

INDEX OF SHEETS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT LOCATED IN CITY OF NAPERVILLE

DESIGN DESIGNATION

	ADT (2005)	POSTED SPEED	DESIGN SPEED
BAILEY ROAD (URBAN-LOCAL STREET)	11,375	30 MPH	35 MPH
	ADT (2030)		
	12,000		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID LOCAL AGENCY IMPROVEMENT

FAU ROUTE 1545 (BAILEY ROAD)
OVER WEST BRANCH DuPAGE RIVER

CITY OF NAPERVILLE

SECTION 00-00115-00-BR

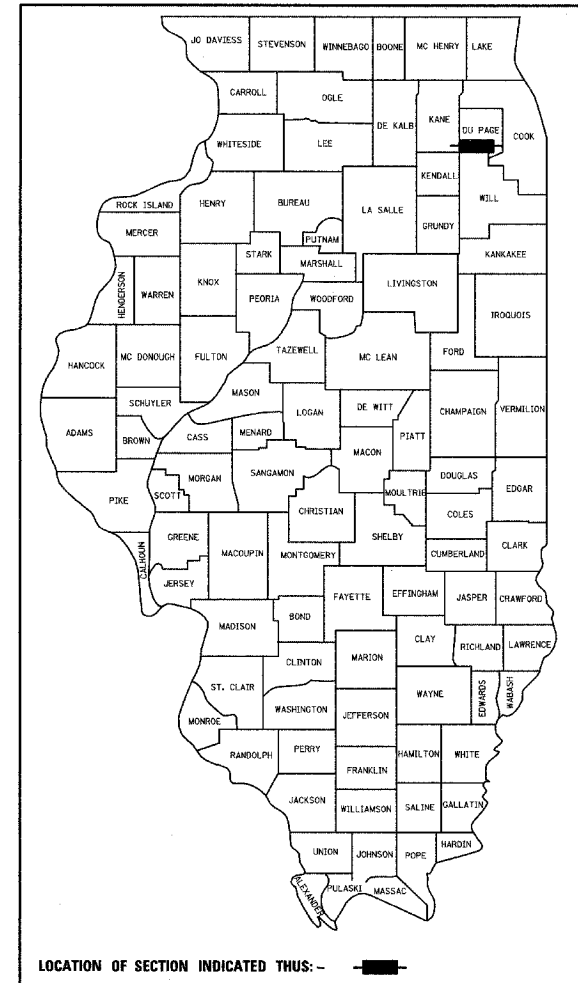
PROJECT NO.: BHM-8003 (343)

BRIDGE REPLACEMENT

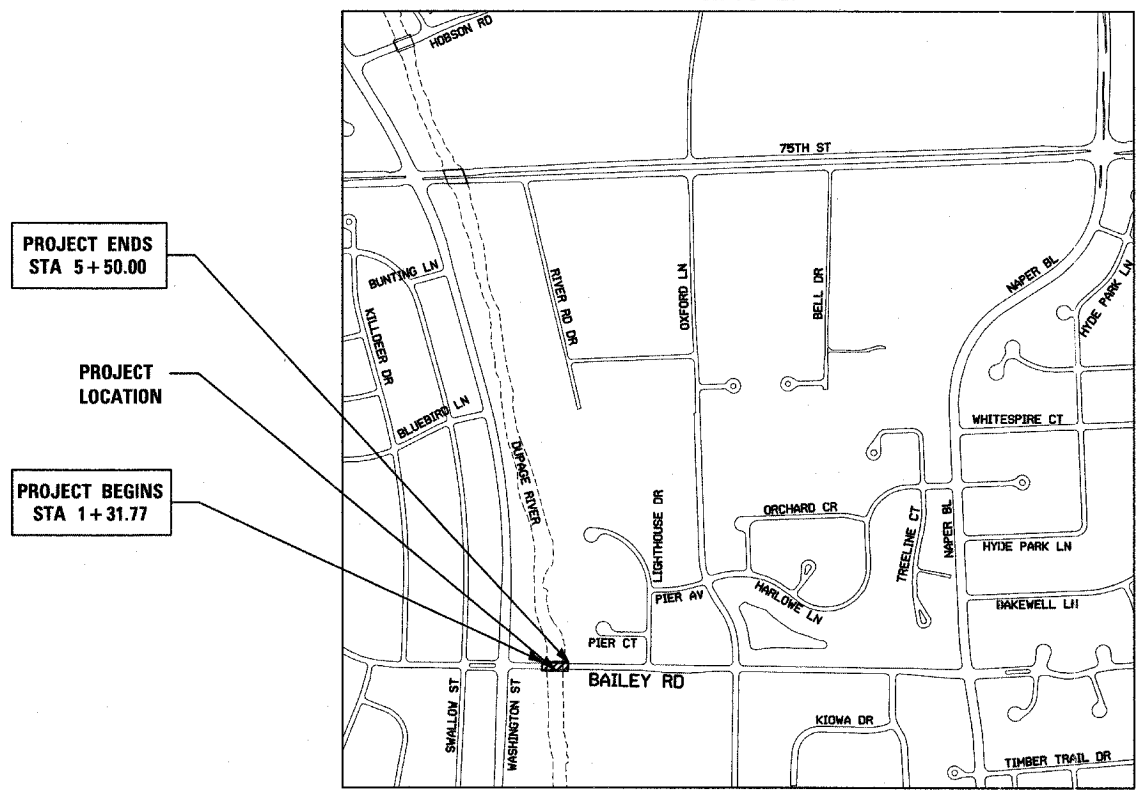
DuPAGE COUNTY

JOB NO: C-91-062-04

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00 BR	DUPAGE	97	1
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961	



R. 10 E.



PROJECT ENDS
STA 5+50.00

PROJECT LOCATION

PROJECT BEGINS
STA 1+31.77

BAILEY ROAD OVER WEST BRANCH OF DuPAGE RIVER
STRUCTURE NO. 022-3028 (STA. 2+99.15)
REMOVE EXISTING 3-SPAN PPC DECK BEAM SUPERSTRUCTURE AND CONSTRUCT 3-SPAN CONTINUOUS STEEL WF BEAM SUPERSTRUCTURE. SUBSTRUCTURE IS TO BE WIDENED.

CITY OF NAPERVILLE

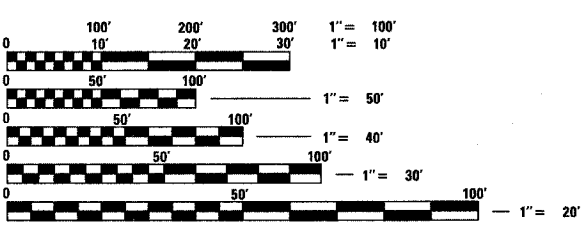
APPROVED July 5 20 07
William J. [Signature]
CITY ENGINEER

PASSED July 17 20 07
C. Holt CHRISTOPHER HOLT
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID
BASED ON LIMITED
REVIEW July 17 20 07
Diane O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

Signed [Signature]
Spiros Pantazis, P.E., Il. Lic. No. 062-054027
Expires 11-30-2007
Date July 12, 2007

Signed [Signature]
Daniel Gacek, P.E., Il. Lic. No. 062-048355
Expires 11-30-2007
Date July 5, 2007



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

CONTRACT NO. 83961

NOT TO SCALE
LISLE TOWNSHIP
GROSS LENGTH OF PROJECT = 419 FT. = 0.08 MI.
NET LENGTH OF PROJECT = 419 FT. = 0.08 MI.


TYLIN INTERNATIONAL
PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

ASSOCIATE FIELD ENGINEER: JESSICA FELICIANO (847) 705-4487
CONSULTANT SERVICES ENGINEER: SPIROS PANTAZIS, P.E., S.E. (773) 792-9000

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000-2A	STRUCTURAL X071-2A	CITY OF NAPERVILLE (100% NON-PARTICIPATING)
20100110	TREE REMOVAL (6-15 UNIT DIAMETER)	UNIT	44	44		
20100210	TREE REMOVAL (>15 UNIT DIAMETER)	UNIT	16	16		
20101100	TREE TRUNK PROTECTION	EACH	8	8		
20101200	TREE ROOT PRUNING	EACH	16	1		15
20200200	ROCK EXCAVATION	CU YD	25			25
20200410	EARTH EXCAVATION (SPECIAL)	CU YD	620			620
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	30	30		
20400800	FURNISHED EXCAVATION	CU YD	145	145		
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	148		148	
20800150	TRENCH BACKFILL	CU YD	155	155		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1109	1109		
25000312	SEEDING, CLASS 4A	ACRE	0.25	0.25		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	18	18		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	18	18		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	18	18		
25000920	SEEDING, CLASS 1A (SPECIAL)	ACRE	0.25			0.25
25100630	EROSION CONTROL BLANKET	SQ YD	570	570		
25200110	SODDING, SALT TOLERANT	SQ YD	539	539		
25200200	SUPPLEMENTAL WATERING	UNIT	48	48		
25200700	SODDING, SPECIAL	SQ YD	650			650
25301500	TREES	EACH	10			10
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	25	25		
28000300	TEMPORARY DITCH CHECKS	EACH	3	3		
28000400	PERIMETER EROSION BARRIER	FOOT	24	24		
28000510	INLET FILTERS	EACH	7	7		
28100107	STONE RIPRAP, CLASS A4	SQ YD	28	28		
28101500	RIPRAP, SPECIAL	SQ YD	20			20
28200200	FILTER FABRIC	SQ YD	28	28		
31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	93	93		
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1.1	0.9		0.2
40600300	AGGREGATE (PRIME COAT)	TON	6	5		1
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	116	116		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	264	264		
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	148	148		
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	126	77		49
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	4	1		3
42001300	PROTECTIVE COAT	SQ YD	417	417		
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	335		335	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	847	847		
42400440	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH, SPECIAL	SQ FT	614	614		
42400800	DETECTABLE WARNINGS	SQ FT	44	44		
44000100	PAVEMENT REMOVAL	SQ YD	228	228		
44000158	HOT-MIX ASPHALT SURFACE REMOVAL 2 1/4"	SQ YD	387			387
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	622	622		
44000600	SIDEWALK REMOVAL	SQ FT	1718	1718		
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	584	64		520
44004610	SIDEWALK REMOVAL AND REPLACEMENT (SPECIAL)	SQ FT	2400			2400
44200998	CLASS B PATCHES, TYPE III, 12 INCH	SQ YD	20			20
44201000	CLASS B PATCHES, TYPE IV, 12 INCH	SQ YD	25			25
44201785	CLASS D PATCHES, TYPE I, 12 INCH	SQ YD	131	131		
44201794	CLASS D PATCHES, TYPE III, 12 INCH	SQ YD	20			20
44201796	CLASS D PATCHES, TYPE IV, 12 INCH	SQ YD	35			35
50101600	REMOVAL OF EXISTING SUPERSTRUCTURES	L SUM	1		1	
50102400	CONCRETE REMOVAL	CU YD	111.0		111.0	
50200100	STRUCTURE EXCAVATION	CU YD	299		299	
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	13		13	
50300225	CONCRETE STRUCTURES	CU YD	182.3	0.4	181.9	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	190.9		190.9	
50300260	BRIDGE DECK GROOVING	SQ YD	400		400	
50300280	CONCRETE ENCASEMENT	CU YD	115			115
50300300	PROTECTIVE COAT	SQ YD	1147		1147	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	3129		3129	
50800105	REINFORCEMENT BARS	POUND	5280		5280	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	78340	30	78310	


• - SPECIALTY ITEM

REVISIONS NAME DATE		BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER SUMMARY OF QUANTITIES (1 OF 3)	City of  Naperville
CONSULTANT TYLIN INTERNATIONAL			
DRAWN: RTM CHECKED: SP APPROVED: DATE: JULY 13, 2007 SCALE: NONE		SHEET NO. <div style="text-align: center; font-size: 2em; font-weight: bold;">3</div>	
JOB NO.: C-91-062-04		PROJECT NO.: BHM-8003(343)	

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000-2A	STRUCTURAL X071-2A	CITY OF NAPERVILLE (100% NON-PARTICIPATING)
50800515	BAR SPLICERS	EACH	186		186	
50900105	ALUMINUM RAILING, TYPE L	FOOT	154		154	
50901720	BICYCLE RAILING	FOOT	158.7	16.4	142.3	
50901750	PARAPET RAILING	FOOT	150		150	
51300205	TEMPORARY BRIDGE COMPLETE NO. 1	EACH	1		1	
51500100	NAME PLATES	EACH	1		1	
51602000	PERMANENT CASING	FOOT	82		82	
51603000	DRILLED SHAFT IN SOIL	CU YD	14.8		14.8	
51604000	DRILLED SHAFT IN ROCK	CU YD	1.5		1.5	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	114		114	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	14		14	
52100520	ANCHOR BOLTS, 1"	EACH	56		56	
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTION 12"	EACH	1	1		
550A0340	STORM SEWERS, CLASS A, TYPE 2, 12"	FOOT	282	282		
55100500	STORM SEWER REMOVAL 12"	FOOT	26	26		
55100700	STORM SEWER REMOVAL 15"	FOOT	5	5		
58700200	BRIDGE SEAT SEALER	SQ FT	200		200	
58700300	CONCRETE SEALER	SQ FT	1317		1317	
59000200	EPOXY CRACK INJECTION	FOOT	205		205	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	116		116	
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	30			30
60200105	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, OPEN LID	EACH	1	1		
60201105	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 11 FRAME AND GRATE	EACH	6	6		
60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1		
60250200	CATCH BASINS TO BE ADJUSTED	EACH	4	4		
60255500	MANHOLES TO BE ADJUSTED	EACH	1	1		
60500060	REMOVING INLETS	EACH	1	1		
60604200	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (SPECIAL)	FOOT	458.5	458.5		
60609500	COMBINATION CONCRETE CURB AND GUTTER, TYPE M-6.12 (SPECIAL)	FOOT	61.0	61.0		
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1	1		
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	1	1		
66410300	CHAIN LINK FENCE REMOVAL	FOOT	25	25		
66411900	TEMPORARY FENCE	FOOT	387	387		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10		10	
67100100	MOBILIZATION	L SUM	1		0.8	0.2
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1		0.6	0.4
70102550	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	EACH	1	1		
70104490	TRAFFIC CONTROL AND PROTECTION (SPECIAL), LOCATION 1	EACH	2	1		1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	20	20		
70300220	TEMPORARY PAVEMENT MARKING LINE - 4"	FOOT	3663	3663		
70300240	TEMPORARY PAVEMENT MARKING LINE - 6"	FOOT	96	96		
70300260	TEMPORARY PAVEMENT MARKING LINE - 12"	FOOT	3	3		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1272	1272		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	400	400		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	725	725		
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTER AND SYMBOLS	SQ FT	74	37		37
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	654	501		153
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	238	160		78
78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	26			26
78003110	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 4"	FOOT	336	336		
78003130	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - LINE 6"	FOOT	30	30		
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	20	20		
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	6	6		
78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	22	22		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	460	460		
81012800	CONDUIT IN TRENCH, 3" DIA., PVC	FOOT	1080			1080
81013100	CONDUIT IN TRENCH, 5" DIA., PVC	FOOT	1720			1720
81013200	CONDUIT IN TRENCH, 6" DIA., PVC	FOOT	9420			9420
87900100	DRILL EXISTING FOUNDATION	EACH	1			1
X0322102	TEMPORARY SIDEWALK RAMP	EACH	2	2		
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	450	450		
X0322671	STABILIZED CONSTRUCTION ENTRANCE	SQ YD	90	90		
X0322923	SEGMENTAL CONCRETE BLOCK WALLS	SQ FT	190		30	160
X0323080	DRAINAGE SCUPPERS, DS-12	EACH	12		12	
X0323426	SEDIMENT CONTROL, DRAINAGE STRUCTURE INLET FILTER CLEANING	EACH	14	14		

* - SPECIALTY ITEM


<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	REVISIONS		NAME	DATE																							BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER SUMMARY OF QUANTITIES (2 OF 3)		City of  Naperville
	REVISIONS																												
NAME	DATE																												
CONSULTANT TYLIN INTERNATIONAL	DRAWN: RTM CHECKED: SP APPROVED: DATE: JULY 13, 2007 SCALE: NONE JOB NO.: C-91-062-04	SHEET NO. <div align="center" style="font-size: 2em; font-weight: bold;">4</div> PROJECT NO.: BHM-8003(343)																											

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY 1000-2A	STRUCTURAL X071-2A	CITY OF NAPERVILLE (100% NON-PARTICIPATING)
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	933		933	
X0324973	REMOVE AND REPLACE BITUMINOUS SURFACE, SPECIAL	SQ FT	6360			6360
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	28		28	
X0329891	SILT CURTAIN	SQ YD	76	76		
X4021000	TEMPORARY ACCESS (PRIVATE ENTRANCE)	EACH	3	1		2
X4022000	TEMPORARY ACCESS (COMMERCIAL ENTRANCE)	EACH	4	1		3
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1	
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1		1	
XX000372	TEMPORARY AGGREGATE	TON	71	71		
XX000504	RESTORATION WORK	L SUM	1			1
XX003435	PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	250	85		165
XX004102	CONCRETE RIPRAP REMOVAL	SQ YD	14	14		
XX004238	BITUMINOUS DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	250			250
XX004804	CONDUIT IN TRENCH, TRANSITION	EACH	2			2
XX004809	UNDER BRIDGE CONDUIT SYSTEM	L SUM	1			1
XX005581	VIDEO TAPE	UNIT	1			1
XX005593	NEW SWITCH GEAR VAULT	EACH	4			4
XX005594	FA-2 ENCASEMENT	CU YD	200			200
XX005595	TRENCH BACKFILL, CA-6	CU YD	320			320
XX005596	CONNECTING TO EXISTING SWITCHGEAR VAULTS OR FUSE CANS	EACH	1			1
XX005597	ROD AND MANDREL	FOOT	12100			12100
XX005598	ADDITIONAL GROUND ROD INSTALLATION	EACH	5			5
XX005599	PULLING ROPE AND DETECTABLE MULE TAPE	FOOT	7000			7000
XX005600	COUNTERPOISE, UNPAVED	FOOT	250			250
XX005601	COUNTERPOISE, PAVED	FOOT	30			30
XX005602	HAND DIGGING, 0 FT TO 5 FT IN PAVEMENT	CU YD	20			20
XX005603	HAND DIGGING, 5 FT TO 20 FT IN PAVEMENT	CU YD	10			10
XX005604	HAND DIGGING, 0 FT TO 5 FT IN UNPAVED AREAS	CU YD	45			45
XX005605	HAND DIGGING, 5 FT TO 20 FT IN UNPAVED AREAS	CU YD	20			20
XX005612	HANDHOLE, DEH8	EACH	4			4
XX006223	PERIMETER EROSION BARRIER, MODIFIED	FOOT	830	830		
XX006444	MULCH, SPECIAL	ACRE	0.25			0.25
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	120		120	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1		0.8	0.2
Z0030020	IMPACT ATTENUATORS, (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	1	1		
Z0030255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2	2		
Z0030320	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 2	EACH	2	2		
Z0053700	RESETTING SURVEY MONUMENTS	EACH	1		1	
Z0076600	TRAINEES	HOUR	1,000	1,000		
X007052	CONDUIT RISER ASSEMBLY - 5 INCH	EACH	1			1
X007053	CONDUIT RISER ASSEMBLY - 6 INCH	EACH	2			2
X007054	HANDHOLE, DEH5	EACH	2			2
X007055	HANDHOLE, DEH6	EACH	3			3

Δ Y080

• - SPECIALTY ITEM

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	REVISIONS												
	NAME	DATE											
DRAWN: RTM	SHEET NO.												
CHECKED: SP	5												
APPROVED:													
DATE: JULY 13, 2007													
SCALE: NONE	PROJECT NO.: BHM-8003(343)												
CONSULTANT	TYLIN INTERNATIONAL		JOB NO.: C-91-062-04										

TREE REMOVAL

LOCATION			TREE REMOV 6-15 (UNIT)	TREE REMOV >15 (UNIT)
ALIGNMENT	STATION	OFFSET		
BAILEY	3+69.2	41.9 LT	8	
BAILEY	3+75.9	50.0 LT	10	
BAILEY	3+75.9	50.0 LT	8	
BAILEY	3+75.9	50.0 LT	6	
BAILEY	4+40.4	21.3 LT	12	
BAILEY	3+78.4	50.9 LT		16
TOTAL			44	16

COMBINATION CONCRETE CURB AND GUTTER REMOVAL & REPLACEMENT

DESCRIPTION OF EXISTING LOCATION	FROM			TO			COMB CURB GUTTER REM & REP (FOOT)
	ALIGNMENT	STATION	OFFSET	ALIGNMENT	STATION	OFFSET	
DRIVEWAY (NORTH SIDE OF BAILEY)	BAILEY	1+31.3	17.5 LT	BAILEY	1+47.4	40.1 LT	32
DRIVEWAY (NORTH SIDE OF BAILEY)	BAILEY	1+82.2	40.1 LT	BAILEY	1+97.3	17.7 LT	32
TOTAL							64

HOT-MIX ASPHALT

LOCATION DESCRIPTION	FROM		TO		HMA SURF MIX D N70 (TON)	LEVEL BINDER MM N70 (TON)	HMA BIND CSE IL-19 N70 (TON)
	ALIGNMENT	STATION	ALIGNMENT	STATION			
RESURFACING WEST OF BRIDGE (CITY FUNDED)	BAILEY	0+33.3	BAILEY	1+31.8	49		
RESURFACING WEST OF BRIDGE	BAILEY	1+31.8	BAILEY	2+15.2	26	39	8
RESURFACING EAST OF BRIDGE	BAILEY	3+83.2	BAILEY	5+50.2	51	77	140
TOTAL					126	116	148

HOT-MIX ASPHALT SURFACE REMOVAL

LOCATION DESCRIPTION	OFFSET DIRECTION	FROM		TO		HMA SURF REM 2 1/4" (SQ YD)	HMA SURF REM BUTT JOINT (SQ YD)
		ALIGNMENT	STATION	ALIGNMENT	STATION		
WASHINGTON TO PROJECT LIMIT	CL	BAILEY	0+33.3	BAILEY	1+31.8	387	
WEST BITUMINOUS TAPER	CL	BAILEY	1+31.8	BAILEY	1+72.0		148
EAST BITUMINOUS TAPER	CL	BAILEY	5+18.0	BAILEY	5+50.0		116
TOTAL						387	264

COMBINATION CONCRETE CURB AND GUTTER REMOVAL

DESCRIPTION OF EXISTING LOCATION	FROM			TO			COMB CURB GUTTER REM (FOOT)
	ALIGNMENT	STATION	OFFSET	ALIGNMENT	STATION	OFFSET	
WEST OF BRIDGE (NORTH)	BAILEY	1+31.3	17.4 LT	BAILEY	2+45.2	18.1 LT	114
WEST OF BRIDGE (SOUTH)	BAILEY	1+31.8	17.6 RT	BAILEY	2+45.2	18.5 RT	114
EAST OF BRIDGE (NORTH)	BAILEY	3+53.2	18.2 LT	BAILEY	5+50.0	17.6 LT	197
EAST OF BRIDGE (SOUTH)	BAILEY	3+53.2	17.8 RT	BAILEY	5+50.0	17.1 RT	197
TOTAL							622

SIDEWALK REMOVAL

LOCATION DESCRIPTION	OFFSET DIRECTION	FROM		TO		SW REMOVAL (SQ FT)
		ALIGNMENT	STATION	ALIGNMENT	STATION	
WEST OF NORTH DWY	LT	BAILEY	1+36.7	BAILEY	1+46.6	50
NW CORNER OF BRIDGE	LT	BAILEY	1+82.8	BAILEY	2+45.2	322
SW CORNER OF BRIDGE	RT	BAILEY	2+01.4	BAILEY	2+45.2	208
SW CORNER OF BRIDGE BIKE PATH	RT	BAILEY	1+92.0	BAILEY	2+20.4	305
SE CORNER OF BRIDGE	RT	BAILEY	3+53.2	BAILEY	4+05.8	262
NE CORNER OF BRIDGE	LT	BAILEY	3+53.2	BAILEY	4+69.1	571
TOTAL						1718

PAVEMENT REMOVAL

LOCATION DESCRIPTION	FROM		TO		PAVEMENT REM (SQ YD)
	ALIGNMENT	STATION	ALIGNMENT	STATION	
WEST BRIDGE APPROACH	BAILEY	2+15.2	BAILEY	2+45.2	115
EAST BRIDGE APPROACH	BAILEY	3+53.2	BAILEY	3+83.2	113
TOTAL					228

DRIVEWAY REMOVAL & REPLACEMENT


LOCATION DESCRIPTION	FROM		TO		PCC DWY REM & REP (SQ YD)
	ALIGNMENT	STATION	ALIGNMENT	STATION	
DWY ON NORTH SIDE OF BAILEY	BAILEY	1+38.1	BAILEY	1+90.5	85
TOTAL					85

COMBINATION CONCRETE CURB AND GUTTER

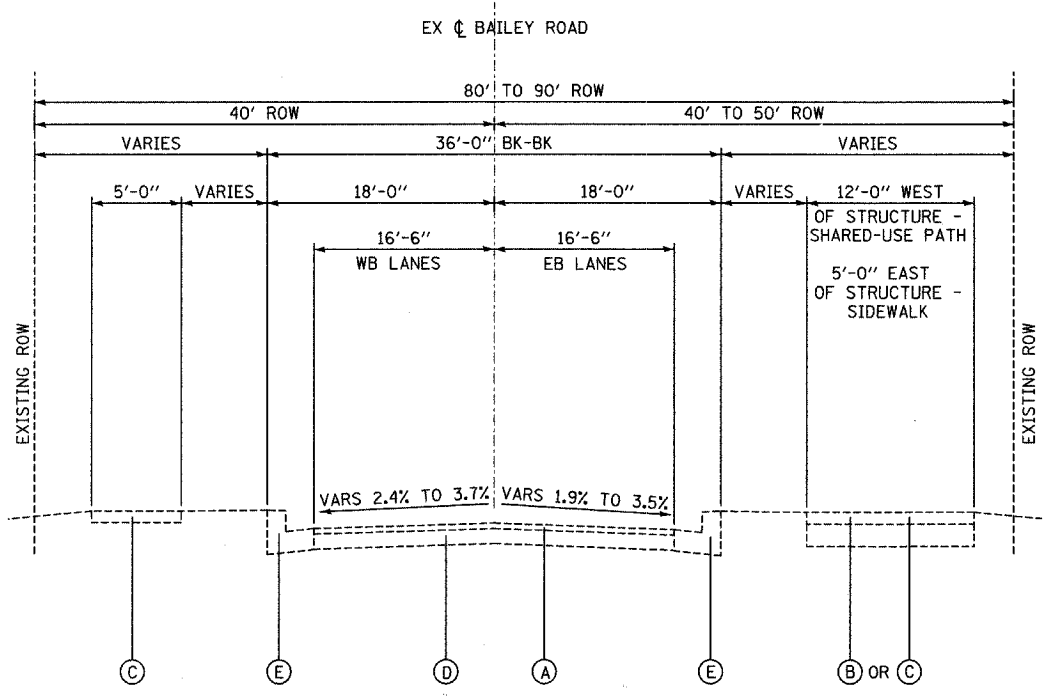
DESCRIPTION OF EXISTING LOCATION	FROM			TO			CCCG TYPE B-6.12 SPECIAL (FOOT)	CCCG TYPE M-6.12 SPECIAL (FOOT)	SUB-BASE GRAN MAT TYPE B (SQ YD)
	ALIGNMENT	STATION	OFFSET	ALIGNMENT	STATION	OFFSET			
NW OF BRIDGE	BAILEY	1+31.4	17.4 LT	BAILEY	2+15.2	18.0 LT	84.0		15
SW OF BRIDGE	BAILEY	1+31.8	17.6 RT	BAILEY	2+33.2	18.0 RT	101.5		18
NE OF BRIDGE	BAILEY	3+83.2	18.0 LT	BAILEY	4+44.0	17.5 LT		61.0	11
NE OF BRIDGE	BAILEY	4+44.0	17.5 LT	BAILEY	5+50.0	17.6 LT	106.0		19
SE OF BRIDGE	BAILEY	3+83.2	18.0 RT	BAILEY	5+50.0	17.1 RT	167.0		29
TOTAL							458.5	61.0	92

PCC SIDEWALK

LOCATION DESCRIPTION	OFFSET DIRECTION	FROM		TO		PCC SW 5 INCH (SQ FT)	PCC SW 6 INCH SPL (SQ FT)
		ALIGNMENT	STATION	ALIGNMENT	STATION		
WEST OF NORTH DWY	LT	BAILEY	1+36.7	BAILEY	1+46.6	50	
NW OF BRIDGE	LT	BAILEY	1+82.9	BAILEY	1+98.9	198	
SW OF BRIDGE (RAMP)	RT	BAILEY	1+91.5	BAILEY	2+01.4		102
SW OF BRIDGE (BIKE PATH)	RT	BAILEY	1+98.0	BAILEY	2+20.8		223
SW OF BRIDGE	RT	BAILEY	2+01.4	BAILEY	2+33.2		273
SW OF BRIDGE (BEHIND IMP ATTEN)	RT	BAILEY	2+21.1	BAILEY	2+33.2		16
NE OF BRIDGE	LT	BAILEY	3+83.2	BAILEY	4+69.1	408	
SE OF BRIDGE	RT	BAILEY	3+83.2	BAILEY	4+05.8	191	
TOTAL						847	614

REVISIONS NAME DATE		BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER SCHEDULES OF QUANTITIES	City of	 Naperville
DRAWN: RTM			SHEET NO.	
CHECKED: SP			6	
APPROVED:				
DATE: JULY 13, 2007				
SCALE: NONE				
JOB NO.: C-91-062-04		PROJECT NO.: BHM-8003(343)		
CONSULTANT		TYLIN INTERNATIONAL		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	7
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				

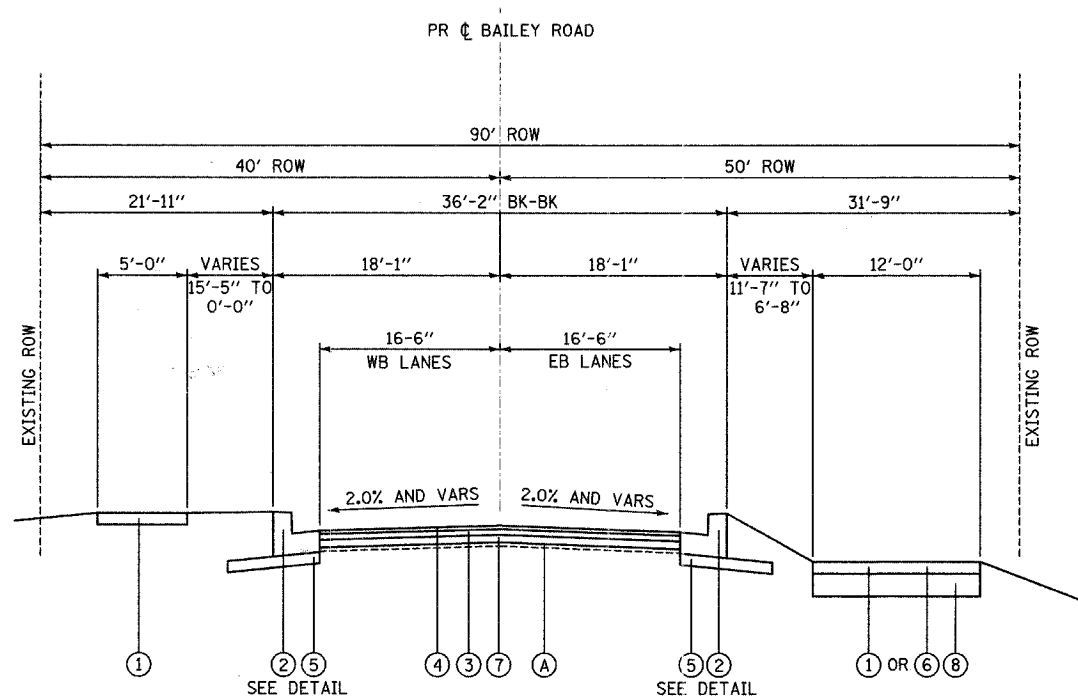


EXISTING PAVEMENT SECTION
STA. 0+33.32 TO STA. 2+15.15 AND
STA. 3+83.15 TO STA. 5+50.00
LOOKING EAST

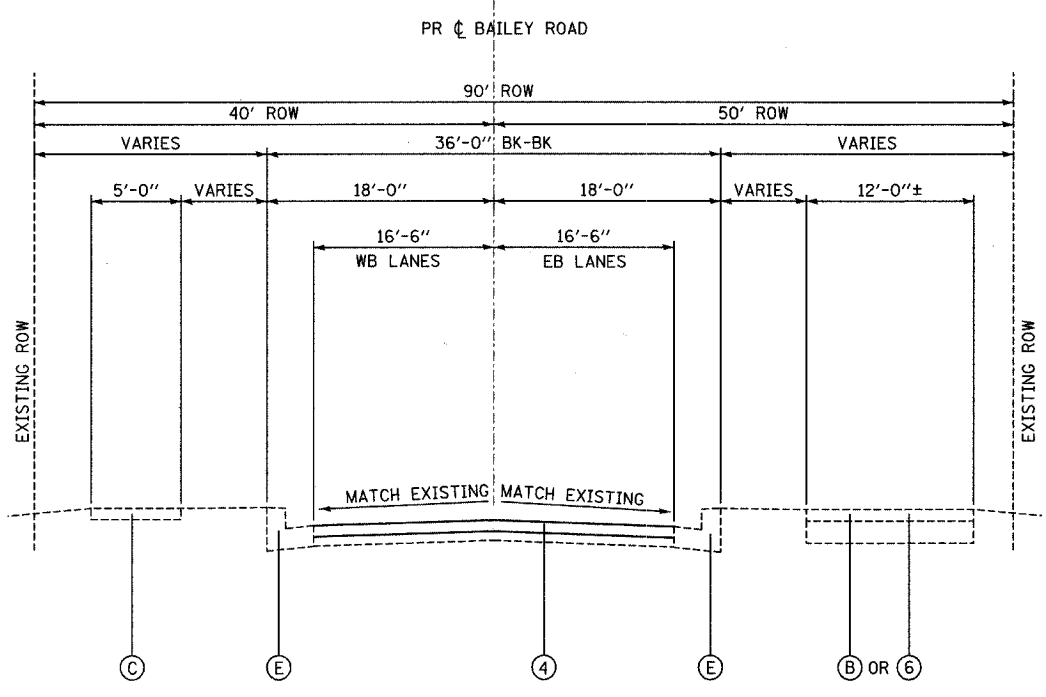
EXISTING LEGEND:

- (A) EXISTING HOT-MIX ASPHALT SURFACE 3"±
- (B) EXISTING HOT-MIX ASPHALT SHARED-USE PATH (4"± HMA & 9"± AGG BASE)
- (C) EXISTING CONCRETE SIDEWALK 5"±
- (D) EXISTING AGGREGATE BASE
- (E) EXISTING CONCRETE CURB AND GUTTER B-6.12

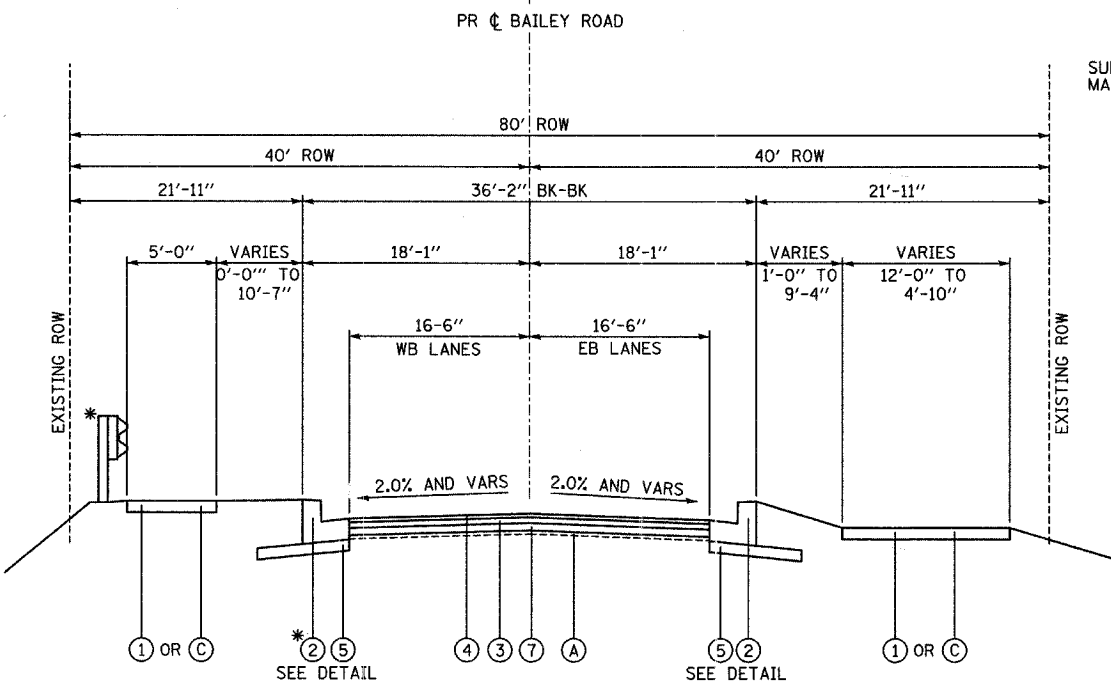
STA. 0+33.32 TO STA. 1+31.77 - RESURFACING (CITY FUNDED)
 STA. 1+31.77 TO STA. 2+15.15 - RESURFACING
 STA. 2+15.15 TO STA. 2+45.15 - BRIDGE APPROACH PAVEMENT
 STA. 2+45.15 TO STA. 3+53.15 - BRIDGE (SEE SHEETS 22 TO 60)
 STA. 3+53.15 TO STA. 3+83.15 - BRIDGE APPROACH PAVEMENT
 STA. 3+83.15 TO STA. 5+50.00 - RESURFACING



PROPOSED RESURFACING
STA. 1+31.77 TO STA. 2+15.15
LOOKING EAST



PROPOSED RESURFACING
(CITY FUNDED)
STA. 0+33.32 TO STA. 1+31.77
LOOKING EAST

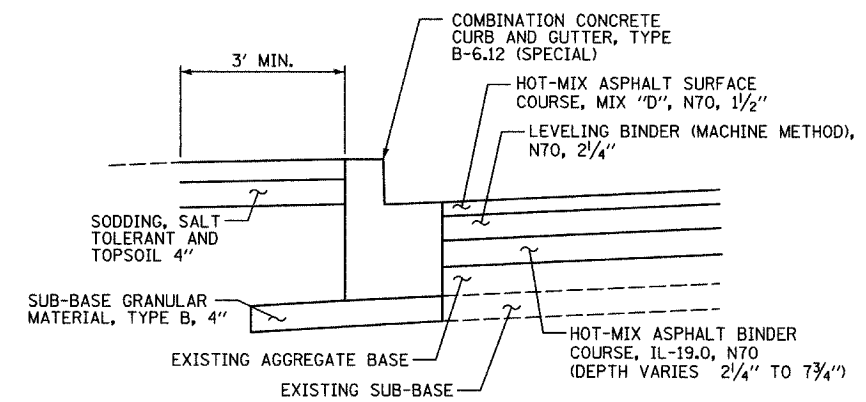


PROPOSED RESURFACING
STA. 3+83.15 TO STA. 5+50.00
LOOKING EAST

*-CCC&G M-6.12 (SPECIAL), GUARDRAIL TERMINALS, AND PCC SIDEWALK 5 INCH INSTALLED FROM STA. 3+83.15 TO 4+43.95

MIXTURE TYPE	AC TYPE	VOIDS
BIKE PATH: HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL-9.5mm) 4"	PG 64-22	4% @ 50 Gyr.
DRIVEWAYS: HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL-9.5mm) 2"	PG 64-22	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 PE-2" CE-10"	PG 64-22/ 58-22	4% @ 70 Gyr.
PAVEMENT RESURFACING: HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70 (IL-9.5mm) 1 1/2"	PG 64-22	4% @ 70 Gyr.
LEVELING BINDER (MACHINE METHOD), N70 2 1/4"	PG 64-22/ 58-22	4% @ 70 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 2 1/4" MIN. TO 7 3/4"	PG 64-22/ 58-22	4% @ 70 Gyr.
PATCHING: CLASS D PATCHES, TYPES I, III, & IV (HMA BINDER IL-19mm)	PG 64-22/ 58-22	4% @ 70 Gyr.

1. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.
2. WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22.
3. THE MAXIMUM LIFT OF HMA MATERIALS IS 4".



CURB AND GUTTER INSTALLATION DETAIL
 STA. 1+31.77 TO 2+15.15
 STA. 3+83.15 TO 5+50.00

PROPOSED LEGEND:

- (1) PCC SIDEWALK 5 INCH
- (2) CONCRETE CURB AND GUTTER, TYPE B-6.12 (SPECIAL)
- (3) LEVELING BINDER (MACHINE METHOD), N70, 2 1/4"
- (4) HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1 1/2" (USE 2 1/4" DEPTH IN CITY FUNDED RESURFACING SECTION)
- (5) SUB-BASE GRANULAR MATERIAL, TYPE B 4"
- (6) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50, 4" (INCLUDED IN THE COST FOR REMOVE AND REPLACE BITUMINOUS SURFACE, SPECIAL)
- (7) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 (DEPTH VARIES 2 1/4" TO 7 3/4")
- (8) AGGREGATE BASE COURSE, TYPE B 9" (INCLUDED IN THE COST FOR REMOVE AND REPLACE BITUMINOUS SURFACE, SPECIAL)

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
 BAILEY ROAD OVER
 WEST BRANCH OF THE DUPAGE RIVER

**EXISTING AND PROPOSED
 TYPICAL PAVEMENT SECTIONS**

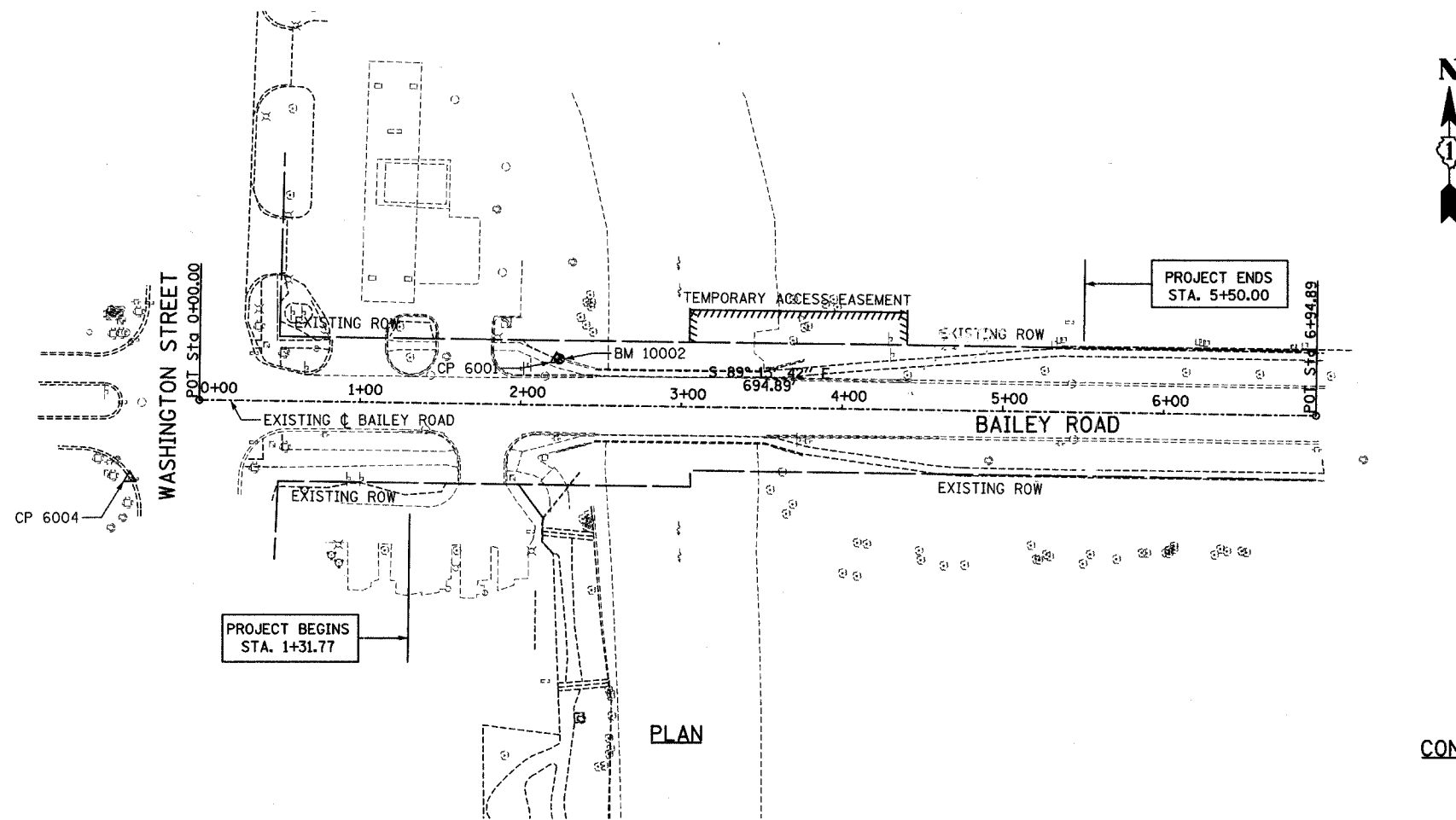
CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

DRAWN: RTM
 CHECKED: SP
 APPROVED:
 DATE: JULY 13, 2007
 SCALE: NONE
 JOB NO.: C-91-062-04

SHEET NO.
7
 PROJECT NO.: BHM-8003(343)

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DuPAGE	97	8
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				



ALIGNMENT
(N 1,848,180.8320 E 1,040,358.5550)
Sta 0+00.00
S 89° 13' 41.8560" E
Dist 694.8850
(N 1,848,171.4730 E 1,041,053.3770)
Sta 6+94.89

PROJECT BEGINS
STA. 1+31.77

PROJECT ENDS
STA. 5+50.00

PLAN

PROJECT BENCHMARK

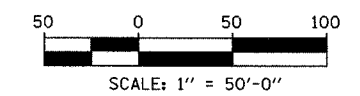
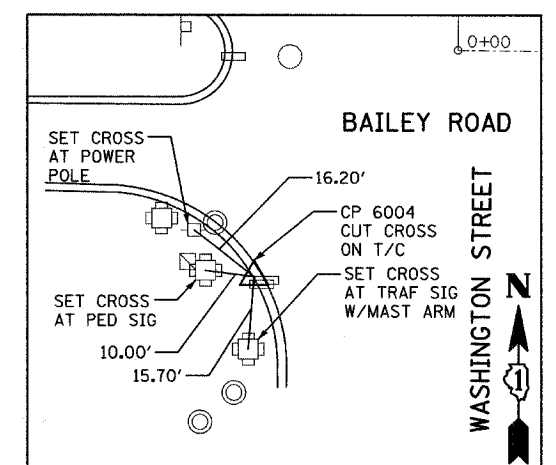
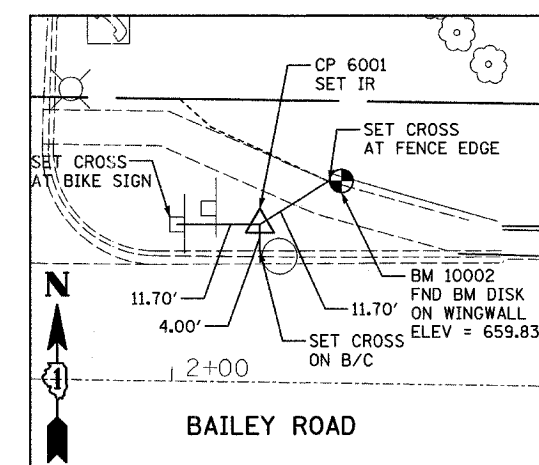
BM-10002 - DUPAGE COUNTY BENCHMARK *LI 32001 IN NORTHWEST WINGWALL OF BAILEY ROAD BRIDGE OVER WEST BRANCH OF DUPAGE RIVER. ELEV. 659.83 (NGVD 29)
THE CONTRACTOR WILL BE REQUIRED TO REPLACE *LI 32001 WITH A NEW ELEVATION IN THE PROPOSED NORTHWEST WINGWALL (SEE SPECIAL PROVISIONS).

CONTROL POINT #6001

N: 1848200.320
E: 1040571.000
EL: 657.270


CONTROL POINT #6004

N: 1848132.505
E: 1040315.240
EL: 657.666



REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER
ALIGNMENT AND SURVEY TIES
FOR CONTROL POINTS
CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

DRAWN: RTM	SHEET NO.
CHECKED: SP	8
APPROVED:	
DATE: JULY 13, 2007	
SCALE: 1"=50'-0"	PROJECT NO.: BHM-8003(343)
JOB NO.: C-91-062-04	

PLAT OF EASEMENT

OF PART OF THE NORTHWEST QUARTER OF SECTION 32, TOWNSHIP 38 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN DU PAGE COUNTY, ILLINOIS.

PIN: 08-29-309-008

CONTRACT 83961

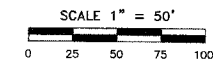
THIS PLAT HAS BEEN SUBMITTED FOR RECORDING BY AND RETURN TO:
NAME: NAPERVILLE CITY CLERK
ADDRESS: P.O. BOX 3020
400 S. EAGLE STREET
NAPERVILLE, IL
60566-7020

LEGEND

- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- QUARTER SECTION LINE
- MEASURED OR COMPUTED DIMENSION
- RECORD DATA
- FOUND IRON PIPE (IP) OR IRON ROD (IR)
- SET 5/8 INCH IRON ROD
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

SURVEYOR'S NOTES

1. 5/8 INCH DIAMETER X 24 INCH IRON RODS SET AT ALL RIGHT-OF-WAY CORNERS UNLESS OTHERWISE NOTED.
2. ALL MEASUREMENTS AND DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.
3. BASIS OF BEARINGS: THE BEARINGS SHOWN ON THE PLAT MAP ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM - EAST ZONE (NAD83). COMBINATION FACTOR: 0.999947016 (GROUND TO GRID).



LEGAL DESCRIPTION OF TEMPORARY EASEMENT PARCEL BOUNDARY (PD-1)

THAT PART OF LOT 43 IN WATERFRONT ESTATES, BEING A RESUBDIVISION OF LOT 3 IN BLOCK 1 OF UNIT ONE, MAPLEBROOK EAST, BEING A SUBDIVISION OF PART OF SECTIONS 29, 30, 31 AND 32, TOWNSHIP 38 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT OF SAID RESUBDIVISION RECORDED JULY 14, 1983 AS DOCUMENT R83-45762, IN DUPAGE COUNTY, ILLINOIS, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID LOT 43; THENCE NORTH 9 DEGREES 44 MINUTES 08 SECONDS WEST, ON THE WESTERLY LINE OF SAID LOT 43, A DISTANCE OF 20.34 FEET; THENCE SOUTH 89 DEGREES 18 MINUTES 54 SECONDS EAST, 139.13 FEET; THENCE SOUTH 0 DEGREES 41 MINUTES 06 SECONDS WEST, 20.00 FEET TO THE SOUTH LINE OF SAID LOT 43; THENCE NORTH 89 DEGREES 18 MINUTES 54 SECONDS WEST, ON SAID SOUTH LINE, 135.45 FEET TO THE POINT OF BEGINNING.

PARCEL PD-1 HEREIN DESCRIBED CONTAINS 0.063 ACRE OR 2,746 SQUARE FEET, MORE OR LESS.

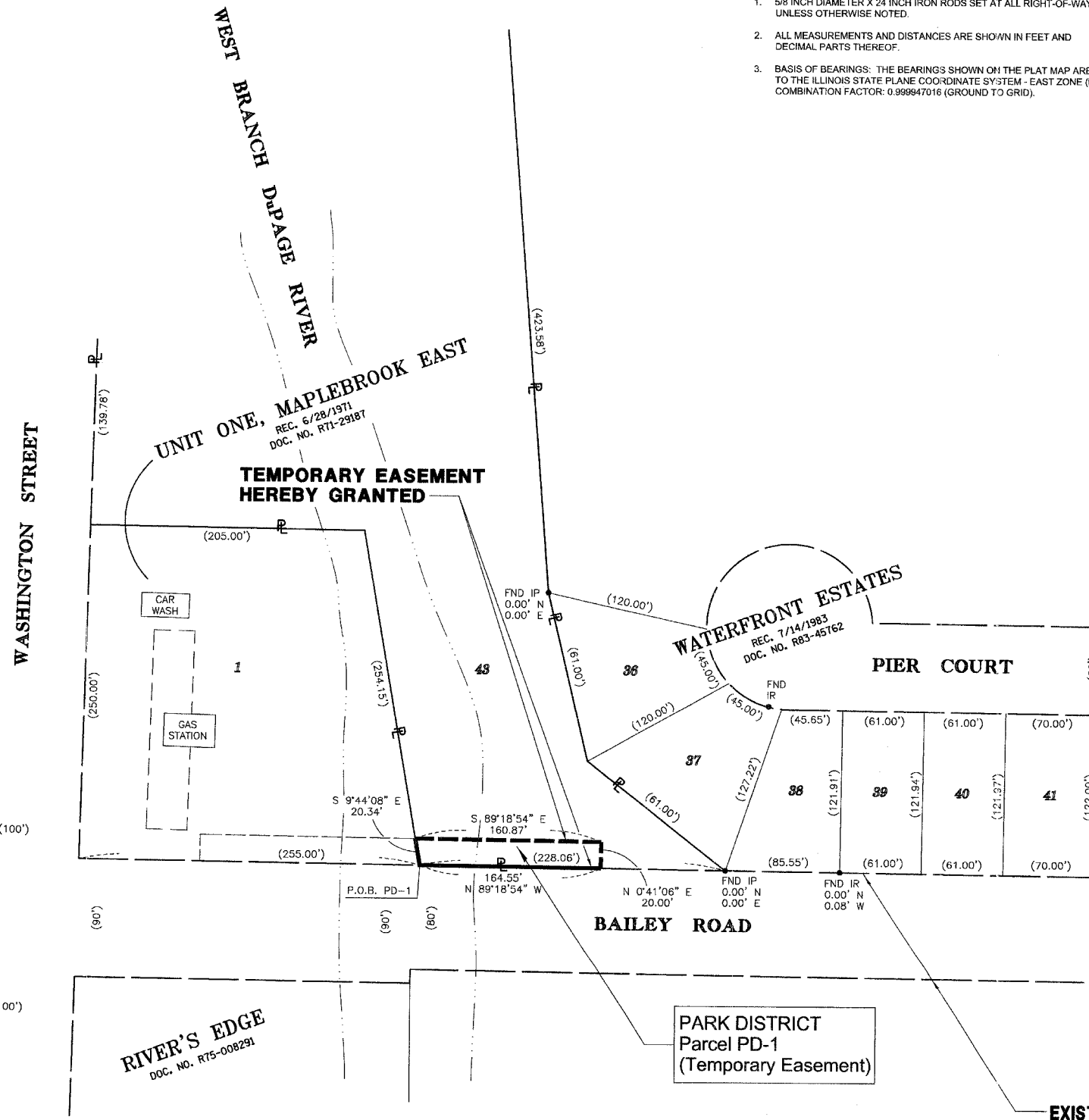
STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

THIS IS TO CERTIFY THAT I, COVENTINE FIDIS, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED AND PLATTED THE LAND SHOWN AND DESCRIBED ON THE PLAT HEREON DRAWN FOR THE USES AND PURPOSES THEREIN SET FORTH.

DATED AT CHICAGO, ILLINOIS THIS 30TH DAY OF JANUARY, 2007.

COVENTINE FIDIS
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 2159
LICENSE EXPIRATION DATE: 11/30/2008

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM SURVEY STANDARDS.



MAPLEBROOK UNIT NO. 2
REC. 5/1/1964
DOC. NO. R64-14568

MAPLEBROOK UNIT NO. 2
REC. 5/1/1964
DOC. NO. R64-14568

RIVER'S EDGE
DOC. NO. R75-008291

PARK DISTRICT
Parcel PD-1
(Temporary Easement)

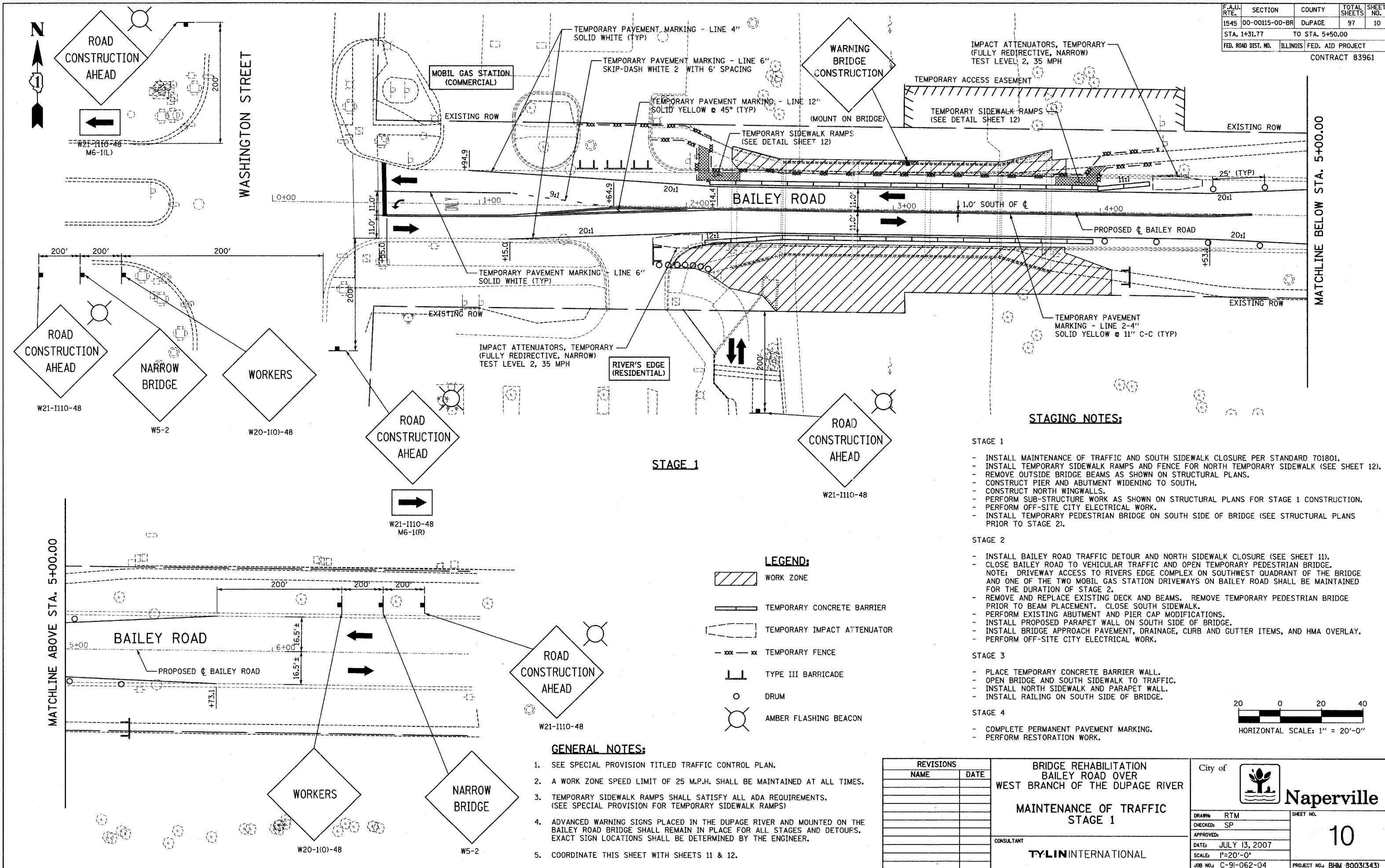
EXISTING RIGHT OF WAY LINES

CONSULTANT
 American Surveying Consultants
841 N. Galena Avenue / Dixon, IL 61021 / 815-288-6231
8604 W. Catalpa Avenue / Chicago, IL 60656 / 773-444-0800
Illinois Professional Design Firm No. 184-003192

CLIENT
 TRANSPORTATION, ENGINEERING AND DEVELOPMENT BUSINESS GROUP
400 S. EAGLE NAPERVILLE, ILLINOIS 60540
PHONE: 630-305-5892
FAX: 630-420-5895
E-MAIL: zbb@naperville.il.us

DATE	NO.	REVISION	BY	SHEET TITLE
				NAPERVILLE PARK DISTRICT
SCALE		DRAWN		CHECKED
1 INCH = 50 FEET		D.D.		C. FIDIS
DATE		PROJECT NO.		SHEET
1/30/2007		204003.1		1 OF 1

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	10
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT 83961		



STAGING NOTES:

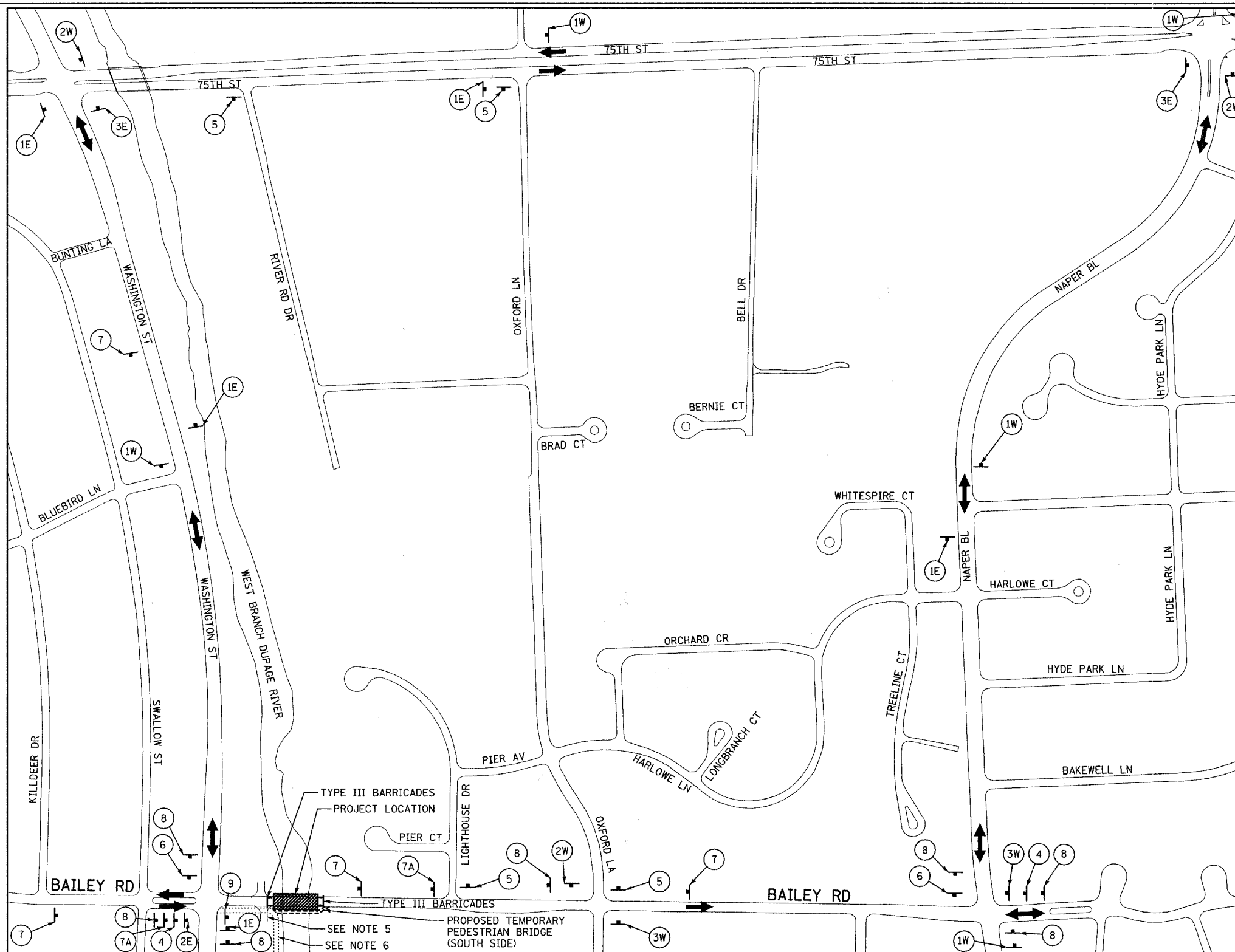
- STAGE 1**
- INSTALL MAINTENANCE OF TRAFFIC AND SOUTH SIDEWALK CLOSURE PER STANDARD 701801.
 - INSTALL TEMPORARY SIDEWALK RAMP AND FENCE FOR NORTH TEMPORARY SIDEWALK (SEE SHEET 12).
 - REMOVE OUTSIDE BRIDGE BEAMS AS SHOWN ON STRUCTURAL PLANS.
 - CONSTRUCT PIER AND ABUTMENT WIDENING TO SOUTH.
 - CONSTRUCT NORTH WINGWALLS.
 - PERFORM SUB-STRUCTURE WORK AS SHOWN ON STRUCTURAL PLANS FOR STAGE 1 CONSTRUCTION.
 - PERFORM OFF-SITE CITY ELECTRICAL WORK.
 - INSTALL TEMPORARY PEDESTRIAN BRIDGE ON SOUTH SIDE OF BRIDGE (SEE STRUCTURAL PLANS PRIOR TO STAGE 2).
- STAGE 2**
- INSTALL BAILEY ROAD TRAFFIC DETOUR AND NORTH SIDEWALK CLOSURE (SEE SHEET 11).
 - CLOSE BAILEY ROAD TO VEHICULAR TRAFFIC AND OPEN TEMPORARY PEDESTRIAN BRIDGE. NOTE: DRIVEWAY ACCESS TO RIVERS EDGE COMPLEX ON SOUTHWEST QUADRANT OF THE BRIDGE AND ONE OF THE TWO MOBIL GAS STATION DRIVEWAYS ON BAILEY ROAD SHALL BE MAINTAINED FOR THE DURATION OF STAGE 2.
 - REMOVE AND REPLACE EXISTING DECK AND BEAMS. REMOVE TEMPORARY PEDESTRIAN BRIDGE PRIOR TO BEAM PLACEMENT. CLOSE SOUTH SIDEWALK.
 - PERFORM EXISTING ABUTMENT AND PIER CAP MODIFICATIONS.
 - INSTALL PROPOSED PARAPET WALL ON SOUTH SIDE OF BRIDGE.
 - INSTALL BRIDGE APPROACH PAVEMENT, DRAINAGE, CURB AND GUTTER ITEMS, AND HMA OVERLAY.
 - PERFORM OFF-SITE CITY ELECTRICAL WORK.
- STAGE 3**
- PLACE TEMPORARY CONCRETE BARRIER WALL.
 - OPEN BRIDGE AND SOUTH SIDEWALK TO TRAFFIC.
 - INSTALL NORTH SIDEWALK AND PARAPET WALL.
 - INSTALL RAILING ON SOUTH SIDE OF BRIDGE.
- STAGE 4**
- COMPLETE PERMANENT PAVEMENT MARKING.
 - PERFORM RESTORATION WORK.

LEGEND:

	WORK ZONE
	TEMPORARY CONCRETE BARRIER
	TEMPORARY IMPACT ATTENUATOR
	TEMPORARY FENCE
	TYPE III BARRICADE
	DRUM
	AMBER FLASHING BEACON

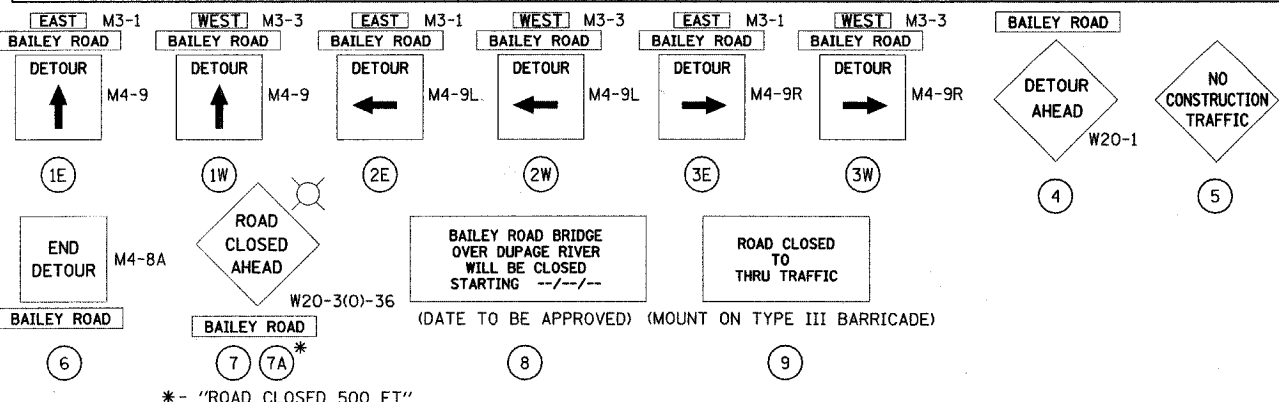
- GENERAL NOTES:**
1. SEE SPECIAL PROVISION TITLED TRAFFIC CONTROL PLAN.
 2. A WORK ZONE SPEED LIMIT OF 25 M.P.H. SHALL BE MAINTAINED AT ALL TIMES.
 3. TEMPORARY SIDEWALK RAMP SHALL SATISFY ALL ADA REQUIREMENTS. (SEE SPECIAL PROVISION FOR TEMPORARY SIDEWALK RAMP)
 4. ADVANCED WARNING SIGNS PLACED IN THE DUPAGE RIVER AND MOUNTED ON THE BAILEY ROAD BRIDGE SHALL REMAIN IN PLACE FOR ALL STAGES AND DETOURS. EXACT SIGN LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.
 5. COORDINATE THIS SHEET WITH SHEETS 11 & 12.

<table border="1"> <thead> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		REVISIONS		NAME	DATE																					<p>BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER</p> <p>MAINTENANCE OF TRAFFIC STAGE 1</p> <p>CONSULTANT TYLIN INTERNATIONAL</p>		<p>City of </p> <p>Naperville</p> <p>DRAWN: RTM CHECKED: SP APPROVED: DATE: JULY 13, 2007 SCALE: 1"=20'-0" JOB NO.: C-91-062-04</p> <p>SHEET NO. 10 PROJECT NO.: BHM 9003(343)</p>	
REVISIONS																													
NAME	DATE																												



SIGN SCHEDULE

SIGN	MUTCD DESIGNATION	SIZE	QUANTITY
	M4-9	30in X 24in	10
	M4-9L	30in X 24in	4
	M4-9R	30in X 24in	4
	SPECIAL **	84in X 24in	9
	W20-2	48in X 48in	2
	M3-2	24in X 12in	8
	M3-4	24in X 12in	10
	SPECIAL **	36in X 12in	29
	M4-8A	30in X 24in	2
	W20-3(0)	36in X 36in	6
	SPECIAL **	36in X 36in	4
	SPECIAL **	84in X 24in	2
	SPECIAL **	84in X 24in	5
	SPECIAL **	36in X 36in	5
	R11-4	60in X 30in	1
	SPECIAL **	48in X 48in	1
	SPECIAL **	84in X 36in	2



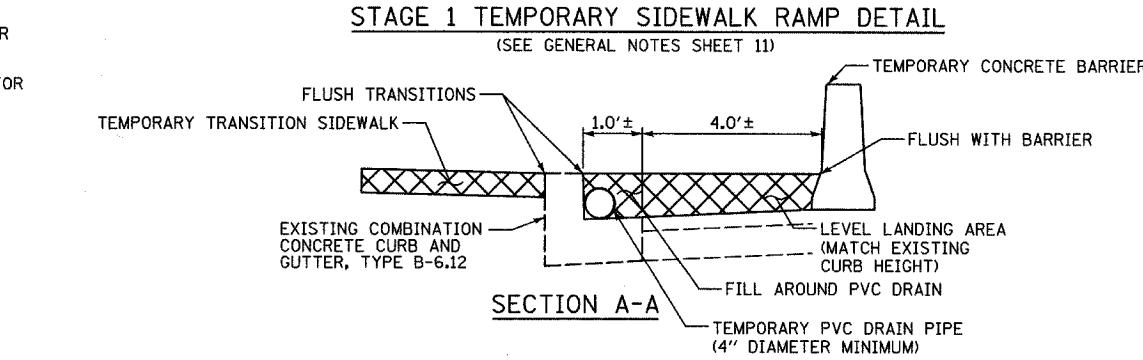
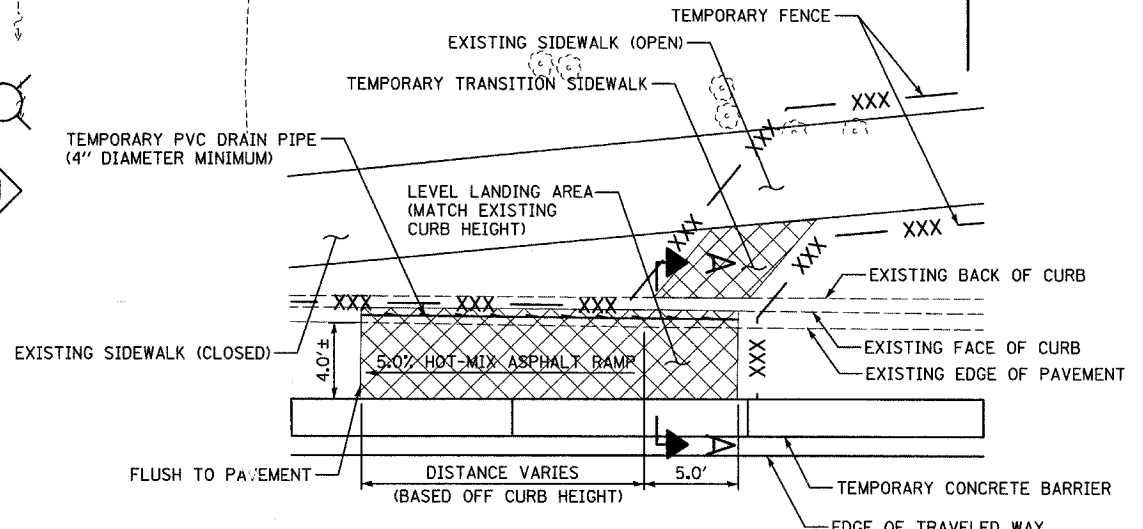
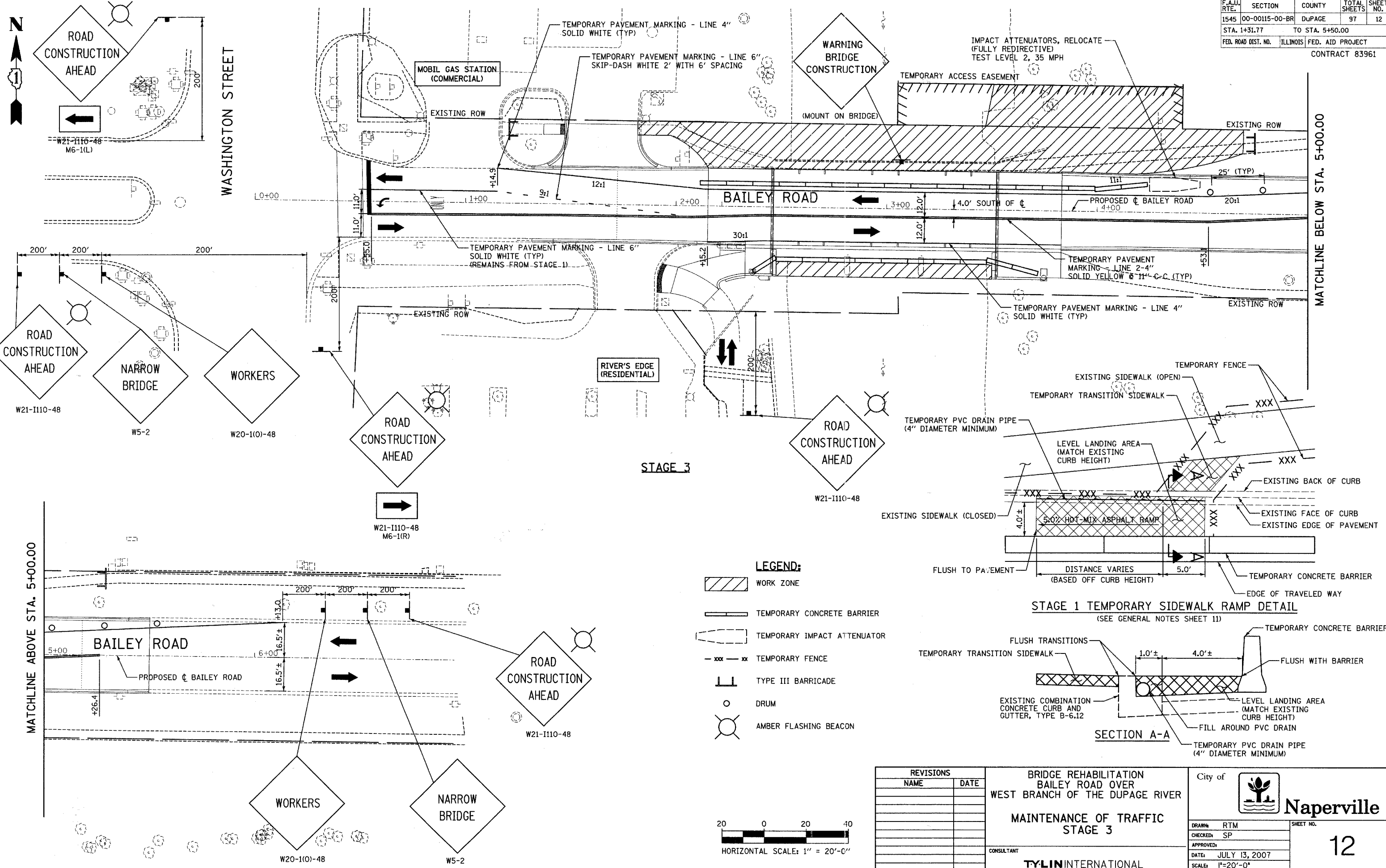
- NOTES:**
- ALL DETOUR SIGNS SHALL BE IN ORANGE COLOR BACKGROUND WITH BLACK LETTERS.
 - FOLLOW LATEST MUTCD MANUAL AND IDOT STANDARDS FOR DETOUR SIGNS AND MAINTENANCE OF TRAFFIC SIGNS.
 - THE DETOUR SIGNING SHALL BE PAID AS TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR.
 - SIDEWALK CLOSURE SIGNING SHALL BE PER STANDARD 701801, AND INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR.
 - MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
 - SEE MAINTENANCE OF TRAFFIC DUPAGE RIVER TRAIL CLOSURE DETAILS.

** - SPECIAL CUSTOM SIGNS SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

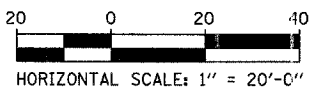
REVISIONS NAME DATE		BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER MAINTENANCE OF TRAFFIC DETOUR - STAGE 2	City of Naperville
CONSULTANT TYLIN INTERNATIONAL			
DRAWN: RTM CHECKED: SP APPROVED: _____ DATE: JULY 13, 2007 SCALE: NONE		SHEET NO. <h1 style="text-align: center;">11</h1>	
JOB NO.: C-91-062-04		PROJECT NO.: BHM-8003(343)	

* - "ROAD CLOSED 500 FT"

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DuPAGE	97	12
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		CONTRACT 83961		



- LEGEND:**
- WORK ZONE
 - TEMPORARY CONCRETE BARRIER
 - TEMPORARY IMPACT ATTENUATOR
 - TEMPORARY FENCE
 - TYPE III BARRICADE
 - DRUM
 - AMBER FLASHING BEACON



REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

MAINTENANCE OF TRAFFIC
STAGE 3

CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

DRAWN: RTM
CHECKED: SP
APPROVED:
DATE: JULY 13, 2007
SCALE: 1"=20'-0"
JOB NO.: C-91-062-04

SHEET NO.
12
PROJECT NO.: BHM-8003(343)

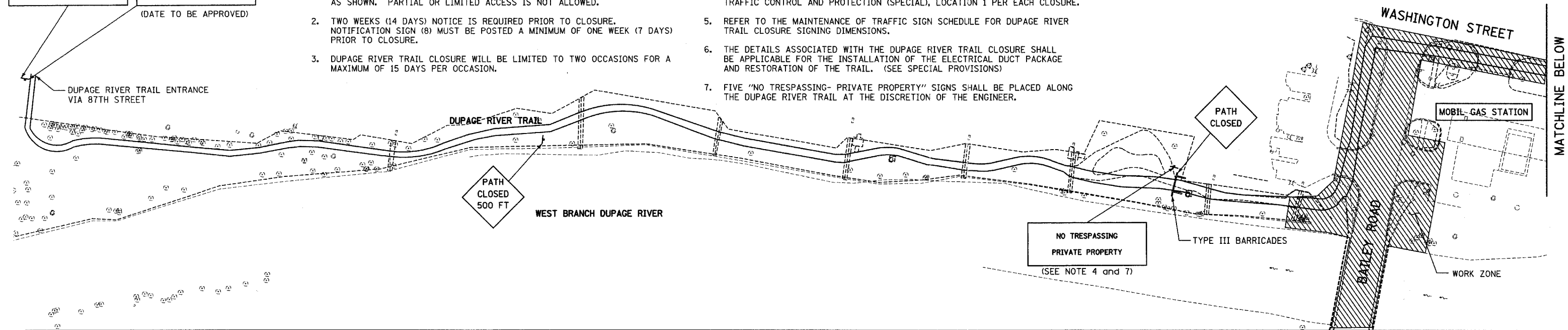
F.A.I.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DuPAGE	97	13
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				

NOTES:

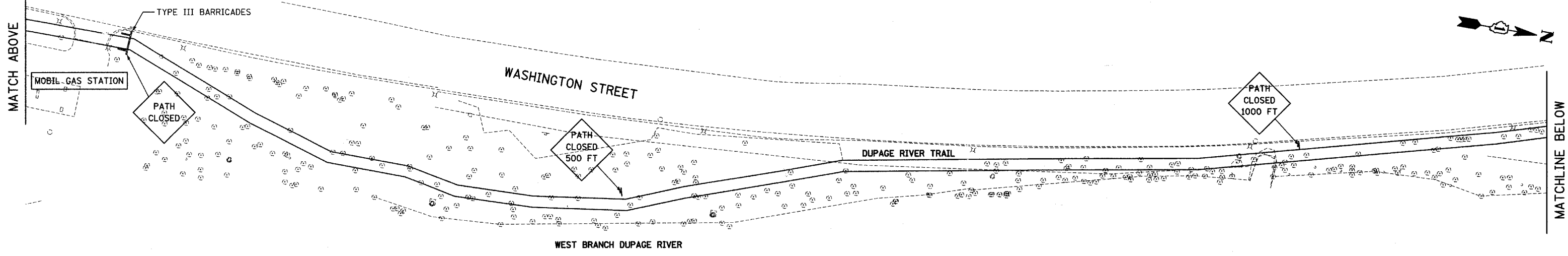
- DUPAGE RIVER TRAIL WILL ONLY BE ALLOWED FOR FULL CLOSURE AS SHOWN. PARTIAL OR LIMITED ACCESS IS NOT ALLOWED.
- TWO WEEKS (14 DAYS) NOTICE IS REQUIRED PRIOR TO CLOSURE. NOTIFICATION SIGN (8) MUST BE POSTED A MINIMUM OF ONE WEEK (7 DAYS) PRIOR TO CLOSURE.
- DUPAGE RIVER TRAIL CLOSURE WILL BE LIMITED TO TWO OCCASIONS FOR A MAXIMUM OF 15 DAYS PER OCCASION.
- THE COST OF THE DUPAGE RIVER TRAIL CLOSURE SIGNING SHALL BE PAID AS TRAFFIC CONTROL AND PROTECTION (SPECIAL), LOCATION 1 PER EACH CLOSURE.
- REFER TO THE MAINTENANCE OF TRAFFIC SIGN SCHEDULE FOR DUPAGE RIVER TRAIL CLOSURE SIGNING DIMENSIONS.
- THE DETAILS ASSOCIATED WITH THE DUPAGE RIVER TRAIL CLOSURE SHALL BE APPLICABLE FOR THE INSTALLATION OF THE ELECTRICAL DUCT PACKAGE AND RESTORATION OF THE TRAIL. (SEE SPECIAL PROVISIONS)
- FIVE "NO TRESPASSING- PRIVATE PROPERTY" SIGNS SHALL BE PLACED ALONG THE DUPAGE RIVER TRAIL AT THE DISCRETION OF THE ENGINEER.

8
**PATH CLOSED AT BAILEY ROAD
 NO ACCESS TO BAILEY ROAD**
**BAILEY ROAD BRIDGE
 OVER DUPAGE RIVER
 WILL BE CLOSED
 STARTING ---/---/---**
 (DATE TO BE APPROVED)

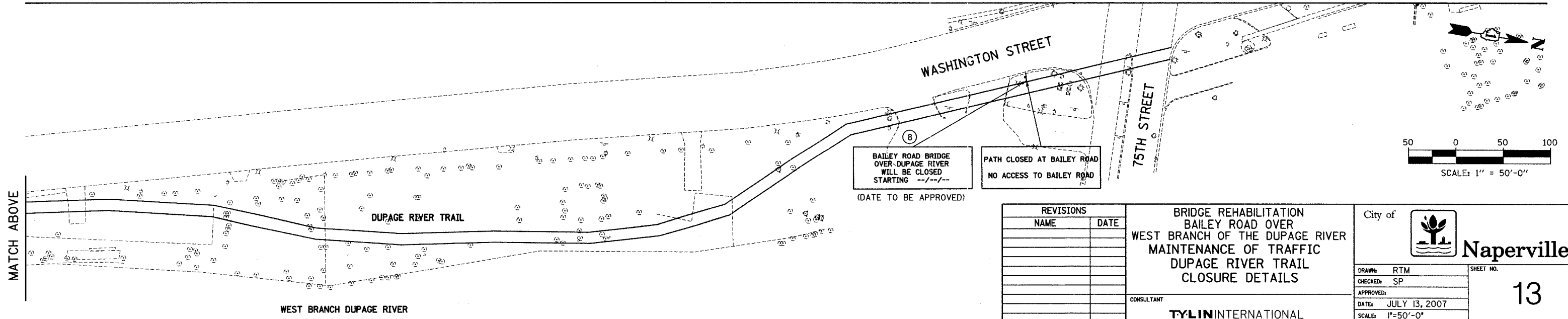
DUPAGE RIVER TRAIL ENTRANCE
 VIA 87TH STREET



MATCH ABOVE



MATCH ABOVE



REVISIONS	
NAME	DATE

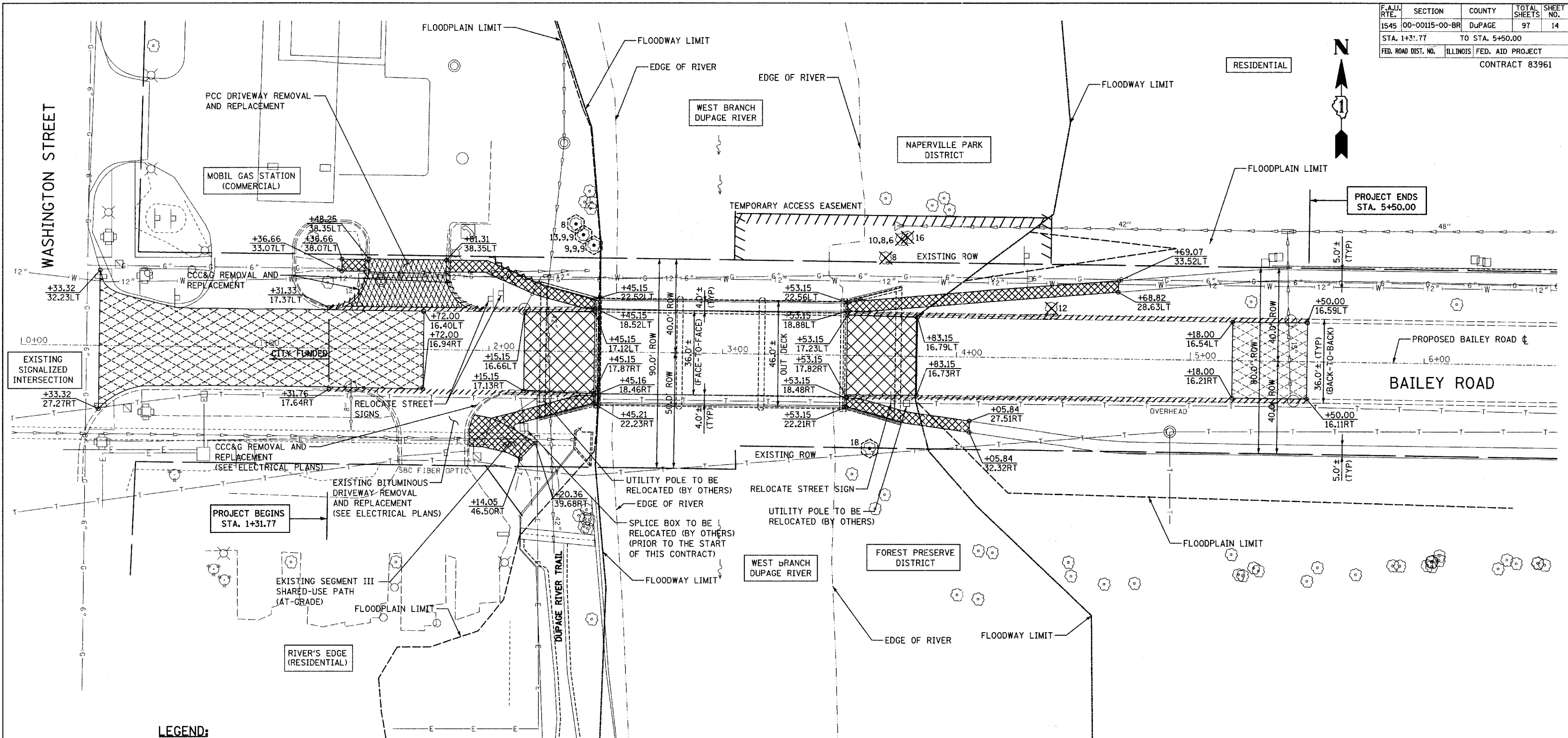
**BRIDGE REHABILITATION
 BAILEY ROAD OVER
 WEST BRANCH OF THE DUPAGE RIVER
 MAINTENANCE OF TRAFFIC
 DUPAGE RIVER TRAIL
 CLOSURE DETAILS**

CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

DRAWN: RTM
 CHECKED: SP
 APPROVED:
 DATE: JULY 13, 2007
 SCALE: 1"=50'-0"
 JOB NO.: C-91-062-04

SHEET NO.
13
 PROJECT NO.: BHM-8003(343)

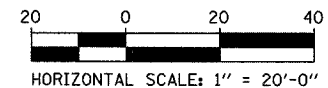


LEGEND:

- PAVEMENT REMOVAL
- SIDEWALK REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT
HOT-MIX ASPHALT SURFACE REMOVAL 2 1/4" (CITY FUNDED ONLY)
- DRIVEWAY REMOVAL
- COMB CONC CURB & GUTTER REMOVAL
- CHAIN LINK FENCE REMOVAL
- TREE REMOVAL (UNITS)
(NO UNIT SHOWN = <6)
- TREE TRUNK PROTECTION

NOTES:

1. SEE ELECTRICAL PLANS FOR ADDITIONAL REMOVAL ITEMS.



REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

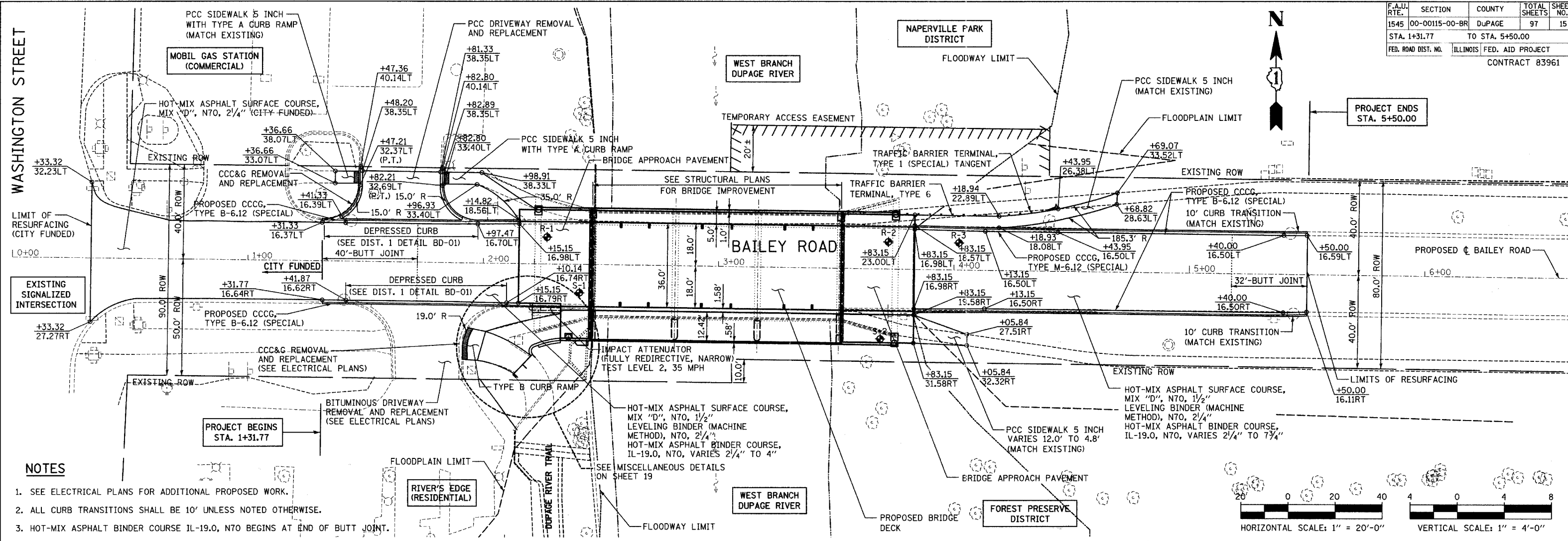
**REMOVAL AND
EXISTING UTILITY PLANS**

CONSULTANT
TYLIN INTERNATIONAL

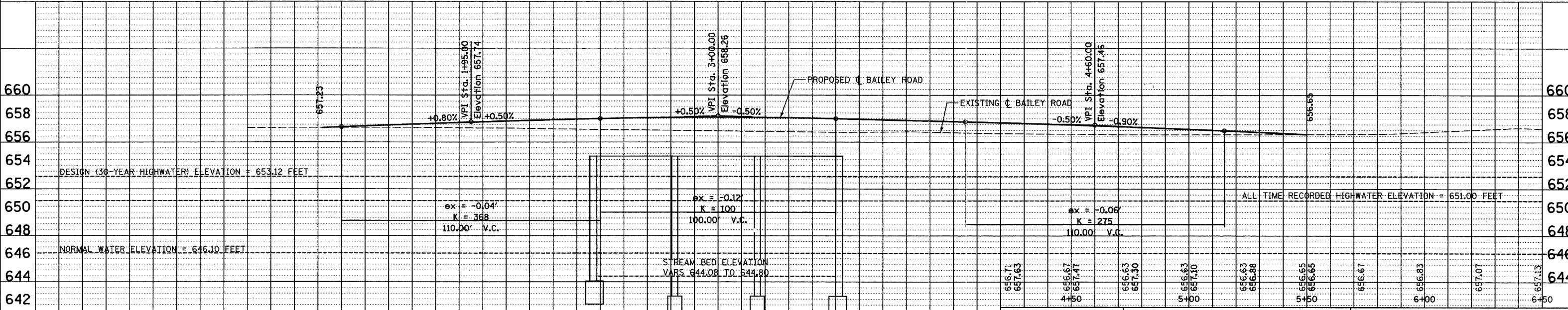
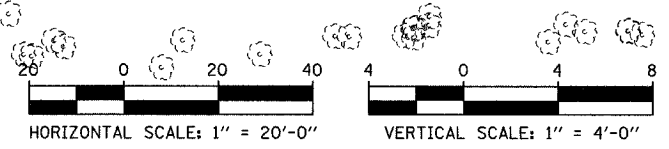
City of **Naperville**

DRAWN: RTM	SHEET NO.
CHECKED: SP	14
APPROVED:	
DATE: JULY 13, 2007	
SCALE: 1"=20'-0"	PROJECT NO.: BHM-8003(343)
JOB NO.: C-91-062-04	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-8R	DUPAGE	97	15
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83961	

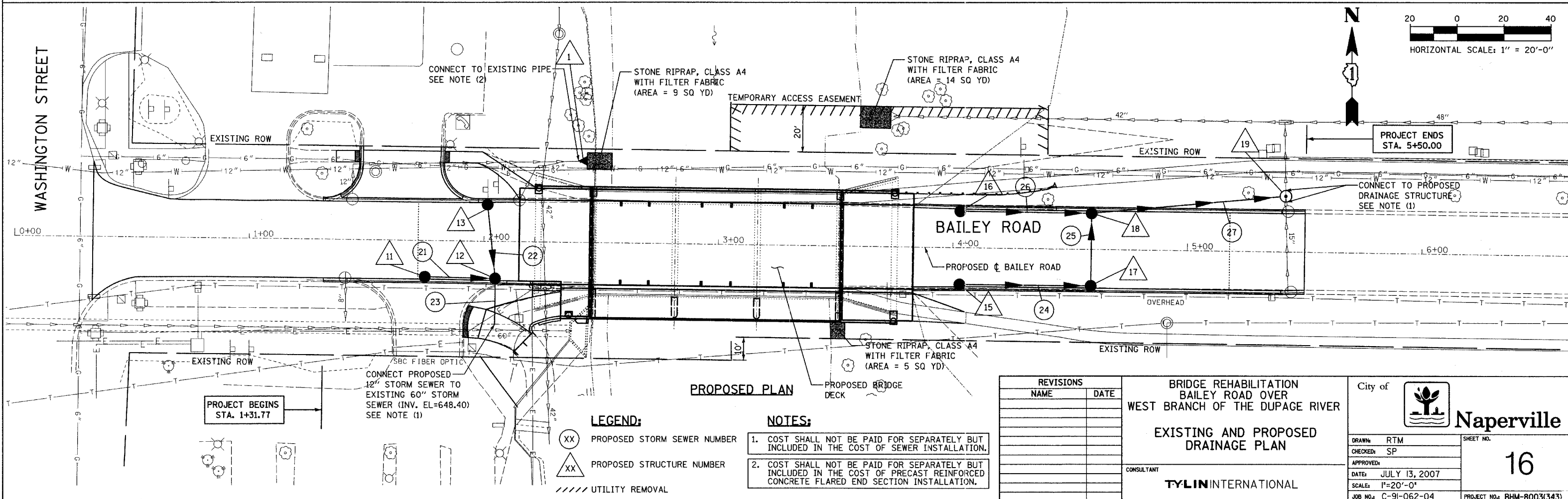
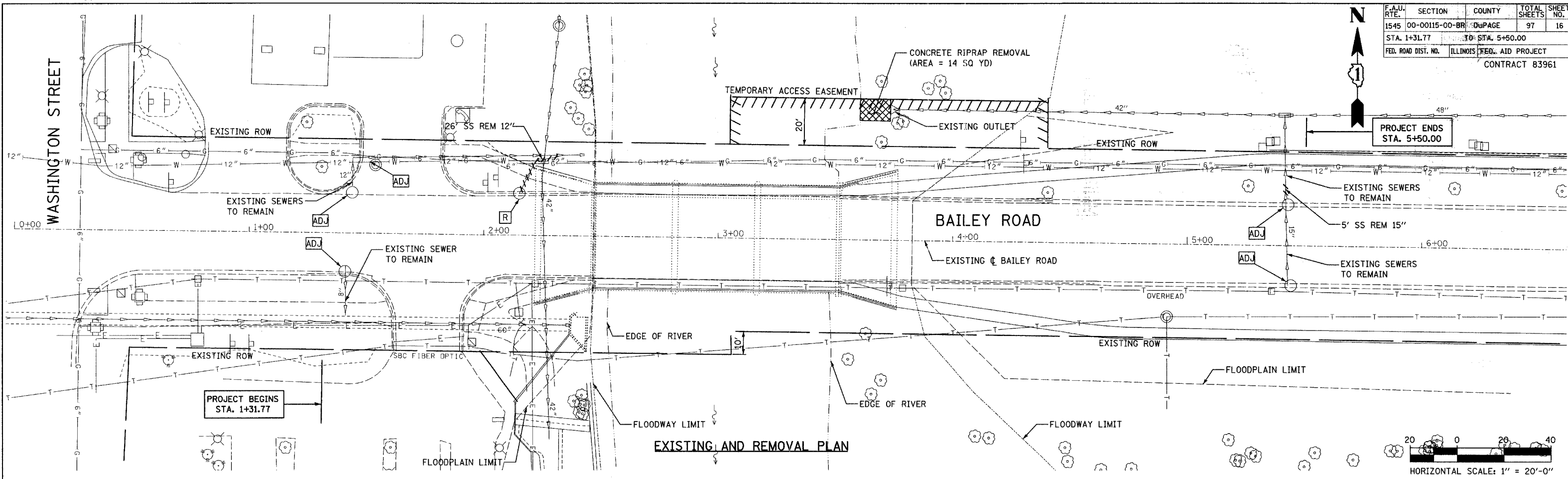


- NOTES**
1. SEE ELECTRICAL PLANS FOR ADDITIONAL PROPOSED WORK.
 2. ALL CURB TRANSITIONS SHALL BE 10' UNLESS NOTED OTHERWISE.
 3. HOT-MIX ASPHALT BINDER COURSE IL-19.0, N70 BEGINS AT END OF BUTT JOINT.



REVISIONS NAME DATE		BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER PROPOSED PLAN AND PROFILE	City of Naperville
CONSULTANT TYLIN INTERNATIONAL			
DRAWN: RTM CHECKED: SP APPROVED: _____ DATE: JULY 13, 2007 SCALE: HORIZ. 1"=20'-0" VERT. 1"=4'-0"		SHEET NO. 15 PROJECT NO.: BHM-8003(343)	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	16
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				



PROPOSED PLAN

- LEGEND:**
- XX PROPOSED STORM SEWER NUMBER
 - XX PROPOSED STRUCTURE NUMBER
 - //// UTILITY REMOVAL


- NOTES:**
1. COST SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF SEWER INSTALLATION.
 2. COST SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF PRECAST REINFORCED CONCRETE FLARED END SECTION INSTALLATION.

