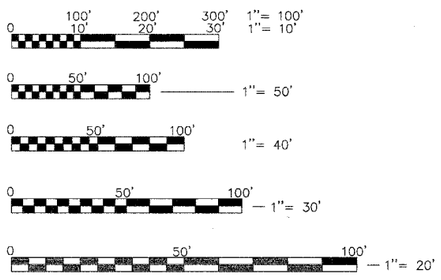
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1776 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
■ McHENRY ■ HUNTLEY ■ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

11-17-06 Letting, Item 043

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	1
PROJECT NO. BHM-8003 (278)				
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT 1		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

SCALES
- PLAN: 1" = 20'
- PROFILE HORIZ.: 1" = 20'
- PROFILE VERT.: 1" = 5'
- CROSS SECTIONS HORZ.: 1" = 2'
- CROSS SECTIONS VERT.: 1" = 5'



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.

STRUCTURE INFORMATION

SN 045-6008:
EXISTING AND PROPOSED STRUCTURE IS TWO SPANS (146'-3") REMOVE EXISTING CONCRETE DECK ON CONCRETE BEAM SUPERSTRUCTURE AND REPLACE WITH A 74'-1" WIDE SUPERSTRUCTURE CONSISTING OF A CONCRETE DECK ON STEEL BEAMS. EXISTING SUBSTRUCTURE UNITS TO BE MODIFIED AND RE-USED.

SN 045-6009:
EXISTING AND PROPOSED STRUCTURE IS FOUR SPANS (296'-8") REMOVE EXISTING CONCRETE DECK ON CONCRETE BEAM SUPERSTRUCTURE AND REPLACE WITH A 74'-1" WIDE SUPERSTRUCTURE CONSISTING OF A CONCRETE DECK ON STEEL BEAMS. EXISTING SUBSTRUCTURE UNITS TO BE MODIFIED AND RE-USED.

PROJECT LOCATED IN THE CITY OF AURORA

CALL JULIE 1-800-892-0123
WITH THE FOLLOWING:
COUNTY KANE
CITY-TOWNSHIP AURORA - AURORA
SEC. & 1/4 SEC. NO.# 15
48 hours before you dig
(Excluding Sat., Sun. & Holidays)

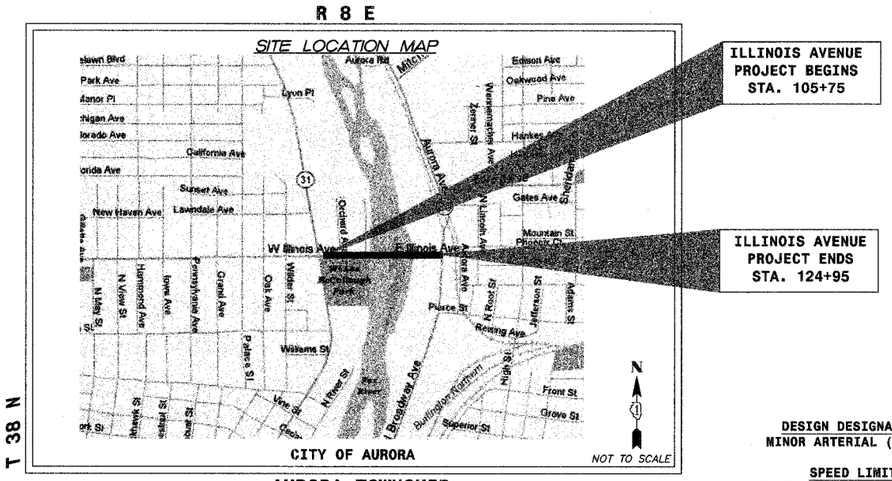
CONTRACT NO. 83867

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

F.A.U. 1517 : ILLINOIS AVENUE OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
ROADWAY WIDENING AND BRIDGE SUPERSTRUCTURE REPLACEMENT
PROJECT NO. ACBHM-8003 (278)
S.N. 045-6008,045-6009
KANE COUNTY
C-91-076-03

LOCATION OF SECTION INDICATED THUS: -



AURORA TOWNSHIP

ILLINOIS AVENUE PROJECT BEGINS STA. 105+75

ILLINOIS AVENUE PROJECT ENDS STA. 124+95

GROSS LENGTH OF PROJECT = 1920 FEET = 0.36 MILES
NET LENGTH OF PROJECT = 1920 FEET = 0.36 MILES

DESIGN DESIGNATION
MINOR ARTERIAL (URBAN)

SPEED LIMIT
ILLINOIS AVENUE: 30 MPH

TRAFFIC DATA
ILLINOIS AVENUE: 11,000 (2002)

CITY OF AURORA

APPROVED August 3 2006
Stephen K. Gordon
LOCAL AGENCY OFFICIAL

PASSED September 5 2006
Christopher Holt
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW Sept 11 2006
Diane O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

PROFESSIONAL ENGINEER'S SIGN & SEAL
JEFF L. PISHA P.E.
DATE: July 28, 2006
LICENSE EXPIRES: Nov. 30, 2007
SEAL
JEFFREY L. PISHA 062-054984 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

STRUCTURAL ENGINEER'S SIGN & SEAL
ROBERT G DAVIES, S.E., P.E.
DATE: July 28, 2006
LICENSE EXPIRES: Nov. 30, 2006
SEAL
STATE OF ILLINOIS ROBERT G. DAVIES 081-004686 LICENSED STRUCTURAL ENGINEER

FEDERAL AID DESIGN ENGINEER: JESSICA MILLER (847) 705-4487

PLOT FILE: GEN
VIEW: CE-01
COMP. FILE: C05181-S11.DWG

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	2
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867

INDEX OF SHEETS

GENERAL NOTES

1 THE CONTRACTOR WILL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE II BARRICADE USED. (ONE (1) WEIGHTED SAND BAG ACROSS EACH BOTTOM RAIL.) ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR (4) SANDBAGS PER BARRICADE.

2 FORTY-EIGHT HOURS BEFORE STARTING EXCAVATION THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) TO HAVE THE LOCATION OF EXISTING UTILITIES STAKED.

3 THE CONTRACTOR SHALL CONTACT THE CITY OF AURORA AND I.D.O.T. AT LEAST 72 HOURS IN ADVANCE OF BEGINNING ANY WORK ON ILLINOIS AVENUE.

4 THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON CITY PROPERTY WITHOUT WRITTEN PERMISSION FROM THE CITY OF AURORA.

5 THE BITUMINOUS MATERIAL PRIME COAT QUANTITIES HAVE BEEN DETERMINED USING A RATE OF 0.40 GAL/SQ-YD WITH TWO (2) APPLICATIONS INCLUDED.

6 UNLESS OTHERWISE NOTED ALL OFFSETS FOR THE DRAINAGE STRUCTURES LOCATED IN THE CURB AND GUTTER ARE TO THE BACK OF CURB. OFFSETS FOR ALL OTHER STRUCTURES ARE TO THE CENTER OF THE GRATE.

7 PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO THE ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTIONS FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTIONS, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

8 THE CONTRACTOR SHALL ENSURE THAT ALL WATER SYSTEM VALVES, VALVE VAULTS, AND SANITARY SEWER MANHOLES REMAIN READILY ACCESSIBLE TO THE CITY FOR EMERGENCY OPERATIONS. THE LOCATIONS OF ALL WATER AND SANITARY FACILITIES SHALL BE MARKED AND READILY VISIBLE AT ALL TIMES.

9 THE CONTRACTOR SHALL NOT OPERATE ANY OF THE EXISTING WATER SYSTEM. CITY OF AURORA FORCES MUST BE PRESENT TO OBSERVE AND OPERATE ALL VALVES, HYDRANTS, ETC. THE CONTRACTOR SHALL PROVIDE THE CITY WITH 24 HOUR NOTICE PRIOR TO STARTING ANY WORK ON CITY FACILITIES.

10 SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH ARTICLE 301.03 OF THE STANDARD SPECIFICATIONS BEFORE REMOVAL OF ANY UNSTABLE MATERIAL.

11 A SOILS REPORT HAS BEEN COMPLETED FOR THIS PROJECT AND IS AVAILABLE FOR CONTRACTOR REVIEW AT THE CITY OF AURORA OFFICES.

12 SAW CUTTING WILL BE REQUIRED FOR ALL REMOVAL ITEMS LISTED IN SECTION 440 OF THE STANDARD SPECIFICATIONS, SHOWN IN THE PLANS, AND AS DIRECTED BY THE ENGINEER. THE COST OF SAW CUTTING WILL BE INCLUDED IN THE COST OF ITEMS BEING REMOVED.

13 THIS PROJECT MAY REQUIRE UP TO 6 CHANGEABLE MESSAGE SIGNS.

14 THE PAY ITEM FOR STORM SEWER REMOVAL SHALL INCLUDE ANY TRENCH BACKFILL REQUIRED TO FILL AREA OF SEWER REMOVAL WHERE THERE IS NO REPLACEMENT. IF PROPOSED STORM SEWER IS REPLACED IN THE SAME TRENCH, THEN TRENCH BACKFILL SHALL BE PAID FOR SEPARATELY WITH THE QUANTITY SHOWN ON THE PLANS.

15 WET TEMPORARY PAVEMENT MARKING TAPE, TYPE III SHALL BE PLACED ON THE FINAL SURFACE PRIOR TO PLACING FINAL STRIPING. COST SHALL BE INCLUDED WITH TRAFFIC CONTROL AND PROTECTION.

16 5' LONG TRANSITIONS FOR PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER ARE INCLUDED AND SHALL BE INCIDENTAL TO COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12.

17 THE WORK UNDER THIS CONTRACT SHALL CONFORM TO ALL REGULATIONS GIVEN IN THE REGIONAL PERMIT ISSUED FOR THE PROJECT AND THE IDNR/OWR PERMIT ISSUED FOR THE PROJECT. THE WORK SHALL ALSO CONFORM TO KANE-DUPAGE COUNTY SOIL AND WATER CONSERVATION DISTRICT (KDSWCD) REQUIREMENTS. ANY FEES REQUIRED BY THE KDSWCD THROUGHOUT THE DURATION OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

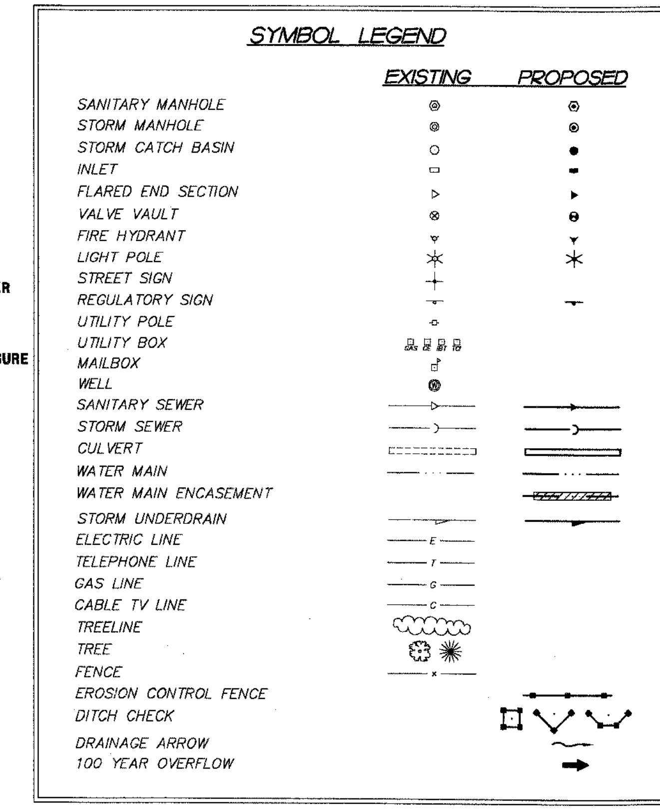
18 BUTT JOINTS WILL BE INSTALLED AT THE END OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND BITUMINOUS TAPER" DETAILS UNLESS OTHERWISE SPECIFIED.

19 PLACING EMBANKMENT SHALL BE IN ACCORDANCE WITH THE "BENCHING DETAIL FOR EMBANKMENT WIDENING" AND THE STANDARD SPECIFICATIONS. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "FURNISHED EXCAVATION."

20 THE BIKE TRAILS THAT CROSS THROUGH THE SITE SHALL BE MAINTAINED BY THE CONTRATOR WITHIN THE LIMITS OF THE R.O.W. AND SHALL REMAIN OPEN TO BIKE AND PEDESTRIAN TRAFFIC AT ALL TIMES DURING CONSTRUCTION. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN "TRAFFIC CONTROL AND PROTECTION."

LIST OF STATE STANDARDS

STANDARD NO.	LIST OF DESCRIPTION
000001-04	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
424001-04	CURB RAMPS FOR SIDEWALKS
515001-02	NAME PLATE FOR BRIDGES
601001	SUB-SURFACE DRAINS
602011	CATCH BASIN, TYPE C
602301-01	INLET, TYPE A
602401-01	MANHOLE, TYPE A
604001-02	FRAME AND LIDS, TYPE 1
604051-02	FRAME AND GRATE, TYPE 11
606001-02	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606301-02	PC CONCRETE ISLAND AND MEDIANS
609006-02	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
701606-04	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701801-03	LANE CLOSURE, MULTILANE 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE FOR SPEEDS < 45 MPH
702001-06	TRAFFIC CONTROL DEVICES
704001-02	TEMPORARY CONCRETE BARRIER
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720011	METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
729001	APPLICATION OF TYPE A & B METAL POSTS
780001-01	TYPICAL PAVEMENT MARKINGS
805001	ELECTRIC SERVICE INSTALLATION DETAILS
878001-07	CONCRETE FOUNDATION DETAILS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTOR LOOPS



STANDARD ABBREVIATIONS

B-B – BACK TO BACK OF CURB
B.C. – BACK OF CURB
B.O.C. – BACK OF CURB
B.S.L. – BUILDING SETBACK LINE
C.B. – STORM CATCH BASIN
C.E. – COMMONWEALTH EDISON CO.
D.E. – DRAINAGE EASEMENT
E-E – EDGE TO EDGE OF PAVEMENT
E.O.P. – EDGE OF PAVEMENT
E.O.S. – EDGE OF SHOULDER
E.P. – EDGE OF PAVEMENT
E.S. – EDGE OF SHOULDER
F.E.S. – FLARED END SECTION
I.B.T. – ILLINOIS BELL TELEPHONE CO.
L.E. – LANDSCAPE EASEMENT
M.H. – MANHOLE (TYPE SPECIFIED ON PLANS)
R.O.W. – RIGHT OF WAY
T.B.F. – TRENCH BACKFILL
T.C. – TOP OF CURB
T.C.E. – TEMPORARY CONSTRUCTION EASEMENT
T.O.B. – TOP OF BERM
T.O.C. – TOP OF CURB
U.E. – UTILITY EASEMENT

REVISIONS		
	NAME	DATE
7.		
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
INDEX OF SHEETS,
LIST OF STATE STANDARDS,
AND GENERAL NOTES

SCALE: "NTS"
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-02
COMP. FILE: 050181-611.DWG

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	3
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE ROADWAY 80% FEDERAL 20% LOCAL I000-2A	BRIDGE 80% FEDERAL 20% LOCAL X07/-2A	LIGHTING 80% FEDERAL 20% LOCAL Y030-1E	ROADWAY 100% LOCAL I000-2A
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	215	215	-	-	-
	20400800	FURNISHED EXCAVATION	CU YD	83	83	-	-	-
	20700400	POROUS GRANULAR EMBANKMENT (SPECIAL)	CU YD	212	-	212	-	-
	20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	604	604	-	-	-
	20800150	TRENCH BACKFILL	CU YD	100	100	-	-	-
*	21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	2,055	2,055	-	-	-
*	25000350	SEEDING, CLASS 7	ACRE	0.4	0.4	-	-	-
*	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	45	-	-	-
*	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	45	-	-	-
*	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	45	-	-	-
*	25200110	SODDING, SALT TOLERANT	SQ YD	2,055	2,055	-	-	-
*	28000400	PERIMETER EROSION BARRIER	FOOT	1,419	1,419	-	-	-
*	28000500	INLET AND PIPE PROTECTION	EACH	9	9	-	-	-
	28000510	INLET FILTERS	EACH	9	9	-	-	-
	28100107	STONE RIP RAP, CLASS A4	SQ YD	9	9	-	-	-
	28200200	FILTER FABRIC	SQ YD	9	9	-	-	-
	31101200	SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	1,231	1,231	-	-	-
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	5,742	3,083	-	-	2,659
	40600980	BITUMINOUS SURFACE REMOVAL - BUTT JOINT	SQ YD	458	-	-	-	458
	42000501	PORTLAND CEMENT CONCRETE PAVEMENT 10" (JOINTED)	SQ YD	811	811	-	-	-
	42001165	BRIDGE APPROACH PAVEMENT	SQ YD	732	732	-	-	-
	42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	168	168	-	-	-
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	67	67	-	-	-
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	10,613	10,613	-	-	-
	42400430	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL	SQ FT	2,567	2,567	-	-	-
	42400800	DETECTABLE WARNINGS	SQ FT	325	325	-	-	-
	44000006	BITUMINOUS SURFACE REMOVAL, 1 ½"	SQ YD	5,982	3,156	-	-	2,826
	44000100	PAVEMENT REMOVAL	SQ YD	1,909	1,909	-	-	-
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	223	223	-	-	-
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	1,989	1,989	-	-	-
	44000600	SIDEWALK REMOVAL	SQ FT	10,901	10,901	-	-	-
	44000910	BITUMINOUS CONCRETE REMOVAL (DECK)	SQ YD	2,551	2,551	-	-	-
	44002010	CONCRETE MEDIAN REMOVAL	FOOT	86	86	-	-	-
	44201785	CLASS D PATCHES, TYPE I, 12"	SQ YD	20	20	-	-	-
	44201794	CLASS D PATCHES, TYPE III, 12"	SQ YD	40	40	-	-	-
	44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	790	790	-	-	-
	50101700	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1	-	1	-	-
	50101800	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 2	EACH	1	-	1	-	-
	50102400	CONCRETE REMOVAL	CU YD	242	-	242	-	-
	50104000	BRIDGE RAIL REMOVAL	FOOT	36	-	36	-	-
	50200100	STRUCTURE EXCAVATION	CU YD	218	-	218	-	-
	50300150	NEOPRENE EXPANSION JOINT 2"	FOOT	153	-	153	-	-
	50300225	CONCRETE STRUCTURES	CU YD	594	-	594	-	-
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	1,143	-	1,143	-	-
	50300260	BRIDGE DECK GROOVING	SQ YD	2,387	-	2,387	-	-
	50300300	PROTECTIVE COAT	SQ YD	4,260	-	4,260	-	-
	50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	40	-	40	-	-
	50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	20	-	20	-	-
	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	-	1	-	-
	50500505	STUD SHEAR CONNECTORS	EACH	13,980	-	13,980	-	-
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	313,040	-	313,040	-	-
	50900605	HANDRAIL REMOVAL	FOOT	116	-	116	-	-

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE ROADWAY 80% FEDERAL 20% LOCAL I000-2A	BRIDGE 80% FEDERAL 20% LOCAL X07/-2A	LIGHTING 80% FEDERAL 20% LOCAL Y030-1E	ROADWAY 100% LOCAL I000-2A
51500100	NAME PLATES	EACH	2	-	2	-	-
54002020	EXPANSION BOLTS ¾"	EACH	56	-	56	-	-
54213447	END SECTIONS 12"	EACH	4	4	-	-	-
550A0340	STORM SEWER, CLASS A, TYPE 2, 12"	FOOT	142	142	-	-	-
55100500	STORM SEWER REMOVAL 12"	FOOT	24	24	-	-	-
56103000	DUCTILE IRON WATER MAIN 6"	FOOT	4	-	-	-	4
56400500	FIRE HYDRANTS TO BE REMOVED	EACH	1	-	-	-	1
56400820	FIRE HYDRANTS WITH AUXILIARY VALVE AND VALVE BOX	EACH	1	-	-	-	1
58700200	BRIDGE SEAT SEALER	SQ FT	964	-	964	-	-
59000100	EPOXY CRACK SEALING	FOOT	97	-	97	-	-
60100945	PIPE DRAINS, 12"	FOOT	56	56	-	-	-
60201105	CATCH BASINS, TYPE A, 4'-DIA, TYPE 11 FRAME AND GRATE	EACH	5	5	-	-	-
60221100	MANHOLES, TYPE A, 5'-DIA, TYPE 1 FRAME, CLOSED LID	EACH	2	2	-	-	-
60224020	MANHOLES, TYPE A, 6'-DIA, TYPE 11 FRAME AND GRATE	EACH	3	3	-	-	-
60223100	MANHOLES, TYPE A, SPECIAL, 5'-DIA, TYPE 1 FRAME, CLOSED LID	EACH	1	1	-	-	-
60236800	INLETS, TYPE A, TYPE 11 FRAME AND GRATE	EACH	5	5	-	-	-
60255800	MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	18	15	-	-	3
60265900	VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	3	2	-	-	1
60500040	REMOVING MANHOLES	EACH	3	3	-	-	-
60500060	REMOVING INLETS	EACH	7	7	-	-	-
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	1,578	1,578	-	-	-
60620800	CONCRETE MEDIAN, TYPE SB-9.12	SQ FT	1,574	1,574	-	-	-
60900140	TYPE B INLET BOX, STANDARD 609006	EACH	4	4	-	-	-
60900515	CONCRETE THRUST BLOCKS	EACH	4	4	-	-	-
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	15	15	-	-	-
67100100	MOBILIZATION	L. SUM	1	0.5	0.5	-	-
70101700	TRAFFIC CONTROL AND PROTECTION	L. SUM	1	0.5	0.5	-	-
70400100	TEMPORARY CONCRETE BARRIER	FOOT	578	578	-	-	-
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	578	578	-	-	-
72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	37	37	-	-	-

+ Y080
* SPECIALTY ITEM

REVISIONS	NAME	DATE
7.		
6.		
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUMMARY OF QUANTITIES

SCALE: "NTS"
DATE 07-28-2006
DRAWN BY MPL
CHECKED BY JLP

PLOT FILE STANDARD
VIEW: CE-03
COMP. FILE: 050181-011.DWG

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	4
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 80% FEDERAL 20% LOCAL I000-2A	BRIDGE 80% FEDERAL 20% LOCAL X07*-2A	LIGHTING 80% FEDERAL 20% LOCAL Y030-1E	ROADWAY 100% LOCAL I000-2A
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS	SQ FT	104	104	-	-	-
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	4,569	4,569	-	-	-
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	593	593	-	-	-
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	388	388	-	-	-
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	36	36	-	-	-
*	78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	3,602	3,602	-	-	-
*	78005150	EPOXY PAVEMENT MARKING - LINE 12"	FOOT	6	6	-	-	-
	78300105	PAVEMENT MARKING REMOVAL	FOOT	200	200	-	-	-
*	80400100	ELECTRIC SERVICE INSTALLATION	EACH	2	-	-	2	-
*	80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1	-	-	1	-
*	80700140	GROUND ROD, ¾" DIA. x 10 FT	EACH	15	-	-	15	-
*	81000600	CONDUIT IN TRENCH, 2" DIA. GALVANIZED STEEL	FOOT	830	40	-	790	-
*	81018500	CONDUIT PUSHED, 2" DIA. GALVANIZED STEEL	FOOT	137	-	-	137	-
*	81100200	CONDUIT ATTACHED TO STRUCTURE, ¾" DIA. GALVANIZED STEEL	FOOT	152	-	-	152	-
*	81400100	HANDHOLES	EACH	24	-	-	24	-
*	81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1,544	-	-	1,544	-
*	81702440	ELECTRIC CABLE IN CONDUIT 600V (XLP TYPE USE) 3-1/C NO. 1/0	FOOT	200	-	-	200	-
*	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	23	-	-	23	-
*	82500530	LIGHTING CONTROLLER TYPE CB-RCS 100 AMP-240 VOLT	EACH	2	-	-	2	-
*	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	121	-	-	121	-
*	84200500	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	16	-	-	16	-
*	84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	2	-	-	2	-
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1	-	-	-
	88600100	DETECTOR LOOP, TYPE I	FOOT	443	-	-	-	443
	X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	200	200	-	-	-
	X0323557	BRIDGE JOINT SYSTEM EXPANSION, 1"	FOOT	153	-	153	-	-
	X0323830	DRAINAGE SCUPPERS, DS-11	EACH	24	-	24	-	-
	X0712400	TEMPORARY PAVEMENT	SQ YD	84	84	-	-	-
	X0925900	BICYCLE RAILING (SPECIAL)	FOOT	624	-	624	-	-
*	X2800100	TEMPORARY DITCH CHECKS, ROLLED EXCELSIOR	EACH	10	10	-	-	-
	X3550500	BITUMINOUS BASE COURSE SUPERPAVE 8"	SQ YD	420	420	-	-	-
	X4021000	TEMPORARY ACCESS (PRIVATE ENTRANCE)	EACH	3	3	-	-	-
	X4022000	TEMPORARY ACCESS (COMMERCIAL ENTRANCE)	EACH	6	6	-	-	-
	X4066426	BITUMINOUS CONC. SURF. COURSE, SUPERPAVE, MIX "D", N70	TON	603	324	-	-	279
	X4066616	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL 19.0, N70	TON	63	63	-	-	-
	X4066770	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70	TON	499	359	-	-	140
*	X7011005	TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR	L SUM	1	0.5	0.5	-	-
*	X7015000	PORTABLE CHANGEABLE MESSAGE SIGN	CAL MO	12	12	-	-	-
*	X7030100	WET TEMPORARY PAVEMENT MARKING TAPE, TYPE III	FOOT	14,644	14,644	-	-	-
*	XX0040837	LUMINAIRE (SPECIAL)	EACH	8	-	-	8	-
	Z0002600	BAR SPLICERS	EACH	2,029	-	2,029	-	-
	Z0004500	BITUMINOUS DRIVEWAY PAVEMENT 8"	SQ YD	128	128	-	-	-
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.6	0.5	-	-
*	Z0030255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	4	4	-	-	-
	Z0036600	PARAPET RAILING	FOOT	446	-	446	-	-
+	Z0076600	TRAINEES	HOUR	1500	750	750	-	-

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: ROADWAY 80% FEDERAL 20% LOCAL I000-2A	BRIDGE 80% FEDERAL 20% LOCAL X07*-2A	LIGHTING 80% FEDERAL 20% LOCAL Y030-1E	ROADWAY 100% LOCAL I000-2A
*	XX0066688	UNIT DUCT WITH 2-1/C NO. 8 AND 1/C NO. 8 GROUND 600 V (XHHW-2), 1" DIA. POLYETHYLENE	FOOT	2,470	-	-	2,470	-
*	XX0066689	UNIT DUCT WITH 4-1/C NO. 8 AND 2-1/C NO. 8 GROUND 600 V (XHHW-2), 1" DIA. POLYETHYLENE	FOOT	20	-	-	20	-
*	XX0066690	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 6 1/C NO. 8	FOOT	162	-	-	162	-
*	XX0066691	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 3 1/C NO. 8	FOOT	77	-	-	77	-
*	XX0066692	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 2 1/C NO. 12	FOOT	168	-	-	168	-
*	XX0066693	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 1/C NO. 12	FOOT	168	-	-	168	-
	X0324876	CONCRETE BARRIER (SPECIAL)	FOOT	198	198	-	-	-
	X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 IN)	SQ FT	171	-	171	-	-
	XX0066694	CLEARING (SPECIAL)	SQ YD	48	48	-	-	-
*	XX0066695	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM	EACH	15	-	-	15	-
*	XX0066696	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN	EACH	4	-	-	4	-

+ Y080
* SPECIALTY ITEM

SMITH ENGINEERING CONSULTANTS, INC.
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www.smithengineering.com E-MAIL: sec@smithengineering.com
■ McHENRY ■ HUNTLEY ■ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUMMARY OF QUANTITIES

REVISIONS	NAME	DATE
7.		
6.		
5.		
4.		
3.		
2.		
1.		

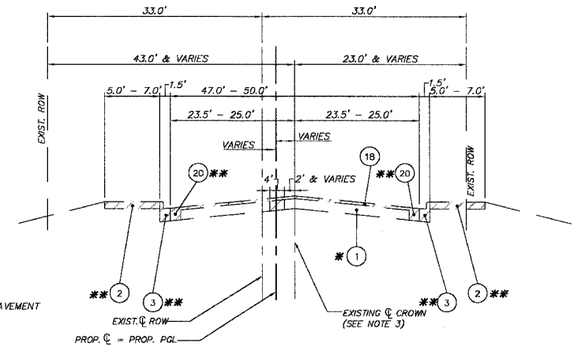
SCALE: "NTS"
DATE 07-28-2006
DRAWN BY MPL
CHECKED BY JPL

PLOT FILE: STANDARD
PLOT SCALE: 1.00
COMP. FILE: 05081-611.DWG

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	5
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867

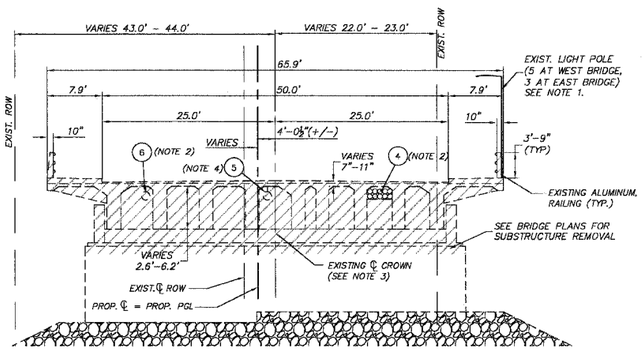


*EXISTING CONCRETE BRIDGE APPROACH PAVEMENT
STA. 113+08 TO STA. 113+38
STA. 116+38 TO STA. 116+81
STA. 116+96 TO STA. 117+11
STA. 118+52 TO STA. 118+82
STA. 120+32 TO STA. 120+62

** NOT REQUIRED STA. 105+75 TO STA. 109+02 AND STA. 123+68 TO STA. 124+95 (SEE REMOVAL PLAN AND PLAN AND PROFILES)

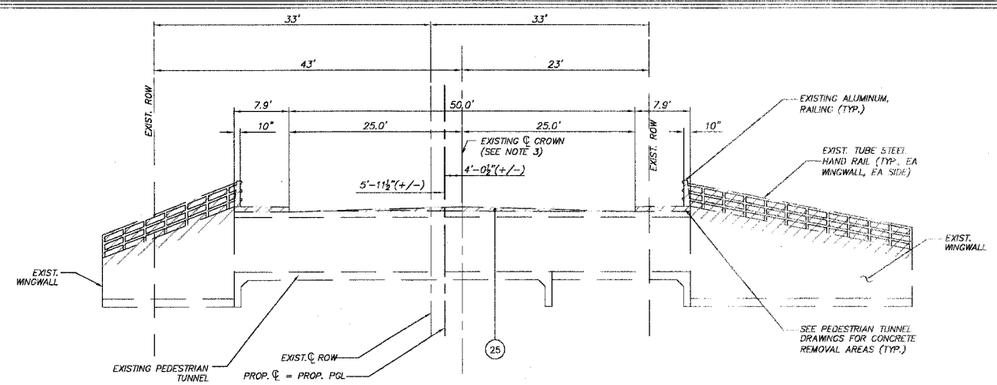
EXISTING ROADWAY CROSS SECTION

STA. 105+75 TO STA. 113+08
STA. 117+11 TO STA. 118+52
STA. 120+62 TO STA. 124+95



ILLINOIS AVENUE BRIDGE - EXISTING TYPICAL SECTION

STA. 113+38 TO STA. 116+38 (SN 045-6009)
STA. 118+82 TO STA. 120+32 (SN 045-6008)



ILLINOIS AVENUE PEDESTRIAN TUNNEL - EXISTING TYPICAL SECTION

STA. 116+81 TO STA. 116+96

LEGEND

1. EXISTING PAVEMENT (2 1/2" –6" BITUMINOUS SURFACE WITH 8"–11" CONCRETE BASE COURSE)
2. EXISTING PCC SIDEWALK
3. EXISTING CONCRETE CURB AND GUTTER
4. EXISTING ABANDONED 10–DUCT ELECTRICAL PACKAGE (5" DIA. PVC)
5. EXISTING 8" GAS MAIN (TO BE RELOCATED BY OTHERS)
6. EXISTING ABANDONED 12" WATER MAIN
7. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70, 1.5"
8. PROPOSED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL–19, N70, 2.5"
9. PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5" (SPECIAL) (SEE PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL SHEET)
10. PROPOSED AGGREGATE BASE 4" (CA–6 CRUSHED) (INCLUDED IN COST OF PCC SIDEWALK)
11. PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5"
12. PROPOSED BITUMINOUS BASE COURSE, SUPERPAVE, 8"
13. PROPOSED SUB–BASE GRANULAR MATERIAL, TYPE B, 4"
14. PROPOSED TOPSOIL FURNISH AND PLACE, 6" & SODDING, SALT TOLERANT
15. PROPOSED POROUS GRANULAR EMBANKMENT, SUBGRADE (12" DEPTH, SEE NOTE BELOW)
16. PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B–6.12 (MINIMUM THICKNESS OF GUTTER FLAG SHALL BE 9". ADDITIONAL AGGREGATE UNDER GUTTER FLAG SHALL BE INCLUDED IN THE COST OF COMBINATION CONCRETE CURB & GUTTER TYPE B–6.12)
17. PROPOSED CONCRETE SUPERSTRUCTURE (CLASS BD CONCRETE) SEE BRIDGE PLANS
18. BITUMINOUS SURFACE REMOVAL, 1½"
19. PROPOSED CONCRETE MEDIAN, TYPE SB–9.12
20. PAVEMENT REMOVAL
21. PROPOSED CONCRETE BARRIER (SPECIAL) (SEE PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL SHEET)
22. PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT, 10" (JOINTED)
23. PROPOSED BRIDGE APPROACH PAVEMENT
24. PROPOSED BRIDGE APPROACH PAVEMENT (SPECIAL)
25. BITUMINOUS CONCRETE REMOVAL (DECK)
26. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
27. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE N70 (THICKNESS VARIES 3/4" TO 2 1/4")

NOTES

1. WORK TO REMOVE EXISTING LIGHT POLES ON THE BRIDGES SHALL BE PAID FOR UNDER "REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE." REMOVAL OF EXISTING CONDUIT, HANDHOLES, ETC. ON THE BRIDGES SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "REMOVAL OF EXISTING SUPERSTRUCTURES."
2. WORK TO REMOVE EXISTING ABANDONED 10–DUCT PACKAGE AND ABANDONED 12" WATER MAIN SHALL BE INCLUDED UNDER THE LUMP SUM UNIT PRICE FOR "REMOVAL OF EXISTING SUPERSTRUCTURES"
3. EXIST. ℄ CROWN SHOWN ON EXISTING TYPICAL SECTIONS FOR CLARITY ONLY.
4. THE CONTRACTOR SHALL VERIFY THE STATUS OF THE EXISTING 8" GAS MAIN WITH THE GAS COMPANY BEFORE BEGINNING SUPERSTRUCTURE REMOVAL

ITEMS TO BE REMOVED

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
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McHENRY, ILLINOIS 60050
PH: 815-385-1770 FAX: 815-385-1781
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
EXISTING TYPICAL SECTIONS

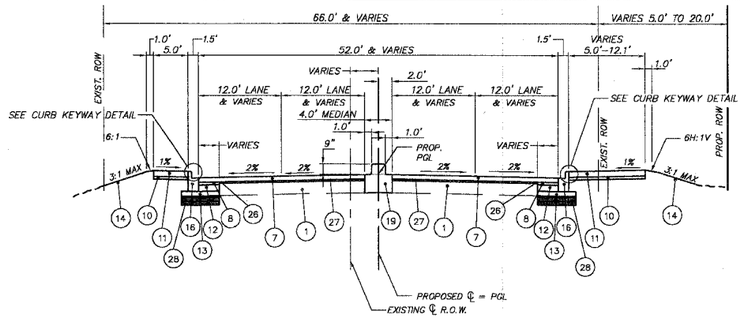
REVISIONS		
	NAME	DATE
7.		
6.		
5.		
4.		
3.		
2.		
1.	KMA	09-13-2006

SCALE: "NTS"
DATE 07-28-2006
DRAWN BY MPL
CHECKED BY RGD

PLOT FILE: STANDARD
VER: CE-05
COMP. FILES: 020101-6130.dwg

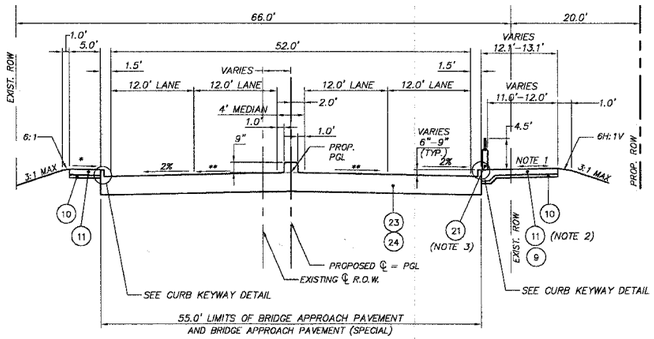
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	6
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867



ILLINOIS AVENUE - PROPOSED TYPICAL SECTION

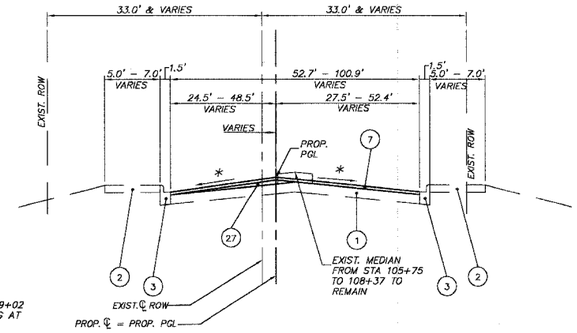
STA. 109+02 TO STA. 113+06.72
STA. 120+61.83 TO STA. 123+05



ILLINOIS AVENUE - PROPOSED TYPICAL SECTION

STA. 113+06.72 TO STA. 113+36.72
STA. 116+39.19 TO STA. 116+81.54
STA. 116+94.54 TO STA. 117+09.54
STA. 118+50.12 TO STA. 118+80.12
STA. 120+31.83 TO STA. 120+61.83

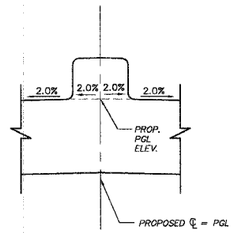
* VARIES 1.0% AT ROADWAY TO 1.6% AT END OF PROP. BRIDGES
** VARIES 1.5% AT END OF PROP. BRIDGES TO 2.0% AT ROADWAY



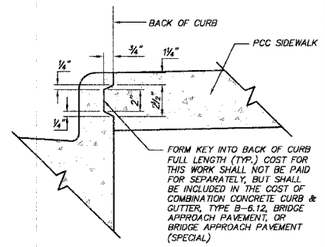
* VARIES FROM 2.0% AT STATIONS 109+02 AND 123+05 TO MATCHING EXISTING AT STATIONS 105+75 AND 124+95

ILLINOIS AVENUE - PROPOSED TYPICAL SECTION

STA. 105+75 TO STA. 109+02
STA. 123+05 TO STA. 124+95



PROPOSED PGL DETAIL (TYP.)



CURB KEYWAY DETAIL

LEGEND

1. EXISTING PAVEMENT (2 1/2" -6" BITUMINOUS SURFACE WITH 8"-11" CONCRETE BASE COURSE)
2. EXISTING PCC SIDEWALK
3. EXISTING CONCRETE CURB AND GUTTER
4. EXISTING ABANDONED 10-DUCT ELECTRICAL PACKAGE (5" DIA. PVC)
5. EXISTING 8" GAS MAIN (TO BE RELOCATED BY OTHERS)
6. EXISTING ABANDONED 12" WATER MAIN
7. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70, 1.5"
8. PROPOSED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N70, 2.5"
9. PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5" (SPECIAL) (SEE PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL SHEET)
10. PROPOSED AGGREGATE BASE 4" (CA-6 CRUSHED) (INCLUDED IN COST OF PCC SIDEWALK)
11. PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5"
12. PROPOSED BITUMINOUS BASE COURSE, SUPERPAVE, 8"
13. PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE B, 4"
14. PROPOSED TOPSOIL FURNISH AND PLACE, 6" & SODDING, SALT TOLERANT
15. PROPOSED POROUS GRANULAR EMBANKMENT, SUBGRADE (12" DEPTH, SEE NOTE BELOW)
16. PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MINIMUM THICKNESS OF GUTTER FLAG SHALL BE 9". ADDITIONAL AGGREGATE UNDER GUTTER FLAG SHALL BE INCLUDED IN THE COST OF COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12)
17. PROPOSED CONCRETE SUPERSTRUCTURE (CLASS BD CONCRETE) SEE BRIDGE PLANS
18. BITUMINOUS SURFACE REMOVAL, 1½"
19. PROPOSED CONCRETE MEDIAN, TYPE SB-9.12
20. PAVEMENT REMOVAL
21. PROPOSED CONCRETE BARRIER (SPECIAL) (SEE PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL SHEET)
22. PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT, 10" (JOINTED)
23. PROPOSED BRIDGE APPROACH PAVEMENT
24. PROPOSED BRIDGE APPROACH PAVEMENT (SPECIAL)
25. BITUMINOUS CONCRETE REMOVAL (DECK)
26. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
27. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE N70 (THICKNESS VARIES 3/4" TO 2 1/4")
28. PROPOSED POROUS GRANULAR EMBANKMENT, SUBGRADE (12" DEPTH-SEE NOTE BELOW)

BITUMINOUS MIXTURE REQUIREMENT

ITEM DESCRIPTION	AC TYPE	VOIDS	RAP %	THICKNESS
*BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70	PG 64-22	4% @ 70 Gyr.	10%	1½"
BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N70	PG 64-22	4% @ 70 Gyr.	15%	2½"
BITUMINOUS BASE COURSE, SUPERPAVE 8"	PG 58-22	2% @ 50 Gyr.	50%	8"
LEVELING BINDER (MACHINE METHOD) SUPERPAVE N70	PG 64-22	4% @ 70 Gyr.	10%	VARIES (¾" TO 2¼")
BITUMINOUS DRIVEWAY PAVEMENT: BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70	PG 64-22	4% @ 70 Gyr.	10%	2"
CLASS D PATCHES, TYPE I	PG 64-22	4% @ 70 Gyr.	15%	12"
CLASS D PATCHES, TYPE II	PG 64-22	4% @ 70 Gyr.	15%	12"

THE UNIT WEIGHT USED TO CALCULATE BITUMINOUS SURFACE MIXTURE IS 112 LB/SY PER INCH THICKNESS.

* TO BE UTILIZED FOR "TEMPORARY PAVEMENT" (2" THICK) AND "BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)"

FLEXIBLE PAVEMENT STRUCTURAL DESIGN - ILLINOIS AVENUE
DESIGN SPEED = 35 MPH

STRUCTURAL DESIGN TRAFFIC		DESIGN YEAR = 2017	
CLASSIFICATION:	CLASS I	ADT:	11,833
DESIGN PERIOD:	20 YEARS	PV:	11,241
TRAFFIC FACTOR:	1.5	SU:	355
ILLINOIS BEARING RATIO:	3	MU:	237
STRUCTURAL DESIGN #(Dt):	4.5		

BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70, 1.5"	x	.40	=	0.60
BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N70, 2.5"	X	.33	=	0.99
BITUMINOUSE BASE COURSE, SUPERPAVE, 8"	X	.33	=	2.64
SUB-BASE GRANULAR MATERIAL, TYPE B-4"	X	.11	=	0.44
				4.5

NOTES

1. CROSS SLOPE OF SHARED USE PATH VARIES FROM 1.6% AT PROP. BRIDGES AND PEDESTRIAN TUNNEL (SLOPING AWAY FROM ROADWAY) TO 1% AT ROADWAY (SLOPING TOWARD ROADWAY)
2. STA. 118+50.12 TO 118+80.12 ONLY
3. STA. 113+06.72 TO STA. 113+36.72, STA. 116+39.19 TO 116+81.54, STA. 116+94.54 TO STA. 117+09.54, AND STA. 120+31.83 TO STA. 120+61.83 ONLY

"POROUS GRANULAR EMBANKMENT, SUBGRADE (PGES) HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH PGES WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSUITABLE AND/OR UNSTABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO COMPENSATION WILL BE DUE THE CONTRACTOR."

ALL RECOMMENDED UNDERCUTS ARE FROM 6" OUTSIDE THE EDGES OF CURB AND GUTTER. DEPTHS WILL BE DETERMINED BY A LICENSED SOILS ENGINEER. LIMITS ARE FROM STA 109+02 TO 113+36.72, 116+39.19 TO 118+80.12, AND 120+31.83 TO 123+05.

REVISIONS		
	NAME	DATE
7.		
6.		
5.		
4.		
3.		
2.		
1.	KMA	09-13-2006

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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PROPOSED TYPICAL SECTIONS

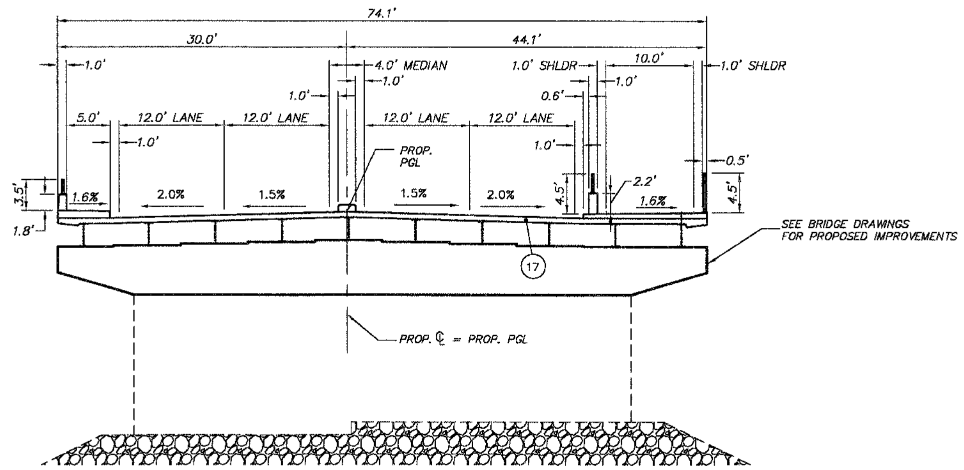
SCALE: "NTS" DRAWN BY MPL

DATE 07-28-2006 CHECKED BY JLP

PLOT FILE-STANDARD
VIEW: CE-06
COMP. FILE: 05181-sht2a.dwg

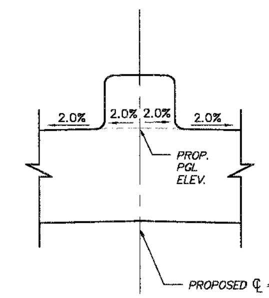
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	7
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867

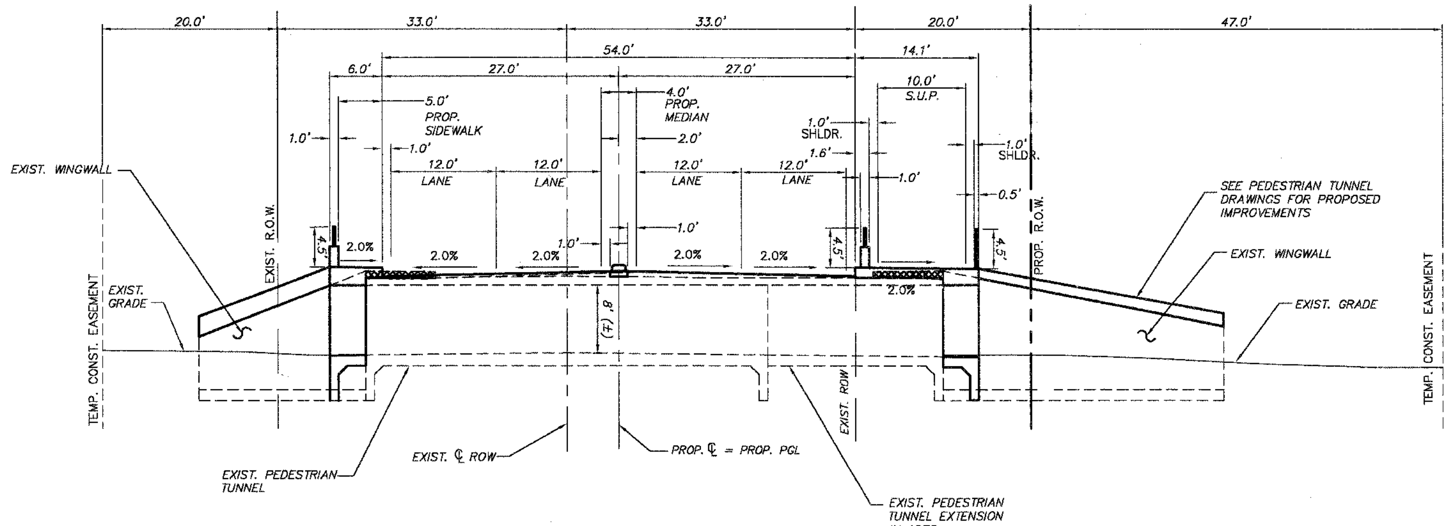


ILLINOIS AVENUE WEST BRIDGE AND EAST BRIDGE PROPOSED TYPICAL SECTION

STA. 113+36.72 TO STA. 116+39.19 (WEST BRIDGE)
STA. 118+80.12 TO STA. 120+31.83 (EAST BRIDGE)

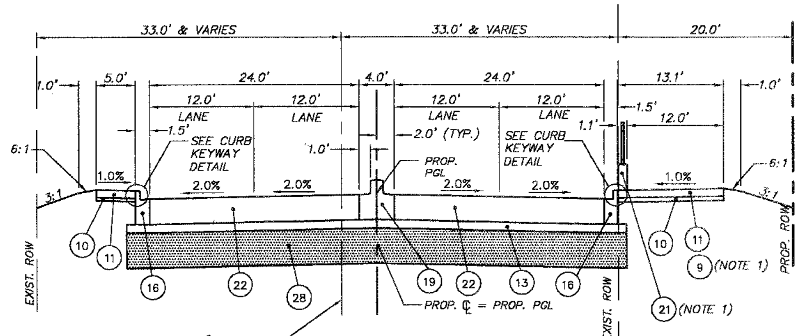


PROPOSED PGL DETAIL (TYP.)



PROPOSED ROADWAY CROSS SECTION AT PEDESTRIAN TUNNEL

STA. 116+81.54 TO STA. 116+94.54



ILLINOIS AVENUE PROPOSED TYPICAL SECTION

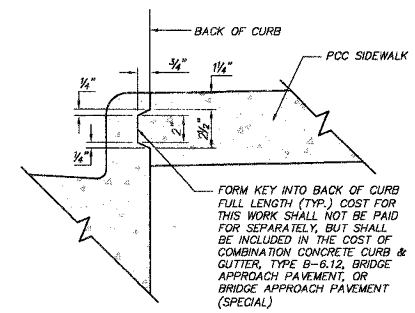
STA. 117+09.54 TO STA. 118+50.12

LEGEND

1. EXISTING PAVEMENT (2 1/2" -6" BITUMINOUS SURFACE WITH 8"-11" CONCRETE BASE COURSE)
2. EXISTING PCC SIDEWALK
3. EXISTING CONCRETE CURB AND GUTTER
4. EXISTING ABANDONED 10-DUCT ELECTRICAL PACKAGE (5" DIA. PVC)
5. EXISTING 8" GAS MAIN (TO BE RELOCATED BY OTHERS)
6. EXISTING ABANDONED 12" WATER MAIN
7. PROPOSED BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70, 1.5"
8. PROPOSED BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19, N70, 2.5"
9. PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5" (SPECIAL) (SEE PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL SHEET
10. PROPOSED AGGREGATE BASE 4" (CA-6 CRUSHED) (INCLUDED IN COST OF PCC SIDEWALK)
11. PROPOSED PORTLAND CEMENT CONCRETE SIDEWALK 5"
12. PROPOSED BITUMINOUS BASE COURSE, SUPERPAVE, 8"
13. PROPOSED SUB-BASE GRANULAR MATERIAL, TYPE B, 4"
14. PROPOSED TOPSOIL FURNISH AND PLACE, 6" & SODDING, SALT TOLERANT
15. PROPOSED POROUS GRANULAR EMBANKMENT, SUBGRADE (12" DEPTH, SEE NOTE BELOW)
16. PROPOSED COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MINIMUM THICKNESS OF GUTTER FLAG SHALL BE 9". ADDITIONAL AGGREGATE UNDER GUTTER FLAG SHALL BE INCLUDED IN THE COST OF COMBINATION CONCRETE CURB & GUTTER TYPE B-6.12)
17. PROPOSED CONCRETE SUPERSTRUCTURE (CLASS BD CONCRETE) SEE BRIDGE PLANS
18. BITUMINOUS SURFACE REMOVAL, 1½"
19. PROPOSED CONCRETE MEDIAN, TYPE SB-9.12
20. PAVEMENT REMOVAL
21. PROPOSED CONCRETE BARRIER (SPECIAL) (SEE PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL SHEET)
22. PROPOSED PORTLAND CEMENT CONCRETE PAVEMENT, 10" (JOINTED)
23. PROPOSED BRIDGE APPROACH PAVEMENT
24. PROPOSED BRIDGE APPROACH PAVEMENT (SPECIAL)
25. BITUMINOUS CONCRETE REMOVAL (DECK)
26. PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
27. PROPOSED LEVELING BINDER (MACHINE METHOD) SUPERPAVE N70 (THICKNESS VARIES 3/4" TO 2 1/4")
28. PROPOSED POROUS GRANULAR EMBANKMENT, SUBGRADE (12" DEPTH-SEE NOTE BELOW)

"POROUS GRANULAR EMBANKMENT, SUBGRADE (PGES) AND GEOTECHNICAL FABRIC FOR GROUND STABILIZATION HAS BEEN PROVIDED FOR USE AT THE LOCATIONS INDICATED FOR SOILS THAT TEND TO BE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH PGES OVER GEOTECHNICAL FABRIC FOR GROUND STABILIZATION WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE GEOTECHNICAL ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHOULD BE TESTED WITH STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSUITABLE AND/OR UNSTABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY SHALL BE DEDUCTED AND NO COMPENSATION WILL BE DUE THE CONTRACTOR."

ALL RECOMMENDED UNDERCUTS ARE FROM 6" OUTSIDE THE EDGES OF CURB AND GUTTER. DEPTHS WILL BE DETERMINED BY A LICENSED SOILS ENGINEER. LIMITS ARE FROM STA 109+02 TO 113+36.72, 116+39.19 TO 118+80.12, AND 120+31.83 TO 123+05.



