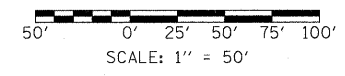
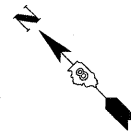


**NOTES:**

1. SEE DRAWING ME-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. SEE DRAWING DW-03 FOR EXISTING DEEP WELL DETAILS.
3. LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK. PROTECT AND TAKE CARE NOT TO DAMAGE EXISTING UTILITIES FOR THE DURATION OF THE CONSTRUCTION.
4. VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
5. COORDINATE ALL WORK WITH CIVIL WORK, STRUCTURAL WORK, AND SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL PLANS.
6. EXISTING CABLE AND RACEWAY TO BE DISCONNECTED AND ABANDONED.



DW-01

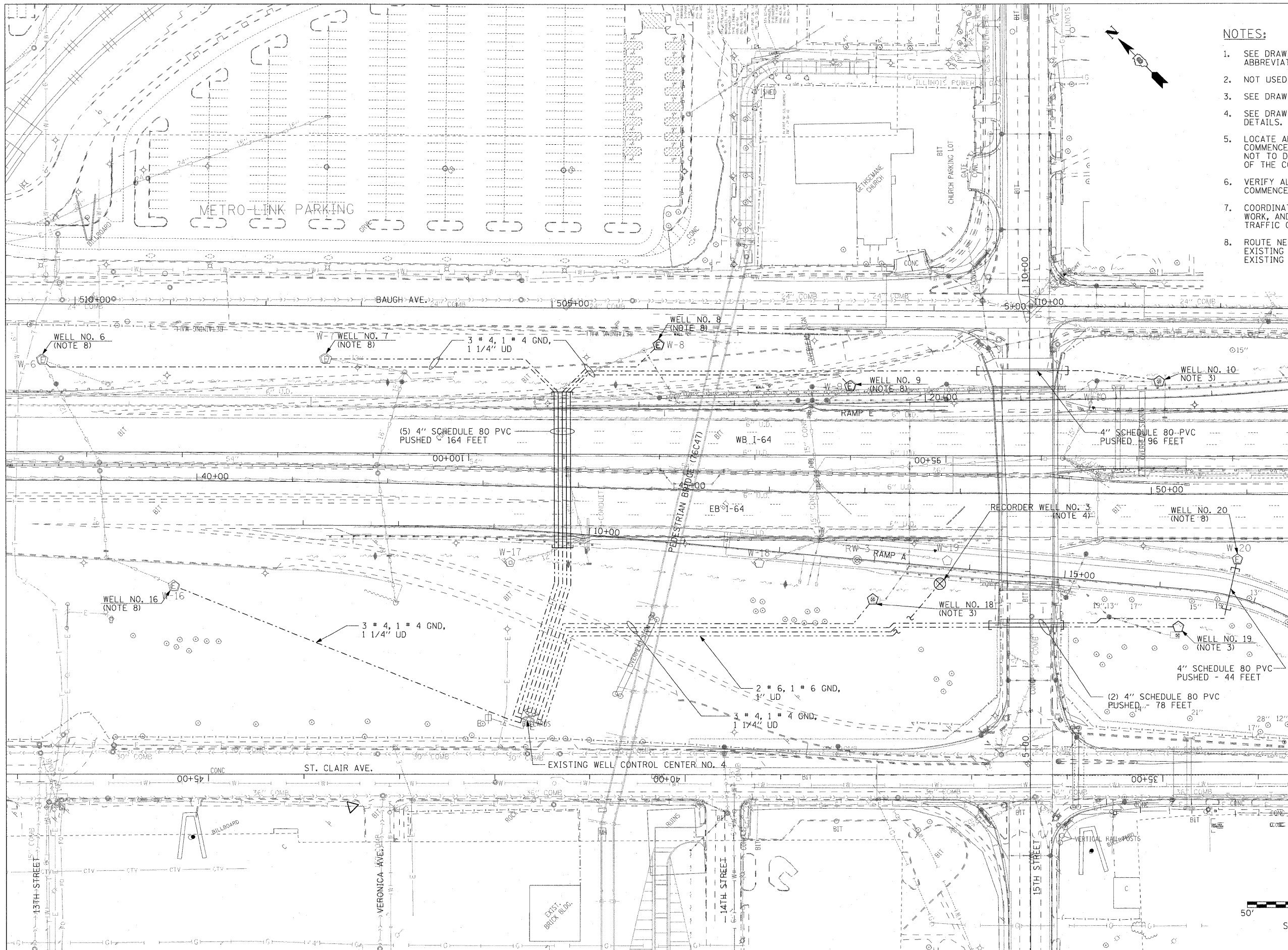
FILE NAME =	USER NAME = jentzt	DESIGNED JSF	REVISED -
#FILE#		DRAWN JSF	REVISED -
	PLOT SCALE = 50.0001' / IN.	CHECKED JPC	REVISED -
	PLOT DATE = 3/17/2010	DATE 03/19/10	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DEEP WELL ELECTRICAL PLANS  
EXISTING CONDITIONS AND DEMOLITION**

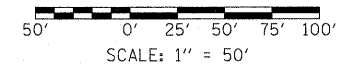
SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 38+00.00 TO STA. 51+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	201
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
			CONTRACT NO. 76C49	



**NOTES:**

1. SEE DRAWING ME-01 FOR ELECTRICAL SYMBOLS AND ABBREVIATIONS.
2. NOT USED
3. SEE DRAWING DW-04 FOR PROPOSED DEEP WELL DETAILS.
4. SEE DRAWING DW-06 FOR PROPOSED RECORDER WELL DETAILS.
5. LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF WORK. PROTECT AND TAKE CARE NOT TO DAMAGE EXISTING UTILITIES FOR THE DURATION OF THE CONSTRUCTION.
6. VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
7. COORDINATE ALL WORK WITH CIVIL WORK, STRUCTURAL WORK, AND SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL PLANS.
8. ROUTE NEW DEEP WELL FEEDER CABLES TO THE EXISTING DISCONNECT SWITCH LOCATED WITHIN THE EXISTING DEEP WELL ENCLOSURE BOX AND CONNECT.



DW-02

FILE NAME =	USER NAME = jentzt	DESIGNED JSF	REVISED -
*FILE#		DRAWN JSF	REVISED -
	PLOT SCALE = 50.0000' / IN.	CHECKED JPC	REVISED -
	PLOT DATE = 3/17/2010	DATE 03/19/10	REVISED -

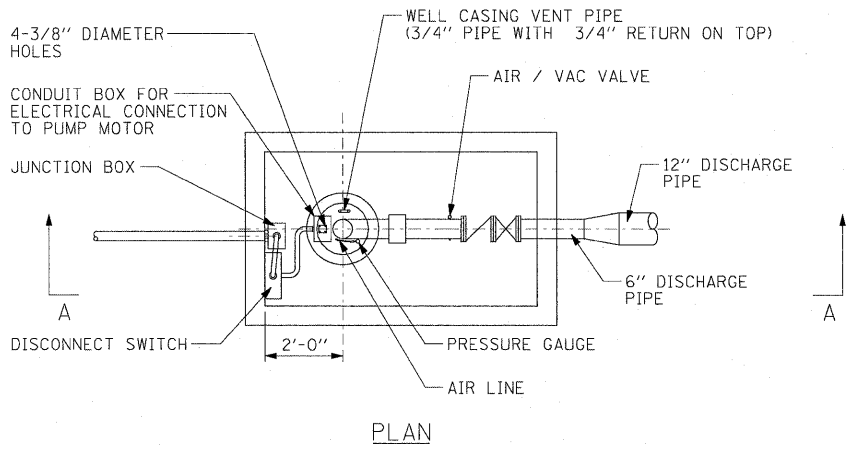
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DEEP WELL ELECTRICAL PLANS  
PROPOSED WORK**

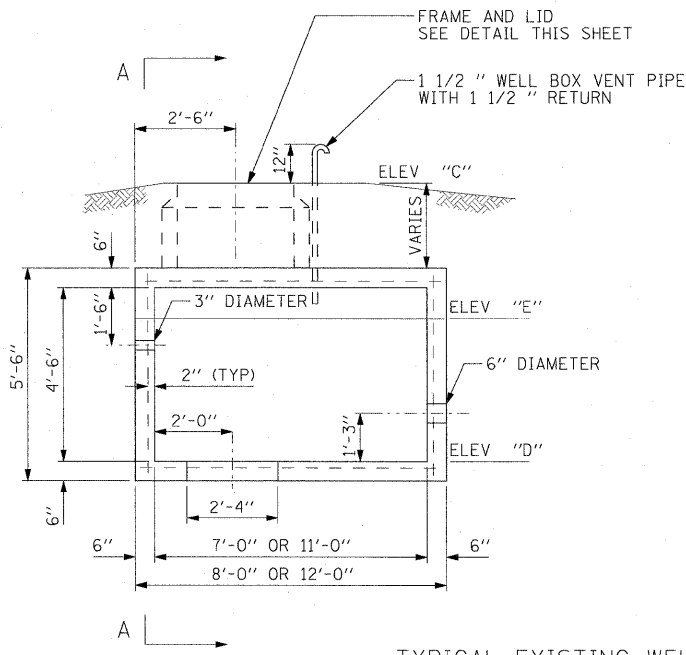
SCALE: 1"=50'    SHEET NO. 1 OF 1 SHEETS    STA. 38+00.00 TO STA. 51+50.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	202
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C49	

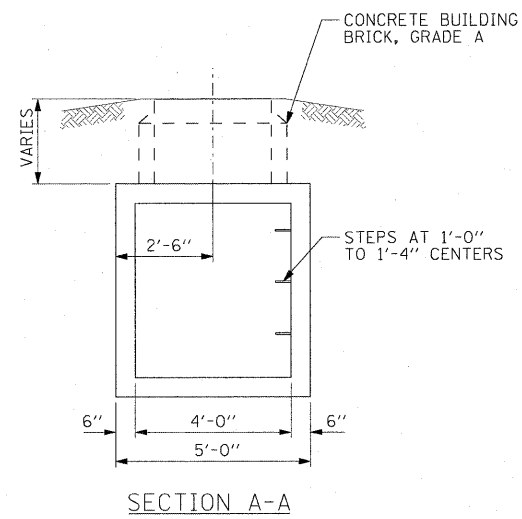




PLAN

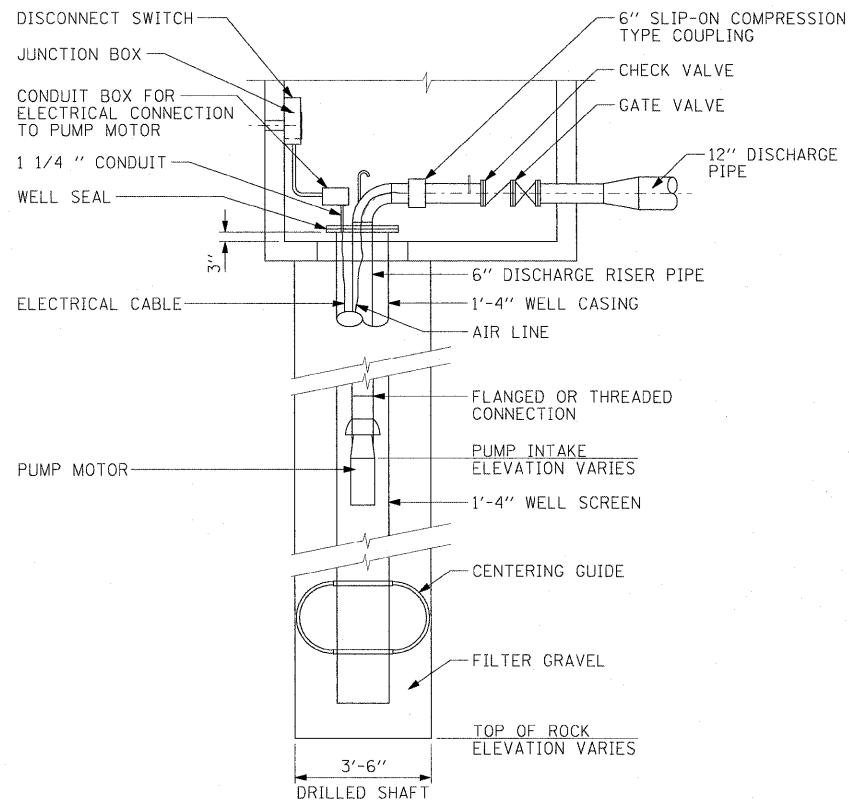


TYPICAL EXISTING WELL ENCLOSURE BOX  
(NOT TO SCALE)



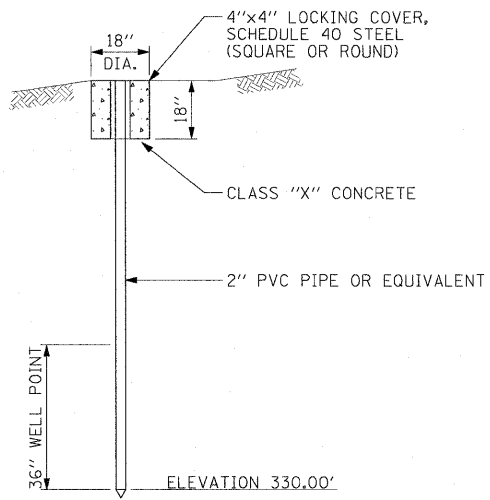
SECTION A-A

- NOTES:**
1. REMOVE THE WELL HEAD AND ASSOCIATED PIPING WITHIN THE WELL ENCLOSURE BOX FOR EACH EXISTING DEEP WELL TO BE FILLED. REFER TO SPECIAL PROVISIONS FOR DEEP WELL SEALING AND FILLING PROCEDURES.
  2. FILL THE EXISTING PIEZOMETER WELL LOCATED IN CLOSE PROXIMITY TO EACH EXISTING DEEP WELL TO BE FILLED. REFER TO SPECIAL PROVISIONS FOR PIEZOMETER WELL FILLING PROCEDURES.

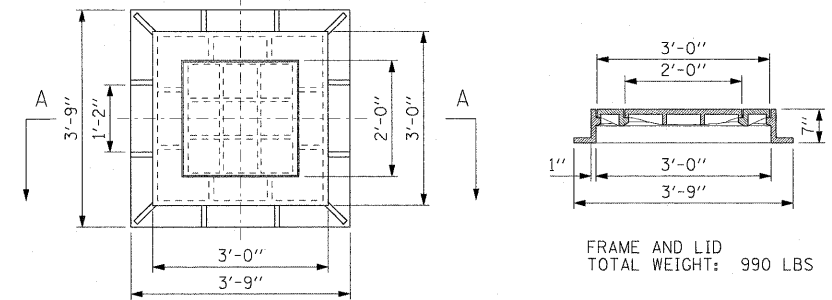


SECTION A-A

TYPICAL EXISTING DEEP WELL  
(NOT TO SCALE)



TYPICAL EXISTING PIEZOMETER WELL  
(NOT TO SCALE)



PLAN

SECTION A-A

TYPICAL EXISTING WELL ENCLOSURE BOX FRAME & LID  
(NOT TO SCALE)

FRAME AND LID  
TOTAL WEIGHT: 990 LBS

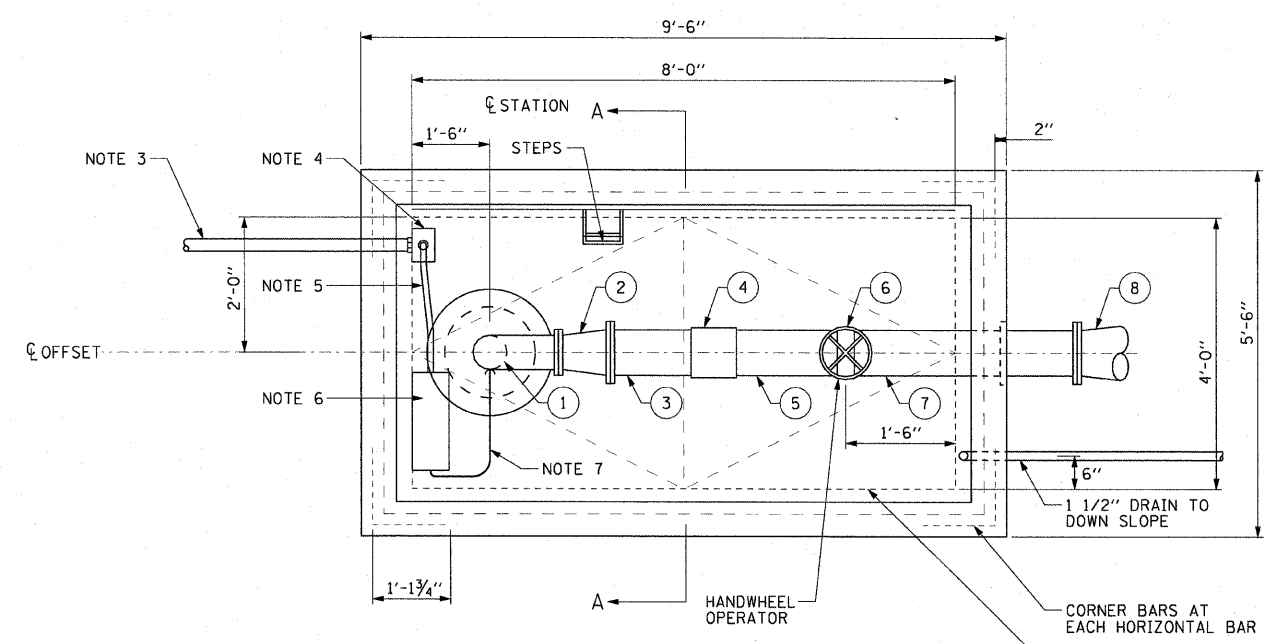
EXISTING WELL ENCLOSURE DEMOLITION AND DEEP WELL ABANDONMENT				
WELL NUMBER	ENCLOSURE LID ELEV. "C"	ENCLOSURE FLOOR ELEV. "D"	REMOVAL DEPTH ELEV. "E"	SPECIAL INSTRUCTIONS
WELL NO.6	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.7	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.8	-	-	NONE	EXISTING WELL TO REMAIN
WELL NO.9	397.11'	390.20'	NONE	EXISTING WELL TO REMAIN
WELL NO.10	404.35'	394.33'	COMPLETE	REMOVE WELLHEAD, RISER PIPING, WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.16	399.58'	392.48'	NONE	EXISTING WELL TO REMAIN
WELL NO.17	397.65'	391.33'	COMPLETE	REMOVE WELLHEAD, RISER PIPING, WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.18	396.28'	390.34'	COMPLETE	REMOVE WELLHEAD, RISER PIPING, WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.19	396.54'	390.63'	COMPLETE	REMOVE WELLHEAD, RISER PIPING, WELL ENCLOSURE BOX, AND FILL WELL
WELL NO.20	404.94'	395.47'	NONE	EXISTING WELL TO REMAIN

NOTES:

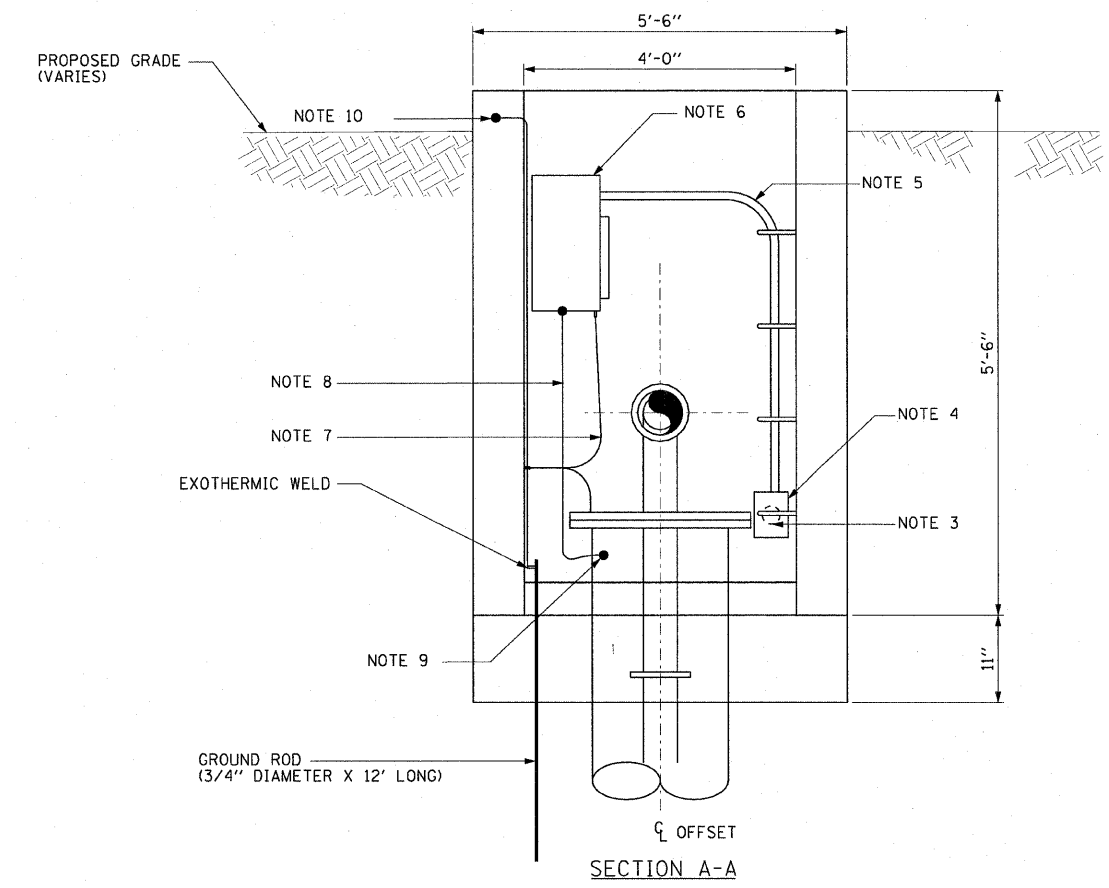
1. CONSTRUCT THE PROPOSED DEEP WELLS AT THE LOCATIONS INDICATED ON THIS DRAWING. REFER TO SPECIAL PROVISIONS FOR INSTALLATION PROCEDURES.
2. CONSTRUCT A NEW PIEZOMETER WELL FOR EACH PROPOSED DEEP WELL. SEE DRAWING DW-05 FOR PROPOSED PIEZOMETER WELL DETAILS.
3. EXTEND 3 INCH RIGID GALVANIZED CONDUIT 5 FEET FROM THE PROPOSED WELL ENCLOSURE BOX TO FACILITATE THE UNIT DUCT INSTALLATION INTO THE ENCLOSURE.
4. 6 INCHES WIDE BY 8 INCHES HIGH BY 4 INCHES DEEP STAINLESS STEEL PULL BOX. DO NOT SPLICE THE CONDUCTORS WITHIN THE PULL BOX.
5. 2 INCH LIQUID-TIGHT FLEXIBLE ~~METAL~~ CONDUIT FOR PUMP FEEDER CONDUCTORS. *NON-METALLIC*
6. 100 AMPERE, 3 POLE, NON-FUSED, HEAVY DUTY DISCONNECT SWITCH.
7. PUMP POWER CABLE (FURNISHED WITH PUMP).
8. NO.6 AWG GROUNDING ELECTRODE CONDUCTOR ROUTED FROM THE DISCONNECT SWITCH TO THE GROUND ROD.
9. NO.6 AWG BONDING CONDUCTOR ROUTED FROM THE GROUND ROD TO THE WELL CASING. BOND CONDUCTOR TO WELL CASING.
10. NO.6 AWG BONDING CONDUCTOR ROUTED FROM THE GROUND ROD TO THE ACCESS HATCH FRAME. BOND CONDUCTOR TO THE ACCESS HATCH FRAME.

BILL OF MATERIAL

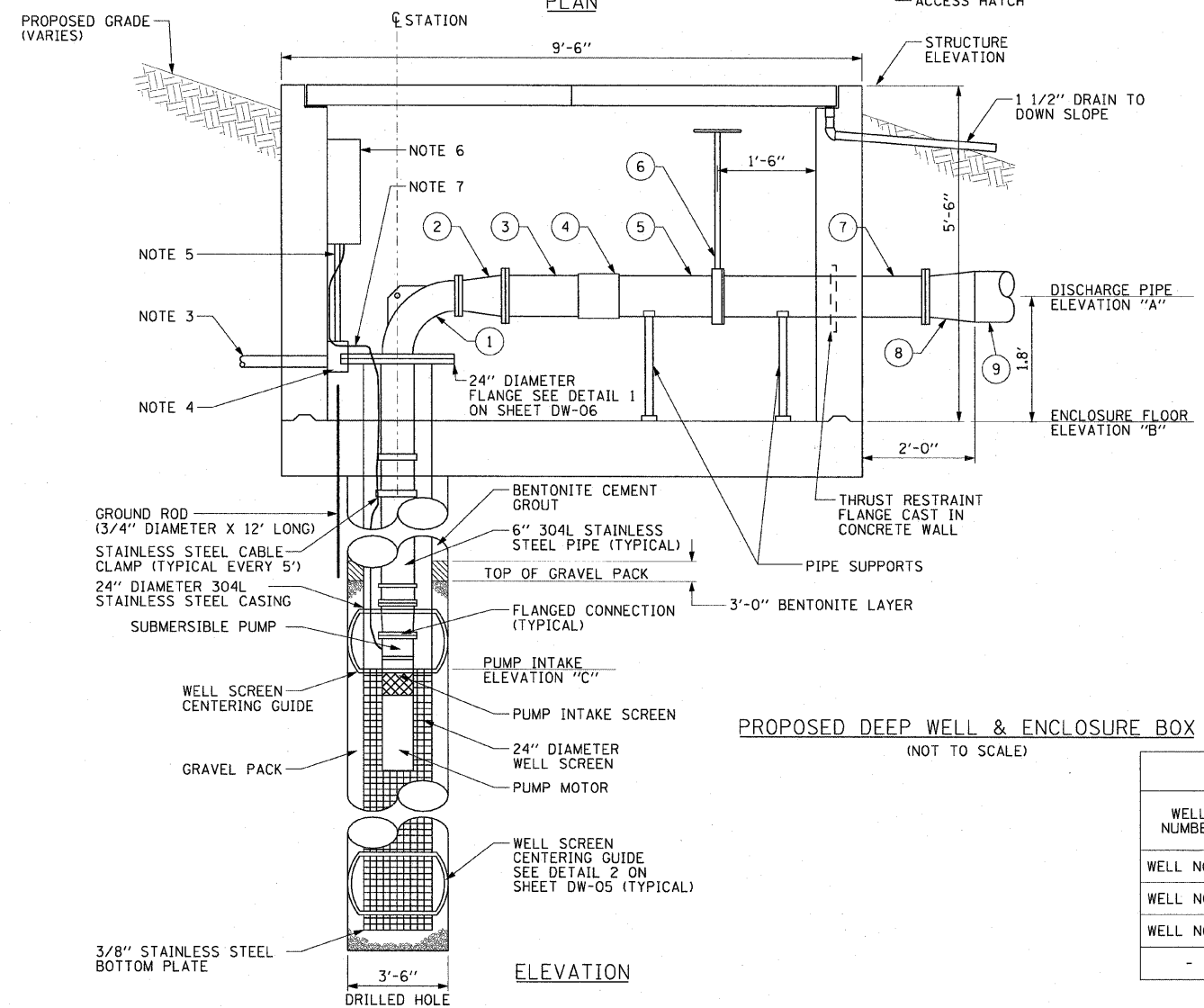
- 1 6" 304L STAINLESS STEEL LONG RADIUS 90 ELBOW
- 2 6"x8" 304L STAINLESS STEEL CONC. REDUCER, FLANGED
- 3 8" HDPE PIPE & FLANGE x PE
- 4 8" STAINLESS STEEL COUPLING
- 5 8" 304L STAINLESS STEEL PIPE & FLANGES
- 6 8" KNIFE GATE VALVE (TILT AS REQUIRED)
- 7 8" 304L STAINLESS STEEL PIPE & FLANGES
- 8 8"x12" HDPE REDUCER, FLANGE x PE
- 9 12" HDPE PIPE (BY OTHERS, SEE DRAINAGE PLANS)



PLAN



SECTION A-A

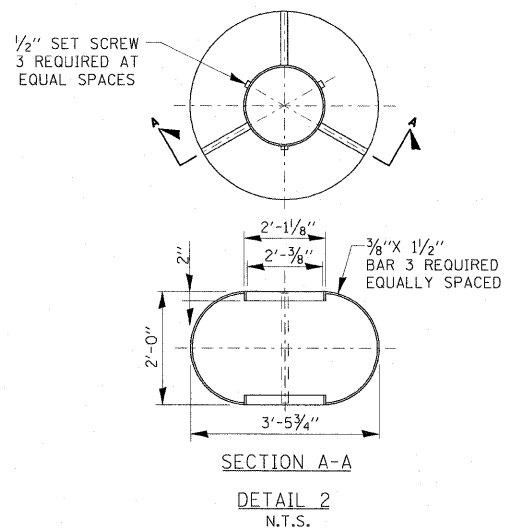
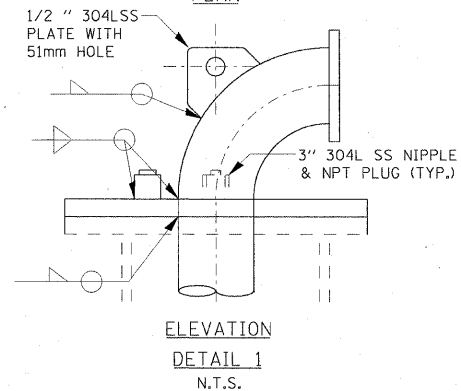
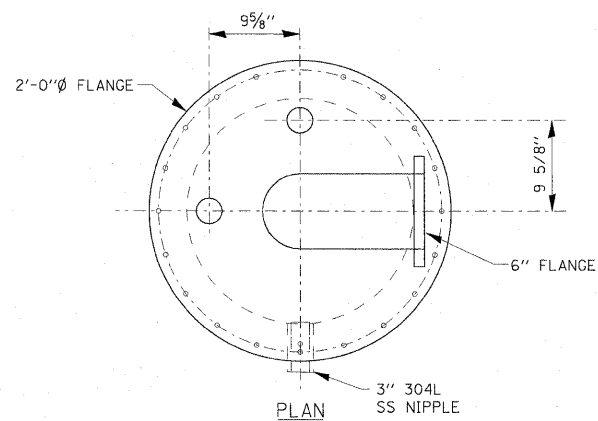


PROPOSED DEEP WELL & ENCLOSURE BOX  
(NOT TO SCALE)

ELEVATION

PROPOSED DEEP WELL INSTALLMENT												
WELL NUMBER	STATION	OFFSET	PROPOSED STRUCTURE ELEVATION	DISCHARGE PIPE ELEV. "A"	ENCLOSURE FLOOR ELEV. "B"	PUMP INTAKE ELEV. "C"	TOP OF SCREEN ELEVATION	BOTTOM OF SCREEN ELEVATION	TOP OF BEDROCK ELEVATION	TOP OF GRAVEL PACK ELEVATION	WELL PACK TYPE	SLOT SIZE
WELL NO.10	17+54.76 RAMP E BL	17.23' RT	398.65'	394.95'	393.15'	324.0'	325.0'	295.0'	294.0'	328.0'	WB-40	50
WELL NO.18	13+01.90 RAMP A BL	40.21' RT	392.72'	389.02'	387.22'	327.0'	328.0'	298.0'	297.0'	333.0'	WB-40	50
WELL NO.19	16+23.10 RAMP A BL	49.22' RT	398.08'	394.38'	392.58'	326.0'	327.0'	297.0'	296.0'	337.0'	WB-40	50
-	-	-	-	-	-	-	-	-	-	-	-	-

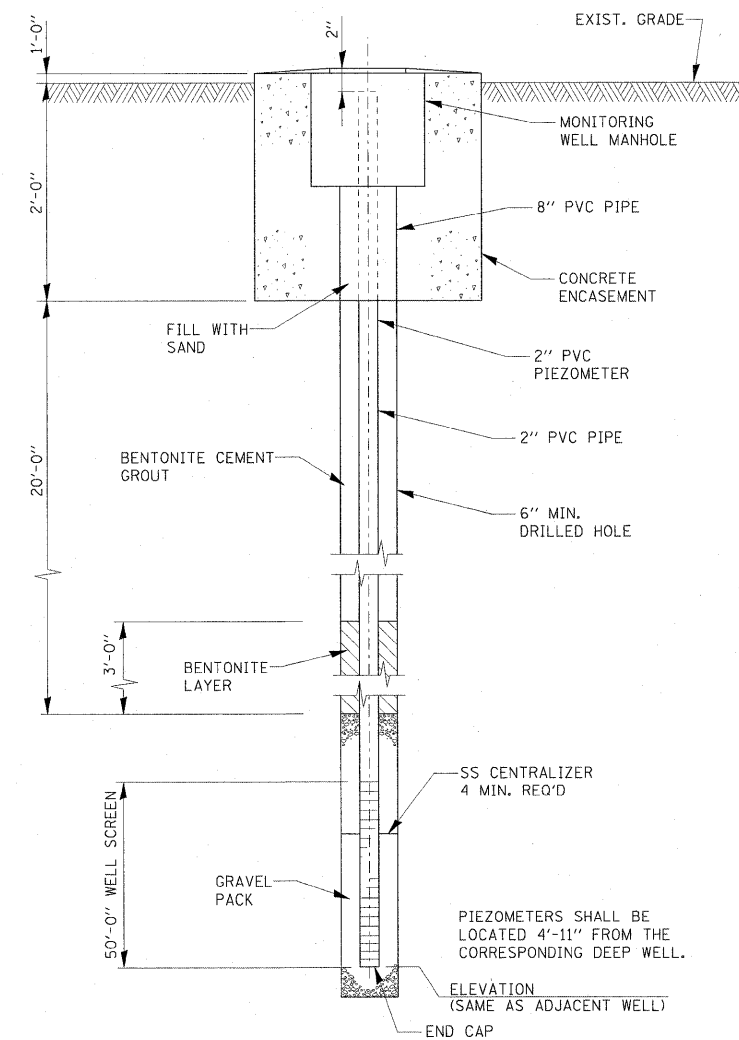
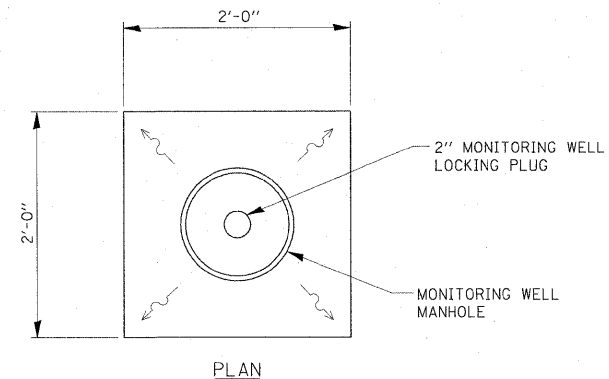
DW-04 Rev.



WELL SCREEN CENTERING GUIDE

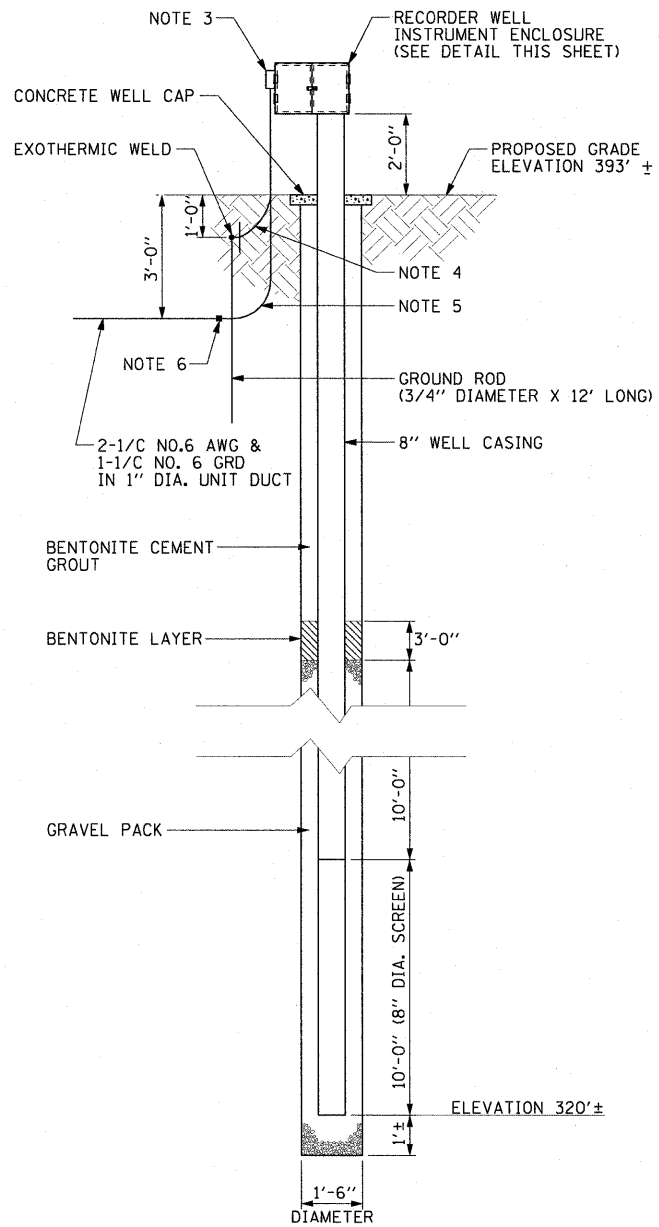
**NOTES:**

1. LOCATE THE PROPOSED PIEZOMETER WELL WITHIN A 10'-0" RADIAL DISTANCE FROM EACH PROPOSED DEEP WELL. SEE DRAWING DW-04 FOR PROPOSED DEEP WELL STATION AND OFFSET DIMENSIONS.
2. SEE DW-04 FOR GRADE ELEVATIONS AND WELL POINT ELEVATIONS.

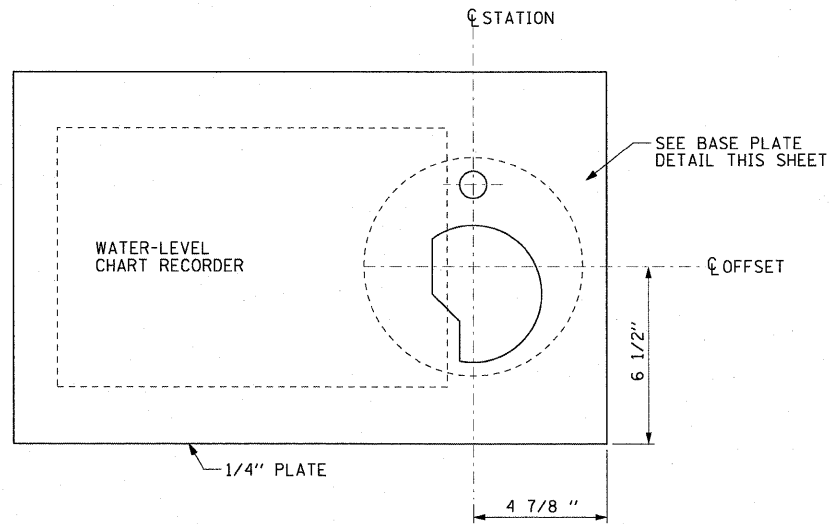


PROFILE OF NEW PIEZOMETER  
N.T.S.

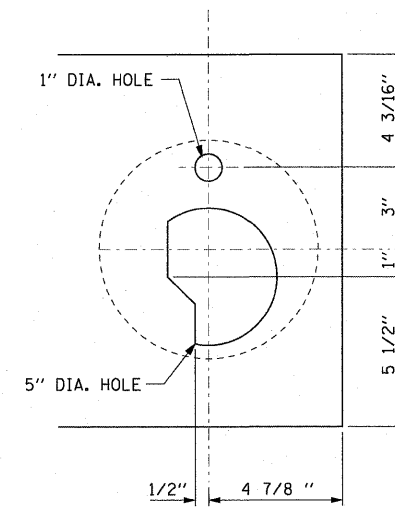
FILE NAME =	USER NAME = stermerb	DESIGNED JSF	REVISD - 4/15/2010	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DEEP WELL DETAILS PROPOSED PIEZOMETER WELL</b>		F.A.J. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 206	
#FILE#	PLOT SCALE = 1:20000 1" = 100'	DRAWN JSF	REVISD -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. N/A	TO STA. N/A	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			
	PLOT DATE = 4/14/2010	CHECKED JPC	REVISD -									
		DATE 03/19/10	REVISD -									



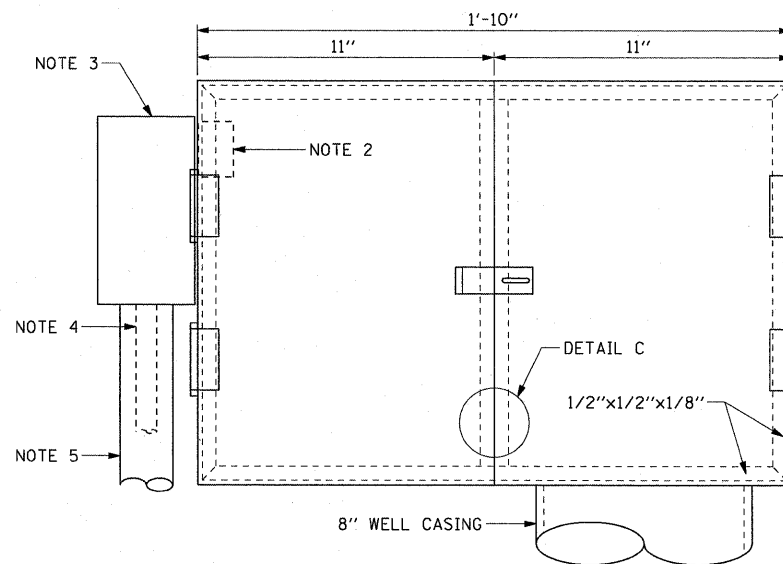
RECORDER WELL NO. 3  
(NOT TO SCALE)



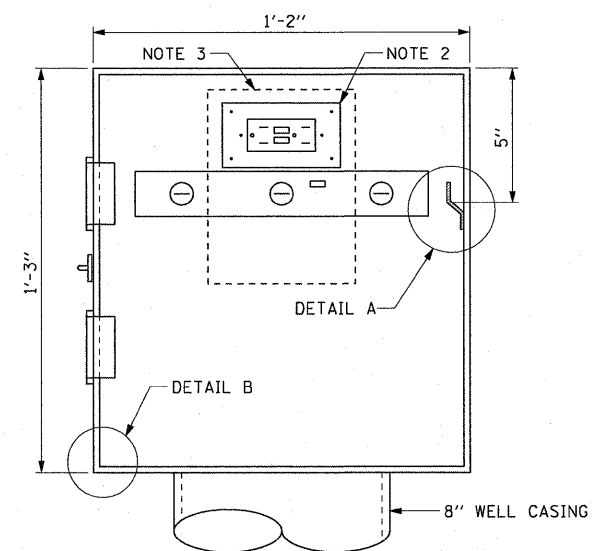
BASE PLATE PLAN  
(NOT TO SCALE)



BASE PLATE DETAIL  
(NOT TO SCALE)



ENCLOSURE ELEVATION



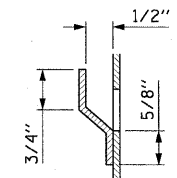
ENCLOSURE SIDE VIEW

TYPICAL RECORDER WELL INSTRUMENT ENCLOSURE  
(NOT TO SCALE)

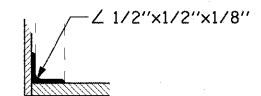
NOTES:

1. CONSTRUCT THE PROPOSED RECORDER WELLS AT THE LOCATIONS INDICATED ON THIS DRAWING. REFER TO SPECIAL PROVISIONS FOR INSTALLATION PROCEDURES.
2. CAST ALUMINUM OUTDOOR "BELL" BOX WITH 15 AMPERE GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE OUTLET AND GASKETED CAST COVER PLATE.
3. STAINLESS STEEL NEMA 4X JUNCTION BOX 6 INCHES WIDE BY 8 INCHES HIGH BY 4 INCHES DEEP. SPLICE POWER FEEDER CONDUCTORS TO NO. 10 AWG CONDUCTORS TO RECEPTACLE OUTLET AND TO NO. 6 AWG GROUNDING ELECTRODE CONDUCTOR. BOND GROUNDING CONDUCTORS TO PULL BOX.
4. 3/4 INCH DIAMETER RIGID GALVANIZED CONDUIT WITH NO. 6 AWG GROUNDING ELECTRODE CONDUCTOR TO GROUND ROD.
5. 2 INCH DIAMETER RIGID GALVANIZED CONDUIT FOR POWER FEEDER.
6. ADAPTER COUPLING AND REDUCER FITTING TO CONNECT UNIT DUCT TO RIGID GALVANIZED CONDUIT.

RECORDER WELL NUMBER	STATION	OFFSET
RW NO. 3	1370+00 RAMP A BL	20.0' RT
-	-	-



DETAIL A



DETAIL B



DETAIL C

FILE NAME =	USER NAME = stermrb	DESIGNED JSF	REVISED - 4/15/2010	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DEEP WELL DETAILS PROPOSED RECORDER WELL</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = 1/8" = 1' IN.	DRAWN JSF	REVISED -			64	82-1-2HB	ST. CLAIR	345	207	
	PLOT DATE = 4/14/2010	CHECKED JPC	REVISED -			SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. N/A TO STA. N/A	
		DATE 03/19/10	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
						CONTRACT NO. 76C49					





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Substructure Layout
4. Top of Slab Elevations 1
5. Top of Slab Elevations 2
6. Top of Slab Elevations 3
7. South Approach Top of Slab Elevations
8. North Approach Top of Slab Elevations
9. Superstructure Plan
10. Superstructure Details 1
11. Superstructure Details 2
12. Superstructure Details 3
13. Superstructure Details 4
14. South Bridge Approach Slab Details 1
15. South Bridge Approach Slab Details 2
16. North Bridge Approach Slab Details 1
17. North Bridge Approach Slab Details 2
18. Bridge Fence Railing Details 1
19. Bridge Fence Railing Details 2
20. Preformed Joint Strip Seal
21. Framing Plan
22. Structural Steel Details 1
23. Structural Steel Details 2
24. Structural Steel Details 3
25. Bearing Details
26. South Abutment Pile Layout
27. South Abutment Footing Plan
28. South Abutment Elevation
29. South Abutment Wingwalls
30. South Abutment Details
31. North Abutment Pile Layout
32. North Abutment Footing Plan
33. North Abutment Elevation
34. North Abutment Wingwalls
35. North Abutment Details
36. Pier Details
37. Form Liner and Drainage Details
38. Drainage Scupper, DS-12
39. Bar Splicer Assembly Details
40. Metal Shell Pile Details
41. HP Pile Details
42. Boring Logs 1
43. Boring Logs 2
44. Boring Logs 3

GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts  $\frac{3}{4}$  in. dia., holes  $\frac{15}{16}$  in. dia., unless otherwise noted.
2. Calculated weight of structural steel = 424,850 lbs. Grade 50 and 44,510 lbs. Grade 36.
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60. See Special Provisions.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and the first interior beam at each of these additional bracket locations.
7. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
8. Concrete sealer shall be applied to the abutment backwalls, bearing seats and exposed front face of stems.
9. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
10. The inorganic Zinc Rich Primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of the new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures."
11. Slipforming of the parapets is not allowed.
12. The limits of the Protective Shield shall be the full width of the existing deck and the length shall be face to face of existing abutment and pier in each span.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu Yd		688	688
Removal of Existing Structures No. 1	Each		1	1
Protective Shield	Sq Yd	1,402		1,402
Structure Excavation	Cu Yd		4,379	4,379
Concrete Structures	Cu Yd		1,254.6	1,254.6
Concrete Superstructure	Cu Yd	825.8		825.8
Bridge Deck Grooving	Sq Yd	1,521		1,521
Form Liner Textured Surface	Sq. Ft.		4,600	4,600
Protective Coat	Sq Yd	1,998		1,998
Furnishing and Erecting Structural Steel	L SUM	1		1
Stud Shear Connectors	Each	3,771		3,771
Reinforcement Bars, Epoxy Coated	Pound	150,930	199,260	350,190
Bar Splicers	Each	119		119
Bridge Fence Railing	Foot	286		286
Bridge Fence Railing (Sidewalk)	Foot	287		287
Furnishing Metal Shell Piles 14" x 0.312"	Foot		9,225	9,225
Furnishing Steel Piles HP 14X89	Foot		3,744	3,744
Driving Piles	Foot		12,969	12,969
Test Pile Metal Shells	Each		1	1
Pile Shoes	Each		39	39
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	122		122
Elastomeric Bearing Assembly, Type I	Each		15	15
Anchor Bolts, $\frac{3}{4}$ "	Each		16	16
Anchor Bolts, 1"	Each		14	14
Anchor Bolts, $1\frac{1}{4}$ "	Each		16	16
Concrete Sealer	Sq. Ft.		3,140	3,140
Geocomposite Wall Drain	Sq Yd		564	564
Pipe Underdrains For Structures 4"	Foot		288	288
Braced Excavation	Cu Yd		163	163
Drainage Scuppers, DS-12	Each	4		4
Temporary Soil Retention System	Sq. Ft.		1,521	1,521
Drainage System	L. Sum	1		1
Mechanical Splicers	Each		830	830

STATION 8+01.54  
BUILT BY  
STATE OF ILLINOIS  
F.A.I. RTE. 64 SEC.82-1-2HB  
LOADING HL-93  
STRUCTURE NO. 082-0377

NAME PLATE  
See Std. 515001

GENERAL DATA  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zzoka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

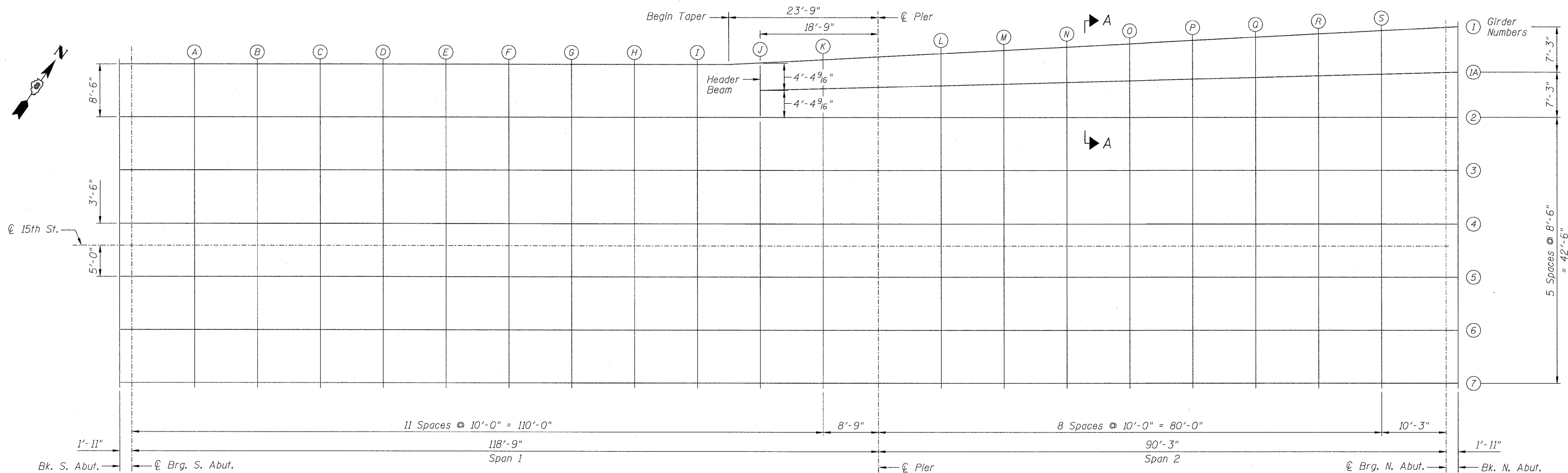
3-31-2010

SHEET NO. 2	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	209
44 SHEETS	CONTRACT NO. 76C49				
		ILLINOIS FED. AID PROJECT			

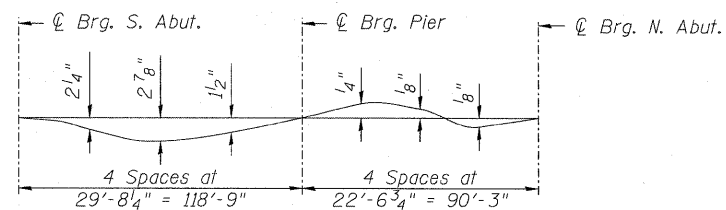
REVISED 4/15/2010



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

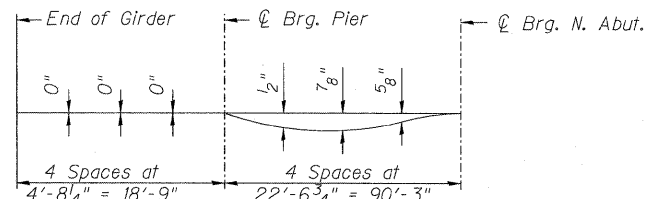


PLAN FOR TOP OF SLAB ELEVATIONS

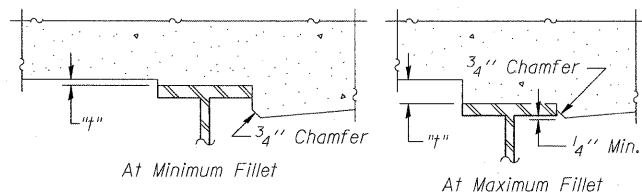


DEAD LOAD DEFLECTION DIAGRAM - GIRDERS 1 & 2  
(Includes weight of concrete only.)

Note:  
The deflections shown are not to be used in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection".

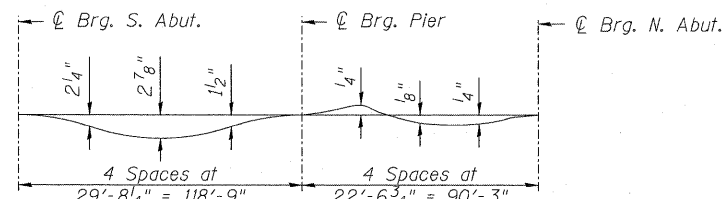


DEAD LOAD DEFLECTION DIAGRAM - GIRDER 1A  
(Includes weight of concrete only.)

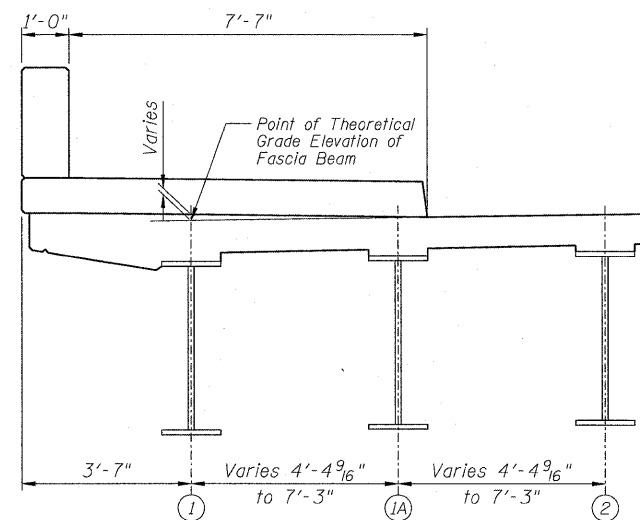


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheets 5 and 6, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM - GIRDERS 3 THRU 7  
(Includes weight of concrete only.)



SECTION A-A

TOP OF SLAB ELEVATIONS 1  
STRUCTURE NO. 082-0377

**ZROKA**  
engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SHEET NO. 4 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	211
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GIRDER 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	-29.00	419.15	419.15
☉ Brg. S. Abut.	6+82.79	-29.00	419.21	419.21
A	6+92.79	-29.00	419.51	419.58
B	7+02.79	-29.00	419.80	419.93
C	7+12.79	-29.00	420.10	420.28
D	7+22.79	-29.00	420.39	420.60
E	7+32.79	-29.00	420.62	420.84
F	7+42.79	-29.00	420.82	421.04
G	7+52.79	-29.00	420.97	421.16
H	7+62.79	-29.00	421.07	421.23
I	7+72.79	-29.00	421.13	421.24
J	7+82.79	-29.50	421.13	421.20
K	7+92.79	-30.00	421.08	421.11
☉ Pier	8+01.54	-30.44	421.01	421.01
L	8+11.54	-30.94	420.88	420.87
M	8+21.54	-31.44	420.70	420.68
N	8+31.54	-31.94	420.48	420.47
O	8+41.54	-32.44	420.21	420.21
P	8+51.54	-32.94	419.90	419.91
Q	8+61.54	-33.44	419.55	419.56
R	8+71.54	-33.94	419.16	419.17
S	8+81.54	-34.44	418.77	418.78
☉ Brg. N. Abut.	8+91.79	-34.95	418.36	418.36
Bk. N. Abut.	8+93.71	-35.04	418.29	418.29

GIRDER 1A

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
J	7+82.79	-24.89	421.22	421.22
K	7+92.79	-25.15	421.18	421.18
☉ Pier	8+01.54	-25.38	421.11	421.11
L	8+11.54	-25.64	420.99	421.00
M	8+21.54	-25.89	420.82	420.85
N	8+31.54	-26.15	420.60	420.65
O	8+41.54	-26.41	420.34	420.40
P	8+51.54	-26.67	420.03	420.10
Q	8+61.54	-26.93	419.68	419.74
R	8+71.54	-27.19	419.30	419.35
S	8+81.54	-27.45	418.91	418.94
☉ Brg. N. Abut.	8+91.79	-27.72	418.51	418.51
Bk. N. Abut.	8+93.71	-27.77	418.44	418.44

GIRDER 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	-20.50	419.33	419.33
☉ Brg. S. Abut.	6+82.79	-20.50	419.39	419.39
A	6+92.79	-20.50	419.68	419.75
B	7+02.79	-20.50	419.98	420.11
C	7+12.79	-20.50	420.28	420.46
D	7+22.79	-20.50	420.56	420.77
E	7+32.79	-20.50	420.80	421.01
F	7+42.79	-20.50	421.00	421.16
G	7+52.79	-20.50	421.14	421.33
H	7+62.79	-20.50	421.25	421.41
I	7+72.79	-20.50	421.30	421.41
J	7+82.79	-20.50	421.31	421.38
K	7+92.79	-20.50	421.28	421.31
☉ Pier	8+01.54	-20.50	421.21	421.21
L	8+11.54	-20.50	421.09	421.08
M	8+21.54	-20.50	420.93	420.91
N	8+31.54	-20.50	420.72	420.71
O	8+41.54	-20.50	420.46	420.46
P	8+51.54	-20.50	420.16	420.17
Q	8+61.54	-20.50	419.82	419.83
R	8+71.54	-20.50	419.44	419.45
S	8+81.54	-20.50	419.06	419.07
☉ Brg. N. Abut.	8+91.79	-20.50	418.66	418.66
Bk. N. Abut.	8+93.71	-20.50	418.59	418.59

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	-12.00	419.51	419.51
☉ Brg. S. Abut.	6+82.79	-12.00	419.56	419.56
A	6+92.79	-12.00	419.86	419.94
B	7+02.79	-12.00	420.16	420.30
C	7+12.79	-12.00	420.45	420.64
D	7+22.79	-12.00	420.74	420.97
E	7+32.79	-12.00	420.98	421.22
F	7+42.79	-12.00	421.17	421.41
G	7+52.79	-12.00	421.32	421.53
H	7+62.79	-12.00	421.42	421.59
I	7+72.79	-12.00	421.48	421.60
J	7+82.79	-12.00	421.49	421.56
K	7+92.79	-12.00	421.46	421.49
☉ Pier	8+01.54	-12.00	421.39	421.39
L	8+11.54	-12.00	421.27	421.25
M	8+21.54	-12.00	421.11	421.09
N	8+31.54	-12.00	420.90	420.89
O	8+41.54	-12.00	420.64	420.64
P	8+51.54	-12.00	420.34	420.35
Q	8+61.54	-12.00	419.99	420.01
R	8+71.54	-12.00	419.62	419.64
S	8+81.54	-12.00	419.23	419.24
☉ Brg. N. Abut.	8+91.79	-12.00	418.84	418.84
Bk. N. Abut.	8+93.71	-12.00	418.77	418.77

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	-3.50	419.68	419.68
☉ Brg. S. Abut.	6+82.79	-3.50	419.74	419.74
A	6+92.79	-3.50	420.04	420.12
B	7+02.79	-3.50	420.33	420.47
C	7+12.79	-3.50	420.63	420.82
D	7+22.79	-3.50	420.92	421.15
E	7+32.79	-3.50	421.16	421.40
F	7+42.79	-3.50	421.35	421.59
G	7+52.79	-3.50	421.50	421.71
H	7+62.79	-3.50	421.60	421.77
I	7+72.79	-3.50	421.66	421.78
J	7+82.79	-3.50	421.67	421.74
K	7+92.79	-3.50	421.63	421.66
☉ Pier	8+01.54	-3.50	421.57	421.57
L	8+11.54	-3.50	421.45	421.43
M	8+21.54	-3.50	421.28	421.26
N	8+31.54	-3.50	421.07	421.06
O	8+41.54	-3.50	420.82	420.82
P	8+51.54	-3.50	420.52	420.53
Q	8+61.54	-3.50	420.17	420.19
R	8+71.54	-3.50	419.80	419.82
S	8+81.54	-3.50	419.41	419.42
☉ Brg. N. Abut.	8+91.79	-3.50	419.02	419.02
Bk. N. Abut.	8+93.71	-3.50	418.94	418.94



DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

TOP OF SLAB ELEVATIONS 2  
STRUCTURE NO. 082-0377

SHEET NO. 5	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	212
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

☉ 15th STREET & PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	0.00	419.76	419.76
☉ Brg. S. Abut.	6+82.79	0.00	419.81	419.81
A	6+92.79	0.00	420.11	420.19
B	7+02.79	0.00	420.41	420.55
C	7+12.79	0.00	420.70	420.89
D	7+22.79	0.00	420.99	421.22
E	7+32.79	0.00	421.23	421.47
F	7+42.79	0.00	421.42	421.66
G	7+52.79	0.00	421.57	421.78
H	7+62.79	0.00	421.67	421.84
I	7+72.79	0.00	421.73	421.85
J	7+82.79	0.00	421.74	421.81
K	7+92.79	0.00	421.71	421.74
☉ Pier	8+01.54	0.00	421.64	421.64
L	8+11.54	0.00	421.52	421.50
M	8+21.54	0.00	421.36	421.34
N	8+31.54	0.00	421.15	421.14
O	8+41.54	0.00	420.89	420.89
P	8+51.54	0.00	420.59	420.60
Q	8+61.54	0.00	420.24	420.26
R	8+71.54	0.00	419.87	419.89
S	8+81.54	0.00	419.48	419.49
☉ Brg. N. Abut.	8+91.79	0.00	419.09	419.09
Bk. N. Abut.	8+93.71	0.00	419.02	419.02

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	5.00	419.65	419.65
☉ Brg. S. Abut.	6+82.79	5.00	419.71	419.71
A	6+92.79	5.00	420.01	420.09
B	7+02.79	5.00	420.30	420.44
C	7+12.79	5.00	420.60	420.79
D	7+22.79	5.00	420.89	421.12
E	7+32.79	5.00	421.12	421.36
F	7+42.79	5.00	421.32	421.56
G	7+52.79	5.00	421.47	421.68
H	7+62.79	5.00	421.57	421.74
I	7+72.79	5.00	421.63	421.75
J	7+82.79	5.00	421.64	421.71
K	7+92.79	5.00	421.60	421.63
☉ Pier	8+01.54	5.00	421.54	421.54
L	8+11.54	5.00	421.42	421.40
M	8+21.54	5.00	421.25	421.23
N	8+31.54	5.00	421.04	421.03
O	8+41.54	5.00	420.79	420.79
P	8+51.54	5.00	420.49	420.50
Q	8+61.54	5.00	420.14	420.16
R	8+71.54	5.00	419.76	419.78
S	8+81.54	5.00	419.38	419.39
☉ Brg. N. Abut.	8+91.79	5.00	418.98	418.98
Bk. N. Abut.	8+93.71	5.00	418.91	418.91

GIRDER 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	13.50	419.48	419.48
☉ Brg. S. Abut.	6+82.79	13.50	419.53	419.53
A	6+92.79	13.50	419.83	419.91
B	7+02.79	13.50	420.13	420.27
C	7+12.79	13.50	420.42	420.61
D	7+22.79	13.50	420.71	420.94
E	7+32.79	13.50	420.95	421.19
F	7+42.79	13.50	421.14	421.38
G	7+52.79	13.50	421.29	421.50
H	7+62.79	13.50	421.39	421.56
I	7+72.79	13.50	421.45	421.57
J	7+82.79	13.50	421.46	421.53
K	7+92.79	13.50	421.43	421.46
☉ Pier	8+01.54	13.50	421.36	421.36
L	8+11.54	13.50	421.24	421.22
M	8+21.54	13.50	421.08	421.06
N	8+31.54	13.50	420.86	420.85
O	8+41.54	13.50	420.61	420.61
P	8+51.54	13.50	420.31	420.32
Q	8+61.54	13.50	419.96	419.98
R	8+71.54	13.50	419.59	419.61
S	8+81.54	13.50	419.20	419.21
☉ Brg. N. Abut.	8+91.79	13.50	418.81	418.81
Bk. N. Abut.	8+93.71	13.50	418.73	418.73

GIRDER 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	6+80.88	22.00	419.30	419.30
☉ Brg. S. Abut.	6+82.79	22.00	419.35	419.35
A	6+92.79	22.00	419.65	419.73
B	7+02.79	22.00	419.95	420.09
C	7+12.79	22.00	420.25	420.44
D	7+22.79	22.00	420.53	420.76
E	7+32.79	22.00	420.77	421.01
F	7+42.79	22.00	420.96	421.20
G	7+52.79	22.00	421.11	421.32
H	7+62.79	22.00	421.21	421.38
I	7+72.79	22.00	421.27	421.39
J	7+82.79	22.00	421.28	421.35
K	7+92.79	22.00	421.25	421.28
☉ Pier	8+01.54	22.00	421.18	421.18
L	8+11.54	22.00	421.06	421.04
M	8+21.54	22.00	420.90	420.88
N	8+31.54	22.00	420.69	420.68
O	8+41.54	22.00	420.43	420.43
P	8+51.54	22.00	420.13	420.14
Q	8+61.54	22.00	419.78	419.80
R	8+71.54	22.00	419.41	419.43
S	8+81.54	22.00	419.02	419.03
☉ Brg. N. Abut.	8+91.79	22.00	418.63	418.63
Bk. N. Abut.	8+93.71	22.00	418.56	418.56



DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

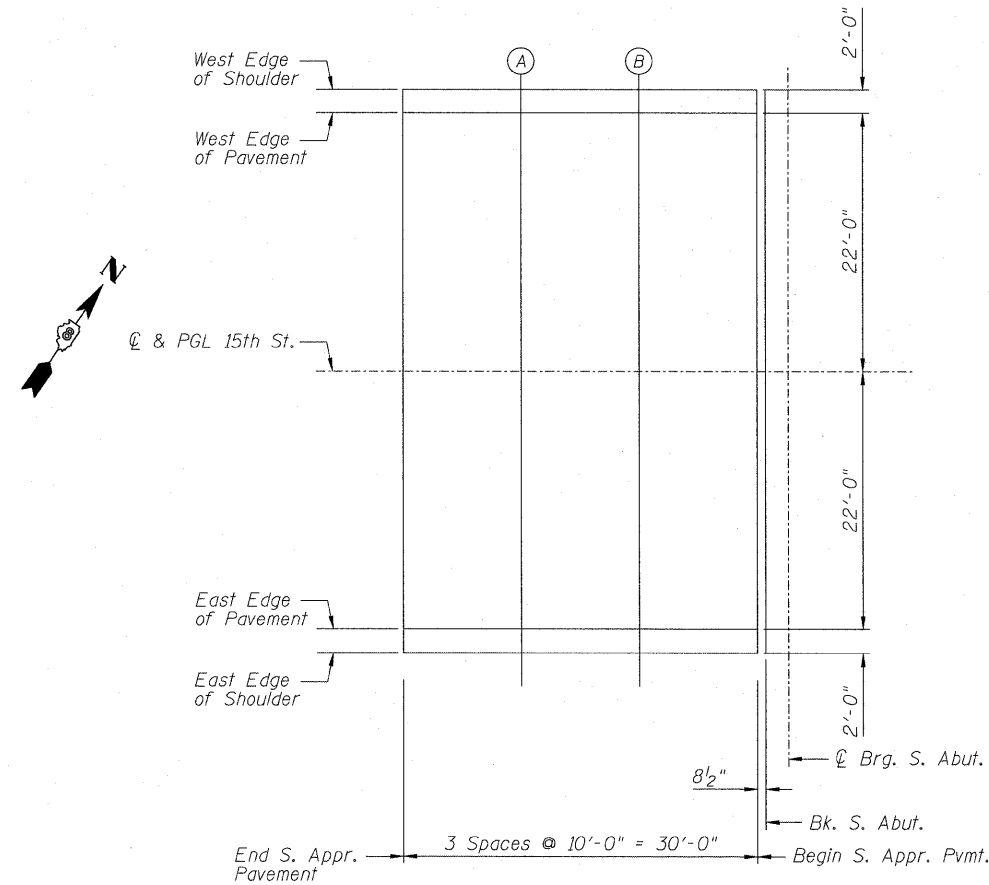
3-31-2010

TOP OF SLAB ELEVATIONS 3  
STRUCTURE NO. 082-0377

SHEET NO. 6	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	213
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



PLAN FOR TOP OF SLAB ELEVATIONS

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pvmf.	6+50.17	-24.00	418.34
A	6+60.17	-24.00	418.64
B	6+70.17	-24.00	418.94
Begin S. Appr. Pvmf.	6+80.17	-24.00	419.24

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pvmf.	6+50.17	-22.00	418.39
A	6+60.17	-22.00	418.68
B	6+70.17	-22.00	418.98
Begin S. Appr. Pvmf.	6+80.17	-22.00	419.28

CL 15th STREET & PGL

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pvmf.	6+50.17	0.00	418.84
A	6+60.17	0.00	419.14
B	6+70.17	0.00	419.44
Begin S. Appr. Pvmf.	6+80.17	0.00	419.74

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pvmf.	6+50.17	22.00	418.39
A	6+60.17	22.00	418.68
B	6+70.17	22.00	418.98
Begin S. Appr. Pvmf.	6+80.17	22.00	419.28

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
End S. Appr. Pvmf.	6+50.17	24.00	418.34
A	6+60.17	24.00	418.64
B	6+70.17	24.00	418.94
Begin S. Appr. Pvmf.	6+80.17	24.00	419.24

SOUTH APPROACH TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

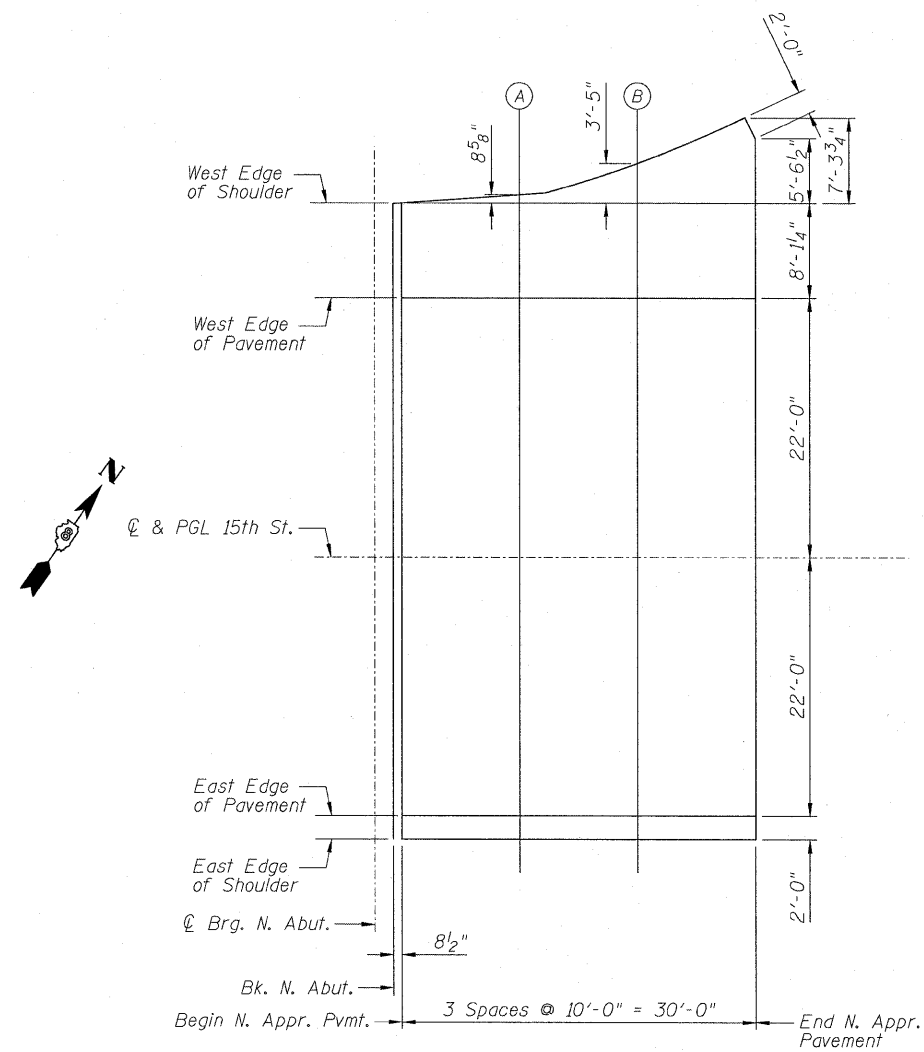
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SHEET NO. 7 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 214
	CONTRACT NO. 76C49				

ILLINOIS FED. AID PROJECT  
Revised 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



PLAN FOR TOP OF SLAB ELEVATIONS

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Pvmt.	8+94.42	-30.10	418.36
A	9+04.42	-30.82	417.96
B	9+14.42	-33.51	417.52
End N. Appr. Pvmt.	9+23.56	-37.45	417.06

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Pvmt.	8+94.42	-22.00	418.53
A	9+04.42	-22.00	418.15
B	9+14.42	-22.00	417.76
End N. Appr. Pvmt.	9+24.42	-22.00	417.38

C 15th STREET & PGL

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Pvmt.	8+94.42	0.00	418.99
A	9+04.42	0.00	418.60
B	9+14.42	0.00	418.22
End N. Appr. Pvmt.	9+24.42	0.00	417.84

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Pvmt.	8+94.42	22.00	418.53
A	9+04.42	22.00	418.15
B	9+14.42	22.00	417.76
End N. Appr. Pvmt.	9+24.42	22.00	417.38

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
Begin N. Appr. Pvmt.	8+94.42	24.00	418.49
A	9+04.42	24.00	418.10
B	9+14.42	24.00	417.72
End N. Appr. Pvmt.	9+24.42	24.00	417.34

NORTH APPROACH TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

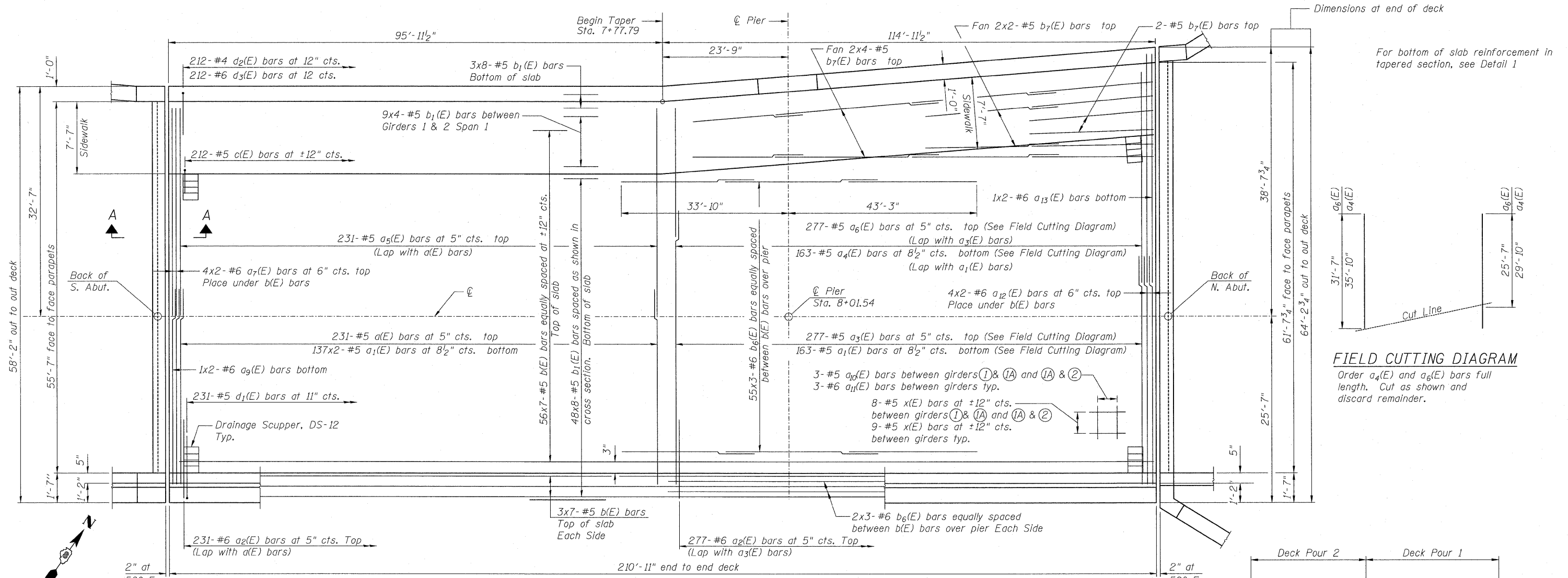
3-31-2010

SHEET NO. 8	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	215
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

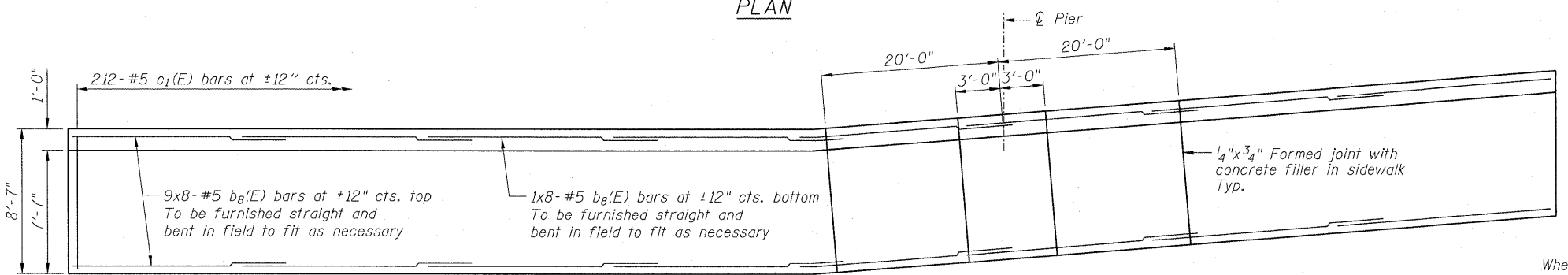
Revised 4/15/2010



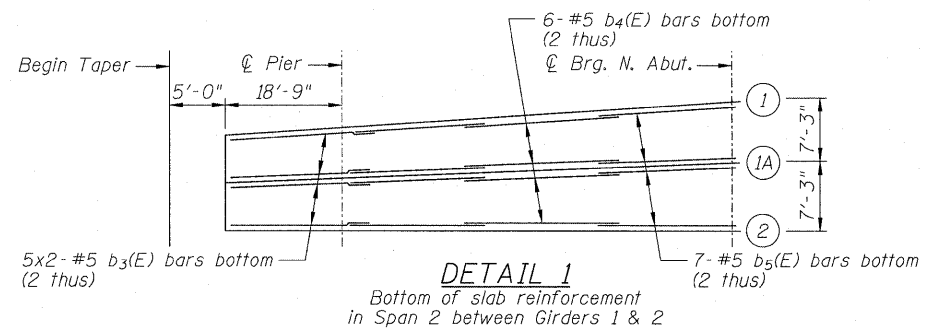
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



PLAN



SIDEWALK PLAN  
Showing Reinforcement

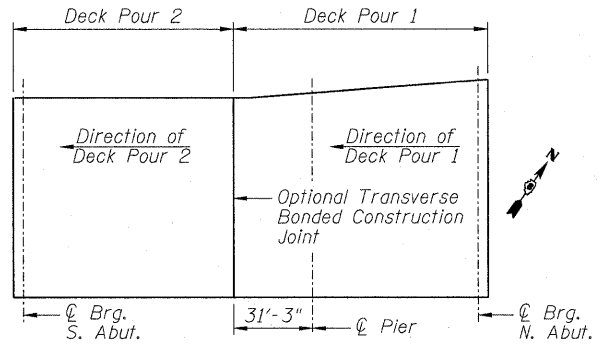


DETAIL 1  
Bottom of slab reinforcement  
in Span 2 between Girders 1 & 2

For bottom of slab reinforcement in tapered section, see Detail 1

FIELD CUTTING DIAGRAM

Order a4(E) and a6(E) bars full length. Cut as shown and discard remainder.



