

- 1 COVER SHEET, INDEX OF SHEETS
- 2 SIGNATURES, GENERAL NOTES, MIXTURE REQUIREMENTS, AND STANDARDS
- 3-7 SUMMARY OF QUANTITIES
- 8 TYPICAL SECTION
- 9 SCHEDULES OF QUANTITIES
- 10 PLAN AND PROFILE SHEET
- 11-12 STAGE CONSTRUCTION PLANS
- 13 SHOULDER AND GUARDRAIL LAYOUT
- 14 EROSION CONTROL SHEET
- 15 R-27 STANDARD
- 16 DISTRICT STANDARDS
- 17-24 STRUCTURE SHEETS
- 25-31 CROSS-SECTIONS

FOR STRUCTURAL PAVEMENT DESIGN
INFORMATION, SEE SHEET NO. IVA

TRAFFIC DATA

2017 ADT 1480
19.3% TRUCKS

TOWNSHIP:

INDIAN CREEK

DESIGN DESIGNATION : IVA

COORDINATE SYSTEM : ILLINOIS COORDINATE SYSTEM, EAST ZONE

POSTED SPEED : 55 MPH

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

PROJECT ENGINEER: DAVID PICHE (618)-351-5227

PROJECT DESIGNER: BILL PORTER (618)-351-5224

CONTRACT NO. 78163

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 328 (US 45)

SECTION 109B-1

PROJECT NHPP-T8DG(792)

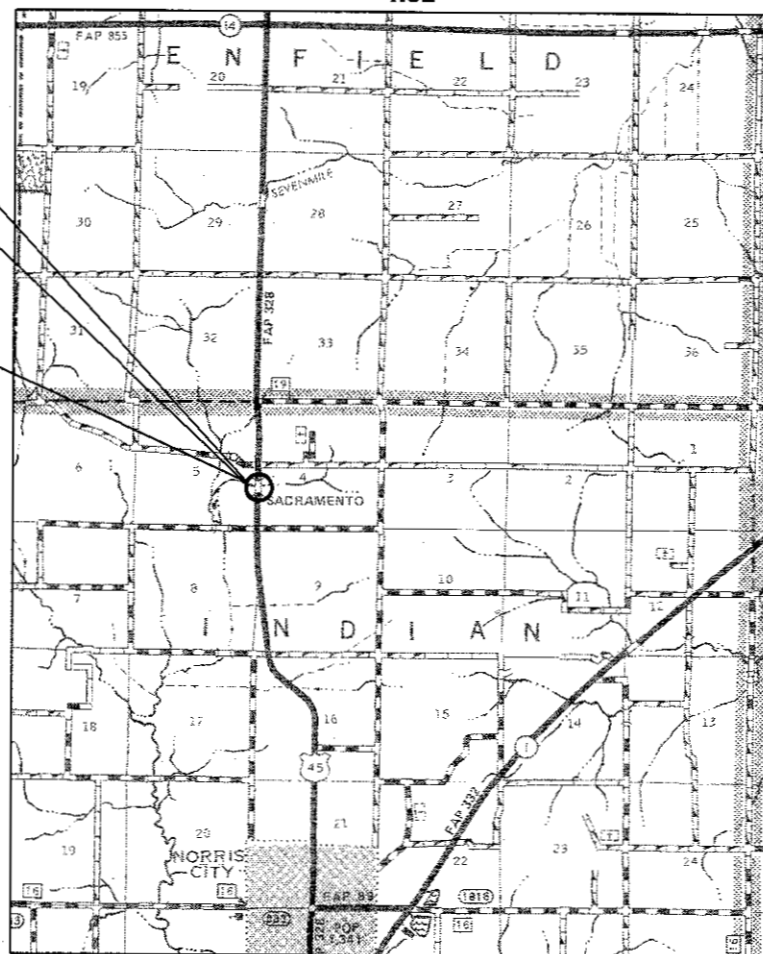
**BOX CULVERT REPLACEMENT OVER UNNAMED STREAM
WHITE COUNTY**

C-99-018-10

R8E

PROPOSED PROJECT BEGINS
STA. 193+78.5
SN 097-2015(P), SN 097-2007(E)
PROPOSED DOUBLE 10' X 7' C.I.P. BOX CULVERT
WITH HORIZONTAL CANTILEVER WINGWALLS
@ US 45 STA. 194+03, 0° SKEW ANGLE
35'-0" END TO END BARRELS, 32'-0" CLEAR WIDTH

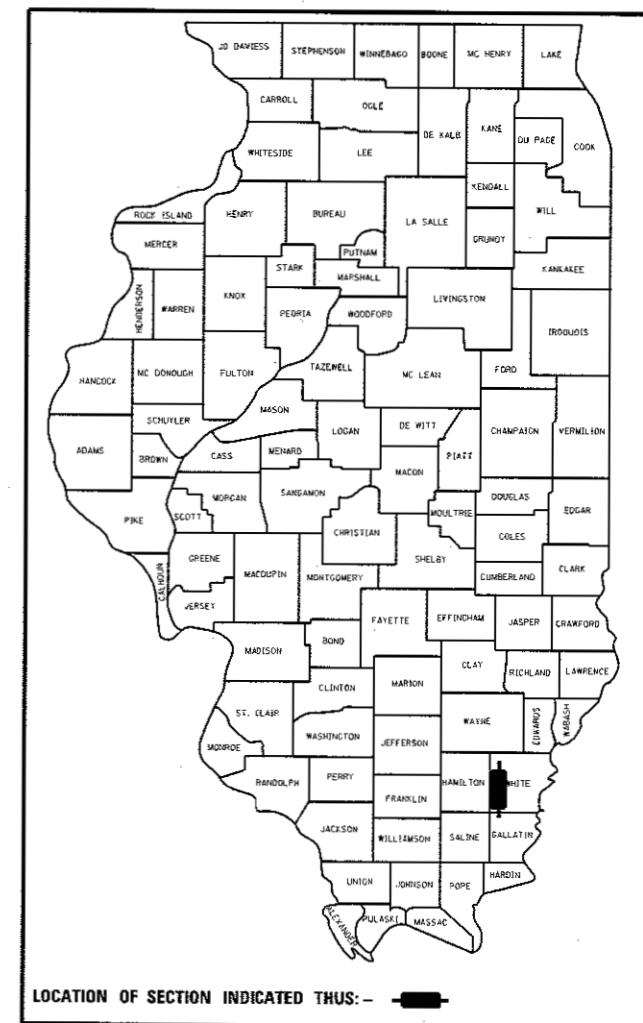
PROPOSED PROJECT ENDS
STA. 194+27.5



GROSS LENGTH = 49 FT. = 0.0142 MILES
NET LENGTH = 49 FT. = 0.0142 MILES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	1
		ILLINOIS	CONTRACT NO. 78163	

D-99-018-10



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
OFFICE OF HIGHWAYS PROJECT IMPLEMENTATION

SUBMITTED August 14 20 17

Jeffrey L. Keen
REGION FIVE ENGINEER

Oct 13 20 17
Nancy M. Adcox PE/BC
ENGINEER OF DESIGN AND ENVIRONMENT

Oct 13 20 17
Annelle G. [Signature]
DIRECTOR OF PROGRAM DEVELOPMENT

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT MIX ASPHALT	2.016 TONS/CU. YD.
ALL AGGREGATE	2.05 TONS/CU. YD.
RIPRAP	1.50 TONS/CU. YD.
EARTH	110 LBS/CU. FT.

THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.

THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION.

AT ALL LOCATIONS WHERE THE PROPOSED HOT MIX ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A FULL DEPTH SAWEED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT WILL BE INCLUDED IN THE COST OF THE TYPE OF PAVEMENT BEING CONSTRUCTED.

PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

THE CENTERLINE PAVEMENT MARKING SHALL BE REMOVED FROM THE STOP BAR TO THE SAND ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW HMA SHOULDERS.

THERE ARE NO AVAILABLE WASTE SITES ON THE EXISTING RIGHT OF WAY WITHIN THE PROJECT LIMITS. DISPOSAL WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WASTE MUST BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

TO RETAIN THE TEMPORARY CONCRETE BARRIER FOR STAGE II TRAFFIC, THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER 2 (#5) BAR SPLICERS OR 2 CAST IN PLACE INSERTS AT 6' CENTERS AT THE MID-DEPTH OF THE PCC PAVEMENT. THE BAR SPLICERS OR INSERTS SHALL HAVE A MINIMUM PROOF LOAD OF 5,000 POUNDS. ALONG WITH THE ANCHORING DEVICES THE CONTRACTOR SHALL PROVIDE ONE STEEL RETAINER PLATE, AND 2 1/2" DIAMETER BOLT AND WASHERS EVERY 6 FEET AS SHOWN ON DETAIL II ON STANDARD R-27 FROM STA. 193+78.5 TO STA. 194+27.5 FOR STAGE II TRAFFIC. COST TO BE INCLUDED WITH TEMPORARY CONCRETE BARRIER.

COMMITMENTS: NONE

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-08	PAVEMENT JOINTS
420601-06	24' (7.2m) PCC PAVEMENT
420701-03	PAVEMENT WELDED WIRE REINFORCEMENT
482001-02	HMA SHOULDERS ADJACENT TO FLEXIBLE PAVEMENT
482006-03	HMA SHOULDER ADJACENT TO RIGID PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-11	STEEL PLATE BEAM GUARDRAIL
630201-07	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-07	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL, TYPE 6A
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24' FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS, FOR SPEEDS ≥ 45 MPH
701321-16	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-06	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
725001-01	OBJECT AND TERMINAL MARKERS
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS

MIXTURE REQUIREMENTS

LOCATIONS(S):	HOT-MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDER, IL-19.0L
TYPICAL AC/PG:	PG64-22
RAP % (MAX):	SEE SPECIAL PROVISION
DESIGN AIR VOIDS:	4.0 %, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0L
FRICTION AGGREGATE:	NONE
QUALITY MANAGEMENT PROGRAM:	QC/OA

Prepared By:	<i>[Signature]</i> DISTRICT STUDIES & PLANS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT LAND ACQUISITION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>[Signature]</i> DISTRICT MATERIALS ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS,
AND STANDARDS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	2
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

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OFFICE: DISTRICT

SUMMARY OF QUANTITIES

WHITE
FAP 328 (US 45)
80% FED / 20% STATE ✓
RURAL ✓
0010

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	68
20700220	POROUS GRANULAR EMBANKMENT	CU YD	214
25000210	SEEDING, CLASS 2A	ACRE	0.25
25000350	SEEDING, CLASS 7	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	23
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	23
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	23
25000700	AGRICULTURAL GROUND LIMESTONE	TON	0.25
25100115	MULCH, METHOD 2	ACRE	0.50
25100630	EROSION CONTROL BLANKET	SO YD	423
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	50
28000400	PERIMETER EROSION BARRIER	FOOT	642

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 PROJECT: ...
 SHEETS: 31 OF 31

USER NAME = porterc	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2017	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 328	SECTION 109B-1	COUNTY WHITE	TOTAL SHEETS 31	SHEET NO. 3
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

WHITE
FAP 328 (US 45)
80% FED / 20% STATE
RURAL
0010

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
28100109	STONE RIPRAP, CLASS A5	SO YD	139
28200200	FILTER FABRIC	SO YD	139
42000060	WELDED WIRE REINFORCEMENT	SO YD	142
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SO YD	142
44000100	PAVEMENT REMOVAL	SO YD	175
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SO YD	401
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	404
50300300	PROTECTIVE COAT	SO YD	11
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	19,330
50800515	BAR SPLICERS	EACH	112
50900200	STEEL RAILING, TYPE 2399	FOOT	47
51500100	NAME PLATES	EACH	1

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PLOT DATE = 8/23/2017	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	1098-1	WHITE	31	4
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

WHITE
FAP 328 (US 45)
80% FED / 20% STATE
RURAL
0010

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
52200010	TEMPORARY SHEET PILING	SO FT	792
54003000	CONCRETE BOX CULVERTS	CU YD	123.5
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	125
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8
67100100	MOBILIZATION	LSUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	LSUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT TERM PAVEMENT MARKING	FOOT	65

12

* SPECIALTY ITEM

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PLOT DATE = 8/23/2017

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
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REVISED -
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	5
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

WHITE
FAP 328 (US 45)
80% FED / 20% STATE
RURAL
0010

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SO FT	22
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,458
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	262.5
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,458
* 78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8
* 86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
X0322128	MEMBRANE WATERPROOFING FOR BURIED STRUCTURES	SO YD	98
X0327979	PAVEMENT MARKING REMOVAL - GRINDING	SO FT	305

12

* SPECIALTY ITEM

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			SCALE:	SHEET OF SHEETS	STA. TO STA.

SUMMARY OF QUANTITIES

WHITE
FAP 328 (US 45)
80% FED / 20% STATE
RURAL
0010

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY
X7010202	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SO FT	473
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	28
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	45

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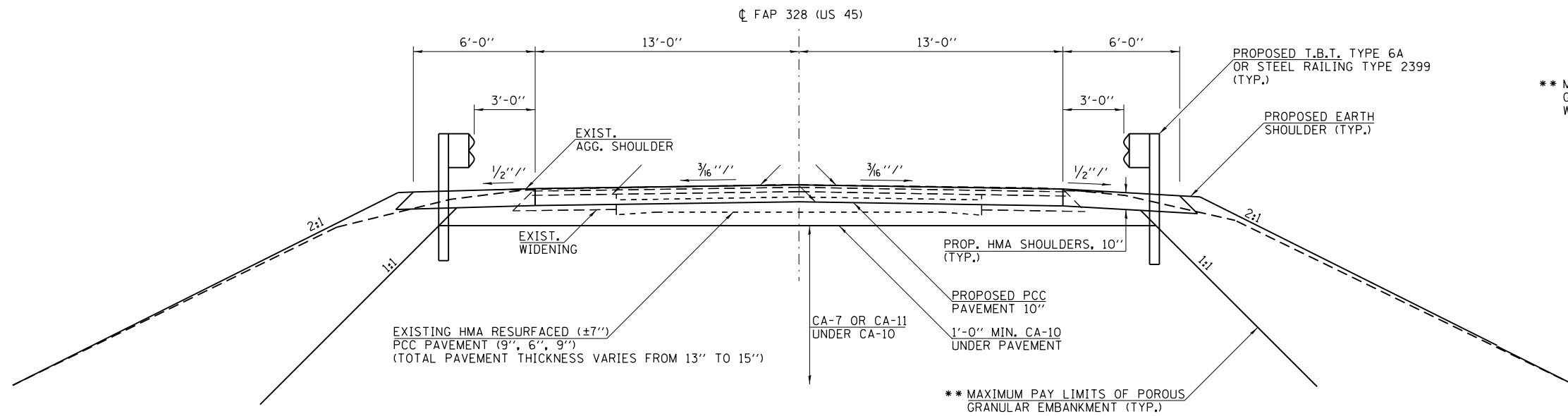
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PLOT DATE = 8/23/2017	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

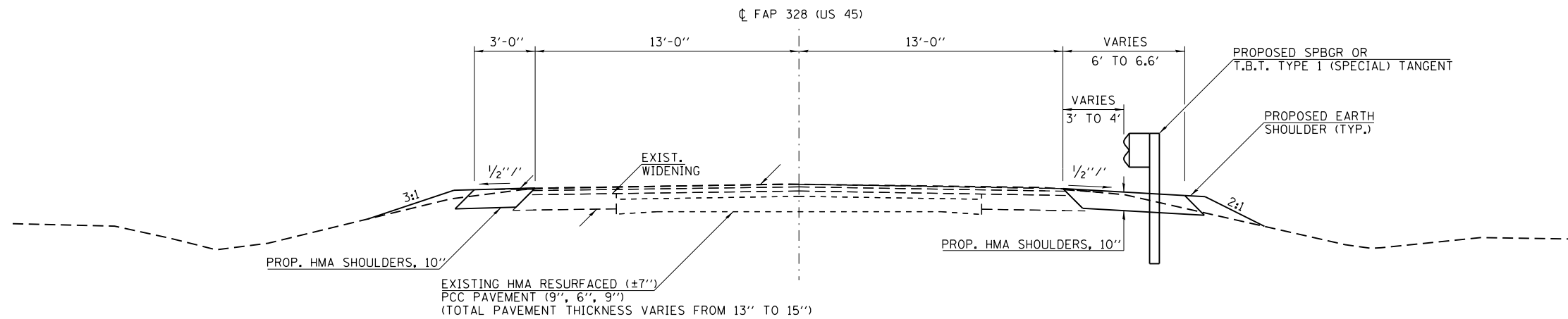
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F.A.P RTE. 328	SECTION 1098-1	COUNTY WHITE	TOTAL SHEETS 31	SHEET NO. 7
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				



TYPICAL SECTION WITHIN PAVEMENT REMOVAL

LOOKING SOUTH



OUTSIDE LIMITS OF GUARDRAIL

WITHIN LIMITS OF GUARDRAIL

TYPICAL SECTION OUTSIDE OF PAVEMENT REMOVAL

LOOKING SOUTH

FILE NAME =	USER NAME = porterc	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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Default	PLOT DATE = 8/17/2017	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT												

