

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 385	12-11131-00-BR	CLAY	22	1
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 95763			

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.	PLAN AND PROFILE
5-12.	STATION CROSS SECTIONS
13-20.	BRIDGE PLANS
21-22.	BORINGS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-04	TRAFFIC CONTROL DEVICES
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

**PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM
OFF SYSTEM BRIDGE**

**PROJECT BROS-0025(081)
SECTION 12-11131-00-BR
STANFORD ROAD DISTRICT
CLAY COUNTY
T.R. 385 / WATERCRESS ROAD
PROPOSED STRUCTURE NO. 013-3244
C-97-038-15**

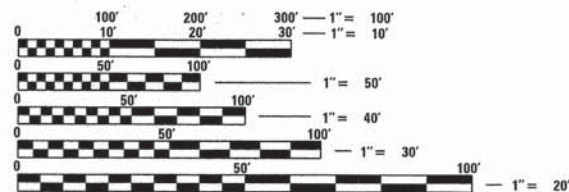


FUNCTIONAL CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 25 ADT (2014)

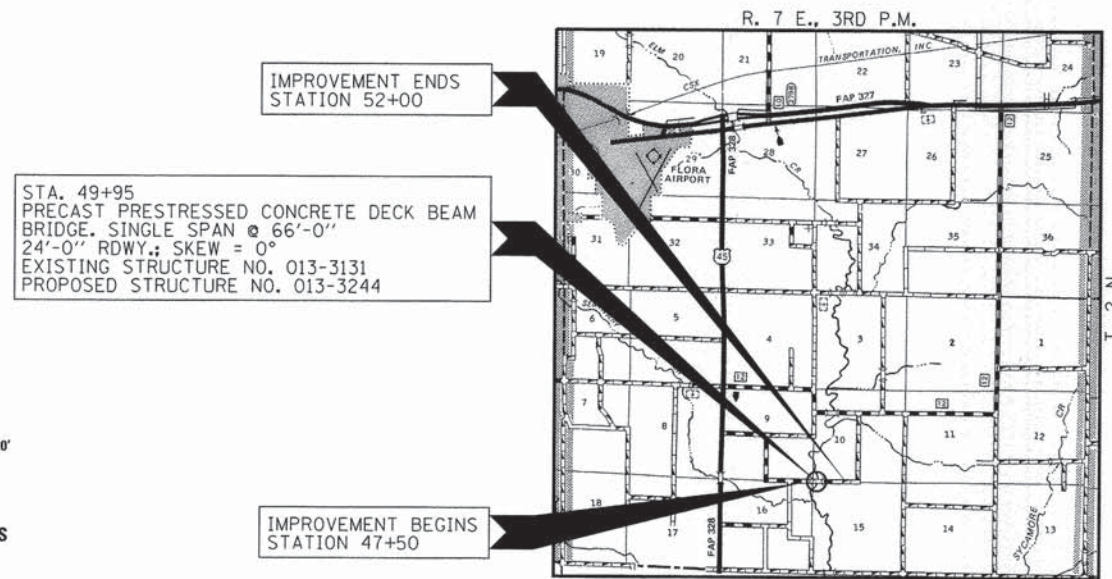
UTILITIES

FRONTIER COMMUNICATIONS
225 EAST CHESTNUT STREET
OLNEY, IL 62450

CLAY COUNTY WATER
7784 OLD HIGHWAY 50
P.O. BOX 555
FLORA, IL 62839



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.

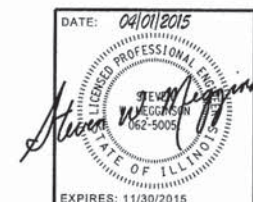


LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 450 FEET = 0.085 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION	
APPROVED	4/2 2015 <i>Michael R. Quardt</i> COUNTY ENGINEER
APPROVED	4-2 2015 <i>Tom Deak</i> TOWNSHIP COMMISSIONER
PASSED	4-10 2015 <i>Maurice Kestel</i> DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS
Releasing For Bid Based on Limited Review	4-10 2015 <i>Roger L. Druehler</i> DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



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

164.00959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

DATE: 04/01/2015
PROJECT NUMBER: 14.0097.130
DATE: 04/01/15

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	CONSTRUCTION CODE 0011	
		UNIT	TOTAL
20200100	EARTH EXCAVATION	CU YD	305
20300100	CHANNEL EXCAVATION	CU YD	130
20400800	FURNISHED EXCAVATION	CU YD	630
28000305	TEMPORARY DITCH CHECKS	FOOT	50
28000400	PERIMETER EROSION BARRIER	FOOT	180
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	365
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	24.2
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,584
50800105	REINFORCEMENT BARS	POUND	2,820
50900205	STEEL RAILING, TYPE S1	FOOT	132
51201400	FURNISHING STEEL PILES HP10X42	FOOT	280
51202305	DRIVING PILES	FOOT	280
51203400	TEST PILE STEEL HP10X42	EACH	1
51500100	NAME PLATES	EACH	1
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	34
542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	40
58700300	CONCRETE SEALER	SQ FT	94
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	54
67100100	MOBILIZATION	L SUM	1
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.5
X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	310

^ 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, JANUARY 1, 2012," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL OF THE EXISTING AGGREGATE SURFACE WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPOSED DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION 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 COMPANIES AND BY FIELD INSPECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

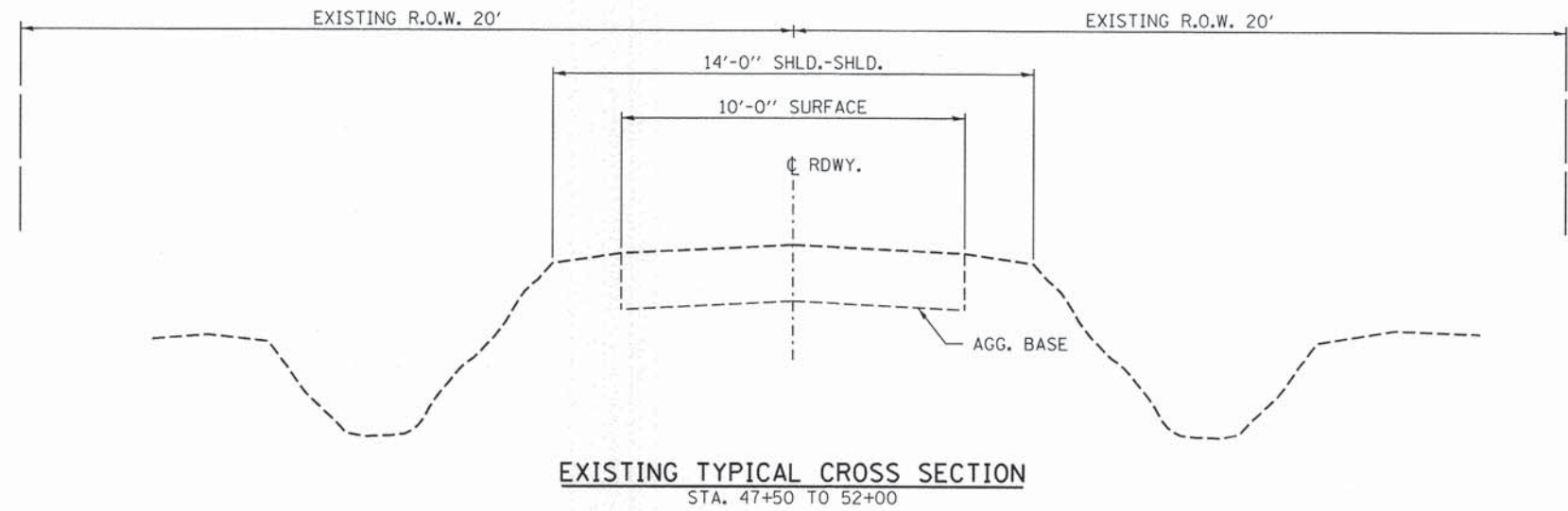
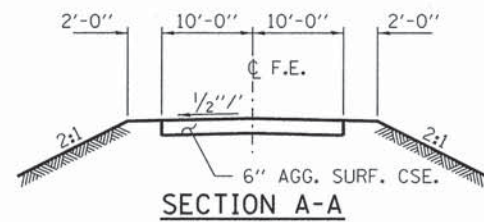
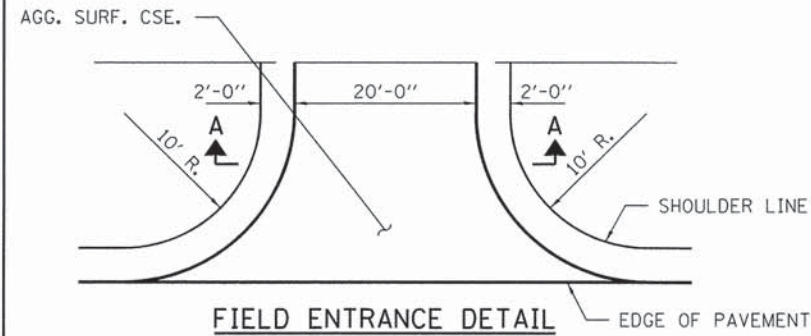
AGGREGATE SURFACE COURSE, TYPE B	2.05 TON/CU YD
STONE RIPRAP, CLASS A4	1.75 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER
SEEDING, CLASS 2 (SPECIAL) = 0.5 ACRES

EARTHWORK SUMMARY

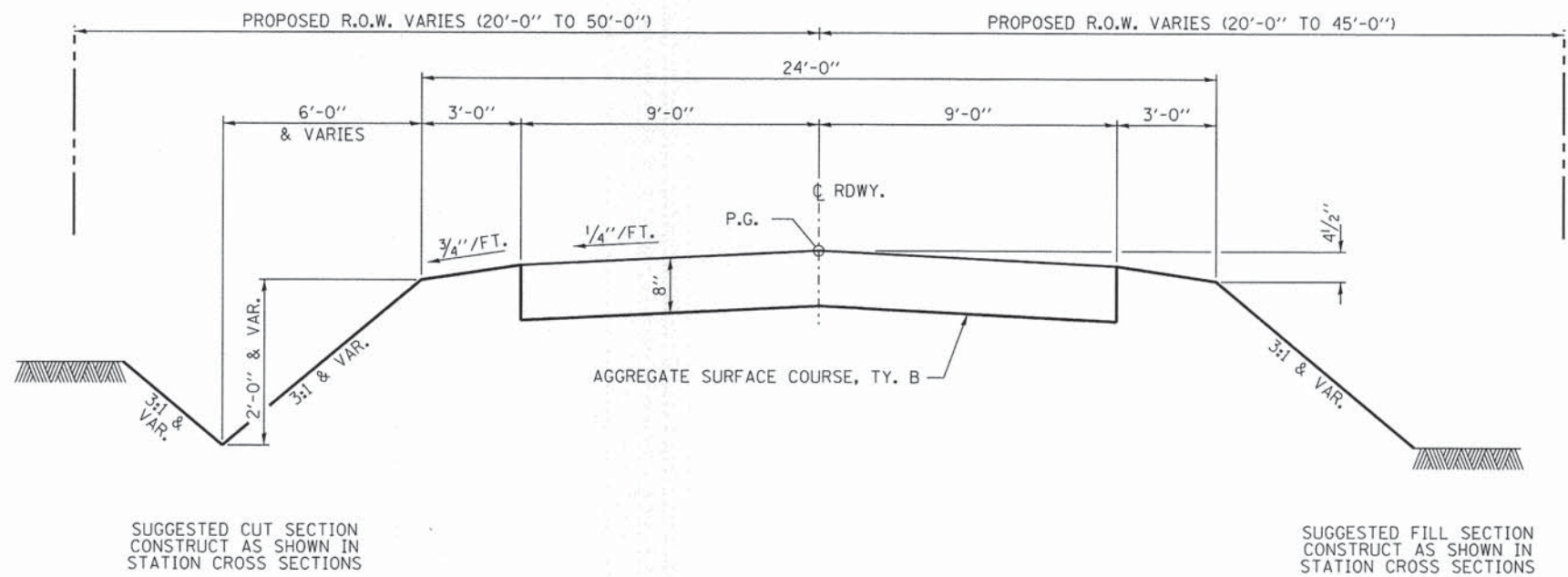
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	% USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE WASTE (+) / SHORTAGE (-)
	20200100	20300100					
	CU YD	CU YD					
T.R. 385 / WATERCRESS ROAD							
STA 47+50.00 TO STA 49+61.34	252		25.00%	100.00%	189	642	-453
STA 49+61.34 TO STA 50+28.67		130	25.00%	70.00%	68		68
STA 50+28.67 TO STA 52+00.00	51		25.00%	100.00%	38	174	-136
ENTRANCE EMBANKMENT						108	-108
TOTAL	303	130			295	925	-629
USE	305	130					-630
					FURNISHED EXCAVATION	630	CU.YD.