DECK POUR SEQUENCE PLAN

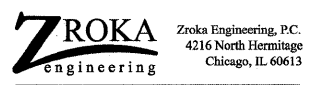
When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

Notes:  
See Sheets 10, 11, 12 & 13 of 44 for superstructure details.  
See Sheet 13 of 44 for Bill of Material.  
Bars indicated thus 56x7-#5 etc. indicates 56 lines of bars with 7 lengths per line.  
See Sheet 11 of 44 for parapet reinforcement.

MIN. BAR LAPS

- #5 bar = 2'-2"
- #6 bar = 2'-7"
- #7 bar = 3'-5"



DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

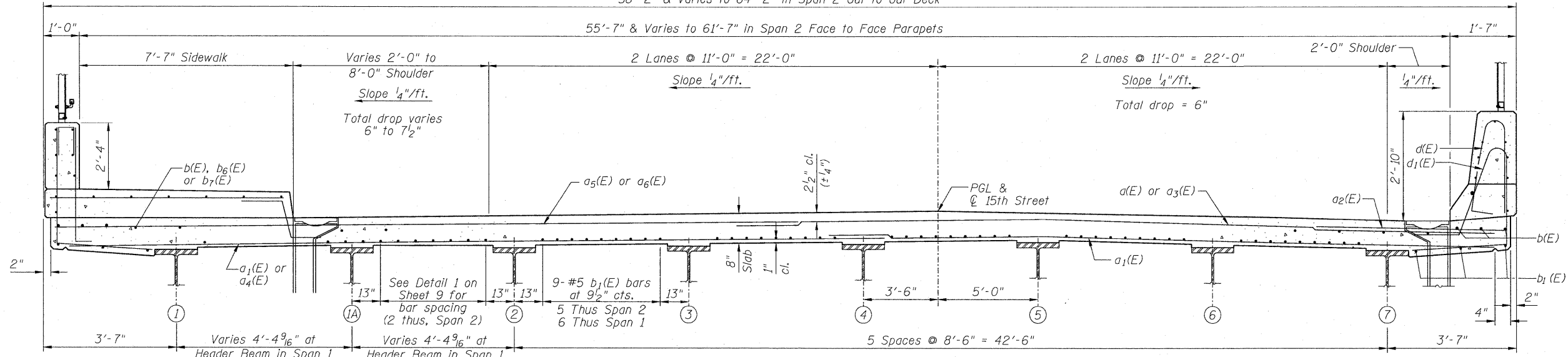
SUPERSTRUCTURE PLAN  
STRUCTURE NO. 082-0377

SHEET NO. 9 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	216
CONTRACT NO. 76C49					
ILLINOIS FED. AID PROJECT					

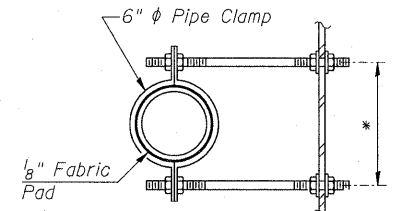
Revised 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

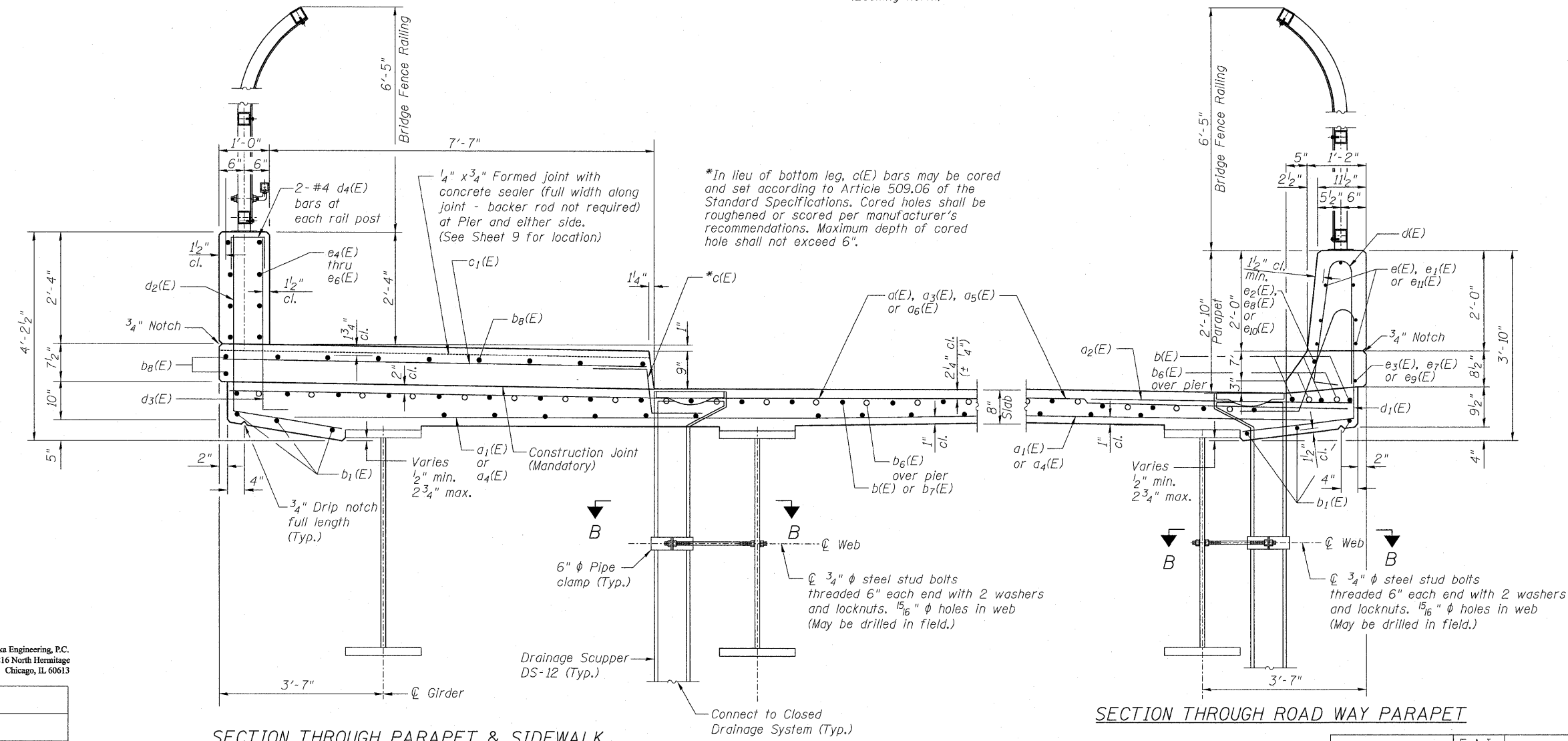
58'-2" & Varies to 64'-2" in Span 2 Out to Out Deck



CROSS SECTION  
(Looking North)



SECTION B-B  
\* Dimension as required by Pipe Clamp



SECTION THROUGH PARAPET & SIDEWALK

SECTION THROUGH ROAD WAY PARAPET

SUPERSTRUCTURE DETAILS 1  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

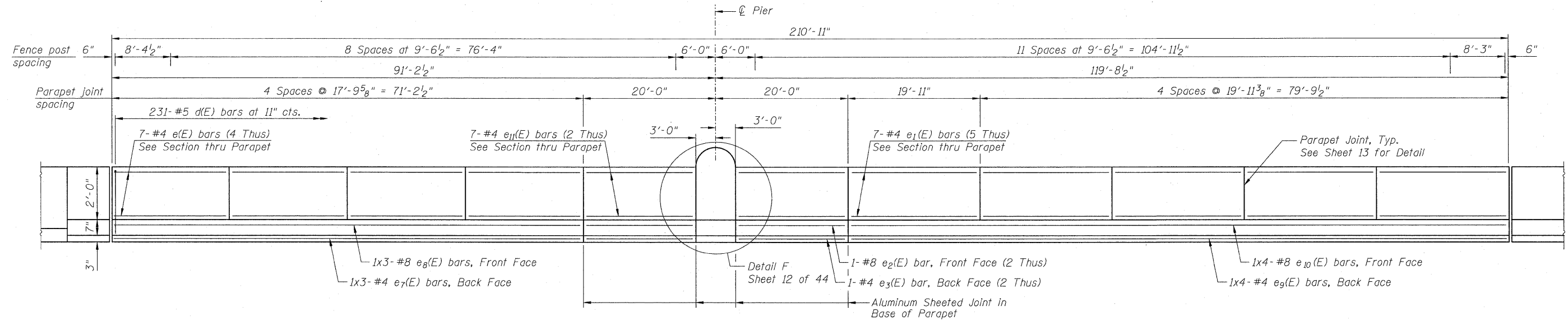
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

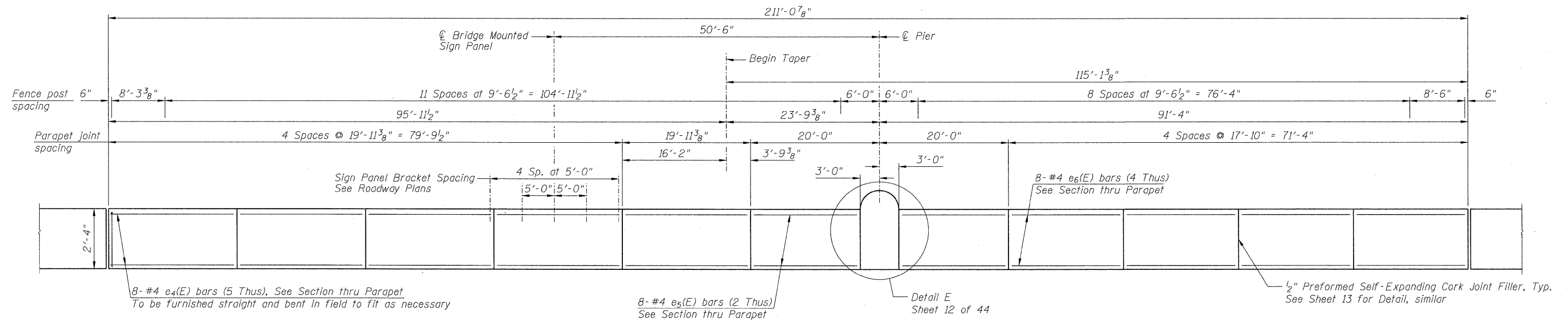
SHEET NO. 10 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	217
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



ROADWAY PARAPET INSIDE ELEVATION



SIDEWALK PARAPET INSIDE ELEVATION

Note:  
Bars indicated thus 1x3-#8 etc. indicates  
1 line of bars with 3 lengths per line.

MIN. BAR LAPS

#4 bar = 1'-4"  
#8 bar = 3'-5"

Note: Vertical scale exaggerated for clarity.

**ZROKA**  
engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

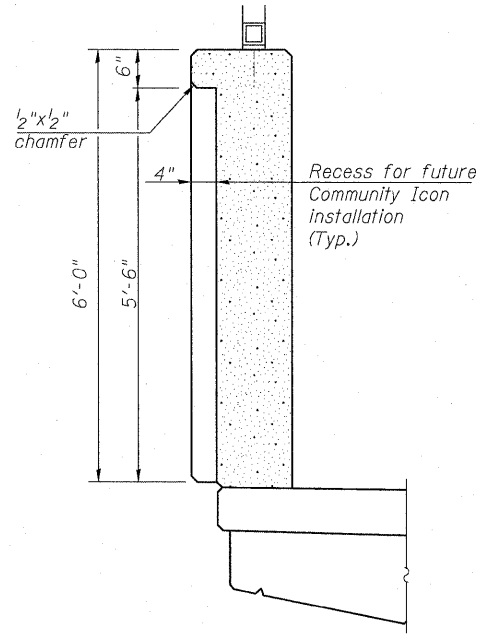
3-31-2010

SUPERSTRUCTURE DETAILS 2  
STRUCTURE NO. 082-0377

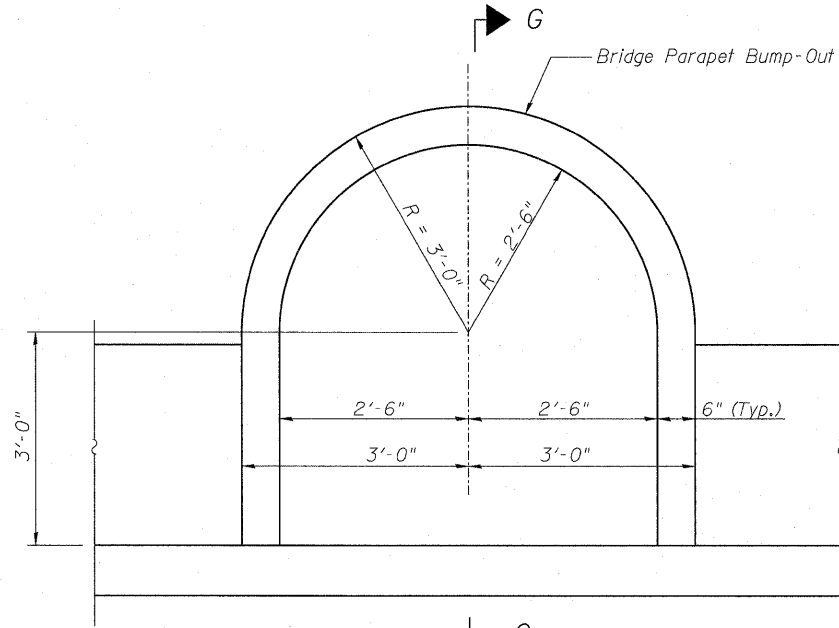
SHEET NO. 11 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	218
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

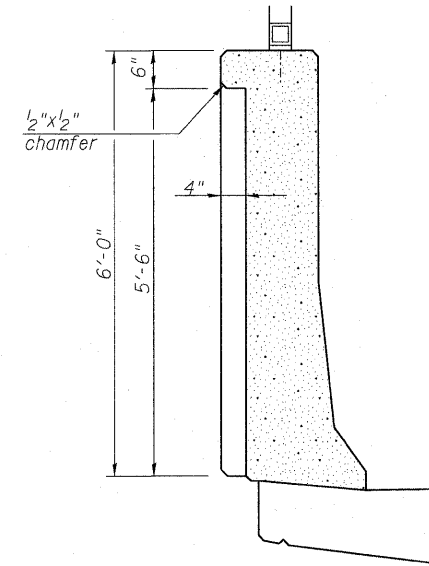
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



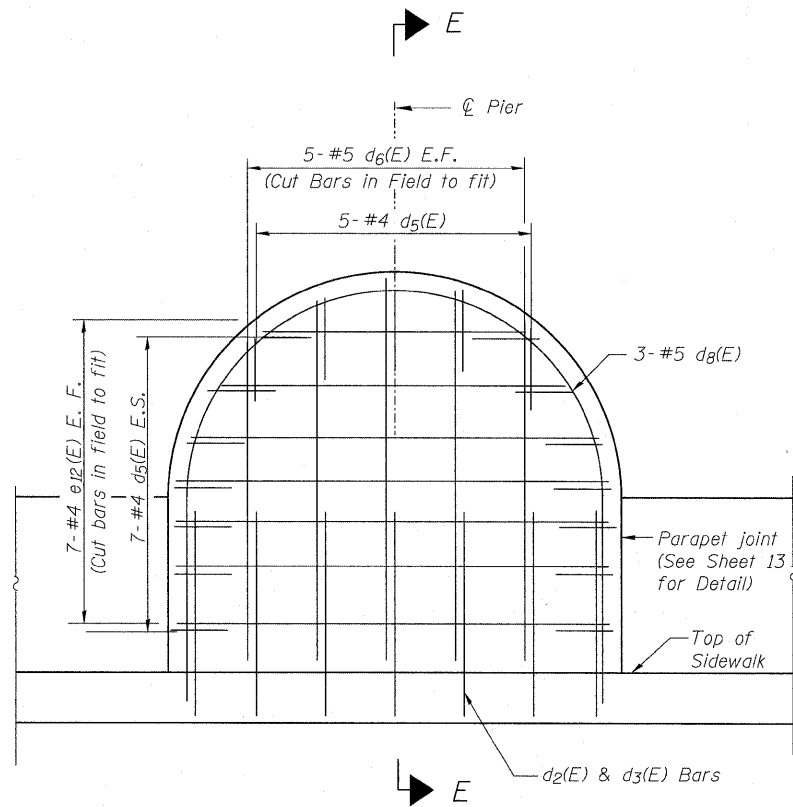
SECTION G-G  
(North Parapet)



COMMUNITY ICON PARAPET ELEVATION

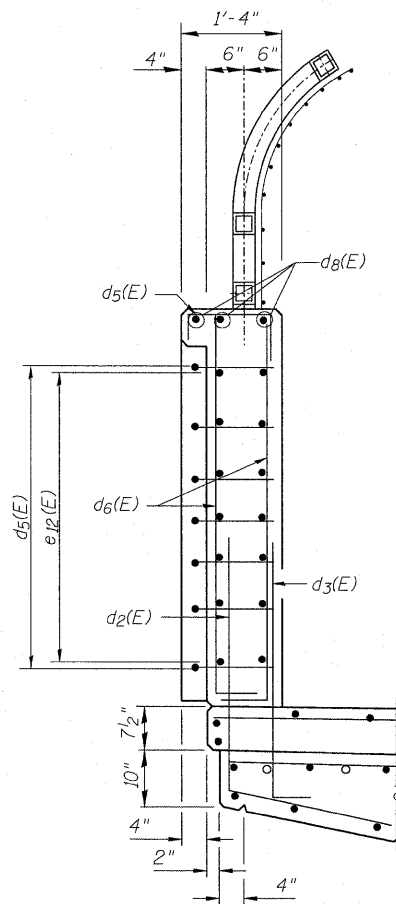


SECTION G-G  
(South Parapet)

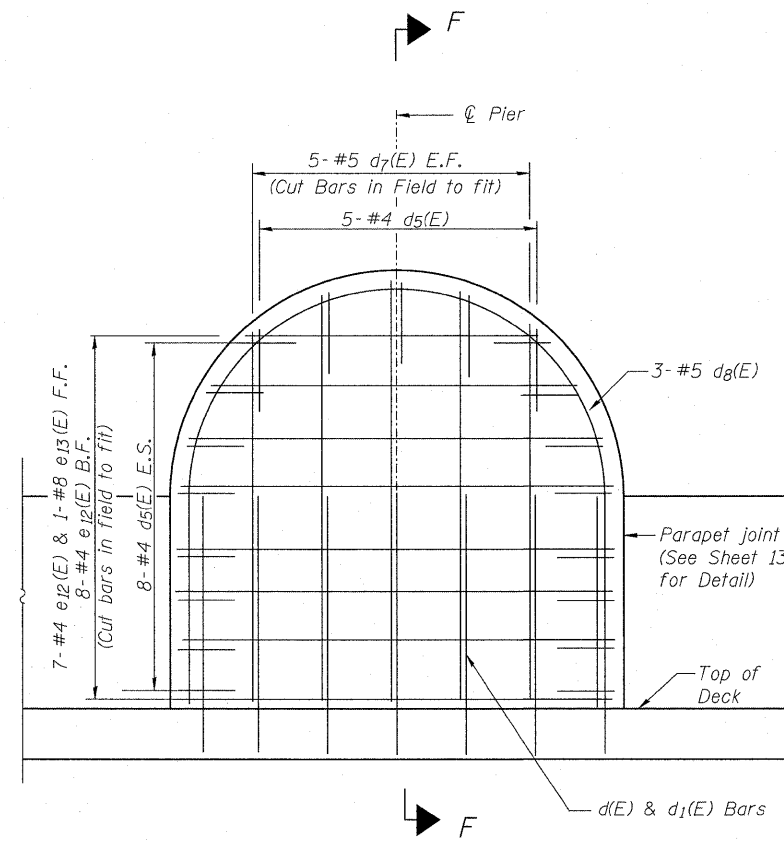


DETAIL E

(See Community Icon Parapet Elevation for dimensions)

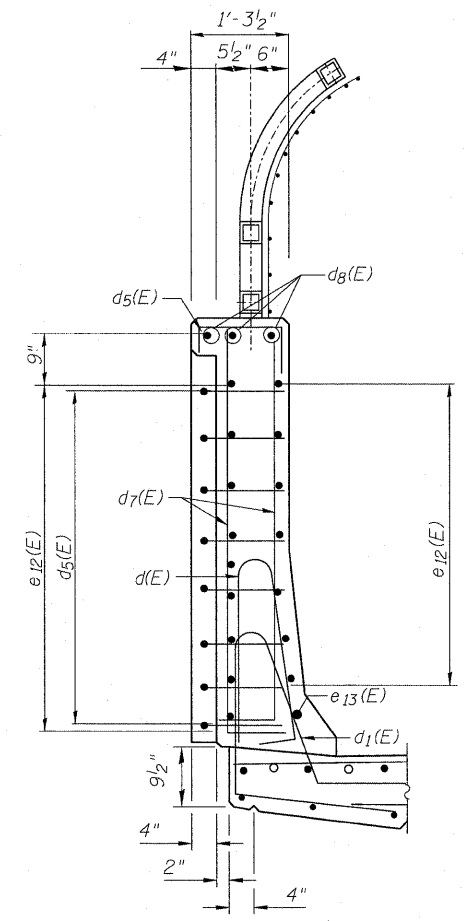


SECTION E-E



DETAIL F

(See Community Icon Parapet Elevation for dimensions)



SECTION F-F

SUPERSTRUCTURE DETAILS 3  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

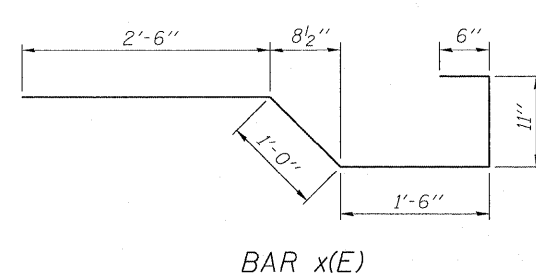
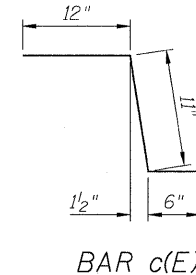
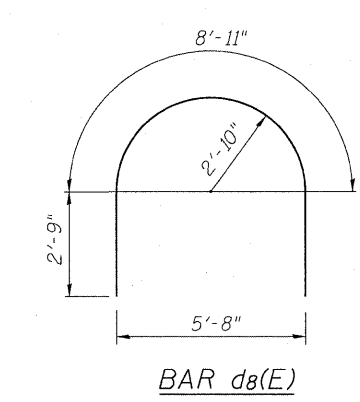
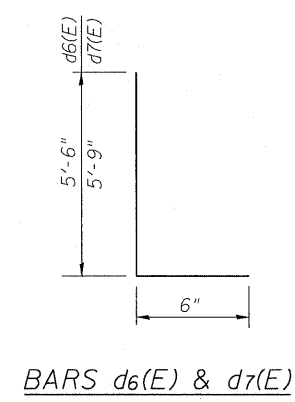
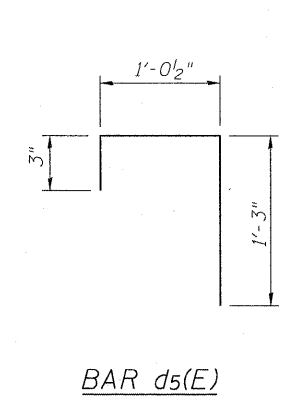
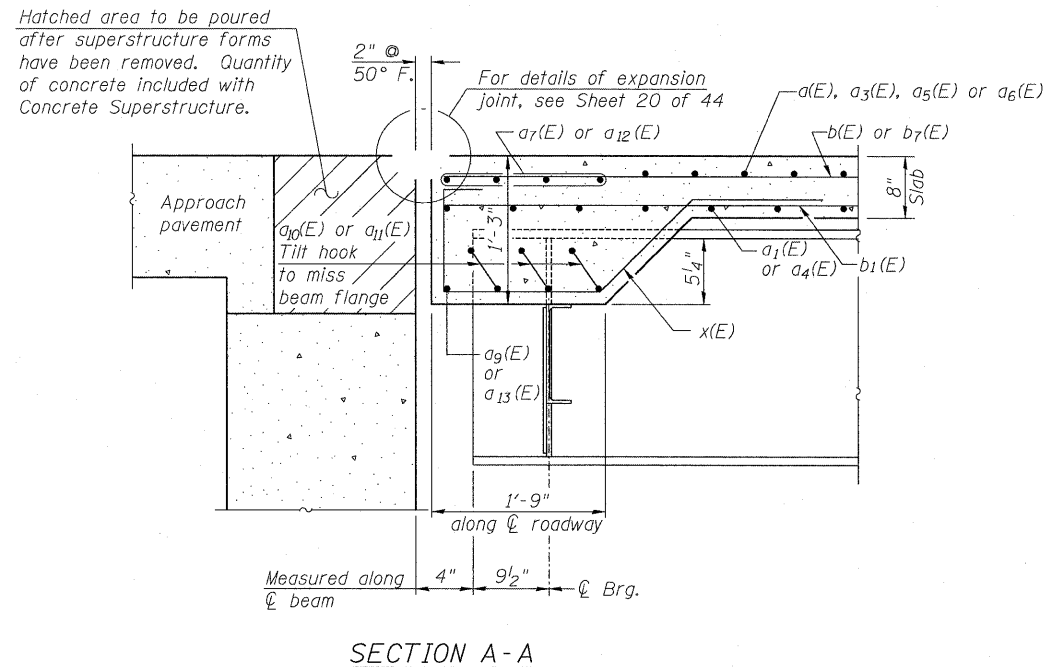
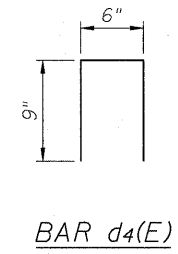
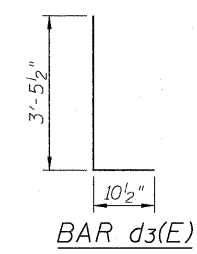
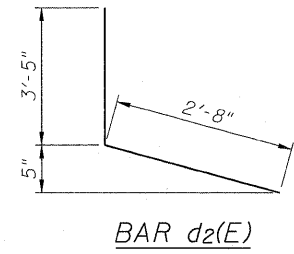
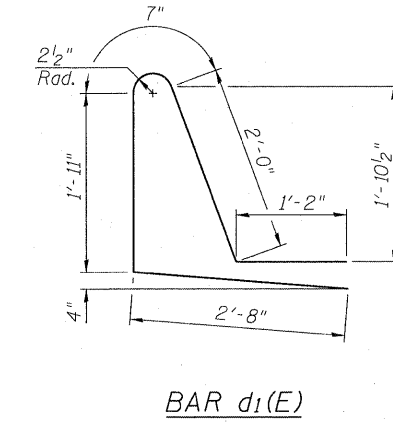
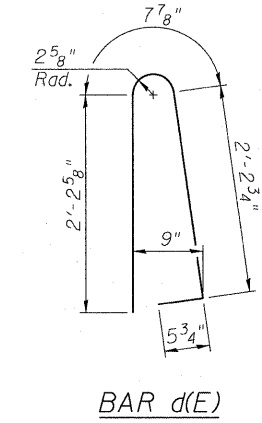
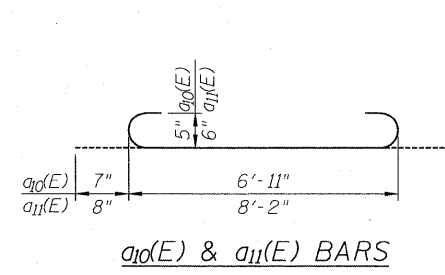
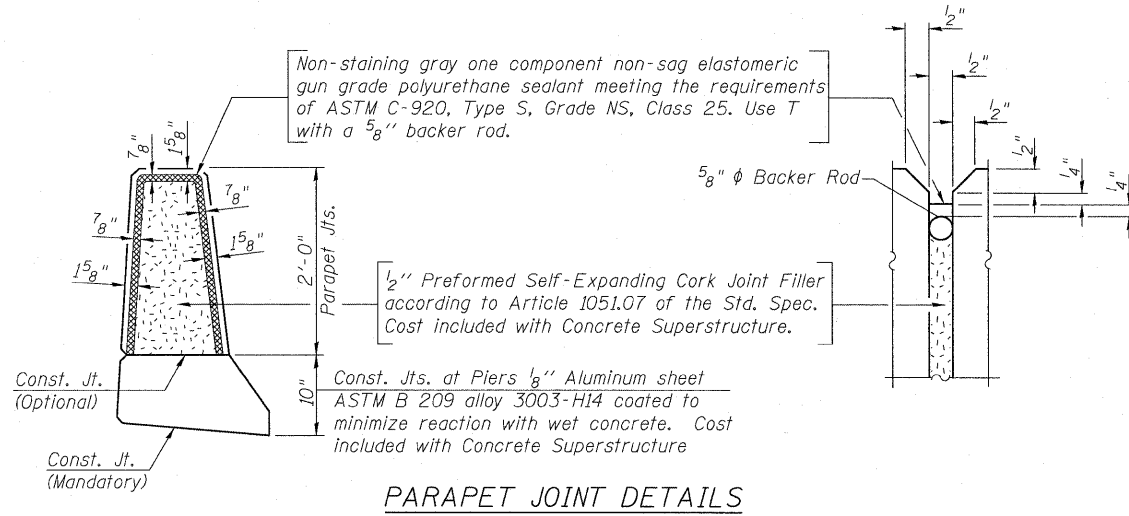
SHEET NO. 12 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	219
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

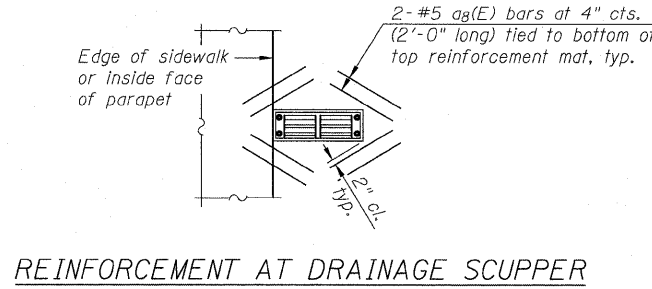


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE  
BILL OF MATERIAL



Bar	No.	Size	Length	Shape
a(E)	231	#5	34'-1"	—
a1(E)	437	#5	29'-10"	—
a2(E)	508	#6	6'-0"	—
a3(E)	277	#5	34'-1"	—
a4(E)	163	#5	35'-10"	—
a5(E)	231	#5	25'-7"	—
a6(E)	277	#5	31'-7"	—
a7(E)	8	#6	30'-3"	—
a8(E)	32	#5	2'-0"	—
a9(E)	2	#6	30'-3"	—
a10(E)	6	#5	8'-1"	( )
a11(E)	33	#6	9'-6"	( )
a12(E)	8	#6	33'-3"	—
a13(E)	2	#6	33'-3"	—
b(E)	434	#5	32'-0"	—
b1(E)	444	#5	28'-4"	—
b3(E)	20	#5	26'-0"	—
b4(E)	12	#5	32'-2"	—
b5(E)	14	#5	31'-6"	—
b6(E)	177	#6	27'-6"	—
b7(E)	14	#5	29'-2"	—
b8(E)	80	#5	28'-4"	—
c(E)	212	#5	2'-5"	—
c1(E)	212	#5	8'-3"	—
d(E)	231	#5	5'-7"	—
d1(E)	231	#5	8'-4"	—
d2(E)	212	#4	6'-1"	—
d3(E)	212	#6	4'-4"	—
d4(E)	92	#4	2'-0"	—
d5(E)	40	#4	2'-7"	—
d6(E)	10	#5	6'-0"	—
d7(E)	10	#5	6'-3"	—
d8(E)	6	#5	14'-5"	—
e(E)	28	#4	17'-6"	—
e1(E)	35	#4	19'-8"	—
e2(E)	2	#8	16'-8"	—
e3(E)	2	#4	16'-8"	—
e4(E)	40	#4	19'-8"	—
e5(E)	16	#4	16'-8"	—
e6(E)	32	#4	17'-7"	—
e7(E)	3	#4	24'-8"	—
e8(E)	3	#8	26'-1"	—
e9(E)	4	#4	26'-0"	—
e10(E)	4	#8	27'-6"	—
e11(E)	14	#4	16'-8"	—
e12(E)	29	#4	5'-8"	—
e13(E)	1	#8	5'-8"	—
x(E)	115	#5	6'-5"	—
Reinforcement Bars, Epoxy Coated		Pound	110,250	
Concrete Superstructure		Cu. Yds.	579.3	
Bridge Deck Grooving		Sq. Yd.	1,164	
Protective Coat		Sq. Yd.	1,530	



**ZROKA** engineering  
Zoka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SUPERSTRUCTURE DETAILS 4  
STRUCTURE NO. 082-0377

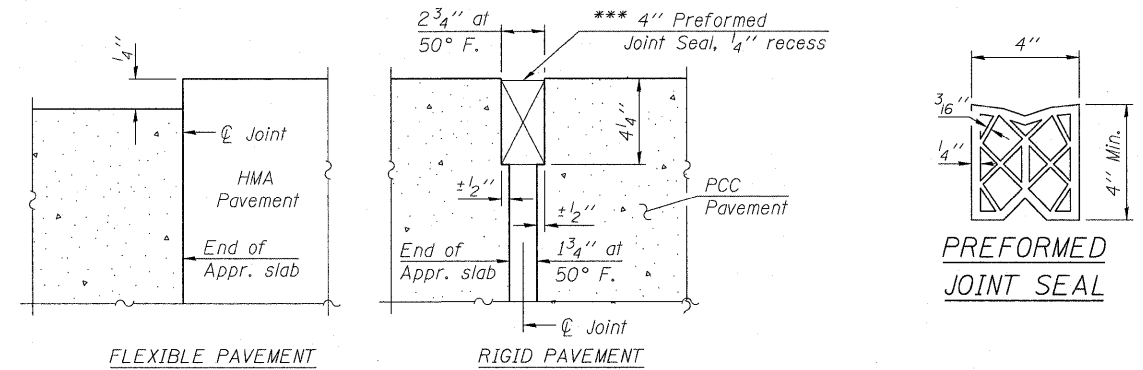
SHEET NO. 13 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	220
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

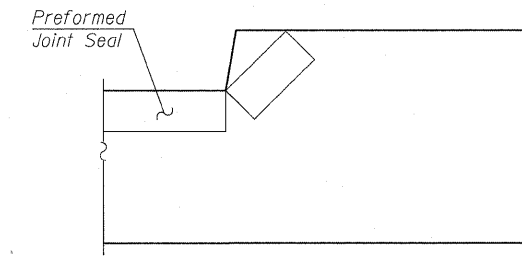
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Notes:  
See sheet 15 of 44 for Sections C-C & D-D.  
Bars indicated thus 46 x 2-#5 etc. indicates 46 lines of bars with 2 lengths per line.

\*\*\* Cost included with Concrete Superstructure.



DETAIL A

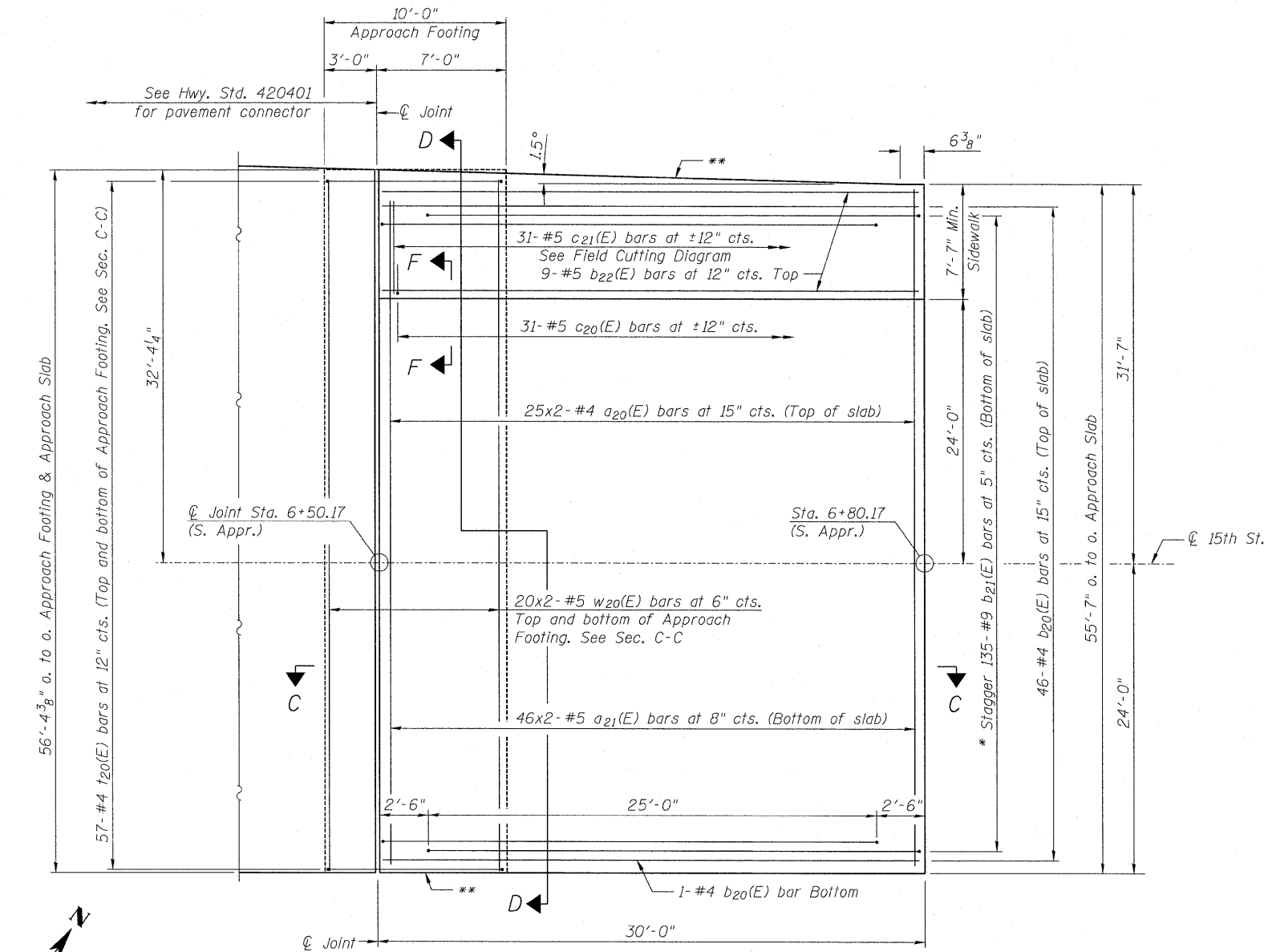


VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

MIN. BAR LAPS

- #4 bar = 1'-8"
- #5 bar = 2'-2"
- #6 bar = 2'-7"



PLAN

\* Tilt #9 b<sub>21</sub>(E) bars as required to maintain clearance.  
\*\* Closed cell joint filler according to Article 1051.08 of the Standard Specifications, full depth of slab and sidewalk, full length of wingwall parapet. Cost included with Concrete Superstructure.

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

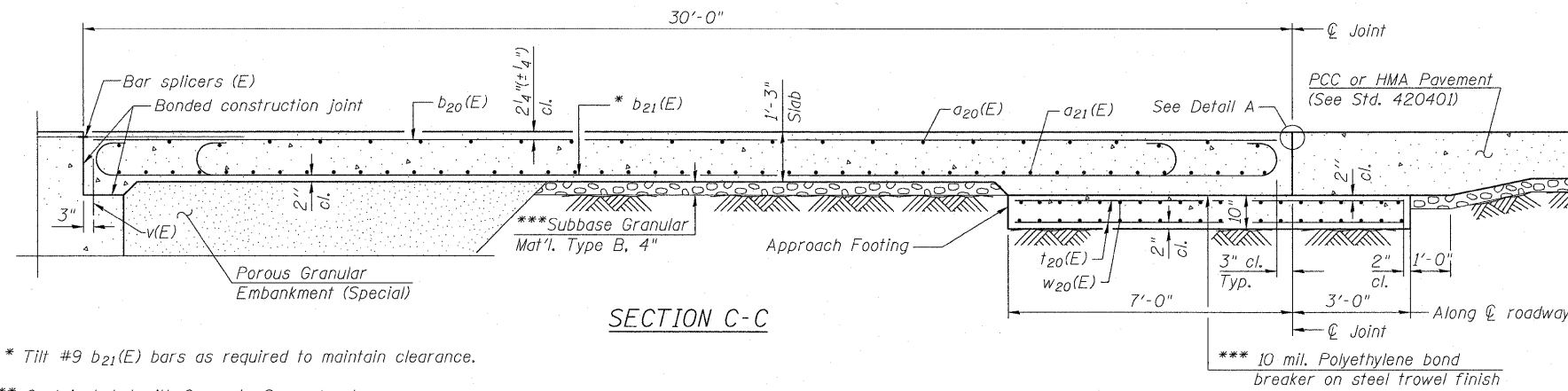
SOUTH BRIDGE APPROACH SLAB DETAILS 1  
STRUCTURE NO. 082-0377

SHEET NO. 14 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	221
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

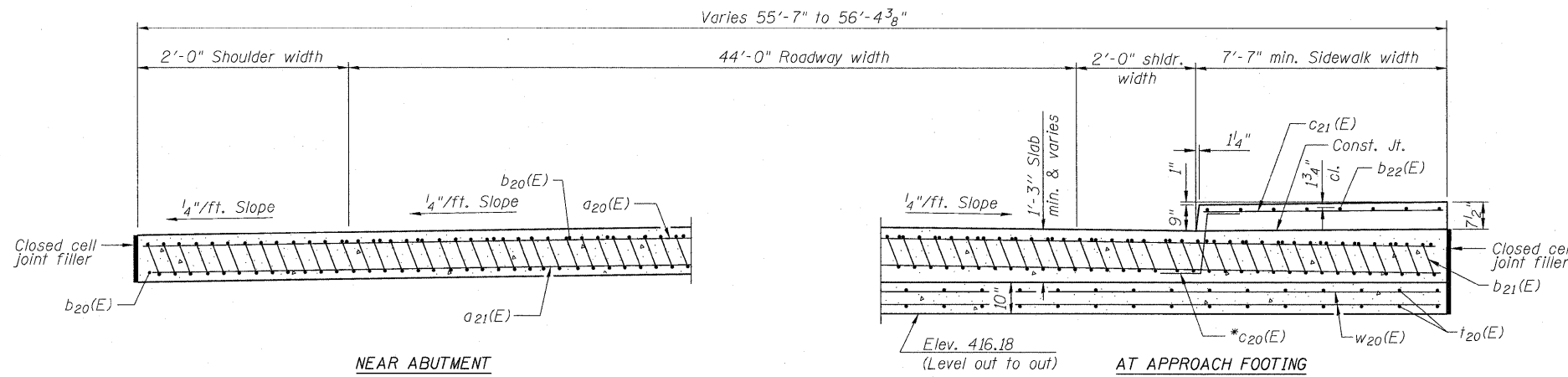
Notes:  
See sheet 14 of 44 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
For bar splicer details, see sheet 39 of 44.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment, Special and drainage treatment details, see sheet 37 of 44.



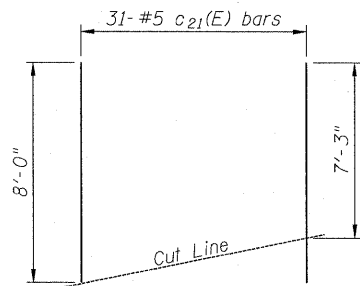
\* Tilt #9 b<sub>21</sub>(E) bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.

**SOUTH APPROACH SLAB  
BILL OF MATERIAL**

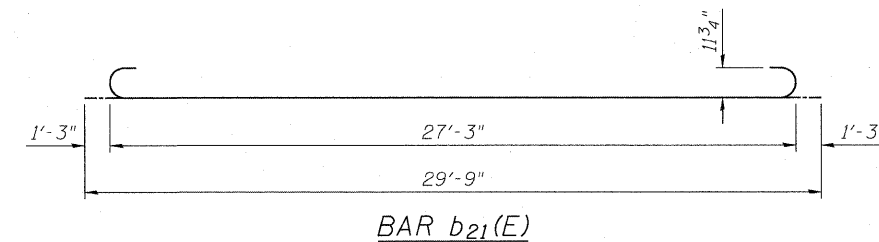
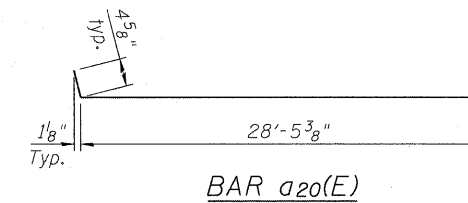
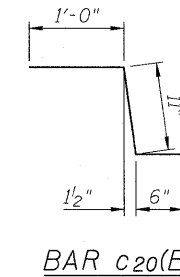
Bar	No.	Size	Length	Shape
a <sub>20</sub> (E)	50	#4	28'-10"	—
a <sub>21</sub> (E)	92	#5	29'-1"	—
b <sub>20</sub> (E)	47	#4	29'-8"	—
b <sub>21</sub> (E)	135	#9	29'-9"	—
b <sub>22</sub> (E)	9	#5	29'-8"	—
c <sub>20</sub> (E)	31	#5	2'-5"	—
c <sub>21</sub> (E)	31	#5	8'-0"	—
t <sub>20</sub> (E)	114	#4	9'-8"	—
w <sub>20</sub> (E)	80	#5	29'-1"	—
Concrete Superstructure		Cu. Yd.	107.4	
Concrete Structures		Cu. Yd.	17.4	
Bridge Deck Grooving		Sq. Yd.	161	
Protective Coat		Sq. Yd.	189	
Reinforcement Bars, Epoxy Coated		Pound	22,120	



\*In lieu of bottom leg, c<sub>20</sub>(E) bars may be cored and set according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of cored hole shall not exceed 6".



**FIELD CUTTING DIAGRAM**  
Order c<sub>21</sub>(E) bars full length. Cut as shown and discard remainder.



**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

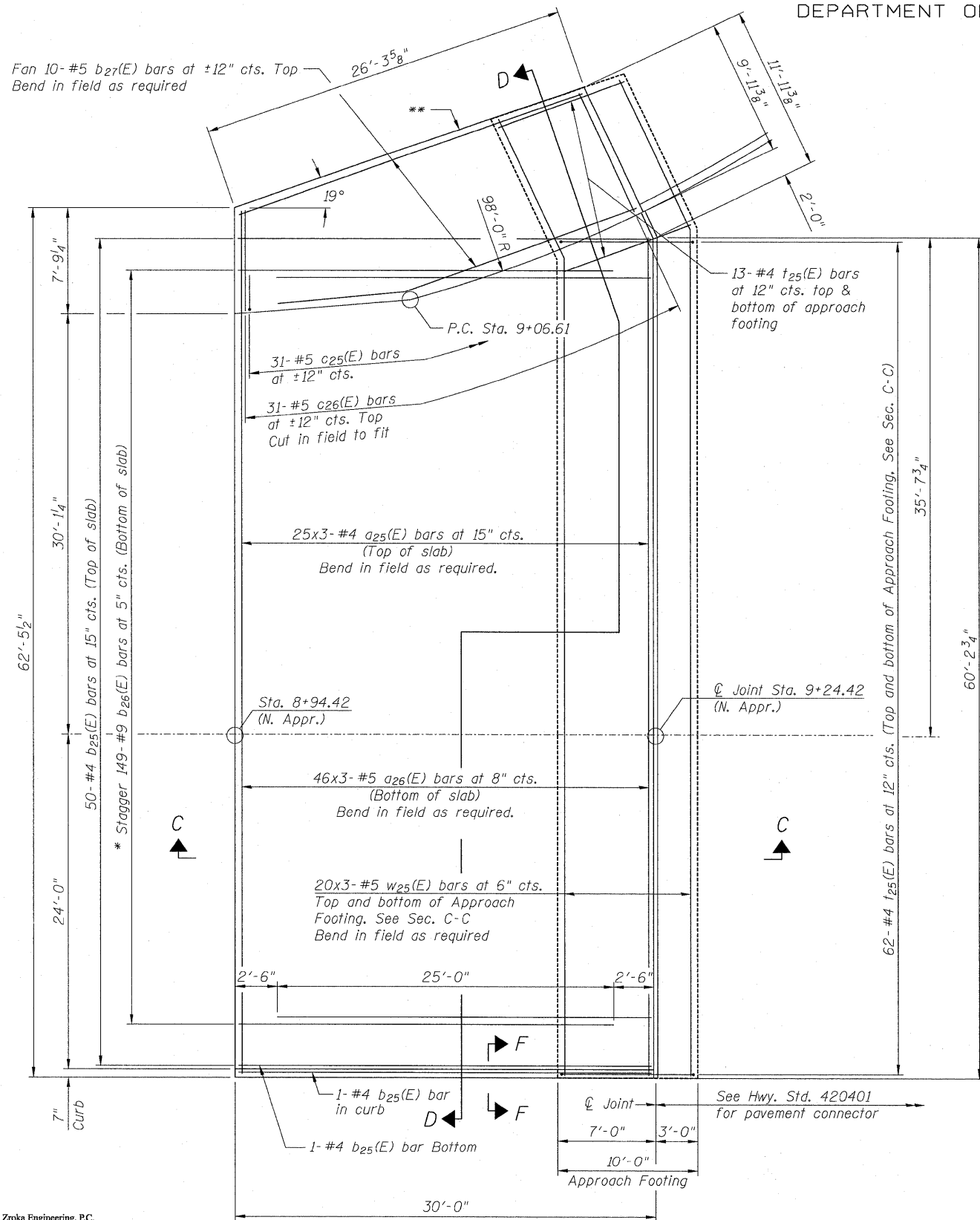
3-31-2010

**SOUTH BRIDGE APPROACH SLAB DETAILS 2  
STRUCTURE NO. 082-0377**

SHEET NO. 15 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 222
	ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C49	

Revised 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

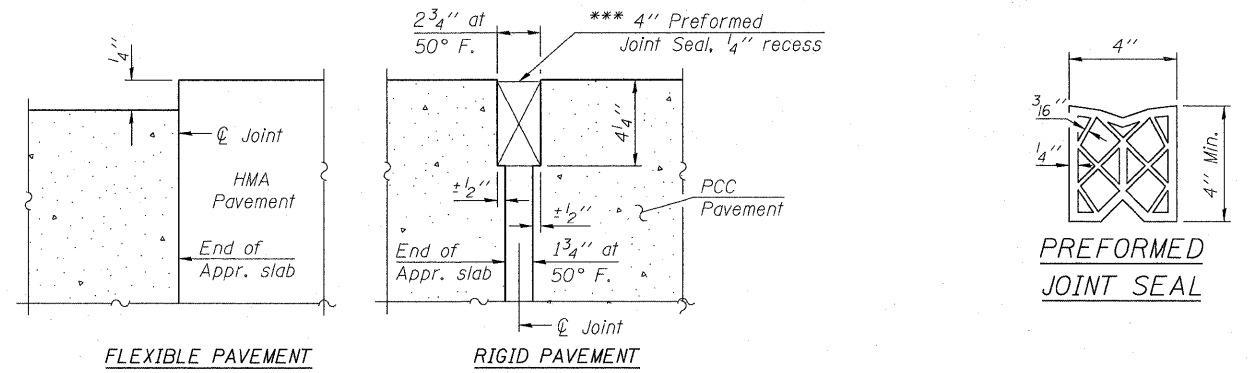


PLAN

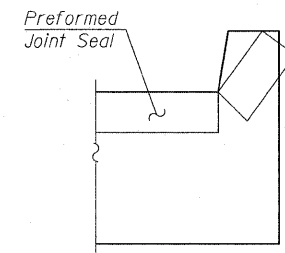
\* Tilt #9 b26(E) bars as required to maintain clearance.  
 \*\* Closed cell joint filler according to Article 1051.08 of the Standard Specifications, full depth of slab and sidewalk, full length of wingwall parapet. Cost Included with Concrete Superstructure.

Notes:  
 See sheet 17 of 44 for Sections C-C & D-D.  
 Bars Indicated thus 46 x 3-#5 etc. indicates 46 lines of bars with 3 lengths per line.

\*\*\* Cost included with Concrete Superstructure.



DETAIL A



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.

MIN. BAR LAPS

- #4 bar = 1'-8"
- #5 bar = 2'-2"
- #6 bar = 2'-7"

**ZROKA** engineering  
 Zroka Engineering, P.C.  
 4216 North Hermitage  
 Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

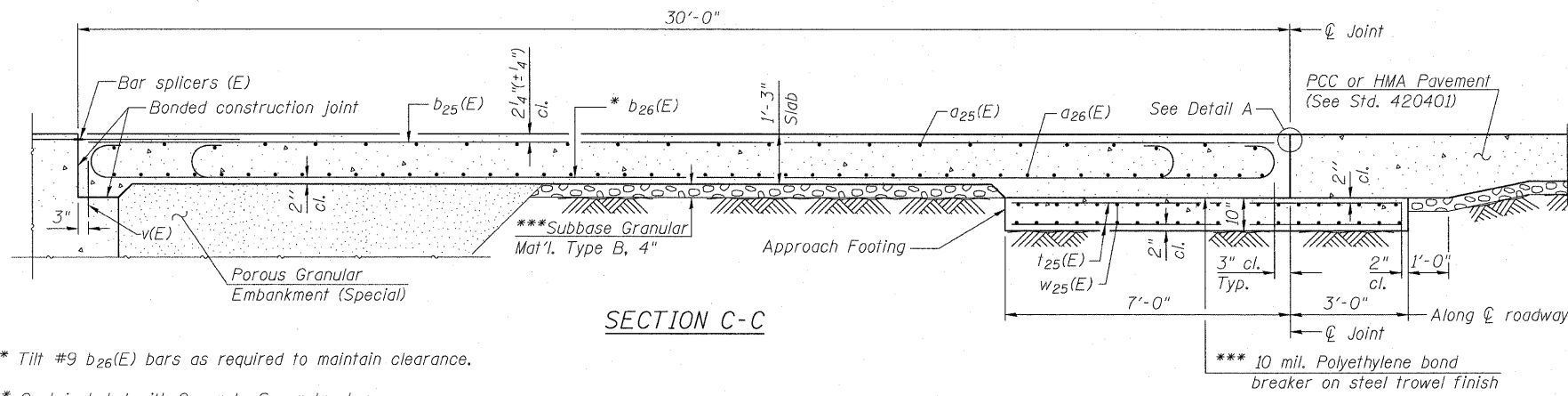
NORTH BRIDGE APPROACH SLAB DETAILS 1  
 STRUCTURE NO. 082-0377

SHEET NO. 16 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	223
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

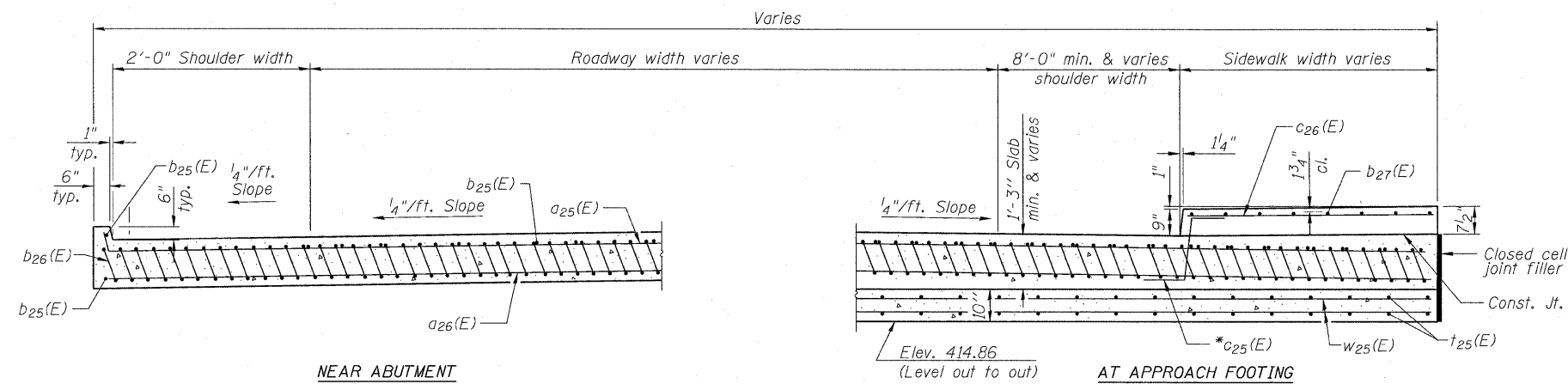
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Notes:  
See sheet 16 of 44 for Detail A.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
For bar splicer details, see sheet 39 of 44.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment, Special and drainage treatment details, see sheet 37 of 44.



SECTION C-C

\* Tilt #9 b26(E) bars as required to maintain clearance.  
\*\*\* Cost included with Concrete Superstructure.



NEAR ABUTMENT

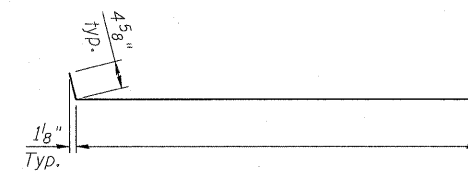
SECTION D-D

(See Plan for dimensions not shown)

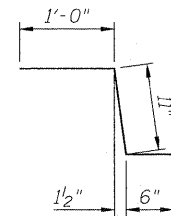
\*In lieu of bottom leg, c25(E) bars may be cored and set according to Article 509.06 of the Standard Specifications. Cored holes shall be roughened or scored per manufacturer's recommendations. Maximum depth of cored hole shall not exceed 6".

NORTH APPROACH SLAB  
BILL OF MATERIAL

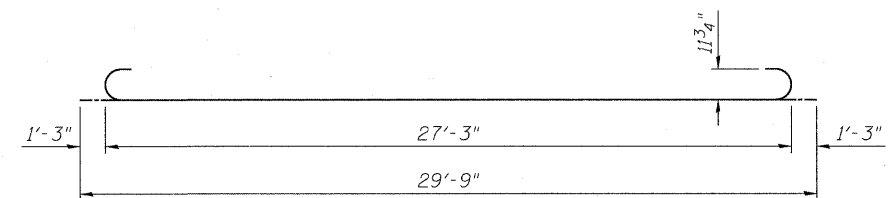
Bar	No.	Size	Length	Shape
a25(E)	75	#4	25'-4"	┌
a26(E)	138	#5	25'-9"	—
b25(E)	52	#4	29'-8"	—
b26(E)	149	#9	29'-9"	┌
b27(E)	10	#5	26'-0"	—
c25(E)	31	#5	2'-5"	┌
c26(E)	31	#5	9'-5"	—
t25(E)	150	#4	9'-8"	—
w25(E)	120	#5	25'-9"	—
Concrete Superstructure		Cu. Yd.	139.1	
Concrete Structures		Cu. Yd.	22.0	
Bridge Deck Grooving		Sq. Yd.	196	
Protective Coat		Sq. Yd.	221	
Reinforcement Bars, Epoxy Coated		Pound	25,920	



BAR a25(E)



BAR c25(E)



BAR b26(E)

NORTH BRIDGE APPROACH SLAB DETAILS 2  
STRUCTURE NO. 082-0377

ZROKA  
engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

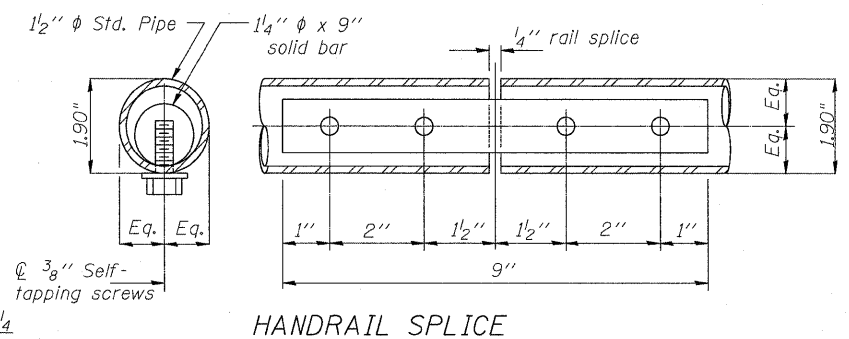
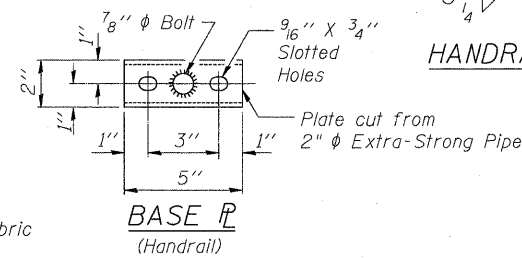
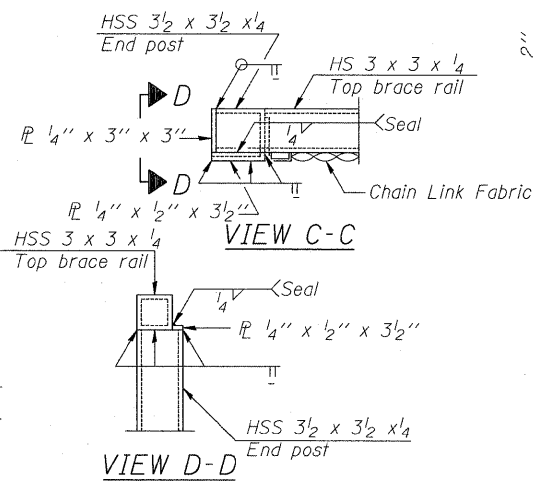
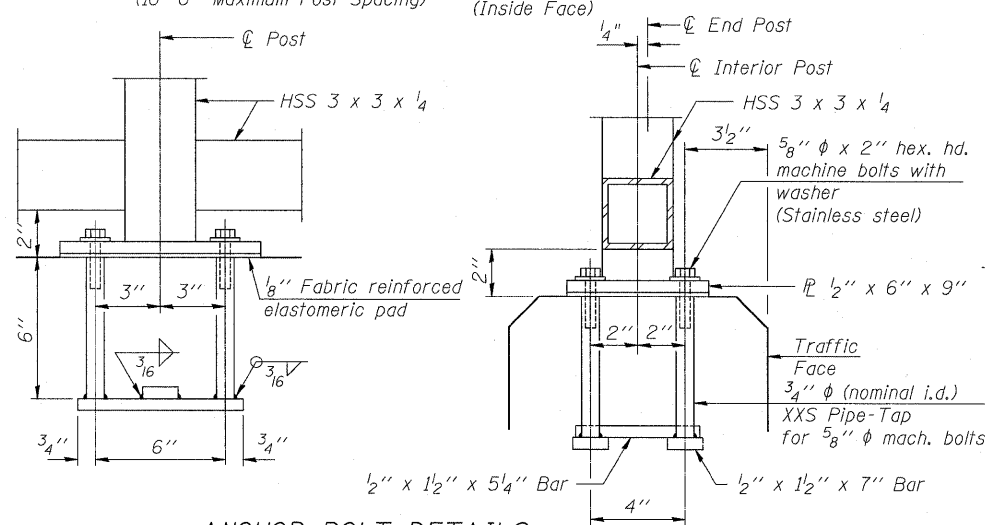
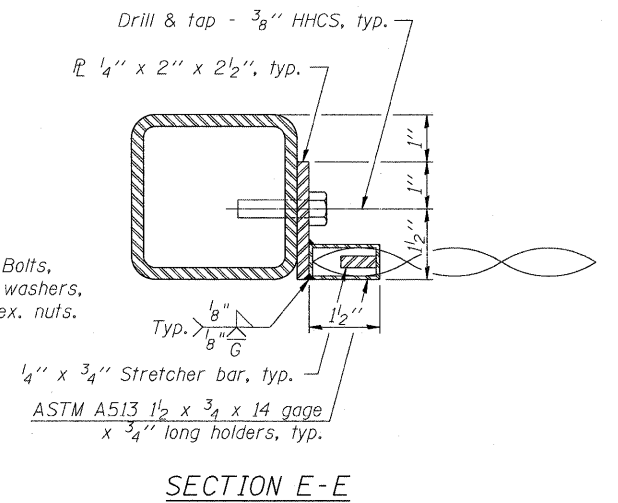
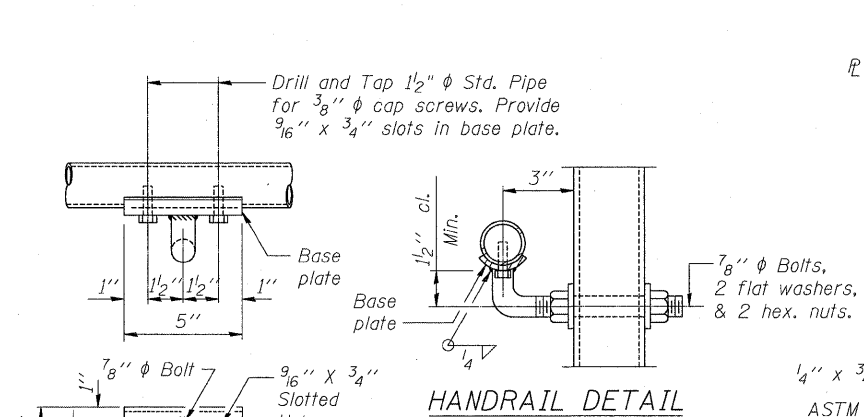
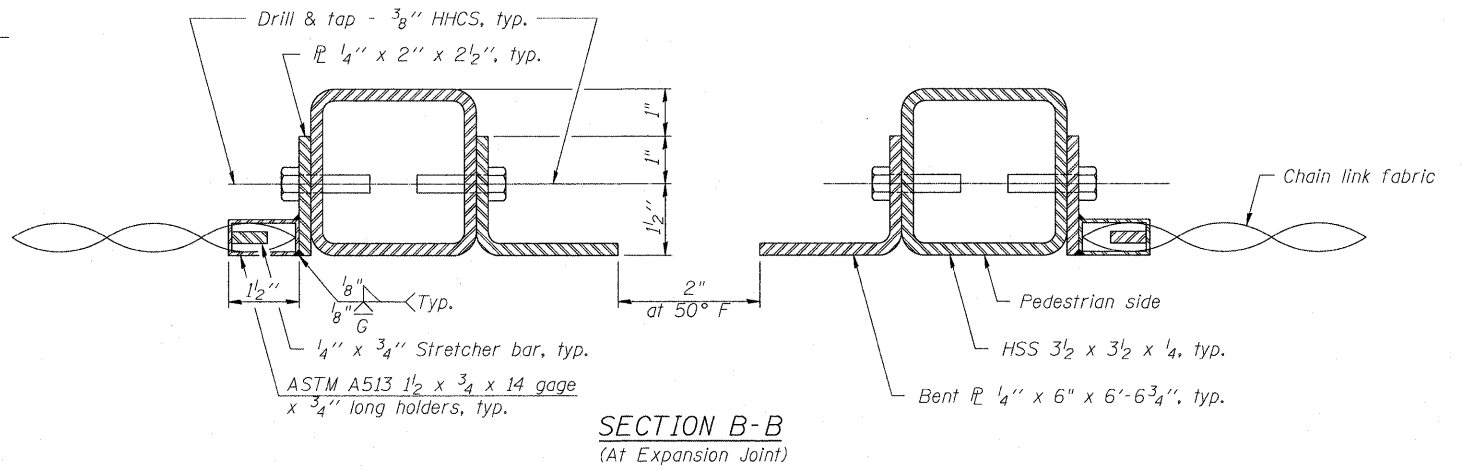
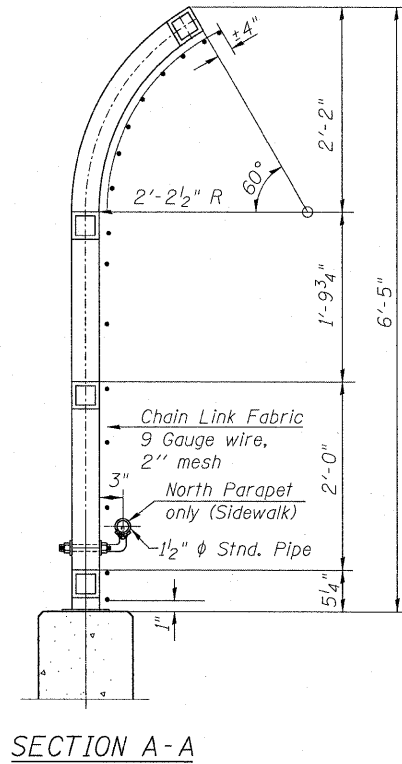
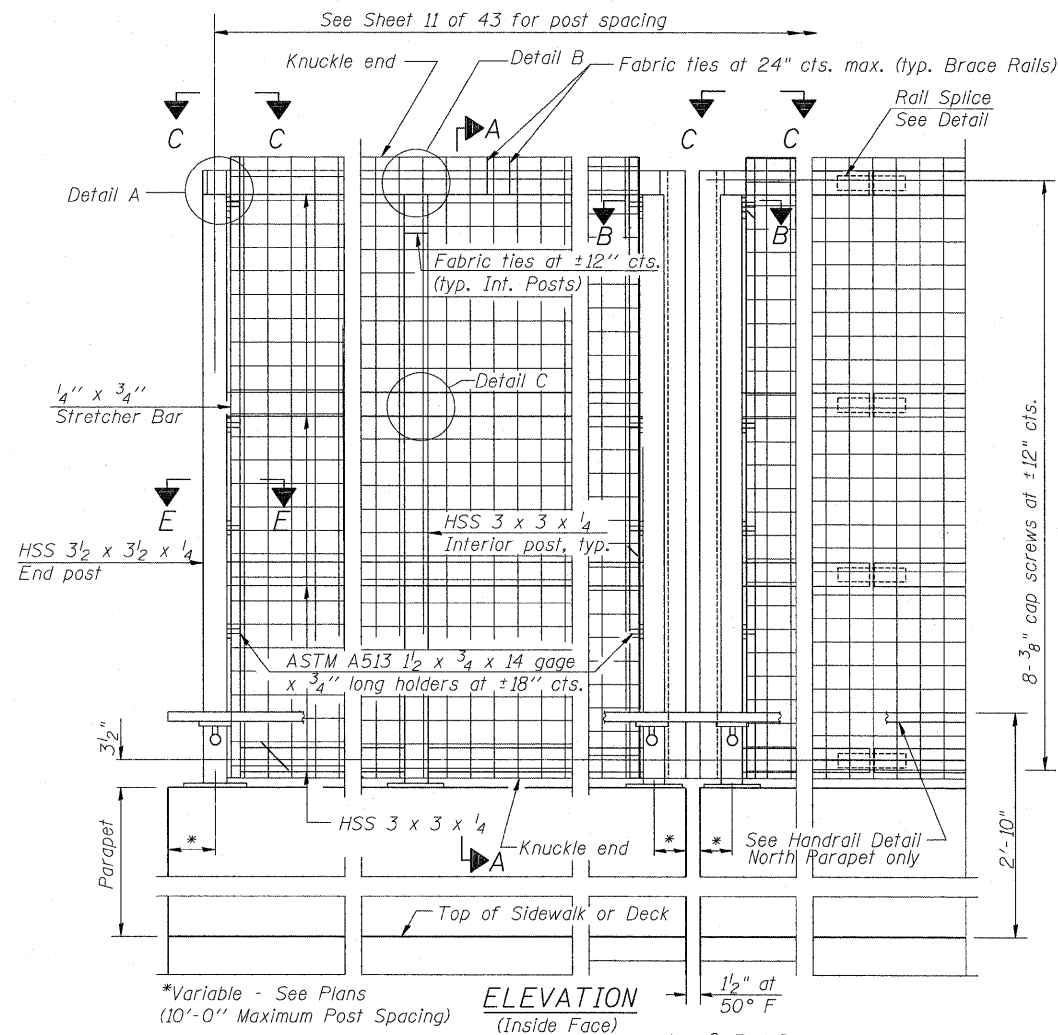
3-31-2010

SHEET NO. 17	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44 SHEETS	64	82-1-2HB	ST. CLAIR	345	224
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

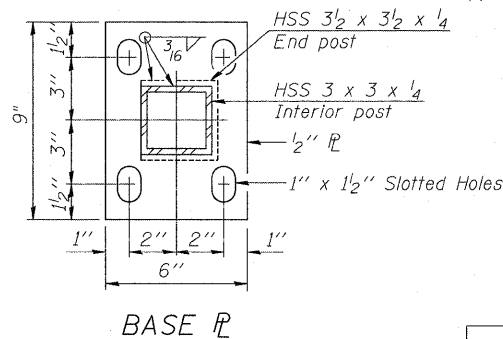
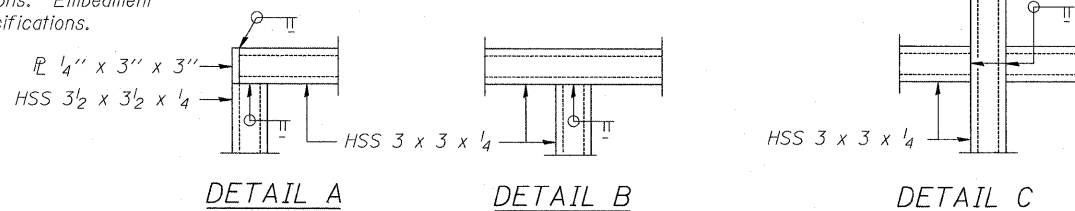
Notes:  
All post, railing, splices, anchor devices and plates shall be painted using the DuPont Imron 2.1 HG High Gloss Polyurethane (Includes Mix Quality "VF") or approved equal. The color of the final finish coat shall be Black.



