

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

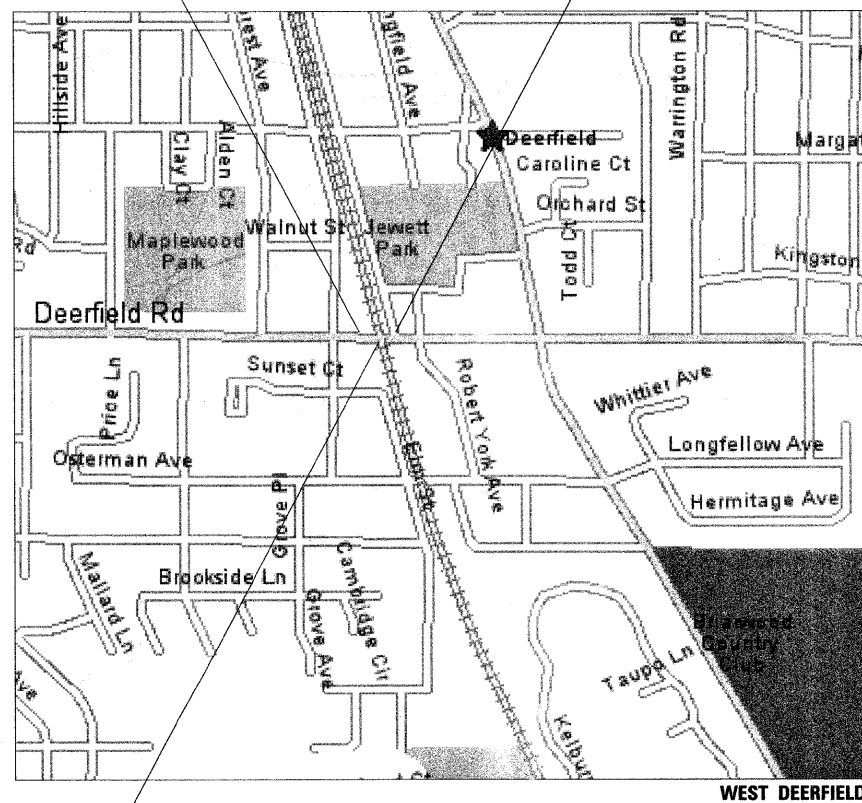
FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA:

DESIGN SPEED 20 M.P.H.  
PROJECTED PEAK HOUR VOLUME (2010): 95 PEDESTRIANS/BICYCLES

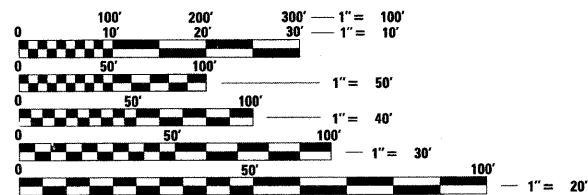
FAU 1257 (DEERFIELD ROAD)  
SECTION 08-00083-00-BT  
PROJECT CMM-TE-0001(798)  
AT METRA MD-N PEDESTRIAN UNDERPASS  
LAKE COUNTY  
JOB C-91-027-09

BEGIN PROJECT STATION 20+46.1  
END PROJECT STATION 23+95.2



GROSS LENGTH = 375.0 FT. = 0.069 MILE  
NET LENGTH = 375.0 FT. = 0.069 MILE

THIS PROJECT IS LOCATED IN  
THE VILLAGE OF DEERFIELD



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD  
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT  
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS  
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

SN-049-6158 PROPOSED UNDERPASS  
SN-049-9941 EXISTING METRA BRIDGE

CONTRACT NO. 63450

FIELD ENGINEER: ALEX HOUSEH P.E. (847) 705-4410

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	1
		ILLINOIS	CONTRACT NO. 63450	

D-91-027-09



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

Approved *Barbara K. [Signature]*  
April 13, 2010  
Village of Deerfield, Director of Public Works

Passed *[Signature]*  
APRIL 16, 2010  
District Engineer of Local Roads & Streets

Releasing for Bid  
Based on Limited  
Review *[Signature]*  
APRIL 16, 2010  
Deputy Director of Highways, Region 1 Engineer

SEAL  
COMPANY: MCDONOUGH ASSOCIATES, INC.  
ENGINEERS / ARCHITECTS  
130 EAST RANDOLPH SUITE 1000  
CHICAGO, ILLINOIS 60601  
SIGNATURE: ALAN R SWANSON  
EXP. 11/30/2011  
Expires: 11/30/11

SEAL  
COMPANY: MCDONOUGH ASSOCIATES, INC.  
ENGINEERS / ARCHITECTS  
130 EAST RANDOLPH SUITE 1000  
CHICAGO, ILLINOIS 60601  
SIGNATURE: KARL J HANSON  
EXP. 11/30/2010  
Expires: 11/30/10

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OF THE STATE OF ILLINOIS

GENERAL NOTES

"STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTING JANUARY 1, 2007 (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS," ADOPTED JANUARY 1, 2010; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; LATEST EDITION OF THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS", THE DETAILS IN THE PLANS; AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, CABLE TELEVISION, FIBER OPTIC, AND GAS FACILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL EXISTING AND PROPOSED UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT, OR PROTECTION IS NECESSARY.

THE LOCATION OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE, AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE DAMAGE INCURRED. THIS WORK SHALL BE ARRANGED BY THE UTILITY COMPANY AND SHALL BE AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FRESH CONCRETE FROM DAMAGE AND VANDALISM. ANY DAMAGED OR VANDALIZED CONCRETE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

WHEN CONSTRUCTING SIDEWALK RAMPS FOR THE HANDICAPPED (STATE STANDARD 424001), USE TYPE B RAMPS UNLESS OTHERWISE SPECIFIED.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION OF ALL EMERGENCY SERVICES, SCHOOL DISTRICTS, THE VILLAGE OF DEERFIELD, AND OTHER AGENCIES AFFECTED BY THE CLOSURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSTING SIGNS THAT WILL INDICATE THE DATES THE CLOSURE WILL BE IN PLACE.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF EXISTING PLANT MATERIAL FOR WHICH THE CONTRACT DOES NOT PROVIDE REMOVAL. THE PROTECTION OF EXISTING PLANT MATERIAL AND THE REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL DAMAGED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 201 OF THE STANDARD SPECIFICATIONS.

INDEX OF SHEETS

SHEET	DESCRIPTION	DRAWING
1	COVER SHEET	CV-1
2	INDEX OF SHEETS, GENERAL NOTES, AND HIGHWAY STANDARDS	IS-1
3-5	SUMMARY OF QUANTITIES	SQ-1 to SQ-3
6	ALIGNMENT, TIES, AND BENCHMARKS	ATB-1
7	EXISTING REMOVAL PLAN	EX-1
8	PROPOSED PLAN AND PROFILE	PF-1
9	PROPOSED DRAINAGE PLAN	DR-1
9-10	PROPOSED RAILING PLAN AND DETAILS	DET-1 to DET-2
12-13	SUGGESTED MAINTENANCE OF VEHICULAR AND PEDESTRIAN TRAFFIC	MOT-1 to MOT-2
14	EROSION AND SEDIMENT CONTROL	EC-1
15-20	ELECTRICAL	RL-1 to RL-6
21-45	STRUCTURAL	S-1 to S-25
46	DISTRICT ONE STANDARD	DS-1
47-51	CROSS SECTIONS	XS-1 to XS-5

STATE STANDARDS

STANDARD NO.	TITLE
000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
424001-05	CURB RAMPS FOR SIDEWALKS
515001-03	NAME PLATE FOR BRIDGES
602301-02	INLET, TYPE A
602306-02	INLET, TYPE B
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-03	FRAME AND LIDS, TYPE 1
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701501-05	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701801-04	LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
814001-02	HANDHOLES
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING

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	PLOT DATE = 4/13/2010	DATE - 04/09/10	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>INDEX OF SHEETS, GENERAL NOTES, AND HIGHWAY STANDARDS</b>			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	2
CONTRACT NO.			63450	
FED. ROAD DIST. NO. 1   ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNALS  
 80% FED LOCAL  
 20% LOCAL  
 LIGHTING  
 80% FED LOCAL  
 20% LOCAL  
 DERIVED PEDESTRIAN  
 80% FED LOCAL  
 20% LOCAL  
 SIDEWALK  
 80% FED LOCAL  
 20% LOCAL  
 SIDEWALK  
 80% FED LOCAL  
 20% LOCAL

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODES				
				SFTY-1B	SFTY-1B	X928-2A	Y030-1E	Y031-1F
20101100	TREE TRUNK PROTECTION	EACH	8	8				
20200100	EARTH EXCAVATION	CU YD	100	100				
20800150	TRENCH BACKFILL	CU YD	15	15				
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	90	90				
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	2	2				
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	2	2				
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	2	2				
25200110	SODDING, SALT TOLERANT	SQ YD	90	90				
25200200	SUPPLEMENTAL WATERING	UNIT	2	2				
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	5	5				
28000400	PERIMETER EROSION BARRIER	FOOT	150	150				
28000510	INLET FILTERS	EACH	3	3				
35101500	AGGREGATE BASE COURSE, TYPE B	CU YD	70	70				
42001300	PROTECTIVE COAT	SQ YD	420	420				
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	3,750	3,750				
42400800	DETECTABLE WARNINGS	SQ FT	60	60				
44000600	SIDEWALK REMOVAL	SQ FT	1,580	1,580				
44213200	SAW CUTS	FOOT	40	40				
50102400	CONCRETE REMOVAL	CU YD	89.4			89.4		
50200100	STRUCTURE EXCAVATION	CU YD	194			194		
50300225	CONCRETE STRUCTURES	CU YD	142.8			142.8		
50300285	FORM LINER TEXTURED SURFACE	SQ FT	1,617			1,617		
50500505	STUD SHEAR CONNECTORS	EACH	439			439		
* 50600200	PAINTING STEEL RAILING	FOOT	580	580				
50700209	UNTREATED TIMBER LAGGING	SQ FT	1,200			1,200		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	14,290			14,290		
* 50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	305	305				
* 50901105	STEEL RAILING	FOOT	180	180				
50901760	PIPE HANDRAIL	FOOT	75	75				
51202210	FURNISHING SOLDIER PILES (HP SECTION)	FOOT	466			466		
51202230	FURNISHING SOLDIER PILES (W SECTION)	FOOT	100			100		
x5121800	Reinforced Steel Sheet Piling	SQ FT	2,256			2,256		
51500100	NAME PLATES	EACH	1			1		
51500110	NAME PLATES (SPECIAL)	EACH	2	2				
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	643			643		

\* SPECIALTY ITEMS

McDonough Associates Inc.  
 Engineers / Architects  
 130 East Randolph Street, Chicago, Illinois 60601

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DESIGNED - JWM  
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DATE - 04/09/10

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	3
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	

80% SIDEWALK (L/EP)  
20% LOCAL

80% SIDEWALK (L/AD)  
20% LOCAL

DEERFIELD PEDESTRIAN  
80% WALKWAY (L/AD)  
20% LOCAL

80% LIGHTING (L/AD)  
20% LOCAL

TRAFFIC SIGNALS  
80% FED (L/EP)  
20% LOCAL

CODE NUMBER	PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODES				
				SFTY-1B	SFTY-1B	X928-2A	Y030-1E	Y031-1F
60109580	PIPE UNDERDRAIN FOR STRUCTURES 4"	FOOT	206.5		40	166.5		
60234200	INLETS, TYPE A, TYPE 1 FRAME, OPEN LID	EACH	3	3				
63400205	GUARD POSTS REMOVAL	EACH	1	1				
67100100	MOBILIZATION	L SUM	1		1			
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1				
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1				
* 80400100	ELECTRIC SERVICE INSTALLATION	EACH	1				1	
* 80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1				1	
* 81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	383				133	250
* 81012300	CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	91				91	
* 81100220	CONDUIT ATTACHED TO STRUCTURE, 3/4" DIA., PVC COATED GALVANIZED STEEL	FOOT	8				8	
* 81100320	CONDUIT ATTACHED TO STRUCTURE, 1" DIA., PVC COATED GALVANIZED STEEL	FOOT	39				39	
* 81200100	CONDUIT EMBEDDED IN STRUCTURE, 1" DIA., GALVANIZED STEEL	FOOT	62				62	
* 81300220	JUNCTION BOX, STAINLESS STEEL, ATTACHED TO STRUCTURE, 6" X 6" X 4"	EACH	4				4	
* 81303950	JUNCTION BOX EMBEDDED IN STRUCTURE, 6" X 6" X 6"	EACH	5				5	
* 81400200	HEAVY-DUTY HANDHOLE	EACH	1					1
* 81700110	ELECTRIC CABLE IN CONDUIT, 600V (EPR-TYPE RHW) 1/C NO. 10	FOOT	200				200	
* 81702410	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 4	FOOT	158				158	
* 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	221				221	
* 82500505	LIGHTING CONTROLLER, SPECIAL	EACH	1				1	
* 84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1				1	
* 84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1				1	
* 84500130	REMOVAL OF LIGHTING CONTROLLER FOUNDATION	EACH	1				1	
* 89502380	REMOVE EXISTING HANDHOLE	EACH	1					1
550A0030	STORM SEWERS, CLASS A, TYPE 1 8"	FOOT	24	24				
X0321865	ANTI-GRAFFITI PROTECTION SYSTEM	SQ FT	2,581			2,581		
* X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	690					690
X0323992	HELICAL GROUND ANCHORS	EACH	9			9		
X0324455	DRILLING AND SETTING SOLDIER PILES (IN SOIL)	CU FT	1,778			1,778		
X7011005	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1	1				
* X8161000	EXPOSE AND RELOCATE EXISTING UNIT DUCT	FOOT	16				16	
* X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	690					690
XX000406	BRICK PAVER REMOVAL AND REPLACEMENT	SQ FT	410	410				
XX001607	RETAINING WALL, SPECIAL	SQ FT	135			135		
XX003308	TRENCH DRAINS	FOOT	180			180		

• SPECIALTY ITEMS

McDonough Associates Inc.  
 Engineers / Architects  
 130 East Randolph Street, Chicago, Illinois 60601

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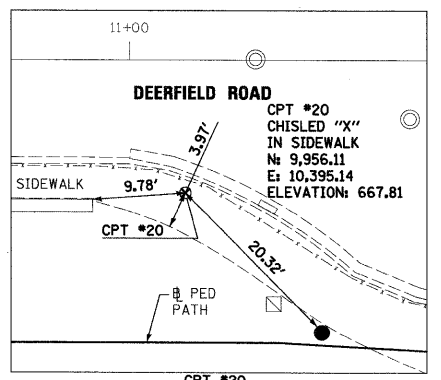
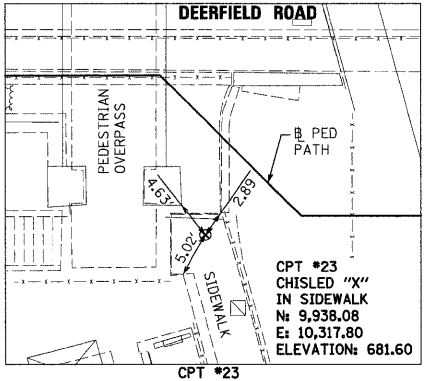
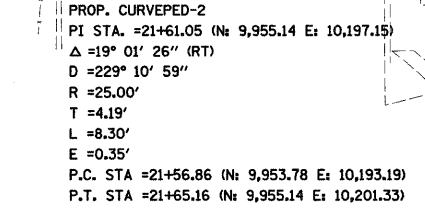
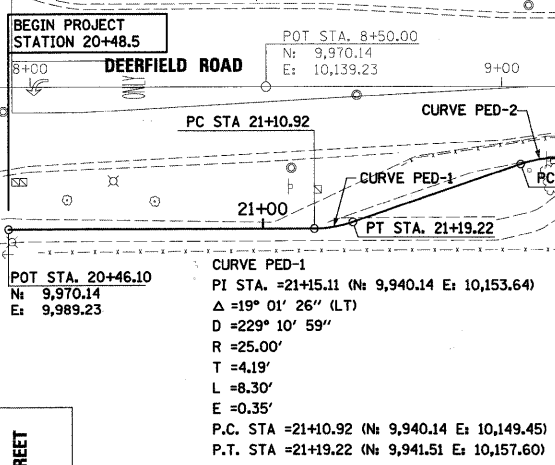
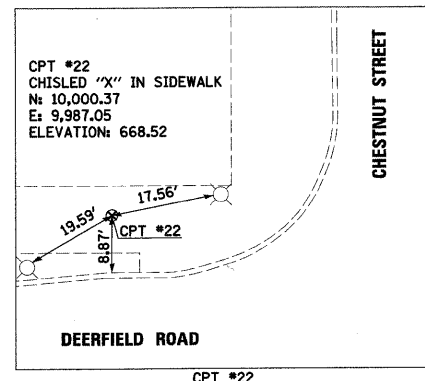
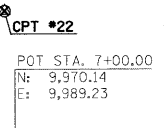
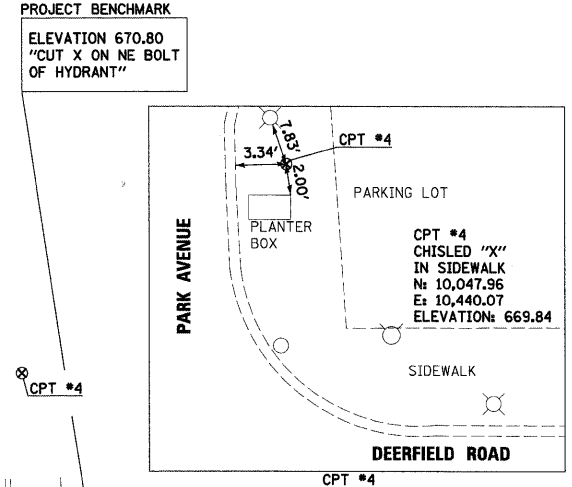
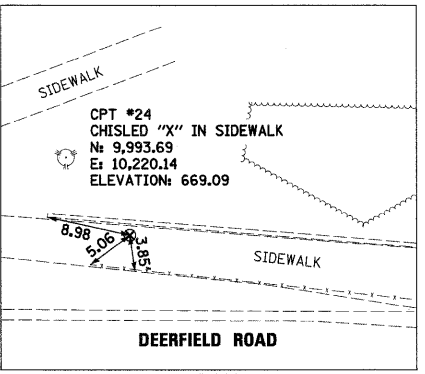
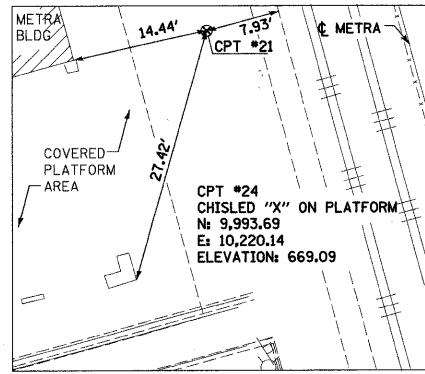
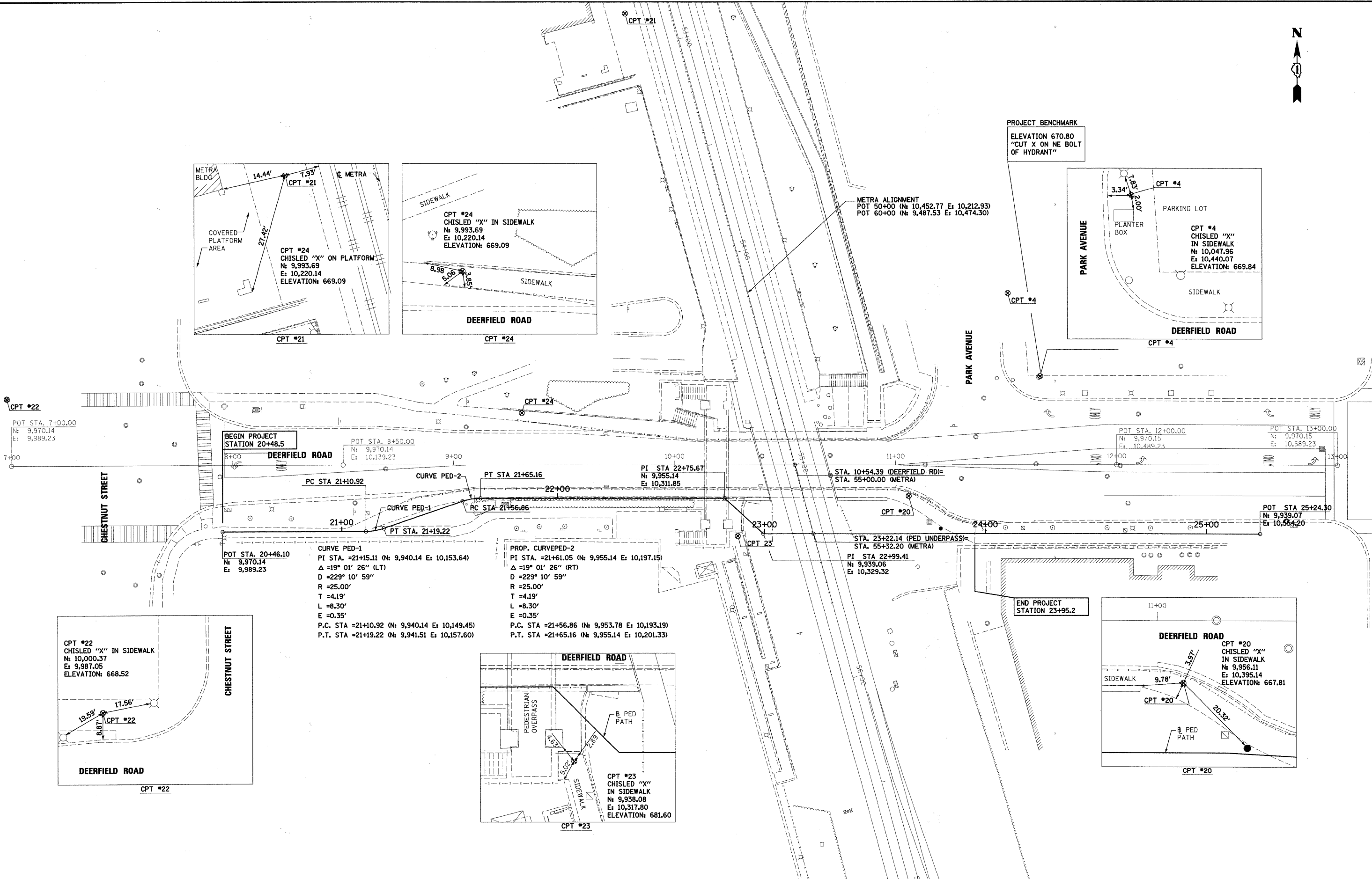
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DATE - 04/09/10	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**  
 SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	4
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	





PROJECT BENCHMARK  
ELEVATION 670.80  
"CUT X ON NE BOLT OF HYDRANT"

METRA ALIGNMENT  
POT 50+00 (N: 10,452.77 E: 10,212.93)  
POT 60+00 (N: 9,487.53 E: 10,474.30)

POT STA. 7+00.00  
N: 9,970.14  
E: 9,989.23

BEGIN PROJECT  
STATION 20+48.5

POT STA. 8+50.00  
N: 9,970.14  
E: 10,139.23

PI STA 22+75.67  
N: 9,955.14  
E: 10,311.85

STA. 10+54.39 (DEERFIELD RD)=  
STA. 55+00.00 (METRA)

POT STA. 12+00.00  
N: 9,970.15  
E: 10,489.23

POT STA. 13+00.00  
N: 9,970.15  
E: 10,589.23

POT STA 25+24.30  
N: 9,939.07  
E: 10,564.20

POT STA. 20+46.10  
N: 9,970.14  
E: 9,989.23

STA. 23+22.14 (PED UNDERPASS)=  
STA. 55+32.20 (METRA)  
PI STA 22+99.41  
N: 9,939.06  
E: 10,329.32

END PROJECT  
STATION 23+95.2

DEERFIELD ROAD  
CPT #20  
CHISLED "X" IN SIDEWALK  
N: 9,956.11  
E: 10,395.14  
ELEVATION: 667.81

McDonough Associates Inc.  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

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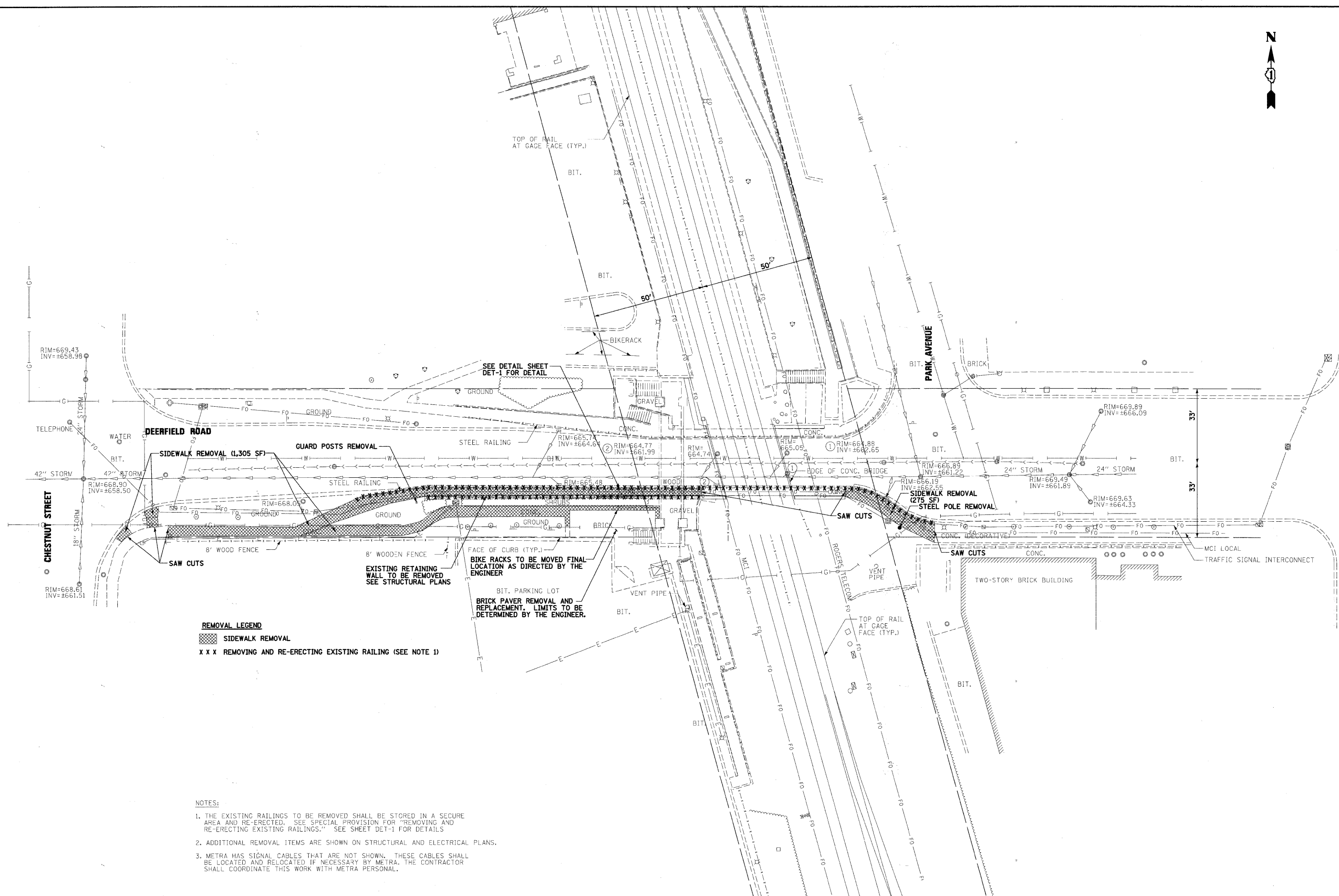
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS

SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	6
CONTRACT NO. 63450				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



**REMOVAL LEGEND**  
 [Hatched Box] SIDEWALK REMOVAL  
 [X X X Box] REMOVING AND RE-ERECTING EXISTING RAILING (SEE NOTE 1)

- NOTES:**
1. THE EXISTING RAILINGS TO BE REMOVED SHALL BE STORED IN A SECURE AREA AND RE-ERECTED. SEE SPECIAL PROVISION FOR "REMOVING AND RE-ERECTING EXISTING RAILINGS." SEE SHEET DET-1 FOR DETAILS
  2. ADDITIONAL REMOVAL ITEMS ARE SHOWN ON STRUCTURAL AND ELECTRICAL PLANS.
  3. METRA HAS SIGNAL CABLES THAT ARE NOT SHOWN. THESE CABLES SHALL BE LOCATED AND RELOCATED IF NECESSARY BY METRA. THE CONTRACTOR SHALL COORDINATE THIS WORK WITH METRA PERSONAL.

**McDonough Associates Inc.**  
 Engineers / Architects  
 130 East Randolph Street, Chicago, Illinois 60601

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PLOT SCALE = 1:240	
PLOT DATE = 4/13/2010	

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

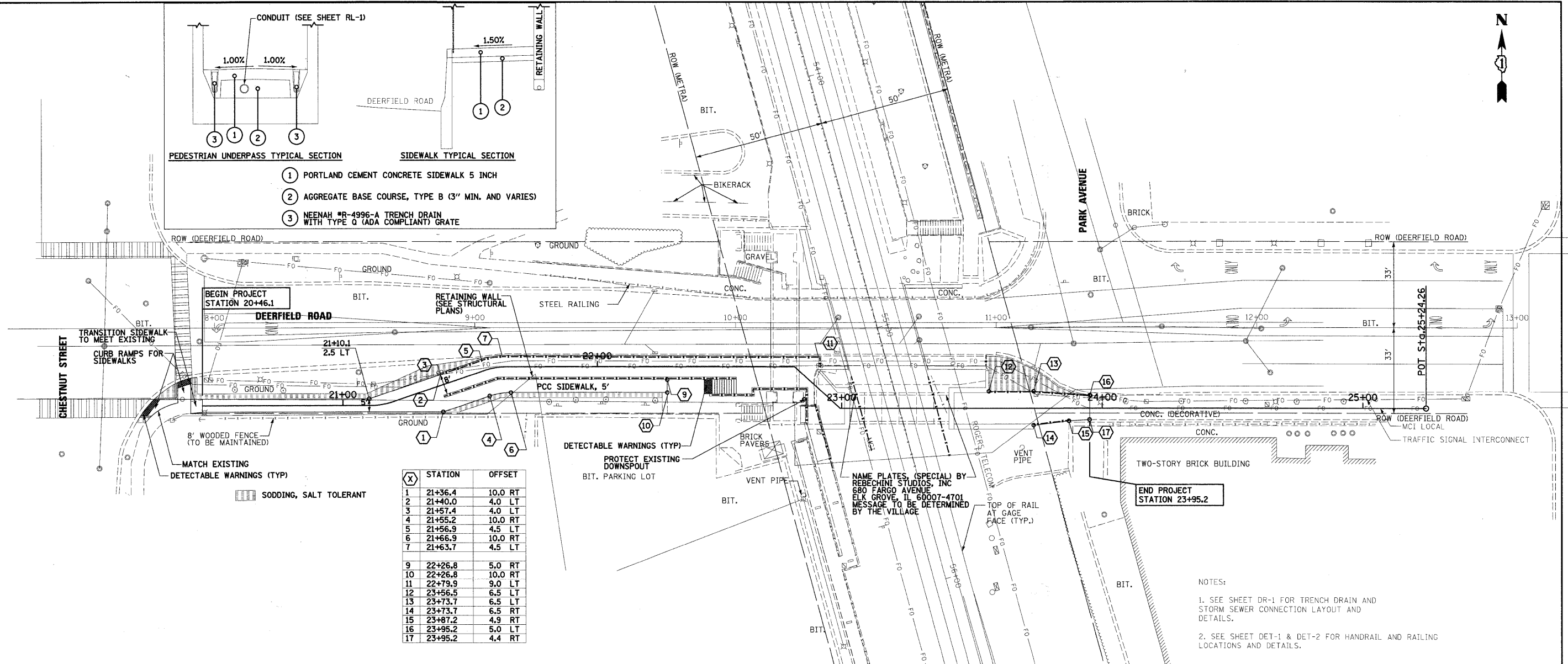
<b>EXISTING REMOVAL PLAN</b>			
SCALE: 1"=20'	SHEET NO. - OF SHEETS	STA. TO STA.	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	7
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			<b>CONTRACT NO. 63450</b>	

PLAN	DATE
BY	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	
DATE	

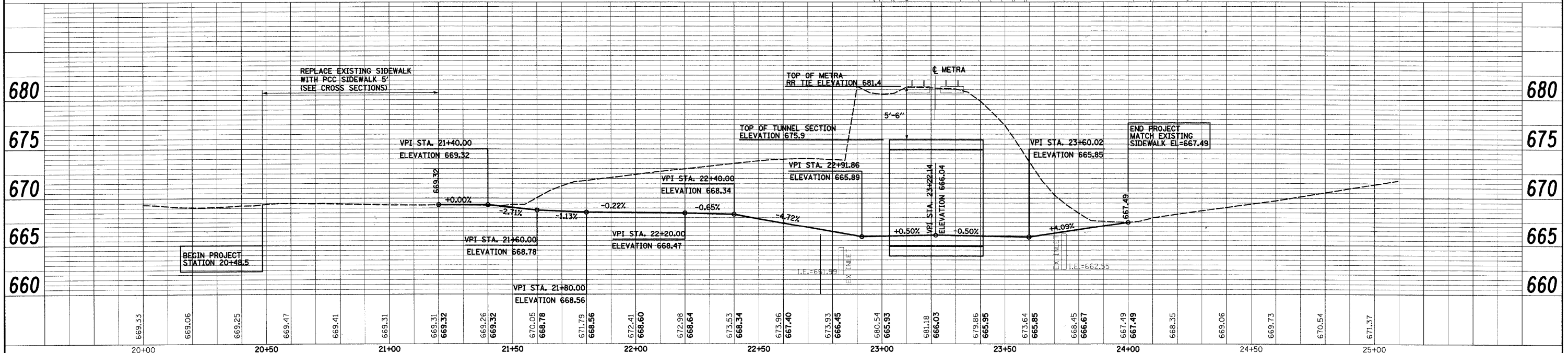
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BY	
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 130 East Randolph Street, Chicago, Illinois 60601



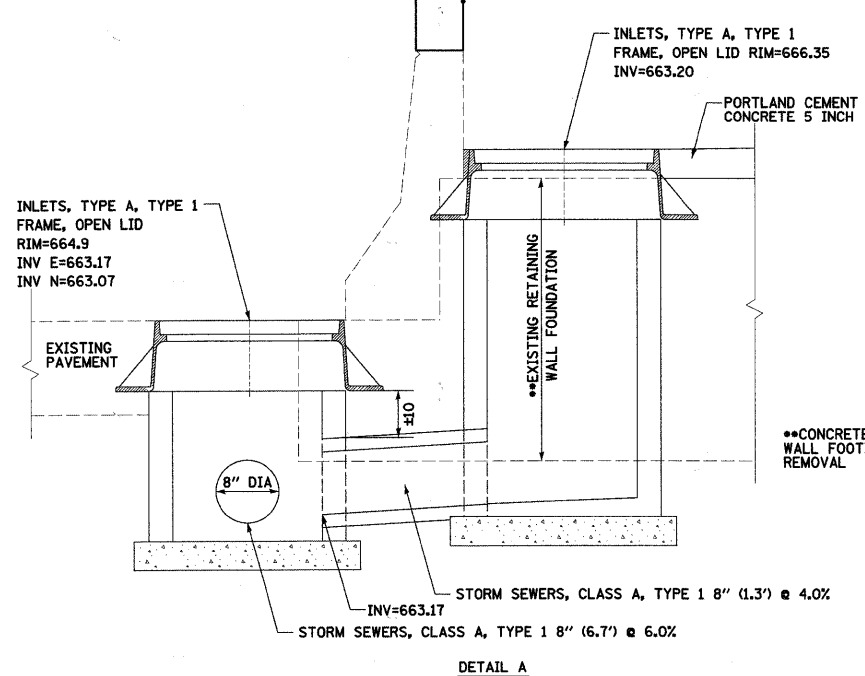
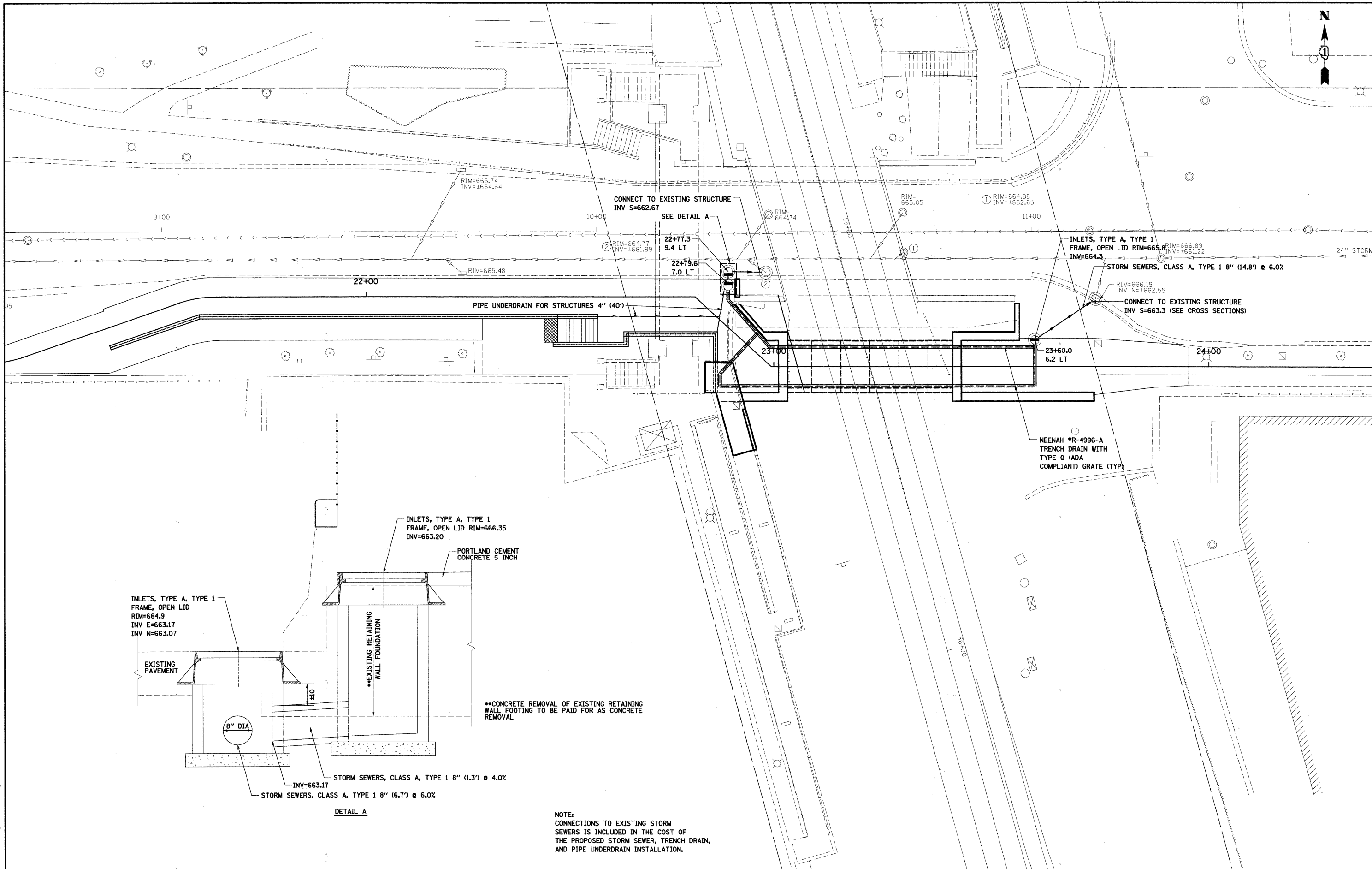
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5	21+56.9	4.5 LT
6	21+66.9	10.0 RT
7	21+63.7	4.5 LT
9	22+26.8	5.0 RT
10	22+26.8	10.0 RT
11	22+79.9	9.0 LT
12	23+56.5	6.5 LT
13	23+73.7	6.5 LT
14	23+73.7	6.5 RT
15	23+87.2	4.9 RT
16	23+95.2	5.0 LT
17	23+95.2	4.4 RT

NOTES:  
 1. SEE SHEET DR-1 FOR TRENCH DRAIN AND STORM SEWER CONNECTION LAYOUT AND DETAILS.  
 2. SEE SHEET DET-1 & DET-2 FOR HANDRAIL AND RAILING LOCATIONS AND DETAILS.



FILE NAME = 01-shr-plan@1dgn.dgn	USER NAME = JMdellet	DESIGNED - JWM	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>PROPOSED PLAN AND PROFILE</b> SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 8	
	PLOT SCALE = 1:248	CHECKED - JLB	REVISED -			FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT	CONTRACT NO. 63450			
	PLOT DATE = 4/13/2010	DATE - 04/09/10	REVISED -								





••CONCRETE REMOVAL OF EXISTING RETAINING WALL FOOTING TO BE PAID FOR AS CONCRETE REMOVAL

NOTE:  
CONNECTIONS TO EXISTING STORM SEWERS IS INCLUDED IN THE COST OF THE PROPOSED STORM SEWER, TRENCH DRAIN, AND PIPE UNDERDRAIN INSTALLATION.

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FILE NAME =  
D1-sht-drain.dgn

USER NAME = JMddolat  
 PLOT SCALE = 1:120  
 PLOT DATE = 4/13/2010

DESIGNED - JWM  
 DRAWN - JWM  
 CHECKED - JLB  
 DATE - 04/09/10

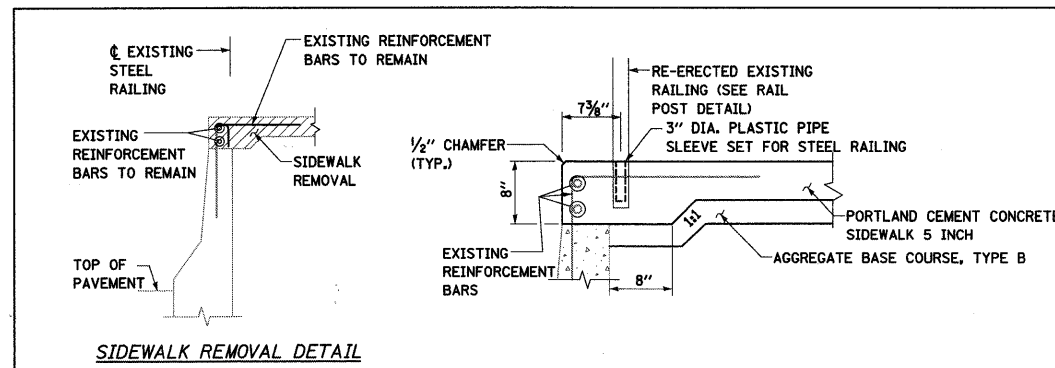
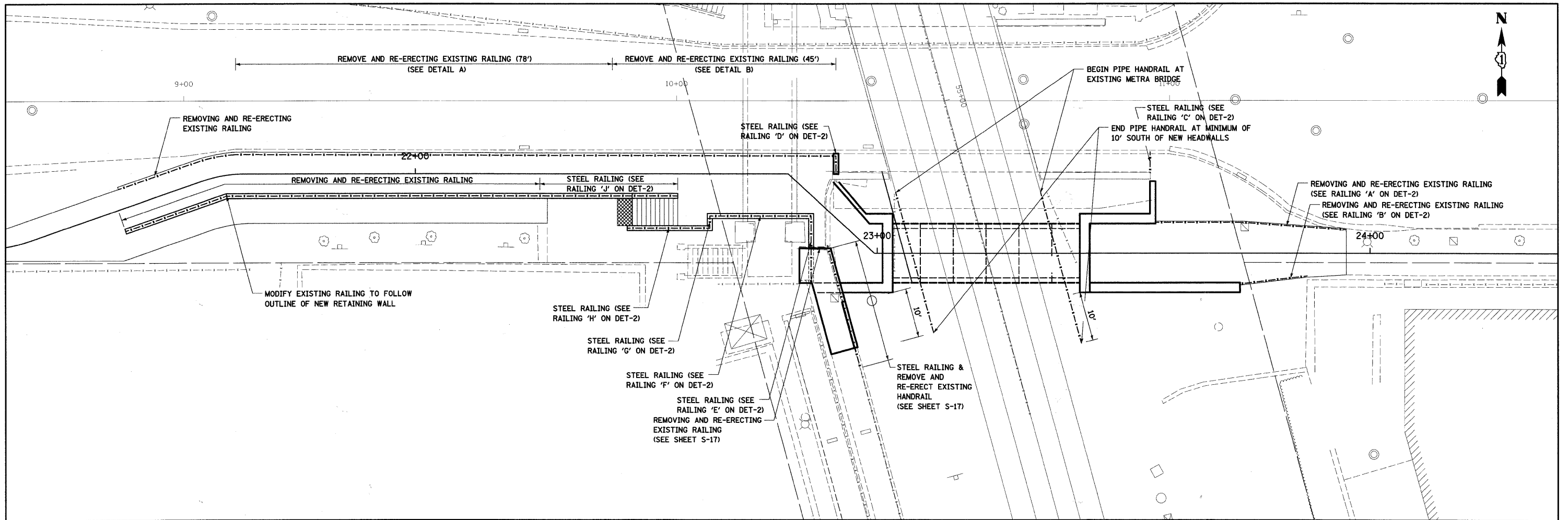
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

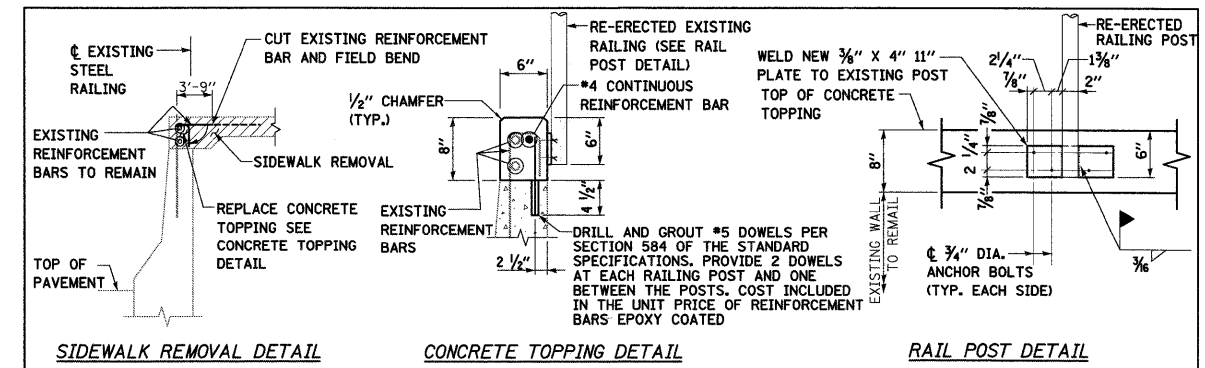
**PROPOSED DRAINAGE PLAN**

SCALE: 1"=10'    SHEET NO.    OF    SHEETS    STA.    TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	9
CONTRACT NO. 63450				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



DETAIL A



DETAIL B

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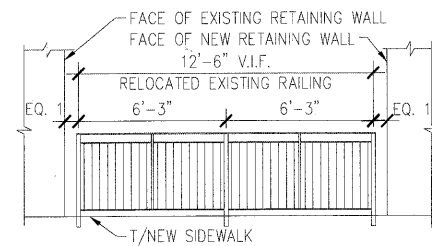
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DATE - 04/09/10	REVISED -

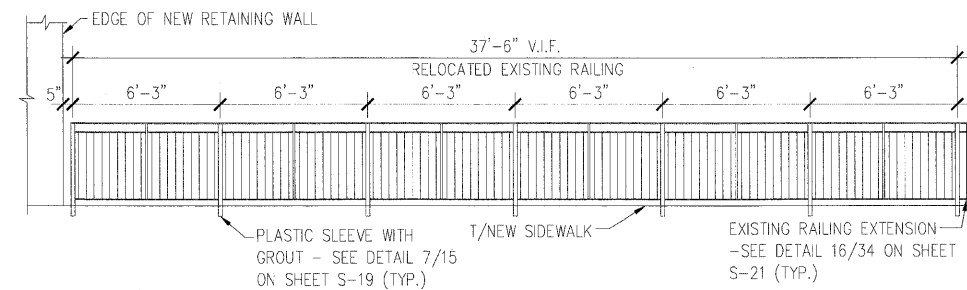
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>PROPOSED RAILING PLAN AND DETAILS</b>			
SCALE: 1"=10'	SHEET NO. OF SHEETS	STA. TO STA.	

