

01-20-2023 LETTING ITEM 125

INDEX OF SHEETS, SEE SHEET NO. 2
LIST OF STANDARDS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

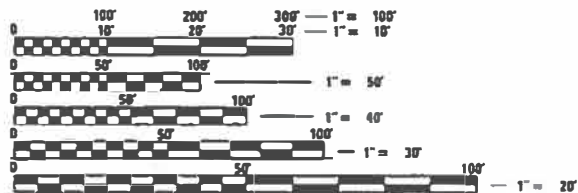
PLANS FOR PROPOSED COUNTY IMPROVEMENT

FAS 1389 (GRAHAM CHAPEL ROAD/CH D41) OVER TRIBUTARY
OF WEST FORK OF KICKAPOO CREEK
SECTION 18-00072-00-BR
PROJECT NO. AYS0(285)
PEORIA COUNTY
JOB NO. C-94-018-22

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18 00072-00-BR	PEORIA	23	1
		ILLINOIS	CONTRACT NO. 89822	



REPLACEMENT OF A CONCRETE
DOUBLE BOX CULVERT LOCATED ON
GRAHAM CHAPEL ROAD OVER TRIBUTARY
OF WEST FORK OF KICKAPOO CREEK
EXISTING SN 072-3075 STA. 153+47.70
PROPOSED SN 072-3159 STA. 153+38.00



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.

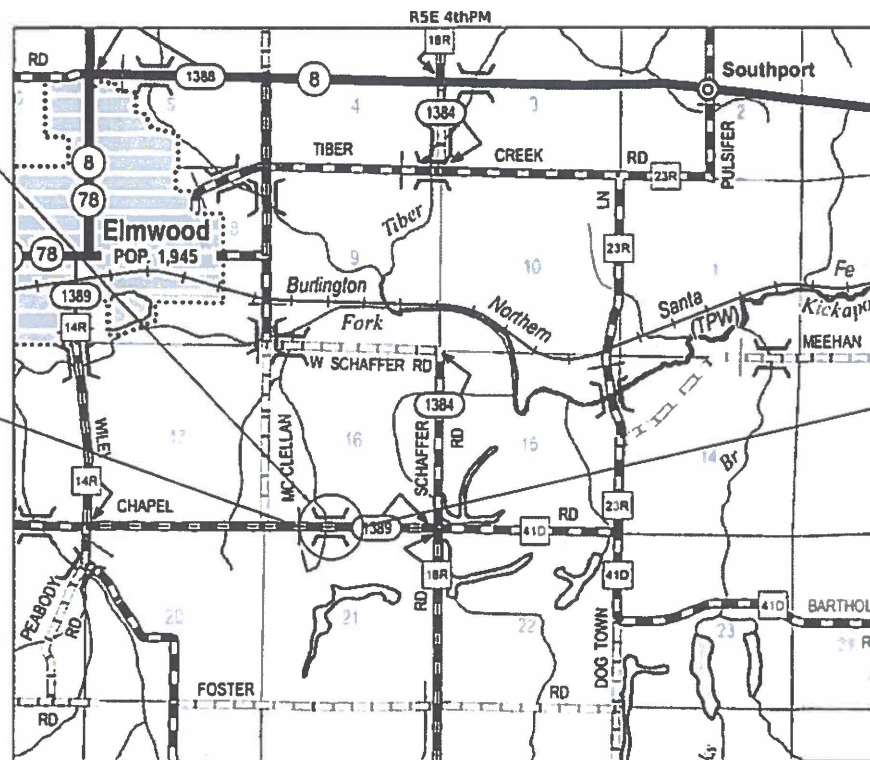
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER GEORGE MERKLE, P.E.
PROJECT MANAGER JEFF SPILLER, P.E.

MAURER-STUTZ
ENGINEERS SURVEYORS

3116 DRIES LN STE 100
PEORIA, ILLINOIS 61604
PH. (309) 693-7615
FAX (309) 693-7616
PROFESSIONAL DESIGN FIRM #184-005754

CATALDG NO. 036293-00D
CONTRACT NO. 89822



LOCATION MAP

ROADWAY CLASSIFICATION:
GRAHAM CHAPEL ROAD OVER TRIBUTARY
OF WEST FORK OF KICKAPOO CREEK - MAJOR COLLECTOR (RURAL)
ADT 525 (2017) - 88% PV, 12% TRUCKS
DESIGN SPEED : 50 MPH
DESIGN POLICY : 3R

GROSS LENGTH = 527.61 FT. = 0.10 MILES
NET LENGTH = 527.61 FT. = 0.10 MILES
VARIANCES: NONE
COMMITMENTS: SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED August 16, 2022
Clay Barakat Peoria County Engineer

PASSED 9/16/22
Tony Sarnine SSA District Engineer of Local Roads & Streets

RELEASING FOR BID BASED ON LIMITED REVIEW September 16, 2022
David G. Jarrett Region 3 Engineer

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

George B. Merkle
George B. Merkle, PE
PE No. 042917
Exp. Date 11/30/2023

8/16/2022

GEORGE B. MERKLE
062-042917
LICENSED PROFESSIONAL ENGINEER
OF ILLINOIS

CONSTRUCTION CODE
STP-BR FUNDS
80% STATE / 20% COUNTY
0010
RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
* 20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	252
* 20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	180
20101000	TEMPORARY FENCE	FOOT	769
20200100	EARTH EXCAVATION	CU YD	920
20400800	FURNISHED EXCAVATION	CU YD	1,930
20700220	POROUS GRANULAR EMBANKMENT	CU YD	610
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	156
25000300	SEEDING, CLASS 3	ACRE	1.00
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	83
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	83
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	83
25100115	MULCH, METHOD 2	ACRE	0.25
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	3,984
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	210
28000305	TEMPORARY DITCH CHECKS	FOOT	670
28000400	PERIMETER EROSION BARRIER	FOOT	438
28000500	INLET AND PIPE PROTECTION	EACH	1
28100107	STONE RIPRAP, CLASS A4	SQ YD	60
28200200	FILTER FABRIC	SQ YD	905
28300400	AGGREGATE DITCH	TON	234
28500400	ARTICULATED BLOCK REVETMENT MAT	SQ YD	324
35101100	AGGREGATE BASE COURSE, TYPE A 12"	SQ YD	1,332

* SPECIALTY ITEMS

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	USER NAME = cjadaz	DESIGNED -	REVISED -	PEORIA COUNTY HIGHWAY DEPARTMENT	GRAHAM CHAPEL ROAD CULVERT REPLACEMENT SUMMARY OF QUANTITIES			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 0.1667' / in.	DRAWN -	REVISED -					1389	18-00072-00-BR	PEORIA	23	3
	PLOT DATE = 9/23/2022	CHECKED -	REVISED -					CONTRACT NO. 89822				
	DATE -	REVISED -	SCALE:					SHEET 1	OF 3	SHEETS	STA.	TO STA.

CONSTRUCTION CODE
 STP-BR FUNDS
 80% STATE / 20% COUNTY
 0010
 RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
40200700	AGGREGATE SURFACE COURSE, TYPE A 8"	SQ YD	112
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	2,996
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1,890
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	294
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	144
44000100	PAVEMENT REMOVAL	SQ YD	1,183
44004000	PAVED DITCH REMOVAL	FOOT	331
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	470
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	97
50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	154
50800105	REINFORCEMENT BARS	POUND	59,550
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,540
51500100	NAME PLATES	EACH	1
54003000	CONCRETE BOX CULVERTS	CU YD	378.0
54262724	METAL FLARED END SECTIONS 24"	EACH	2
542D1069	PIPE CULVERTS, CLASS D, TYPE 2 24"	FOOT	59
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	400
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
* 66500105	WOVEN WIRE FENCE, 4'	FOOT	681
* 66500305	WOVEN WIRE GATES, 4' X 4' SINGLE	EACH	1
* 66501600	WOVEN WIRE GATES, 4' X 16' DOUBLE	EACH	1
*	SPECIALTY ITEMS		

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PLOT DATE = 9/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

**PEORIA COUNTY
HIGHWAY DEPARTMENT**

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
SUMMARY OF QUANTITIES**

SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	4
CONTRACT NO. 89822				
ILLINOIS FED. AID PROJECT				

CONSTRUCTION CODE
 STP-BR FUNDS
 80% STATE / 20% COUNTY
 0010
 RURAL

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	3
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	48
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	16
* 72000100	SIGN PANEL - TYPE 1	SQ FT	6
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* 72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	16
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	1,451
* 78011025	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	1,451
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8
X6650202	WOVEN WIRE FENCE REMOVAL	FOOT	710
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
X7240300	SIGN REMOVAL	EACH	1
Z0013798	CONSTRUCTION LAYOUT	L SUM	1
Z0054400	ROCK FILL	CU YD	154

* SPECIALTY ITEMS

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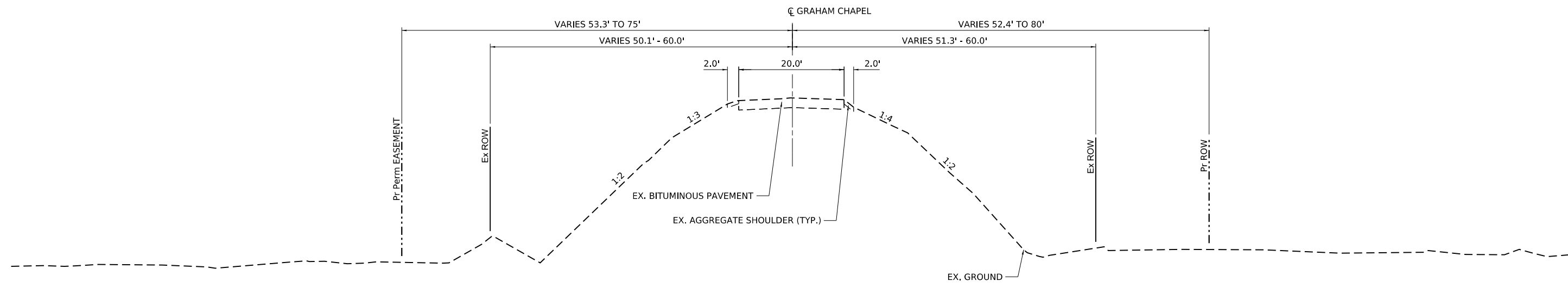
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PLOT DATE = 9/23/2022	DATE -	REVISED -

**PEORIA COUNTY
 HIGHWAY DEPARTMENT**

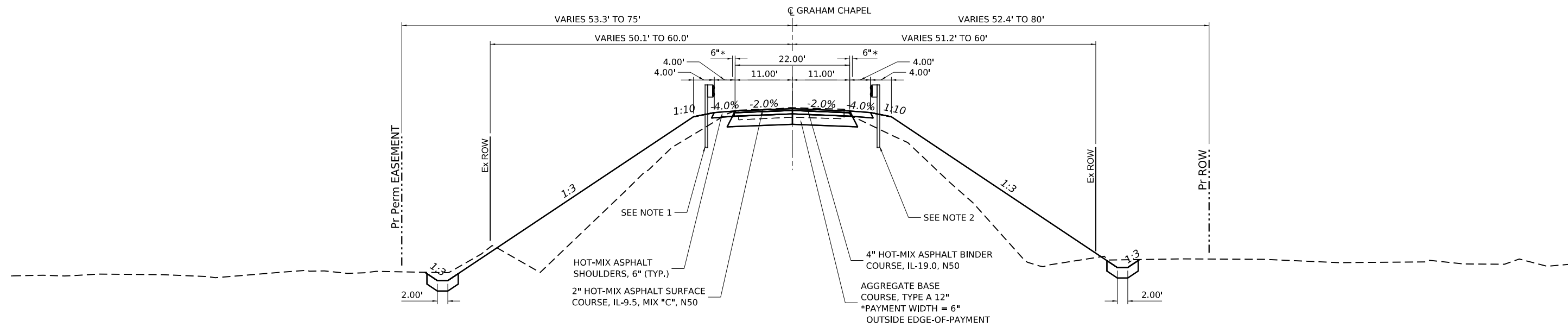
**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
 SUMMARY OF QUANTITIES**

SCALE: SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	5
CONTRACT NO. 89822				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION
 NOT TO SCALE
 STA. 150+72.15 - STA. 155+99.76



PROPOSED TYPICAL SECTION
 NOT TO SCALE
 STA. 150+72.15 - STA. 155+99.76

NOTE 1:
 TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT AND STEEL
 PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS LIMITS LEFT SIDE:
 STA. 152+24.96 - STA. 155+24.96

NOTE 2:
 TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT AND STEEL
 PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS LIMITS RIGHT SIDE:
 STA. 151+49.96 - STA. 154+49.96

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PLOT DATE = 8/18/2022	CHECKED -	REVISED -
	DATE -	REVISED -

**PEORIA COUNTY
 HIGHWAY DEPARTMENT**

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
 TYPICAL SECTIONS**

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	6
CONTRACT NO. 89822				
ILLINOIS FED. AID PROJECT				