CURB KEYWAY DETAIL

NOTES

1. STA. 117+09.54 TO STA. 117+92 ONLY

REVISIONS		
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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
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McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
McHENRY HUNTLEY YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

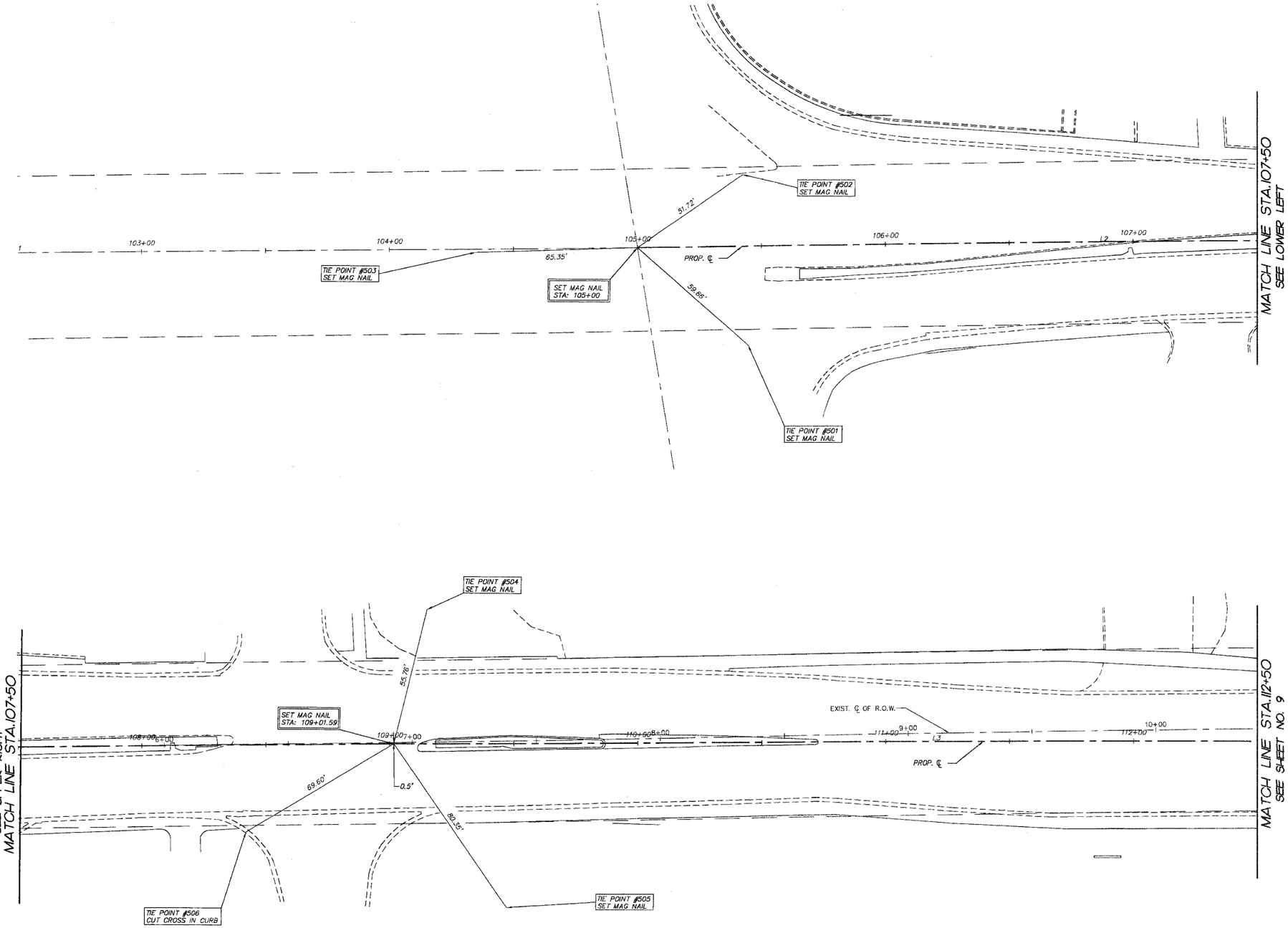
ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PROPOSED BRIDGE
TYPICAL SECTIONS

SCALE: "NTS" DRAWN BY WJH
DATE 07-28-2006 CHECKED BY TEH

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	8
STA.	102+50	TO STA.	112+50	
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867



PROPOSED CONCRETE PAVEMENT
(QUANITY ON PLANS)

LINE TABLE				
LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N88°59'04"E	113+08.10	120+30.26
L5	454.41'	S89°34'41"E	120+30.26	124+84.68
L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	263.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

TIE POINT TABLE		
TIE POINT	NORTHING	EASTING
501	1859009.30	989661.46
502	1859078.63	989658.81
503	1859046.53	989551.21
504	1859109.58	990031.13
505	1858989.42	990063.94
506	1859019.06	989958.68

SITE BENCHMARKS

BM 1:
CUT SQUARE ON NORTHWEST WINGWALL OF
WEST BRIDGE: SN 045-6009
ELEVATION = 639.93

BM 2:
CUT SQUARE ON SOUTHEAST WINGWALL OF
EAST BRIDGE: SN 045-6008
ELEVATION = 639.88

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McHENRY, ILLINOIS 60050
PH: 815-385-1776 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
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REVISIONS		
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ILLINOIS DEPARTMENT OF TRANSPORTATION

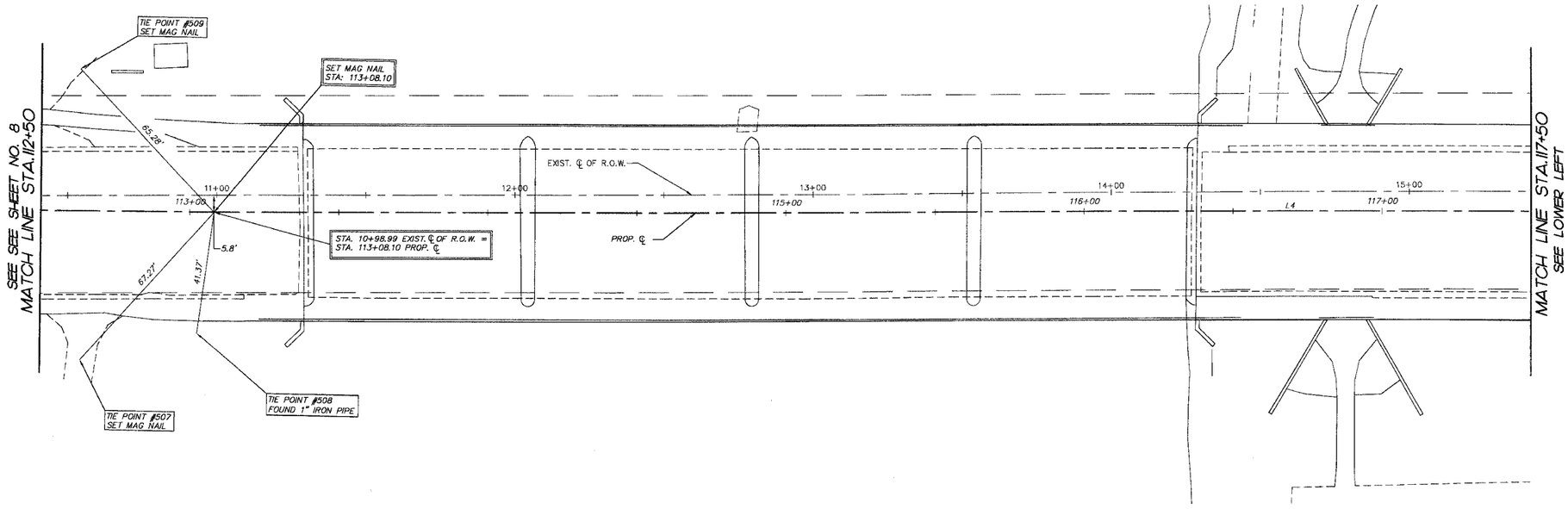
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
ALIGNMENT AND TIES
STA 102+50 TO STA 112+50

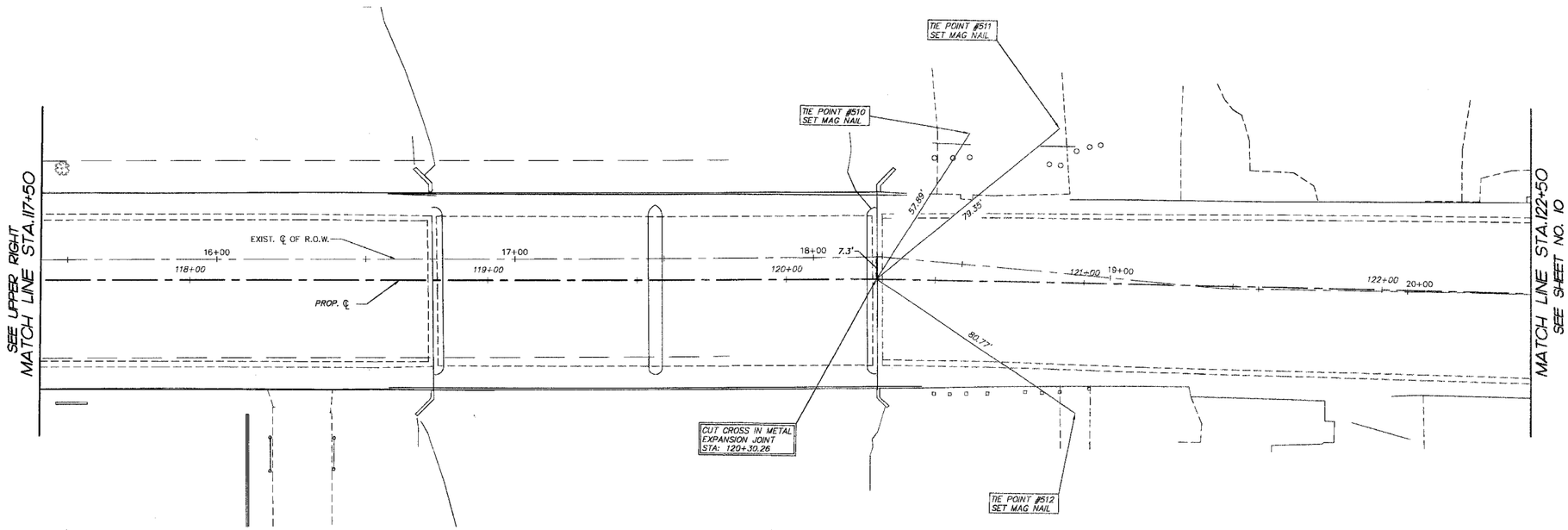
SCALE: 1" = 20'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-8
COMP. FILE: 060181-828.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	9
STA.	112+50	TO STA.	122+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867





LINE TABLE				
LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N88°59'04"E	113+08.10	120+30.26
L5	454.41'	S89°34'41"E	120+30.26	124+84.68
L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	283.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

TIE POINT TABLE		
TIE POINT	NORTHING	EASTING
507	1859007.47	990380.41
508	1859017.16	990419.46
509	1859105.04	990379.06
510	1859120.26	991177.06
511	1859122.67	991207.19
512	1859026.57	991214.05

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ILLINOIS DEPARTMENT OF TRANSPORTATION

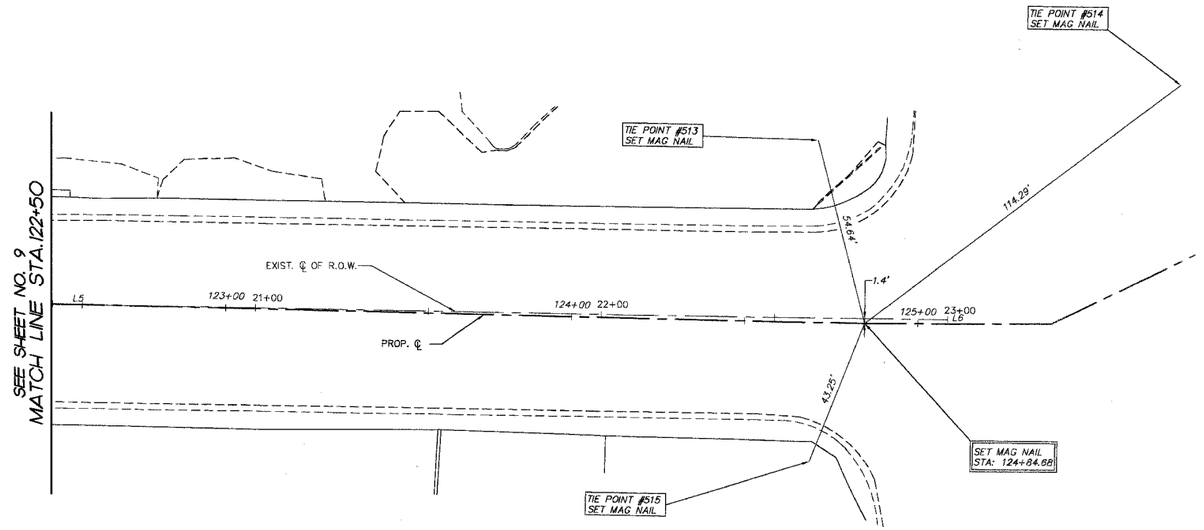
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
ALIGNMENT AND TIES
STA 112+50 TO STA 122+50

SCALE: 1" = 20'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-9
COMP. FILE: 050101-6929.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	10
STA.	122+50	TO STA.	125+00	
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867



LINE TABLE				
LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N88°59'04"E	113+08.10	120+30.26
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L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	283.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

TIE POINT TABLE		
TIE POINT	NORTHING	EASTING
513	1859120.46	991586.89
514	1859137.68	991691.34
515	1859027.26	991585.61

REVISIONS		
	NAME	DATE
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ILLINOIS AVENUE OVER THE FOX RIVER
ALIGNMENT AND TIES
STA 122+50 TO STA 125+00

SCALE: 1" = 20'

DRAWN BY MPL

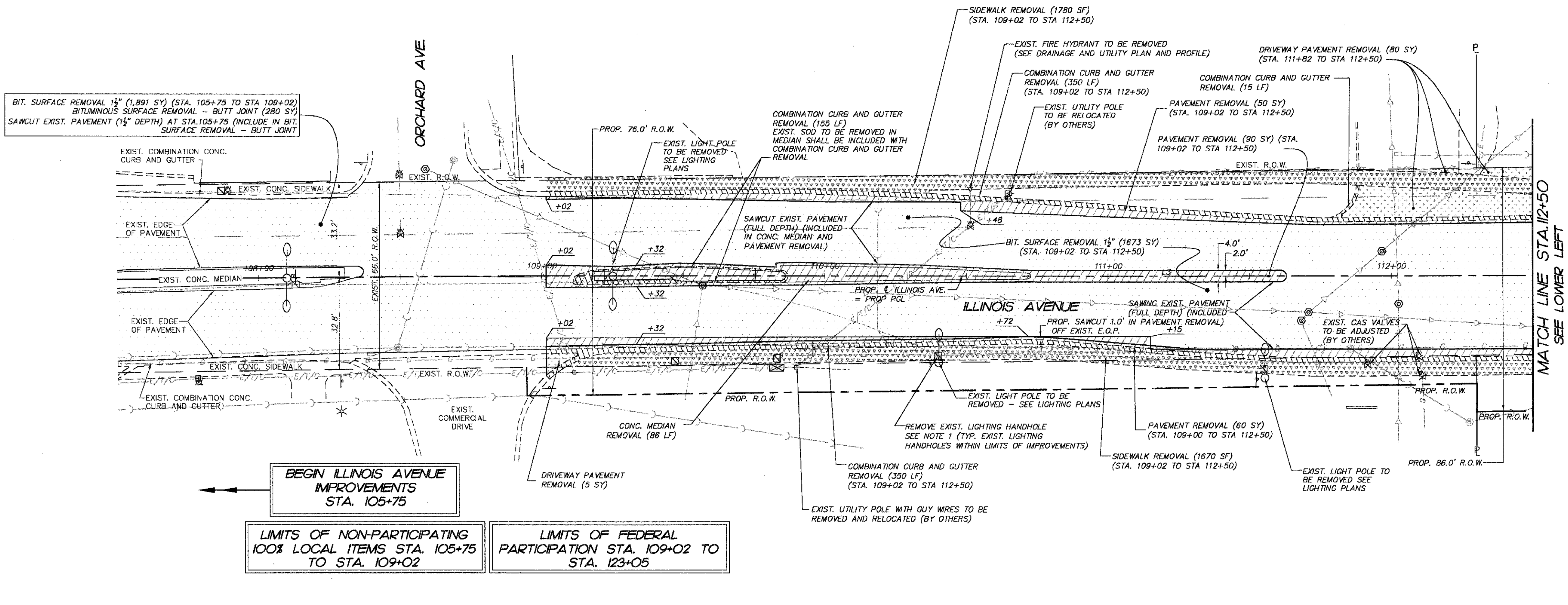
DATE 07-28-2006

CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: DE-13
COMP. FILE: 050181-429.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	11
STA. 107+50	TO STA. 117+50			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT: 83867



BIT. SURFACE REMOVAL 1½" (1,891 SY) (STA. 105+75 TO STA 109+02) BITUMINOUS SURFACE REMOVAL – BUTT JOINT (280 SY)
SAWCUT EXIST. PAVEMENT (1½" DEPTH) AT STA.105+75 (INCLUDE IN BIT. SURFACE REMOVAL – BUTT JOINT
ORCHARD AVE.
EXIST. COMBINATION CONC. CURB AND GUTTER
EXIST. CONC. SIDEWALK
EXIST. EDGE OF PAVEMENT
EXIST. CONC. MEDIAN
EXIST. COMBINATION CONC. CURB AND GUTTER
EXIST. R.O.W.
EXIST. 66.0' R.O.W.
EXIST. COMMERCIAL DRIVE
PROP. 76.0' R.O.W.
EXIST. LIGHT POLE TO BE REMOVED SEE LIGHTING PLANS
COMBINATION CURB AND GUTTER REMOVAL (155 LF) EXIST. SOD TO BE REMOVED IN MEDIAN SHALL BE INCLUDED WITH COMBINATION CURB AND GUTTER REMOVAL
SAWCUT EXIST. PAVEMENT (FULL DEPTH) (INCLUDED IN CONC. MEDIAN AND PAVEMENT REMOVAL)
SIDEWALK REMOVAL (1780 SF) (STA. 109+02 TO STA 112+50)
EXIST. FIRE HYDRANT TO BE REMOVED (SEE DRAINAGE AND UTILITY PLAN AND PROFILE)
COMBINATION CURB AND GUTTER REMOVAL (350 LF) (STA. 109+02 TO STA 112+50)
EXIST. UTILITY POLE TO BE RELOCATED (BY OTHERS)
PAVEMENT REMOVAL (50 SY) (STA. 109+02 TO STA 112+50)
PAVEMENT REMOVAL (90 SY) (STA. 109+02 TO STA 112+50)
COMBINATION CURB AND GUTTER REMOVAL (15 LF)
DRIVEWAY PAVEMENT REMOVAL (80 SY) (STA. 111+82 TO STA 112+50)
BIT. SURFACE REMOVAL 1½" (1673 SY) (STA. 109+02 TO STA 112+50)
PROP. ℄ ILLINOIS AVE. = PROP PGL
ILLINOIS AVENUE
SAWING EXIST. PAVEMENT (FULL DEPTH) (INCLUDED IN PAVEMENT REMOVAL)
PROP. SAWCUT 1.0' OFF EXIST. E.O.P.
EXIST. GAS VALVES TO BE ADJUSTED (BY OTHERS)
PROP. R.O.W.
PROP. 86.0' R.O.W.
CONC. MEDIAN REMOVAL (86 LF)
DRIVEWAY PAVEMENT REMOVAL (5 SY)
EXIST. LIGHT POLE TO BE REMOVED – SEE LIGHTING PLANS
REMOVE EXIST. LIGHTING HANDHOLE SEE NOTE 1 (TYP. EXIST. LIGHTING HANDHOLES WITHIN LIMITS OF IMPROVEMENTS)
COMBINATION CURB AND GUTTER REMOVAL (350 LF) (STA. 109+02 TO STA 112+50)
EXIST. UTILITY POLE WITH GUY WIRES TO BE REMOVED AND RELOCATED (BY OTHERS)
PAVEMENT REMOVAL (60 SY) (STA. 109+00 TO STA 112+50)
SIDEWALK REMOVAL (1670 SF) (STA. 109+02 TO STA 112+50)
EXIST. LIGHT POLE TO BE REMOVED SEE LIGHTING PLANS
MATCH LINE STA.112+50 SEE LOWER LEFT
BEGIN ILLINOIS AVENUE IMPROVEMENTS STA. 105+75
LIMITS OF NON-PARTICIPATING 100% LOCAL ITEMS STA. 105+75 TO STA. 109+02
LIMITS OF FEDERAL PARTICIPATION STA. 109+02 TO STA. 123+05

LINE TABLE

LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
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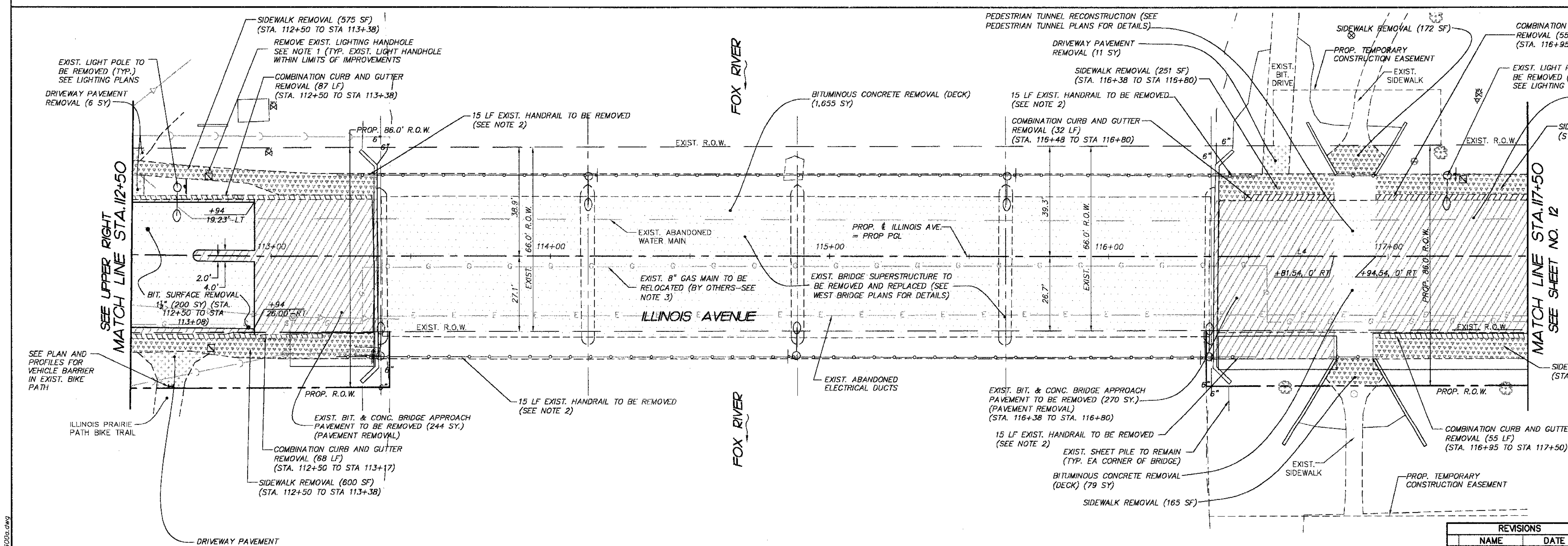
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

NOTES:

1. EXISTING LIGHTING HANDHOLE REMOVAL SHALL BE INCLUDED UNDER 'REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE'.
2. EXISTING HANDRAIL REMOVAL OFF OF BRIDGES SHALL BE INCLUDED UNDER "SIDEWALK REMOVAL"
3. CONTRACTOR SHALL VERIFY STATUS OF 8" GAS MAIN WITH GAS COMPANY BEFORE BRIDGE SUPERSTRUCTURE REMOVAL.

PROJECT LEGEND:

- DENOTES BITUMINOUS SURFACE REMOVAL, 1½" OR BITUMINOUS CONCRETE REMOVAL (DECK)
- DENOTES BITUMINOUS SURFACE REMOVAL, – BUTT JOINT
- DENOTES PAVEMENT REMOVAL OR CONCRETE MEDIAN REMOVAL
- DENOTES SIDEWALK REMOVAL
- DENOTES COMBINATION CURB AND GUTTER REMOVAL
- DENOTES DRIVEWAY PAVEMENT REMOVAL
- DENOTES TREE REMOVAL (6 TO 15 UNITS DIAMETER)



SEE UPPER RIGHT MATCH LINE STA.112+50
SIDEWALK REMOVAL (575 SF) (STA. 112+50 TO STA 113+38)
REMOVE EXIST. LIGHTING HANDHOLE SEE NOTE 1 (TYP. EXIST. LIGHT HANDHOLE WITHIN LIMITS OF IMPROVEMENTS
EXIST. LIGHT POLE TO BE REMOVED (TYP.) SEE LIGHTING PLANS
DRIVEWAY PAVEMENT REMOVAL (6 SY)
COMBINATION CURB AND GUTTER REMOVAL (87 LF) (STA. 112+50 TO STA 113+38)
PROP. 86.0' R.O.W.
15 LF EXIST. HANDRAIL TO BE REMOVED (SEE NOTE 2)
FOX RIVER
BITUMINOUS CONCRETE REMOVAL (DECK) (1,655 SY)
EXIST. ABANDONED WATER MAIN
EXIST. 8" GAS MAIN TO BE RELOCATED (BY OTHERS–SEE NOTE 3)
ILLINOIS AVENUE
PROP. ℄ ILLINOIS AVE. = PROP PGL
EXIST. BRIDGE SUPERSTRUCTURE TO BE REMOVED AND REPLACED (SEE WEST BRIDGE PLANS FOR DETAILS)
EXIST. ABANDONED ELECTRICAL DUCTS
BIT. SURFACE REMOVAL 1½" (200 SY) (STA. 112+50 TO STA 113+08)
SEE PLAN AND PROFILES FOR VEHICLE BARRIER IN EXIST. BIKE PATH
ILLINOIS PRAIRIE PATH BIKE TRAIL
EXIST. BIT. & CONC. BRIDGE APPROACH PAVEMENT TO BE REMOVED (244 SY.) (PAVEMENT REMOVAL)
COMBINATION CURB AND GUTTER REMOVAL (68 LF) (STA. 112+50 TO STA 113+17)
SIDEWALK REMOVAL (600 SF) (STA. 112+50 TO STA 113+38)
DRIVEWAY PAVEMENT REMOVAL (22 SY)
15 LF EXIST. HANDRAIL TO BE REMOVED (SEE NOTE 2)
PEDESTRIAN TUNNEL RECONSTRUCTION (SEE PEDESTRIAN TUNNEL PLANS FOR DETAILS)
DRIVEWAY PAVEMENT REMOVAL (11 SY)
SIDEWALK REMOVAL (251 SF) (STA. 116+38 TO STA 116+80)
15 LF EXIST. HANDRAIL TO BE REMOVED (SEE NOTE 2)
COMBINATION CURB AND GUTTER REMOVAL (32 LF) (STA. 116+48 TO STA 116+80)
SIDEWALK REMOVAL (172 SF)
PROP. TEMPORARY CONSTRUCTION EASEMENT
EXIST. SIDEWALK
EXIST. BIT. DRIVE
COMBINATION CURB AND GUTTER REMOVAL (55 LF) (STA. 116+95 TO STA 117+50)
EXIST. LIGHT POLE TO BE REMOVED (TYP.) SEE LIGHTING PLANS
PAVEMENT REMOVAL (284 SY) (STA. 116+95 TO STA. 117+50)
SIDEWALK REMOVAL (384 SF) (STA. 116+95 TO STA 117+50)
MATCH LINE STA.117+50 SEE SHEET NO. 12
SIDEWALK REMOVAL (397 SF) (STA. 116+95 TO STA 117+50)
EXIST. BIT. & CONC. BRIDGE APPROACH PAVEMENT TO BE REMOVED (270 SY.) (PAVEMENT REMOVAL) (STA. 116+38 TO STA. 116+80)
15 LF EXIST. HANDRAIL TO BE REMOVED (SEE NOTE 2)
EXIST. SHEET PILE TO REMAIN (TYP. EA CORNER OF BRIDGE)
BITUMINOUS CONCRETE REMOVAL (DECK) (79 SY)
SIDEWALK REMOVAL (165 SF)
COMBINATION CURB AND GUTTER REMOVAL (55 LF) (STA. 116+95 TO STA 117+50)
PROP. TEMPORARY CONSTRUCTION EASEMENT

REVISIONS	NAME	DATE
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McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
McHENRY ▪ HUNTLEY ▪ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

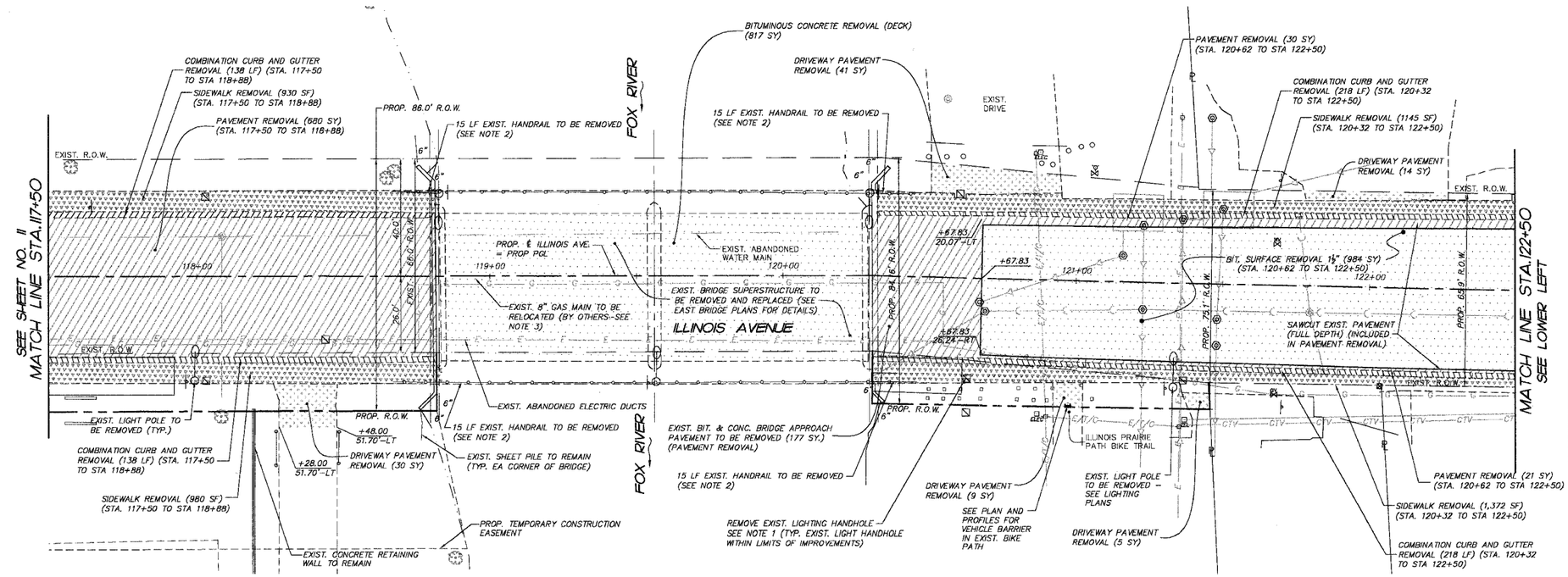
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
REMOVAL PLAN
STA 107+50 TO STA 117+50

SCALE: 1" = 20'
DATE 07-28-2006
DRAWN BY MPL
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: GE-11
COMP. FILE: 050181-S00a.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	12
STA.	117+50	TO STA.	125+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT: 83867



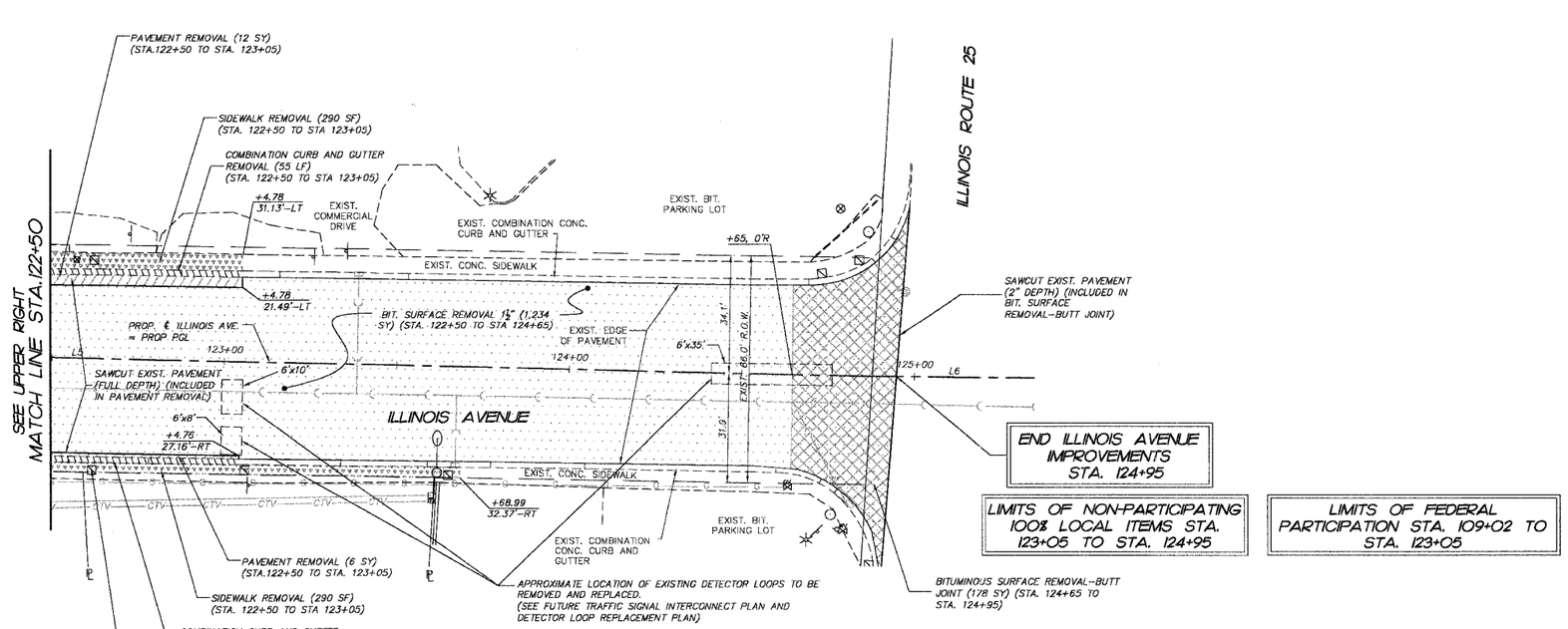
LINE TABLE				
LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N88°59'04"E	113+08.10	120+30.26
L5	454.41'	S89°34'41"E	120+30.26	124+84.68
L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	283.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

NOTES:

1. EXISTING LIGHTING HANDHOLE REMOVAL SHALL BE INCLUDED UNDER "REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE".
2. EXISTING HANDRAIL REMOVAL OFF OF BRIDGES SHALL BE INCLUDED UNDER "SIDEWALK REMOVAL."
3. CONTRACTOR SHALL VERIFY STATUS OF 8" GAS MAIN WITH GAS COMPANY BEFORE BRIDGE SUPERSTRUCTURE REMOVAL.

PROJECT LEGEND:

- DENOTES BITUMINOUS SURFACE REMOVAL, 1½" OR BITUMINOUS CONCRETE REMOVAL (DECK)
- DENOTES BITUMINOUS SURFACE REMOVAL, -- BUTT JOINT
- DENOTES PAVEMENT REMOVAL OR CONCRETE MEDIAN REMOVAL
- DENOTES SIDEWALK REMOVAL
- DENOTES COMBINATION CURB AND GUTTER REMOVAL
- DENOTES DRIVEWAY PAVEMENT REMOVAL
- DENOTES TREE REMOVAL (6 TO 15 UNITS DIAMETER)



SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1779 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
REMOVAL PLAN
STA 117+50 TO STA 125+00

REVISIONS		
	NAME	DATE
7.		
6.		
5.		
4.		
3.		
2.		
1.	KMA	09-13-2006

SCALE: 1" = 20'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-12 (00181-6000.dwg
COMP. FILE: (00181-6000.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	13
STA. 107+50	TO STA. 112+50			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

PROPOSED RESURFACING (2,171 SY) SHALL EXTEND TO STATION 105+75 (STA. 105+75 TO STA. 109+02)
- BITUMINOUS SURFACE REMOVAL, 1½"
- LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70, (THICKNESS VARIES)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70, 1½"

ORCHARD AVE.

EXIST. COMBINATION CONC. CURB AND GUTTER
EXIST. BUILDING
EXIST. R.O.W.
EXIST. CONC. SIDEWALK
EXIST. EDGE OF PAVEMENT
EXIST. CONC. MEDIAN
EXIST. COMMERCIAL DRIVE
EXIST. 66.0' R.O.W.
PROP. 76.0' R.O.W.
PROP. R.O.W.
PROP. 86.0' R.O.W.

PROP. COMB. CONC. CURB AND GUTTER, TYPE B-6.12 (348 LF) (STA. 109+02 TO STA 112+50)

PROPOSED PAVEMENT (166 SY)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70, 1½"
- BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL-19.0, N70, 2 ½"
- BITUMINOUS BASE COURSE, SUPERPAVE 8"
- SUB BASE GRANULAR MATERIAL, TYPE B, 4"

PROP. BIT. DRIVEWAY PAVEMENT 8", (37 SY) (STA. 111+85.7 TO STA 112+50)

PROP. R.C.C. SIDEWALK, 5" (1810 SF) (STA. 109+00 TO STA 112+50)
PROP. P.C.C. SIDEWALK, 5" (3195 SF) (STA. 109+00 TO STA 112+50)

100' TAPER
5.0' (TYP.)
36' R
PROP. & ILLINOIS AVE. = PROP. PCL
4.0" PROP. CONCRETE MEDIAN TYPE SB-9.12 (1,116 SF) (STA. 109+06 TO STA. 112+50)
2.0'
9.0'
24.0' E.E.
50.0' E.E.

PROPOSED RESURFACING (1,910 SY)
- BITUMINOUS SURFACE REMOVAL, 1½"
- LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70, (THICKNESS VARIES)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70, 1½"

PROPOSED PAVEMENT (110 SY)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70, 1½"
- BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL-19.0, N70, 2 ½"
- BITUMINOUS BASE COURSE, SUPERPAVE 8"
- SUB BASE GRANULAR MATERIAL, TYPE B, 4"

PROP. BIT. DRIVEWAY PAVEMENT 8", (5 SY)

PROP. COMB. CONC. CURB AND GUTTER, TYPE B-6.12 (348 LF) (STA. 109+02 TO STA 112+50)

MATCH LINE STA. 112+50
SEE SHEET NO. 14

BEGIN ILLINOIS AVENUE IMPROVEMENTS STA. 105+75

LIMITS OF NON-PARTICIPATING 100% LOCAL ITEMS STA. 105+75 TO STA. 109+02

LIMITS OF FEDERAL PARTICIPATION STA. 109+02 TO STA. 123+05

LEGEND
- PROPOSED RESURFACING (QUANTITY ON PLANS)
- PROPOSED PAVEMENT (QUANTITY ON PLANS)
- PROPOSED PCC SIDEWALK, 5" (QUANTITY ON PLANS)
- PROPOSED PCC SIDEWALK, 5" (SPECIAL) (QUANTITY ON PLANS)
- PROPOSED DEPRESSED CURB & GUTTER
- PROPOSED CONCRETE PAVEMENT (QUANTITY ON PLANS)

LINE TABLE				
LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N88°59'04"E	113+08.10	120+30.26
L5	454.41'	S89°34'41"E	120+30.26	124+84.68
L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	283.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

ILLINOIS AVENUE

PVI STA = 110+00
PVI ELEV = 652.80
A.D. = -1.24
K = 96.69
120.0' VC

PVI STA = 109+00
PVI ELEV = 657.87
BVCS: 109+40
BVCE: 655.84
EVCS: 110+60
EVCE: 649.01
BVCS: 111+12.50
BVCE: 645.70
LOW POINT ELEV. = 639.72
LOW POINT STA. = 113+02.08
PVI STA. = 112+25
PVI ELEV. = 638.60
A.D. = 7.49
K = 30.04
225.0' VC

MATCH EXISTING
-4.44%
-5.07%
-6.31%

EXIST. GRADE ELEVATION ALONG PROP. CENTERLINE
PROPOSED CENTERLINE ELEVATION

	108+00	109+00	110+00	111+00	112+00
EXIST. GRADE ELEVATION ALONG PROP. CENTERLINE	665.73 / 663.51	660.09 / 660.09	657.87 / 657.87	656.12 / 655.33	652.61 / 652.61
PROPOSED CENTERLINE ELEVATION				648.00 / 648.64	646.55 / 646.49
				644.41 / 644.57	641.02 / 641.45
					639.77

670 665 660 655 650 645 640 635 630

MATCH LINE STA. 112+50
SEE SHEET NO. 14

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PLAN AND PROFILE
STA 107+50 TO STA. 112+50

SCALE: VERT. 1"=5' HORIZ. 1"=20' DRAWN BY: MPL
DATE: 09-18-2006 CHECKED BY: JLP

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

COMP. FILE: 130181-602e.dwg
PLOT FILE:
VIEW: CE-13

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	14
STA. 112+50	TO STA. 117+50			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

ILLINOIS AVENUE

LEGEND

▨	PROPOSED RESURFACING (QUANTITY ON PLANS)
▨	PROPOSED PAVEMENT (QUANTITY ON PLANS)
☐	PROPOSED PCC SIDEWALK, 5" (QUANITY ON PLANS)
▦	PROPOSED PCC SIDEWALK, 5" (SPECIAL) (QUANITY ON PLANS)
▬	PROPOSED DEPRESSED CURB & GUTTER
☐	PROPOSED CONCRETE PAVEMENT (QUANITY ON PLANS)

LINE TABLE

LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N88°59'04"E	113+08.10	120+30.26
L5	454.41'	S89°34'41"E	120+30.26	124+84.68
L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	283.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PLAN AND PROFILE
STA 112+50 TO STA. 117+50

SCALE: VERT. 1"=5' HORIZ. 1"=20'
DRAWN BY: MPL
DATE: 07-28-2006
CHECKED BY: JLP

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

COMP. FILE: 050181-s02a.dwg
PLOT FILE:
VIEW: CE-14

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	15
STA.	117+50	TO STA.	122+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

DATE	BY	
		SURVEYED
		DRAWN
		TEMPLATE
		AREAS
		AREAS CHECKED

FINAL SURVEY NOTE BOOK

NO.

PROP. P.C.C. SIDEWALK, 5" (651 SF) (STA. 117+50 TO STA 118+80.12)

PROP. CONCRETE PAVEMENT –PCC PAVEMENT, 10" (JOINTED) –SUB BASE GRANULAR MATERIAL, TYPE B 4" (578 SY) (STA. 117+50 TO STA. 118+50.12)

PROP. BRIDGE APPROACH PAVEMENT DRAIN (STA. 118+62.12) SEE DRAINAGE AND UTILITY PLAN AND PROFILE

PROP. COMB. CONC. CURB AND GUTTER, TYPE B-6.12 (100 LF) (STA. 117+50 TO STA 118+50.12)

PROP. CONCRETE MEDIAN, TYPE SB-9.12 (160 SF) STA. TO STA. 117+50 TO STA. 117+90

EXIST. R.O.W.

SEE SHEET NO. 14 MATCH LINE STA.117+50

EXIST. SHORELINE

PROPOSED PAVEMENT (84 SY)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70, 1½"
- BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL-19.0, N70, 2 ½"
- BITUMINOUS BASE COURSE, SUPERPAVE 8"
- SUB BASE GRANULAR MATERIAL, TYPE B, 4"

PROP. BITUMINOUS DRIVEWAY PAVEMENT (26 SY)

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) (35 SY)

PROPOSED RESURFACING (956 SY)
- BITUMINOUS SURFACE REMOVAL, 1½"
- LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70, (THICKNESS VARIES)
- BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE MIX D, N70, 1½"

PROP. COMB. CONC. CURB AND GUTTER, B-6.12 (188 LF) (STA. 120+61.83 TO STA 12 2+50)

PROP. P.C.C. SIDEWALK, 5" (941 SF) (STA. 120+61.83 TO STA 122+50)

PROP. ℄ ILLINOIS AVE. = PROP PGL

EXIST. BRIDGE SUPER STRUCTURE TO BE REMOVED AND REPLACED (SEE EAST BRIDGE PLANS FOR DETAILS)

BRIDGE APPROACH PAVEMENT

30.0' BRIDGE APPROACH PAVEMENT

EXIST. 86.0' R.O.W.

EXIST. 66.0' R.O.W.

PROP. R.O.W.

PROP. 86.0' R.O.W.

PROP. 82.6' R.O.W.

EXIST. BIT. DRIVE

PROP. P.C.C. SIDEWALK, 5" (SPECIAL) (553 SF) (STA. 117+50 TO STA 117+92)

PROP. CONC. BARRIER (SPECIAL) (42 LF) (STA.117+50 TO STA 117+92) SEE CONSTRUCTION DETAILS

PROP. COMB. CONC. CURB AND GUTTER, TYPE B-6.12 (100 LF) (STA. 117+50 TO STA 118+50.12)

PROP. TEMPORARY CONSTRUCTION EASEMENT

PROP. BIT. DRIVEWAY PAVEMENT 8", (37 SY) (STA. 111+85.7 TO STA 112+50)

PROP. BRIDGE APPROACH PAVEMENT DRAIN (STA. 118+82.12) SEE DRAINAGE AND UTILITY PLAN AND PROFILE

PROP. P.C.C. SIDEWALK, 5" (1,150 SF) (STA. 117+92 TO STA 118+80.12)

FOX RIVER

PROP. CONC. BARRIER (SPECIAL) (42 LF) (STA.120+31.83 TO STA 120+61.83) SEE CONSTRUCTION DETAILS

PROP. P.C.C. SIDEWALK, 5"(SPECIAL) SEE CONSTRUCTION DETAILS (367 SF)(STA 120+31.83 TO STA. 120+61.83)

EXIST. WOOD POSTS TO BE REMOVED AND RELOCATED AS SHOWN (6 TYP.) THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE ITEM " PCC SIDEWALK, 5"

EXIST. WOOD POSTS WITH BIKE TRAIL SIGNS TO BE REMOVED AND RELOCATED AS SHOWN (2 TYP.) THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE ITEM " PCC SIDEWALK, 5"

TEMPORARILY REMOVE EXIST. VERTICAL MOTORIZED VEHICLE BARRICADES AND RE-INSTALL IN PROPOSED PCC SIDEWALK, 5". THIS WORK SHALL BE INCLUDED IN "PCC SIDEWALK, 5 INCH"

PROP. COMB. CONC. CURB AND GUTTER, B-6.12 (188 LF) (STA. 120+61.83 TO STA 122+50)

PROP. P.C.C. SIDEWALK, 5" (1,291 SF) (STA. 120+61.83 TO STA 122+50)

PROP. BIT. DRIVEWAY PAVEMENT 8", (10 SY)

MATCH LINE STA.122+50 SEE SHEET NO. 16

LEGEND
- PROPOSED RESURFACING (QUANTITY ON PLANS)
- PROPOSED PAVEMENT (QUANTITY ON PLANS)
- PROPOSED PCC SIDEWALK, 5" (QUANTITY ON PLANS)
- PROPOSED PCC SIDEWALK, 5" (SPECIAL) (QUANTITY ON PLANS)
- PROPOSED DEPRESSED CURB & GUTTER
- PROPOSED CONCRETE PAVEMENT (QUANTITY ON PLANS)

N E S W S.B.C.

LINE TABLE

LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	105+00	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
L4	722.16'	N82°59'04"E	113+08.10	120+30.26
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L6	53.89'	N89°37'36"E	124+84.68	125+38.57
L7	283.73'	N63°42'21"E	125+38.57	128+22.30
L8	271.84'	N89°24'05"E	128+22.30	130+94.14

HIGH POINT ELEV = 643.12
HIGH POINT STA = 116+91.45
PVI STA = 117+00
PVI ELEV = 644.20
A.D. = -2.48
K = 141.19
350.0' VC

EVCS: 118+75
EVCE: 641.93

-1.30%

BVCS: 121+00
BVCE: 639.00

LOW POINT ELEV = 638.52
LOW POINT STA = 121+74.61
PVI STA = 122+00
PVI ELEV = 637.70
A.D. = 3.48
K = 57.39
200.0' VC

EXIST. GRADE ELEVATION ALONG PROP. CENTERLINE

PROPOSED CENTERLINE ELEVATION

SEE SHEET NO. 14 MATCH LINE STA.117+50

MATCH LINE STA.122+50 SEE SHEET NO. 16

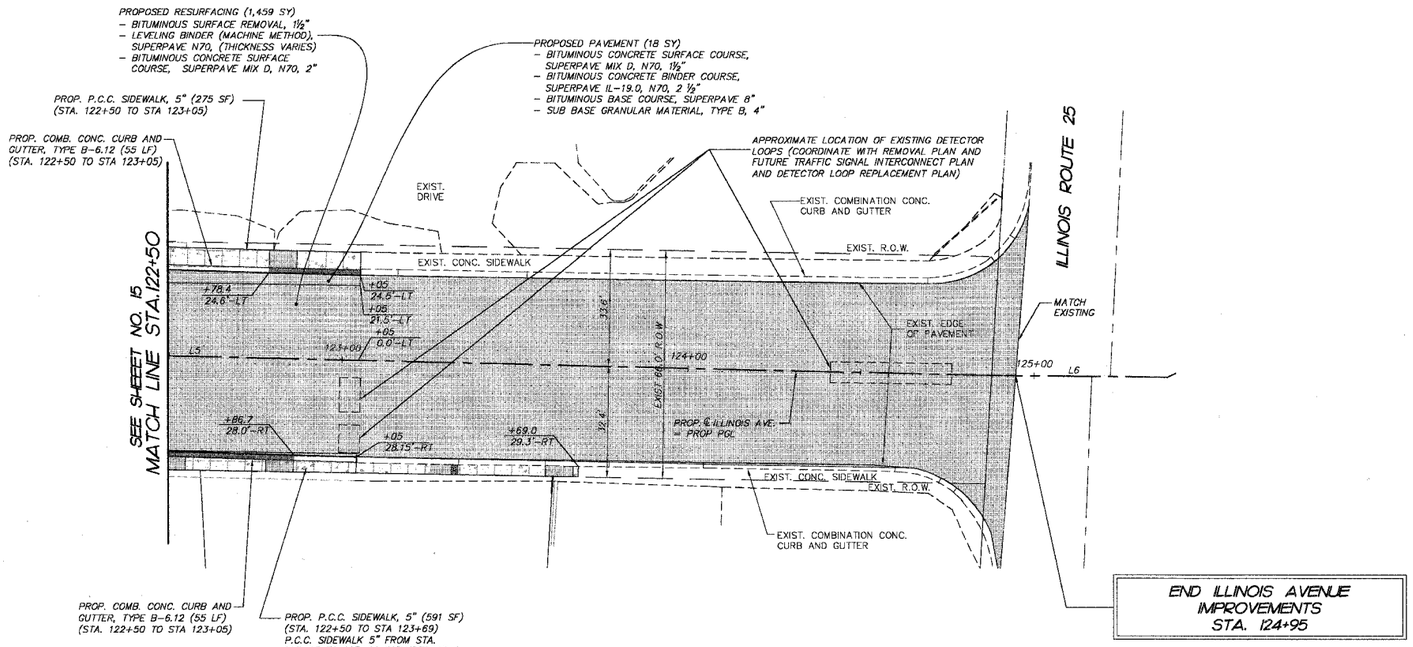
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PLAN AND PROFILE
STA 117+50 TO STA. 122+50
SCALE: VERT. 1"=5' HORIZ. 1"=20'
DRAWN BY: MPL
DATE: 07-28-2006
CHECKED BY: JLP

COMP. FILE: 050187-6020a.dwg
PLOT FILE:
W.O.#: CE-15

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	16
STA. 122+50	TO STA. 125+00			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



LIMITS OF NON-PARTICIPATING 100% LOCAL ITEMS STA. 123+05 TO STA. 124+95

LIMITS OF FEDERAL PARTICIPATION STA. 109+02 TO STA. 123+05

LEGEND

- PROPOSED RESURFACING (QUANTITY ON PLANS)
- PROPOSED PAVEMENT (QUANTITY ON PLANS)
- PROPOSED PCC SIDEWALK, 5" (QUANITY ON PLANS)
- PROPOSED PCC SIDEWALK, 5" (SPECIAL) (QUANITY ON PLANS)
- PROPOSED DEPRESSED CURB & GUTTER
- PROPOSED CONCRETE PAVEMENT (QUANITY ON PLANS)

LINE TABLE				
LINE	LENGTH	BEARING	BEGIN STA.	END STA.
L1	500.00'	S89°04'04"W	100+00	105+00
L2	401.59'	S89°04'04"W	109+01.59	109+01.59
L3	406.52'	N89°35'59"E	109+01.59	113+08.10
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L5	454.41'	S89°34'41"E	120+30.26	124+84.68
L6	53.89'	N89°37'36"E	124+84.68	125+38.57
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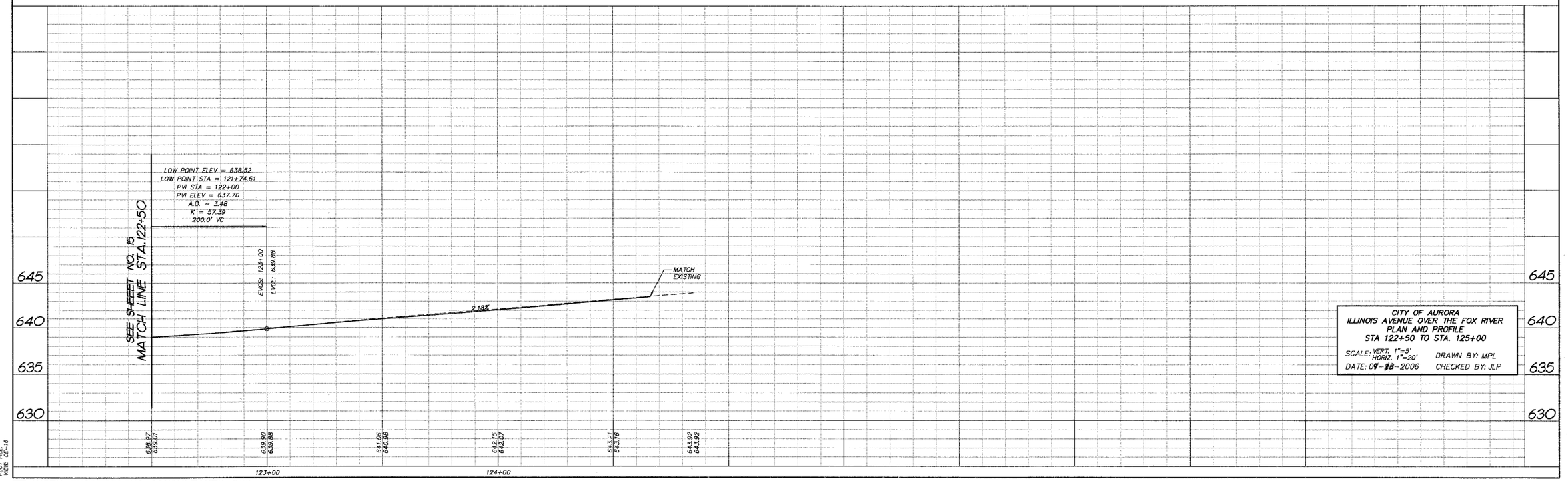


CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PLAN AND PROFILE
STA 122+50 TO STA. 125+00

SCALE: VERT. 1"=5' HORIZ. 1"=20' DRAWN BY: MPL
DATE: 09-18-2006 CHECKED BY: JLP

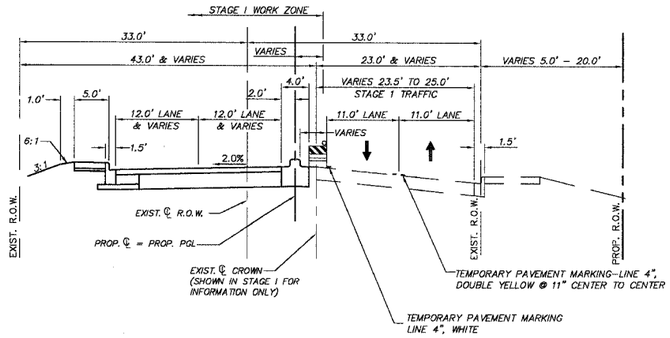
FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
TEMPLATE		
AREAS		
AREAS CHECKED		
NO.		

COMP. FILE: 050181-602a.dwg
PLOT FILE:
VIEW: CE-16

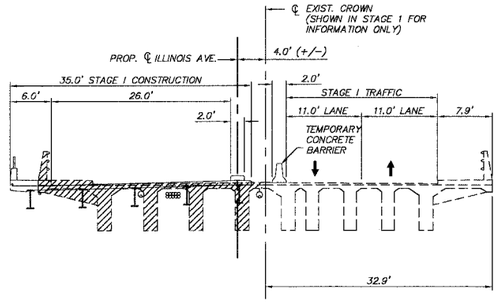
SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	17
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

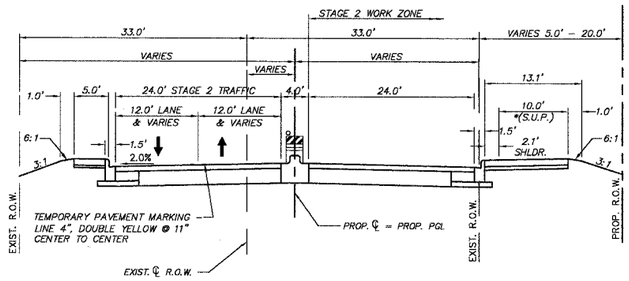
CONTRACT #: 83867



ILLINOIS AVENUE
TYPICAL ROADWAY SECTION
STAGE 1 CONSTRUCTION

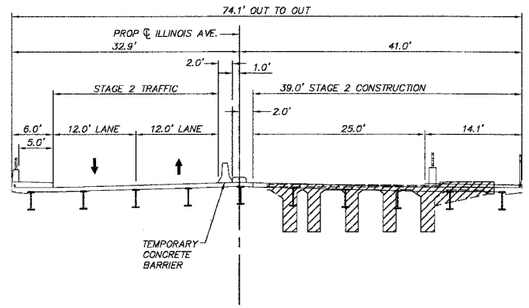


ILLINOIS AVENUE
TYPICAL BRIDGE SECTION
STAGE 1 CONSTRUCTION



ILLINOIS AVENUE
TYPICAL ROADWAY SECTION
STAGE 2 CONSTRUCTION

* S.U.P. = SHARED USE PATH



ILLINOIS AVENUE
TYPICAL BRIDGE SECTION
STAGE 2 CONSTRUCTION

SUGGESTED MAINTENANCE OF TRAFFIC

GENERAL

- A MINIMUM OF ONE (1) SIDEWALK SHALL BE MAINTAINED FOR THE ENTIRE LENGTH OF THE PROJECT LIMITS AT ALL TIMES DURING CONSTRUCTION

ADVANCE WORK

- COORDINATE WITH REQUIRED UTILITY RELOCATIONS.
- REMOVE EXISTING CONCRETE MEDIAN FROM STA 109+11 TO STA. 110+72 AND PLACE TEMPORARY PAVEMENT. MAINTAIN EXISTING TRAFFIC USING HIGHWAY STANDARD 701606.

STAGE I

TRAFFIC:
- MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION UTILIZING THE EXISTING TWO EASTBOUND LANES.

CONSTRUCTION:
- CONSTRUCT NORTH HALVES OF BRIDGES, PEDESTRIAN TUNNEL AND AVAILABLE PORTIONS OF ROADWAY. CONSTRUCT REMAINDER OF NORTH HALF OF ROADWAY UTILIZING HIGHWAY STANDARD 701606.

STAGE II

TRAFFIC:
- MAINTAIN ONE LANE OF TRAFFIC IN EACH DIRECTION UTILIZING THE NEWLY CONSTRUCTED WEST BOUND LANES.

CONSTRUCTION:
- CONSTRUCT SOUTH HALVES OF BRIDGES, PEDESTRIAN TUNNEL, AND AVAILABLE PORTIONS OF ROADWAY. CONSTRUCT REMAINDER OF SOUTH HALF OF ROADWAY UTILIZING HIGHWAY STANDARD 701606.

