

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

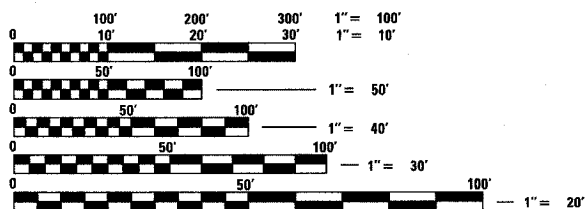
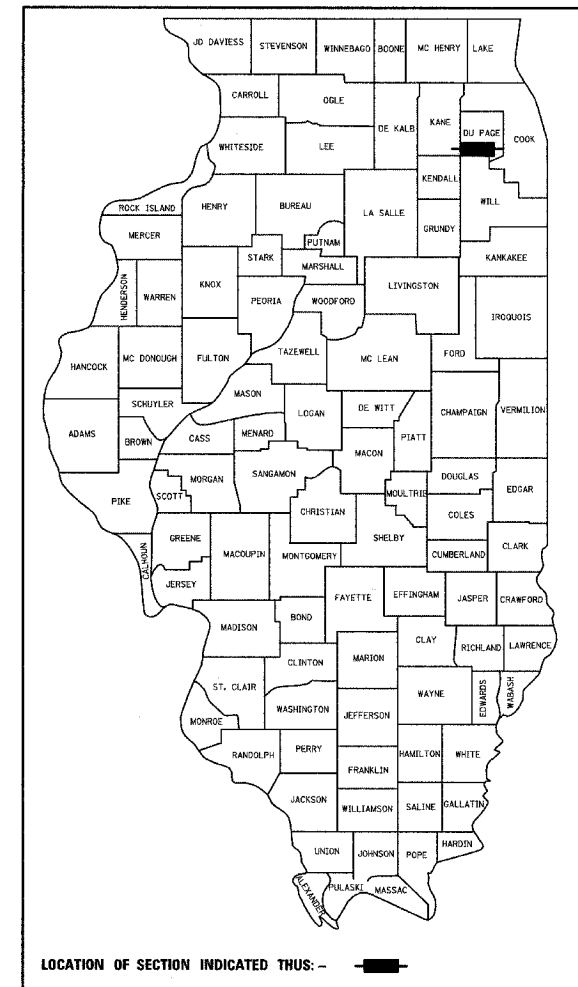
PROJECT NO.: BHM-8003 (343)

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	



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.

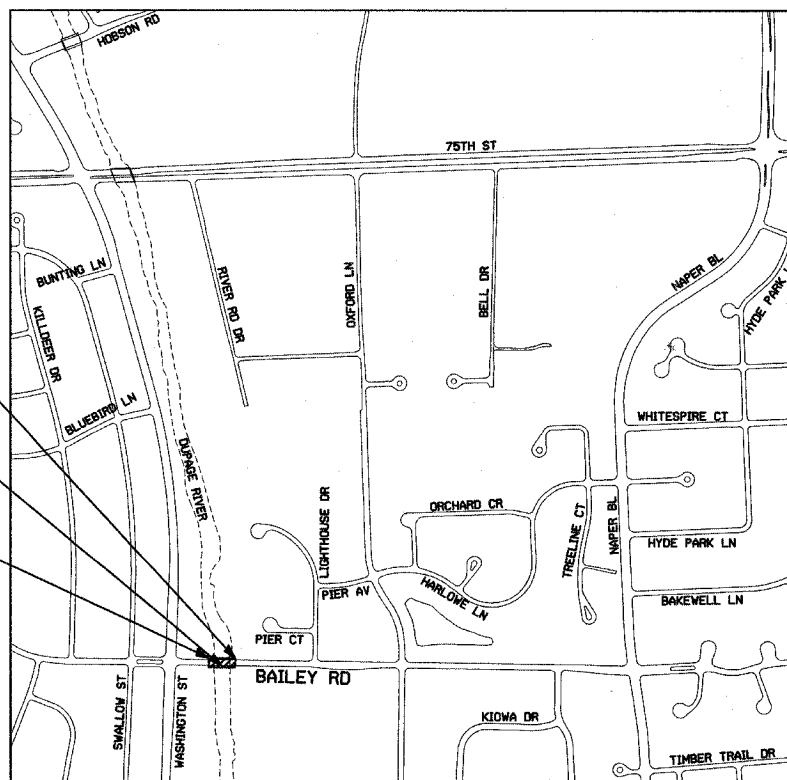
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 83961

PROJECT ENDS
STA 5+50.00

PROJECT LOCATION

PROJECT BEGINS
STA 1+31.77

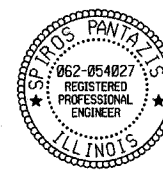


NOT TO SCALE
LISLE TOWNSHIP

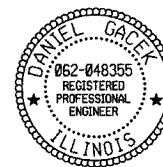
GROSS LENGTH OF PROJECT = 419 FT. = 0.08 MI.
NET LENGTH OF PROJECT = 419 FT. = 0.08 MI.

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.



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



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

For Electrical Drawings 67 to 89

CITY OF NAPERVILLE

APPROVED July 5 20 07
[Signature]
CITY ENGINEER

PASSED July 17 20 07
[Signature] CHRISTOPHER HOLT
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID
BASED ON LIMITED
REVIEW July 17 20 07
[Signature]
DIANE O'KEEFE
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

TY-LIN 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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	2
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				

GENERAL NOTES:


1. THE CONTRACTOR SHALL MAINTAIN ALL ROADWAYS OPEN TO TRAFFIC AS SHOWN PER THE MAINTENANCE OF TRAFFIC DETAILS.
2. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL J.U.L.I.E. AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, CABLE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED).
3. THE CONTRACTOR SHALL NOT BE ALLOWED TO ERECT A YARD OR FIELD OFFICE ON CITY RIGHT-OF-WAY OR PROPERTY WITHOUT WRITTEN PERMISSION FROM THE CITY OF NAPERVILLE.
4. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE PROPER CURING TIME FOR THE VARIOUS HMA LIFTS.
5. ALL ELEVATIONS REFER TO DUPAGE COUNTY DATUM (SEE SHEET 7).
6. NO WORK SHALL COMMENCE UNTIL TRAFFIC CONTROL REQUIREMENTS AND EROSION CONTROL MEASURES ARE MET.
7. ALL UTILITIES, SCHOOL DISTRICTS, PARK DISTRICT, LOCAL POLICE, AND FIRE DEPARTMENTS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
8. UNLESS AUTHORIZED BY THE ENGINEER, ALL EXISTING ACCESS POINTS SHALL BE MAINTAINED AT ALL TIMES BY THE CONTRACTOR.
9. BOXED ITEMS ARE INCLUDED IN THIS CONTRACT AND SHALL NOT BE PAID FOR SEPARATELY.
10. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED UNDER THE PROVISIONS OF ARTICLE 201.05 OF THE STANDARD SPECIFICATIONS.
11. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS OWN EXPENSE OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY.
12. ALL CLEARING, REMOVAL OF BUSHES, HEDGES AND TREES UNDER SIX (6) INCHES IN DIAMETER WILL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION.
13. DURING THE CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED, AT HIS EXPENSE, TO HAVE AVAILABLE A WATER TRUCK OR SIMILAR EQUIPMENT TO CONTROL DUST. IF NECESSARY, THE CONTRACTOR SHALL BE REQUIRED TO CONTROL DUST DURING NON-WORKING HOURS.
14. THE CONTRACTOR MUST MAKE PRIOR ARRANGEMENTS WITH THE CITY OF NAPERVILLE WATER DEPARTMENT PRIOR TO THE USE OF ANY FIRE HYDRANT. HYDRANT METERS AND RPZ'S MUST BE USED. CONTACT THE ENGINEERING DEPARTMENT AT (630) 420-4122.
15. ALL OPEN EXCAVATIONS MUST BE ADEQUATELY COVERED (STEEL PLATED) OR FILLED IN AT THE END OF EACH DAY. NO OPEN EXCAVATIONS ARE ALLOWED OVERNIGHT. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST OF THE ITEM REQUIRING EXCAVATION.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND CLEAN UP OF MUD AND OTHER DEBRIS TRACKED ON ALL STREETS LEADING TO THE PROJECT SITE CAUSED BY THE CONSTRUCTION OPERATIONS. THE CLEAN UP IS AT THE DISCRETION OF AND MUST BE DONE TO THE SATISFACTION OF THE CITY ENGINEER.
17. THE CONTRACTOR SHALL OBSERVE THE FOLLOWING WORKING HOURS:
 WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 7:00 AM AND 7:00 PM MONDAY THROUGH FRIDAY. WORK ON SATURDAYS SHALL BE LIMITED TO 8:00 AM TO 4:00 PM. NO WORK SHALL BE PERFORMED ON SUNDAYS OR THE FOLLOWING HOLIDAYS: NEW YEARS DAY, MEMORIAL DAY, 4th OF JULY, LABOR DAY, THANKSGIVING AND CHRISTMAS. ANY LANE CLOSURES ON WASHINGTON STREET SHALL BE LIMITED TO THE HOURS OF 9:00 AM TO 3:30 PM. ANY ADJUSTMENTS SHALL BE APPROVED BY THE CITY ENGINEER.
18. ALL TRENCHES, HOLES OR OTHER EXCAVATIONS REQUIRED FOR UTILITY INSTALLATION SHOULD BE BACK-FILLED, STABILIZED AT THE END OF EACH WORKING DAY. NO EXCAVATION SHOULD BE OPENED MORE THAN WHAT CAN BE STABILIZED BY THE END OF THE SAME DAY. IF AN EXCAVATION MUST BE LEFT UNSTABILIZED OR OPENED OVERNIGHT, SOIL EROSION AND SAFETY PROTECTION MEASURES SHALL BE INSTALLED.
19. ALL WASTE GENERATED AS A RESULT OF CONSTRUCTION ACTIVITIES (CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER, SANITARY WASTE OR ANY OTHER WASTE) SHALL BE PROPERLY DISPOSED OF AND BE PREVENTED FROM BEING CARRIED OFF THE SITE BY EITHER WIND OR WATER.
20. ALL COMPENSATORY STORAGE SHALL BE OPERATIONAL PRIOR TO THE PLACEMENT OF FILL, STRUCTURES, OR OTHER MATERIALS IN THE REGULATORY FLOODPLAIN.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL MEASURES AS SHOWN ON THE PLANS FOR THE DURATION OF CONSTRUCTION.
22. NO WORK SHALL BE PERFORMED IN FLOWING WATER. WORK IN AND NEAR THE CRITICAL AREAS SHOULD BE ISOLATED FROM CONCENTRATED FLOWS OR STREAM FLOW. ONCE WORK IN THIS AREA BEGINS, PRIORITY SHALL BE GIVEN TO THE COMPLETION OF THE WORK AND FINAL STABILIZATION OF ALL DISTURBED AREAS.

INDEX OF STATE STANDARDS

STD. NO.	TITLE
000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-03	TEMPORARY EROSION CONTROL SYSTEM
424001-04	CURB RAMPS FOR SIDEWALKS
442101-06	CLASS B PATCHES
442201-02	CLASS C AND D PATCHES
515001-02	NAME PLATE FOR BRIDGES
542301-01	PRECAST REINFORCED CONCRETE FLARED END SECTION
601101-00	CONCRETE HEADWALL FOR PIPE DRAIN
602001-00	CATCH BASIN, TYPE A
602401-01	MANHOLE, TYPE A
602701-01	CAST IRON STEPS
604001-02	FRAME AND LIDS, TYPE 1
604051-02	FRAME AND GRATE, TYPE 11
630001-07	STEEL PLATE BEAM GUARDRAIL
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
667101	PERMANENT SURVEY MARKERS
701501-03	URBAN LANE CLOSURE, 2 LANE, 2 WAY, UNDIVIDED
701606-04	URBAN LANE CLOSURE, MULTILANE, 2 WAY WITH MOUNTABLE MEDIAN
701701-04	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-06	TRAFFIC CONTROL DEVICES
704001-03	TEMPORARY CONCRETE BARRIER
720001-00	SIGN PANEL MOUNTING DETAILS
720006-01	SIGN PANEL ERECTION DETAILS
720011-00	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-00	APPLICATION OF TYPE A AND TYPE B METAL POSTS
780001-01	TYPICAL PAVEMENT MARKINGS
BLR 23-1	TRAFFIC BARRIER TERMINAL, TYPE 1


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14	REMOVAL PLAN AND EXISTING UTILITIES
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20	PAVEMENT MARKING & SIGNING PLANS/LANDSCAPING PLANS
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90	BD-01, DRIVEWAY DETAILS
91	BD-07, DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER
92	BD-32, BUTT JOINT AND HMA TAPER DETAILS
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96 - 97	ROADWAY CROSS SECTIONS

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REVISIONS																															
NAME	DATE																														
<p>CONSULTANT TYLIN INTERNATIONAL</p>		<p>DRAWN: RTM CHECKED: SP APPROVED: DATE: OCTOBER 4, 2007 SCALE: NONE</p>		<p>SHEET NO. 2</p>																											
<p>JOB NO.: C-91-062-04</p>		<p>PROJECT NO.: BHM-8003(343)</p>																													


SUMMARY OF QUANTITIES						
CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	ROADWAY I000-2A	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	1140	1140		
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		111	
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: OCTOBER 4, 2007 SCALE: NONE JOB NO.: C-91-062-04
			SHEET NO. 3 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		
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	170	170		
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		
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	

• - SPECIALTY ITEM


REVISIONS NAME DATE 		BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER SUMMARY OF QUANTITIES (2 OF 3)	City of  Naperville
CONSULTANT TYLIN INTERNATIONAL			SHEET NO. <div style="font-size: 2em; text-align: center;">4</div>
DRAWN: RTM CHECKED: SP APPROVED: DATE: OCTOBER 4, 2007 SCALE: NONE 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)
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
XX005598	ADDITIONAL GROUND ROD INSTALLATION	EACH	5			5
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
XX007052	CONDUIT RISER ASSEMBLY - 5 INCH	EACH	1			1
XX007053	CONDUIT RISER ASSEMBLY - 6 INCH	EACH	2			2
XX007054	HANDHOLE, DEH5	EACH	2			2
XX007055	HANDHOLE, DEH6	EACH	3			3
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	1000	1000		
XX007130	2 WAY - 3" PVC DUCT BANK - 1 HIGH BY 2 WIDE	FOOT	180			180
XX007139	4 WAY - 3" PVC DUCT BANK - 1 HIGH BY 4 WIDE	FOOT	55			55
XX007140	2 WAY - 5" PVC DUCT BANK - 1 HIGH BY 2 WIDE	FOOT	660			660
XX007141	2 WAY - 6" PVC DUCT BANK - 1 HIGH BY 2 WIDE	FOOT	1555			1555
XX007142	4 WAY - 6" PVC DUCT BANK - 1 HIGH BY 4 WIDE	FOOT	760			760
XX007143	6 WAY - 6" PVC DUCT BANK - 1 HIGH BY 6 WIDE	FOOT	490			490
XX007144	6 WAY - 2-6", 2-5", 2-3" PVC DUCT BANK - 2 HIGH BY 3 WIDE	FOOT	150			150
XX007145	6 WAY - 2-5", 4-3" PVC DUCT BANK - 2 HIGH BY 3 WIDE	FOOT	50			50

Δ Y080

* - 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> </tbody> </table>		REVISIONS		NAME	DATE																					BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER SUMMARY OF QUANTITIES (3 OF 3)	City of  Naperville
REVISIONS																											
NAME	DATE																										
CONSULTANT TYLIN INTERNATIONAL	DRAWN: RTM CHECKED: SP APPROVED: DATE: OCTOBER 4, 2007 SCALE: NONE JOB NO.: C-91-062-04	SHEET NO. 5 PROJECT NO.: BHM-8003(343)																									

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

PCC SIDEWALK

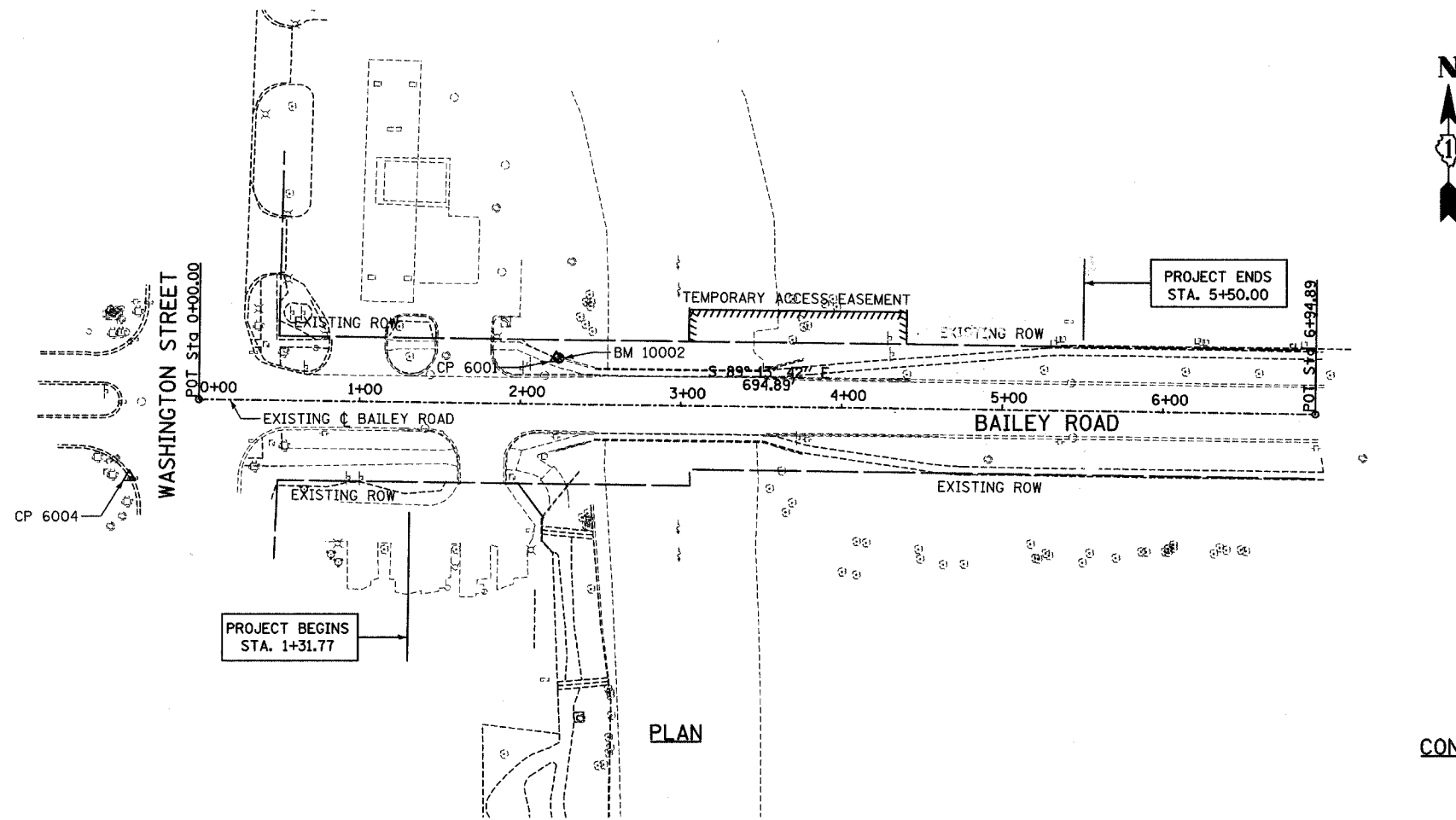
LOCATION DESCRIPTION	OFFSET DIRECTION	FROM		TO		PCC SW 5 INCH (SQ FT)	PCC SW 6 INCH SPL (SQ FT)
		ALIGNMENT	STATION	ALIGNMENT	STATION		
WEST OF NORTH DWY	LT	BAILEY	1+36.7	BAILEY	1+46.6	50	
NW OF BRIDGE	LT	BAILEY	1+82.9	BAILEY	1+98.9	198	
SW OF BRIDGE (RAMP)	RT	BAILEY	1+91.5	BAILEY	2+01.4		102
SW OF BRIDGE (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 ATTN)	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

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

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

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				

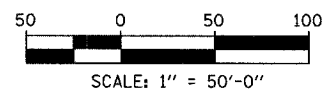
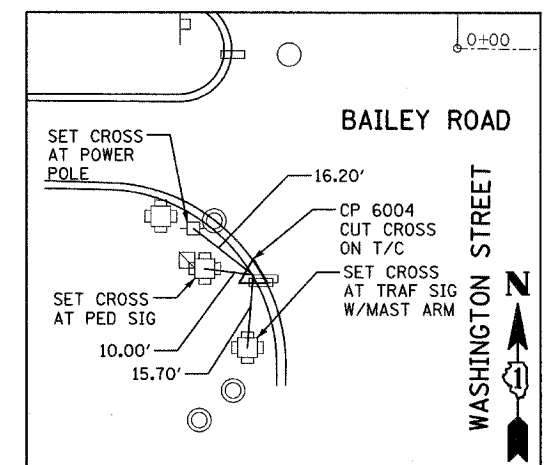
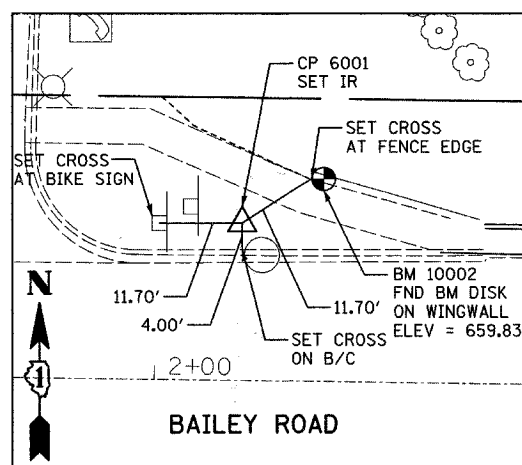


ALIGNMENT
(N 1,848,180.8320 E 1,040,358.5550)
Sta 0+00.00
S 89° 13' 41.8560" E
Dist 694.8850
(N 1,848,171.4730 E 1,041,053.3770)
Sta 6+94.89

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

SHEET NO.
8
PROJECT NO.: BHM-8003(343)

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

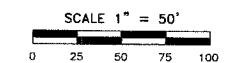
THIS PLAT HAS BEEN SUBMITTED FOR RECORDING BY AND RETURN TO:
NAME: NAPERVILLE CITY CLERK
ADDRESS: P.O. BOX 3020
400 S. EAGLE STREET
NAPERVILLE, IL
60566-7020

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

- 5/8 INCH DIAMETER X 24 INCH IRON RODS SET AT ALL RIGHT-OF-WAY CORNERS UNLESS OTHERWISE NOTED.
- ALL MEASUREMENTS AND DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.
- 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 0 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.

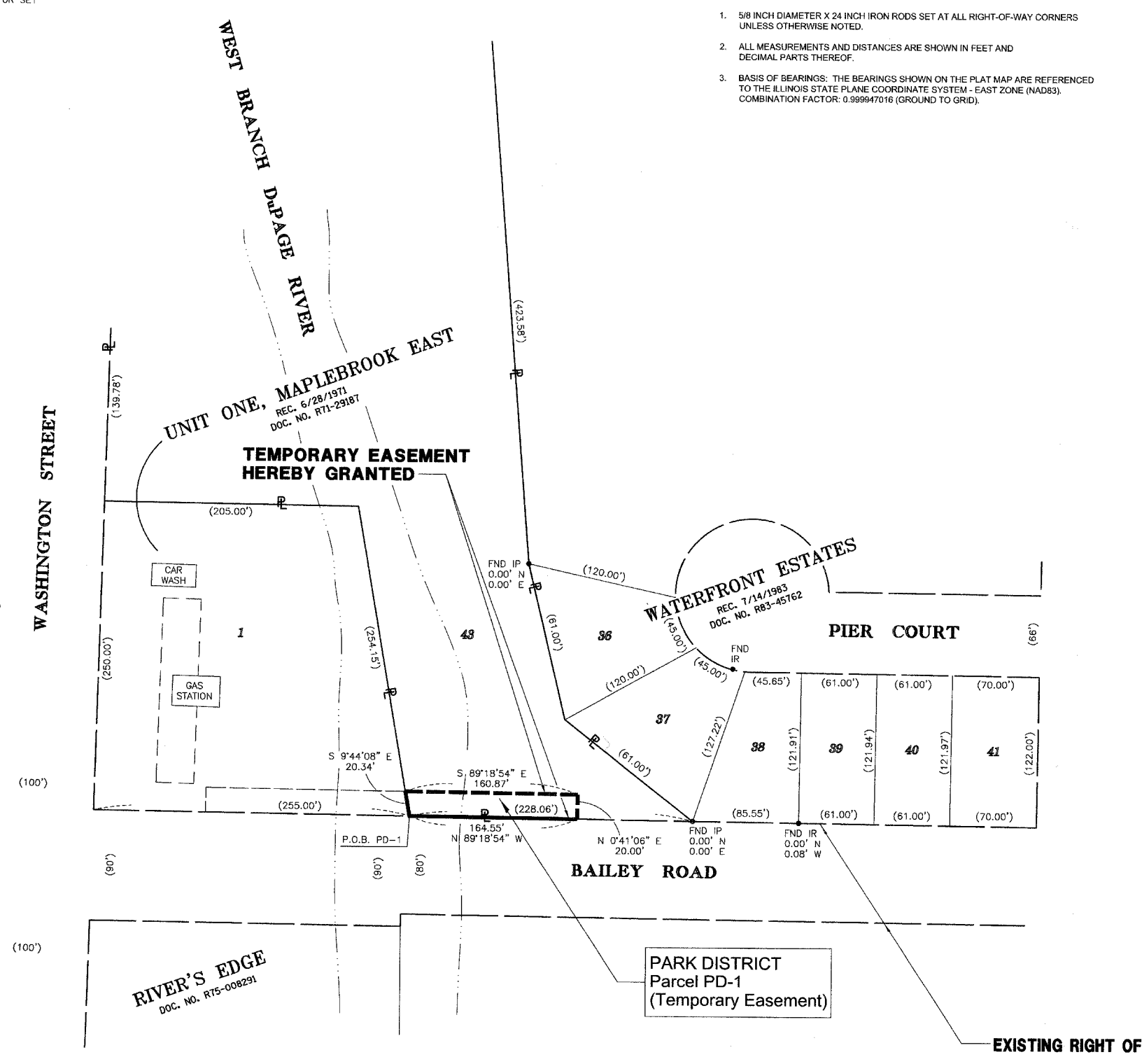
STATE OF ILLINOIS)
) SS
COUNTY OF COOK)

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

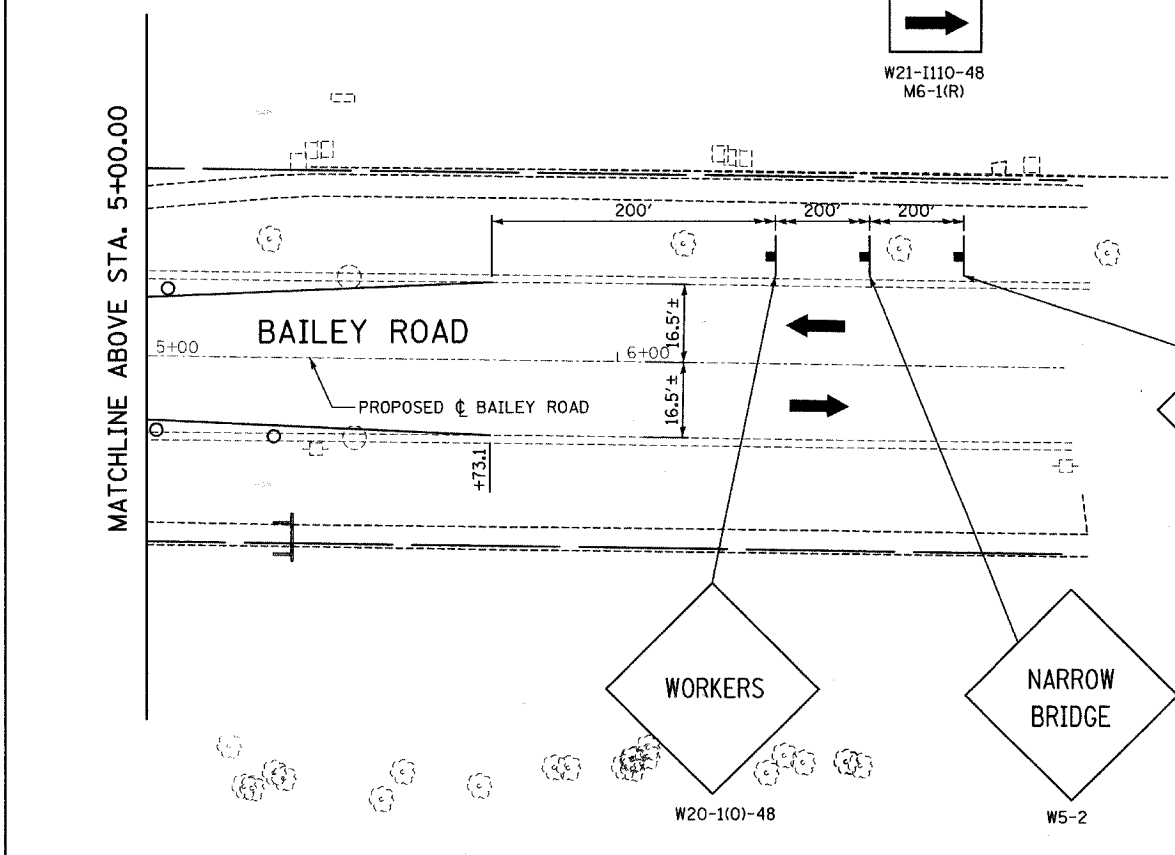
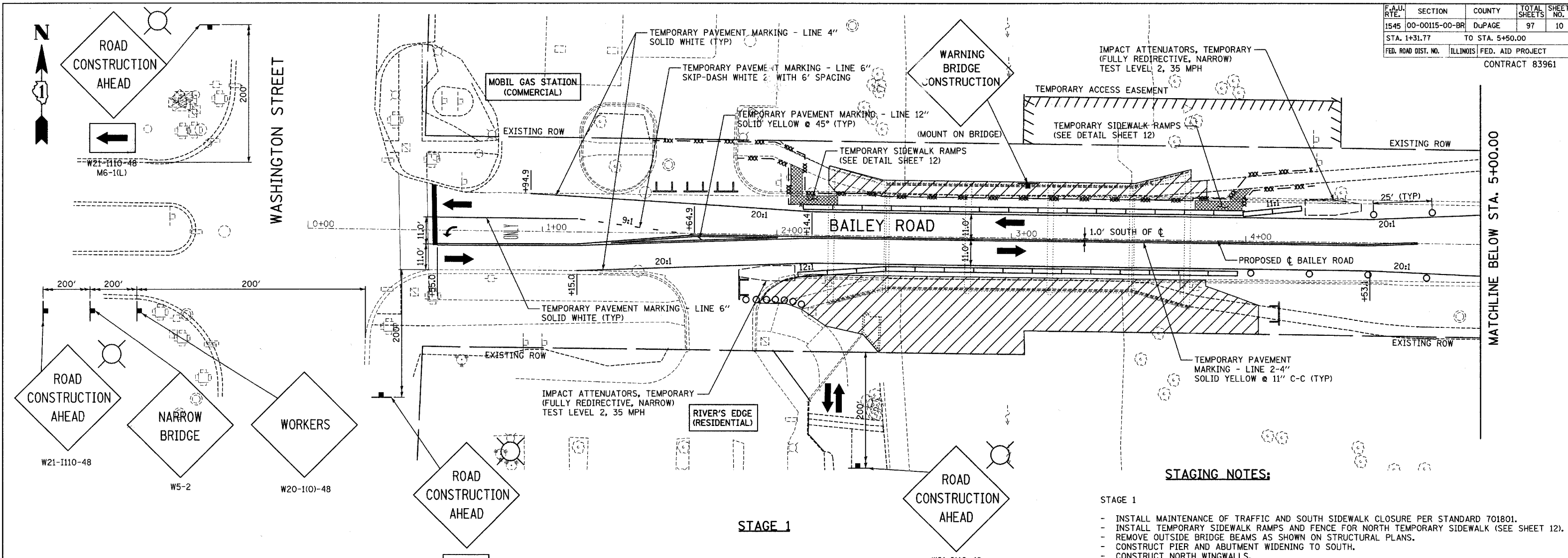
RIVER'S EDGE
DOC. NO. R75-008291

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 630-305-5992 FAX 630-420-5986 E-MAIL: jdb@naperville.il.us	DATE	NO.	REVISION	BY	SHEET TITLE	NAPERVILLE PARK DISTRICT				
		SCALE	DRAWN	CHECKED	DATE	PROJECT NO.	SHEET				
		1 INCH = 50 FEET	D.D.	C. FIDIS	1/30/2007	204003.1	1	OF			

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.

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

MAINTENANCE OF TRAFFIC
STAGE 1

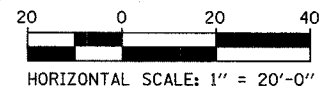
CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

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

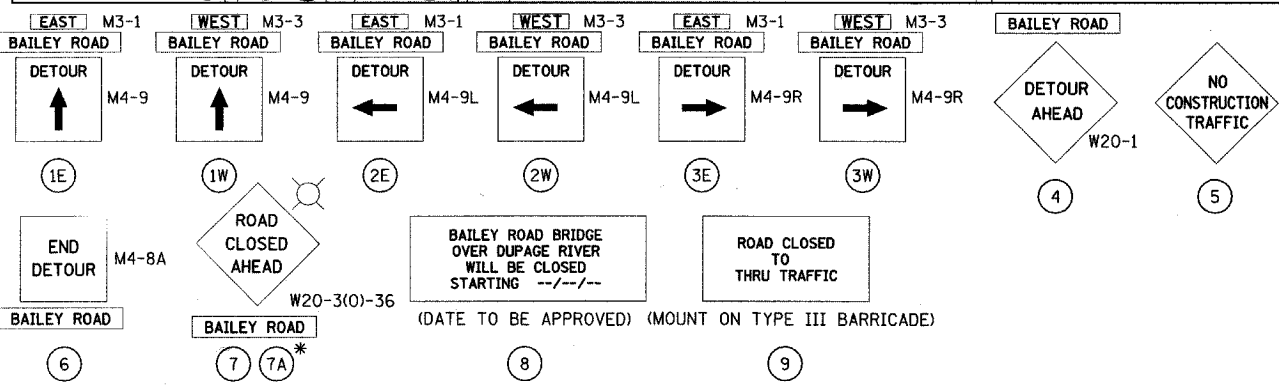
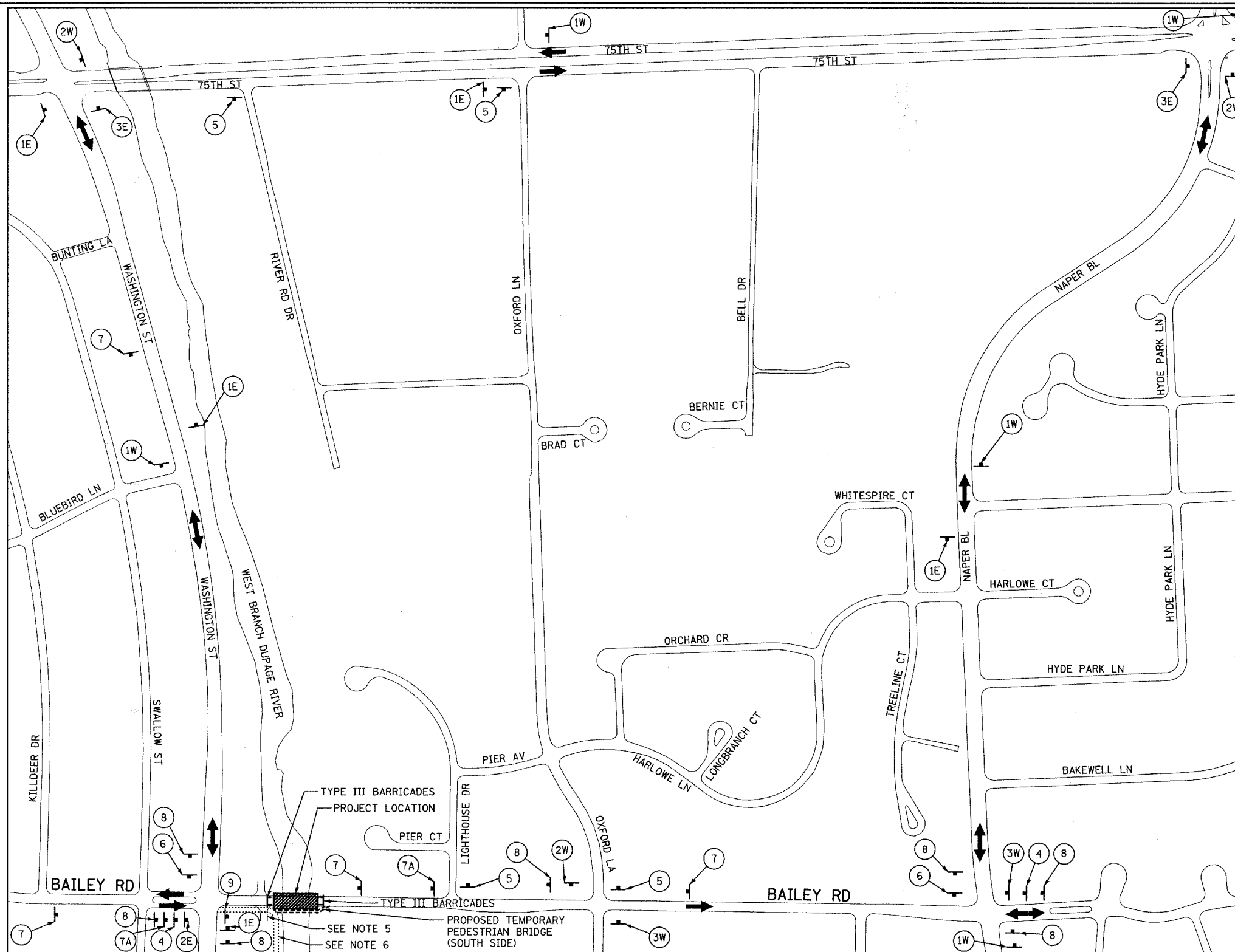
SHEET NO.
10

PROJECT NO.: BHM-9003(343)



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
BAILEY ROAD BRIDGE OVER DUPAGE RIVER WILL BE CLOSED STARTING --/--/---	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 **	36in X 36in	4
PATH CLOSED AT BAILEY ROAD NO ACCESS TO BAILEY ROAD	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
WARNING BAILEY ROAD BRIDGE CONSTRUCTION AHEAD OBSTRUCTIONS IN RIVER USE CAUTION (PLACE IN DUPAGE RIVER)	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

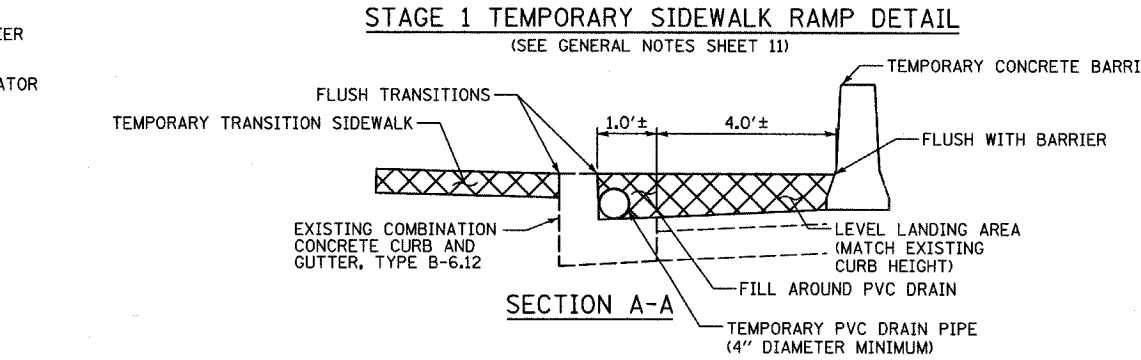
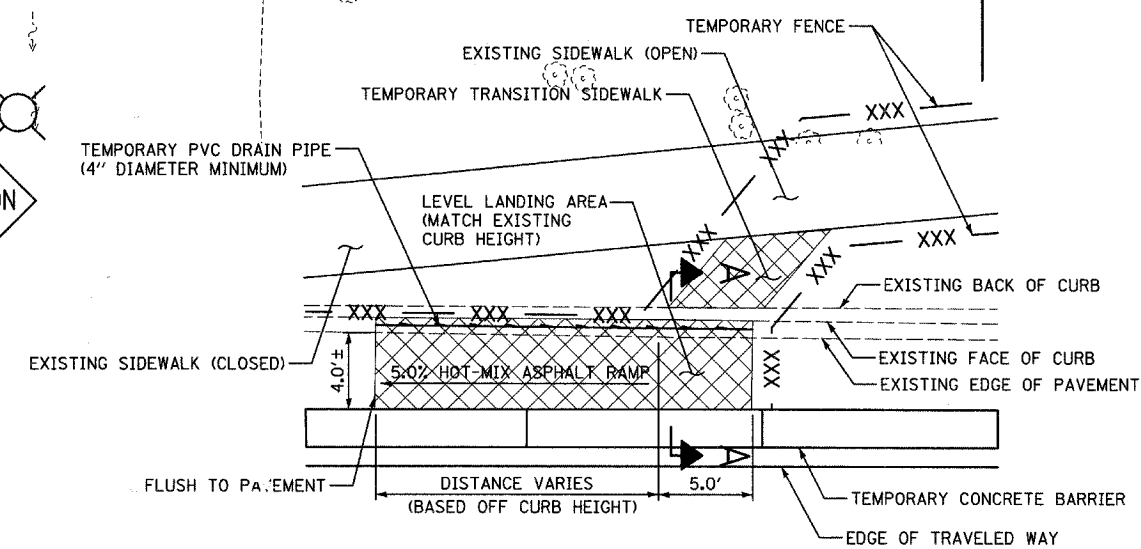
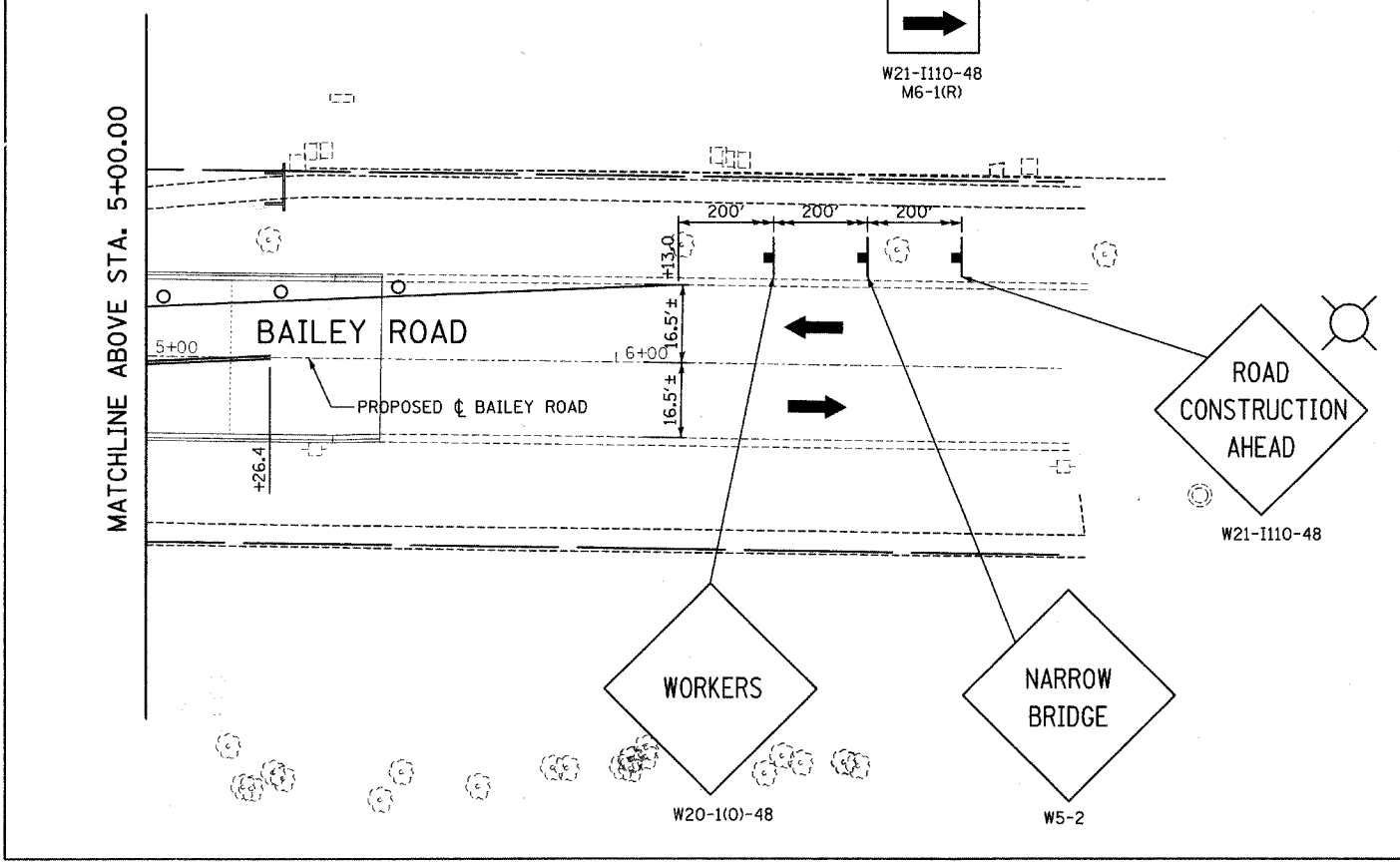
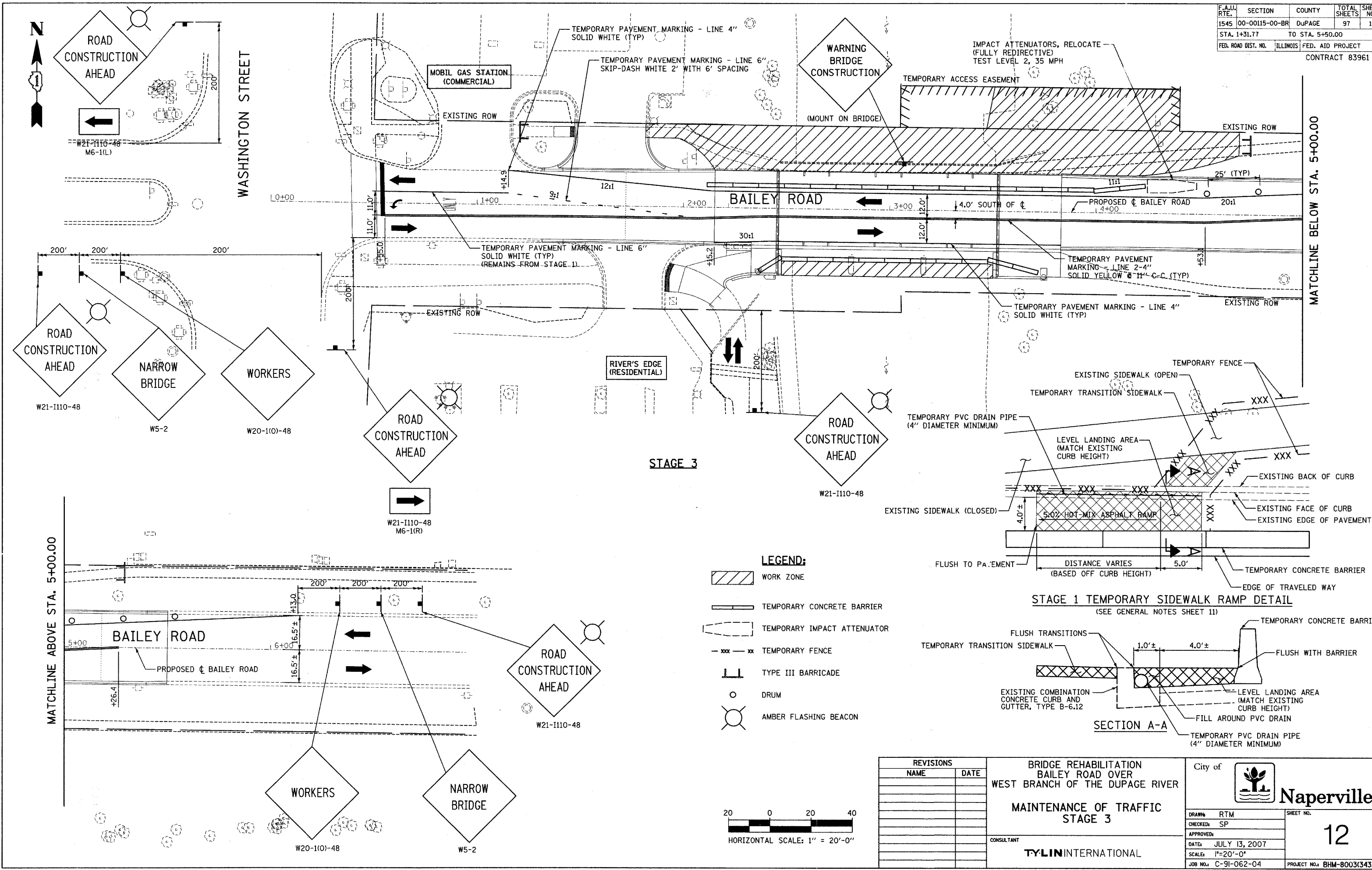
CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

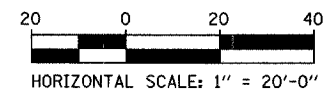
DRAWN: RTM
CHECKED: SP
APPROVED:
DATE: JULY 13, 2007
SCALE: NONE
JOB No. C-91-062-04

SHEET NO. **11**
PROJECT No. BHM-8003(343)

* - "ROAD CLOSED 500 FT"



- 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	SHEET NO. 12
CHECKED: SP	
APPROVED:	
DATE: JULY 13, 2007	
SCALE: 1"=20'-0"	
JOB NO.: C-91-062-04	PROJECT NO.: BHM-8003(343)

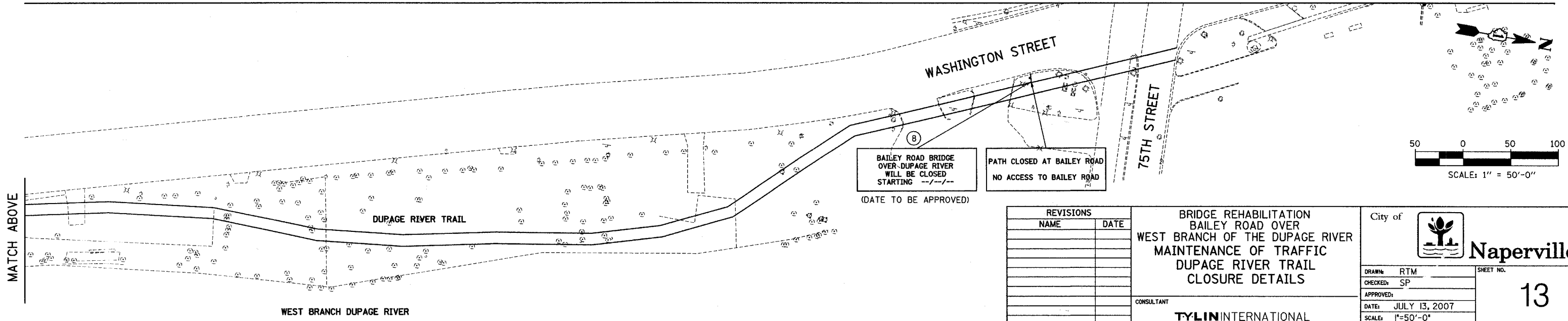
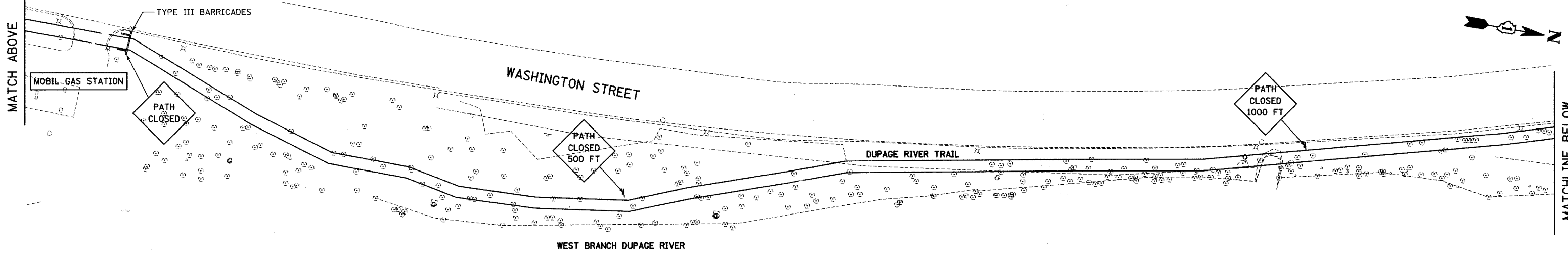
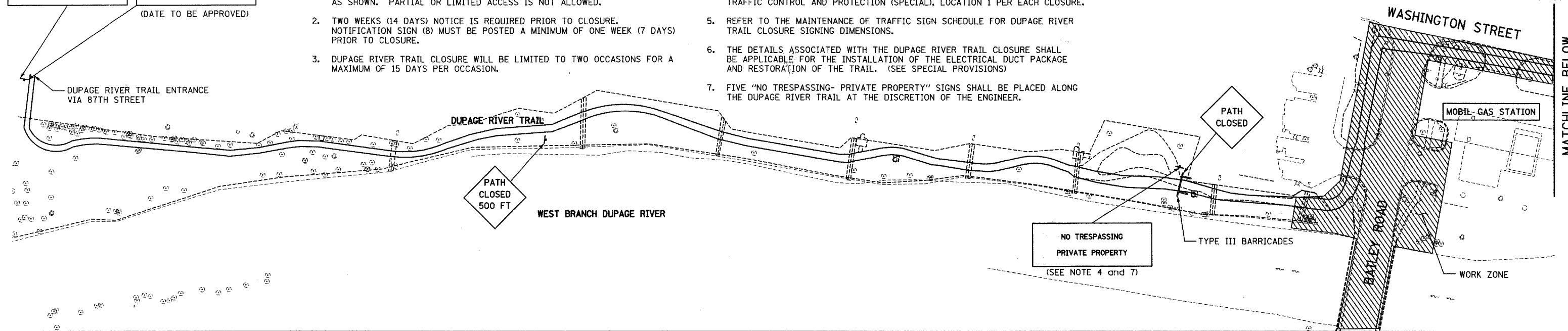
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	13
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT 83961				

NOTES:

- DUPAGE RIVER TRAIL CLOSURE 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



REVISIONS	
NAME	DATE

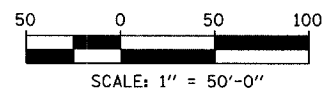
BRIDGE REHABILITATION
 BAILEY ROAD OVER
 WEST BRANCH OF THE DUPAGE RIVER
 MAINTENANCE OF TRAFFIC
 DUPAGE RIVER TRAIL
 CLOSURE DETAILS

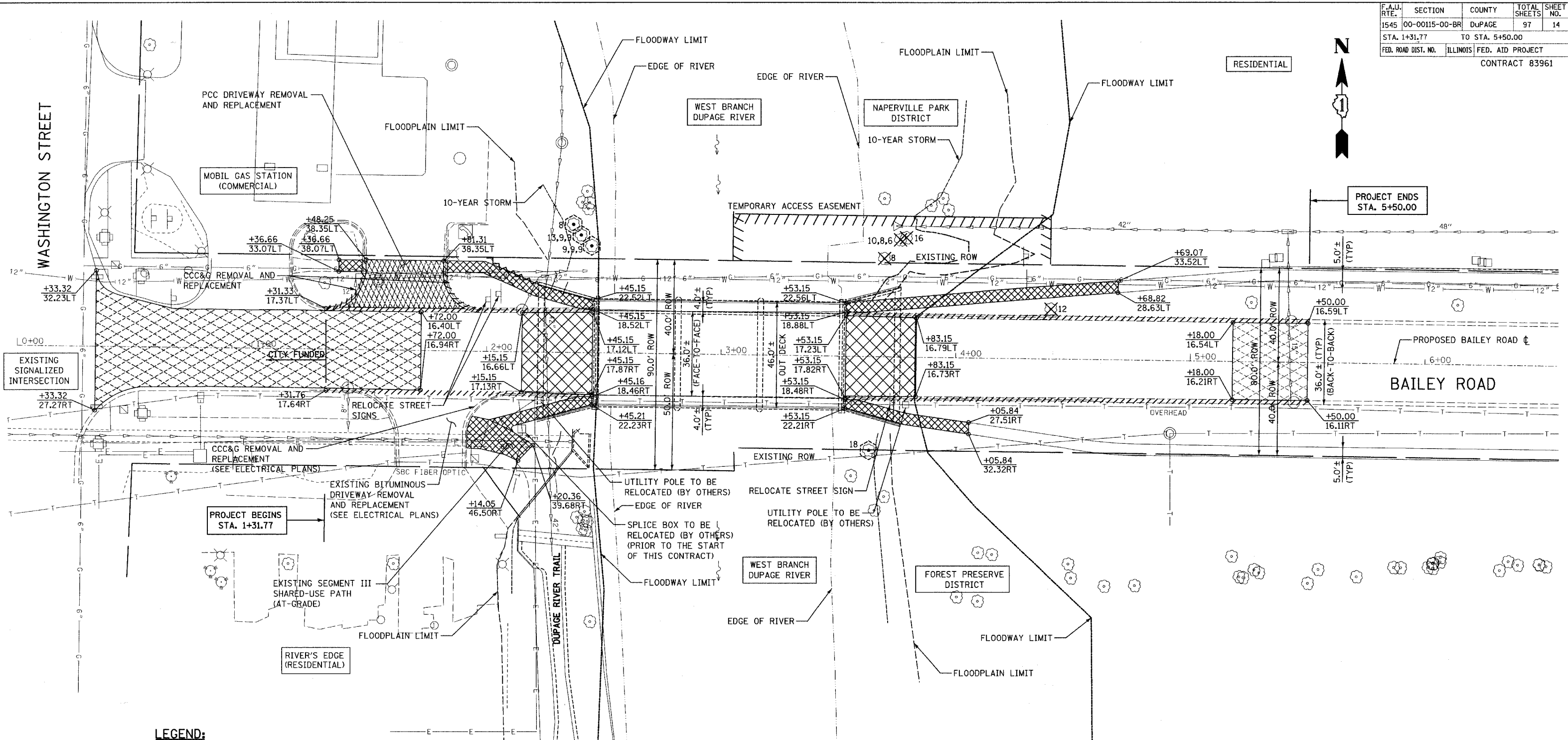
CONSULTANT
TYLIN INTERNATIONAL

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)



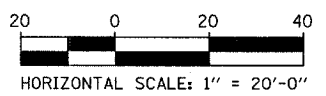


LEGEND:

- 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

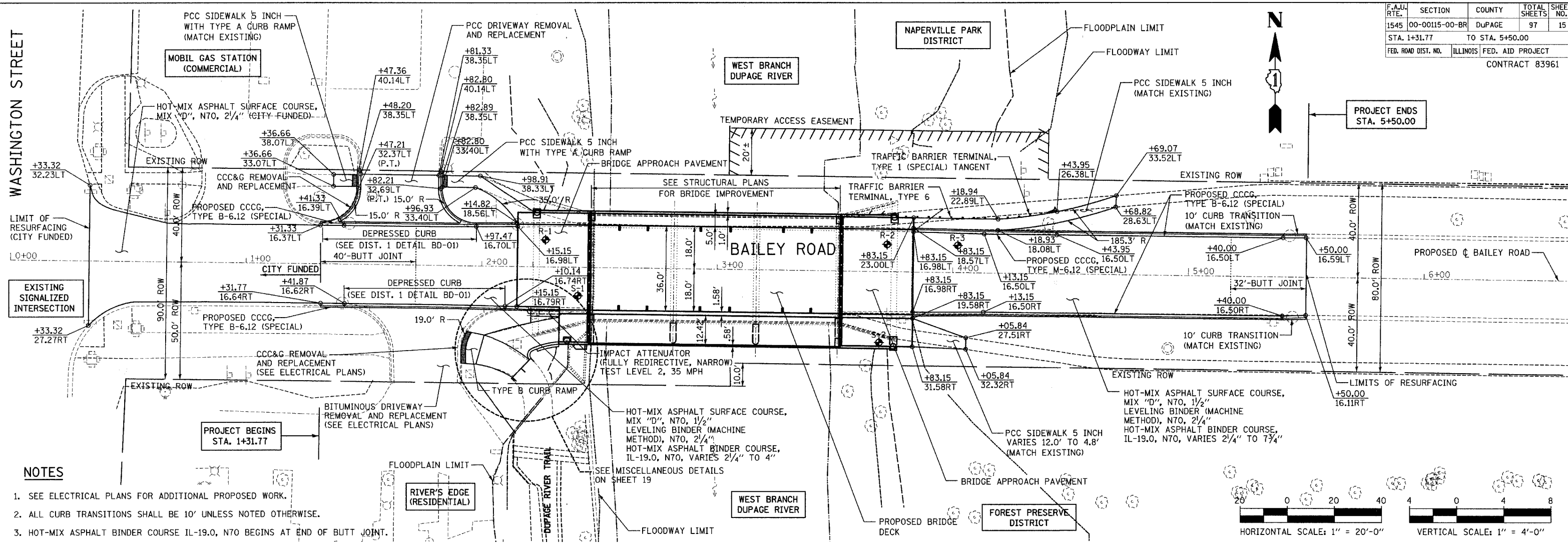
BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

**REMOVAL AND
EXISTING UTILITY PLANS**

CONSULTANT
TYLIN INTERNATIONAL

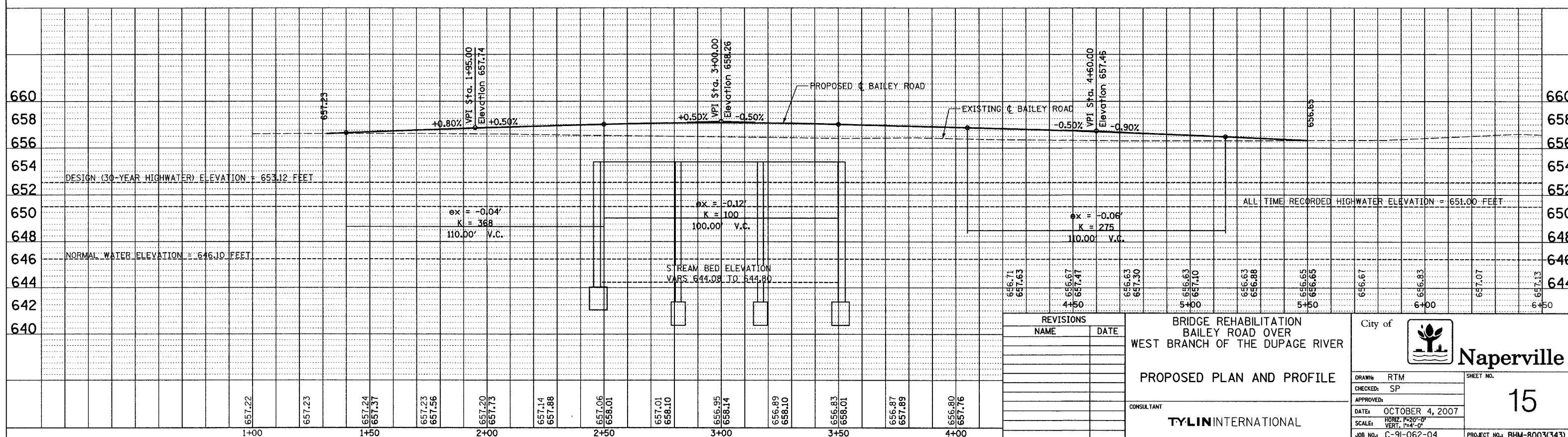
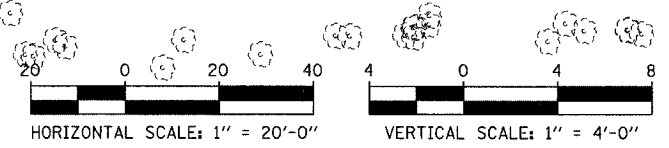
City of **Naperville**

DRAWN: RTM	SHEET NO.
CHECKED: SP	14
APPROVED:	
DATE: OCTOBER 4, 2007	
SCALE: 1"=20'-0"	PROJECT NO.: BHM-8003(343)
JOB NO.: C-91-062-04	



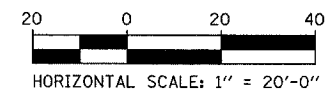
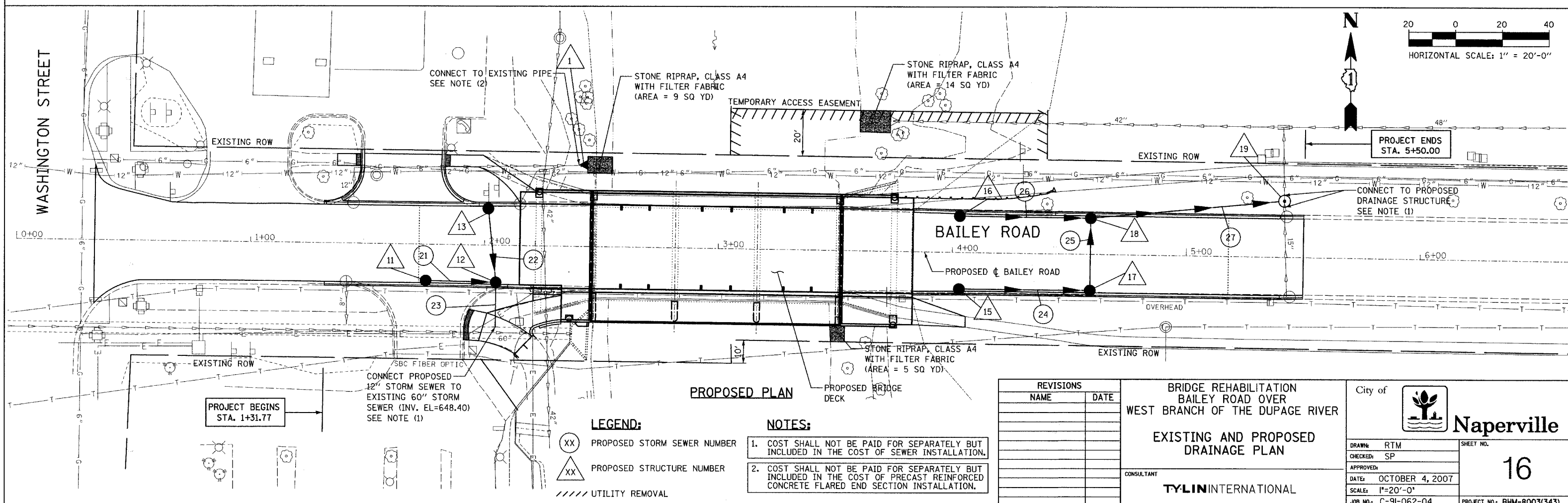
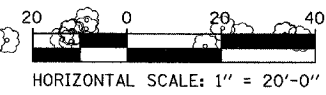
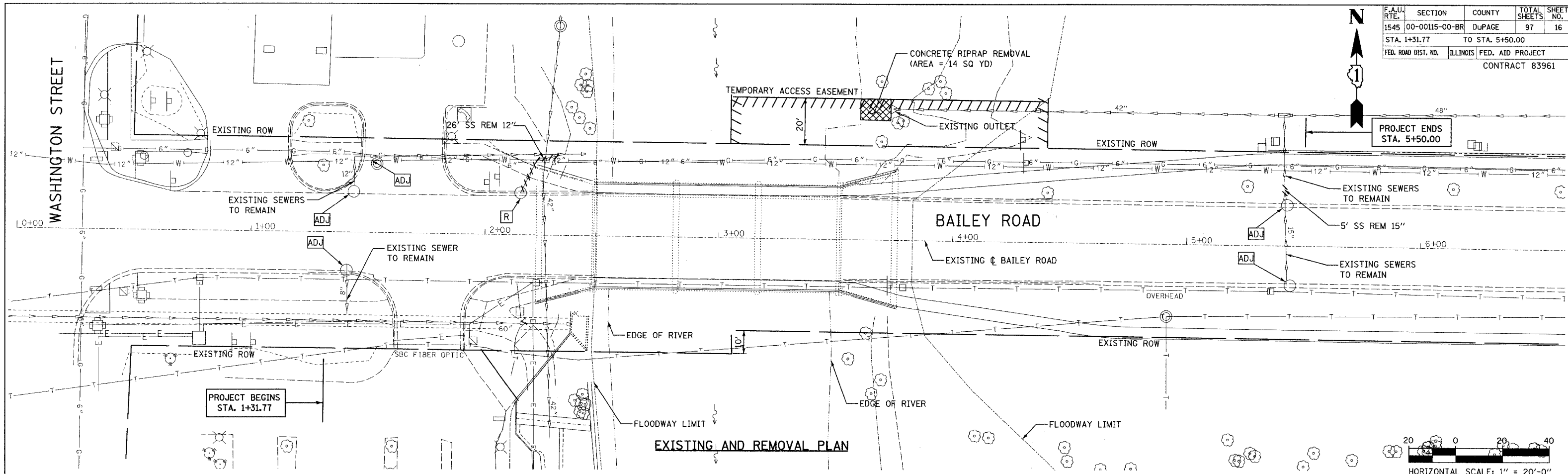
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-00115-00-BR	DUPAGE	97	15
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT 83961				

- 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	City of Naperville
PROPOSED PLAN AND PROFILE			
CONSULTANT TYLIN INTERNATIONAL		DRAWN: RTM CHECKED: SP APPROVED:	SHEET NO. 15
DATE: OCTOBER 4, 2007 SCALE: HORIZ. 1"=20'-0" VERT. 1"=4'-0"		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				




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.
CHECKED: SP	16
APPROVED:	
DATE: OCTOBER 4, 2007	
SCALE: 1"=20'-0"	
JOB NO.: C-91-062-04	PROJECT NO.: BHM-8003(343)

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

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

DRAINAGE STRUCTURE SCHEDULE

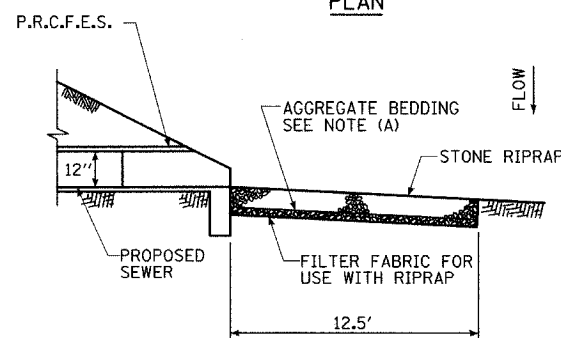
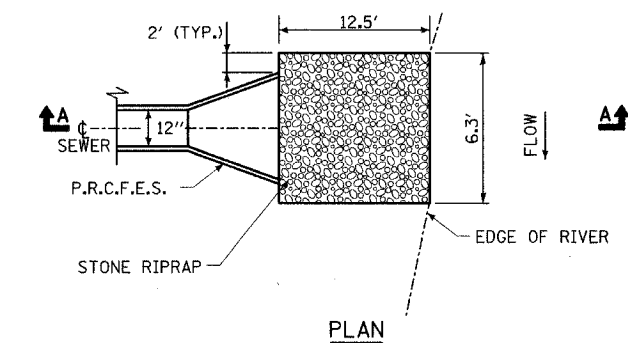
STRUCTURE NUMBER	STATION	OFFSET	STRUCTURE TYPE		DIA. (FT)	FRAME & LID	TOP OF FRAME	N INV.	E INV.	S INV.	W INV.
			MH/ES	CB							
1	2+42.52	35.0 LT	FES(1)		12(1)						646.39
11	1+75.00	16.5 RT		A	4	T1F OL	657.23		650.96		
12	2+05.00	16.7 RT		A	4	T11 F&G	657.42	650.70		648.70	650.70
13	2+01.40	16.8 LT		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	T1F CL	656.79	650.40		650.40	650.63

STORM SEWER SCHEDULE

PIPE NUMBER	UPSTREAM STATION	DOWNSTREAM STATION	TYPE	DIA. (IN)	LENGTH (FT)	SLOPE (%)	T.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	14.5
24	4+03.00	4+59.00	2	12	52	1.00	19.4
25	4+59.00	4+60.79	2	12	27	1.00	17.1
26	4+03.00	4+60.79	2	12	52	1.00	32.9
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.

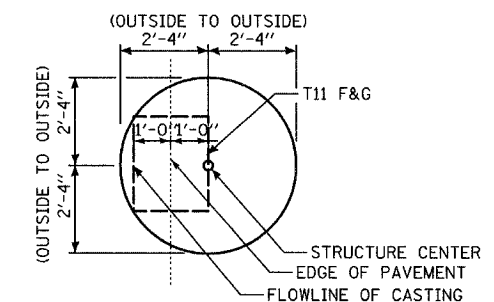


SECTION A-A
OUTLET PERPENDICULAR
TO FLOW

RIPRAP DETAILS

NOTE:

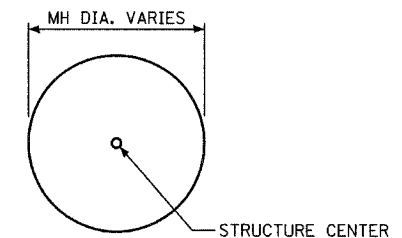
(A) THE COST OF AGGREGATE BEDDING SHALL BE INCLUDED IN THE COST OF RIPRAP PER SQUARE YARD.



CATCH BASIN

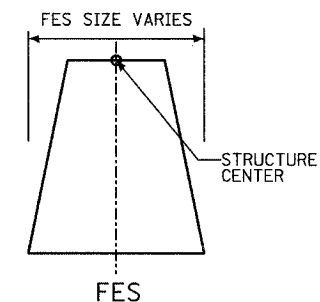
(PRECAST REINFORCED CONCRETE SECTION)

- (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)

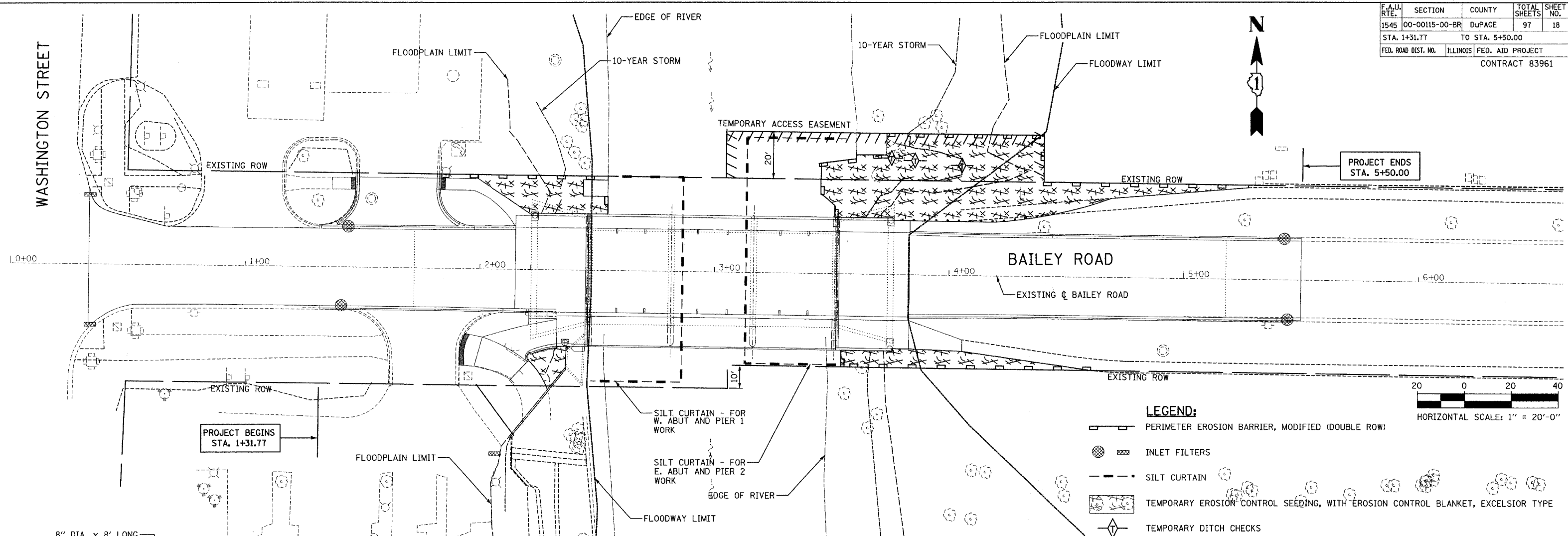


LEGEND:

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

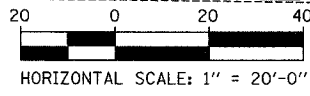
REVISIONS		BRIDGE REHABILITATION BAILEY ROAD OVER WEST BRANCH OF THE DUPAGE RIVER	City of Naperville
NAME	DATE		
		DRAINAGE SCHEDULES AND DETAILS	DRAWN: RTM CHECKED: NB APPROVED: DATE: OCTOBER 4, 2007 SCALE: NONE
		CONSULTANT TYLIN INTERNATIONAL	SHEET NO. 17
		JOB NO.: C-91-062-04 PROJECT NO.: BHM-8003(343)	

F.A.J. 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				



LEGEND:

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

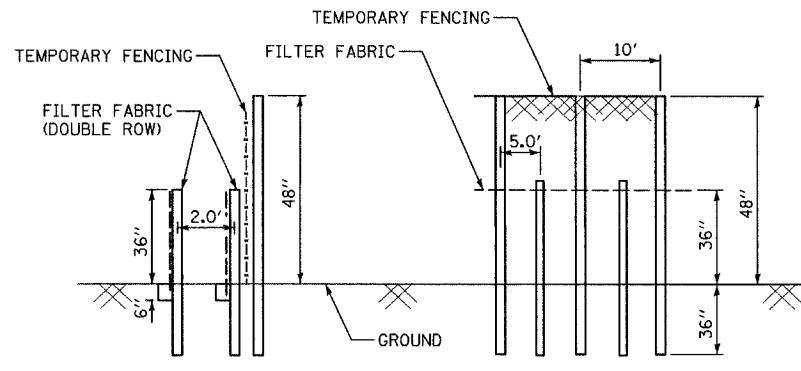


GENERAL NOTES

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.
6. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL REVISED FEBRUARY 2002.
7. THE KANE-DUPAGE SOIL AND WATER CONSERVATION DISTRICT (KDSWCD) MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
8. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
9. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS) A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE OWNER FOR REVIEW BY THE KDSWCD.
10. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE KDSWCD.
11. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INFORM ANY SUB-CONTRACTORS WHO MAY PERFORM WORK ON THIS PROJECT, OF THE REQUIREMENTS OF IMPLEMENTING AND MAINTAINING THESE EROSION CONTROL PLANS AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS SET FORTH BY THE ILLINOIS EPA.