**BILL OF MATERIAL**

Item	Unit	Quantity
Bridge Fence Railing	Foot	286
Bridge Fence Railing (Sidewalk)	Foot	287

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8 inch diameter anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



BRIDGE FENCE RAILING DETAILS 1  
STRUCTURE NO. 082-0377

SHEET NO. 18	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44 SHEETS	64	82-1-2HB	ST. CLAIR	345	225
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

**ZROKA** Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

Revised 4/15/2010

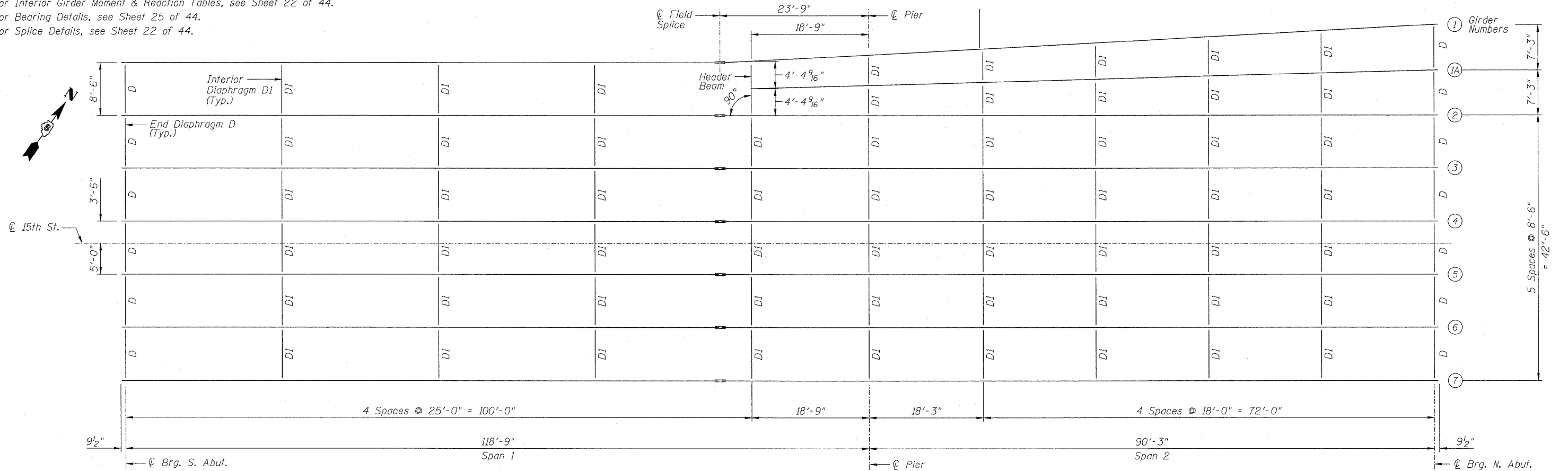






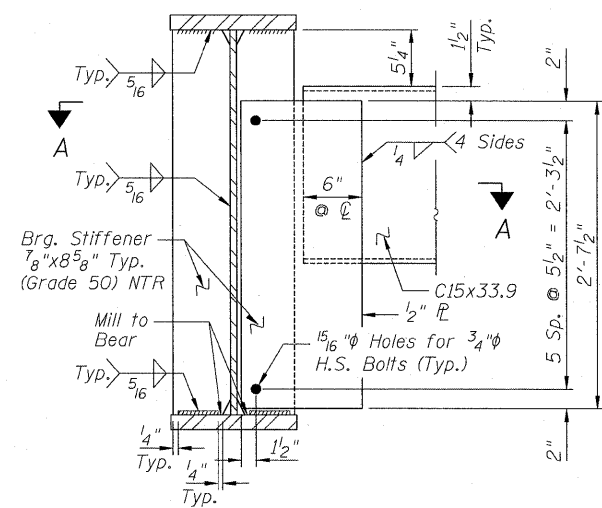
Notes:  
 All dimensions are horizontal.  
 Ends of girders, bearing stiffeners and connection plates shall be vertical.  
 For Girder Details, see Sheet 23 of 44.  
 For Interior Girder Moment & Reaction Tables, see Sheet 22 of 44.  
 For Bearing Details, see Sheet 25 of 44.  
 For Splice Details, see Sheet 22 of 44.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

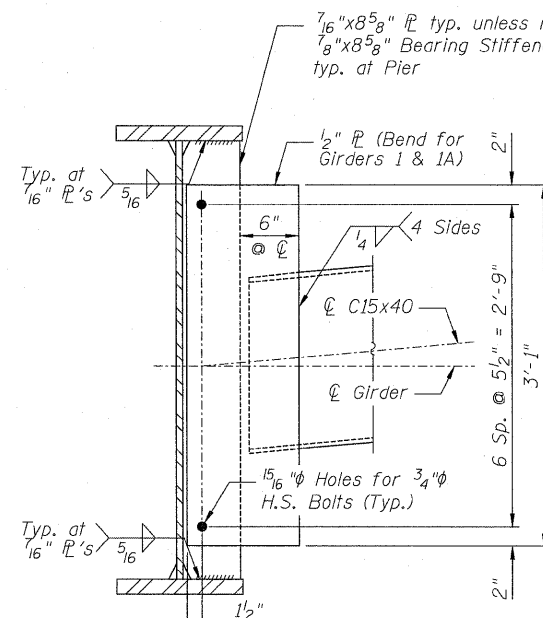
SECTION A-A



END DIAPHRAGM D

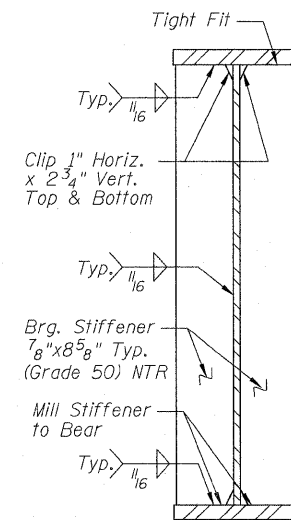
(13 Thus)

Note:  
 Two hardened washers shall be required for each set of oversized holes.

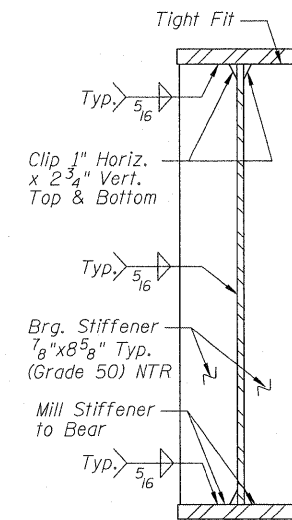


INTERIOR DIAPHRAGM D1

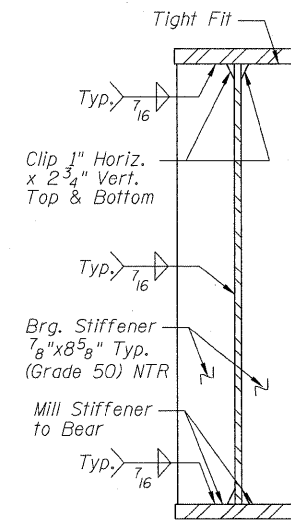
(58 Thus)



SECTION AT PIER  
 (All Girders Except Girder 1A)



SECTION AT ABUTMENT



SECTION AT PIER  
 GIRDER 1A

Notes:

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

**ZROKA** engineering  
 Zroka Engineering, P.C.  
 4216 North Hermitage  
 Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

FRAMING PLAN  
 STRUCTURE NO. 082-0377

SHEET NO. 21	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	228
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1	Pier	0.6 Sp. 2
$I_s$	(in <sup>4</sup> ) 23,318	44,057	23,318
$I_c(n)$	(in <sup>4</sup> ) 53,512		53,512
$I_c(3n)$	(in <sup>4</sup> ) 39,923		39,923
$S_s$	(in <sup>3</sup> ) 992	1,798	992
$S_c(n)$	(in <sup>3</sup> ) 1,312		1,312
$S_c(3n)$	(in <sup>3</sup> ) 1,213		1,213
Z		1,977	
DC1	(k/ft) 1.121	1.268	1.121
$M_{DC1}$	(k) 1.153	1.916	330
DC2	(k/ft) 0.268	0.251	0.234
$M_{DC2}$	(k) 314	336	95
DW	(k/ft) 0.347	0.335	0.322
$M_{DW}$	(k) 407	462	130
$M_L + IM$	(k) 1,856	1,582	1,296
$M_u$ (Strength I)	(k) 5,693	6,277	2,994
$\phi_f M_n, \phi_f M_{nc}$	(k) 6,419		6,659
$f_s$ DC1	(ksi) 13.9	12.8	4.0
$f_s$ DC2	(ksi) 3.1	2.2	0.9
$f_s$ DW	(ksi) 4.0	3.1	1.3
$f_s$ 1.3(I+IM)	(ksi) 21.9	13.7	15.3
$f_s$ (Service II)	(ksi) 42.9	31.8	21.5
$f_s$ (Total)(Strength I)	(ksi) 41.8		
$V_f$	(k) 31.7		31.3

GIRDER 1A MOMENT TABLE			
	Pier	0.6 Sp. 2	
$I_s$	(in <sup>4</sup> ) 23,318	23,318	
$I_c(n)$	(in <sup>4</sup> ) 53,512		49,218
$I_c(3n)$	(in <sup>4</sup> ) 39,923		36,383
$S_s$	(in <sup>3</sup> ) 992		992
$S_c(n)$	(in <sup>3</sup> ) 1,312		1,291
$S_c(3n)$	(in <sup>3</sup> ) 1,177		1,177
Z		1,113	
DC1	(k/ft) 0.722	0.865	
$M_{DC1}$	(k) 720	559	
DC2	(k/ft) 0.234	0.234	
$M_{DC2}$	(k) 151	169	
DW	(k/ft) 0.304	0.322	
$M_{DW}$	(k) 207	233	
$M_L + IM$	(k) 735	983	
$M_u$ (Strength I)	(k) 2,686	2,980	
$\phi_f M_n, \phi_f M_{nc}$	(k) 6,333		6,333
$f_s$ DC1	(ksi) 8.7	6.8	
$f_s$ DC2	(ksi) 1.8	1.7	
$f_s$ DW	(ksi) 2.5	2.4	
$f_s$ 1.3(I+IM)	(ksi) 11.6	11.9	
$f_s$ (Service II)	(ksi) 24.6	22.8	
$f_s$ (Total)(Strength I)	(ksi) 40.0	47.5	
$V_f$	(k) 23.4		23.4

\* Compact sections  
\*\* Non-Compact and slender sections

\* Compact sections  
\*\* Non-Compact and slender sections

INTERIOR GIRDER REACTION TABLE			
	S. Abut.	Pier	N. Abut.
$R_{DC1}$	(k) 51.2	155.3	29.3
$R_{DC2}$	(k) 12.9	33.0	6.8
$R_{DW}$	(k) 16.8	44.2	9.5
$R_L + IM$	(k) 114.6	226.8	99.4
$R_{Total}$	(k) 195.5	459.3	145.0

GIRDER 1A REACTION TABLE			
	Pier	N. Abut.	
$R_{DC1}$	(k) 89.9	31.1	
$R_{DC2}$	(k) 22.7	8.9	
$R_{DW}$	(k) 29.5	12.3	
$R_L + IM$	(k) 128.6	79.0	
$R_{Total}$	(k) 270.7	131.2	

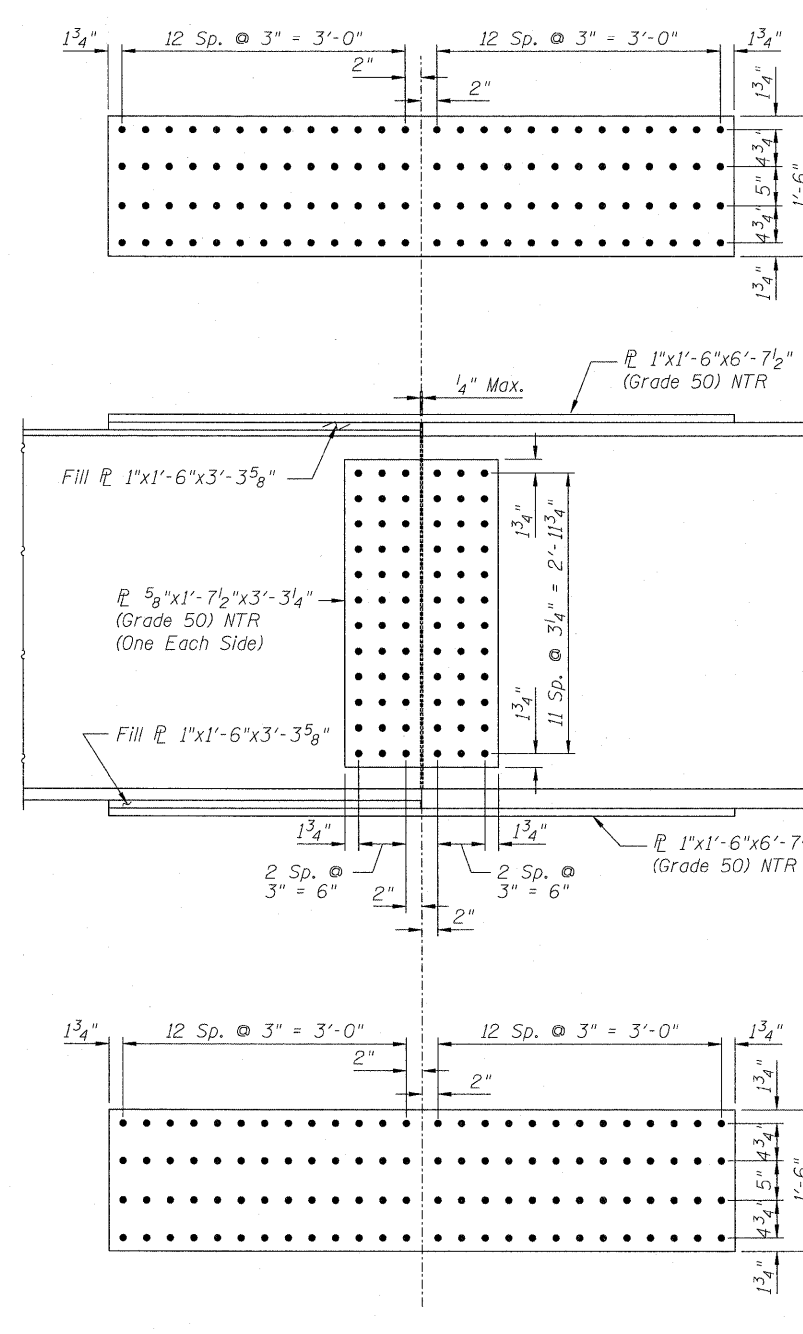
- $I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).
- Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- $M_{DC1}$ : Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- $M_{DC2}$ : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- $M_{DW}$ : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_L + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- $M_u$  (Strength I): Factored design moment (kip-ft.).  
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
- $\phi_f M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- $\phi_f M_{nc}$ : Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- $f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$
- $f_s$  (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).  
 $1.25(M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
- $V_f$ : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

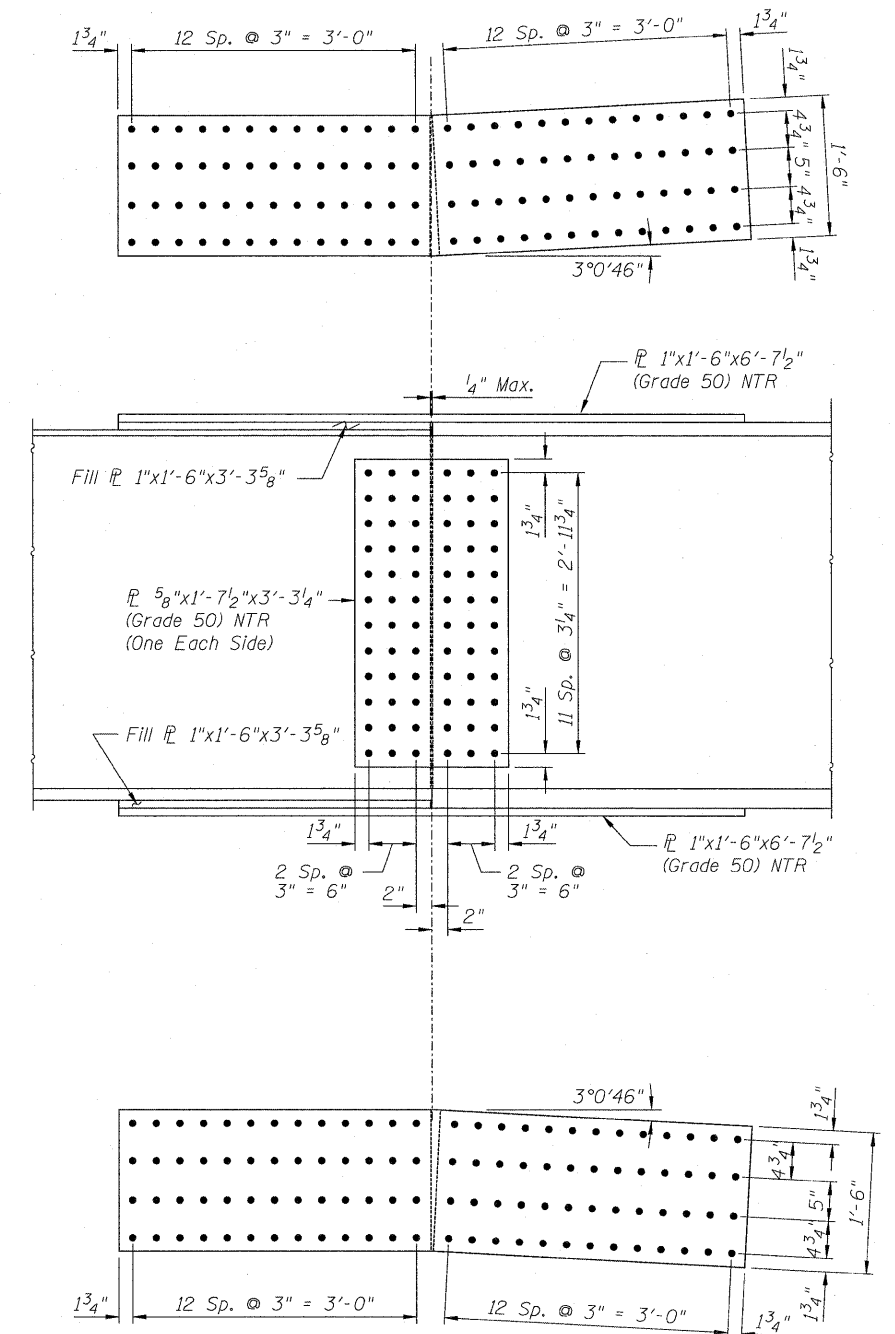
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



FIELD SPLICE DETAIL  
GIRDERS 2 THRU 7

Fasteners shall be AASHTO M164 Type 1 bolts.  
Bolts  $T_b$  in diameter, holes  $1 5/16$  diameter.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



FIELD SPLICE DETAIL  
GIRDER 1

Fasteners shall be AASHTO M164 Type 1 bolts.  
Bolts  $T_b$  in diameter, holes  $1 5/16$  diameter.

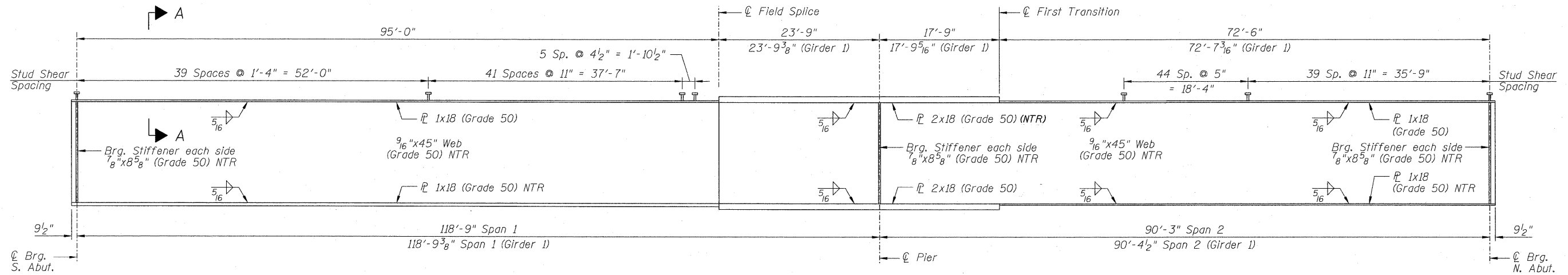
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

STRUCTURAL STEEL DETAILS 1  
STRUCTURE NO. 082-0377

SHEET NO. 22 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	229
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

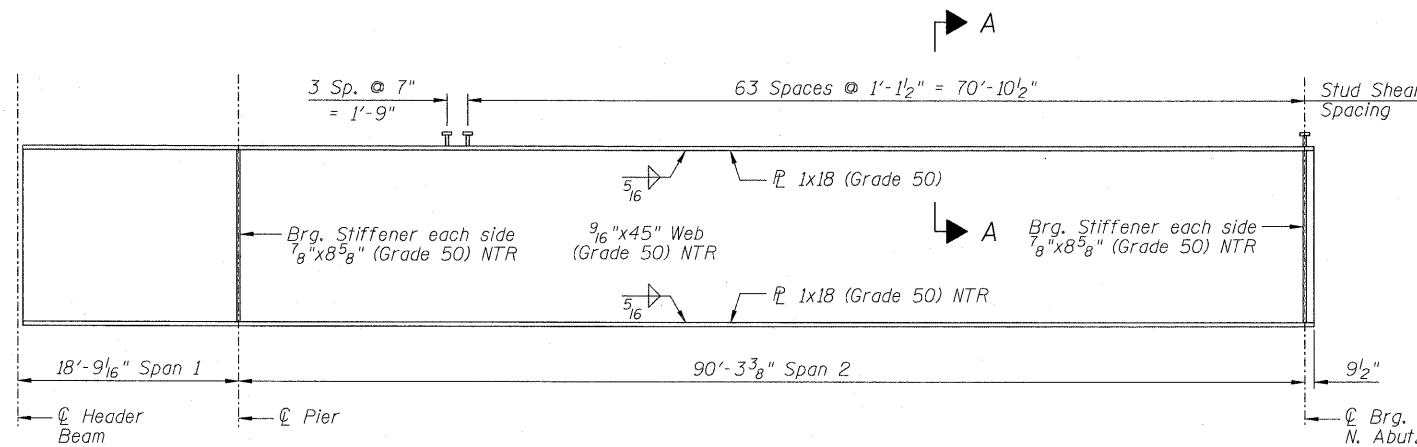
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



GIRDERS 1 THRU 7 ELEVATION

(Unless Noted Otherwise)

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



GIRDER 1A ELEVATION

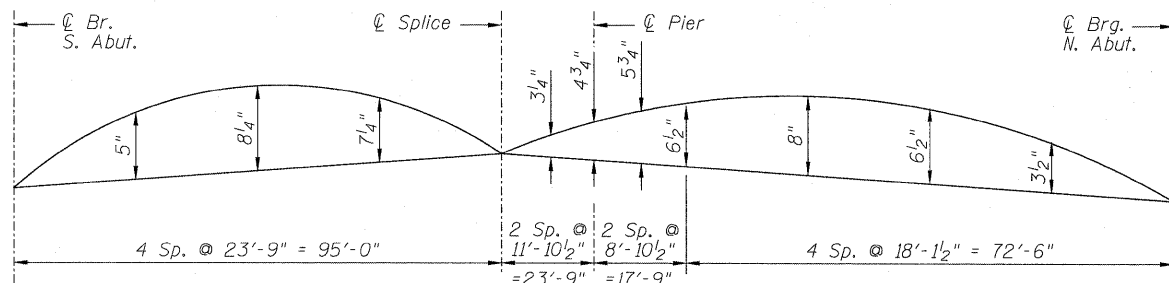
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

TOP OF WEB ELEVATIONS

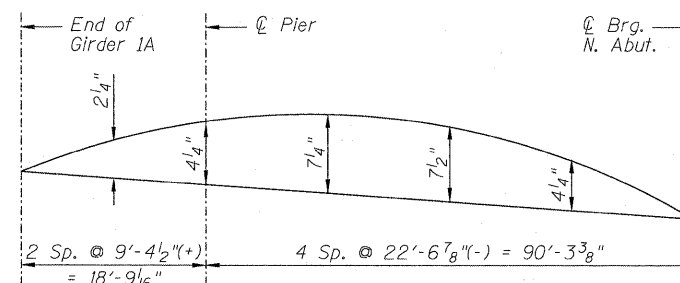
(For Fabrication Only)

\*Top of Web elevation for Girder 1A is located at the south end of Girder 1A

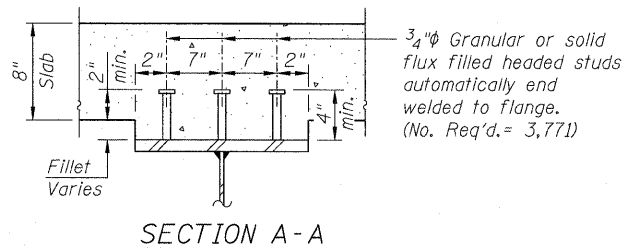
Girder	℄ Brg. S. Abut.	℄ Field Splice	℄ Pier	First Transition	℄ Brg. N. Abut.
1	418.397	420.265	420.094	419.817	417.547
1A		*420.408	420.296		417.697
2	418.574	420.442	420.297	420.040	417.849
3	418.751	420.619	420.474	420.217	418.026
4	418.928	420.796	420.652	420.394	418.203
5	418.897	420.765	420.620	420.362	418.172
6	418.720	420.588	420.443	420.185	417.995
7	418.543	420.410	420.266	420.008	417.818



CAMBER DIAGRAM GIRDERS 1 THRU 7



CAMBER DIAGRAM GIRDER 1A



SECTION A-A

STRUCTURAL STEEL DETAILS 2  
STRUCTURE NO. 082-0377

**ZROKA**  
engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

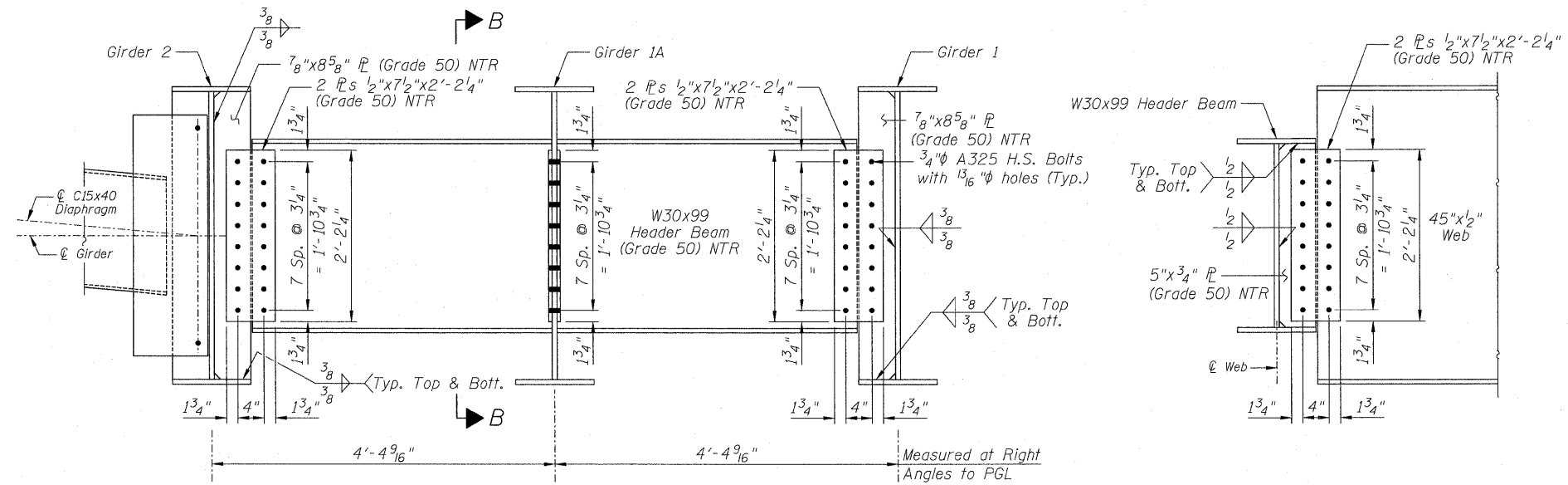
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SHEET NO. 23 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	230
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

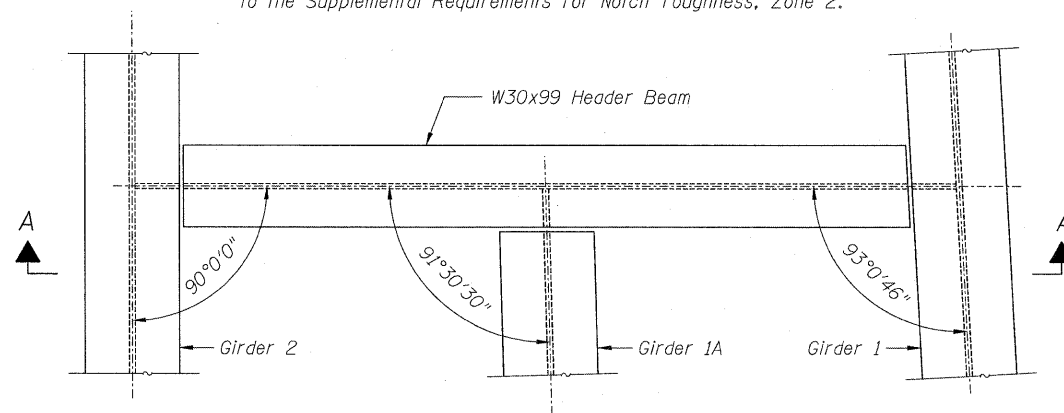


SECTION A-A

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

SECTION B-B

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



PLAN - HEADER BEAM

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

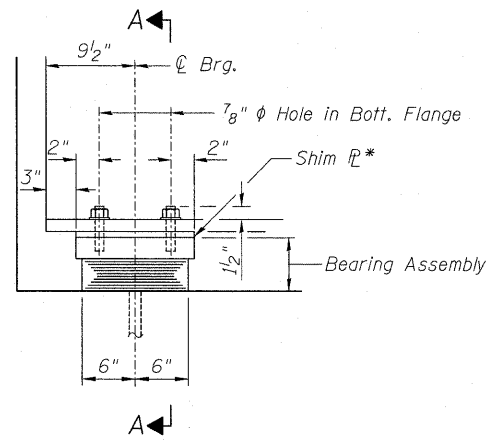
3-31-2010

STRUCTURAL STEEL DETAILS 3  
STRUCTURE NO. 082-0377

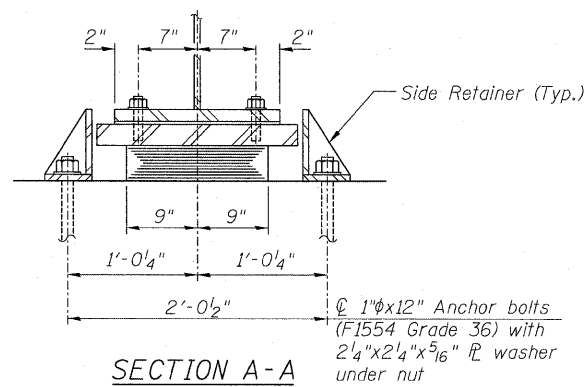
SHEET NO. 24	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	231
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

REVISED 4/11/2010

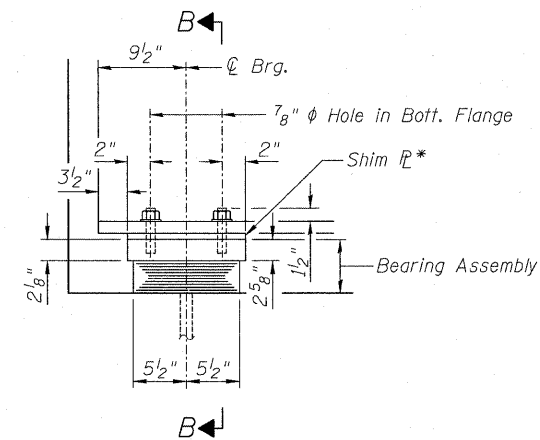
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



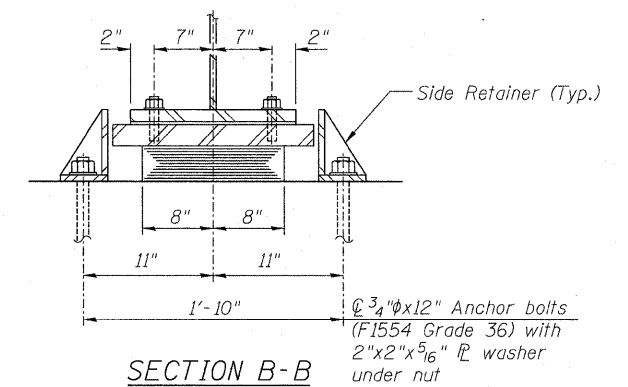
ELEVATION AT SOUTH ABUT.



SECTION A-A



ELEVATION AT NORTH ABUT.



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

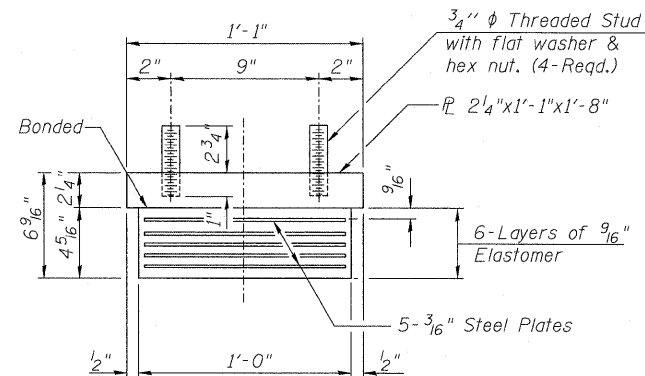
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

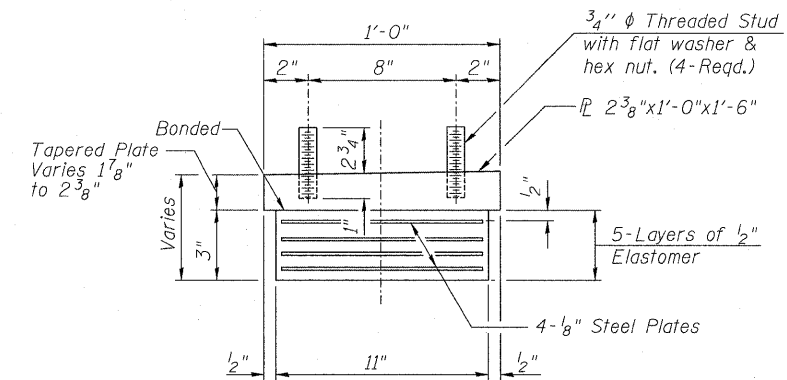
Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

\*Provide one 3/8" thick shim plate under Girder 4.

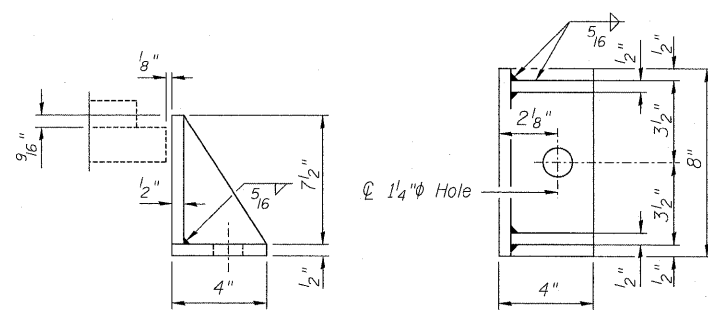


BEARING ASSEMBLY SOUTH ABUT.

Note:  
Shim plates shall not be placed under Elastomeric Bearing Assembly, Type I.

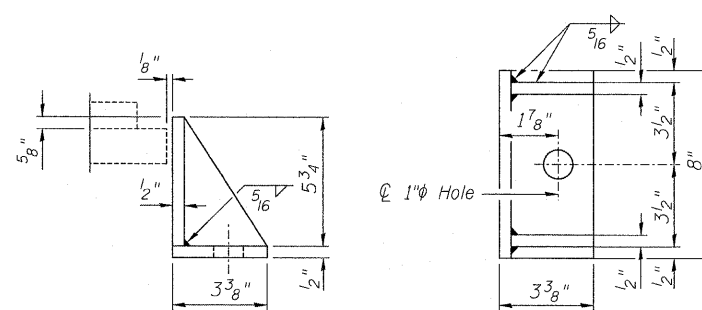


BEARING ASSEMBLY NORTH ABUT.



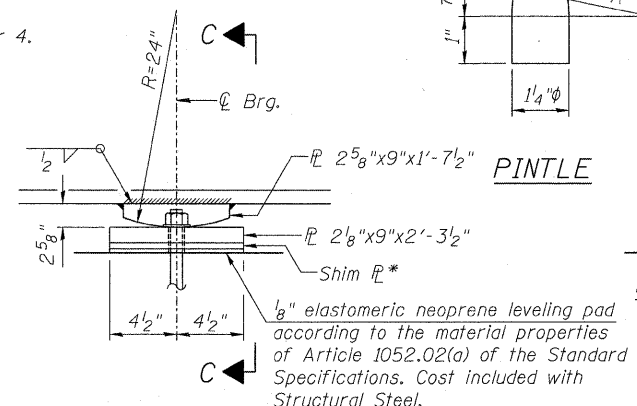
SIDE RETAINER - SOUTH ABUT.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



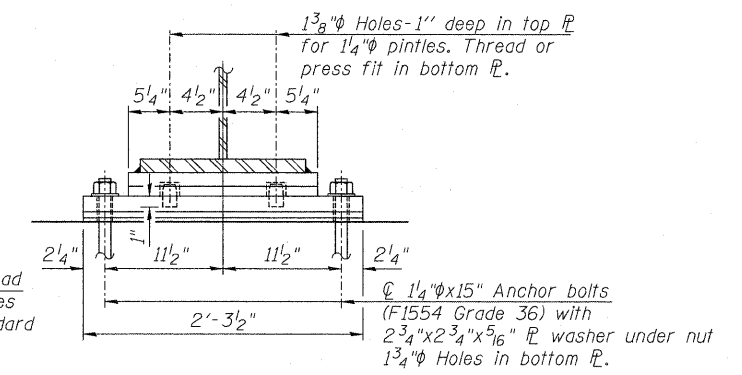
SIDE RETAINER - NORTH ABUT.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION AT PIER

FIXED BEARING



SECTION C-C

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	15
Anchor Bolts, 3/4"	Each	16
Anchor Bolts, 1"	Each	14
Anchor Bolts, 1 1/4"	Each	16

BEARING DETAILS  
STRUCTURE NO. 082-0377

SHEET NO. 25	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	232
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

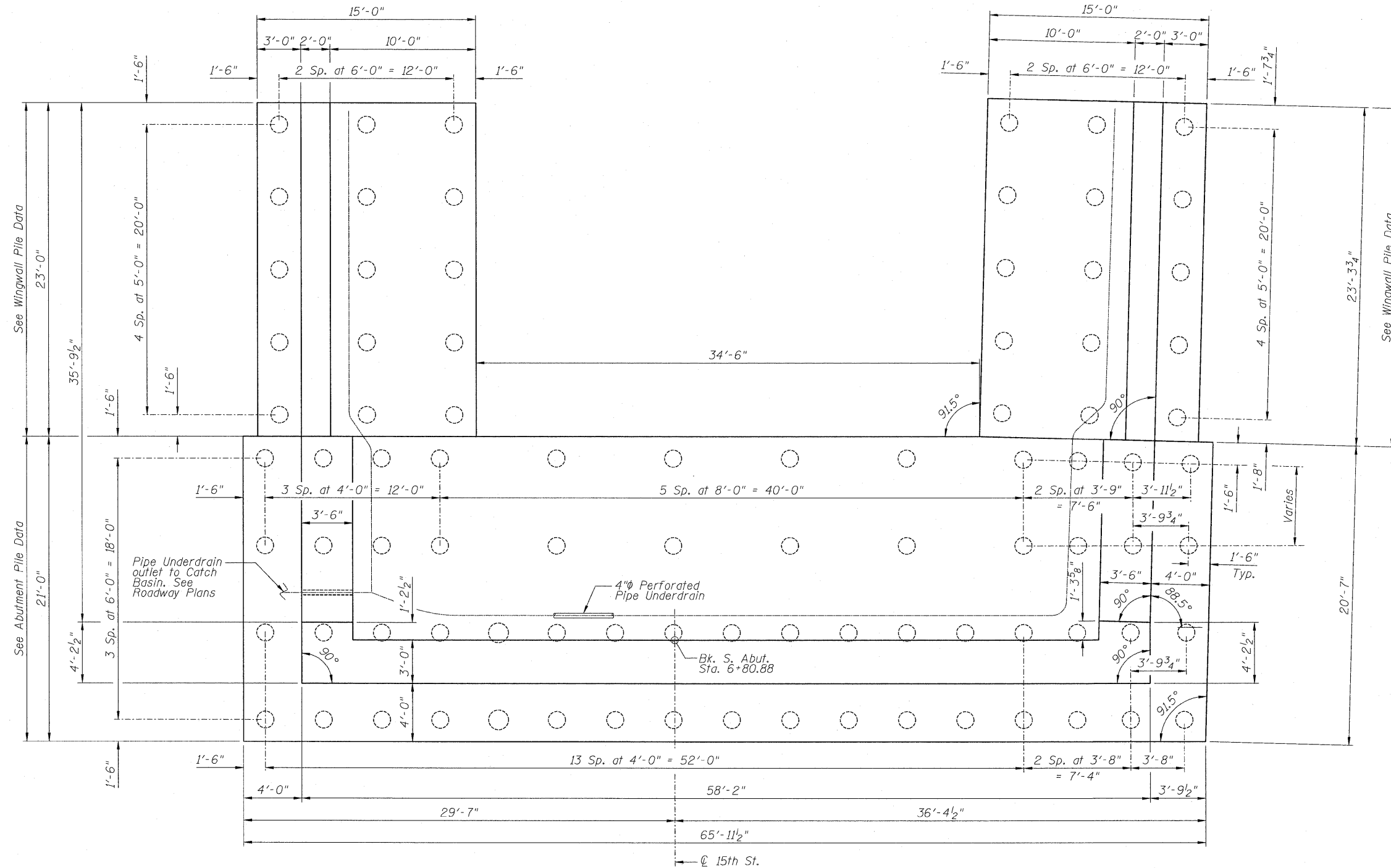
REVISION 4/11/2010

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



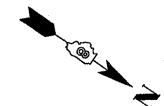
**ABUTMENT PILE DATA**

Type: 14" Metal Shell Pile x .312 Walls  
Nominal Required Bearing: 450K  
Factored Resistance Available: 225K  
Est. Length: 67 ft.  
No. Production Piles: 57  
No. Test Piles: 1

**WINGWALL PILE DATA**

Type: 14" Metal Shell Pile x .312 Walls  
Nominal Required Bearing: 300K  
Factored Resistance Available: 150K  
Est. Length: 42 ft.  
No. Production Piles: 30  
No. Test Piles: 0

SOUTH ABUTMENT PILE LAYOUT



**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SOUTH ABUTMENT PILE LAYOUT  
STRUCTURE NO. 082-0377

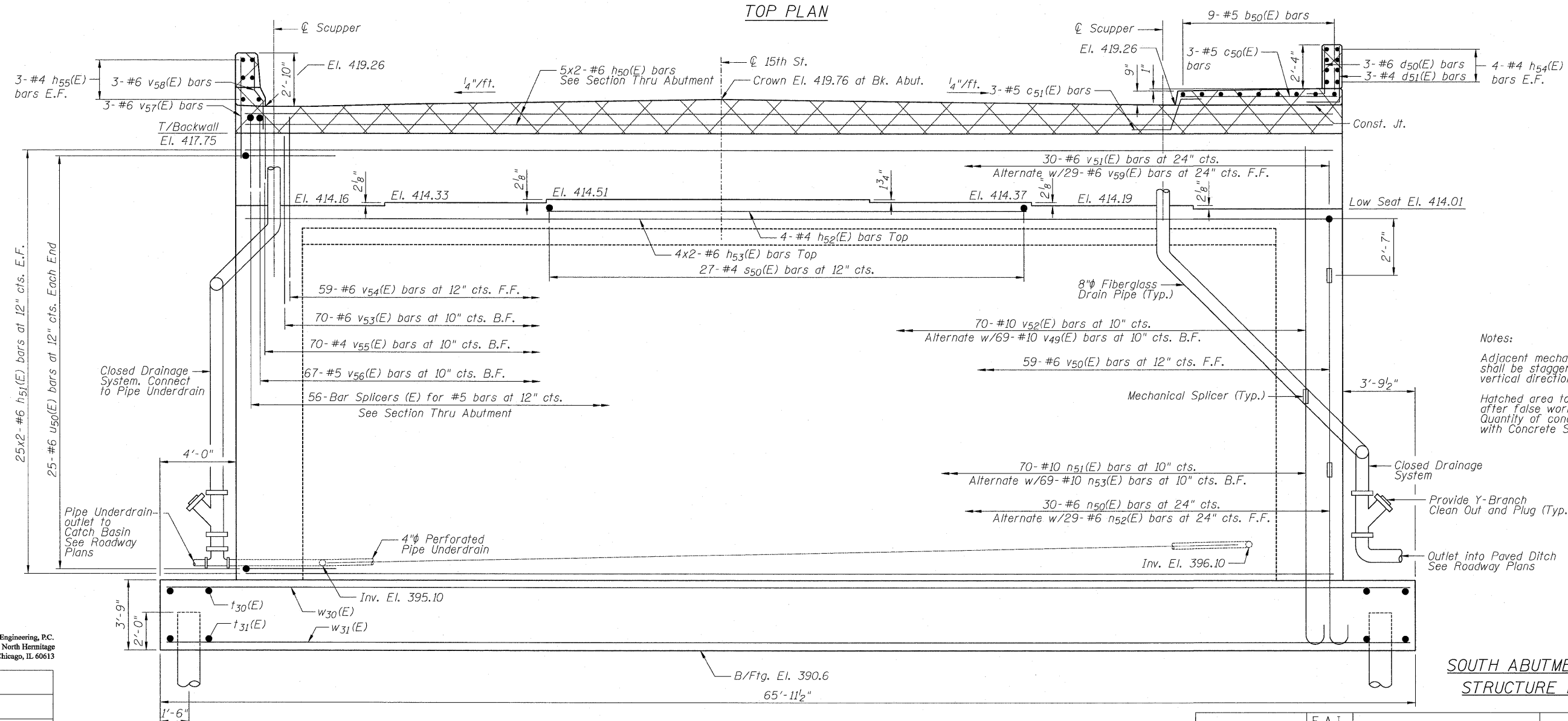
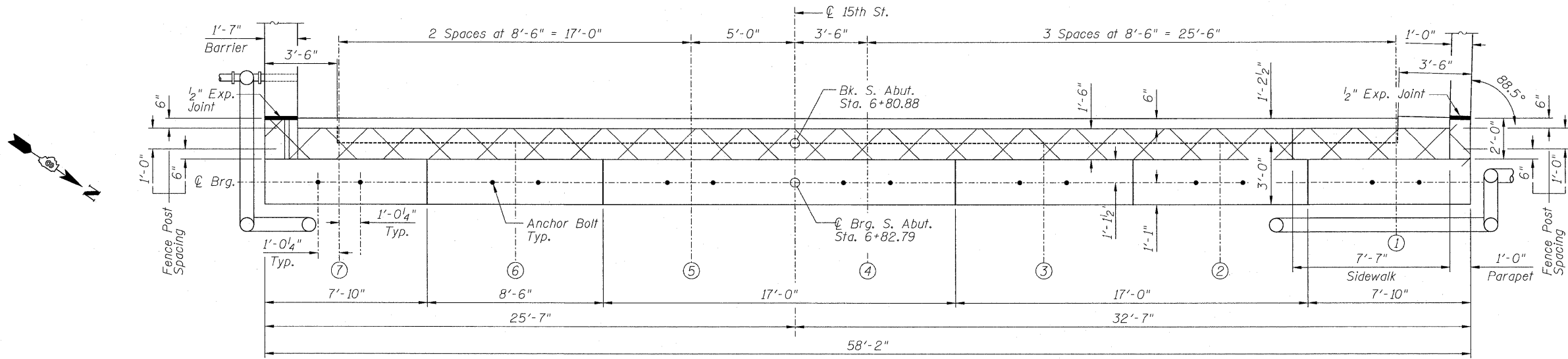
SHEET NO. 26 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 233
	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

REVISION 4/15/2010





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Notes:  
Adjacent mechanical splicers shall be staggered 2'-0" in the vertical direction.  
Hatched area to be poured after false work has been removed. Quantity of concrete included with Concrete Superstructure.

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

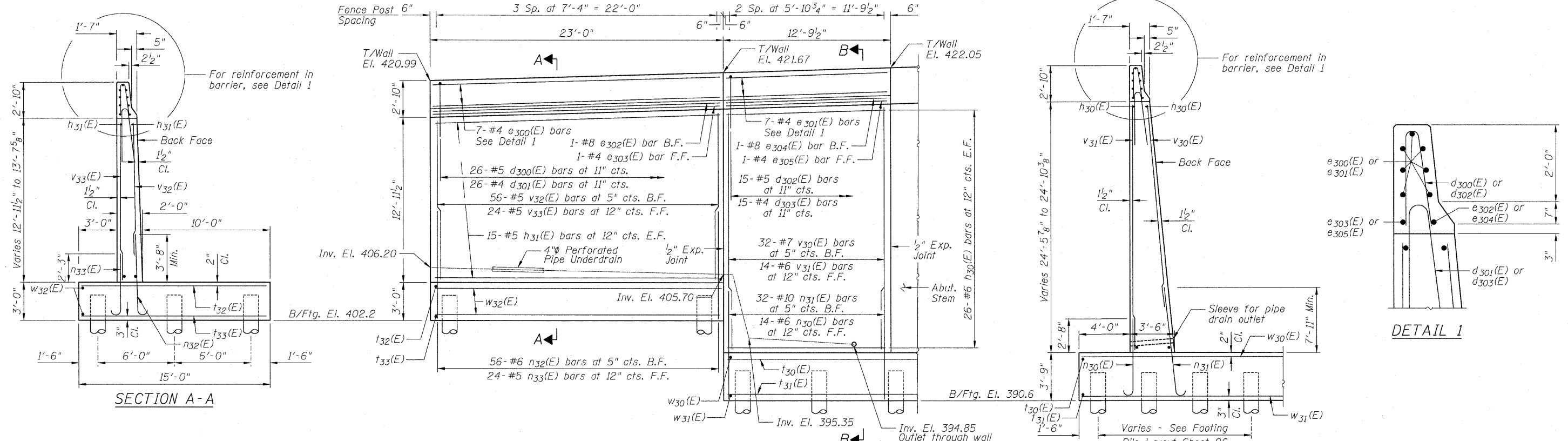
SOUTH ABUTMENT ELEVATION  
(Looking South)

SOUTH ABUTMENT ELEVATION  
STRUCTURE NO. 082-0377

SHEET NO. 28 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 235
	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

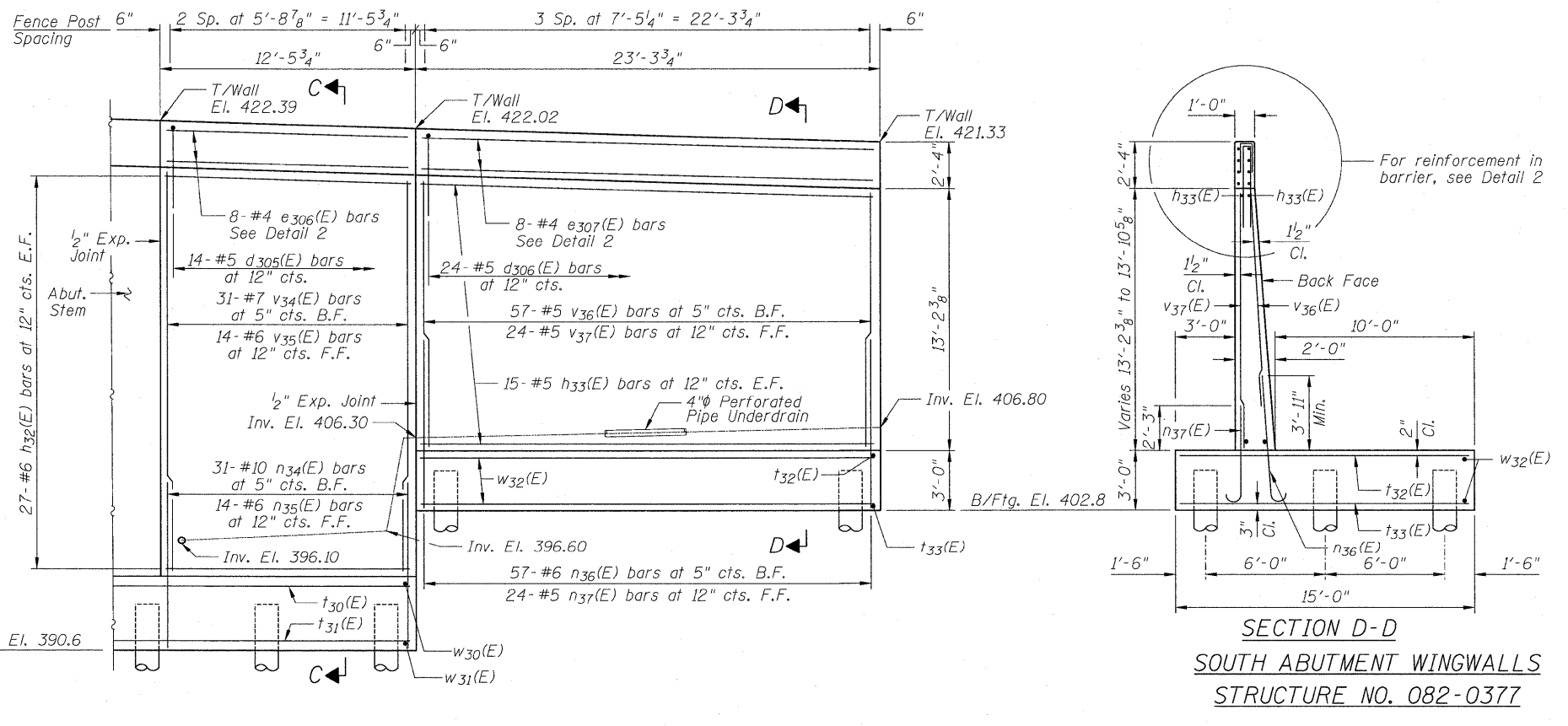
Revised 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



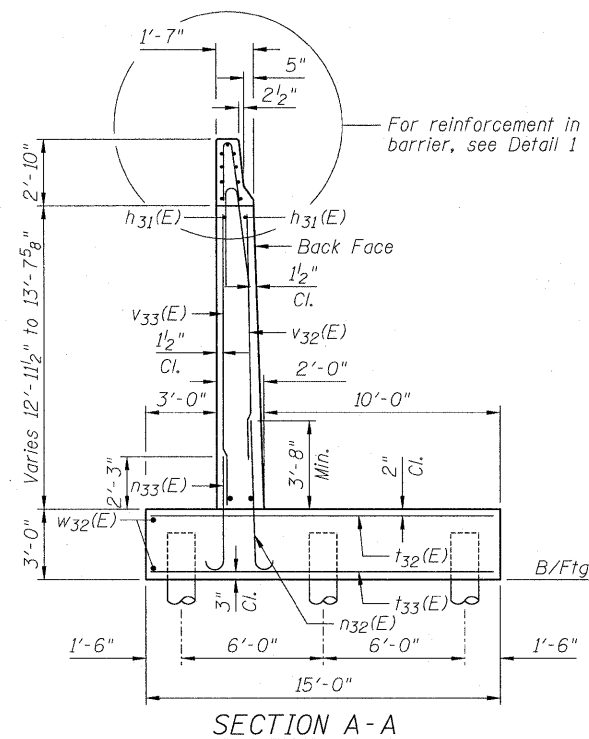
EAST WINGWALL ELEVATION

SECTION B-B

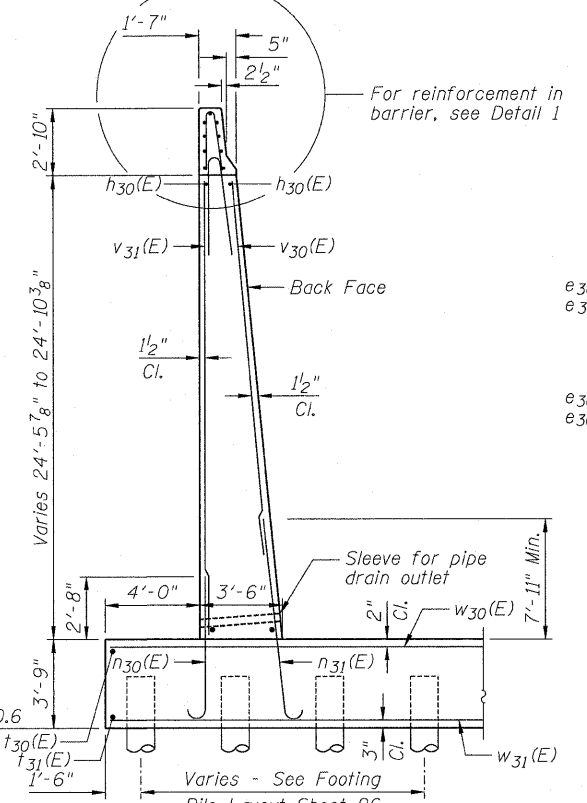


WEST WINGWALL ELEVATION

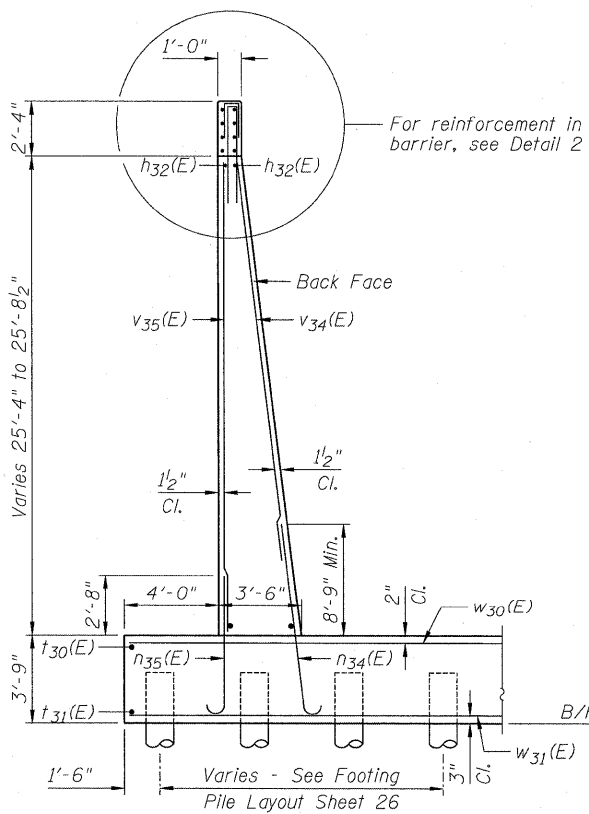
SECTION D-D  
SOUTH ABUTMENT WINGWALLS  
STRUCTURE NO. 082-0377



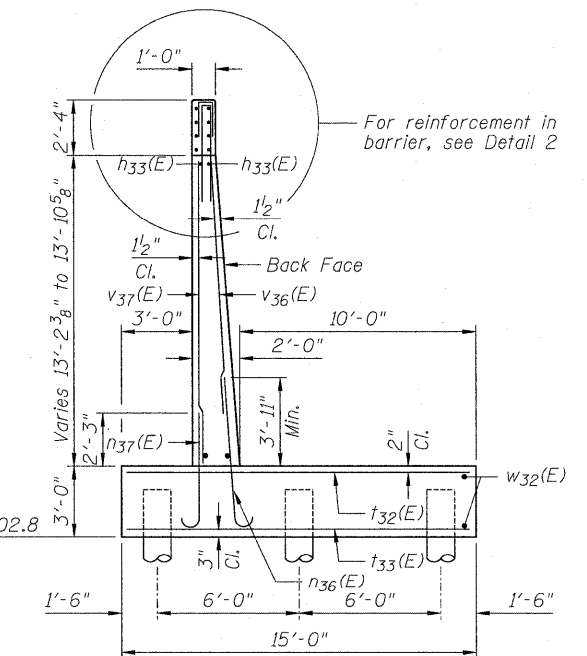
SECTION A-A



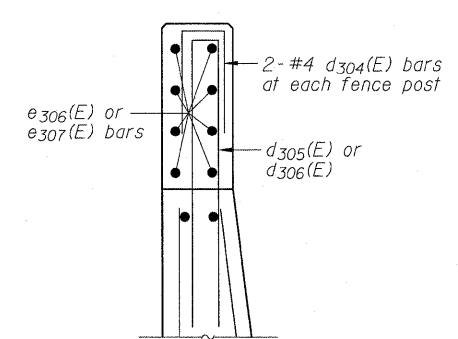
SECTION B-B



SECTION C-C



SECTION D-D  
SOUTH ABUTMENT WINGWALLS  
STRUCTURE NO. 082-0377



DETAIL 2

MIN. BAR LAPS

- #5 bar = 2'-2"
- #6 bar = 2'-7"
- #7 bar = 3'-5"
- #10 bar = 7'-3"

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SHEET NO. 29	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	236
44 SHEETS		CONTRACT NO. 76C49			
ILLINOIS FED. AID PROJECT					

REVISED 4/11/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT & WINGWALLS BILL OF MATERIAL

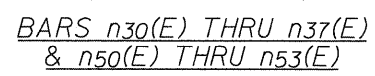
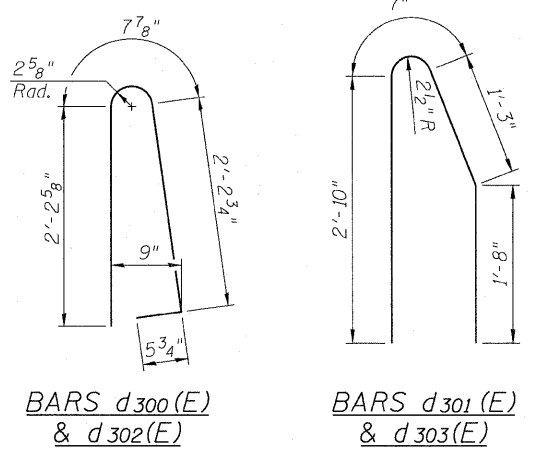
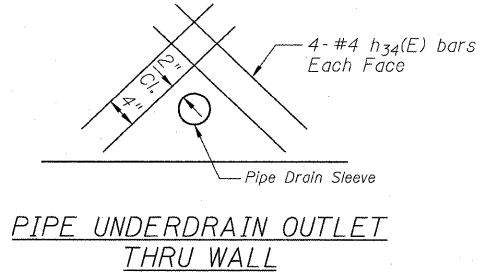
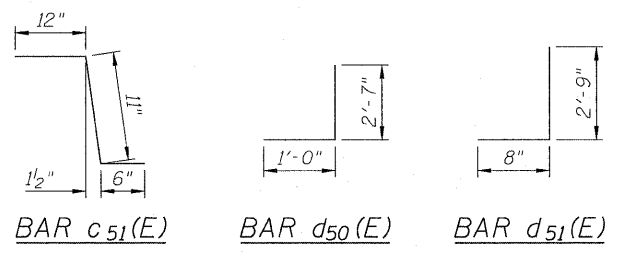
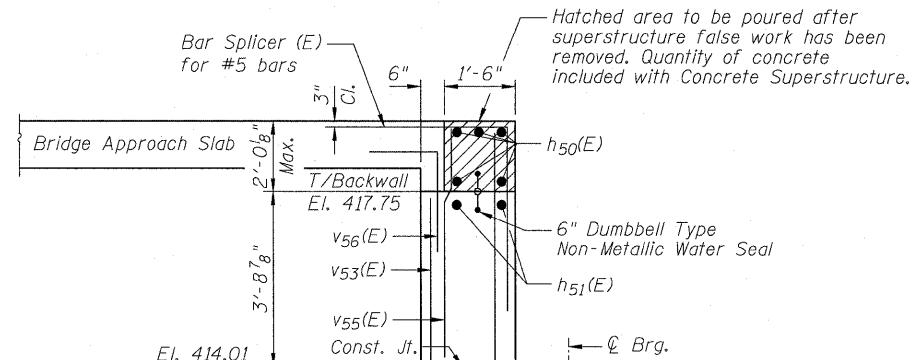
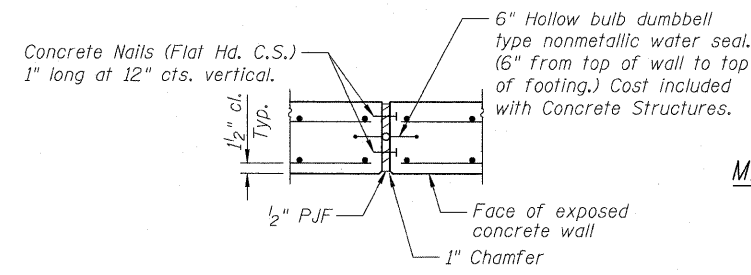
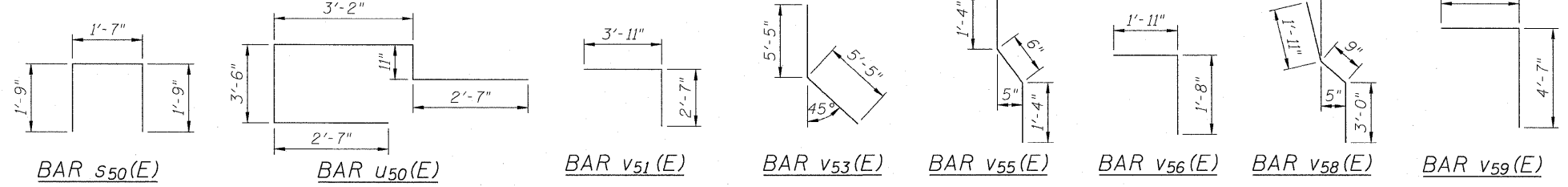
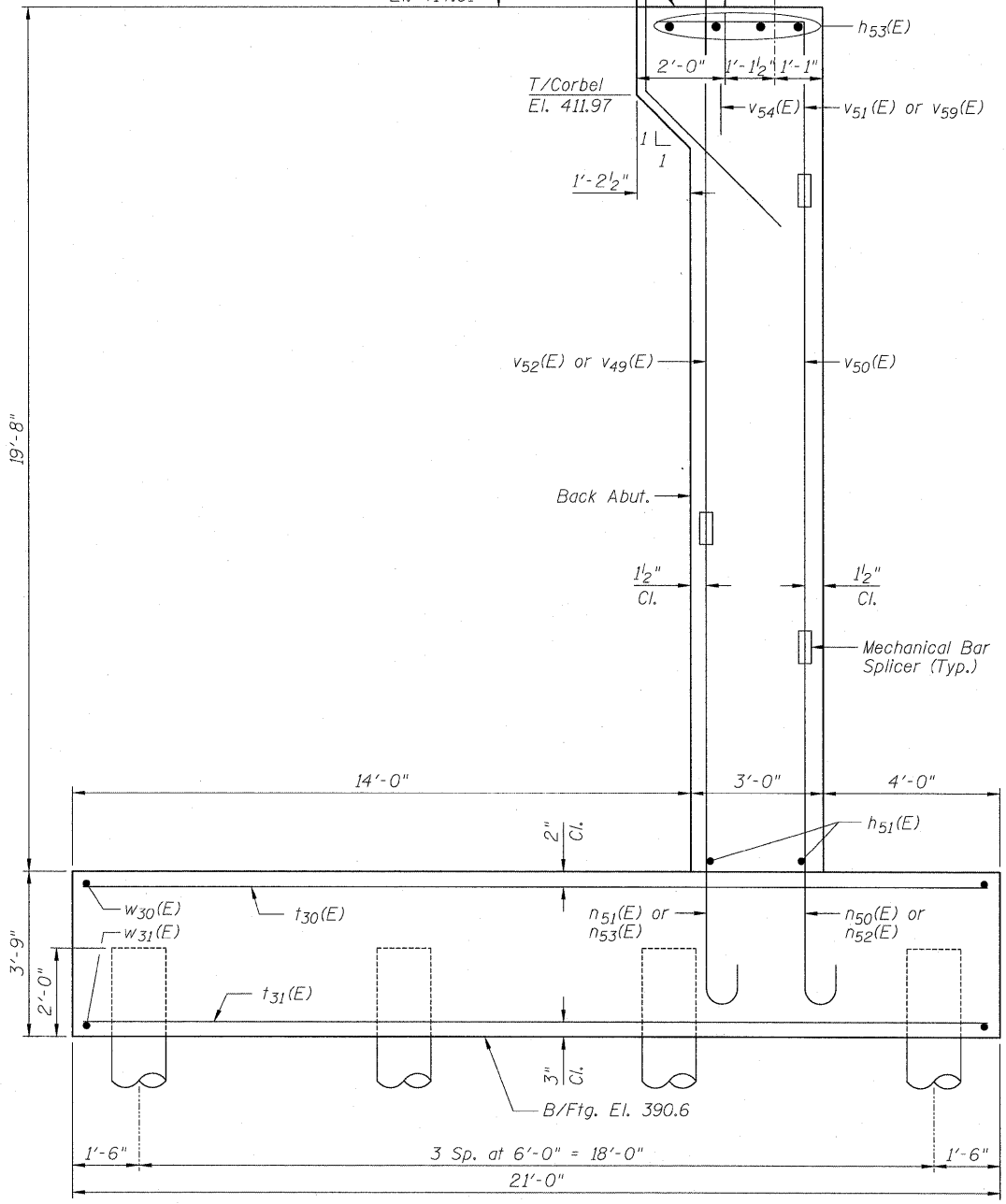