EARTHWORK SCHEDULE

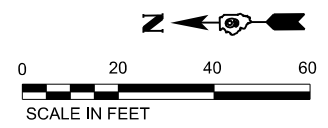
LOCATION STATION	EARTH EXCAVATION	STRUCTURE EXCAVATION	SHRINKAGE FACTOR FOR EARTH EXCAVATION	EARTH EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
US 45 (FAP 328)	CU YD	CU YD	%	CU YD	CU YD	CU YD
CULVERT						
STA. 193+78.5 TO STA. 194+27.5		404				
NORTH						
STA. 192+00 TO STA. 193+78.5	34		25	25.5	20	5.5
SOUTH						
STA. 194+27.5 TO STA. 196+00	34		25	25.5	14	11.5
TOTALS	68	404		51	34	17

EROSION CONTROL SCHEDULE

LOCATION STATION	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET
US (FAP 328)	FOOT	SQ YD
NE QUAD		
STA. 192+40 TO STA. 193+83	150	
STA. 192+40 TO STA. 193+90		112
NW QUAD		
STA. 192+24 TO STA. 193+83	167	
STA. 192+24 TO STA. 193+70		105
SE QUAD		
STA. 194+22 TO STA. 195+83	167	
STA. 194+15 TO STA. 195+83		107
SW QUAD		
STA. 194+22 TO STA. 195+66	158	
STA. 194+15 TO STA. 195+66		99
TOTALS	642	423

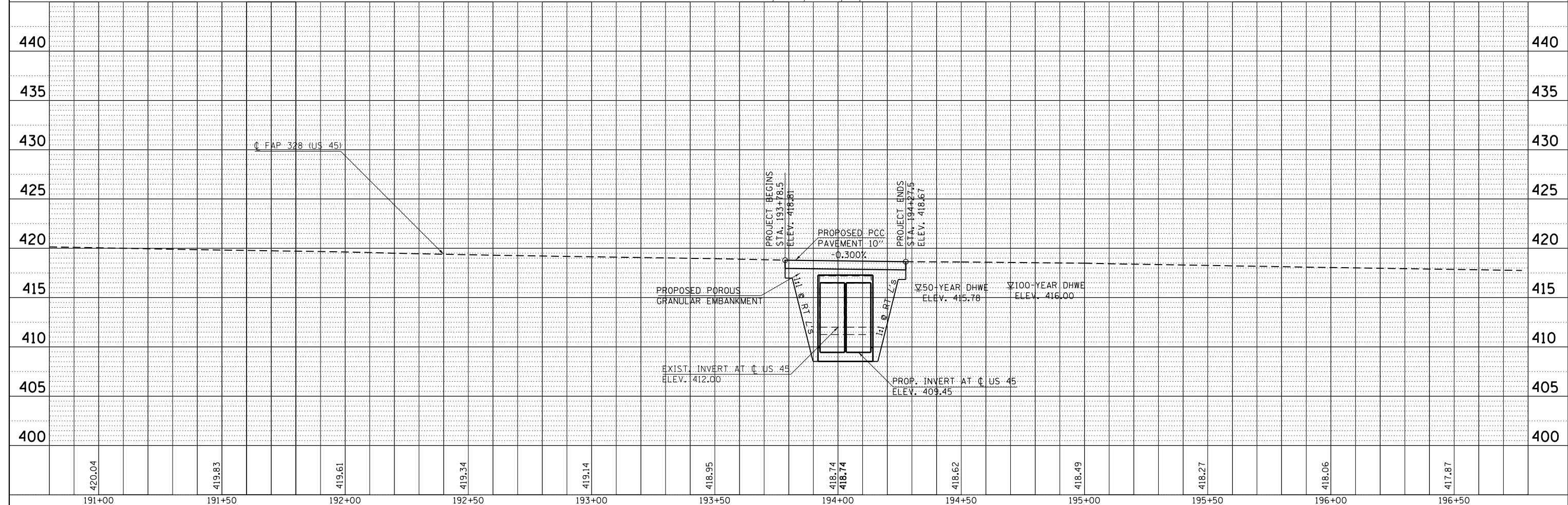
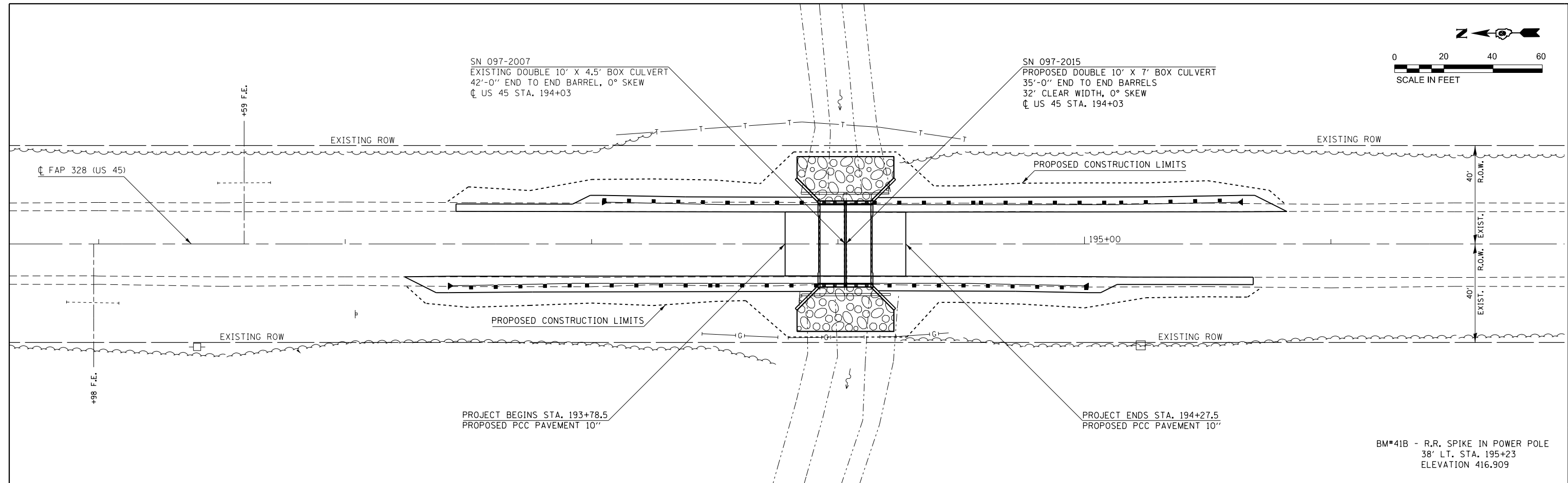
PAVEMENT MARKING SCHEDULE

LOCATION STATION	TEMPORARY PAVEMENT MARKING LINE 4"	TEMPORARY PAVEMENT MARKING REMOVAL	PAINT PAVEMENT MARKING LINE 4"	SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	PAVEMENT MARKING REMOVAL
IL 154	FOOT	SQ FT	FOOT	FOOT	SQ FT	SQ FT
CL STA 190+69 TO STA 197+17	162	54	162	65	22	
LT STA 190+69 TO STA 197+17	648	216	648			
RT STA 190+69 TO STA 197+17	648	216	648			
STAGE 1						
CL STA. 190+69 TO STA 197+17						54
RT STA 192+00 TO STA 196+00						133
STAGE 2						
LT STA 192+00 TO STA 193+78.5						60
LT STA 194+27.5 TO STA 196+00						58
TOTAL	1458	486	1458	65	22	305

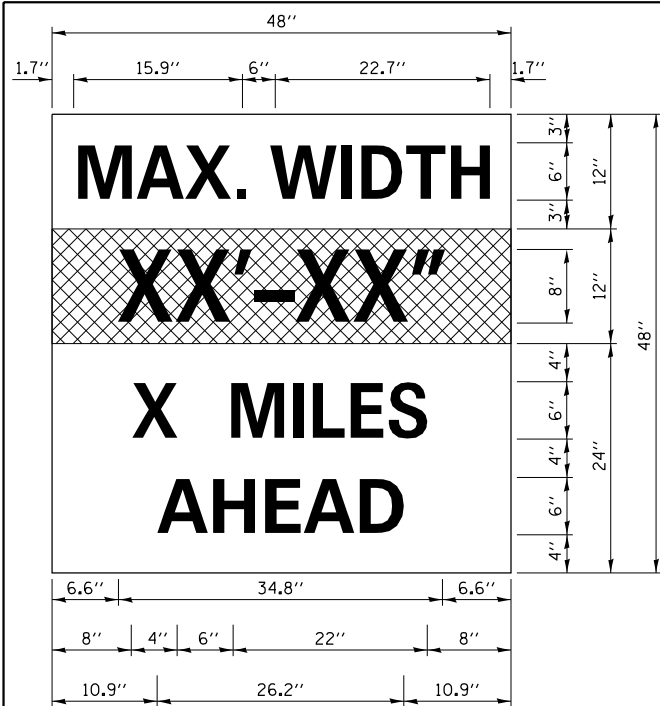


PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
	FILED		
	CAD FILE NAME		
	NO.		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		
	NO.		



FILE NAME =	USER NAME = portercw	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE SCALE: SHEET OF SHEETS STA. TO STA.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		REVISIONS	REVISIONS			328	109B-1	WHITE	31	10	
		CHECKED -	REVISIONS -			CONTRACT NO. 78163					
		DATE -	REVISIONS -			ILLINOIS FED. AID PROJECT					



W12-I103

W12-I103 (WIDTH IS 80)
 NO BORDER, BLACK ON WHITE:
 "MAX WIDTH" D:
 NO BORDER, BLACK ON ORANGE:
 "XX'-XX'" D:
 NO BORDER, BLACK ON WHITE:
 "X MILES" D: "AHEAD" D:

- NOTES:**
1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321".
 2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
 3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.

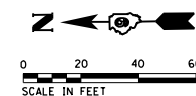
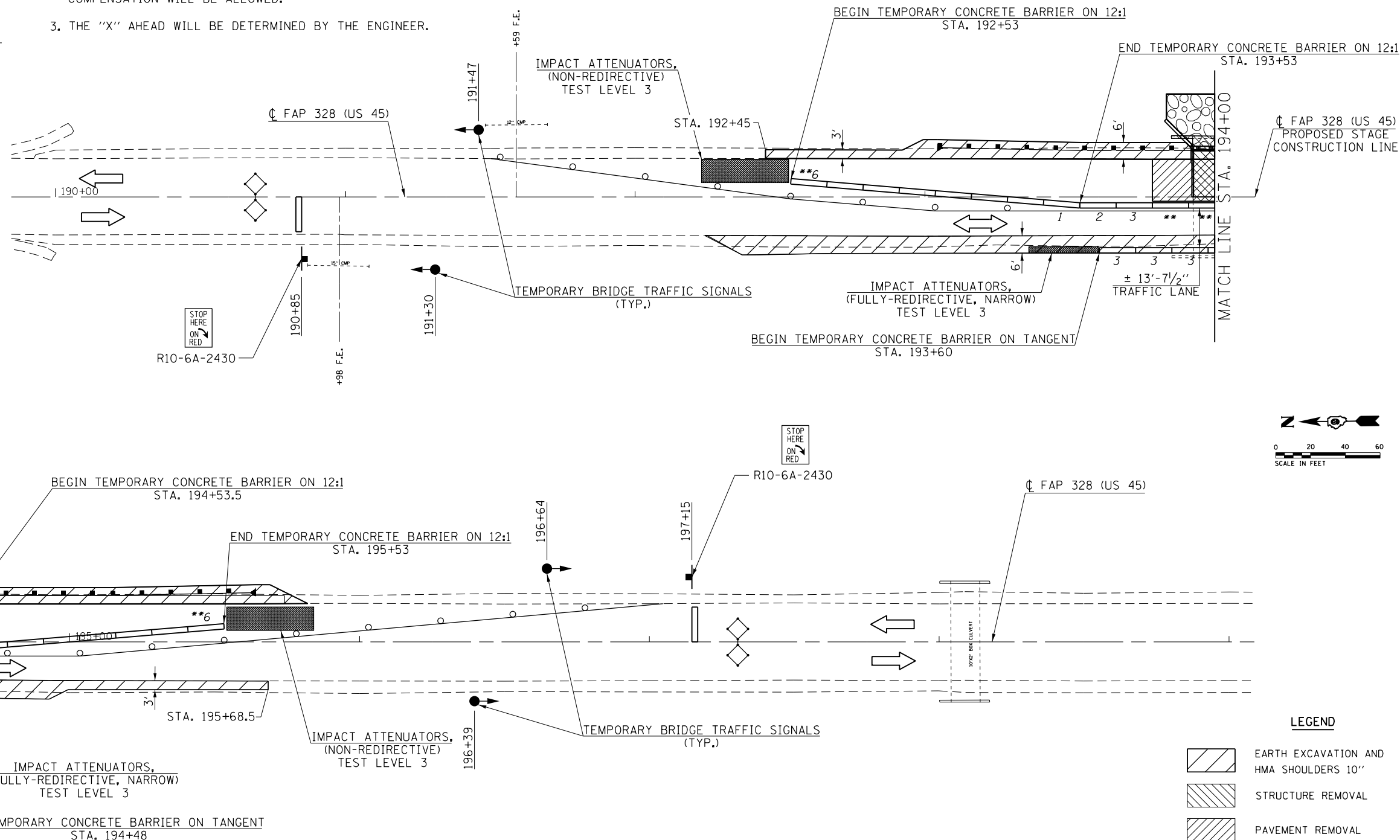
4. ADDITIONAL SIGNAGE FOR THE ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321 (SPECIAL).
5. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(O)-48) SHOWN ON STANDARD 701321 (SPECIAL) AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN BELOW, SHALL BE 12'-0" FOR STAGE I CONSTRUCTION AND 12'-0" FOR STAGE II CONSTRUCTION.

6. SEE STANDARD 701321 AND ATTACHED DETAIL FOR COMPLETION OF STAGE CONSTRUCTION SIGNING AND ADVANCE DETECTOR LOOP PLACEMENT NOT SHOWN.
7. ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.
8. THE QUANTITY OF EXCAVATION REQUIRED FOR PLACEMENT OF HOT-MIX ASPHALT SHOULDERS, 10" IS INCLUDED IN THE QUANTITY OF EARTH EXCAVATION.

NOTES FOR MAX WIDTH SIGNING:

1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATION DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE NOTED WORK, INCLUDING SIGN, POSTS, HARDWARE AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD. 701321 (SPECIAL) AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE "X" AHEAD WILL BE DETERMINED BY THE ENGINEER.

•• FOR STAGE I PINNING OF TEMPORARY CONCRETE BARRIER SEE BRIDGE OFFICE STANDARD R-27.



LEGEND

	EARTH EXCAVATION AND HMA SHOULDERS 10"
	STRUCTURE REMOVAL
	PAVEMENT REMOVAL

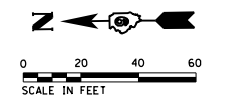
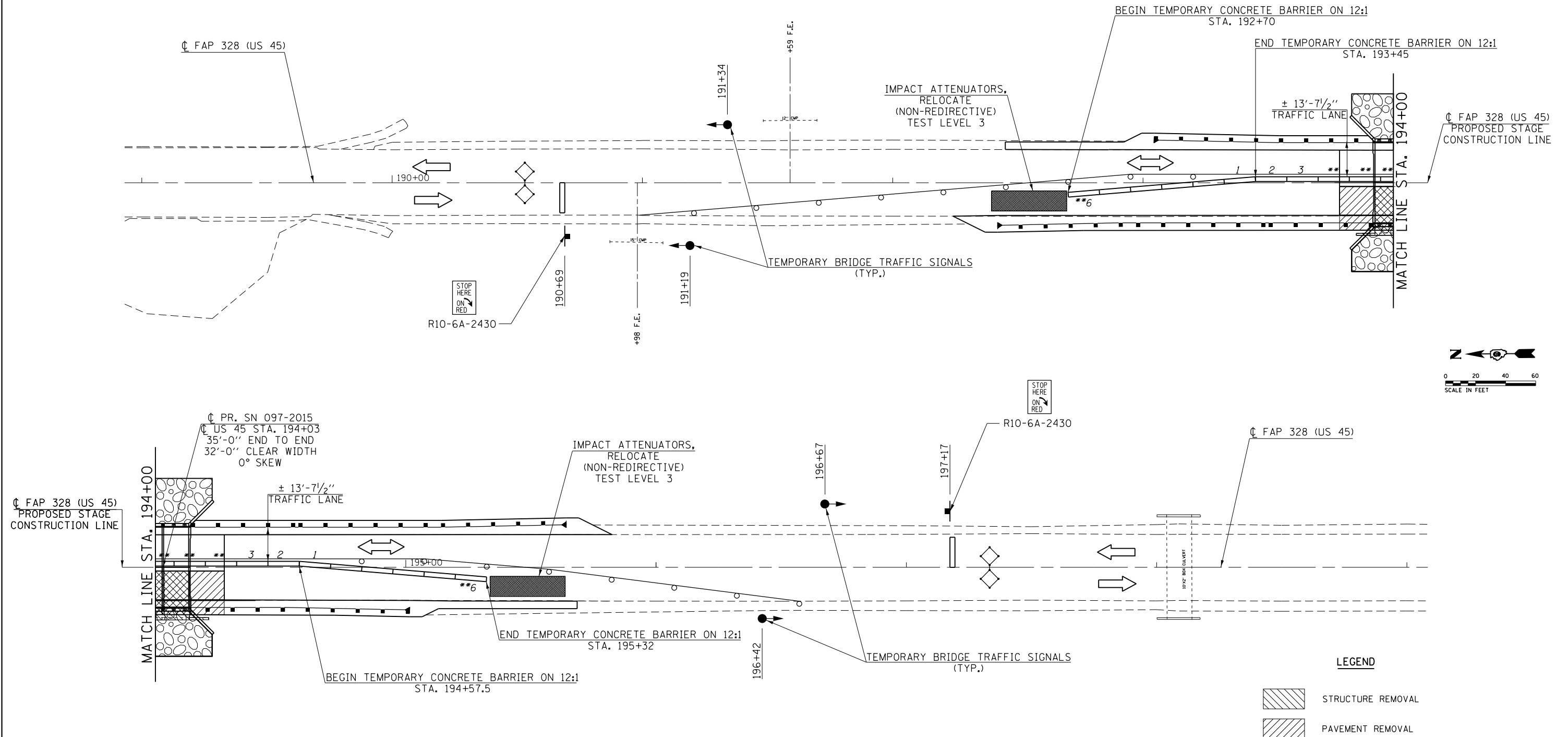
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pw:\IL04EB\INTEG\Illinois.gov\PWIDOT\Documents\DOT\Office\District 9\Projects\78163\CADD\CAD\Drawings\78163-11-11-11.dwg	PLOT SCALE = 40,0000' / 1"	CHECKED -	REVISED -			328	109B-1	WHITE	31	11	
Stage 1 Plot	PLOT DATE = 8/17/2017	DATE -	REVISED -			CONTRACT NO. 78163					
ILLINOIS FED. AID PROJECT											

- NOTES:
1. TRAFFIC CONTROL SHALL BE ERECTED AS SHOWN AND ACCORDING TO "TRAFFIC CONTROL AND PROTECTION, STANDARD 701321".
 2. SEE SPECIAL PROVISIONS FOR ADDITIONAL TRAFFIC CONTROL REQUIREMENTS.
 3. COORDINATE LOCATION OF SIGNALS WITH FINAL WORK AS DIRECTED BY THE ENGINEER.