20100110 TREE REMOVAL (6 TO 15 UNITS DIAMETER)				
LOCATION			UNIT	REMARKS
151+24.37	36.2'	RT	10.0	
151+38.30	36.9'	RT	7.0	
152+17.69	48.4'	RT	15.0	
152+40.14	45.3'	RT	6.0	
152+62.20	40.8'	RT	6.0	
152+78.90	30.9'	LT	13.0	
152+81.50	40.1'	RT	6.0	
152+82.57	48.6'	RT	7.0	
152+82.90	35.2'	RT	7.0	
152+88.14	30.3'	LT	11.0	
152+92.34	55.5'	RT	15.0	
153+02.16	28.2'	LT	11.0	
153+05.04	34.5'	RT	6.0	
153+06.86	61.7'	RT	6.0	
153+09.19	47.9'	RT	6.0	
153+18.79	70.6'	RT	7.0	
153+23.52	25.8'	LT	15.0	
153+27.11	73.8'	RT	7.0	
153+57.97	31.5'	LT	15.0	
153+71.11	34.8'	RT	15.0	
153+72.91	40.7'	RT	10.0	
153+83.24	49.3'	RT	8.0	
154+15.20	49.9'	RT	6.0	
154+19.39	57.2'	RT	6.0	
154+31.43	42.5'	RT	6.0	
154+44.92	59.0'	RT	6.0	
154+46.71	57.7'	RT	6.0	
154+64.31	53.6'	RT	6.0	
154+69.23	52.3'	RT	7.0	
TOTAL			252.0	

20100210 TREE REMOVAL (OVER 15 UNITS DIAMETER)				
LOCATION			UNIT	REMARKS
152+46.99	49.5'	RT	19.0	
152+82.98	29.4'	LT	17.0	
153+23.33	29.2'	LT	16.0	
153+30.98	43.3'	RT	16.0	
153+62.36	29.2'	LT	16.0	
153+69.82	52.7'	RT	22.0	
153+77.18	39.9'	RT	34.0	
154+37.15	43.0'	RT	19.0	
154+99.58	59.9'	RT	21.0	
TOTAL			180.0	

20101000 TEMPORARY FENCE				
LOCATION			FOOT	REMARKS
151+12.04 TO 155+08.29		RT	400.0	
151+16.48 TO 154+81.02		LT	369.0	
TOTAL			769.0	

25000300 SEEDING, CLASS 3				
LOCATION			ACRE	REMARKS
150+72.15 TO 155+99.76		LT	0.45	
150+72.15 TO 151+13.04		RT	0.02	
151+43.00 TO 155+99.76		RT	0.44	
TOTAL			0.91	ROUND UP TO NEAREST 0.25 ACRE

25000400 NITROGEN FERTILIZER NUTRIENT				
LOCATION			POUND	REMARKS
150+72.15 TO 155+99.76		LT	40.8	
150+72.15 TO 151+13.04		RT	2.2	
151+43.00 TO 155+99.76		RT	39.3	
TOTAL			82.2	

25000500 PHOSPHORUS FERTILIZER NUTRIENT				
LOCATION			POUND	REMARKS
150+72.15 TO 155+99.76		LT	40.8	
150+72.15 TO 151+13.04		RT	2.2	
151+43.00 TO 155+99.76		RT	39.3	
TOTAL			82.2	

25000600 POTASSIUM FERTILIZER NUTRIENT				
LOCATION			POUND	REMARKS
150+72.15 TO 155+99.76		LT	40.8	
150+72.15 TO 151+13.04		RT	2.2	
151+43.00 TO 155+99.76		RT	39.3	
TOTAL			82.2	

25100115 MULCH, METHOD 2				
LOCATION			ACRE	REMARKS
151+43.00 TO 153+01.73		RT	0.05	
151+11.20 TO 153+03.17		LT	0.01	
153+72.92 TO 154+84.54		LT	0.01	
153+75.00 TO 155+08.29		RT	0.02	
TOTAL			0.09	ROUND UP TO NEAREST 0.25 ACRE

25100635 HEAVY DUTY EROSION CONTROL BLANKET				
LOCATION			SQ YD	REMARKS
150+72.15 TO 155+99.76		LT	2086.4	
150+72.15 TO 151+13.04		RT	115.7	
151+43.04 TO 155+99.76		RT	1781.3	
TOTAL			3983.4	

28000250 TEMPORARY EROSION CONTROL SEEDING				
LOCATION			POUND	REMARKS
150+72.15 TO 155+99.76		LT	102.2	
150+72.15 TO 155+99.76		RT	107.3	
TOTAL			209.6	

28000305 TEMPORARY DITCH CHECKS				
LOCATION			FOOT	REMARKS
151+66.61 TO 153+00.44		RT	160.0	
151+04.57 TO 153+02.57		LT	180.0	
153+70.49 TO 155+62.49		RT	170.0	
153+97.05 TO 155+62.05		LT	160.0	
TOTAL			670.0	

28000400 PERIMETER EROSION BARRIER				
LOCATION			FOOT	REMARKS
151+43.04 TO 152+97.70		RT	156.6	
152+14.93 TO 153+03.17		LT	88.7	
153+72.92 TO 154+38.00		LT	65.9	
153+78.31 TO 155+03.85		RT	126.4	
TOTAL			437.6	

28000500 INLET AND PIPE PROTECTION				
LOCATION			EACH	REMARKS
151+01.67 TO 152+97.70		RT	1.0	
TOTAL			1.0	

28200200 FILTER FABRIC				
LOCATION			SQ YD	REMARKS
150+92.87 TO 151+02.36		RT	5.6	
151+58.47 TO 153+01.73		RT	96.8	
150+93.07 TO 153+03.17		LT	141.7	
153+72.92 TO 155+78.05		LT	138.6	
153+74.27 TO 155+77.85		RT	137.9	
STRUCTURE PLANS			384.0	
TOTAL			904.6	

28300400 AGGREGATE DITCH				
LOCATION			TON	REMARKS
150+92.87 TO 151+02.36		RT	2.5	
151+58.47 TO 153+01.73		RT	43.6	
150+93.07 TO 153+03.17		LT	63.8	
153+72.92 TO 155+78.05		LT	62.4	
153+74.27 TO 155+77.85		RT	62.0	
TOTAL			234.2	

35101100 AGGREGATE BASE COURSE, TYPE A 12"			
LOCATION			SQ YD
150+72.15 TO 155+99.76			1331.6
TOTAL			1331.6

40200700 AGGREGATE SURFACE COURSE, TYPE A 8"			
LOCATION			SQ YD
151+13.04 TO 151+43.04		RT	111.6
TOTAL			111.6

40600275 BITUMINOUS MATERIALS (PRIME COAT)			
LOCATION			POUND
150+72.15 TO 155+99.76			2996.0
TOTAL			2996.0

40600290 BITUMINOUS MATERIALS (TACK COAT)			
LOCATION			POUND
150+72.15 TO 155+99.76			1889.3
TOTAL			1889.3

40603080 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50			
LOCATION			TON
150+72.15 TO 155+99.76			293.9
TOTAL			293.9

40604050 HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50			
LOCATION			TON
150+72.15 TO 155+99.76			143.7
TOTAL			143.7

44000100 PAVEMENT REMOVAL			
LOCATION			SQ YD
150+72.15 TO 155+99.76			1183.0
TOTAL			1183.0

44004000 PAVED DITCH REMOVAL			
LOCATION			FOOT
150+93.60 TO 152+47.49		LT	154.1
150+93.56 TO 152+43.53		RT	150.6
155+51.50 TO 155+77.24		LT	25.8
TOTAL			330.5

48203021 HOT-MIX ASPHALT SHOULDERS, 6"			
LOCATION			SQ YD
150+72.15 TO 155+99.76		LT	223.0
150+72.15 TO 155+99.76		RT	246.6
TOTAL			469.6

50105220 PIPE CULVERT REMOVAL			
LOCATION			FOOT
152+50.73 TO 153+05.50		RT	55.9
154+77.35 TO 155+17.40		RT	40.3
TOTAL			96.2

54262724 METAL FLARED END SECTIONS 24"			
LOCATION			EACH
151+01.67 TO 152+97.70		RT	1.0
151+58.84 TO 153+03.17		RT	1.0
TOTAL			2.0

MODEL: Default
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USER NAME = cadiaz	DESIGNED -	REVISED -
PLOT SCALE = 0.1667' / in.	DRAWN -	REVISED -
PLOT DATE = 9/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

**PEORIA COUNTY
HIGHWAY DEPARTMENT**

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
SCHEDULE OF QUANTITIES**

SCALE: SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.S. RTE. 1389	SECTION 18-0072-00-BR	COUNTY PEORIA	TOTAL SHEETS 23	SHEET NO. 7
CONTRACT NO. 89822				
ILLINOIS		FED. AID PROJECT		

542D1069 PIPE CULVERTS, CLASS D, TYPE 2 24"					
LOCATION				FOOT	REMARKS
151+01.67	TO	151+58.84	RT	59.0	
TOTAL				59.0	

63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS					
LOCATION				FOOT	REMARKS
152+00.00	TO	154+00.00	RT	200.0	
152+75.00	TO	154+75.00	LT	200.0	
TOTAL				400.0	

63100167 TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT					
LOCATION				EACH	REMARKS
151+50.00	TO	152+00.00	RT	1.0	
152+25.00	TO	152+75.00	LT	1.0	
154+00.00	TO	154+50.00	RT	1.0	
154+75.00	TO	155+25.00	LT	1.0	
TOTAL				4.0	

66500105 WOVEN WIRE FENCE, 4'					
LOCATION				FOOT	REMARKS
151+16.48	TO	153+03.17	LT	217.1	
151+43.04	TO	152+98.83	RT	159.3	
153+01.64	TO	153+11.73	RT	14.4	
153+64.27	TO	155+08.29	RT	152.8	
153+72.92	TO	154+81.02	LT	137.2	
TOTAL				680.8	

66500305 WOVEN WIRE GATES, 4' X 4' SINGLE					
LOCATION				EACH	REMARKS
152+98.83	TO	153+01.64	RT	1.0	
TOTAL				1.0	

66501600 WOVEN WIRE GATES, 4' X 16' DOUBLE					
LOCATION				EACH	REMARKS
151+12.04	TO	151+44.04	RT	1.0	
TOTAL				1.0	

66600105 FURNISHING AND ERECTING RIGHT OF WAY MARKERS					
LOCATION				EACH	REMARKS
153+00.00		80.0'	RT	1.0	
153+75.00		80.0'	RT	1.0	
155+50.00		60.0'	RT	1.0	
TOTAL				3.0	

70300100 SHORT TERM PAVEMENT MARKING					
LOCATION				FOOT	REMARKS
150+72.15	TO	155+99.76		48.0	YELLOW SKIP-DASH
TOTAL				48.0	

70300150 SHORT TERM PAVEMENT MARKING REMOVAL					
LOCATION				SQ FT	REMARKS
150+72.15	TO	155+99.76		16.0	
TOTAL				16.0	

72000100 SIGN PANEL - TYPE 1					
LOCATION				SQ FT	REMARKS
153+34.47		25.0'	RT	5.6	
TOTAL				5.6	

72501000 TERMINAL MARKER - DIRECT APPLIED					
LOCATION				EACH	REMARKS
151+50.00			RT	1.0	
152+25.00			LT	1.0	
154+50.00			RT	1.0	
155+25.00			LT	1.0	
TOTAL				4.0	

72800100 TELESCOPING STEEL SIGN SUPPORT					
LOCATION				FOOT	REMARKS
153+34.47		25.0'	RT	16.0	
TOTAL				16.0	

78009004 MODIFIED URETHANE PAVEMENT MARKING - LINE 4"					
LOCATION				FOOT	REMARKS
150+72.15	TO	153+35.49	LT	263.3	YELLOW SOLID
150+72.15	TO	155+99.76		131.9	YELLOW SKIP-DASH
150+72.15	TO	155+99.76	LT	527.6	WHITE EDGE LINE
150+72.15	TO	155+99.76	RT	527.6	WHITE EDGE LINE
TOTAL				1450.5	

78011025 GROOVING FOR RECESSED PAVEMENT MARKING 5"					
LOCATION				FOOT	REMARKS
150+72.15	TO	153+35.49	LT	263.3	
150+72.15	TO	155+99.76		131.9	
150+72.15	TO	155+99.76	LT	527.6	
150+72.15	TO	155+99.76	RT	527.6	
TOTAL				1450.5	

78200005 GUARDRAIL REFLECTORS, TYPE A					
LOCATION				EACH	REMARKS
151+50.00	TO	154+50.00	RT	4.0	
152+25.00	TO	155+25.00	LT	4.0	
TOTAL				8.0	

X6650202 WOVEN WIRE FENCE REMOVAL					
LOCATION				FOOT	REMARKS
151+16.48	TO	153+24.36	LT	213.5	
151+12.04	TO	153+28.38	RT	216.6	
153+67.20	TO	155+08.29	RT	153.2	
153+76.34	TO	154+81.02	LT	109.8	
154+02.35	TO	154+14.89	RT	16.6	
TOTAL				709.7	