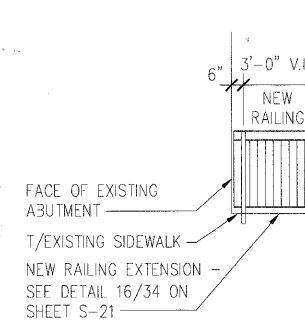
F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 10
CONTRACT NO. 63450				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



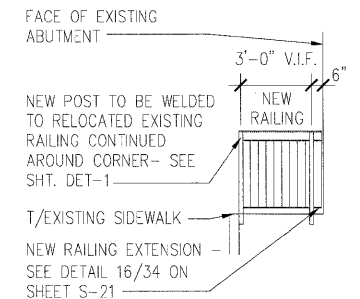
RAILING 'A' ELEVATION (LOOKING SOUTH)  
SCALE: 1/4" = 1'-0"



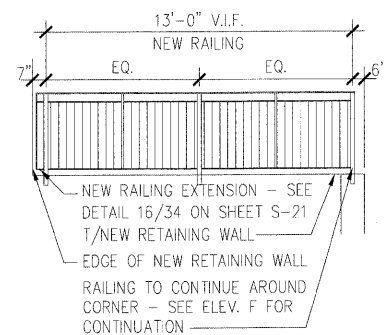
RAILING 'B' ELEVATION (LOOKING NORTH)  
SCALE: 1/4" = 1'-0"



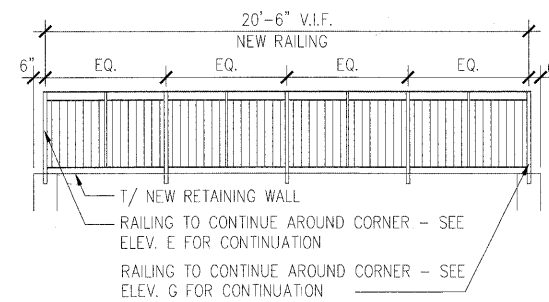
RAILING 'C' ELEVATION (LOOKING WEST)  
SCALE: 1/4" = 1'-0"



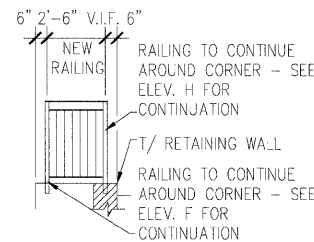
RAILING 'D' ELEVATION (LOOKING EAST)  
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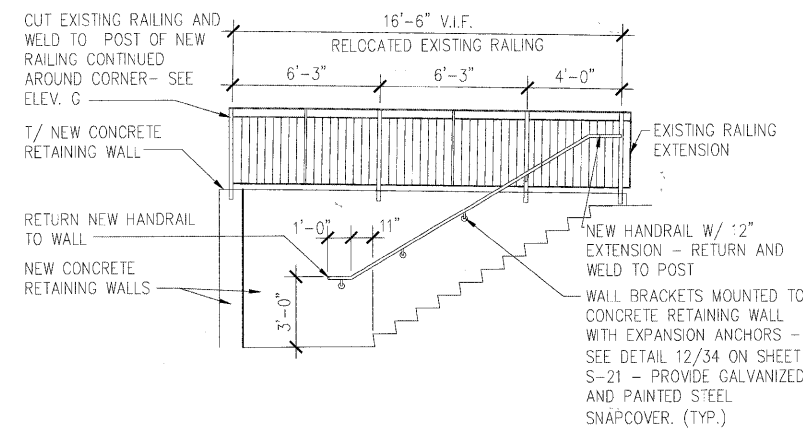
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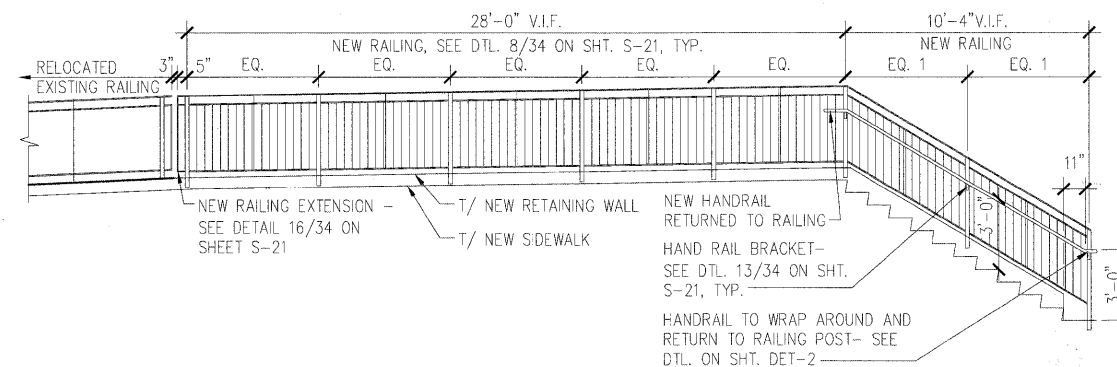
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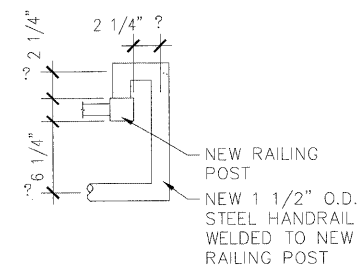
RAILING 'G' ELEVATION (LOOKING EAST)  
SCALE: 1/4" = 1'-0"



RAILING 'H' ELEVATION (LOOKING SOUTH)  
SCALE: 1/4" = 1'-0"



RAILING 'J' ELEVATION (LOOKING NORTH)  
SCALE: 1/4" = 1'-0"



NEW HANDRAIL RETURN DETAIL  
SCALE: 1 1/2" = 1'-0"

**NEW RAILING NOTES**

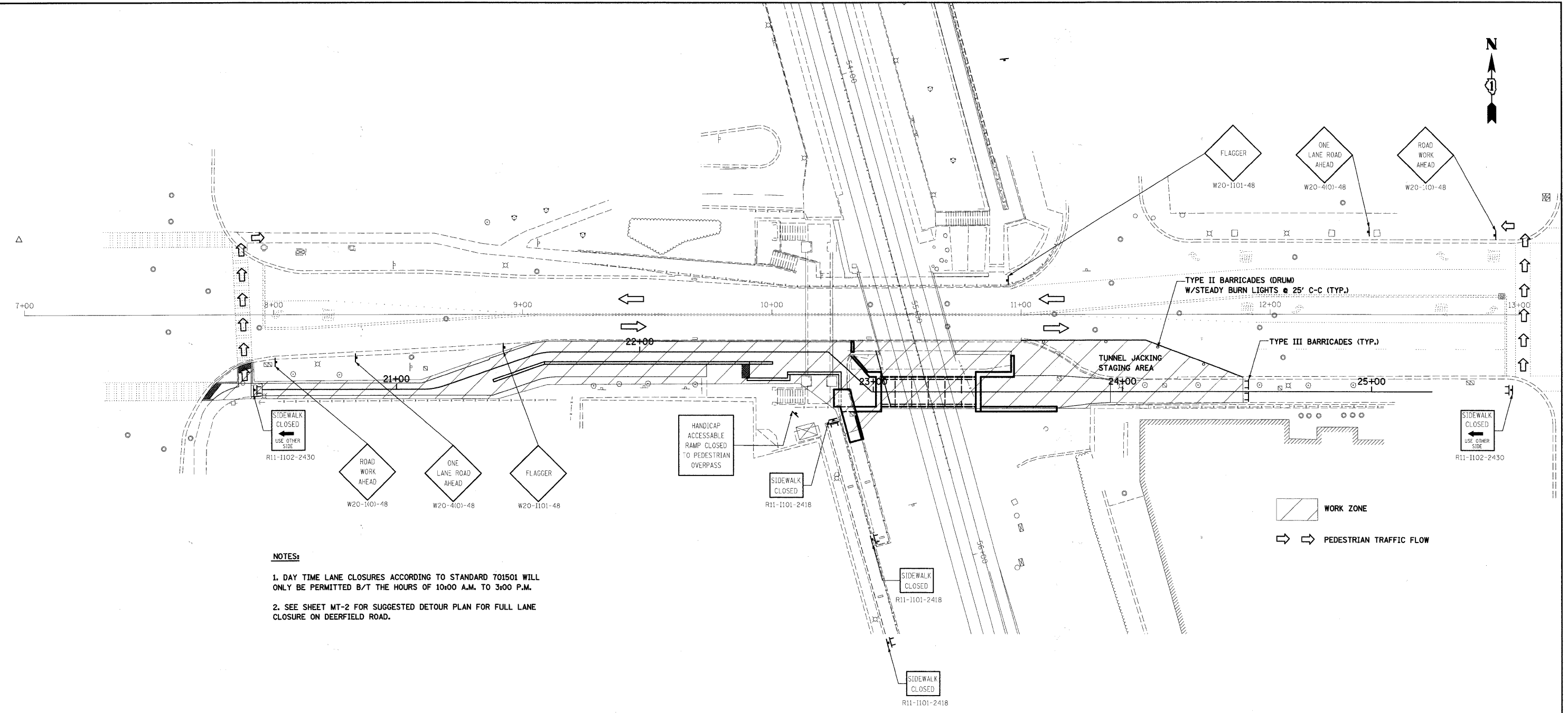
1. ALL NEW RAILING TO BE CONSTRUCTED TO MATCH EXISTING RAILING. SEE TYPICAL RAILING DETAILS ON STRUCTURAL DRAWINGS.
2. ALL NEW RAILING TO BE GALVANIZED AND PAINTED.
3. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO FABRICATION.
4. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL RAILING WORK ON THE EXISTING ADA RAMP.
5. ALL NEW RAILING ON SLOPED RETAINING WALLS SHALL FOLLOW THE SLOPE WITH THE VERTICAL POSTS PLUMB.
6. REFER TO STANDARD RAILING DETAILS ON SHEETS S-19 THROUGH S-22 FOR RAILING DETAILS, COMPONENT SIZES AND CONNECTION DETAILS.
7. RAILINGS SHALL BE FABRICATED IN THEIR ENTIRETY PRIOR TO GALVANIZING. CONTRACTOR SHALL PROVIDE RAILING EXPANSION JOINTS AS INDICATED IN DETAIL 5/35 ON SHEET S-22 WHERE NEEDED FOR JOINING RAILING PORTIONS IN THE FIELD. FIELD WELDING SHALL BE AVOIDED.
8. ALL NEW RAILING TO BE PAID FOR UNDER "STEEL RAILING". HANDRAILS AND ALL ASSOCIATED HARDWARE AT STAIRS SHALL BE INCLUDED IN THE COST OF THIS PAY ITEM.
9. ALL PAINTING OF NEW HANDRAIL WILL BE PAID FOR UNDER "PAINTING STEEL RAILING"

**RELOCATED EXISTING RAILING:**

1. ALL EXISTING RAILING INDICATED TO BE REMOVED AND RELOCATED SHALL BE SALVAGED IN ITS ENTIRETY WITHOUT DAMAGING ANY OF ITS COMPONENTS AND SHALL BE STORED IN A SAFE LOCATION.
2. REPAIR ALL DAMAGE TO EXISTING RAILING PRIOR TO RE-INSTALLATION.
3. CONTRACTOR SHALL CUT, RECONFIGURE, RE-WELD AND OTHERWISE MODIFY THE EXISTING RAILING COMPONENTS AS REQUIRED TO ACHIEVE THE FINAL CONFIGURATION SHOWN ON THESE DRAWINGS.
4. ALL EXISTING RAILING IS GALVANIZED AND PAINTED. THE CONTRACTOR SHALL REPAIR ALL GALVANIZING DAMAGED DURING REMOVAL OR RECONFIGURATION WORK PRIOR TO PAINTING THE RAILING.
5. ALL RELOCATED RAILING TO BE PAINTED. PAINTING TO BE PAID FOR UNDER "PAINTING STEEL RAILING", WHICH SHALL INCLUDE REMOVAL OF PREVIOUS PAINT AS REQUIRED AND ALL PREPARATORY WORK.
6. REFER TO STANDARD RAILING DETAILS ON SHEETS S-19 THROUGH S-22 FOR COMPONENT SIZES AND CONNECTION DETAILS.
7. THE CONTRACTOR SHALL TAKE INVENTORY OF EXISTING RAILING PRIOR TO REMOVAL TO ENSURE ENOUGH MATERIAL IS SALVAGEABLE TO ACCOMMODATE NEW RAILING CONFIGURATION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IF A DISCREPANCY OR SHORTAGE EXISTS. ALL EXTRA NON-REUSABLE RAILING MATERIAL SHALL BE DISPOSED OF PROPERLY.
8. ALL RELOCATED RAILING TO BE PAID FOR UNDER "REMOVING AND RE-ERECTING EXISTING RAILING", WHICH SHALL INCLUDE ALL WORK NECESSARY TO ACHIEVE THE RAILING CONFIGURATION SHOWN, INCLUDING REMOVAL, CLEANING, MODIFICATION, REINSTALLATION AND GALVANIZING REPAIR.
9. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD PRIOR TO START OF WORK.
10. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL RAILING WORK ON THE EXISTING ADA RAMP.

FILE NAME =	USER NAME = JMiddlet	DESIGNED - PS	REVISED -
D:\sht-railings2.dgn		DRAWN - PS	REVISED -
		CHECKED - FH	REVISED -
		DATE - 04/09/10	REVISED -

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	11
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	



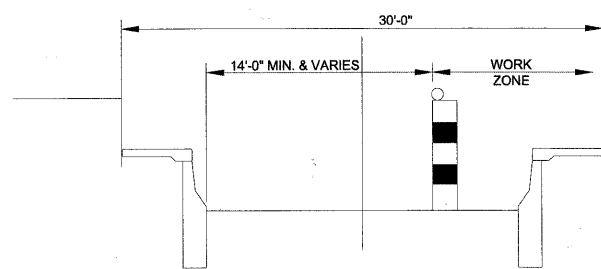
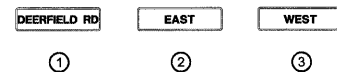
**NOTES:**

1. DAY TIME LANE CLOSURES ACCORDING TO STANDARD 701501 WILL ONLY BE PERMITTED B/T THE HOURS OF 10:00 A.M. TO 3:00 P.M.
2. SEE SHEET MT-2 FOR SUGGESTED DETOUR PLAN FOR FULL LANE CLOSURE ON DEERFIELD ROAD.

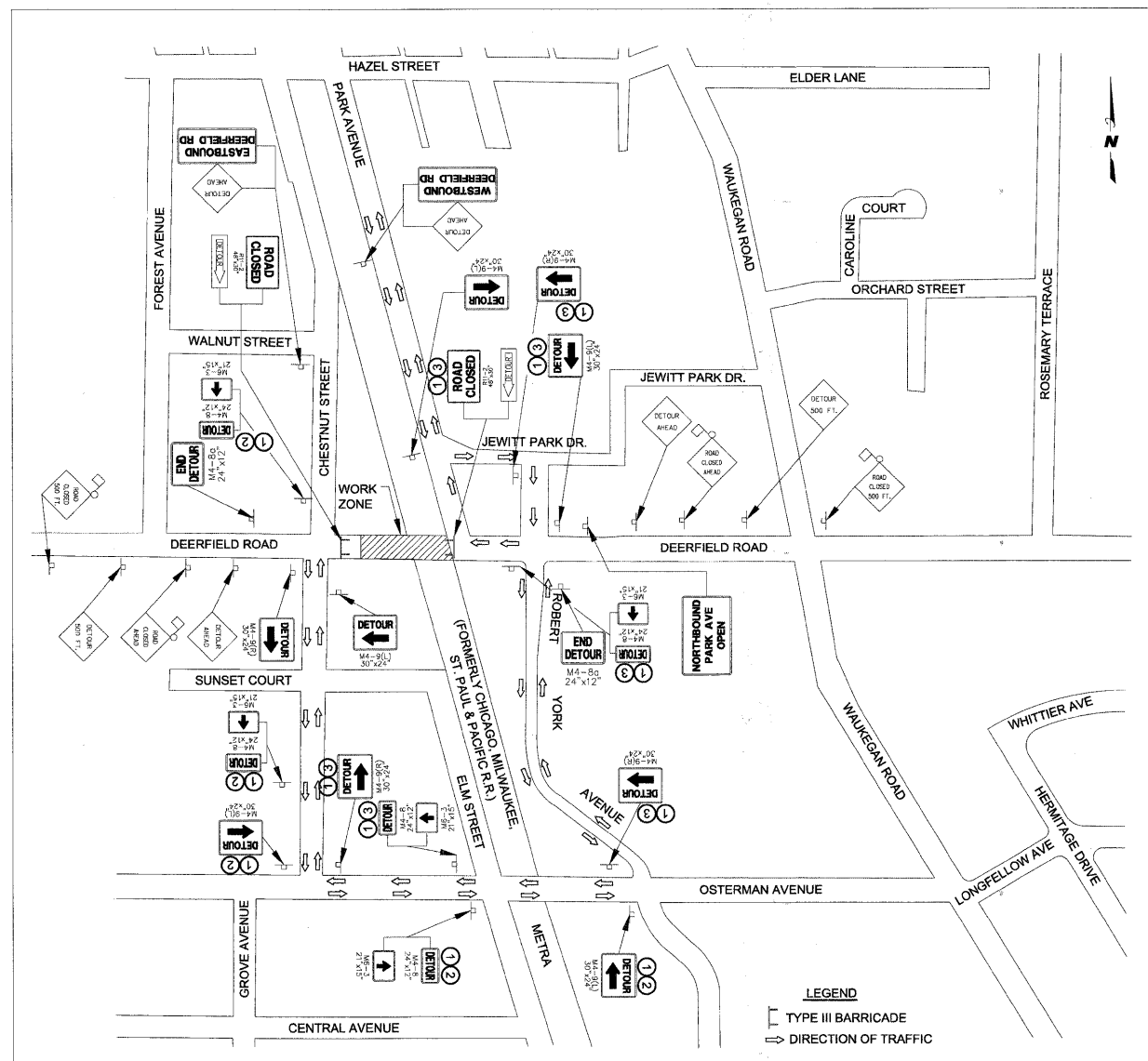
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 130 East Randolph Street, Chicago, Illinois 60601

FILE NAME = D:\-shtr-mot.dgn	USER NAME = JMaddlet	DESIGNED - JWM	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUGGESTED MAINTENANCE OF VEHICULAR AND PEDESTRIAN TRAFFIC</b>	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 12	
PLOT SCALE = 1:240	CHECKED - JLB	REVISED -	SCALE: 1"=20'			SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		CONTRACT NO. 63450	
PLOT DATE = 4/13/2010	DATE - 04/09/10	REVISED -									

**SUPPLEMENTAL DETOUR SIGNING**



**TYPICAL SECTION FOR PARTIAL DEERFIELD ROAD LANE CLOSURE  
(MAINTAIN TWO-WAY TRAFFIC WITH FLAGGER)**



**DETOUR PLAN FOR DEERFIELD ROAD FULL CLOSURE, IF REQUIRED**

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PLOT SCALE = 1:2880.001	
PLOT DATE = 4/13/2010	

DESIGNED - JWM	REVISD -
DRAWN - JWM	REVISD -
CHECKED - JLB	REVISD -
DATE - 04/09/10	REVISD -

DESIGNED - JWM	REVISD -
DRAWN - JWM	REVISD -
CHECKED - JLB	REVISD -
DATE - 04/09/10	REVISD -

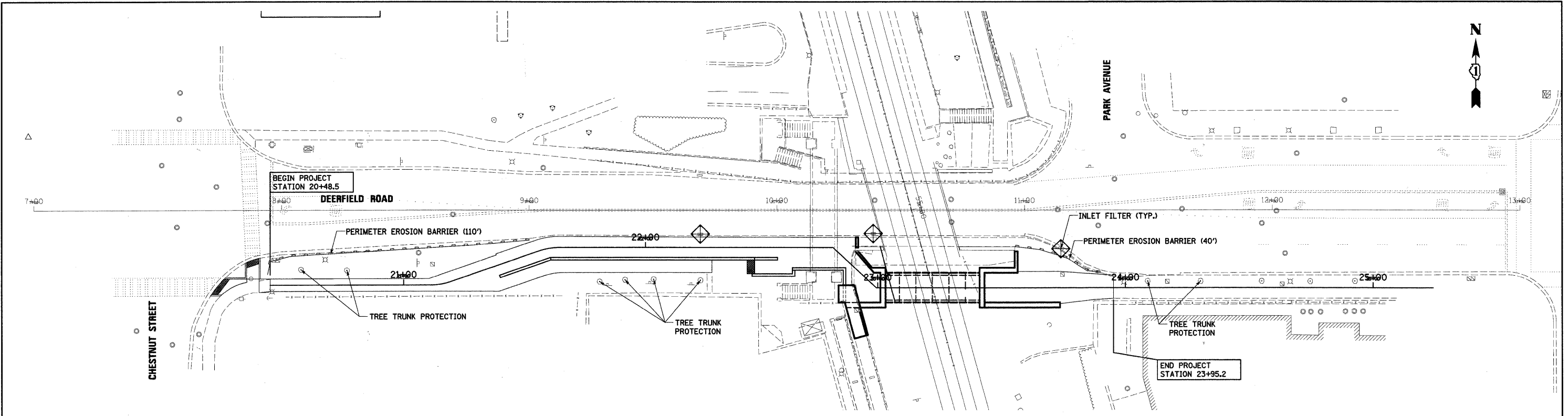
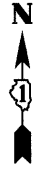
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DRAWN - JWM	REVISD -
CHECKED - JLB	REVISD -
DATE - 04/09/10	REVISD -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUGGESTED MAINTENANCE OF VEHICULAR AND  
PEDESTRIAN TRAFFIC**

SCALE: 1"=20'    SHEET NO.    OF    SHEETS    STA.    TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	13
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	



**EROSION CONTROL NOTES:**

1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS AS DEFINED IN THE ILLINOIS URBAN MANUAL, LATEST EDITION.
2. THE PURPOSE OF THE EROSION AND SEDIMENT CONTROL MEASURES INCLUDED FOR THIS PROJECT IS TO LIMIT THE SEDIMENT POLLUTION IMPACT OF ANY STORM WATER DISCHARGES THAT ORIGINATE ON THIS SITE OR OFF-SITE FLOWS THAT FLOW OVER THE DISTURBED AREAS ONTO DOWNSTREAM AREAS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT SEDIMENT TRANSPORT OFF THE SITE IS REDUCED BY A COMBINATION OF MINIMIZATION OF EROSION AT THE SOURCE AND INSTALLATION OF SPECIFIC MEASURES TO CONTROL OR REDUCE THE TRANSPORT OF SEDIMENT. A COPY OF THE EROSION AND SEDIMENT CONTROL SCHEDULE BEING IMPLEMENTED BY THE CONTRACTOR WILL BE ON THE CONSTRUCTION SITE AT ALL TIMES.
4. ALL RUNOFF ORIGINATING ON DISTURBED AREAS ASSOCIATED WITH THIS PROJECT WILL PASS THROUGH ONE OR MORE MEASURES THAT WILL MINIMIZE THE OFF-SITE SEDIMENT IMPACTS OF THE CONSTRUCTION ACTIVITY.
5. THE SILT FENCE PERIMETER EROSION BARRIER MUST REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED WITH VEGETATION. AT THIS TIME, THE PERIMETER EROSION BARRIER MUST BE REMOVED AND AREAS DAMAGED BY THE FENCE INSTALLATION RESTORED.
6. DISTURBED AREAS ARE TO BE PROTECTED FROM EROSION IN A TIMELY MANNER. UPON COMPLETION OF GRADING OR CONSTRUCTION, THE AREA WILL BE STABILIZED (USING PERMANENT MEASURES WHEN POSSIBLE) WITHIN 7 CALENDAR DAYS. TEMPORARY STABILIZATION THROUGH USE OF GROUND COVER, MULCHING, OR OTHER APPROVED MEASURES WILL BE INSTALLED WHENEVER SITE DEVELOPMENT WORK, GRADING OR OTHER EARTH DISTURBING ACTIVITIES CEASE TO BE CONTINUOUS FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE 7/14 DAY REQUIREMENT IS TAKEN TO MEAN THAT THE STABILIZATION OPERATION IS COMPLETE OR NEARING COMPLETION IN THE DEFINED TIME.
7. THE CONTRACTOR MUST DESIGNATE ONE OF HIS EMPLOYEES AS RESPONSIBLE FOR IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN ON ALL DISTURBED AREAS. THIS PERSON IS TO BE KNOWLEDGEABLE ABOUT INSTALLATION AND MAINTENANCE OF THE REQUIRED MEASURES. THIS EMPLOYEE IS TO HAVE THE AUTHORITY TO CARRY OUT THE IMPLEMENTATION OF ANY INSTRUCTIONS CONCERNING THE EROSION AND SEDIMENT CONTROL PLAN GIVEN BY THE ENGINEER. ALL MEASURES WILL BE INSPECTED BY THIS INDIVIDUAL AND THE ENGINEER ON A REGULAR BASIS (AT LEAST ONCE EVERY 7 DAYS) AND AFTER RAINFALL EVENT GREATER THAN 0.5 INCHES.
8. ALL PUBLIC ROADWAYS ADJACENT TO THE CONSTRUCTION SITE MUST BE INSPECTED AND CLEANED IF NECESSARY AT THE END OF EACH CONSTRUCTION DAY.
9. STREETS ADJACENT TO THE SITE MUST BE KEPT FREE OF DIRT, MUD, AND DEBRIS.
10. DUST CONTROL METHODS MUST BE IMPLEMENTED TO MINIMIZE DUST AND AIR-BORNE DIRT GENERATION.
11. STOCKPILES OF SOIL TO REMAIN IN PLACE MORE THAN THREE DAYS MUST BE FURNISHED WITH EROSION & SEDIMENT CONTROL MEASURES. STOCKPILES TO REMAIN IN PLACE FOR 21 DAYS OR MORE MUST RECEIVE TEMPORARY SEEDING.
12. SEDIMENT LADEN DEWATERING DISCHARGE MUST BE DIRECTED TO AN APPROVED SEDIMENT TRAPPING MEASURE PRIOR TO RELEASE FROM THE SITE.

FILE NAME =	USER NAME = JMdolat
D1-sht-erosion@dgn.dgn	
PLOT SCALE = 1:240	
PLOT DATE = 4/13/2010	

DESIGNED - JWM	REVISED -
DRAWN - JWM	REVISED -
CHECKED - JLB	REVISED -
DATE - 04/09/10	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>EROSION AND SEDIMENT CONTROL PLAN</b>	
SCALE: 1"=20'	SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	14
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
	WALL MOUNTED LUMINAIRE, 70 WATT HPS
	CEILING MOUNTED LUMINAIRE, 70 WATT HPS
	LIGHTING CONTROLLER
	ELECTRIC JUNCTION BOX
	ELECTRIC HANDHOLE
	EXISTING UTILITY SERVICE CONNECTION, POLE MOUNTED WITH DISCONNECT SWITCH
	EXPOSED CONDUIT
	UNIT DUCT
	EXISTING UNDERGROUND WIRING TO REMAIN
	EXISTING CONDUIT EXPOSED
	EXISTING CONDUIT TO BE REMOVED
	CONCEALED CONDUIT IN STRUCTURE
	CONCEALED CONDUIT UNDERGROUND, TRENCHED OR PUSHED
	RACEWAY OR DIRECT BURIAL CABLE UNDERGROUND, WITHOUT ENCASEMENT
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN

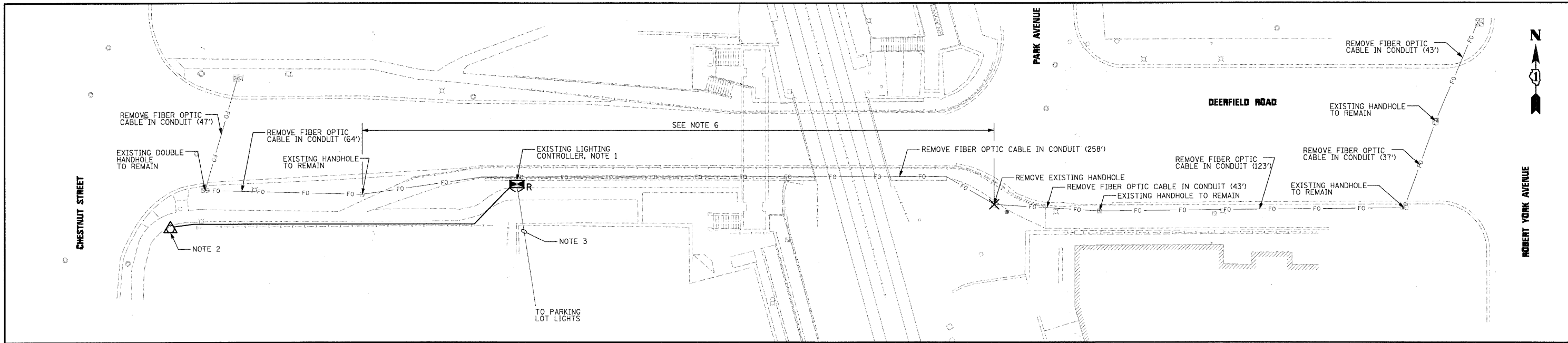
ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
ATS	ATTACHED TO STRUCTURE
B	BASELINE
BOE	IDOT BUREAU OF ELECTRICITY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
C	CENTERLINE
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DIA	DIAMETER
DP	DISTRIBUTION PANEL
E	EXISTING UNIT TO REMAIN
ECA	ELECTRIC CABLE ASSEMBLY
EIS	EMBEDDED IN STRUCTURE
EM	EXISTING UNIT TO BE MODIFIED (e.g. NEW LUMINAIRE, BALLAST OR MAST ARM)
EOP	EDGE OF TRAVELED PAVEMENT
ER	EXISTING RELOCATED UNIT
FT	FEET OR FOOT
FU	FUSE
GND	GROUND
HPS	HIGH PRESURE SODIUM
IDOT	ILLINOIS DEPARTMENT OF TRANSPORTATION
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERE
KW	KILOWATTS
M	METER
MTG HT	MOUNTING HEIGHT
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NO. #	NUMBER
P	PROPOSED
PB	PUSH BUTTON
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PVCC RGC	PVC COATED RIGID GALVANIZED CONDUIT
PT	POTENTIAL TRANSFORMER
R	EXISTING UNIT TO BE REMOVED (OWNER SALVAGED U.N.O.)
RR	EXISTING UNIT TO BE REMOVED AND REINSTALLED
RECP	RECEPTACLE
RGC	RIGID GALVANIZED CONDUIT
SEL SW	SELECTOR SWITCH
SPARE	SPARE
SPACE	SPACE
SS	STAINLESS STEEL
STA	STATION
UD	UNIT DUCT
U.N.O.	UNLESS NOTED OTHERWISE
WP	WOOD POLE
XFMR	TRANSFORMER

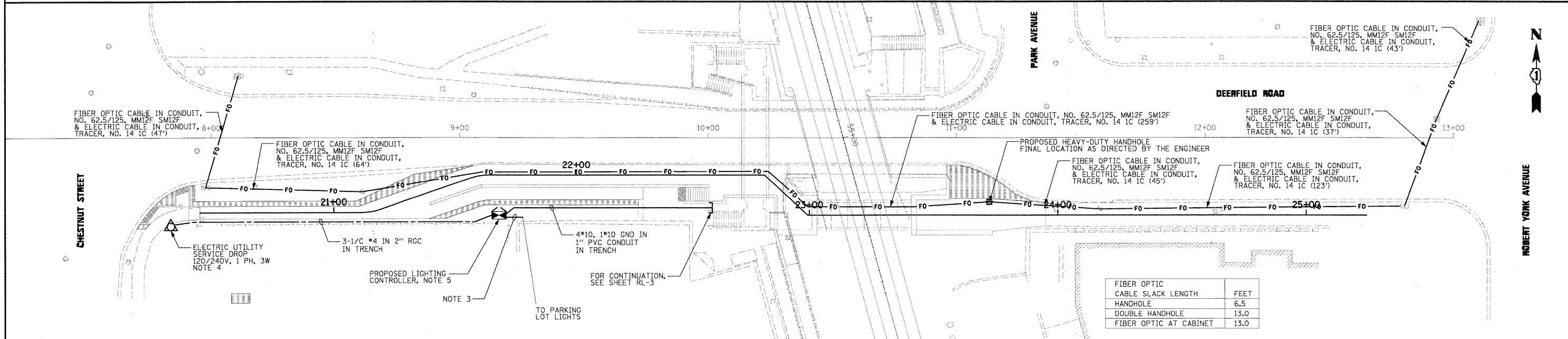
GENERAL NOTES:

- ALL WORK AND MATERIAL SHALL COMPLY WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007, UNLESS SPECIFICALLY STATED OTHERWISE IN THE SPECIAL PROVISIONS, AND ON CONTRACT DRAWINGS.
- QUANTITIES OF CONDUIT, WHERE INDICATED ON THE PLANS, ARE APPROXIMATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND SHALL INSTALL RACEWAYS IN COMPLETE CONFORMANCE WITH SPECIFIED REQUIREMENTS.
- NO EQUIPMENT OR MATERIAL SHALL BE DELIVERED TO THE JOB SITE PRIOR TO THE APPROVAL AND INSPECTION OF THE ENGINEER. ANY EQUIPMENT OR MATERIAL DELIVERED TO THE JOB SITE PRIOR TO APPROVAL AND INSPECTION SHALL BE REMOVED FROM THE JOB SITE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL PREPARE A PRELIMINARY SCHEDULE WHEN THE CONTRACT COMMENCES WHICH ESTABLISHES THE DATE WHEN THE ELECTRICAL SERVICES WILL BE REQUIRED. THIS SCHEDULE SHALL BE FORWARDED IN WRITING TO COMMONWEALTH EDISON COMPANY (COMED). SUBSEQUENT UPDATING OF THE SCHEDULE SHALL BE FORWARDED TO COMED AS CHANGES MAY OCCUR IN THE DATE OF SERVICE REQUIREMENTS. TEN (10) DAYS BEFORE THE ELECTRICAL SERVICES ARE REQUIRED, THE CONTRACTOR SHALL NOTIFY COMED BY PHONE AND CONFIRM THE REQUEST IN WRITING. COMED ELECTRIC SERVICE AGREEMENT SHALL BE FORWARDED TO THE VILLAGE OF DEERFIELD PUBLIC WORKS AND ENGINEERING DEPARTMENT.
- ALL EXISTING AREAS THAT ARE DAMAGED AS PART OF THIS WORK, INCLUDING BUT NOT LIMITED TO FENCING, CURB AND GUTTER, SIDEWALKS, AND WHERE RESTORATION IS NOT COVERED BY THE APPLICABLE SECTIONS OF THE SPECIAL PROVISIONS, SHALL BE RESTORED TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THIS CONTRACT. SEPARATE PAYMENT WILL NOT BE MADE.
- WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO FURTHER EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE EXCAVATION PAY ITEM.
- ALL CONDUIT, JUNCTION BOXES, AND APPERTUNANCES ARE ILLUSTRATED DIAGRAMMATICALLY, THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH THE APPROVAL OF THE ENGINEER.
- CONDUITS SHALL BE INSTALLED AT A MINIMUM 36" DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERDRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF CONDUIT AS REQUIRED AT NO ADDITIONAL COST. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
- WHERE MULTIPLE CONDUITS ADJACENT TO EACH OTHER ARE INSTALLED IN A COMMON TRENCH, TRENCH AND BACKFILL WILL NOT BE PAID FOR EACH CONDUIT, BUT WILL BE PAID FOR THE LENGTH OF THE COMMON TRENCH ONLY.
- EQUIPMENT GROUNDING CONDUCTORS SHALL BE SPLICED AND BONDED TO EACH JUNCTION BOX AND PULL BOX THE CONDUCTORS PASS THROUGH AS WELL AS AT EACH LIGHTING FIXTURE AND TO ALL OTHER ITEMS OF EQUIPMENT. JUNCTION BOXES SHALL BE EQUIPPED WITH GROUND LUGS FOR GROUND WIRE TERMINATION WITHOUT DEGRADATION OF THE BOX RATING.

FILE NAME = D:\sht-elec01.dgn	USER NAME = JMiddlet	DESIGNED - JLW	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DEERFIELD RD PEDESTRIAN UNDERPASS ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES</b>	F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 1:12	CHECKED - KMY	REVISED -	1257			08-00083-00-BT	LAKE	51	15	
PLOT DATE = 4/13/2010	DATE - 04/09/10	REVISED -	CONTRACT NO. 63450			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



EXISTING ELECTRICAL PLAN  
SCALE: 1" = 20'

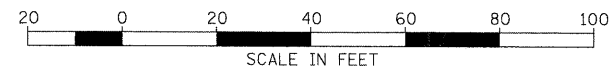


PROPOSED ELECTRICAL PLAN  
SCALE: 1" = 20'

NOTES:

- EXISTING LIGHTING CONTROLLER SHALL REMAIN OPERATIONAL FOR NORMAL NIGHT TIME HOURS UNTIL NEW LIGHTING CONTROLLER HAS BEEN INSTALLED, ENERGIZED, TESTED, AND ALL EXISTING LIGHTING CIRCUITS HAVE BEEN REROUTED AND RECONNECTED TO THE NEW LIGHTING CONTROLLER.
- COORDINATE WITH COMED FOR REMOVAL OF ELECTRICAL SERVICE INSTALLATION TO THE EXISTING LIGHTING CONTROLLER.
- EXISTING UNIT DUCT TO BE EXPOSED AND RELOCATED TO THE PROPOSED LIGHTING CONTROLLER. THIS WORK MUST BE COMPLETED AFTER THE NEW LIGHTING CONTROLLER HAS BEEN INSTALLED, ENERGIZED, AND READY FOR OPERATION. EXPOSING AND RELOCATING EXISTING UNIT DUCT WORK SHALL BE DONE IN ONE WORK DAY TO ENSURE THAT ALL EXISTING LIGHTING LOADS ARE ENERGIZED AND OPERATIONAL DURING NORMAL NIGHT TIME HOURS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE "EXPOSE AND RELOCATE UNIT DUCT" PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
- REFER TO SHEET RL-6 FOR ELECTRIC SERVICE INSTALLATION DETAIL.
- REFER TO SHEET RL-4 FOR LIGHTING CONTROLLER INSTALLATION DETAILS.
- THE EXISTING CONDUIT SHALL ALSO BE REMOVED, THIS WORK IS INCLUDED IN THE PRICE OF "REMOVE FIBER OPTIC CABLE".

FIBER OPTIC CABLE SLACK LENGTH	FEET
HANDHOLE	6.5
DOUBLE HANDHOLE	13.0
FIBER OPTIC AT CABINET	13.0



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130 East Randolph Street, Chicago, Illinois 60601

FILE NAME =	USER NAME = JMiddle
D:\sht\eleo82.dgn	
PLOT SCALE = 1:240	
PLOT DATE = 4/13/2019	

DESIGNED - JLW	REVISED -
DRAWN - CJM	REVISED -
CHECKED - KMY	REVISED -
DATE - 04/09/10	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEERFIELD RD PEDESTRIAN UNDERPASS  
EXISTING AND PROPOSED ELECTRICAL PLANS

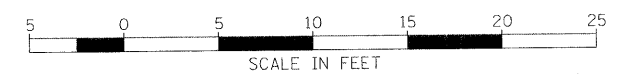
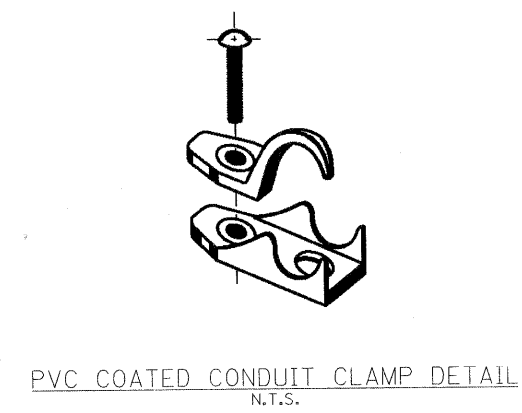
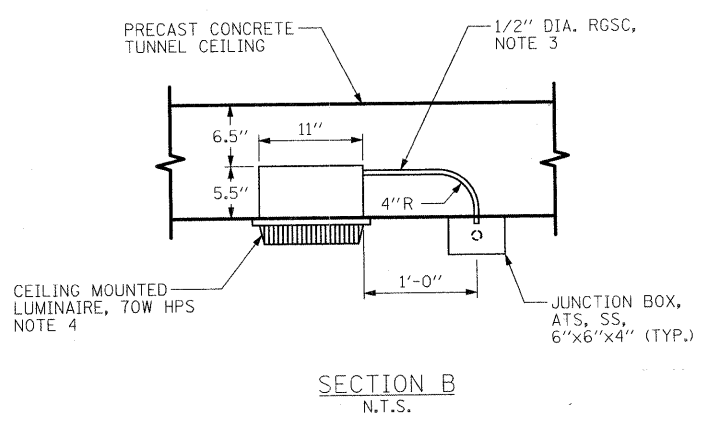
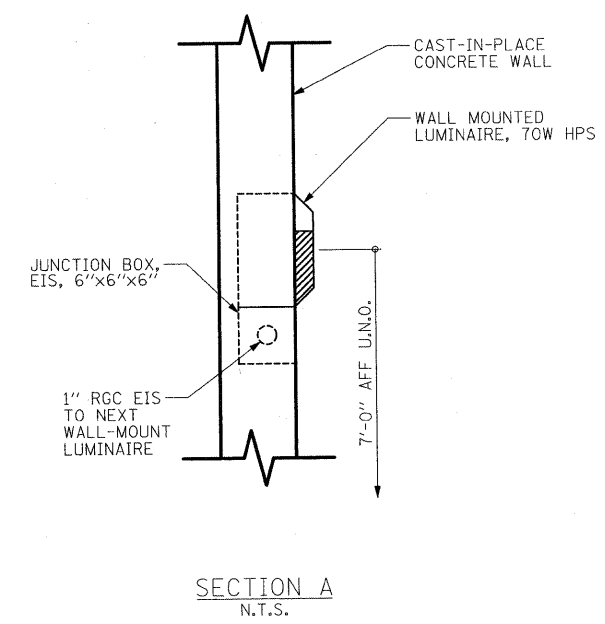
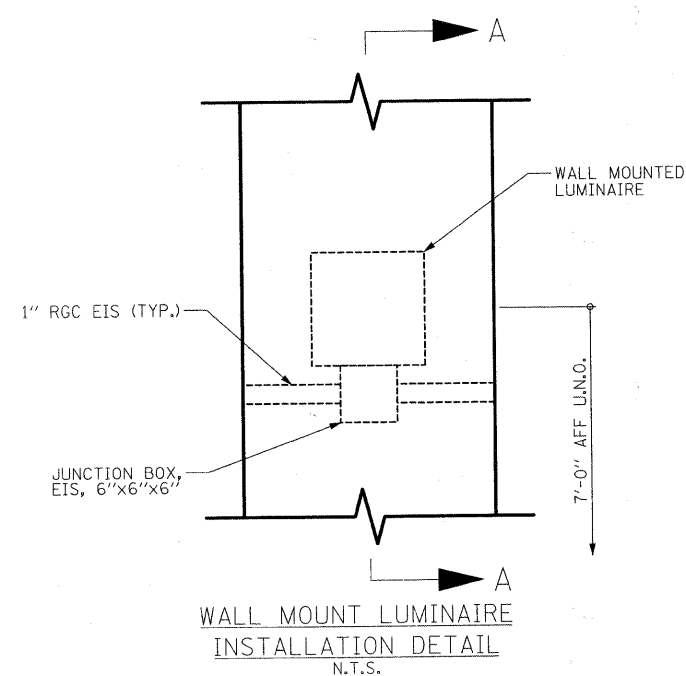
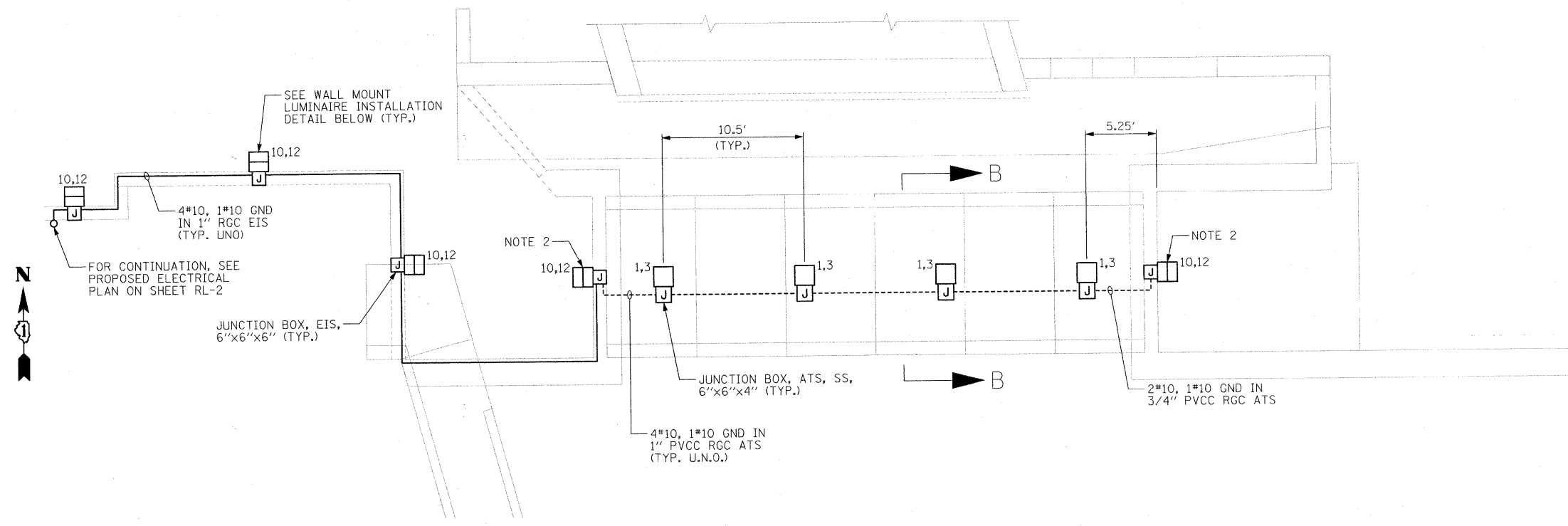
SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	16
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 63450



**NOTES:**

1. SEE SHEET RL-1 FOR ELECTRICAL SYMBOL LIST, ABBREVIATIONS, AND GENERAL NOTES.
2. FIXTURE SHALL BE MOUNTED AT 12'-0" AFF ON HEADWALL.
3. 1/2" DIA. RGSC AND 4" RADIUS ELBOW FOR EACH CEILING MOUNTED LUMINAIRE SHALL BE FURNISHED AND INSTALLED BY THE PRECAST CONCRETE BOX MANUFACTURER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRECAST CONCRETE BOX SEGMENTS PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
4. VERIFY LUMINAIRE DIMENSIONS WITH THE LIGHT FIXTURE SHOP DRAWINGS PRIOR TO THE CONSTRUCTION OF PRECAST CONCRETE BOX SEGMENTS.