SYMBOL LEGEND

- INDICATES TEMPORARY CONCRETE BARRIER
- INDICATES TYPE II BARRICADE
- INDICATES DIRECTION OF TRAFFIC FLOW

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
* McHENRY * HUNTLEY * YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUGGESTED MAINTENANCE OF TRAFFIC
TYPICAL SECTIONS

SCALE: "NTS"
DATE 07-28-2006
DRAWN BY WJH
CHECKED BY JLP

REVISIONS	NAME	DATE
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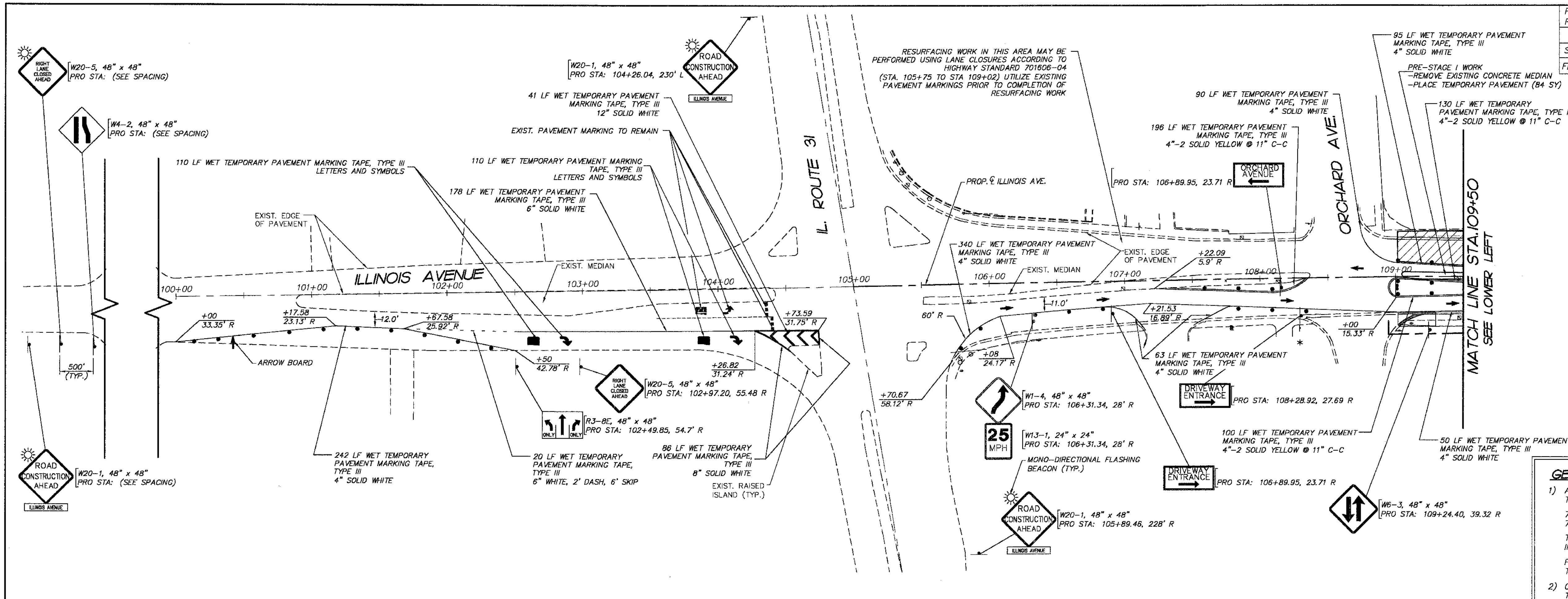
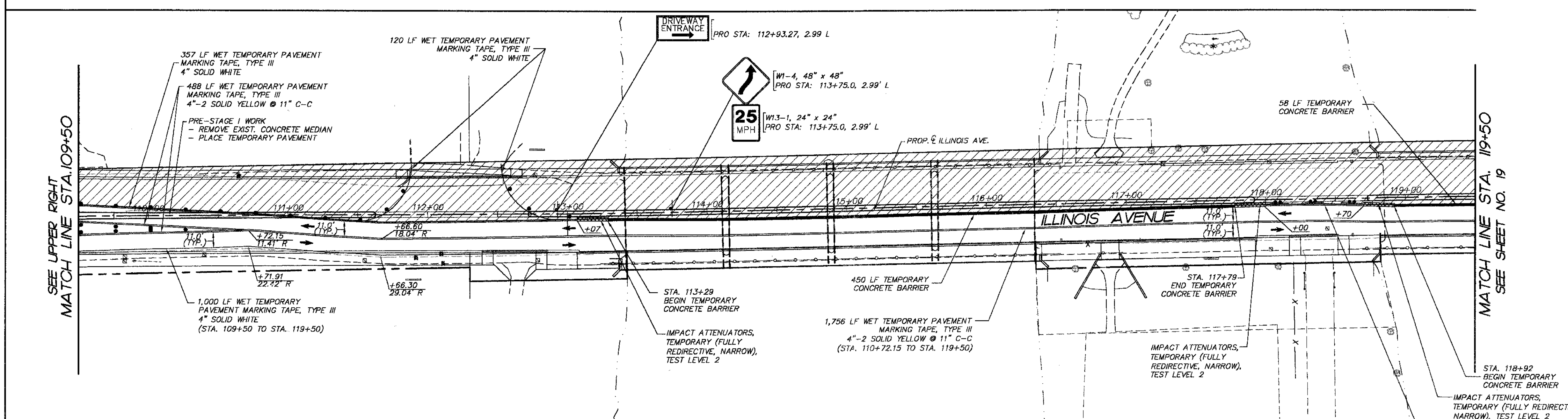
PLOT FILE: STANDARD
PLOT DATE: 7/27/2006
COMP. FILE: 050181-609a.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	18
STA.	100+00	TO STA.	119+50	
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		

CONTRACT #: 83867





GENERAL NOTES & SYMBOL LEGEND

1) ALL SIGNING & STRIPING TO BE IN ACCORDANCE WITH THE FOLLOWING STATE STANDARDS:

720006 701606
702001 701801

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

2) CONTRACTOR TO MAINTAIN TEMPORARY ACCESS AT ALL TIMES DURING CONSTRUCTION TO ALL DRIVEWAYS ALONG THE LIMITS OF CONSTRUCTION.

3) TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL BEACON

4) TYPE III BARRICADE

5) INDICATES DIRECTION OF TRAFFIC FLOW

HATCH LEGEND

DENOTES CONSTRUCTION AREA FOR IMPROVEMENTS.

DENOTES IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2

GENERAL NOTES

1. The contractor shall maintain a minimum of 2 – 11' wide lanes for two-way traffic flow.
2. The contractor shall maintain traffic in accordance with the special provisions, details, state standards, standard specifications and as directed by the Engineer.
3. The Engineer shall be informed 48 hours in advance of any change in construction staging.
4. Type II barricades and vertical panels shall be equipped with mono-directional steady burn lights and shall be placed at 50' intervals along the proposed work zone, 25' intervals within taper sections and 12' intervals around radii as indicated on the plans or as directed by the Engineer.
5. The Contractor shall be required to remove all existing pavement markings which conflict with the designated traffic control plan. This work shall be paid for as pavement marking removal. The Contractor shall mark a double 4" wide solid centerline 11" C/C during Stage I and Stage II traffic operations as shown on the plans. This work shall be paid for at the contract unit price for WET TEMPORARY PAVEMENT MARKING TAPE, TYPE III.
6. The furnishing, installing, and relocation of all traffic signs shall be in accordance with the Manual on Uniform Traffic Control Devices and the Standard Specifications. This work shall be included in the cost for traffic control and protection. All conflicting traffic signs shall be covered as directed by the Engineer. This shall be incidental to the cost of traffic control and protection.
7. Ingress and egress to driveways and side streets shall be maintained as shown on the plans and/or as directed by the Engineer. Quantities for Temporary Access (Private Entrance) and Temporary Access (Commercial Entrance) have been included in the contract for driveway and side street access. A minimum of one (1) sidewalk shall be maintained throughout the duration of the project for pedestrian traffic.
8. The Contractor shall provide and install two (2) weighted sand bags on each Type II barricade used – one (1) weighted sand bag across each bottom rail. All Type III barricades shall require a minimum of four (4) sandbags per barricade.
9. The Contractor shall be responsible for ensuring drainage of the roadway during all stages of construction.
10. Temporary pavement shall adhere to Section 703 of the Standard Specifications and the project special provisions.
11. The existing light poles on the south side of Illinois Avenue shall be maintained and remain functional for the duration of Stage I Construction. This work shall not be paid for separately, but shall be included in the cost of TRAFFIC CONTROL AND PROTECTION. Coordinate with Lighting Plans and Details.
12. The cost to relocate impact attenuators shall be included in the cost of IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2.

REVISIONS		
	NAME	DATE
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▪ McHENRY ▪ HUNTLEY ▪ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

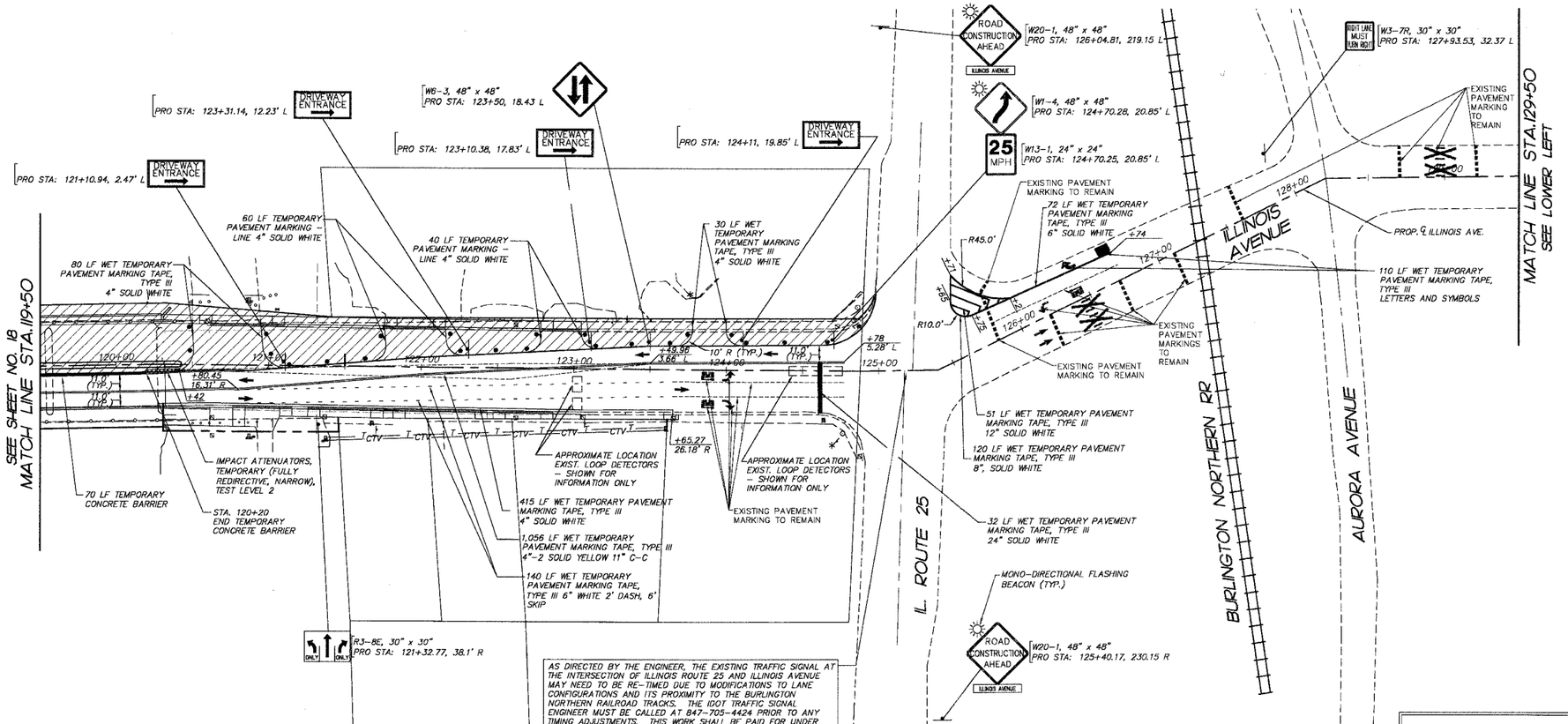
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUGGESTED MAINTENANCE OF TRAFFIC PLAN
STAGE 1
STA 100+00 TO STA 119+50

SCALE: 1" = 40'
DATE 07-28-2006
DRAWN BY MPL
CHECKED BY JLP

PLOT FILE: STANDARD
MEM: CE-18
COMP. FILE: 050181-627.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	19
STA.	119+50	TO STA.	129+82	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



GENERAL NOTES & SYMBOL LEGEND

1) ALL SIGNING & STRIPING TO BE IN ACCORDANCE WITH THE FOLLOWING STATE STANDARDS:

720006 701606
702001 701801

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

2) CONTRACTOR TO MAINTAIN TEMPORARY ACCESS AT ALL TIMES DURING CONSTRUCTION TO ALL DRIVEWAYS ALONG THE LIMITS OF CONSTRUCTION.

3) TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL BEACON

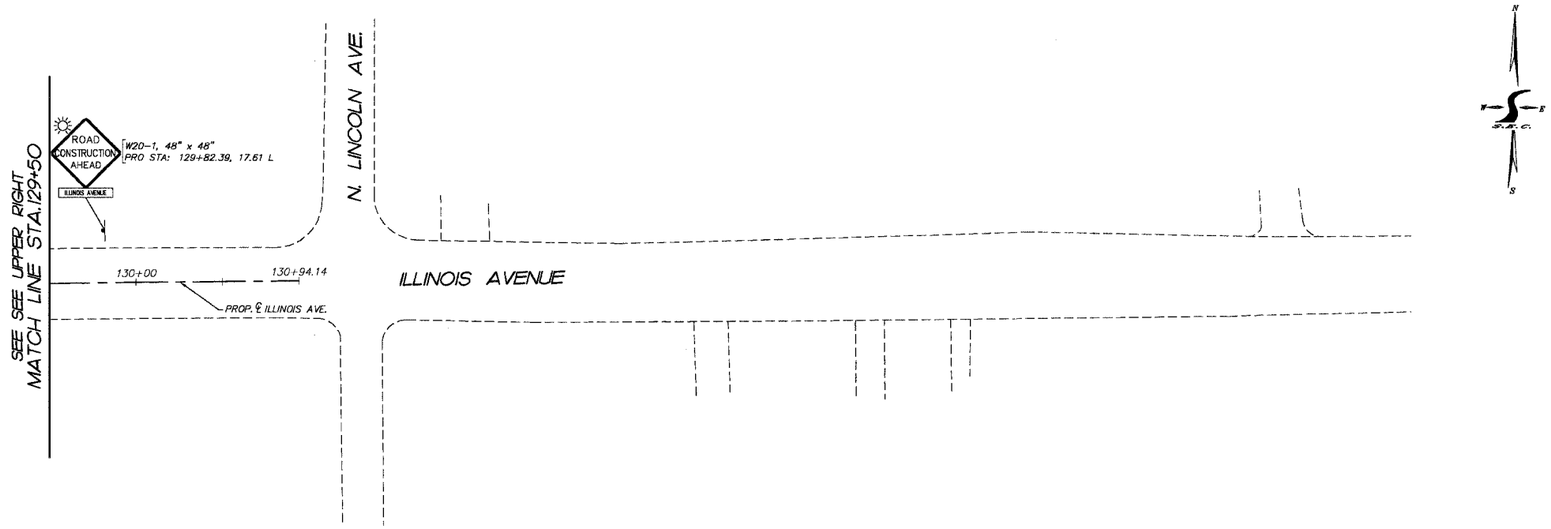
4) TYPE III BARRICADE

5) INDICATES DIRECTION OF TRAFFIC FLOW

HATCH LEGEND

DENOTES CONSTRUCTION AREA FOR IMPROVEMENTS.

DENOTES IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2



GENERAL NOTES

1. The contractor shall maintain a minimum of 2 - 11' wide lanes for two-way traffic flow.
2. The contractor shall maintain traffic in accordance with the special provisions, state standards, standard specifications and as directed by the Engineer.
3. The Engineer shall be informed 48 hours in advance of any change in construction staging.
4. Type II barricades and vertical panels shall be equipped with mono-directional steady burn lights and shall be placed at 50' intervals along the proposed work zone, 25' intervals within taper sections, and 12' intervals around radii as indicated on the plans or as directed by the Engineer.
5. The Contractor shall be required to remove all existing pavement markings which conflict with the designated traffic control plan. This work shall be paid for as pavement marking removal. The Contractor shall mark a double 4" wide solid centerline 11' C/C during Stage I and Stage II traffic operations as shown on the plans. This work shall be paid for at the contract unit price for WET TEMPORARY PAVEMENT MARKING TAPE, TYPE III.
6. The furnishing, installing, and relocation of all traffic signs shall be in accordance with the Manual on Uniform Traffic Control Devices and the Standard Specifications. This work shall be included in the cost for traffic control and protection. All conflicting traffic signs shall be covered as directed by the Engineer. This shall be incidental to the cost of traffic control and protection.
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8. The Contractor shall provide and install two (2) weighted sand bags on each Type II barricade used - one (1) weighted sand bag across each bottom rail. All Type III barricades shall require a minimum of four (4) sandbags per barricade.
9. The Contractor shall be responsible for ensuring drainage of the roadway during all stages of construction.
10. Temporary pavement shall adhere to Section 703 of the Standard Specifications and the project special provisions.
11. The existing light poles on the south side of Illinois Avenue shall be maintained and remain functional for the duration of Stage I Construction. This work shall not be paid for separately, but shall be included in the cost of TRAFFIC CONTROL PROTECTION. Coordinate with Lighting Plans and Details
12. The cost to relocate impact attenuators shall be included in the cost of IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2.

REVISIONS	NAME	DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION

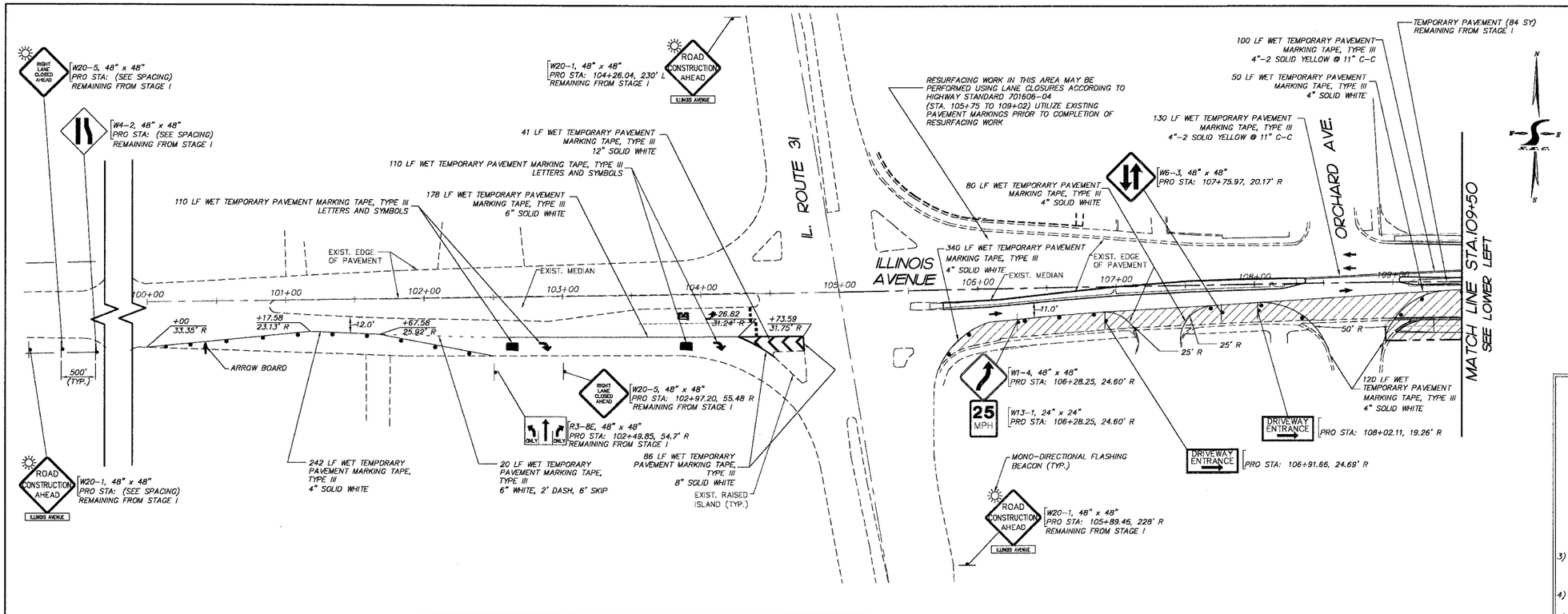
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUGGESTED MAINTENANCE OF TRAFFIC PLAN
STAGE 1
STA 119+50 TO STA 129+82

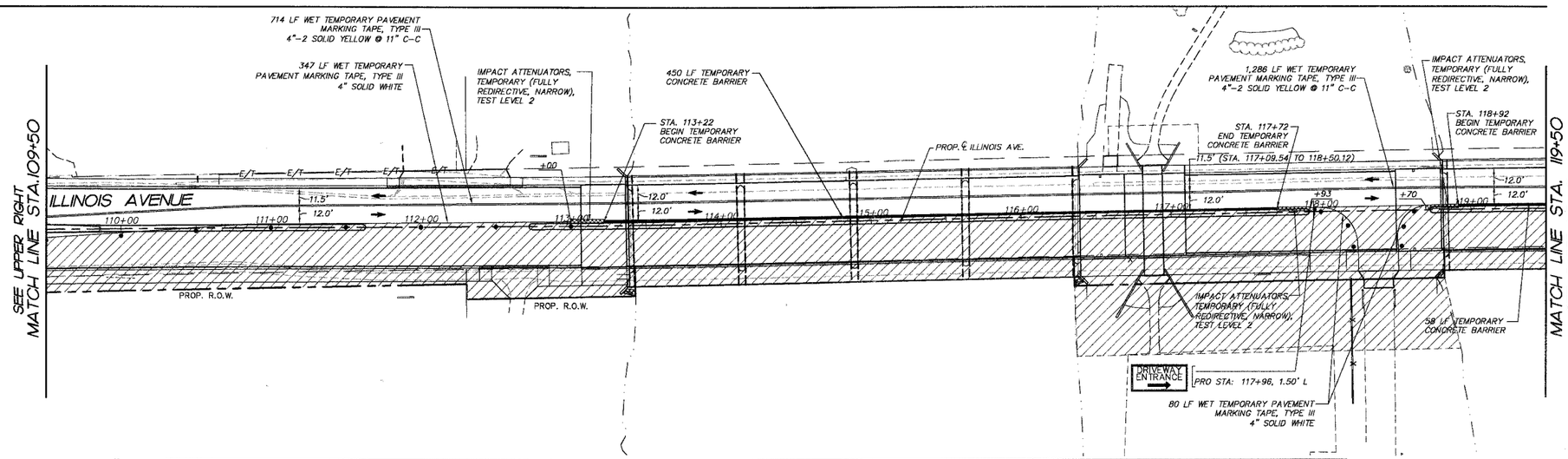
SCALE: 1" = 40'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: C2-19
COMM. FILE: 050151-627.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	20
STA.	100+00	TO STA.	119+50	
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867





GENERAL NOTES & SYMBOL LEGEND

1) ALL SIGNING & STRIPING TO BE IN ACCORDANCE WITH THE FOLLOWING STATE STANDARDS:
   720006 701606
   702001 701801
   TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
   PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING
2) CONTRACTOR TO MAINTAIN TEMPORARY ACCESS AT ALL TIMES DURING CONSTRUCTION TO ALL DRIVEWAYS ALONG THE LIMITS OF CONSTRUCTION.
3) TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL BEACON
4) TYPE III BARRICADE
5) INDICATES DIRECTION OF TRAFFIC FLOW

HATCH LEGEND

DENOTES CONSTRUCTION AREA FOR IMPROVEMENTS.

DENOTES IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2

GENERAL NOTES

1. The contractor shall maintain a minimum of 2 – 11' wide lanes for two-way traffic flow.
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REVISIONS		
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■ McHENRY ■ HUNTLEY ■ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000106

ILLINOIS DEPARTMENT OF TRANSPORTATION

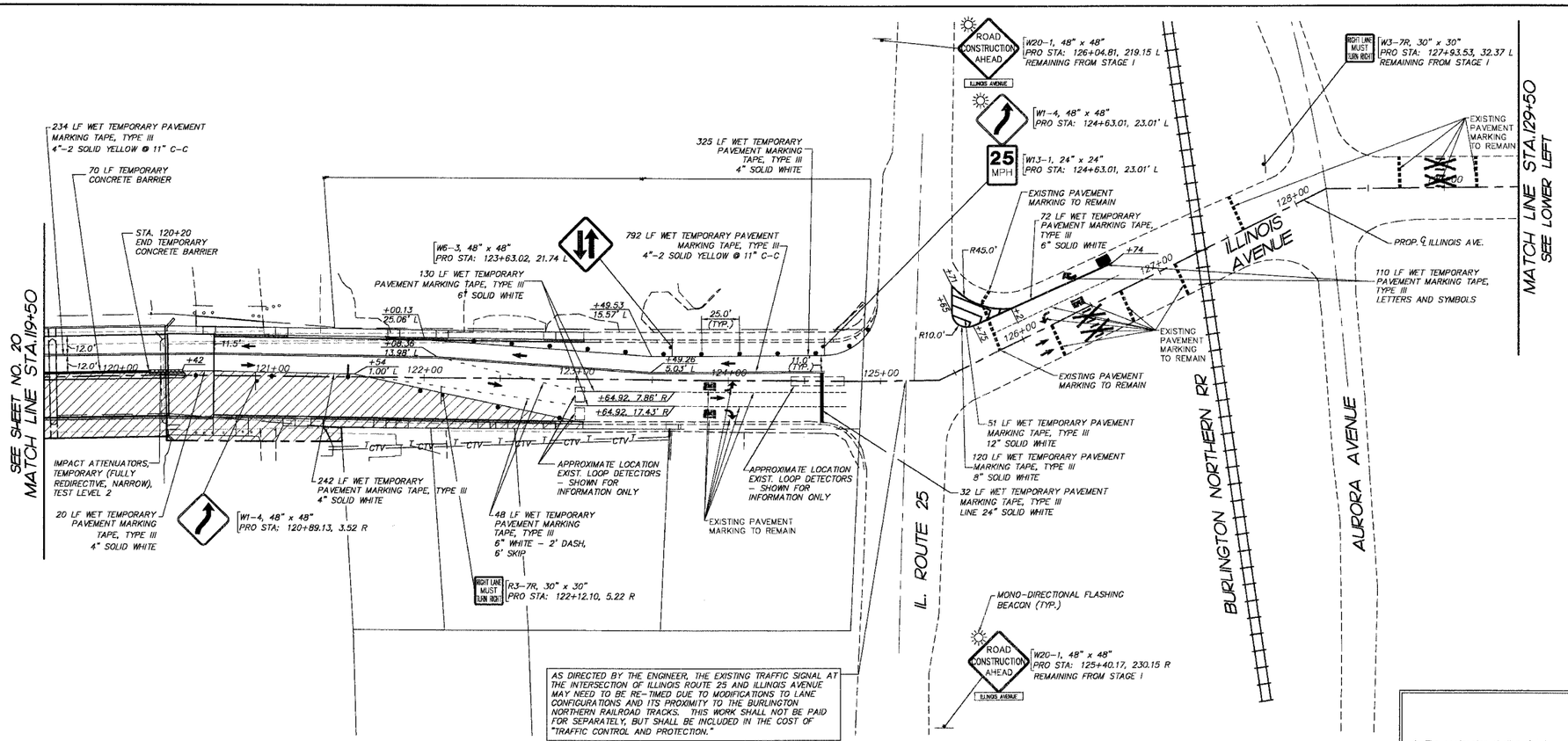
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUGGESTED MAINTENANCE OF TRAFFIC PLAN
STAGE II
STA 100+00 TO STA 119+50

SCALE: 1" = 40'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW FILE: 05018I-62719.dwg
COMP. FILE: 05018I-62719.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	21
STA.	119+50	TO STA.	129+82	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



GENERAL NOTES & SYMBOL LEGEND

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   720006 701606
   702001 701801

   TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS AND DRIVEWAYS

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2) CONTRACTOR TO MAINTAIN TEMPORARY ACCESS AT ALL TIMES DURING CONSTRUCTION TO ALL DRIVEWAYS ALONG THE LIMITS OF CONSTRUCTION.

3) TYPE II BARRICADE WITH STEADY BURN MONODIRECTIONAL BEACON

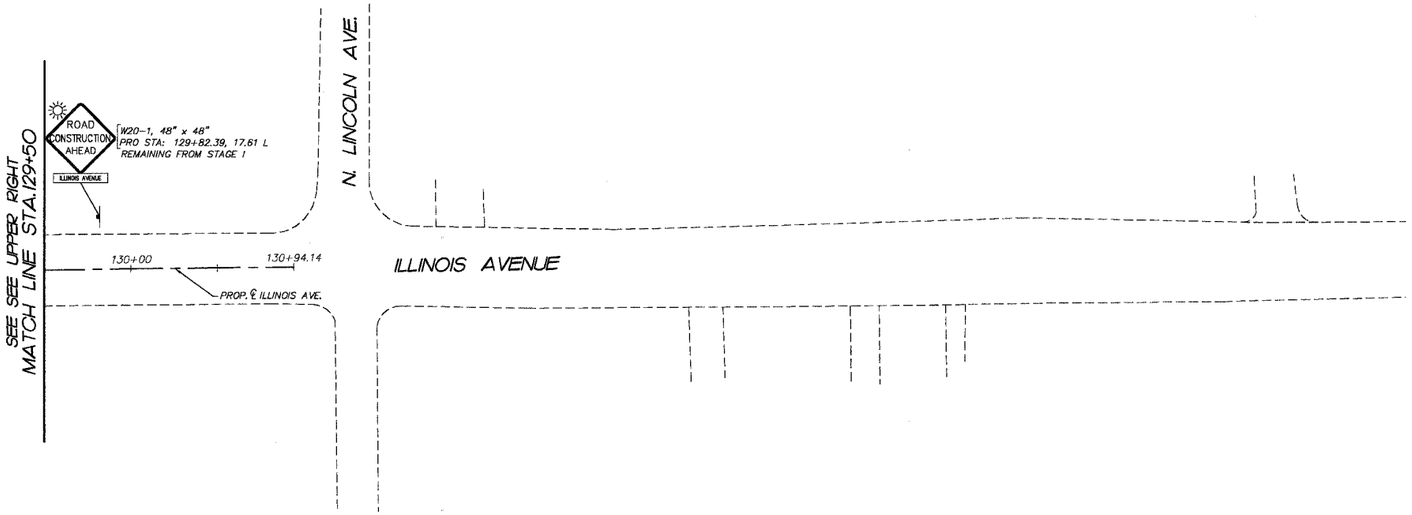
4) TYPE III BARRICADE

5) INDICATES DIRECTION OF TRAFFIC FLOW

HATCH LEGEND

DENOTES CONSTRUCTION AREA FOR IMPROVEMENTS.

DENOTES IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW) TEST LEVEL 2



GENERAL NOTES

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10. Temporary pavement shall adhere to Section 703 of the Standard Specifications and the special provisions.
11. The proposed light poles to be installed on the north side of Illinois Avenue during Stage I construction shall be functional prior to Stage II construction. Coordinate with Lighting Plans and Details.
12. The cost of relocating impact attenuators shall be included in the cost of IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2.

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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

REVISIONS		
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
SUGGESTED MAINTENANCE OF TRAFFIC PLAN
STAGE II
STA 119+50 TO STA 129+82

SCALE: 1" = 40'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

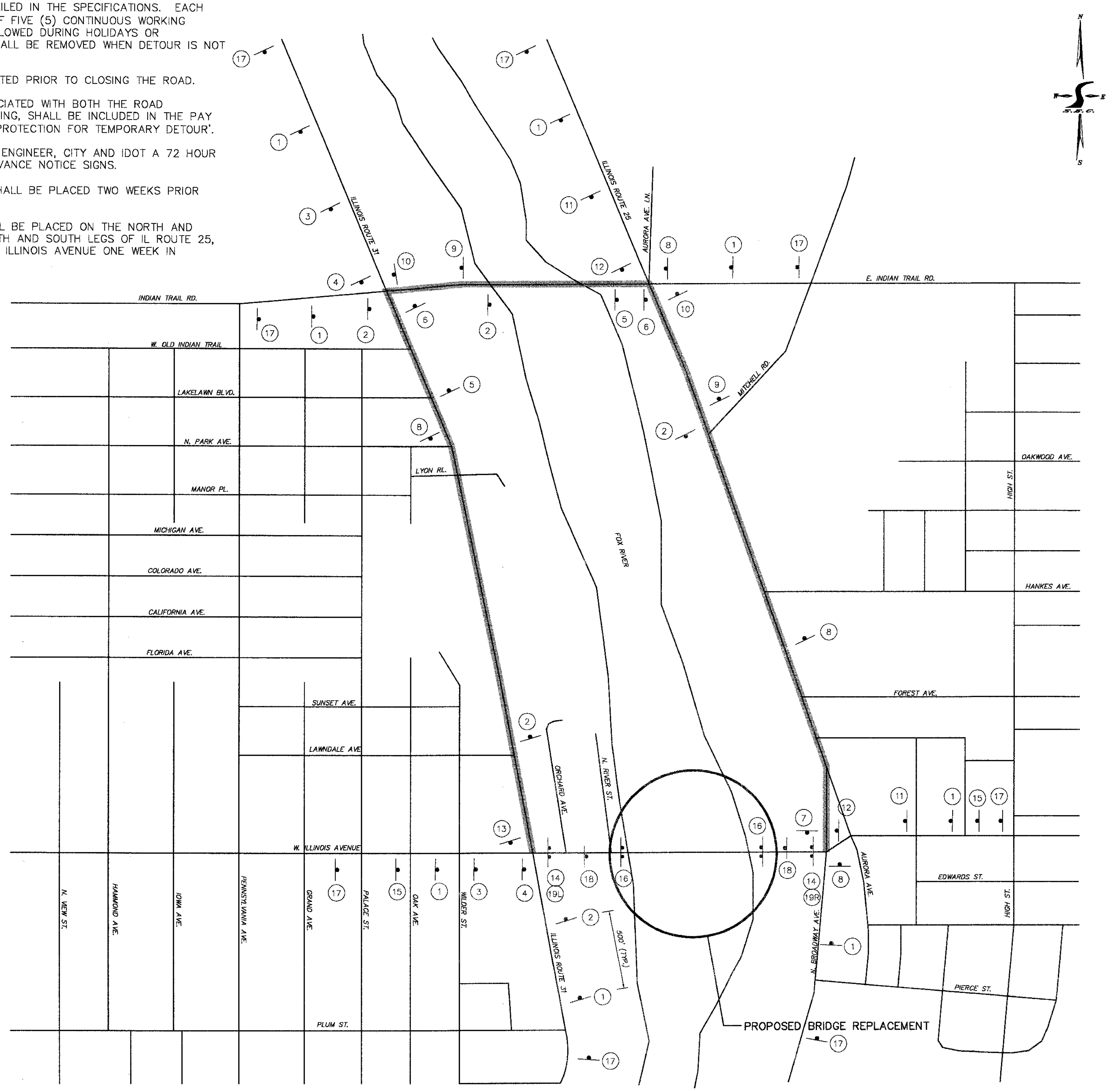
PLOT FILE: STANDARD
MEM. CE-21
COMP. FILE: 050151-6278.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	22
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867

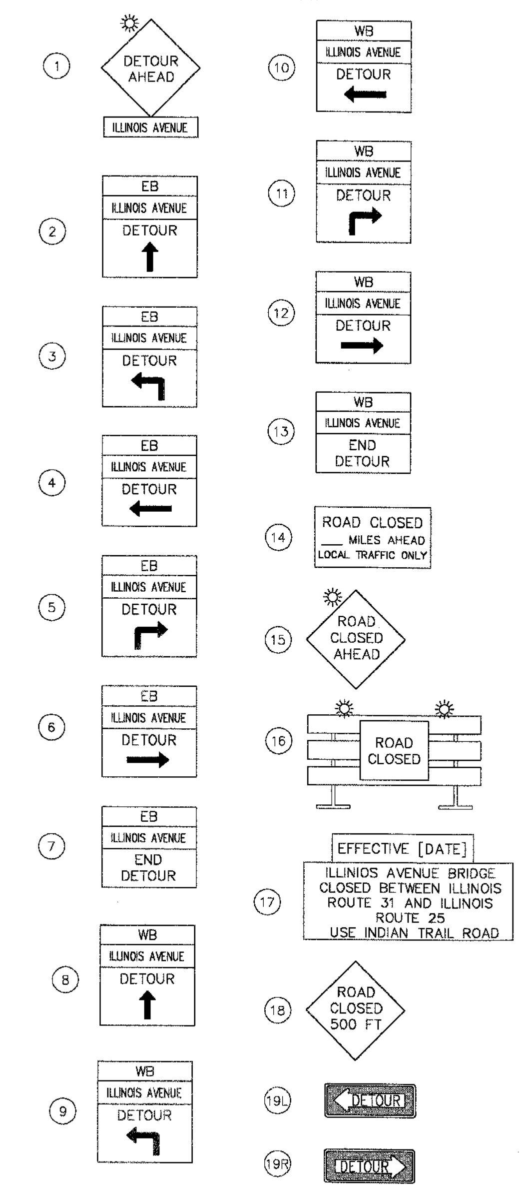
ROAD CLOSURE GENERAL NOTES

1. THE CONTRACTOR WILL BE ALLOWED TO CLOSE ILLINOIS AVENUE FOR TWO (2) SEPARATE DURATIONS AS DETAILED IN THE SPECIFICATIONS. EACH DURATION SHALL BE A MAXIMUM OF FIVE (5) CONTINUOUS WORKING DAYS. CLOSURES WILL NOT BE ALLOWED DURING HOLIDAYS OR WEEKENDS. ALL DETOUR SIGNS SHALL BE REMOVED WHEN DETOUR IS NOT IN PLACE.
2. THE DETOUR ROUTE SHALL BE POSTED PRIOR TO CLOSING THE ROAD.
3. ALL TRAFFIC CONTROL WORK ASSOCIATED WITH BOTH THE ROAD CLOSURES, SIGNING, AND BARRICADING, SHALL BE INCLUDED IN THE PAY ITEM FOR 'TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR'.
4. THE CONTRACTOR SHALL GIVE THE ENGINEER, CITY AND IDOT A 72 HOUR NOTICE PRIOR TO PLACING THE ADVANCE NOTICE SIGNS.
5. ADVANCE NOTICE SIGNS " (17) " SHALL BE PLACED TWO WEEKS PRIOR TO CLOSING THE ROADWAY.
6. CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ON THE NORTH AND SOUTH LEGS OF IL ROUTE 31, NORTH AND SOUTH LEGS OF IL ROUTE 25, AND THE EAST AND WEST LEGS OF ILLINOIS AVENUE ONE WEEK IN ADVANCE OF ROAD CLOSURES.



NOTE:
SIGN SPACING SHALL BE 500' TYPICAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SIGN LEGEND



LEGEND

PROPOSED DETOUR ROUTE

SMITH ENGINEERING CONSULTANTS, INC.
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
DETOUR PLAN

REVISIONS	NAME	DATE
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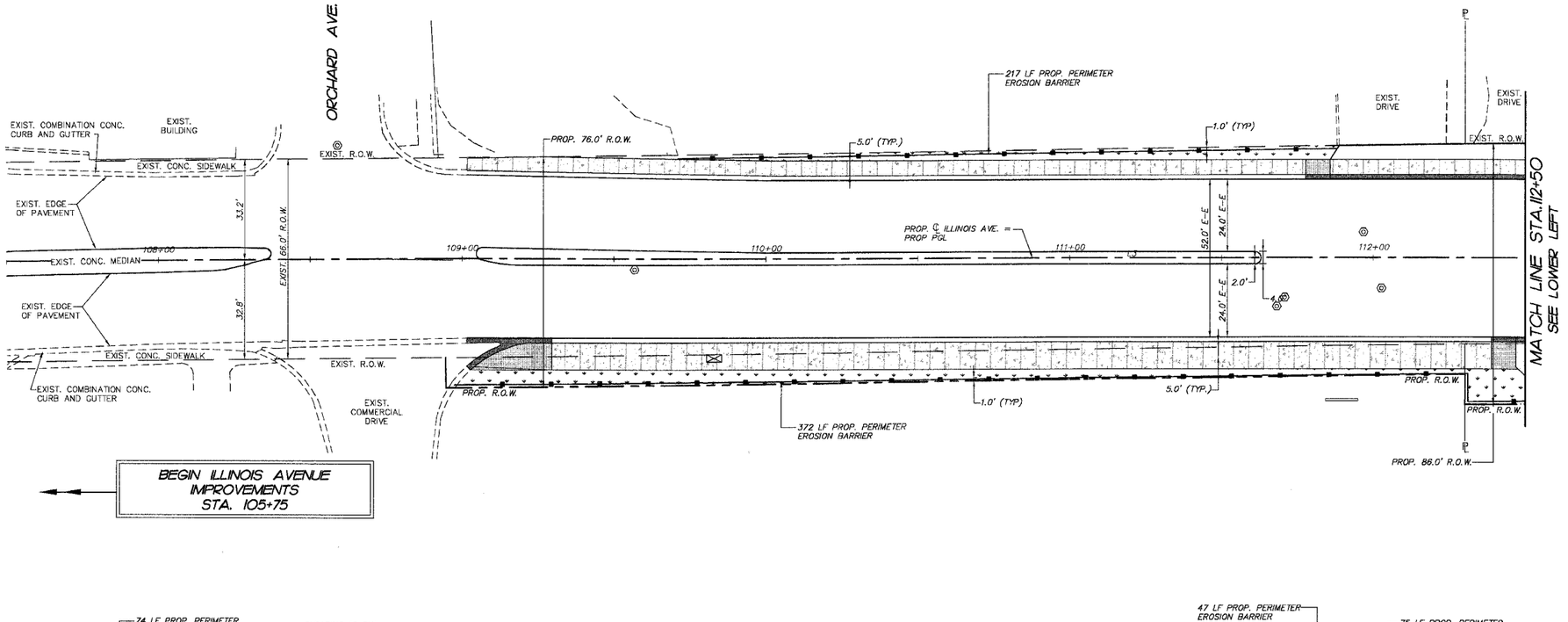
SCALE: "NTS"
DATE 07-28-2006
DRAWN BY CFR
CHECKED BY JLP

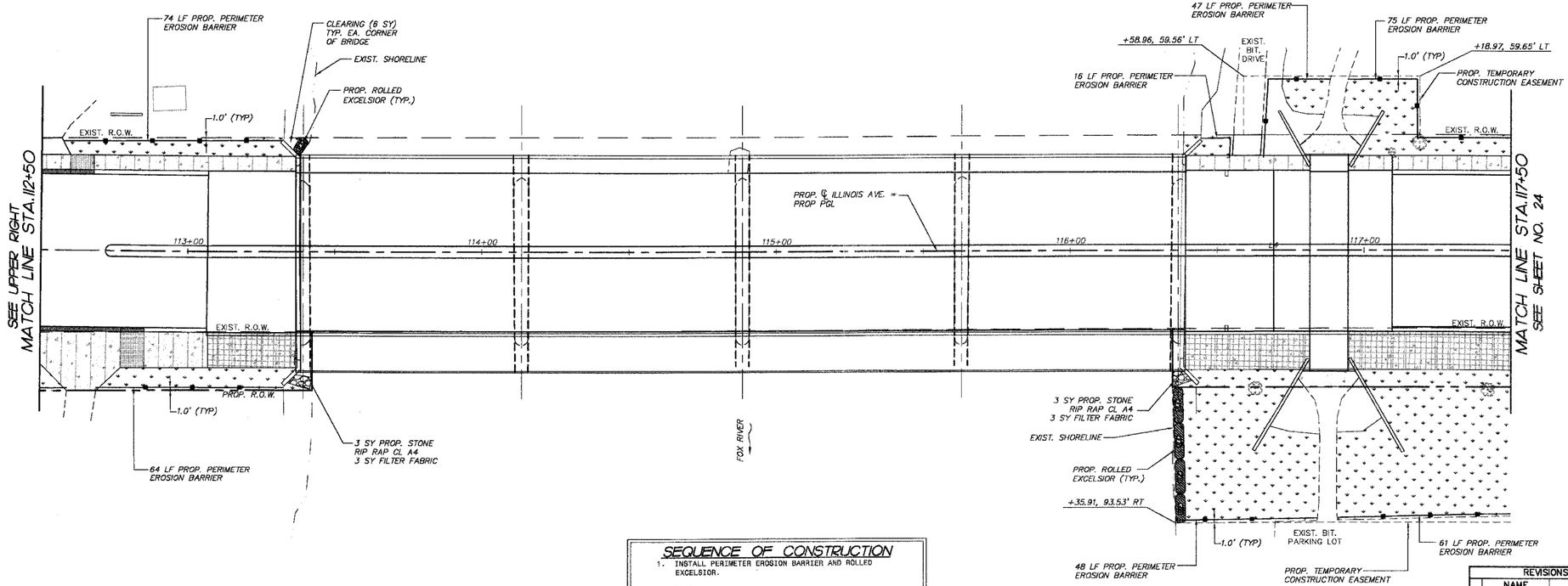
PLOT FILE: STANDARD
VIEW: CE-22
COMP. FILE: 050181-E27.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	23
STA.	107+50	TO STA.	117+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



BEGIN ILLINOIS AVENUE IMPROVEMENTS STA. 105+75



SEQUENCE OF CONSTRUCTION

1. INSTALL PERIMETER EROSION BARRIER AND ROLLED EXCELSIOR.
2. PERFORM BRIDGE SUPERSTRUCTURE DEMOLITION AND RECONSTRUCTION CONCURRENTLY WITH ROADWAY REHABILITATION AND UNDERGROUND UTILITIES UTILIZING STAGE CONSTRUCTION. TEMPORARILY RESTORE DISTURBED AREAS WITH SEEDING, CLASS 7.
3. COMPLETE BRIDGE AND ROADWAY RECONSTRUCTION AND ESTABLISH SODDING, SALT TOLERANT.

LEGEND:

- DENOTES PROPOSED TOPSOIL FURNISH AND PLACE 6" AND SODDING, SALT TOLERANT
- DENOTES PERIMETER EROSION BARRIER
- DENOTES STONE RIP RAP
- DENOTES ROLLED EXCELSIOR
- DENOTES FLOW DIRECTION

EROSION CONTROL NOTES:

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.

WORK SHALL BE DONE IN ACCORDANCE WITH HIGHWAY STANDARD 280001 AND DETAILS IN THE PLANS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE KDSWCD.

PERIMETER EROSION BARRIER MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY OR AFTER A ONE-HALF INCH OR GREATER RAINFALL EVENT AND ANY REQUIRED REPAIRS WILL BE MADE.

WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION SHALL BE FILTERED AND A MEANS PROVIDED TO REDUCE EROSION.

ROLLED EXCELSIOR SHALL BE PLACED ALONG THE RIVER EDGE AS SHOWN. THE REMOVAL AND REINSTALLATION REQUIRED DUE TO CONSTRUCTION OPERATIONS SHALL BE INCLUDED IN COST OF THE ROLLED EXCELSIOR.

MECHANIZED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED FROM OR MOVED ALONG THE RIVER BOTTOM.

ANY DISTURBED GROUND SHALL BE PROTECTED WITHIN 7 DAYS WITH EITHER PERMANENT OR TEMPORARY EROSION CONTROL MEASURES.

ROLLED EXCELSIOR'S SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SHALL BE A MINIMUM OF 12' IN LENGTH.

CONTRACTOR SHALL NOT DISTURB GROUND OUTSIDE THE PERIMETER EROSION BARRIER. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREA OTHER THAN INDICATED ON THESE PLANS, A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE CITY OF AURORA FOR REVIEW BY THE KDSWCD.

WORK THIS SHEET WITH THE BRIDGE PLANS AND THE 'EARTH EXCAVATION TABLE.

AT ALL TIMES, PERIMETER EROSION BARRIER SHALL BE INSTALLED BETWEEN ALL DISTURBED AREAS AND THE RIVER. PERIMETER BARRIERS SHALL BE INSPECTED AT THE END OF EACH WORK DAY AND PRIOR TO ANY RAIN EVENTS.

ALL INLETS ON AND ADJACENT TO THE SITE MUST HAVE A SEDIMENT TRAPPING OR CONTAINMENT DEVICE INSTALLED DURING CONSTRUCTION ACTIVITIES. STRAW BALES ARE NOT ALLOWED.

BUILDING MATERIAL STOCKPILES SHALL BE LOCATED IN AREAS THAT DO NOT HAVE HIGH POTENTIAL FOR CONTRIBUTING SEDIMENTS TO THE RIVER OR STORMWATER STRUCTURES.

THE CONTRACTOR IS NOT PERMITTED TO ALLOW THE EXISTING DECK MATERIAL, OR OTHER CONSTRUCTION DEBRIS TO FALL INTO THE RIVER DURING DEMOLITION OR CONSTRUCTION.

IN THE EVENT THE CONTRACTOR REQUESTS TEMPORARY WORK ACCESS TO THE FOX RIVER TO PLACE TEMPORARY SHORING PLATFORMS OR THER STRUCTURES, THE CONTRACTOR MUST CONTACT THE KANE-DUPAGE SOIL & WATER CONSERVATION DISTRICT AT 630-584-7961 EXT 3. AND THE US ARMY CORP OF ENGINEERS TO COORDINATE EROSION AND SEDIMENT CONTROL MEASURES. AT NO TIME WILL ACTIVE EXCAVATION BE ALLOWED IN THE RIVER FLOWS.

IF ANY EXCAVATION OF THE BANKS SHALL TAKE PLACE FOR THE PLACEMENT OF RIPRAP, TIMING OF THE WORK TO COINCIDE WITH LOW FLOW CONDITIONS SHALL TAKE PLACE. IF ANY FLOWING WATER IS PRESENT ON THE BANKS DURING THE EXCAVATION AND PLACEMENT OF THE RIP RAP, A TURBIDITY CURTAIN, SILT FENCE, OR OTHER SEDIMENT BARRIER SHALL BE PLACED BETWEEN THE ACTIVE EXCAVATION AREA AND THE RIVER FLOWS. IF WORK SHALL NOT BE DONE DURING ACTIVE FLOWS ON THE BANKS, NO ADDITIONAL SEDIMENT CONTROL BARRIER IS NECESSARY, HOWEVER STABILIZATION AND PLACEMENT OF THE RIP RAP SHALL TAKE PLACE IMMEDIATELY UPON COMPLETION OF THE GRADING ON THE BANK AREA.

REVISIONS	NAME	DATE
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SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
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McHENRY, ILLINOIS 60050
PH: 815-385-1775 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
• McHENRY • YORKVILLE • SUNTLEY
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
EROSION CONTROL PLAN
STA 107+50 TO STA 117+50

SCALE: 1" = 20'

DRAWN BY MPL

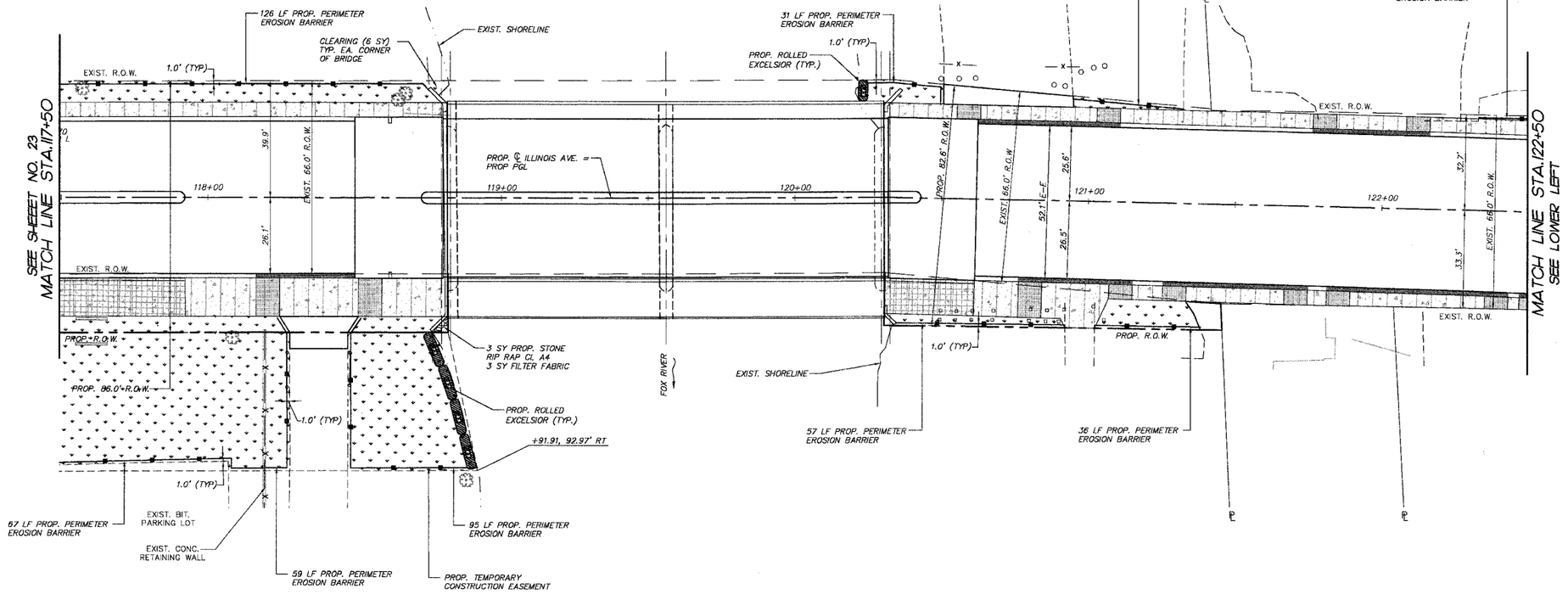
DATE 07-28-2006

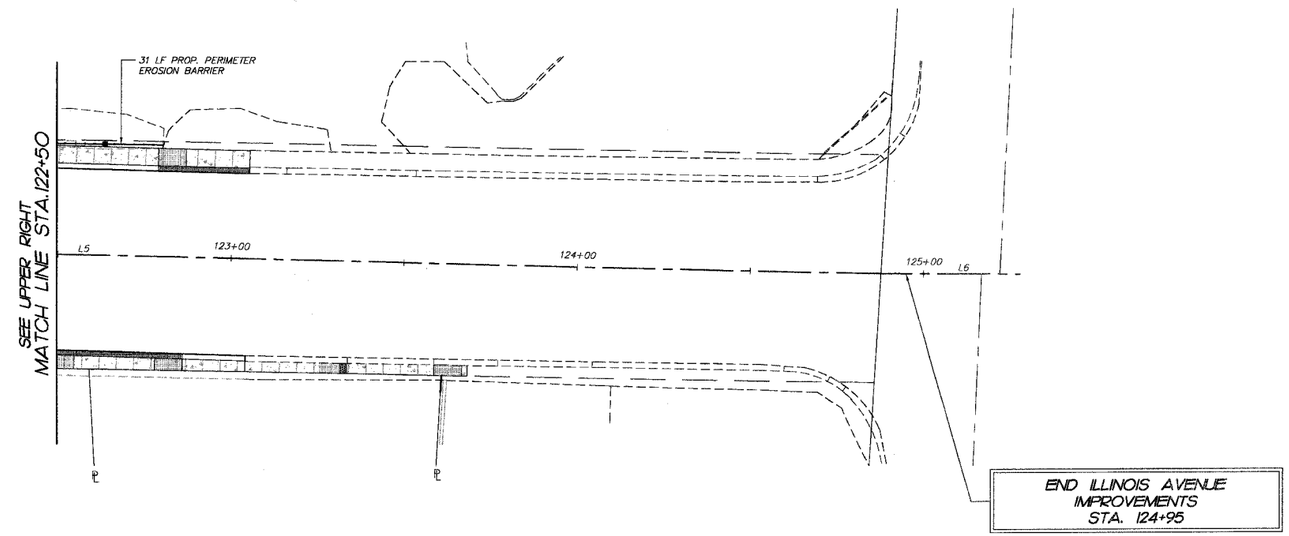
CHECKED BY JLP

PLOT FILE STANDARD
VIEW: CE-21
COMP. FILE: 050181-826.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	24
STA.	117+50	TO STA.	125+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867





END ILLINOIS AVENUE IMPROVEMENTS STA. 124+95

LEGEND:

- DENOTES PROPOSED TOPSOIL FURNISH AND PLACE 6" AND SODDING, SALT TOLERANT
- DENOTES PERIMETER EROSION BARRIER
- DENOTES STONE RIP RAP
- DENOTES ROLLED EXCELSIOR
- DENOTES FLOW DIRECTION

EROSION CONTROL NOTES:

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.

WORK SHALL BE DONE IN ACCORDANCE WITH HIGHWAY STANDARD 280001 AND DETAILS IN THE PLANS.

A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE KDSWCD.

PERIMETER EROSION BARRIER MUST REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED WEEKLY OR AFTER A ONE-HALF INCH OR GREATER RAINFALL EVENT AND ANY REQUIRED REPAIRS WILL BE MADE.

WATER PUMPED OR OTHERWISE DISCHARGED FROM THE SITE DURING CONSTRUCTION SHALL BE FILTERED AND A MEANS PROVIDED TO REDUCE EROSION.

ROLLED EXCELSIOR SHALL BE PLACED ALONG THE RIVER EDGE AS SHOWN. THE REMOVAL AND REINSTALLATION REQUIRED DUE TO CONSTRUCTION OPERATIONS SHALL BE INCLUDED IN COST OF THE ROLLED EXCELSIOR.