TABLE OF DIMENSIONS

Bar	A	B	C
n30(E)	6'-2"	8"	6"
n31(E)	11'-6"	1'-5"	1'-1 1/4"
n32(E)	6'-6"	8"	6"
n33(E)	5'-0"	7"	5"
n34(E)	12'-4"	1'-5"	1'-1 1/4"
n35(E)	6'-2"	8"	6"
n36(E)	6'-9"	8"	6"
n37(E)	5'-0"	7"	5"
n50(E)	8'-1"	8"	6"
n51(E)	10'-10"	1'-5"	1'-1 1/4"
n52(E)	6'-1"	8"	6"
n53(E)	12'-10"	1'-5"	1'-1 1/4"

Bar	No.	Size	Length	Shape
b50(E)	9	#5	1'-8"	—
c50(E)	3	#5	8'-3"	—
c51(E)	3	#5	2'-5"	—
d50(E)	3	#6	3'-7"	┘
d51(E)	3	#4	3'-5"	┘
d300(E)	26	#5	5'-7"	┘
d301(E)	26	#4	6'-4"	┘
d302(E)	15	#5	5'-7"	┘
d303(E)	15	#4	6'-4"	┘
d304(E)	14	#4	2'-0"	┘
d305(E)	14	#5	9'-2"	┘
d306(E)	24	#5	9'-2"	┘
e300(E)	7	#4	22'-8"	—
e301(E)	7	#4	12'-6"	—
e302(E)	1	#8	22'-8"	—
e303(E)	1	#4	22'-8"	—
e304(E)	1	#8	12'-6"	—
e305(E)	1	#4	12'-6"	—
e306(E)	8	#4	12'-2"	—
e307(E)	8	#4	23'-0"	—
h30(E)	52	#6	12'-6"	—
h31(E)	30	#5	22'-8"	—
h32(E)	54	#6	12'-2"	—
h33(E)	30	#5	23'-0"	—
h34(E)	8	#4	4'-0"	—
h50(E)	10	#6	30'-3"	—
h51(E)	100	#6	30'-3"	—
h52(E)	4	#4	25'-2"	—
h53(E)	8	#6	30'-3"	—
h54(E)	8	#4	1'-8"	—
h55(E)	6	#4	1'-8"	—
n30(E)	14	#6	6'-10"	┘
n31(E)	32	#10	12'-11"	┘
n32(E)	56	#6	7'-2"	┘
n33(E)	24	#5	5'-7"	┘
n34(E)	31	#10	13'-9"	┘
n35(E)	14	#6	6'-10"	┘
n36(E)	57	#6	7'-5"	┘
n37(E)	24	#5	5'-7"	┘
n50(E)	30	#6	8'-9"	┘
n51(E)	70	#10	12'-3"	┘
n52(E)	29	#6	6'-9"	┘
n53(E)	69	#10	14'-3"	┘
s50(E)	27	#4	5'-1"	┘
t30(E)	159	#8	20'-8"	—
t31(E)	161	#6	20'-8"	—
t32(E)	102	#7	14'-8"	—
t33(E)	108	#4	14'-8"	—
u50(E)	50	#6	12'-9"	┘
v30(E)	32	#7	20'-4"	—
v31(E)	14	#6	24'-6"	—
v32(E)	56	#5	12'-0"	—
v33(E)	24	#5	13'-4"	—
v34(E)	31	#7	20'-6"	—
v35(E)	14	#6	25'-4"	—
v36(E)	57	#5	12'-1"	—
v37(E)	24	#5	13'-6"	—
v49(E)	69	#10	10'-2"	—
v50(E)	59	#6	12'-3"	—
v51(E)	30	#6	6'-6"	┘
v52(E)	70	#10	12'-2"	—
v53(E)	70	#6	10'-10"	┘
v54(E)	59	#6	6'-6"	—
v55(E)	70	#4	3'-2"	┘
v56(E)	67	#5	3'-7"	┘
v57(E)	3	#6	5'-10"	—
v58(E)	3	#6	5'-8"	┘
v59(E)	29	#6	8'-6"	┘
w30(E)	150	#10	26'-9"	—
w31(E)	165	#5	23'-4"	—
w32(E)	60	#5	22'-8"	—
Structure Excavation		Cu. Yd.	2,288	
Concrete Structures		Cu. Yd.	521.9	
Reinforcement Bars, Epoxy Coated		Pound	82,220	
Furnishing Metal Shell Piles 14"x0.312"		Foot	5,079	
Driving Piles		Foot	5,079	
Test Pile Metal Shells		Each	1	
Mechanical Splicers		Each	257	
Bar Splicers		Each	56	
Protective Coat		Sq. Yd.	29	
Concrete Sealer		Sq. Ft.	1,504	
Porous Granular Embankment, Special		Cu. Yd.	332	



MIN. BAR LAPS  
#5 bar = 2'-2"  
#6 bar = 2'-7"  
#9 bar = 5'-9"  
#10 bar = 7'-3"

SOUTH ABUTMENT DETAILS  
STRUCTURE NO. 082-0377

**ZROKA** Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

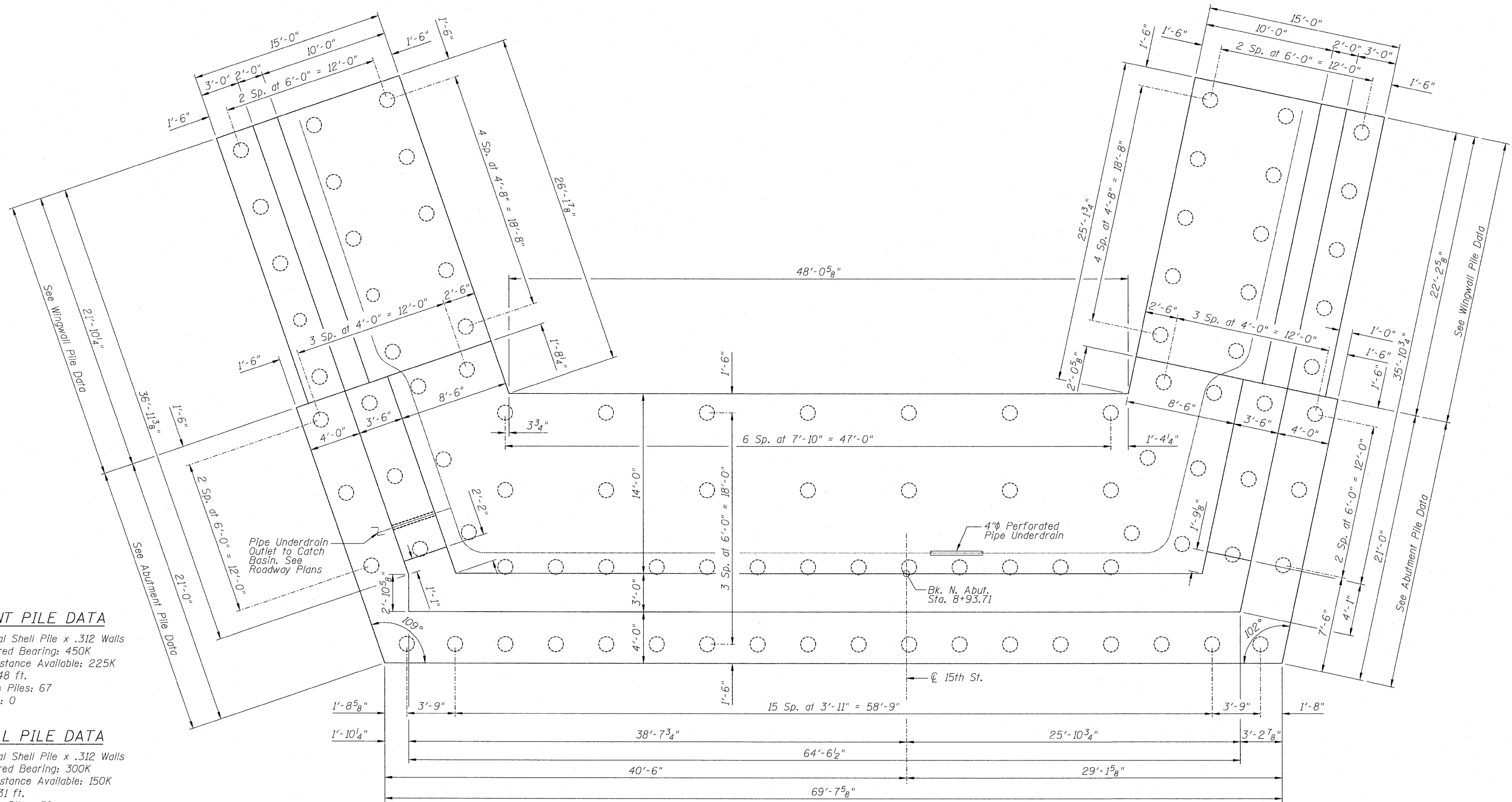
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SHEET NO. 30 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 237
	CONTRACT NO. 76C49				

ILLINOIS FED. AID PROJECT  
Revised 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



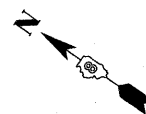
**ABUTMENT PILE DATA**

Type: 14" Metal Shell Pile x .312 Walls  
Nominal Required Bearing: 450K  
Factored Resistance Available: 225K  
Est. Length: 48 ft.  
No. Production Piles: 67  
No. Test Piles: 0

**WINGWALL PILE DATA**

Type: 14" Metal Shell Pile x .312 Walls  
Nominal Required Bearing: 300K  
Factored Resistance Available: 150K  
Est. Length: 31 ft.  
No. Production Piles: 30  
No. Test Piles: 0

**NORTH ABUTMENT PILE LAYOUT**



**NORTH ABUTMENT PILE LAYOUT  
STRUCTURE NO. 082-0377**

**ZROKA** Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

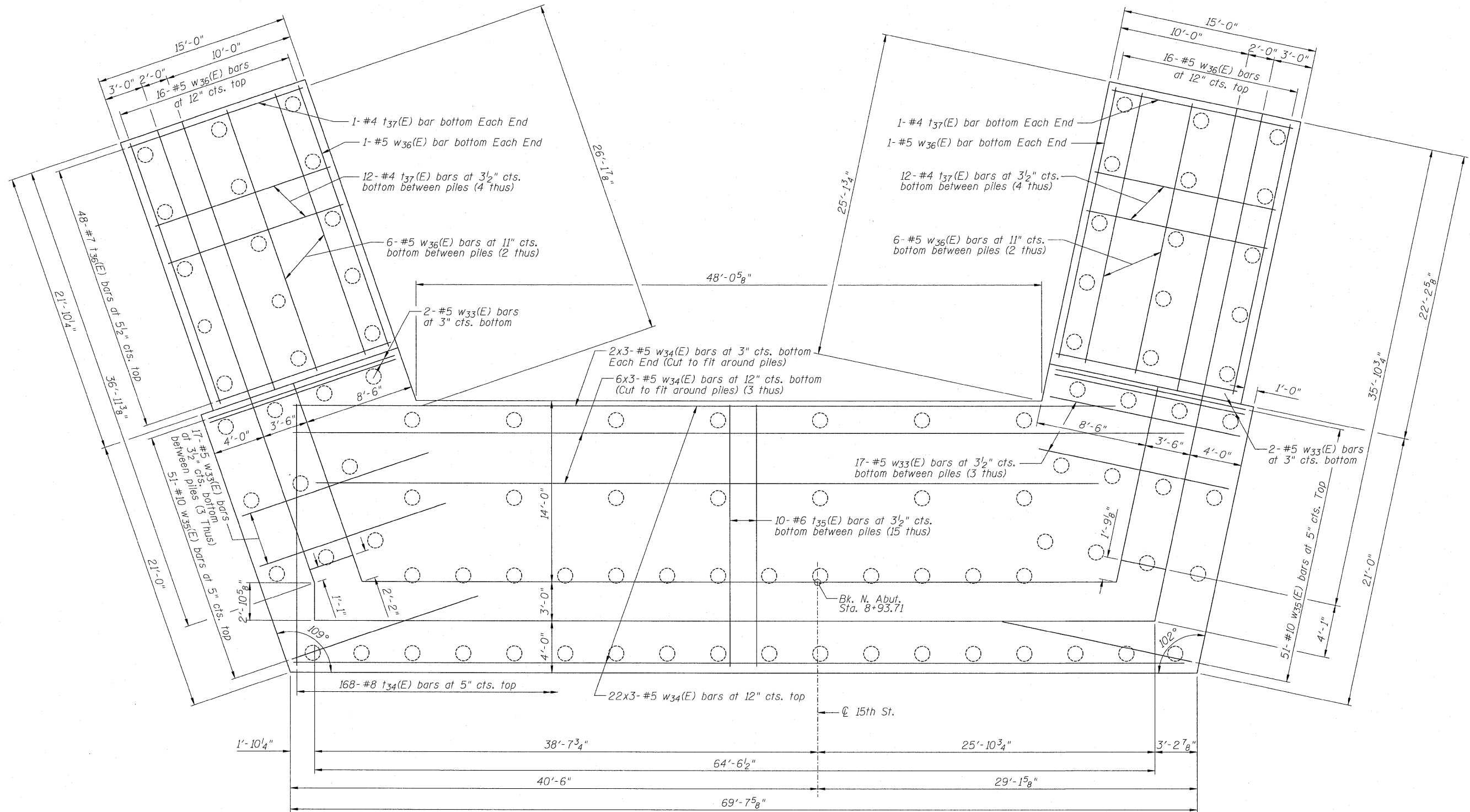
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

SHEET NO. 31 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	238
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



NORTH ABUTMENT FOOTING PLAN

MIN. BAR LAPS  
#5 bar = 2'-2"

Notes:

Bars indicated thus: 2x3-#5 etc. indicates 2 lines of bars with 3 lengths per line.

See Sheet 35 of 44 for Bill of Material.

**ZROKA** Engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

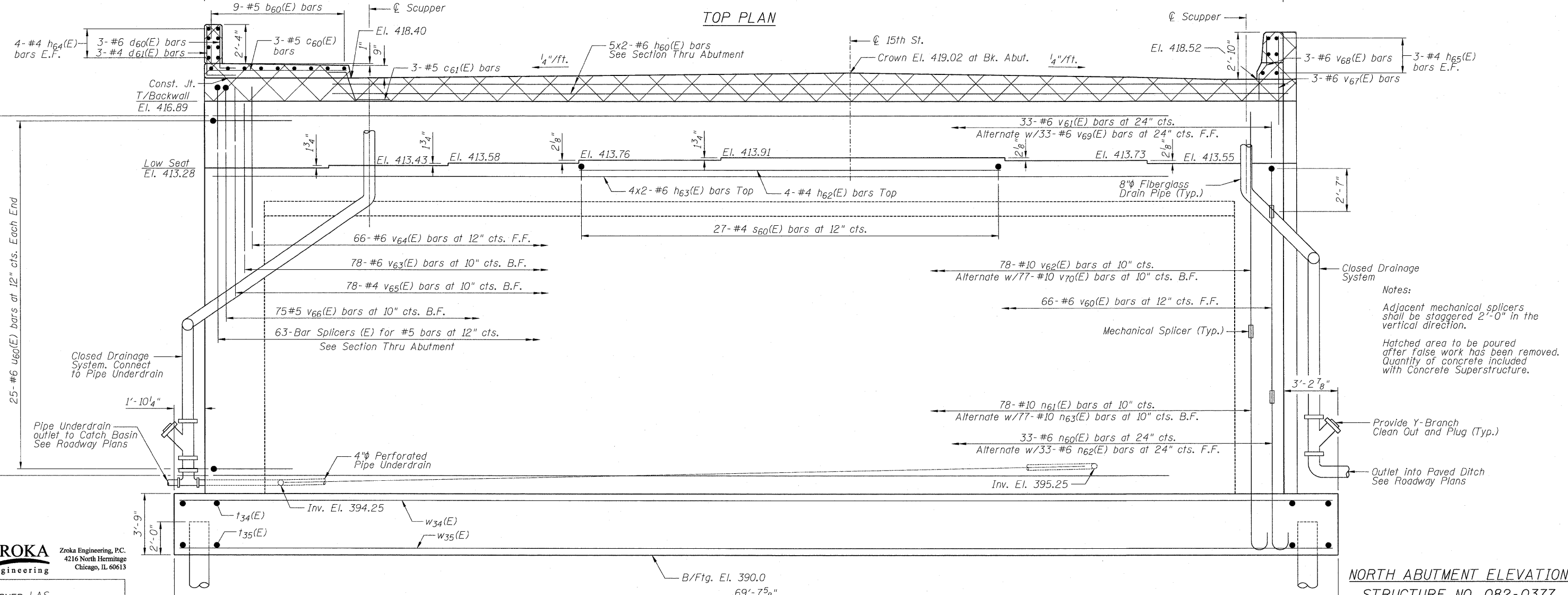
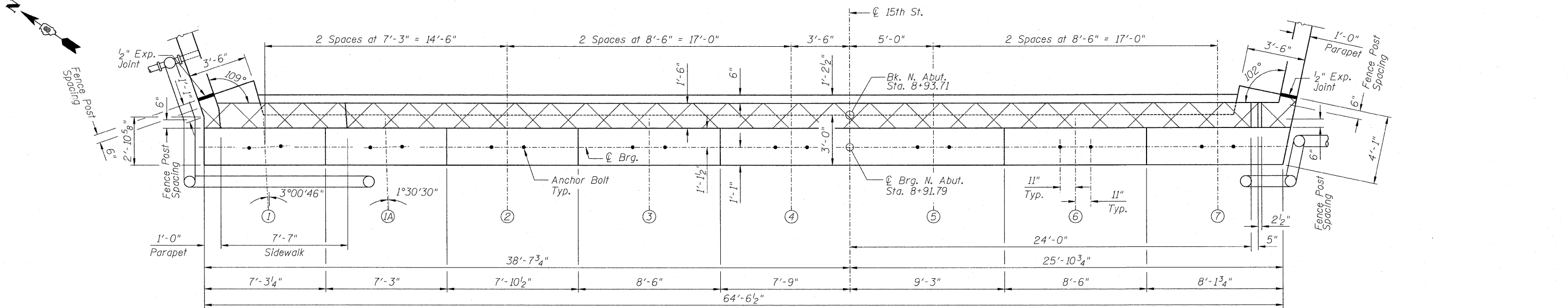
3-31-2010

NORTH ABUTMENT FOOTING PLAN  
STRUCTURE NO. 082-0377

SHEET NO. 32 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	239
CONTRACT NO. 76C49					
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Notes:  
Adjacent mechanical splicers shall be staggered 2'-0" in the vertical direction.  
Hatched area to be poured after false work has been removed. Quantity of concrete included with Concrete Superstructure.

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

**NORTH ABUTMENT ELEVATION**  
(Looking North)

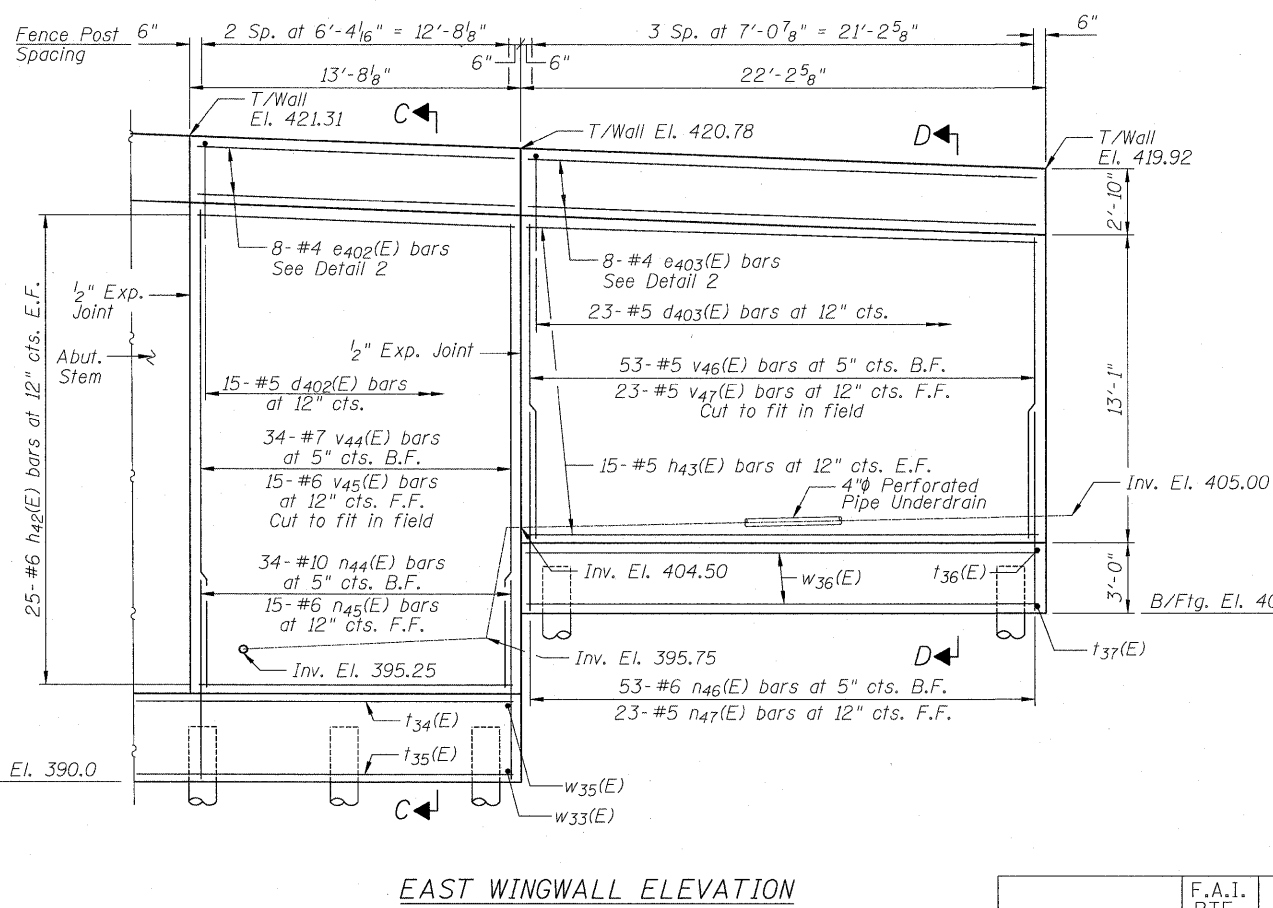
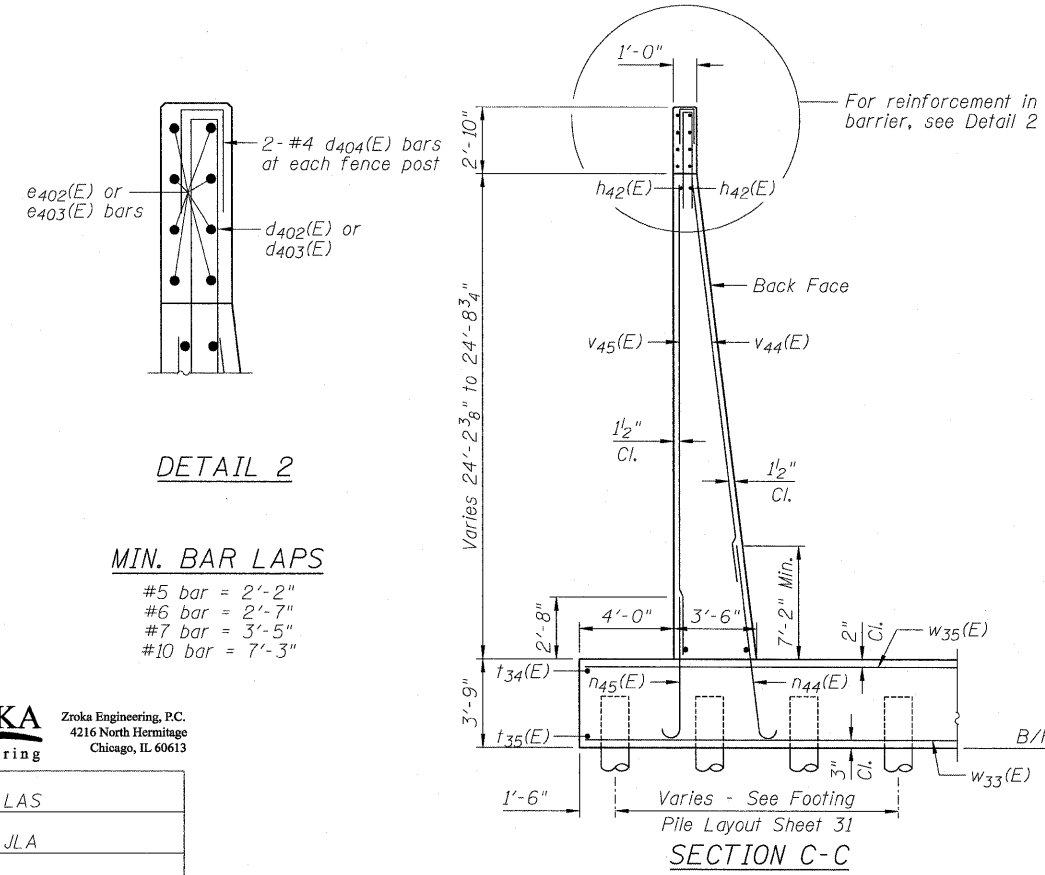
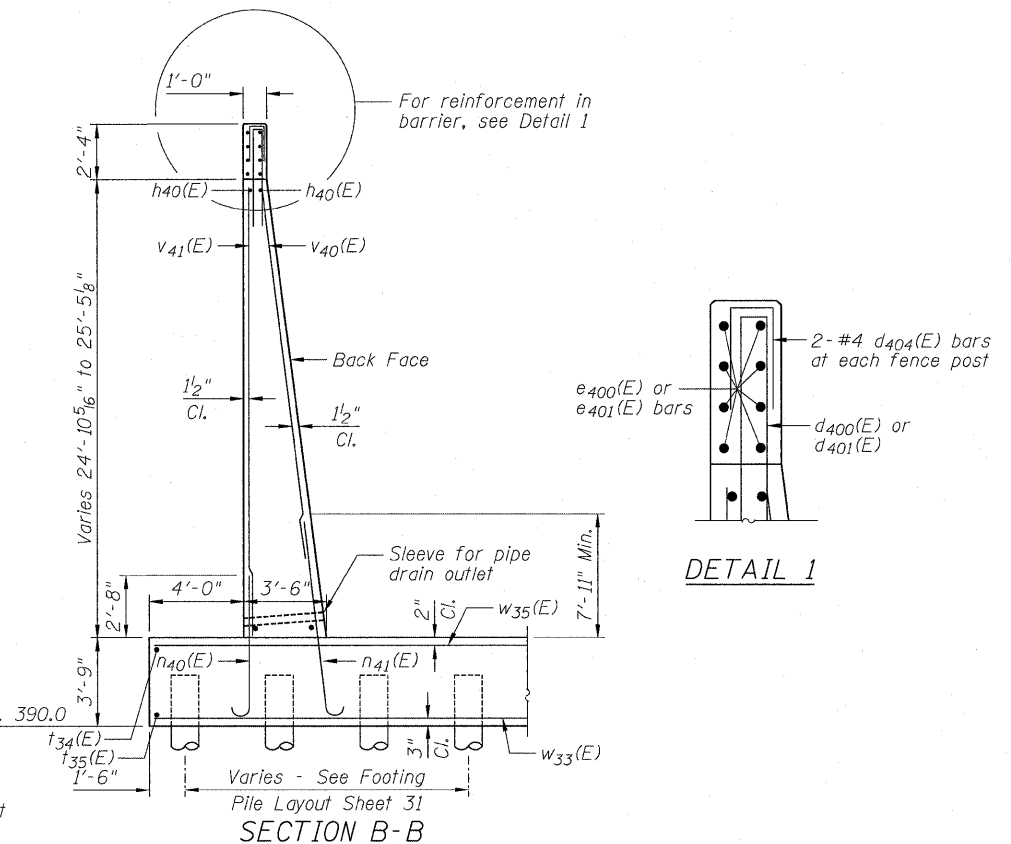
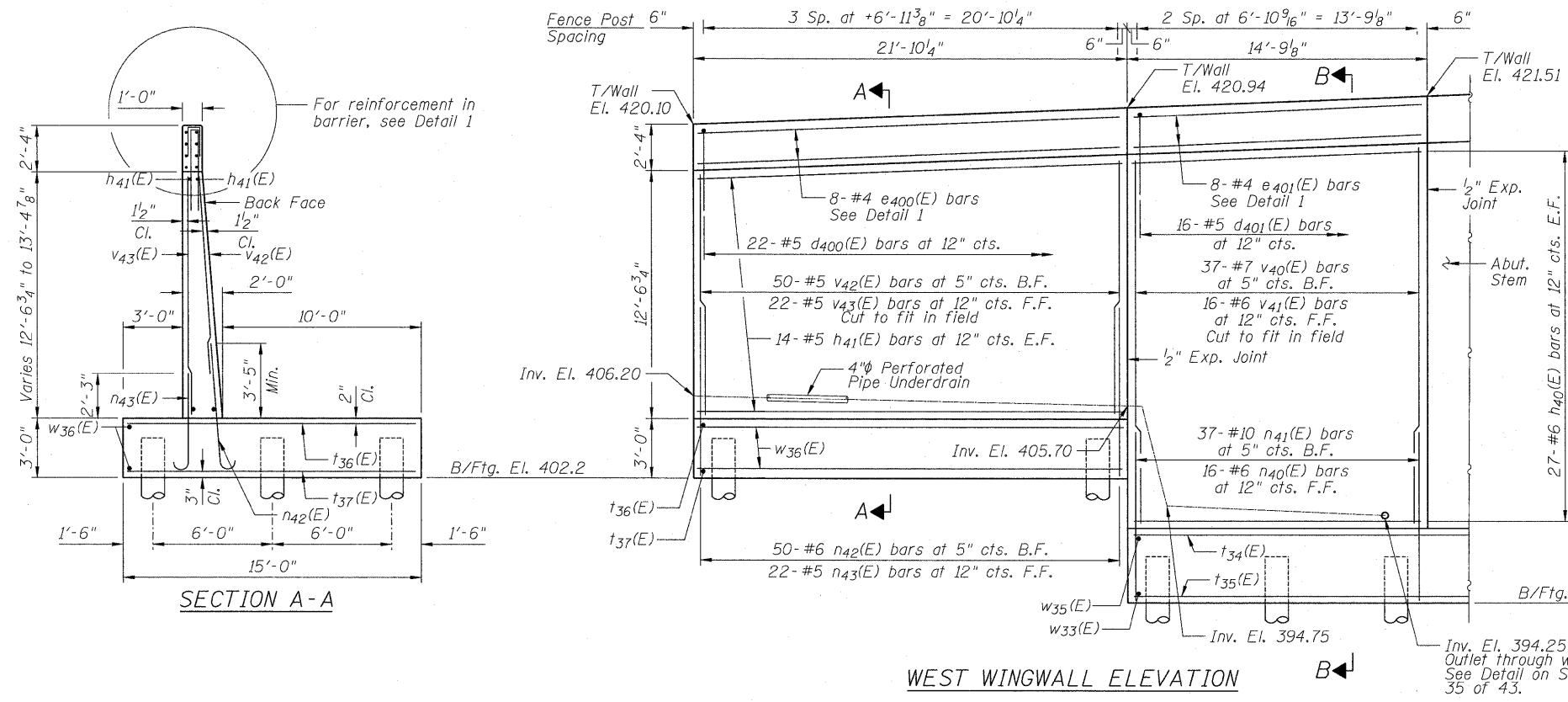
**NORTH ABUTMENT ELEVATION**  
STRUCTURE NO. 082-0377

SHEET NO. 33 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	240
CONTRACT NO. 76C49					
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SECTION D-D**  
**NORTH ABUTMENT WINGWALLS**  
**STRUCTURE NO. 082-0377**

**MIN. BAR LAPS**

#5 bar = 2'-2"  
#6 bar = 2'-7"  
#7 bar = 3'-5"  
#10 bar = 7'-3"

**ZROKA**  
engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

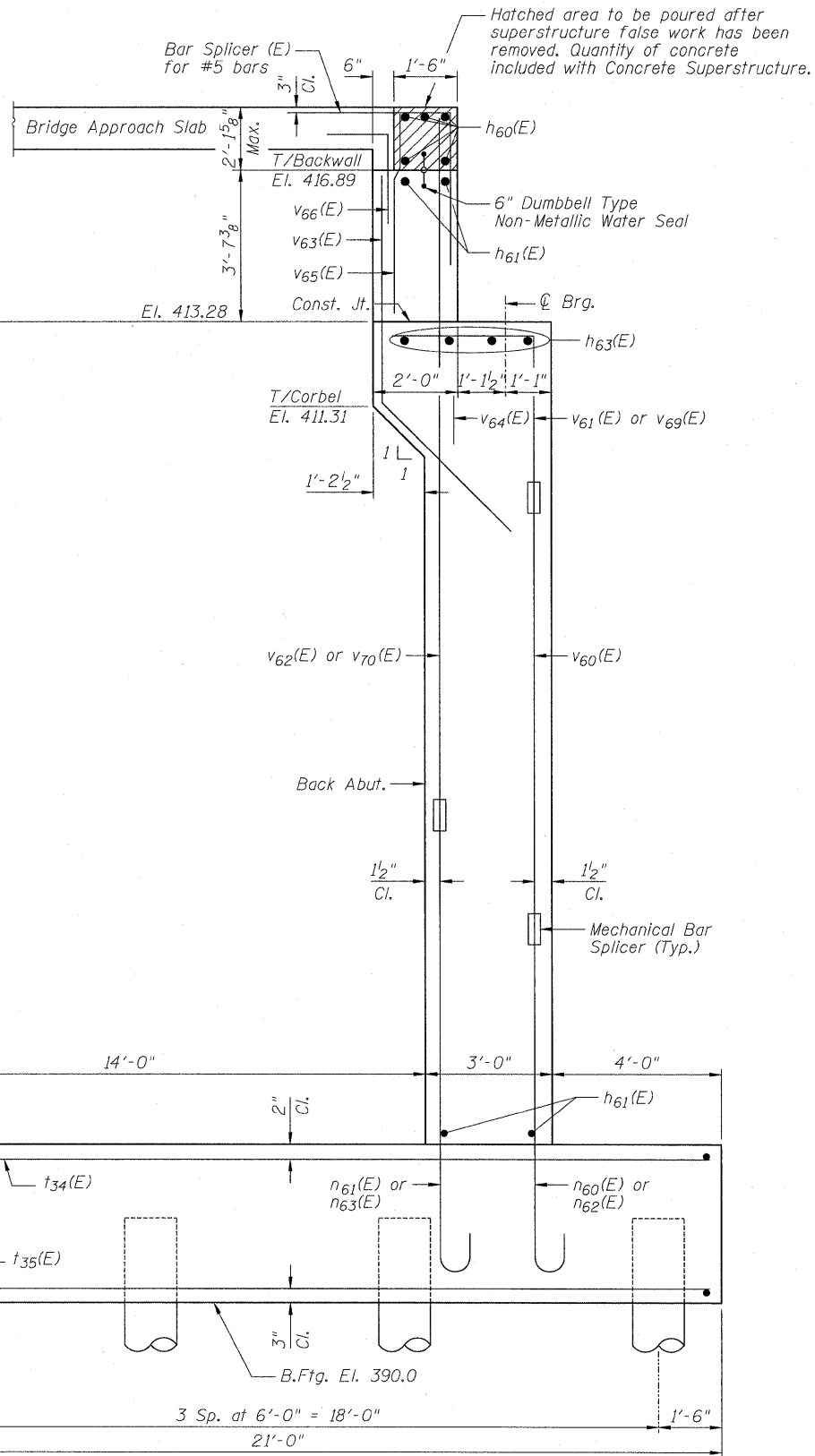
3-31-2010

SHEET NO. 34	F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44 SHEETS	64	82-1-2HB	ST. CLAIR	345	241
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

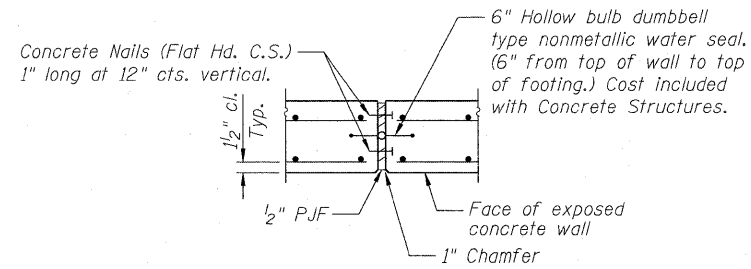
REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

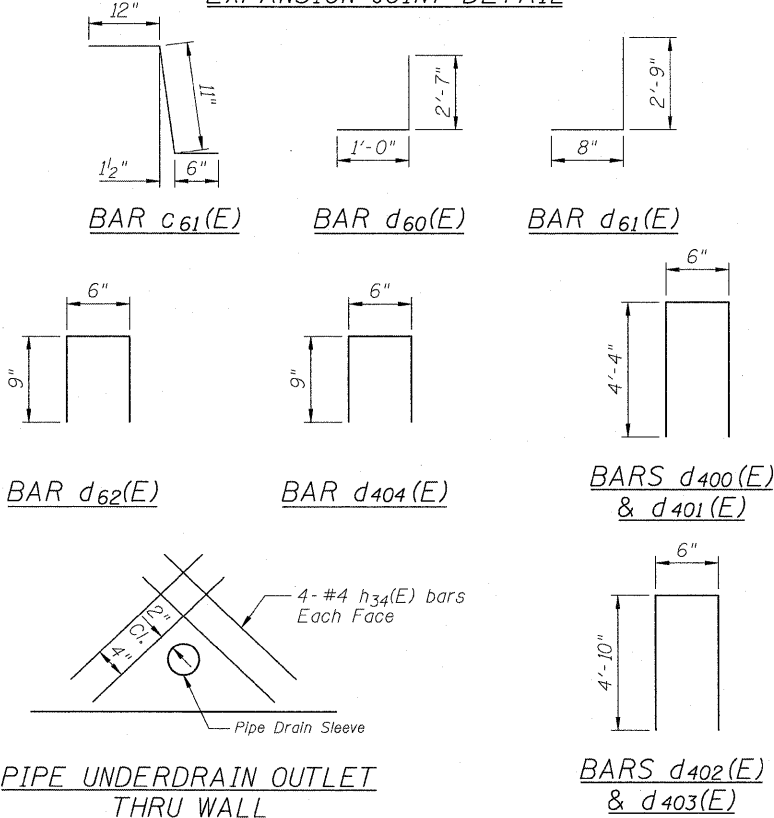
NORTH ABUTMENT & WINGWALLS BILL OF MATERIAL



SECTION THRU ABUTMENT



EXPANSION JOINT DETAIL

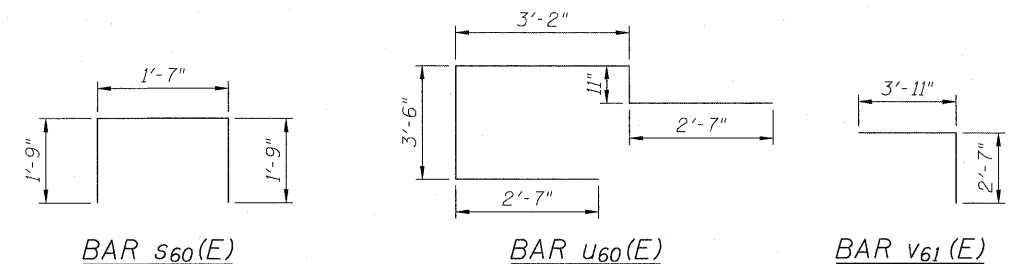


PIPE UNDERDRAIN OUTLET THRU WALL

Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
b60(E)	9	#5	1'-8"	—	s60(E)	27	#4	5'-1"	□
c60(E)	3	#5	8'-3"	—	t34(E)	168	#8	20'-8"	—
c61(E)	3	#5	2'-5"	—	t35(E)	150	#6	20'-8"	—
d60(E)	3	#6	3'-7"	J	t36(E)	96	#7	14'-8"	—
d61(E)	3	#4	3'-5"	J	t37(E)	100	#4	14'-8"	—
d62(E)	8	#4	2'-0"	□	u60(E)	50	#6	12'-9"	□
d400(E)	22	#5	9'-2"	□	v40(E)	37	#7	20'-10"	—
d401(E)	16	#5	9'-2"	□	v41(E)	16	#6	25'-1"	—
d402(E)	15	#5	10'-2"	□	v42(E)	50	#5	12'-0"	—
d403(E)	23	#5	10'-2"	□	v43(E)	22	#5	13'-0"	—
d404(E)	28	#4	2'-0"	□	v44(E)	34	#7	20'-11"	—
e400(E)	8	#4	21'-6"	—	v45(E)	15	#6	24'-4"	—
e401(E)	8	#4	14'-5"	—	v46(E)	53	#5	12'-0"	—
e402(E)	8	#4	13'-4"	—	v47(E)	23	#5	13'-6"	—
e403(E)	8	#4	21'-10"	—	v60(E)	66	#6	12'-2"	—
h34(E)	8	#4	4'-0"	—	v61(E)	33	#6	6'-6"	└
h40(E)	54	#6	14'-5"	—	v62(E)	78	#10	12'-1"	—
h41(E)	28	#5	21'-6"	—	v63(E)	78	#6	10'-8"	└
h42(E)	52	#6	13'-4"	—	v64(E)	66	#6	6'-6"	—
h43(E)	30	#5	21'-10"	—	v65(E)	78	#4	3'-2"	└
h60(E)	10	#6	33'-5"	—	v66(E)	75	#5	3'-7"	└
h61(E)	100	#6	33'-5"	—	v67(E)	3	#6	5'-10"	—
h62(E)	4	#4	25'-2"	—	v68(E)	3	#6	5'-8"	└
h63(E)	8	#6	33'-5"	—	v69(E)	33	#6	8'-2"	└
h64(E)	8	#4	1'-8"	—	v70(E)	77	#10	10'-1"	—
h65(E)	6	#4	1'-8"	—	w33(E)	106	#5	15'-8"	—
n40(E)	16	#6	6'-10"	└	w34(E)	126	#5	24'-7"	—
n41(E)	37	#10	12'-11"	└	w35(E)	102	#10	15'-8"	—
n42(E)	50	#6	6'-11"	└	w36(E)	60	#5	21'-6"	—
n43(E)	22	#5	5'-7"	└	Structure Excavation	Cu. Yd.	2,091		
n44(E)	34	#10	12'-2"	└	Concrete Structures	Cu. Yd.	566.5		
n45(E)	15	#6	6'-10"	└	Reinforcement Bars, Epoxy Coated	Pound	75,770		
n46(E)	53	#6	7'-5"	└	Furnishing Metal Shell Piles 14"x0.312"	Foot	4,146		
n47(E)	23	#5	5'-7"	└	Driving Piles	Foot	4,146		
n60(E)	33	#6	8'-9"	└	Mechanical Splicers	Each	287		
n61(E)	78	#10	12'-3"	└	Bar Splicers	Each	63		
n62(E)	33	#6	6'-9"	└	Protective Coat	Sq. Yd.	29		
n63(E)	77	#10	14'-3"	└	Concrete Sealer	Sq. Ft.	1,636		
					Porous Granular Embankment, Special	Cu. Yd.	356		

TABLE OF DIMENSIONS

Bar	A	B	C
n40(E)	6'-2"	8"	6"
n41(E)	11'-6"	1'-5"	1'-1 1/4"
n42(E)	6'-3"	8"	6"
n43(E)	5'-0"	7"	5"
n44(E)	10'-9"	1'-5"	1'-1 1/4"
n45(E)	6'-2"	8"	6"
n46(E)	6'-9"	8"	6"
n47(E)	5'-0"	7"	5"
n60(E)	8'-1"	8"	6"
n61(E)	10'-10"	1'-5"	1'-1 1/4"
n62(E)	6'-1"	8"	6"
n63(E)	12'-10"	1'-5"	1'-1 1/4"



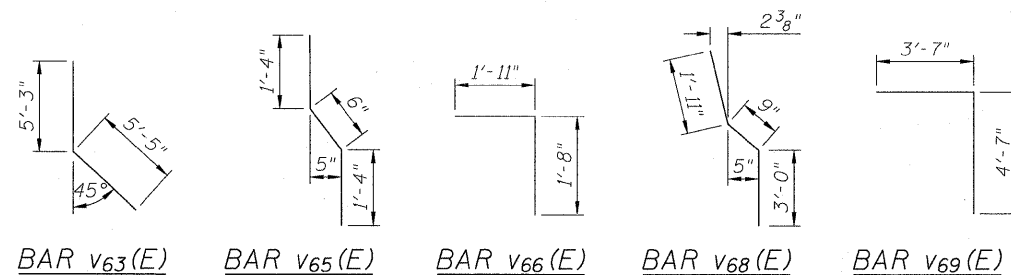
NORTH ABUTMENT DETAILS  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

MIN. BAR LAPS

- #5 bar = 2'-2"
- #6 bar = 2'-7"
- #9 bar = 5'-9"
- #10 bar = 7'-3"



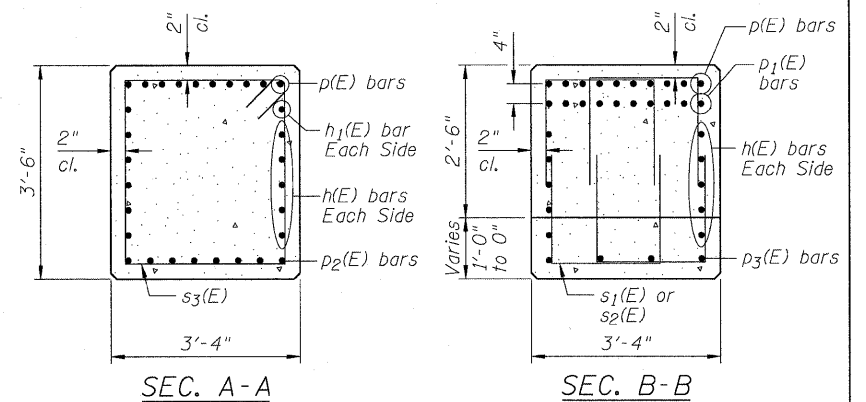
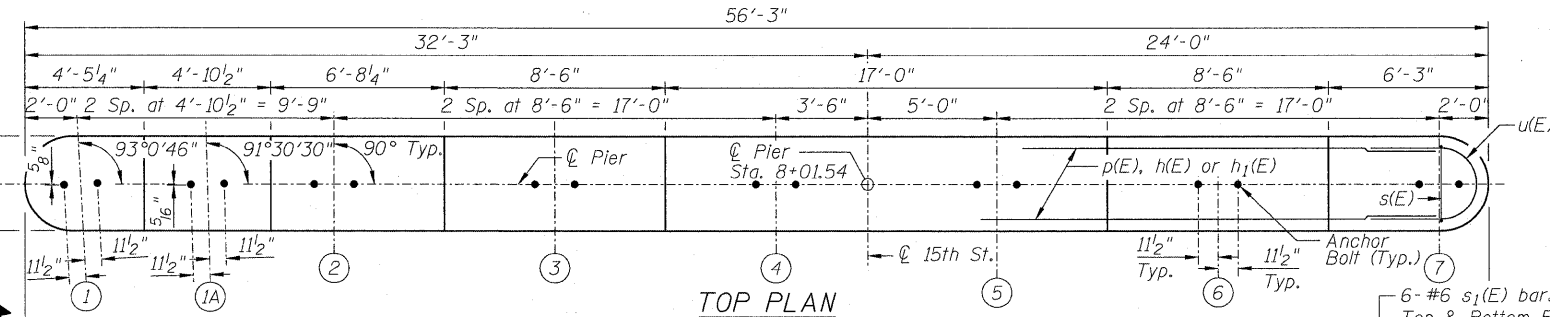
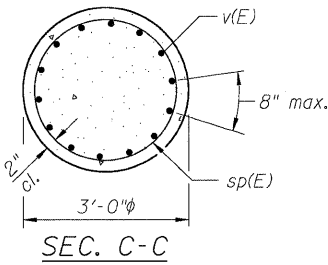
SHEET NO. 35	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44 SHEETS	64	82-1-2HB	ST. CLAIR	345	242
CONTRACT NO. 76C49					
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

3-31-2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Notes:  
Space reinforcement in cap to miss anchor bolts.  
Four steps monolithically with cap.  
The s<sub>5</sub>(E) cross-ties shall be placed so that the 90° hooked ends of two successive cross-ties alternate end-for-end.  
The s(E) bars shall be placed so that the longer side is alternated.



**BARS n(E), n<sub>1</sub>(E), and v<sub>1</sub>(E)**

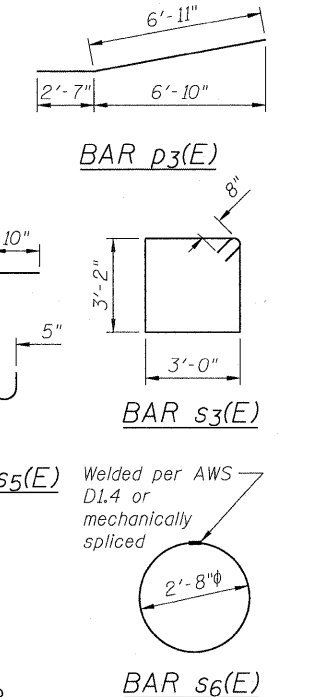
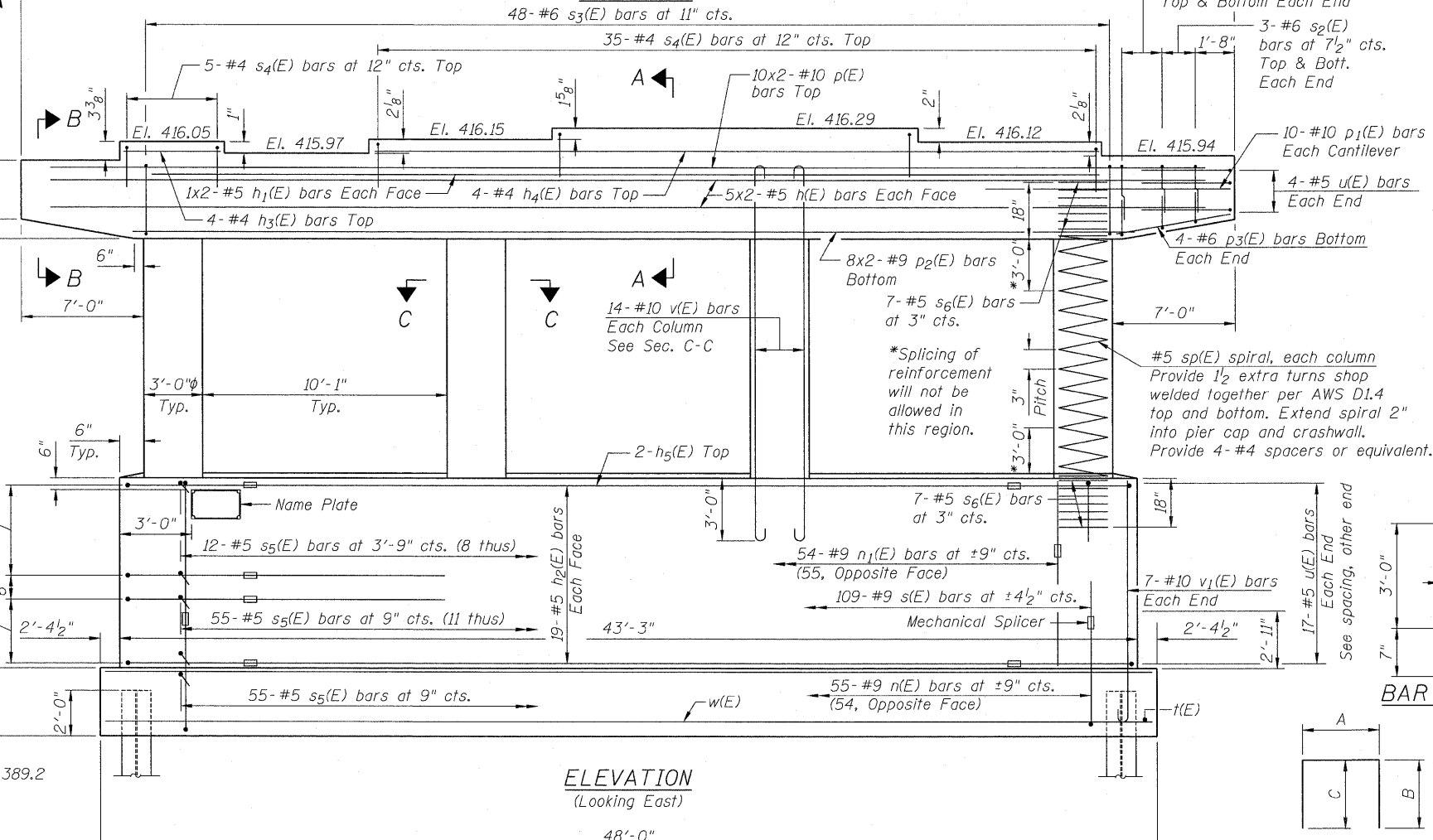
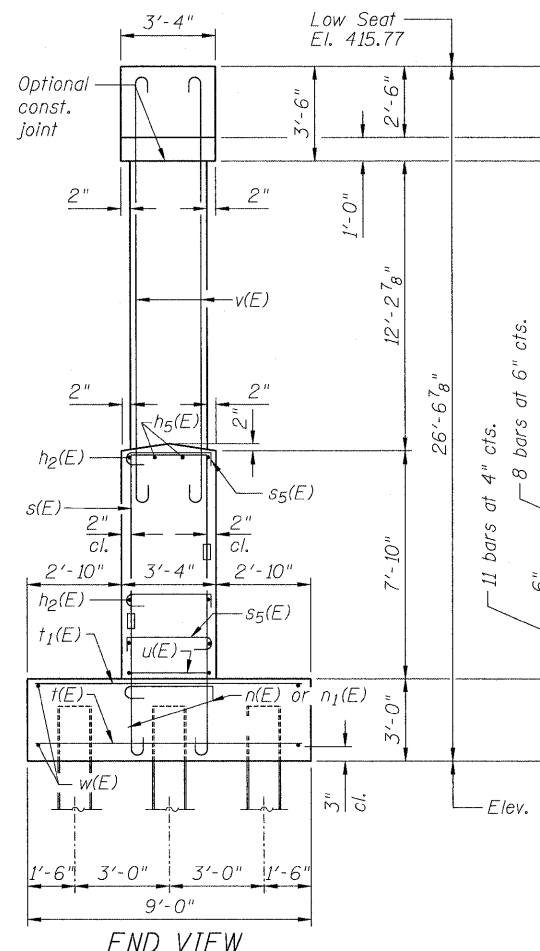
**TABLE OF DIMENSIONS**

Bar	A	B	C
n(E)	6'-1"	1'-3"	11 3/4"
n <sub>1</sub> (E)	8'-1"	1'-3"	11 3/4"
v <sub>1</sub> (E)	10'-5"	1'-5"	1'-1 1/4"

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	20	#5	29'-1"	—
h <sub>1</sub> (E)	4	#5	22'-9"	—
h <sub>2</sub> (E)	38	#5	29'-11"	—
h <sub>3</sub> (E)	4	#4	4'-6"	—
h <sub>4</sub> (E)	4	#4	33'-8"	—
h <sub>5</sub> (E)	2	#5	42'-9"	—
n(E)	109	#9	7'-4"	U
n <sub>1</sub> (E)	109	#9	9'-4"	U
p(E)	20	#10	33'-1"	—
p <sub>1</sub> (E)	20	#10	12'-0"	—
p <sub>2</sub> (E)	16	#9	24'-4"	—
p <sub>3</sub> (E)	8	#6	9'-6"	—
s(E)	109	#9	9'-8"	L
s <sub>1</sub> (E)	24	#6	7'-2"	L
s <sub>2</sub> (E)	12	#6	6'-8"	L
s <sub>3</sub> (E)	48	#6	13'-8"	□
s <sub>4</sub> (E)	40	#4	6'-6"	L
s <sub>5</sub> (E)	756	#5	4'-5"	U
s <sub>6</sub> (E)	56	#5	8'-4"	O
sp(E)	4	#5	12'-6"	W
t(E)	126	#6	8'-8"	—
t <sub>1</sub> (E)	49	#5	8'-8"	—
u(E)	40	#5	14'-9"	U
v(E)	56	#10	20'-5"	U
v <sub>1</sub> (E)	14	#10	11'-10"	U
w(E)	40	#5	24'-11"	—
Concrete Structures		Cu. Yd.	126.8	
Reinforcement Bars, Epoxy Coated		Pound	33,910	
Furnishing Steel Piles, HP14x89		Foot	3,744	
Driving Piles		Foot	3,744	
Pile Shoes		Each	39	
Mechanical Splicers		Each	286	

\*\* Length is height of spiral.



**s(E) THRU s<sub>2</sub>(E) BARS, s<sub>4</sub>(E) BAR**

**TABLE OF DIMENSIONS**

Bar	A	B	C
s(E)	3'-0"	4'-4"	2'-4"
s <sub>1</sub> (E)	2'-0"	2'-7"	2'-7"
s <sub>2</sub> (E)	2'-0"	2'-4"	2'-4"
s <sub>4</sub> (E)	3'-0"	1'-9"	1'-9"

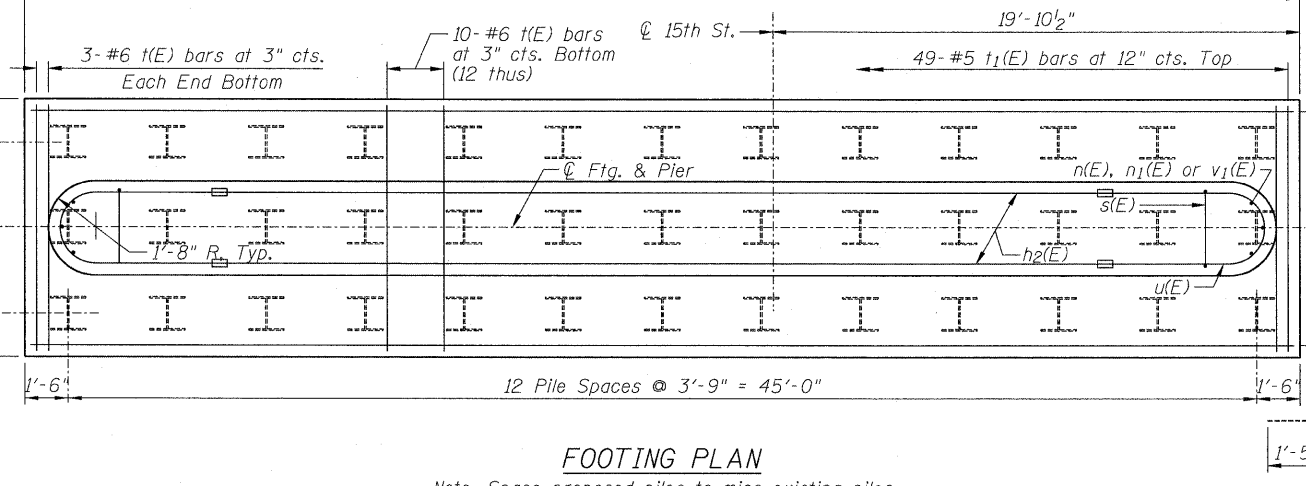
Note:  
When splicing of spiral reinforcement is necessary, the spirals shall be provided with 1/2 extra turns at the ends to be spliced. These additional turns shall either be welded together according to AWS D1.4, or shall both terminate with a 135° standard hook.

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

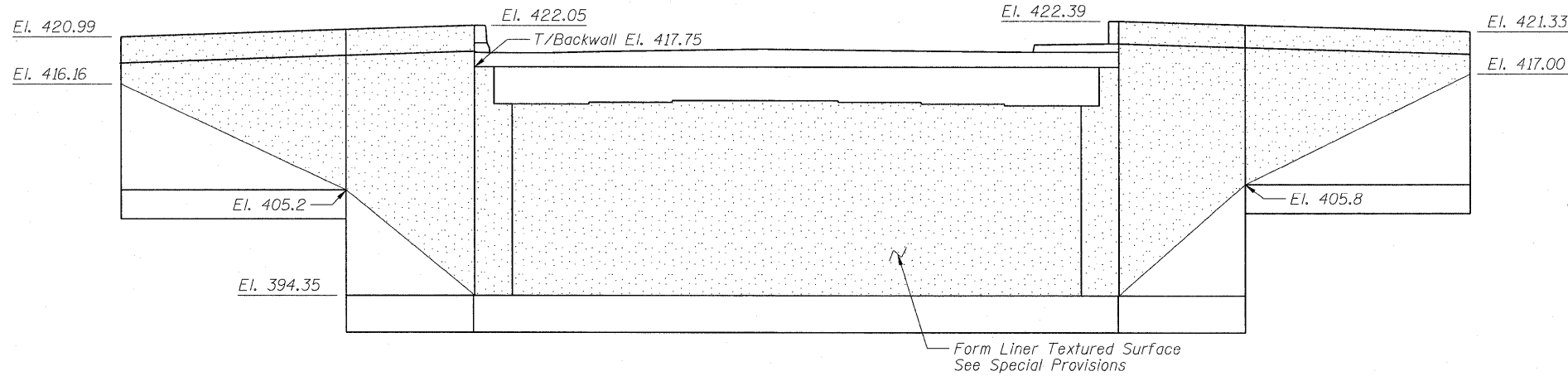
**MIN. BAR LAPS**  
#5 bar = 2'-2"  
#9 bar = 5'-9"  
#10 bar = 10'-3"



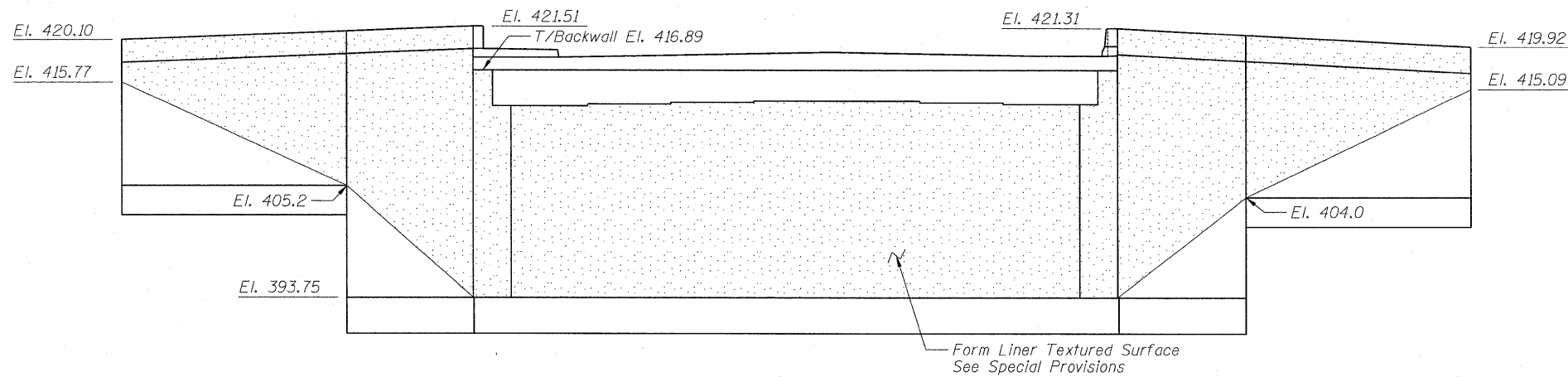
SHEET NO. 36	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44 SHEETS	64	82-1-2HB	ST. CLAIR	345	243
CONTRACT NO. 76C49					
ILLINOIS FED. AID PROJECT					
Revised 4/15/2010					

Note: Space proposed piles to miss existing piles

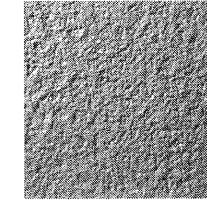
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



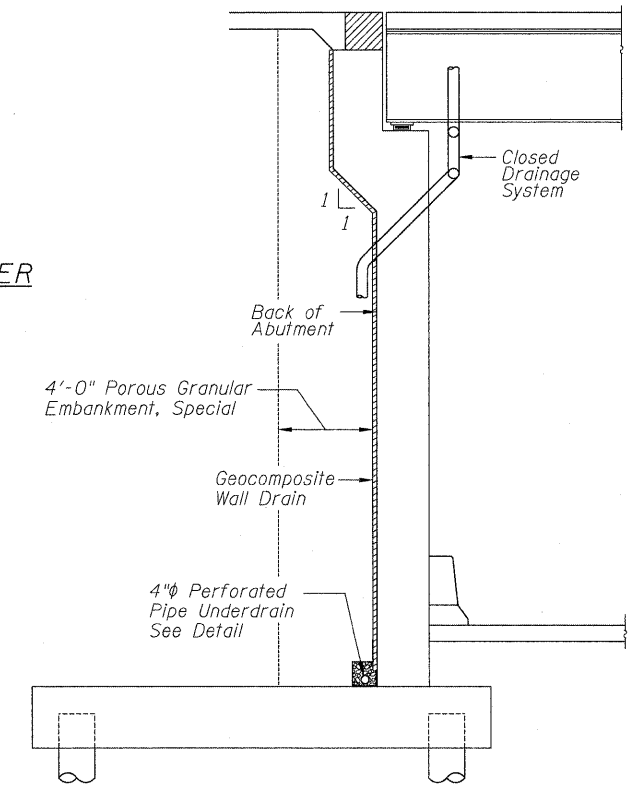
FORM LINER TEXTURED SURFACE  
FOR SOUTH ABUTMENT & WINGWALLS



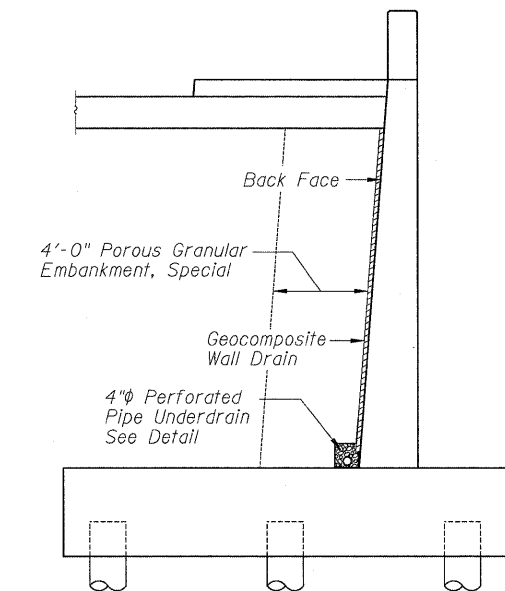
FORM LINER TEXTURED SURFACE  
FOR NORTH ABUTMENT & WINGWALLS



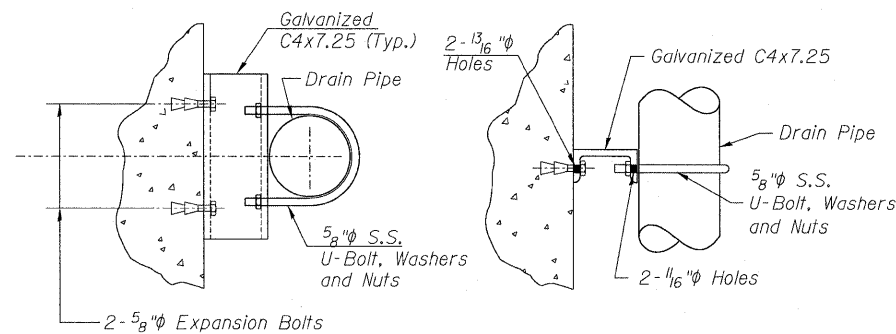
EXAMPLE OF FORM LINER  
TEXTURED SURFACE



SECTION THRU ABUTMENT  
SHOWING DRAINAGE SYSTEM



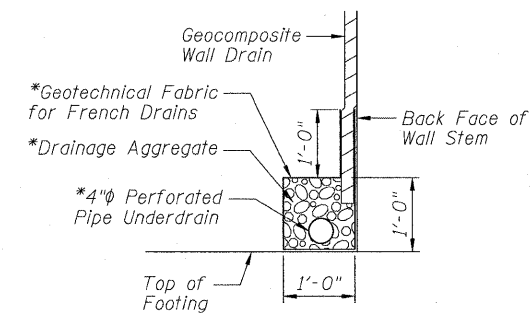
SECTION THRU WINGWALL  
SHOWING DRAINAGE SYSTEM



PLAN

ELEVATION

PIPE SUPPORT DETAIL



\*Included in the cost of  
"Pipe Underdrains for Structures"  
PIPE UNDERDRAIN DETAIL

FORM LINER AND DRAINAGE DETAILS  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

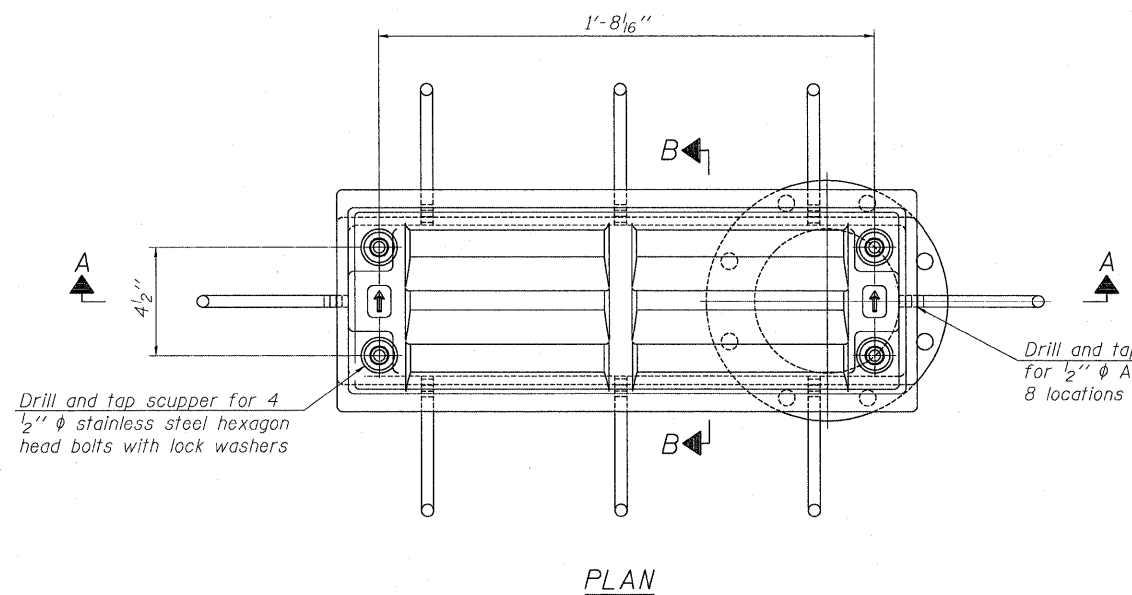
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

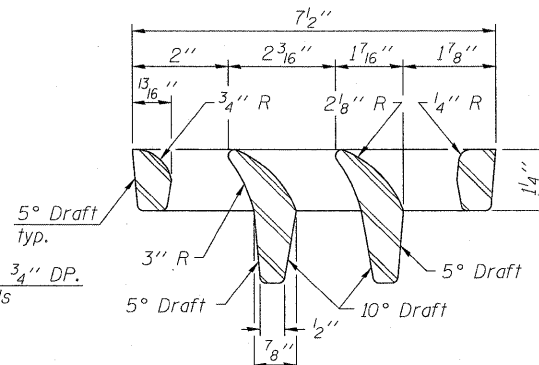
SHEET NO. 37	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	244
44 SHEETS	CONTRACT NO. 76C49				
ILLINOIS FED. AID PROJECT					

Revised 4/17/2010

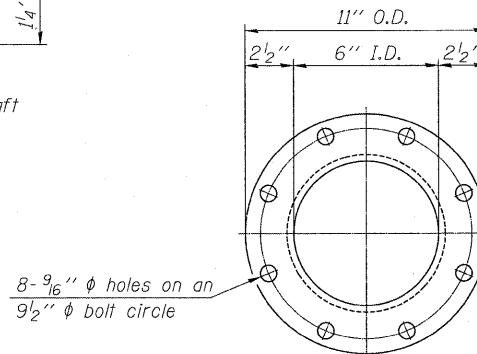
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



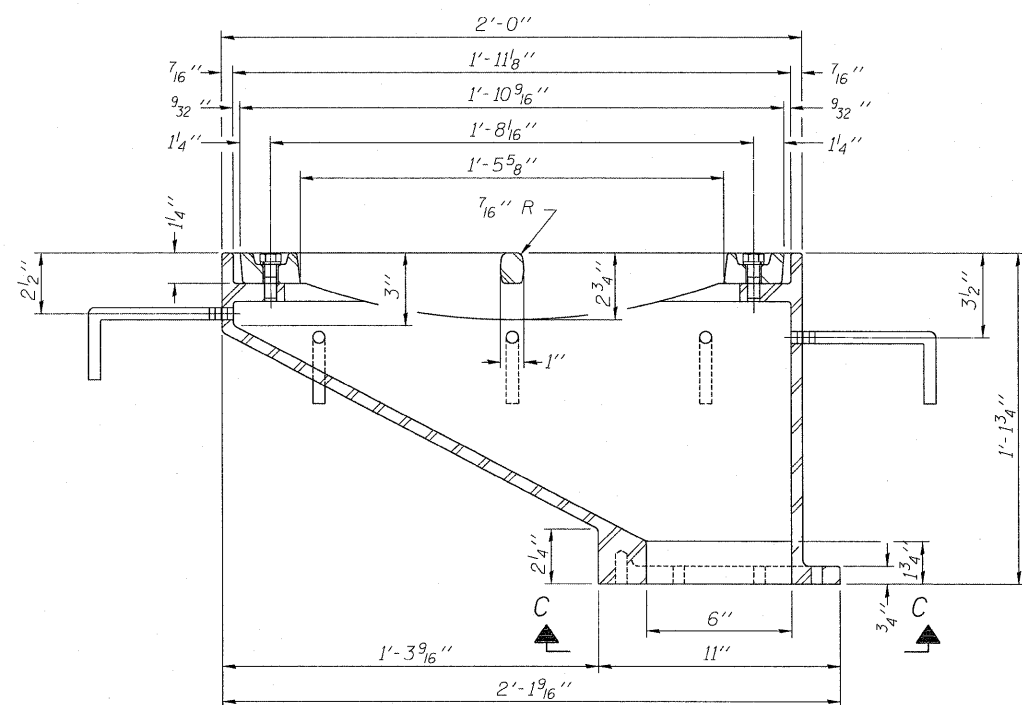
PLAN



VANE GRATE DETAIL

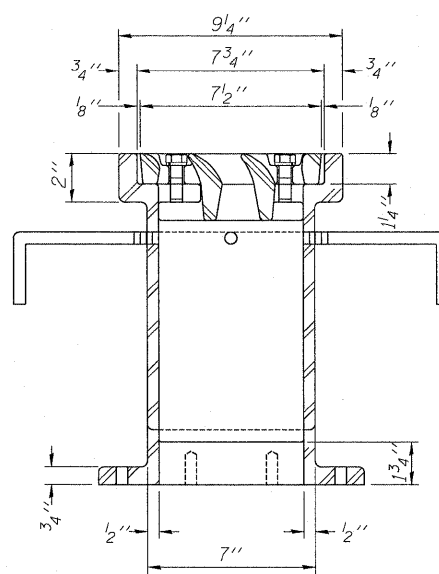


VIEW C-C

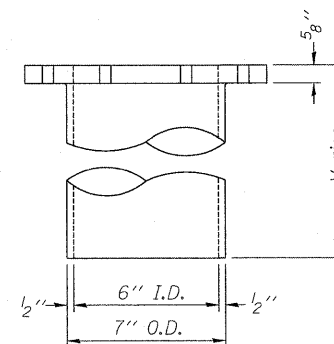


SECTION A-A

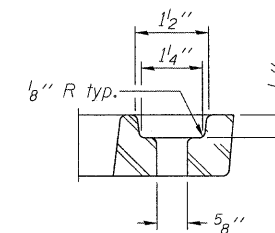
See sheet 10 of 44 for scupper location relative to parapet.