4. ADDITIONAL SIGNAGE FOR THE ADVANCE WIDTH RESTRICTION WARNING SHALL BE INCLUDED IN THE COST OF STANDARD 701321 (SPECIAL).
5. THE DIMENSION SHOWN ON THE WIDTH RESTRICTION SIGN (W12-I102(O)-48) SHOWN ON STANDARD 701321 (SPECIAL) AND ON THE ADVANCE WARNING SIGN (W12-I103) SHOWN BELOW, SHALL BE 12'-0" FOR STAGE I CONSTRUCTION AND 12'-0" FOR STAGE II CONSTRUCTION.

6. SEE STANDARD 701321 AND ATTACHED DETAIL FOR COMPLETION OF STAGE CONSTRUCTION SIGNING AND ADVANCE DETECTOR LOOP PLACEMENT NOT SHOWN.
7. ALL TRAFFIC SIGNALS SHOWN ARE INCLUDED IN TEMPORARY BRIDGE TRAFFIC SIGNALS - 1 EACH.

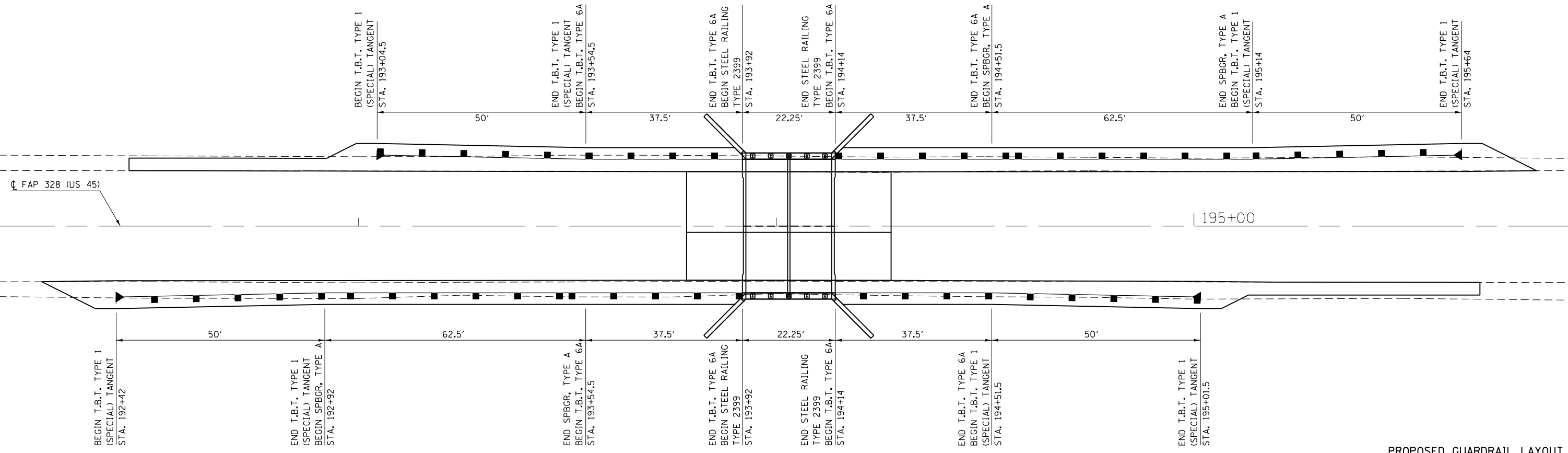
•• FOR STAGE 2 PINNING OF TEMPORARY CONCRETE BARRIER SEE GENERAL NOTES ON SHEET 2 AND BRIDGE OFFICE STANDARD R-27.



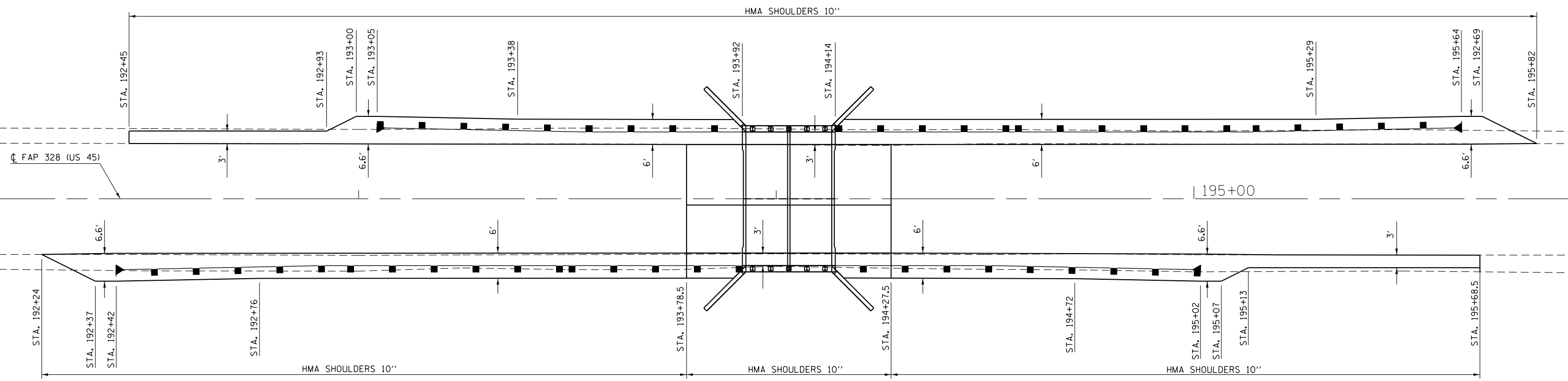
LEGEND

- STRUCTURE REMOVAL
- PAVEMENT REMOVAL

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Stage 1 Plot		CHECKED -	REVISED -			SCALE:	SHEET OF SHEETS	328	1098-1	WHITE	31	12
		DATE -	REVISED -			STA. TO STA.	CONTRACT NO. 78163					
						ILLINOIS FED. AID PROJECT						



PROPOSED GUARDRAIL LAYOUT



PROPOSED HMA SHOULDER LAYOUT

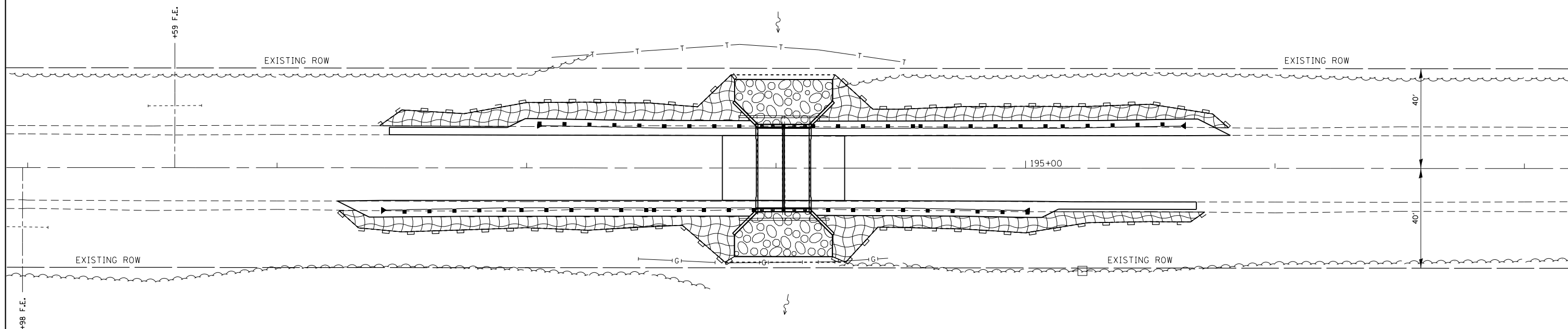
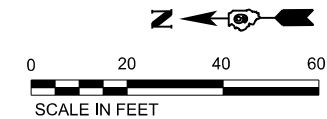
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PLOT DATE = 8/17/2017	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROPOSED GUARDRAIL & HMA SHOULDER LAYOUT

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	1098-1	WHITE	31	13
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				



PERIMETER EROSION BARRIER 

EROSION CONTROL BLANKET 

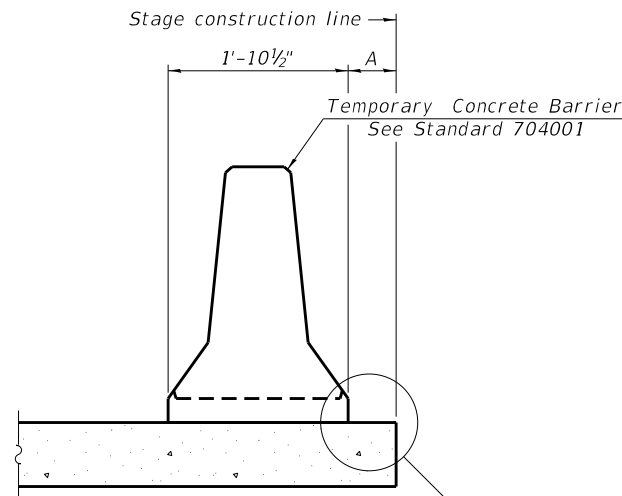
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Default	PLOT SCALE = 40,0000' / 1"	CHECKED -	REVISED -
	PLOT DATE = 8/17/2017	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EROSION CONTROL

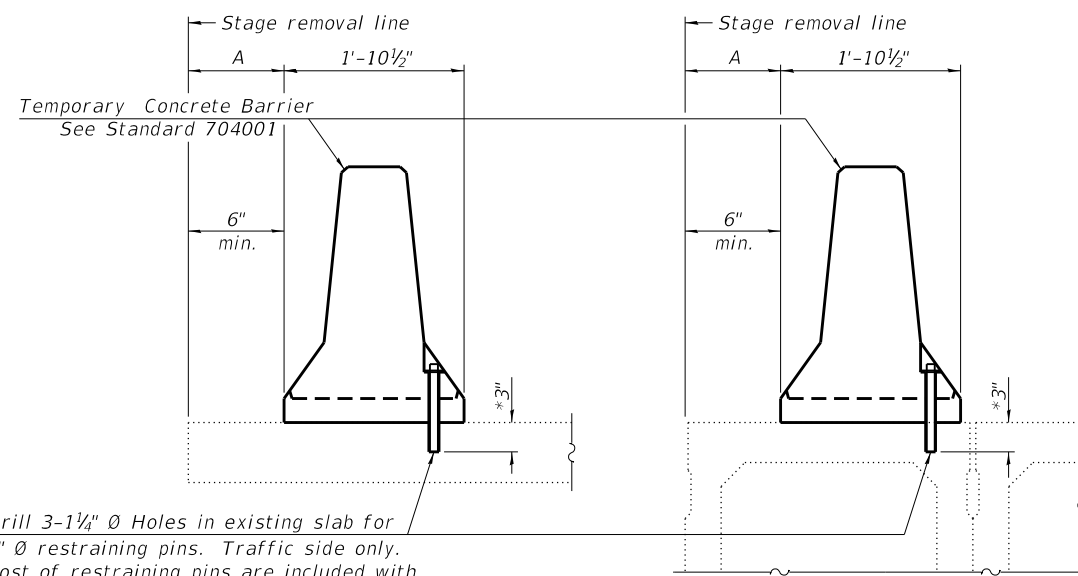
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	14
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

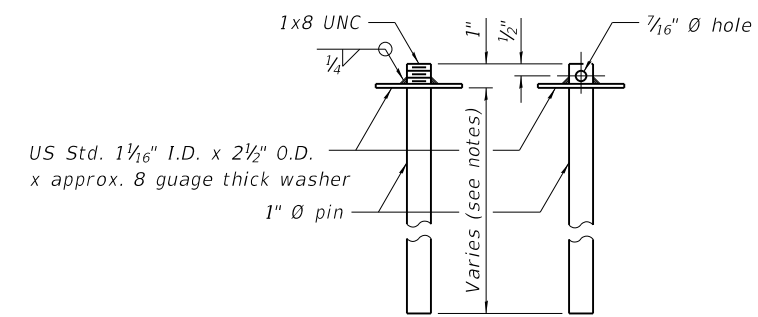


Drill 3-1 1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

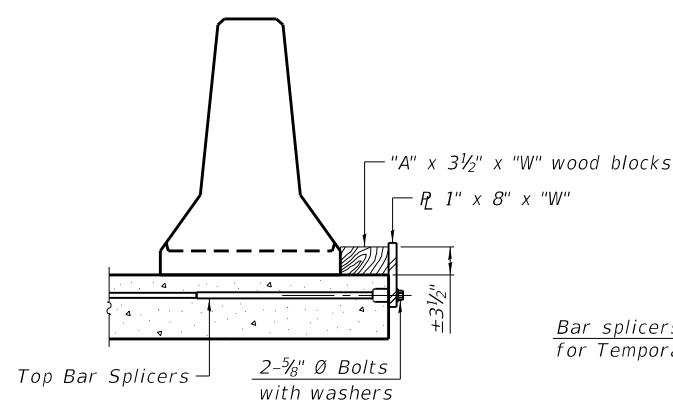
EXISTING SLAB

EXISTING DECK BEAM

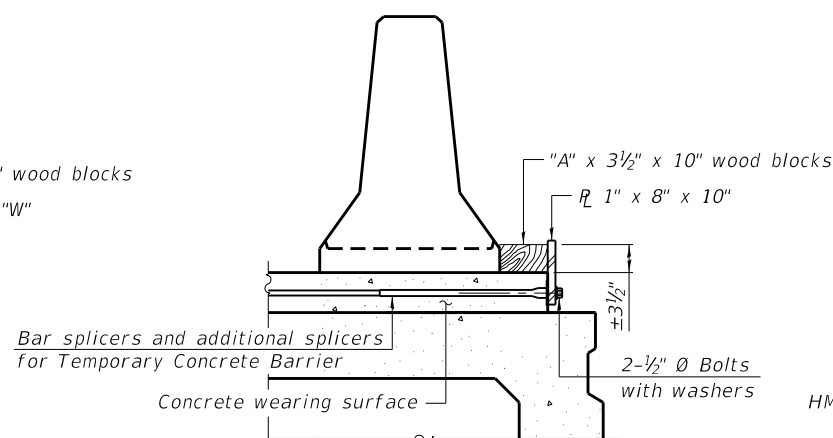
SECTIONS THRU SLAB OR DECK BEAM



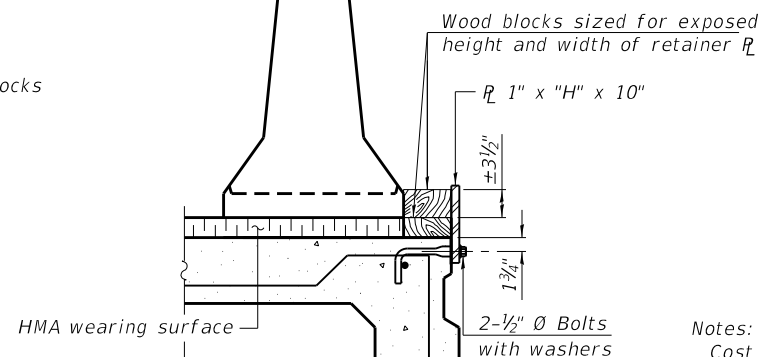
RESTRAINING PIN



DETAIL I

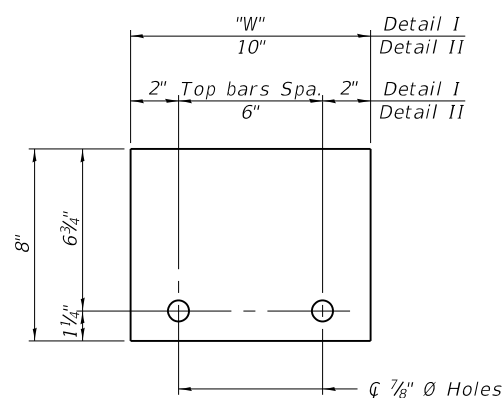


DETAIL II

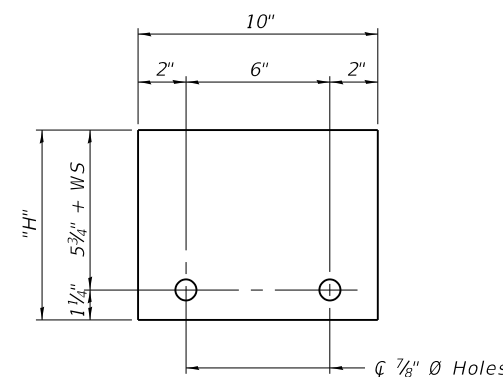


DETAIL III

BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W" (Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate C/L of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