MECHANIZED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED FROM OR MOVED ALONG THE RIVER BOTTOM.

ANY DISTURBED GROUND SHALL BE PROTECTED WITHIN 7 DAYS WITH EITHER PERMANENT OR TEMPORARY EROSION CONTROL MEASURES.

ROLLED EXCELSIOR'S SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SHALL BE A MINIMUM OF 12' IN LENGTH.

CONTRACTOR SHALL NOT DISTURB GROUND OUTSIDE THE PERIMETER EROSION BARRIER. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREA OTHER THAN INDICATED ON THESE PLANS, A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE CITY OF AURORA FOR REVIEW BY THE KDSWCD.

WORK THIS SHEET WITH THE BRIDGE PLANS AND THE 'EARTH EXCAVATION TABLE.

AT ALL TIMES, PERIMETER EROSION BARRIER SHALL BE INSTALLED BETWEEN ALL DISTURBED AREAS AND THE RIVER. PERIMETER BARRIERS SHALL BE INSPECTED AT THE END OF EACH WORK DAY AND PRIOR TO ANY RAIN EVENTS.

ALL INLETS ON AND ADJACENT TO THE SITE MUST HAVE A SEDIMENT TRAPPING OR CONTAINMENT DEVICE INSTALLED DURING CONSTRUCTION ACTIVITIES. STRAW BALES ARE NOT ALLOWED.

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IF ANY EXCAVATION OF THE BANKS SHALL TAKE PLACE FOR THE PLACEMENT OF RIPRAP, TIMING OF THE WORK TO COINCIDE WITH LOW FLOW CONDITIONS SHALL TAKE PLACE. IF ANY FLOWING WATER IS PRESENT ON THE BANKS DURING THE EXCAVATION AND PLACEMENT OF THE RIP RAP, A TURBIDITY CURTAIN, SILT FENCE, OR OTHER SEDIMENT BARRIER SHALL BE PLACED BETWEEN THE ACTIVE EXCAVATION AREA AND THE RIVER FLOWS. IF WORK SHALL NOT BE DONE DURING ACTIVE FLOWS ON THE BANKS, NO ADDITIONAL SEDIMENT CONTROL BARRIER IS NECESSARY, HOWEVER STABILIZATION AND PLACEMENT OF THE RIP RAP SHALL TAKE PLACE IMMEDIATELY UPON COMPLETION OF THE GRADING ON THE BANK AREA.

SEQUENCE OF CONSTRUCTION

1. INSTALL PERIMETER EROSION BARRIER AND ROLLED EXCELSIOR.
2. PERFORM BRIDGE SUPERSTRUCTURE DEMOLITION AND RECONSTRUCTION CONCURRENTLY WITH ROADWAY REHABILITATION AND UNDERGROUND UTILITIES UTILIZING STAGE CONSTRUCTION. TEMPORARILY RESTORE DISTURBED AREAS WITH SEEDING, CLASS 7.
3. COMPLETE BRIDGE AND ROADWAY RECONSTRUCTION AND ESTABLISH SODDING, SALT TOLERANT.

REVISIONS	NAME	DATE
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
EROSION CONTROL PLAN
STA 117+50 TO STA 125+00

SCALE: 1" = 20'

DRAWN BY MPL

DATE 07-28-2006

CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-24
COMP. FILE: 050181-SDE.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	25
STA.	107+50	TO STA.	112+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

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

LIMITS OF FEDERAL PARTICIPATION STA. 109+02 TO STA. 123+05

INCLUDE "MANHOLES TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID" (QTY.=3 EA.) AND "VALVE VAULTS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID" (QTY.=1 EA.) IN RESURFACING LIMITS FROM STA. 105+75 TO STA 109+02

ORCHARD AVE.

EXIST. STORM MANHOLE

EXIST. COMBINATION CONC. CURB AND GUTTER

EXIST. R.O.W.

EXIST. CONC. SIDEWALK

EXIST. EDGE OF PAVEMENT

EXIST. CONC. MEDIAN

EXIST. 30" STORM SEWER

EXIST. OVERHEAD UTILITIES

EXIST. STORM INLET

EXIST. COMMERCIAL DRIVE

EXIST. 21" DIP STORM SEWER

EXIST. 12" DIP SAN. SEWER

PROP. 76.0' R.O.W.

EXIST. ABANDONDED 12" STORM SEWER

EXIST. WATER MAIN

EXIST. FIRE HYDRANT TO BE REMOVED

EXIST. TELEPHONE PEDESTAL AND ASSOCIATED PHONE CABLE TO BE RELOCATED BY OTHERS (AT&T)

EXIST. UTILITY POLE TO BE RELOCATED (BY OTHERS)

EXIST. BURIED ELECTRIC (COMED)

EXIST. 27" SAN. SEWER

EXIST. OVERHEAD UTILITIES

PROP. ℄ ILLINOIS AVE. = PROP. PGL

PROP. CLASS D PATCHES, TYPE III, 12" (32 SY)

PROP. CLASS D PATCHES, TYPE I, 12" (4 SY)

EXIST. STORM INLET

EXIST. 30" STORM SEWER

EXIST. 8" DIP SAN. SEWER

EXIST. 8" GAS MAIN (NICOR)

EXIST. GAS VALVE RIMS TO BE ADJUSTED (BY OTHERS)

EXIST. 10" GAS MAIN

EXIST. 42" RCP STORM SEWER

PROP. 86.0' R.O.W.

2 LF STORM SEWER REMOVAL, 12" REMAINING 12" STORM SEWER SHALL BE PLUGGED WITH CLASS SI CONCRETE TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE INCLUDED IN STORM SEWER REMOVAL, 12"

EXIST. UTILITY POLE WITH GUY WIRES TO BE REMOVED AND RELOCATED (BY OTHERS)

MATCH LINE STA. 112+50 SEE SHEET NO. 26

BEGIN ILLINOIS AVENUE IMPROVEMENTS STA. 105+75

LIMITS OF NON-PARTICIPATING 100% LOCAL ITEMS STA. 105+75 TO STA. 109+02

NOTES

1. WORK TO CONNECT EXIST. PIPES TO PROPOSED STRUCTURES SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST FOR THE PROPOSED STRUCTURE PAY ITEM.

LEGEND

- EXIST. STORM SEWER TO BE REMOVED, SIZE AS INDICATED.
- R — DENOTES STRUCTURE TO BE REMOVED (MANHOLE, VALVE VAULT, CATCH BASIN OR INLET)
- # — DENOTES PROPOSED DRAINAGE STRUCTURE OR STORM SEWER
- (#) — DENOTES PROPOSED WATERMAIN, OR FIRE HYDRANT
- A — DENOTES EXISTING STRUCTURE TO BE ADJUSTED WITH NEW TYPE 1 FRAME AND GRATE, CLOSED LID
- △# — DENOTES PROPOSED SANITARY STRUCTURE

STORM SEWER TAGS

1. MH TA 6' DIA. T11 F&G
   STA. 109+63, 27.5' R
   T/C = 654.67
   INV = MATCH EXIST. (W) TIE EXIST. 30" RCP STORM SEWER INTO PROP. MH
   INV = 648.22 (E) TIE EXIST. 30" RCP STORM SEWER INTO PROP. MH
   (SEE NOTE 1)

2. MH TA 6' DIA. T11 F&G
   STA. 110+25, 27.5' R
   T/C = 651.18
   INV = 645.52 (E) TIE EXIST. 30" RCP STORM SEWER INTO PROP. MH
   INV = 645.52 (W) TIE EXIST. 30" RCP STORM SEWER INTO PROP. MH
   (SEE NOTE 1)

2A. CB TA 4' DIA. T11 F&G
   STA. 111+00, 27.5' L
   T/C = 646.41
   INV = 643.02 (S) 12"

2B. 52 LF STORM SEWER CLASS A, TYPE 2, 12 @ 1.00% (TBF = 37 CY)

2C. MH TA 6' DIA. T11 F&G
   STA. 111+00, 27.5' R
   T/C = 646.41
   INV = 642.50 (N) 12"
   INV = 639.92 (E) TIE EXIST. 30" RCP STORM SEWER INTO PROP. MH
   INV = 639.92 (W) TIE EXIST. 30" RCP STORM SEWER INTO PROP. MH
   (SEE NOTE 1)

(#) WATER MAIN TAGS

1. FIRE HYDRANT
   STA. 110+51, 34' L
   BURY = 649.55

2. 4 LF WATER MAIN 6

△# SANITARY SEWER TAGS

1. MH TA SPECIAL 5' DIA. T1F CL (SEE STANDARD CONSTRUCTION DETAILS)
   STA. 111+71, 13' R
   RIM = 642.33
   INV = 636.29 (W) TIE EXIST. 27" SAN. SEWER INTO PROP. MH
   INV = 636.29 (E) TIE EXIST. 27" SAN. SEWER INTO PROP. MH
   (SEE NOTE 1)

ILLINOIS AVENUE

PVI STA = 109+00
PVI ELEV = 657.87
-4.44%
-5.07%
BVCS: 109+40
BVCE: 656.84
PVI STA = 110+00
PVI ELEV = 652.60
A.D. = -1.24
K = 96.69
120.0' VC
EVCS: 110+60
EVCE: 649.01
-6.31%
BVCS: 111+12.50
BVCE: 645.70
LOW POINT ELEV = 639.72
LOW POINT STA = 113+02.08
PVI STA = 112+25
PVI ELEV = 638.60
A.D. = 7.49
K = 30.04
225.0' VC
EXIST. 30" STORM SEWER
EXIST. 30" STORM SEWER
MATCH LINE STA. 112+50 SEE SHEET NO. 26

670 665 660 655 650 645 640 635 630

665.73 663.51 660.09 660.09 657.87 657.87 656.19 655.33 652.64 652.01 649.80 649.64 646.55 646.49 643.41 643.37 641.02 641.45 639.77

108+00 109+00 110+00 111+00 112+00

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
DRAINAGE AND UTILITY PLAN AND PROFILE
STA 107+50 TO STA. 112+50

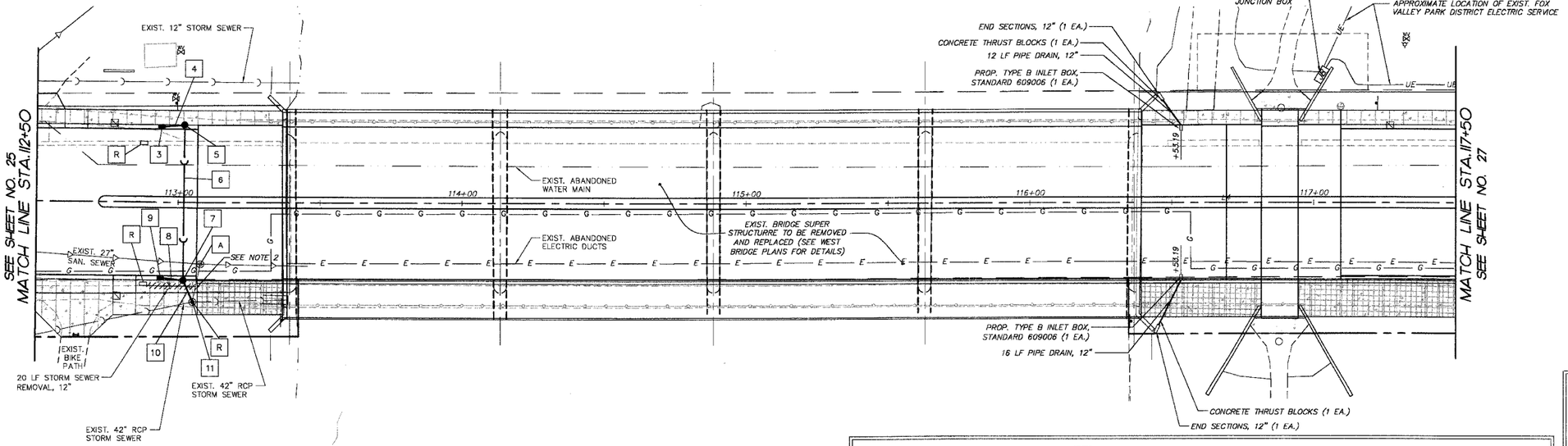
SCALE: VERT. 1"=5' HORIZ. 1"=20'
DRAWN BY: MPL
DATE: 09-18-2006
CHECKED BY: JLP

COMP. FILE: 050181-602e.dwg
PLOT FILE:
VER: CE-25

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	26
STA. 112+50	TO STA. 117+50			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



STORM SEWER TAGS

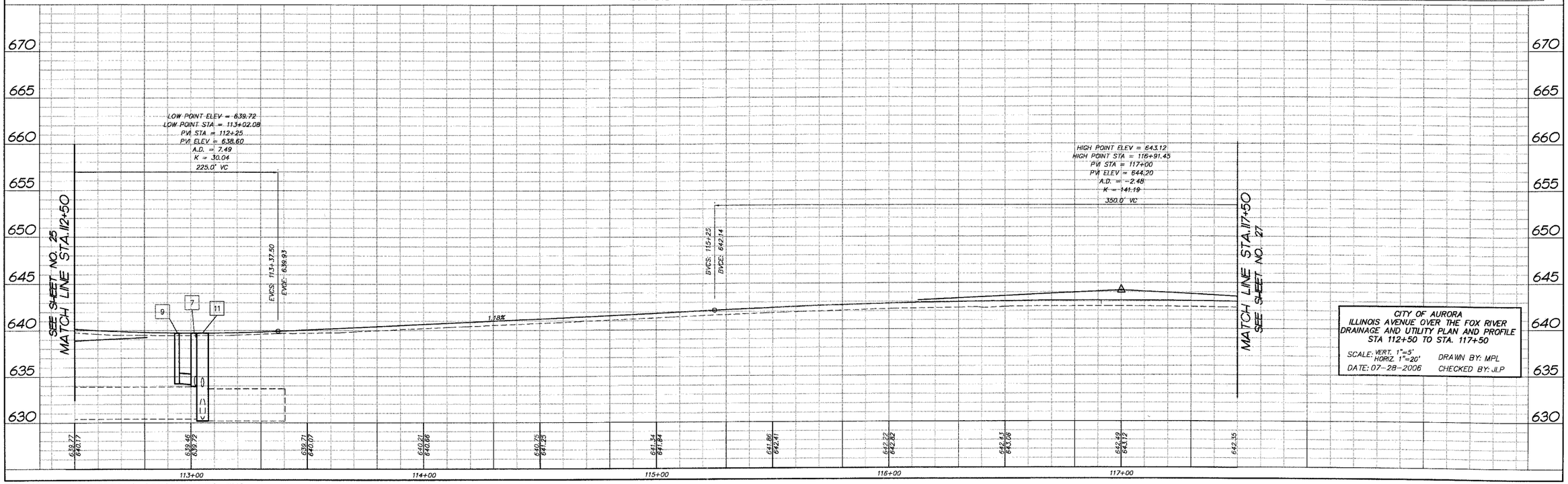
3. INLET TA T11 F&C
   STA. 112+94, 27.5' L
   T/C = 639.65
   INV = 634.76 (E) 12"
4. 6 LF STORM SEWER CLASS A, TYPE 2,
   12 @ 1.00% (TBF = 1 CY)
5. CB TA 4' DIA. T11 F&G
   STA. 113+02, 27.5' L
   T/C = 639.64
   INV = 634.70 (W) 12"
   INV = 634.60 (S) 12"
6. 54 LF STORM SEWER CLASS A, TYPE 2,
   12 @ 1.00% (TBF = 55 CY)
7. CB TA 4' DIA. T11 F&G
   STA. 113+02, 27.5'R
   T/C = 639.64
   INV = 634.06 (N) 12"
   INV = 633.96 (S) 12"
   INV = 634.16 (W) 12"
8. 6 LF STORM SEWER CLASS A, TYPE 2,
   12 @ 1.00% (TBF = 1 CY)
9. INLET TA T11 F&G
   STA. 112+94, 27.5' R
   T/C = 639.65
   INV = 634.22 (E) 12"
10. 6 LF STORM SEWER CLASS A, TYPE 2,
    12 @ 1.00% (TBF = 2 CY)
11. MH TA 5' DIA. T1F CL
    STA. 113+05, 35' R
    RIM = 639.72
    INV = 630.39 (W) TIE EXIST. 42" RCP STORM SEWER INTO PROP. MH
    INV = 630.19 (E) TIE EXIST. 42" RCP STORM SEWER INTO PROP. MH
    INV = 633.90 (NW) 12"
    INV = 630.34 (NE) TIE EXIST. 27" SAN. SEWER INTO PROP. MH
    (SEE NOTE 1)

NOTES

1. WORK TO CONNECT EXIST. PIPES TO PROPOSED STRUCTURES SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST FOR THE PROPOSED STRUCTURE PAY ITEM.
2. EXIST. TEE IN PIPE SHALL BE PLUGGED WITH CLASS SI CONCRETE TO THE SATISFACTION OF THE ENGINEER. EXISTING 27" SEWER SHALL REMAIN OPEN. THIS WORK SHALL BE INCLUDED IN STORM SEWER REMOVAL, 12"

LEGEND

- DENOTES EXISTING STORM SEWER TO BE REMOVED, SIZE AS INDICATED.
- R — DENOTES STRUCTURE TO BE REMOVED (MANHOLE, VALVE VAULT, CATCH BASIN OR INLET)
- # — DENOTES PROPOSED DRAINAGE STRUCTURE OR STORM SEWER
- (#) — DENOTES PROPOSED WATERMAIN, OR FIRE HYDRANT
- A — DENOTES EXISTING STRUCTURE TO BE ADJUSTED WITH NEW TYPE 1 FRAME AND GRATE, CLOSED LID
- (#) — DENOTES PROPOSED SANITARY STRUCTURE



CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
DRAINAGE AND UTILITY PLAN AND PROFILE
STA 112+50 TO STA. 117+50

SCALE: VERT. 1"=5' HORIZ. 1"=20' | DRAWN BY: MPL
DATE: 07-28-2006 | CHECKED BY: JLP

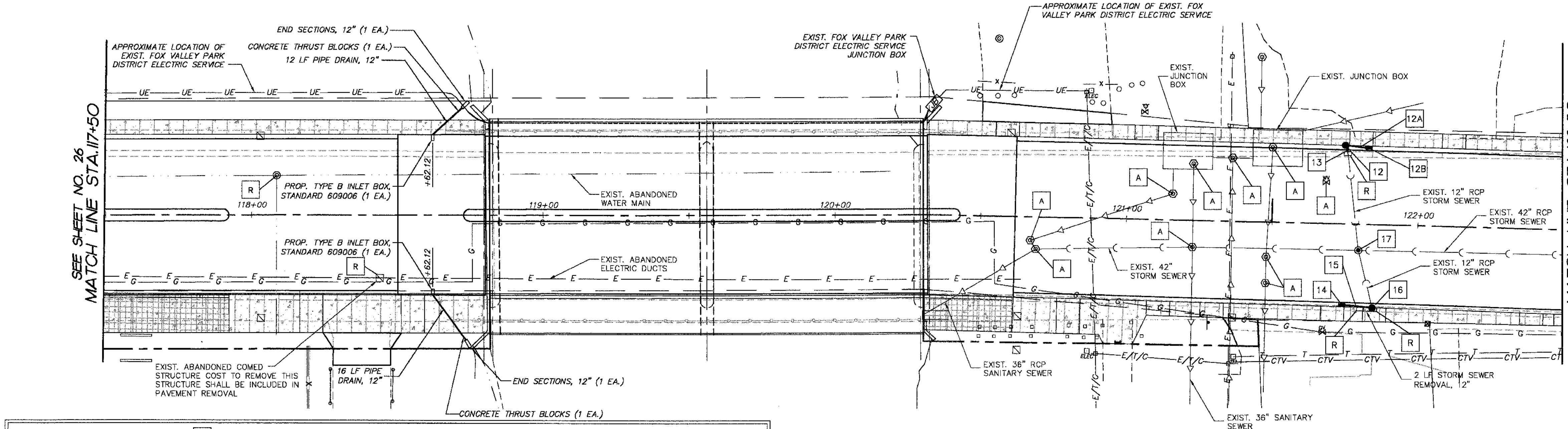
FINAL SURVEY NOTE BOOK — SURVEYED — PLOTTED — TEMPLATE AREAS — AREAS CHECKED — NO. — BY — DATE

COMP. FILE: 050181-602fs.dwg
PLOT FILE:
REV. 12-26

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	27
STA. 117+50 TO STA. 122+50				
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



NOTES

1. WORK TO CONNECT EXIST. PIPES TO PROPOSED STRUCTURES SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST FOR THE PROPOSED STRUCTURE PAY ITEM.
2. WORK TO CONNECT PROP. STORM SEWER TO EXIST. STORM SEWER WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE OF THE ITEM "STORM SEWER" OF THE TYPE AND SIZE SPECIFIED.

STORM SEWER TAGS

12. CB TA 4' DIA. T11 F&G
STA. 121+74.61, 26.7' L
T/C = 638.46
INV = 633.70 (S) 12"

13. 4 LF STORM SEWER, CLASS A, TYPE 2
12 @ 1.00% (TBF = 1 CY)
CONNECT TO EXIST. 12" RCP STORM SEWER
(SEE NOTE 2)

14. INLET TA 2' DIA. T11 F&G
STA. 121+74.61, 28.6' R
T/C = 638.42
INV = 633.90 (E) 12"

15. 8 LF STORM SEWER, CLASS A, TYPE 2
12 @ 1.00% (TBF = 1 CY)

16. CB TA 4' DIA. T11 F&G
STA. 121+85, 28.7' R
T/C = 638.42
INV = 633.82 (W) 12"
INV = 633.47 (N) TIE EXIST. 12" RCP STORM SEWER INTO PROP. CB
(SEE NOTE 1)

17. MH TA 5' DIA T1F CL
STA. = 121+81.5, 9' R
RIM = 638.34
INV = 630.90 (W) TIE EXIST. 42" RCP STORM SEWER INTO PROP. MH
INV = 631.00 (E) TIE EXIST. 42" RCP STORM SEWER INTO PROP. MH
EXIST. STORM SEWER NORTH & SOUTH MAKES BLIND CONNECTION TO EXIST. 42" RCP STORM SEWER-MATCH INVERTS AT PROP. MANHOLE
(SEE NOTE 1.)

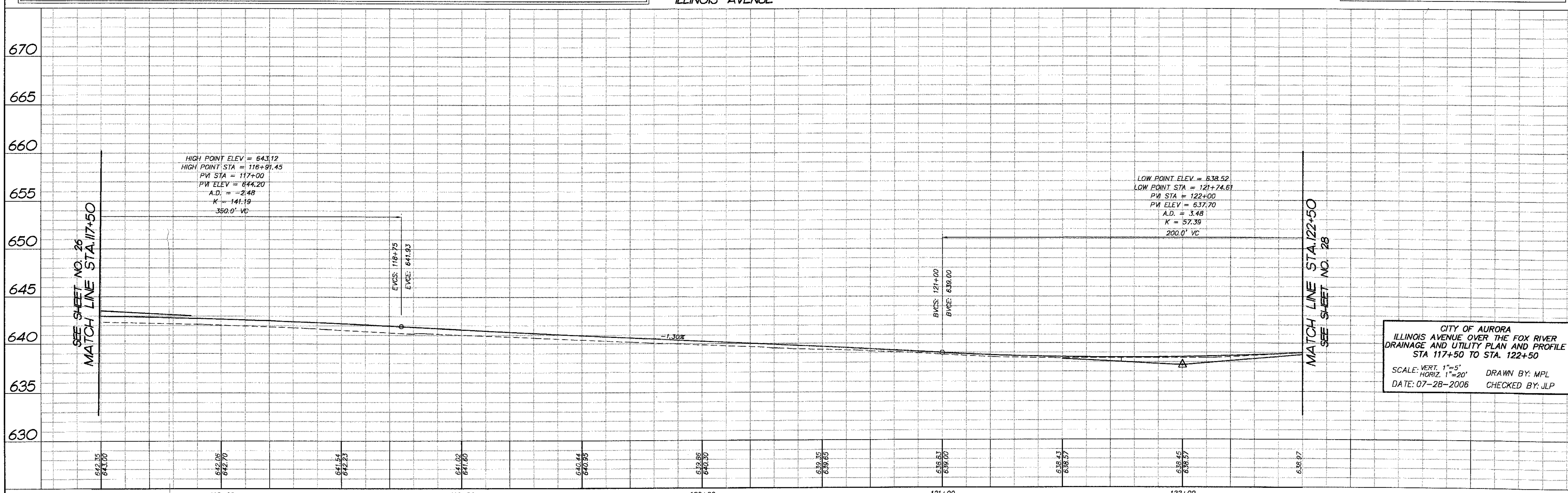
12A. 6 LF STORM SEWER, CLASS A, TYPE 2
12 @ 1.00% (TBF = 1 CY)

12B. INLET TA T11 F&G
STA. 121+82.61, 26.7' L
T/C = 638.46
INV = 633.76 (W) 12"

LEGEND

- DENOTES EXISTING STORM SEWER TO BE REMOVED, SIZE AS INDICATED.
- R — DENOTES STRUCTURE TO BE REMOVED (MANHOLE, VALVE VAULT, CATCH BASIN, INLET OR HANDHOLE)
- # — DENOTES PROPOSED DRAINAGE STRUCTURE OR STORM SEWER
- (#) — DENOTES PROPOSED WATERMAIN, OR FIRE HYDRANT
- A — DENOTES EXISTING STRUCTURE TO BE ADJUSTED WITH NEW TYPE 1 FRAME AND GRATE, CLOSED LID
- △ # — DENOTES PROPOSED SANITARY STRUCTURE

ILLINOIS AVENUE



CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
DRAINAGE AND UTILITY PLAN AND PROFILE
STA 117+50 TO STA. 122+50

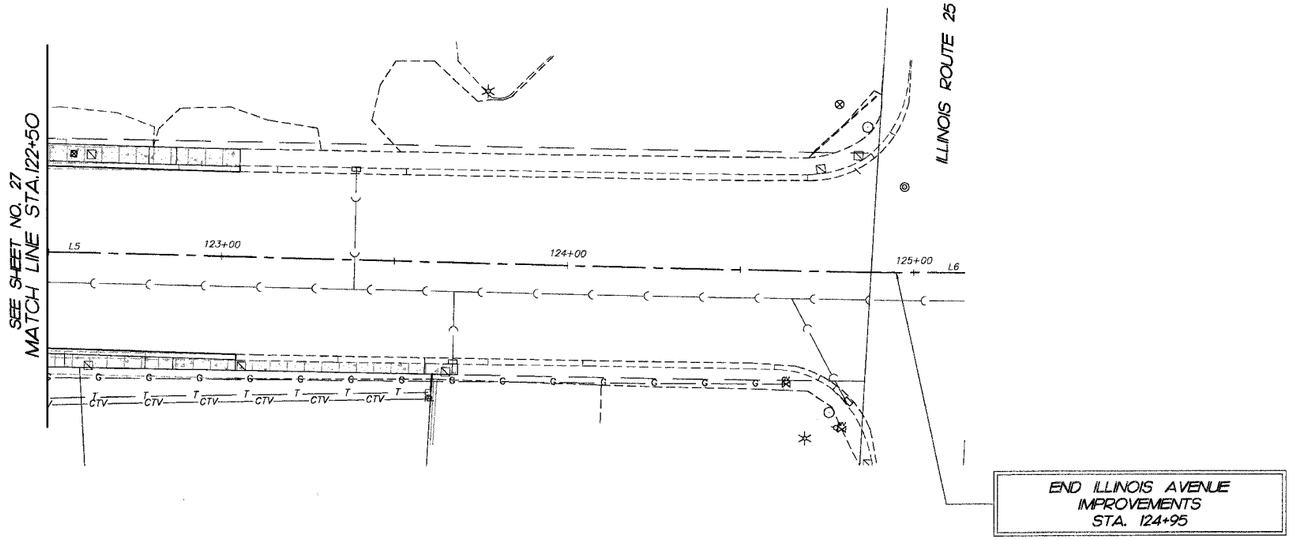
SCALE: VERT. 1"=5' HORIZ. 1"=20'
DRAWN BY: MPL
DATE: 07-28-2006
CHECKED BY: JLP

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	28
STA. 122+50	TO STA. 125+00			
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

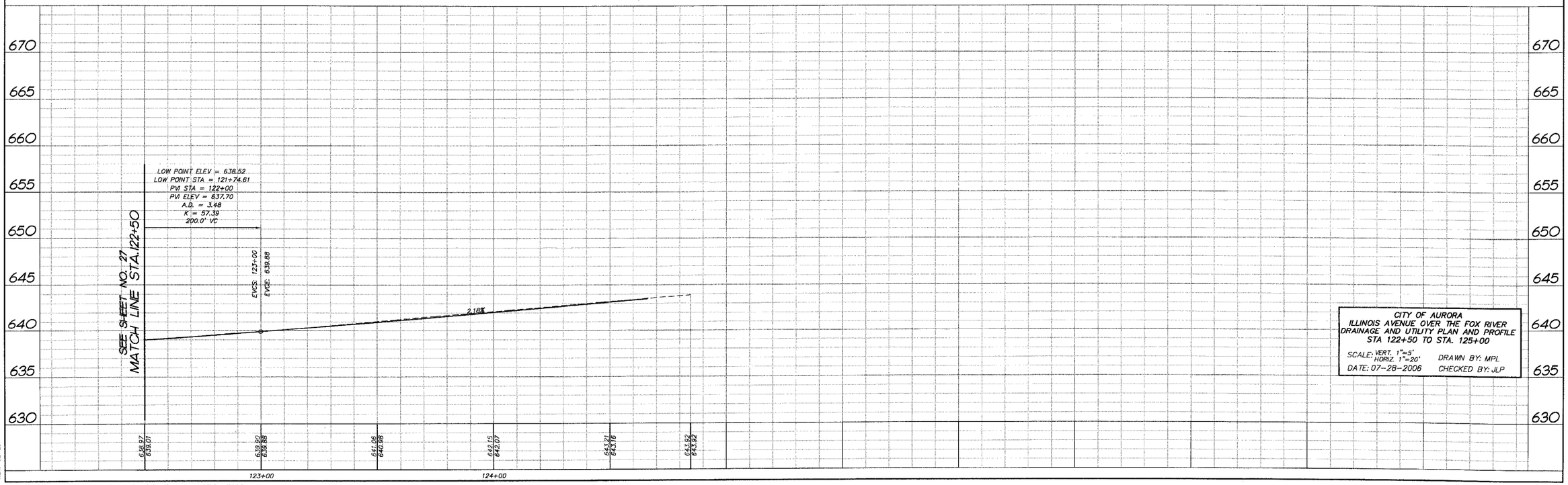
CONTRACT #: 83867

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



LEGEND

- DENOTES EXISTING STORM SEWER TO BE REMOVED, SIZE AS INDICATED.
- R — DENOTES STRUCTURE TO BE REMOVED (MANHOLE, VALVE VAULT, CATCH BASIN OR INLET)
- # — DENOTES PROPOSED DRAINAGE STRUCTURE OR STORM SEWER
- (#) — DENOTES PROPOSED WATERMAIN, OR FIRE HYDRANT
- A — DENOTES EXISTING STRUCTURE TO BE ADJUSTED WITH NEW TYPE 1 FRAME AND GRATE, CLOSED LID
- # — DENOTES PROPOSED SANITARY STRUCTURE



CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
DRAINAGE AND UTILITY PLAN AND PROFILE
STA 122+50 TO STA. 125+00

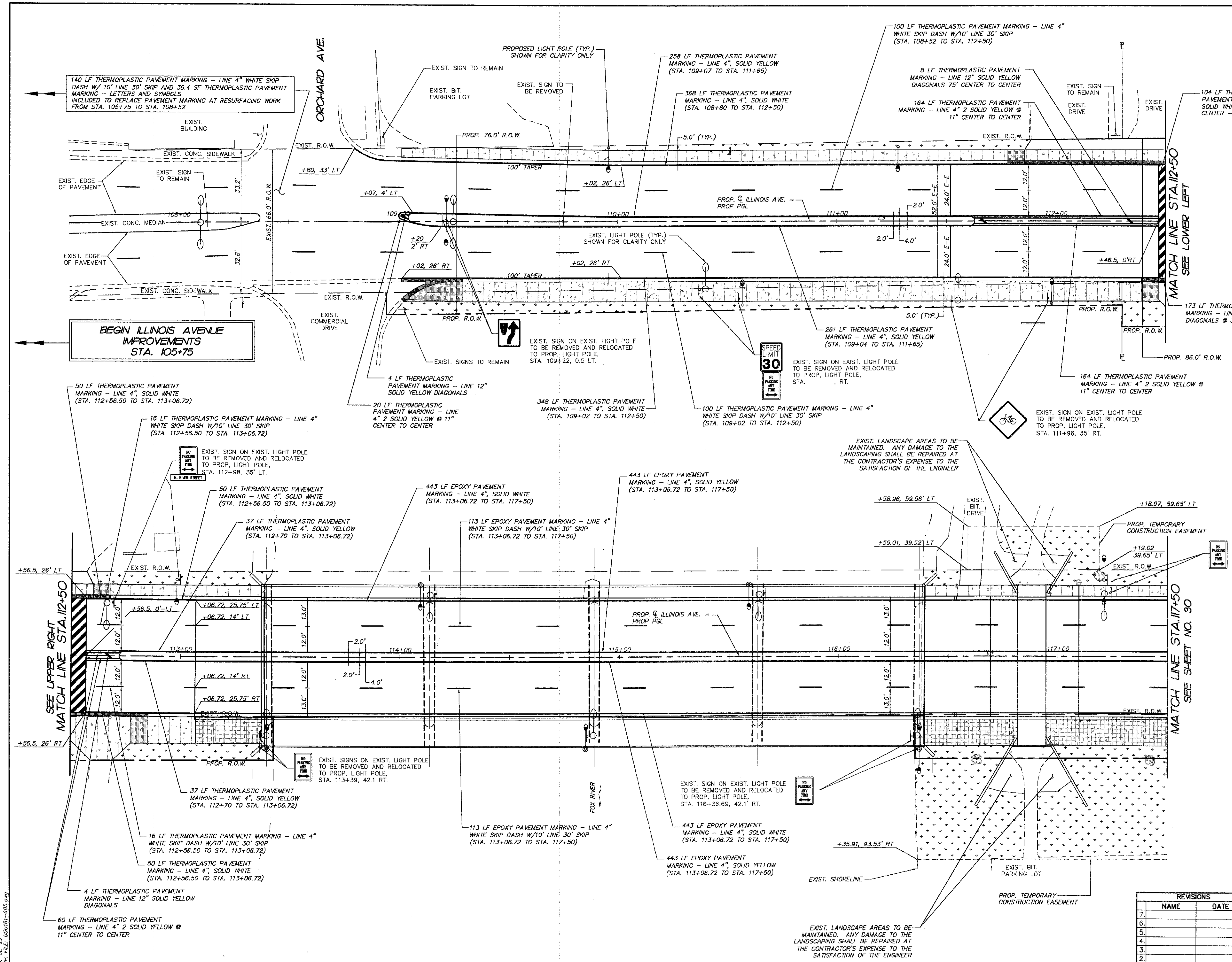
SCALE: VERT. 1"=5'
HORIZ. 1"=20'
DRAWN BY: MPL
DATE: 07-28-2006
CHECKED BY: JLP

COMP. FILE: 050181-602b.dwg
PLOT FILE:
DATE: 12-28

SMITH ENGINEERING CONSULTANTS INC.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	29
STA. 107+50		TO STA. 117+50		
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		

CONTRACT #: 83867



140 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" WHITE SKIP DASH W/ 10' LINE 30' SKIP AND 36.4 SF THERMOPLASTIC PAVEMENT MARKING – LETTERS AND SYMBOLS INCLUDED TO REPLACE PAVEMENT MARKING AT RESURFACING WORK FROM STA. 105+75 TO STA. 108+52
ORCHARD AVE.
BEGIN ILLINOIS AVENUE IMPROVEMENTS STA. 105+75
EXIST. BUILDING
EXIST. CONC. SIDEWALK
EXIST. SIGN TO REMAIN
EXIST. EDGE OF PAVEMENT
EXIST. CONC. MEDIAN
EXIST. 66.0' R.O.W.
EXIST. R.O.W.
EXIST. COMMERCIAL DRIVE
EXIST. BIT. PARKING LOT
EXIST. SIGN TO BE REMOVED
PROPOSED LIGHT POLE (TYP.) SHOWN FOR CLARITY ONLY
PROP. 76.0' R.O.W.
100' TAPER
EXIST. LIGHT POLE (TYP.) SHOWN FOR CLARITY ONLY
PROP. ℄ ILLINOIS AVE. = PROP PGL
258 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4", SOLID YELLOW (STA. 109+07 TO STA. 111+65)
368 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4", SOLID WHITE (STA. 108+80 TO STA. 112+50)
100 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" WHITE SKIP DASH W/10' LINE 30' SKIP (STA. 108+52 TO STA. 112+50)
8 LF THERMOPLASTIC PAVEMENT MARKING – LINE 12" SOLID YELLOW DIAGONALS 75' CENTER TO CENTER
164 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" 2 SOLID YELLOW @ 11" CENTER TO CENTER
104 LF THERMOPLASTIC PAVEMENT MARKING – LINE 6" SOLID WHITE 2 @ 10' CENTER – CENTER
EXIST. DRIVE
MATCH LINE STA.112+50 SEE LOWER LEFT
EXIST. SIGN ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. 109+22, 0.5 LT.
EXIST. SIGNS TO REMAIN
4 LF THERMOPLASTIC PAVEMENT MARKING – LINE 12" SOLID YELLOW DIAGONALS
20 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" 2 SOLID YELLOW @ 11" CENTER TO CENTER
348 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4", SOLID WHITE (STA. 109+02 TO STA. 112+50)
SPEED LIMIT 30
EXIST. SIGN ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. , RT.
100 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" WHITE SKIP DASH W/10' LINE 30' SKIP (STA. 109+02 TO STA. 112+50)
261 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4", SOLID YELLOW (STA. 109+04 TO STA. 111+65)
164 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" 2 SOLID YELLOW @ 11" CENTER TO CENTER
173 LF THERMOPLASTIC PAVEMENT MARKING – LINE 12" SOLID WHITE DIAGONALS @ 3' CENTER TO CENTER
PROP. 86.0' R.O.W.
EXIST. SIGN ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. 111+96, 35' RT.
EXIST. LANDSCAPE AREAS TO BE MAINTAINED. ANY DAMAGE TO THE LANDSCAPING SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER
50 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4", SOLID WHITE (STA. 112+56.50 TO STA. 113+06.72)
16 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" WHITE SKIP DASH W/10' LINE 30' SKIP (STA. 112+56.50 TO STA. 113+06.72)
EXIST. SIGN ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. 112+98, 35' LT.
37 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4", SOLID YELLOW (STA. 112+70 TO STA. 113+06.72)
443 LF EPOXY PAVEMENT MARKING – LINE 4", SOLID WHITE (STA. 113+06.72 TO STA. 117+50)
113 LF EPOXY PAVEMENT MARKING – LINE 4" WHITE SKIP DASH W/10' LINE 30' SKIP (STA. 113+06.72 TO STA. 117+50)
443 LF EPOXY PAVEMENT MARKING – LINE 4", SOLID YELLOW (STA. 113+06.72 TO STA. 117+50)
EXIST. BIT. DRIVE
PROP. TEMPORARY CONSTRUCTION EASEMENT
EXIST. SIGN ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. 117+21, 35' LT.
SEE UPPER RIGHT MATCH LINE STA.112+50
MATCH LINE STA.117+50 SEE SHEET NO. 30
EXIST. SIGNS ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. 113+39, 42.1' RT.
FOX RIVER
EXIST. SIGN ON EXIST. LIGHT POLE TO BE REMOVED AND RELOCATED TO PROP. LIGHT POLE, STA. 116+36.69, 42.1' RT.
4 LF THERMOPLASTIC PAVEMENT MARKING – LINE 12" SOLID YELLOW DIAGONALS
60 LF THERMOPLASTIC PAVEMENT MARKING – LINE 4" 2 SOLID YELLOW @ 11" CENTER TO CENTER
EXIST. SHORELINE
EXIST. BIT. PARKING LOT

LEGEND:

DENOTES PROPOSED TOPSOIL FURNISH AND PLACE 6" AND SODDING, SALT TOLERANT

QUANTITIES:

STA. 107+50 TO STA. 117+50
-TOPSOIL FURNISH AND PLACE 6": 1,199 SY
-SODDING,SALT TOLERANT: 1,199 SY

NOTES:

1. PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "DISTRICTONE TYPICAL PAVEMENT MARKINGS" DETAIL SHEET.
2. EXISTING SIGNS TO REMAIN SHALL BE PRESERVED
3. ALL PAVEMENT MARKINGS PLACED ON CONCRETE SHALL BE EPOXY AND ALL PAVEMENT MARKINGS PLACED ON BITUMINOUS SHALL BE THERMOPLASTIC.

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
McHENRY HUNTLEY YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

REVISIONS	NAME	DATE
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CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PAVEMENT MARKING, SIGNING, AND LANDSCAPING PLAN
STA 107+50 TO STA 117+50

SCALE: 1" = 20'
DATE 07-28-2006
DRAWN BY MPL
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-29
COMP. FILE: 050181-605.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	30
STA.	117+50	TO STA.	125+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

LEGEND:

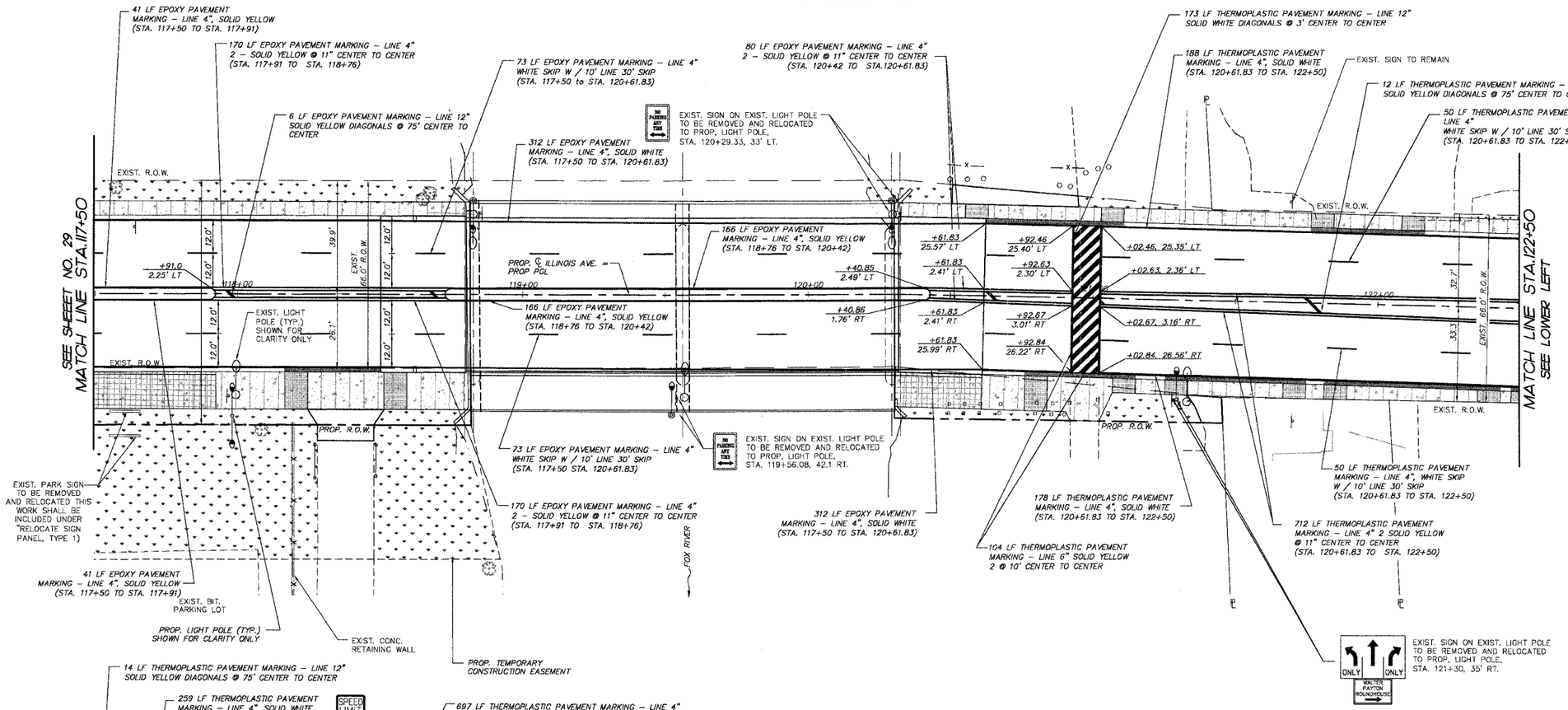
DENOTES PROPOSED TOPSOIL FURNISH AND PLACE 6" AND SODDING, SALT TOLERANT

QUANTITIES:

STA. 117+50 TO STA. 125+00
- TOPSOIL FURNISH AND PLACE 6": 856 SY
- SODDING, SALT TOLERANT: 856 SY

NOTES:

1. PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE "DISTRICTONE TYPICAL PAVEMENT MARKINGS" DETAIL SHEET.
2. EXISTING SIGNS TO REMAIN SHALL BE PRESERVED
3. ALL PAVEMENT MARKINGS PLACED ON CONCRETE SHALL BE EPOXY AND ALL PAVEMENT MARKINGS PLACED ON BITUMINOUS SHALL BE THERMOPLASTIC.



PLOT FILE: STANDARD
MEM. CE-30
COMP. FILE: 060181-A05.dwg

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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PAVEMENT MARKING, SIGNING, AND LANDSCAPE PLAN
STA 117+50 TO STA 125+00

SCALE: 1" = 20'

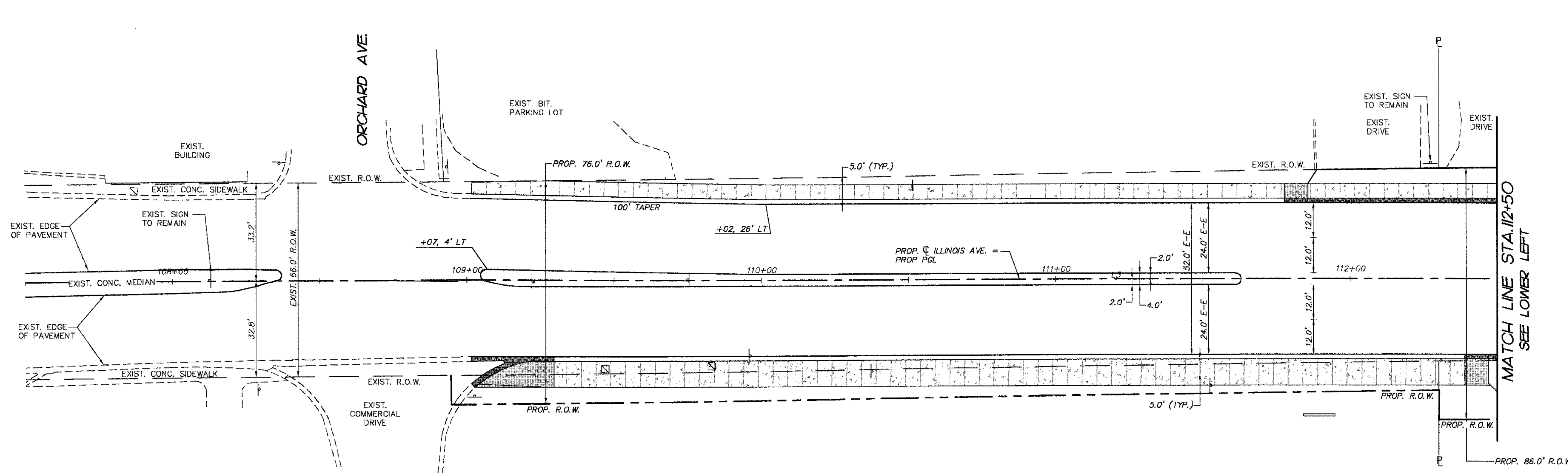
DRAWN BY MPL

DATE 07-28-2006

CHECKED BY JLP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	31
STA.	107+50	TO STA.	117+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

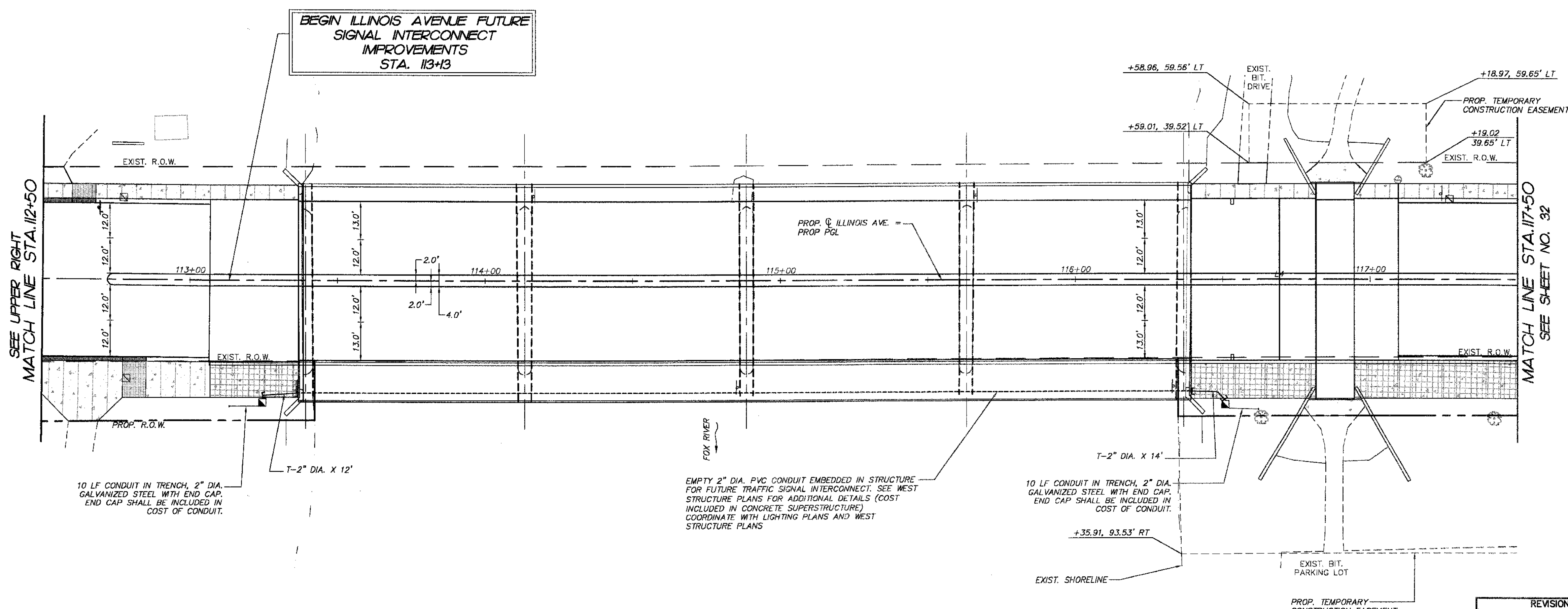
CONTRACT #: 83867



LEGEND:

- EXISTING HANDHOLE
- PROPOSED HANDHOLE
- PVC CONDUIT EMBEDDED IN STRUCTURE
- T/P: CONDUIT IN TRENCH (T) CONDUIT PUSHED (P) RIGID GALVANIZED STEEL (RGSC) CONDUIT DIA. X LENGTH

BEGIN ILLINOIS AVENUE FUTURE SIGNAL INTERCONNECT IMPROVEMENTS STA. 113+13



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ILLINOIS DEPARTMENT OF TRANSPORTATION

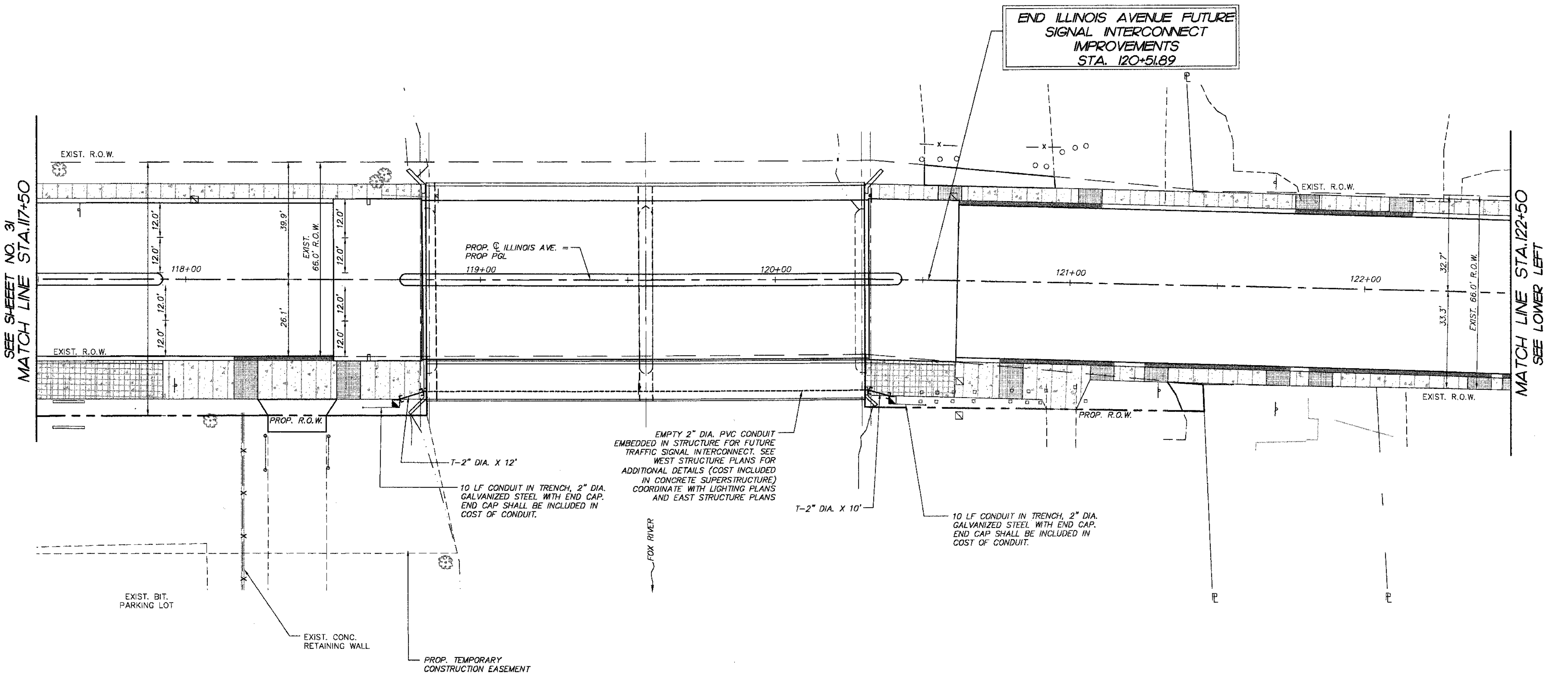
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
FUTURE TRAFFIC SIGNAL INTERCONNECT PLAN
AND DETECTOR LOOP REPLACEMENT PLAN
STA 107+50 TO STA 117+50

SCALE: 1" = 20'
DRAWN BY KMA
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-31
COMP. FILE: 050181-607.dwg

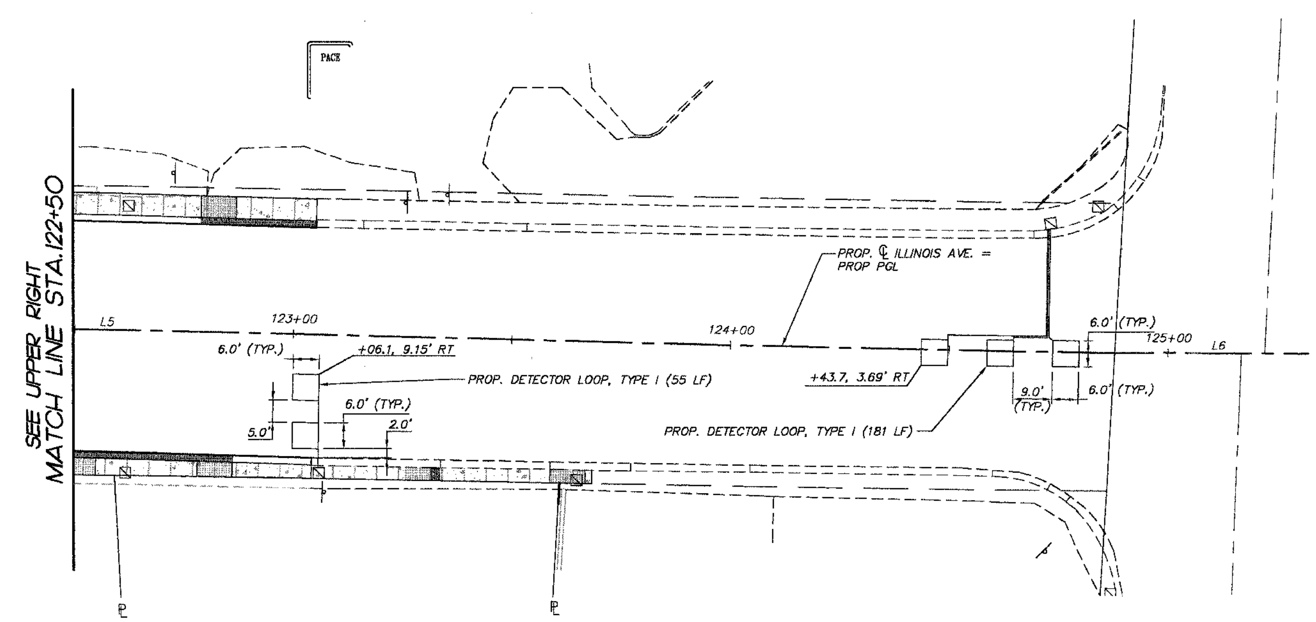
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	32
STA.	117+50	TO STA.	125+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867



LEGEND:

- EXISTING HANDHOLE
- PROPOSED HANDHOLE
- PVC CONDUIT EMBEDDED IN STRUCTURE
- T/P CONDUIT IN TRENCH (T) CONDUIT PUSHED (P) RIGID GALVANIZED STEEL (RGSC) CONDUIT DIA. X LENGTH



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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
FUTURE TRAFFIC SIGNAL INTERCONNECT PLAN AND DETECTOR LOOP REPLACEMENT PLAN
STA 117+50 TO STA 125+00

SCALE: 1" = 20'
DRAWN BY KMA
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-32
COMP. FILE: 050181-S07.dwg

BILL OF MATERIALS

CODE NO.	ITEM	UNIT	TOTAL QUANTITIES
80400100	ELECTRIC SERVICE INSTALLATION	EACH	2
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
80700140	GROUND ROD, ¾" DIA. x 10 FT	EACH	15
81000600	CONDUIT IN TRENCH, 2" DIA. GALVANIZED STEEL	FOOT	790
81018500	CONDUIT PUSHED, 2" DIA. GALVANIZED STEEL	FOOT	137
81100200	CONDUIT ATTACHED TO STRUCTURE, ¾" DIA. GALVANIZED STEEL	FOOT	152
81400100	HANDHOLES	EACH	24
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1,544
81702440	ELECTRIC CABLE IN CONDUIT 600V (XLP TYPE USE) 3-1/C NO. 1/0	FOOT	200
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	23
82500530	LIGHTING CONTROLLER TYPE CB-RCS 100 AMP - 240 VOLT	EACH	2
83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	121
84200500	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE	EACH	16
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	2
XX003070	LUMINAIRE (SPECIAL)	EACH	8
	UNIT DUCT WITH 2-1/C NO. 8 AND 1/C NO. 8 GROUND 600 V (XHHW-2), 1" DIA. POLYETHYLENE	FOOT	2,470
	UNIT DUCT WITH 4-1/C NO. 8 AND 2-1/C NO. 8 GROUND 600 V (XHHW-2), 1" DIA. POLYETHYLENE	FOOT	20
	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 6 1/C NO. 8	FOOT	162
	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 3 1/C NO. 8	FOOT	77
	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 2-1/C NO. 12	FOOT	168
	ELECTRIC CABLE IN CONDUIT 600 V (XHHW-2), 1/C NO. 12 GROUND	FOOT	168
	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM	EACH	15
	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN	EACH	4

GENERAL NOTES

1 WHERE SEPARATE CIRCUIT RUNS ARE TO BE INSTALLED PARALLEL WITH EACH OTHER, ONE COMMON TRENCH SHALL BE USED AND SHALL BE MEASURED ONLY ONCE FOR PAYMENT, AS TRANCH AND BACKFILL FOR ELECTRICAL WORK.