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

**EXISTING AND PROPOSED
DRAINAGE PLAN**

CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

DRAWN: RTM	SHEET NO. 16
CHECKED: SP	
APPROVED:	
DATE: JULY 13, 2007	
SCALE: 1"=20'-0"	
JOB NO.: C-91-062-04	PROJECT NO.: BHM-8003(343)

DRAINAGE STRUCTURE SCHEDULE

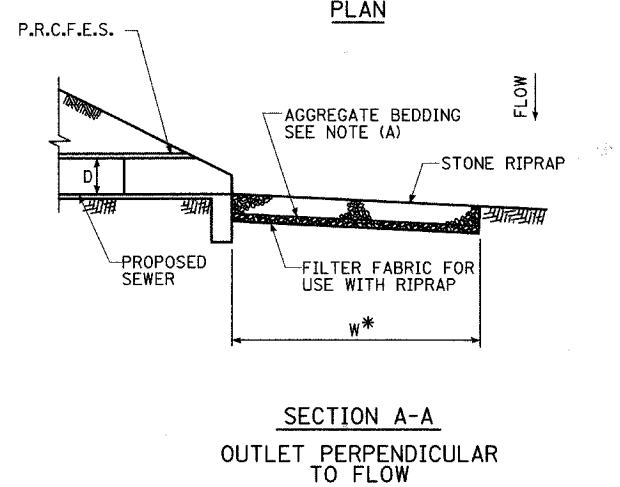
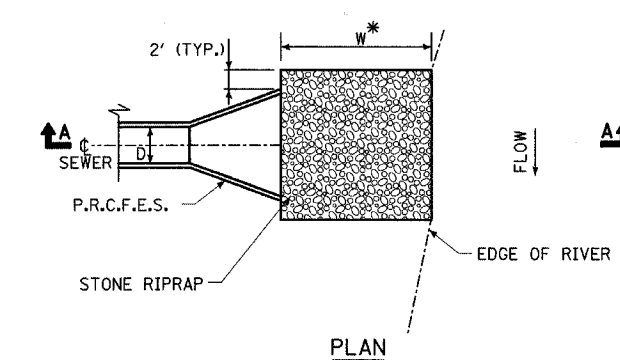
STRUCTURE NUMBER	STATION	OFFSET	STRUCTURE TYPE		DIA. (FT)	FRAME & LID	TOP OF FRAME	N INV.	E INV.	S INV.	W INV.
			MH/ES	CB							
1	2+42.52	35.0 LT	FES(1)		12(1)						646.39
11	1+75.00	16.5 RT		A	4	T11 OL	657.23		650.96		
12	2+05.00	16.7 RT		A	4	T11 F&G	657.42	650.70		648.70	650.70
13	2+01.40	16.8 LT		A	4	T11 F&G	657.40			650.97	
NOT USED	NOT USED										
15	4+03.00	16.7 RT		A	4	T11 F&G	657.41		652.52		
16	4+03.00	16.7 LT		A	4	T11 F&G	657.41		652.02		
17	4+59.00	16.5 RT		A	4	T11 F&G	657.08	651.96			651.96
18	4+60.79	16.5 LT		A	4	T11 F&G	657.07		651.46	651.46	651.46
19	5+41.67	24.0 LT	A		4	T11 CL	656.79	650.40		650.40	650.63

STORM SEWER SCHEDULE

PIPE NUMBER	UPSTREAM STATION	DOWNSTREAM STATION	TYPE	DIA. (IN)	LENGTH (FT)	SLOPE (%)	.B. (CU.YD)
21	1+75.00	2+05.00	2	12	26	1.00	20.2
22	2+01.40	2+05.00	2	12	27	1.00	21.4
23	2+05.00	2+05.00	2	12	18	1.67	4.5
24	4+03.00	4+59.00	2	12	52	1.00	3.4
25	4+59.00	4+60.79	2	12	27	1.00	7.1
26	4+03.00	4+60.79	2	12	52	1.00	2.9
27	4+60.79	5+41.67	2	12	80	1.00	29.2

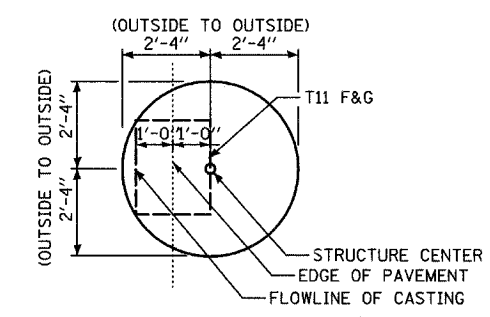
NOTES:

- (1) FES=FLARED END SECTION. SIZE NOTED IN SCHEDULE IS GIVEN IN INCHES.
- (2) SEE THE DRAINAGE & UTILITY PLANS FOR LOCATION OF ALL STRUCTURES.
- (3) CATCH BASIN STATIONS AND OFFSETS ARE MEASURED TO EDGE OF PAVEMENT. (SEE BELOW)
- (4) THE STATION/OFFSET/ELEVATION NOTED FOR ALL DRAINAGE STRUCTURES LOCATED IN THE CURB LINE AND/OR SHOULDER REFER TO THE POSITION OF THE ADJACENT PROPOSED EDGE OF PAVEMENT OR EDGE OF SHOULDER AS APPLICABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE OFFSET NECESSARY FOR THE STRUCTURES TO SET THE FRAME AND GRATE IN THE PROPOSED LOCATION. THE STATION/OFFSET FOR ALL OTHER DRAINAGE STRUCTURES ARE DIMENSIONED TO THE CENTER OF STRUCTURE AND ELEVATION TO TOP OF GRATE.



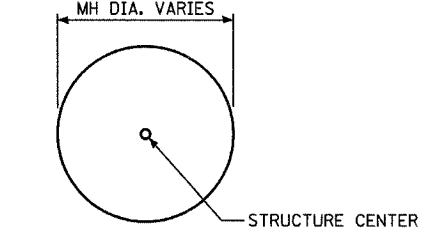
RIPRAP DETAILS
*W-SEE DRAINAGE PLANS FOR DIMENSIONS

NOTE:
(A) THE COST OF AGGREGATE BEDDING SHALL BE INCLUDED IN THE COST OF RIPRAP PER SQUARE YARD.



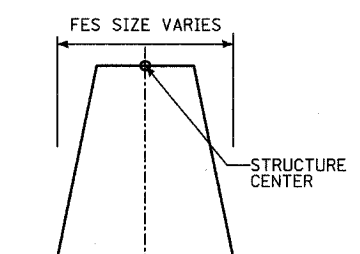
CATCH BASIN
(PRECAST REINFORCED CONCRETE SECTION)

(5) MANHOLE STATIONS AND OFFSETS ARE MEASURED TO CENTER OF STRUCTURE. (SEE BELOW)



MANHOLE

(6) FLARED END SECTION STATIONS AND OFFSETS ARE MEASURED TO CENTER OF STRUCTURE. (SEE BELOW)

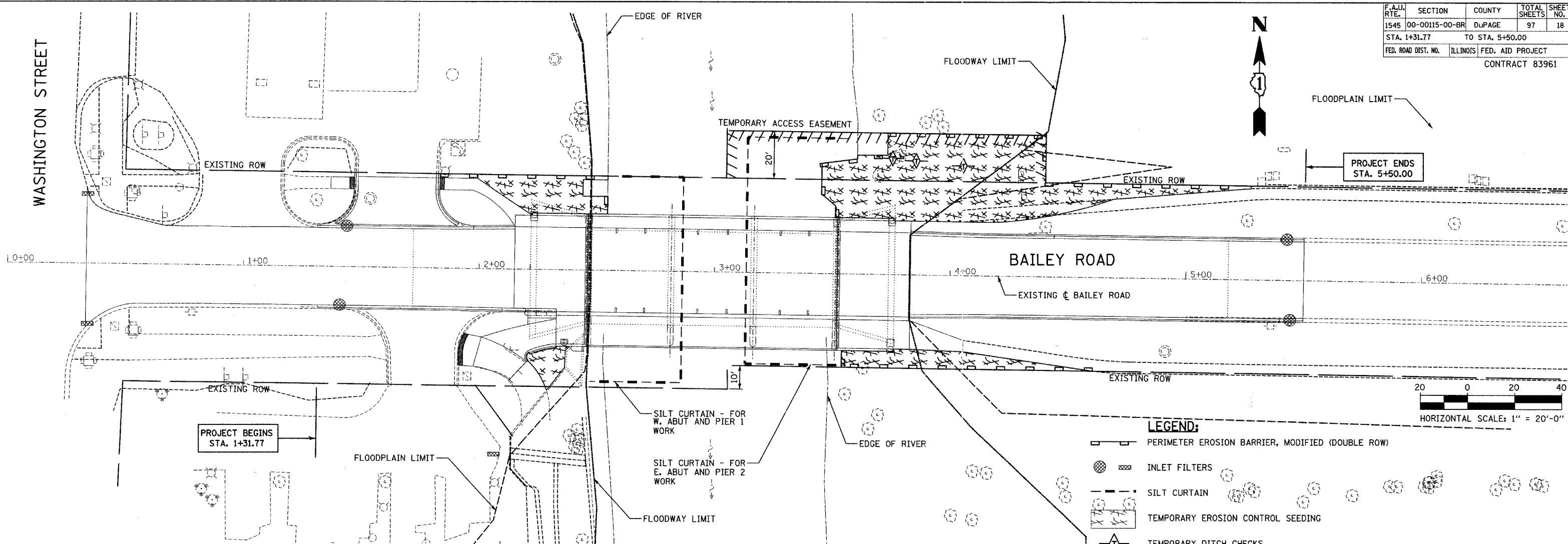


FES

LEGEND:
P.R.C.F.E.S.=PRECAST REINFORCED CONCRETE
FLARED END SECTION
D=SEWER DIAMETER

REVISIONS <table border="1"> <thead> <tr> <th>NAME</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		NAME	DATE																					BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER DRAINAGE SCHEDULES AND DETAILS	City of Naperville
NAME	DATE																								
CONSULTANT TYLIN INTERNATIONAL		DRAWN: RTM CHECKED: NB APPROVED: DATE: JULY 13, 2007 SCALE: NONE JOB NO.: C-91-062-04	SHEET NO. 17 PROJECT NO.: BHM-8003(343)																						

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	18
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83961	

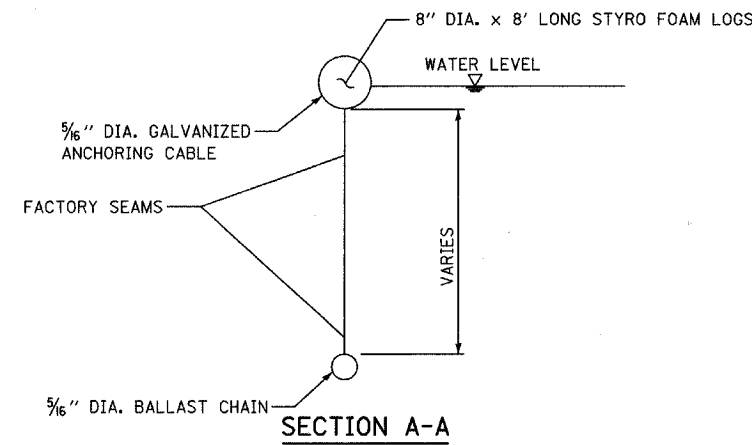


PROJECT BEGINS STA. 1+31.77

PROJECT ENDS STA. 5+50.00

LEGEND:

- PERIMETER EROSION BARRIER, MODIFIED (DOUBLE ROW)
- INLET FILTERS
- SILT CURTAIN
- TEMPORARY EROSION CONTROL SEEDING
- TEMPORARY DITCH CHECKS

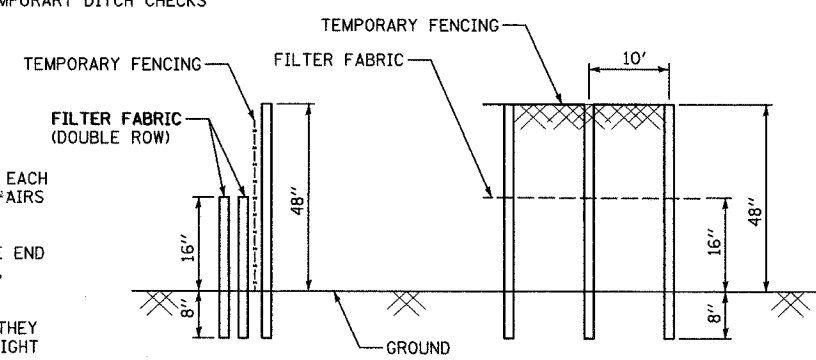


GENERAL NOTES

1. THE SURFACE OF STRIPPED OR DISTURBED AREAS SHALL BE PERMANENTLY OR TEMPORARILY STABILIZED WITHIN 14 DAYS AFTER FINAL GRADE IS REACHED OR WHEN LEFT IDLE FOR MORE THAN 14 DAYS. TEMPORARY EROSION CONTROL AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY UNTIL PERMANENT SOIL EROSION CONTROL MEASURES HAVE BEEN ADEQUATELY ESTABLISHED.
2. STOCKPILES OF SOIL SHALL NOT BE LOCATED IN SPECIAL MANAGEMENT AREAS.
3. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN 3 DAYS, THEN EROSION AND SEDIMENT CONTROL SHALL BE PROVIDED FOR SUCH STOCKPILE.
4. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30-DAYS AFTER FINAL STABILIZATION IS ACHIEVED WITH PERMANENT SOIL STABILIZATION MEASURES. TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF AND THE AREA PERMANENTLY STABILIZED.
5. INLET FILTERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS SHALL BE MADE IMMEDIATELY. WHEN CLOGGING OCCURS, INLET FILTERS SHALL BE CLEANED OR REPLACED AS DIRECTED BY THE ENGINEER.

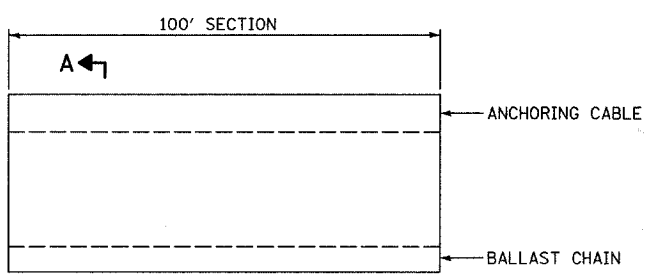
PERIMETER EROSION BARRIER MAINTENANCE

1. PERIMETER EROSION BARRIER SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY HALF THE HEIGHT OF THE BARRIER.
4. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDDED.



PERIMETER EROSION BARRIER, MODIFIED DETAIL

1. TEMPORARY FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES.
2. FILTER FABRIC SHALL BE FASTENED SECURELY TO THE TEMPORARY FENCE WITH WIRE TIES.



SILT CURTAIN DETAIL
NOT TO SCALE

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

EROSION CONTROL PLANS

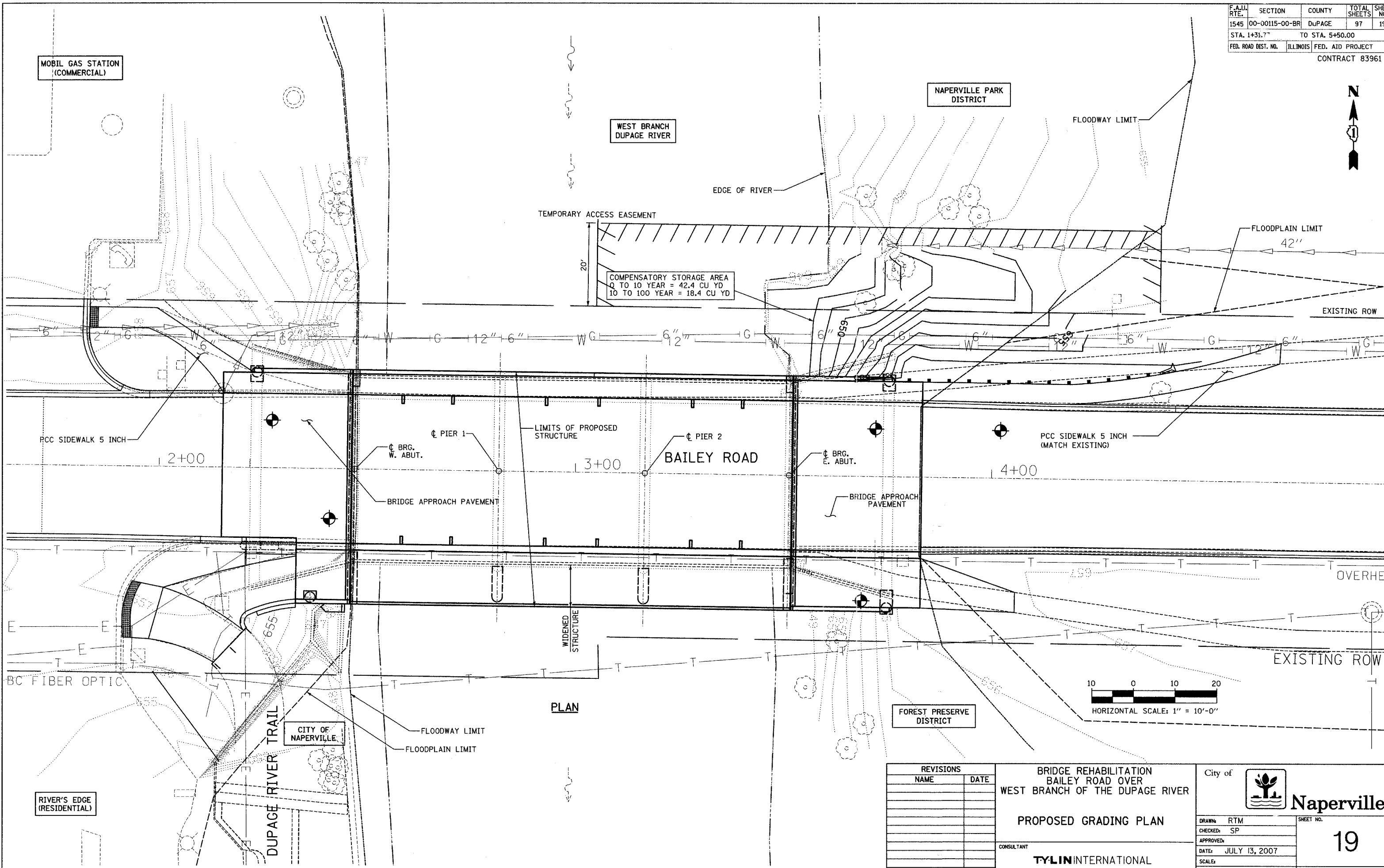
CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

DRAWN: RTM
CHECKED: SP
APPROVED:
DATE: JULY 13, 2007
SCALE: 1"=20'-0"
JOB NO.: C-91-062-04

SHEET NO.
18

PROJECT NO.: BHM-8003(343)




PLAN

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

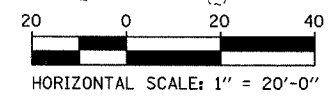
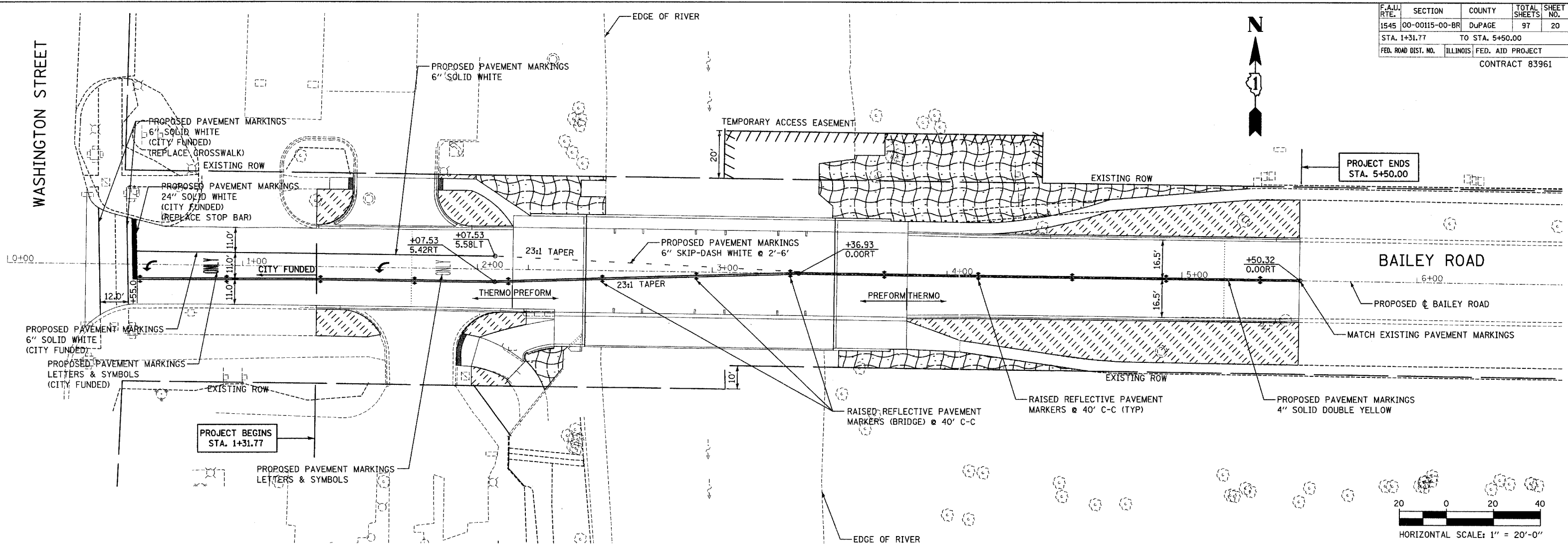
PROPOSED GRADING PLAN

CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

DRAWN: RTM	SHEET NO.
CHECKED: SP	19
APPROVED:	
DATE: JULY 13, 2007	
SCALE:	PROJECT NO.: PHM-8003(343)
JOB NO.: C-91-062-04	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DuPAGE	97	20
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		CONTRACT 83961



NOTES:

1. ALL PERMANENT PAVEMENT MARKINGS PLACED ON HMA ARE TO BE THERMOPLASTIC.
2. ALL PERMANENT PAVEMENT MARKINGS PLACED ON BRIDGE PAVEMENT ARE TO BE PREFORMED PLASTIC.

LEGEND:

- SEEDING, CLASS 4A - LOW PROFILE NATIVE GRASS WITH EROSION CONTROL BLANKET
- SODDING, SALT TOLERANT

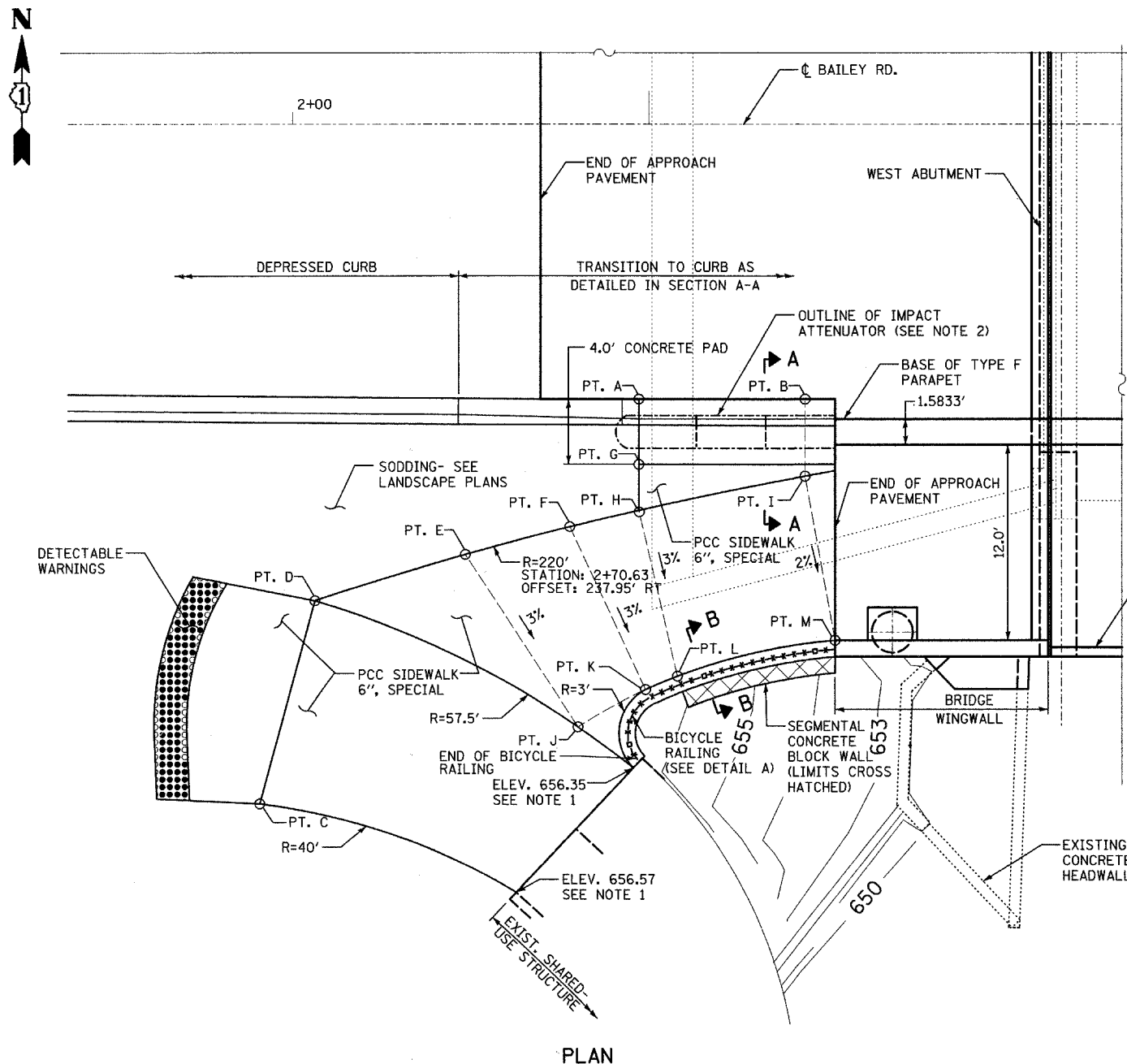
REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER
PAVEMENT MARKING AND
SIGNING PLANS
LANDSCAPING PLANS

CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

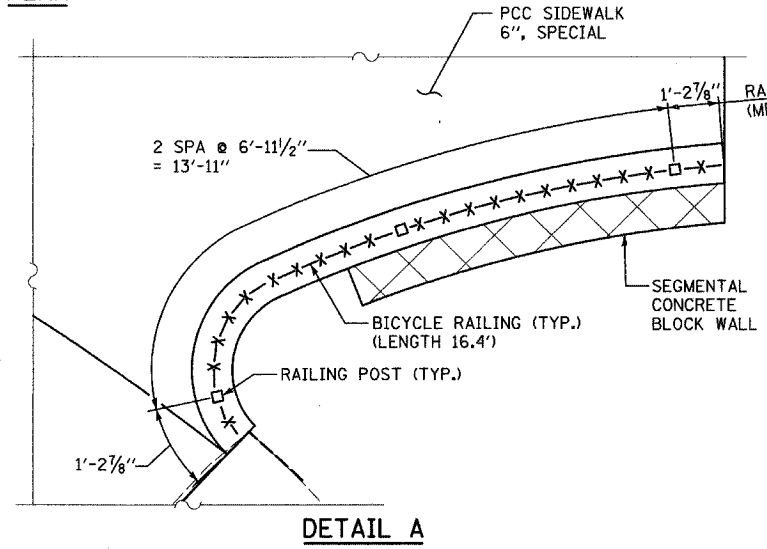
DRAWN: RTM	SHEET NO.
CHECKED: SP	20
APPROVED:	
DATE: JULY 13, 2007	PROJECT NO.: BHM-8003(343)
SCALE: 1"=20'-0"	JOB NO.: C-91-062-04



PLAN

SIDEWALK LAYOUT

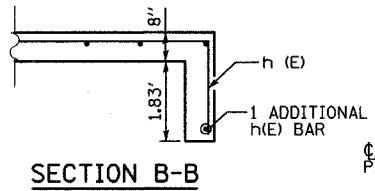
POINT	STATION	OFFSET	ELEVATION
A	2+21.15	16.79' RT	657.55
B	2+31.32	16.79' RT	657.63
C	1+97.99	41.58' RT	656.63
D	2+01.37	29.14' RT	657.25
E	2+10.55	26.32' RT	656.90
F	2+16.94	24.61' RT	657.10
G	2+21.15	20.79' RT	657.47
H	2+21.15	23.59' RT	657.19
I	2+31.32	21.50' RT	657.54
J	2+17.43	36.88' RT	656.52
K	2+21.56	34.61' RT	656.77
L	2+23.50	33.79' RT	656.88
M	2+33.15	31.58' RT	657.34



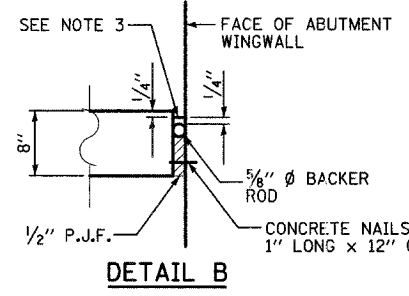
DETAIL A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	9	#4	2'-3"	
h ₁ (E)	3	#4	6'-6"	
Reinforcement Bars, Epoxy Coated		POUND	30	
Concrete Structures		CU YD	0.4	



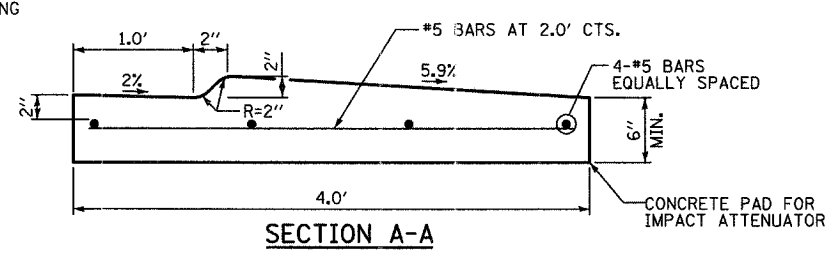
SECTION B-B



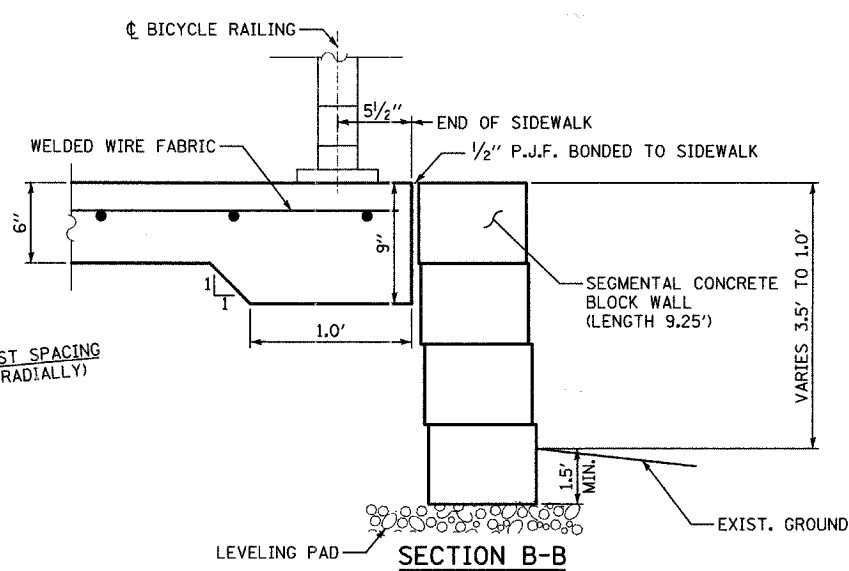
DETAIL B

BAR h (E)

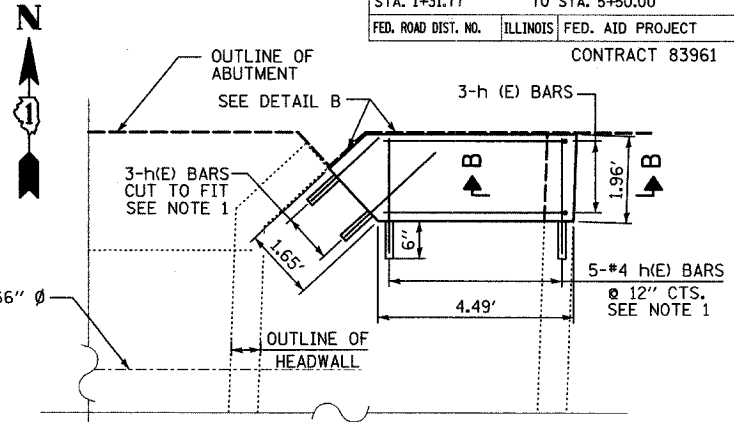
RECONSTRUCTION OF CONCRETE APRON AT 66" Ø PIPE



SECTION A-A



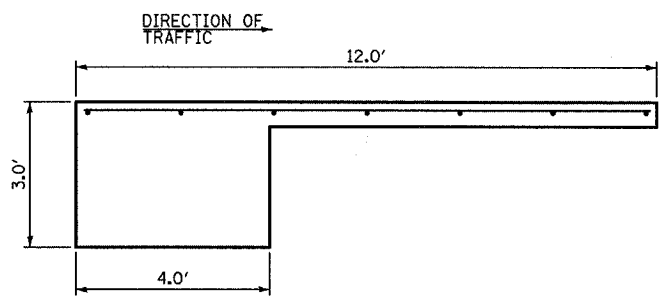
SECTION B-B



PLAN

NOTES:

- EPOXY GROUT BARS IN 6" DEEP MINIMUM DRILLED HOLES ACCORDING TO ARTICLE 584 OF THE STANDARD SPECIFICATIONS. THE GROUT AND METHOD OF APPLICATION SHALL BE APPROVED BY THE ENGINEER.
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- NON-STAINING GRAY ONE COMPONENT NON-SAG ELASTOMERIC GUN GRADE POLYURETHANE SEALANT MEETING THE REQUIREMENTS OF ASTM C-920, TYPE S, GRADE NS, CLASS 25, USE T WITH A 5/8" BACKER ROD. COST INCLUDED WITH CONCRETE STRUCTURES.



LONGITUDINAL SECTION THRU CONCRETE PAD

GENERAL NOTES:

- ELEVATIONS OF EXISTING SHARED-USE STRUCTURE TAKEN FROM SURVEY. CONTRACTOR TO FIELD VERIFY AND ADJUST PROPOSED SIDEWALK ELEVATIONS AS NECESSARY.
- IMPACT ATTENUATOR (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2. LAYOUT OF ATTENUATOR SHOWN IS QUADGUARD MODEL # QS2403Y. IF CONTRACTOR SELECTS AN ALTERNATIVE, THAT SYSTEM SHALL HAVE A MAXIMUM OUT TO OUT WIDTH OF 2'-7" AND MAX HEIGHT FROM TOP OF LEVELING PAD OF 34".
- CONCRETE FOR ATTENUATOR BASE SHALL BE IN ACCORDANCE WITH SECTION 420 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH SECTION 508 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706 GRADE 60 (IL MODIFIED).
- THE CONCRETE, REINFORCEMENT BARS AND NECESSARY EXCAVATION WILL BE INCLUDED IN THE COST OF "IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2".
- THE IMPACT ATTENUATOR SHALL HAVE A TRANSITION RAIL SEGMENT ON THE SHARED-USE PATH SIDE TO SHIELD PEDESTRIANS FROM THE BLUNT END OF THE ATTENUATOR.
- FOR DETAILS OF BICYCLE RAILING, SEE SHEET 37.

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

MISCELLANEOUS DETAILS

CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

City of Naperville logo and name.

DRAWN: DE
CHECKED: SP
APPROVED:
DATE: JULY 13, 2007
SCALE:
JOB NO.: C-91-062-04
PROJECT NO.: BHM-8003(343)

SHEET NO.
21

Benchmark: DuPage County Benchmark #L132001 atop Northwest wingwall Elev. 659.83. (DuPage County Datum)
 Existing Structure: S.N. 022-3028. Built in 1969 as 79th Street Bridge is a 3-span PPC Deck Beam superstructure with closed abutments and solid walled piers. Bk. to Bk. abutments is 106'-6" and 46'-0" out to out deck. The contractor shall remove the superstructure and replace it with a reinforced concrete deck on continuous steel wide flange beams. Proposed out to out deck is 56'-7". The substructure will be partially removed and widened in-kind. The construction will be staged for the substructure widening and North sidewalk construction. Traffic will be detoured during superstructure replacement.

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 1 39 - SHEETS
1545	*	DUPAGE	97	22	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 83961
		00-00115-00-BR			

LOADING HS20-44

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

DESIGN SPECIFICATIONS

AASHTO 2002 Standard Specifications for Highway Bridges, 17th Edition

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.04
 Site Coefficient (S) = 1.0

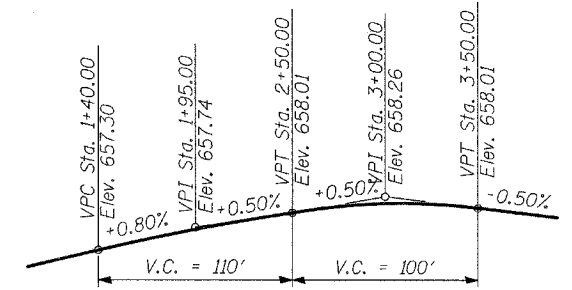
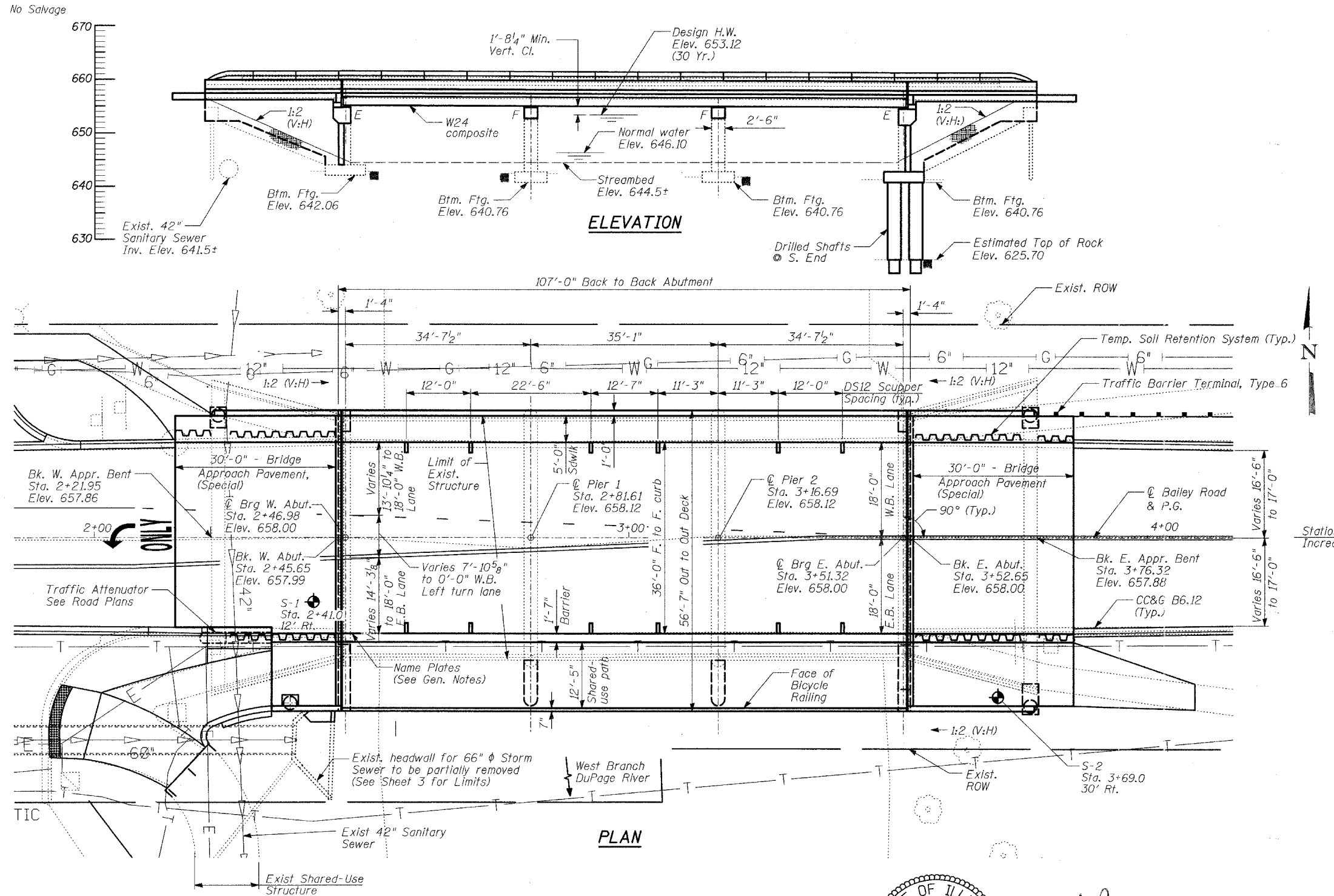
DESIGN STRESSES

FIELD UNITS (New Construction)

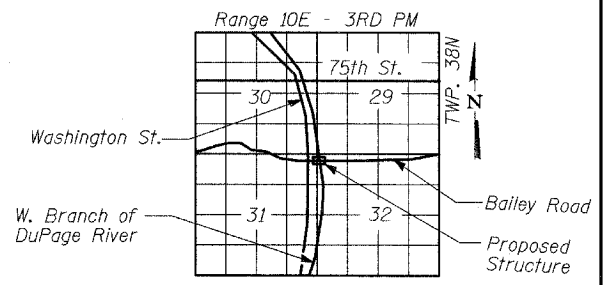
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $F_y = 50,000$ psi (M270 Grade 50W) Structural Steel

FIELD UNITS (Existing Construction)

$f'_c = 3,500$ psi (Piers)
 $f'_c = 2,500$ psi (Abutments)
 $f_y = 40,000$ psi (Reinforcement)



PROFILE GRADE
 (along centerline roadway)



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 114.70 sq. mi. Low Grade Elev. 656.65 @ Sta. 5+00

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head-Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	3510	755	755	652.15	0.11	0.10	652.26	652.25
Base	30	4703	850	850	653.12	0.17	0.16	653.29	653.28
Overtopping	100	5600	914	914	653.77	0.22	0.21	653.99	653.98
Max. Calc.	500	7500	995	995	654.60	0.68	0.66	655.28	655.26

TYLIN INTERNATIONAL

DESIGNED	- SP
CHECKED	- PF
DRAWN	- SP
CHECKED	- PF



Signed *S. Pantazis*
 Spiros Pantazis, S.E. II, Lic. No. 081-006448 Expires 11-30-2008.
 Date July 12, 2007 For drawings 1 thru 39

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications of Highway Bridges".

GENERAL PLAN & ELEVATION

BAILEY ROAD OVER THE
 WEST BRANCH OF THE DUPAGE RIVER
 FAU 1545
 SECTION 00-00115-00-BR STA. 2+99.15
 DUPAGE COUNTY
 S.N. 022-3028

GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 3. Bolts $\frac{7}{8}$ in. ϕ , holes $\frac{15}{16}$ in. ϕ , unless otherwise noted.
- Calculated weight of Structural Steel:
Grade 36 = 11,380 lbs.
Grade 50 = 65,800 lbs.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars designated (E) shall be epoxy coated.
- Concrete Sealer shall be applied to the exposed surface area of the abutment stems.
- All structural steel shall be AASHTO M 270 Grade 50W (except expansion joints which shall be AASHTO M 270 Grade 36.)
- Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
- Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
- Structural steel shall only be painted for a distance of 6 ft. each way from the deck joints. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- All exposed structural steel of the bearings shall be cleaned and shop painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
- The Contractor is advised that the existing PPC deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
- The existing name plate shall be cleaned and relocated adjacent to the new name plate. Cost included with Name Plates.
- If the Contractor's procedure for existing beam removal involves placement of cranes or other heavy equipment on the beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the beams. To distribute the load to multiple beams, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams.
- The pay item Underwater Structure Excavation Protection - Location 1 is to cover the substructure work for the West Abutment and Pier 1. The pay item Underwater Structure Excavation Protection - Location 2 is to cover the substructure work between the East Abutment and Pier 2. The method of dewatering shall be submitted to the DuPage County Division of Environmental Concerns for approval.
- The river is used at times by canoeists. During removal operations, the Contractor shall prevent debris from falling into the river and shall not dump debris into the river.
- The Contractor shall restrict access beneath the structure during beam or concrete removal operations, beam erection and deck formwork installation that occur above Span 2. The cost shall be included in the pay items associated with this work.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

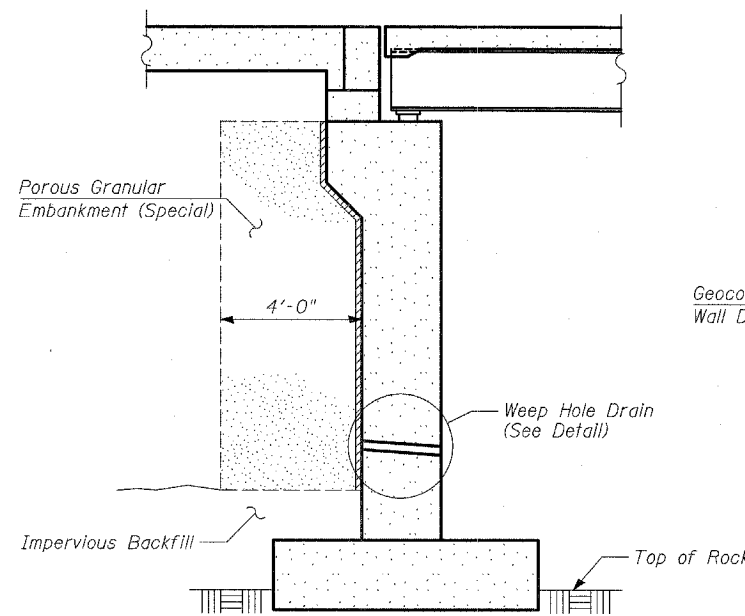
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1545	*	DUPAGE	97	23
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	39 - SHEETS
* 00-00115-00-BR				CONTRACT NO. 83961

INDEX OF SHEETS

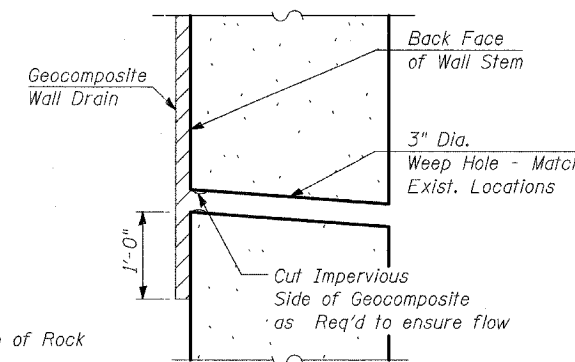
- GENERAL PLAN & ELEVATION
- GEN NOTES, SHT. INDEX, BILL OF MATERIAL
- SUBSTRUCTURE REMOVAL DETAILS
- STAGE CONSTRUCTION - I
- STAGE CONSTRUCTION - II
- TEMPORARY CONCRETE BARRIER
- TOP OF SLAB ELEVATIONS - LAYOUT
- TOP OF SLAB ELEVATIONS - I
- TOP OF SLAB ELEVATIONS - II
- TOP OF WEST APPROACH PAVEMENT ELEVATIONS
- TOP OF EAST APPROACH PAVEMENT ELEVATIONS
- DECK PLAN
- PARAPET ELEVATIONS
- DECK CROSS SECTION, BAR LIST AND BILL OF MATERIAL
- ALUMINUM RAILING, TYPE L
- RAILING DETAILS
- PREFORMED JOINT STRIP SEAL
- DRAINAGE SCUPPER, DS-12
- FRAMING PLAN
- FRAMING DETAILS
- BEARINGS
- WEST ABUTMENT
- WEST ABUTMENT CURTAIN WALLS
- WEST ABUTMENT SECTIONS AND DETAILS
- EAST ABUTMENT
- EAST ABUTMENT CURTAIN WALLS
- EAST ABUTMENT SECTIONS AND DETAILS
- WEST AND EAST ABUTMENT REINFORCING
- PIERS 1 & 2
- PIER DETAILS
- SUBSTRUCTURE REPAIR
- CANTILEVER FORMING BRACKETS
- BAR SPLICER ASSEMBLY DETAILS
- SOIL BORING S-1
- SOIL BORING S-2
- WEST APPROACH PAVEMENT LAYOUT
- WEST APPROACH PAVEMENT DETAILS
- EAST APPROACH PAVEMENT LAYOUT
- EAST APPROACH PAVEMENT DETAILS

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD		148	148
REMOVAL OF EXISTING SUPERSTRUCTURES	L SUM	1		1
CONCRETE REMOVAL	CU YD		111.0	111.0
STRUCTURE EXCAVATION	CU YD		299	299
ROCK EXCAVATION FOR STRUCTURES	CU YD		13	13
CONCRETE STRUCTURES	CU YD		181.9	181.9
CONCRETE SUPERSTRUCTURE	CU YD	190.9		190.9
BRIDGE DECK GROOVING	SQ YD	400		400
PROTECTIVE COAT	SQ YD	1,147		1,147
FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
STUD SHEAR CONNECTORS	EACH	3,129		3,129
REINFORCEMENT BARS	POUND		5,280	5,280
REINFORCEMENT BARS, EPOXY COATED	POUND	53,340	24,970	78,310
BAR SPLICERS	EACH		186	186
ALUMINUM RAILING, TYPE L	FOOT	154		154
BICYCLE RAILING	FOOT	142.3		142.3
PARAPET RAILING	FOOT	150		150
TEMPORARY BRIDGE COMPLETE NO. 1	EACH			1
NAME PLATES	EACH	1		1
PERMANENT CASING	FOOT		82	82
DRILLED SHAFT IN SOIL	CU YD		14.8	14.8
DRILLED SHAFT IN ROCK	CU YD		1.5	1.5
PREFORMED JOINT STRIP SEAL	FOOT	114		114
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	14		14
ANCHOR BOLTS, 1"	EACH	56		56
BRIDGE SEAT SEALER	SQ FT		200	200
CONCRETE SEALER	SQ FT		1,317	1,317
EPOXY CRACK INJECTION	FOOT		205	205
GEOCOMPOSITE WALL DRAIN	SQ YD		116	116
DRAINAGE SCUPPERS, DS-12	EACH	12		12
TEMPORARY SOIL RETENTION SYSTEM	SQ FT		933	933
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT		28	28
UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH		1	1
UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH		1	1
ASBESTOS BEARING PAD REMOVAL	EACH	120		120



TYPICAL SECTION THRU ABUTMENT



WEEP HOLE DRAIN DETAIL

W. BRANCH OF DUPAGE RIVER
REBUILT BY
CITY OF NAPERVILLE
SEC. 00-00115-00-BR
F.A.U. 1545 STA. 2+99.15
STR. NO. 022-3028 LOADING HS20

NAME PLATE
See Std. 515001

GEN NOTES, SHT. INDEX, BILL OF MATERIAL

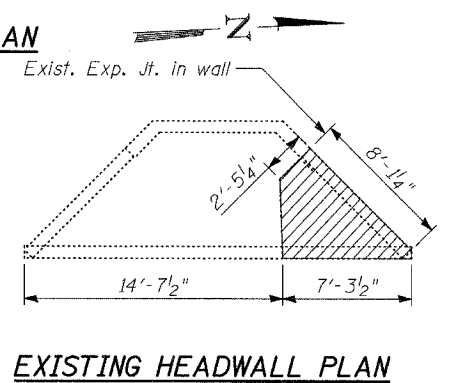
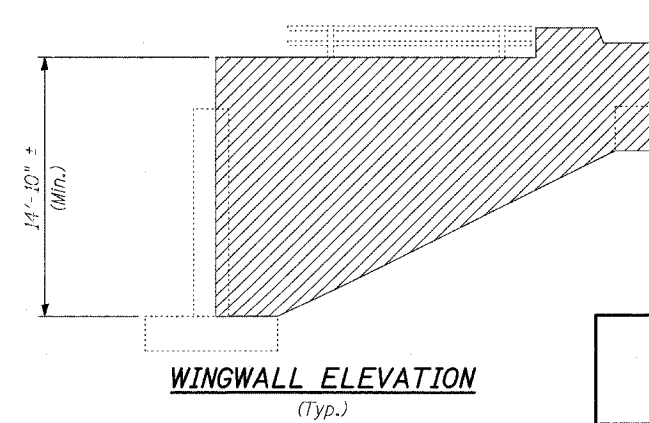
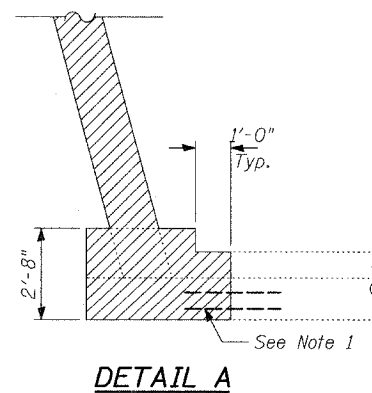
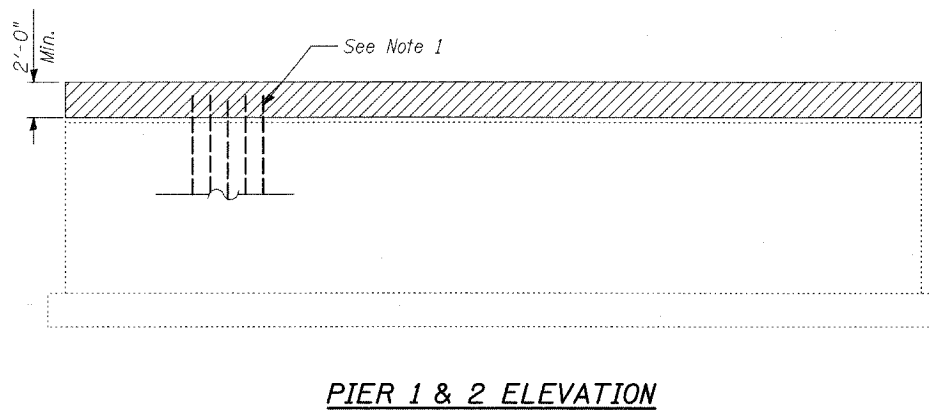
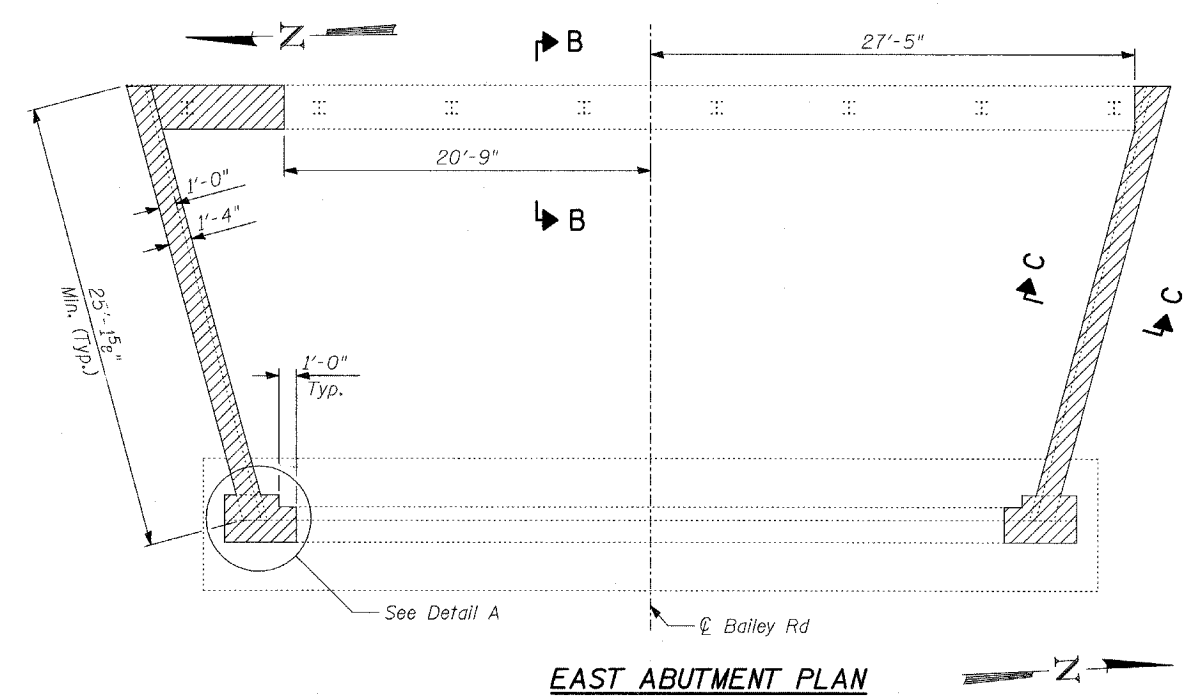
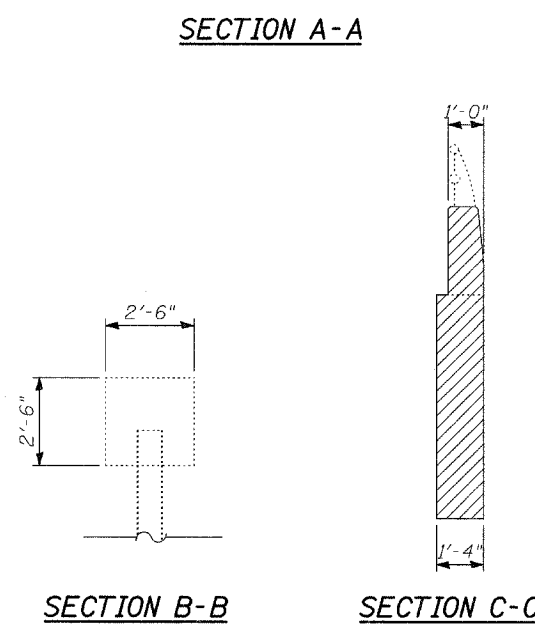
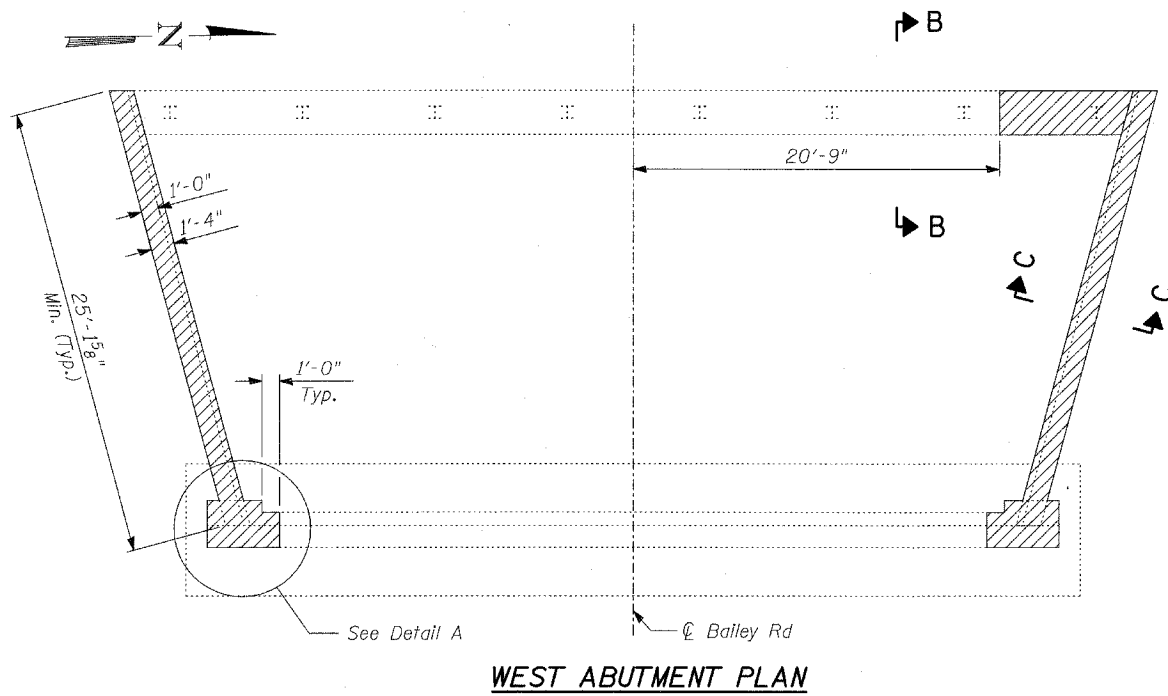
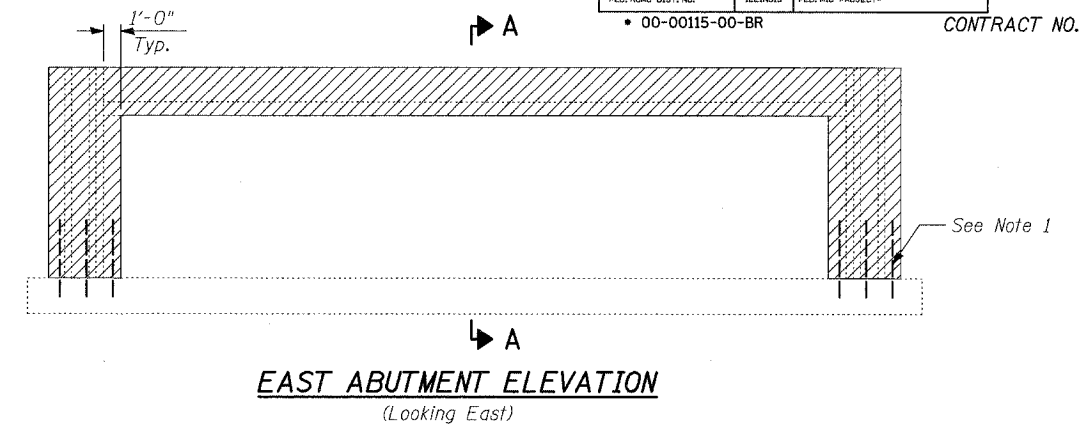
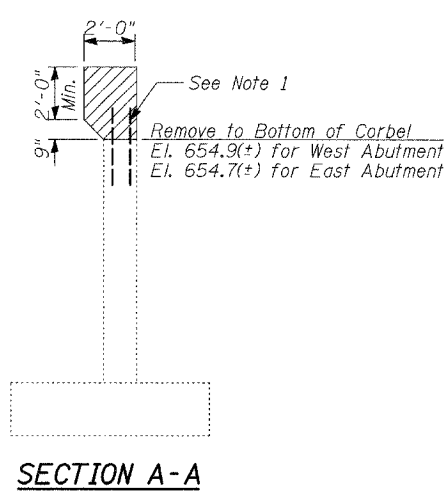
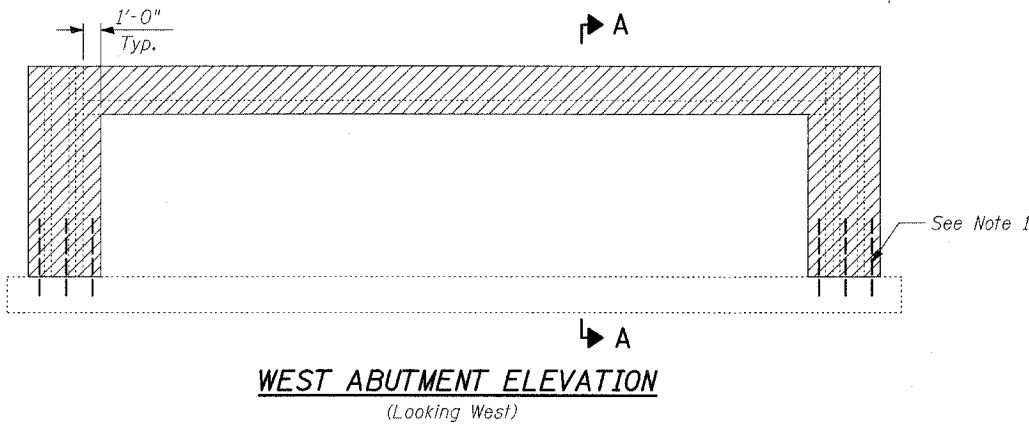
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

TYLIN INTERNATIONAL

DESIGNED	- SP
CHECKED	- PF
DRAWN	- PL
CHECKED	- PF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 3
1545	*	DUPAGE	97	24	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
* 00-00115-00-BR					



TYLIN INTERNATIONAL

DESIGNED	- DE
CHECKED	- SP
DRAWN	- DE
CHECKED	- SP

LEGEND
Concrete Removal

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	CU YD	110.5

NOTES:

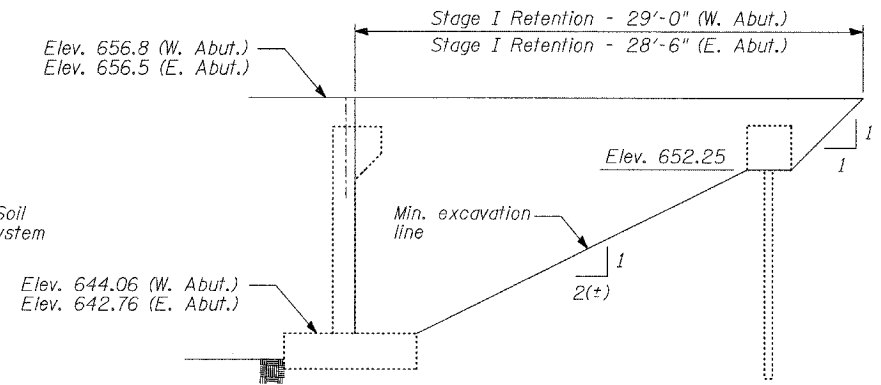
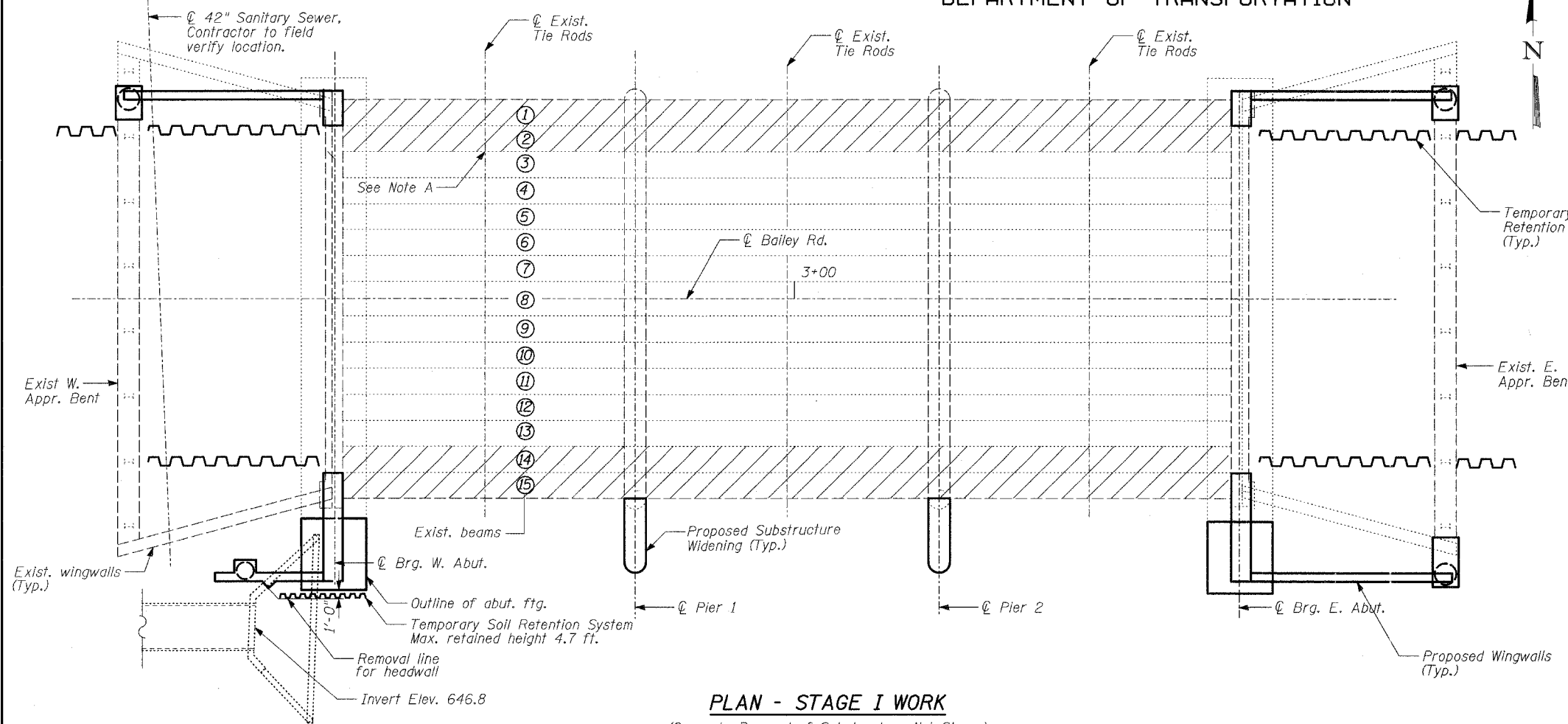
- Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
- Existing structure plans provided for reference. See Sheets 61-66.

SUBSTRUCTURE REMOVAL DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LENG.	SHEET NO.	SHEET NO. - 4
1545	*	DUPAGE	97	25	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT-		CONTRACT NO. 83961	
* 00-00115-00-BR					



TEMPORARY SOIL RETENTION SYSTEM

PLAN - STAGE I WORK

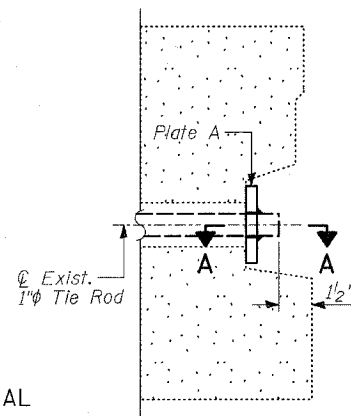
(Concrete Removal of Substructure Not Shown)

NOTES

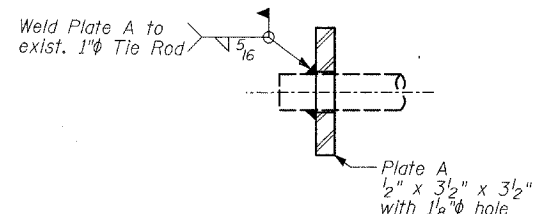
1. A cantilevered sheet piling system does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
2. The Details shown at the Transverse Tie Rod Assemblies including the Concrete Removal at the existing Beams shall be included in the cost of "Removal of Existing Superstructures".

Note A:

Existing tie rods to be cut, see Detail A this sheet. (Typ. at all tie rod locations between beam to be removed and beam to remain, 6 locations)



DETAIL B



SECTION A-A

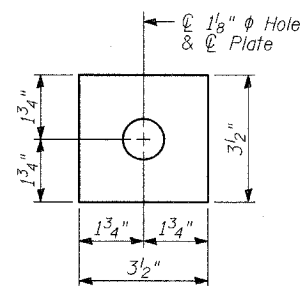
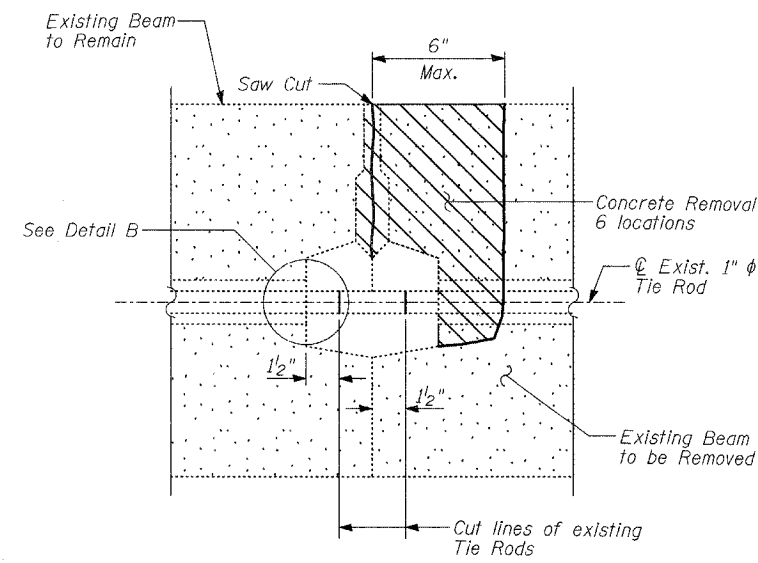


PLATE A



DETAIL A - BEAM REMOVAL DETAIL AT TRANSVERSE TIES

LEGEND

Denotes Beam Removal

TYLIN INTERNATIONAL

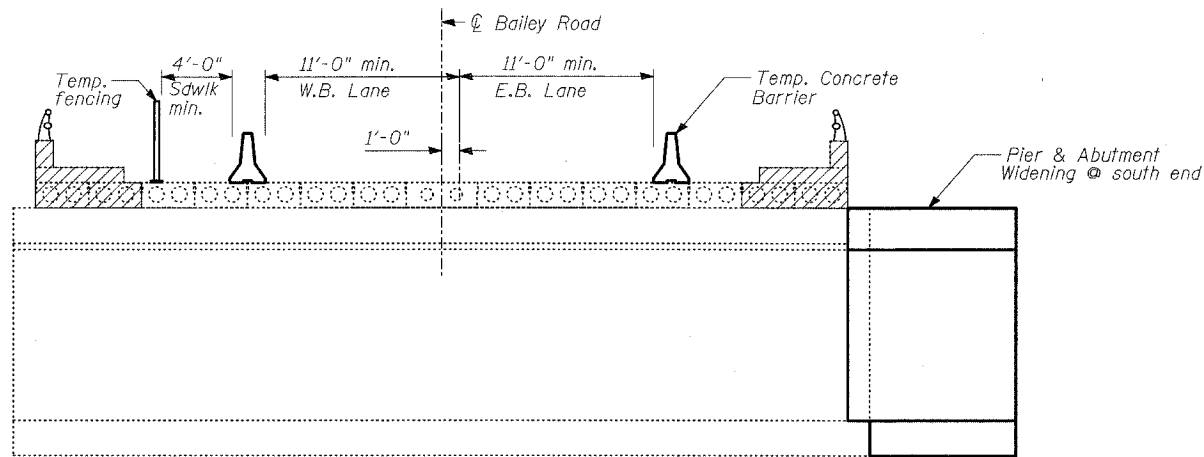
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CHECKED	- PF
DRAWN	- SP, SNB
CHECKED	- PF

STAGE CONSTRUCTION - I

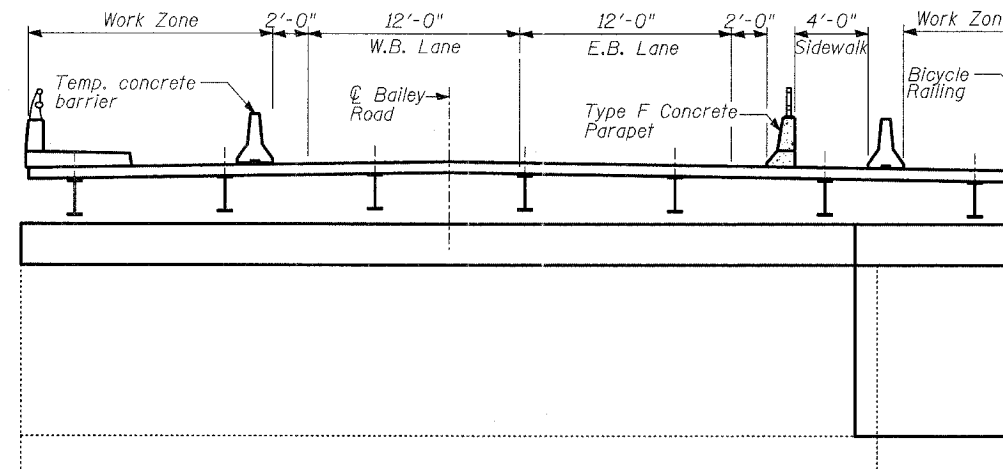
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 5
1545	•	DUPAGE	97	26	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 83961
• 00-00115-00-BR					



STAGE I
(Looking East- Pier shown)



STAGE III
(Looking East- Pier shown)

CONSTRUCTION SEQUENCE

STAGE I

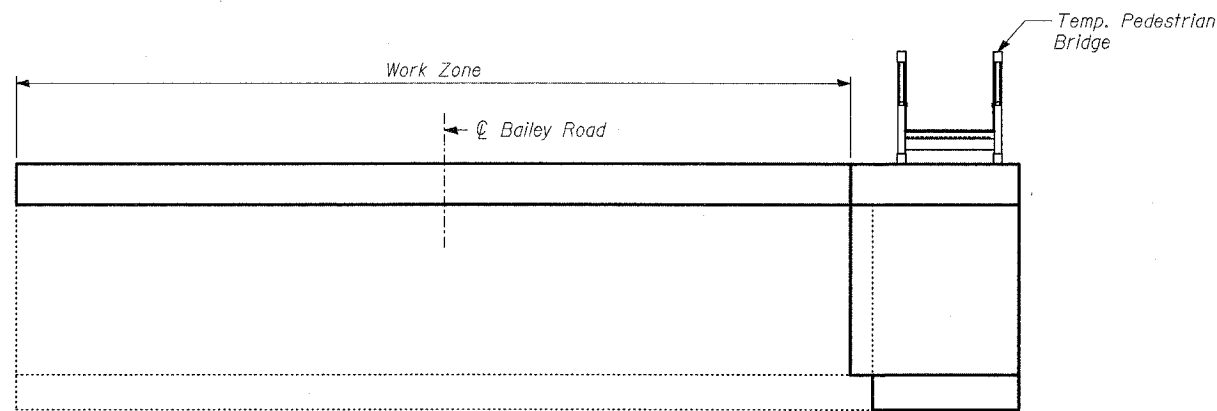
1. Prestage work will consist of removal of the existing sidewalks and barrier, along with beams 1, 2, 14 and 15. The removal of the PPC deck beams will be in accordance with the Special Provision "Removal of Existing Superstructures" along with details on Sheet 4.
2. The Contractor shall set up the Maintenance of Traffic as shown on the plans. Lane and sidewalk widths shown are minimum. The Contractor shall verify the location of the existing PPC deck beams prior to temporary concrete barrier installation. Slight adjustments to the locations of the concrete barrier may be required prior to anchorage of barrier to PPC deck beams to avoid drilling the anchorage bar into the deck beam void.
3. The Contractor shall perform the Substructure work as shown on Sheet 4: Abutment extensions and Wingwalls on the South end, Abutment reconstruction and Wingwalls on the North end.
4. Upon completion of substructure work, the Contractor shall install a temporary pedestrian bridge within the limits of the substructure widening on the south end.

STAGE II

1. Vehicular traffic will be detoured during Stage II work.
2. The Contractor shall remove the remaining PPC beams.
3. The bearing seats for the Piers will be reconstructed. The Abutments will be rehabilitated as shown on the Plans.
4. The temporary pedestrian bridge will be removed prior to the placement of the new beams.
5. Erect the new beams, place the deck and Type F Concrete Parapet.

STAGE III

1. Set up the Maintenance of Traffic details as shown on the Plans.
2. Work to be performed shall be the installation of the Bicycle Railing on the South edge of deck along with Sidewalk and Barrier installation on the North side.



STAGE II
(Looking East- Pier shown)

TYLIN INTERNATIONAL

DESIGNED	- SP
CHECKED	- PF
DRAWN	- SP
CHECKED	- PF

STAGE CONSTRUCTION - II

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 6 39 - SHEETS
1545	•	DUPAGE	97	27	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83961		

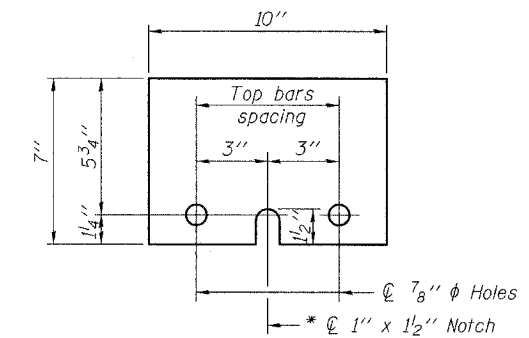
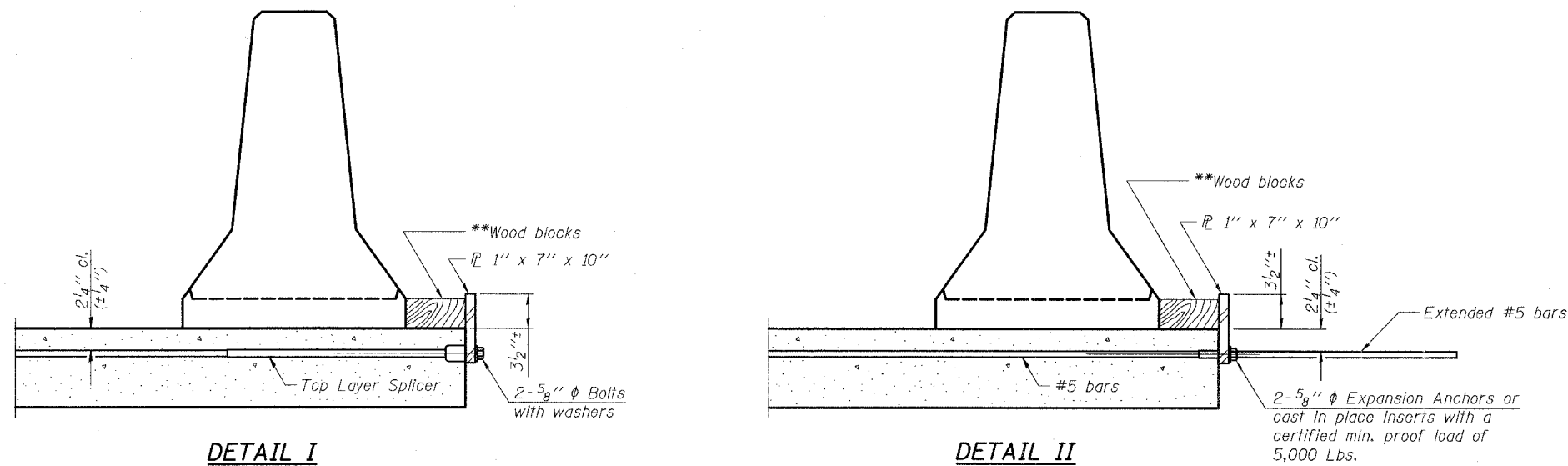
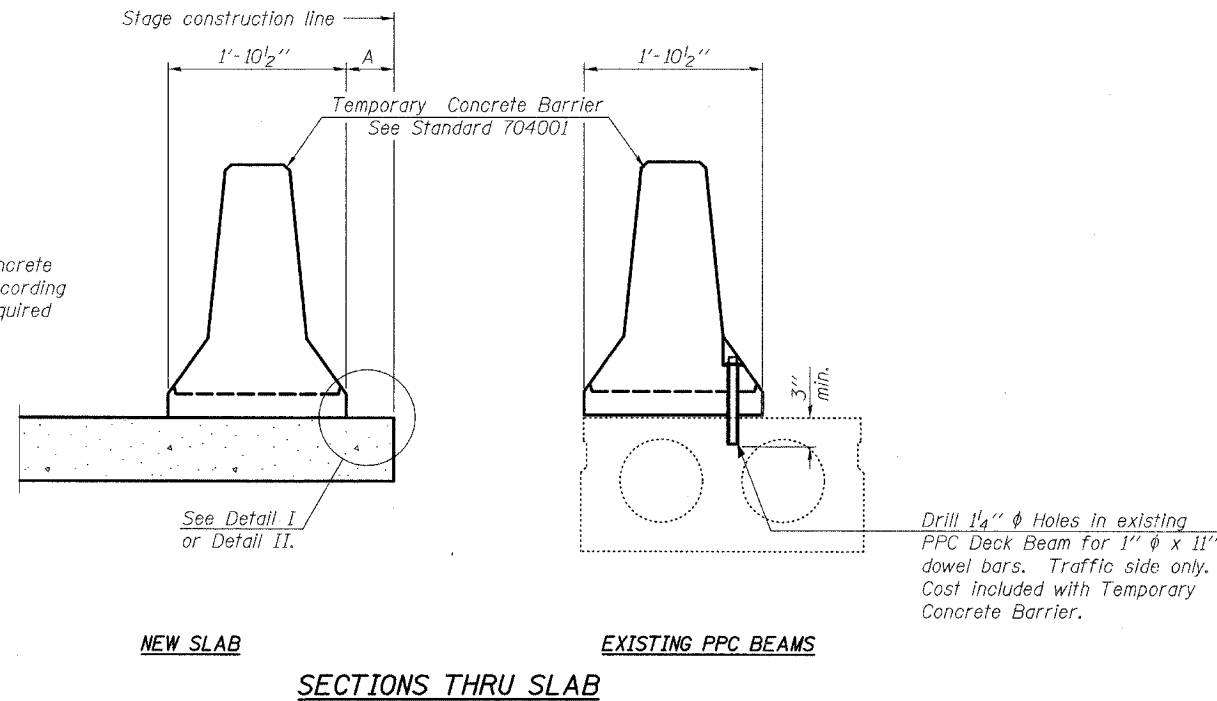
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



STEEL RETAINER \bar{P} 1" x 7" x 10"

* Required only with Detail II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

TYLIN INTERNATIONAL

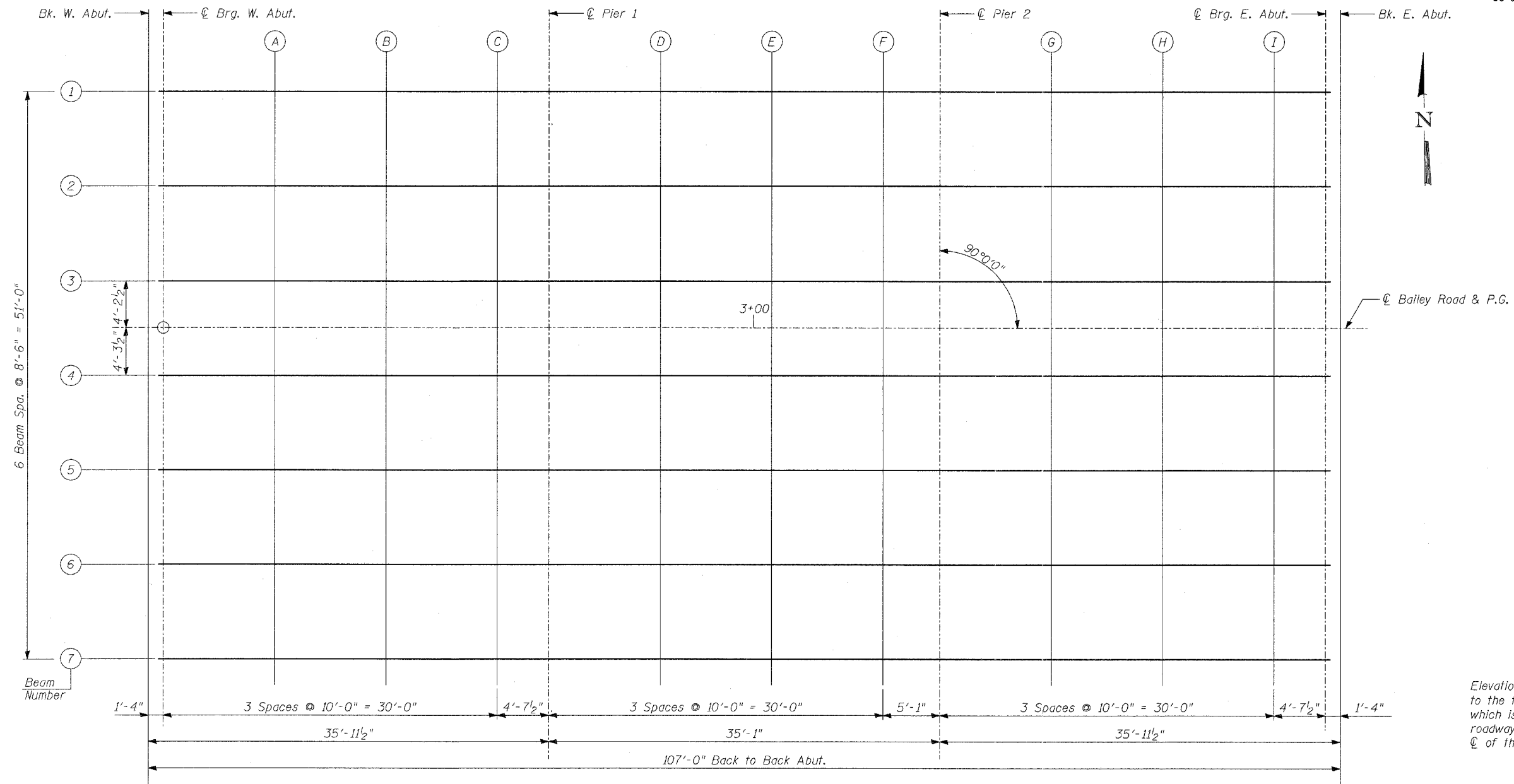
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CHECKED	-	SP
DRAWN	-	SNB
CHECKED	-	SP

TEMPORARY CONCRETE BARRIER

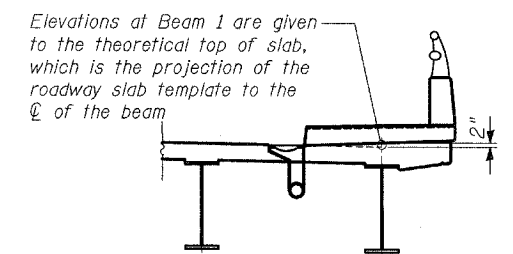
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

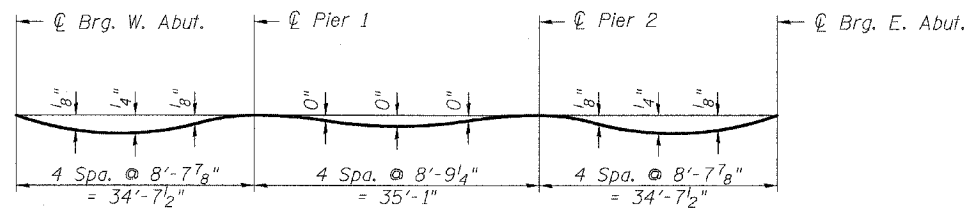
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	•	DUPAGE	97	28
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		
• 00-00115-00-BR			CONTRACT NO. 83961	



PLAN



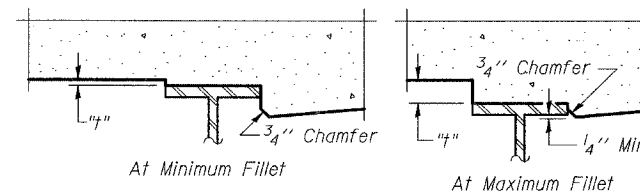
LOCATION OF ELEVATIONS
AT BEAM 1



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections.



FILLET HEIGHTS

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

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- PF
DRAWN	- PL
CHECKED	- PF

TOP OF SLAB ELEVATIONS - LAYOUT

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	•	DUPAGE	97	29
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. - 8

39 - SHEETS

• 00-00115-00-BR

CONTRACT NO. 83961

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	-21.21	657.66	657.66
☉ Brg. West Abut.	2+46.98	-21.21	657.67	657.67
Line A	2+56.98	-21.21	657.71	657.73
Line B	2+66.98	-21.21	657.75	657.77
Line C	2+76.98	-21.21	657.78	657.78
☉ Brg. Pier 1	2+81.61	-21.21	657.79	657.79
Line D	2+91.61	-21.21	657.80	657.80
Line E	3+01.61	-21.21	657.80	657.81
Line F	3+11.61	-21.21	657.80	657.80
☉ Brg. Pier 2	3+16.69	-21.21	657.79	657.79
Line G	3+26.69	-21.21	657.77	657.78
Line H	3+36.69	-21.21	657.74	657.75
Line I	3+46.69	-21.21	657.69	657.70
☉ Brg. East Abut.	3+51.32	-21.21	657.67	657.67
Bk. of East Abut.	3+52.65	-21.21	657.67	657.67

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	-12.71	657.79	657.79
☉ Brg. West Abut.	2+46.98	-12.71	657.80	657.80
Line A	2+56.98	-12.71	657.84	657.86
Line B	2+66.98	-12.71	657.88	657.90
Line C	2+76.98	-12.71	657.91	657.91
☉ Brg. Pier 1	2+81.61	-12.71	657.92	657.92
Line D	2+91.61	-12.71	657.93	657.93
Line E	3+01.61	-12.71	657.94	657.94
Line F	3+11.61	-12.71	657.93	657.93
☉ Brg. Pier 2	3+16.69	-12.71	657.92	657.92
Line G	3+26.69	-12.71	657.90	657.91
Line H	3+36.69	-12.71	657.87	657.89
Line I	3+46.69	-12.71	657.83	657.84
☉ Brg. East Abut.	3+51.32	-12.71	657.80	657.80
Bk. of East Abut.	3+52.65	-12.71	657.80	657.80

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	-4.21	657.93	657.93
☉ Brg. West Abut.	2+46.98	-4.21	657.93	657.93
Line A	2+56.98	-4.21	657.98	657.99
Line B	2+66.98	-4.21	658.01	658.03
Line C	2+76.98	-4.21	658.04	658.05
☉ Brg. Pier 1	2+81.61	-4.21	658.05	658.05
Line D	2+91.61	-4.21	658.07	658.07
Line E	3+01.61	-4.21	658.07	658.07
Line F	3+11.61	-4.21	658.06	658.06
☉ Brg. Pier 2	3+16.69	-4.21	658.06	658.06
Line G	3+26.69	-4.21	658.03	658.05
Line H	3+36.69	-4.21	658.00	658.02
Line I	3+46.69	-4.21	657.96	657.97
☉ Brg. East Abut.	3+51.32	-4.21	657.94	657.94
Bk. of East Abut.	3+52.65	-4.21	657.93	657.93

☉ ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	0.00	657.99	657.99
☉ Brg. West Abut.	2+46.98	0.00	658.00	658.00
Line A	2+56.98	0.00	658.04	658.06
Line B	2+66.98	0.00	658.08	658.10
Line C	2+76.98	0.00	658.11	658.11
☉ Brg. Pier 1	2+81.61	0.00	658.12	658.12
Line D	2+91.61	0.00	658.13	658.13
Line E	3+01.61	0.00	658.13	658.14
Line F	3+11.61	0.00	658.13	658.13
☉ Brg. Pier 2	3+16.69	0.00	658.12	658.12
Line G	3+26.69	0.00	658.10	658.11
Line H	3+36.69	0.00	658.07	658.09
Line I	3+46.69	0.00	658.03	658.03
☉ Brg. East Abut.	3+51.32	0.00	658.00	658.00
Bk. of East Abut.	3+52.65	0.00	658.00	658.00

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	4.29	657.93	657.93
☉ Brg. West Abut.	2+46.98	4.29	657.93	657.93
Line A	2+56.98	4.29	657.98	657.99
Line B	2+66.98	4.29	658.01	658.03
Line C	2+76.98	4.29	658.04	658.05
☉ Brg. Pier 1	2+81.61	4.29	658.05	658.05
Line D	2+91.61	4.29	658.06	658.07
Line E	3+01.61	4.29	658.07	658.07
Line F	3+11.61	4.29	658.06	658.06
☉ Brg. Pier 2	3+16.69	4.29	658.05	658.05
Line G	3+26.69	4.29	658.03	658.04
Line H	3+36.69	4.29	658.00	658.02
Line I	3+46.69	4.29	657.96	657.97
☉ Brg. East Abut.	3+51.32	4.29	657.94	657.94
Bk. of East Abut.	3+52.65	4.29	657.93	657.93

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	12.79	657.79	657.79
☉ Brg. West Abut.	2+46.98	12.79	657.80	657.80
Line A	2+56.98	12.79	657.84	657.86
Line B	2+66.98	12.79	657.88	657.90
Line C	2+76.98	12.79	657.91	657.91
☉ Brg. Pier 1	2+81.61	12.79	657.92	657.92
Line D	2+91.61	12.79	657.93	657.93
Line E	3+01.61	12.79	657.94	657.94
Line F	3+11.61	12.79	657.93	657.93
☉ Brg. Pier 2	3+16.69	12.79	657.92	657.92
Line G	3+26.69	12.79	657.90	657.91
Line H	3+36.69	12.79	657.87	657.89
Line I	3+46.69	12.79	657.83	657.83
☉ Brg. East Abut.	3+51.32	12.79	657.80	657.80
Bk. of East Abut.	3+52.65	12.79	657.80	657.80

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- SNB
DRAWN	- PL
CHECKED	- SNB

TOP OF SLAB ELEVATIONS - I

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	*	DUPAGE	97	30
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. - 9

39 - SHEETS

• 00-00115-00-BR

CONTRACT NO. 83961

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	21.29	657.66	657.66
⊙ Brg. West Abut.	2+46.98	21.29	657.67	657.67
Line A	2+56.98	21.29	657.71	657.73
Line B	2+66.98	21.29	657.75	657.76
Line C	2+76.98	21.29	657.78	657.78
⊙ Brg. Pier 1	2+81.61	21.29	657.79	657.79
Line D	2+91.61	21.29	657.80	657.80
Line E	3+01.61	21.29	657.80	657.80
Line F	3+11.61	21.29	657.80	657.79
⊙ Brg. Pier 2	3+16.69	21.29	657.79	657.79
Line G	3+26.69	21.29	657.77	657.78
Line H	3+36.69	21.29	657.74	657.75
Line I	3+46.69	21.29	657.69	657.70
⊙ Brg. East Abut.	3+51.32	21.29	657.67	657.67
Bk. of East Abut.	3+52.65	21.29	657.66	657.66

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of West Abut.	2+45.65	29.79	657.53	657.53
⊙ Brg. West Abut.	2+46.98	29.79	657.53	657.53
Line A	2+56.98	29.79	657.58	657.59
Line B	2+66.98	29.79	657.61	657.63
Line C	2+76.98	29.79	657.64	657.65
⊙ Brg. Pier 1	2+81.61	29.79	657.65	657.65
Line D	2+91.61	29.79	657.67	657.67
Line E	3+01.61	29.79	657.67	657.67
Line F	3+11.61	29.79	657.66	657.66
⊙ Brg. Pier 2	3+16.69	29.79	657.66	657.66
Line G	3+26.69	29.79	657.63	657.65
Line H	3+36.69	29.79	657.60	657.62
Line I	3+46.69	29.79	657.56	657.57
⊙ Brg. East Abut.	3+51.32	29.79	657.54	657.54
Bk. of East Abut.	3+52.65	29.79	657.53	657.53

TYLIN INTERNATIONAL

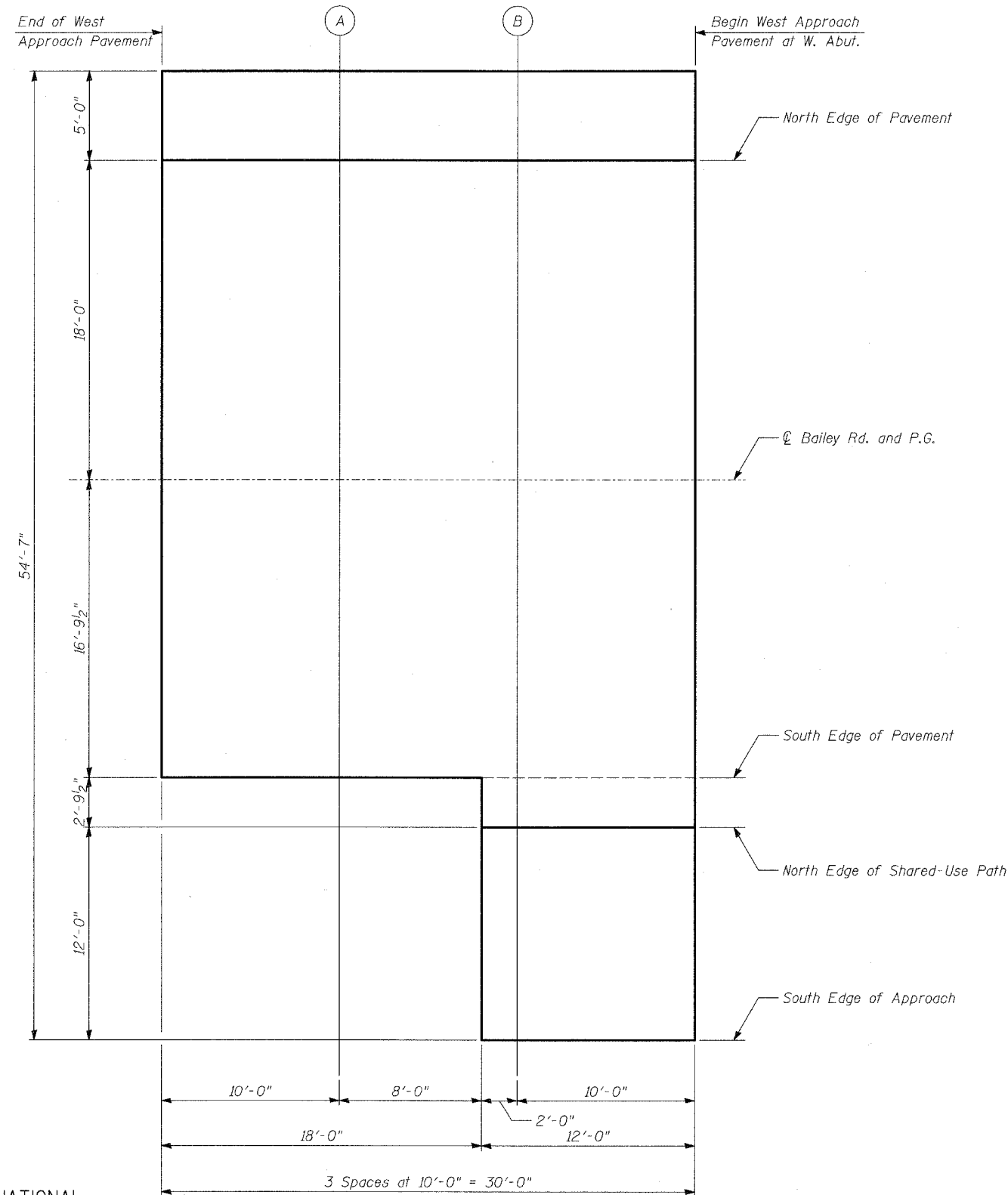
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TOP OF SLAB ELEVATIONS - II

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 10
1545	•	DUPAGE	97	31	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
• 00-00115-00-BR					



PLAN

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- SNB
DRAWN	- PL
CHECKED	- SNB

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	2+15.15	-18.00	657.45
A	2+25.15	-18.00	657.54
B	2+35.15	-18.00	657.63
Begin W. Appr. Pav't	2+45.15	-18.00	657.71

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	2+15.15	16.79	657.47
A	2+25.15	16.79	657.56
B	2+35.15	16.79	657.65
Begin W. Appr. Pav't	2+45.15	16.79	657.73

SOUTH EDGE OF APPROACH

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	2+15.15	31.58	N/A
A	2+25.15	31.58	N/A
B	2+35.15	31.58	657.36
Begin W. Appr. Pav't	2+45.15	31.58	657.50

BAILEY RD. AND P.G.