EROSION CONTROL SCHEDULE

LOCATION	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER
	28000305	28000400
	FOOT	FOOT
TR 385 / WATERCRESS LANE		
LT. STA 48+90 TO LT. STA 49+40		50
LT. STA 49+55	25	
RT. STA 49+55	25	
LT. STA 50+20 TO LT. STA 51+50		130
TOTAL	50	180



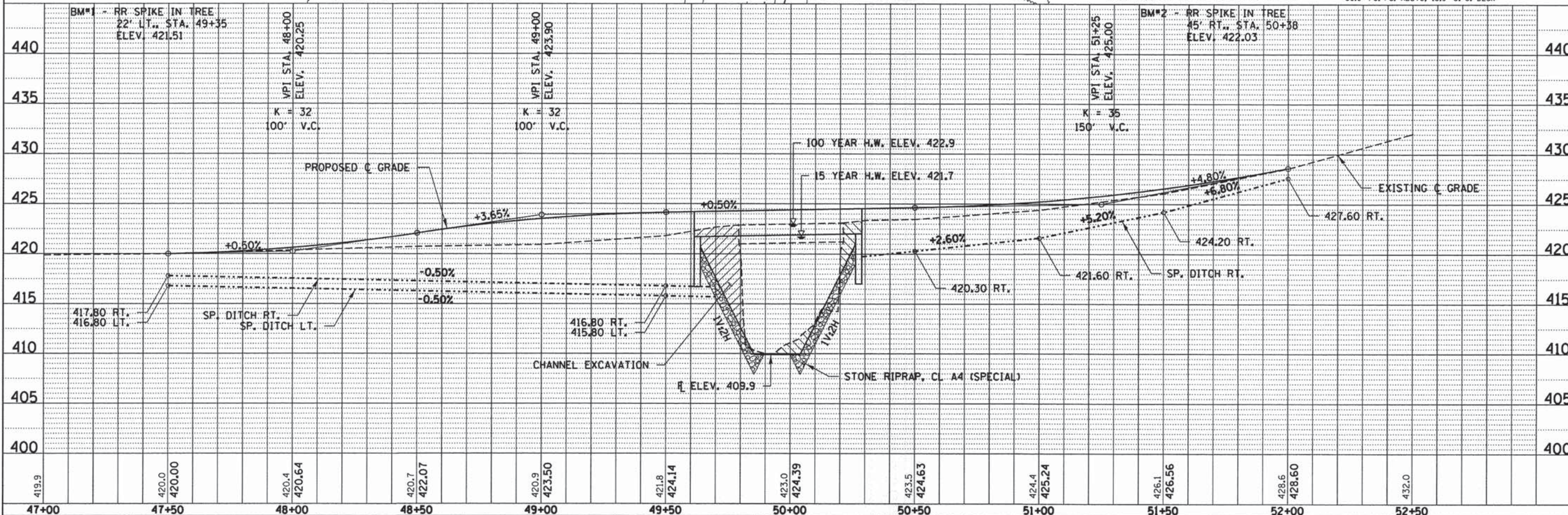
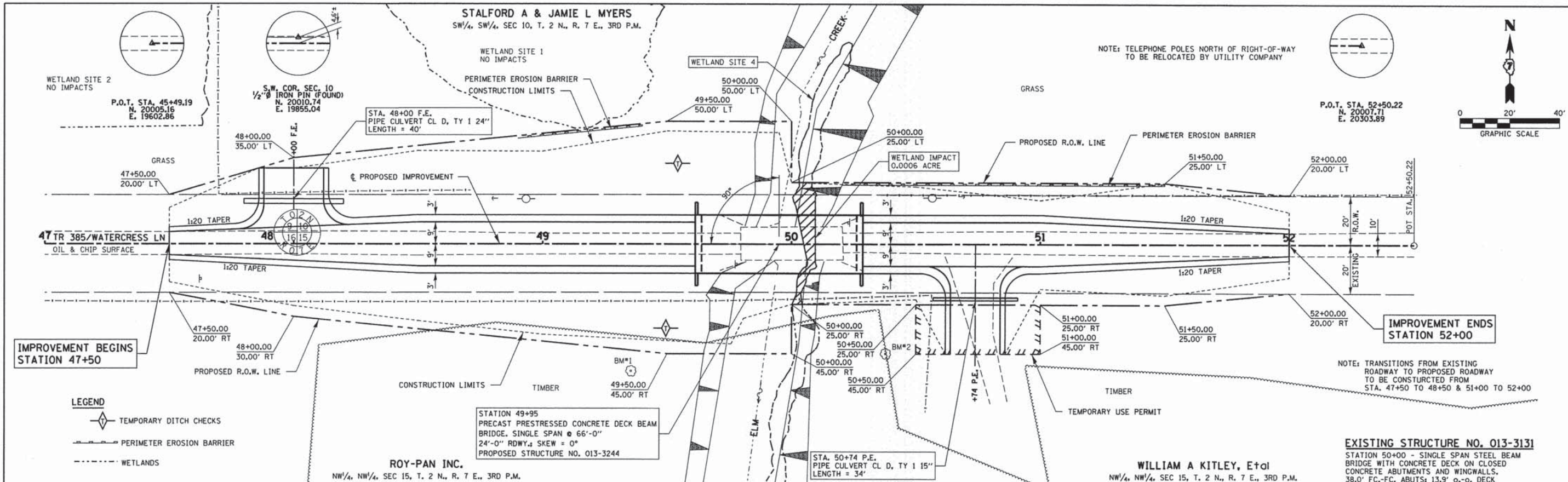
EXISTING TYPICAL CROSS SECTION
STA. 47+50 TO 52+00



PROPOSED TYPICAL CROSS SECTION
STA. 47+50 TO 52+00

TRANSITIONS FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY ARE TO BE CONSTRUCTED FROM STA. 47+50 TO 48+50 AND STA. 51+00 TO 52+00.

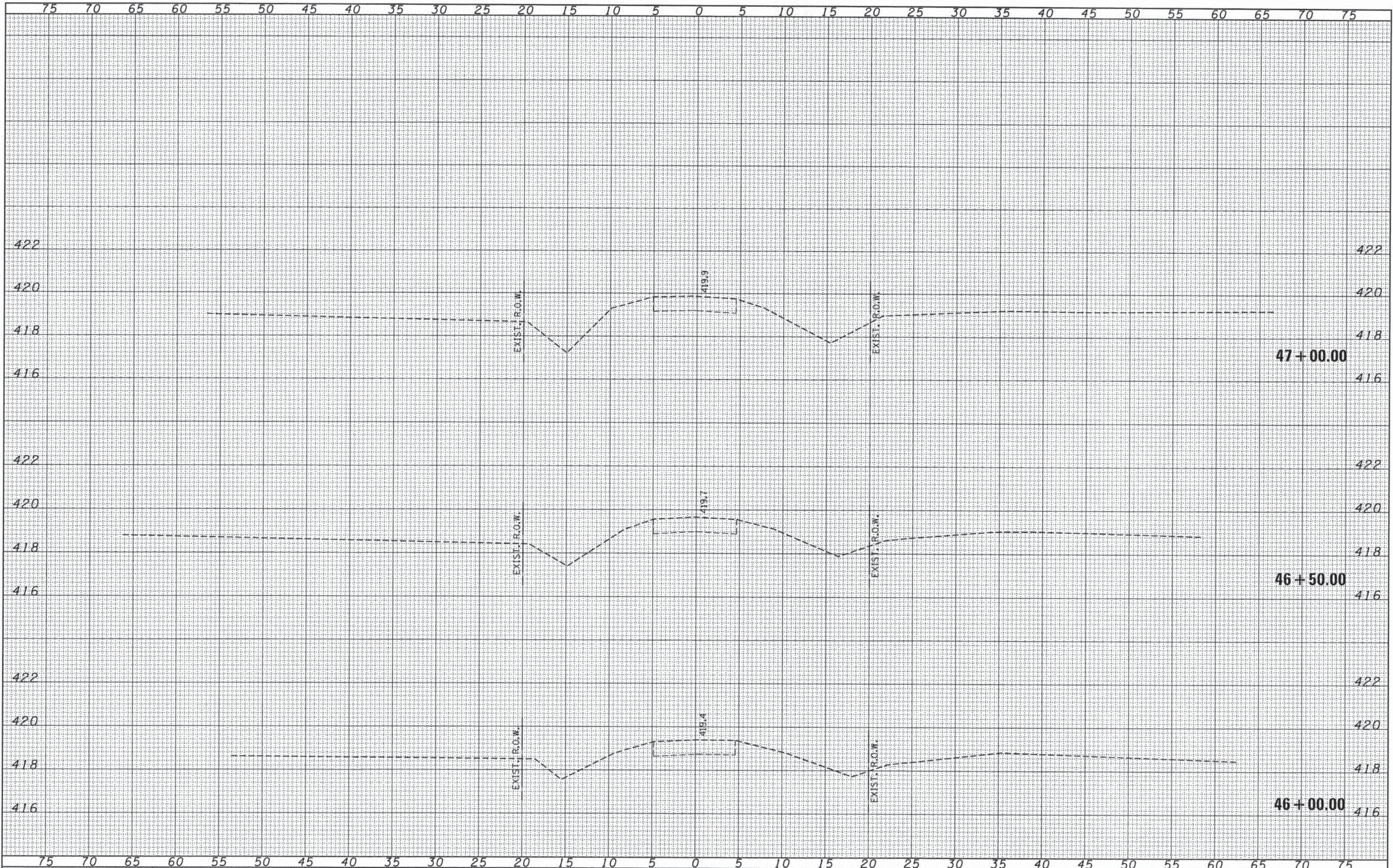
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HAMPTON, LENZINI AND RENWICK, INC. 2585 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - R.D.H.	REVISED -			385	12-11131-00-BR	CLAY	22	3	
ILLINOIS PROFESSIONAL DESIGN FIRM L.P. / P.E. / S.E. CORP. 184.000958	PLOT DATE = 4/1/2015	CHECKED - S.W.M.	REVISED -			STANFORD ROAD DISTRICT	CONTRACT NO. 95763		ILLINOIS FED. AID PROJECT BROS-0025(081)		
		DATE - 04/01/15	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.		



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BY	
PLAN	
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DATE	
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NO.	

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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -			385	12-11131-00-BR	CLAY	22	4
3000 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62702	PLOT SCALE =	CHECKED - S.W.M.	REVISED -			STANFORD ROAD DISTRICT				
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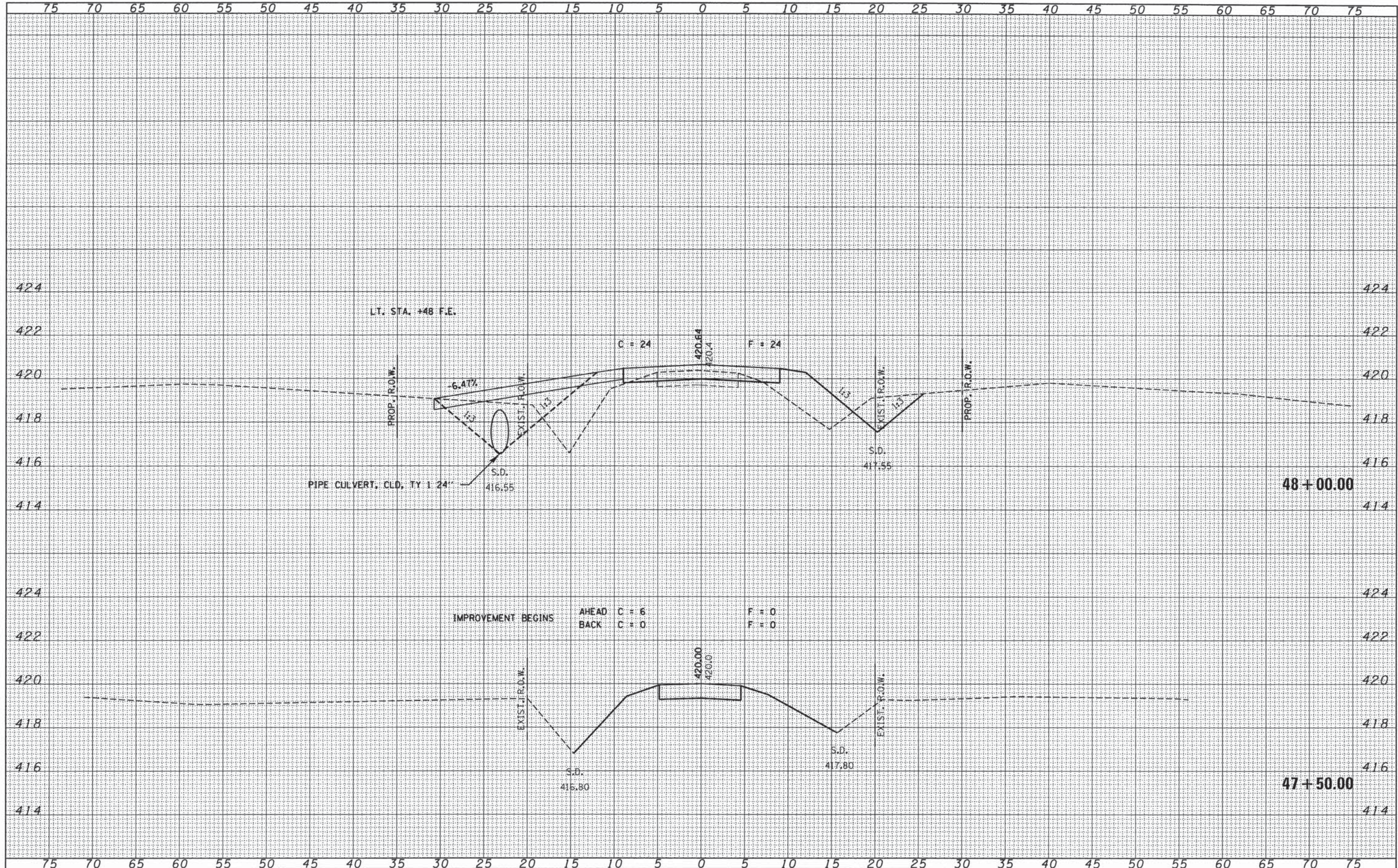
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ORIGINAL SURVEY	