X7240300 SIGN REMOVAL					
LOCATION				EACH	REMARKS
153+34.47		17.8'	RT	1.0	
TOTAL				1.0	

LOCATION	EARTH EXCAVATION	EXCAVATION ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT (FILL)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
GRAHAM CHAPEL RD.	CU YD	CU YD	CU YD	CU YD
STA. 150+72.15 - STA. 155+99.76	918.82	689.11	2615.87	-1926.76
TOTAL	918.82	689.11	2615.87	-1926.76

EARTHWORK SUMMARY			
20200100	EARTH EXCAVATION	920	CU YD
20400800	FURNISHED EXCAVATION	1930	CU YD

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




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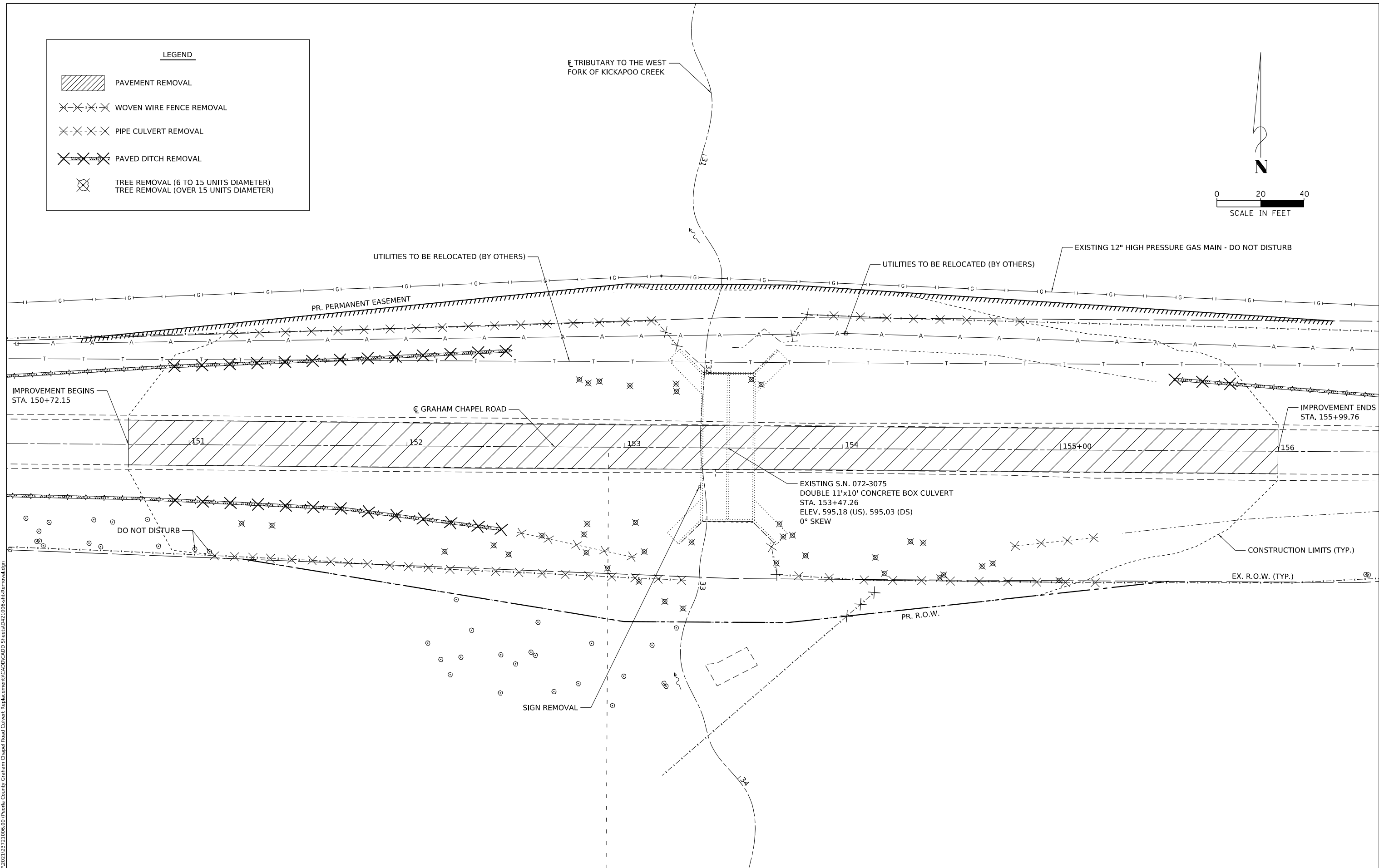
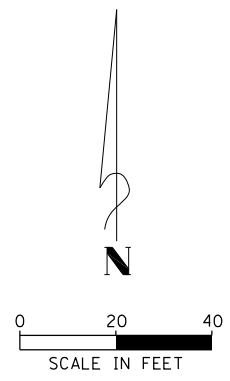
**PEORIA COUNTY
HIGHWAY DEPARTMENT**

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
SCHEDULE OF QUANTITIES**

SCALE: SHEET 2 OF 2 SHEETS STA. TO STA.

F.A.S. RTE. 1389	SECTION 18-00072-00-BR	COUNTY PEORIA	TOTAL SHEETS 23	SHEET NO. 8
			CONTRACT NO. 89822	
		ILLINOIS FED. AID PROJECT		

LEGEND	
	PAVEMENT REMOVAL
	WOVEN WIRE FENCE REMOVAL
	PIPE CULVERT REMOVAL
	PAVED DITCH REMOVAL
	TREE REMOVAL (6 TO 15 UNITS DIAMETER)
	TREE REMOVAL (OVER 15 UNITS DIAMETER)



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DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**PEORIA COUNTY
HIGHWAY DEPARTMENT**

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
REMOVAL PLAN**

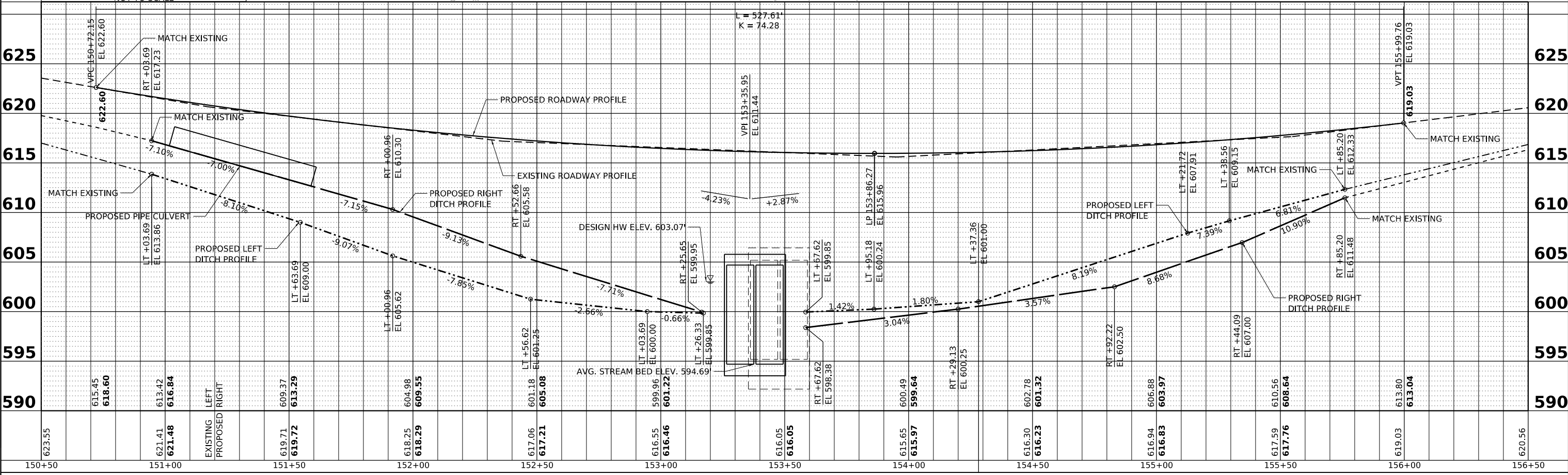
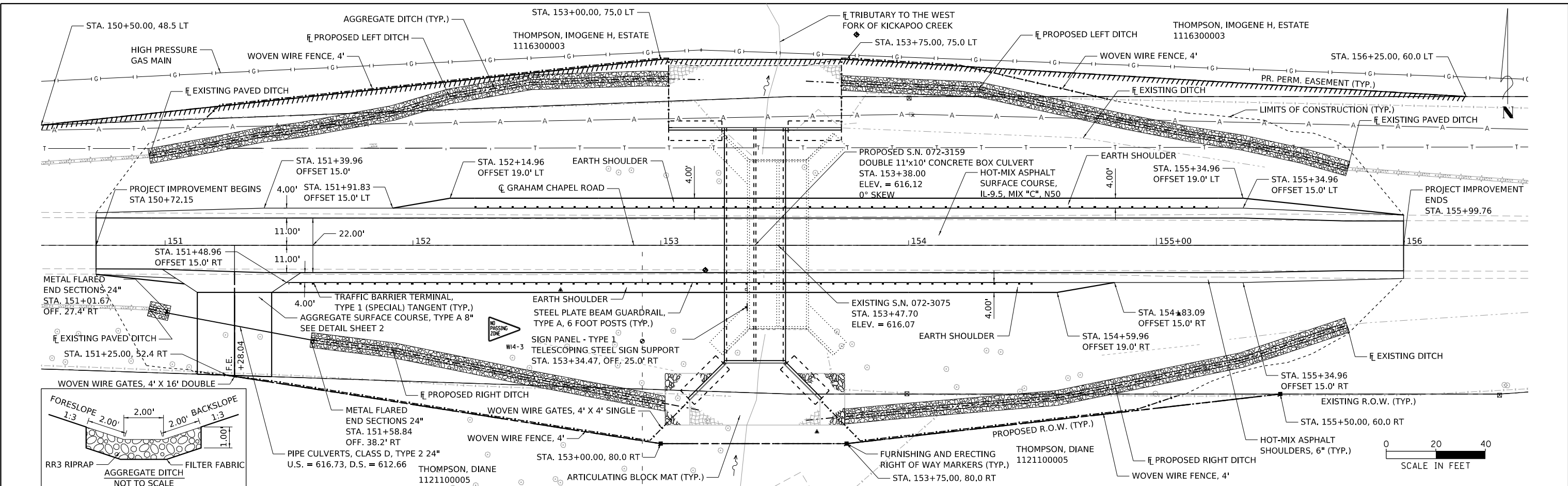
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CONTRACT NO. 89822				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
GRADES CHECKED	
ALIGNMENT CHECKED	
STRUCTURE NOTATIONS CHKD	
NOTE BOOK NO.	
CADD FILE NAME	

DATE	
BY	
PROFILE	
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150+50		151+00		151+50		152+00		152+50		153+00		153+50		154+00		154+50		155+00		155+50		156+00		156+50						

MAURER-STUTZ
 ENGINEERS SURVEYORS

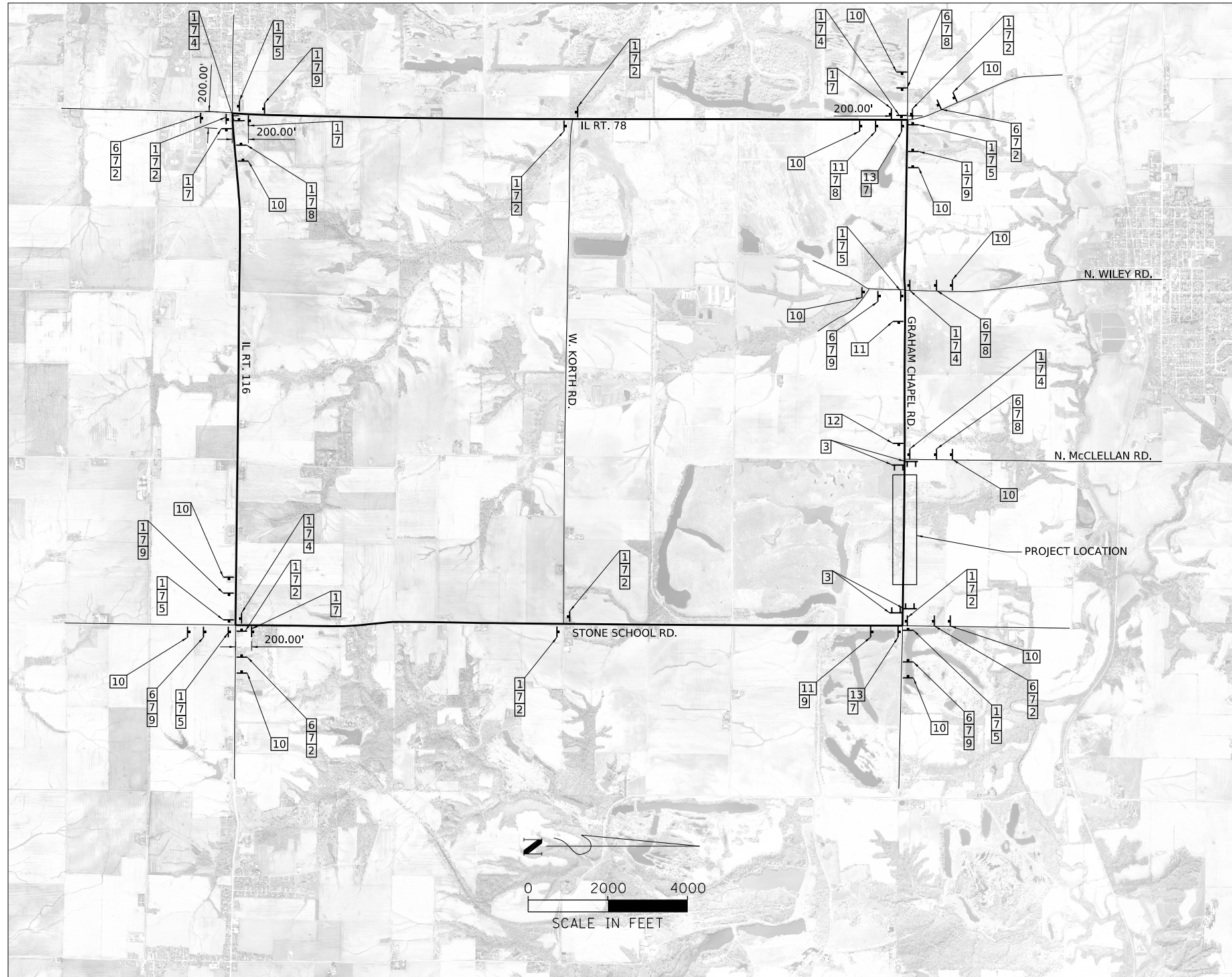
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PEORIA COUNTY
HIGHWAY DEPARTMENT

GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
PLAN AND PROFILE SHEET

SCALE: 20H:5V SHEET 1 OF 1 SHEETS STA. 150+50.00 TO STA. 156+50.00

F.A.S. RTE. 1389	SECTION 18-00072-00-BR	COUNTY PEORIA	TOTAL SHEETS 698	SHEET NO. \$P&P-1
CONTRACT NO. 89822				
ILLINOIS / FED. AID PROJECT				



LEGEND

1	M4-8		8	M5-1R ORANGE	
2	M6-3 ORANGE		9	M5-1L ORANGE	
3	R11-2		10	W20-2	
4	W1-6R		11	W20-3	
5	W1-6L		12	W20-3	
6	W20-2a		13	M4-8a	
7					

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Bench Mark - B.M. #401, Spindle in Power Pole, Sta. 154+01.75, 52.40' LT, Elev. 604.08.
 Existing Structure - S.N. 072-3075: Built in 1954, the structure consists of a double barrel (11' by 10') C.I.P. Concrete Culvert. The culvert is 68'-2" long, with approx. 9' of fill above. The structure is to be removed and replaced during road closure.
 Salvage - None.
 Precast alternate is not allowed.

LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

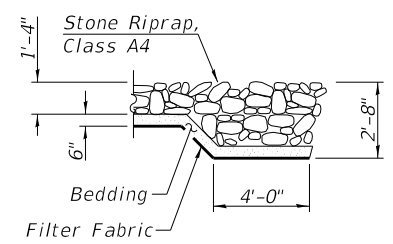
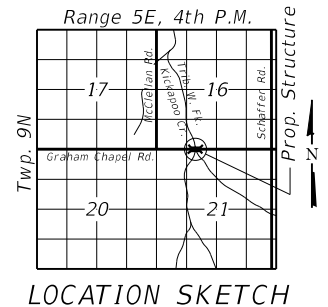
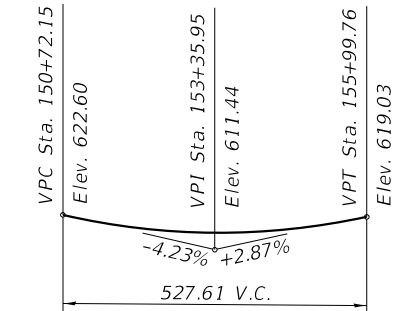
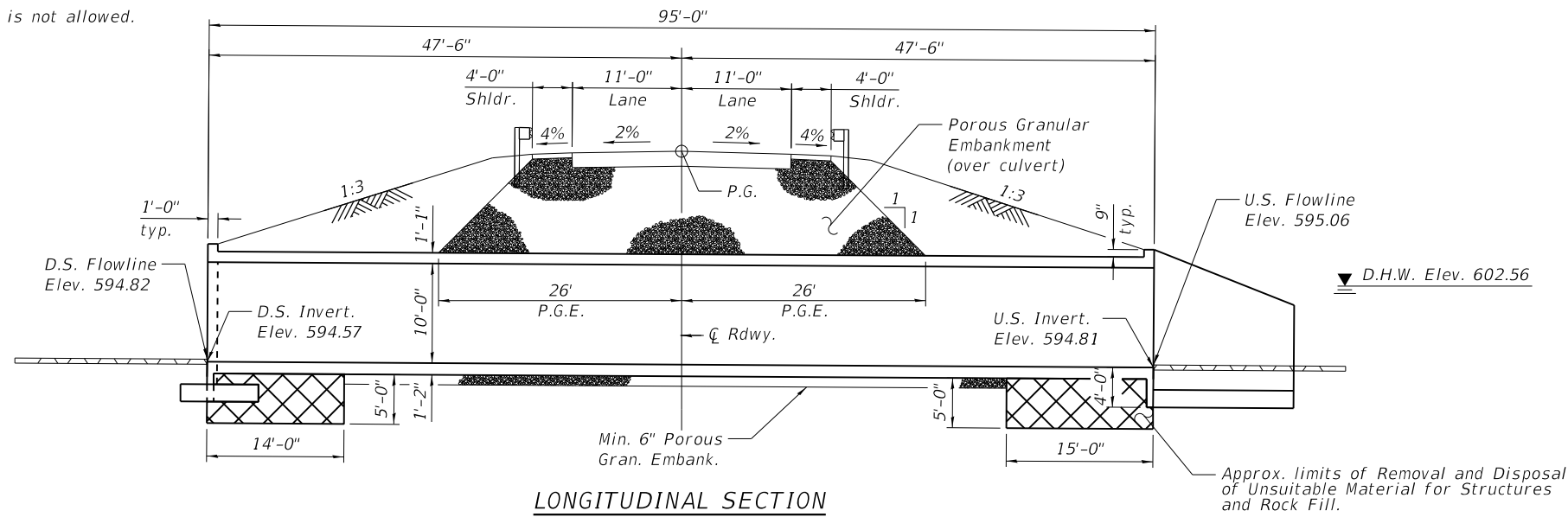
DESIGN SPECIFICATIONS
 2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES
FIELD UNITS

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

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
3. Culvert Details
4. Culvert Details
5. Soil Boring Logs



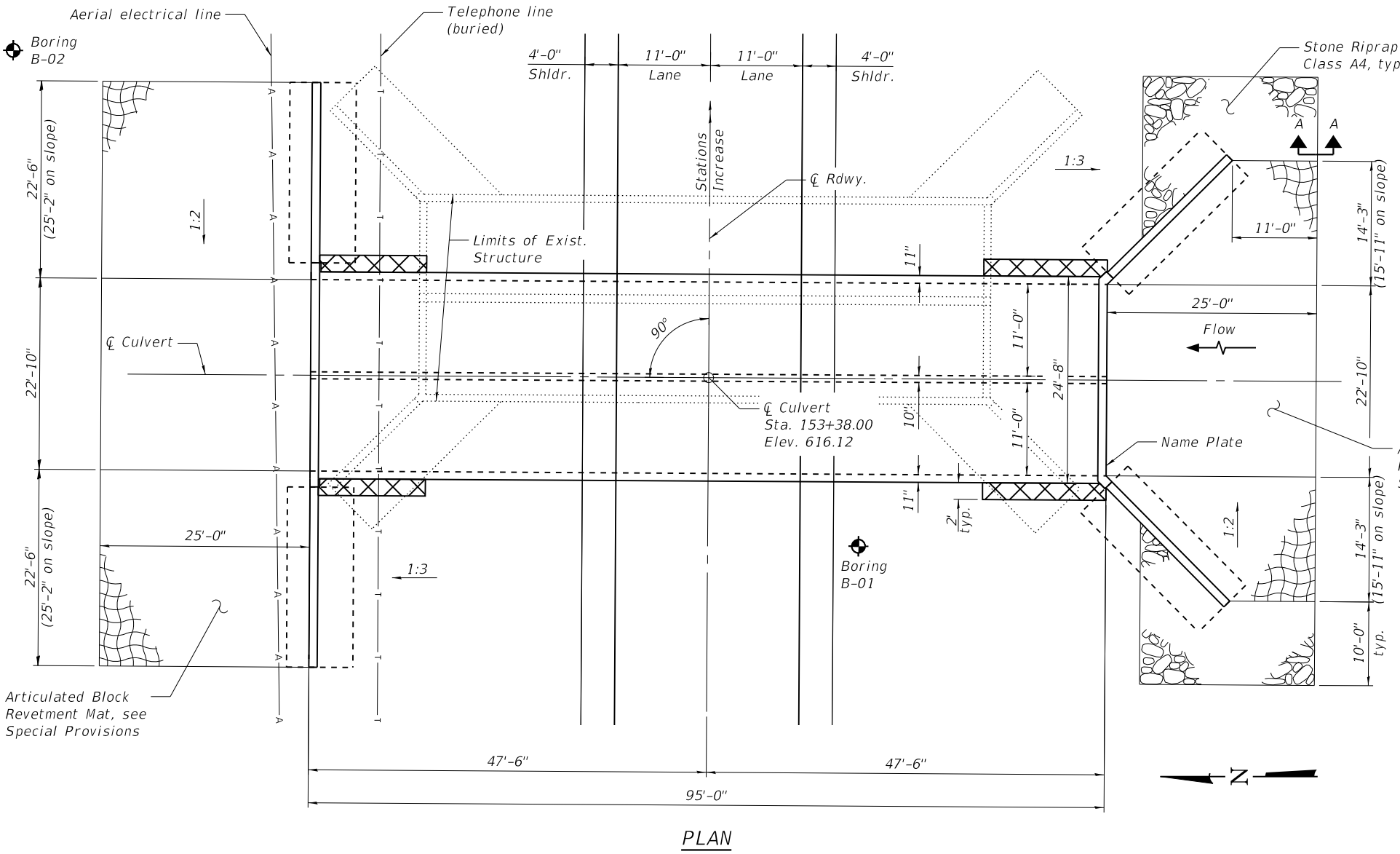
TRIB. TO W. FORK KICKAPOO CREEK
 BUILT 20 BY
 PEORIA COUNTY
 SEC. 18-00072-00-BR
 F.A.S. 1389 STA. 153+38.00
 STR. NO. 072-3159 LOADING HL-93

NAME PLATE
 See Std. 515001

I certify that to the best of my knowledge, information, and belief, this bridge 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 Bridge Design Specifications.



Bryan Swanson
 Date Signed: 8-16-22
 Exp. Date: 11/30/2022



GENERAL PLAN
 GRAHAM CHAPEL RD. OVER
 TRIB. TO WEST FORK OF KICKAPOO CREEK
 F.A.S. 1389 - SEC. 18-00072-00-BR
 PEORIA COUNTY
 STA. 153+38.00
 STRUCTURE NO. 072-3159

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**PEORIA COUNTY
 HIGHWAY DEPARTMENT**

SHEET NO. 1 OF 5 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	14
CONTRACT NO. 89822				