8/17/2017 8:47:19 AM

R-27 2-17-2017

DESIGNED -	EXAMINED	DATE -
CHECKED -	ENGINEER OF BRIDGE DESIGN	
DRAWN -	PASSED	REVISED -
CHECKED -	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

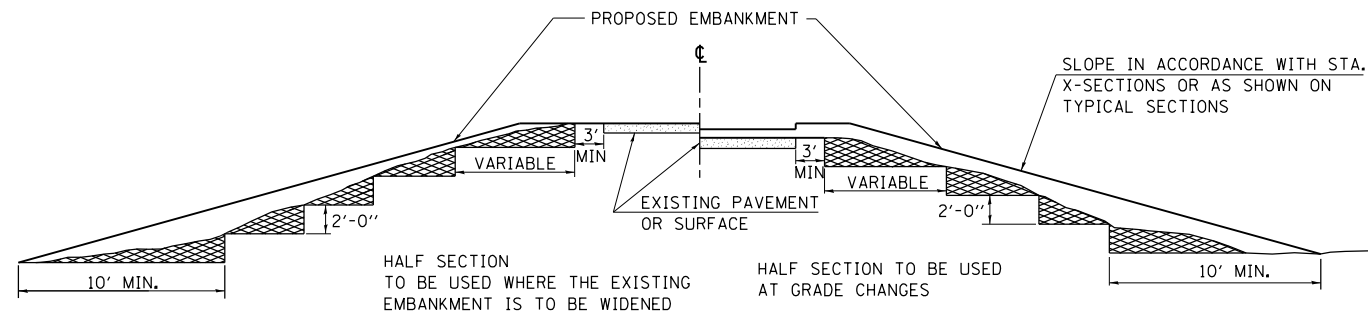
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 097-2015 (PROPOSED)

SHEET OF SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	15
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



HALF SECTION TO BE USED WHERE THE EXISTING EMBANKMENT IS TO BE WIDENED

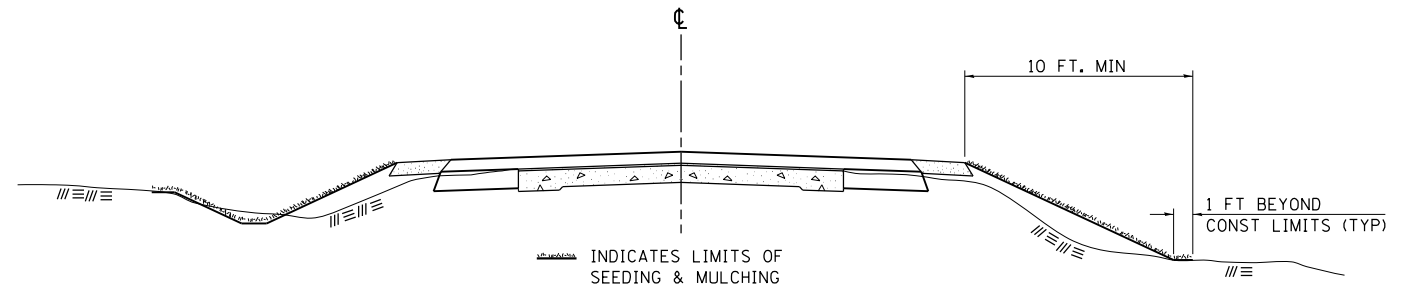
HALF SECTION TO BE USED AT GRADE CHANGES

MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-3-99
RESIZED	5-7-08
REVIEWED	5-17-13

STD. 9-16

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

ON DETOUR ROADS, SLOPES SHALL BE SEEDED IMMEDIATELY UPON COMPLETION OF ANY GIVEN STAGE GRADING. TEMPORARY SEEDED SHALL BE CLASS 7.

FERTILIZER NUTRIENTS SHALL BE APPLIED TO ALL SEEDED AREAS. LIMESTONE SHALL BE APPLIED TO ALL AREAS OF FINAL SEEDED.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR ROAD AND BRIDGE CONSTRUCTION.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08
REVISED	5-16-13

STD. 9-12

MODEL: Default
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USER NAME = porterwc	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/17/2017	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT STANDARDS

SCALE: SHEET OF SHEETS STA. TO STA.

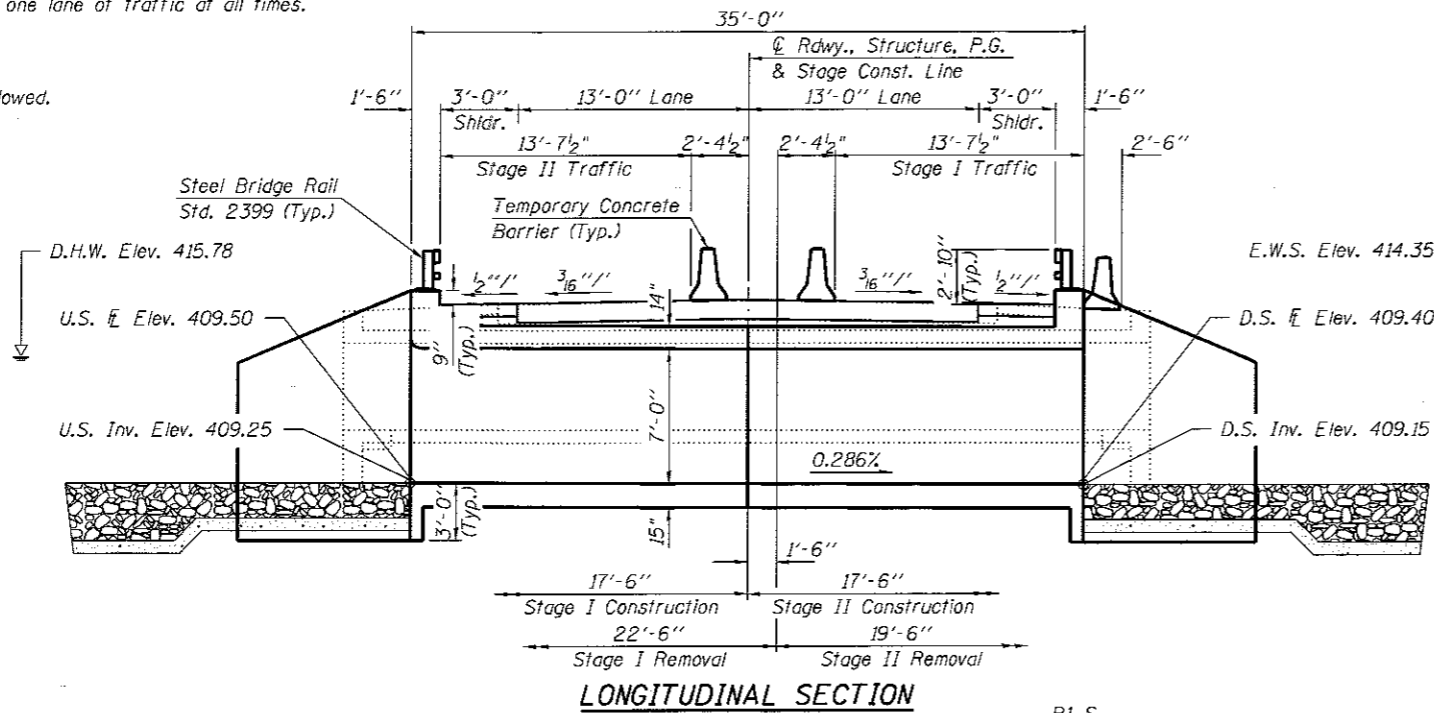
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	16
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

BENCHMARK: BM#40 - Spike in power pole 40' Lt., Sta. 195+23, Elev. 416.909.

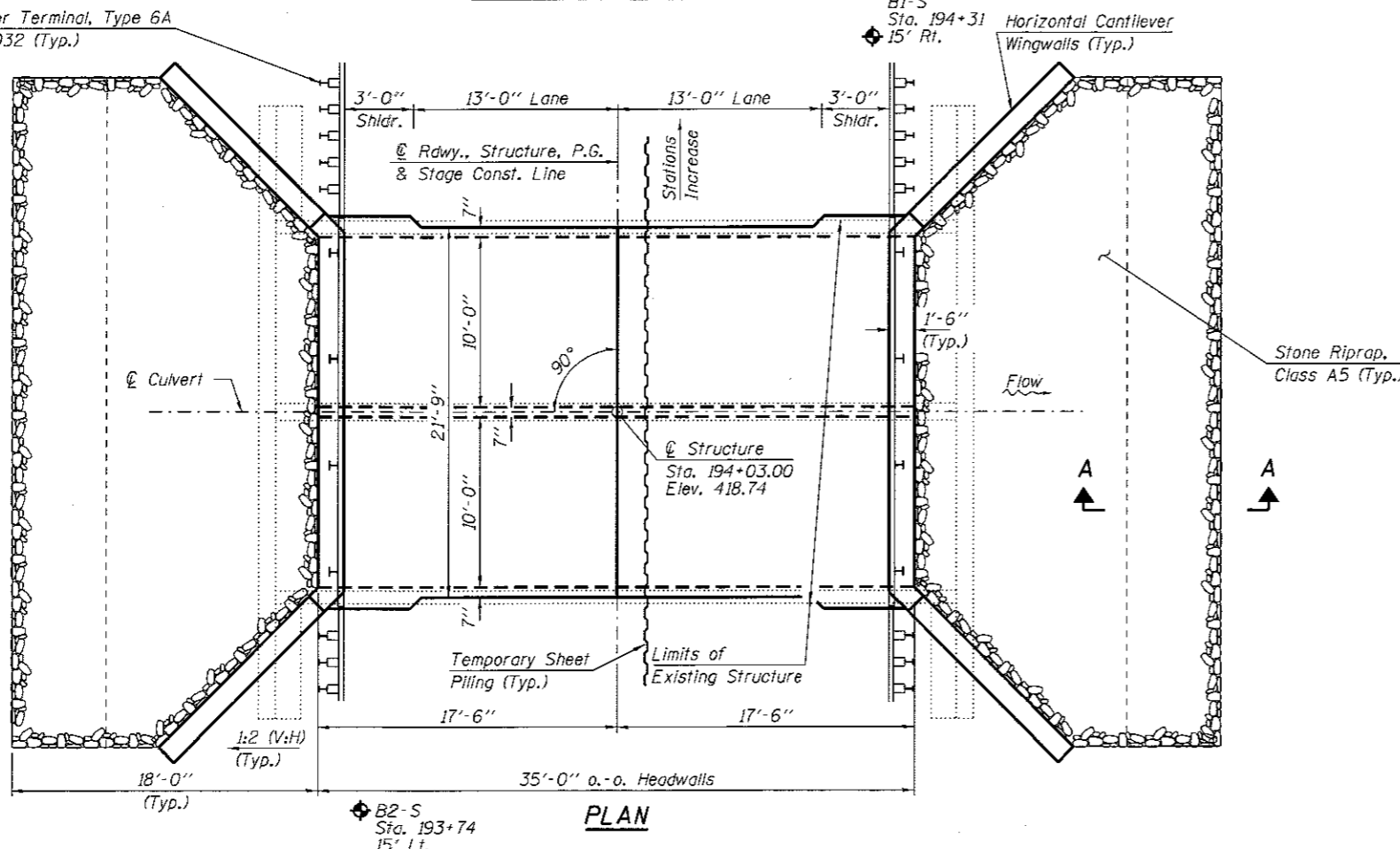
EXISTING STRUCTURE: SN 097-2007 was built in 1927 as SBI Route 14G Section 109. The structure is a double barrel 10'x4.5' box culvert 22.5' bk.-bk. sidewalls and 42.0' o.-o. length. The culvert is to be removed and replaced using staged construction to maintain one lane of traffic at all times.

Salvage: None

Precast alternate not allowed.



Traffic Barrier Terminal, Type 6A
Standard 631032 (Typ.)

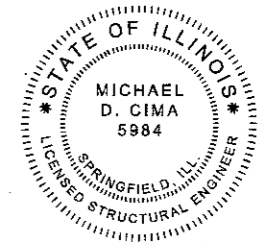


DESIGN SPECIFICATIONS
2014 AASHTO LRFD Bridge Design
Specifications with 2016 Interims

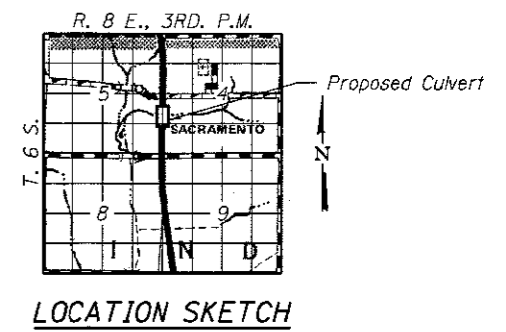
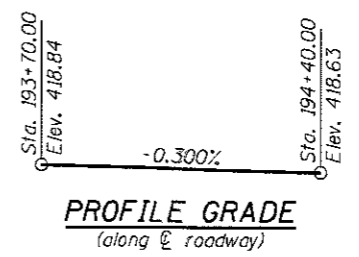
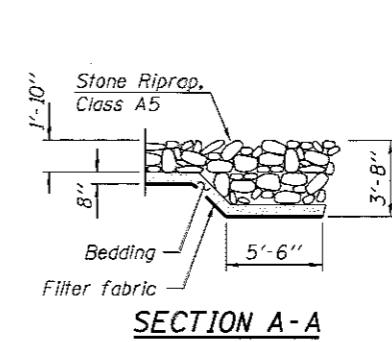
DESIGN STRESSES
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)

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

APPROVED
For Structural Adequacy Only
D. Carl Pines
Engineer of Bridges & Structures



Michael D. Cima 8/3/2017
Michael D. Cima, Illinois S.E. 081-005984 Date
Expires 11/30/2018



GENERAL PLAN
US ROUTE 45
OVER UNNAMED STREAM
FAP ROUTE 328 - SECTION 109B-1
WHITE COUNTY
STATION 194+03.00
STRUCTURE NUMBER 097-2015

WATERWAY INFORMATION

Drainage Area = 0.8 Sq. Mi. Existing Low Grade Elev. 416.4 @ Sta. 200+00
Proposed Low Grade Elev. 416.4 @ Sta. 200+00

Flood	Freq. Yr.	Q (C.F.S.)		Opening Sq. Ft.		Natural H.W.E.	Head - Ft.		Headwater El.		
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.	
Main Channel	10	442	486	65	100	415.25	0.84	0.00	416.09	415.25	
		Relief Struct.	137	93	20						20
		Total	579	579	85						120
Design/Overlapping	50	574	774	75	110	415.78	1.14	0.80	416.92	416.58	
		Relief Struct.	405	205	20						20
		Total	979	979	95						130
Base	100	602	814	80	115	416.00	1.05	0.76	417.05	416.76	
		Relief Struct.	558	346	20						20
		Total	1160	1160	100						135

INDEX OF SHEETS

1. General Plan
2. General Details
3. Stage Construction Details
4. Culvert Plan
5. Culvert Details
6. Steel Railing Type 2399
7. Bar Splicer Assembly and Mechanical Splicer Details
8. Boring Logs

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MODEL = BRIDGE.dwg
PLOT DRIVER = PLOTDRV8



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0972015-78163-001-GPE.dgn	CHECKED - KWB	REVISED
PLOT SCALE = 2.0000' / 1"	DRAWN - RPW	REVISED
PLOT DATE = 8/3/2017	CHECKED - MDC	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
STRUCTURE NO. 097-2015
SHEET NO. 1 OF 8 SHEETS

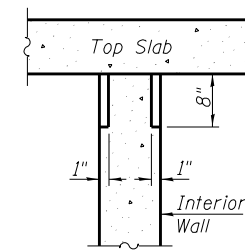
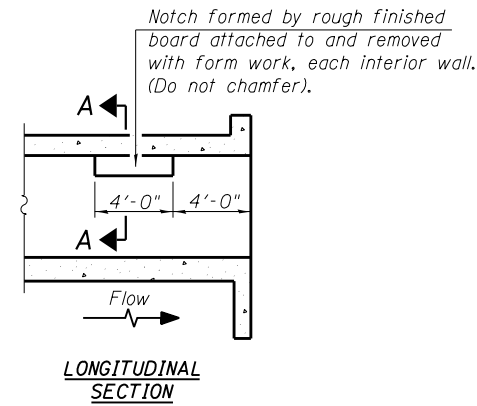
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	17
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Excavation behind existing sidewalls shall be performed to balance front and back soil pressure before removing the existing top slab. The Contractor shall sawcut the upper portion of the existing sidewalls at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.
 Waterproofing membrane shall cover the top surface of the culvert and extend 6 inches up the inside face of the headwall. The waterproofing membrane shall extend to 12 inches below the construction joint between the culvert sidewall and the top slab on the outside face of the sidewalls.
 Protective Coat shall be applied to the top of the headwalls and to the exposed inside face of the headwalls.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. Yd.	139
Filter Fabric	Sq. Yd.	139
Removal of Existing Structures	Each	1
Structure Excavation	Cu. Yd.	404
Protective Coat	Sq. Yd.	11
Reinforcement Bars, Epoxy Coated	Pound	19,330
Bar Splicers	Each	112
Steel Railing, Type 2399	Foot	47
Name Plates	Each	1
Temporary Sheet Piling	Sq. Ft.	792
Concrete Box Culverts	Cu. Yd.	123.5
Membrane Waterproofing for Buried Structures	Sq. Yd.	98