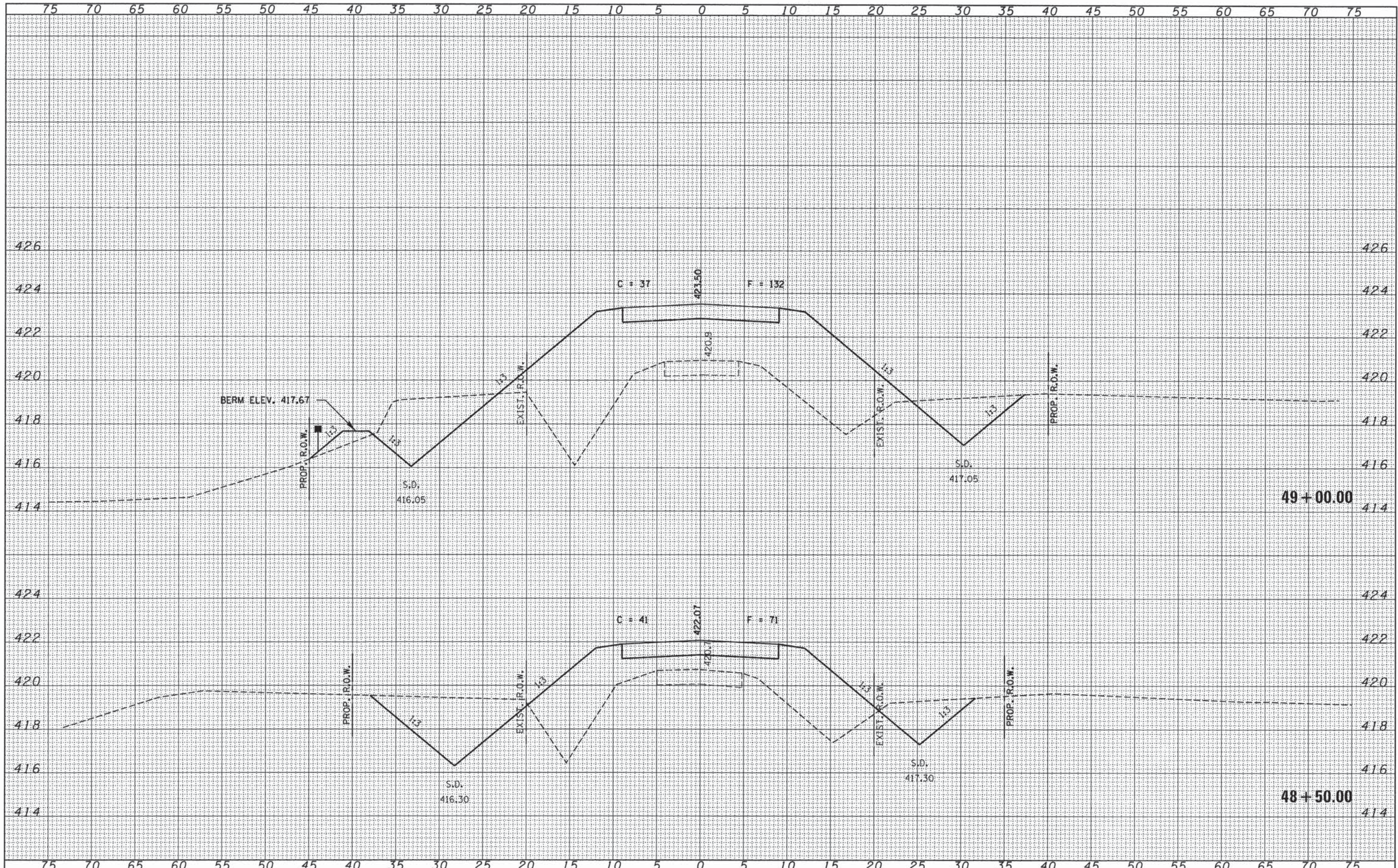
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		385	12-11131-00-BR	CLAY	22	5			
200 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62761	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		STANFORD ROAD DISTRICT			CONTRACT NO. 95763				
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 194.000009	PLOT DATE = 4/1/2015	DATE - 04/01/15	REVISED -		SCALE: 5H:2V	SHEET NO. 1 OF 8 SHEETS	STA. 46+00.00 TO STA. 47+00.00	[ILLINOIS] FED. AID PROJECT BROX-0025(08)				

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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1400 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		385	12-11131-00-BR	CLAY	22	6
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-000059	PLOT DATE = 4/1/2015	DATE - 04/01/15	REVISED -		STANFORD ROAD DISTRICT		CONTRACT NO. 95763		[ILLINOIS] FED. AID PROJECT BROX-00251081



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 HAMPTON, LENZINI AND RENWICK, INC.
 2015 STEVENSON DRIVE, SUITE 207
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LICENSE NO. 001-000000

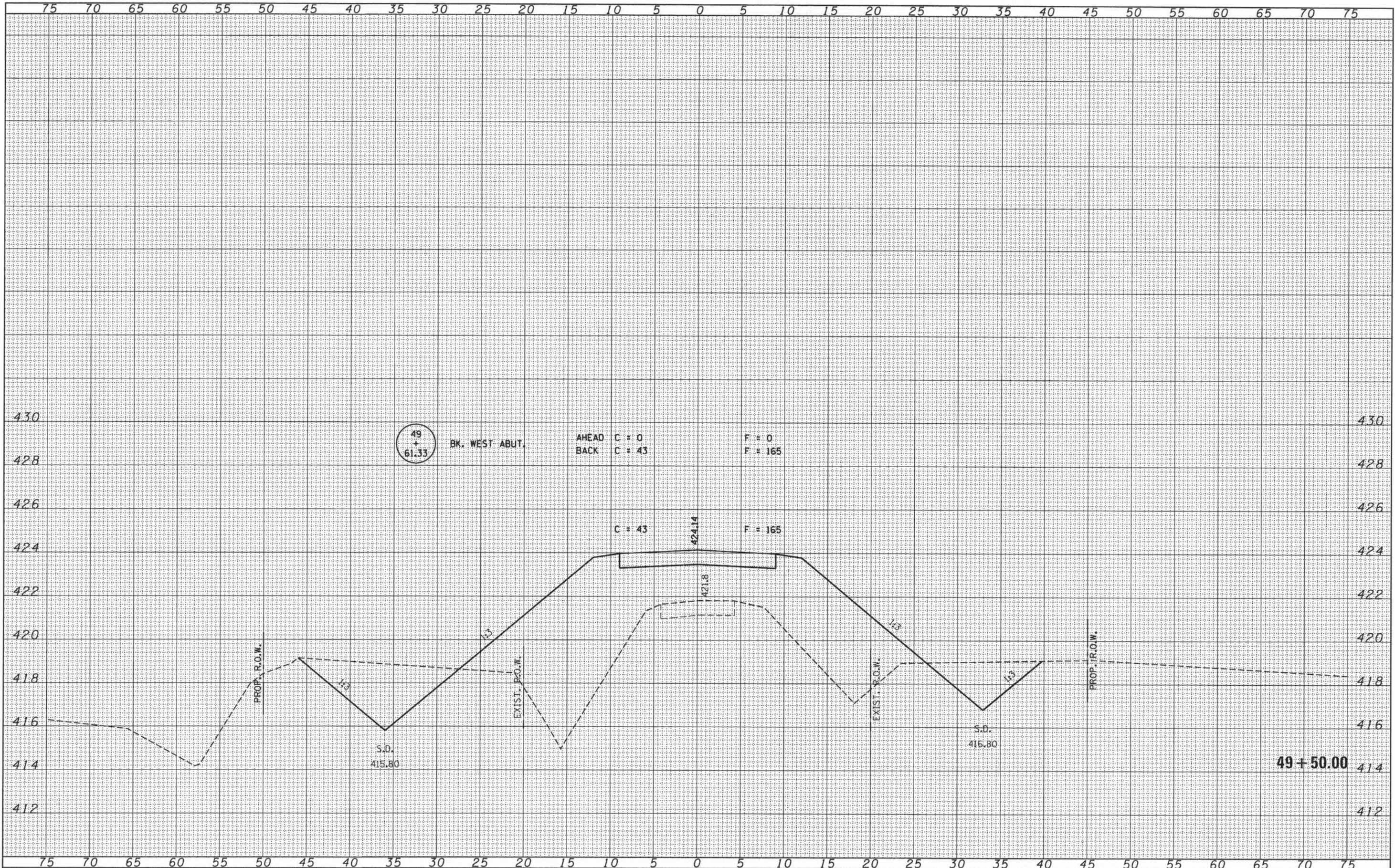
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	CHECKED - S.W.M.	REVISED -
PLOT SCALE =	DATE - 04/01/15	REVISED -
PLOT DATE = 4/1/2015		

STATE OF ILLINOIS
 CLAY COUNTY HIGHWAY DEPARTMENT

SCALE: 5H:2V	SHEET NO. 3 OF 8 SHEETS	STA. 48+50.00 TO STA. 49+00.00
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STATION CROSS SECTIONS

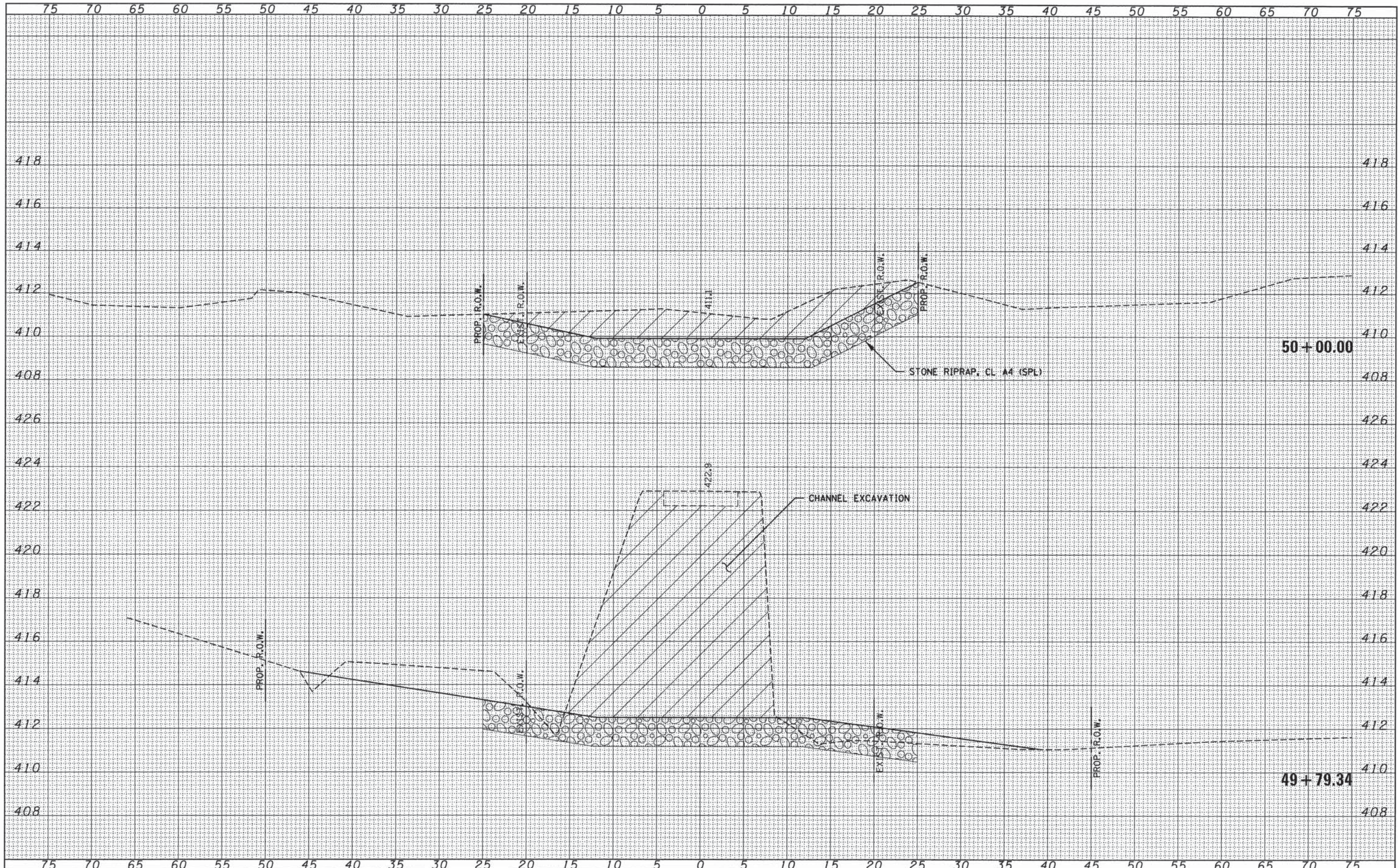
TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
385	12-11131-00-BR	CLAY	22	7
STANFORD ROAD DISTRICT			CONTRACT NO. 95763	
ILLINOIS FED. AID PROJECT BROX-0025(081)				



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NOTE BOOK	
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HAMPTON, LENZINI AND RENWICK, INC. 2005 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763		DRAWN - L.G.C.	REVISED -		385	12-11131-00-BR	CLAY	22	8			
ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / BE CORP. 184.000899	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		STANFORD ROAD DISTRICT			CONTRACT NO. 95763				
	PLOT DATE = 4/1/2015	DATE - 04/01/15	REVISED -		SCALE: 5H:2V			SHEET NO. 4 OF 8 SHEETS STA. 49+50.00 TO STA. 49+50.00				
ILLINOIS FED. AID PROJECT BROX-0025(08)												



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TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
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BY	
ORIGINAL SURVEY	
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TEMPLATE	
NOTE BOOK	
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 HAMPTON, LENZINI AND RENWICK, INC.
 300 S. EVERGREEN DRIVE, SUITE 207
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LICENSE NO. 000000000

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	DRAWN - L.G.C.	REVISED -
PLOT SCALE =	CHECKED - S.W.M.	REVISED -
PLOT DATE = 4/1/2015	DATE - 04/01/15	REVISED -

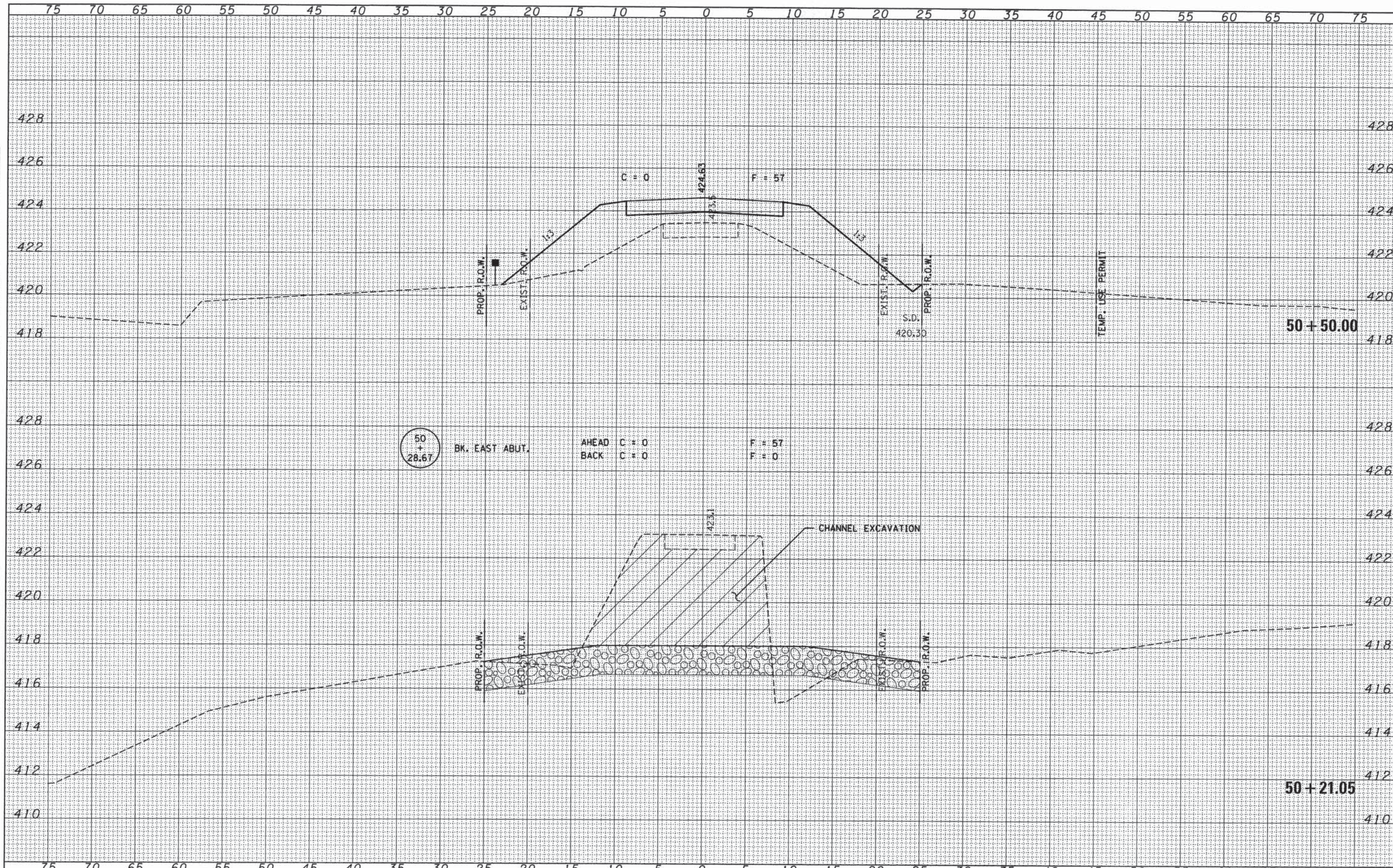
STATE OF ILLINOIS
 CLAY COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 SCALE: 5H:2V
 SHEET NO. 5 OF 8 SHEETS
 STA. 49+79.34 TO STA. 50+00.00

