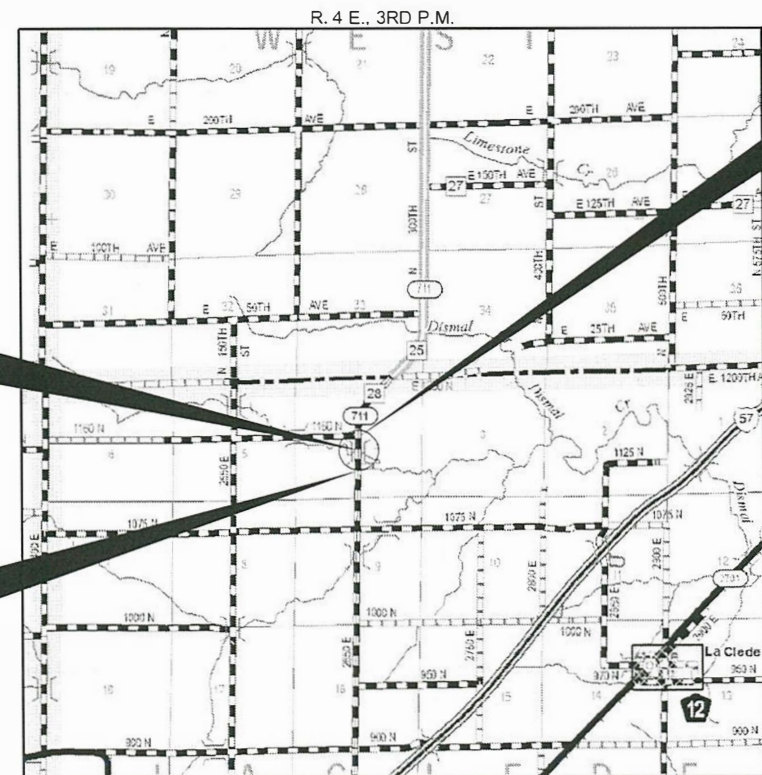
IMPROVEMENT ENDS
STATION 561+60

UTILITIES

FAYETTE WATER COMPANY
RR 1 BOX 71A
BROWNSTOWN, IL 62418

FRONTIER COMMUNICATIONS
801 W JACKSON
ALTAMONT, IL 62411

SOUTHWESTERN ELETRIC CO-OP
525 US ROUTE 40
GREENVILLE, IL 62246



LOCATION MAP

IMPROVEMENT BEGINS
STATION 557+90

WARNING

CALL 811
BEFORE YOU DIG
DIG NO: X1281150

DATE: 03/30/2020

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

184.002958
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

EXPIRES: 11/30/2021 PROJECT NUMBER: 19.0158.130 DATE: 03/30/2020

SUMMARY OF QUANTITIES

CODE NO.	ITEM	CONSTRUCTION TYPE CODE 0010	
		UNIT	TOTAL
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	120
^ 20200100	EARTH EXCAVATION	CU YD	360
28100207	STONE RIPRAP, CLASS A4	TON	210
28300400	AGGREGATE DITCH	TON	145
31101200	SUBBASE GRANULAR MATERIAL, TYPE B, 4"	SQ YD	400
^ 40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	360
^ 40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	83
^ 40604052	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N70	TON	31
^ 44201759	CLASS D PATCHES, TYPE IV, 9 INCH	SQ YD	367
48101200	AGGREGATE SHOULDERS, TYPE B 6"	TON	195
^ 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	80
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	28,580
* ^ 50901050	STEEL RAILING, TYPE SM	FOOT	54
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	133.2
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	4
60108104	PIPE UNDERDRAINS, TYPE 1, 4"	FOOT	680
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	25
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	620
67100100	MOBILIZATION	L SUM	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	30
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	465
X0301852	DEWATERING STRUCTURE NO. 1	EACH	1
X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	88
X2070302	POROUS GRANULAR EMBANKMENT, SPECIAL	TON	430
^ X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.35
^ X7010216	TRAFFIC CONTROL AND PROTECTION, SPECIAL	L SUM	1
^ Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	150

^ SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

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.
- THE ROAD SHALL BE CLOSED TO TRAFFIC AT ALL TIMES EXCEPT AS DISCUSSED IN THE SPECIAL PROVISIONS AND TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING COSTRUCTION OF THE PROJECT.
- THE ELEVATIONS SHOWN ON THE PLANS ARE AN ASSUMED DATUM AND ARE NOT U.S.G.S. DATUM.
- 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 CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITIES. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT OR PROTECTION IS NECESSARY.
- ALL EXCAVATED MATERIAL FROM THE PROJECT MAY BE USED IN THE PROPOSED EMBANKMENT AT THE APPROVAL OF THE ENGINEER.
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 0.35 ACRES
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:
 STONE RIPRAP 1.75 TON/CU.YD.
 AGGREGATE SURFACE AND BASE COURSES 2.05 TON/CU.YD.
 HOT-MIX ASPHALT 112 LBS/SQ.YD./INCH THICKNESS
 AGGREGATE SHOULDER 2.05 TON/CU.YD.
 RAP 1.6 TON/CU.YD.

BITUMINOUS MATERIALS RATES	
SURFACE TYPE	RESIDUAL RATE
MILLED HMA OR PCC (TACK COAT)	0.05 LB/SQ FT
EXISTING PAVEMENT (TACK COAT)	0.05 LB/SQ FT
BETWEEN LIFTS (TACK COAT)	0.025 LB/SQ FT

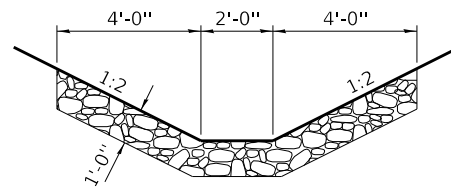
- PAVEMENT SHALL BE SAWCUT AT STATIONS 559+00 & 560+50. COST INCLUDED IN EARTH EXCAVATION.
- UNDERDRAINS SHALL BE PLACED TO AVOID RAIL POSTS. DRAINS SHALL BE TRENCHED AS TO OUTLET NEAR THE CULVERT AS SHOWN. TRENCHES SHALL BE BACKFILLED WITH FINE AGGREGATE AS APPROVED BY THE ENGINEER AS PER STANDARD SPECIFICATIONS.

PAINT PAVEMENT MARKING LINE		
TYPE (PAINT)	SIZE & COLOR	LIN. FT.
EDGE LINE	4" WHITE	300
SKIP-DASH C	4" YELLOW	15
NO-PASS LINE	4" YELLOW	150
TOTAL		465

EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	MISC. EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
F.A.S. 711 / C.H. 28							
STA. 557+90.00 TO STA. 559+59.88	107		25.00%	100.00%	81	79	2
STA. 559+84.13 TO STA. 561+60.00	253		25.00%	100.00%	190	44	146
EXCAVATION FROM CULVERT PGE**		280	25.00%	100.00%	210	0	210
TOTAL	361	280			481	123	358
USE	360						360

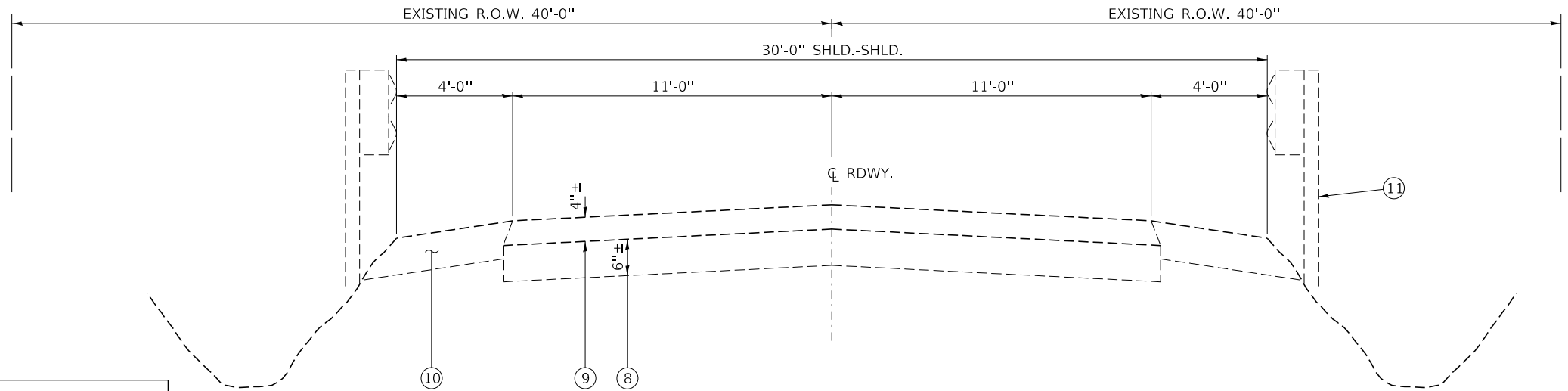
** COST INCLUDED WITH CONCRETE BOX CULVERT

WASTE 360 CU YDS



AGGREGATE DITCH (RR1)

RT. STA. 559+18 TO STA. 559+43
 LT. STA. 559+18 TO STA. 559+43
 RT. STA. 560+00 TO STA. 560+75
 LT. STA. 560+00 TO STA. 560+75
 LT. STA. 558+20 TO STA. 558+32

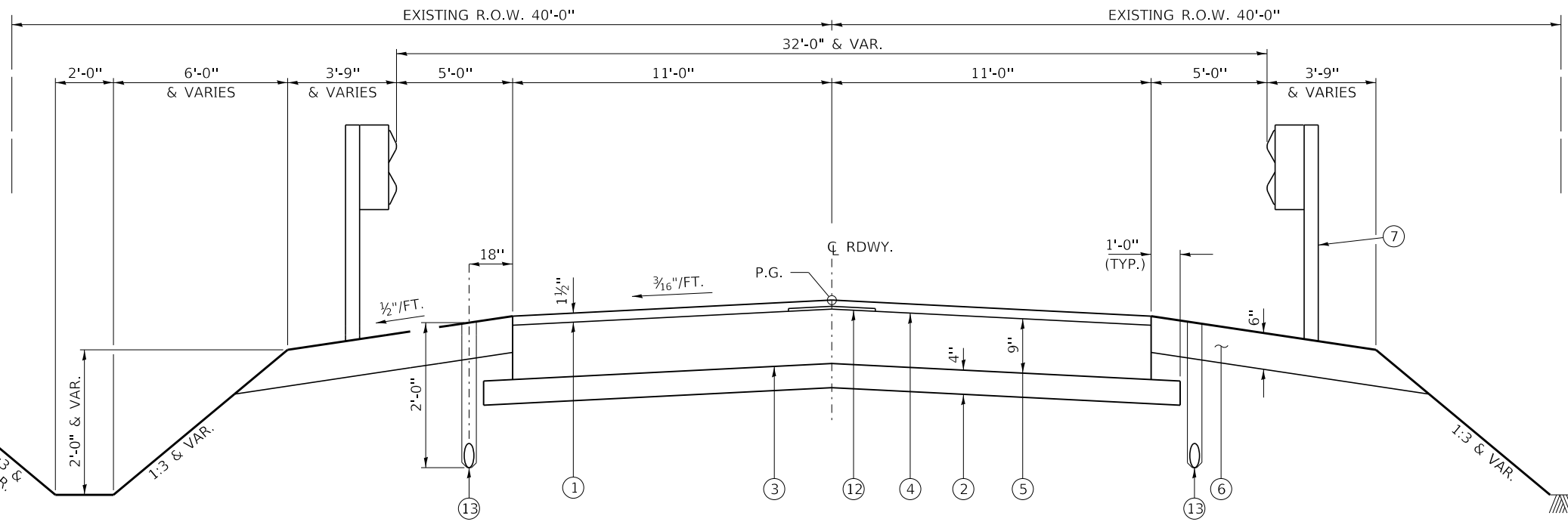


EXISTING TYPICAL CROSS SECTION
 STA. 522+32 TO STA. 781+73

ASPHALT MIXTURE REQUIREMENTS				
MIXTURE USE(S):	HOT-MIX ASPHALT SURFACE COURSE	HMA SHOULDERS (TOP LIFT)	HMA SHOULDERS (BOTTOM LIFTS)	CLASS D PATCHES
PG:	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4% @ Ndes 70	4% @ Ndes 70	4% @ Ndes 70	4% @ Ndes 70
MIXTURE COMPOSITION: (MIXTURE GRADATION):	IL 9.5	IL 9.5	IL 19.0	IL 19.0
FRICTION AGGREGATE:	MIXTURE C	MIXTURE C	NONE	NONE
MIXTURE WEIGHTS:	112 LBS. / SQ. YD. / INCH	112 LBS. / SQ. YD. / INCH	112 LBS. / SQ. YD. / INCH	112 LBS. / SQ. YD. / INCH
QUALITY CONTROL PROGRAM:	QC/QA	QC/QA	QC/QA	QC/QA

PIPE UNDERDRAINS, TYPE 1, 4"

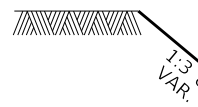
RT. STA. 557+90 TO STA. 559+45 = 170 FT
 LT. STA. 557+90 TO STA. 559+45 = 170 FT
 RT. STA. 560+00 TO STA. 561+60 = 170 FT
 LT. STA. 560+00 TO STA. 561+60 = 170 FT
 SEE SHEET 6 FOR LAYOUT = TOTAL 680 FT