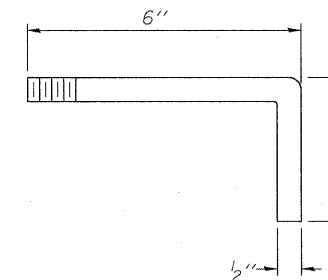
SECTION B-B



DOWNSPOUT



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	4

DRAINAGE SCUPPER, DS-12  
STRUCTURE NO. 082-0377

**ZROKA** Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

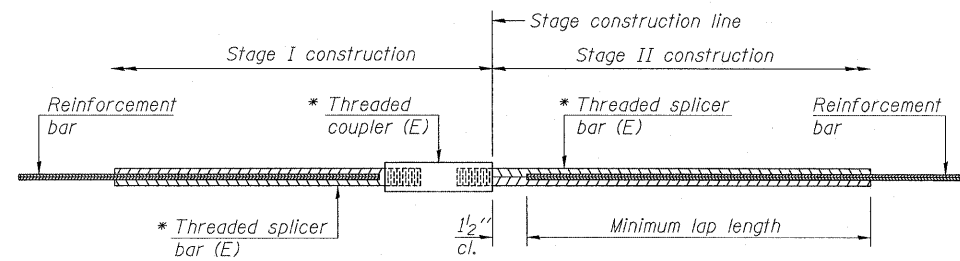
DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010 DS-12 11-1-09

Drill and tap 8 holes for 1/2"-13 bolts on a 9 1/2" bolt circle. (2 blind holes are 1/4" deep, 6 thru holes)

SHEET NO. 38 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	245
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					
REVISED 4/15/2010					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

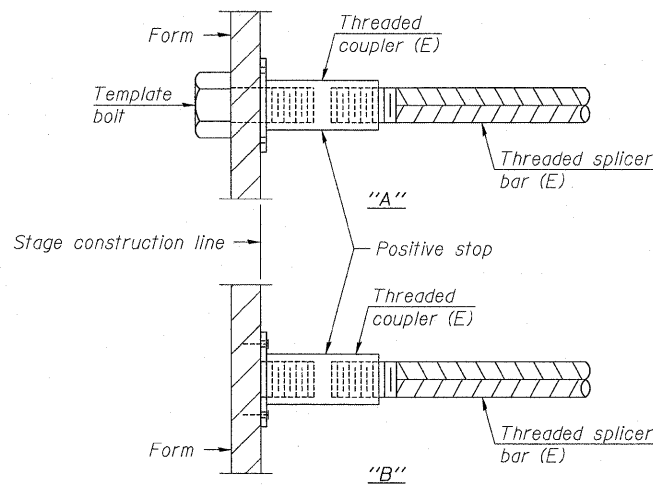
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C  
Table 2: Black bar, Top bar lap, 0.8 Class C  
Table 3: Epoxy bar, 0.8 Class C  
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

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

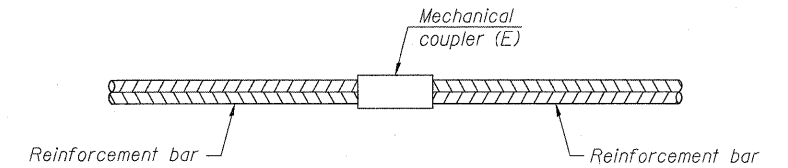
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



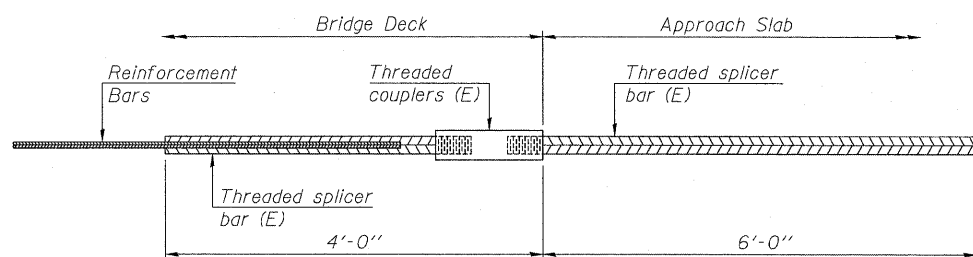
INSTALLATION AND SETTING METHODS

"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.



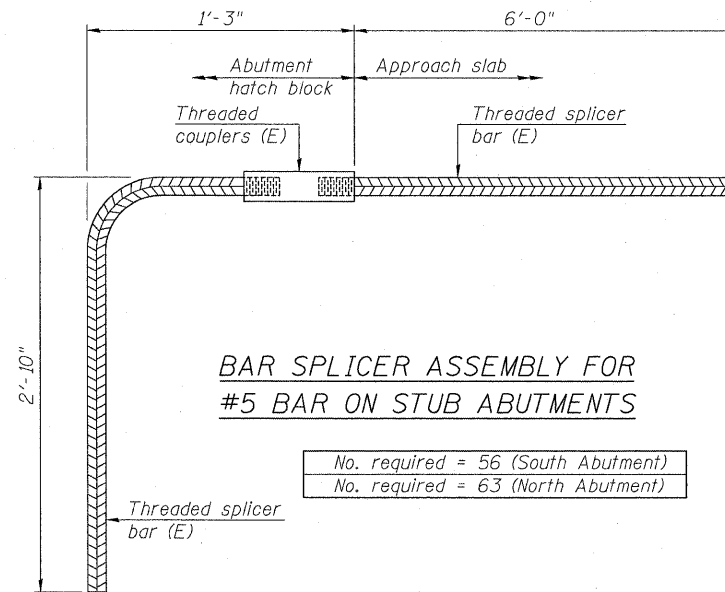
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
South Abutment	#6	118
South Abutment	#10	139
North Abutment	#6	132
North Abutment	#10	155
Pier	#5	68
Pier	#9	218



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 56 (South Abutment)  
No. required = 63 (North Abutment)

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 special provision for Mechanical Splicers.  
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

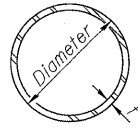
DESIGNED LAS
CHECKED JLA
DRAWN SAW
CHECKED LAS

3-31-2010 BSD-1 11-1-09

SHEET NO. 39 44 SHEETS	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 246
	CONTRACT NO. 76C49			ILLINOIS FED. AID PROJECT	

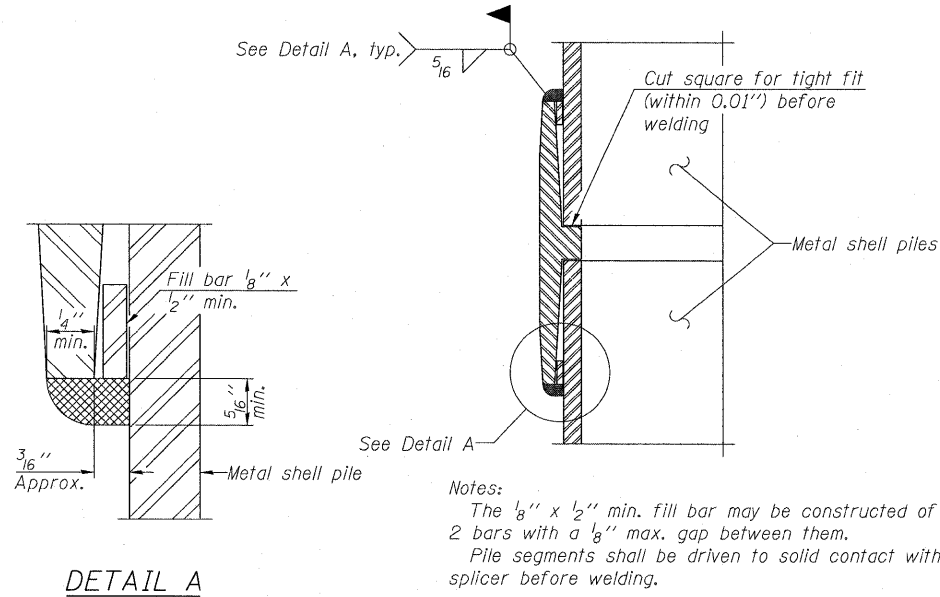
REVISED 4/15/2010

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



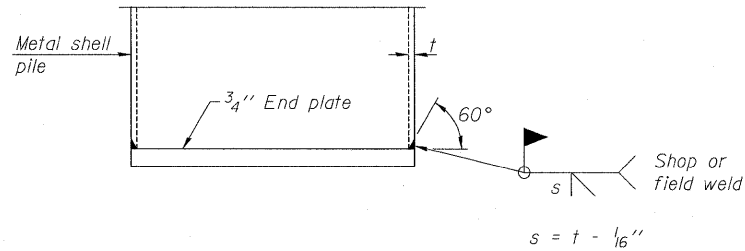
METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per Foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361

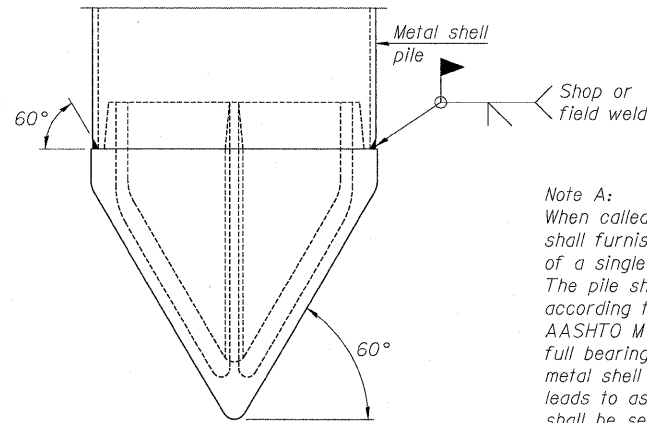


DETAIL A

WELDED COMMERCIAL SPLICE



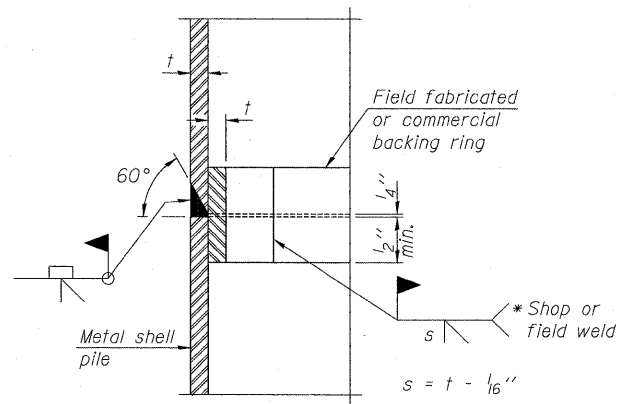
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

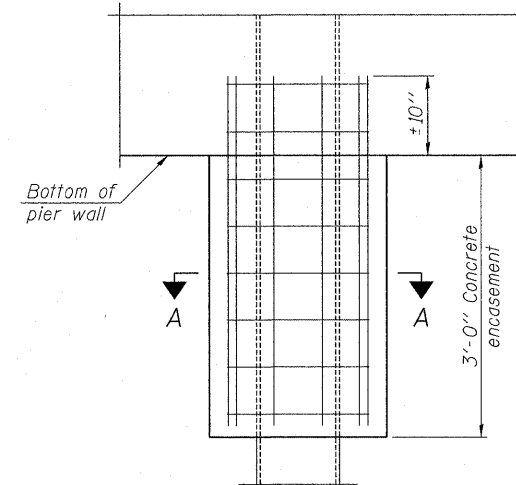
Note A:  
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



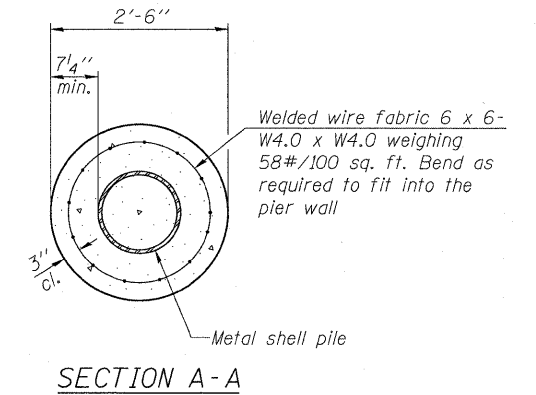
COMPLETE PENETRATION WELD SPLICE

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

Note:  
The metal shell piles shall be according to ASTM A 252 Grade 3.



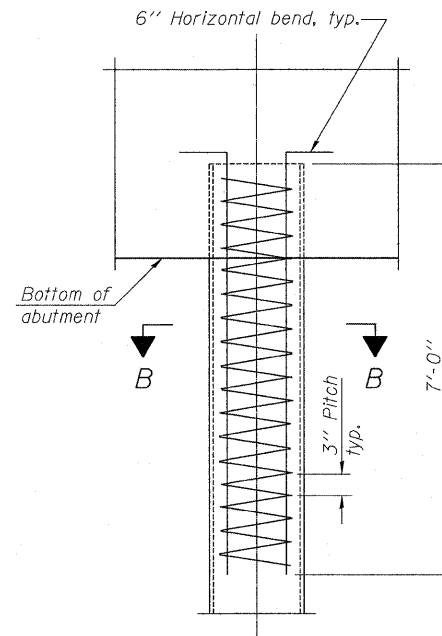
ELEVATION



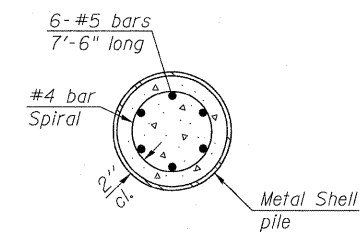
SECTION A-A

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

CONCRETE ENCASEMENT AT PIERS



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

METAL SHELL PILE DETAILS  
STRUCTURE NO. 082-0377

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

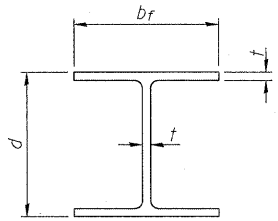
F-MS 11-1-09

SHEET NO. 40 44 SHEETS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	247
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

Revised 4/15/2010

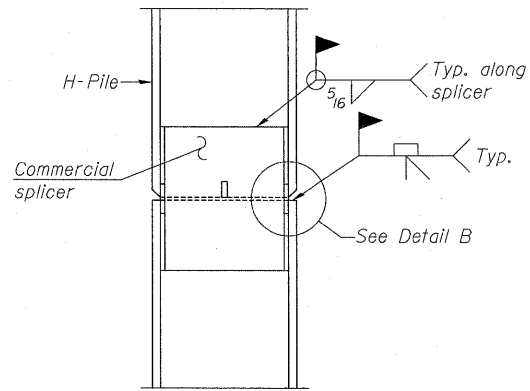


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

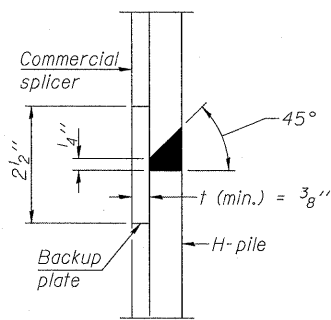


STEEL PILE TABLE

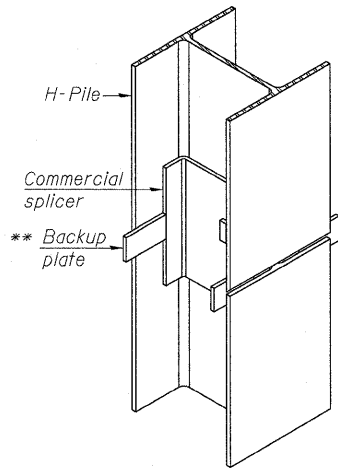
Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x17	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	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

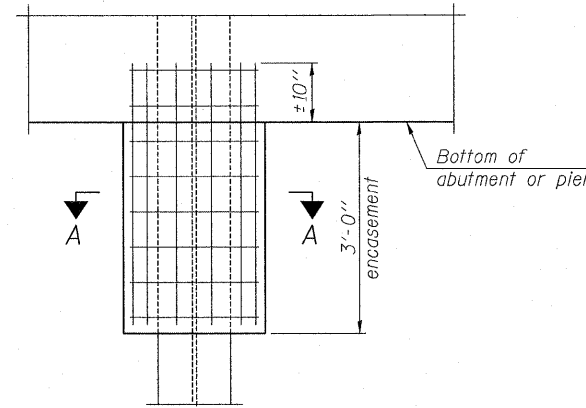


DETAIL "B"



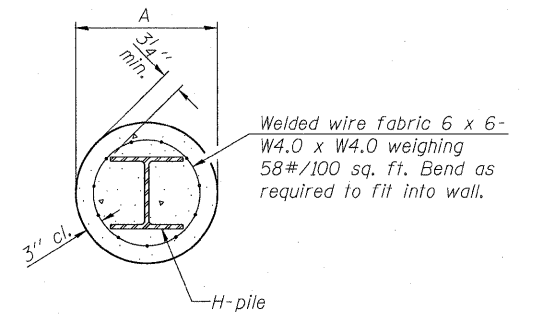
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



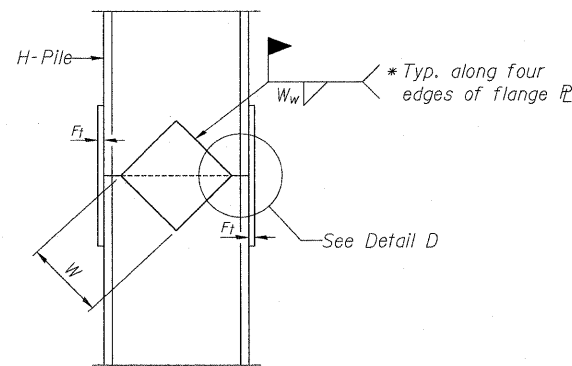
ELEVATION

PILE ENCASEMENT

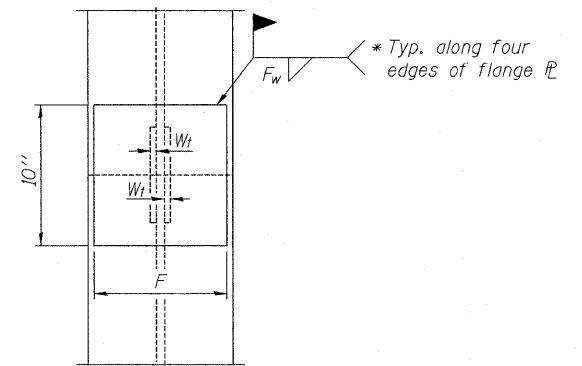


SECTION A-A

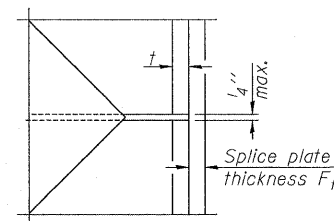
Note:  
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



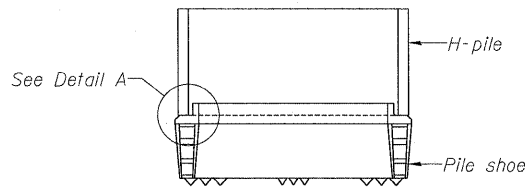
END VIEW



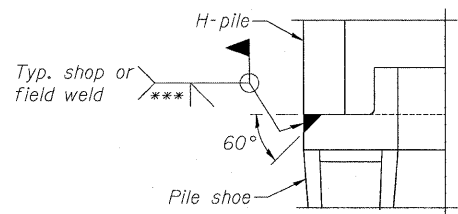
DETAIL D

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x17	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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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"

WELDED PLATE FIELD SPLICE

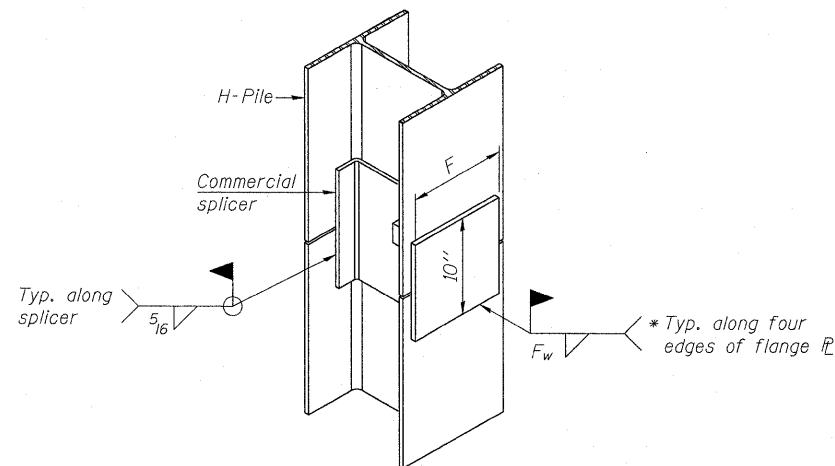


ELEVATION



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.).

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

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

3-31-2010

F-HP 11-1-09

HP PILE DETAILS  
STRUCTURE NO. 082-0377

SHEET NO. 41	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	64	82-1-2HB	ST. CLAIR	345	248
44 SHEETS	CONTRACT NO. 76C49				

ILLINOIS FED. AID PROJECT

Revised 4/10/2010



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BORING LOG B-20 (Page 4 of 4)

Illinois Department of Transportation  
Division of Highways  
geotechnical

**SOIL BORING LOG** Page 4 of 4  
Date 11/22/00

ROUTE FAI-999 DESCRIPTION Trilevel Interchange LOGGED BY BEC  
SECTION 81-2, 82R LOCATION SEC. 18, TWP. 2N, RNG. 9W  
COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0377 Surface Water Elev. Unknown ft  
Station NA Stream Bed Elev. Unknown ft  
BORING NO. B-20 Groundwater Elev.:  
Station 8+11 First Encounter \*\* ft  
Offset 47.00ft Right Upon Completion \*\* ft  
Ground Surface Elev. 415.80 ft After \*\* Hrs. \*\* ft

DEPTH (ft)	B	U	M	SOIL DESCRIPTION	DEPTH (ft)	B	U	M
0				CRYSTALLINE LIMESTONE- See Rock Core Log (continued)	0			
128					128			
286.30				End of Boring	286.30			
136					136			
158					158			
140					140			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
\* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)  
\*\* Not measured due to drilling methods used

BORING LOG B-21 (Page 1 of 4)

Illinois Department of Transportation  
Division of Highways  
geotechnical

**SOIL BORING LOG** Page 1 of 4  
Date 2/21/01

ROUTE FAI-999 DESCRIPTION Trilevel Interchange LOGGED BY JLG  
SECTION 81-2, 82R LOCATION SEC. 18, TWP. 2N, RNG. 9W  
COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0377 Surface Water Elev. Unknown ft  
Station NA Stream Bed Elev. Unknown ft  
BORING NO. B-21 Groundwater Elev.:  
Station 8+41 First Encounter \*\* ft  
Offset 58.00ft Left Upon Completion \*\* ft  
Ground Surface Elev. 415.10 ft After \*\* Hrs. \*\* ft

DEPTH (ft)	B	U	M	SOIL DESCRIPTION	DEPTH (ft)	B	U	M
0				Brown, SILTY CLAY (FILL)	0			
3					3			
2	1.3				2	0.3		35
3					3			
412.10				Medium stiff, brown and gray, CLAY	412.10			
2					2			
3	1.7		36		3	0.3		35
4					4			
3					3			
3	2.0		39		3			20
3					3			
407.10				Soft to medium stiff, brown and gray, mottled, SILTY CLAY	407.10			
2					2			
2	1.0		38		2			24
3					3			
2					2			
2	0.3		34		2			
2					2			
1					1			
2	1.3		34		2	0.5		39
2					2			
2					2	1		
3	1.3		33		3			
3					3			
387.10				Medium dense, brown, FINE GRAINED SAND	387.10			
4					4			
6					6			
5					5			
376.10				Soft, gray, SANDY LOAM	376.10			
0					0			
1					1			37
1					1			
40					40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
\* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)  
\*\* Not measured due to drilling methods used

BORING LOG B-21 (Page 2 of 4)

Illinois Department of Transportation  
Division of Highways  
geotechnical

**SOIL BORING LOG** Page 2 of 4  
Date 2/21/01

ROUTE FAI-999 DESCRIPTION Trilevel Interchange LOGGED BY JLG  
SECTION 81-2, 82R LOCATION SEC. 18, TWP. 2N, RNG. 9W  
COUNTY St. Clair DRILLING METHOD Hollow Stem Auger and Mud Rotary HAMMER TYPE Automatic Hammer

STRUCT. NO. 082-0377 Surface Water Elev. Unknown ft  
Station NA Stream Bed Elev. Unknown ft  
BORING NO. B-21 Groundwater Elev.:  
Station 8+41 First Encounter \*\* ft  
Offset 58.00ft Left Upon Completion \*\* ft  
Ground Surface Elev. 415.10 ft After \*\* Hrs. \*\* ft

DEPTH (ft)	B	U	M	SOIL DESCRIPTION	DEPTH (ft)	B	U	M
0				Soft, gray, SANDY LOAM (continued)	0			
373.10					373.10			
4					4			
8					8			
12					12			
14					14			
12				becomes loose with trace COARSE GRAINED SAND	12			
14					14			
8					8			
10					10			
9					9			
8					8			
10					10			
7					7			
8					8			
10					10			
15					15			
15					15			
25					25			
15					15			
17					17			
10					10			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)  
\* Rimac attempted, not measured due to sample disturbance BBS, from 137 (Rev. 8-99)  
\*\* Not measured due to drilling methods used

**ZROKA** engineering  
Zroka Engineering, P.C.  
4216 North Hermitage  
Chicago, IL 60613

DESIGNED	LAS
CHECKED	JLA
DRAWN	SAW
CHECKED	LAS

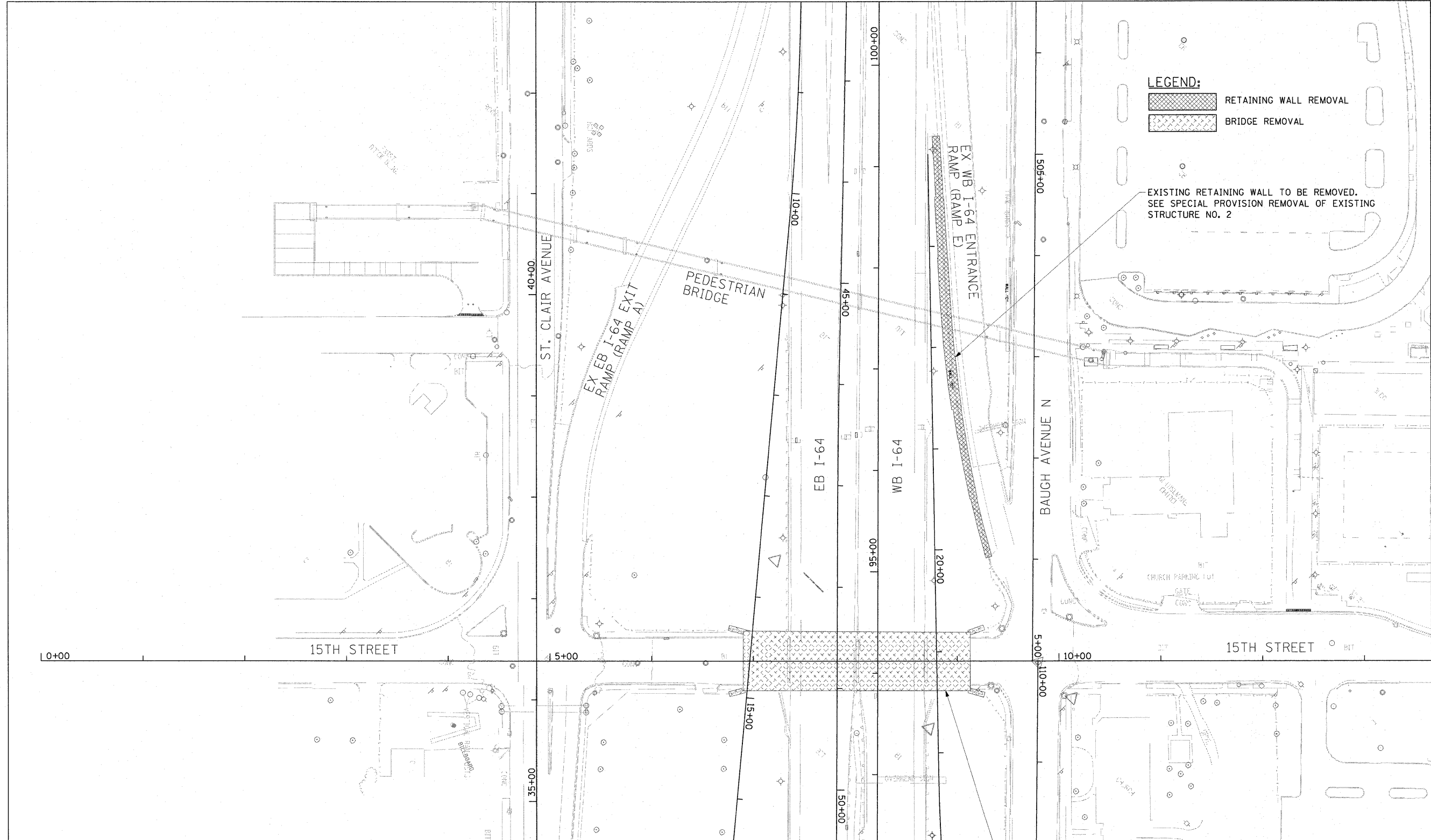
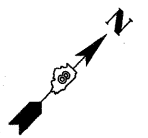
3-31-2010

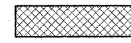
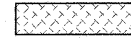
BORING LOGS 2  
STRUCTURE NO. 082-0377

SHEET NO. 43	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44 SHEETS	64	82-1-2HB	ST. CLAIR	345	250
			CONTRACT NO. 76C49		
ILLINOIS FED. AID PROJECT					

REVISED 4/15/2010





**LEGEND:**  
 RETAINING WALL REMOVAL  
 BRIDGE REMOVAL

EXISTING RETAINING WALL TO BE REMOVED.  
 SEE SPECIAL PROVISION REMOVAL OF EXISTING  
 STRUCTURE NO. 2

EXISTING 15TH STREET BRIDGE TO BE REMOVED.  
 SEE SPECIAL PROVISION REMOVAL OF EXISTING  
 STRUCTURE NO. 1

FILE NAME = #FILE#	USER NAME = pmsarno	DESIGNED ATB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURAL REMOVAL PLAN</b>	F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 252
	PLOT SCALE = 50,000' / IN.	CHECKED ATB	REVISED -			CONTRACT NO. 76C49				
	PLOT DATE = 3/18/2010	DATE 03/19/10	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				
	SCALE: 1" = 50'		SHEET NO. 1 OF 1 SHEETS			STA. TO STA.				

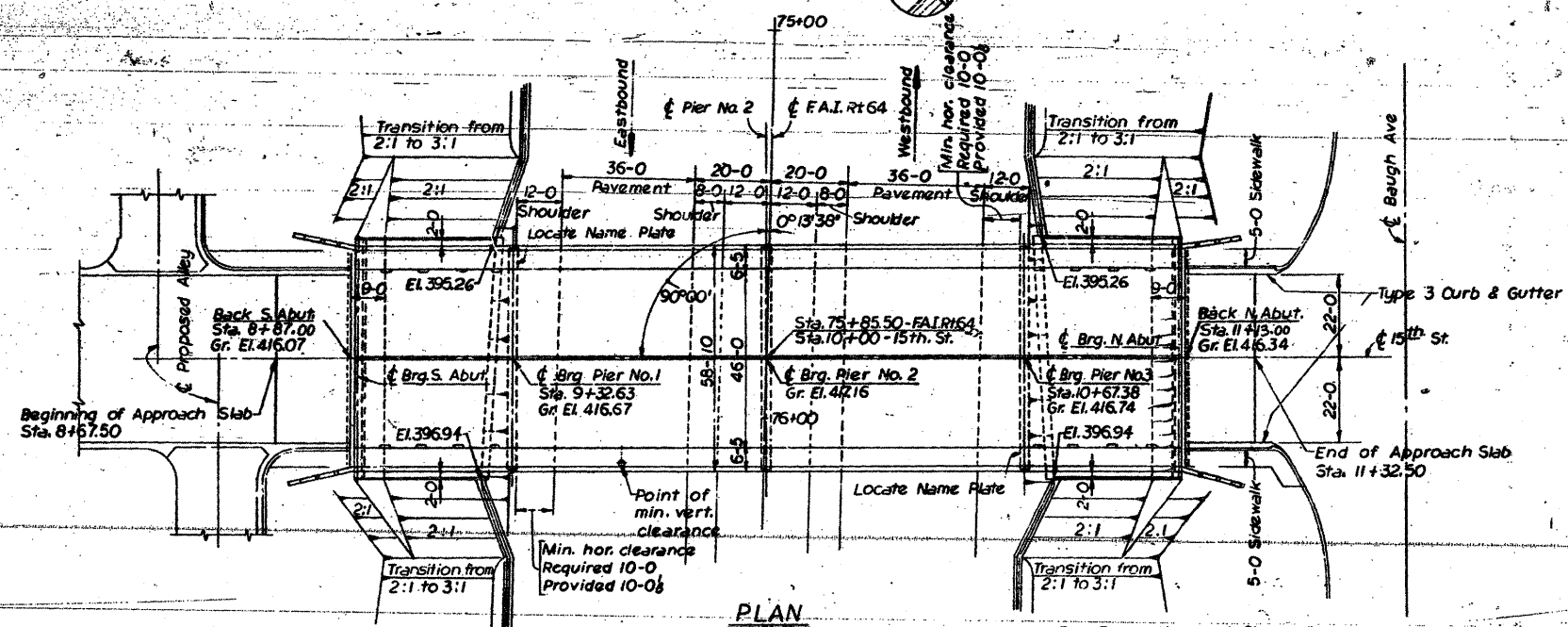
FOR INFORMATION ONLY

B.M. C-11 El. 414.780 Cut + C.B. rim point  
 farthest from Curb, N. Side of Baugh,  
 150' East of 15th Street.  
 Existing Structures: None.

FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E.A.I. RT. 64	82-1HB-1	ST. CLAIR	345	253
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT 3-64-1(5)D				

GENERAL NOTES:

- Class "X" Concrete shall be used throughout.
- Coarse aggregate which is to be used in parapet, hand rails and end posts must be absolutely free of chert, flint, limonite, lignite, and soft sandstone.
- The concrete floor slab shall be finished in accordance with Article 503.16(f) of the Standard Specifications.
- Slope Wall shall be reinforced with welded wire fabric 6" x 6" mesh, #4 wires, weighing 58# per 100 sq. ft.
- All reinforcement bars shall be lapped 24 dia. unless otherwise noted.
- Fasteners shall be high strength bolts. Bolts 5/8", open holes 3/4", unless otherwise noted.
- Calculated plan weight of structural steel - 354,280 lbs.
- Railings shall be adjusted to true alignment and Parapets have been poured.
- All rockers, bolsters, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 503.09 of the Standard Specifications and are included in quantity of Structural Steel.
- Anchor bolts shall be set before riveting diaphragms over supports.
- All aluminum handrail posts shall be vertical.
- The roadway expansion guards shall be fabricated and erected to fit the crown of roadway.
- Expansion guards are included in quantity of Structural Steel.
- The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel. See Supplemental Specifications.
- All paint shall be furnished and applied by the Contractor.
- The Contractor shall drive 1 Test Pile (Concrete) and 2 Test Piles (Timber) in permanent locations as directed by the Engineer before ordering or casting remainder of piles.
- Locate one test pile each, at S. Abut., Pier No. 1 and Pier No. 3.
- All Timber Piles shall be crossoted.
- All structural steel shall be A-36.



For Excavation and Slope Wall Details see Sheet No. 10

FIELD WEIGHING OF CONSTRUCTION MATERIALS TO THE BOTTOM FLANGES OR FOR A MEASURE OF 1/2 OF THE SPAN RACE MAY FROM THE SURFACE ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WEIGHING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

EXCAVATION FOR PORTIONS OF STRUCTURES IN THE NEIGHBORHOOD SHALL NOT BE CLASSIFIED.

TOTAL BILL OF MATERIAL

ITEM	Unit	Section 82-FHB-1		Total
		Super	Sub	
Class "X" Concrete	Cu.Yds.	414.9	367.0	781.9
Reinforcement bars	Lbs.	89,280	32,170	121,450
Structural Steel	Lump Sum	4.5		4.5
Steel Rolling Type M **	L.F.	446		446
Name Plates	Each	2	2	4
Concrete Piles	L.F.	1060	1060	2120
Test Piles (Concrete)	Each	1	1	2
Crossoted Piles (up to 20')	L.F.	1300	1300	2600
Bridge Seal Sealant	L.S.	1	1	2
Test Piles (Crossoted Timber)	Each	2	2	4
Slope Wall (4")	Sq.Yds.	594	594	1188
Class "X" Excavation for Structures	Cu.Yds.	609	609	1218
Special Excavation	Cu.Yds.	12,428	12,428	24,856
Protective Coat	Sq.Yds.	1620	1620	3240
Alum. Rolling Type L **	L.F.	446		446

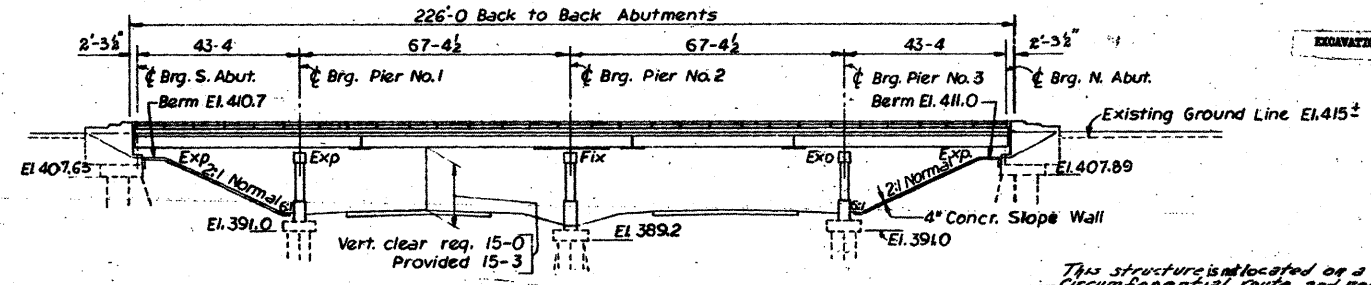
DESIGN STRESSES

- fc = 1400 psi Superstructure and Substructure without earth pressure.
- fc = 1000 psi Substructure with earth pressure.
- fs = 20,000 p.s.i. Reinforcing Steel.
- fs = 20,000 p.s.i. Structural Steel.
- n = 10.
- v = 75 p.s.i. Pier Footings.

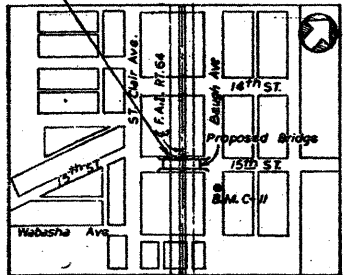
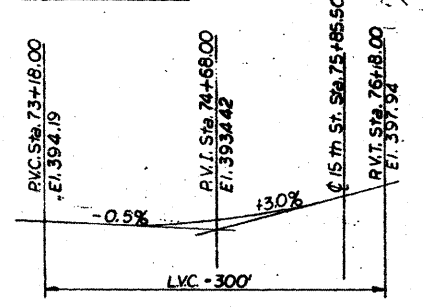
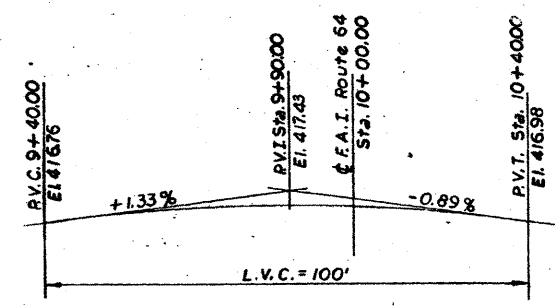
STA. 75+85.50  
 BUILT BY  
 STATE OF ILLINOIS  
 F.A.I. RT. 64 SEC. 82-1HB-1  
 EA. PROJ. 1-64-1(5)  
 LOADING HS-20

NAME PLATE

\* At abutments.  
 See Standard 2113-1 \*\*\* Includes excavation for slope wall  
 For Location see Plan & Sheet No. 7



This structure is located on a ground surface that has a 14'-3" clearance.



LOADING: HS-20-44

Drawn by: P.A.S.  
 Checked by: A.T.

Original Quantities: Cl. X Conc. Sub 374.7 Total 781.5 Cu.Yds., Reinf. Bars Sub 30,190; Super 11210, Total 14150 lbs., Slope Wall 574 Sq. Yds., Cl. A EXCAV. 787 Cu. Yds., Added Protective Coat 1620 Sq. Yds; Bridge Seal Sealant L.S. 1, Structural Steel 354,280 lbs.; Concrete Piles 2352 L.F.; Alum. Rolling Type L \*\* 446; Rev. 1/23/20 Str. Steel From 354,280 lbs. to Lump Sum S.M. Rev. 12-22-67 10-6-67 J.M.J. Rev. class "X" conc. from 776.6 to 781.9 cu yds. reinf. bars from 108,550 to 121,450 lbs.

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BLDGS.  
 DIVISION OF HIGHWAYS  
 GENERAL PLAN AND ELEVATION  
 15TH ST.  
 OVER F.A.I. RT. 64  
 STATION 75+85.50  
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB-1  
 H. W. LOCHNER, INC.  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

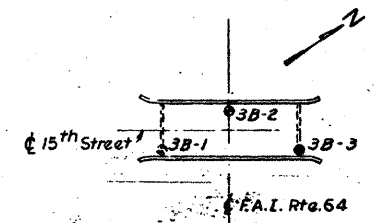


FOR INFORMATION ONLY

FED. ROAD DIST. NO. 4	SECTION 82-1HB-1	COUNTY ST. CLAIR	TOTAL SHEETS 47	SHEET 18
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

3B-1				3B-2				3B-3				WB-1				WB-2									
ELEV.	DEPTH	N	QU	DESCRIPTION	ELEV.	DEPTH	N	QU	DESCRIPTION	ELEV.	DEPTH	N	QU	DESCRIPTION	ELEV.	DEPTH	N	QU	DESCRIPTION						
415.07				Black silty top soil.	415.07				Black top soil, moist, loose.	413.18				Black top soil with brown silt, moist, loose.	419.63					Black cinders & brown silty clay, moist.					
410.0	2.5	11	1700	Yellow clay, moist, tough	410.0	2.5	10	1765	Brown & grey clay, moist, tough.	410.0	2.5	6		Brown & grey silt, trace of clay, moist, loose.	410.0	2.5	7	1810	Brown silty clay, some fine sand, stiff, moist.	410.0	2.5	4	1275	Cinders, sand, fine gravel & ash.	
	4.0	9	4030			4.0	5	2480			4.0	6				4.0	7	1810			4.0	4	1275	Brown & grey silty clay, moist, soft.	
	5.0					5.0			Brown clay, moist, stiff.		5.0	10				5.0	9	4260	Brown & grey silty clay, moist, tough.		5.0	5	1690	Brown & grey silty clay, moist, stiff.	
	6.5					6.5	7				6.5	11				6.5	5	1690			6.5	4	1275	Brown & grey silty clay, moist, soft.	
	7.5					7.5					7.5	11				7.5	4	1275			7.5	14.5	7	2140	Brown & grey silty clay, moist, stiff.
	9.0					9.0					9.0	10.0				9.0	7	2140			9.0	14.9	7	2140	Brown & grey silty clay, moist, stiff.
	10.0					10.0					10.0					10.0	9				10.0	15.0	9		
	11.5					11.5					11.5					11.5	9				11.5	16.5	9		
	12.5					12.5					12.5					12.5	16.5				12.5	17.5	16.5	9	
	14.0					14.0					14.0					14.0	17.5				14.0	19.0	16.5	6	
	15.0					15.0					15.0					15.0	19.0				15.0	20.0	19.0	6	
	16.5					16.5					16.5					16.5	20.0				16.5	21.5	12		
	17.5					17.5					17.5					17.5	21.5				17.5	22.5	21.5	12	
	19.0					19.0					19.0					19.0	22.5				19.0	24.0	16		
	20.0					20.0					20.0					20.0	24.0				20.0	25.0	12		
	21.5					21.5					21.5					21.5	25.0				21.5	26.5	12		
	22.5					22.5					22.5					22.5	26.5				22.5	27.5	12		
	24.0					24.0					24.0					24.0	27.5				24.0	29.0	15		
	25.0					25.0					25.0					25.0	29.0				25.0	30.0	15		
	26.5					26.5					26.5					26.5	30.0				26.5	31.5	15		
	27.5					27.5					27.5					27.5	31.5				27.5	32.5	15		
	29.0					29.0					29.0					29.0	32.5				29.0	34.0	15		
	30.0					30.0					30.0					30.0	34.0				30.0	35.0	15		
	31.5					31.5					31.5					31.5	35.0				31.5	36.5	15		
	32.5					32.5					32.5					32.5	36.5				32.5	37.5	15		
	34.0					34.0					34.0					34.0	37.5				34.0	39.0	15		
	35.0					35.0					35.0					35.0	39.0				35.0	40.0	15		
	36.5					36.5					36.5					36.5	40.0				36.5	41.5	15		
	37.5					37.5					37.5					37.5	41.5				37.5	42.5	15		
	39.0					39.0					39.0					39.0	42.5				39.0	44.0	15		
	40.0					40.0					40.0					40.0	44.0				40.0	45.0	15		
	41.5					41.5					41.5					41.5	45.0				41.5	46.5	15		
	42.5					42.5					42.5					42.5	46.5				42.5	47.5	15		
	44.0					44.0					44.0					44.0	47.5				44.0	49.0	15		
	45.0					45.0					45.0					45.0	49.0				45.0	50.0	15		
	46.5					46.5					46.5					46.5	50.0				46.5	51.5	15		
	47.5					47.5					47.5					47.5	51.5				47.5	52.5	15		
	49.0					49.0					49.0					49.0	52.5				49.0	54.0	15		
	50.0					50.0					50.0					50.0	54.0				50.0	55.0	15		
	51.5					51.5					51.5					51.5	55.0				51.5	56.5	15		
	52.5					52.5					52.5					52.5	56.5				52.5	57.5	15		
	360.38					360.38					360.38					360.38	57.5				360.38	59.0	15		
	34.0					34.0					34.0					34.0	59.0				34.0	60.0	15		

Boring	From top	up to	dia.	L.	R.
3B-1	AF	212	-	-	49'
3B-2	AF	296	-	-	6'
3B-3	AF	325	-	-	57'



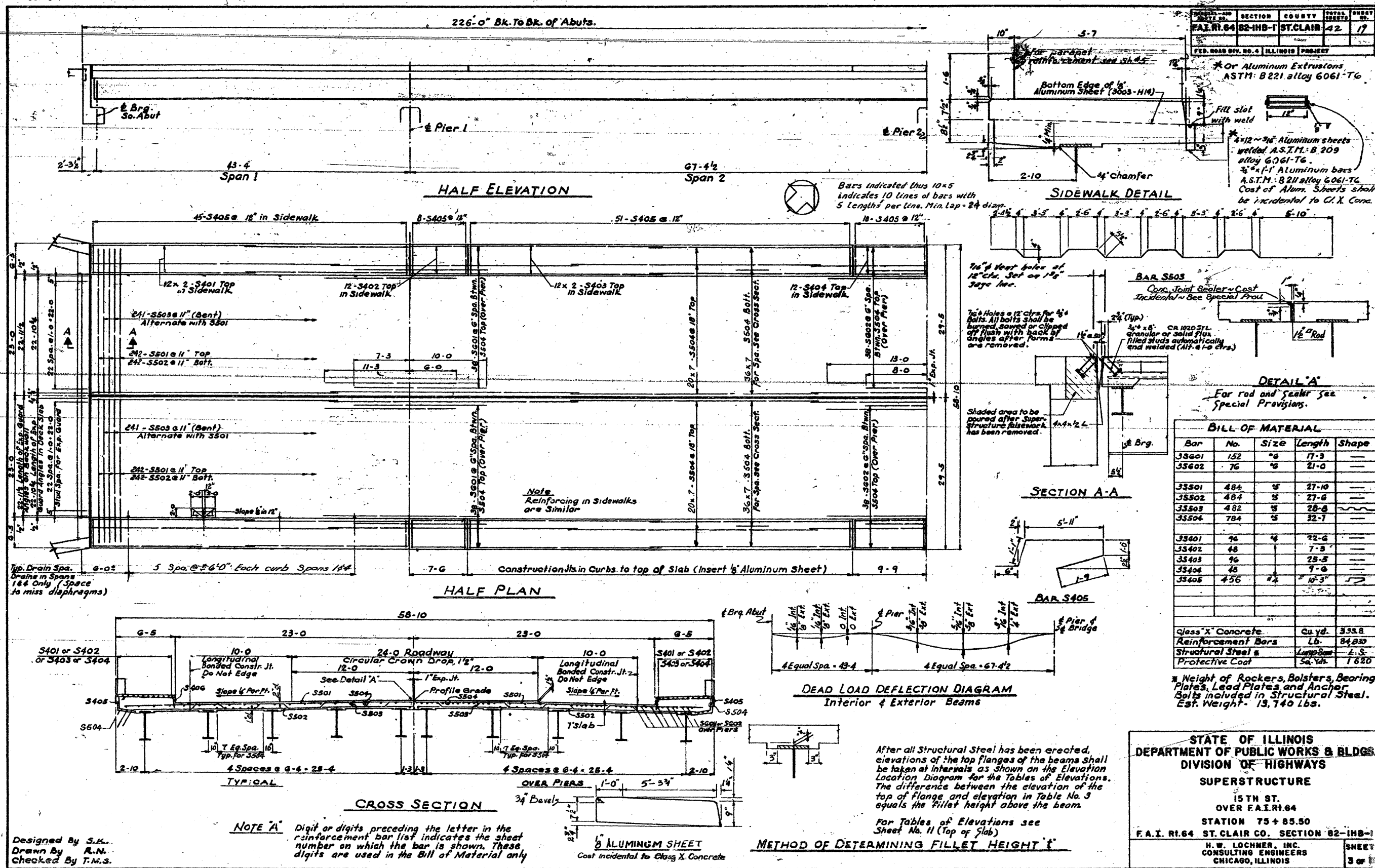
LEGEND

WL-----Water level below ground surface 24hrs. after completion.  
 Qu-----Unconfined Compressive Strength (p.s.f.)  
 N-----Penetration Blows per foot acquired by driving a 2" O.D. Split Spoon Sampler with a 140# weight drop 30 inches.  
 Method of bore - wash out.

Drawn by: M.V.D.  
 Checked by: B.M.

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BLDGS  
 DIVISION OF HIGHWAYS  
 BORING LOGS  
 15 TH. ST.  
 OVER F.A.I. RT. 64  
 STATION 75 + 85.50  
 F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB-1  
 H. W. LOCHNER, INC.  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

FOR INFORMATION ONLY



PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. R. 64	82-1HB-1	ST. CLAIR	345	255
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

Bar No.	Size	Length	Shape
33601	152	7'-3"	—
33602	76	21'-0"	—
33501	484	5'	27'-10"
33502	484	5'	27'-6"
33503	482	5'	28'-8"
33504	784	5'	32'-7"
33401	96	4'	22'-6"
33402	48	7'-3"	—
33403	96	25'-5"	—
33404	48	9'-0"	—
33405	456	4'	10'-3"

Class "X" Concrete Cu. Yd. 338.8  
 Reinforcement Bars Lb. 84,850  
 Structural Steel Lump Sum L.S.  
 Protective Coat Sq. Yds. 1,620

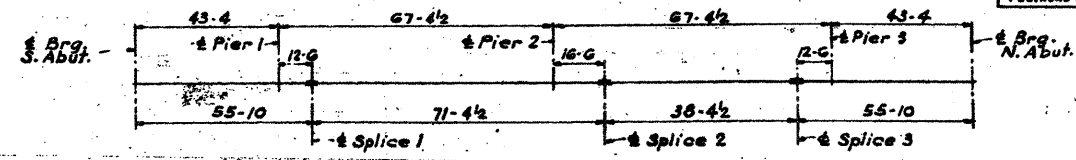
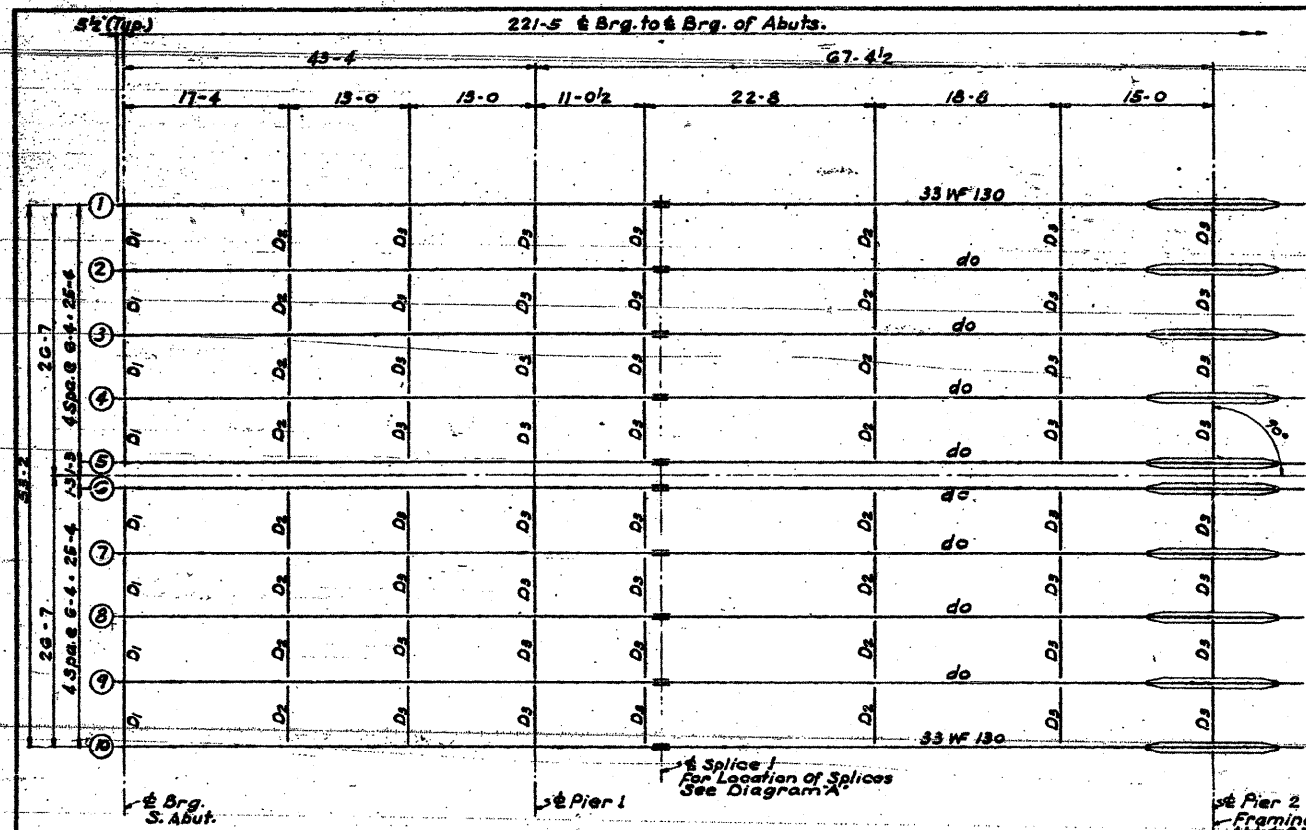
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BLDGS.  
 DIVISION OF HIGHWAYS  
 SUPERSTRUCTURE  
 15TH ST.  
 OVER F.A.I. R. 64  
 STATION 75 + 85.50  
 F.A.I. R. 64 ST. CLAIR CO. SECTION 82-1HB-1  
 H. W. LOCHNER, INC.  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS  
 SHEET 3 of 4

Original Quantities: Reinf. Bars 68,500 lbs., structural steel 353,730 lbs. Rev. 1/23/70 Str. Steel from 354,280 lbs to Lump Sum SM 10-4-67 J.M.J. Rev. class "x" conc. from 388.5 to 393.8 cu. yds. and rein. bars from 71,970 to 84,500 lbs. Top of slab reinf. cl. from 15' to 2' 6-24-70 J.M.J. Rev. Rein. bars from 84,500 to 84,850 lbs.



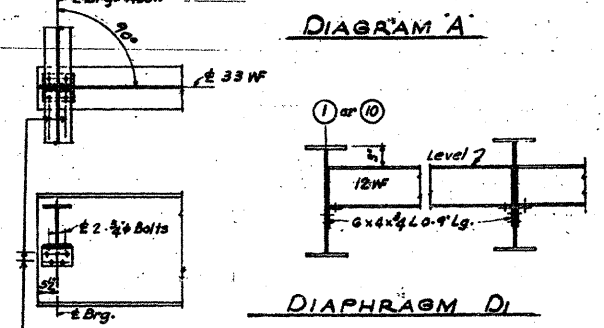
FOR INFORMATION ONLY

FEDERAL-AID DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.I.Rt.64	82-1HB-1	ST. CLAIR	41	20
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

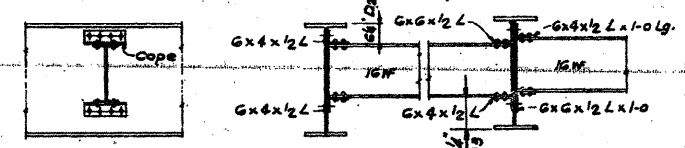


ELEVATION TOP OF BEAMS

Beam No.	Brg. S. Abut.	Pier 1	Splice 1	Pier 2	Splice 2	Pier 3	Splice 3	Brg. N. Abut.
1	415.03	415.60	415.77	416.00	416.07	415.79	416.68	415.29
2	415.10	415.73	415.90	416.13	416.20	415.72	416.81	415.42
3	415.29	415.86	416.03	416.27	416.33	416.05	416.94	415.35
4	415.40	415.98	416.14	416.38	416.45	416.17	416.66	415.67
5	415.45	416.03	416.19	416.43	416.50	416.21	416.71	415.72
6	415.45	416.03	416.17	416.43	416.50	416.21	416.71	415.72
7	415.40	415.98	416.14	416.38	416.45	416.17	416.66	415.67
8	415.29	415.86	416.03	416.27	416.33	416.05	416.94	415.35
9	415.10	415.73	415.90	416.13	416.20	415.72	416.81	415.42
10	415.03	415.60	415.77	416.00	416.07	415.79	416.68	415.29



DIAPHRAGM D1  
Angles may be attached in the shop with 3/4" high strength bolts or 1/4" C.F.W.



DIAPHRAGM D2 & D3

Note: Elevations as shown are to top of top flange of Bms.

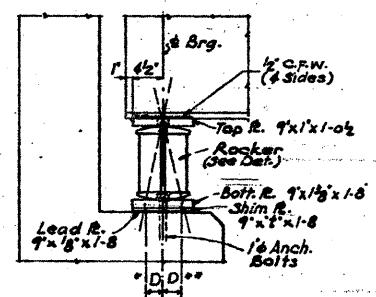
SHIM R. THICKNESS 't'

Location	1	2	3	4	5	6	7	8	9	10
Brg. S. Abut.	0	0	0	0	5/8"	5/8"	0	0	0	0
Pier 1	0	0	0	0	5/8"	5/8"	0	0	0	0
Pier 2	0	0	0	0	5/8"	5/8"	0	0	0	0
Pier 3	0	0	0	0	5/8"	5/8"	0	0	0	0
Brg. N. Abut.	0	0	0	0	5/8"	5/8"	0	0	0	0

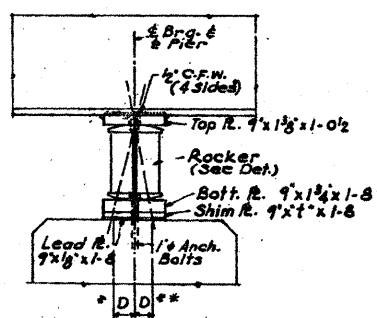
Note: Diaphragm D1 - 12WF40  
Diaphragm D2 & D3 - 16WF36

HALF PLAN

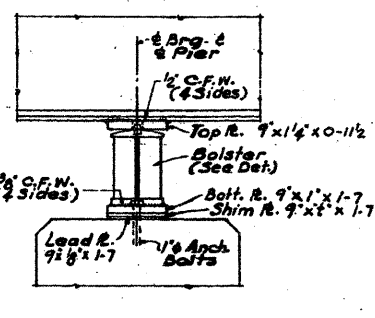
NOTES:  
1" x 12" Anchor Bolts to be grouted into drilled holes after beams are in place, or bolts at fixed pier may be built into the masonry.  
\*D = 1/8" / 100ft. of exp. for every 15" below the normal temp. of 50°F.  
\*D = 1/8" / 100ft. of exp. for every 15" above the normal temp. of 50°F.



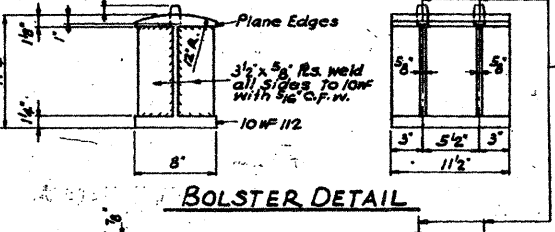
EXP. BRG. AT ABUTMENT



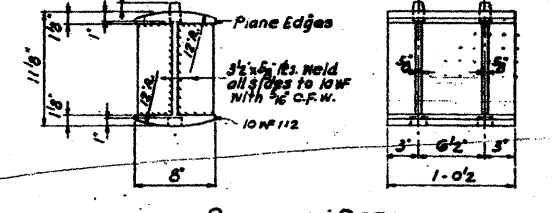
EXP. BRG. AT PIERS 1 & 3



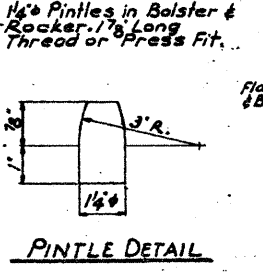
FIXED BRG. AT PIER 2



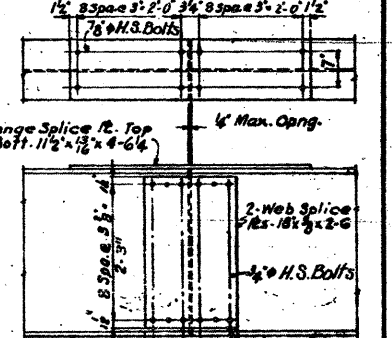
BOLSTER DETAIL



ROCKER DETAIL

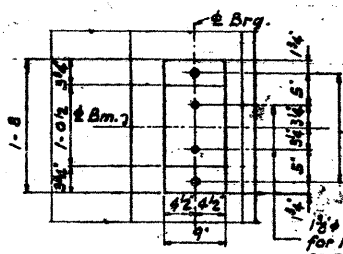


PINTLE DETAIL

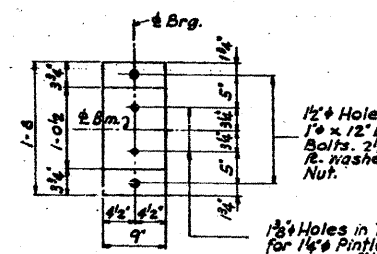


SPlice DETAILS

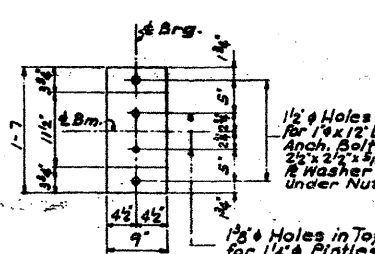
Note: All Bolt holes to be reamed with all parts assembled to grade & of parts match marked.



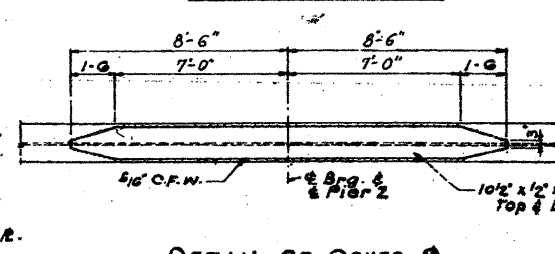
PLAN



PLAN



PLAN

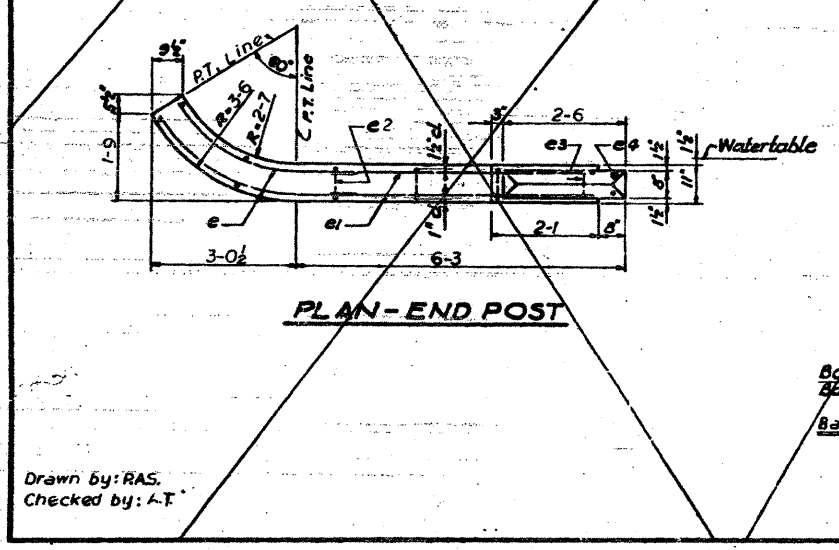
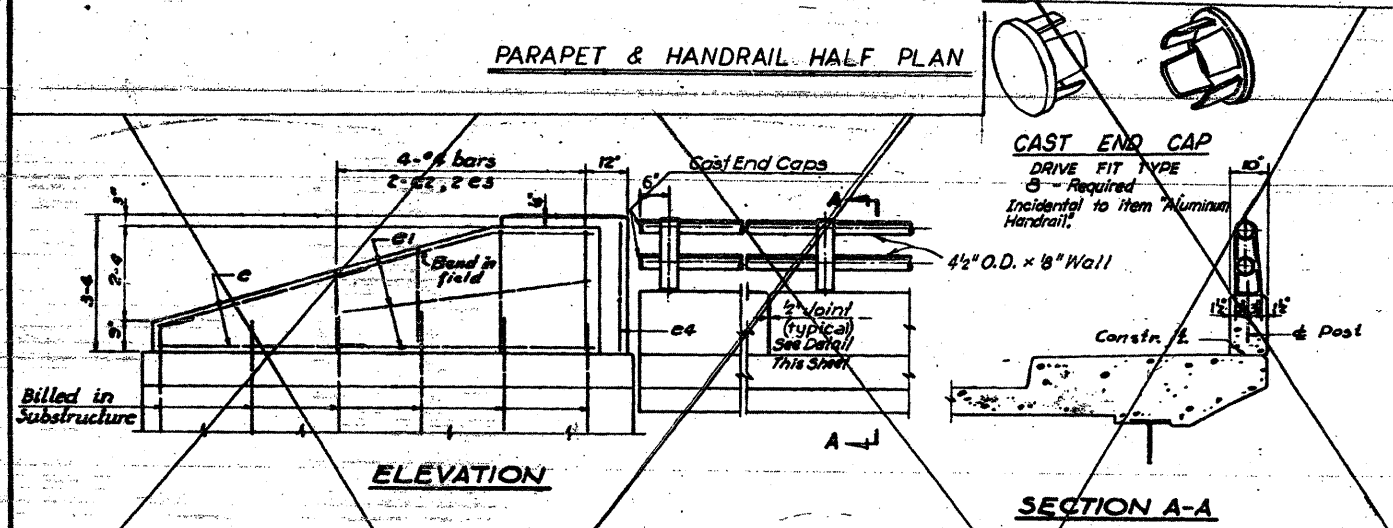
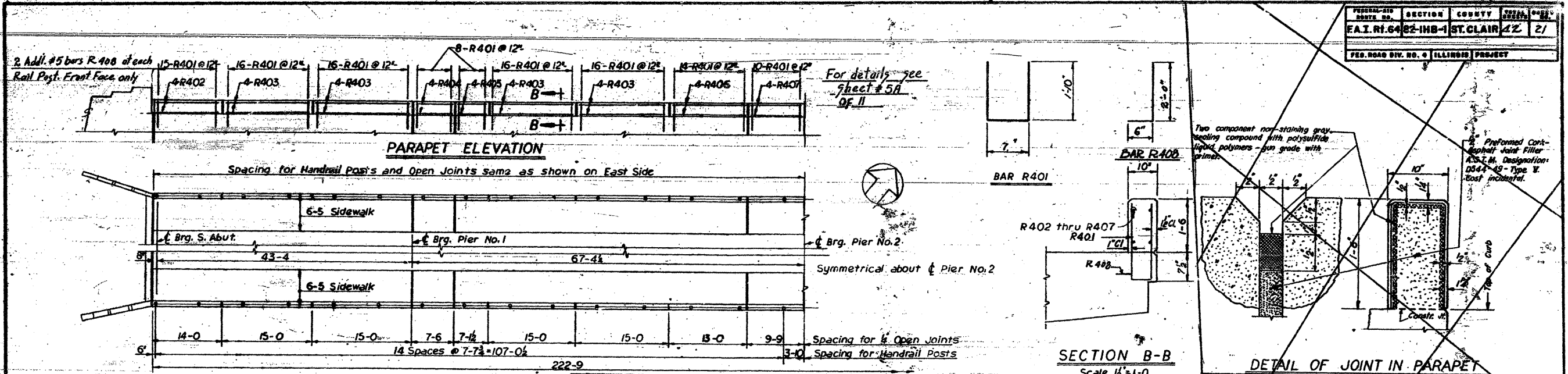


DETAIL OF COVER R.

Designed By S.K.  
Drawn By R.N.  
Checked By T.M.S.

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BLDGS.  
DIVISION OF HIGHWAYS  
STEEL LAYOUT AND DETAILS  
15TH ST.  
OVER FA.I.Rt.64  
STATION 75 + 85.50  
FA.I. Rt.64 ST. CLAIR CO. SECTION 82-1HB-1  
H. W. LOCHNER, INC.  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
SHEET 4 OF 11

FOR INFORMATION ONLY



BAR LIST FOR END POSTS

Bar	No.	Size	Length	Shape
e	16	#4	4-6	—
e1	24	#4	4-11	—
e2	8	#4	4-0	—
e3	8	#4	6-6	—
e4	8	#4	2-11	—

NOTES:

All posts shall be placed normal to parapet.  
 All posts shall be of Aluminum conforming to A.S.T.M. Specification B-108 alloy 5G-70B-T6.  
 All Rail Tubing shall be of Aluminum conforming to A.S.T.M. Specification B-235 alloy 6S-11A-T6.  
 Alclad washers shall be made from sheet conforming to A.S.T.M. Specification B-209 alloy clad CG-42A-T4.  
 Rail Tubing may extend a maximum of 3 panels.  
 For material composition of Prefabricated Pad, See Art. 54.9(f) (Bearings and Anchorage), of the 3rd Specs.  
 Set Screws shall be of Aluminum conforming to A.S.T.M. Specification B-211 alloy CG-42A-T4.