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
385	12-11131-00-BR	CLAY	22	9
STANFORD ROAD DISTRICT			CONTRACT NO. 95763	
ILLINOIS FED. AID PROJECT BROX-0025(081)				

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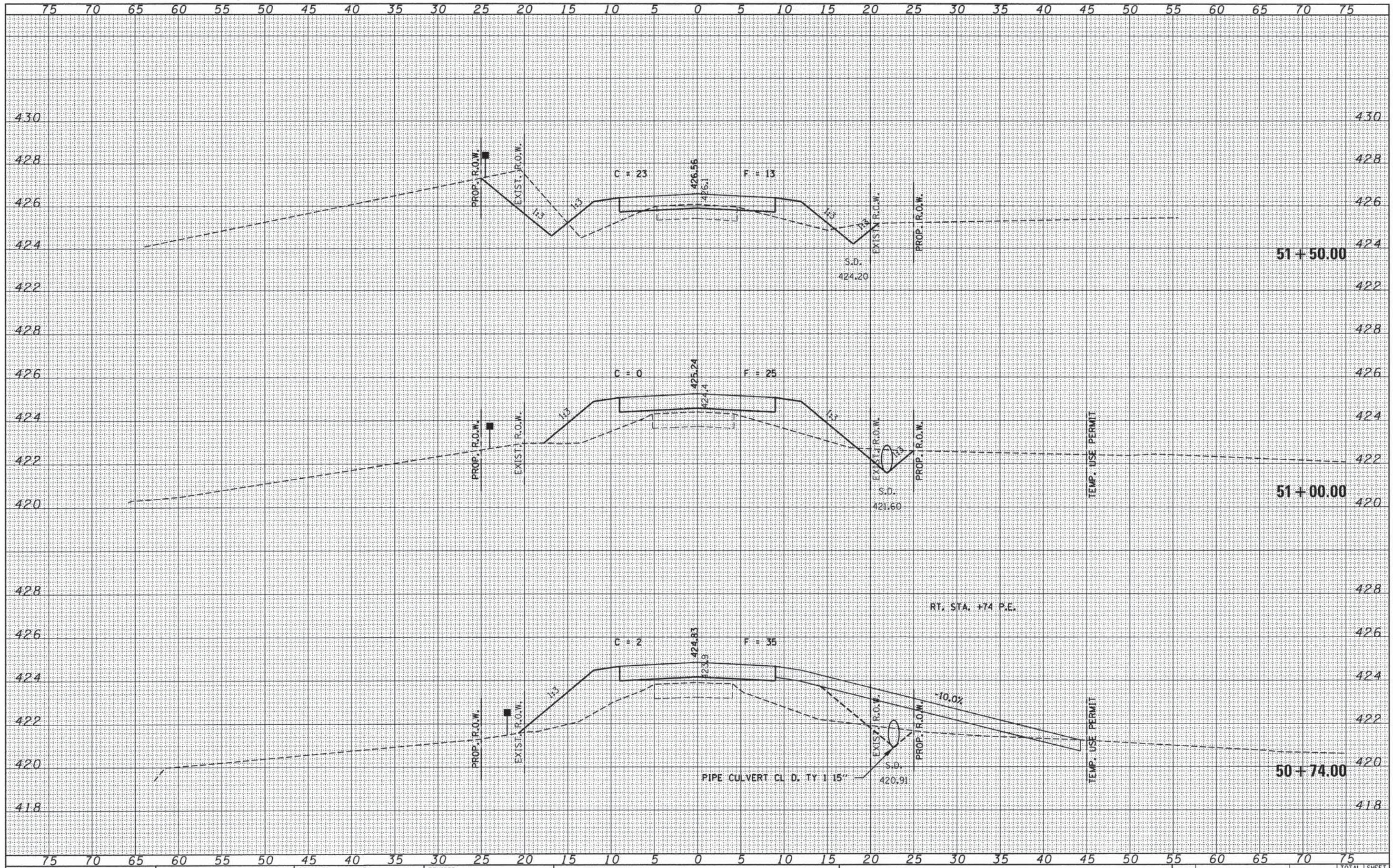
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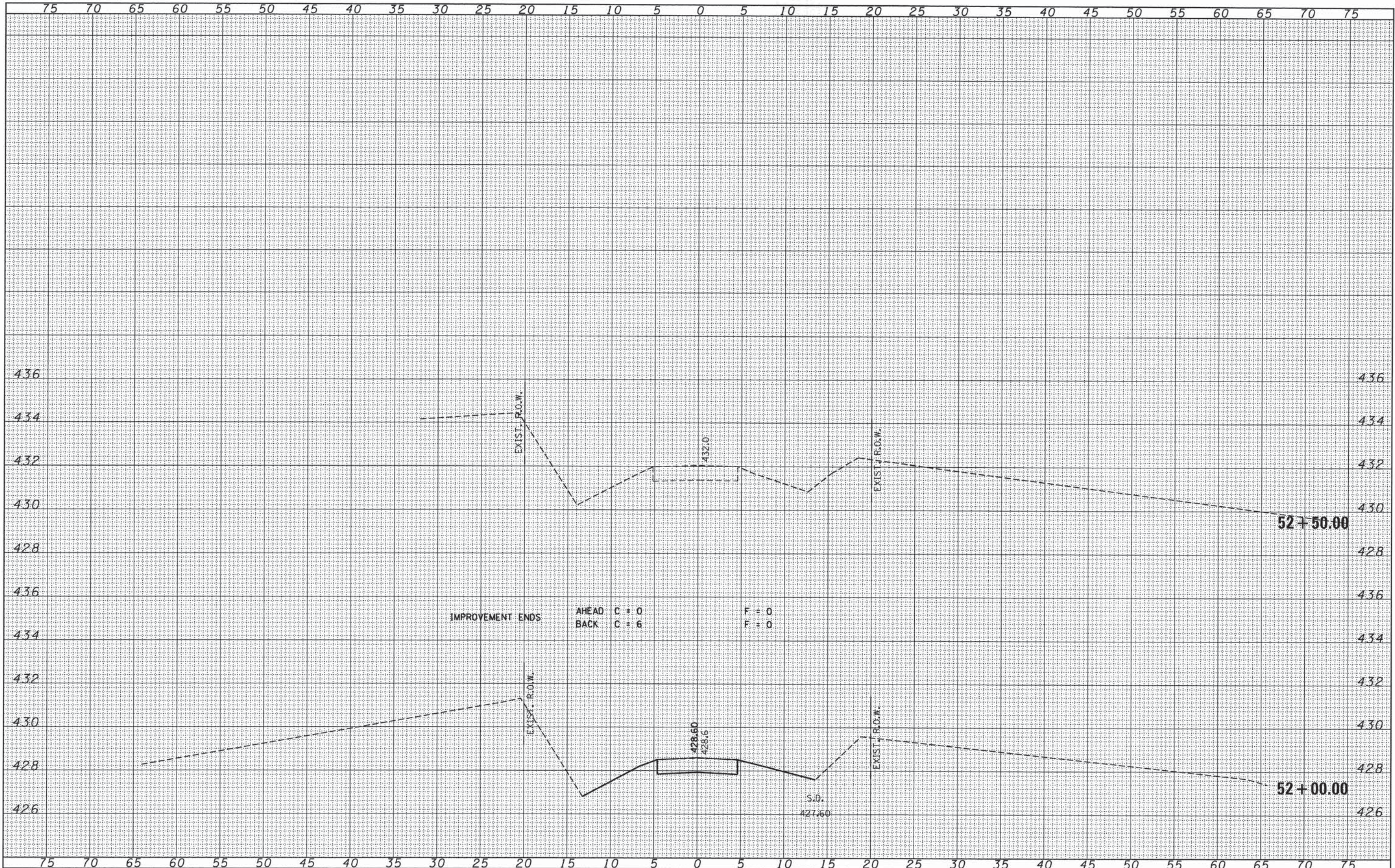
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HAMPTON, LENZINI AND RENWICK, INC.		DRAWN - L.G.C.	REVISED -		385	12-11131-00-BR	CLAY	22	10
2088 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62760		CHECKED - S.W.M.	REVISED -		STANFORD ROAD DISTRICT CONTRACT NO. 95763				
ILLINOIS PROFESSIONAL DESIGN FIRM L8/PE/SE CORP. 184.000009		DATE - 04/01/15	REVISED -		[ILLINOIS] FED. AID PROJECT BROX-00250811				

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FINL SURVEY	SUBMITTED
NOTE BOOK	PLOTTED
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HAMPTON, LENZINI AND RENWICK, INC. 300 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 18-00099					385	12-11131-00-BR	CLAY	22	11
PLOT SCALE =	CHECKED - S.W.M.	REVISED -	REVISED -		STANFORD ROAD DISTRICT CONTRACT NO. 95763				
PLOT DATE = 4/1/2015	DATE - 04/01/15	REVISED -	REVISED -		ILLINOIS FED. AID PROJECT BROX-002510811				



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HLR HAMPSON, LENZINI AND RENWICK, INC. 3985 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763 ILLINOIS PROFESSIONAL DESIGN FIRM L.P. / P.E. / S.E. CORP. 184,000889		DRAWN - L.G.C.	REVISED -		385	12-11131-00-BR	CLAY	22	12			
	PLOT SCALE =	CHECKED - S.W.M.	REVISED -		STANFORD ROAD DISTRICT			CONTRACT NO. 95763				
	PLOT DATE = 4/1/2015	DATE - 04/01/15	REVISED -		ILLINOIS FED. AID PROJECT BROX-0025(081)							

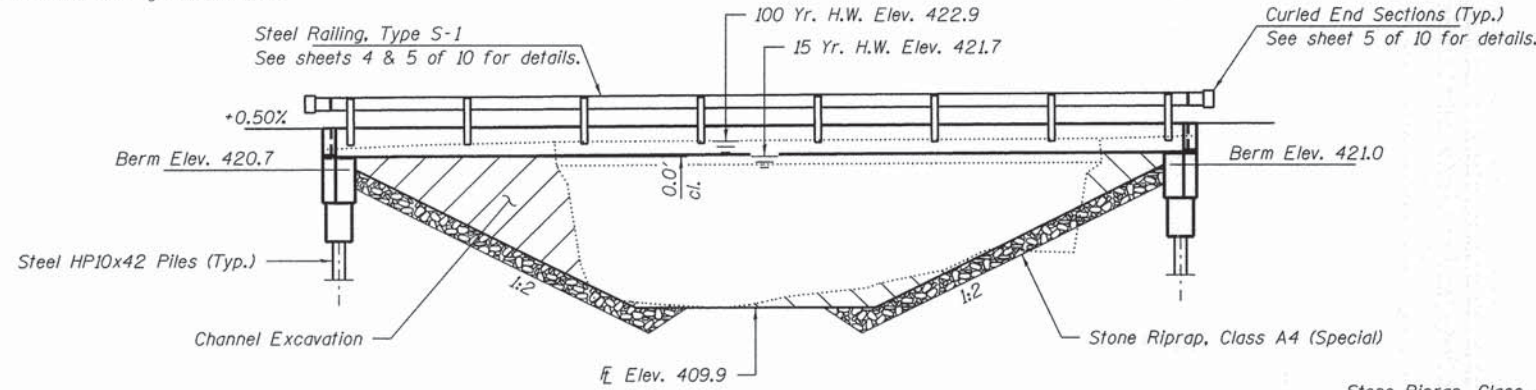
SCALE: 5H:2V SHEET NO. 8 OF 8 SHEETS STA. 52+00.00 TO STA. 52+50.00

BENCHMARK: RR spike in tree 45' Rt. Sta. 50+38; Elev. 422.03

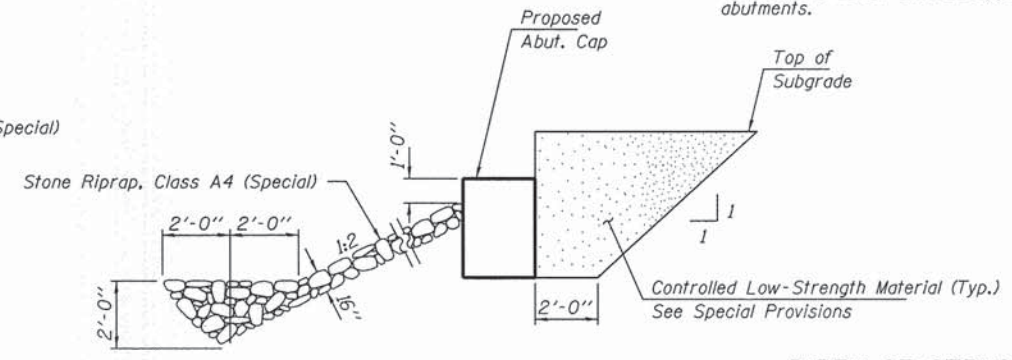
EXISTING STRUCTURE NO. 013-313: Sta. 50+00 - Single span steel beam bridge with concrete deck on closed concrete abutments and wingwalls. 38.0 fc-fc. abuts.; 13.9' o.-o. deck

Structure closed to traffic during construction.