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	2+15.15	0.00	657.82
A	2+25.15	0.00	657.88
B	2+35.15	0.00	657.94
Begin W. Appr. Pav't	2+45.15	0.00	657.99

NORTH EDGE OF SHARED-USE PATH

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't	2+15.15	19.58	N/A
A	2+25.15	19.58	N/A
B	2+35.15	19.58	657.60
Begin W. Appr. Pav't	2+45.15	19.58	657.68

**TOP OF WEST APPROACH
PAVEMENT ELEVATIONS**

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	*	DUPAGE	97	32
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SHEET NO. - 11

39 - SHEETS

• 00-00115-00-BR

CONTRACT NO. 83961

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3+53.15	-18.00	657.71
A	3+63.15	-18.00	657.63
B	3+73.15	-18.00	657.55
End E. Appr. Pav't	3+83.15	-18.00	657.47

☉ BAILEY RD. AND P.G.

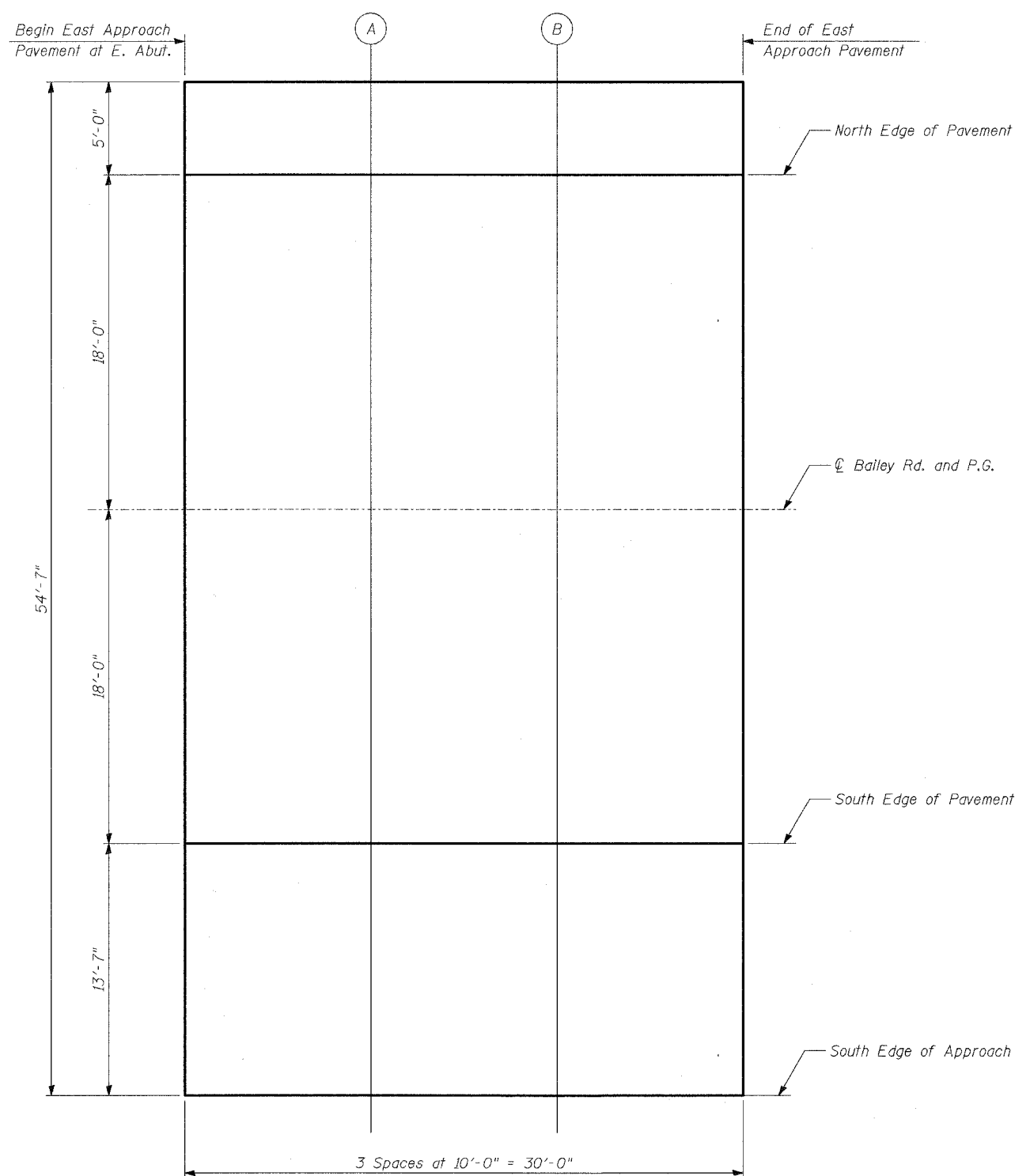
Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3+53.15	0.00	657.99
A	3+63.15	0.00	657.94
B	3+73.15	0.00	657.89
End E. Appr. Pav't	3+83.15	0.00	657.84

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3+53.15	18.00	657.71
A	3+63.15	18.00	657.63
B	3+73.15	18.00	657.55
End E. Appr. Pav't	3+83.15	18.00	657.47

SOUTH EDGE OF APPROACH

Location	Station	Offset	Theoretical Grade Elevations
Begin E. Appr. Pav't	3+53.15	31.58	657.50
A	3+63.15	31.58	657.40
B	3+73.15	31.58	657.29
End E. Appr. Pav't	3+83.15	31.58	657.19



PLAN

TYLIN INTERNATIONAL

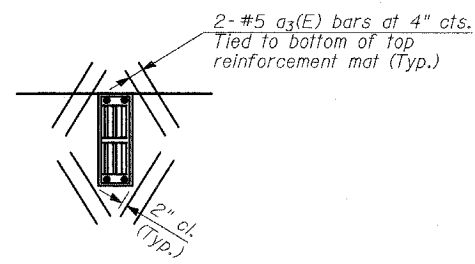
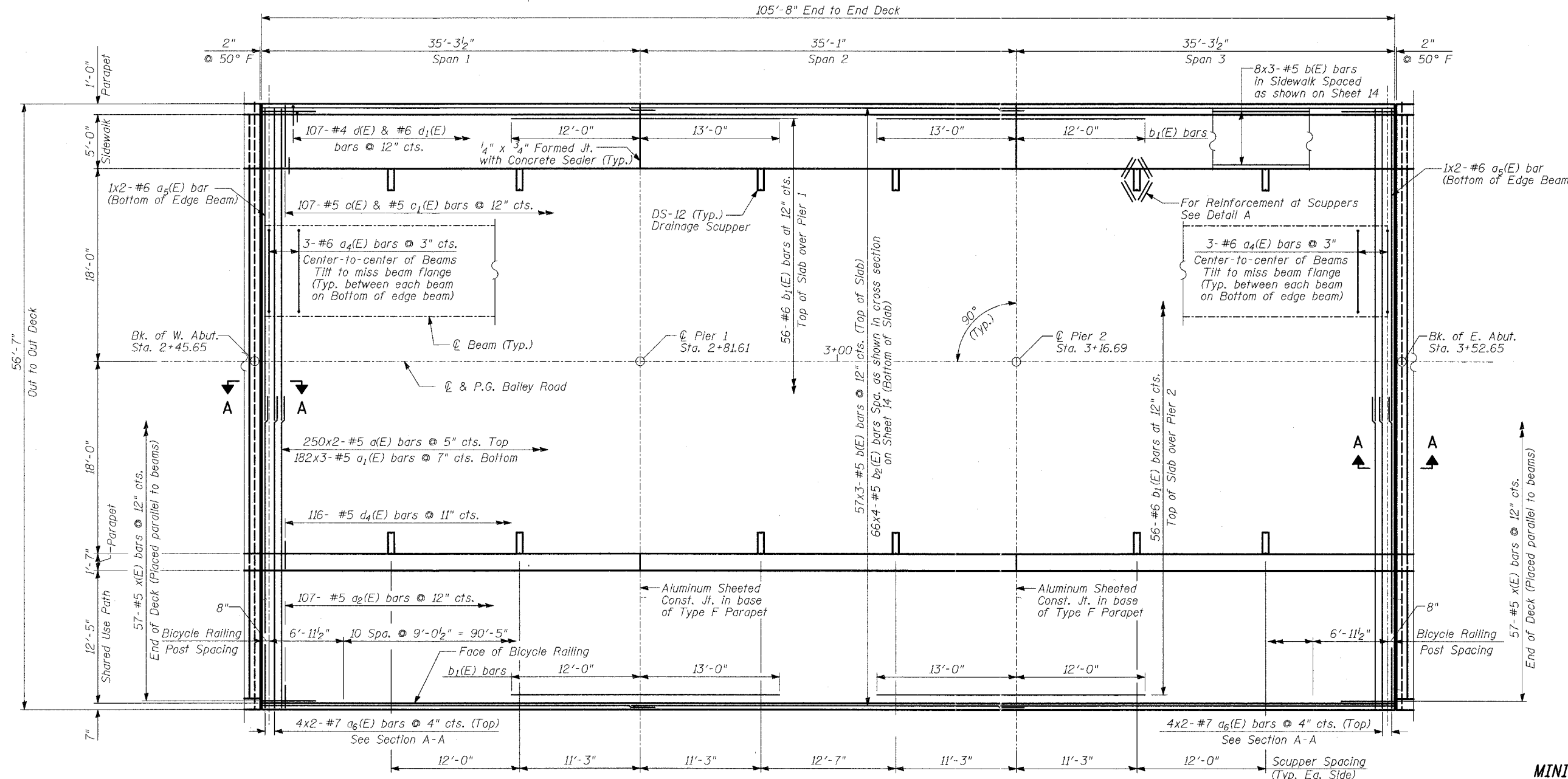
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CHECKED	- SNB
DRAWN	- PL
CHECKED	- SNB

**TOP OF EAST APPROACH
PAVEMENT ELEVATIONS**

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

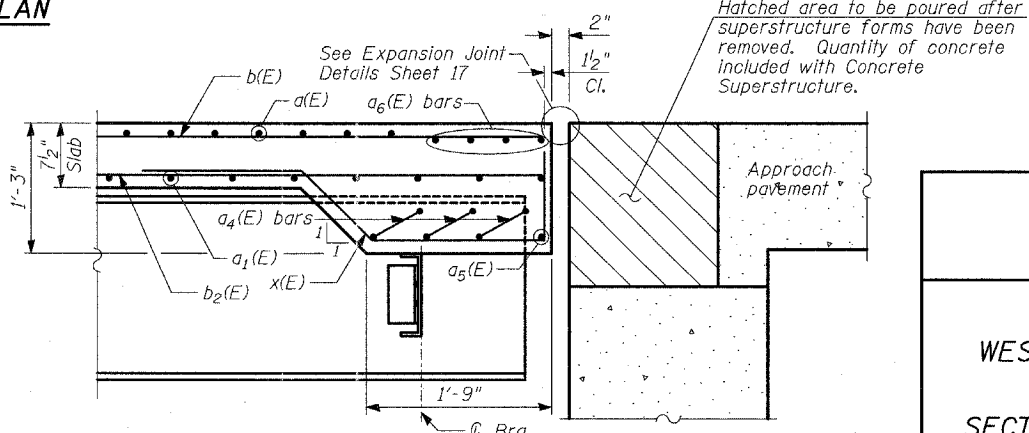
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE	SHEET NO.	SHEET NO. - 12
1545	*	DUPAGE	97	33	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83961		
* 00-00115-00-BR					



Note:
Cut longitudinal reinforcement to clear drainage scuppers.

PLAN



MINIMUM BAR LAPS

Bar	Lap
#5	2'-2"
#6	2'-7"
#7	3'-5"

NOTES:

- See Sheet 14 for Superstructure Details and Bill of Material.
- Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
- See Sheet 13 for Parapet Reinforcement.
- Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet 17.

TYLIN INTERNATIONAL

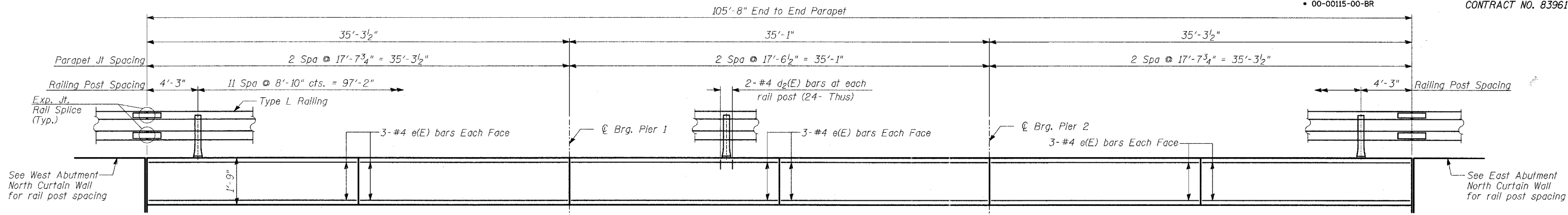
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CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

DECK PLAN

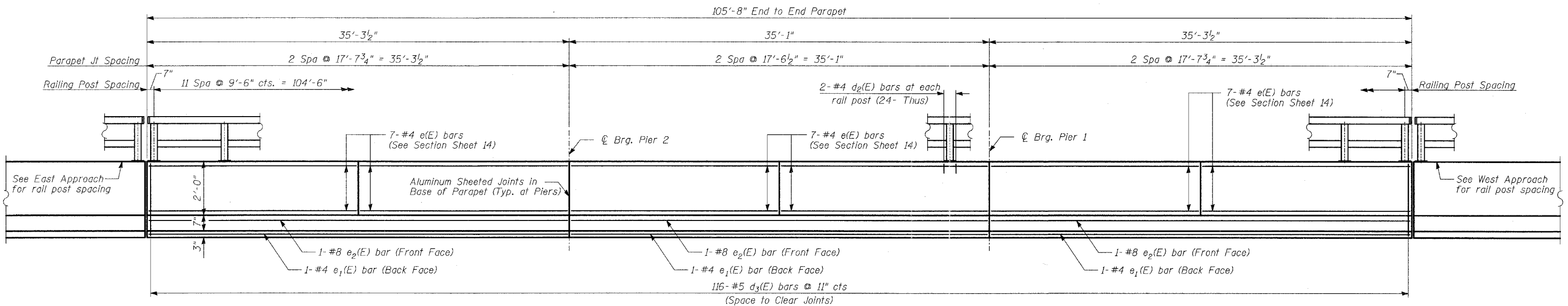
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

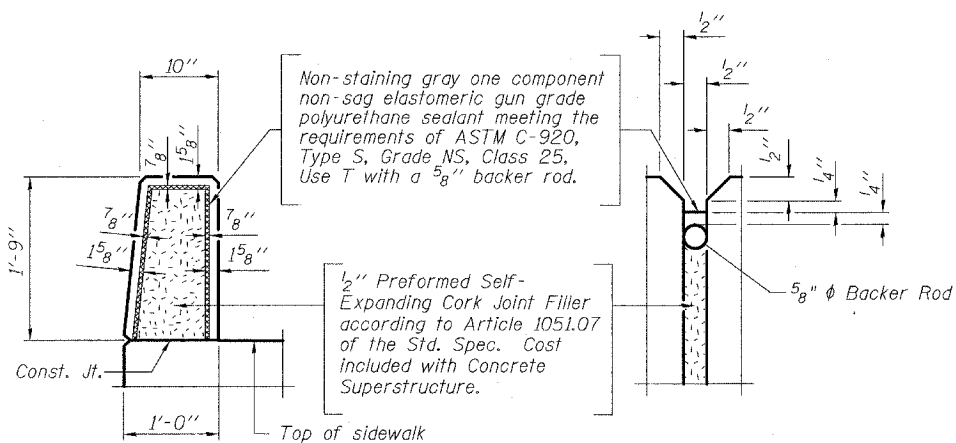
ROUTE NO.	SECTION	COUNTY	TEST SHEETS	SHEET NO.	SHEET NO. - 13
1545	*	DUPAGE	97	34	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83961		



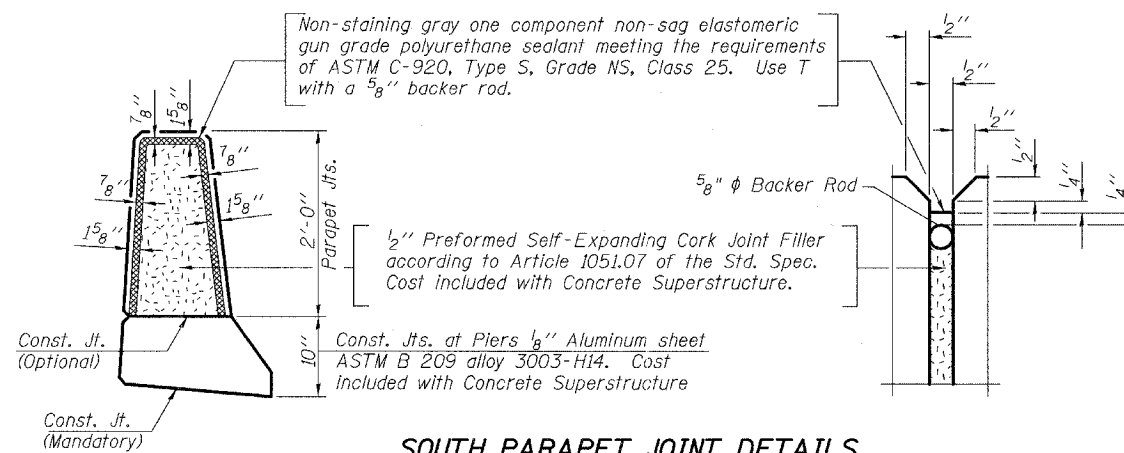
INSIDE ELEVATION OF NORTH PARAPET



INSIDE ELEVATION OF SOUTH PARAPET



NORTH PARAPET JOINT DETAILS



SOUTH PARAPET JOINT DETAILS

TYLIN INTERNATIONAL

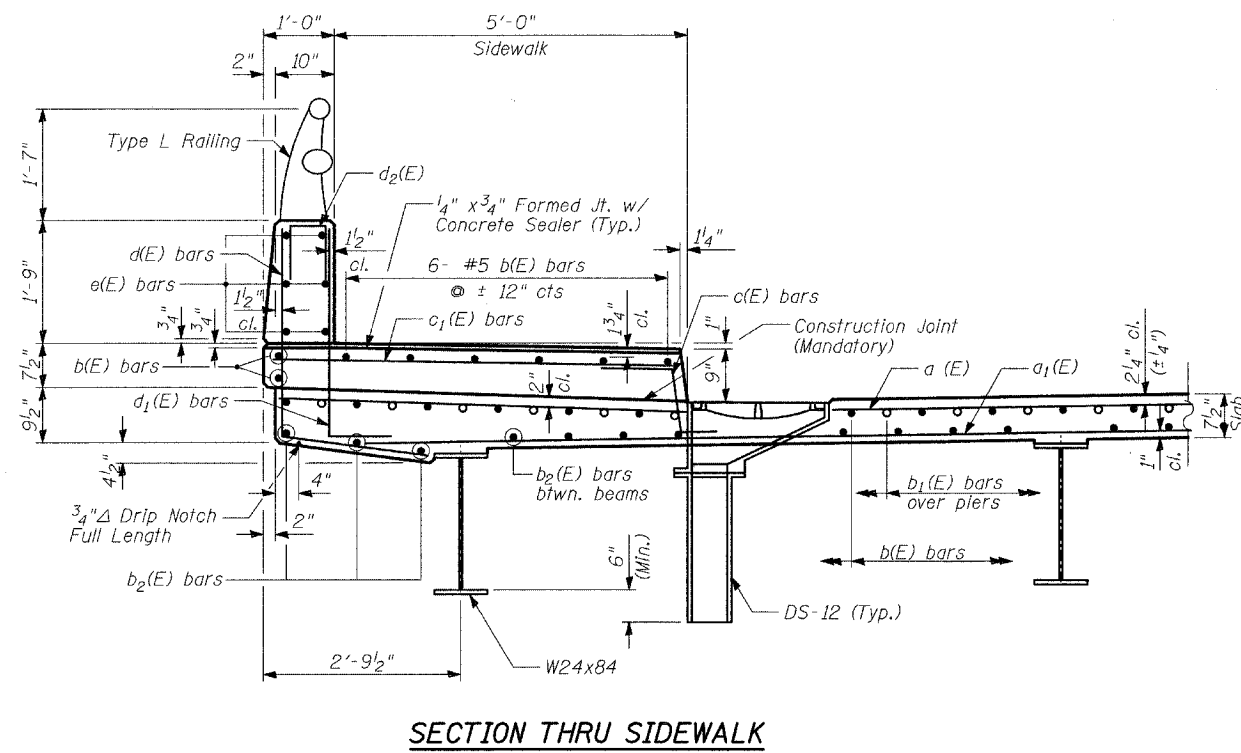
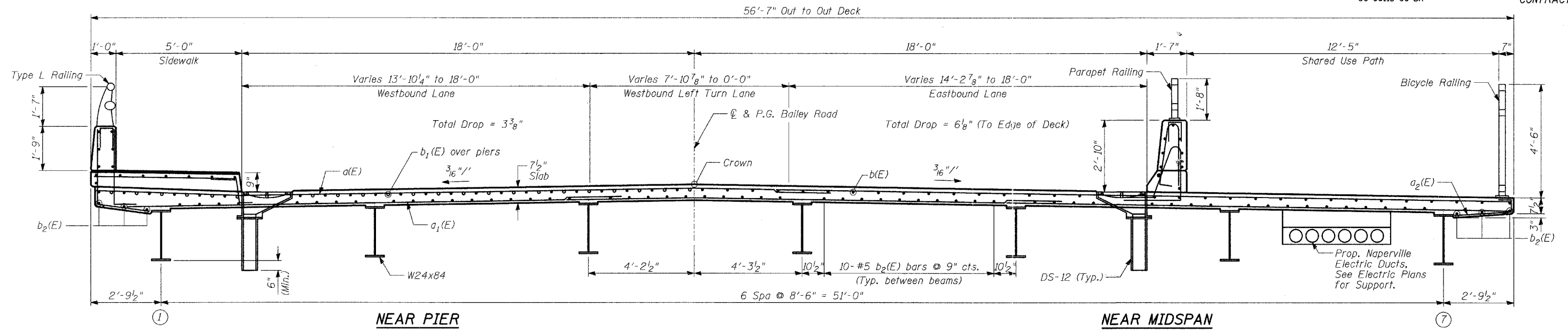
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CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

PARAPET ELEVATIONS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

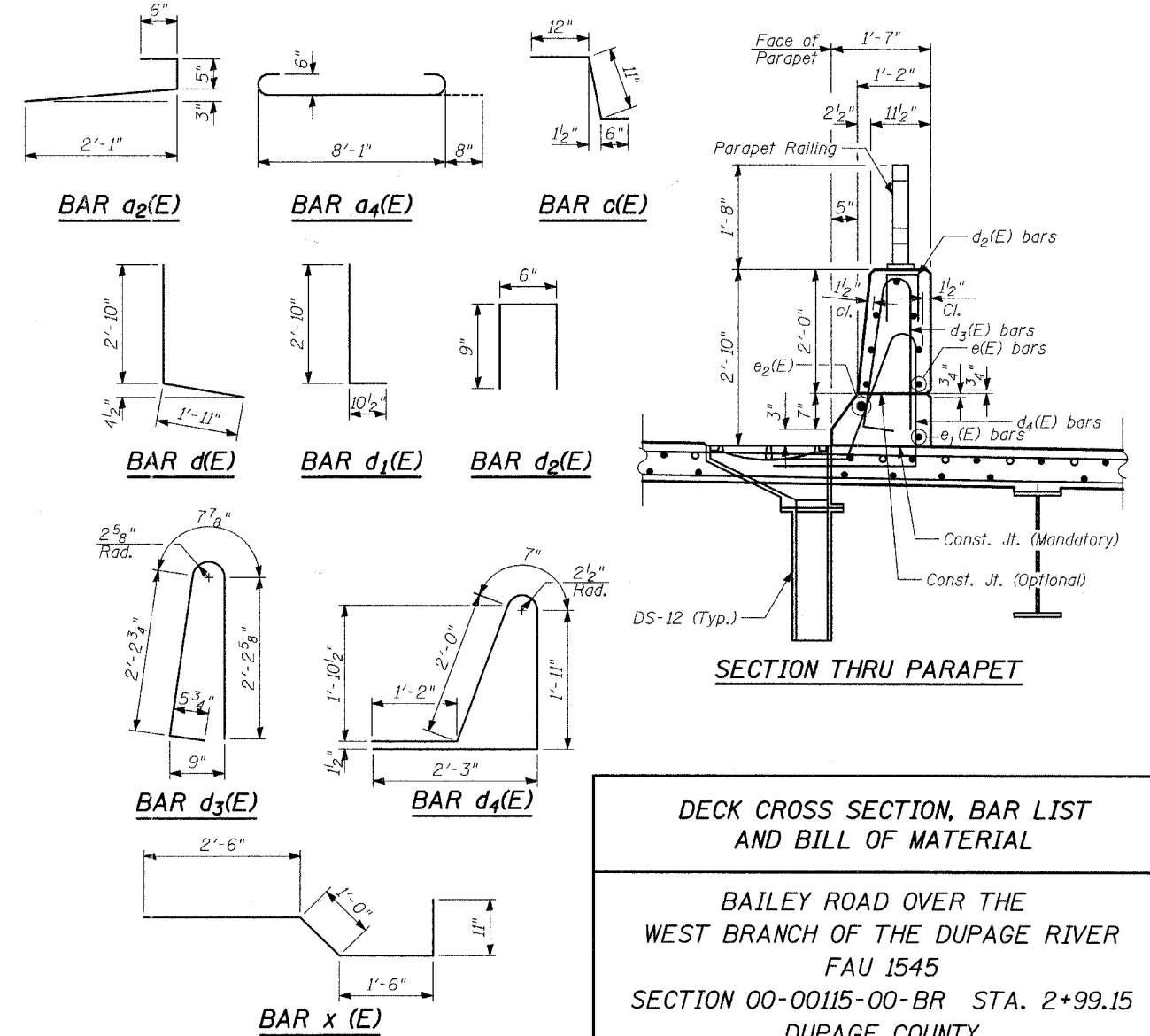
ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. - 14 39 - SHEETS
1545		DUPAGE	97	35	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		



SECTION THRU SUPERSTRUCTURE
(Looking East)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	500	#5	29'-1"	
a ₁ (E)	546	#5	19'-8"	
a ₂ (E)	107	#5	3'-0"	
a ₃ (E)	96	#5	2'-0"	
a ₄ (E)	36	#6	9'-5"	
a ₅ (E)	4	#6	29'-4"	
a ₆ (E)	16	#7	29'-9"	
b(E)	195	#5	36'-7"	
b ₁ (E)	112	#6	25'-0"	
b ₂ (E)	264	#5	27'-11"	
c(E)	107	#5	2'-5"	
c ₁ (E)	107	#5	5'-8"	
d(E)	107	#4	4'-9"	
d ₁ (E)	107	#6	3'-9"	
d ₂ (E)	24	#4	2'-0"	
d ₃ (E)	116	#5	5'-7"	
d ₄ (E)	116	#5	7'-11"	
e(E)	78	#4	17'-3"	
e ₁ (E)	3	#4	34'-11"	
e ₂ (E)	3	#8	34'-11"	
x(E)	114	#5	5'-11"	
Concrete Superstructure	CU YD		190.9	
Reinforcement Bars, Epoxy Coated	POUND		53,340	
Bridge Deck Grooving	SQ YD		400	
Protective Coat	SQ YD		767	



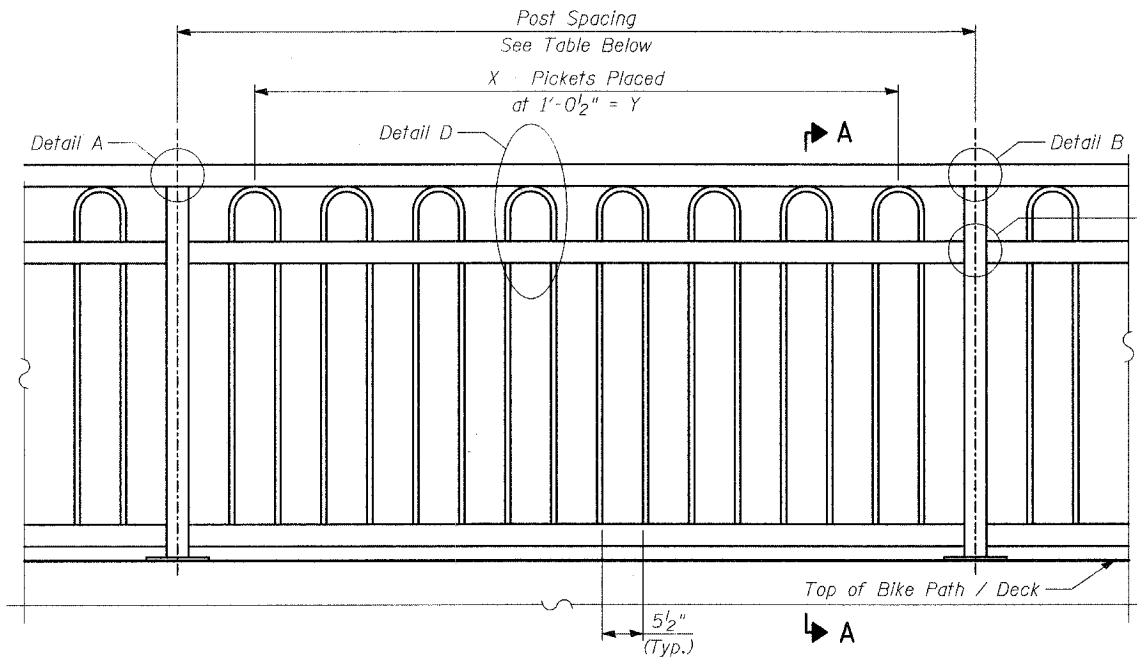
DECK CROSS SECTION, BAR LIST AND BILL OF MATERIAL

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

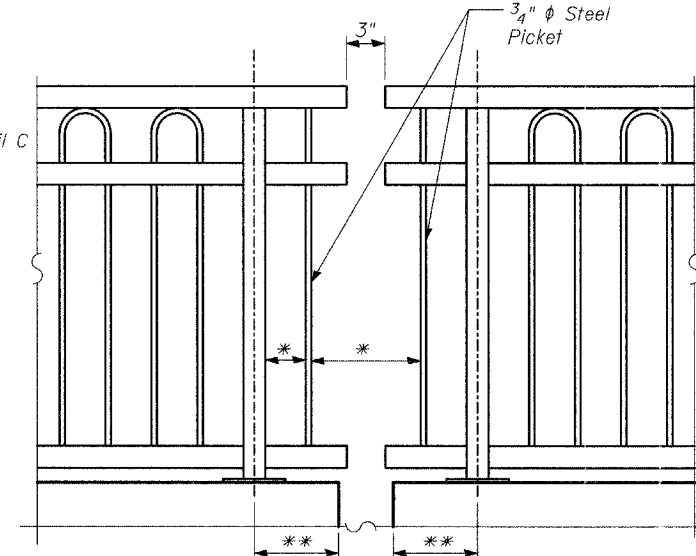
TYLIN INTERNATIONAL

DESIGNED	- DE
CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

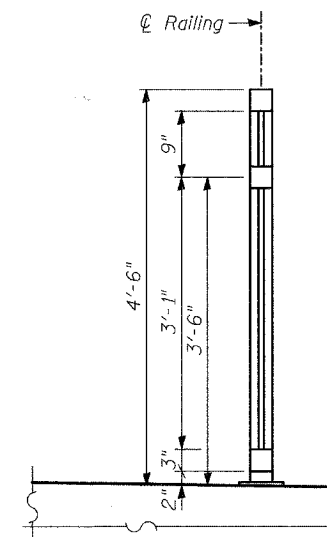


ELEVATION - TYPICAL SECTION



SECTION A-A

* Max Spacing is 6". Rail Fabricator shall add pickets as necessary.
** Varies- See Plans.

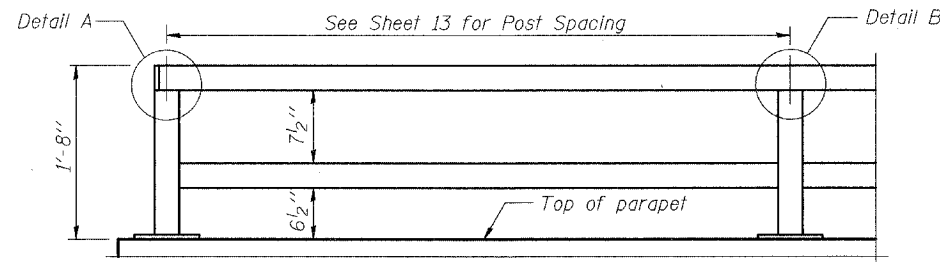


SECTION THRU DECK

BICYCLE RAILING LAYOUT

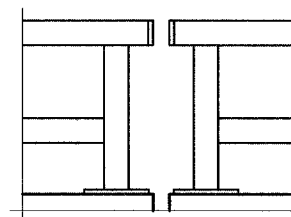
Post Spacing	Picket Layout	
	X	Y
5'-11"	5	4'-2"
6'-11 1/2"	6	5'-2 1/2"
8'-0"	7	6'-3"
9'-0 1/2"	8	7'-3 1/2"

(See Sheets 12, 23 & 26 for Layout)

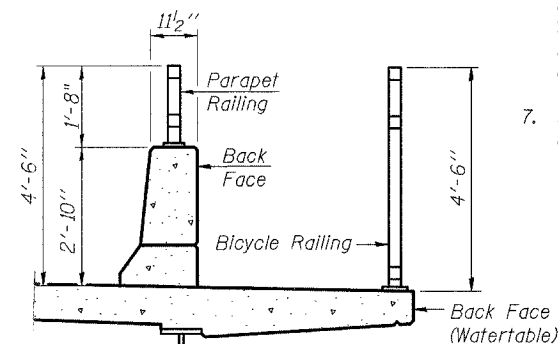


PARAPET RAILING
ELEVATION

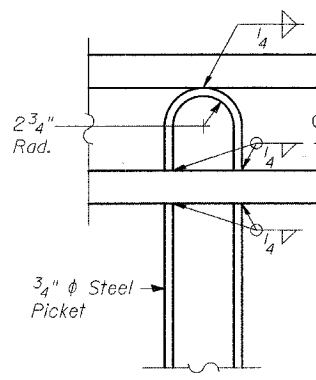
BICYCLE RAILING



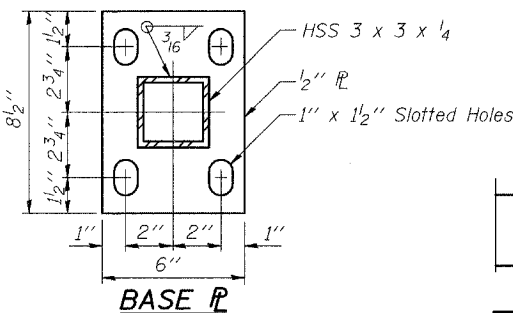
PARAPET RAILING
ELEVATION AT EXPANSION JOINT



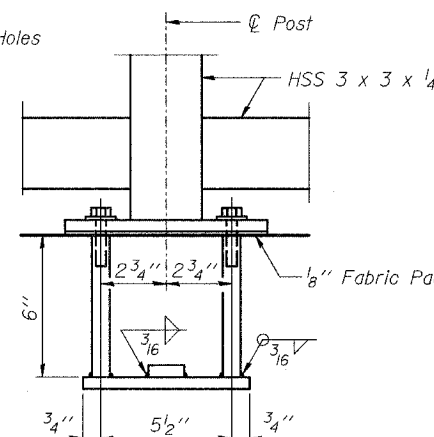
SECTION THRU DECK



DETAIL D

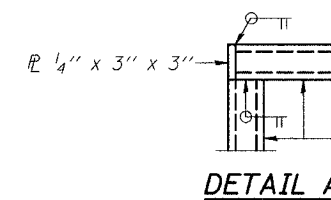


BASE PL

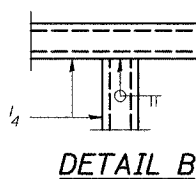


TYPICAL ANCHOR BOLT DETAILS

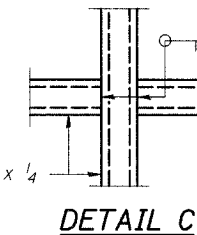
In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" φ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



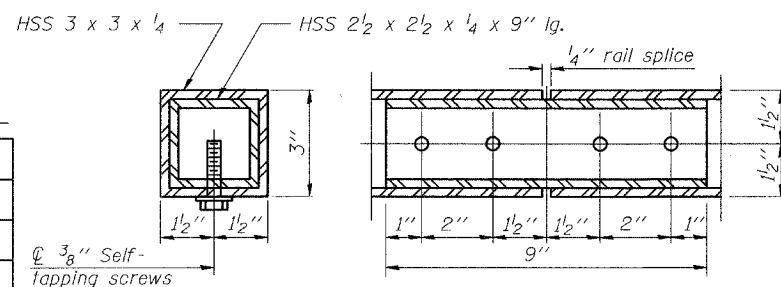
DETAIL A



DETAIL B



DETAIL C



TYPICAL RAIL SPLICE DETAILS

NOTES:

- Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Bicycle Railing, or Parapet Railing.
- Hollow Structural Steel Tubing shall conform to the requirements of ASTM Designation of 500, Grade B, Structural Steel Tubing. Anchor bolts shall conform to ASTM A307 unless noted otherwise.
- All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.
- The bicycle railing and parapet railing shall be powder coated and the color shall be black.
- The exterior steel surface shall be blast cleaned to Steel Structures Painting Council Surface Preparation Specification No. 6 (SSPC-SP6) requirements using cast steel abrasives conforming to the Society of Automotive Engineers (SAE) recommended Practice J827. The blast method used is a recirculating, closed cycle centrifugal wheel system with abrasive conforming to SAE Shot Number S280.
- All exterior surfaces shall be coated with a Urethane or Triglycidyl Isocyanurate (TGIC) Polyester Powder to a minimum film thickness of 0.002". The coating shall be electrostatically applied and cured in a gas fired convection oven by heating the steel substrate to a minimum of 350 degrees Fahrenheit and a maximum of 400 degrees Fahrenheit. The thermosetting powder resin shall provide both intercoat as well as substrate fusion adhesion that meets 5A or 5B classifications of ASTM D3359.
- Ship railing to the site in a manner to prevent damage to the powder coating.

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	142.3
Parapet Railing	Foot	150

(1) Additional Bicycle Railing on Sheet 21 of 95.

TYLIN INTERNATIONAL

DESIGNED	- SNB
CHECKED	- PF
DRAWN	- SNB
CHECKED	- PF

φ 3/8" Self-tapping screws

RAILING DETAILS

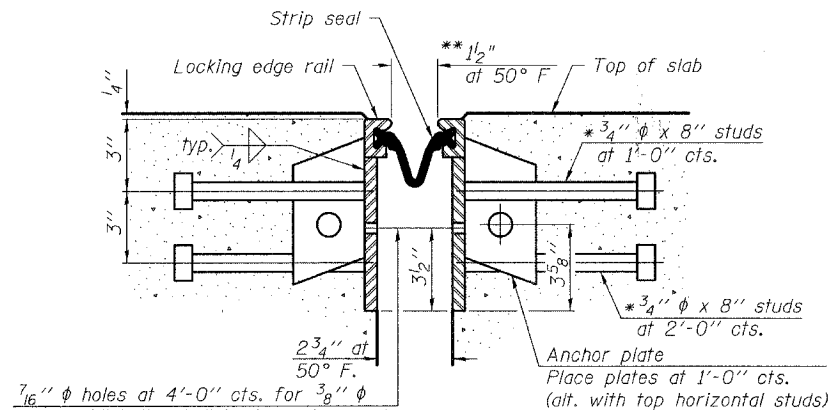
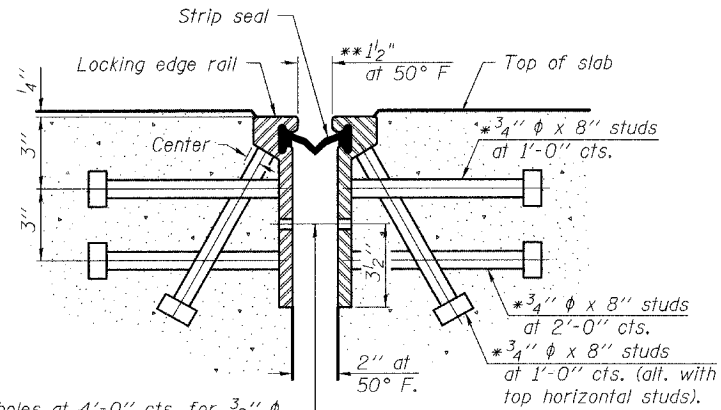
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 17
1545	*	DUPAGE	97	38	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83961		
			* 00-00115-00-BR		

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** When joint is fixed, dimension is set at 1 1/2".



7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

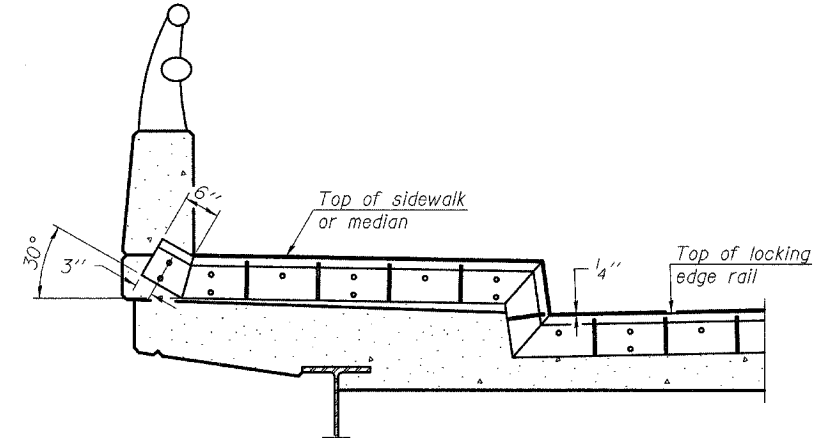
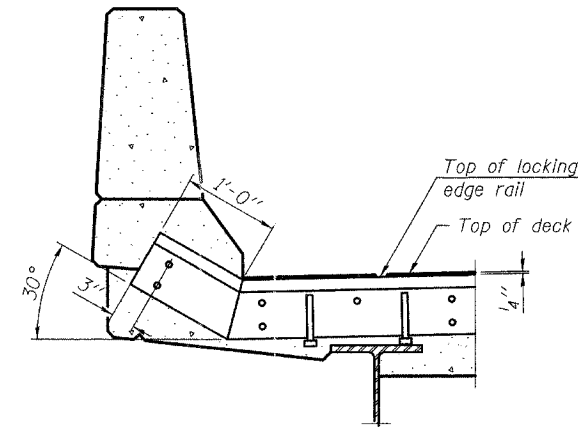
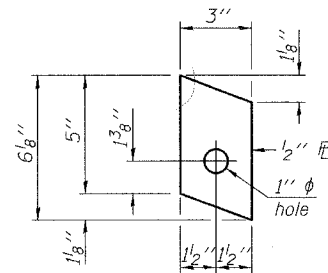
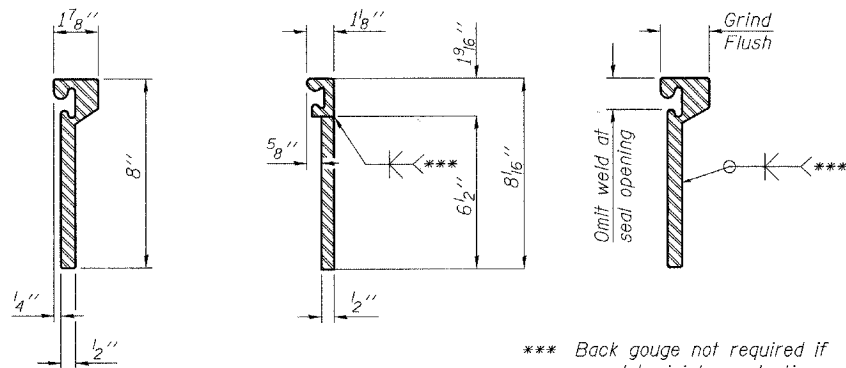
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

SECTION THRU ROLLED RAIL JOINT

SECTION THRU WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL WELDED RAIL

*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

ANCHOR PLATE (for welded rail)

AT PARAPET

AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS

LOCKING EDGE RAILS

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	114

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- PF
DRAWN	- SNB
CHECKED	- PF

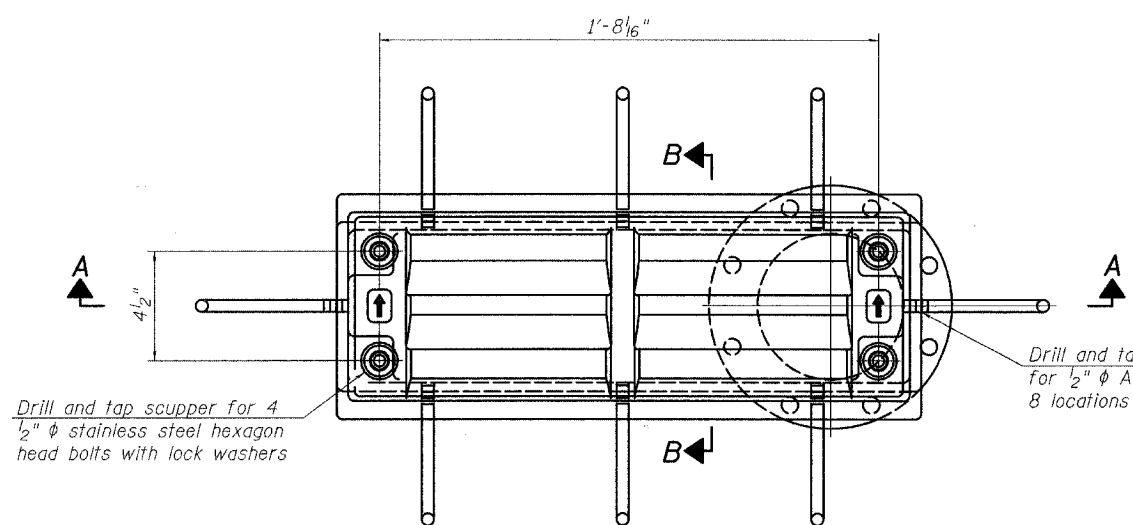
PREFORMED JOINT STRIP SEAL

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
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SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

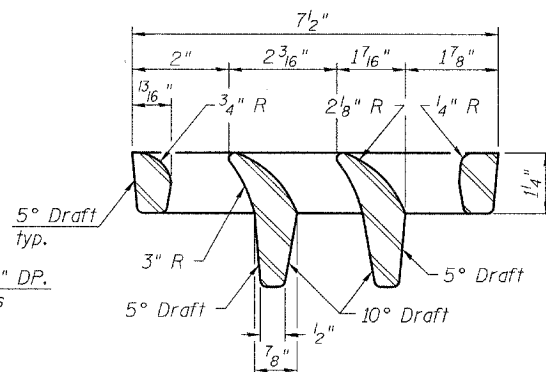
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.	SHEET NO. - 18
1545	•	DUPAGE	97	39	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
• 00-00115-00-BR					

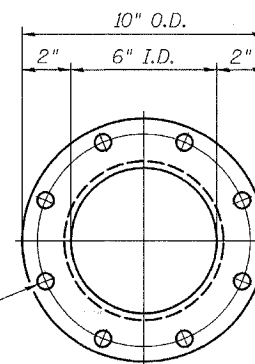
Notes:
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-12.
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



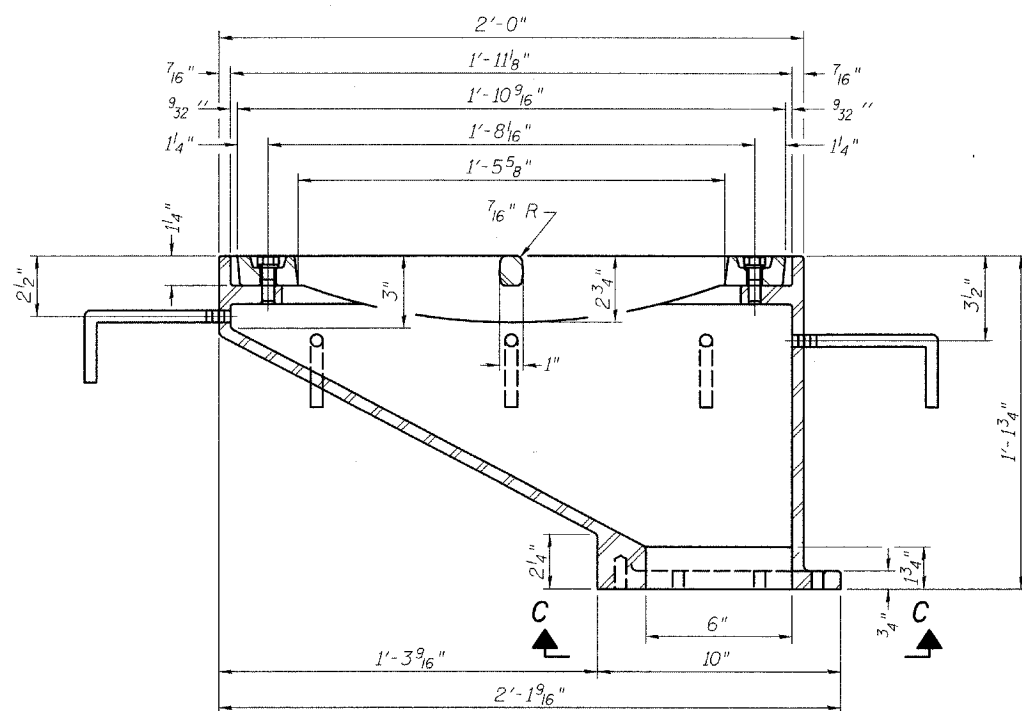
PLAN



VANE GRATE DETAIL

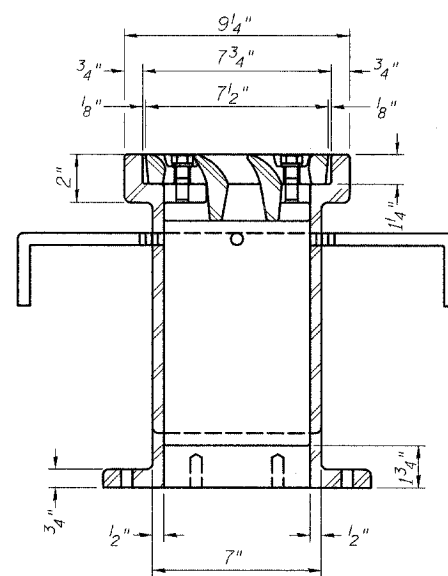


VIEW C-C

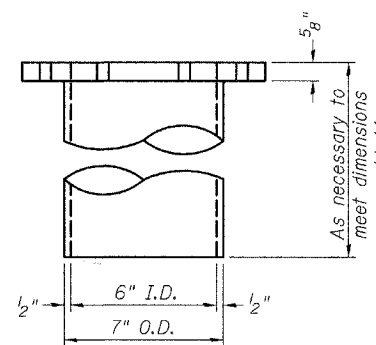


SECTION A-A

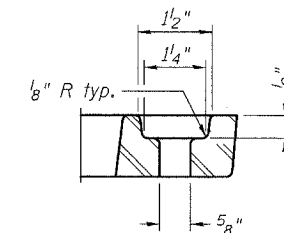
See sheet 14 for scupper location relative to parapet.



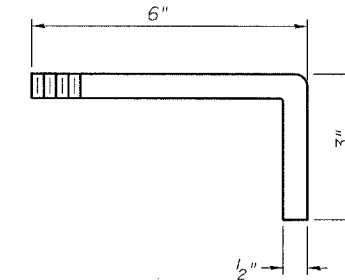
SECTION B-B



DOWNSPOUT



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	12

DRAINAGE SCUPPER, DS-12

BAILEY ROAD OVER THE
 WEST BRANCH OF THE DUPAGE RIVER
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 SECTION 00-00115-00-BR STA. 2+99.15
 DUPAGE COUNTY
 S.N. 022-3028

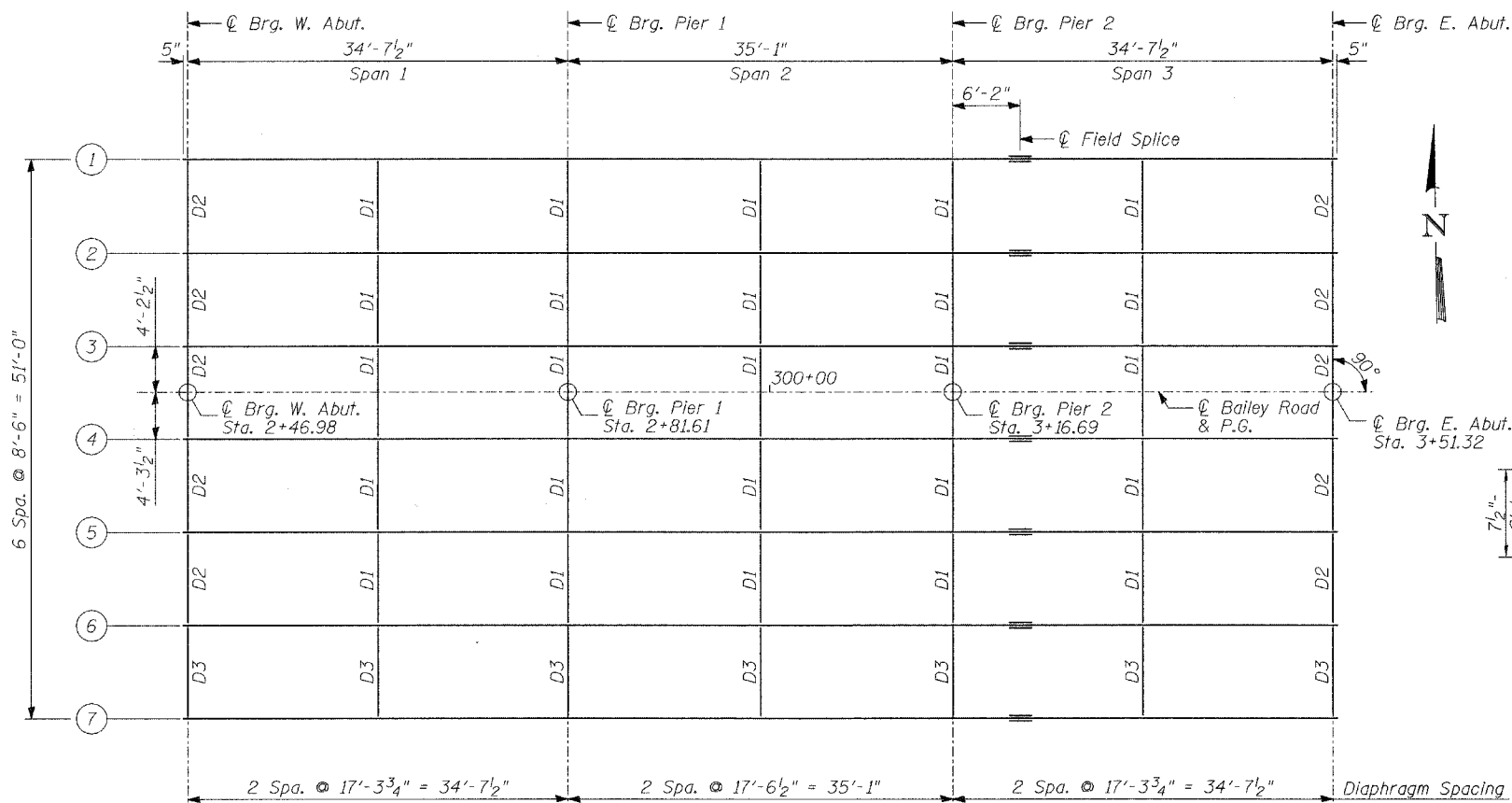
TYLIN INTERNATIONAL

DESIGNED	-	SNB
CHECKED	-	PF
DRAWN	-	SNB
CHECKED	-	PF

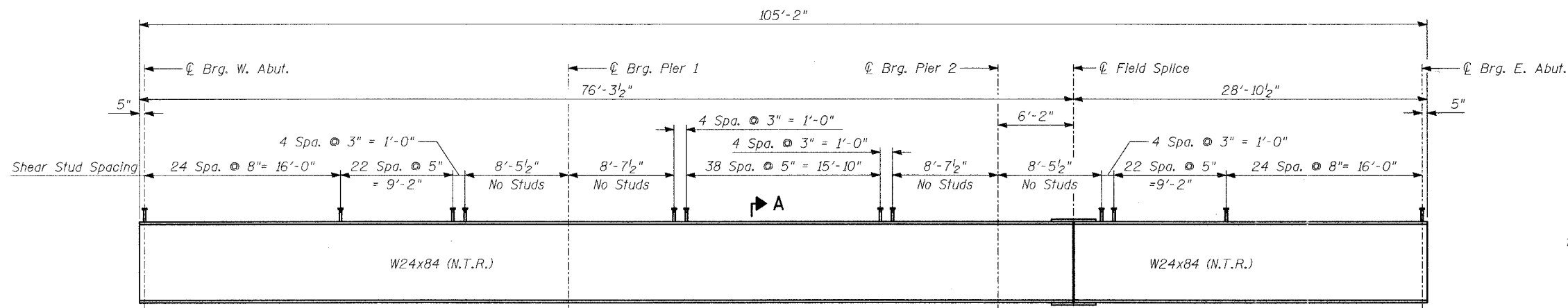
Drill and tap 8 holes for 1/2"-13 bolts on an 8 3/4" φ bolt circle. (2 blind holes are 1/4" deep, 6 thru holes)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 19 39 - SHEETS
1545	•	DUPAGE	97	40	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ. NO.	00-00115-00-BR		CONTRACT NO. 83961



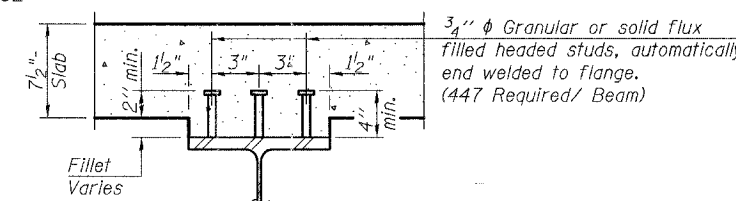
FRAMING PLAN



BEAM ELEVATION

	Abut.	Pier
R _D (k)	21.9	59.0
R _L (k)	39.0	48.2
Imp. (k)	11.7	12.4
R _{Total} (k)	72.6	119.6

	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I _s (in ⁴)	2,370	2,370	2,370
I _c (n) (in ⁴)	7,361	--	7,361
I _c (3n) (in ⁴)	5,589	--	5,589
S _s (in ³)	197	197	197
S _c (n) (in ³)	307	--	307
S _c (3n) (in ³)	279	--	279
Z (in ³)	--	224	--
Q (k/')	0.92	1.55	0.92
M _D (k)	88	173	31
s _D (k/')	0.63	--	0.63
M _{sD} (k)	66	--	35
M _L (k)	235	121	193
M _{Imp} (k)	70	36	58
1.3 [M _D + M _{Imp}] (k)	508	262	418
M _u (k)	861	565	630
f _s (non-comp) (ksi)	5.36	10.54	1.89
f _s (comp) (ksi)	2.84	--	1.51
f _s [M _L + M _{Imp}] (ksi)	19.86	15.96	16.34
f _s (Overload) (ksi)	28.06	26.50	19.74
f _s (Total) (ksi)	--	34.45	--
VR (k)	54.3	--	44.5



SECTION A-A

- * Compact section
- ** Braced non-compact
- I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in⁴ and in³).
- I_c(n), S_c(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in⁴ and in³).
- I_c(3n), S_c(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in⁴ and in³).
- Z: Plastic Section Modulus of the steel section in non-composite areas (in³).
- Q: Un-factored non-composite dead load (kips/ft.).
- M_D: Un-factored moment due to non-composite dead load (kip-ft.).
- s_D: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M_{sD}: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- M_L: Un-factored live load moment (kip-ft.).
- M_{Imp}: Un-factored moment due to impact (kip-ft.).
- M_u: Factored design moment (kip-ft.).
- 1.3 [M_D + M_{Imp} + 5/3 (M_L + M_{Imp})]
- M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- f_s (Overload): Sum of stresses as computed from the moments below (ksi). M_D + M_{sD} + 5/3 (M_L + M_{Imp})
- f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi). 1.3 [M_D + M_{sD} + 5/3 (M_L + M_{Imp})]
- VR: Maximum L + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).

- NOTES:**
- All structural steel for stringers and splice plates shall conform to the requirements of AASHTO M270, Grade 50W. All other structural steel shall conform to the requirements of AASHTO M270, Grade 36W.
 - Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
 - All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

BILL OF MATERIAL

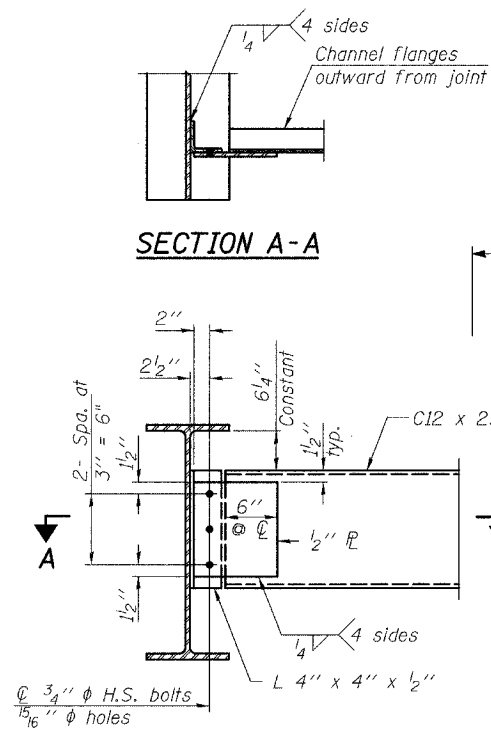
ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	L SUM	1
Stud Shear Connectors	EACH	3,129

FRAMING PLAN

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

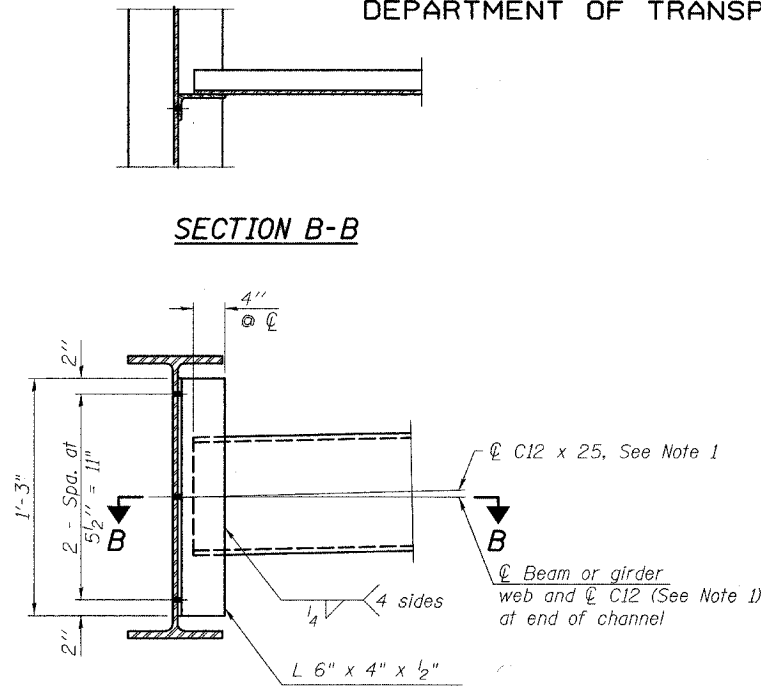
ROUTE NO.	SECTION	COUNTY	PROJECT	SHEET NO.	SHEET NO. - 20
1545	*	DUPAGE	97	41	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
			• 00-00115-00-BR		



END DIAPHRAGM - D2
(10 - D2 Required)

Notes:

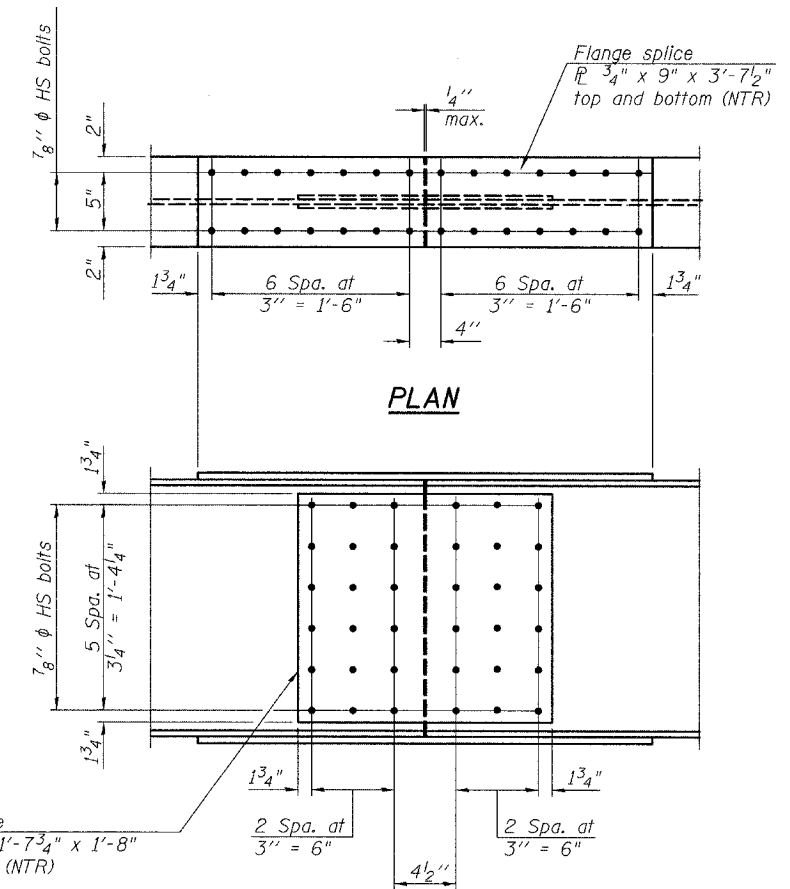
- 3/4" φ HS bolts, 15/16" φ holes
- Two hardened washers required for each set of oversized holes.



INTERIOR DIAPHRAGM - D1
(25 - D1 Required)

Notes:

- Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
- 3/4" φ HS bolts, 15/16" φ holes
- Two hardened washers required for each set of oversized holes.



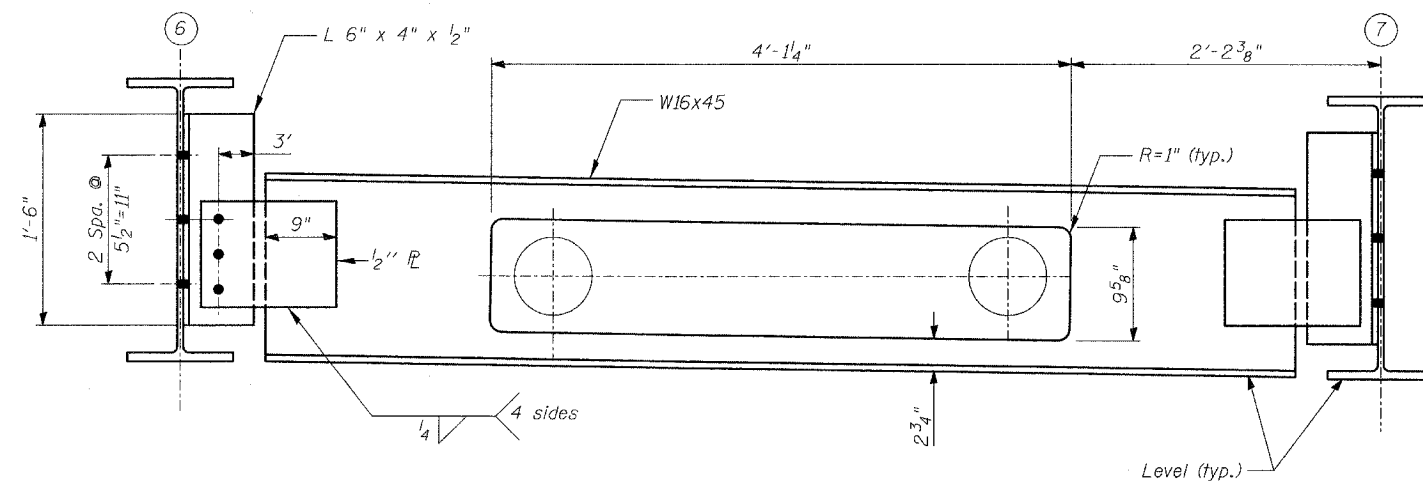
ELEVATION

SPLICE DETAIL
(7- Required)

TOP OF BEAM ELEVATIONS

For Fabrication Only.

Beam	φ Brg. W. Abut.	φ Brg. Pier 1	φ Brg. Pier 2	F.S.	φ Brg. E. Abut.
Beam 1	657.00	657.01	657.03	657.03	657.01
Beam 2	657.13	657.15	657.16	657.16	657.14
Beam 3	657.27	657.28	657.29	657.29	657.27
Beam 4	657.27	657.28	657.29	657.29	657.27
Beam 5	657.13	657.15	657.16	657.16	657.14
Beam 6	657.00	657.01	657.02	657.03	657.00
Beam 7	656.87	656.88	656.89	656.89	656.87



DIAPHRAGM - D3
(7 - D3 Required)

Notes:

- 3/4" φ HS bolts, 15/16" φ holes
- Two hardened washers required for each set of oversized holes.

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

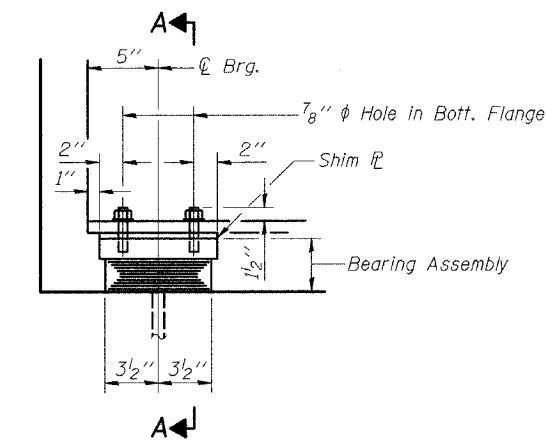
FRAMING DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

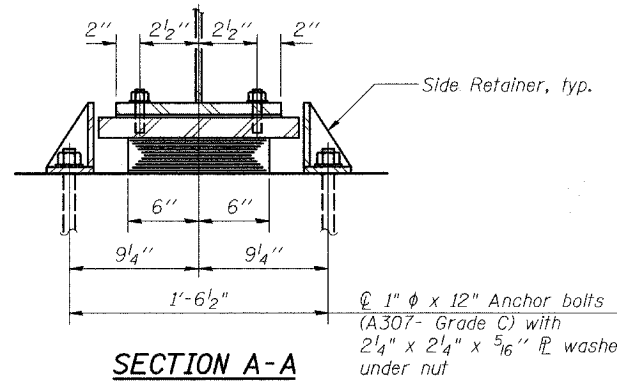
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 21
1545	*	DUPAGE	97	42	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-			

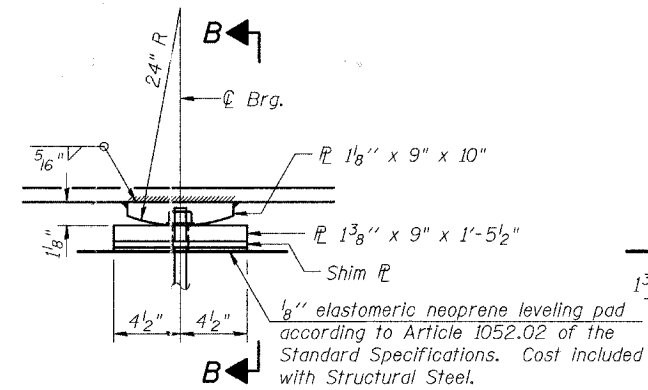
• 00-00115-00-BR CONTRACT NO. 83961



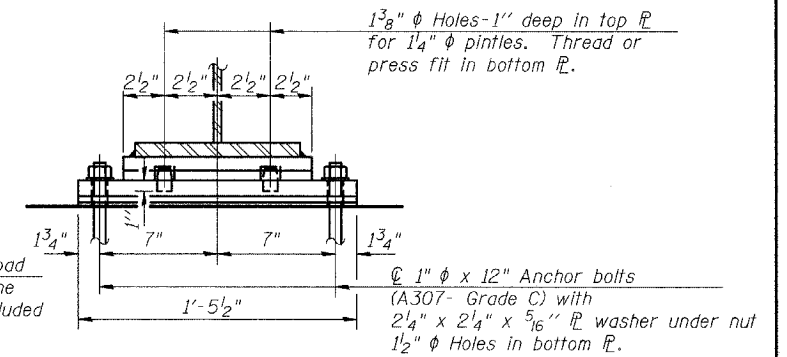
ELEVATION AT ABUT.



SECTION A-A



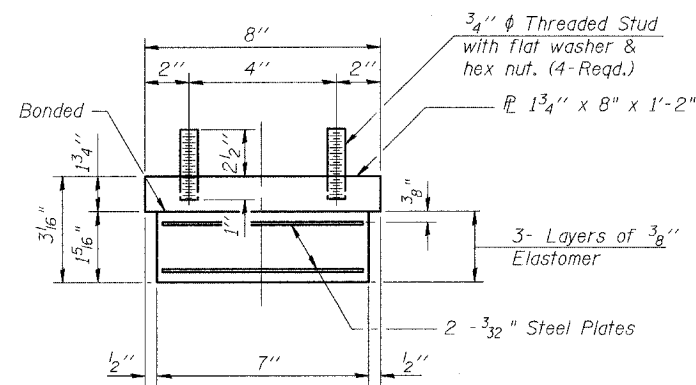
ELEVATION AT PIER



SECTION B-B

TYPE I ELASTOMERIC EXP. BRG.

FIXED BEARING



BEARING ASSEMBLY

Notes:

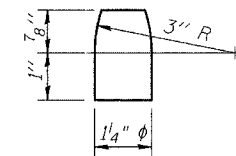
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of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

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

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

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

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



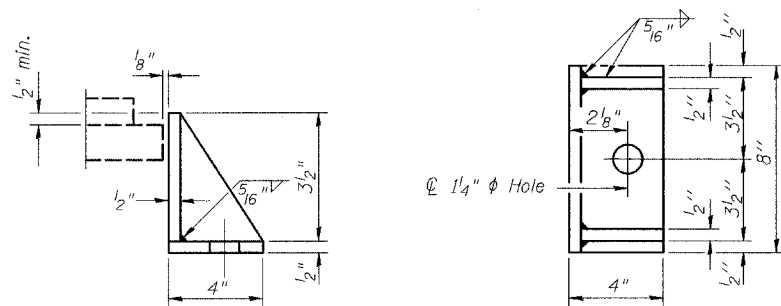
PINTLE

NOTES:

- The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M270 Grade 50W.
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Bearing plates, side retainers, anchor bolts, nuts, washers, and pintles shall be galvanized according to AASHTO M111 or M232.

Note:

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

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

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

BILL OF MATERIAL

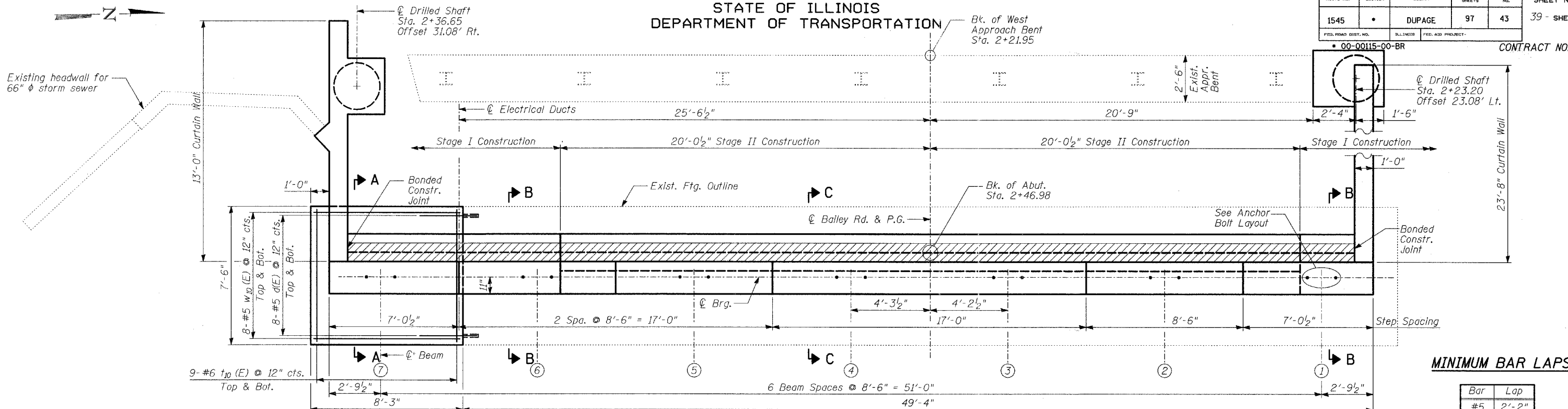
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	14
Anchor Bolts, 1" diameter	Each	56

BEARINGS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

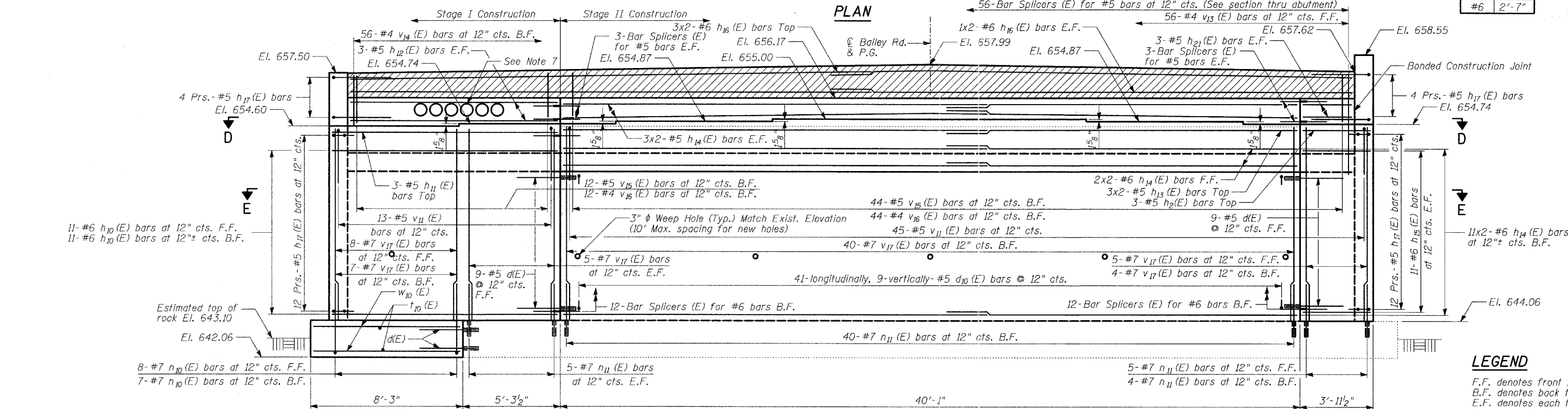
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. - 22 39 - SHEETS
1545	•	DUPAGE	97	43	
FED. ROAD DIST. NO.		BILLINGS	FED. AID PROJECT	CONTRACT NO. 83961	
• 00-00115-00-BR					



MINIMUM BAR LAPS

Bar	Lap
#5	2'-2"
#6	2'-7"

PLAN



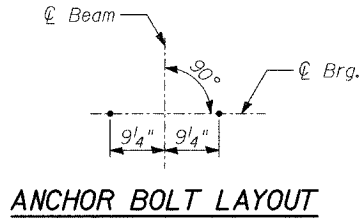
ELEVATION

NOTES:

1. Space reinforcement in cap to miss anchor bolts.
2. All edges shall have standard $\frac{3}{4}$ " chamfers.
3. Epoxy grout #5 bars in 9" deep minimum drilled holes and #7 bars in 12" deep minimum drilled holes according to Article 584 of the Standard Specifications. The grout and method of application shall be approved by the Engineer.
4. Bars indicated thus: 3x2-#5 etc. Indicates 3 lines of bars with 2 lengths per line.
5. For Sections A-A, B-B, C-C, D-D and E-E see Sheet 24.
6. For details of reinforcement and Bill of Material see Sheet 28.
7. 8" PVC Pipe Sleeve for 6" PVC Electrical conduits. Price of 8" PVC shall be included in the cost of "Concrete Structures".
8. Pour steps monolithically with cap.
9. Allowable Bearing Pressure for footing=12,000 psf. Allowable Bearing Pressure for drilled shafts is 20 tons/sq.ft

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

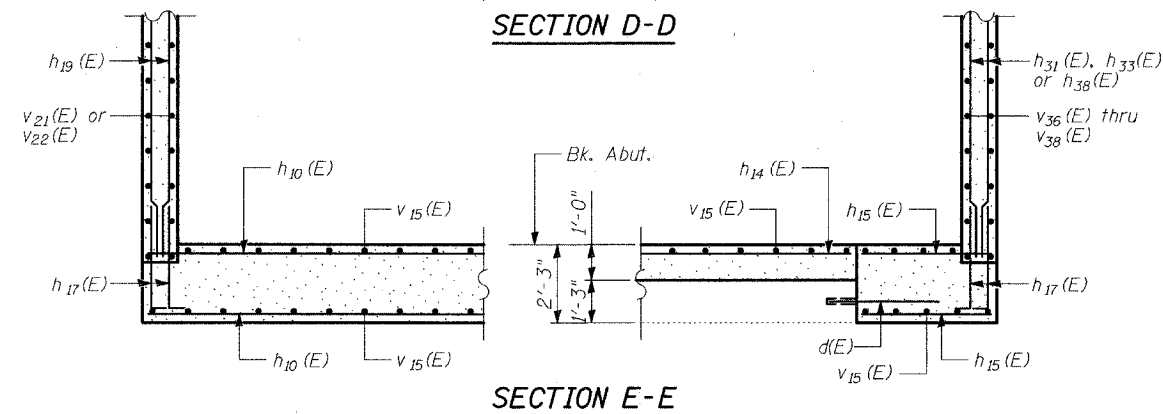
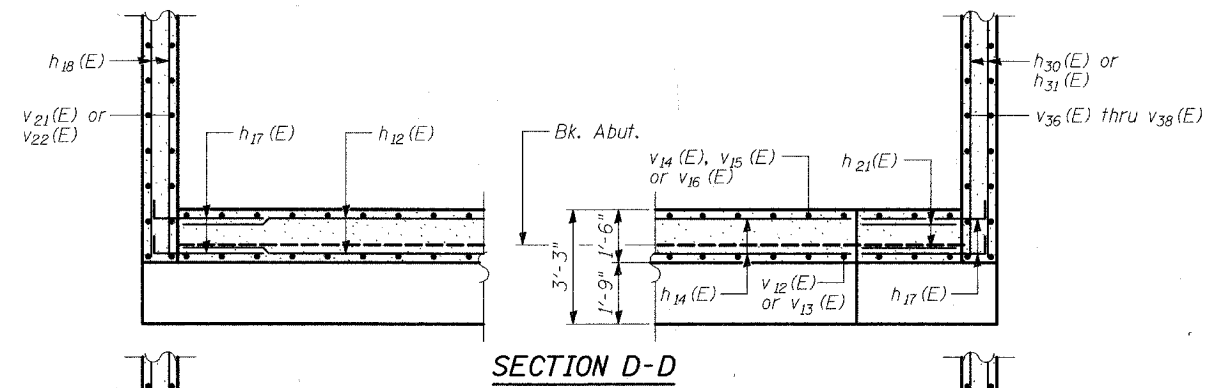
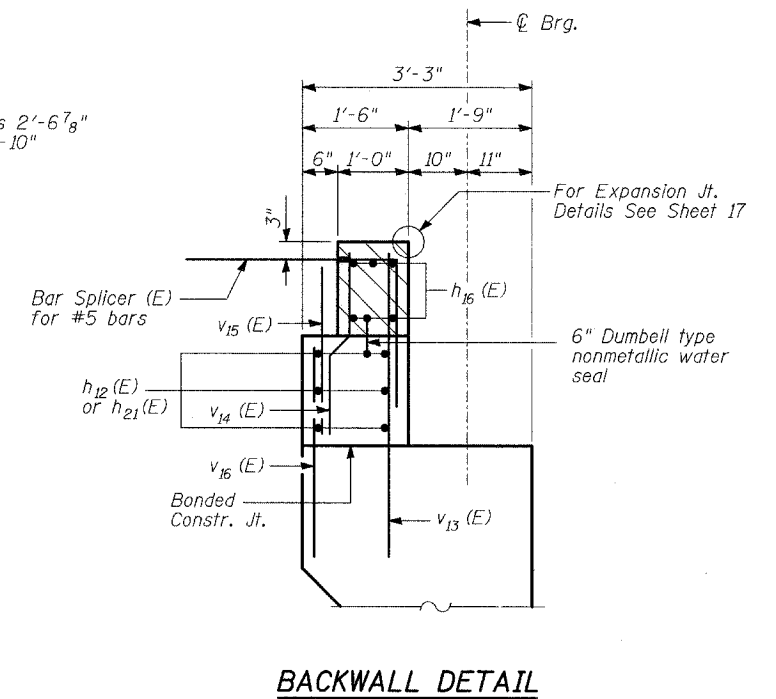
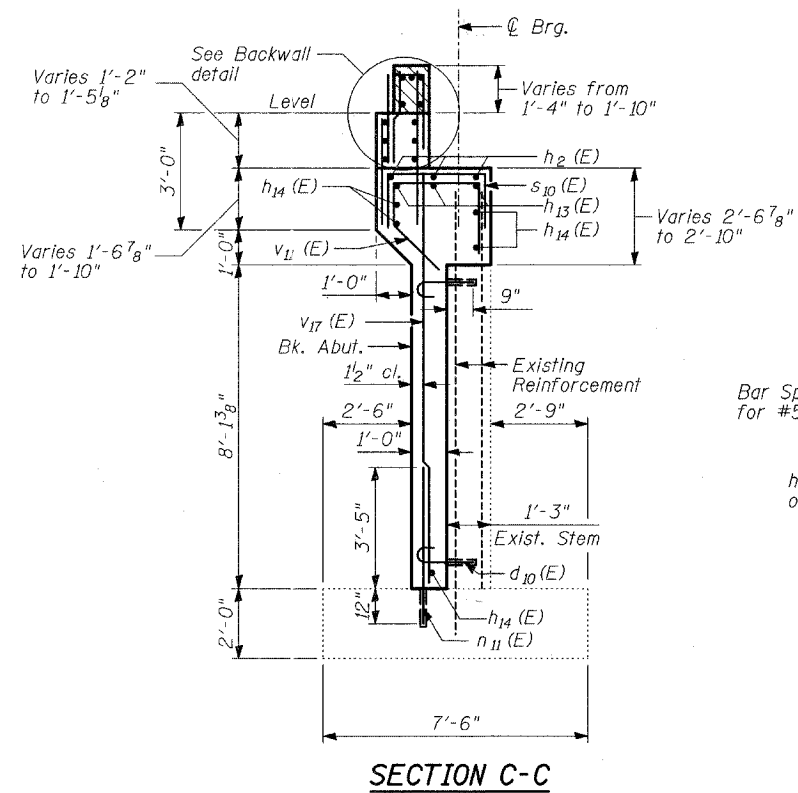
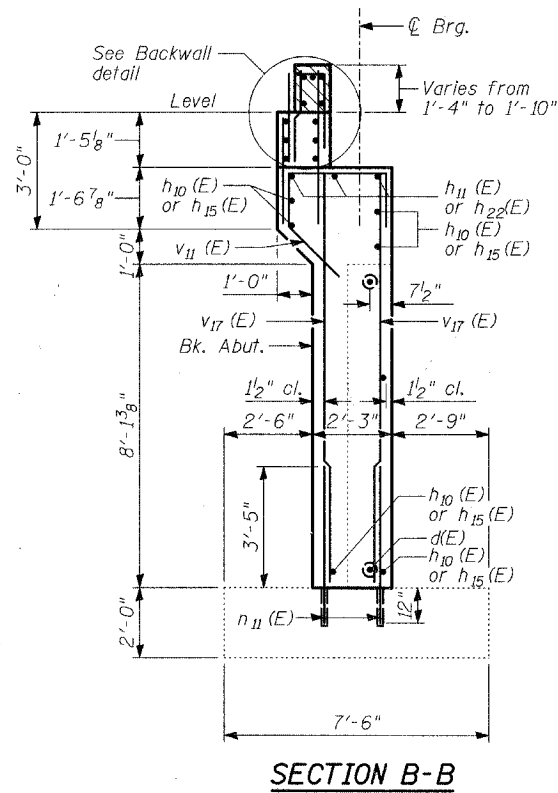
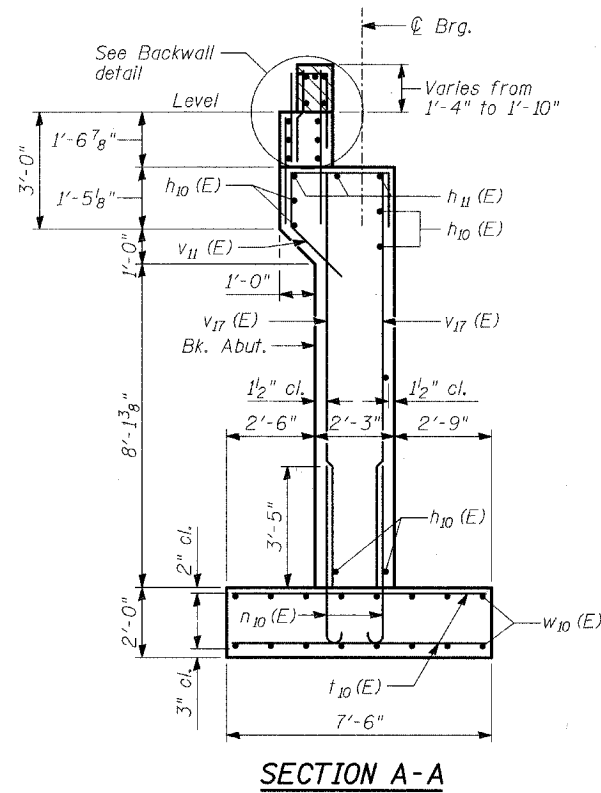


WEST ABUTMENT

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LISTED	SHEET	SHEET NO. - 24
1545	*	DUPAGE	97	45	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
* 00-00115-00-BR					



NOTE:

- Hatched area to be poured after Superstructure falsework has been removed. Quantity of Concrete included with Concrete Superstructure.

TYLIN INTERNATIONAL

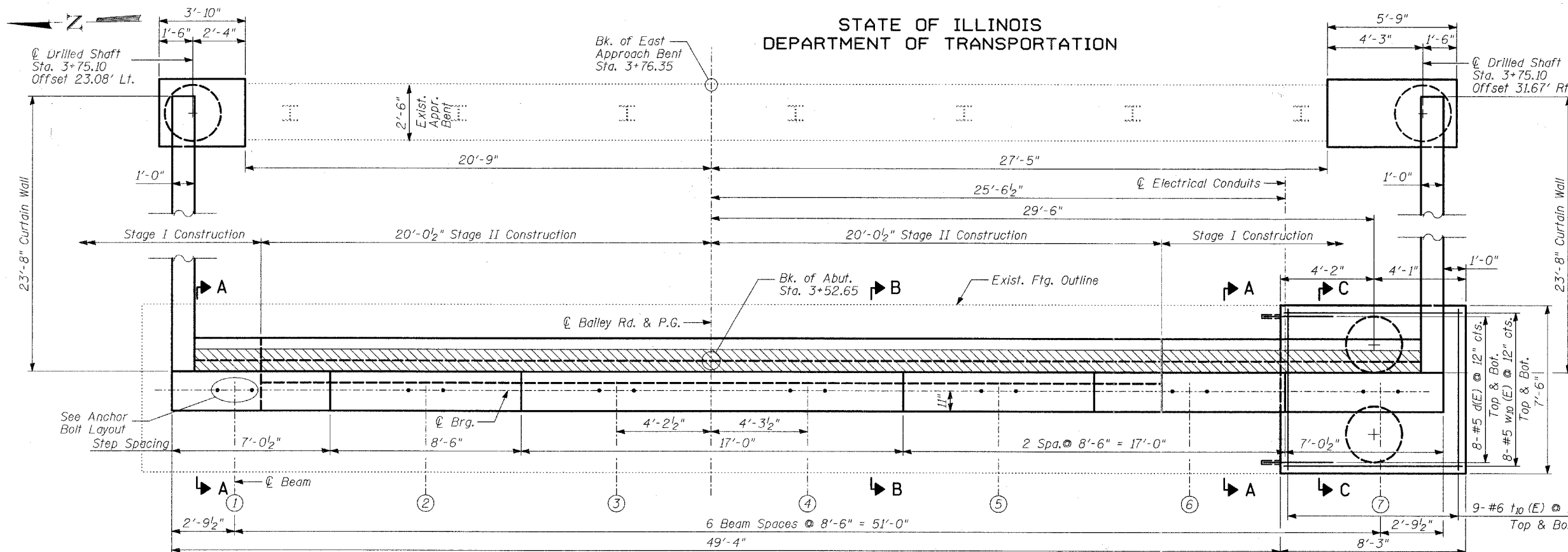
DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

WEST ABUTMENT
SECTIONS AND DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

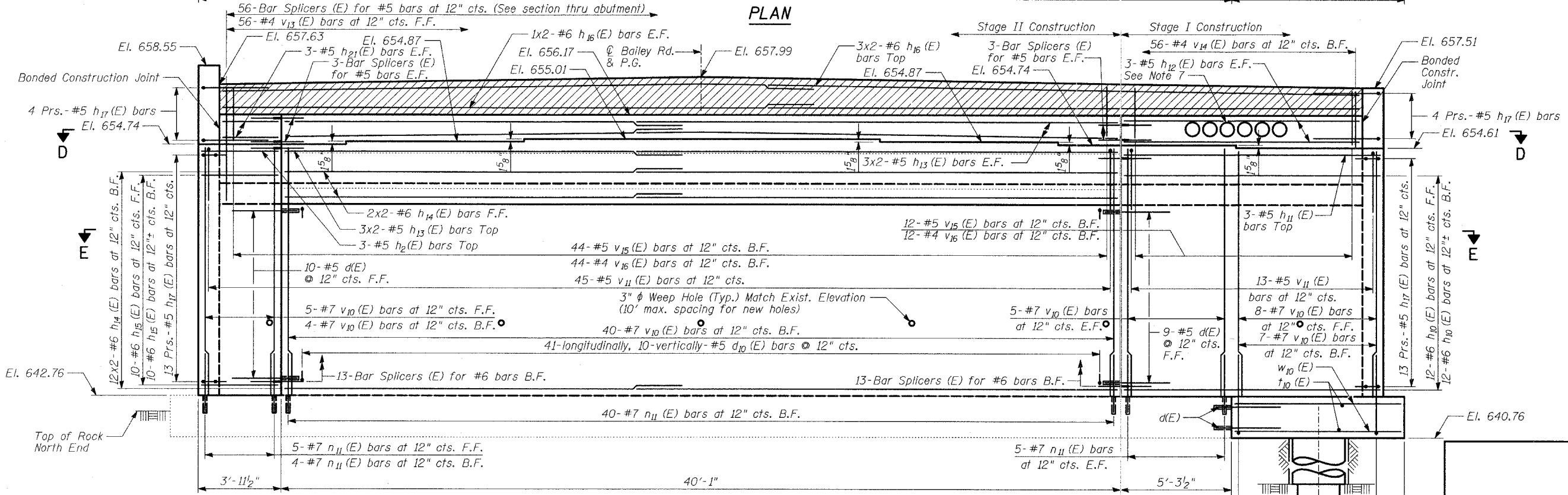
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. - 25
1545	*	DUPAGE	97	46	39 - SHEETS
FED. ROAD DIST. NO.					ILLINOIS
FED. AID PROJECT -					CONTRACT NO. 83961



- NOTES:**
1. Space reinforcement in cap to miss anchor bolts.
 2. All edges shall have standard 3/4" chamfers.
 3. Epoxy grout #5 bars in 9" deep minimum drilled holes and #7 bars in 12" deep minimum drilled holes according to Article 584 of the Standard Specifications. The grout and method of application shall be approved by the Engineer.
 4. Bars indicated thus: 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.
 5. For Sections A-A, B-B, C-C, D-D and E-E see Sheet 27.
 6. For details of reinforcement and Bill of Material see Sheet 28.
 7. 8" PVC Pipe Sleeve for 6" PVC Electrical conduits. Price of 8" PVC shall be included in the cost of "Concrete Structures".
 8. Pour steps monolithically with cap.
 9. Allowable Bearing Pressure for footing=12,000 psf. Allowable Bearing Pressure for drilled shafts is 20 tons/sq.ft

PLAN

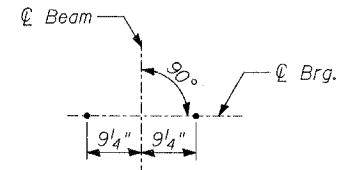


ELEVATION

MINIMUM BAR LAPS

Bar	Lap
#5	2'-2"
#6	2'-7"

ANCHOR BOLT LAYOUT



LEGEND

F.F. denotes front face
B.F. denotes back face
E.F. denotes each face

EAST ABUTMENT

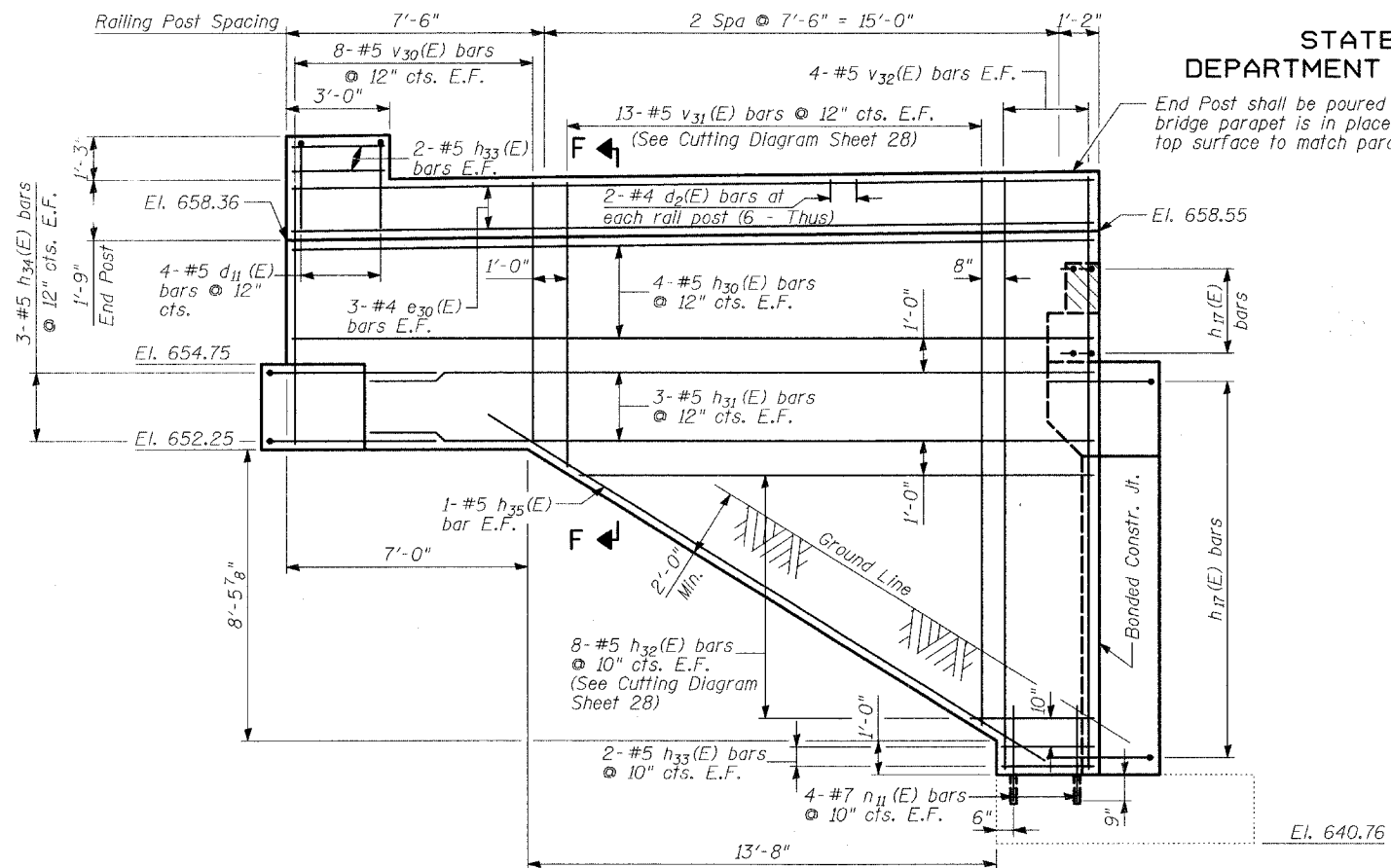
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

TYLIN INTERNATIONAL

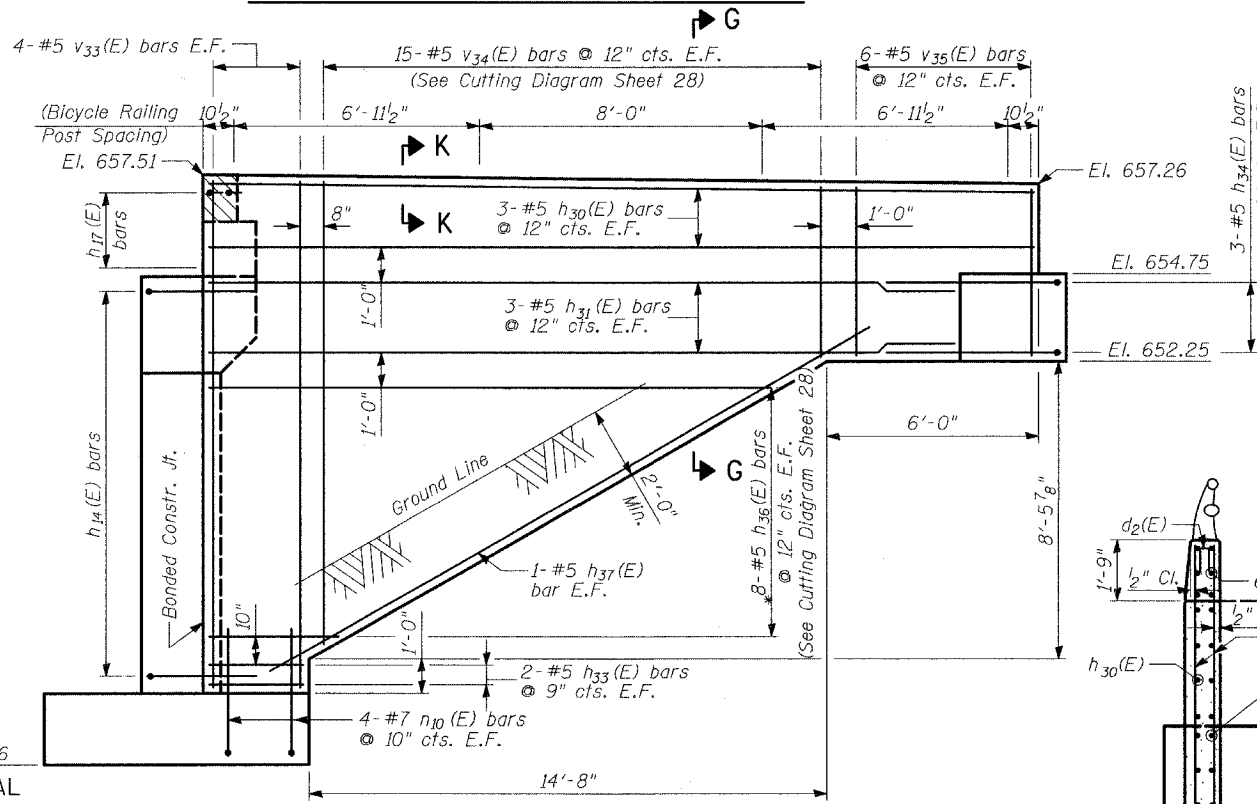
DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

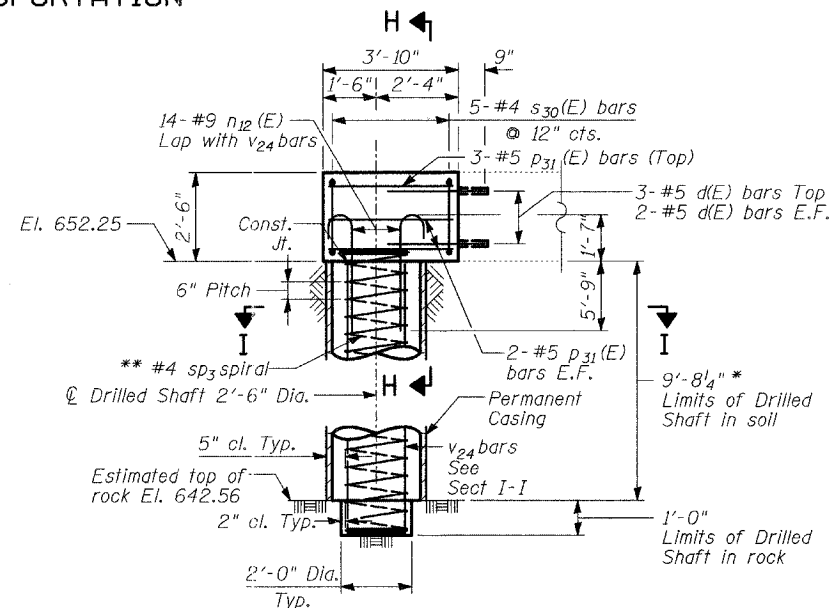
ROUTE NO.	SECTION	COUNTY	LETS	SHEET NO.	SHEET NO. - 26
1545	*	DUPAGE	97	47	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			
* 00-00115-00-BR			CONTRACT NO. 83961		



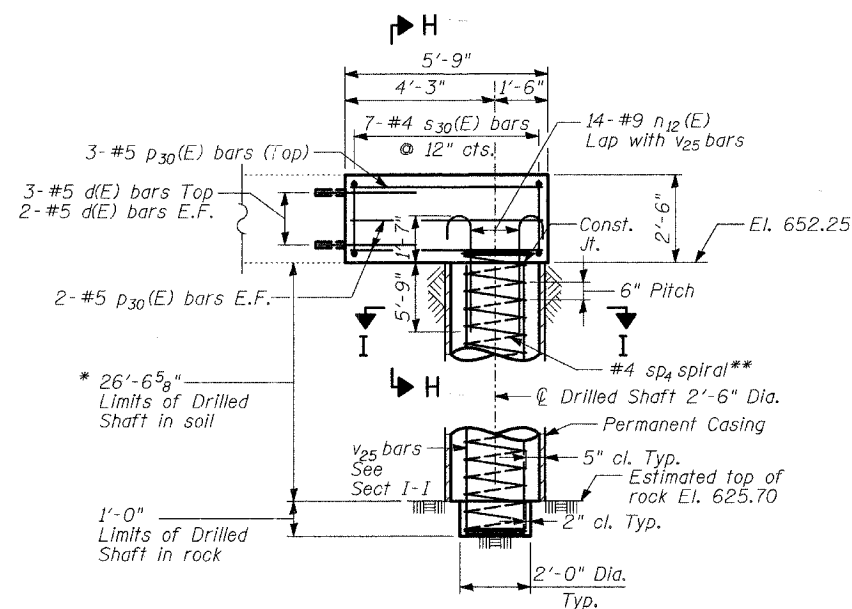
NORTH CURTAIN WALL SIDE ELEVATION



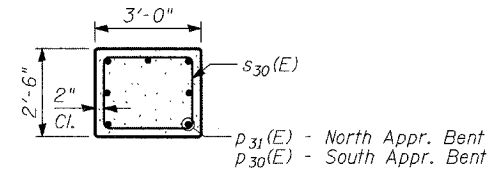
SOUTH CURTAIN WALL SIDE ELEVATION



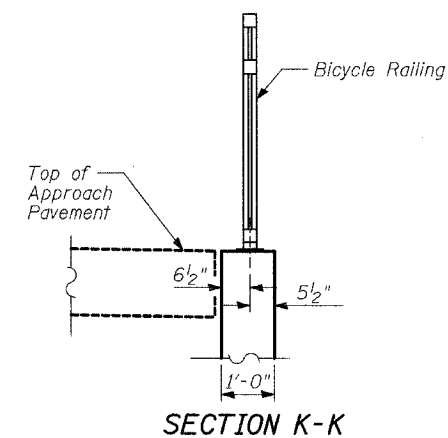
NORTH APPROACH BENT MODIFICATION



SOUTH APPROACH BENT MODIFICATION



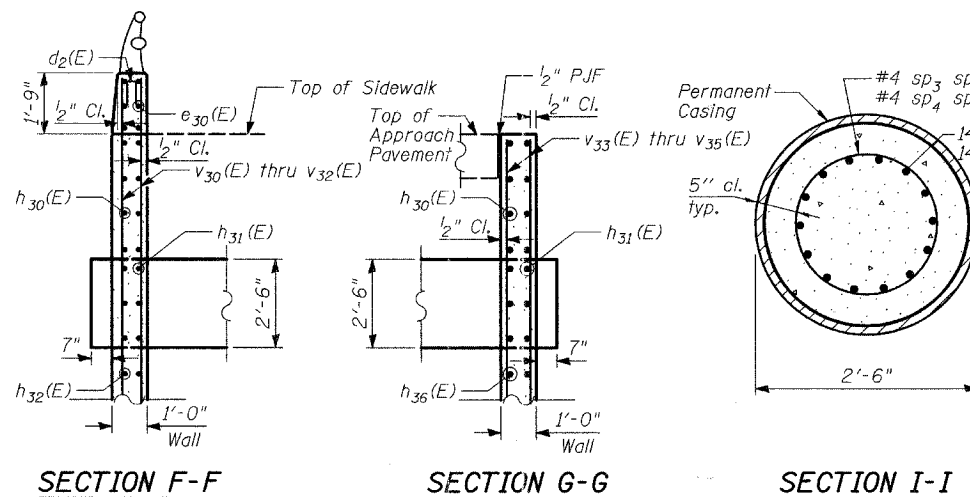
SECTION H-H



SECTION K-K

* The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.