PROPOSED TYPICAL CROSS SECTION
 STA. 559+00 TO STA. 560+50
 SEE SHEET 5 FOR SHOULDER LAYOUT

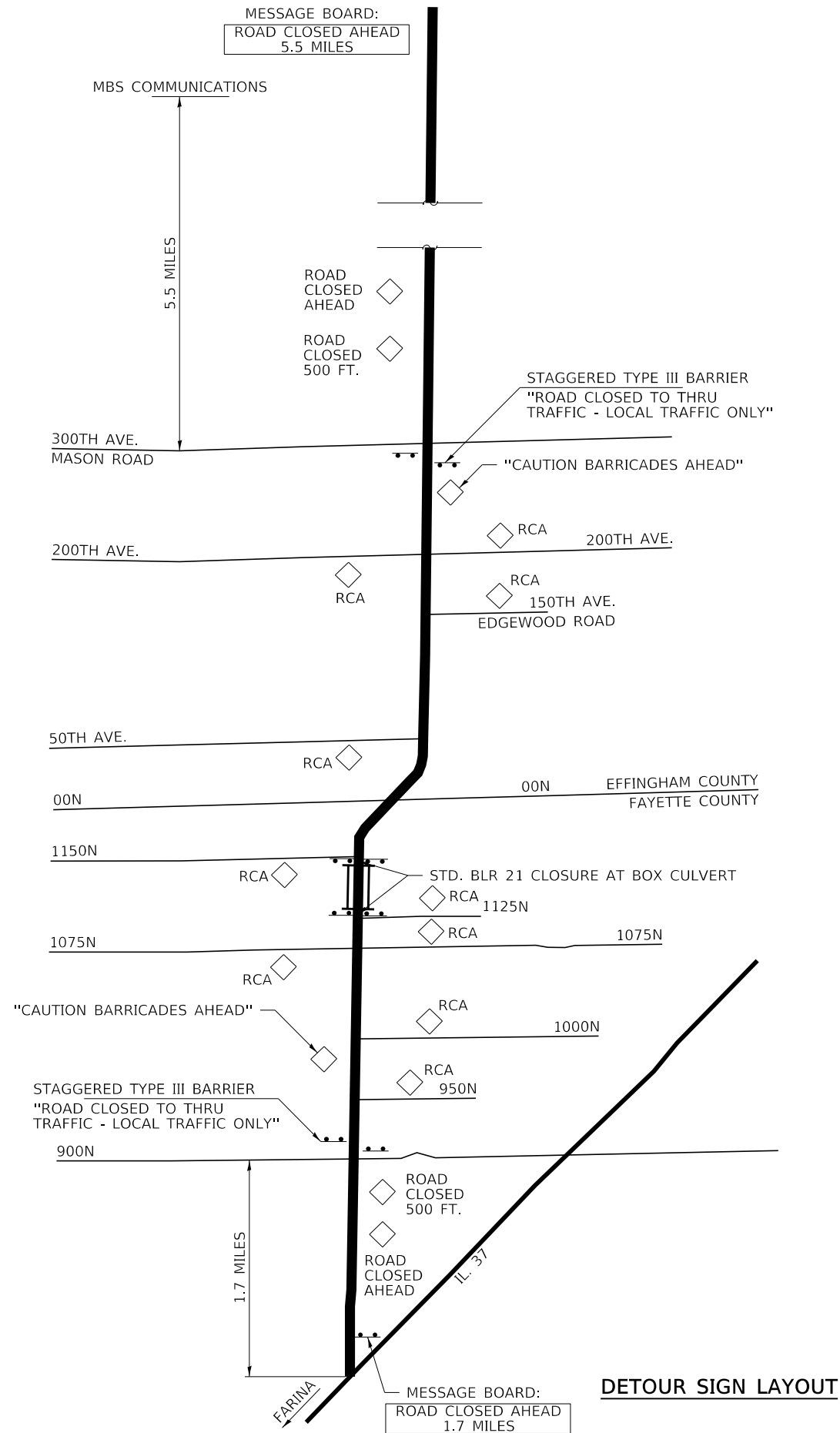
LEGEND

- ① HMA SURFACE COURSE, MIX C, IL-9.5, N70 (1 1/2" THICKNESS)
- ② SUBBASE GRANULAR MATERIAL, TYPE B 4"
- ③ BITUMINOUS MATERIALS (PRIME COAT)
- ④ BITUMINOUS MATERIALS (TACK COAT)
- ⑤ CLASS D, PATCH IV 9"
- ⑥ AGGREGATE SHOULDERS, TYPE B (6")
- ⑦ SPBGR / TRAFFIC BARRIER TERMINALS
- ⑧ EXISTING BITUMINOUS BASE COURSE (6"±)
- ⑨ EXISTING HMA SURFACE COURSE (4"±)
- ⑩ EXISTING AGGREGATE SHOULDER (6"±)
- ⑪ GUARDRAIL REMOVAL
- ⑫ LONGITUDINAL JOINT SEALANT
- ⑬ PIPE UNDERDRAINS, TYPE 1, 4"



SUGGESTED CUT SECTION
 CONSTRUCT AS SHOWN IN
 STATION CROSS SECTIONS

SUGGESTED FILL SECTION
 CONSTRUCT AS SHOWN IN
 STATION CROSS SECTIONS



DETOUR SIGN LAYOUT

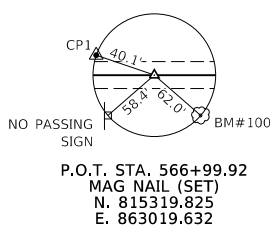
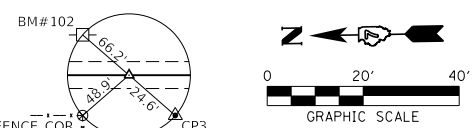
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HAMPTON, LENZINI AND RENWICK, INC. 3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	DRAWN - R.D.H.	REVISED -
PLOT DATE = 3/30/2020	DATE = 03/30/2020	CHECKED - S.W.M.	REVISED -

**STATE OF ILLINOIS
FAYETTE COUNTY HIGHWAY DEPARTMENT**

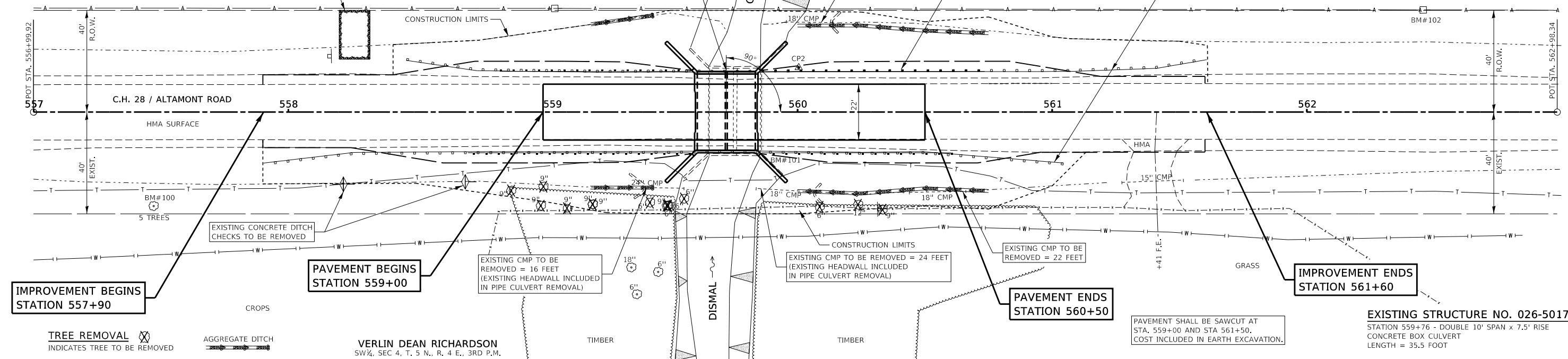
TRAFFIC CONTROL PLAN			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	19-00128-00-BR	FAYETTE	18	4
ALTAMONT ROAD C.H. 28			CONTRACT NO. 95873	
ILLINOIS FED. AID PROJECT DNG9(460)				

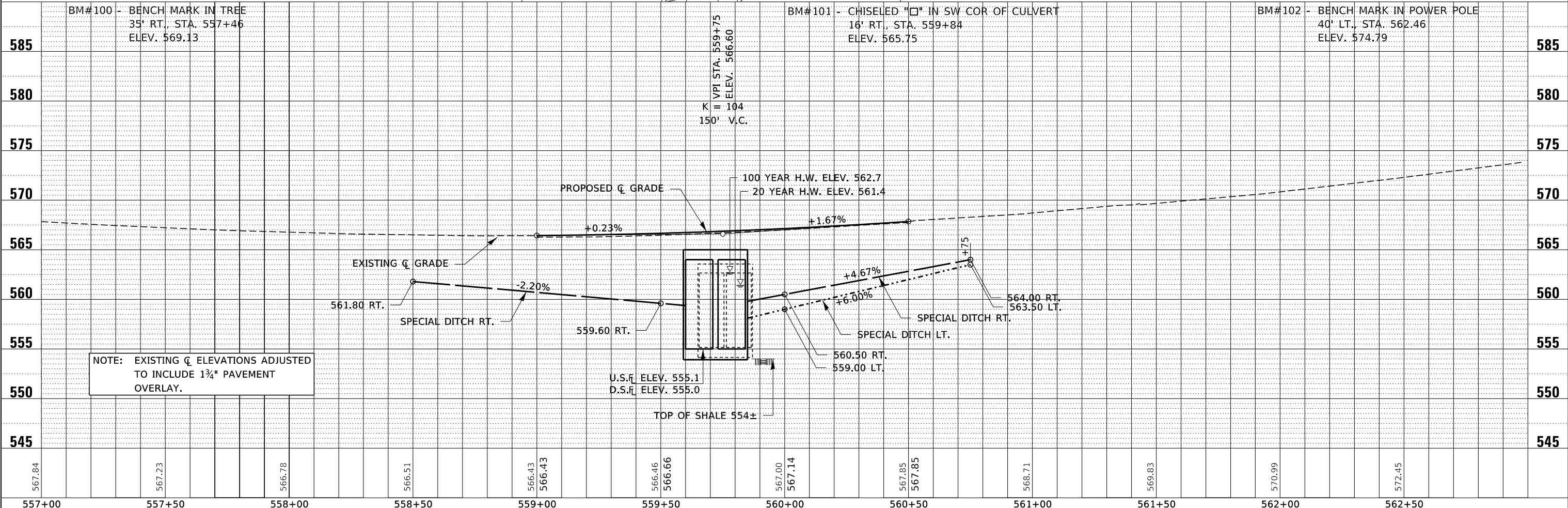
LUCY E. KRAMER, TRUST
SE ¼, SEC 4, T. 5 N., R. 4 E., 3RD P.M.



DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
REVISIONS	
NO.	

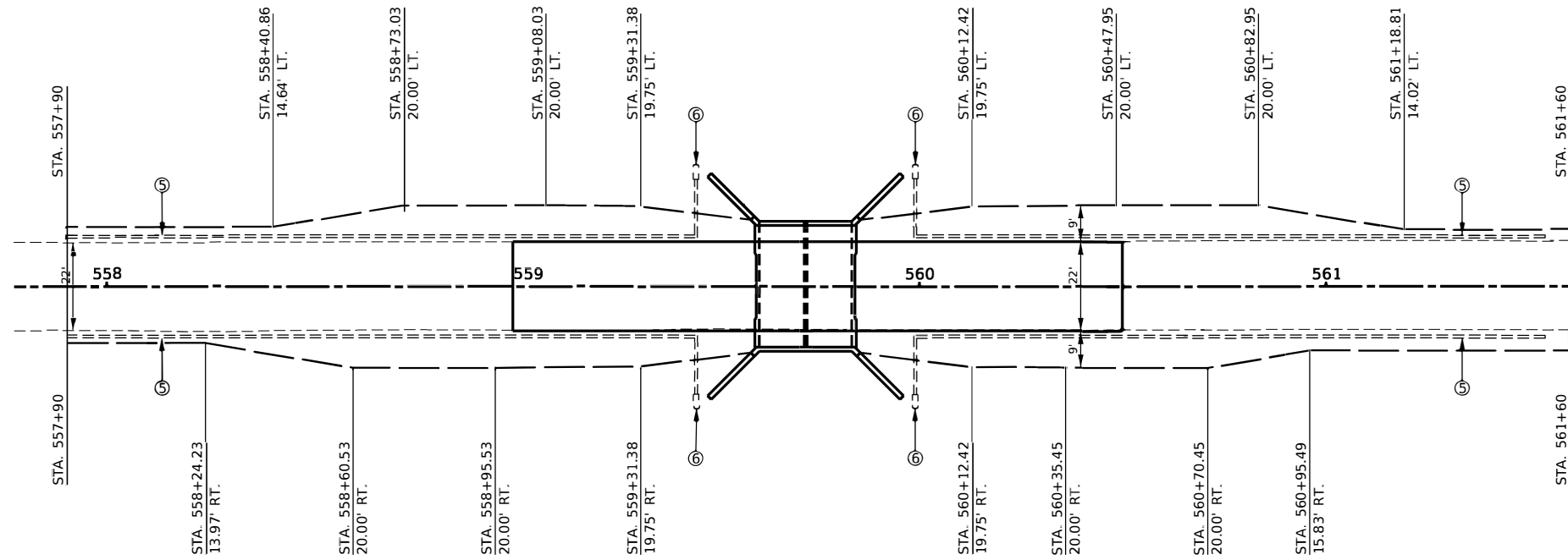


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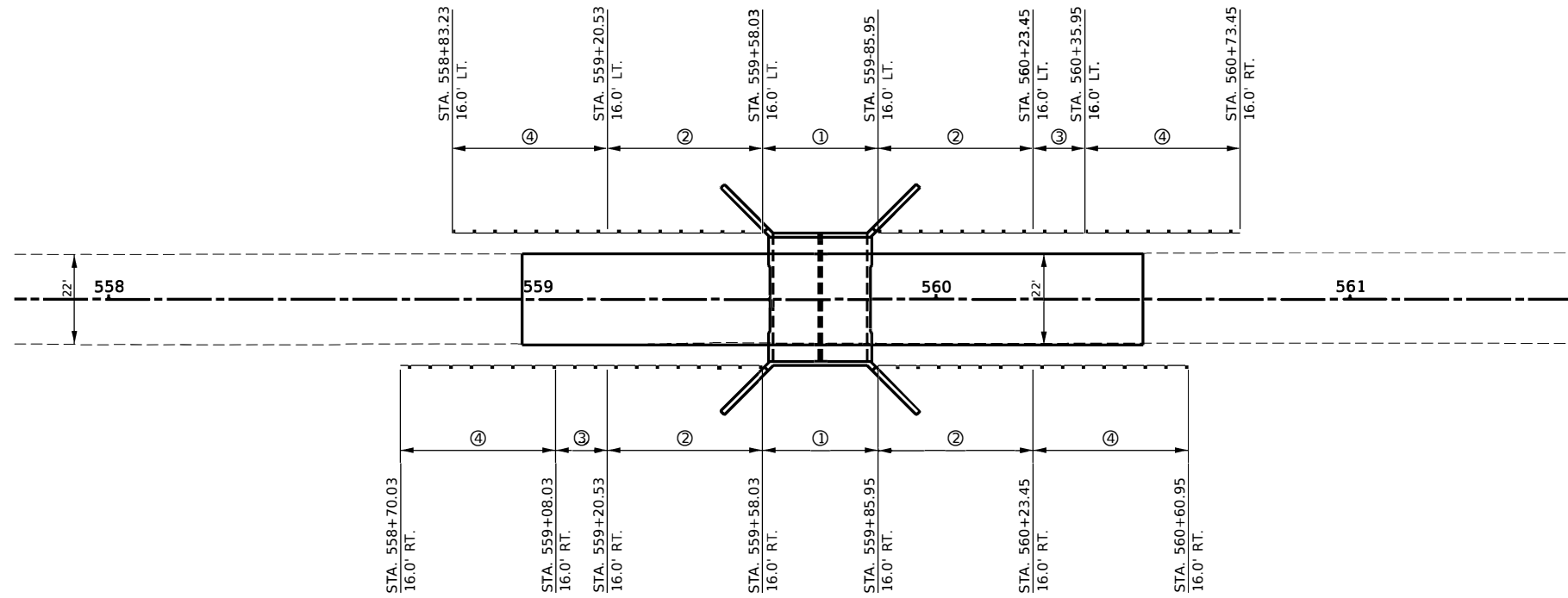
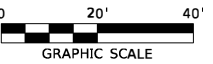


NOTE: EXISTING Q ELEVATIONS ADJUSTED TO INCLUDE 1 3/4" PAVEMENT OVERLAY.