No Salvage

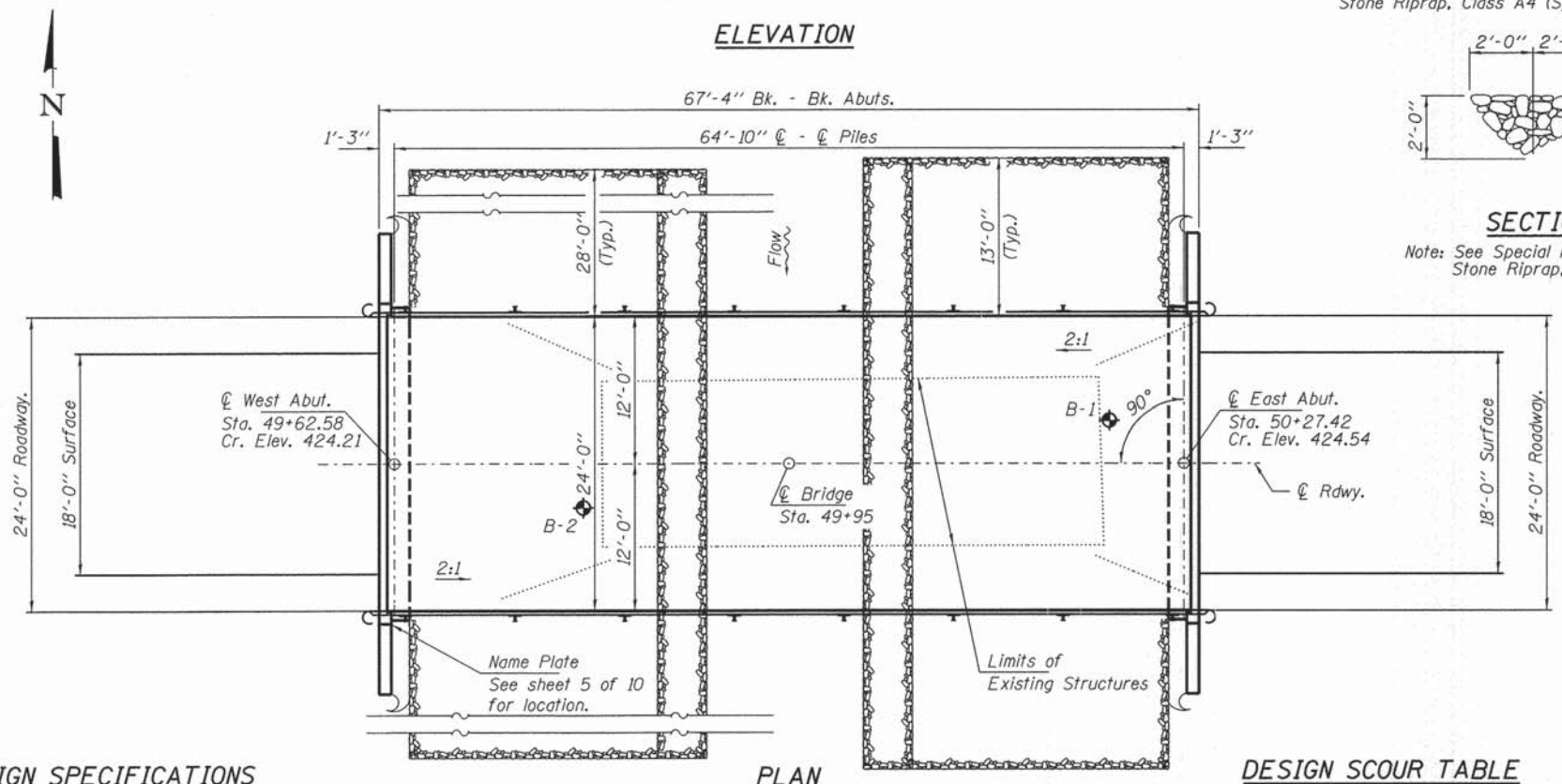


ELEVATION



SECTION A-A

Note: See Special Provisions for Stone Riprap, Class A4 (Special).



PLAN

DESIGN SCOUR TABLE

Event/Limit State	Design Scour Elevations (ft.)		Item
	W. Abut.	E. Abut.	
Q100	418.1	418.4	8
Q200	418.1	418.4	
Design	418.1	418.4	
Check	418.1	418.4	

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 LRFD Specifications."

Steven W. Megginson 04/01/2015
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



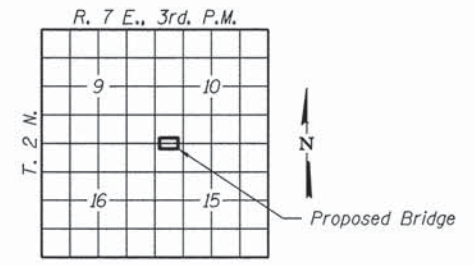
Expires 11-30-2016

GENERAL NOTES

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at West Abutment or approved by the Engineer before ordering the remainder of piles. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions. Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation. All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions. Concrete sealer shall be applied to the designated areas of the abutments.

INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. 27"x48" PPC Deck Beam
3. 27"x48" PPC Deck Beam Details
4. Superstructure Details
5. Steel Railing, Type S-1
6. West Abutment
7. East Abutment
8. HP-Pile Details
- 9-10. Borings



LOCATION SKETCH

ELM CREEK
BUILT 201L BY
CLAY COUNTY
SEC. 12-11131-00-BR
STANFORD ROAD DISTRICT
STR. NO. 013-3244
LOADING HL-93

NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($1/2$ " ϕ low lax. strands)
 $f_{pbt} = 201,960$ psi ($1/2$ " ϕ low lax. strands)
 $f_y = 60,000$ psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.188g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.518g
Soil Site Class = C

WATERWAY INFORMATION

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.	Exist.	Prop.	Exist.	Prop.
Overtopping	10	3208	360	450	421.41	0.14	0.12	421.55	421.53				
Design	15	3650	360	470	421.71	0.16	0.13	421.87	421.84				
Base	100	5810	360	470	422.94	0.16	0.17	423.10	423.11				
Max. Calc.	500	7740	360	470	423.86	0.14	0.18	424.00	424.04				

Drainage Area = 29.8 Sq. Mi. Existing Low Grade Elev. 419.3 @ Sta. 45+50
Proposed Low Grade Elev. 419.3 @ Sta. 45+50

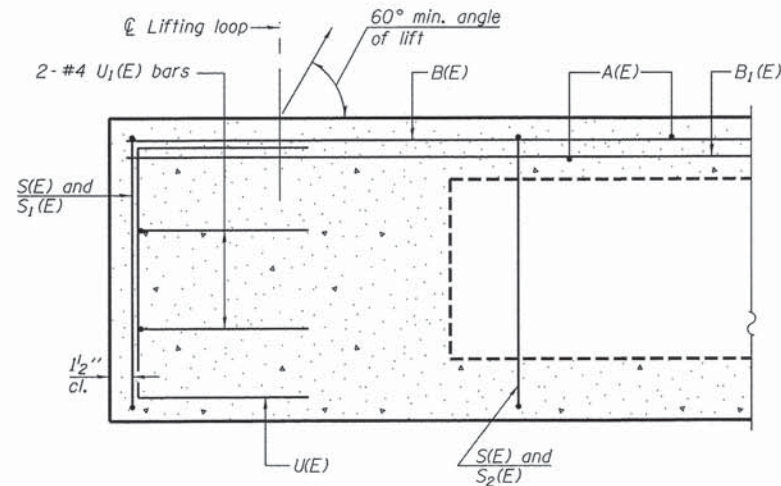
10 Year Velocity through Existing Bridge = 4.2 Tps 10 Year Velocity through Proposed Bridge = 4.2 Tps

FILE NAME = 140897-ah-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
2885 ELEVATION DRIVE, SUITE 301		DRAWN - R.D.H.	REVISED -
SPRINGFIELD, ILLINOIS 62703		CHECKED - S.W.M.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM			
LS 1 P/E/SE CORP. 184-093899			

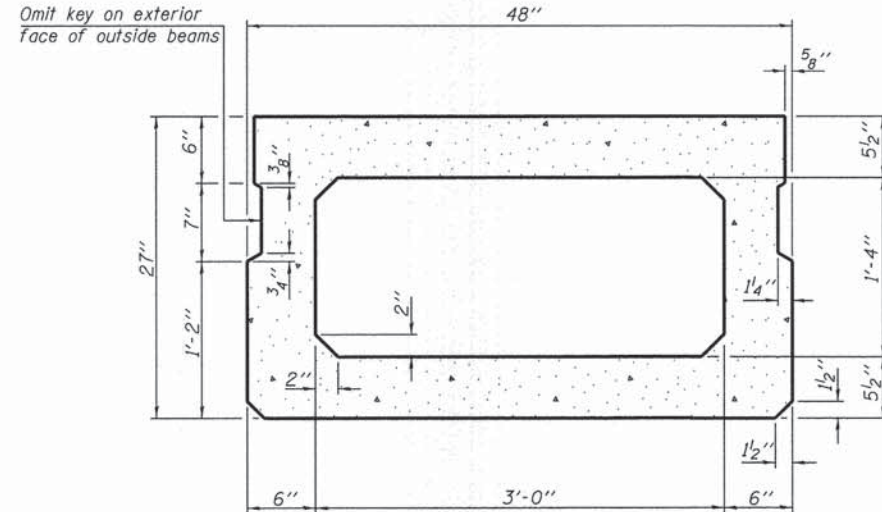
STATE OF ILLINOIS
CLAY COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 013-3244
SHEET NO. 1 OF 10 SHEETS

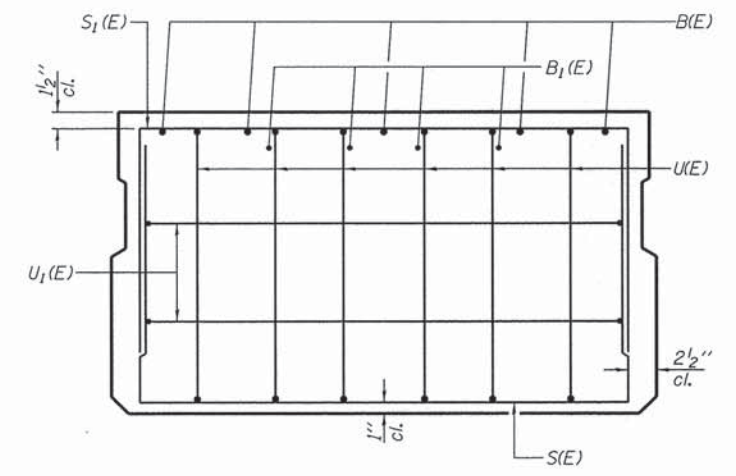
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
385	12-11131-00-BR	CLAY	22	13
STANFORD ROAD DISTRICT			CONTRACT NO. 95763	
ILLINOIS FED. AID PROJECT BROS-0025(081)				



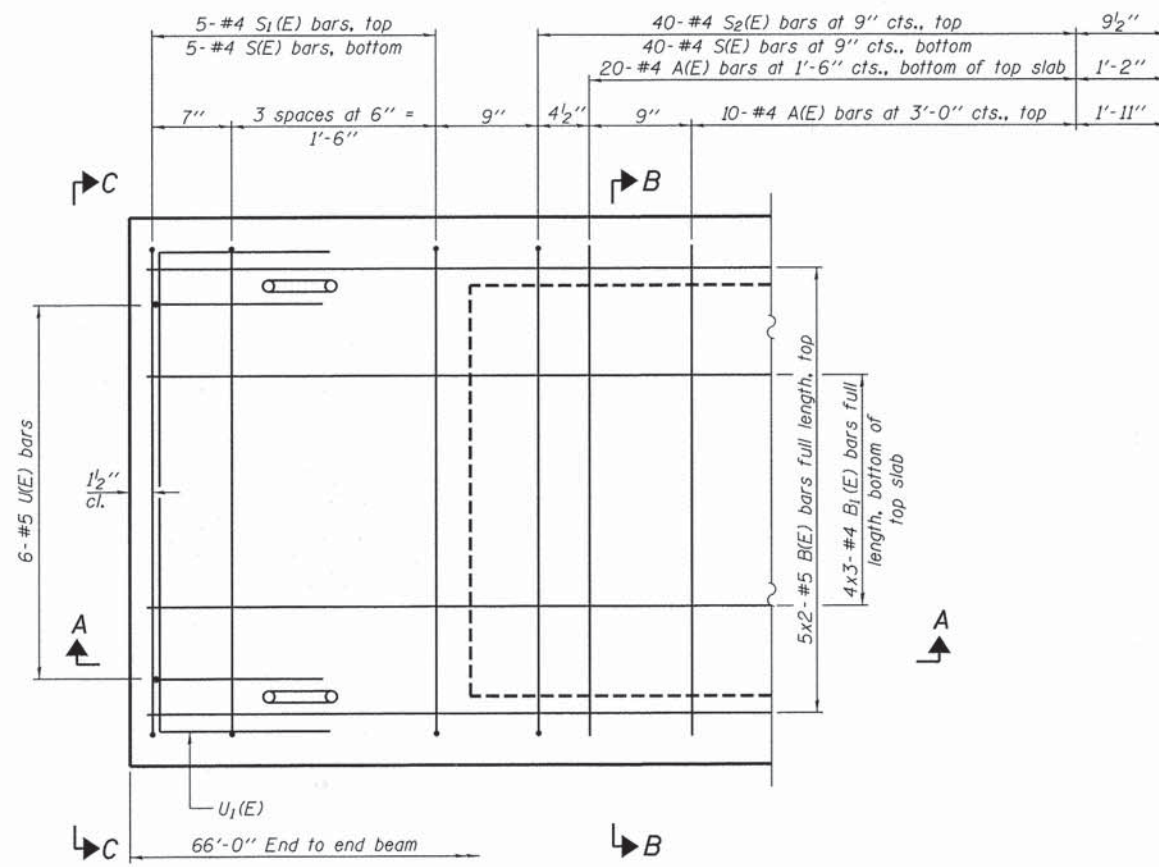
SECTION A-A



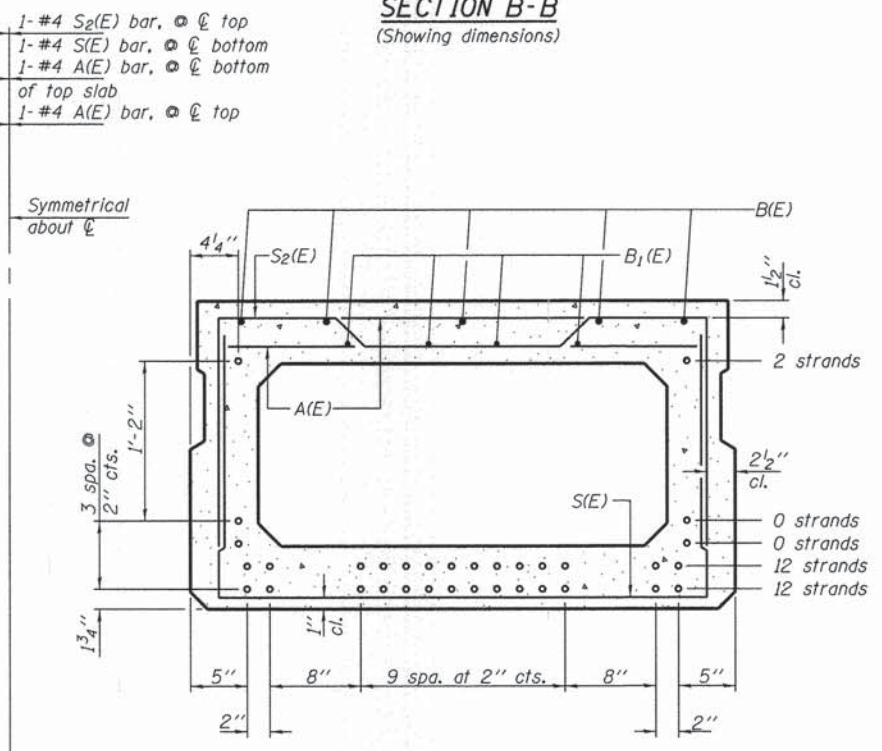
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	62	#4	3'-7"	—
B(E)	10	#5	34'-2"	—
B1(E)	12	#4	23'-3"	—
S(E)	91	#4	7'-5"	U
S1(E)	10	#4	6'-11"	U
S2(E)	81	#4	7'-2"	U
U(E)	12	#5	4'-6"	C
U1(E)	4	#4	6'-0"	C

Note: See sheet 3 & 4 of 10 for additional details and Bill of Material.