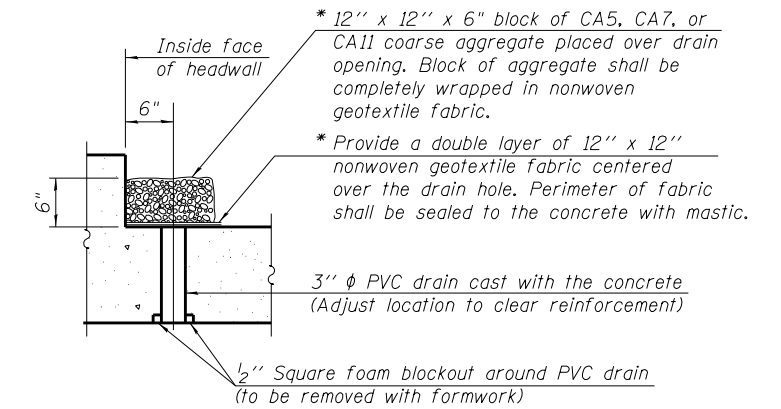


SECTION A-A
PHOEBE NESTING
 (Downstream End Only)

STATION 194+03.00
 BUILT BY
 STATE OF ILLINOIS
 F.A.P. RT. 328 SEC. 109B-1
 LOADING HL-93
 STR. NO. 097-2015

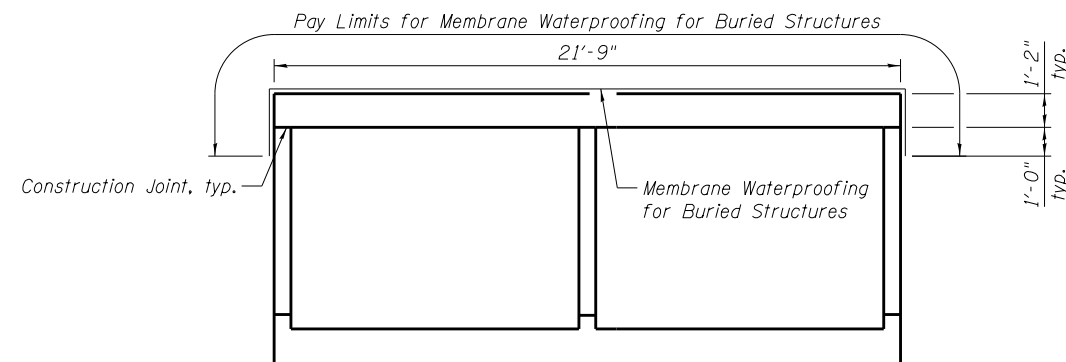
NAME PLATE
 See Std. 515001

* Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.



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 the associated work.)



MEMBRANE WATERPROOFING
FOR BURIED STRUCTURES

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 MODEL = #MODEL\$
 PLOT DRIVER = #PLTDV\$



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 CHECKED - KWB
 DRAWN - RPW
 CHECKED - MDC

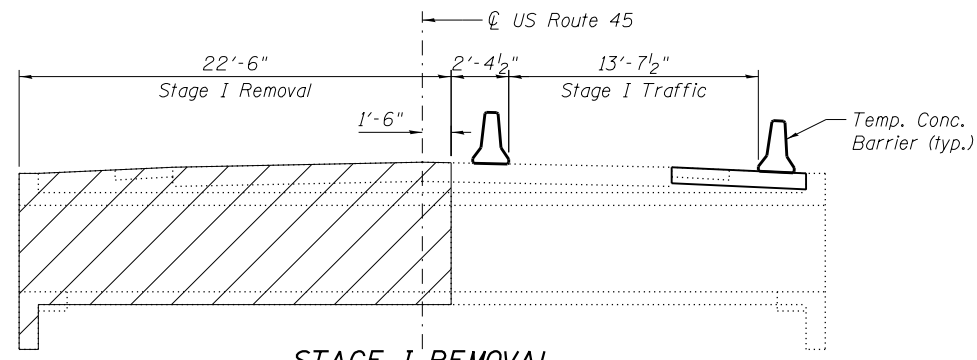
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 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

GENERAL DETAILS
 STRUCTURE NO. 097-2015

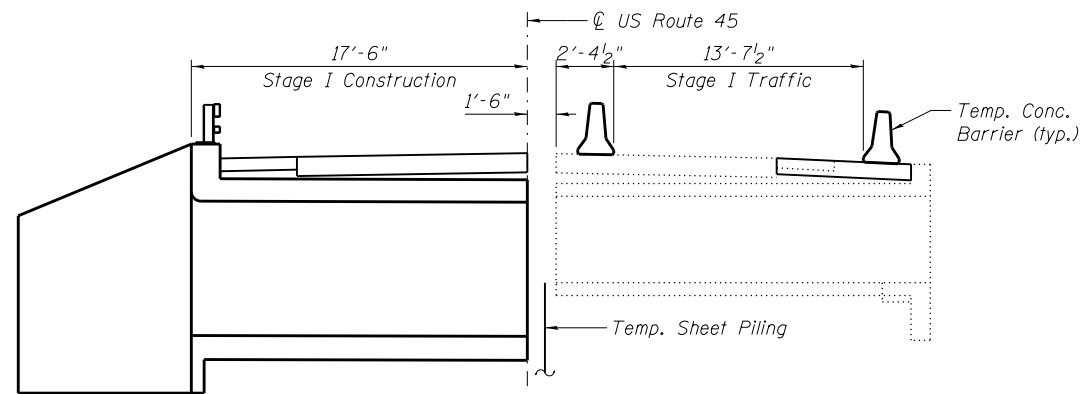
SHEET NO. 2 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 78163	



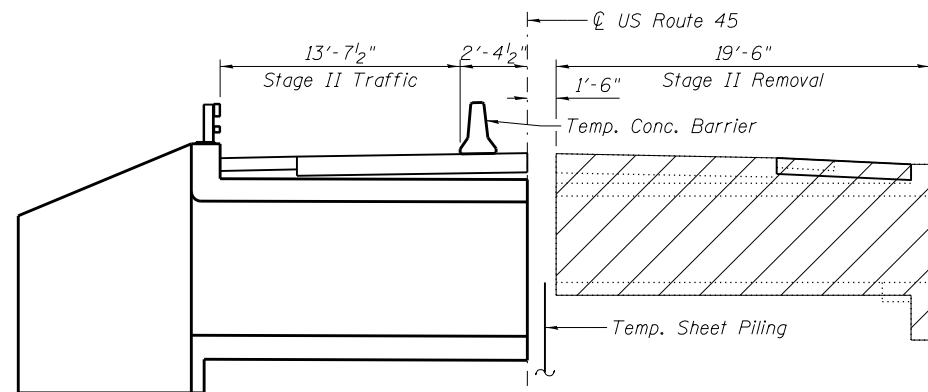
STAGE I REMOVAL

(Looking South)



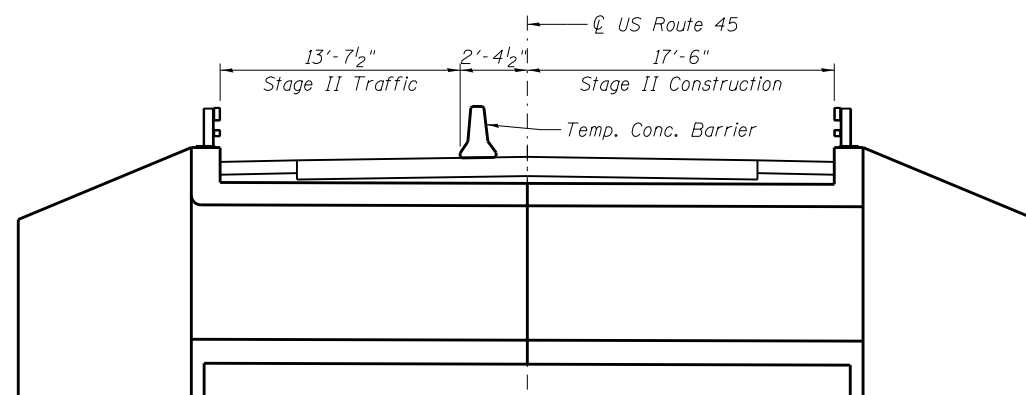
STAGE I CONSTRUCTION

(Looking South)



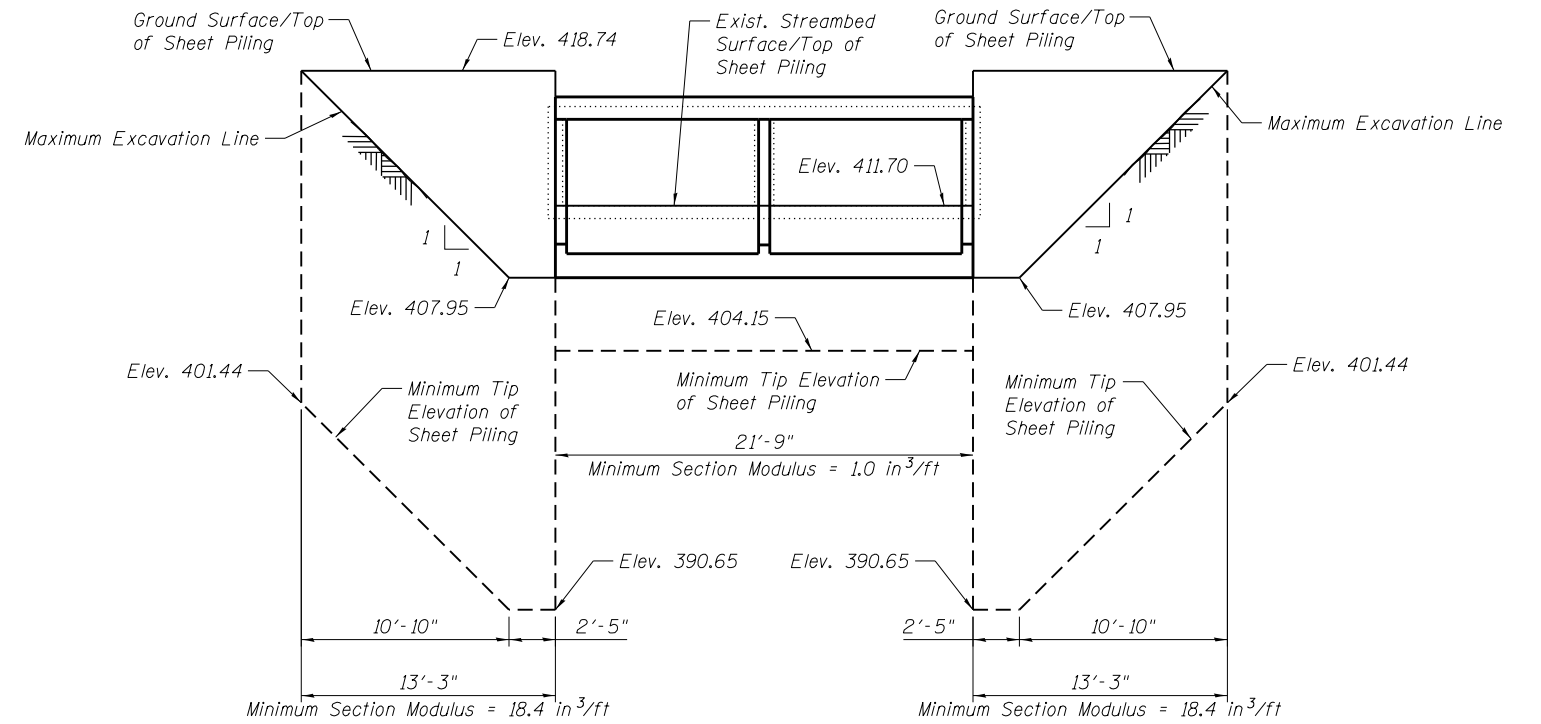
STAGE II REMOVAL

(Looking South)



STAGE II CONSTRUCTION

(Looking South)



TEMPORARY SHEET PILING

Notes:
 Hatched area indicates Removal of Existing Structures.
 See Roadway Plans for quantity and details of Temporary Base Course Widening, 10", Temporary Concrete Barrier, and Pinning Temporary Concrete Barrier.
 If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

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 MODEL = #MODEL\$
 PLOT DRIVER = #PLOTDRVS\$



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 0972015-78163-003-Stage Const Details.dgn
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 PLOT DATE = 8/3/2017

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 CHECKED - MDC

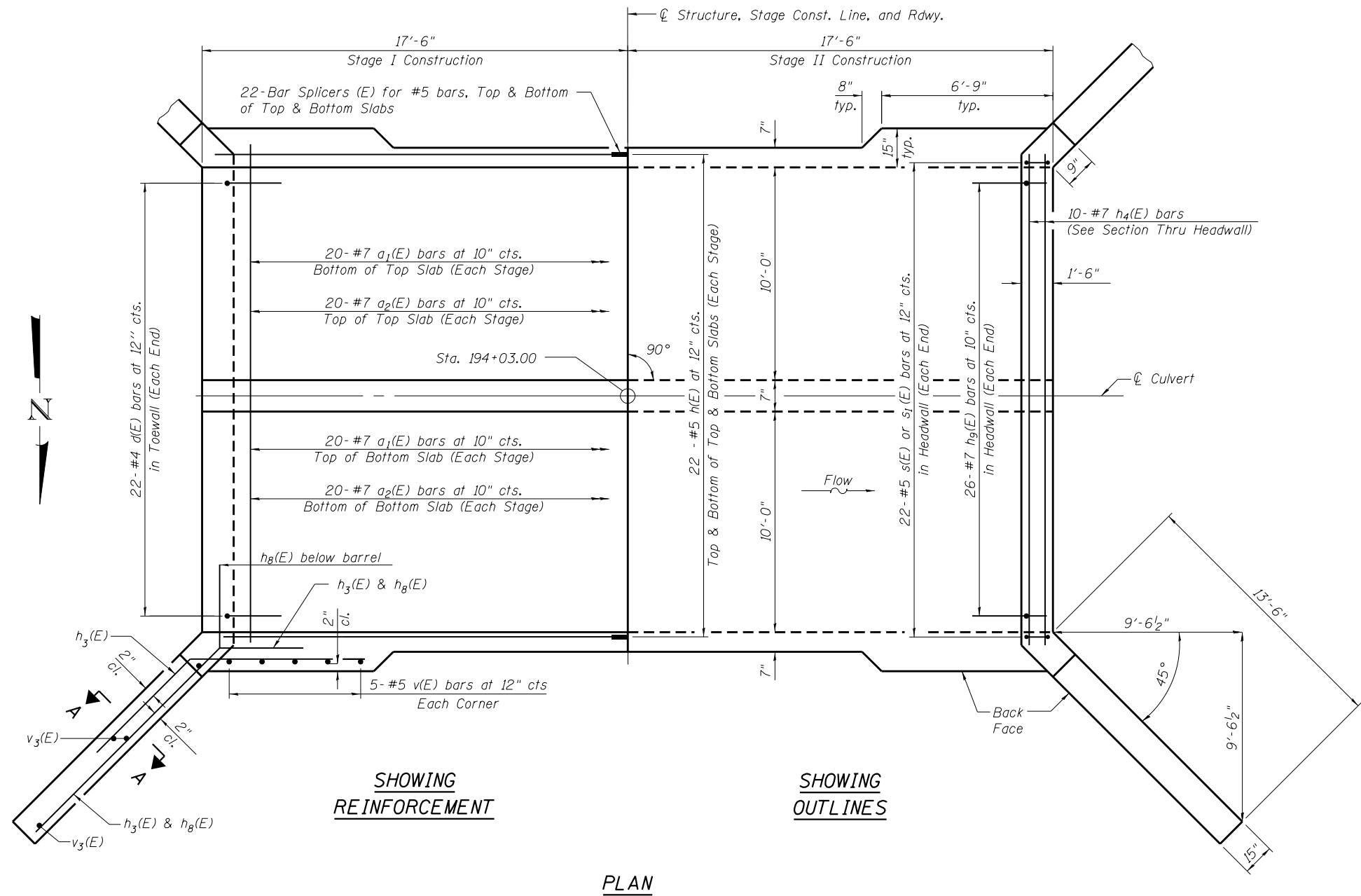
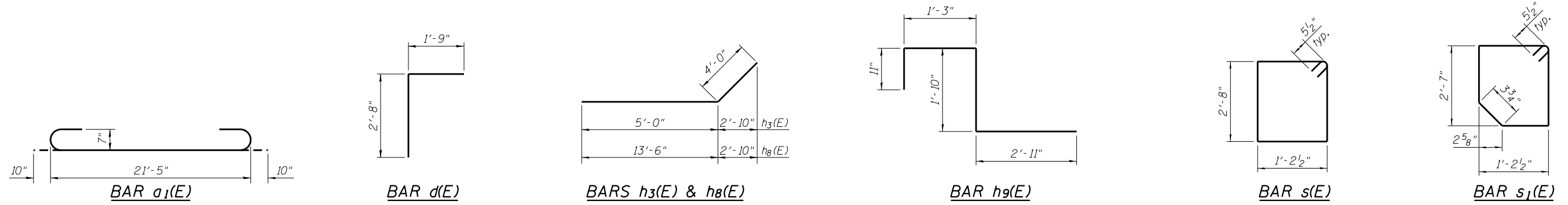
REVISED
 REVISED
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS
 STRUCTURE NO. 097-2015