FILE NAME = 190158-ent-planprf.dgn	USER NAME = rmosick	DESIGNED - J.W.F.	REVISED -	<p align="center">STATE OF ILLINOIS FAYETTE COUNTY HIGHWAY DEPARTMENT</p>	<p align="center">PLAN & PROFILE ALTAMONT ROAD</p>	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - T.W.K.	REVISED -			711	19-00128-00-BR	FAYETTE	18	5
3088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E./S.E. CORP. 184.000959		CHECKED - S.W.M.	REVISED -			ALTAMONT ROAD / C.H. 28		CONTRACT NO. 95873		
		DATE - 03/30/2020	REVISED -			SCALE: 5V:20H	SHEET NO. 1 OF 1 SHEETS	STA. 556+99.92 TO STA. 562+98.34	ILLINOIS FED. AID PROJECT DNO9(460)	



SHOULDER LAYOUT



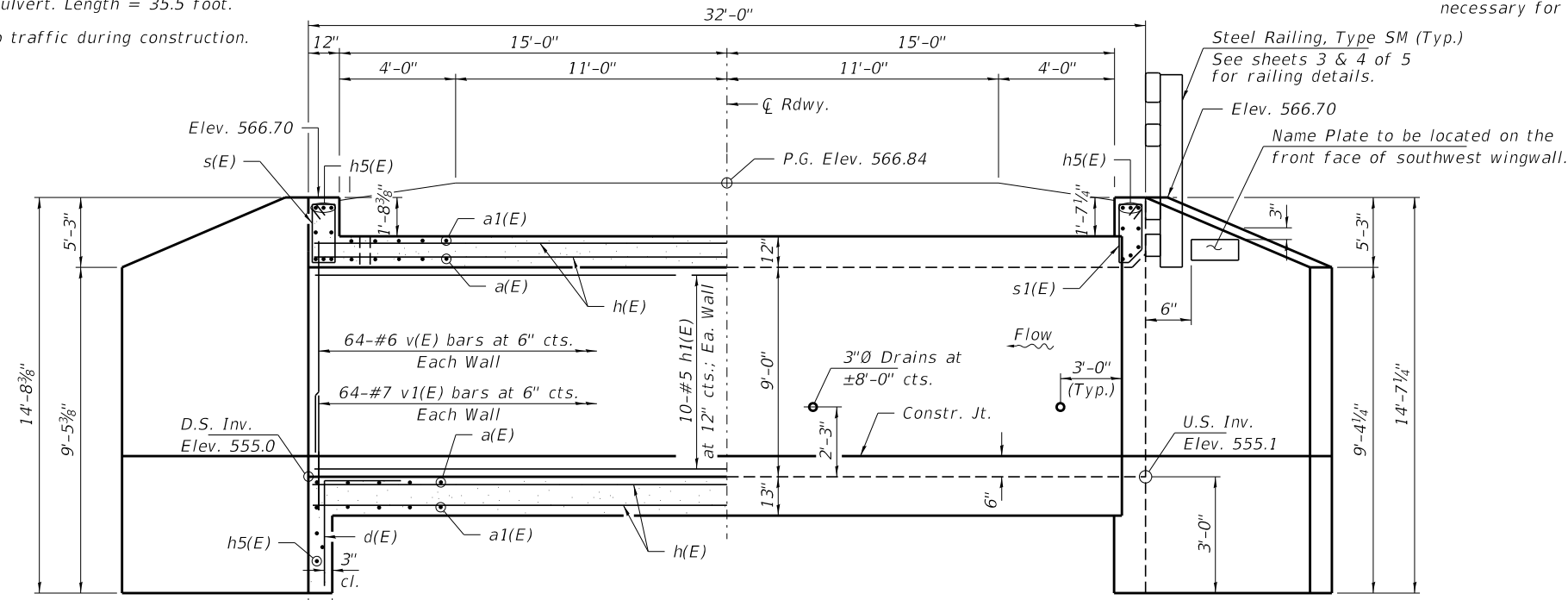
GUARDRAIL LAYOUT

- ① STEEL RAILING, TYPE SM
- ② TBT TY 6A
- ③ STEEL PLATE BEAM GUARDRAIL TYPE A (12.5 FT TYP.)
- ④ TBT TY 1, SPECIAL TANGENT
- ⑤ PIPE UNDERDRAINS = 720 FEET
- ⑥ CONCRETE HEADWALL FOR PIPE UNDERDRAINS = 4

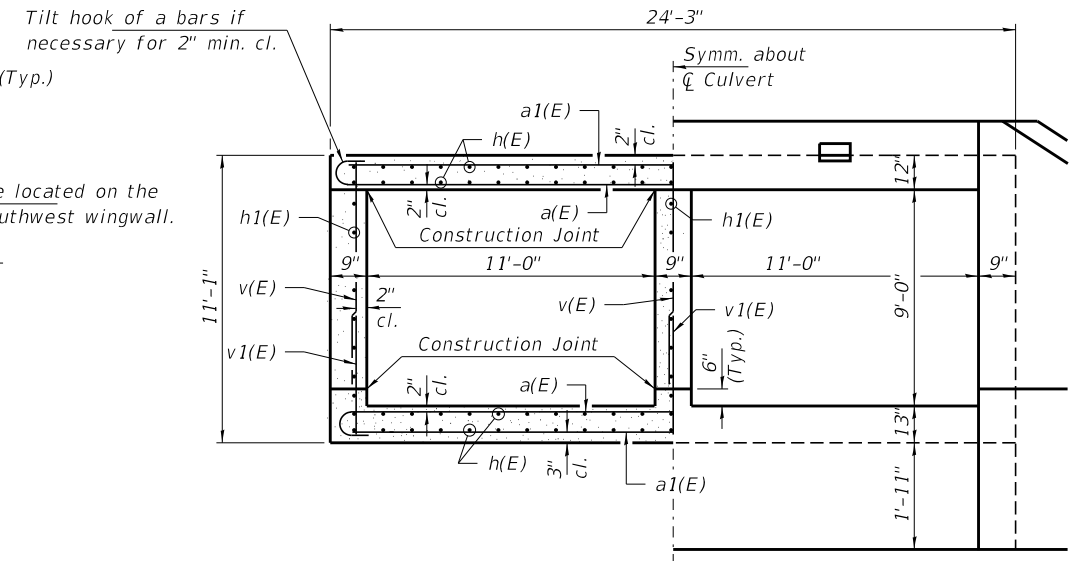
EXISTING STRUCTURE NO. 026-5017: Sta. 559+76 - Double 10' span x 7.5' rise concrete box culvert. Length = 35.5 foot.

Road closed to traffic during construction.

No Salvage



LONGITUDINAL SECTION



HALF SECTION THRU BARRELS Showing Reinforcement
HALF END ELEVATION Showing Outlines

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 on sheet 3 of 6 for the full length of the culvert.
- All construction joints shall be bonded.
- Precast concrete box culverts will not be allowed.
- Reinforcement bars designated (E) shall be epoxy coated.
- 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.
- Excavation required to construct the cut off wall and wingwalls in the shale layer shall not be paid for separately, but included in cost of Concrete Box Culverts.

INDEX OF STRUCTURE SHEETS

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

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	124	#7	25'-7"	U
a1(E)	62	#7	23'-11"	—
d(E)	46	#4	4'-5"	L
h(E)	100	#6	31'-8"	—
h1(E)	30	#5	31'-8"	—
h2(E)	84	#9	8'-0"	—
h3(E)	52	#9	20'-3"	—
h4(E)	24	#9	19'-0"	—
h5(E)	22	#7	22'-11"	—
s(E)	23	#5	7'-3"	U
s1(E)	23	#5	6'-10"	U
v(E)	196	#6	9'-2"	—
v1(E)	196	#6	4'-6"	—
v2(E)	40	#4	14'-2"	—
Stone Riprap, Class A4			Ton	210
Name Plates			Each	1
Removal of Existing Structures			Each	1
Concrete Box Culverts			Cu. Yd.	133.2
Reinforcement Bars, Epoxy Coated			Pound	28,580
Membrane Waterproofing System for Buried Struct.			Sq. Yd.	88
Porous Granular Embankment, Special			Ton	430
Dewatering Structure No. 1			Each	1

MIN. BAR LAP #5 = 2'-11"

DESIGN SPECIFICATIONS 2017 AASHTO LRFD Bridge Design Specifications, 8th Edition.

DESIGN STRESSES

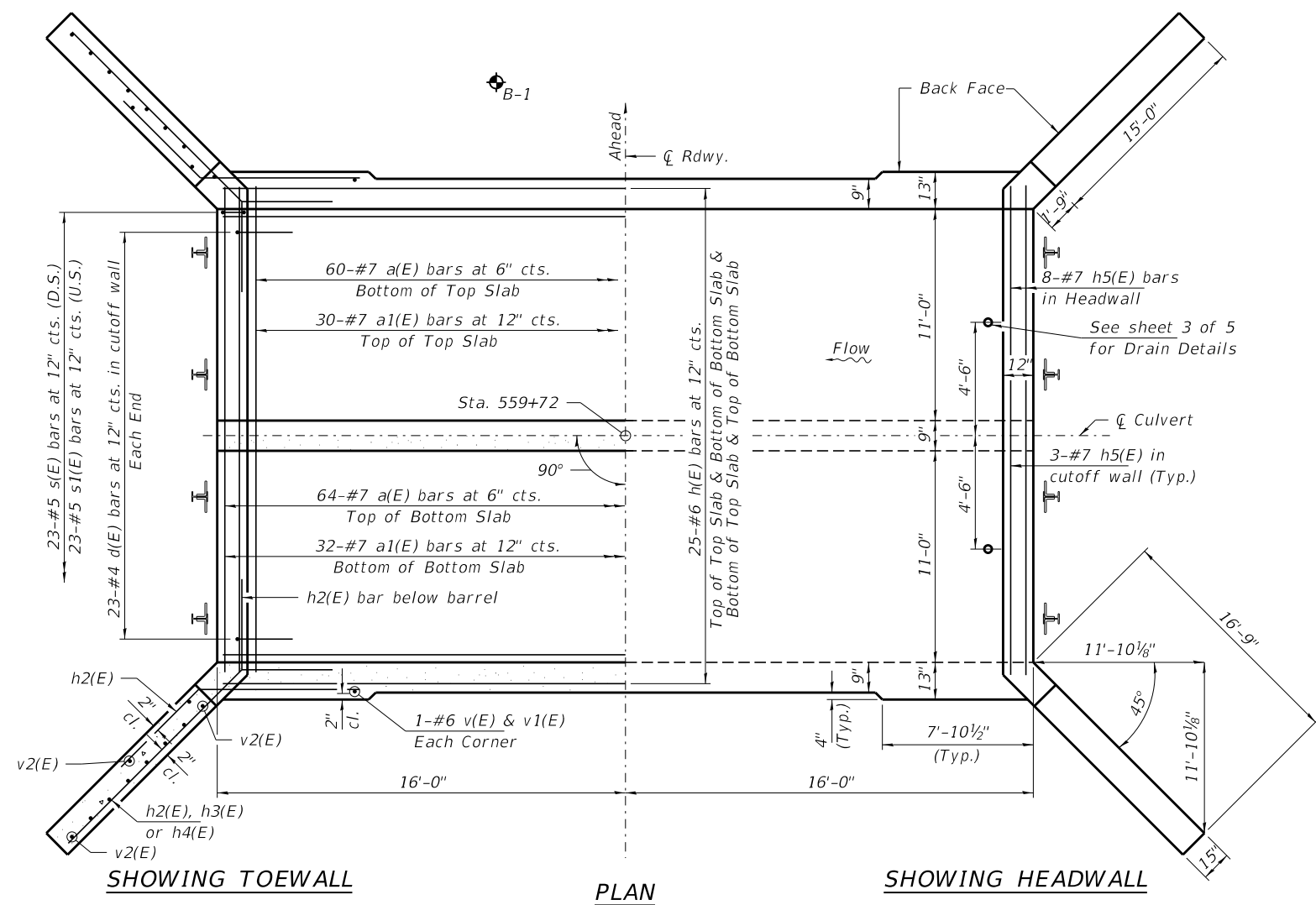
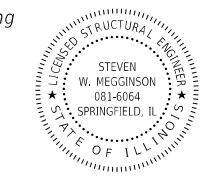
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

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."