2 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MARK THE PROPOSED LOCATIONS OF ALL LIGHT POLES FOR EXAMINATION AND CONFIRMATION WITH THE ENGINEER AT THE PRECONSTRUCTION INSPECTION. THE EXACT LOCATIONS OF ALL OTHER ROADWAY LIGHTING ITEMS, INCLUDING THE LIGHTING CONTROLLER SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO STARTING WORK.

3 THE RESPONSIBILITY FOR COORDINATING FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS SHALL REMAIN WITH THE CONTRACTOR.

4 THE CONTRACTOR SHALL SUBMIT EIGHT (8) COPIES OF APPROVABLE MANUFACTURER'S PRODUCT DATA AND DETAIL SHOP DRAWINGS FOR ENGINEER APPROVAL WITHIN 30 DAYS AFTER CONTRACT EXECUTION TO THE McHENRY OFFICE OF SMITH ENGINEERING CONSULTANTS,
4500 PRIME PARKWAY McHENRY, IL 60050 PH. (815) 385-1778. THE FOLLOWING SHALL BE INCLUDED:
   - A. TRENCH: ELECTRICAL WARNING TAPE
   - B. FOUNDATION: CLASS "SI" CONCRETE, REINFORCEMENT, RACEWAYS, ANCHOR BOLTS WITH NUTS AND WASHERS.
   - C. CONDUIT: CONDUIT AND CONDUIT FITTINGS.
   - D. GROUND ROD: GROUND ROD, COPPER WIRE, EXOTHERMIC WELD.
   - E. UNIT DUCT/CABLES
   - F. ELECTRIC CABLES
   - G. LIGHT POLE/ARM: POLE DETAILS, SHOP DRAWINGS, AND WIND LOAD CALCULATIONS, POLE WIRE.
   - H. LUMINAIRE: ROADWAY LUMINAIRE WITH BALLAST ASSEMBLY.
   - I. ELECTRICAL ITEMS: ELECTRIC TAPES, QUICK DISCONNECT WITH FUSE, LAMPS.
   - J. LIGHTING CONTROLLER: CIRCUITRY DETAIL, CATALOG ON MATERIALS, PAINT.

5 THE CONTRACTOR SHALL SUBMIT FOUR (4) SETS OF FULL SIZE COMPLETE, ACCURATE "RECORD DRAWING" PLAN SETS TO THE ENGINEER FOR REVIEW AND COMMENT, AND DEPICT ALL ROADWAY LIGHTING MATERIAL INSTALLATIONS WITH ANY CHANGES INDICATED IN RED. "RECORD DRAWINGS" SHALL BE SUBMITTED AT LEAST 7 DAYS BEFORE SCHEDULING A FINAL INSPECTION.

6 THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. AT (1-800-892-0123) TO LOCATE AND MARK/STAKE ALL UNDERGROUND UTILITIES.

7 THE CONTRACTOR SHALL GIVE CONSTRUCTION STAGING FOR THE PROPOSED LIGHTING WORK IN WRITING TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE ENGINEER.

8 THE LIGHT POLE SETBACK SHALL BE 6' FROM THE BACK OF CURB TO THE FACE OF THE FOUNDATION UNLESS SHOWN OTHERWISE.

9 THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.

10 THE PROPOSED TRENCH SHALL BE 36 INCHES BELOW FINISHED GRADE.

11 BALLAST LOSSES SHALL NOT EXCEED 17.5% FOR A 250 WATT HPS, 55 V LAMP LUMINAIRE.

12 THE EXISTING LIGHT POLES ON THE SOUTH SIDE OF ILLINOIS AVENUE SHALL BE MAINTAINED AND REMAIN FUNCTIONAL FOR THE DURATION OF STAGE I CONSTRUCTION. THIS WORK SHALL NO BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL PROTECTION."

13 THE PROPOSED LIGHT POLES TO BE INSTALLED ON THE NORTH SIDE OF THE ILLINOIS AVENUE, THE PROPOSED LIGHTING CONTROLLERS, AND PROPOSED WIRING AND CONDUIT REQUIRED TO SERVICE THESE LIGHT POLES SHALL BE INSTALLED DURING STAGE I CONSTRUCTION AND SHALL BE FUNCTIONAL PRIOR TO BEGINNING STAGE II CONSTRUCTION. THE CONTRACTOR HAS THE OPTION TO TEMPORARILY RE-INSTALL EXISTING SALVAGED LIGHT POLES AT PROPOSED LIGHT POLE LOCATIONS TO PROVIDE TEMPORARY ROADWAY LIGHTING DURING STAGE II UNTIL THE PROPOSED LIGHT POLES CAN BE INSTALLED. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF "TRAFFIC CONTROL AND PROTECTION."

<u>THE FOLLOWING ITEMS ARE EMBEDDED IN THE BRIDGE SUPERSTRUCTURES</u>

1. ANCHOR BOLTS FOR LIGHTING UNIT FOUNDATION
2. 2" DIA. PVC CONDUIT (SCHEDULE 40)
3. EXPANSION FITTINGS SHALL BE INSTALLED AT BRIDGE EXPANSION JOINTS FOR ALL ELECTRICAL RACEWAY RUNS

THE COST OF FURNISHING THESE MATERIALS SHALL BE INCLUDED WITH "CONCRETE SUPERSTRUCTURE" AND SHALL NOT BE PAID FOR SEPARATELY. SEE BRIDGE PLANS FOR ADDITIONAL DETAILS.

REVISIONS	NAME	DATE
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

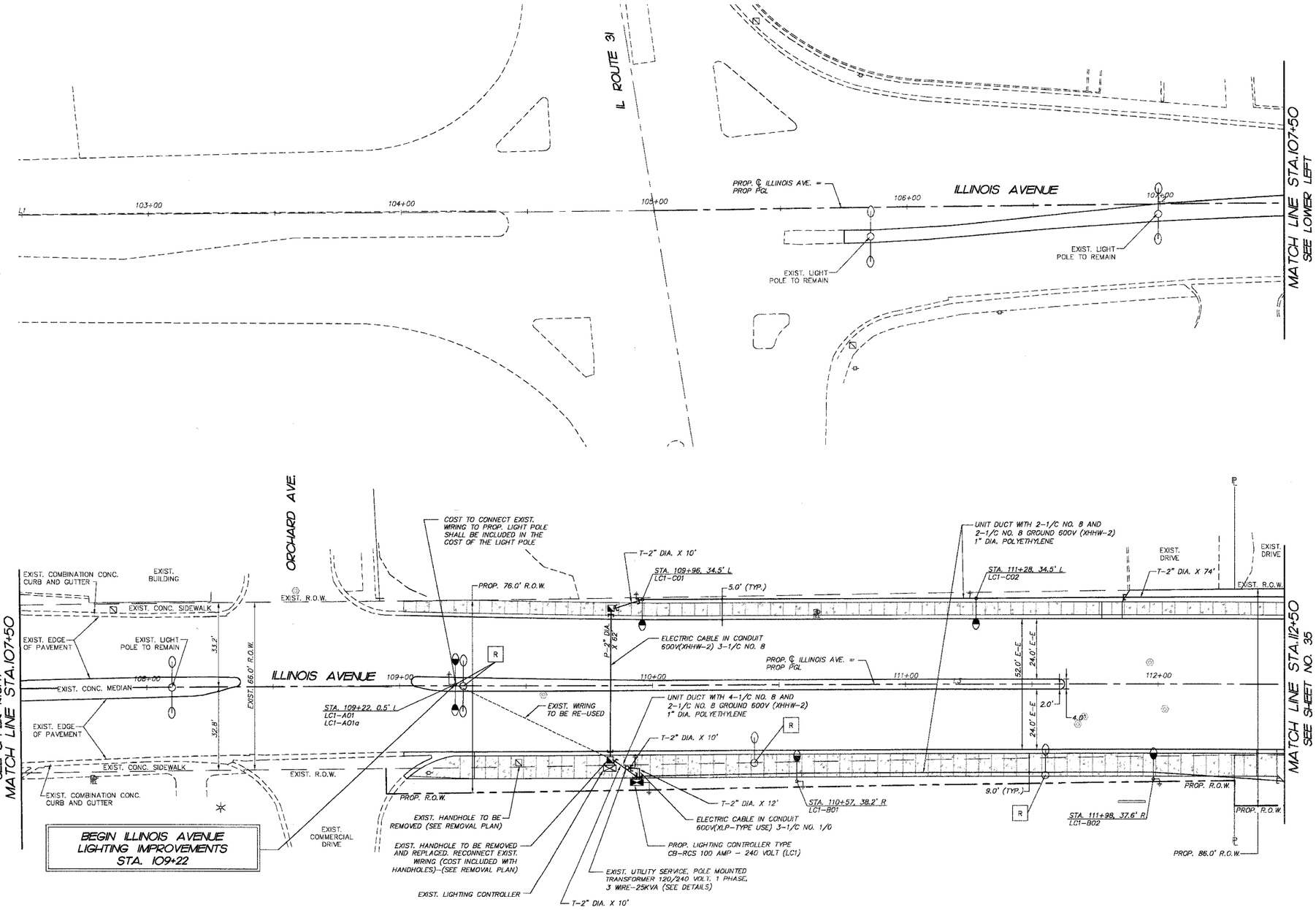
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING GENERAL NOTES AND BILL OF MATERIALS

SCALE: "NTS"
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY GB

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	34
STA.	102+50	TO STA.	107+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

E-02 OF E-09

CONTRACT #: 83867



BEGIN ILLINOIS AVENUE LIGHTING IMPROVEMENTS STA. 109+22

LEGEND:

- R — REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE
- EXISTING LIGHT POLE
- EXISTING LIGHT POLE WITH DOUBLE MAST ARM AND LUMINAIRE
- EXISTING LIGHTING CONTROLLER
- EXISTING HANDHOLE
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM (BRIDGE MOUNTED)
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN (BRIDGE MOUNTED)
- PROPOSED LUMINAIRE (SPECIAL)
- GROUND ROD, ⅝" DIA. X 10 FT.
- PROPOSED HANDHOLE
- PROPOSED LIGHTING CONTROLLER TYPE CB-RCS 100 AMP - 240 VOLT
- STA. XXX+XX, XX' R — POLE LOCATION
  LCX-XXX — POLE NUMBER; LIGHTING CIRCUIT BREAKER DESIGNATION; LIGHTING CONTROLLER DESIGNATION
- PVC CONDUIT EMBEDDED IN STRUCTURE
- ELECTRIC CABLE IN UNIT DUCT, NUMBER OF CONDUCTORS AND DIAMETER OF CONDUIT AS SHOWN
- T/P — CONDUIT IN TRENCH (T) CONDUIT PUSHED (P) RIGID GALVANIZED STEEL (RGSC) CONDUIT DIA. X LENGTH

NOTES:

1. THE CONTRACTOR SHALL VERIFY THAT THERE ARE NO CONFLICTS BETWEEN THE PROPOSED LIGHT POLE FOUNDATION LOCATIONS AND EXISTING UTILITIES, PROPOSED UTILITIES, EXISTING DRIVEWAYS, AND PROPOSED DRIVEWAYS. IF A CONFLICT IS FOUND, THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER. IN THE EVENT OF A CONFLICT, THE CONTRACTOR SHALL OBTAIN WRITTEN INSTRUCTIONS FORM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED. BY FAILING TO SECURE SUCH INSTRUCTIONS, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE.

REVISIONS	NAME	DATE
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SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1779 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
■ McHENRY ■ HUNTLEY ■ YORKVILLE
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS
STA. 102+50 TO STA. 107+50

SCALE: 1" = 20'

DRAWN BY MPL

DATE 07-28-2006

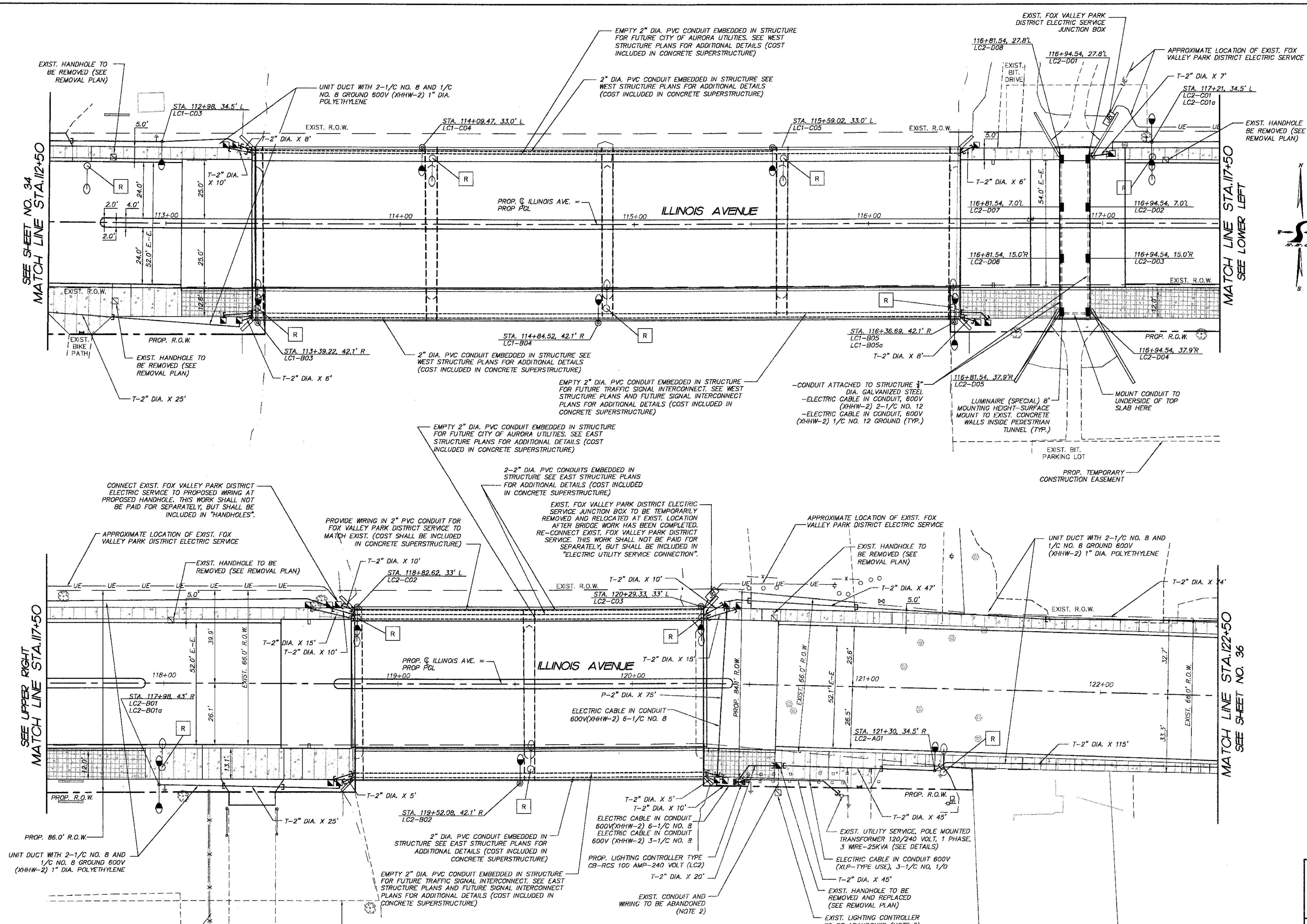
CHECKED BY GB

PLOT FILE:STANDARD
VIEW: CE-34
COMM. FILE: 050181-622.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	35
STA. 112+50		TO STA. 122+50		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

E-03 OF E-09

CONTRACT #: 83867



LEGEND:

Symbol	Description
R	REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE
	EXISTING LIGHT POLE
	EXISTING LIGHT POLE WITH DOUBLE MAST ARM AND LUMINAIRE
	EXISTING LIGHTING CONTROLLER
	EXISTING HANDHOLE
	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM
	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM (BRIDGE MOUNTED)
	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN
	LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN (BRIDGE MOUNTED)
	PROPOSED LUMINAIRE (SPECIAL)
	GROUND ROD, ⅝" DIA. X 10 FT.
	PROPOSED HANDHOLE
	PROPOSED LIGHTING CONTROLLER TYPE CB-RCS 100 AMP - 240 VOLT
STA. XXX+XX, XX' R / LCX-XXX	POLE LOCATION; POLE NUMBER; LIGHTING CIRCUIT BREAKER DESIGNATION; LIGHTING CONTROLLER DESIGNATION
------	PVC CONDUIT EMBEDDED IN STRUCTURE
——	ELECTRIC CABLE IN UNIT DUCT, NUMBER OF CONDUCTORS AND DIAMETER OF CONDUIT AS SHOWN
T/P	CONDUIT IN TRENCH (T) CONDUIT PUSHED (P) RIGID GALVANIZED STEEL (RGSC) CONDUIT DIA. X LENGTH

NOTES:

1. THE CONTRACTOR SHALL VERIFY THAT THERE ARE NO CONFLICTS BETWEEN THE PROPOSED LIGHT POLE FOUNDATION LOCATIONS AND EXISTING UTILITIES, PROPOSED UTILITIES, EXISTING DRIVEWAYS, AND PROPOSED DRIVEWAYS. IF A CONFLICT IS FOUND, THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER. IN THE EVENT OF A CONFLICT, THE CONTRACTOR SHALL OBTAIN WRITTEN INSTRUCTIONS FORM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED. BY FAILING TO SECURE SUCH INSTRUCTIONS, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE.
2. COST TO ABANDON EXISTING LIGHTING CONTROLLER AND WIRING SHOWN SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED UNDER "LIGHTING CONTROLLER TYPE CB-RCS 100 AMP-240 VOLT".
3. COORDINATE PEDESTRIAN TUNNEL LIGHTING WITH PEDESTRIAN TUNNEL PLANS.

REVISIONS	NAME	DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS
STA. 107+50 TO STA. 117+50

SCALE: 1" = 20'

DATE 07-28-2006

DRAWN BY MPL

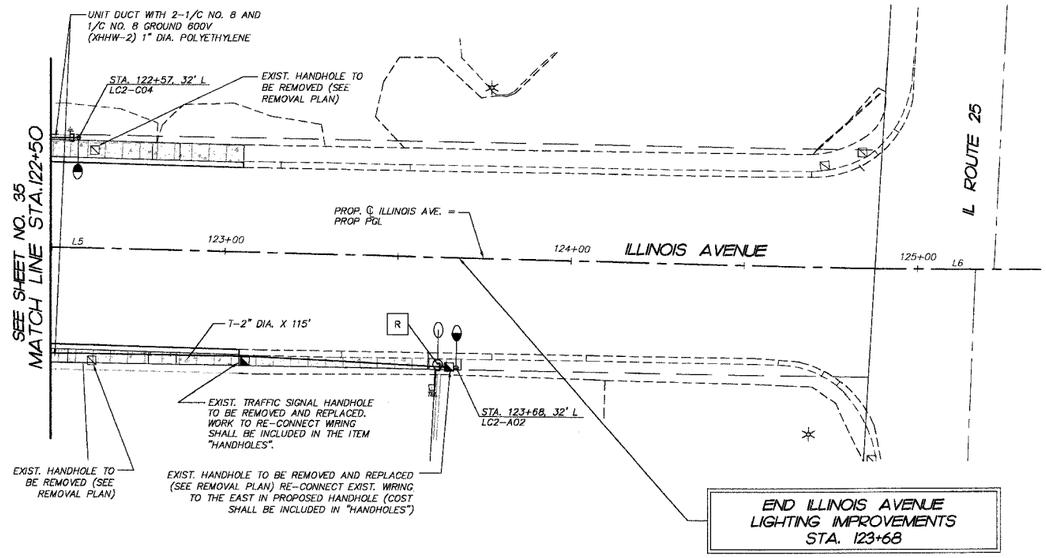
CHECKED BY GB

PLOT FILE: STANDARD
VIEW: CE-35
COMP. FILE: 050181-E22.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	36
STA.	122+50	TO STA.	125+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

E-04 OF E-09

CONTRACT #: 83867



LEGEND:

- R — REMOVAL OF EXISTING LIGHTING UNIT, SALVAGE
- EXISTING LIGHT POLE
- EXISTING LIGHT POLE WITH DOUBLE MAST ARM AND LUMINAIRE
- EXISTING LIGHTING CONTROLLER
- EXISTING HANDHOLE
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM (BRIDGE MOUNTED)
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN
- LIGHT POLE, STEEL, 31 FT M.H., 12 FT MAST ARM, TWIN (BRIDGE MOUNTED)
- PROPOSED LUMINAIRE (SPECIAL)
- GROUND ROD, ⅝" DIA. X 10 FT.
- PROPOSED HANDHOLE
- PROPOSED LIGHTING CONTROLLER TYPE CB-RCS 100 AMP - 240 VOLT
- STA XXX+XX. XX' R / LCX-XXX — POLE LOCATION; POLE NUMBER; LIGHTING CIRCUIT BREAKER DESIGNATION; LIGHTING CONTROLLER DESIGNATION
- PVC CONDUIT EMBEDDED IN STRUCTURE
- ELECTRIC CABLE IN UNIT DUCT, NUMBER OF CONDUCTORS AND DIAMETER OF CONDUIT AS SHOWN
- T/P — CONDUIT IN TRENCH (T) CONDUIT PUSHED (P) RIGID GALVANIZED STEEL (RGSC) CONDUIT DIA. X LENGTH

NOTES:

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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLAN AND DETAILS
STA 122+50 TO STA 125+00

SCALE: 1" = 20'

DRAWN BY MPL

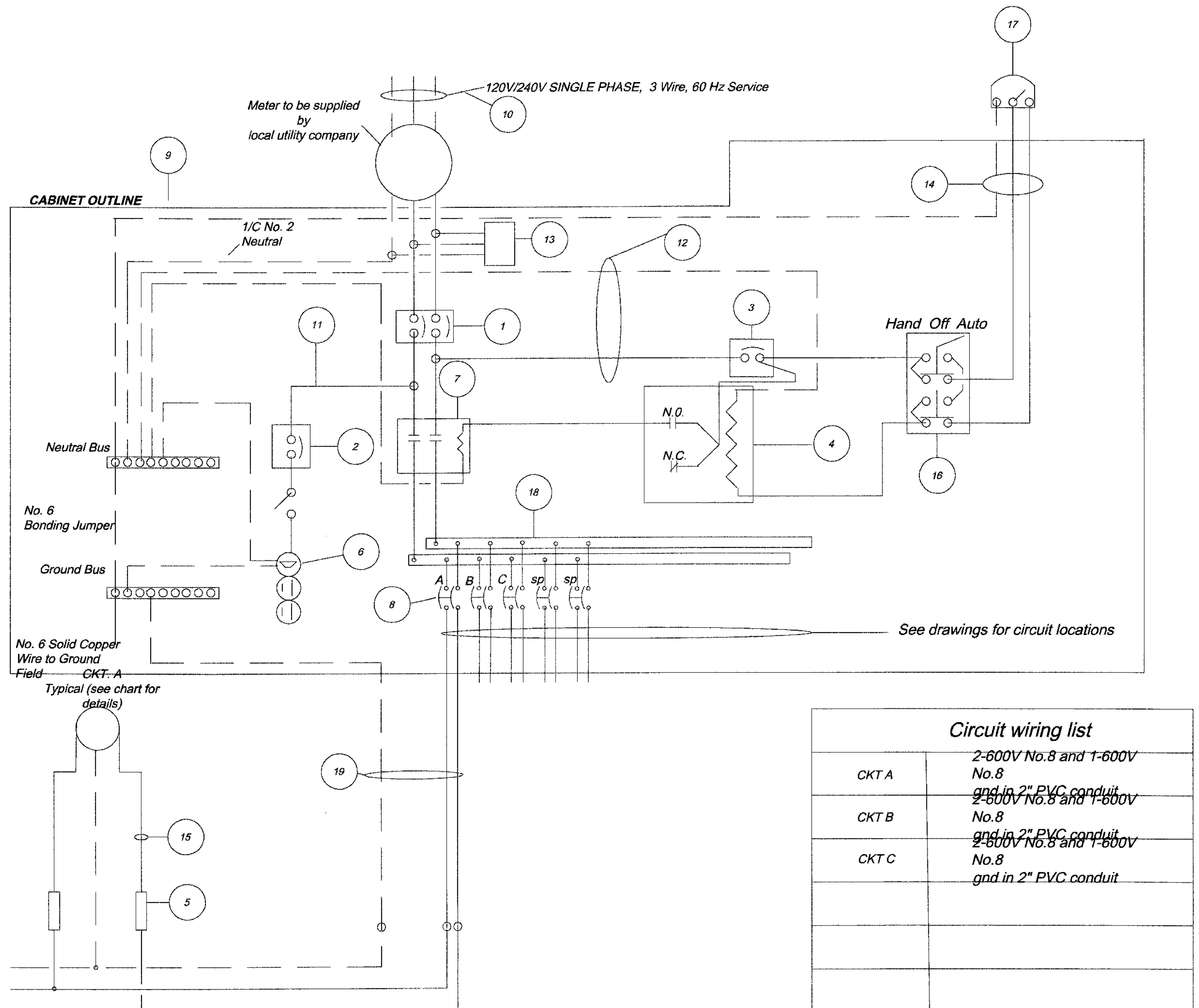
DATE 07-28-2006

CHECKED BY GB

PLOT FILE STANDARD
WORK FILE:
COMP. FILE: C50181-622.dwg

LIGHTING CONTROLLER
LC1
COMPONENT SCHEDULE

ITEM	DESCRIPTION	SPECIFICATION OR EQUAL
1	Main Circuit Breaker	100A, 2P, 240V Rating, 10K AIC
2	Lampholder Circuit Breaker	15A, 1P, 120V Rating, 10K AIC
3	Photoelectric Control Circuit Breaker	15A, 1P, 120V Rating, 10K AIC
4	Auxiliary Relay	120V Operated SPST 60Hz Coil 600V Normally Open Contacts
5	Fuse	Single Pole In-Line Fuseholder 600V, 5A
6	Lampholder With Outlet	120V Weatherproof Lampholder with SPST Switch & GFCI Outlet
7	Contactor	100A, 2P, 240V Rating, 10K AIC
8	Branch Line Circuit Breakers	14 - 20A, 2P, 240V Rating, 10K AIC Note: circuit F2 to be 30A
9	Control Cabinet	H41"x W25"x D16" NEMA 3R
10	Service Cables	Existing Service
11	Lampholder Wire	2 - 600V No. 12
12	Control Wire	2 - 600V No. 12
13	Surge Arrestor	10K Ampere Rating
14	Photoelectric Control Wire	3 - 600V No. 10
15	Lighting Pole Wire	2 - 600V 10awg cables with Pole Ground and Fusing
16	HAND/OFF/AUTO Control Switch	20A, 3 Position, 600V
17	Photocell	
18	Terminal Block	600V
19	Lighting circuit Control Wire	2-600V No.8 and 1-600V No.8 gnd in 2" unit duct



Circuit wiring list

CKT A	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit
CKT B	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit
CKT C	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit

LIGHTING CONTROLLER WIRING DETAIL

——— Phase Conductor

— — Neutral/Ground Conductor

Circuit I.D.	QTY	AMPERE	WATTS
A	8	9.6	2304W
B	6	7.2	1728W
C	5	6	1440W
Total			5472W

REVISIONS	NAME	DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS
LIGHTING CONTROL PANEL DETAILS

SCALE: N.T.S.
DATE 07-28-06
DRAWN BY
CHECKED BY GB

PLOT FILE: STANDARD
VIEW: CE-37
COMP. FILE: 050181-609-lighting.dwg

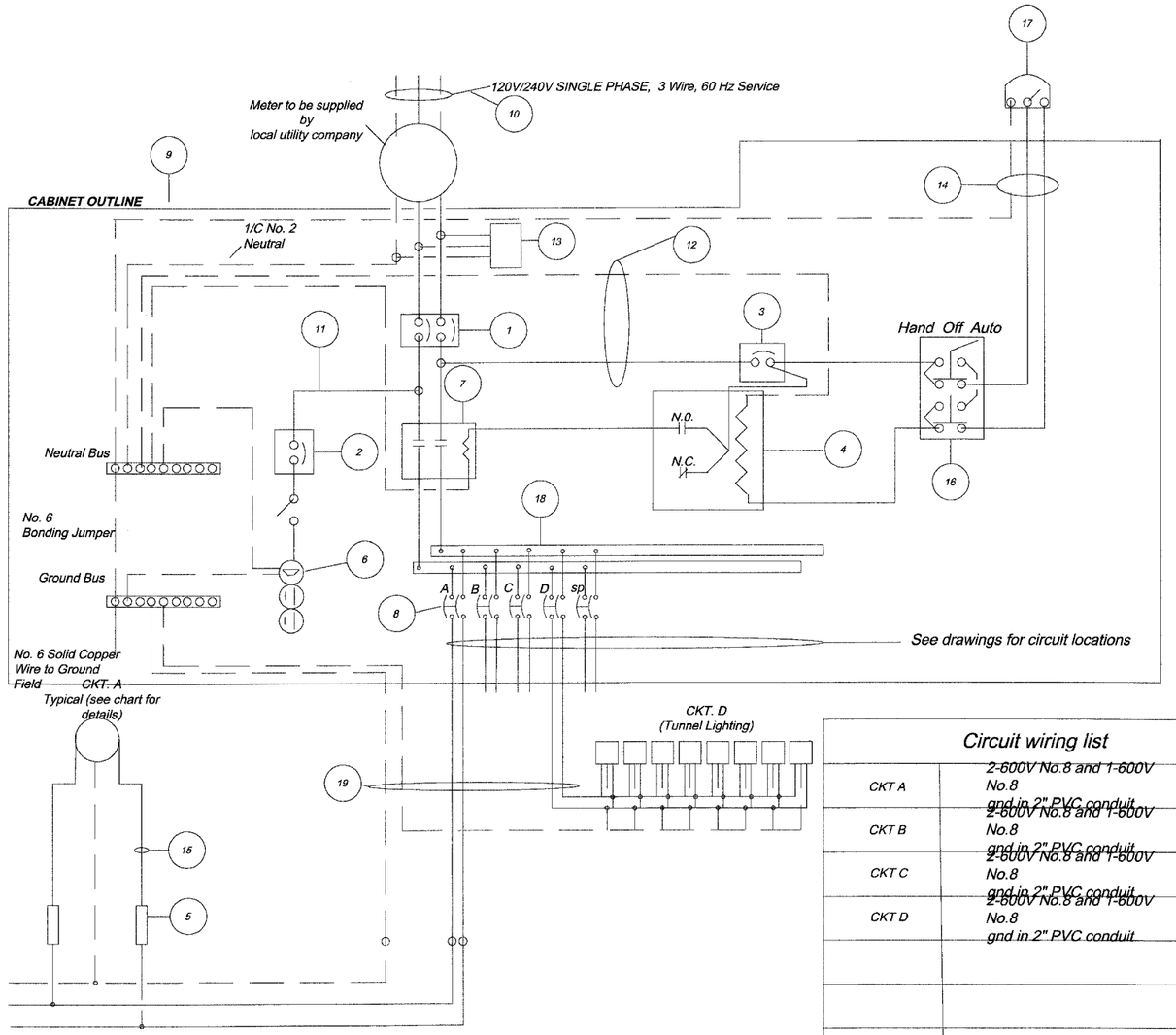
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	38
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

E-06 OF E-09

CONTRACT #: 83867

LIGHTING CONTROLLER LC2 COMPONENT SCHEDULE

ITEM	DESCRIPTION	SPECIFICATION OR EQUAL
1	Main Circuit Breaker	100A, 2P, 240V Rating, 10K AIC
2	Lampholder Circuit Breaker	15A, 1P, 120V Rating, 10K AIC
3	Photoelectric Control Circuit Breaker	15A, 1P, 120V Rating, 10K AIC
4	Auxiliary Relay	120V Operated SPST 60Hz Coil 600V Normally Open Contacts
5	Fuse	Single Pole In-Line Fuseholder 600V, 5A
6	Lampholder With Outlet	120V Weatherproof Lampholder with SPST Switch & GFCI Outlet
7	Contactor	100A, 2P, 240V Rating, 10K AIC
8	Branch Line Circuit Breakers	14 - 20A, 2P, 240V Rating, 10K AIC Note: circuit F2 to be 30A
9	Control Cabinet	H41"x W25"x D16" NEMA 3R
10	Service Cables	Existing Service
11	Lampholder Wire	2 - 600V No. 12
12	Control Wire	2 - 600V No. 12
13	Surge Arrestor	10K Ampere Rating
14	Photoelectric Control Wire	3 - 600V No. 10
15	Lighting Pole Wire	2 - 600V 10awg cables with Pole Ground and Fusing
16	HAND/OFF/AUTO Control Switch	20A, 3 Position, 600V
17	Photocell	
18	Terminal Block	600V
19	Lighting circuit Control Wire	2-600V No.8 and 1-600V No.8 gnd in 2" unit duct



Circuit wiring list	
CKT A	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit
CKT B	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit
CKT C	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit
CKT D	2-600V No.8 and 1-600V No.8 gnd in 2" PVC conduit

LIGHTING CONTROLLER WIRING DETAIL

——— Phase Conductor

— — Neutral/Ground Conductor

Circuit I.D.	QTY	AMPERE	WATTS
A	7	8.4	2016W
B	2	2.4	576W
C	5	6	1440W
D	8	8.8	2112W
Total			6144W

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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS
LIGHTING CONTROLLER PANEL DETAILS

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SCALE: N.T.S.

DATE 07-28-06

DRAWN BY

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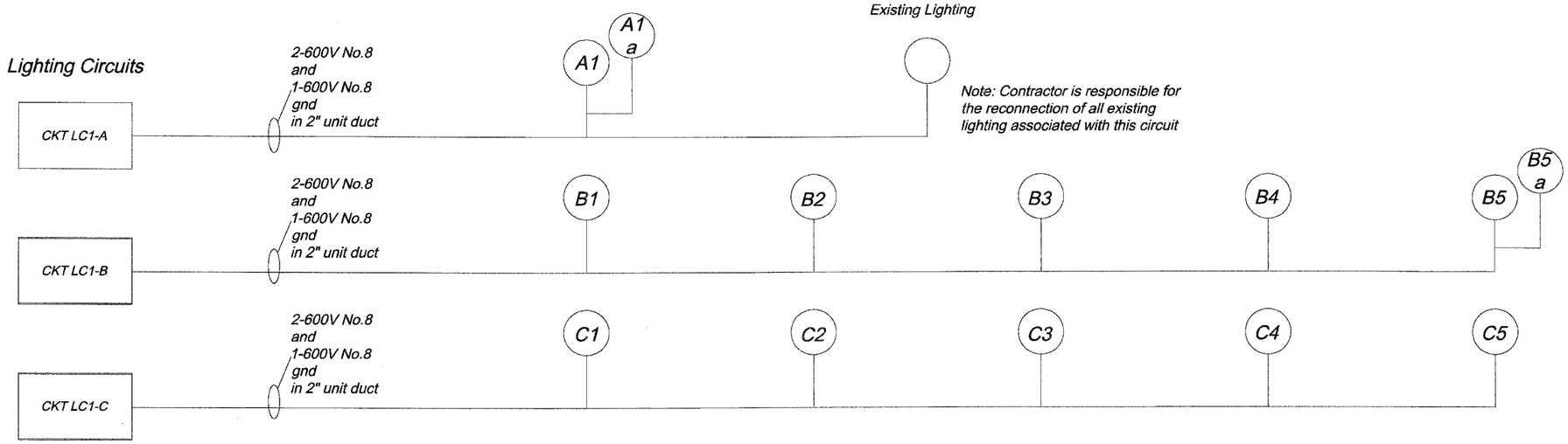
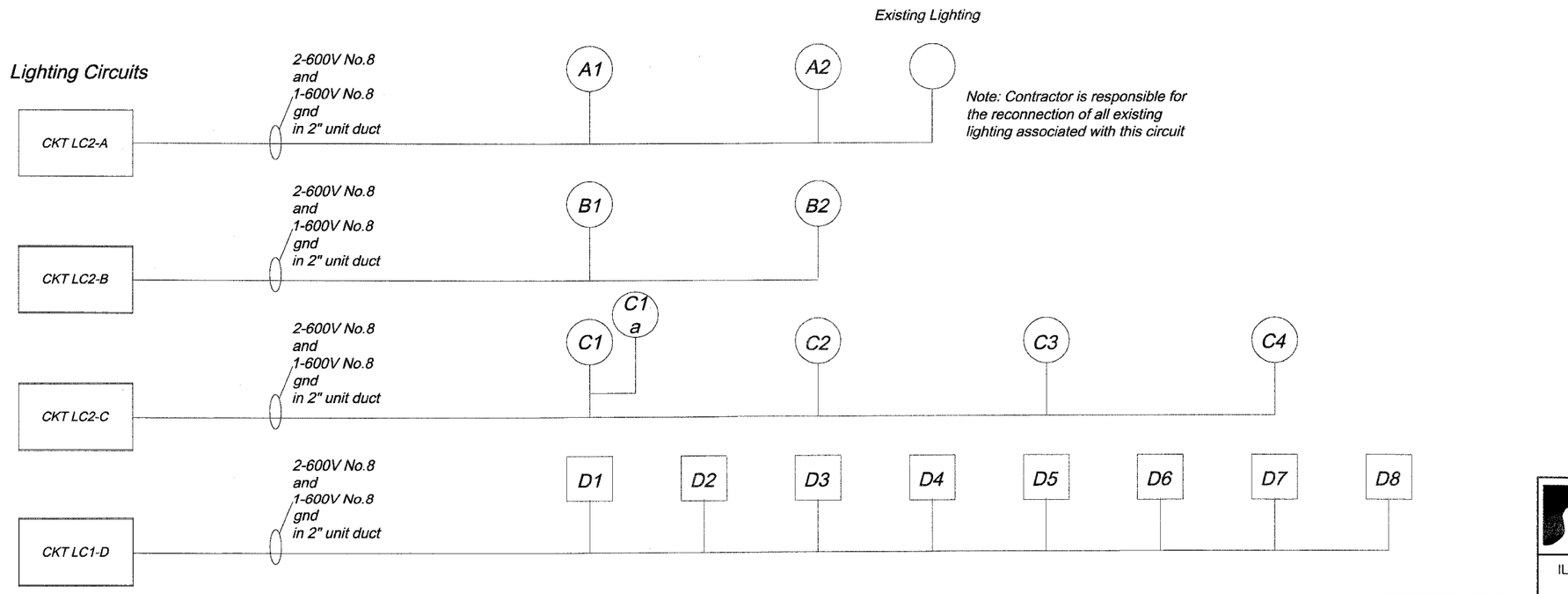
PLOT FILE: STANDARD
WORK FILE: 33
COMP. FILE: 050191 - 609 - lighting.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	39
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

E-07 OF E-09

CONTRACT #: 83867





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www.smithengineering.com E-MAIL: sec@smithengineering.com
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS
ONE LINE DIAGRAM

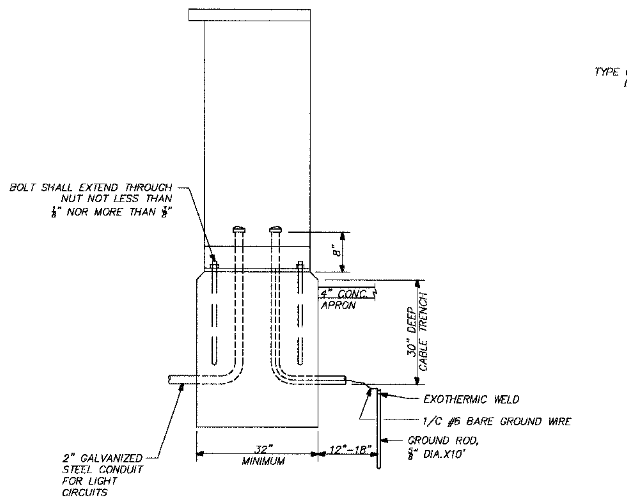
SCALE: N.T.S.

DRAWN BY

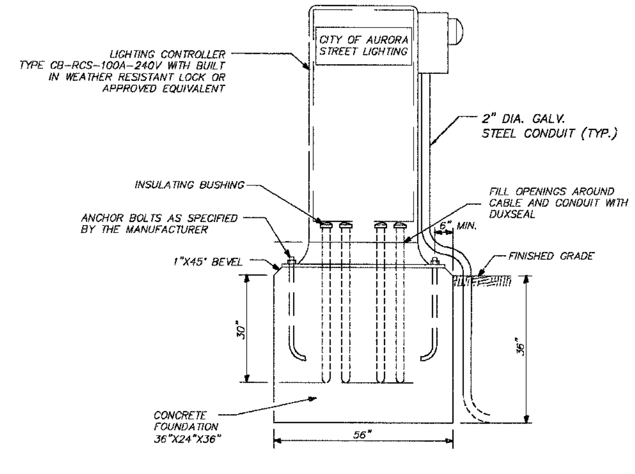
DATE 07-28-05

CHECKED BY GB

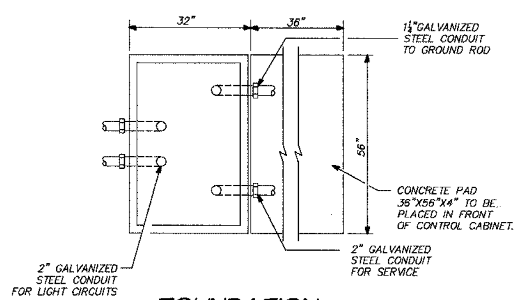
PLOT FILE: STANDARD
VIEW: CE-39
COMP. FILE: 050181-SDS-lighting.dwg



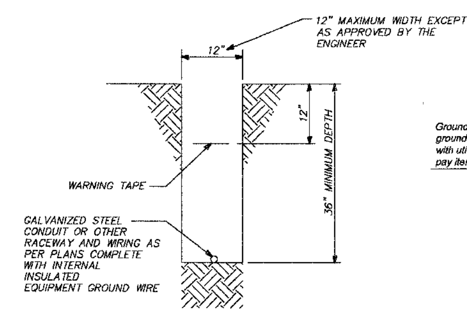
CABINET AND FOUNDATION
(SIDE VIEW)



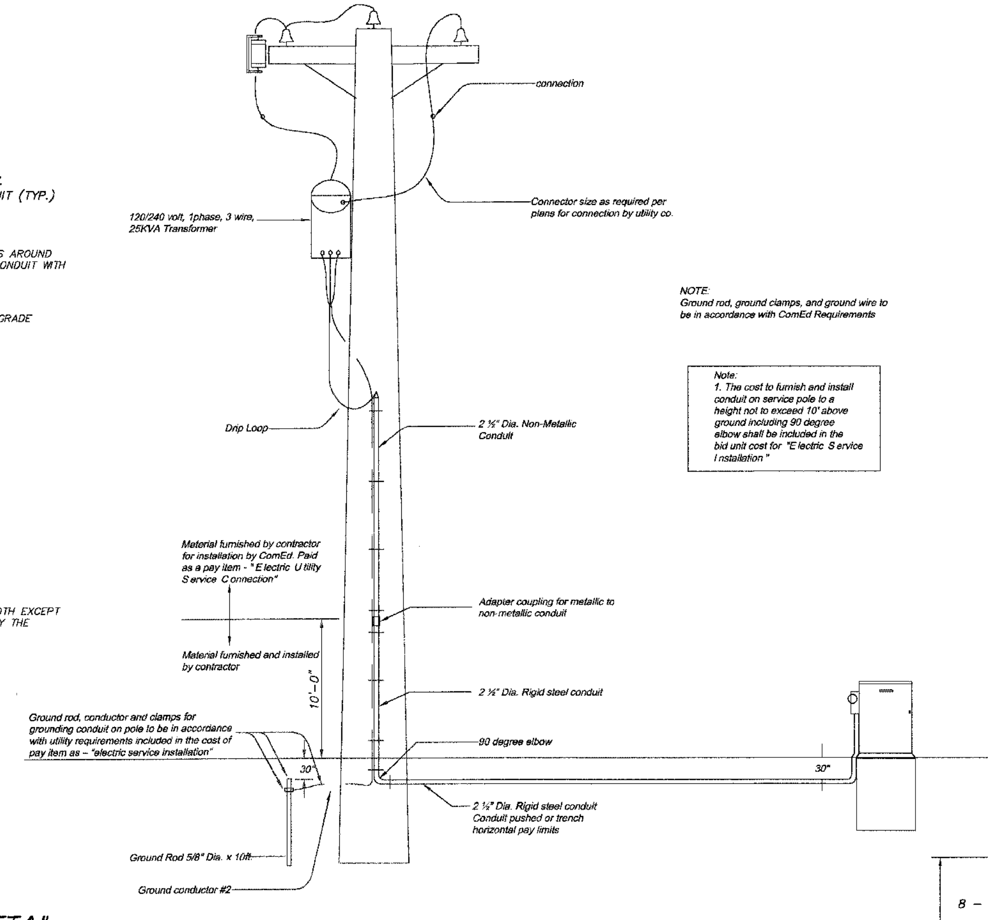
CABINET AND FOUNDATION
(FRONT VIEW)



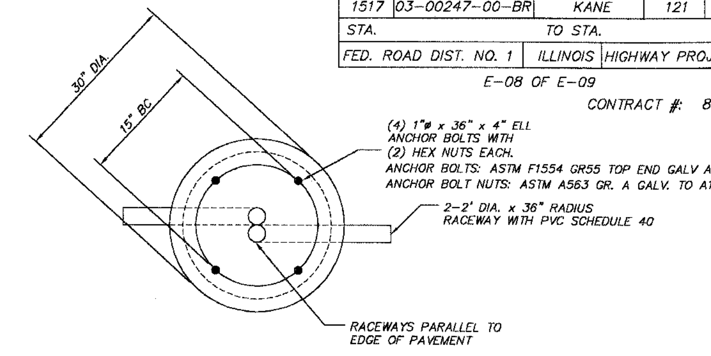
FOUNDATION
(TOP VIEW)



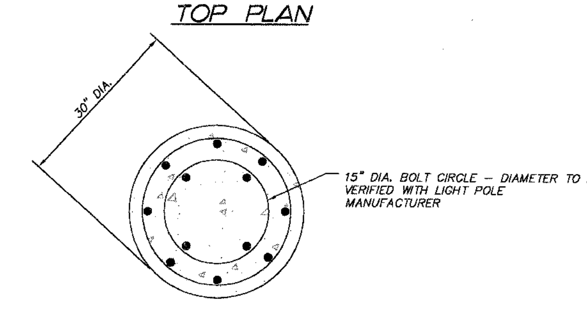
TYPICAL CONDUIT IN TRENCH DETAIL



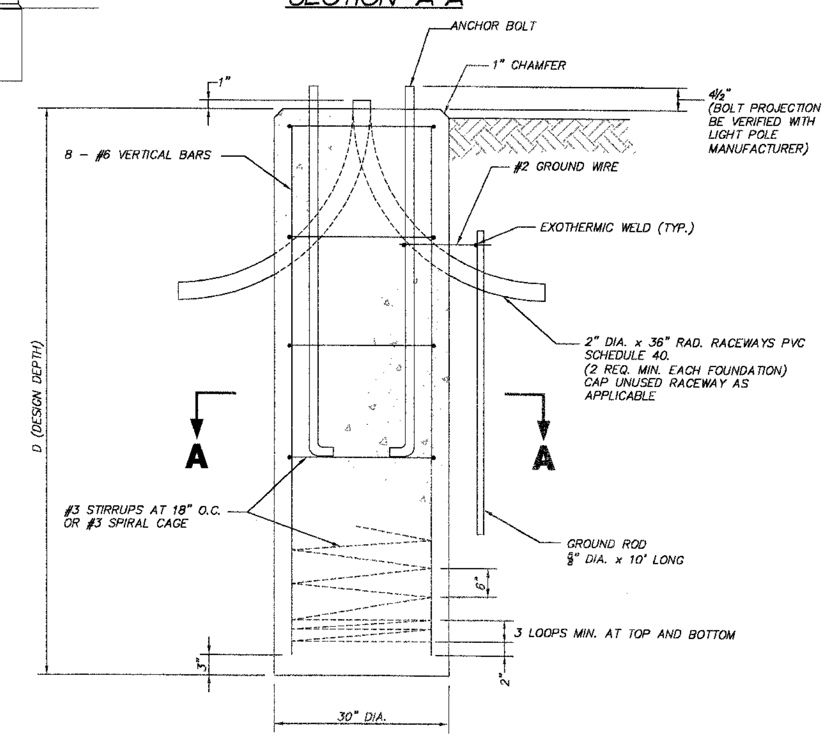
PROPOSED SERVICE INSTALLATION
POLE TOP MOUNTED TRANSFORMER



TOP PLAN

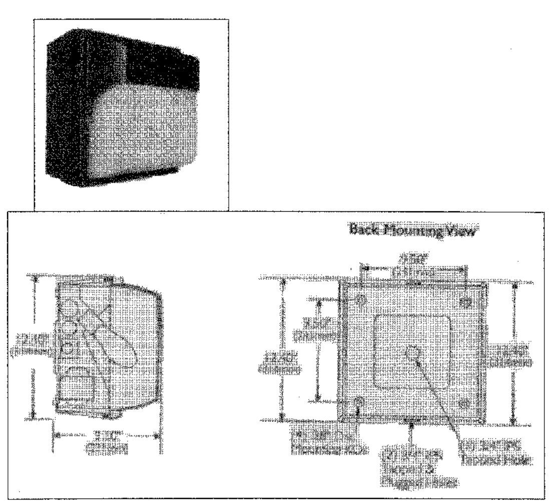


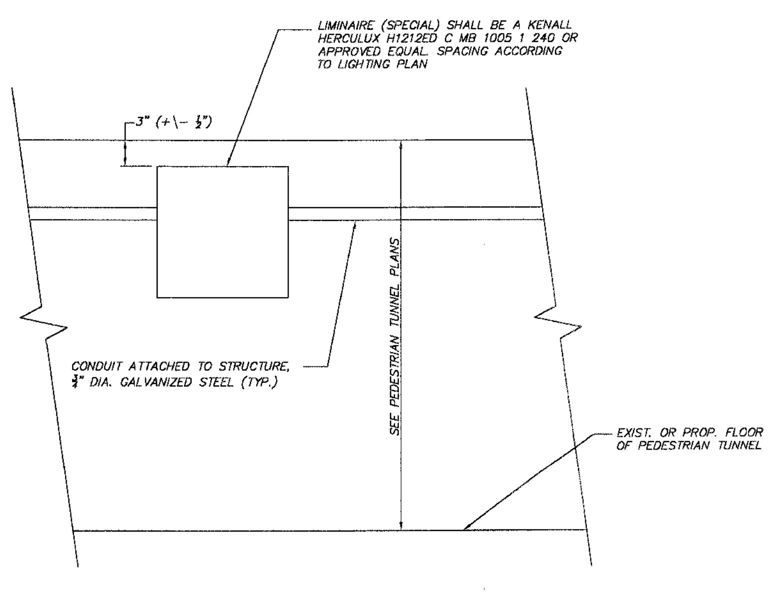
SECTION A-A



FOUNDATION DETAIL

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	11'-0"	12'-8"
MEDIUM CLAY Qu = 0.75 TON/SQ. FT.	9'-0"	14'-10"
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-6"	8'-7"
LOOSE SAND PHI = 34°	9'-6"	10'-7"
MEDIUM SAND PHI = 37.5°	9'-0"	9'-10"
DENSE SAND PHI = 40°	8'-3"	9'-7"





ELEVATION OF SIDE WALL INSIDE PEDESTRIAN TUNNEL

LUMINAIRE (SPECIAL) DETAIL

PEDESTRIAN TUNNEL

NOTES

1. THE ANCHOR BOLTS TIED WITH REINFORCEMENT AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORM.
2. RACEWAYS SHALL PROJECT 1" ABOVE THE TOP OF THE FOUNDATION.
3. THE CABLE TRENCH SHALL BE BACKFILLED AND FIRMLY COMPACTED BEFORE LIGHT POLE IS ERECTED.
4. CONCRETE FOR LIGHT POLE FOUNDATION, 30" SHALL BE CLASS SI. CONCRETE FOUNDATION MUST BE CURED FOR TEN (10) DAYS BEFORE THE LIGHT STANDARD IS ERECTED.

REVISIONS	NAME	DATE
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PH: 815-385-1778 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
■ McHENRY ■ HUNTLEY ■ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

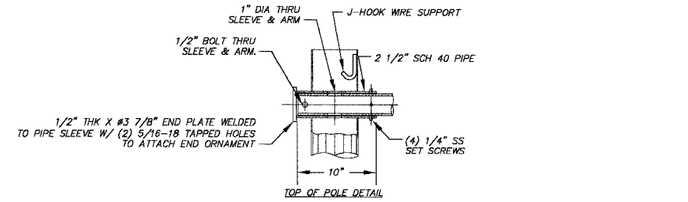
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS

SCALE: N.T.S.
DATE 07-28-06
DRAWN BY
CHECKED BY GB

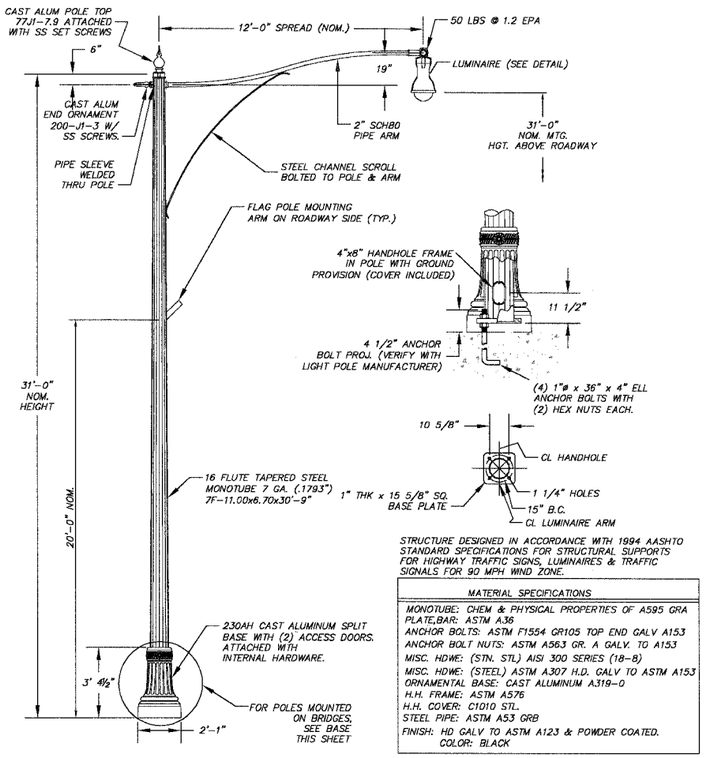
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	41
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

E-09 OF E-09

CONTRACT #: 83867



TOP OF POLE DETAIL

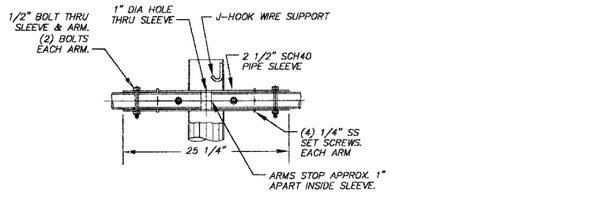


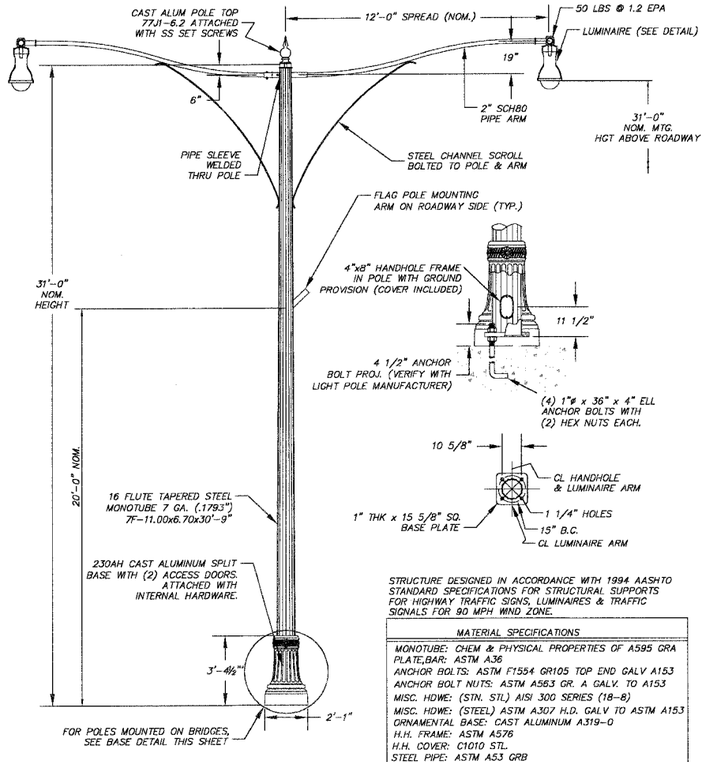
STRUCTURE DESIGNED IN ACCORDANCE WITH 1994 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY TRAFFIC SIGNS, LUMINAIRES & TRAFFIC SIGNALS FOR 90 MPH WIND ZONE.