**McDonough Associates Inc.**  
 Engineers / Architects  
 130 East Randolph Street Chicago, Illinois 60601

FILE NAME	USER NAME = JMddlet	DESIGNED - JLW	REVISED -
DI-shht-aler		DRAWN - CJM	REVISED -
PLOT SCALE = 1:60		CHECKED - KMY	REVISED -
PLOT DATE = 6/14/2010		DATE - 04/09/10	REVISED -

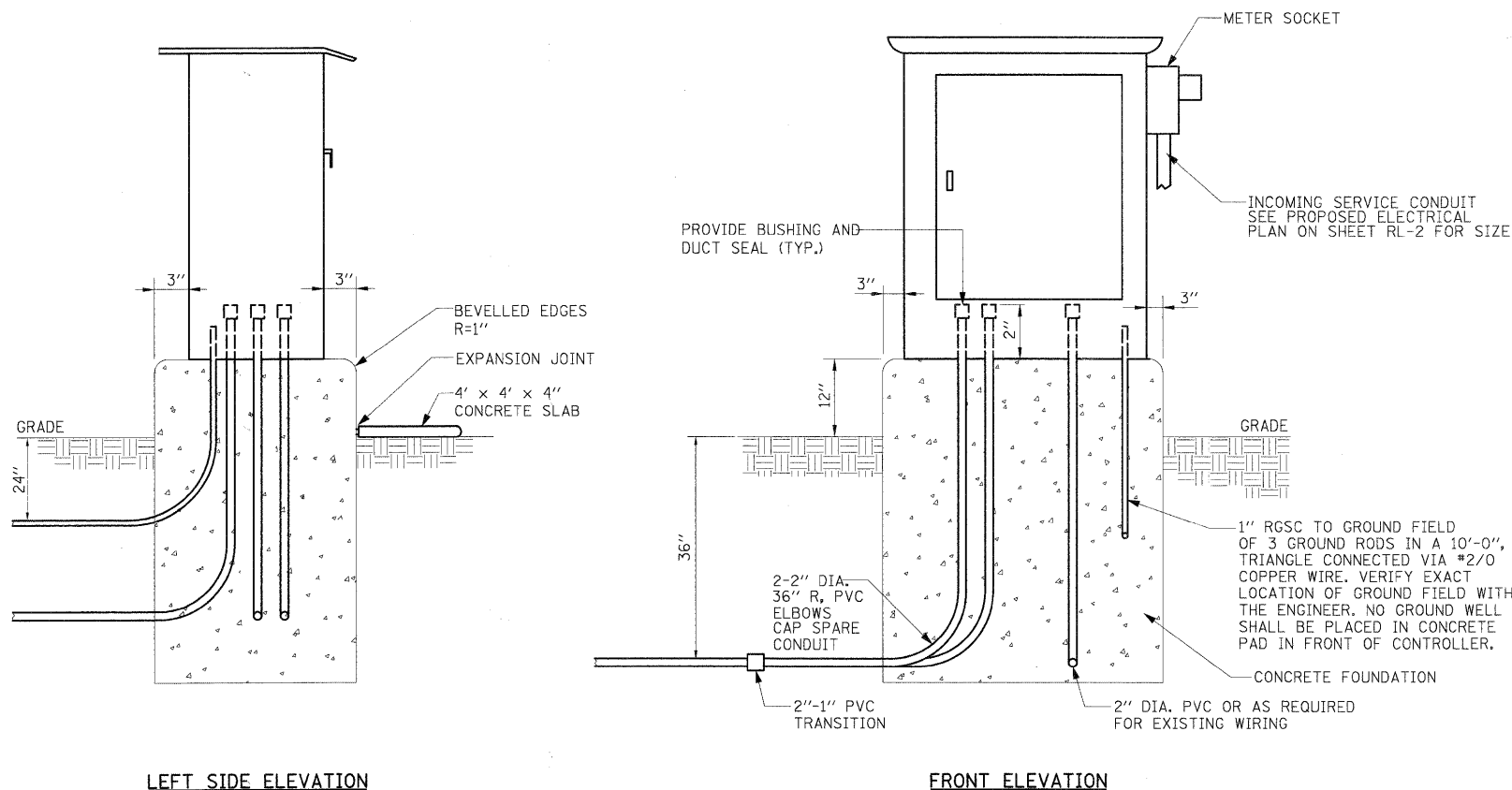
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**DEERFIELD RD PEDESTRIAN UNDERPASS**  
**LIGHTING PLAN & DETAILS**

SCALE: 1" = 5'	SHEET NO. OF SHEETS	STA. TO STA.
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F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 17
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**CONTRACT NO. 63450**



LEFT SIDE ELEVATION

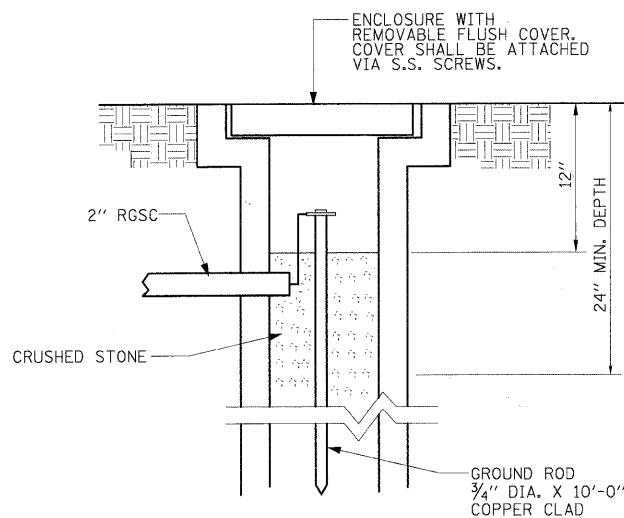
FRONT ELEVATION

**LIGHTING CONTROLLER INSTALLATION DETAILS**

NOT TO SCALE

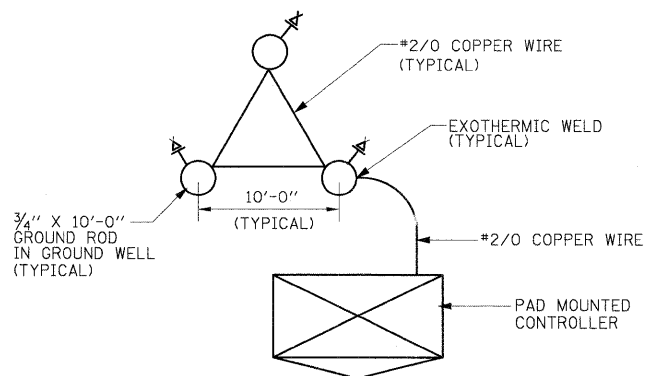
**GENERAL NOTES:**

- COORDINATE PLACEMENT OF RACEWAYS WITH CONTROLLER MANUFACTURER TO ASSURE DOOR LATCH DOES NOT INTERFERE WITH CABLES OR OTHER DEVICES.
- METER FITTING SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE FRONT ELEVATION.
- THE CONTRACTOR SHALL PROVIDE A GROUND FIELD AT CABINET LOCATION. THE GROUND RODS, ANCHOR BOLTS AND REINFORCEMENT STEEL SHALL ALL BE INTERCONNECTED.
- GROUND FIELD INSTALLATION AT CONTROLLER LOCATION, INCLUDING ALL LABOR AND MATERIAL, SHALL BE CONSIDERED INCLUDED IN THE "LIGHTING CONTROLLER" PAY ITEM. NO SEPARATE PAYMENT WILL BE MADE.
- THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF GROUND FIELD WITH THE ENGINEER.
- CABINET SHALL BE FABRICATED FROM 1#8" SHEET ALUMINUM #3003H14 FORMED AND ARC WELDED ASSEMBLY.
- ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL.
- 1" THICK POLYISOCYANURATE INSULATION SHALL BE INSTALLED AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.
- METAL MOUNTING PANEL SHALL BE #10 GAUGE GALVANIZED SHEET STEEL FLANGED BACK 3/4" I.D. ON 4 SIDES.
- ALL DEVICES SHALL BE FRONT REMOVABLE.
- ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.
- ALL CONTROL WIRING SHALL BE 600V TYPE RHW-2.
- ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.
- CIRCUIT BREAKERS, CONTACTOR AND OTHER COMPONENTS SHALL BE PANEL MOUNTED ON 1/8" THICK GLASTIC INSULATION BACK PANEL.
- THE COMPLETED CONTROLLER SHALL BE U.L. LISTED AS AN INDUSTRIAL CONTROL PANEL UNDER UL508.
- ALL 120 VOLT SYSTEM AND ALL CONTROL WIRING SHALL BE #12 AWG STRANDED, UNLESS OTHERWISE INDICATED.
- ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
- THE COST OF PROVIDING WEATHER-PROOF METER SOCKET ON CONTROL CABINET SHALL BE INCLUDED IN THE COST OF LIGHTING CONTROLLER.
- FOR LIGHTING CONTROLLER WIRING DIAGRAM, SEE SHEET RL-5.
- ALL CONDUIT SHALL BE PVC SCHEDULE 40, UNLESS OTHERWISE NOTED.



GROUND WELL DETAIL

NOT TO SCALE

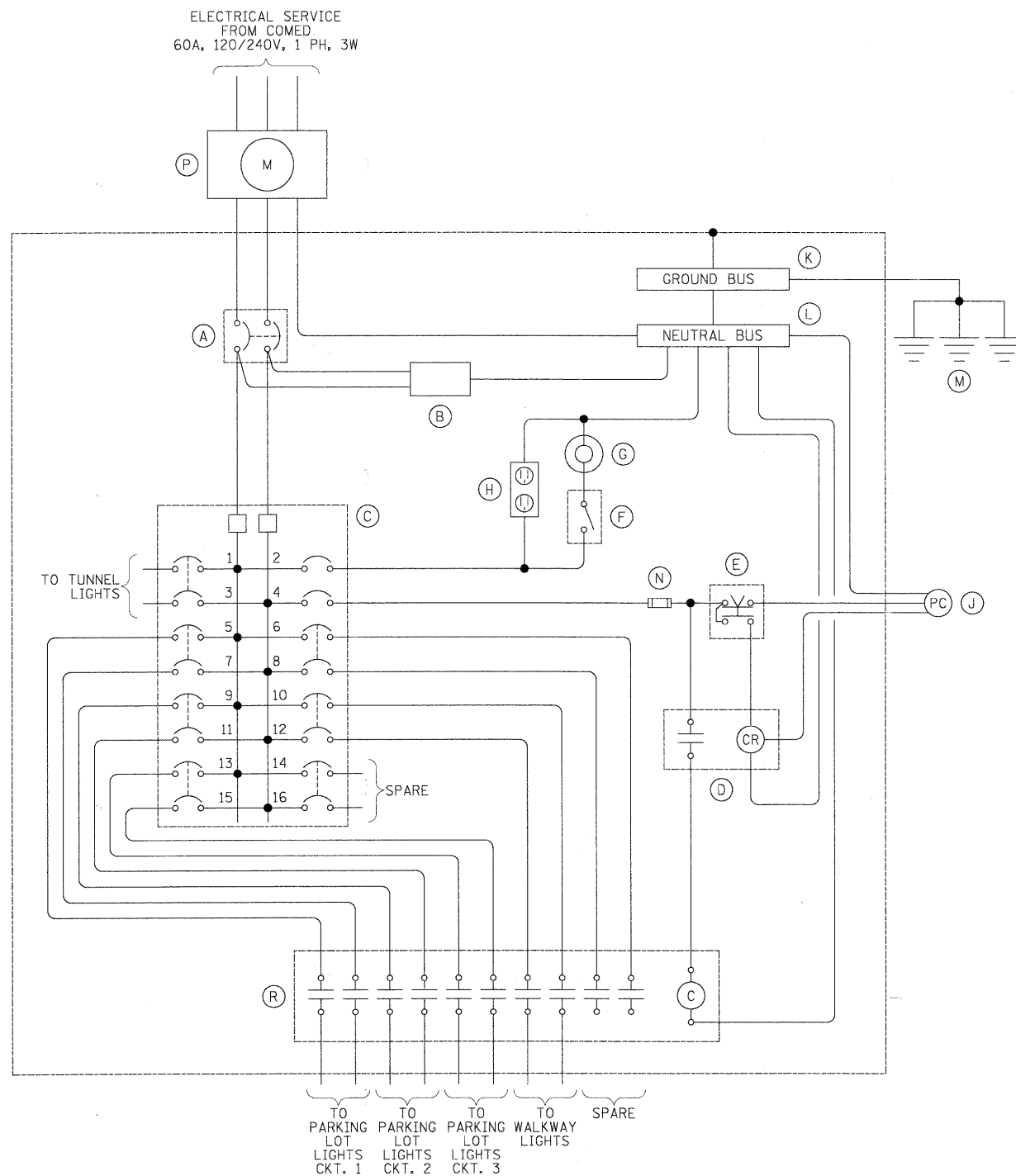


GROUND FIELD DETAIL

NOT TO SCALE

USER NAME = JMiddlet	DESIGNED - JLW	REVISED -
PLOT SCALE = 1:12	DRAWN - CJM	REVISED -
PLOT DATE = 4/13/2010	CHECKED - KMY	REVISED -
	DATE - 04/09/10	REVISED -

F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 18
CONTRACT NO. 63450				
FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT				



CIRCUIT	AMPS	VA
1	0.66	160
2	1.0	240
3	0.66	160
4	0.5	120
5	2.3	560
6	-	-
7	2.3	560
8	-	-
9	2.3	560
10	0.83	200
11	2.3	560
12	0.83	200
13	2.9	700
14	-	-
15	2.9	700
16	-	-
TOTAL	19.48	4720

ITEM	QTY.	DESCRIPTION
(A)	1	MAIN CIRCUIT BREAKER, MOLDED CASE, THERMAL MAGNETIC, 2-POLE, 240V, 100 AMP FRAME & 60A TRIP, INTERRUPTING RATING OF NOT LESS THAN 22,000 RMS SYMMETRICAL AMPS AT 240V
(B)	1	BRACKET MOUNTED SURGE ARRESTOR FOR 120/240V, 3W SERVICE
(C)	1	PANELBOARD INTERIOR ONLY, 120/240V, SINGLE PHASE, WITH 100A COPPER BUS, (2) 1P-20A AND (7) 2P-20A BOLT-ON BRANCH CIRCUIT BREAKERS EACH RATING NOT LESS THAN 22,000 RMS AMPERES AT 240V
(D)	1	CONTROL RELAY WITH CONTACTS RATED FOR CONTACTOR IN RUSH CURRENT
(E)	1	TWO-POSITION TEST SWITCH
(F)	1	MICRO-SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED)
(G)	1	60W, VAPORTIGHT INCANDESCENT LIGHTING FIXTURE WITH GLOBE, GUARD, AND MOUNTING BOX
(H)	1	GFI RECEPTACLE, 120V, 20A, PREMIUM SPEC, GRADE, NEMA 5-15R IN WP BOX WITH FLAP TYPE COVER
(J)	1	PHOTOELECTRIC CELL MOUNTED ON THE TOP OF LIGHTING CONTROL CABINET FACING NORTH-EAST SKY AND SHIELDED FROM ADJACENT LIGHTS
(K)	1	GROUND BUS, 1/4"x1"x12" WITH LUGS & SPARE LUGS
(L)	1	NEUTRAL BUS, 1/4"x1"x12" WITH LUGS & SPARE LUGS
(M)	3	COPPER-CLAD GROUND ROD, 5/8"x10'
(N)	1	FNQR-5 AND FUSE BLOCK
(P)	1	100A SOCKET FOR ELECTRIC UTILITY COMPANY METER
(R)	1	MULTIPOLE LIGHTING CONTACTOR, 30A FIELD-CONVERTIBLE CONTACTS, 10 N.O. CONTACTS, 120V COIL, SQUARE D CAT. NO. 8903LO82V02

NOTES:

- POWER WIRING RHH/RHW CONTROL WIRING #12 HTW.
- GROUND BUS CONNECTOR SCREWS ARE PAINTED GREEN. NEUTRAL BUS CONNECTOR SCREWS ARE PAINTED WHITE.
- THE CONTROLLER WILL BE SUITABLE FOR USE AS SERVICE EQUIPMENT PER NEC 230.66.
- LOAD IS BASED ON THE FOLLOWING:  
 70W, HPS LUMINAIRE: 80W, 0.33A @ 240V.  
 250W, HPS LUMINAIRE: 280W, 1.167A @ 240V.

FILE NAME = DI-ght-elec05.dgn	USER NAME = JMidlet	DESIGNED - JLW	REVISED -
PLOT SCALE = 1:12	CHECKED - KMY	DRAWN - CJM	REVISED -
PLOT DATE = 4/13/2010	DATE - 04/09/10		REVISED -

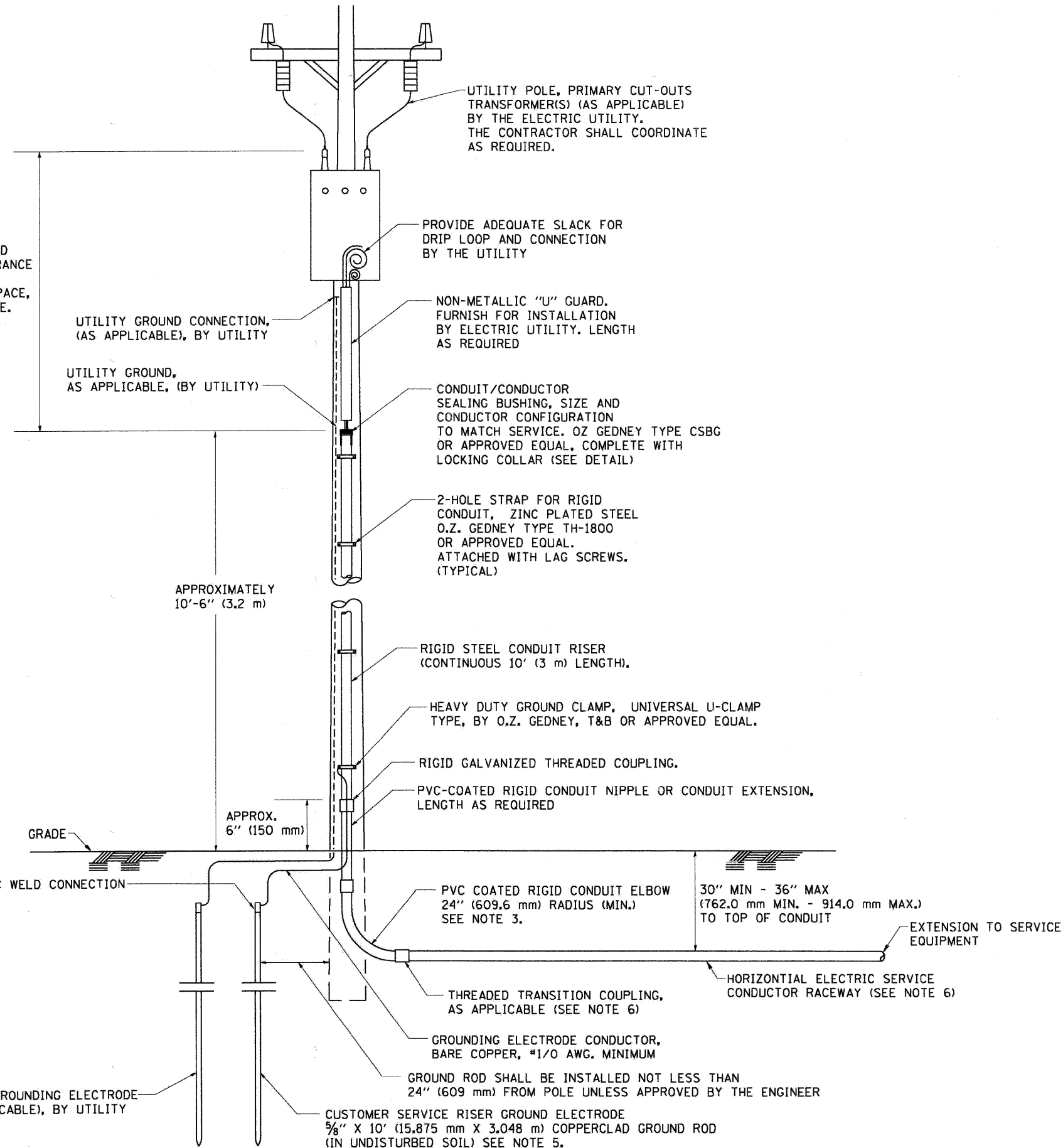
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEERFIELD RD PEDESTRIAN UNDERPASS  
LIGHTING CONTROLLER WIRING DIAGRAM

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

F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 19
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				CONTRACT NO. 63450

ASCERTAIN AND ASSURE CLEARANCE FROM UTILITY SECONDARY SPACE, AS APPLICABLE.

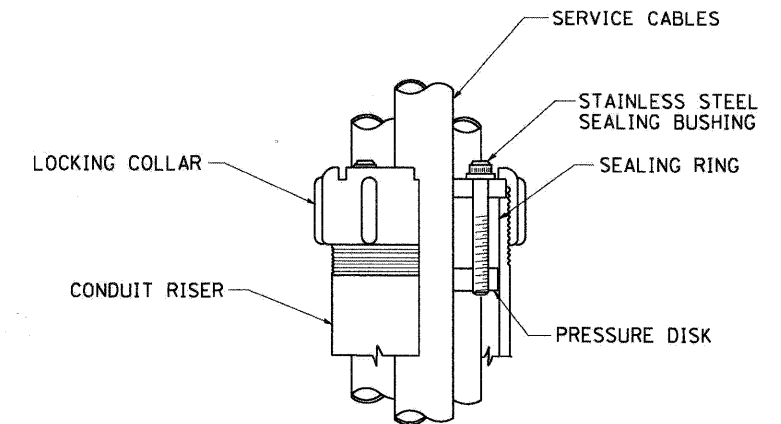


**APPLICATION**

THIS DETAIL APPLIES FOR LOW VOLTAGE ELECTRIC SERVICE (660 V OR LESS) FROM AN OVERHEAD UTILITY SUPPLY TO SEPERATLY-MOUNTED SERVICE EQUIPMENT.

**NOTES**

- SERVICE VOLTAGE SHALL BE AS INDICATED ELSEWHERE IN THE DRAWINGS.
- UNLESS OTHERWISE INDICATED, ITEMS AND WORK SHALL BE INCLUDED AND PAID AS PART OF THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.
- CONDUIT AND CONNECTOR DIAMETER SHALL MATCH THE DIAMETER OF THE SERVICE CONDUCTOR RACEWAY AS INDICATED ON THE PLANS.
- PVC COATED RACEWAYS AND ACCESSORIES SHALL BE CAREFULLY INSTALLED WITH MFR RECOMMENDED TOOLS AND PROCEDURES TO AVOID DAMAGE. ANY DAMAGE SHALL BE REPAIRED WITH COMPATIBLE PVC TOUCH-UP MATERIAL TO THE SATISFACTION OF THE ENGINEER OR THE DAMAGED MATERIAL SHALL BE REPLACED AT NO ADDITIONAL COST.
- THE CONTRACTOR SHALL OBTAIN INSPECTION AND APPROVAL BY THE ENGINEER OF SERVICE RISER GROUND ELECTRODE, RISER ELBOW, NIPPLE AND CONNECTION TO SERVICE CONDUCTOR RACEWAY EXTENSION BEFORE BACKFILL AND SHALL ALSO OBTAIN INSPECTION OF SERVICE RISER AND SEALING BUSHING BEFORE UTILITY "U" GUARD INSTALLATION AND SERVICE CONNECTION.
- THE HORIZONTAL ELECTRIC SERVICE CONDUCTOR RACEWAY SHALL BE AS INDICATED AND SHALL BE MEASURED SEPARATELY FOR PAYMENT. WHEN THE RACEWAY IS PVC-COATED RIGID GALVANIZED STEEL, THE COUPLING SHALL BE THE SAME. WHEN THE RACEWAY IS PVC CONDUIT (IN CONCRETE), THE COUPLING SHALL BE A METALIC TO NON METALIC ADAPTER. WHEN THE RACEWAY IS ENCASED IN CONCRETE, THE CONCRETE SHALL EXTEND TO COVER THE COUPLING.
- PLANS AND DETAILS INDICATE THE GENERAL NATURE AND REQUIREMENTS. THEY DO NOT SHOW EVERY ACCESSORY AND ATTACHMENT, AND THEY DO NOT RELIEVE THE CONTRACTOR OF THE REQUIREMENTS OF THE SPECIFICATIONS AND SPECIAL PROVISIONS TO ASCERTAIN UTILITY REQUIREMENTS AND TO COORDINATE ACCORDINGLY, FURNISHING ALL ITEMS AND WORK NOT PROVIDED BY THE UTILITY, BUT NECESSARY FOR A COMPLETE SERVICE INSTALLATION IS REQUIRED AND SHALL BE INCLUDED IN THE ELECTRIC UTILITY SERVICE INSTALLATION PAY ITEM.



**SEALING BUSHING DETAIL**

McDonough Associates Inc.  
Engineers/Architects  
130 East Randolph Street Chicago, Illinois 60601

FILE NAME = D1-sht-elec06.dgn	USER NAME = JModlet	DESIGNED - JLW	REVISED -
		DRAWN - CJM	REVISED -
		CHECKED - KMY	REVISED -
		DATE - 04/09/10	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

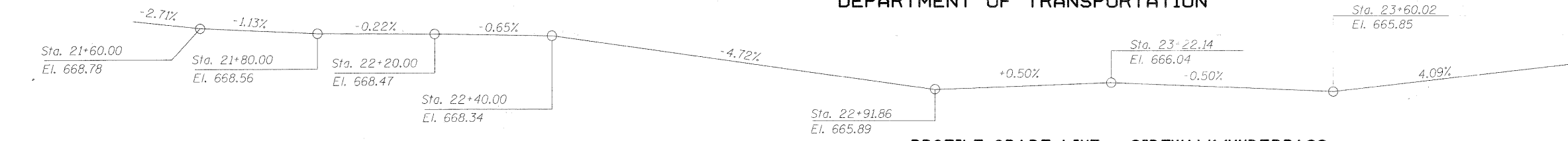
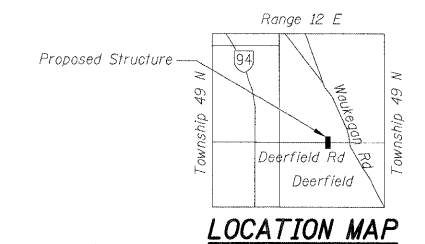
**DEERFIELD RD PEDESTRIAN UNDERPASS  
ELECTRIC SERVICE INSTALLATION DETAILS**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
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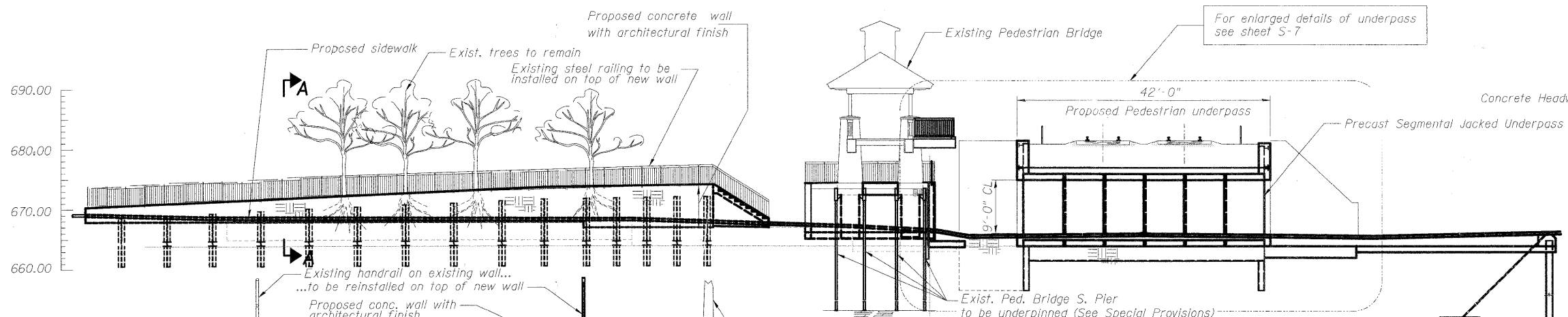
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	20
CONTRACT NO. 63450				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

BENCHMARK "BM-1": Cut X on N.E. bolt of hydrant at N.E. corner of Deerfield and Park = Elev. 670.80

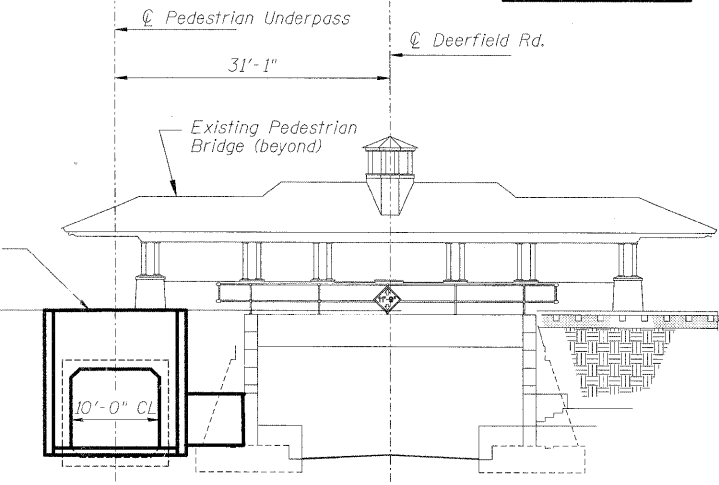
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



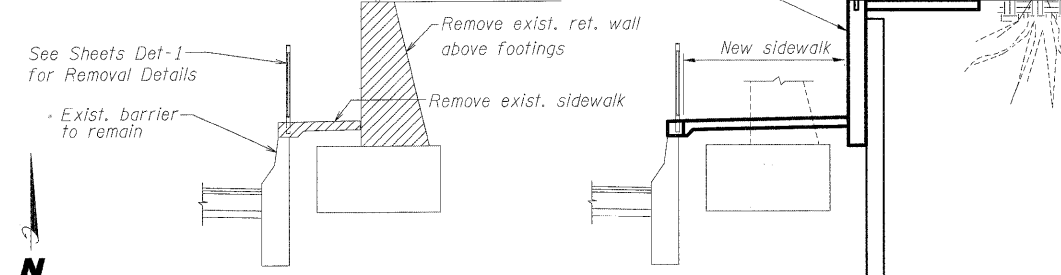
PROFILE GRADE LINE - SIDEWALK/UNDERPASS



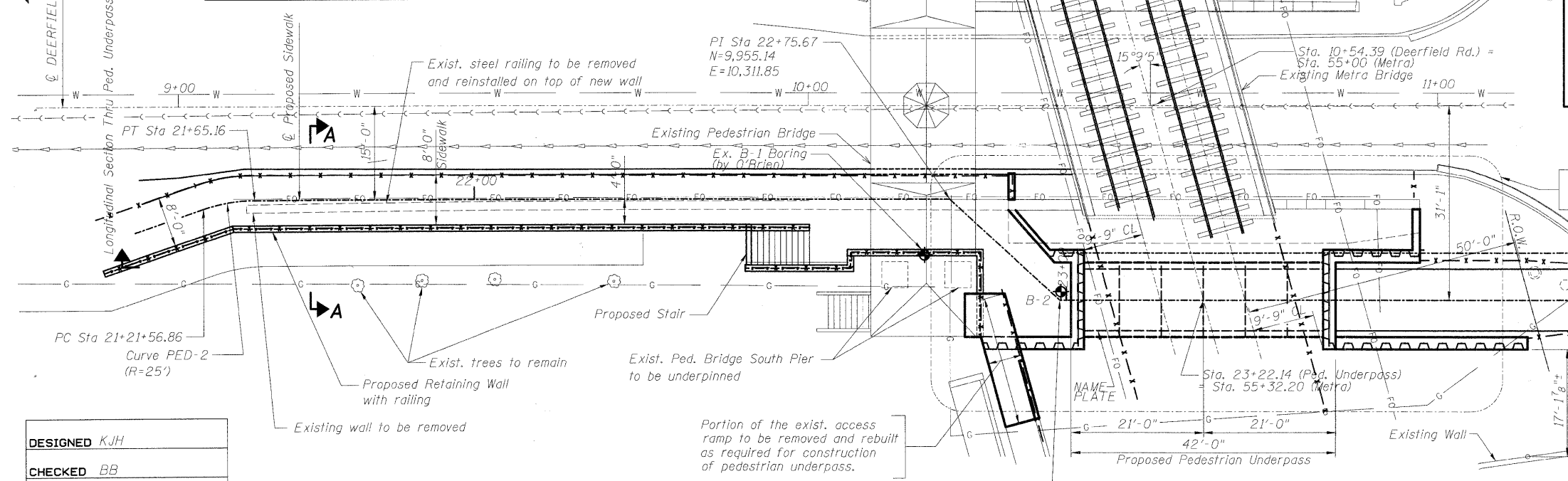
LONGITUDINAL SECTION THRU PEDESTRIAN UNDERPASS



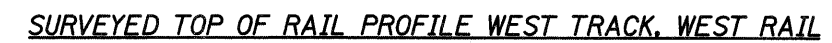
EAST ELEVATION



SECTION A-A THRU RETAINING WALL



PLAN



SURVEYED TOP OF RAIL PROFILE EAST TRACK, WEST RAIL

PEDESTRIAN UNDERPASS  
BUILT BY  
VILLAGE OF DEERFIELD  
LAKE COUNTY  
SECTION 08-00083-00-BT  
F.A.U. RT. 1257 STA 23+22  
STR. NO. 049-6159 LOADING E-80

NAME PLATE  
See Std. 515001

LOADING COOPER E-80 OR  
ALTERNATE LIVE LOADING  
DESIGN SPECIFICATIONS  
2005 AREMA Specifications

DESIGN STRESSES  
FIELD UNITS  
f<sub>c</sub> = 4,000 psi  
f<sub>y</sub> = 60,000 psi (Reinforcement)  
f<sub>y</sub> = 36,000 psi (Structural Steel)  
f<sub>y</sub> = 150,000 psi (Bar Tendons)

PRECAST UNITS  
f<sub>c</sub> = 5,000 psi  
SEISMIC DATA  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.037g  
Site Coefficient (S) = 1.0

GENERAL PLAN AND ELEVATION  
DEERFIELD ROAD PEDESTRIAN UNDERPASS  
UNDER METRA NORTH LINE  
SECTION 08-00083-00-BT  
LAKE COUNTY  
STRUCTURE NO. 049-6159

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

PI Sta 22+99.41  
N=9,939.06  
E=10,329.32

McDonough Associates Inc.  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-1 SHEETS S-25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	21
SN 049-6159			CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**GENERAL**

1. Construction shall conform to the requirements of the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2007 of the Illinois Department of Transportation.

2. The Contractor shall take all the necessary safety precautions to protect abutting property, utilities, pedestrians and vehicular traffic and shall maintain cleanliness of all public and private property immediately adjacent to the construction site. The Contractor shall install protective barriers, fences or other approved protective measures to prevent access by unauthorized personnel into the work area.

3. The Contractor shall coordinate his efforts with all local and governmental agencies that are affected by the work to assure conformance with their regulations.

4. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of work, however, the Contractor will be paid for the quantity actually furnished or removed at the unit price.

5. All dimensions on structural drawings shall be coordinated by the Contractor with Civil and Electrical drawings. Contractor shall be fully responsible for confirming and correlating all dimensions on the job site and between drawings and trades. Notify Engineer of any discrepancies that may exist. See Civil and Electrical Drawings for additional openings, sleeves and other embedded items.

6. It shall be the Contractor's responsibility to verify the location of all utilities and fiber optic lines prior to starting construction. Contact J.U.L.I.E. at 800-892-0123.

7. Items not specifically listed or annotated in the documents but necessary for the complete and correct installation are included in the scope of work.

**TESTING & INSPECTION**

1. All welds shall be tested in accordance with American Welding Society (AWS) Standards

2. All material tests shall be made in accordance with the Specifications. Concrete compressive strength tests shall be made for all concrete strengths. The approved testing laboratory shall make all testing. All test reports shall be submitted to the designated Metra Representative.

3. Track level inspection shall consist of measuring the top of rail elevations during all phases of work, that could result in ground settlement below the tracks, such as tunnel jacking or driving sheet piles. If a vertical settlement of  $\frac{1}{4}$ " is measured, all work shall cease until initial track elevations have been restored by corrective actions. (See Special Provisions).

**FOUNDATION**

1. All substructure work shall be performed according to the recommendations prepared by Geo Services, Inc., dated September 2009.

2. The Contractor is responsible for the design and detailing of the connections, helical ground anchors and all appurtenances for the earth retention systems during all phases of construction. Where shown on the plans, the Contractor shall use the member sizes and forces indicated and submit the construction procedure, prepared by a Structural Engineer licensed in the State of Illinois, to the Engineer for review.

**STRUCTURAL STEEL**

1. Structural steel members shall conform ASTM A36.

2. Structural pipe shall conform to ASTM A53, Grade B (Fy = 35 ksi)

3. Tubular sections shall conform to ASTM A500, Grade B (Fy=46 ksi)

4. All bolts shall be 3/4" diameter ASTM A-325 high strength bolts in accordance with the "Specifications for Structural Joints Using ASTM A325 or A 490 Bolts" unless noted otherwise.

5. All headed welding studs shall conform to ASTM A108

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH/RJ
CHECKED	AWW

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**REINFORCED CONCRETE:**

1. Cast-in-place concrete shall conform to the requirements of Class SI concrete.
2. The following minimum concrete cover (clear cover) shall be provided for reinforcement unless noted otherwise:  
Concrete cast against and permanently exposed to earth = 3" CI  
Walls = 2" CI  
Slab Top Bars = 2" CI  
Slab on Grade Top Bars = 1" CI
3. Any change in the location of construction joints shown or specified is subject to the Engineer's approval. The Contractor shall submit the shop drawing's, showing the location of all proposed construction joints for Engineer's review and approval before commencing the work.
4. Each contractor and sub-contractor shall provide sleeves in concrete formwork for his own work. No coring of the concrete work will be allowed without the written permission of the Engineer.

**5. REINFORCING STEEL**

5.1 All reinforcing steel shall conform to ASTM A615-60 (60,000 psi yield stress) and shall be used throughout the job, with the exception of reinforcement bars used in welded connections, which shall conform to ASTM A706-60.

5.2 All welded wire fabrics shall be ASTM A185

**6. EPOXY COATING:**

6.1 Epoxy coated reinforcement shall be ASTM A775. Damaged epoxy coating shall be repaired with patching material conforming to these Specifications and performed in accordance with material manufacturer's recommendations.

6.2 All Reinforcement bars shall be epoxy coated. All tie wires for epoxy coated bars and accessories shall be epoxy coated.

**7. REINFORCEMENT BAR SPLICES**

7.1 Splicing shall conform to Section 508 of the Standard Specifications except as modified below.

7.2 Vertical Bars shall be spliced at or near the floor lines.

7.3 All splices shall be staggered. At any section, a maximum of 50% of reinforcement shall be spliced. The distance between splices shall be a minimum of 4'-0".

7.4 All lap splices shall be spliced in contact and wired together except where definitely detailed otherwise.

7.5 Unless specifically shown otherwise, location of splices shall be as following:

- Walls: At floor lines
- Beams, Spandrels, etc: Top bars at the mid-span,  
Bottom bars over supports  
Side bars at mid-span

8. All walls shall be doweled in to the footings, walls or slabs with bars of the same size and spacing as the wall bars having minimum 38 bar diameter embedment, except where specifically indicated otherwise.

9. For walls provide #5 bars at 12" each face, vertical and horizontal unless noted otherwise.

**TUNNEL CONSTRUCTION**

1. Safety measures as per OSHA and METRA regulations

2. All temporary shoring structures, tie-backs and thrust block, including sheet piling, batter piles if required, steel frames, etc., required for the tunnel jacking shall be designed by the Contractor's Structural Engineer and subject to approval by the Engineer. All related calculations/sketches must be sealed by a Structural Engineer licensed in the State of Illinois.

3. Strength of concrete in precast concrete tunnel segments shall be f'c = 5,000 PSI at 28 days

4. Fabrication of reinforcement bars and placement of concrete shall be as indicated in the Special Provisions.

5. Steel sheet piles shall be per ASTM A-328, latest edition

6. Structural steel shall conform to ASTM A-36, latest edition

7. Fabrication and erection of steel shall be as per AISC Specifications.

8. Monitor alignment and level of the railroad track during construction as indicated in the Special Provisions.

**TUNNEL CONSTRUCTION (CONT.)**

9. Should any movement occur on the railroad tracks beyond the limits defined in the Special Provisions, the Contractor should stop jacking immediately and revise jacking procedures so that no movement occurs.

10. Dewater the excavation as required, to maintain a dry condition.

11. The jacking shield, shown on the drawing is schematic. Contractor shall submit the details and procedures of the jacking for review by Engineer prior to starting any construction of tunnel.

12. Contractor must include in his bid the amount of bentonite slurry injected to cover a surface area of 2,000 square feet and voids in soil created during tunnel construction.

13. All sheet piles shall remain in place unless otherwise noted on the drawings.

**CONSTRUCTION REQUIREMENTS**

The Contractor shall be cognizant about the site constraints and the related challenges associated with this work. Installation procedures will be affected by existing conditions and may require modifications to the details and/or procedures shown on the plans. It is the Contractor's responsibility to determine the most cost-effective method of constructions and include all items necessary for the proper and safe execution and completion of the work.

**ANCHORING SYSTEMS AND TIE-RODS**

1. The ultimate ground anchor capacity for soil anchors or helical anchors shall be at least twice the service loads indicated on the plans.

2. At the locations where bar tendons are indicated on the plans, the bars shall be ASTM A722 steel with an ultimate strength of 150 KSI.

**CONSTRUCTION INCIDENTALS**

1. Steel Sheet Piling: Included in the contract unit price per square foot shall be the necessary bracing and lateral support systems required to assure the sheet piling installation is safe throughout all phases of construction. The lateral support systems shall consist of walers, struts, and tie-rods installed at the proper locations and if required in stages.

2. Tunnel Jacking: Included in the contract lump sum price shall be all tie back anchors, bracing, piling, shoring and thrust blocks for the launching pit and receiving pit; the alignment system, the exploratory borings, the mud-slabs, sheet pile wall modifications, the tunnel shield, the pressure grout injection, the jacking, the contract grouting, the track monitoring, the ventilation and de-watering, all excavation and spoil haul for the launching and receiving pits and for the tunnel itself, and all other material and labor necessary to complete tunnel jacking in accordance with the requirements of the Special Provisions or as directed by the Engineer.

3. Precast Concrete Box Segments: Included in the contract lump sum price shall be the preparation of shop drawings, the manufacture of the box segments, the testing, the delivery to the job site, and all other material and labor necessary to complete the precast concrete box segments in accordance with the requirements of the Special Provisions.

4. Underpinning Existing Structures: Included in the contract lump sum price shall be the design of the system and all labor and material required to safely support existing structure components during all phases of construction and prevent shifting or settlement in accordance with the requirements of the Special Provisions.

5. Retaining Wall, Special: Included in the contract unit price per square foot shall be all labor and material required for the design and installation of a temporary earth retention system to support the railroad embankment and to construct the wall as indicated in the Special Provisions.

**ANTI-GRAFFITI PROTECTION SYSTEM**

With the exception of the tunnel interior, all exposed concrete surface areas constructed under this contract shall be coated with an Anti-Graffiti Protection System as specified and directed by the Engineer. In addition, the surface areas of the south abutment of the existing railroad bridge shall also be coated.