SHEET NO. 3 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	19
CONTRACT NO. 78163				
ILLINOIS FED. AID PROJECT				



Notes:
 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.
 See Sheet 5 of 8 for Section A-A and Section Thru Headwall.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
$a_1(E)$	80	#7	23'-1"		
$a_2(E)$	80	#7	21'-5"		
$d(E)$	44	#4	4'-5"		
$h(E)$	176	#5	16'-11"		
$h_2(E)$	48	#4	17'-2"		
$h_3(E)$	88	#7	9'-0"		
$h_4(E)$	20	#7	21'-0"		
$h_8(E)$	72	#7	17'-6"		
$h_9(E)$	52	#7	6'-11"		
$s(E)$	22	#5	8'-8"		
$s_1(E)$	22	#5	8'-5"		
$v(E)$	206	#5	9'-1"		
$v_3(E)$	16	#4	12'-6"		
Concrete Box Culverts				Cu. Yd.	123.5
Reinforcement Bars, Epoxy Coated				Pound	19,330

FILE NAME = #FILELONG\$
 MODEL = #MODEL\$
 PLOT DRIVER = #PLOTDRVS\$



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 0972015-78163-004-Culvert Plan.dgn
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 PLOT DATE = 8/3/2017

DESIGNED - RPW
 CHECKED - KWB
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 CHECKED - MDC

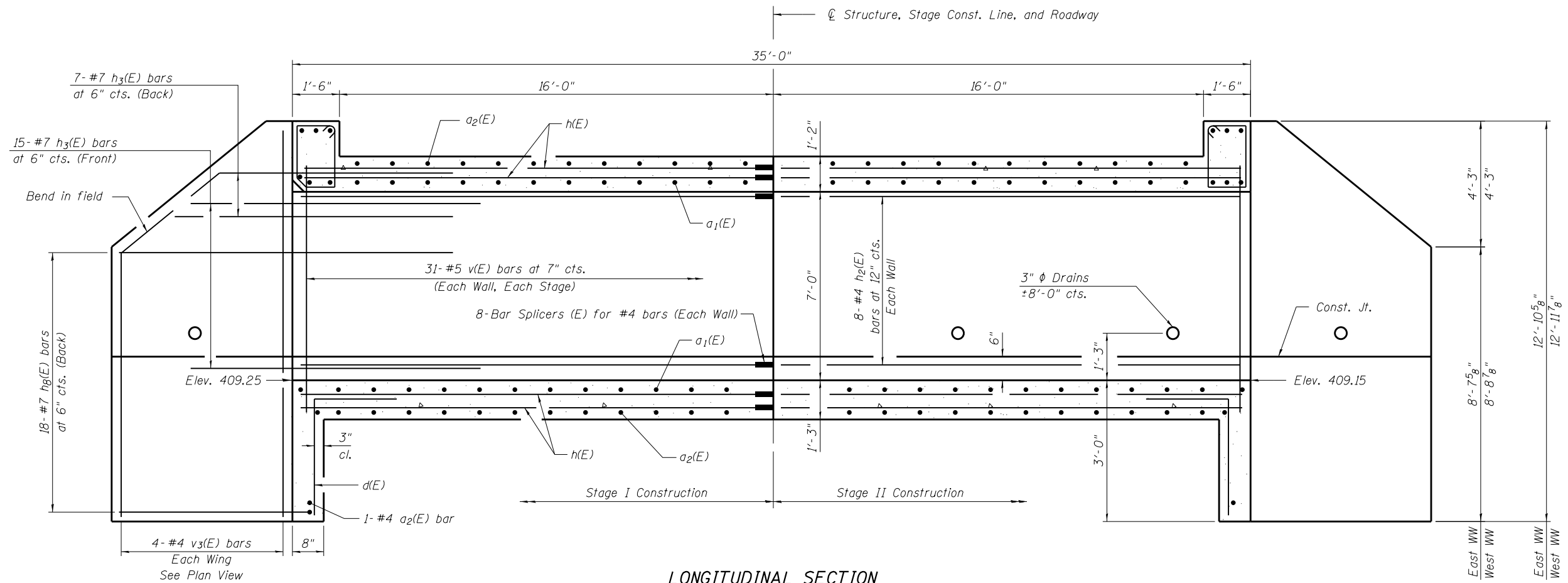
REVISED
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CULVERT PLAN
 STRUCTURE NO. 097-2015

SHEET NO. 4 OF 8 SHEETS

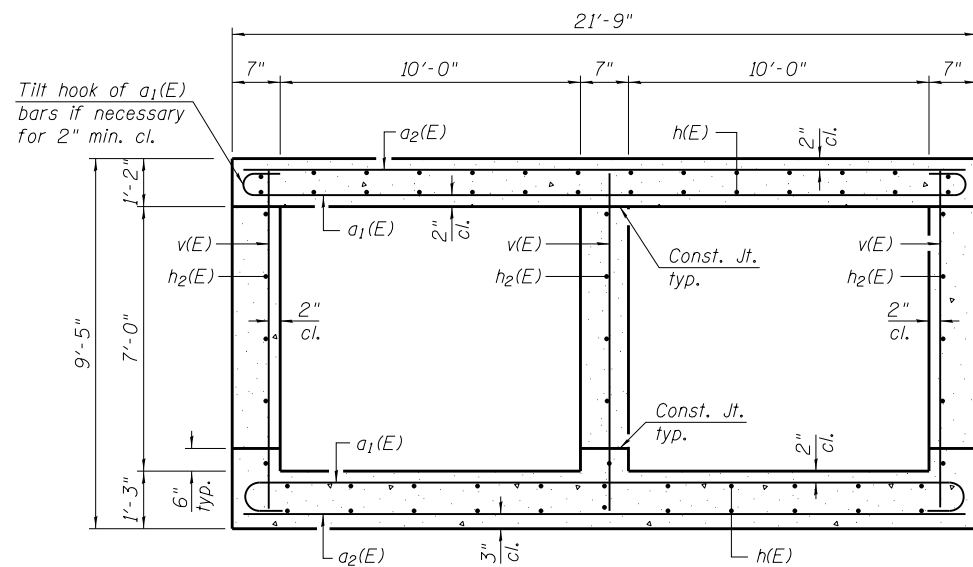
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	20
				CONTRACT NO. 78163
ILLINOIS FED. AID PROJECT				



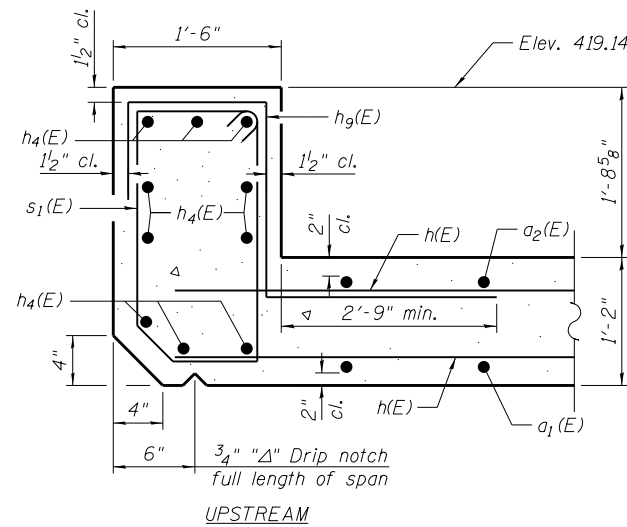
LONGITUDINAL SECTION
(Looking South)

Notes:

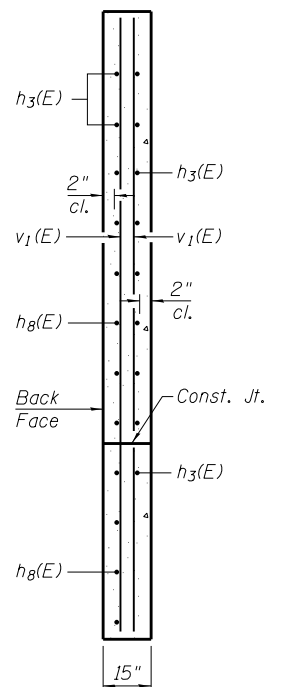
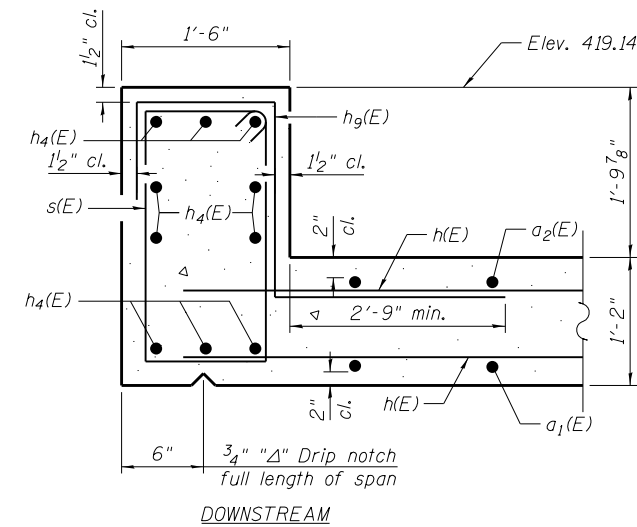
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
See Sheet 4 of 8 for location of Section A-A.



SECTION THRU BARREL



SECTION THRU HEADWALL



SECTION A-A

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MODEL = #MODEL\$
PLOT DRIVER = #PLOTDRVS\$



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0972015-78163-005-Culvert Details.dgn
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CHECKED - MDC

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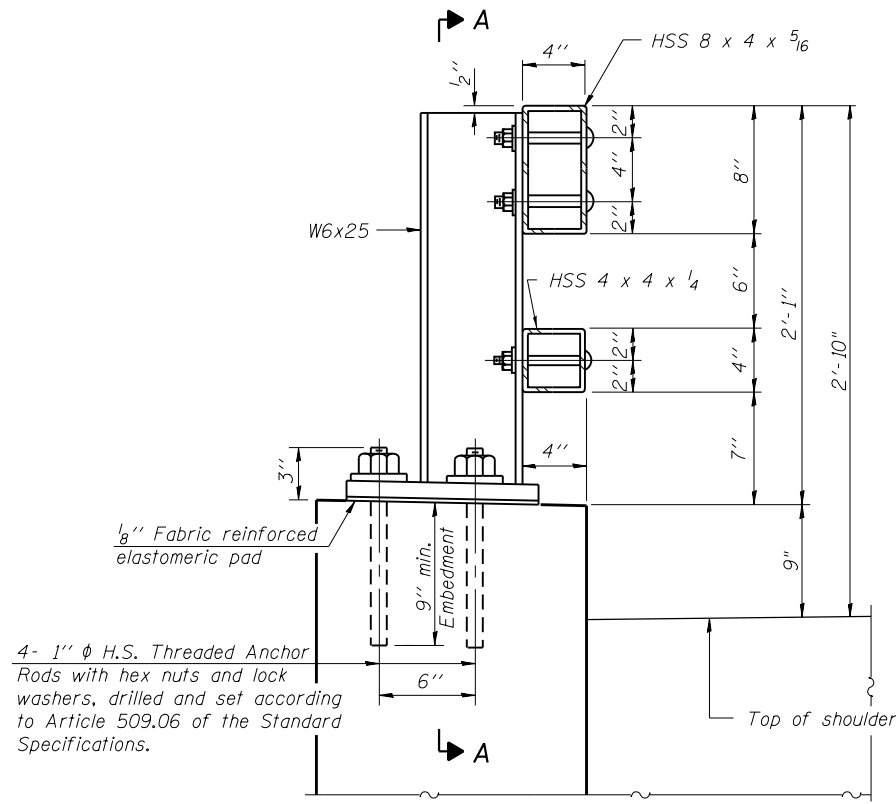
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CULVERT DETAILS
STRUCTURE NO. 097-2015

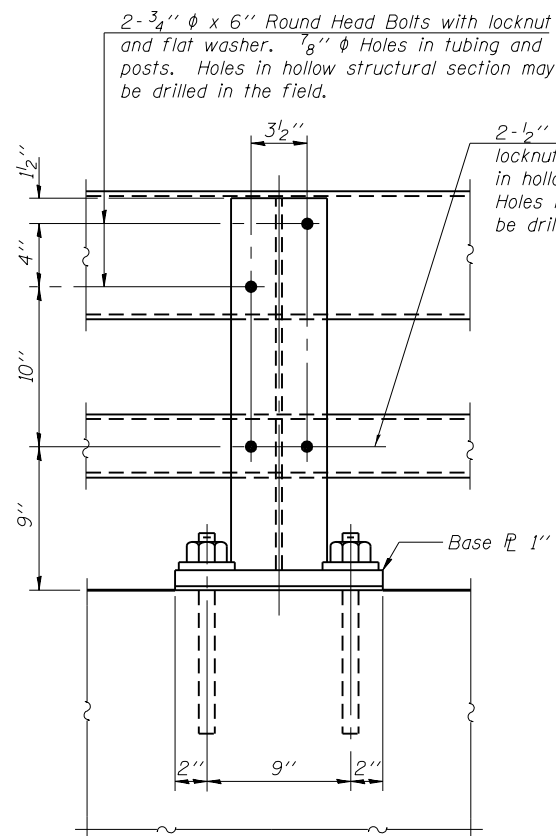
SHEET NO. 5 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78163				

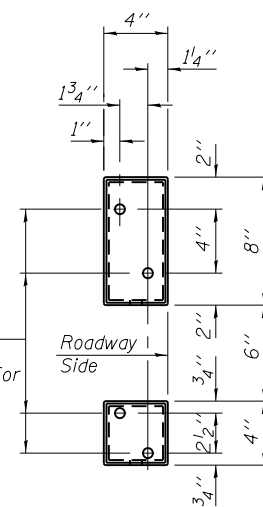
ILLINOIS FED. AID PROJECT



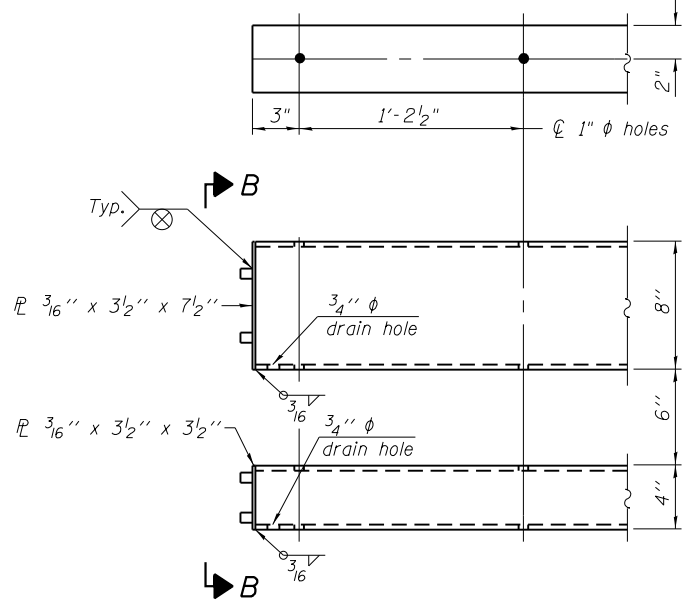
SECTION AT RAIL POST



SECTION A-A



VIEW B-B



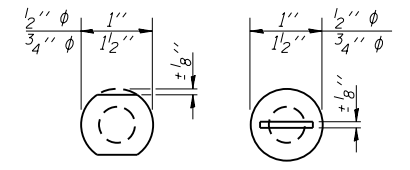
END OF RAIL DETAILS

4- 1" ϕ H.S. Threaded Anchor Rods with hex nuts and lock washers, drilled and set according to Article 509.06 of the Standard Specifications.

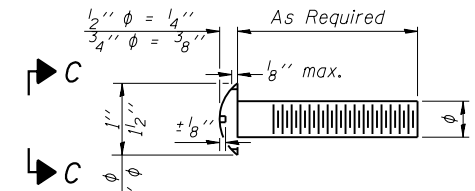
2- 3/4" ϕ x 6" Round Head Bolts with locknut and flat washer. 7/8" ϕ Holes in tubing and posts. Holes in hollow structural section may be drilled in the field.

2- 1/2" ϕ x 6" Round Head Bolts with locknut and flat washer. 5/8" ϕ Holes in hollow structural section and post. Holes in hollow structural section may be drilled in the field.

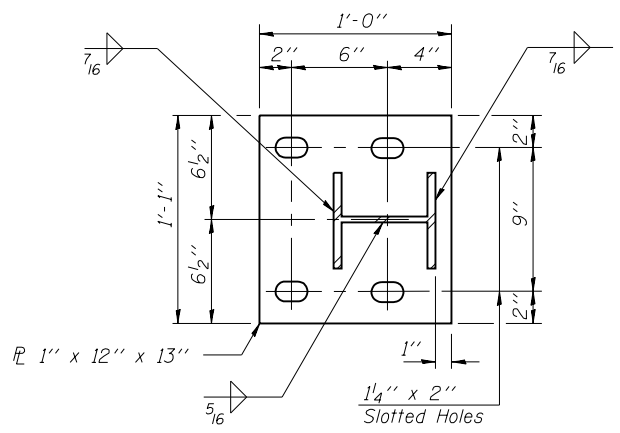
4- 5/8" reduced base welded studs. Provide 4- 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.