ILLINOIS FED. AID PROJECT

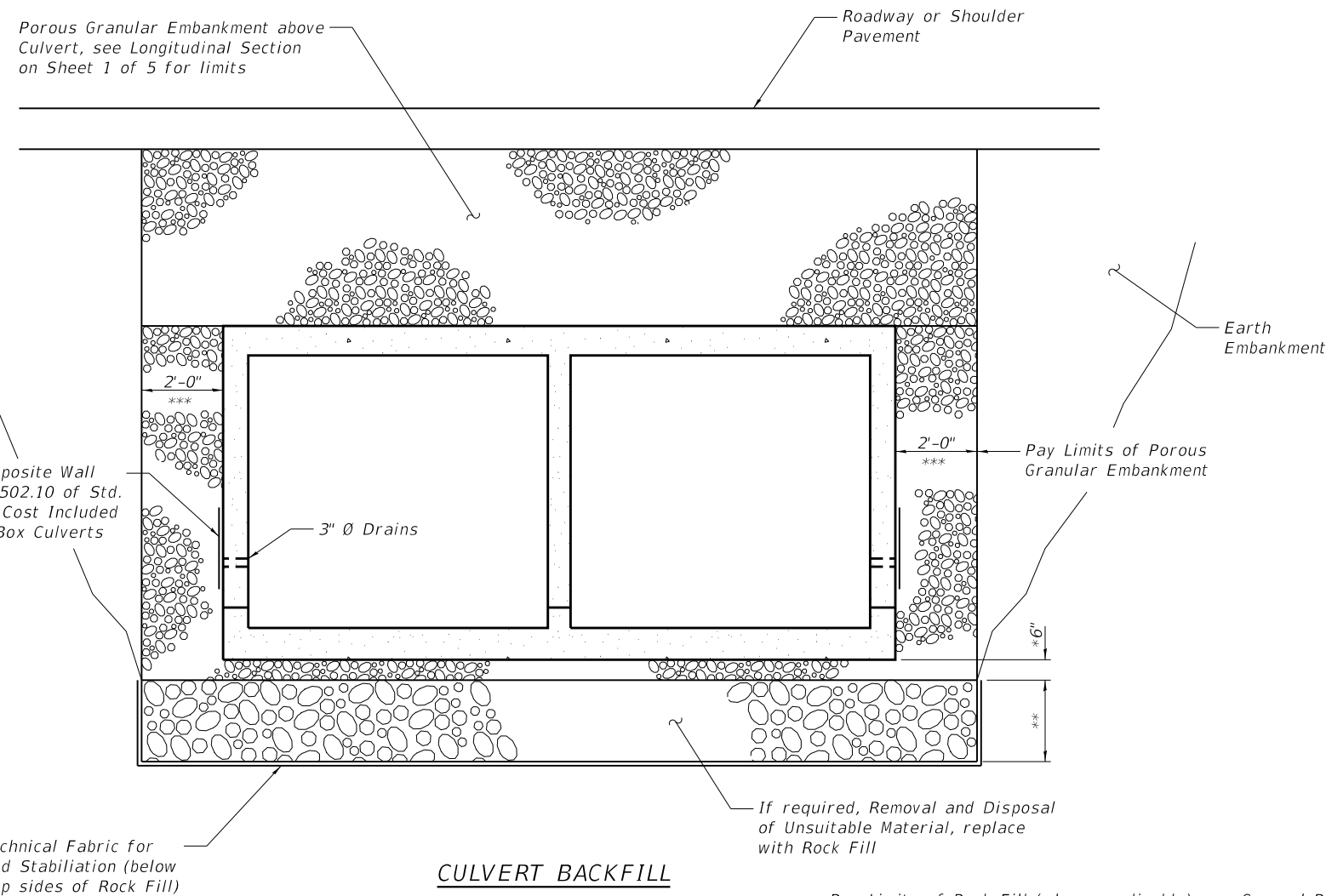
WATERWAY INFORMATION

Drainage Area = 2.52 sq. mi.		Low Grade Elev. 615.96 @ Sta. 153+86.27							
Flood	Freq. Yr.	Q C.F.S.	Opening Ft ²		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Ten-Year	10	890	155	160	602.07	0.51	0.31	602.73	602.38
Design	20	1103	167	170	602.56	0.80	0.51	603.58	603.07
Base	100	1720	204	201	603.93	1.88	1.23	606.33	605.16
Max. Calc.	500	2370	220	220	605.38	3.26	2.20	609.50	607.58

10-Year Velocity thru Exist. Structure = 6.11 ft/s
 10-Year Velocity thru Prop. Structure = 5.65 ft/s

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu. Yd.	610
Geotechnical Fabric for Ground Stabilization	Sq. Yd.	156
Stone Riprap, Class A4	Sq. Yd.	60
Filter Fabric	Sq. Yd.	384
Articulated Block Revetment Mat	Sq. Yd.	324
Removal of Existing Structures	Each	1
Removal and Disposal of Unsuitable Material for Structures	Cu. Yd.	154
Reinforcement Bars	Pound	59550
Reinforcement Bars, Epoxy Coated	Pound	1540
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	378.0
Rock Fill	Cu. Yd.	154



GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the engineer.

Excavation for new structure shall be included in the cost for Concrete Box Culverts.

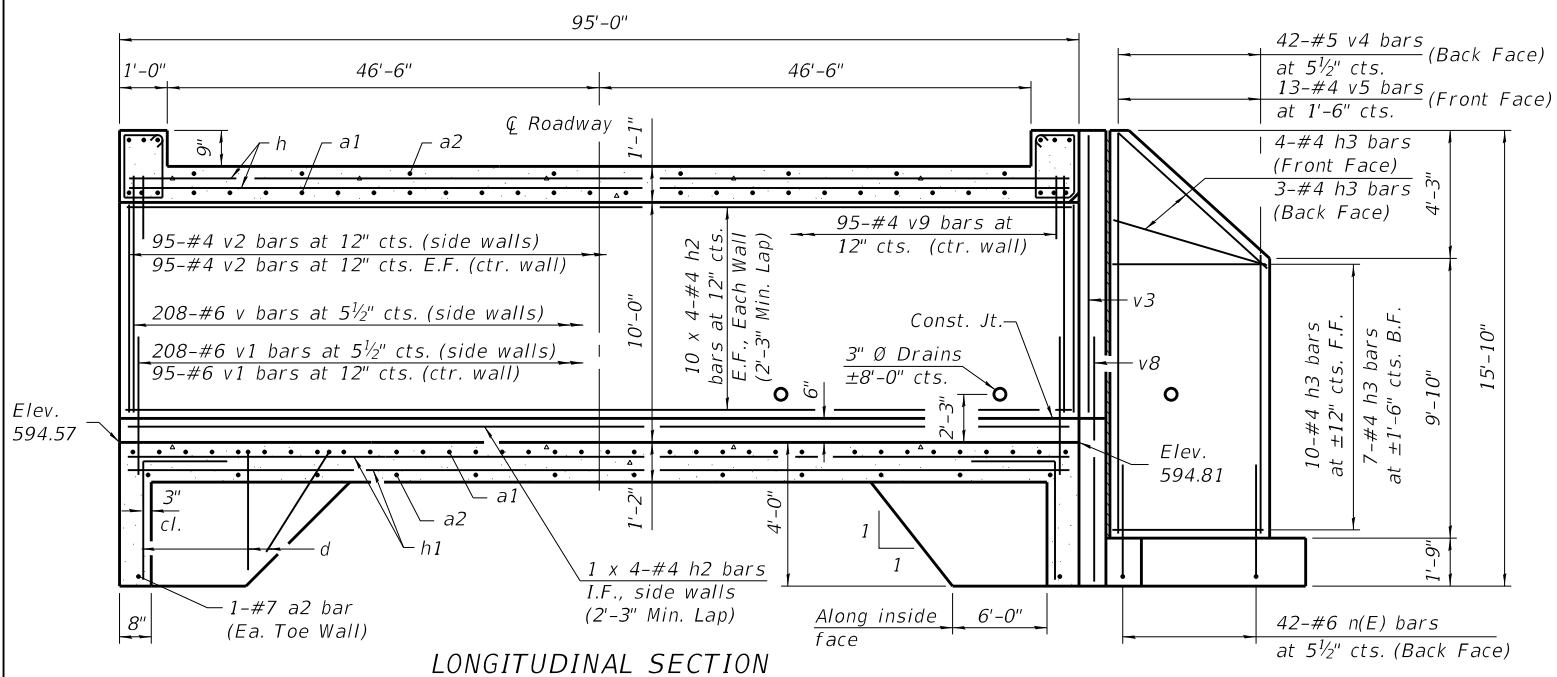
The limits and quantities of removal and replacement shown are based on boring data and may be modified by the Field Engineer for variable subsurface conditions encountered in the field. Moist, soft soils below the culvert should be removed and replaced with Rock Fill. Soils below the wingwalls shall satisfy the bearing pressure noted on sheet 3 of 5.

The Rock Fill shall be capped with 6 in. of CA7 and satisfy the Standard Specifications unless otherwise indicated in the Special Provisions. The cost of the capping material shall be included in the pay item for Rock Fill.

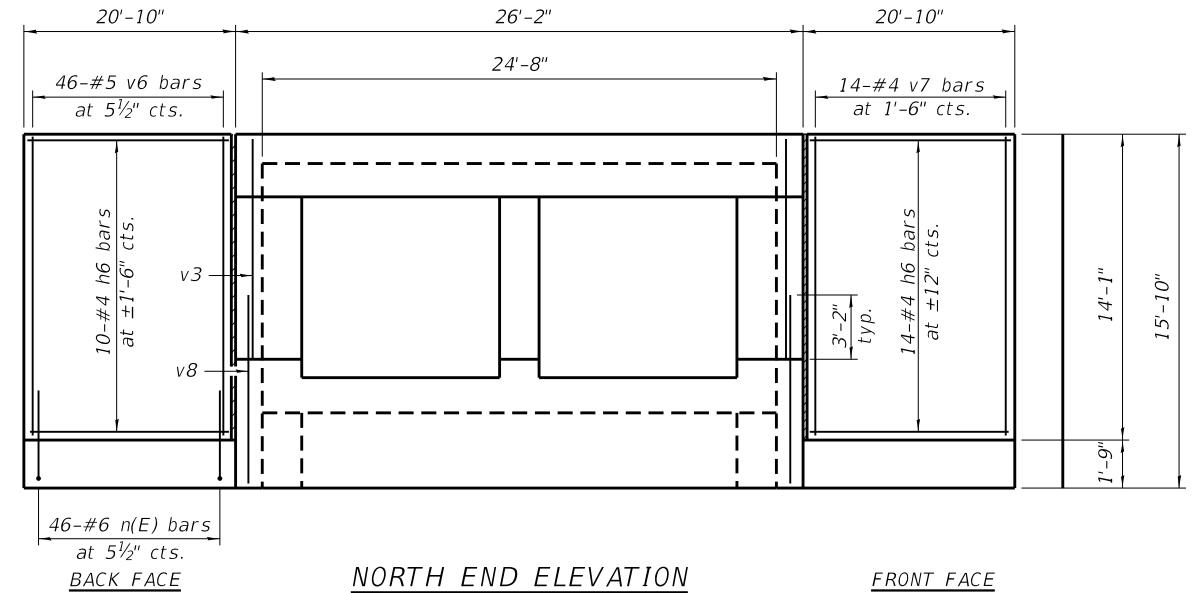
- * Pay Limits of Rock Fill (where applicable), see General Plan and Elevation for estimated depths and limits
- ** Where no undercut is required, a 6" minimum layer of Porous Granular Embankment shall be placed below the bottom of the culvert.
- *** Porous Granular Embankment along sides of culvert to within 3 feet of each end.

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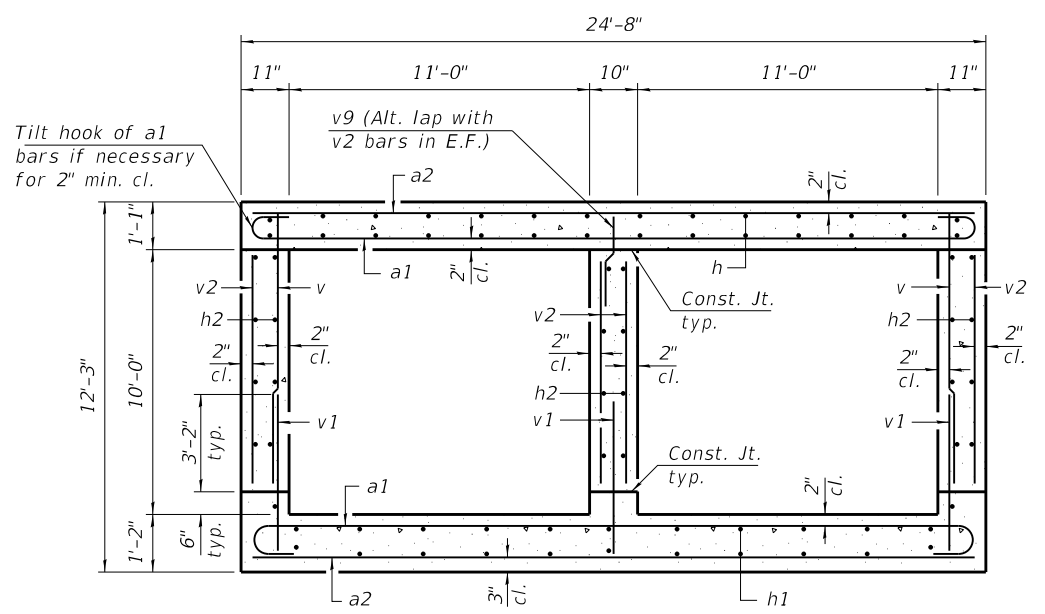