MATERIAL SPECIFICATIONS
MONOTUBE: CHEM & PHYSICAL PROPERTIES OF A595 GRA
PLATE,BAR: ASTM A36
ANCHOR BOLTS: ASTM F1554 GR105 TOP END GALV A153
ANCHOR BOLT NUTS: ASTM A563 GR. A GALV. TO A153
MISC. HDWE: (STN. STL) AISI 300 SERIES (18-8)
MISC. HDWE: (STEEL) ASTM A307 H.D. GALV TO ASTM A153
ORNAMENTAL BASE: CAST ALUMINUM A319-0
H.H. FRAME: ASTM A576
H.H. COVER: C1010 STL.
STEEL PIPE: ASTM A53 GRB
FINISH: HD GALV TO ASTM A123 & POWDER COATED. COLOR: BLACK

LIGHT POLE, STEEL, 30 FT. M.H., 12 FT. MAST ARM DETAIL

UNION METAL CORPORATION MODEL B70028-230-B41-Y1 OR APPROVED EQUAL





STRUCTURE DESIGNED IN ACCORDANCE WITH 1994 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY TRAFFIC SIGNS, LUMINAIRES & TRAFFIC SIGNALS FOR 90 MPH WIND ZONE.

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MONOTUBE: CHEM & PHYSICAL PROPERTIES OF A595 GRA
PLATE,BAR: ASTM A36
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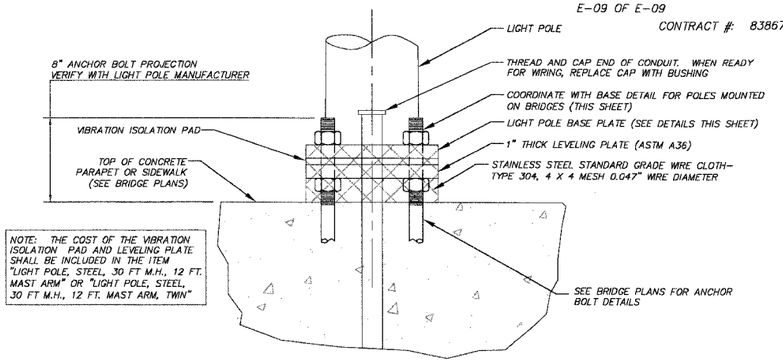
ORNAMENTAL BASE: CAST ALUMINUM A319-0
H.H. FRAME: ASTM A576
H.H. COVER: C1010 STL.
STEEL PIPE: ASTM A53 GRB
FINISH: HD GALV TO ASTM A123 & POWDER COATED. COLOR: BLACK

LIGHT POLE, STEEL, 30 FT. M.H., 12 FT. MAST ARM, TWIN DETAIL

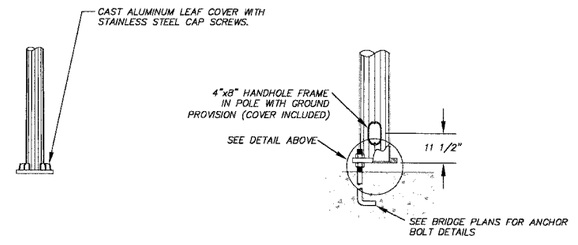
UNION METAL CORPORATION MODEL B70028-230-B43-Y1 OR APPROVED EQUAL



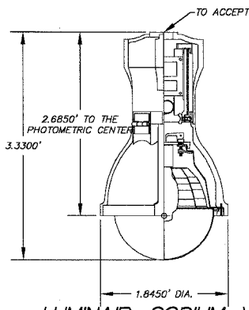
NOTE: THE COST OF THE VIBRATION ISOLATION PAD AND LEVELING PLATE SHALL BE INCLUDED IN THE ITEM "LIGHT POLE, STEEL, 30 FT M.H., 12 FT. MAST ARM" OR "LIGHT POLE, STEEL, 30 FT M.H., 12 FT. MAST ARM, TWIN"

INSTALLATION DETAIL FOR POLES MOUNTED ON BRIDGES

WORK THIS DETAIL WITH BRIDGE PLANS



BASE DETAIL FOR POLES MOUNTED ON BRIDGES



LUMINAIRE SPECIFICATIONS

STYLE:	COLUMBIA VERTICAL LAMP, TYPE III, CUTOFF WITH 12" HALF ROUND GLOBE
HEIGHT:	27 3/4"
WIDTH:	15 3/8" DIAMETER
MATERIAL:	CAST ALUMINUM ALLOY ANSI 356 PER A.S.T.M. B26-95
GLOBE:	CLEAR POLYCARBONATE
DISTRIBUTION:	TYPE III - ASYMMETRIC
FINISH:	PRIME PAINT THEN FINISH SHERWIN WILLIAMS ACROLON - BLACK
LAMPING:	250 WATT HPS
VOLTAGE:	QUAD
SOCKET:	MOGUL BASE
PHOTO CONTROL:	NONE

LUMINAIR, SODIUM VAPOR, VERTICAL MOUNT, 250 WATT DETAIL

SPRING CITY MFG. CO. MODEL ALMCLB-PHR2-VC3 OR APPROVED EQUAL

REVISIONS		
	NAME	DATE
7.		
6.		
5.		
4.		
3.		
2.		
1.		

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
LIGHTING PLANS AND DETAILS

SCALE: N.T.S.

DRAWN BY CFR

DATE 07-28-06

CHECKED BY GB

PLOT FILE: STANDARD
VIEW FILE: 41
COMP. FILE: 030181-502-lighting.dwg

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	42
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SW-1
SW-30 SHEETS

Benchmark:
Cut square on Northwest Wingwall (West Bridge)
Elev. = 639.93

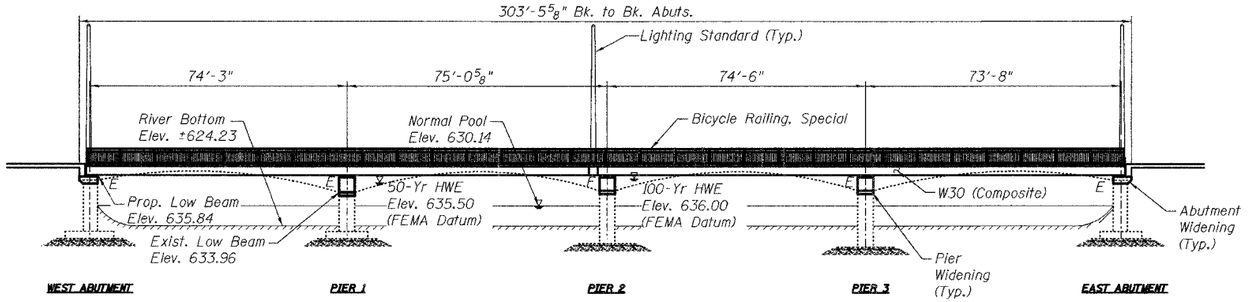
Existing Structure:
No. 045-6009 built in 1949 under Sec. 14B-CS, S.A.R. 24 Ext. (Kane County Sec. 118-B M.F.T.) and widened in 1976. The Superstructure consists of 4-continuous reinforced concrete T-Beam spans measuring 302'-8 7/8" back to back of abutments and 65'-11" out to out deck supported by three reinforced concrete piers and two reinforced concrete closed abutments founded on rock.

Salvage:
Reuse existing substructures.

Staging:
One lane of traffic in each direction to be maintained during construction utilizing staged construction.

LEGEND:

- 12" Cast Iron Watermain (Abandoned)
- 8" Gas Main (To be Abandoned by NICOR Prior to Construction)
- (10)-5" PVC Electrical Conduits (Abandoned)



ELEVATION

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th Ed.

LOADING HS20-44

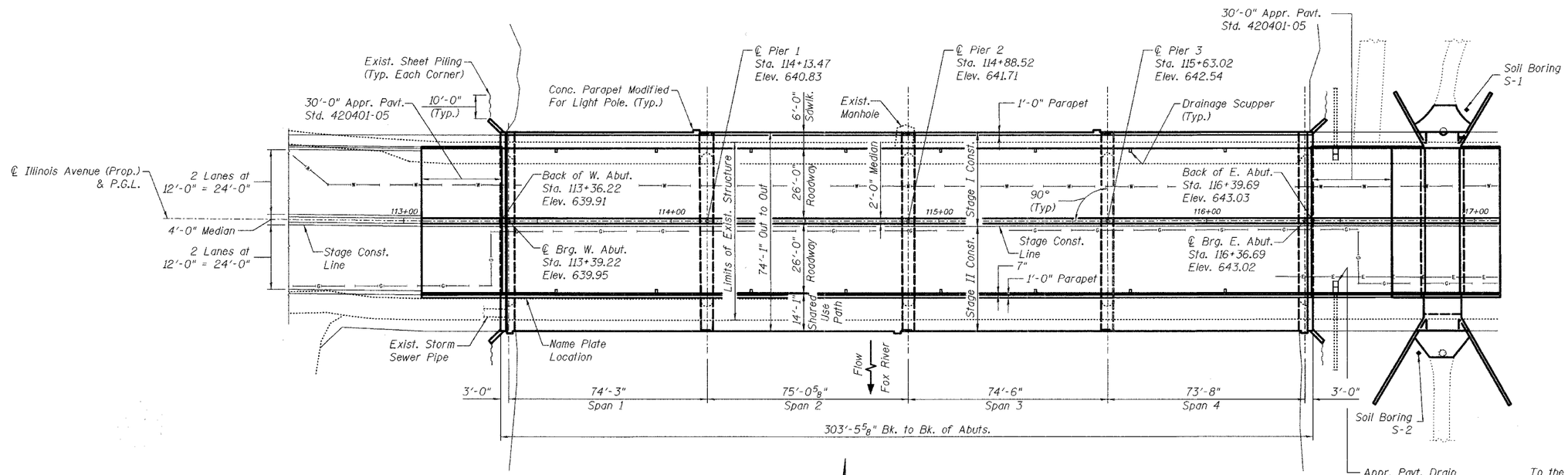
Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Gr. 50 Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4%g
Site Coefficient (S) = 1.0

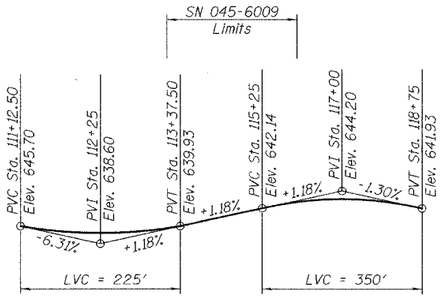


PLAN

FOX RIVER
BUILT 2007 BY
CITY OF AURORA
SEC 03-00247-00-BR
STATION 114+87.96
STR. NO. 045-6009
LOADING HS20

NAME PLATE

See Std. 515001-02



PROFILE GRADE

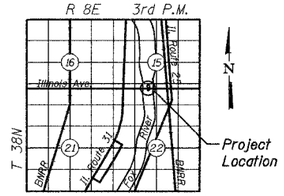
(Along ℄ Illinois Av.)

WATERWAY INFORMATION

Drainage Area = 1,705 Sq. Mi. Low Grade Elev. 639.52 @ Sta. - 121+74.61

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10								
Design	50	8,400	3,159.16	3,178.16	635.50	0	0	635.50	635.50
Base	100	9,180	3,285.84	3,318.92	636.00	0	0	636.00	636.00
Overtopping									
Max. Calc.	500								

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF



LOCATION SKETCH

STATE OF ILLINOIS
ANDREW E. UNDERWAGER
081-008218
CHICAGO, IL
LICENSED STRUCTURAL ENGINEER

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 for Highway Bridges".

Andrew E. Underwager — 8-3-06
Andrew E. Underwager — Date
Licensed Structural Engineer
License Expires November 30, 2006

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

GENERAL PLAN AND ELEVATION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	43
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SW-2
SW-30 SHEETS

GENERAL NOTES

Fasteners shall be high strength bolts.
Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 560,446 lbs.

Field welding of construction accessories will not be permitted to beams.

Anchor bolts shall be set before bolting diaphragms over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322, Grade 60.

Backfill shall be placed behind the abutment after the superstructure has been poured and the falsework removed. See Article 502.10 of the Standard Specifications.

The back face of Closed Abutments and their wingwalls shall be waterproofed according to Article 503.18 of the Standard Specifications.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two $\frac{1}{8}$" adjusting shims shall be provided for each bearing and placed as detailed.

Bridge Seat Sealer shall be applied to the seat area of the abutments.

When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the Deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:

1. At least 72 hours shall have elapsed from the end of the previous pour.

2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3,500 psi.

All construction joints shall be bonded.

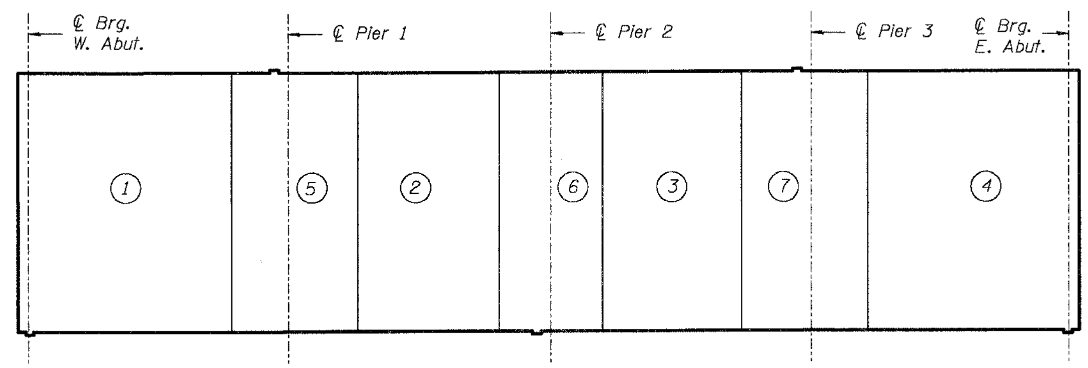
Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I Removal.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number NE2006043 which was issued for the permanent construction.

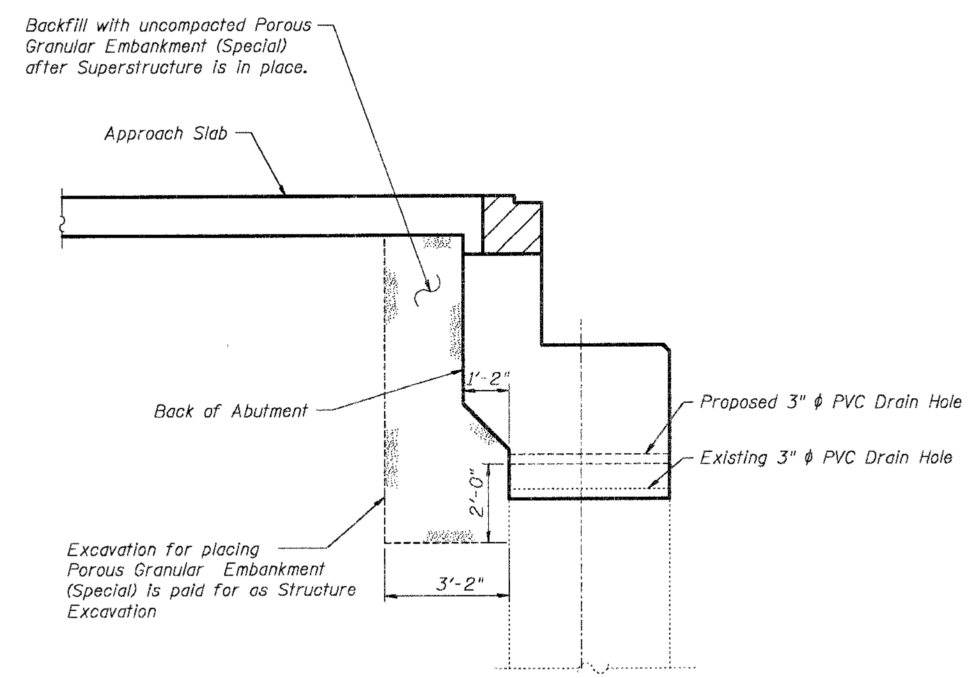
The organic zinc rich primer / epoxy / urethane paint system shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with exception that the masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat shall be gray, Munsell No. 5B 7/1. See special provision for "Cleaning and Painting New Metal Structures".

The information shown in these plans concerning the type and location of utilities is not guaranteed to be accurate or all-inclusive. The Contractor is responsible for making his own determination as to the existence of type, size and location of all underground and overhead utilities as may be necessary to avoid conflict with construction operations and/or damage to the utility.

During Phase I, the Contractor shall maintain sidewalk access and lighting on the south side. During Phase II, the new lighting on the north side shall be operational and new sidewalk acccessible.



POURING SEQUENCE



ABUTMENT DRAINAGE DETAIL

TOTAL BILL OF MATERIAL - 045-6009

	ITEM	UNIT	TOTAL
*	Porous Granular Embankment (Special)	Cu. Yd.	106
*	Removal of Existing Superstructures, No. 1	Each	1
	Concrete Removal	Cu. Yd.	126.7
	Structure Excavation	Cu. Yd.	106
	Neoprene Expansion Joint 2"	Foot	152.7
	Concrete Structures	Cu. Yd.	347.8
	Concrete Superstructure	Cu. Yd.	738.2
	Bridge Deck Grooving	Sq. Yd.	1,595
*	Protective Coat	Sq. Yd.	2,762
	Elastomeric Bearing Assembly, Type I	Each	20
	Elastomeric Bearing Assembly, Type II	Each	20
*	Structural Repair of Concrete (Depth Equal To Or Less Than 5 In.)	Sq. Ft.	18.5
	Furnishing and Erecting Structural Steel	L. Sum	0.66
	Stud Shear Connectors	Each	9,300
	Reinforced Bars, Epoxy Coated	Pound	195,430
	Name Plates	Each	1
	Bridge Seat Sealer	Sq. Ft.	482
	Epoxy Crack Sealing	Foot	79
	Drainage Scuppers, DS-11	Each	16
*	Bicycle Railing, Special	Foot	320
	Parapet Railing	Foot	298
	Bar Splicers	Each	1,286

*Indicates Item Requires a Special Provision.

INDEX OF STRUCTURE SHEETS - 045-6009

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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REVISIONS	
NAME	DATE

CITY OF AURORA

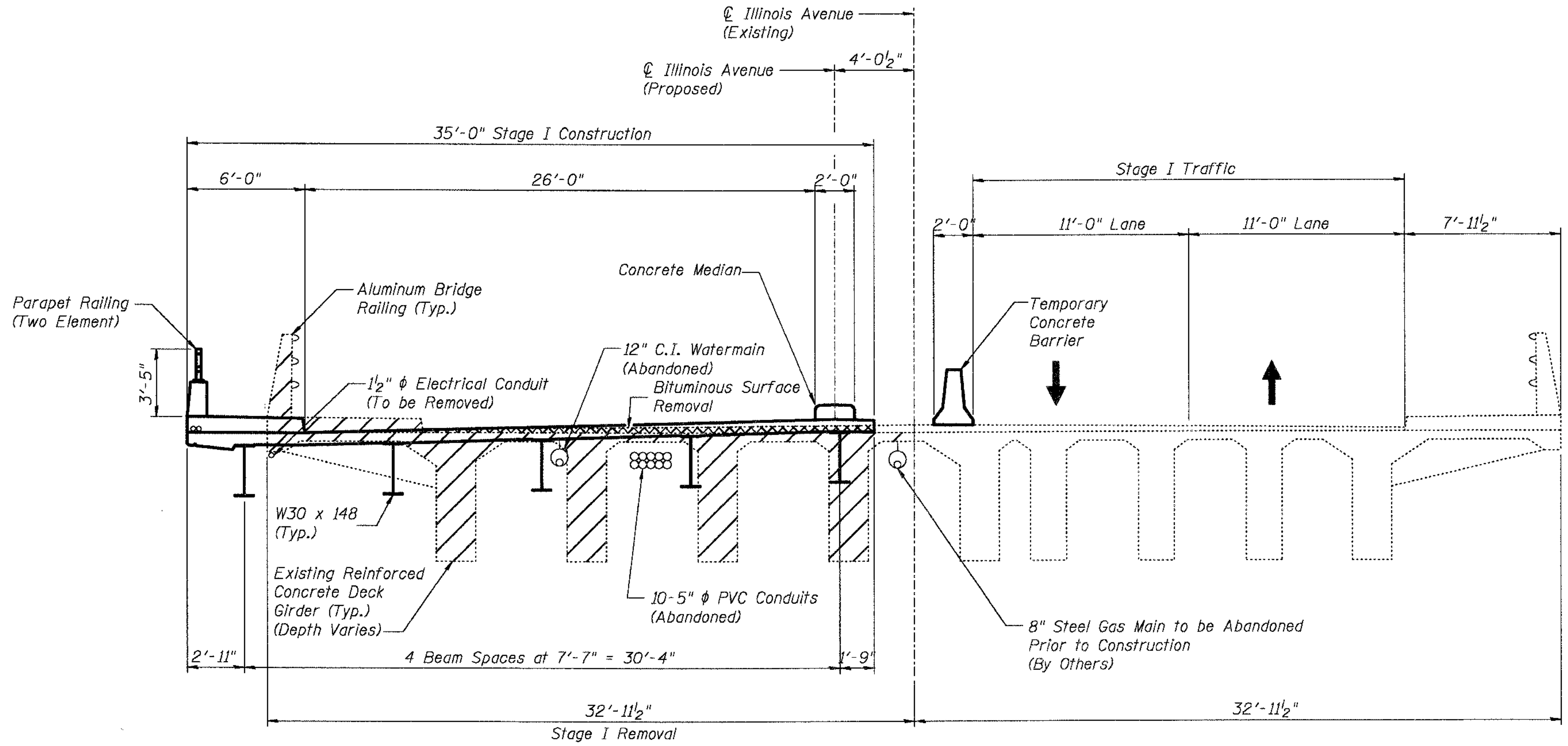
GENERAL NOTES, INDEX & QUANTITIES
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

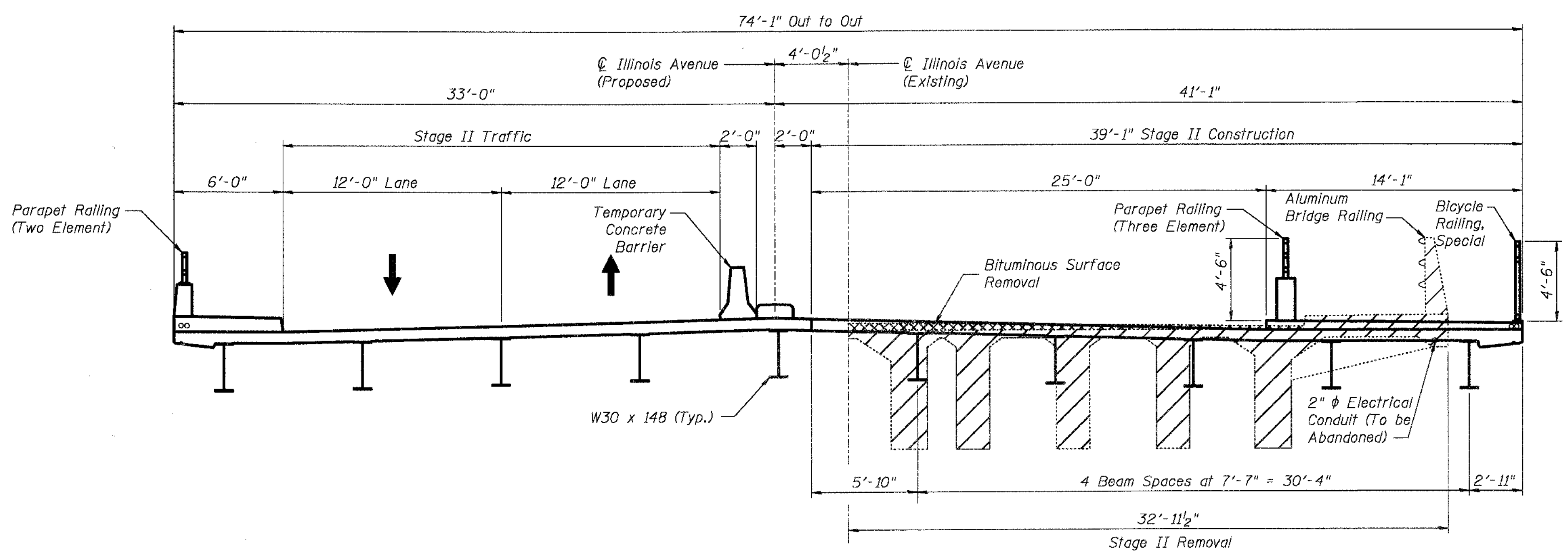
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	44
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SW-3
SW-30 SHEETS



STAGE I
(Looking East)



STAGE II
(Looking East)

NOTES:

Contractor may remove existing superstructure as required utilizing permanent lane closures for a period of not longer than 5 continuous days.

Prior to any permanent lane closures, the Contractor shall notify the City 72 hours in advance and obtain all necessary permits. See Roadway Plans for detour route requirements.

See Sheet SW-4 for Temporary Concrete Barrier Details.

See Roadway Plans for Temporary Concrete Barrier Quantity.

The removal and disposal of abandoned utilities shall be the Contractor's responsibility. The cost of this work shall be included in the cost of "Removal of Existing Superstructures, No. 1".

The removal and disposal of the existing aluminum railing shall be included in the cost of "Removal of Existing Superstructures, No. 1".

(hatched) Indicates limits of "Removal of Existing Superstructures, No. 1".

(cross-hatched) Indicates limits of Bituminous Surface Removal. See Roadway Plans for quantity.

BILL OF MATERIAL

Item	Unit	Total
Removal of Existing Superstructures, No. 1	Each	1

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

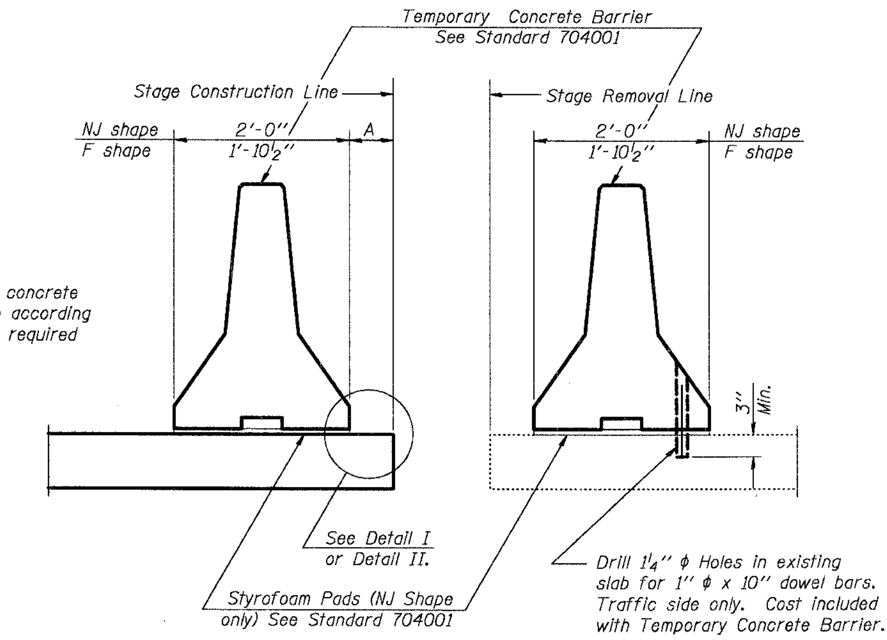
REVISIONS	
NAME	DATE

CITY OF AURORA

STAGE CONSTRUCTION DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

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".



NEW SLAB

EXISTING SLAB

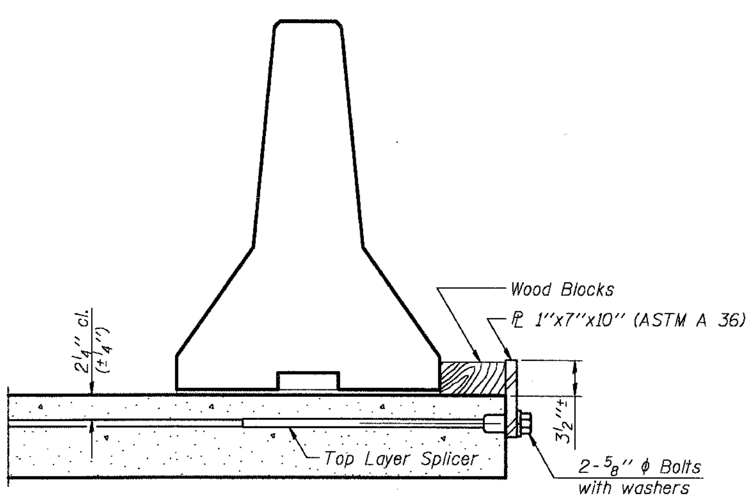
SECTIONS THRU SLAB

NOTES

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

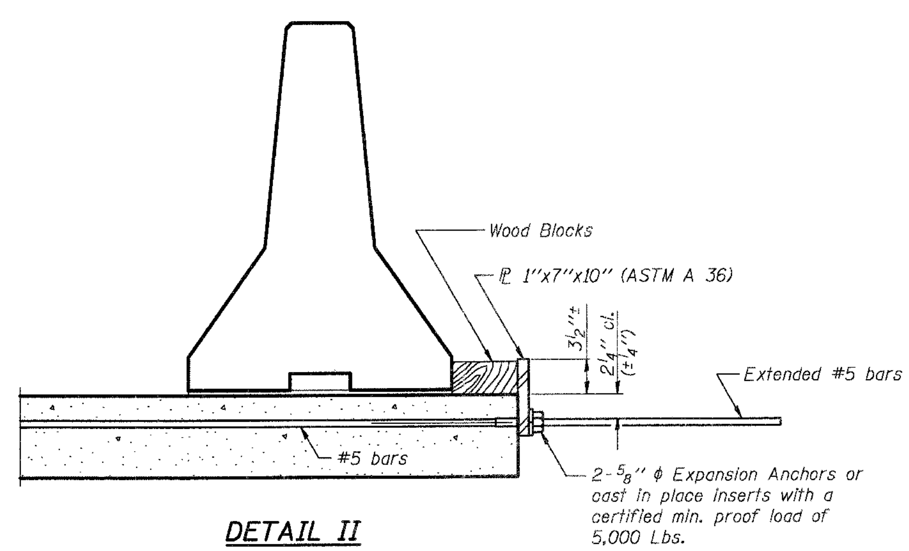
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.
See Roadway plans for quantity Temporary Concrete Barrier.



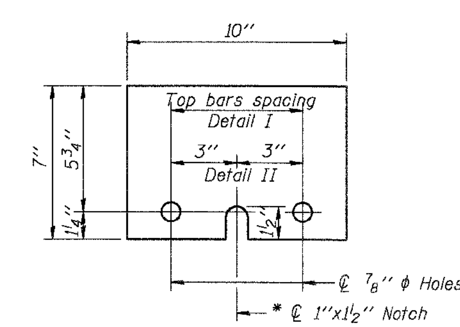
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



ℙ 1"x7"x10"

* Required only with Detail II

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

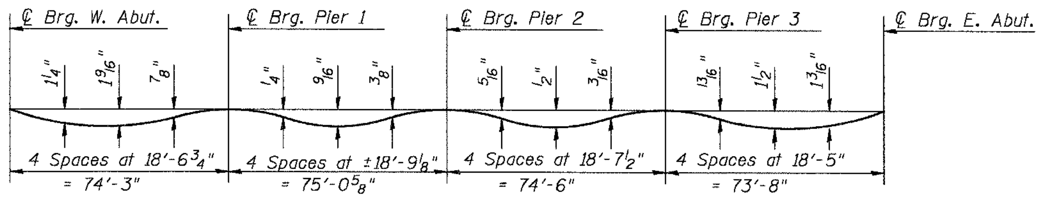
TEMPORARY CONCRETE BARRIER
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	46
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

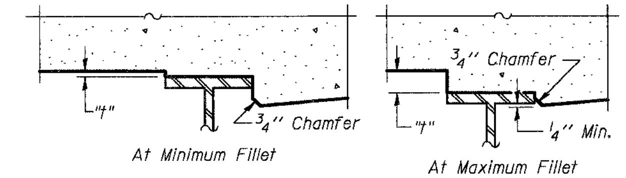
SHEET NO. SW-5
SW-30 SHEETS



DEAD LOAD DEFLECTION DIAGRAM

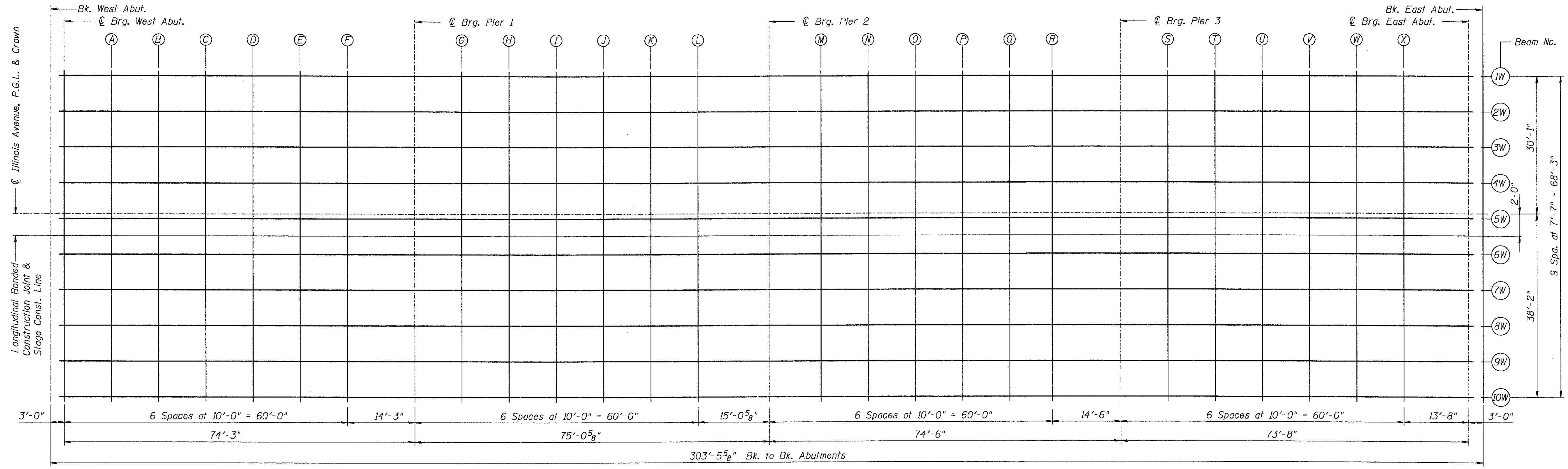
(Includes weight of concrete only.)

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 as shown below.

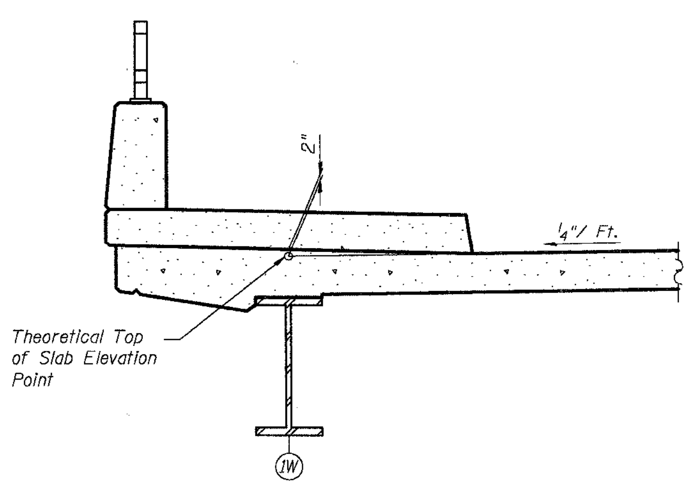


To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet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

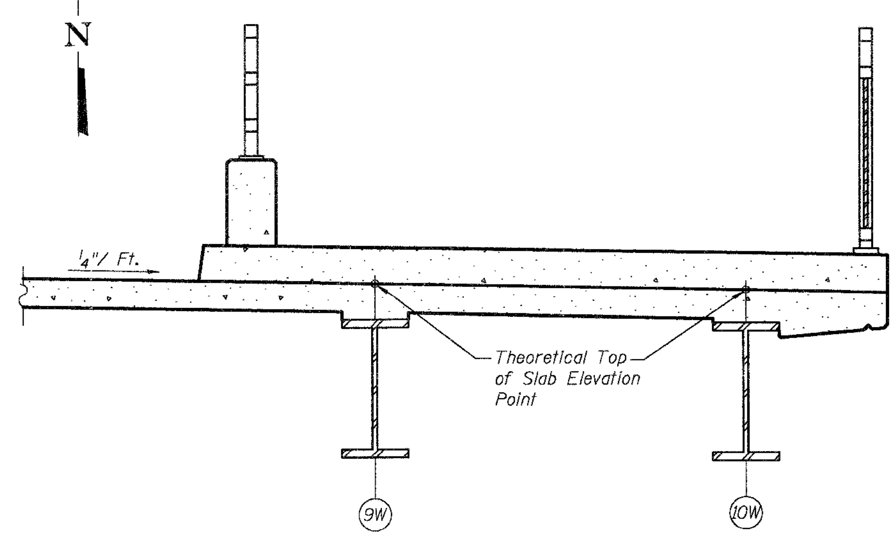
FILLET HEIGHTS



PLAN



SECTION THRU SIDEWALK



SECTION THRU SHARED USE PATH

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (1 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

BEAM 1W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	-30.083	639.36	639.36
℄ Brg.W. Abut.	113+39.22	-30.083	639.40	639.40
A	113+49.22	-30.083	639.51	639.58
B	113+59.22	-30.083	639.63	639.74
C	113+69.22	-30.083	639.75	639.88
D	113+79.22	-30.083	639.87	639.99
E	113+89.22	-30.083	639.99	640.08
F	113+99.22	-30.083	640.10	640.16
℄ Brg. Pier 1	114+13.47	-30.083	640.27	640.27
G	114+23.47	-30.083	640.39	640.39
H	114+33.47	-30.083	640.51	640.53
I	114+43.47	-30.083	640.63	640.66
J	114+53.47	-30.083	640.74	640.79
K	114+63.47	-30.083	640.86	640.90
L	114+73.47	-30.083	640.98	641.00
℄ Brg. Pier 2	114+88.52	-30.083	641.16	641.16
M	114+98.52	-30.083	641.28	641.29
N	115+08.52	-30.083	641.39	641.42
O	115+18.52	-30.083	641.51	641.55
P	115+28.52	-30.083	641.63	641.67
Q	115+38.52	-30.083	641.74	641.77
R	115+48.52	-30.083	641.84	641.85
℄ Brg. Pier 3	115+63.02	-30.083	641.98	641.98
S	115+73.02	-30.083	642.07	642.10
T	115+83.02	-30.083	642.15	642.23
U	115+93.02	-30.083	642.22	642.34
V	116+03.02	-30.083	642.29	642.42
W	116+13.02	-30.083	642.35	642.47
X	116+23.02	-30.083	642.40	642.48
℄ Brg. E. Abut.	116+36.69	-30.083	642.46	642.46
Bk. E. Abut.	116+39.69	-30.083	642.47	642.47

BEAM 2W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	-22.500	639.52	639.52
℄ Brg.W. Abut.	113+39.22	-22.500	639.55	639.55
A	113+49.22	-22.500	639.67	639.73
B	113+59.22	-22.500	639.79	639.90
C	113+69.22	-22.500	639.91	640.04
D	113+79.22	-22.500	640.03	640.15
E	113+89.22	-22.500	640.14	640.24
F	113+99.22	-22.500	640.26	640.31
℄ Brg. Pier 1	114+13.47	-22.500	640.43	640.43
G	114+23.47	-22.500	640.55	640.55
H	114+33.47	-22.500	640.67	640.69
I	114+43.47	-22.500	640.78	640.82
J	114+53.47	-22.500	640.90	640.95
K	114+63.47	-22.500	641.02	641.06
L	114+73.47	-22.500	641.14	641.16
℄ Brg. Pier 2	114+88.52	-22.500	641.32	641.32
M	114+98.52	-22.500	641.43	641.44
N	115+08.52	-22.500	641.55	641.57
O	115+18.52	-22.500	641.67	641.71
P	115+28.52	-22.500	641.79	641.83
Q	115+38.52	-22.500	641.90	641.93
R	115+48.52	-22.500	642.00	642.01
℄ Brg. Pier 3	115+63.02	-22.500	642.14	642.14
S	115+73.02	-22.500	642.23	642.26
T	115+83.02	-22.500	642.31	642.38
U	115+93.02	-22.500	642.38	642.49
V	116+03.02	-22.500	642.45	642.58
W	116+13.02	-22.500	642.51	642.63
X	116+23.02	-22.500	642.56	642.64
℄ Brg. E. Abut.	116+36.69	-22.500	642.62	642.62
Bk. E. Abut.	116+39.69	-22.500	642.63	642.63

BEAM 3W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	-14.917	639.68	639.68
℄ Brg.W. Abut.	113+39.22	-14.917	639.71	639.71
A	113+49.22	-14.917	639.83	639.89
B	113+59.22	-14.917	639.95	640.06
C	113+69.22	-14.917	640.07	640.20
D	113+79.22	-14.917	640.18	640.31
E	113+89.22	-14.917	640.30	640.40
F	113+99.22	-14.917	640.42	640.47
℄ Brg. Pier 1	114+13.47	-14.917	640.59	640.59
G	114+23.47	-14.917	640.71	640.71
H	114+33.47	-14.917	640.82	640.85
I	114+43.47	-14.917	640.94	640.98
J	114+53.47	-14.917	641.06	641.11
K	114+63.47	-14.917	641.18	641.22
L	114+73.47	-14.917	641.30	641.32
℄ Brg. Pier 2	114+88.52	-14.917	641.47	641.47
M	114+98.52	-14.917	641.59	641.60
N	115+08.52	-14.917	641.71	641.73
O	115+18.52	-14.917	641.83	641.87
P	115+28.52	-14.917	641.94	641.98
Q	115+38.52	-14.917	642.06	642.08
R	115+48.52	-14.917	642.16	642.17
℄ Brg. Pier 3	115+63.02	-14.917	642.30	642.30
S	115+73.02	-14.917	642.39	642.42
T	115+83.02	-14.917	642.47	642.54
U	115+93.02	-14.917	642.54	642.65
V	116+03.02	-14.917	642.61	642.74
W	116+13.02	-14.917	642.67	642.78
X	116+23.02	-14.917	642.72	642.80
℄ Brg. E. Abut.	116+36.69	-14.917	642.78	642.78
Bk. E. Abut.	116+39.69	-14.917	642.79	642.79

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (2 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

BEAM 4W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	-7.330	639.80	639.80
℄ Brg.W. Abut.	113+39.22	-7.330	639.84	639.84
A	113+49.22	-7.330	639.95	640.02
B	113+59.22	-7.330	640.07	640.18
C	113+69.22	-7.330	640.19	640.32
D	113+79.22	-7.330	640.31	640.43
E	113+89.22	-7.330	640.43	640.52
F	113+99.22	-7.330	640.54	640.59
℄ Brg. Pier 1	114+13.47	-7.330	640.71	640.71
G	114+23.47	-7.330	640.83	640.83
H	114+33.47	-7.330	640.95	640.97
I	114+43.47	-7.330	641.07	641.10
J	114+53.47	-7.330	641.18	641.23
K	114+63.47	-7.330	641.30	641.34
L	114+73.47	-7.330	641.42	641.44
℄ Brg. Pier 2	114+88.52	-7.330	641.60	641.60
M	114+98.52	-7.330	641.72	641.73
N	115+08.52	-7.330	641.83	641.85
O	115+18.52	-7.330	641.95	641.99
P	115+28.52	-7.330	642.07	642.11
Q	115+38.52	-7.330	642.18	642.21
R	115+48.52	-7.330	642.28	642.29
℄ Brg. Pier 3	115+63.02	-7.330	642.42	642.42
S	115+73.02	-7.330	642.51	642.54
T	115+83.02	-7.330	642.59	642.67
U	115+93.02	-7.330	642.66	642.78
V	116+03.02	-7.330	642.73	642.86
W	116+13.02	-7.330	642.79	642.91
X	116+23.02	-7.330	642.84	642.92
℄ Brg. E. Abut.	116+36.69	-7.330	642.90	642.90
Bk. E. Abut.	116+39.69	-7.330	642.91	642.91

PROFILE GRADE LINE, CENTERLINE & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	0.000	639.91	639.91
℄ Brg.W. Abut.	113+39.22	0.000	639.95	639.95
A	113+49.22	0.000	640.07	640.13
B	113+59.22	0.000	640.19	640.30
C	113+69.22	0.000	640.30	640.44
D	113+79.22	0.000	640.42	640.55
E	113+89.22	0.000	640.54	640.64
F	113+99.22	0.000	640.66	640.71
℄ Brg. Pier 1	114+13.47	0.000	640.83	640.83
G	114+23.47	0.000	640.94	640.95
H	114+33.47	0.000	641.06	641.08
I	114+43.47	0.000	641.18	641.22
J	114+53.47	0.000	641.30	641.34
K	114+63.47	0.000	641.42	641.46
L	114+73.47	0.000	641.53	641.56
℄ Brg. Pier 2	114+88.52	0.000	641.71	641.71
M	114+98.52	0.000	641.83	641.84
N	115+08.52	0.000	641.95	641.97
O	115+18.52	0.000	642.07	642.11
P	115+28.52	0.000	642.18	642.22
Q	115+38.52	0.000	642.29	642.32
R	115+48.52	0.000	642.40	642.41
℄ Brg. Pier 3	115+63.02	0.000	642.54	642.54
S	115+73.02	0.000	642.62	642.66
T	115+83.02	0.000	642.71	642.78
U	115+93.02	0.000	642.78	642.89
V	116+03.02	0.000	642.84	642.97
W	116+13.02	0.000	642.90	643.02
X	116+23.02	0.000	642.96	643.04
℄ Brg. E. Abut.	116+36.69	0.000	643.02	643.02
Bk. E. Abut.	116+39.69	0.000	643.03	643.03

BEAM 5W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	0.250	639.91	639.91
℄ Brg.W. Abut.	113+39.22	0.250	639.95	639.95
A	113+49.22	0.250	640.06	640.13
B	113+59.22	0.250	640.18	640.29
C	113+69.22	0.250	640.30	640.43
D	113+79.22	0.250	640.42	640.54
E	113+89.22	0.250	640.54	640.63
F	113+99.22	0.250	640.65	640.71
℄ Brg. Pier 1	114+13.47	0.250	640.82	640.82
G	114+23.47	0.250	640.94	640.94
H	114+33.47	0.250	641.06	641.08
I	114+43.47	0.250	641.18	641.21
J	114+53.47	0.250	641.29	641.34
K	114+63.47	0.250	641.41	641.45
L	114+73.47	0.250	641.53	641.55
℄ Brg. Pier 2	114+88.52	0.250	641.71	641.71
M	114+98.52	0.250	641.83	641.84
N	115+08.52	0.250	641.94	641.96
O	115+18.52	0.250	642.06	642.10
P	115+28.52	0.250	642.18	642.22
Q	115+38.52	0.250	642.29	642.32
R	115+48.52	0.250	642.39	642.40
℄ Brg. Pier 3	115+63.02	0.250	642.53	642.53
S	115+73.02	0.250	642.62	642.65
T	115+83.02	0.250	642.70	642.78
U	115+93.02	0.250	642.77	642.89
V	116+03.02	0.250	642.84	642.97
W	116+13.02	0.250	642.90	643.02
X	116+23.02	0.250	642.95	643.03
℄ Brg. E. Abut.	116+36.69	0.250	643.01	643.01
Bk. E. Abut.	116+39.69	0.250	643.02	643.02

STAGE CONSTRUCTION LINE & LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	2.000	639.88	639.88
℄ Brg.W. Abut.	113+39.22	2.000	639.92	639.92
A	113+49.22	2.000	640.04	640.10
B	113+59.22	2.000	640.16	640.26
C	113+69.22	2.000	640.27	640.40
D	113+79.22	2.000	640.39	640.52
E	113+89.22	2.000	640.51	640.60
F	113+99.22	2.000	640.63	640.68
℄ Brg. Pier 1	114+13.47	2.000	640.80	640.80
G	114+23.47	2.000	640.91	640.91
H	114+33.47	2.000	641.03	641.05
I	114+43.47	2.000	641.15	641.19
J	114+53.47	2.000	641.27	641.31
K	114+63.47	2.000	641.39	641.42
L	114+73.47	2.000	641.50	641.52
℄ Brg. Pier 2	114+88.52	2.000	641.68	641.68
M	114+98.52	2.000	641.80	641.81
N	115+08.52	2.000	641.92	641.94
O	115+18.52	2.000	642.03	642.08
P	115+28.52	2.000	642.15	642.19
Q	115+38.52	2.000	642.26	642.29
R	115+48.52	2.000	642.37	642.38
℄ Brg. Pier 3	115+63.02	2.000	642.51	642.51
S	115+73.02	2.000	642.59	642.63
T	115+83.02	2.000	642.67	642.75
U	115+93.02	2.000	642.75	642.86
V	116+03.02	2.000	642.81	642.94
W	116+13.02	2.000	642.87	642.99
X	116+23.02	2.000	642.92	643.00
℄ Brg. E. Abut.	116+36.69	2.000	642.98	642.98
Bk. E. Abut.	116+39.69	2.000	643.00	643.00

BEAM 6W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	7.833	639.79	639.79
℄ Brg.W. Abut.	113+39.22	7.833	639.83	639.83
A	113+49.22	7.833	639.95	640.01
B	113+59.22	7.833	640.06	640.17
C	113+69.22	7.833	640.18	640.31
D	113+79.22	7.833	540.30	640.42
E	113+89.22	7.833	640.42	640.51
F	113+99.22	7.833	640.54	640.59
℄ Brg. Pier 1	114+13.47	7.833	640.70	640.70
G	114+23.47	7.833	640.82	640.82
H	114+33.47	7.833	640.94	640.96
I	114+43.47	7.833	641.06	641.10
J	114+53.47	7.833	641.18	641.22
K	114+63.47	7.833	641.29	641.33
L	114+73.47	7.833	641.41	641.43
℄ Brg. Pier 2	114+88.52	7.833	641.59	641.59
M	114+98.52	7.833	641.71	641.72
N	115+08.52	7.833	641.83	641.85
O	115+18.52	7.833	641.94	641.99
P	115+28.52	7.833	642.06	642.10
Q	115+38.52	7.833	642.17	642.20
R	115+48.52	7.833	642.28	642.28
℄ Brg. Pier 3	115+63.02	7.833	642.42	642.42
S	115+73.02	7.833	642.50	642.53
T	115+83.02	7.833	642.58	642.66
U	115+93.02	7.833	642.66	642.77
V	116+03.02	7.833	642.72	642.85
W	116+13.02	7.833	642.78	642.90
X	116+23.02	7.833	642.83	642.91
℄ Brg. E. Abut.	116+36.69	7.833	642.89	642.89
Bk. E. Abut.	116+39.69	7.833	642.90	642.90

BEAM 7W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	15.417	639.67	639.67
℄ Brg.W. Abut.	113+39.22	15.417	639.70	639.70
A	113+49.22	15.417	639.82	639.88
B	113+59.22	15.417	639.94	640.05
C	113+69.22	15.417	640.06	640.19
D	113+79.22	15.417	640.17	640.30
E	113+89.22	15.417	640.29	640.39
F	113+99.22	15.417	640.41	640.46
℄ Brg. Pier 1	114+13.47	15.417	640.58	640.58
G	114+23.47	15.417	640.70	640.70
H	114+33.47	15.417	640.81	640.84
I	114+43.47	15.417	640.93	640.97
J	114+53.47	15.417	641.05	641.10
K	114+63.47	15.417	641.17	641.21
L	114+73.47	15.417	641.29	641.31
℄ Brg. Pier 2	114+88.52	15.417	641.46	641.46
M	114+98.52	15.417	641.58	641.59
N	115+08.52	15.417	641.70	641.72
O	115+18.52	15.417	641.82	641.86
P	115+28.52	15.417	641.93	641.97
Q	115+38.52	15.417	642.04	642.07
R	115+48.52	15.417	642.15	642.16
℄ Brg. Pier 3	115+63.02	15.417	642.29	642.29
S	115+73.02	15.417	642.38	642.41
T	115+83.02	15.417	642.46	642.53
U	115+93.02	15.417	642.53	642.64
V	116+03.02	15.417	642.60	642.73
W	116+13.02	15.417	642.66	642.77
X	116+23.02	15.417	642.71	642.79
℄ Brg. E. Abut.	116+36.69	15.417	642.77	642.77
Bk. E. Abut.	116+39.69	15.417	642.78	642.78

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (4 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

BEAM 8W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	23.000	639.51	639.51
℄ Brg.W. Abut.	113+39.22	23.000	639.54	639.54
A	113+49.22	23.000	639.66	639.72
B	113+59.22	23.000	639.78	639.89
C	113+69.22	23.000	639.90	640.03
D	113+79.22	23.000	640.02	640.14
E	113+89.22	23.000	640.13	640.23
F	113+99.22	23.000	640.25	640.30
℄ Brg. Pier 1	114+13.47	23.000	640.42	640.42
G	114+23.47	23.000	640.54	640.54
H	114+33.47	23.000	640.66	640.68
I	114+43.47	23.000	640.77	640.81
J	114+53.47	23.000	640.89	640.94
K	114+63.47	23.000	641.01	641.05
L	114+73.47	23.000	641.13	641.15
℄ Brg. Pier 2	114+88.52	23.000	641.31	641.31
M	114+98.52	23.000	641.42	641.43
N	115+08.52	23.000	641.54	641.56
O	115+18.52	23.000	641.66	641.70
P	115+28.52	23.000	641.77	641.82
Q	115+38.52	23.000	641.89	641.92
R	115+48.52	23.000	641.99	642.00
℄ Brg. Pier 3	115+63.02	23.000	642.13	642.13
S	115+73.02	23.000	642.22	642.25
T	115+83.02	23.000	642.30	642.37
U	115+93.02	23.000	642.37	642.48
V	116+03.02	23.000	642.44	642.57
W	116+13.02	23.000	642.50	642.62
X	116+23.02	23.000	642.55	642.63
℄ Brg. E. Abut.	116+36.69	23.000	642.61	642.61
Bk. E. Abut.	116+39.69	23.000	642.62	642.62

BEAM 9W

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	30.583	639.35	639.35
℄ Brg.W. Abut.	113+39.22	30.583	639.39	639.39
A	113+49.22	30.583	639.50	639.57
B	113+59.22	30.583	639.62	639.73
C	113+69.22	30.583	639.74	639.87
D	113+79.22	30.583	639.86	639.98
E	113+89.22	30.583	639.98	640.07
F	113+99.22	30.583	640.09	640.14
℄ Brg. Pier 1	114+13.47	30.583	640.26	640.26
G	114+23.47	30.583	640.38	640.38
H	114+33.47	30.583	640.50	640.52
I	114+43.47	30.583	640.62	640.65
J	114+53.47	30.583	640.73	640.78
K	114+63.47	30.583	640.85	640.89
L	114+73.47	30.583	640.97	640.99
℄ Brg. Pier 2	114+88.52	30.583	641.15	641.15
M	114+98.52	30.583	641.27	641.28
N	115+08.52	30.583	641.38	641.40
O	115+18.52	30.583	641.50	641.54
P	115+28.52	30.583	641.62	641.66
Q	115+38.52	30.583	641.73	641.76
R	115+48.52	30.583	641.83	641.84
℄ Brg. Pier 3	115+63.02	30.583	641.97	641.97
S	115+73.02	30.583	642.06	642.09
T	115+83.02	30.583	642.14	642.22
U	115+93.02	30.583	642.21	642.33
V	116+03.02	30.583	642.28	642.41
W	116+13.02	30.583	642.34	642.46
X	116+23.02	30.583	642.39	642.47
℄ Brg. E. Abut.	116+36.69	30.583	642.45	642.45
Bk. E. Abut.	116+39.69	30.583	642.46	642.46

BEAM 10W

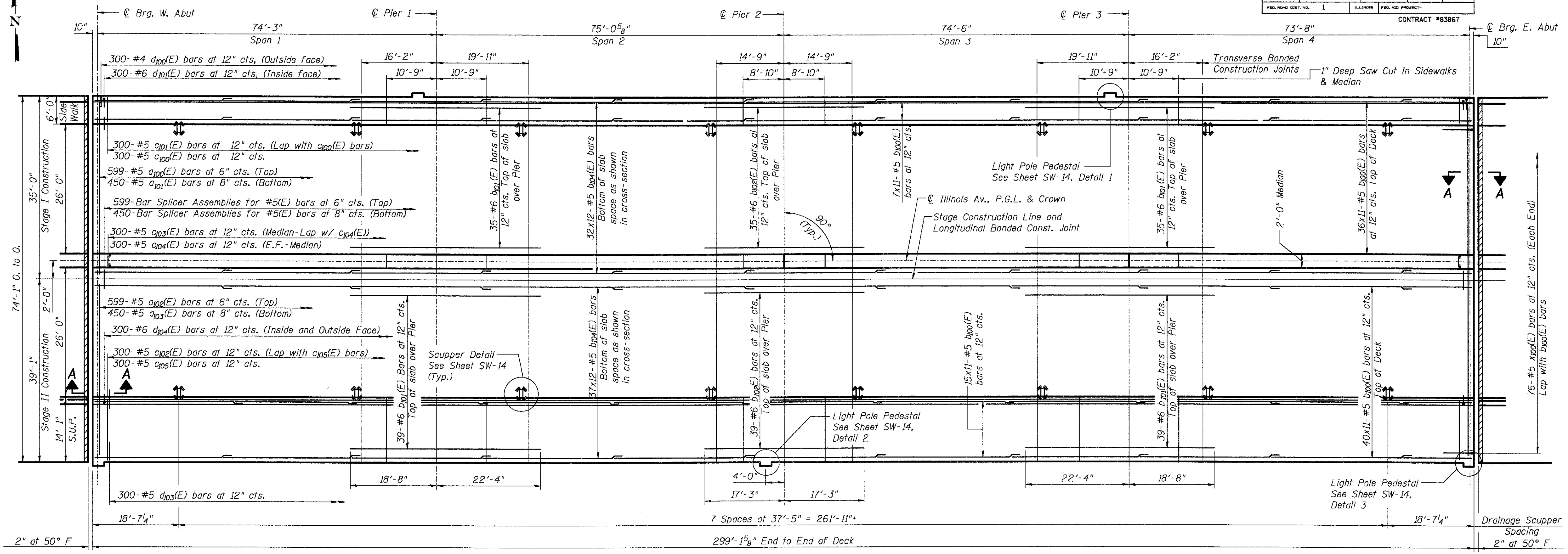
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	113+36.22	38.167	639.19	639.19
℄ Brg.W. Abut.	113+39.22	38.167	639.23	639.23
A	113+49.22	38.167	639.35	639.41
B	113+59.22	38.167	639.46	639.57
C	113+69.22	38.167	639.58	639.71
D	113+79.22	38.167	639.70	639.83
E	113+89.22	38.167	639.82	639.91
F	113+99.22	38.167	639.94	639.99
℄ Brg. Pier 1	114+13.47	38.167	640.10	640.10
G	114+23.47	38.167	640.22	640.22
H	114+33.47	38.167	640.34	640.36
I	114+43.47	38.167	640.46	640.50
J	114+53.47	38.167	640.58	640.62
K	114+63.47	38.167	640.69	640.73
L	114+73.47	38.167	640.81	640.83
℄ Brg. Pier 2	114+88.52	38.167	640.99	640.99
M	114+98.52	38.167	641.11	641.12
N	115+08.52	38.167	641.23	641.25
O	115+18.52	38.167	641.34	641.39
P	115+28.52	38.167	641.46	641.50
Q	115+38.52	38.167	641.57	641.60
R	115+48.52	38.167	641.68	641.68
℄ Brg. Pier 3	115+63.02	38.167	641.82	641.82
S	115+73.02	38.167	641.90	641.93
T	115+83.02	38.167	641.98	642.06
U	115+93.02	38.167	642.06	642.17
V	116+03.02	38.167	642.12	642.25
W	116+13.02	38.167	642.18	642.30
X	116+23.02	38.167	642.23	642.31
℄ Brg. E. Abut.	116+36.69	38.167	642.29	642.29
Bk. E. Abut.	116+39.69	38.167	642.31	642.31

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	51
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

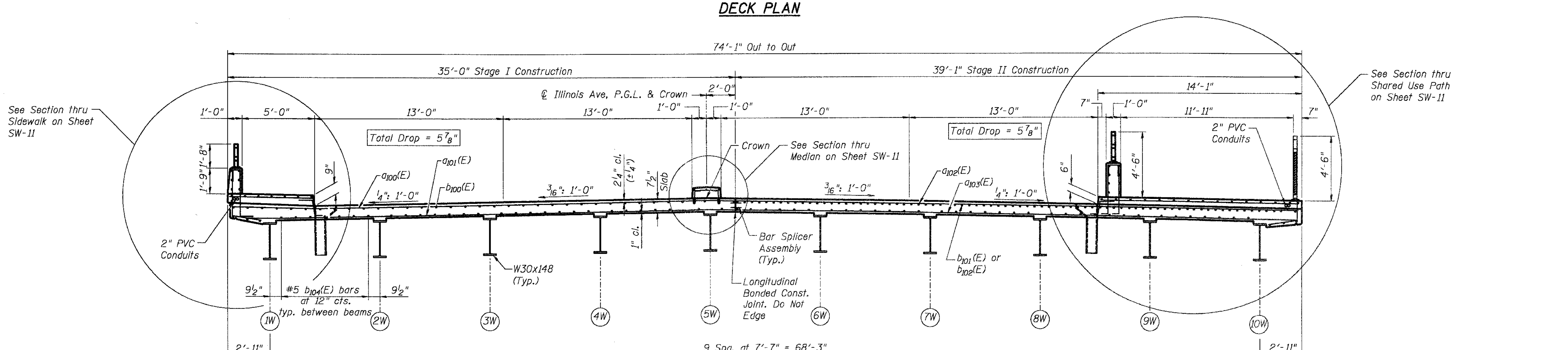
SHEET NO. SW-10

SW-30 SHEETS



℄ Brg. W. Abut
℄ Pier 1
℄ Pier 2
℄ Pier 3
℄ Brg. E. Abut
74'-3" Span 1
75'-0 5/8" Span 2
74'-6" Span 3
73'-8" Span 4
300-#4 d100(E) bars at 12" cts. (Outside face)
300-#6 d101(E) bars at 12" cts. (Inside face)
Transverse Bonded Construction Joints
1" Deep Saw Cut in Sidewalks & Median
300-#5 c101(E) bars at 12" cts. (Lap with c100(E) bars)
300-#5 c100(E) bars at 12" cts.
599-#5 a100(E) bars at 6" cts. (Top)
450-#5 a101(E) bars at 8" cts. (Bottom)
599-Bar Splicer Assemblies for #5(E) bars at 6" cts. (Top)
450-Bar Splicer Assemblies for #5(E) bars at 8" cts. (Bottom)
300-#5 c103(E) bars at 12" cts. (Median-Lap w/ c104(E))
300-#5 c104(E) bars at 12" cts. (E.F.-Median)
599-#5 a102(E) bars at 6" cts. (Top)
450-#5 a103(E) bars at 8" cts. (Bottom)
300-#6 d104(E) bars at 12" cts. (Inside and Outside Face)
300-#5 c102(E) bars at 12" cts. (Lap with c105(E) bars)
300-#5 c105(E) bars at 12" cts.
300-#5 d103(E) bars at 12" cts.
Light Pole Pedestal See Sheet SW-14, Detail 1
Light Pole Pedestal See Sheet SW-14, Detail 2
Light Pole Pedestal See Sheet SW-14, Detail 3
Scupper Detail See Sheet SW-14 (Typ.)
℄ Illinois Av., P.G.L. & Crown
Stage Construction Line and Longitudinal Bonded Const. Joint
2'-0" Median
76-#5 x100(E) bars at 12" cts. (Each End) Lap with b100(E) bars
7 Spaces at 37'-5" = 261'-11"±
299'-1 5/8" End to End of Deck
Drainage Scupper Spacing
2" at 50° F
74'-1" O. to O.
35'-0" Stage I Construction
39'-1" Stage II Construction
6'-0" Side Walk
14'-1" S.U.P.