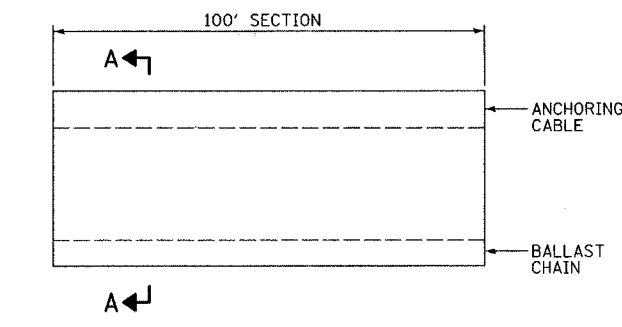
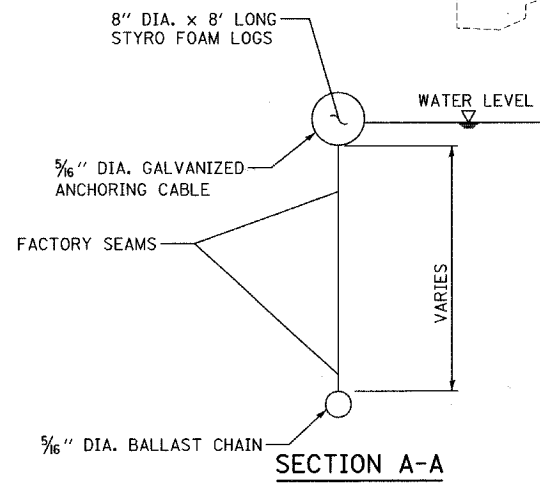
PERIMETER EROSION BARRIER MAINTENANCE

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 SEEDED.



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, SEE STD 280001.



SILT CURTAIN DETAIL
NOT TO SCALE

REVISIONS	
NAME	DATE

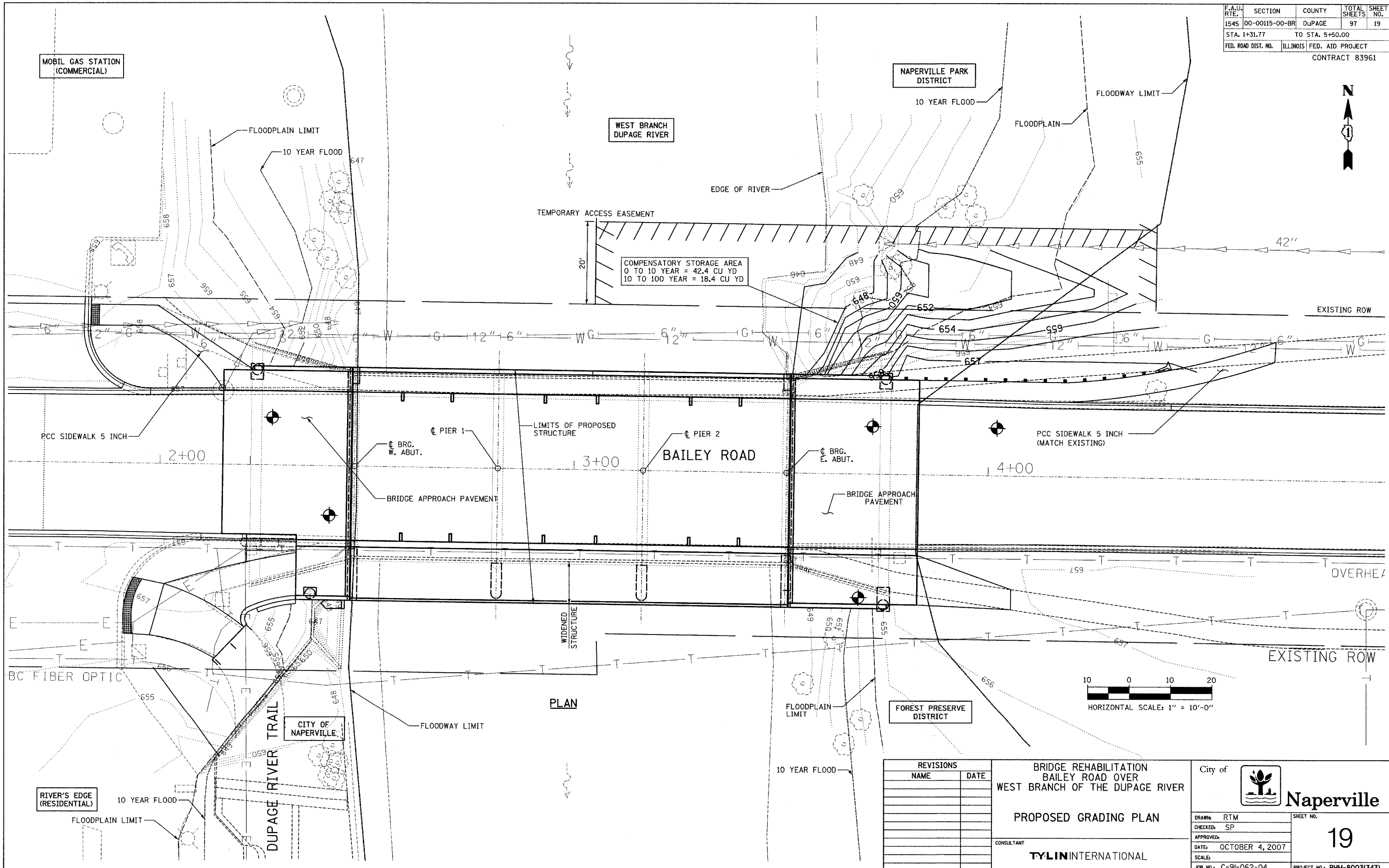
BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

EROSION CONTROL PLANS

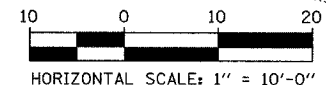
CONSULTANT
TYLIN INTERNATIONAL

City of **Naperville**

DRAWN: RTM	SHEET NO.
CHECKED: SP	18
APPROVED:	
DATE: OCTOBER 4, 2007	
SCALE: 1"=20'-0"	PROJECT NO.: BHM-8003(343)
JOB NO.: C-9I-062-04	



PLAN




REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

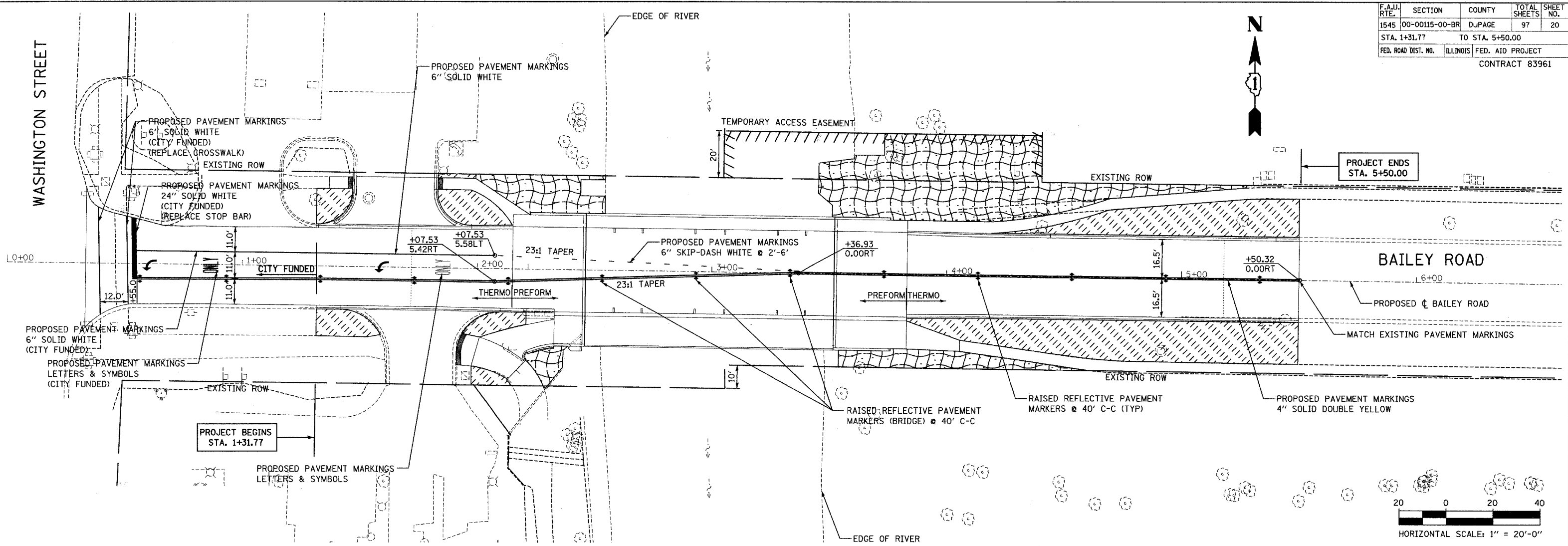
PROPOSED GRADING PLAN

CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

DRAWN: RTM	SHEET NO.
CHECKED: SP	19
APPROVED:	
DATE: OCTOBER 4, 2007	PROJECT NO.: BHM-8003(343)
SCALE:	JOB NO.: C-9I-062-04



F.A.I.D. 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

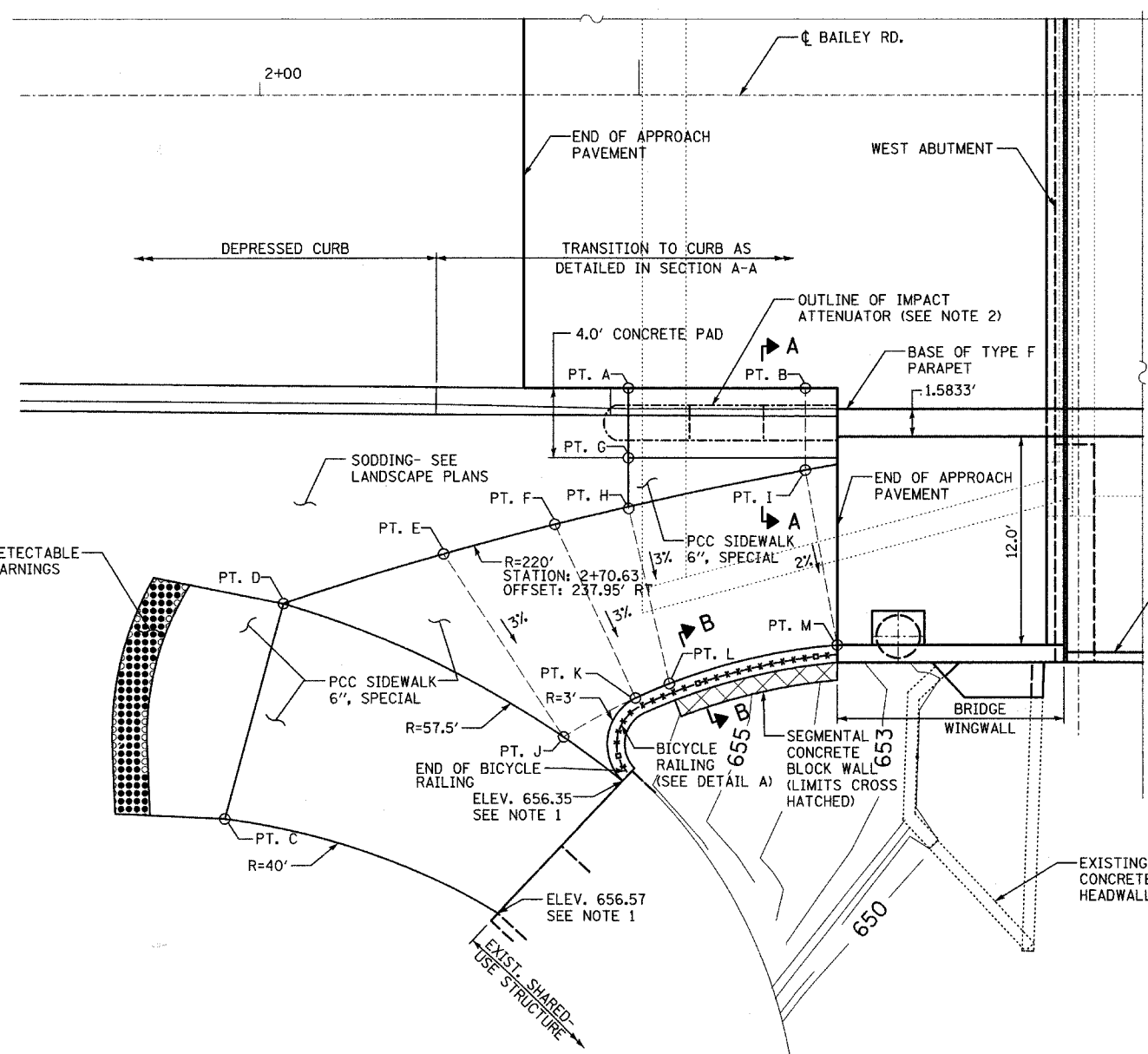
REVISIONS	
NAME	DATE

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

CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

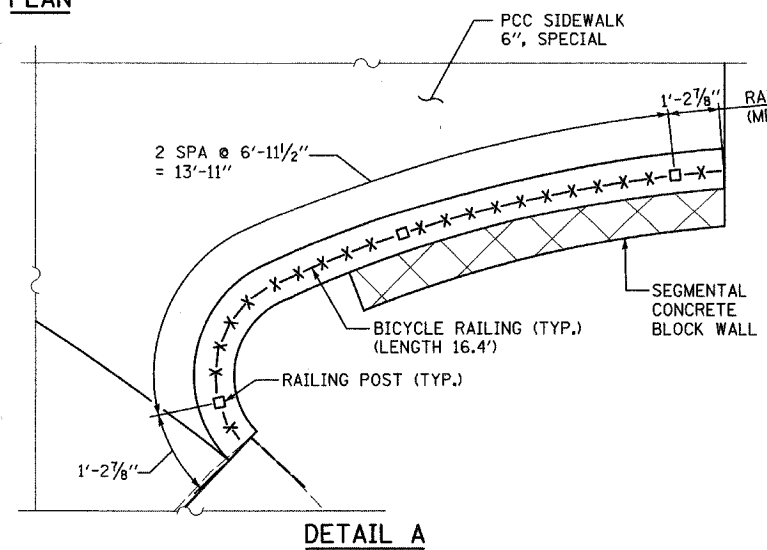
DRAWN: RTM	SHEET NO.
CHECKED: SP	20
APPROVED:	
DATE: JULY 13, 2007	
SCALE: 1"=20'-0"	PROJECT NO.: BHM-8003(343)
JOB NO.: C-91-062-04	



PLAN

SIDEWALK LAYOUT

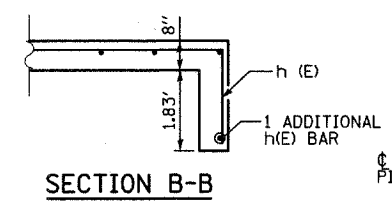
POINT	STATION	OFFSET	ELEVATION
A	2+21.15	16.79' RT	657.55
B	2+31.32	16.79' RT	657.63
C	1+97.99	41.58' RT	656.63
D	2+01.37	29.14' RT	657.25
E	2+10.55	26.32' RT	656.90
F	2+16.94	24.61' RT	657.10
G	2+21.15	20.79' RT	657.47
H	2+21.15	23.59' RT	657.19
I	2+31.32	21.50' RT	657.54
J	2+17.43	36.88' RT	656.52
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



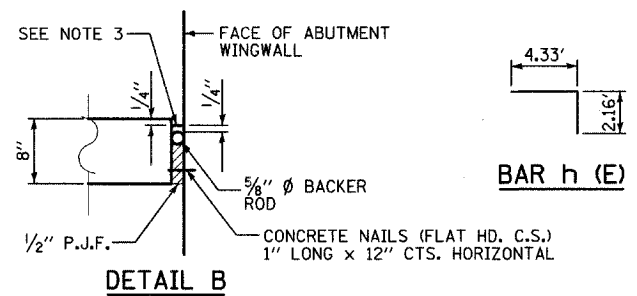
DETAIL A

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

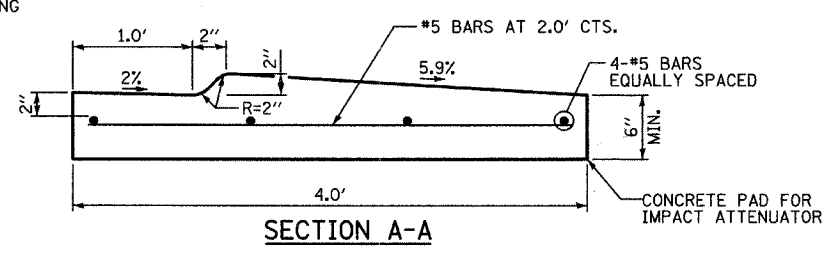


SECTION B-B

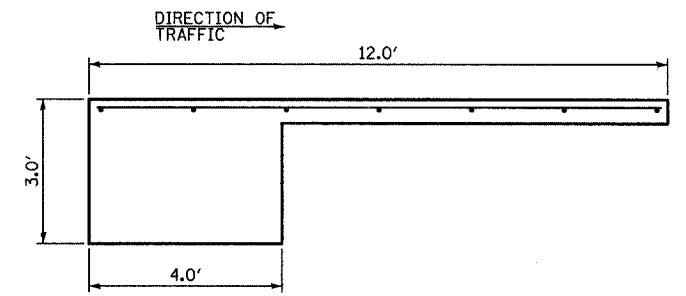


DETAIL B

RECONSTRUCTION OF CONCRETE APRON AT 66" Ø PIPE



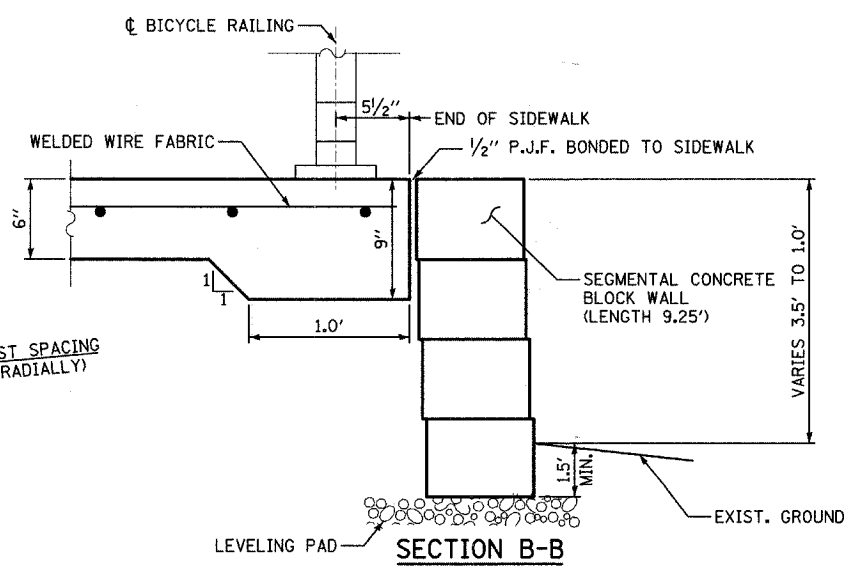
SECTION A-A



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.




SECTION B-B

REVISIONS	
NAME	DATE

BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER

MISCELLANEOUS DETAILS

CONSULTANT
TYLIN INTERNATIONAL

City of  **Naperville**

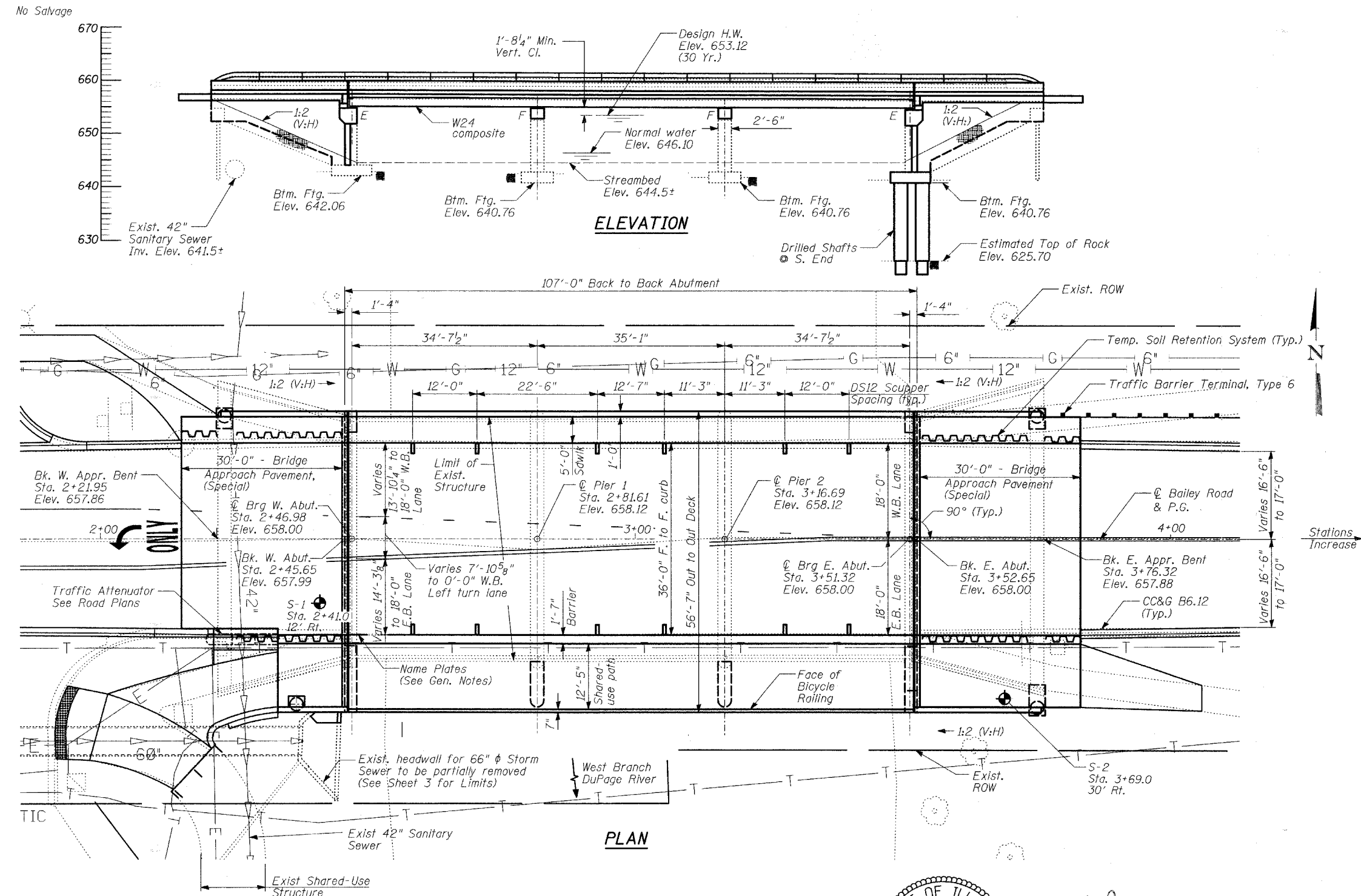
DRAWN: DE
CHECKED: SP
APPROVED:
DATE: JULY 13, 2007
SCALE:
JOB No.: C-91-062-04

SHEET NO.
21
PROJECT No.: BHM-8003(343)

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
1545		DUPAGE	97	22	39 - SHEETS
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

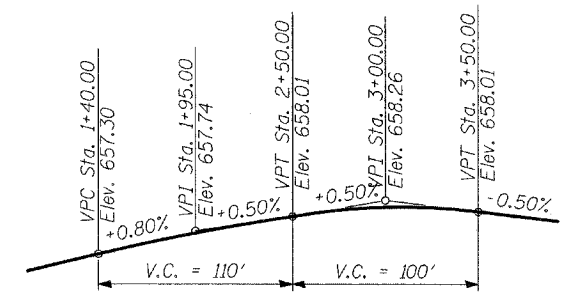
DESIGN SPECIFICATIONS
 AASHTO 2002 Standard Specifications for Highway Bridges, 17th Edition

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

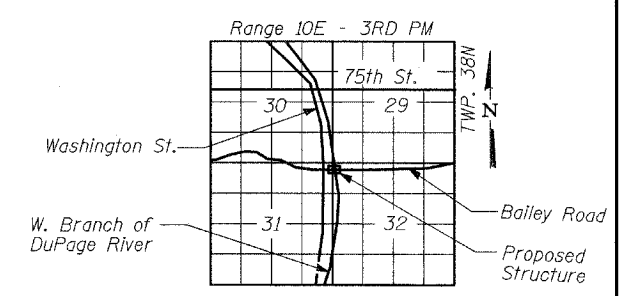
DESIGN STRESSES

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 of roadway)



LOCATION SKETCH

WATERWAY INFORMATION

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

Flood	Freq. Yr.	Q 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 following items shall be general conditions as part of the Contractor's operation in the river:
 - Work in and on the banks of the DuPage River shall be timed to take place during low or no-flow condition.
 - Concentrated flow shall be isolated from the work area using non-erodable cofferdam (Jersey barriers, steel sheets, aqua barriers, etc.)
 - If bypass is necessary, the inlet of the hose shall be placed in a sump pit and the outlet placed on a non-erodable, energy dissipating surface prior to joining the river.
 - All discharges from dewatering activities must be filtered by means of a sediment trap, filter bag, polymer system, etc. The dewatering method shall take into account the amount of water being removed from the work area and its sediment load.
 - The side slopes shall be reseeded and stabilized with an erosion control blanket as indicated on sheet 18 prior to accepting flows.
- 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.

TYLIN INTERNATIONAL

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

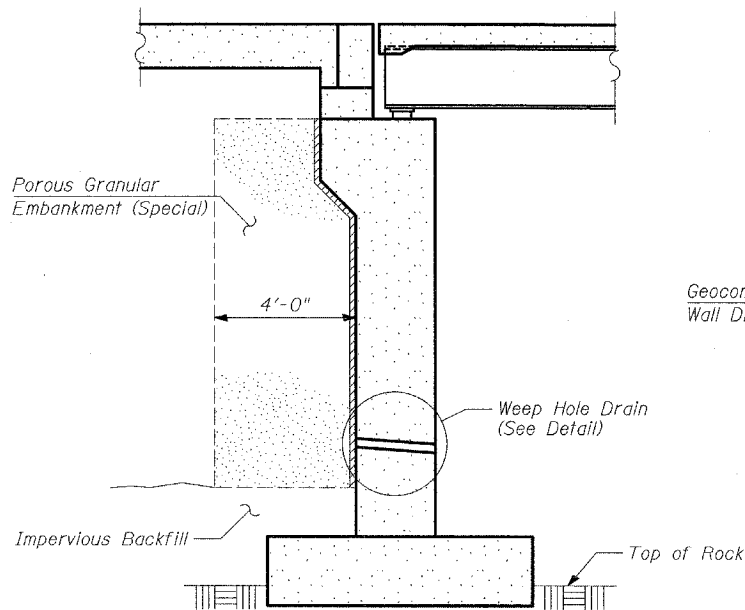
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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-		
* 00-00115-00-BR				CONTRACT NO. 83961	

INDEX OF SHEETS

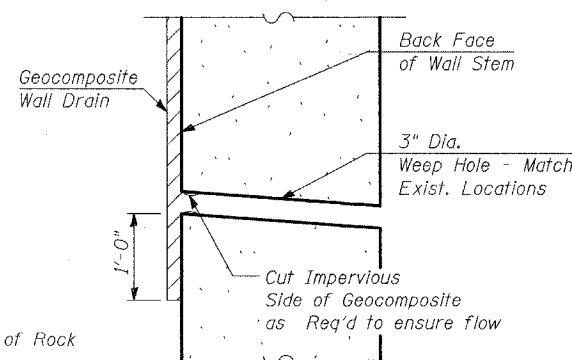
- GENERAL PLAN & ELEVATION
- GEN NOTES, SHT. INDEX, BILL OF MATERIAL
- SUBSTRUCTURE REMOVAL DETAILS
- STAGE CONSTRUCTION - I
- STAGE CONSTRUCTION - II
- TEMPORARY CONCRETE BARRIER
- TOP OF SLAB ELEVATIONS - LAYOUT
- TOP OF SLAB ELEVATIONS - I
- TOP OF SLAB ELEVATIONS - II
- TOP OF WEST APPROACH PAVEMENT 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

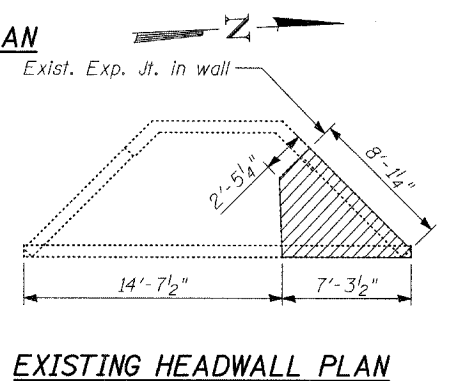
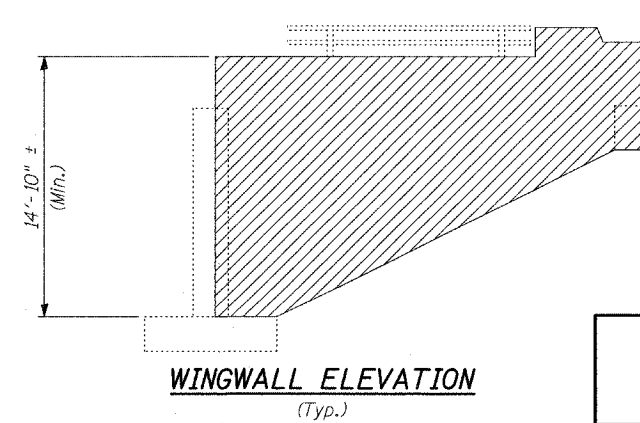
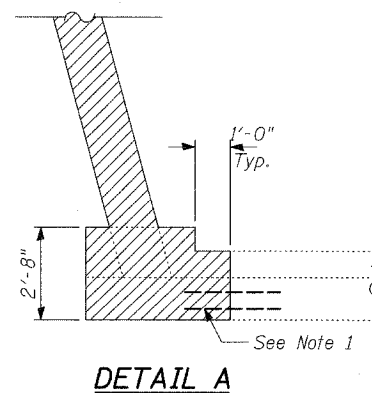
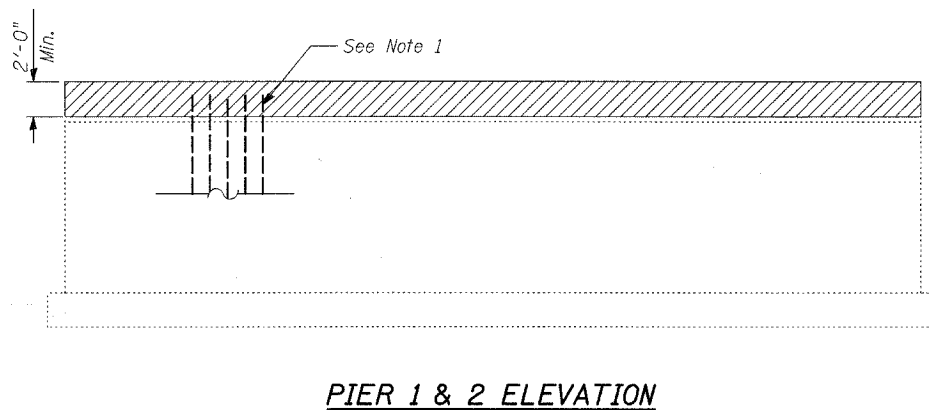
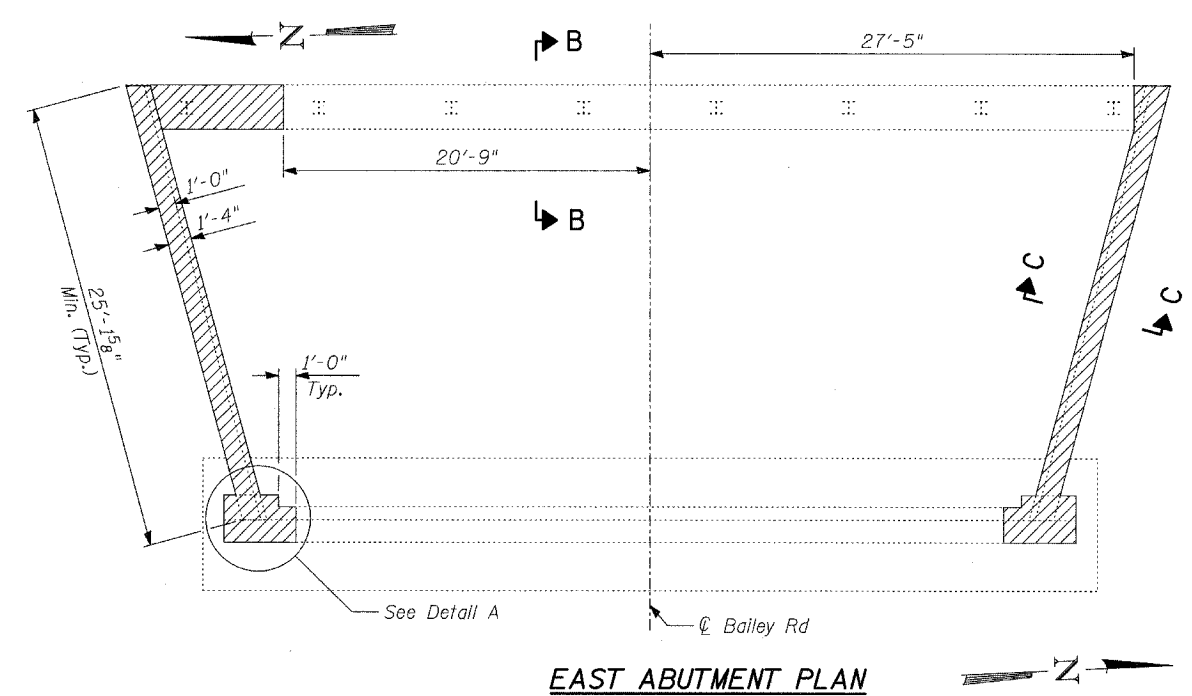
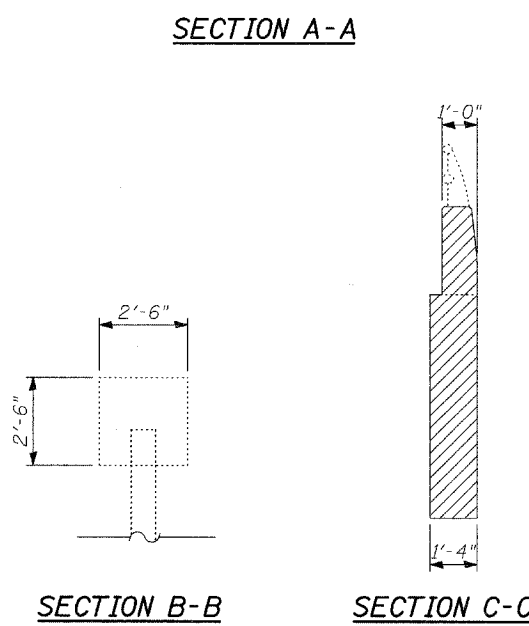
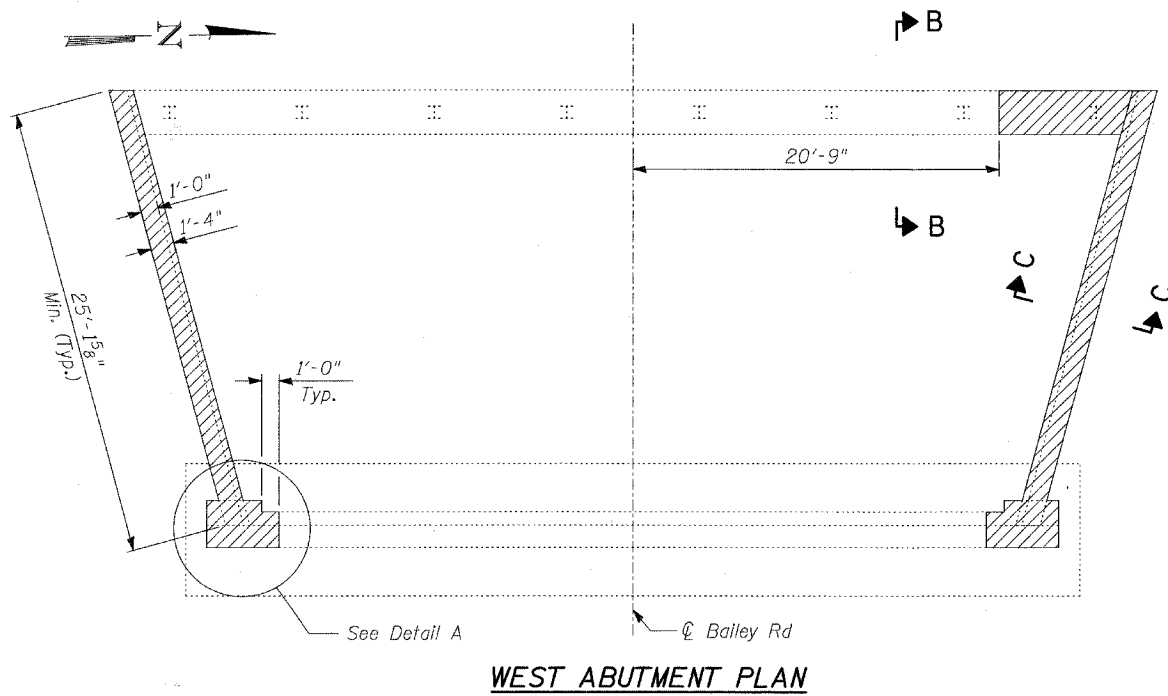
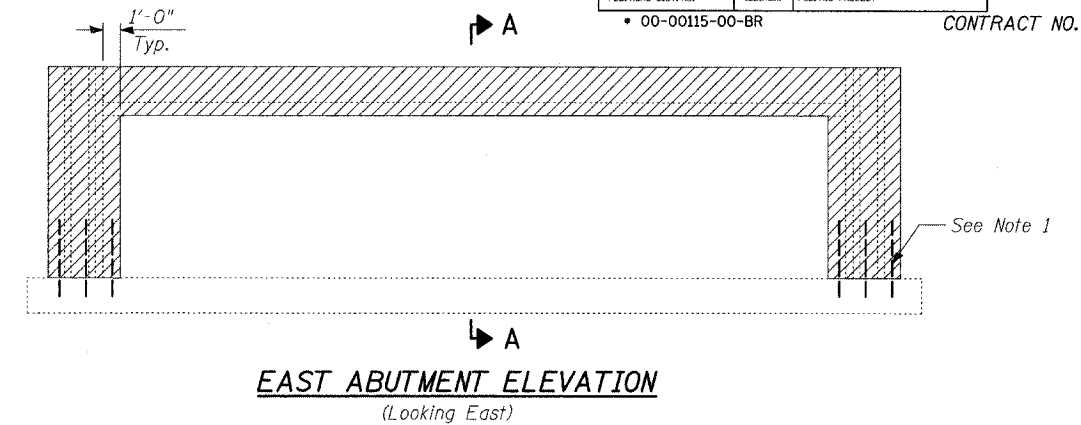
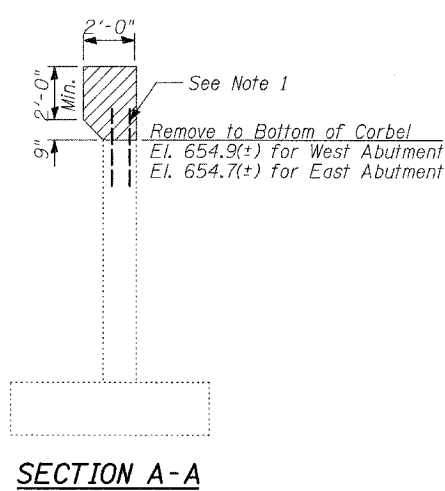
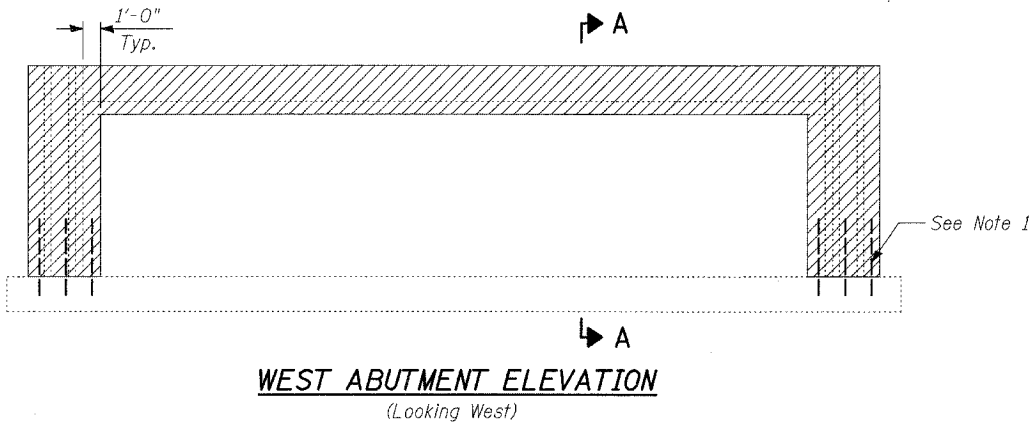
NAME PLATE
See Std. 515001

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

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:

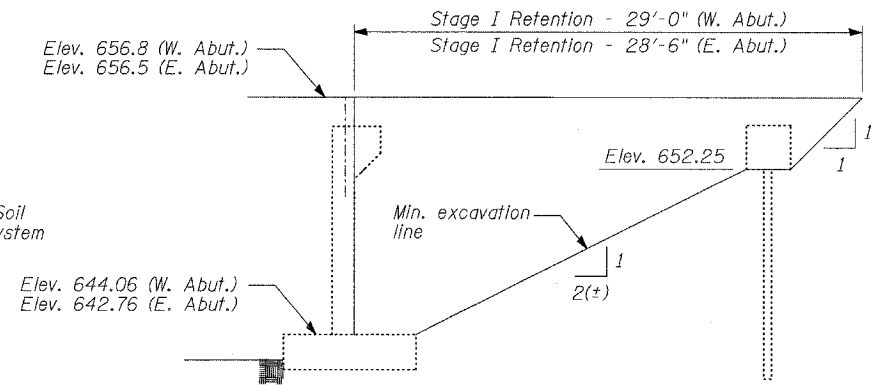
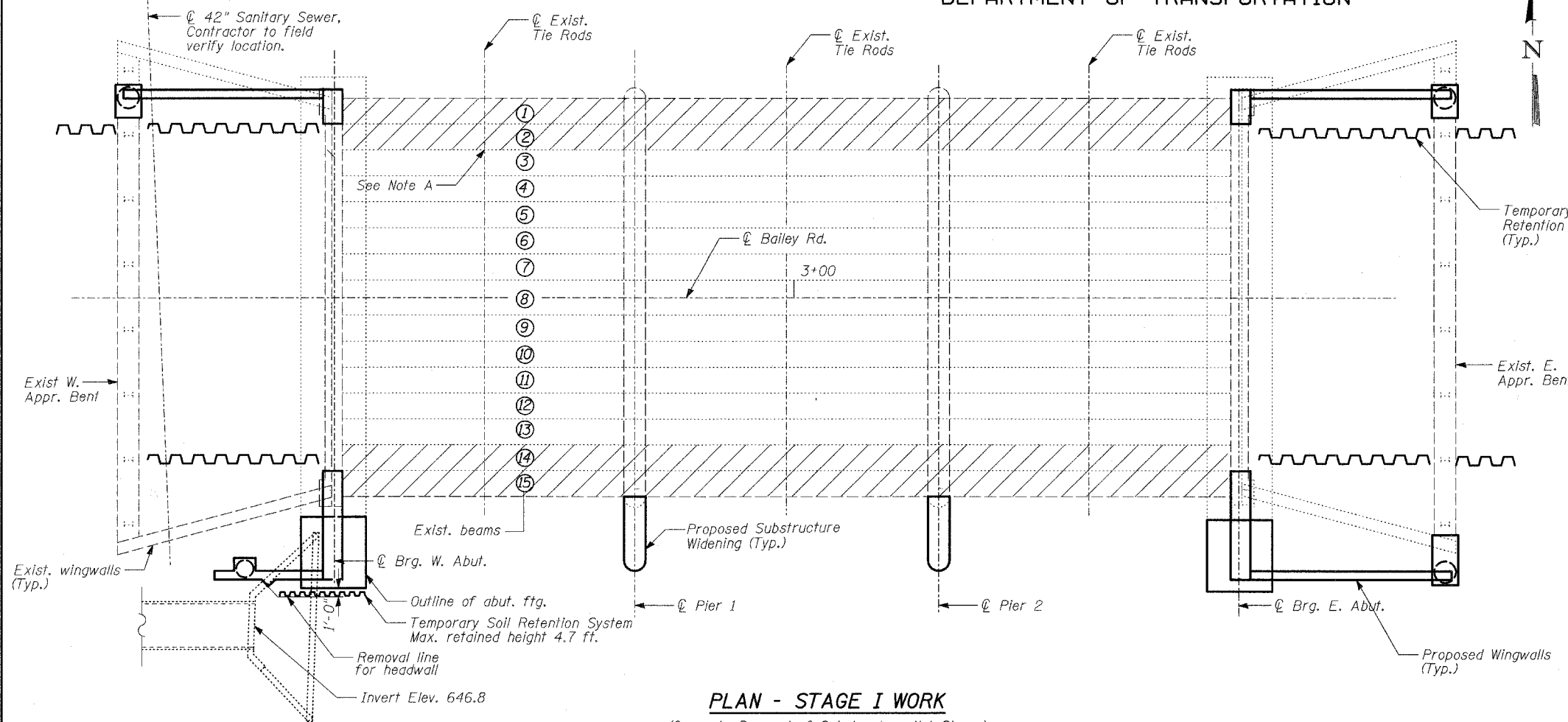
- Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete 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	SHEET NO.	SHEET NO. - 4
1545	*	DUPAGE	97	25
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	39 - SHEETS
		00-00115-00-BR	CONTRACT NO. 83961	



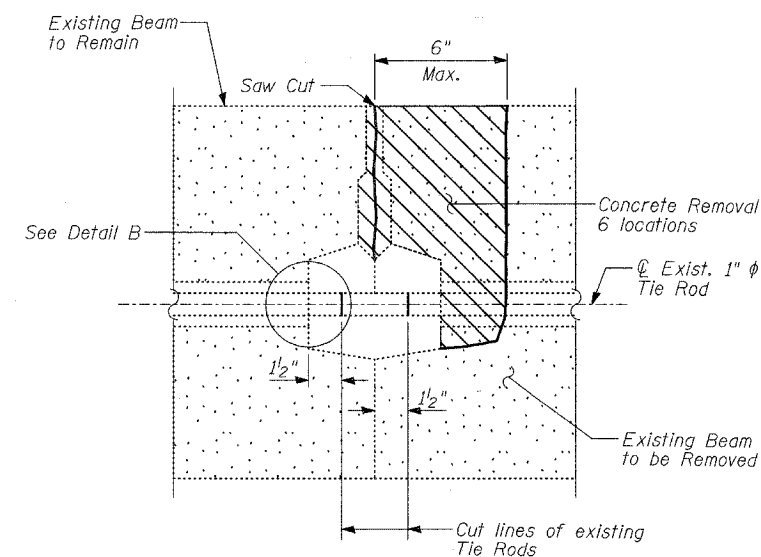
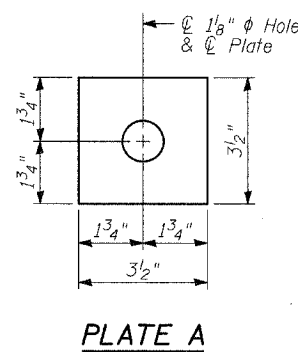
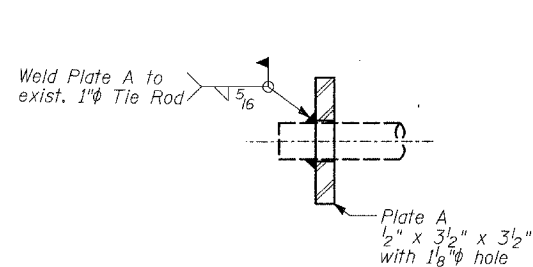
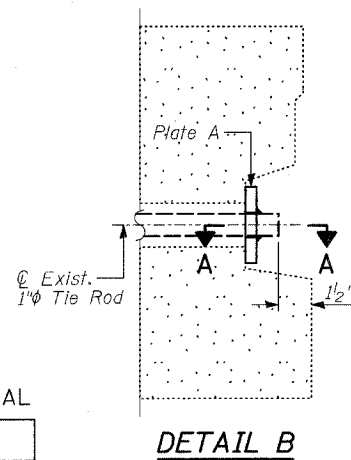
PLAN - STAGE I WORK
(Concrete Removal of Substructure Not Shown)

TEMPORARY SOIL RETENTION SYSTEM

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)



LEGEND

Denotes Beam Removal

TYLIN INTERNATIONAL

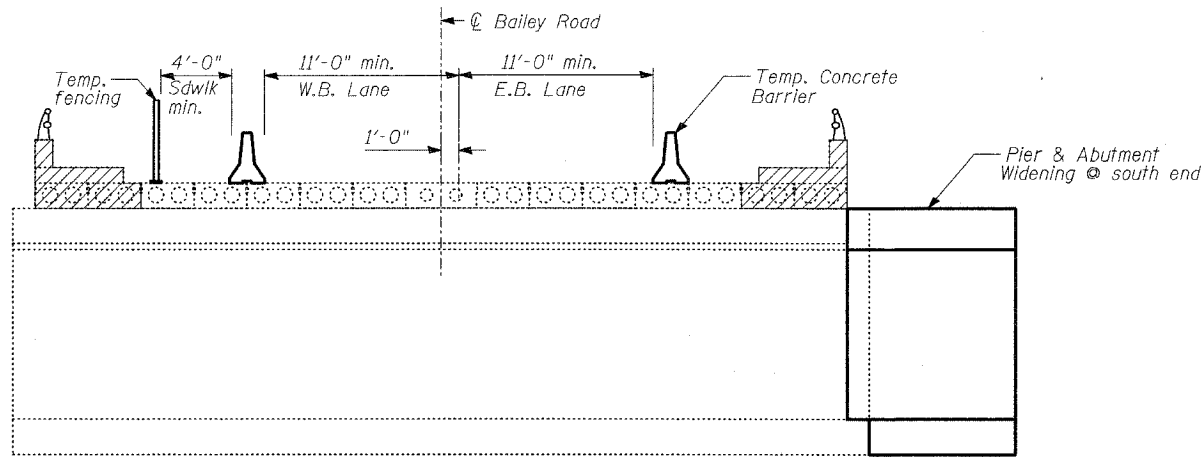
DESIGNED	- SP
CHECKED	- PF
DRAWN	- SP, SNB
CHECKED	- PF

STAGE CONSTRUCTION - I

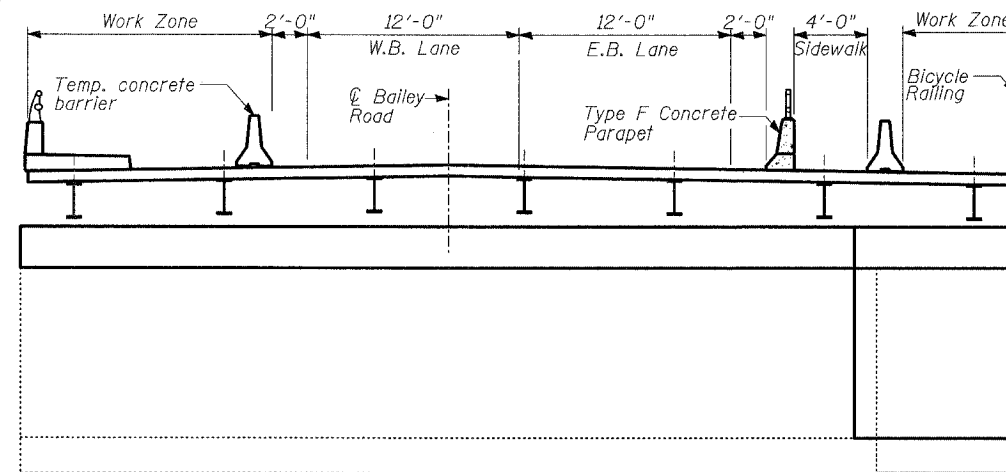
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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



STAGE I
(Looking East- Pier shown)



STAGE III
(Looking East- Pier shown)

CONSTRUCTION SEQUENCE

STAGE I

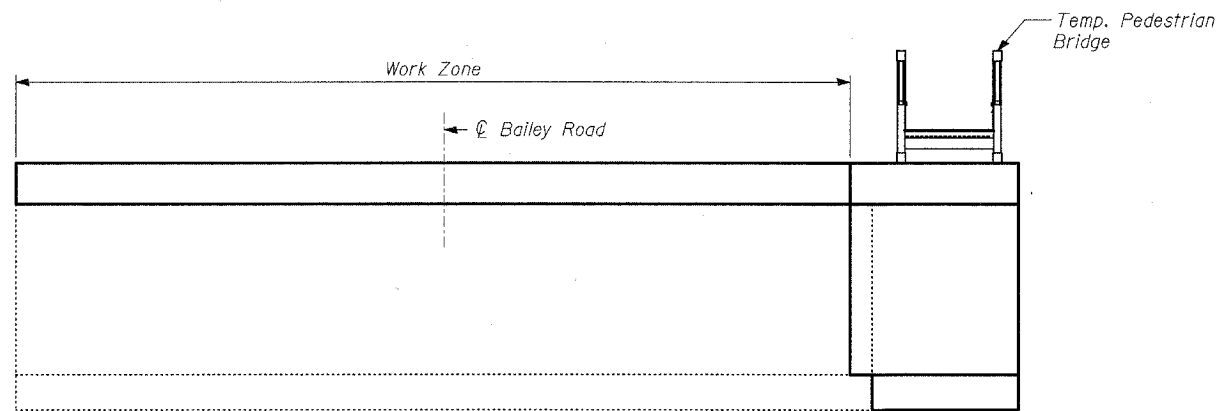
1. Prestage work will consist of removal of the existing sidewalks and barrier, along with beams 1, 2, 14 and 15. The removal of the PPC deck beams will be in accordance with the Special Provision "Removal of Existing Superstructures" along with details on Sheet 4.
2. The Contractor shall set up the 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	SHEETS	SHEET NO.
1545	•	DUPAGE	97	27
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. - 6

39 - SHEETS

• 00-00115-00-BR

CONTRACT NO. 83961

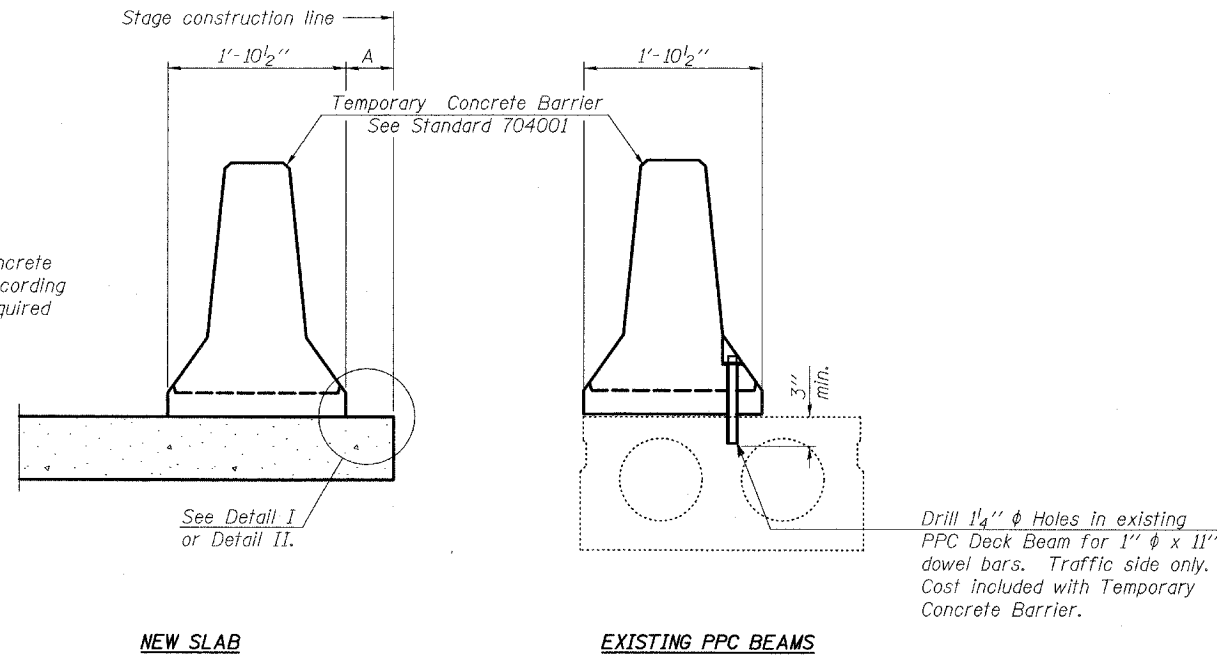
NOTES

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.

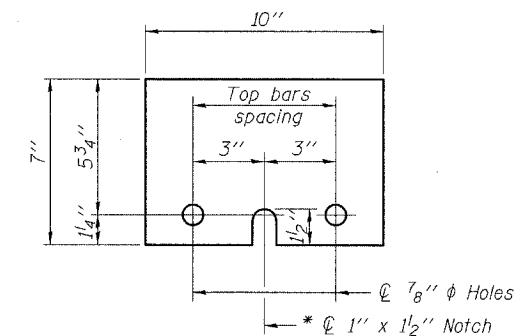
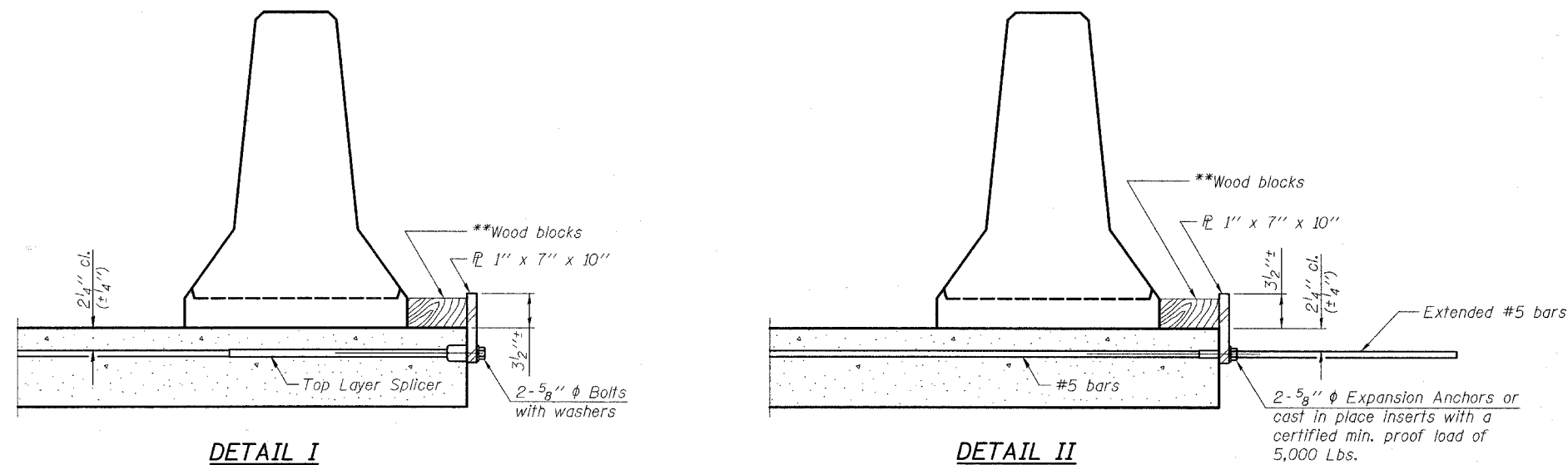
Cost of anchorage is included with Temporary Concrete Barrier.
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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".



Drill 1/4" ϕ Holes in existing PPC Deck Beam for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



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

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

TEMPORARY CONCRETE BARRIER

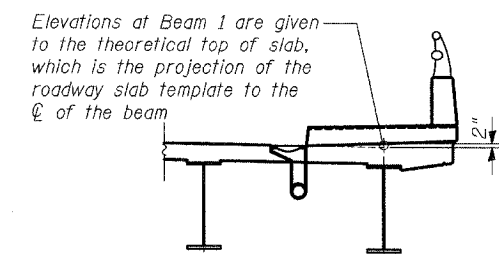
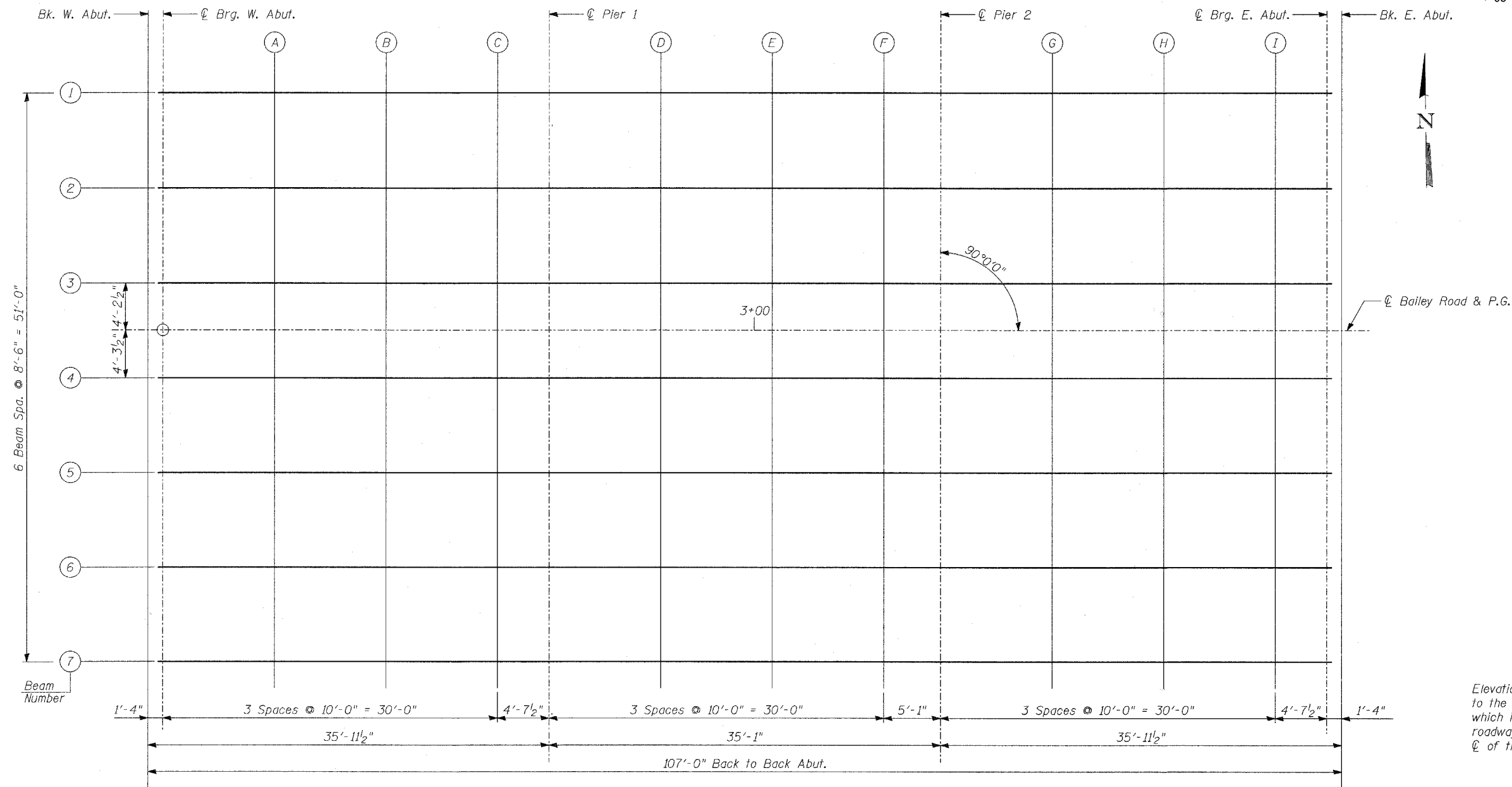
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

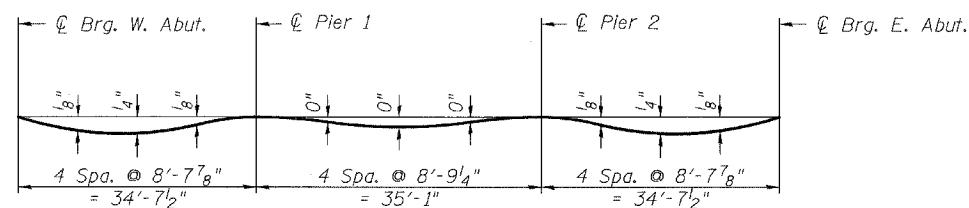
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	•	DUPAGE	97	28
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-		

SHEET NO. - 7
39 - SHEETS

• 00-00115-00-BR CONTRACT NO. 83961



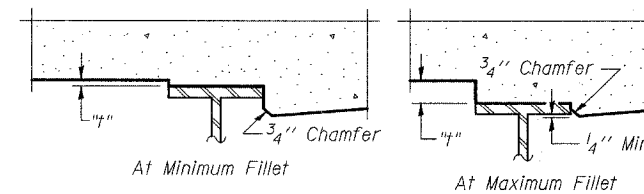
LOCATION OF ELEVATIONS
AT BEAM 1



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	SHEETS	SHEET NO.	SHEET NO. - 8 39 - SHEETS
1545	•	DUPAGE	97	29	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-		CONTRACT NO. 83961
			• 00-00115-00-BR		

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	SHEET NO.	SHEET NO. - 9
1545	•	DUPAGE	97	30
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
• 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

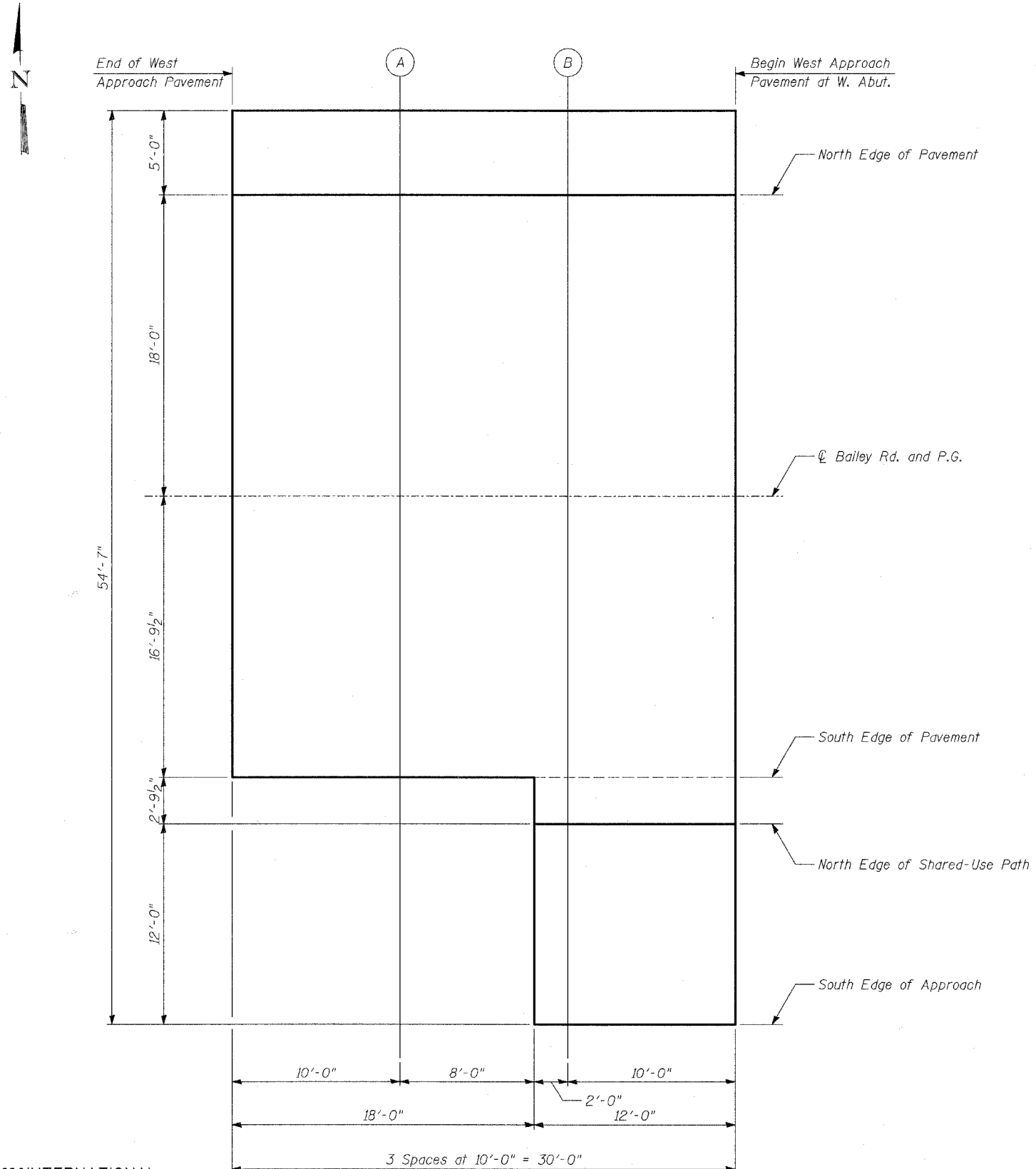
DESIGNED	- PL
CHECKED	- SNB
DRAWN	- PL
CHECKED	- SNB

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

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

CL 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

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

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

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

TYLIN INTERNATIONAL

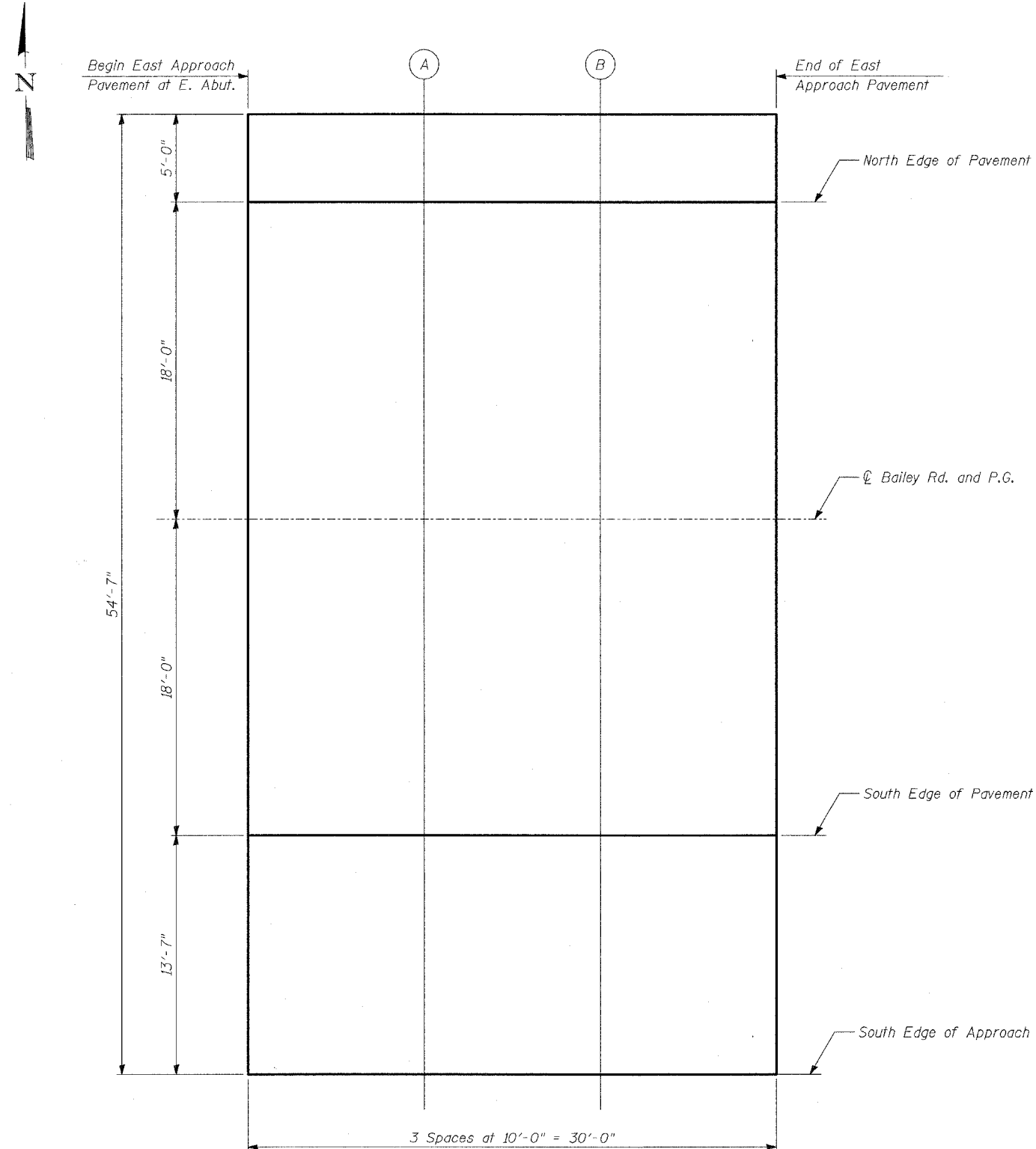
DESIGNED	- PL
CHECKED	- SNB
DRAWN	- PL
CHECKED	- SNB

**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.	SHEET NO. - 11
1545	*	DUPAGE	97	32	39 - SHEETS
FED. ROAD DIST. NO.	LENGTH	FED. AID PROJECT			
			* 00-00115-00-BR CONTRACT NO. 83961		



PLAN

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

C 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

TYLIN INTERNATIONAL

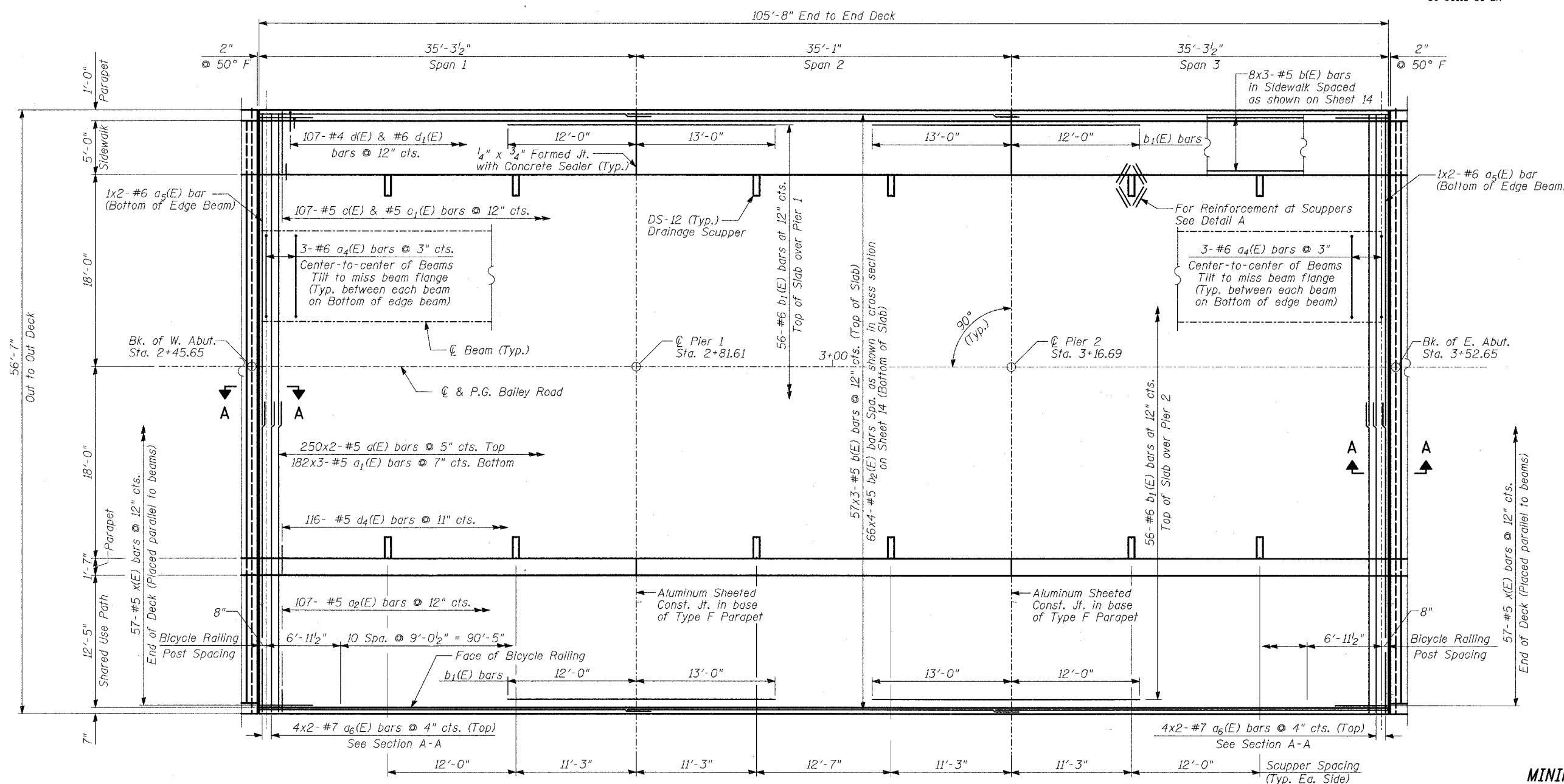
DESIGNED	- PL
CHECKED	- SNB
DRAWN	- PL
CHECKED	- SNB

**TOP OF EAST APPROACH
PAVEMENT ELEVATIONS**

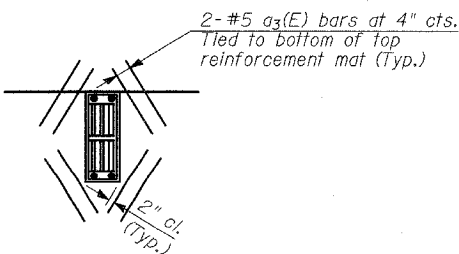
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ADJUT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	*	DUPAGE	97	33
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
00-00115-00-BR		CONTRACT NO. 83961		



PLAN

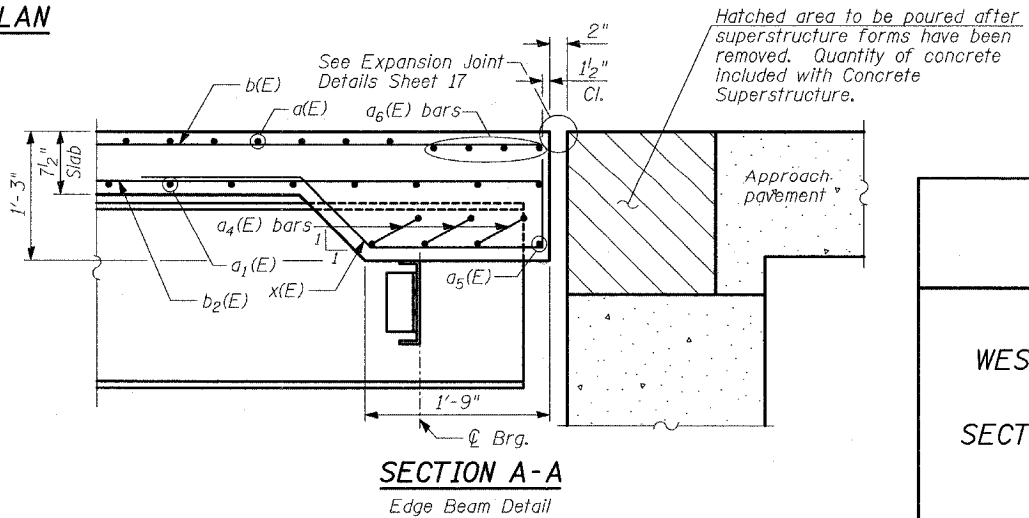


DETAIL A

Note:
Cut longitudinal reinforcement to clear drainage scuppers.