** Provide 1/2 extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment footing. Provide min. 4-#4 spacers or equivalent.



SECTION F-F

SECTION G-G

SECTION I-I

TYLIN INTERNATIONAL

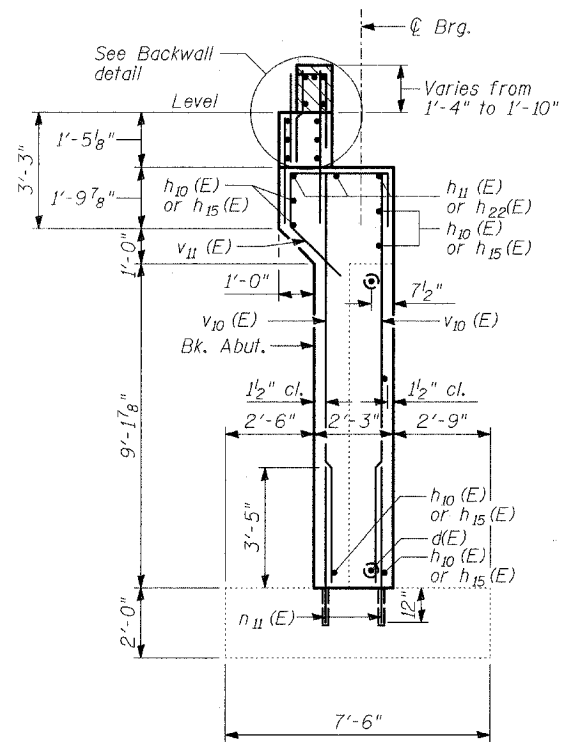
DESIGNED	- SNB
CHECKED	- SP
DRAWN	- SNB
CHECKED	- SP

EAST ABUTMENT CURTAIN WALLS

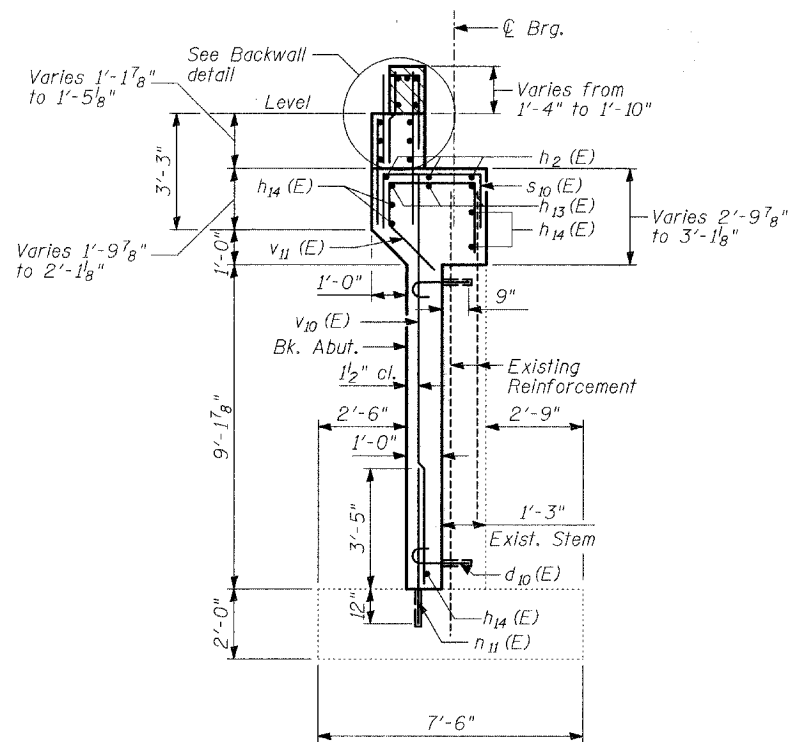
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

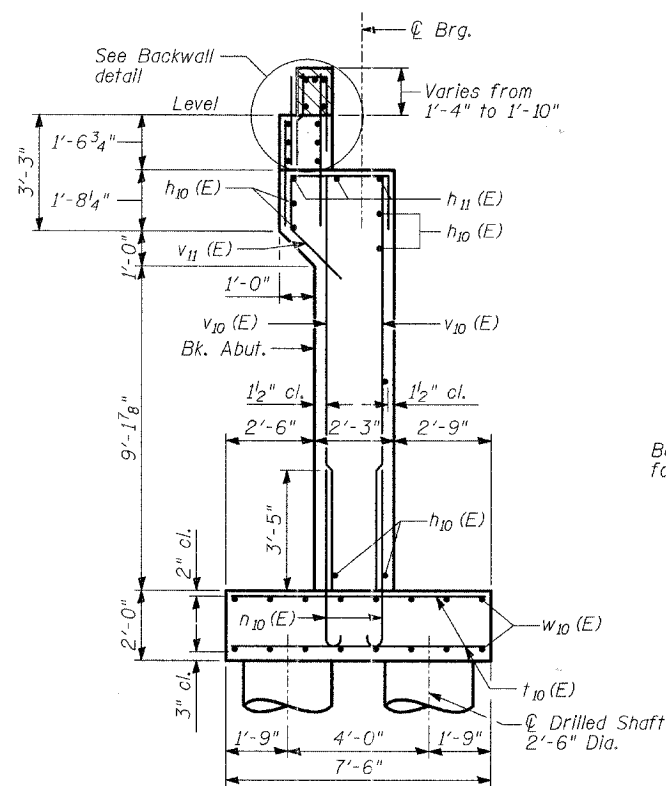
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 27
1545	*	DUPAGE	97	48	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 83961
00-00115-00-BR					



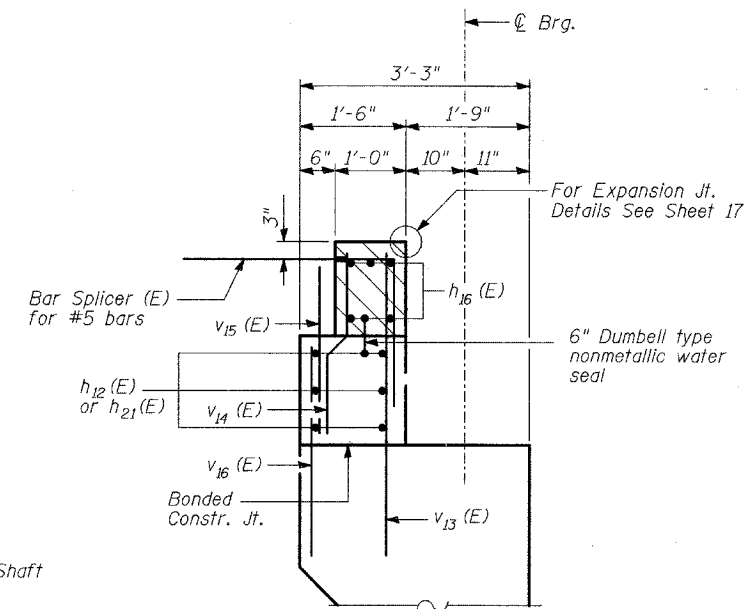
SECTION A-A



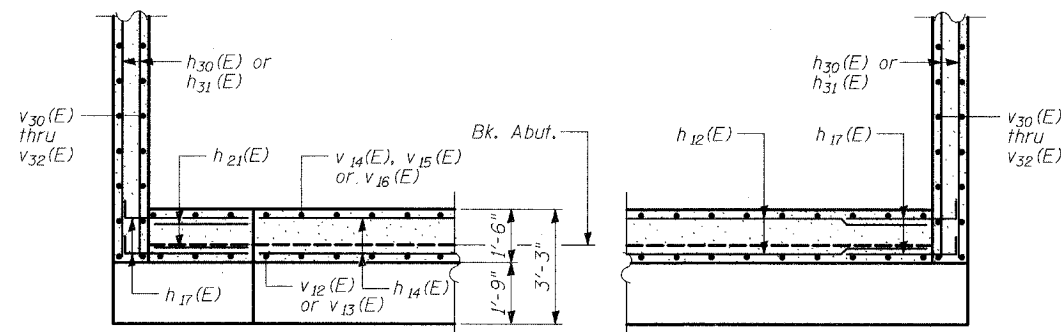
SECTION B-B



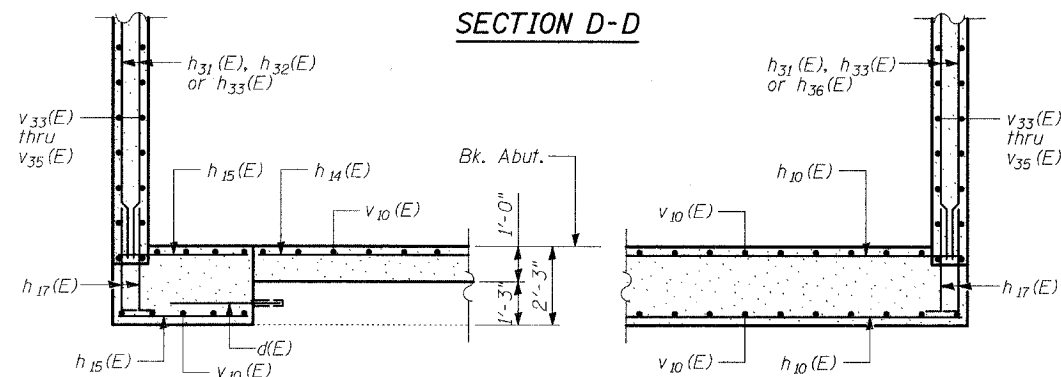
SECTION C-C



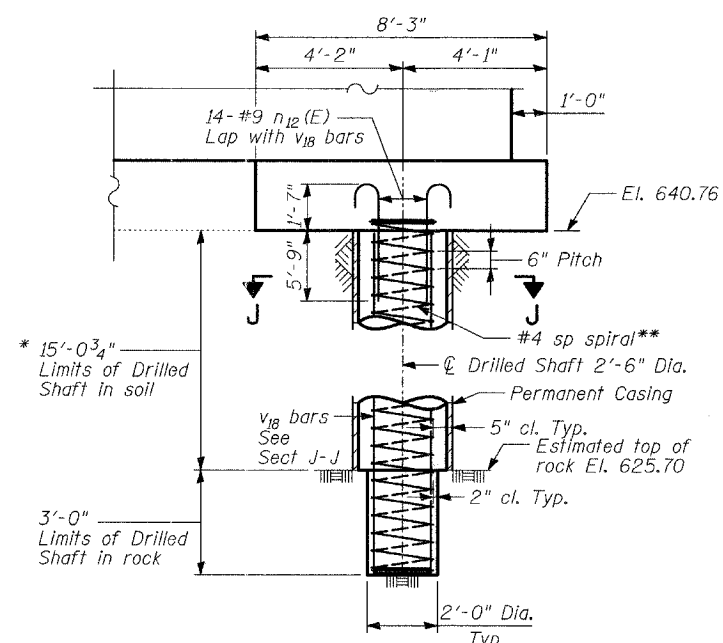
BACKWALL DETAIL



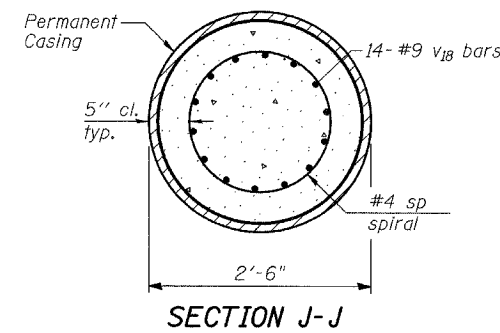
SECTION D-D



SECTION E-E



DRILLED SHAFT DETAIL



SECTION J-J

NOTE:
1. Hatched area to be poured after Superstructure falsework has been removed. Quantity of Concrete included with Concrete Superstructure.

TYLIN INTERNATIONAL

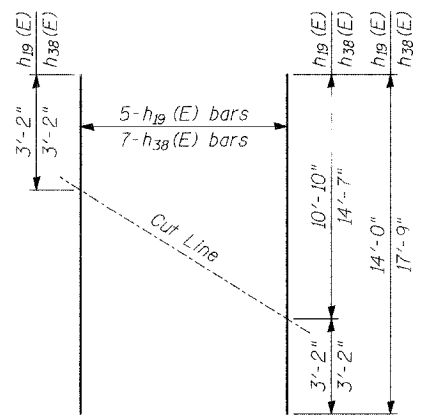
DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

EAST ABUTMENT
SECTIONS AND DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

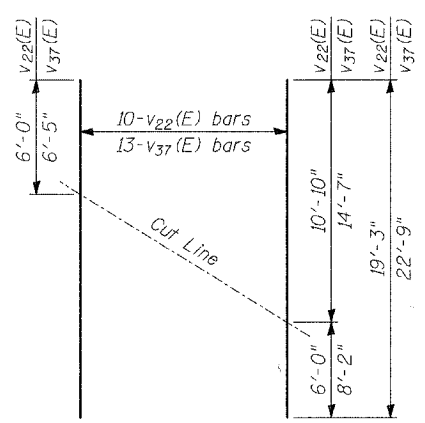
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	*	DUPAGE	97	49
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	CONTRACT NO. 83961	
00-00115-00-BR		39 - SHEETS		



FIELD CUTTING DIAGRAM

Order $h_{19}(E)$ and $h_{38}(E)$ bars full length. Cut to fit and use the remainder of bars in opposite face.



FIELD CUTTING DIAGRAM

Order $v_{22}(E)$ and $v_{37}(E)$ bars full length. Cut to fit and use the remainder of bars in opposite face.

**WEST ABUTMENT
BILL OF MATERIAL**

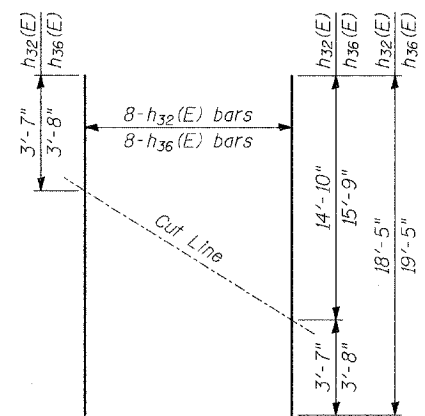
Bar	No.	Size	Length	Shape
$d_2(E)$	46	#5	3'-3"	—
$d_{10}(E)$	6	#4	2'-0"	┘
$d_{11}(E)$	369	#5	2'-2"	┘
$e_{30}(E)$	6	#4	23'-4"	—
$h_{10}(E)$	22	#6	12'-2"	—
$h_{11}(E)$	3	#5	12'-2"	—
$h_{12}(E)$	5	#5	11'-2"	—
$h_{13}(E)$	18	#5	21'-0"	—
$h_{14}(E)$	26	#6	21'-3"	—
$h_{15}(E)$	22	#6	3'-7"	—
$h_{16}(E)$	10	#6	28'-6"	—
$h_{17}(E)$	64	#5	4'-3"	┘
$h_{18}(E)$	14	#5	12'-8"	—
$h_{19}(E)$	5	#5	14'-0"	—
$h_{20}(E)$	5	#5	3'-8"	┘
$h_{21}(E)$	6	#5	2'-7"	—
$h_{22}(E)$	3	#5	3'-7"	—
$h_{30}(E)$	8	#5	23'-4"	—
$h_{31}(E)$	6	#5	21'-1"	—
$h_{33}(E)$	8	#5	2'-8"	—
$h_{34}(E)$	6	#5	5'-7"	┘
$h_{38}(E)$	7	#5	17'-9"	—
$h_{39}(E)$	2	#5	18'-6"	—
$n_{10}(E)$	15	#7	6'-0"	┘
$n_{11}(E)$	67	#7	4'-5"	—
$n_{12}(E)$	14	#9	8'-3"	┘
$p_{31}(E)$	7	#5	3'-6"	—
$s_{11}(E)$	8	#5	11'-7"	┘
$s_{30}(E)$	5	#4	10'-5"	┘
sp_1	1	#4	8'-6"	⋈
sp_2	1	#4	10'-4"	⋈
$t_{10}(E)$	18	#6	7'-2"	—
$v_{11}(E)$	58	#5	8'-1"	┘
$v_{13}(E)$	56	#4	3'-11"	—
$v_{14}(E)$	56	#4	2'-9"	┘
$v_{15}(E)$	56	#5	2'-6"	—
$v_{16}(E)$	56	#4	2'-8"	—

**WEST ABUTMENT
BILL OF MATERIAL CONT.**

Bar	No.	Size	Length	Shape
$v_{17}(E)$	74	#7	10'-4"	—
v_{19}	14	#9	11'-10"	—
$v_{20}(E)$	4	#5	6'-10"	—
$v_{21}(E)$	8	#5	13'-3"	—
$v_{22}(E)$	10	#5	16'-10"	—
v_{23}	14	#9	10'-0"	—
$v_{36}(E)$	8	#5	14'-1"	—
$v_{37}(E)$	13	#5	22'-9"	—
$v_{38}(E)$	16	#5	7'-6"	—
$w_{10}(E)$	16	#5	7'-11"	—
Structure Excavation		Cu Yd	134	
Rock Excavation for Structures		Cu Yd	2	
Concrete Structures		Cu Yd	63.8	
Reinforcement Bars, Epoxy Coated		Pound	9,580	
Reinforcement Bars		Pound	1,200	
Bridge Seat Sealer		Sq Ft	100	
Geocomposite Wall Drain		Sq Yd	52	
Drilled Shaft in Soil		Cu Yd	2.7	
Drilled Shaft in Rock		Cu Yd	0.5	
Porous Granular Embankment, Special		Cu Yd	69	
Bar Splicers		Each	92	
Permanent Casing		Foot	15	

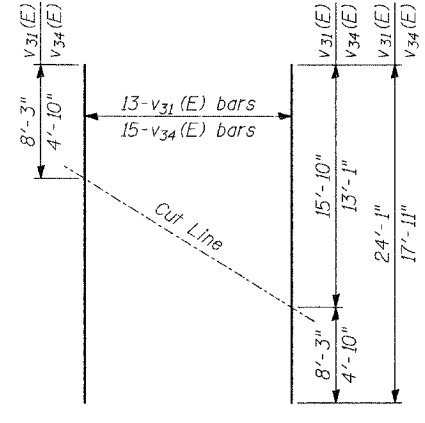
Min. lap for spirals = 1'-8".

*** Length is height of spiral.



FIELD CUTTING DIAGRAM

Order $h_{32}(E)$ and $h_{36}(E)$ bars full length. Cut to fit and use the remainder of bars in opposite face.



FIELD CUTTING DIAGRAM

Order $v_{31}(E)$ and $v_{34}(E)$ bars full length. Cut to fit and use the remainder of bars in opposite face.

**EAST ABUTMENT
BILL OF MATERIAL**

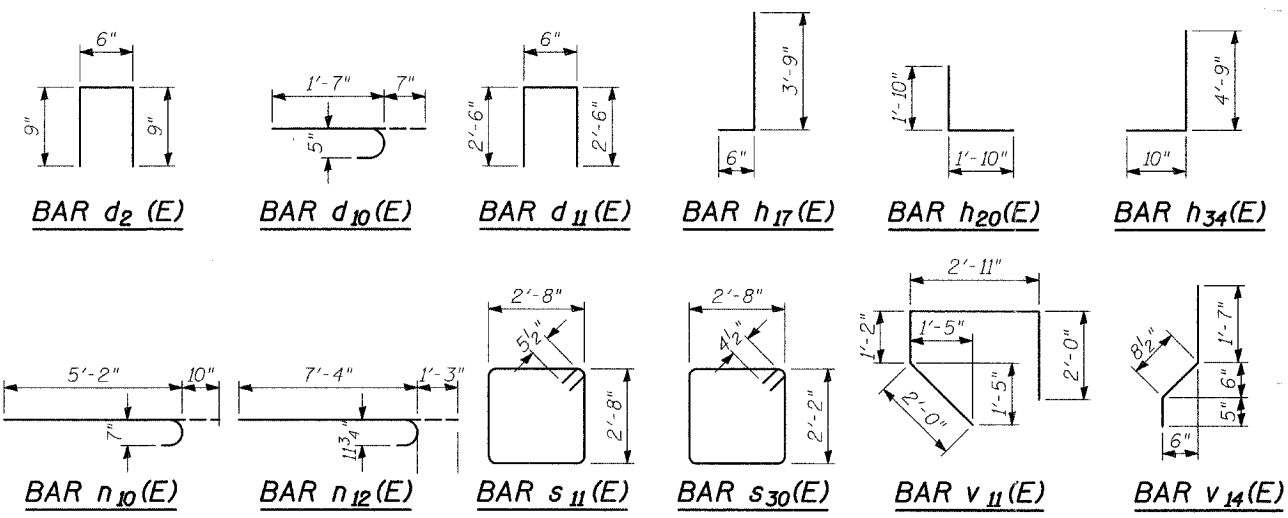
Bar	No.	Size	Length	Shape
$d_2(E)$	50	#5	3'-3"	—
$d_{10}(E)$	6	#4	2'-0"	┘
$d_{11}(E)$	410	#5	2'-2"	┘
$d_{12}(E)$	4	#5	5'-6"	┘
$e_{30}(E)$	6	#4	23'-4"	—
$h_{10}(E)$	24	#6	12'-2"	—
$h_{11}(E)$	3	#5	12'-2"	—
$h_{12}(E)$	6	#5	11'-2"	—
$h_{13}(E)$	18	#5	21'-0"	—
$h_{14}(E)$	28	#6	21'-3"	—
$h_{15}(E)$	24	#6	3'-7"	—
$h_{16}(E)$	10	#6	28'-6"	—
$h_{17}(E)$	68	#5	4'-3"	┘
$h_{21}(E)$	6	#5	2'-7"	—
$h_{22}(E)$	3	#5	3'-7"	—
$h_{30}(E)$	14	#5	23'-4"	—
$h_{31}(E)$	12	#5	21'-1"	—
$h_{32}(E)$	8	#5	18'-5"	—
$h_{33}(E)$	12	#5	2'-8"	—
$h_{34}(E)$	12	#5	5'-7"	┘
$h_{35}(E)$	2	#5	19'-1"	—
$h_{36}(E)$	8	#5	19'-5"	—
$h_{37}(E)$	2	#5	20'-0"	—
$n_{10}(E)$	23	#7	6'-0"	┘
$n_{11}(E)$	67	#7	4'-5"	—
$n_{12}(E)$	56	#9	8'-3"	┘
$p_{30}(E)$	7	#5	5'-5"	—
$p_{31}(E)$	7	#5	3'-6"	—
$s_{30}(E)$	12	#4	10'-5"	┘
sp	2	#4	18'-3"	⋈
sp_3	1	#4	10'-10"	⋈
sp_4	1	#4	27'-9"	⋈

**EAST ABUTMENT
BILL OF MATERIAL CONT.**

Bar	No.	Size	Length	Shape
$t_{10}(E)$	18	#6	7'-2"	—
$v_{10}(E)$	74	#7	11'-8"	—
$v_{11}(E)$	58	#5	8'-1"	┘
$v_{13}(E)$	56	#4	3'-11"	—
$v_{14}(E)$	56	#4	2'-9"	┘
$v_{15}(E)$	56	#5	2'-6"	—
$v_{16}(E)$	56	#4	2'-8"	—
v_{18}	28	#9	17'-10"	—
v_{24}	14	#9	10'-6"	—
v_{25}	14	#9	27'-5"	—
$v_{30}(E)$	16	#5	7'-6"	—
$v_{31}(E)$	13	#5	24'-1"	—
$v_{32}(E)$	8	#5	17'-2"	—
$v_{33}(E)$	8	#5	14'-5"	—
$v_{34}(E)$	15	#5	17'-11"	—
$v_{35}(E)$	12	#5	4'-9"	—
$w_{10}(E)$	16	#5	7'-11"	—
Structure Excavation		Cu Yd	143	
Rock Excavation for Structures		Cu Yd	6	
Concrete Structures		Cu Yd	73.7	
Reinforcement Bars, Epoxy Coated		Pound	11,850	
Reinforcement Bars		Pound	4,080	
Bridge Seat Sealer		Sq Ft	100	
Geocomposite Wall Drain		Sq Yd	60	
Drilled Shaft in Soil		Cu Yd	12.1	
Drilled Shaft in Rock		Cu Yd	1.0	
Porous Granular Embankment, Special		Cu Yd	79	
Bar Splicers		Each	94	
Permanent Casing		Foot	67	

Min. lap for spirals = 1'-8".

*** Length is height of spiral.



TYLIN INTERNATIONAL

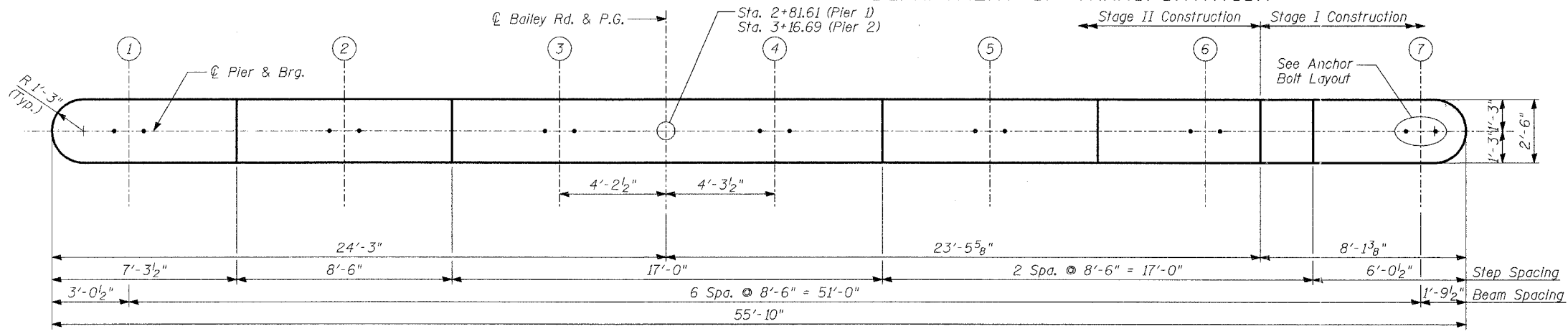
DESIGNED	- PL,SNB
CHECKED	- SP
DRAWN	- SNB
CHECKED	- SP

WEST AND EAST ABUTMENT REINFORCING

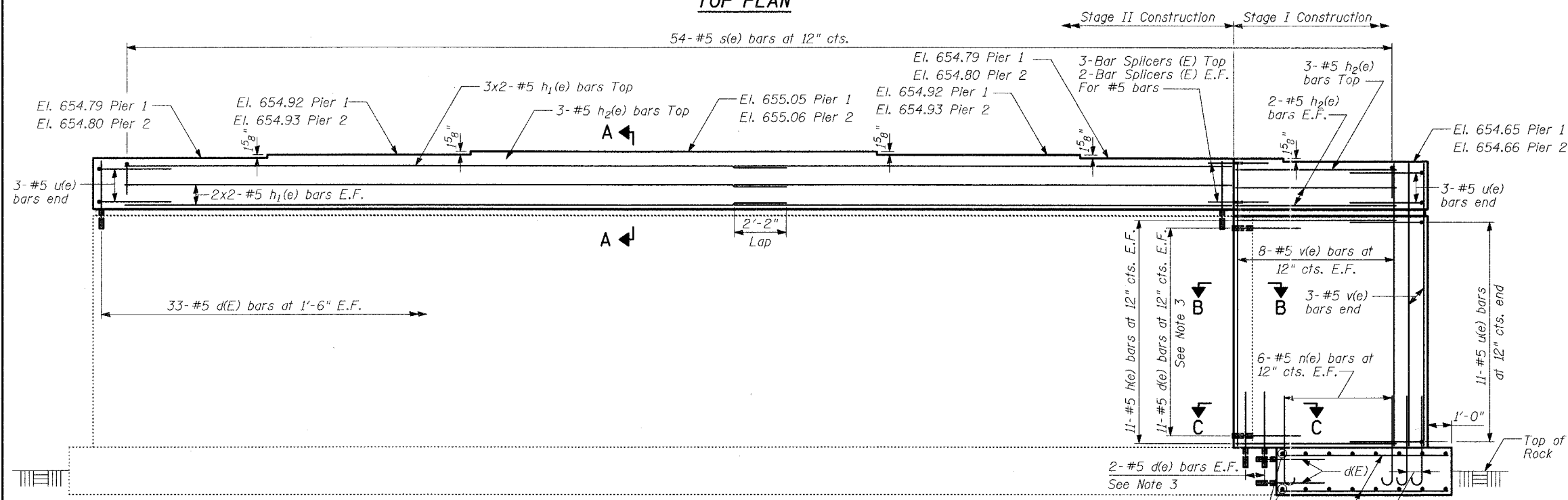
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

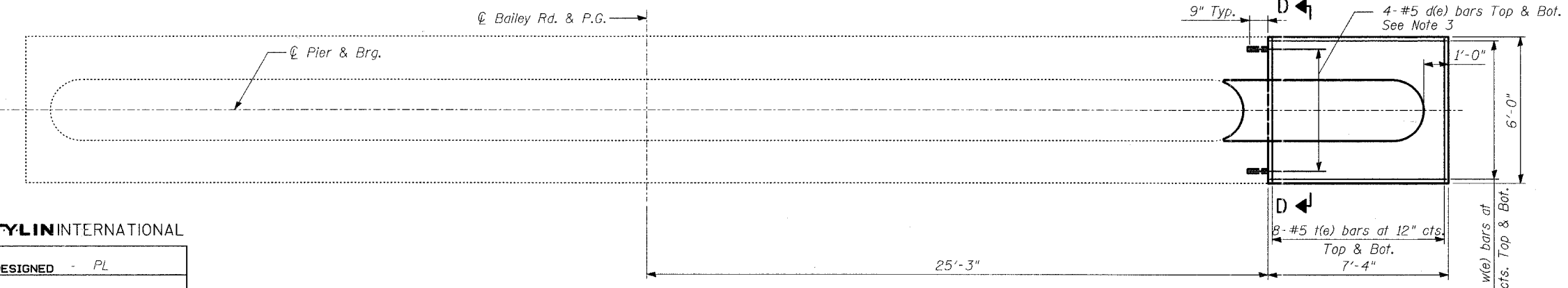
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. - 29
1545	*	DUPAGE	97	50	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
* 00-00115-00-BR					



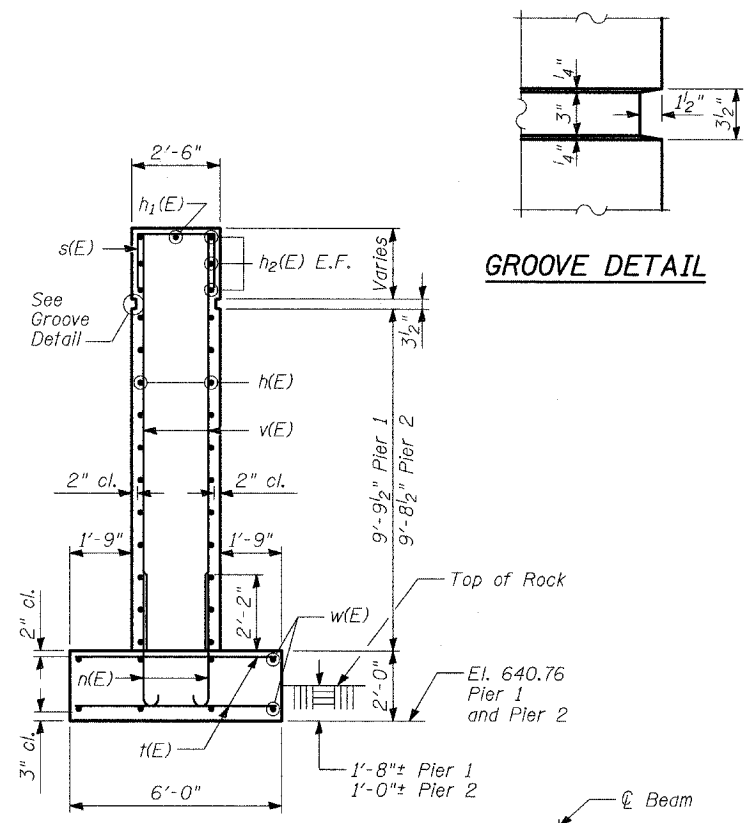
TOP PLAN



ELEVATION
(Looking East)



FOOTING PLAN



END VIEW

ANCHOR BOLT LAYOUT

NOTES:

1. Space reinforcement in pier to miss anchor bolts.
2. All edges shall have standard $\frac{3}{4}$ " chamfers.
3. Epoxy grout bars in 9" deep minimum drilled holes according to Article 584 of the Standard Specifications. The grout and method of application shall be approved by the Engineer.
4. Bars indicated thus: 3x2-#5 etc. indicates 3 lines of bars with 2 lengths per line.
5. For Section C-C and Section D-D see Sheet 30.
6. For Bill of Material see Sheet 30.
7. Pour steps monolithically with Pier Cap.
8. Allowable Bearing Pressure 12,000 psf.

TYLIN INTERNATIONAL

DESIGNED	- PL
CHECKED	- DJE
DRAWN	- PL
CHECKED	- DJE

LEGEND

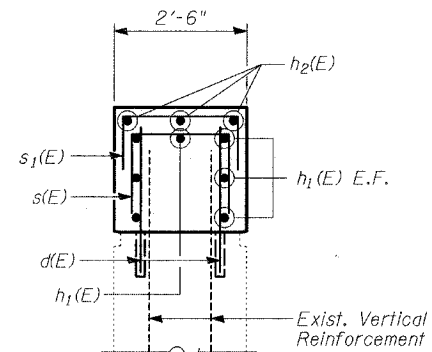
E.F. indicates Each Face

PIERS 1 & 2

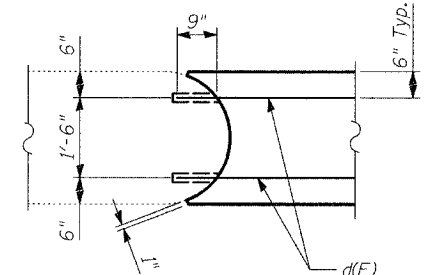
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

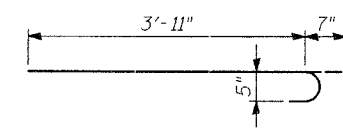
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1545		DUPAGE	97	51	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ. NO.	CONTRACT NO. 83961	
• 00-00115-00-BR					



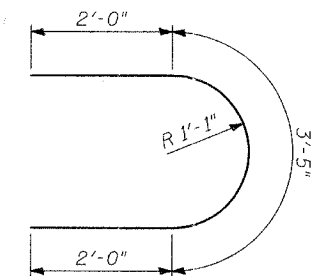
SECTION A-A



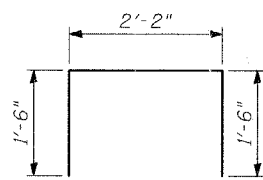
SECTION B-B



BAR n(E)



BAR u(E)



BAR s(E)

PIER 1 BILL OF MATERIAL

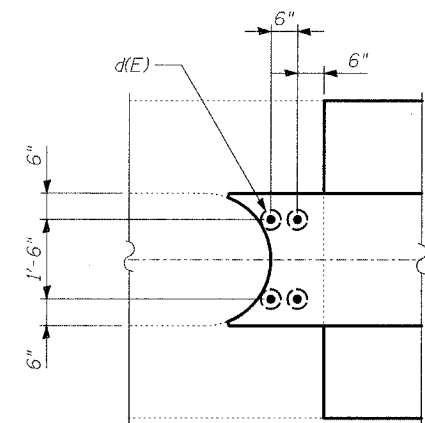
Bar	No.	Size	Length	Shape
d(E)	100	#5	3'-3"	—
h(E)	22	#5	6'-6"	—
h1(E)	14	#5	24'-3"	—
h2(E)	7	#5	6'-8"	—
n(E)	17	#5	4'-6"	—
s(E)	54	#5	5'-2"	—
t(E)	16	#5	5'-8"	—
u(E)	17	#5	7'-5"	—
v(E)	19	#5	11'-9"	—
w(E)	8	#5	7'-0"	—

Reinforcement Bars, Epoxy Coated	Pound	1,770
Concrete Structures	Cu. Yd.	22.2
Bar Splicers	Each	7
Rock Excavation for Structures	Cu. Yd.	3
Structure Excavation	Cu. Yd.	11

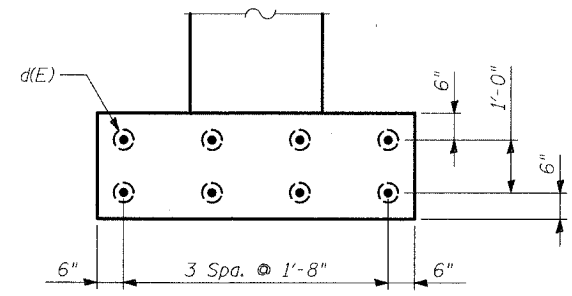
PIER 2 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	100	#5	3'-3"	—
h(E)	22	#5	6'-6"	—
h1(E)	14	#5	24'-3"	—
h2(E)	7	#5	6'-8"	—
n(E)	17	#5	4'-6"	—
s(E)	54	#5	5'-2"	—
t(E)	16	#5	5'-8"	—
u(E)	17	#5	7'-5"	—
v(E)	19	#5	11'-9"	—
w(E)	8	#5	7'-0"	—

Reinforcement Bars, Epoxy Coated	Pound	1,770
Concrete Structures	Cu. Yd.	22.2
Bar Splicers	Each	7
Rock Excavation for Structures	Cu. Yd.	2
Structure Excavation	Cu. Yd.	11



SECTION C-C



SECTION D-D

TYLIN INTERNATIONAL

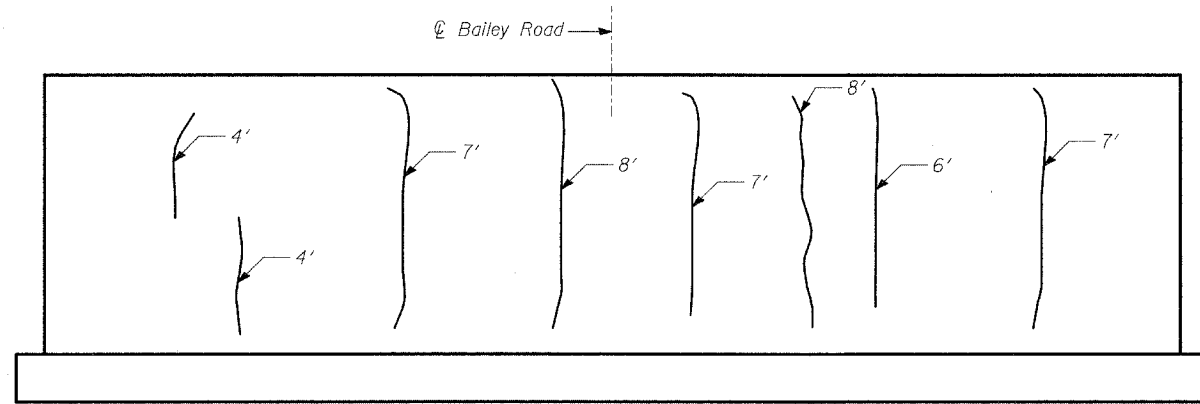
DESIGNED	- PL
CHECKED	- DJE
DRAWN	- PL
CHECKED	- DJE

PIER DETAILS

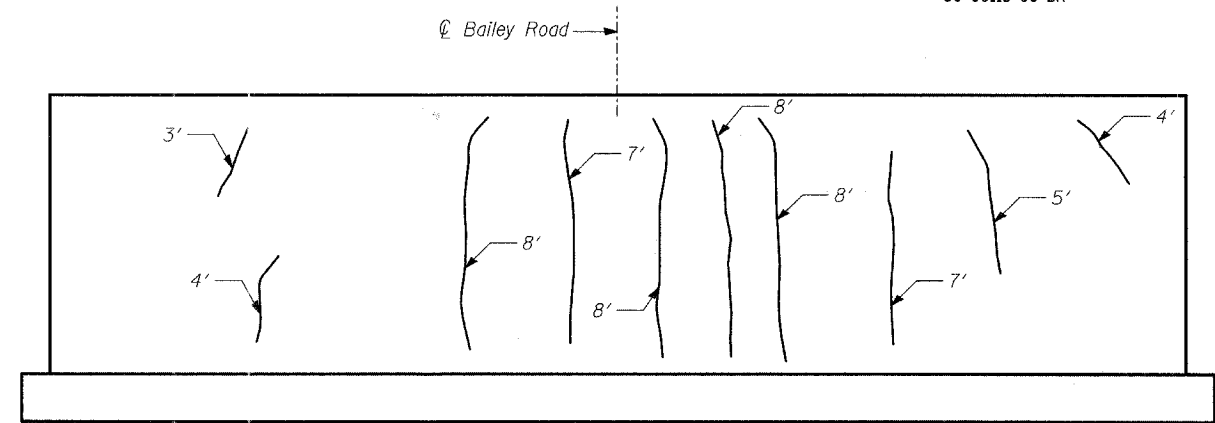
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

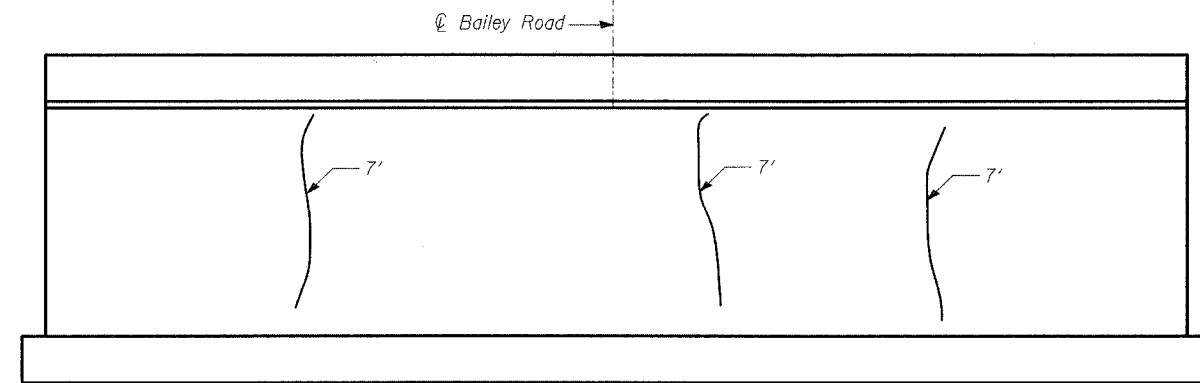
ROUTE NO.	SECTION	COUNTY	LETS	SHEET NO.	SHEET NO. - 31
1545	*	DUPAGE	97	52	39 SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.	CONTRACT NO. 83961		
* 00-00115-00-BR					



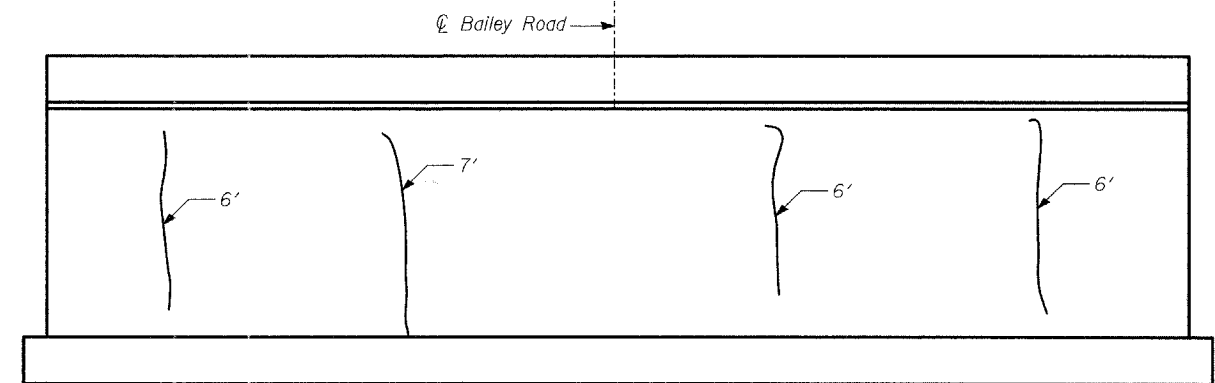
WEST ABUTMENT ELEVATION
(Looking West)



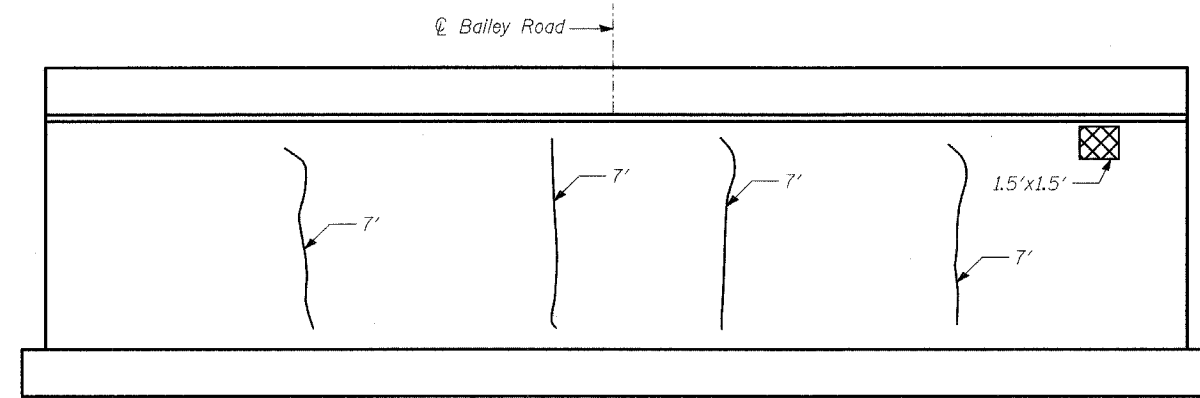
EAST ABUTMENT ELEVATION
(Looking East)



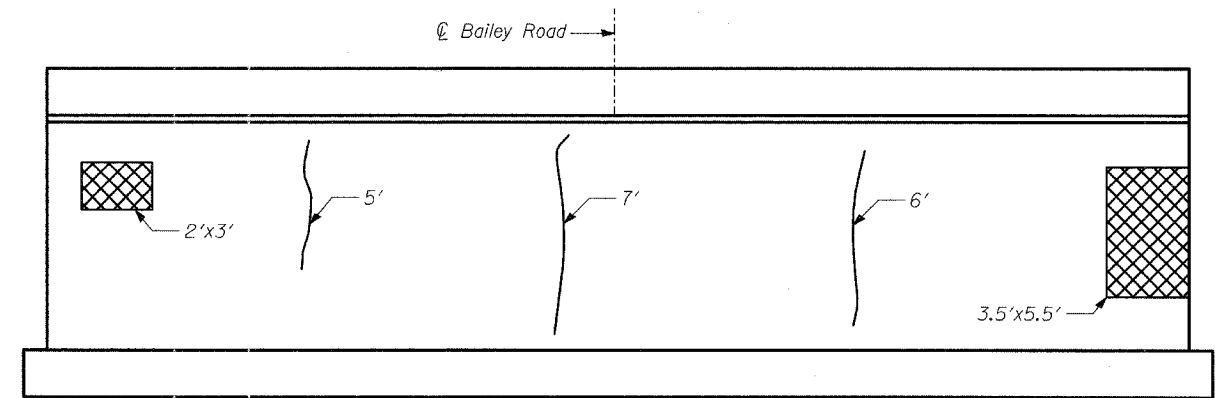
PIER 1 ELEVATION
(Looking West)



PIER 1 ELEVATION
(Looking East)



PIER 2 ELEVATION
(Looking West)





PIER 2 ELEVATION
(Looking East)

TYLIN INTERNATIONAL

DESIGNED	-	SP
CHECKED	-	PF
DRAWN	-	SNB
CHECKED	-	SP

LEGEND

-  Epoxy Crack Injection
-  Structural Repair of Concrete (Depth equal to or less than 5")

BILL OF MATERIAL

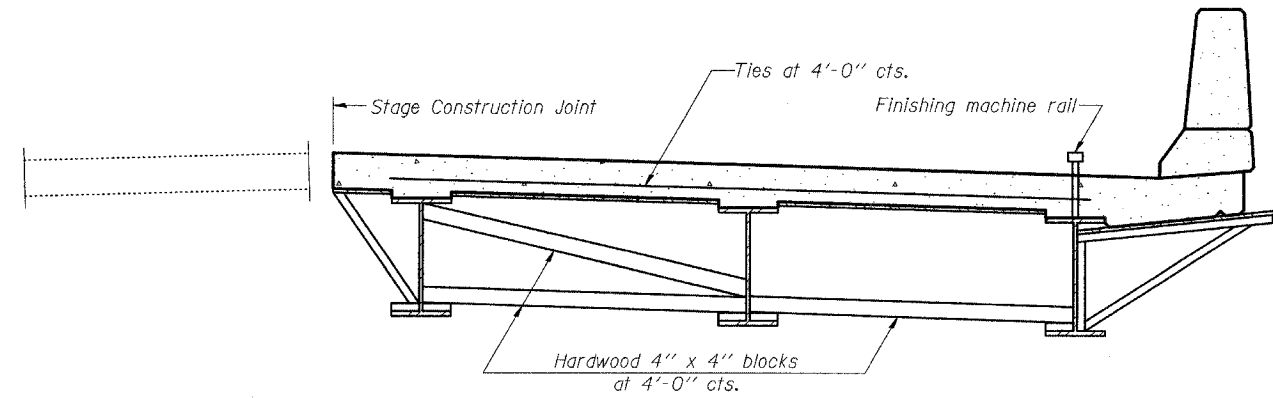
ITEM	UNIT	TOTAL
Epoxy Crack Injection	FT	205
Structural Repair of Concrete (Depth equal to or less than 5")	SG FT	28

SUBSTRUCTURE REPAIR

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 32
1545	•	DUPAGE	97	53	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
• 00-00115-00-BR					



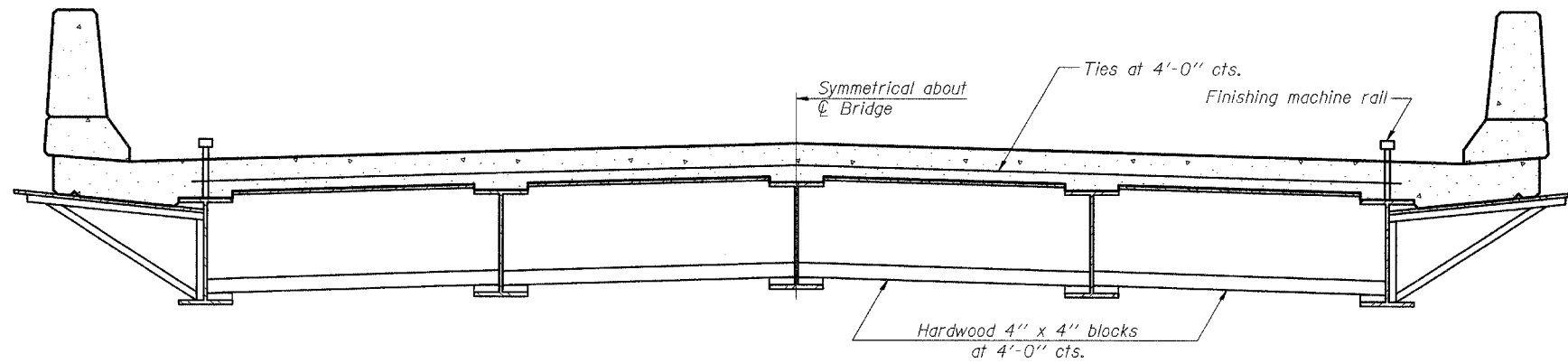
**FORM BRACES FOR
STAGE CONSTRUCTION**

When cantilever forming brackets are used, the work shall be done according to Article 503.06 (b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR
STANDARD CONSTRUCTION**

TYLIN INTERNATIONAL

DESIGNED	-	SNB
CHECKED	-	SP
DRAWN	-	SNB
CHECKED	-	SP

CANTILEVER FORMING BRACKETS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. - 33
1545	•	DUPAGE	97	54	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ. NO.	CONTRACT NO. 83961		
* 00-00115-00-BR					

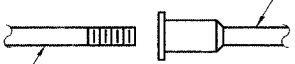
NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_t$
(Tension in kips)
- ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

The diameter of this part is the same as the diameter of the bar spliced.



The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

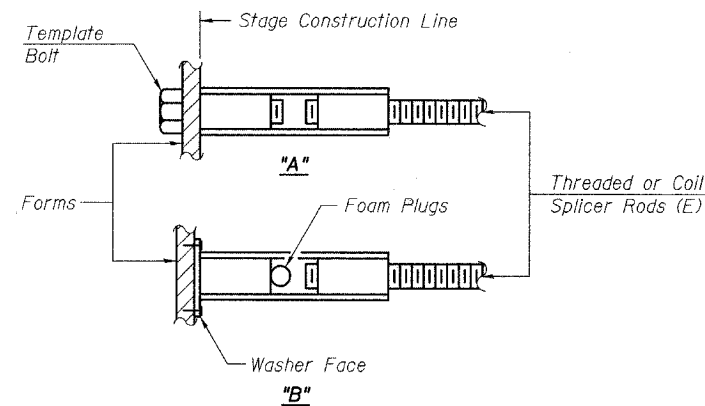
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

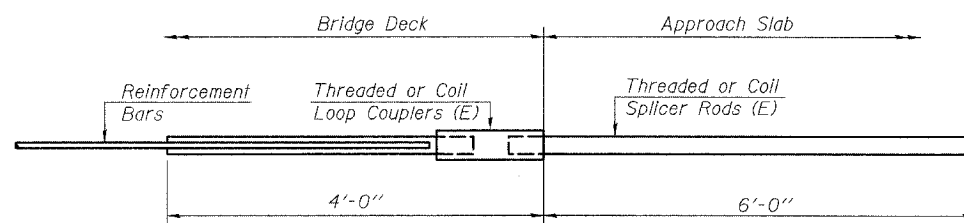
** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

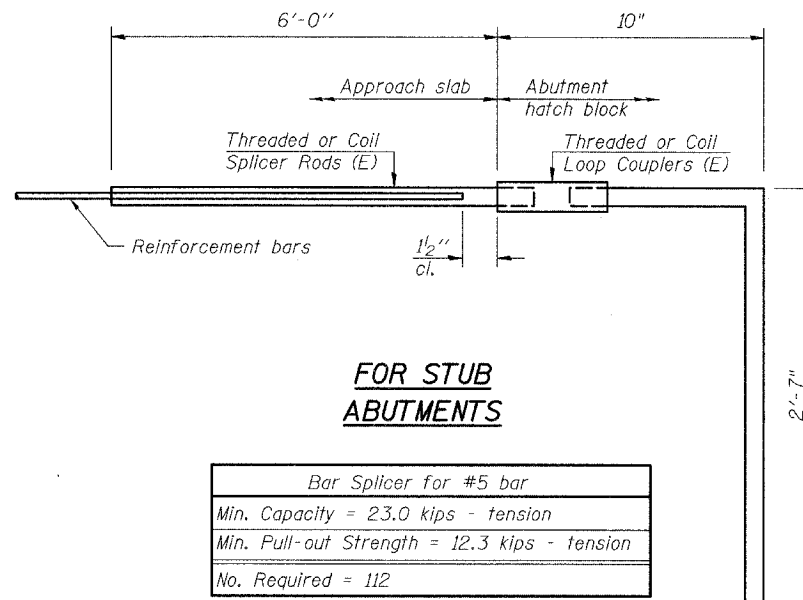
"A": Set bar splicer assembly by means of a template bolt.
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



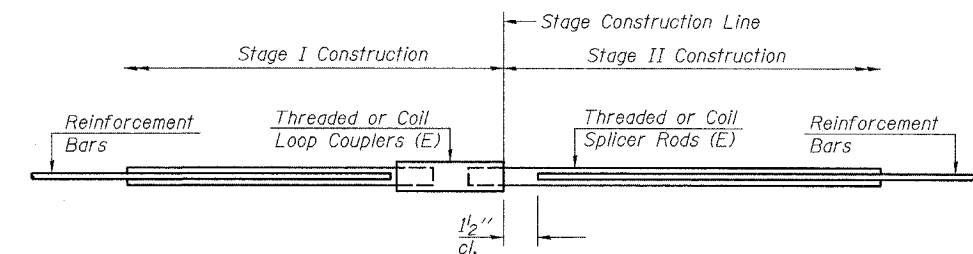
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 0



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 112



STANDARD

Bar Size	No. Assemblies Required	Location
#5	24	12-West Abutment; 12-East Abutment
#6	50	24-West Abutment; 26-East Abutment

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DESIGNED	- DE
CHECKED	- SP
DRAWN	- DE
CHECKED	- SP

BAR SPLICER ASSEMBLY DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE	SHEET NO.	SHEET NO. - 34 39 - SHEETS
1545	*	DUPAGE	97	55	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		
00-00115-00-BR		CONTRACT NO. 83961			

STRUCTURE FOUNDATION BORING LOG		Sh 1 of 1	
<p>OBA O'BRIEN & ASSOCIATES, INC. CONSULTING ENGINEERS 1235 E. DAVIS ST./ARLINGTON HTS., IL 60005 (847)398-1441 • FAX(847) 398-2316</p>			
Project: Bailey Road Bridge over the West Branch of the DuPage River		OBA JOB NO. 04251	
Location: Naperville, Illinois		Date: October 13, 04	
County: DuPage County		Bored By: Patrick	
Client: T.Y. Lin International/BASCOR, Inc.		Checked By: DOB	
BORING No.: S-1			
Station: 2+41			
Offset: 2.0' Right			
Surface Elevation: 656.6			
Soil Description	Blow Counts	Qu (tsf)	W (%)
4.0" ASPHALT, 44.0" CRUSHED ASPHALT	8 10 6	NP	3
SILTY CLAY-some sand, gravel & stone-dark brown & gray-soft to very stiff (CL) Fill	5 5 5	2.25P	18
SILTY CLAY-trace sand & gravel-dark brown & gray-very stiff (CL)	2 4 3	1.25P	16
FRACTURED ROCK-very dense	50/3"	NP	5
SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE			
RUN 1 (-14.5' to -19.5') Light gray with horizontal bedding. Slightly porous with rust staining throughout. Weathered with numerous horizontal fractures throughout. Recovery=100.0% RQD=21.7%			
RUN 2 (-19.5' to -24.5') Light gray with horizontal bedding. Slightly porous with rust staining throughout. Weathered with numerous horizontal fractures throughout. Recovery=100.0% RQD=41.7%			

N-Standard Penetration is the value of the last blow counts in each sample zone (ASTM D-1586)
NR-No Recovery ST-Shelby Tube
O'BRIEN & ASSOCIATES, INC.

W-Standard Penetration is the value of the last blow counts in each sample zone (ASTM D-1586)
B-Bulge Failure S-Shear Failure
E-Estimated Value P-Penetrometer
O'BRIEN & ASSOCIATES, INC.

Qu-Unconfined Compressive Strength (tsf) (at 15% dry weight)
W-Water Content, percent dry weight (at 15% dry weight)
NP-Non-Plastic
VS-Vane Shear (psf)

STRUCTURE FOUNDATION ROCK CORING LOG		Sh 1 of 1				
<p>OBA O'BRIEN & ASSOCIATES, INC. CONSULTING ENGINEERS 1235 E. DAVIS ST./ARLINGTON HTS., IL 60005 (847)398-1441 • FAX(847) 398-2316</p>						
Project: Bailey Road Bridge over the West Branch of the DuPage River		OBA JOB NO. 04251				
Location: Naperville, Illinois		Date: October 13, 04				
County: DuPage County		Bored By: Patrick				
Client: T.Y. Lin International/BASCOR, Inc.		Checked By: DOB				
BORING No.: S-1						
Station: 2+41						
Offset: 2.0' Right						
Surface Elevation: 656.6						
Core Type: NX Split Barrel		Core Diameter: 2.0 in.				
Core Length: 5.0 ft.		Top of Rock Elev.: 642.1				
Top Elev.	CORING NOTES AND ROCK DESCRIPTION	CORE RUN (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (Min./ft.)	COMPRESSIVE STRENGTH (tsf)
642.1	SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE RUN 1 (-14.5' to -19.5') Light gray with horizontal bedding. Slightly porous with rust staining throughout. Weathered with numerous horizontal fractures throughout. 100.0% water recovery	1	100.0	21.7	5.0	n/a
637.1	RUN 2 (-19.5' to -24.5') Light gray with horizontal bedding. Slightly porous with rust staining throughout. Weathered with numerous horizontal fractures throughout. 100.0% water recovery	2	100.0	41.7	5.6	n/a

O'BRIEN & ASSOCIATES, INC.

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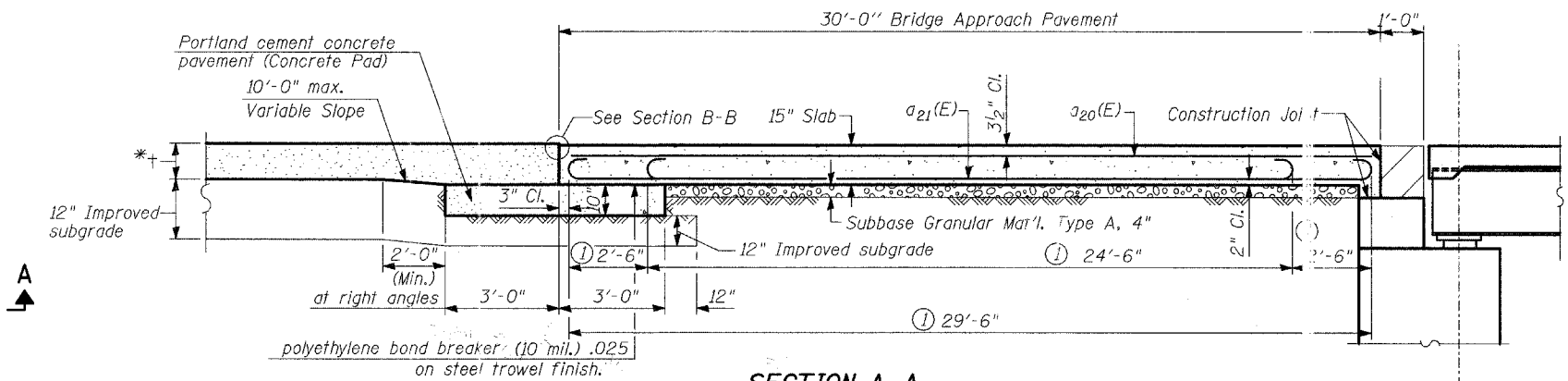
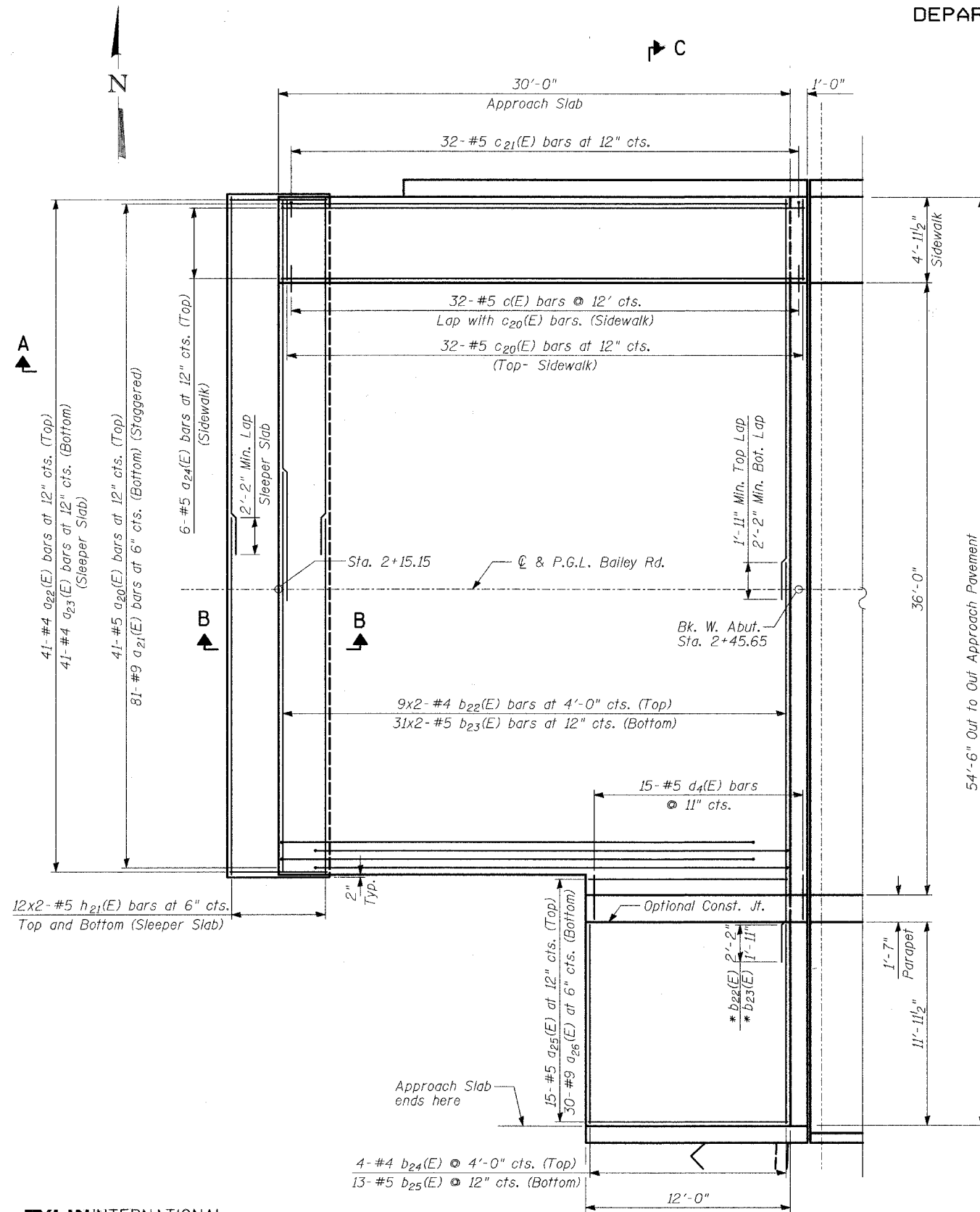
DESIGNED	-	SNB
CHECKED	-	SP
DRAWN	-	SNB
CHECKED	-	SP

SOIL BORING S-1

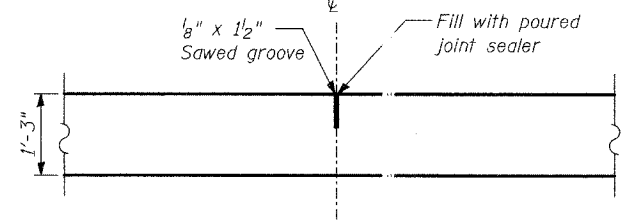
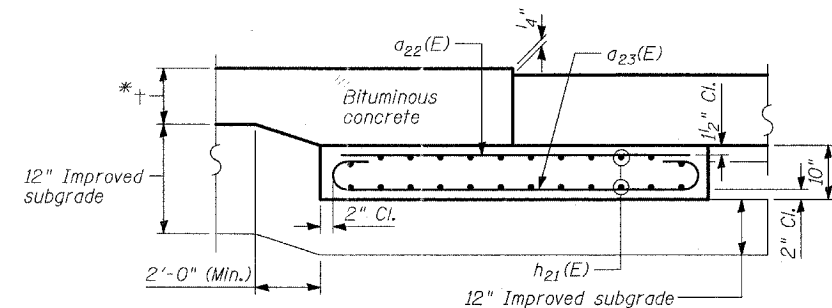
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. - 36
1545	*	DUPAGE	97	57	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID	CONTRACT NO. 83961		
* 00-00115-00-BR					



SECTION A-A
① Stagger a₂₁(E) bars as shown on plan
* See Proposed Plan and Profile Sheet for thickness



- NOTES:**
- With the approval of the Engineer, the Contractor will be permitted to reduce the paving widths by substituting a Longitudinal Construction Joint with tie bars, as shown in Standard 420401, in lieu of the Specified Sawed Longitudinal Joint.
 - The Contractor shall provide the details shown in Detail B at the centerline on Bailey Rd. and at a lane edge if pavement is poured two or more lanes at a time.
 - Bars indicated thus 31x2-#5 indicates 31 lines of bars with 2 lengths per line.
 - The cost of tie bars, expansion joint, preformed joint seal, polyethylene bond breaker, reinforcement bars, sidewalk, the concrete pad (including reinforcement), 4" granular subbase and excavation shall be included in the cost of Bridge Approach Pavement (Special).
 - See Sheet 37 for Section C-C.

TYLIN INTERNATIONAL

DESIGNED	DE
CHECKED	SNB
DRAWN	DE
CHECKED	SNB

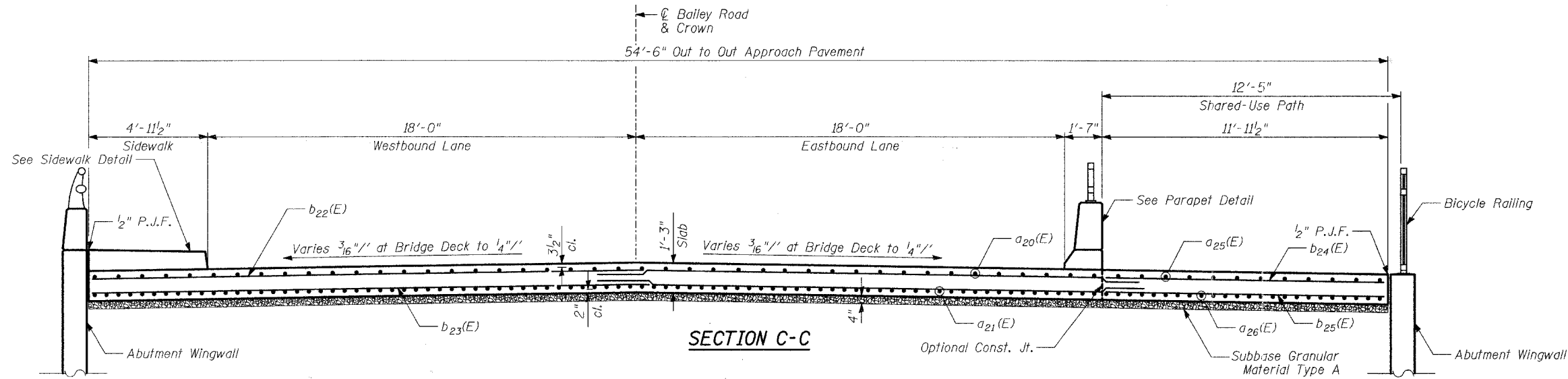
PLAN
* Extend b₂₂(E) & b₂₃(E) bars past optional construction joint to lap with b₂₄(E) and b₂₅(E) bars.

WEST APPROACH PAVEMENT LAYOUT

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1:45
SECTION 00-00115-00 BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILES	SHEET NO.	SHEET NO. - 37
1545	•	DUPAGE	97	58	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID SUBJECT	CONTRACT NO. 83961		

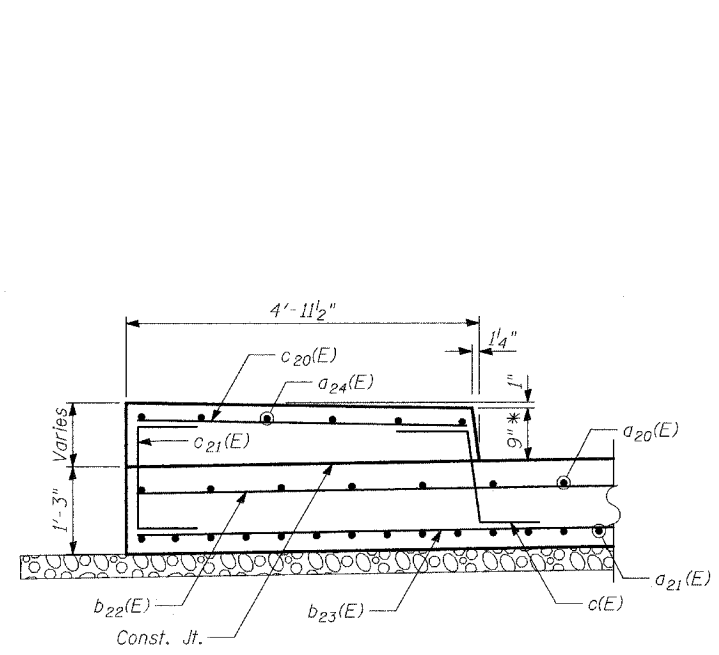


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₂₀ (E)	41	#5	29'-6"	—
a ₂₁ (E)	81	#9	29'-6"	—
a ₂₂ (E)	41	#4	5'-"	—
a ₂₃ (E)	41	#4	6'-"	—
a ₂₄ (E)	6	#5	30'-8"	—
a ₂₅ (E)	15	#5	11'-"	—
a ₂₆ (E)	30	#9	11'-"	—
b ₂₂ (E)	18	#4	23'-3"	—
b ₂₃ (E)	62	#5	23'-6"	—
b ₂₄ (E)	4	#4	11'-"	—
b ₂₅ (E)	13	#5	11'-"	—
c(E)	32	#5	2'-"	—
c ₂₀ (E)	32	#5	4'-"	—
c ₂₁ (E)	32	#5	3'-"	—
d ₂ (E)	6	#4	2'-"	—
d ₃ (E)	15	#5	5'-"	—
d ₄ (E)	15	#5	7'-"	—
e ₂₂ (E)	8	#4	12'-3"	—
e ₂₃ (E)	1	#8	12'-3"	—
h ₂₁ (E)	48	#5	21'-7"	—

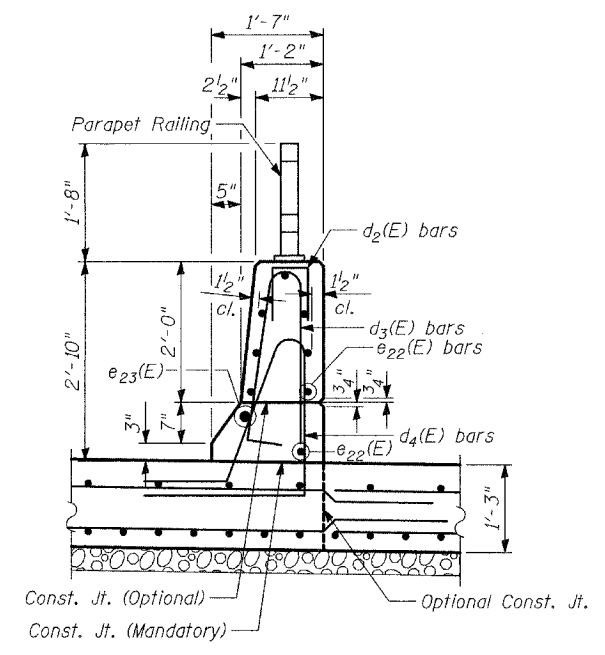
Bridge Approach Pavement (Special)	SQ YD	153
Protective Coat	SQ YD	171
** Reinforcement Bars, Epoxy Coated	Pound	15,007

** Provided for information only

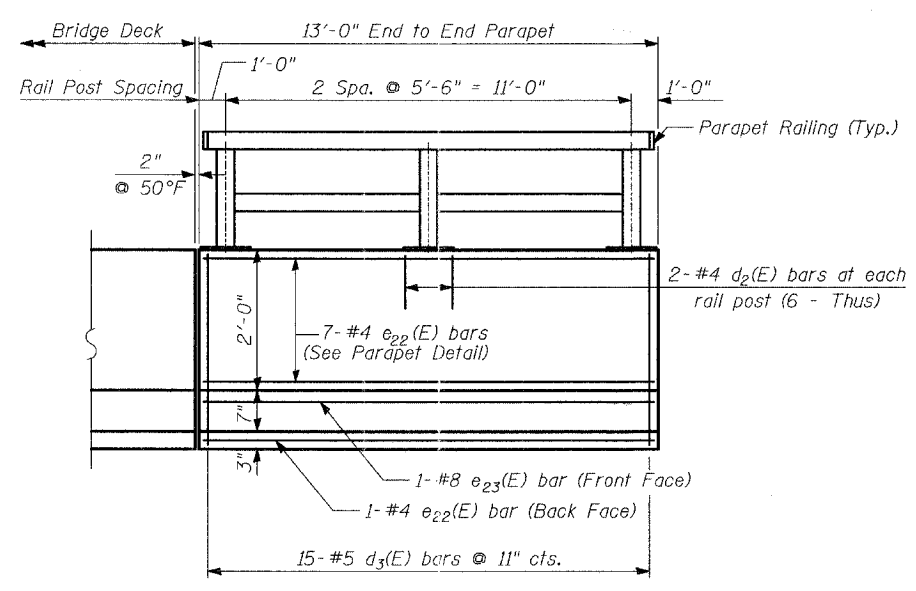


SIDEWALK DETAIL

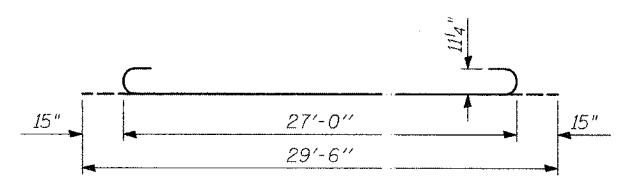
* Transition to match approach curb & gutter shape in last 10' of approach pavement.



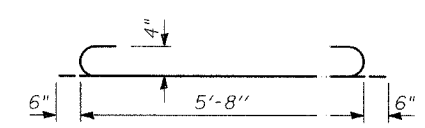
PARAPET DETAIL



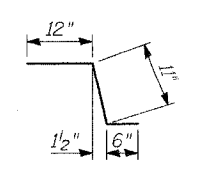
INSIDE ELEVATION OF PARAPET



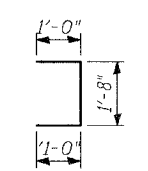
BAR a₂₁(E)



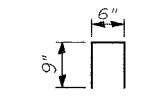
BAR a₂₃(E)



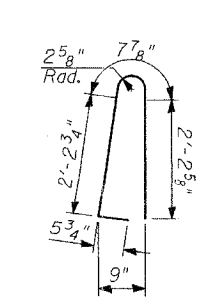
BAR c(E)



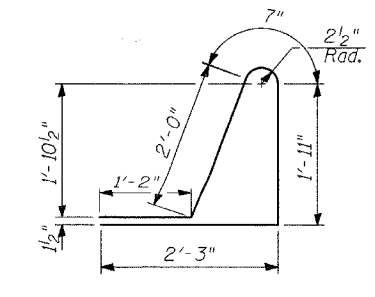
BAR c₂₁(E)



BAR d₂(E)



BAR d₃(E)



BAR d₄(E)

TYLIN INTERNATIONAL

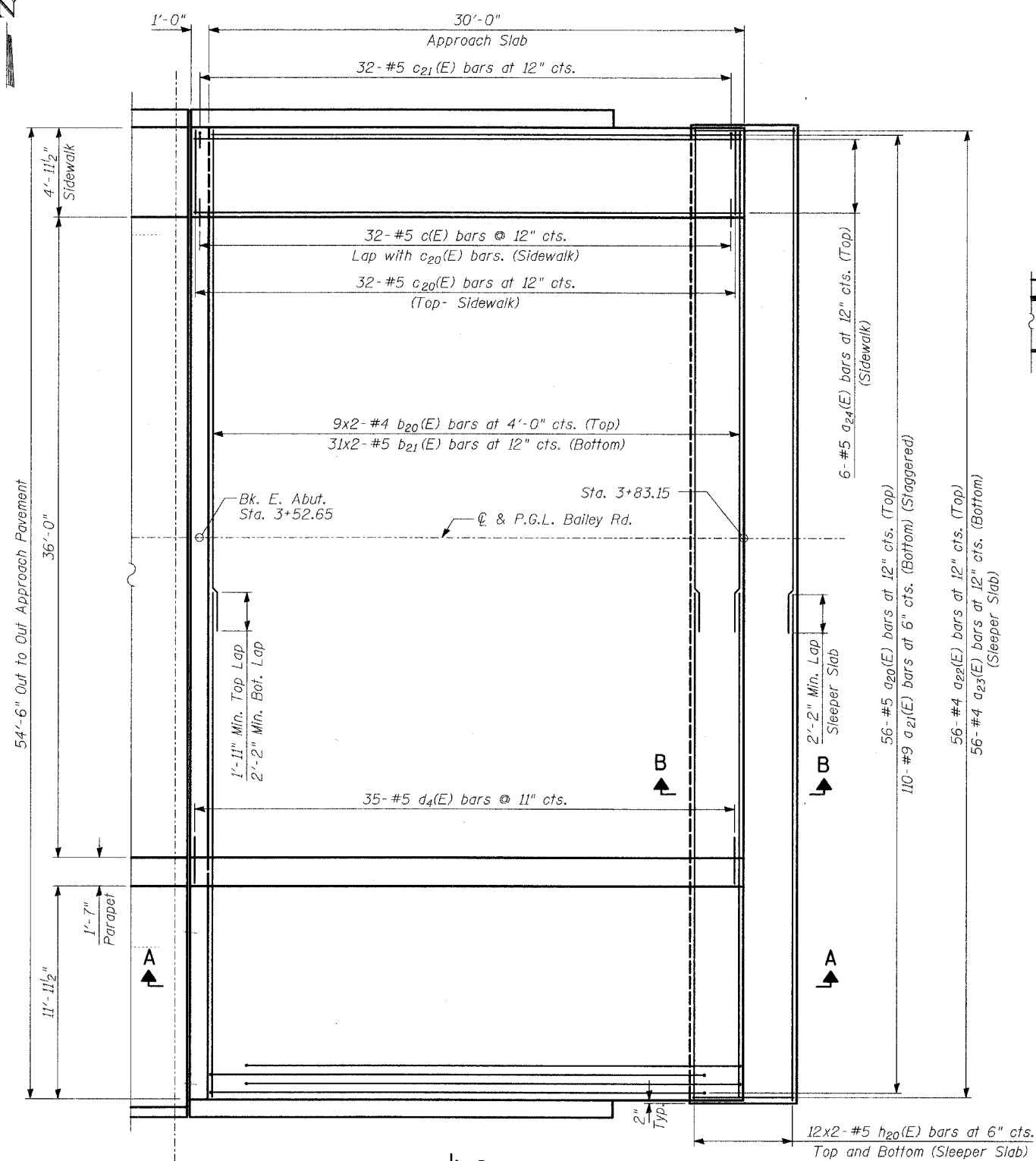
DESIGNED	- DE
CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

WEST APPROACH PAVEMENT DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00 BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022 3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

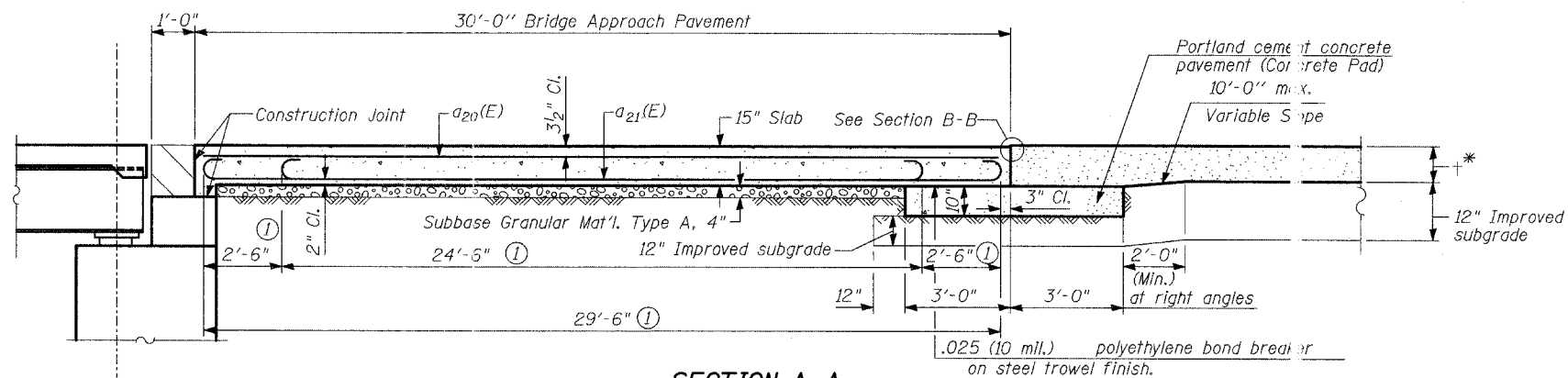
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 38
1545	*	DUPAGE	97	59	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID	PROJECT		
* 00-00115-00-BR		CONTRACT NO. 83961			



PLAN

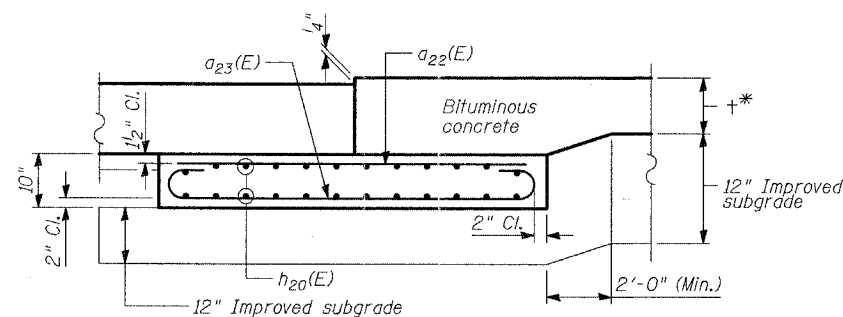
TYLIN INTERNATIONAL

DESIGNED	- DE
CHECKED	- SNB
DRAWN	- TE
CHECKED	- SNB



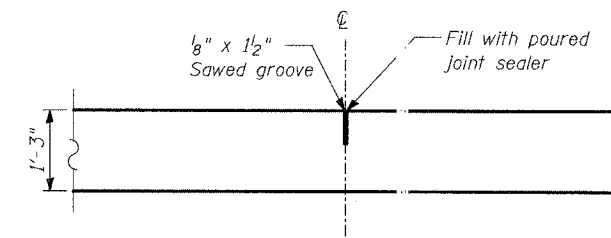
SECTION A-A

① Stagger a21(E) bars as shown on plan
* See Proposed Plan and Profile Sheet for thickness



SECTION B-B - FLEXIBLE PAVEMENT

(Showing reinforcement)
* See Proposed Plan and Profile Sheet for thickness



DETAIL B

(Reinforcement Not Shown)

NOTES:

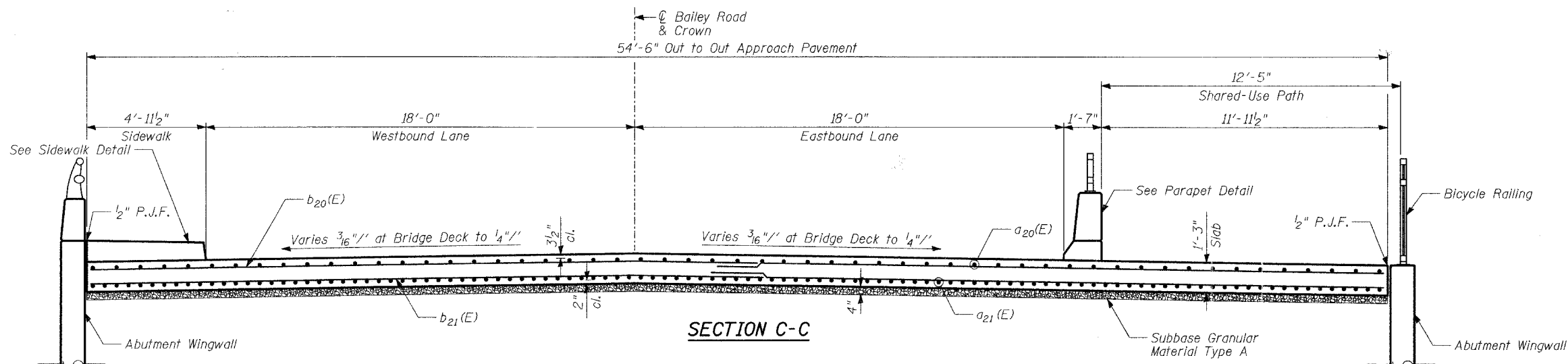
- With the approval of the Engineer, the Contractor will be permitted to reduce the paving widths by substituting a Longitudinal Construction Joint with tie bars, as shown in Standard 420401, in lieu of the Specified Sawed Longitudinal Joint.
- The Contractor shall provide the details shown in Detail B at the C on Bailey Rd. and at a lane edge if pavement is poured two or more lanes at a time.
- Bars indicated thus 31x2-#5 indicates 31 lines of bars with 2 lengths per line.
- The cost of tie bars, expansion joint, preformed joint seal, polyethylene bond breaker, reinforcement bars, sidewalk, the concrete pad (including reinforcement), 4" granular subbase and excavation shall be included in the cost of Bridge Approach Pavement (Special).
- See Sheet 39 for Section C-C.

EAST APPROACH PAVEMENT LAYOUT

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1:45
SECTION 00-00115-00 BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022 3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

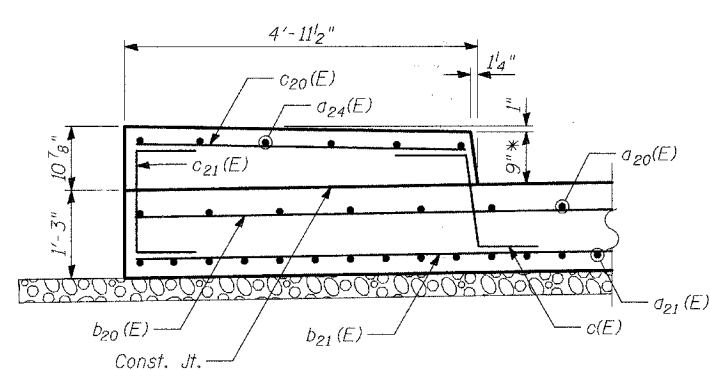
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 39
1545	*	DUPAGE	97	60	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID	CONTRACT NO. 83961		
* 00-00115-00-BR					



BILL OF MATERIAL

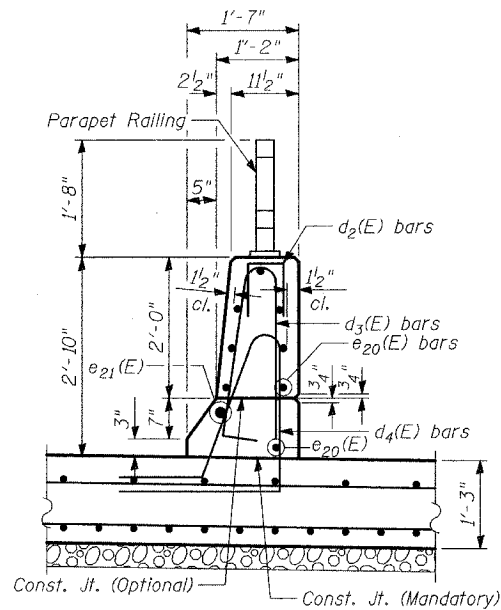
Bar	No.	Size	Length	Shape
a ₂₀ (E)	56	#5	29'-6"	
a ₂₁ (E)	110	#9	29'-6"	
a ₂₂ (E)	56	#4	5'-"	
a ₂₃ (E)	56	#4	6'-"	
a ₂₄ (E)	6	#5	30'-8"	
b ₂₀ (E)	18	#4	28'-1"	
b ₂₁ (E)	62	#5	28'-3"	
c(E)	32	#5	2'-"	
c ₂₀ (E)	32	#5	4'-"	
c ₂₁ (E)	32	#5	3'-"	
d ₂ (E)	8	#4	2'-"	
d ₃ (E)	35	#5	5'-"	
d ₄ (E)	35	#5	7'-"	
e ₂₀ (E)	8	#4	30'-8"	
e ₂₁ (E)	1	#8	30'-8"	
h ₂₀ (E)	48	#5	28'-5"	
Bridge Approach Pavement (Special)			SQ YD	182
Protective Coat			SQ YD	209
** Reinforcement Bars, Epoxy Coated			Pound	18,105

** Provided for information only

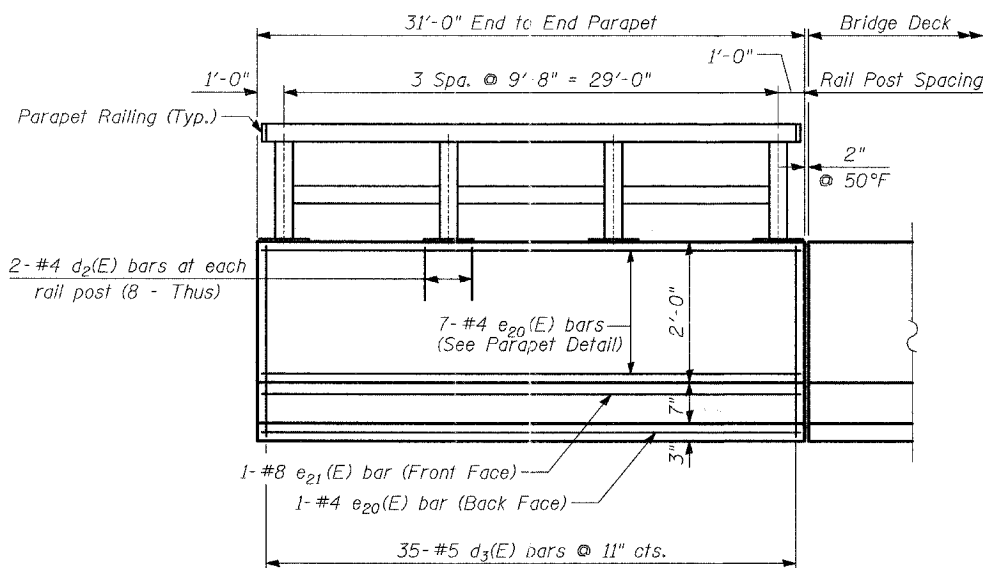


SIDEWALK DETAIL

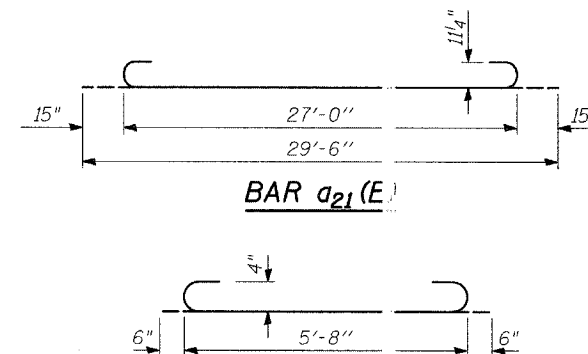
* Transition to match approach curb & gutter shape in last 10' of approach pavement.