Notes:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.
Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

MINIMUM BAR LAP
#4 bar = 2'-0"
#5 bar = 2'-6"

PD-2748-0 7-1-10

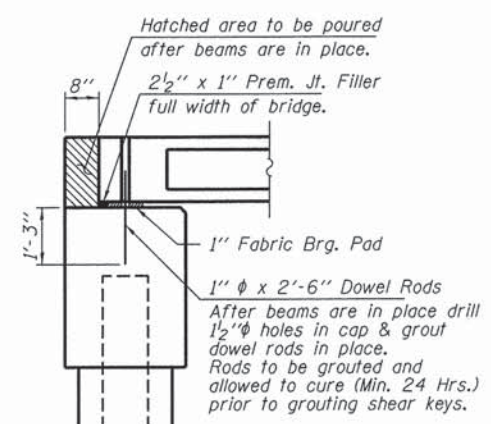
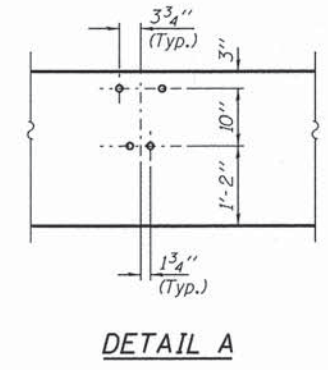
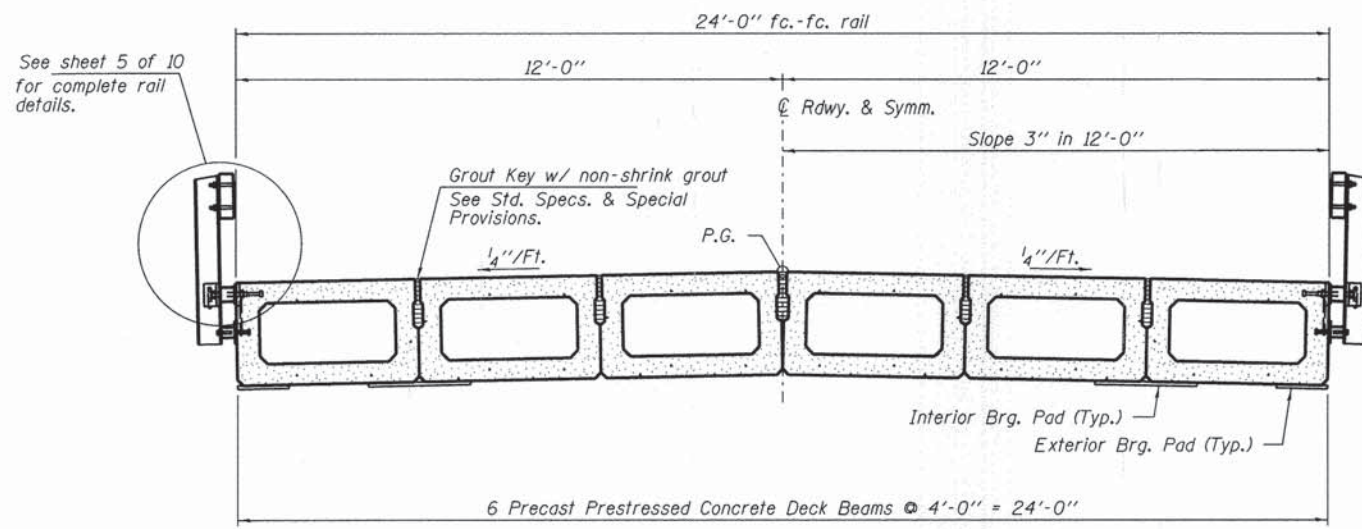
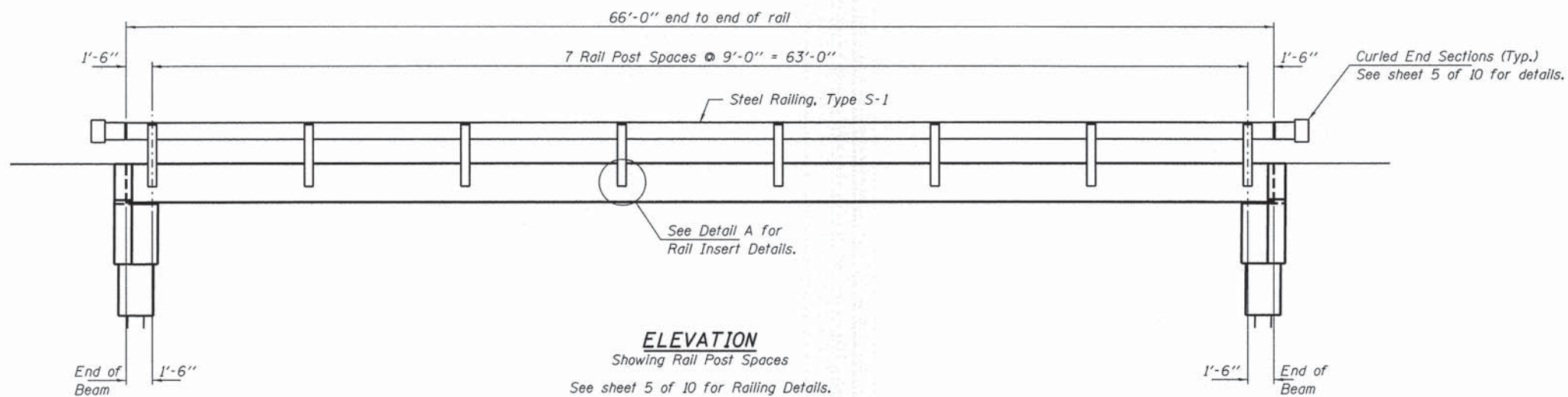
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HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3388 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE *	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE * 4/1/2015	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
CLAY COUNTY HIGHWAY DEPARTMENT

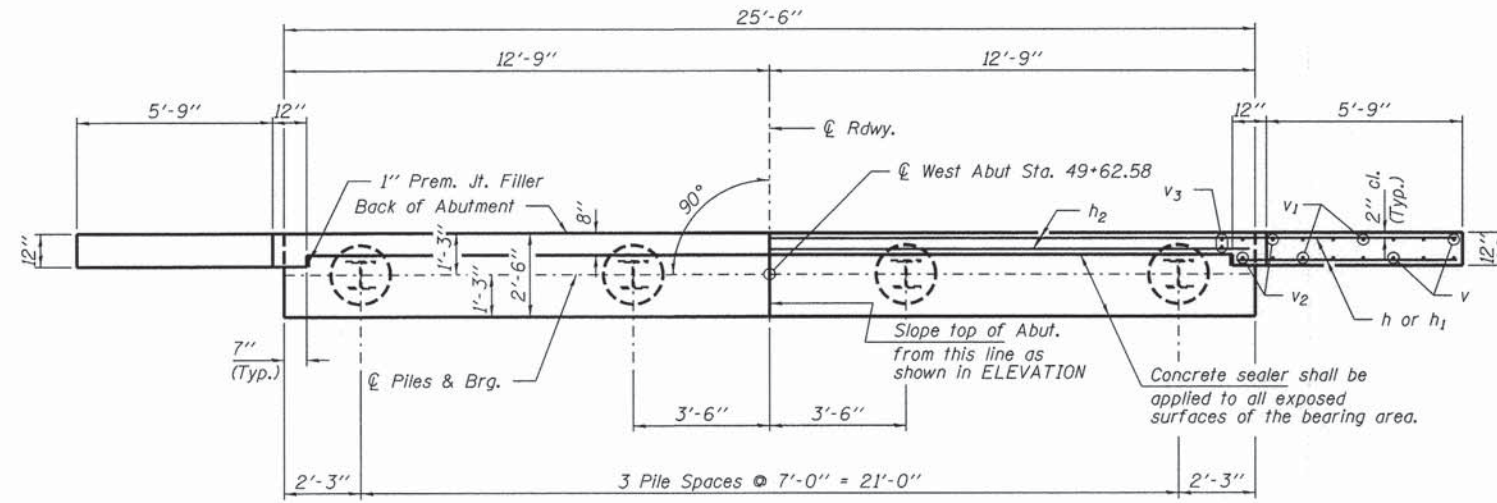
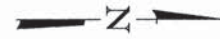
27" x 48" PPC DECK BEAM
STRUCTURE NO. 013-3244

SHEET NO. 2 OF 10 SHEETS

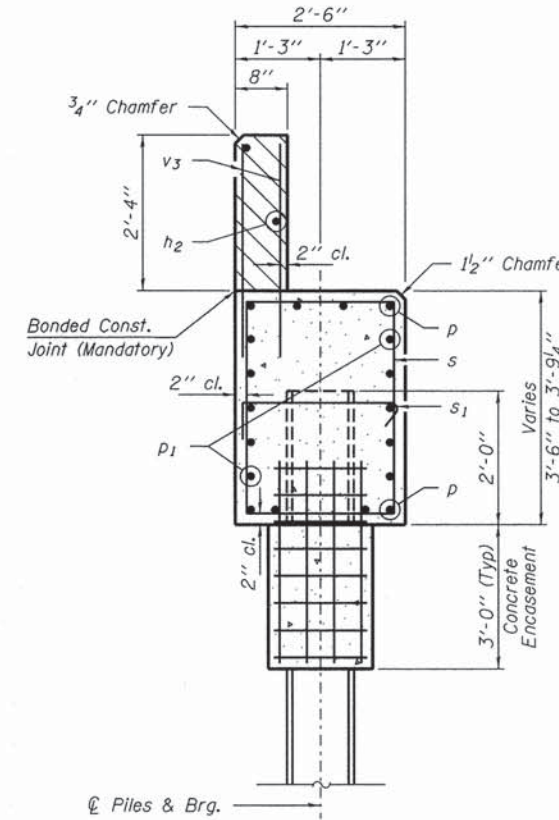
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
385	12-11131-00-BR	CLAY	22	14
STANFORD ROAD DISTRICT		CONTRACT NO. 95763		
[ILLINOIS] FED. AID PROJECT BR05-0025(081)				



FILE NAME * 148897-ah-bridge.dgn	USER NAME *	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS CLAY COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 013-3244	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3440 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000859		CHECKED - S.W.M.	REVISED -			385	12-11131-00-BR	CLAY	22	16
	PLOT SCALE *	DRAWN - R.D.H.	REVISED -			STANFORD ROAD DISTRICT		CONTRACT NO. 95763		
	PLOT DATE * 4/1/2015	CHECKED - S.W.M.	REVISED -			SHEET NO. 4 OF 10 SHEETS		ILLINOIS FED. AID PROJECT BROS-002510811		

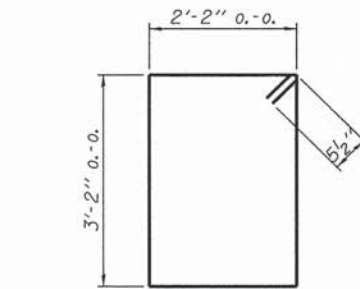


PLAN

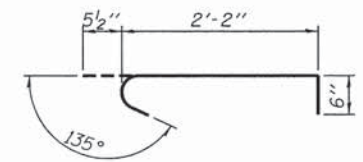


SECTION A-A

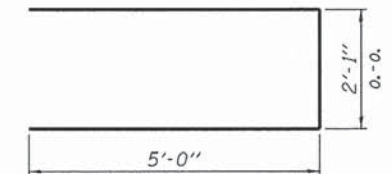
Hatched area to be poured after beams are in place.