LONGITUDINAL SECTION

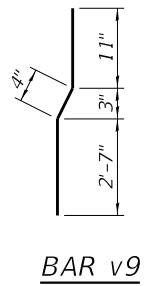


NORTH END ELEVATION

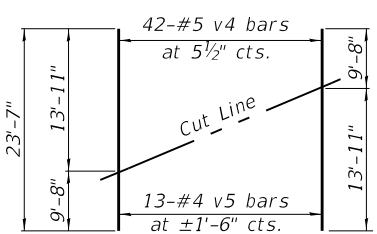
FRONT FACE



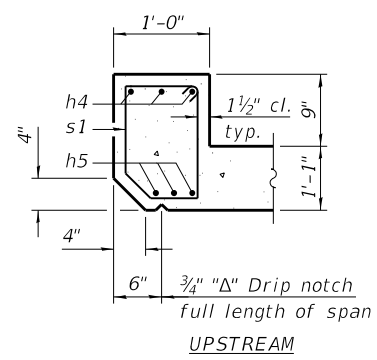
SECTION THRU BARREL



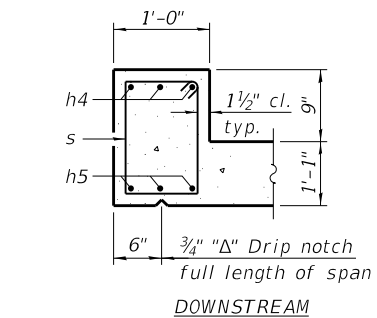
BAR v9



FIELD CUTTING DIAGRAM

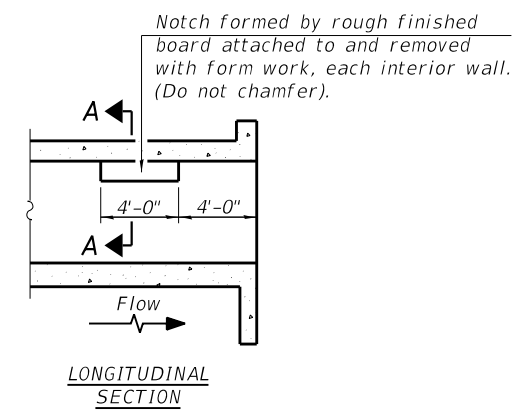


UPSTREAM

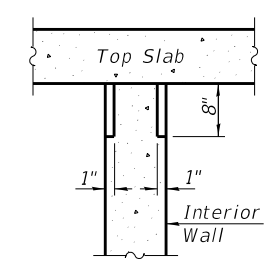


DOWNSTREAM

SECTION THRU HEADWALL



LONGITUDINAL SECTION



SECTION A-A

PHOEBE NESTING SITE DETAILS (Downstream End Only)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a1	301	#6	25'-8"	
a2	328	#7	24'-4"	
d	82	#4	5'-5"	
h	200	#4	25'-0"	
h1	200	#4	25'-0"	
h2	248	#4	25'-5"	
h3	48	#4	18'-11"	
h4	6	#7	25'-10"	
h5	6	#6	25'-10"	
h6	48	#4	20'-6"	
n(E)	176	#6	5'-10"	
s	25	#4	5'-5"	
s1	25	#4	5'-3"	
t	332	#4	7'-8"	
v	416	#6	10'-5"	
v1	511	#6	4'-7"	
v2	380	#4	9'-4"	
v3	8	#6	11'-2"	
v4	42	#5	23'-7"	
v5	13	#4	23'-7"	
v6	92	#5	13'-11"	
v7	28	#4	13'-11"	
v8	8	#6	7'-5"	
v9	95	#4	3'-10"	
w	40	#4	18'-11"	
w1	40	#4	20'-6"	
Concrete Box Culverts			Cu. Yd.	378.0
Reinforcement Bars			Pound	59550
Reinforcement Bars, Epoxy Coated			Pound	1540

Notes:
 Bars indicated thus 12 x 4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 At the Contractor's option, a longer v1 bar may be ordered to replace the v bar.
 No reduction in quantities shall be made for this substitution.
 See Sheet 3 of 5 for plan view and bar details.

Order bars shown full length. Cut as shown and use remainder of bars in opposite wingwall.

(Sheet 2 of 2)

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PEORIA COUNTY HIGHWAY DEPARTMENT

CULVERT DETAILS STRUCTURE NO. 072-3159

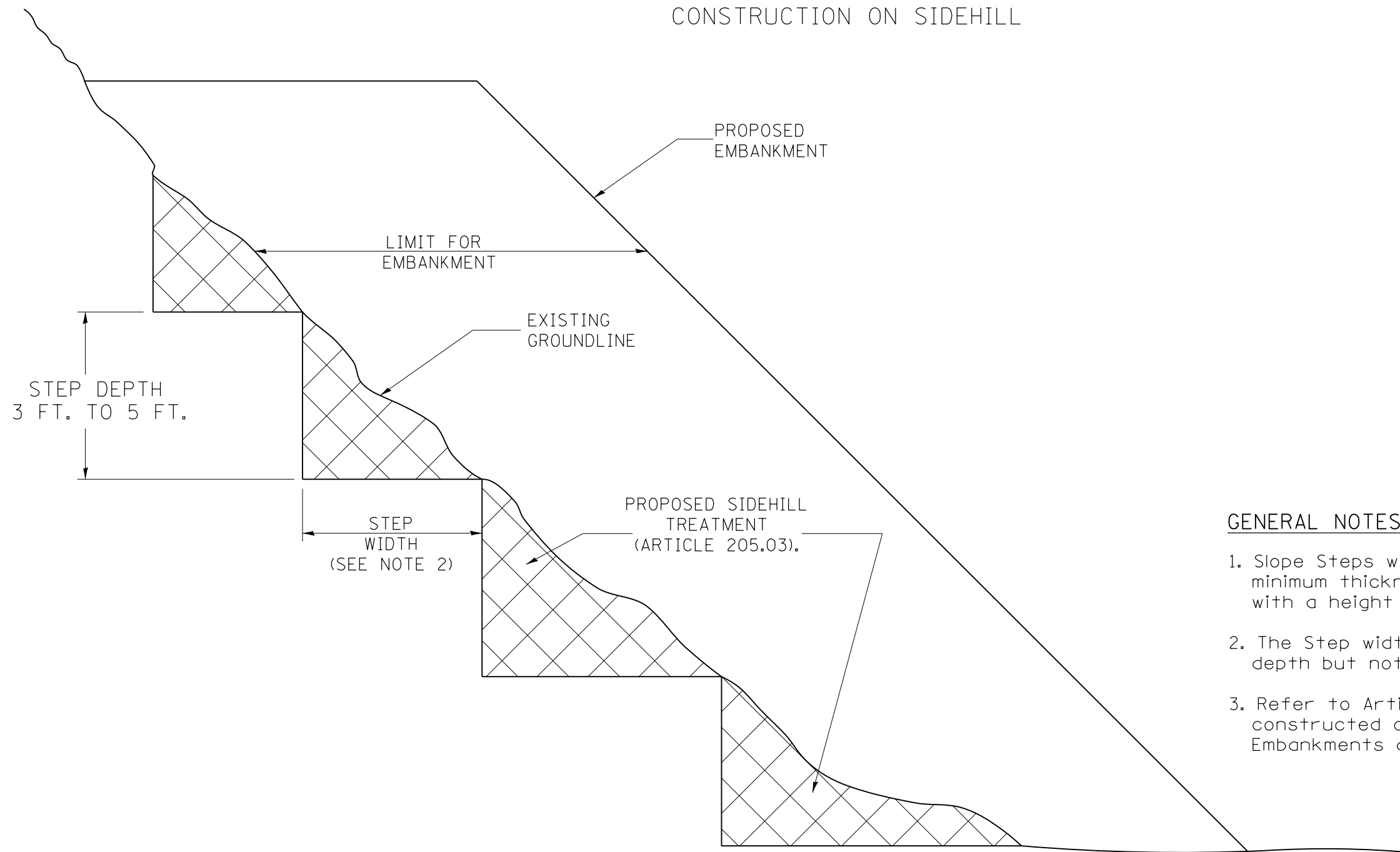
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CONTRACT NO. 89822				

ILLINOIS FED. AID PROJECT

SLOPE STEPS DETAIL

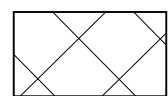
TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "sliver fills" and on all fills with a height of 10 feet or greater.
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:



STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFICATION).

All dimensions are in inches (millimeters)
unless otherwise noted.

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.
5-30-18	MINOR CORRECTION	R.D.