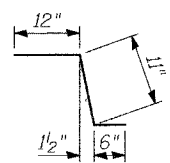
PARAPET DETAIL



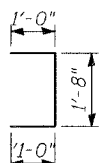
INSIDE ELEVATION OF PARAPET



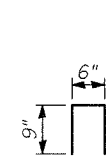
BAR a₂₃(E)



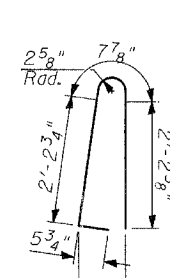
BAR c(E)



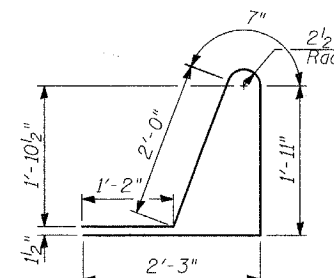
BAR c₂₁(E)



BAR d₂(E)



BAR d₃(E)



BAR d₄(E)

TYLIN INTERNATIONAL

DESIGNED	- DE
CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

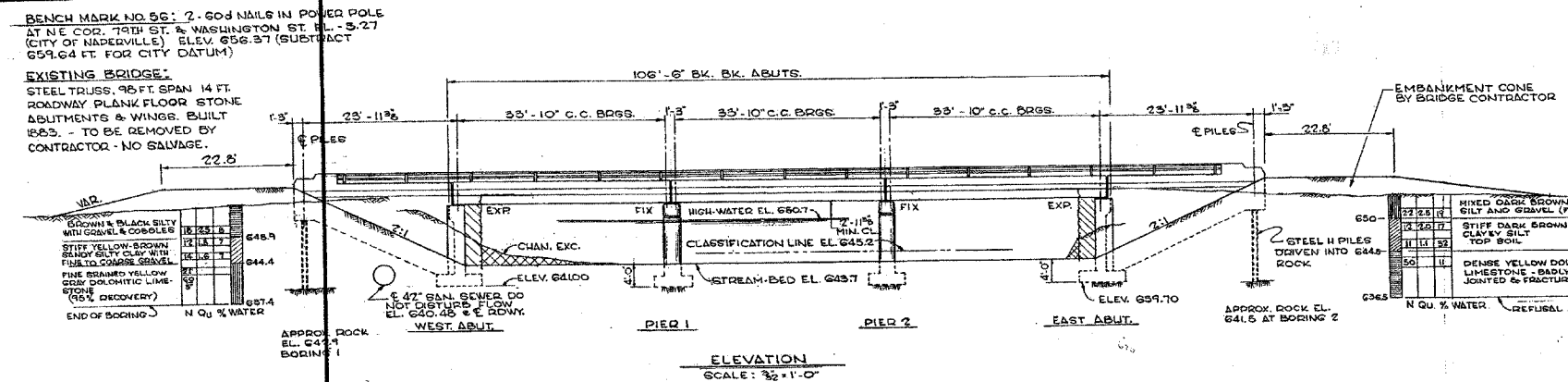
EAST APPROACH PAVEMENT DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00 BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	*	DUPAGE	97	61
FED. ROAD DIST. NO.		ILLINOIS	FED. AID DISTRICT	
* 00-00115-00-BR		CONTRACT NO. 83961		

SECTION	ROUTE No.	SHEET
7TH ST. BRIDGE		5 OF 15
COUNTY	ROAD DISTRICT	
DUPAGE	LISLE	



GENERAL NOTES

THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED AUGUST 1, 1968 BY THE ILLINOIS DIVISION OF HIGHWAYS SHALL APPLY TO THIS PROJECT.

ALL REINFORCEMENT BARS SHALL BE LAPPED 24 BAR DIAMETERS UNLESS OTHERWISE SHOWN.

THE PILES SHALL BE GIVEN TWO SHOP COATS OF AN OIL-BASED PAINT AND ARE INCLUDED FOR WEIGHT AS FOUND BY STANDARD TESTS TO STRUCTURAL STEEL.

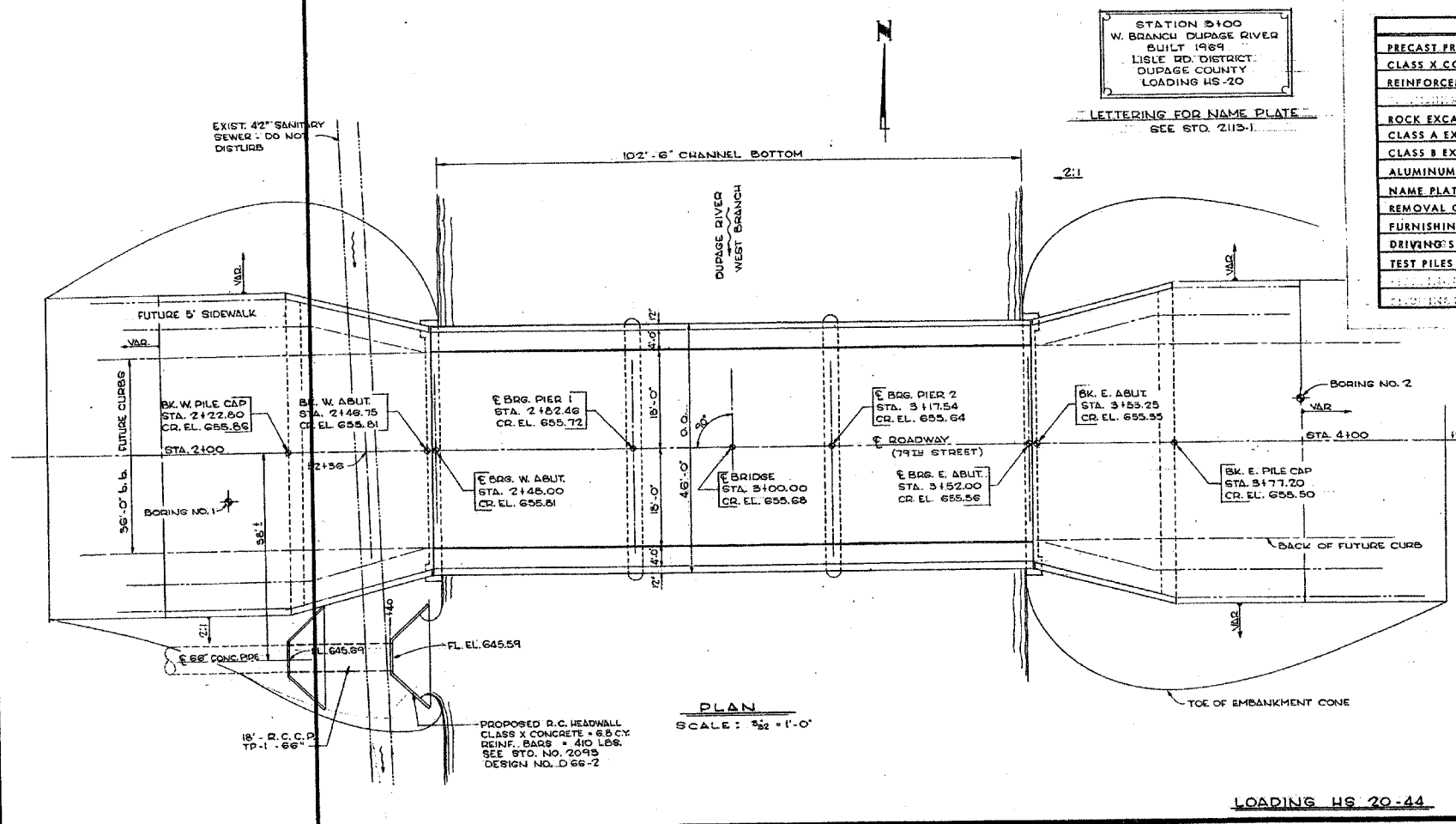
THE CONTRACTOR SHALL DRIVE ONE (1) STEEL TEST PILE AT EACH ABUTMENT BENT AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.

CARE SHALL BE EXERCISED BY THE CONTRACTOR IN CONSTRUCTING THE WEST ABUTMENT TO AVOID DISTURBING THE EXISTING 42 INCH DIAMETER SANITARY SEWER.

THE CHANNEL SHALL BE CLEANED OUT AND RESHAPED AS SHOWN BY SHADED AREA ON SHEET NO. 2. EXCAVATED MATERIAL SHALL BE SPREAD ON ADJACENT BANKS AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR PER CUBIC YARD OF CHANNEL EXCAVATION.

TOTAL BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUBSTR.	SUPERSTR.	TOTAL
PRECAST PRESTRESSED CONCRETE DECK BEAMS (17")	SQ. FT.		4830	4830
CLASS X CONCRETE	CU. YD.	3381.9	47.8	399.7
REINFORCEMENT BARS	LBS.	29120	3940	33060
ROCK EXCAVATION FOR STRUCTURES	CU. YD.		46.4	46.4
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.	260		260
CLASS B EXCAVATION FOR STRUCTURES	CU. YD.	280		280
ALUMINUM RAILING	LIN. FT.		284	284
NAME PLATES	EACH		1	1
REMOVAL OF EXISTING STRUCTURES	EACH		1	1
FURNISHING STEEL PILES (8 BP 36)	LIN. FT.	161		161
DRIVING STEEL PILES	LIN. FT.	161		161
TEST PILES (STEEL)	EACH	2		2



GENERAL PLAN & ELEVATION
7TH ST. BRIDGE OVER W. BRANCH DUPAGE RIVER
LISLE ROAD DISTRICT
DUPAGE COUNTY

RONALD DOLD & CO. SUPT. OF HIGHWAYS.

DESIGNED BY BILL THOMPSON DATE FEB. 1961	PREPARED BY WILLET, HOFMANN & ASSOCIATES INC. CONSULTING ENGINEERS JOINTLY, ILLINOIS	REGISTERED PROFESSIONAL ENGINEER STATE OF ILLINOIS NO. 011-0115-00-BR
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TYLIN INTERNATIONAL

DESIGNED	-	SNB
CHECKED	-	
DRAWN	-	SNB
CHECKED	-	

FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN ON EXISTING PLANS ARE ON A DIFFERENT VERTICAL DATUM THAN CONTRACT PLANS.

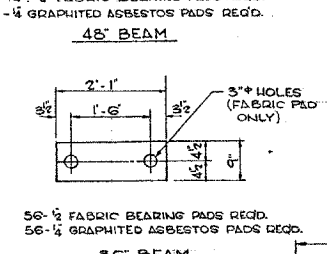
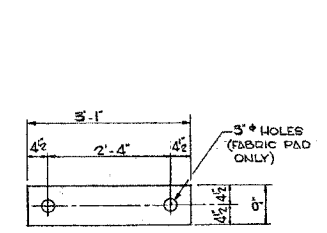
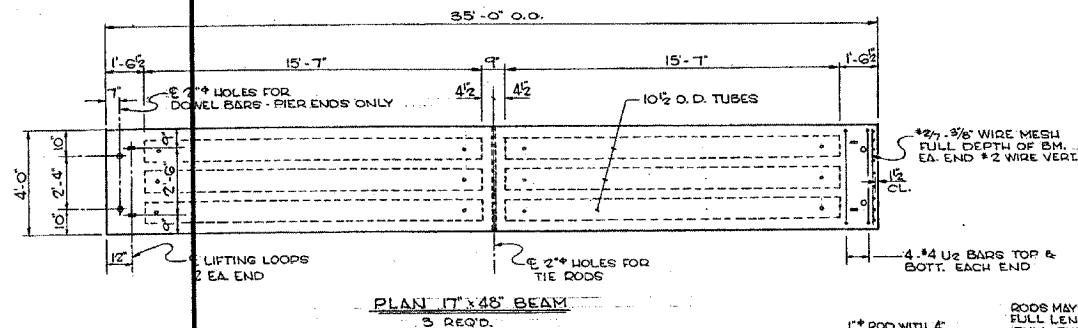
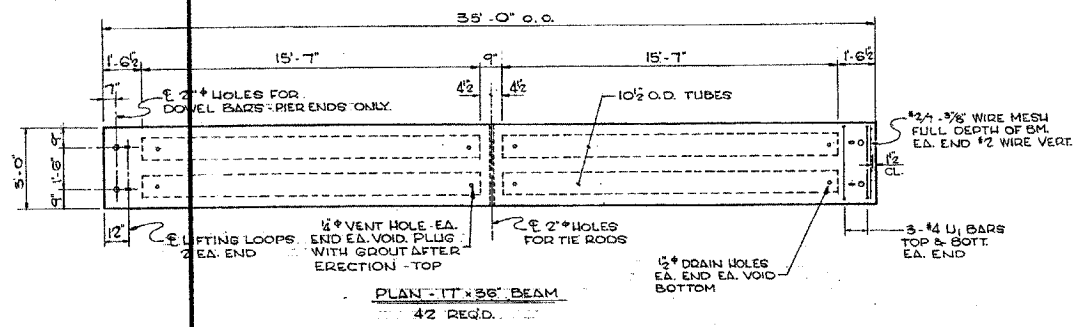
EXISTING GENERAL PLAN AND ELEVATION

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
1545	*	DUPAGE	97	62	- SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID P. DIST.	CONTRACT NO. 83961		
* 00-00115-00-BR					

SECTION	ROUTE No.	SHEET
79th STREET BRIDGE		6 OF 13
COUNTY	ROAD DISTRICT	
DUPAGE	LISLE	



GENERAL NOTES:

PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH STRESS-RELIEVED 7-WIRE STRAND. THE NOMINAL DIAMETER SHALL BE 7/16" AND THE NOMINAL CROSS-SECTIONAL AREA SHALL BE 0.109 SQ. INCH.

LIFTING LOOPS SHALL BE 3 - 7/16" DIA. OR 1/2" DIA. STRANDS.

THE 1" DIA. RODS IN THE TRANSVERSE TIE ASSEMBLY SHALL BE TIGHTENED TO A SNUG FIT AND THE THREADS SET.

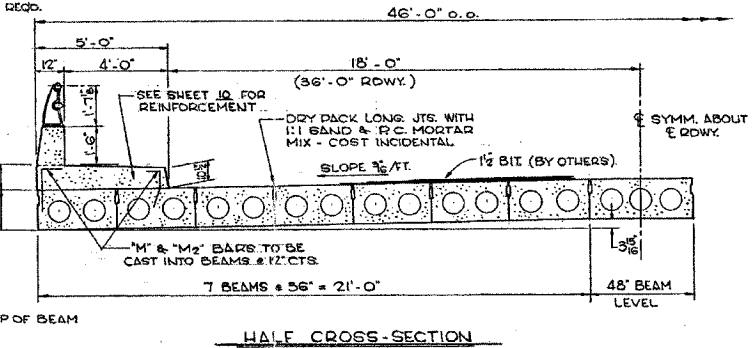
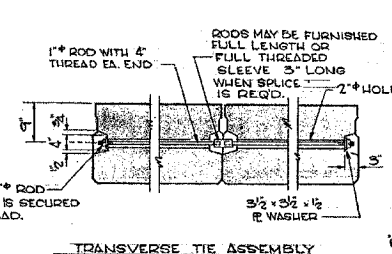
POCKETS THAT RECEIVE TRANSVERSE TIE BAR ON OUTSIDE BEAM SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE.

COST OF REINFORCEMENT AND ACCESSORIES CASTED INTO BEAMS, OF BEARING PADS, OF FURNISHING AND ASSEMBLING TRANSVERSE TIES, OF FURNISHING, DRILLING AND GROUTING DOWEL HOLES, AND OF GROUTING LONGITUDINAL SHEAR KEYS IS INCLUDED IN UNIT PRICE BID FOR "PRECAST PRESTRESSED CONCRETE BRIDGE DECK."

STEEL FOR DOWEL RODS, TRANSVERSE TIE RODS SHALL BE S.A.E. 1020, STRUCTURAL STEEL A.S.T.M. DESIGNATION A-36 OR INTERMEDIATE GRADE A.S.T.M. DESIGNATION A-15.

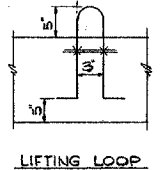
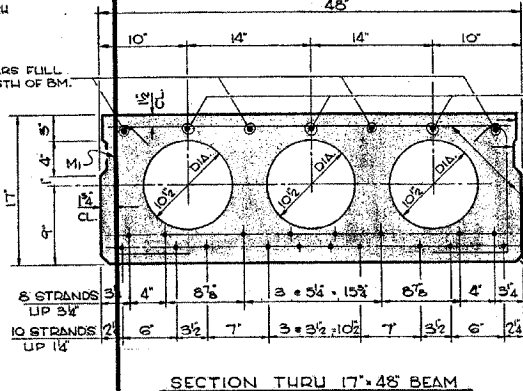
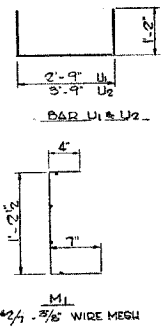
AFTER FABRICATION THE TRANSVERSE TIE ASSEMBLIES (TIE RODS, NUTS, WASHERS AND SLEEVES) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-153.

AN ALTERNATE STRAND PATTERN USING EXTRA HIGH STRENGTH PRESTRESSING STRAND (270 KSI) IS PERMITTED. SEE SPECIAL PROVISIONS.

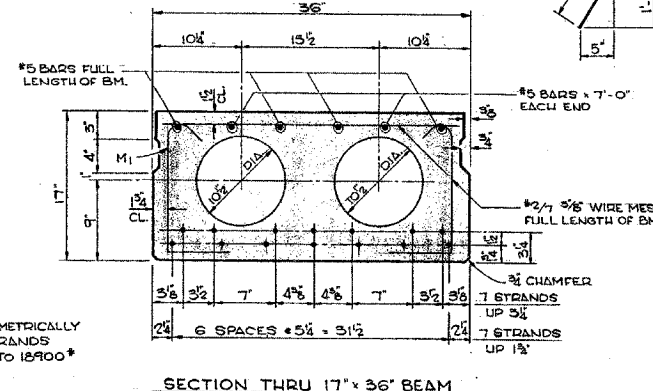


BILL OF MATERIAL

ITEM	UNIT	QUAN.
PRECAST PRESTRESSED CONC. BRIDGE DECK 17'	SQ FT	4830



NOTE:
PLACE STRANDS SYMMETRICALLY ABOUT C BEAMS. STRANDS 7 WIRE 7/16" STRESS TO 18900* PER STRAND.



DECK BEAM DETAILS
79th STREET BRIDGE
LISLE ROAD DISTRICT
DUPAGE COUNTY

TYLIN INTERNATIONAL

DESIGNED	- SNB
CHECKED	- SP
DRAWN	- SNB
CHECKED	- SP

FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN ON EXISTING PLANS ARE ON A DIFFERENT VERTICAL DATUM THAN CONTRACT PLANS.

EXISTING DECK BEAM DETAILS

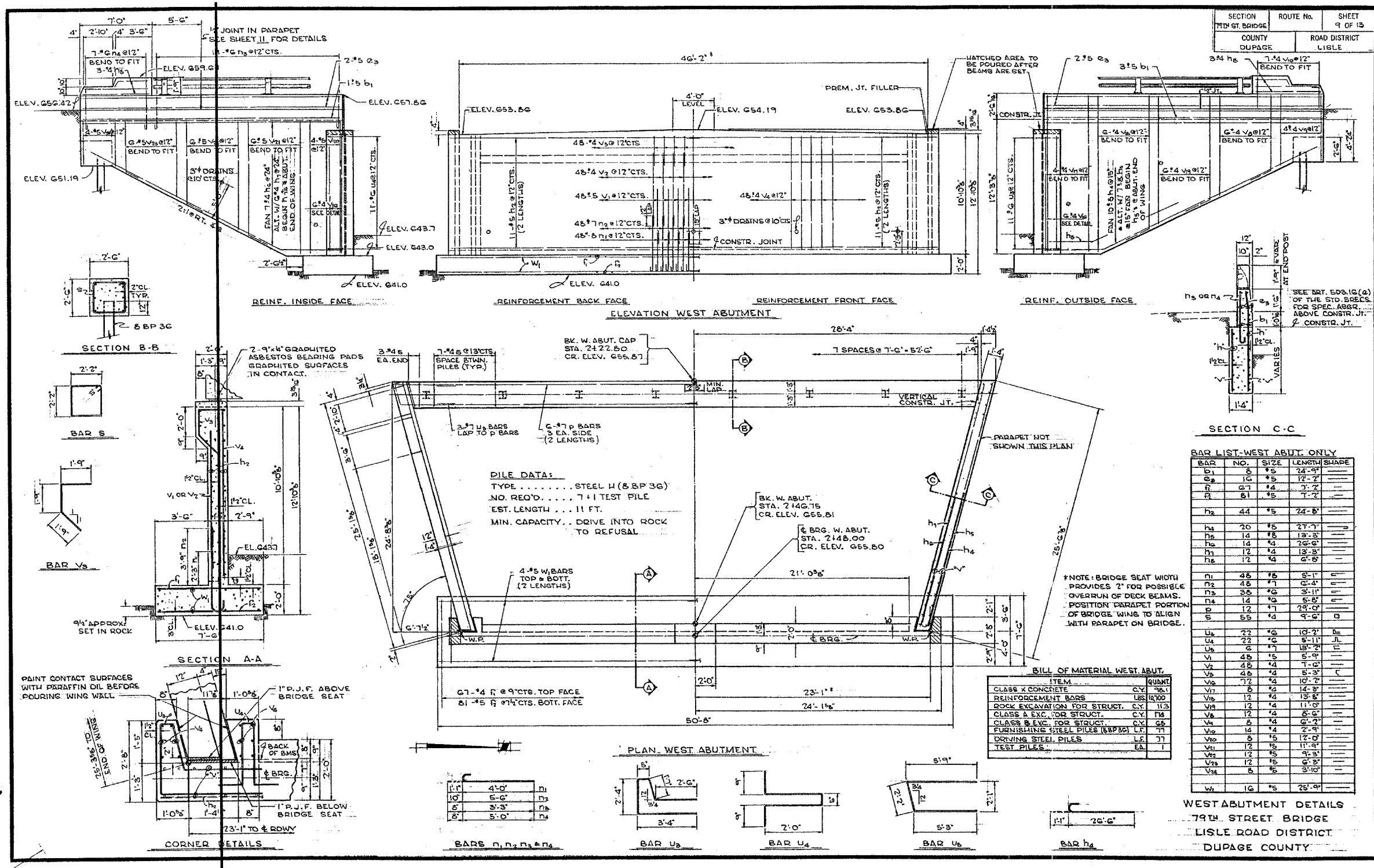
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	*	DUPAGE	97	63
FED. ROAD DIST. NO.		ILLINOIS	FED. AID P. C.	

00-00115-00-BR

CONTRACT NO. 83961



BAR LIST - WEST ABUT. ONLY

BAR NO.	SIZE	LENGTH	SHADE
B1	6	24.9'	
B2	10	12.7'	
B3	6	3.7'	
B4	6	7.7'	
B5	4	24.8'	
B6	20	27.7'	
B7	14	13.3'	
B8	14	26.8'	
B9	12	13.3'	
B10	12	6.8'	
B11	48	8.1'	
B12	48	6.2'	
B13	38	3.1'	
B14	14	8.8'	
B15	12	29.0'	
B16	55	9.6'	
U1	22	10.2'	
U2	22	8.1'	
U3	6	18.2'	
U4	48	5.4'	
U5	48	7.0'	
U6	72	10.2'	
U7	8	14.8'	
U8	12	13.8'	
U9	12	11.0'	
U10	12	8.2'	
U11	8	6.2'	
U12	14	2.4'	
U13	8	12.0'	
U14	12	11.8'	
U15	12	9.3'	
U16	12	6.2'	
U17	5	3.10'	
W1	16	28.4'	

BILL OF MATERIAL WEST ABUT.

ITEM	QUANT.
CLASS X CONCRETE	C.Y. 384
REINFORCEMENT BARS	13700
ROCK EXCAVATION FOR STRUCT.	C.Y. 113
CLASS B EXC. FOR STRUCT.	C.Y. 114
CLASS B EXC. FOR PILES	C.Y. 65
FURNISHING STEEL PILES (8BP36)	L.F. 77
DRIVING STEEL PILES	L.F. 77
TEST PILES	EA. 1

WEST ABUTMENT DETAILS
79TH STREET BRIDGE
LISLE ROAD DISTRICT
DUPAGE COUNTY

TYLIN INTERNATIONAL

DESIGNED	-	SNB
CHECKED	-	
DRAWN	-	SNB
CHECKED	-	

FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN ON EXISTING PLANS ARE ON A
DIFFERENT VERTICAL DATUM THAN CONTRACT PLANS.

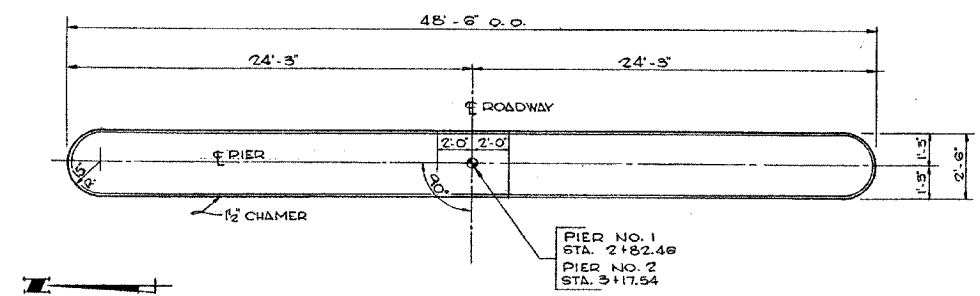
EXISTING WEST ABUTMENT DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

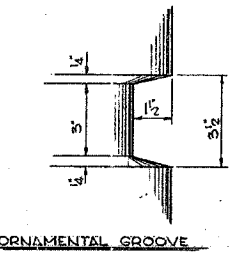
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
1545	*	DUPAGE	97	64	1545
FED. ROAD DIST. NO.		ILLINOIS	FED. AID P.C. NO.	CONTRACT NO. 83961	

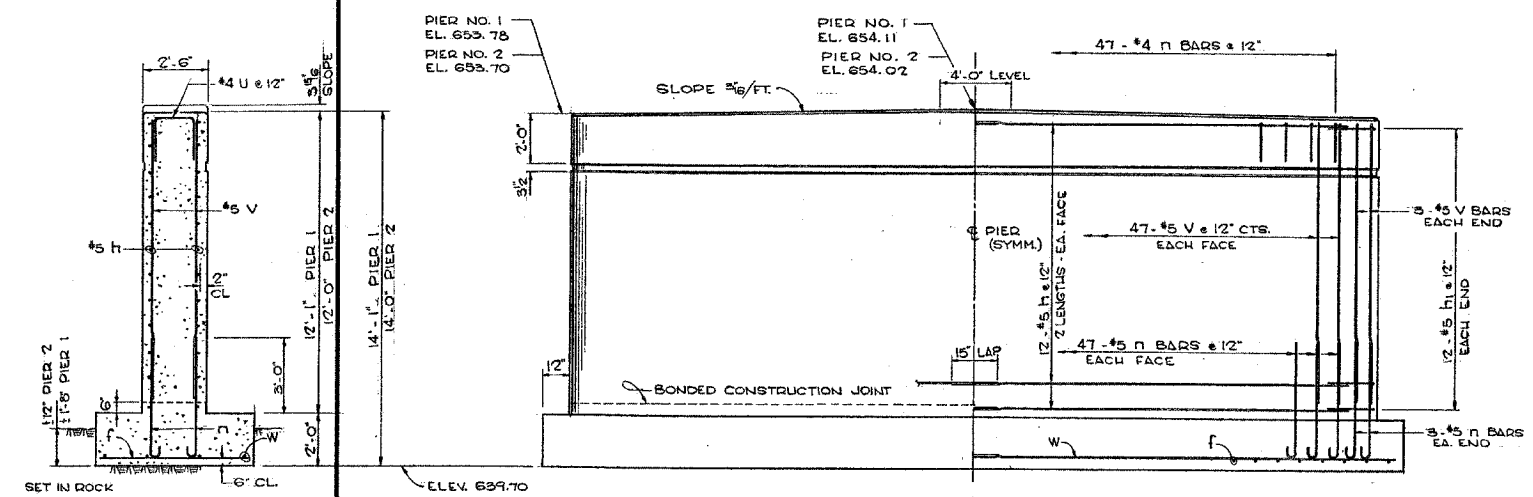
SECTION	ROUTE NO.	SHEET
79TH ST BRIDGE		1 OF 13
COUNTY	ROAD DISTRICT	
DUPAGE	LISLE	



TOP VIEW
NO SCALE



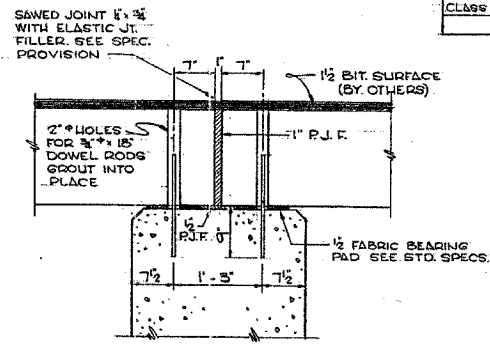
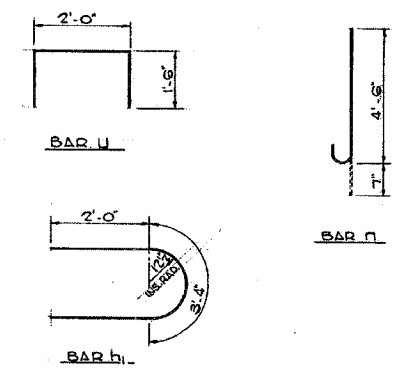
ORNAMENTAL GROOVE



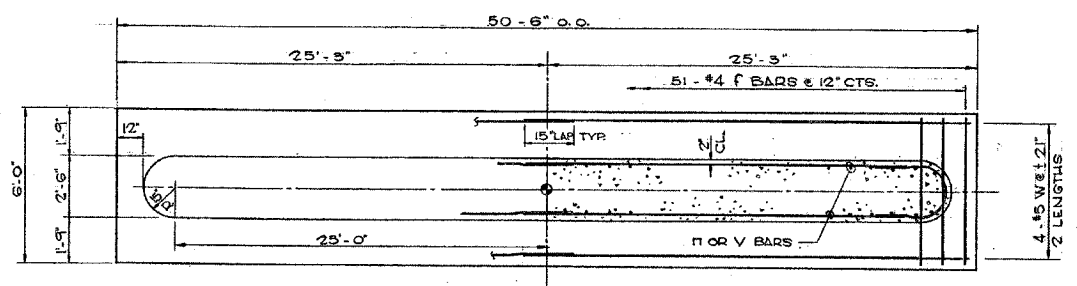
ELEVATION - PIER 1 & 2
NO SCALE

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
f	102	#4	5'-6"	—
h	96	#5	25'-6"	—
h ₁	48	#5	7'-4"	U
n	200	#5	5'-1"	—
u	94	#4	5'-0"	U
v	200	#5	11'-3"	—
w	16	#5	25'-9"	—
CLASS X CONCRETE CU. YDS.				153.2
REINFORCEMENT BARS LBS.				7240
ROCK EXC. FOR STRUCT. CU. YDS.				28.1
CLASS B EXC. FOR STRUCT. CU. YDS.				111.0



BEARING DETAILS



FOOTING PLAN
NO SCALE

PIER DETAILS
79TH STREET BRIDGE
LISLE ROAD DISTRICT
DUPAGE COUNTY

SECTION THRU PIER

2970 LBS. PER SQ. FT.
MAX SOIL PRESSURE

FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN ON EXISTING PLANS ARE ON A
DIFFERENT VERTICAL DATUM THAN CONTRACT PLANS.

TYLIN INTERNATIONAL

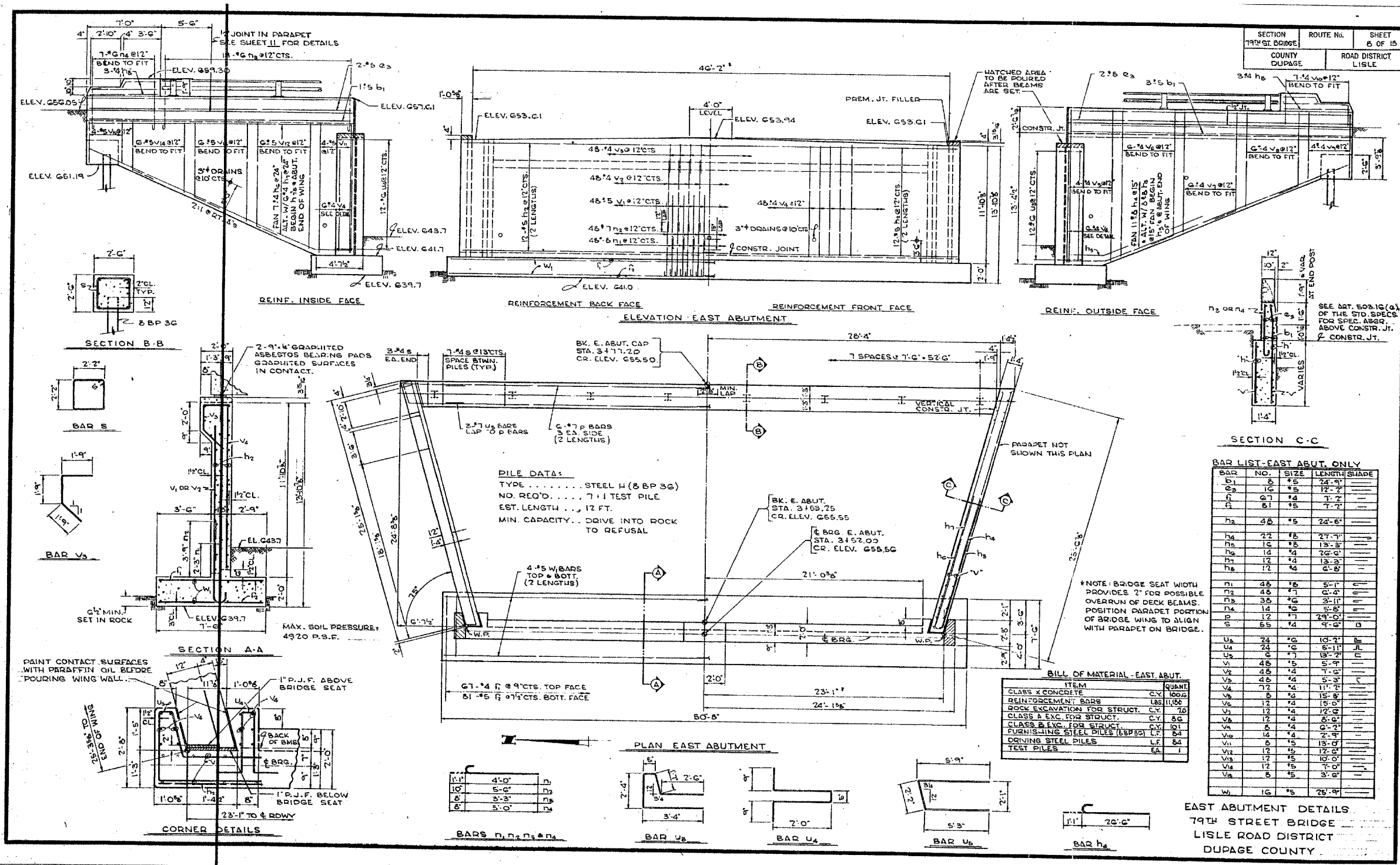
DESIGNED	-	SNB
CHECKED	-	
DRAWN	-	SNB
CHECKED	-	

EXISTING PIER DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	D-SHEET NO.	SHEET NO.
1545	•	DUPAGE	97	65	- SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID P. CT.		
• 00-00115-00-BR		CONTRACT NO. 83961			



FOR INFORMATION ONLY

NOTE:
ELEVATIONS SHOWN ON EXISTING PLANS ARE ON A DIFFERENT VERTICAL DATUM THAN CONTRACT PLANS.

TYLIN INTERNATIONAL

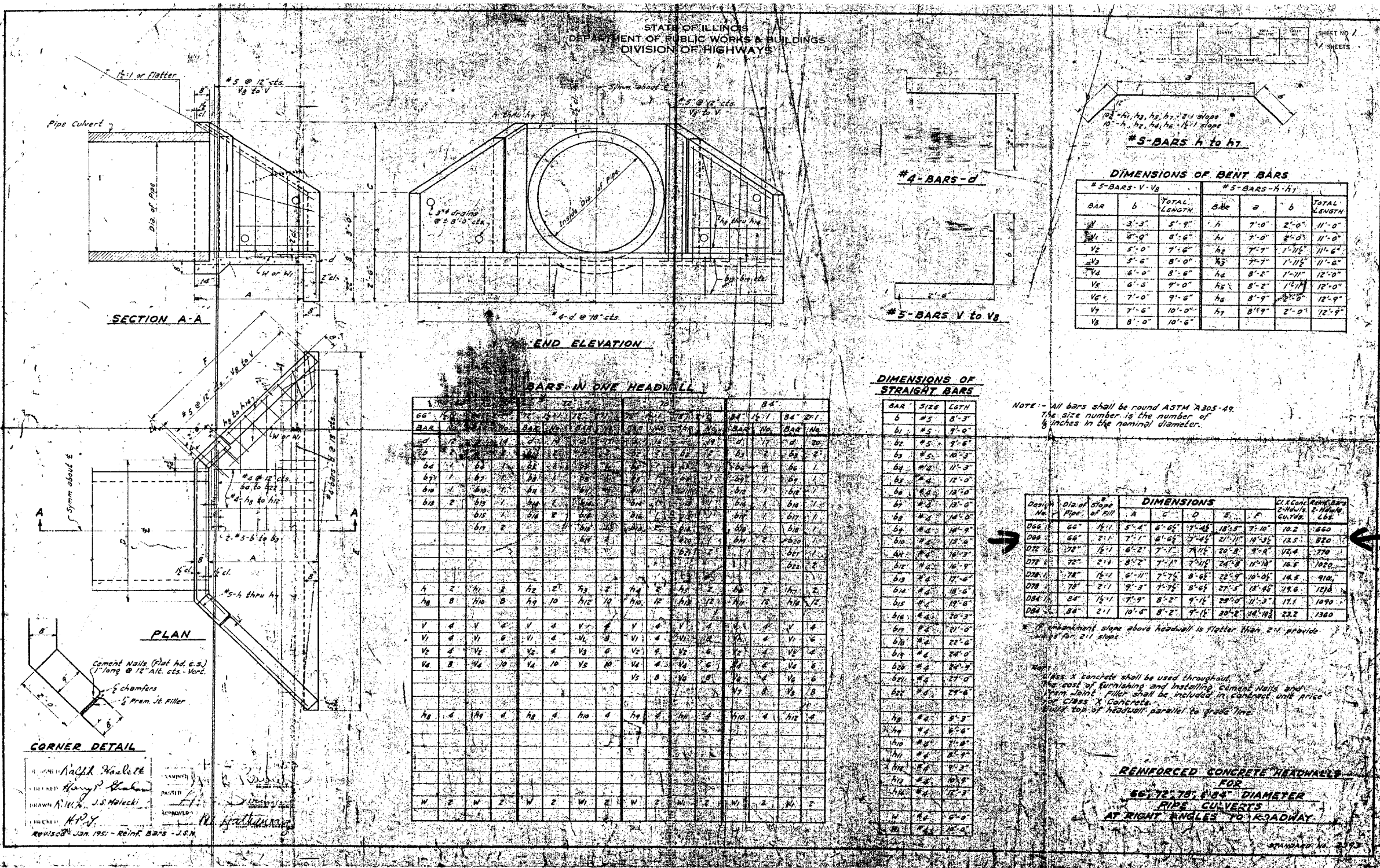
DESIGNED	- SNB
CHECKED	-
DRAWN	- SNB
CHECKED	-

EXISTING EAST ABUTMENT DETAILS

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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



DIMENSIONS OF BENT BARS

#5-BARS-V-V8			#5-BARS-H-H7		
BAR	b	TOTAL LENGTH	BAR	b	TOTAL LENGTH
V1	3'-3"	5'-9"	H1	7'-0"	11'-0"
V2	5'-0"	7'-6"	H2	7'-7"	11'-6"
V3	5'-6"	8'-0"	H3	7'-7"	11'-6"
V4	6'-0"	8'-6"	H4	8'-2"	12'-0"
V5	6'-6"	9'-0"	H5	8'-2"	12'-0"
V6	7'-0"	9'-6"	H6	8'-9"	12'-9"
V7	7'-6"	10'-0"	H7	8'-9"	12'-9"
V8	8'-0"	10'-6"			

BARS IN ONE HEADWALL

66"				72"				78"				84"			
BAR	No.	SIZE	LGTH	BAR	No.	SIZE	LGTH	BAR	No.	SIZE	LGTH	BAR	No.	SIZE	LGTH
b1	1	#5	9'-0"	b1	1	#5	9'-0"	b1	1	#5	9'-0"	b1	1	#5	9'-0"
b2	2	#5	9'-6"	b2	2	#5	10'-3"	b2	2	#5	11'-0"	b2	2	#5	11'-7"
b3	3	#5	10'-3"	b3	3	#5	11'-0"	b3	3	#5	11'-7"	b3	3	#5	12'-4"
b4	4	#5	11'-0"	b4	4	#5	11'-7"	b4	4	#5	12'-4"	b4	4	#5	13'-1"
b5	5	#5	11'-7"	b5	5	#5	12'-4"	b5	5	#5	13'-1"	b5	5	#5	13'-8"
b6	6	#5	12'-4"	b6	6	#5	13'-1"	b6	6	#5	13'-8"	b6	6	#5	14'-5"
b7	7	#5	13'-1"	b7	7	#5	13'-8"	b7	7	#5	14'-5"	b7	7	#5	15'-2"
b8	8	#5	13'-8"	b8	8	#5	14'-5"	b8	8	#5	15'-2"	b8	8	#5	15'-9"
b9	9	#5	14'-5"	b9	9	#5	15'-2"	b9	9	#5	15'-9"	b9	9	#5	16'-6"
b10	10	#5	15'-2"	b10	10	#5	15'-9"	b10	10	#5	16'-6"	b10	10	#5	17'-3"
b11	11	#5	15'-9"	b11	11	#5	16'-6"	b11	11	#5	17'-3"	b11	11	#5	18'-0"
b12	12	#5	16'-6"	b12	12	#5	17'-3"	b12	12	#5	18'-0"	b12	12	#5	18'-7"
b13	13	#5	17'-3"	b13	13	#5	18'-0"	b13	13	#5	18'-7"	b13	13	#5	19'-4"
b14	14	#5	18'-0"	b14	14	#5	18'-7"	b14	14	#5	19'-4"	b14	14	#5	20'-1"
b15	15	#5	18'-7"	b15	15	#5	19'-4"	b15	15	#5	20'-1"	b15	15	#5	20'-8"
b16	16	#5	19'-4"	b16	16	#5	20'-1"	b16	16	#5	20'-8"	b16	16	#5	21'-5"
b17	17	#5	20'-1"	b17	17	#5	20'-8"	b17	17	#5	21'-5"	b17	17	#5	22'-2"
b18	18	#5	20'-8"	b18	18	#5	21'-5"	b18	18	#5	22'-2"	b18	18	#5	22'-9"
b19	19	#5	21'-5"	b19	19	#5	22'-2"	b19	19	#5	22'-9"	b19	19	#5	23'-6"
b20	20	#5	22'-2"	b20	20	#5	22'-9"	b20	20	#5	23'-6"	b20	20	#5	24'-3"
b21	21	#5	22'-9"	b21	21	#5	23'-6"	b21	21	#5	24'-3"	b21	21	#5	25'-0"
b22	22	#5	23'-6"	b22	22	#5	24'-3"	b22	22	#5	25'-0"	b22	22	#5	25'-7"
b23	23	#5	24'-3"	b23	23	#5	24'-10"	b23	23	#5	25'-7"	b23	23	#5	26'-4"
b24	24	#5	25'-0"	b24	24	#5	25'-7"	b24	24	#5	26'-4"	b24	24	#5	27'-1"
b25	25	#5	25'-7"	b25	25	#5	26'-4"	b25	25	#5	27'-1"	b25	25	#5	27'-8"
b26	26	#5	26'-4"	b26	26	#5	27'-1"	b26	26	#5	27'-8"	b26	26	#5	28'-5"
b27	27	#5	27'-1"	b27	27	#5	27'-8"	b27	27	#5	28'-5"	b27	27	#5	29'-2"
b28	28	#5	27'-8"	b28	28	#5	28'-5"	b28	28	#5	29'-2"	b28	28	#5	29'-9"
b29	29	#5	28'-5"	b29	29	#5	29'-2"	b29	29	#5	29'-9"	b29	29	#5	30'-6"
b30	30	#5	29'-2"	b30	30	#5	29'-9"	b30	30	#5	30'-6"	b30	30	#5	31'-3"
b31	31	#5	29'-9"	b31	31	#5	30'-6"	b31	31	#5	31'-3"	b31	31	#5	32'-0"
b32	32	#5	30'-6"	b32	32	#5	31'-3"	b32	32	#5	32'-0"	b32	32	#5	32'-7"
b33	33	#5	31'-3"	b33	33	#5	32'-0"	b33	33	#5	32'-7"	b33	33	#5	33'-4"
b34	34	#5	32'-0"	b34	34	#5	32'-7"	b34	34	#5	33'-4"	b34	34	#5	34'-1"
b35	35	#5	32'-7"	b35	35	#5	33'-4"	b35	35	#5	34'-1"	b35	35	#5	34'-8"
b36	36	#5	33'-4"	b36	36	#5	34'-1"	b36	36	#5	34'-8"	b36	36	#5	35'-5"
b37	37	#5	34'-1"	b37	37	#5	34'-8"	b37	37	#5	35'-5"	b37	37	#5	36'-2"
b38	38	#5	34'-8"	b38	38	#5	35'-5"	b38	38	#5	36'-2"	b38	38	#5	36'-9"
b39	39	#5	35'-5"	b39	39	#5	36'-2"	b39	39	#5	36'-9"	b39	39	#5	37'-6"
b40	40	#5	36'-2"	b40	40	#5	36'-9"	b40	40	#5	37'-6"	b40	40	#5	38'-3"
b41	41	#5	36'-9"	b41	41	#5	37'-6"	b41	41	#5	38'-3"	b41	41	#5	39'-0"
b42	42	#5	37'-6"	b42	42	#5	38'-3"	b42	42	#5	39'-0"	b42	42	#5	39'-7"
b43	43	#5	38'-3"	b43	43	#5	39'-0"	b43	43	#5	39'-7"	b43	43	#5	40'-4"
b44	44	#5	39'-0"	b44	44	#5	39'-7"	b44	44	#5	40'-4"	b44	44	#5	41'-1"
b45	45	#5	39'-7"	b45	45	#5	40'-4"	b45	45	#5	41'-1"	b45	45	#5	41'-8"
b46	46	#5	40'-4"	b46	46	#5	41'-1"	b46	46	#5	41'-8"	b46	46	#5	42'-5"
b47	47	#5	41'-1"	b47	47	#5	41'-8"	b47	47	#5	42'-5"	b47	47	#5	43'-2"
b48	48	#5	41'-8"	b48	48	#5	42'-5"	b48	48	#5	43'-2"	b48	48	#5	43'-9"
b49	49	#5	42'-5"	b49	49	#5	43'-2"	b49	49	#5	43'-9"	b49	49	#5	44'-6"
b50	50	#5	43'-2"	b50	50	#5	43'-9"	b50	50	#5	44'-6"	b50	50	#5	45'-3"
b51	51	#5	43'-9"	b51	51	#5	44'-6"	b51	51	#5	45'-3"	b51	51	#5	46'-0"
b52	52	#5	44'-6"	b52	52	#5	45'-3"	b52	52	#5	46'-0"	b52	52	#5	46'-7"
b53	53	#5	45'-3"	b53	53	#5	45'-10"	b53	53	#5	46'-7"	b53	53	#5	47'-4"
b54	54	#5	46'-0"	b54	54	#5	46'-7"	b54	54	#5	47'-4"	b54	54	#5	48'-1"
b55	55	#5	46'-7"	b55	55	#5	48'-1"	b55	55	#5	48'-8"	b55	55	#5	49'-5"
b56	56	#5	47'-4"	b56	56	#5	48'-8"	b56	56	#5	49'-5"	b56	56	#5	50'-2"
b57	57	#5	48'-1"	b57	57	#5	49'-5"	b57	57	#5	50'-2"	b57	57	#5	50'-9"
b58	58	#5	48'-8"	b58	58	#5	50'-2"	b58	58	#5	50'-9"	b58	58	#5	51'-6"
b59	59	#5	49'-5"	b59	59	#5	50'-9"	b59	59	#5	51'-6"	b59	59	#5	52'-3"
b60	60	#5	50'-2"	b60	60	#5	51'-6"	b60	60	#5	52'-3"	b60	60	#5	53'-0"
b61	61	#5	50'-9"	b61	61	#5	52'-3"	b61	61	#5	53'-0"	b61	61	#5	53'-7"
b62	62	#5	51'-6"	b62	62	#5	52'-10"	b62	62	#5	53'-7"	b62	62	#5	54'-4"
b63	63	#5	52'-3"	b63	63	#5	53'-7"	b63	63	#5	54'-4"	b63	63	#5	55'-1"
b64	64	#5	53'-0"	b64	64	#5	54'-4"	b64	64	#5	55'-1"	b64	64	#5	55'-8"
b65	65	#5	53'-7"	b65	65	#5	54'-11"	b65	65	#5	55'-8"	b65	65	#5	56'-5"
b66	66	#5	54'-4"	b66	66	#5	55'-8"	b66	66	#5	56'-5"	b66	66	#5	57'-2"
b67	67	#5	55'-1"	b67	67	#5	56'-5"	b67	67	#5	57'-2"	b67	67	#5	57'-9"
b68	68	#5	55'-8"	b68	68	#5	56'-12"	b68	68	#5	57'-9"	b68	68	#5	58'-6"
b69	69	#5	56'-5"	b69	69	#5	57'-9"	b69	69	#5	58'-6"	b69	69	#5	59'-3"
b70	70	#5	57'-2"	b70	70	#5	58'-6"	b70	70	#5	59'-3"	b70	70	#5	60'-0"
b71	71	#5	57'-9"	b71	71	#5	59'-3"	b71	71	#5	60'-0"	b71	71	#5	60'-7"
b72	72	#5	58'-6"	b72	72	#5	59'-10"	b72	72	#5	60'-7"	b72	72	#5	61'-4"
b73	73	#5	59'-3"	b73	73	#5	60'-7"	b73	73	#5	61'-4"	b73	73	#5	62'-1"
b74	74	#5	59'-10"	b74	74	#5	61'-4"	b74	74	#5	62'-1"	b74	74	#5	62'-8"
b75	75	#5	60'-7"	b75	75	#5	62'-1"	b75	75	#5	62'-8"	b75	75	#5	63'-5"
b76	76	#5	61'-4"	b76	76	#5	62'-8"	b76	76	#5	63'-5"	b76	76	#5	64'-2"
b77	77	#5	62'-1"	b77	77	#5	63'-5"	b77	77	#5	64'-2"	b77	77	#5	64'-9"
b78	78	#5	62'-8"	b78	78	#5	64'-2"	b78	78	#5	64'-9"	b78	78	#5	65'-6"
b79	79	#5	63'-5"	b79	79	#5	64'-9"	b79	79	#5	65'-6"	b79	79	#5	66'-3"
b80	80	#5	64'-2"	b80	80	#5	65'-6"	b80	80	#5	66'-3"	b80	80	#5	67'-0"

**PROPOSED ELECTRIC CONSTRUCTION
ALONG BAILEY RD. (DUPAGE COUNTY)
BETWEEN WASHINGTON ST. AND
COACH DR. AT THE DUPAGE RIVER
IN THE CITY OF NAPERVILLE, STATE OF ILLINOIS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	9	67
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

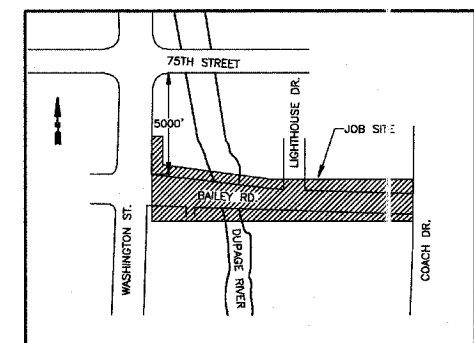
SPECIAL NOTES

- ALL UTILITIES MAY NOT BE SHOWN. CALL J.U.L.I.E. AT 1-800-892-0123 FOR FIELD LOCATIONS OF UNDERGROUND UTILITY LINES PRIOR TO ANY DIGGING OR CONSTRUCTION.
- THE BRUSH AND TREES SMALLER THAN 6 INCHES IN DIAMETER LOCATED IN ROAD RIGHT OF WAY AND THAT IS PRESENT ALONG MOST OF THE PROPOSED ROUTE ARE TO BE TRIMMED OR REMOVED BY THE LANDSCAPE CONTRACTOR FOR CLEARANCE TO THE PROPOSED UNDERGROUND OR OVERHEAD ELECTRIC WIRES OR EQUIPMENT AS REQUIRED AND IS UNDER THE DIRECTION OF THE CITY OF NAPERVILLE (ELECTRIC) AND PER PERMIT. ALL TREE WORK IS TO BE PERFORMED BY LANDSCAPE CONTRACTOR PROVIDED BY THE LINE CONTRACTOR.
- THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON ABOVE GROUND STRUCTURES, J.U.L.I.E. PAINT MARKS, AND RECORD DRAWINGS. LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE SURVEY OF THIS WORK TO LOCATE BURIED UTILITIES/STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE FOLLOWING OFFICES SHOULD BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS: TELEPHONE, GAS, ELECTRIC, WATER, SEWER AND CABLE T.V. ALL LOCATED OR POSSIBLE UNDER GROUND FACILITIES SHALL BE EXPOSED ON ALL SIDES BY EXCAVATING TO THE KNOWN OR UNKNOWN UNDER GROUND FACILITY PRIOR TO DIGGING FOUNDATIONS, TRENCHES OR HANDHOLES.
- EXISTING ELECTRICAL FACILITIES SHALL BE DE-ENERGIZED PRIOR TO THE CONTRACTOR AND HIS SUBCONTRACTOR'S WORKERS COMMENCING WORK. THE CONTRACTOR IS TO CONTACT THE DEPARTMENT OF PUBLIC UTILITIES, ELECTRICAL DIVISION TO DE-ENERGIZED ALL NEARBY ELECTRICAL CIRCUITS AND FACILITIES. HOWEVER, IF CONDITIONS EXIST THAT REQUIRE THE CIRCUIT TO REMAIN ENERGIZED, THE CONTRACTOR SHALL PROCEED TO WORK WITH CONDUCTORS ENERGIZED, PER OSHA AND NESC REGULATIONS.
THE CONTRACTOR SHALL COORDINATE THE PLANNED WORK SCHEDULE, CONSTRUCTION SEQUENCE, AND ANY OUTAGE REQUEST WITH THE DPU-E ELECTRICAL CONTROL, MR. JOHN FEATER AND THE ENGINEER.
- CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHILE WORKING IN, ON OR NEAR ELECTRICAL FACILITIES. HE AND ALL HIS SUBCONTRACTOR'S WORKERS SHALL FOLLOW APPROPRIATE OSHA LOCK-OUT/TAG-OUT PROCEDURES, CONFINED SPACE ENTRY, CPR AND CLEARANCE REQUIREMENTS FROM ENERGIZED EQUIPMENT.
- CONNECTION TO EXISTING ELECTRICAL FACILITIES SHALL BE ACCOMPLISHED ONLY BY CONTRACTOR'S EMPLOYEES AND HIS SUBCONTRACTOR'S EMPLOYEES THAT ARE TRAINED TO WORK ON HIGH VOLTAGE FACILITIES (34.5kV FACILITIES OR LOWER), IN ACCORDANCE WITH OSHA REGULATIONS, 29 CFR. A MINIMUM OF TWO SUCH QUALIFIED PERSONNEL SHALL BE PRESENT WHILE WORKING ON OR NEAR THESE FACILITIES.
- THE CONTRACTOR SHALL ARRANGE FOR INSPECTION OF HIS AND HIS SUBCONTRACTOR'S WORK, BY DPU-E PERSONAL.
- THE CONTRACTOR SHALL INSTALL ALL WORK (UNLESS OTHERWISE SPECIFIED) AT EACH LOCATION TO THE FINAL ELEVATIONS AND INTENDED PURPOSE. THE CONTRACTOR'S SURVEYOR TO OBTAIN THE ELEVATION AND PROVIDE THIS ELEVATION MARK TO THE CONTRACTOR WITH A FIELD STAKE AND ELEVATION WRITTEN ON IT. IN ADDITION, ELEVATION MARKS FOR HANDHOLES SHALL BE DETERMINED. THIS WORK IS CONSIDERED INCIDENTAL TO THE CONTRACT. THE SURVEYOR SHALL PERFORM ALL LAYOUT WORK, OFFSET STAKES, PROFILE WORK, VOLUMES, CALCULATIONS, FOUNDATION WORK, AS BUILT WORK, SLOPE, GRADE, BENCHMARK WORK, ELEVATION AND DIMENSIONS PER G.P.S.
- ALL WORK SHALL MEET OSHA REGULATIONS OF LATEST ISSUE.
- THE CONTRACTOR SHALL REMOVE ONLY THOSE TREES, BUSHES, FLOWERS, AND SHRUBS SO DESIGNATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, OR THOSE WHICH DIRECTLY INTERFERE WITH THE SAFETY OR QUALITY OF CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF TWO (2) DAYS IN ADVANCE OF REMOVAL OF TREES WHICH AFFECT SAFETY. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN WORKING NEAR EXISTING TREES AND SHRUBS TO AVOID DAMAGING THOSE NOT SCHEDULED FOR REMOVAL AND SHALL REPLACE ANY DAMAGED PLANTS AT HIS OWN EXPENSE. THE CONTRACTOR SHALL PROTECT ALL OTHER TREES, BUSHES AND LANDSCAPING FEATURES. TREES REMOVED OR DAMAGED BY THE CONTRACTOR WHICH HAVE NOT BEEN DESIGNATED FOR REMOVAL, SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY. TREES TO HAVE BRANCHES OR ROOTS PRUNED SHALL BE DONE IN A NEAT AND CLEAN MANNER (I.E., WITH A SAW OR SHEARS) AND NOT TORN OR BROKEN WITH CONSTRUCTION EQUIPMENT.

GENERAL NOTES

- CONTRACTOR SHALL RESTRICT HIS OPERATIONS TO EASEMENTS AND ROAD RIGHT-OF-WAY AS SHOWN ON THE DRAWINGS.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL ARRANGE TO HAVE ALL UNDERGROUND UTILITIES INCLUDING WATER, GAS, ELECTRIC, STORM SEWER, SANITARY SEWER, SPRINGLER SYSTEM, TRAFFIC CONTROL SIGNALS, TELEPHONE AND CABLE TV LOCATED AND SUITABLY MARKED. SHOULD A UTILITY BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED AT ONCE. IF UTILITIES INTERFERE WITH THE CONSTRUCTION ALIGNMENT, THEY SHALL BE PROTECTED AT NO ADDITIONAL EXPENSE TO THE OWNER AND WITHOUT CLAIM BY THE CONTRACTOR FOR DELAYS DUE TO UTILITY LINES ENCOUNTERED. THE CITY OF NAPERVILLE SHALL BE NOTIFIED 96 HOURS IN ADVANCE OF WATERMAIN, SANITARY, AND ELECTRIC CROSSINGS.
- INFORMATION ON THE PLANS REGARDING UNDERGROUND UTILITIES IS TAKEN FROM THE BEST AVAILABLE RECORDS, BUT IS NOT REPRESENTED AS BEING ENTIRELY CORRECT OR COMPLETE. THE CONTRACTOR SHALL NOTIFY OPERATING AGENCY IN ADVANCE OF CROSSING OVER OR UNDER ANY UTILITIES SHOWN ON THE PLANS. THE CONTRACTOR SHALL NOTIFY OPERATING AGENCY AND ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY UTILITY NOT SHOWN ON THE PLANS. ANY UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- MSDS SHEETS ARE REQUIRED ON THE JOB SITE FOR ALL MATERIALS USED.
- THE CONTRACTOR SHALL UNDER NO CIRCUMSTANCES DISTURB OR REMOVE A TREE UNLESS SPECIFICALLY DIRECTED TO DO SO ON THE PLANS OR BY THE ENGINEER. CONTRACTOR SHALL NOTE PROTECTION OF ALL TREES, SHRUBS ETC., ALONG THE LINE OF CONSTRUCTION IS REQUIRED. WRITTEN PERMISSION FROM THE OWNER IS REQUIRED PRIOR TO ANY TREE OR SHRUB REMOVAL.
- THE CONTRACTOR SHALL PROTECT ALL PROPERTY PINS AND SURVEY MONUMENTS AND SHALL RESTORE ANY WHICH ARE DISTURBED BY HIS OPERATIONS AT NO ADDITIONAL COST TO THE CONTRACT.
- ALL FIELD TILE, CULVERTS, GRATES, DRAIN PIPE, ENCOUNTERED DURING CONSTRUCTION OPERATIONS AND DAMAGED SHALL BE REPAIRED WITH NEW MATERIALS PER THE SPECIFICATIONS. A RECORD OF THE LOCATION OF ALL FIELD TILE, CULVERTS OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER UPON COMPLETION OF THE PROJECT. ALL FIELD REPAIRS SHALL BE AT CONTRACTOR'S EXPENSE.
- ANY PAVEMENT OR PAVEMENT STRIPING DAMAGED OR REMOVED DURING CONSTRUCTION OPERATIONS, OTHER THAN THE AREAS SHOWN ON DRAWING 58199 SHEETS 1 THRU 23, SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO THE CITY.
- ALL EXISTING UTILITY FACILITIES SHALL BE KEPT IN SERVICE DURING CONSTRUCTION EXCEPT WHERE PERMISSION IS GRANTED OTHERWISE BY THE OWNER. ALL VALVE BOXES AND VALVE VAULTS, ELECTRIC MANHOLES, SWITCH GEARS OR TRANSFORMERS SHALL REMAIN ACCESSIBLE TO THE RESPECTIVE UTILITY COMPANY.
- THE CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING FENCE, POSTS, AND GATES DURING CONSTRUCTION. ALL WORK AND MATERIAL NECESSARY TO REPLACE EXISTING FENCE, POSTS, AND GATES DAMAGED BECAUSE OF NONCOMPLIANCE WILL BE AT CONTRACTOR'S OWN EXPENSE, AND NO EXTRA COMPENSATION WILL BE ALLOWED. ALL REPLACEMENT MATERIALS ARE TO BE NEW.
- ALL EXISTING TRAFFIC SIGNS, ELECTRIC UNDERGROUND CABLES, DUCTS, FENCES, GUARDRAILS, STREET LIGHTS, STREET SIGNS, ETC., WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR REMOVAL OR DISPOSAL SHALL BE MAINTAINED BY THE CONTRACTOR OR TEMPORARILY RELOCATED. THIS IS CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED. DAMAGE TO THESE ITEMS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE. IN ADDITION, ALL MAILBOXES THAT INTERFERE WITH CONSTRUCTION SHALL BE SIMILARLY RELOCATED AT NO ADDITIONAL COST. CONTRACTOR SHALL PROVIDE TEMPORARY TRAFFIC REGULATORY AND SAFETY SIGNAGE THAT IS DISTURBED BY CONSTRUCTION ACTIVITIES. SUCH COST SHALL BE CONSIDERED INCIDENTAL TO THE COST OF TRAFFIC CONTROL.
- THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL BUSINESS, THE CONSTRUCTION SITE, RESIDENCES, AGRICULTURE AREAS, AND ALL OTHER SITES NECESSARY FOR THE MAINTENANCE OF COMMERCE AND SAFETY AT ALL TIMES. THE CONTRACTOR MAY PLACE TEMPORARY PLATES OR OTHER SUCH DEVICES IN A SAFE AND ACCESSIBLE MANNER TO TEMPORARILY MAINTAIN ACCESS. IN NO CASE MAY MORE THAN ONE POINT OF ACCESS TO ANY RESIDENCE, BUSINESS OR SITE BE UNDER CONSTRUCTION SIMULTANEOUSLY. SHOULD A PROPERTY HAVE ONLY ONE POINT OF ACCESS, THE CONTRACTOR SHALL STAGE HIS WORK SO AS TO ONLY OBSTRUCT ONE HALF OF THIS ENTRANCE AT ANY TIME AND SHALL MAINTAIN ACCESS TO HIS PROPERTY AT ALL TIME. COSTS FOR MAINTAINING ACCESS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT (SEE NOTE 28).
- CONTRACTOR SHALL PLACE AND MAINTAIN TEMPORARY 2" TO 6" HMA PATCHES ACROSS ALL PAVEMENT REPAIR AREAS PRIOR TO THE INSTALLATION OF THE FINAL PAVEMENT REPAIRS. COSTS SHALL BE INCIDENTAL TO THE ASSOCIATED PAY ITEMS. PLATES MAY BE PLACED IN LIEU OF HMA PATCHES AT THE DISCRETION OF THE FIELD ENGINEER. PLATES ARE TO BE RAMPED AND PINNED IN PLACE TO PREVENT MOVEMENT AND CAPABLE OF SUPPORTING HS-20 LOADING. COUNTER SINKING OF PLATES IS REQUIRED.
- THE CONTRACTOR SHALL REMOVE AND REPLACE ALL SIGNS OF ALL TYPES, SIZES, AND OWNERSHIP NECESSARY TO COMPLETE INDICATED WORK. COST OF THIS WORK SHALL BE INCIDENTAL TO THE WORK AND CONTRACT.
- THE CONTRACTOR SHALL BRACE ALL STREET LIGHT POLES, DPU-E POLES, CABLE TV OR COMED POLES WITHIN THE VICINITY OF THE INDICATED WORK. COST OF THIS WORK SHALL BE INCIDENTAL TO THE WORK AND CONTRACT. ANY DELAY DUE TO OBTAINING PERMISSION OR A PERMIT FROM THE OWNER OF THE FACILITY TO SUPPORT OR RELOCATE OF ANY EXISTING FACILITY IS AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL CONTACT THE CITY OF NAPERVILLE'S TRANSPORTATION ENGINEERING AND DEVELOPMENT BUSINESS GROUP 48 HOURS PRIOR TO PERFORMING WORK IN OR AROUND THE WORK AREA WHERE DETECTOR LOOPS OR TRAFFIC SIGNALS HAVE THE POSSIBILITY OF BEING ENCOUNTERED AND/OR DAMAGED. THE CONTRACTOR SHALL CONTACT THE DUPAGE COUNTY DEPARTMENT OF TRANSPORTATION WITH THE SAME INFORMATION.

CONTINUED ON PAGE 2



LOCATION MAP
N.T.S.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES -- ELECTRIC					
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION					
PROJECT TITLE	MAP NO.	DATE	DATE	DATE	DATE
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	2014/1323	08-15-07	08-15-07	08-15-07	08-15-07
PROJECT DESCRIPTION	PROJECT NO.	DATE	DATE	DATE	DATE
COORDINATED WITH BRIDGE IMPROVEMENT	EJ12-06-04	08-15-07	08-15-07	08-15-07	08-15-07
DATE	WORK NUMBER	DATE	DATE	DATE	DATE
08-15-07	58199	08-15-07	08-15-07	08-15-07	08-15-07
DESIGNED BY	SCALE	DATE	DATE	DATE	DATE
RFJ	NTS	08-15-07	08-15-07	08-15-07	08-15-07
CHECKED BY	SCALE	DATE	DATE	DATE	DATE
RFJ	NTS	08-15-07	08-15-07	08-15-07	08-15-07
DATE	DATE	DATE	DATE	DATE	DATE
08-15-07	08-15-07	08-15-07	08-15-07	08-15-07	08-15-07

**PROPOSED ELECTRIC CONSTRUCTION
ALONG BAILEY RD. (DUPAGE COUNTY)
BETWEEN WASHINGTON ST. AND
COACH DR. AT THE DUPAGE RIVER
IN THE CITY OF NAPERVILLE, STATE OF ILLINOIS**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	17	68
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

GENERAL NOTES (CONTINUED)

- 17) THE CONTRACTOR SHALL PROVIDE TIME DURING CONSTRUCTION OPERATIONS FOR THE LANDSCAPER TO REMOVE, PRESERVE, AND REINSTALL ANY BUSH OR SHRUB. BUSHES, SHRUBS, VINES, AND SEEDINGS SHALL BE DUG UP WITH CARE, AVOIDING INJURY TO THE PLANTS OR LOSS OR DAMAGE OF THE ROOTS. IMMEDIATELY AFTER DIGGING, ROOTS SHALL BE PROTECTED AGAINST DRYING OUT AND FREEZING BY WRAPPING ROOT SYSTEM IN BURLAP, REMOVED VEGETATION SHALL BE PLACED IN TEMPORARY STORAGE EITHER ON SITE OR AT OTHER APPROVED LOCATIONS. IF LANDSCAPER IS UNABLE TO REUSE EXISTING VEGETATION, HE SHALL REPLACE WITH SAME SIZE AND SPECIES AT HIS OWN EXPENSE. COST OF THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE LANDSCAPING CONTRACT AND IS PART OF THE RESTORATION.
- 18) DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR IS NOT ALLOWED TO PERMANENTLY STOCK PILE MATERIAL ON SITE. CONTRACTOR SHALL SUPPLY LIGHTED BARRICADES AROUND ALL STOCKPILES AND IS RESPONSIBLE FOR THE SECURITY OF ALL THE MATERIALS STORED OFF SITE.
- 19) ALL RESTORATION IS DIRECTED BY THE CITY PERMIT WHICH THE CONTRACTOR IS REQUIRED TO OBTAIN PRIOR TO STARTING WORK. ALL REQUESTS REQUIRED BY THE CITY SHALL BE HONORED AND COMPLETED BY THE LANDSCAPER AT NO EXPENSE TO THE CITY. THE LANDSCAPE CONTRACTOR SHALL PERFORM ALL RESTORATION PER CITY OF NAPERVILLE SPECIFICATIONS. THE CONTRACTOR SHALL PERFORM ALL WORK TO THE MOST RESTRICTIVE REQUIREMENT OF THE GOVERNING BODIES. THIS IS PART OF THE RESTORATION PRICE.
- 20) ALL IDENTIFIED OR SUSPECTED UNDERGROUND FACILITIES OR OBSTRUCTIONS SHALL BE LOCATED BY HAND DIGGING TO A DEPTH OF 8 FEET, WIDTH OF 4 FEET AND LENGTH OF 5 FEET AND IDENTIFIED BY NAME AND SIZE.
- 21) WHEN REPAIRING, REPLACING, OR INSTALLING ITEMS, THE ITEMS SUPPLIED BY THE CONTRACTOR SHALL BE NEW AND NOT USED.

- 22) THE COST TO LOCATE, SUPPORT, MOVE AND PROTECT THE UTILITIES (SHOWN ON THE DRAWINGS) SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO WORK.
- 23) ALL MATERIALS REMOVED DURING THE CONSTRUCTION OF THE PROJECT AND DESIGNATED ON THE PLANS OR BY THE CITY AS SALVAGED MATERIALS SHALL BE REMOVED, CLEANED, AND STACKED AT THE DESIGNATED CITY OF NAPERVILLE SITE. ALL UNUSED MATERIALS SHALL BE THE PROPERTY OF THE CITY.
- 24) ALL MATERIALS REMOVED BY THE CONTRACTOR, SUCH AS POLES, WIRE, STEEL POLES, FOUNDATIONS, ANCHORS, GUYS, CROSS ARMS, INSULATOR GROUND WIRES, CONDUCTORS, AND HARDWARE AND DESIGNATED ON THE PLAN FOR REMOVAL SHALL BE REMOVED TO AN APPROPRIATE DUMP SITE FOR WASTE. DUMP TICKETS RECEIVED AND RETURNED TO THE CITY. ALL AREAS LEFT DAMAGED BY THE REMOVAL SHALL BE REPAIRED, REPLACED OR INSTALLED TO ROUGH GRADE.
- 25) THE CITY OF NAPERVILLE DOES NOT GUARANTEE A SEQUENCE OF WORK OR AVAILABILITY OF THE WORK AREA OR QUANTITY OF WORK.
- 26) ALL WORK WILL OCCUR DURING ALL 4 SEASONS OF THE YEAR. THEREFORE, THERE SHALL BE NO COMPENSATION PAID BY THE CITY FOR SNOW, ICE, RAIN, WIND, OR HOT OR COLD WEATHER. IT IS ASSUMED THE CONTRACTOR HAS INCLUDED THESE ITEMS IN THE PRICING.

27) THE CONTRACTOR IS ADVISED THAT JOINTED, FISSURED ROCK, LARGE BOULDERS (12 INCHES OR LARGER) AND VERY TOUGH STRATIFIED ROCK/SHALE EXISTS FROM 1'-0" TO 5'-0" BELOW GRADE AND SOLID ROCK EXISTS FROM 5'-0" TO 20'-0" BELOW GRADE AND REQUIRES ADDITIONAL WORK AND IS INCLUDED IN THE COST OF INSTALLING THE DUCT BANK OR HAND HOLE WORK OR RISER WORK. THE CONTRACTOR WILL EXCAVATE IN ROCK ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS FOR ROCK EXCAVATION FOR STRUCTURES. THE BOTTOM OF THE TRENCH SHALL BE LINED WITH 2 INCHES OF FA2 MATERIALS OR CA-6 MATERIALS TO FORM A BEDDING FOR THE DUCT PACKAGE AND IS INCIDENTAL TO THE COST.

28) THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL WORK OR AS MUCH AS POSSIBLE USING TRAFFIC CONTROL AND LANE CLOSURES AS REQUIRED FOR THE BRIDGE WORK. ALL ELECTRICAL WORK REQUIRING A LANE CLOSURE OR TRAFFIC CONTROL SHALL ONLY BE ACCEPTED IF THE BRIDGE WORK IS NOT INVOLVED. THE CONTRACTOR TO INCLUDE THESE COSTS UNDER THE TRAFFIC CONTROL PAY ITEM.

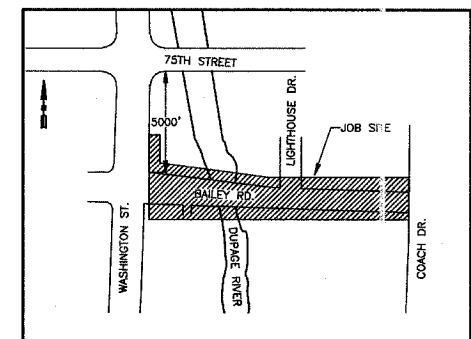
29) THE CONTRACTOR SHALL, DURING THE PROGRESS OF THE JOB, NOTE ANY AND ALL CHANGES OR DEVIATIONS FROM THE ORIGINAL DRAWING. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF ALL RECORDED DIMENSIONS AND ELEVATIONS. ALL MANHOLES, HAND HOLES, VAULTS OR RISERS, BENDS AND FITTINGS, SHALL BE TIED TO A MINIMUM OF TWO PERMANENT VISIBLE POINTS (I.E. PROPERTY IRONS AND BUILDINGS). DEVIATIONS FROM CHANGES IN GRADE SHALL ALSO BE NOTED ON THE RECORD DRAWINGS.

30) WATER MAIN VALVES, INCLUDING TAP VALVES, ADJACENT TO AN EXISTING WATER MAIN, AND EXISTING WATER MAIN VALVES SHALL ONLY BE OPERATED BY THE CITY OF NAPERVILLE, DEPARTMENT OF PUBLIC UTILITIES CEE/CM DIVISION PERSONNEL WITH 48-HOURS NOTICE (MONDAY-FRIDAY) 630-420-4122.

UTILITY CONTACTS:

CITY OF NAPERVILLE:

- NDPU- WATER AND WASTEWATER
MR. PAT EYRE
(830) 420-4122
- NDPU- ELECTRIC
MRS. LUCY HYNES
(830) 305-5375
- NDPW- PUBLIC WORKS
MR. DAN VORREN
(830) 548-2981
- TED- TRANSPORTATION, ENGINEERING & DEVELOPMENT BUSINESS GROUP
MR. BILL NOVAK
(830) 420-6704
- OTHER UTILITIES:**
- SBC AMERITECH AT&T- MR. GREG LAWRENCE
(830) 462-5846
MS. DONNA SZPYTEK
(830) 941-4223
- COMCAST- MR. BOB SCHULTER
(830) 600-6347
- COMMONWEALTH EDISON- MR. LYNN CHRISTENSON
(830) 723-2303
- NICOR GAS- MS. CONSTANCE LANE
(830) 983-8676
X3830
- WIDE OPEN WEST- MR. TOM JEBENS
(830) 536-3153
MR. JIM PIRTANO
(830) 669-2707
- DUPAGE COUNTY PERMIT ADMINISTRATOR- MR. ROBERT KOLARS
401 N. COUNTY FARM RD.
WHEATON, IL 60187
(830) 407-6886

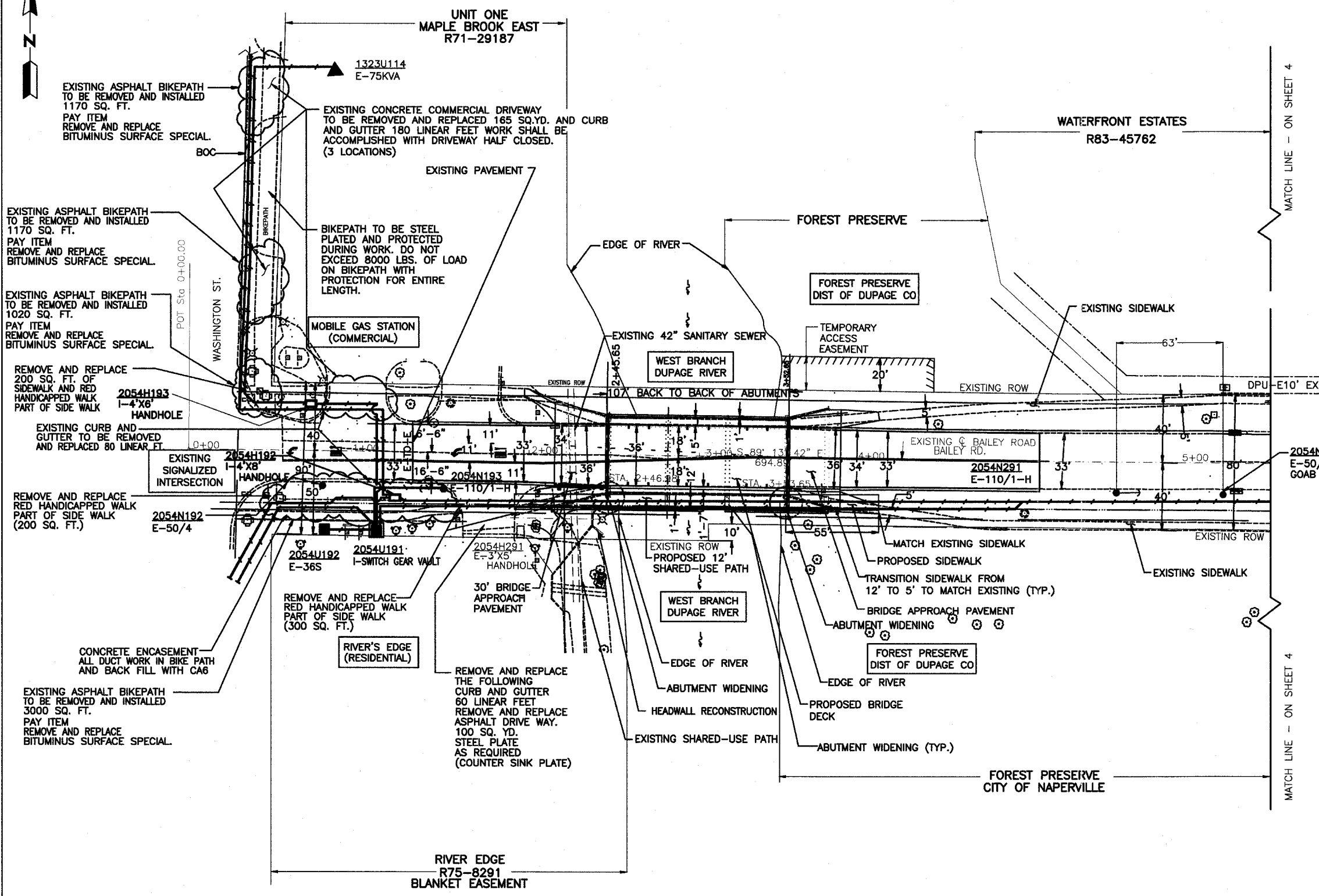


LOCATION MAP
N.T.S.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT NO.	DATE	SCALE	DATE
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	2014/1323	1/323	2014/1323
COORDINATED WITH BRIDGE IMPROVEMENT		DATE	DATE
		JK	JK
DATE	ISSUED	ENGINEER	PROJECT NO.
06-07-14	58199	JK	EU12-06-04
ISSUED	ENGINEER	PROJECT NO.	DATE
NTS			SHEET 2 OF 23

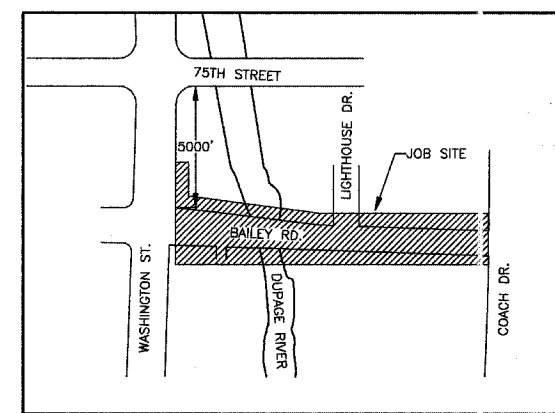
PLAN VIEW WITH ALL FACILITIES SHOWN (SEE PAGE 5 AND 6 FOR DETAIL LAY OUT OF DUCTBANK)

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	17	69
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				



LEGEND

EXISTING	
	OVERHEAD
	E-POLE
	E-3-4/0 AAA PRI.
	E-ANCHOR & GUY ASSEMBLY
UNDERGROUND	
	E-TRANSFORMER
	E-SW. MOD., FUSE MOD. or TERM. MOD.
	E-HANDHOLE
	E-1-1/0 STR. AL. 15kV W/CONC. JKT.
	E-3-1/0 STR. AL. 15kV W/CONC. JKT.
	E-DUCT BANK
	E-EASEMENT
	E-TRAFFIC LIGHT
	E-INLET
	E-STREET LIGHT
	E-TREE/SHRUB
INSTALL UNDERGROUND	
	I-SW. MOD., FUSE MOD.
	I-HANDHOLE
	I-DUCT BANK



CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION		MAP NO. 2054/1323	JOB FILE NO. 8001800YCL000
COORDINATED WITH BRIDGE IMPROVEMENT		DATE: 05-18-07	PROJECT NO. EU12-06-04
DATE: 05-18-07	WORK NUMBER NO. 58199	DATE: 05-18-07	COMPLETED BY:
ENGINEER: RPS	APPV: JK	SCALE: 1"=30'	SHEET 3 OF 23

PLAN VIEW WITH ALL FACILITIES SHOWN
(SEE PAGE 5 AND 6 FOR DETAIL LAY OUT OF DUCTBANK)

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	70
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				

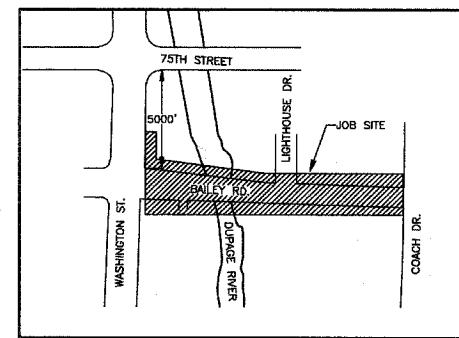
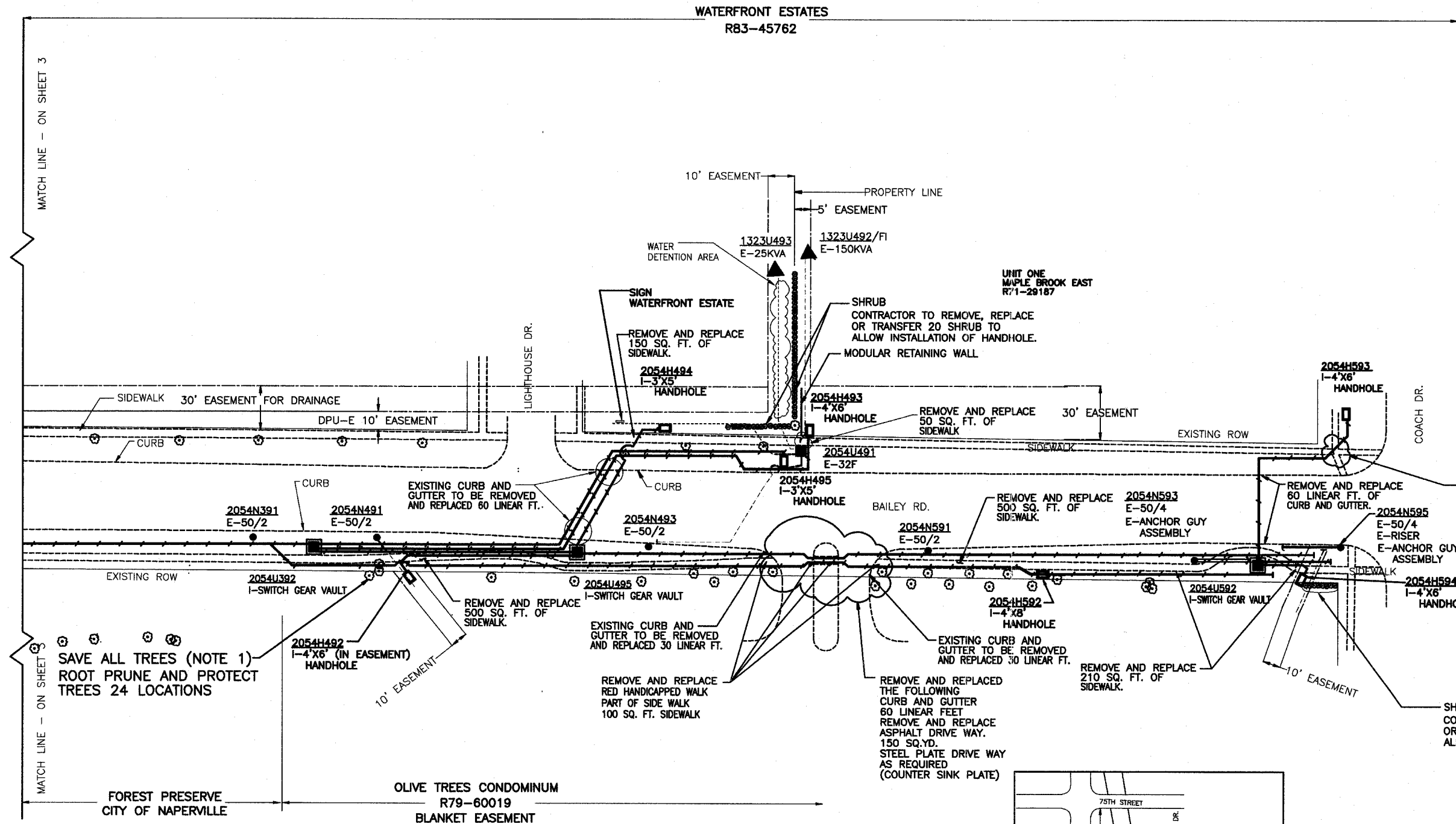
LEGEND

EXISTING OVERHEAD

- E-POLE
- E-3-4/0 AAA PRI.
- E-ANCHOR & GUY ASSEMBLY
- E-SW. MOD., FUSE MOD.
- ▲ E-TRANSFORMER
- E-HANDHOLE
- E-1-1/0 STR. AL.
- - - E-3-4/0 STR. AL.
- - - E-3-1/0 STR. AL.
- E-DUCT BANK
- - - E-CURB/SIDEWALK
- ⊙ E-TREE/SHRUB

INSTALL UNDERGROUND

- I-SWITCH GEAR VAULT
- I-HANDHOLE
- I-DUCT BANK

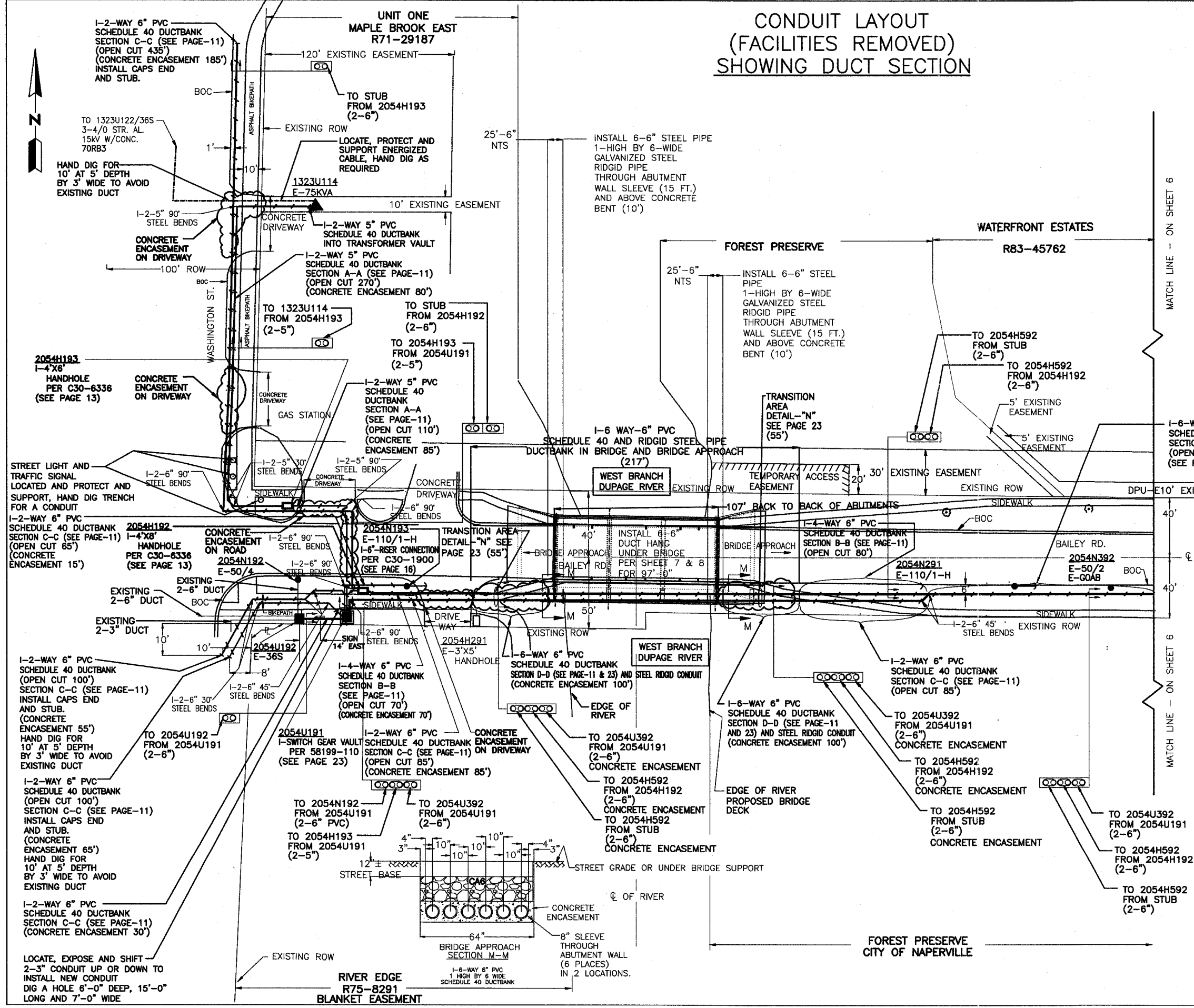


LOCATION MAP
N.T.S.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE	JOB NO.	JOB FILE NO.	
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	2054/1323	0001000004000	
PROJECT DESCRIPTION	WORK NO.	PROJECT NO.	
COORDINATED WITH BRIDGE IMPROVEMENT	JK	EU12-06-04	
DATE	WORK PERIOD NO.	DATE	
05-18-07			
DESIGNED	NO.	DATE	
RFB			
ENGINEER	58199	DATE	
SCALE	1"=30'	SHEET	4 OF 23

CONDUIT LAYOUT (FACILITIES REMOVED) SHOWING DUCT SECTION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	17	31
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				



LEGEND

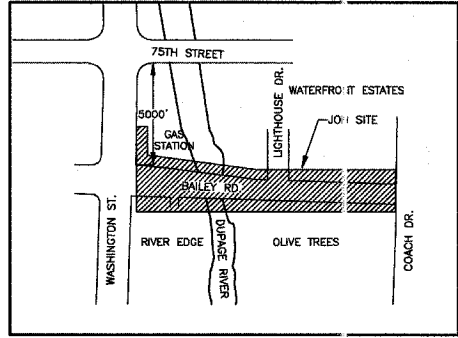
EXISTING

- E-POLE
- E-3-4/0 AAA PRI.
- E-ANCHOR & GUY ASSEMBLY
- E-SW. MOD., FUSE MOD.
- ▲ E-TRANSFORMER
- E-HANDHOLE
- E-1-1/0 STR AL.
- - - E-3-4/0 STR AL.
- - - E-3-1/0 STR AL.
- E-DUCT BANK
- ⊙ E-TREES/BUS LINES
- E-BOC/SIDEWALK

INSTALL

UNDERGROUND

- I-SWITCH GEAR VAULT
- I-HANDHOLE
- I-DUCT BANK



NOTE:
SEE PAGE 11 FOR CROSS SECTION OF DUCTBANK AND TRENCH AND RESTORATION REQUIREMENTS.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT NO.	DATE	ISSUED	COMPLETED BY
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	02-19-07	58199	
PROJECT DESCRIPTION	COORDINATED WITH	BRIDGE IMPROVEMENT	
DATE	ISSUED	COMPLETED BY	
02-19-07	58199		
ENGINEER	58199		
1"=30'	SHEET 5 OF 23		

CONDUIT LAYOUT (FACILITIES REMOVED) SHOWING DUCT SECTION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	72
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

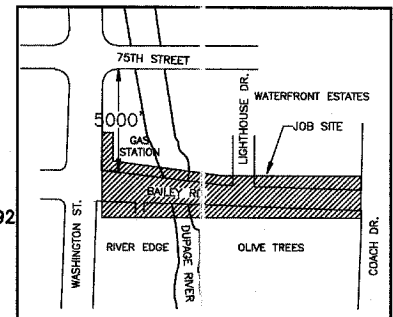
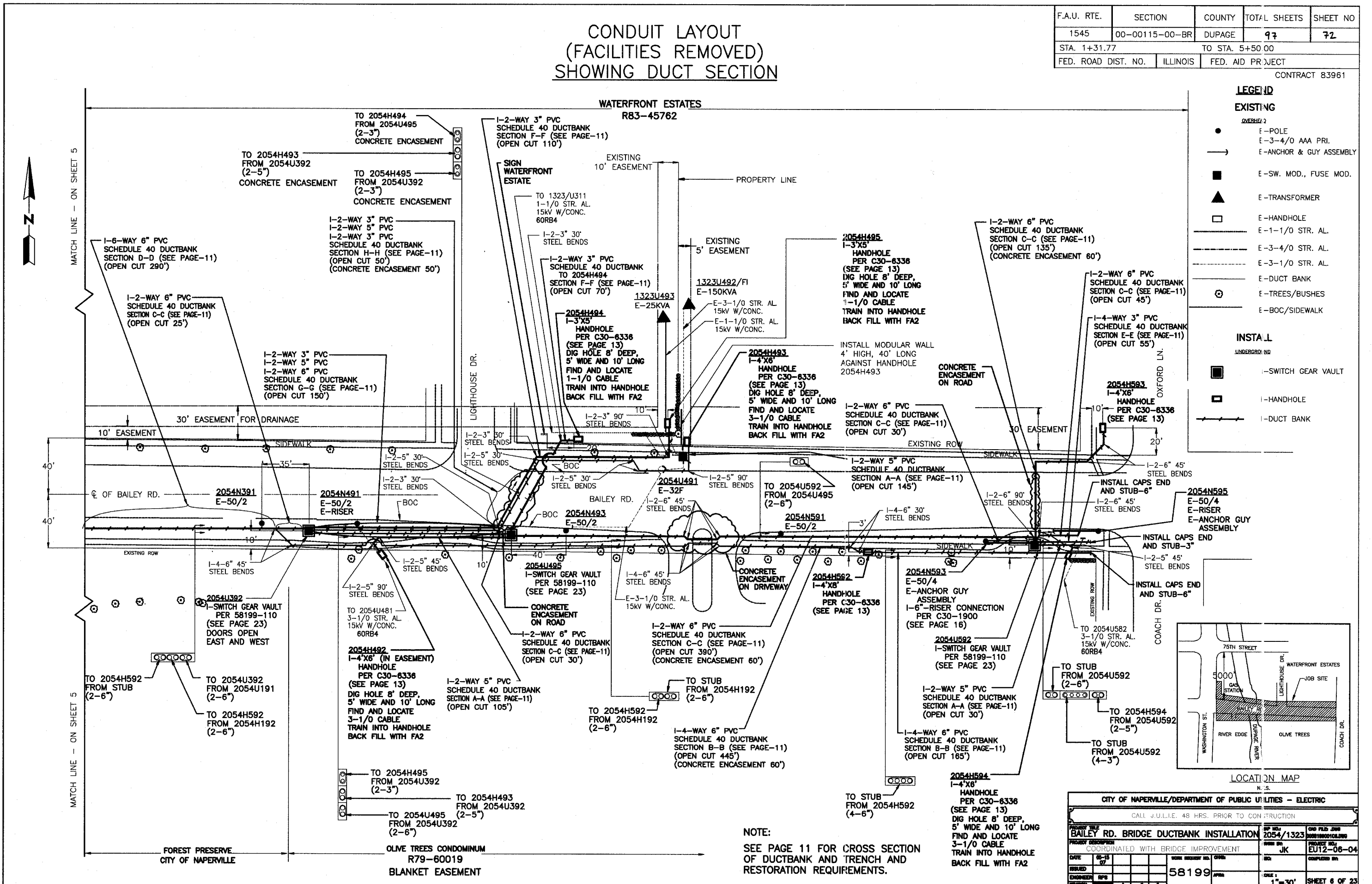
LEGEND

EXISTING

- E-POLE
- E-3-4/0 AAA PRI.
- E-ANCHOR & GUY ASSEMBLY
- E-SW. MOD., FUSE MOD.
- ▲ E-TRANSFORMER
- E-HANDHOLE
- E-1-1/0 STR. AL.
- E-3-4/0 STR. AL.
- E-3-1/0 STR. AL.
- E-DUCT BANK
- ⊙ E-TREES/BUSHES
- E-BOC/SIDEWALK

INSTALL

- UNDERGROUND
- I-SWITCH GEAR VAULT
- I-HANDHOLE
- I-DUCT BANK

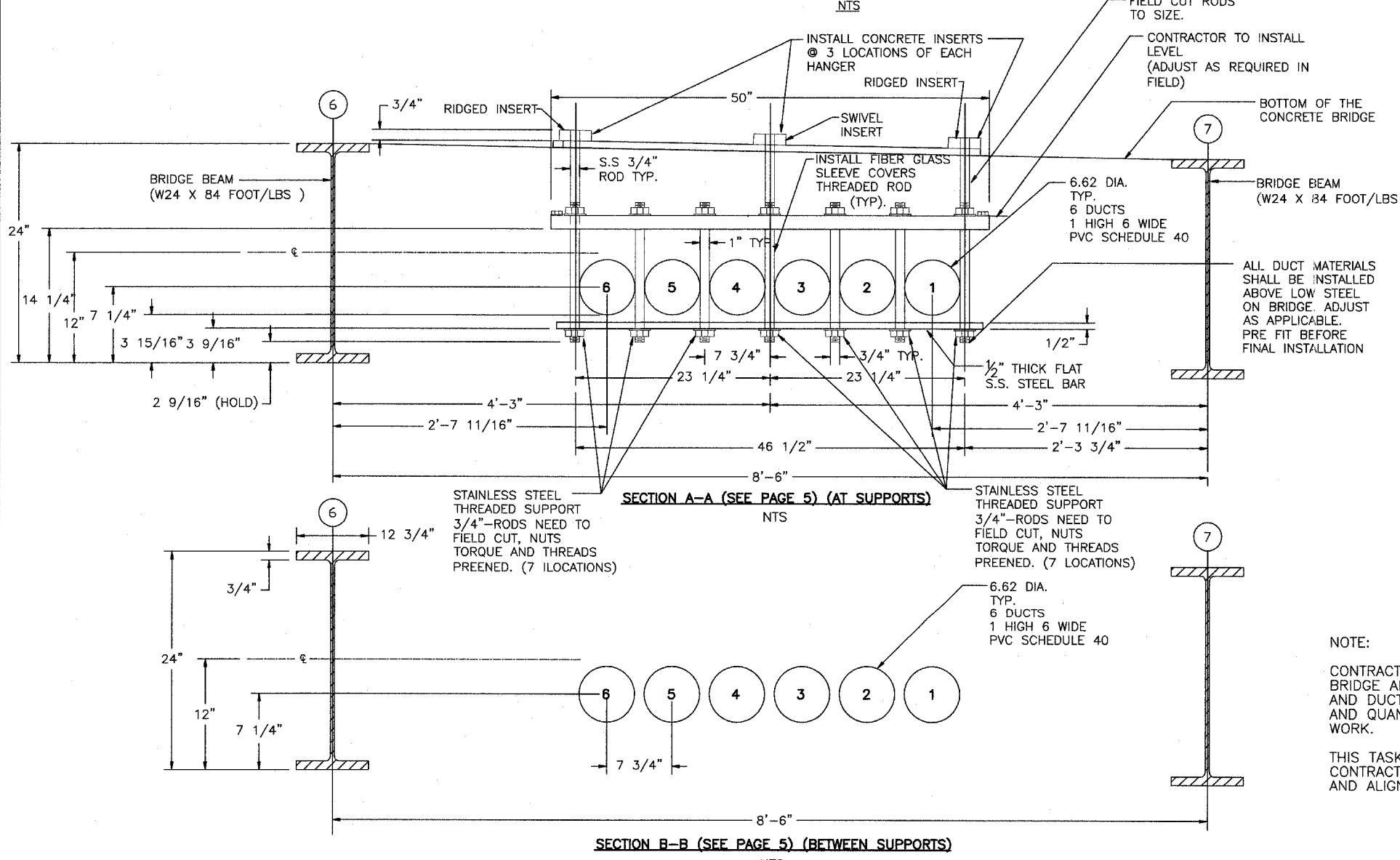
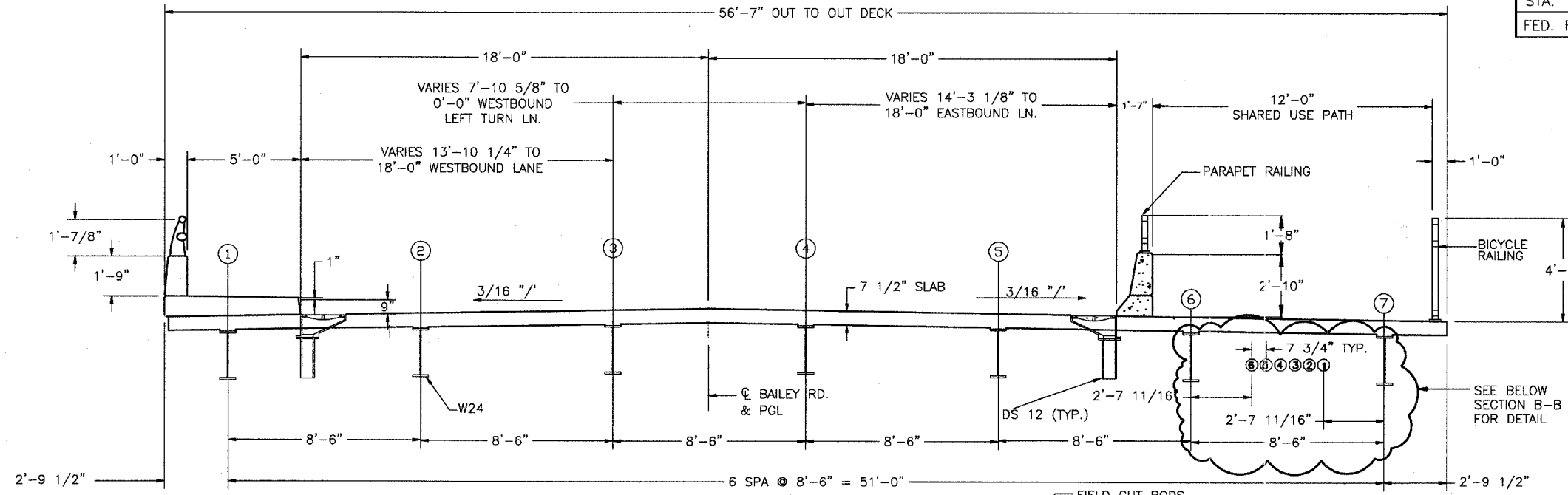


NOTE:
SEE PAGE 11 FOR CROSS SECTION OF DUCTBANK AND TRENCH AND RESTORATION REQUIREMENTS.