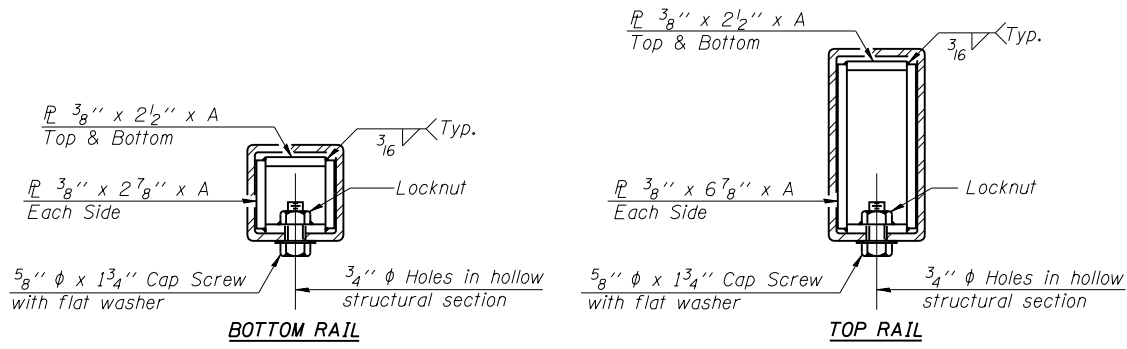
VIEW C-C



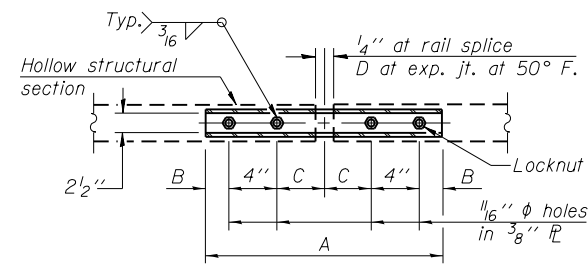
DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS



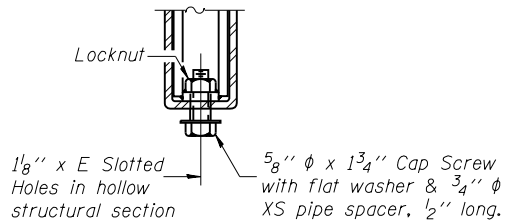
BASE PLATE DETAIL



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:
 Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.
 Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.
 Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

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	4"	1'-8"	2"	4"	—

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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	47

(6'-3" Maximum Post Spacing)

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 PLOT DRIVER = #PLOTDRVS\$



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 PLOT DATE = 8/3/2017

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 CHECKED - MDC

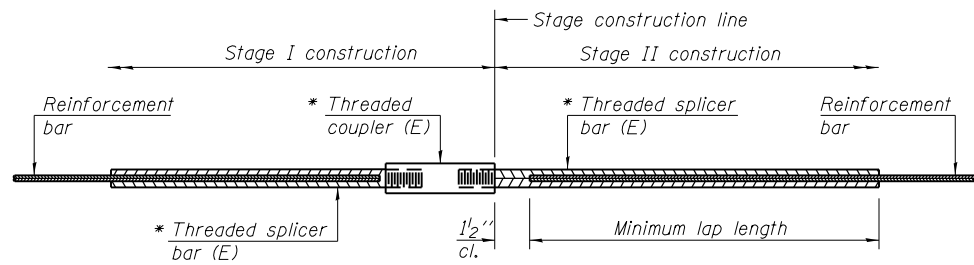
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE 2399
 STRUCTURE NO. 097-2015

SHEET NO. 6 OF 8 SHEETS

F.A.P. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 328 109B-1 WHITE 31 22
 CONTRACT NO. 78163
 ILLINOIS FED. AID PROJECT

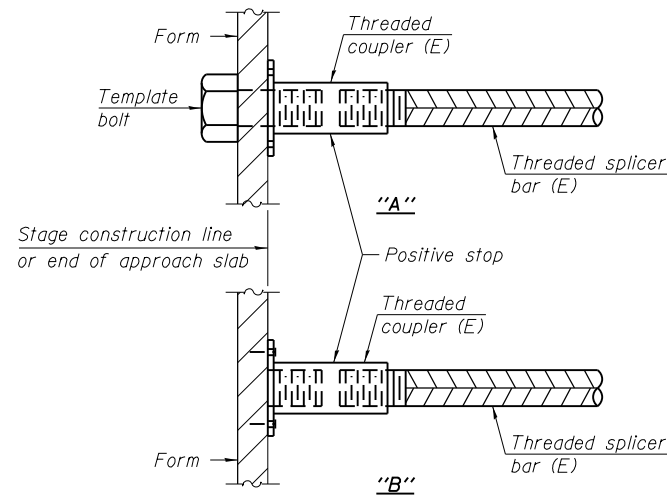


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1/2" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Top Slab	#5	44	3'-2"
Walls	#4	24	2'-11"
Bottom Slab	#5	44	3'-2"

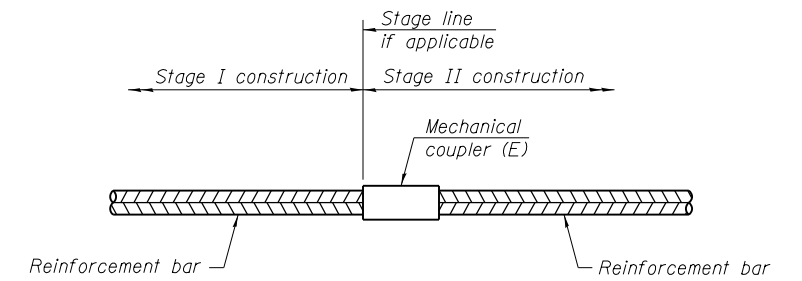


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

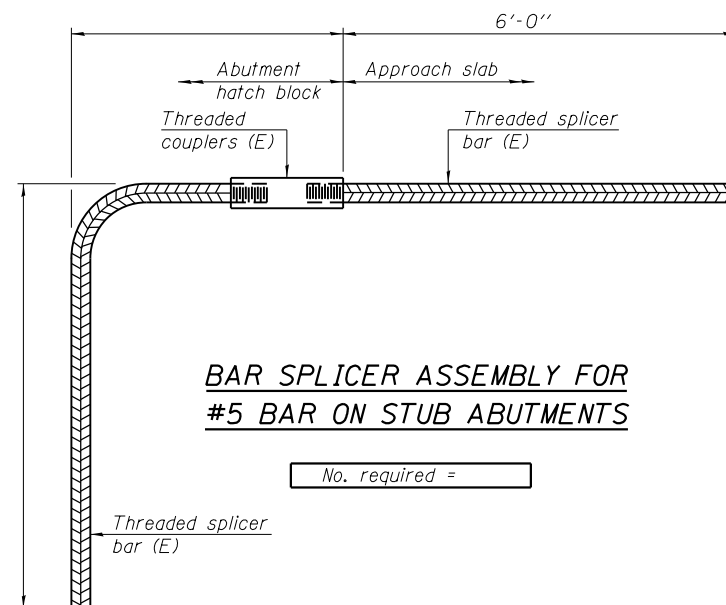
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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MODEL = #MODEL\$
PLOT DRIVER = #PLTDRVS\$

BSD-1

11-22-2016



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PLOT DATE = 8/3/2017

DESIGNED - RPW
CHECKED - KWB
DRAWN - RPW
CHECKED - MDC

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REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 097-2015

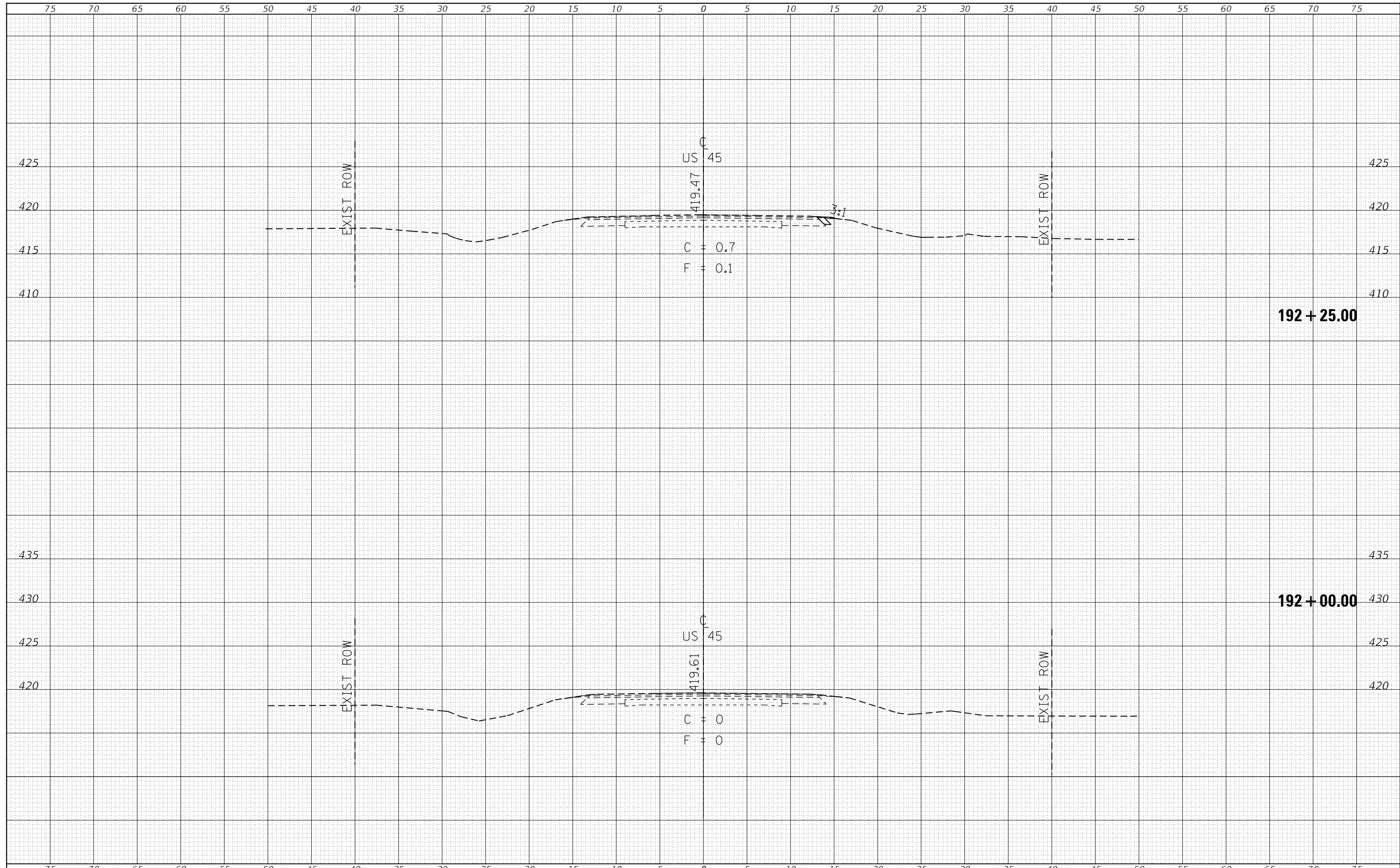
SHEET NO. 7 OF 8 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	23
CONTRACT NO. 78163				

ILLINOIS FED. AID PROJECT

DATE	
BY	
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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS
	CHECKED

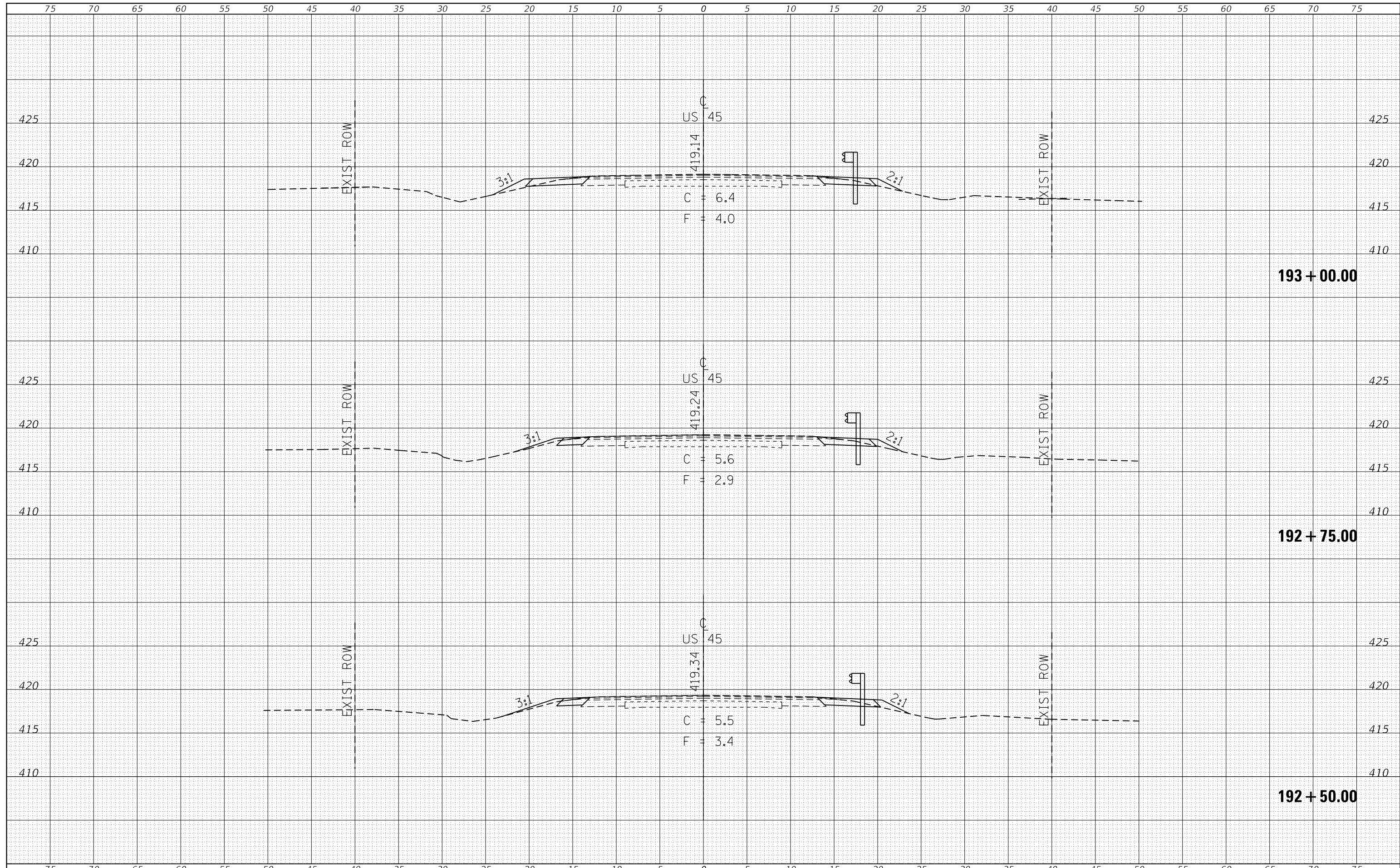
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NOTE BOOK	PLOTTED
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	PLOT DATE = 8/17/2017	DATE -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA. 192+00.00	TO STA. 192+25.00