**PEORIA COUNTY
HIGHWAY DEPARTMENT**

NOT TO SCALE

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
SLOPE STEPS DETAIL**

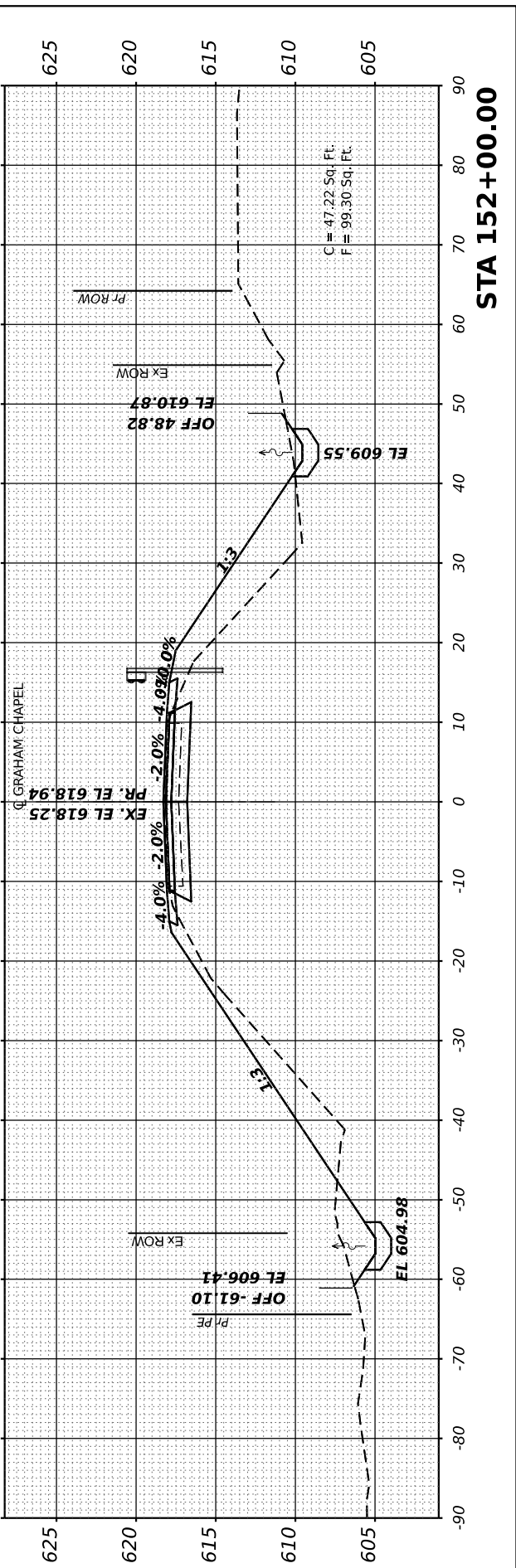
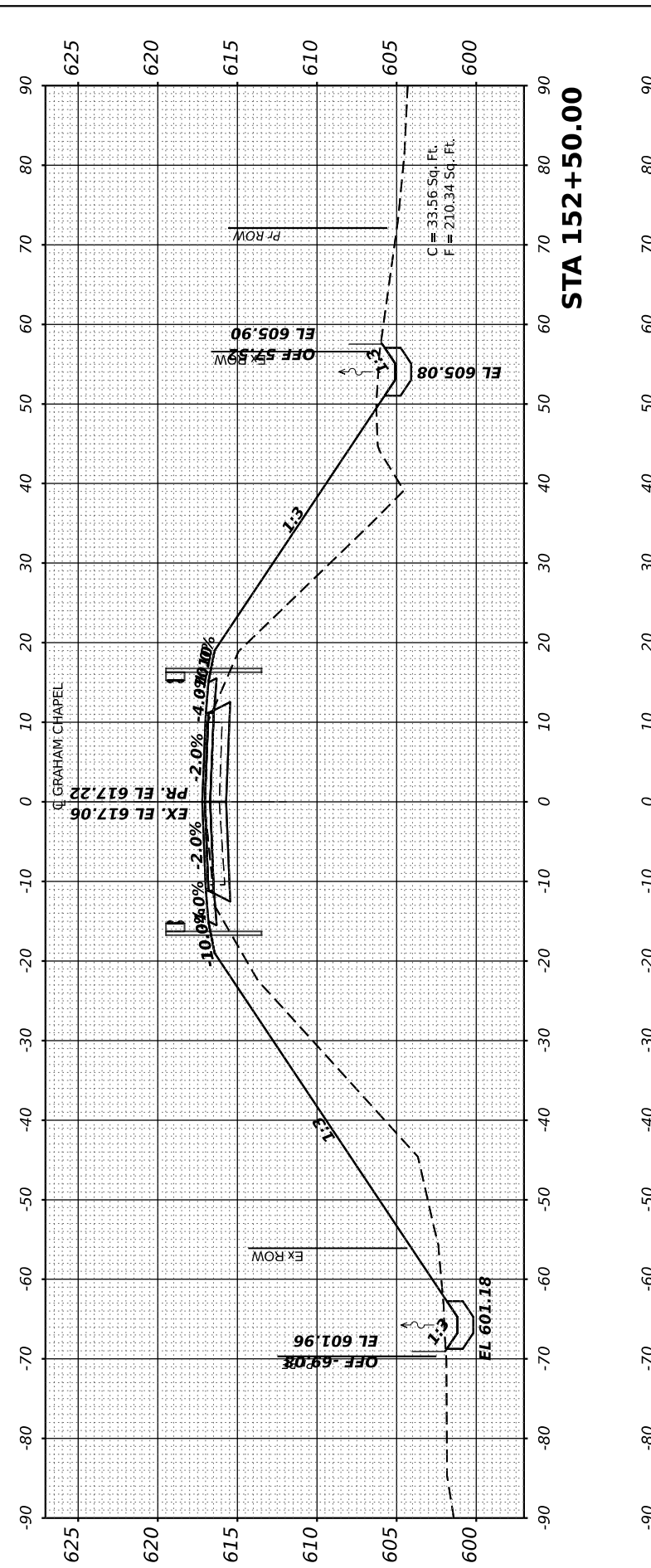
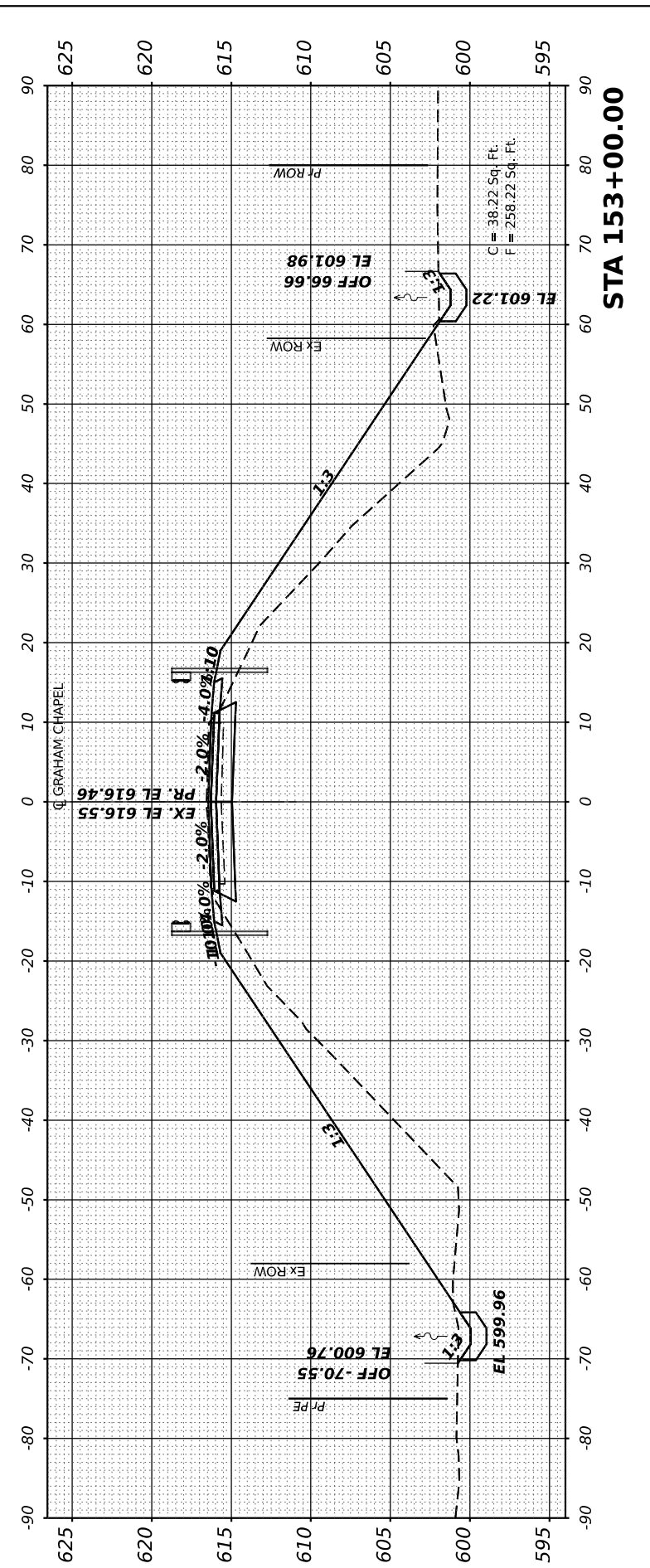
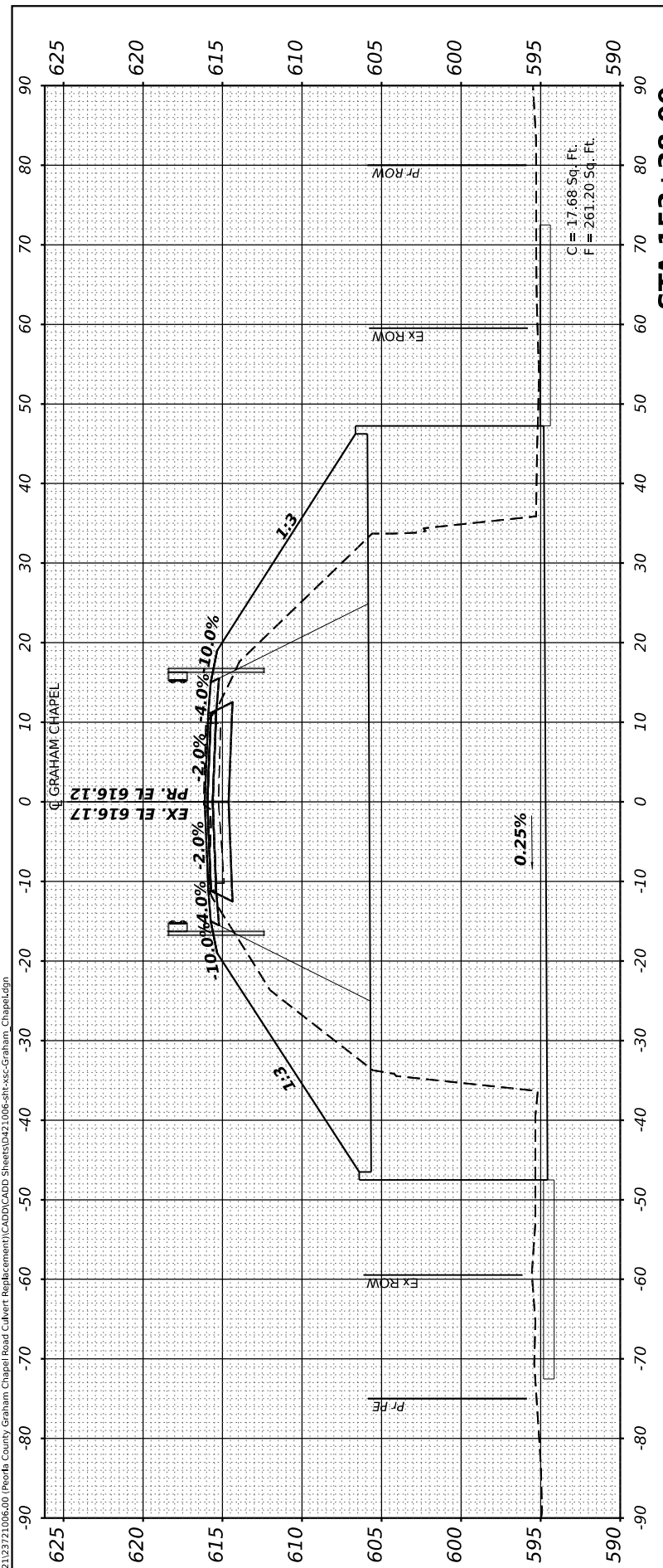
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AREAS CHECKED	TEMPLATE		
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DRAWN	-
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DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**PEORIA COUNTY
 HIGHWAY DEPARTMENT**