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.



SECTION A-A
Edge Beam Detail

MINIMUM BAR LAPS

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

TYLIN INTERNATIONAL

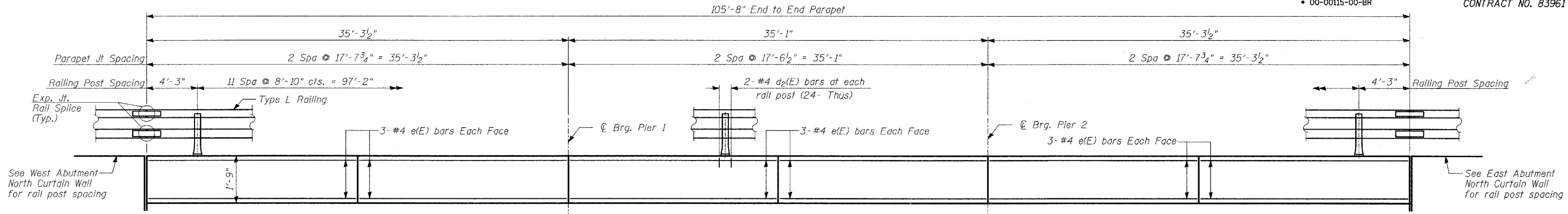
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CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

DECK PLAN

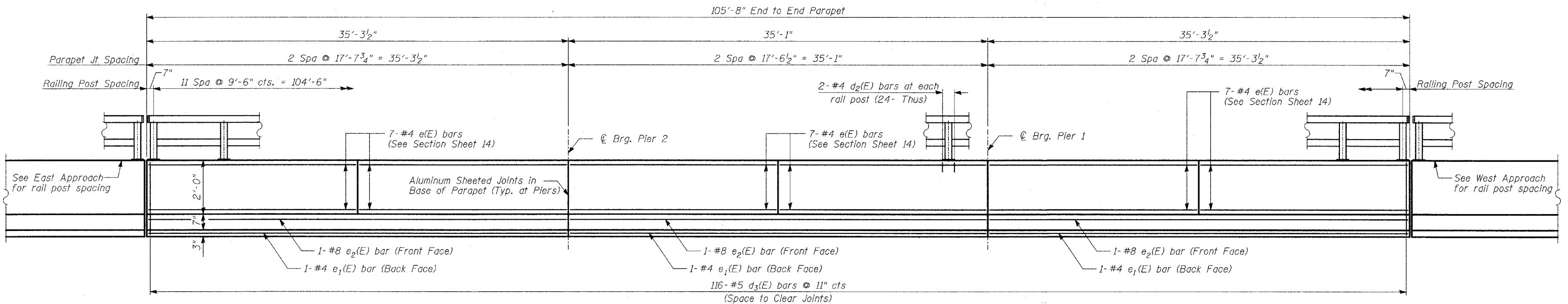
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

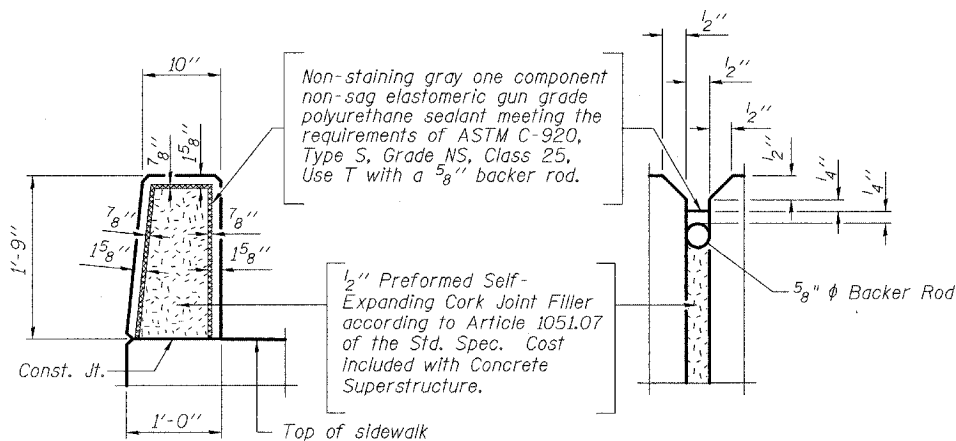
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. - 13 39 - SHEETS
1545	•	DUPAGE	97	34	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83961		



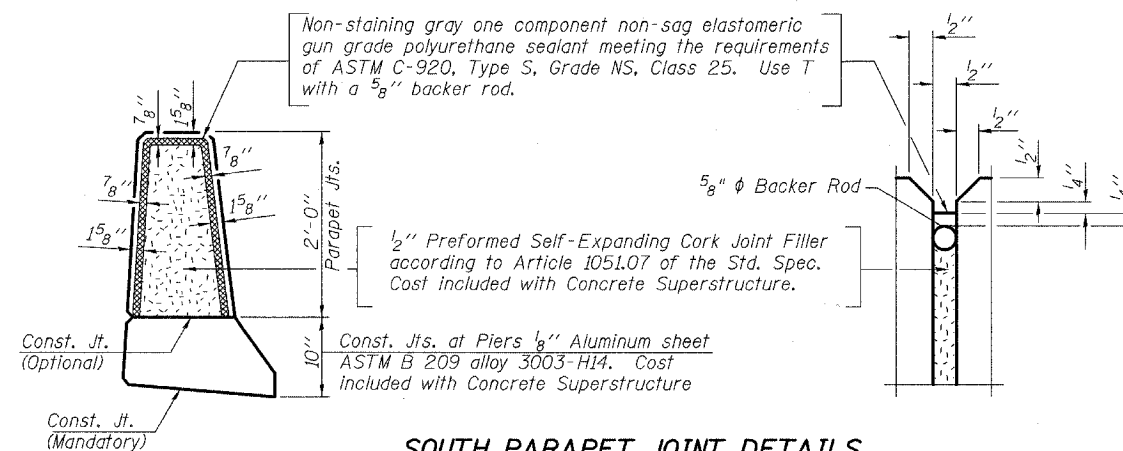
INSIDE ELEVATION OF NORTH PARAPET



INSIDE ELEVATION OF SOUTH PARAPET



NORTH PARAPET JOINT DETAILS



SOUTH PARAPET JOINT DETAILS

TYLIN INTERNATIONAL

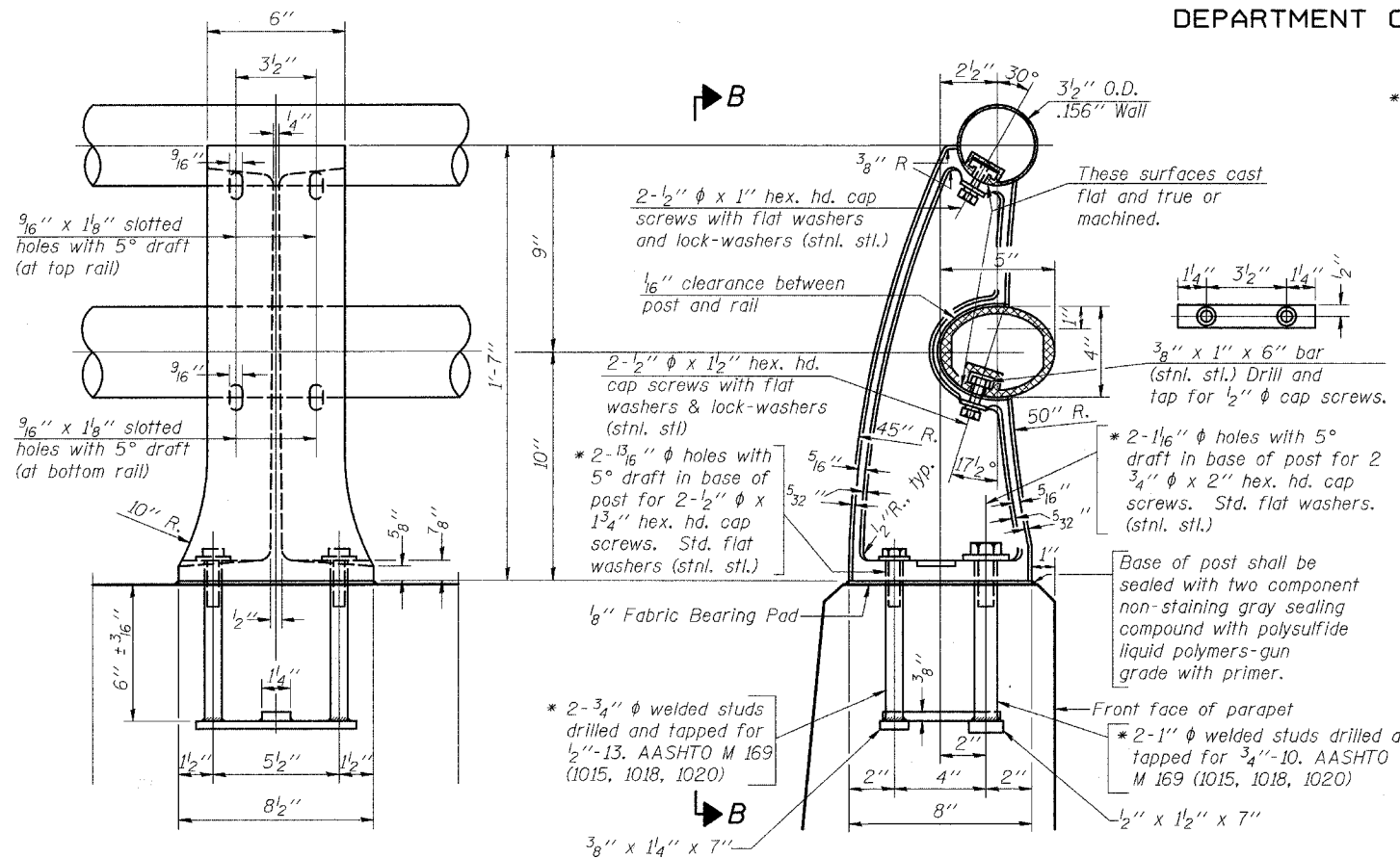
DESIGNED	- DE
CHECKED	- SNB
DRAWN	- DE
CHECKED	- SNB

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	TOTAL SHEETS	SHEET	SHEET NO. - 15
1545	•	DUPAGE	97	36	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-			
			CONTRACT NO. 83961		

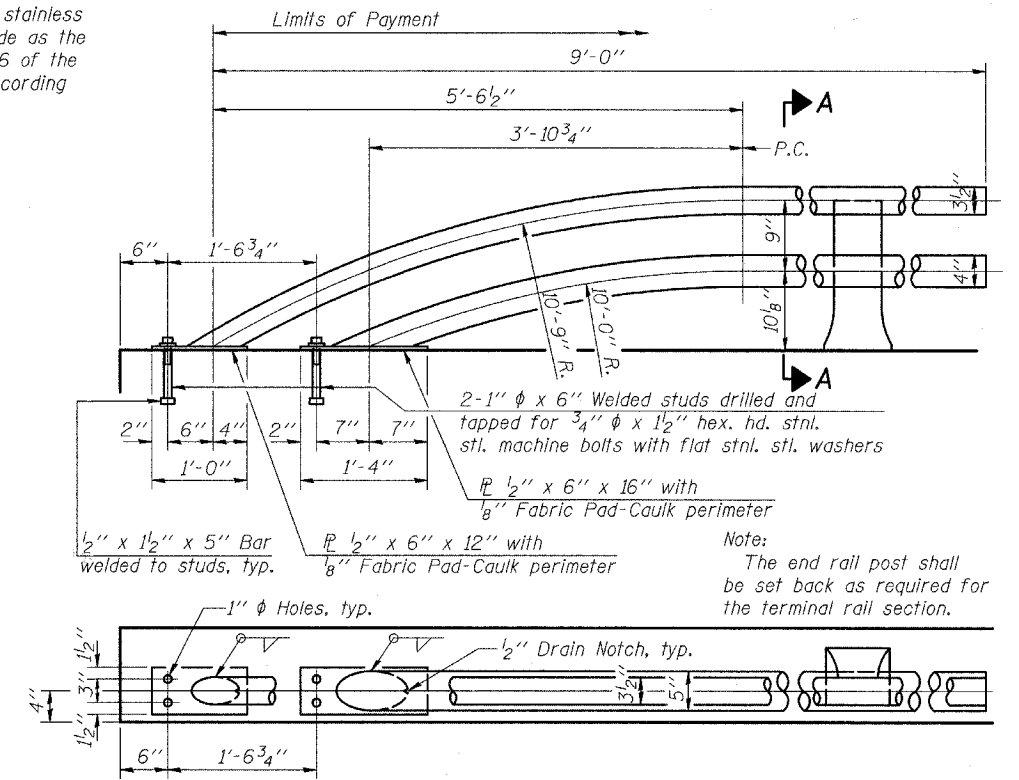


VIEW B-B

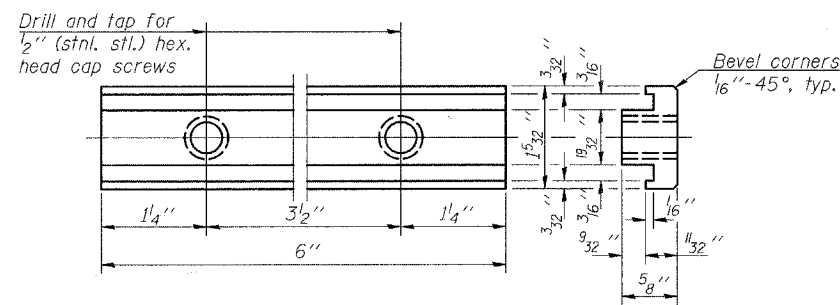
RAIL POST DETAILS

SECTION A-A

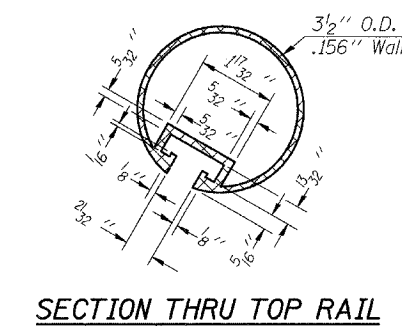
* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



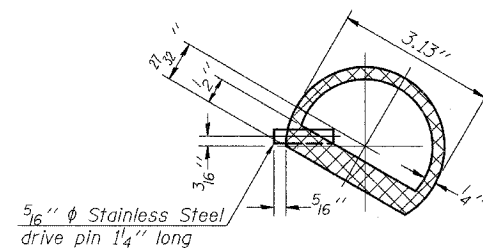
RAIL TERMINAL SECTION



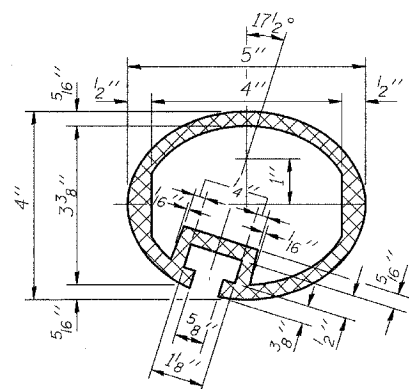
RAIL POST CLAMP BAR
For Top Rail



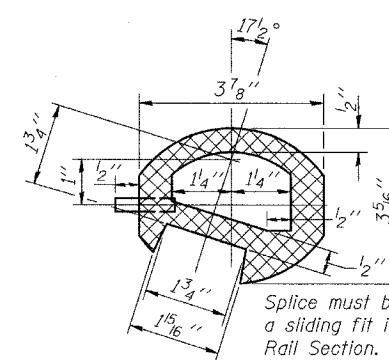
SECTION THRU TOP RAIL



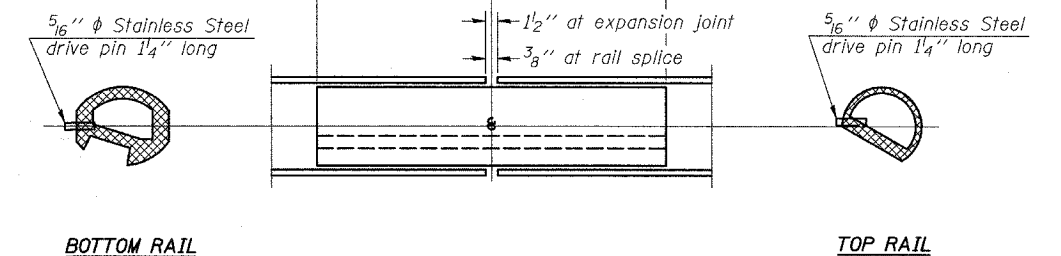
SECTION THRU SPLICE
For Top Rail



SEC. THRU ELLIPTICAL
RAIL SECTION



SEC. THRU SPLICE



BOTTOM RAIL

RAIL SPLICE

TOP RAIL

BILL OF MATERIAL

Item	Unit	Quantity
Aluminum Railing, Type L	Foot	154

ALUMINUM RAILING, TYPE L

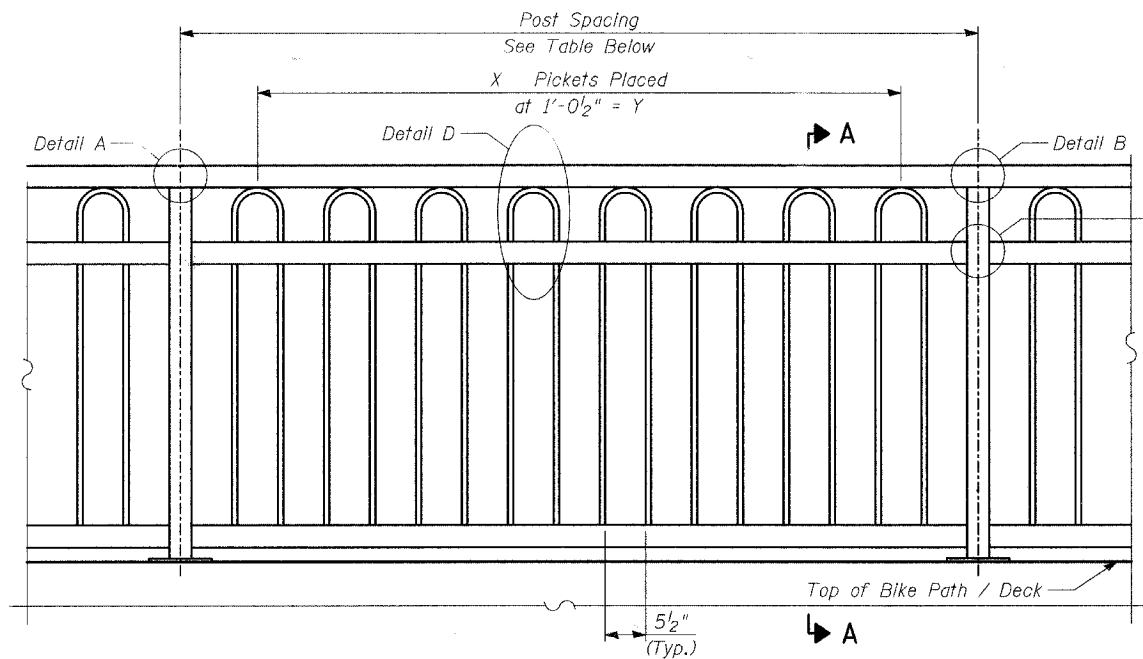
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

TYLIN INTERNATIONAL

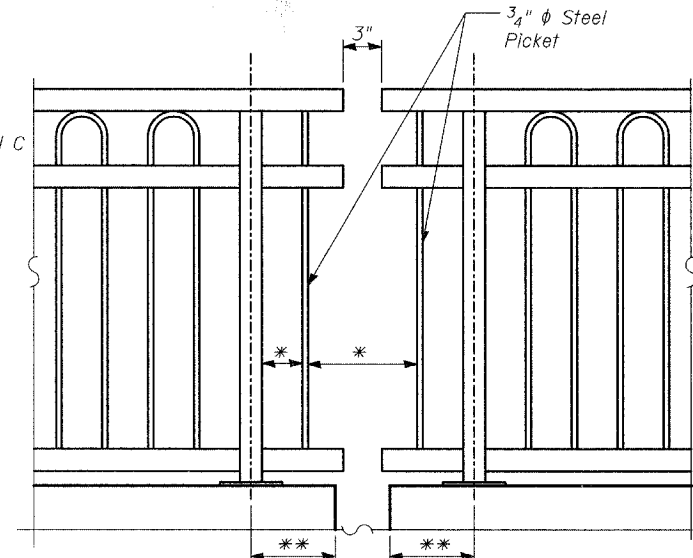
DESIGNED	- SNB
CHECKED	- SP
DRAWN	- SNB
CHECKED	- SP

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
Provide 1-9" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
See Sheet 13, 23 & 26 for rail post spacing.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION - TYPICAL SECTION



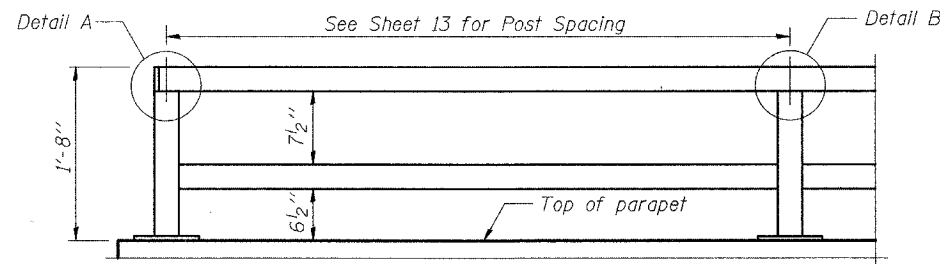
SECTION A-A

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

BICYCLE RAILING LAYOUT

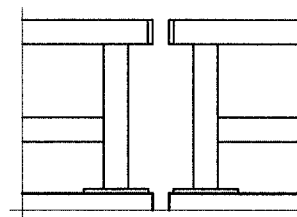
Post Spacing	Picket Layout	
	X	Y
5'-11"	5	4'-2"
6'-11 1/2"	6	5'-2 1/2"
8'-0"	7	6'-3"
9'-0 1/2"	8	7'-3 1/2"

(See Sheets 12, 23 & 26 for Layout)

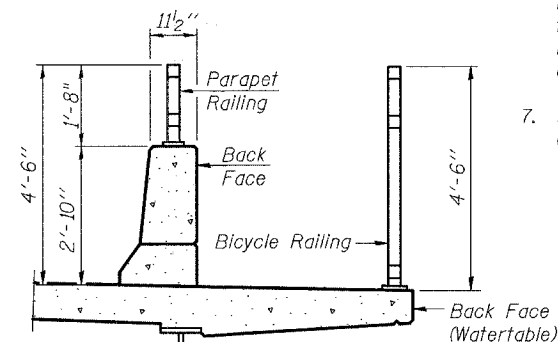


PARAPET RAILING
ELEVATION

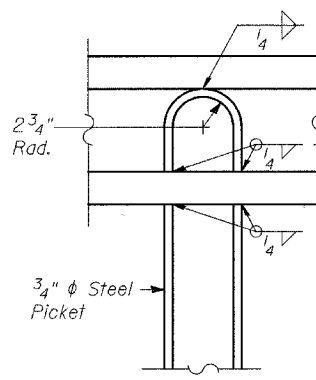
BICYCLE RAILING



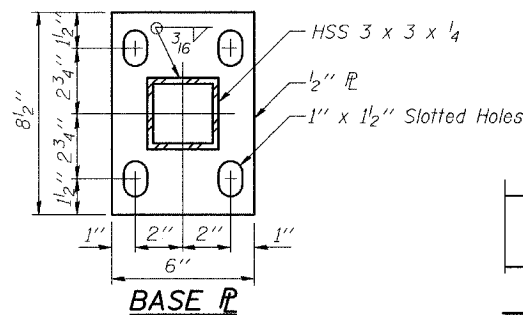
PARAPET RAILING
ELEVATION AT EXPANSION JOINT



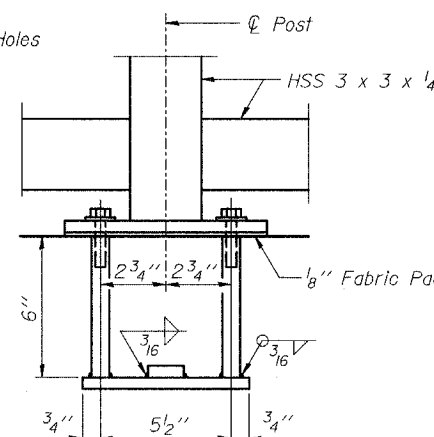
SECTION THRU DECK



DETAIL D

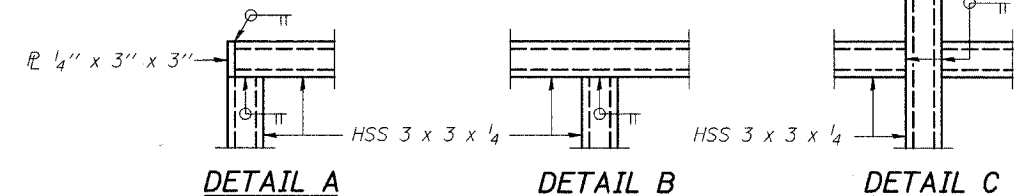


BASE PL



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

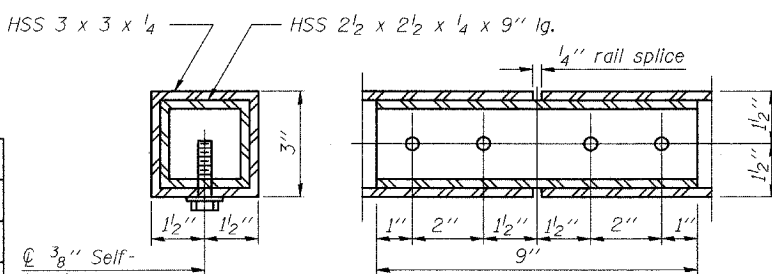
BILL OF MATERIAL

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



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.

RAILING DETAILS

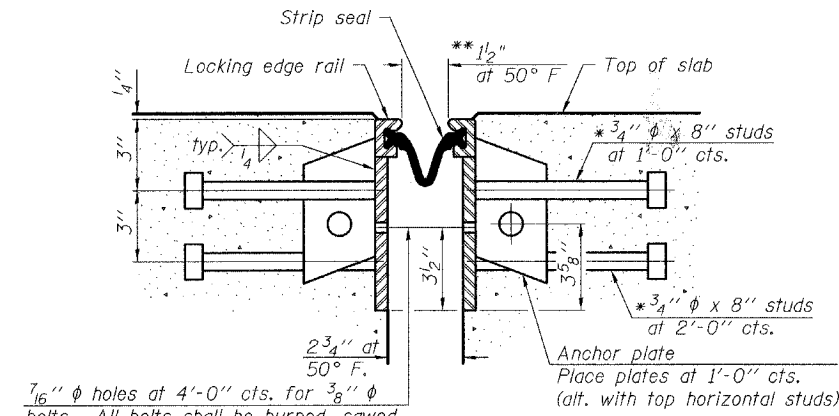
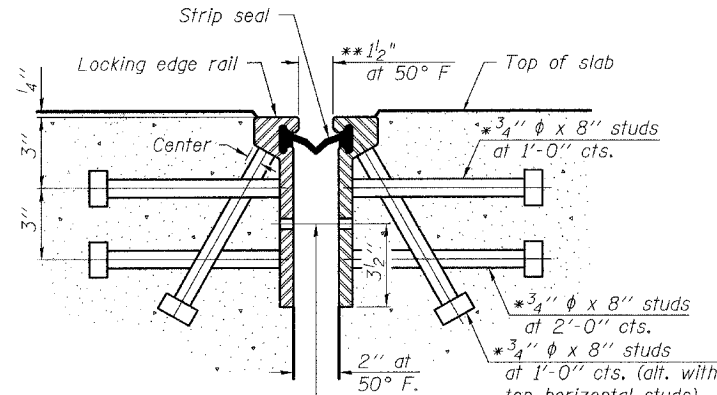
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	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".



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.

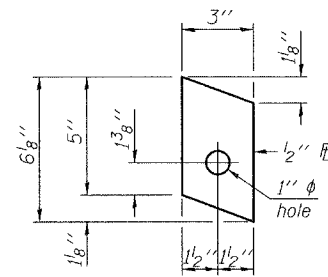
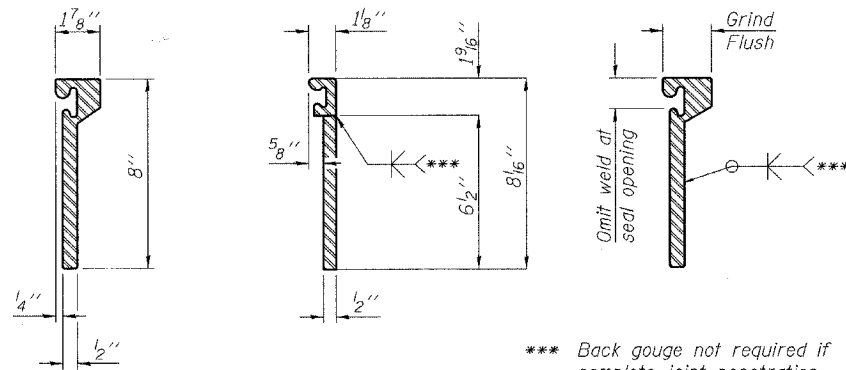
The manufacturer's recommended installation methods shall be followed.

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.

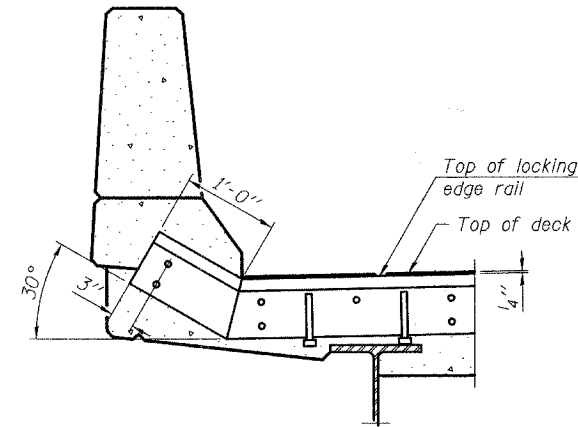
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

SECTION THRU
ROLLED RAIL JOINT

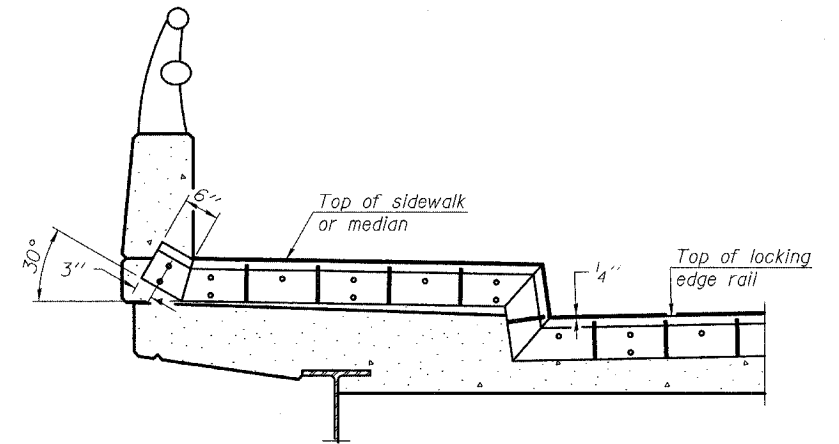
SECTION THRU
WELDED RAIL JOINT



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

ROLLED
(EXTRUDED) RAIL WELDED RAIL

LOCKING EDGE
RAIL SPLICE

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

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
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. - 18 39 - SHEETS
1545	•	DUPAGE	97	39	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		

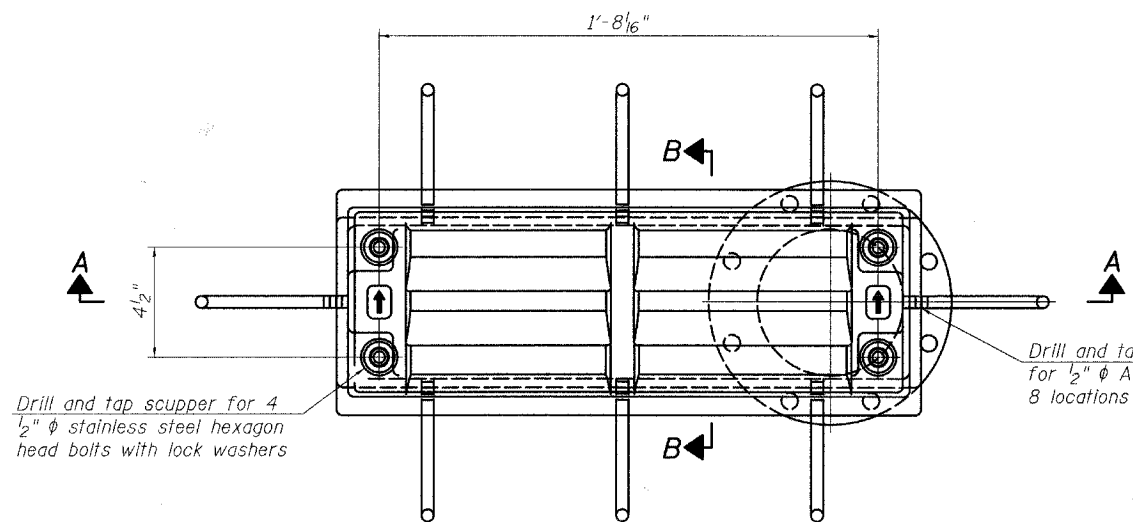
Notes:
All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
Downspouts located on the exterior side of a painted steel 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.

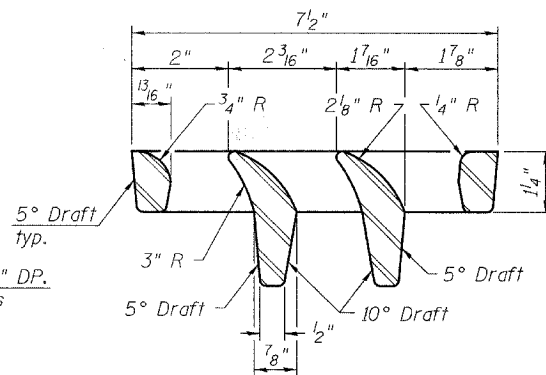
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.

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.

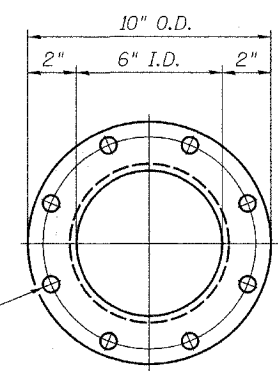


PLAN

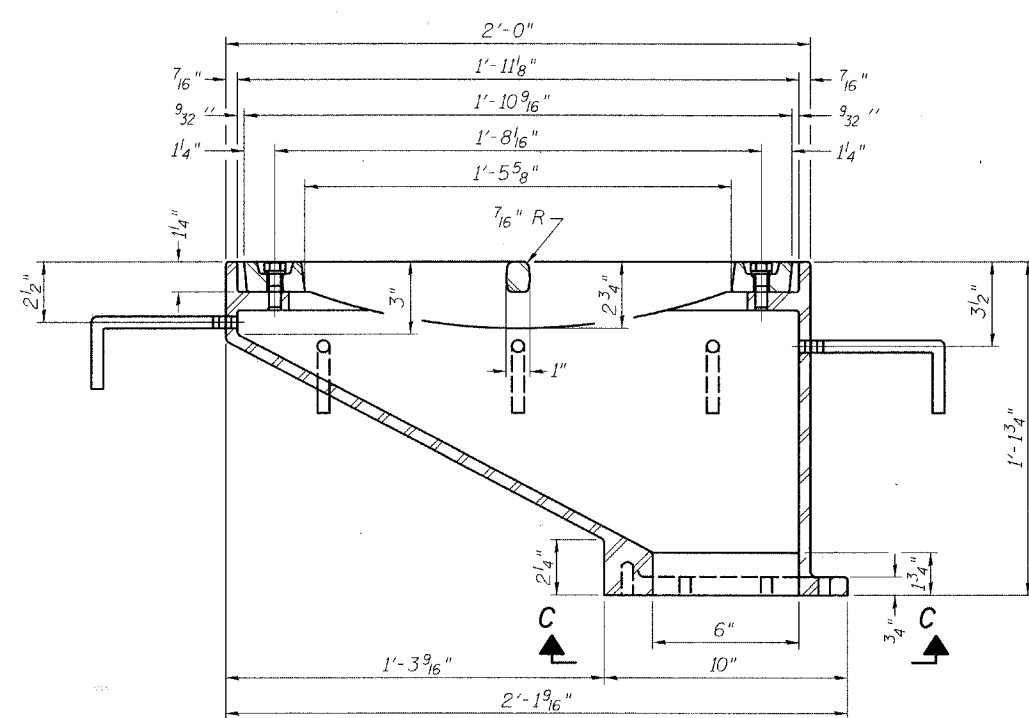


VANE GRATE DETAIL

8-9/16" φ holes on an 8 3/4" φ bolt circle

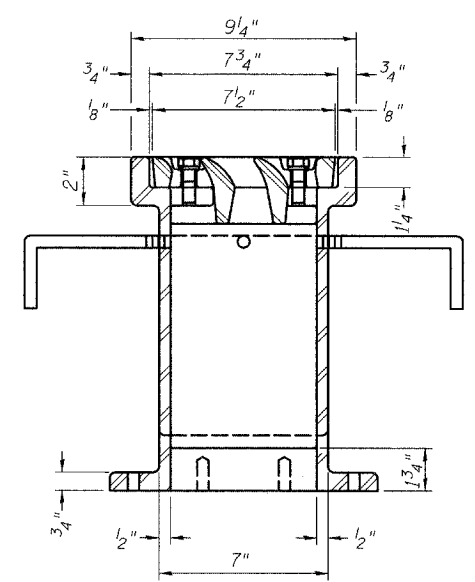


VIEW C-C

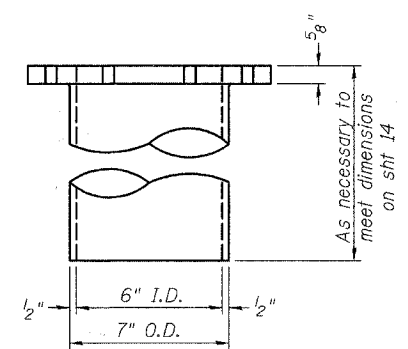


SECTION A-A

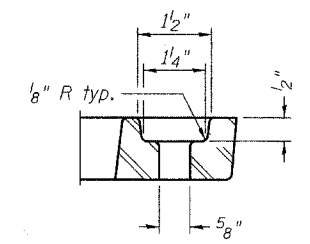
See sheet 14 for scupper location relative to parapet.



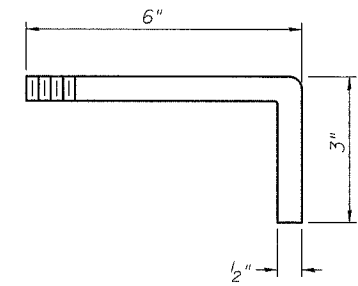
SECTION B-B



DOWNSPOUT



BOLT HOLE DETAIL



ANCHOR STUD DETAIL

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-12	Each	12

DRAINAGE SCUPPER, DS-12

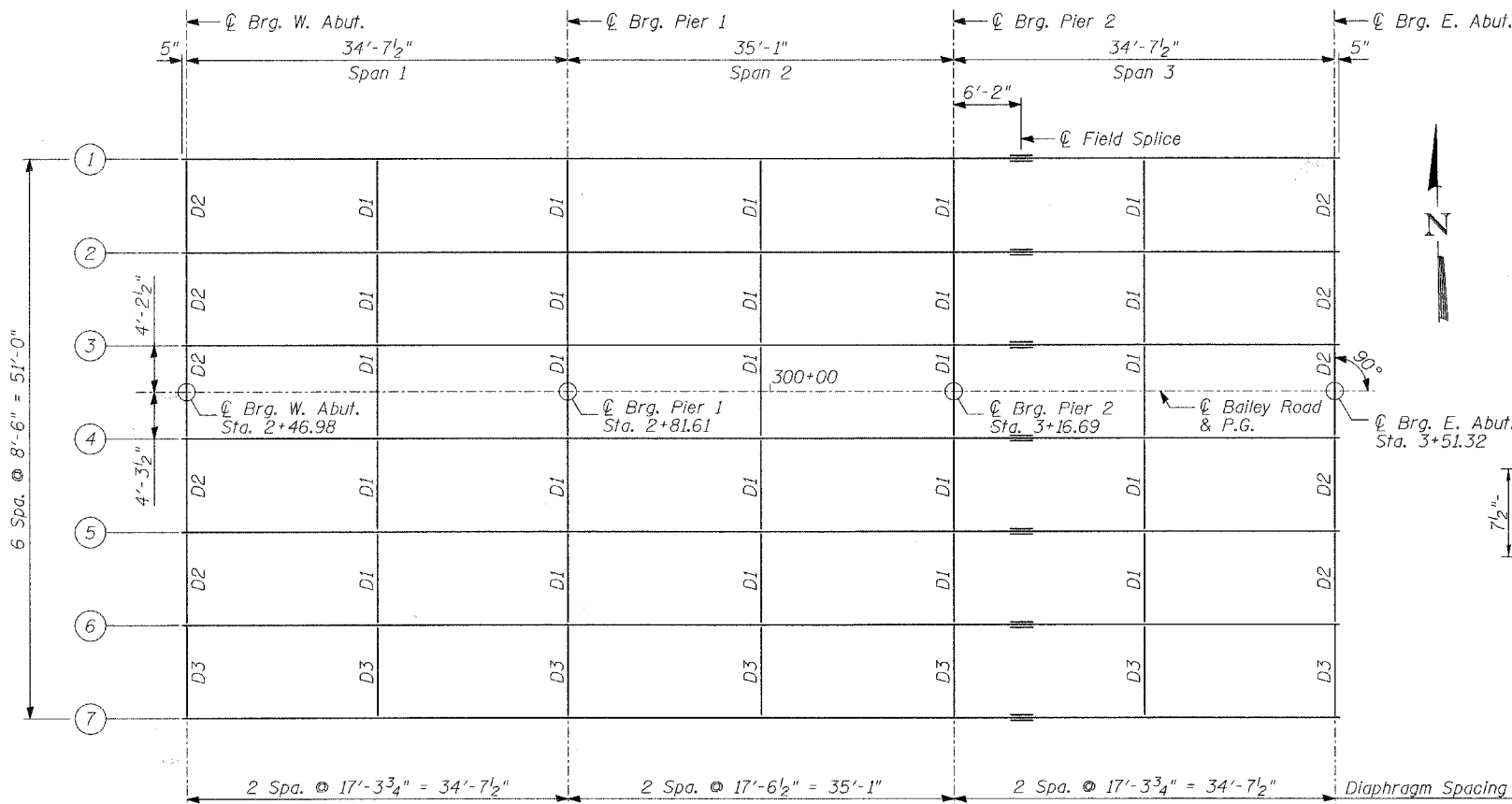
BAILEY ROAD OVER THE
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DUPAGE COUNTY
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TYLIN INTERNATIONAL

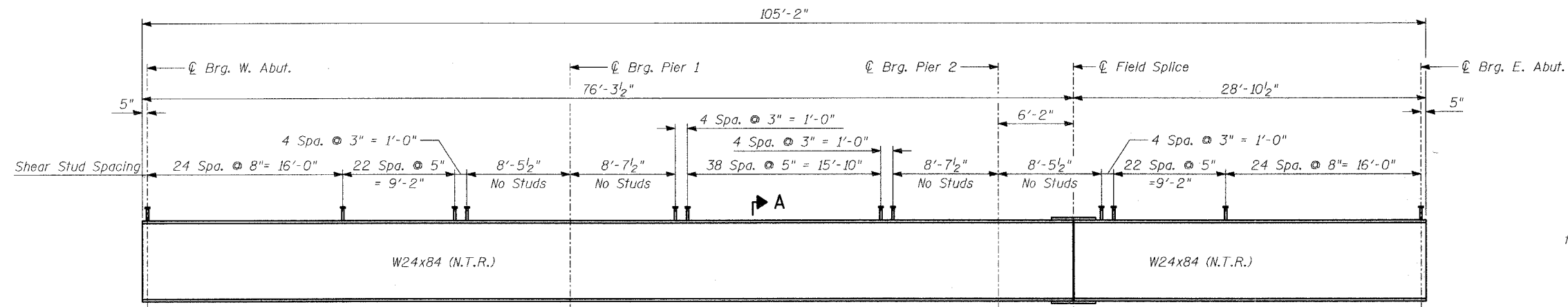
DESIGNED	- SNB
CHECKED	- PF
DRAWN	- SNB
CHECKED	- PF

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. - 19 39 - SHEETS
1545	*	DUPAGE	97	40	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.	CONTRACT NO. 83961		



FRAMING PLAN



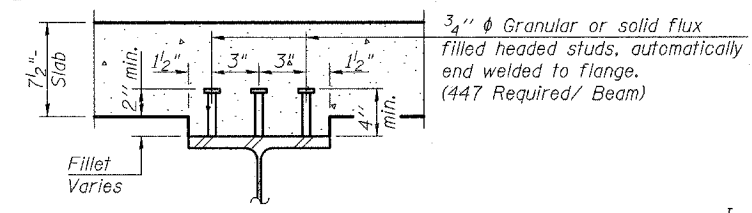
BEAM ELEVATION

INTERIOR GIRDER REACTION TABLE

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

INTERIOR GIRDER MOMENT TABLE

	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	--
ρ (k/')	0.92	1.55	0.92
M _ρ (k)	88	173	31
s _ρ (k/')	0.63	--	0.63
M _{sρ} (k)	66	--	35
M _l (k)	235	121	193
M _{Imp} (k)	70	36	58
M ₃ [M _l + M _{Imp}] (k)	508	262	418
M _a (k)	861	565	630
M _u (k)	1,411	--	1,607
f _s ρ non-comp (ksi)	5.36	10.54	1.89
f _s ρ (comp) (ksi)	2.84	--	1.51
f _s M ₃ [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).
- ρ: Un-factored non-composite dead load (kips/ft.).
- M_ρ: Un-factored moment due to non-composite dead load (kip-ft.).
- s_ρ: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- M_{sρ}: 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_a: Factored design moment (kip-ft.).
- 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).
- f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
- VR: Maximum live load + 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

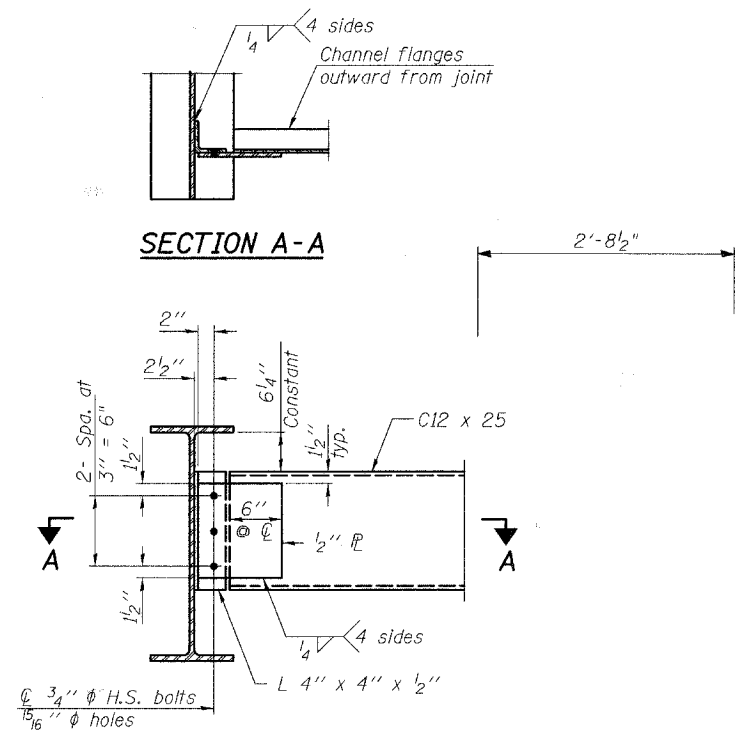
ITEM	UNIT	TOTAL
Furnishing and Erecting Structural Steel	L SUM	1
Stud Shear Connectors	EACH	3,129

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

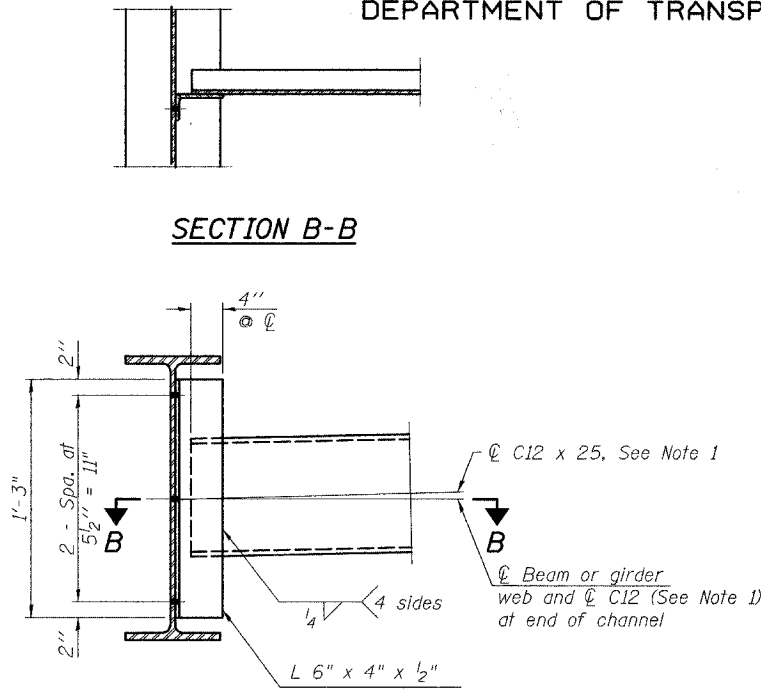
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 20 39 - SHEETS
1545	*	DUPAGE	97	41	
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 83961
00-00115-00-BR					



END DIAPHRAGM - D2
(10 - D2 Required)

Notes:

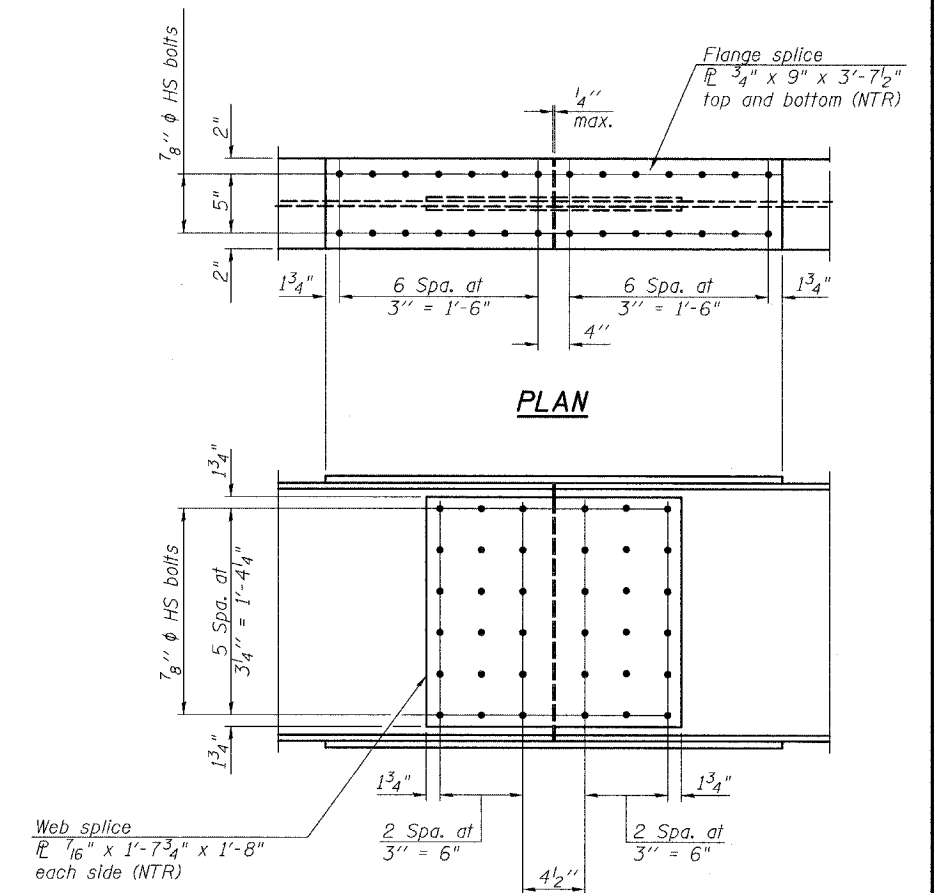
- 3/4" HS bolts, 15/16" holes
- Two hardened washers required for each set of oversized holes.



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



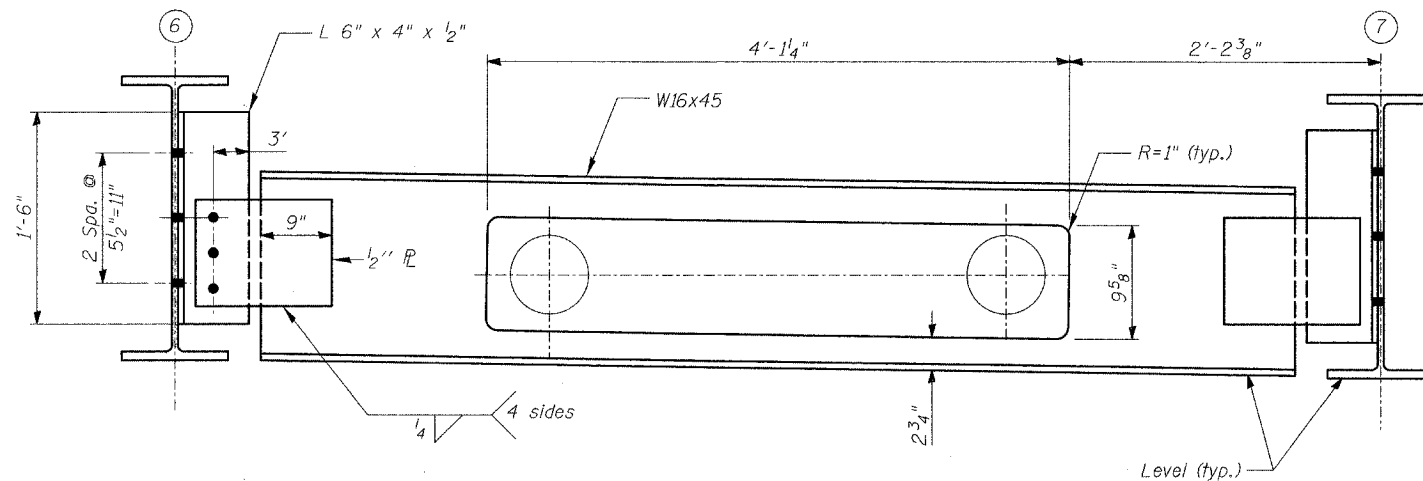
ELEVATION

SPLICE DETAIL
(7 - Required)

TOP OF BEAM ELEVATIONS

For Fabrication Only.

Beam	℄ Brg. W. Abut.	℄ Brg. Pier 1	℄ Brg. Pier 2	F.S.	℄ 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" HS bolts, 15/16" holes
- Two hardened washers required for each set of oversized holes.

TYLIN INTERNATIONAL

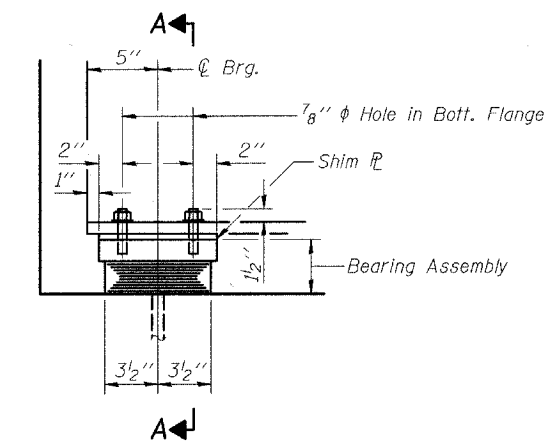
DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

FRAMING DETAILS

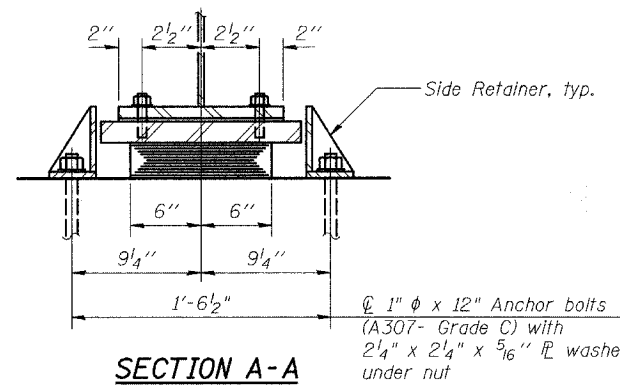
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

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-	CONTRACT NO. 83961		
• 00-00115-00-BR					

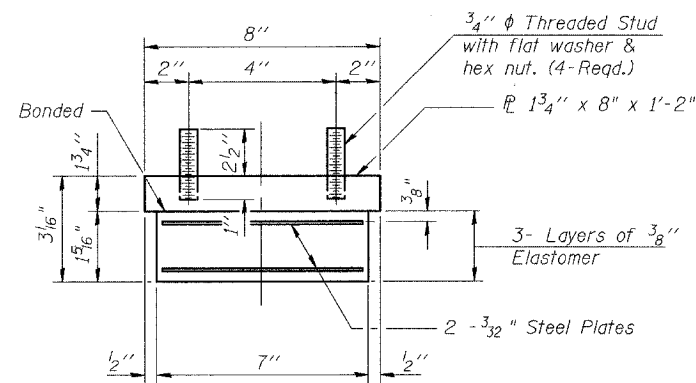


ELEVATION AT ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.

Notes:

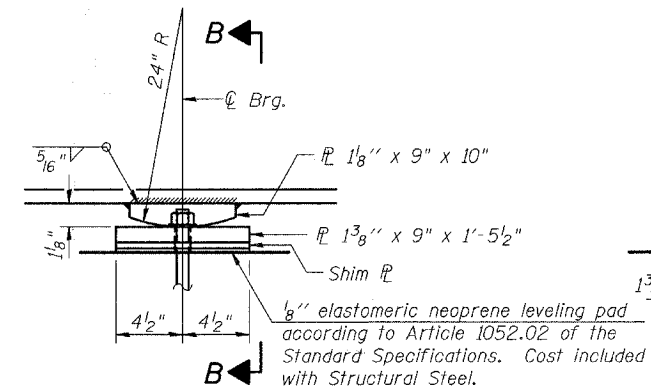
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of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

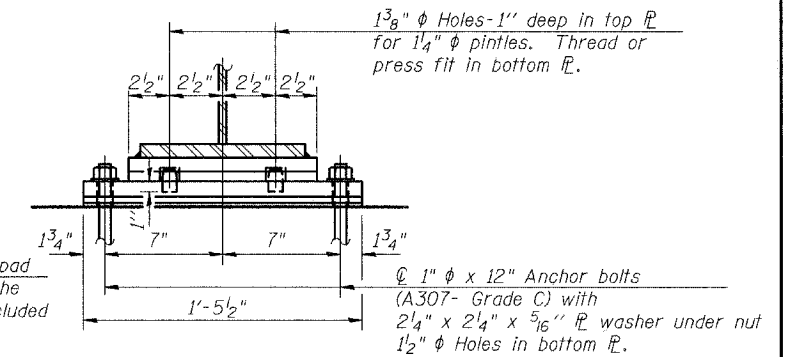
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

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.

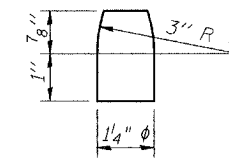


ELEVATION AT PIER



SECTION B-B

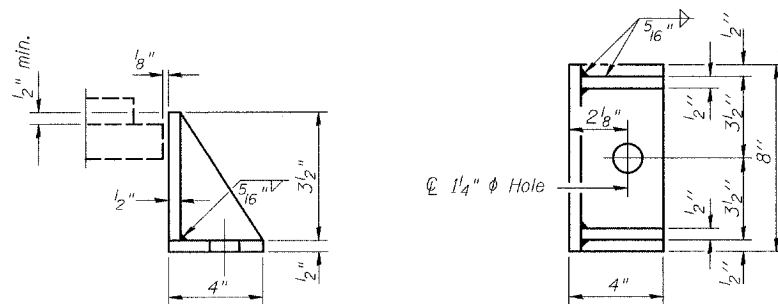
FIXED BEARING



PINTLE

NOTES:

- The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M270 Grade 50W.
- Two 1/8 inch 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.



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

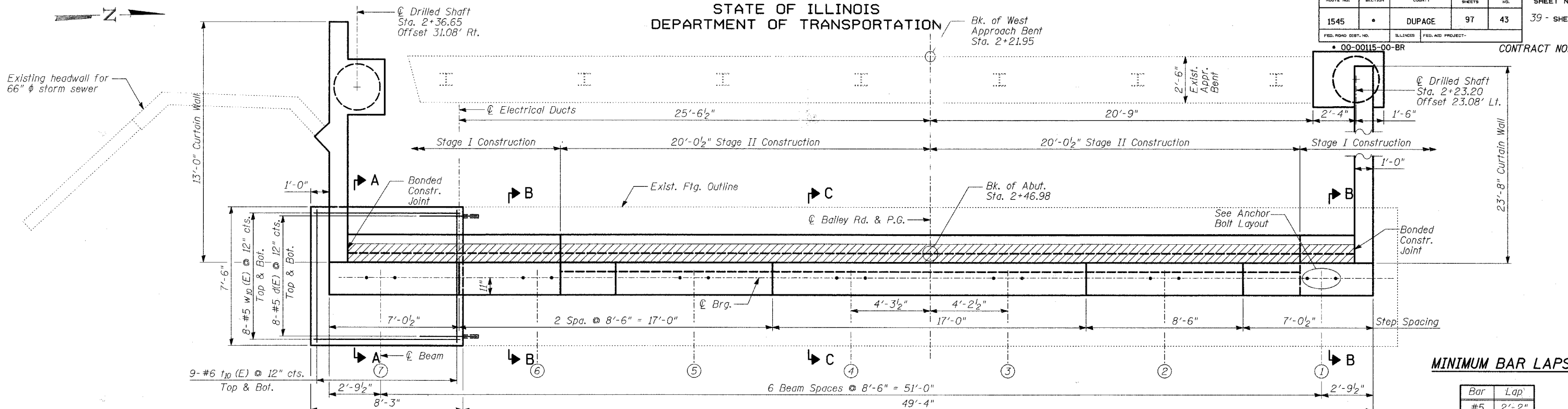
Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	14
Anchor Bolts, 1" ϕ	Each	56

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

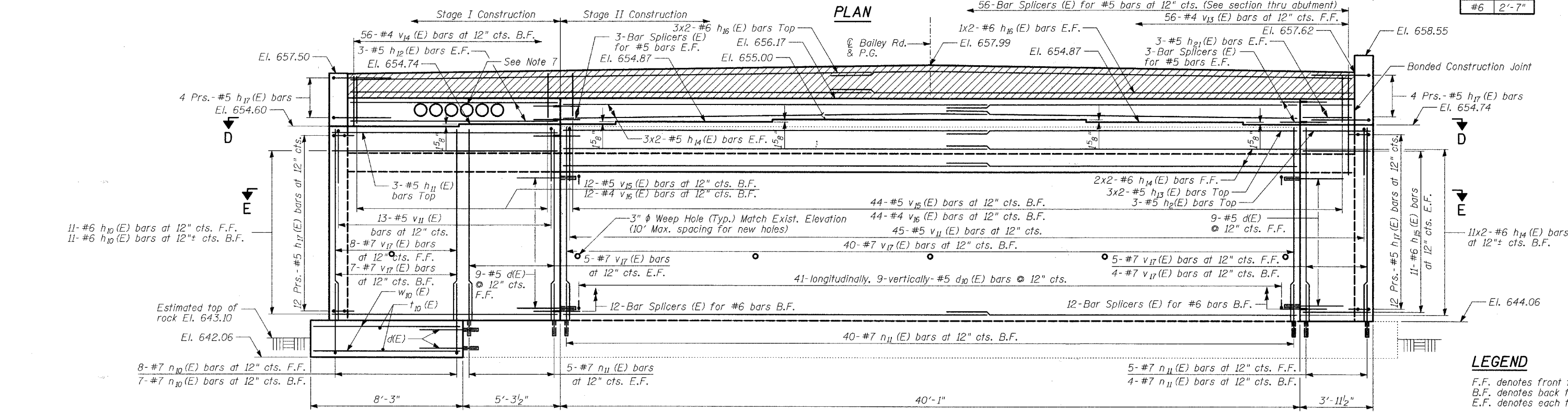
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1545	•	DUPAGE	97	43	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-		CONTRACT NO. 83961
• 00-00115-00-BR					



MINIMUM BAR LAPS

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

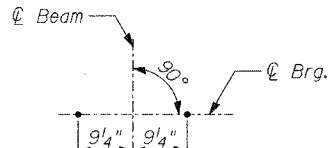
PLAN



ELEVATION

NOTES:

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



ANCHOR BOLT LAYOUT

TYLIN INTERNATIONAL

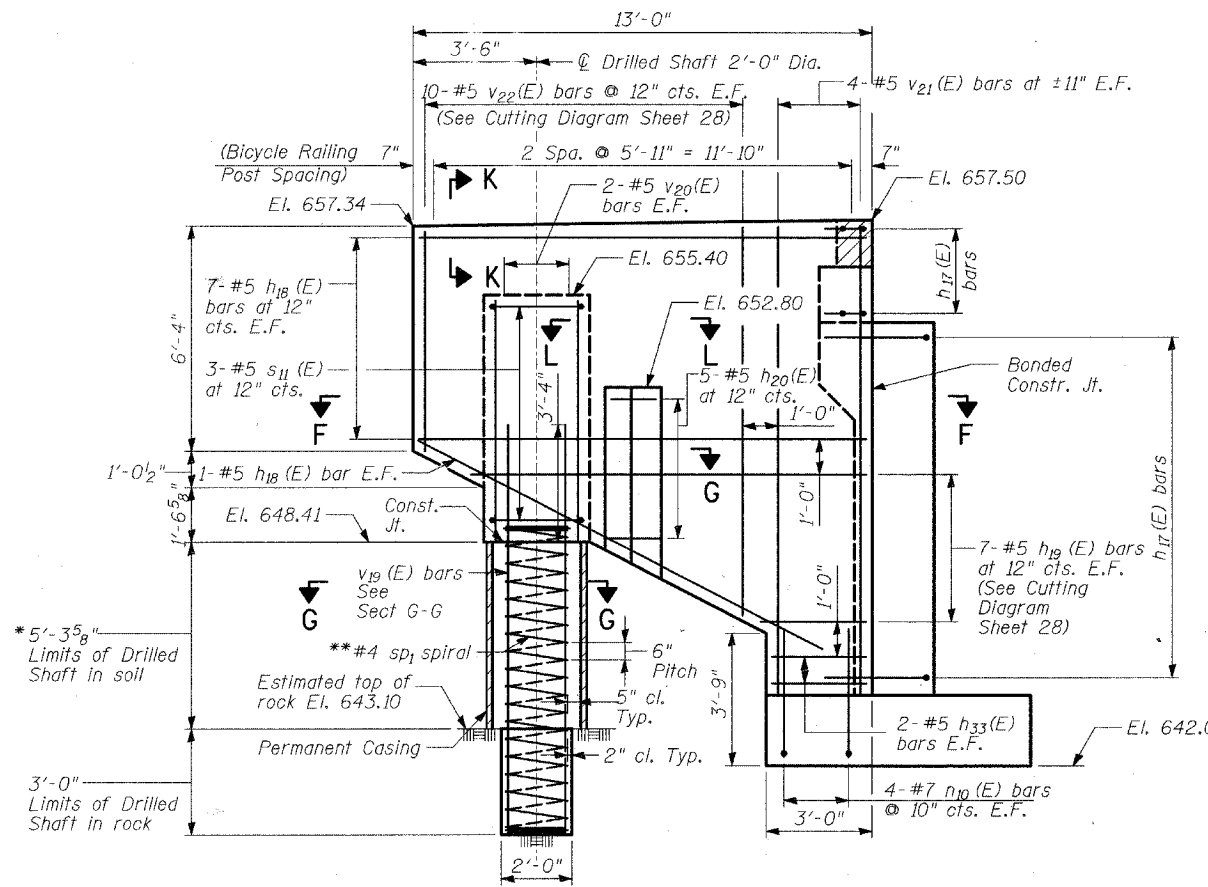
DESIGNED	PL
CHECKED	SP
DRAWN	PL
CHECKED	SP

WEST ABUTMENT

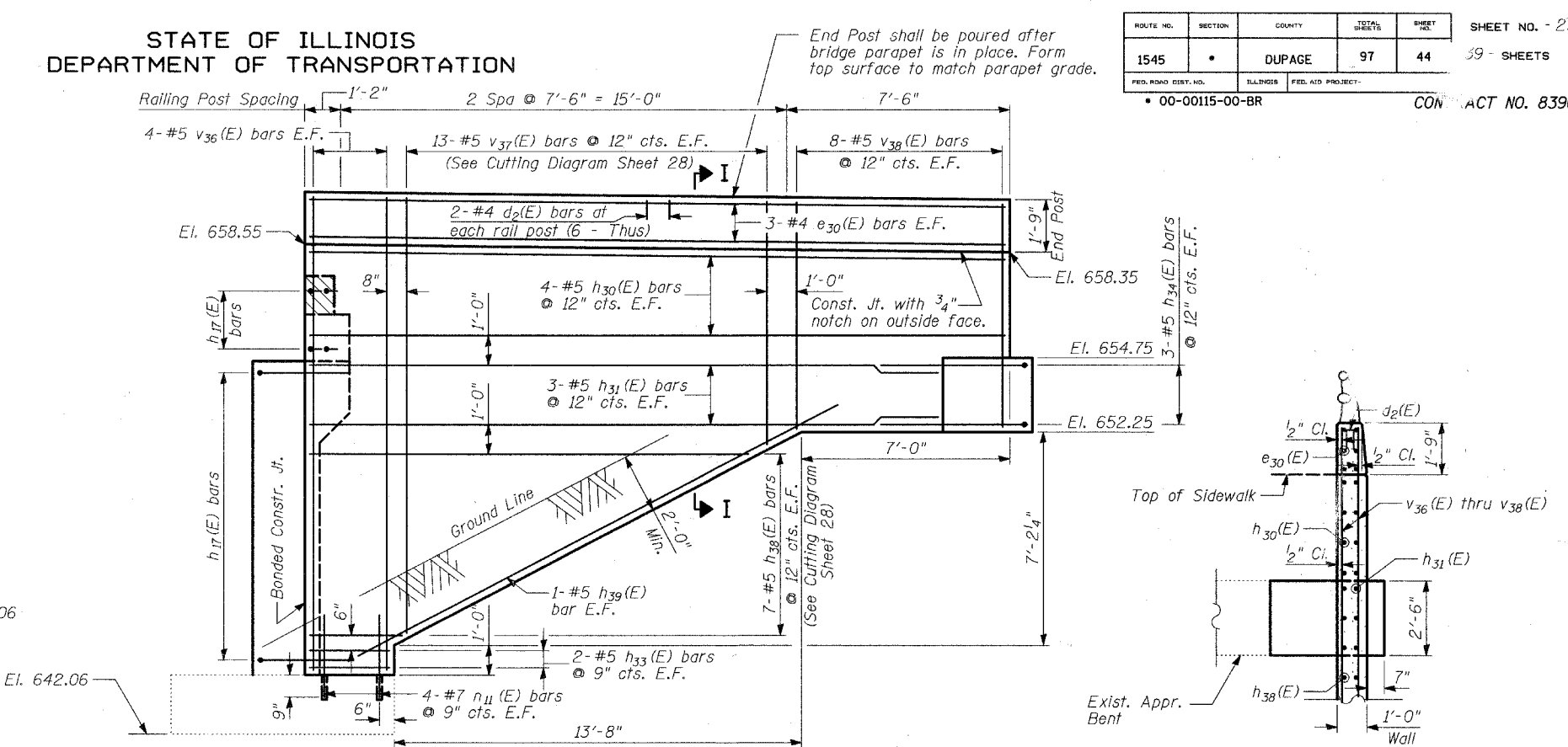
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

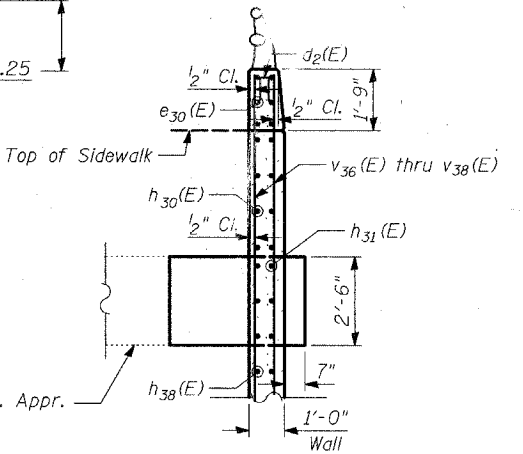
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
1545	*	DUPAGE	97	44
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961
00-00115-00-BR				



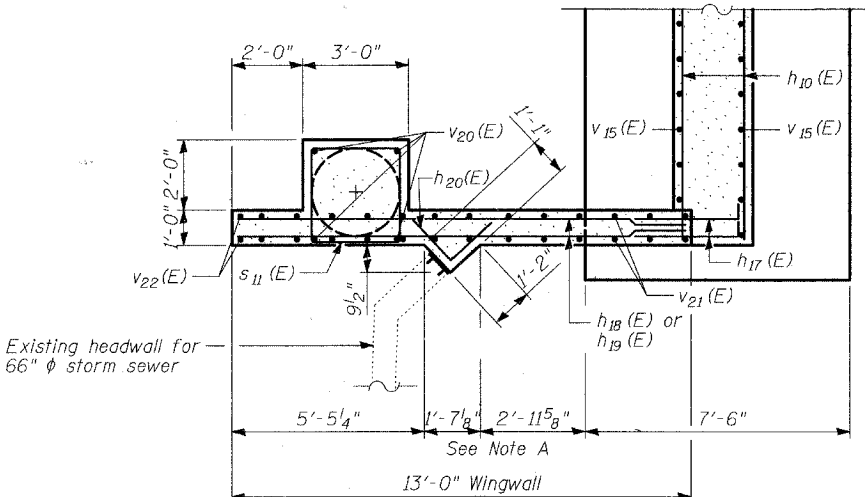
SOUTH CURTAIN WALL SIDE ELEVATION



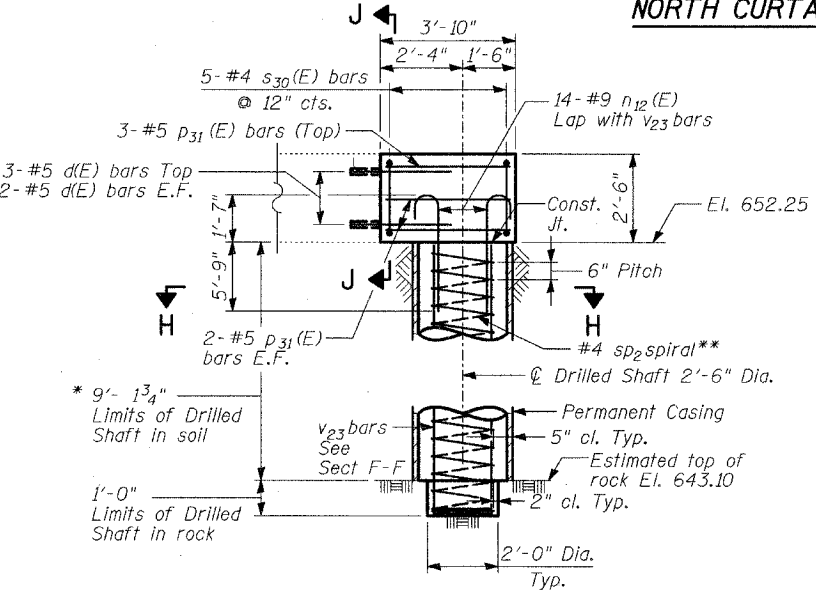
NORTH CURTAIN WALL SIDE ELEVATION



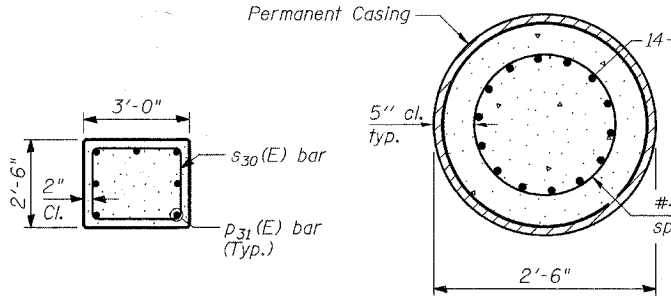
SECTION I-I



SECTION F-F

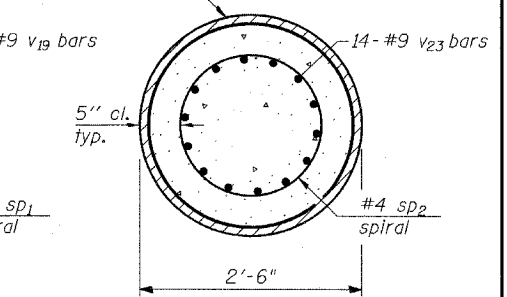


NORTH APPROACH BENT MODIFICATION



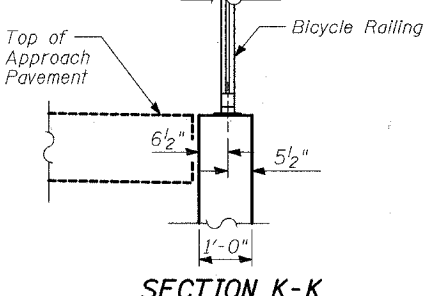
SECTION J-J

SECTION G-G

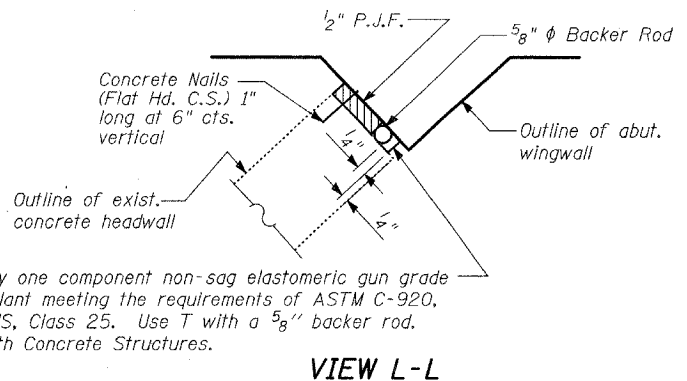


SECTION H-H

Note A:
Contractor to field verify location of existing headwall. Adjust dimension in field if necessary.