BAR LIST FOR PARAPETS

BAR	NO.	SIZE	LENGTH	SHAPE
5R401	476	#5	4'-3"	—
5R402	16	#5	13'-6"	—
5R403	64	#5	14'-8"	—
5R404	16	#5	7'-2"	—
5R405	16	#5	6'-9"	—
5R406	16	#5	12'-8"	—
5R407	16	#5	9'-5"	—
5R408	120	#5	2'-6"	—

BILL OF MATERIAL

Class "X" Concrete	Cu Yds.	21.1
Reinforcement Bars	Lbs.	4390
Alum. Rail Type C	Lbs.	446

\* see sheet 5B for alternate.

STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BLDGS  
 DIVISION OF HIGHWAYS  
 ALUMINUM HANDRAIL  
 AND PARAPET DETAILS

15TH ST.  
 OVER F.A.I. R. 64  
 STATION 88 + 85.50  
 F.A.I. R. 64 ST. CLAIR CO. SECTION 82-IN

N. W. LOCHNER, INC.  
 CONSULTING ENGINEERS  
 CHICAGO, ILLINOIS

SHEET  
 5 OF 11

Drawn by: RAS.  
 Checked by: A.T.

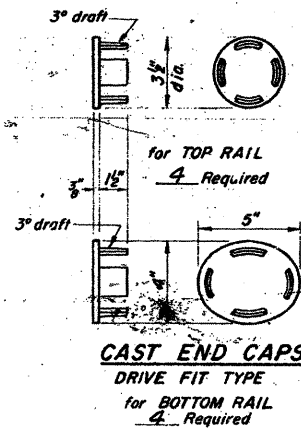
A.S.A. Reinf. bars from 2010 to 4390 lbs., Cl. X Conc. 23.3 to 21.1 C. Yk.



FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	82-1HB-1	ST. CLAIR	42	E1B // SHEETS
SHEET NO. 58				



NOTES:

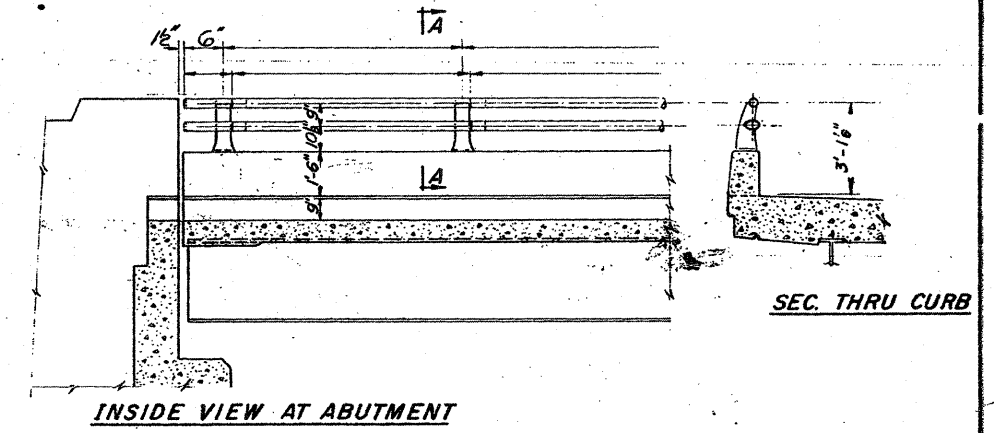
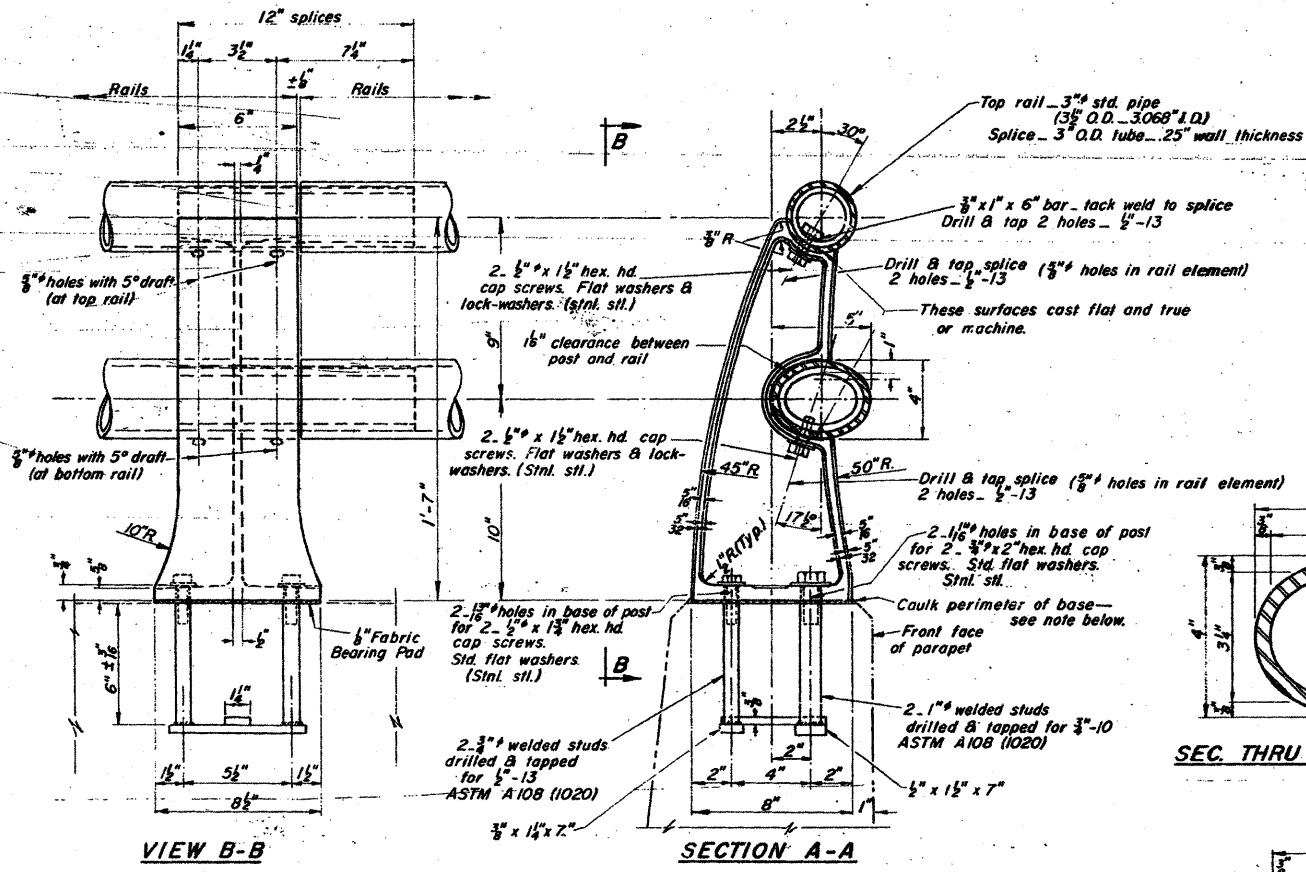
All Posts shall be normal to parapet.  
All Posts shall be malleable cast iron conforming to ASTM A-47, Grade 350B, galvanized to ASTM A-153.  
All Rail Tubing shall conform to applicable requirements of ASTM A-53, Grade B, (pipe or tube) galvanized to ASTM A-120.

Provide 1-<sup>1</sup>/<sub>8</sub>" and 2-<sup>1</sup>/<sub>8</sub>" galvanized sheet steel shims for 25% of the Posts. Rail element shall be parallel to Grade—high spots shall be ground and low spots shimmed.

If any of the galvanizing coat is damaged or removed during erection, the affected area shall be painted with one coat of zinc paint in accordance with Military Specification MIL-P-26915 Type 1, air-dry cure.

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE M.

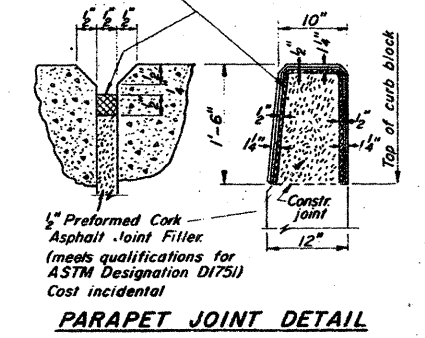
For post and joint spacing see sheet 5 of 11.



**BILL of MATERIAL**

Item	Unit	Quantity
STEEL RAILING, TYPE M	Lin. Ft	446

Two component non-staining gray sealing compound with polysulfide liquid polymers—gun grade with primer.



**TYPE M STEEL RAILING**

F.A.I. ROUTE 64 ~ SEC. 82-1HB-1  
ST. CLAIR COUNTY  
STA. 75+85.50

DESIGNED	19
CHECKED	EXAMINED
DRAWN <i>M. M. Best</i>	PASSED
CHECKED	APPROVED

Note! Seal base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers—gun grade with primer.

Note! Splice must be sliding fit in Rail Section.

R-21 Dwn. 3-20-64 Rev. 7-23-65 8-18-65 5-20-68







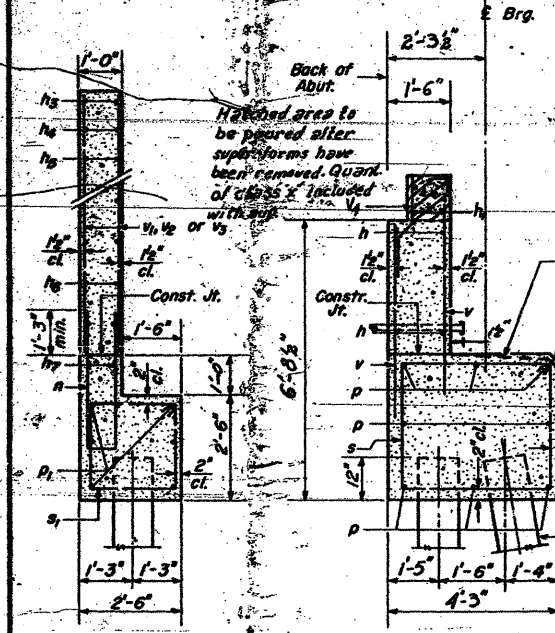
FOR INFORMATION ONLY

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

DATE	SECTION	COUNTY	SHEET	SHEET NO.
8-13-64	82-1HB-1	St. Clair	A-2	22
SHEET NO. 6				11 SHEETS

WING WALL ELEVATION

Dimensions



SEC. A-A

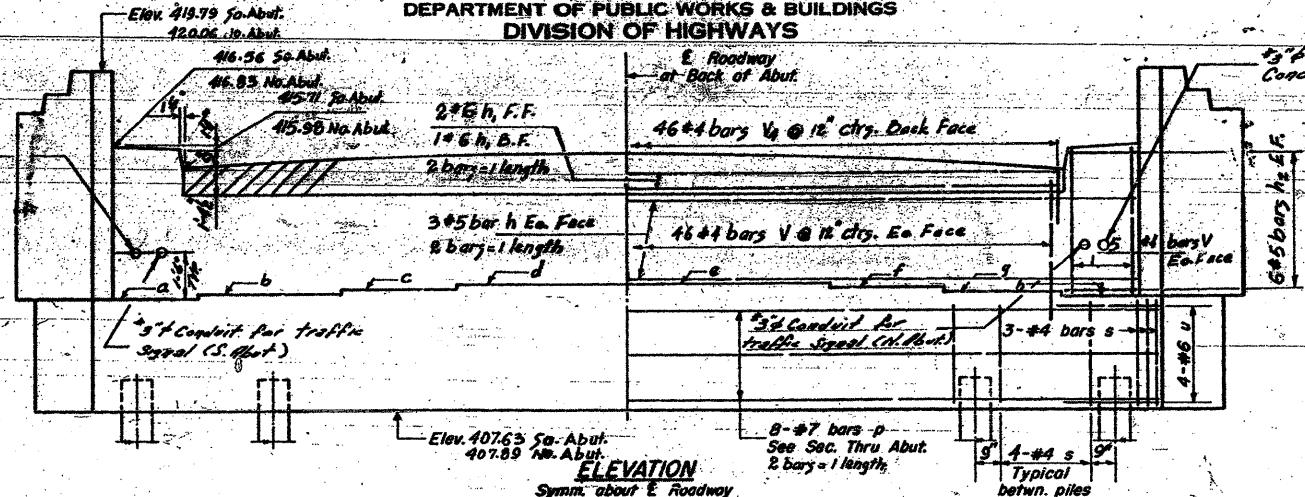
SEC. THRU ABUT.

BRIDGE JET ELEVATIONS

	a	b	c	d	e	f	g	h
So. Abut.	411.13	411.26	411.39	411.51	411.51	411.39	411.26	411.13
No. Abut.	411.39	411.53	411.66	411.77	411.77	411.66	411.53	411.39

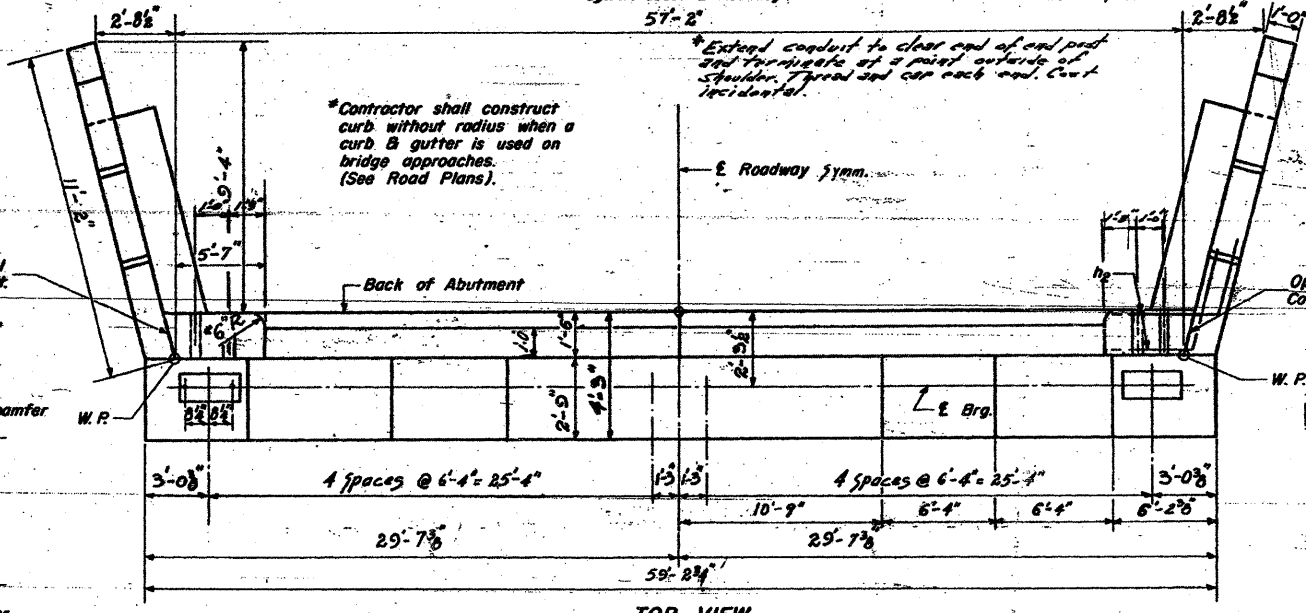
DESIGNED	A.S.A.	EXAMINED	
CHECKED	J.M.J.	PASSED	
DRAWN	W.A. Soudan, Jr.	APPROVED	
CHECKED			

A-8 7-10-62 Rev. 11-27-62



ELEVATION

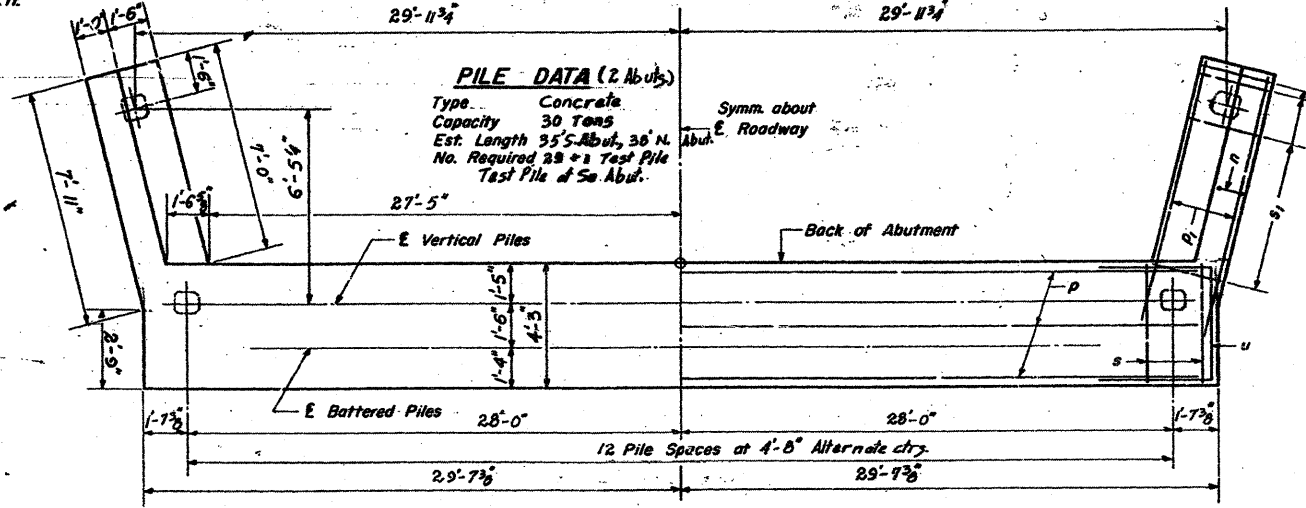
Symm. about E. Roadway



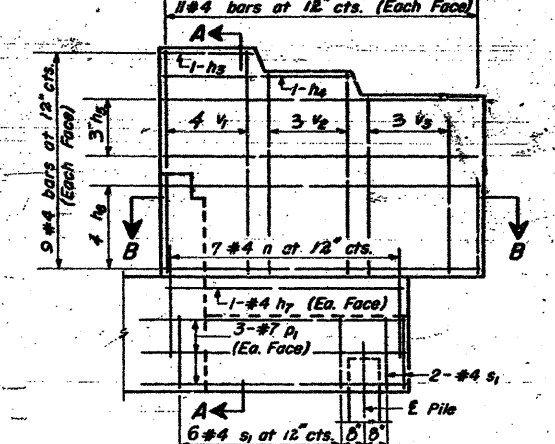
TOP VIEW

PILE DATA (2 Abut.)

Type: Concrete  
Capacity: 30 Tons  
Est. Length: 95' S. Abut., 36' N. Abut.  
No. Required: 28 + 1 Test Pile  
Test Pile at So. Abut.

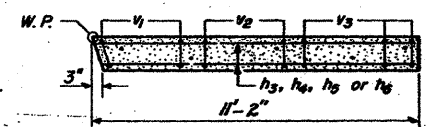


PLAN - PILE CAP



WING WALL ELEVATION

Reinforcement



SEC. B-B

NO. 50 ABUTMENT  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	24	#5	28'-6"	—
h	12	#6	24'-0"	—
h <sub>2</sub>	48	#5	11'-10"	—
h <sub>3</sub>	8	#4	8'-10"	—
h <sub>4</sub>	8	#4	6'-8"	—
h <sub>5</sub>	24	#4	10'-8"	—
h <sub>6</sub>	32	#4	10'-8"	—
h <sub>7</sub>	8	#4	7'-0"	—
n	28	#4	7'-9"	□
p	32	#7	3'-0"	—
p <sub>1</sub>	24	#7	9'-0"	—
s	108	#4	14'-11"	□
s <sub>1</sub>	32	#4	9'-5"	□
u	16	#6	11'-10"	□
v	884	#4	5'-3"	—
v <sub>1</sub>	32	#4	8'-6"	—
v <sub>2</sub>	24	#4	7'-8"	—
v <sub>3</sub>	32	#4	6'-10"	—
v <sub>4</sub>	98	#4	3'-3"	—
Class X Concrete				Cu. Yds. 108.5
Reinforcement Bars				Lbs. 7850
Concrete Piles				Lin. Ft. 1060
Test Piles Concrete				Eq. 1

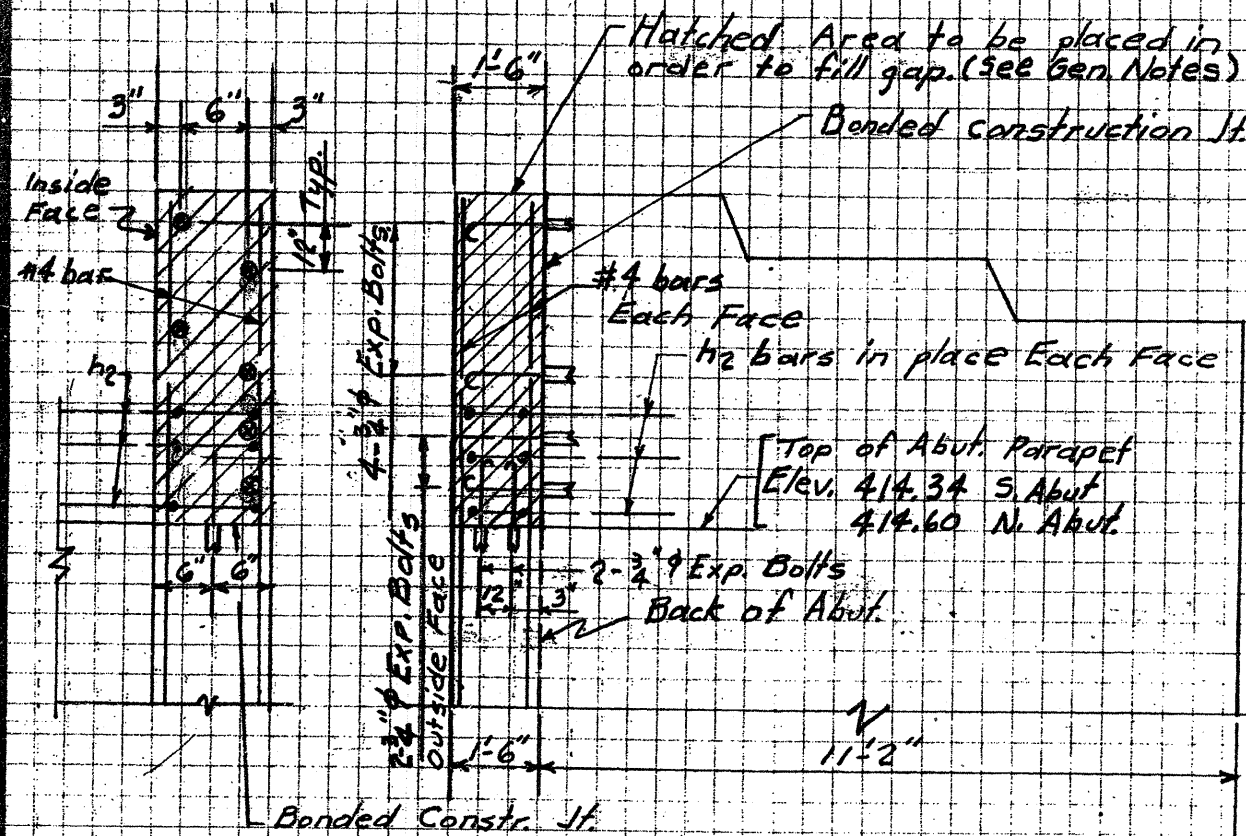
ABUTMENTS

F.A.I. ROUTE 64 SEC. 82-1HB-1  
ST. CLAIR COUNTY

Revised Class X concrete for abutments (100 cfs) per "All of Detail" 11-11-62



Sheet 22a of 42



END VIEW WINGWALL ELEVATION

All dimensions are @ Rt. Ls.

\* Exp. Bolts shall consist of 3/4" φ self drilling expansion shells & hooked bolts embedded 1'-3" into new concrete.

ABUTMENT REPAIRS  
FAI ROUTE 64  
SECTION 82-1HB-1  
ST. CLAIR COUNTY

FILE NAME =	USER NAME = pmsarno	DESIGNED	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING 15TH STREET BRIDGE AND RETAINING WALL 'D' PLANS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN PP	REVISD -			64	82-1-2HB	ST. CLAIR	345	263	
		CHECKED AB	REVISD -			CONTRACT NO. 76C49					
		DATE 03/19/10	REVISD -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
				SCALE: NONE	SHEET NO. 11 OF 22 SHEETS	STA.	TO STA.				

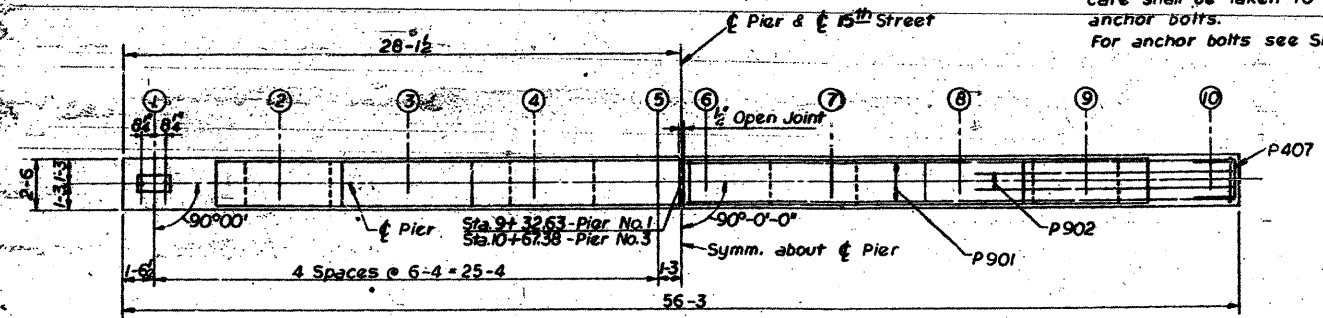


FOR INFORMATION ONLY

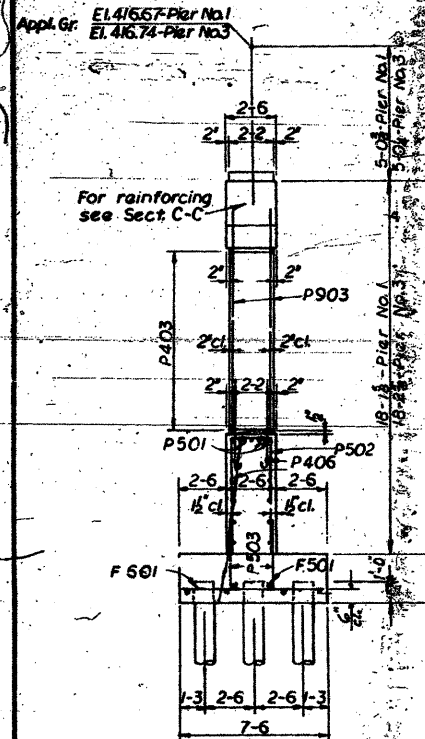
FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.I. RT. 64	82-1HB-1	ST. CLAIR	42	23
FED. ROAD DIST. NO. 4 ILLINOIS PROJECT				

NOTE: In placing reinforcement bars care shall be taken to clear anchor bolts.  
For anchor bolts see Sh. No. 4

	a	b	c	d	e	f	g	h
Pier No. 1	411.64	411.77	411.91	412.02	412.02	411.91	411.77	411.64
Pier No. 3	411.72	411.85	411.98	412.10	412.10	411.98	411.85	411.72

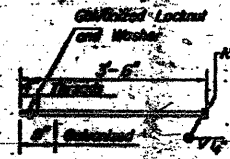


TOP PLAN



END VIEW

NOTE: All edges to have standard 3/4" chamfer except footing.

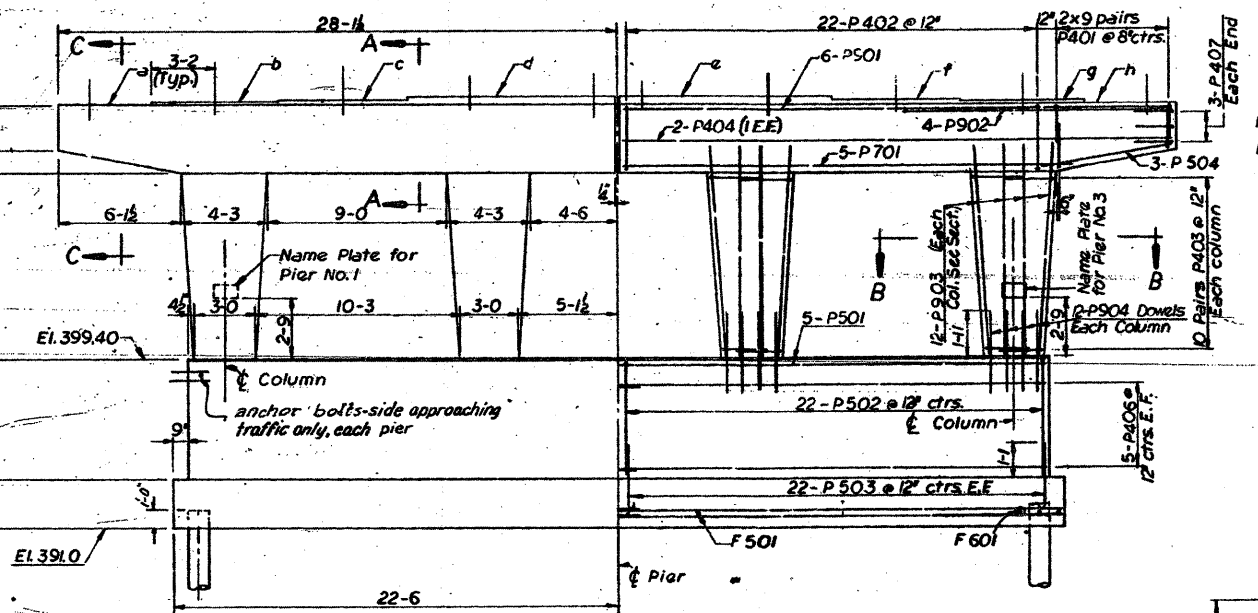


ANCHOR BOLT



RIVET

Designed by: S.K.  
Drawn by: R.A.S.  
Checked by: R.N.

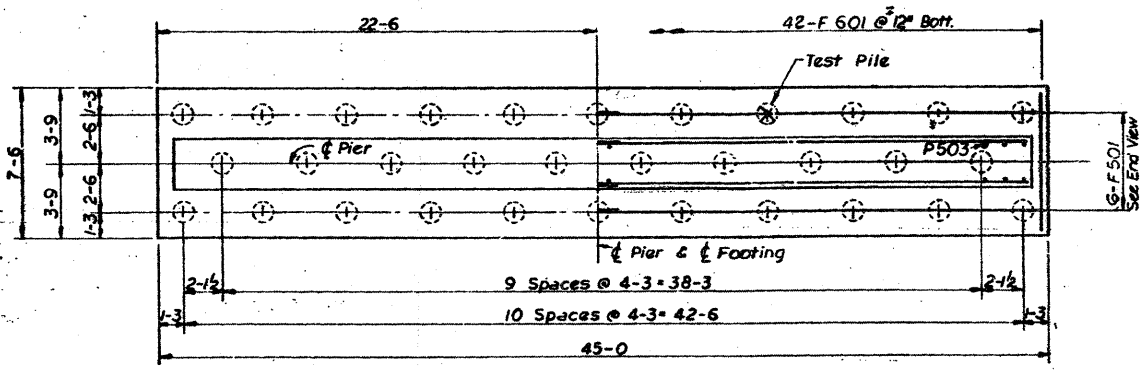


ELEVATION

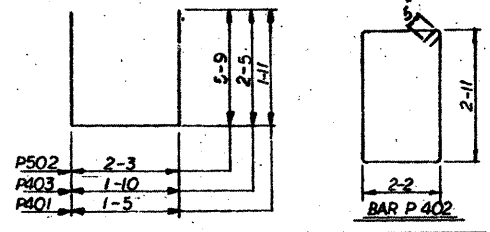
DIMENSIONS

NOTE: Dimensions and Reinforcement symmetrical about center line of Pier.

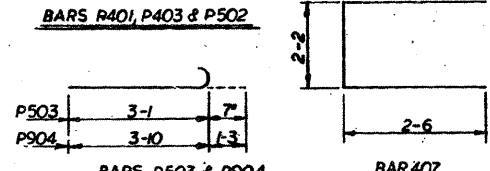
REINFORCEMENT



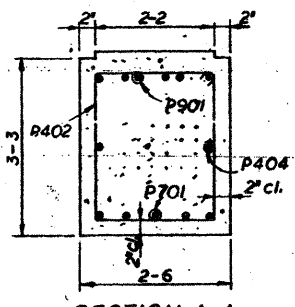
FOOTING PLAN



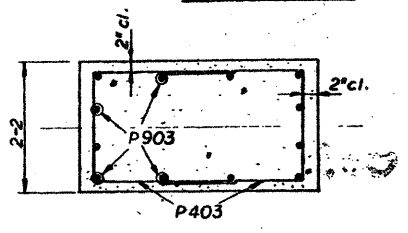
BAR P402



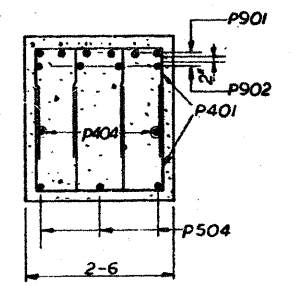
BAR P503 & P504



SECTION A-A



SECTION B-B



SECTION C-C

BAR NO.	NO.	SIZE	LENGTH	SHAPE
7P401	144	#4	5-3	U
7P402	88	#4	11-0	D
7P403	160	#4	6-8	U
7P404	8	#4	27-9	—
7P405	40	#4	22-2	—
7P407	12	#4	7-2	C
7P501	10	#5	43-2	—
7P502	88	#5	13-9	U
7P503	176	#5	3-8	U
7P504	12	#5	6-6	—
7P701	20	#7	21-10	—
7P901	24	#9	27-9	—
7P902	16	#9	14-0	—
7P903	96	#9	11-0	—
7P904	96	#9	5-1	—
7F501	24	#5	22-11	—
7F601	84	#6	7-3	—

Class "X" Concrete	Cu. Yds.	165.1
Reinforcement bars	Lbs.	15,790
Test Piles Timber	Each	2
Crossed Piles	Lin. Ft.	868
Name Plate	Each	2

	PIER NO. 1	PIER NO. 3
Type	Crossed	Crossed
Capacity	20 Tons	20 Tons
Est. Length	14'	14'
No. Required	31	31
Test Pile	1	1

NOTE: For reinforcement bar designation see Note "A" Sheet No. 3.

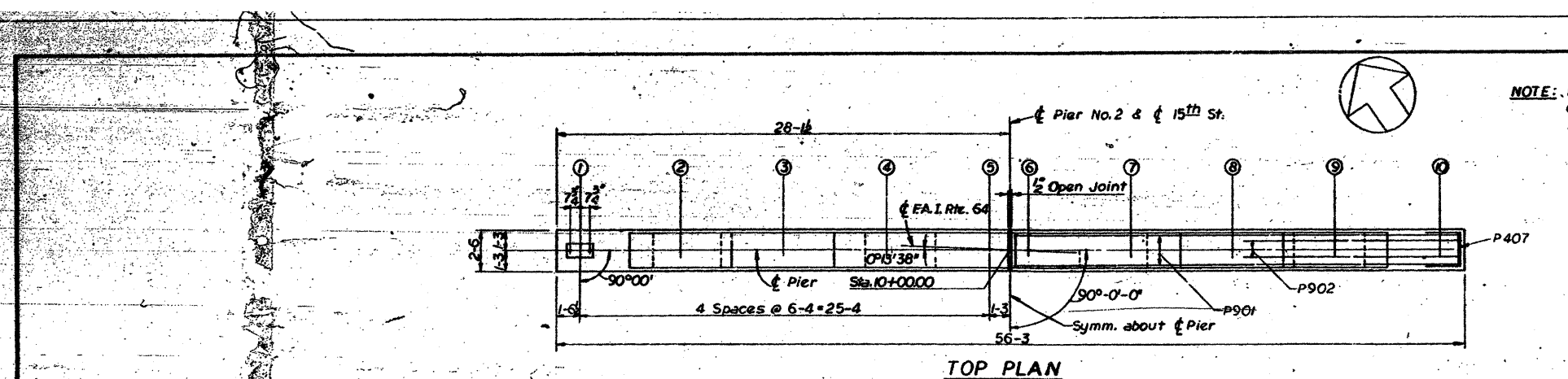
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BLDGS.  
DIVISION OF HIGHWAYS  
PIERS NO. 1 AND NO. 3  
15TH ST.  
OVER FA.I. RT. 64  
STATION 75 + 85.50  
FA.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB-1  
H. W. LOCHNER, INC.  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

SHEET 7 OF 11

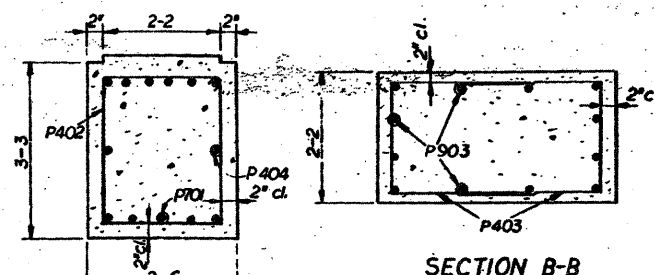
FOR INFORMATION ONLY

FEDERAL-ROAD DISTRICT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rte. 64	82-1HB-1	ST. CLAIR	42	24
FED. ROAD DIST. NO. 4 ILLINOIS PROJECT				

NOTE: In placing reinforcement bars care shall be taken to clear anchor bolts.  
For anchor bolts see Sh. No. 4

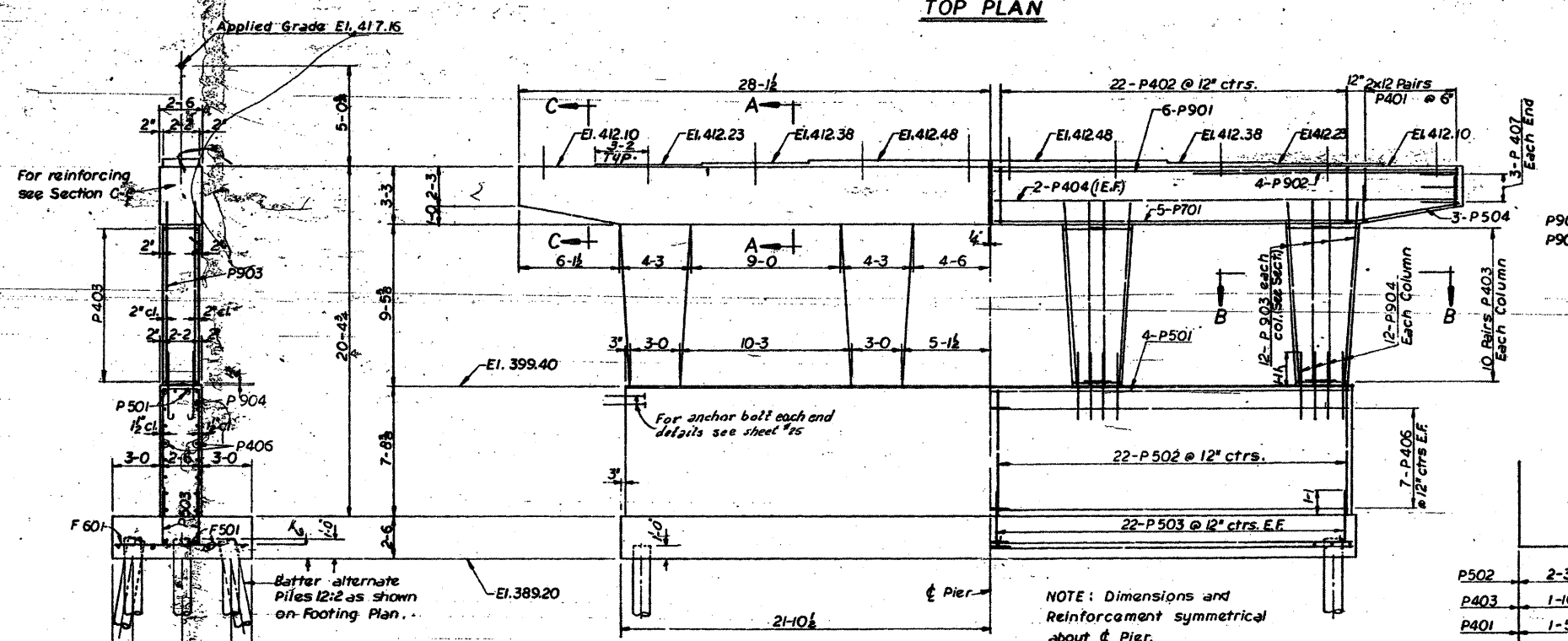


TOP PLAN

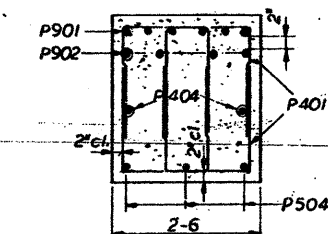


SECTION A-A

SECTION B-B



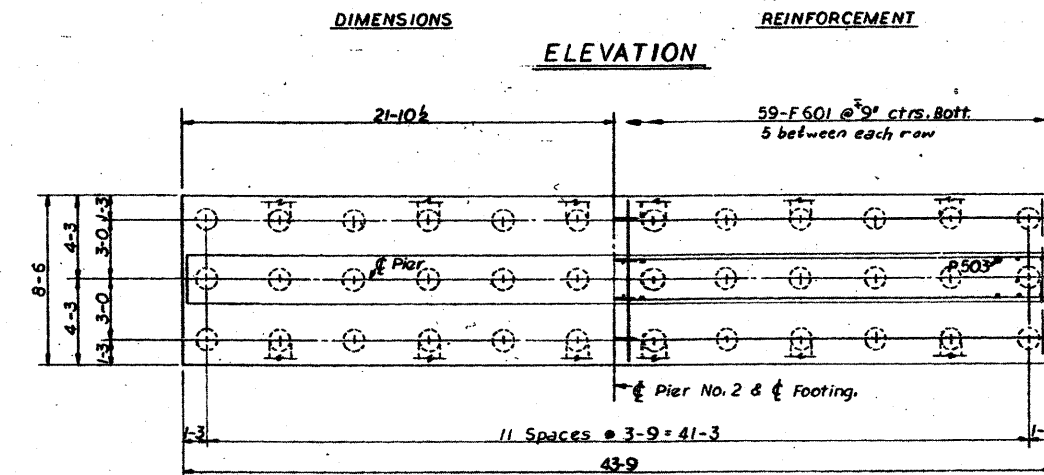
ELEVATION



SECTION C-C

BILL OF MATERIAL				
BAR NO.	NO.	SIZE	LENGTH	SHAPE
8P401	96	#4	5-3	U
8P402	44	#4	11-0	U
8P403	80	#4	6-8	U
8P404	4	#4	27-9	—
8P406	28	#4	22-0	—
8P407	6	#4	7-2	C
8P501	4	#5	42-11	—
8P502	44	#5	17-3	U
8P503	88	#5	3-8	U
8P504	6	#5	6-6	—
8P701	10	#7	21-0	—
8P901	12	#9	27-9	—
8P902	8	#9	14-0	—
8P903	48	#9	11-6	—
8P904	48	#9	5-1	U
8F501	12	#5	22-3	—
8F601	59	#6	8-3	—
Class "X" Concrete		Cu. Yds.	93.4	
Reinforcement bars		Lbs.	8570	
Crosotod Piles		Lin. Ft.	432	

END-VIEW  
NOTE: All edges to have standard 3/4 chamfer except footing.



FOOTING PLAN

PILE DATA	
Type	Crosotod
Capacity	20 Tons
Estimated Length	12'
No. required	36

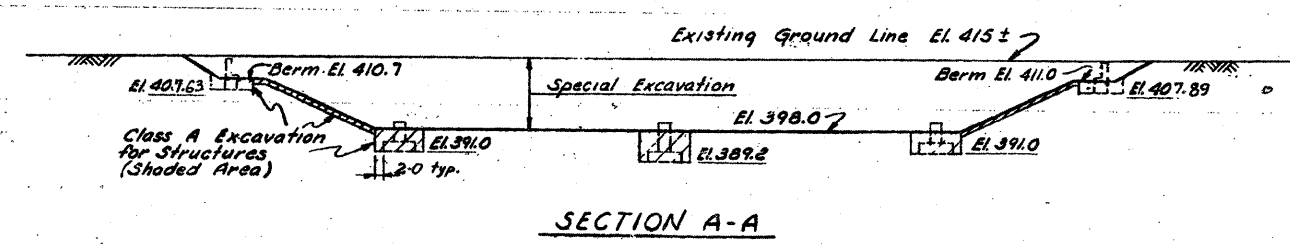
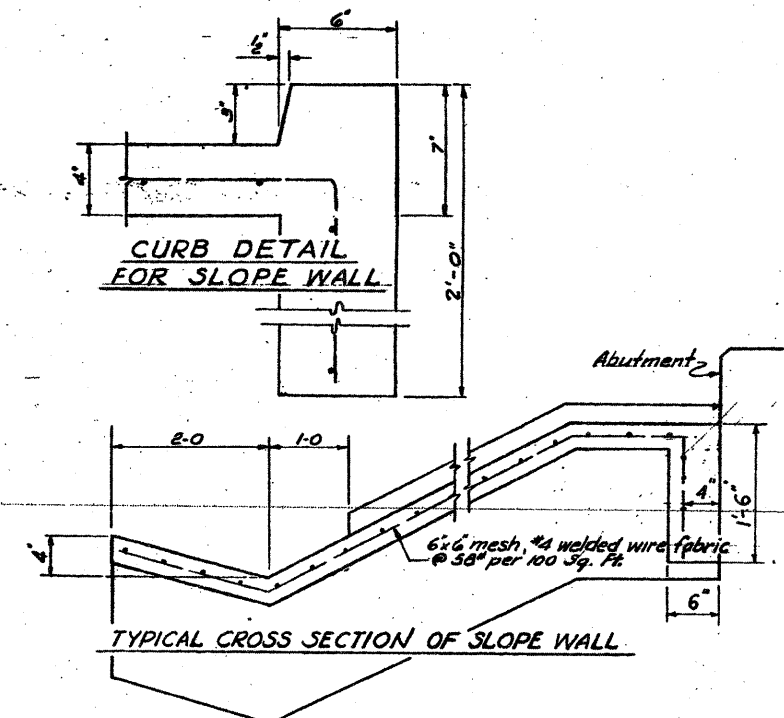
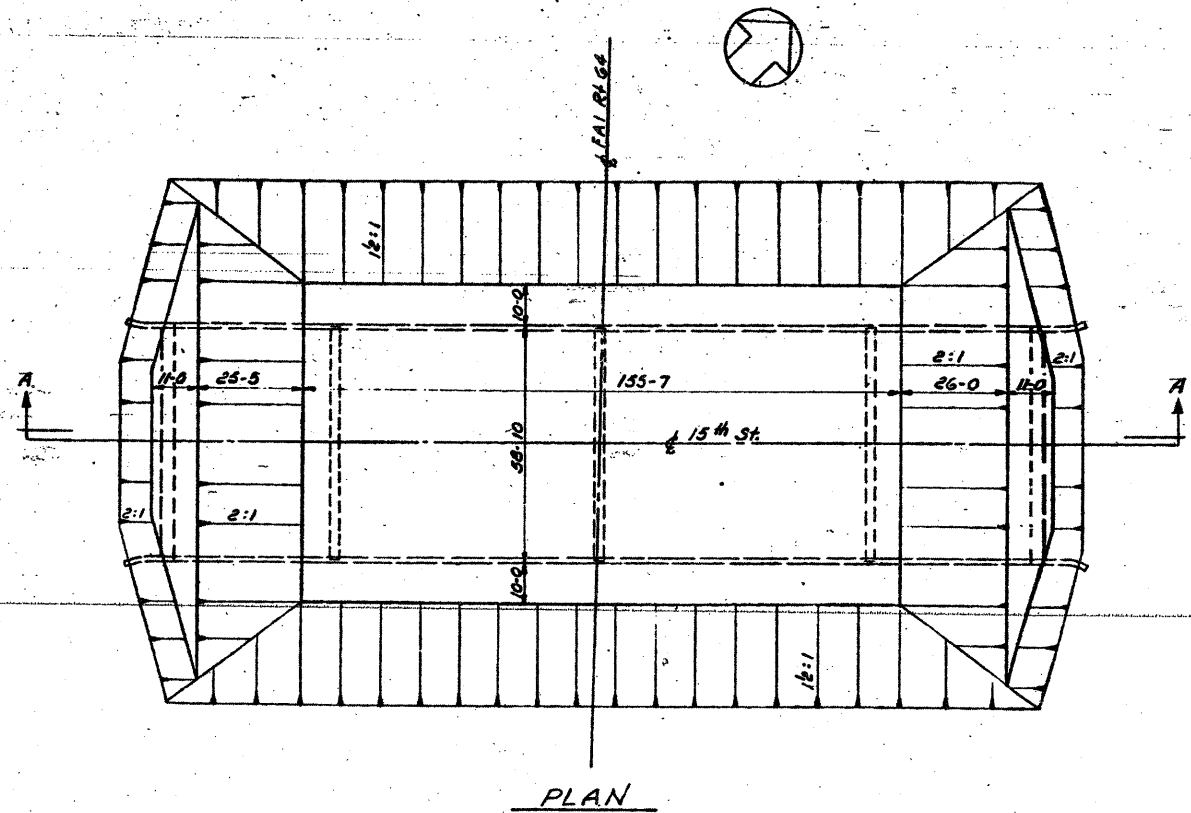
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BLDGS.  
DIVISION OF HIGHWAYS  
**PIER No. 2**  
15TH ST.  
OVER F.A.I. Rte. 64  
STATION 75+85.50  
F.A.I. Rte. 64 ST. CLAIR CO. SECTION 82-1HB-1  
H. W. LOCHNER, INC.  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

Designed by: S. K.  
Drawn by: R. A. S.  
Checked by: R. N.



FOR INFORMATION ONLY

FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.R. 64	82-1HB-1	ST. CLAIR	42	26
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				



Drawn by - A.J.C.  
Checked by - R.N.

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BLDGS.  
DIVISION OF HIGHWAYS  
EARTHWORK AND SLOPE WALLS  
15TH ST.  
OVER F.A.I.R. 64  
STATION 75 + 85.50  
F.A.I.R. 64 ST. CLAIR CO. SECTION 82-1HB-1  
H. W. LOCHNER, INC.  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

SHEET 10 of 11

FILE NAME =	USER NAME = pmsarino	DESIGNED	REVISD -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING 15TH STREET BRIDGE AND RETAINING WALL 'D' PLANS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN PP	REVISD -			64	82-1-2HB	ST. CLAIR	345	267	
		CHECKED AB	REVISD -			CONTRACT NO. 76C49					
		DATE 03/19/10	REVISD -			SCALE: NONE	SHEET NO. 15 OF 22 SHEETS	STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

FOR INFORMATION ONLY

PROGRAM ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI.RT.64	82-1HB-1	ST. CLAIR	22	27
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				

D.L. DEFLECTION (FT.)

BRG. ABUT.	A1	A2	A3	A4	PIER No. 1	B1	B2	B3	B4	B5	B6	PIER No. 2	C1	C2	C3	C4	C5	C6	PIER No. 3	D1	D2	D3	D4	BRG. ABUT.	
BM. 1 B 10	.008	.008	.008	.002	-.001	.000	.019	.042	.054	.050	.031	.000	.000	.014	.037	.053	.053	.036	.012	.000	-.000	.006	.009	.003	.000
BM. 2,3,4,5,6,7,8,9	.000	.006	.005	.001	-.000	.000	.011	.005	.031	.029	.019	.000	.000	.009	.022	.031	.022	.000	.000	.000	.004	.005	.001	.000	.000

TABLE 1  
THEORETICAL ELEVATION TOP OF CONCRETE

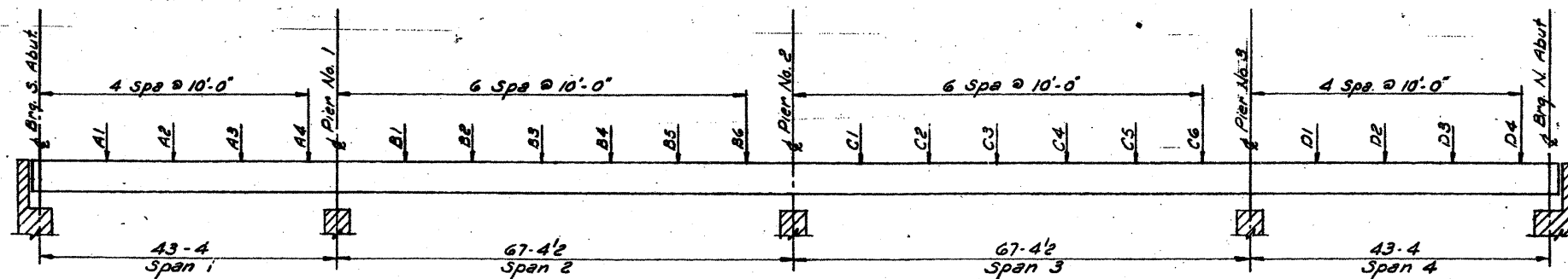
BEAMS	A1	A2	A3	A4	PIER No. 1	B1	B2	B3	B4	B5	B6	PIER No. 2	C1	C2	C3	C4	C5	C6	PIER No. 3	D1	D2	D3	D4	BRG. ABUT.	
1 B 10	415.660	415.793	415.926	416.059	416.192	416.257	416.369	416.485	416.579	416.650	416.625	416.727	416.733	416.722	416.688	416.633	416.555	416.466	416.377	416.311	416.222	416.133	416.044	415.955	415.925
2 B 9	415.792	415.925	416.058	416.191	416.326	416.369	416.501	416.617	416.711	416.782	416.832	416.859	416.865	416.854	416.829	416.765	416.687	416.598	416.509	416.443	416.354	416.265	416.176	416.087	416.057
3 B 8	415.926	416.057	416.190	416.323	416.456	416.500	416.633	416.749	416.843	416.914	416.964	416.991	416.997	416.986	416.952	416.888	416.819	416.730	416.641	416.575	416.486	416.397	416.308	416.219	416.189
4 B 7	416.059	416.172	416.305	416.438	416.571	416.615	416.748	416.864	416.958	417.029	417.079	417.106	417.112	417.101	417.067	417.011	416.934	416.845	416.756	416.690	416.601	416.512	416.423	416.334	416.304
5 B 6	416.088	416.221	416.354	416.487	416.620	416.664	416.796	416.912	417.006	417.078	417.127	417.155	417.161	417.149	417.116	417.060	416.982	416.893	416.804	416.739	416.650	416.561	416.472	416.383	416.353

TABLE 2  
THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION

BEAMS	A1	A2	A3	A4	PIER No. 1	B1	B2	B3	B4	B5	B6	PIER No. 2	C1	C2	C3	C4	C5	C6	PIER No. 3	D1	D2	D3	D4	BRG. ABUT.	
1 B 10	415.660	415.801	415.935	416.061	416.190	416.237	416.388	416.527	416.634	416.701	416.731	416.736	416.733	416.738	416.725	416.686	416.608	416.502	416.390	416.311	416.222	416.140	416.053	415.958	415.925
2 B 9	415.792	415.930	416.063	416.193	416.326	416.369	416.513	416.642	416.743	416.812	416.831	416.866	416.865	416.864	416.863	416.796	416.718	416.620	416.517	416.443	416.355	416.269	416.181	416.089	416.057
3 B 8	415.926	416.062	416.195	416.325	416.456	416.500	416.645	416.774	416.875	416.944	416.983	416.998	416.997	416.995	416.975	416.928	416.850	416.752	416.649	416.575	416.487	416.401	416.313	416.221	416.189
4 B 7	416.059	416.177	416.310	416.440	416.571	416.615	416.760	416.889	416.990	417.059	417.098	417.113	417.112	417.110	417.090	417.043	416.965	416.867	416.764	416.690	416.602	416.516	416.428	416.336	416.304
5 B 6	416.088	416.225	416.359	416.489	416.619	416.664	416.808	416.937	417.038	417.108	417.147	417.161	417.161	417.159	417.138	417.091	417.013	416.915	416.812	416.739	416.650	416.565	416.477	416.384	416.353

TABLE 3  
THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION - SLAB THICKNESS (T<sup>3</sup>)

BEAMS	A1	A2	A3	A4	PIER No. 1	B1	B2	B3	B4	B5	B6	PIER No. 2	C1	C2	C3	C4	C5	C6	PIER No. 3	D1	D2	D3	D4	BRG. ABUT.	
1 B 10	415.077	415.218	415.354	415.478	415.607	415.653	415.805	415.944	416.050	416.118	416.144	416.153	416.150	416.142	416.122	416.025	415.919	415.806	415.728	415.639	415.557	415.470	415.375	415.362	
2 B 9	415.209	415.346	415.480	415.610	415.740	415.785	415.929	416.058	416.159	416.229	416.268	416.282	416.282	416.280	416.260	416.212	416.134	416.036	415.934	415.860	415.771	415.686	415.598	415.505	415.474
3 B 8	415.341	415.478	415.612	415.742	415.872	415.917	416.061	416.190	416.291	416.361	416.400	416.414	416.414	416.412	416.392	416.344	416.266	416.168	416.066	415.992	415.903	415.818	415.730	415.637	415.606
4 B 7	415.474	415.593	415.727	415.857	415.987	416.032	416.176	416.305	416.406	416.476	416.515	416.529	416.529	416.527	416.507	416.459	416.381	416.283	416.181	416.107	416.018	415.933	415.846	415.752	415.721
5 B 6	415.504	415.642	415.775	415.905	416.036	416.081	416.225	416.354	416.455	416.525	416.564	416.578	416.577	416.576	416.555	416.508	416.430	416.332	416.229	416.155	416.067	415.982	415.893	415.801	415.770



ELEVATION LOCATION DIAGRAM

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BLDGS.  
DIVISION OF HIGHWAYS

TABLES OF ELEVATIONS

15 TH ST.  
OVER F.A.I.RT.64  
STATION 75 + 85.50  
F.A.I.RT.64 ST. CLAIR CO. SECTION 82-1HB-1

H. W. LOCHNER, INC.  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS

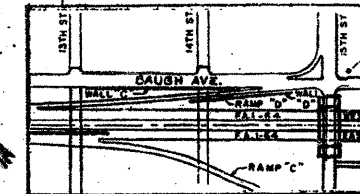
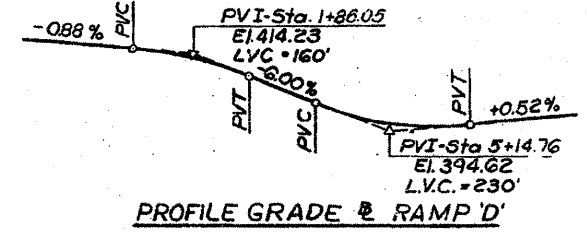
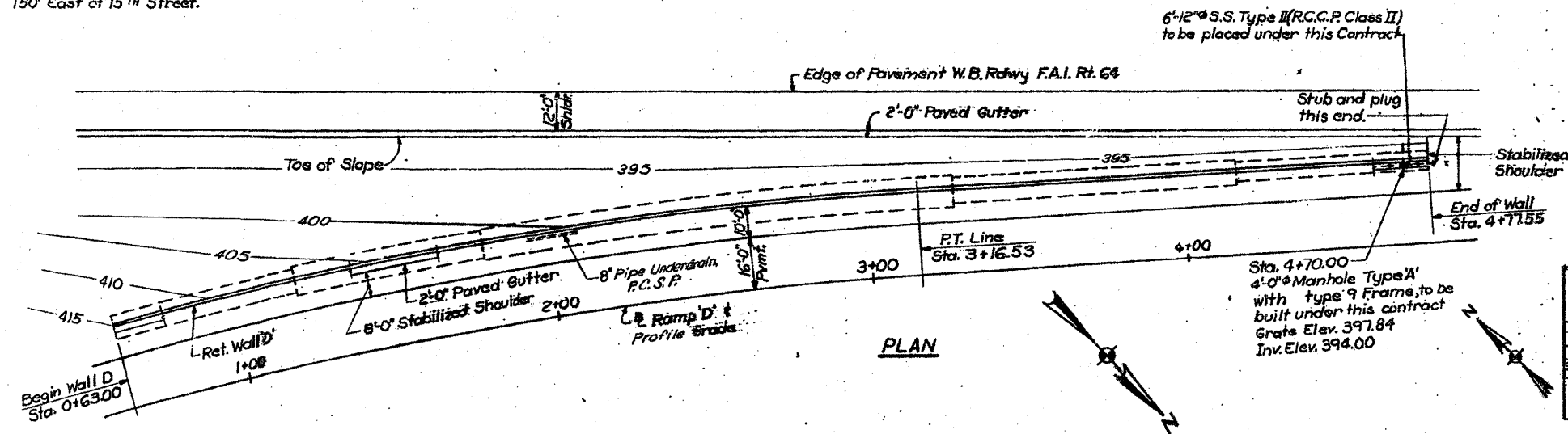
SHEET  
11 of 11



FOR INFORMATION ONLY

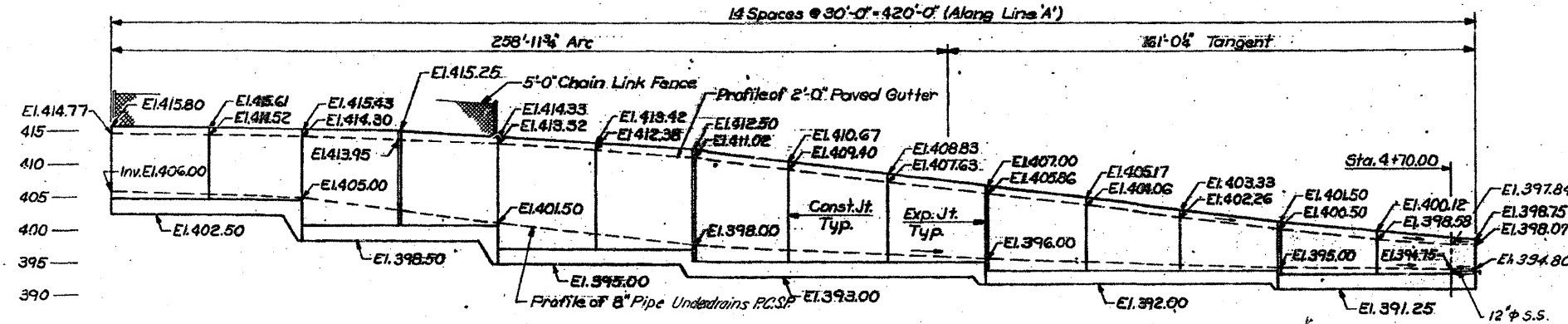
Bench Mark C-11 El.414.780 Cut 3/4" C.B. Pin point farthest from Curb North side of Baugh Ave. 150' East of 15<sup>TH</sup> Street.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I.-64	82-1HB	ST. CLAIR	110	51
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



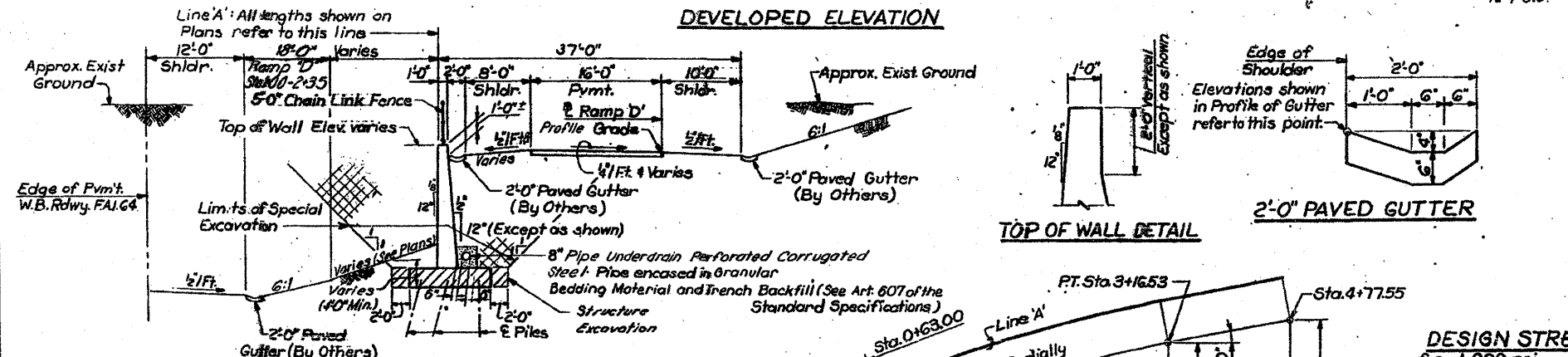
**CURVE DATA - RAMP 'D'**

PI =	Sta. 1+80.14
Δ =	12° 28' 51.2"
D =	4° 33' 26.16"
R =	1257.24'
L =	273.87'
T =	137.48'
E =	7.59'
S.E. =	0.0208'/ft



GENERAL NOTES

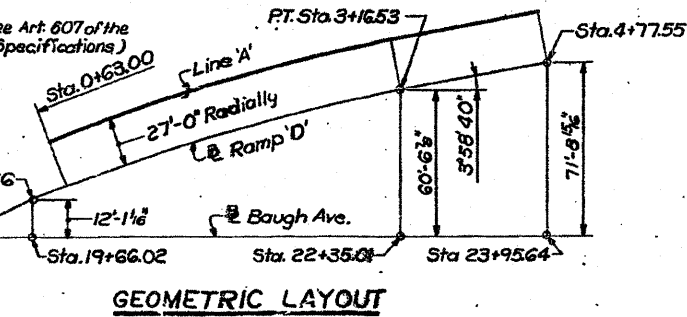
All reinforcement bars shall be lapped 24 diameters minimum unless otherwise shown. The Contractor shall drive two timber test piles in the vicinity of the retaining wall as directed by the Engineer before ordering the remainder of piles. The back of the retaining wall shall be waterproofed from top of footing to finish grade in accordance with Art. 501 of the Standard Specifications. All cross-reference sheet numbers shown on plans are the numbers located in the lower right hand corner.



TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Class X Concrete	Cu. Yds.	524
Reinforcement Bars	Lbs.	40,620
Furnishing Crosstied Timber Piles (20' to 30')	Lin. Ft.	4,994
Test Piles (Timber)	Each	2
Structure Excavation	Cu. Yds.	430
8" Pipe Underdrains Perfor. Corr. Stl. Pipe	Lin. Ft.	420
Chain Link Fence 5'	Lin. Ft.	118.5
Special Excavation	Cu. Yds.	9825

NOTE: The granular bedding mat'l & trench backfill encasement around 8" pipe underdrain shall be considered incidental to the cost of 8" pipe underdrain perforated corrugated steel pipe.



DESIGN STRESSES

f<sub>c</sub> = 1,000 psi  
 f<sub>s</sub> = 20,000 psi Reinforcement  
 v = 75 psi (Footing)  
 n = 10  
 P<sub>3</sub> = Equivalent fluid pressure = 40 p.c.f.

PILE DATA

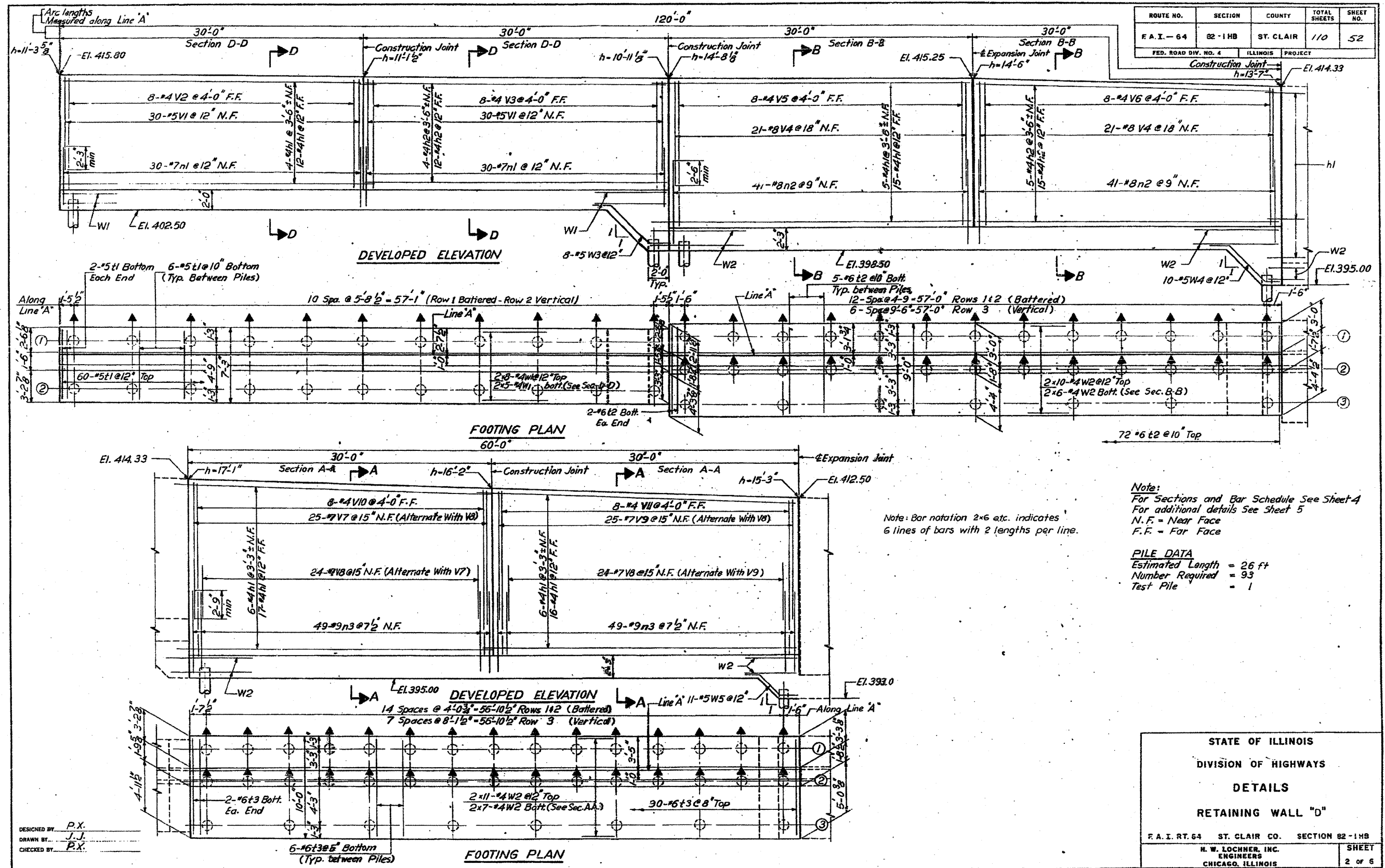
Type = Crosstied Timber Piles  
 Required Capacity = 24 Tons  
 For Estimated length and number of piles required see Sheets 2, 3 and 4.