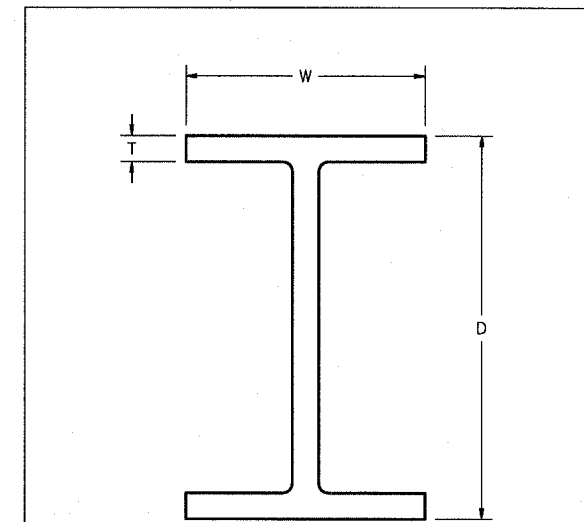
CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT FILE NO.	PROJECT NO.	DATE	PROJECT TITLE
2054/1323	58199	06-15-07	BAILEY RD. BRIDGE DUCTBANK INSTALLATION
DESIGNED BY	CHECKED BY	DATE	PROJECT NO.
JFK	JFK	06-15-07	EU12-06-04
SCALE	SHEET	OF	
1"=30'	72	6 OF 23	

DUCT LOCATION IN BRIDGE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	73
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				



BEAM DIMENSION INFORMATION FOR WIDE FLANGE W SHAPES



SECTION NUMBER	WT. PER FOOT (LBS)	DIMENSIONS		
		D	W	T
W24	84	24	12 3/4	3/4

NOTE:

CONTRACTOR TO LAYOUT SECTION THROUGH BRIDGE AND PREFIT ALL HANGERS, INSERTS AND DUCT MATERIALS FOR PROPER FIT AND QUANTITY PRIOR TO PROCEEDING TO WORK.

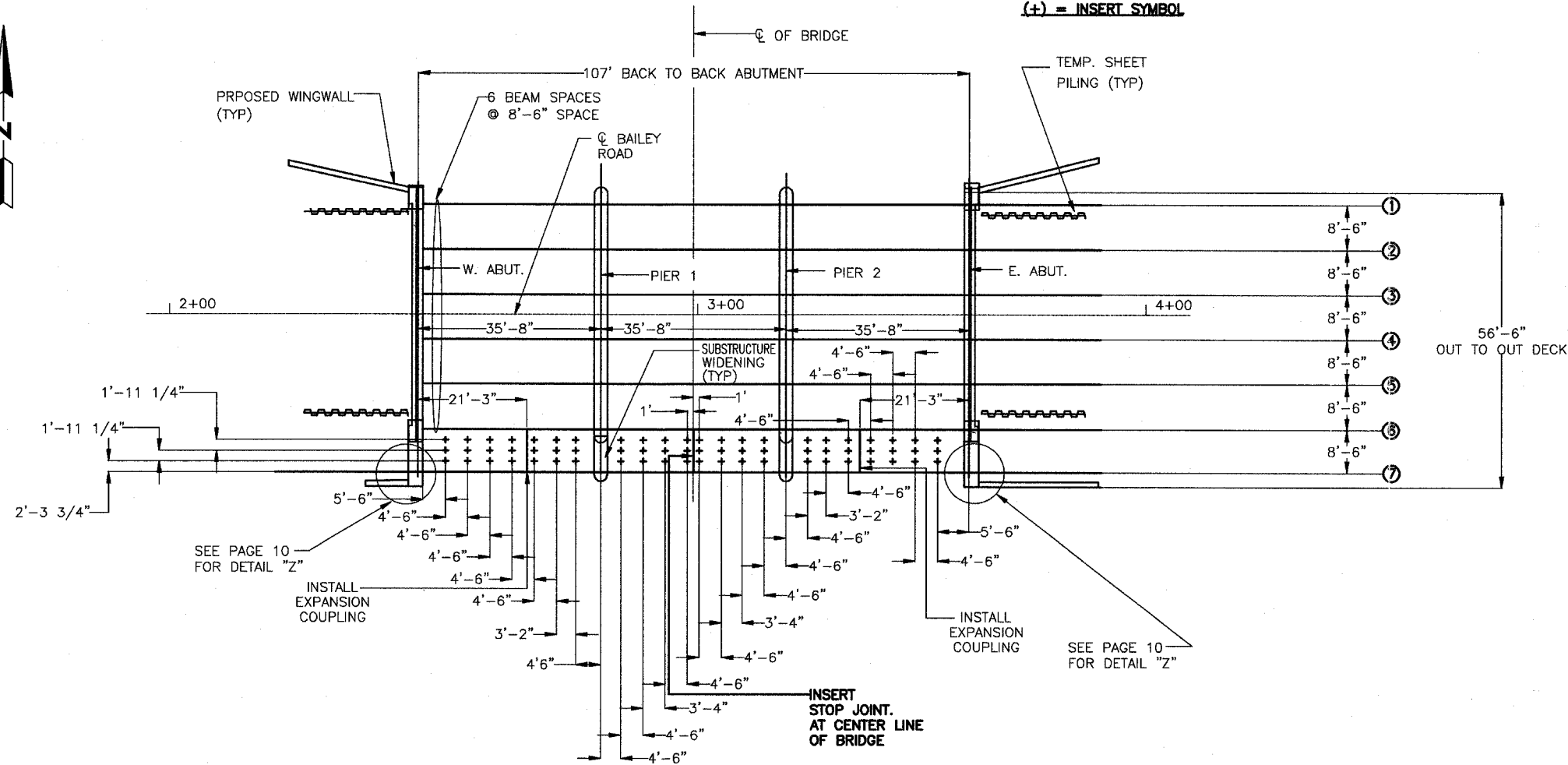
THIS TASK MAY BE REPEATED BY THE CONTRACTOR TO ENSURE PROPER FIT AND ALIGNMENT.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT NO.	DATE	SCALE	SHEET
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	06-15-07	1/2" = 1'-0"	7 OF 23
PROJECT DESCRIPTION	WORK NUMBER	ENGINEER	DATE
COORDINATED WITH BRIDGE IMPROVEMENT	58199	JK	06-15-07
ISSUED	APPROVED	SCALE	DATE
ENGINEER	NTS	1/2" = 1'-0"	06-15-07

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	74
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

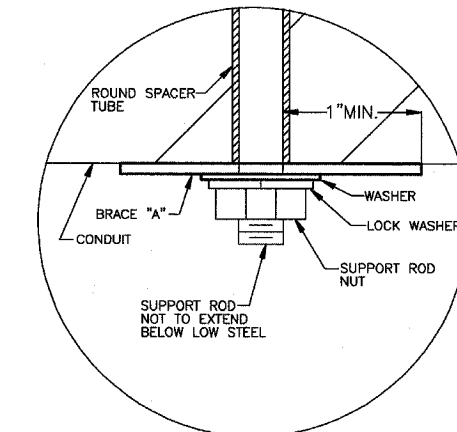
CONTRACT 83961

INSERT LAYOUT (66 PLACES)
 (+) = INSERT SYMBOL

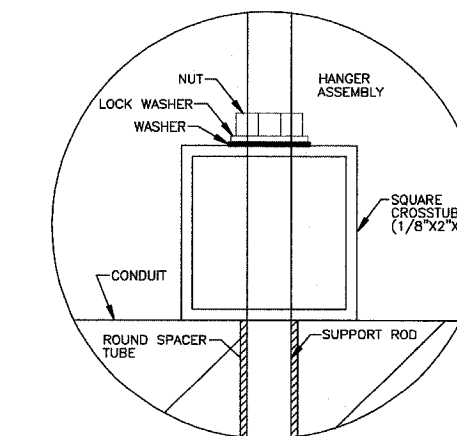


PLAN
 (STAGE I SUBSTRUCTURE CONSTRUCTION)
 NTS

- NOTES:**
- 1) ALL 3/4 CONCRETE INSERTS WITH SWIVEL NUTS SHALL BE INSTALLED ON THE INSIDE SUPPORT ROD HANGER.
 - 2) BRACE ITEM K (PAGE-7) SHALL BE INSTALLED AT 4'-6" SPACING. ON THE OUTSIDE AT BOTH BRIDGE ABUTMENTS.
 - 3) ALL INSERTS SHALL BE CHECKED BY VISUAL OBSERVATION AND HAND CHECKED TO BE SURE THAT THE INSERTS WILL NOT MOVE OR FALL OFF DURING THE CONCRETE POUR PROCESS.
 - 4) CONTRACTOR SHALL ALLOW FOR DELAY DUE TO CONCRETE CURING WHICH CAN TAKE UP TO 6 WEEKS OR MORE.
 - 5) CONTRACTOR TO PROVIDE FALL PROTECTION.

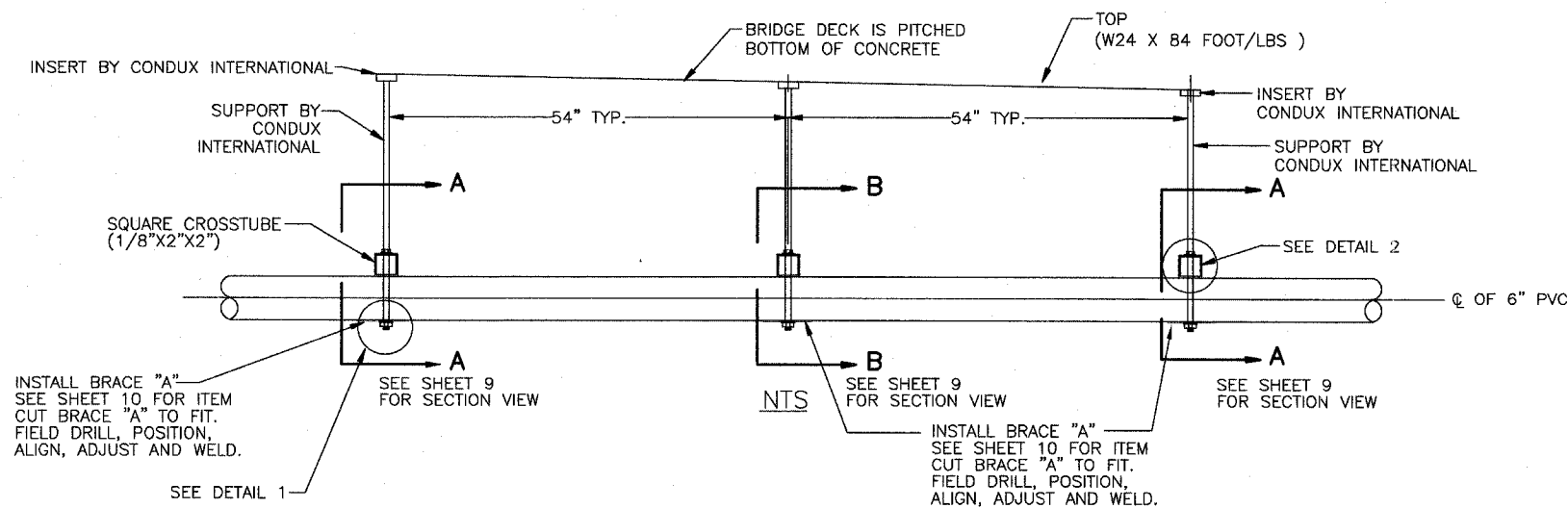


DETAIL 1



DETAIL 2

NOTE: SEE PAGE 9 FOR SECTION A-A AND B-B.

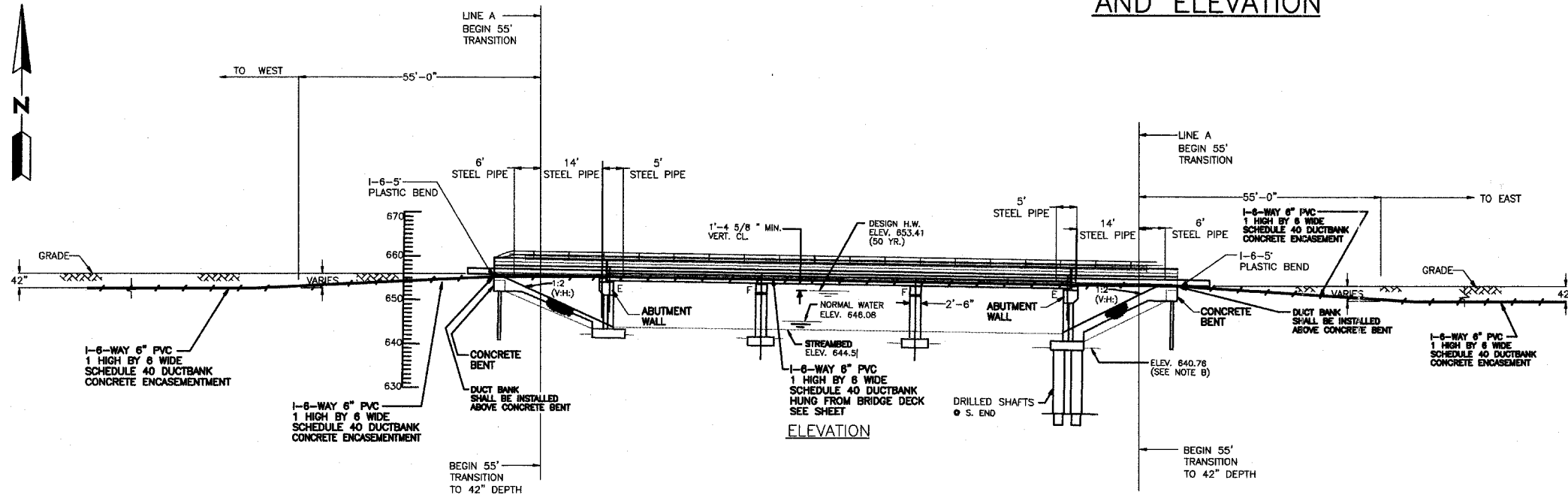


CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC				
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION				
PROJECT NO.	2054/1323	DATE	05-19-07	SCALE
PROJECT NAME	BAILEY RD. BRIDGE DUCTBANK INSTALLATION	ISSUED	07-07	58199
COORDINATED WITH	BRIDGE IMPROVEMENT	ENGINEER	RPS	NTS
DATE	05-19-07	WORK PERIOD NO.	58199	APPROVED
ISSUED	07-07	SCALE	NTS	SHEET 8 OF 23

GENERAL PLAN AND ELEVATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	75
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961



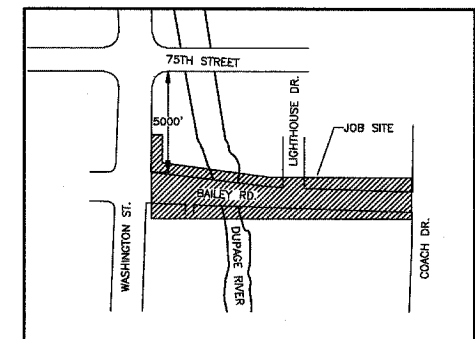
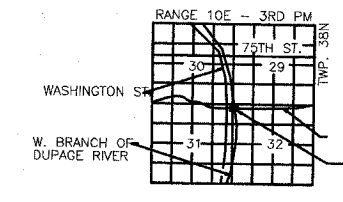
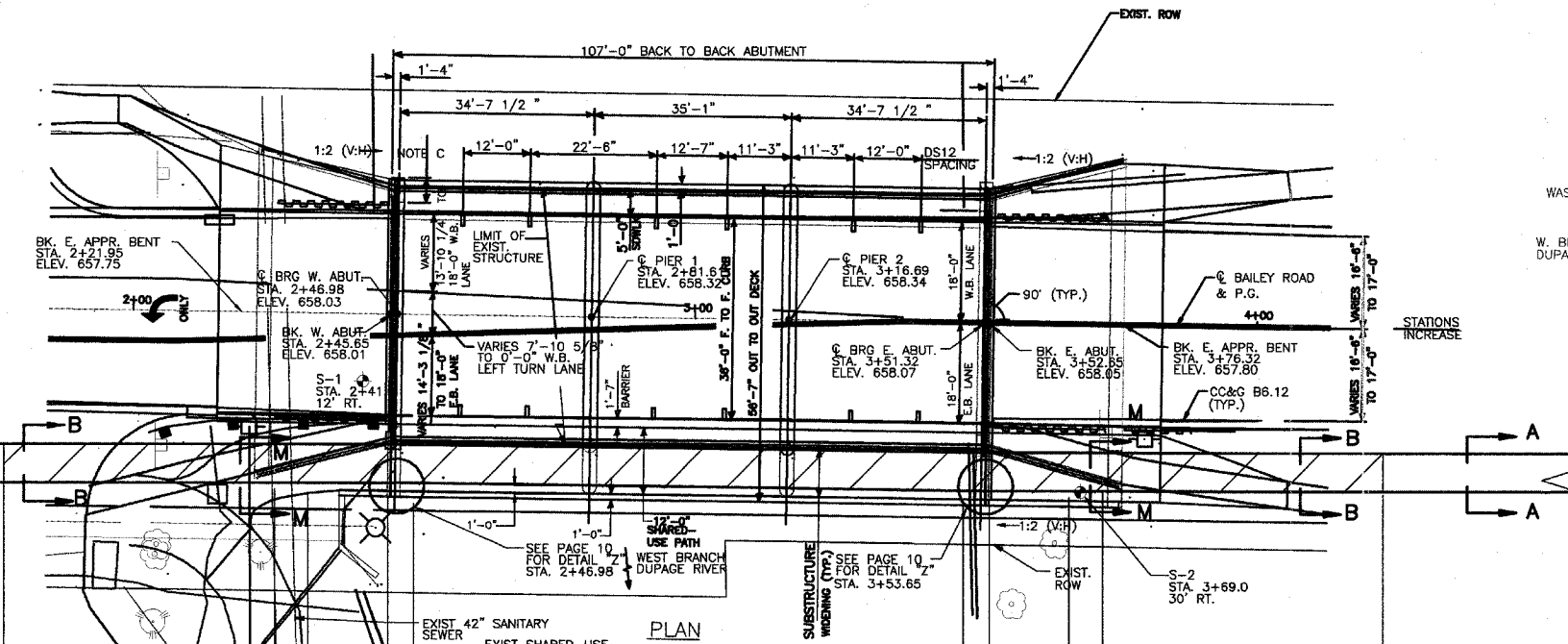
LEGEND

EXISTING UNDERGROUND

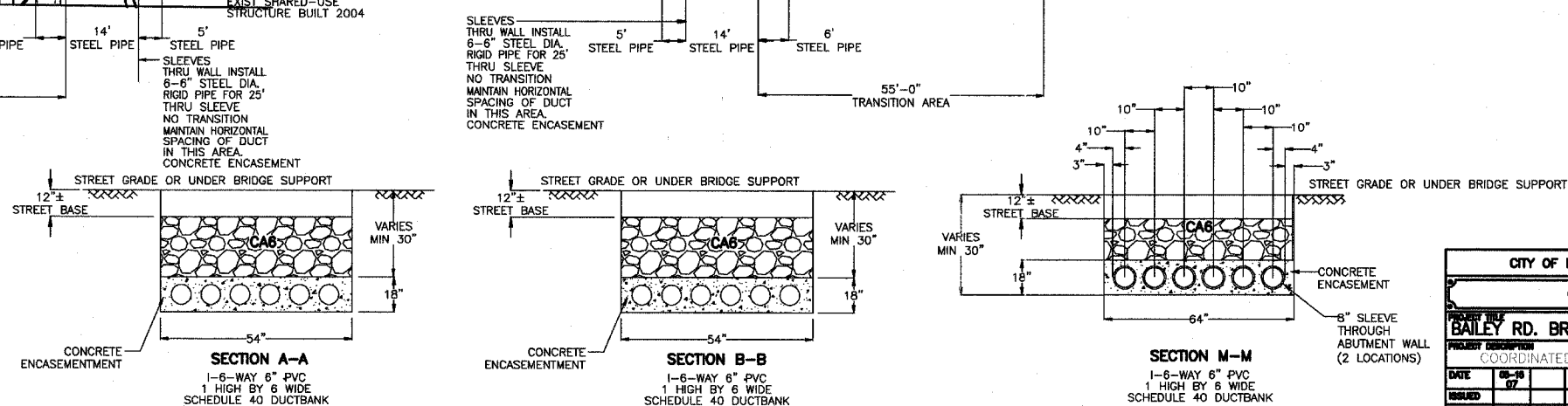
- E-TRAFFIC LIGHT
- E-INLET
- E-STREET LIGHT
- E-TREES

INSTALL UNDERGROUND

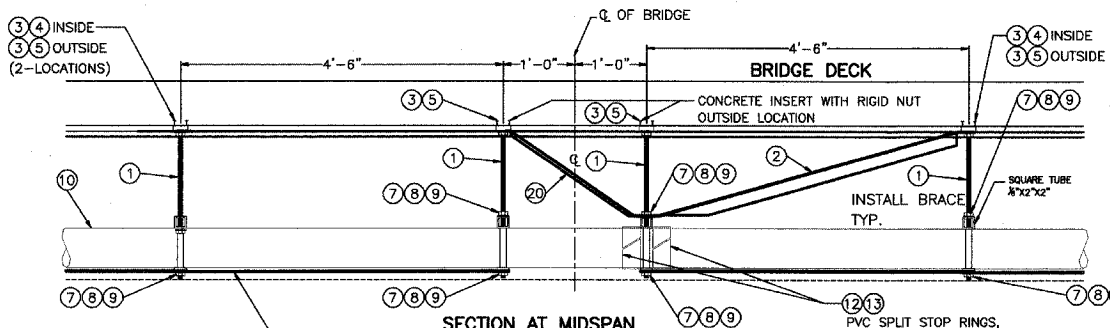
- 1-6-WAY DUCT BANK



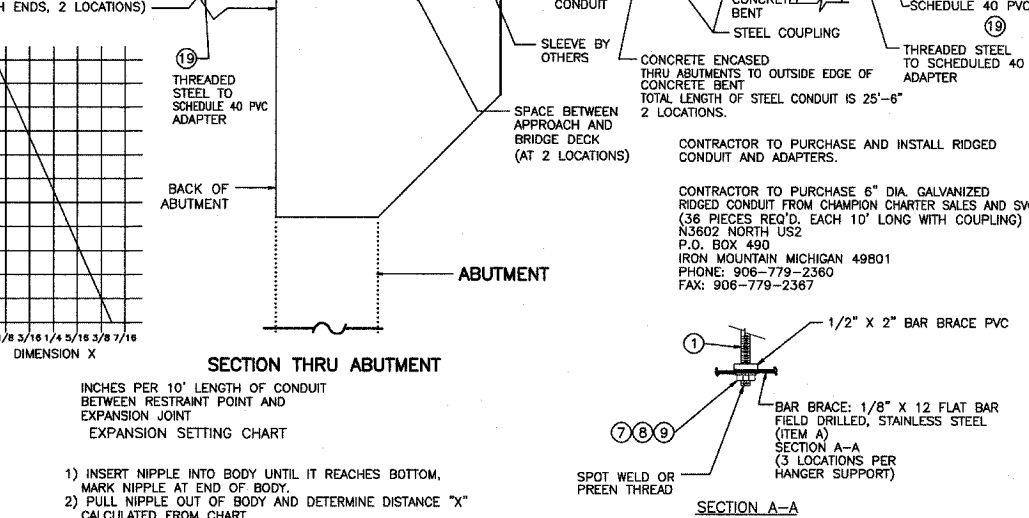
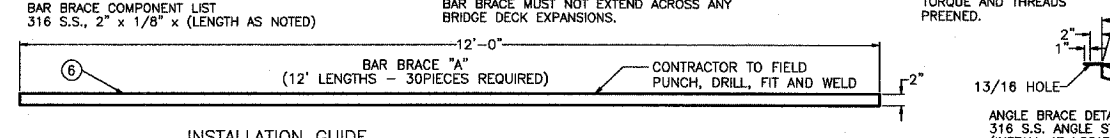
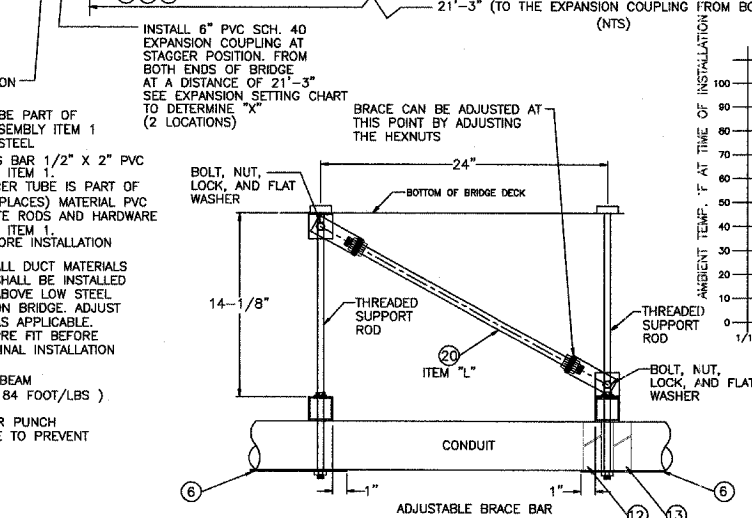
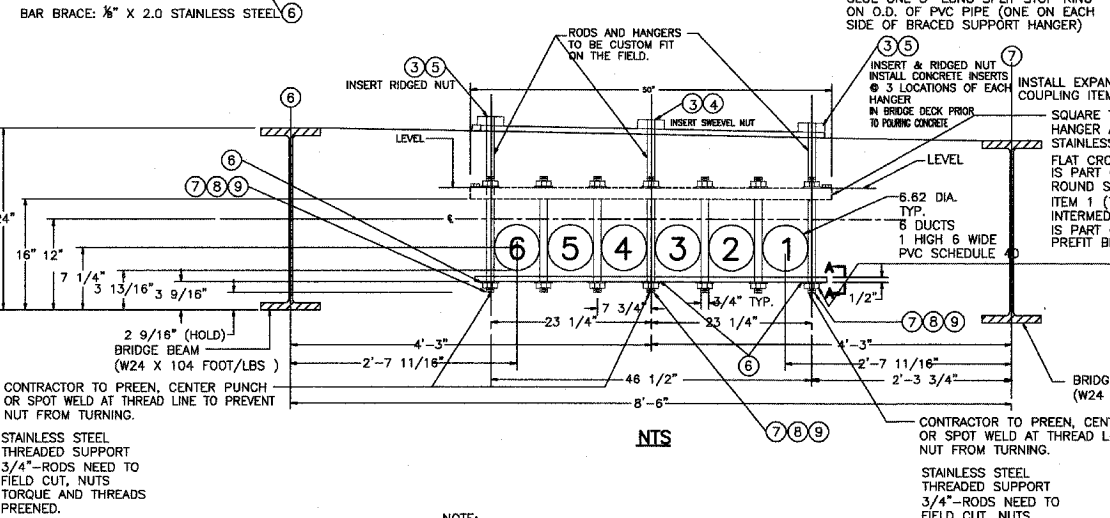
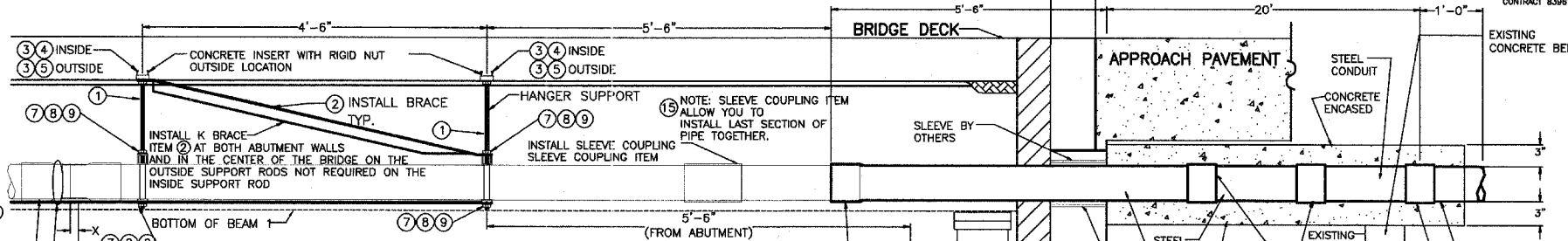
LOCATION MAP
N.T.S.



CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC					
CALL J.U.L.E. 48 HRS. PRIOR TO CONSTRUCTION					
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION			JOB NO. 2054/1323	JOB FILED JOB BOB1980041CD.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT			DRAWN BY JK	PROJECT NO. EU12-06-04	
DATE 06-10-07	WORK NUMBER 58199	APPV. /s/	SCALE NTS	COMPLETED BY	SHEET 9 OF 23



UNDER BRIDGE CONDUIT ATTACHMENT



1. BEGIN AT ONE ABUTMENT BY INSTALLING AN ADAPTER COUPLING ONTO THE CONDUIT THAT IS PROTRUDING FROM THE ABUTMENT. THIS CONDUIT IS THREADED STEEL.
 2. INSTALL AS MANY SUPPORTS AS REQUIRED TO REACH THE FIRST CONDUIT JOINT. THIS REQUIRES THE INSTALLATION OF CONCRETE INSERTS INTO BRIDGE DECK AT TIME OF PLACEMENT OF CONCRETE.
 3. NEXT INSTALL THE FIRST PIECE OF CONDUIT AND MAKE THE CONNECTION AT THE ABUTMENT ACCORDING TO STANDARD PRACTICES FOR TYPE OF CONDUIT BEING USED. CONTINUE THE PROCESS OF INSTALLING SEGMENTS OF SUPPORTS AND CONDUIT, WORKING FROM ONE ABUTMENT TO THE OTHER. NO JOINT SHOULD BE WITHIN 12 INCHES OF A HANGER.
 4. EXPANSION JOINTS ARE INSTALLED AT (2) TWO LOCATIONS IN THE CONDUIT SYSTEM DURING THIS ONGOING ASSEMBLY PROCESS. THE EXPANSION JOINTS MUST BE PLACED AS THE REQUIRED LOCATIONS BY ATTACHING THE EXPANSION SLEEVE TO THE CONDUIT THAT IS IN PLACE. IF THE EXPANSION SLEEVE IS OF THE TYPE THAT WILL ACCEPT THE SPOT END OF THE NEXT CONDUIT PIECE, THEN THE NEXT CONDUIT PIECE SHOULD BE INSERTED TO THE HALFWAY POINT OF THE SLEEVE ALLOWING FOR EQUAL MOVEMENT IN EITHER DIRECTION.* IF THE EXPANSION SLEEVE IS OF THE TYPE THAT REQUIRES AN EXPANSION NIPPLE, THEN THE NIPPLE SHOULD BE ADJUSTED TO THE HALFWAY POINT OF THE SLEEVE AND SUBSEQUENTLY ASSEMBLED TO THE END OF THE NEXT CONDUIT SECTION.
- A. CARE MUST BE TAKEN THAT THE EXPANSION JOINTS REMAIN AT MID-TRAVEL DURING THE REMAINDER OF THE INSTALLATION PROCESS. THE JOINT MAY BE WRAPPED WITH TAPE FOR ASSURANCE.
- B. NO EXPANSION JOINT SHOULD BE CLOSER THAN 12 INCHES TO ANY SUPPORT. THE IDEAL LOCATION IS 1/4 THE DISTANCE TO THE NEXT SUPPORT.
5. SPLIT STOP RINGS ARE INSTALLED ON THE CONDUIT AT ANCHOR POINTS WHICH OCCUR AT THE MIDWAY POINT BETWEEN EXPANSION JOINTS, WHICH IS THE CENTER OF THE BRIDGE. WHEN AN ANCHOR POINT LOCATION IS REACHED, TWO STOP RINGS SHOULD BE SLIPPED OVER THE CONDUIT SECTION SO THAT ONE FALLS ON EACH SIDE OF THE ANCHOR POINT SUPPORT. AFTER THE CONDUIT CONNECTION HAS BEEN MADE, AND THE LAST EXPANSION JOINT HAS BEEN CHECKED TO MAKE SURE THAT IT HAS NOT MOVED, THE STOP RINGS CAN BE EPOXIED TO THE OUTSIDE OF THE CONDUIT AGAINST EACH SIDE OF THE SUPPORT. PLASTIC TIE WRAPS OR TAPE CAN BE USED TO HOLD THE STOP RINGS IN PLACE UNTIL THE EPOXY HAS CURED.
 6. THE LAST SECTION OF CONDUIT SHOULD BE CUT TO LENGTH SO THAT IT FITS END TO END WITH THE CONDUIT THAT PROTRUDES FROM THE ABUTMENT. IF THE TWO CONDUITS ARE THE SAME, THE CONNECTION CAN BE MADE WITH A SLEEVE COUPLING OR SLIP COUPLING. SIMPLY SLIDE THE SLEEVE OVER THE JOINT. IF AN ADAPTER COUPLING IS REQUIRED, THEN THE LAST CONNECTION IS MADE BY RETRACTING THE LAST EXPANSION JOINT, THEREBY ALLOWING ENOUGH SPACE BETWEEN THE CONDUIT ENDS TO INSTALL THE ADAPTER. AFTER THE CONNECTION HAS BEEN MADE, THE EXPANSION JOINT SHOULD BE BACK AT MID-TRAVEL.*

THE CONTRACTOR SHALL FURNISH UNLOAD DELIVER AND INSTALL THE FOLLOWING MATERIALS PER CITY OF NAPERVILLE'S SPECIFICATION FOR W.F. #8199 AT THE BAILEY RD. BRIDGE. MATERIAL LIST FOR BRIDGE WORK. CONDUX INTERNATIONAL, INC. P.O. BOX 247 145 KINGSWOOD RD. MANKATO, MN 56002-0247 ATTN: BRIAN BAYNES (1-800-533-2077)

ITEM	BILL OF MATERIALS (UNDER BRIDGE SUPPORT SYSTEM) PURCHASE BY CONTRACTOR	UNIT	QTY.	PRODUCT NO.
1	HANGER, 1H-6W, FIBERGLASS & STAINLESS STEEL, OPENING FOR 6" PVC DUCT THREADED RODS: 3/4-10 X 24.75 LONG WITH NUTS, BOLTS AND WASHERS	ASSEMBLY	22	TBA
2	HANGER BRACE (ITEM K)	EACH	8	TBA
3	INSERT, CONCRETE AD-BODY M-28 CONCRETE INSERT BODY: M-28	EACH	92	08409926
4	INSERT, CON 3/4 NUT SWIVEL M-28 CONCRETE INSERT SWIVEL NUT: 3/4-10 UNC	EACH	32	08409961
5	INSERT, CON 3/4 NUT RIDGE M-28 CONCRETE INSERT RIDGE NUT: 3/4-10 UNC	EACH	60	08409938
6	FLAT BAR: 1/8 X 2.0 X 12 FT. STAINLESS STEEL (BAR BRACE A) (30 PIECES)	FEET	480	00168100
7	HEX NUT: 3/4-10 UNC STAINLESS STEEL	EACH	15	02125100
8	LOCK WASHER: 3/4" STAINLESS STEEL	EACH	15	02125300
9	FLAT WASHER: 3/4" STAINLESS STEEL	EACH	15	02125200
10	CONDUIT, SCH 40/6.00" UL CONDUIT: 6" PVC SCH 40 UL MEETING NEMA TC-2, UL651 (10' LENGTH)	FEET	1300'	05101160
11	CPLG, EXP PVC-6.82 SC40-6IN EXPANSION JOINT: 6" SCH 40 WITH O-RING	EACH	12	06101360
12	CPLG, 6.82 ID PVC-STOP COUPLING STOP: 6" SCH 40 PVC	EACH	12	05210060
13	RING, STOP 6.50 ID-PVC-SCH 40	EACH	12	08501960
14	SOLVENT CEMENT 32 OZ-FAST SET AS REQUIRED	EACH	12	08519103
15	CPLG, 6.82 ID PVC- COUPLING SLEEVE: 6" SCH 40 PVC	EACH	12	TBA
16	ADAPTER: 6" PVC TO 6" THREADED FEMALE	EACH	36	TBA
17	COUPLING 5 DEGREE STOP PVC SCH 40	EACH	36	TBA
18	6" RIGID GALVANIZED CONDUIT IN TEN (10) LENGTH (BY CONTRACTOR)	EACH	36	TBA
19	6" PVC ADAPTER THREADED ON ONE END-SOCKET ON OTHER	EACH	36	TBA
20	ADJUSTABLE BRACE BAR ITEM "L"	EACH	4	TBA

CONTRACTOR TO COUNT ALL ITEMS AND PREFIT PRIOR TO INSTALLATION. ANY ITEMS MISSING SHALL BE ORDERED BY THE CONTRACTOR WITH SUFFICIENT LEAD TIME TO AVOID DELAYS.

CONTRACTOR TO BEND SCH. 40 PVC TO FIT SPACING DIFFERENTIAL BETWEEN HANGARS AND STEEL CONDUIT ENDS. USE HOT BOX TO FORM PVC BENDS. DO NOT KINK, DISTORT OR TWIST CONDUIT. BENDS MUST BE AT LEAST 6" AWAY FROM STEEL CONDUIT AND HANGER. MAXIMUM BEND DEFLECTION = 12". (3 LOCATIONS)

CONTRACTOR TO LAY OUT THE PATTERN AND DETERMINE OFFSET IN FIELD. FIELD BEND MATERIALS TO FIT.

*THIS PRINCIPLE HOLDS TRUE FOR A TEMPERATURE RANGE OF APPROX. 50°-70°F ACCOUNT FOR YOUR JOBSITE AMBIENT TEMPERATURE WHEN INSTALLING EXPANSION JOINTS.

7. CHECK ALL CONNECTIONS, PREEN THREADS, TACK WELD ALL NUTS TO RODS, CHECK LOW STEEL FOR CLEARANCE.

8. CONTRACTOR SHALL PROVIDE FALL PROTECTION.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT NO. **2054** OLD FILE NO. **0638000100**

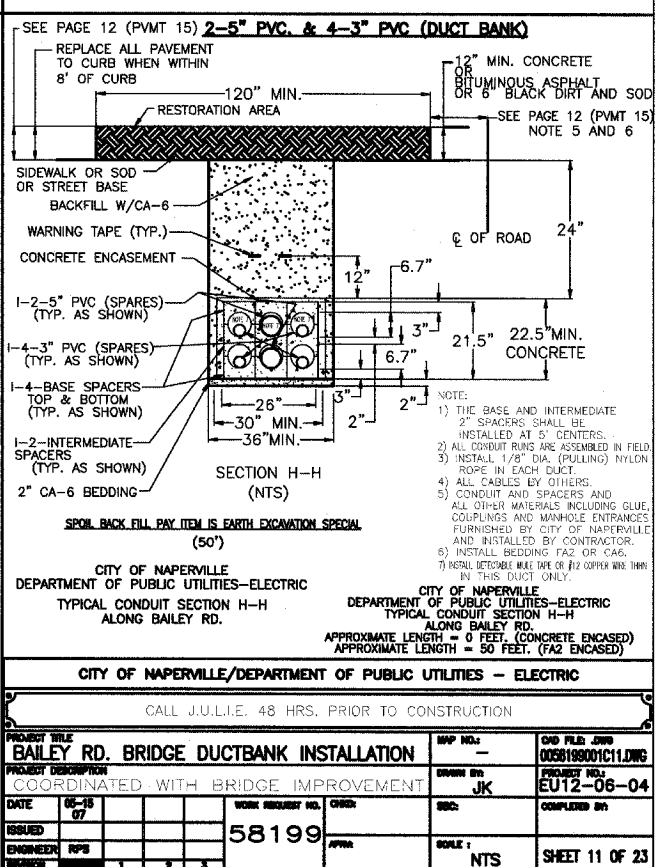
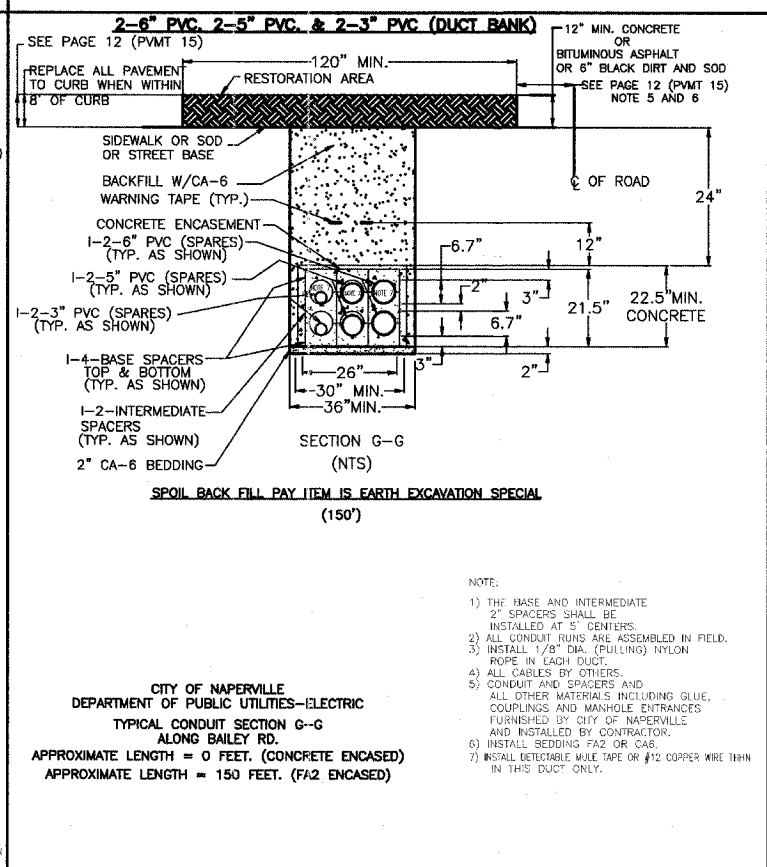
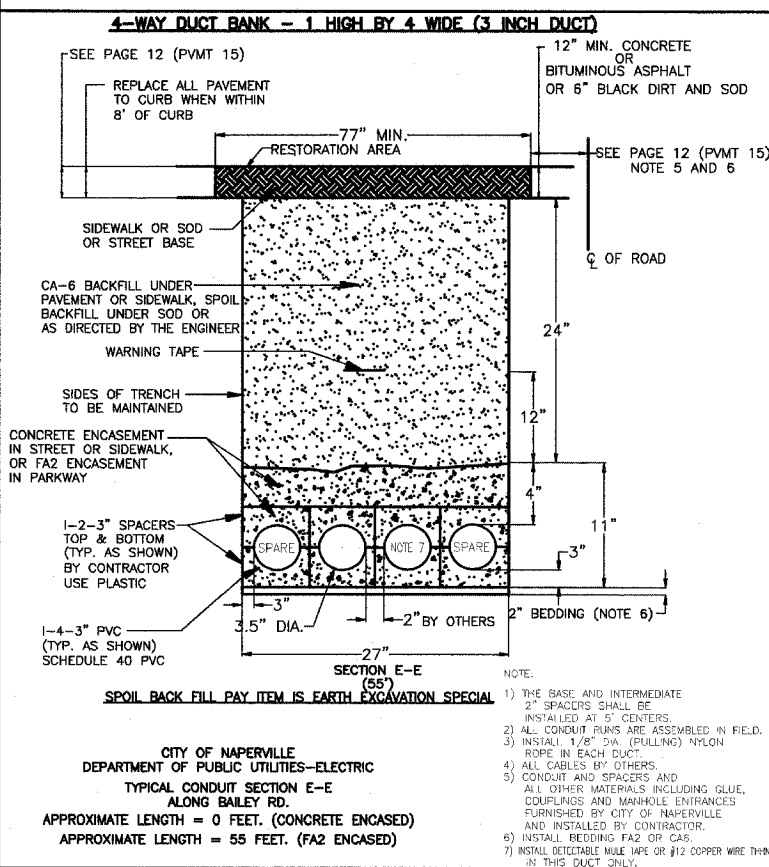
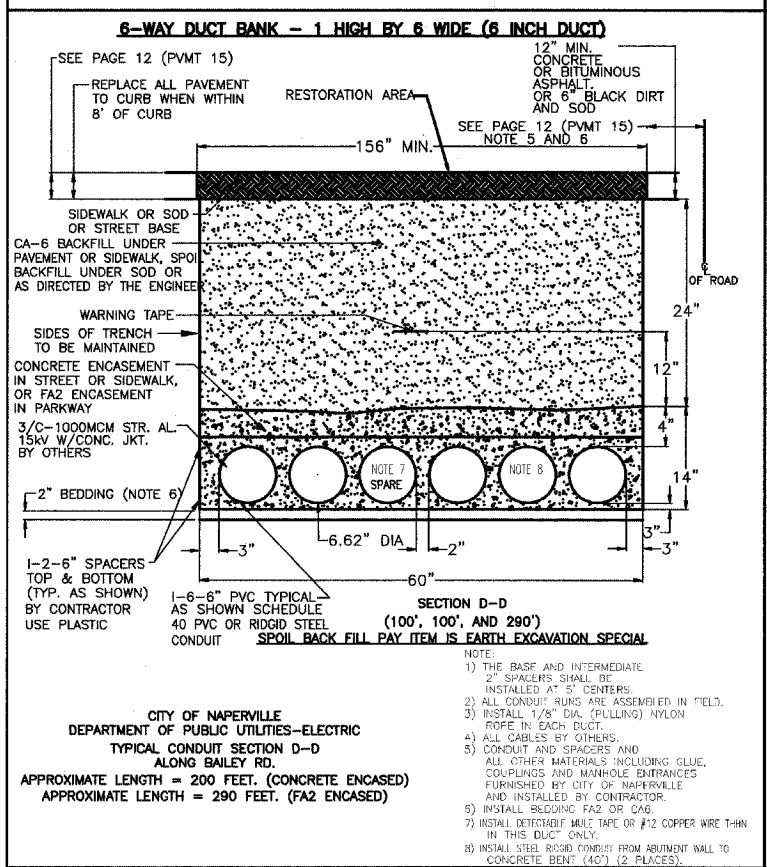
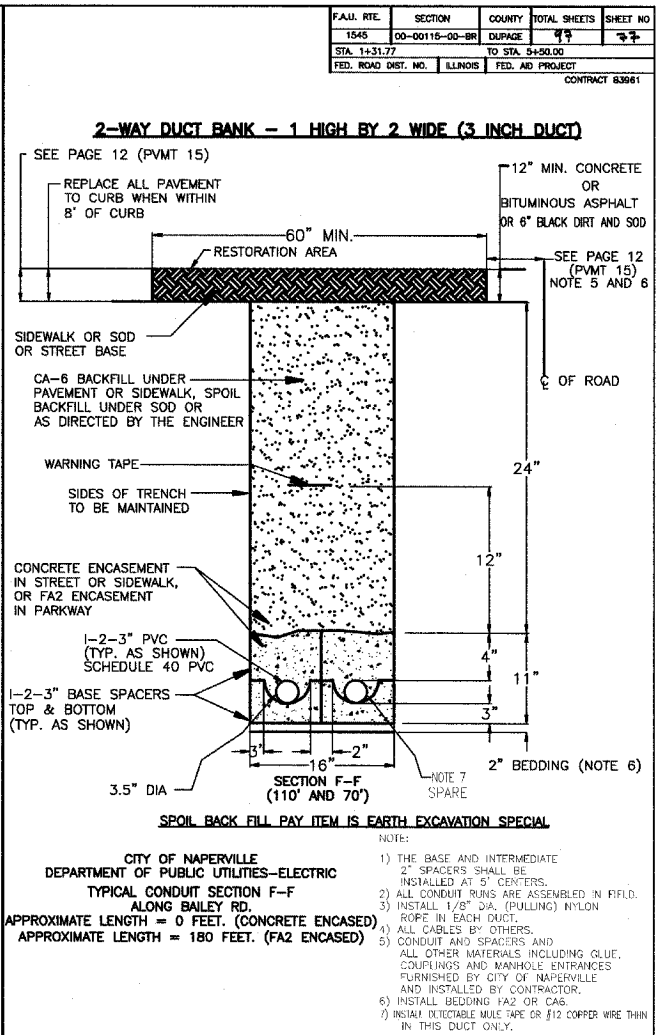
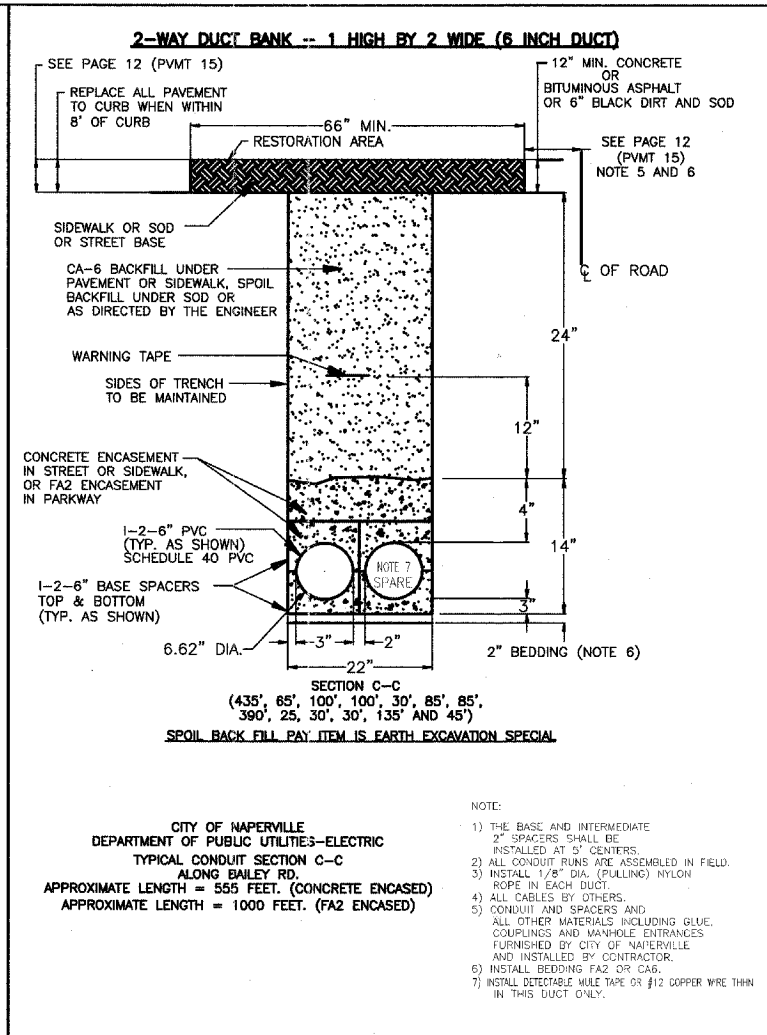
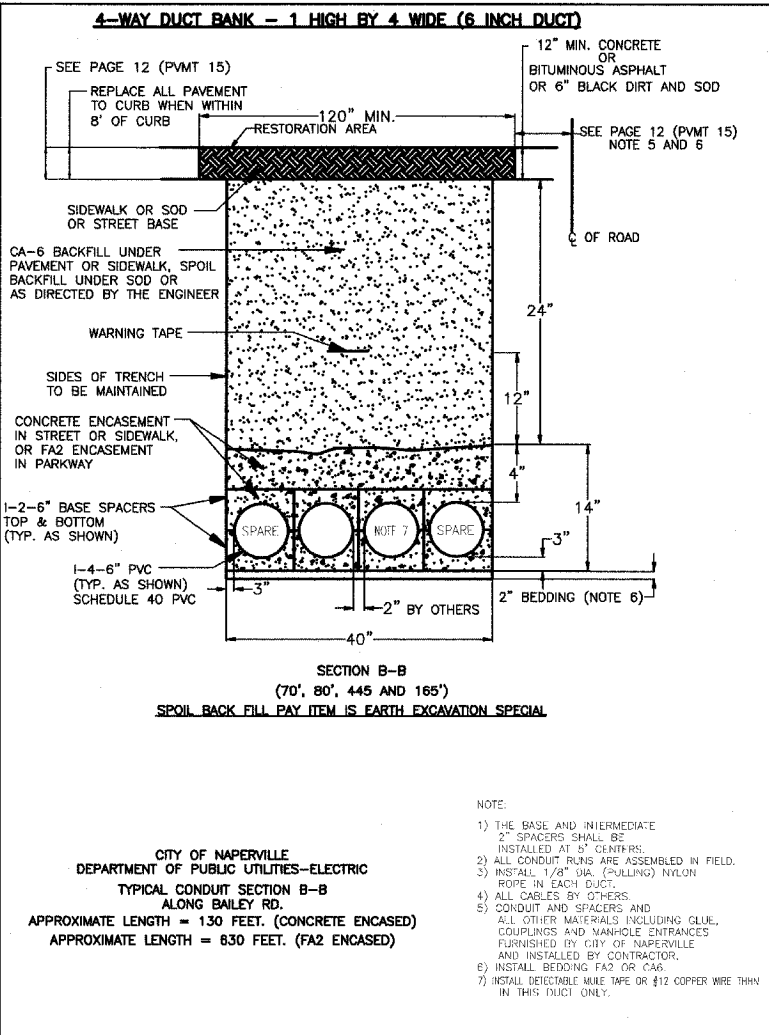
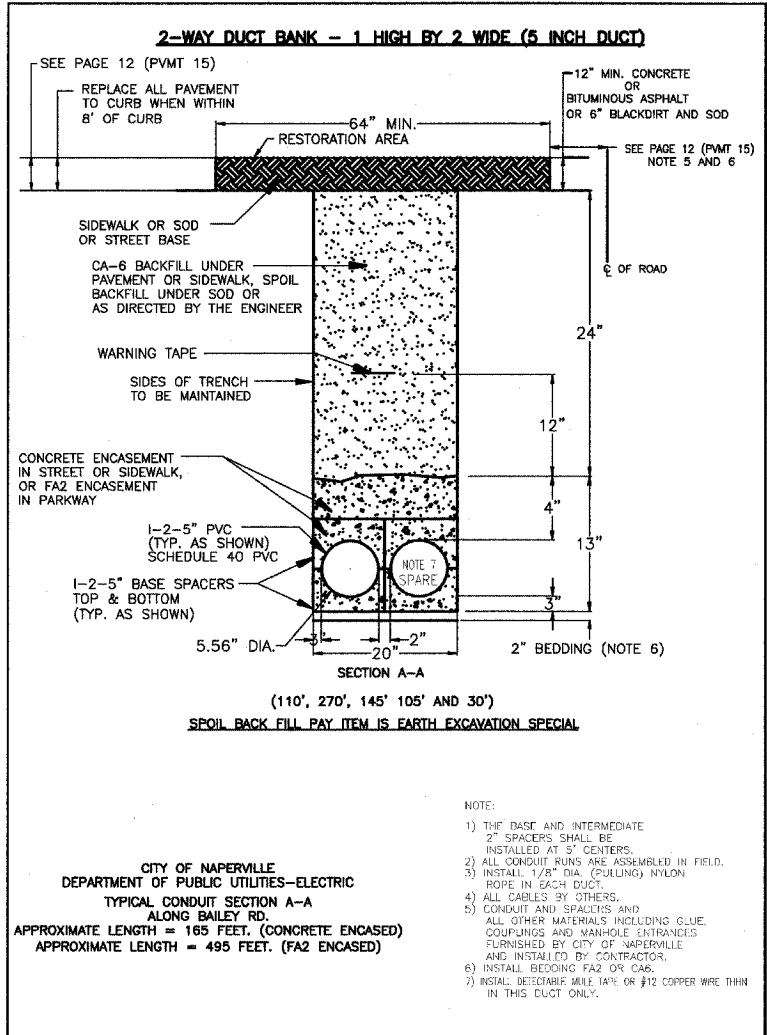
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COORDINATED WITH BRIDGE IMPROVEMENT

DATE: **06-28** WORK RELEASE NO. **58199** APPROVED: **JK** COMPLETED BY: **NTS**

DESIGNED BY: **JK** DATE: **07** DATE: **07**

SCALE: **NTS** SHEET **10 OF 23**



F.A.U. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-01	DUPAGE	99	99
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT TITLE: BAILEY RD. BRIDGE DUCTBANK INSTALLATION

COORDINATED WITH BRIDGE IMPROVEMENT

DATE: 05-16-07

ISSUED: RPS

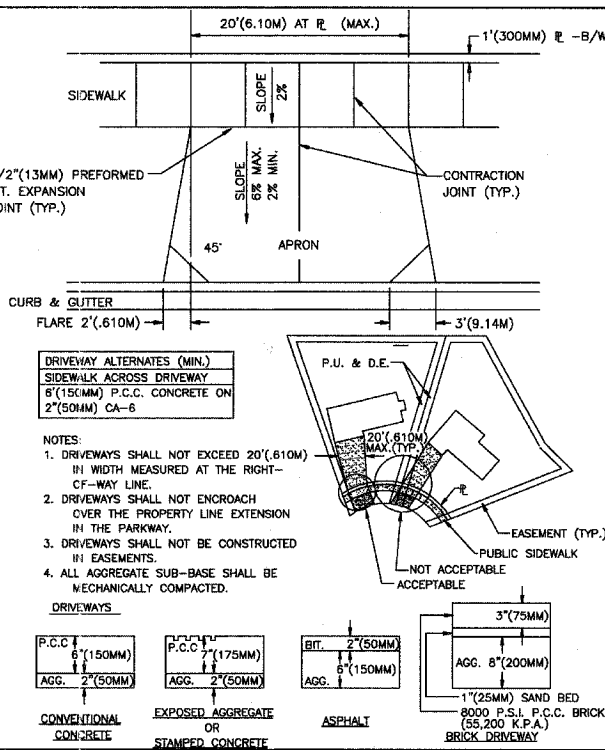
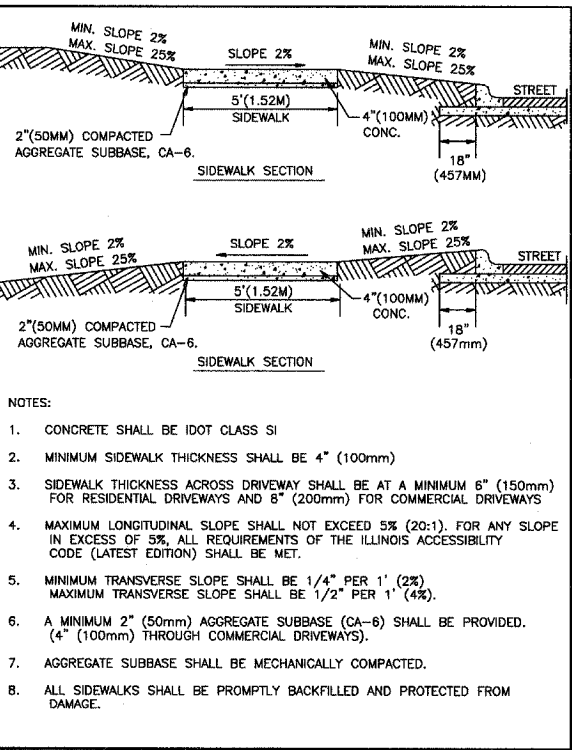
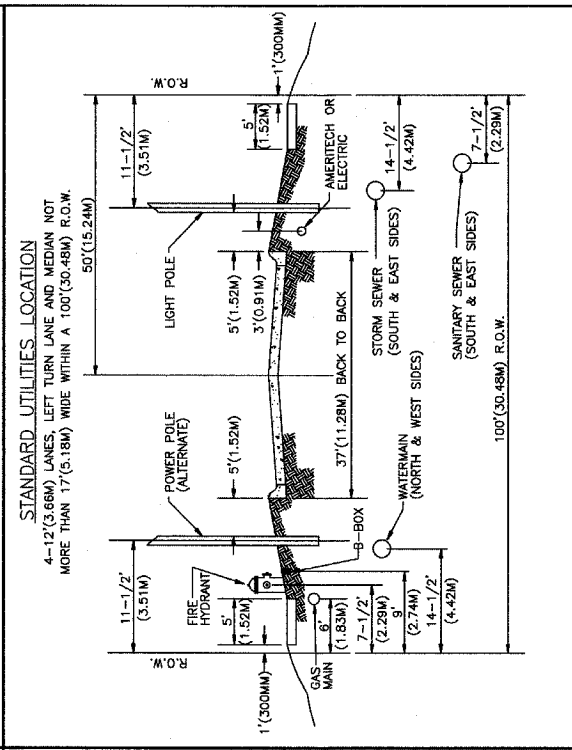
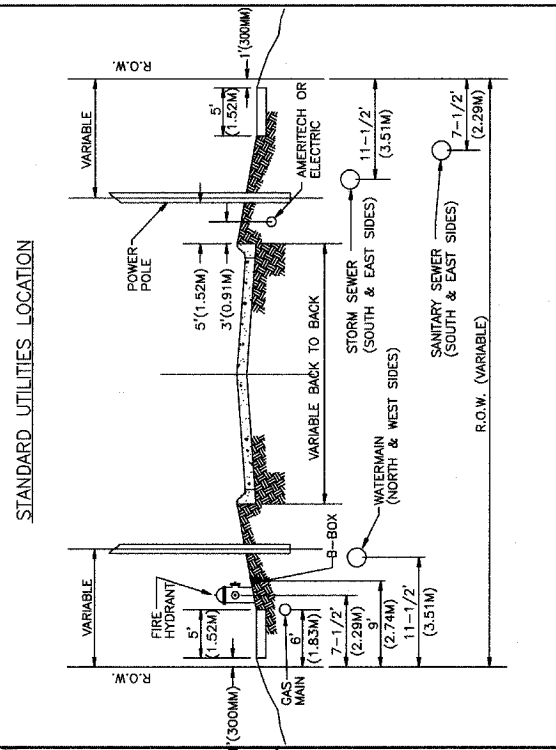
ENGINEER: NTS

WORK REQUEST NO.: 58199

SCALE: NTS

SHEET 11 OF 23

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	78
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83961	

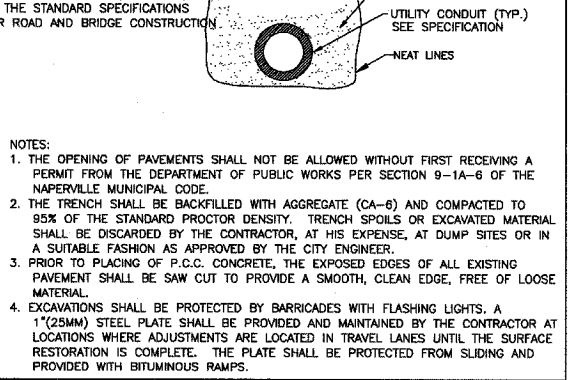
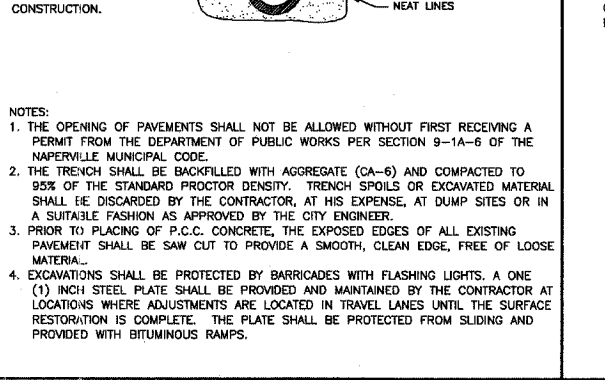
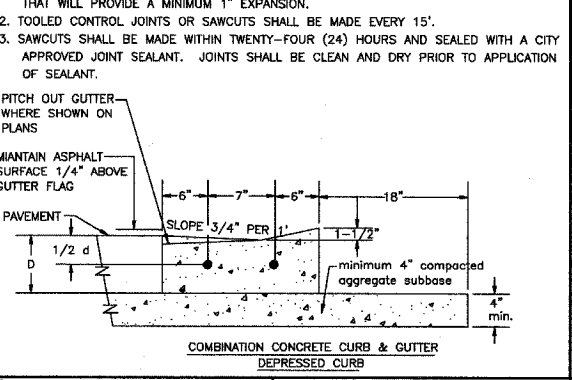
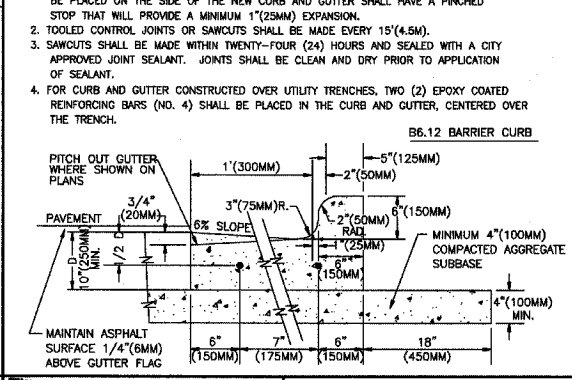
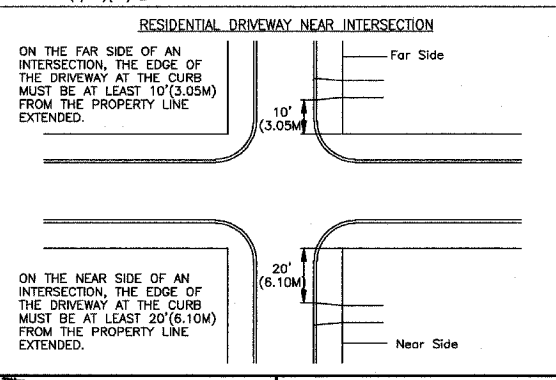
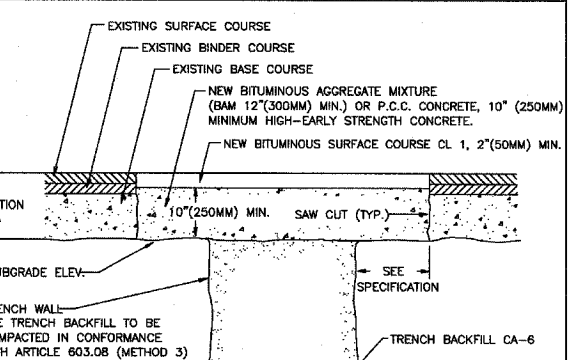
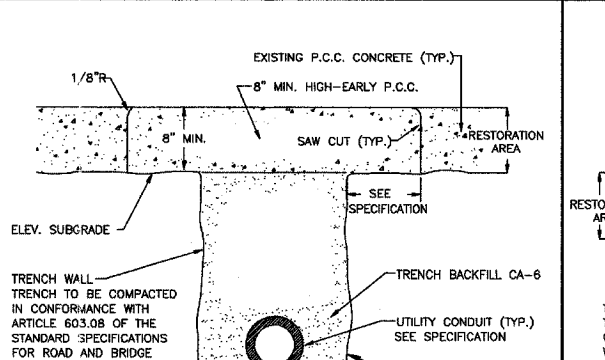
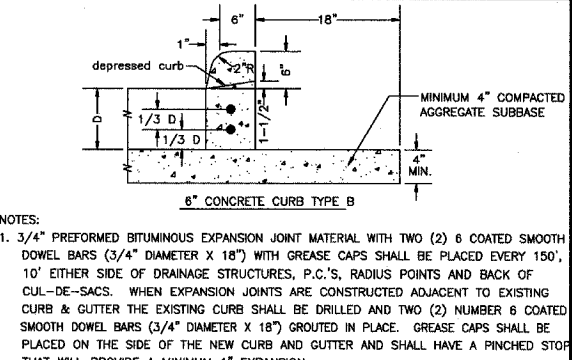
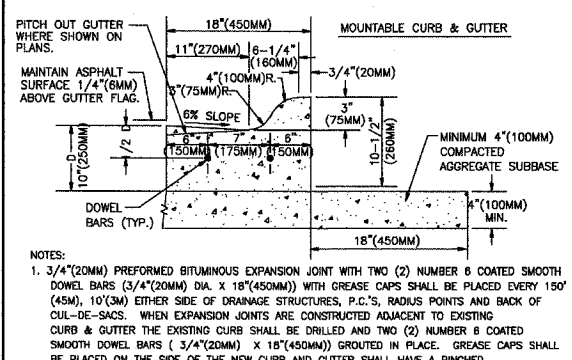
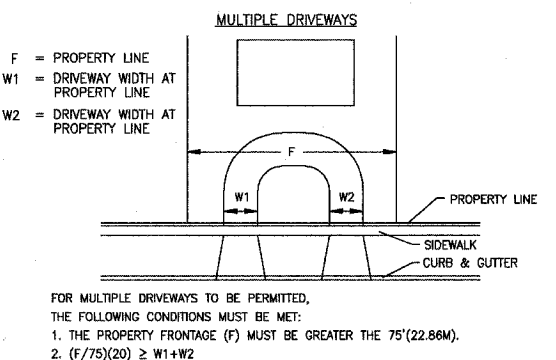


STANDARD UTILITIES LOCATION
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 8/21/98 REV: SHEET 1 OF 2 Detail: MISC 1

STANDARD UTILITIES LOCATION
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 8/29/98 REV: SHEET 2 OF 2 Detail: MISC 1

SIDEWALK
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/8/98 REV: PVM 3

TYPICAL RESIDENTIAL DRIVEWAY DETAIL
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/2/98 REV: SHEET 1 OF 2 Detail: PVM 9



TYPICAL RESIDENTIAL DRIVEWAY DETAIL
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/2/98 REV: SHEET 2 OF 2 Detail: PVM 9

CURB & GUTTER
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/2/98 REV: SHEET 2 OF 2 Detail: PVM 11

Curb & Gutter
City of Naperville Standard Detail
Scale: N.T.S. Date: 11/13/94 Detail: Pvm 12

Utility Trench Paving Section Thru Existing Rigid Pavements
City of Naperville Standard Detail
Scale: N.T.S. Date: 1/13/94 Detail: PVM 14

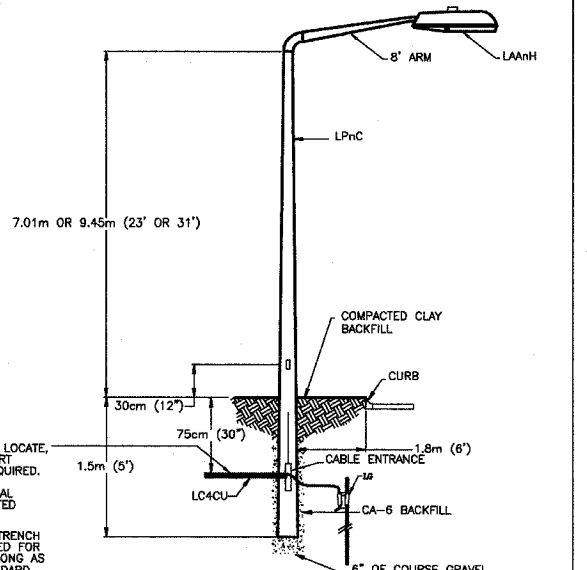
UTILITY TRENCH PAVING SECTION THROUGH EXISTING FLEXIBLE PAVEMENTS
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/8/98 REV: SHEET 1 OF 2 Detail: PVM 15

NOTES:
1) SEE GENERAL SPECIFICATIONS FOR CHANGES TO THE ABOVE SPECIFICATIONS.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE	IMP NO.	ORD FILE NO.	
BAILEY RD. BRIDGE DUCTBANK INSTALLATION		00081980010121090	
PROJECT DESCRIPTION	DRWN BY	PROJECT NO.	
COORDINATED WITH BRIDGE IMPROVEMENT	JK	EU12-06-04	
DATE	WORK ORDER NO.	AMOUNT	COMPLETED BY
06-09-07	58199		
ISSUED	APPR	SCALE	
		NTS	
ENGINEER			
RPS			
REVISION			
1			
2			
3			

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	79
STA. 1+31.77			TO STA. 5+50.00	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT 83961



CONTRACTOR IS ADVISED TO LOCATE, PROTECT, MOVE AND SUPPORT STREET LIGHT CABLE AS REQUIRED.
CONTRACTOR TO NOTE TYPICAL LIGHT POLE TO BE SUPPORTED AS REQUIRED.
CONTRACTOR TO HAND DIG TRENCH TO THE NEAR LINES REQUIRED FOR A MINIMUM OF 10' OR AS LONG AS REQUIRED TO MAINTAIN STANDARD.

CODE	QTY	DESCRIPTION
LC4CU	*	Cable in Conduit, 4- #6 Cu.
LG	1	Pole & Luminaire Ground
LAAnH	1	Luminaire, HPS Cobra
LPnC	1	Pole Concrete Slid. w/8' Arm

n = pole size, * = as required.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
STREET LIGHTING TYPICAL 23' AND 31'
DATE 9-18-04
Page 1 of 3
C40-3030

Item Code	Description 1	Description 2	5	6	8	8A
284 104 00010	HANDHOLE	36" X 60" X 36"				
284 104 00020	HANDHOLE	48" X 72" X 36"				
284 104 00030	HANDHOLE	48" X 96" X 36"				
284 104 00040	HANDHOLE, ADJUSTABLE	48" X 96" X 36"				

Assembly	Item Code	Description 1	Description 2	Qty
D3B30P	285 101 00025	ELBOW, PVC 30 DEG 3"	STANDARD RADIUS SCH 40	1
D3B45P	285 101 00030	ELBOW, 36" R PVC 45 DEG 3"	SCH 40	1
D3B90P	285 101 00040	ELBOW, 36" R PVC 90 DEG 3"	SCH 40	1
D5B30P	285 101 00060	ELBOW, 36" R PVC 30 DEG 5"	SCH 40	1
D5B45P	285 101 00090	ELBOW, 36" R PVC 45 DEG 5"	SCH 40	1
D5B90P	285 101 00100	ELBOW, 36" R PVC 90 DEG 5"	SCH 40	1
D6B30P	285 101 00230	ELBOW, 48" R PVC 30 DEG 6"	SCH 40	1
D6B45P	285 101 00230	ELBOW, 48" R PVC 45 DEG 6"	SCH 40	1
D6B90P	285 101 00240	ELBOW, 48" R PVC 90 DEG 6"	SCH 40	1

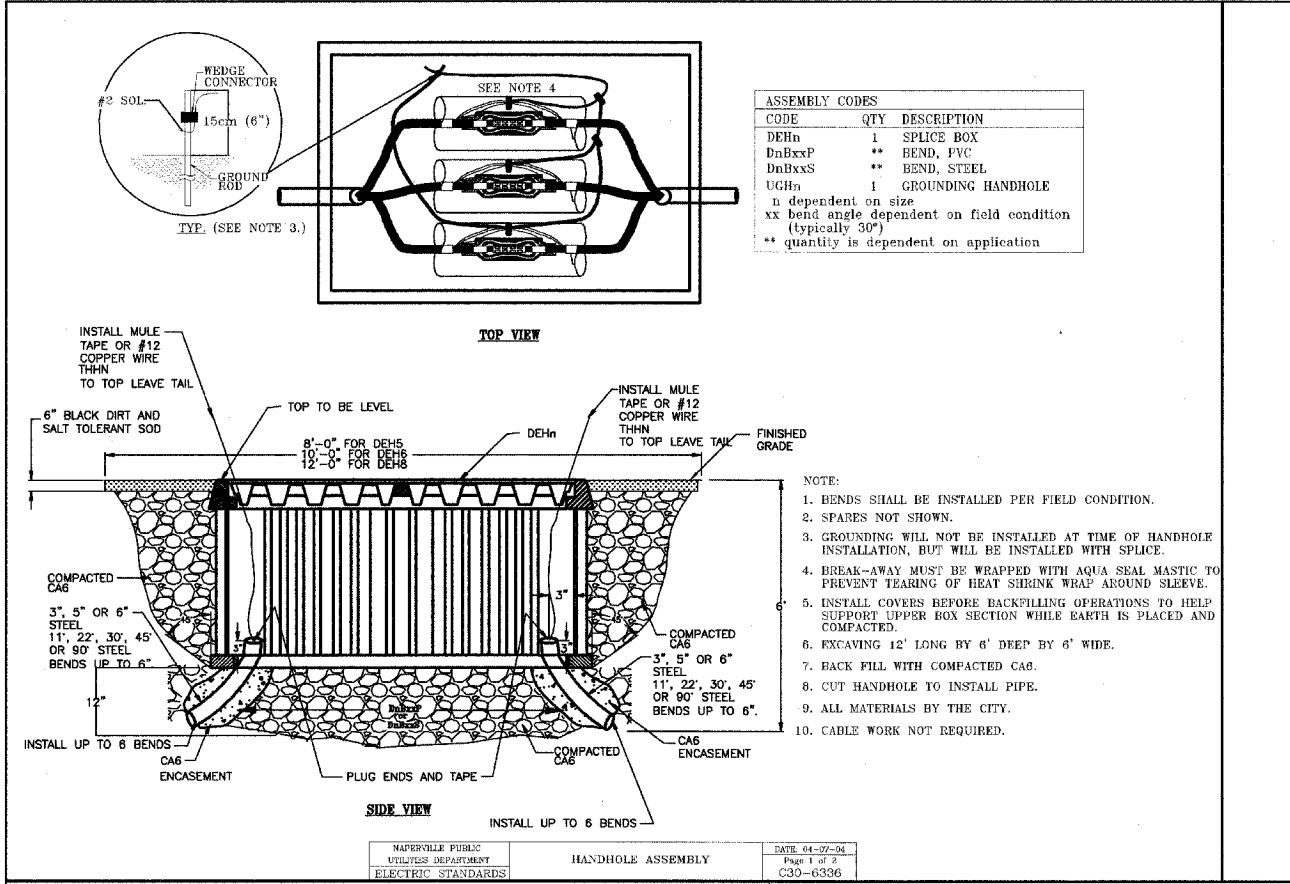
Item Code	Description 1	Description 2	Qty
285 101 00140	ELBOW, 30" R STL 90 DEG 3"	GALVANIZED	1
285 102 00040	COUPLING, PVC 3"	LONG LINE SCH 40	1

Item Code	Description 1	Description 2	D5B30S	D5B45S	D5B90S
285 101 00160	ELBOW, 36" R STL 30 DEG 5"	GALVANIZED			
285 101 00170	ELBOW, 36" R STL 45 DEG 5"	GALVANIZED			
285 101 00180	ELBOW, 36" R STL 90 DEG 5"	GALVANIZED			
285 102 00110	COUPLING, PVC 5"	LONG LINE SCH 40	1	1	1

Item Code	Description 1	Description 2	D6B11S	D6B22S	D6B30S	D6B45S	D6B90S
285 101 00180	ELBOW, 48" R STL 30 DEG 6"	GALVANIZED					
285 101 00190	ELBOW, 48" R STL 45 DEG 6"	GALVANIZED					
285 101 00200	ELBOW, 48" R STL 90 DEG 6"	GALVANIZED					
285 101 00210	ELBOW, 48" R STL 90 DEG 6"	GALVANIZED					
285 102 00140	COUPLING, PVC 6"	LONG LINE SCH 40	1	1	1	1	1

Item Code	Description 1	Description 2	Qty	Qty
280 107 00020	CU BARE SD	#2 SOL	10	30
283 108 00010	GROUND ROD COPPER CLAD	5/8" X 10'	1	1
286 100 00320	CONNECTOR, WEDGE CU	5/8" STR(7) - 5/8" ROD	1	1
286 101 00010	SHELL, WEDGE AMP	BLUE	1	1
286 100 00210	CONNECTOR, BREAK-AWAY CU	2SOL-2/0STR X 2SOL-2/0STR	1	2

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
HANDHOLE ASSEMBLY
DATE 04-07-04
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CODE	QTY	DESCRIPTION
DEHn	1	SPLICE BOX
DnBxxP	**	BEND, PVC
DnBxxS	**	BEND, STEEL
UGHn	1	GROUNDING HANDHOLE

n dependent on size
xx bend angle dependent on field condition (typically 30°)
** quantity is dependent on application

- NOTE:
- BENDS SHALL BE INSTALLED PER FIELD CONDITION.
 - SPARES NOT SHOWN.
 - GROUNDING WILL NOT BE INSTALLED AT TIME OF HANDHOLE INSTALLATION, BUT WILL BE INSTALLED WITH SPLICE.
 - BREAK-AWAY MUST BE WRAPPED WITH AQUA SEAL MASTIC TO PREVENT TEARING OF HEAT SHRINK WRAP AROUND SLEEVE.
 - INSTALL COVERS BEFORE BACKFILLING OPERATIONS TO HELP SUPPORT UPPER BOX SECTION WHILE EARTH IS PLACED AND COMPACTED.
 - EXCAVATING 12' LONG BY 6' DEEP BY 6' WIDE.
 - BACK FILL WITH COMPACTED CAS.
 - CUT HANDHOLE TO INSTALL PIPE.
 - ALL MATERIALS BY THE CITY.
 - CABLE WORK NOT REQUIRED.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
HANDHOLE ASSEMBLY
DATE 04-07-04
Page 1 of 2
C30-8396

I. GENERAL

A. THIS SPECIFICATION COVERS THE SODDING AND SEEDING THAT ARE APPLICABLE TO ALL CITY PROPERTIES.

B. ALL CONTRACTOR'S OPERATIONS ON CITY PROPERTIES SHALL MEET THE APPROVAL OF AND SHALL BE DONE TO THE SATISFACTION OF THE GENERAL SUPERINTENDENT OF THE CITY OR HIS AUTHORIZED REPRESENTATIVE.

C. THE CONTRACTOR SHALL DEPOSIT WITH THE CITY A CERTIFIED OR CASHIER'S CHECK IN AN AMOUNT AS SPECIFIED IN "SPECIAL INSTRUCTIONS" OF THE "GENERAL SPECIFICATION AND INSTRUCTIONS TO BIDDERS". THE CONTRACTOR SHALL ALSO FURNISH THE CITY WITH A CERTIFICATE OF INSURANCE, PUBLIC LIABILITY AND PROPERTY DAMAGE. IN THE EVENT THE INSURANCE IS DEEMED UNSATISFACTORY BY THE CITY, THE CONTRACTOR SHALL, UPON REQUEST, FURNISH THE CITY WITH A SURETY BOND IN AN AMOUNT AS SPECIFIED IN THE SPECIFICATION "SPECIAL INSTRUCTIONS" OF THE "GENERAL SPECIFICATION".

II. NOTIFICATION

THE CONTRACTOR SHALL GIVE THE CITY 72 HOURS PRIOR NOTICE, EXCLUSIVE OF SATURDAYS, SUNDAYS OR LEGAL HOLIDAYS, BEFORE STARTING WORK OR ANY OPERATIONS ON THE CITY'S PROPERTY.

III. TREE REMOVAL AND PROTECTION

ONLY TREES AND/OR OTHER PLANTINGS MARKED WITH PAINT SHALL BE REMOVED OR TRIMMED. ALL OTHER TREES OR PLANTINGS WITHIN THE WORK AREA ARE TO BE PROTECTED BY WOOD CRIBBING. ALL OTHER WORK REQUIRED SHALL BE DIRECTED BY THE PROJECT ENGINEER.

IV. SODDING

A. ALL CONSTRUCTION STORAGE OF EQUIPMENT AND MATERIALS SHALL BE CONFINED TO THE RIGHT-OF-WAY OR SET ASIDE AREA PROVIDED BY THE CONTRACTOR OFF SITE AND SUBJECT TO THE APPROVAL OF THE GENERAL SUPERINTENDENT OF THE CITY OR HIS AUTHORIZED REPRESENTATIVE. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFIRMED TO THE RIGHT-OF-WAY.

B. ALL SURPLUS EXCAVATED MATERIALS SHALL BE DISPOSED OF OFF THE CITY'S PROPERTY. ALL TREES, STUMPS AND OTHER DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS SHALL BE DISPOSED OF OFF THE CITY'S PROPERTY.

C. IMMEDIATELY AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED, ALL AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE GRADED AS NEARLY AS POSSIBLE TO THEIR ORIGINAL CONTOURS EXCEPT AREAS OF EXCAVATION WHICH SHALL BE NEATLY CROWNED OVER TO ALLOW FOR SETTLEMENT.

D. THE CONTRACTOR SHALL RETAIN A LICENSED LANDSCAPE CONTRACTOR APPROVED BY THE CITY TO PERFORM ALL THE FINAL TOPSOILING, FINE GRADING AND SEEDING OR SODDING WORK IN ACCORDANCE WITH PARAGRAPH E AND F BELOW. THE SEEDING OR SODDING SHALL BE DONE UNDER THE SUPERVISION OF THE CITY IN THE PROPER SEASON FOR SUCH WORK AND SHALL BE AT NO COST TO THE CITY.

E. THE GRASS AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED WITH SOD AND 6 INCHES OF BLACK PULVERIZED DIRT, AREA PREPARED, EXISTING DIRT AND GRASS DEBRIS REMOVED AND DISPOSED OF OFF SITE. MADE LEVEL AND GRADED. ALL AREAS SHALL PROMOTE DRAINAGE. ALL EXCAVATED MATERIALS AND EXISTING GRASS AND LANDSCAPING SHALL BE REMOVED AND UNACCEPTABLE FILL REMOVED AND DEPOSITED OFF SITE.

F. ALL GRASS WORK AREAS SHOWN ON THE CONSTRUCTION DRAWINGS PLUS ALL OTHER AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR AND IS INCIDENTAL TO THE WORK. THE CONTRACTOR IS ADVISED SOME OF THE WORK AREAS ARE BETWEEN ROAD WAY PROPERTY LINES AND WITHIN THE ROAD AREA AS SHOWN ON COUNTY DRAWINGS SHALL BE DONE TO THE DUPAGE COUNTY DEPARTMENT OF TRANSPORTATION. SATISFACTION OF THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR SURFACE RESTORATION, FOR ALL AREA'S INSIDE/OUTSIDE THE ROAD AREAS. THE CONTRACTOR SHALL REVIEW ALL DRAWING PREPARED TO DETERMINE THE EXACT LIMITS OF THE ROADWAY TO DETERMINE THE RESTORATION AREA'S, WHICH IS THEREFORE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL NOT BE GIVEN ANY CONSIDERATION BY THE OWNER FOR ANY CLAIM ARISING OUT OF A LACK OF UNDERSTANDING, INTENT, OR INTERPRETATION NOT CONSIDER WITH DRAWINGS OF THE ROAD AS APPLIED TO SURFACE RESTORATION.

G. ALL GRASS AREAS SHALL BE RESTORED WITH A MINIMUM 6 INCH LAYER OF DELIVERED SCREENED RICK DARK PULVERIZED TOP SOIL. TOP SOIL SHALL NOT BE PULVERIZED ON THE JOB SITE PRIOR TO THE APPLICATION OF THE TOP SOIL. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED AND COMPACTED SO AS MINIMIZE FUTURE SETTLEMENT. TOP SOIL SHALL BE FREE FROM ROOTS, STICKS, WEEDS, BRUSH, STONES, OR OTHER LITTER. WASTE PRODUCTS OR VISIBLE ORGANIC MATERIALS SUCH AS WOOD. IT SHALL BE A LOAMY MIXTURE HAVING AT LEAST 90 PERCENT PASSING THE NO 10 SIEVE.

IV. SODDING (CONTINUED)

H. A SAMPLE, FREE FROM EXTRANEOUS MATERIALS, SHALL COMPLY WITH FOLLOWING REQUIREMENTS.

IT SHALL CONTAIN NOT LESS THEN 1 PERCENT NOR MORE THAN 10 PERCENT ORGANIC MATTER AS DETERMINED BY THE TEST FOR ORGANIC MATTER IN ACCORDANCE WITH AASHTO T 194.

IT SHALL CONTAIN NOT LESS THAN 12 PERCENT NOT MORE THAN 50 PERCENT CLAY AS DETERMINED IN ACCORDANCE WITH AASHTO 88.

THE SAND CONTENT SHALL NOT EXCEED 55 PERCENT AS DETERMINED IN ACCORDANCE WITH AASHTO T 88.

I. THE PH OF THE SAMPLE SHALL NOT BE LOWER THAN 5.0 OR HIGHER THAN 8.0. THE PH SHALL BE DETERMINED WITH AN ACCEPTABLE PH METER, IN THAT PORTION OF THE SAMPLE PASSING THE NO. 10 SIEVE, IN ACCORDANCE WITH THE SUGGESTED METHODS OF TEST FOR HYDROGEN ION CONCENTRATION (PH) OF SOILS INCLUDED IN THE PROCEDURES FOR TESTING SOILS ISSUED DECEMBER 1964 BY THE AMERICAN SOCIETY FOR TESTING AND MATERIALS.

J. FERTILIZER SHALL BE A COMPLETE FERTILIZER, PART OF THE ELEMENTS OF WHICH IS DERIVED FROM ORGANIC SOURCES. IT SHALL CONTAIN A MINIMUM OF 5 PERCENT NITROGEN, 10 PERCENT PHOSPHORUS AND 5 PERCENT POTASH BY WEIGHT.

K. SOD SHALL BE GOOD QUALITY KENTUCKY BLUE GRASS (POA PRATENSIS). SODDING SHALL BE DONE IN ACCORDANCE WITH SECTION 252 (SODDING) OF THE LATEST REVISION OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, ILLINOIS DEPARTMENT OF TRANSPORTATION. THE SOD SHALL BE SALT TOLERANT. THE SOD SHALL BE STAKED TO MAINTAIN POSITION ON THE GROUND DUE TO A SLOPE OR A POSSIBLE TURNOFF.

L. THE SOD SHALL BE STAKED ON ALL SLOPES OF 1:4 (V:H) OR STEEPER. SOD SHALL BE STAKED WITH NOT LESS THAN 4 STAKES WITH NOT LESS THAN 4 STAKES PER SQUARE YARD, WITH A MINIMUM OF ONE STAKE FOR EACH PIECE OF SOD, STAKES SHALL BE INSTALLED SO THEY HOLD THE SOD FIRMLY AND PRESENT NO DANGER TO PEDESTRIAN OR MOVING CREWS.

M. WITHIN 2 HOURS AFTER THE SOD HAS BEEN PLACED, 5 GALLONS OF WATER PER SQUARE YARD SHALL BE APPLIED. ANOTHER WATERING WITHIN 3 DAYS OF THE PLACEMENT SHALL BE APPLIED (5 GAL/S.Y.). THEN ONE MORE WATERING WITHIN 5 DAYS OF THE LAST AT THE SAME 5 GAL/S.Y. RATE. HOWEVER, IN THE ABSENCE OF 1 INCH OF RAIN PER WEEK, SODDED AREAS SHALL BE WATERED A MINIMUM OF 3 TIMES A WEEK WITH 5 GALLONS OF WATER PER SQUARE YARD APPLIED FOR NOT LESS THAN 6 WEEKS USING CONTRACTORS SUPPLIED WATER AND AS CALLED FOR IN ACCORDANCE WITH SECTION 250 AND SECTION 252 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE LATEST REVISION, ILLINOIS DEPARTMENT OF TRANSPORTATION. ALL WATERING SHALL START THE DAY THE SOD IS FIRST PUT DOWN. ALL WATER USED SHALL BE CONTRACTOR SUPPLIED WATER. A FAILURE TO WATER THE SOD MAY RESULT IN THE CITY OF NAPERVILLE REJECTING ALL RESTORATION WORK PERFORMED. CITY OF NAPERVILLE SHALL REQUIRE ALL SOD IN AN AREA REMOVED, RE-PREP THE AREA, AND INSTALL NEW SOD.

N. THE CONTRACTOR AT HIS EXPENSE SHALL DISPOSE OF SURPLUS MATERIALS AND WASTE ITEMS.

SODDING SHALL BE MEASURED BY THE SQUARE YARD. ALL TURFED AREAS RESTORED WITH SOD WITHIN THE LIMITS OF RESTORATION WILL BE ELIGIBLE FOR PAYMENT. AREAS BEYOND THE PUBLIC RIGHT-OF-WAY OR THE EASEMENT AREAS SHOWN THAT ARE DISTURBED BY THE CONTRACTOR'S ACTIVITIES SHALL BE RESTORED TO EQUAL OR BETTER CONDITION BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. IN NO CASE SHALL THE PAY LIMITS FOR RESTORATION EXTEND BEYOND 20 FEET TOTAL WIDTH/RADIUS FROM THE CENTER OF THE PROPOSED UTILITY BEING CONSTRUCTED OR A 20 FEET WIDTH FOR A TRENCH LENGTH.

O. CONTRACTOR IS ADVISED SODDING INSTALLATION, REMOVAL AND REPLACEMENT IS INCLUDED IN THE APPROPRIATE UNIT PRICING FOR FOUNDATIONS, POLE ERECTION AND CONDUIT WORK.

P. ALL VANDALISM, RUTS, OR DAMAGE OF ANY KIND SHALL BE CAUSE FOR REPLACEMENT AT CONTRACTOR'S COST.

Q. PAYMENT FOR SODDING SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR SALT TOLERANT SODDING. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS TO COMPLETE THE ITEM AS SHOWN ON THE PLANS AND AS SPECIFIED. FERTILIZING AND INITIAL WATERING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE FOR SODDING.

R. THE SODDING AND RESTORATION WORK SHALL CARRY A 1 YEAR 6 MONTHS GUARANTEE FROM THE DATE OF FINAL PAYMENT AND IS INCLUDE IN THE PRICING FOR THIS ITEM.

V. SEEDING

A. THE WORK SHALL INCLUDE THE SEEDING AND FERTILIZING OF ALL DISTURBED AREAS ALONG THE PROPOSED IMPROVEMENTS AS DIRECTED BY THE ENGINEER.

B. SEEDING AND FERTILIZING MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 250 OF THE STANDARD SPECIFICATIONS. SEED SHALL BE CLASS "A, SALT TOLERANT LAWN MIXTURE.

C. CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIALS, DEBRIS AND RUBBISH RESULTING FROM CONSTRUCTION OPERATIONS, AND AN STONES OR BOULDERS LARGER THAN 1 INCH SHALL BE REMOVED FROM THE SITE.

D. THE GROUND SHALL BE PREPARED PRIOR, BUT NOT IN EXCESS OF 24 HOURS BEFORE THE SEED IS PLACED. THE SOIL SHALL BE WORKED UNTIL IT IS RELATIVELY FREE FROM DEBRIS, WASHES, GULLIES, CLODS AND STONES. THE SURFACE SHALL BE WORKED TO A DEPTH OF NOT LESS THAN 3 INCHES, WITH A DISK, TILLER, OR THEIR EQUIPMENT APPROVED BY THE ENGINEER. PREPARED SURFACES THAT BECOME CRUSTED SHALL BE REWORKED TO AN ACCEPTABLE CONDITION FOR SEEDING AND A MINIMUM 6 INCHES OF PULVERIZED TOP SOIL SHALL BE PLACED OVER ALL DISTRIBUTED AREAS. ALL SOIL SURFACES SHALL BE MOIST WHEN THE SEED IS APPLIED. AREAS SHOWN TO BE AGRICULTURE IN NATURE SHALL BE RESTORED WITH AN EQUAL DEPTH OF TOP SOIL. SEEDDED AREAS SHALL BE COVERED IMMEDIATELY AN EXCELSIOR BLANKET IS INCLUDED IN THIS WORK.

E. FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATES:

NITROGEN FERTILIZER NUTRIENTS 90 LBS/ACRE.
PHOSPHORUS FERTILIZER NUTRIENTS 54 LBS/ACRE.
POTASSIUM FERTILIZER NUTRIENTS 35 LBS/ACRE.

F. HYDRO SEEDING WITH APPROVED GRASS SEED AT A RATE OF 175 POUNDS PER ACRE AND MULCHED AS DIRECTED BY THE CITY OF NAPERVILLE. THE CONTRACTOR SHALL FURNISH APPROVED TOP SOIL TO INSURE A 6 INCH COVERAGE OVER THE AREA TO SEEDDED AND WATERED. THE SEED IS TO BE MIXED IN THE FOLLOWING PROPERTIES.

40 LBS. KENTUCKY BLUE GRASS PLUS FERTILIZER PER 100T REQUIREMENTS.
40 LBS. ALTA FESQUE GRASS.
20 LBS. PERENNIAL RYE GRASS.

G. AREAS BEYOND THE PUBLIC RIGHT-OF-WAY OR THE EASEMENT AREAS SHOWN THAT ARE DISTURBED BY THE CONTRACTOR'S ACTIVITIES SHALL BE RESTORED TO EQUAL OR BETTER CONDITION BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. IN NO CASE SHALL THE PAY LIMITS FOR RESTORATION EXTEND BEYOND 20 FEET TOTAL WIDTH/RADIUS FROM THE CENTER OF THE PROPOSED UTILITY BEING CONSTRUCTED OR A 20 FEET WIDTH FOR A TRENCH LENGTH.

H. ALL SEEDDED AREAS SHALL BE MOWED 4 TIMES TO A HEIGHT OF 3 INCHES. THE CUT MATERIAL SHALL NOT BE WIND BLOWN OR LEFT IN A LUMPY CONDITION BY EVENLY DISTRIBUTED. AREAS BEYOND THE WORK AREA LIMITS SHOWN ON THE PLAN SHALL BE RESTORED TO BETTER OR EQUAL CONDITIONS AT THE CONTRACTOR'S EXPENSE.

I. WITHIN 2 HOURS AFTER THE SEED HAS BEEN PLACED, 3 GALLONS OF WATER PER SQUARE YARD SHALL BE APPLIED. ANOTHER WATERING WITHIN 3 DAYS OF THE PLACEMENT SHALL BE APPLIED (3 GAL/S.Y.). THEN ONE MORE WATERING WITHIN 5 DAYS OF THE LAST AT THE SAME 3 GAL/S.Y. RATE. HOWEVER, IN THE ABSENCE OF 1 INCH OF RAIN PER WEEK, SEEDDED AREAS SHALL BE WATERED A MINIMUM OF 3 TIMES A WEEK WITH 3 GALLONS OF WATER PER SQUARE YARD APPLIED FOR NOT LESS THAN 6 WEEKS USING CONTRACTORS SUPPLIED WATER AND AS CALLED FOR IN ACCORDANCE WITH SECTION 250 AND SECTION 252 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE LATEST REVISION, ILLINOIS DEPARTMENT OF TRANSPORTATION. ALL WATERING SHALL START THE DAY THE SEED IS FIRST PUT DOWN. ALL WATER USED SHALL BE CONTRACTOR SUPPLIED WATER. A FAILURE TO WATER THE SEED MAY RESULT IN THE CITY OF NAPERVILLE REJECTING ALL RESTORATION WORK PERFORMED. CITY OF NAPERVILLE SHALL REQUIRE ALL SEEDDED AREAS REMOVED, RE-PREP THE AREA, AND INSTALL NEW SEED.

J. THIS WORK INCLUDES ALL SEED, FERTILIZER, WATERING, OTHER MATERIALS, LABOR EQUIPMENT AND INCIDENTALS TO COMPLETE THE JOB OR AS DIRECTED BY THE ENGINEER ON A UNIT OF PER ACRE.

K. THE SEEDING AND RESTORATION WORK SHALL CARRY A 1 YEAR 6 MONTHS GUARANTEE FROM THE DATE OF FINAL PAYMENT (RECEIPT OF AS BUILTS) AND IS INCLUDED IN PAYMENT.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC

CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	IMP NO. -	CAD FILE NO. 005819001C13.DWG
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-06-04
DATE 06-18-07	WORK REQUEST NO. 58199	DATE 06-01-05
DESIGNED BY RFB	APPROVED BY NTS	DATE 06-01-05
REVISION 1 2 3	SCALE 1"	PAGE 3 OF 3

SHEET 13 OF 23

FA.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	80
STA. 1+31.77			TO STA. 5+50.00	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT 83961

CONDUIT RUN TRENCH PREPARATION

THESE INSTRUCTIONS COVER DESIGN AND CONSTRUCTION INFORMATION NECESSARY FOR THE LAY-OUT AND INSTALLATION OF CONDUIT RUNS.

SAFEGUARDING UNDERGROUND FACILITIES

IN ORDER TO SAFEGUARD THE UNDERGROUND FACILITIES OF BOTH THE CITY OF NAPERVILLE AND OTHERS, APPLICABLE INSTRUCTIONS AND PROCEDURES COVERING THE PROVISIONS OF ANY AGREEMENT BETWEEN THE CITY OF NAPERVILLE AND ANOTHER UTILITY CONCERNING INTERCHANGE OF INFORMATION AND CONSTRUCTION WORK PRACTICES SHALL BE FOLLOWED. BEFORE ANY SOIL IS DISTURBED, J.U.L.I.E. MUST BE NOTIFIED TO MARK ALL UTILITIES IN THE AREA OF THE TRENCH.

CONDUIT RUN LAYOUT

CONDUIT RUNS AND MANHOLES SHOULD BE LOCATED SO THAT THE RUN WILL FOLLOW AS NEARLY AS POSSIBLE A STRAIGHT LINE BETWEEN MANHOLES. IF OBSTRUCTIONS MAKE THIS IMPRACTICAL, THE RUN MAY BE CURVED AS NECESSARY.

CONDUIT RUNS BETWEEN MANHOLES SHALL HAVE AN OVERALL LENGTH FROM MANHOLE TO MANHOLE NOT TO EXCEED 475 FT. SPECIAL CASES INVOLVING LONGER LENGTHS MAY BE CONSIDERED BY THE ENGINEER, BUT ONLY IF SPECIALLY ORDERED CABLE REELS CAN ACCOMMODATE THIS LONG-PULL CONSTRUCTION.

A CONDUIT RUN MAY ENTER A STANDARD MANHOLE AT A MAXIMUM ANGLE OF 15° TO THE RESPECTIVE AXIS OF THE MANHOLE. IN CASES WHERE A LARGER ANGLE IS REQUIRED, THE MANHOLE SHALL BE REDESIGNED TO OBTAIN SATISFACTORY CABLE PULLING AND TRAINING CONDITIONS. IN LOCATIONS WHERE STREET LINES ARE NOT DETERMINED BY CURBS, SIDEWALKS OR BUILDINGS, THE EXACT POSITION OF THE CONDUIT RUN SHALL BE DETERMINED BY A SURVEY.

THE PROPOSED TRENCH MAY BE MARKED OFF BY MEANS OF A CHALK LINE IN UNPAVED TERRITORY AND BY A ROUTE IDENTIFICATION SPRAY PAINTED IN PAVED TERRITORY. BOTH SIDES OF THE TRENCH SHALL BE MARKED IF THE TRENCH IS TO BE DUG BY HAND. IF A MACHINE IS TO BE USED, ONLY ONE SIDE OF THE TRENCH NEED BE MARKED.