SECTION K-K



VIEW L-L

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.

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

Notes:
Quantity of concrete in end post is included with concrete superstructure on Sheet 14.

TYLIN INTERNATIONAL

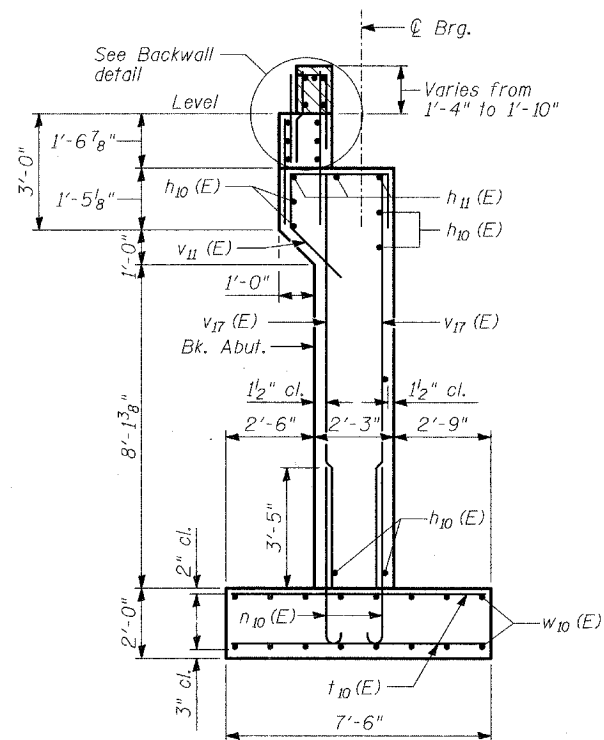
DESIGNED	PL, SNB
CHECKED	SP
DRAWN	PL, SNB
CHECKED	SP

WEST ABUTMENT CURTAIN WALLS

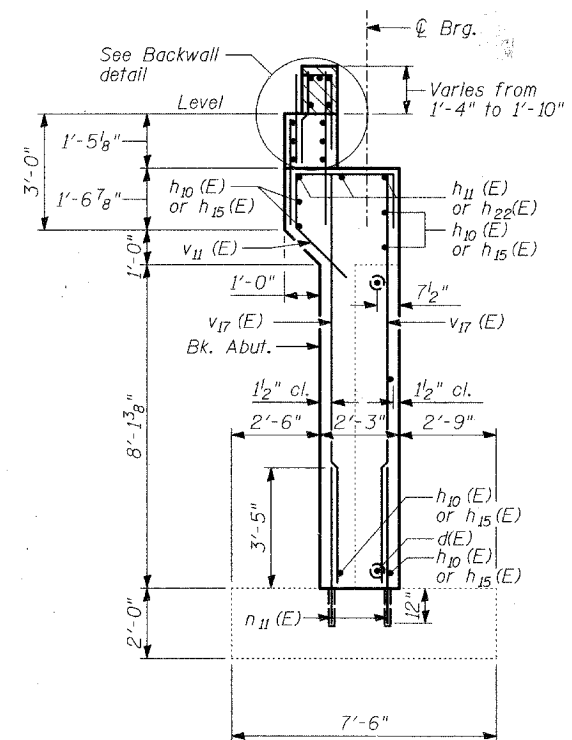
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

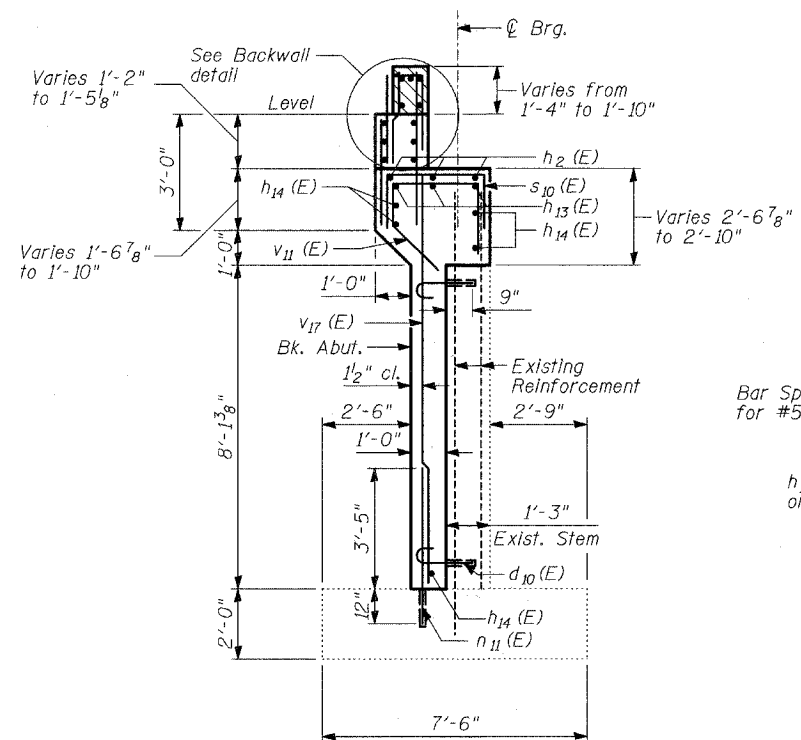
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. - 24 39 - SHEETS
1545	*	DUPAGE	97	45	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT-	CONTRACT NO. 83961		



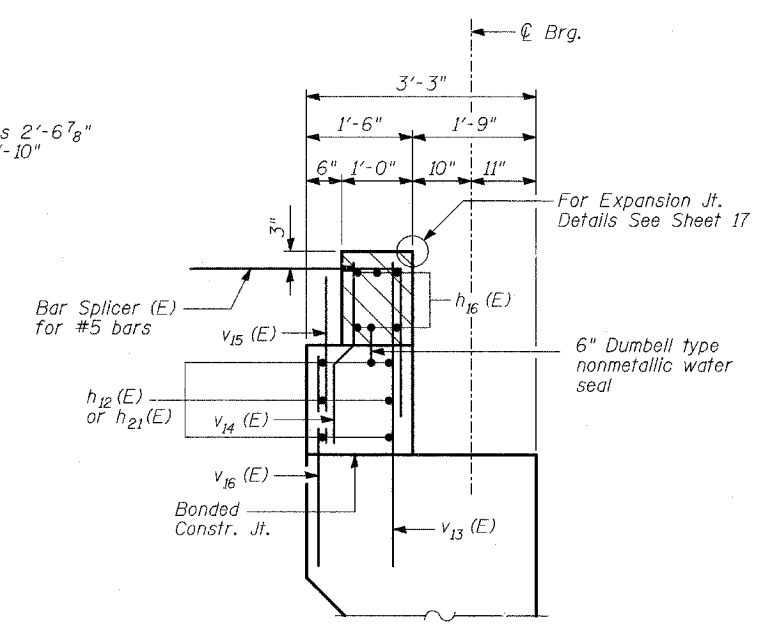
SECTION A-A



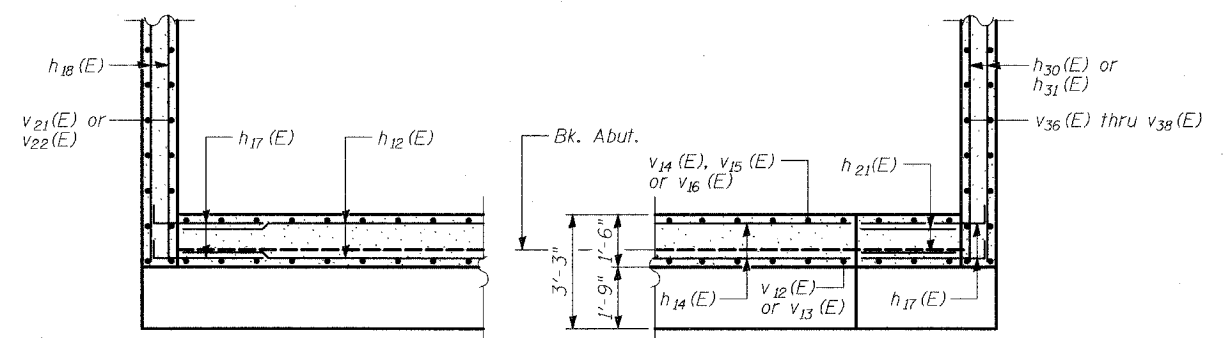
SECTION B-B



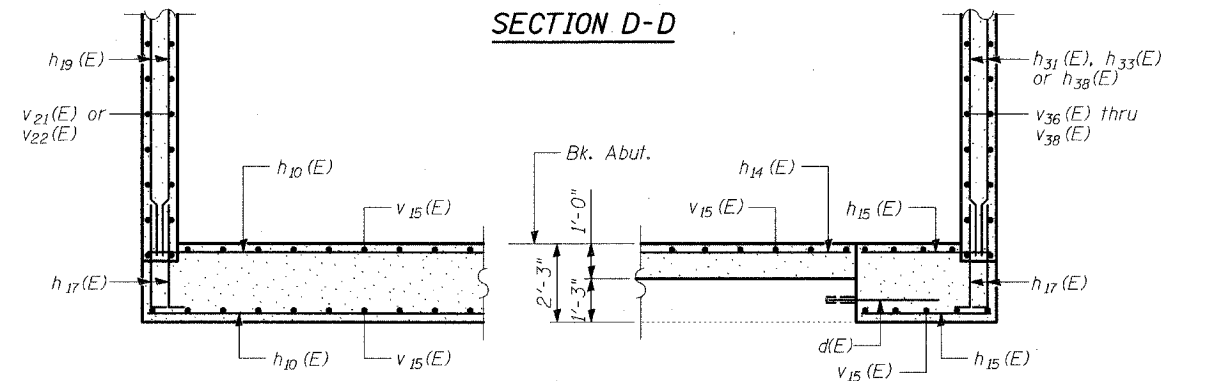
SECTION C-C



BACKWALL DETAIL



SECTION D-D



SECTION E-E

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

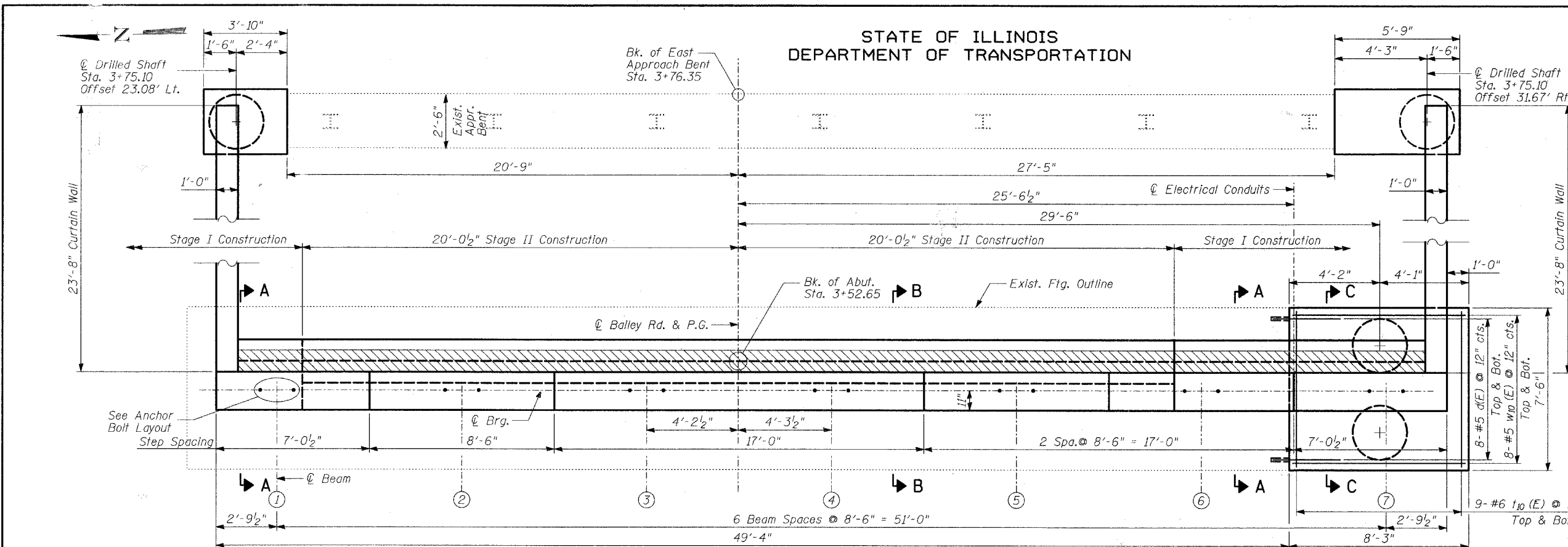
TYLIN INTERNATIONAL

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

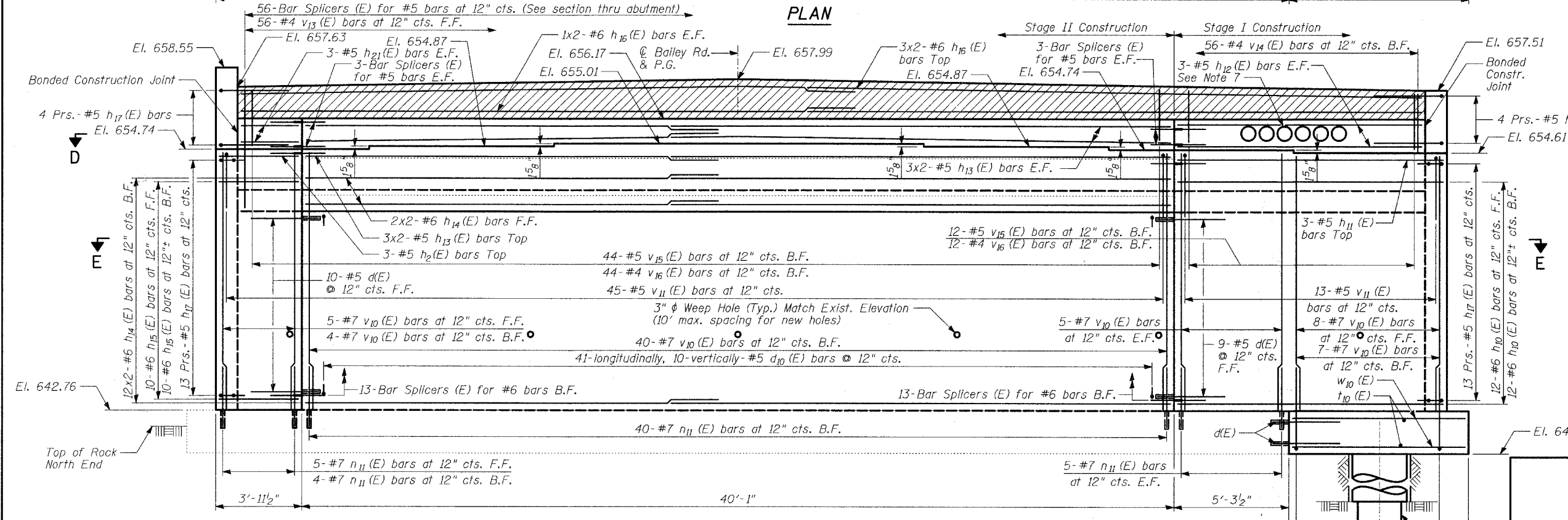
**WEST ABUTMENT
SECTIONS AND DETAILS**

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



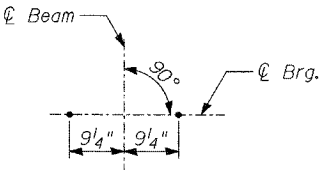
- NOTES:**
1. Space reinforcement in cap to miss anchor bolts.
 2. All edges shall have standard $\frac{3}{4}$ " chamfers.
 3. Epoxy grout #5 bars in 9" deep minimum drilled holes and #7 bars in 12" deep minimum drilled holes according to Article 584 of the Standard Specifications. The grout and method 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 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



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

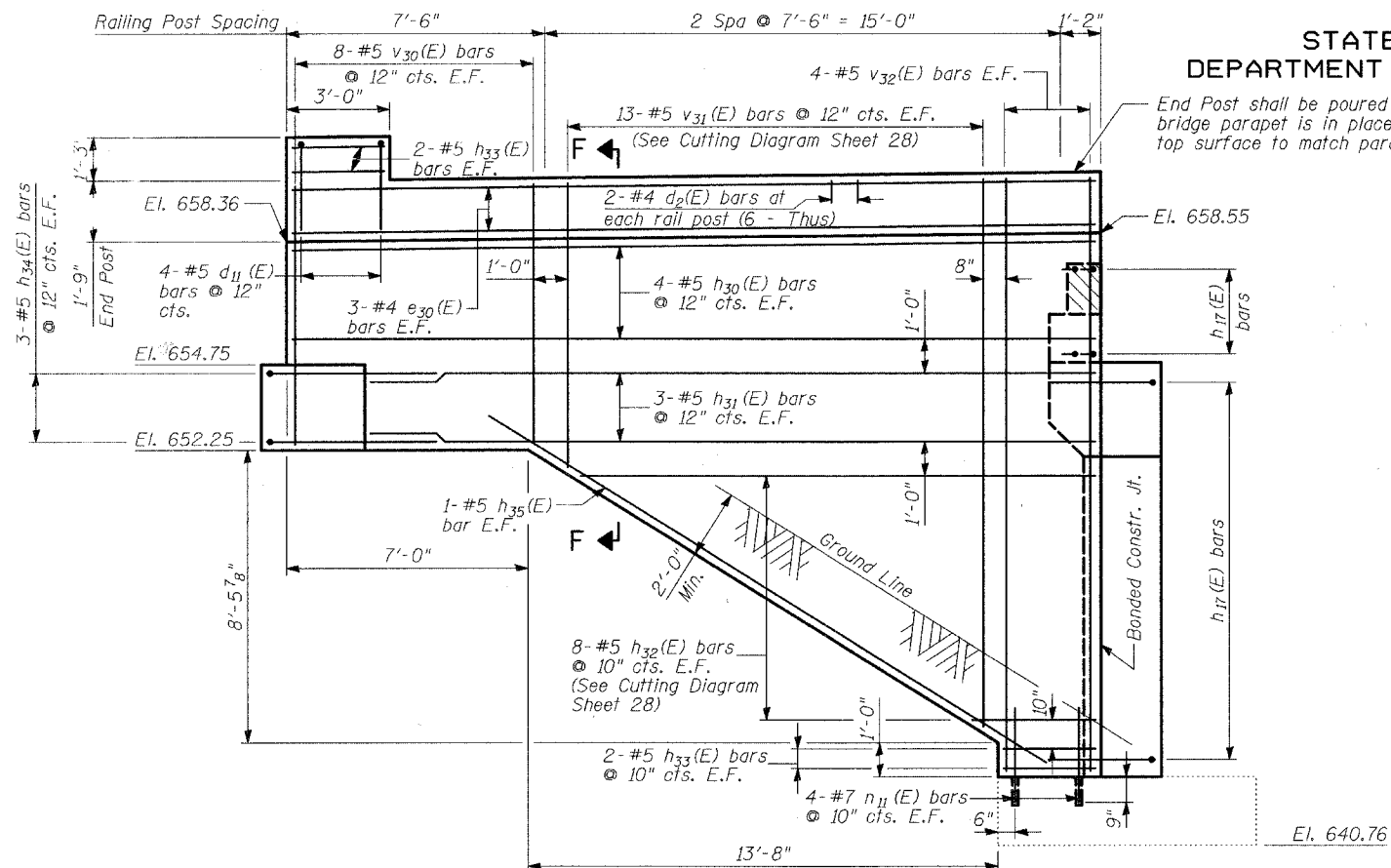
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

TYLIN INTERNATIONAL

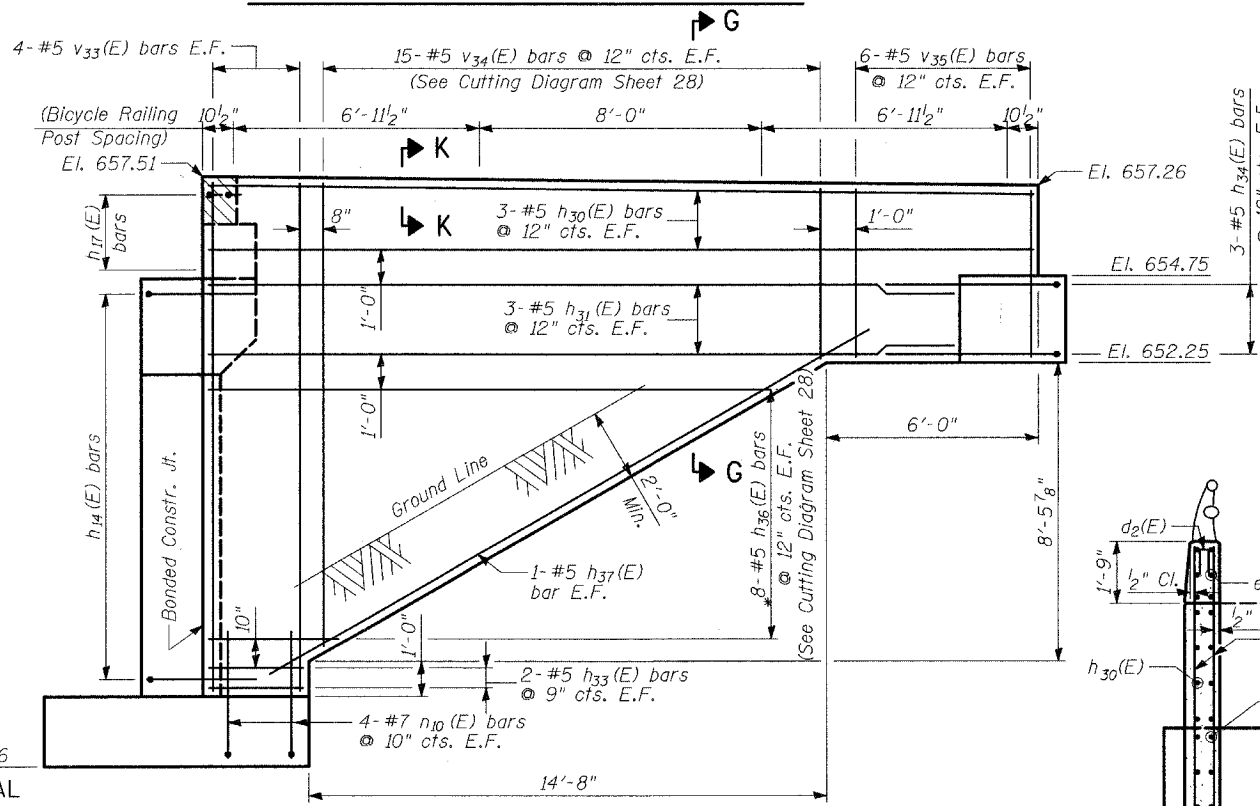
DESIGNED	PL
CHECKED	SP
DRAWN	PL
CHECKED	SP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

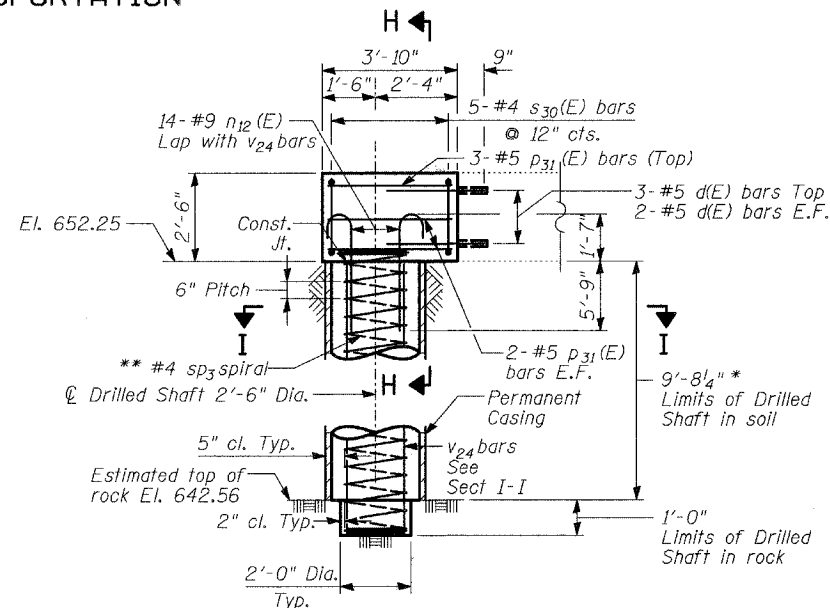


NORTH CURTAIN WALL SIDE ELEVATION

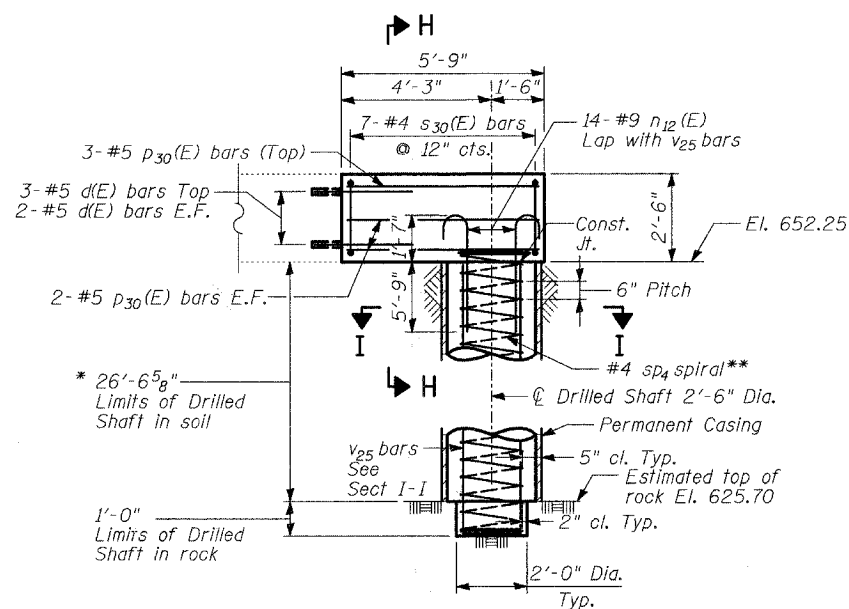


SOUTH CURTAIN WALL SIDE ELEVATION

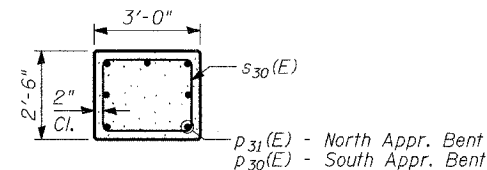
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.



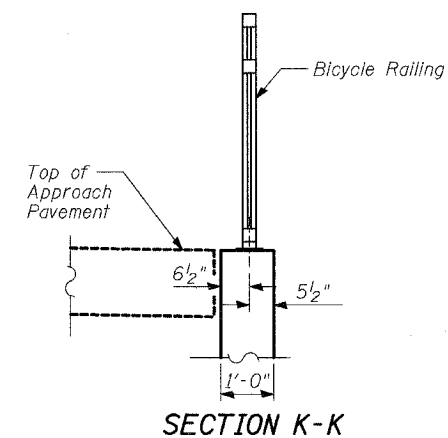
NORTH APPROACH BENT MODIFICATION



SOUTH APPROACH BENT MODIFICATION



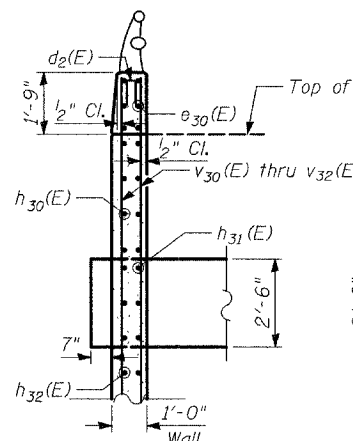
SECTION H-H



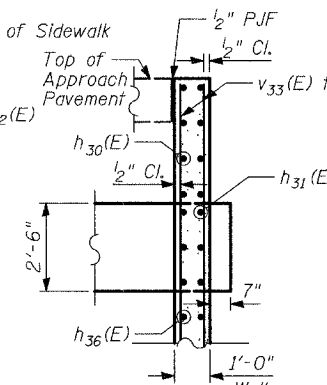
SECTION K-K

* 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.

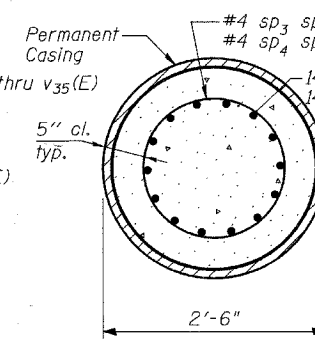
** Provide 1/2 extra turns top and bottom of each drilled shaft. Extend spiral 2' into abutment footing. Provide min. 4-#4 spacers or equivalent.



SECTION F-F



SECTION G-G



SECTION I-I

EAST ABUTMENT CURTAIN WALLS

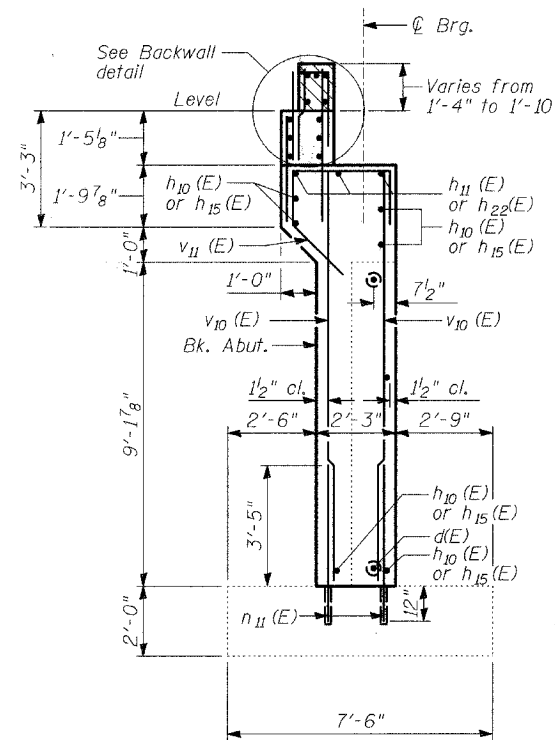
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

TYLIN INTERNATIONAL

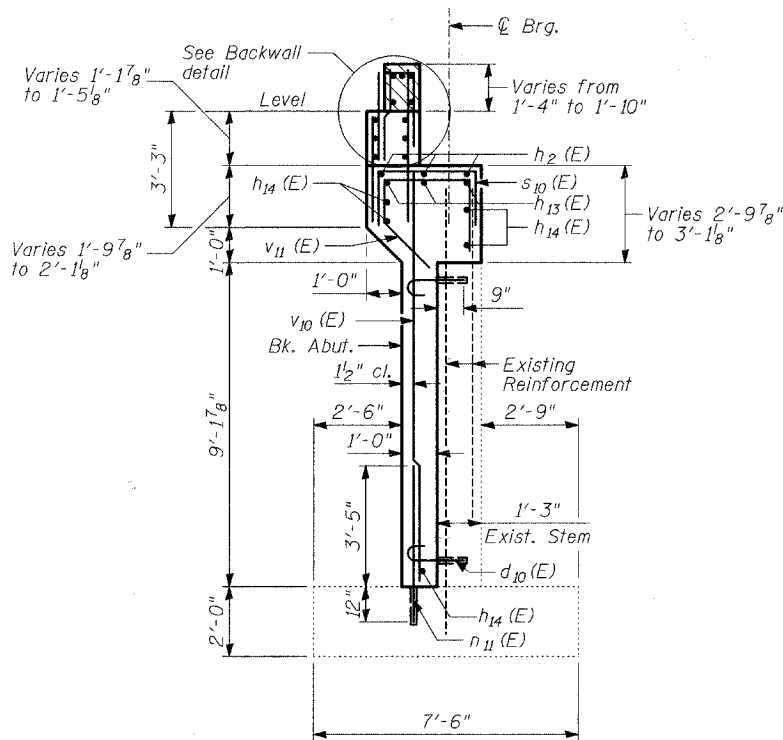
DESIGNED	- SNB
CHECKED	- SP
DRAWN	- SNB
CHECKED	- SP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

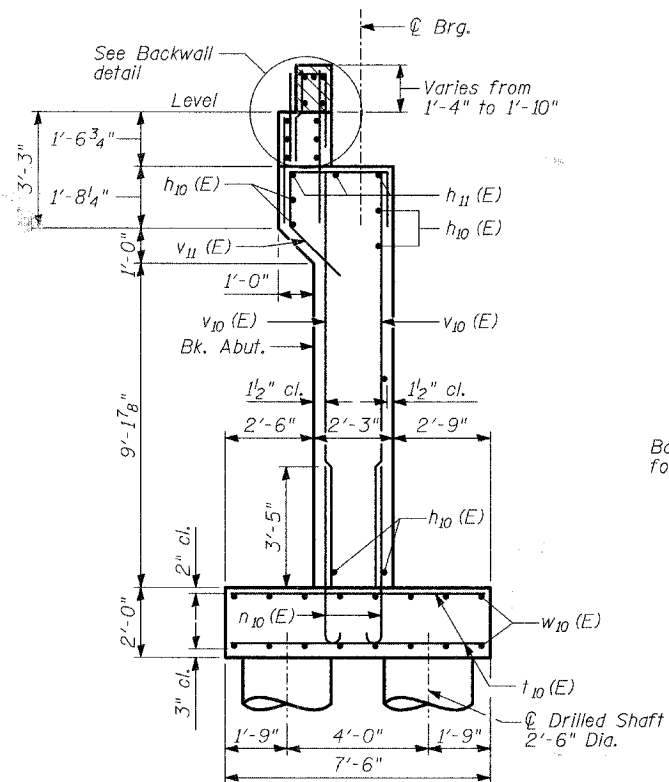
ROUTE NO.	SECTION	COUNTY	FEEDING ROADS	SHEET NO.	SHEET NO. - 27
1545	*	DUPAGE	97	48	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT -	CONTRACT NO. 83961		
* 00-00115-00-BR					



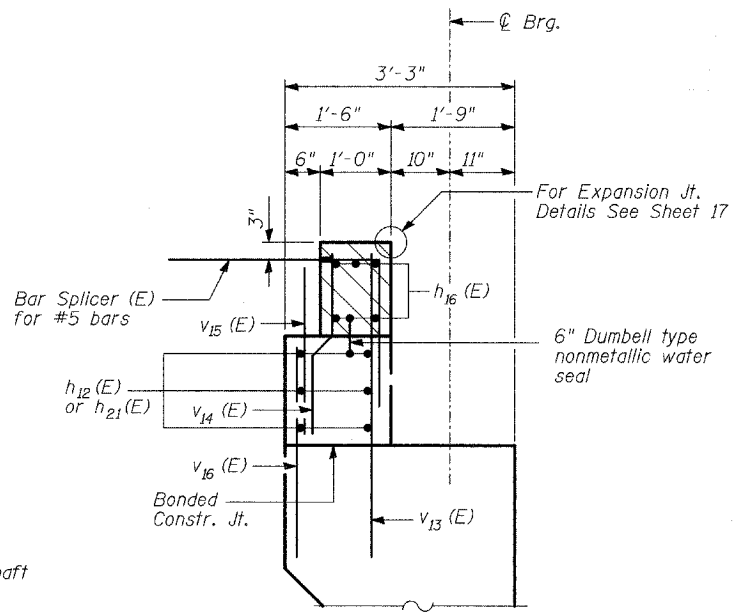
SECTION A-A



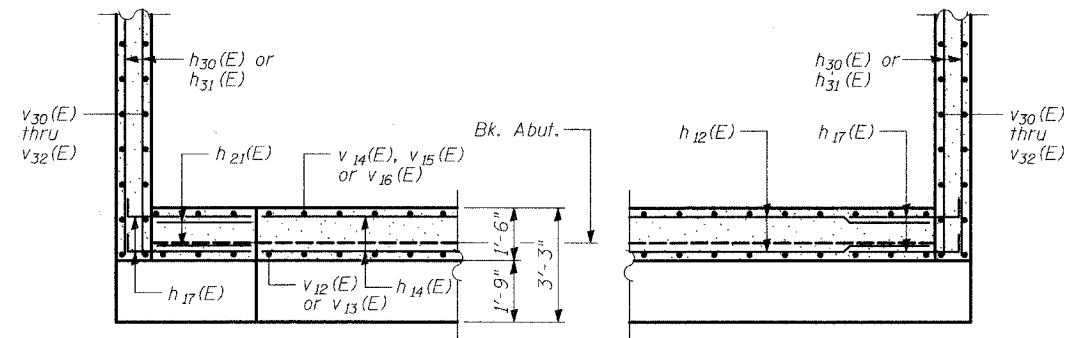
SECTION B-B



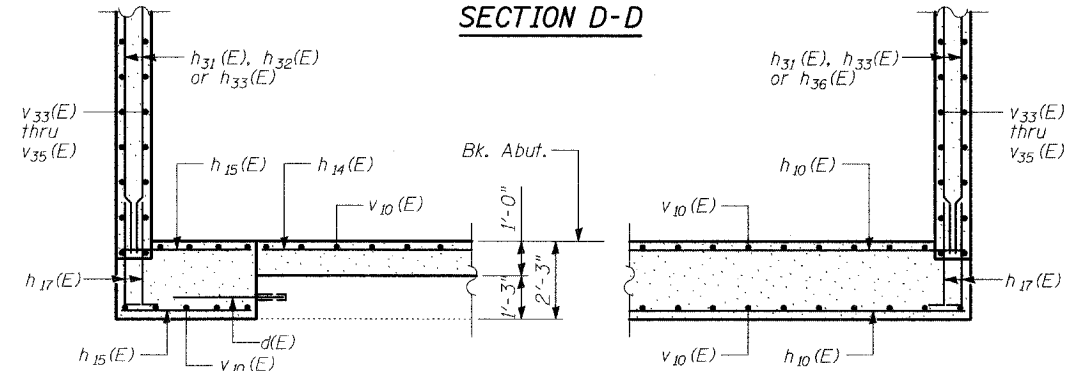
SECTION C-C



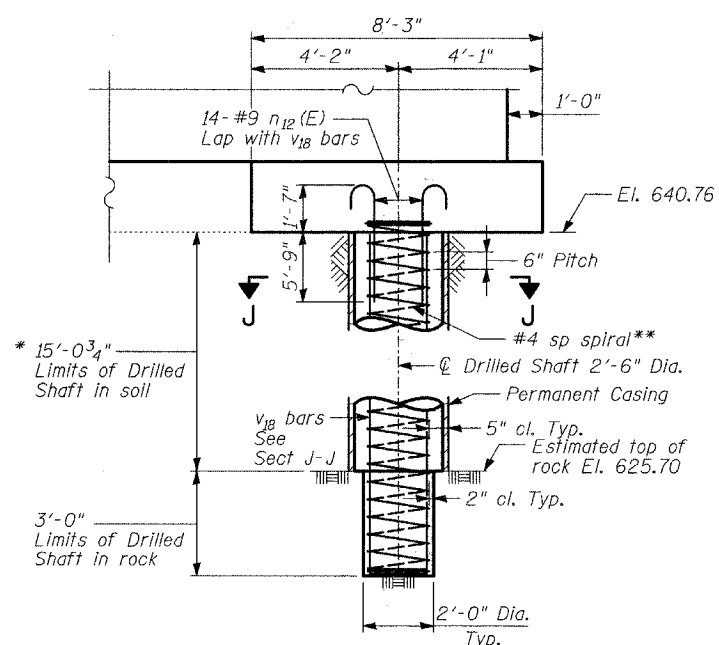
BACKWALL DETAIL



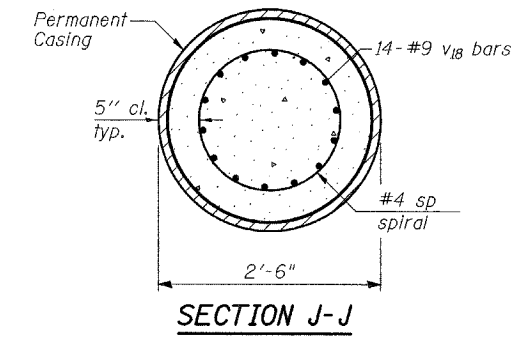
SECTION D-D



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

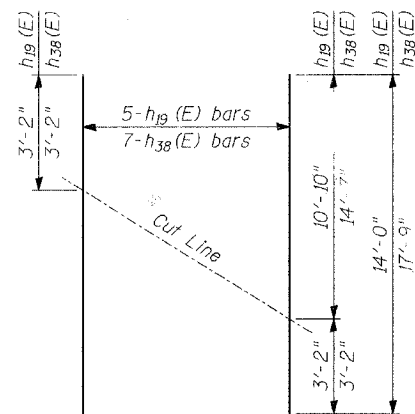
DESIGNED	- PL
CHECKED	- SP
DRAWN	- PL
CHECKED	- SP

**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

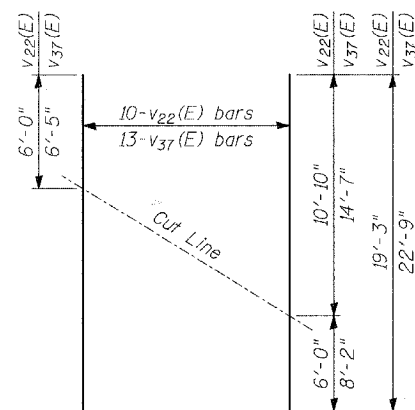
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 28
1545	*	DUPAGE	97	49	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		CONTRACT NO. 83961
00-00115-00-BR					



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**

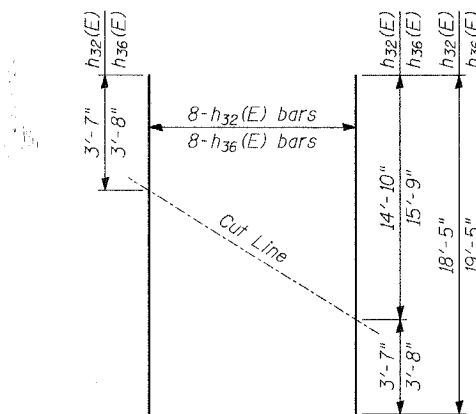
Bar No.	Size	Length	Shape
$d_2(E)$	#5	3'-3"	—
$d_{10}(E)$	#4	2'-0"	—
$d_{11}(E)$	#5	2'-2"	—
$e_{30}(E)$	#4	23'-4"	—
$h_{10}(E)$	#6	12'-2"	—
$h_{11}(E)$	#5	12'-2"	—
$h_{12}(E)$	#5	11'-2"	—
$h_{13}(E)$	#5	21'-0"	—
$h_{14}(E)$	#6	21'-3"	—
$h_{15}(E)$	#6	3'-7"	—
$h_{16}(E)$	#6	28'-6"	—
$h_{17}(E)$	#5	4'-3"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

**WEST ABUTMENT
BILL OF MATERIAL CONT.**

Bar No.	Size	Length	Shape
$v_{17}(E)$	#7	10'-4"	—
v_{19}	#9	11'-10"	—
$v_{20}(E)$	#5	6'-10"	—
$v_{21}(E)$	#5	13'-3"	—
$v_{22}(E)$	#5	16'-10"	—
v_{23}	#9	10'-0"	—
$v_{36}(E)$	#5	14'-1"	—
$v_{37}(E)$	#5	22'-9"	—
$v_{38}(E)$	#5	7'-6"	—
$w_{10}(E)$	#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	

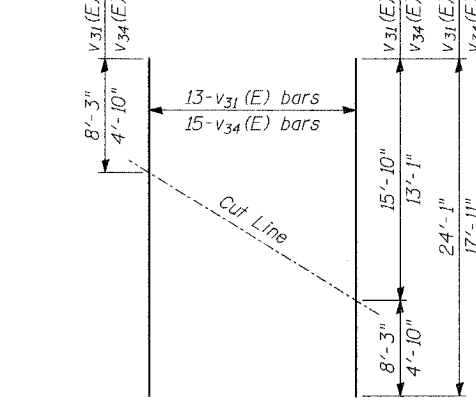
Min. lap for spirals = 1'-8".

*** 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**

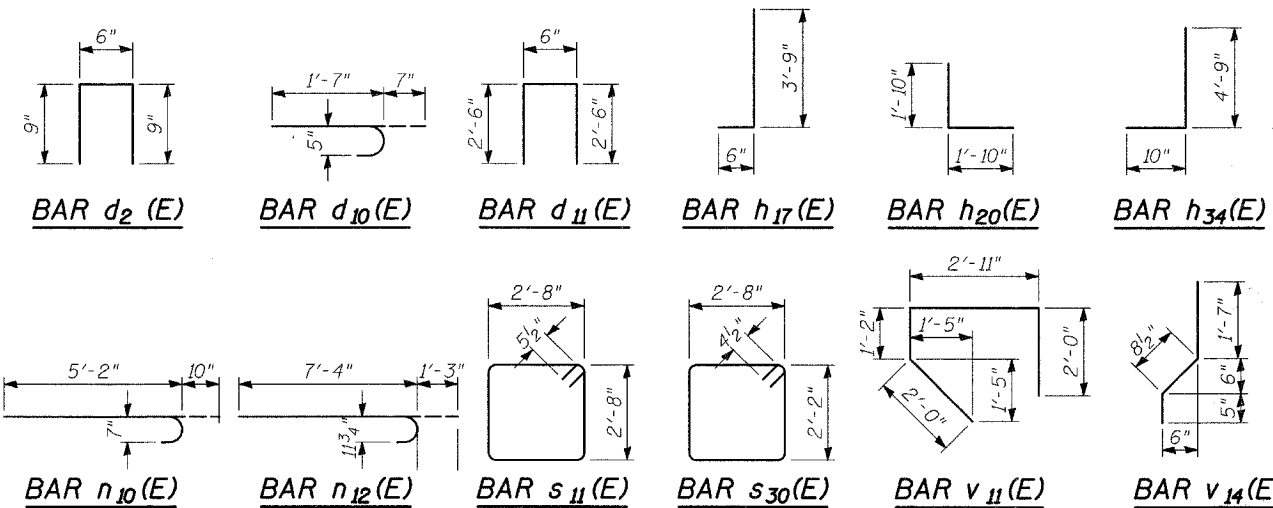
Bar No.	Size	Length	Shape
$d_2(E)$	#5	3'-3"	—
$d_{10}(E)$	#4	2'-0"	—
$d_{11}(E)$	#5	2'-2"	—
$d_{12}(E)$	#5	5'-6"	—
$e_{30}(E)$	#4	23'-4"	—
$h_{10}(E)$	#6	12'-2"	—
$h_{11}(E)$	#5	12'-2"	—
$h_{12}(E)$	#5	11'-2"	—
$h_{13}(E)$	#5	21'-0"	—
$h_{14}(E)$	#6	21'-3"	—
$h_{15}(E)$	#6	3'-7"	—
$h_{16}(E)$	#6	28'-6"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

**EAST ABUTMENT
BILL OF MATERIAL CONT.**

Bar No.	Size	Length	Shape
$t_{10}(E)$	#6	7'-2"	—
$v_{10}(E)$	#7	11'-8"	—
$v_{11}(E)$	#5	8'-1"	—
$v_{13}(E)$	#4	3'-11"	—
$v_{14}(E)$	#4	2'-9"	—
$v_{15}(E)$	#5	2'-6"	—
$v_{16}(E)$	#4	2'-8"	—
v_{18}	#9	17'-10"	—
v_{24}	#9	10'-6"	—
v_{25}	#9	27'-5"	—
$v_{30}(E)$	#5	7'-6"	—
$v_{31}(E)$	#5	24'-1"	—
$v_{32}(E)$	#5	17'-2"	—
$v_{33}(E)$	#5	14'-5"	—
$v_{34}(E)$	#5	17'-11"	—
$v_{35}(E)$	#5	4'-9"	—
$w_{10}(E)$	#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

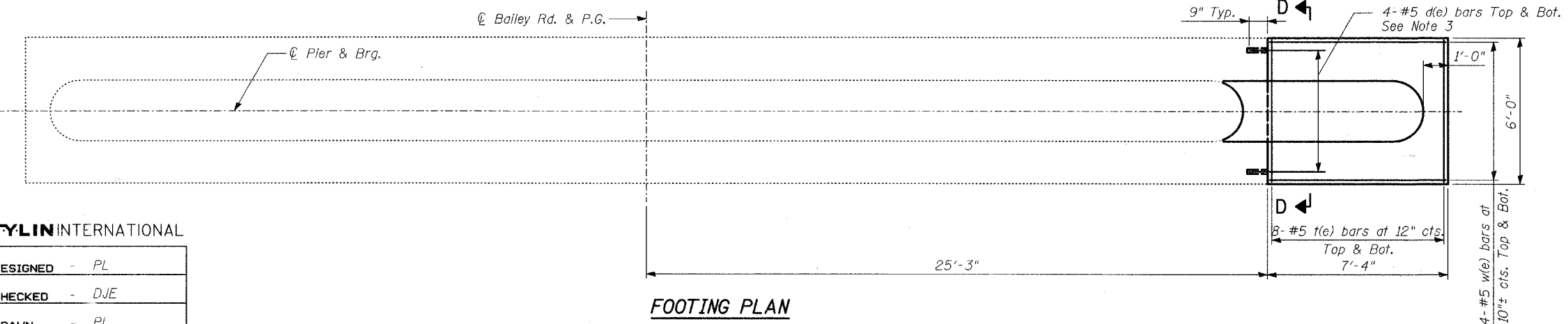
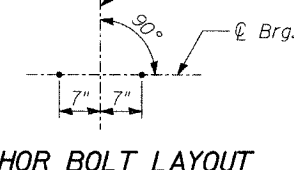
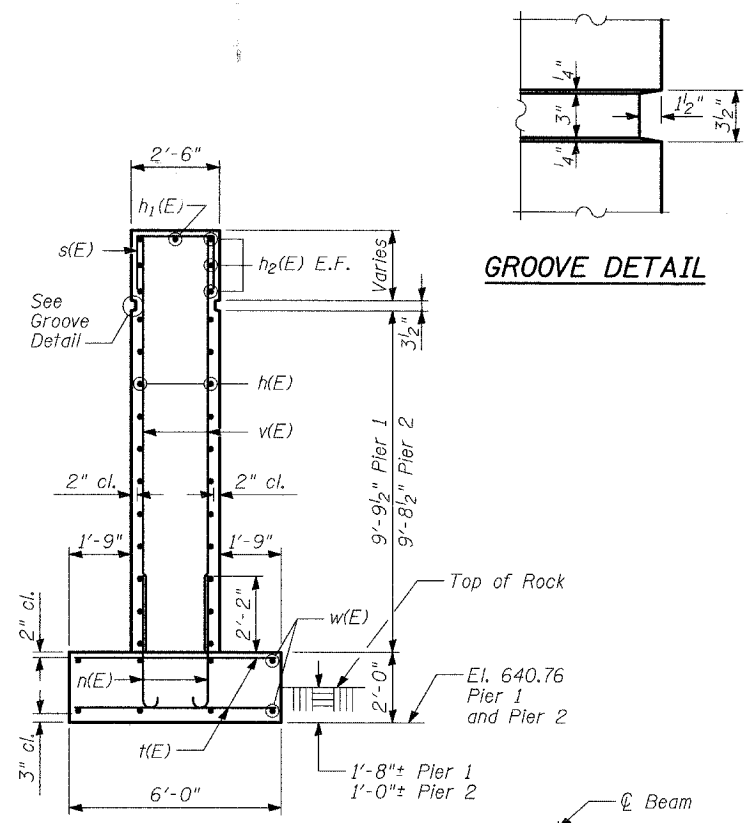
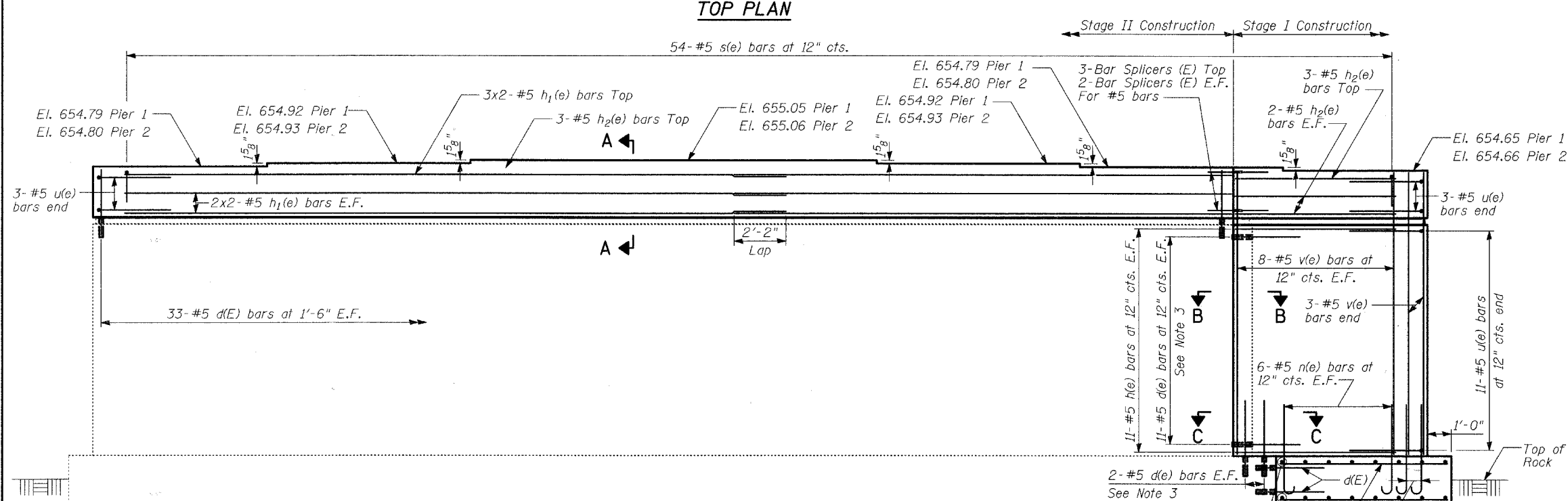
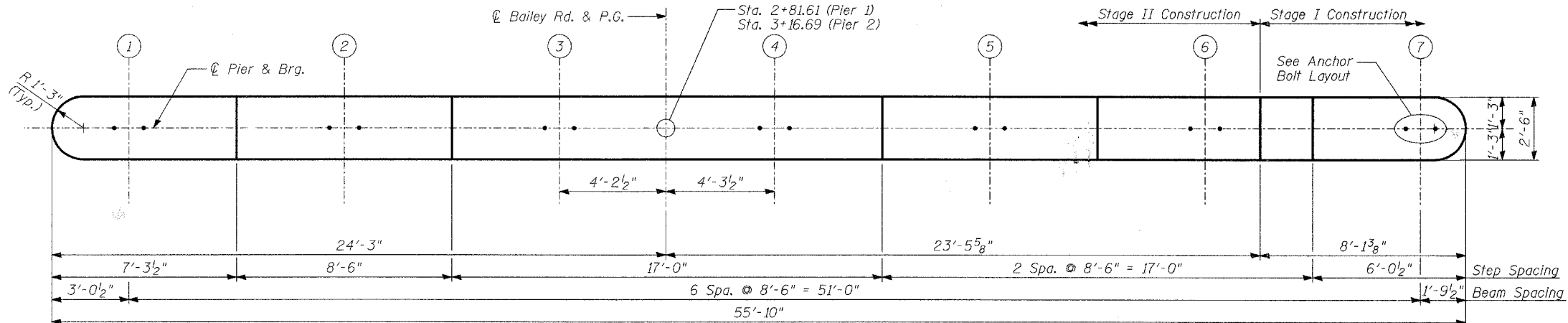
DESIGNED	PL,SNB
CHECKED	SP
DRAWN	SNB
CHECKED	SP

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



LEGEND
E.F. Indicates Each Face

TYLIN INTERNATIONAL

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

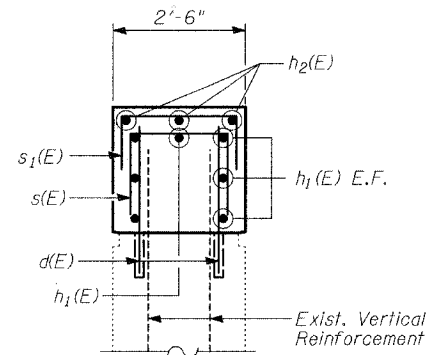
PIERS 1 & 2

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

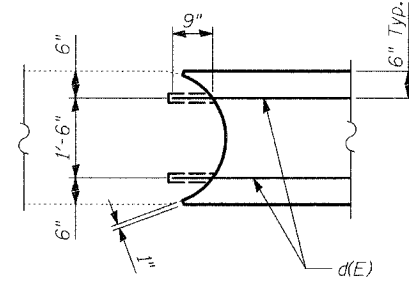
- NOTES:**
- Space reinforcement in pier to miss anchor bolts.
 - All edges shall have standard $\frac{3}{4}$ " chamfers.
 - Epoxy grout bars in 9" deep minimum drilled holes according to Article 584 of the Standard Specifications. The grout and method of application shall be approved by the Engineer.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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

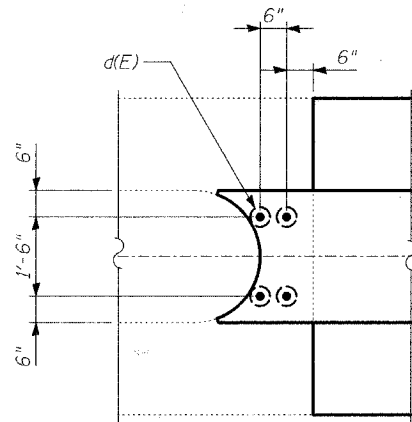
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 30
1545	*	DUPAGE	97	51	39 - SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ.	CONTRACT NO. 83961	
00-00115-00-BR					



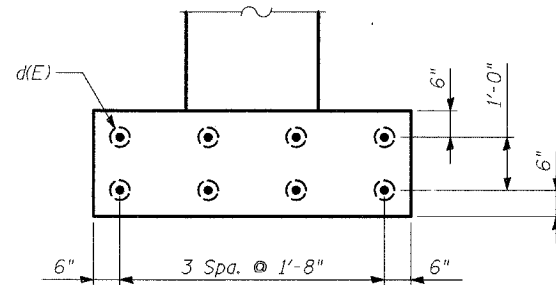
SECTION A-A



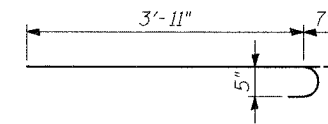
SECTION B-B



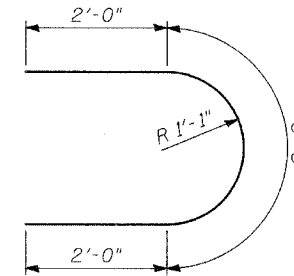
SECTION C-C



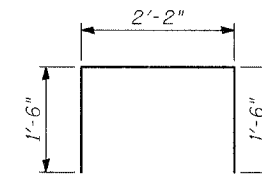
SECTION D-D



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	

TYLIN INTERNATIONAL

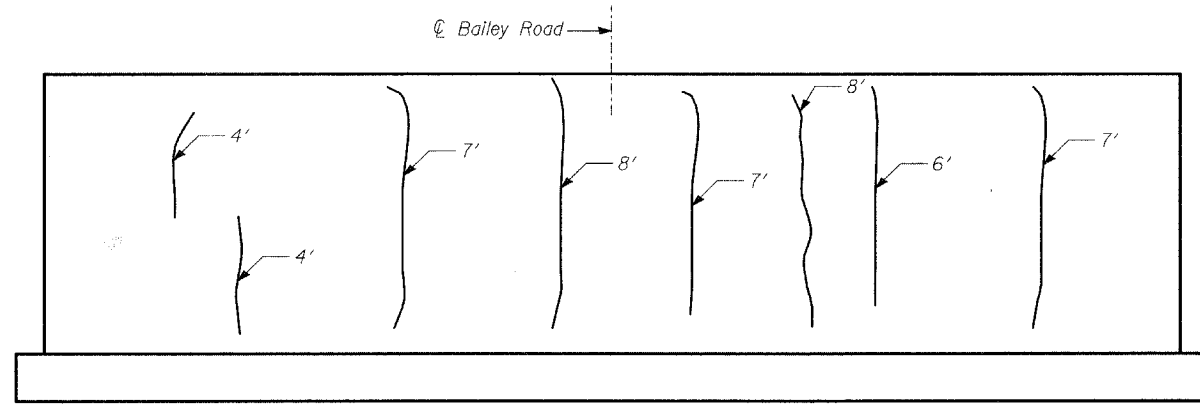
DESIGNED	- PL
CHECKED	- DJE
DRAWN	- PL
CHECKED	- DJE

PIER DETAILS

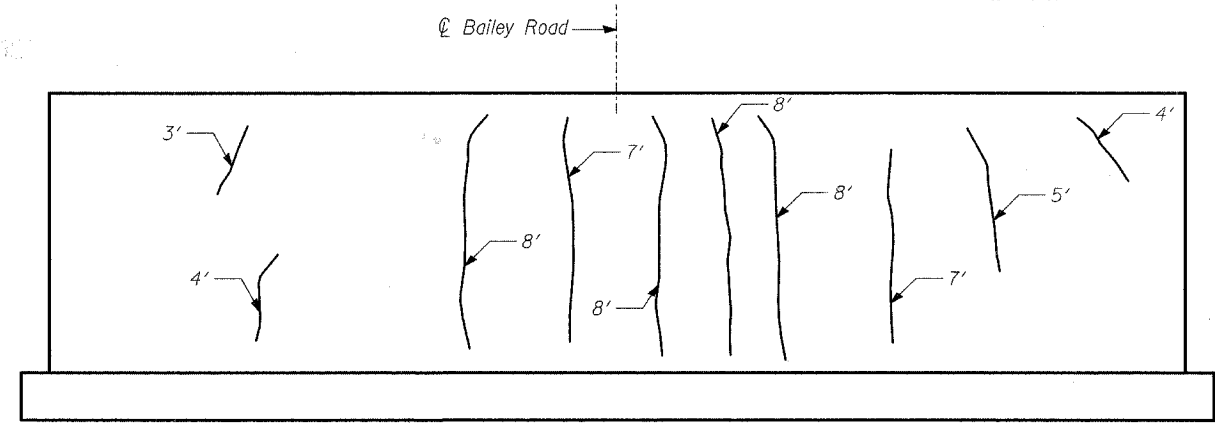
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

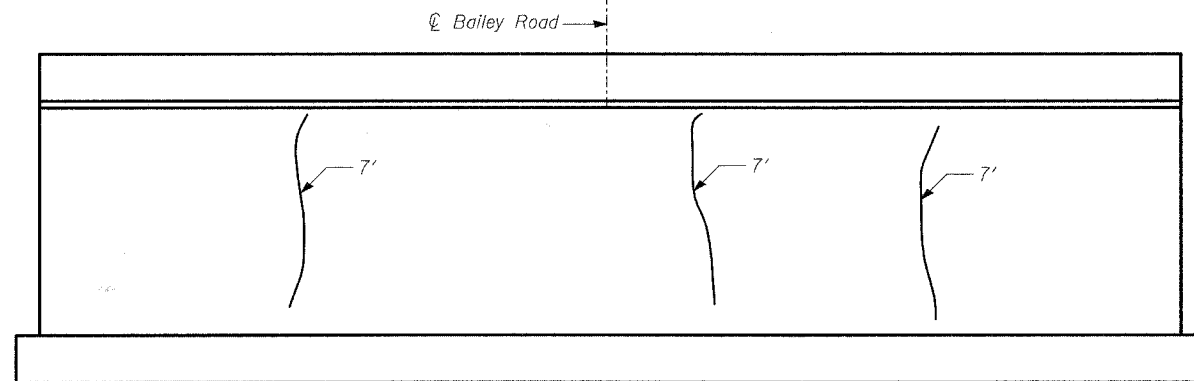
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO. - 31
1545	*	DUPAGE	97	52	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.	CONTRACT NO. 83961		
• 00-00115-00-BR					



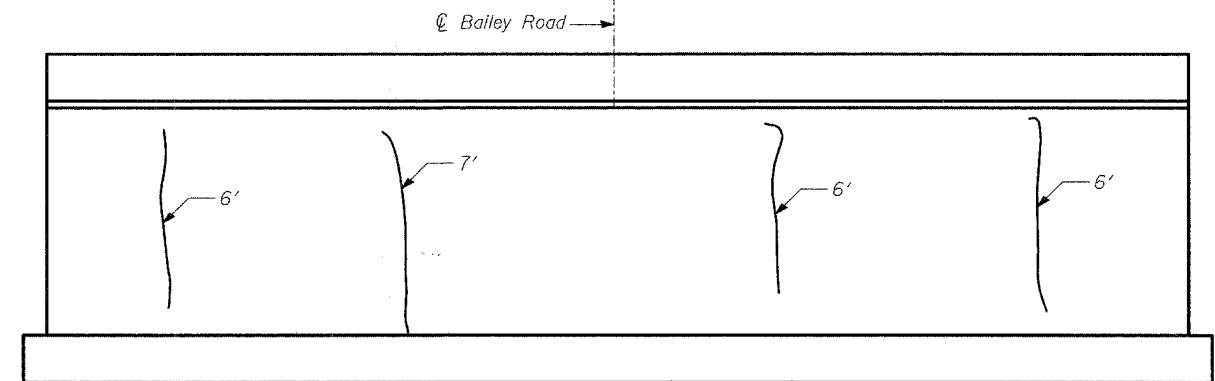
WEST ABUTMENT ELEVATION
(Looking West)



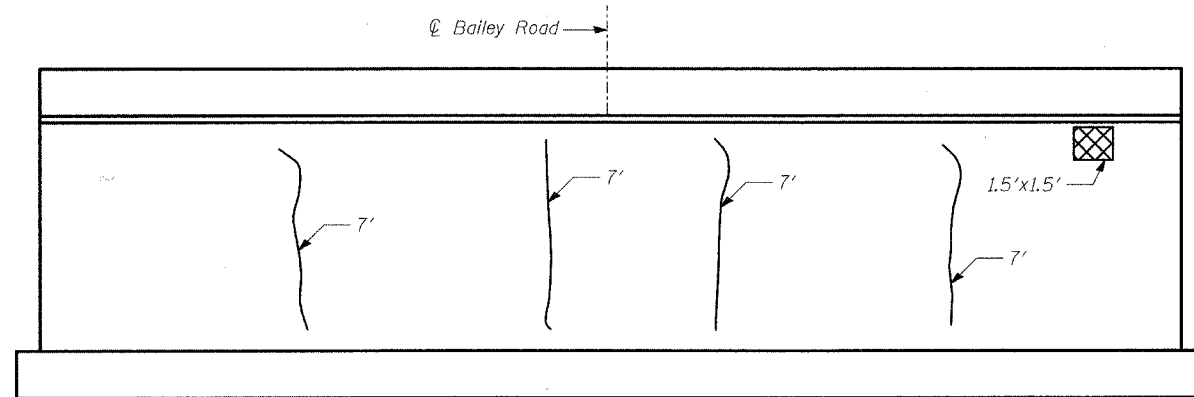
EAST ABUTMENT ELEVATION
(Looking East)



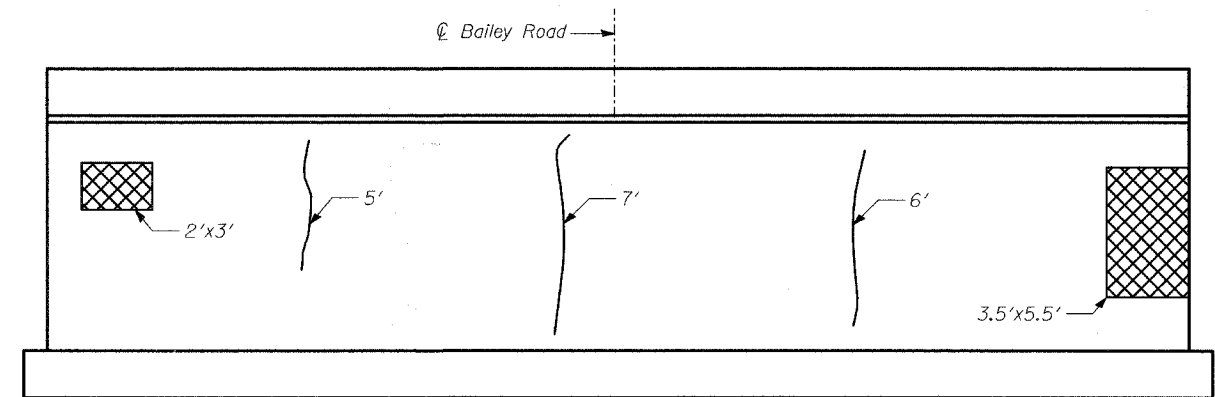
PIER 1 ELEVATION
(Looking West)



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

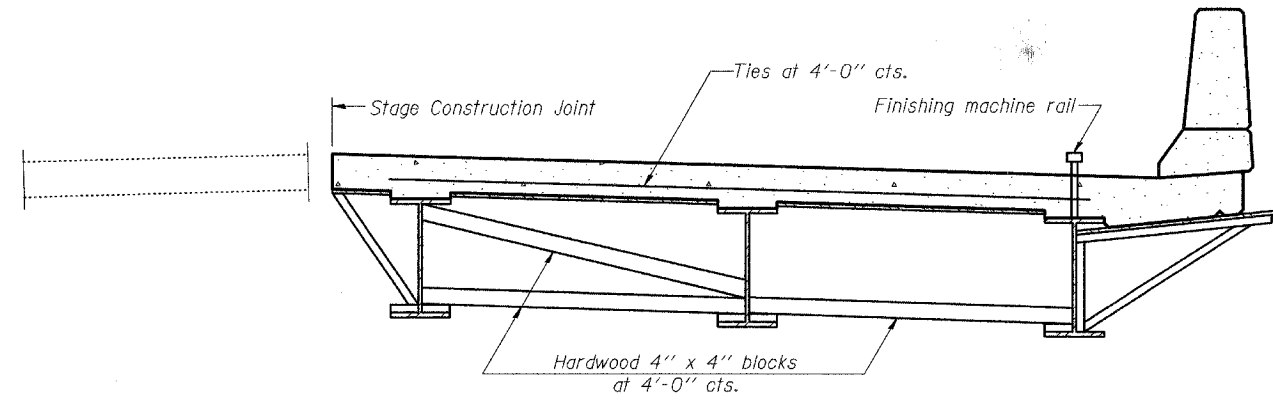
ITEM	UNIT	TOTAL
Epoxy Crack Injection	FT	205
Structural Repair of Concrete (Depth equal to or less than 5")	SQ FT	28

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			
* 00-00115-00-BR			CONTRACT NO. 83961		



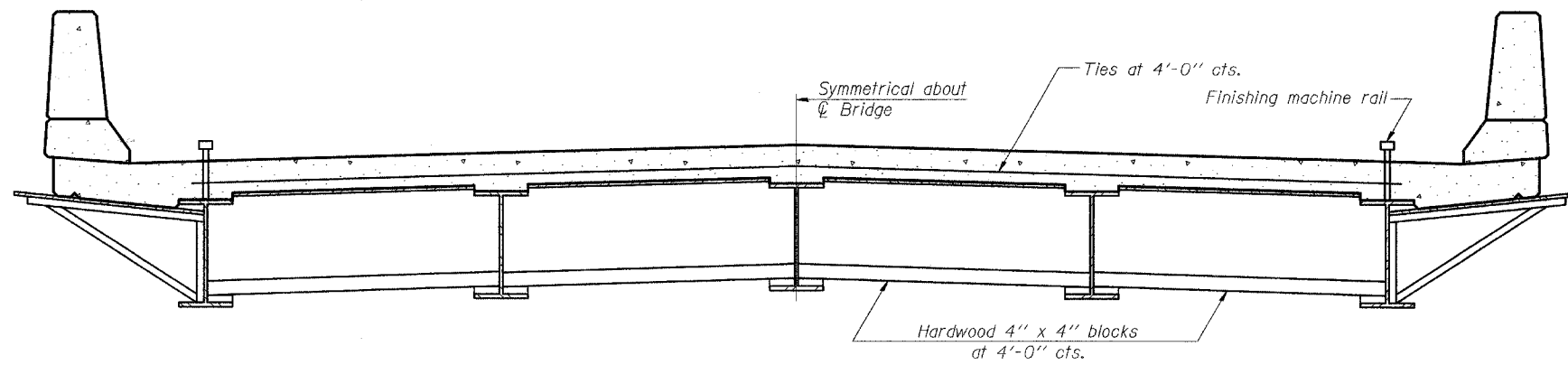
**FORM BRACES FOR
STAGE CONSTRUCTION**

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

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

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**

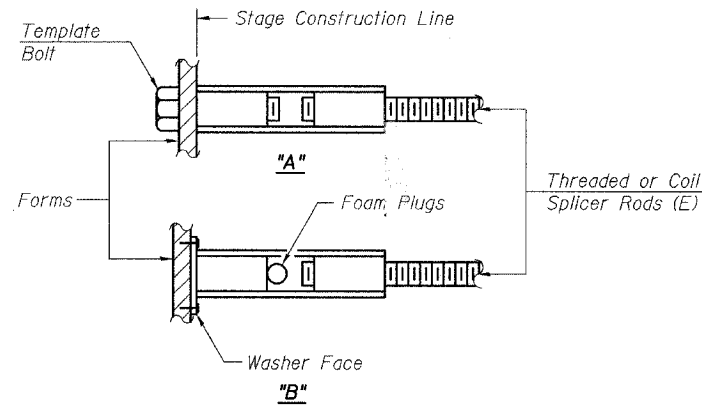
Wire Connector



WELDED SECTIONS

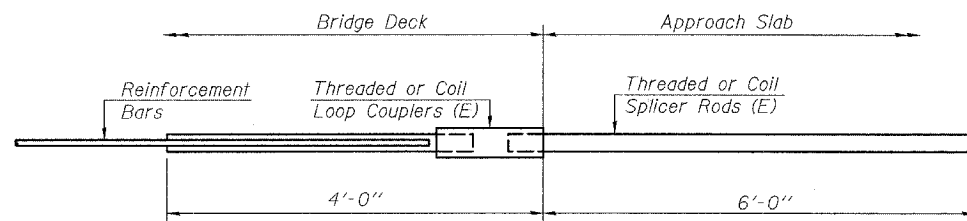
BAR SPLICER ASSEMBLY ALTERNATIVES

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



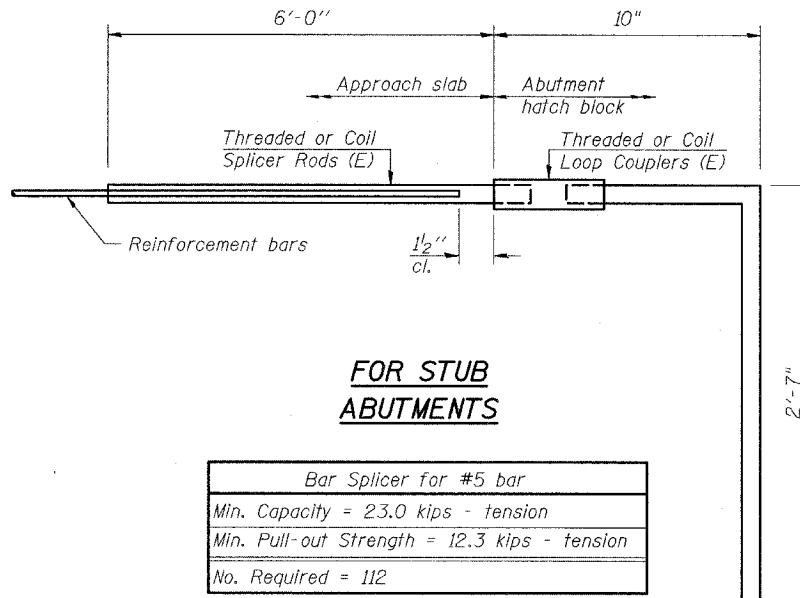
INSTALLATION AND SETTING METHODS

"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.