STATE OF ILLINOIS  
 DIVISION OF HIGHWAYS  
 GENERAL PLAN  
 RETAINING WALL "D"

F. A. I. RT. 64 ST. CLAIR CO. SECTION 82-1HB  
 H. W. LOCHNER, INC.  
 ENGINEERS  
 CHICAGO, ILLINOIS

SHEET  
 1 OF 6

FOR INFORMATION ONLY



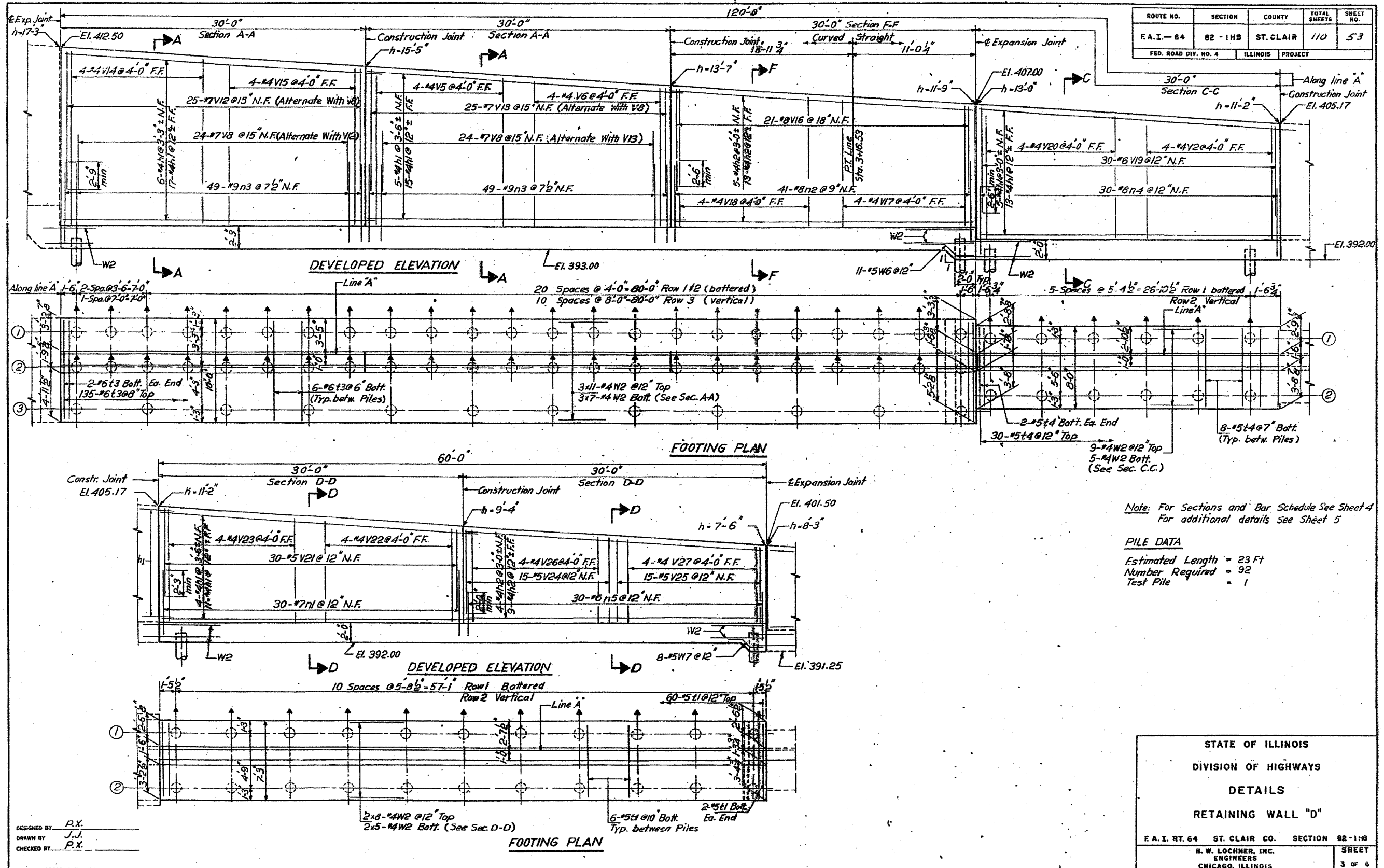
Note:  
 For Sections and Bar Schedule See Sheet 4  
 For additional details See Sheet 5  
 N.F. = Near Face  
 F.F. = Far Face

PILE DATA  
 Estimated Length = 26 ft  
 Number Required = 93  
 Test Pile = 1

STATE OF ILLINOIS  
 DIVISION OF HIGHWAYS  
 DETAILS  
 RETAINING WALL "D"

F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB  
 H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS SHEET 2 OF 6

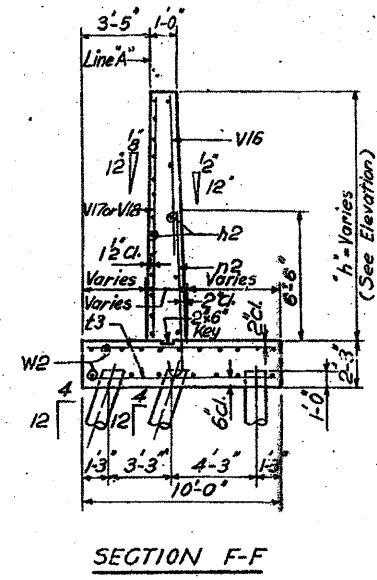
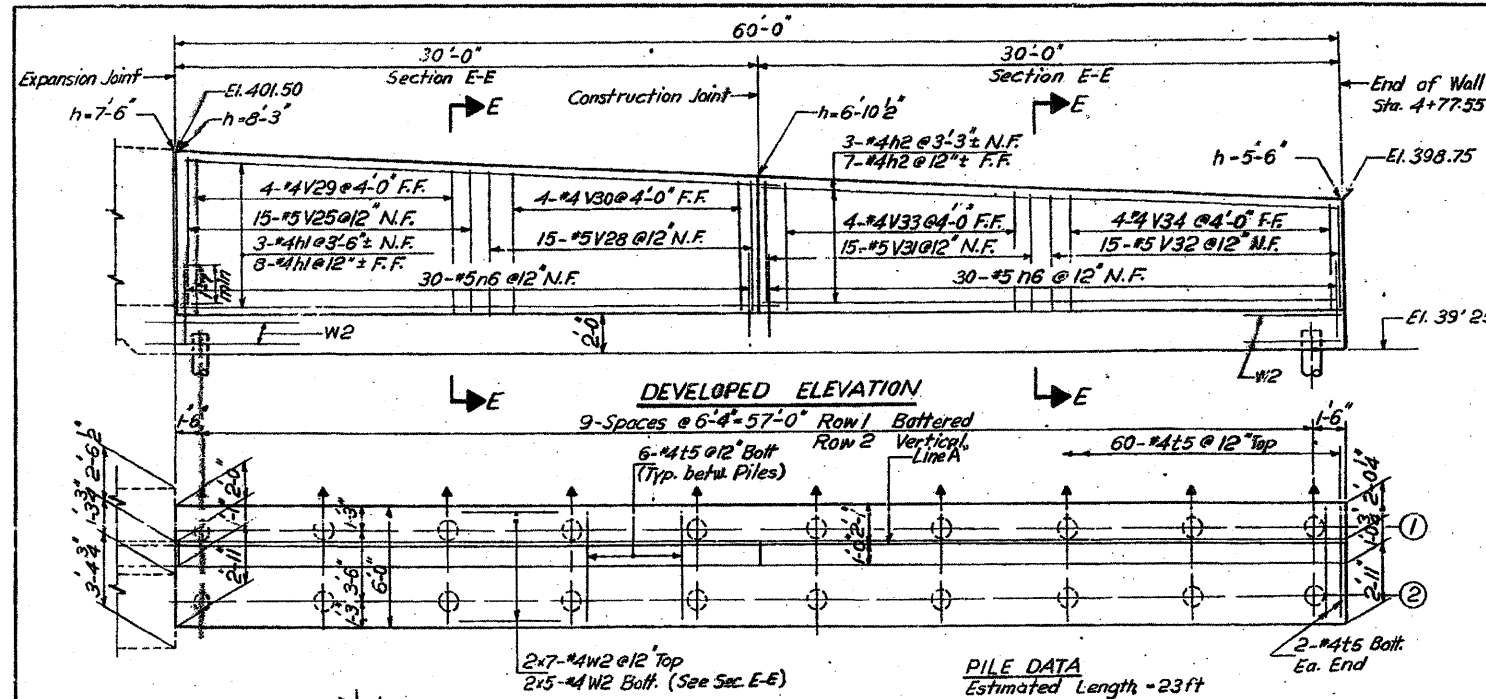
FOR INFORMATION ONLY





FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. I. - 64	82-1HB	ST. CLAIR	110	54
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

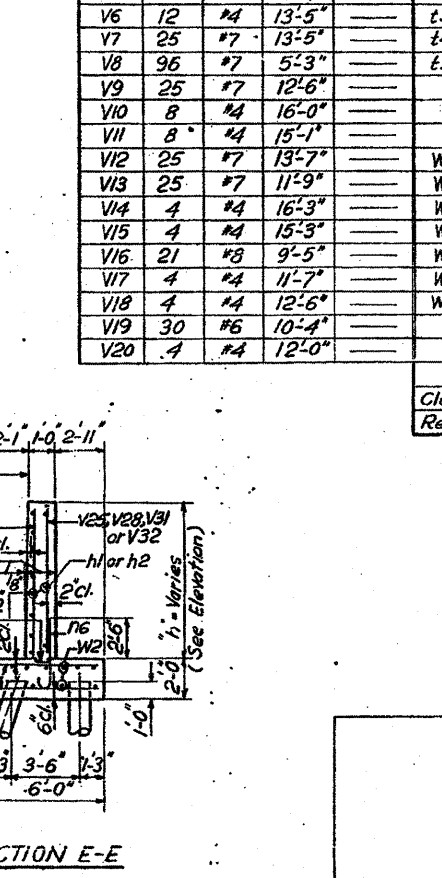
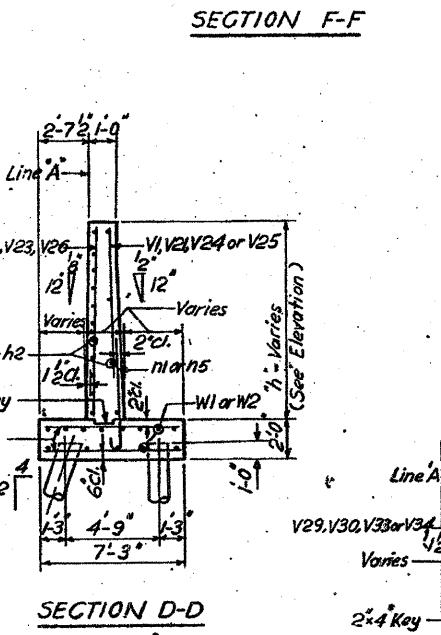
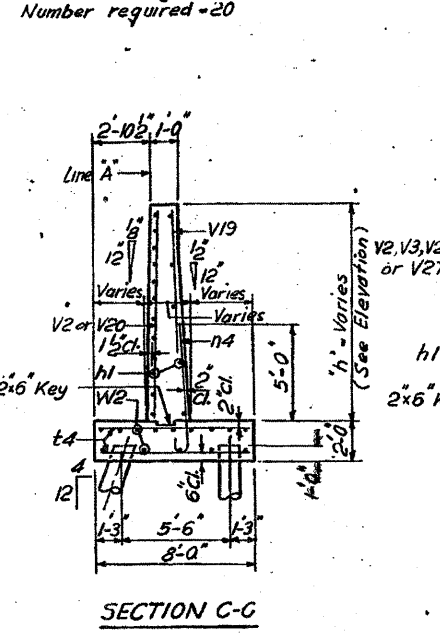
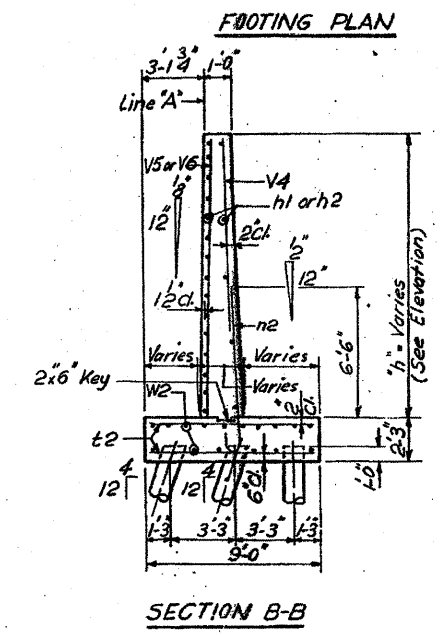
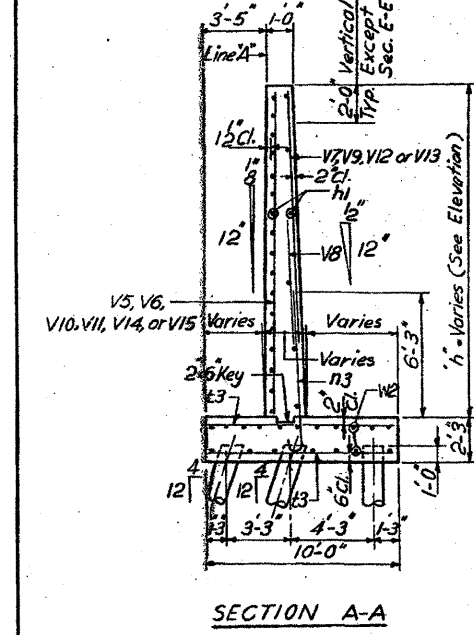


**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	Bar	No.	Size	Length	Shape
h1	168	#4	31'-0"	—	V21	30	#5	9'-0"	—
h2	77	#4	29'-9"	—	V22	4	#4	9'-2"	—
					V24	4	#4	10'-2"	—
					V24	15	#5	8'-2"	—
					V25	30	#5	7'-3"	—
n1	90	#7	6'-7"	C	V26	4	#4	8'-3"	—
n2	123	#8	9'-4"	C	V27	4	#4	7'-3"	—
n3	196	#9	9'-3"	C	V28	15	#5	6'-8"	—
n4	30	#8	7'-7"	C	V29	4	#4	7'-5"	—
n5	30	#6	5'-2"	C	V30	4	#4	6'-9"	—
n6	60	#5	4'-7"	C	V31	15	#5	5'-10"	—
					V32	15	#5	5'-2"	—
					V33	4	#4	6'-0"	—
					V34	4	#4	5'-4"	—
V1	60	#5	9'-2"	—	t1	248	#5	6'-11"	—
V2	12	#4	11'-0"	—	t2	136	#6	8'-8"	—
V3	8	#4	10'-9"	—	t3	449	#6	9'-8"	—
V4	42	#8	10'-6"	—	t4	74	#5	7'-8"	—
V5	12	#4	14'-4"	—	t5	118	#4	5'-8"	—
V6	12	#4	13'-5"	—					
V7	25	#7	13'-5"	—					
V8	95	#7	5'-3"	—					
V9	25	#7	12'-6"	—					
V10	8	#4	16'-0"	—					
V11	8	#4	15'-1"	—					
V12	25	#7	13'-7"	—	W1	26	#4	30'-4"	—
V13	25	#7	11'-9"	—	W2	186	#4	31'-6"	—
V14	4	#4	16'-3"	—	W3	8	#5	8'-8"	—
V15	4	#4	15'-3"	—	W4	10	#5	7'-11"	—
V16	21	#8	9'-5"	—	W5	11	#5	5'-10"	—
V17	4	#4	11'-7"	—	W6	11	#5	4'-5"	—
V18	4	#4	12'-6"	—	W7	8	#5	4'-1"	—
V19	30	#6	10'-4"	—					
V20	4	#4	12'-0"	—					

Item	Unit	Total
Class X Concrete	Cu. Yds.	524
Reinforcement Bars	Lbs	40,620



Bars W3 thru W7

Bar	"a"	"b"
W3	5'-8"	4'-0"
W4	4'-11"	3'-5"
W5	2'-10"	2'-0"
W6	1'-5"	1'-0"
W7	1'-1"	0'-9"

Bars n1 thru n6

Bar	"a"	"b"
n1	5'-9"	10'
n2	8'-3"	14'
n3	8'-8"	13'
n4	6'-6"	1-1"
n5	4'-6"	8'
n6	4'-0"	7'

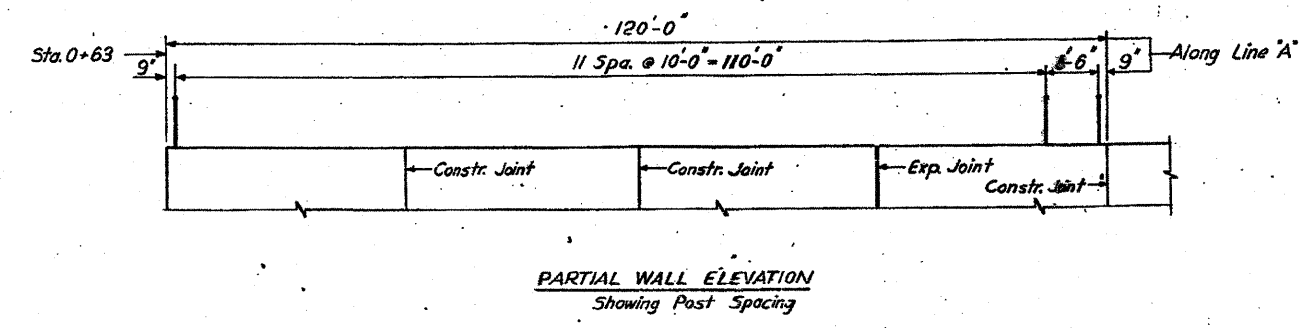
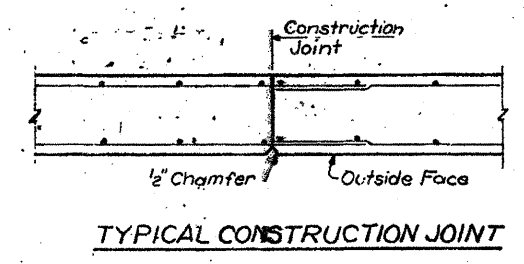
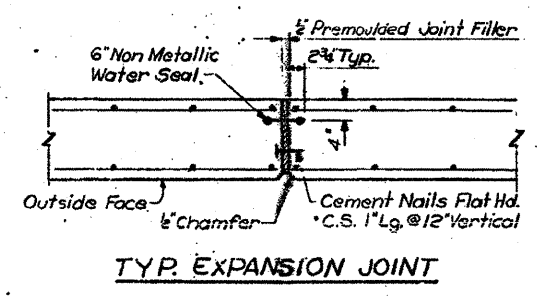
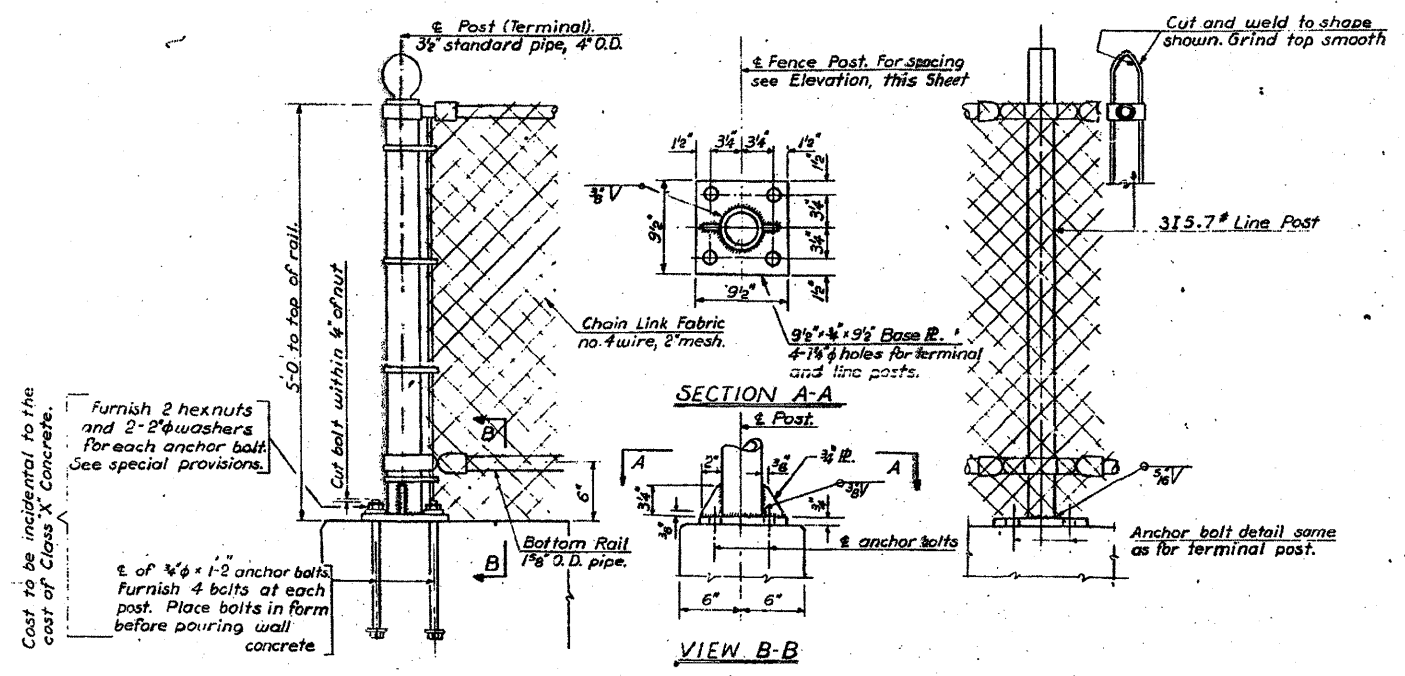
DESIGNED BY P.X.  
 DRAWN BY J.J.  
 CHECKED BY P.X.

STATE OF ILLINOIS  
 DIVISION OF HIGHWAYS  
 DETAILS  
 RETAINING WALL "D"

F.A. I. RT. 64 ST. CLAIR CO. SECTION 82-1HB  
 H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS SHEET 4 OF 6

FOR INFORMATION ONLY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 64	82-1HB	ST. CLAIR	110	55
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



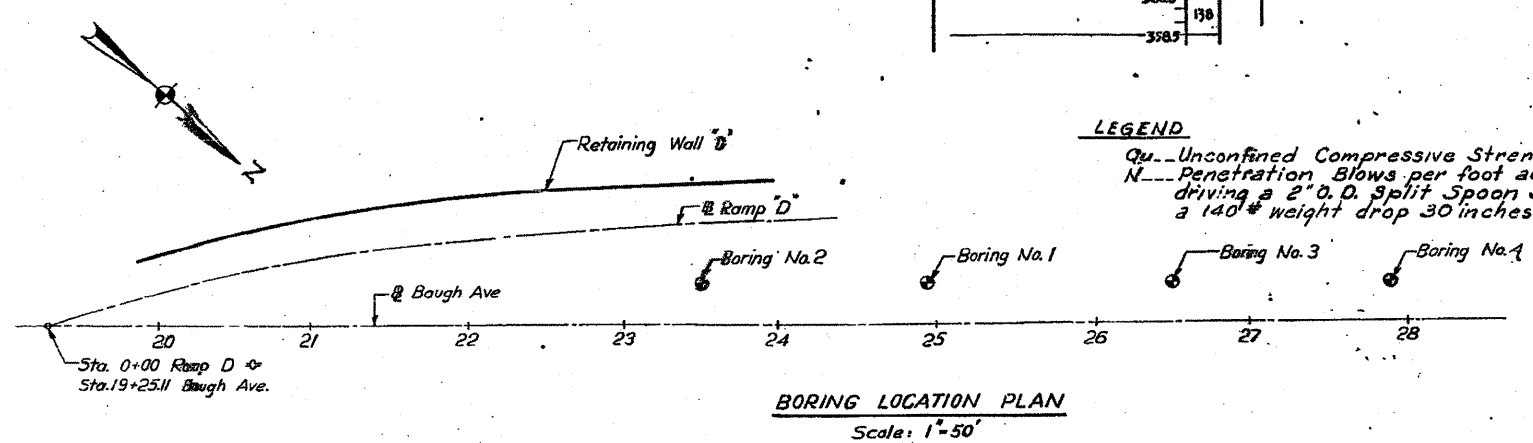
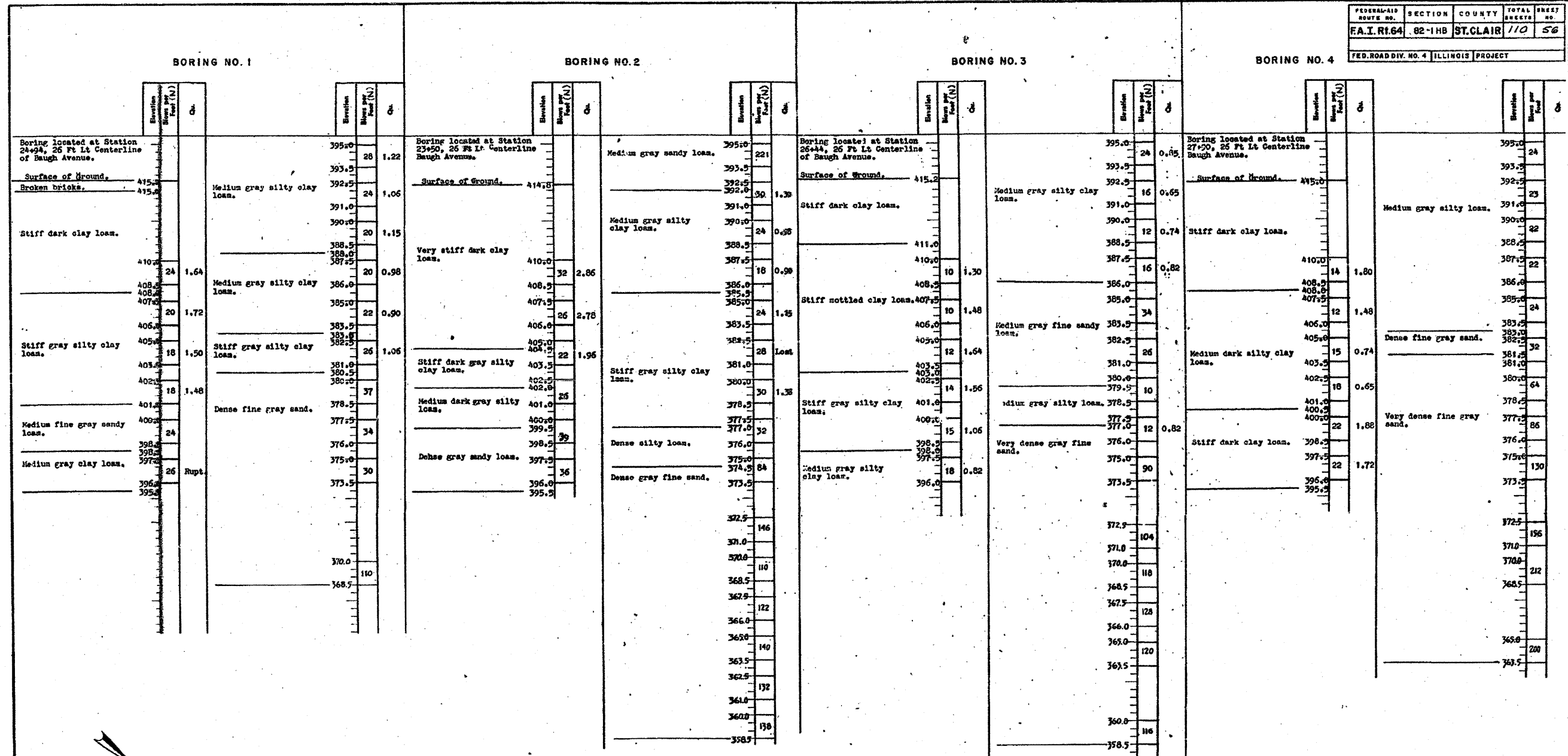
DESIGNED BY: P.X.  
 DRAWN BY: J.V.  
 CHECKED BY: P.X.

STATE OF ILLINOIS  
 DIVISION OF HIGHWAYS  
 DETAILS  
 RETAINING WALL "D"

F.A.I. RT. 64 ST. CLAIR CO. SECTION 82-1HB  
 H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS  
 SHEET NO. 5 OF 6

FOR INFORMATION ONLY

FEDERAL-AID ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.I. R1.64	82-1HB	ST. CLAIR	110	56
FED. ROAD DIV. NO. 4 ILLINOIS PROJECT				



**LEGEND**  
 Qu - Unconfined Compressive Strength (Tons/ Sq. Ft.)  
 N - Penetration Blows per foot acquired by driving a 2" O.D. Split Spoon Sampler with a 140# weight drop 30 inches

Date of Borings: Feb. 1960

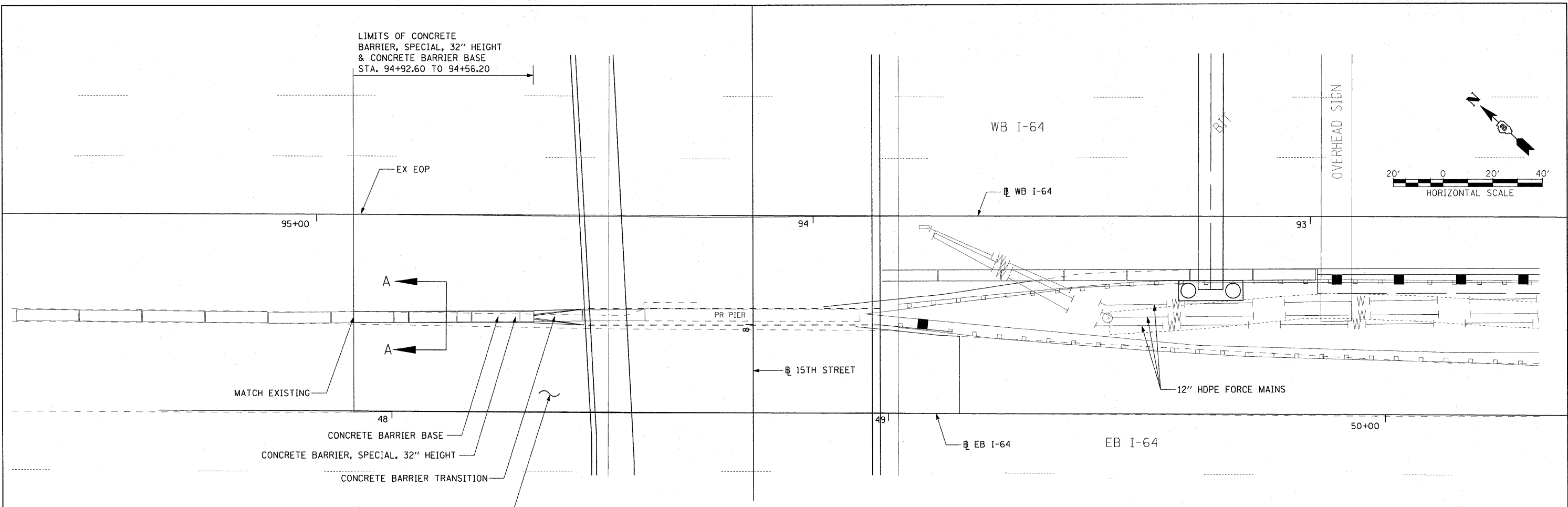
**STATE OF ILLINOIS**  
**DIVISION OF HIGHWAYS**  
**BORING LOGS**  
**RETAINING WALL 'D'**

FA.I. R1.64 ST. CLAIR CO. SECTION 82-1HB

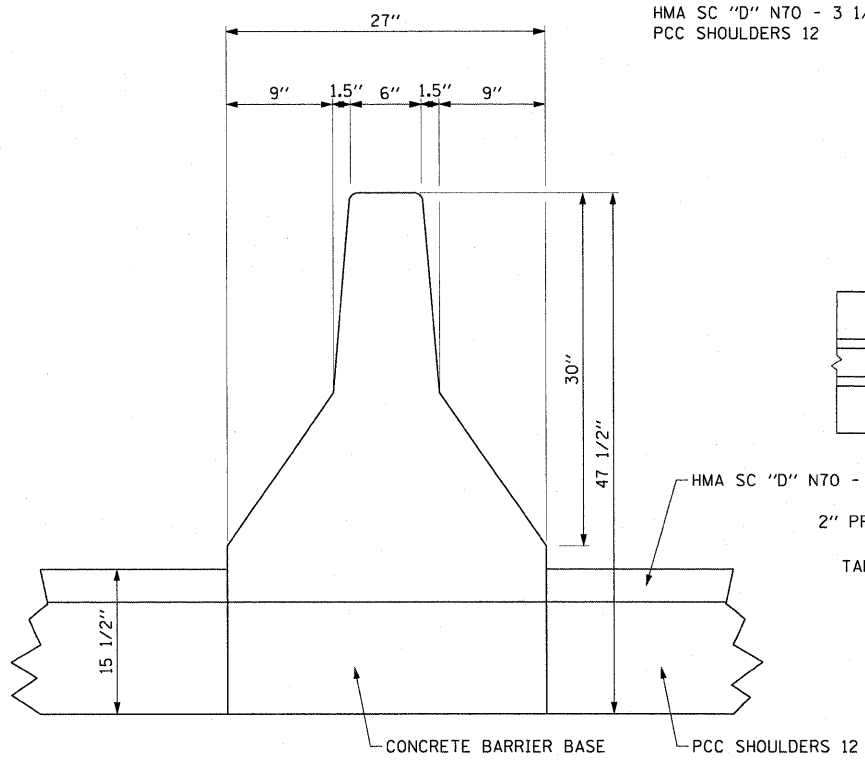
H.W. LOCHNER, INC.  
 ENGINEERS  
 CHICAGO, ILLINOIS

SHEET 6 OF 6

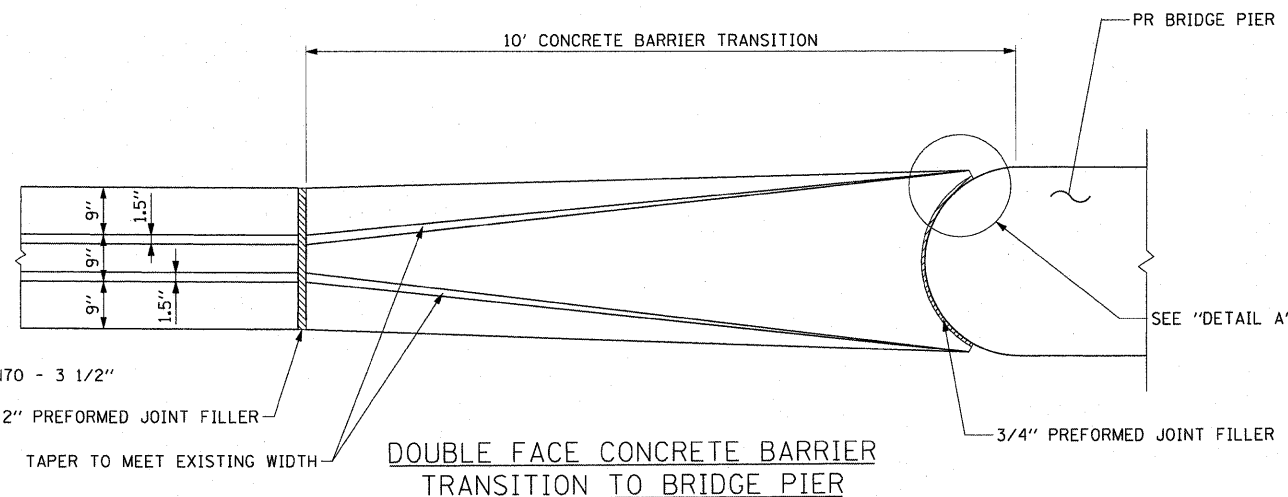




PLAN



SECTION A-A



DETAIL A

GENERAL NOTES

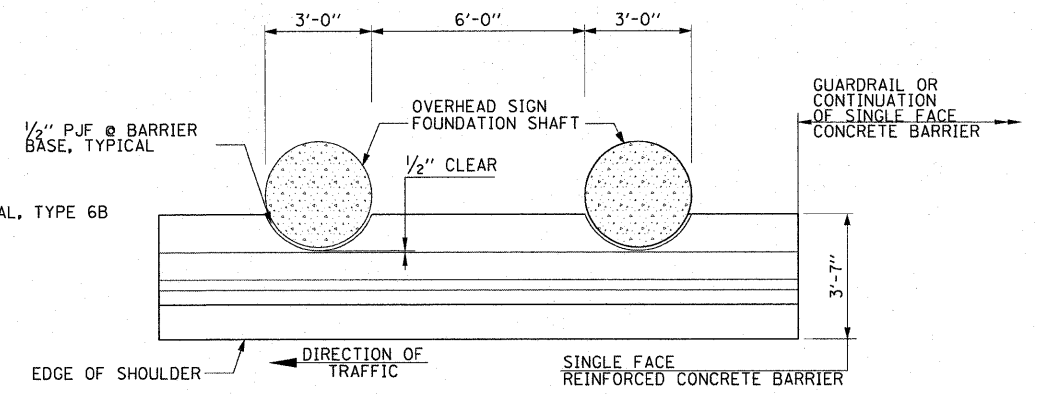
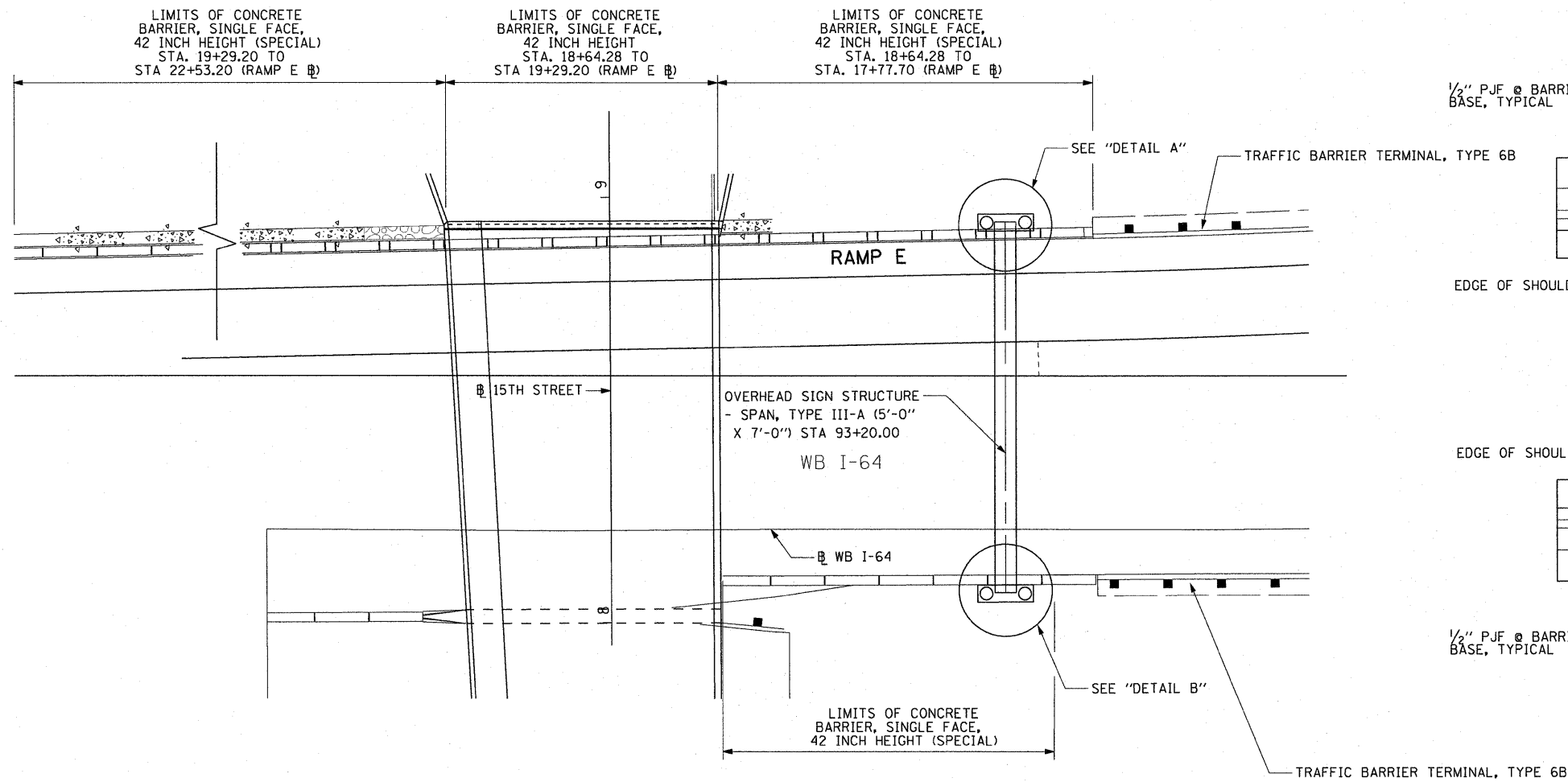
1. CONTRACTOR OPTIONS FOR FILL BETWEEN BARRIER WALLS (WHEN NEEDED):
  - A. PLACE 4" CLASS SI CONCRETE.
  - B. PLACE 12" OF GRANULAR MATERIAL AT BASE BETWEEN WALLS.
  - C. PLACE GRANULAR MATERIAL FROM BASE TO BOTTOM OF 4" CAP. FORMING MATERIAL FOR 4" CAP MAY REMAIN IN PLACE.
2. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS. AT JOINTS WITH EXISTING BARRIER WALL TO REMAIN, SEE STANDARD 637006-02 FOR JOINT DETAILS.
3. EXPANSION JOINTS SHOWN ON THIS DRAWING SHALL BE PREFORMED JOINT MATERIAL (BITUMINOUS TYPE) FILLER SHALL MEET AASHTO DESIGNATION M-33.
4. ALL REINFORCING STEEL SHALL BE GRADE 40 OR GRADE 60 MEETING THE REQUIREMENTS OF AASHTO M31 OR ASTM A615.
5. ALL WORK DETAILED HEREIN SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONCRETE BARRIER PAY ITEMS.
6. PREFORMED JOINT FILLER SHALL BE INCLUDED IN THE COST OF THE CONCRETE BARRIER TRANSITION.

FILE NAME =	USER NAME = pmsarino	DESIGNED CRH	REVISIONS -
#FILE#		DRAWN CRH	REVISIONS -
	PLOT SCALE = 10.0000' / IN.	CHECKED DBM	REVISIONS -
	PLOT DATE = 3/18/2010	DATE 03/19/10	REVISIONS -

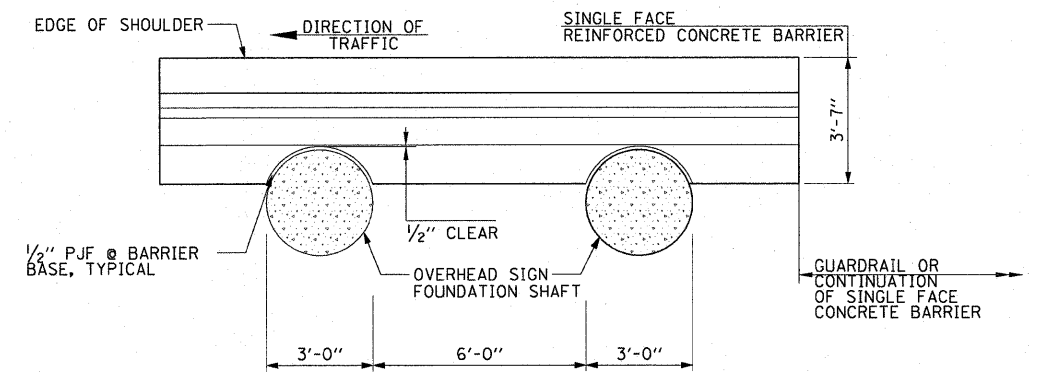
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS - CONCRETE BARRIER, SPECIAL, 32" HEIGHT DETAIL  
SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

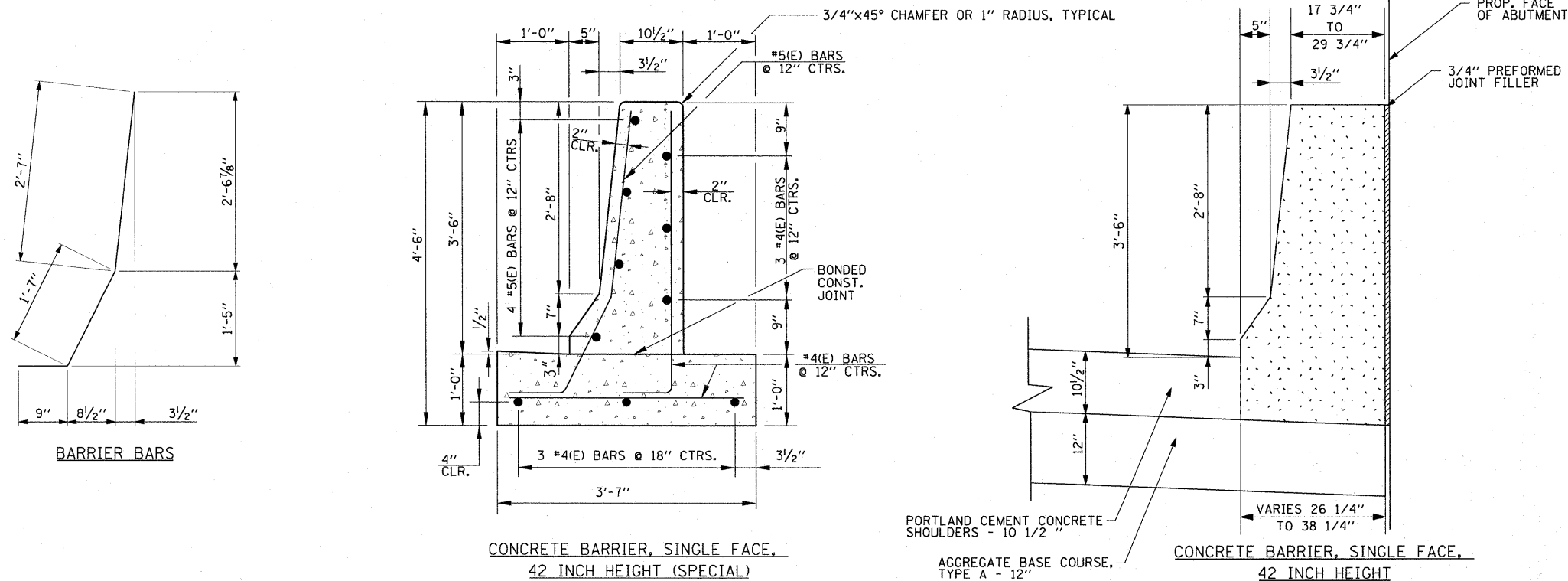
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	276
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C49	



DETAIL A



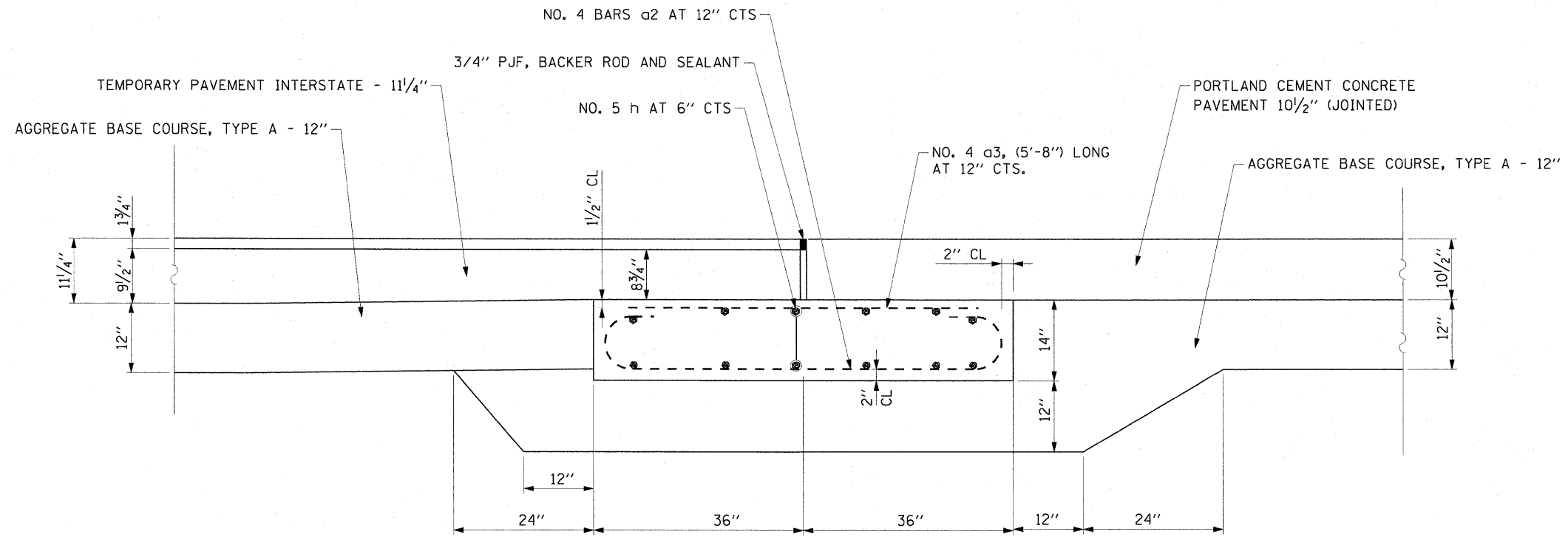
DETAIL B



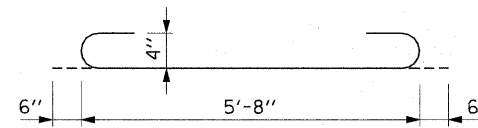
NOTES:

- TOP SHOULDER EDGE OF BARRIER BASE GUTTER SHALL MATCH THE TOP OF SHOULDER ELEVATION.
- 1" DEEP CONTRACTION JOINTS SHALL BE CONSTRUCTED IN BOTH THE REINFORCED CONCRETE BARRIER WALL AND BASE. CONTRACTION JOINTS SHALL ALSO BE CONSTRUCTED AT BOTH SIDES OF ALL DRAINAGE STRUCTURES. MAXIMUM JOINT SPACING SHALL BE 30 FEET.
- THE FORMING OF CONTRACTION JOINTS SHALL BE DONE WITH AN APPROVED FINISHING TOOL AT THE DISCRETION OF THE ENGINEER SUBJECT TO THE SATISFACTORY CONTROL OF CRACKING. THE SAWING OF CONTRACTION JOINTS IN THE BARRIER WALL SHALL NOT BE PERMITTED.
- REINFORCING BARS SHALL MEET THE REQUIREMENTS OF AASHTO M31 (ASTM A615), GRADE 60, AND SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS.
- REINFORCING BARS DESIGNATED "E" SHALL BE EPOXY COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- CONTRACTOR MAY POUR BARRIER BASE AND CONC. SHOULDER MONOLITHICALLY. IF THIS OPTION IS SELECTED, THE SHOULDER MUST BE INCREASED TO 12". NO ADDITIONAL COMPENSATION WILL BE MADE FOR THIS CHANGE.
- 3/4" PREFORMED JOINT FILLER SHALL BE USED WHERE CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT MEETS CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT (SPECIAL). PAYMENT SHALL BE INCLUDED IN COST OF CONCRETE BARRIER, SINGLE FACE, 42 INCH HEIGHT

FILE NAME =	USER NAME = pmaernn	DESIGNED CRH	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>ROADWAY DETAILS - CONCRETE BARRIER,</b> <b>SINGLE FACE, 42 INCH HEIGHT (SPECIAL)</b>	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN CRH	REVISED -			64	82-1-2HB	ST. CLAIR	345	277
PLOT SCALE = 10.0000' / IN.		CHECKED DBM	REVISED -			CONTRACT NO. 76C49				
PLOT DATE = 3/18/2010		DATE 03/19/10	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	



SLEEPER SLAB CROSS SECTION



BAR a2

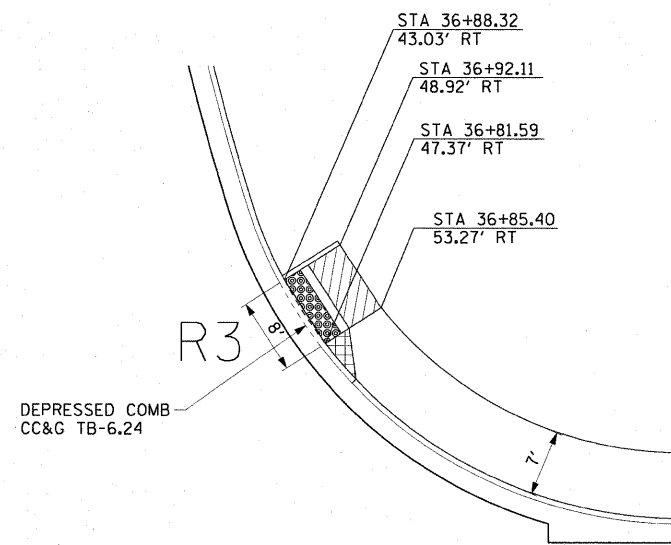
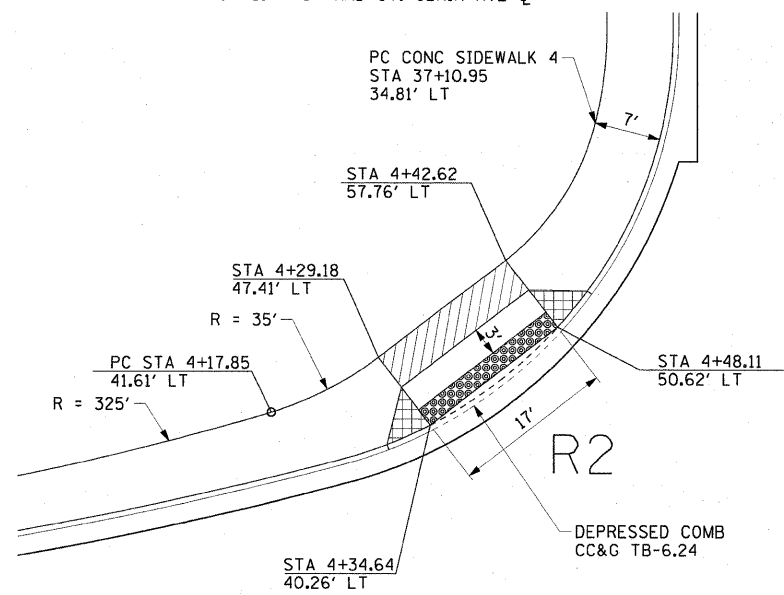
NOTES:

1. SLEEPER SLAB TO BE PAID FOR SEPARATELY.
2. ADDITIONAL WORK AND MATERIALS FOR INCREASED PAVEMENT THICKNESS AT SLEEPER SLAB AND PREFORMED JOINT SEALER TO BE INCLUDED IN PCC PAVEMENT 10 1/2" (JOINTED).


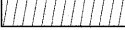
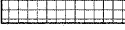
FILE NAME = #FILE#	USER NAME = pmsarno	DESIGNED OP	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>ROADWAY DETAILS - SLEEPER SLAB DETAIL</b>		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1,000' / IN.	DRAWN OP	REVISED -				64	82-1-2HB	ST. CLAIR	345	279
	PLOT DATE = 3/19/2010	CHECKED DBM	REVISED -				CONTRACT NO. 76C49				
	DATE 03/19/10	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

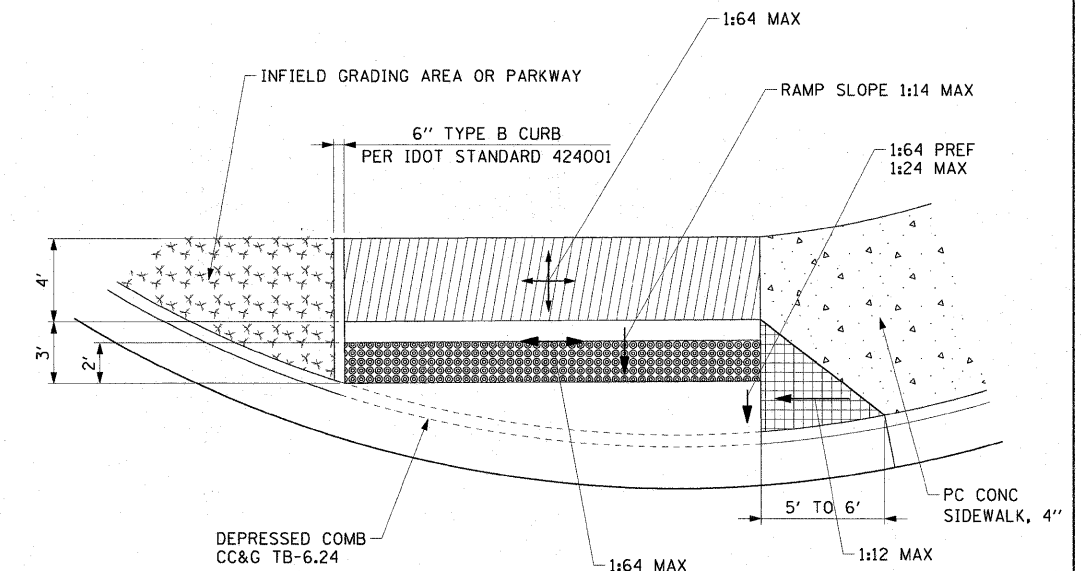


NOTE: STATION AND OFFSETS TAKEN FROM 15TH ST AND ST. CLAIR AVE CL

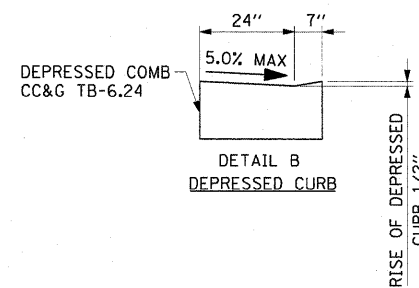
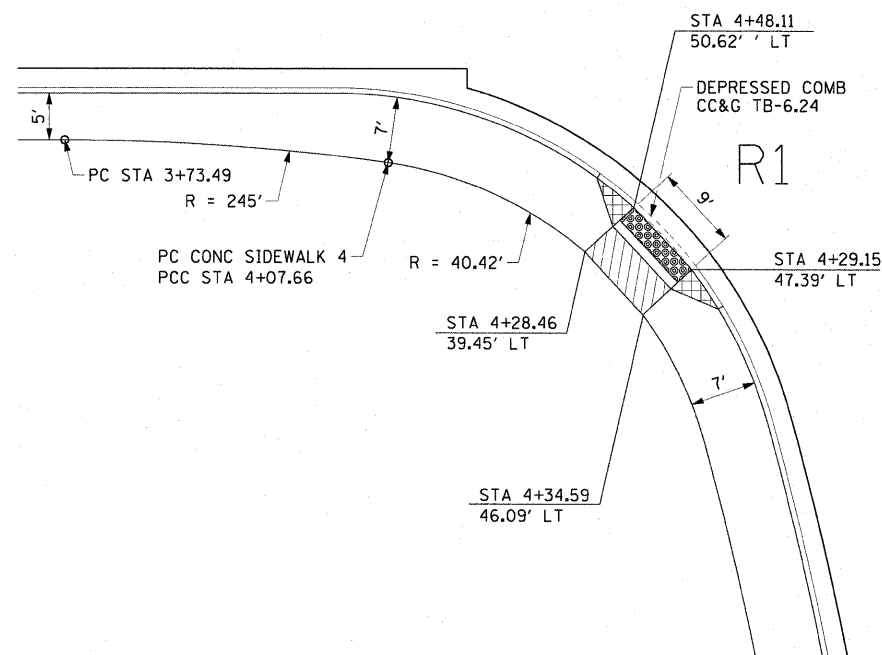


LEGEND:

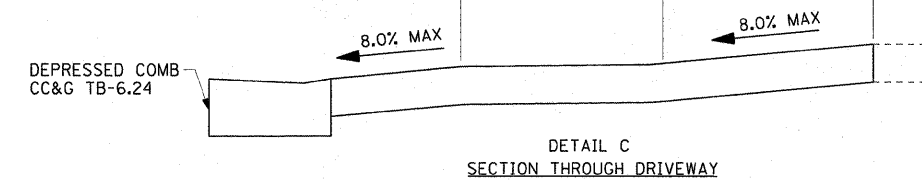
-  DETECTABLE WARNINGS (24" WIDE)
-  LEVEL LANDING AREA = 1:64 MAX
-  SIDE FLARE = 1:12 MAX (SLOPING INWARD TO DETECTABLE WARNING)



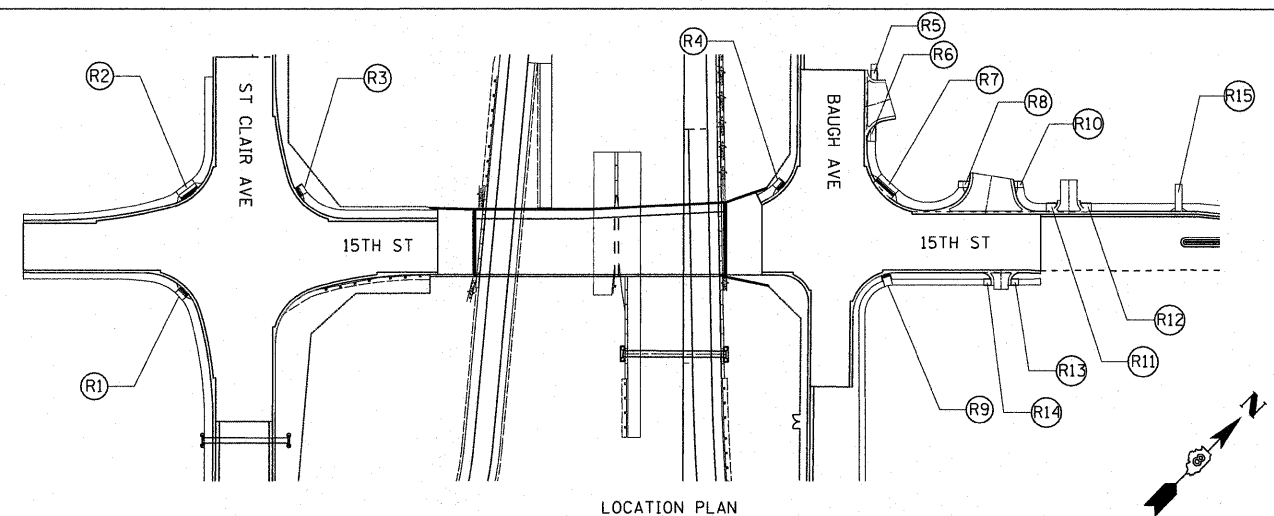
DETAIL A  
(TYP DIMENSIONS FOR ALL CURB RAMPS, UNLESS OTHERWISE NOTED)



DETAIL B  
DEPRESSED CURB



DETAIL C  
SECTION THROUGH DRIVEWAY



LOCATION PLAN

FILE NAME =	USER NAME = plmsorno	DESIGNED CRH	REVISED -
#FILE#		DRAWN CRH	REVISED -
	PLOT SCALE = 10,000' / IN.	CHECKED DBM	REVISED -
	PLOT DATE = 3/18/2010	DATE 03/19/10	REVISED -

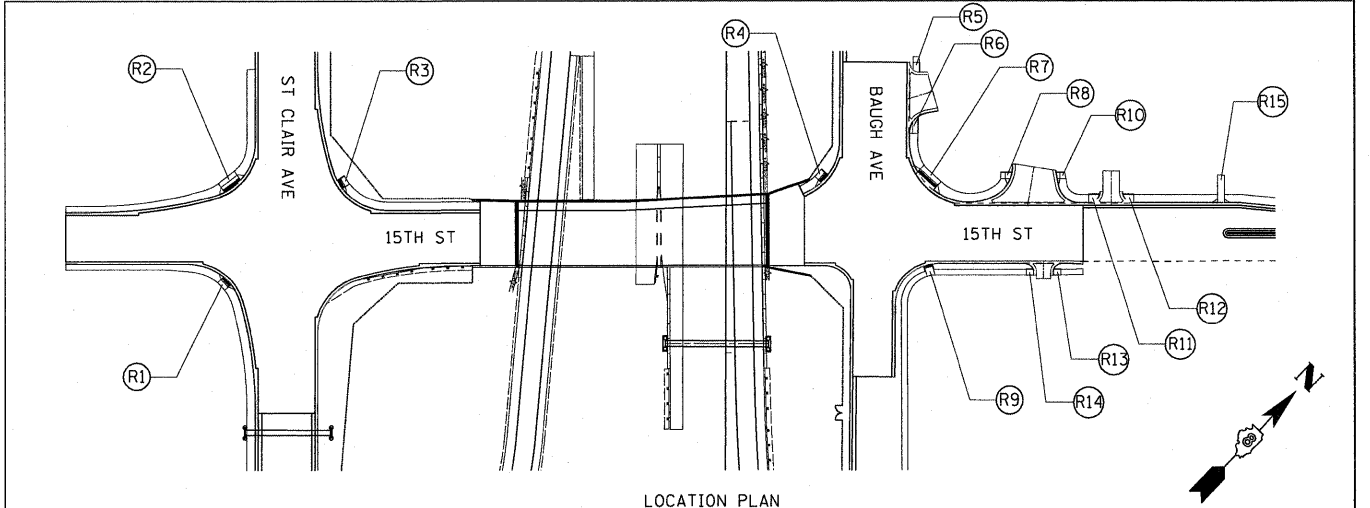
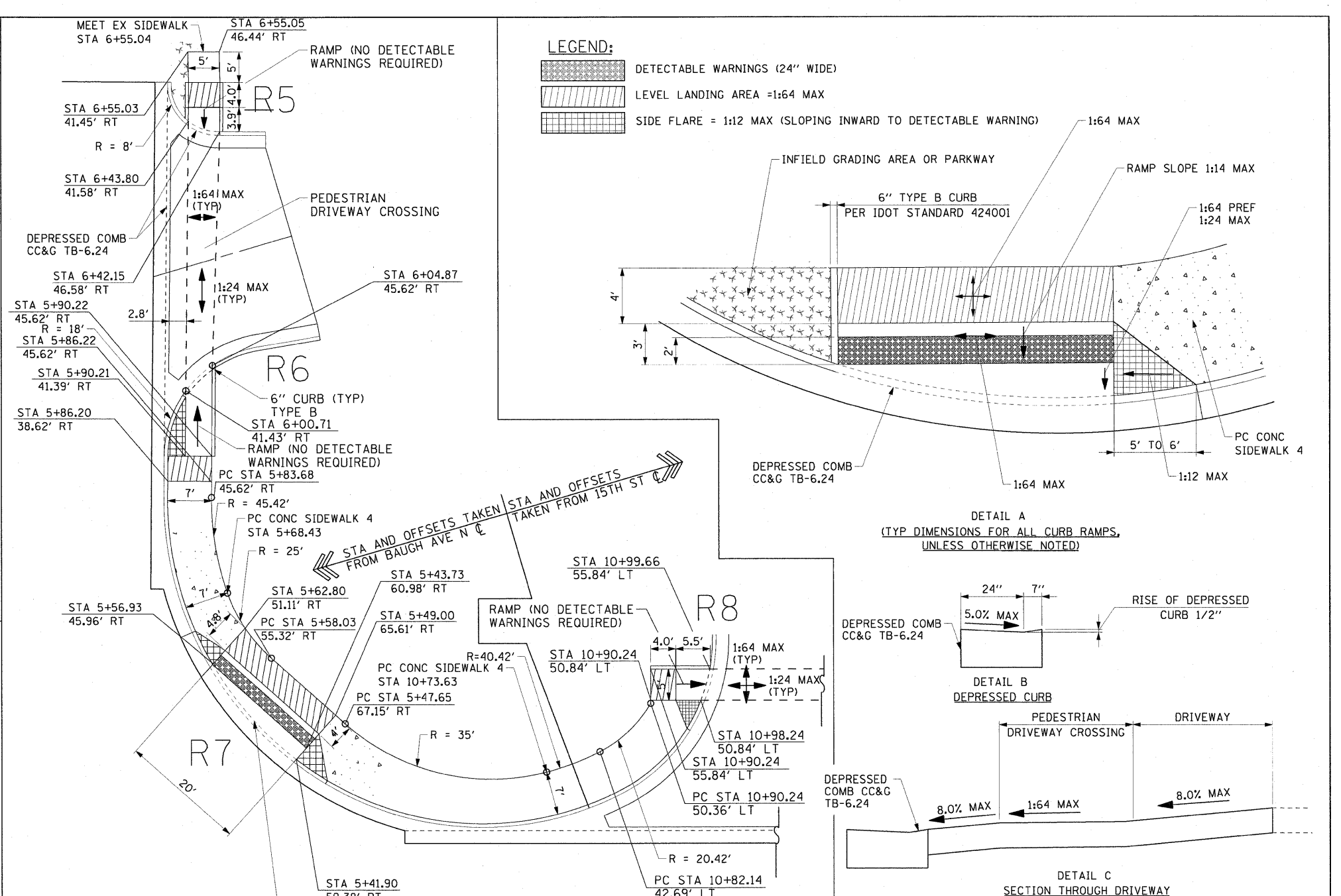
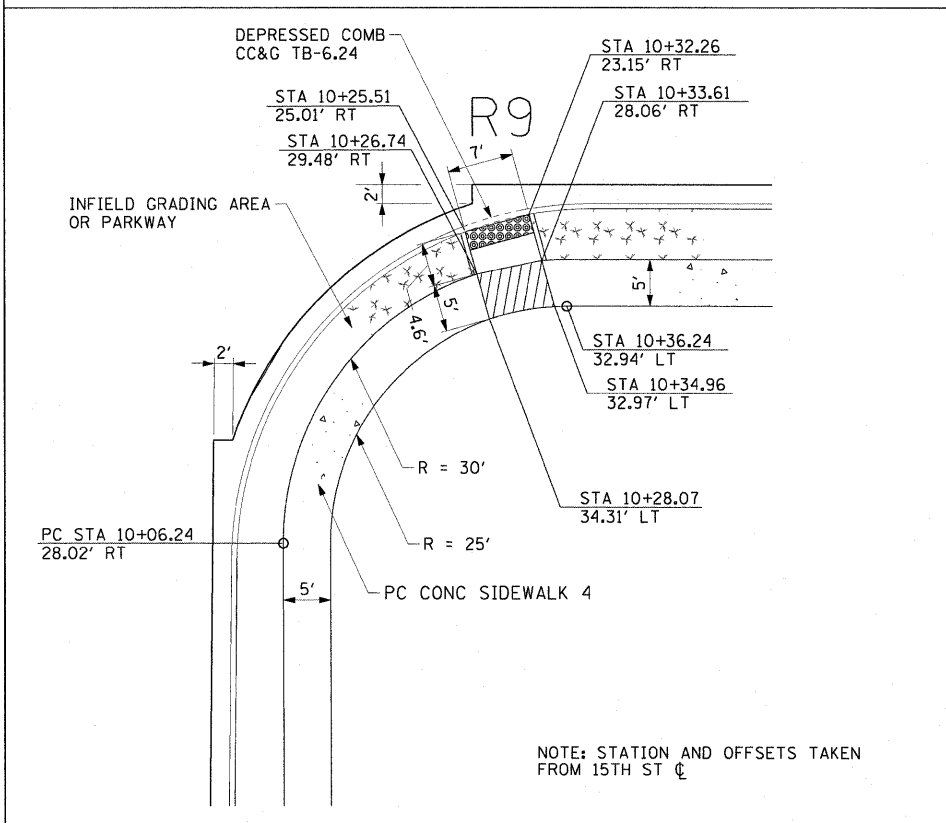
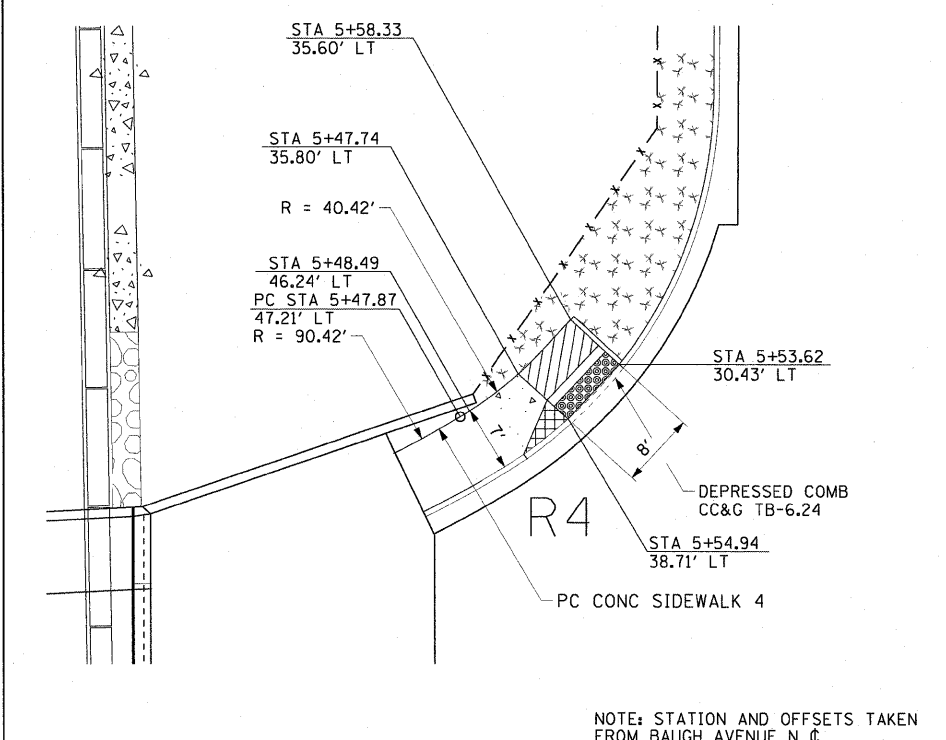
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS - ADA CURB RAMPS

SCALE: SHEET NO. 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	280
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				





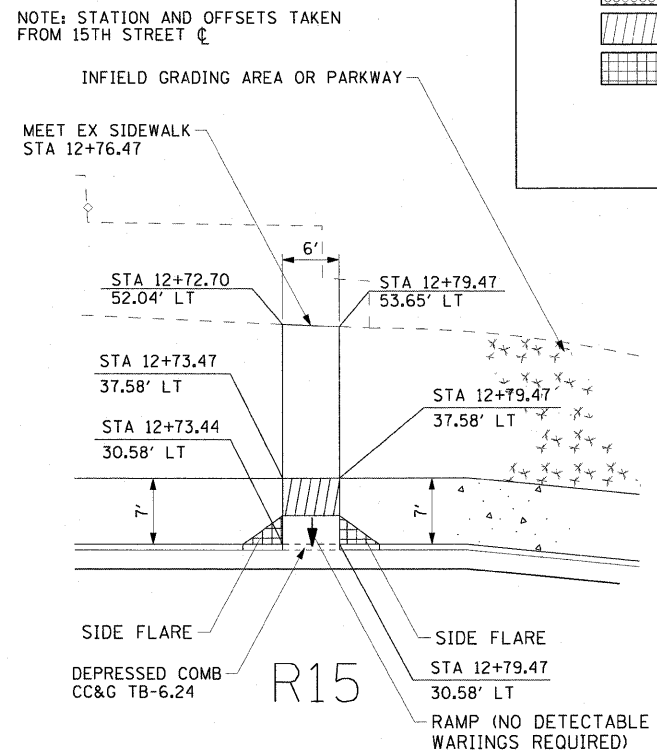
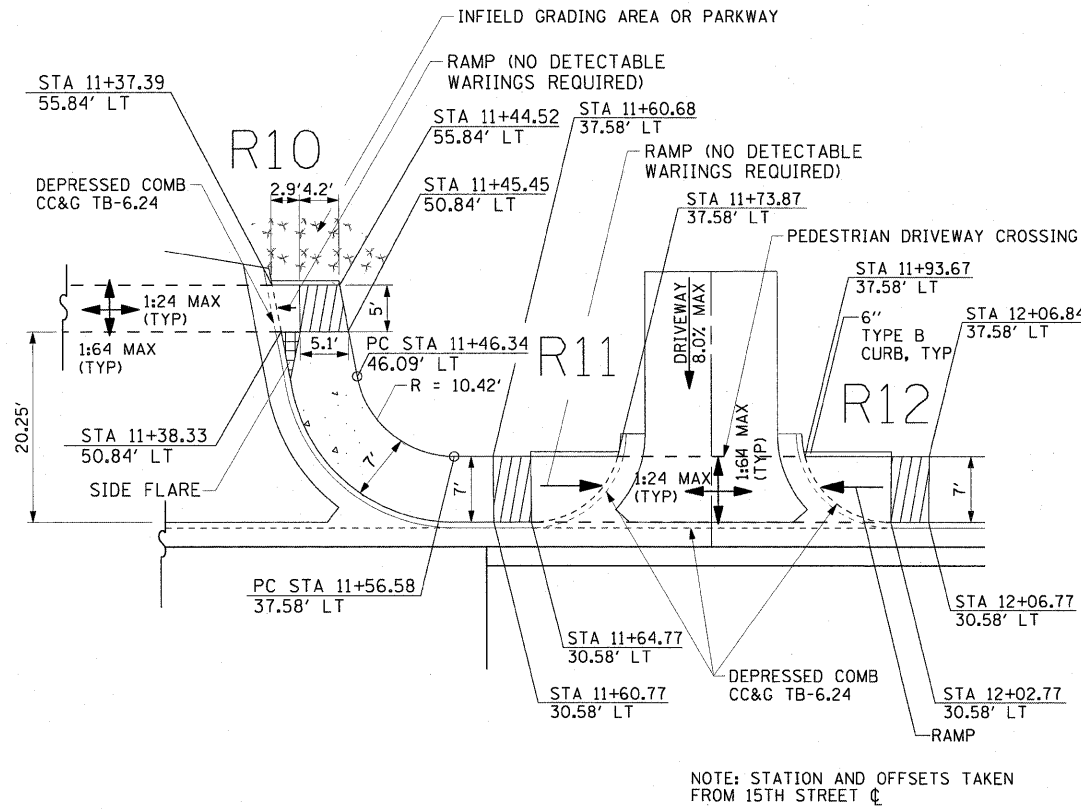
FILE NAME =	USER NAME = pmsarno	DESIGNED CRH	REVISED -
#FILE#		DRAWN CRH	REVISED -
		CHECKED DBM	REVISED -
		DATE 03/19/10	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

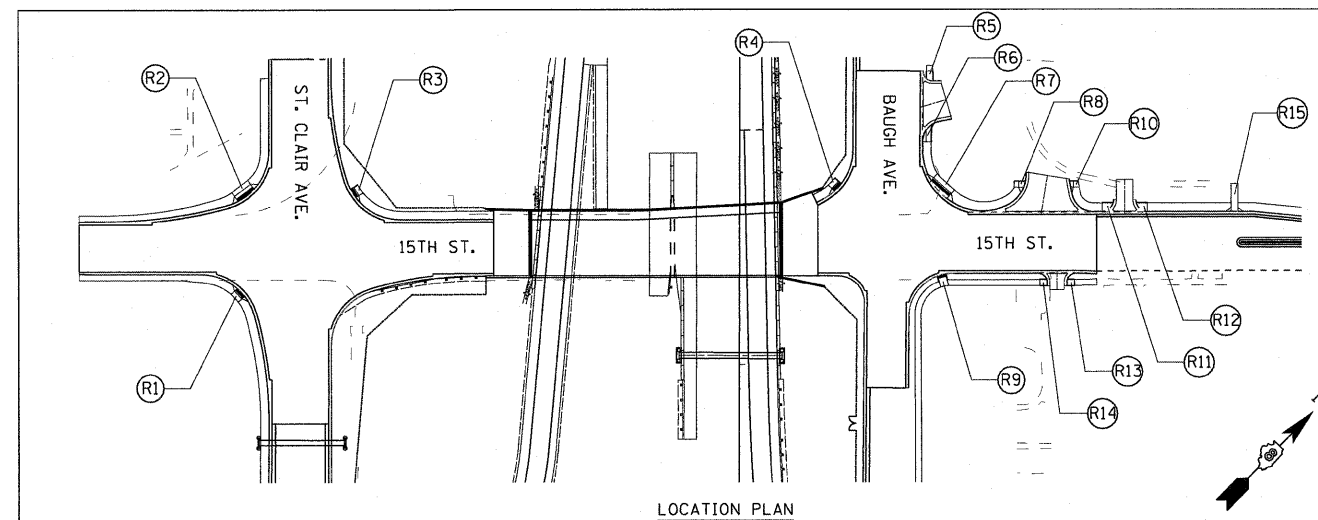
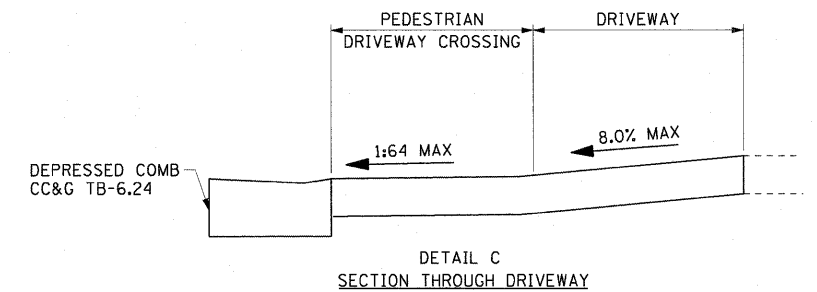
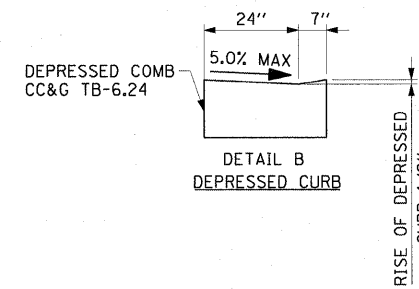
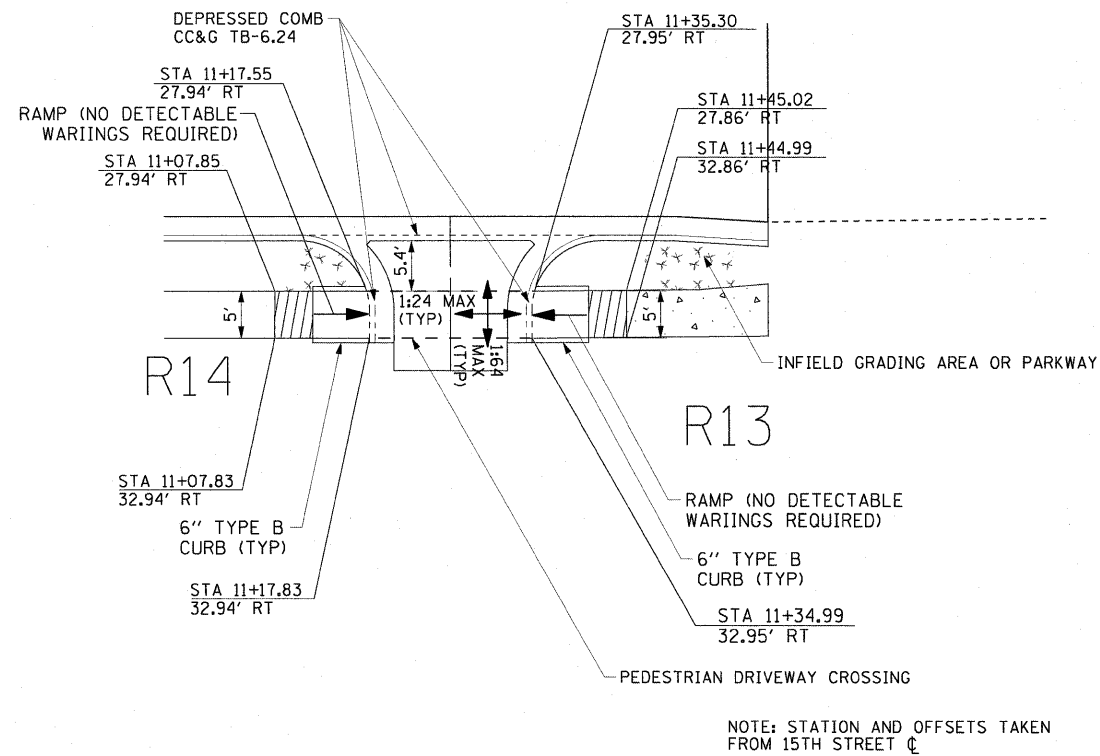
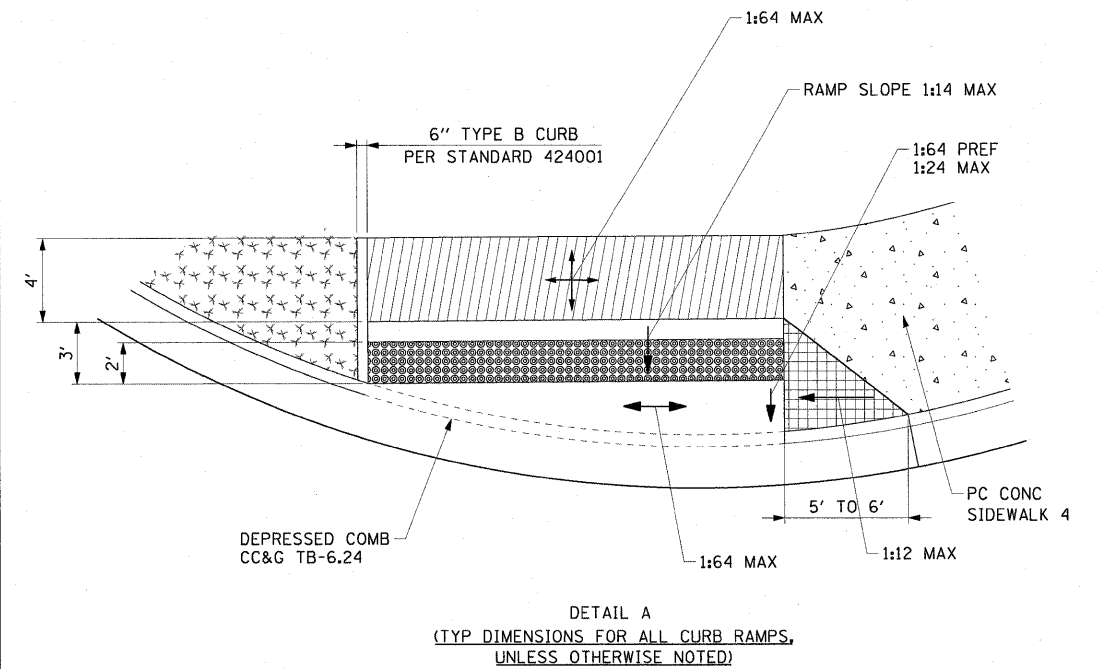
**ROADWAY DETAILS - ADA CURB RAMPS**

SCALE: SHEET NO. 2 OF 3 SHEETS STA. TO STA.