**INDEX OF SHEET**

- S-1 General Plan and Elevation
- S-2 General Notes and Quantities
- S-3 Construction Staging - Preliminary Stage (Part 1)
- S-4 Construction Staging - Preliminary Stage (Part 2)
- S-5 Construction Staging - First Stage
- S-6 Construction Staging - Typical Stage
- S-7 Tunnel Details - Final
- S-8 Jacked Tunnel Details
- S-9 Tunnel Headwall Details
- S-10 Tunnel Wingwall Details
- S-11 Tunnel Wingwall Details
- S-12 Retaining Wall Removal Details
- S-13 Retaining Wall Proposed Details
- S-14 Retaining Wall and Underpinning and Stair Details
- S-15 Retaining Wall and Railing Details
- S-16 Access Ramp Modifications - Removal
- S-17 Access Ramp Modifications - Replacement
- S-18 Boring Logs
- S-19 thru S-25 Previous Construction Drawings (For information Only)

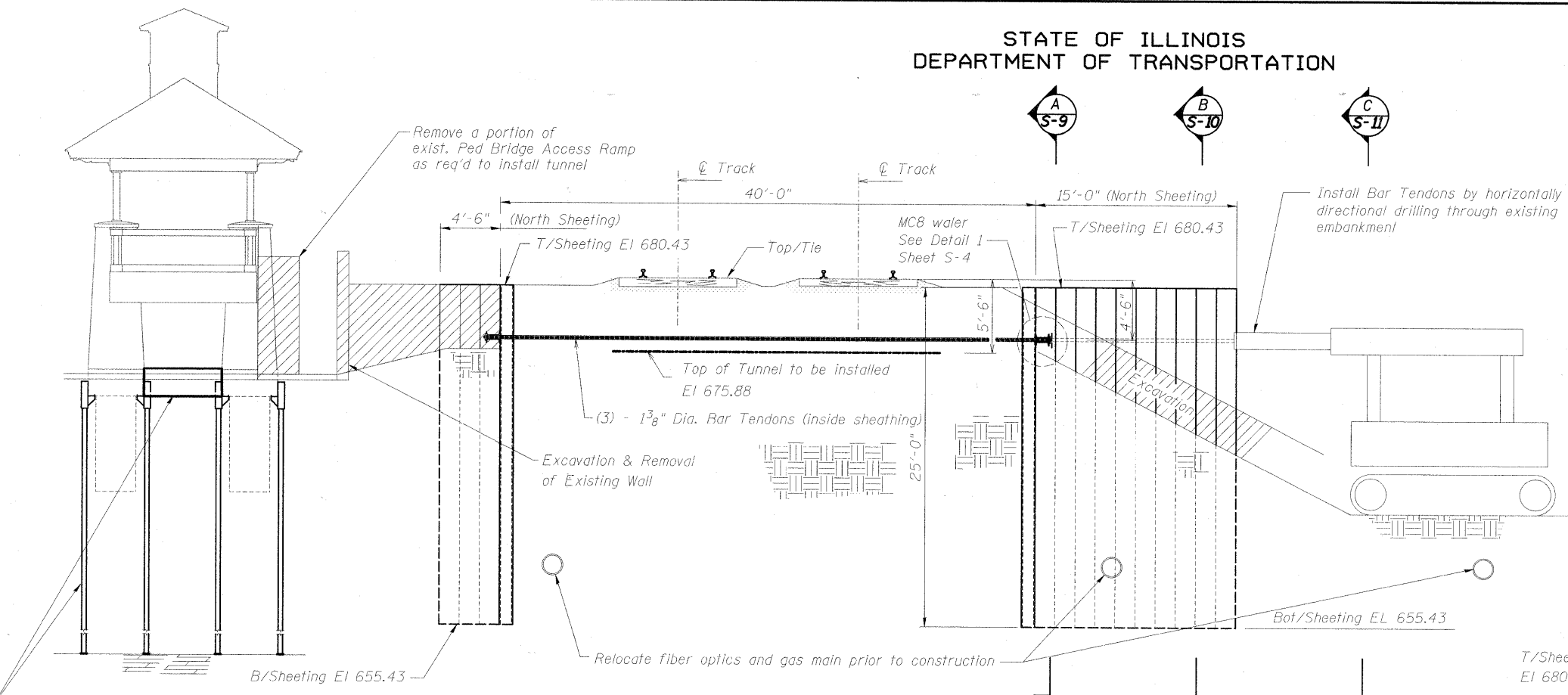
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Concrete Removal	Cu Yd	89.4
Structure Excavation	Cu Yd	194
Concrete Structures	Cu Yd	142.8
Form Liner Textured Surface	Sq Ft	1,617
Stud Shear Connectors	Each	439
Untreated Timber Lagging	Sq Ft	1,200
Reinforcement Bars, Epoxy Coated	Pound	14,290
Furnishing Soldier Piles (HP Section)	Each	466
Furnishing Soldier Piles (W Section)	Foot	100
Steel Sheet Piling	Sq Ft	2,256
Name Plates	Each	1
Geocomposite Wall Drain	Sq Ft	643
Pipe Underdrains For Structures, 4"	Feet	166.5
Anti-Graffiti Protection System	Sq Ft	2,581
Helical Ground Anchors	Each	9
Drilling And Setting Soldier Piles (In-Soil)	Cu Ft	1,778
Retaining Wall, Special	Sq Ft	135
Coating System For Concrete	Sq Ft	1,153
Precast Concrete Box Segments	L Sum	1
Underpinning Existing Structure	L Sum	1
Tunnel Jacking	L Sum	1

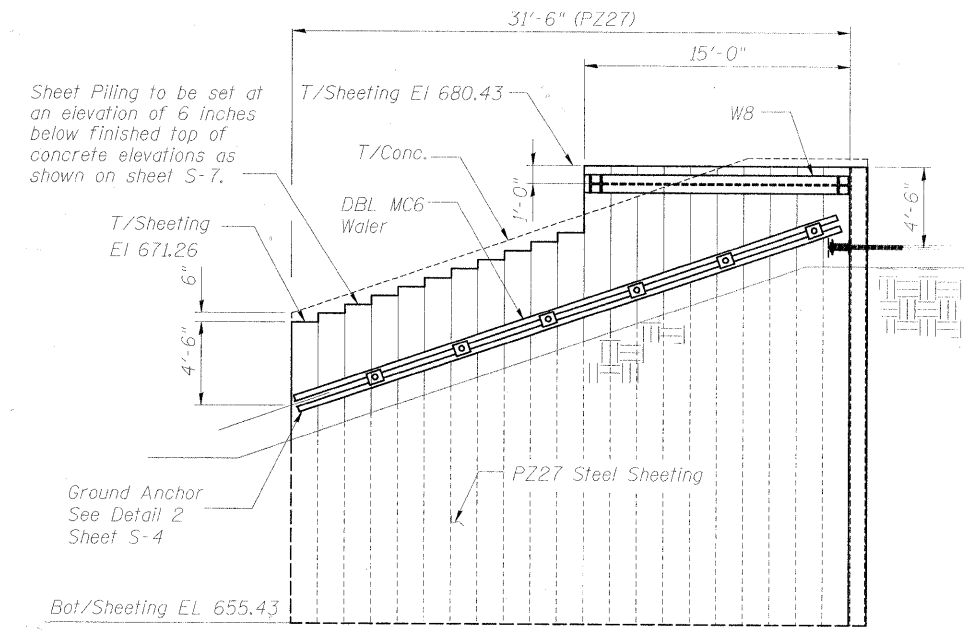
**GENERAL NOTES AND QUANTITIES  
STRUCTURE NO. 049-6159**

SHEET NO. S-2 SHEETS S-25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	22
SN 049-6159			CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

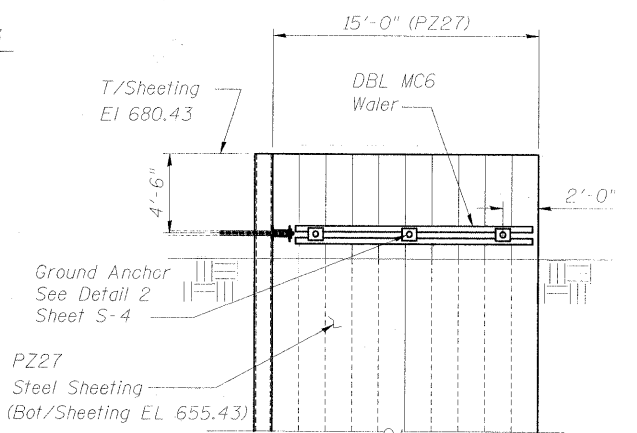
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



**SECTION - TUNNEL CONSTRUCTION - PRELIMINARY STAGE (PART 1)**



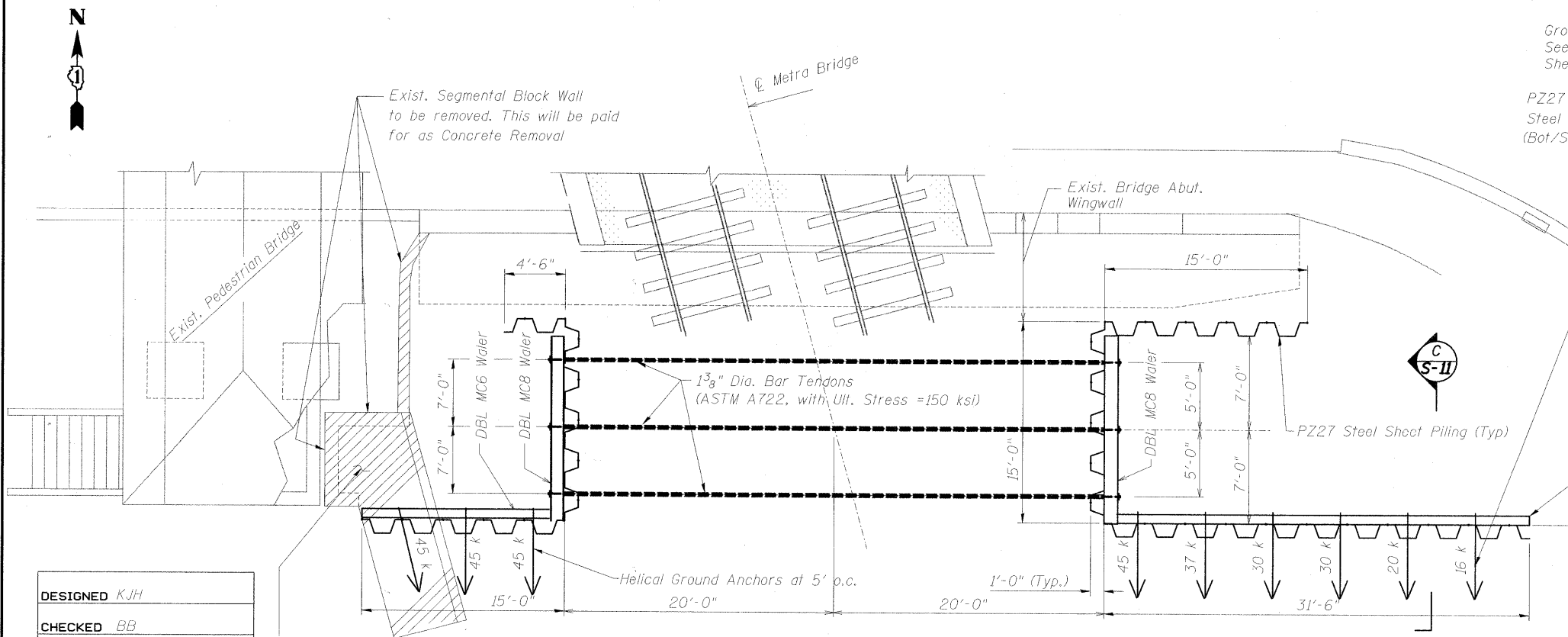
**SOUTHEAST SHEETING ELEVATION (Looking South)**



**SOUTHWEST SHEETING ELEVATION (Looking South)**

**STAGED NOTES (S-3)**

1. Relocate fiber optics and gas main prior to construction.
2. Underpin existing pedestrian bridge south pier.
3. Install sheet piling.
4. Excavate existing embankment as indicated on the east and west side of tracks.
5. Install bar tendons by horizontally directional drilling through existing embankment.
6. Install waters, see water detail on sheet S-4.
7. Remove existing wall on west end of tracks.
8. Remove a portion of the existing pedestrian bridge access ramp as required for installation of tunnel.



**PLAN - TUNNEL CONSTRUCTION - PRELIMINARY STAGE (PART 1)**

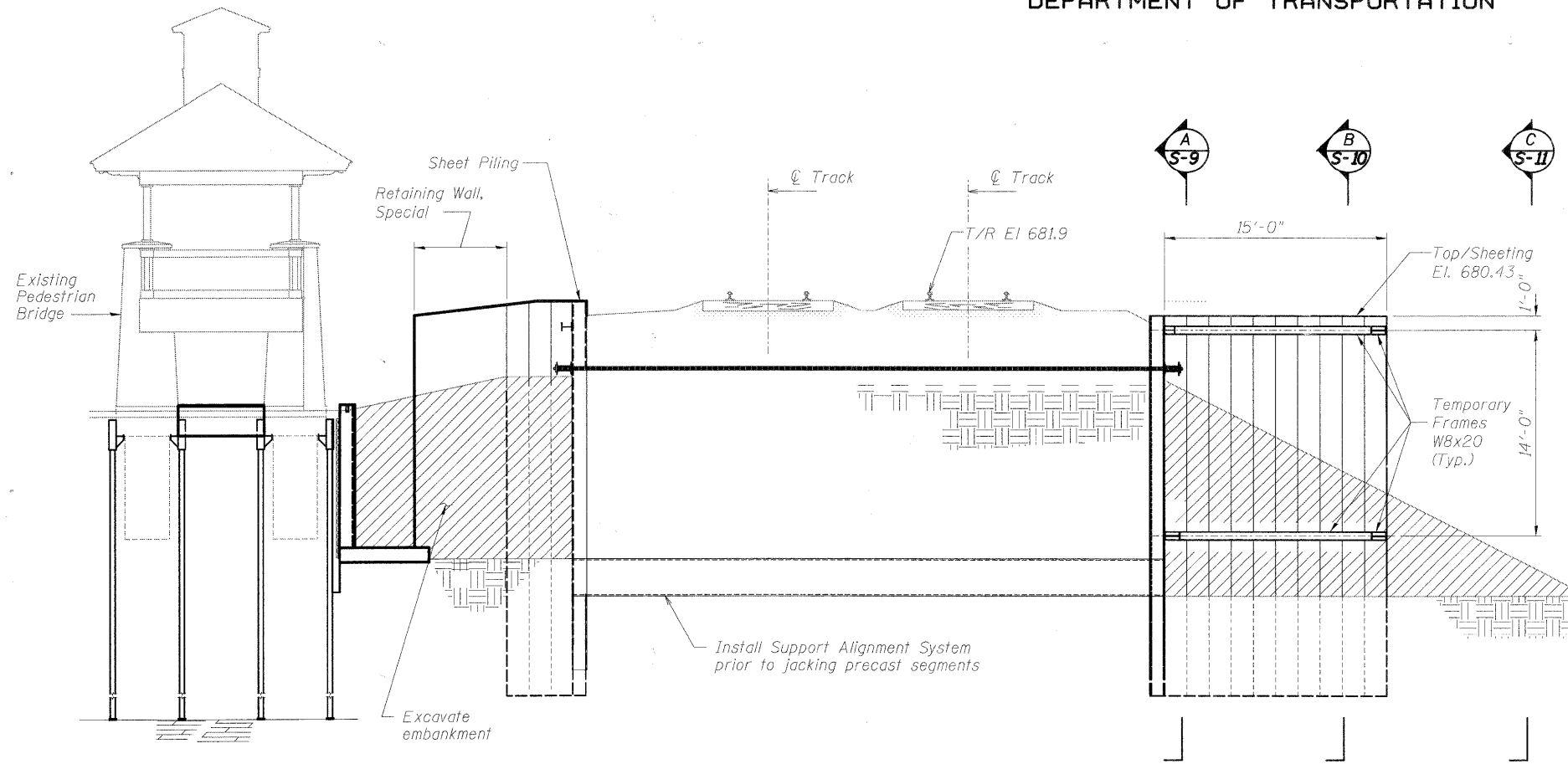
**CONSTRUCTION STAGING-PRELIMINARY STAGE (PART 1)**  
**STRUCTURE NO. 049-6159**

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

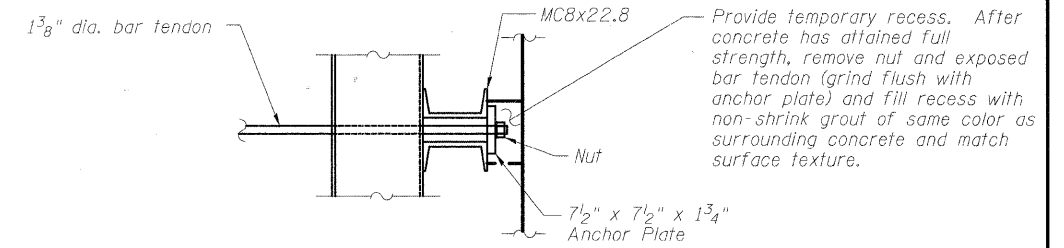
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-3 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 23
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

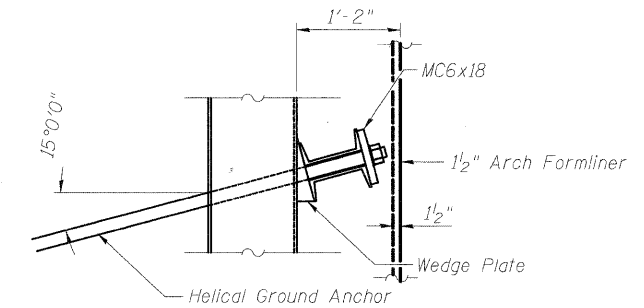
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SECTION - TUNNEL CONSTRUCTION - PRELIMINARY STAGE (PART 2)



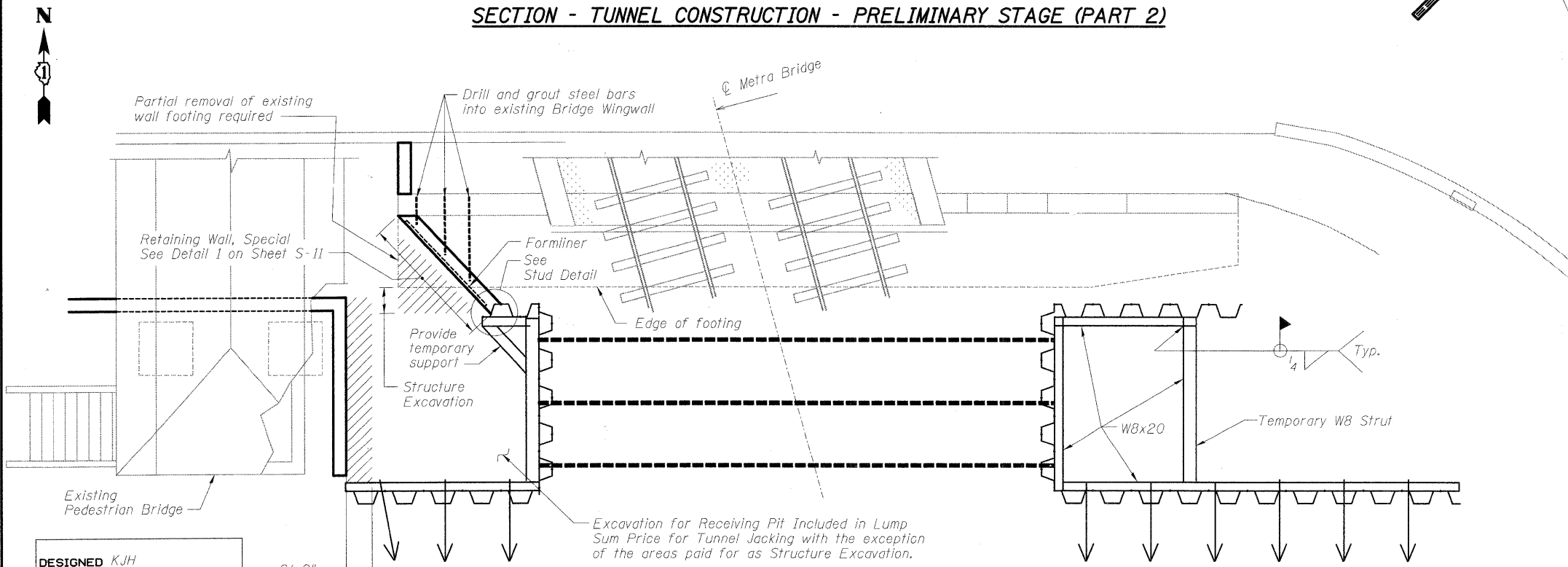
DETAIL 1 - WALER FOR THREAD BARS



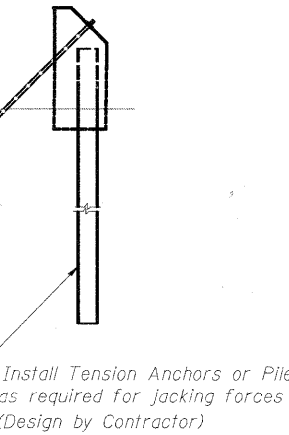
DETAIL 2 - WALER FOR HELICAL GROUND ANCHORS

STAGED NOTES (S-4)

1. Install top temporary frames at each end of tunnel.
2. Excavate as needed to install support alignment system.
3. Install temporary frames at bottom of sheeting on east side of tunnel.
4. Install support alignment system.
5. Install tension anchors or piles as required for jacking purposes.



PLAN - TUNNEL CONSTRUCTION - PRELIMINARY STAGE (PART 2)



STUD DETAIL

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

CONSTRUCTION STAGING-PRELIMINARY STAGE  
(PART 2)  
STRUCTURE NO. 049-6159

SHEET NO. S-4 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 24
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

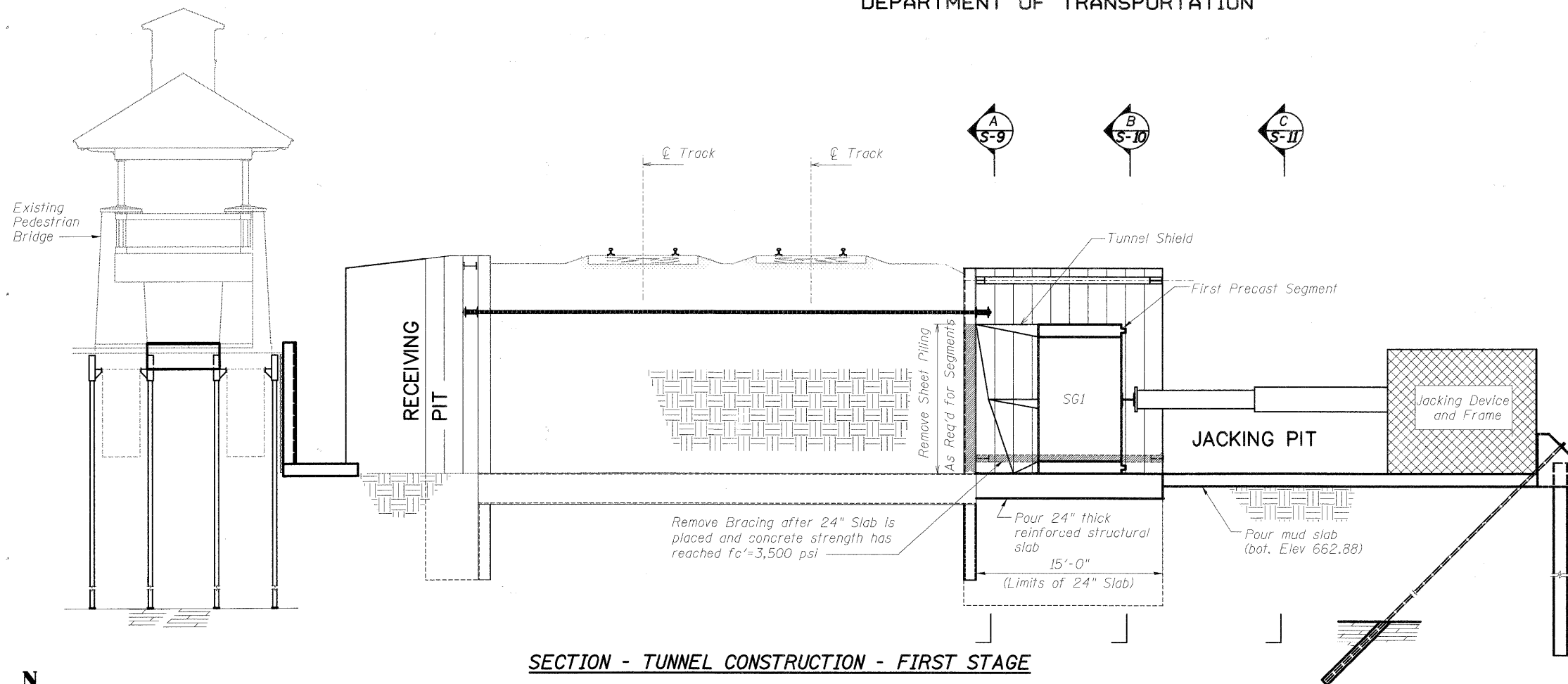
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601



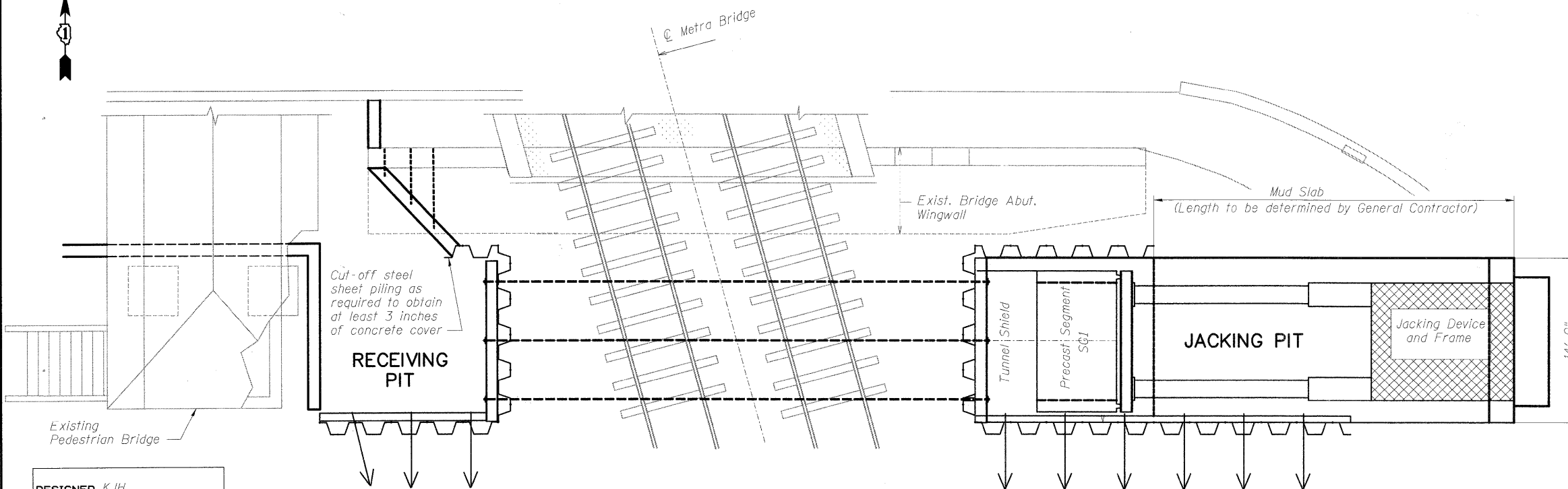
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**STAGED NOTES (S-5)**

1. Pour structural slab and mud slab.
2. Remove bracing on the bottom of sheet piling on the east end of the tunnel as indicated.
3. Install precast segments.



**SECTION - TUNNEL CONSTRUCTION - FIRST STAGE**



**PLAN - TUNNEL CONSTRUCTION - FIRST STAGE**

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

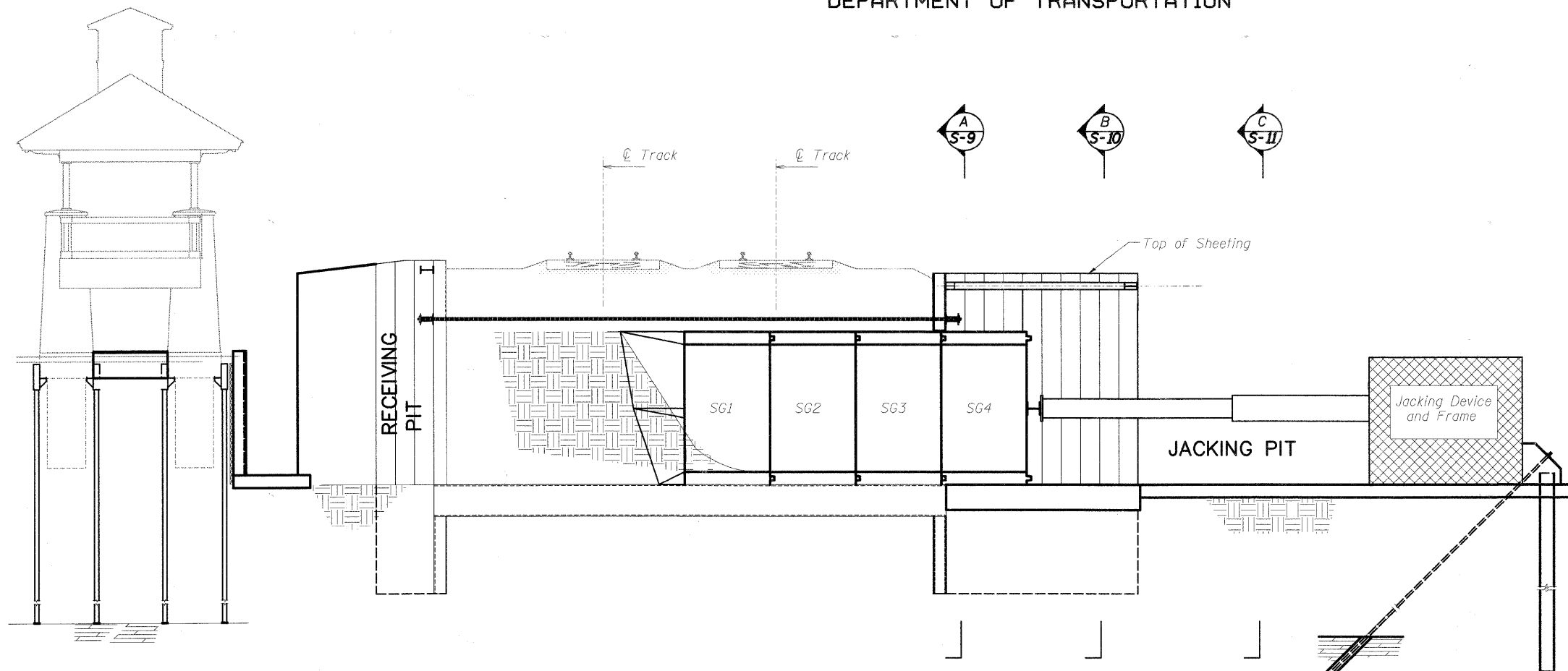
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	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**CONSTRUCTION STAGING-FIRST STAGE  
STRUCTURE NO. 049-6159**

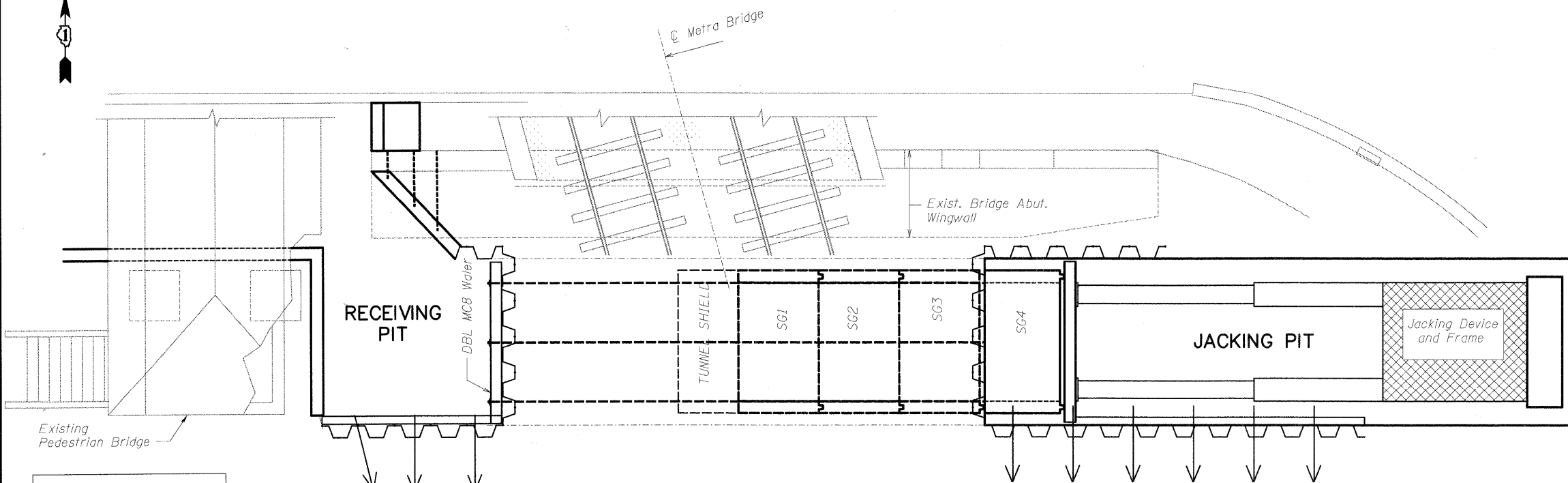
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**STAGED NOTES (S-6)**

1. After installation of precast segments remove jacking equipment and anchor used for jacking.
2. Pour concrete facing.
3. Cut remaining frames from wall face.



**SECTION - TUNNEL CONSTRUCTION - TYPICAL STAGE**



**PLAN - TUNNEL CONSTRUCTION - TYPICAL STAGE**

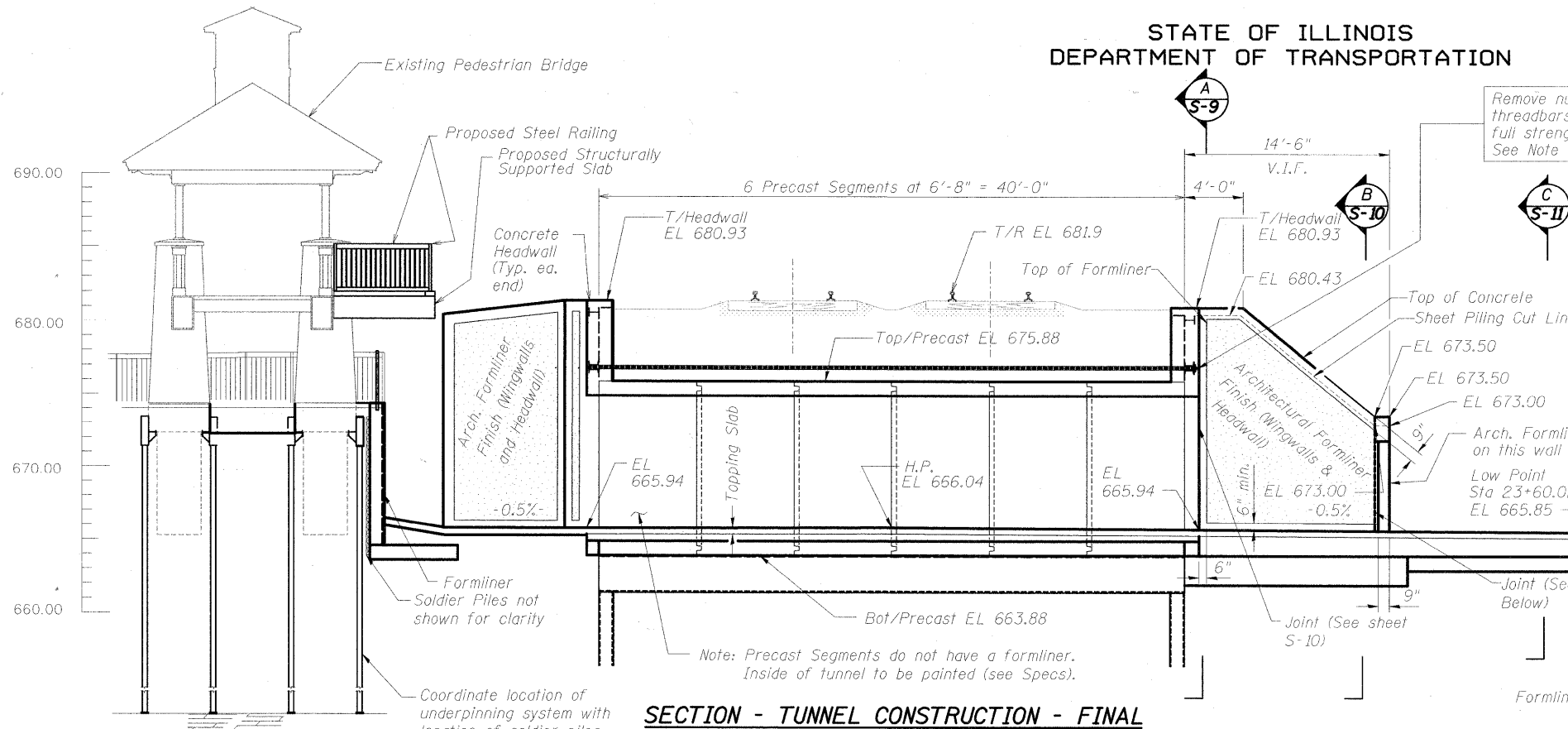
DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

**CONSTRUCTION STAGING-TYPICAL STAGE  
STRUCTURE NO. 049-6159**

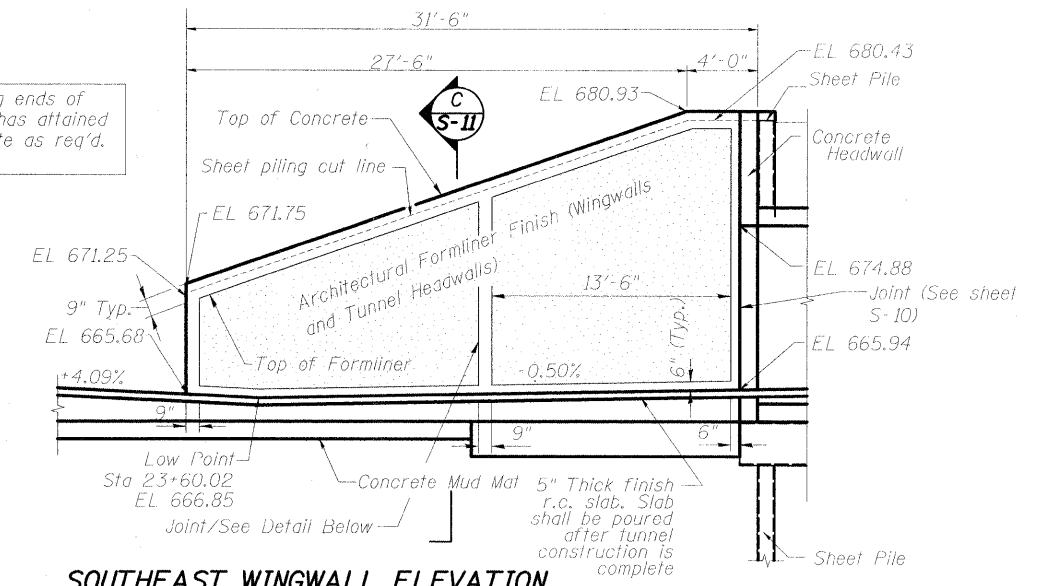
SHEET NO. S-6 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 26
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT		

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130 East Randolph Street Chicago, Illinois 60601

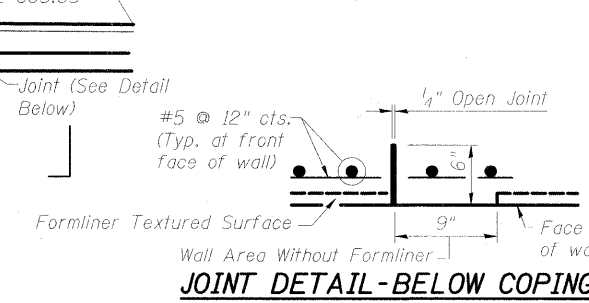
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



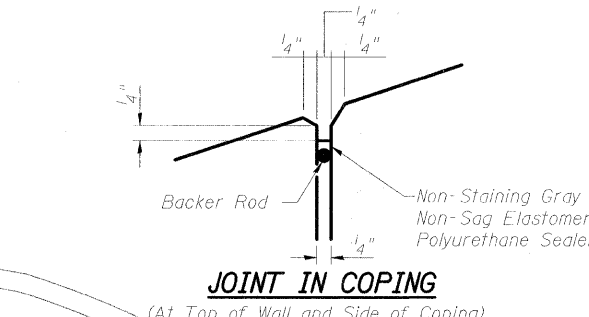
**SECTION - TUNNEL CONSTRUCTION - FINAL**



**SOUTHEAST WINGWALL ELEVATION**

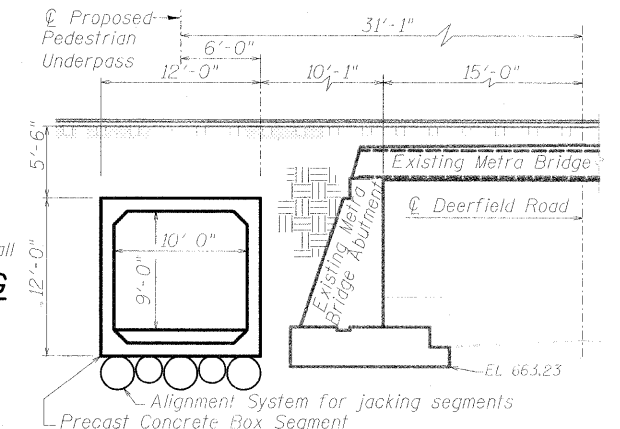


**JOINT DETAIL-BELOW COPING**

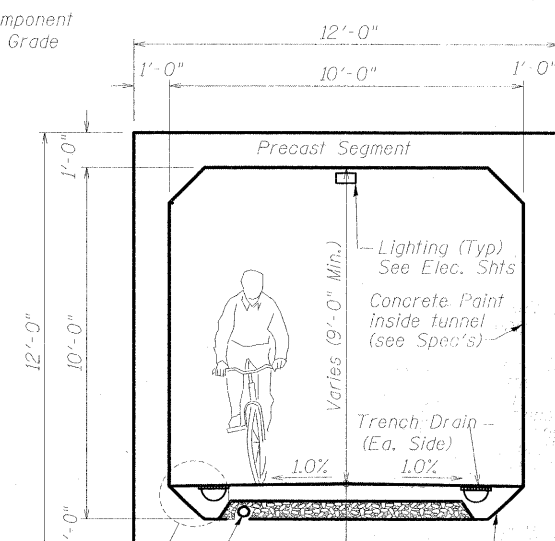


**JOINT IN COPING**

(At Top of Wall and Side of Coping)

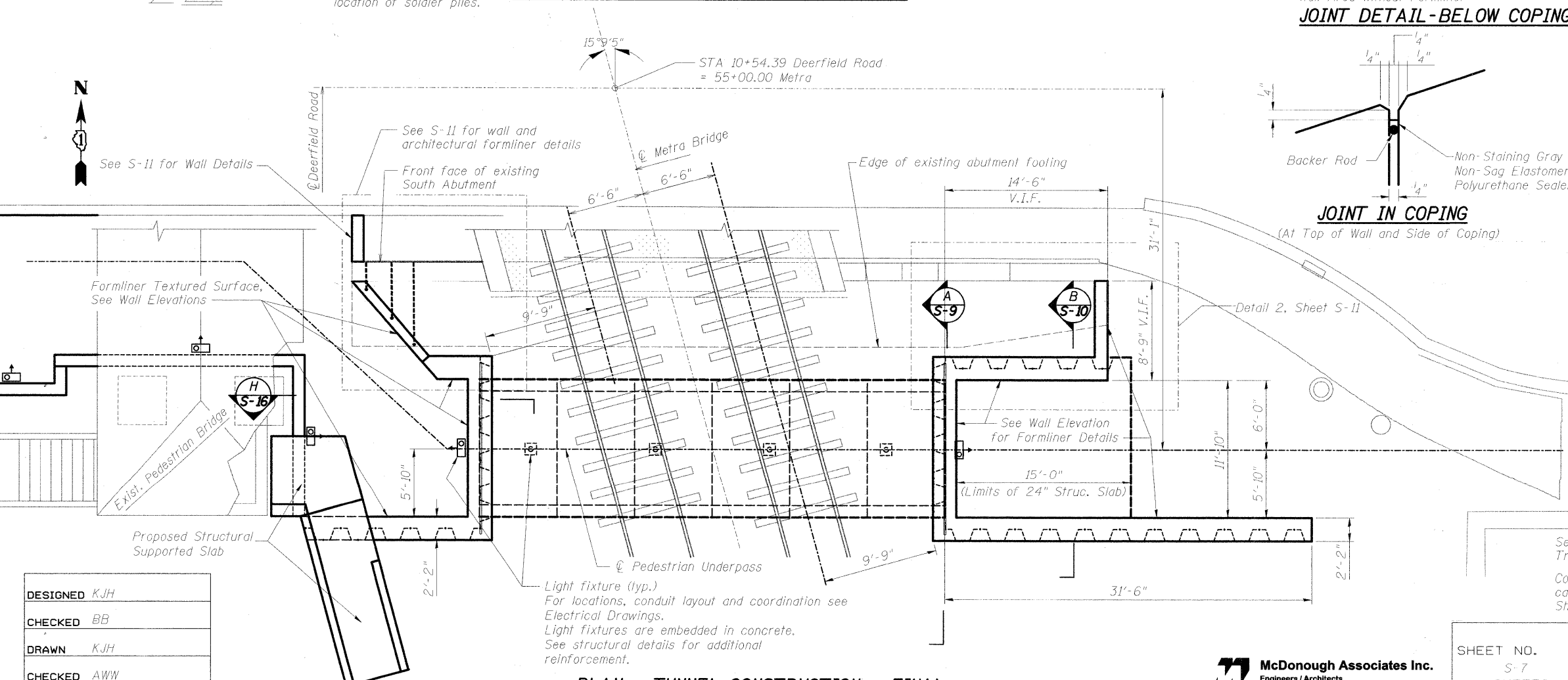


**SECTION THRU UNDERPASS LOOKING WEST**



**UNDERPASS DETAIL**

**TUNNEL DETAILS - FINAL  
STRUCTURE NO. 049-6159**



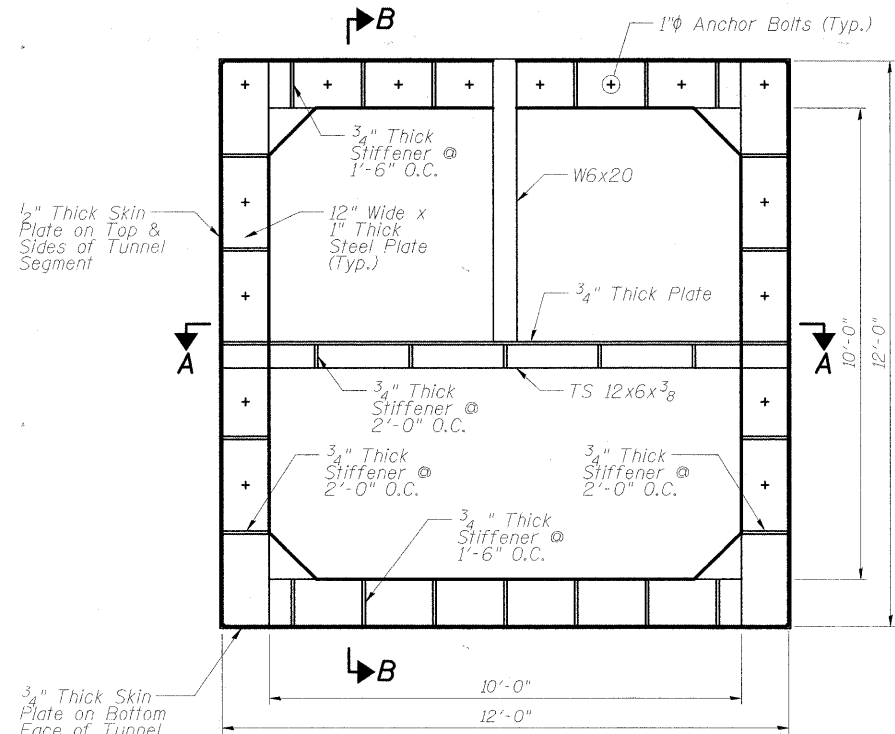
**PLAN - TUNNEL CONSTRUCTION - FINAL**

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

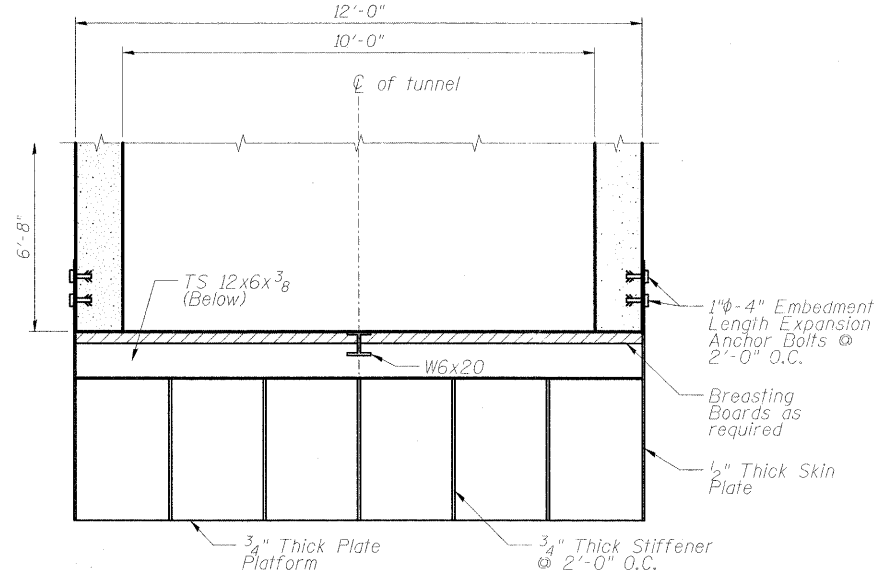
SHEET NO. S-7 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 27
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