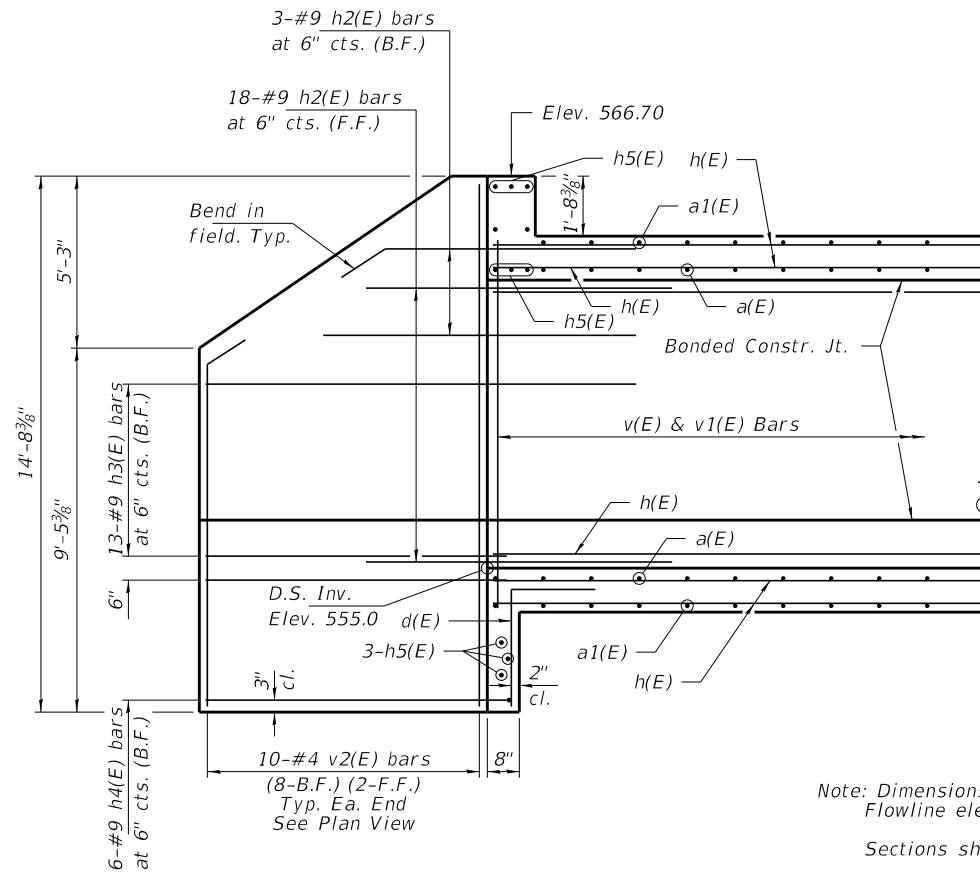
Steven W. Megginson 03/30/2020
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



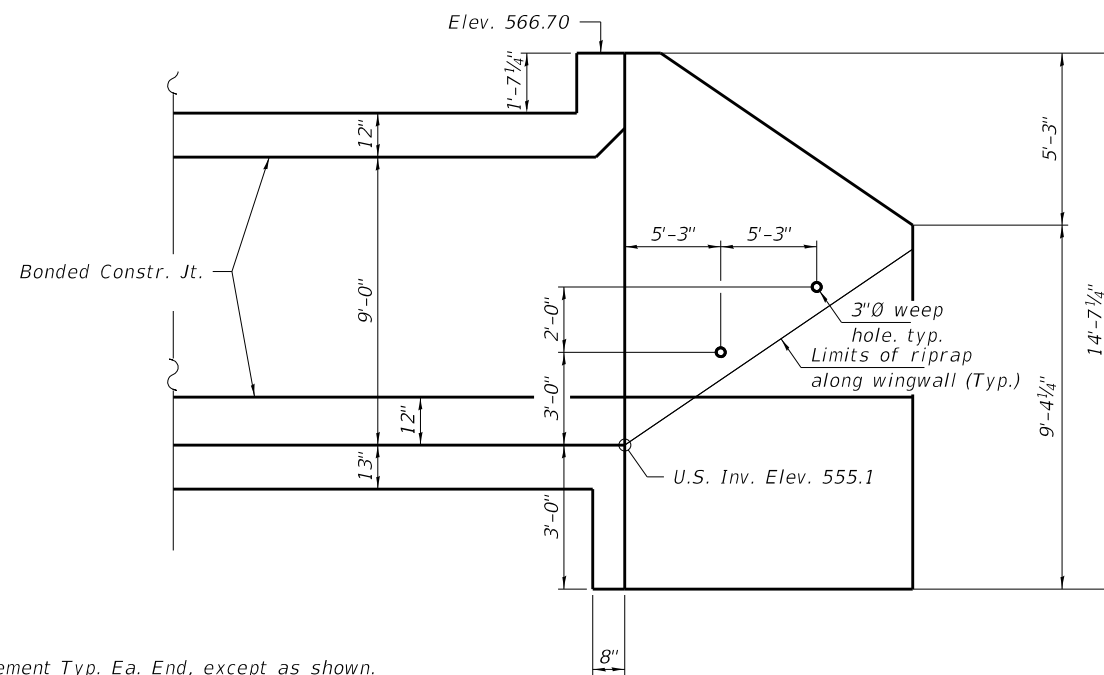
SHOWING TOEWALL

PLAN

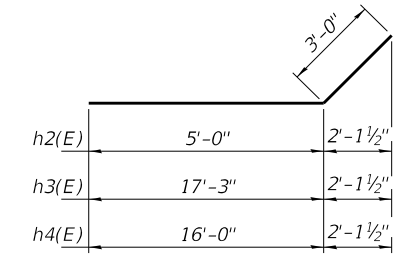
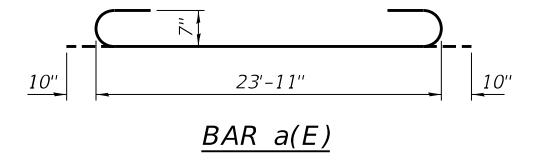
SHOWING HEADWALL



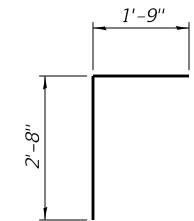
WINGWALL ELEVATION - SHOWING REINFORCEMENT



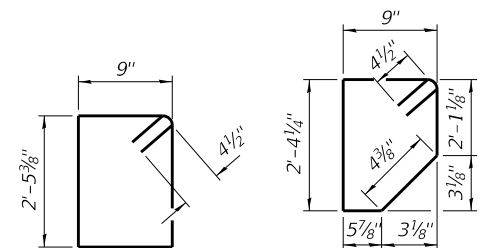
WINGWALL ELEVATION



BARS h2(E), h3(E) & h4(E)



BAR d(E)

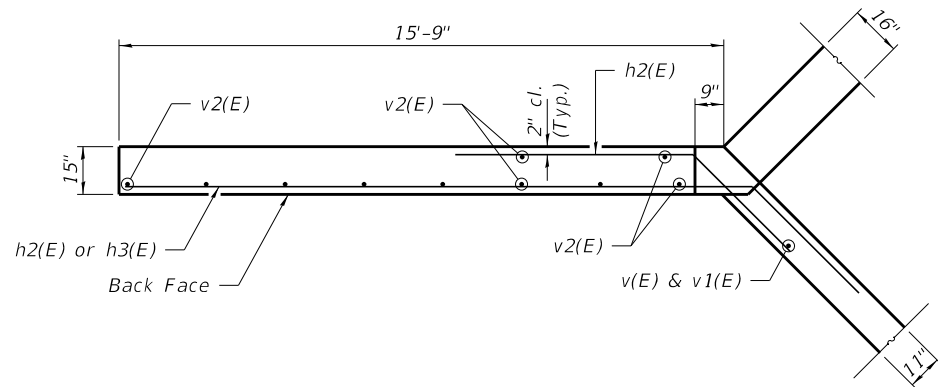


BAR s(E)

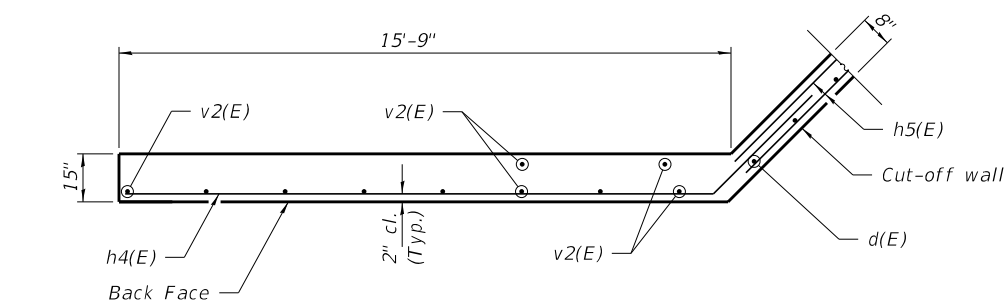
BAR s1(E)

Note: Dimensions & Reinforcement Typ. Ea. End, except as shown. Flowline elevations are given at ∇ culvert.

Sections shown parallel with ∇ culverts.



WINGWALL UPPER PLAN



WINGWALL LOWER PLAN

DISMAL CREEK
BUILT 202 BY
FAYETTE COUNTY
SEC. 19-00128-00-BR
F.A.S. 711 / C.H. 28
STR. NO. 026-5029
LOADING HL-93

NAME PLATE
See Std. 515001

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	893	110	125	560.78	0.38	0.00	561.16	560.78
Base	20	1120	125	140	561.43	0.85	0.29	562.28	561.72
scour Check/Ovt.(E)	100	1680	150	170	562.74	3.06	1.41	565.80	564.15
Max. Calc./Ovt.(P)	200	2280	150	190	563.86	3.33	2.63	567.19	566.49

10 Year Velocity Through Existing Bridge = 8.1 fps 10 Year Velocity Through Proposed Bridge = 7.1 fps

NOTES

- For Bill of Material and reinforcement bars summary see sheet 1 of 4.
- B.F. denotes Back Face and F. F. denotes Front Face.

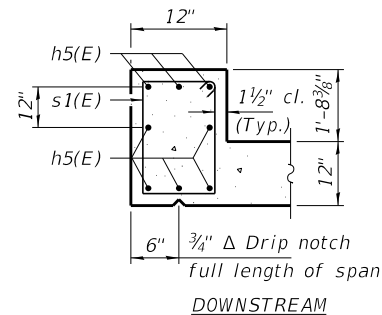
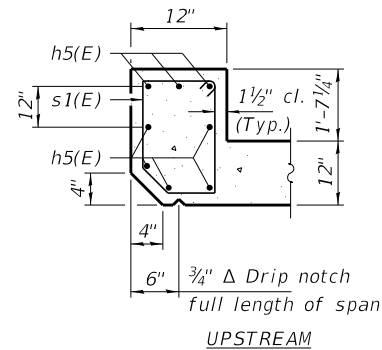
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PLOT DATE = 3/30/2020		DRAWN - R.D.H.	REVISED -
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STATE OF ILLINOIS
FAYETTE COUNTY HIGHWAY DEPARTMENT

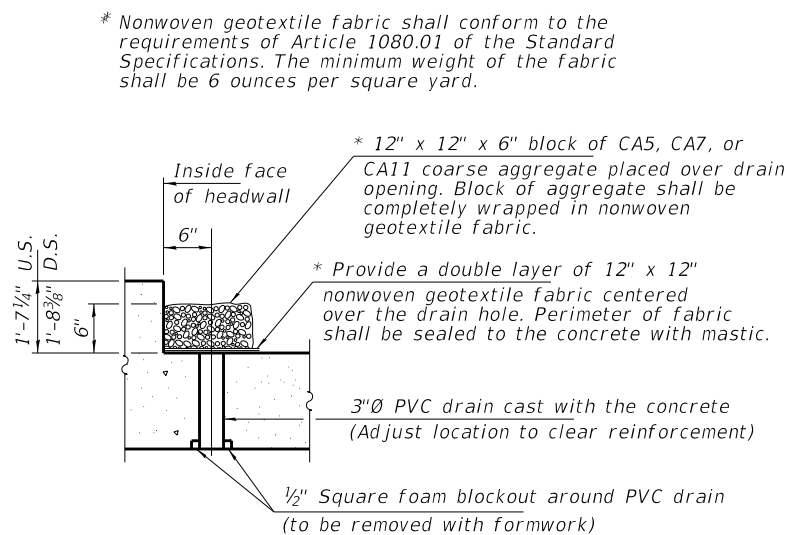
CULVERT DETAILS
STRUCTURE NO. 026-5029

SHEET NO. 2 OF 5 SHEETS

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	19-00128-00-BR	FAYETTE	18	8
ALTIMONT ROAD / C.H. 28		CONTRACT NO. 95873		
ILLINOIS FED. AID PROJECT DNO9(460)				

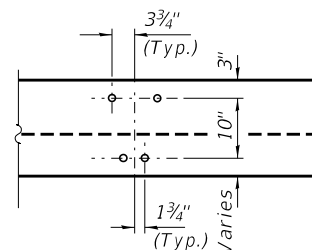


SECTION THRU HEADWALL

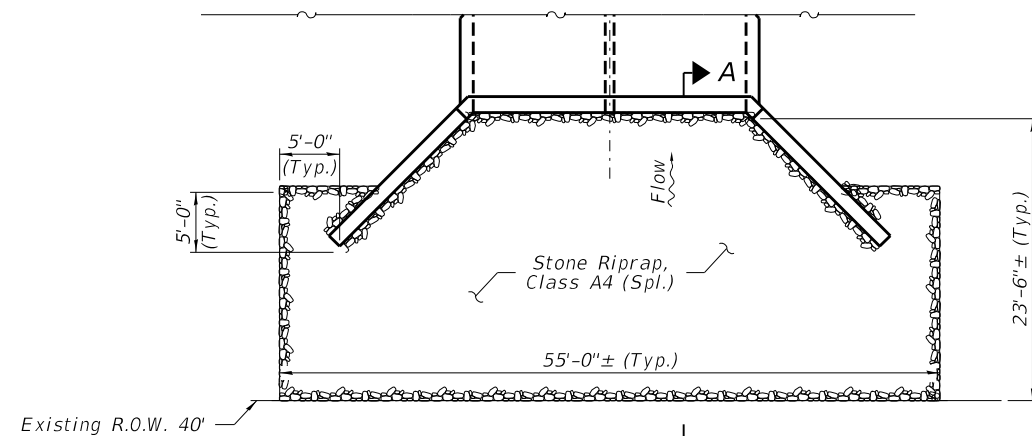


DRAIN DETAIL

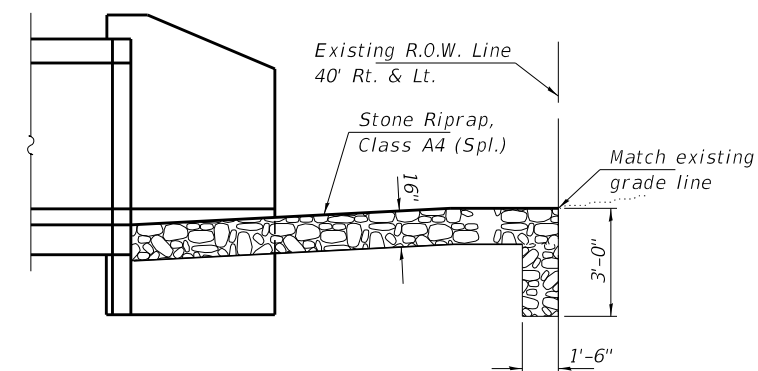
(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for Concrete Box Culverts.)