EXCAVATION

THE STANDARD WIDTH OF THE TRENCH SHALL BE EQUAL TO THE OVERALL WIDTH OF THE CONDUIT RUN BELOW SHOWN ON PAGE 6 FOR REGULAR FORMATIONS, AND SHALL BE ADJUSTED TO INCLUDE WHERE TRANSPOSITIONS ARE NECESSARY TO PASS OBSTRUCTIONS. THE SIDES OF THE TRENCH SHALL BE TRIMMED SMOOTHLY TO GIVE A UNIFORM THICKNESS OF CONCRETE AROUND THE CONDUIT. THE SIDES OF THE EXCAVATION SHALL BE SHORED IN ACCORDANCE WITH SAFETY REGULATING COMMISSION PRACTICES TO PREVENT CAVE-INS.

DEPTH OF TRENCH

THE DEPTH OF THE TRENCH IN THE RUN IS GOVERNED BY THE MINIMUM DEPTH OF THE CONDUIT RUN BELOW THE STREET SURFACE OR ESTABLISHED GRADE, THE HEIGHT OF THE DUCT SECTION, AND THE PRESENCE OF OBSTRUCTIONS. AT THE APPROACH TO THE MANHOLE, THE MINIMUM DISTANCE FROM THE MANHOLE ROOF TO THE TOP DUCTS AND THE FANNING OF THE DUCTS AT THE DUCT ENTRANCE OF THE MANHOLE ALSO GOVERN THE DEPTH OF THE TRENCH.

IF CINDERS, SLAG, RUBBISH FILL OR OTHER MATERIAL HAVING POOR HEAT CONDUCTING PROPERTIES ARE UNCOVERED IN THE EXCAVATION, THE WIDTH AND DEPTH OF THE TRENCH SHALL BE INCREASED. THIS EXTRA SPACE IS TO PROVIDE FOR THE PLACING OF SPECIAL BACKFILL GRAVEL AROUND THE CONDUIT.

THE MINIMUM DISTANCE FROM THE TOP OF A CONDUIT RUN TO THE SURFACE OF A ROADWAY OR ESTABLISHED GRADE SHALL BE 2 FEET 6 INCHES EXCEPT WHERE THE CONDUIT PASSES UNDER A VIADUCT AND CAUSES A SUMP IN THE LINE. IN THIS CASE THE MINIMUM DISTANCE SHALL BE 3 FEET 0 INCHES. CONDUIT RUNS WHICH PASS UNDER RAILROAD SWITCH TRACKS, OR MAIN LINE TRACKS SHALL HAVE THE MINIMUM DISTANCE OF 4 FEET 2 INCHES BELOW THE TOP OF THE RAIL.

THE HEIGHT OF THE DUCT SECTION FOR VARIOUS STANDARD CONDUIT FORMATIONS OF DUCTS IS SHOWN ON PAGE 6, AND SHALL BE ADJUSTED FOR TRANSPOSITION SECTIONS.

THE MINIMUM DISTANCE FROM THE TOP OF THE DUCTS TO THE MANHOLE ROOF IS SPECIFIED ON THE MANHOLE DRAWINGS AND THE SEPARATION OF THE DUCTS AT THE MANHOLE DUCT ENTRANCE IS SHOWN ON THE MANHOLE STANDARDS. THIS WILL DETERMINE THE MINIMUM WIDTH AND DEPTH OF THE TRENCH AT THE MANHOLE.

OBSTRUCTIONS AFFECT THE DEPTH OF THE TRENCH IN THAT THE GRADE OF THE CONDUIT RUN MUST BE ADJUSTED TO AVOID THEM. THE ENTIRE TRENCH SHOULD BE OPENED BETWEEN MANHOLES BEFORE ANY CONDUIT IS LAID TO ASCERTAIN THE EXISTENCE AND POSITION OF ANY OBSTRUCTIONS.

WHEN THE REQUIRED DEPTH OF THE TRENCH IS KNOWN FOR ALL POINTS, THE GRADE MAY BE ESTABLISHED.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06 Page 1 of 11 C30-1900
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GRADE

IN GENERAL, ALL CONDUIT RUNS SHALL BE UNIFORMLY GRADED SO THAT WATER WILL DRAIN INTO THE MANHOLES FROM ANY POINT IN THE RUN. THE EXCEPTIONS TO THIS RULE ARE CONDUIT RUNS WHICH PASS UNDER RIVERS, VIADUCTS, AND ABNORMAL OBSTRUCTIONS IN THE RUN. IT IS ESSENTIAL THAT THE CONDUIT RUN SHALL BE UNIFORMLY GRADED SO THAT THERE WILL BE NO RIPPLES IN THE RUN.

THE MINIMUM GRADE FOR A CONDUIT RUN SHALL BE 1 INCH PER 100 FT. ALL GRADES SHALL BE ESTABLISHED WITH A LEVEL BY THE CONTRACTOR'S ENGINEER AND MARKED BY WOODEN GRADE STAKES ON THE CENTER LINE OF THE BOTTOM OF THE TRENCH. THE STAKES SHALL BE SET 5 FT. APART WHEN CONCRETE CONDUIT IS TO BE INSTALLED AND 10 FT. APART FOR PLASTIC CONDUIT ALONE.

THE TOP OF THE GRADE STAKE SHALL INDICATE THE TOP SURFACE OF THE BOTTOM CONDUIT CONCRETE ENCASEMENT.

AFTER THE GRADE OF THE CONDUIT RUN HAS BEEN ESTABLISHED BY MEANS OF THE GRADE STAKES, THE BOTTOM OF THE TRENCH SHALL BE TRIMMED 3 INCHES BELOW THE TOP OF THE STAKES EXCEPT WHERE THE TRENCH CROSSES A RAILROAD TRACK. IN SUCH CASES THE BOTTOM SHALL BE TRIMMED 6 INCHES BELOW THE TOP OF THE STAKES. TRENCHES WHICH HAVE BEEN DUG TOO DEEP AND THEN PARTIALLY REFILLED SHALL BE TAMPED SOLID AFTER REFILLING BEFORE POURING THE CONCRETE ENCASEMENT.

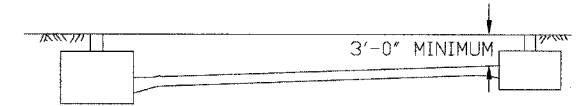
DOUBLE SLOPE GRADING

THE MOST DESIRABLE METHOD OF GRADING A CONDUIT RUN BETWEEN MANHOLES IS ILLUSTRATED IN THE SKETCH SHOWN BELOW. THE MINIMUM DISTANCE FROM THE TOP OF THE CONDUIT RUN TO THE STREET SURFACE IS 3 FT. 0 INCHES, AT THE CENTER OF THE RUN. FROM THERE THE RUN FALLS IN A DOUBLE SLOPE AND DRAINS TOWARD BOTH MANHOLES.



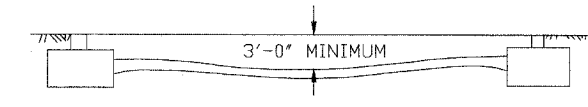
SINGLE SLOPE GRADING

WHERE THE STREET LEVEL SLOPES FROM ONE MANHOLE TO THE OTHER, OR WHERE OBSTRUCTIONS WILL NOT PERMIT DOUBLE SLOPE GRADING, THE CONDUIT RUN SHALL BE GRADED IN ONLY ONE DIRECTION AS SHOWN.



GRADING UNDER VIADUCT OR LARGE OBSTRUCTIONS

A CONDUIT RUN, WHICH IS TO BE INSTALLED UNDER A VIADUCT WHERE THE STREET GRADE IS DEPRECATED, OR UNDER A LARGE OBSTRUCTION, MAY BE GRADED WITH A SUMP IN THE LINE AS SHOWN, PROVIDED THAT THE SINGLE SLOPE GRADING METHOD IS NOT PRACTICAL OR ECONOMICAL. THE TOP OF THE RUN SHALL BE AT LEAST 3 FT. BELOW STREET GRADE TO PREVENT FREEZING. IF THE STREET GRADE IS LEVEL UNDER THE VIADUCT THIS RULE DOES NOT APPLY.



INSTALLATION

SEE INSTRUCTION FOR INSTALLING ALL CONDUIT DUCT BANK 3', 5' OR 6' (PER OPEN CUT) ATTACHES.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06 Page 2 of 11 C30-1900
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CONDUIT RUN INSTALLATION (USING CONCRETE OF FA2 ENCASEMENT)

APPLICATION

THIS STANDARD COVERS THE PROCEDURE TO BE FOLLOWED WHEN INSTALLING CONCRETE OR FA2 ENCASED CONDUIT BY THE MONOLITHIC METHOD. THIS METHOD CONSISTS OF BUILDING UP THE LAYERS OF CONDUIT ON SPACERS AND THEN POURING THE CONCRETE OR FA2 ENCASEMENT IN A MONOLITHIC MASS.

GENERAL

THE SIZE AND TYPE OF CONDUIT IS GIVEN ON M30-1500 BUT SHALL BE SPECIFIED FOR EACH JOB ON THE INSTALLATION DRAWINGS.

SPLIT CONDUIT, IF AVAILABLE, MAY BE USED TO REBUILD OR CHANGE THE LOCATION OF EXISTING DUCTS THAT CONTAIN CABLES.

ALL CONDUIT TRENCHES SHALL BE DUG WITH A 100 FOOT HEADWAY TO ALLOW FOR VERTICAL ADJUSTMENTS.

INSTALL ALL TRENCHES AS PER OSHA STANDARDS FOR OPEN CUTTING THE GROUND.

ALL CONDUIT WITH BROKEN ENDS SHALL BE CUT, AND USED WHENEVER POSSIBLE.

SPLIT DUCT IS SUPPLIED BY THE CONTRACTOR.

TRENCH PREPARATION

THE PREPARATION OF THE TRENCH FOR CONDUIT RUNS SHALL BE AS PRESCRIBED ON PAGE 1 OF THIS STANDARD. WHERE SWAMPY OR UNSTABLE SOIL IS ENCOUNTERED, CONDUIT SHALL BE PLACED ON A CONCRETE BASE, LAYING THE CONDUIT AFTER THE CONCRETE IS LEVELED AND STARTS TO SET. AT THIS POINT THE BASE OF THE CONCRETE WILL SUPPORT THE CONDUIT AND PERMIT THE BASE SPACERS TO BE DEPRECATED AND TO FIND AN EVEN BEARING WHILE THE BASE CONCRETE IS STILL YIELDING. THE BASE CONCRETE IS BY VOLUME: 1 PART PORTLAND CEMENT, 3 PARTS #2 TORPEDO SAND, AND 5 PARTS 3/4 INCH TO #4 GRAVEL (NOT CRUSHED STONE).

IF THE CONDUIT DOES NOT REST ON UNDISTURBED EARTH WITHIN 3 FEET OF THE MANHOLE OR VAULT, BRIDGE THE GAP TO THE UNDISTURBED EARTH WITH A 6 INCH BASE OF REINFORCED CONCRETE. THIS CONCRETE SHALL BE A "DENSE SHEATHING" (PAGE 5) WITH #4 REINFORCING BARS ON 8 INCH CENTERS, 3 INCHES FROM THE BOTTOM.

CONCRETE MIX FOR CONDUIT ENCASEMENT (SHEATHING)

(a) READY-MIXED

READY MIXED CONCRETE DELIVERED TO THE JOB SHALL BE SPECIFIED AS 3000 POUNDS PER SQUARE INCH MINIMUM (AT 28 DAYS) CONCRETE. THE COARSE AGGREGATE SHALL BE PEA GRAVEL. THE FINE AGGREGATE SHALL BE #2 TORPEDO SAND. SLUMP AT POINT OF DELIVERY SHALL NOT BE MORE THAN 4 INCHES NOR LESS THAN 2 INCHES.

MINIMUM CEMENT CONTENT SHALL BE 3 1/2 BAGS OF TYPE I PORTLAND CEMENT PER CUBIC YARD. FLY ASH SHALL BE INCORPORATED INTO THE MIX ON THE BASIS OF 20 POUNDS PER SACK OF CEMENT. INCLUDE AIR ENTRAINMENT AGENT TO ENTRAIN BETWEEN 4 PERCENT AND 6 PERCENT OF AIR IN THE CONCRETE.

EXCEPT AS OTHERWISE DESIGNATED IN THIS STANDARD, ALL READY-MIXED CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SPECIFICATIONS FOR READY-MIXED CONCRETE (ASTM C94 LATEST EDITION).

READY-MIXED CONCRETE SHALL BE PLACED WITHIN 1 HOUR AFTER WATER HAS BEEN ADDED TO THE MIX.

(b) BATCH-MIXED

WHEN THE CONCRETE IS MIXED ON THE JOB, A PRE-BAGGED CEMENT MIX CONSISTING BY WEIGHT OF 70 PERCENT PORTLAND CEMENT AND 30 PERCENT FLY ASH SHALL NORMALLY BE USED. THE CONCRETE MIX PROPORTIONS BY VOLUME (RODDED SATURATED SURFACE DRY BASIS) SHALL BE: 1 PART OF PRE-BAGGED MIX (1 BAG IS 1 CUBIC FOOT), 3 1/2 PARTS OF #2 TORPEDO SAND, AND 2 1/2 PARTS PEA GRAVEL. MAXIMUM WATER CONTENT, INCLUDING FREE SURFACE MOISTURE IN AGGREGATES, SHALL NOT EXCEED 7 GALLONS PER BAG OF CEMENT MIX. SLUMP SHALL BE AS SPECIFIED ABOVE UNDER READY-MIXED CONCRETE.

IN THE EVENT THAT THE PRE-BAGGED CEMENT MIX IS NOT AVAILABLE, 1 BAG OF TYPE I PORTLAND CEMENT SHALL BE SUBSTITUTED FOR 1 BAG OF THE CEMENT MIX. WATER CONTENT, SLUMP, AND THE CONCRETE MIX PROPORTIONS SHALL REMAIN AS STATED IN THE PRECEDING PARAGRAPH.

THE AGGREGATES SHALL BE MEASURED BEFORE BEING PUT IN THE MIXER, AND SHALL BE IN SUCH PROPORTIONS THAT ONE FULL BAG OF CEMENT WILL BE USED IN EACH BATCH. ALL CONCRETE SHALL BE MIXED FOR A MINIMUM OF TWO MINUTES IN A MACHINE MIXER.

HAND MIXING SHALL NOT BE DONE EXCEPT BY THE SPECIAL PERMISSION OF THE ENGINEER. NO MORTAR OR CONCRETE SHALL BE "TEMPERED" EITHER BY REMIXING OR BY THE ADDITION OF ANY MATERIALS OR ADMIXTURES. THE DRUM OF THE MIXER SHALL BE COMPLETELY EMPTIED BEFORE RECEIVING MATERIALS FOR THE SUCCEEDING BATCH. CONCRETE THAT HAS OBTAINED ITS INITIAL SET BEFORE BEING PLACED SHALL BE DISCARDED AND NOT USED ON THE JOB.

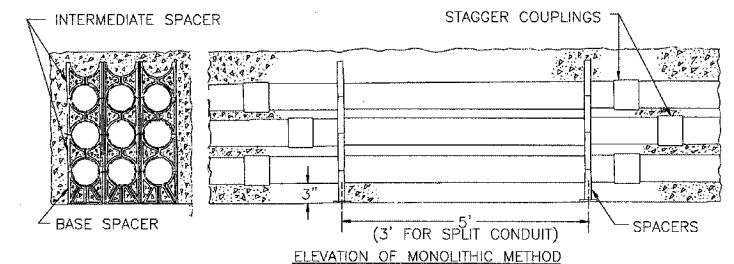
COLD WEATHER CONCRETING (BELOW 40° F)

INGREDIENTS OF CONCRETE POURED WHEN THE SURROUNDING AIR IS BELOW 40° F SHALL BE HEATED SO THAT THE TEMPERATURE OF THE CONCRETE AFTER PLACEMENT IS NEITHER LOWER THAN 55° F NOR GREATER THAN 65° F. PLUG ENDS OF CONDUIT RUN TO PREVENT AIR CIRCULATION. PROTECT CONCRETE FROM FREEZING FOR A MINIMUM OF 48 HOURS.

WHEREVER POSSIBLE, ALL CONCRETE MATERIALS AND ALL REINFORCEMENT, FORMS, FILLERS AND GROUND WITH WHICH CONCRETE IS TO COME IN CONTACT SHOULD BE FREE FROM FROST.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06 Page 3 of 11 C30-1900
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LAYING CONDUIT



CONDUIT INSTALLATION

THE STANDARD ARRANGEMENT AND SEPARATION OF DUCTS AND THE THICKNESS OF CONCRETE SHEATHING SHALL BE AS SHOWN ON PAGE 7 FOR CONDUIT RUNS UNDER MAIN LINE RAILROAD TRACK, OR ON PAGE 6 OF THIS STANDARD FOR ALL OTHER LOCATIONS. IF SPECIAL ARRANGEMENTS ARE REQUIRED, THE SECTIONAL OUTLINE OF THE DUCTS SHALL BE SHOWN ON THE INSTALLATION DRAWINGS. TRANSPOSITION OF THE DUCTS MADE NECESSARY BY OBSTRUCTIONS, SHALL BE MADE FOLLOWING THIS STANDARD, BUT SHALL BE DONE ONLY WHEN SPECIFIED ON THE DRAWINGS OR WHEN SPECIALLY AUTHORIZED BY THE ENGINEER AFTER UNFORESEEN OBSTRUCTIONS ARE UNCOVERED.

THE FIRST LAYER OF THE CONDUIT SHALL BE LAID ON PLASTIC 6 INCH BASE SPACERS (DPU-E #285-199-00170) HORIZONTALLY LOCKED, WHICH WILL PROVIDE A 3-INCH LAYER OF CONCRETE BELOW THE CONDUIT. THEY SHALL BE PLACED AT INTERVALS OF APPROXIMATELY 5 FEET. ALL OF THE SUCCEEDING LAYERS ARE PLACED ON PLASTIC 6 INCH INTERMEDIATE SPACERS (DPU-E #285-199-00180) VERTICALLY LOCKED TO PREVIOUSLY PLACED SPACERS. THE CONDUIT COUPLINGS SHALL BE STAGGERED SO THAT NO COUPLING IS IN-LINE WITH THE COUPLING ON AN ADJACENT CONDUIT. WHEN THE REQUIRED LAYERS OF CONDUIT ARE BUILT UP, THE ENTIRE ASSEMBLY SHALL BE BRACED TO PREVENT LATERAL AND VERTICAL MOVEMENT. WHEN THE INSTALLATION OF SPLIT DUCT IS SPECIFIED, PLACE SPACERS AT THREE FOOT INTERVALS.

THE CONCRETE SHALL BE THOROUGHLY SPADED, VIBRATED AND PUDDLED IN AND AROUND THE CONDUIT PACKAGE. BRACING SHALL BE REMOVED WHEN CONCRETE HAS STARTED TO SET AND THERE IS NO FURTHER DANGER THAT DUCTS WILL FLOAT OR MOVE OUT OF ALIGNMENT. HOLES LEFT BY BRACING SHOULD THEN BE FILLED WITH GROUT.

IN FORMATIONS GREATER THAN 4 DUCTS HIGH, THE PREFERRED PRACTICE IS TO INSTALL THE FORMATION IN TWO LAYERS WITH THE CONCRETE BEING POURED IN 2 STEPS. THIS WILL PREVENT THE SPACERS FROM SPREADING OUT UNEVENLY AND CREATING UNEVEN VARIANCES IN CLEARANCES BETWEEN CONDUITS. THIS PROCEDURE WILL ALSO ENSURE THAT THERE IS A CONCRETE ENVELOPE AROUND EVERY DUCT AND DECREASE VERTICAL DROP TO THE LOWEST POSSIBLE DISTANCE WHEN POURING THE CONCRETE.

UNFINISHED CONSTRUCTION

IF THE CONDUIT RUN MUST BE TEMPORARILY LEFT UNFINISHED DURING CONSTRUCTION, CONDUIT SHALL BE CLOSED WITH PLASTIC CONDUIT PLUGS. IF THE CONDUIT RUN IS TO BE DEAD-ENDED, FOR COMPLETION AT SOME FUTURE TIME, THE END OF EACH CONDUIT SHALL BE PLUGGED AND STAGGERED APPROXIMATELY 3 INCHES FROM THE ADJACENT CONDUIT. THE END OF THE CONCRETE SHEATHING SHALL BE STEPPED BACK APPROXIMATELY 6 INCHES FOR EACH HORIZONTAL ROW OF CONDUIT. THE ENDS OF THE INSTALLED CONDUIT SHALL EXTEND BEYOND THE SHEATHING TO PERMIT CONNECTION TO FUTURE CONDUIT.

IN INSTANCES WHERE THE CONDUIT ENDS MAY NOT BE EASILY LOCATED, INSTALL AN ELECTRONIC MARKER BALL (DPU-E# 284-199-00250) TO ASSIST IN LOCATION. AFTER THE CONDUIT IS INSTALLED, BACKFILL THE HOLE COVERING THE CONDUIT ENDS APPROXIMATELY 6 TO 12 INCHES AND INSERT MARKER IN HOLE ABOVE THE CONDUIT END. LAY MARKER ON FLAT GROUND AND CONTINUE BACKFILLING, INSURING THAT THE MARKER STAYS IN A HORIZONTAL POSITION SO THAT IT MAY BE LOCATED BY THE LOCATOR TOOL.

TRANSPOSING AROUND OBSTRUCTIONS

WHEN SMALL OBSTRUCTIONS ARE ENCOUNTERED, AND IT IS NOT ECONOMICAL OR DESIRABLE TO INSTALL THE CONDUIT RUN BELOW THE OBSTRUCTION, THE CONDUIT PACKAGE MAY BE TRANSPOSED. IN SUCH AN OPERATION, A 1-INCH SPACE SHALL BE LEFT ABOVE AND BELOW, BETWEEN THE CONCRETE SHEATH AND THE OBSTRUCTION. A 6 INCH GAP SHALL BE LEFT AROUND UTILITIES THAT ARE OBSTRUCTIONS. EACH PORTION OF THE TRANSPOSED CONDUIT SECTION SHALL BE INSTALLED AS A DOUBLE REVERSE CURVE USING A MINIMUM RADIUS OF 300 FEET.

THE SPACE BETWEEN THE TWO PORTIONS OF THE TRANSPOSED SECTION SHALL BE COMPLETELY FILLED WITH CONCRETE TO WITHIN 3 INCHES OF EACH SIDE OF THE OBSTRUCTION. THIS 3 INCH SPACE SHALL BE FILLED WITH #2 TORPEDO SAND (FA-2 MATERIAL).

SPECIFICATION

SEE INSTRUCTION FOR INSTALLING ALL CONDUIT DUCT BANK 3', 5' OR 6' (PER OPEN CUT) ATTACHES.

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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	APP. NO. -	ORD. FILE NO. 0058199001C14DW6	PROJECT NO. EU12-06-04
DATE 08-15-07	ISSUED 58199	ENGINEER RFS	SCALE NTS
COORDINATED WITH BRIDGE IMPROVEMENT		DRWN BY JK	COMPLETED BY
SHEET 14 OF 23			

CONDUIT RUN INSTALLATION

CONDUIT BELLS

ALL CONDUITS SHALL TERMINATE AT A PRE-CAST MANHOLE IN PLASTIC CONDUIT ENTRANCE BELL ENDS AS SHOWN ON PAGE 6 OF THIS STANDARD. ALL CONDUITS SHALL TERMINATE AT A VAULT PER THIS STANDARD. IF CONDUIT PLUGS ARE USED, THEY SHOULD BE REMOVED AFTER CONSTRUCTION IS COMPLETED UNLESS OTHERWISE SPECIFIED.

BACKFILLING

AFTER THE CONCRETE SHEATHING HAS ATTAINED ITS INITIAL SET, THE TRENCH SHALL BE BACKFILLED. SAND OR OTHER STATE OR MUNICIPAL APPROVED MATERIAL SHALL BE USED UNDER PAVEMENTS EXCEPT WHEN THE EXCAVATED MATERIAL IS FINE, DRY, CAN BE WELL COMPACTED, AND WILL NOT SETTLE AFTER PAVEMENT IS RESTORED. IF THE EXCAVATION IS MADE IN SANDY SOIL, THE REMOVED MATERIAL MAY BE USED FOR BACKFILL IF SATISFACTORY TO THE ENGINEER. LAKE SAND SHALL NEVER BE USED FOR THE BACKFILL IN CONDUIT TRENCHES BECAUSE OF ITS POOR HEAT-CONDUCTING PROPERTIES. ALL BACKFILL IN PAVED AREAS SHALL BE THOROUGHLY COMPACTED AND FLOODED.

CONDUIT RUNS IN PARKWAYS MAY BE BACKFILLED WITH THE EXCAVATED MATERIAL IF IT IS CLAY, LOAM, COARSE SAND, OR GRAVEL.

WHEN LAKE SAND, PEAT, CINDERS, SLAG, OR OTHER MATERIALS WITH POOR HEAT CONDUCTING PROPERTIES ARE ENCOUNTERED IN THE CONDUIT EXCAVATION, THERMAL BACKFILL SHALL BE ADDED AROUND AND ABOVE THE CONDUIT AS SPECIFIED ON THE INSTALLATION PLANS OR BY THE ENGINEER. THIS THERMAL BACKFILL WILL BE SPECIFIED OR BANK RUN GRAVEL FROM A LOCATION APPROVED BY THE ENGINEER.

PAVING, CURBS, SIDEWALKS

REPLACEMENT OF PAVING, CURBS, AND SIDEWALKS SHALL BE DONE IN ACCORDANCE WITH THE MUNICIPAL OR STATE REQUIREMENTS.

CONDUIT PREPARATION

AFTER THE CONCRETE SHEATHING HAS ATTAINED ITS INITIAL SET, EACH CONDUIT SHALL BE RODDED AND MANDRELLERED BY THE CONTRACTOR OR CREW, THROUGH EACH OF THE CONDUIT. WHEN A PREVIOUSLY DEAD-END CONDUIT RUN IS EXTENDED, THE ENTIRE RUN SHALL BE RODDED AND MANDRELLERED. CONDUIT RUNS CONTAINING OR TERMINATING IN SMALL RADIUS BENDS THAT WILL NOT PERMIT THE PASSAGE OF A STANDARD SIZE MANDREL, SHALL BE MANDRELLERED THROUGH THEIR STRAIGHT PORTION PRIOR TO THE CONSTRUCTION OR INSTALLATION OF THE BENDS. THE MANDRELLING OF SMALL RADIUS BENDS SHALL BE DONE WITH A FLEXIBLE MANDREL NO SMALLER IN DIAMETER THAN 1/2 INCH LESS THAN THE NOMINAL DIAMETER OF THE BEND.

WHEN REQUESTED, THE CONTRACTOR SHALL, AS A PART OF THE MANDRELLING OPERATION, PULL IN AND LEAVE IN CERTAIN DESIGNATED DUCTS A #12 SOL. CU. MARKER CABLE (DPU-E# 280-113-00040, WHITE), (DPU-E# 280-113-00041, BLACK), (DPU-E# 280-113-00042, RED), (DPU-E# 280-113-00043, GREEN), (DPU-E# 280-113-00044, BLUE), (DPU-E# 280-113-00045, ORANGE), OR (DPU-E# 280-113-00046, YELLOW). ADDITIONALLY A 22GA. DETECTABLE MULETAPE 1250# STRENGTH @ 3000' (DPU-E# 450-024-00010), MAY BE USED. EITHER OPTION WILL BE FURNISHED BY THE CITY OF NAPERVILLE DPU-E.

LATERALS

CONDUIT LATERALS THAT ARE TO BE CONCRETE ENCASED SHALL BE INSTALLED IN THE SAME MANNER AS MAIN CONDUIT RUNS. LATERALS THAT TERMINATE AT MANHOLE WALLS SHALL BE CONSTRUCTED AS SHOWN ON THIS STANDARD. THOSE THAT TERMINATE AT A POLE SHALL BE CONSTRUCTED PER PAGE 9 OF THIS STANDARD. THOSE TERMINATING AT AN EQUIPMENT FOUNDATION SHALL BE CONSTRUCTED PER THAT SPECIFIC EQUIPMENT FOUNDATION STANDARD.

DENSE CONDUIT SHEATHING FOR SPECIAL CONDITIONS

WHEN SPECIFIED ON THE INSTALLATION DRAWINGS, CONDUIT RUNS TO BE INSTALLED IN KNOWN CORROSIVE LOCATIONS, SUCH AS IN CINDER FILL, ADJACENT TO COAL STORAGE PILES, IN GAS PURIFIER SLAG, ETC., SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING INSTRUCTIONS. ALL OTHER PROCEDURES GIVEN IN PRECEDING PAGES OF THIS STANDARD SHALL BE FOLLOWED.

THE OUTER SHEATHING ALL AROUND SHALL BE 4 INCHES THICK.

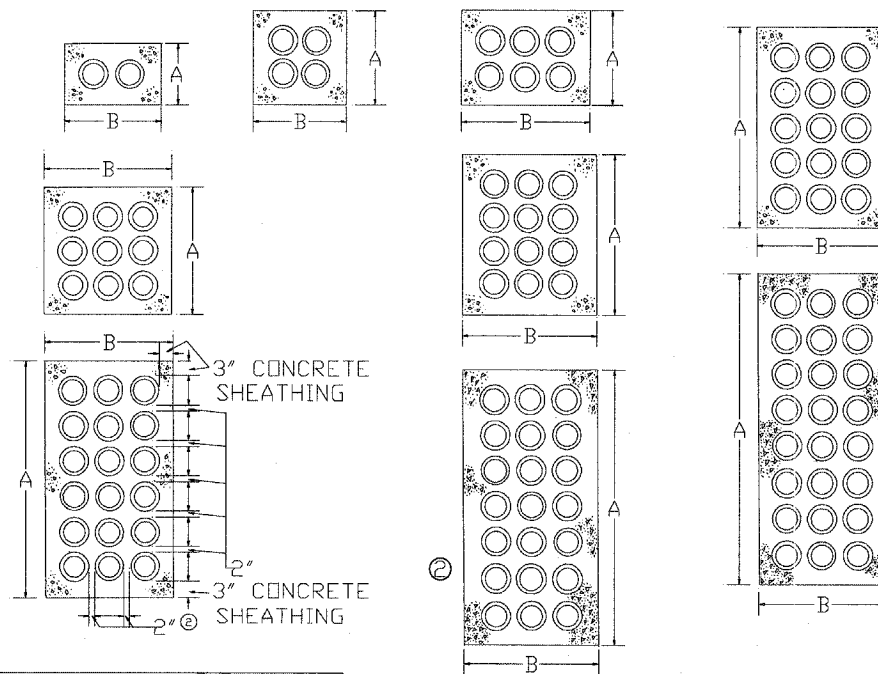
CONCRETE SHALL CONSIST OF THE FOLLOWING MIX:

- 1 PART TYPE 1 PORTLAND CEMENT
- 2 PARTS #2 TORPEDO SAND
- 2 PARTS PEA GRAVEL (NOT CRUSHED STONE)
- 1/2 BAG OF FLY ASH SHALL BE ADDED TO THE MIX FOR EACH BAG OF PORTLAND CEMENT USED.
- FOR AN ALTERNATIVE TO PORTLAND CEMENT AND FLY ASH, LUMNITE CEMENT SHALL BE SPECIFIED. INCLUDE AIR ENTRAINMENT AGENT TO ENTRAIN 7 1/2 PERCENT OF AIR IN CONCRETE.

INCLUDING FREE SURFACE MOISTURE IN THE AGGREGATES OF NOT MORE THAN 6 GALLONS OF WATER PER BAG OF CEMENT SHALL BE USED.

MINIMUM SLUMP SHALL BE 2 INCHES AND MAXIMUM SLUMP IS 4 INCHES.

CONDUIT RUN FORMATIONS BETWEEN MANHOLES



NO. OF DUCTS	DIMENSIONS (2) (3)			
	PLASTIC CONDUIT			
	5" CONDUIT		6" CONDUIT	
	A *	B *	A *	B *
2	11 3/4"	19"	12 3/4"	21 1/2"
4	19"	19"	21 1/2"	21 1/2"
6	19"	26 1/2"	21 1/2"	30"
9	26 1/2"	26 1/2"	30"	30"
12	33 3/4"	26 1/2"	38 3/4"	30"
15	41"	26 1/2"	47 1/2"	30"
18	48 1/4"	26 1/2"	55 3/4"	30"
21	55 1/2"	26 1/2"	64 3/4"	30"
24(3X8)	63"	26 1/2"	73"	30"
24(4X6)	48 1/4"	34"	55 3/4"	38 3/4"

* DIMENSIONS ARE TO THE NEXT LARGER 1/4"

NOTES:

APPLICATION

- THIS STANDARD SHALL BE USED FOR THE ARRANGEMENT OF CONDUIT FORMATIONS BETWEEN MANHOLES.

INFORMATION

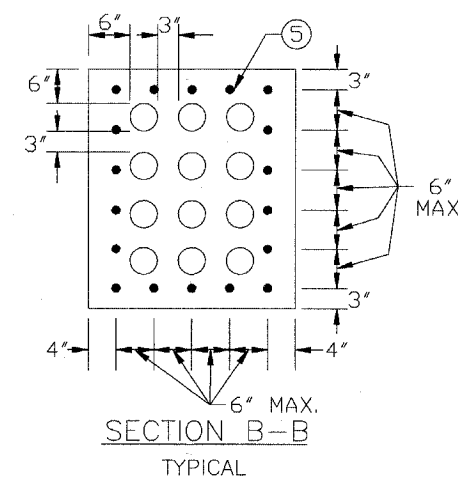
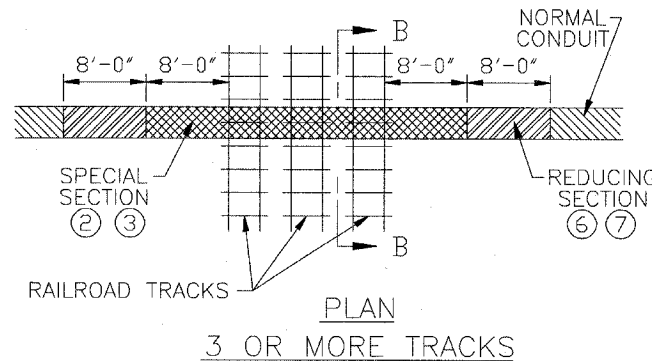
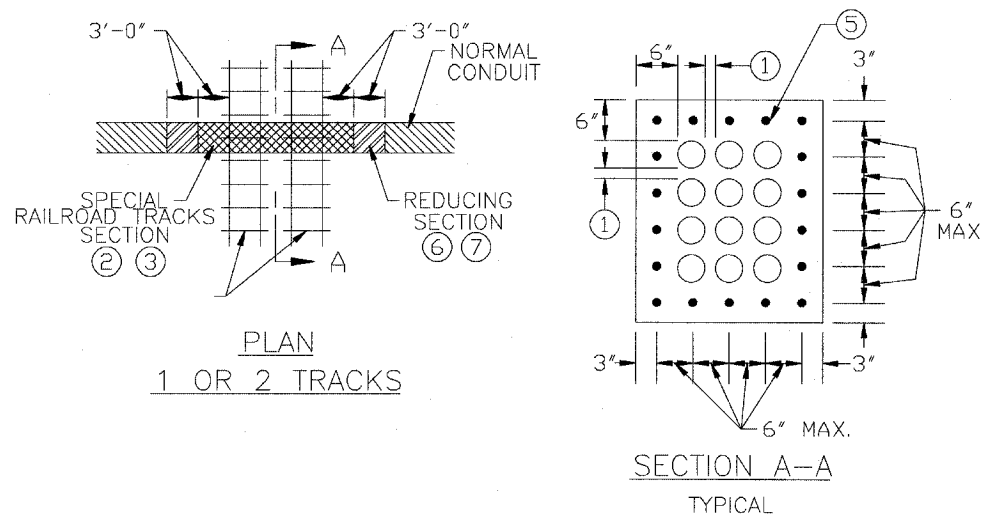
- 1 THIS STANDARD COVERS THE ARRANGEMENT OF THE CONDUIT IN CONDUIT RUNS AND LATERALS.
- 2 THE SEPARATION BETWEEN CONDUITS SHALL BE 2" INCHES. CONCRETE SHEATHING SHALL BE 3" INCHES THICK EXCEPT WHERE A CONDUIT RUN IS UNDER RAILROAD SWITCH TRACKS OR MAIN LINE RAILROAD TRACKS. THEN THE SHEATHING SHALL BE AS SHOWN ON PAGE 7.
- 3 THESE DIMENSIONS REFLECT THE USE OF PLASTIC BASE SPACERS WHICH PROVIDES A HORIZONTAL AND VERTICAL SEPARATION AT OR GREATER THAN THE MINIMUM REQUIREMENTS.

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CONDUIT RUN RR TRACK CROSSING

SWITCH TRACKS OR MAIN LINE TRACKS



NOTES:

APPLICATION

- THIS STANDARD SHALL BE USED FOR THE FORMATION OF CONDUIT RUNS THAT CROSS UNDER RAILROAD TRACKS.

INFORMATION

- 1 NORMAL DUCT SPACING AS ON PAGE 6 (2 INCHES).
- 2 TOP OF SPECIAL SECTION TO BE AT LEAST 50" BELOW TOP OF RAIL.
- 3 CONCRETE MIXTURE OF SPECIAL SECTION TO BE OF DENSE SHEATHING, SEE PAGE 5.
- 4 LEAVE TRACK SHORING IN PLACE AT LEAST 7 DAYS UNLESS QUICK SETTING CEMENT IS USED.
- 5 #6 GRADE 60 REINFORCING BARS, OVERLAP THE ENDS 18".
- 6 DUCTS OF REDUCING SECTION TO BE LAID AS REVERSE CURVE.
- 7 REDUCE HORIZONTAL AND VERTICAL SEPARATION OF DUCTS FROM 3" TO NORMAL, AND THE ENVELOPE FROM 6" TO 3". CONCRETE MIXTURE OF REDUCING SECTION TO BE NORMAL SHEATHING.

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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES -- ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	MAP NO. -	CID FILE NO. 0058199001C15.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-06-04	
DATE 08-18-07	WORK PERMIT NO. 58199	SCALE NTS	SHEET 15 OF 23

CONDUIT ENTRANCE INTO MANHOLE/HANDHOLE
 APPLICABLE TO SWITCHGEAR AND TRANSFORMER VAULTS

GENERAL
 CONDUIT ENTRANCES INTO MANHOLES/HANDHOLES SHALL NORMALLY BE MADE WITH PLASTIC ENTRANCE BELLS PER FIGURE 1 OR 2. THE ENTRANCE CONDUIT SHALL BE PLASTIC OR STEEL ENCASED IN CONCRETE AS PER FIGURE 1 AND 2 BELOW, SPECIFIED BY THE ENGINEER ON THE CONSTRUCTION DRAWINGS.

POCKETS
 DUCT POCKETS SHALL BE PROVIDED IN WALLS WHERE SPECIFIED ON CONSTRUCTION DRAWINGS. POCKET NOT REQUIRED ON NEWER STYLE MANHOLE DESIGNS (FIGURE 2). TYPICAL POCKET DIMENSIONS ARE INDICATED BELOW ON FIGURE 1.

CONDUIT SPACING
 CONDUIT SHALL NORMALLY BE SUPPORTED BY VERTICAL AND HORIZONTALLY INTERLOCKED PLASTIC SPACERS TO PROVIDE ALIGNMENT WITH PLASTIC ENTRANCE BELL UNITS AT 8 1/4 IN. SPACING.

ENTRANCE BELL UNITS

PLASTIC 6 INCH ENTRANCE BELLS, DPU-E# 285-103-00100 SHALL BE USED ON CONDUIT ENTRANCES TO MANHOLES.

ENTRANCE PIPES

GALVANIZED STEEL CONDUIT, M30-1550, SHALL BE USED FOR ALL BENDS. PIPES INTENDED FOR CABLES ON INITIAL INSTALLATION SHALL BE CAPPED WITH PLUGS (DPU-E# 285-103-00090) TO PREVENT CONTAMINATION FROM ENTERING THE PIPES.

INSTALLATION METHODS

EVERY EFFORT SHALL BE MADE TO INSURE A WATERIGHT INSTALLATION OF ENTRANCE PIPES. WHERE PIPES ARE INSTALLED THROUGH AN OPENING LEFT IN A MANHOLE, OR BROKEN OUT OF AN EXISTING MANHOLE WALL, SURFACES SHALL BE CLEANED, WETTED AND COVERED WITH A COATING OF 3 TO 1 SAND AND CEMENT MORTAR. IF BRICKWORK IS EXISTING ON THE INNER FACE OF WALL, IT SHALL ALSO BE COATED WITH A SAND AND CEMENT MORTAR. AN ALTERNATE PROCEDURE IS TO DRILL HOLES IN THE WALL AND GROUT THE PIPES IN PLACE WITH A SAND AND CEMENT MORTAR. THE INSIDE SURFACE OF THE HOLES SHALL BE ROUGHENED TO OBTAIN A STRONG AND WATERIGHT BOND.

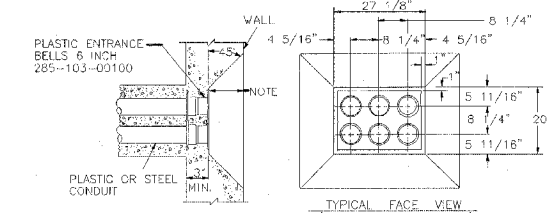


FIG. 1 MANHOLE ENTRANCE WITH PLASTIC TERMINATORS (OLDER STYLE) FOR PLASTIC OR STEEL CONDUIT (POCKET TYPE)

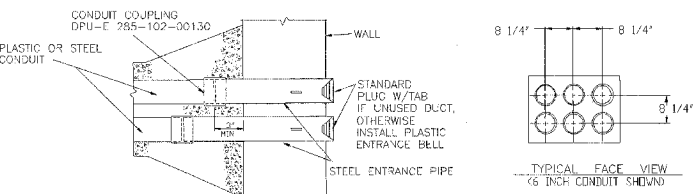
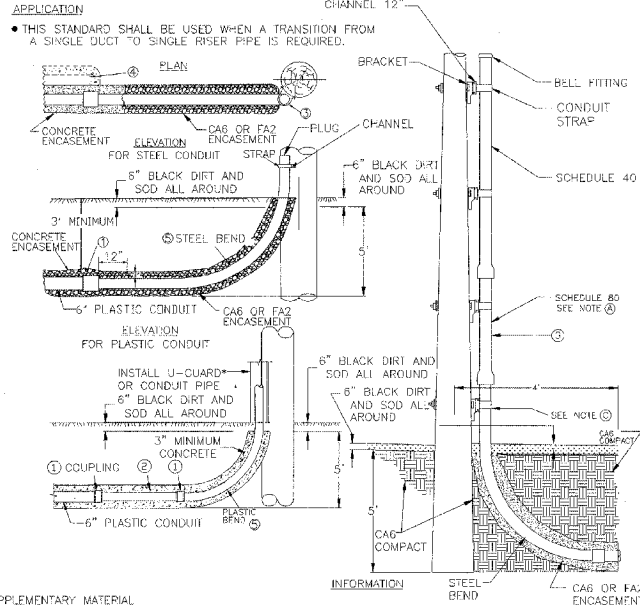


FIG. 2 ENTRANCE IN MANHOLE/HANDHOLE (NEWER STYLE)

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ELECTRIC STANDARDS		PAGE 8 OF 11 C30-1900

CONDUIT TO RISER AT POLE

DUCTBANK CONDUIT TO RISER AT POLE FOR PLASTIC OR STEEL CONDUIT



SUPPLEMENTARY MATERIAL

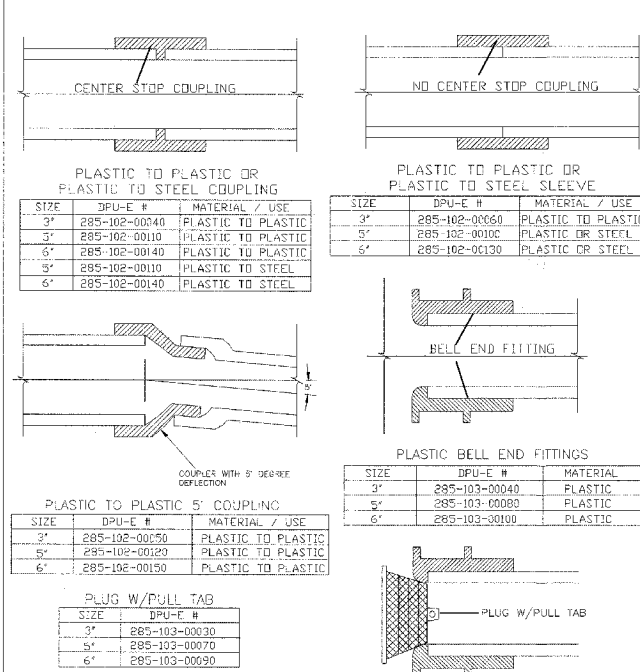
- IF BELLED END OF PLASTIC CONDUIT CAN BE CONNECTED TO STEEL BEND OMIT COUPLING.
- CUT OUT SO THAT A GOOD CONNECTING FIT CAN BE MADE BETWEEN THE CONDUITS AND BENDS.
- LOCATE THE BEND ON A QUADRANT OF THE POLE WHERE IT IS THE LEAST SUSCEPTIBLE TO DAMAGE BY VEHICLES.
- IF SPARE DUCT IS INSTALLED, PLUG AT BOTH ENDS AND ENCASE IN CONCRETE WHEN NECESSARY (SPARE DUCT REQUIRED).
- SCHEDULE 80 PVC DOES NOT REQUIRE CONCRETE ENCASEMENT.
- CONDUIT TO A U-GUARD RISER FOLLOWS C20-5222, FOR USE AS MAINTENANCE ONLY.
- ALL MATERIALS SUPPLIED BY THE CITY.

NOTES:

- FIRST SECTION ABOVE ELBOW MUST BE SCHEDULE 80.
- FOR LARGER POLES (>50"), ADDITIONAL CONDUIT AND HARDWARE MAY BE REQUIRED.
- STEEL BEND AND POLE BRACKET EXISTING FROM PREVIOUS DUCT BANK INSTALLATION.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06
ELECTRIC STANDARDS		PAGE 9 OF 11 C30-1900

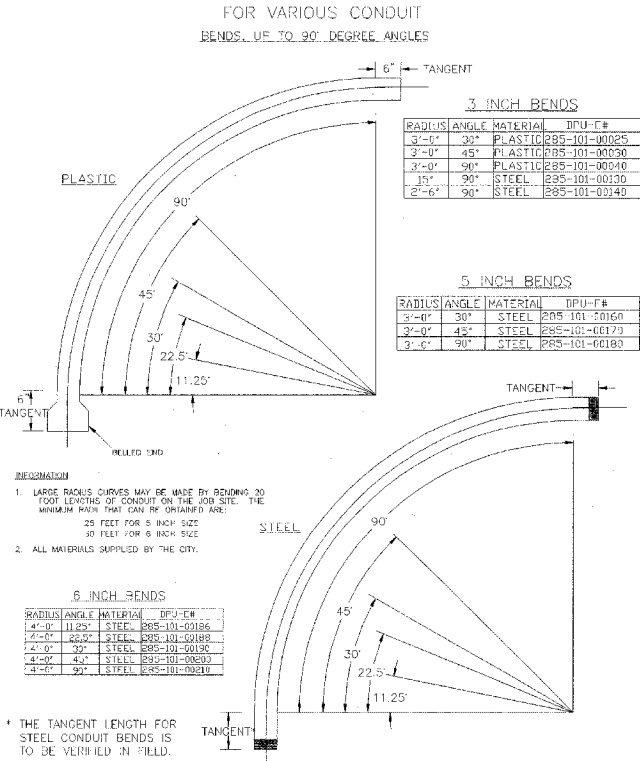
PLASTIC CONDUIT COUPLINGS FOR CONCRETE ENCASED PLASTIC CONDUIT



APPLICATION
 THIS STANDARD SHALL BE USED FOR THE INSTALLATION OF CONDUIT COUPLINGS ON CONCRETE ENCASED PLASTIC CONDUIT DUCTBANK.

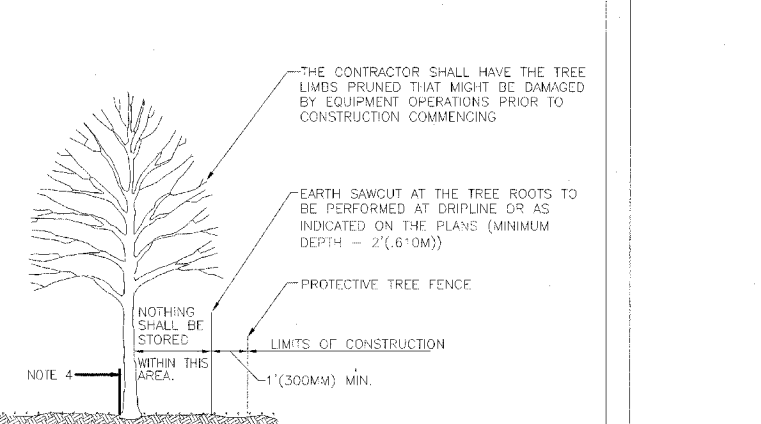
NAPERVILLE PUBLIC UTILITIES DEPARTMENT	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06
ELECTRIC STANDARDS		PAGE 10 OF 11 C30-1900

PLASTIC & STEEL CONDUIT BENDS FOR VARIOUS CONDUIT



NAPERVILLE PUBLIC UTILITIES DEPARTMENT	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06
ELECTRIC STANDARDS		PAGE 11 OF 11 C30-1900

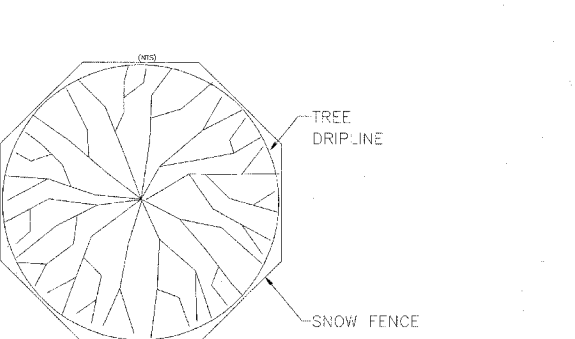
TREE PROTECTION DETAIL



- NOTE:**
- IF A UTILITY MUST BE WITHIN 15 FEET OF A TREE TRUNK, IT IS RECOMMENDED THAT IT BE AUGERED.
 - ALL TREES PROTECTED SHALL BE DEEP ROOT FERTILIZED.
 - ALL TREES SHALL BE WATERED.
 - PROTECT TREES WITH PLANKS FOR 10' ABOVE GROUND AND COMPLETELY AROUND TREE.
 - ALL MATERIALS SUPPLIED BY CONTRACTOR.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	TREE PROTECTION DETAIL	DATE: 05-01-05
ELECTRIC STANDARDS		PAGE 1 OF 1 58199-101

RECOMMENDED PRACTICES FOR TREES TO BE SAVED



- SNOW FENCE SHALL EXTEND TO THE DRIPLINE OF THE TREE. THE SNOW FENCE SHALL BE HIGH ENOUGH SO AS TO BE VISIBLE TO ALL CONSTRUCTION PERSONNEL.
- GRADE CHANGES, UTILITY TRENCHES, STORAGE OF CONSTRUCTION MATERIAL, DUMPING OF WASTE OR STORAGE OF CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED WITHIN SNOW FENCING.
- IF A UTILITY MUST BE WITHIN 15'(4.57M) OF A TREE TRUNK, IT IS RECOMMENDED THAT IT BE AUGERED.
- ALL TREES TO BE SAVED WHICH HAVE BEEN SUBJECTED TO CONSTRUCTION ACTIVITY WITHIN THE DRIPLINE SHOULD BE SELECTIVELY THINNED 10% BY AN ARBORIST SKILLED AT THE SELECTIVE THINNING PROCEDURE. NONE OF THE TREES SHALL BE TOPPED, HEADED BACK, SKINNED (REMOVAL OF THE INTERIOR BRANCHES), OR CLIMBED WITH SPIKES. ALL DEAD WOOD SHOULD BE REMOVED TO AVOID HAZARD.
- IT IS RECOMMENDED THAT FOLLOWING CONSTRUCTION, TREES BE MAINTAINED IN THEIR NATIVE CONDITION. NO LAWN SHOULD BE PLACED AROUND THE TREES. IT IS RECOMMENDED THAT THE AREA BE MULCHED WITH 2"(50MM) OF DECOMPOSED LEAVES AND 2"(50MM) OF WOOD CHIPS OR BARK.
- ALL TREES PROTECTED SHALL BE DEEP ROOT FERTILIZED.
- ALL TREES SHALL BE WATERED.
- ALL MATERIALS SUPPLIED BY CONTRACTOR.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	RECOMMENDED PRACTICES FOR TREES TO BE SAVED	DATE: 05-01-05
ELECTRIC STANDARDS		PAGE 1 OF 1 58199-102

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	17	82
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT 83961	

MATERIAL SUPPLIED BY THE CITY OF NAPERVILLE
BAILEY RD. BRIDGE DUCT BANK (W.F. #58199)

ITEM DESCRIPTION	PART NO.	HTE CODE	QTY.	UNIT
VAULT, SWITCHGEAR, 74"x76" FIBERCRETE	284-101-00010	DEVA	4	EACH
CONDUIT 3" DIA SCHEDULE 40 PVC PIPE	285-100-00040	D3C	1080	FEET
CONDUIT 6" DIA SCHEDULE 40 PVC PIPE	285-100-00070	D6C	9420	FEET
CONDUIT 5" DIA SCHEDULE 40 PVC PIPE	285-100-00060	D5C	1720	FEET
ELBOW 6" STEEL 48" RADIUS, 90°	285-101-00210	D6B90S	4	EACH
ELBOW 6" STEEL 48" RADIUS, 45°	285-101-00200	D6B45S	14	EACH
ELBOW 6" STEEL 48" RADIUS, 22°	285-101-00188	D6B22S	24	EACH
ELBOW 6" STEEL 48" RADIUS, 11°	285-101-00186	D6B11S	24	EACH
ELBOW 5" STEEL 36" RADIUS, 90°	285-101-00100	D5B90S	12	EACH
ELBOW 5" STEEL 36" RADIUS, 30°	285-101-00080	D5B30S	2	EACH
ELBOW 3" SCH. 40 PVC 36" RADIUS, 90°	285-100-00040	D3B90P	6	EACH
COUPLING SLEEVE 6" PVC LONG LINE	285-102-00130	D6V	32	EACH
COUPLING 6" LONG LINE SCHEDULE 40 PVC	285-102-00140	D6L	32	EACH
COUPLING 6" SCHEDULE 40 PVC 5'	285-102-00150	D6L5	40	EACH
COUPLING SLEEVE 5" PVC LONG LINE	285-102-00070	D5V	10	EACH
COUPLING 5" LONG LINE SCHEDULE 40 PVC	285-102-00080	D5L	10	EACH
COUPLING 5" SCHEDULE 40 PVC 5'	285-102-00120	D5L5	20	EACH
COUPLING SLEEVE 3" PVC LONG LINE	285-102-00030	D3V	8	EACH
COUPLING 3" LONG LINE SCHEDULE 40 PVC	285-102-00065	D3L	8	EACH
COUPLING 3" SCHEDULE 40 PVC 5'	285-102-00040	D3L5	16	EACH
BELL FITTING PVC 6" SCHEDULE 40	285-103-00040	D6F	32	EACH
BELL FITTING PVC 5" SCHEDULE 40	285-103-00080	D5F	12	EACH
BELL FITTING PVC 3" SCHEDULE 40	285-103-00040	D3F	8	EACH
PLUG, PVC 6" WITH PULL TAB	285-103-00030	D6P	46	EACH
PLUG, PVC 5" WITH PULL TAB	285-103-00070	D5P	10	EACH
PLUG, PVC 3" WITH PULL TAB	285-103-00030	D3P	10	EACH
CEMENT PVC QUARTS WITH BRUSH 24HR DRY (SUMMER)	285-199-00090	DMG	5	EACH
SPACER, BASE PVC, 6"	285-199-00170	D6R	36	EACH
SPACER, INTERMEDIATE PVC 6"	285-199-00180	D6R1	100	EACH
DETECTABLE MULE TAPE, 1250 LB, 3,000' REEL	450-024-00010	D0DT	3	REEL
BLOW LINE, 6,500' IN PAILS/ 200# BREAK STRENGTH	450-024-00006	D0M	1	EACH
HANDHOLE 4'X8' (FIBERCRETE)	284-104-00030	DEH8	4	EACH
HANDHOLE 4'X6' (FIBERCRETE)	284-104-00020	DEH6	3	EACH
HANDHOLE 3'X5' (FIBERCRETE)	284-104-00010	DEH5	2	EACH
STUD DRIVING FOR END ROD	283 156 00050	UGDRS	8	EACH
STRAP 6" CONDUIT (RISER)	285 199 00050	DRC6	12	EACH
CONDUIT, SCH 80 PVC 6"	285 100 00075	DRC6	20	EACH
BRACKET, POLE 3"	285 199 00005	DRC6	6	EACH
CHANNEL 12"	285 199 00070	DRC6	6	EACH
CONDUIT, SCH 40 PVC 6"	285 100 00070	DRC6	40	EACH
BELL FITTING, PVC 6"	285 103 00100	DRC6	2	EACH

- NOTES:**
- ALL MATERIALS NOT SHOWN BUT REQUIRED ARE SUPPLIED NEW BY THE CONTRACTOR FOR A COMPLETE JOB.
 - MATERIALS SUPPLIED BY THE CONTRACTOR ARE AS FOLLOWS:
 - ALL BRIDGE MATERIALS PURCHASE FROM CONDUX.
 - LIDS FOR VAULTS (SWITCH GEAR - 6 REQUIRED).
 - 6" RIGID GALVANIZED STRAIGHT 10 FEET LENGTH OF CONDUIT, STEEL PIPE, THREADED BOTH ENDS WITH COUPLING (36 PIECES REQUIRED).
 - ALL LANDSCAPING MATERIALS, BLACK DIRT, TREES, WATER, SOD, SEED, TREE PROTECTION, BUSHES, ROCK, STONE, MULCH ETC.
 - MISCELLANEOUS TRUCK STOCK.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE	MAP NO.	CAD FILE	DATE
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	-	0058199001C16.DWG	
PROJECT DESCRIPTION	DRAWN BY	PROJECT NO.	DATE
COORDINATED WITH BRIDGE IMPROVEMENT	JK	EU12-06-04	
DATE	WORK REQUEST NO.	GRID	DATE
05-16-07	58199		05-01-05
DESIGNED	BY	CHECKED	DATE
RPS			05-01-05
ENGINEER	APPN	SCALE	SHEET
		NTS	16 OF 23

GROUND ELECTRODE MEASUREMENT

SCOPE:
 GROUNDING TESTS SHALL BE DONE FOR MANHOLE GROUNDS, GROUND ROD CONNECTIONS AND COUNTERPOISE CONNECTIONS TO ENSURE THE INTEGRITY OF THE ELECTRODE INSTALLATION. TESTING OF THE GROUND SYSTEM AND CONNECTIONS SHALL BE DONE USING THE CLAMP-ON RESISTANCE TEST METHOD FOR GROUND RODS AND COUNTERPOISE.

CLAMP-ON GROUND RESISTANCE TEST (NORMAL TEST)/
 THREE POINT FALL OF POTENTIAL TEST (NORMAL TEST)

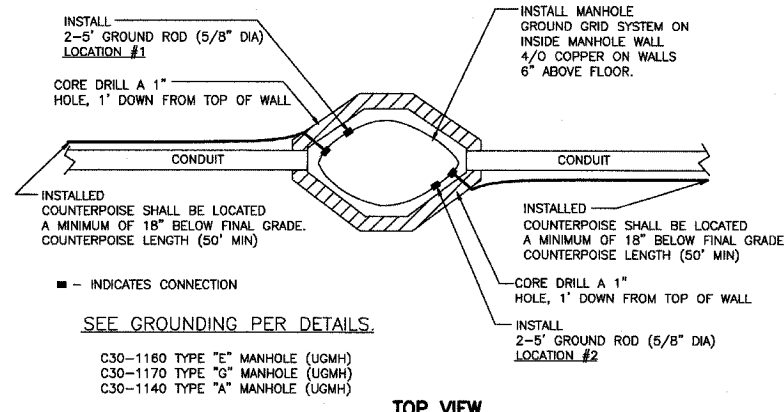
TESTS SHALL BE PERFORMED WHEN THE GROUND IS NOT FROZEN TO ELIMINATE HIGH RESISTANCE READINGS IN THE MANHOLES. THE CLAMP ON TEST SHALL BE DONE AT EACH GROUND ROD AND COUNTERPOISE CONNECTION AND FROM THE MANHOLE PERIMETER GROUND CABLE TO THE GROUND ROD. AEMC INSTRUMENT MODEL 3710, 3730, OR EQUIVALENT MAY BE USED. THE CLAMP ON GROUND METER SHALL BE CLAMPED ON TO THE POWER NEUTRAL BETWEEN THE UTILITY TRANSFORMER, POLE GROUND, SWITCH GEAR GROUND AND THE SITE GROUND. THE USER MUST BE AWARE THAT A 0.7 Ω READING INDICATES A CONTINUITY LOOP AND NOT A GROUND RESISTANCE. IF A FLOWER NEUTRAL IS NOT CLOSE TO THE NEW INSTALLATION THEN THE THREE POINT FALL OF POTENTIAL, GROUND RESISTANCE CAN BE USED.

ALL TESTING MATERIAL AND TOOLS ARE FURNISHED BY THE CONTRACTOR. THIS SPECIFICATION IS USED TO TEST HANDHOLES, SWITCH GEAR VAULTS, MANHOLES AND OTHER EQUIPMENT AS DIRECTED.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 1 of 7 58199-103
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CLAMP ON METER TEST STANDARD MANHOLE

(GROUNDING WITH GROUND RODS AND COUNTERPOISE)

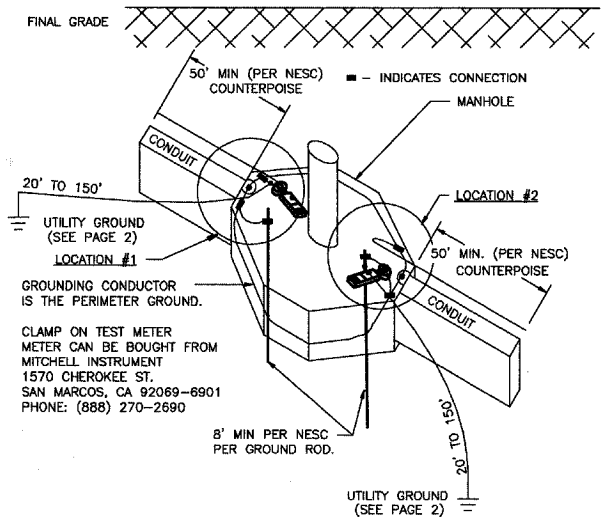


SEE GROUNDING PER DETAILS.

- C30-1160 TYPE "E" MANHOLE (UGMH)
- C30-1170 TYPE "G" MANHOLE (UGMH)
- C30-1140 TYPE "A" MANHOLE (UGMH)

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 2 of 7 58199-103
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SAMPLE INSTALLATION (CLAMP ON METER)



NOTE:

OBSERVE ALL SAFETY REQUIREMENTS AND THEN REMOVE COVERING ON THE GROUND CONDUCTOR IF PRESENT AND PROVIDE SUFFICIENT ROOM FOR THE MODEL 3710/3730 JAWS, WHICH MUST BE ABLE TO CLOSE EASILY AROUND THE CONDUCTOR. THE JAWS CAN BE PLACED AROUND THE GROUND ROD ITSELF.
 NOTE: THE CLAMP MUST BE PLACED SO THAT THE JAWS ARE IN AN ELECTRICAL PATH FROM THE SYSTEM NEUTRAL OR GROUND WIRE TO THE GROUND ROD, OR COUNTERPOISE.

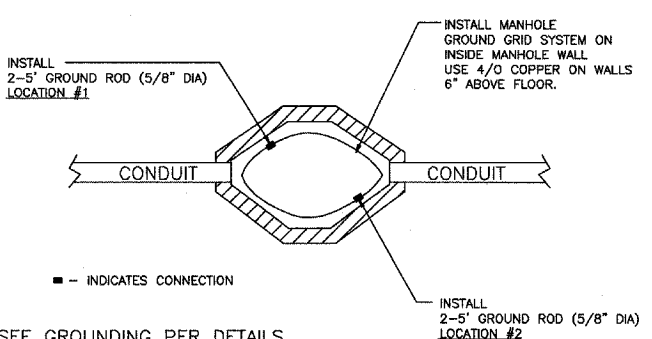
SELECT THE CURRENT RANGE "A", CLAMP ON TO THE GROUND CONDUCTOR AND MEASURE THE GROUND CURRENT. THE MAXIMUM CURRENT RANGE IS 30 A. IF THE GROUND CURRENT EXCEEDS 5 A, GROUND RESISTANCE MEASUREMENTS ARE NOT POSSIBLE. DO NOT PROCEED FURTHER WITH THE MEASUREMENT. REMOVE THE CLAMP-ON TESTER FROM THE CIRCUIT, NOTING THE LOCATION FOR MAINTENANCE, AND CONTINUE TO THE NEXT TEST LOCATION. RECORD CURRENT ON DATA SHEET.

AFTER NOTING THE GROUND CURRENT, SELECT THE GROUND RESISTANCE RANGE "Ω" (OHM) AND MEASURE THE RESISTANCE DIRECTLY. THE READING YOU MEASURE WITH THE 3710/3730 INDICATES THE RESISTANCE OF THE ROD, RESISTANCE OF THE COUNTERPOISE, BUT ALSO OF THE CONNECTION TO THE SYSTEM NEUTRAL AND ALL BONDING CONNECTIONS BETWEEN THE NEUTRAL AND THE ROD.

RECORD 2 OR 4 RESISTANCE READINGS ON DATA SHEET. IF ANY ONE READING IS ABOVE 25 OHMS, CONTACT DPU-E IMMEDIATELY. SEND COMPLETED DATA SHEET TO THE PROJECT ENGINEER AND RECORDS.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 3 of 7 58199-103
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STANDARD MANHOLE (GROUNDING WITH RODS)

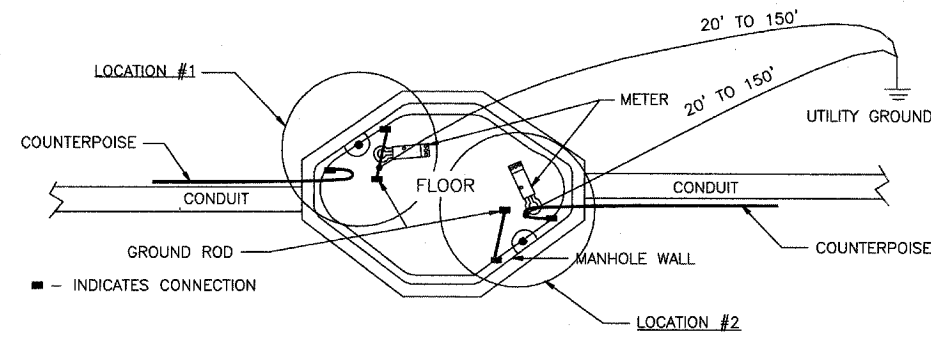


SEE GROUNDING PER DETAILS.

- C30-1160 TYPE "E" MANHOLE (UGMH)
- C30-1170 TYPE "G" MANHOLE (UGMH)
- C30-1140 TYPE "A" MANHOLE (UGMH)

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 4 of 7 58199-103
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PLACEMENT OF METER FOR READING



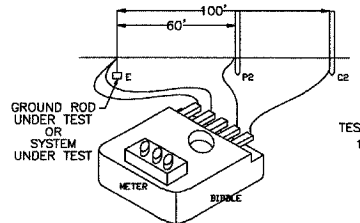
- UTILITY GROUND:
- TRANSFORMER CASE
- SWITCH GEAR CASE
- FUSE/PLUG CAN CASE
- NEUTRAL ON CABLE
- GROUND ON POLE
- INDEPENDENT GROUND SET

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 4 of 7 58199-103
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DATA SHEET FOR RECORDING GROUND RESISTANCE BY THE FALL OF POTENTIAL METHOD.

INSPECTOR _____ LOCATION _____ JOB NO. _____

TEST INSTRUMENT:
 MANUFACTURER: _____
 MODEL NO.: _____
 CALIBRATION DATE: _____



TEST METHOD USED
 1) 3 POINT ELECTRODE AC "FALL-OF-POTENTIAL"

LOCATION	TEST METHOD	NO. OF RODS	ROD SIZE & LENGTH	DISTANCE BETWEEN RODS (FT.)	AUX. ELECTRODE TEST POINT (FT.)	RESISTANCE OHMS	REMARKS
					P2 C2		

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 5 of 7 58199-103
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DATA SHEET FOR RECORDING GROUND RESISTANCE MEASUREMENT BY THE CLAMP ON GROUND RESISTANCE TEST METHOD

INSTALL FEET OF GROUND RODS TOTAL PER LOCATION		INSTALL FEET OF COUNTERPOISE TOTAL PER LOCATION		MEASURED RESISTANCE OF GROUND RODS (OHMS)		MEASURED RESISTANCE OF COUNTERPOISE (OHMS)		MEASURED RESISTANCE OF GROUND RODS AND COUNTERPOISE (OHMS)		SOIL CONDITION i.e. ROCK, CLAY SAND, WET OR DRY		METHOD OF CONNECTION TO GROUND RODS i.e. CADWELD BOLTED, IMPACT, CRIMP.		CURRENT READING (AMPS)		MEASURED WATER LEVEL IN MANHOLE (FT)		REMARKS	
LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2	LOCATION #1	LOCATION #2		

- NOTE:
 A HIGH READING INDICATES ONE OR MORE OF THE FOLLOWING:
 1) POOR GROUND RODS.
 2) OPEN GROUND CONDUCTOR.
 3) HIGH RESISTANCE, DUE TO POOR CONNECTIONS ON RODS, HARDWARE & CLAMPS.
 4) METER CLAMP IS IMPROPERLY CLOSED.
 5) FAULTY METER.

DATE: _____
 TYPE OF METER AND MFG.: _____
 MANHOLE NUMBER + TYPE: _____
 POLE NUMBER + SIZE: _____
 STREET ADDRESS: _____
 NAME OF PERSON PERFORMING TEST: _____
 V.F. # _____
 TEMPERATURE (AIR): _____ F
 SIZE OF GROUND RODS: 5/8 DIA COPPER CLAD, UNLESS NOTED
 SIZE OF CABLE FOR GROUND WIRE AND/OR COUNTERPOISE IS 4/0 COPPER (BARE) 7 STRAND, UNLESS NOTED

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 06-01-06 Page 6 of 7 58199-103
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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES -- ELECTRIC

CALL U.U.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	MAP NO. -	CAD FILED JOB 005819001C17.DWG
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EUT2-06-04
DATE 06-18-07	WORK REQUEST NO. 58199	ISSUED BY JK
ISSUED BY RFS	APPROVED BY JK	SCALE NTS
REVISION	1	SHEET 17 OF 23

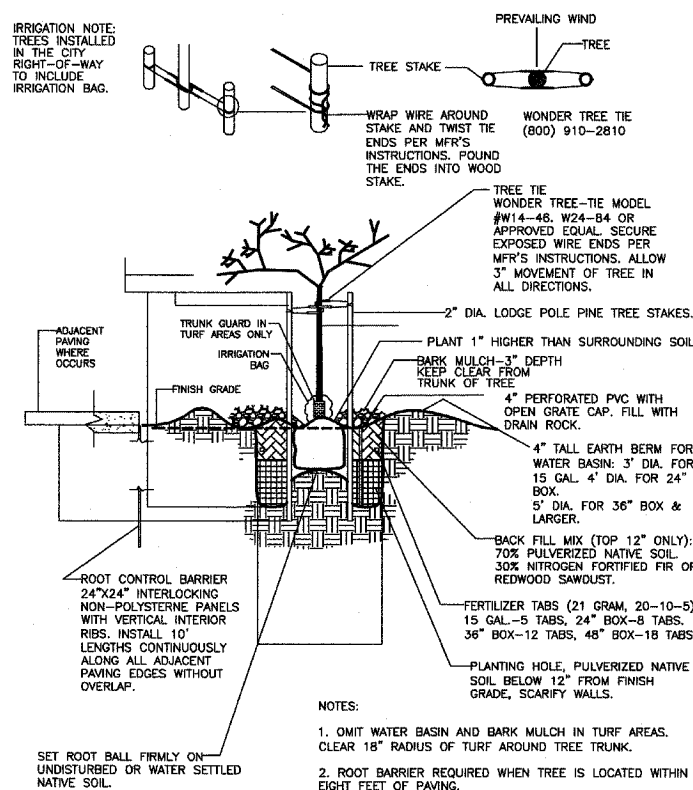
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	85
STA. 1+31.77			TO STA. 5+50.00	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

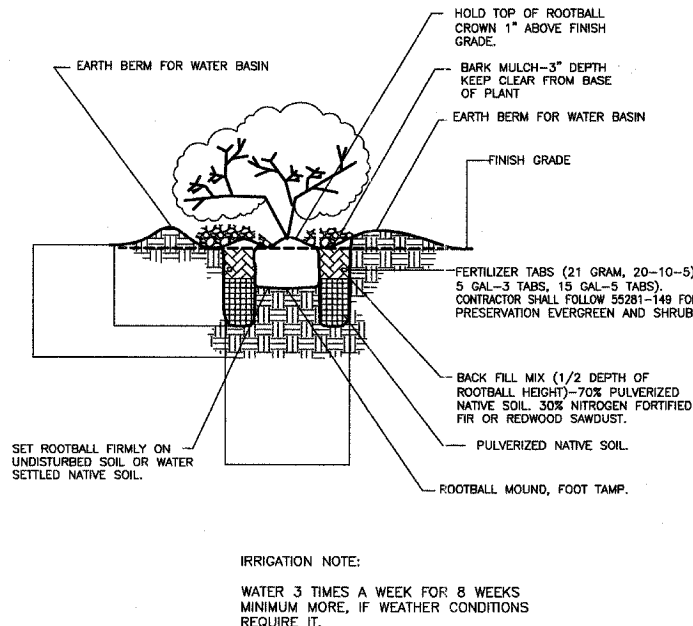
XL CONTRACTOR'S RESPONSIBILITY AND GUARANTEE

- 1) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL PLANTS FOR ONE YEAR FOLLOWING THE DATE OF PLACEMENT INCLUDING WATERING ALL PLANTS AT THE TIME OF PLANTING AND AS NEEDED THROUGHOUT THE GROWING SEASON. HE SHALL VISIT THE SITE MONTHLY DURING THE GROWING SEASON TO CHECK THE PLANT'S CONDITION, AND SHALL REPORT HIS FINDINGS TO THE OWNER'S REPRESENTATIVE.
- 2) IF AT THE TIME OF HIS VISIT, OR DURING A ROUTINE CHECK BY THE OWNER'S REPRESENTATIVE, IT IS DETERMINED THE PLANTS NEED WATER, THE PLANTS SHALL BE WATERED WITHIN THREE DAYS FROM THAT DATE. NOTICE WILL BE GIVEN THE CONTRACTOR BY THE OWNER'S REPRESENTATIVE BY TELEPHONE AND BY LETTER.
- 3) ALL PLANTS, WHICH WITHIN EIGHTEEN MONTHS FOLLOWING THE DATE OF THE PLANTING AND ACCEPTANCE BY THE OWNER, ARE IN AN UNHEALTHY CONDITION OR ARE UNSHAPELY DUE TO DEAD OR DYING PARTS, EXCEPT THOSE PLANTS WHOSE CONDITION IS CAUSED BY VANDALISM OR BY RABBITS, SHALL BE REPLACED AT NO EXTRA COST TO THE OWNER.
- 4) ALL REPLACEMENT PLANTS SHALL BE SELECTED, DELIVERED AND PLANTED IN ACCORDANCE WITH THIS SPECIFICATION. ALL REPLACEMENT PLANTS SHALL BE GUARANTEED FOR EIGHTEEN MONTHS FROM TIME OF REPLACEMENT AND SHALL RECEIVE THE SAME CARE AND TREATMENT AS THE ORIGINAL PLANTING.
- 5) THE CONTRACTOR WITH THE WRITTEN REPORT FROM THE ARBORIST, AND THE OWNER'S REPRESENTATIVE WILL DETERMINE, AND WILL AGREE IN WRITING, THE CAUSES OF THE PLANT'S DEATH OR DISFIGURATION. THE CONTRACTOR WILL RECEIVE IN WRITING A LIST OF ALL PLANTS THAT SHALL BE REPLACED. UPON RECEIPT OF THIS LIST, THE CONTRACTOR SHALL, WITHIN THE SAME PLANTING SEASON AS THE DATE OF THE LIST, REMOVE ALL PLANTS ON THE LIST AND REPLACE THEM WITH HEALTHY PLANTS.
- 6) THE CONTRACTOR SHALL FURNISH AND HAVE AVAILABLE DURING THE LENGTH OF THE PROJECT A LICENSED, CERTIFIED ARBORIST FOR RECOMMENDATIONS, PURCHASE OF PLANT MATERIALS, DIRECTIONS, SUGGESTION AND GENERAL OVERSIGHT OF ALL ROOT PRUNING AND PLANTING OPERATIONS.
- 7) CONTRACTOR SHALL FURNISH, DELIVER, INSTALL, STORE, AND MAINTAIN ALL PLANT MATERIALS INCLUDING TREES, SHRUBS AND FLOWERS FOR THE DURATION OF THE CONTRACT AND GUARANTEE PERIOD. ALL WATERING AND WINTER PROTECTION AT THE CONTRACTOR'S COST AND IS INCLUDED IN THE PRICING.
- 8) THE CONTRACTOR SHALL FURNISH ALL MATERIALS, FEES, TOOLS, FERTILIZER, WATER AND PLANT MAINTENANCE ON THIS SPECIFICATION PLUS ALL LANDSCAPING MATERIALS AND LABOR.
- 9) CONTRACTOR SHALL PRESERVE ALL TREES, SHRUBS AND EVERGREENS.

TREE PLANTING "DETAIL"



EVERGREEN AND SHRUB PLANTING "DETAIL"



TREE SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS

DBH = DIAMETER OF TRUNK AT BREAST HEIGHT (4 1/2 FEET FROM GROUND LEVEL)

THE CITY REGULATES THE REMOVAL AND DESTRUCTION OF EXISTING TREES TO PRESERVE THE VISUAL BEAUTY THAT TREES PROVIDE TO THE RESIDENTS AND VISITORS TO THE CITY. ENVIRONMENTAL BENEFIT THEY PROVIDE SUCH AS REDUCING HEAT ISLAND AND CONTROLLING WIND AND EROSION, AND THEIR CONTRIBUTION TO PROPERTY VALUES. TREES, SHRUBS AND EVERGREENS HAVE VALUE AS INDIVIDUAL TREES, SHRUBS OR EVERGREENS AS GROUPS OF TREES, SHRUBS OR EVERGREENS, AND AS A COMPONENT OF THE OVERALL URBAN FOREST. TO THE EXTENT THAT TREES, SHRUBS OR EVERGREENS ARE CONTRIBUTING IN THESE WAYS TO THE PUBLIC WELFARE OF THE PEOPLE OF THE CITY, TREES, SHRUBS OR EVERGREENS WILL BE PROTECTED AND PRESERVED THROUGH THE REGULATION OF THEIR REMOVAL AND DAMAGE TO THEM.

TRANSMISSION LINE PROJECTS AND TREE REMOVALS:

THE CITY REQUIRES THAT ALL TREES WITH A DBH OF 3" OR MORE, OTHER THAN COMMERCIAL NUT AND FRUIT BEARING TREES AND ARE PART OF ANY TRANSMISSION LINE WORK CAN NOT BE REMOVED WITHOUT A COMPLETED TREES AND SHRUBS LAYOUT THAT INCLUDES AN APPROVAL FROM THE CITY.

INFORMATION AVAILABLE ON TREES FROM OTHER SOURCES:

THE NATIONAL ARBOR DAY FOUNDATION PRODUCES A TREE CITY USA BULLETIN THAT PROVIDES A STRAIGHT FORWARD APPROACH TO TREE CARE. DOWNLOAD THE BULLETIN FROM THE URBAN FOREST ECOSYSTEMS INSTITUTE, SPONSORED BY CALIFORNIA POLYTECHNIC STATE UNIVERSITY.

THE INTERNATIONAL SOCIETY OF ARBORICULTURE PRODUCES A NUMBER OF CONSUMER ORIENTED BROCHURES TO HELP PEOPLE PURCHASE AND CARE FOR TREES.

THE ARBOR DAY FOUNDATION HAS A TRAINING AND AWARDS PROGRAM FOR DEVELOPERS COMMITTED TO TREE PRESERVATION THROUGH DEVELOPMENT.

MINIMUM LANDSCAPE REQUIREMENTS & POLICIES:

THE FOLLOWING LIST OF ITEMS AND MINIMUM REQUIREMENTS MUST BE COMPLETED BY THE CONTRACTOR/ARBORIST PRIOR TO PERFORMING ANY WORK. THERE MAY BE OTHER CONDITIONS THAT PERTAIN TO AN INDIVIDUAL PROJECT THAT ARE NOT LISTED BELOW. THE CONTRACTOR SHALL BE MADE AWARE OF SUCH REQUIREMENTS DURING THE BID MEETING OR BY LETTER.

- 1) THE CONTRACTOR/ARBORIST SHALL SUBMIT COMPLETED LANDSCAPE PLANS INCLUDING SPECIFICATIONS IN COMPLIANCE WITH ALL CITY REQUIREMENTS. THE LANDSCAPE PLANS SHALL DENOTE THE LOCATION OF ALL EXISTING AND PROPOSED ON-SITE LANDSCAPE MATERIALS AND STREET TREES INCLUDING A COMPLETE KEYED PLANT LIST SHOWING QUANTITIES, CONTAINER SIZES, AND CORRECT BOTANICAL DESIGNATIONS OF ALL LANDSCAPE MATERIALS; DESIGN DETAILS FOR SUCH LANDSCAPE ARCHITECTURAL FEATURES AS WALLS OR FENCES, LIGHTING, PAVING PATTERNS, ARBORS, BENCHES, FOUNTAINS AND OTHER LIKE FEATURES. ALL AREAS NOT OTHERWISE OCCUPIED BY STRUCTURE OR PAVED AREAS SHALL BE LANDSCAPED AND WATERED BY AN ADEQUATE WATERING SYSTEM.
- 2) EXISTING AND PROPOSED TREES MUST BE SHOWN IN THE STREET RIGHT-OF-WAY OR EASEMENT AND IDENTIFIED BY PROPOSED SPECIES. CITY TREES AND ALL TREES IN THE CITY RIGHT-OF-WAY REQUIRE BUZZERS.
- 3) THE CONTRACTOR/ARBORIST SHALL CONTACT THE CITY PRIOR TO TREE PLANTING FOR APPROVAL OF LOCATIONS, AND AFTER PLANTING FOR FINAL INSPECTION AND ACCEPTANCE OF ALL RIGHT-OF-WAY AND BACK-UP LANDSCAPING.
- 4) THE CONTRACTOR/ARBORIST SHALL CONTACT THE PROJECT ENGINEER FOR FINAL INSPECTION OF LANDSCAPING. THE CONTRACTOR/ARBORIST SHALL SUBMIT A LETTER TO THE CITY OF NAPERVILLE CERTIFYING THE PLANTING HAS BEEN INSTALLED IN CONFORMANCE WITH THE APPROVED PLANTING PLANS, SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY OF NAPERVILLE.

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NAPERVILLE PUBLIC UTILITIES DEPARTMENT	LANDSCAPING OVERHEAD OR UNDERGROUND (CONSTRUCTION SPECIFICATION)	DATE: 05-01-05 Page 10 of 11 58199-104
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NAPERVILLE PUBLIC UTILITIES DEPARTMENT	LANDSCAPING OVERHEAD OR UNDERGROUND (CONSTRUCTION SPECIFICATION)	DATE: 05-01-05 Page 11 of 11 58199-104
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TREE SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS

DBH = DIAMETER OF TRUNK AT BREAST HEIGHT (4 1/2 FEET FROM GROUND LEVEL)

- 1) A CONTINUOUS SHRUB PLANTING, 15-GALLON SIZE MINIMUM WILL SCREEN STRUCTURE FOUNDATION. 15-GALLON SIZE TREES AND SHRUB/GROUND COVER PLANTING MAY ALSO BE REQUIRED.
- 2) PLANTING PLAN MUST LIST TOTAL SQUARE FEET OF LANDSCAPE AREA AND TOTAL TREES, SHRUBS AND EVERGREEN ON PLAN.
- 3) THE CONTRACTOR/ARBORIST SHALL SHOW THE PLAN AND PROFILE ALL EXISTING TREES, SHRUBS AND EVERGREEN TO BE SAVED, RELOCATED OR REMOVED. EXISTING TREES 3" CALIPER AND LARGER TO BE REMOVED, REQUIRE APPROVAL FROM THE CITY. IF THERE ARE NO EXISTING TREES ON THE SITE, THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER TO DEVELOPMENT ORGANIZATION CERTIFYING THAT NO TREES, SHRUBS AND EVERGREENS EXIST ON THE SITE.
- 4) PLANS WITH TREES, SHRUBS AND EVERGREENS TO BE PRESERVED AND RELOCATED MUST CONFORM TO THE ARBOR ANY FOUNDATION SPECS, AND CITY'S REQUIREMENT TO INSTALL ELECTRICAL FACILITIES.
- 5) IF ROOT BARRIERS ARE PROPOSED BY APPLICANTS, THEY SHALL NOT CIRCLE ROOTBALLS, BUT BE PLACED ALONG PAVING EDGE.
- 6) BRANCHES FROM MATURE TREES MAY NOT OVERHANG CONDUCTORS, BUILDINGS OR ROOFS.
- 7) PLANT ADJACENT TO BUILDINGS OR OTHER BUILT FEATURES MUST BE PROVIDED IN THE FOLLOWING MINIMUM WAYS:
 - SMALL TREES (TO 15 FEET TALL) NO CLOSER THAN 6 FEET FROM BUILDING 10 FEET FROM STEEL POLES 15 FEET FROM PAVING, CURBS OR WALLS WITH A MINIMUM PLANTING ARE 5 FEET WIDE.
 - MEDIUM TREES (TO 30 FEET TALL) NO CLOSURE THAN 10 FEET FROM BUILDING 10 FEET FROM STEEL POLES OR 15 FEET FROM PAVING, CURBS OR WALLS WITH A MINIMUM PLANTING AREA 6 FEET WIDE
- 8) INSTALL 3" SHREDDED (WALK ON) BARK MULCH IN ALL PLANTING AREAS NOT SHOWN TO RECEIVE TURF OR HYDROSEED. USE OF "GORILLA HAIR" IS PROHIBITED.

TREE SURVEY STANDARDS:

TREE SURVEY IS REQUIRED FOR ALL TENTATIVE TRANSMISSION LINE WORK SUBJECT TO REVIEW BY THE CITY. THE INFORMATION CONTAINED ON AN ACCURATE TREE SURVEY PROVIDES THE CITY AND THE CONTRACTOR WITH SUFFICIENT INFORMATION UPON WHICH TO MAKE DECISIONS REGARDING THE PRESERVATION OF TREES.

SITES WITH NO EXISTING TREES MAY AVOID THE TREE SURVEY REQUIREMENT BY SUBMITTING A LETTER SIGNED BY A LICENSED CERTIFIED ARBORIST ATTESTING TO THE FACT THAT THERE ARE NO EXISTING TREES ON THE SITE. THE TREE SURVEY SHALL BE SUBMITTED FOR APPROVAL TO THE CITY WITH PLANS.

- 1) TREE SURVEY SHALL BE INCLUDED ON THE WORK PLAN, PRIOR TO PERFORMING ANY WORK ON A SEPARATE SHEET AT SAME SCALE AS PLANS, AND NUMBERED IN SEQUENCE WITH THE PROJECT PLANS AND COORDINATED WITH THE WORK.
- 2) TREE SURVEY SHALL SHOW ALL TREES WITH 3-INCH DBH OR GREATER OR ALL TREES IF THE SITE HAS TREES. TREES SHALL BE CORRECTLY LABELED WITH SPECIES, DBH, AND SPOT ELEVATION AT BASE OF TREE.
- 3) TREE SURVEY MUST ACCURATELY LOCATE TREE TRUNKS AND CANOPIES, AND BE PREPARED BY AND CERTIFIED BY A LICENSED SURVEYOR. IF NO TREES 3 INCH DBH OR GREATER EXIST ON THE SITE, THE LANDSCAPE ARBORIST SHALL SUBMIT A LETTER TO THE CITY STATING THAT NO TREES EXIST.
- 4) TREE SURVEY SHALL CLEARLY INDICATE THOSE TREES THE CONTRACTOR PREFERS TO RELOCATE, PRESERVE IN PLACE, OR REMOVE. EMPHASIS SHALL BE ON TREE PRESERVATION.
- 5) TREE SURVEY MUST BE REVIEWED AND APPROVED BY THE CITY PRIOR TO COUNTY APPROVAL.

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NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	TREE, SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS	DATE: 05-01-05 Page 1 of 5 58199-105
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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	APP. NO.: -	CAD FILE NO. 0058199001C19.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY: JK	PROJECT NO. EU12-06-04	
DATE: 05-15-07	WORK REQUEST NO. ORDR: 58199	ISSUED BY: RFS	COMPLETED BY:
ISSUED BY: RFS	APPROVED BY: RFS	SCALE: NTS	SHEET 19 OF 23

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	86
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

TREE SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS

- 1) TREE SURVEY SHALL SHOW LAY OUT OF ALL EXISTING AND PROPOSED TRANSMISSION STRUCTURES OR UNDER GROUND CONDUIT AND MANHOLE WORK, FOUNDATION WORK AND SET UP AREAS
- 2) LOCATE ALL TREES WITHIN THE WORK AREA FOR EACH STRUCTURE SET-UP, FOUNDATION, SWITCH GEAR, CONDUIT AND MANHOLE TRENCH, HANDHOLE, TRANSFORMER VAULT AND ALL EXCAVATIONS PROJECTS BY THE CONTRACTOR, SHOW DISPOSITION OF EACH TREE AND SHRUB.

THIS CONDITION MAY BE WAIVED BY THE CITY IN CASES WHERE THE COST OF PREPARING A TREE SURVEY IS NOT APPROPRIATE GIVEN THE COST OF IMPROVEMENT PROPOSED MAY WAIVE THIS CONDITION. IN SUCH CASES, AN INDIVIDUAL TREE REMOVAL PERMIT MAY BE REQUESTED IN WRITING TO THE CITY. AN APPROVED TREE REMOVAL PERMIT MUST BE OBTAINED PRIOR TO PERFORMING ANY WORK.

THE CITY WILL REVIEW THE SURVEY AND MAY RECOMMEND APPROVAL OR DENIAL FOR THE REQUESTED REMOVALS. AN ARBORIST REPORT IS REQUIRED FOR TREES BEFORE RECOMMENDATION ARE MADE. THE CONTRACTOR'S CONSULTING ARBORIST AT THE EXPENSE OF THE CONTRACTOR WILL PREPARE ALL ARBORIST ANALYSIS.

ARBORIST'S ANALYSIS REPORT STANDARDS:

AN ARBORIST ANALYSIS REPORT IS REQUIRED TO MAKE A MORE DETAILED ASSESSMENT OF AN INDIVIDUAL TREE'S SUITABILITY FOR PRESERVATION. THE REPORT SHALL BE PREPARED BY AN ARBORIST CERTIFIED BY THE ISA (INTERNATIONAL SOCIETY OF ARBORICULTURE) AND APPROVED BY THE CITY.

THE ARBORIST REPORT WILL INCLUDE, AT A MINIMUM, THE FOLLOWING FACTORS IN THE EVALUATION OF SUITABILITY FOR PRESERVATION:

TREE HEALTH: HEALTHY, VIGOROUS TREES ARE BETTER ABLE TO TOLERATE IMPACTS SUCH AS ROOT INJURY, DEMOLITION OF EXISTING STRUCTURES, CHANGES IN SOIL GRADE AND MOISTURE, AND SOIL COMPACTION, THAN ARE NON-VIGOROUS TREES.

STRUCTURAL INTEGRITY: TREES WITH SIGNIFICANT AMOUNTS OF WOOD DECAY AND OTHER STRUCTURAL DEFECTS THAT CANNOT BE CORRECTED ARE LIKELY TO FAIL. SUCH TREES WILL NOT BE PRESERVED IN AREAS WHERE DAMAGE TO PEOPLE OR PROPERTY IS LIKELY TO OCCUR.

SPECIES RESPONSE: THERE IS A WIDE VARIATION IN THE RESPONSE OF INDIVIDUAL SPECIES TO CONSTRUCTION IMPACTS AND CHANGES IN THE ENVIRONMENT.

TREE AGE AND LONGEVITY: OLD TREES, WHILE HAVING SIGNIFICANT EMOTIONAL AND AESTHETIC APPEAL, SOME TIMES HAVE LIMITED PHYSIOLOGICAL CAPACITY TO ADJUST TO AN ALTERED ENVIRONMENT. YOUNG TREES ARE BETTER ABLE TO GENERATE NEW TISSUE AND RESPOND TO CHANGE. OLDER TREES MAY REQUIRE MODIFICATIONS TO THE DEVELOPMENT PROPOSAL, TO ACHIEVE PRESERVATION.

SHRUBS AND EVERGREENS: ALL SHRUBS SHALL BE IDENTIFIED, GRADED AND REPLACED LIKE OR BETTER-CONDITIONED SPECIES.

EACH TREE SHALL BE GIVEN A RATING REGARDING SUITABILITY FOR PRESERVATION BASED UPON ITS AGE, HEALTH, STRUCTURAL CONDITION AND ABILITY TO SAFELY COEXIST WITH THE DEVELOPMENT ENVIRONMENT.

TREE SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS

CONTRACTOR/ARBORIST'S STANDARD TREE PRESERVATION (SURVEY):

PLANS MUST SHOW THE REMOVAL, RELOCATION, OR PRESERVATION OF TREES (E.G., DEMOLITION PLANS, GRADING PLANS, ETC.) BY INCLUDING THE FOLLOWING:

1. PLANS SHALL SHOW ALL EXISTING TREES, SHRUBS AND EVERGREENS REGARDLESS OF DISPOSITION, WITH ACCURATE TRUNK LOCATION, TREE CANOPY, SPECIES AND CALIPER SIZE. GROVES OF EXISTING TREES, SHRUBS AND EVERGREENS OF THE SAME SPECIES TO BE PRESERVED MAY BE SHOWN WITH A COMBINED CANOPY LINE AND NO TRUNK LOCATIONS. EACH INDIVIDUAL TREE, SHRUB AND EVERGREEN, HOWEVER, MUST BE LISTED BY SPECIES AND DBH SIZE.
2. ALL SPECIES MUST BE IDENTIFIED.
3. FENCING AT TREES TO BE PRESERVED MUST BE SHOWN ON THE PLAN.
4. ALL TREES, SHRUBS AND EVERGREENS TO BE REMOVED SHALL BE CLEARLY IDENTIFIED WITH AN "X" AND CALLED OUT FOR REMOVAL. PLAN IDENTIFICATION MUST INCLUDE SPECIES AND CALIPER SIZE.
5. CALL OUT ON THE PLAN EACH TREE, SHRUB AND EVERGREEN TO BE PRESERVED, BY SPECIES AND CALIPER SIZE.
6. CALL OUT ON THE PLAN EACH TREE, SHRUB AND EVERGREEN TO BE RELOCATED, BY SPECIES AND CALIPER SIZE. THE PLAN SHALL CLEARLY SHOW EXISTING LOCATION OF EACH TREE, SHRUB AND EVERGREEN AND THE FUTURE LOCATION OF THE SAME TREE. TREE, SHRUB AND EVERGREEN RELOCATION NOTES AND DIRECTIONS SHALL BE DEVELOPED BY A CERTIFIED ARBORIST AND INCLUDED ON THE PLAN WHERE THE TREE, SHRUB AND EVERGREEN RELOCATION IS SHOWN. RELOCATION NOTES SHALL INCLUDE THE NAME AND PHONE NUMBER OF THE CERTIFIED ARBORIST IN CHARGE OF THE TREE LOCATION AND SHALL STATE THAT THE CONTRACTOR IS REQUIRED TO HAVE THE CERTIFIED ARBORIST MONITOR ALL WORK ASSOCIATED WITH THE TREE, SHRUB AND EVERGREEN RELOCATION.
7. ARBORIST TO COORDINATE LOCATION OF EXISTING SHRUBS, TREES AND EVERGREENS WITH STRUCTURE ERECTION, STRUCTURE FOUNDATION, WIRE SET-UP, CONDUIT AND MANHOLE EXCAVATIONS AND TRANSFORMER VAULT AND HANDHOLE INSTALLATIONS BY SHOWING AREA REQUIRED FOR INSTALLATION AND HOW THE TREES ARE TO BE CONSIDERED.

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TREE SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS

CONTRACTOR/ARBORIST REQUIREMENTS FOR STANDARD TREE PRESERVATION:

THE FOLLOWING ARE MINIMUM REQUIREMENT FOR PROJECTS THAT HAVE EXISTING TREES THAT WILL BE PRESERVED OR RELOCATED AS DETERMINED BY THE CONTRACTOR'S ARBORIST. THE CITY RECOGNIZES THAT TREE PRESERVATION MEASURES THAT TAKE INTO ACCOUNT THE UNIQUE REQUIREMENTS OF THE TREE SPECIES, AGE, CONDITION, AND SITE CONDITIONS ACHIEVE THE BEST RESULTS. PROJECTS WHERE PRESERVATION OF EXISTING TREES IS REQUIRED APPROVAL WILL NOT BE GIVEN FOR INSTALLATION, UNTIL WORK PLANS, PLANTING PLANS INCLUDE THE FOLLOWING ARE COMPLETED IN THE FIELD.

TREE PRESERVATION:

1. TREE PRESERVATION REQUIRED BEFORE DEMOLITION OR CONSTRUCTION BEGINS
2. TREES CALLED OUT FOR PRESERVATION SHALL BE FENCED AT THE DRIP LINE. FENCING MAY OCCUR AT THE COMBINED DRIP LINES OF GROVES OF TREES. PLACE 3" BARK MULCH BENEATH DRIP LINES OF TREES TO BE PRESERVED.
3. FENCING SHALL BE 6 FEET TALL SNOW FENCING WITH STEEL POSTS EMBEDDED IN THE GROUND.
4. NO GRADING SHALL OCCUR WITHIN THE DRIP LINES/FENCED AREA OF EXISTING TREES.
5. NO CONSTRUCTION MATERIALS OR CONSTRUCTION VEHICLES MAY BE STORED WITHIN THE DRIP LINES/FENCING AREA OF EXISTING TREES.
6. CONSTRUCTION VEHICLES OR MACHINERY MAY NOT PASS BETWEEN TWO OR MORE EXISTING TREES IDENTIFIED FOR PRESERVATION IF THEIR CANOPIES ARE WITHIN 10 FEET OF TOUCHING. ADDITIONAL FENCING MAY BE REQUIRED BY THE CITY TO ENFORCE THIS.
7. TREE PRESERVATION MEASURES MUST BE IN PLACE BEFORE CONSTRUCTION, DEMOLITION OR GRADING ACTIVITIES COMMENCE. CITY WILL STOP CONSTRUCTION IF TREE PRESERVATION MEASURES ARE NOT IN PLACE AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
8. THE CONTRACTOR IS REQUIRED TO HAVE AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) ON SITE IF SITE CONSTRUCTION EFFORTS REQUIRE PLANTING OR REMOVAL OF EXISTING ROOTS OR BRANCH PRUNING. A CERTIFIED ARBORIST, PROVIDED BY THE CONTRACTOR AND APPROVED BY THE CITY SHALL BE ON SITE AND MONITOR ALL ROOT PRUNING AND BRANCH PRUNING OF EXISTING TREES AND INSTALLATION OF ALL LANDSCAPING MATERIALS.
9. UNAUTHORIZED TREES, SHRUBS AND EVERGREENS REMOVED ARE SUBJECT TO REPLACEMENT EQUAL TO THE APPRAISED VALUE OF THE TREE LOST.
10. THE CONTRACTOR IS REQUIRED TO WATER, FERTILIZE AND ATTEND TO OTHER MAINTENANCE NEEDS OF EXISTING TREES AS NEEDED TO MAINTAIN HEALTHY GROWTH THROUGHOUT THE CONSTRUCTION PERIOD. SIX FEET DIAMETER, MINIMUM, BY SIX-INCH TALL EARTH BERMS SHALL BE CONSTRUCTED AT THE BASE OF EACH TREE TO FUNCTION AS TEMPORARY WATERING BASINS DURING THE CONSTRUCTION PERIOD. TREES SHALL BE WATERED ACCORDING TO CITY SPECIFICATION AND WATER CONDITIONS.
11. IF TREES, SHRUBS AND EVERGREENS ARE BEING RELOCATED, RELOCATION OF EXISTING TREES SHALL OCCUR UNDER THE OBSERVATION AND DIRECTION OF A CERTIFIED ARBORIST APPROVED BY THE CITY.
12. THE ARBORIST SHALL INCLUDE ALL TREES PRESERVATION TO INSTALL STRUCTURES, STRUCTURE FOUNDATIONS, SET UP AREAS AND CONDUIT AND MANHOLE EXCAVATION WORK.
13. WOOD BOARDS ARE REQUIRED TO BE INSTALLED COMPLETELY AROUND THE PERIMETER OF THE TREE WITH 2" THICK LUMBER TO HEIGHT OF 10' AND SECURED. ALL THE TREES WITHIN THE RIGHT-OF-WAY SHALL BE PROTECTED. ALL WORK TO MAINTAIN TREE PROTECTION IS THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL ABIDE BY ALL DIRECTION FROM THE ARBORIST WHEN INSTALLING THE TREE PROTECTION.

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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC					
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION					
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	IMP NO. -	IMP FILE JOB 0058199001C20.DWG	PROJECT NO. EU12-06-04	DATE 06-15-07	WORK ORDER NO. 58199
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DIVISION JK	PROJECT NO. EU12-06-04	COMPLETED BY	ENGINEER RPS	SCALE NTS
DATE 06-15-07	WORK ORDER NO. 58199	PROJECT NO. EU12-06-04	COMPLETED BY	ENGINEER RPS	SCALE NTS
REVISION	1	2	3		SHEET 20 OF 23

DISTRIBUTION AND TRANSMISSION LINE CLEARING AND ENVIRONMENTAL QUALITY PROTECTION

NEW CONSTRUCTION CLEARING PROGRAM

TREES AND VEGETATION WILL BE CLEARED TO REQUIRED CLEARANCES FOR NEW CONSTRUCTION OF FACILITIES. THE CONTRACTOR IS RESPONSIBLE FOR THE CLEARING OF THE RIGHT-OF-WAY. IT IS VERY IMPORTANT THAT THE CLEARING BE DONE APPROPRIATELY. APPROPRIATE EQUIPMENT MAY NOT BE AS READILY ACCESSIBLE/AVAILABLE TO THESE AREAS IN THE FUTURE. ALL TREES SHOULD BE TRIMMED, REMOVED, OR CHEMICALLY TREATED PER SPECIFICATIONS AND AS THEY ARE LISTED IN THIS DOCUMENT.