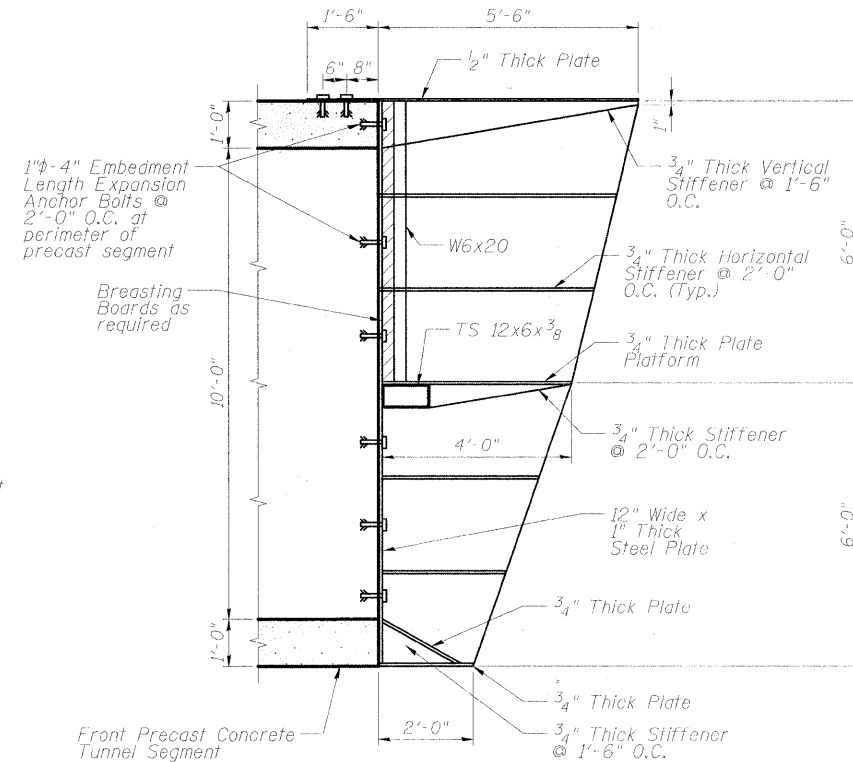
**TUNNELING SHIELD FRONT VIEW**

Scale: 1/2" = 1'-0"



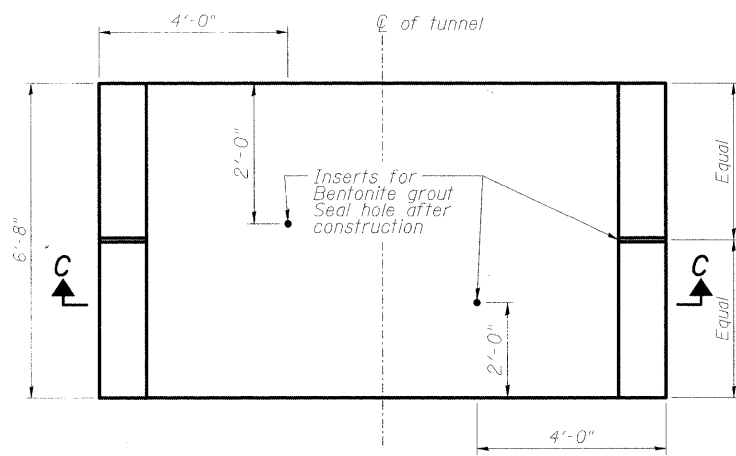
**TUNNELING SHIELD SECTION A-A**

Scale: 1/2" = 1'-0"



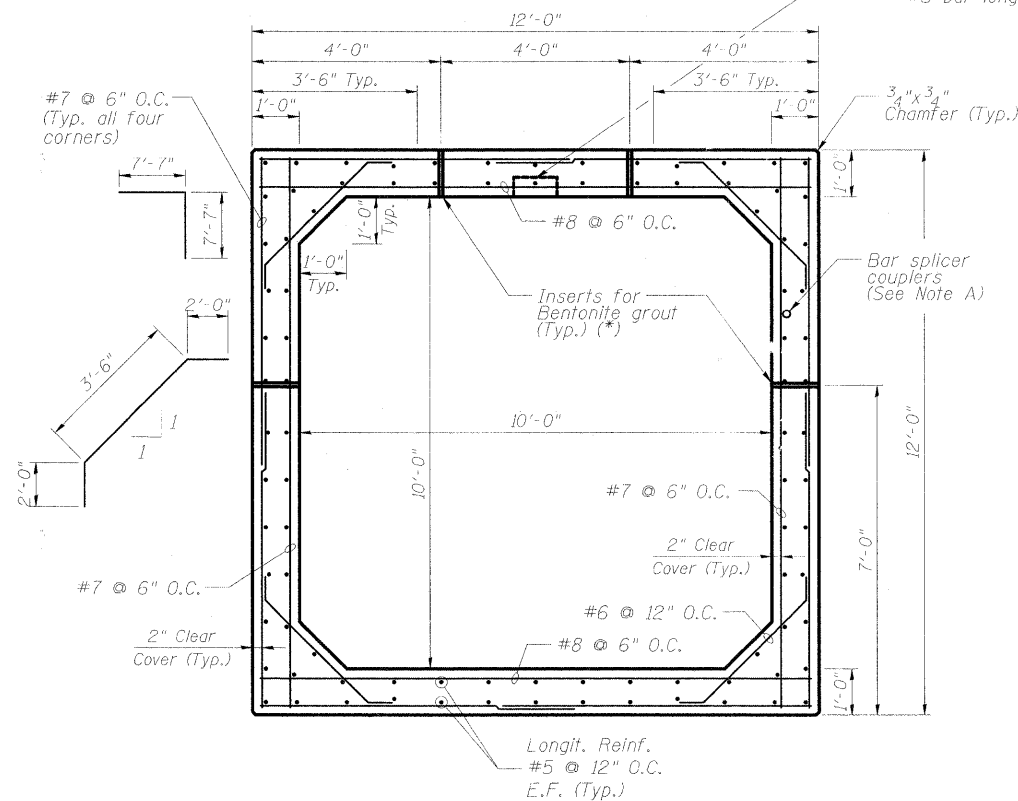
**TUNNELING SHIELD SECTION B-B**

Scale: 1/2" = 1'-0"



**TYPICAL PRECAST CONCRETE TUNNEL SEGMENT PLAN**

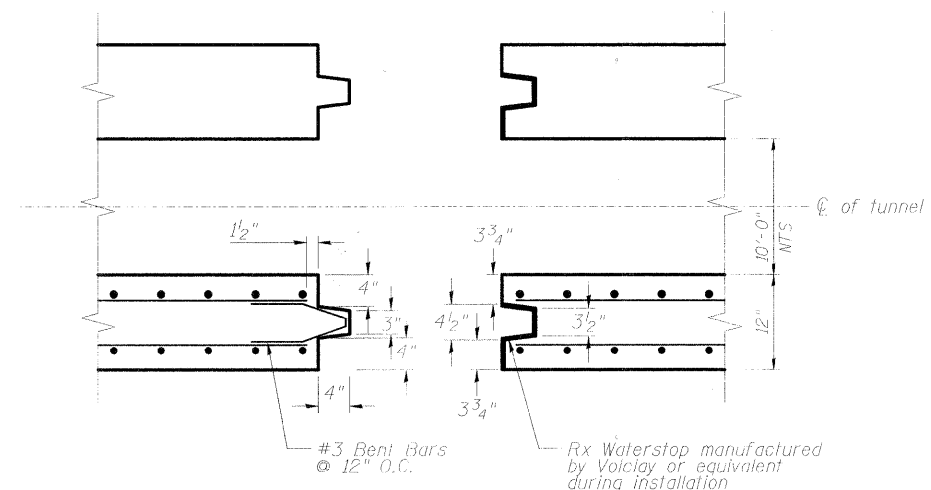
Scale: 1/2" = 1'-0"



**PRECAST CONCRETE TUNNEL SECTION C-C**

Scale: 1/2" = 1'-0"

See electrical drawings for embedded light fixture type, size and location. Reinforcement in tunnel shall frame around boxout for fixture. Place additional #8 bar transversely and #5 bar longitudinally on each side of boxout.



**WALL JOINT DETAIL BETWEEN TWO TUNNEL SEGMENTS AROUND THE PERIMETER**

Not to Scale

**Notes:**

Temporary bracing shown is schematic.

It is the responsibility of the Contractor to design the tunneling shield system and submit the calculations and drawing to the Engineer for approval. The calculations and drawing shall be sealed by a licensed Professional Engineer.

All Fillet Washouts

DESIGNED	KJH
CHECKED	BB
DRAWN	CJM
CHECKED	AWW

\* Contractor should monitor the Bentonite flow so that the Bentonite does not come up to track level.

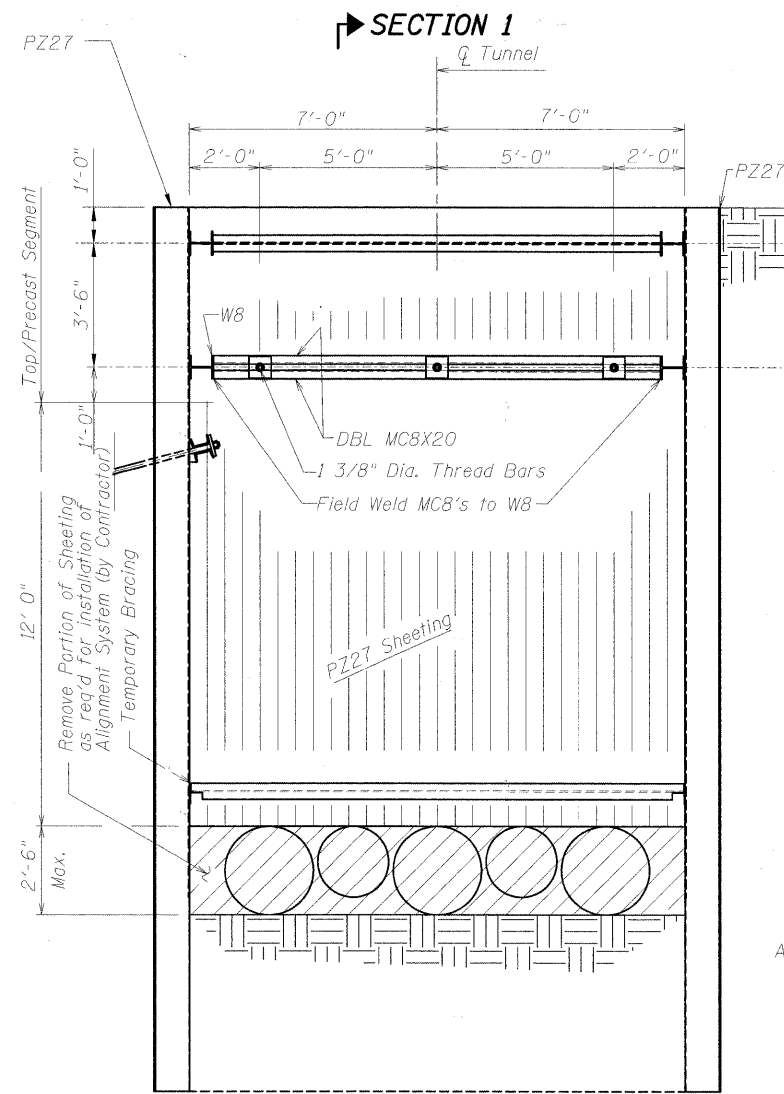
Note A: Provide bar splicer couplers for #5 bars at 12" cts in the top slab, sidewalls & bottom slab, in the outside face of east & west end sections only. (See Sheet S-9).

**JACK TUNNEL DETAILS  
STRUCTURE NO. 049-6159**

SHEET NO. S-8 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNT LAKE 51	TOTAL SHEETS 56
	SN 049-6159		CONTRACT NO. 63450	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

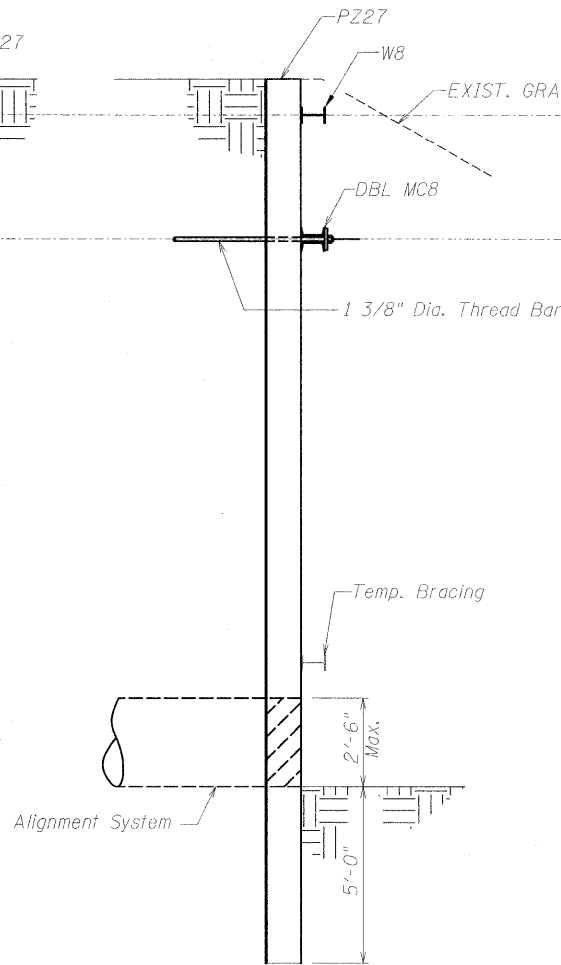
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

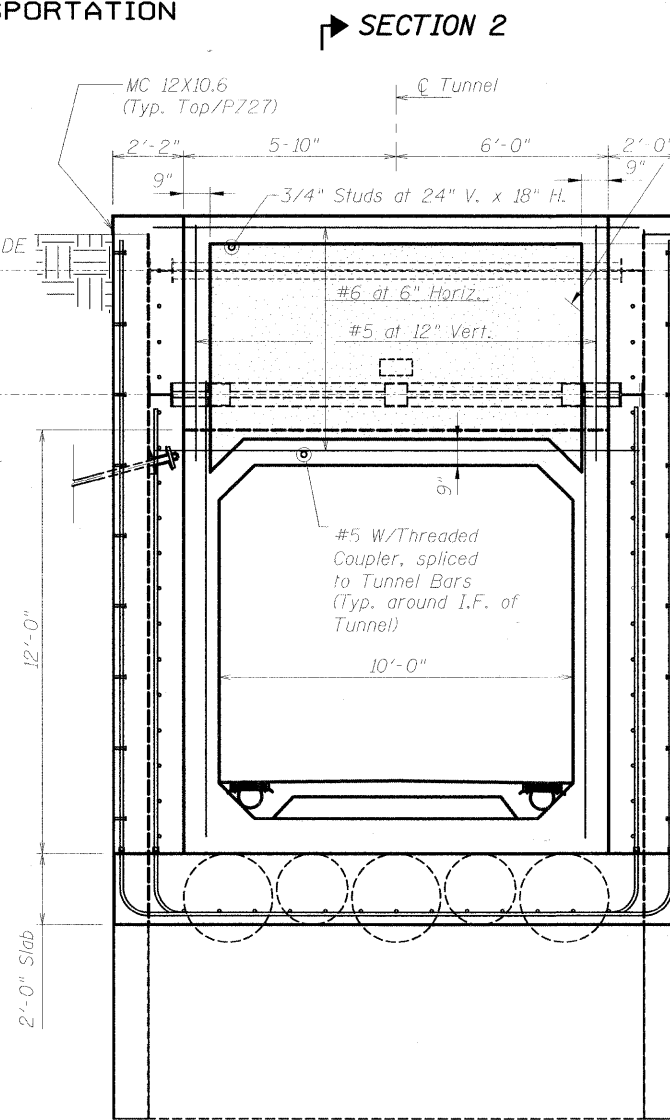


SECTION 1

SHOWN PRIOR TO POURING CONCRETE

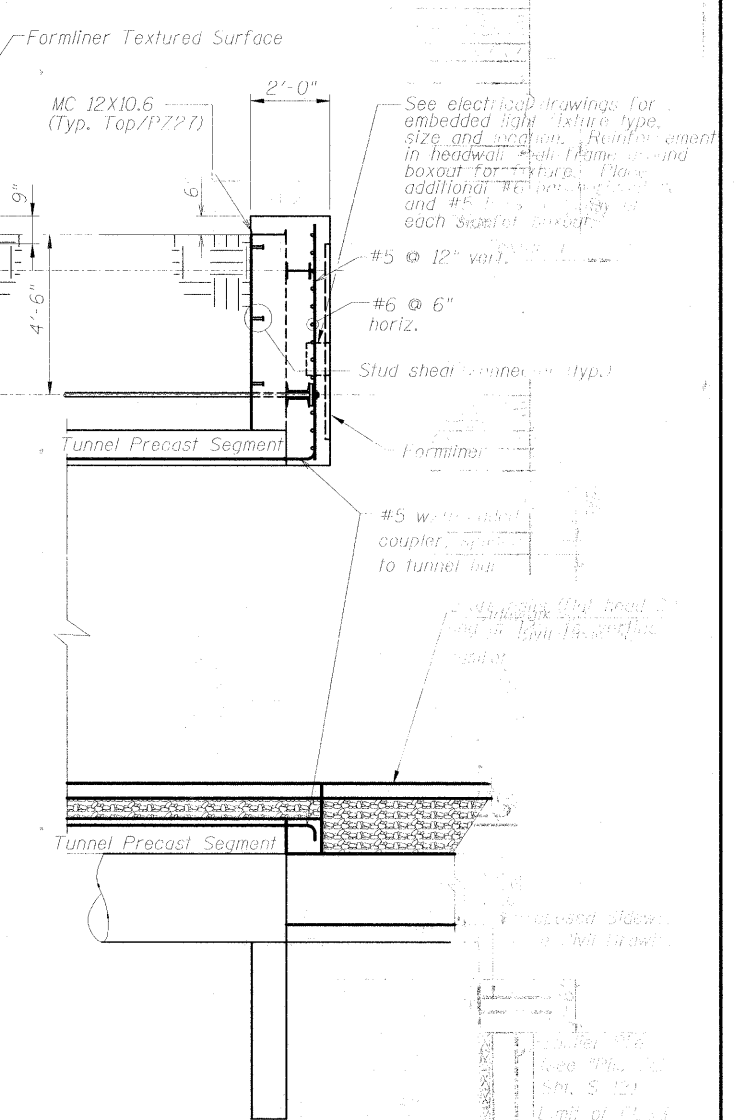


SECTION 1



SECTION 2

FINAL CONSTRUCTION



SECTION 2

(A) SECTION - EAST TUNNEL HEADWALL

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

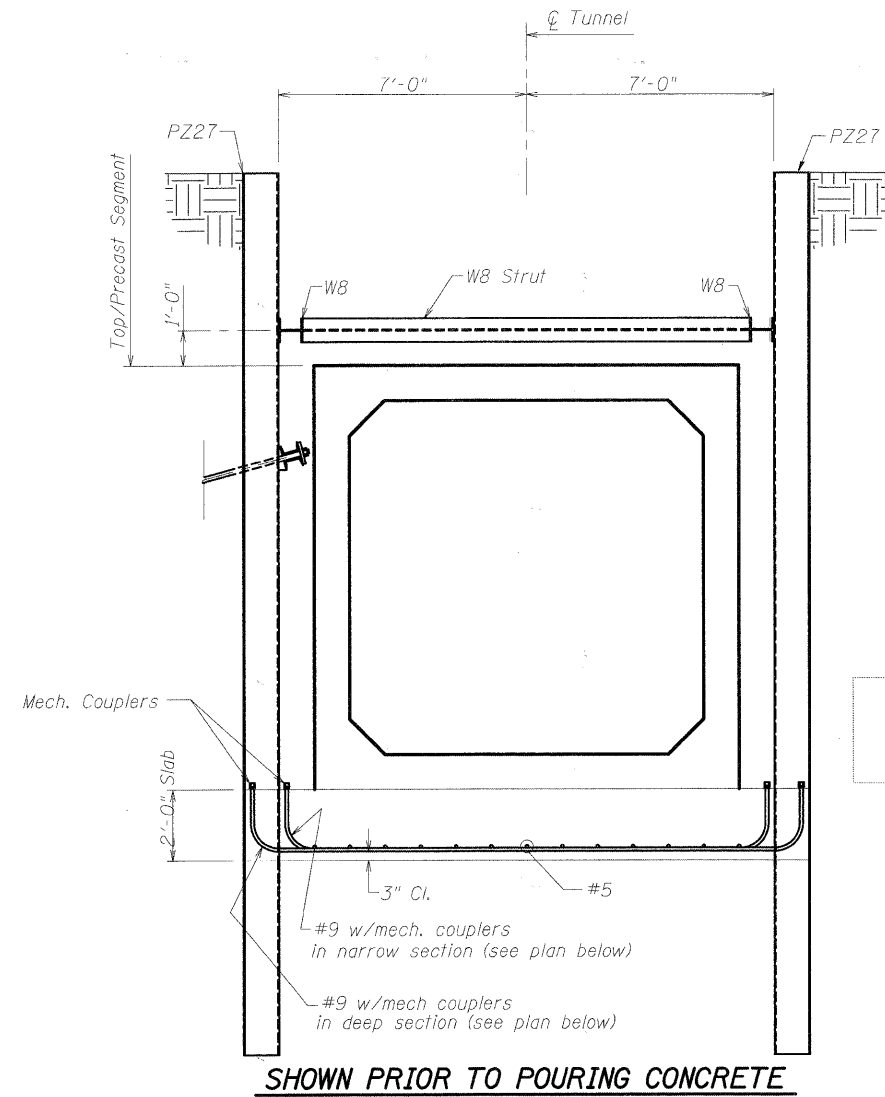
**McDonough Associates Inc.**  
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130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-9 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT SN 049-6159	COUNTY LAKE	TOTAL SHEETS 51
	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 29

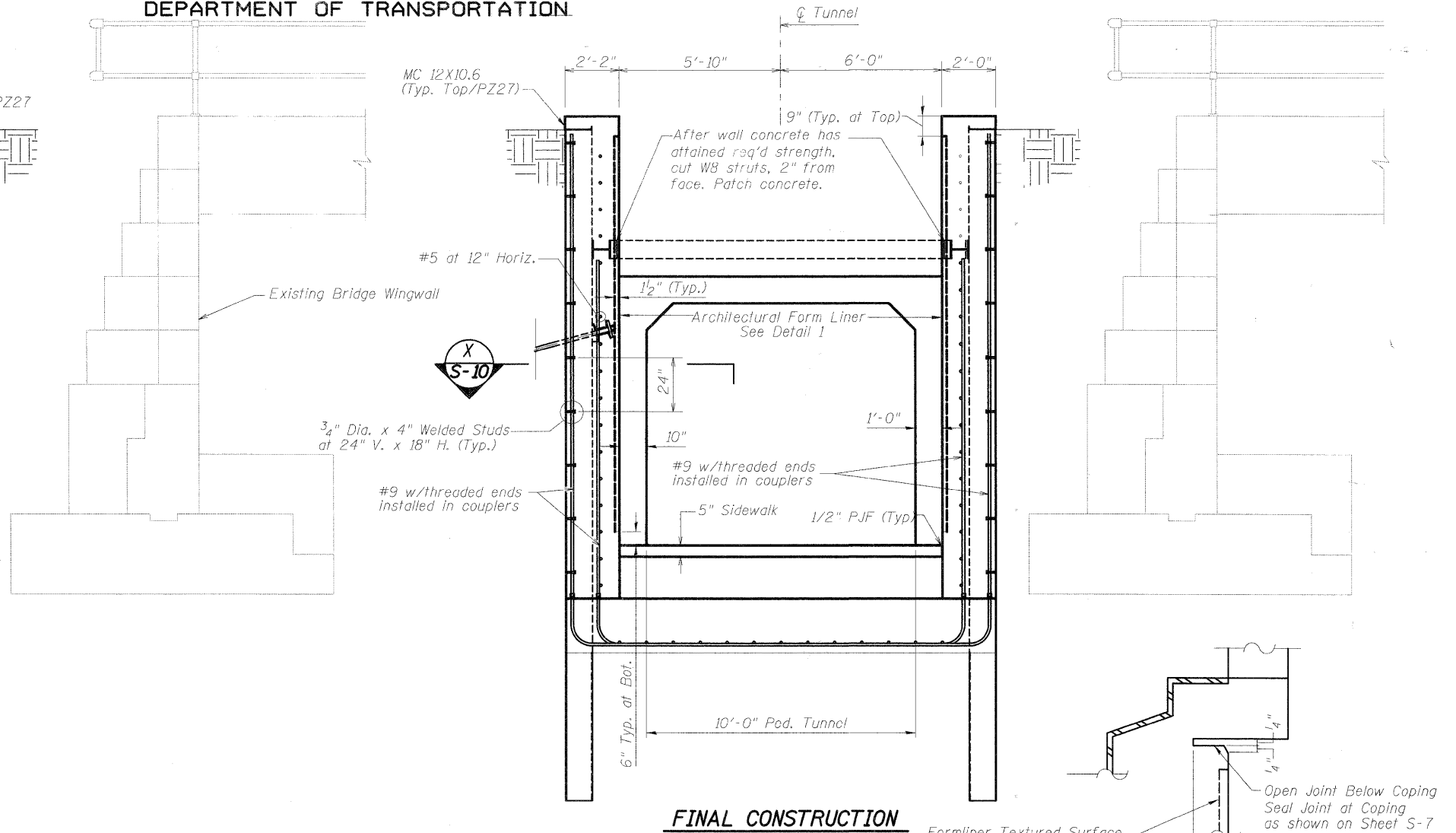
TUNNEL HEADWALL DETAILS  
STRUCTURE NO. 049-6159

SOLDIER

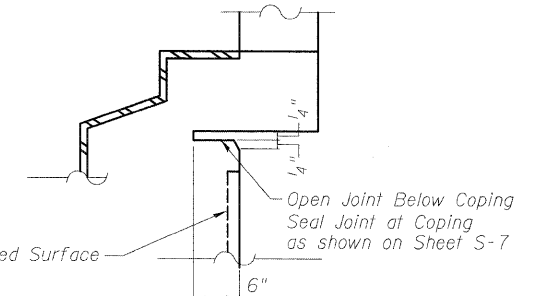
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SHOWN PRIOR TO POURING CONCRETE



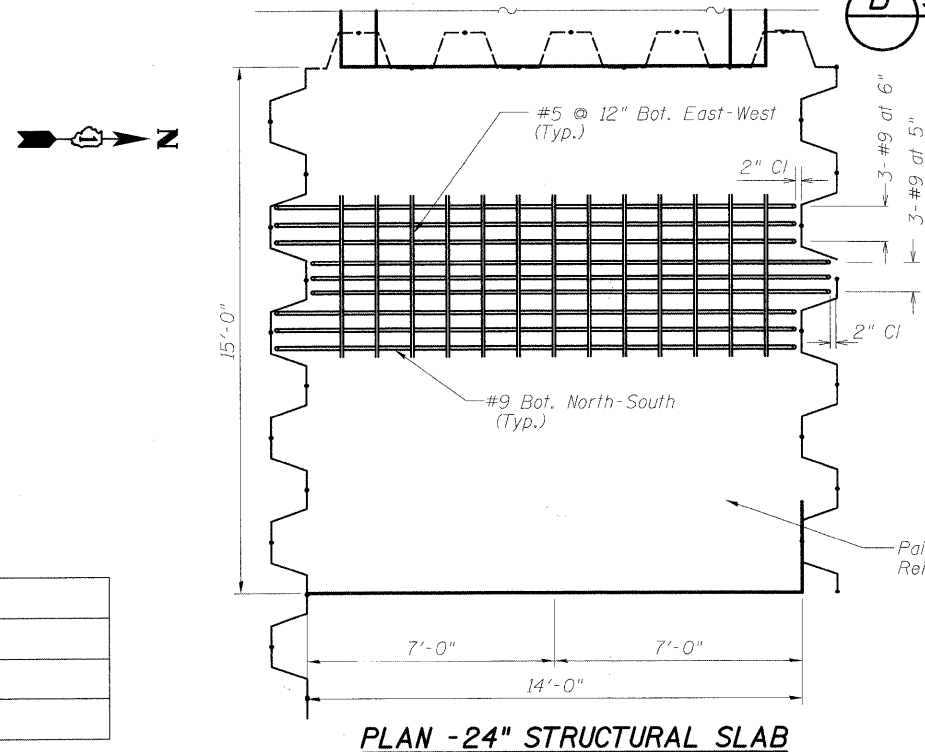
FINAL CONSTRUCTION



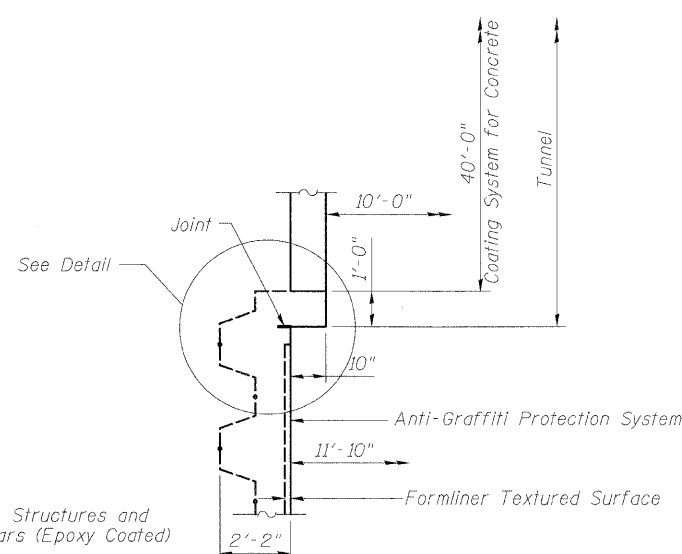
JOINT DETAIL

Seal Joint at Coping as Shown on Sheet S-7

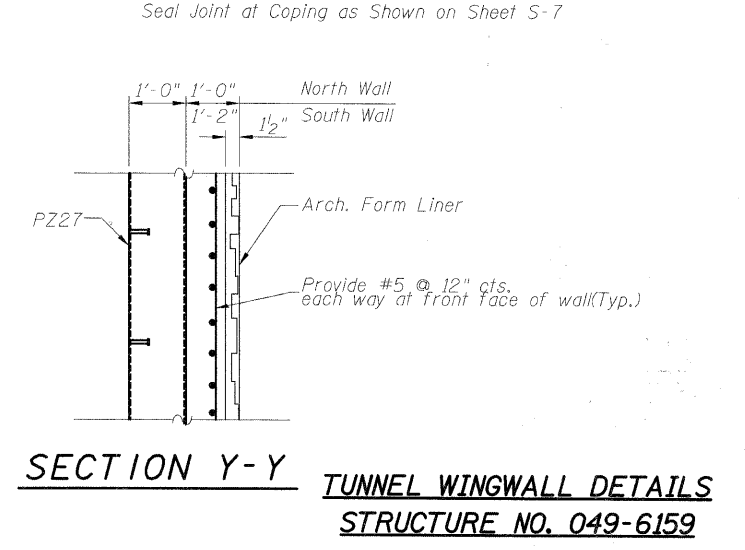
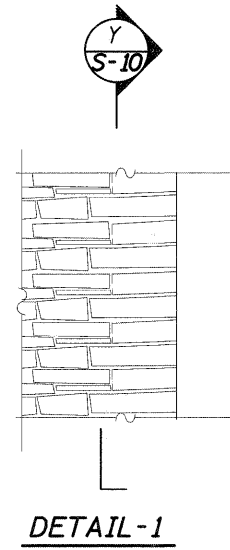
**B** SECTION - EAST TUNNEL WINGWALLS



PLAN - 24" STRUCTURAL SLAB



SECTION X-X



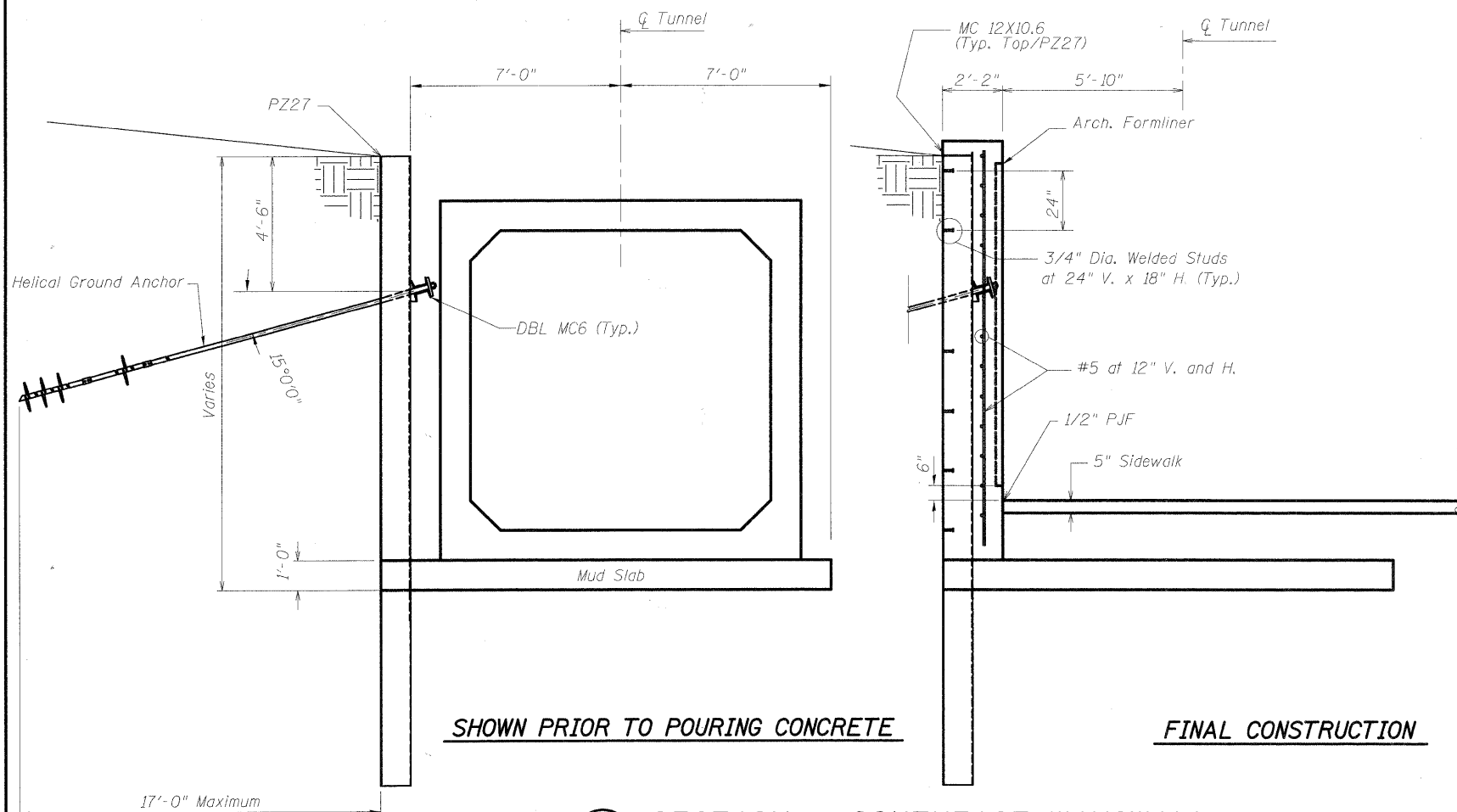
SECTION Y-Y TUNNEL WINGWALL DETAILS  
STRUCTURE NO. 049-6159

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

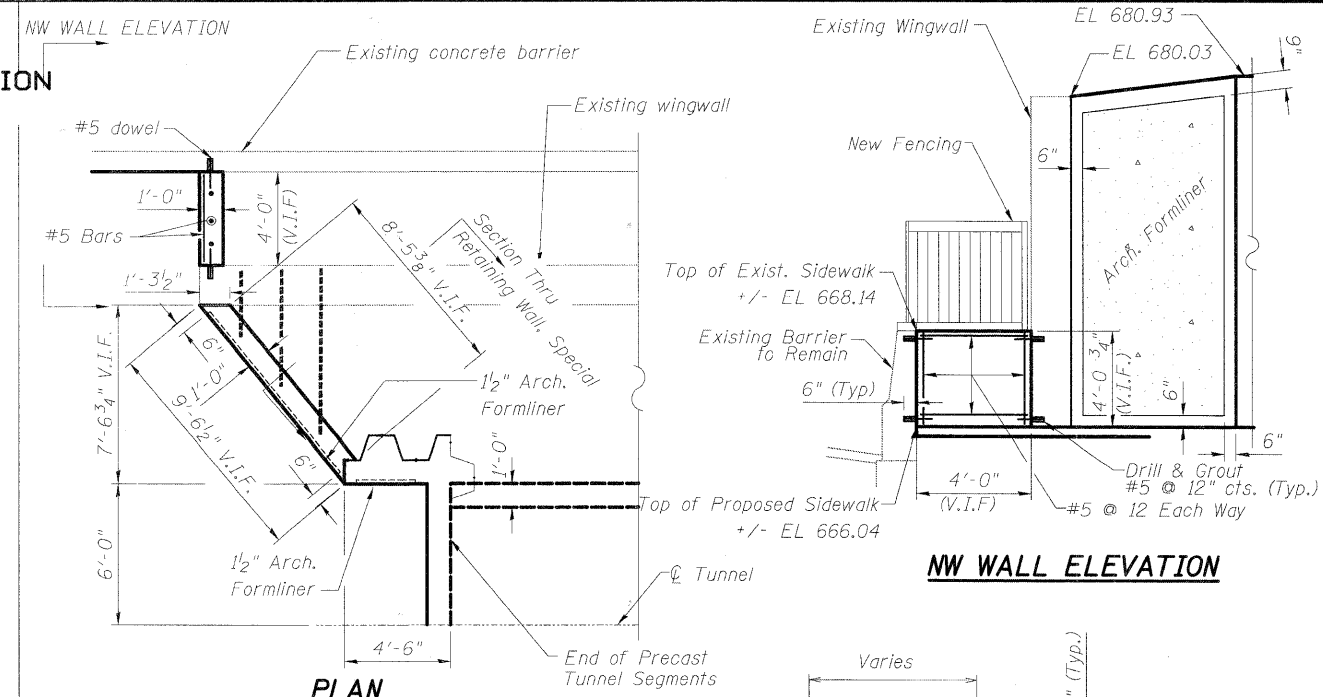
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-10 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 30
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

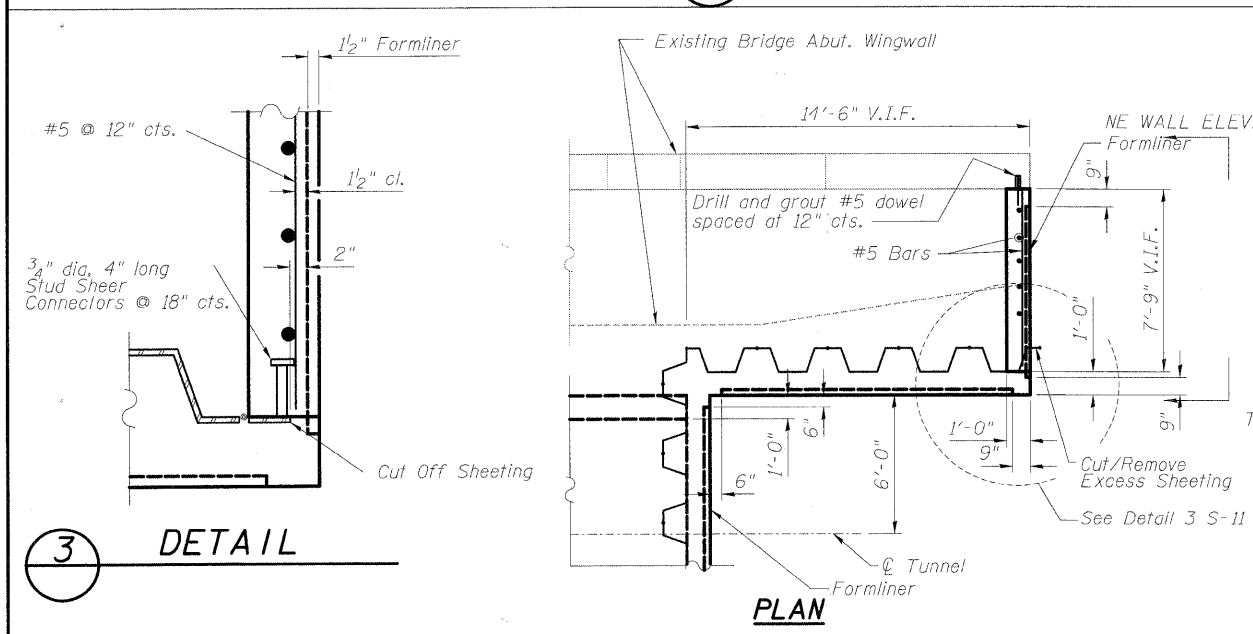


**(C) SECTION - SOUTHEAST WINGWALL**



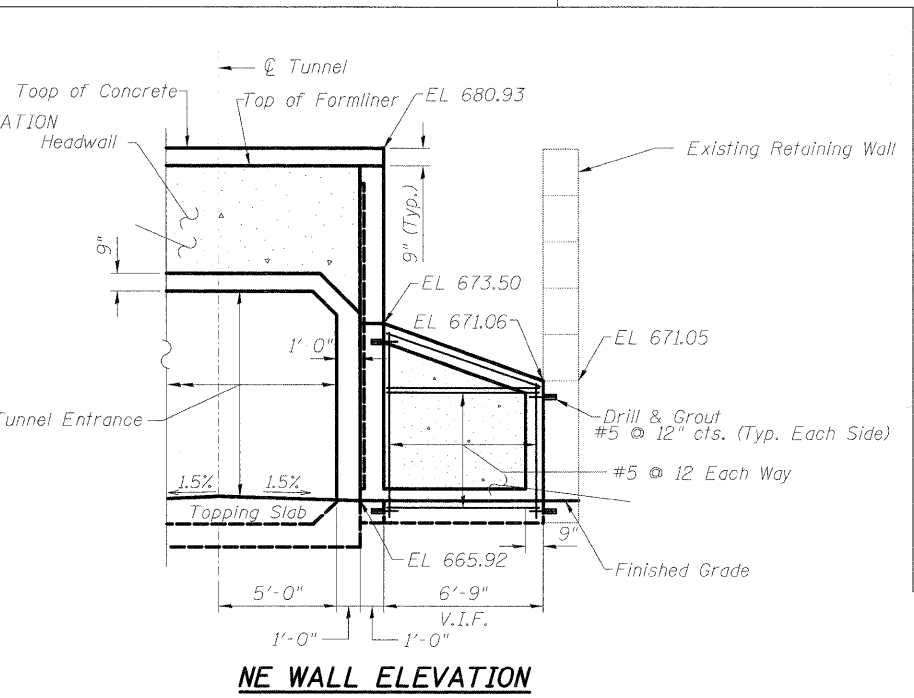
**PLAN**

**NW WALL ELEVATION**

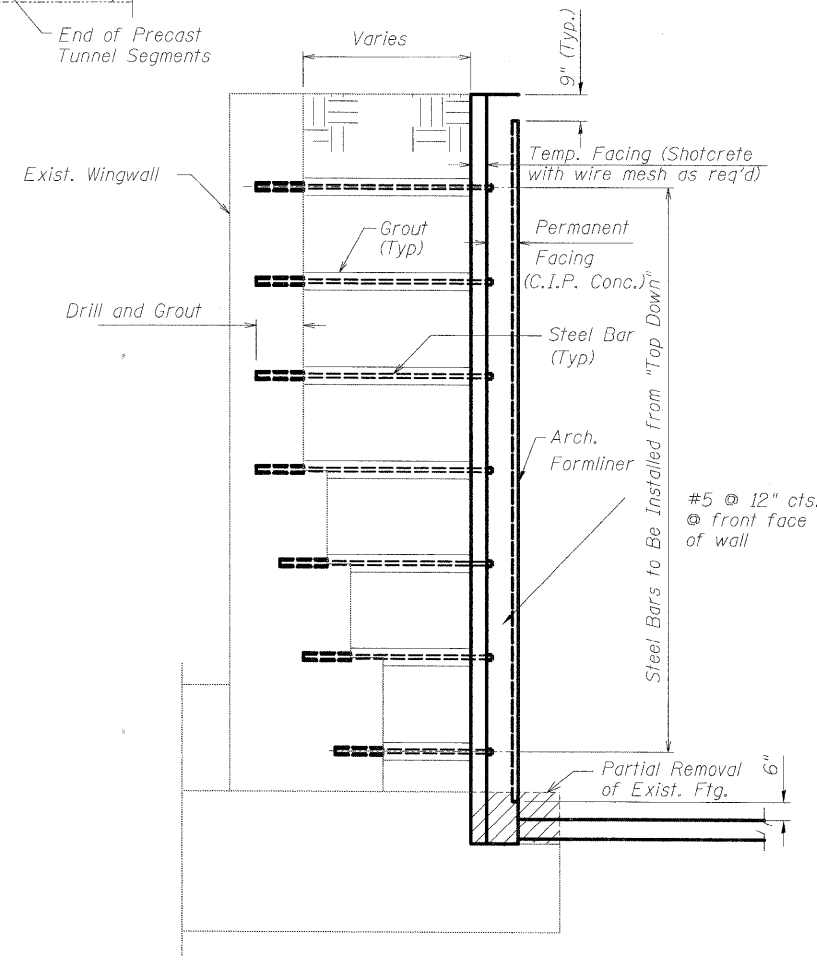


**3 DETAIL**

**PLAN**



**NE WALL ELEVATION**



**SECTION THRU RETAINING WALL, SPECIAL**

**DETAIL - NW CORNER WALLS**

**(2) DETAIL - NE CORNER WALLS**

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

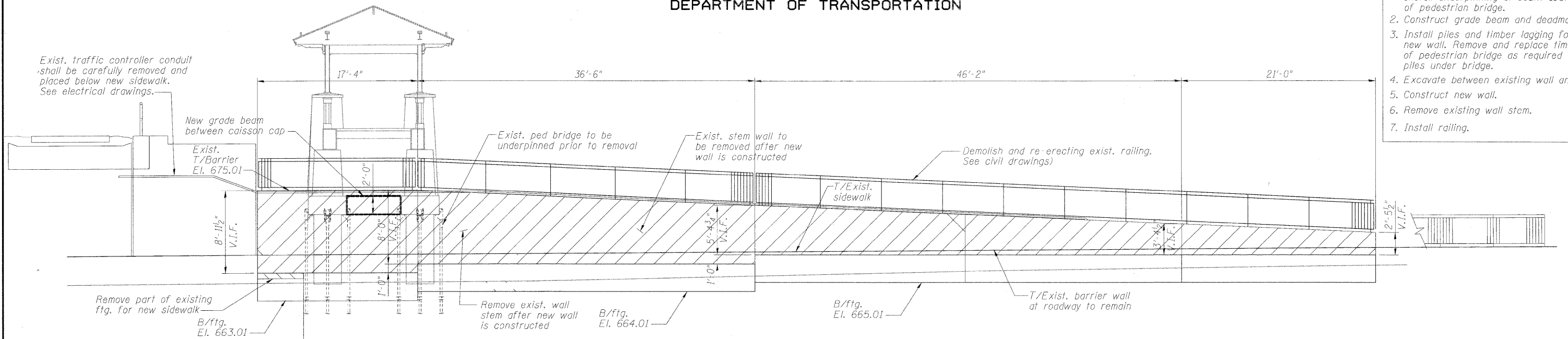
SHEET NO. S-11 SHEETS S-25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	31
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**TUNNEL WINGWALL DETAILS  
STRUCTURE NO. 049-6159**

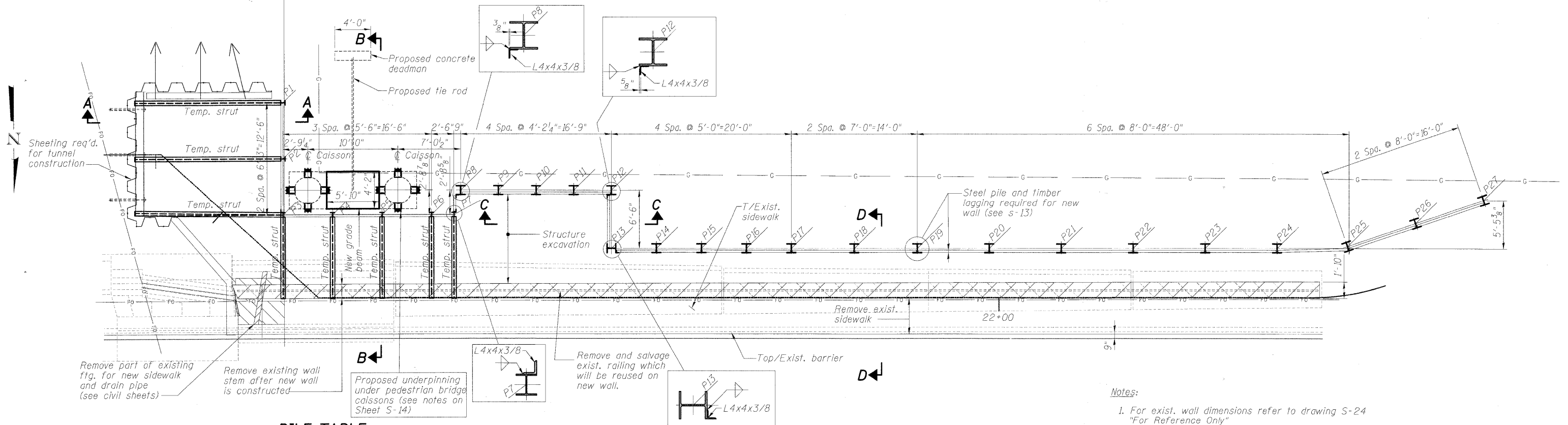
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WALL STAGING STEPS:

1. Install underpinning at south abutment of pedestrian bridge.
2. Construct grade beam and deadman.
3. Install piles and timber lagging for new wall. Remove and replace timber deck of pedestrian bridge as required to install piles under bridge.
4. Excavate between existing wall and lagging.
5. Construct new wall.
6. Remove existing wall stem.
7. Install railing.