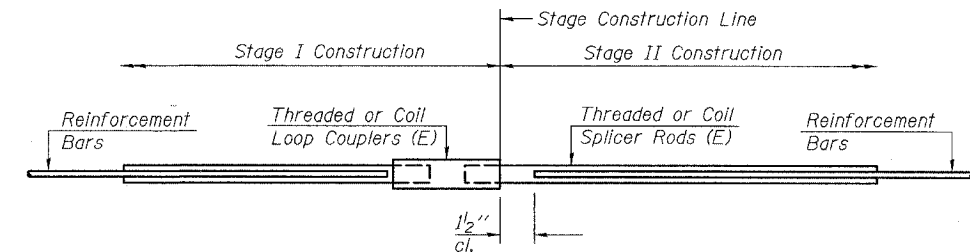
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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

TYLIN INTERNATIONAL

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

STRUCTURE FOUNDATION BORING LOG		Sh <u>1</u> of <u>1</u>	
<p>OBA O'BRIEN & ASSOCIATES, INC. CONSULTING ENGINEERS 1235 E. DAVIS ST./ARLINGTON HTS., IL 60005 (847)398-1444 • 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	1 1 1	0.25P	20
SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE	3 3	3.5P	4
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% ROD=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% ROD=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-Water Content, percent dry weight noted in italics above
VS-Vane Shear (psf)
E-Estimated Value P-Penetrometer NP-Non-Plastic

STRUCTURE FOUNDATION ROCK CORING LOG		Sh <u>1</u> of <u>1</u>				
<p>OBA O'BRIEN & ASSOCIATES, INC. CONSULTING ENGINEERS 1235 E. DAVIS ST./ARLINGTON HTS., IL 60005 (847)398-1444 • 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.: 642J				
Top Elev.	CORING NOTES AND ROCK DESCRIPTION	CORE RUN (#)	RECOVERY (%)	R.O.D. (%)	CORE TIME (Min./ft.)	COMPRESSIVE STRENGTH (tsf)
642J	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
637J	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.

TYLIN INTERNATIONAL

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

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 12, 04	
County: DuPage County		Bored By: Patrick	
Client: T.Y. Lin International/BASCOR, Inc.		Checked By: DOB	
BORING No.: S-2			
Station: 3+69			
Offset: 30.0' Right			
Surface Elevation: 656.7			
Blow Counts	QU (tsf)	W (%)	Surface Water Elev. n/a Groundwater Elevation WD Dry Groundwater Elevation AB n/a After Hours
7			72/5*
8			
8	4.5+P	22	Cobbles from -26.0' to -27.5'. NP 14
7			
11			48 70/2*
-5		7	-30 NP 8
14			
11			
7	4.5+P	22	RUN 1
5			
4			
-10		12	-35
3			
6			
20		13	RUN 2
47			
37			
-15		6	-40
15			
12			
19		13	
11			
30			
-20		11	-45
70/3*			
		14	
70/3*			
-25		10	-50

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-Soil Failure
B-Bulge Failure S-Shear Failure
E-Estimated Value P-Penetrometer
O'BRIEN & ASSOCIATES, INC.

QU-Unconfined Compressive Strength (tsf) noted in Italics above & w
W-Water Content, percent dry weight noted in Italics above & w
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 12, 04				
County: DuPage County		Bored By: Patrick				
Client: T.Y. Lin International/BASCOR, Inc.		Checked By: DOB				
BORING No.: S-2						
Station: 3+69						
Offset: 30.0' Right						
Surface Elevation: 656.7						
		Core Type: NX Split Barrel				
		Core Diameter: 2.0 in.				
		Core Length: 5.0 ft.				
		Top of Rock Elev. 626.2				
Top Elev.	CORING NOTES AND ROCK DESCRIPTION	CORE RUN (#)	RECOVERY (%)	R.O.D. (%)	CORE TIME (Min./ft.)	COMPRESSIVE STRENGTH (tsf)
626.2	SILURIAN SYSTEM, NIAGARAN SERIES DOLOMITE RUN 1 (-30.5' to -35.5') Light gray with horizontal bedding. Slightly porous with rust staining throughout. Weathered with numerous horizontal & vertical fractures throughout.	1	100.0	16.7	7.0	n/a
	100.0% water recovery					
621.2	RUN 2 (-35.5' to -40.5') Light gray with horizontal bedding. Slightly porous with rust staining throughout. Weathered with numerous horizontal & vertical fractures throughout.	2	100.0	16.7	7.0	n/a
	0.0% water recovery					

O'BRIEN & ASSOCIATES, INC.

TYLIN INTERNATIONAL

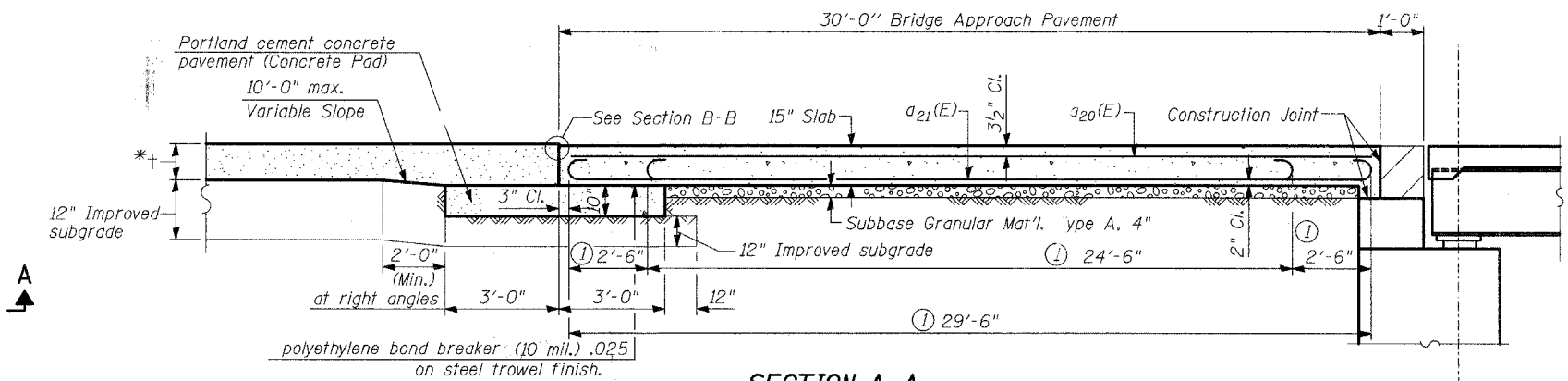
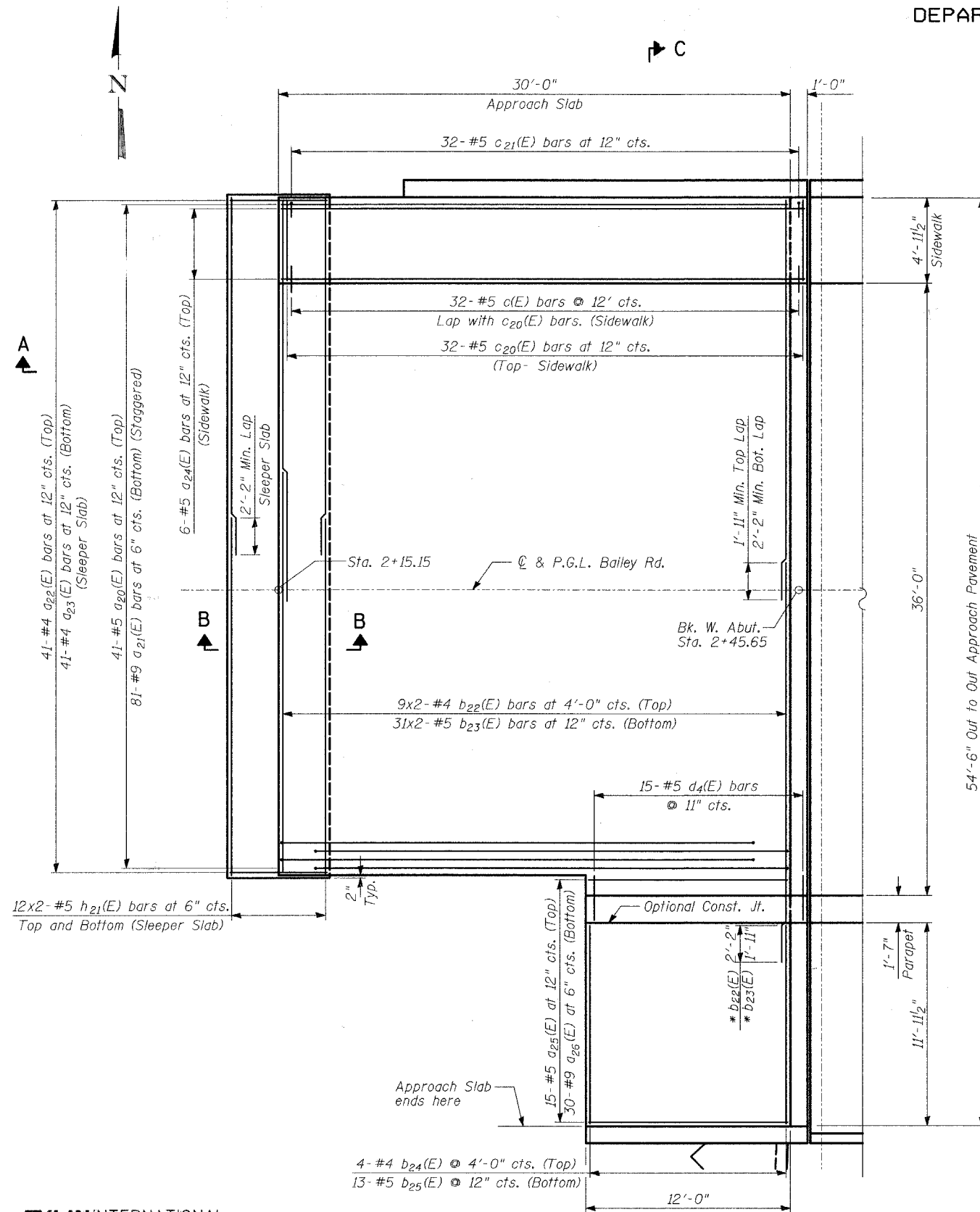
DESIGNED	-	SNB
CHECKED	-	SP
DRAWN	-	SNB
CHECKED	-	SP

SOIL BORING S-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

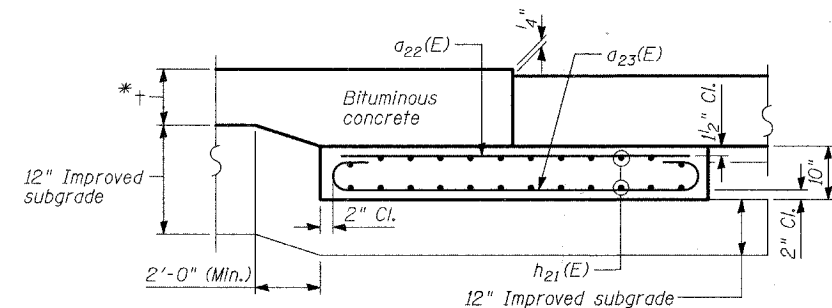
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.	SHEET NO. - 36
1545	*	DUPAGE	97	57	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ. NO.	CONTRACT NO. 83961		



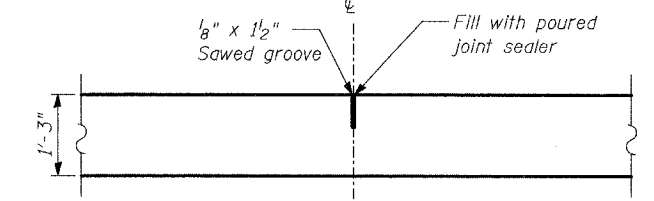
SECTION A-A

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 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

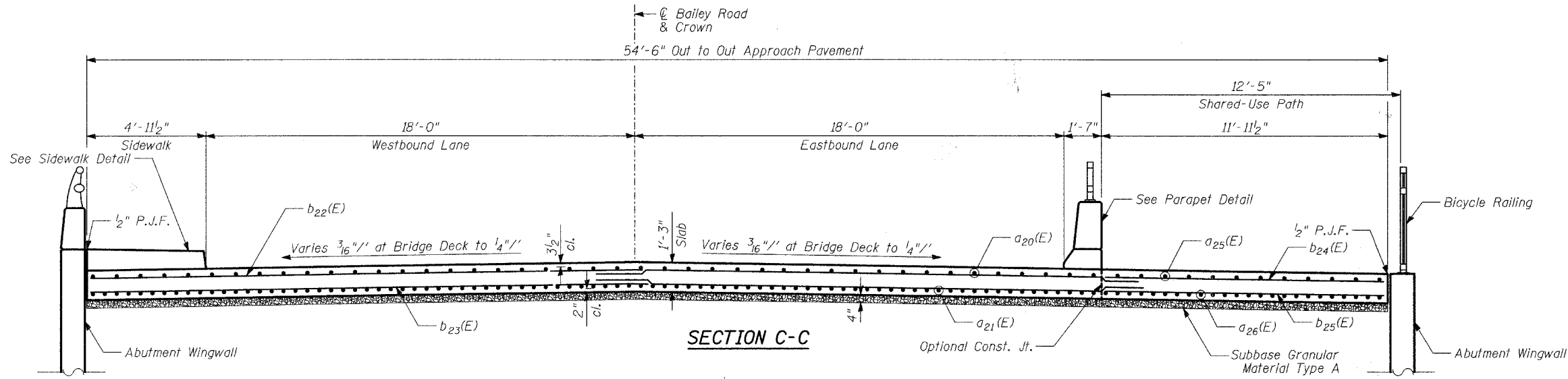
* Extend b₂₂(E) & b₂₃(E) bars past optional construction joint to lap with b₂₄(E) and b₂₅(E) bars.

WEST APPROACH PAVEMENT LAYOUT

BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 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	STATION	SHEET NO.	SHEET NO. - 37
1545	*	DUPAGE	97	58	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 83961		
* 00-00115-00-BR					

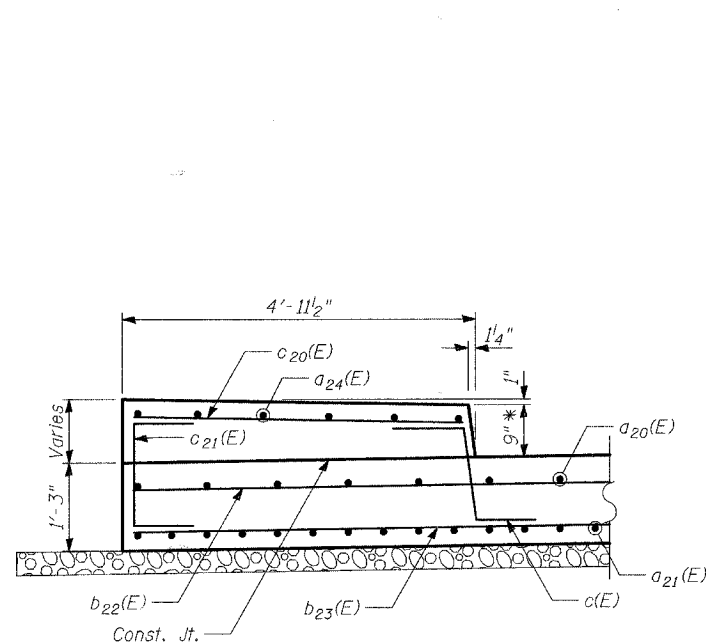


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a20(E)	41	#5	29'-6"	U
a21(E)	81	#9	29'-6"	U
a22(E)	41	#4	5'-8"	U
a23(E)	41	#4	6'-8"	U
a24(E)	6	#5	30'-8"	U
a25(E)	15	#5	11'-8"	U
a26(E)	30	#9	11'-8"	U
b22(E)	18	#4	23'-3"	U
b23(E)	62	#5	23'-6"	U
b24(E)	4	#4	11'-8"	U
b25(E)	13	#5	11'-8"	U
c(E)	32	#5	2'-5"	U
c20(E)	32	#5	4'-8"	U
c21(E)	32	#5	3'-8"	U
d2(E)	6	#4	2'-0"	U
d3(E)	15	#5	5'-7"	U
d4(E)	15	#5	7'-11"	U
e22(E)	8	#4	12'-8"	U
e23(E)	1	#8	12'-8"	U
h21(E)	48	#5	21'-0"	U

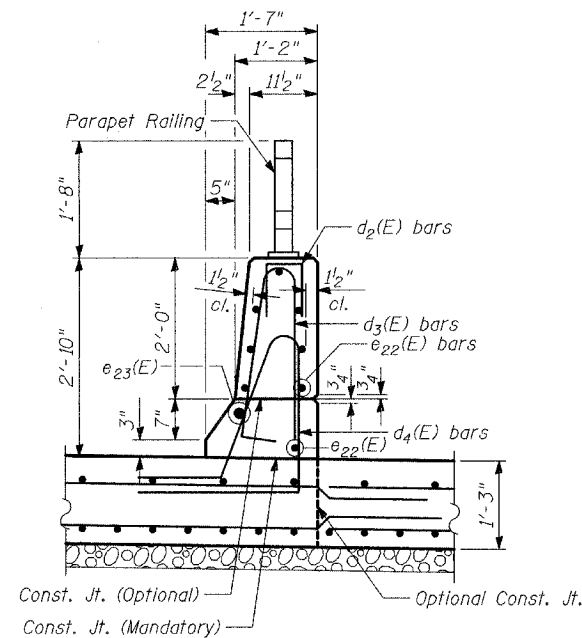
Bridge Approach Pavement (Special)	SQ YD	153
Protective Coat	SQ YD	171
** Reinforcement Bars, Epoxy Coated	Pound	15,007

** Provided for information only

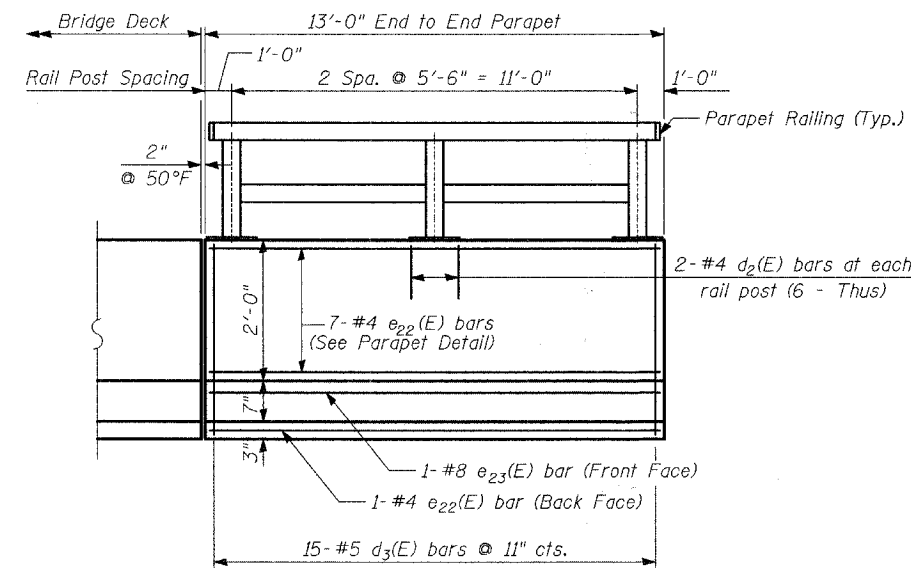


SIDEWALK DETAIL

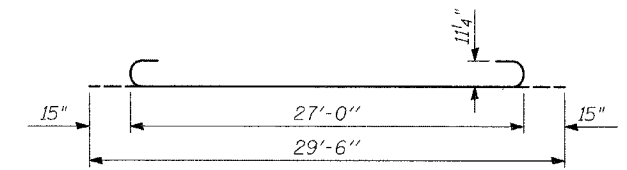
* Transition to match approach curb & gutter shape in last 10' of approach pavement.



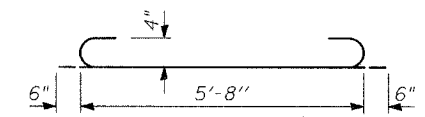
PARAPET DETAIL



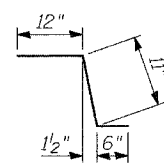
INSIDE ELEVATION OF PARAPET



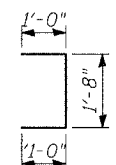
BAR a21(E)



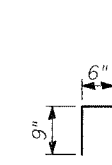
BAR a23(E)



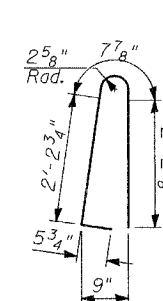
BAR c(E)



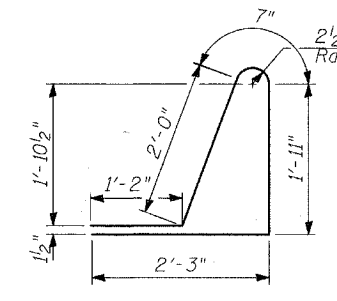
BAR c21(E)



BAR d2(E)



BAR d3(E)



BAR d4(E)

WEST APPROACH PAVEMENT DETAILS

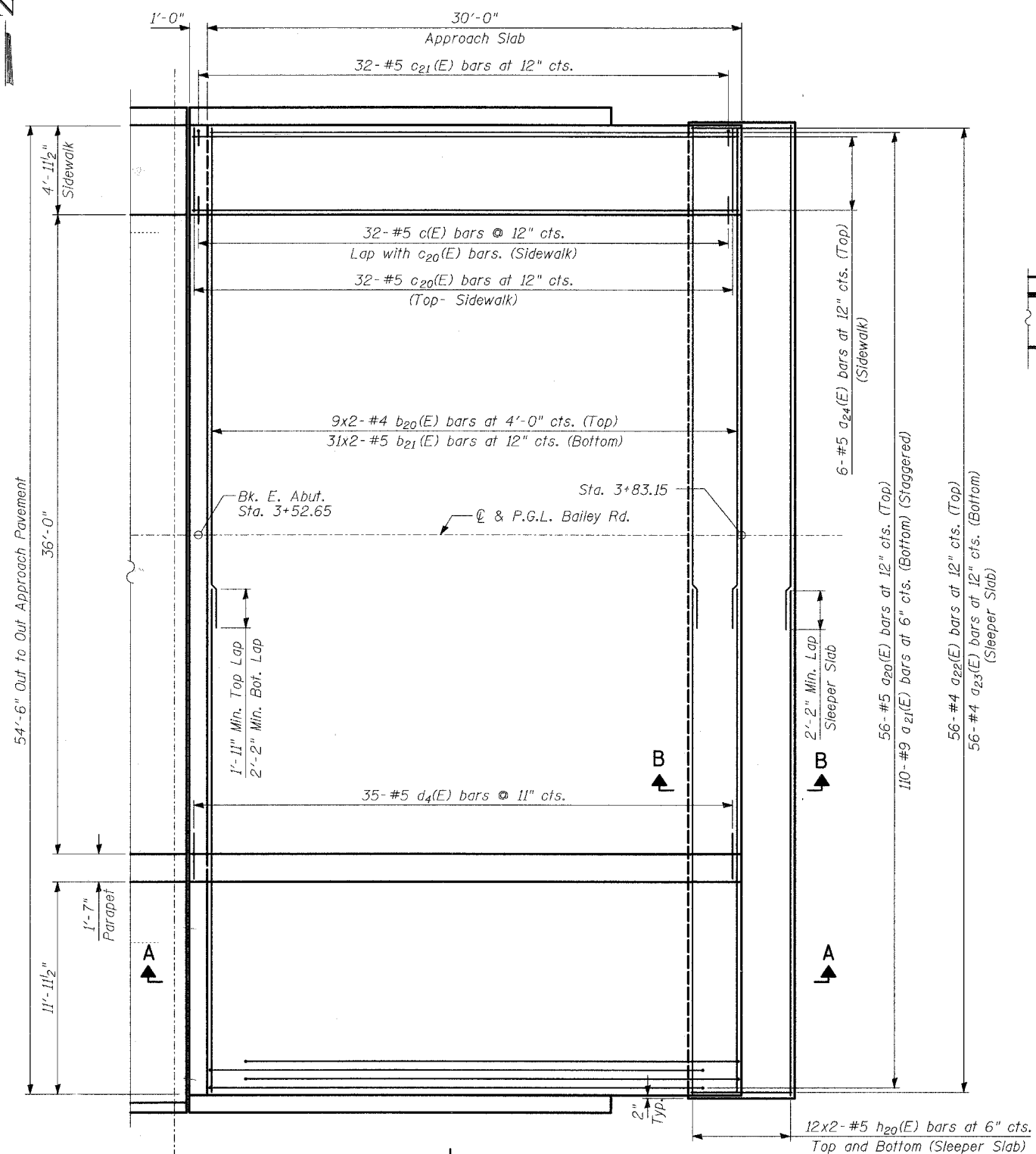
BAILEY ROAD OVER THE
WEST BRANCH OF THE DUPAGE RIVER
FAU 1545
SECTION 00-00115-00-BR STA. 2+99.15
DUPAGE COUNTY
S.N. 022-3028

TYLIN INTERNATIONAL

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

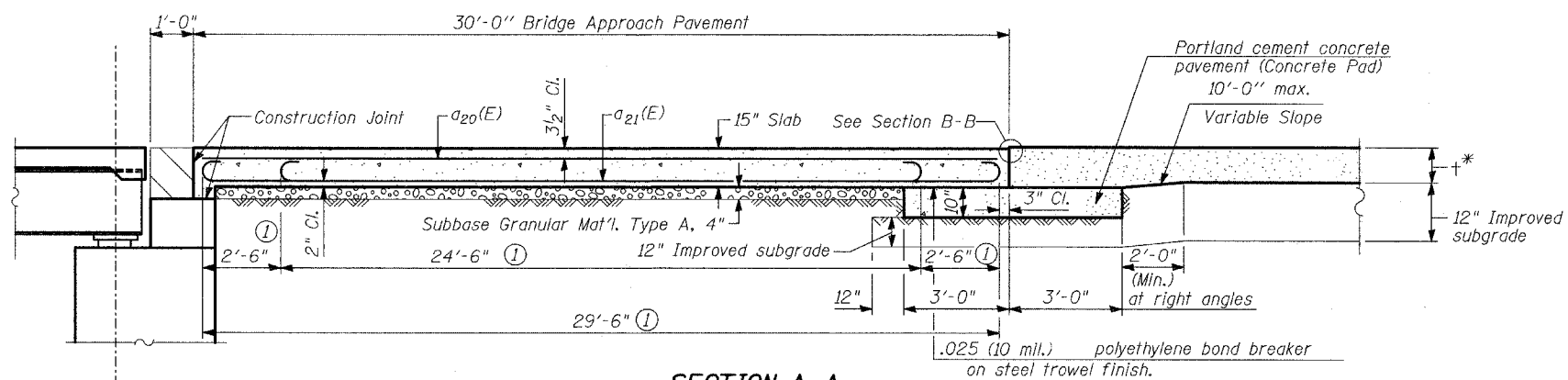
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 38
1545	•	DUPAGE	97	59	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			
• 00-00115-00-BR			CONTRACT NO. 83961		



PLAN

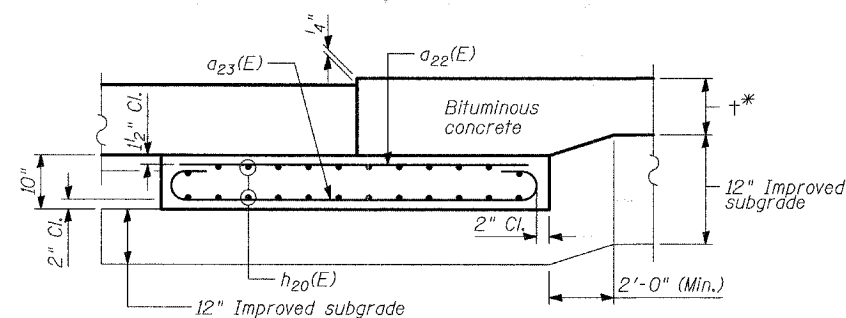
TYLIN INTERNATIONAL

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



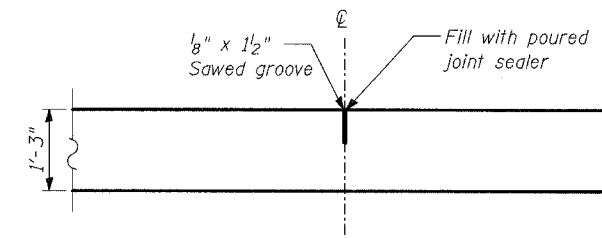
SECTION A-A

① Stagger $a_{21}(E)$ 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:

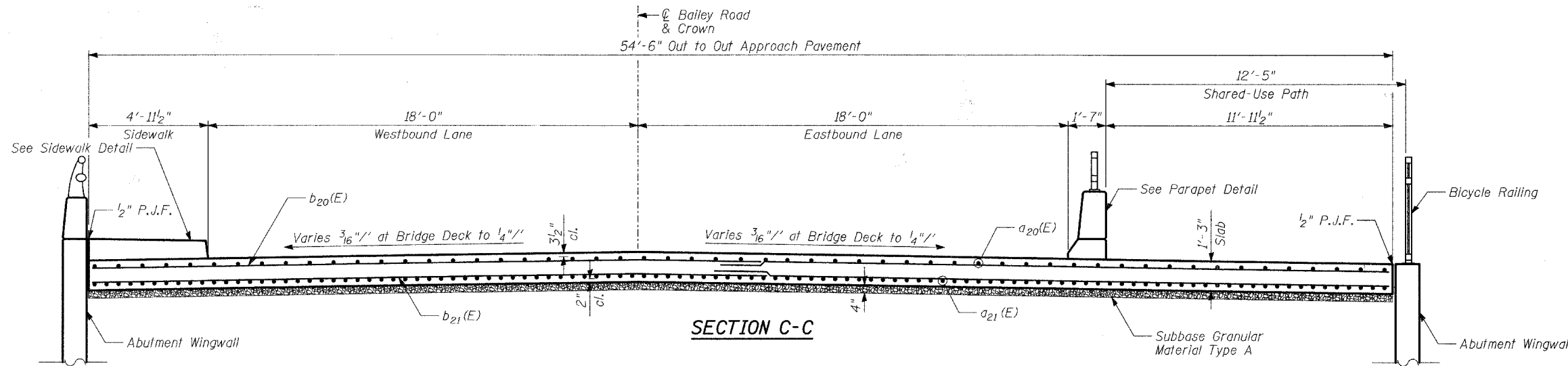
1. With the approval of the Engineer, the Contractor will be permitted to reduce the paving widths by substituting a Longitudinal Construction Joint with tie bars, as shown in Standard 420401, in lieu of the Specified Sawed Longitudinal Joint.
2. The Contractor shall provide the details shown in Detail B at the \mathcal{C} on Bailey Rd. and at a lane edge if pavement is poured two or more lanes at a time.
3. Bars indicated thus 31x2-#5 indicates 31 lines of bars with 2 lengths per line.
4. 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).
5. See Sheet 39 for Section C-C.

EAST APPROACH PAVEMENT 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

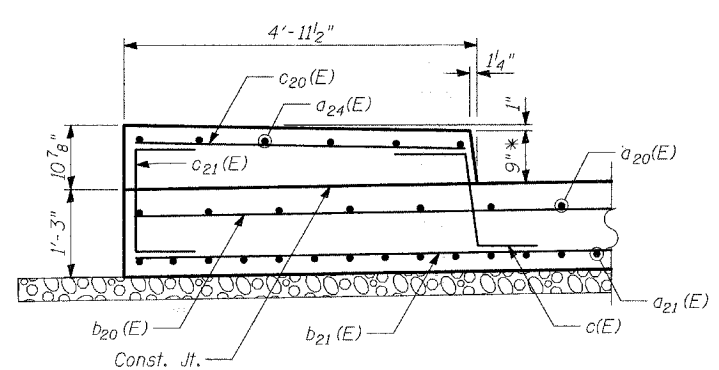
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. - 39
1545	*	DUPAGE	97	60	39 - SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.			
* 00-00115-00-BR			CONTRACT NO. 83961		



BILL OF MATERIAL

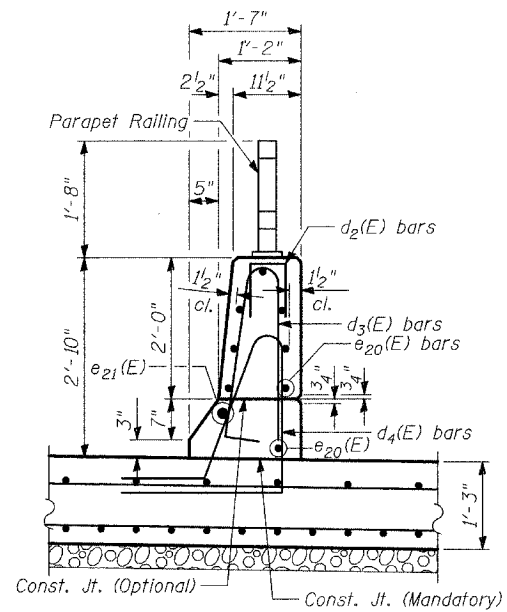
Bar	No.	Size	Length	Shape
a ₂₀ (E)	56	#5	29'-6"	—
a ₂₁ (E)	110	#9	29'-6"	—
a ₂₂ (E)	56	#4	5'-8"	—
a ₂₃ (E)	56	#4	6'-8"	—
a ₂₄ (E)	6	#5	30'-8"	—
b ₂₀ (E)	18	#4	28'-1"	—
b ₂₁ (E)	62	#5	28'-3"	—
c(E)	32	#5	2'-5"	—
c ₂₀ (E)	32	#5	4'-8"	—
c ₂₁ (E)	32	#5	3'-8"	—
d ₂ (E)	8	#4	2'-0"	—
d ₃ (E)	35	#5	5'-7"	—
d ₄ (E)	35	#5	7'-11"	—
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

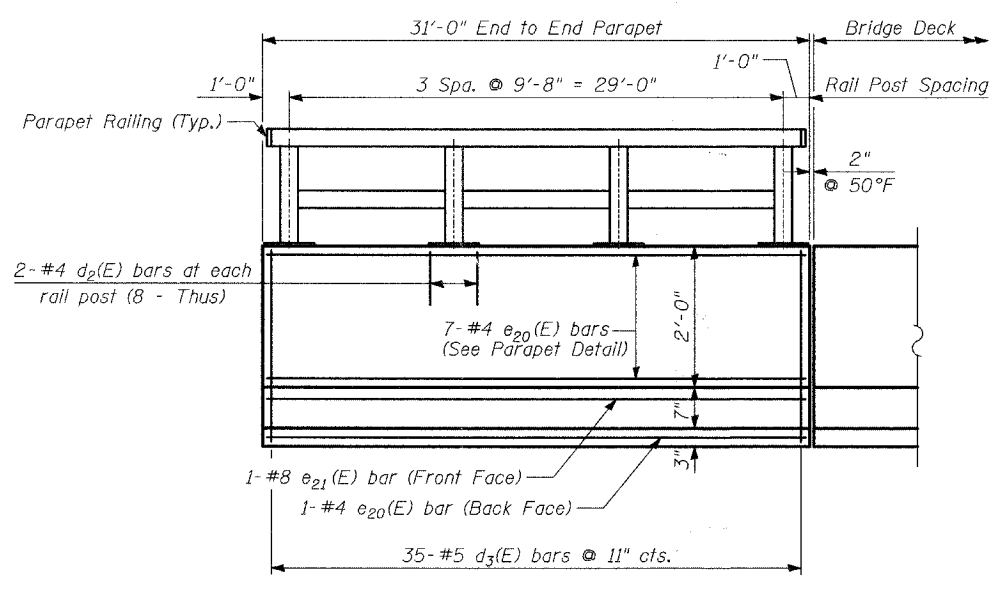


SIDEWALK DETAIL

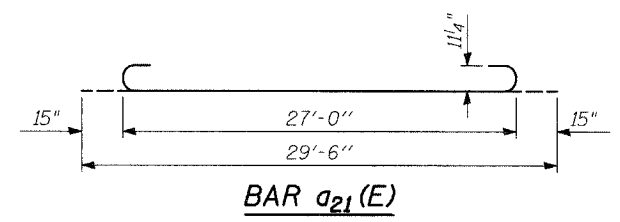
* Transition to match approach curb & gutter shape in last 10' of approach pavement.



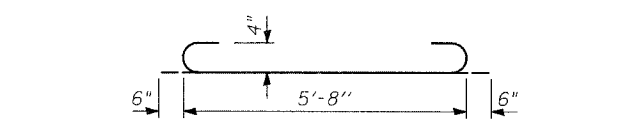
PARAPET DETAIL



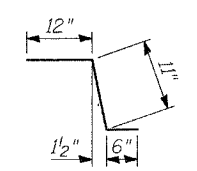
INSIDE ELEVATION OF PARAPET



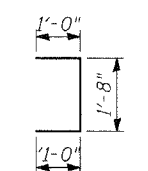
BAR a₂₁(E)



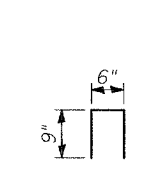
BAR a₂₃(E)



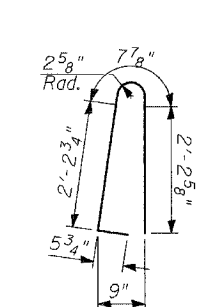
BAR c(E)



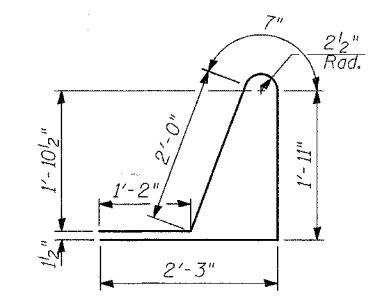
BAR c₂₁(E)



BAR d₂(E)



BAR d₃(E)



BAR d₄(E)

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

TYLIN INTERNATIONAL

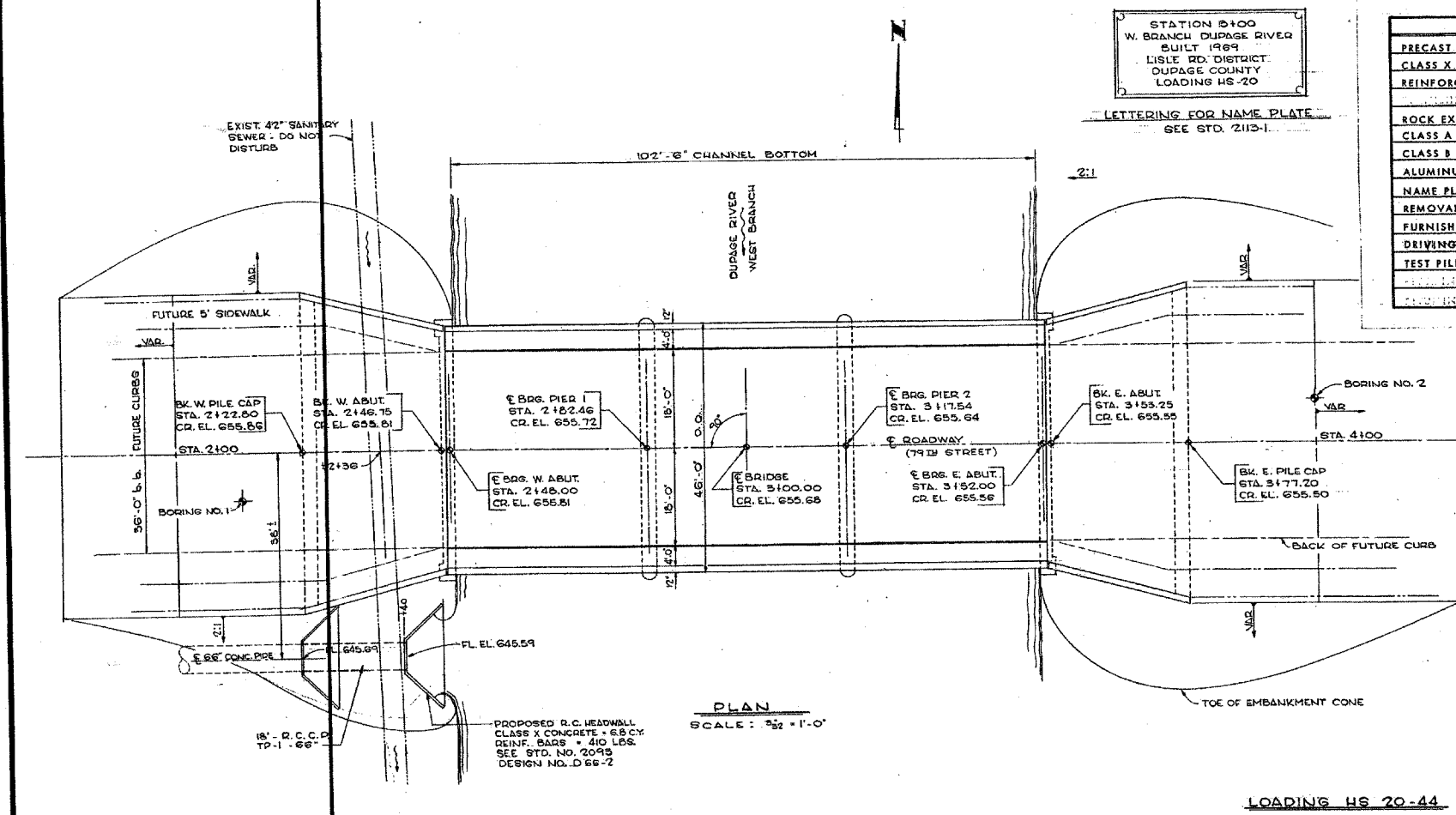
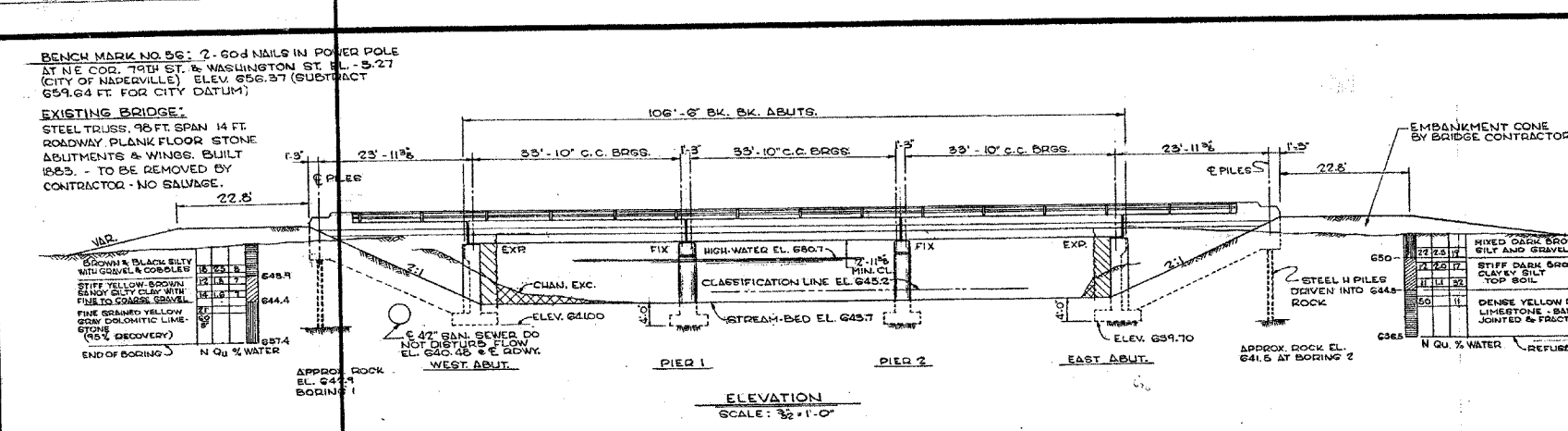
DESIGNED	DE
CHECKED	SNB
DRAWN	DE
CHECKED	SNB

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. 1545	SECTION •	COUNTY DUPAGE	SHEET NO. 97	SHEET NO. 61	SHEET NO. SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ. NO.		

• 00-00115-00-BR CONTRACT NO. 83961

SECTION 79TH ST BRIDGE	ROUTE No. 1545	SHEET 5 OF 13
COUNTY DUPAGE	ROAD DISTRICT 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 BRIDGE ANGLES SHALL BE GIVEN TWO SHOP COATS OF 100% SOLYD PAINT AND THIS INCLUDED FOR PAINTMENT IS FOUND TO BE NECESSARY TO PROTECT 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.	2,381.9	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
79TH BRIDGE OVER W. BRANCH DUPAGE RIVER
LISLE ROAD DISTRICT
DUPAGE COUNTY

RONALD DOLD & CO. SUPT. OF HIGHWAYS.

DESIGN BY BILL THOMPSON DATE FEB. 1967	PREPARED BY WILLETT, HOFMANN & ASSOCIATES INC. CONSULTING ENGINEERS JOLIET, ILLINOIS	REGISTERED STRUCTURAL ENGINEER NO. 022-3028 STATE OF ILLINOIS
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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.

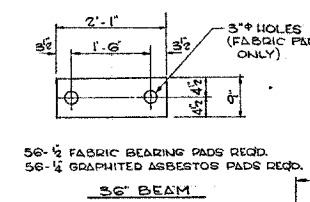
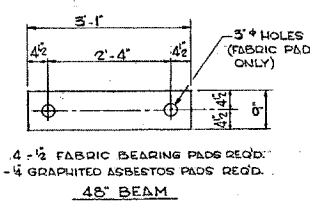
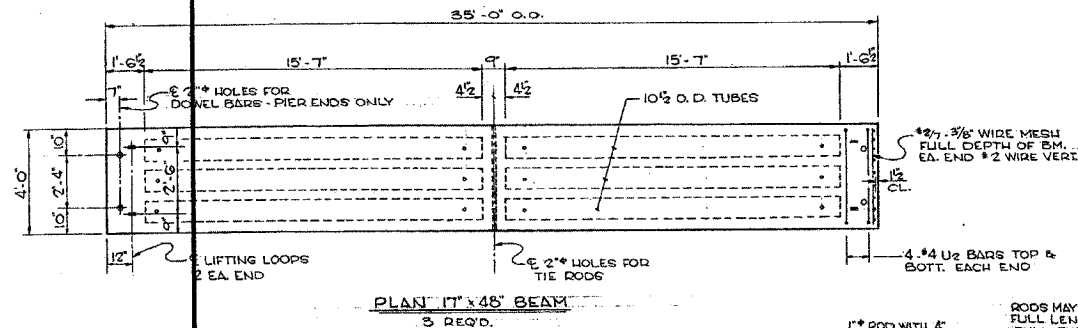
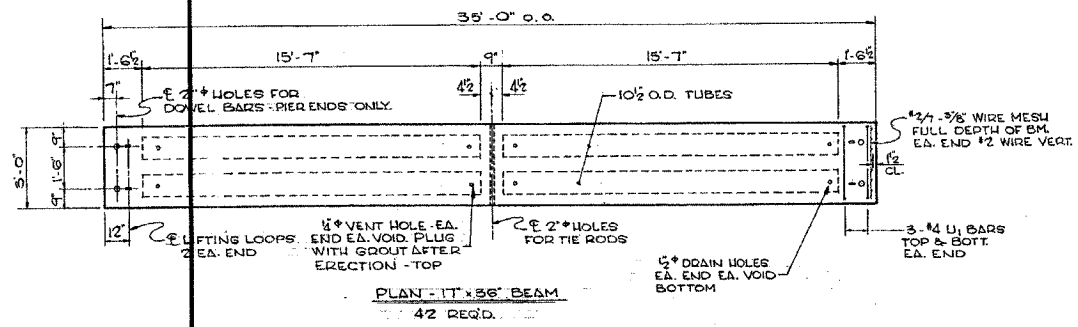
EXISTING GENERAL PLAN AND ELEVATION

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	ISLANDS	SHEET NO.	SHEET NO.
1545	*	DUPAGE	97	62	SHEETS
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJ. NO.	CONTRACT NO. 83961	
00-00115-00-BR					

SECTION	ROUTE No.	SHEET
79 TH ST 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.

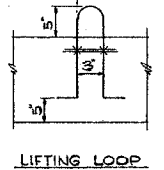
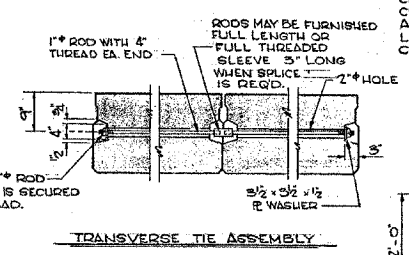
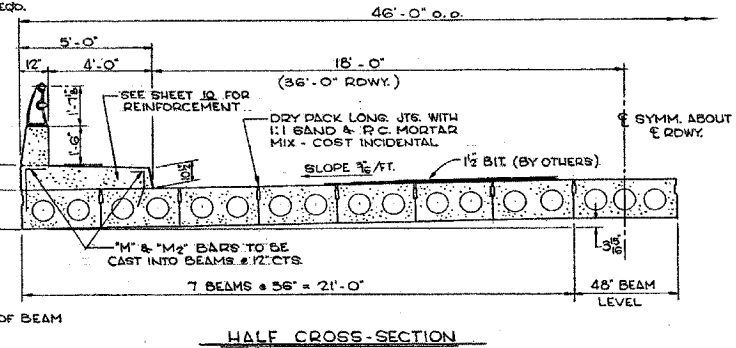
POCKETS THAT RECEIVE TRANSVERSE TIE BAR ON OUTSIDE BEAM SHALL BE FILLED WITH GROUT AFTER TRANSVERSE TIE ASSEMBLY IS IN PLACE.

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.

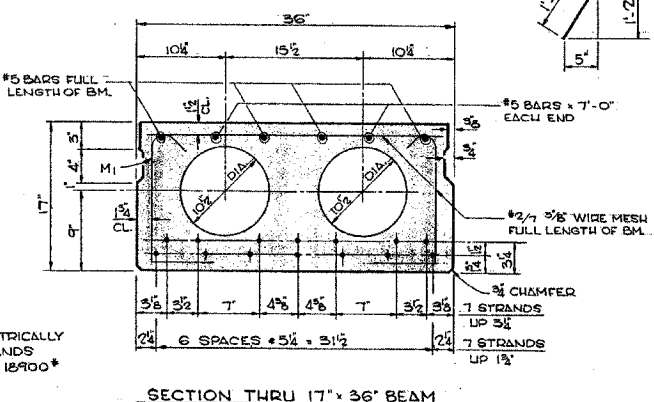
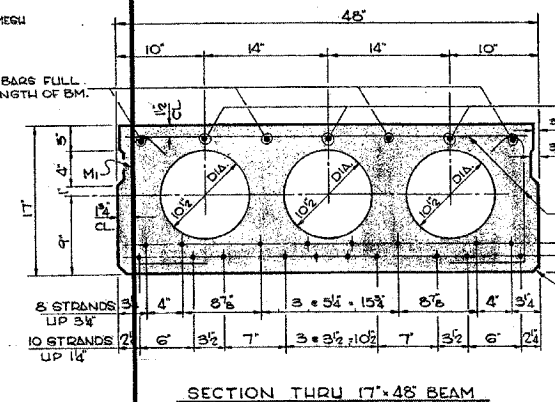
AFTER FABRICATION THE TRANSVERSE TIE ASSEMBLIES (TIE RODS, NUTS, WASHERS AND SLEEVES) SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH A.S.T.M. DESIGNATION A-153.

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	4850



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

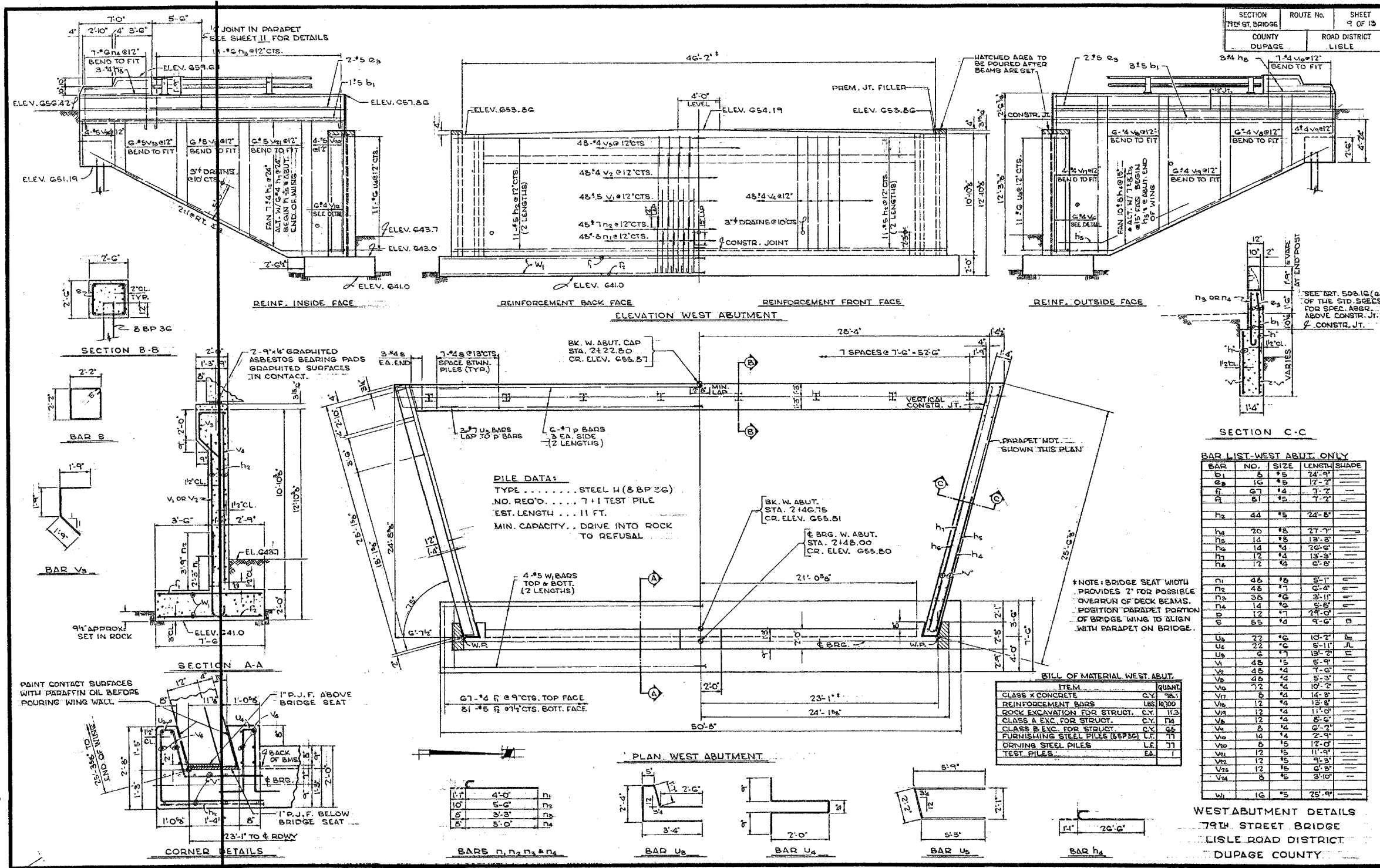
NOTE:
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EXISTING DECK BEAM DETAILS

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	SHEETS	SHEET NO.
1545	*	DUPAGE	97	63
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ.		
				CONTRACT NO. 83961



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.

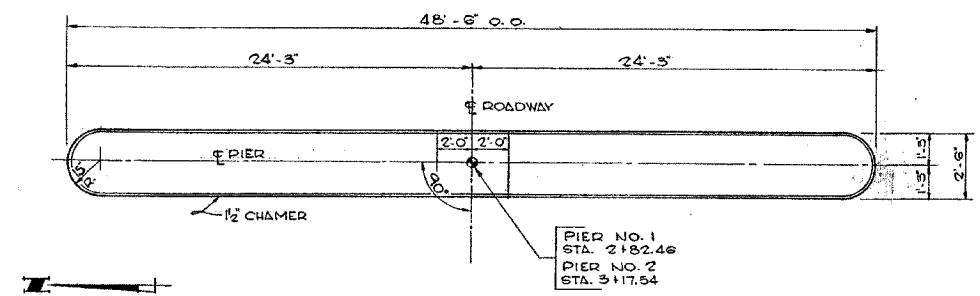
EXISTING WEST ABUTMENT DETAILS

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

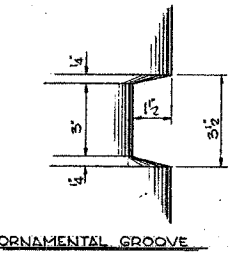
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STA.	SHEET NO.	SHEET NO.
1545	*	DUPAGE	97	64	SHEETS
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJ. NO.	CONTRACT NO. 83961		
			* 00-00115-00-BR		

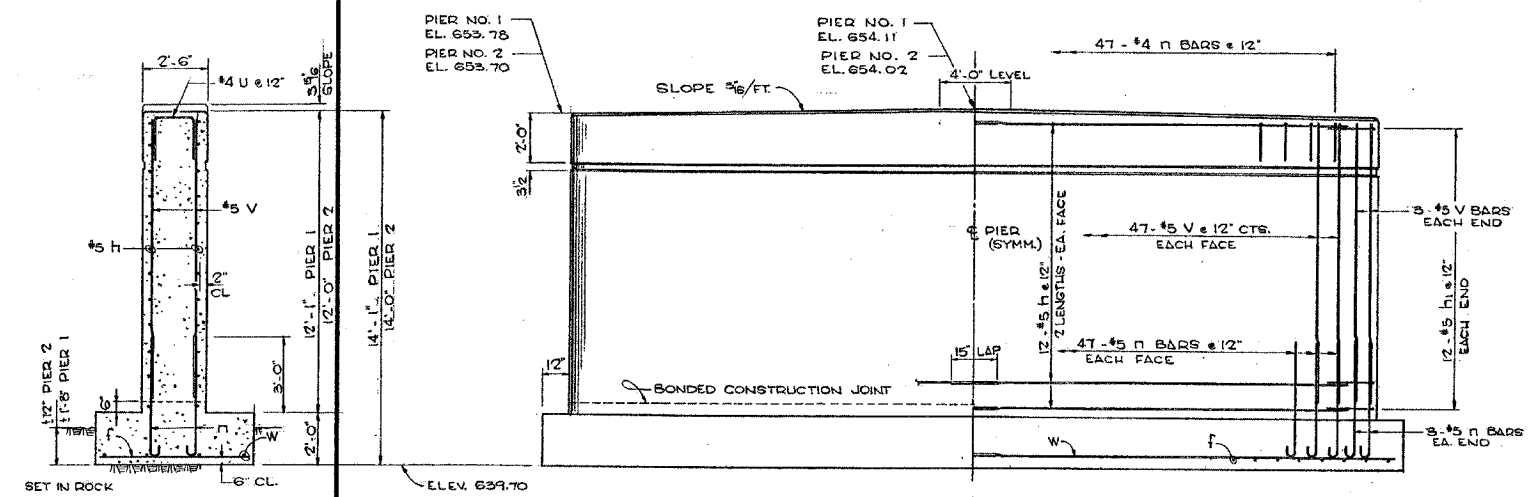
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THRU ST BRIDGE		1 OF 13
COUNTY	ROAD DISTRICT	
DUPAGE	LISLE	



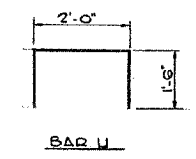
TOP VIEW
NO SCALE



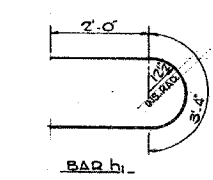
ORNAMENTAL GROOVE



ELEVATION - PIER 1 & 2
NO SCALE



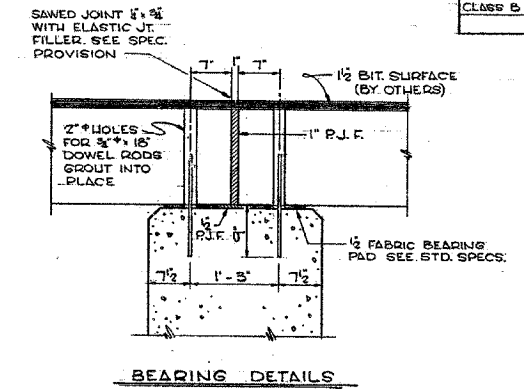
BAR U



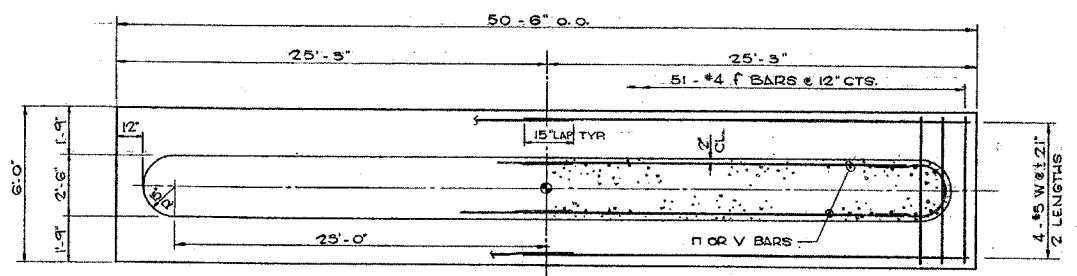
BAR N

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
f	102	#4	5'-6"	—
h	96	#5	25'-6"	—
h ₁	46	#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

FOR INFORMATION ONLY

NOTE:
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DIFFERENT VERTICAL DATUM THAN CONTRACT PLANS.