F.A.I. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 281
CONTRACT NO. 76C49			ILLINOIS FED. AID PROJECT	



- LEGEND:**
- DETECTABLE WARNINGS (24" WIDE)
  - LEVEL LANDING AREA = 1:64 MAX
  - SIDE FLARE = 1:12 MAX (SLOPING INWARD TO DETECTABLE WARNING)



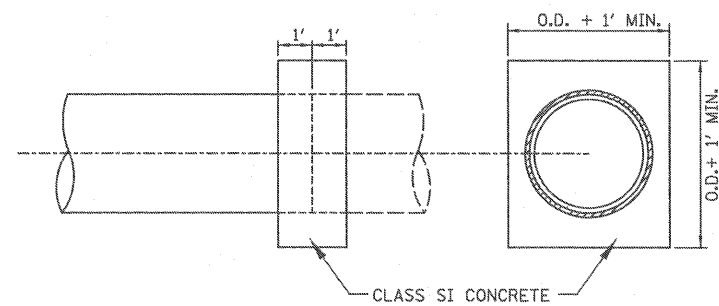
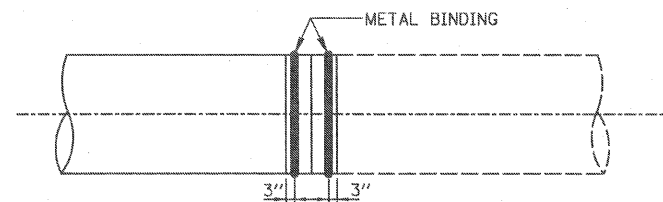
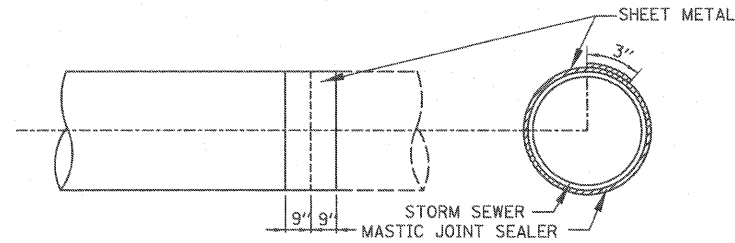
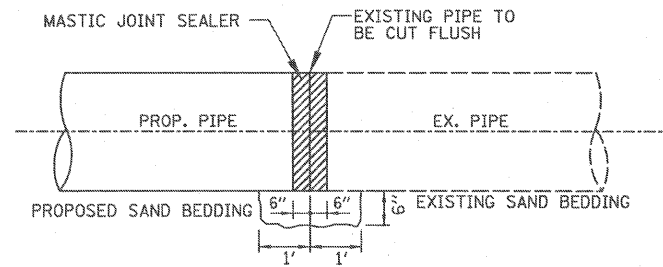
FILE NAME =	USER NAME = pmserrno	DESIGNED CRH	REVISED
#FILE#		DRAWN CRH	REVISED -
	PLOT SCALE = 10,000' / IN.	CHECKED DBM	REVISED -
	PLOT DATE = 3/18/2010	DATE 03/19/10	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS - ADA CURB RAMPS

SCALE: SHEET NO. 3 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	282
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		CONTRACT NO. 76C49	



CONCRETE COLLAR

CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 1' X 6" DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT SHEET METAL GAGE 19 OR GEOTEXTILE FABRIC CLASS B, 1.5' WIDE AND THE LENGTH OF THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" LONG.
5. WRAP THE SHEET METAL OR GEOTEXTILE FABRIC CLASS B AROUND THE PIPES, 9" ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL OR GEOTEXTILE FABRIC CLASS B, AT LEAST 3" AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL OR GEOTEXTILE FABRIC CLASS B AND THE PIPES.
9. PLACE CONCRETE AROUND THE JOINT.

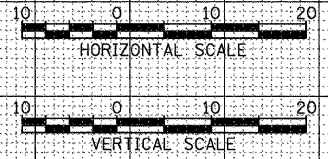
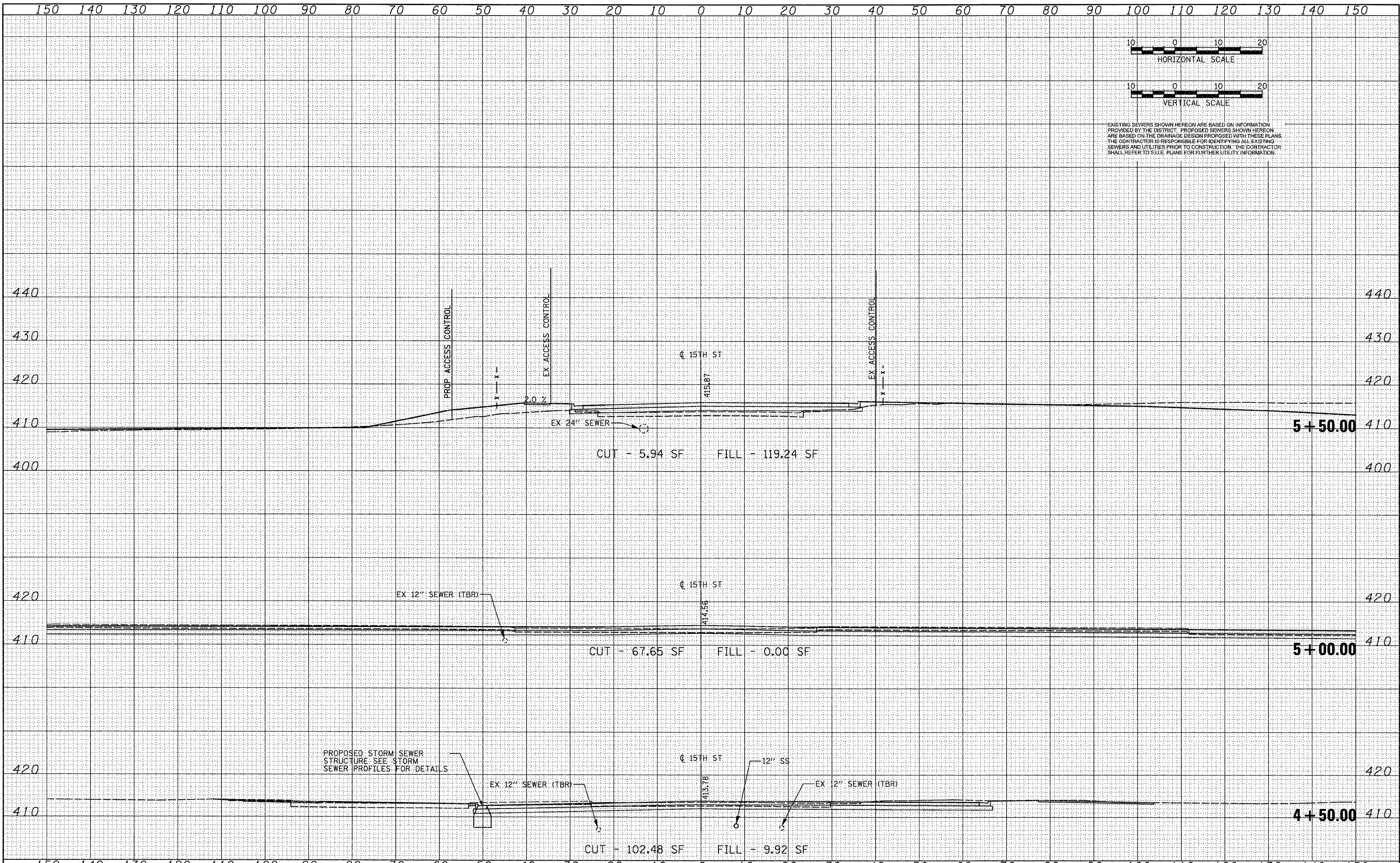
GENERAL NOTES:

1. WHEN THE CONNECTION LOCATION SHOWN ON THE PLANS IS WITHIN 2' OF AN EXISTING JOINT, GO TO THE EXISTING JOINT.
2. CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE PIPE. ALL DEBRIS THAT ENTERS THE PIPE MUST BE REMOVED. THE PIPE MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.
3. CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE FROM PROJECTING INTO THE EXISTING PIPE.

FILE NAME = #FILE#	USER NAME = IDOT	DESIGNED - TTB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DRAINAGE DETAIL - CONCRETE COLLAR</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0001' / IN.	CHECKED - JAH	REVISED -					64	82-1-2HB	ST. CLAIR	345	283
PLOT DATE = 3/17/2010	DATE - 3/19/2010	REVISED -	REVISED -	SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 76C49		







EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

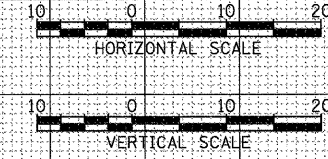
FILE NAME = D8TRI-76C49-ah.t.XS_15th.dgn	USER NAME = IDOT	DESIGNED - TTB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS - 15TH STREET</b>			F.A. RTE. 64	SECTION 82-1-2HB	COUNTY ST. CLAIR	TOTAL SHEETS 345	SHEET NO. 285
	PLOT SCALE = 10.0000' / IN.	DRAWN - GDO	REVISED -		SCALE: 1" = 10'	SHEET NO. 2 OF 8 SHEETS	STA. 4+50.00 TO STA. 5+50.00	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 76C49	
	PLOT DATE = 3/19/2010	CHECKED - JAH	REVISED -									
		DATE - 3/19/2010	REVISED -									





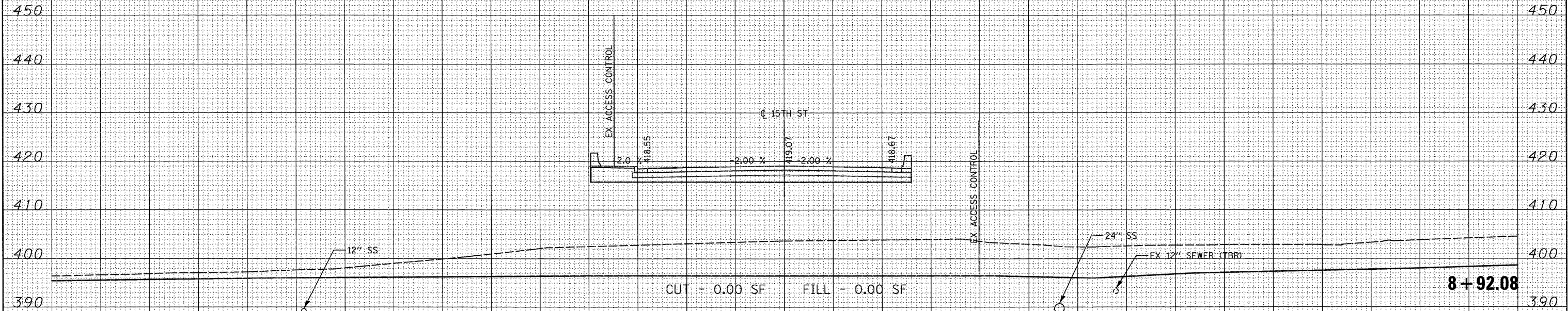


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

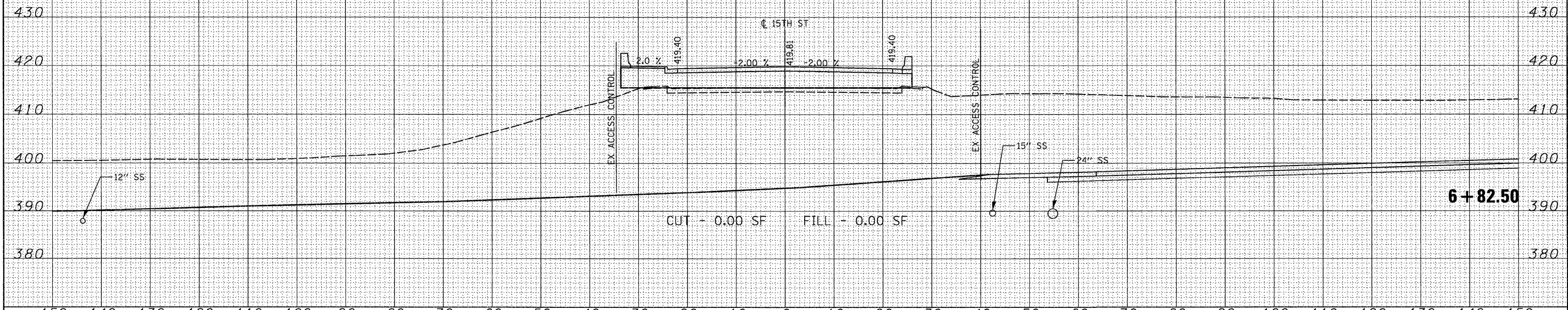


EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO SALE PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
PLotted	
NOTE BOOK	
AREAS CHECKED	
NO.	



DATE	
BY	
ORIGINAL SURVEY	
PLotted	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE NAME = DBTRI-76C49-sh.t.XS\_15th.dgn

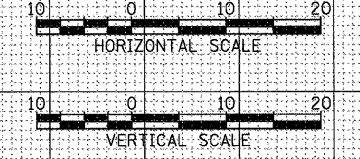
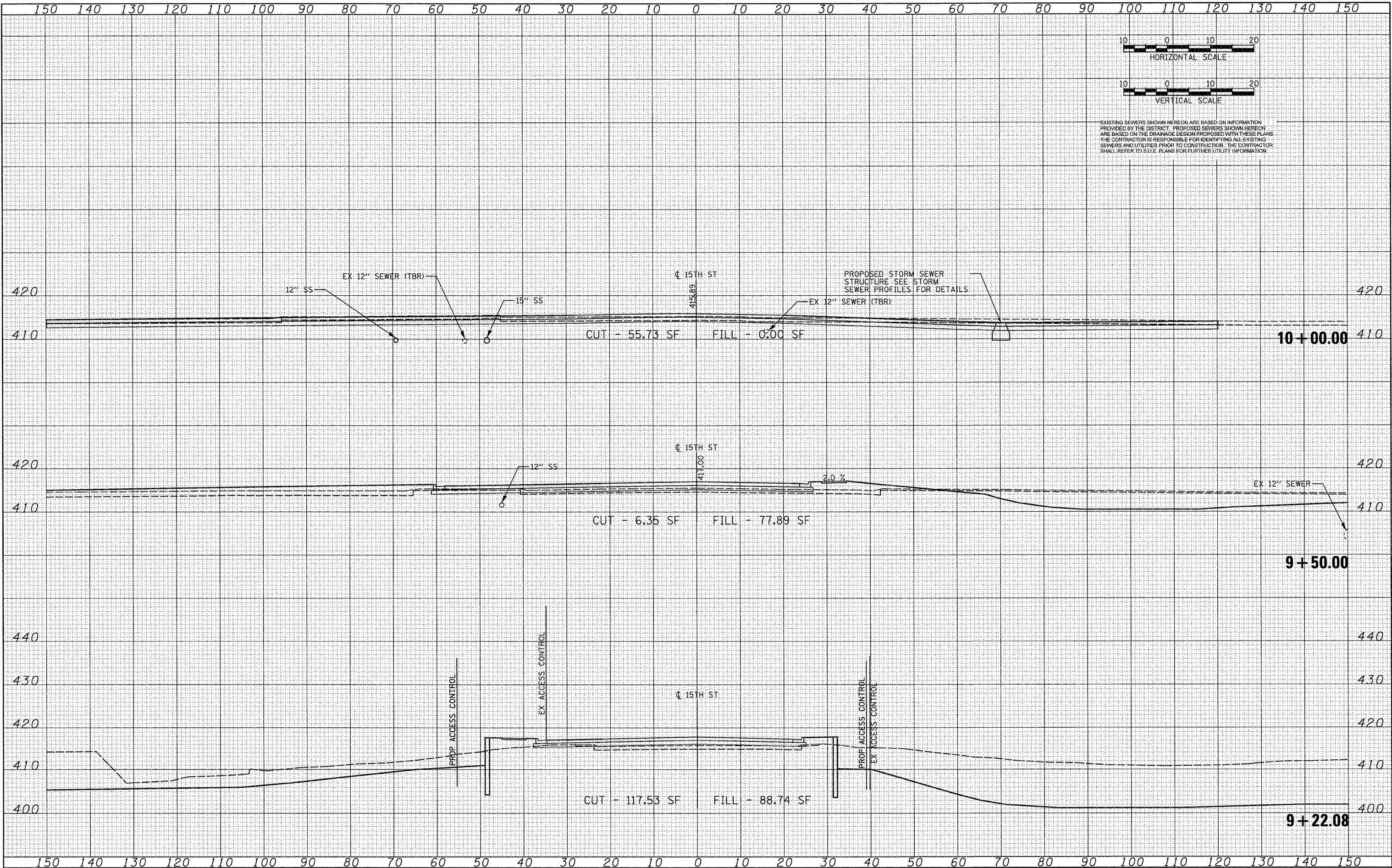
USER NAME = IDDT	DESIGNED - TTB	REVISED -
	DRAWN - GDO	REVISED -
PLOT SCALE = 10.0000' / IN.	CHECKED - JAH	REVISED -
PLOT DATE = 3/17/2010	DATE - 3/19/2010	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS - 15TH STREET**  
SCALE: 1" = 10' SHEET NO. 4 OF 8 SHEETS STA. 6+82.50 TO STA. 8+92.08

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	287
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C49	





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

FILE NAME = DBTRI-76C49-sh\_t.XS\_15th.dgn

USER NAME = IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

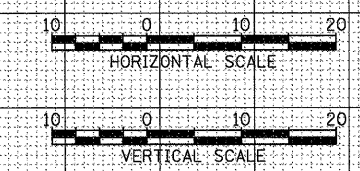
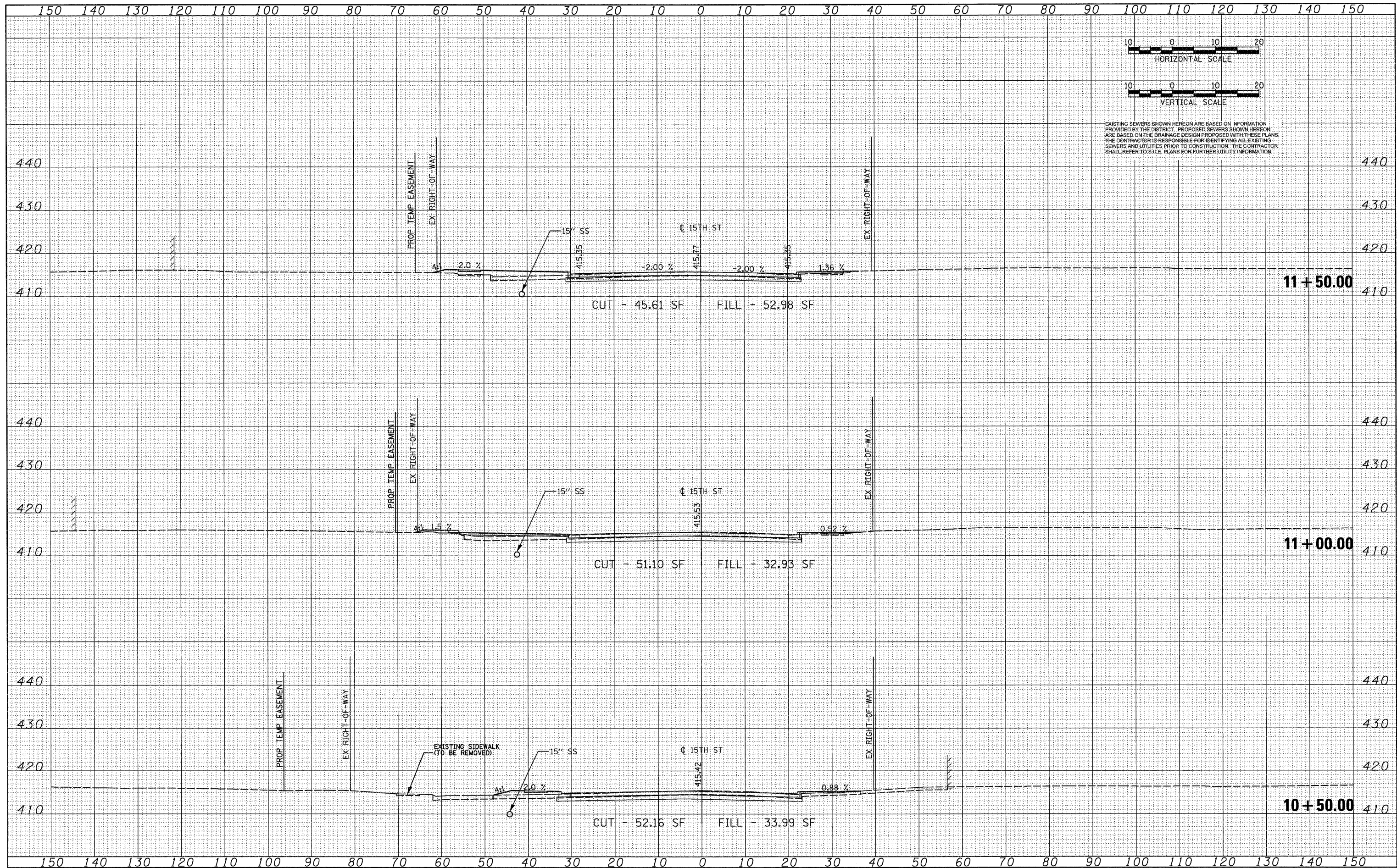
REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - 15TH STREET  
 SCALE: 1" = 10'  
 SHEET NO. 5 OF 8 SHEETS  
 STA. 9+22.08 TO STA. 10+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	288
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C49	





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO SALE PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

FILE NAME = DBTRI-76C49-sh\_t.XS\_15th.dgn

USER NAME = IDDT	DESIGNED - TTB	REVISED -
	DRAWN - GDO	REVISED -
PLOT SCALE = 10.0000' / IN.	CHECKED - JAH	REVISED -
PLOT DATE = 3/17/2010	DATE - 3/19/2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

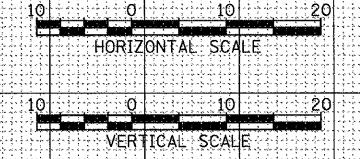
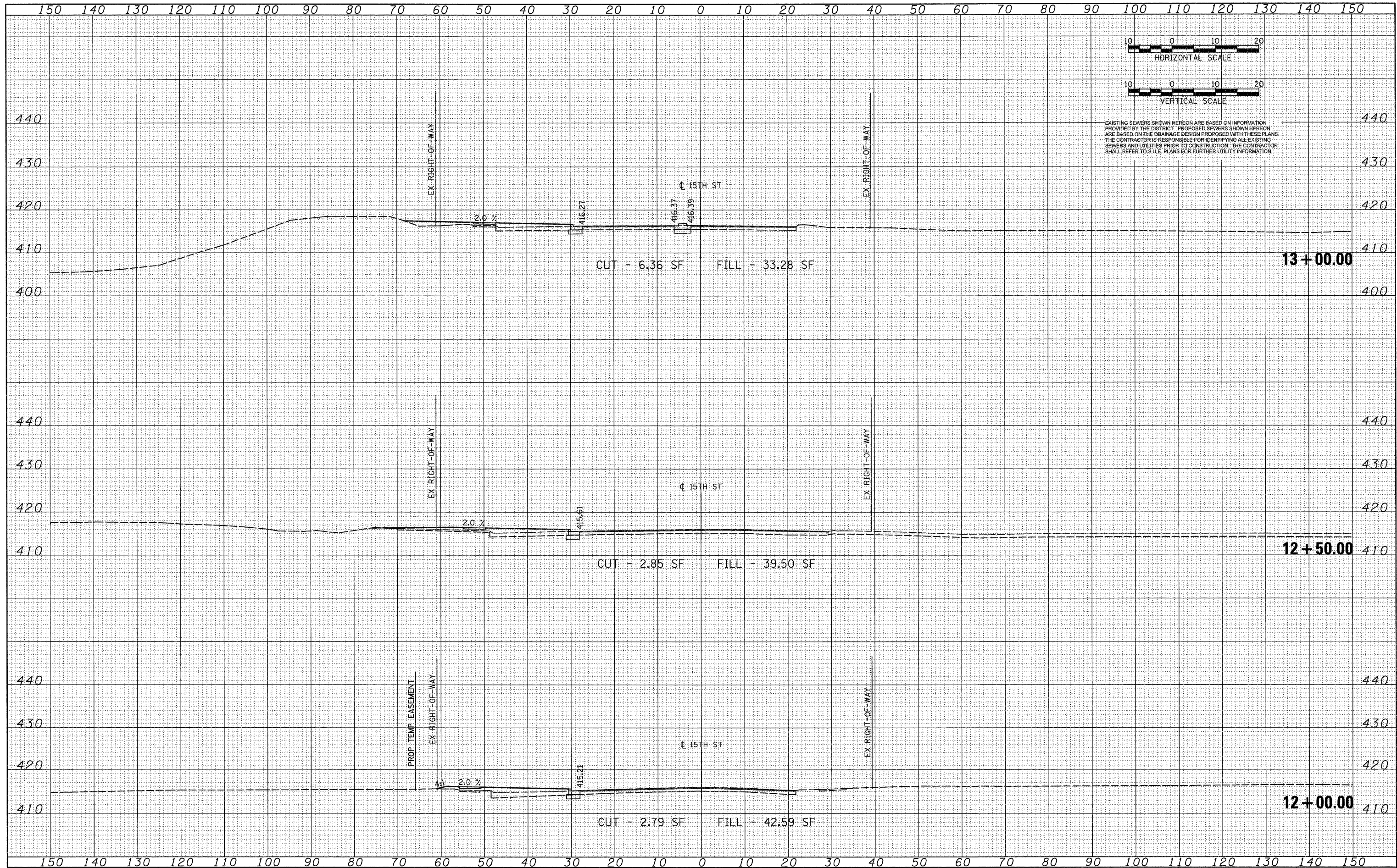
CROSS SECTIONS - 15TH STREET  
SCALE: 1" = 10' SHEET NO. 6 OF 8 SHEETS STA. 10+50.00 TO STA. 11+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	289
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 76C49	



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

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



EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

FILE NAME = DBTRI-76C49-sh\_t.XS\_15th.dgn

USER NAME = IDOT	DESIGNED - TTB	REVISED -
PLLOT SCALE = 10.0000' / IN.	DRAWN - GDO	REVISED -
PLLOT DATE = 3/17/2010	CHECKED - JAH	REVISED -
	DATE - 3/19/2010	REVISED -

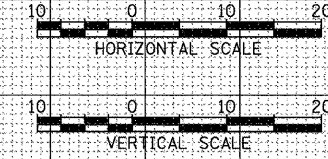
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - 15TH STREET  
 SCALE: 1" = 10'    SHEET NO. 7 OF 8 SHEETS    STA. 12+00.00 TO STA. 13+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	290
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

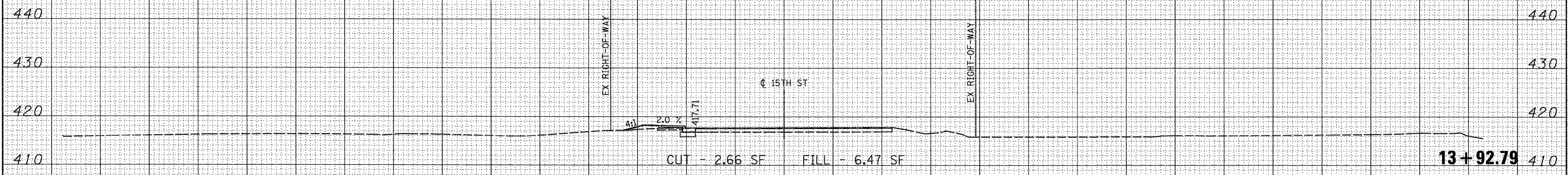


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

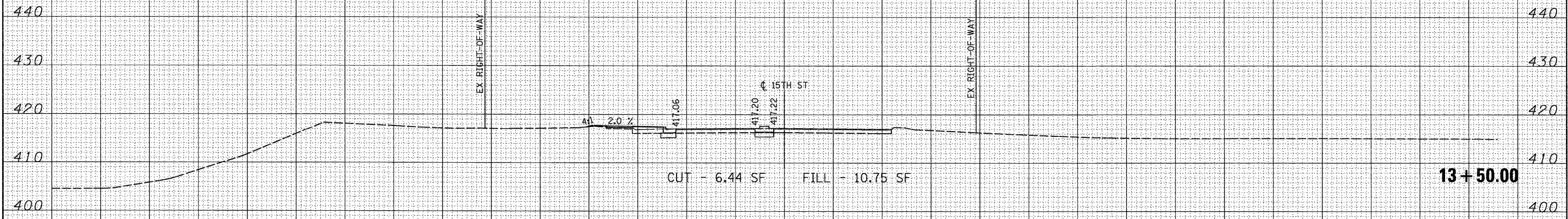


EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

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



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



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FILE NAME = DBTRI-76C49-ah-t.XS.15th.dgn

USER NAME = IDOT	DESIGNED - TTB	REVISED -
PLOT SCALE = 10.0000' / IN.	DRAWN - GDO	REVISED -
PLOT DATE = 3/17/2010	CHECKED - JAH	REVISED -
	DATE - 3/19/2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

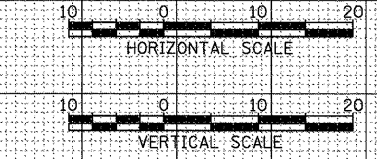
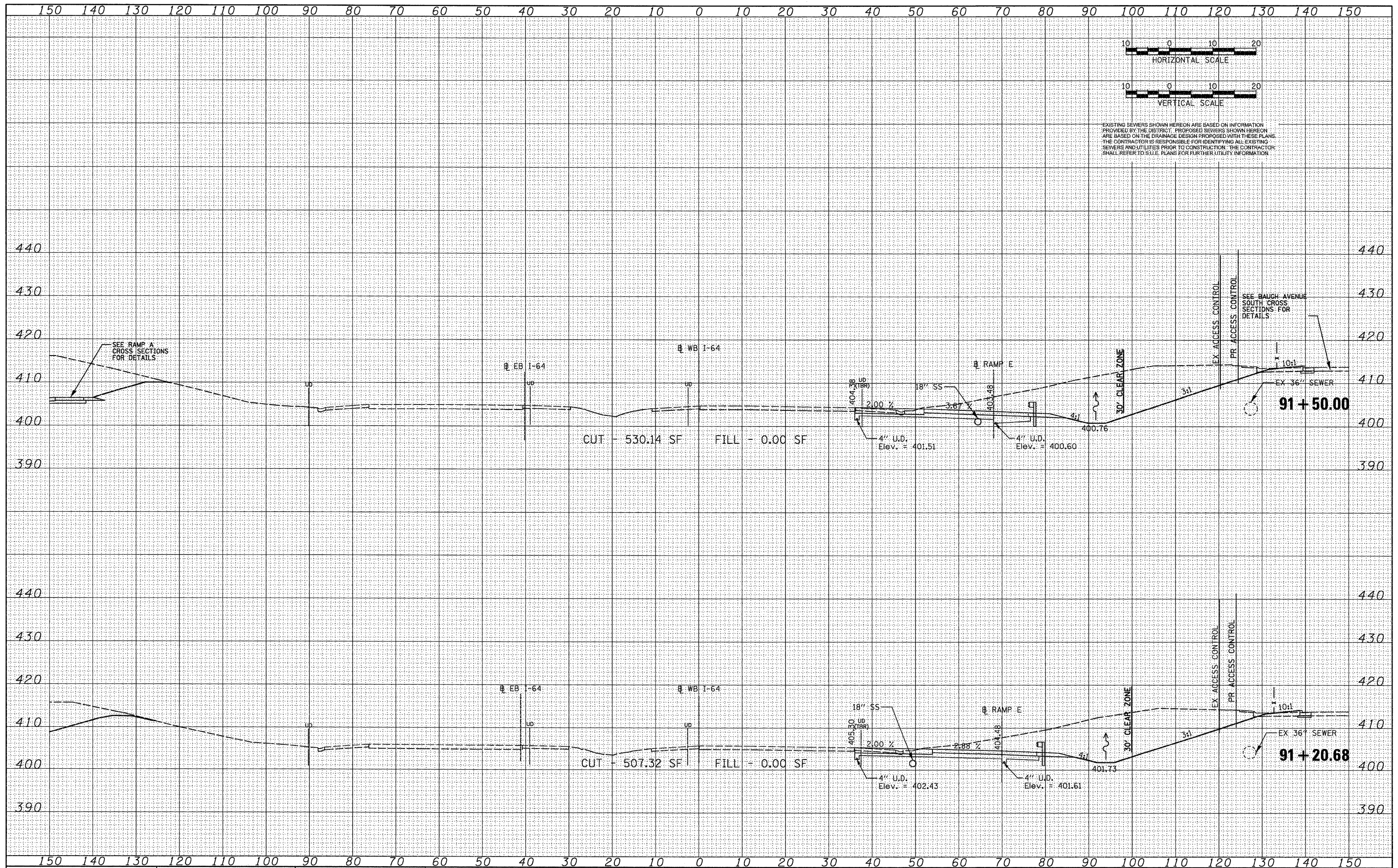
CROSS SECTIONS - 15TH STREET  
SCALE: 1" = 10'  
SHEET NO. 8 OF 8 SHEETS  
STA. 13+50.00 TO STA. 13+92.79

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	291
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



DATE	
BY	
FINAL SURVEY	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

FILE NAME = DBTRI-76C49-ah-t.XS-64WB.dgn  
 USER NAME = IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

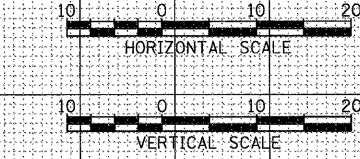
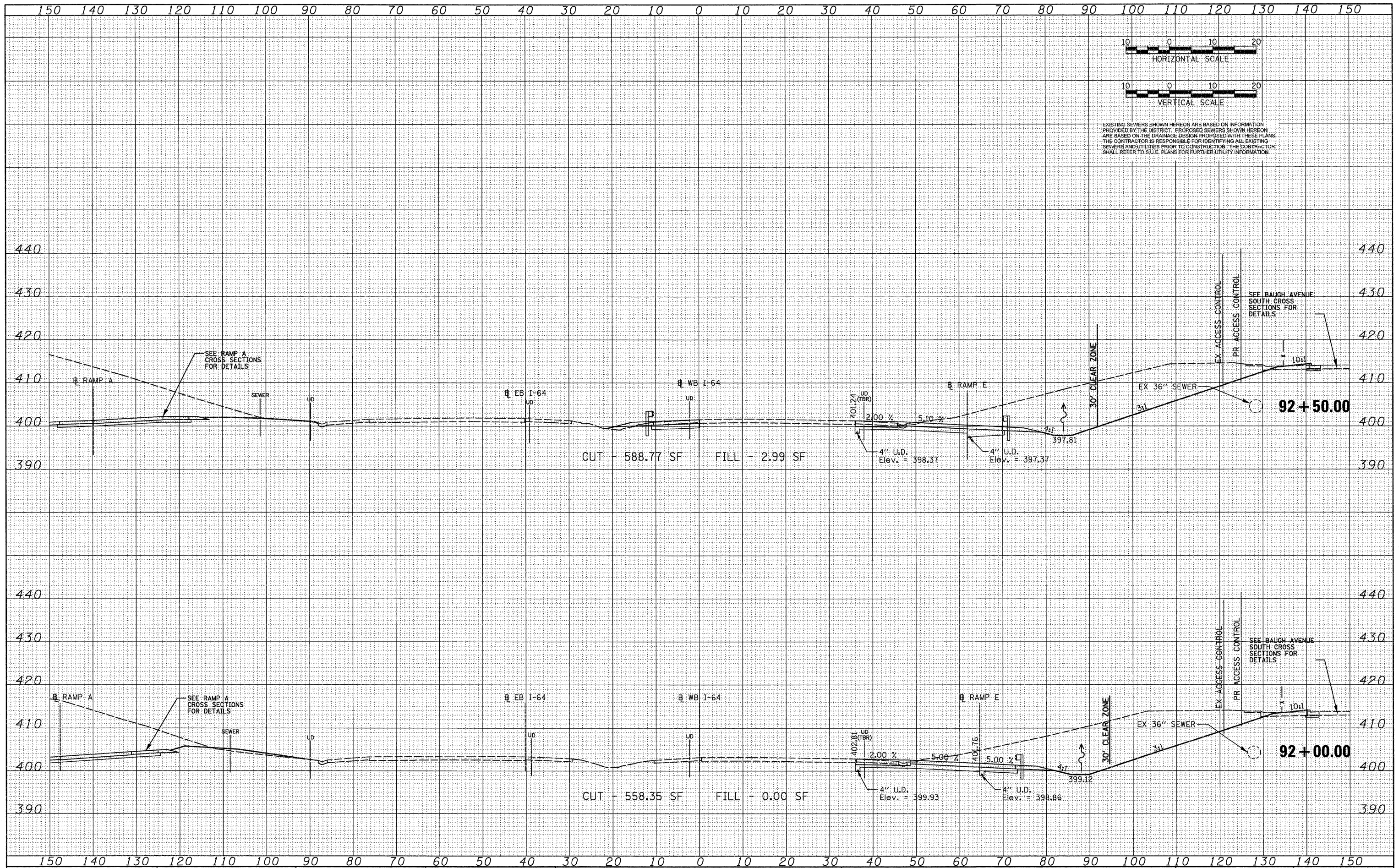
REVISIONS:  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - WB I-64  
 SCALE: 1" = 10'  
 SHEET NO. 1 OF 16 SHEETS  
 STA. 91+20.68 TO STA. 91+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	292
CONTRACT NO. 76C49			ILLINOIS FED. AID PROJECT	





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

FILE NAME = DBTRI-76C49-aht.XS\_64WB.dgn

USER NAME = IDOT  
 PLOT SCALE = 10,0000' / IN.  
 PLOT DATE = 3/18/2010

DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

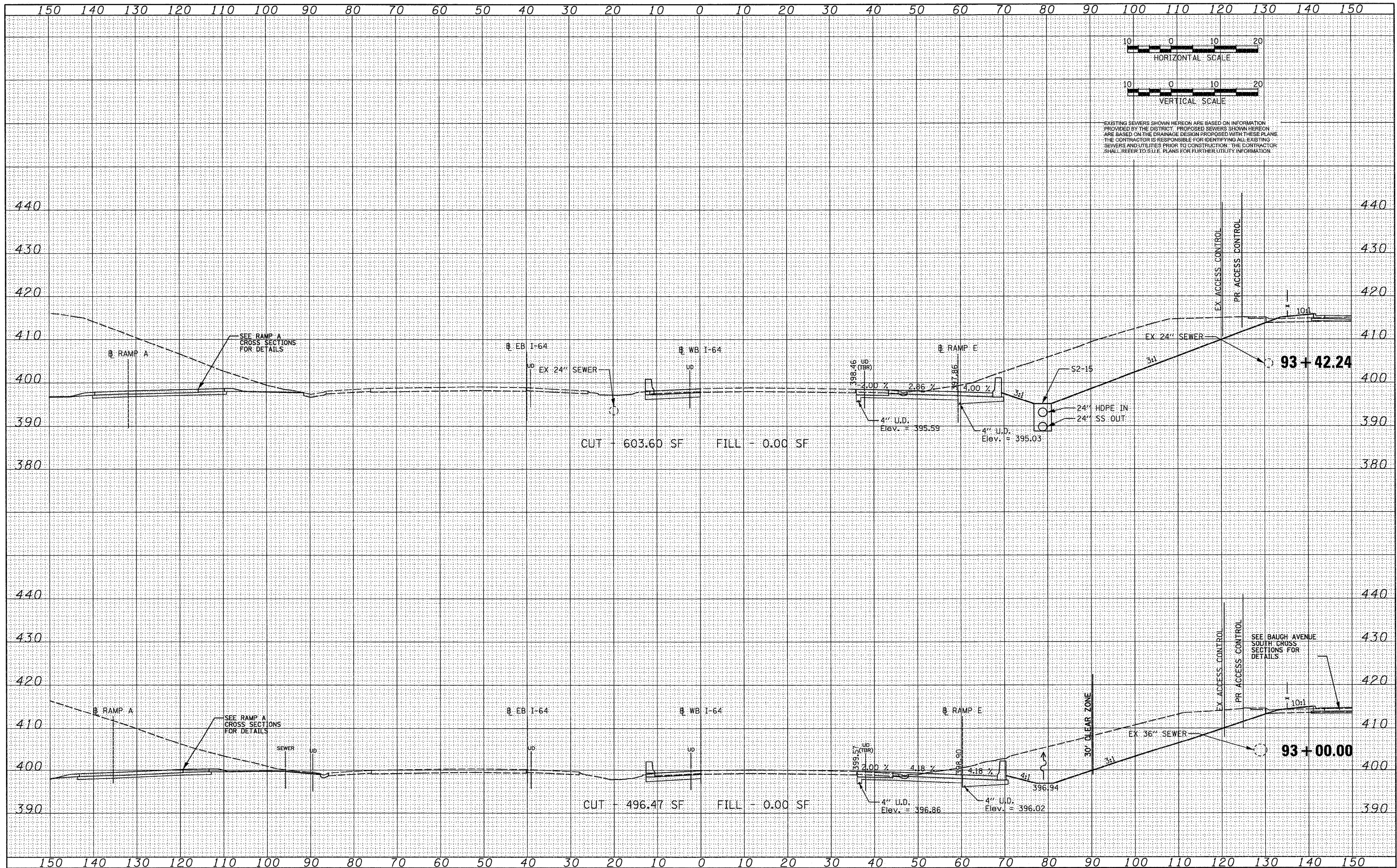
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - WB I-64

SCALE: 1" = 10' SHEET NO. 2 OF 16 SHEETS STA. 92+00.00 TO STA. 92+50.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	293
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
SURVEY	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	

FILE NAME = DBTRI-76C49-sh\_t.XS\_64WB.dgn

USER NAME = IDOT  
 PLOT SCALE = 10.0000' / IN.  
 PLOT DATE = 3/19/2010

DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

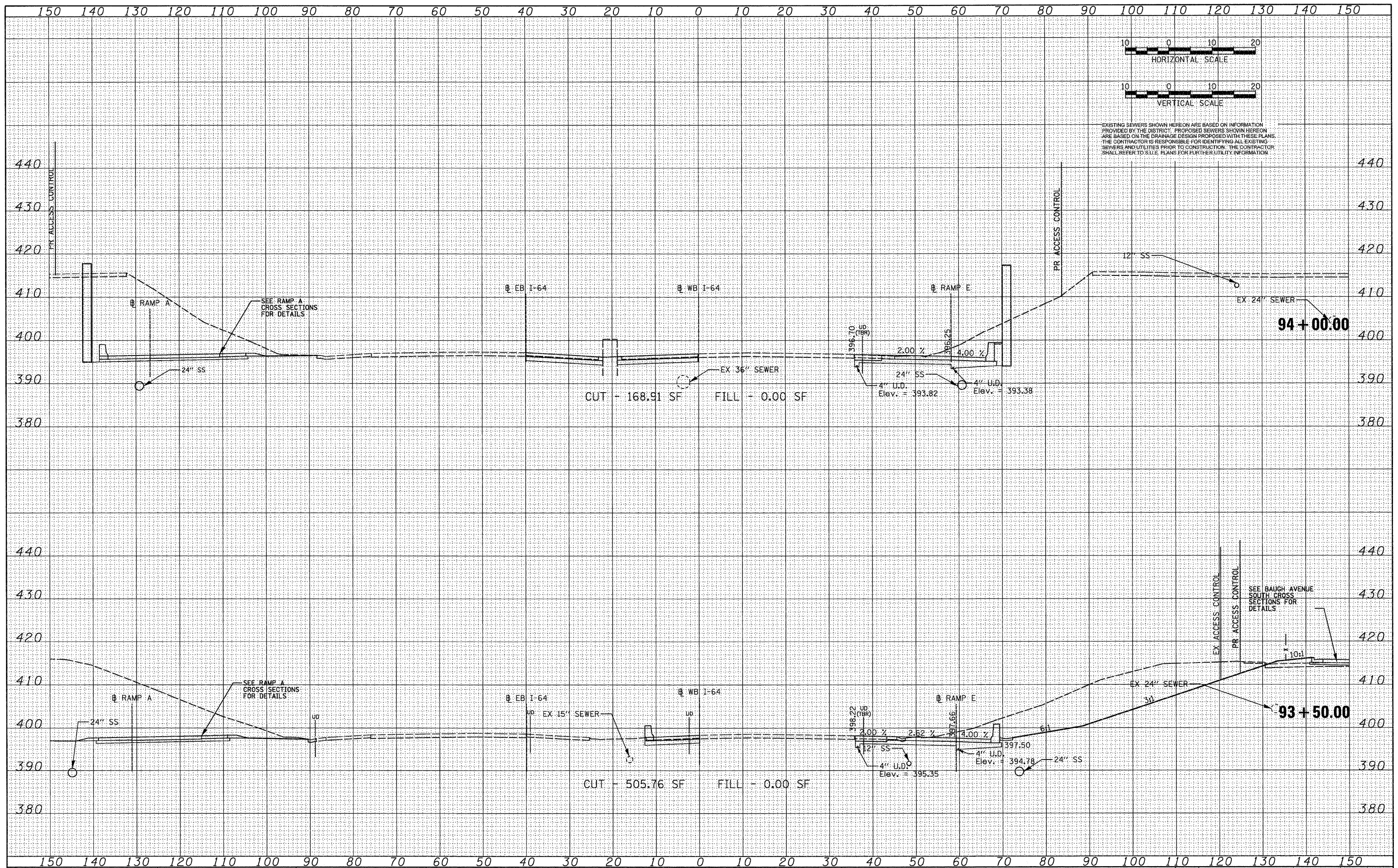
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS - WB I-64**

SCALE: 1" = 10' SHEET NO. 3 OF 16 SHEETS STA. 93+00.00 TO STA. 93+42.24

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	294
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





DATE	
BY	
FINAL SURVEY	
NO. OF SHEETS	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NO. OF SHEETS	
NOTE BOOK	
AREAS CHECKED	

FILE NAME = D8TRI-76C49-sh\_t\_XS\_64WB.dgn

USER NAME = IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

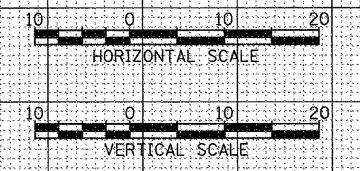
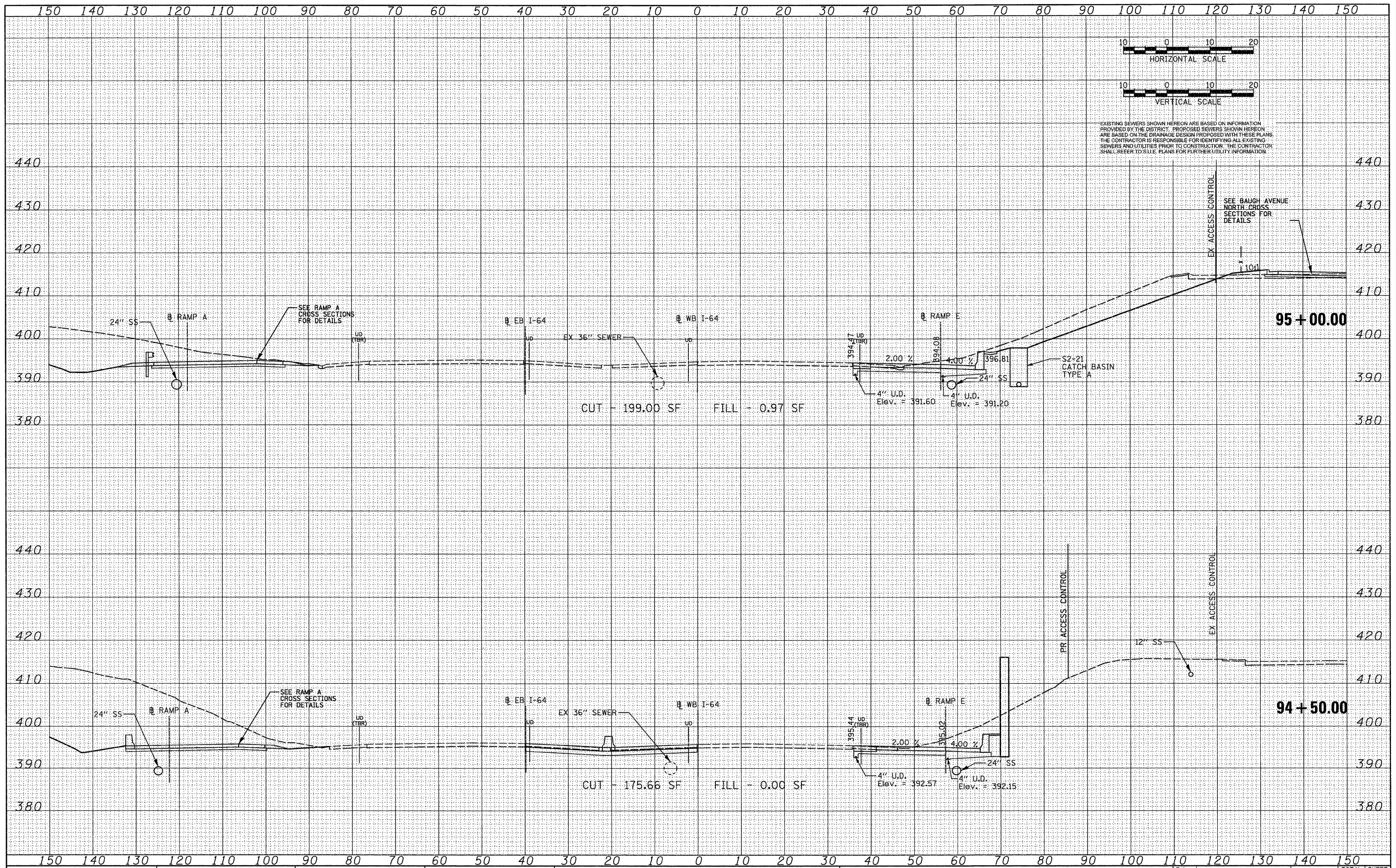
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - WB I-64

SCALE: 1" = 10' SHEET NO. 4 OF 16 SHEETS STA. 93+50.00 TO STA. 94+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	295
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROVIDED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

FILE NAME = DBTRI-76C49-ah-t.XS\_64WB.dgn

USER NAME = IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

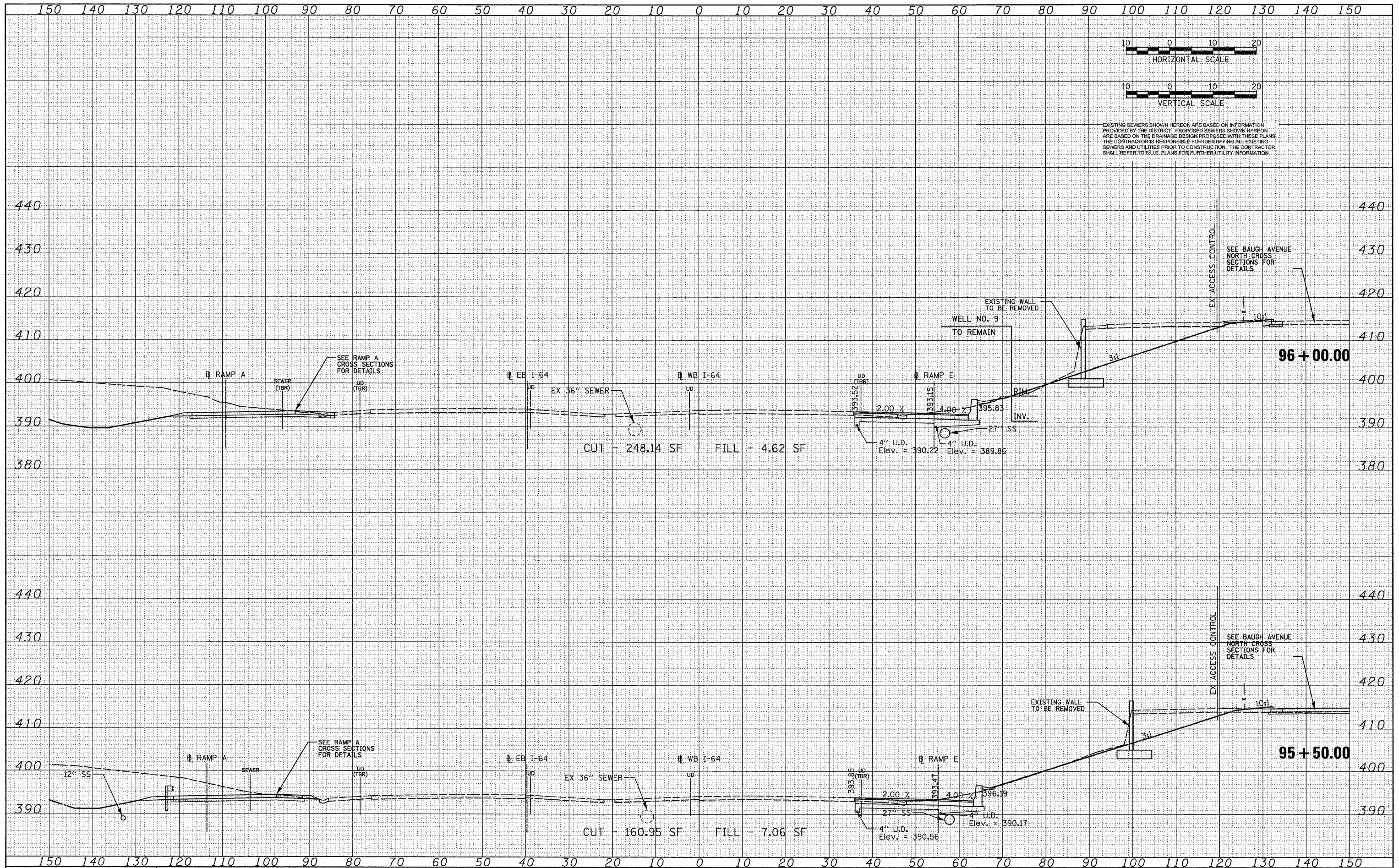
CROSS SECTIONS - WB I-64  
 SCALE: 1" = 10'  
 SHEET NO. 5 OF 16 SHEETS  
 STA. 94+50.00 TO STA. 95+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	296
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	
TEMPL.	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
TEMPL.	
AREAS CHECKED	



FILE NAME = DBTRI-76C49-sh.t.XS\_64WB.dgn

USER NAME = IDOT

DESIGNED - TTB

DRAWN - GDO

CHECKED - JAH

DATE - 3/19/2010

REVISED -

REVISED -

REVISED -

REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

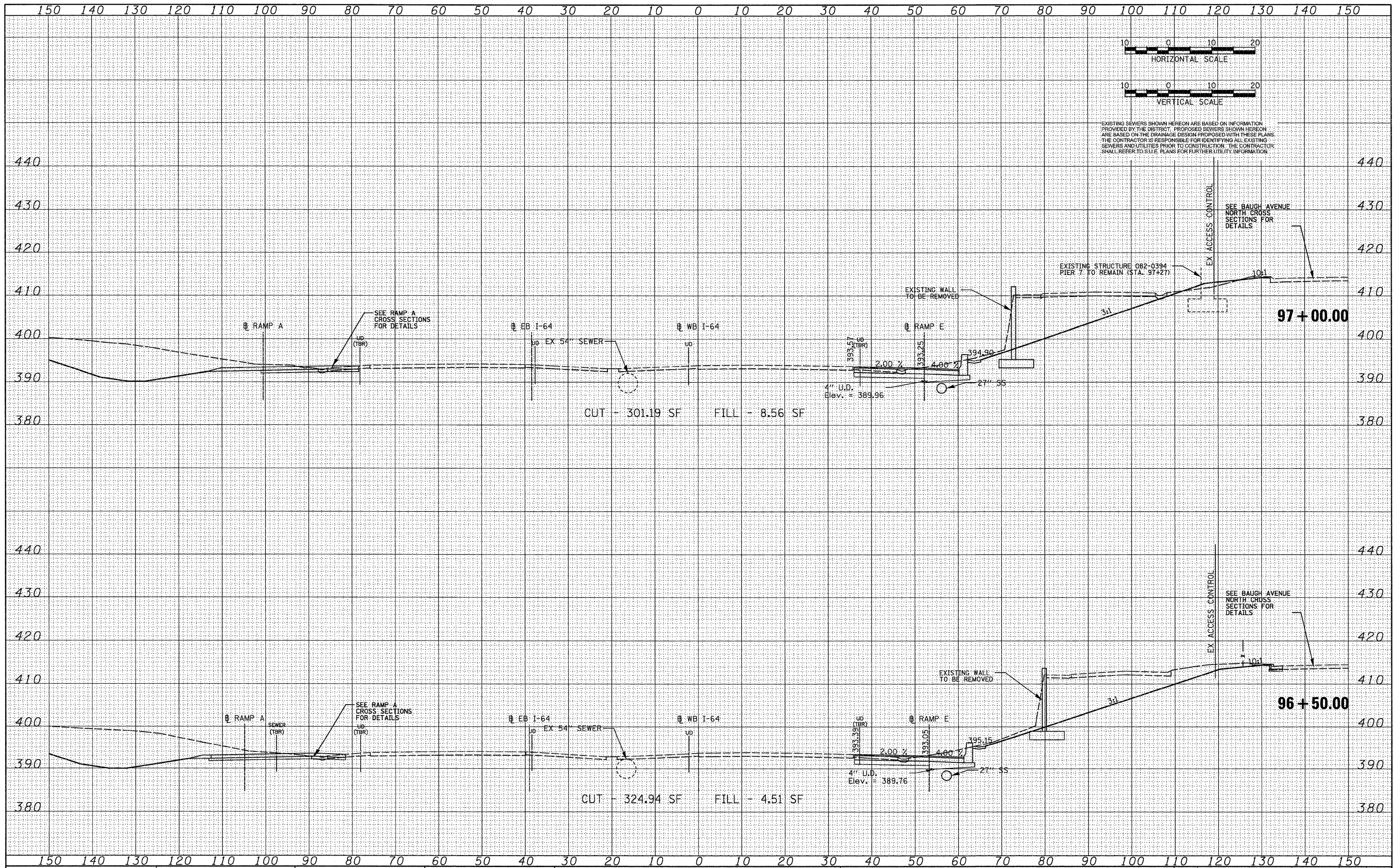
**CROSS SECTIONS - WB I-64**

SCALE: 1" = 10'    SHEET NO. 6 OF 16 SHEETS    STA. 95+50.00 TO STA. 96+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	297
CONTRACT NO. 76C49				

FED. ROAD DIST. NO.    ILLINOIS FED. AID PROJECT





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	

FILE NAME - DBTRI-76C49-shr.XS\_64WB.dgn

USER NAME - IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - WB I-64

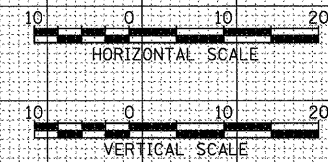
SCALE: 1" = 10' SHEET NO. 7 OF 16 SHEETS STA. 96+50.00 TO STA. 97+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	298
CONTRACT NO. 76C49				

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

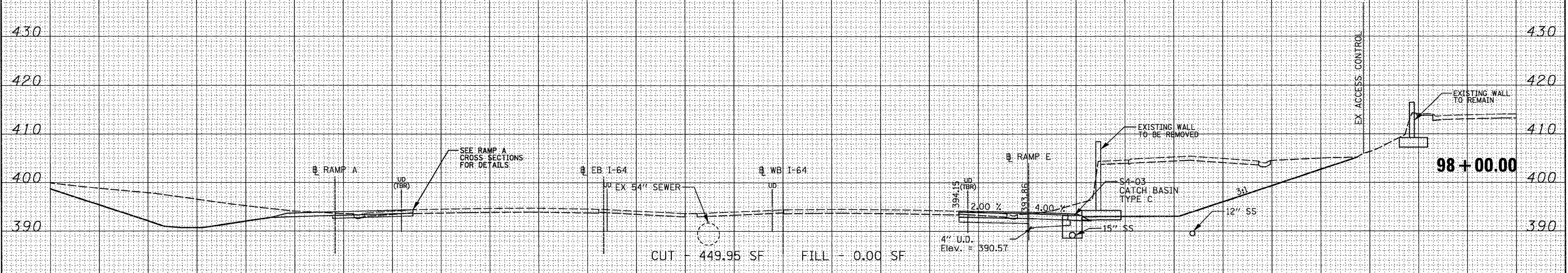


150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150



EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

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



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



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FILE NAME = DBTRI-76C49-ah-t.XS-64WB.dgn

USER NAME = IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

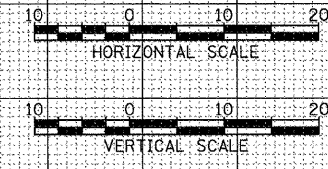
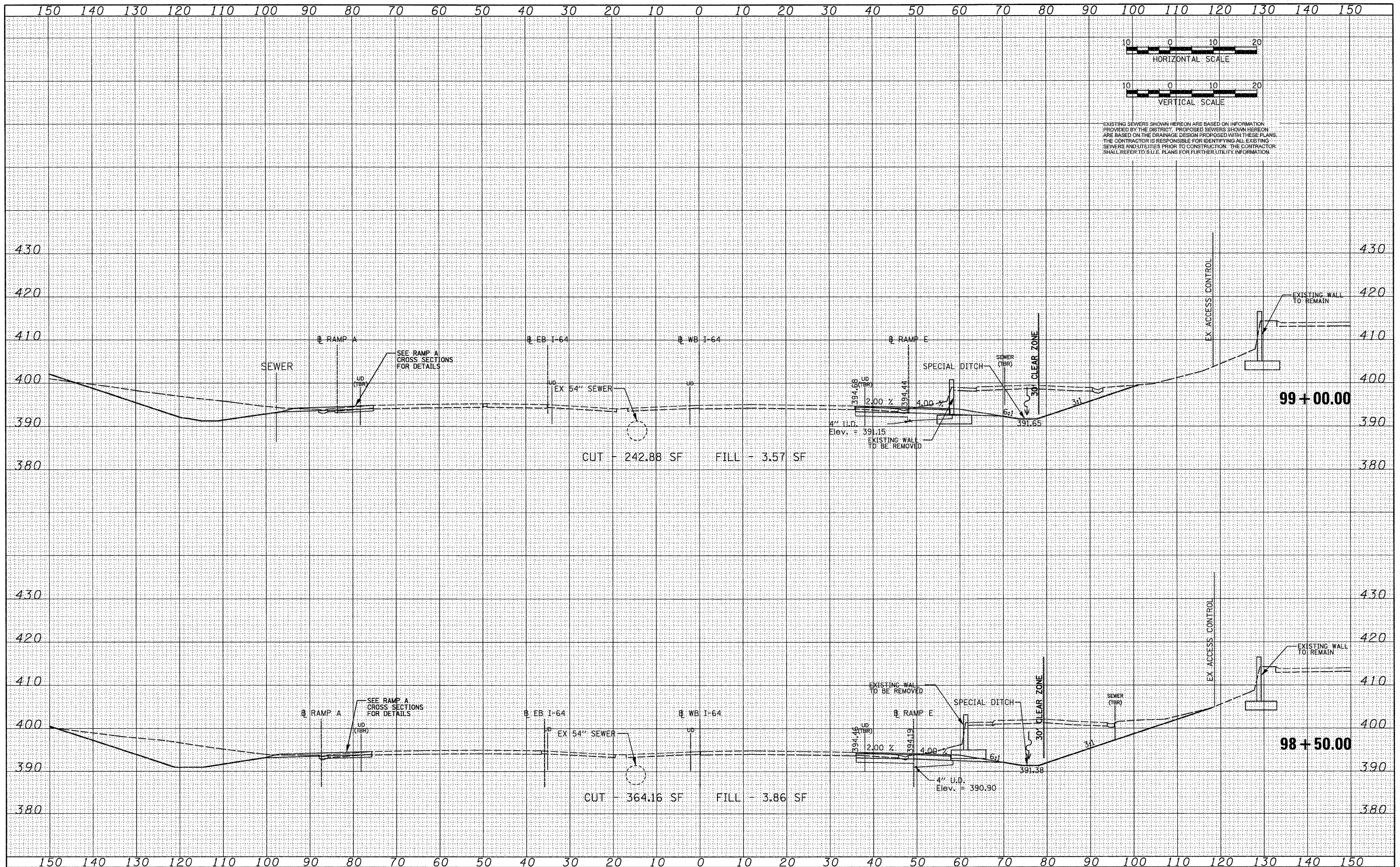
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS - WB I-64

SCALE: 1" = 10' SHEET NO. 8 OF 16 SHEETS STA. 97+50.00 TO STA. 98+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	299
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				





EXISTING SEWERS SHOWN HEREON ARE BASED ON INFORMATION PROVIDED BY THE DISTRICT. PROPOSED SEWERS SHOWN HEREON ARE BASED ON THE DRAINAGE DESIGN PROPOSED WITH THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL EXISTING SEWERS AND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REFER TO S.U.E. PLANS FOR FURTHER UTILITY INFORMATION.

DATE	
BY	
FINAL SURVEY	
NOTED	
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTED	
NOTE BOOK	
TEMPLATE	
AREAS	
CHECKED	

FILE NAME = D8TR1-76C49-sh\_t.XS\_64WB.dgn  
 USER NAME = IDOT  
 DESIGNED - TTB  
 DRAWN - GDO  
 CHECKED - JAH  
 DATE - 3/19/2010

REVISOR  
 REVISION  
 REVISION  
 REVISION

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS - WB I-64**  
 SCALE: 1" = 10' SHEET NO. 9 OF 16 SHEETS STA. 98+50.00 TO STA. 99+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1-2HB	ST. CLAIR	345	300
CONTRACT NO. 76C49				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				