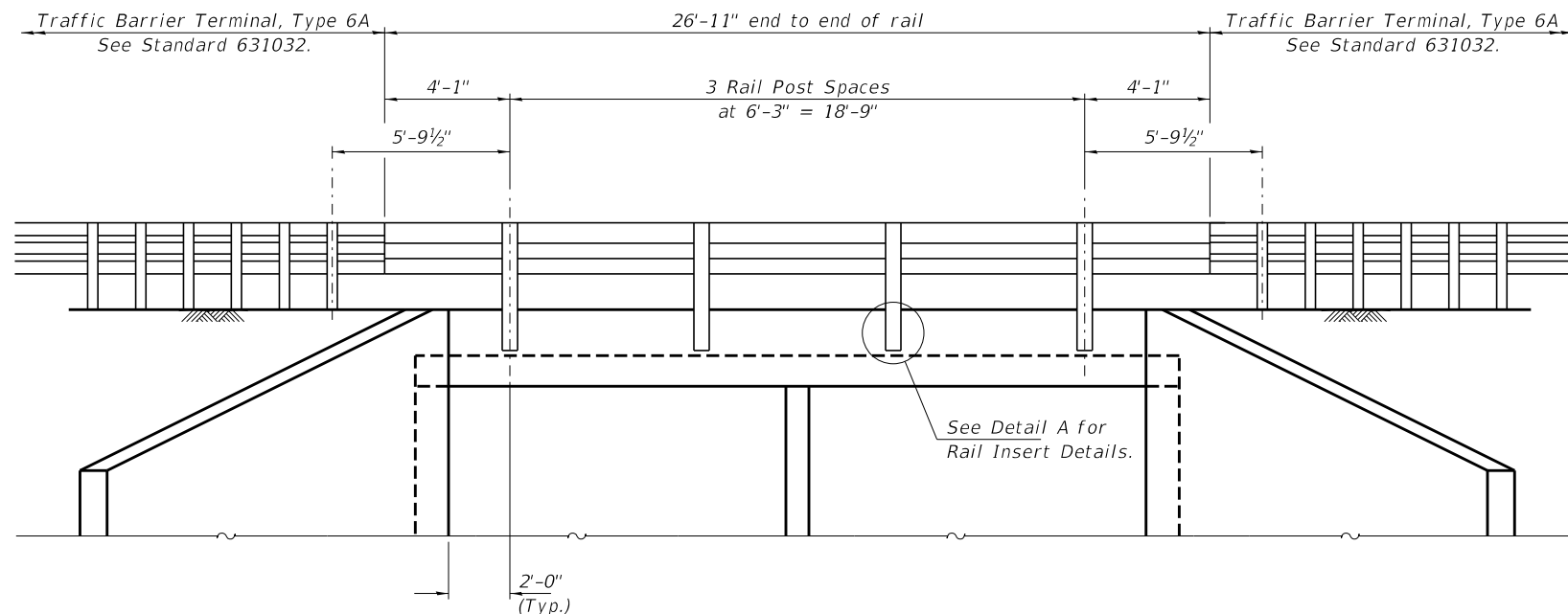
DETAIL A



RIPRAP LAYOUT



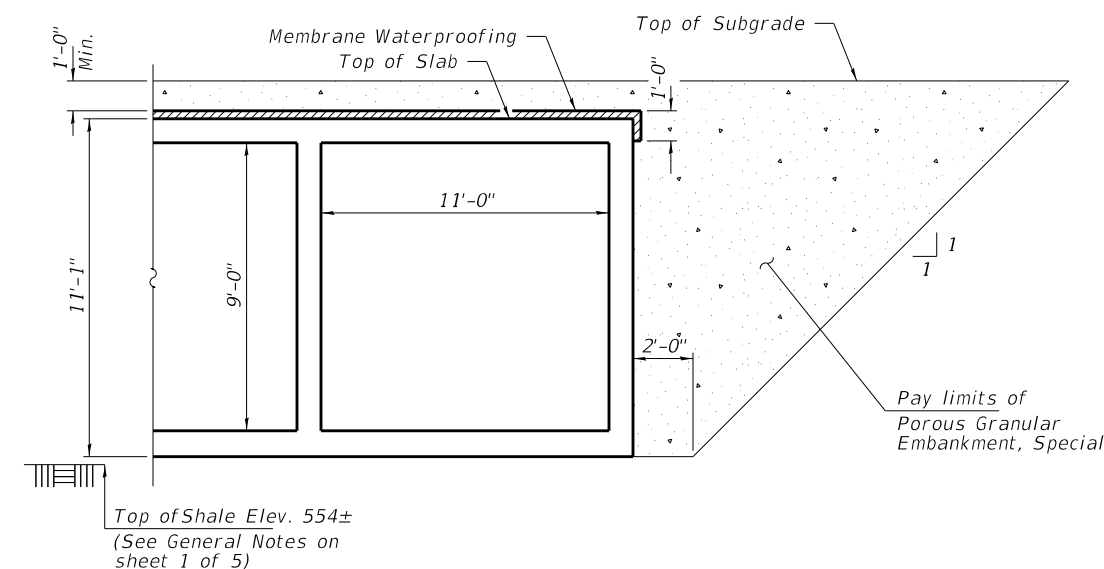
SECTION A-A



ELEVATION

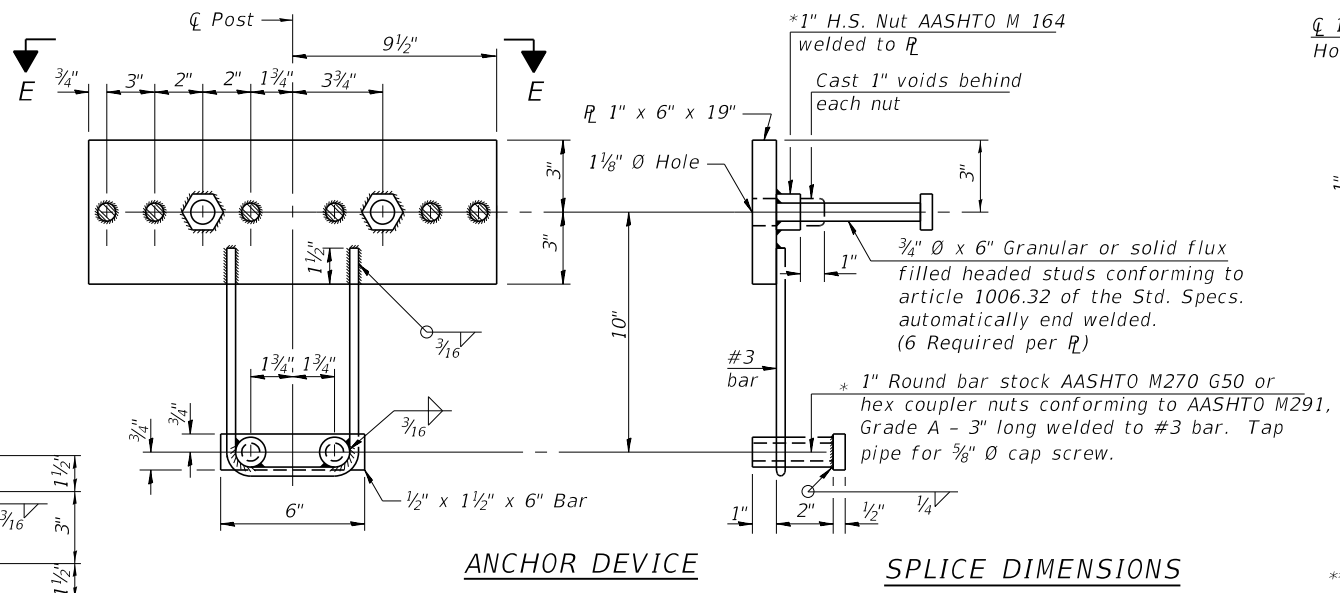
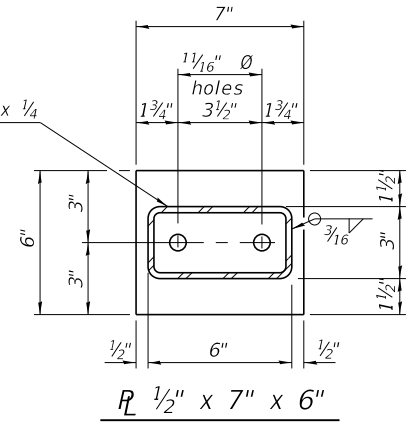
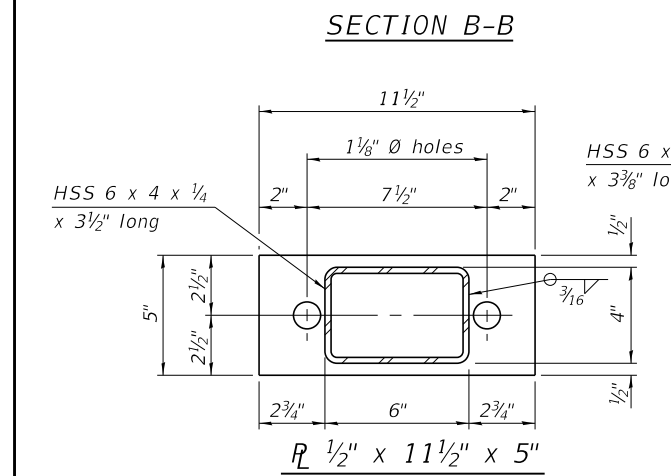
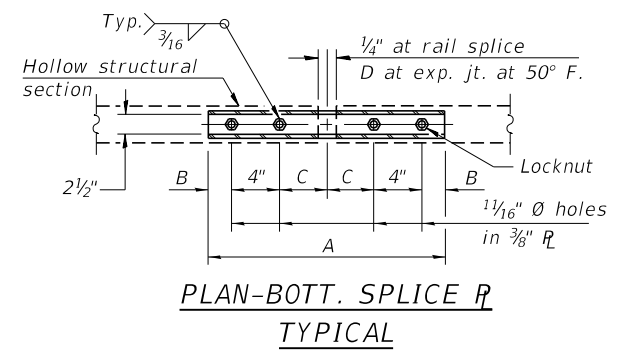
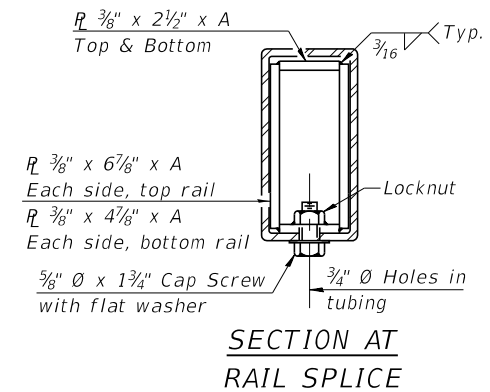
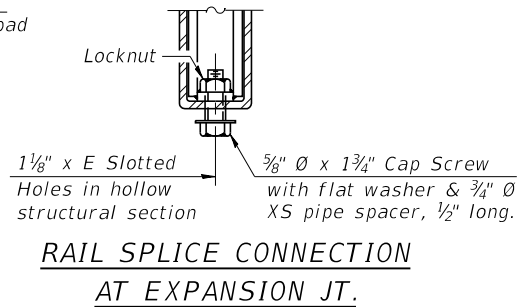
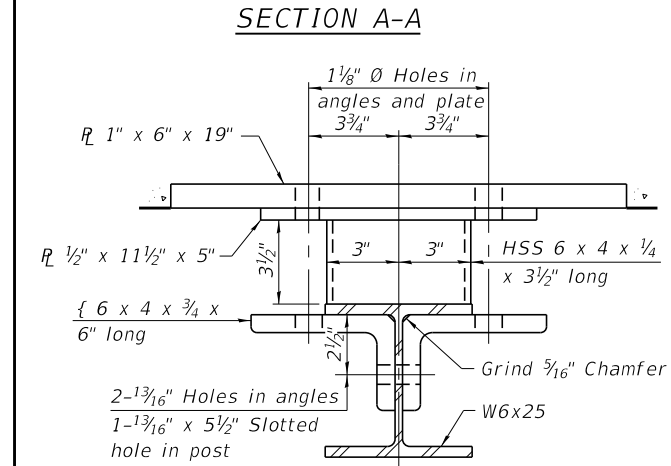
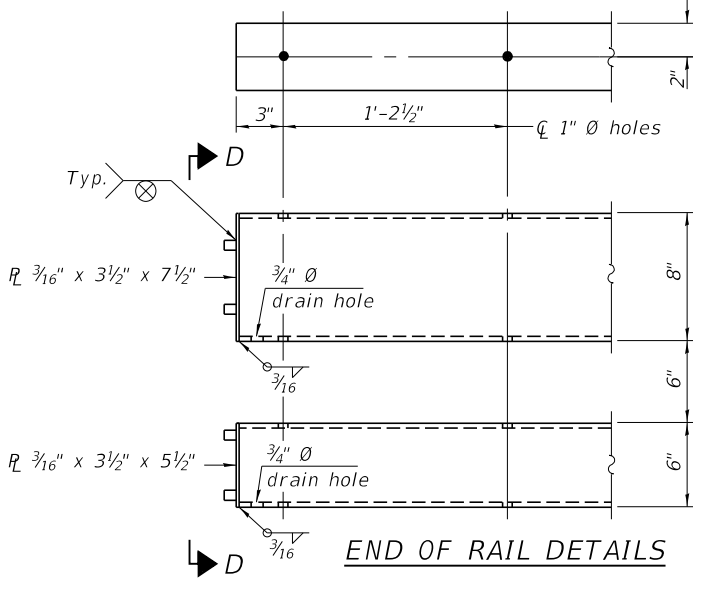
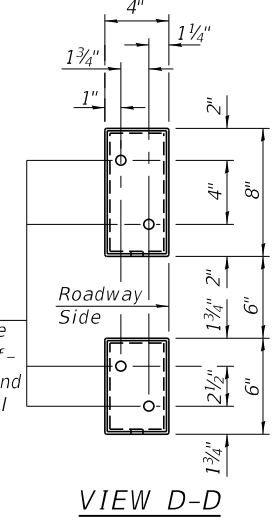
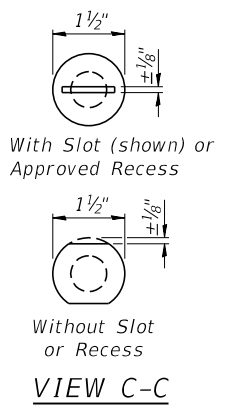
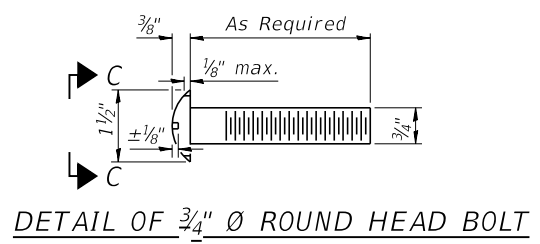
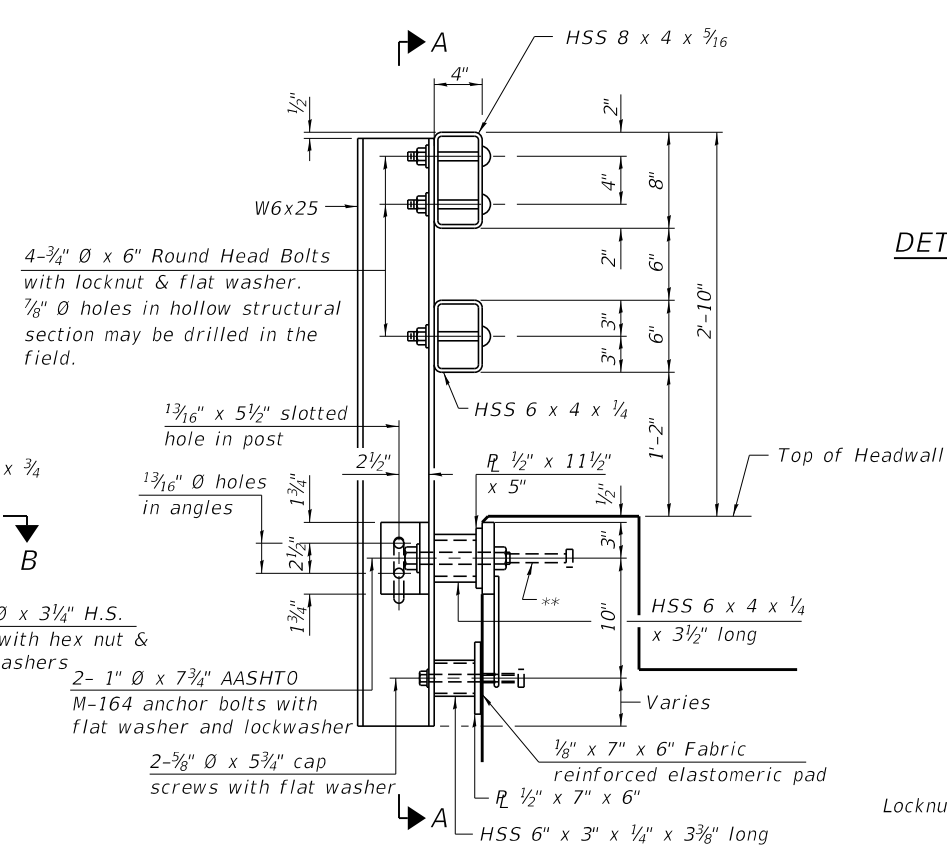
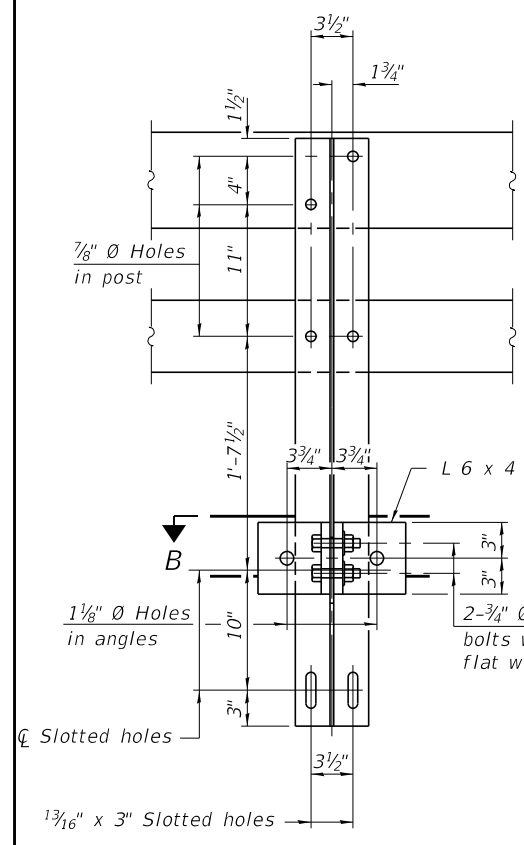
Showing Rail Post Spaces