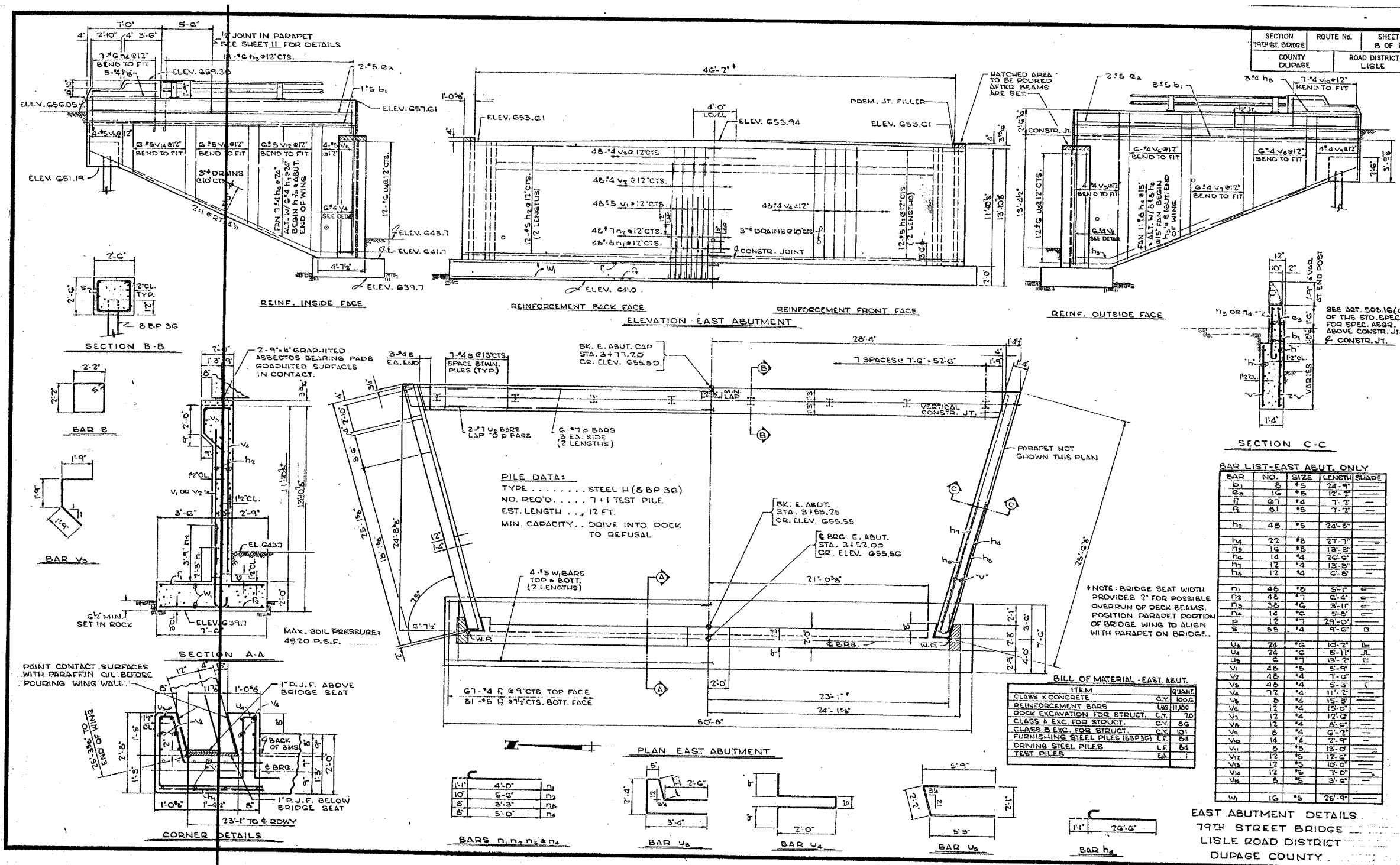
TYLIN INTERNATIONAL

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



TYLIN INTERNATIONAL

DESIGNED	-	SNB
CHECKED	-	
DRAWN	-	SNB
CHECKED	-	

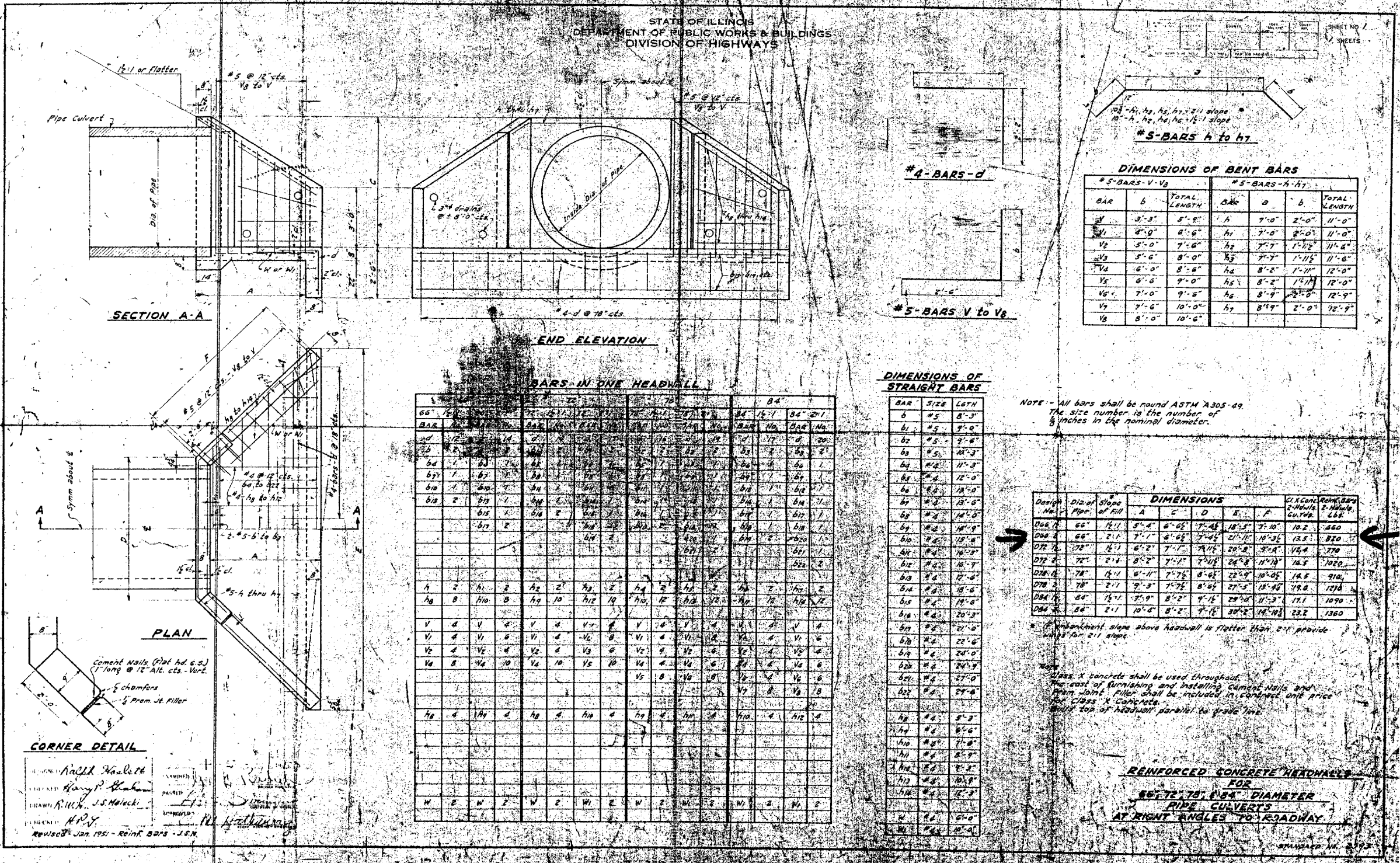
FOR INFORMATION ONLY

NOTE:
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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



BARS IN ONE HEADWALL

BAR NO.	SIZE	LGTH	BAR NO.	SIZE	LGTH
b1	#5	9'-0"	b19	#4	12'-0"
b2	#5	9'-6"	b20	#4	12'-0"
b3	#5	10'-3"	b21	#4	12'-0"
b4	#4	11'-3"	b22	#4	12'-0"
b5	#4	12'-0"	b23	#4	12'-0"
b6	#4	13'-0"	b24	#4	12'-0"
b7	#4	13'-6"	b25	#4	12'-0"
b8	#4	14'-0"	b26	#4	12'-0"
b9	#4	14'-6"	b27	#4	12'-0"
b10	#4	15'-0"	b28	#4	12'-0"
b11	#4	15'-6"	b29	#4	12'-0"
b12	#4	16'-0"	b30	#4	12'-0"
b13	#4	16'-6"	b31	#4	12'-0"
b14	#4	17'-0"	b32	#4	12'-0"
b15	#4	17'-6"	b33	#4	12'-0"
b16	#4	18'-0"	b34	#4	12'-0"
b17	#4	18'-6"	b35	#4	12'-0"
b18	#4	19'-0"	b36	#4	12'-0"
b37	#4	20'-0"	b38	#4	12'-0"
b39	#4	21'-0"	b39	#4	12'-0"
b40	#4	22'-0"	b40	#4	12'-0"
b41	#4	23'-0"	b41	#4	12'-0"
b42	#4	24'-0"	b42	#4	12'-0"
b43	#4	25'-0"	b43	#4	12'-0"
b44	#4	26'-0"	b44	#4	12'-0"
b45	#4	27'-0"	b45	#4	12'-0"
b46	#4	28'-0"	b46	#4	12'-0"
b47	#4	29'-0"	b47	#4	12'-0"
b48	#4	30'-0"	b48	#4	12'-0"
b49	#4	31'-0"	b49	#4	12'-0"
b50	#4	32'-0"	b50	#4	12'-0"
b51	#4	33'-0"	b51	#4	12'-0"
b52	#4	34'-0"	b52	#4	12'-0"
b53	#4	35'-0"	b53	#4	12'-0"
b54	#4	36'-0"	b54	#4	12'-0"
b55	#4	37'-0"	b55	#4	12'-0"
b56	#4	38'-0"	b56	#4	12'-0"
b57	#4	39'-0"	b57	#4	12'-0"
b58	#4	40'-0"	b58	#4	12'-0"
b59	#4	41'-0"	b59	#4	12'-0"
b60	#4	42'-0"	b60	#4	12'-0"
b61	#4	43'-0"	b61	#4	12'-0"
b62	#4	44'-0"	b62	#4	12'-0"
b63	#4	45'-0"	b63	#4	12'-0"
b64	#4	46'-0"	b64	#4	12'-0"
b65	#4	47'-0"	b65	#4	12'-0"
b66	#4	48'-0"	b66	#4	12'-0"
b67	#4	49'-0"	b67	#4	12'-0"
b68	#4	50'-0"	b68	#4	12'-0"
b69	#4	51'-0"	b69	#4	12'-0"
b70	#4	52'-0"	b70	#4	12'-0"
b71	#4	53'-0"	b71	#4	12'-0"
b72	#4	54'-0"	b72	#4	12'-0"
b73	#4	55'-0"	b73	#4	12'-0"
b74	#4	56'-0"	b74	#4	12'-0"
b75	#4	57'-0"	b75	#4	12'-0"
b76	#4	58'-0"	b76	#4	12'-0"
b77	#4	59'-0"	b77	#4	12'-0"
b78	#4	60'-0"	b78	#4	12'-0"
b79	#4	61'-0"	b79	#4	12'-0"
b80	#4	62'-0"	b80	#4	12'-0"
b81	#4	63'-0"	b81	#4	12'-0"
b82	#4	64'-0"	b82	#4	12'-0"
b83	#4	65'-0"	b83	#4	12'-0"
b84	#4	66'-0"	b84	#4	12'-0"
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b86	#4	68'-0"	b86	#4	12'-0"
b87	#4	69'-0"	b87	#4	12'-0"
b88	#4	70'-0"	b88	#4	12'-0"
b89	#4	71'-0"	b89	#4	12'-0"
b90	#4	72'-0"	b90	#4	12'-0"
b91	#4	73'-0"	b91	#4	12'-0"
b92	#4	74'-0"	b92	#4	12'-0"
b93	#4	75'-0"	b93	#4	12'-0"
b94	#4	76'-0"	b94	#4	12'-0"
b95	#4	77'-0"	b95	#4	12'-0"
b96	#4	78'-0"	b96	#4	12'-0"
b97	#4	79'-0"	b97	#4	12'-0"
b98	#4	80'-0"	b98	#4	12'-0"
b99	#4	81'-0"	b99	#4	12'-0"
b100	#4	82'-0"	b100	#4	12'-0"

DIMENSIONS OF STRAIGHT BARS

BAR	SIZE	LGTH
b1	#5	9'-0"
b2	#5	9'-6"
b3	#5	10'-3"
b4	#4	11'-3"
b5	#4	12'-0"
b6	#4	13'-0"
b7	#4	13'-6"
b8	#4	14'-0"
b9	#4	14'-6"
b10	#4	15'-0"
b11	#4	15'-6"
b12	#4	16'-0"
b13	#4	16'-6"
b14	#4	17'-0"
b15	#4	17'-6"
b16	#4	18'-0"
b17	#4	18'-6"
b18	#4	19'-0"
b19	#4	20'-0"
b20	#4	21'-0"
b21	#4	22'-0"
b22	#4	23'-0"
b23	#4	24'-0"
b24	#4	25'-0"
b25	#4	26'-0"
b26	#4	27'-0"
b27	#4	28'-0"
b28	#4	29'-0"
b29	#4	30'-0"
b30	#4	31'-0"
b31	#4	32'-0"
b32	#4	33'-0"
b33	#4	34'-0"
b34	#4	35'-0"
b35	#4	36'-0"
b36	#4	37'-0"
b37	#4	38'-0"
b38	#4	39'-0"
b39	#4	40'-0"
b40	#4	41'-0"
b41	#4	42'-0"
b42	#4	43'-0"
b43	#4	44'-0"
b44	#4	45'-0"
b45	#4	46'-0"
b46	#4	47'-0"
b47	#4	48'-0"
b48	#4	49'-0"
b49	#4	50'-0"
b50	#4	51'-0"
b51	#4	52'-0"
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b69	#4	70'-0"
b70	#4	71'-0"
b71	#4	72'-0"
b72	#4	73'-0"
b73	#4	74'-0"
b74	#4	75'-0"
b75	#4	76'-0"
b76	#4	77'-0"
b77	#4	78'-0"
b78	#4	79'-0"
b79	#4	80'-0"
b80	#4	81'-0"
b81	#4	82'-0"
b82	#4	83'-0"
b83	#4	84'-0"
b84	#4	85'-0"
b85	#4	86'-0"
b86	#4	87'-0"
b87	#4	88'-0"
b88	#4	89'-0"
b89	#4	90'-0"
b90	#4	91'-0"
b91	#4	92'-0"
b92	#4	93'-0"
b93	#4	94'-0"
b94	#4	95'-0"
b95	#4	96'-0"
b96	#4	97'-0"
b97	#4	98'-0"
b98	#4	99'-0"
b99	#4	100'-0"

NOTE - All bars shall be round ASTM A305-49. The size number is the number of inches in the nominal diameter.

DIMENSIONS

Design No.	Di. of Pipe	Slope	A	C	D	E	F	Cl. Conc. Cu. Yds.	Reinf. Bars Lbs.
D66-2	66"	1:1	5'-4"	6'-6"	7'-4"	18'-5"	7'-10"	10.2	560
D66	66"	2:1	7'-1"	8'-6"	7'-4"	21'-11"	10'-3"	13.5	820
D72-2	72"	1:1	6'-2"	7'-1"	7'-11"	20'-8"	9'-8"	14.4	770
D72	72"	2:1	8'-2"	7'-1"	7'-11"	24'-8"	11'-11"	16.5	1020
D78-2	78"	1:1	6'-11"	7'-7"	8'-6"	22'-9"	10'-5"	14.5	910
D78	78"	2:1	9'-3"	7'-7"	8'-6"	27'-5"	13'-4"	19.8	1210
D84-2	84"	1:1	9'-9"	8'-2"	9'-1"	25'-0"	11'-5"	17.1	1070
D84	84"	2:1	10'-6"	8'-2"	9'-1"	30'-5"	14'-11"	23.2	1360

NOTE - If embankment slope above headwall is flatter than 2:1 provide width 16'-2:1 slope.

NOTE - Class X concrete shall be used throughout. The cost of furnishing and installing Cement Nails and Form Joint Fills shall be included in contract unit price for Class X concrete.

NOTE - Build top of headwall parallel to grade line.

TYLIN INTERNATIONAL

DESIGNED	-	SNB
CHECKED	-	
DRAWN	-	SNB
CHECKED	-	

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

EXISTING CONCRETE HEADWALL

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

**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	97	67
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT 83961

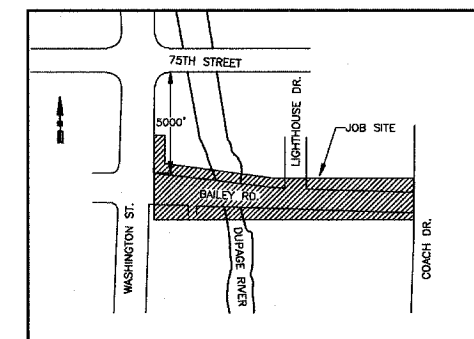
SPECIAL NOTES

- 1) 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.
- 2) 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.
- 3) 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.
- 4) 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 JEATER AND THE ENGINEER.
- 5) 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.
- 6) 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.
- 7) THE CONTRACTOR SHALL ARRANGE FOR INSPECTION OF HIS AND HIS SUBCONTRACTOR'S WORK, BY DPU-E PERSONAL.
- 8) 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.
- 9) ALL WORK SHALL MEET OSHA REGULATIONS OF LATEST ISSUE.
- 10) 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

- 1) CONTRACTOR SHALL RESTRICT HIS OPERATIONS TO EASEMENTS AND ROAD RIGHT-OF-WAY AS SHOWN ON THE DRAWINGS.
- 2) 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.
- 3) 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.
- 4) MSDS SHEETS ARE REQUIRED ON THE JOB SITE FOR ALL MATERIALS USED.
- 5) 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.
- 6) 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.
- 7) 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.
- 8) 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.
- 9) 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.
- 10) 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.
- 11) 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.
- 12) 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 2b).
- 13) 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.
- 14) 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.
- 15) 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.
- 16) 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 NO. BAILEY RD. BRIDGE DUCTBANK INSTALLATION	APP. NO. 2054/1323	CD FILE NO. 200819001G1.DWG	
COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-06-04	
DATE 05-07	WORK ORDER NO. 58199	SEC.	COMPLETED BY
ISSUED	APP.	SCALE NTS	SHEET 1 OF 23

**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	97	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 PA2 MATERIALS OR CA-6 MATERIALS TO FROM 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.

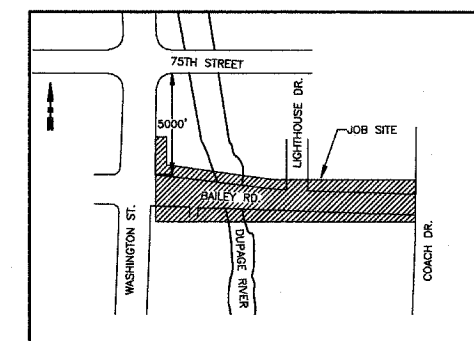
29) THE CONTRACTOR SHALL, DURING THE PROGRESS OF THE JOB, NOTE ANY AND ALL CHANGES OR DEVIATIONS FROM THE ORIGINAL DRAWING. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF ALL RECORDED DIMENSIONS AND ELEVATIONS. ALL MANHOLES, HAND HOLES VAULTS OR RISERS, BENDS AND FITTINGS, SHALL BE TIED TO 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
(630) 420-4122
- NDPU- ELECTRIC
MRS. LUCY HYNES
(630) 305-5375
- NDPW- PUBLIC WORKS
MR. DAN VORREN
(630) 548-2981
- TED- TRANSPORTATION, ENGINEERING & DEVELOPMENT BUSINESS GROUP
MR. BILL NOVAK
(630) 420-6704
- OTHER UTILITIES:**
- SBC AMERITECH AT&T- MR. GREG LAWRENCE
(630) 462-5846
MS. DONNA SZPYTEK
(630) 941-4223
- COMCAST- MR. BOB SCHULTER
(630) 600-6347
- COMMONWEALTH EDISON- MR. LYNN CHRISTENSON
(630) 723-2303
- NICOR GAS- MS. CONSTANCE LANE
(630) 988-8676
X3830
- WIDE OPEN WEST- MR. TOM JEBENS
(630) 536-3153
MR. JIM PIRTANO
(630) 669-2707
- DUPAGE COUNTY PERMIT ADMINISTRATOR- MR. ROBERT KOLARS
401 N. COUNTY FARM RD.
WHEATON, IL 60187
(630) 407-6886



LOCATION MAP
N.T.S.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL JULIE, 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT NO.	2054/1323	DATE PLOD DWG	008198001C2.DWG
PROJECT NAME	BAILEY RD. BRIDGE DUCTBANK INSTALLATION	PROJECT NO.	EU12-06-04
COORDINATED WITH BRIDGE IMPROVEMENT		DRWN BY	JK
DATE	06-19-07	WORK NUMBER	58199
ISSUED		SCALE	NTS
ENGINEER			
FORN			
			SHEET 2 OF 23

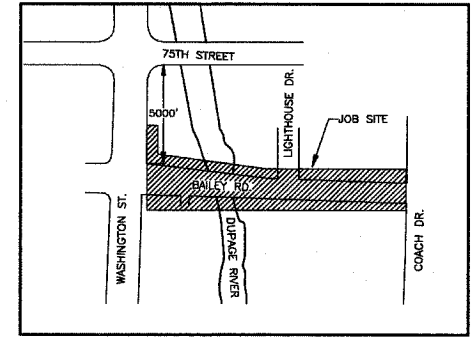
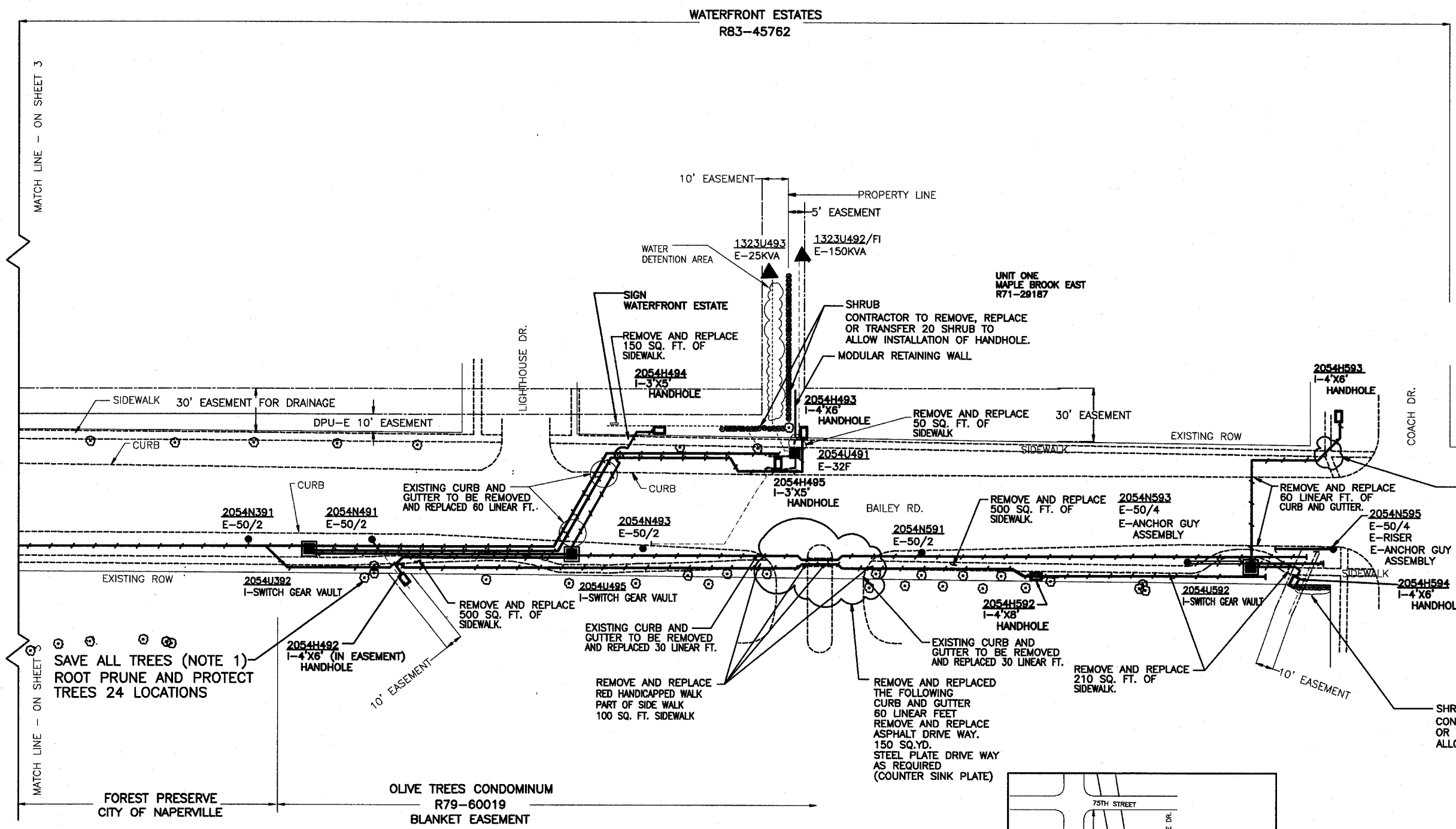
**PLAN VIEW WITH ALL FACILITIES SHOWN
(SEE PAGE 5 AND 6 FOR DETAIL LAY OUT OF DUCTBANK)**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	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

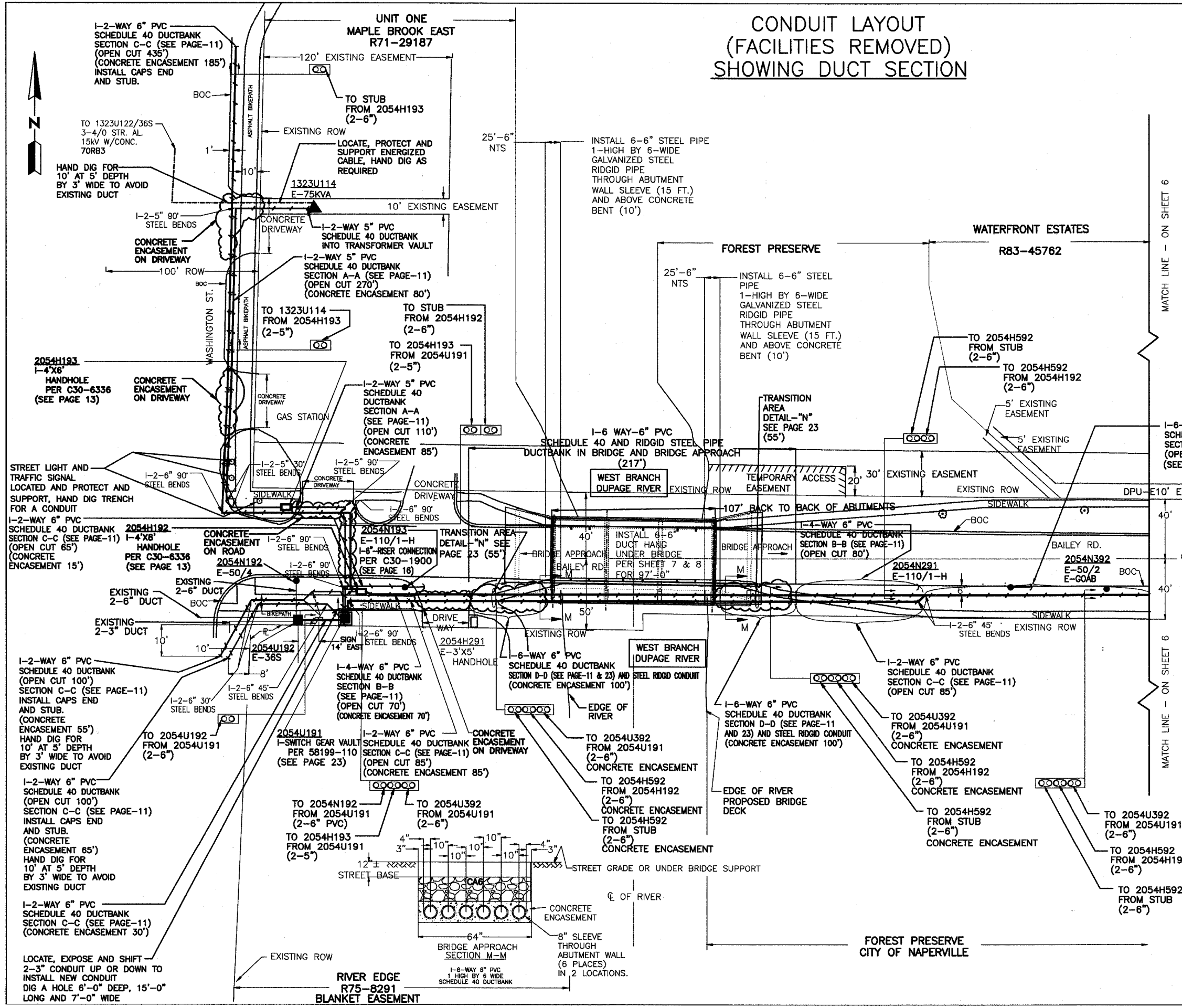


LOCATION MAP
N.T.S.

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT FILE NO.	PROJECT NO.	JOB FILE NO.	PROJECT FILE NO.
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	2054/1323	2054/1323	EU12-06-04
COORDINATED WITH BRIDGE IMPROVEMENT		REVISED BY	DATE
		JK	
ISSUED	DATE	WORK ORDER NO.	DATE
ENGINEER	RPS	58199	
REVISION		SCALE	DATE
		1"=30'	

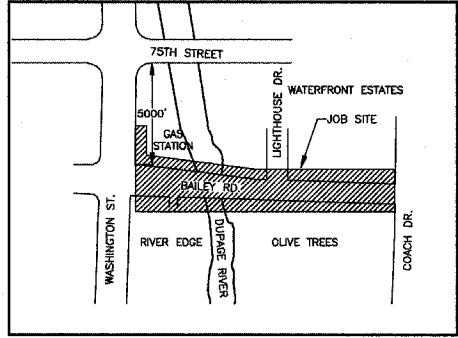
CONDUIT LAYOUT (FACILITIES REMOVED) SHOWING DUCT SECTION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	71
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 TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION		MAP NO. 2054/1323	GIS FILE NO. 2001000102.DWG
PROJECT COORDINATED WITH BRIDGE IMPROVEMENT		DESIGN BY JK	PROJECT NO. EU12-06-04
DATE 05-19-07	WORK NUMBER 58199	ISSUED BY	COMPLETED BY
ISSUED BY RPS	APPROVED BY	SCALE 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

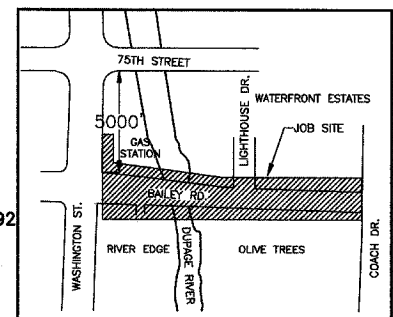
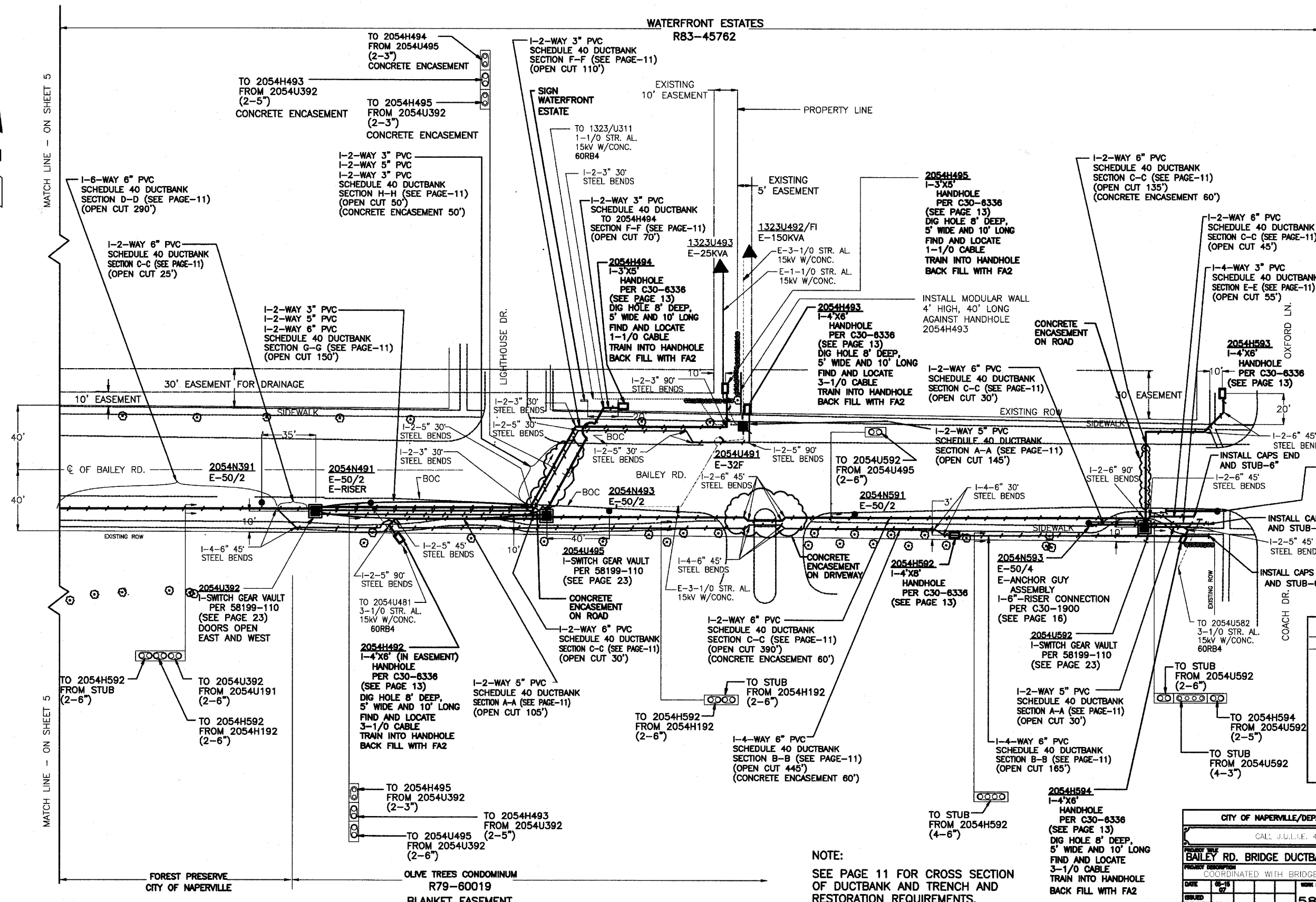
LEGEND

EXISTING

- 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-TREES/BUSHES
- E-BOC/SIDEWALK

INSTALL

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

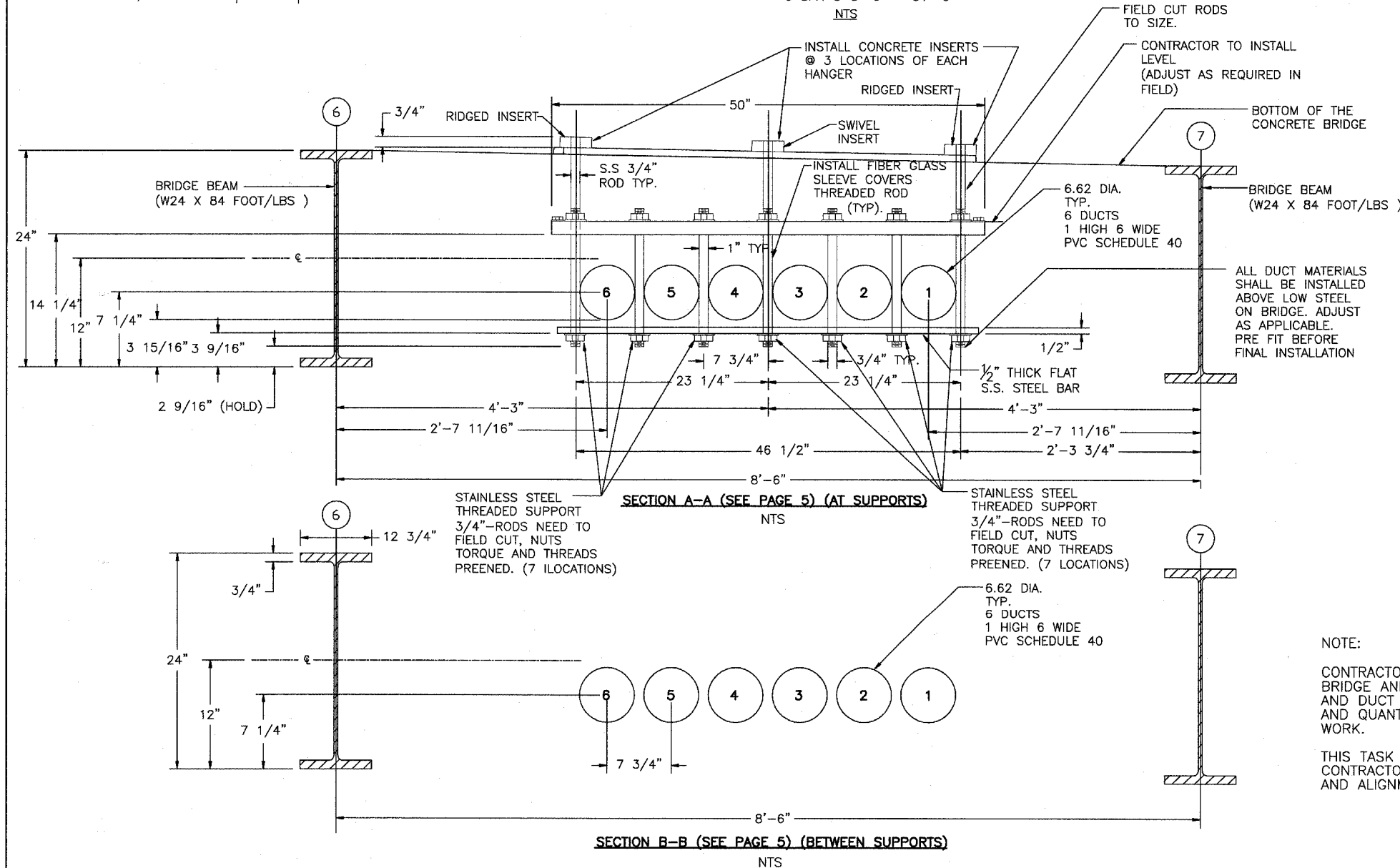
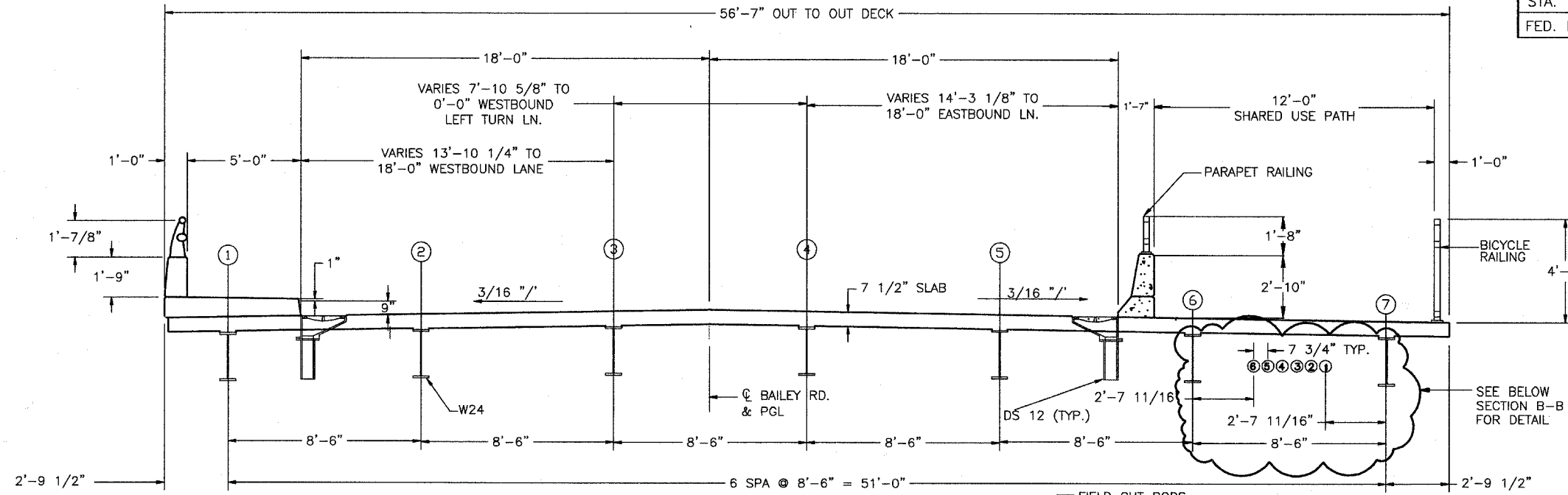


NOTE:
SEE PAGE 11 FOR CROSS SECTION OF DUCTBANK AND TRENCH AND RESTORATION REQUIREMENTS.

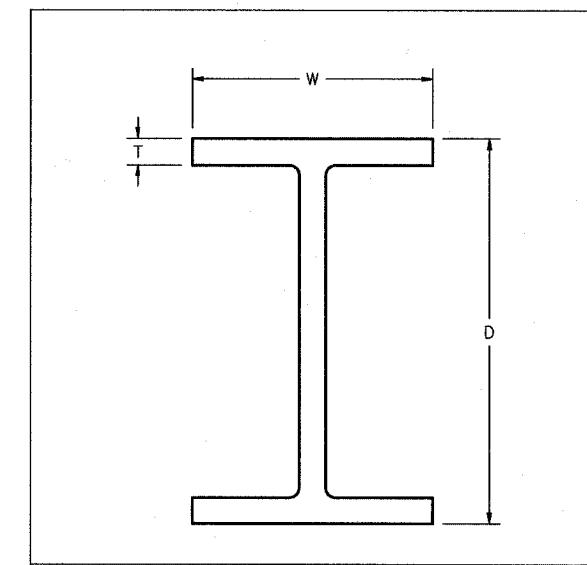
CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT FILE NO. 58199	MAP NO. 2054/1323	DATE 06-18-07	JOB FILED DATE 06-18-07
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	ISSUED RPS	PROJECT FILE NO. EU12-06-04
ISSUED RPS	WORK ORDER NO. 58199	SCALE 1"=30'	COMPLETED BY
ENGINEER RPS	APPROVED	SHEET 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.

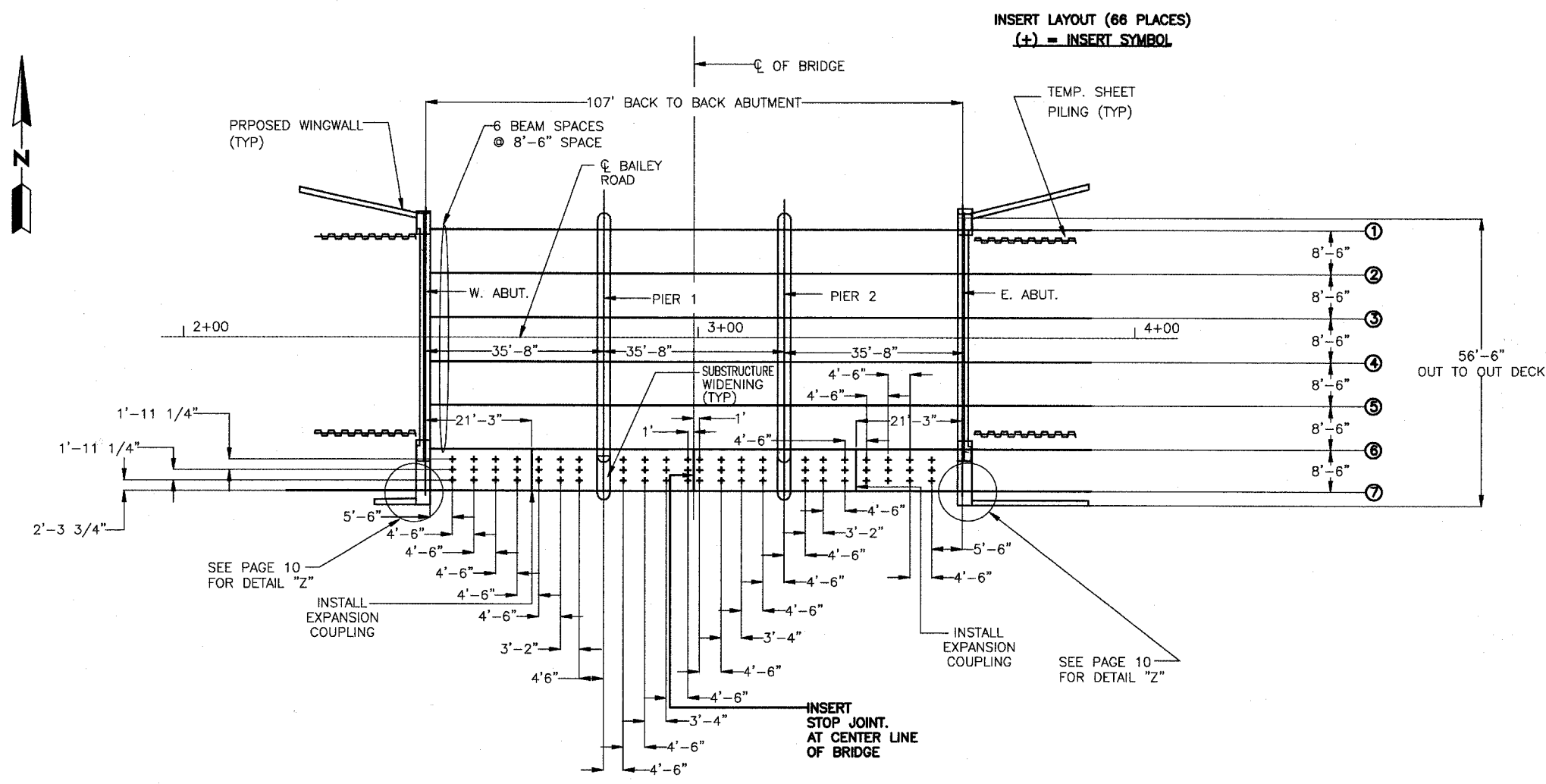
CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL JULIE: 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION		IMP NO. 2054/1323	IMP FILE NO. 205100017200
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT		ISSUED BY JK	PROJECT NO. EU12-06-04
DATE 06-18-07	WORK REPORT NO. 58199	ISSUED BY JK	COMPLETED BY
ISSUED BY RFS	APPROVED BY	SCALE NTS	SHEET 7 OF 23

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		

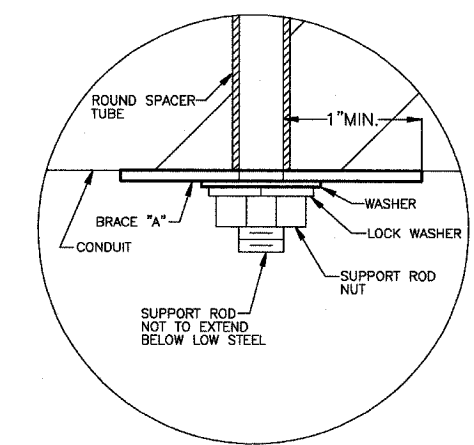
CONTRACT 83961

NOTES:

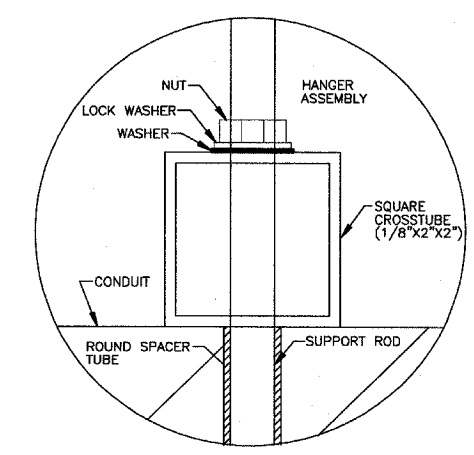
- 1) ALL 3/4 CONCRETE INSERTS WITH SWIVEL NUTS SHALL BE INSTALLED ON THE INSIDE SUPPORT ROD HANGER.
- 2) BRACE ITEM K (PAGE-7) SHALL BE INSTALLED AT 4'-6" SPACING. ON THE OUTSIDE AT BOTH BRIDGE ABUTMENTS.
- 3) ALL INSERTS SHALL BE CHECKED BY VISUAL OBSERVATION AND HAND CHECKED TO BE SURE THAT THE INSERTS 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.



PLAN
(STAGE I SUBSTRUCTURE CONSTRUCTION)
NTS

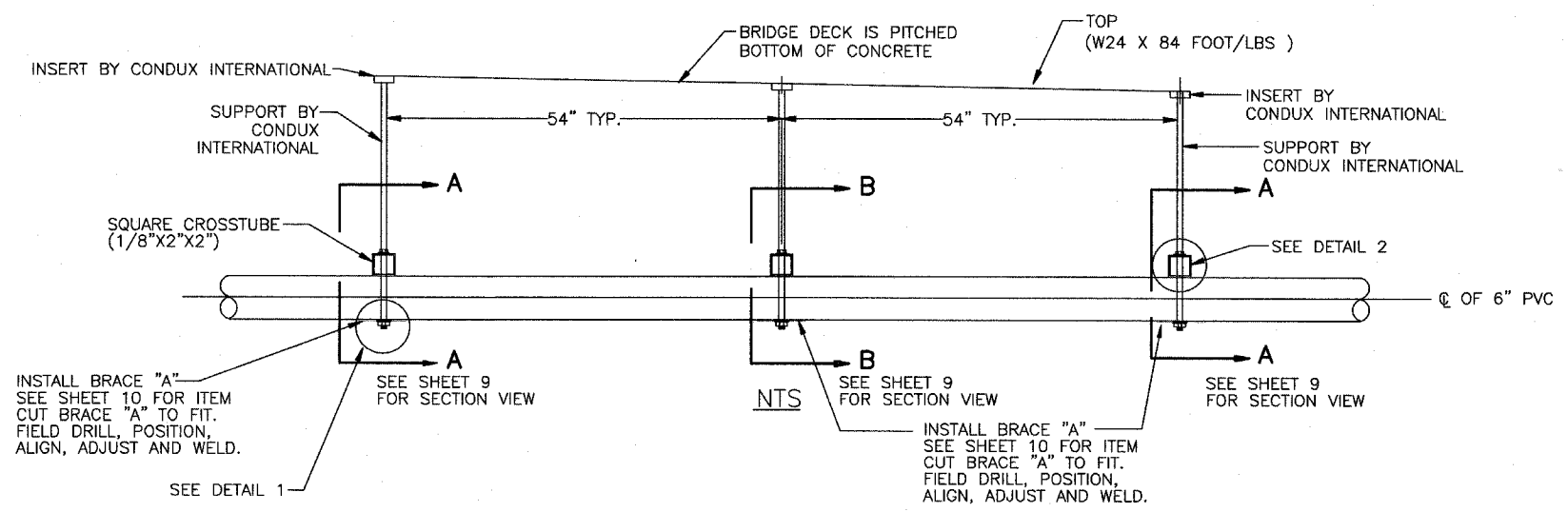


DETAIL 1



DETAIL 2

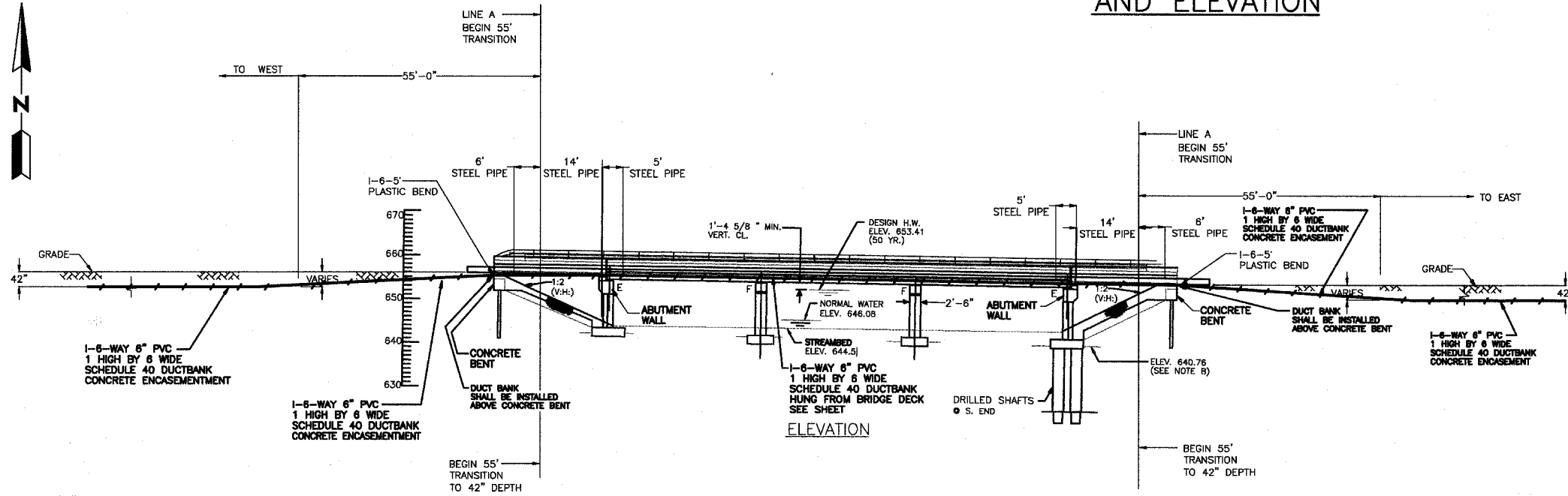
NOTE: SEE PAGE 9 FOR SECTION A-A AND B-B.



CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
CALL J.U.L.I.E. 48 HRS. PRIOR TO CONSTRUCTION			
PROJECT TITLE BAILEY RD. BRIDGE DUCTBANK INSTALLATION	APP NO. 2054/1323	APP FILED DATE 08/18/04	APP FILED NO. 00018001012.DWG
PROJECT NUMBER COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-08-04	DATE 08-18-04
DATE 08-18-04	SCALE 1" = 3'-0"	ENGINEER RPS	58199
ENGINEER RPS	SCALE NTS	DESIGNED BY RPS	58199
REVISIONS	1	2	3

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				



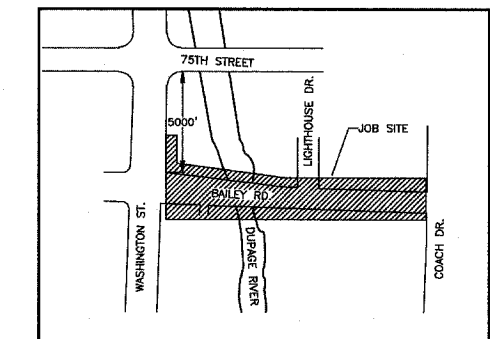
LEGEND

EXISTING UNDERGROUND

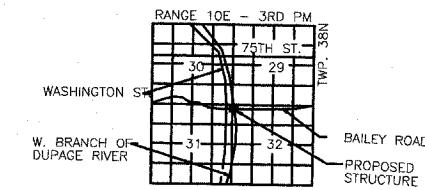
- E-TRAFFIC LIGHT
- E-INLET
- E-STREET LIGHT
- E-TREES

INSTALL UNDERGROUND

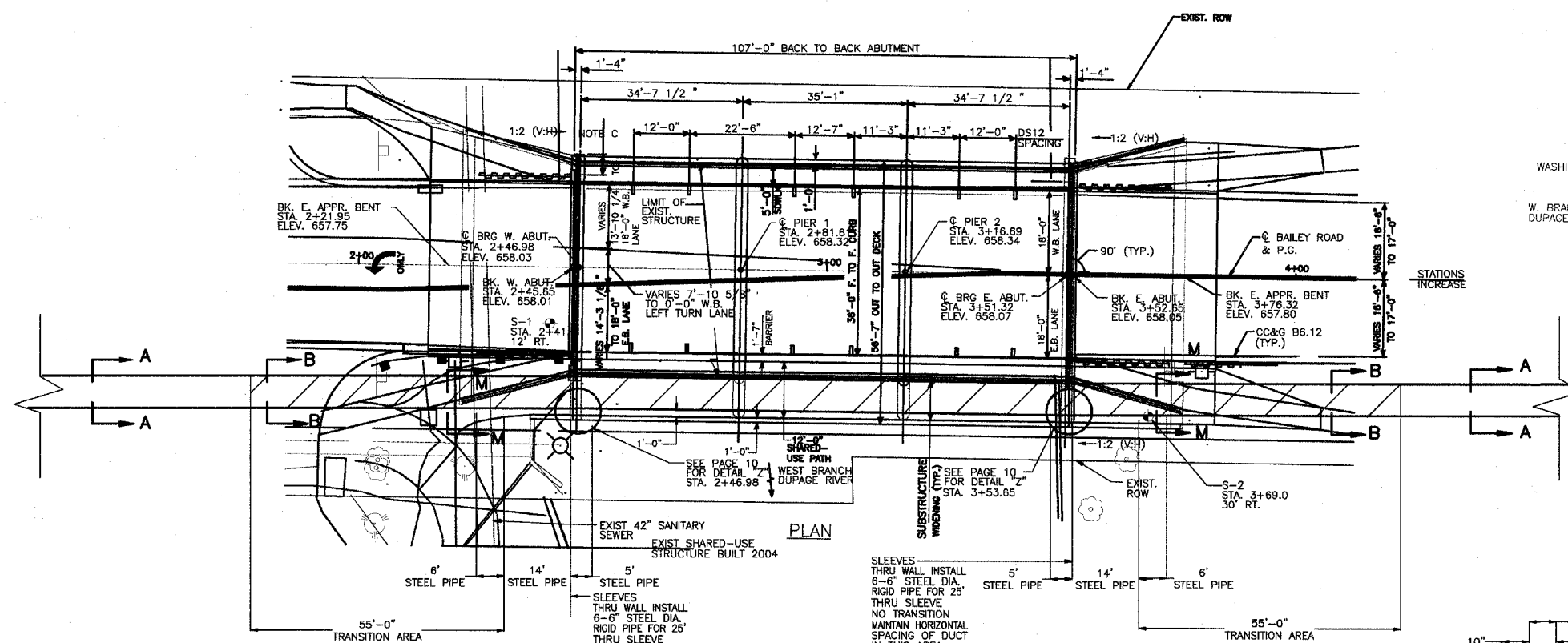
- 1-6-WAY DUCT BANK



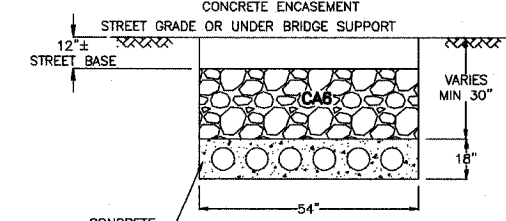
LOCATION MAP
N.T.S.



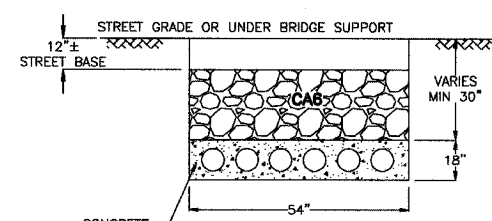
LOCATION SKETCH



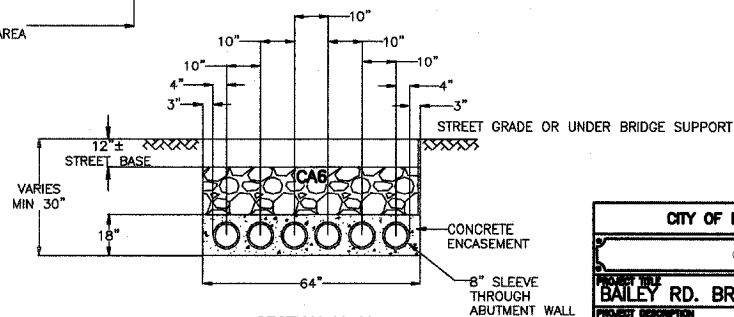
PLAN



SECTION A-A
1-6-WAY 6" PVC
1 HIGH BY 6 WIDE
SCHEDULE 40 DUCTBANK



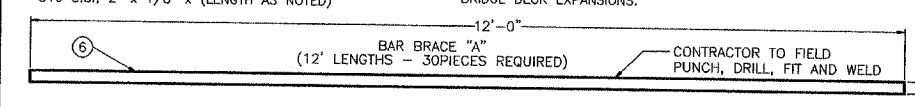
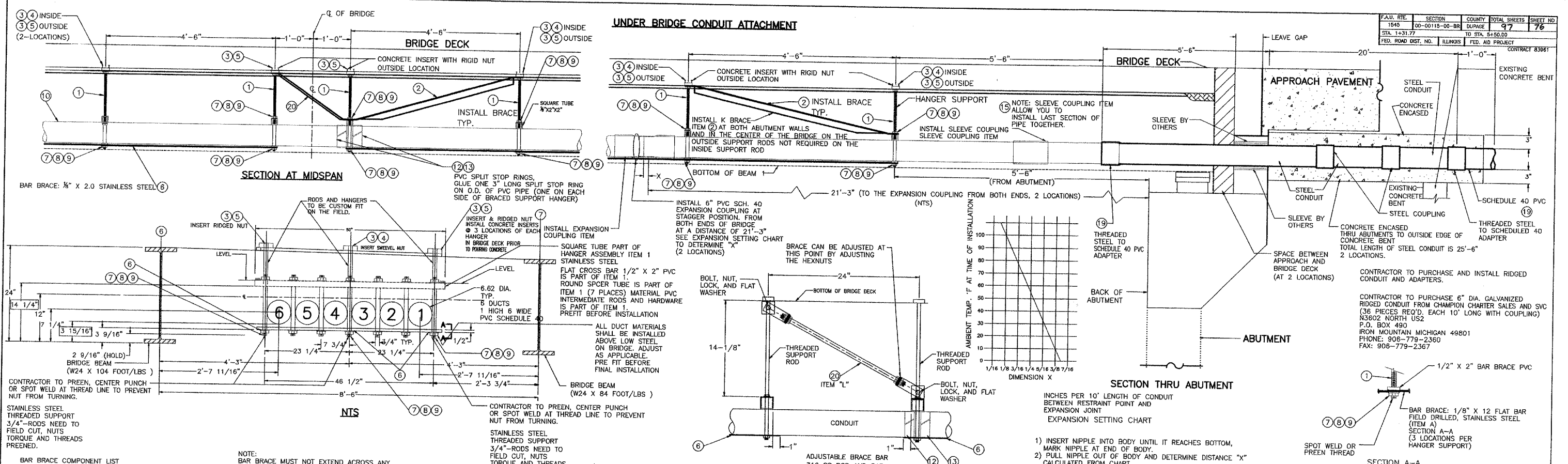
SECTION B-B
1-6-WAY 6" PVC
1 HIGH BY 6 WIDE
SCHEDULE 40 DUCTBANK



SECTION M-M
1-6-WAY 6" PVC
1 HIGH BY 6 WIDE
SCHEDULE 40 DUCTBANK

CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC					
CALL J.U.L.E. 48 HRS. PRIOR TO CONSTRUCTION					
PROJECT NO.	MAP NO.	JOB FILED	DATE	ISSUED	COMPLETED
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	2054/1323	00818000100.DWG		JK	
COORDINATED WITH BRIDGE IMPROVEMENT					
DATE	BY	WORK NUMBER	CHG.	ISS.	COMPLETED
		58199			
ENGINEER	SCALE	SHEET		OF	
	NTS	1		9 OF 23	

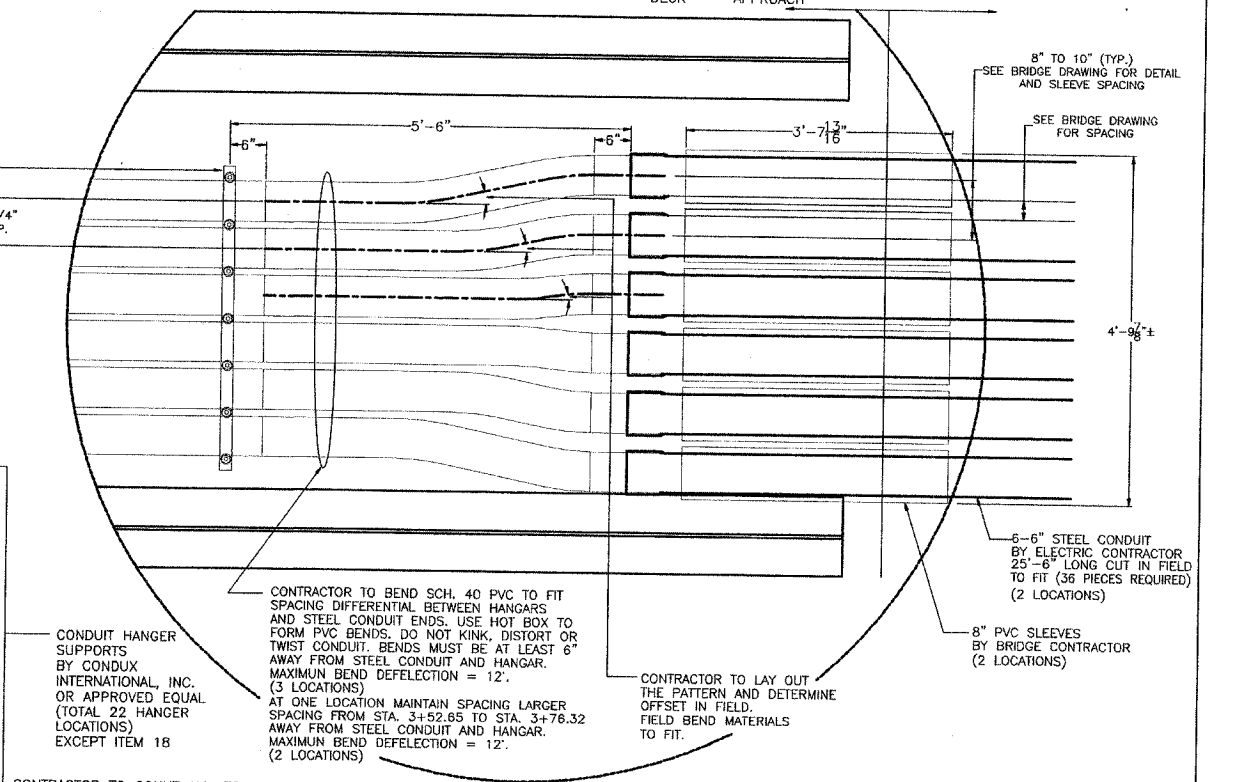
UNDER BRIDGE CONDUIT ATTACHMENT



- BEGIN AT ONE ABUTMENT BY INSTALLING AN ADAPTER COUPLING ONTO THE CONDUIT THAT IS PROTRUDING FROM THE ABUTMENT. THIS CONDUIT IS THREADED STEEL.
- 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.
- 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.
- 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 SPIGOT 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, THE NIPPLE SHOULD BE ADJUSTED TO THE HALFWAY POINT OF THE SLEEVE AND SUBSEQUENTLY ASSEMBLED TO THE END OF THE NEXT CONDUIT SECTION.
- 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.
- NO EXPANSION JOINT SHOULD BE CLOSER THAN 12 INCHES TO ANY SUPPORT. THE IDEAL LOCATION IS 1/4 THE DISTANCE TO THE NEXT SUPPORT.
- 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 CAN BE WRAPPED OR TAPE CAN BE USED TO HOLD THE STOP RINGS IN PLACE UNTIL THE EPOXY HAS CURED.
- IF IT IS CONVENIENT AT THIS TIME TO INSTALL THE ANCHOR POINT BRACING ITEM "K" AND ITEM "L" BETWEEN THE ANCHOR POINT SUPPORT AND THE BRIDGE DECK.
- 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 ONTO ONE OF THE CONDUITS, APPLY EPOXY TO EACH END, PLACE THE ENDS TOGETHER AND 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.
- *THIS PRINCIPLE HOLDS TRUE FOR A TEMPERATURE RANGE OF APPROX. 50°-70°F ACCOUNT FOR YOUR JOBSITE AMBIENT TEMPERATURE WHEN INSTALLING EXPANSION JOINTS.
- CHECK ALL CONNECTIONS, PREEN THREADS, TACK WELD ALL NUTS TO RODS, CHECK LOW STEEL FOR CLEARANCE.
- CONTRACTOR SHALL PROVIDE FALL PROTECTION.

THE CONTRACTOR SHALL FURNISH UNLOAD DELIVER AND INSTALL THE FOLLOWING MATERIALS PER CITY OF NAPERVILLE'S SPECIFICATION FOR W.F. #58199 AT THE BAILEY RD. BRIDGE. MATERIAL LIST FOR BRIDGE WORK. CONDUX INTERNATIONAL, INC. P.O. BOX 247 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 ADJ-BODY M-26 CONCRETE INSERT BODY; M-26	EACH	92	08409925
4	INSERT, CON 3/4 NUT SWIVEL M-26 CONCRETE INSERT SWIVEL NUT; 3/4-10 UNC	EACH	32	08409961
5	INSERT, CON 3/4 NUT RIDGE M-26 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	460'	00166100
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-6.62 SC40-6IN EXPANSION JOINT; 6" SCH 40 WITH O-RING	EACH	12	06101360
12	CPLG, 6.62 ID PVC-STOP COUPLING STOP; 6" SCH 40 PVC	EACH	12	05210080
13	RING, STOP, 6.50 ID-PVC-SCH 40	EACH	12	08501960
14	ADAPTER, 6" PVC TO 6" THREADED FEMALE	EACH	12	08519103
15	CPLG, 6.62 ID PVC-COUPLING SLEEVE; 6" SCH 40 PVC	EACH	12	TBA
16	ADAPTER, 6" PVC TO 6" THREADED FEMALE	EACH	12	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



CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC

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

PROJECT FILE: BAILEY RD. BRIDGE DUCTBANK INSTALLATION

PROJECT DESCRIPTION: COORDINATED WITH BRIDGE IMPROVEMENT

DATE: 05-18-97

ENGINEER: RPS

58199

DATE: 05-18-97

ENGINEER: NTS

NO. 2054

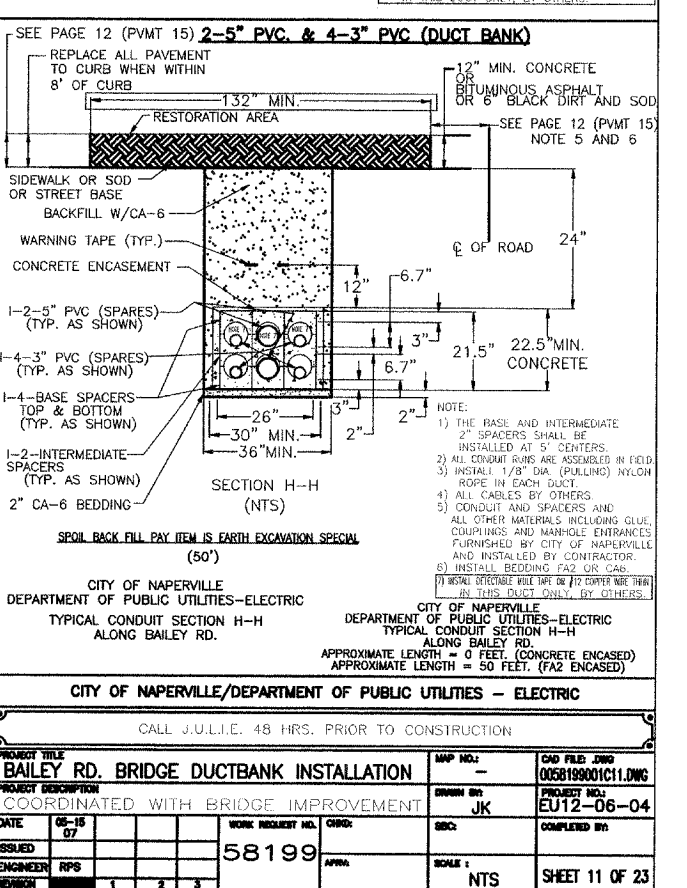
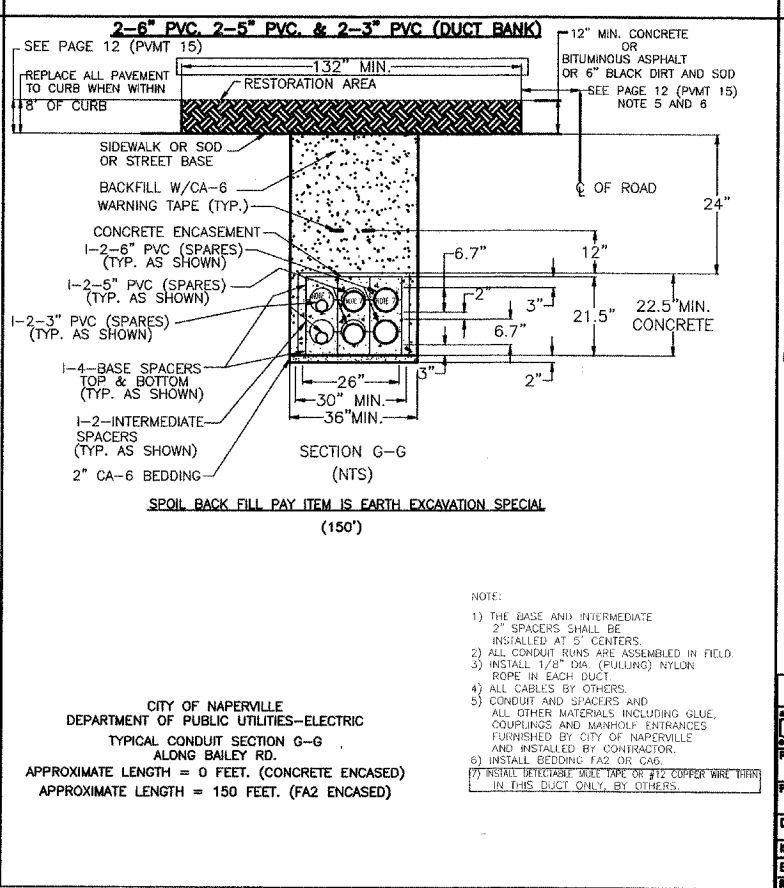
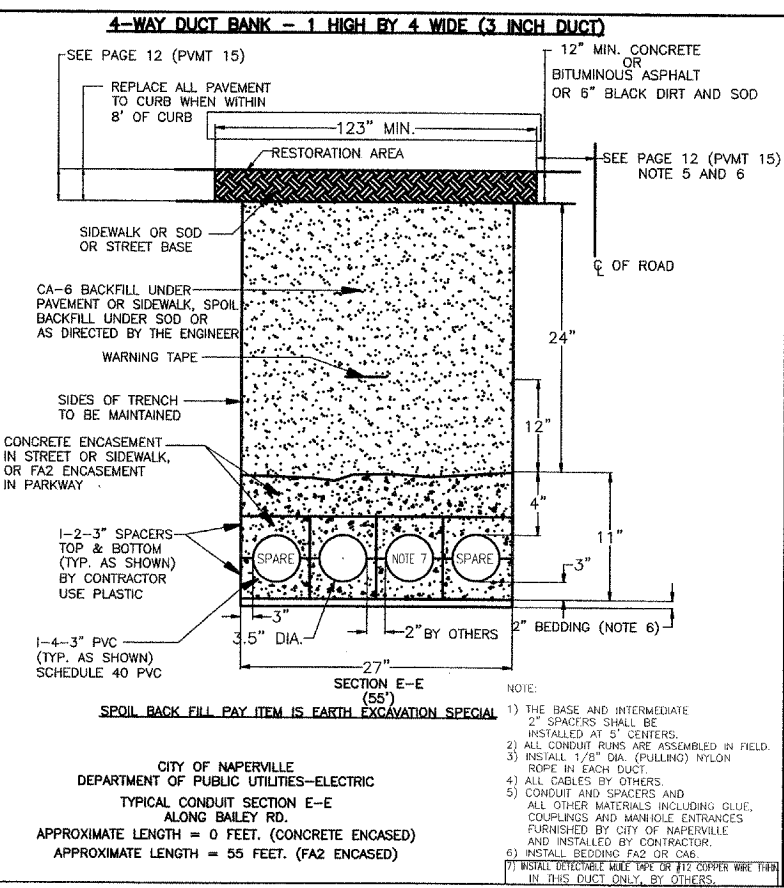
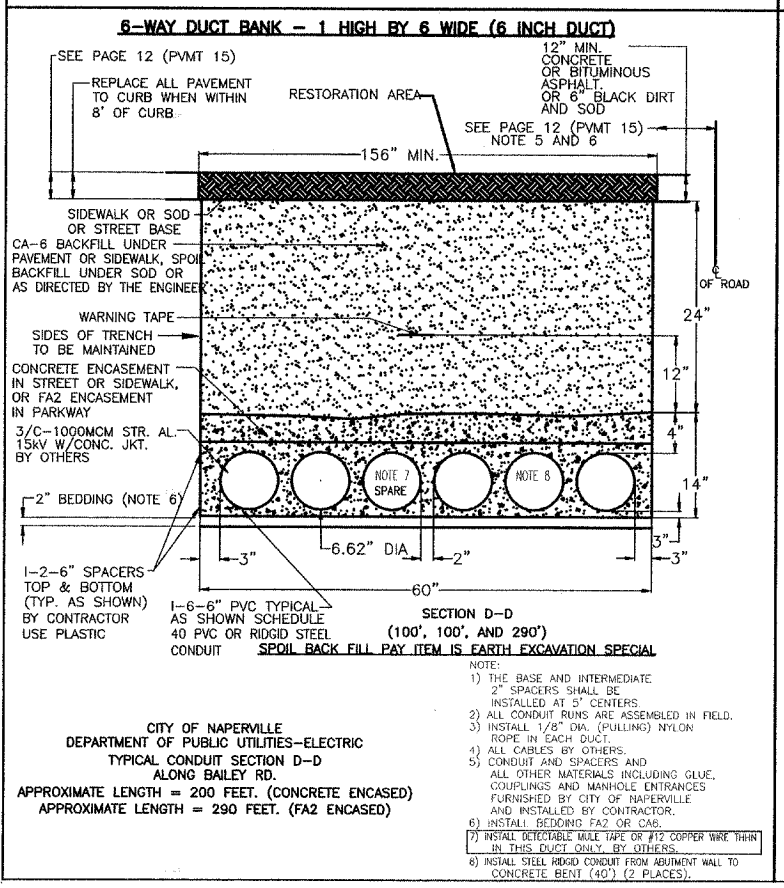
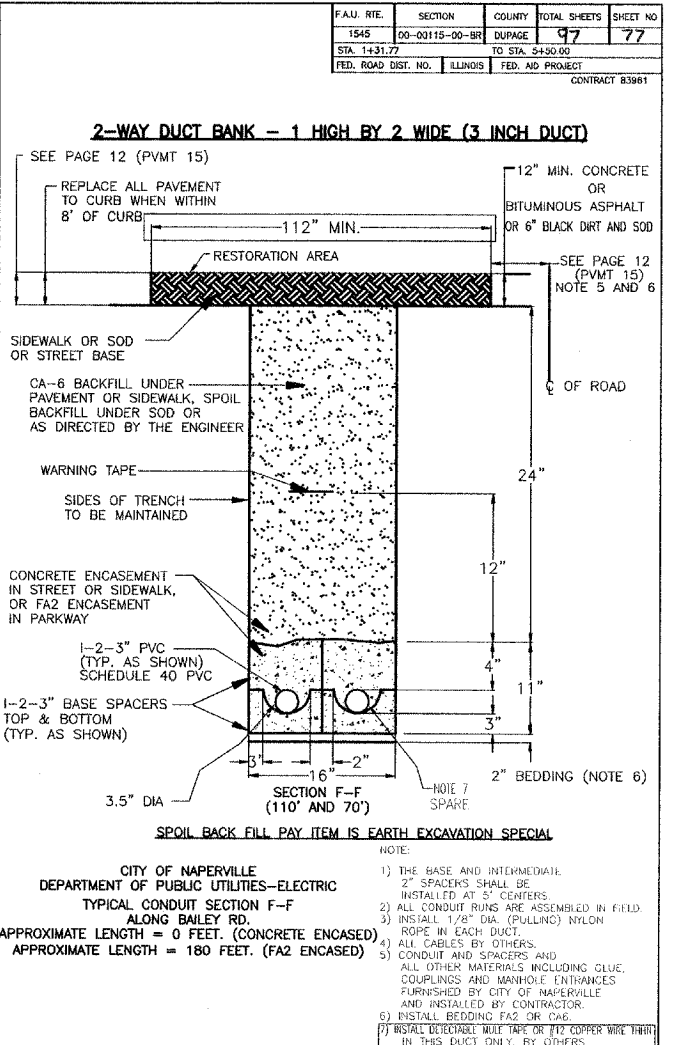
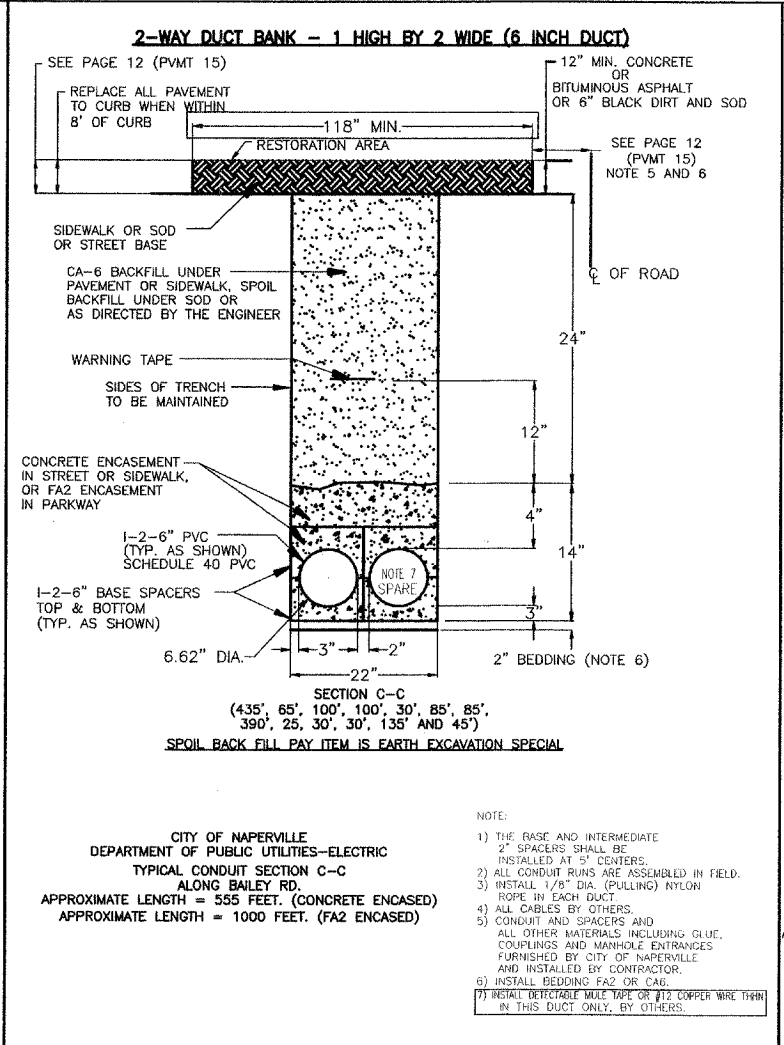
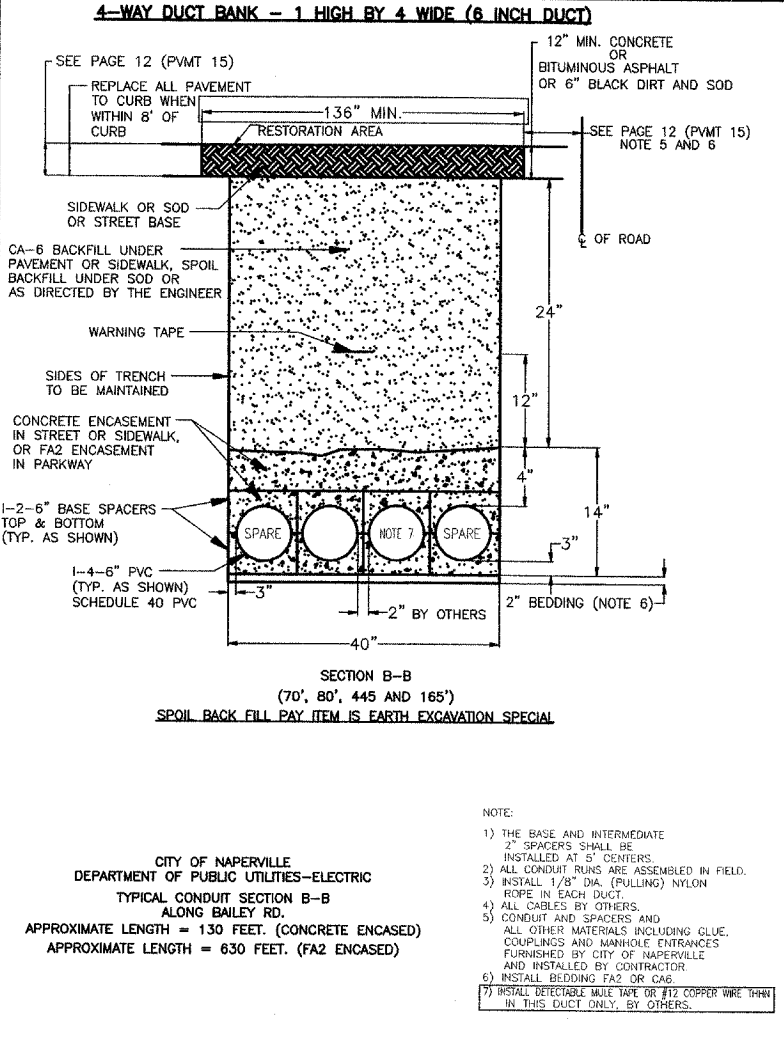
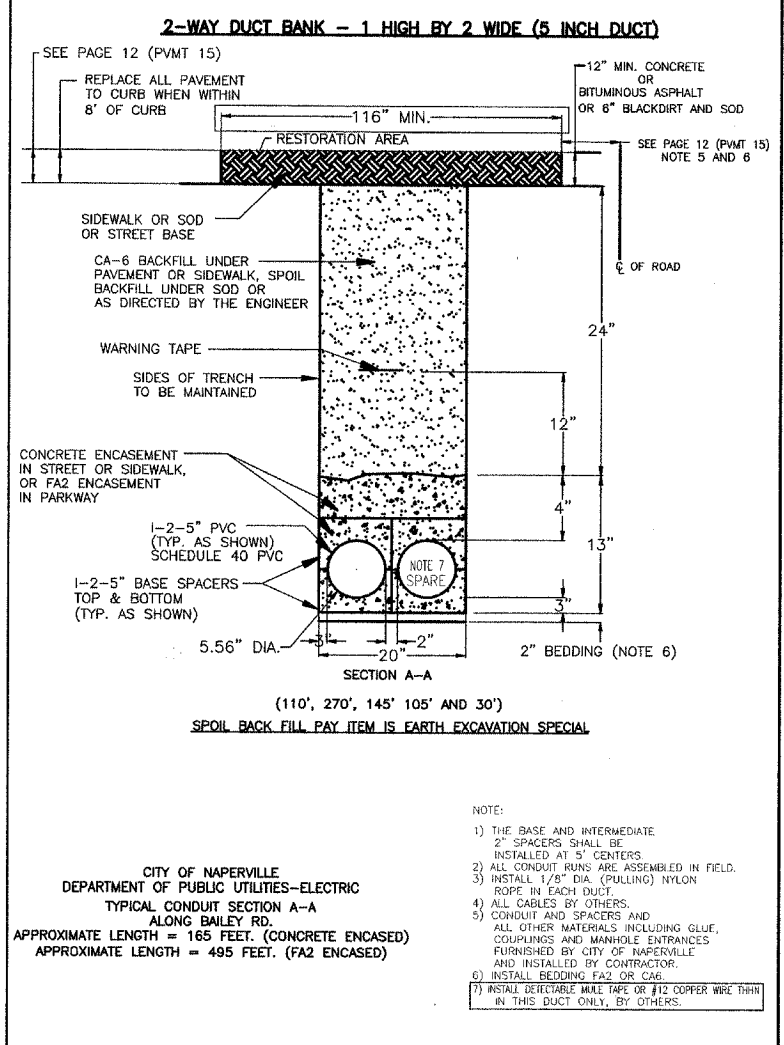
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NO. EU12-06-04