ELEVATION-RETAINING WALL STEM REMOVAL



PILE TABLE

Location	Type	Top/Pile	Length	Notes
P1-P3	W6x25	675.55	14'-9"	See Section A-A
P4-P7	W6x25	675.55	14'-0"	See Section B-B
P8-P9	HP12x84	672.88	26'-0"	See Section D-D
P10-P13	HP12x84	672.69	26'-0"	See Section D-D
P14-P15	HP12x84	672.54	24'-9"	See Section D-D
P16-P17	HP12x84	672.38	24'-9"	See Section D-D
P18-P19	HP12x84	671.96	23'-2"	See Section D-D
P20-P21	HP12x84	671.27	23'-2"	See Section D-D
P22-P23	HP12x84	670.56	21'-6"	See Section D-D
P24-P25	HP12x84	669.86	20'-0"	See Section D-D
P26-P27	HP12x53	669.19	17'-6"	See Section D-D

RETAINING WALL REMOVAL AND PILE PLAN

Timber Lagging:

The contractor is responsible for the design and performance of the lagging using no less than 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi. The lagging shall be placed with 3/4" gaps between adjacent timbers to allow for ground water to enter the geocomposite wall drain which shall be placed with its pervious side toward the lagging.

Notes:

1. For exist. wall dimensions refer to drawing S-24 "For Reference Only"
2. For sections A-A and C-C, see sheet S-14. For sections B-B and D-D, see sheet S-15.

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

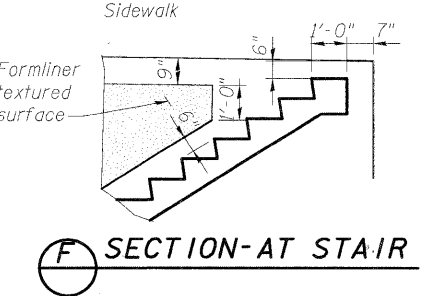
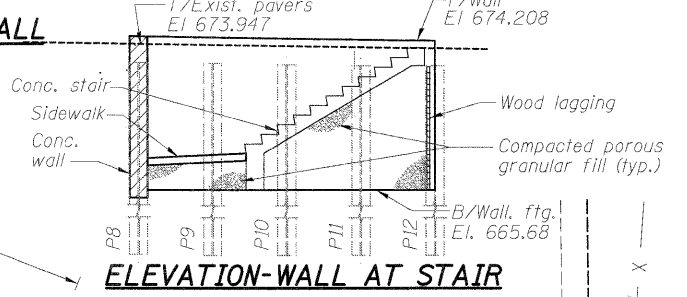
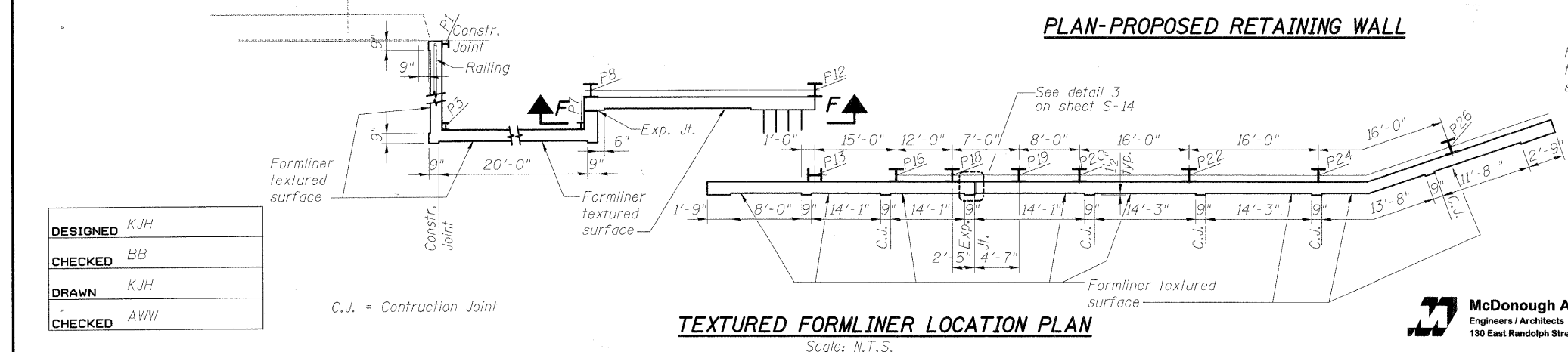
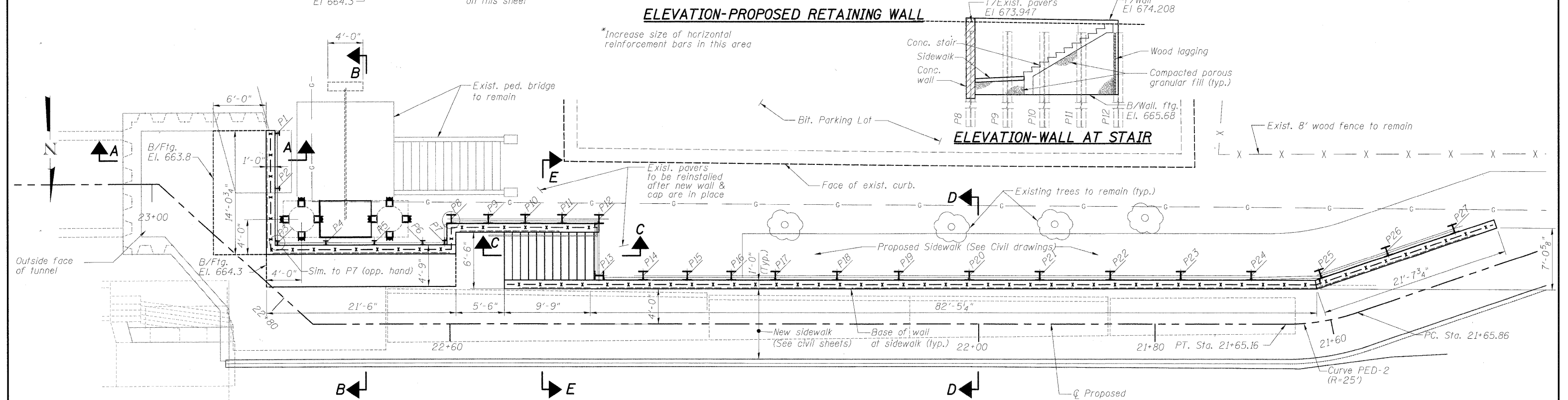
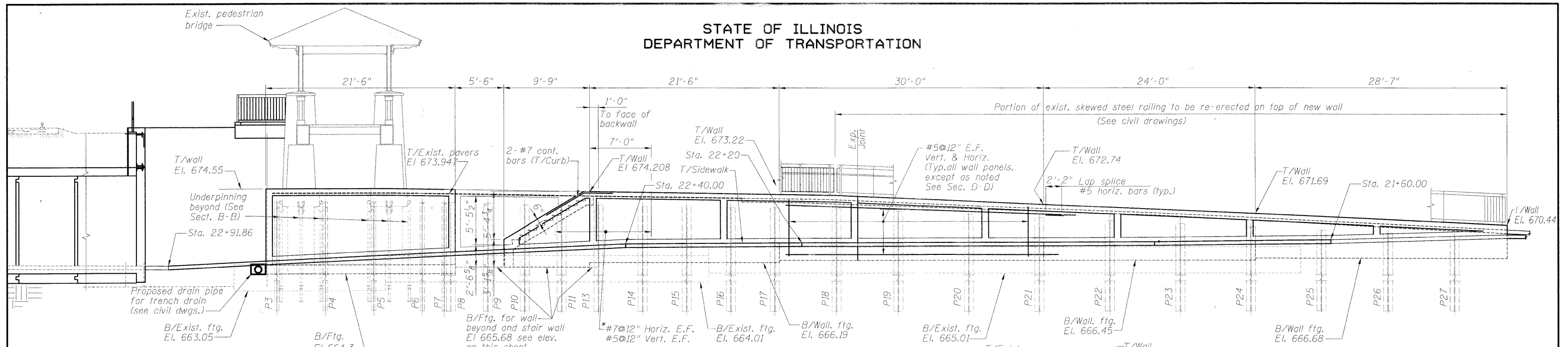
RETAINING WALL REMOVAL  
PILE AND LAGGING LOCATION PLAN  
STRUCTURE NO. 049-6159

SHEET NO.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-12	1257	08-00083-00-BT	LAKE	51	32
S-25		SN 049-6159			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

McDonough Associates Inc.  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Note:

1. For exist. wall dimensions refer to drawing S-24 "For Reference Only"
2. For section A-A, C-C and E-E, see sheet S-14. For Sections B-B and D-D, see sheet S-15.

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

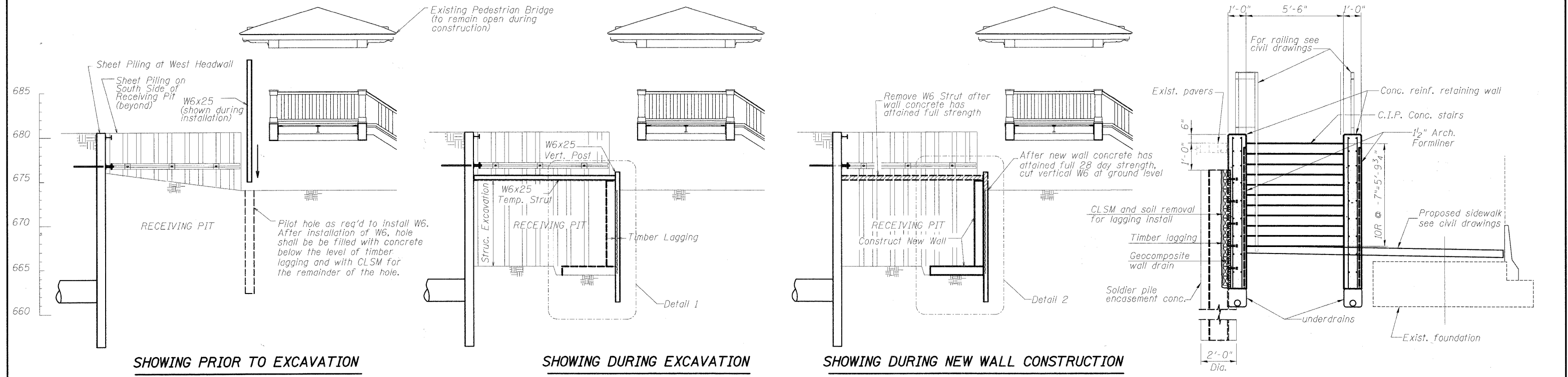
C.J. = Construction Joint

**RETAINING WALL-PLAN & ELEVATION  
STRUCTURE NO. 049-6159**

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-13 SHEETS S-25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	33
	SN 049-6159			CONTRACT NO. 63450	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



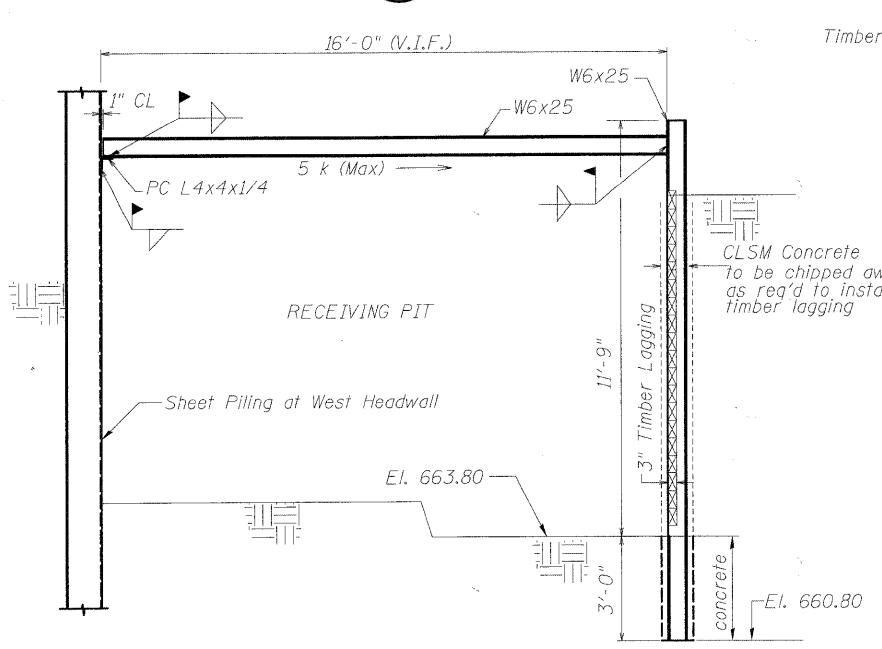
SHOWING PRIOR TO EXCAVATION

SHOWING DURING EXCAVATION

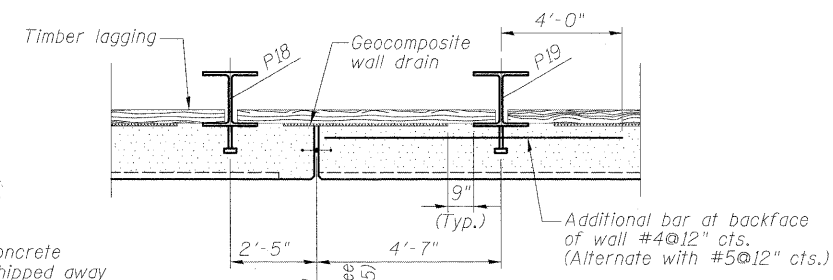
SHOWING DURING NEW WALL CONSTRUCTION

**A** SECTION-SHOWING PORTION OF WALL IN RECEIVING PIT

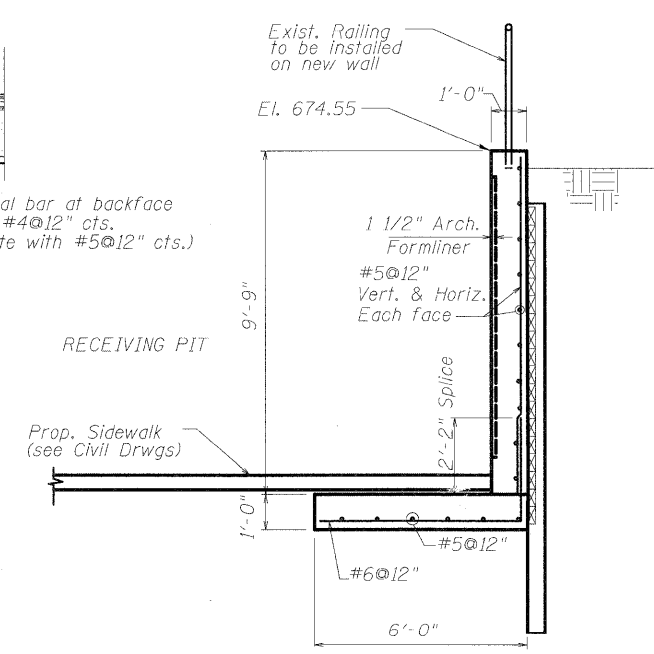
**E** SECTION - THRU STAIR



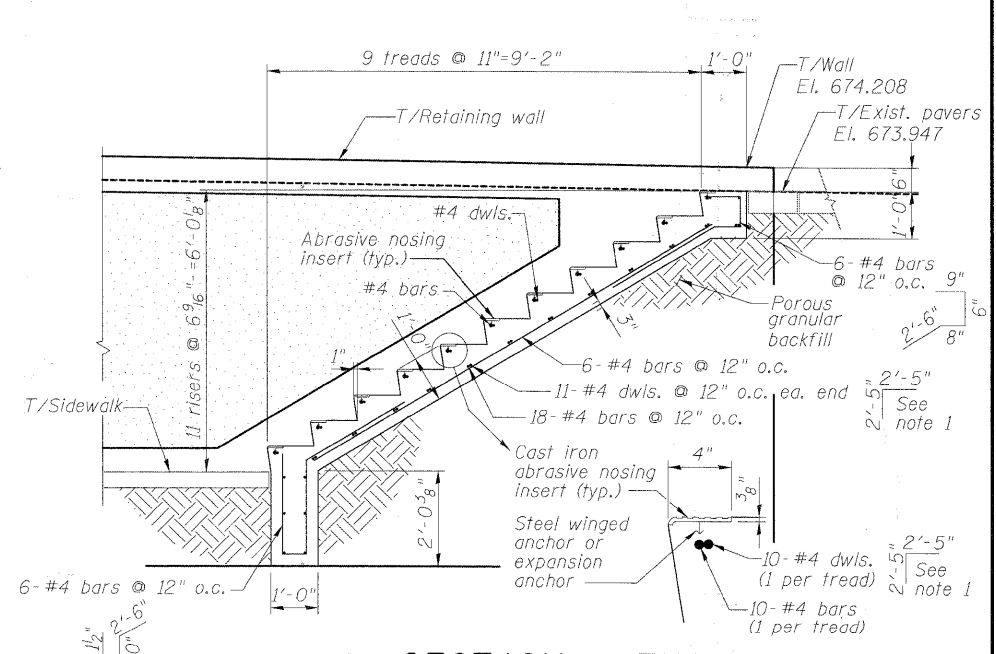
**1** DETAIL-SHOWING EXCAVATION



**3** DETAIL



**2** DETAIL-SHOWING WALL CONSTRUCTION



**C** SECTION - THRU STAIR

Note 1:  
The Contractor may utilize bar couplers, to splice the horizontal stairway bars to the wall reinforcement, instead of using dowels.

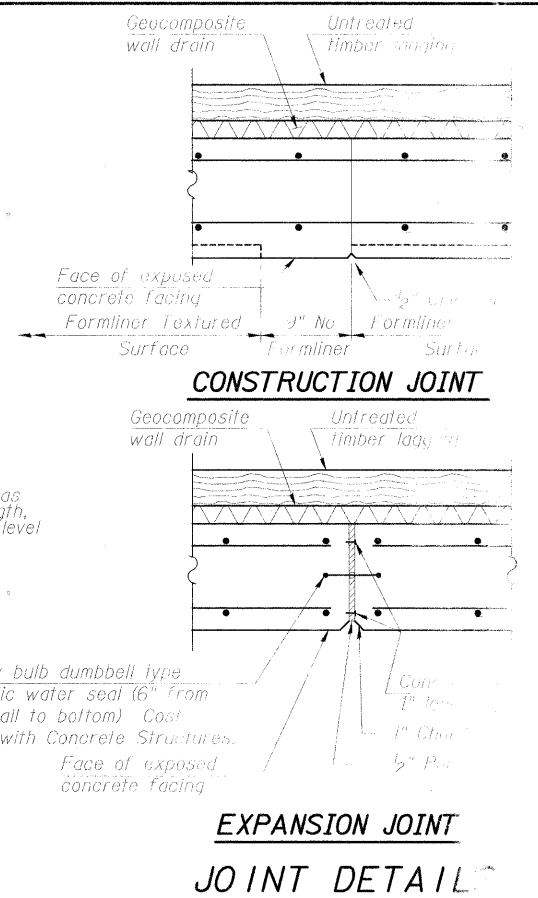
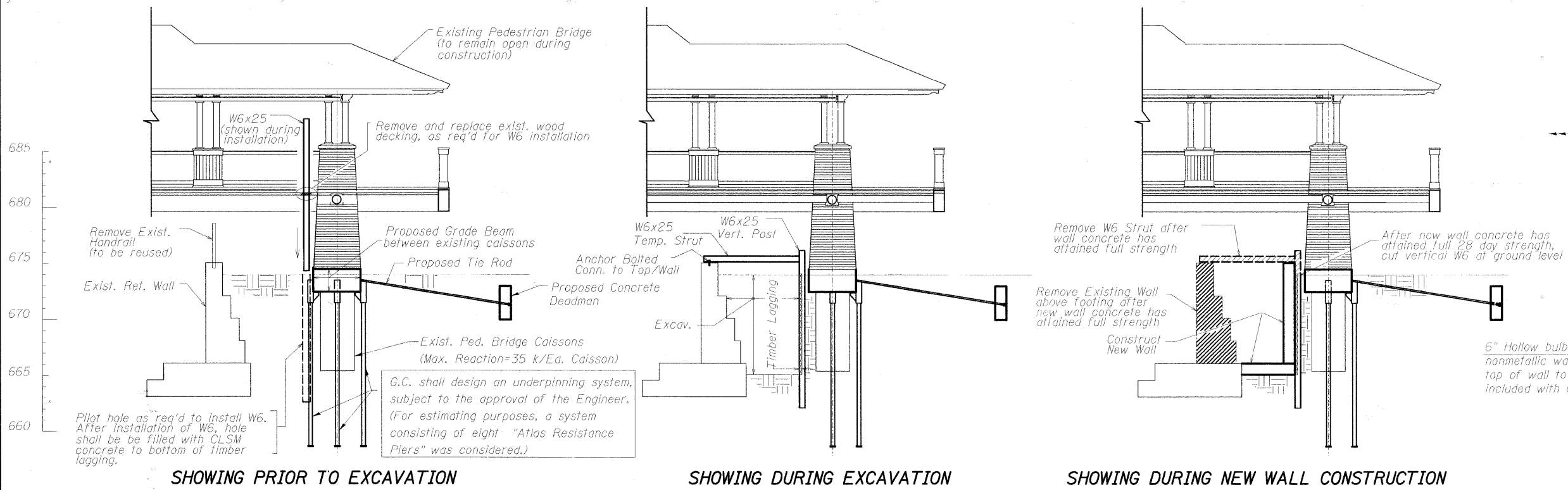
**WALL DETAILS**  
**STRUCTURE NO. 049-6159**

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	-AWW

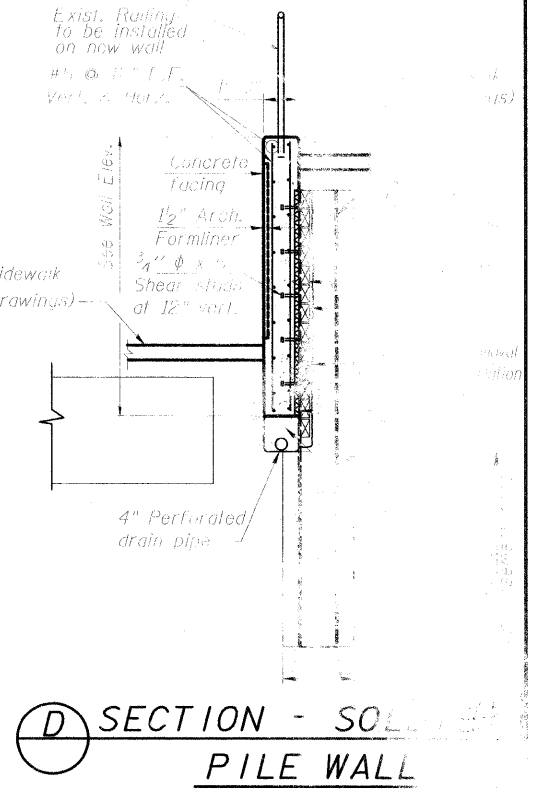
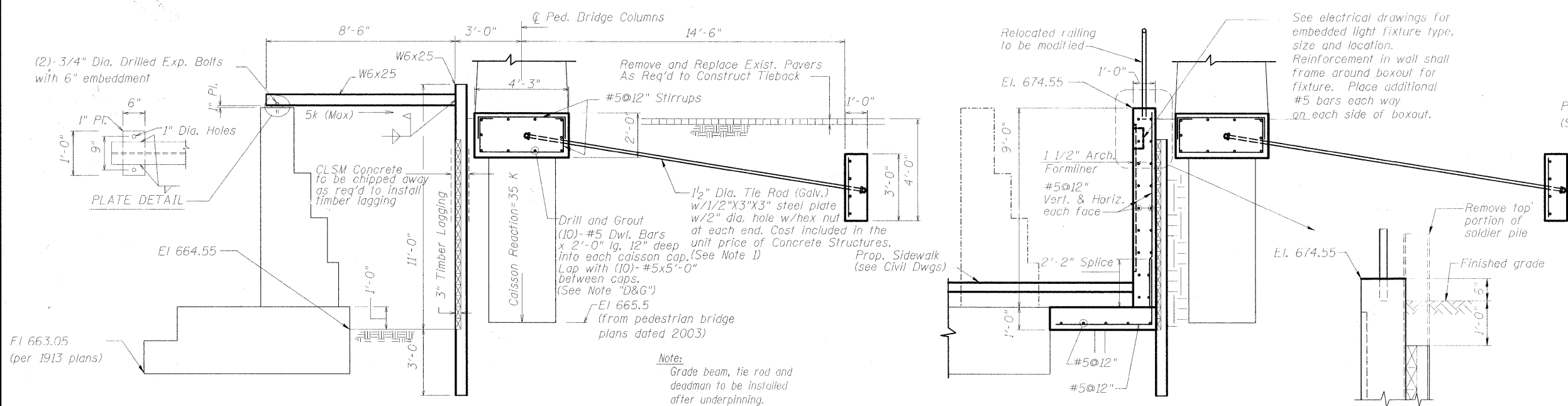
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-14 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 34
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



(B) SECTION - SHOWING PORTION OF WALL UNDER PEDESTRIAN BRIDGE



(1) DETAIL - SHOWING EXCAVATION

(2) DETAIL - SHOWING WALL CONSTRUCTION

(D) SECTION - SOLDIER PILE WALL

WALL DETAILS  
STRUCTURE NO. 049-6159

DESIGNED	KJH
CHECKED	BB
DRAWN	KJH
CHECKED	AWW

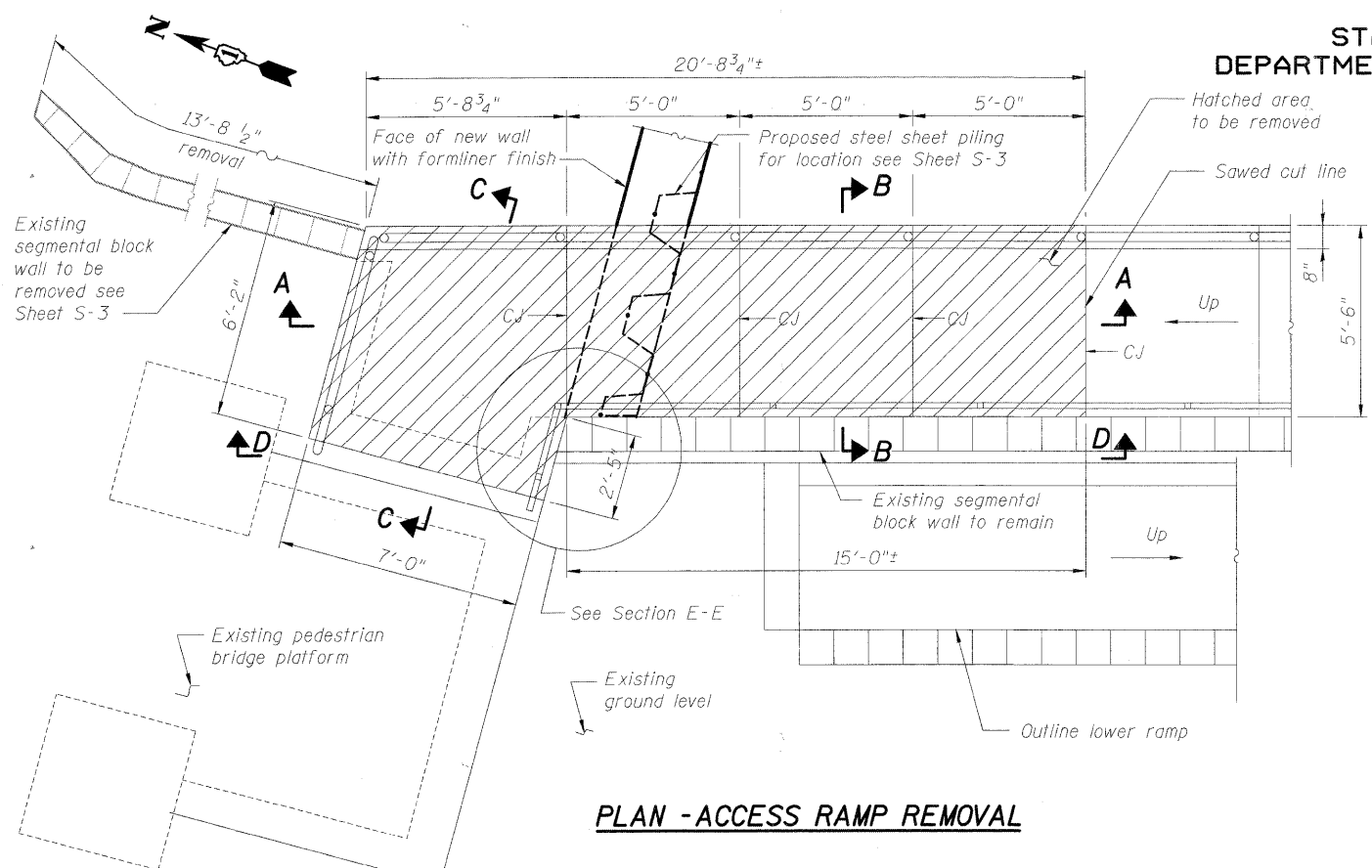
Note "D&G"  
Drilling and Grouting of the dowel bars shall conform to the requirements of Section 584 of the Standard Specifications. The cost of the material and dowel installation is included in the unit price of Reinforcement Bars, Epoxy Coated.

Note 1:  
Excavation and backfill for deadman and tie rods shall be included in the item "Structure Excavation".

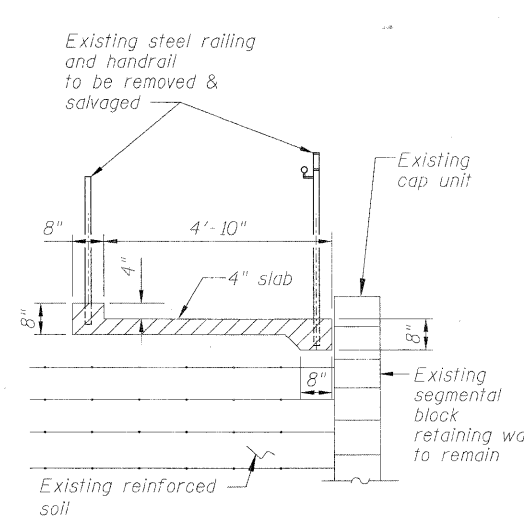
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-15	F.A.U. RTE. 1257	SECTION	COUNTY	SHEETS 51	35
		08-00083-00-BT	LAKE		
SHEETS S-25	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

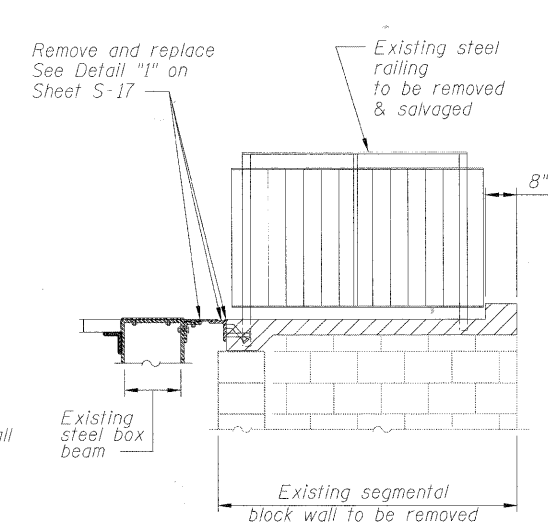
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



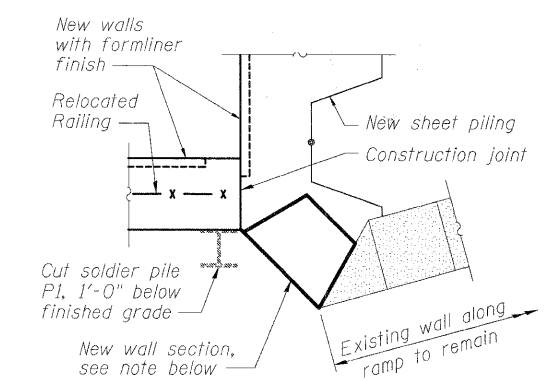
**PLAN - ACCESS RAMP REMOVAL**



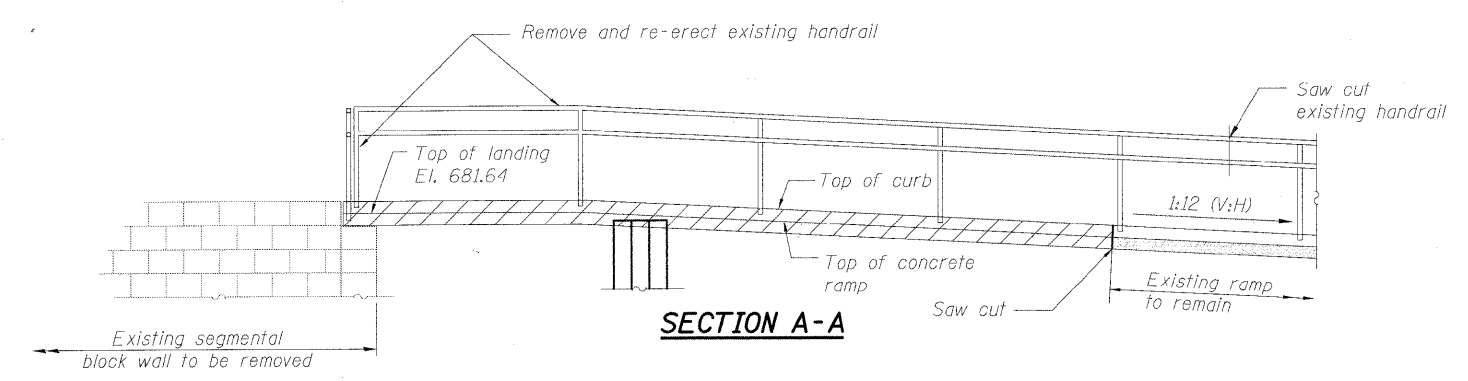
**SECTION B-B**



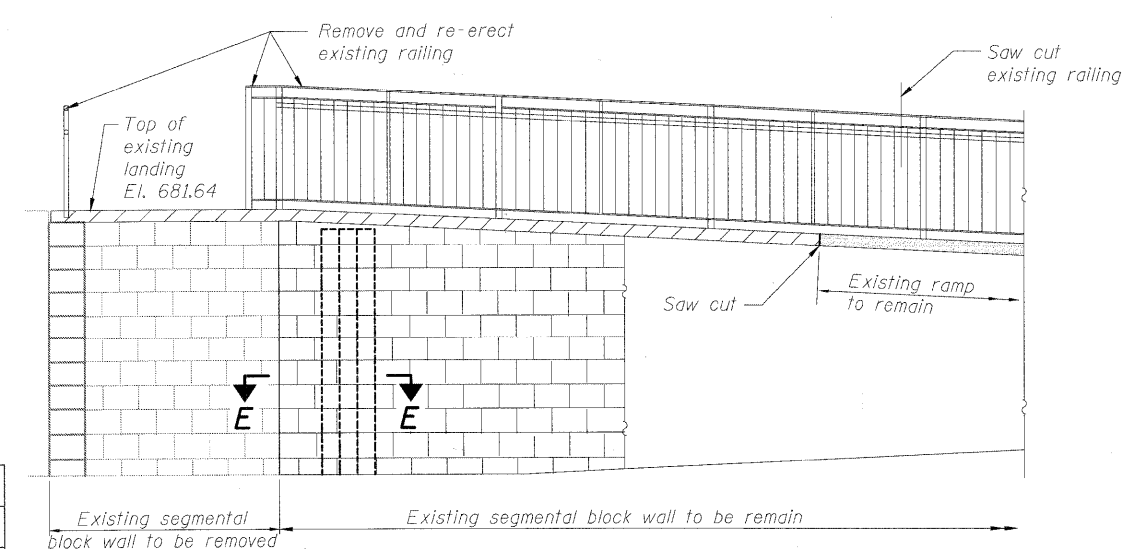
**SECTION C-C**



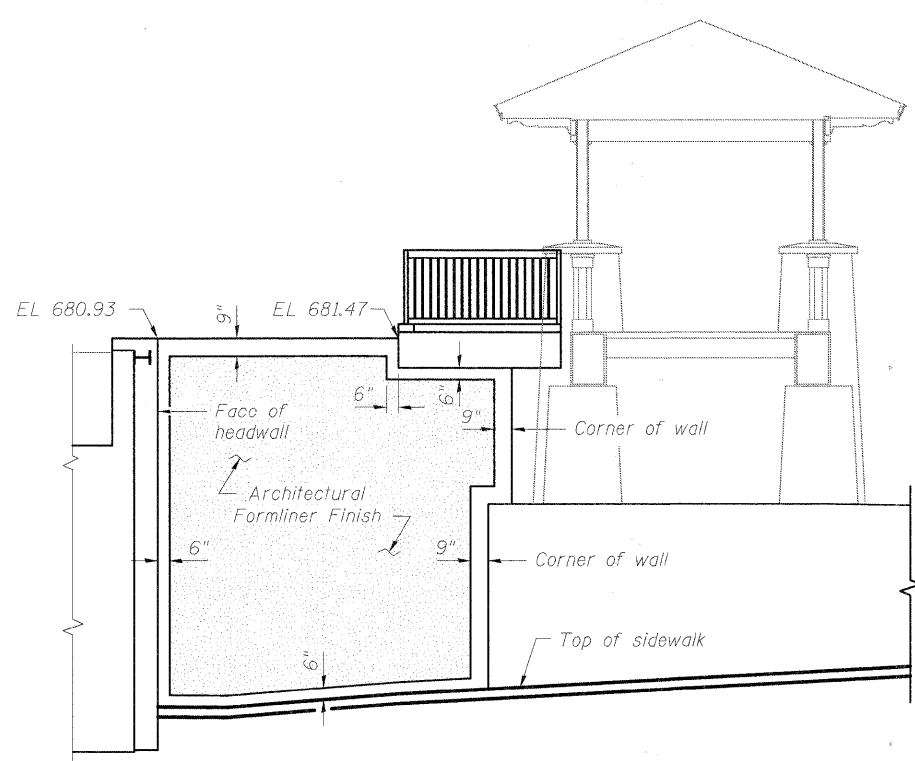
**SECTION E-E**



**SECTION A-A**




**SECTION D-D**



**SECTION H-H**

Note:  
For the location of Section H-H see Sheet S-7.