See sheet 5 of 5 for Railing Details.



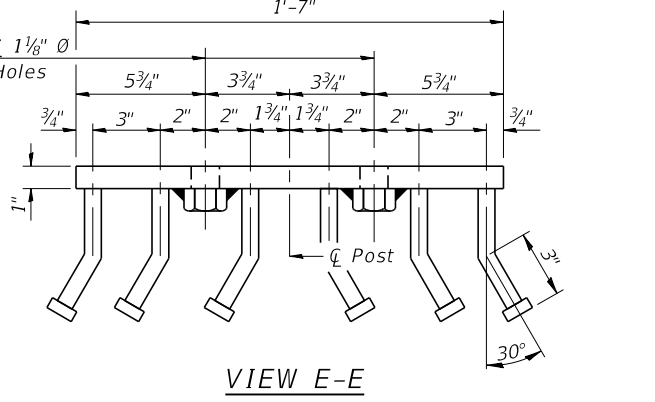
BACKFILL DETAIL

FILE NAME = 190158-shi-culvert.dgn	USER NAME = rthosick	DESIGNED - J.R.B.	REVISED -	STATE OF ILLINOIS FAYETTE COUNTY HIGHWAY DEPARTMENT	CULVERT DETAILS STRUCTURE NO. 026-5029	F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L5 / PE / SE CORP. 184.000959	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -			711	19-00128-00-BR	FAYETTE	18	9
	PLOT DATE = 3/30/2020	DRAWN - R.D.H.	REVISED -			ALTAMONT ROAD / C.H. 28		CONTRACT NO. 95873		
		CHECKED - S.W.M.	REVISED -			ILLINOIS		FED. AID PROJECT DNO9(460)		



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"	—



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 SM.
 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.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	54

R-34CWS 8-11-2017 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)

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HAMPTON, LENZINI AND RENWICK, INC.	PLOT SCALE = \$SCALE\$	CHECKED - S.W.M.	REVISED -
3085 STEVENSON DRIVE, SUITE 201	PLOT DATE = 3/30/2020	DRAWN - R.D.H.	REVISED -
SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM			
LS / PE / SE CORP. 184.000959			

STATE OF ILLINOIS
 FAYETTE COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE SM
 STRUCTURE NO. 026-5029

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	19-00128-00-BR	FAYETTE	18	10
ALTAMONT ROAD / C.H. 28		CONTRACT NO. 95873		
ILLINOIS FED. AID PROJECT DNO9(460)				

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

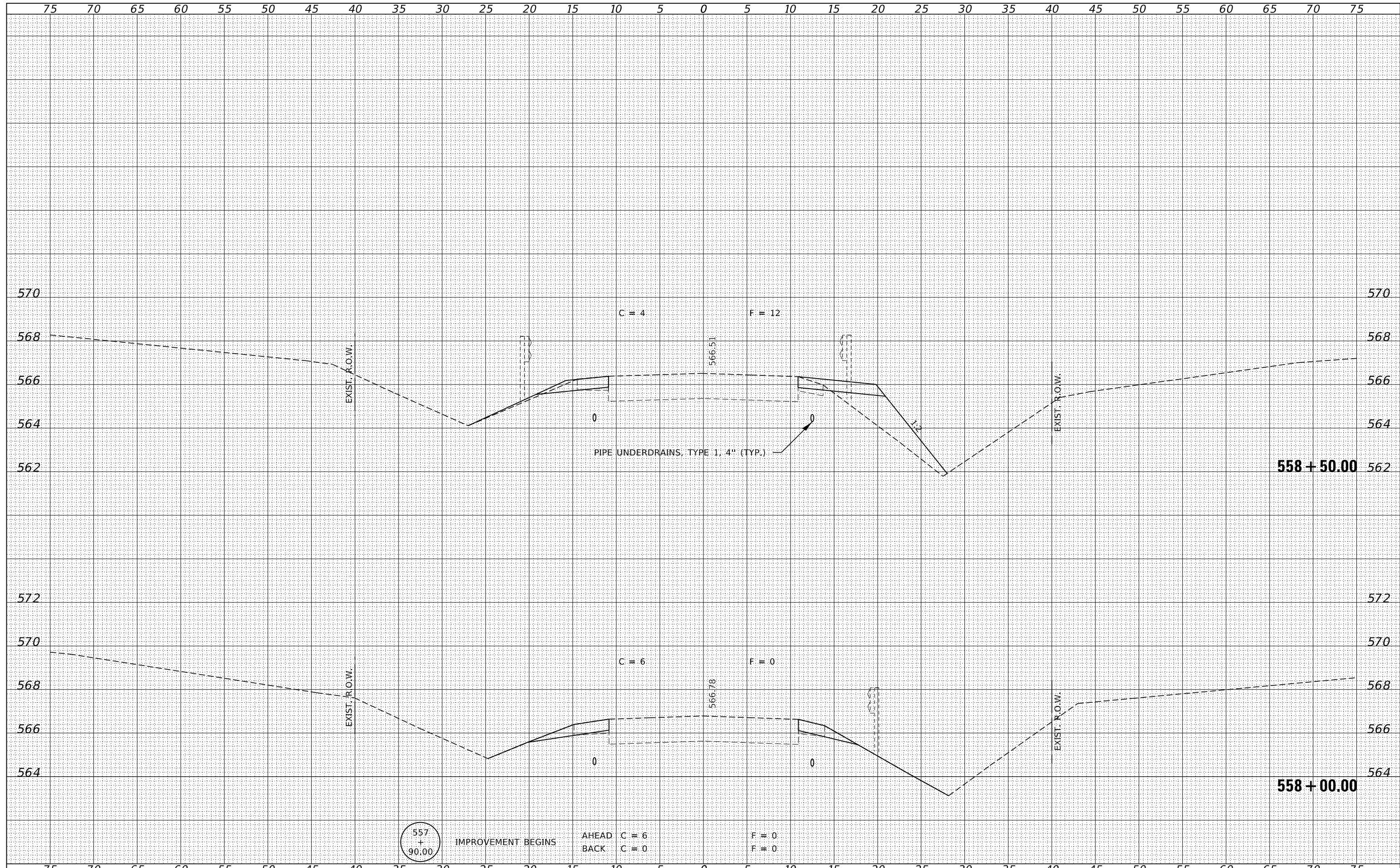
NOBLE		BORING No. B-1		water level reading					
ENGINEERING CONSULTANTS		County Fayette, IL	Sheet No. 1 of 2	1st encounter Dry					
Client HLR		Weather Overcast	Temperature 70's	water level reading					
Driller Noble Engineering Consultants		Date Start 6-12-19	Surface Elevation 100**	completion	Dry Cave				
Location 19-00128-00-BR		Date Finished 6-12-19	Driller Tony Schoccker	Backfill	Soil cuttings				
Depth:	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	USC Class.	Elev.**
1							0.0'-0.9' Crushed Rock, asphalt, clay, etc. FILL		99
2 (564.8)	SS-1	1.0'-2.5'	23	31-19.4	10			FILL	98
3									97
4 (562.8)	SS-2	3.5'-5.0'	3	2-2-1	50		0.9'-8.0' Silt, Clay, Etc. FILL	FILL	96
5									95
6 (560.8)	SS-3	6.0'-7.5'	4	1-2-2	40			FILL	94
7									93
8									92
9 (557.8)	SS-4	8.5'-10.0'	10	3-4-6	100	1.0	8.0'-18.5' SILTY CLAY, trace to some gravel, trace sand, occ. cobbles below 14', stiff, brown	CL	91
10									90
11									89
12									88
13									87
14 (552.8)	SS-5	13.5'-15.0'	100+	34-100/2***	80	1.0		CL	86
15									85
16									84
17									83
18									82
19 (547.8)	SS-6	18.5'-20.0'	140	41-64-76	80	-		-	81
20									80
21									79
22									78
23									77
24 (542.8)	SS-7	23.5'-25.0'	100+	87-100/4*	100	-	18.5'-42.4' HIGHLY WEATHERED SHALE, occ. thin clay seams, gray	-	76
25									75
26									74
27									73
28									72
29									71
30 (536.8)	SS-8	28.5'-30.0'	100+	74-100/5*	90	-		-	70
Drilling Method HSA (2-1/4" id)		comments		* Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder					
Depth 0' to 42.4'				** ground surface elevation at boring location is estimated from bridge deck					
Drill Rig Mobile B-47				***rock in shoe					
Sampling split-spoon (SS)				** ground surface elevation at boring location is estimated and is not surveyed (566.8)					