DATE	
BY	
ORIGINAL SURVEY NO.	
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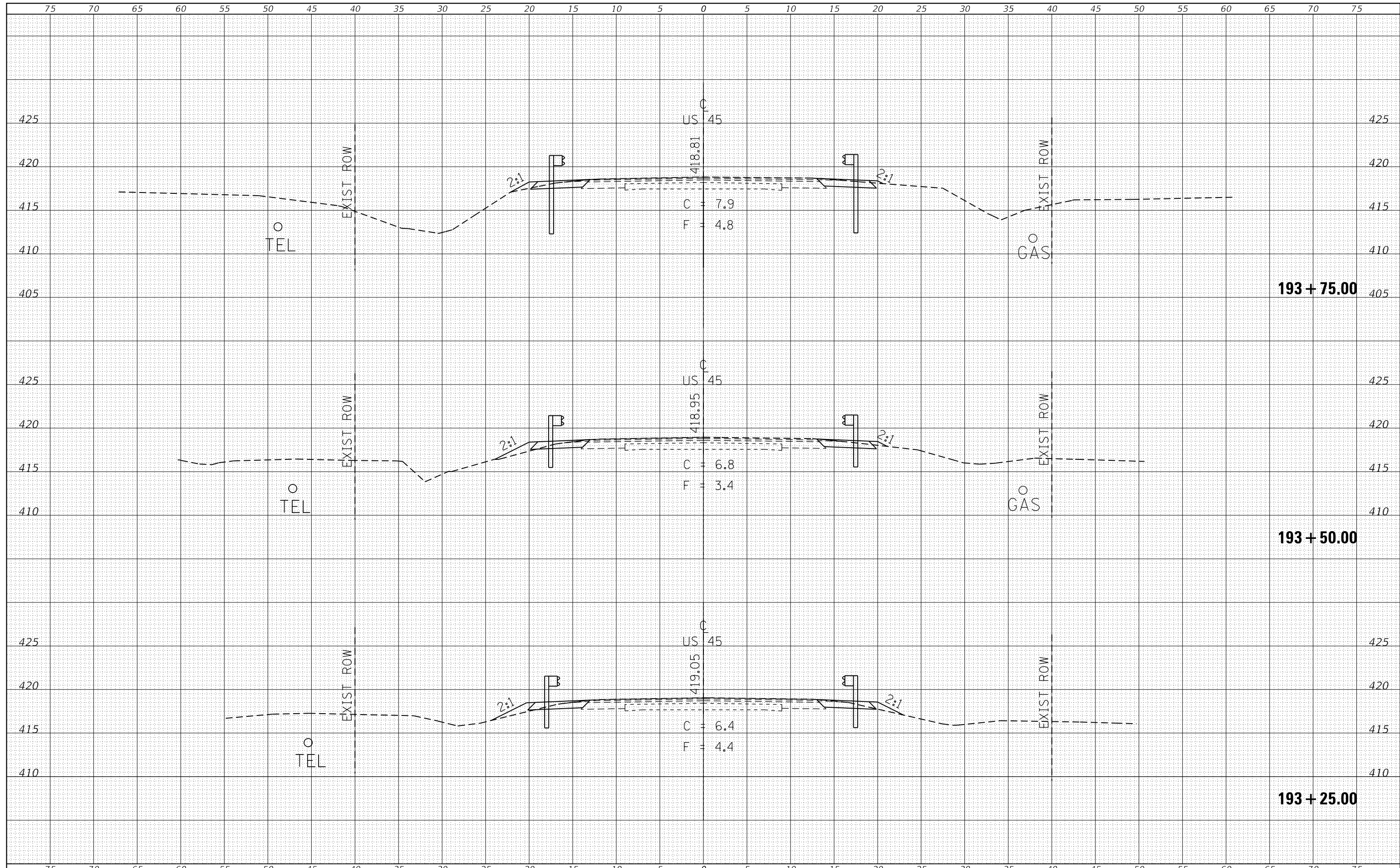
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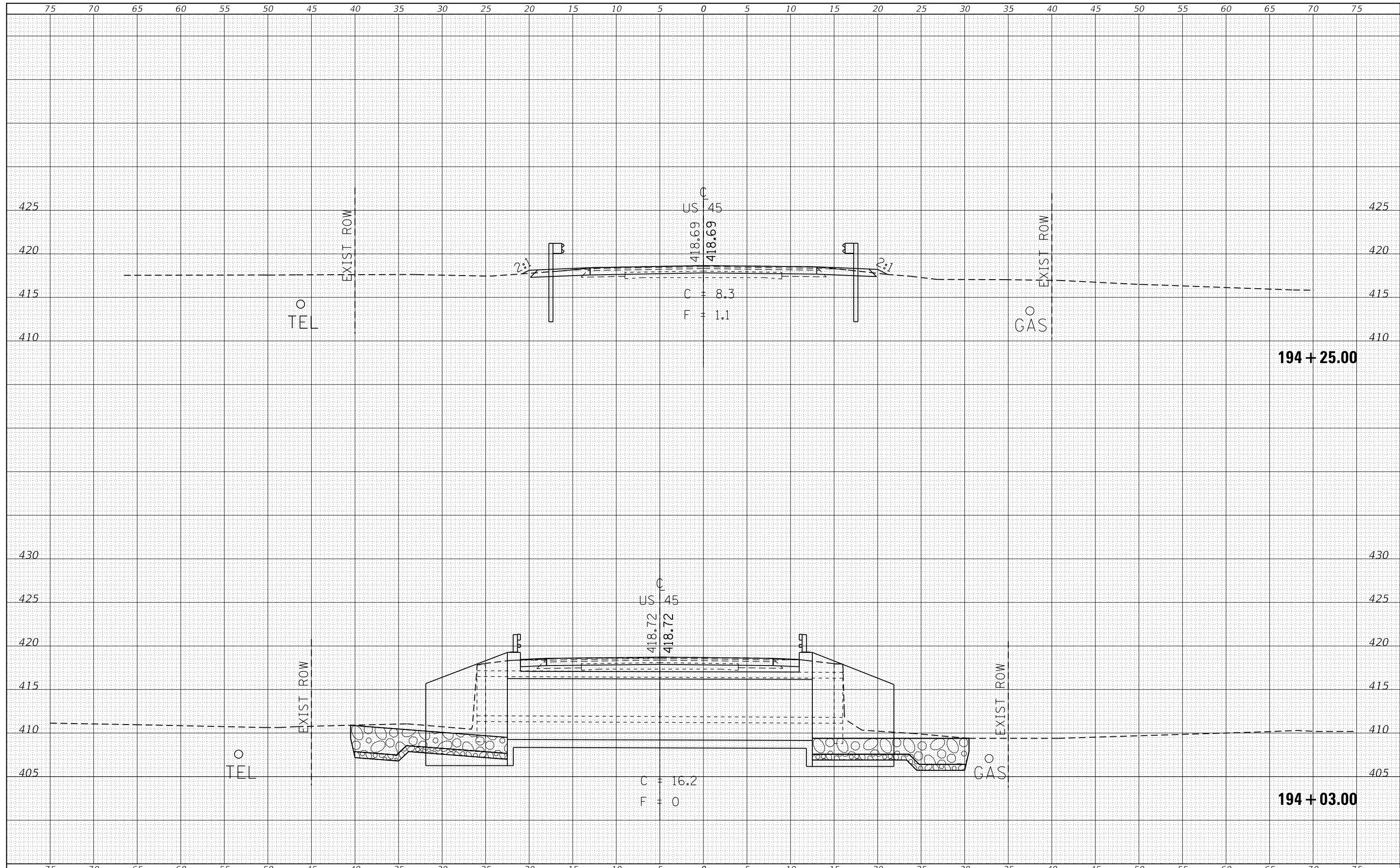
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DATE	
BY	
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BY	
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	AREAS CHECKED



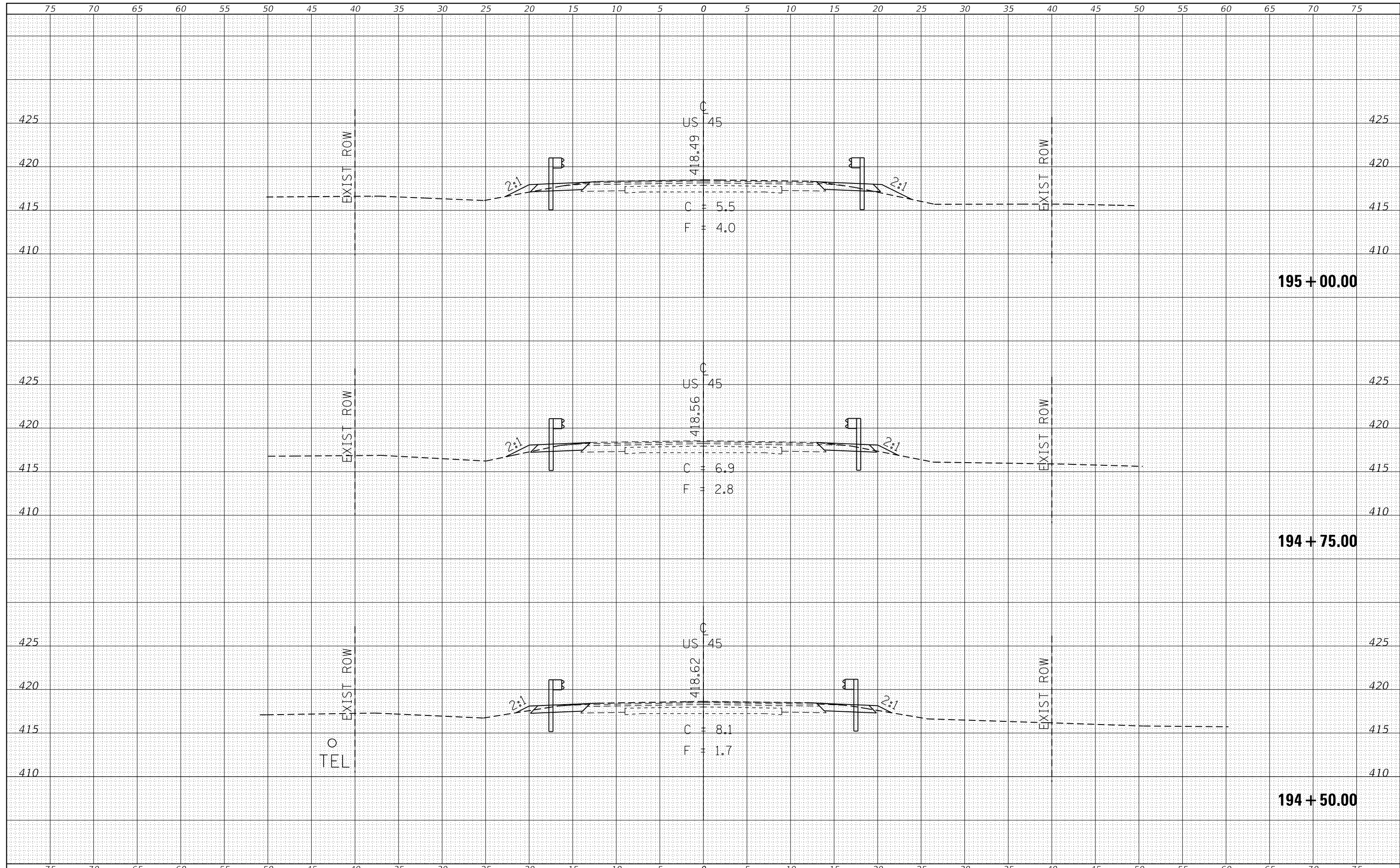
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194 + 25.00

194 + 03.00

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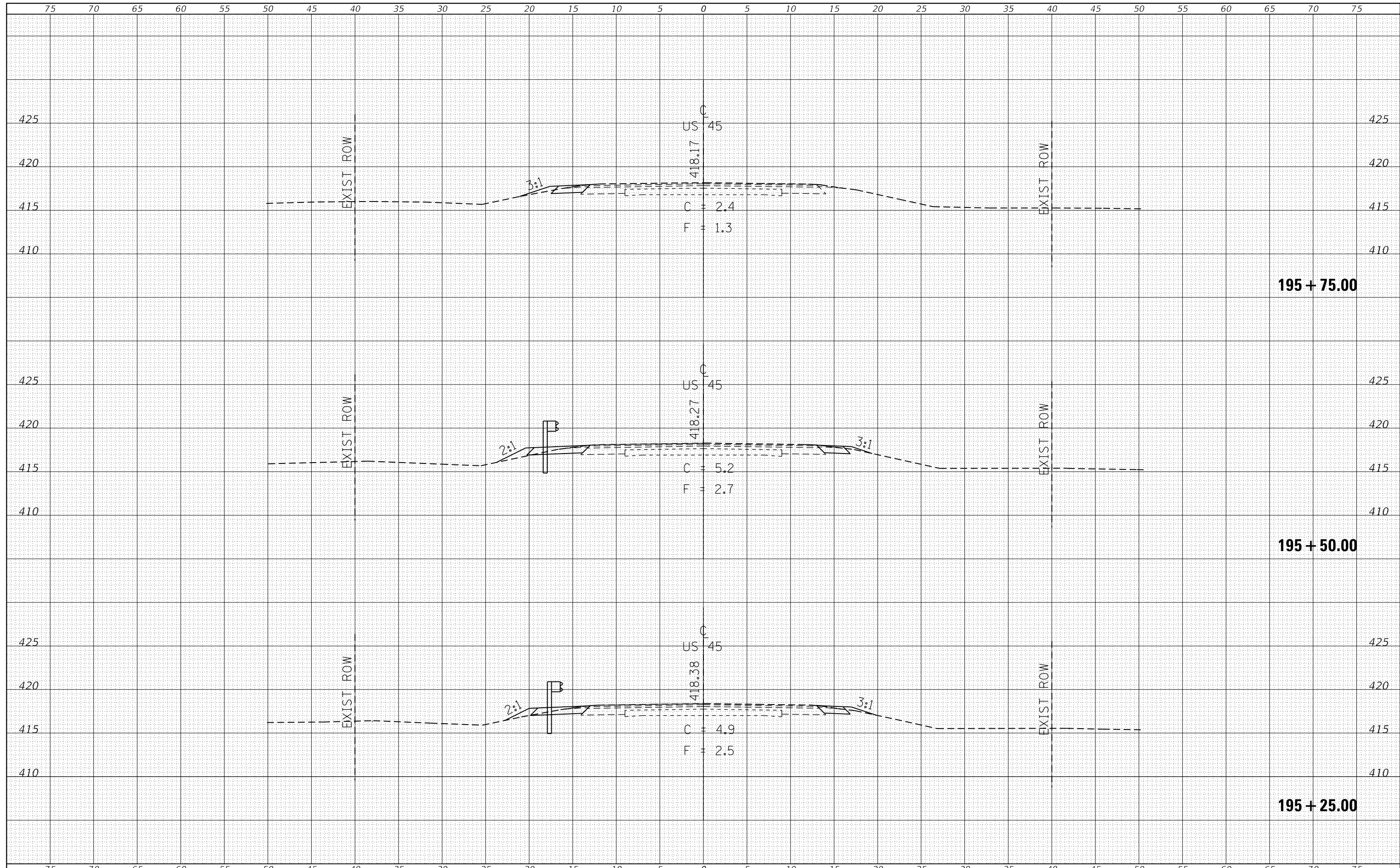
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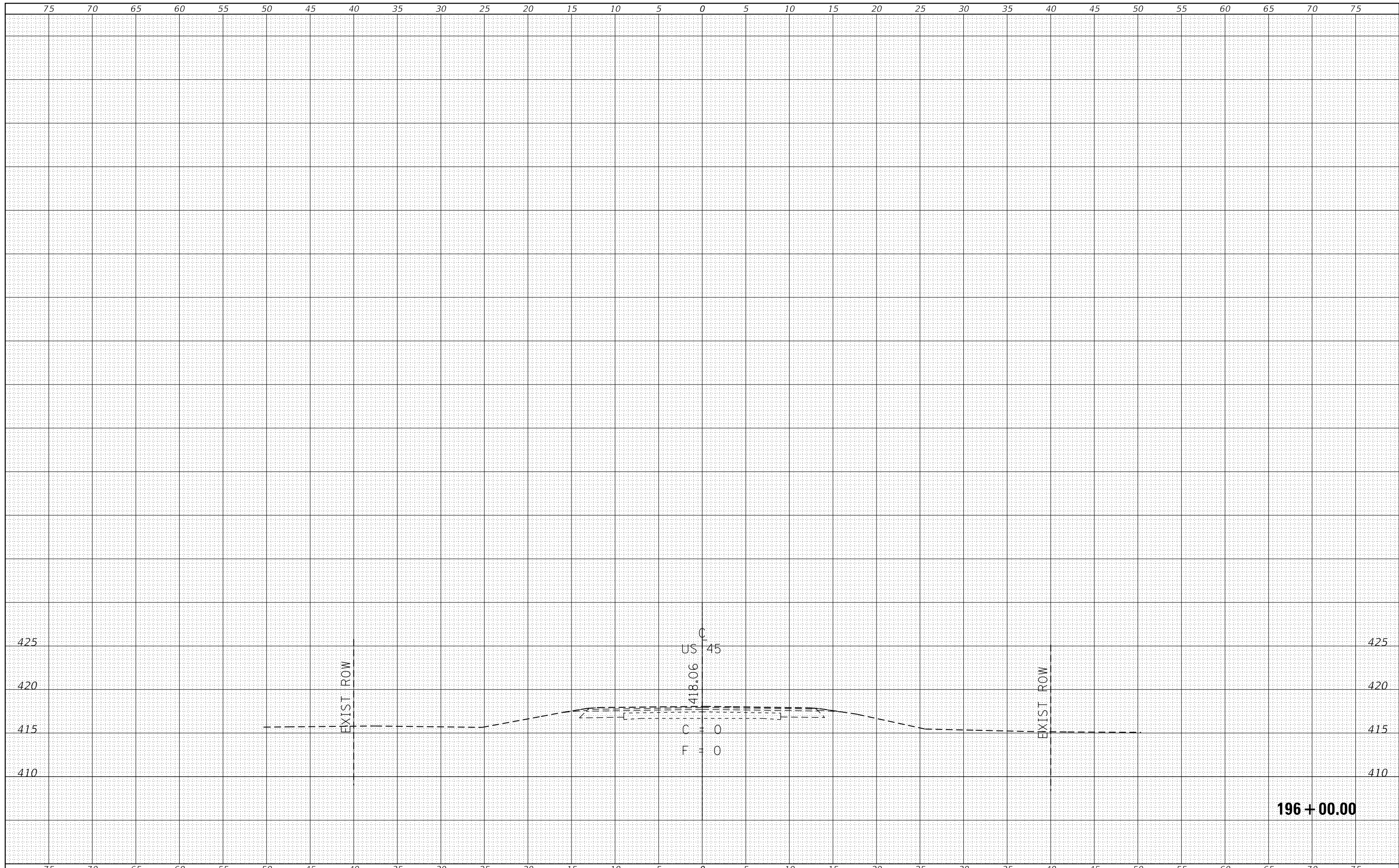
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 DATE - 8/17/2017

REVISED -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS
 SCALE: SHEET OF SHEETS STA. 196+00.00 TO STA. 196+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	109B-1	WHITE	31	31
CONTRACT NO. 78163				
ILLINOIS		FED. AID PROJECT		