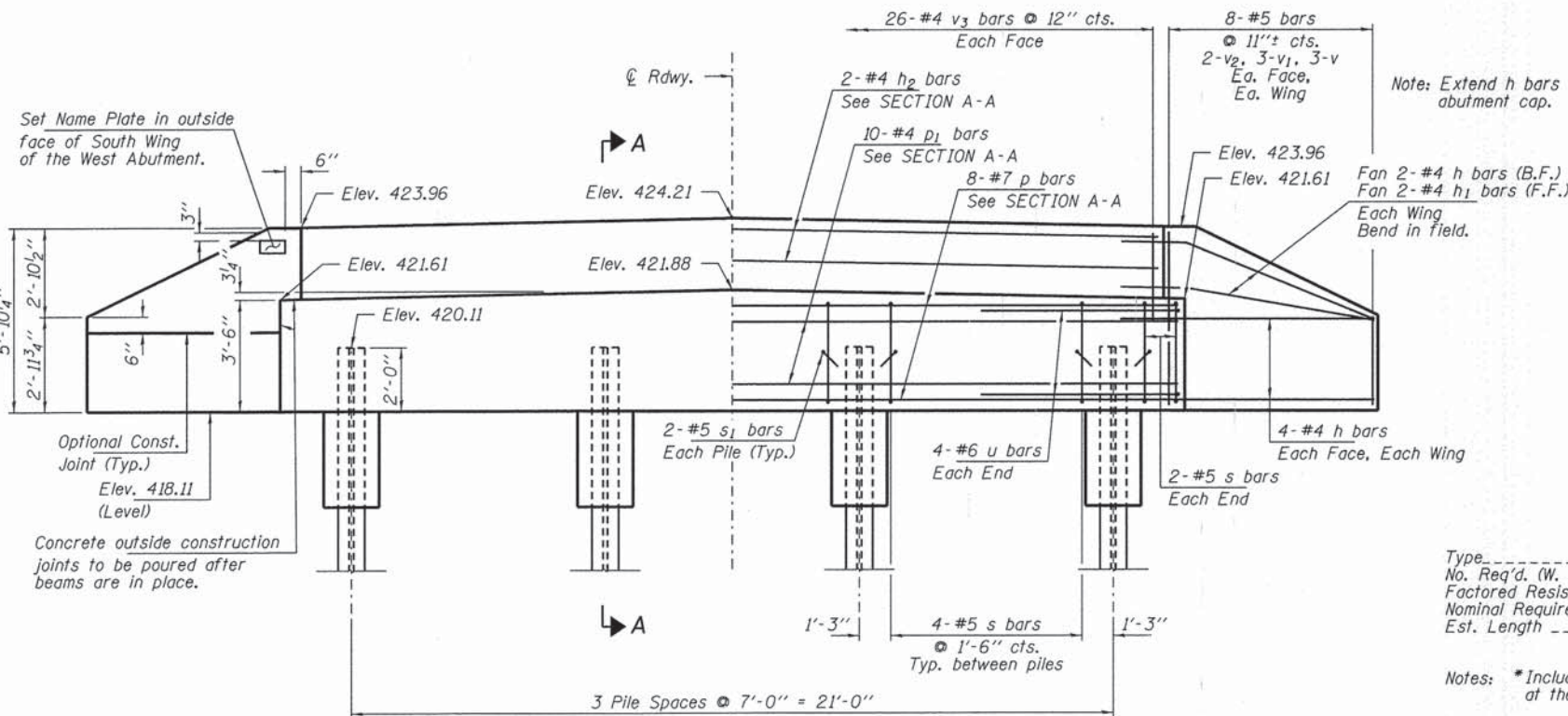
BAR s



BAR s1



BAR u



ELEVATION
(Looking West)

PILE DATA

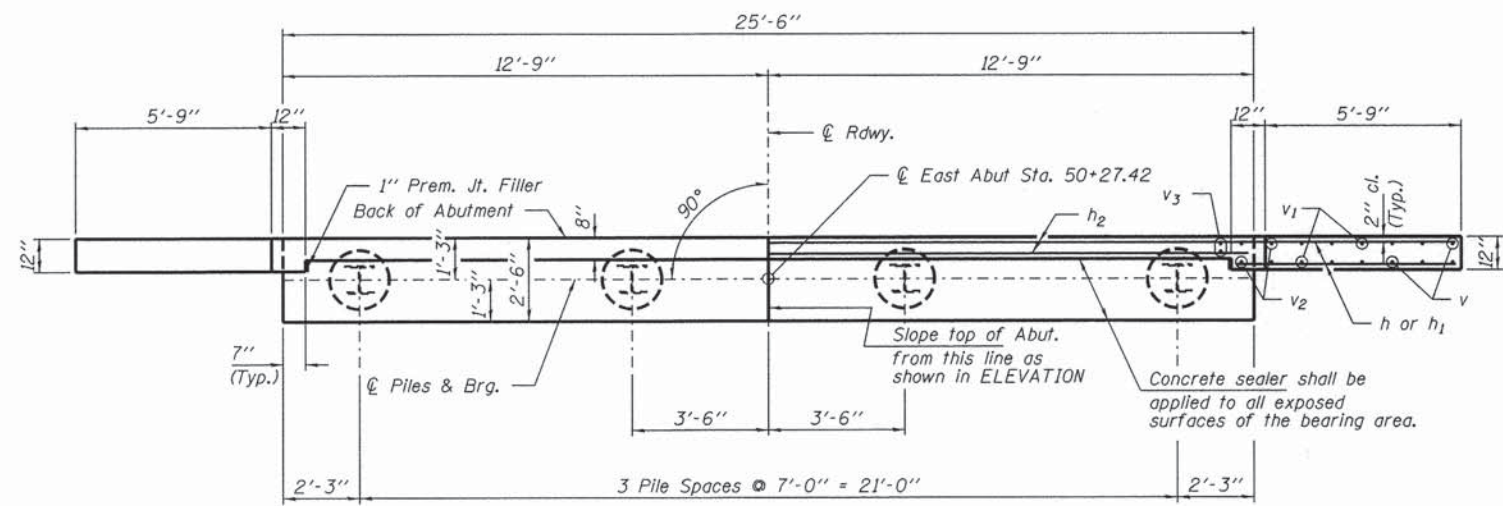
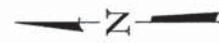
Type: Steel HP10x42
 No. Req'd. (W. Abut.): 4
 Factored Resistance Available (Rf): 184 Kips/Pile
 Nominal Required Bearing (Rn): 335 Kips/Pile
 Est. Length: 40 Ft/Pile

Notes: *Includes one test pile to be driven in permanent location at the West Abutment.

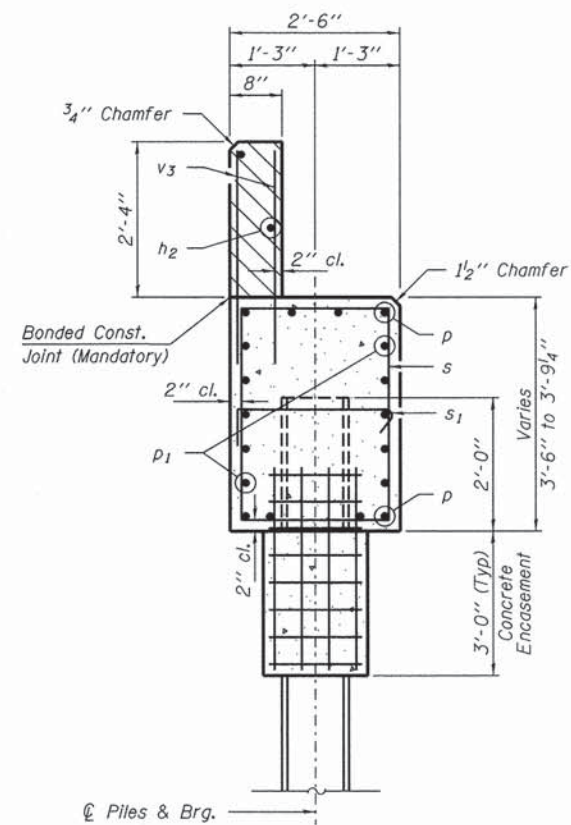
The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

BILL OF MATERIAL - W. ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE	
h	20	#4	8'-0"	—	
h1	4	#4	6'-6"	—	
h2	2	#4	25'-2"	—	
p	8	#7	25'-2"	—	
p1	10	#4	25'-2"	—	
s	16	#5	11'-7"	□	
s1	8	#5	3'-2"	U	
u	8	#6	12'-1"	U	
v	12	#5	2'-9"	—	
v1	12	#5	4'-1"	—	
v2	8	#5	5'-6"	—	
v3	52	#5	3'-2"	—	
Concrete Structures				Cu. Yd.	12.1
Concrete Encasement				Cu. Yd.	1.4
Reinforcement Bars				Pound	1,410
Steel Piles HP10x42				Foot	120
Test Pile Steel HP10x42				Each	1
Name Plates				Each	1
Concrete Sealer				Sq. Ft.	47

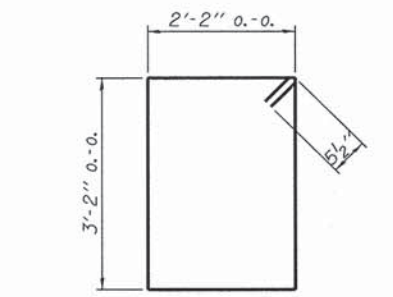


PLAN

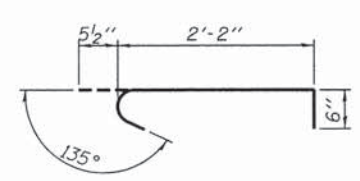


SECTION A-A

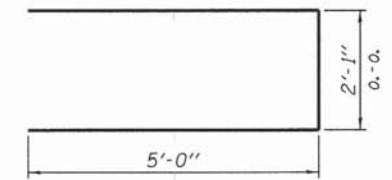
Hatched area to be poured after beams are in place.



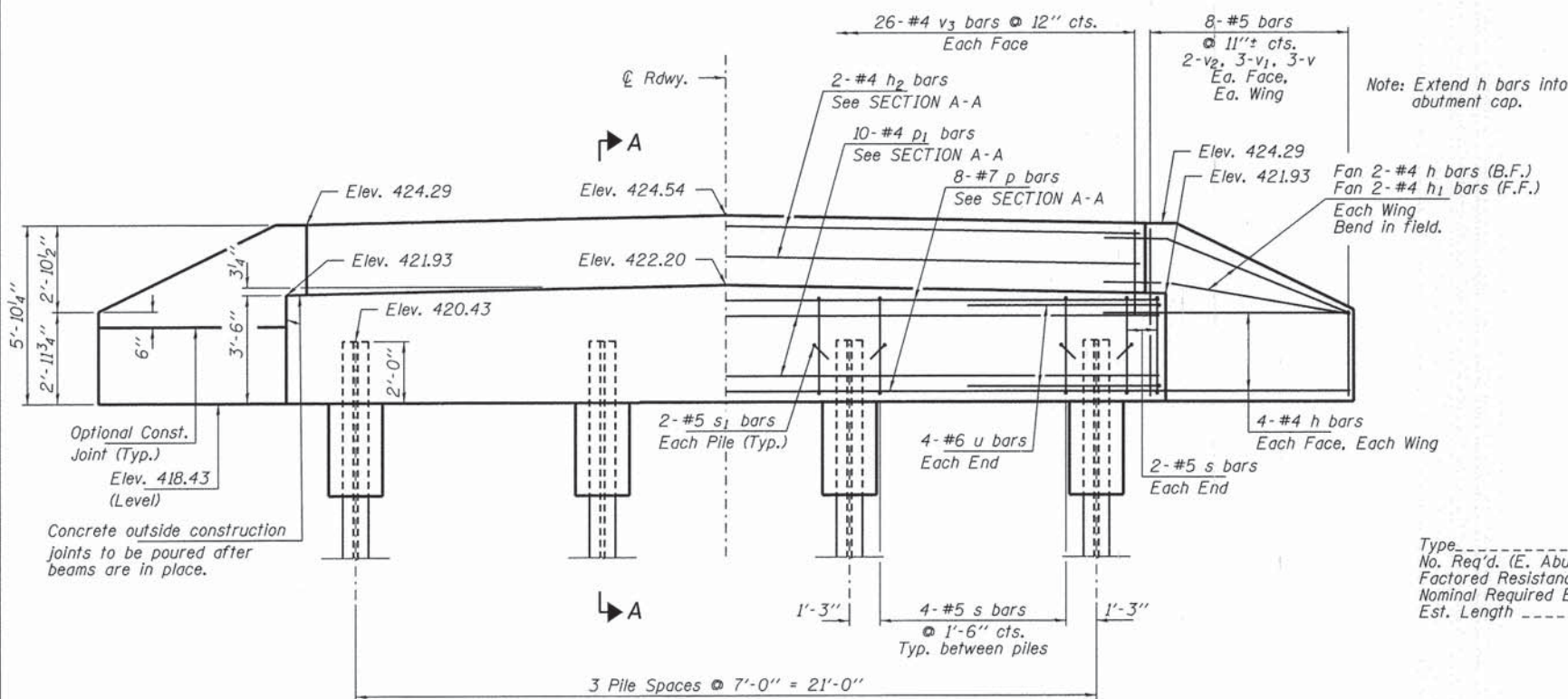
BAR s



BAR s1



BAR u



ELEVATION
(Looking East)

PILE DATA

Type ----- Steel HP10x42
 No. Req'd. (E. Abut.) ----- 4
 Factored Resistance Available (Rf) ----- 184 Kips/Pile
 Nominal Required Bearing (Rn) ----- 335 Kips/Pile
 Est. Length ----- 40 Ft./Pile

BILL OF MATERIAL - E. ABUT.