**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
 GRAHAM CHAPEL ROAD CROSS SECTIONS**

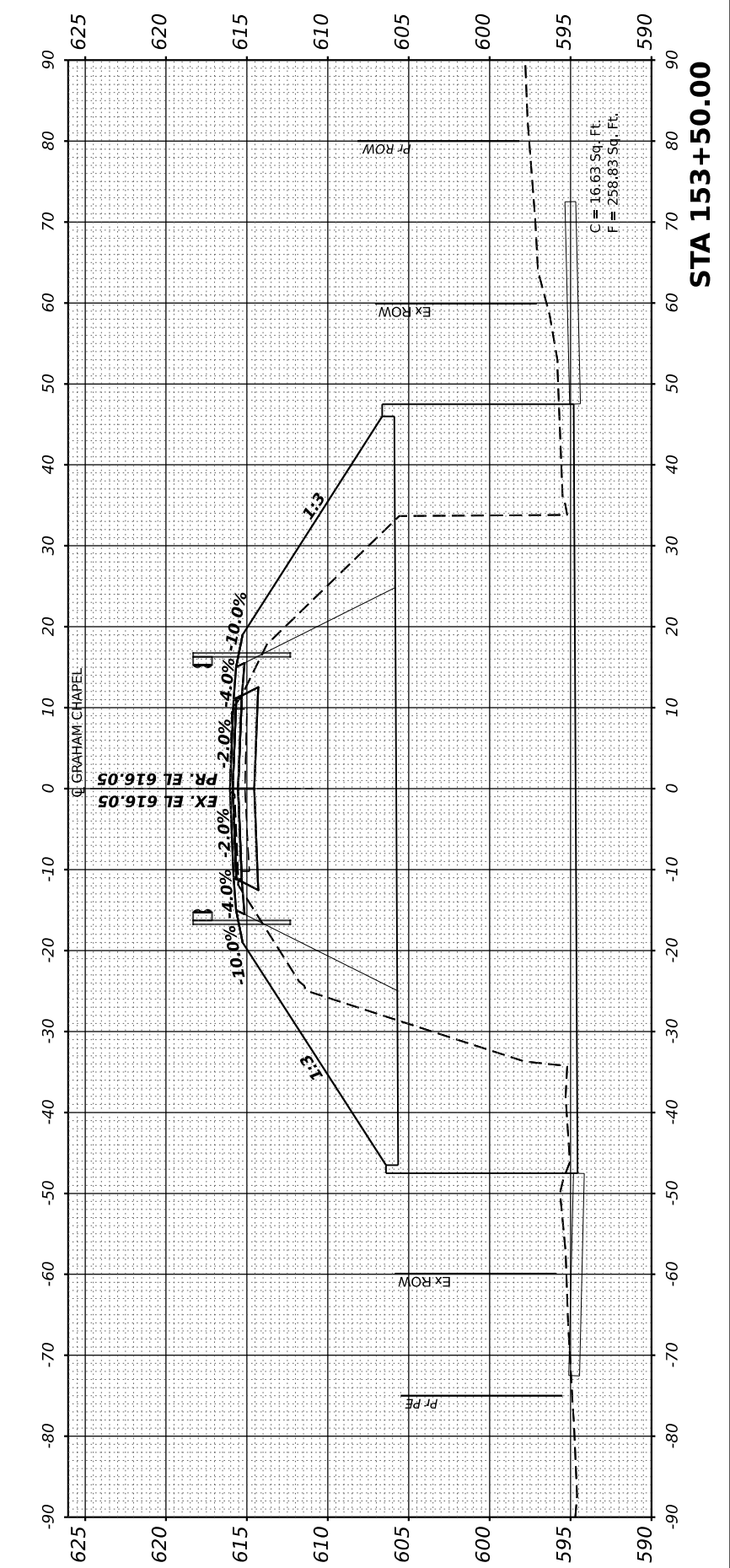
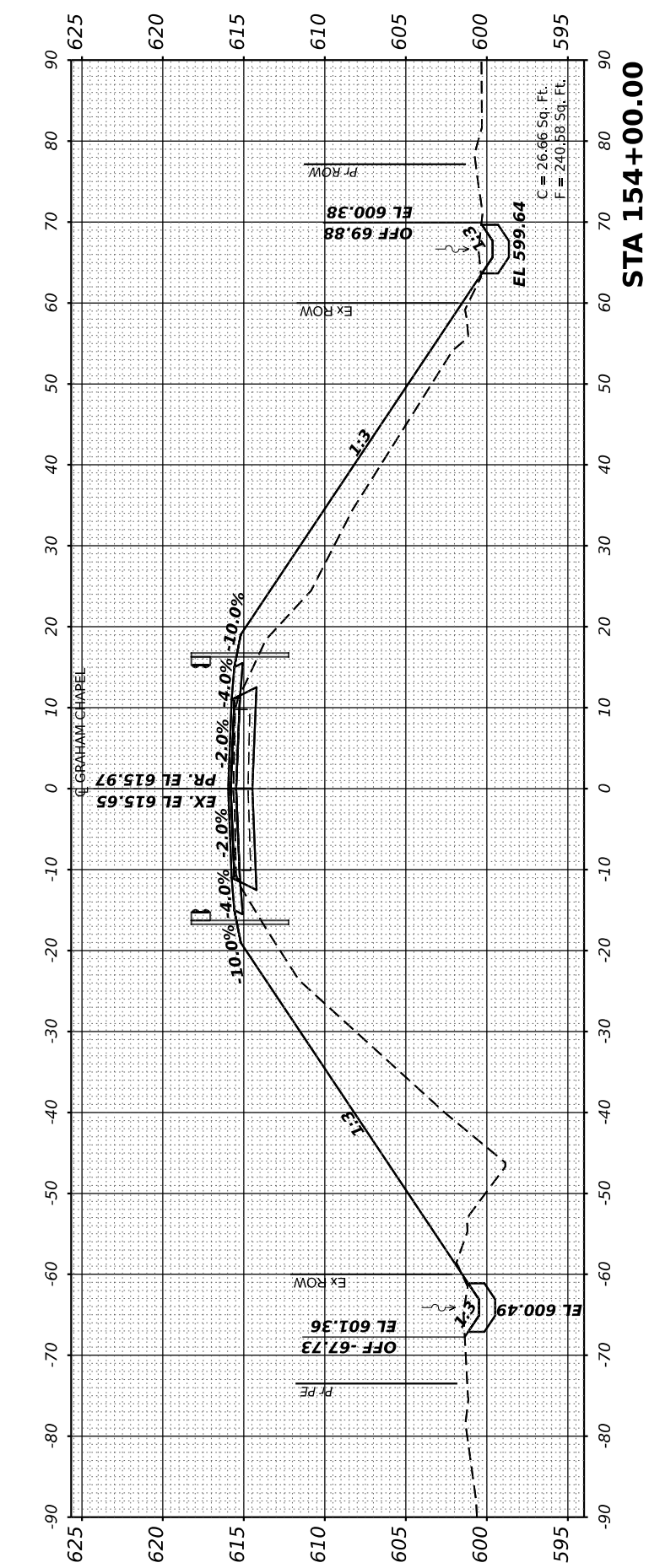
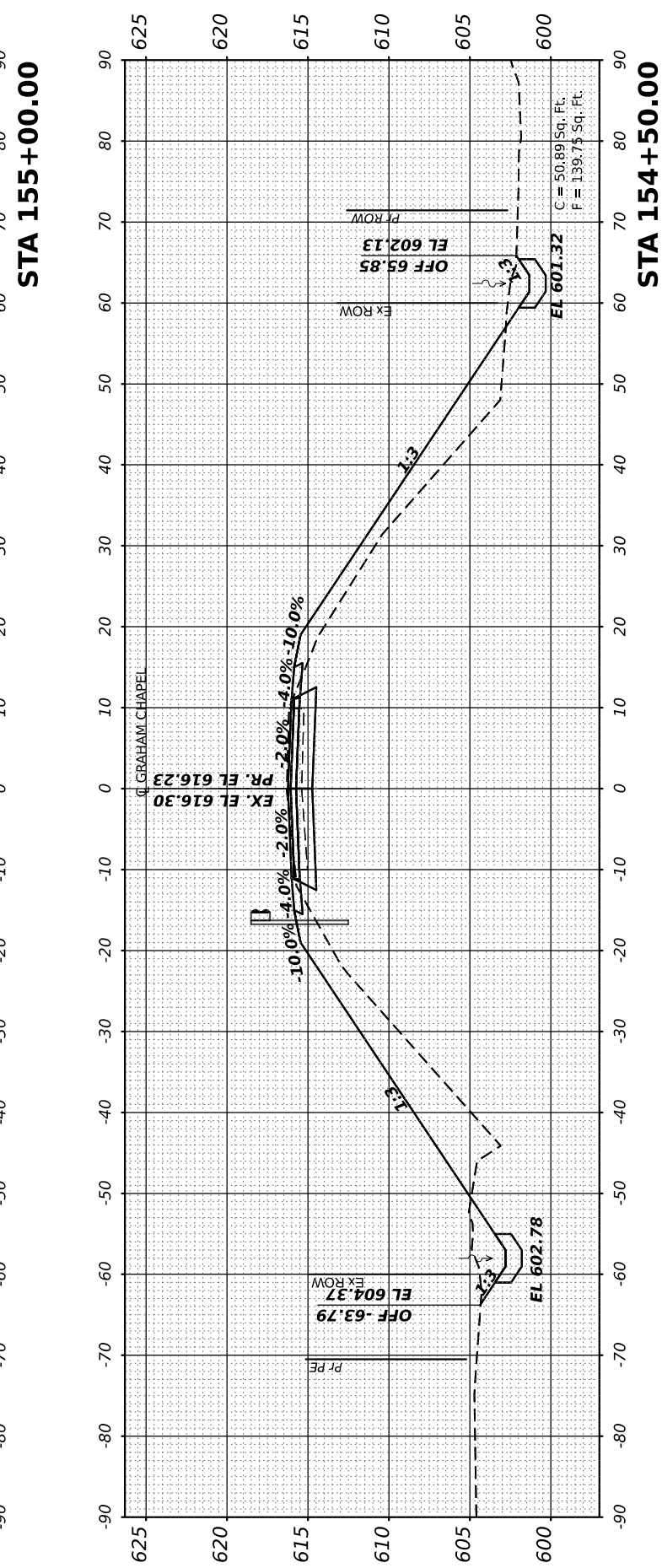
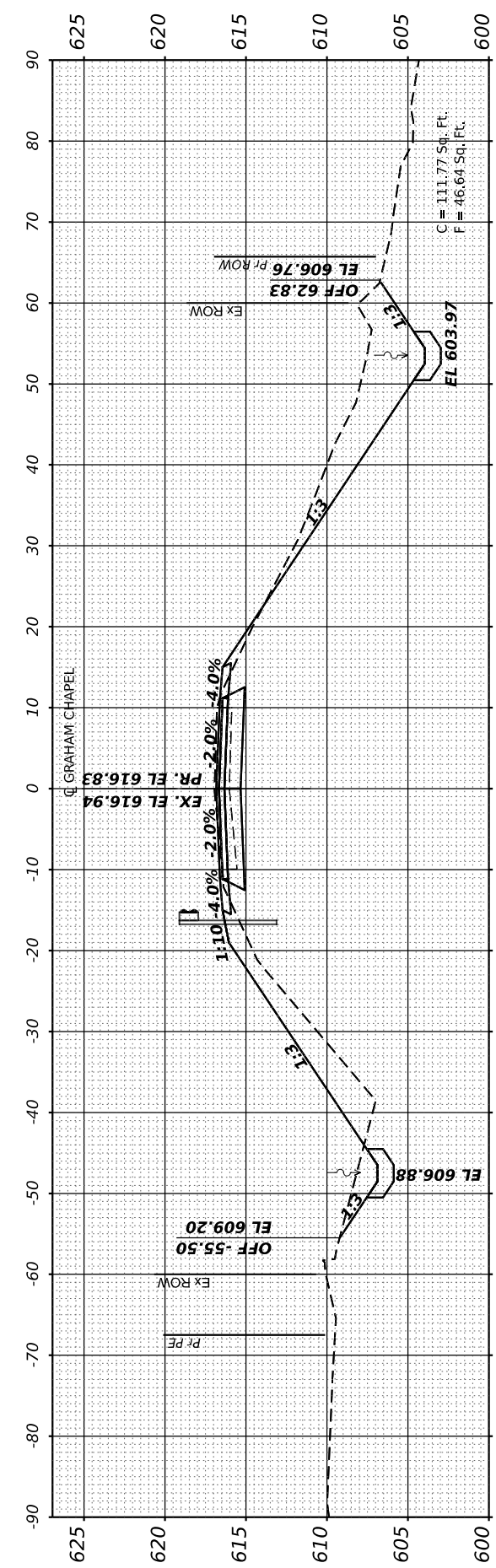
SCALE: SHEET 2 OF 4 SHEETS STA. 152+00.00 TO STA. 153+37.46

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	21
CONTRACT NO. 89822				
ILLINOIS FED. AID PROJECT				

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

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

MODEL: 133+50.00
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USER NAME	= cadiaz
PLOT SCALE	= 0.16666667 ' / in.
PLOT DATE	= 9/2/2022

DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

**PEORIA COUNTY
HIGHWAY DEPARTMENT**

GRAHAM CHAPEL ROAD CULVERT REPLACEMENT			
GRAHAM CHAPEL ROAD CROSS SECTIONS			
SCALE:	SHEET 3	OF 4	SHEETS
		STA. 153+50.00 TO STA. 155+00.00	

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	22
CONTRACT NO. 89822				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED TEMPLATE AREAS CHECKED	BY	DATE

MODEL 135+50.00
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PLOT DATE	= 9/2/2022

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DATE	-

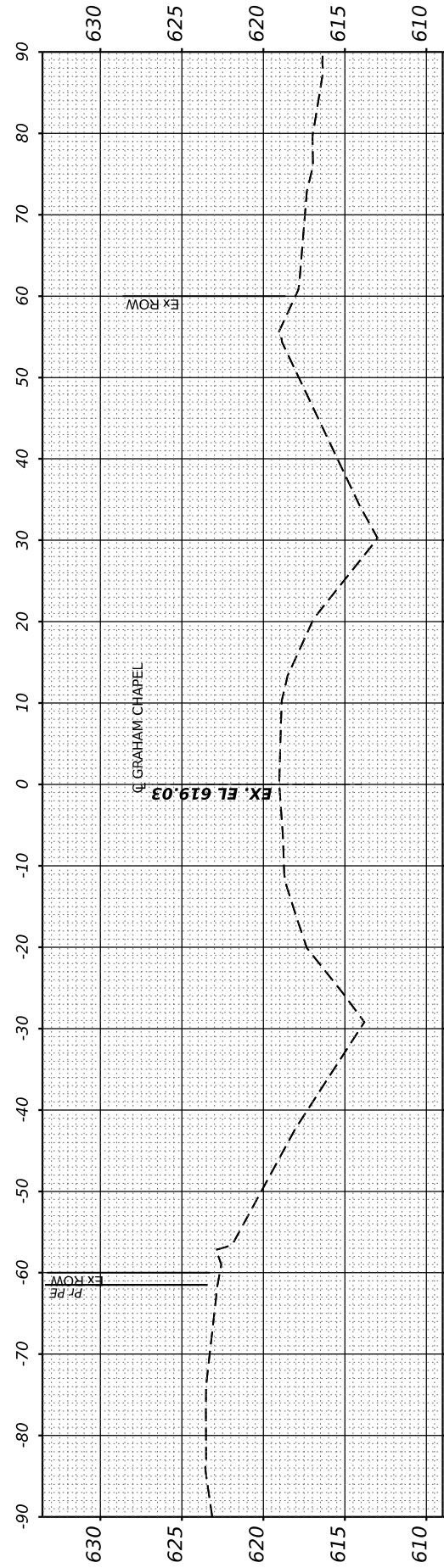
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REVISED	-
REVISED	-

**PEORIA COUNTY
HIGHWAY DEPARTMENT**

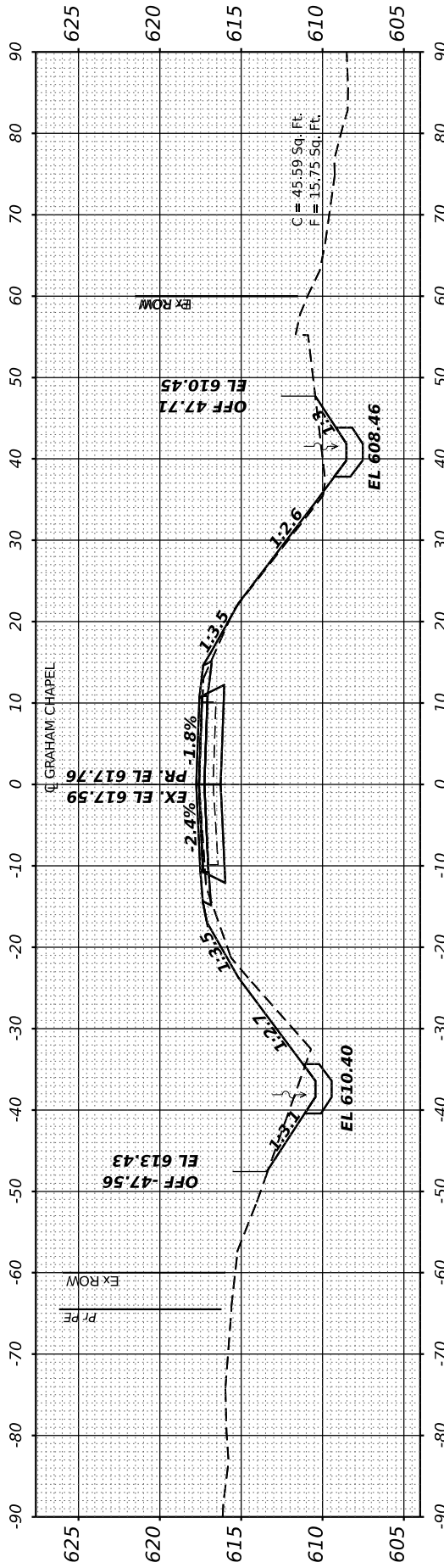
**GRAHAM CHAPEL ROAD CULVERT REPLACEMENT
GRAHAM CHAPEL ROAD CROSS SECTIONS**

SCALE: SHEET 4 OF 4 SHEETS STA. 155+50.00 TO STA. 156+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1389	18-00072-00-BR	PEORIA	23	23
CONTRACT NO. 89822			ILLINOIS FED. AID PROJECT	



**STA 155+99.76
IMPROVEMENT ENDS**



STA 155+50.00