DECK PLAN



74'-1" Out to Out
35'-0" Stage I Construction
39'-1" Stage II Construction
℄ Illinois Ave, P.G.L. & Crown
See Section thru Sidewalk on Sheet SW-11
See Section thru Shared Use Path on Sheet SW-11
See Section thru Median on Sheet SW-11
Total Drop = 5 7/8"
Crown
2" PVC Conduits
Bar Splicer Assembly (Typ.)
Longitudinal Bonded Const. Joint. Do Not Edge
W30x148 (Typ.)
#5 b104(E) bars at 12" cts. typ. between beams
b101(E) or b102(E)
9 Spa. at 7'-7" = 68'-3"
Near Midspan
Near Piers

TYPICAL DECK CROSS SECTION

(Looking East)

NOTES:

Work this sheet with sheets SW-11 thru SW-14.

Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.

See Sheet SW-11 for Section A-A.

Min. Lap length for #5 Bars = 2'-2"

Min. Lap length for #6 Bars = 2'-7"

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

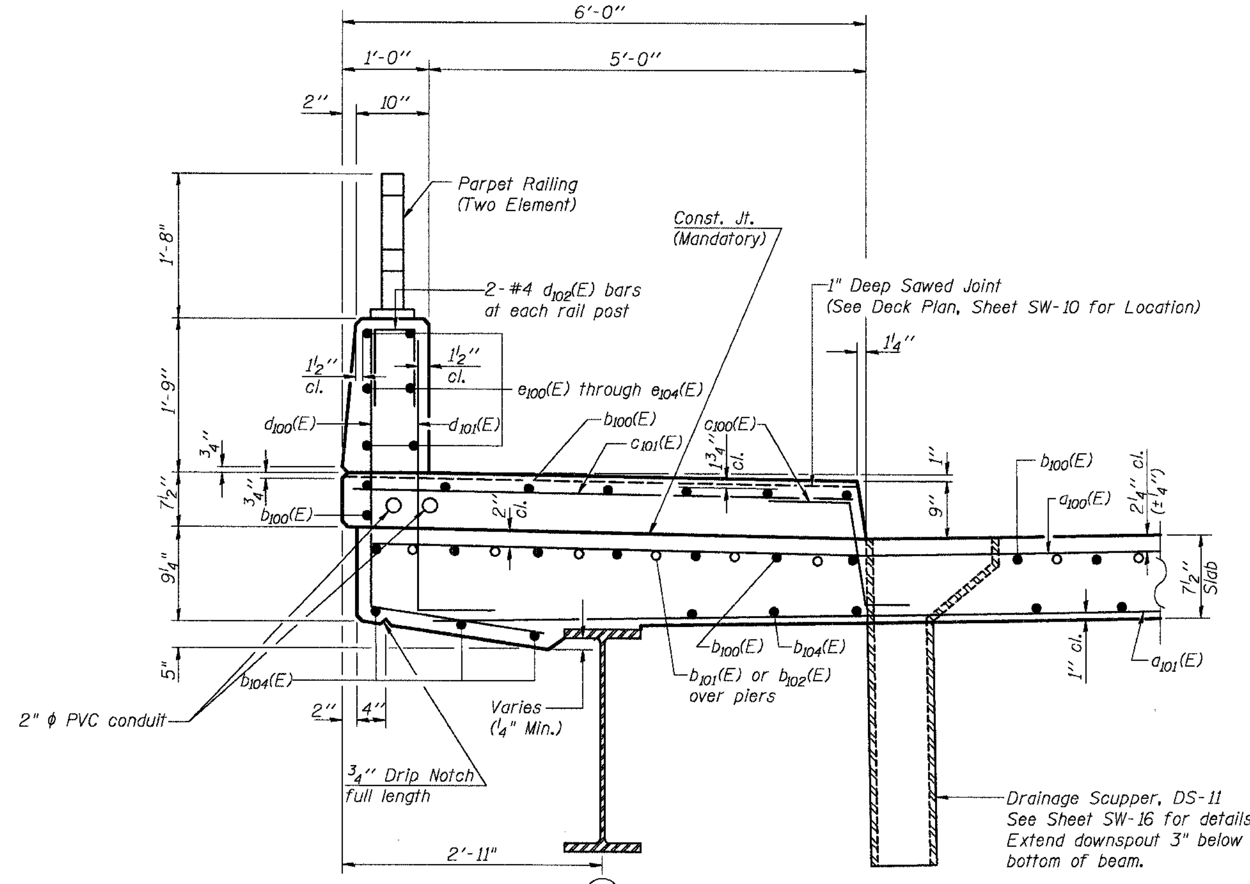
DECK PLAN & CROSS SECTION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	52
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

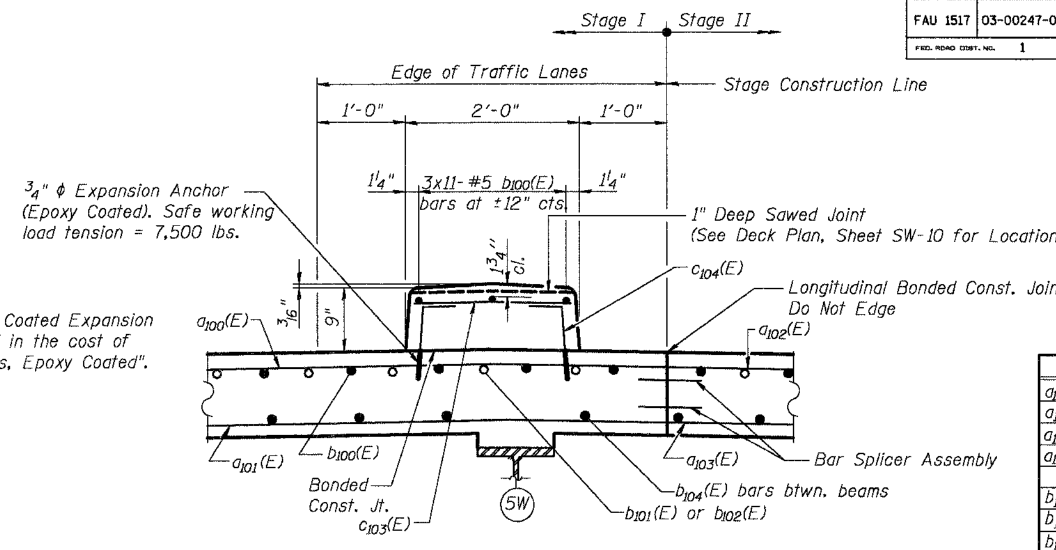
CONTRACT #83867

SHEET NO. SW-11
SW-30 SHEETS

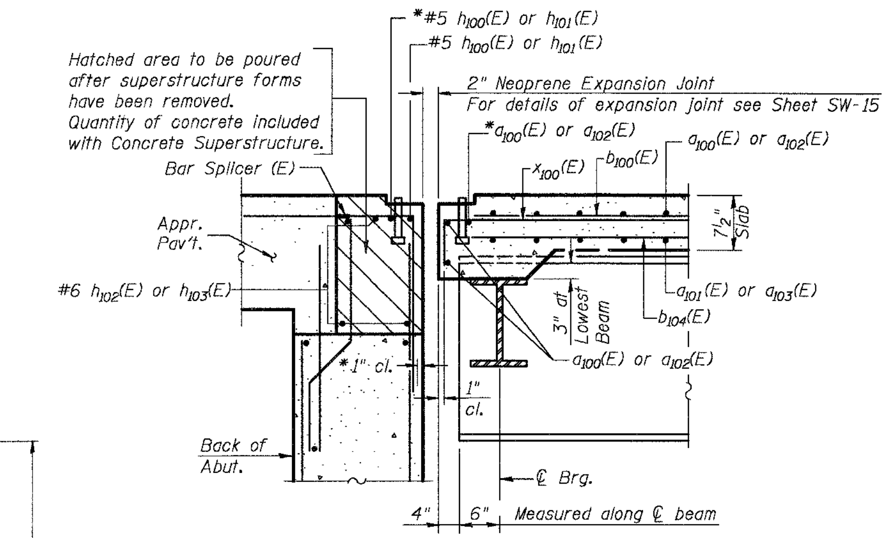


SECTION THRU SIDEWALK

NOTE:
The Cost of Epoxy Coated Expansion Anchors is included in the cost of "Reinforcement Bars, Epoxy Coated".



SECTION THRU MEDIAN



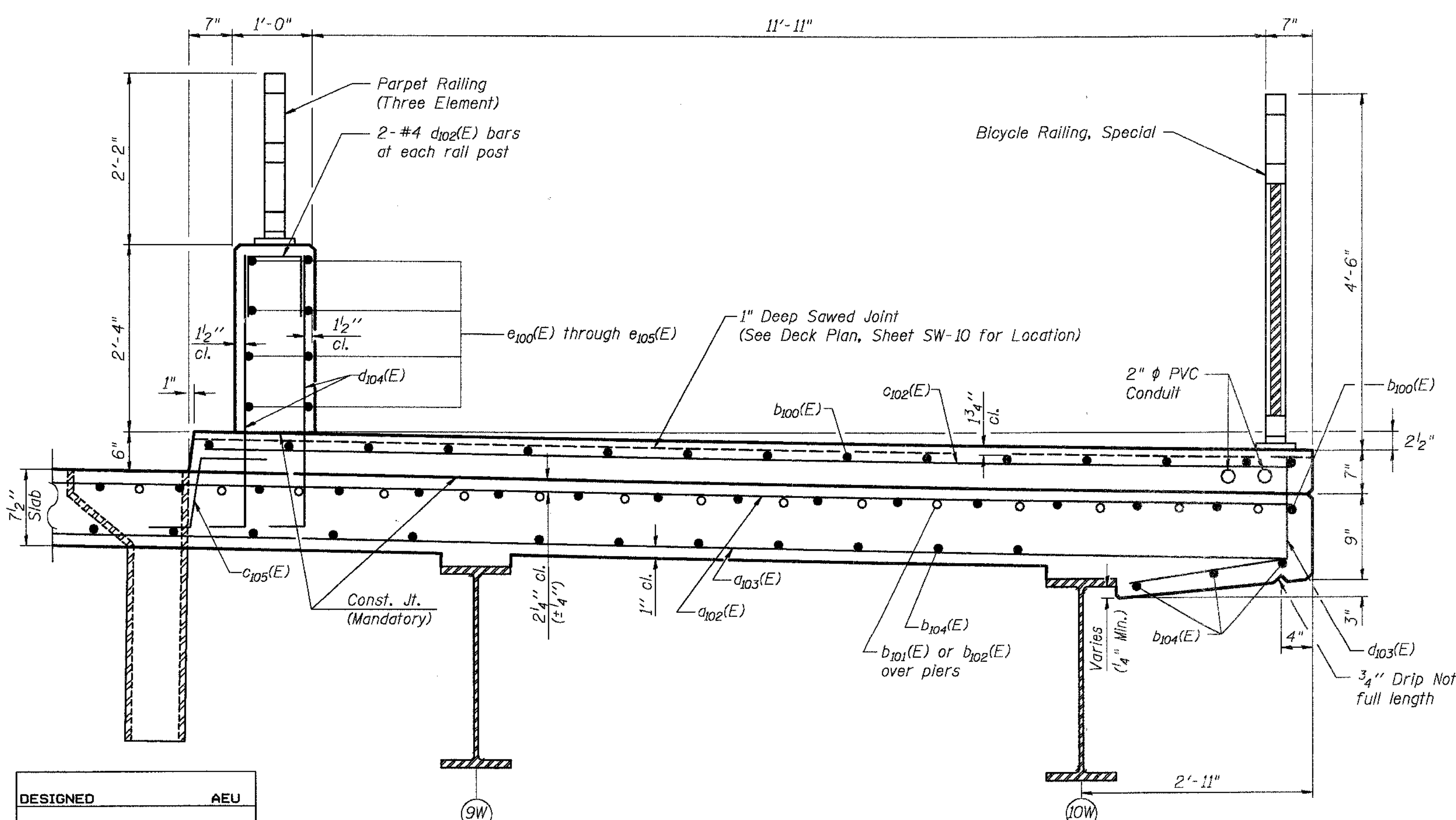
SECTION A-A

* Place $a_{100}(E)$ or $a_{102}(E)$ and $h_{101}(E)$ bars in back of anchor bolt as shown if required to maintain 1" cl. (+0-1/8"). Anchor bolts should be tied to $a_{100}(E)$ or $a_{102}(E)$ and $h_{101}(E)$ bars.

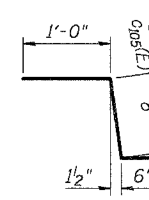
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$a_{100}(E)$	599	#5	34'-6"	
$a_{101}(E)$	450	#5	34'-6"	
$a_{102}(E)$	599	#5	38'-9"	
$a_{103}(E)$	450	#5	38'-9"	
$b_{100}(E)$	1133	#5	28'-11"	
$b_{101}(E)$	148	#6	41'-0"	
$b_{102}(E)$	74	#6	34'-6"	
$b_{104}(E)$	828	#5	26'-8"	
$b_{105}(E)$	128	#5	1'-6"	
$c_{100}(E)$	300	#5	2'-5"	
$c_{101}(E)$	300	#5	5'-8"	
$c_{102}(E)$	300	#5	13'-9"	
$c_{103}(E)$	300	#5	1'-8"	
$c_{104}(E)$	600	#5	1'-3"	
$c_{105}(E)$	300	#5	2'-2"	
$d_{100}(E)$	300	#4	4'-10"	
$d_{101}(E)$	300	#6	3'-9"	
$d_{102}(E)$	124	#4	2'-0"	
$d_{103}(E)$	300	#5	3'-3"	
$d_{104}(E)$	600	#6	4'-1"	
$d_{105}(E)$	8	#4	1'-8"	
$d_{106}(E)$	18	#6	8'-11"	
$d_{107}(E)$	6	#6	3'-10"	
$d_{108}(E)$	9	#6	2'-5"	
$d_{109}(E)$	6	#6	1'-8"	
$e_{100}(E)$	84	#4	15'-8"	
$e_{101}(E)$	48	#4	10'-6"	
$e_{102}(E)$	36	#4	18'-1"	
$e_{103}(E)$	24	#4	8'-6"	
$e_{104}(E)$	36	#4	17'-11"	
$e_{105}(E)$	12	#4	17'-2"	
$x_{100}(E)$	152	#5	4'-1"	
Reinforcement Bars, Epoxy Coated			Pound	170,170
Concrete Superstructure			Cu. Yd.	738.2
Bridge Deck Grooving			Sq. Yd.	1,595
Protective Coat			Sq. Yd.	2,762

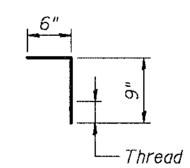
Reinforcement bars designated (E) shall be epoxy coated.



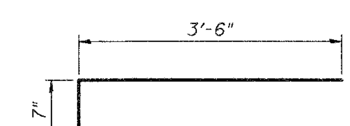
SECTION THRU SHARED USE PATH



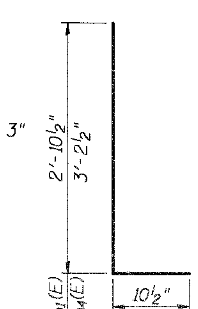
BARS $c_{100}(E)$ and $c_{105}(E)$



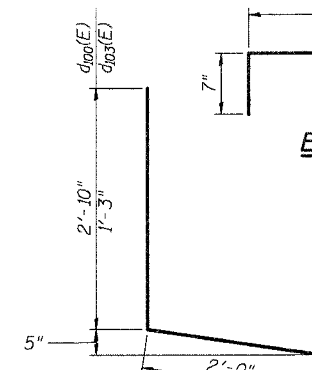
BAR $c_{104}(E)$



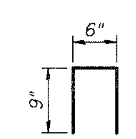
BAR $x_{100}(E)$



BARS $d_{101}(E)$ and $d_{104}(E)$



BARS $d_{100}(E)$ and $d_{103}(E)$



BAR $d_{102}(E)$

NOTES:

Work this sheet with sheets SW-10 and SW-12 through SW-14.
See sheet SW-10 for Section A-A.
For Parapet Railing and Bicycle Railing, Special details see Sheet SW-17.
For Bar Splicer Assembly details see Sheet SW-23.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

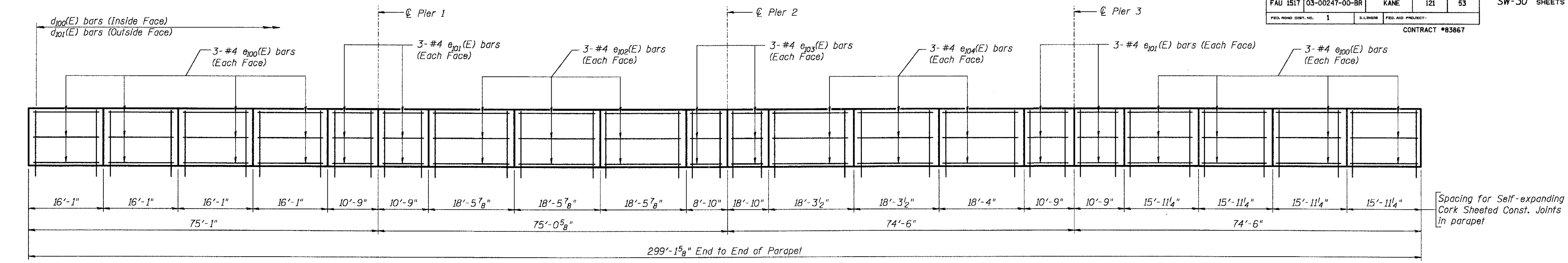
SUPERSTRUCTURE DETAILS I
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

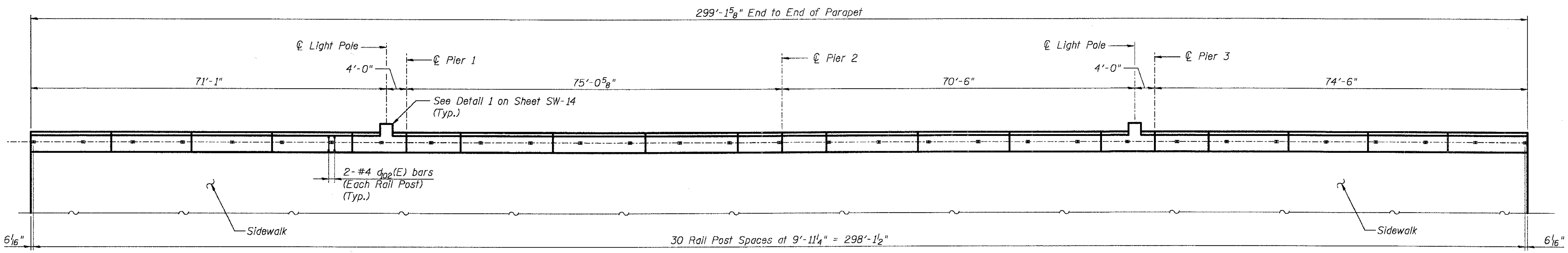
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	53
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	

CONTRACT #83867

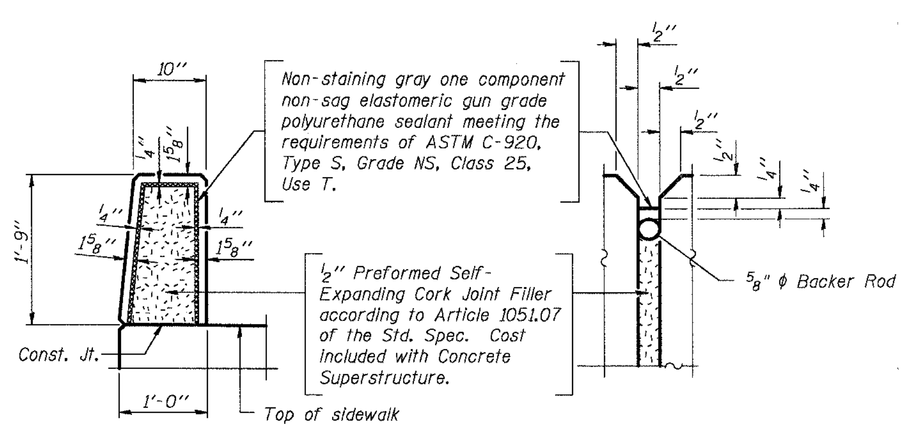
SHEET NO. SW-12
SW-30 SHEETS



INSIDE ELEVATION OF NORTH PARAPET



TOP PLAN OF NORTH PARAPET



PARAPET JOINT DETAILS

Notes:

Work this Sheet with Sheets SW-10, SW-11 & SW-14.

For parapet railing details see Sheet SW-17.

For light pole support details see Sheet SW-14.

For Bill of Material see Sheet SW-11

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

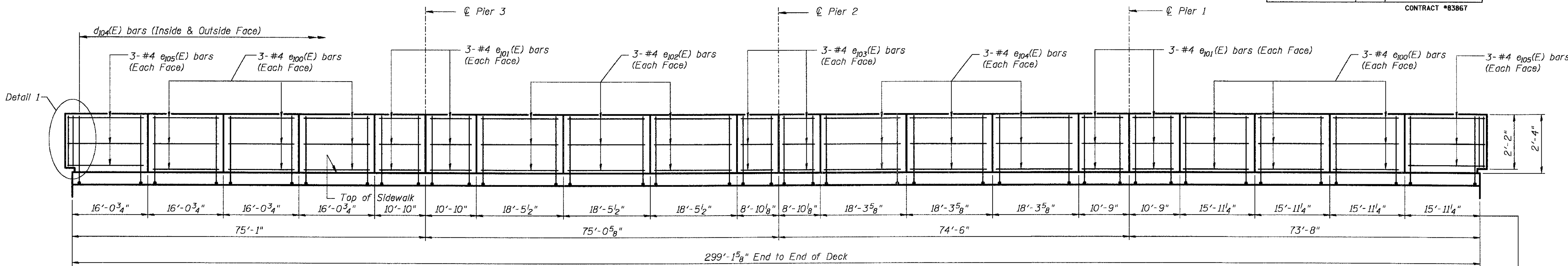
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

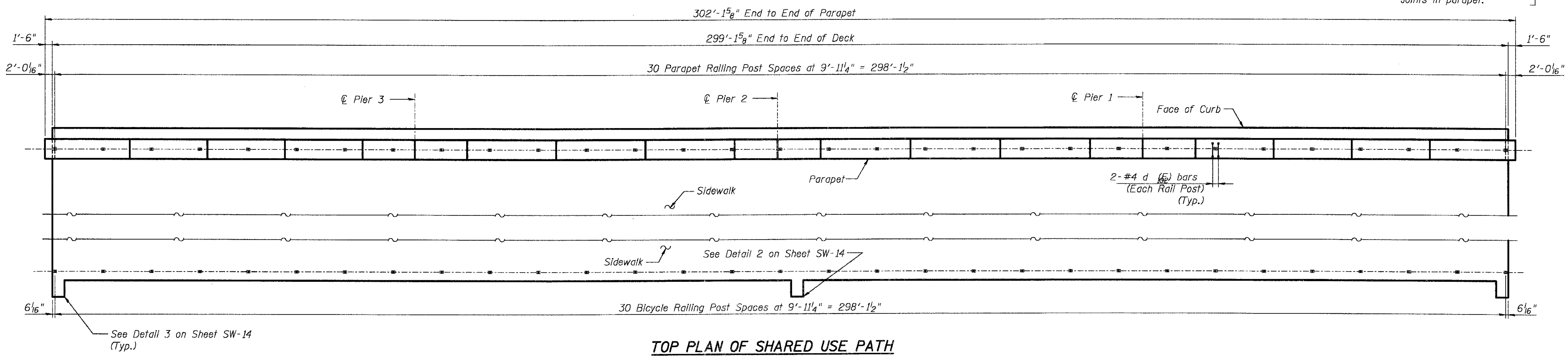
CITY OF AURORA

SUPERSTRUCTURE DETAILS II
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

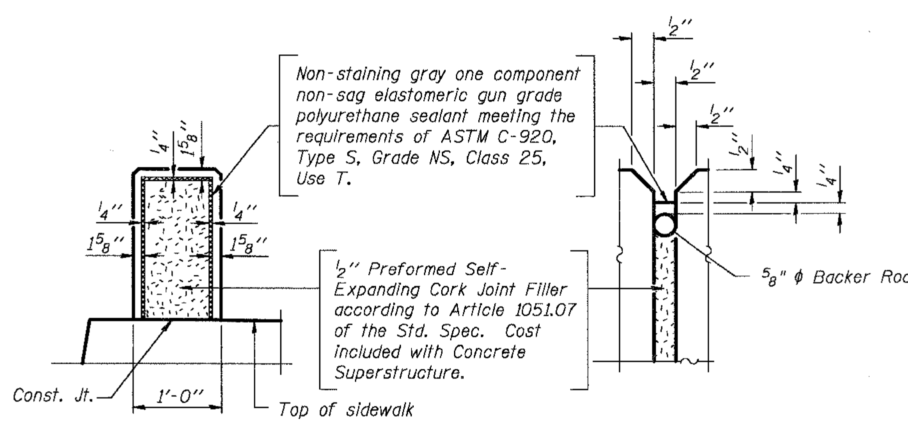
DATE 7-28-2006



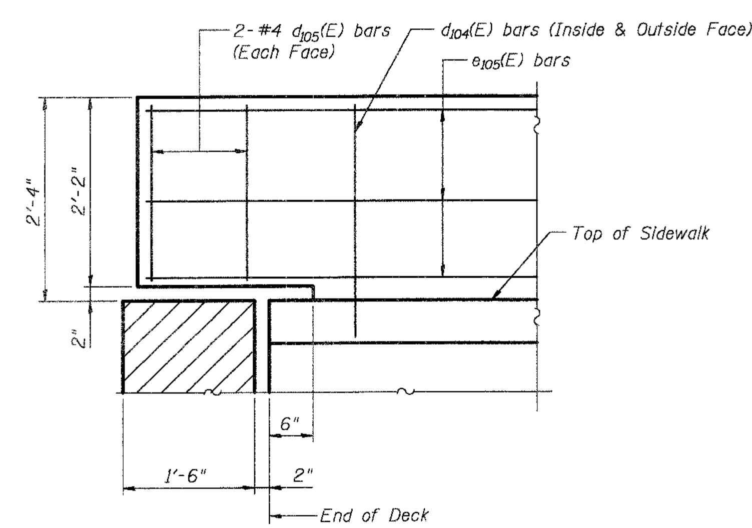
INSIDE ELEVATION OF SOUTH PARAPET



TOP PLAN OF SHARED USE PATH



SOUTH PARAPET JOINT DETAILS



DETAIL 1

Typical at both ends of Parapet

Notes:

Work this Sheet with Sheets SW-10, SW-11 & SW-14.

For parapet railing details see Sheet SW-11.

For light pole support details see Sheet SW-14.

For Bill of Material see Sheet SW-11.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

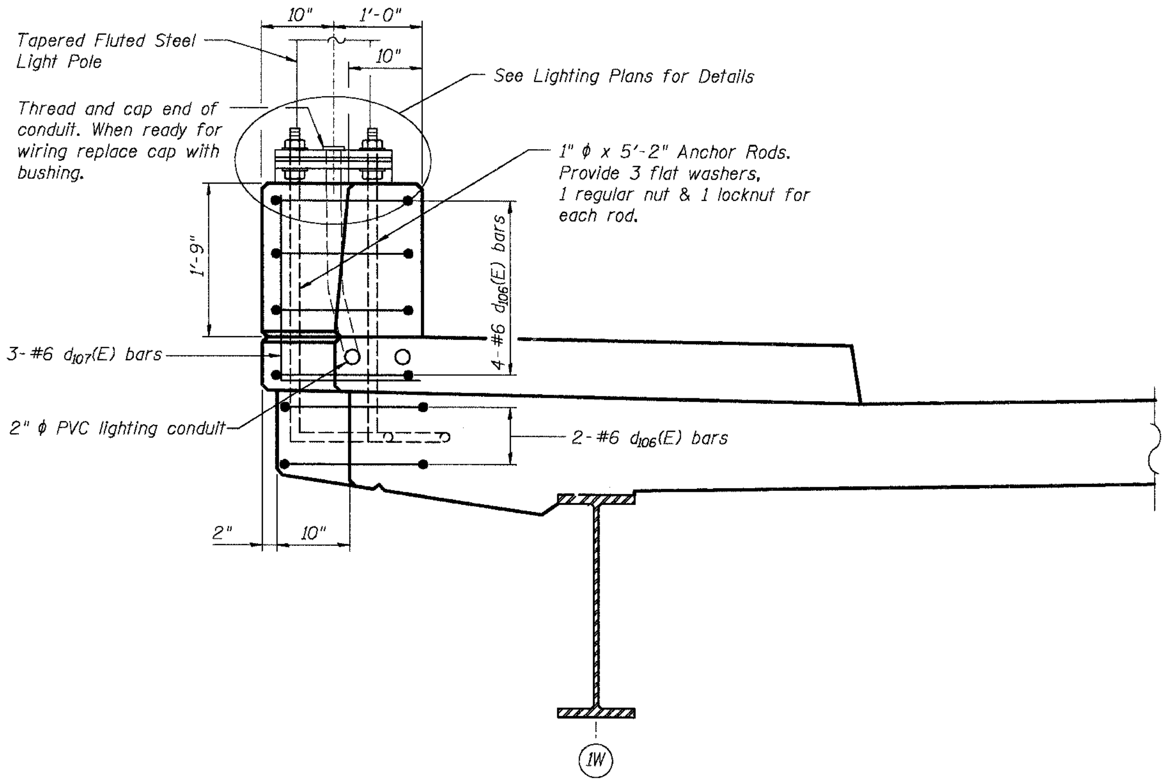
SUPERSTRUCTURE DETAILS III
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

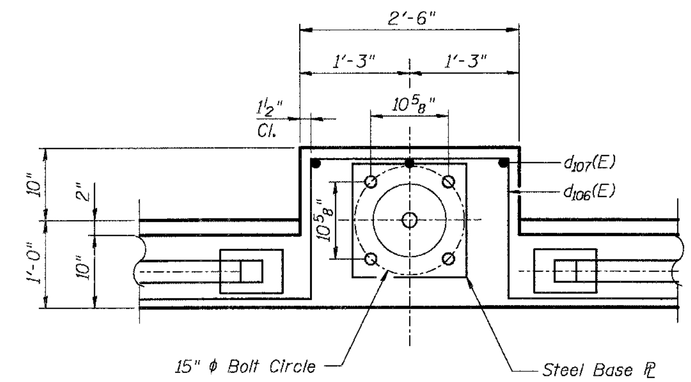
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	55
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

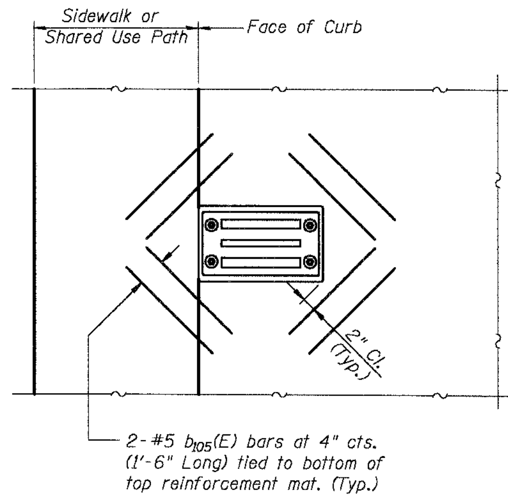
SHEET NO. SW-14
SW-30 SHEETS



SECTION - DETAIL 1

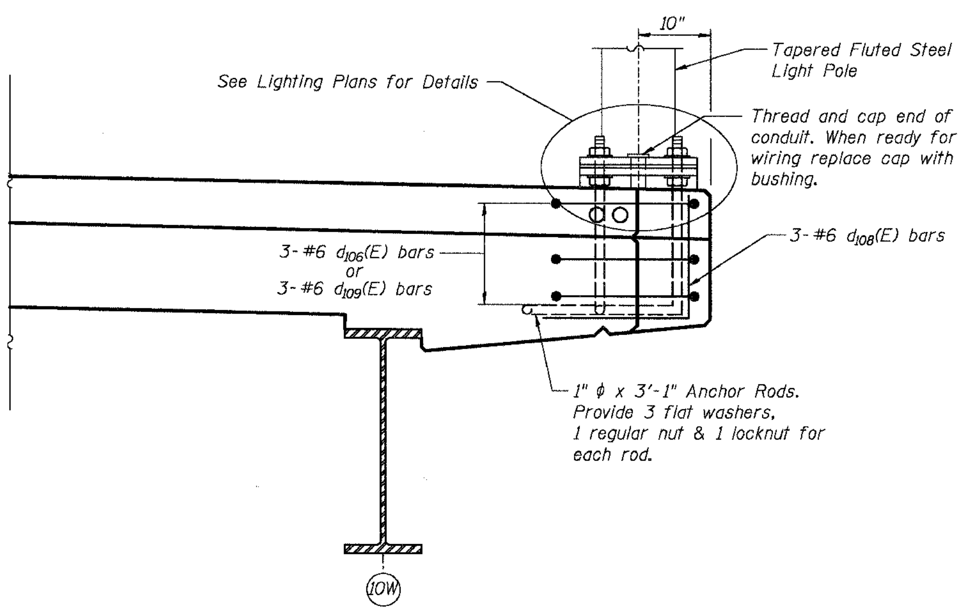


PLAN - DETAIL 1

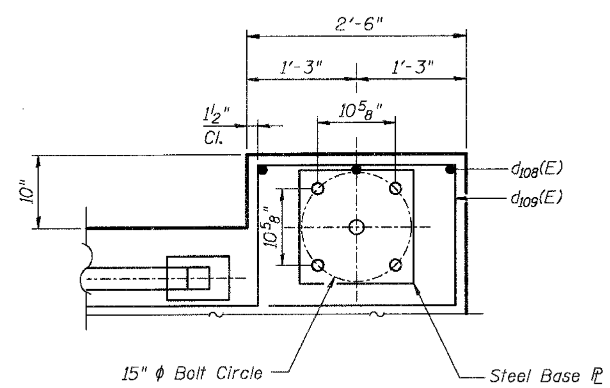


SCUPPER DETAIL - PLAN

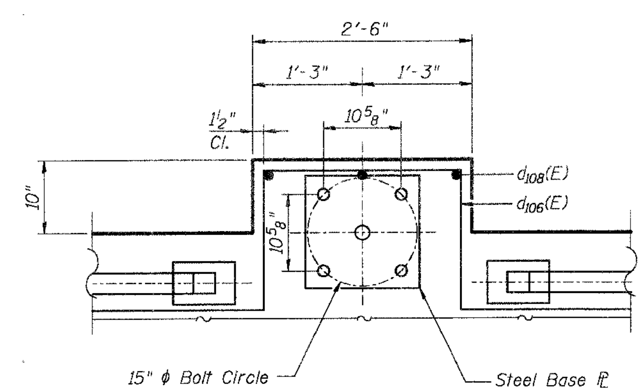
LIGHT POLE MOUNTED ON CONCRETE PARAPET DETAILS



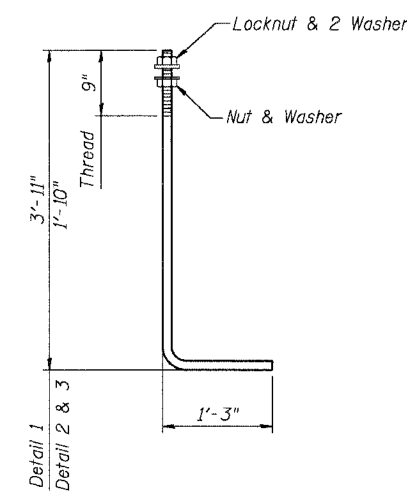
SECTION - DETAIL 2 & 3



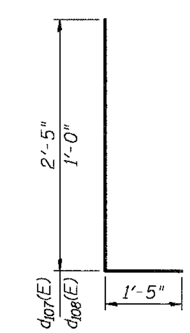
PLAN - DETAIL 3



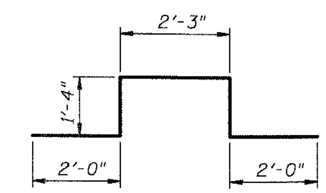
PLAN - DETAIL 2



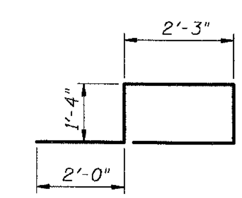
1" ϕ ANCHOR ROD
(ASTM F1554 Grade 105)



BARS d107(E) & d108(E)



BAR d106(E)



BAR d109(E)

LIGHT POLE MOUNTED ON SHARED USE PATH DETAIL

NOTES:

Work this sheet with sheets SW-10 through SW-13.
For Bill of Material see Sheet SW-11.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

SUPERSTRUCTURE DETAILS IV
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	56
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SW-15

SW-30 SHEETS

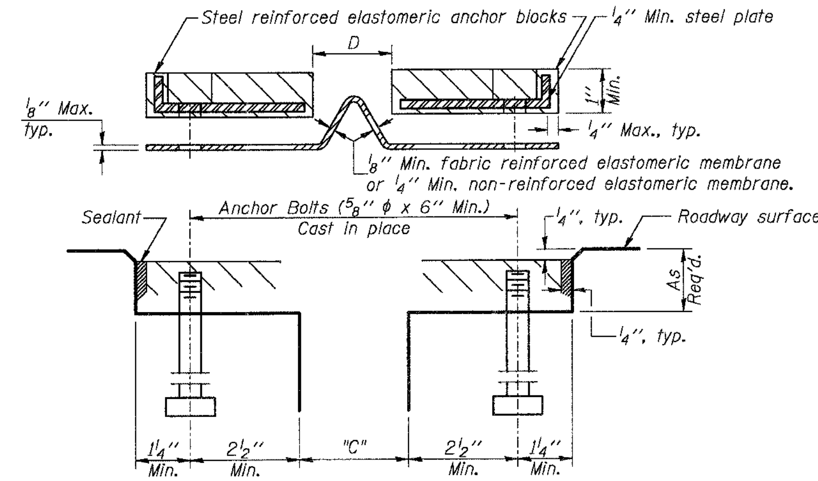
Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.

INSTALLATION NOTES

(1) Install continuous seal in roadway, parapet, curb, and sidewalk.

(2) Install anchor blocks as indicated.

Note A:
Maximum spacing of anchor bolts shall be 12" centers.



CROSS SECTION

GENERAL NOTES

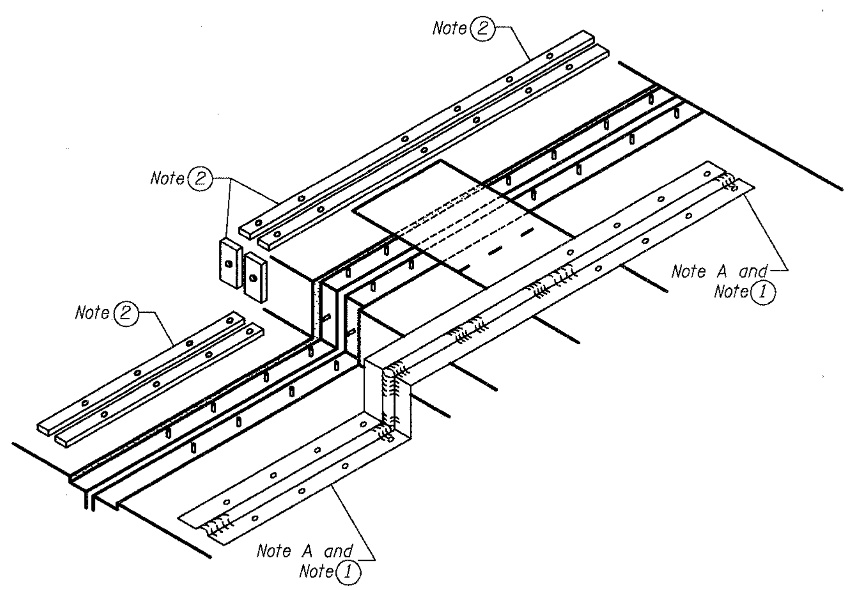
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

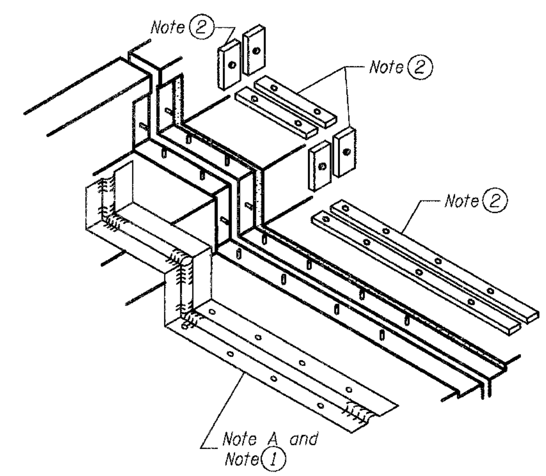
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

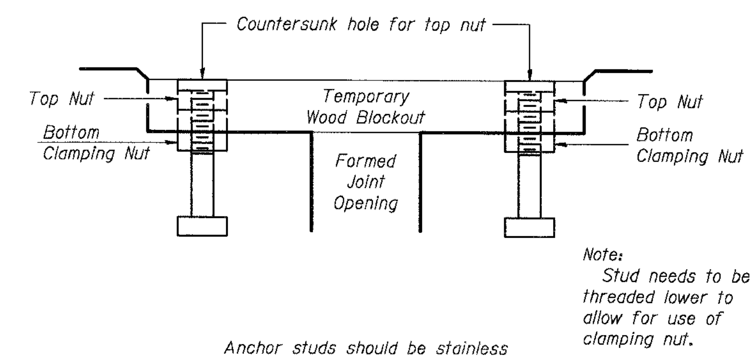
The parapet and roadway membrane shall be made continuous by an approved vulcanizing process. Lapping will not be permitted.



AT SHARED USE PATH



AT SIDEWALK OR MEDIAN



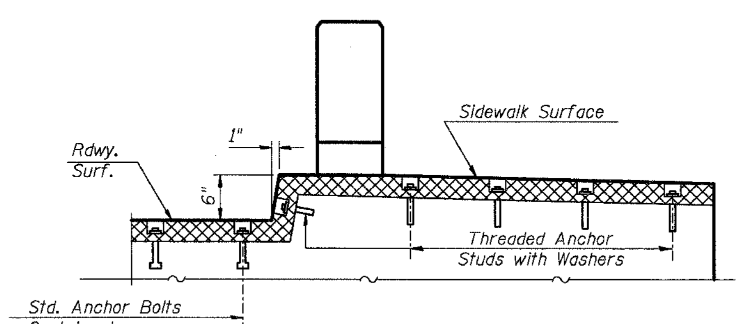
Note:
Stud needs to be threaded lower to allow for use of clamping nut.

Anchor studs should be stainless

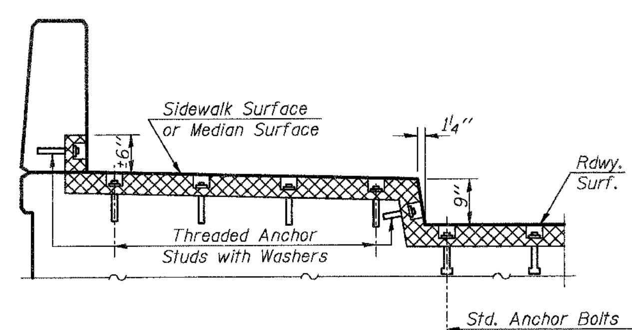
RECOMMENDED BLOCKOUT DETAIL

BILL OF MATERIAL

Item	Unit	Quantity
Neoprene Expansion Joint 2"	Foot	152.7



AT SHARED USE PATH TYPICAL END TREATMENTS



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

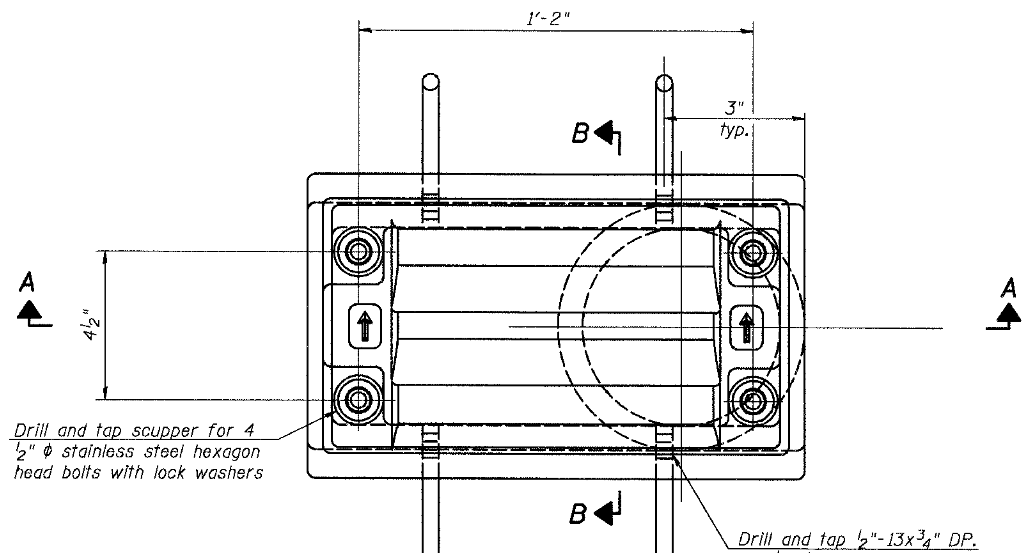
NEOPRENE EXPANSION JOINTS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

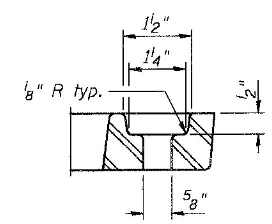
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	57
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

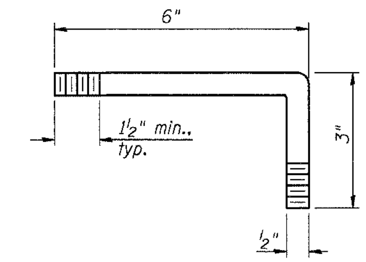
SHEET NO. SW-16
SW-30 SHEETS



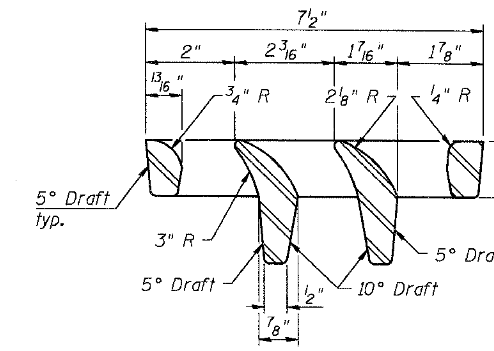
PLAN



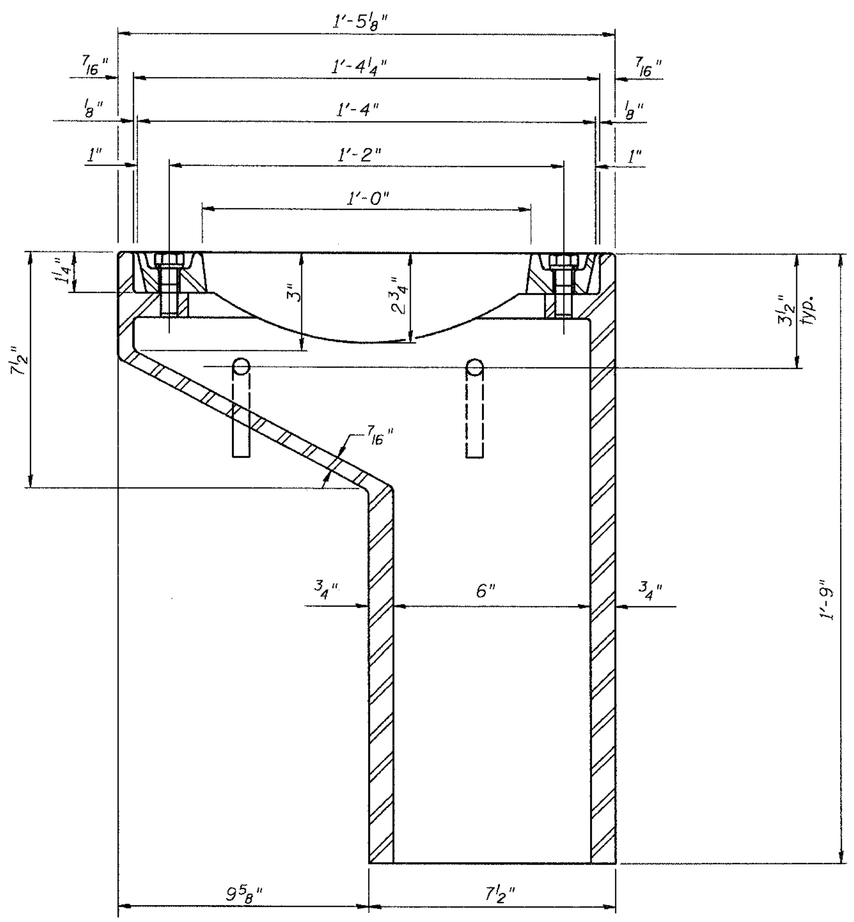
BOLT HOLE DETAIL



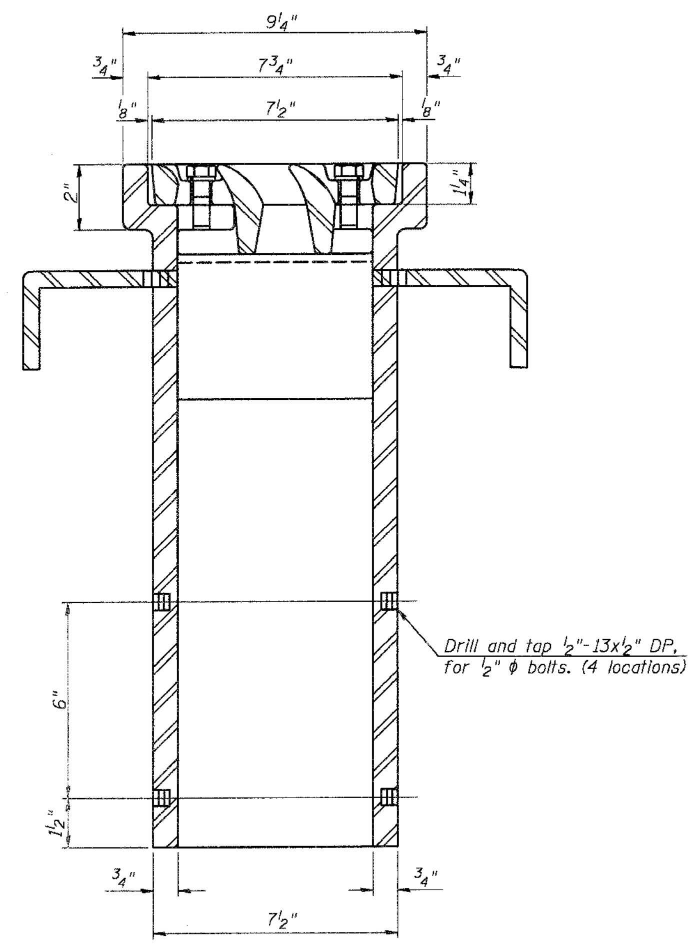
ANCHOR STUD DETAIL



VANE GRATE DETAIL



SECTION A-A



SECTION B-B

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.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. 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 cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

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-11.