DESIGNED	BB
CHECKED	KJH
DRAWN	RJ
CHECKED	AWW

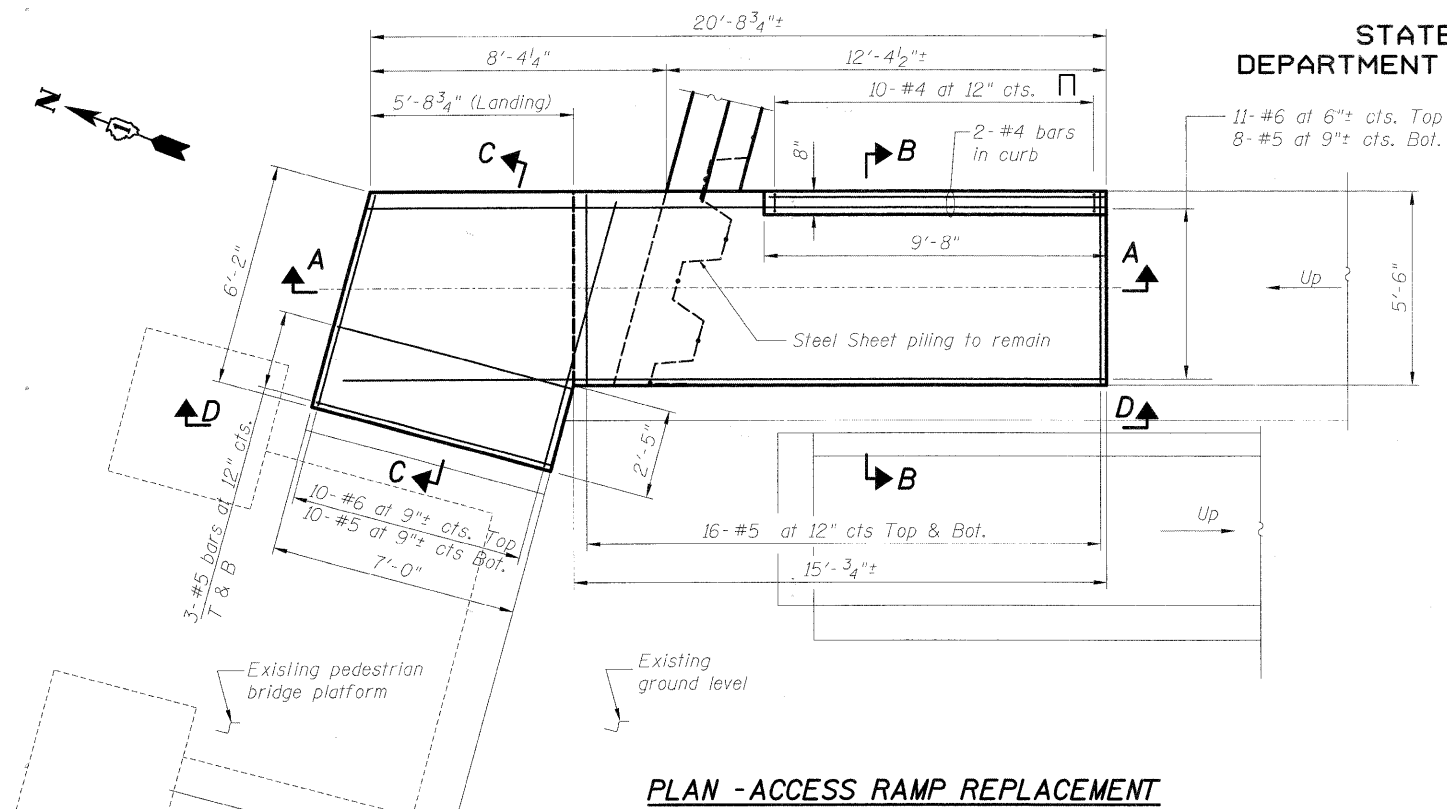
 Hatched area indicates concrete removal

 **McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

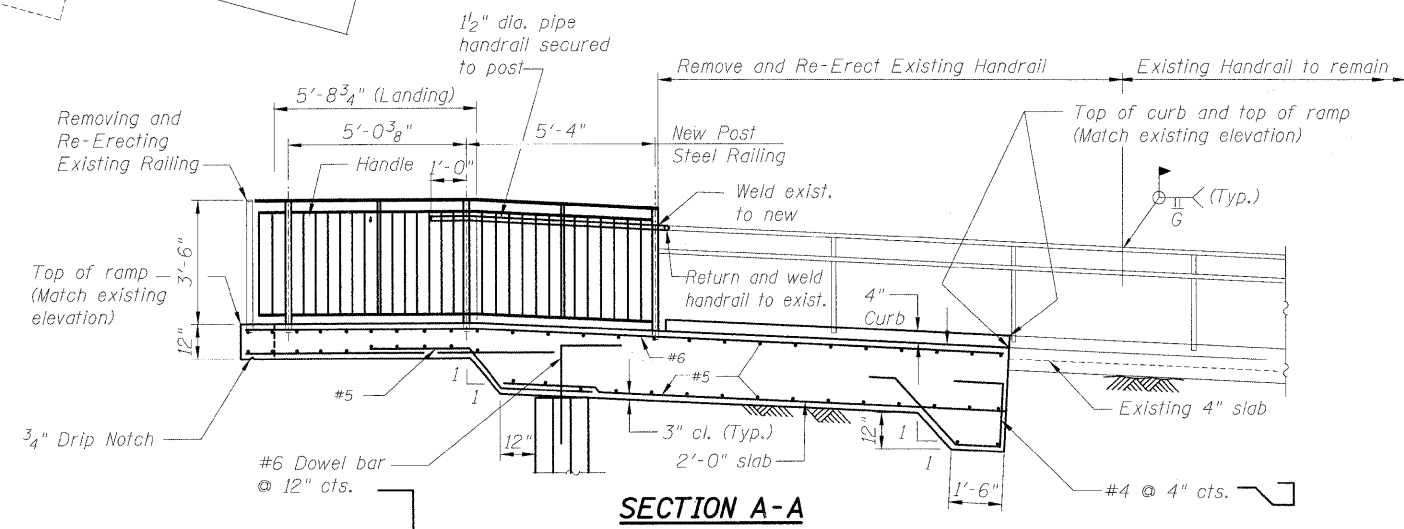
**ACCESS RAMP MODIFICATIONS-REMOVAL  
STRUCTURE NO. 049-6159**

SHEET NO. S-16	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	36
SHEETS S-25	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

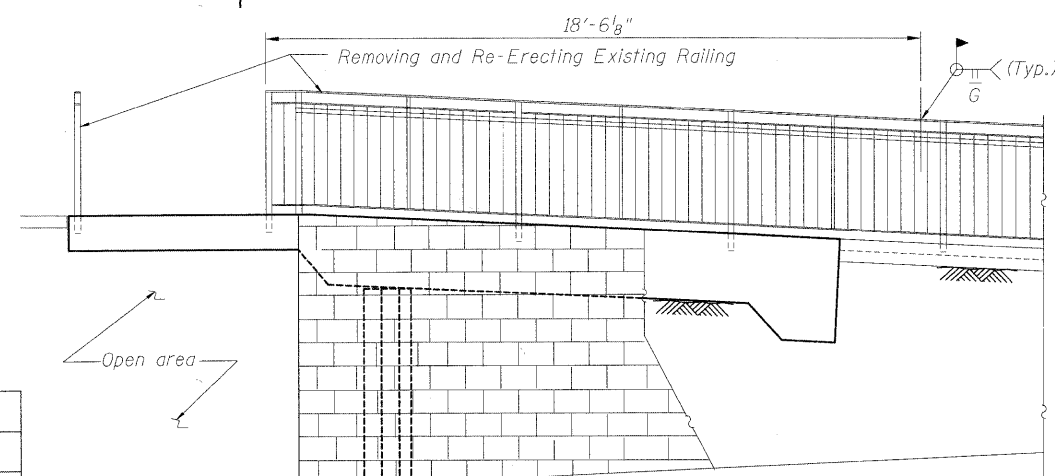
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



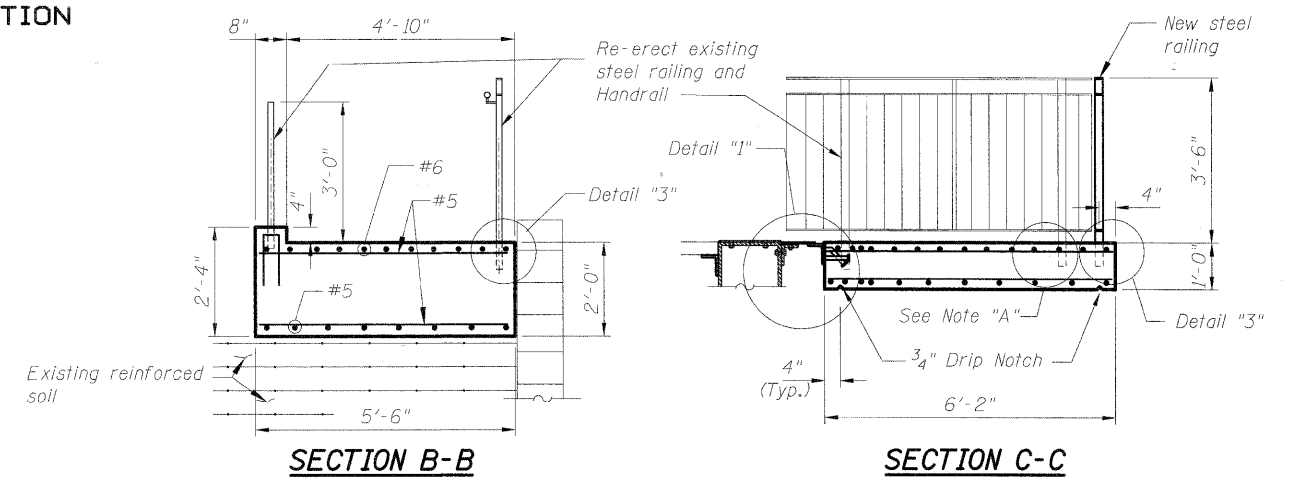
PLAN - ACCESS RAMP REPLACEMENT



SECTION A-A

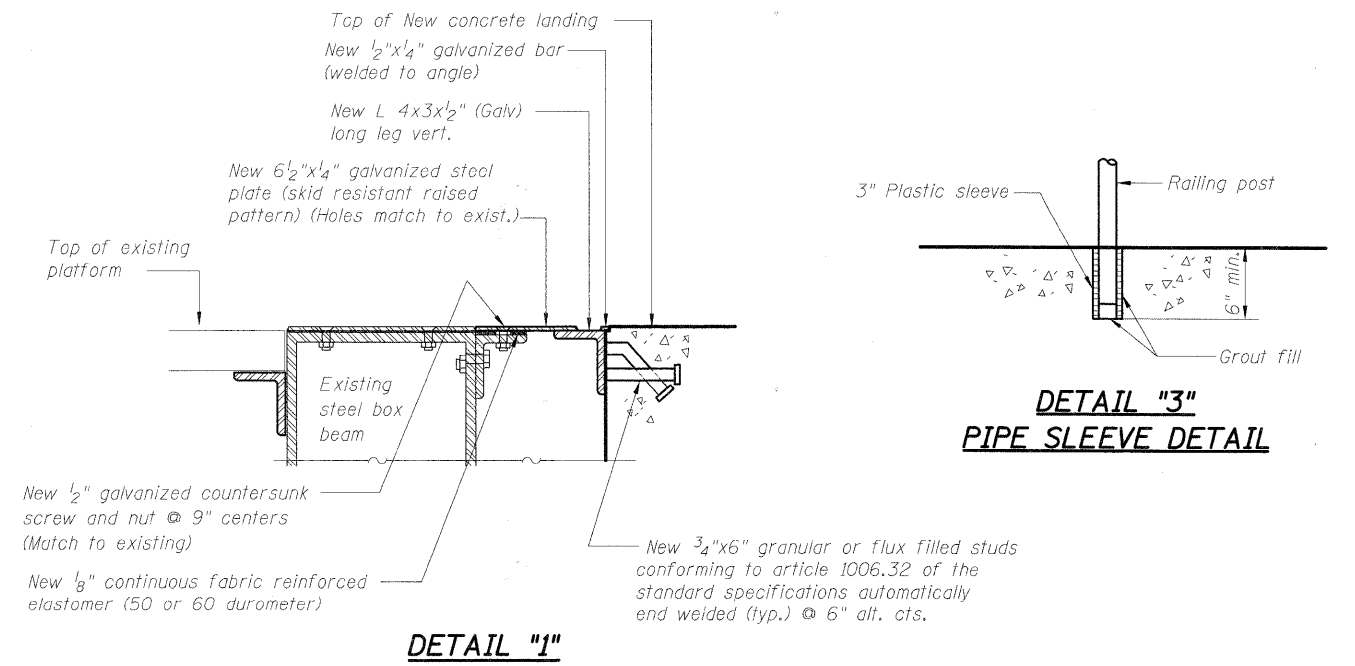


SECTION D-D



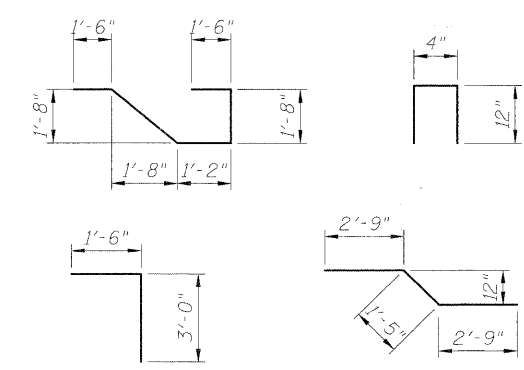
SECTION B-B

SECTION C-C



DETAIL "1"

DETAIL "3"  
PIPE SLEEVE DETAIL



BENT BAR DETAILS

DESIGNED	BB
CHECKED	KJH
DRAWN	RJ
CHECKED	BB

ACCESS RAMP MODIFICATIONS-REPLACEMENT  
STRUCTURE NO. 049-6159

SHEET NO. S-17 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 37
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

(Below Boring from Pedestrian Bridge Contract)

Page: 1 of 1

**Geo Services, Inc.**  
Geotechnical, Environmental & Civil Engineering  
805 Archer St., Suite 204  
Naperville, Illinois 60563  
(630) 355-2638

**STRUCTURE FOUNDATION BORING LOG**

Project: Geotechnical Investigation For The Proposed Metra Deerfield Road Pedestrian Underpass GSI Job No.: 09006  
Location: Deerfield Station, Deerfield, Illinois Date: 8/19/2009  
County: Cook Bored By: RJ  
Client: McDonough & Associates Checked By: AJP

BORING No.: B-1  
Station: 11+24  
Offset: 32.5' Right  
Ground Surface Elevation: 680.2

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	Surface Water Elev. n/a	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)
678.7	HA	-	4	Groundwater Elev. WD 676.2	678.7	HA	2.0P	25
677.7	HA	0.5P	28	Groundwater Elev. AB 675.7	675.7	HA	5.0B	22
675.7	HA	3.9B	24	After Hours:	675.7	HA	3.0B	21
665.2	HA	1.4B	25		665.2	HA	2.3B	27

End Of Boring @ -15.0' Hand Auger

Page: 1 of 1

**Geo Services, Inc.**  
Geotechnical, Environmental & Civil Engineering  
805 Archer St., Suite 204  
Naperville, Illinois 60563  
(630) 355-2638

**STRUCTURE FOUNDATION BORING LOG**

Project: Geotechnical Investigation For The Proposed Metra Deerfield Road Pedestrian Underpass GSI Job No.: 09006  
Location: Deerfield Station, Deerfield, Illinois Date: 7/31/2009  
County: Cook Bored By: MD  
Client: McDonough & Associates Checked By: AJP

BORING No.: B-2  
Station: 10+40  
Offset: 30.0' Right  
Ground Surface Elevation: 680.5

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	Surface Water Elev. n/a	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)
680.5	HA	NP	NR	Groundwater Elev. WD n/a	680.5	HA	NP	NR
	HA	NP	NR	Groundwater Elev. AB n/a		HA	NP	NR
	HA	NP	NR	After Hours:		HA	NP	NR

Miscellaneous Sand & Stone  
End Of Boring @ -13.0' Hand Auger Refusal Due to Large Stone

Page: 1 of 1

**O'Brien & Associates, Inc.**  
CONSULTING ENGINEERS  
1300 E. BROAD ST., WILSONVILLE, IL 60090  
(630) 355-1444 • FAX (630) 355-2200

**STRUCTURE FOUNDATION BORING LOG**

Project: Pedestrian Overpass for Deerfield Metra Station OBA JOB NO. 02218  
Location: Deerfield, Illinois Date: June 18, 2002  
County: Lake Bored By: RJ  
Client: McDonough Associates, Inc. Checked By: DOB

BORING No.: B-1  
Station: XX  
Offset: XX

DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)	Surface Water Elev. n/a	DEPTH (ft)	BLOWS (6")	UCS (tsf)	MOIST (%)
875.5	HA	-	-	Groundwater Elev. 857.0 WD	875.5	HA	-	-
874.5	HA	0.5P	22	Groundwater Elev. Dry AB	874.5	HA	0.5P	22
872.0	HA	3.75P	18	After Hours	872.0	HA	3.75P	18
864.5	HA	2.75B	19		864.5	HA	2.75B	19
862.0	HA	3.2B	15		862.0	HA	3.2B	15
857.0	HA	1.6B	12		857.0	HA	1.6B	12
847.7	HA	3.0B	23		847.7	HA	3.0B	23
825.5	HA	1.7B	23		825.5	HA	1.7B	23

End of Boring @ -50.0' Hollow Stem Augers CME Safety Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shealy Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D-1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shealy Tube Sample VS-Vane Shear Test  
The SPT (N value) is the sum of the last two blow values in each sampling zone (ASTM D-1586) The Unit Dry Weight (pcf) is noted in italics above moist (%)  
NR-No Recovery

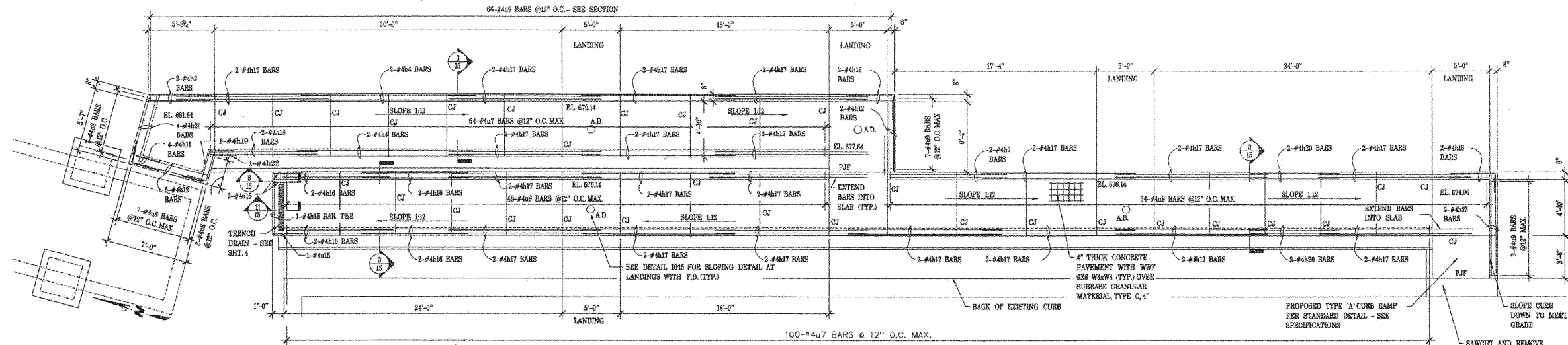
N-Standard Penetration is the value of the test two blow counts in each sample zone (ASTM D-1586)  
Type Failure: B-Bulge Failure S-Shear Failure P-Penetrometer  
UCS-Unconfined Compressive Strength (tsf) U<sub>1</sub>-Unit weight (pcf) noted in italics above moist (%)  
NR-No Recovery

**BORING LOGS**  
**STRUCTURE NO. 049-6159**

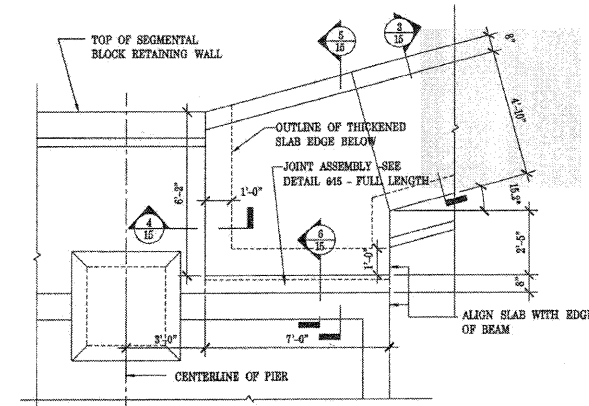
SHEET NO. S-18 SHEETS S-25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	38
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

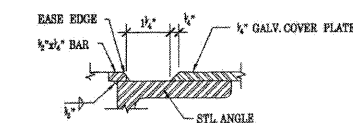
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



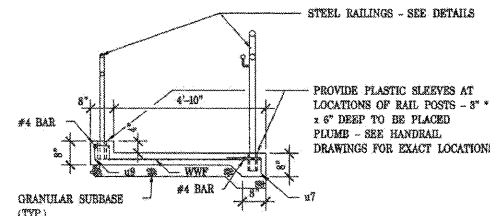
1 RAMP PLAN  
15 SCALE: 1/4" = 1'-0"



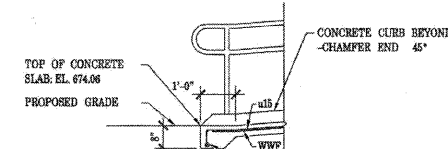
2 ENLARGED PLAN OF TOP RAMP LANDING  
15 SCALE: 1/4" = 1'-0"



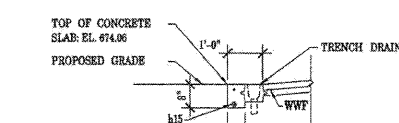
9 COVER PLATE DETAIL  
15 SCALE: 1/4" = 1'-0"



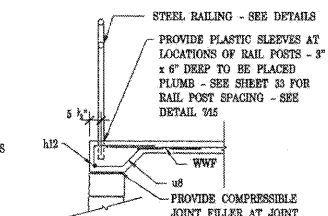
3 TYPICAL RAMP SECTION  
15 SCALE: 1/4" = 1'-0"



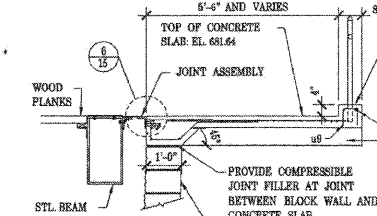
8 SECTION THROUGH BOTTOM LANDING  
15 SCALE: 1/4" = 1'-0"



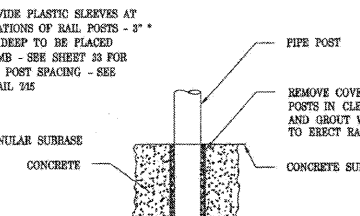
11 SECTION THROUGH TRENCH DRAIN  
15 SCALE: 1/4" = 1'-0"



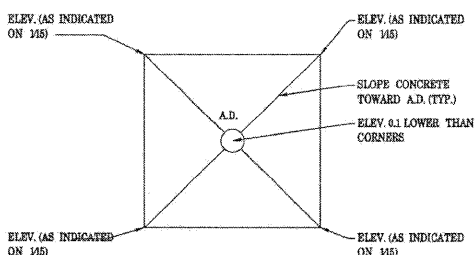
4 SECTION THROUGH COPING  
15 SCALE: 1/4" = 1'-0"



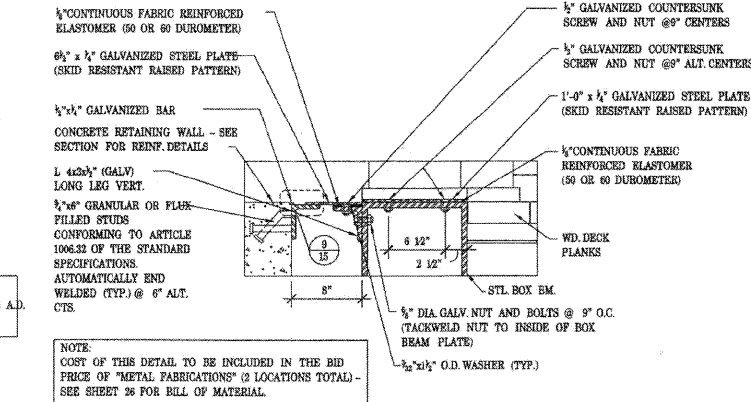
5 SECTION THROUGH TOP LANDING  
15 SCALE: 1/4" = 1'-0"



7 PIPE SLEEVE DETAIL (TYPICAL)  
15 SCALE: 1/4" = 1'-0"



10 PLAN OF TYPICAL LANDING  
15 SCALE: 1/4" = 1'-0"



6 SECTION THROUGH TOP LANDING  
15 SCALE: 1/4" = 1'-0"

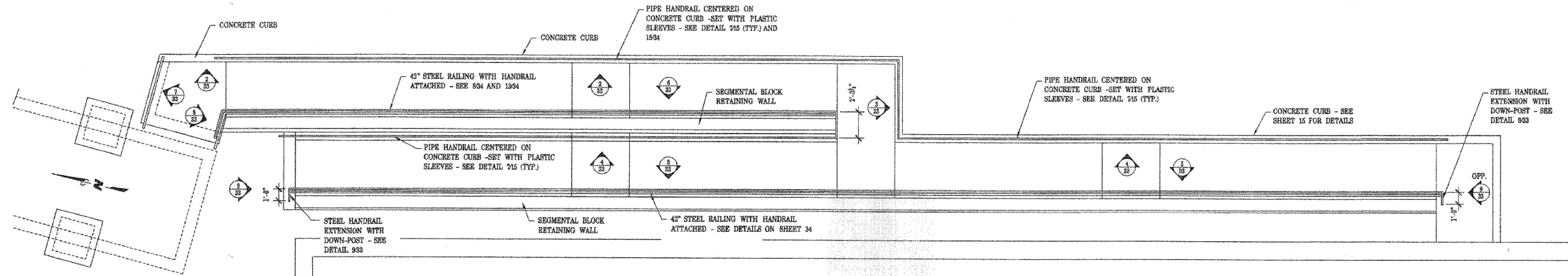
FOR INFORMATION ONLY

- NOTES:
- COST OF CURB RAMP AS SHOWN IN DETAIL 145 AT SOUTH END OF RAMP, TO BE INCLUDED IN BID PRICE OF "CONCRETE STRUCTURES"
  - COST OF SAWCUT AND PARTIAL REMOVAL OF CURB AND CUTTER AND REPLACEMENT WITH DEPRESSED CURB TO BE INCLUDED IN BID PRICE OF "CONCRETE STRUCTURES"
  - SEE SHEET 33 FOR RAIL POST SPACING FOR PLACEMENT OF PIPE SLEEVES AS SHOWN IN DETAIL 715. COST OF SUPPLY AND PLACING OF PLASTIC PIPESLEEVES TO BE INCLUDED IN THE BID PRICE OF "CONCRETE STRUCTURES" COORDINATE PIPE SLEEVE SELECTION AND PLACEMENT WITH STEEL RAILING MANUFACTURER.
  - "PJP" INDICATES 1/2" PREFORMED JOINT FILLER FULL DEPTH AND WIDTH - COST TO BE INCLUDED IN BID PRICE FOR "CONCRETE STRUCTURES"
  - "CF" INDICATES 1/2" DEEP SAWCUT CONTROL JOINT, SAWN AT 4 TO 24 HOURS. COST TO BE INCLUDED IN BID PRICE FOR "CONCRETE STRUCTURES"
  - SEE SHEET 16 FOR REBAR DETAILS AND BILL OF MATERIAL

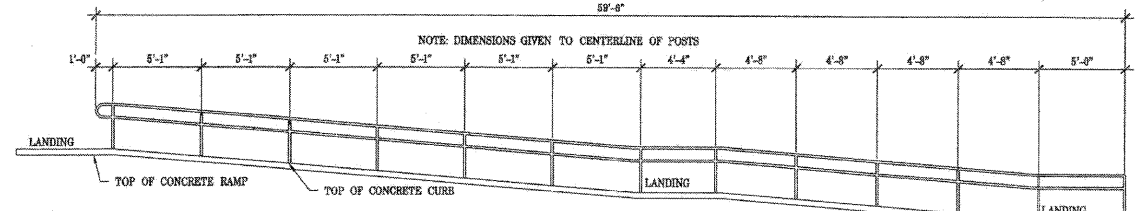
FOR INFORMATION ONLY  
STRUCTURE NO. 049-6159

SHEET NO. S-19 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 39
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

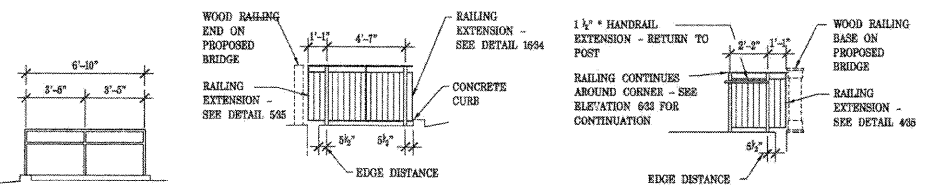
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



1 RAILING PLAN AT RAMP  
SCALE: 1/4" = 1'-0"



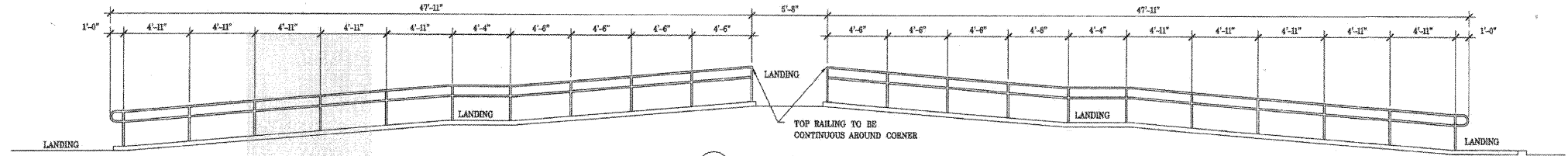
2 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"



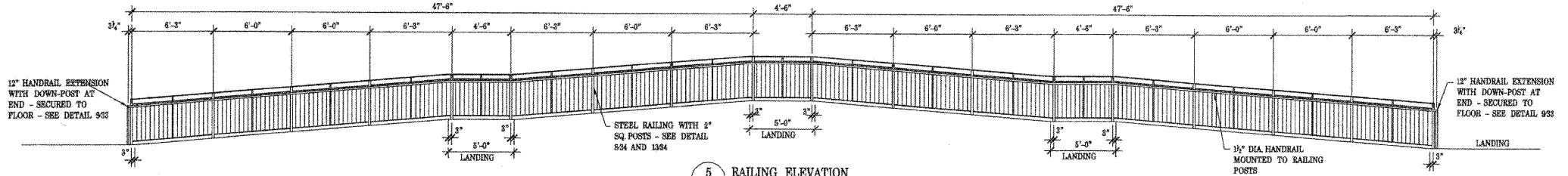
3 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"

7 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"

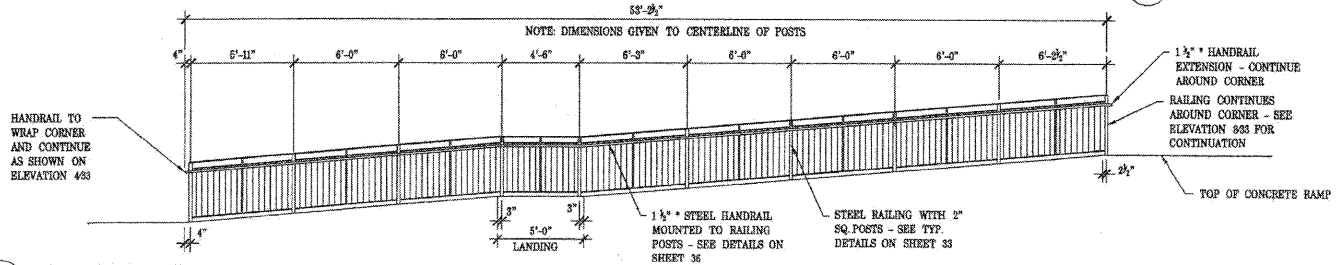
8 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"



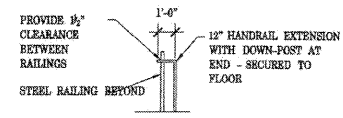
4 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"



5 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"



6 RAILING ELEVATION  
SCALE: 1/4" = 1'-0"



9 HANDRAIL EXTENSION DETAIL  
SCALE: 1/4" = 1'-0"

NOTES:  
WORK THIS SHEET WITH 38 AND 35

FOR INFORMATION ONLY

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FOR INFORMATION ONLY  
STRUCTURE NO. 049-6159

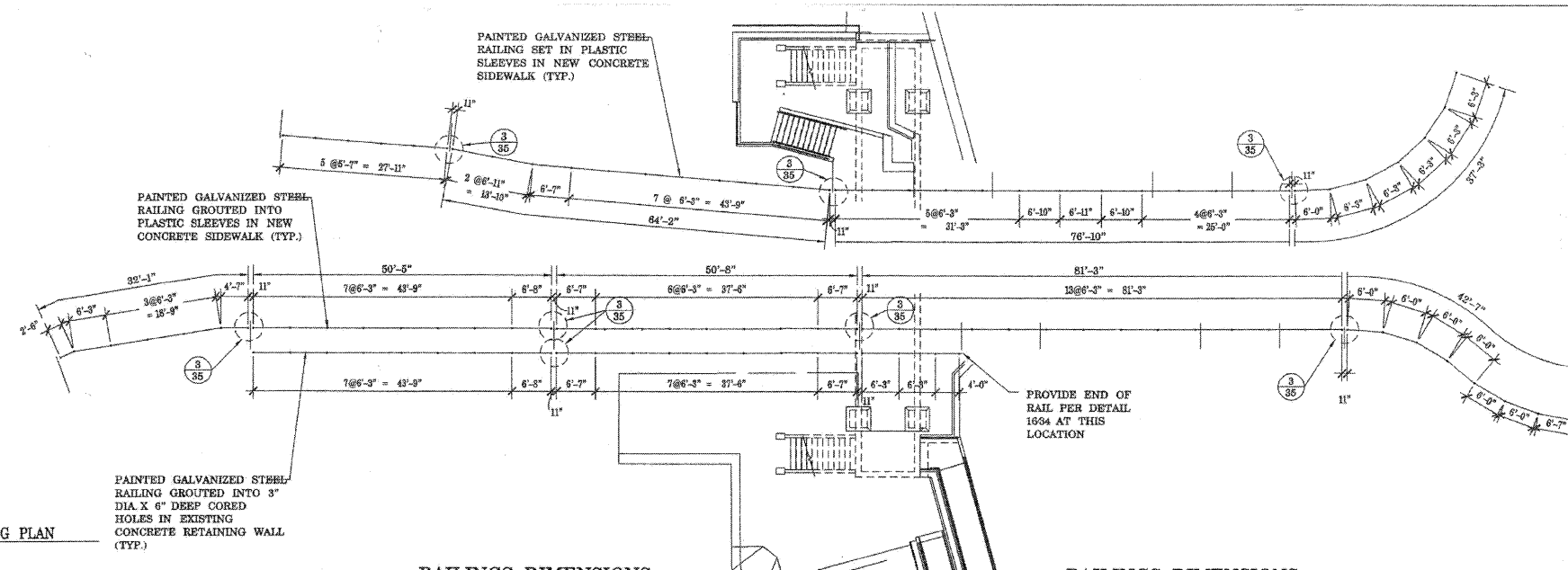
**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-20 SHEETS S-25	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1257	08-00083-00-BT	LAKE	51	40
SN 049-6159			CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					





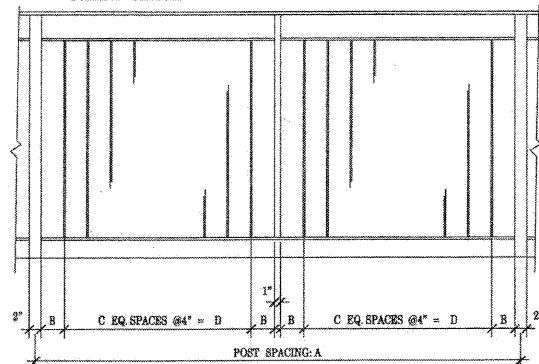
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



NOTE:  
ALL DIMENSIONS GIVEN TO CENTERLINE OF POSTS.  
PROPOSED POST SPACING MAY NEED TO BE ADJUSTED IN THE FIELD PRIOR TO POURING CONCRETE TO CORRESPOND WITH ACTUAL LOCATIONS OF CONCRETE JOINTS.  
CONTRACTOR TO VERIFY EXACT LOCATIONS OF PIPE SLEEVES PRIOR TO FABRICATION OF STL. RAILINGS.  
SOME RAILING PORTIONS MAY REQUIRE FIELD WELDED JOINTS - SEE NOTE BELOW FOR PATCHING GALVANIZING AT THESE LOCATIONS.  
SEE DETAILS ON SHEET 32 FOR EDGE DISTANCE OF PIPE SLEEVES FOR RAIL POSTS

1 RAILING POST SPACING PLAN  
SCALE: 3/8" = 1'-0"

NOTE:  
SEE DETAIL 634 FOR STEEL RAILING DETAILS



2 TYPICAL RAILING ELEVATIONS AND DIMENSIONS  
SCALE: 1" = 1'-0"

NOTES:

HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A500, GRADE B, STRUCTURAL STEEL TUBING.

ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270 M GRADE 30.

THE HANDRAILING MOUNTED TO THE STEEL RAILING ALONG THE RAMP AND AT THE STAIRS AS WELL AS THE WALL MOUNTED HANDRAIL DEPICTED IN DETAIL 634, FURNISHED AND INSTALLED SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR "STEEL RAILING"

ALL POSTS, RAILINGS AND RENT PLATES SHALL BE GALVANIZED AFTER SHOP FABRICATION ACCORDING TO AASHTO M 111 AND ASTM A 385. VENT HOLES FOR GALVANIZING SHALL BE PLACED IN THE POSTS AT LOCATIONS THAT WILL NOT ALLOW THE ACCUMULATION OF MOISTURE IN THE MEMBERS.

ALL POSTS TO BE SET PLUMB. RAILINGS ARE TO FOLLOW SLOPE OF GROUND - CONTRACTOR TO VERIFY IN THE FIELD.

THE INORGANIC ZINC RICH PRIMER/ACRYLIC/ACRYLIC PAINT SYSTEM SHALL BE USED FOR SHOP PAINTING OF ALL STEEL RAILINGS EXCEPT WHERE OTHERWISE NOTED.

FINAL PAINT COAT SHALL BE BLACK.

ALL WELDS TO BE MWS (MINIMUM WELD SIZE) PER AWS UNLESS NOTED OTHERWISE.

EXPANSION JOINTS IN THE PIPE HANDRAILS SHALL BE PLACED PER STANDARD SPECIFICATIONS SECTION 510.

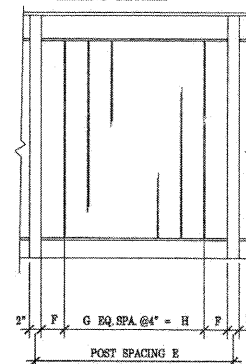
EXPANSION JOINTS IN THE STEEL RAILING SHALL BE PLACED AT 40FT. MAX. -SEE DETAIL 535. ALIGN EXPANSION JOINT WITH JOINTS IN ATTACHED HANDRAIL ALONG THE RAMP.

RAILINGS DIMENSIONS

POST SPACING*	DIM.	NO.	LENGTH
A	B	C	D
4'-0"	3'-14"	4	1'-4"
4'-6"	2'-3/8"	5	1'-8"
4'-7"	3"	5	1'-8"
4'-11"	4"	5	1'-8"
5'-2"	3'-3/4"	6	2'-0"
5'-6"	3'-3/4"	6	2'-0"
5'-7"	4"	6	2'-0"
5'-11"	3"	7	2'-4"
6'-0"	3'-14"	7	2'-4"
6'-1"	3'-1/2"	7	2'-4"
6'-2"	3'-3/4"	7	2'-4"
6'-3"	4"	7	2'-4"
6'-7"	3"	8	2'-8"
6'-8"	3'-1/4"	8	2'-8"
6'-10"	3'-3/4"	8	2'-8"
6'-11"	4"	8	2'-8"

\* POST SPACINGS AS INDICATED ON PLAN 165 AND ELEVATIONS ON SHEETS 33 AND 34

NOTE:  
SEE DETAIL 634 FOR STEEL RAILING DETAILS



4 RAILING EXPANSION JOINT DETAIL AT BRIDGE JOINTS  
SCALE: 1" = 1'-0"

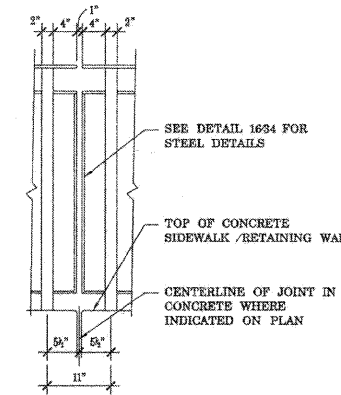
RAILINGS DIMENSIONS

POST SPACING*	DIM.	NO.	LENGTH
E	F	G	H
1'-2"	4"	1	4"
2'-2"	4"	4	1'-4"
2'-6"	3"	5	1'-8"
2'-10"	4"	6	2'-0"
3'-0"	3"	7	2'-4"
3'-5"	2'-1/2"	8	2'-8"
3'-4"	3"	8	2'-8"
3'-5"	3'-1/2"	8	2'-8"
3'-6"	4"	8	2'-8"

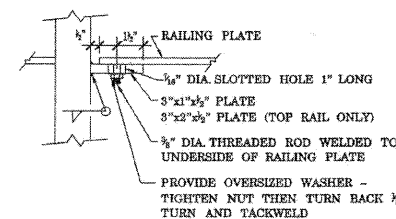
\* POST SPACINGS AS INDICATED ON PLAN 165 AND ELEVATIONS ON SHEETS 33 AND 34

BILL OF MATERIALS - RAILINGS

ITEM	UNIT	TOTAL
STEEL RAILING	LFT.	317
PIPE HANDRAIL	LFT.	168



3 TYPICAL ELEVATION OF RAILING DETAIL AT JOINTS  
SCALE: 1" = 1'-0"



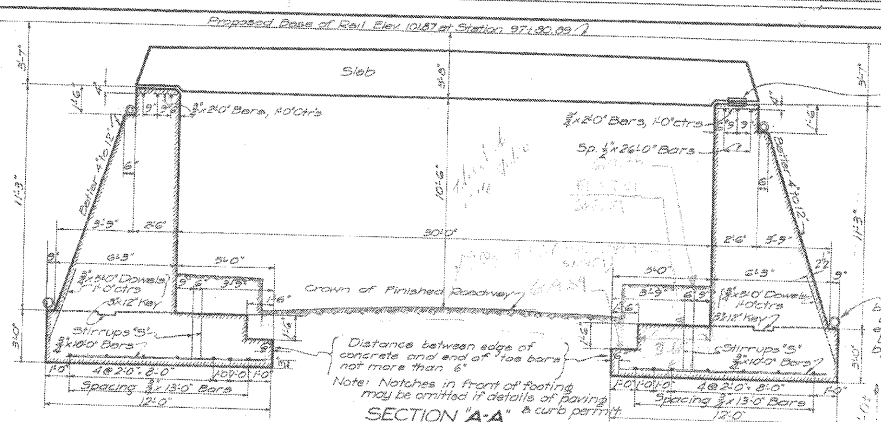
5 RAILING EXPANSION JOINT DETAIL  
SCALE: 1" = 1'-0"

FOR INFORMATION ONLY

FOR INFORMATION ONLY  
STRUCTURE NO. 049-6159

SHEET NO.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-22	1257	08-00083-00-BT	LAKE	51	42
SHEETS	SN 049-6159		CONTRACT NO. 63450		
S-25	FED. ROAD DIST. NO. 1 ILLINOIS		FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

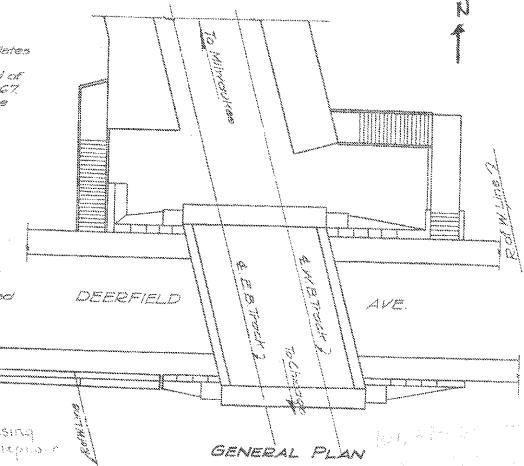


Note: Erector may place Natches & Plates P1 in either abutment. For details of free end bearing and of Plates P1, see Drawing No. D-4367. Plates P1 should be placed with the burr side down.

For details of notch for parapet see Drg No. D-4367.

Drains to be placed at top and bottom of newwork as shown. Lower drains to be carried around ends of "through wings". Disposal of drainage to be determined by "Eng-in-Charge".

Note: Notches in front of footing may be omitted if details of paving are shown.



Revised 10/29/14 ACC. C.S.C. 11/29/14 C.H.C.

No.	Size	Length	Description
14	20"	X	Longitudinals
22	18"	X	"
187	10"	0	Toe Bars
56	12"	6	Stirrups 5'
54	8"	0	Dowels
68	4"	0	"
7	5"	0	Longitudinals
4	18"	X	" (SW Ret Wall)
29	8"	0	Transverse "
14	8"	0	Dowels
66	8"	0	Bars under Bridge Seat
6	24"	X	Longitudinals
12	16"	0	"

Slabs See Drg. D-4367

Every bar is to be a deformed bar with effective section equivalent to that of a square with side equal to size given.

All bars may, overruled, be length not to exceed two inches.

Bars marked "X" may be applied.

Splices of bars must lap 24"

**GENERAL NOTES**

Location: Deerfield Avenue Crossing - just south of depot - Deerfield, Illinois.

Drawing No. of Survey: D-3762

Block Mark: Door S/U, E.B. Bleimehl Saloon - 200' South of Depot - Elev. 100.00.

Proposed Base of Rail: Elev. 101.87 at Sta. 97+50.89

Grade: Level

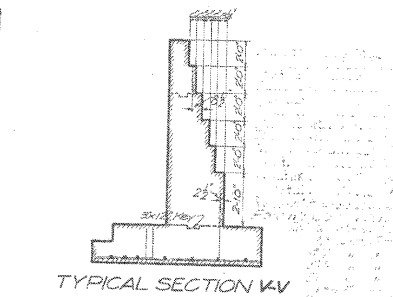
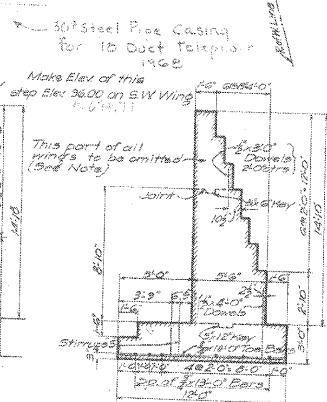
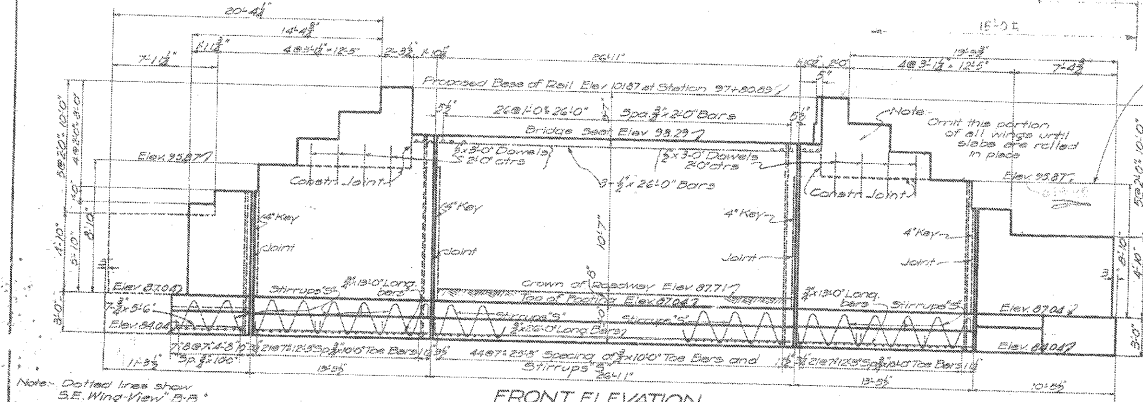
Alignment: Tangent

Bearing on Soil: 125 tons per sq. ft.

Foundation: See Drawing No. D-4377.

For Details of Slabs see Drawing No. D-4367.

Station 97+82.0 at intersection of E. of St. and gauge line North Rail of E.B. Track.