NOBLE		BORING No. B-1		water level reading					
ENGINEERING CONSULTANTS		County Fayette, IL	Sheet No. 2 of 2	1st encounter Dry					
Client HLR		Weather Overcast	Temperature 70s	water level reading					
Driller Noble Engineering Consultants		Date Start 6-12-19	Surface Elevation 100**	completion	Dry Cave				
Location 19-00128-00-BR		Date Finished 6-12-19	Driller Tony Schoccker	Backfill	Soil cuttings				
Depth:	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	USC Class.	Elev.**
31									69
32									68
33									67
34 (532.8)	SS-9	33.5'-35.0'	100+	47-100/5*	100	-		-	66
35									65
36									64
37									63
38									62
39 (527.8)	SS-10	38.5'-40.0'	100+	62-100/5*	50	-	18.5'-42.4' HIGHLY WEATHERED SHALE, occ. thin clay seams, gray	-	61
40									60
41									59
42							AR 42.4'		58
43									57
44									
45									
46									
47									
48									
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59									
60									
Drilling Method HSA (2-1/4" id)		comments		* Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder					
Depth 0' to 42.4'				** ground surface elevation at boring location is estimated and is not surveyed					
Drill Rig Mobile B-47				***rock in shoe					
Sampling split-spoon (SS)									

BORING

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
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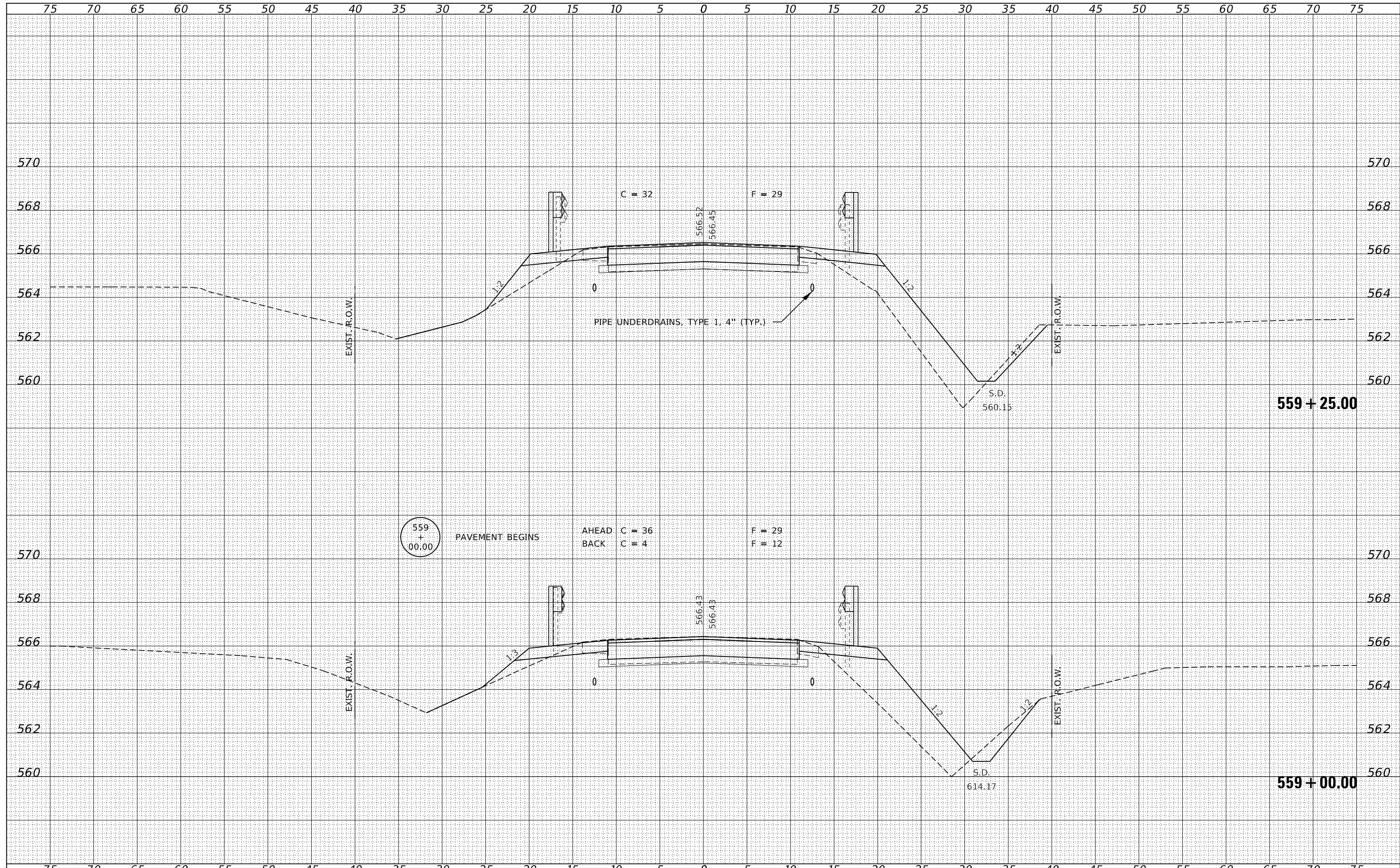
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HAMPTON, LENZINI AND RENWICK, INC.	DRAWN - T.W.K.	REVISD -	711					19-00128-00-BR	FAYETTE	18	12	
3888 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	CHECKED - S.W.M.	REVISD -	ALTAMONT ROAD / C.H. 28					CONTRACT NO. 95873				
ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958	DATE - 03/30/2020	REVISD -	SCALE: 5H:2V					SHEET NO. 1 OF 7 SHEETS	STA. 558+00.00 TO STA. 558+50.00	ILLINOIS FED. AID PROJECT DNC9(460)		

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
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DATE	
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 DRAWN - T.W.K.
 CHECKED - S.W.M.
 DATE - 03/30/2020
 PLOT SCALE = \$S\$CALES
 PLOT DATE = 3/30/2020

DESIGNED - J.W.F.
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 REVISIONS:
 REVISIONS:
 REVISIONS:

STATE OF ILLINOIS
 FAYETTE COUNTY HIGHWAY DEPARTMENT

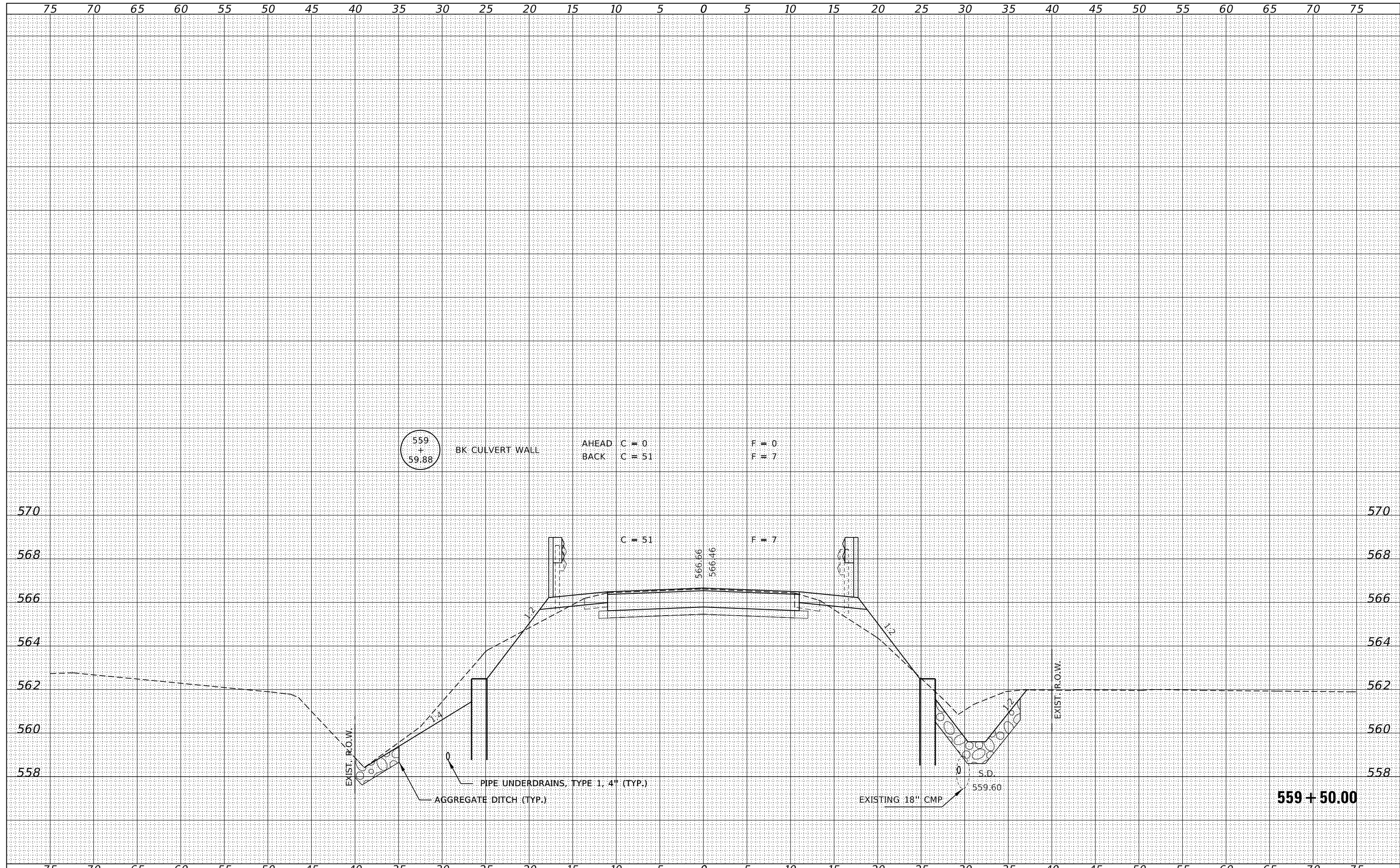
STATION CROSS SECTIONS

SCALE: 5H:2V
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 STA. 559+00.00 TO STA. 559+25.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	19-00128-00-BR	FAYETTE	18	13
ALTAMONT ROAD / C.H. 28			CONTRACT NO. 95873	
ILLINOIS FED. AID PROJECT DNC9(460)				

DATE	
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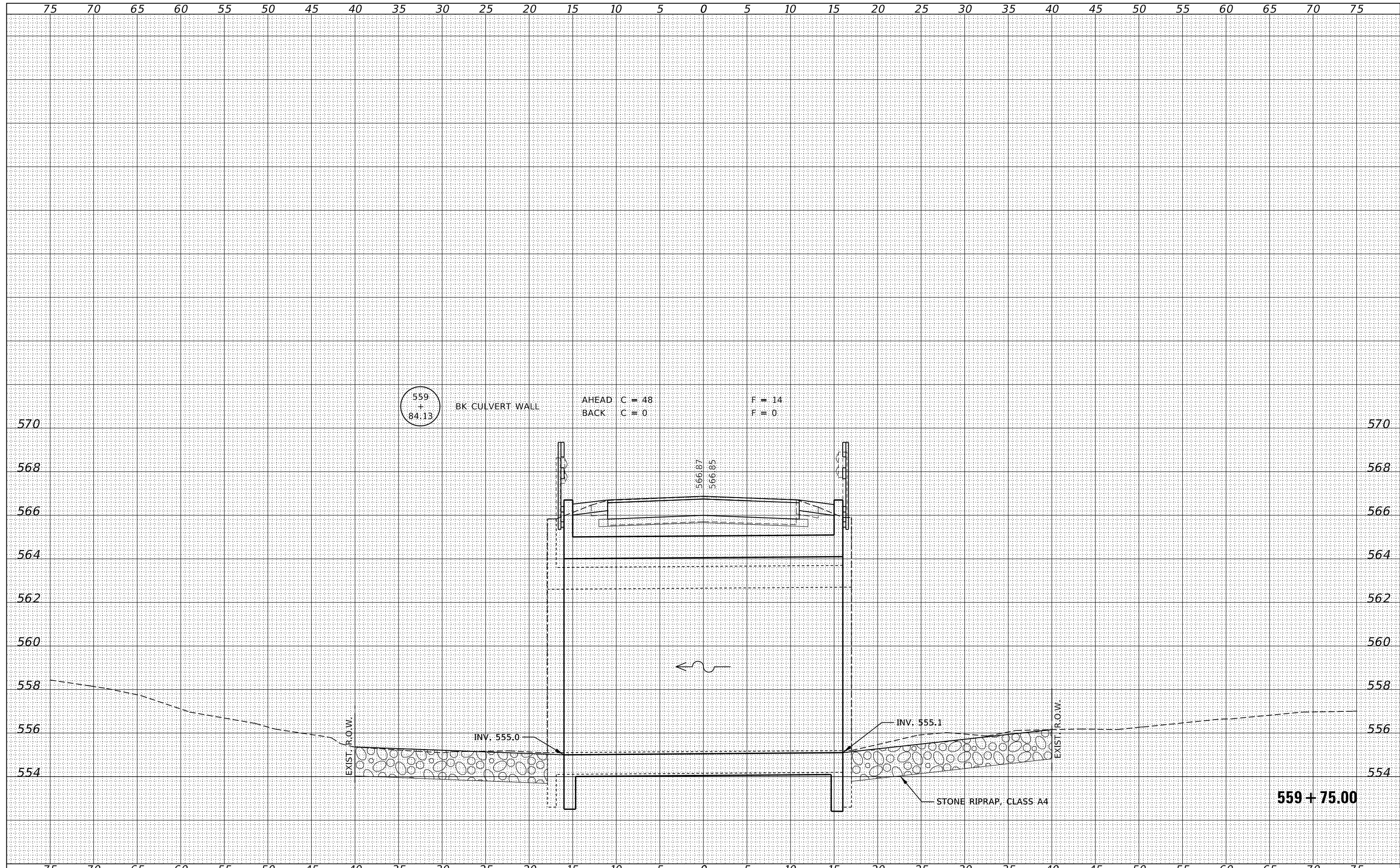
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NOTE BOOK	
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HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958	PLOT SCALE = \$SCALES	DRAWN - T.W.K.	REVISED -					711	19-00128-00-BR	FAYETTE	18	14
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	DATE - 03/30/2020	REVISED -						CONTRACT NO. 95873				