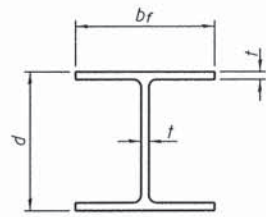
BAR	NO.	SIZE	LENGTH	SHAPE
h	20	#4	8'-0"	—
h1	4	#4	6'-6"	—
h2	2	#4	25'-2"	—
p	8	#7	25'-2"	—
p1	10	#4	25'-2"	—
s	16	#5	11'-7"	□
s1	8	#5	3'-2"	U
u	8	#6	12'-1"	U
v	12	#5	2'-9"	—
v1	12	#5	4'-1"	—
v2	8	#5	5'-6"	—
v3	52	#5	3'-2"	—
Concrete Structures			Cu. Yd.	12.1
Concrete Encasement			Cu. Yd.	1.4
Reinforcement Bars			Pound	1,410
Steel Piles HP10x42			Foot	160
Concrete Sealer			Sq. Ft.	47

FILE NAME = 140897-ahs-bridge.dgn	USER NAME =	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC.		CHECKED - S.W.M.	REVISED -
3045 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703	PLOT SCALE =	DRAWN - R.D.H.	REVISED -
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.002886	PLOT DATE = 4/1/2015	CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
CLAY COUNTY HIGHWAY DEPARTMENT

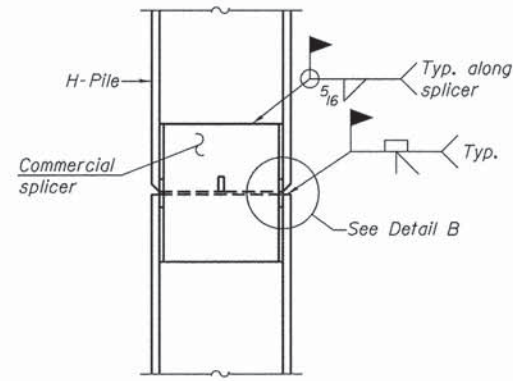
EAST ABUTMENT
STRUCTURE NO. 013-3244
 SHEET NO. 7 OF 10 SHEETS

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
385	12-11131-00-BR	CLAY	22	19
STANFORD ROAD DISTRICT			CONTRACT NO. 95763	
ILLINOIS FED. AID PROJECT BR05-0025(081)				

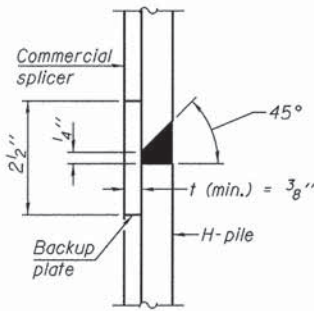


STEEL PILE TABLE

Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

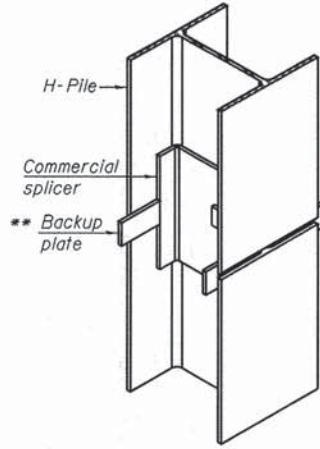


ELEVATION

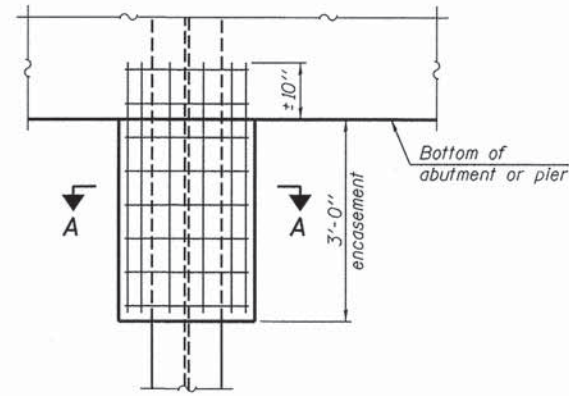


DETAIL "B"

WELDED COMMERCIAL SPLICE

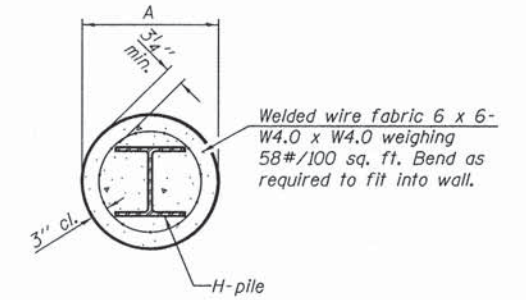


ISOMETRIC VIEW



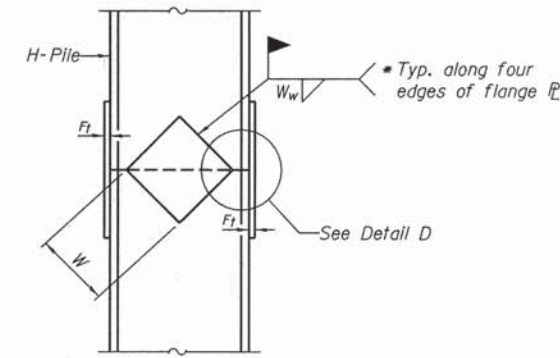
ELEVATION

PILE ENCASEMENT

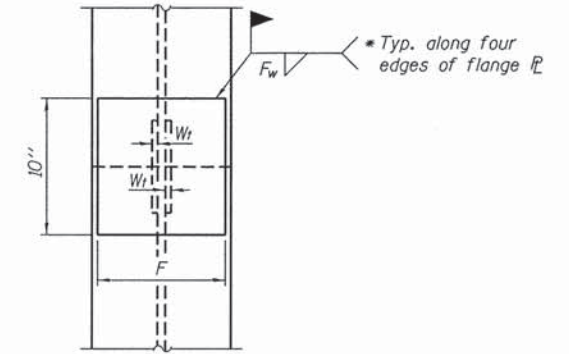


SECTION A-A

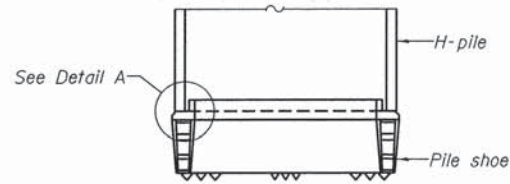
Note:
Forms for encasement may be omitted when soil conditions permit.



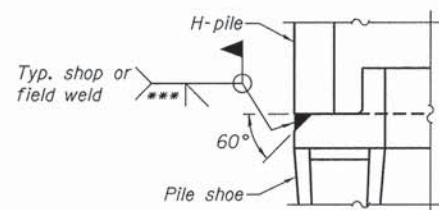
ELEVATION



END VIEW

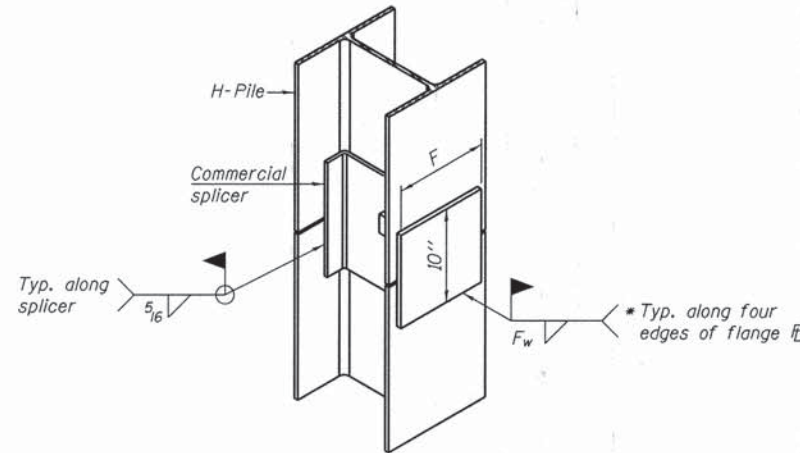


ELEVATION



DETAIL A

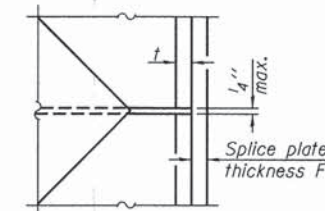
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP

7-1-10

FILE NAME * 148097-shr-bridge.dgn	USER NAME *	DESIGNED - L.A.P.	REVISED -	STATE OF ILLINOIS CLAY COUNTY HIGHWAY DEPARTMENT	HP PILE DETAILS STRUCTURE NO. 013-3244	T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3405 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62769		CHECKED - S.W.M.	REVISED -			385	12-11131-00-BR	CLAY	22	20
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184.000999	PLOT SCALE *	DRAWN - R.D.H.	REVISED -			STANFORD ROAD DISTRICT		CONTRACT NO. 95763		
	PLOT DATE * 4/1/2015	CHECKED - S.W.M.	REVISED -			SHEET NO. 8 OF 10 SHEETS		ILLINOIS FED. AID PROJECT BR05-0025(081)		

NOBLE		BORING No. B-1		water level reading						
ENGINEERING CONSULTANTS		County: Clay, IL	Sheet No. 1 of 2	1st encounter: 29'						
Client: Clay County Highway Dept.		Weather: Overcast	Temperature: 30's	water level reading						
Driller: Noble Engineering Consultants		Date Start: 3-07-13	Surface Elevation: Bridge Deck	@completion	29'					
Location: Structure #3131		Date Finished: 3-07-13	Driller: Tony Schocker	Backfill:	Soil Cuttings					
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class.	Elev.**
1							0.0'-0.5' asphaltic concrete pavement over granular subbase			-1
2	SS-1	1.0'-2.5'	8	9-4-4	50	-		12.7	FILL	(421.0)
3										-3
4	SS-2	3.5'-5.0'	4	1-2-2	50	-	0.5'-10.0' silt, clay, organics, etc, FILL	17.9	FILL	(419.0)
5										-5
6	SS-3	6.0'-7.5'	4	1-2-2	30	-		28.5	FILL	-6
7										-7
8										-8
9	SS-4	8.5'-10.0'	4	1-2-2	100	-		22.1	FILL	-9
10										-10
11										-11
12										-12
13										-13
14	SS-5	13.5'-15.0'	7	2-3-4	100	1.2	10.0'-18.5' SILTY CLAY, trace sand, stiff, brown	17.7	CL	(409.0)
15										-15
16										-16
17										-17
18										-18
19	SS-6	18.5'-20.0'	22	6-10-12	100	4.5		13.2	CL-ML	-19
20										-20
21										-21
22										-22
23										-23
24	SS-7	23.5'-25.0'	39	11-15-24	100	4.5	18.5'-29' CLAYEY SILT (TILL), trace to some sand, trace gravel, hard, brown mottled gray	13.3	CL-ML	(399.0)
25										-25
26										-26
27										-27
28										-28
29							29'-36.5' SILTY FINE SAND, well			-29
30	SS-8	28.5'-30.0'	121	25-49-72	100	-	cemented, trace gravel, moist, extremely dense, brown	22	SM	(393.0)
Drilling Method: HSA (3-3/4" id)		comments		* Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder						
Depth: 0' to 40.9'										(423.0)
Drill Rig: Mobile B-47				** ground surface elevation at boring location is estimated and is not surveyed						
Sampling: split-spoon (SS)										

NOBLE		BORING No. B-1		water level reading						
ENGINEERING CONSULTANTS		County: Clay, IL	Sheet No. 2 of 2	1st encounter: 29'						
Client: Clay County Highway Dept.		Weather: Overcast	Temperature: low 40's	water level reading						
Driller: Noble Engineering Consultants		Date Start: 3-07-13	Surface Elevation: Bridge Deck	@completion	29'					
Location: Structure #3131		Date Finished: 3-07-13	Driller: Tony Schocker	Backfill:	Soil Cuttings					
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class.	Elev.**
31										-31
32										-32
33							29'-36.5' SILTY FINE SAND, well			-33
34	SS-9	33.5'-35.0'	58	25-26-32	100		cemented, trace gravel, moist, v. dense, brown	22	SM	(389.0)
35										-35
36										-36
37										-37
38										-38
39	SS-10	39.5'-40.0'	100+	100/1*	100		36.5'-40.9' HIGHLY WEATHERED SHALE, gray	7.8		(384.0)
40										-40
41							AR 40.9'			-41
Drilling Method: HSA (3-3/4" id)		comments		* Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder						
Depth: 0' to 40.9'										
Drill Rig: Mobile B-47				** ground surface elevation at boring location is estimated and is not surveyed						
Sampling: split-spoon (SS)										

BORING 1

NOBLE		BORING No. B-2				water level reading				
ENGINEERING CONSULTANTS		County: Clay, IL		Sheet No. 1 of 2		1st encounter: 24'				
Client: Clay County Highway Dept.		Weather: Overcast		Temperature: 30's		water level reading				
Driller: Noble Engineering Consultants		Date Start: 3-07-13		Surface Elevation: Bridge Deck		@completion 29'				
Location: Structure #3131		Date Finished: 3-07-13		Driller: Tony Schocker		Backfill: Soil cuttings				
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class.	Elev.**
1							0.0'-0.5' Asphaltic concrete pavement over granular subbase			-1
2	SS-1	1.0'-2.5'	8	5-4-3	50	-		14.6	FILL	(420.5)
3										-3
4	SS-2	3.5'-5.0'	4	2-2-2	80	-	0.5'-10.0' silt, clay, organics, etc, FILL, dark brown	16.3	FILL	(418.5)
5										-5
6	SS-3	6.0'-7.5'	4	1-2-2	30	-		20.6	FILL	-6
7										-7
8										-8
9	SS-4	8.5'-10.0'	4	2-2-2	100	-		24.7	FILL	-9
10										-10
11										-11
12										-12
13										-13
14	SS-5	13.5'-15.0'	3	2-1-2	30	0.7	10.0'-18.5' SILTY CLAY, trace sand, medium consistency, brown	28.2	CL	(408.5)
15										-15
16										-16
17										-17
18										-18
19	SS-6	18.5'-20.0'	28	8-11-17	100	4.5+		18.1	CL-ML	-19
20										-20
21										-21
22										-22
23										-23
24	SS-7	23.5'-25.0'	31	9-14-17	100	4.5+	18.5'-29' CLAYEY SILT(TILL), trace to some sand, trace gravel, hard, brown mottled gray	12.1	CL-ML	(398.5)
25										-25
26										-26
27										-27
28										-28
29							29'-35.5' SILTY FINE SAND, well cemented, trace gravel, wet, v. dense, brown			(393.5)
30	SS-8	28.5'-30.0'	65	27-28-37	100	-		12.6	SM	-30
Drilling Method: HSA (3-3/4" id)		comments		* Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder						
Depth: 0' to 40.2'										
Drill Rig: Mobile B-47				** ground surface elevation at boring location is estimated and is not surveyed						(422.5)
Sampling: split-spoon (SS)										

NOBLE		BORING No. B-2				water level reading				
ENGINEERING CONSULTANTS		County: Clay, IL		Sheet No. 2 of 2		1st encounter: 24'				
Client: Clay County Highway Dept.		Weather: Overcast		Temperature: low 40's		water level reading				
Driller: Noble Engineering Consultants		Date Start: 3-07-13		Surface Elevation: Bridge Deck		@completion 29'				
Location: Structure #3131		Date Finished: 3-07-13		Driller: Tony Schocker		Backfill: Soil Cuttings				
Depth	Sample No.	Sample Depth	N-Value	Blow Count	Recovery (%)	Qp (tsf)*	Soil Description	W %	USC Class.	Elev.**
31										-31
32							29'-35.5' SILTY FINE SAND, well cemented, trace gravel, wet, v. dense, brown			(390.5)
33										-33
34	SS-9	33.5'-35.0'	61	24-31-30	100	-		21.3	SM	-34
35										-35
36							35.5'-40.2' HIGHLY WEATHERED SHALE, gray			(386.5)
37										-37
38										-38
39	SS-10	38.5'-40.0'	100+	100/2"	100	-		8.1		-39
40										-40
41										-41
						AR 40.2				
Drilling Method: HSA (3-3/4" id)		comments		* Qp test is an estimate of the unconfined compressive strength performed by a compact calibrated spring loaded cylinder						
Depth: 0' to 40.2'										
Drill Rig: Mobile B-47				** ground surface elevation at boring location is estimated and is not surveyed						
Sampling: split-spoon (SS)										

BORING 2