NO. 58199

NO. NTS

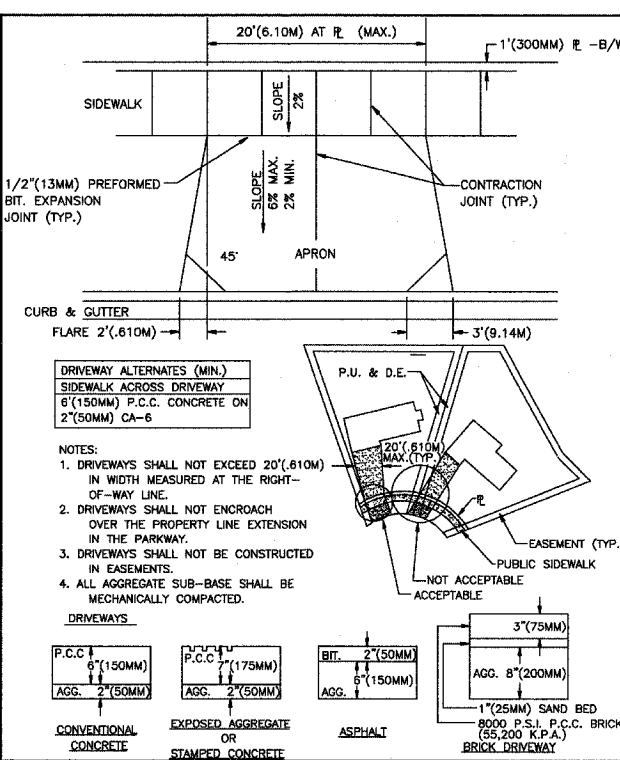
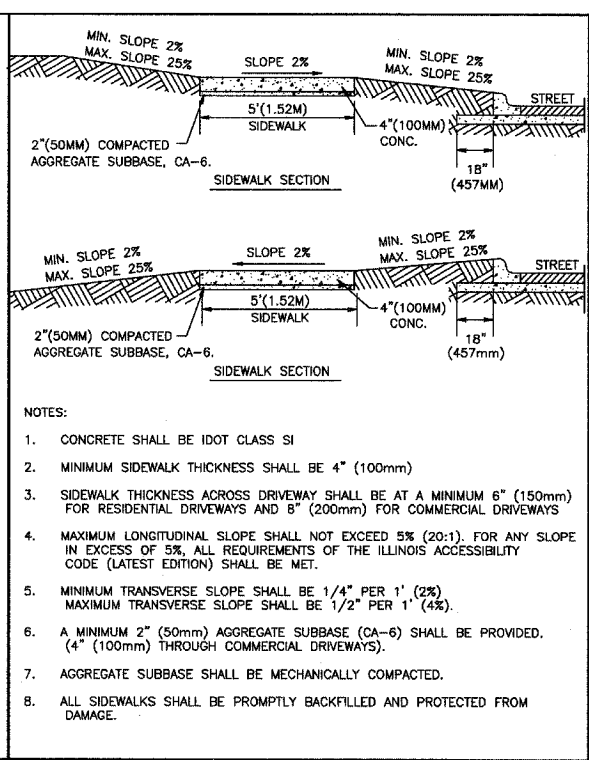
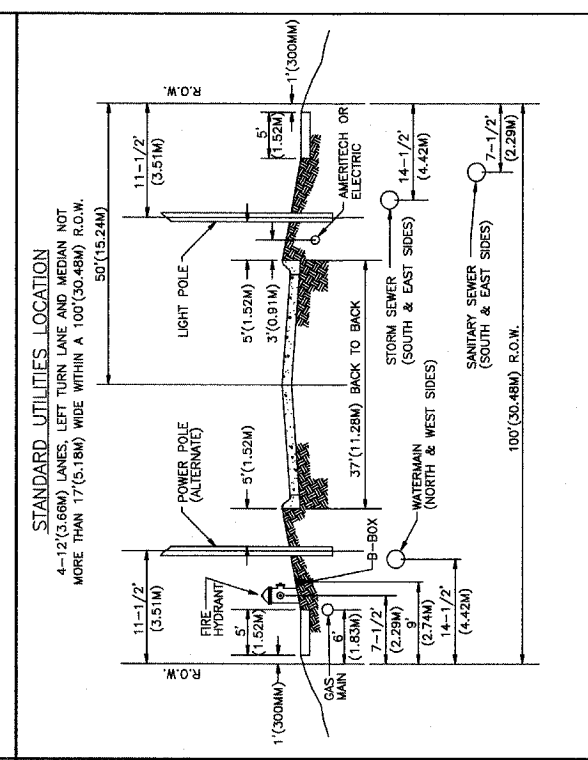
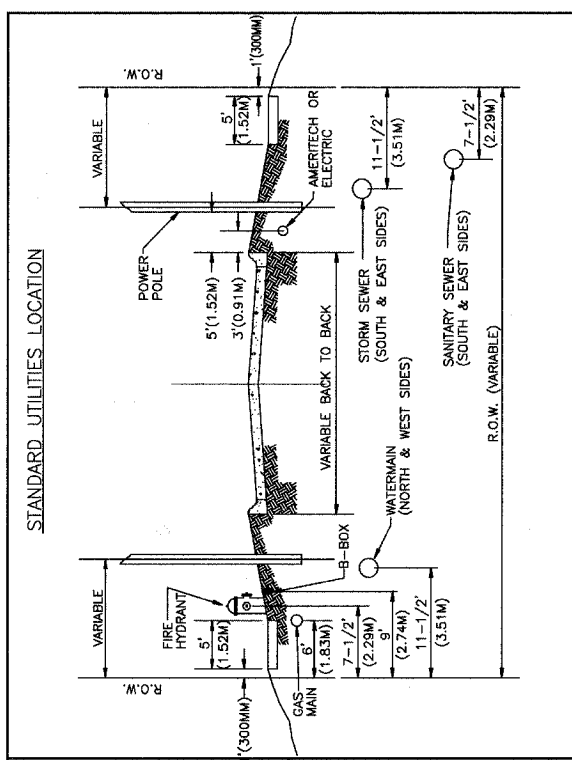
SHEET 10 OF 23



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	-	06B199001C11.DWG	06-15-07
PROJECT DESCRIPTION	DRAWN BY	PROJECT NO.	ISSUED
COORDINATED WITH BRIDGE IMPROVEMENT	JK	EU12-06-04	58199
DATE	WORK REQUEST NO.	ORIG.	SCALE
06-15-07			NTS
ENGINEER	APPROV.	SCALE	SHEET
RPS		NTS	11 OF 23

10/04/07

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	

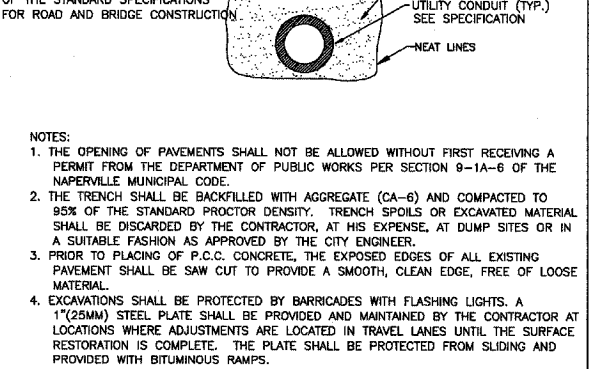
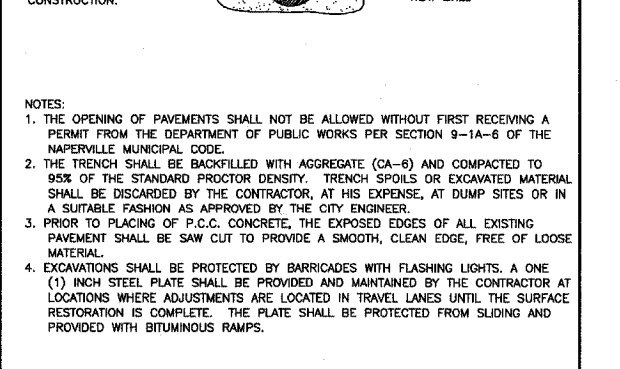
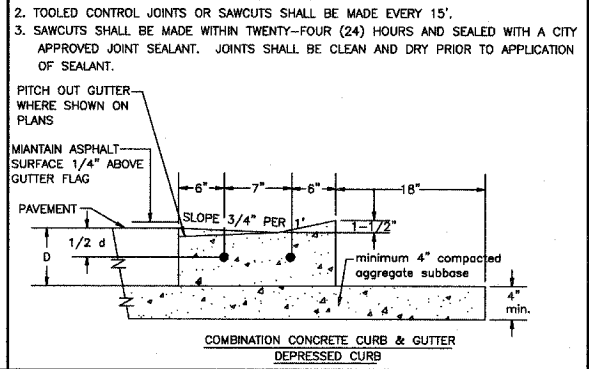
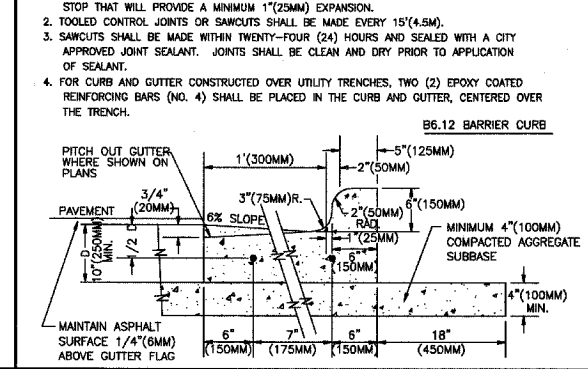
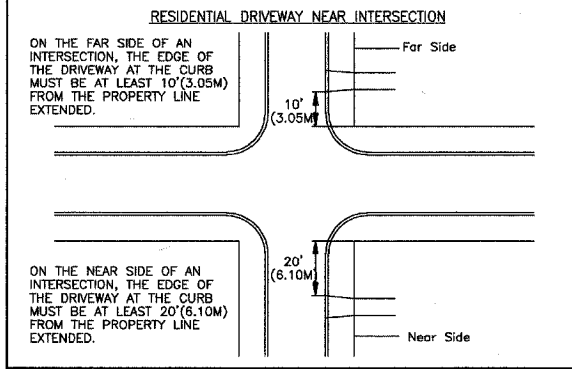
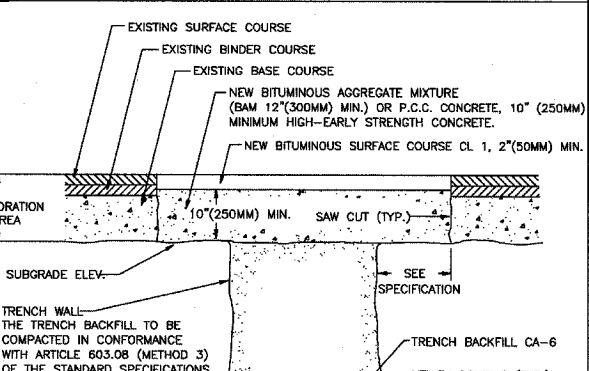
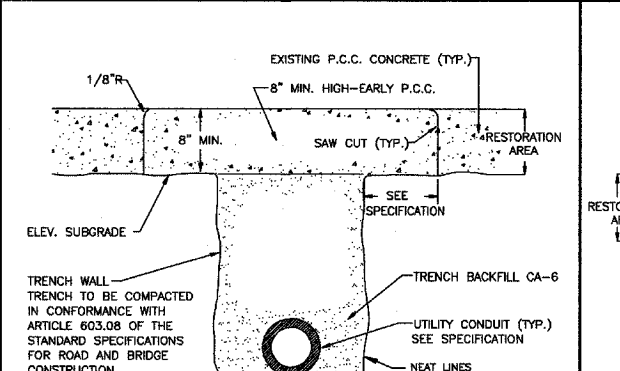
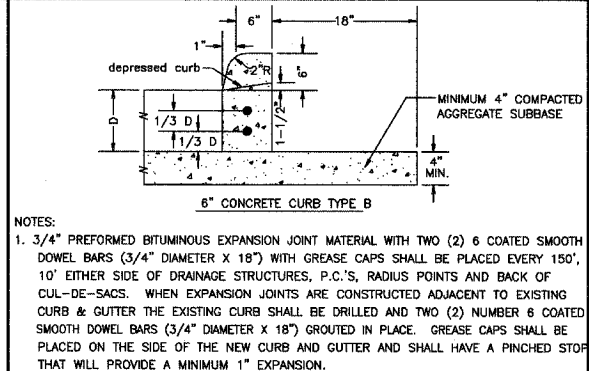
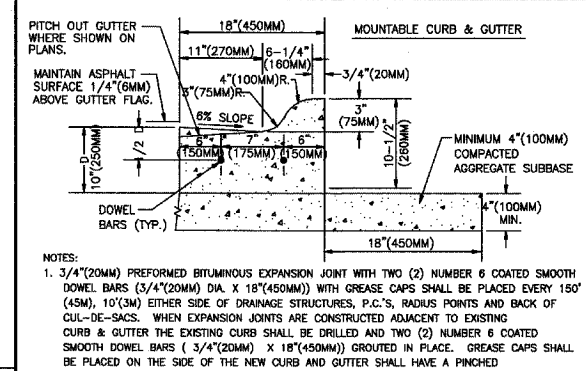
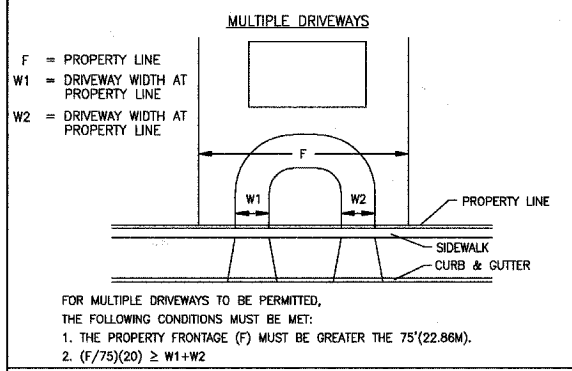


STANDARD UTILITIES LOCATION
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 1 OF 2 Detail: MISC 1

STANDARD UTILITIES LOCATION
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 2 OF 2 Detail: MISC 1

SIDEWALK
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 1 OF 2 Detail: PMVT 3

TYPICAL RESIDENTIAL DRIVEWAY DETAIL
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 1 OF 2 Detail: PMVT 9



TYPICAL RESIDENTIAL DRIVEWAY DETAIL
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 2 OF 2 Detail: PMVT 9

CURB & GUTTER
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 2 OF 2 Detail: PMVT 11

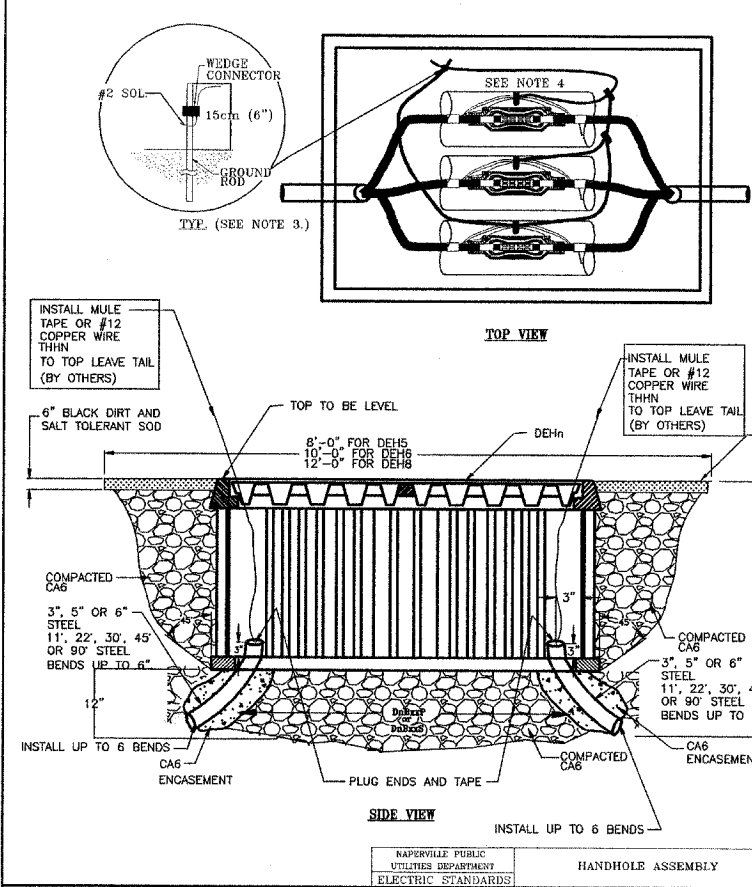
Curb & Gutter
City of Naperville Standard Detail
Scale: N.T.S. Date: 11/13/94 Detail: PMVT 12

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

UTILITY TRENCH PAVING SECTION THROUGH EXISTING FLEXIBLE PAVEMENTS
CITY OF NAPERVILLE STANDARD DETAIL
Approved By: DATE: 6/21/98 REV: SHEET 1 OF 2 Detail: PMVT 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 FILE	IMP NO.	OP FILE NO.	
BAILEY RD. BRIDGE DUCTBANK INSTALLATION		00061900012.DWG	
PROJECT DESCRIPTION	ISSUED BY	PROJECT NO.	
COORDINATED WITH BRIDGE IMPROVEMENT		EJ12-06-04	
DATE: 05-19-97	WORK REQUEST NO.:	ISSUED BY:	COMPLETED BY:
ISSUED BY: NTS	58199		
ENGINEER: NTS	SCALE:	DATE:	SHEET 12 OF 23



CODE	QTY	DESCRIPTION
DEHn	1	SPLICE BOX
DnBxxP	**	BEND, PVC
DnBxxS	**	BEND, STEEL
UGHn	1	GROUNDING HANDHOLE

n dependent on size
 ** 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.
 - EXCAVING 12' LONG BY 6' DEEP BY 6' WIDE.
 - BACK FILL WITH COMPACTED CA6.
 - CUT HANDHOLE TO INSTALL PIPE.
 - ALL MATERIALS BY THE CITY.
 - CABLE WORK NOT REQUIRED.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 HANDHOLE ASSEMBLY
 DATE: 04-07-04
 Page 1 of 2
 C30-6336

DEHn: HANDHOLE (SPLICE BOX)

Item Code	Description 1	Description 2	QTY	QTY	QTY	QTY
284 104 00010	HANDHOLE	36" X 60" X 36"	1			
284 104 00030	HANDHOLE	48" X 78" X 36"		1		
284 104 00030	HANDHOLE	48" X 96" X 36"			1	
284 104 00040	HANDHOLE ADJUSTABLE	48" X 96" X 36"				1

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 00050	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 00080	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 00220	ELBOW 48"R PVC 30 DEG 6"	SCH 40	1
D6B45P	285 101 00250	ELBOW 48"R PVC 45 DEG 6"	SCH 40	1
D6B90P	285 101 00240	ELBOW 48"R PVC 90 DEG 6"	SCH 40	1

D3BxxS: BEND, 3" STEEL

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

D5BxxS: BEND, 5" STEEL

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

D6BxxS: BEND, 6" STEEL

Item Code	Description 1	Description 2	D6B11S	D6B22S	D6B30S	D6B45S	D6B90S
285 101 00186	ELBOW 48"R STL 11 DEG 6"	GALVANIZED	1				
285 101 00188	ELBOW 48"R STL 22.5 DEG 6"	GALVANIZED		1			
285 101 00190	ELBOW 48"R STL 30 DEG 6"	GALVANIZED			1		
285 101 00200	ELBOW 48"R STL 45 DEG 6"	GALVANIZED				1	
285 101 00210	ELBOW 48"R STL 90 DEG 6"	GALVANIZED					1
285 102 00140	COUPLING, PVC 6"	LONG LINE SCH 40	1	1	1	1	1

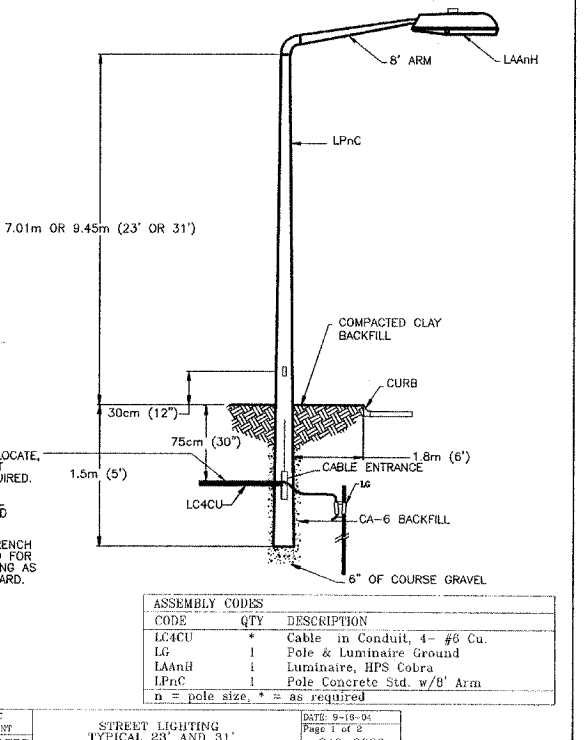
UGHn: GROUNDING, HANDHOLE

Item Code	Description 1	Description 2	UGH1	UGH3
280 107 00020	CU BARE SD	#2 SOL	10	30
283 150 00010	GROUND ROD COPPER CLAD	5/8" X 10'	1	1
286 100 00020	CONNECTOR, WEDGE CU	4/8 STR(7) - 5/8" ROD	1	1
286 101 00010	SHILL, WEDGE AMP	BLDE	1	1
286 109 00210	CONNECTOR, BREAK-AWAY CU	2SOL-2/OSTR X 2SOL-2/OSTR		2

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 HANDHOLE ASSEMBLY
 DATE: 04-07-04
 Page 2 of 2
 C30-6336

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- #8 Cu.
LG	1	Pole & Luminaire Ground
LAnH	1	Luminaire, HPS Cobra
LPnC	1	Pole Concrete Std. w/6' Arm

n = pole size, * = as required

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 STREET LIGHTING TYPICAL 23' AND 31'
 DATE: 9-19-04
 Page 1 of 2
 C40-3030

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 CONFINED 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 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 AREA'S. 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 THAN 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 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 1A, 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. SEEDED 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 36 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 SEEDED AND WATERED. THE SEED IS TO BE MIXED IN THE FOLLOWING PROPERTIES:

40 LBS. KENTUCKY BLUE GRASS PLUS FERTILIZER PER IDOT REQUIREMENTS.
 40 LBS. ALTA FESCUE 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 SEEDED AREAS SHALL BE MOWED 4 TIMES TO A HEIGHT OF 3 INCHES. THE CUT MATERIAL SHALL NOT BE SHOWN ROWED OR LEFT IN A LUMPY CONDITION BY EVENLY DISTRIBUTED. AREAS BEYOND THE WORK AREA LIMITS WITHIN 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, SEEDED 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 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 SEEDED 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	MAP NO.	CAD FILE	PROJECT NO.
BAILEY RD. BRIDGE DUCTBANK INSTALLATION	-	0058199001C13.DWG	EU12-06-04
PROJECT DESCRIPTION	DRAWN BY	DATE	ISSUED
COORDINATED WITH BRIDGE IMPROVEMENT	JK	05-18-07	58199
DATE	WORK REQUEST NO.	CHG.	SEC.
05-18-07	58199		
ISSUED	APPROV.	SCALE	SHEET
APR 18 2007		NTS	13 OF 23

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 SODDING AND SEEDING WORK ON CITY PROPERTY OVERHEAD OR UNDERGROUND CONSTRUCTION (CONSTRUCTION SPECIFICATION)
 DATE: 05-01-05
 Page 1 of 3
 58199-100

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 SODDING AND SEEDING WORK ON CITY PROPERTY OVERHEAD OR UNDERGROUND CONSTRUCTION (CONSTRUCTION SPECIFICATION)
 DATE: 05-01-05
 Page 2 of 3
 58199-100

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 SODDING AND SEEDING WORK ON CITY PROPERTY OVERHEAD OR UNDERGROUND CONSTRUCTION (CONSTRUCTION SPECIFICATION)
 DATE: 05-01-05
 Page 3 of 3
 58199-100

10/04/07

FAU. 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 AS 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.

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.

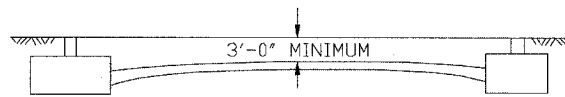
THE MINIMUM GRADE FOR A CONDUIT RUN SHALL BE 1 INCH PER 100 FT. ALL GRADES SHALL BE ESTABLISHED WITH A LEVEL BY THE CONTRACTOR'S ENGINEER AND MARKED BY WOODEN GRADE STAKES ON THE CENTER LINE OF THE BOTTOM OF THE TRENCH. THE STAKES SHALL BE SET 5 FT. APART WHEN CONCRETE CONDUIT IS TO BE INSTALLED AND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

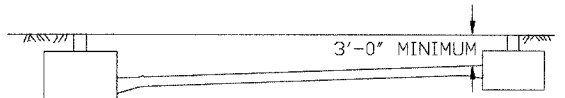
DOUBLE SLOPE GRADING

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.



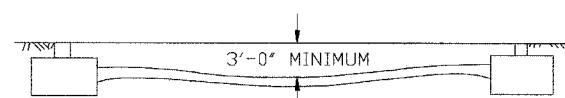
SINGLE SLOPE GRADING

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 DEPRESSED, 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.

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 DEPRESSED 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 6 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 1 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, ANY 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 1 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.

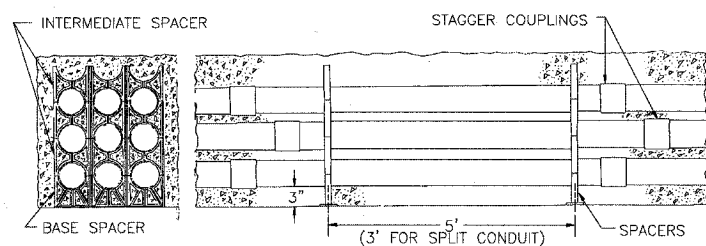
WHEREVER POSSIBLE, ALL CONCRETE MATERIALS AND ALL REINFORCEMENT, FORMS, FILLERS AND GROUND WITH WHICH CONCRETE IS TO COME IN CONTACT SHOULD BE FREE FROM FROST.

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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. -	CON. FILE NO. 0058199001C14.DWG	
DATE 08-07	WORK NUMBER NO. 58199	DESIGNER JK	PROJECT NO. EU12-06-04
ISSUED	APPROVED	SCALE NTS	COMPLETED BY
ENGINEER RFS			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 8 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 MANDRELLED, 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 MANDRELLED. CONDUIT RUNS CONTAINING OR TERMINATING IN SMALL RADIUS BENDS THAT WILL NOT PERMIT THE PASSAGE OF A STANDARD SIZE MANDREL, SHALL BE MANDRELLED THROUGH THEIR STRAIGHT PORTION PRIOR TO THE CONSTRUCTION OR INSTALLATION OF THE BENDS. THE MANDRELING 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 MANDRELING 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.

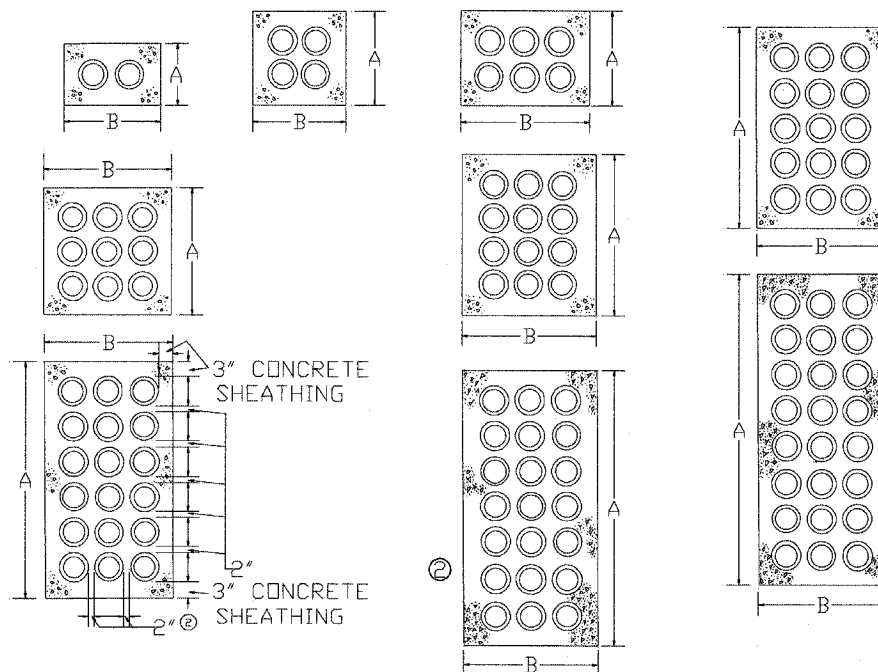
THE OUTER SHEATHING ALL AROUND SHALL BE 4 INCHES THICK.

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

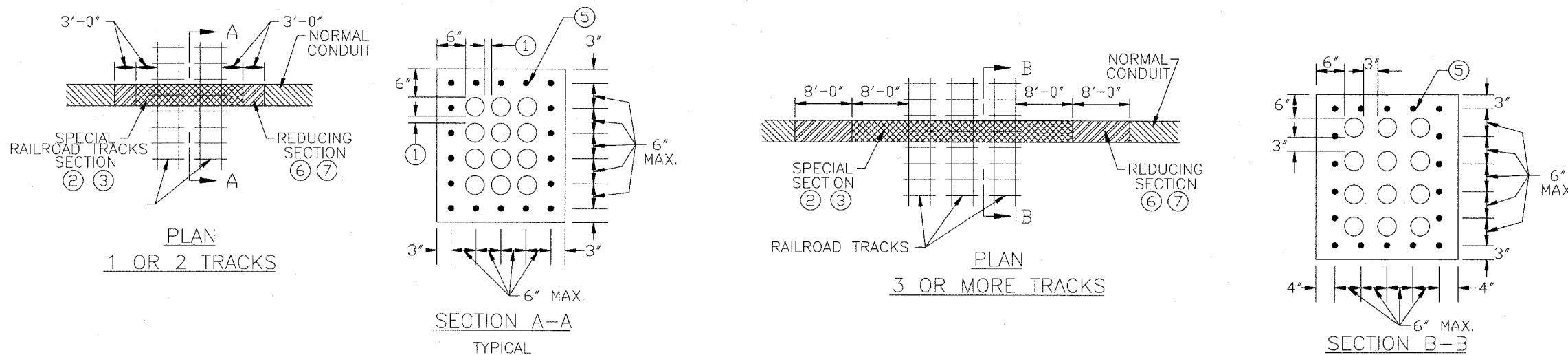
- THIS STANDARD COVERS THE ARRANGEMENT OF THE CONDUIT IN CONDUIT RUNS AND LATERALS.
- THE SEPARATION BETWEEN CONDUITS SHALL BE 2" INCHES. CONCRETE SHEATHING SHALL BE 3" INCHES THICK EXCEPT WHERE A CONDUIT RUN IS UNDER RAILROAD SWITCH TRACKS OR MAIN LINE RAILROAD TRACKS. THEN THE SHEATHING SHALL BE AS SHOWN ON PAGE 7.
- 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

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

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-06 PAGE 7 OF 11 C30-1900
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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. -	CAD FILE NO. 005819001C15.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EUT2-06-04	
DATE 05-15-07	WORK PERMIT NO. 58199	ISSUED BY RPS	COMPLETED BY
ENGINEER RPS	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 WATER-TIGHT 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 CROUT THE PIPES IN PLACE WITH A SAND AND CEMENT MORTAR. THE INSIDE SURFACE OF THE HOLES SHALL BE ROUGHENED TO OBTAIN A STRONG AND WATER-TIGHT BOND.

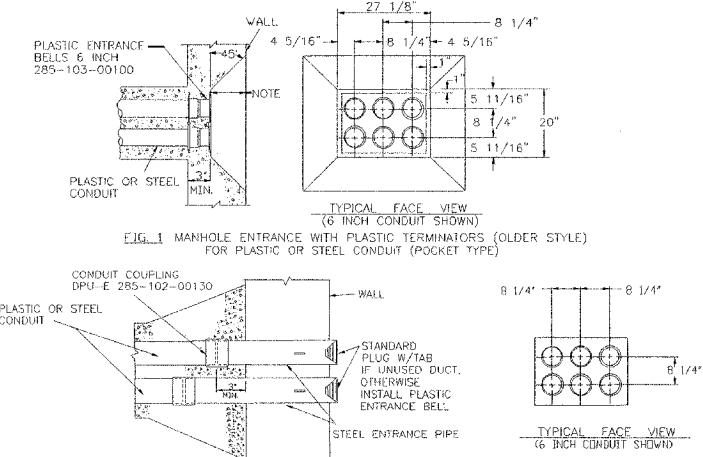


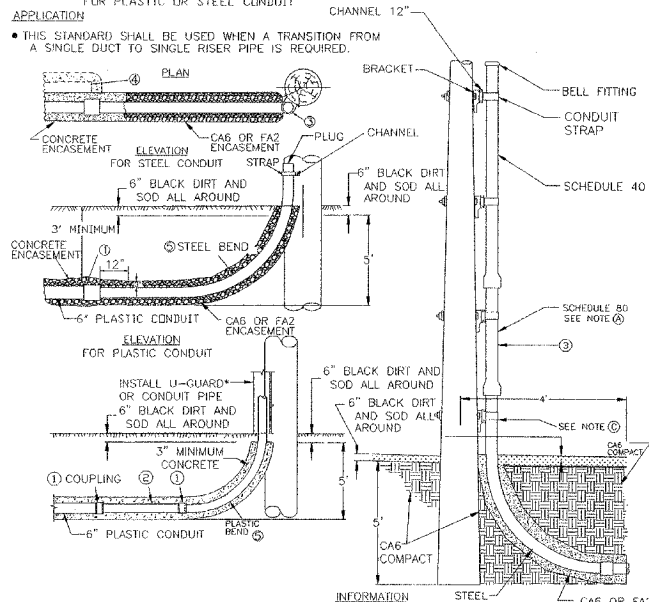
FIG. 1 MANHOLE ENTRANCE WITH PLASTIC TERMINATORS (OLDER STYLE) FOR PLASTIC OR STEEL CONDUIT (POCKET TYPE)

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

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-08 PAGE 9 OF 11 C30-1900
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CONDUIT TO RISER AT POLE

DUCTBANK CONDUIT TO RISER AT POLE FOR PLASTIC OR STEEL CONDUIT



APPLICATION: THIS STANDARD SHALL BE USED WHEN A TRANSITION FROM A SINGLE DUCT TO SINGLE RISER PIPE IS REQUIRED.

NOTES:

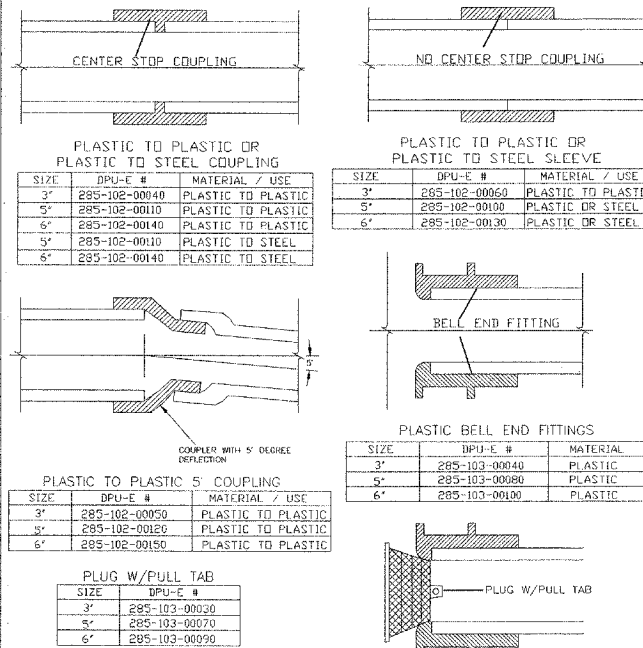
- IF BELLED END OF PLASTIC CONDUIT CAN BE CONNECTED TO STEEL BEND OMIT COUPLING.
- FIELD CUT SO THAT A GOOD CONNECTING FIT CAN BE MADE BETWEEN THE CONDUITS AND BENDS.
- LOCATE THE BEND ON A QUADRANT OF THE POLE WHERE IT IS THE LEAST SUSCEPTIBLE TO DAMAGE BY VEHICLES.
- IF SPARE DUCT IS INSTALLED, PLUG 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.

INFORMATION:

- 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.

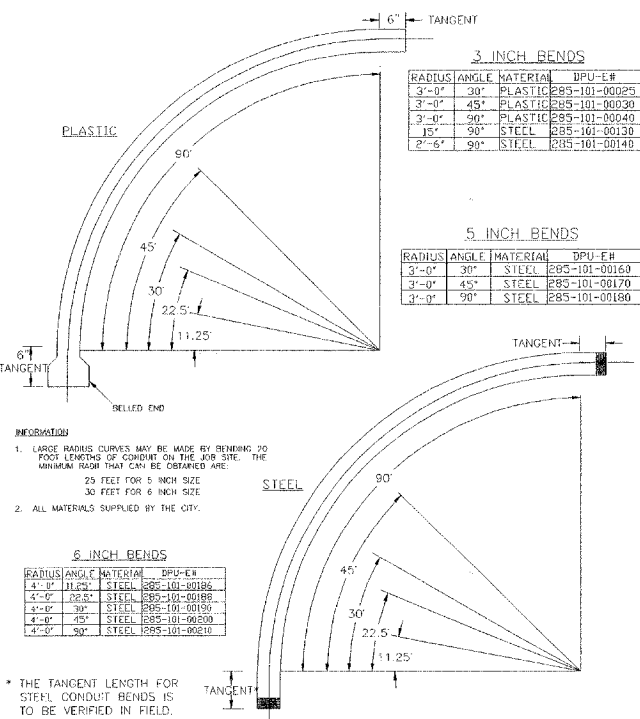
NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-08 PAGE 9 OF 11 C30-1900
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PLASTIC CONDUIT COUPLINGS FOR CONCRETE ENCASED PLASTIC CONDUIT



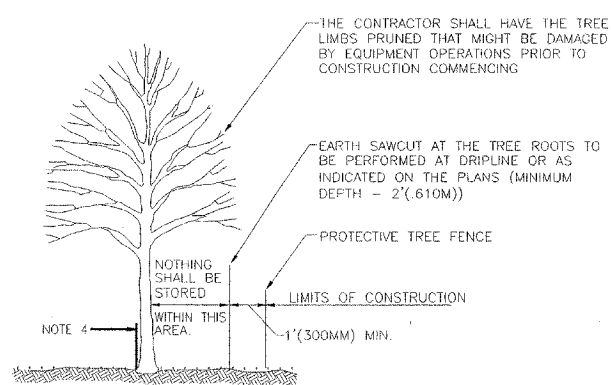
NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	DUCTBANK CONSTRUCTION SPECIFICATION	DATE: 08-22-08 PAGE 10 OF 11 C30-1900
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PLASTIC & STEEL CONDUIT BENDS FOR VARIOUS CONDUIT BENDS, UP TO 90 DEGREE ANGLES



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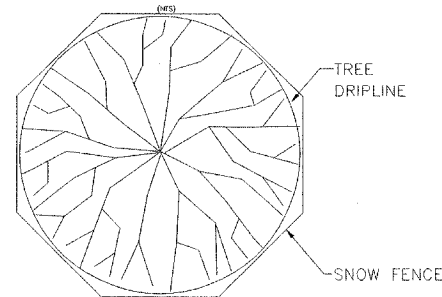
TREE PROTECTION DETAIL



- 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 ELECTRIC STANDARDS	TREE PROTECTION DETAIL	DATE: 05-01-08 PAGE 1 OF 1 58199-101
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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 ELECTRIC STANDARDS	RECOMMENDED PRACTICES FOR TREES TO BE SAVED	DATE: 05-01-08 PAGE 1 OF 1 58199-102
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	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	9390	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 8" 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 (BY OTHERS)	450-024-00010	D0T	0	REEL
BLOW LINE, 6,500' IN PAILS/ 200# BREAK STRENGTH (BY OTHERS)	450-024-00006	DOM	0	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 BAILEY RD. BRIDGE DUCTBANK INSTALLATION	W/P NO. -	OID FILE NO. 0058199001C16.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-06-04	
DATE 06-18-07	WORK REQUEST NO. 58199	ISSUED RPS	COMPLETED BY
ISSUED ENGINEER	APPROVED	SCALE NTS	SHEET 16 OF 23

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	83
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT 83961

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)

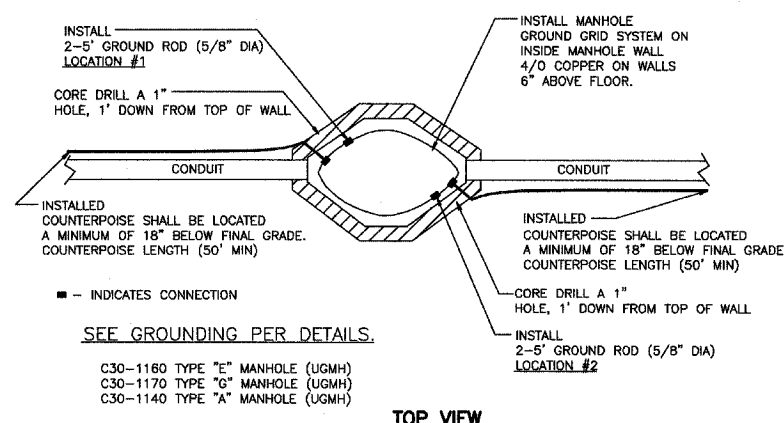
TESTS SHALL BE PERFORMED WHEN THE GROUND IS NOT FROZEN TO ELIMINATE HIGH RESISTANCE READINGS IN THE MANHOLES. THE CLAMP ON TEST SHALL BE DONE AT EACH GROUND ROD AND COUNTERPOISE CONNECTION AND FROM THE MANHOLE PERIMETER GROUND CABLE TO THE GROUND ROD. AEMC INSTRUMENT MODEL 3710, 3730, OR EQUIVALENT MAY 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 V² READING INDICATES A CONTINUITY LOOP AND NOT A GROUND RESISTANCE. IF A POWER 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: 05-01-05 Page 1 of 7 58199-103
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CLAMP ON METER TEST STANDARD MANHOLE

(GROUNDING WITH GROUND RODS AND COUNTERPOISE)



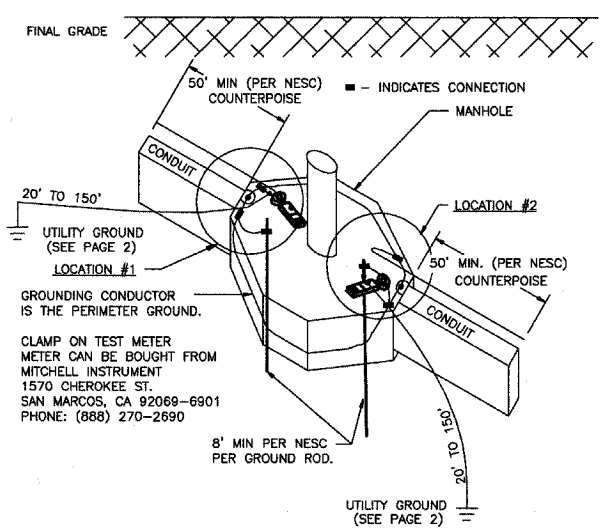
SEE GROUNDING PER DETAILS.

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

TOP VIEW

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05 Page 2 of 7 58199-103
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SAMPLE INSTALLATION (CLAMP ON METER)



NOTE:

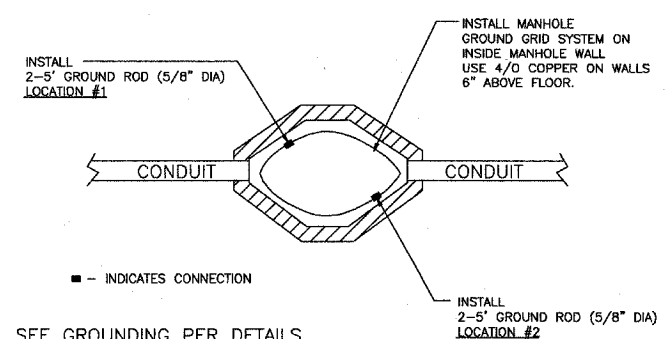
OBSERVE ALL SAFETY REQUIREMENTS AND THEN REMOVE COVERING ON THE GROUND CONDUCTOR IF PRESENT AND PROVIDE SUFFICIENT ROOM FOR THE MODEL 3710/3730 JAWS, WHICH MUST BE ABLE TO CLOSE EASILY AROUND THE CONDUCTOR. THE JAWS CAN BE PLACED AROUND THE GROUND ROD ITSELF.
 NOTE: THE CLAMP MUST BE PLACED SO THAT THE 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.

STANDARD MANHOLE (GROUNDING WITH RODS)

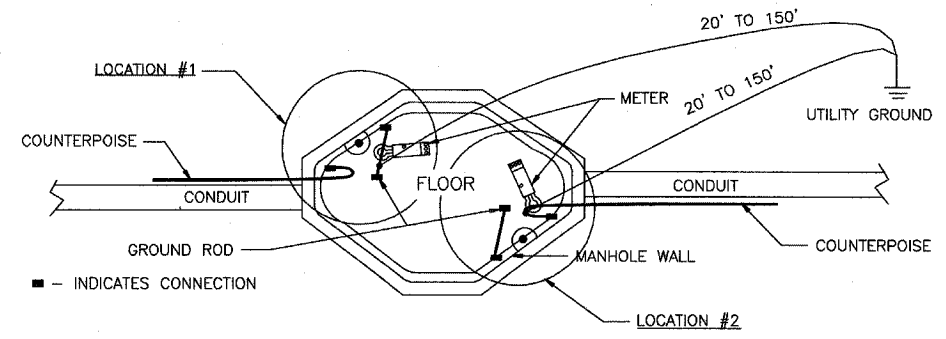


SEE GROUNDING PER DETAILS.

- 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: 05-01-05 Page 3 of 7 58199-103
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PLACEMENT OF METER FOR READING



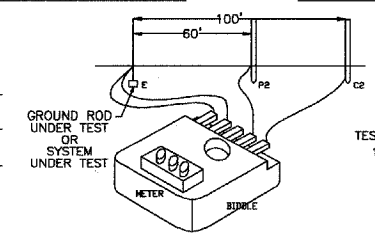
UTILITY GROUND:
 TRANSFORMER CASE
 SWITCH GEAR CASE
 FUSE/PLUG CAN CASE
 NEUTRAL ON CABLE
 GROUND ON POLE
 INDEPENDENT GROUND SET

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05 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	P3		

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05 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			

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): _____
 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

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. JK	CAD FILE NO. 0058199001C17.JWG	PROJECT NO. EU12-06-04
DATE 05-15-07	ISSUED 07	WORK PERMIT NO. 58199	COMPLETED BY
ENGINEER RPS	SCALE NTS	SHEET 17 OF 23	

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	GROUNDING WITH GROUND RODS (DETAIL)	DATE: 05-01-05 Page 7 of 7 58199-103
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LANDSCAPING OVERHEAD OR UNDERGROUND			DATE: 06-01-06
NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS			Page 1 of 11 58199-104
THIS SPECIFICATION COVERS THE REQUIREMENTS FOR THE INSTALLATION OF FLOWERS, PLANTS, TREES, SHRUBS, EVERGREENS AS PART OF THE ELECTRICAL WORK ASSOCIATED WITH OVERHEAD AND UNDERGROUND LINES AND RELATED FACILITIES IN ACCORDANCE WITH THE JOB DRAWINGS.			
I. GENERAL			
1) THE NUMBER, TYPE AND LOCATION OF PLANTINGS SHALL BE AS SHOWN ON THE JOB OR DIRECTED BY THE ENGINEER.	2) THE CONTRACTOR SHALL GIVE HIS PERSONAL ATTENTION TO THE FAITHFUL CARRYING OUT OF THE WORK. COMPETENT AND SKILLFUL MEN SHALL BE EMPLOYED TO EXECUTE THE WORK WHICH SHALL BE SUPERVISED BY AN EXPERIENCED ARBORIST FOREMAN AT ALL TIMES.	3) THE CONTRACTOR SHALL HAVE AVAILABLE AND IN GOOD CONDITION ALL EQUIPMENT NECESSARY FOR THE SAFE TRANSPORTING OF PLANTINGS TO THE SITE AND FOR SETTING PLANTINGS IN FINAL POSITION.	4) THE CONTRACTOR SHALL CONTAIN HIS OPERATION WITHIN THE OWNER'S PROPERTY AND SHALL AVOID OR MINIMIZE ANNOYANCE OR DISTURBANCE TO THE PUBLIC.
5) CARE SHALL BE TAKEN TO AVOID DISTURBANCE OF ALL AREAS OUTSIDE OF THE WORK AREAS AND ANY DAMAGE THERETO SHALL BE IMMEDIATELY REPAIRED AND RESTORED TO THE ORIGINAL CONDITION.	6) WHEN THE WORK IS COMPLETED, THE CONTRACTOR SHALL RESTORE THE SURFACE OF OWNER'S PROPERTY AND/OR ANY OTHER LAND USED BY THE CONTRACTOR TO ITS ORIGINAL CONDITION. EXCESS EXCAVATION MATERIAL AND ALL OTHER MATERIAL WHICH COLLECTS AS A RESULT OF THE CONTRACTOR'S OPERATION, SHALL BE REMOVED IMMEDIATELY.	7) ALL BRICKS, MORTAR, DECORATIVE STONE, CONCRETE, STONE, SAND GRAVEL, MODULAR BRICK FORMS, MULCH OF ALL TYPES, PULVERIZED BLACK DIRT, IRRELS, FENCE INSTALLATION AND REMOVAL, FLOWERS, SHRUBS, EVERGREENS SHALL BE TO BE FURNISHED BY THE CONTRACTOR WITH LABOR TO INSTALL.	8) THE CONTRACTOR SHALL REMOVE ONLY THOSE TREES AND SHRUBS SO DESIGNATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, OR THOSE THAT DIRECTLY INTERFERE WITH THE SAFETY OR QUALITY OF CONSTRUCTION PRACTICES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF TWO DAYS IN ADVANCE OF REMOVAL OF TREES THAT 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 REPAIR 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 THAT HAVE NOT BEEN DESIGNATED FOR REMOVAL, SHALL BE REPAIRED 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 DESIGNED FOR PRUNING OR SHEARS OR LOPPERS) AND NOT TORN, PULLED, OR BROKEN WITH CONSTRUCTION EQUIPMENT. THE CONTRACTOR SHALL HAVE THE SERVICES OF A REGISTERED AND CERTIFIED ARBORIST ON SITE DURING THE TREE REMOVAL, TRIMMING AND PRUNING WORK. THE ARBORIST SHALL IDENTIFY THE TYPE, SIZE, DIAMETER AND CONDITION OF ALL TREES AND EVERGREENS PRIOR TO REMOVAL, TRIMMING AND/OR PRUNING AND PROVIDE A REPORT FOR EACH TREE OR EVERGREEN WORKED ON IN THE REPORT SHALL BE PROVIDED IN DUPLICATE AND GIVEN TO THE ENGINEER FOR REVIEW. SEE DETAILS OF TREE REQUIREMENTS IN PLAN DRAWINGS OR AS DIRECTED BY THE ENGINEER.

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III. TREES AND EVERGREENS (CONTINUED):			
THE CONTRACTOR SHALL NOTE THAT SOME LANDSCAPING MATERIALS MAY BE REQUIRED TO BE TRANSPORTED THEN ALL RULES, REGULATIONS, PAYMENT, GUARANTEES, WATERING FOR 2 MONTHS, CARE OF TREES, BASS SIZE, PREP AREA SHALL HAVE THE SAME REQUIREMENTS AS IF INSTALLING NEW LANDSCAPING MATERIALS. ALL TRANSFERRED LANDSCAPING MATERIALS ACTIVITIES SHALL BE DIRECTED AND PERFORMED UNDER THE SUPERVISION OF THE ARBORIST AND LANDSCAPE ARCHITECT. SEE DRAWING FOR PARTICULARS. TRANSPLANTING SHOWN ON THE DRAWING, AND NOT IDENTIFIED UNDER A UNIT PRICE ARE CONSIDERED INCIDENTAL TO THE COST OF THE PROJECT AND SHALL NOT BE PAID FOR SEPARATELY.			
IV. PLANTING			
1) IF THE SOIL AT HAND IS NOT SUITABLE FOR PLANTING, A SUITABLE LIGHT RICH SOIL SHALL BE SUPPLIED. THE BACKFILL SOIL SHALL BE FREE OF SOIL, LUMPS, STONES, AND ALL OTHER TYPES OF FOREIGN MATERIALS AND SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO DELIVERY ON THE SITE. BACKFILL SHALL BE MIXED WITH PEAT MOSS, OR EQUIVALENT, AND SHALL BE WELL COMPACTED BY TAMPING AND WATERING ACCORDING TO ACCEPTED PRACTICE SO THAT ALL VOIDS AND AIR POCKETS ARE ELIMINATED. A SLIGHT DEPRESSION SHALL BE LEFT AROUND THE PLANTING TO FACILITATE WATERING.	2) PLANTING PITS FOR BALLED AND BURLAPPED TREES SHALL BE PREPARED AT THE TIME THE STOCK IS DUG SO THAT NO DELAY OCCUR WHEN THE STOCK IS READY TO BE PLANTED. ALL PITS SHALL BE DUG AT LEAST ONE FOOT WIDER THAN THE DIAMETER OF THE BALL. THE PLANTING PIT SHALL BE DEEP ENOUGH TO PROVIDE PROPER DRAINAGE, TO ALLOW FOUR INCHES OF GOOD SOIL BENEATH THE BALL AND TO PERMIT THE PLANTING WHEN IT HAS SETTLED TO STAND AT THE ESTABLISHED GRADE AT THE SAME DEPTH AS IT ORIGINALLY GREW. IF THE SOIL CONDITION IN THE PITS ARE SUCH THAT ADDITIONAL DRAINAGE IS REQUIRED TO ENSURE SUCCESSFUL GROWTH, SUITABLE DRAINAGE SHALL BE PROVIDED BY THE CONTRACTOR. WHATEVER TYPE OF DRAINAGE IS PROVIDED SHALL ELIMINATE SUPERFLUOUS WATER IN THE PIT AND DRAIN AWAY FROM THE PLANTING SITE. EACH TREE SHALL BE PLANTED SO AS TO STAND DIRECTLY WHERE STAKED AND AT THE ESTABLISHED GRADE.	3) IMMEDIATELY AFTER BEING PLANTED, THE TRUNKS OF ALL DECIDUOUS TREES SHALL BE WRAPPED SPIRALLY WITH CREPE PAPER MANUFACTURED FOR THIS PURPOSE. WRAPPING SHALL BE APPLIED FROM TOP DOWN AND STARTED AT POINT FAR ENOUGH UP IN THE TREE TO BE WELL SHADDED BY BRANCHES ABOVE. LARGE LOWER LIMBS SHALL BE BOUND AND REINFORCED WITH STOUT CORD WOUND SPIRALLY IN THE OPPOSITE DIRECTION OF THE WRAPPING PAPER.	4) ALL BALLED AND BURLAPPED SHRUBS SHALL BE PLANTED IN HOLES TWELVE INCHES LARGER IN DIAMETER THAN THE BALL, OF ADEQUATE DEPTH, AND WITH PERPENDICULAR WALLS. THE BALL SHALL BE COVERED TO APPROXIMATELY THREE QUARTERS OF THE DEPTH AND THOROUGHLY WATERED IN PLACE. THE REMAINING ONE QUARTER FILL SHALL BE DRY SOIL WELL COMPACTED INTO PLACE.
5) IN AREAS WHERE THE PLANTING OF BALLED STOCK HAS RESULTED IN AN EXCESSIVE AMOUNT OF EXTRA SOIL, SUCH EXCESS SHALL BE REMOVED IMMEDIATELY BY THE CONTRACTOR AND DISPOSED OF OFF SITE.	6) PLANTING PITS FOR BARE ROOTED STOCK SHALL BE AMPLE TO RECEIVE THE ROOTS WITH ONE INCH OF GROWTH. AFTER PLANTING THE PLANTS IN THE PITS, THE LATTER SHALL BE THREE QUARTERS FILLED WITH TOP SOIL WATERED AND THEN FILLED WITH COMPACTED DRY EARTH TO THE LEVEL OF THE FINISHED GRADE. THE PLANTS SHALL BE PLANTED PLUMB AND STRAIGHT.	7) ALL DECIDUOUS BARE ROOTED STOCK SHALL BE PROMPTLY ROOT PRUNED BEFORE PLANTING TO REMOVE UNDESIRABLE ROOT GROWTH AND TO IMPROVE GROWTH CHARACTERISTICS.	

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I. GENERAL (CONTINUED)			
9) TREES SHALL BE INSTALLED A MINIMUM OF FIVE FEET HORIZONTALLY FROM SANITARY SEWERS, SANITARY SERVICES, WATER MAINS, AND WATER SERVICES. TREES SHALL BE INSTALLED A MINIMUM OF TEN FEET HORIZONTALLY FROM UTILITY STRUCTURES AND APPURTENANCES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, VALVE VAULTS, VALVE BOXES AND FIRE HYDRANTS.	10) THE CONTRACTOR SHALL PROVIDE THE SERVICES OF A LICENSED AND REGISTERED ARBORIST, A REGISTERED LANDSCAPER ARCHITECT, PLUS A STATE AND COUNTY LICENSED, CERTIFIED AND APPROVED LANDSCAPING SERVICE ASSIGNED AND PERFORM SERVICES FOR THE DURATION OF THE PROJECT. THE ARBORIST AND REGISTERED LANDSCAPER ARCHITECT SHALL OVERSEE ALL RESTORATION REQUIRED ON THE PROJECT AS IT RELATES TO SURFACE RESTORATION, VEGETATION, DECORATIVE FEATURES, PROVIDE LANDSCAPING DESIGNS, GARDENS, AND TREES AND SHRUBS AND EVERGREENS AND SOILING, SEEDING AND BLACK DIRT INSTALLATION, AND SHALL DIRECT PRUNING AND TRIMMING OPERATIONS TO FOLLOW THE BEST PRACTICES AND METHODS WHEN IT COMES TO SURFACE RESTORATION, VEGETATION, TREES AND PLANTS. THE ARBORIST AND/OR ARCHITECT SHALL WRITE REPORTS WITH RECOMMENDATIONS, CAUSE AND EFFECT RELATION SHIPS, PROVIDE LANDSCAPING DESIGNS FOR CUSTOMER APPROVAL AND PROVIDE POSSIBLE SOLUTIONS WITH OPTIONS OF ALL WORK BEING DONE OR PROPOSED WHEN REQUESTED TO DO SO BY THE OWNER. THE REGISTRATION NUMBER AND NAME OF THE REGISTERED LANDSCAPE ARCHITECT SHALL BE PROVIDED PRIOR TO STARTING WORK. IN ADDITION, THE CONTRACTOR SHALL PROVIDE THE ARBORIST NAME AND CREDENTIALS. THE COST OF PROVIDING THIS SERVICE IS INCIDENTAL TO THE COST OF THE CONTRACT.	11) ALL RESTORATION SHALL NOT BE DONE EXCEPT FOR PREP WORK OF THE AREA, PRUNING OR TRIMMING WHEN THE SUMMER SEASON TEMPERATURE SHALL EXCEED 85 DEGREES FAHRENHEIT OR BELOW 40 DEGREES FAHRENHEIT WINTER TEMPERATURE. ALL RESTORATION SHALL START BY APRIL 1 AND END BY NOVEMBER 15, OR SOONER AS WEATHER PERMITS. IF WINTER CONDITIONS PREVENT RESTORATION WORK FOLLOWING THE WINTER SEASON, THE CONTRACTOR SHALL RESUME RESTORATION WORK BY APRIL 1, WEATHER PERMITTING, OF THE NEXT YEAR OR IN ACCORDANCE WITH LOCAL AGENCIES. THE OWNER SHALL RETAIN FUNDS OF A MINIMUM EQUAL TO THE WORK TO BE DONE OR MORE, AND SHALL BE PAID WHEN THE WORK IS COMPLETED. THE GUARANTEE SHALL BE FROM THE DATE THE ENGINEER HAS SIGNED THAT ALL SURFACE RESTORATION IS COMPLETED.	12) THIS WORK SHALL CONSIST OF THE CUTTING, GRUBBING, REMOVAL AND DISPOSAL OF TREES AND EVERGREENS AT THE LOCATIONS SHOWN ON THE PLANS OR SPECIFIED BY THE ENGINEER. ALL TREES SHALL BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER. TREE REMOVAL METHODS SHALL BE IN CONFORMANCE WITH ILLINOIS STATE STATUTE 201.04 OF THE STANDARD SPECIFICATIONS.
13) CLEARING WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCLUDED IN THE UTILITY INSTALLATION REQUIRED IN THE CONTRACT.	14) THE CONTRACTOR SHALL REMOVE ALL STUMPS, TREES AND EVERGREENS AND DISPOSE OFF SITE, PLUS RESTORE SURFACE WITH A 6" LAYER OF BLACK DIRT AND SOIL.	15) THE CONTRACTOR SHALL REQUIRE THAT AN ARBORIST AND ARCHITECT LANDSCAPER LOOK AT EACH TREE FOR DISEASE, FUNGUS OR BEETLE INFESTATION AND SOUND TREE FOR STRUCTURAL SUITABILITY AND GENERAL CONDITION OF TREES BEFORE CLIMBING OR SAWING. A REPORT SHALL BE GIVEN TO THE ENGINEER INDICATING THEIR FINDINGS.	16) TREES TO BE REMOVED OR INSTALLED WILL BE MEASURED IN INCH-DIAMETER. THE DIAMETER WILL BE MEASURED AT A POINT FOUR FEET ABOVE THE HIGHEST GROUND LEVEL AT THE BASE OF THE TREE AND WILL BE DETERMINED BY ASSURING THE CIRCUMFERENCE OF THE TREE AND DIVIDING THIS MEASURE CIRCUMFERENCE BY 3.1416.
17) TREE REMOVAL OR INSTALLATION WILL BE PAID FOR AT THE CONTRACT UNIT PRICES PER UNIT DIAMETER FOR TREE REMOVAL/INSTALLATION. 6-12" INCH DIAMETER, AND 13-30" INCH DIAMETER, WHICH SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT AND APPURTENANCES NECESSARY TO COMPLETE THE WORK.	18) CONTRACTOR IS ADVISED TREE REMOVAL OR INSTALLATION REQUIRES THAT ALL UTILITIES ARE TO BE IDENTIFIED PRIOR TO REMOVAL AND PROVIDE PROPER PROTECTION (WOOD LAGGING GROUND TREES).	19) CONTRACTOR SHALL SUPPLY ALL LANDSCAPING MATERIALS.	

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IV. PLANTING (CONTINUED)			
6) THIS WORK SHALL CONSIST OF PLANTING TREES AND EVERGREENS OF VARIOUS SIZES AND TRUNK DIAMETER. THE CONTRACTOR SHALL CAREFULLY LOCATE 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.	7) PRIOR TO PLANTING, EXAMINE THE AREA FOR OVERHEAD OBSTRUCTIONS WHEN DIGGING AND MOVING. CONTRACTOR SHALL UNDERTAKE ANY PRUNING REQUIRED TO REMOVE 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.	8) CONTRACTOR SHALL EXAMINE THE NEW SITE FOR THE TREE'S HABITAT REQUIREMENTS. FOR EXAMPLE: WIND PROTECTION, TIME OF YEAR, SOIL PH, SUNLIGHT 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.	9) THE CONTRACTOR SHALL BE REQUESTED TO PLANT THE FOLLOWING TREE OR EVERGREEN SPECIES: USE 15 GALLON SIZE OR 4" HIGH ON 4" DIA. AS MEASURES (DWARF RED BUCK EYE).
RIVER BIRCH HACKBERRY HAWTHORN AMERICAN LINDEN SILVER MAPLE PIN OAK RED OAK GREEN ASH SUMAC COLORADO SPRUCE BALSAM SPRUCE PINES OF VARIOUS SPECIES CRAB MYRTLE TREE EMERALD ARBORVITAE	SARGENT CRAB TREE NINE BARK DARTS GOLD SUMAC SMOOTH ARROW WOOD VIBURNUM WIGELA FORTIA JAPANESE YEW SUMATRAN YEW ARBORVITAE GLOBE ARBORVITAE TECHY ARBORVITAE AMERICAN MUCHO FIVE EOKWOOD WINTERGREEN DWARF RED BUCK EYE CRANBERRY VIBURNUM	10) 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.	11) THE CONTRACTOR SHALL GET APPROVAL FOR PLANTING FROM THE CITY OF NAPERVILLE PRIOR TO PLANTING.
12) THE CONTRACTOR SHALL IDENTIFY WHAT TYPE OF TREE SHALL BE PLANTED AND PREPARE TREE FOR SHIPPING AND PLANTING.	13) THE CONTRACTOR SHALL MAINTAIN ALL ACTIVITIES WITHIN THE EASEMENTS OR PUBLIC WAYS AND A-1. OTHER MEANS TO PERFORM THE WORK IS AT THE CONTRACTORS EXPENSE AND SHALL OBTAIN PERMISSION FROM ALL LAND OWNERS TO USE THEIR PROPERTY.	14) THE CONTRACTOR UNDER THE DIRECTION OF AN ARBORIST SHALL PREPARE THE SITE FOR THE PLANTING, FERTILIZE, WATER, TRIM AND MULCH, STAKE AS NECESSARY, PROVIDE DRAINAGE AND MAINTAIN FOR ONE YEAR.	15) TREES AND EVERGREENS TO BE PLANTED SHALL BE MEASURED IN INCH DIAMETER. THE DIAMETER WILL BE MEASURED AT A POINT FOUR 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 MEASURE CIRCUMFERENCE BY 3.1416.

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II. PLANT MATERIAL			
1) THE CONTRACTOR SHALL INVESTIGATE SOURCES OF SUPPLY TO ENSURE THAT ALL THE PLANTS DESIGNATED ON THE PLANTING LIST IN THE SIZE, VARIETY, AND QUALITY NOTED AND SPECIFIED ARE AVAILABLE. FAILURE TO TAKE THIS PRECAUTION WILL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY TO FURNISH AND INSTALL ALL THE PLANT MATERIAL INSTANT ACCORDANT WITH THE CONTRACT REQUIREMENTS, AND WITHOUT ADDITIONAL EXPENSE TO THE OWNER.	2) ALL STOCK FURNISHED SHALL BE WELL SHAPED PLANTS AND MUST BE TRUED TO NAME. ONE OF EACH SIZE SHALL BE LEGIBLY TAGGED WITH A WEATHER PROOF TAG STATING TREE SIZE AND STANDARD BOTANICAL NAME AS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERMEN.	3) ALL BALLED AND BURLAPPED STOCK SHALL CONFORM FULLY TO THE SPECIFICATIONS AS SET FORTH BY THE AMERICAN NURSERMEN'S ASSOCIATION AND THE ILLINOIS LANDSCAPE CONTRACTOR'S ASSOCIATION.	4) THE CALIPER OF TREE TRUNKS SHALL BE TAKEN SIX INCHES ABOVEGROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR INCHES CALIPER AND 12 INCHES ABOVE GROUND LEVEL FOR TREES OF LARGER CALIPER.
5) NO SUBSTITUTION SHALL BE MADE WITHOUT WRITTEN AUTHORIZATION BY THE OWNER'S REPRESENTATIVE.	6) UPON NOTICE FROM THE OWNER'S REPRESENTATIVE, ALL PLANTS NOT TRUE TO SIZE, QUALITY, VARIETY AND COLOR SPECIFIED SHALL BE REMOVED BY THE CONTRACTOR AND IMMEDIATELY REPLACED AT THE CONTRACTOR'S EXPENSE WITH PLANTS MEETING THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. THE DECISION OF THE OWNER'S REPRESENTATIVE SHALL BE FINAL.	7) ALL PLANTS SHALL BE DUG WITH REASONABLE CARE AND SKILL IMMEDIATELY PREVIOUS TO SHIPMENT. IF, DUG IN ADVANCE, ROOTS MUST BE CAREFULLY PROTECTED AT ALL TIMES TO PREVENT EXCESSIVE DRYING AND LOSS OF VITALITY. ROOTS SHALL NOT BE SPLIT NOR SHALL ANY ROOTS OVER ONE-HALF INCH DIAMETER BE CUT OR BROKEN. SPECIAL PRECAUTIONS SHALL BE TAKEN TO AVOID ANY UNNECESSARY INJURY TO OR REMOVAL OF FIBROUS ROOTS.	8) EACH SPECIES OR VARIETY SHALL BE HANDLED AND PACKED IN THE APPROVED MANNER FOR THAT PLANT, HAVING REGARD TO THE SOIL AND CLIMATIC CONDITIONS AT THE TIME AND PLACE OF DIGGING, THE TYPE OF TRANSIT, THE DELIVERY SITE, AND THE TIME THAT WILL BE CONSUMED IN TRANSIT OR DELIVERY. ALL PRECAUTIONS THAT ARE CUSTOMARY IN GOOD TRADE PRACTICE SHALL BE TAKEN TO ENSURE THAT UPON ARRIVAL AT THE DESTINATION THE PLANTS ARE IN GOOD CONDITION FOR SUCCESSFUL GROWTH.
III. TREES AND EVERGREENS			
1) IDENTIFY SPECIES USING AN ARBORIST. INSTALL ALL WORK USING A REGISTERED, LICENSED, LANDSCAPING SERVICE. REMOVE, FURNISH, DELIVER, MAKE READY WORK, GRADE, LEVEL, DISPOSE OF EXCAVATED MATERIALS OFF SITE, AND PLANT A TREE OR EVERGREEN OF THE SAME SPECIES, VARIETY AND SAME SIZE, INSTALLED SUITABLE BLACK DIRT IN 1" GRADE, INSTALL WITH MULCH AND WATER. IF THIS IS NOT POSSIBLE FOR TREE REPLACEMENT DO THE FOLLOWING: FURNISH, DELIVER AND PLANT WITH THE SAME AT LOCATIONS DESIGNATED BY THE ENGINEER. A NUMBER OF TREES OF THE SAME SPECIES AND VARIETY HAVING A MINIMUM DIAMETER OF 4 INCHES, WHOSE TOTAL INCH-DIAMETER EQUALS THE INCH DIAMETER OF THE TREE REMOVED. DIAMETER OF THE PRESENT TREE 4" AND LESS IN DIAMETER SHALL BE MEASURED AT 6 INCHES FROM THE TOP OF ROOT BALL OR AS DENOTED ON THE DRAWINGS. TREES 4" AND LARGER IN DIAMETER SHALL BE MEASURED AT 12 INCHES FROM TOP OF ROOT BALL OR AS DENOTED ON THE DRAWINGS. THE EXCAVATION FOR THE TREE OR EVERGREEN SHALL BE THREE TIMES THE DIAMETER SIZE OF THE ROOT BALL PLUS 3" TO 4" FEET DEEP AND THE EXCAVATED AND EXISTING GROUND MATERIALS REMOVED FROM THE SITE AND DISPOSED OF OFF SITE. DECORATIVE EDGING INSTALLED, AND NEW PULVERIZED DIRT WITH THE PROPER NUTRIENTS ADDED, SUPPORTED BY ROPE THE DOWNS, AND 3 INCH THICK BED OF MULCH AROUND THE TREE COVERING THE EXCAVATED AREA, PLUS WATERING FOR 2 MONTHS UNDER THE DIRECTION OF AN ARBORIST ENGINEER. ALL TREES AND EVERGREENS PLANTED SHALL BE LOCATED AND IDENTIFIED AND DATED AND PUT ON A DRAWING AND THE TREE OR EVERGREEN IDENTIFIED BY SPECIES AND SIZE WITH THE STREET ADDRESS AND GIVEN TO THE ENGINEER FOR THE RECORD. ALL TREES OR EVERGREENS SHALL BE GUARANTEED TO GROW FOR ONE YEAR AND 6 MONTHS FROM THE DATE OF THE AS BUILT DRAWING, WHICH IS SIGNED AND DATED BY THE ENGINEER.			