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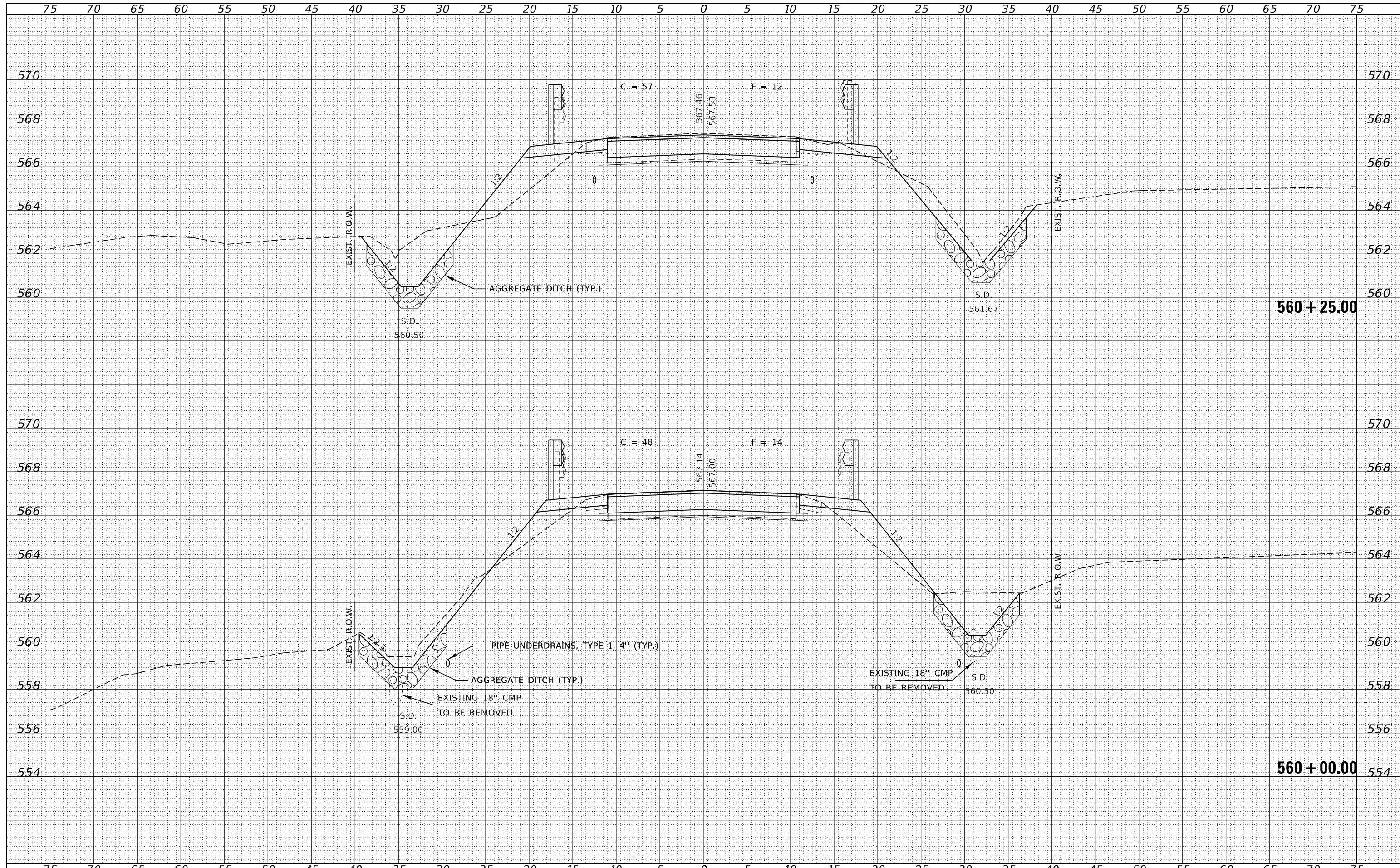
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HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L/S / PE / SE CORP. 184.000958		DRAWN - T.W.K.	REVISED -		711	19-00128-00-BR	FAYETTE	18	15			
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PLOT DATE = 3/30/2020		DATE - 03/30/2020	REVISED -		SCALE: 5H:2V	SHEET NO. 4 OF 7 SHEETS	STA. 559+75.00 TO STA. 559+75.00	ILLINOIS FED. AID PROJECT DNC9(460)				

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BY	
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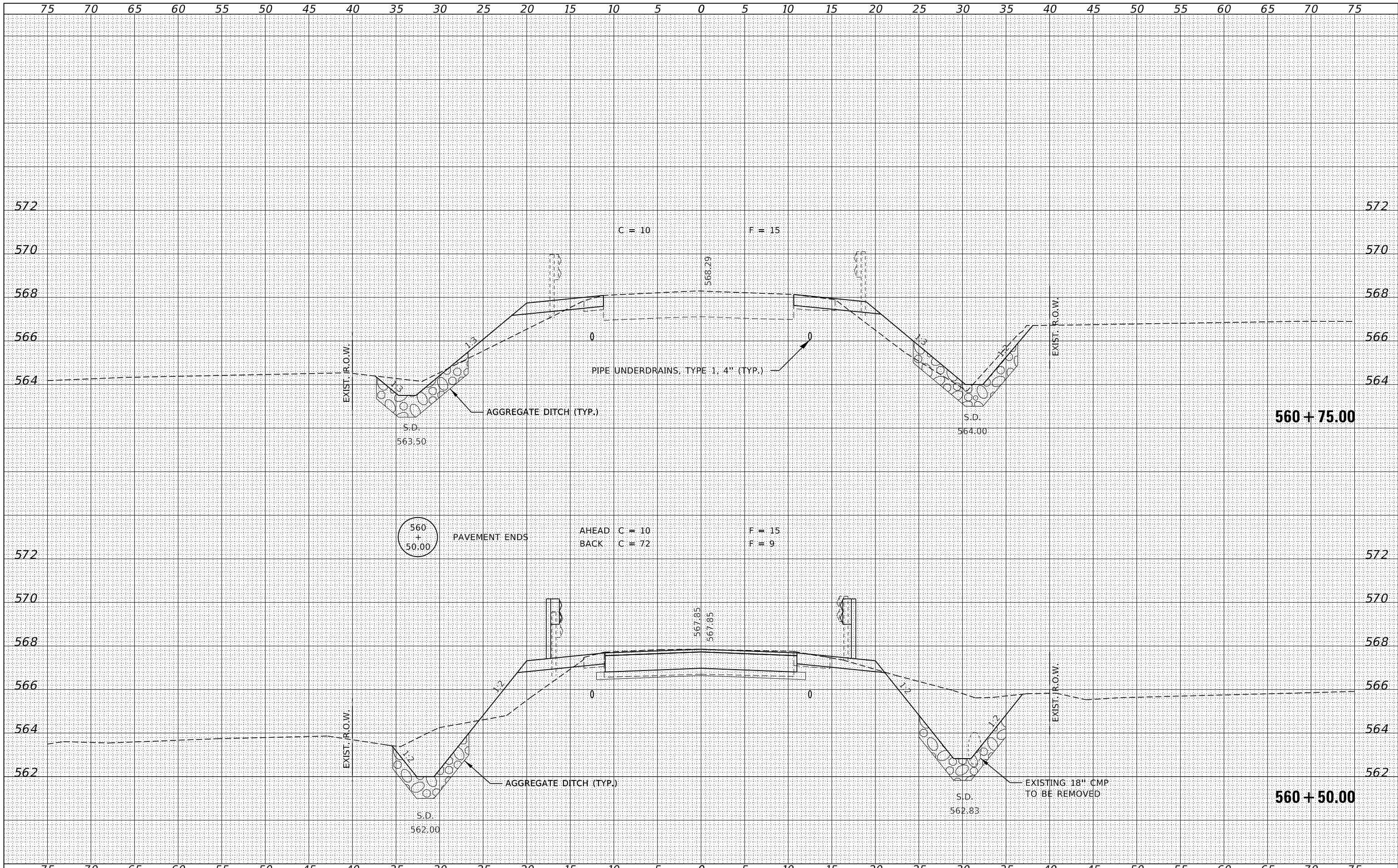
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HAMPTON, LENZINI AND RENWICK, INC. 3885 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000958	PLOT SCALE = \$SCALES	DRAWN - T.W.K.	REVISED -		711	19-00128-00-BR	FAYETTE	18	16
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		DATE = 03/30/2020	REVISED -		SCALE: 5H:2V	SHEET NO. 5 OF 7 SHEETS	STA. 560+00.00 TO STA. 560+25.00	ILLINOIS FED. AID PROJECT DNC9(460)	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	
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 3885 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000958

USER NAME = rmosck
 PLOT SCALE = \$SCALES
 PLOT DATE = 3/30/2020

DESIGNED - J.V.F.
 DRAWN - T.W.K.
 CHECKED - S.W.M.
 DATE - 03/30/2020

REVISED -
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 REVISED -
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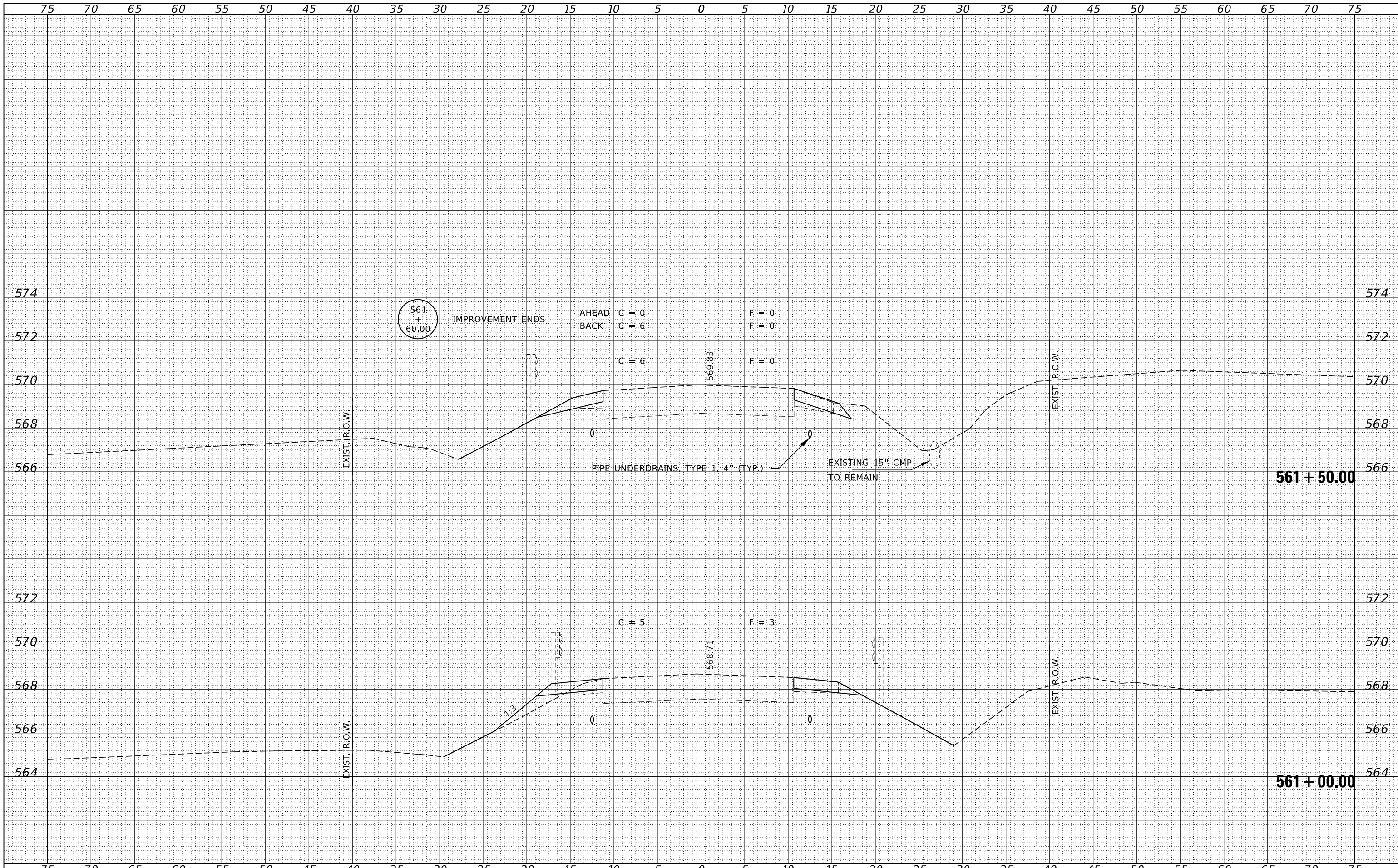
STATE OF ILLINOIS
 FAYETTE COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 6 OF 7 SHEETS
 STA. 560+50.00 TO STA. 560+75.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	19-00128-00-BR	FAYETTE	18	17
ALTAMONT ROAD / C.H. 28			CONTRACT NO. 95873	
ILLINOIS FED. AID PROJECT DNR(460)				

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



FILE NAME = 190158-shl-xssheets.dgn
 DESIGNED - J.V.F.
 DRAWN - T.W.K.
 CHECKED - S.W.M.
 DATE - 03/30/2020

USER NAME = rmosck
 PLOT SCALE = \$SCALE\$
 PLOT DATE = 3/30/2020

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STATE OF ILLINOIS
 FAYETTE COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

SCALE: 5H:2V SHEET NO. 7 OF 7 SHEETS STA. 561+00.00 TO STA. 561+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
711	19-00128-00-BR	FAYETTE	18	18
ALTAMONT ROAD / C.H. 28		CONTRACT NO. 95873		
ILLINOIS FED. AID PROJECT DNC9(460)				