**CONSTRUCTION NOTES**

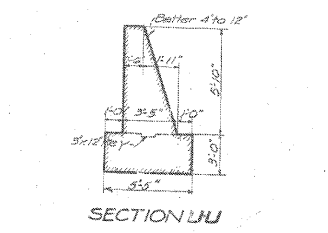
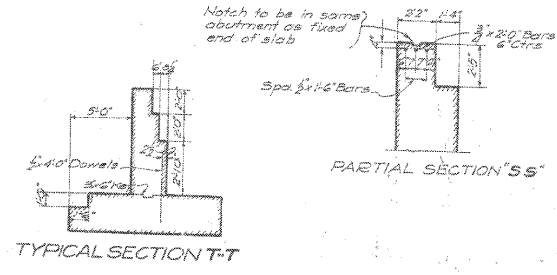
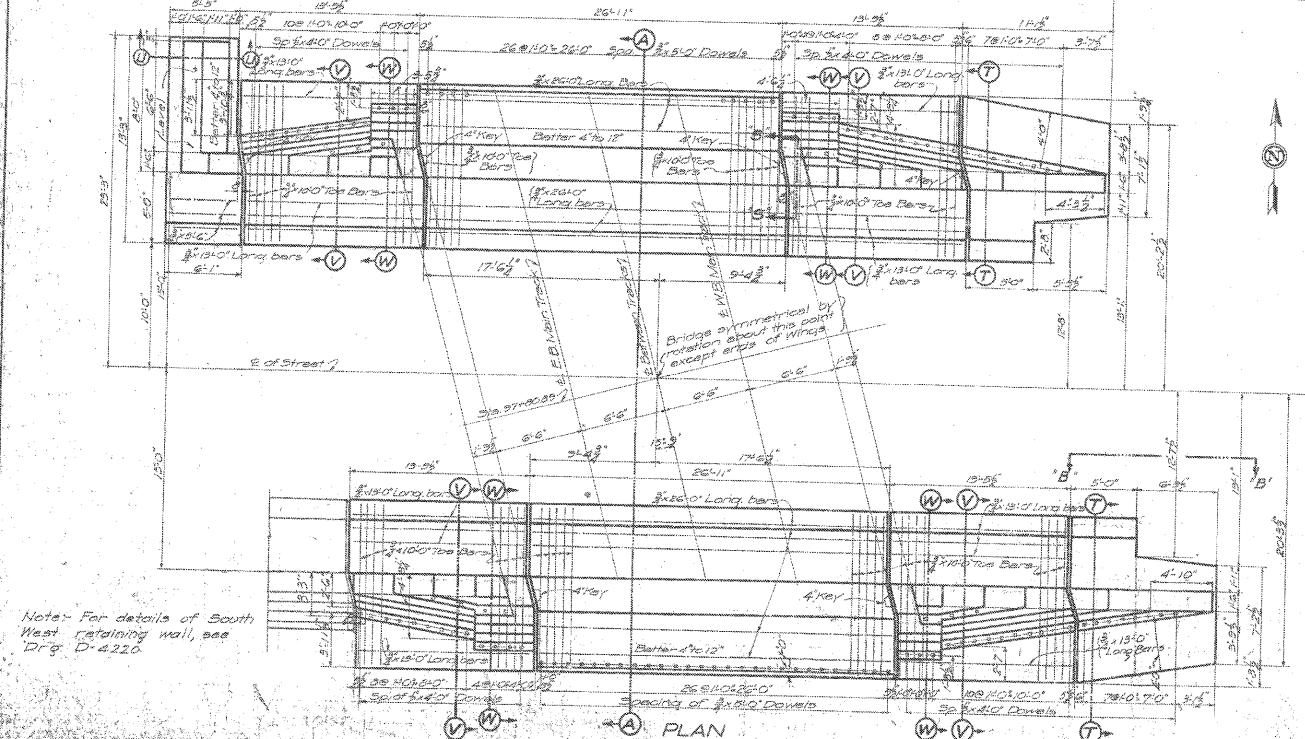
Footings: No horizontal joints. No vertical joints except as shown.

Newwork: No vertical or horizontal joints except as shown.

All projecting edges and vertical joints which will be visible after fill to be made are to be finished with 1" V strips.

Foundations may be altered by Eng-in-Charge.

CONCRETE		
Mixture	1:2:4	1:3:3
Abutments	Footings	5%
	Newwork	5%
Hinge & Ret. Wall	Footings	10%
	Newwork	10%
Slabs and Parapets	5%	5%
Total	22%	47%
Grand Total	56%	64%



Order	Officer	Initials
1	ENGR. M.C.C.	
2	E.S.M.	
3	Chief Engineer	

**C.M. & ST. PRY.**  
ENGINEERING DEPARTMENT  
A-118<sup>3</sup> DEERFIELD AVENUE SUBWAY  
Deerfield, Illinois.  
NEATWORK AND FOOTINGS  
Chicago Nov. 7, 1913. Drawing No. D-4366  
Corrected Approved:

Note: For details of South West retaining wall, see Drg. D-4226.

FOR INFORMATION ONLY  
STRUCTURE NO. 049-6159

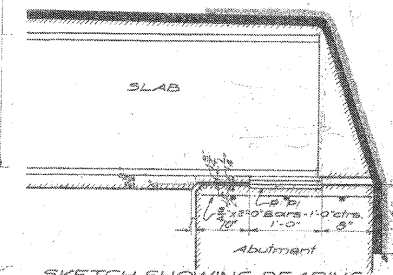
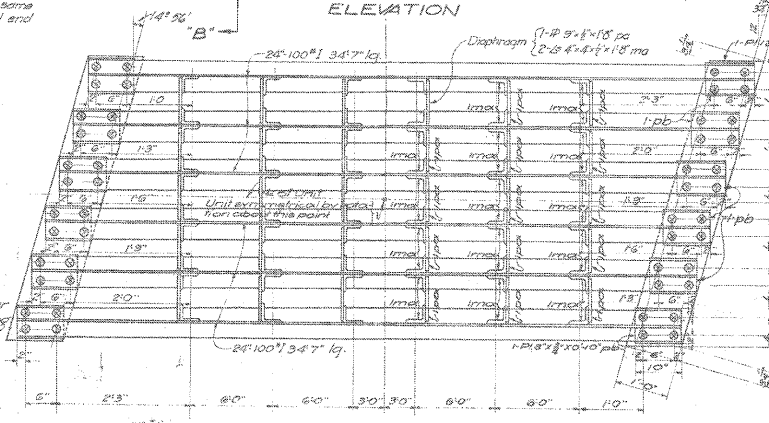
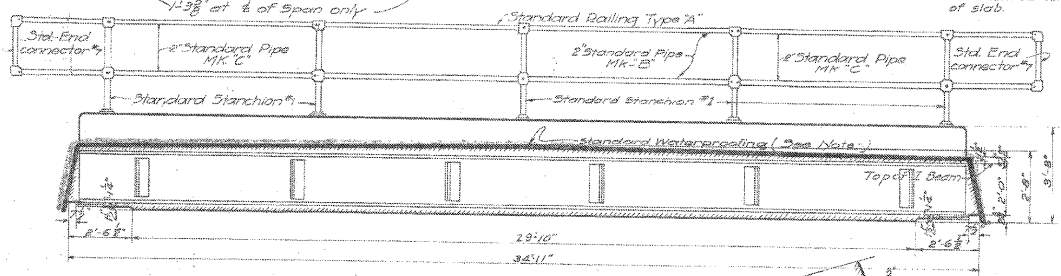
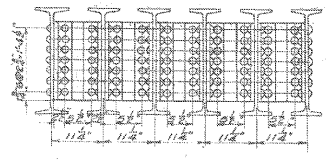
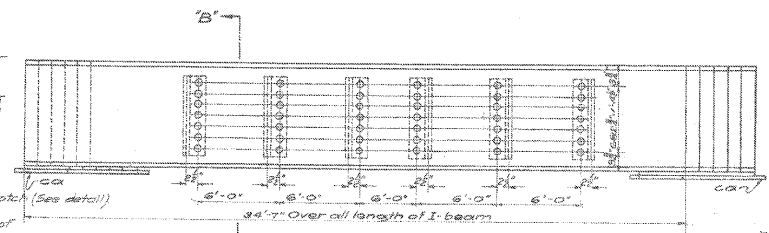
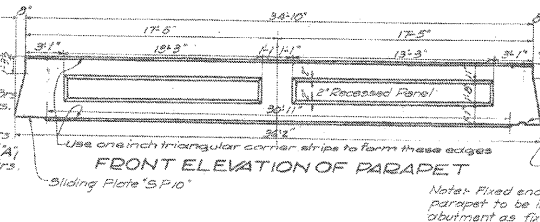
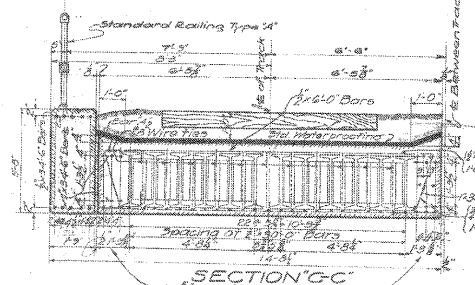
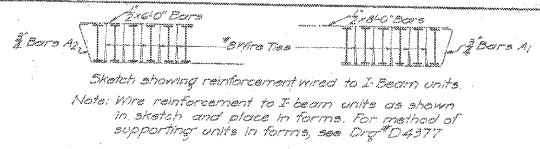
SHEET NO.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-23	1257	08-00083-00-BT	LAKE	51	43
S-25		SN 049-6159			
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

Revised 10/29/14  
11/20/14  
ACC.  
C.C.C.

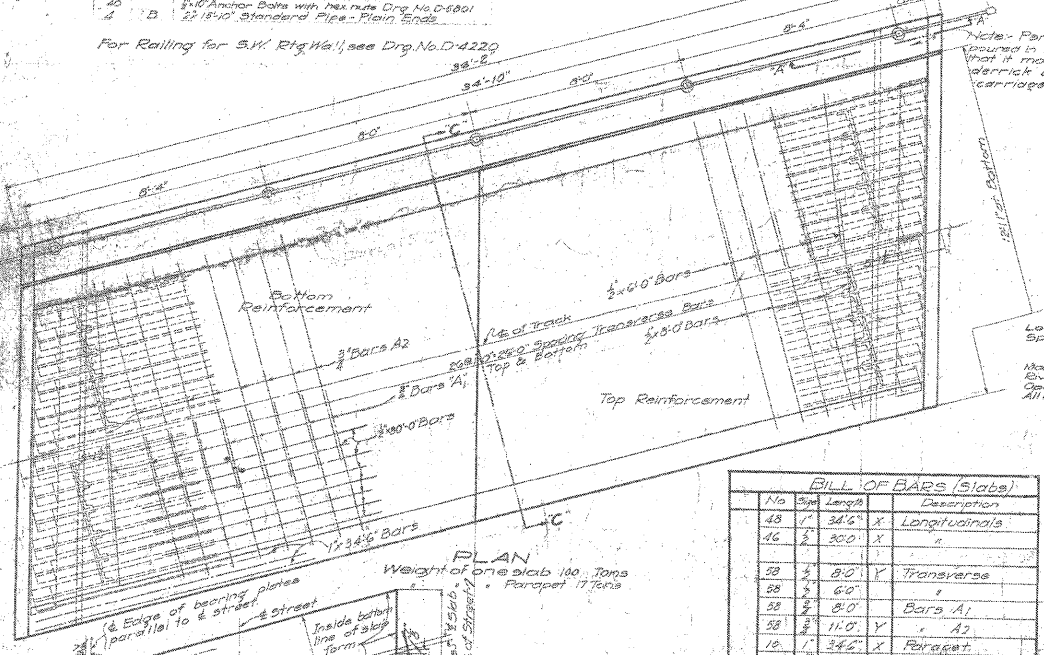
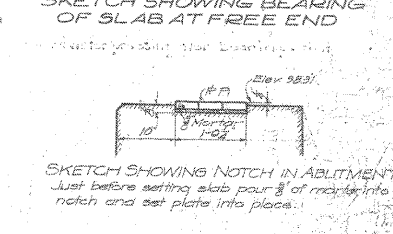
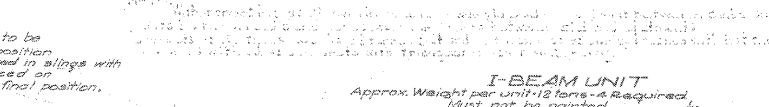
Note: At each intersection of Lower bars they are to be wired to upper transverse bars with wire, making ties at 10-cfs. on each long bottom bar. See Sketch.



**BILL OF MATERIAL FOR RAILING**

No.	Material	Description
10	#1	Main structure - Dwg. No. D-5000
4	#7	End connectors
8	#1	Standard pipe - Plain Ends
32	#10	Standard pipe - Plain Ends
20	#10	Standard pipe - Plain Ends
4	#10	Standard pipe - Plain Ends

For Railing for S.W. Rtg. Wall, see Drg. No. D-4220

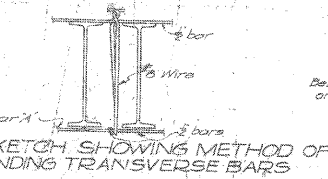


**BILL OF BARS (Slabs)**

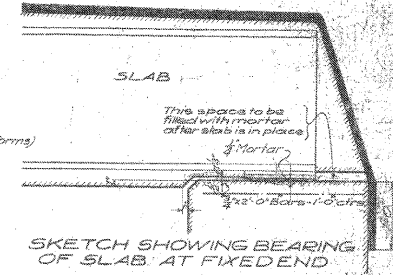
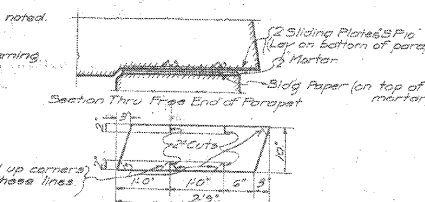
No.	Size	Length	Description
48	7	34'-6"	Longitudinals
46	8	8'-0"	"
28	8	8'-0"	Transverse
88	8	6'-0"	"
88	8	6'-0"	Bars A1
88	8	11'-0"	Bars A2
18	7	34'-6"	Parapet
10	8	34'-6"	"

**GENERAL STEEL NOTES**

Loading: 12-55 with boiler floor. Impact 50%  
Specifications: C.M. & S.P. By Engineering Department  
For Design: March 1912  
For Material: same relationship July 1911, except point as noted.  
Material: Steel  
Bolts: 5/8" diameter  
Open holes: 1/2" diameter except as noted.  
All holes shall be punched. The diameter shall be punched & reaming.  
Not required.



Note: Holes may be punched out with 1/2" punch a left unfinished. Plate must be carefully straightened after punching.



Note: For Details of Waterproofing see Drg. D-5000. Engr. in charge to determine necessity for waterproofing.

AFE 2358

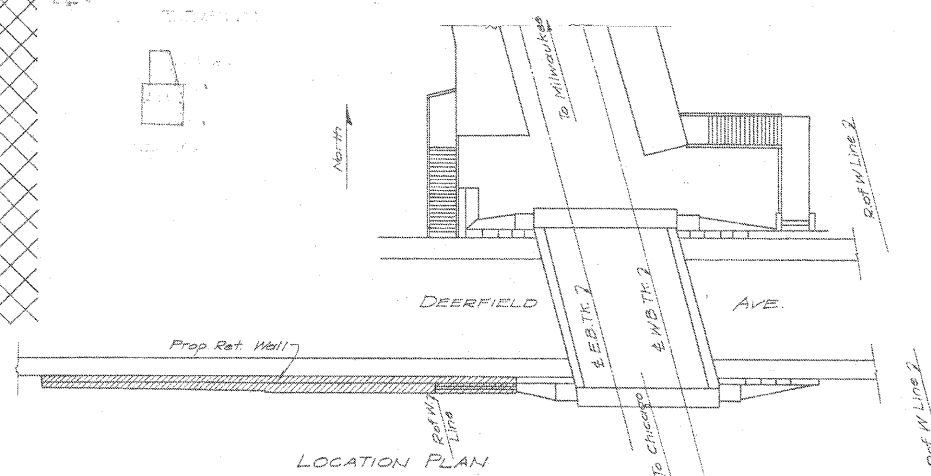
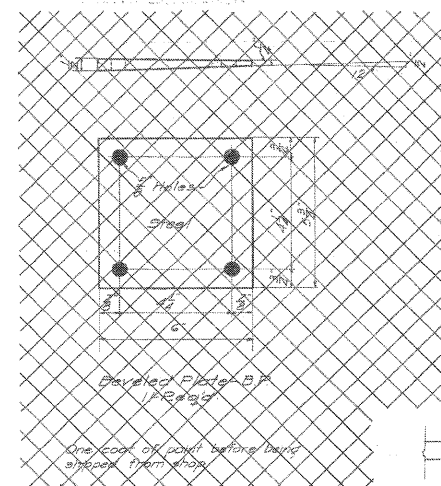
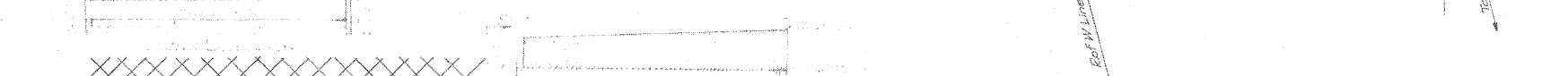
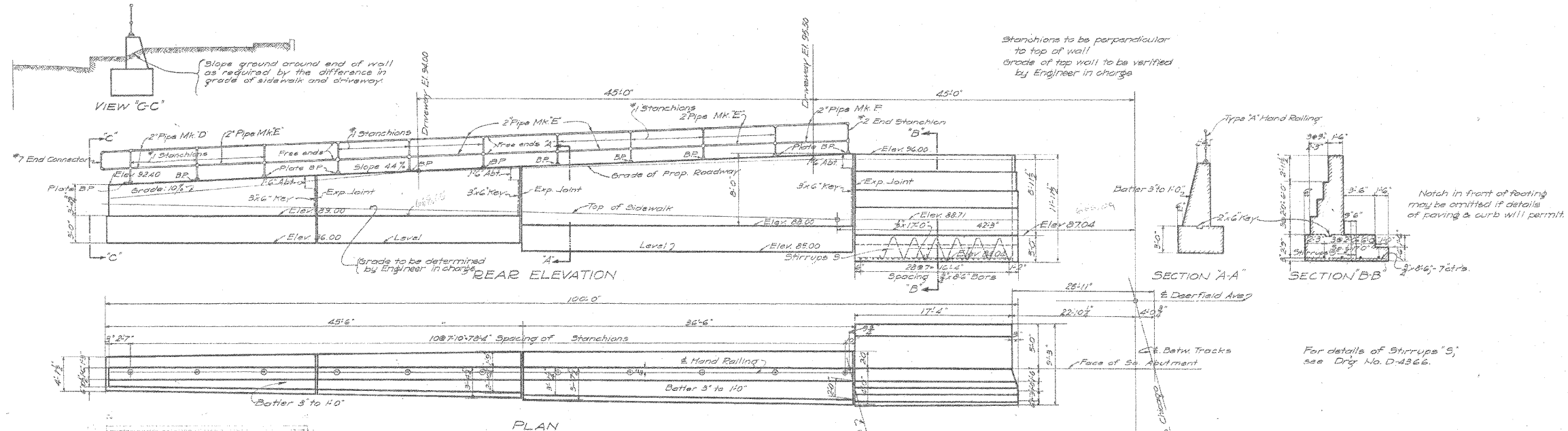
**C.M. & S.P.R.Y.**  
ENGINEERING DEPARTMENT  
A-118 3/4 DEERFIELD AVENUE, SUBWAY  
Deerfield, Ill.  
SLAB DETAILS  
Chicago, Aug. 9, 1913  
Contract No. 049-6159

FOR INFORMATION ONLY  
STRUCTURE NO. 049-6159

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-24	1257	08-00083-00-BT	LAKE	51	44
SHEETS	SN 049-6159		CONTRACT NO. 63450		
S-25	FED. ROAD DIST. NO. 1 ILLINOIS		FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



BILL OF MATERIAL FOR HAND RAILING		
No.	Mark	Description
2	D	2x14" Standard Pipe, Plain ends
8	E	2x18 1/2" Standard Pipe, Plain ends
2	F	2x7 7/8" Standard Pipe, Plain ends
10	"1	Main Stanchions" Drg. D-5800
1	"7	End Connector, Drg. D-5800
38		3/8 x 3/8 Soft Steel Rivets
44		3/4 x 10" Anchor Bolts, Hex. Nuts Drg. D-5801
1	"2	End Stanchion Drg. D-5800

For Railing for Slab see Drg. D-4367.

5 of 5  
A. 56  
P. 23

A.F.E. 2356

**C.M. & ST. R.R.Y.**  
ENGINEERING DEPARTMENT

**A-118 2** DEERFIELD AVE SUBWAY  
Dearfield, Illinois

**SOUTH WEST RETAINING WALL**

Chicago, Nov. 27, 1914  
Corrected

Chicago, Nov. 27, 1914  
Corrected

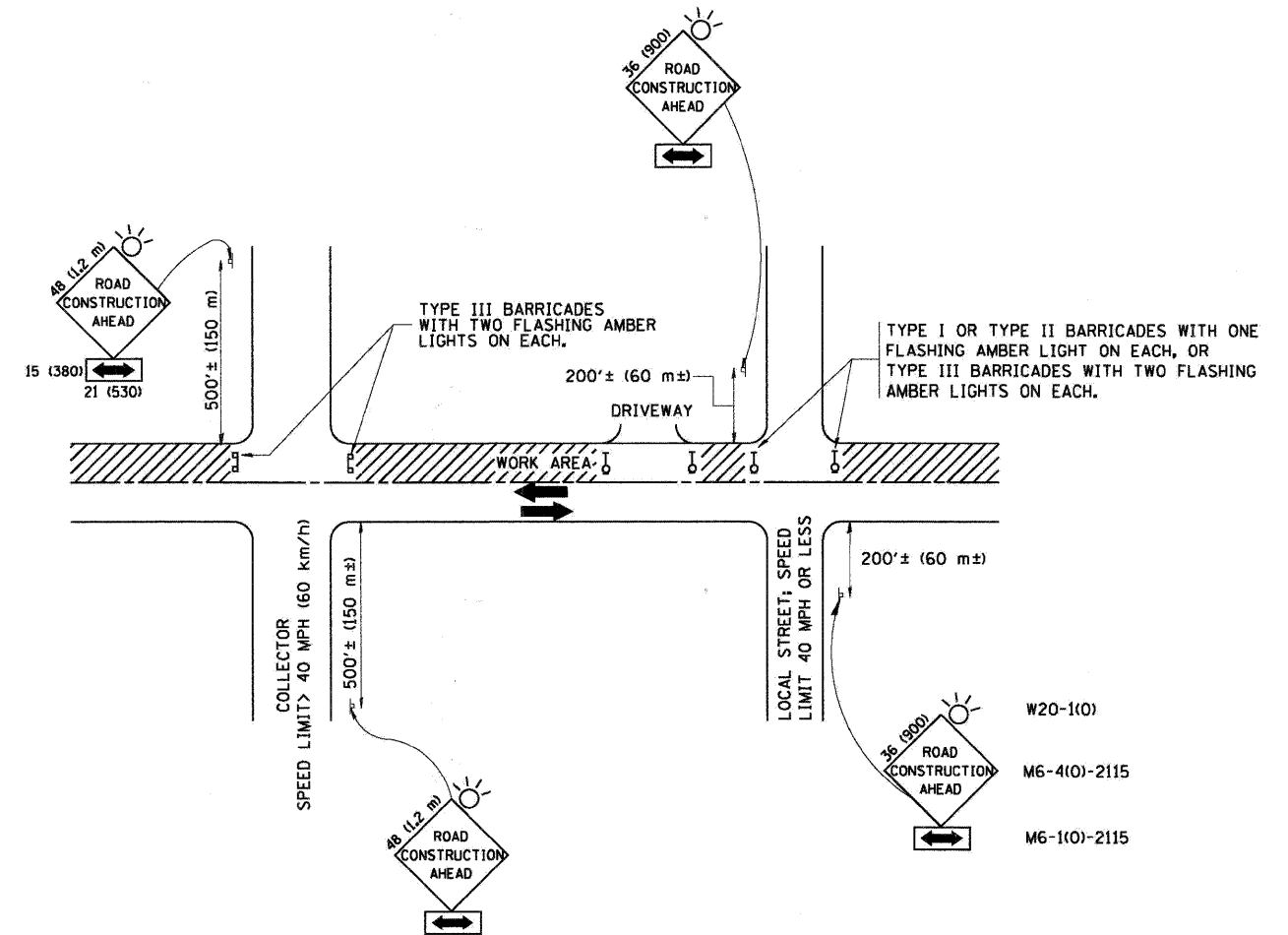
Approved: *[Signature]*  
Chief Engineer

Eng. of Design

FOR INFORMATION ONLY  
STRUCTURE NO. 049-6159

**McDonough Associates Inc.**  
Engineers / Architects  
130 East Randolph Street Chicago, Illinois 60601

SHEET NO. S-25 SHEETS S-25	F.A.U. RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 45
	SN 049-6159		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS:
  1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

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		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

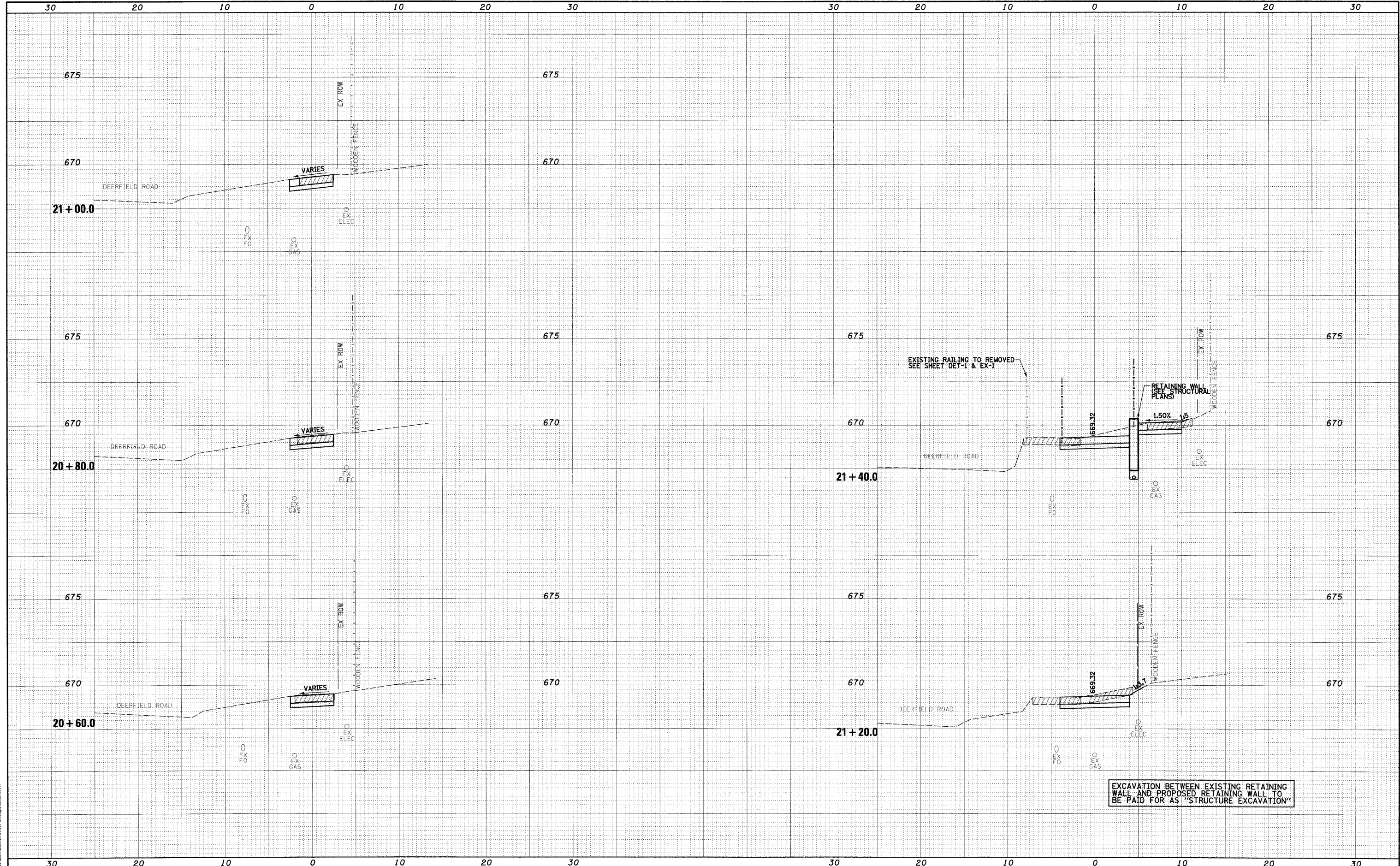
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	1257	08-00083-00-BT	LAKE	51	46
STA. TO STA.		TC-10		CONTRACT NO. 63450		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						

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

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

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 198 East Randolph Street, Chicago, Illinois 60601

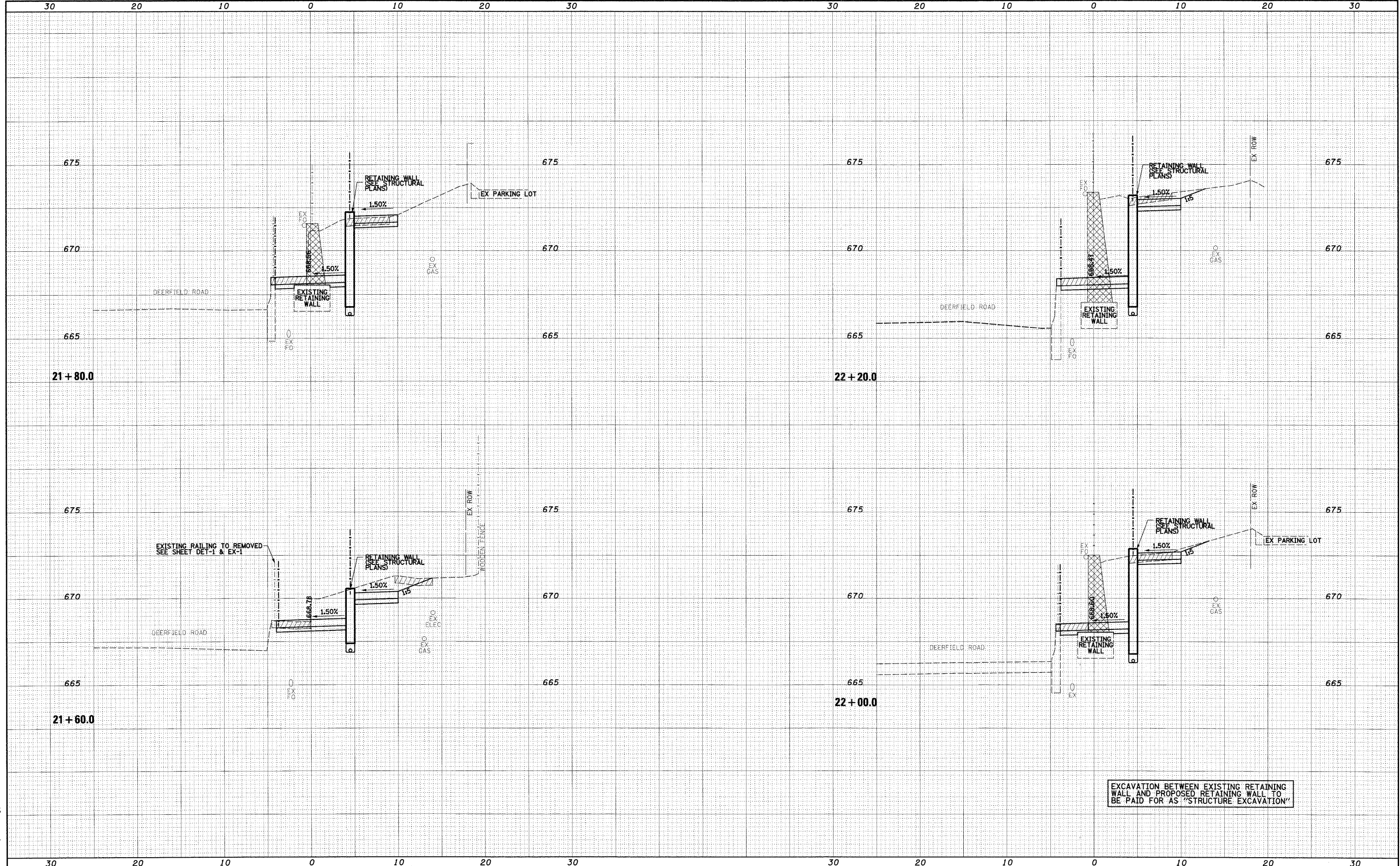


FILE NAME = 01-sht-xsc.dgn	USER NAME = JMiddlet	DESIGNED - JWM	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>DEERFIELD PEDESTRIAN UNDERPASS</b> SCALE: 1"=5'H; 1"=1'V    SHEET NO.    OF 5 SHEETS    STA. 20+60.0 TO STA. 21+40.0	FAU RTE. 1257	SECTION 08-00083-00-BT	COUNTY LAKE	TOTAL SHEETS 51	SHEET NO. 47	
PLOT SCALE = 1:60	PLOT DATE = 4/13/2010	CHECKED - RY	REVISED -			CONTRACT NO. 63450					
PLOT DATE = 4/13/2010	DATE - 04/09/10	REVISED -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					

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

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

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Engineers & Architects  
190 East Randolph Street, Chicago, Illinois 60601

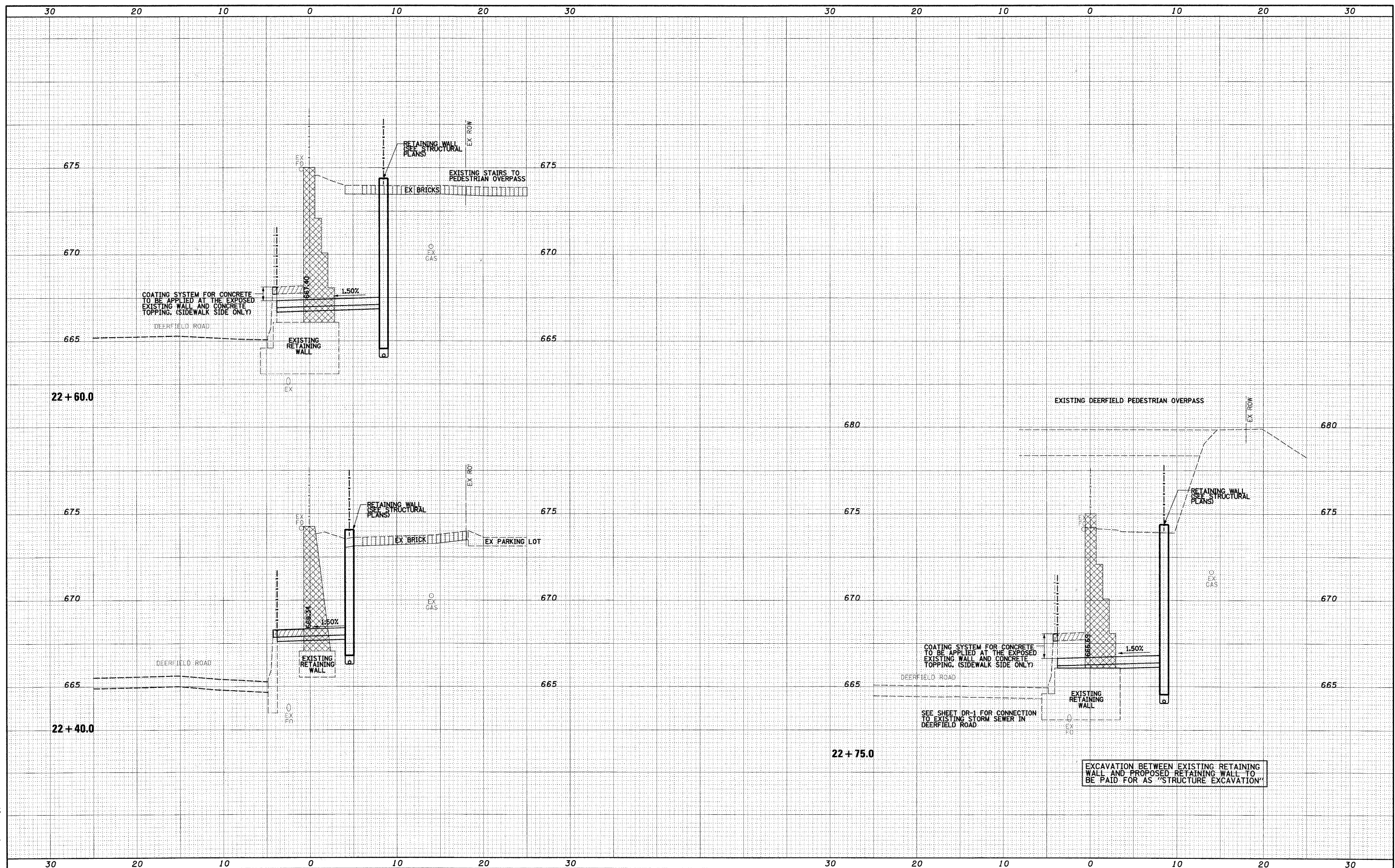


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D1-sht-xec.dgn		DRAWN - JWM	REVISED -			1257	08-00083-00-BT	LAKE	51	48	
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PLOT DATE = 4/13/2010		DATE - 04/09/10	REVISED -			FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT					



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

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



EXCAVATION BETWEEN EXISTING RETAINING WALL AND PROPOSED RETAINING WALL TO BE PAID FOR AS 'STRUCTURE EXCAVATION'

FILE NAME =  
DI-sht-xsc.dgn

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PLOT SCALE = 1:600	DRAWN - JWM	REVISED -
PLOT DATE = 4/13/2010	CHECKED - RY	REVISED -
	DATE - 04/09/10	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

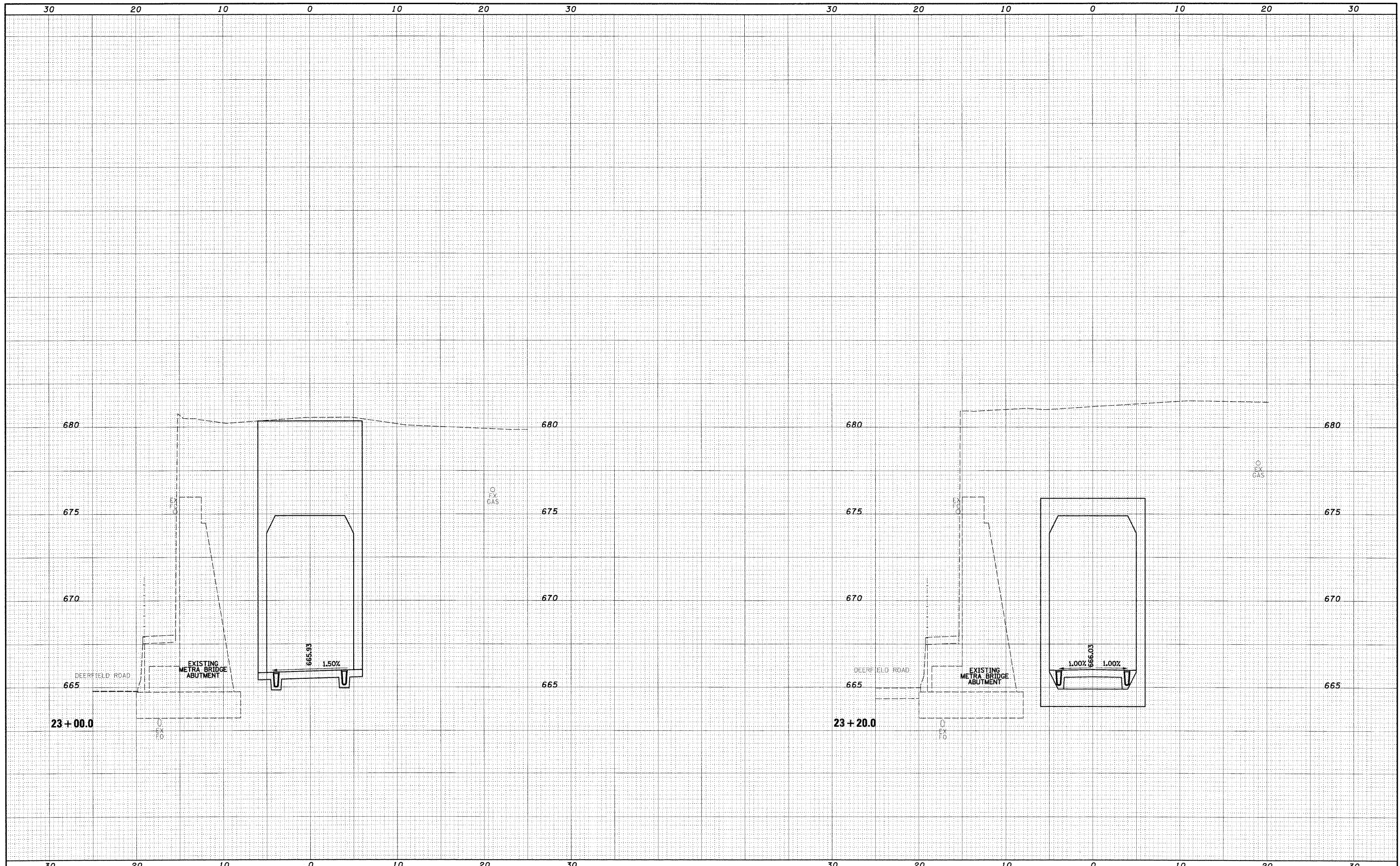
**DEERFIELD PEDESTRIAN UNDERPASS**  
SCALE: 1"=5'H; 1"=1'V SHEET NO. OF 5 SHEETS STA. 22+40.0 TO STA. 22+75.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	49
FED. ROAD DIST. NO. 1				ILLINOIS FED. AID PROJECT
CONTRACT NO. 63450				

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

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

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130 East Randolph Street Chicago, Illinois 60601



FILE NAME = 01-sh-t-xao.dgn

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 PLOT SCALE = 1:600  
 PLOT DATE = 4/13/2010

DESIGNED - JWM  
 DRAWN - JWM  
 CHECKED - RY  
 DATE - 04/09/10

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEERFIELD PEDESTRIAN UNDERPASS

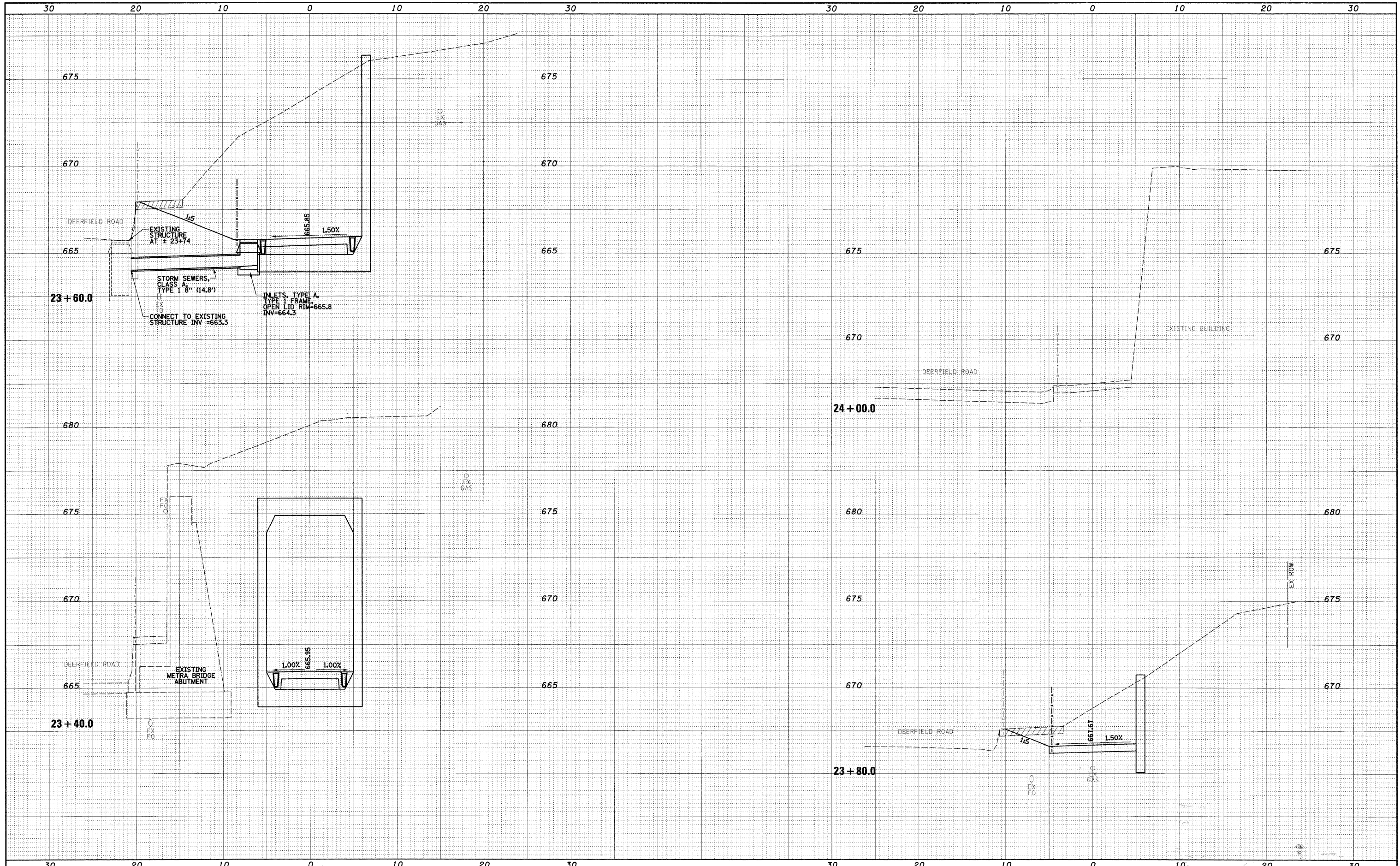
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	50
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	

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

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

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Engineers / Architects  
180 East Randolph Street Chicago, Illinois 60601



FILE NAME = 01-sh1-xso.dgn  
USER NAME = JMcclat  
DESIGNED - JWM  
DRAWN - JWM  
CHECKED - RY  
DATE - 04/09/10  
PLOT SCALE = 1:600  
PLOT DATE = 4/13/2010

REVISIONS  
REVISOR -  
DATE -  
REVISIONS  
REVISOR -  
DATE -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DEERFIELD PEDESTRIAN UNDERPASS

SCALE: 1"=5'H; 1"=1'V SHEET NO. OF 5 SHEETS STA. 23+40.0 TO STA. 24+00.0

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	08-00083-00-BT	LAKE	51	51
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63450	