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IV. PLANTING (CONTINUED):			
17) ALL TREES AND SHRUBS SHALL BE TOP THINNED OR PRUNED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE. PRUNING SHALL BE ONLY FOR THE PURPOSE OF BALANCING TOPS TO ROOTS AND FOR THE REMOVAL OF INTERFERING BRANCHES AND BAD CROTCHES, BUT SHALL NOT CHANGE THE NATURAL GROWTH OR APPEARANCE OF THE PLANT.	18) ALL TOP THINNING OR PRUNING SHALL BE PERFORMED WITH THE PROPER TOOLS, PRUNING SHEARS OR LOPPING TOOLS. NORVAL TOP PRUNING OF BALLED STOCK WILL REQUIRE REMOVAL OF APPROXIMATELY ONE QUARTER OF THE BRANCHES; OF BARE ROOTED STOCK APPROXIMATELY ONE THIRD OF THE BRANCHES. ALL PRUNING WOUNDS SHALL BE PAINTED WITH AN APPROVED TREE WOUND DRESSING.	V. FERTILIZER	
FERTILIZER SHALL BE A CONTROLLED RELEASE TYPE, SUCH AS MAGAMP, DISTRIBUTED BY JIFFY PRODUCTS OF AMERICA, P.O. BOX 338, WEST CHICAGO, ILLINOIS 60185, OR APPROVED EQUAL. THE FERTILIZER SHALL BE PLACED DIRECTLY INTO PLANTING PITS IN QUANTITIES AND METHOD AS SHOWN ON PLAN.			
APPLICATION RATES AND METHODS FOR MAGAMP			
a) 10 IN. BALL	2 OZS. COARSE	PLACE IN BOTTOM OF PLANTING PIT PRIOR TO PLANTING.	
b) 12-16 IN. BALL	4 OZS. COARSE	PLACE IN BOTTOM OF PLANTING PIT PRIOR TO PLANTING.	
c) 16-20 IN. BALL	8 OZS. COARSE	PLACE IN BOTTOM OF PLANTING PIT PRIOR TO PLANTING.	
d) 2 FT. BALL	10-12 OZS. COARSE	PLACE IN BOTTOM OF PLANTING PIT PRIOR TO PLANTING.	
e) 3 FT. BALL	1 TO 2 LBS. COARSE	PLACE IN BOTTOM OF PLANTING PIT PRIOR TO PLANTING.	
f) BARE ROOT PLANTING 12 IN. TO 8 FT. TALL	2 OZS. TO 2 LBS. COARSE	PLACE IN BOTTOM OF PLANTING PIT AND COVER WITH 1/2 TO 1 IN. SOIL BARRIER.	
VI. INSPECTION			
INSPECTION OF ALL STOCK MAY BE MADE AT POINT OF ORIGIN OR POINT OF DELIVERY, OR BOTH BY OWNER'S REPRESENTATIVE. STOCK WHICH CANNOT BE SHOWN FOR INSPECTION ON TWENTY-FOUR HOUR NOTICE MAY BE REJECTED. AN INSPECTION DURING DIGGING WILL BE MADE WHENEVER SUCH EXAMINATION IS DEEMED DESIRABLE. FINAL INSPECTION WILL BE MADE BY THE SAME REPRESENTATIVE WHEN THE MATERIAL IS DELIVERED. THE OWNER RESERVES THE RIGHT TO REJECT ALL STOCK WHICH IS FOUND UNSATISFACTORY UPON DELIVERY.			
VII. DELIVERY			
1) ALL PLANTS SHALL BE PACKED FOR DELIVERY TO ENSURE ADEQUATE PROTECTION AGAINST CLIMATIC, SEASONAL, OR ANY OTHER INJURY DURING TRANSIT. THE ROOTS OF BARE-ROOTED STOCK SHALL BE CAREFULLY PROTECTED WITH WET STRAW, MOSS OR OTHER SUITABLE PACKING MATERIAL WHICH WILL ENSURE THE ARRIVAL OF PLANTS AT THE DESTINATION IN GOOD CONDITION. SPECIAL ATTENTION SHALL BE GIVEN TO ENSURE PROMPT DELIVERY, CAREFUL HANDLING IN LOADING, PROTECTION BY CANVAS OR OTHER ACCEPTED METHODS IN TRANSIT, AND UNLOADING AT THE POINT OF DELIVERY.			
2) THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION FOR ALL UNPLANTED STOCK ON THE SITE BY CAREFULLY HEELING IN OR BY OTHER STANDARD APPROVED PRACTICES.			

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1545	00-00115-00-BR	DUPAGE	97	64
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT 83961				
II. TREES AND EVERGREENS (CONTINUED):				
2) THE CONTRACTOR, UPON APPROVAL OF THE ENGINEER, MAY ELECT TO AUGUR UNDER ANY TREE OR EVERGREEN WITH A TRUNK SIZE OF 6 INCHES OR LARGER. HOWEVER, ALL TREES OR EVERGREENS WITH A TRUNK SIZE OF 12 INCHES AND LARGER SHALL BE AUGURED. AUGURING SHALL EXTEND THE FULL LENGTH OF THE DRIP LINE OF THE TREE AND PASS NO CLOSER THAN 4 FEET TO THE OUT SIDE DIAMETER OF THE TRUNK. DEVIATION FROM THE CONDUIT CENTERLINE TO AVOID TREE TRUNKS WILL BE PERMITTED WHERE POSSIBLE, BUT AT NO ADDITIONAL COST TO THE OWNER. THE DIRECTIONAL BORING TECHNIQUE MAY BE CONSIDERED AND PERFORMED WITH THE ENGINEER'S APPROVAL AT NO COST TO THE OWNER. ALL WORK TO REMOVE THE TREES OR EVERGREENS ARE UNDER THE SUPERVISION OF AN ARBORIST PROVIDED BY THE CONTRACTOR. ALL EXCAVATION SHALL BE BACKFILLED WITH 6 INCHES OF BLACK DIRT AND LEVELED AND GRADED.				
3) SHRUBS, BUSHES, FLOWERS, PLANTS, SMALL TREES AND SMALL EVERGREENS SHALL BE FURNISHED, DELIVERED, AREA PREPARED, BLACK DIRT BACK FILL SHALL MADE LEVEL, GRADE, AND COMPACT AND PROMOTE DRAINAGE, AND PLANT A PLANT OF THE SAME SPECIES VARIETY, SAME SIZE IN HEIGHT, SAME SIZE IN WIDTH, AS GOVERNED BY ARTICLE 1081.01 (c), TYPES 1, 2, 3 AND 4, OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION OR FURNISH, DELIVER AND PLANT, AT LOCATIONS DESIGNATED BY THE ENGINEER, A NUMBER OF PLANTS OF THE SAME SPECIES AND VARIETY WHOSE TOTAL MEASUREMENTS SHALL EQUAL THE MEASUREMENT OF THE PLANT TO BE REPLACED, MEASURED ABOVE THE EXCAVATION FOR THE SHRUBS, BUSHES, FLOWERS, PLANTS, SMALL TREES AND SMALL EVERGREENS SHALL BE TWICE THE SIZE OF THE ROOT BALL AND THE EXISTING GROUND MATERIALS REMOVED FROM THE AREA AND NEW PULVERIZED DIRT WITH THE PROPER NUTRIENTS ADDED, SUPPORTED BY ROPE THE DOWNS, STICKS AND 3 INCH THICK BED OF MULCH AROUND THE PLANT COVERING THE EXCAVATED AREA, PLUS WATERING FOR 2 MONTHS UNDER THE DIRECTION OF AN ARBORIST. ALL SHRUBS, BUSHES, FLOWERS, PLANTS, SMALL TREES, SMALL EVERGREENS PLANTED SHALL BE LOCATED AND IDENTIFIED AND DATED AND PUT ON A DRAWING AND THE SHRUBS, BUSHES, FLOWERS, PLANTS, OR SMALL EVERGREENS AND SMALL TREES SHALL BE IDENTIFIED BY SPECIES AND SIZE WITH THE STREET ADDRESS AND GIVEN TO THE ENGINEER FOR THE RECORD. ALL SHRUBS, BUSHES, FLOWERS, PLANTS, SMALL TREES, OR SMALL EVERGREENS SHALL BE GUARANTEED TO GROW FOR ONE YEAR FROM THE DATE OF THE AS BUILT DRAWING, WHICH IS SIGNED AND DATED BY THE ENGINEER.				
4) THE CONTRACTOR SHALL REPLACE ALL EXISTING LANDSCAPING SUCH AS: BLACK DIRT, GRASS, PLANTS, TREES, SHRUBS, EVERGREENS, GARDENS, VEGETABLE GARDENS, VINES, BUSHES, FLOWERS AND ROCK GARDENS REMOVED OR DAMAGED. THE CONTRACTOR SHALL VERIFY THE EXCAVATION TO DETERMINE ALL THE TYPES OF LANDSCAPING PRIOR TO STARTING THE WORK. FAILURE TO DO SO SHALL REQUIRE THAT ALL LANDSCAPING CLAIMED TO BE DAMAGED SHALL BE CONSIDERED DAMAGED AND REPLACED AT THE CONTRACTORS COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LANDSCAPING CARE OF ALL TYPES AND VARIETY OF LANDSCAPING DURING THE PERIOD OF ESTABLISHMENT FOR INITIAL AND REPLACED LANDSCAPING AND SHALL COMPLY WITH REQUIREMENTS FOR REMOVAL AND REPLACEMENT OF UNACCEPTABLE AND/OR DEAD LANDSCAPING MATERIALS.				
5) ALL LANDSCAPING MATERIALS SHALL CARRY A ONE YEAR AND SIX MONTHS GUARANTEE FROM FINAL PAYMENT AND/OR FROM THE DATE THE ENGINEER SIGNS THE AS BUILT DRAWING ACCEPTING THE WORK.				
6) AT THE TIME OF SELECTION AT THE NURSERY THE LANDSCAPING MATERIALS MUST BE: <ul style="list-style-type: none"> A) IN A LIVE, HEALTHY CONDITION. B) CHECK AND RECORD THE DIAMETER FROM TOP OF ROOT BALL. C) BALANCED AND SYMMETRICAL APPEARANCE. D) REPRESENTATIVE OF ITS SPECIES IN COLOR, SIZE AND STRAIGHTNESS. E) SUFFICIENT DIRT TO PROMOTE GROWTH. F) NOT INFECTED WITH INSECTS OR FUNGI. G) ALL LANDSCAPING MATERIALS SHALL BE APPROVED FOR PLANTING BY THE ARBORIST AND/OR LANDSCAPE ARCHITECT. 				
7) ALL LANDSCAPING, PLANTS, ETC., THAT DO NOT MEET THE REQUIREMENTS FOR ACCEPTANCE SHALL BE REPLACED AT THE CONTRACTORS COST AT ITS OWN EXPENSE AND SHALL CARRY THE SAME GUARANTEE.				
TREES, PLANTS, GRASS, SHRUBS, EVERGREENS, GARDENS, VEGETABLE GARDENS, BUSHES, FLOWERS, AND VINES RESTORATION IDENTIFIED ON THE CONSTRUCTION DRAWING, SHALL BE PAID BY UNIT PRICING, HOWEVER ALL DISTURBED AREAS CAUSED DURING CONSTRUCTION AND/OR NOT SHOWN ON THE DRAWINGS SHALL BE RESTORED BY THE CONTRACTOR AND IS INCIDENTAL TO THE WORK. THE CONTRACTOR IS ADVISED THE WORK AREA IS THE PERIOD OF ESTABLISHMENT FOR INITIAL AND REPLACED LANDSCAPING AND SHALL COMPLY WITH TRANSPORTATION REQUIREMENTS; THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL AREAS.				

LANDSCAPING OVERHEAD OR UNDERGROUND			DATE: 06-01-06																												
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VIII. ROOT PRUNING																															
1) THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, A REGISTERED ARBORIST, A REGISTERED LANDSCAPE ARCHITECT, AND APPURTENANCES NECESSARY TO PERFORM TREE AND EVERGREEN ROOT PRUNING WORK SHALL BE COMPLETED IN CONFORMANCE WITH SECTION 01 OF THE "STANDARD ROAD SPECIFICATION" LISTED HEREIN. THIS SHALL BE COMPLETED FOR ALL TREES ENDOUGHING UPON THE CONSTRUCTION AREA. ANY ROOTS ENCOUNTERED SHALL BE TREATED WITH THIS METHOD AS DIRECTED BY THE CITY.																															
2) ROOT PRUNING USING AN APPROVED MECHANICAL ROOT PRUNING SAW, OR LOPPER AS DIRECTED BY A REGISTERED ARBORIST, SHALL BE PERFORMED PRIOR TO DIGGING WHERE NOTED ON THE PLANS. PER CUSTOMER REQUEST OR AS DIRECTED BY THE ENGINEER, WHENEVER ROOTS OF PLANT MATERIAL ARE TO REMAIN EXPOSED DURING CONSTRUCTION, THE DAMAGED ROOTS ARE TO BE REMOVED BY CUTTING THEM OFF CLEARLY. PRUNING SHALL BE DONE IN THE PRESENCE OF THE ENGINEER AND/OR REGISTERED ARBORIST AND IN SUCH A MANNER AS TO PRESERVE THE NATURAL GROWTH HABIT.																															
3) ANY DAMAGE TO THE ROOT ZONE, AS DETERMINED BY THE ENGINEER AND/OR ARBORIST SHALL BE COMPENSATED BY PRUNING AN EQUIVALENT AMOUNT OF THE TOP VEGETATIVE GROWTH OF THE PLANT MATERIAL WITHIN 1 WEEK FOLLOWING ROOT DAMAGE. FERTILIZER NUTRIENTS SHALL BE APPLIED WITHIN 48 HOURS AFTER ROOT DAMAGE OCCURS. A FERTILIZER WITH A 1:1:1 RATION SHALL BE APPLIED AT THE RATE OF 5 LBS. OF NUTRIENTS PER 1000 SQ. FT.																															
4) APPLICATION SHALL BE ACCOMPLISHED BY PLACING DRY FERTILIZER IN HOLES IN THE SOIL. HOLES SHALL BE 8 TO 12 INCHES DEEP AND SPACED 2 FEET APART IN AN AREA BEGINNING 30 INCHES FROM THE BASE OF THE PLANT. HOLES CAN BE PUNCHED WITH A PUNCH BAR, DUG WITH A SPADE, DRILLED WITH AN AUGER OR ANY METHOD APPROVED BY THE ENGINEER. APPROXIMATELY 0.02 LB. OF FERTILIZER NUTRIENTS SHALL BE PLACED BY IN EACH HOLE (250 HOURS PER 1000 SQ. FT.).																															
5) IF THE ENGINEER OR ARBORIST DETERMINE THAT THE HOLE METHOD OF FERTILIZER PLACEMENT IS NOT PRACTICAL OR DESIRABLE, AN APPROVED METHOD OF UNIFORM SURFACE APPLICATION WILL BE ALLOWED.																															
6) IN THE CASE OF INADEQUATE RAINFALL, AS DETERMINED BY THE ENGINEER, SUPPLEMENTAL WATER SHALL BE APPLIED WITHIN 48 HOURS OF ANY ROOT DAMAGE. THE WATER SHALL BE APPLIED AT THE RATE OF 2 GALLONS PER SQ. YD. OF SURFACE WITHIN THE ROOT ZONE OF PLANT MATERIAL HAVING SUSTAINED DAMAGE TO THE ROOT ZONE. THREE SUBSEQUENT WEEKLY WATERINGS AT 2 GALLONS PER SQ. YD. SHALL BE APPLIED IF DEEMED NECESSARY BY THE ENGINEER. ADDITIONAL WATERING MAY BE REQUIRED. THE ENGINEER SHALL DIRECT THIS WORK.																															
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2) SUPPLEMENTAL WATERING WILL BE MEASURED FOR PAYMENT IN UNITS OF 1000 GALLONS OF WATER APPLIED ON THE SOODED AREAS.																															
3) CONTRACTOR IS ADVISED SUPPLEMENTAL WATERING IS INCLUDED IN THE UNIT PRICING PER STRUCTURES, CONNECTION, OR OTHER REMOVAL AND/OR FOUNDATION INSTALLATION. SUPPLEMENTAL WATERING IS AT THE DIRECTION OF THE ENGINEER.																															
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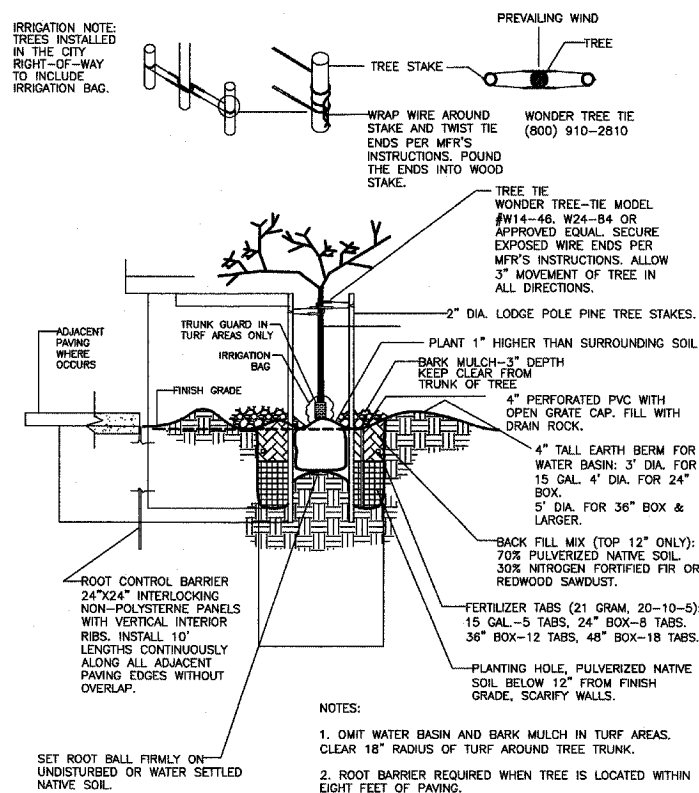
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
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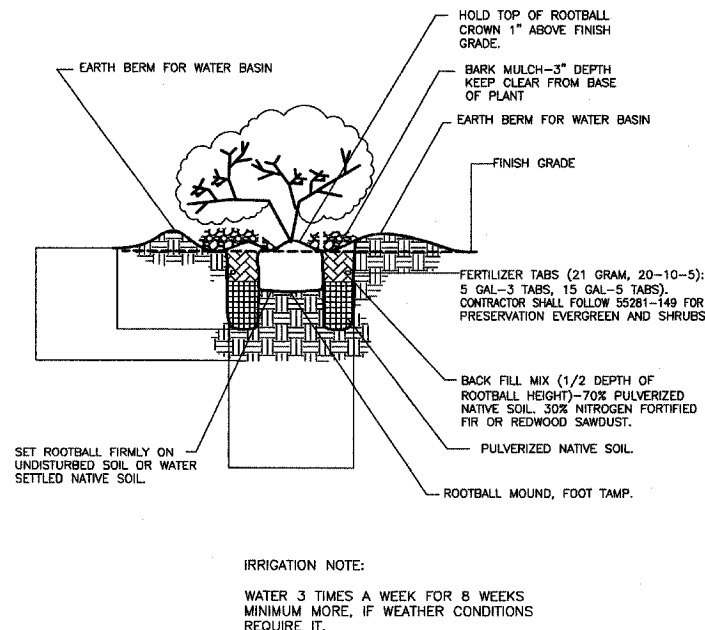
XI. CONTRACTOR'S RESPONSIBILITY AND GUARANTEE

- 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.
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.
- 2) 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.
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.
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.
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 OVER SIGHT OF ALL ROOT PRUNING AND PLANTING OPERATIONS.
- 3) 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.
- 4) THE CONTRACTOR SHALL FURNISH ALL MATERIALS, FEES, TOOLS, FERTILIZER, WATER AND PLANT MAINTENANCE ON THIS SPECIFICATION PLUS ALL LANDSCAPING MATERIALS AND LABOR.
- 5) 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 BREST HEIGHT (4 1/4 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 BUILDUP AND CONTROLLING WIND AND EROSION, AND THEIR CONTRIBUTION TO PROPERTY VALUES. TREES, SHRUBS AND EVERGREENS HAVE VALUE AS INDIVIDUAL TREES, SHRUBS OR EVERGREENS AS OR GROUP 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 DEMONSTRATE "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 BUBBLERS.
- 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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TREE SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS

DBH = DIAMETER OF TRUNK AT BREST HEIGHT (4 1/4 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" CALIFER 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 AREA 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.

DATE: 05-01-05	TREE, SHRUB AND EVERGREEN PRESERVATION REQUIREMENT	NAPERVILLE PUBLIC UTILITIES DEPARTMENT
Page 2 of 5		ELECTRIC STANDARDS
58199-105		

NAPERVILLE PUBLIC UTILITIES DEPARTMENT	TREE, SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS	DATE: 05-01-05 Page 1 of 5 58199-105
ELECTRIC STANDARDS		

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. 0058199001C19.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-06-04	
DATE 05-15-07	WORK REQUEST NO. 58199	ISS.:	COMPLETED BY
ISSUED RFS	APPR.	SOLE:	NTS
REVISION	1 2 3		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 LAYOUT 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, SOMETIMES 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.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	TREE, SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS	DATE 05-01-05 Page 5 of 5 58199-105
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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.

DATE: 05-01-05
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58199-105

TREE, SHRUB AND EVERGREEN PRESERVATION REQUIREMENT

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
ELECTRIC STANDARDS

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	TREE, SHRUB AND EVERGREEN PRESERVATION REQUIREMENTS	DATE 05-01-05 Page 3 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		MAP NO.	CAD FILE JWB 0036199001C20.DWG	
PROJECT DESCRIPTION	COORDINATED WITH BRIDGE IMPROVEMENT		DRAWN BY	PROJECT NO. EU12-06-04	
DATE	05-15-07	WORK ORDER NO.	58199	ISSUED BY	COMPLETED BY
ISSUED	RPS	APPROVED	NTS	SCALE	SHEET 20 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 1/2 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	MUGHO PINE
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.

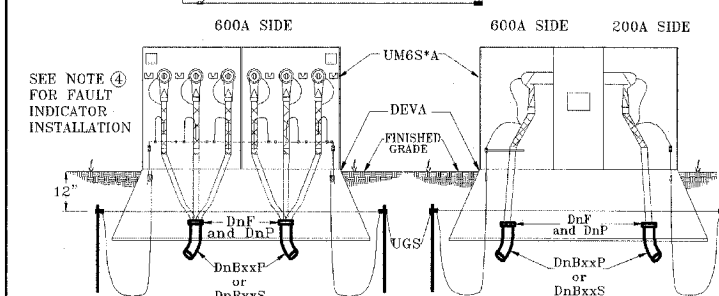
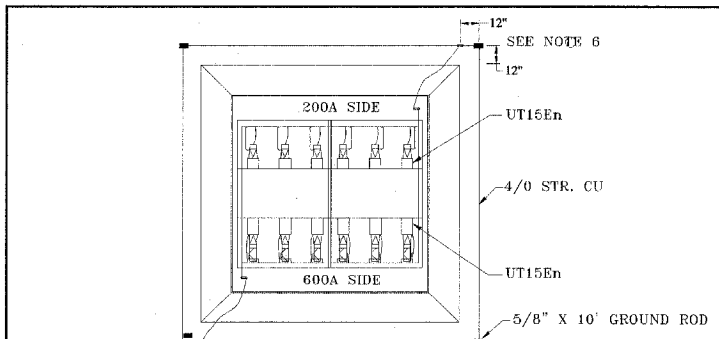
TREES, SHRUBS AND EVERGREENS TO BE PLANTED SHALL BE MEASURED IN INCH-DIAMETER. THE DIAMETER WILL BE MEASURED AT A POINT FOUR (4) FEET ABOVE THE HIGHEST GROUND LEVEL AT THE BASE OF THE TREE OR EVERGREEN AND WILL BE DETERMINED BY ASSURING THE CIRCUMFERENCE OF THE TREE AND DIVIDING THIS MEASURED CIRCUMFERENCE 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	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
ELECTRIC STANDARDS		Page 1 of 1 58199-108

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	SWP NO.: -	CAD FILE JOB 0006199001C22.DWG	
PROJECT DESCRIPTION COORDINATED WITH BRIDGE IMPROVEMENT	DRAWN BY JK	PROJECT NO. EU12-06-04	COMPLETED BY
DATE 05-18-07	WORK PERMIT NO. 58199	ISSUED BY	SCALE NTS
ISSUED	APPROVED	DATE	SHEET 22 OF 23



ASSEMBLY CODES

CODE	QTY	DESCRIPTION
DEVA	1	Vault, Air Switch
DnBxxP	**	Bend, PVC
DnBxxS	**	Bend, Steel
DnF	**	Bell Fitting, PVC
DnP	**	Plug, PVC
Uf15n	**	Faulted Circuit Indicator
UfnsMU	**	Fuse Unit, 15kV, SMU 20
UM65*A	1	Switch, Pad mounted
UGS#	1	Grounding, Switchgear
UT15AE	**	Arrester, Elbow, 9kV
UT15En	**	Elbow, 15kV

n 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 - DEVA.
 - 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 UT15E - BUSHING INSERT, 15kV 200 Amps WAS ELIMINATED AFTER S&C ADDED THE BUSHING INSERT OPTION TO ALL NEW FINE SWITCHGEAR! THE UT15E OPTION IS STILL AVAILABLE FOR USE AS A REPLACEMENT OPTION.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 30 15kV AIR SWITCH MODULE ASSEMBLY
 DATE: 4-22-07
 Page 1 of 3
 C30-0013

DEVA: VAULT, AIR SWITCH

Item Code	Description 1	Description 2	TE	A	TC	PC	F	AE	M	AL
284 101 00120	EXTENDER, 14 TRF VAULT	44" X 44" X 1/2" 225" OPEN								
284 101 00010	VAULT, AIR SWITCH	74" X 76" X 36" (FIBER-CRETE)	1							
284 101 00020	VAULT, 10 TRF/FUSE CAN	44" X 44" X 36" (FIBER-CRETE)								
284 101 00030	VAULT, 30 PLUG CAN	23" X 69" X 36" (FIBER-CRETE)								
284 101 00040	VAULT, 30 FUSE CAN	49" X 69" X 36" (FIBER-CRETE)								
284 101 00100	EXTENDER, AIR SWITCH VAULT	74" X 76" X 36" (FIBER-CRETE)								
NON	CA-6	CRUSHED LIMESTONE			25	25	.5			
NON	VAULT, 12.47KV PH. METERING	56" X 56" X 320" (FIBER-CRETE)								1
NON	LID, AIR SWITCH VAULT	2-PIECE DESIGN W/HARDWARE								1

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, 36" R PVC 45 DEG 3"	SCH 40	1
D3B60P	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
D5B60P	285 101 00100	ELBOW, 36" R PVC 90 DEG 5"	SCH 40	1
D8B30P	285 101 00020	ELBOW, 48" R PVC 30 DEG 6"	SCH 40	1
D8B45P	285 101 00030	ELBOW, 48" R PVC 45 DEG 6"	SCH 40	1
D8B60P	285 101 00040	ELBOW, 48" R PVC 90 DEG 6"	SCH 40	1

D3BxxS: BEND, 3" STEEL

Item Code	Description 1	Description 2	D3B90S	Qty
285 101 00140	ELBOW, 30" 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	D5B30S	D5B45S	D5B60S	Qty
285 101 00160	ELBOW, 36" R STL 30 DEG 5"	GALVANIZED				1
285 101 00170	ELBOW, 36" R STL 45 DEG 5"	GALVANIZED				1
285 101 00180	ELBOW, 36" 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	D6B33S	D6B44S	D6B55S	Qty
285 101 00186	ELBOW, 48" R STL 11 DEG 6"	GALVANIZED						1
285 101 00188	ELBOW, 48" R 22.5 DEG 6"	GALVANIZED						1
285 101 00190	ELBOW, 48" R STL 30 DEG 6"	GALVANIZED						1
285 101 00200	ELBOW, 48" R STL 45 DEG 6"	GALVANIZED						1
285 101 00210	ELBOW, 48" 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	D5P	D5P	D6P	Qty
285 103 00040	BELL FITTING, PVC 3"	SCH 40 & SCH 80				1
285 103 00090	BELL FITTING, PVC 5"	SCH 40 & SCH 80				1
285 103 00100	BELL FITTING, PVC 6"	SCH 40 & SCH 80				1

DnP: PLUG, PVC

Item Code	Description 1	Description 2	D3P	D5P	D6P	Qty
285 103 00000	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

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 30 15kV AIR SWITCH MODULE ASSEMBLY
 DATE: 10-22-06
 Page 2 of 3
 C30-0013

UfnsMU: 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	65K							
289 105 00060	FUSE UNIT, SMU20, 15KV	80K							
289 105 00070	FUSE UNIT, SMU20, 15KV	100K							
289 105 00080	FUSE UNIT, SMU20, 15KV	120K							
289 105 00090	FUSE UNIT, SMU20, 15KV	200K							

UGS: GROUNDING, SWITCHGEAR

Item Code	Description 1	Description 2	UGS	UGSV	UGSE	Qty
286 107 00070	CU BASE SB	4/0 7-STR				4
283 156 00010	GROUND ROD, COPPER CLAD	5/8" X 10'				76
284 199 00184	CLAMP, CABLE TO FLAT GND	#6 SOL - 250 MCM CU				4
286 100 00280	CONNECTOR, WEDGE CU	1/0 STR (7) - 4/0 STR (7)				4
286 100 00320	CONNECTOR, WEDGE CU	1/0 STR (7) - 5/8" ROD				4
286 101 00010	SHELL, WEDGE AMP	WHITE				8
286 199 00220	BREAK-AWAY	1/0-4/0 STR X 1/0 - 4/0 STR				12

Uf15n: FAULTED CIRCUIT INDICATOR

Item Code	Description 1	Description 2	Uf15	Uf15	Uf15	Qty
283 199 00210	GUARD WIRE	SPIRAL				4
284 120 00010	FAULT INDICATOR, 1/0 - 4/0	15KV				1
284 120 00020	FAULT INDICATOR, 750 - 1000	15KV				3
284 120 00030	INDICATOR CABLE, 3 TO 1	10 FOOT				1
284 120 00040	INDICATOR CABLE, 1 TO 1	6 FOOT				1
284 120 00050	INDICATOR CABLE, SMALL					6
284 120 00060	CLIP	ADHESIVE BACKED				4

UM65*A: SWITCH, PAD MOUNTED

Item Code	Description 1	Description 2	2A	3A	2AA	3AA	Qty
NON	3PH, 2 WAY AUTOMATED SWITCH	15KV, 600A					1
NON	3PH, 3 WAY AUTOMATED SWITCH	15KV, 600A					1
284 200 00050	3PH, 2 WAY	0.3/15KV, 600A					1
284 200 00060	3PH, 3 WAY	0.3/15KV, 600A					1
284 199 00010	SHOCK NOTICE OBSTRUCTION	0" X 24"					2
287 109 00040	PAIDICK, BRONZE	W/1-1/2" SHACKLE					4

UTAB: BUSHING INSERT, 15KV 200

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

*THIS OPTION IS STILL AVAILABLE FOR USE AS REPLACEMENTS.

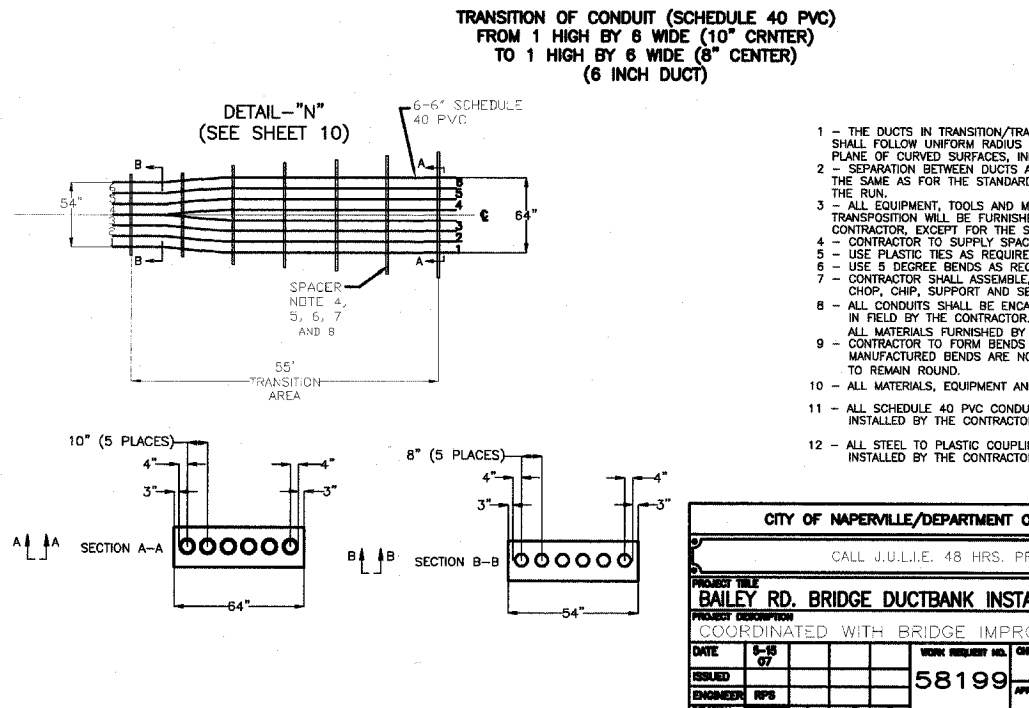
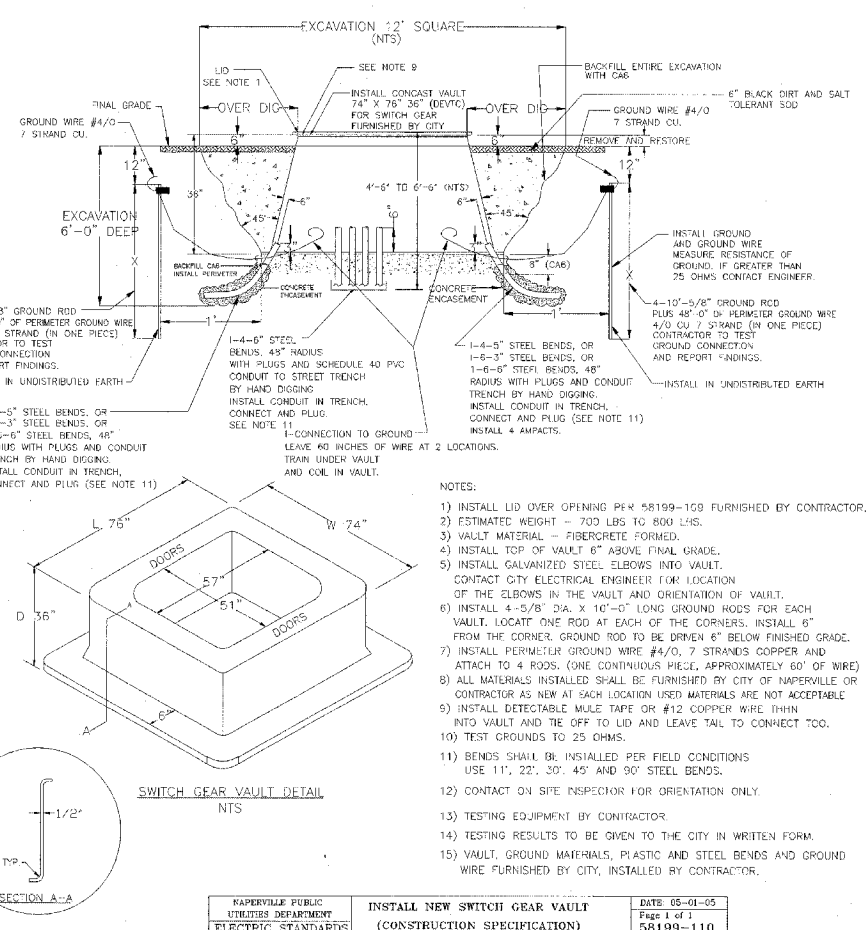
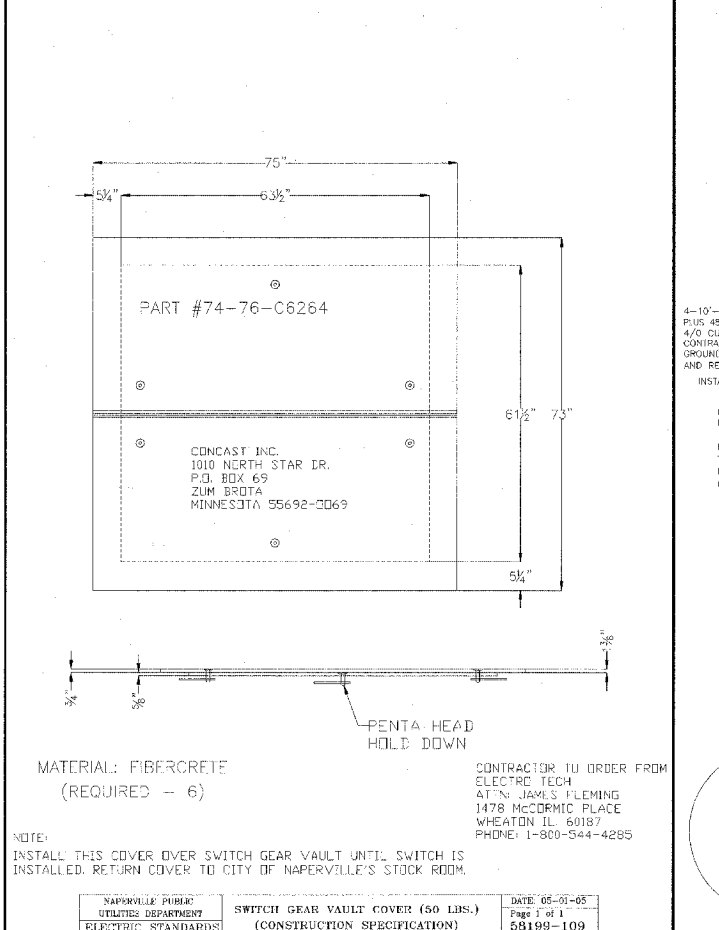
UT15AE: ARRESTER, ELBOW, 9KV

Item Code	Description 1	Description 2	B	E	P	Qty
284 118 00020	ARRESTER, ELBOW	9/10 kV				1
284 118 00030	ARRESTER, PARKING STAND	9/10 kV				1
284 118 00040	ARRESTER, BUSHING INSERT	9/10kV				1
286 199 00220	CONNECTOR, BREAKAWAY CU	1/0 - 4/0 STR				1

UT15E: ELBOW, 15KV

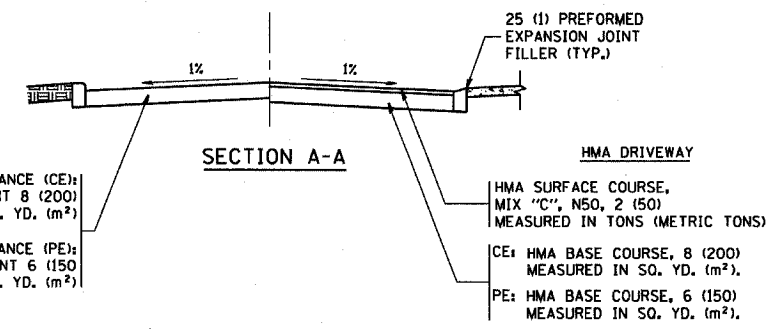
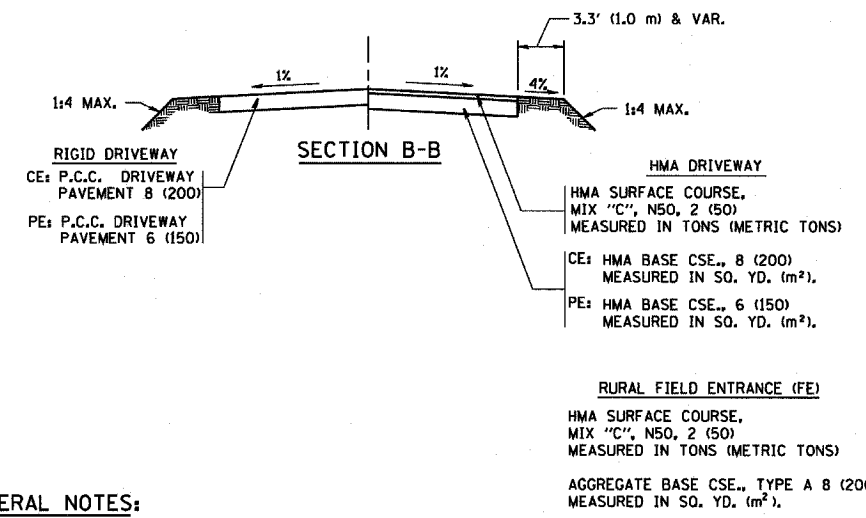
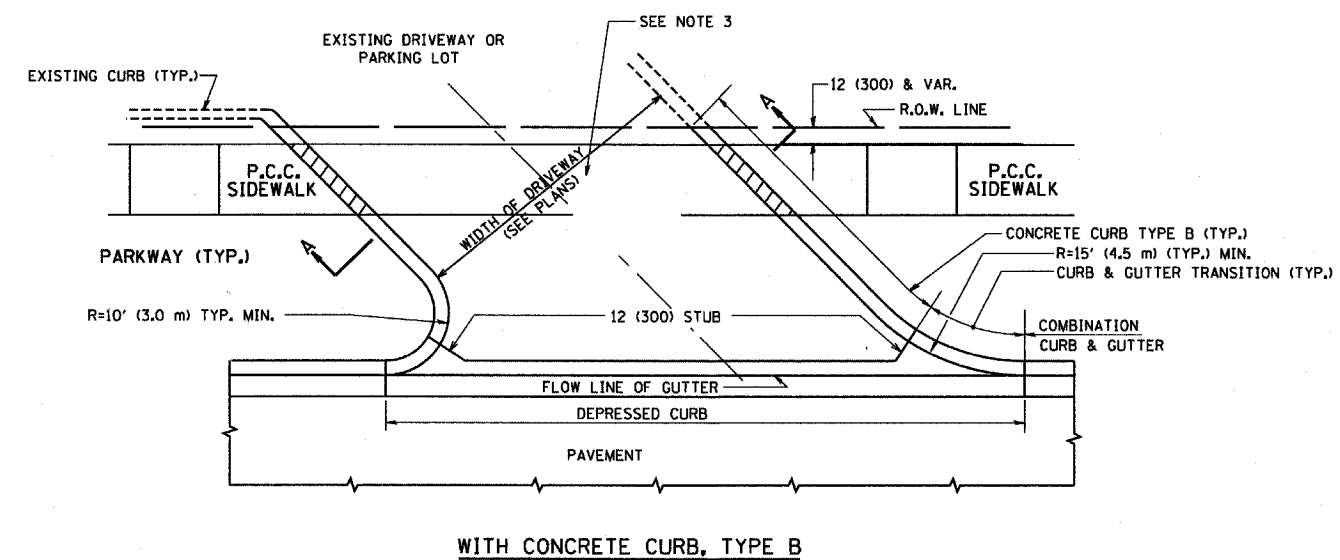
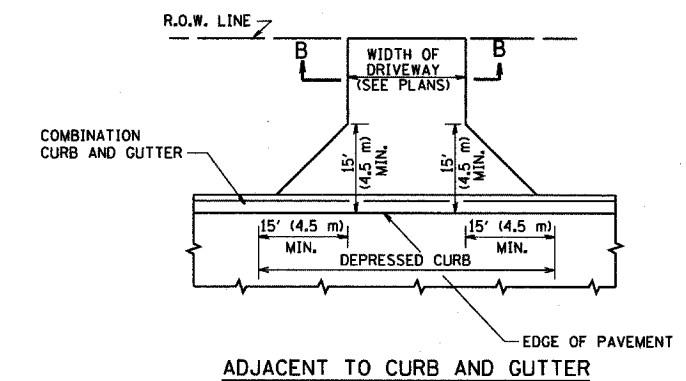
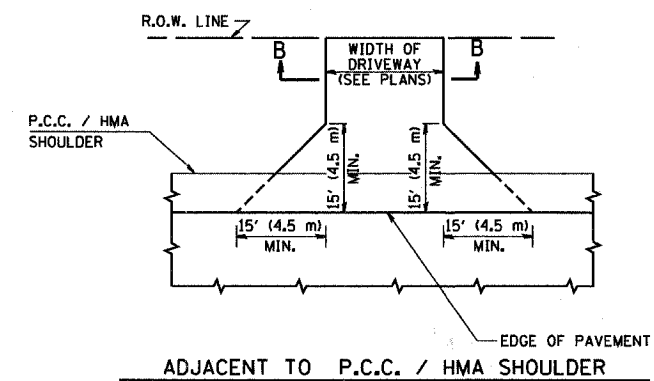
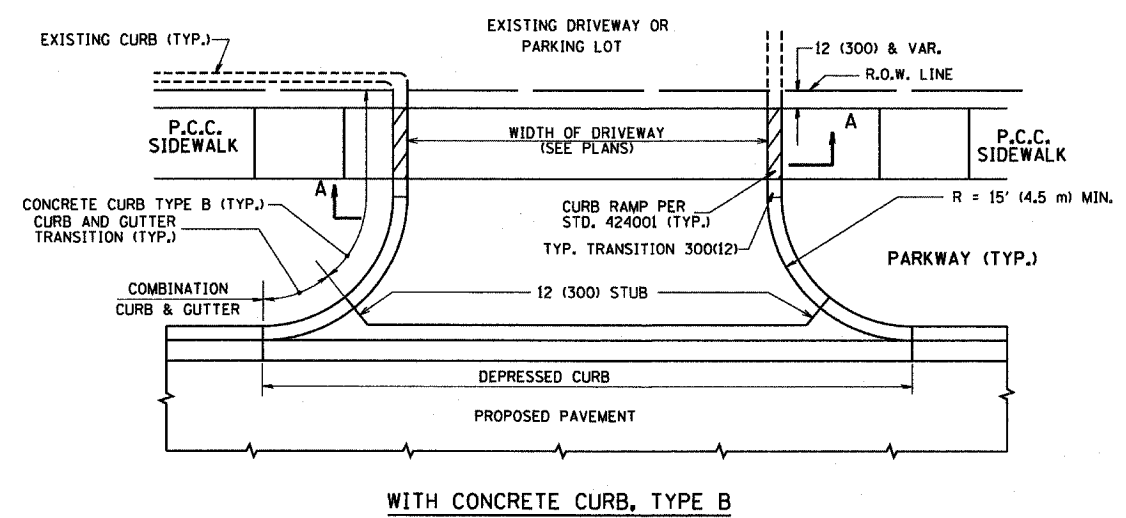
Item Code	Description 1	Description 2	10	10P	40	40E	C75	C98	10	40	76	99	Qty
284 109 00010	FUSE, ELBOW 8KV	30A											1
284 117 00020	ELBOW, FUSED 0.3KV 200A	1/0 STR AL 175-220 MLL											1
284 117 00030	ELBOW, 15KV 200A	1/0 STR AL 175-220 MLL											1
284 117 00031	ELBOW, 15KV 200A EXTENDED	1/0 STR AL 175-220 MLL											1
284 117 00040	ELBOW, 15KV 200A	4/0 STR AL 175-220 MLL											1
284 117 00041	ELBOW, 15KV 200A EXTENDED	4/0 STR AL 175-220 MLL											1
284 117 00065	ELBOW, 15KV 600A, W/LETP	750 MCM STR AL 175-220 MLL											1
284 117 00066	ELBOW, 15KV 600A EXTENDED	750 MCM STR AL 175-220 MLL											1
284 117 00095	ELBOW, 15KV 600A, W/LETP	1000 MCM STR AL 175-220 MLL											1
284 117 00096	ELBOW, 15KV 600A EXTENDED	1000 MCM STR AL 175-220 MLL											1
284 117 00100	ELBOW, 15KV 600A	4/0 STR AL 175-220 MLL											1
284 117 00140	KIT CABLE JACKET SEAL	1/0-4/0 (0.95"-1.50")											1
284 117 00440	KIT CABLE JACKET SEAL	250-1000 MCM (1.30"-2.67")											1
255 199 00100	CABLE CLEANER	QUARTS	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01	1
284 199 00120	CAP, INSULATED W/GROUND	15KV 200A											1

NAPERVILLE PUBLIC UTILITIES DEPARTMENT
 ELECTRIC STANDARDS
 30 15kV AIR SWITCH MODULE ASSEMBLY
 DATE: 10-22-06
 Page 3 of 3
 C30-0013



- 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

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1645	00-0018-00-06	DuPage	97	90
STA. 1+31.77		TO STA. 5+60.00		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



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.

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. LoFLEUR	04-15-03
R. BORO	01-01-07

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

ILLINOIS DEPARTMENT OF TRANSPORTATION

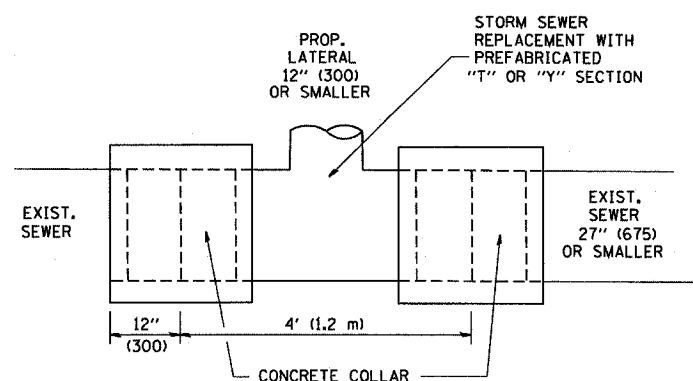
DRIVEWAY DETAILS
 DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

SCALE: VERT. NONE
 HORIZ.

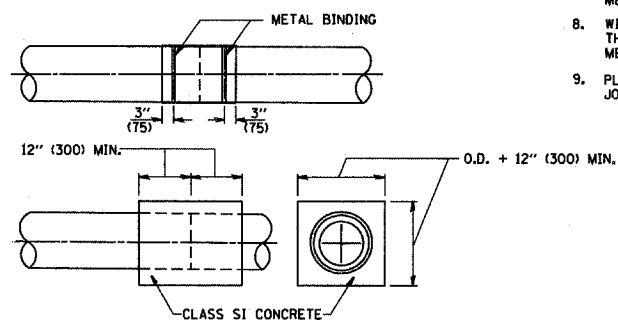
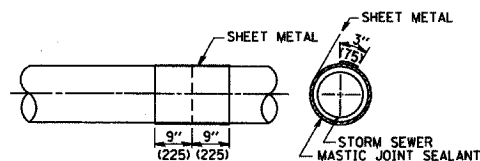
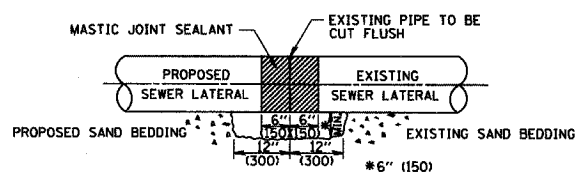
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-0018-00-BA	DU PAGE	97	91
STA. 1+31.77		TO STA. 5+60.00		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT



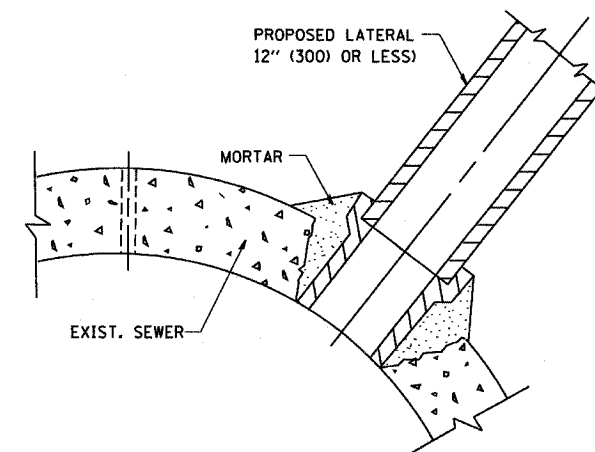
DETAIL "A"
LATERAL CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER



DETAIL "B"
CLASS SI CONCRETE COLLAR

CONSTRUCTION SEQUENCE

- CUT THE EXISTING END OF THE PIPE SO AS TO PRESENT A FLUSH BUTT JOINT. BRUSH AND CLEAN ALL PIPES.
- APPLY THE MASTIC JOINT SEALANT TO THE FIRST 6" (150) OF EACH PIPE.
- BUTT THE PIPES TOGETHER LEAVING A MINIMUM OF 12" x 6" (300 x 150) DEEP EXCAVATION UNDER AND AROUND EACH PIPE END.
- CUT A PIECE OF SHEET METAL GAGE NO. 19 11 (0.0418) 18" (450) WIDE BY THE OUTSIDE CIRCUMFERENCE OF THE PIPE PLUS 3" (75) LONG.
- WRAP THE SHEET METAL AROUND THE PIPES, 9" (225) ON EACH SIDE OF THE JOINT, STARTING AT THE TOP OF THE PIPE.
- LAP THE SHEET METAL AT LEAST 3" (75) AT THE TOP OF THE PIPE AND PLACE THE MASTIC JOINT SEALANT BETWEEN THE LAP.
- PLACE TWO METAL BANDS AROUND THE SHEET METAL AND TIGHTEN.
- WIPE OFF ANY EXCESS MASTIC JOINT SEALANT THAT OZZES OUT FROM BETWEEN THE SHEET METAL AND THE PIPES.
- 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

- THIS WORK SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE PORTIONS OF SECTION 950 OF THE STANDARD SPECIFICATIONS.
- CONNECTION TO AN EXISTING STORM SEWER SHALL BE BY EITHER OF THE FOLLOWING METHODS:
 - PROPOSED STORM SEWER CONNECTION TO EXISTING SEWER OF 27" (675) OR SMALLER SEE DETAIL "A" AND "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	07/25/93
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

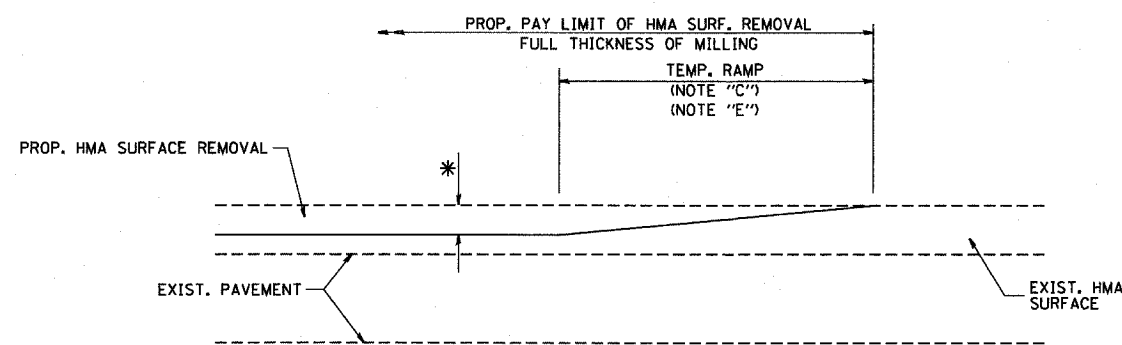
ILLINOIS DEPARTMENT OF TRANSPORTATION
DETAIL OF STORM SEWER CONNECTION TO EXISTING SEWER

SCALE: VERT. NONE
HORIZ.

DRAWN BY
CHECKED BY

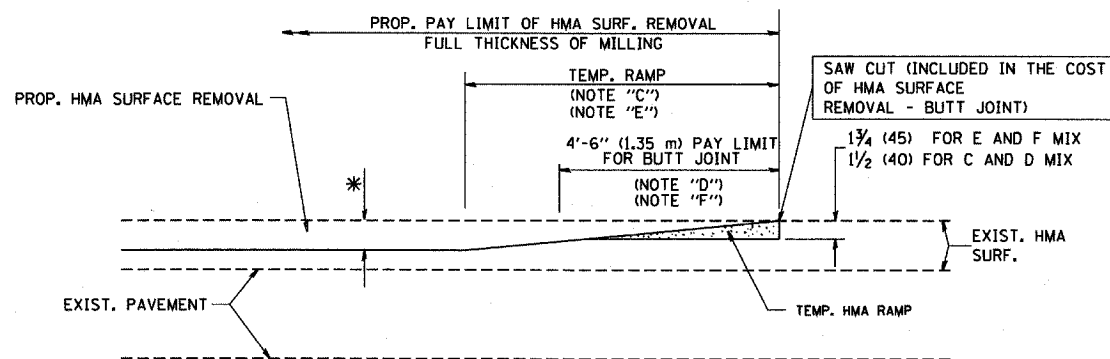
BD500-01 (BD-7)

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-0015-00-BR	DUPAGE	97	92
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



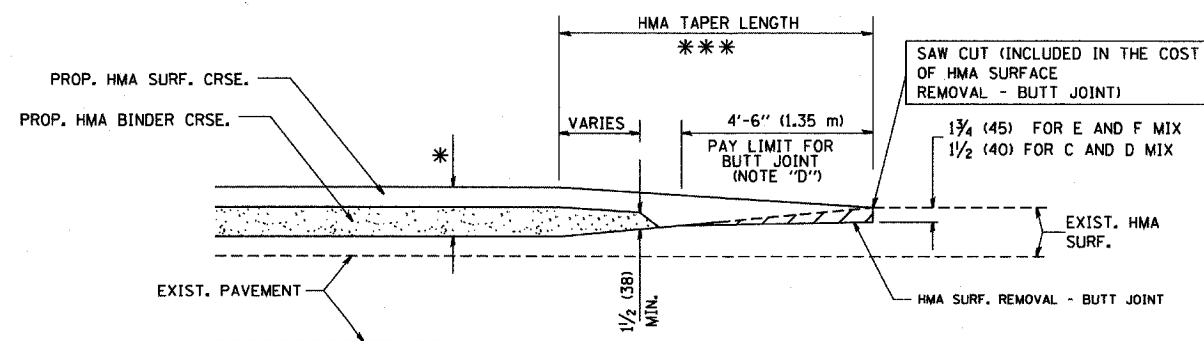
MILLED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 1



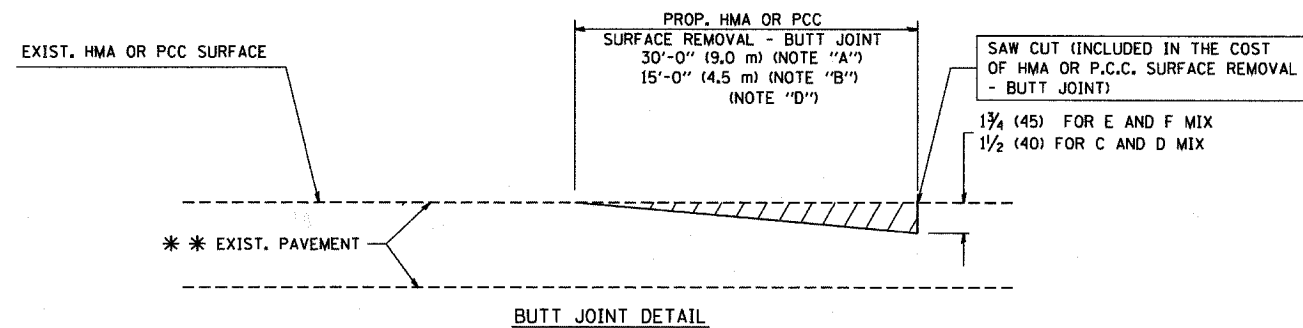
HMA CONSTRUCTED TEMPORARY RAMP
(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

OPTION 2
TYPICAL TEMPORARY RAMP

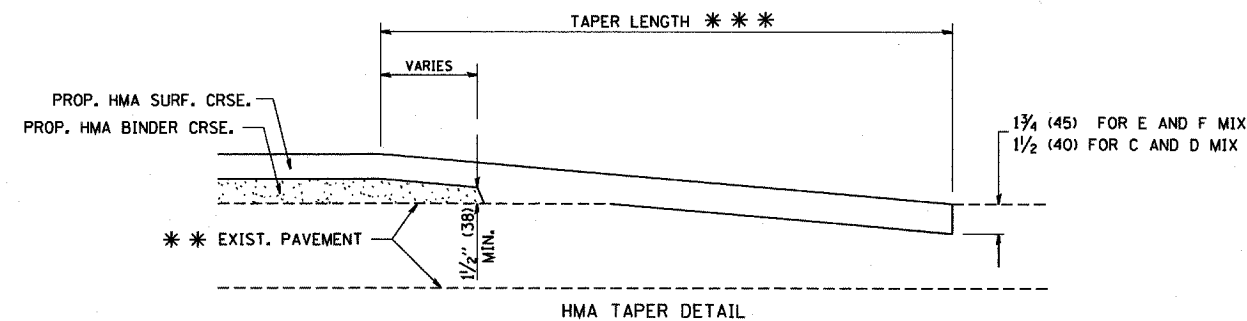


BUTT JOINT AND
HMA TAPER

TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

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

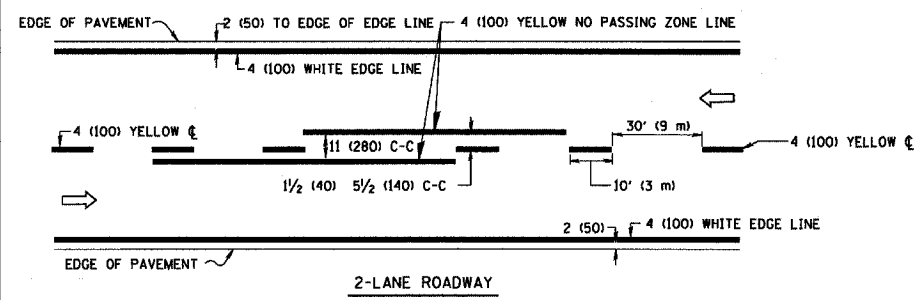
BUTT JOINT AND
HMA TAPER
DETAILS

SCALE: VERT. NONE
HORIZ.

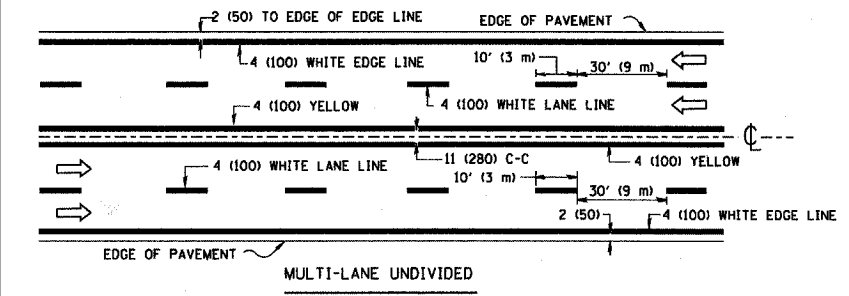
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CHECKED BY

BD400-05 (VI-BD32)

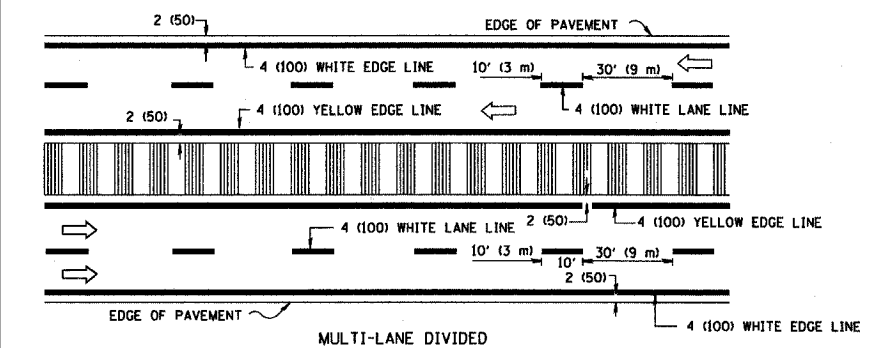
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1545	00-0015-00-BR	DUPAGE	97	93
STA. 1+31.77		TO STA. 5+50.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



2-LANE ROADWAY



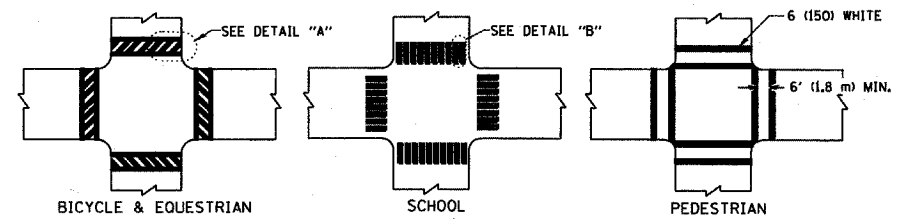
MULTI-LANE UNDIVIDED



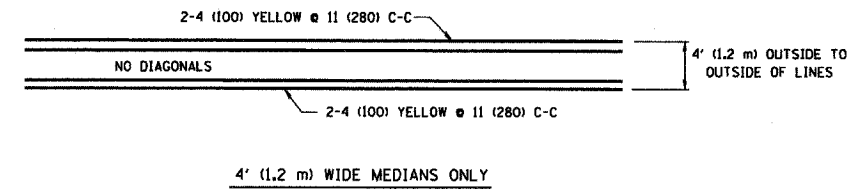
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

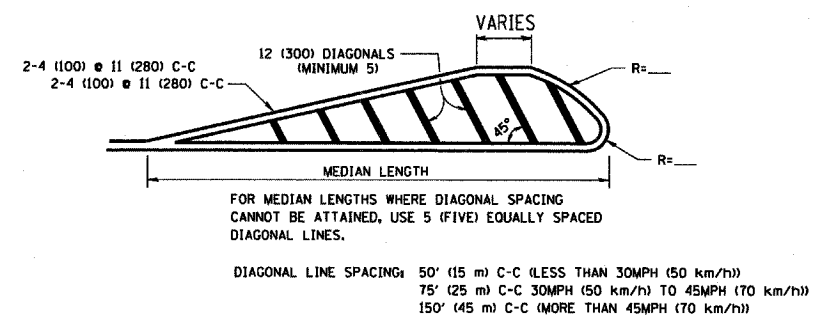
TYPICAL LANE AND EDGE LINE MARKING



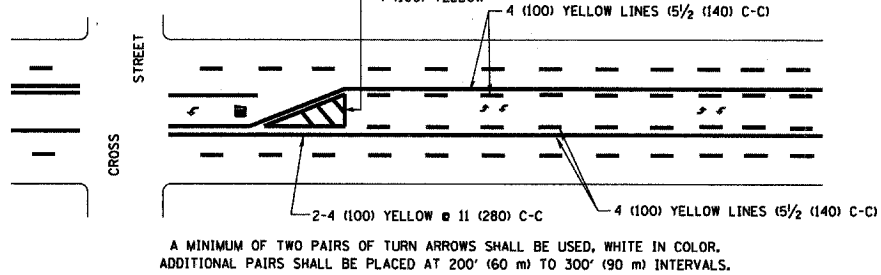
TYPICAL CROSSWALK MARKING



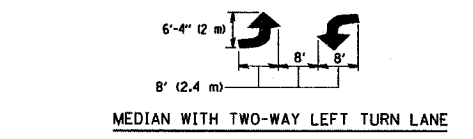
4' (1.2 m) WIDE MEDIANS ONLY



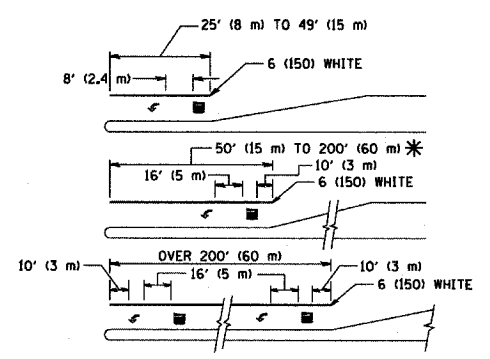
MEDIANS OVER 4' (1.2 m) WIDE



TYPICAL PAINTED MEDIAN MARKING



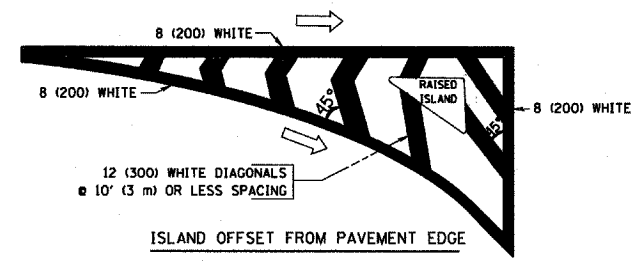
MEDIAN WITH TWO-WAY LEFT TURN LANE



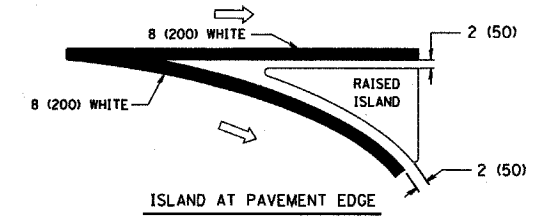
TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) 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".



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

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	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	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 (8' (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; 5/2 (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 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" IS 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

PLOT DATE = 3/6/2007
 FILE NAME = K:\distone\13.dgn
 PLOT SCALE = 50.0000 / IN.
 USER NAME = baward



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: 11.5' Left
 Surface Elevation: 656.4

Soil Description	Blow Counts	Qu (tsf)	W (%)	Surface Water Elev.	n/a	Blow Counts	Qu (tsf)	W (%)
				Groundwater Elevation WD Dry				
3.0" ASPHALT, 9.0" CRUSHED STONE								
	7							
	5							
SILTY CLAY-some sand, gravel & stone-brown & gray spotted black-medium stiff to stiff (CL) Fill	9	1.75P	18					
	3							
	4							
	-5	4	1.25P	20		-30		
	2							
	4							
	4	0.5P	18					
End of Boring @ -7.5' 3.25" Hollow Stem Augers CME-75 Automatic Hammer								
	-10					-35		
	-15					-40		
	-20					-45		
	-25					-50		

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-Bulge Failure S-Shear Failure
 E-Estimated Value F-Penetrometer
 O'BRIEN & ASSOCIATES, INC.

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



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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: 11.5' Right
 Surface Elevation: 656.2

Soil Description	Blow Counts	Qu (tsf)	W (%)	Surface Water Elev.	n/a	Blow Counts	Qu (tsf)	W (%)
				Groundwater Elevation WD Dry				
3.0" ASPHALT, 9.0" CRUSHED STONE								
	13							
	8							
CLAYEY SAND & STONE-brown-loose to medium dense (GC) Fill	8	NP	7					
	4							
	4							
	-5	5	NP	6		-30		
	2							
	2							
	3	0.75P	19					
SILTY CLAY-some sand, gravel & stone-brown & gray spotted black-medium stiff (CL) Fill	3							
	4							
TOPSOIL-black (OL)	-10	5	2.0P	42		-35		
End of Boring @ -10.0' 3.25" Hollow Stem Augers CME-75 Automatic Hammer								
	-15					-40		
	-20					-45		
	-25					-50		

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-Bulge Failure S-Shear Failure
 E-Estimated Value F-Penetrometer
 O'BRIEN & ASSOCIATES, INC.

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

REVISIONS	
NAME	DATE

**BRIDGE REHABILITATION
BAILEY ROAD OVER
WEST BRANCH OF THE DUPAGE RIVER
SOIL BORINGS R-1 AND R-2**

CONSULTANT
TYLIN INTERNATIONAL

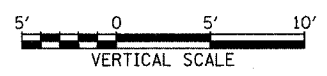
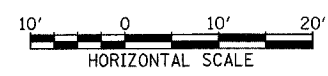
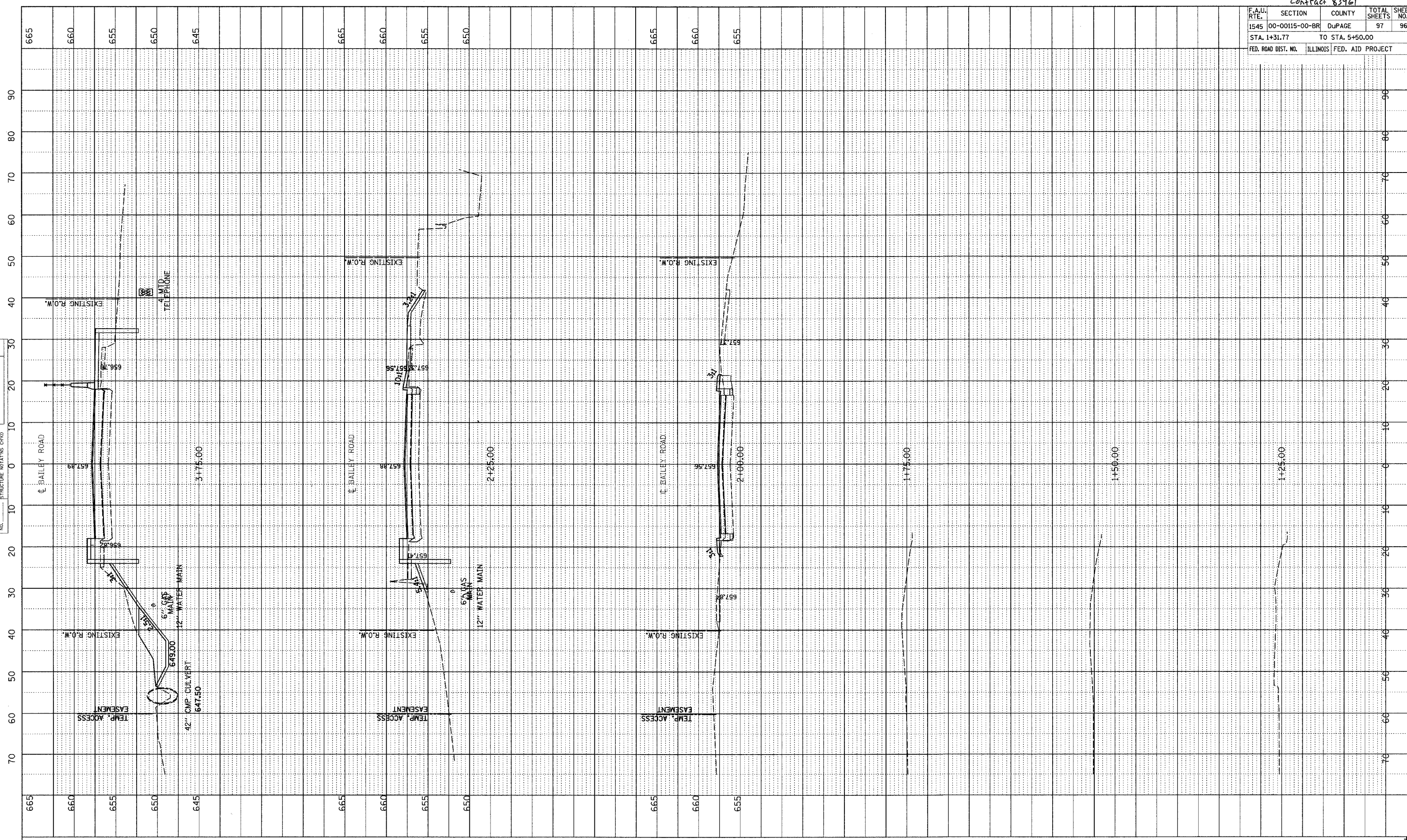
City of  **Naperville**

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

SHEET NO.
94
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		

BY	DATE



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		

DATE	BY

PROFILE	SURVEYED	GRADES CHECKED
NOTE BOOK NO.		
STRUCTURE NOTATION C/P/D		

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70