IDENTIFICATION

- PRIOR TO PERFORMING ANY WORK A VIDEO SHOWING EXISTING TREES AND VEGETATION FOR ENTIRE LENGTH AND WIDTH OF THE RIGHT-OF-WAY SHALL BE TAKEN AND 2 COPIES MADE AND STORED UNTIL THE FINAL PAYMENT IS MADE.
- THE CONTRACTOR'S ARBORIST SHALL IDENTIFY ALL TREES BY HEIGHT, DIAMETER SPECIES, LOCATION AND GENERAL HEALTH. THE ARBORIST TO IDENTIFY ANY TREE THAT IS ENDANGERED BY FEDERAL STATE OR COUNTY LAW. IDENTIFY ALL TREES FOR REMOVAL, TRIMMING, ROOT AND PRUNING ETC PRIOR TO PERFORMING WORK. PROVIDE THE CITY WITH SECTION OF ALL TREES AND PLANT GROWTH SHOWING.

GENERAL TREE TRIMMING GUIDELINES

LOW GROWING SHRUBS -- SHRUBS WHICH WILL NOT INTERFERE WITH ACCESS, OPERATION OR MAINTENANCE OF THE LINE, SHALL BE LEFT UNDISTURBED.

SLASH -- SLASH MAY BE CHIPPED AND BLOWN ON THE RIGHT-OF-WAY IF SO SPECIFIED. IF CHIPPING IS NOT POSSIBLE DUE TO TERRAIN OR OTHER CIRCUMSTANCES, THE SLASH WILL BE LOADED AND SCATTERED ON OUTER LIMITS OF RIGHT-OF-WAY SO THAT ACCESS FOR CREWS WILL NOT BE INHIBITED OR HALTED AWAY TO A LICENSED DUMP. STANDARD FIRE HAZARD REDUCTION PRACTICES WILL BE EMPLOYED, SUCH AS REMOVING LADDER FUELS.

CUTTING TREES OUTSIDE THE RIGHT-OF-WAY -- DEAD TREES BEYOND THE RIGHT-OF-WAY WHICH WOULD STRIKE THE LINE IN FALLING SHALL BE REMOVED. LEANING TREES BEYOND THE RIGHT-OF-WAY WHICH WOULD STRIKE THE LINE IN FALLING AND WHICH WOULD REQUIRE TOPPING IF NOT REMOVED, SHALL EITHER BE REMOVED OR TOPPED. THE LANDOWNERS PERMISSION SHOULD BE RECEIVED PRIOR TO CUTTING TREES OUTSIDE OF THE RIGHT-OF-WAY.

MOVING -- MECHANICAL OPERATIONS SUCH AS MOWERS OR BRUSHHOGS, WILL BE UTILIZED WHERE TERRAIN PERMITS, TO MOST EFFICIENTLY USE OUR EQUIPMENT, AND REDUCE HUMAN EXPOSURE TO HAZARDOUS CONDITIONS. THE MACHINES WILL BE REQUIRED TO PRODUCE A CLEAN, NEAT LOOKING JOB.

PRUNING STANDARDS AND PRACTICES -- ALL PRUNING PRACTICES WILL FOLLOW MODERN GUIDELINES AS PUBLISHED BY THE INTERNATIONAL ASSOCIATION OF ARBORICULTURE (ISA) STANDARDS UNLESS A LANDOWNER MAKES A WRITTEN REQUEST OTHERWISE. REFER TO ANSI A300 (1995), INTERNATIONAL SOCIETY OF ARBORICULTURE TREE PRUNING STANDARDS (1995), AND PRUNING TREES NEAR ELECTRICAL UTILITY LINES (SHOO-1990). CORRECT TREE TRIMMING SHOULD PROMOTE TREE GROWTH AWAY FROM ELECTRICAL CONDUCTORS, PROVIDE LONGER PERIODS OF CLEARANCE, AND REDUCE FUTURE WORK.

HERBICIDE SPECIFICATION

- GENERAL -- THE USE OF HERBICIDES IS AN INTEGRAL PART OF A VEGETATION MANAGEMENT PROGRAM. HERBICIDE APPLICATIONS WILL BE PERFORMED ACCORDING TO FEDERAL, STATE AND LOCAL REGULATIONS. HERBICIDE PRODUCTS WILL BE USED CONSISTENT WITH THEIR LABELING. THE LABEL IS THE LAW. HERBICIDE APPLICATIONS WILL BE PURSUED AS A VEGETATION MANAGEMENT TOOL WHERE POSSIBLE. ALL HERBICIDE PRODUCTS, MIXES AND APPLICATIONS MUST BE APPROVED. ALL HERBICIDE APPLICATIONS REQUIRE WRITTEN PERMISSION FROM THE PROPERTY OWNER. EXTREME CAUTION WHEN APPLYING HERBICIDES NEAR WATER. ADJACENT PROPERTIES WITH CROPS THAT MIGHT BE DAMAGED, OR TREES THAT MIGHT BE ROOT GRAFTED TO A NEARBY STUMP, AGAIN, THE LABEL WILL SPELL OUT THESE CONCERNS AND THE APPLICATION/CONTRACTOR IS RESPONSIBLE FOR THEM.
- HERBICIDE APPLICATIONS -- THE COMPANY MAKING THE APPLICATION IS RESPONSIBLE FOR THE PURCHASE, STORAGE, RECORD KEEPING AND DISPOSAL OF HERBICIDES. HERBICIDES WILL ONLY BE APPLIED BY QUALIFIED APPLICATORS. HERBICIDE CREWS, TREE CREWS, AND MOWING CREWS ARE REQUIRED TO HAVE AT LEAST ONE INDIVIDUAL ON THE CREW AT ALL TIMES, WHO IS QUALIFIED TO APPLY HERBICIDES. A QUALIFIED APPLICATOR IS AN INDIVIDUAL WHO HAS BEEN TRAINED REGARDING THE PRODUCT AND APPLICATION METHOD, AND MEETS ANY FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS. THIS INDIVIDUAL MAY BE REQUIRED TO HOLD A CERTIFIED APPLICATORS LICENSE, OR BE UNDER THE DIRECT SUPERVISION OF A CERTIFIED APPLICATOR. THIS WILL DEPEND UPON STATE LAWS AND REGULATIONS WHERE THE APPLICATION IS MADE. SUPERVISOR OF QUALIFIED APPLICATORS ARE REQUIRED TO HOLD A CERTIFIED APPLICATORS LICENSE IN THE STATE OR STATES IN WHICH THEY SUPERVISE CREWS.

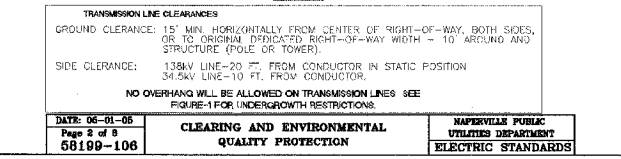
HERBICIDE REPORTS -- ALL HERBICIDE APPLICATION OF CONTRACTORS WILL BE REPORTED TO THE CITY USING THE CONTRACTOR'S HERBICIDE REPORT. REPORTS WILL BE SUBMITTED TO CITY ON A WEEKLY BASIS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REPORTS FOR REVIEW BY THE STATE DEPARTMENT OF AGRICULTURE.

TREE REMOVAL -- TREE REMOVAL ELIMINATES HAZARDOUS CONDITIONS, IMPROVES ACCESS TO FACILITIES AND REDUCES FUTURE WORK. TREE REMOVALS WILL BE PURSUED WHEREVER FEASIBLE.

- TREE REMOVAL CANDIDATES
 - TREES THAT ARE LOCATED AT HOMES, SCHOOLS, PARKS, AND BUSINESSES OR OTHER AREAS, WHICH CHIMNEY MAY CLIMB EASILY AND CONTACT PRIMARY CONDUCTORS.
 - CLIMBABLE TREES OR TREES WITH TREE HOUSES THAT ARE CLOSE TO PRIMARY CONDUCTORS.
 - FAST GROWING TREES THAT MAY INTERFERE WITH PRIMARY CONDUCTORS BEFORE THE NEXT MAINTENANCE TRIMMING.
 - VOLUNTARY TREES WHICH WILL ESSENTIALLY INTERFERE WITH PRIMARY CONDUCTORS.
 - IMMATURE TREES THAT ARE NOT PRESENTLY INTERFERING WITH PRIMARY CONDUCTORS, BUT COULD AT THEIR MATURE HEIGHT.
 - DEAD, DYING, DISEASED, DEFORMED AND UNSTABLE TREES WHICH HAVE A HIGH PROBABILITY OF FALLING AND CONTACTING PRIMARY OR SECONDARY CONDUCTORS.
 - TREES THAT REQUIRE EXTENSIVE DROP CROUCH TRIMMING.
- TREE REMOVAL CONDITIONS
 - TREE REMOVALS SHOULD BE LIMITED TO TEN FEET EITHER SIDE OF DISTRIBUTION CONDUCTORS AND WITHIN TRANSMISSION RIGHTS OF WAY, EXCLUDING DANGER TREES. SEE 55281-147 PRESERVATION OF TREES, SHRUBS AND EVERGREENS.
 - DANGER TREES (OUTSIDE OF THE RIGHT-OF-WAY) SHOULD ONLY BE REMOVED IF THERE IS A THREAT OF THE TREE OR LIMBS FALLING AND CONTACTING THE PRIMARY CONDUCTOR AND REQUIRE LANDOWNER PERMISSION.
 - LOW GROWING COMPATIBLE SHRUBS OR TREES WHOSE MATURE HEIGHT IS LESS THAN 25 FEET SHOULD NOT BE REMOVED. THERE WILL BE SITUATIONS WHERE THIS TYPE OF VEGETATION SHOULD BE REMOVED FOR ACCESS TO FACILITIES OR POLE CLEARING REQUIREMENTS.
 - STUMPS SHALL BE CUT AS CLOSE TO THE GROUND AS PRACTICAL OR REMOVED.
 - ALL DECIDUOUS TREES, BUSHES AND VINES THAT ARE REMOVED MAY REQUIRE STUMP TREATMENT WITH AN APPROVED HERBICIDE MIX. HERBICIDE APPLICATIONS REQUIRE WRITTEN PERMISSION FROM THE PROPERTY OWNER OR COUNTY.
 - TREE REMOVAL REQUIRES PERMISSION FROM THE PROPERTY OWNER, ON TRANSMISSION LINES ONLY. CERTAIN "LANDSCAPE" TREES MAY BE LEFT AT OWNER'S REQUEST, PROVIDED RW ACCESS IS NOT IMPAIRED.
 - ALL TREES REMOVED SHALL BE REPLACED PER THE CITY'S PLANTING SPECIFICATION, QUANTITY BY QUANTITY AND OF SLOW GROWING VARIETY AND FINAL HEIGHT LESS THAN 25' WHEN FULLY GROWN (SEE PAGE 7).

THESE REQUIREMENTS MEET OR EXCEED SUGGESTED STATE AND FEDERAL GUIDELINES FOR FIRE HAZARD CONTROL AND WILL PROVIDE OUR LINE CREWS WITH THE BEST POSSIBLE ACCESS AND SAFE, CLEAR WORKING CONDITIONS, AND MINIMIZE TREE RELATED SERVICE INTERRUPTIONS.

- TREE TRIMMING SPECIFICATIONS/CLEARANCES



NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	DATE: 06-01-06 Page 1 of 8 58199-106
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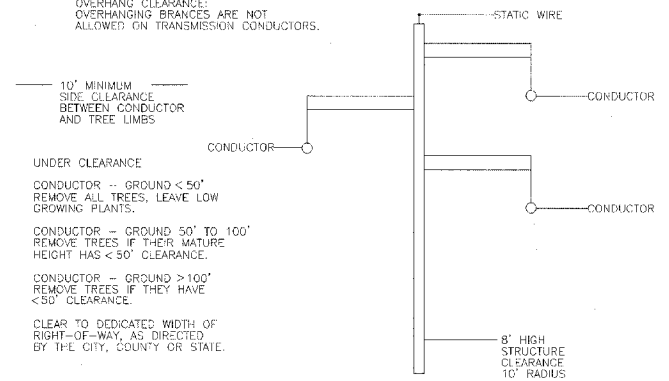
NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	DATE: 06-01-06 Page 2 of 8 58199-106
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NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	DATE: 06-01-06 Page 3 of 8 58199-106
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138KV TRANSMISSION LINE CLEARANCE FIGURE-1				
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	87
STA. 1+31.77	TO STA. 5+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				

OVERHANG CLEARANCE

A TEN FOOT OVERHANG WILL ONLY BE AN OPTION IN SPECIAL SITUATIONS AT THE PROPERTY OWNER'S REQUEST, AND WILL NONE BE CONSIDERED ON LARGE DIAMETER TREES (TREE LARGER THAN 20 FEET DIAMETER BREST HEIGHT) THAT ARE SOUND AND THE PROPERTY OWNER DOESN'T WANT THE TREE CUT.



LINE CLEARANCE

PLANTS SHOULD NOT BE INSTALLED THAT COULD ULTIMATELY GROW WITHIN THE MINIMUM ACCEPTABLE CLEARANCE DISTANCE OF PLANTS FROM CONDUCTORS STATED IN TABLE BELOW. IN GENERAL, THE ACCEPTABLE MATURE HEIGHT OF PLANTS FOR A GIVEN SITUATION WILL BE DETERMINED BY THE HEIGHT OF THE CONDUCTOR ABOVE THE GROUND AND THE VOLTAGE OF THE LINE. USING A CONDUCTOR HEIGHT OF 40' (ABOVE GROUND AT 235°F @ 750' SPAN) RESULT IN MAXIMUM PLANT HEIGHT AS FOLLOWS:

VOLTAGE	MINIMUM CLEARANCE OF PLANTS FROM CONDUCTOR	MAXIMUM PLANT HEIGHT	MAX. SAG @ 235°F @ 750' SPAN
12,000 VOLTS TO 138,000 VOLTS	15'	25'	24'

- GENERAL

THE ASSIGNED CONTRACTOR SHALL PLAN, COORDINATE, AND CONDUCT HIS OPERATIONS IN A MANNER WHICH PROTECTS THE QUALITY OF THE ENVIRONMENT AND COMPLIES WITH ENVIRONMENTAL EXPECTATIONS. THIS SPECIFICATION CONTAINS PROVISIONS WHICH SHALL BE CONTRACT CONSTRUCTION OPERATIONS. IF THE CONTRACTOR FAILS TO OPERATE WITHIN THE INTENT OF THESE REQUIREMENTS, WILL DIRECT CHANGES TO OPERATING PROCEDURES. CONTINUED VIOLATION WILL RESULT IN A WORK SUSPENSION UNTIL CORRECTION OR REMEDIAL ACTION IS TAKEN BY THE CONTRACTOR. FINALS AND CONTRACT TERMINATION WILL BE USED AS APPROPRIATE. THE COSTS OF COMPLYING WITH THESE SPECIFICATIONS ARE INCIDENTAL TO THE CONTRACTOR WORK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. AT ALL STRUCTURE AND CONDUCTION PULLING SITES, PROTECTIVE MEASURES TO PREVENT EROSION WILL BE TAKEN IMMEDIATELY UPON THE END OF EACH STEP IN A CONSTRUCTION SEQUENCE, AND THOSE PROTECTIVE MEASURES SHALL BE INSPECTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION AND RIGHT-OF-WAY REHABILITATION PERIOD.
- REGULATIONS

THE ASSIGNED CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL ENVIRONMENTAL AND ANTI POLLUTION LAWS, REGULATIONS, AND ORDINANCES RELATED TO ENVIRONMENT PROTECTION AND PREVENTION, CONTROL, AND ABATEMENT OF ALL FORMS OF POLLUTION.
- USE AREAS

THE ASSIGNED CONTRACTOR'S USE AREAS INCLUDE BUT ARE NOT LIMITED TO SITE OFFICE, SHOP, MAINTENANCE, PARKING, STORAGE, STAGING, ASSEMBLY AREAS, UTILITY SERVICES, AND ACCESS ROADS TO THE USE AREAS. THE CONSTRUCTION CONTRACTOR SHALL SUBMIT PLANS AND DRAWINGS FOR THEIR LOCATION AND DEVELOPMENT TO THE ENGINEER AND PROJECT MANAGER FOR APPROVAL. SECONDARY CONTAINMENT WILL BE PROVIDED FOR FUEL AND PETROLEUM PRODUCT STORAGE PURSUANT TO 28CFR1910.106(d)(6)(ii)(OSHA).
- EQUIPMENT

ALL MAJOR EQUIPMENT AND PROPOSED METHODS OF OPERATION SHALL BE SUBJECT TO THE APPROVAL OF CITY. THE USE OR OPERATION OF HEAVY EQUIPMENT IN AREAS OUTSIDE THE RIGHT-OF-WAY, ACCESS PRIVIES, OR STRUCTURE, POLE, OR TOWER SITES WILL NOT BE PERMITTED WITHOUT PERMISSION OF THE CITY INSPECTOR OR FIELD ENGINEER. HEAVY EQUIPMENT USE ON STEEP SLOPES (GREATER THAN 20 PERCENT) AND IN WEI AREAS WILL BE HELD TO THE MINIMUM NECESSARY TO CONSTRUCT THE TRANSMISSION LINE. STEPS WILL BE TAKEN TO LIMIT GROUND DISTURBANCE CAUSED BY HEAVY EQUIPMENT USAGE, AND EROSION AND SEDIMENT CONTROL WILL BE INSTITUTED ON DISTURBED AREAS IN ACCORDANCE WITH STATE REQUIREMENTS.

NO SUBSURFACE GROUND-DISTURBING EQUIPMENT OR STUMP-REMOVAL EQUIPMENT WILL BE USED BY CONSTRUCTION FORCES EXCEPT ON ACCESS ROADS OR AT THE ACTUAL STRUCTURE, POLE, OR TOWER SITES, WHERE ONLY FOOTING LOCATIONS AND CONTROLLED RAINOFF DIVERSIONS SHALL BE CREATED THAT DISTURB THE SOIL. ALL OTHER AREAS OF GROUND COVER OR IN PLACE STUMPS AND ROOTS SHALL REMAIN IN PLACE. (NOTE: TRACKED VEHICLES DISTURB SURFACE LAYER OF THE GROUND DUE TO SIZE AND FUNCTION). SOME DISKING OF THE RIGHT-OF-WAY MAY OCCUR FOR PROPER SEEDING PREPARATION.

UNLESS PONDING PREVIOUSLY OCCURRED (E.G., EXISTING LOW-LYING AREAS), WATER SHOULD NOT BE ALLOWED TO FLOOD ON THE STRUCTURE SITES EXCEPT AROUND FOUNDATION AREAS. THE WATER MUST BE DIRECTED AWAY FROM THE SITE IN A DISPERSED MANNER AS POSSIBLE. AT POLE OR STRUCTURE SITES SOME MEANS OF UPSIDE INTERRUPTION OF POTENTIAL OVERLAND FLOW AND DIVERSION AROUND THE FOOTINGS SHOULD BE PROVIDED AS THE FIRST STEP IN CONSTRUCTION-SITE PREPARATION. IF LEVELING IS NECESSARY, IT MUST BE IMPLEMENTED BY MEANS THAT PROVIDE FOR CONTINUOUS GENTLE, CONTROLLED, OVERLAND FLOW MUST BE MAINTAINED. A GOOD GRASS COVER, STRAW, GRAVEL, OR OTHER PROTECTION OF THE SURFACE MUST BE MAINTAINED. STEPS SHALL BE TAKEN TO PREVENT EROSION IN THE WASHING CHANNEL OF THE IN-SITU SOILS WILL BE BENEFICIAL BOTH DURING CONSTRUCTION AND OVER THE SERVICE LIFE OF ANY STRUCTURE.
- REFUSE DISPOSAL

THE CONTRACTOR PERSONNEL SHALL BE RESPONSIBLE FOR EARLY INSPECTION, CLEANUP, AND PROPER LABELING, STORAGE, AND DISPOSAL OF ALL REFUSE AND DEBRIS PRODUCED BY HIS OPERATIONS AND BY HIS EMPLOYEES. SUITABLE REFUSE COLLECTION FACILITIES WILL BE REQUIRED. ONLY STATE-APPROVED DISPOSAL AREAS SHALL BE USED. DISPOSAL CONTAINERS SUCH AS DUMPSTERS OR POLY-ORF CONTAINERS SHALL BE OBTAINED FROM A PROPER WASTE DISPOSAL CONTRACTOR. SOLID, SPECIAL, CONSTRUCTION/DEMOLITION, AND HAZARDOUS WASTES AS WELL AS SCRAP ARE PART OF THE POTENTIAL REFUSE GENERATED AND MUST BE PROPERLY MANAGED WITH EMPHASIS ON REUSE, RECYCLE, OR POSSIBLE GIVE AWAY, AS APPROPRIATE, BEFORE THEY ARE HANDLED AS WASTE.

- LANDSCAPE PRESERVATION

THE CONTRACTOR SHALL EXERCISE CARE TO PRESERVE THE NATURAL LANDSCAPE IN THE ENTIRE CONSTRUCTION AREA AS WELL AS USE AREAS, IN OR OUTSIDE THE RIGHT-OF-WAY, AND ON OR ADJACENT TO ACCESS ROADS. CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO PREVENT ANY UNNECESSARY DESTRUCTION, SCARRING, OR DEFACING OF THE NATURAL VEGETATION AND SURROUNDINGS IN THE VICINITY OF THE WORK.

CERTAIN AREAS ON SITE AND ALONG THE RIGHT-OF-WAY MAY BE DESIGNATED BY THE SPECIFICATIONS OR THE CITY ENGINEER AS ENVIRONMENTALLY SENSITIVE. THESE AREAS INCLUDE BUT ARE NOT LIMITED TO AREAS CLASSIFIED AS FRODIBLE, GEOLOGICALLY SENSITIVE, SCENIC, HISTORICAL AND ARCHAEOLOGICAL, FISH AND WILDLIFE REFUGES, WATER QUALITY PROTECTION, AND PUBLIC RECREATION AREAS SUCH AS PARKS AND MONUMENTS. CONTRACTOR'S CONSTRUCTION CREWS SHALL TAKE ALL NECESSARY ACTIONS TO AVOID ADVERSE IMPACTS TO THESE SENSITIVE AREAS AND THEIR ADJACENT BUFFER ZONES. THESE ACTIONS MAY INCLUDE SUSPENSION OF WORK OR CHANGES TO OPERATIONS DURING PERIODS OF RAIN OR HEAVY PUBLIC USE. HOURS MAY BE RESTRICTED OR CONCENTRATIONS OF NOISY EQUIPMENT MAY HAVE TO BE DISPersed, IF PRE-HISTORIC OR HISTORIC ARTIFACTS OR FEATURES ARE ENCOUNTERED DURING CLEARING OR CONSTRUCTION OPERATIONS, THE OPERATIONS SHALL IMMEDIATELY CEASE FOR AT LEAST 100 FEET IN EACH DIRECTION, AND THE CITY'S RIGHT-OF-WAY INSPECTOR OR CONSTRUCTION SUPERINTENDENT AND CULTURAL RESOURCES PROGRAM SHALL BE NOTIFIED. THE SITE SHALL BE LEFT AS FOUND UNTIL A SIGNIFICANCE DETERMINATION IS MADE. WORK MAY CONTINUE ELSEWHERE, BEYOND THE 100 FOOT PERIMETER.
- WATER QUALITY CONTROL

THE CONTRACTOR CONSTRUCTION ACTIVITIES SHALL BE PERFORMED BY METHODS THAT WILL PREVENT ENTRANCE OR ACCIDENTAL SPILLS OF SOLID MATTER, CONTAMINANTS, DEBRIS, AND OTHER OBJECTIONABLE POLLUTANTS AND WASTES INTO FLOWING CANALS, SINKHOLES, STREAMS, DRY WATERCOURSES, LAKES, PONDS, AND UNDERGROUND WATER SOURCES.

THE CLEARING CONTRACTOR WILL ERECT AND MAINTAIN SILT FENCES ON STEEP SLOPES AND ADJACENT TO ANY STREAM, WETLAND, OR OTHER WATER BODY. ADDITIONAL PROTECTION MAY BE REQUIRED FOR AREAS OF DISTURBANCE CREATED BY CONSTRUCTION ACTIVITIES. THE PROTECTION DEVICES WILL BE INSPECTED BY THE FIELD ENGINEER OR OTHER DESIGNATED CITY OR CONTRACTOR PERSONNEL ROUTINELY AND DURING PERIODS OF HIGH RUNOFF, AND ANY NECESSARY REPAIRS WILL BE MADE AS SOON AS PRACTICABLE. CONTROL SURFACE INSPECTIONS WILL BE CONDUCTED IN ACCORDANCE WITH PERMIT REQUIREMENTS. RECORDS OF ALL INSPECTIONS WILL BE MAINTAINED ON SITE, AND COPIES OF INSPECTION FORMS WILL BE FORWARDED TO THE CITY'S CONSTRUCTION ENVIRONMENT ENGINEER.

ACCEPTABLE MEASURES FOR DISPOSAL OF WASTE OIL FROM VEHICLES AND EQUIPMENT SHALL BE FOLLOWED. NO WASTE OIL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, ON A CONSTRUCTION SITE, OR ON ACCESS ROADS.
- TURBIDITY AND BLOCKING OF STREAMS

CONSTRUCTION ACTIVITIES IN OR NEAR BODIES OF WATER SHALL BE CONTROLLED TO PREVENT THE WATER TURBIDITY FROM EXCEEDING STATE OR LOCAL WATER QUALITY STANDARDS FOR THAT STREAM. ALL CONDITIONS OF A GENERAL STREAM WATER PERMIT, ADIATIC RESOURCE ALTERATION PERMIT, OR A SITE-SPECIFIC PERMIT SHALL BE MET INCLUDING MONITORING OF TURBIDITY IN RECEIVING STREAMS AND/OR STORM WATER DISCHARGES AND IMPLEMENTATION OF APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES.

APPROPRIATE DRAINAGE FACILITIES FOR TEMPORARY CONSTRUCTION ACTIVITIES INTERRUPTING NATURAL SITE DRAINAGE SHALL BE PROVIDED TO AVOID EROSION. WATERCOURSES SHALL NOT BE BLOCKED OR DIVERTED UNLESS REQUIRED BY THE SPECIFICATIONS OR THE CITY ENGINEER. DIVERSIONS SHALL BE MADE IN ACCORDANCE WITH STATE COUNTY OR CITY.

MECHANIZED EQUIPMENT SHALL NOT BE OPERATED IN FLOWING WATER EXCEPT WHEN APPROVED AND THEN ONLY TO CONSTRUCT CROSSINGS OR TO PERFORM REQUIRED CONSTRUCTION UNDER DIRECT GUIDANCE OF CITY. CONSTRUCTION OF STREAM FORD OR OTHER CROSSINGS WILL ONLY BE PERMITTED AT APPROVED LOCATION AND TO CURRENT CITY CONSTRUCTION ACCESS ROAD STANDARDS. MATERIAL SHALL NOT BE DISPOSED IN WATERCOURSES OR WITHIN STREAM BANK AREAS WHERE IT COULD BE WASHED AWAY BY HIGH STREAM FLOWS. APPROPRIATE CORPS OF ENGINEERS AND STATE PERMITS SHALL BE OBTAINED.

WASTEWATER FROM CONSTRUCTION OR DEWATERING OPERATIONS SHALL BE CONTROLLED TO PREVENT EXCESSIVE EROSION OR TURBIDITY IN A STREAM, WETLAND, LAKE, OR POND. ANY WORK OR PLACING OF EQUIPMENT WITHIN A FLOWING OR DRY WATERCOURSE REQUIRES THE PRIOR APPROVAL OF CITY.

NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	DATE: 06-01-06 Page 5 of 8 58199-106
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NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	DATE: 06-01-06 Page 6 of 8 58199-106
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NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	DATE: 06-01-06 Page 7 of 8 58199-106
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- VEHICLE SERVICES

ROUTINE MAINTENANCE OF PERSONNEL VEHICLES WILL NOT BE PERFORMED ON THE RIGHT-OF-WAY. HOWEVER, IF EMERGENCY OR "HAVE TO" SITUATIONS ARISE, MINIMAL/TEMPORARY MAINTENANCE TO PERSONNEL VEHICLES WILL OCCUR IN ORDER TO MOBILIZE THE VEHICLE TO AN OFF-SITE MAINTENANCE SHOP. HEAVY EQUIPMENT WILL BE SERVICED ON THE RIGHT-OF-WAY, EXCEPT IN DESIGNATED AREAS. THE CONTRACTOR SHALL MAINTAIN THESE VEHICLES WITH APPROVED SPILL PROTECTION CONTROLS AND COUNTERMEASURES. IF EMERGENCY MAINTENANCE IN A SENSITIVE OR QUESTIONABLE AREA ARISES, THE AREA ENVIRONMENTAL COORDINATOR OR CONSTRUCTION ENVIRONMENTAL ENGINEER WILL BE CONSULTED. ALL WASTES AND USED OILS WILL BE PROPERLY RECOVERED, HANDLED, AND DISPOSED/RECYCLED. EQUIPMENT SHALL NOT BE TEMPORARILY STORED IN STREAM FLOOD PLANS OR RIGHT-OF-WAY, WHETHER OVERNIGHT OR ON WEEKENDS OR HOLIDAYS.
- SMOKE AND ODORS

THE CONTRACTOR SHALL PROPERLY STORE AND HANDLE COMBUSTIBLE MATERIAL WHICH COULD CREATE OBJECTIONABLE SMOKE, ODORS, OR FUMES. THE CONTRACTOR SHALL NOT BURN REFUSE SUCH AS TRASH, RAGS, TIRES, PLASTICS, OR OTHER DEBRIS.
- NOISE CONTROL

THE CONTRACTOR SHALL TAKE MEASURES TO AVOID THE CREATION OF NOISE LEVELS THAT ARE CONSIDERED NUISANCES, SAFETY, OR HEALTH HAZARDS. CRITICAL AREAS INCLUDING BUT NOT LIMITED TO RESIDENTIAL AREAS, PARKS, PUBLIC USE AREAS, AND SOME HANDICAPPED OPERATIONS, WILL REQUIRE SPECIAL CONSIDERATIONS. THE CITY'S CRITERIA FOR DETERMINING CORRECTIVE MEASURES SHALL BE DETERMINED BY COMPARING THE NOISE LEVEL OF THE CONSTRUCTION OPERATION TO THE BACKGROUND NOISE LEVELS. ALSO, ESPECIALLY NOISY EQUIPMENT SUCH AS HELICOPTERS, PILE DRIVERS, AIR HAMMERS, CHIPPERS, CHAIN SAWS, OR AREAS FOR MACHINE SHOPS, STAGING, ASSEMBLY, OR BLASTING MAY REQUIRE CORRECTIVE ACTIONS WHEN REQUIRED BY THE CITY.

ALL INTERNAL COMBUSTION ENGINES SHALL BE PROPERLY EQUIPPED WITH MUFFLERS AS REQUIRED BY THE DEPARTMENT OF LABOR'S SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION. THE CITY MAY REQUIRE SPARK ARRESTERS IN ADDITION TO MUFFLERS ON SOME ENGINES. AIR COMPRESSORS AND OTHER NOISY EQUIPMENT MAY REQUIRE SOUND REDUCING ENCLOSURES IN SOME CIRCUMSTANCES.
- DAMAGES

THE MOVEMENT OF CONSTRUCTION CREWS AND EQUIPMENT SHALL BE CONDUCTED IN A MANNER WHICH CAUSES AS LITTLE INTRUSION AND DAMAGE AS POSSIBLE TO CORPES, ORCHARDS, WOODS, WETLANDS, AND OTHER PROPERTY FEATURES AND VEGETATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR EROSION DAMAGE CAUSED BY HIS ACTIONS AND ESPECIALLY FOR CREATING CONDITIONS THAT WOULD THREATEN THE STABILITY OF THE RIGHT-OF-WAY OR SITE SOIL, THE STRUCTURES, OR ACCESS TO EITHER, WHEN PROPERTY OWNERS PREFER THE CORRECTION OF GROUND COVER CONDITION OR SOIL AND SUBSOIL PROBLEMS THEMSELVES.

THE CONTRACTOR SHALL PAY THE PROPERTY OWNER FOR ALL WORK RELATIVE TO THE DAMAGED DONE.
- TREES, SHURBS AND EVERGREENS PRESERVATION

CONTRACTOR SHALL FOLLOW IDOT SPECIFICATION AND CITY SPECIFICATION WHEN PRESERVING TREES, SHRUBS AND EVERGREENS.

DATE: 06-01-06 Page 4 of 8 58199-106	CLEARING AND ENVIRONMENTAL QUALITY PROTECTION	NAPEVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS
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CITY OF NAPEVILLE/DEPARTMENT OF PUBLIC UTILITIES -- ELECTRIC

CALL J.U.U.I.E. 48 HRS. PRIOR TO CONSTRUCTION

PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	IMP NO. -	CAD FILE NO. 05819800/C21.DWG
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EUT2-06-04
DATE 06-19-07	WORK REQUEST NO. 58199	SEC. APPA
DESIGNED RFB	APPROVED NTS	SHEET 21 OF 23

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	88
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

**PLANTING TREES, SHRUBS AND EVERGREENS 3 INCH TO 5 INCH DIA, 6 INCH TO 8 INCH DIA,
9 INCH TO 11 INCH DIA AND 12 INCH TO 15 INCH DIA.**

THIS WORK SHALL CONSIST OF PLANTING TREES, SHRUBS AND EVERGREENS OF VARIOUS SIZES AND TRUNK DIAMETERS. THE CONTRACTOR SHALL CAREFULLY EXAMINE THE PROPOSED LOCATION FOR FOREIGN UTILITIES, ROOM FOR GROWTH, SUITABLE DRAINAGE AND SUNLIGHT OR SHADE. THE ARBORIST SHALL BE ON THE PROJECT DURING THE ENTIRE PROCESS AND SHALL DIRECT THE PLANTING.

PRIOR TO PLANTING, EXAMINE THE AREA FOR OVERHEAD OBSTRUCTIONS WHEN DIGGING AND MOVING. CONTRACTOR SHALL UNDERTAKE ANY PRUNING REQUIRED REMOVING POORLY- POSITIONED OR DAMAGED LIMBS. THE CONTRACTOR SHALL IDENTIFY IF THE SPECIES, OR SOME PORTION THEREOF, IS DISEASED. THE CONTRACTOR SHALL DETERMINE IF THE TREE OR EVERGREEN IS A SAFETY CONCERN PRIOR TO PERFORMING ANY WORK. FOR EXAMPLE, IF IT CREATES A LINE OF SIGHT PROBLEM FOR VEHICLES. IF IN THE OPINION OF THE ARBORIST THE TREE OR EVERGREEN IS NOT PLANTABLE THEN THE TREE SHALL NOT BE PLANTED. CONTRACTOR SHALL EXAMINE THE NEW SITE FOR THE TREE'S HABITAT REQUIREMENTS. FOR EXAMPLE: WIND PROTECTION, TIME OF YEAR, SOIL PH, SUNLIGHT, DRAINAGE AND MOISTURE REQUIREMENTS. PLANT IN EARLY FALL, BEFORE FIRST FREEZE OR IN THE SPRING BEFORE THE BUDS ON THE TREES OR EVERGREENS BEGIN TO SWELL.

THE CONTRACTOR SHALL BE REQUESTED TO PLANT THE FOLLOWING TREE SPECIES:

USE 15 GALLON SIZE OR 4 FEET HIGH OR 4" DIAMETER AS APPLICABLE.

RIVER BIRCH	SARGENT CRAB TREE
HACKBERRY	NINE BARK DARTS GOLD
HAWTHORN	SUMAC SMOOTH
LINDEN AMERICAN	ARROW WOOD VIBURNUM
MAPLE SILVER	WIEGELA FLORIDA
MAPLE NORWAY	WIEGELA FLORIDA
OAK PIN	JAPANESE YEW
RED OAK	SUMATRAN YEW
ASH GREEN	ARBORVITAE GLOBE
SUMAC	ARBORVITAE TECHNY
COLORADO SPRUCE	ARBORVITAE AMERICAN
BALSAM	MUGHOPINE
SPRUCE	BOXWOOD WINTERGREEN
PINES OF VARIOUS SPECIES	DWARF RED BUCK EYE
CRANBERRY VIBURNUM	

THE CONTRACTOR SHALL PREPARE A DESIGN OF THE PLANTED TREE AS IT FITS ON THE PROPERTY BY AN ARCHITECT LANDSCAPER. THE DRAWING SHALL BE GIVEN TO THE ENGINEER. THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER AS TO WHAT AND WHERE TO PLANT

THE CONTRACTOR SHALL GET APPROVAL FOR PLANTING FROM THE CITY OF NAPERVILLE PRIOR TO PLANTING.

THE CONTRACTOR SHALL IDENTIFY WHAT TYPE OF TREE SHALL BE PLANTED AND PREPARE TREE FOR SHIPPING AND PLANTING

THE CONTRACTOR SHALL MAINTAIN ALL ACTIVITIES WITHIN THE EASEMENTS OR PUBLIC WAYS ANY AND ALL OTHER MEANS TO PERFORM THE WORK IS AT THE CONTRACTORS EXPENSE AND SHALL OBTAIN PERMISSION FROM ALL LAND OWNERS TO USE THEIR PROPERTY.

THE CONTRACTOR UNDER THE DIRECTION OF AN ARBORIST SHALL PREPARE THE SITE FOR THE PLANTING, FERTILIZE, WATER, TRIM ADD MULCH, STAKE AS NECESSARY, PROVIDE DRAINAGE AND MAINTAIN FOR ONE YEAR.

TREES, SHRUBS AND EVERGREENS TO BE PLANTED SHALL BE MEASURED IN INCH-DIAMETER. THE DIAMETER WILL BE MEASURED AT A POINT FOUR (4) FEET ABOVE THE HIGHEST GROUND LEVEL AT THE BASE OF THE TREE OR EVERGREEN AND WILL BE DETERMINED BY ASSURING THE CIRCUMFERENCE OF THE TREE AND DIVIDING THIS MEASURED CIRCUMFERENCE BY 3.1416. ALL LANDSCAPING MATERIALS, TOOLS, EQUIPMENT, VEGETATION, WATERING, AND FERTILIZATION IS FURNISHED AND INSTALLED BY THE CONTRACTOR.

THE BASIS OF PAVEMENT:

THIS WORK SHALL BE PAID FOR AT THE CONTRACT PRICE FOR EACH TREE SPECIES INSTALLED COMPLETE AND PLANTED, 3 INCHES TO 5 INCHES, 6 INCHES TO 8 INCHES OR 9 INCHES TO 11 INCHES OR 12 INCHES TO 15 INCHES, THIS INCLUDES EXCAVATING, REMOVING BALL, FERTILIZERS, EQUIPMENT OF ALL TYPES, HAULING, LOADING, UNLOADING, TRAFFIC CONTROL, STORAGE, NEW 6" INCH LAYER OF BLACK DIRT, MULCH, EDGING, STAKING, REMOVE ALL EXCAVATED MATERIAL OFF SITE, REMOVING AND INSTALLING FENCES, TEMPORARY WORK TO GET TO SITE, SETTING AND ALIGNING, PROVIDE TREES WITH ALL WATERING AND FERTILIZER AS REQUIRED, WITH MAINTENANCE AND ONE-YEAR GUARANTEE FROM LAST PAYMENT FOR THE ENTIRE PROJECT.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	PLANTING TREES, SHRUBS AND EVERGREENS 3" TO 5" DIA., 6" TO 8" DIA., 9" TO 11" DIA., AND 12" TO 15" DIA.	DATE: 05-01-05 Page 1 of 1 58199-108
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CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	DATE 05-18-97	ISSUED BY JK	PROJECT NO. EU12-06-04
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DATE 05-18-97	ISSUED BY JK	PROJECT NO. EU12-06-04
DATE 05-18-97	ISSUED BY JK	PROJECT NO. 58199	COMPLETED BY
ENGINEER RFB	SCALE NTS	SHEET 22 OF 23	

UFASMU: FUSE UNIT, 15KV, SMU20

Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty	Qty
289 105 00030	FUSE UNIT, SMU20, 15KV	25K							
289 105 00040	FUSE UNIT, SMU20, 15KV	50K							
289 105 00050	FUSE UNIT, SMU20, 15KV	85K							
289 105 00060	FUSE UNIT, SMU20, 15KV	80K							
289 105 00070	FUSE UNIT, SMU20, 15KV	100K							
289 105 00080	FUSE UNIT, SMU20, 15KV	140K							
289 105 00090	FUSE UNIT, SMU20, 15KV	200K							

UGS: GROUNDING, SWITCHGEAR

Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty
280 107 00070	CU BASE SH	4/0 7-STR						
283 105 00010	GROUND ROD, COPPER CLAD	5/8" X 10'						
284 199 00184	CLAMP, CABLE TO FLAT GND	#6 SOL - 250 MCM CU						
286 100 00260	CONNECTOR, WEDGE CU	4/0 STR (7) - 4/0 STR (7)						
286 100 00320	CONNECTOR, WEDGE CU	4/0 STR (7) - 5/8" ROD						
286 101 00010	SHIELD WEDGE AMP	WHITE						
286 199 00220	BREAK-AWAY	1/0-4/0 STR X 1/0 - 4/0 STR						

UI15n: FAULTED CIRCUIT INDICATOR

Item Code	Description 1	Description 2	Qty	Qty	Qty
285 199 00210	GUARD WIRE	SPIRAL			
284 120 00010	FAULT INDICATOR, 1/0 - 4/0	15KV			
284 120 00020	FAULT INDICATOR, 750 - 1000	15KV			
284 120 00030	INDICATOR CABLE, 3 TO 1	10 FOOT			
284 120 00040	INDICATOR CABLE, 1 TO 1	6 FOOT			
284 120 00050	TIES, CABLE	SMALL			
284 120 00060	CLIP	ADHESIVE BACKED			

UM6S*: SWITCH, PAD MOUNTED

Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty
NON	3PH, 2-WAY AUTOMATED SWITCH	15KV, 600A				
NON	3PH, 3-WAY AUTOMATED SWITCH	15KV, 600A				
284 200 00050	3PH, 2 WAY	8.3/15KV, 600A				
284 200 00060	3PH, 3-WAY	8.3/15KV, 600A				
284 199 00310	SIGN NOTICE/OBSTRUCTION	6" X 3"				
287 100 00040	PADLOCK, BRONZE	W/1-1/2" SHACKLE				

UTAB: BUSHING INSERT, 15KV 200

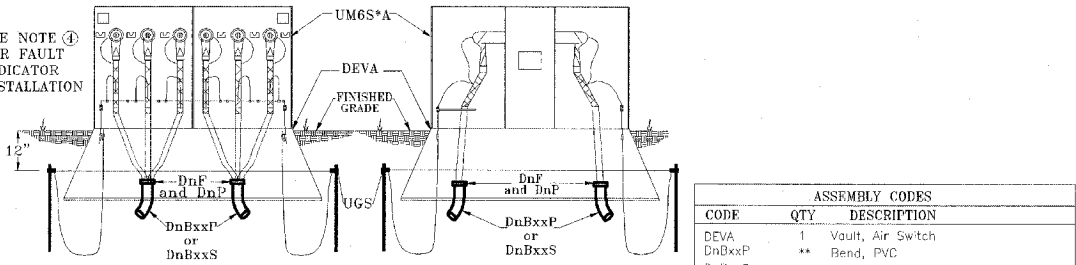
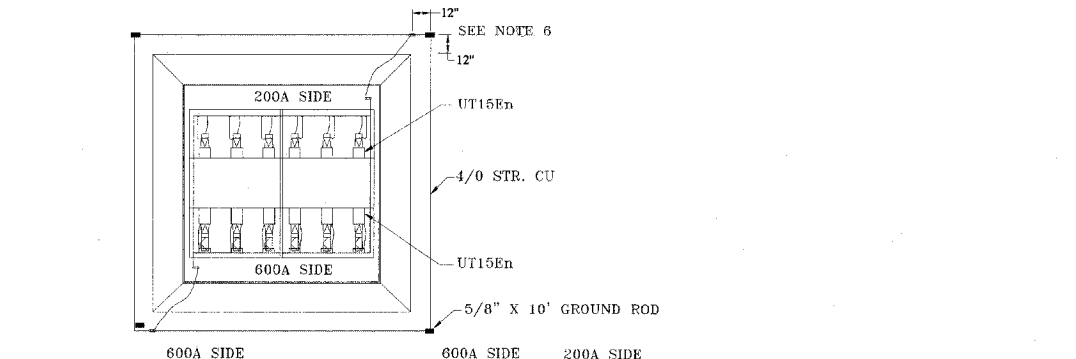
Item Code	Description 1	Description 2	Qty
284 117 00080	INSERT, LOADBREAK BUSHING	15KV, 200A	

UT15AE: ARRESTER, ELBOW, 9KV

Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty
284 118 00020	ARRESTER, ELBOW	9/10 KV				
284 118 00030	ARRESTER, PARKING STAND	9/10 KV				
284 118 00040	ARRESTER, BUSHING INSERT	9/10KV				
286 199 00020	CONNECTOR, BREAKAWAY CU	1/0 - 4/0 STR				

UT15E: ELBOW, 15KV

Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty	Qty
284 109 00010	FUSE, ELBOW 9KV	30A							
284 117 00020	ELBOW, FUSED 8.3KV 200A	1/0 STR AL 175-220 MIL							
284 117 00030	ELBOW, 15KV 200A	1/0 STR AL 175-220 MIL							
284 117 00040	ELBOW, 15KV 200A EXTENDED	1/0 STR AL 175-220 MIL							
284 117 00050	ELBOW, 15KV 200A	4/0 STR AL 175-220 MIL							
284 117 00060	ELBOW, 15KV 200A EXTENDED	4/0 STR AL 175-220 MIL							
284 117 00070	ELBOW, 15KV 600A, W/LETP	750 MCM STR AL 175-220 MIL							
284 117 00080	ELBOW, 15KV 600A, W/LETP	1000 MCM STR AL 175-220 MIL							
284 117 00090	ELBOW, 15KV 600A EXTENDED	1000 MCM STR AL 175-220 MIL							
284 117 00100	ELBOW, 15KV 600A	4/0 STR AL 175-220 MIL							
284 117 00110	KIT CABLE JACKET SEAL	1/0-4/0 (0.93"-1.50")							
284 117 00120	KIT CABLE JACKET SEAL	250-1000 MCM (1.30"-2.67")							
255 199 00100	CABLE CLEANER	QUARTS							
284 199 00120	CAP, INSULATED W/GROUND	15KV 200A							



ASSEMBLY CODES

CODE	QTY	DESCRIPTION
DEVA	1	Vault, Air Switch
DnBxxP	**	Bend, PVC
DnBxxS	**	Bend, Steel
DnF	**	Bell Fitting, PVC
DnF*	**	Plug, PVC
UI15n	**	Faulted Circuit Indicator
UFASMU	**	Fuse Unit, 15KV, SMU 20
UM6S*A	1	Switch, Pad mounted
UGS#	1	Grounding, Switchgear
UT15AE	**	Arrestor, Elbow, 9KV
UT15En	**	Elbow, 15KV

r is dependent on size
* 2(2-way) or 3(3-way)
** qty is dependent on application
xx bend angle dependent on field condition, (typically 45°)
V for vault only, E for switchgear only

- NOTE:
- BENDS SHALL BE INSTALLED PER FIELD CONDITION.
 - SPARES NOT SHOWN.
 - INSTALL ELBOW ARRESTERS AT NORMAL OPEN SWITCH LOCATIONS ON 600A SIDE.
 - SEE C30-1010 FOR FAULT INDICATOR LOCATION.
 - FOR VAULT INSTALLATIONS ONLY, INSTALL LIDS - DEVAL.
 - GROUND GRID INSTALLED 12" FROM VAULT AND 12" BELOW GRADE.
 - CONTRACTOR IS ADVISED THIS SPECIFICATION INDICATES WHAT IS INSIDE AN EXISTING ENERGIZED SWITCH GEAR THAT IS TO BE WORKED IN BY THE CONTRACTOR.
- THE ASSEMBLY CODE UM6S# - BUSHING INSERT, 15KV 200 Amps WAS ELIMINATED AFTER S&C ADDED THE BUSHING INSERT OPTION TO ALL NEW PNE SWITCHGEAR! THE UTAB# OPTION IS STILL AVAILABLE FOR USE AS A REPLACEMENT OPTION.

DEVA: VAULT, AIR SWITCH

Item Code	Description 1	Description 2	Qty	Qty	Qty	Qty	Qty	Qty
284 100 00120	EXTENDER, 14 TRF VAULT	44" X44" X 2" W/25" 25" OPEN						
284 101 00010	VAULT, AIR SWITCH	74" X76" X36" (FIBER-CRETE)						
284 101 00020	VAULT, 1Ø TRF/FUSE CAN	44" X44" X36" (FIBER-CRETE)						
284 101 00030	VAULT, 3Ø PLUG CAN	23" X69" X36" (FIBER-CRETE)						
284 101 00040	VAULT, 3Ø FUSE CAN	49" X69" X36" (FIBER-CRETE)						
284 101 00100	EXTENDER, AIR SWITCH VAULT	74" X76" X3" (FIBER-CRETE)						
NON	CA-6	CRUSHED LIMESTONE						
NON	VAULT, 12.47KV PH. METERING	56" X56" X20" (FIBER-CRETE)						
NON	LID, AIR SWITCH VAULT	2-PIECE DESIGN W/HARDWARE						

DnBxxP: BEND, PVC

Assembly	Item Code	Description 1	Description 2	Qty
D3B30P	285 101 00025	ELBOW, PVC 30 DEG 3"	STANDARD RADIUS SCH 40	1
D3B45P	285 101 00030	ELBOW, 3Ø E PVC 45 DEG 3"	SCH 40	1
D3B60P	285 101 00040	ELBOW, 3Ø E PVC 60 DEG 3"	SCH 40	1
D3B90P	285 101 00080	ELBOW, 3Ø E PVC 90 DEG 5"	SCH 40	1
D5B45P	285 101 00090	ELBOW, 3Ø E PVC 45 DEG 5"	SCH 40	1
D5B60P	285 101 00100	ELBOW, 3Ø E PVC 60 DEG 5"	SCH 40	1
D5B90P	285 101 00200	ELBOW, 4Ø E PVC 90 DEG 6"	SCH 40	1
D5B90P	285 101 00240	ELBOW, 4Ø E PVC 45 DEG 6"	SCH 40	1
D5B90P	285 101 00240	ELBOW, 4Ø E PVC 90 DEG 6"	SCH 40	1

D3BxxS: BEND, 3" STEEL

Item Code	Description 1	Description 2	D3B90S	Qty
285 101 00140	ELBOW, 3Ø R STL 90 DEG 3"	GALVANIZED		1
285 102 00040	COUPLING, PVC 3"	LONG LINE SCH 40		1

D5BxxS: BEND, 5" STEEL

Item Code	Description 1	Description 2	D5B90S	D5B45S	D5B60S	Qty
285 101 00160	ELBOW, 3Ø R STL 30 DEG 5"	GALVANIZED				1
285 101 00170	ELBOW, 3Ø R STL 45 DEG 5"	GALVANIZED				1
285 101 00180	ELBOW, 3Ø R STL 90 DEG 5"	GALVANIZED				1
285 102 00110	COUPLING, PVC 5"	LONG LINE SCH 40				1

D6BxxS: BEND, 6" STEEL

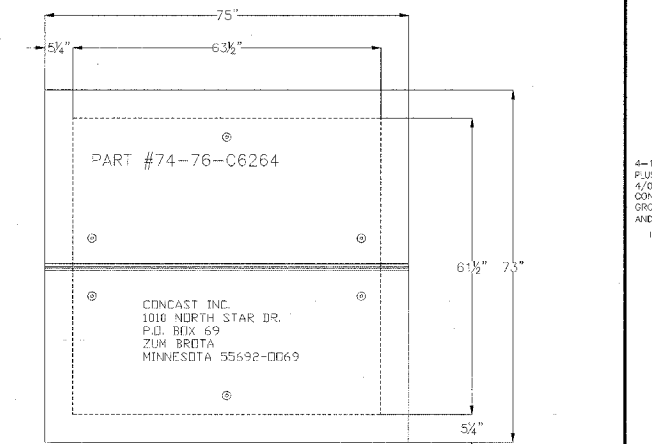
Item Code	Description 1	Description 2	D6B11S	D6B22S	D6B30S	D6B45S	D6B90S	Qty
285 101 00180	ELBOW, 4Ø R STL 11 DEG 6"	GALVANIZED						1
285 101 00188	ELBOW, 4Ø R 22.5 DEG 6"	GALVANIZED						1
285 101 00189	ELBOW, 4Ø R STL 30 DEG 6"	GALVANIZED						1
285 101 00200	ELBOW, 4Ø R STL 45 DEG 6"	GALVANIZED						1
285 101 00210	ELBOW, 4Ø R STL 90 DEG 6"	GALVANIZED						1
285 102 00140	COUPLING, PVC 6"	LONG LINE SCH 40						1

DnF: BELL FITTING, PVC

Item Code	Description 1	Description 2	DnF	D5F	D6F	Qty
285 103 00040	BELL FITTING, PVC 3"	SCH 40 & SCH 80				1
285 103 00080	BELL FITTING, PVC 5"	SCH 40 & SCH 80				1
285 103 00100	BELL FITTING, PVC 6"	SCH 40 & SCH 80				1

DnF: PLUG, PVC

Item Code	Description 1	Description 2	DnF	D5F	D6F	Qty
285 103 00030	PLUG, PVC 3"	WITH PULL TAB				1
285 103 00070	PLUG, PVC 5"	WITH PULL TAB				1
285 103 00090	PLUG, PVC 6"	WITH PULL TAB				1

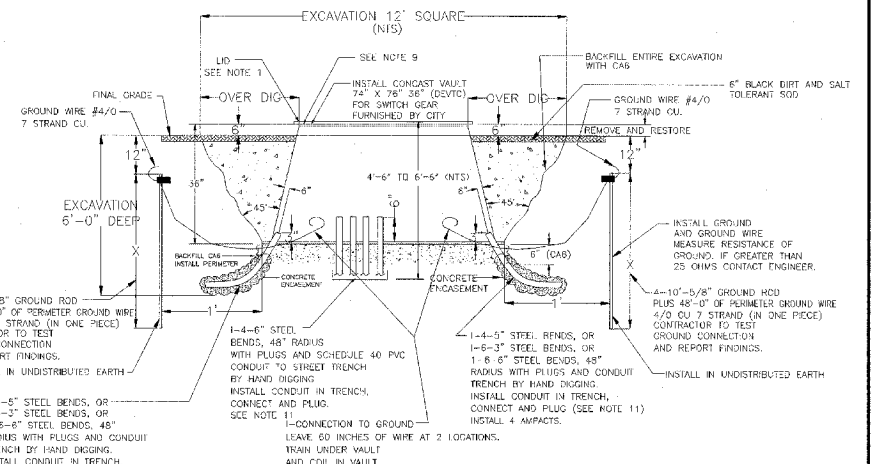


MATERIAL: FIBERCRETE (REQUIRED - 6)

CONTRACTOR TO ORDER FROM ELECTRIC TUB ATTN: JAMES FLEWING 1478 McDERMID PLACE WHEATON IL 60187 PHONE: 1-800-544-4285

NOTE: INSTALL THIS COVER OVER SWITCH GEAR VAULT UNTIL SWITCH IS INSTALLED. RETURN COVER TO CITY OF NAPERVILLE'S STOCK ROOM.

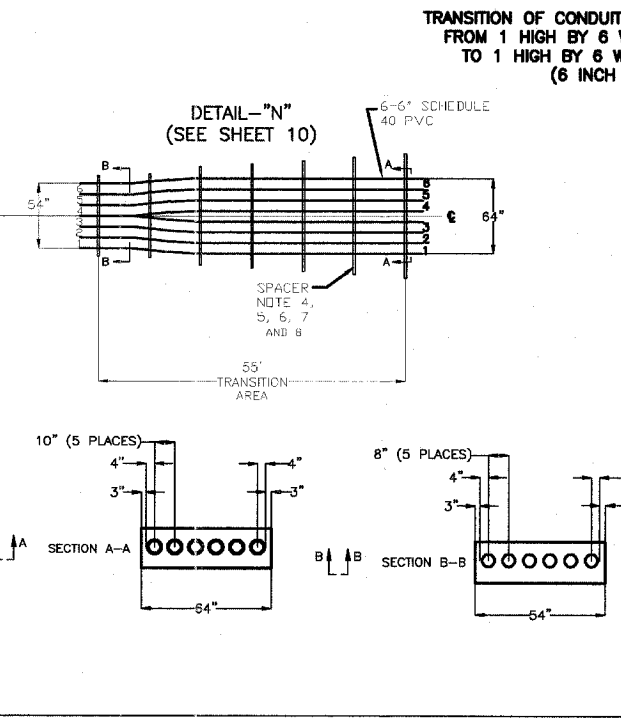
NAPERVILLE PUBLIC UTILITIES DEPARTMENT
ELECTRIC STANDARDS
SWITCH GEAR VAULT COVER (50 LBS.)
(CONSTRUCTION SPECIFICATION)
DATE: 05-01-05
Page 1 of 1
58199-109



NOTES:

- INSTALL LID OVER OPENING PER 58199-109 FURNISHED BY CONTRACTOR.
- ESTIMATED WEIGHT - 700 LBS TO 800 LBS.
- VAULT MATERIAL - FIBERCRETE FORMED.
- INSTALL TOP OF VAULT 8" ABOVE FINAL GRADE.
- INSTALL GALVANIZED STEEL ELBOWS INTO VAULT. CONTACT CITY ELECTRICAL ENGINEER FOR LOCATION OF THE ELBOWS IN THE VAULT AND ORIENTATION OF VAULT.
- INSTALL 4-5/8" DIA. X 10'-0" LONG GROUND RODS FOR EACH VAULT. LOCATE ONE ROD AT EACH OF THE CORNERS. INSTALL 6" FROM THE CORNER. GROUND ROD TO BE DRIVEN 6" BELOW FINISHED GRADE.
- INSTALL PERIMETER GROUND WIRE #4/0, 7 STRANDS COPPER AND ATTACH TO 4 RODS. (ONE CONTINUOUS PIECE, APPROXIMATELY 60' OF WIRE)
- ALL MATERIALS INSTALLED SHALL BE FURNISHED BY CITY OF NAPERVILLE OR CONTRACTOR AS NEW AT EACH LOCATION USED MATERIALS ARE NOT ACCEPTABLE
- INSTALL DETECTABLE MULE TAPE OR #12 COPPER WIRE THIN INTO VAULT AND TIE OFF TO LID AND LEAVE TAIL TO CONNECT TOO.
- TEST GROUNDS TO 25 OHMS.
- BENDS SHALL BE INSTALLED PER FIELD CONDITIONS USE 11", 22", 30", 45" AND 90" STEEL BENDS.
- CONTACT ON SITE INSPECTOR FOR ORIENTATION ONLY.
- TESTING EQUIPMENT BY CONTRACTOR.
- TESTING RESULTS TO BE GIVEN TO THE CITY IN WRITTEN FORM.
- VAULT, GROUND MATERIALS, PLASTIC AND STEEL BENDS AND GROUND WIRE FURNISHED BY CITY, INSTALLED BY CONTRACTOR.

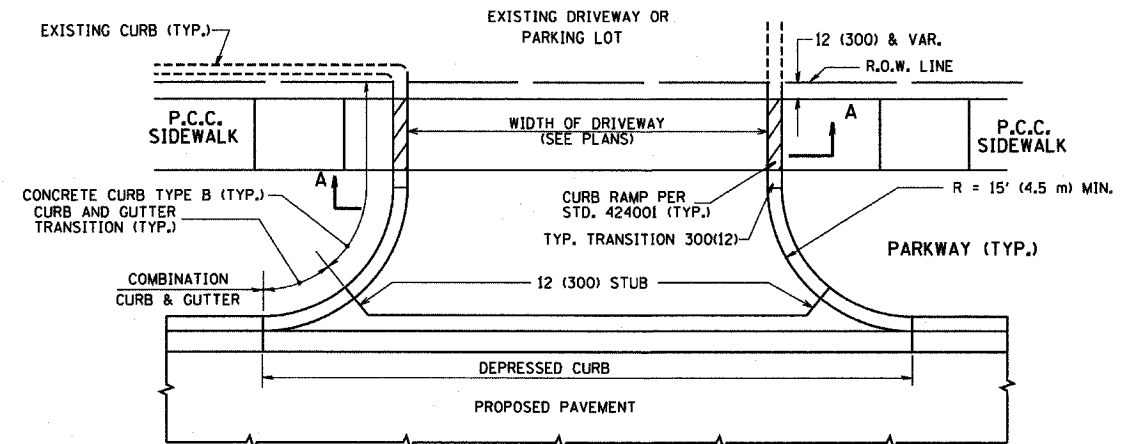
NAPERVILLE PUBLIC UTILITIES DEPARTMENT
ELECTRIC STANDARDS
INSTALL NEW SWITCH GEAR VAULT
(CONSTRUCTION SPECIFICATION)
DATE: 05-01-05
Page 1 of 1
58199-110



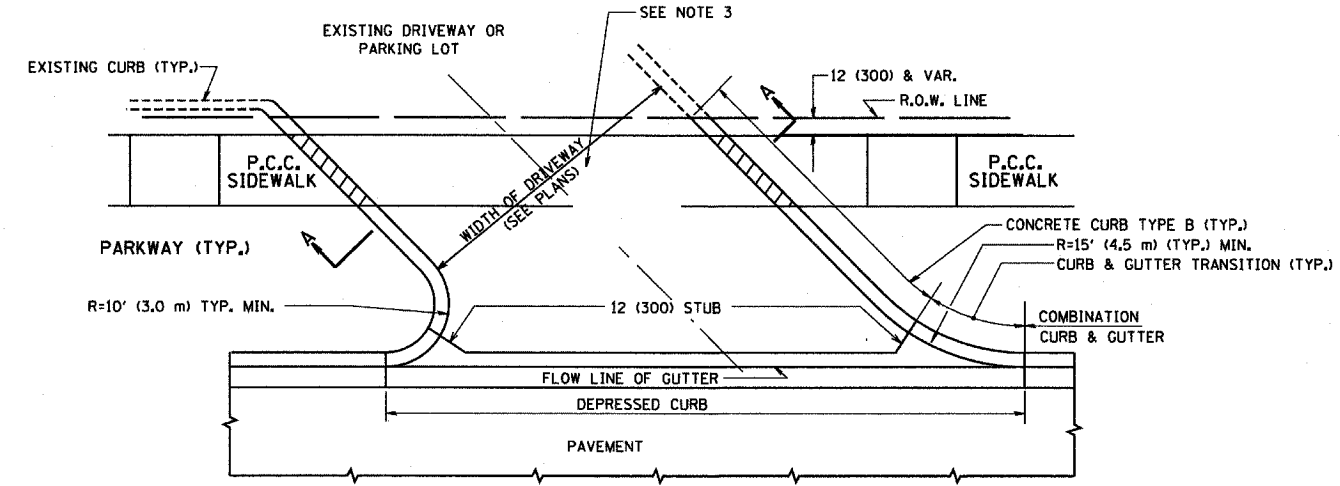
TRANSITION OF CONDUIT (SCHEDULE 40 PVC) FROM 1 HIGH BY 6 WIDE (10" CENTER) TO 1 HIGH BY 8 WIDE (8" CENTER) (6 INCH DUCT)

- THE DUCTS IN TRANSITION/TRANSPOSING FROM SECTION A-A TO SECTION B-B SHALL FOLLOW UNIFORM RADIUS REVERSE CURVES, WHICH LIE IN THE PLANE OF CURVED SURFACES, INDICATED IN THE PLAN OF DUCT AXES.
- SEPARATION BETWEEN DUCTS AND SHEATHING THICKNESS SHALL BE THE SAME AS FOR THE STANDARD FORMATION IN THE REMAINDER OF THE RUN.
- ALL EQUIPMENT, TOOLS AND MATERIAL TO COMPLETE THE TRANSPOSITION WILL BE FURNISHED AND INSTALLED BY THE CONTRACTOR, EXCEPT FOR THE SCHEDULE 40 PVC CONDUIT.
- CONTRACTOR TO SUPPLY SPACERS, COUPLING AND ADAPTERS.
- USE PLASTIC TIES AS REQUIRED.
- USE 5 DEGREE BENDS AS REQUIRED.
- CONTRACTOR SHALL ASSEMBLE, PRE FIT, LEVEL, CUT ARRANGE, CHOP, CHIP, SUPPORT AND SECURE DUCT FOR A COMPLETE JOB.
- ALL CONDUITS SHALL BE ENCASED IN CONCRETE AND FORMED IN FIELD BY THE CONTRACTOR, USING FORMS CUT TO FIT OF WOOD ALL MATERIALS FURNISHED BY THE CONTRACTOR.
- CONTRACTOR TO FORM BENDS IN FIELD USING A HOT BOX IF MANUFACTURED BENDS ARE NOT ACCEPTABLE. ALL DUCT TO REMAIN ROUND.
- ALL MATERIALS, EQUIPMENT AND TOOLS FURNISHED BY CONTRACTOR.
- ALL SCHEDULE 40 PVC CONDUIT SHALL BE SUPPLIED BY THE CITY, INSTALLED BY THE CONTRACTOR.
- ALL STEEL TO PLASTIC COUPLING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

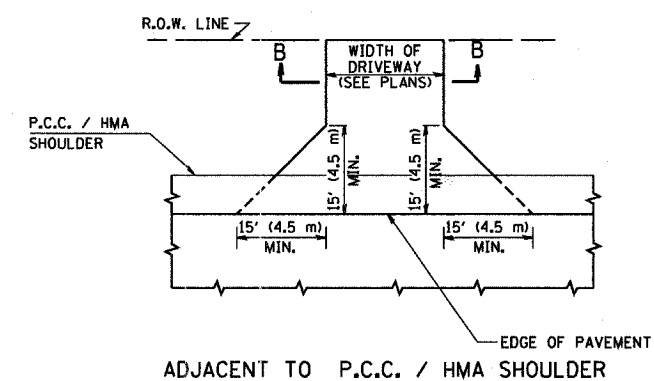
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1645	00-0018-00-8A	DUPAGE	97	90
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



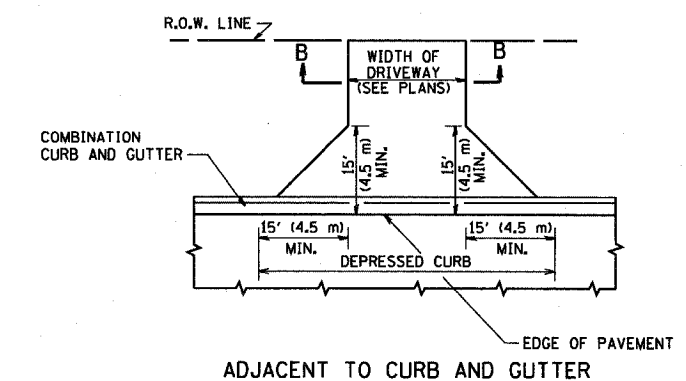
WITH CONCRETE CURB, TYPE B



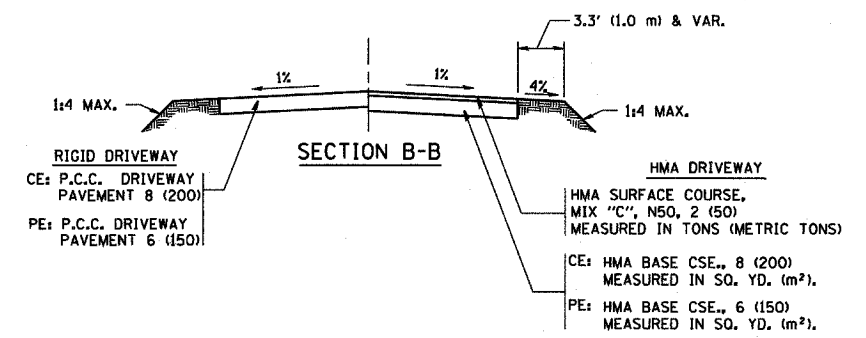
WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER

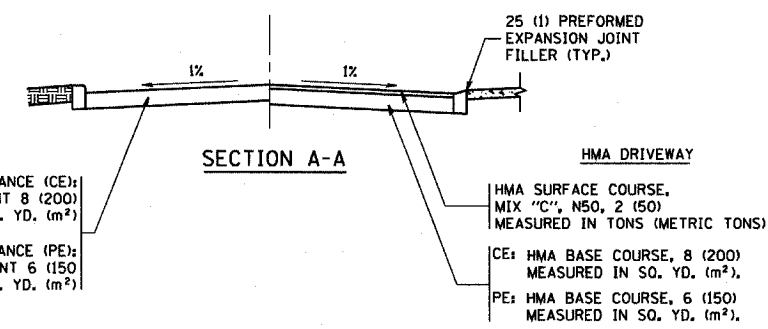


ADJACENT TO CURB AND GUTTER



SECTION B-B

RURAL FIELD ENTRANCE (FE)
 HMA SURFACE COURSE,
 MIX "C", N50, 2 (50)
 MEASURED IN TONS (METRIC TONS)
 CE: HMA BASE COURSE, 8 (200)
 MEASURED IN SQ. YD. (m²),
 PE: HMA BASE COURSE, 6 (150)
 MEASURED IN SQ. YD. (m²),
 AGGREGATE BASE COURSE, TYPE A B (200)
 MEASURED IN SQ. YD. (m²).



SECTION A-A

RIGID DRIVEWAY
 COMMERCIAL ENTRANCE (CE):
 P.C.C. DRIVEWAY PAVEMENT 8 (200)
 MEASURED IN SQ. YD. (m²)
 NON-COMMERCIAL ENTRANCE (PE):
 P.C.C. DRIVEWAY PAVEMENT 6 (150)
 MEASURED IN SQ. YD. (m²)

HMA DRIVEWAY
 HMA SURFACE COURSE,
 MIX "C", N50, 2 (50)
 MEASURED IN TONS (METRIC TONS)
 CE: HMA BASE COURSE, 8 (200)
 MEASURED IN SQ. YD. (m²),
 PE: HMA BASE COURSE, 6 (150)
 MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

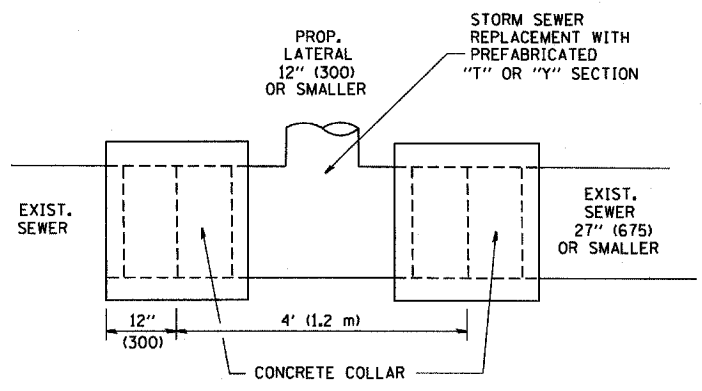
REVISIONS	
NAME	DATE
R. SHAH	11-04-95
J. POLLASTRINI	08-12-96
J. POLLASTRINI	12-14-96
A. ABBAS	03-21-97
T. HOLTZ	04-08-97
M. GOMEZ	04-06-01
P. LaFLEUR	04-15-03
R. BORO	01-01-07

ILLINOIS DEPARTMENT OF TRANSPORTATION
DRIVEWAY DETAILS
 DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

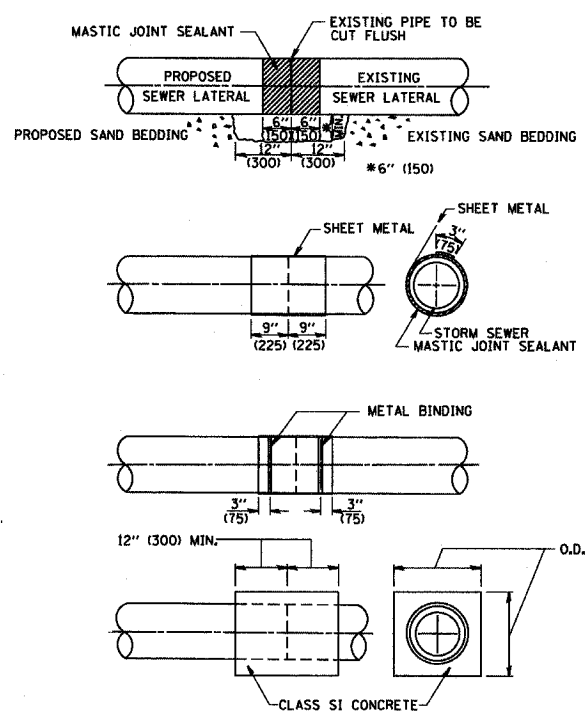
SCALE: VERT. NONE
 HORIZ.
 DRAWN BY
 CHECKED BY

PLOT DATE = 4/11/2007
 FILE NAME = c:\p\projects\driveway\driveway.dwg
 PLOT SCALE = 40,000 / 1 IN.
 USER NAME = drivetong

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-0015-00-8A	DU PAGE	97	91
STA. 1+31.77		TO STA. 5+60.00		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT



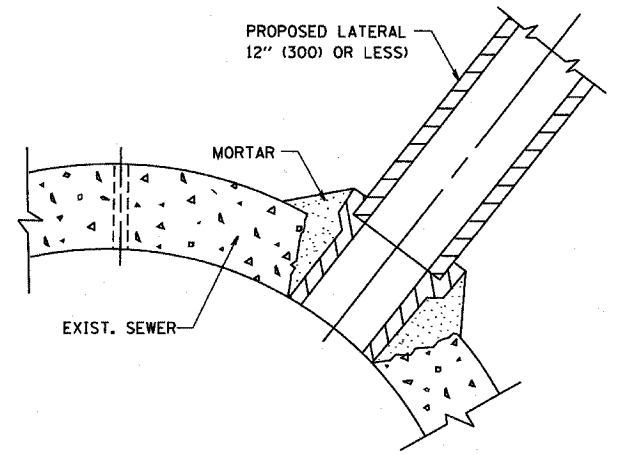
DETAIL "A"
LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER



DETAIL "B"
CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

1. CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
2. APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
3. BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
4. CUT A PIECE OF SHEET METAL GAGE NO. 19 1.1 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
5. WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
6. LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
7. PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
8. WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OOZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
9. PLACE CLASS SI CONCRETE AROUND THE JOINT.



DETAIL "C"
PROPOSED LATERAL CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER

NOTES

MATERIAL

MATERIAL USED FOR THE TEE OR WYE SECTION SHALL BE COMPATIBLE WITH THE EXISTING STORM SEWER OR THE PROPOSED STORM SEWER.

CONSTRUCTION METHODS

- I. THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 550 OF THE STANDARD SPECIFICATIONS.
 - II. CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - A) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "B".
 - B) PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 30" (750) OR LARGER SEE DETAIL "C".
- IF THE EXISTING SEWER PIPE IS CRACKED, BROKEN OR OTHERWISE DAMAGED BY THE CONTRACTOR IN MAKING THE CIRCULAR OPENING, THE CONTRACTOR SHALL REPLACE THAT SECTION OF PIPE WITH PIPE EQUAL AND SIMILAR IN ALL RESPECTS TO THE PIPE IN THE EXISTING SEWER, IN A CAREFUL WORKMANLIKE MANNER, WITHOUT EXTRA COMPENSATION.

GENERAL

CARE MUST BE TAKEN TO PREVENT DEBRIS FROM ENTERING THE SEWER. ALL DEBRIS WHICH ENTERS THE SEWER MUST BE REMOVED. THE SEWER MUST BE LEFT CLEAN AND UNOBSTRUCTED UPON COMPLETION OF THE CONTRACT.

CARE MUST BE TAKEN TO PREVENT ANY PART OF THE NEW PIPE CONNECTION FROM PROJECTING INTO THE EXISTING SEWER.

BASIS OF PAYMENT

TEE OR WYE CONNECTIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STORM SEWER TEE OR WYE OF THE TYPE AND SIZE SPECIFIED IN THE PLANS. THIS PRICE SHALL INCLUDE ALL EXCAVATION OF THE TRENCH, REMOVAL OF THE EXISTING STORM SEWER, FURNISHING AND INSTALLING THE SPECIFIED TEE OR WYE SECTION, FURNISHING AND INSTALLING THE REQUIRED CONCRETE COLLAR, AND ALL OTHER MATERIAL NECESSARY TO COMPLETE THIS WORK AS SHOWN AND SPECIFIED.

REMOVAL AND REINSTALLATION OF EXISTING STORM SEWER ADJACENT TO THE PROPOSED TEE OR WYE SECTION, FOR THE PURPOSE OF FACILITATING THE INSTALLATION OF THE TEE OR WYE SECTION, WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE WORK.

TRENCH BACKFILL, EXCAVATION IN ROCK AND REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIAL BELOW PLAN BEDDING GRADE WILL BE PAID FOR SEPARATELY.

CONCRETE COLLAR FOR CONNECTING A PROPOSED STORM SEWER TO AN EXISTING STORM SEWER WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	07/25/90
M. DE YONG	02/05/92
M. DE YONG	05/08/92
R. SHAH	09/09/94
R. SHAH	10/25/94
R. SHAH	06/12/96

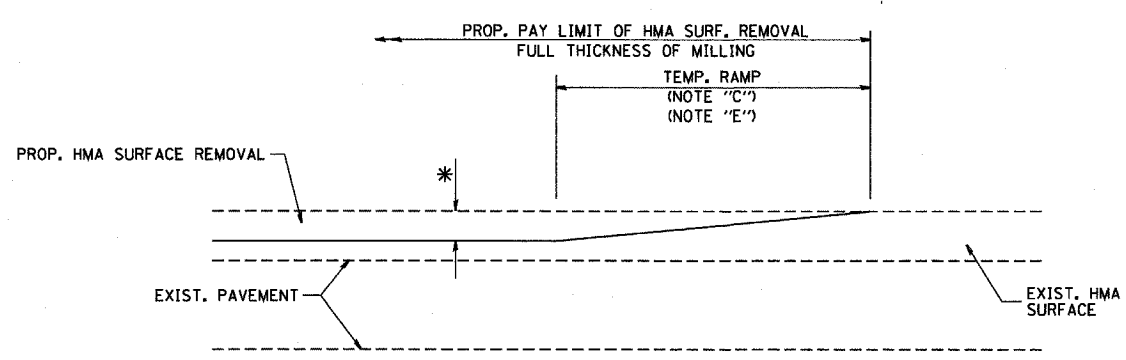
ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER

SCALE: VERT. NONE
HORIZ.

DRAWN BY
CHECKED BY
BD500-01 (BD-7)

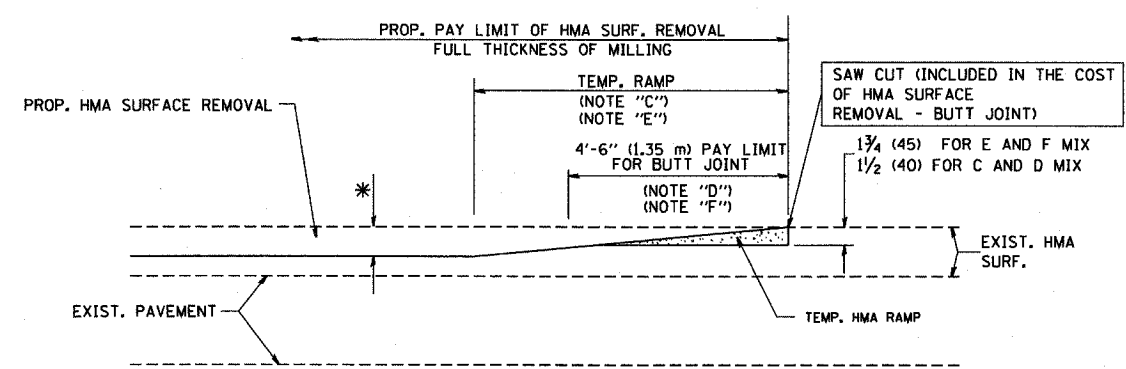
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USER NAME = baward

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA. 1+31.77		TO STA. 8+50.00		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



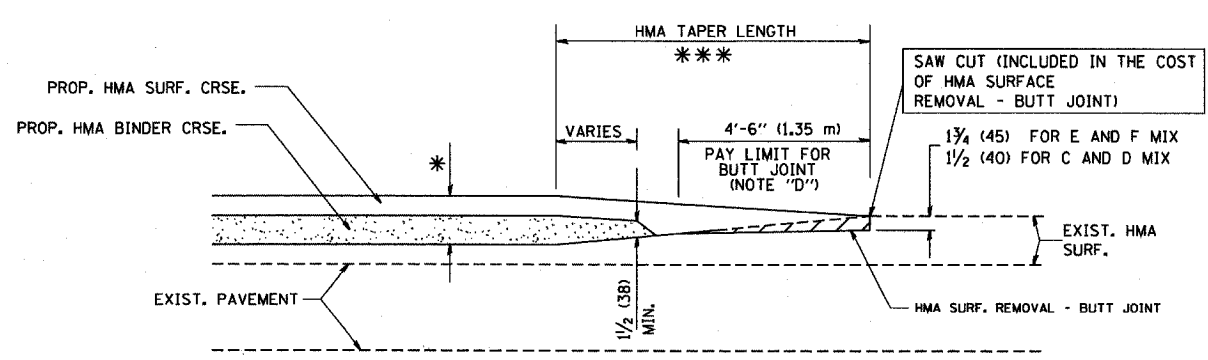
MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1

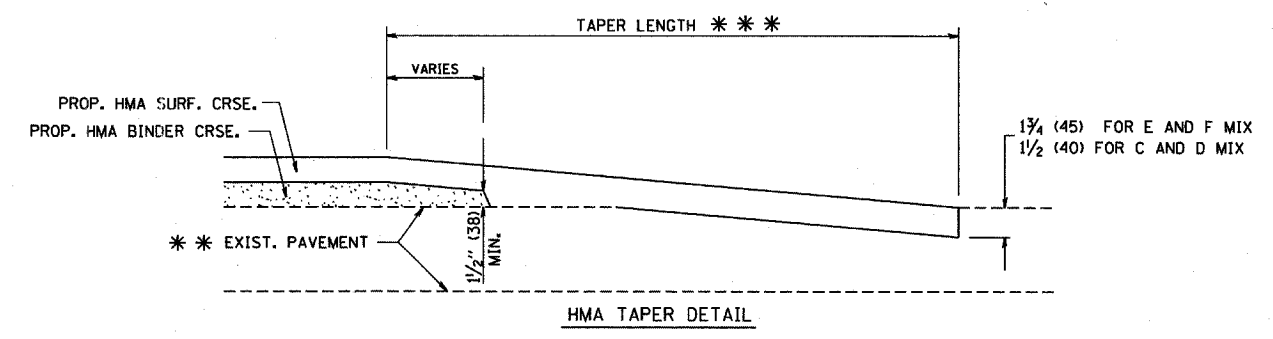
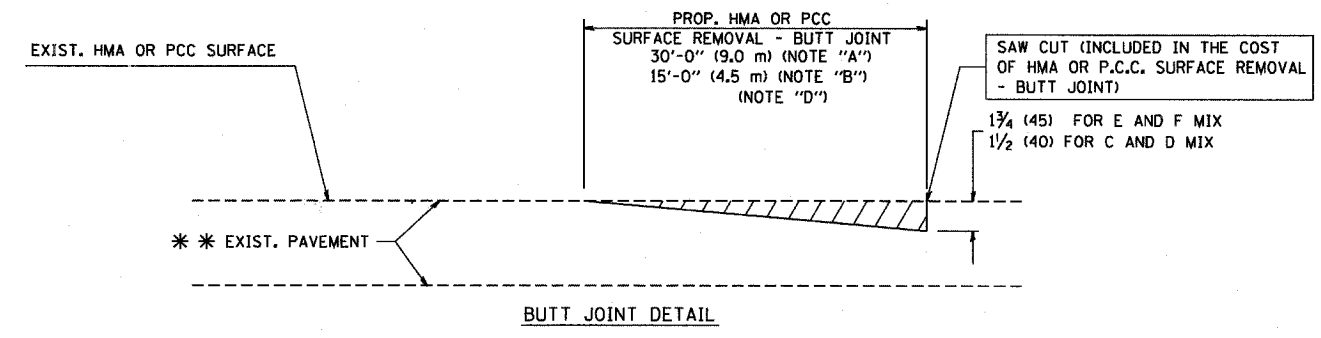


HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2
TYPICAL TEMPORARY RAMP



BUTT JOINT AND HMA TAPER
TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

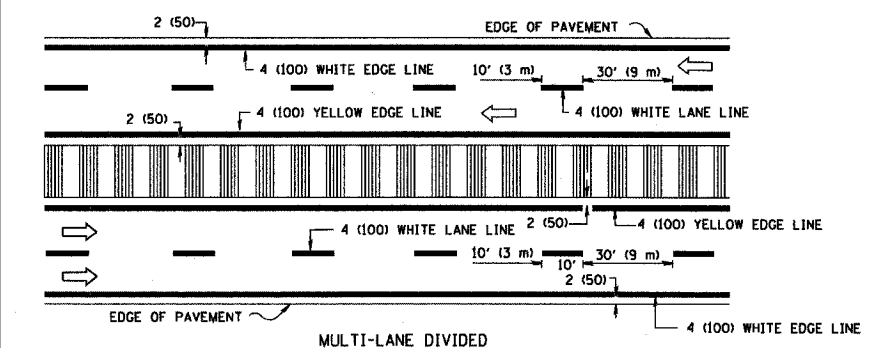
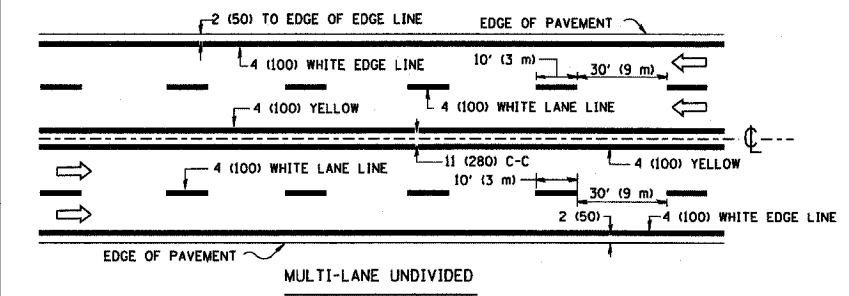
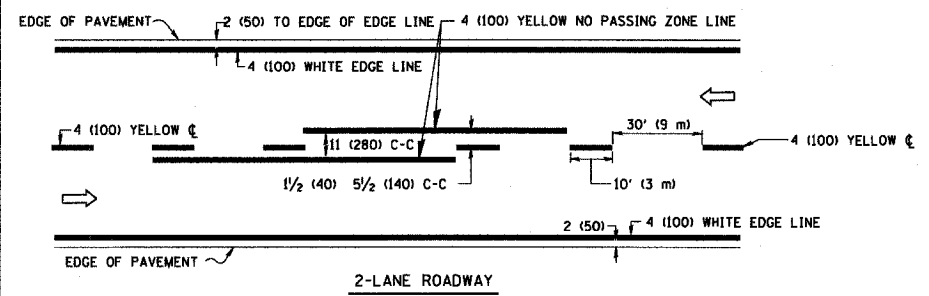
BUTT JOINT AND HMA TAPER DETAILS

SCALE: VERT. NONE
HORIZ.

DRAWN BY
CHECKED BY
BD400-05 (VI=BD32)

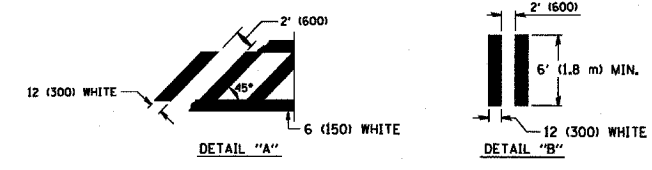
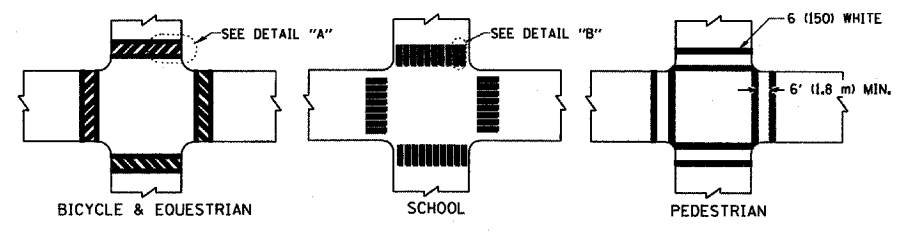
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USER NAME = baward

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

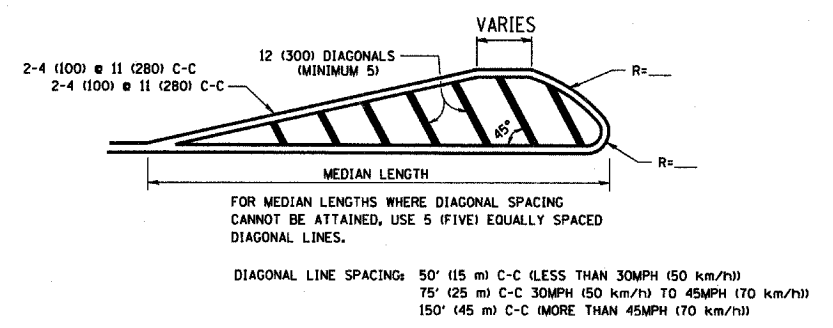
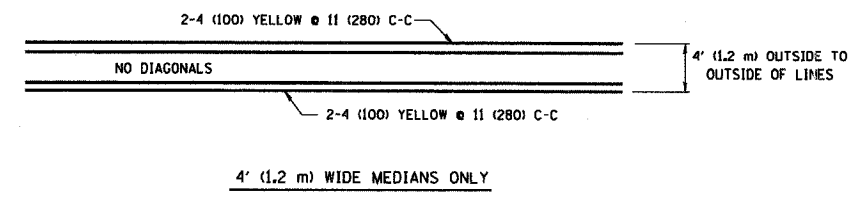


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

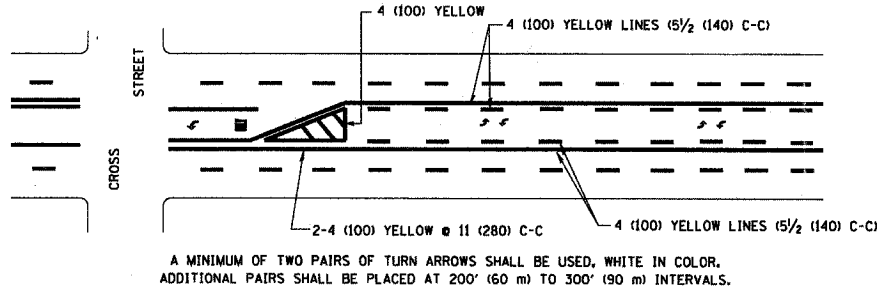


TYPICAL CROSSWALK MARKING

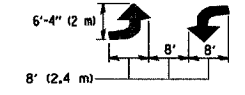


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

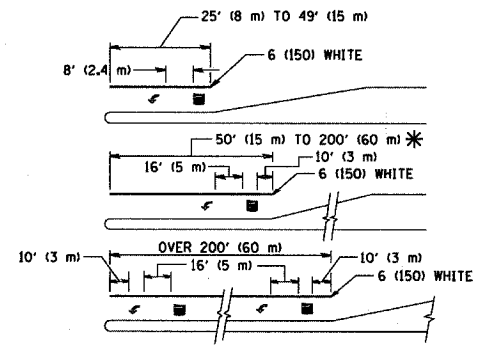


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

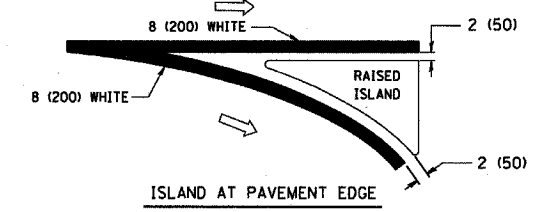
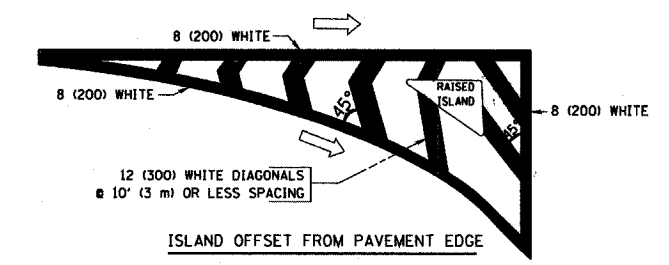


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ; ONLY AREA = 20.8 SQ. FT. (1.9 m²)

* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100)	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS @ (2.4m)	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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


REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD
CHECKED BY
TC-13

PLOT DATE = 3/6/2007
FILE NAME = K:\chris\pav\3.dgn
PLOT SCALE = 0.5000 / IN.
USER NAME = bcaard



O'BRIEN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1235 E. DAVIS ST., ARLINGTON HTS., IL 60005
(847)398-1441 • FAX(847) 398-2376

STRUCTURE FOUNDATION BORING LOG


Sh 1 of 1

Project: Bailey Road Bridge over the West Branch of the DuPage River OBA JOB NO. 04251
 Location: Naperville, Illinois Date: October 13, 04
 County: DuPage County Bored By: Patrick
 Client: T.Y. Lin International/BASCOR, Inc. Checked By: DOB

BORING No.: R-1
 Station: 2+27
 Offset: 1.5' Left
 Surface Elevation: 656.4

Soil Description	Blow Counts	Qu (tsf)	W (%)	Surface Water Elev.	WD	n/a	Dry	Blow Counts	Qu (tsf)	W (%)
				Groundwater Elevation AB						
3.0" ASPHALT, 9.0" CRUSHED STONE	7									
SILTY CLAY-some sand, gravel & stone-brown & gray spotted black-medium stiff to stiff (CL) Fill	5	1.75P	18							
	9									
	3									
Silty clay-some sand, gravel & stone-brown & gray spotted black-medium stiff (CL) Fill	4	1.25P	20							
	-5									
	4									
End of Boring @ -7.5' 3.25" Hollow Stem Augers CME-75 Automatic Hammer	2	0.5P	18							
	4									
	4									
	-10									
	-15									
	-20									
	-25									

N-Standard Penetration is the value of the last blow counts in each sample zone (ASTM D-1586)
 NR-No Recovery ST-Shelby Tube
 O'BRIEN & ASSOCIATES, INC.



O'BRIEN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1235 E. DAVIS ST., ARLINGTON HTS., IL 60005
(847)398-1441 • FAX(847) 398-2376

STRUCTURE FOUNDATION BORING LOG

Sh 1 of 1

Project: Bailey Road Bridge over the West Branch of the DuPage River OBA JOB NO. 04251
 Location: Naperville, Illinois Date: October 13, 04
 County: DuPage County Bored By: Patrick
 Client: T.Y. Lin International/BASCOR, Inc. Checked By: DOB

BORING No.: R-2
 Station: 3+72
 Offset: 1.5' Right
 Surface Elevation: 656.2


Soil Description	Blow Counts	Qu (tsf)	W (%)	Surface Water Elev.	WD	n/a	Dry	Blow Counts	Qu (tsf)	W (%)
				Groundwater Elevation AB						
3.0" ASPHALT, 9.0" CRUSHED STONE	13									
CLAYEY SAND & STONE-brown-loose to medium dense (GC) Fill	8	NP	7							
	4									
Silty clay-some sand, gravel & stone-brown & gray spotted black-medium stiff (CL) Fill	4	NP	6							
	-5									
TOPSOIL-black (OL)	2	0.75P	19							
	2									
	3									
End of Boring @ -10.0' 3.25" Hollow Stem Augers CME-75 Automatic Hammer	4	2.0P	42							
	-10									
	-15									
	-20									
	-25									

N-Standard Penetration is the value of the last blow counts in each sample zone (ASTM D-1586)
 NR-No Recovery ST-Shelby Tube
 O'BRIEN & ASSOCIATES, INC.

REVISIONS	
NAME	DATE


**BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER
SOIL BORINGS R-1 AND R-2**

CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

City of Naperville logo and name.

DRAWN: SNB	SHEET NO.
CHECKED: SP	94
APPROVED:	
DATE: JULY 13, 2007	
SCALE: 1"=20'-0"	
JOB NO.: C-91-062-04	PROJECT NO.: BHM-8003(343)



STRUCTURE FOUNDATION BORING LOG

O'BRIEN & ASSOCIATES, INC.
CONSULTING ENGINEERS
1235 E. DAVIS ST./ARLINGTON HTS., IL 60005
(847)398-1441 • FAX(847) 398-2376


Sh 1 of 1

Project: Bailey Road Bridge over the West Branch of the DuPage River OBA JOB NO. 04251
 Location: Naperville, Illinois Date October 12, 04
 County: DuPage County Bored By Patrick
 Client: I.Y. Lin International/BASCOR, Inc. Checked By DOB
 BORING No.: R-3

Station: <u>4+02</u> Offset: <u>11.5' Left</u> Surface Elevation: <u>656.2</u>	Blow Counts	Qu (tsf)	W (%)	Surface Water Elev.	n/a	Blow Counts	Qu (tsf)	W (%)
				Groundwater Elevation WD	Dry			
3.0' ASPHALT, 12.0' CRUSHED STONE	20							
CRUSHED GRAVEL & STONE- brown-medium dense (FIII)	14 10	NP	4					
SILTY CLAY-some sand, gravel & stone-dark brown-medium stiff (CL) Fill	7 5 8	1.75P	20					
TOPSOIL-black (OL)	3 3 4	1.75P	38					
	3 3 3	1.5P	37					
End of Boring @ -10.0' 3.25" Hollow Stem Augers CME-75 Automatic Hammer	-10							
	-15							
	-20							
	-25							
	-30							
	-35							
	-40							
	-45							
	-50							

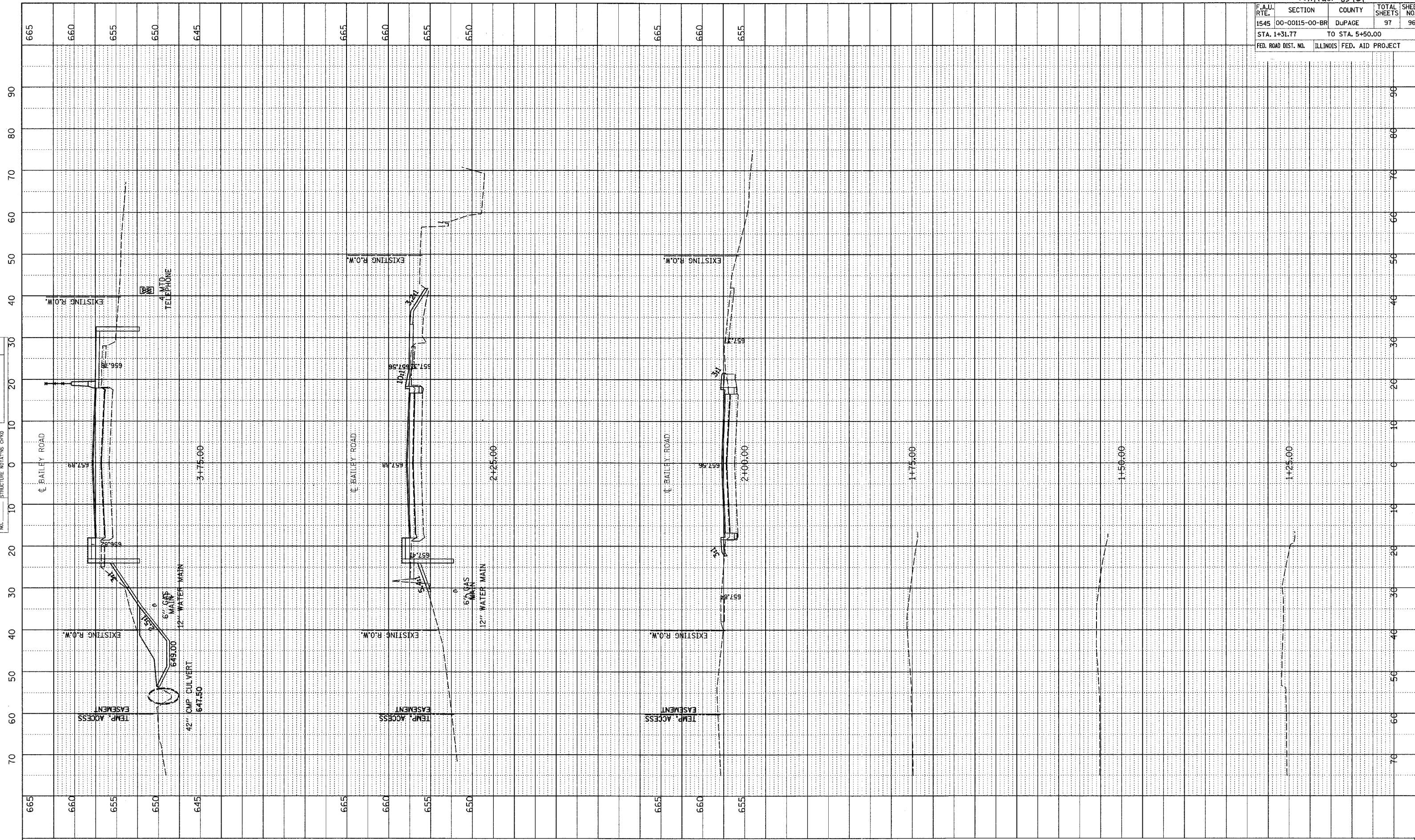
N-Standard Penetration is the value of the last blow counts in each sample zone (ASTM D-1586)
 NR-No Recovery ST-Shealy Tube
 B-Bulge Failure S-Shear Failure
 E-Estimated Value P-Penetrometer
 Qu-Unconfined Compressive Strength (tsf) at dry weight (pcf)
 W-Water Content, percent dry weight noted in Italics above
 NP-Non-Plastic
 VS-Vane Shear (psf)

O'BRIEN & ASSOCIATES, INC.

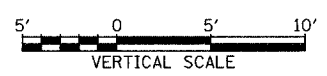
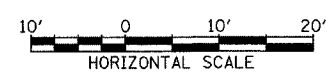
REVISIONS NAME DATE 	BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER SOIL BORING R-3	City of  Naperville	
		DRAWN: SNB CHECKED: SP APPROVED:	SHEET NO. <h1 style="text-align: center;">95</h1>
		DATE: JULY 13, 2007 SCALE: 1"=20'-0"	
		CONSULTANT TYLIN INTERNATIONAL	
		JOB NO.: C-91-062-04 PROJECT NO.: BHM-8003(343)	

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	96
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DATE _____ BY _____
 PROFILE SURVEYED _____
 GRADES CHECKED _____
 NOTE BOOK NO. _____
 B.M. NOTED _____
 STRUCTURE NOTATIONS CRD _____



TYLINTERNATIONAL



STA. 1+25 TO STA. 3+75

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	97
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

PROFILE	SURVEYED	DATE
NOTE BOOK	PROCESSED	
NO.	B.M. NOTED	
	STRUCTURE NOTATIONS CHRD	

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70