BILL OF MATERIAL

Item	Unit	Quantity
Drainage Scuppers, DS-11	Each	16

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

DRAINAGE SCUPPER, DS-11
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

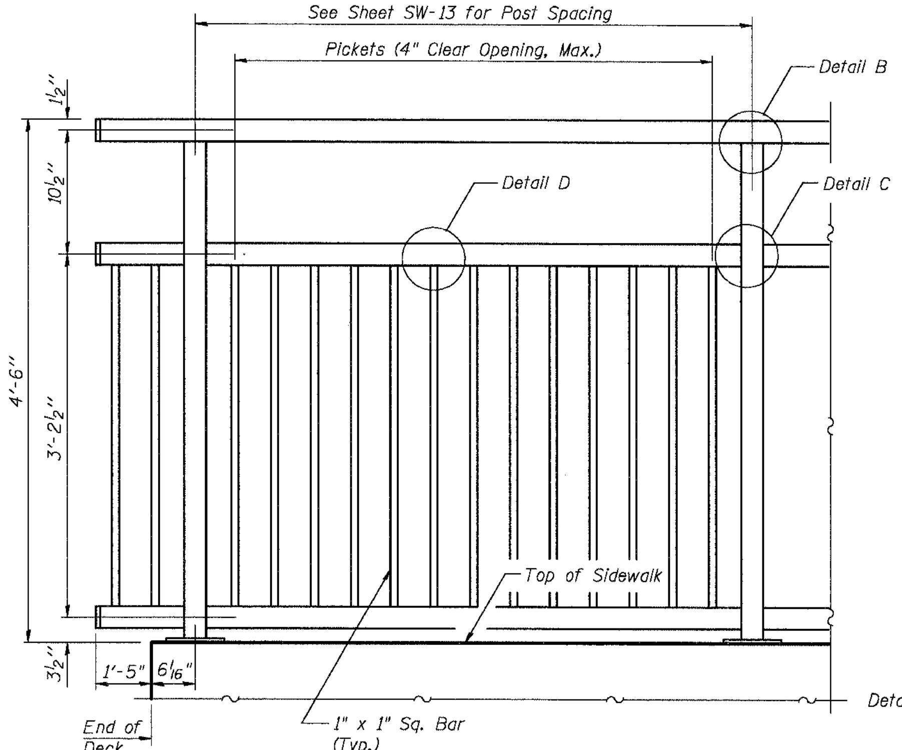
DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	58
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

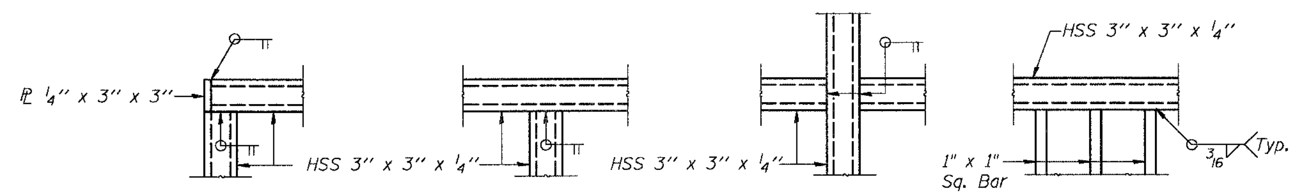
SHEET NO. SW-17

SW-30 SHEETS

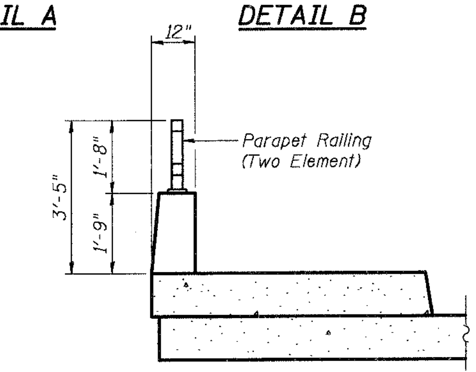
CONTRACT #83867



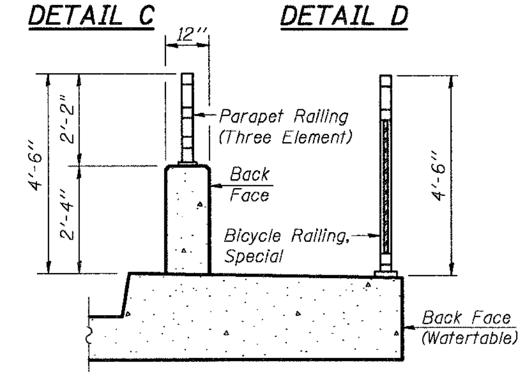
BICYCLE RAILING



DETAIL A DETAIL B DETAIL C DETAIL D



SECTION THRU SIDEWALK



SECTION THRU SHARED USE PATH

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Bicycle Railing, Special or Parapet Railing.

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

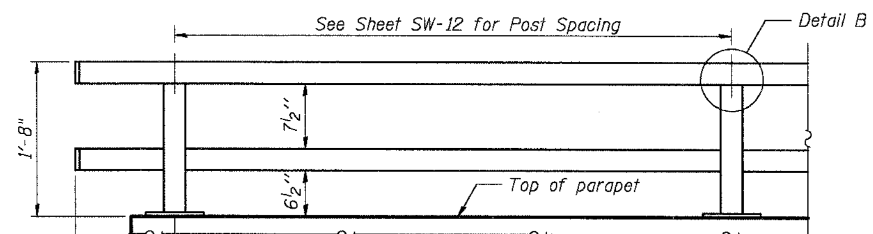
The Three Element Parapet Railing, furnished and installed shall not be paid for separately but shall be included in the unit bid price for Bicycle Railing, Special.

If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

Space reinforcement to miss anchor rods.

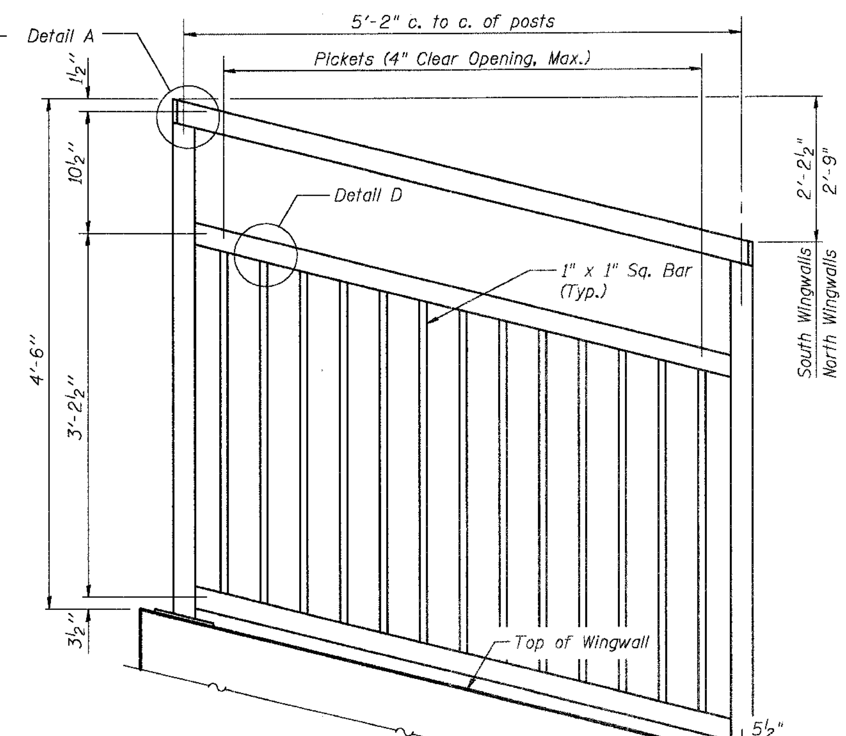
All post, railing, pickets, splices, and anchor devices shall be powder coated black. The powder coating system to be used shall be approved by the engineer prior to the coating process.

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting ⅝" ϕ anchor rods. Embedment shall be according to the manufacturer's specifications.



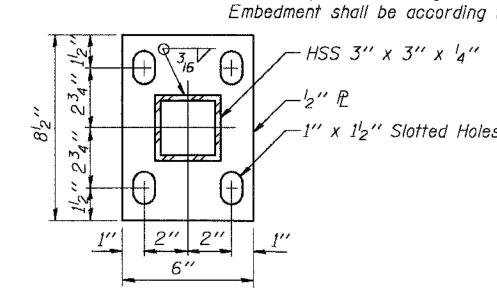
PARAPET RAILING ELEVATION

(Inside Face of Two Element Rail)

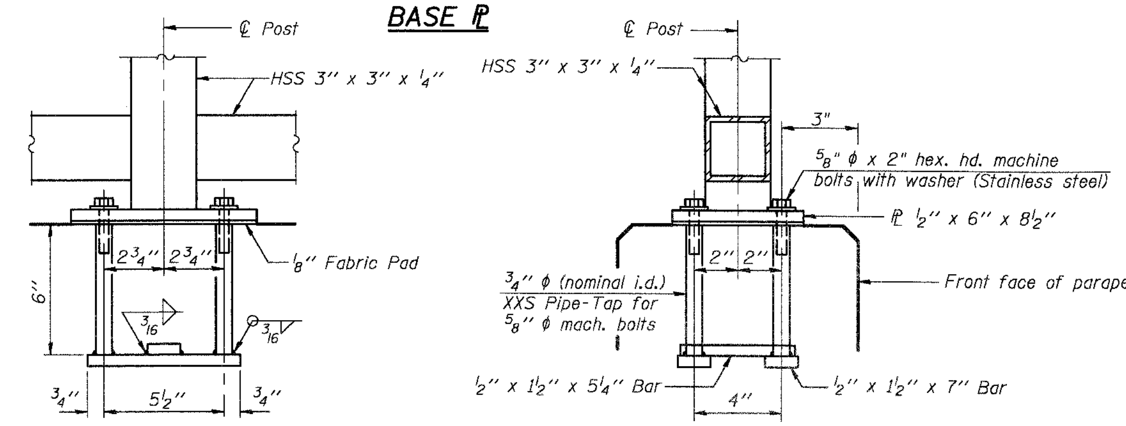


BICYCLE RAILING ON WINGWALL

Work with Sheets SW-24 through SW-27

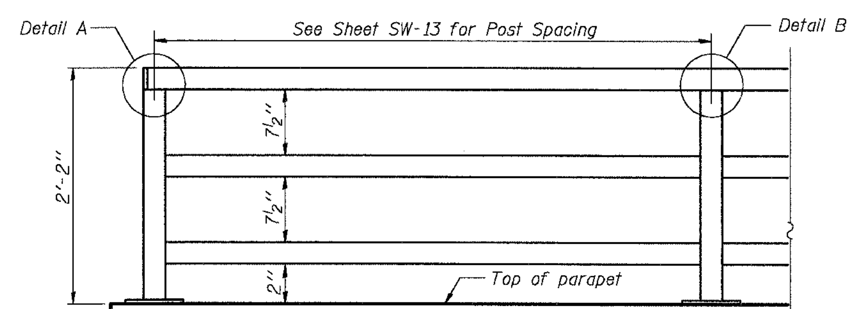


BASE ℄



ANCHOR BOLT DETAILS

Parapet Railings

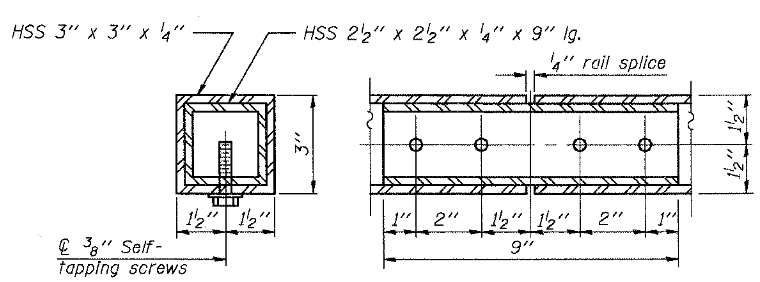


PARAPET RAILING ELEVATION

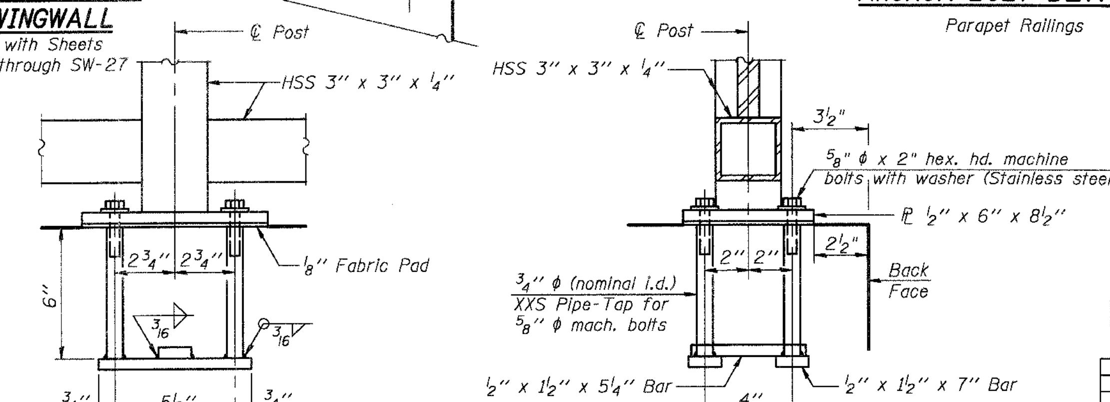
(Inside Face of Three Element Rail)

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing, Special	Foot	298
Parapet Railing	Foot	298



RAIL SPLICE



ANCHOR BOLT DETAILS

Bicycle Railing

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

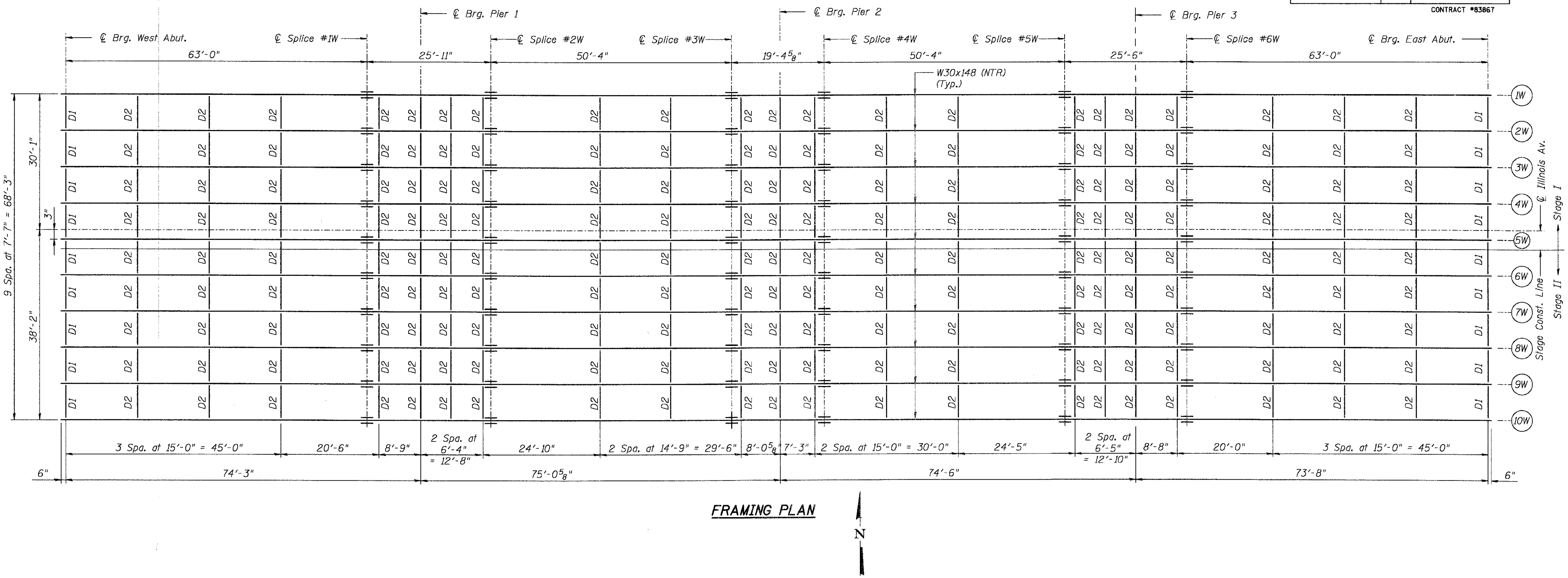
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

BRIDGE RAILING DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006



FRAMING PLAN

INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
Is	(in^4)	6,680	6,680	6,680	6,680	6,680	6,680	6,680
Ic (n)	(in^4)	17,020	-	17,020	-	17,020	-	17,020
Ic (3n)	(in^4)	12,596	-	12,596	-	12,596	-	12,596
Ss	(in^3)	436	436	436	436	436	436	436
Sc (n)	(in^3)	622	-	622	-	622	-	622
Sc (3n)	(in^3)	566	-	566	-	566	-	566
Z	(in^3)	-	500	-	500	-	500	-
DL	(k/ft.)	1.00	1.55	1.00	1.55	1.00	1.55	1.00
MDL	('k)	449	776	254	549	248	765	444
sDL	(k/ft.)	0.55	-	0.55	-	0.55	-	0.55
MsDL	('k)	269	-	173	-	170	-	265
MLL	('k)	642	309	567	289	563	306	637
M (Imp)	('k)	161	77	142	72	141	77	160
$\frac{5}{3}$[MLL+M(Imp)]	('k)	1,339	644	1,182	602	1,173	638	1,329
Ma	('k)	2,674	1,846	2,092	1,496	2,069	1,824	2,649
Mu	('k)	3,015	2,083	3,015	2,083	3,015	2,083	3,015
fsDL (non-comp)	(k.s.i.)	12.4	21.4	7.0	15.1	6.8	21.1	12.2
fsDL (comp)	(k.s.i.)	5.7	-	3.7	-	3.6	-	5.6
fs$\frac{5}{3}$ (LL+Imp)	(k.s.i.)	25.8	17.7	22.8	16.6	22.6	17.6	25.6
fs (Overload)	(k.s.i.)	43.9	39.1	33.5	31.7	33.1	38.6	43.5
fs (Total)	(k.s.i.)	-	-	-	-	-	-	-
VR	(k)	56.9	-	46.0	-	45.9	-	56.9

INTERIOR GIRDER REACTION TABLE

		W. Abut.	Pier 1	Pier 2	Pier 3	E. Abut.
RDL	(k)	45.7	130.8	109.4	129.9	45.5
RLL	(k)	42.4	56.0	54.2	55.8	42.3
Imp.	(k)	10.6	14.0	13.6	14.0	10.6
R (Total)	(k)	98.7	200.8	177.2	199.7	98.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See AASHTO 10.38)
VR is the maximum Live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
Ma (Applied Moment)=1.3[MDL + MsDL + $\frac{5}{3}$(MLL + M(Imp))].
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
fs (Overload) is the sum of the stresses due to MDL + MsDL + $\frac{5}{3}$(MLL + M(Imp)).
fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[MDL + MsDL + $\frac{5}{3}$(MLL + M(Imp))].

TOP OF BEAM ELEVATIONS (For Fabrication Use Only)

LOCATION	WEST ABUT.	EAST ABUT	PIER 1	PIER 2	PIER 3	SPLICE 1W	SPLICE 2W	SPLICE 3W	SPLICE 4W	SPLICE 5W	SPLICE 6W
Beam 1W	638.71	641.77	639.48	640.37	641.19	639.35	639.66	640.25	640.48	641.05	641.29
Beam 2W	638.86	641.93	639.64	640.53	641.35	639.51	639.81	640.41	640.64	641.21	641.44
Beam 3W	639.02	642.09	639.80	640.68	641.51	639.67	639.97	640.57	640.79	641.37	641.60
Beam 4W	639.15	642.21	639.92	640.81	641.63	639.79	640.09	640.69	640.92	641.49	641.73
Beam 5W	639.26	642.32	640.03	640.92	641.74	639.90	640.21	640.80	641.03	641.60	641.84
Beam 6W	639.14	642.20	639.91	640.80	641.63	639.78	640.09	640.68	640.91	641.48	641.72
Beam 7W	639.01	642.08	639.79	640.67	641.50	639.66	639.96	640.56	640.78	641.36	641.59
Beam 8W	638.85	641.92	639.63	640.52	641.34	639.50	639.80	640.40	640.63	641.20	641.43
Beam 9W	638.70	641.76	639.47	640.36	641.18	639.34	639.65	640.24	640.47	641.04	641.28
Beam 10W	638.54	641.60	639.31	640.20	641.03	639.18	639.49	640.08	640.31	640.88	641.12

NOTES:

All material shall be AASHTO M270 Grade 50.

NTR indicates notch toughness requirements.

See Sheet SW-19 for typical beam elevation and framing details.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

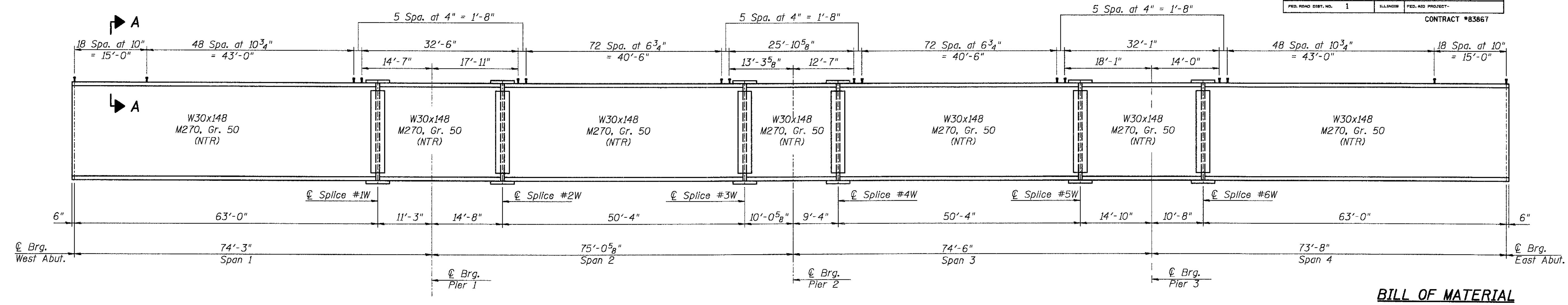
STEEL FRAMING PLAN
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	60
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SW-19
SW-30 SHEETS



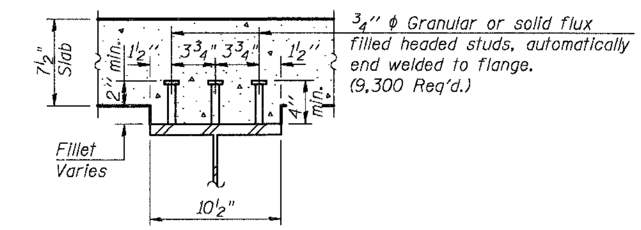
TYPICAL BEAM ELEVATION

"NTR" denotes beams to which Notch Toughness requirements are applicable

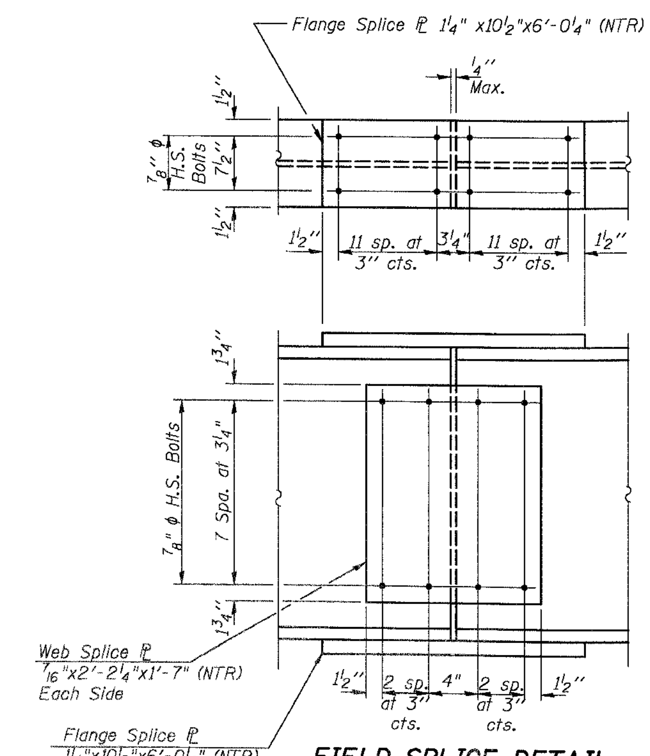
BILL OF MATERIAL

Item	Unit	Quantity
Furnishing & Erecting Structural Steel	L. Sum	0.66
Stud Shear Connectors	Each	9,300

Notes:
Work this Sheet with Sheets SW-18, SW-20 & SW-21.
All splice material shall be M270 Grade 50.

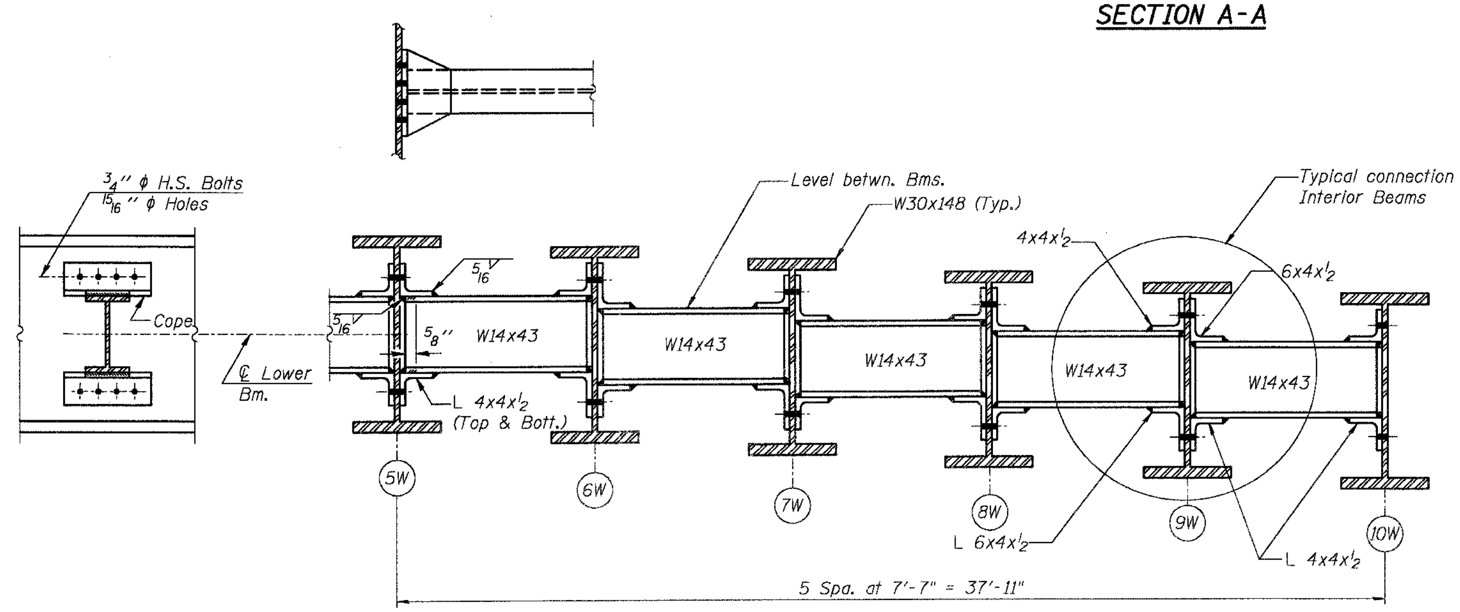


SECTION A-A



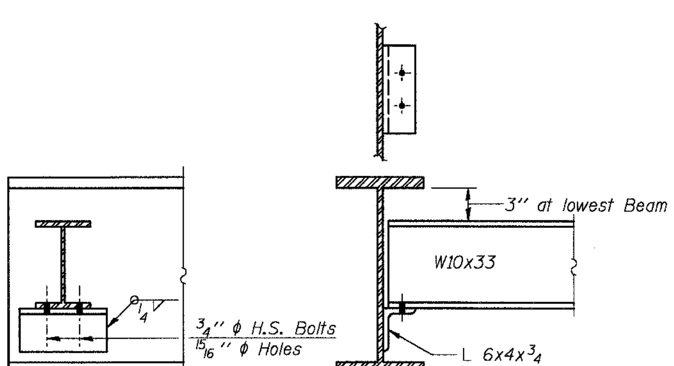
FIELD SPLICE DETAIL

(60 Required)



DIAPHRAGM D2

(189 Required)



END DIAPHRAGM D1

(18 Required)

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

Note:
Two hardened washers shall be required over all oversize holes for diaphragms.

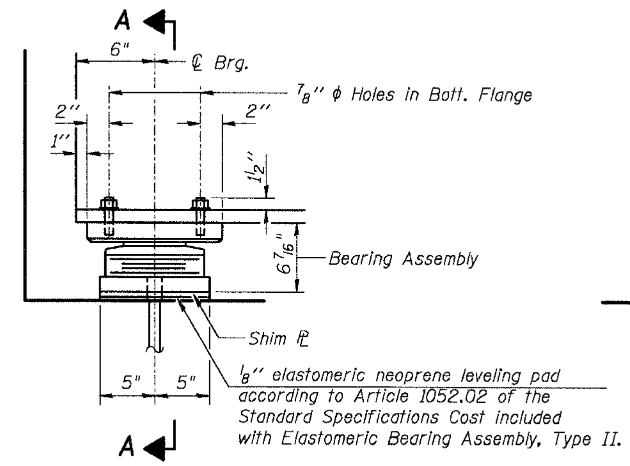
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

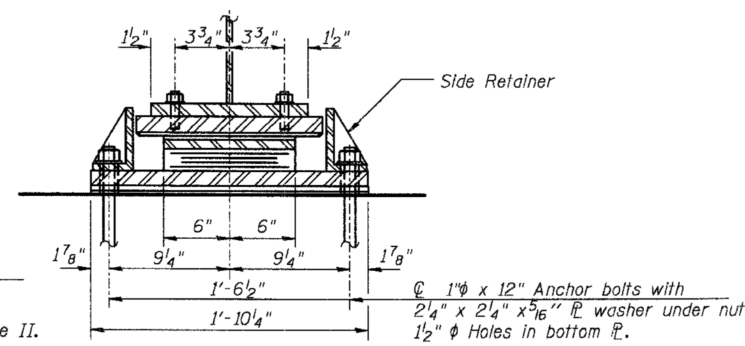
CITY OF AURORA

STEEL FRAMING DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006



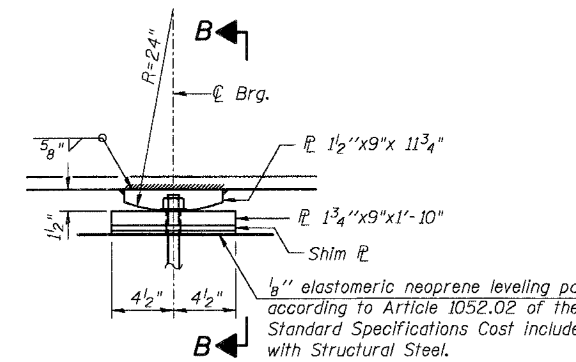
ELEVATION AT ABUTS.



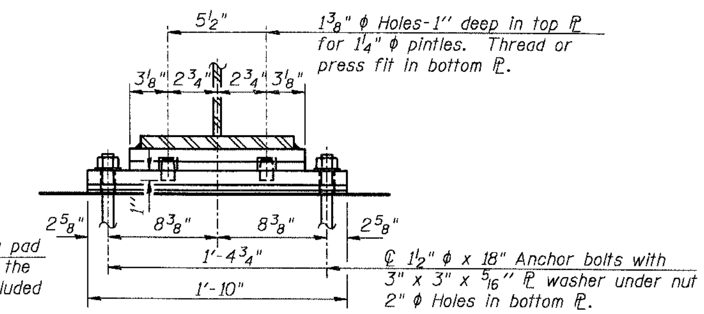
SECTION A-A

TYPE II ELASTOMERIC EXP. BRG.

(20 Required)



ELEVATION AT PIER 2

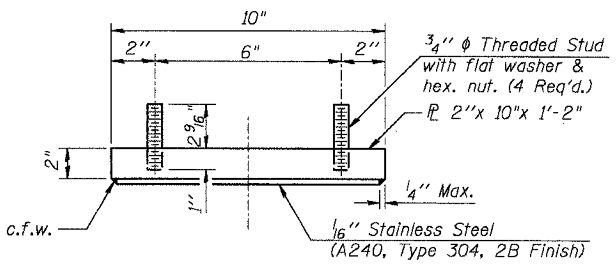


SECTION B-B

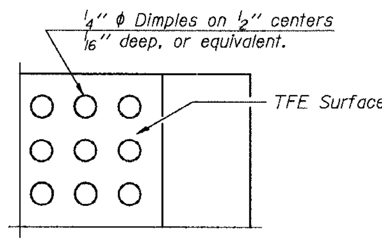
FIXED BEARING

(10 Required)

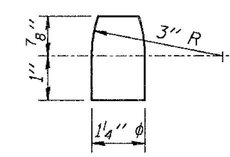
Notes:
See sheet SW-22 for Anchor Bolt installation.



TOP BEARING ASSEMBLY

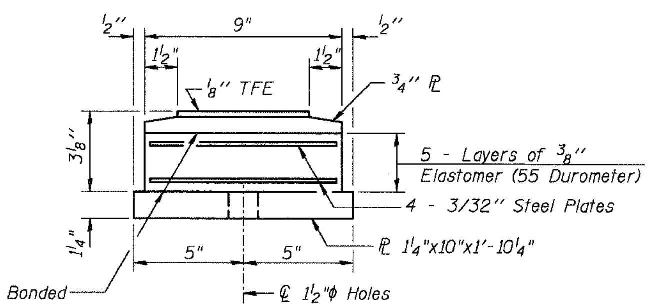


PLAN-TFE SURFACE

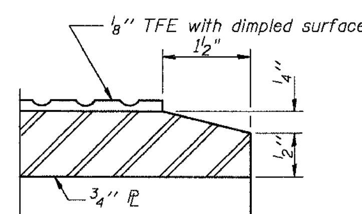


PINTLE

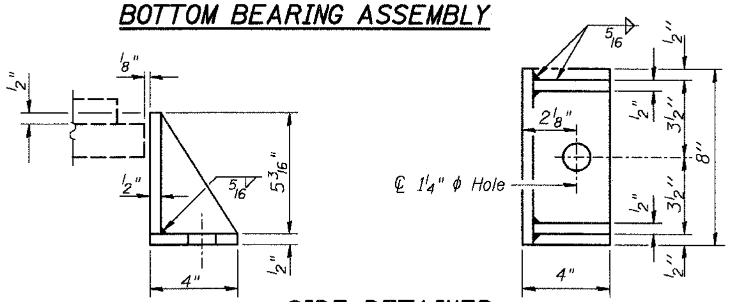
(Fy=50 ksi)



BOTTOM BEARING ASSEMBLY



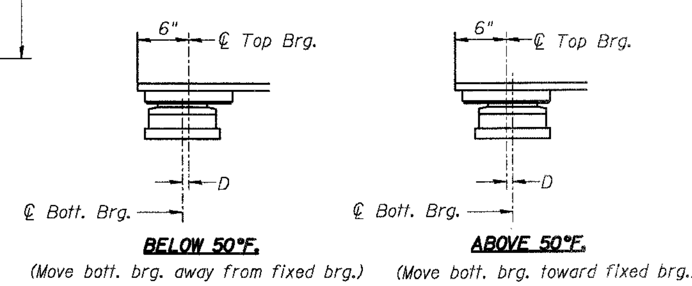
SECTION THRU TFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

Notes:
The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.
Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type II	Each	20

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

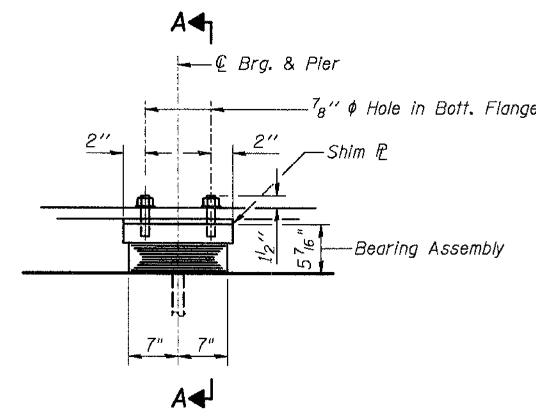
BEARING DETAILS I
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

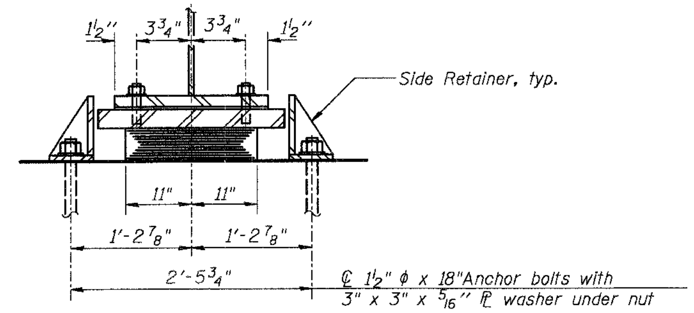
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	62
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SW-21
SW-30 SHEETS



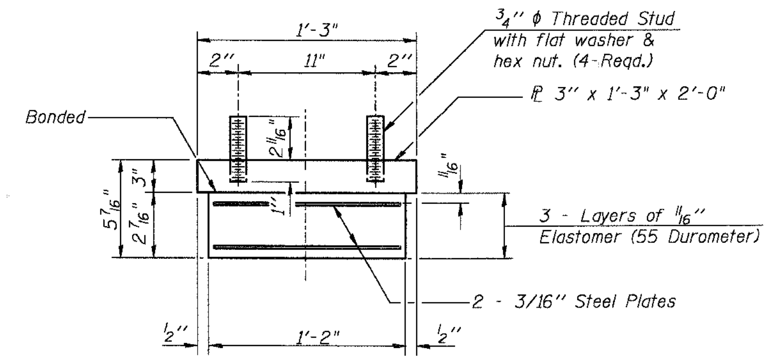
ELEVATION AT PIERS 1 & 3



SECTION A-A

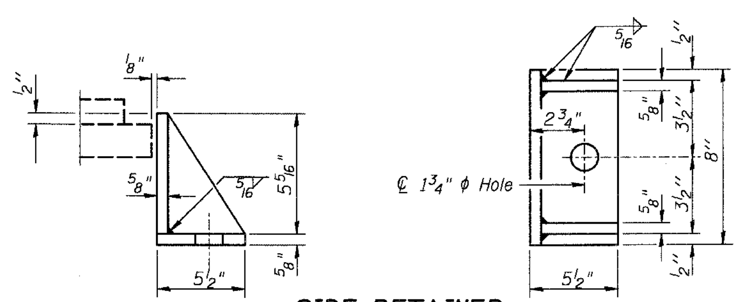
TYPE I ELASTOMERIC EXP. BRG.
(20 Required)

Notes:
See sheet SW-22 for Anchor Bolt installation.



BEARING ASSEMBLY

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



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	20

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

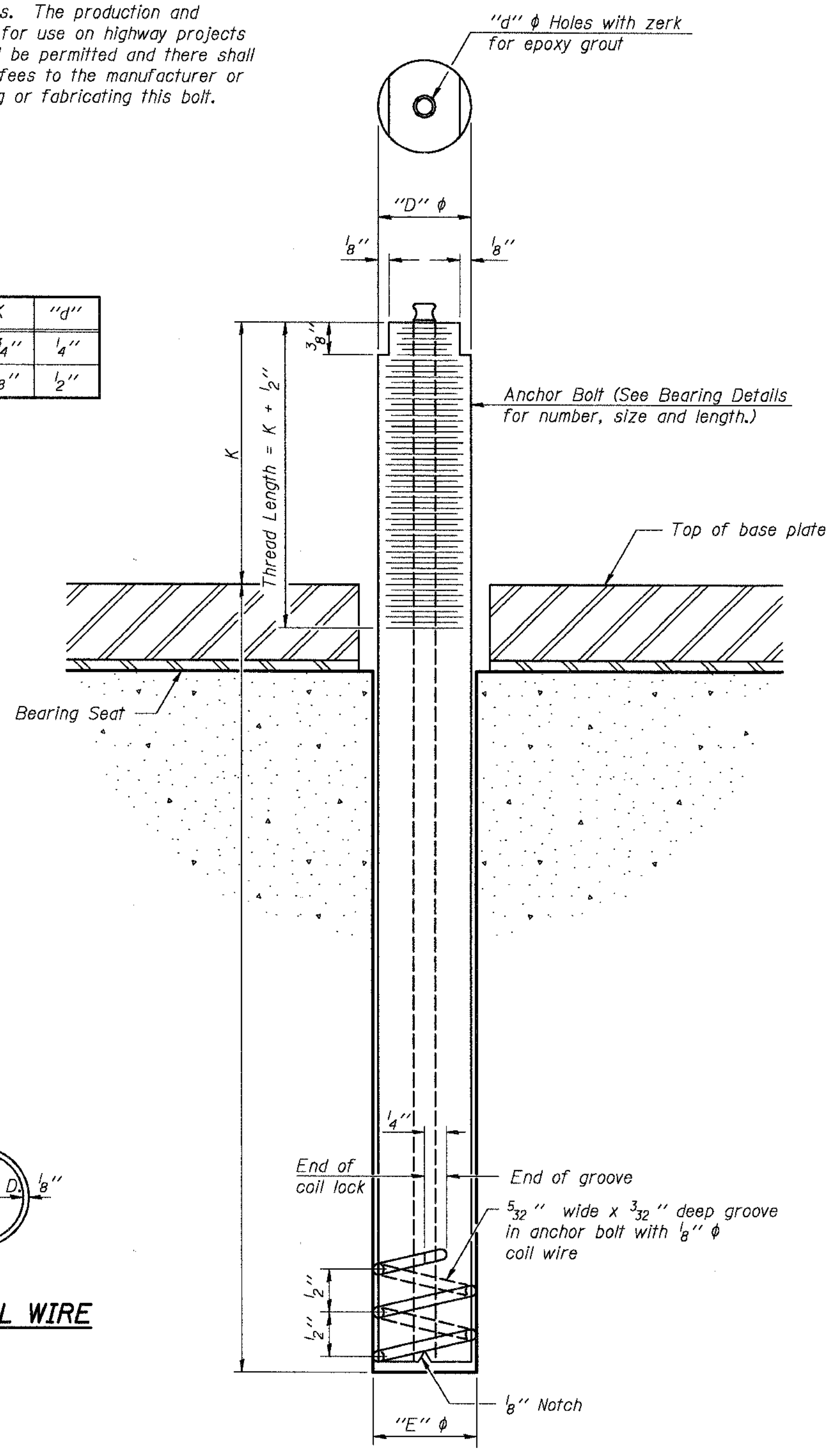
REVISIONS	
NAME	DATE

CITY OF AURORA

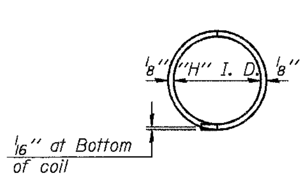
BEARING DETAILS II
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Size	Type
Abutments	1" ϕ	A 307
Piers 1 & 3	1 1/2" ϕ	M 164
Pier 2	1 1/2" ϕ	A 307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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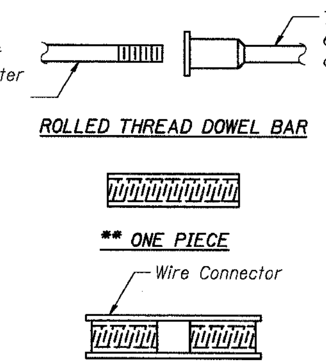
CITY OF AURORA

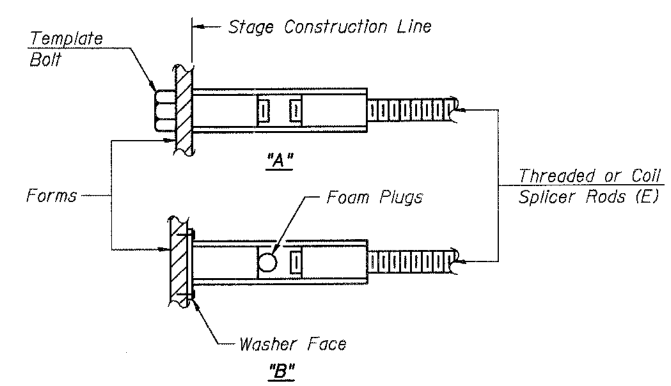
ANCHOR BOLT DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006



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.

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:

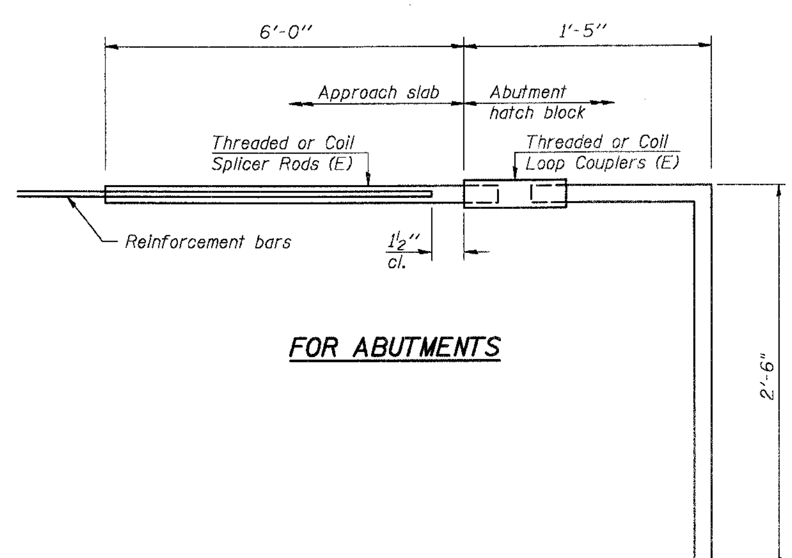
① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

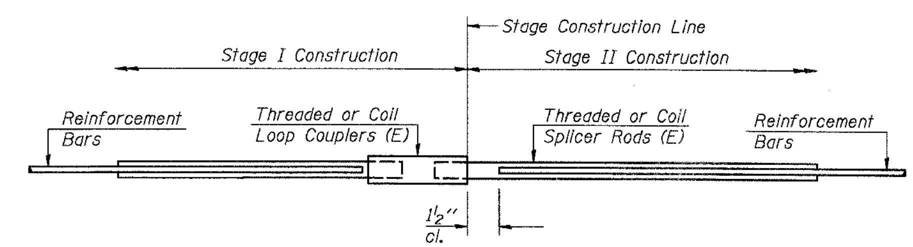
BAR SPLICER ASSEMBLIES			
		Strength Requirements	
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



FOR ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 112



STANDARD

Bar Size	No. Assemblies Required	Location
#5	599	Deck
#5	450	Deck
#5	20	W. Abut.
#6	4	W. Abut.
#7	7	W. Abut.
#5	11	Pier 1
#8	10	Pier 1
#5	11	Pier 2
#8	10	Pier 2
#5	11	Pier 3
#8	10	Pier 3
#5	20	E. Abut.
#6	4	E. Abut.
#7	7	E. Abut.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

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NAME	DATE

CITY OF AURORA

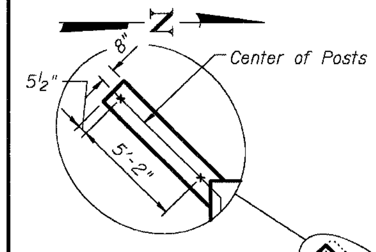
BAR SPLICER DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	65

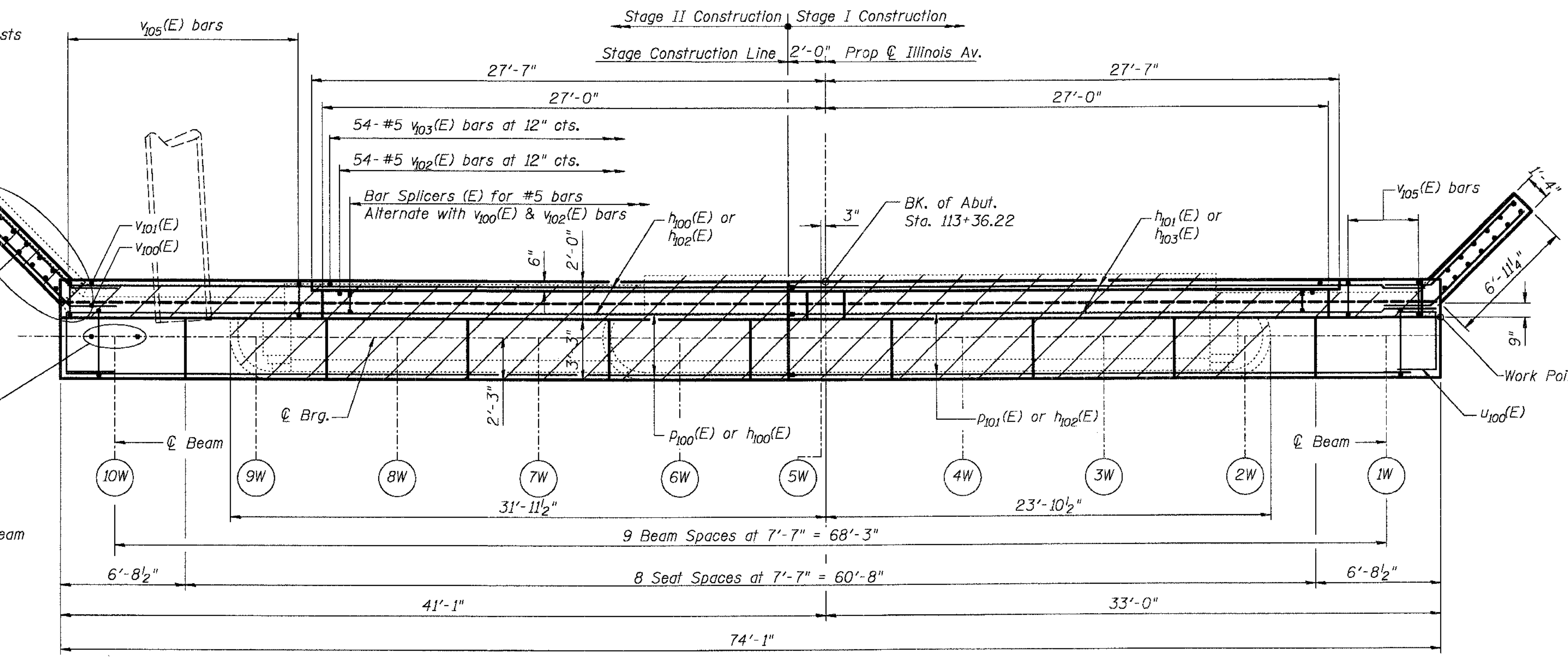
CONTRACT #83867

SHEET NO. SW-24
SW-30 SHEETS

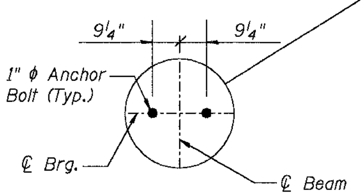


POST SPACING

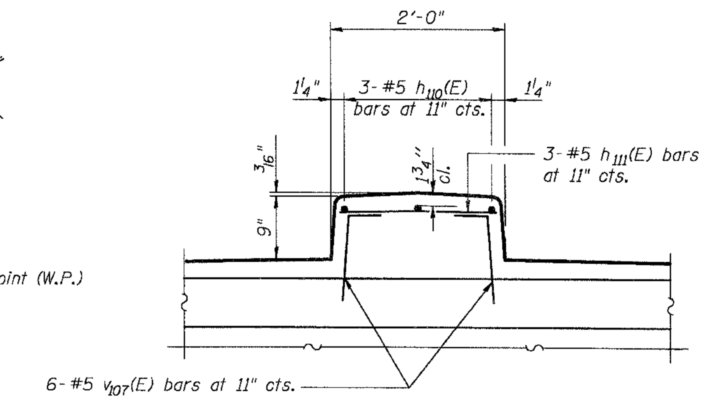
(See sheet SW-17 for railing details) typ. each wingwall



TOP PLAN



ANCHOR BOLT DETAIL



MEDIAN DETAIL

NOTES:

Work this sheet with sheets SW-17, and SW-25.

Space reinforcement in abutment seat to miss anchor bolts.

Contractor to field verify dimensions of existing abutment and wingwalls and locations of existing storm pipe in wingwall.

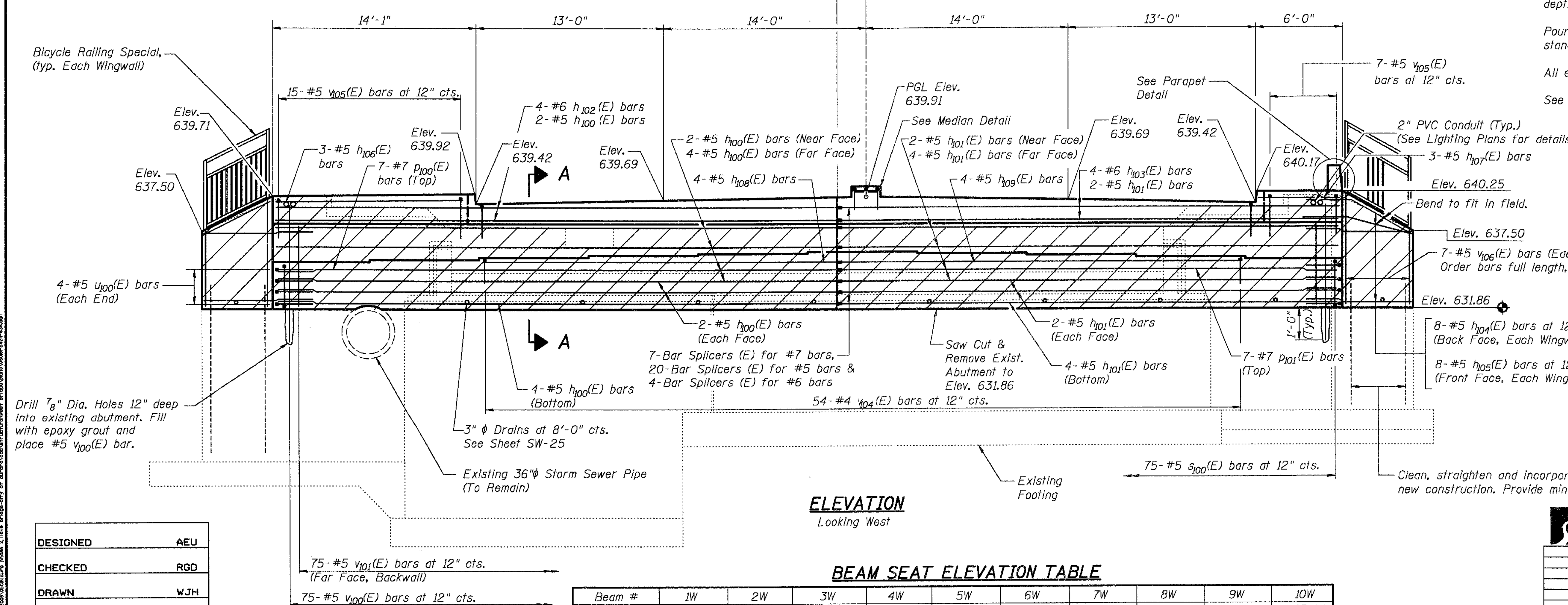
Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Cost included in pay item "Concrete Removal".

Drill and epoxy grout #5 v_{100}(E) bars in drilled holes with a minimum depth of 12" according to to Article 584 of the Standard Specs.

Pour steps monolithically with abutment cap. All edges shall have standard ¾" chamfers except as noted.

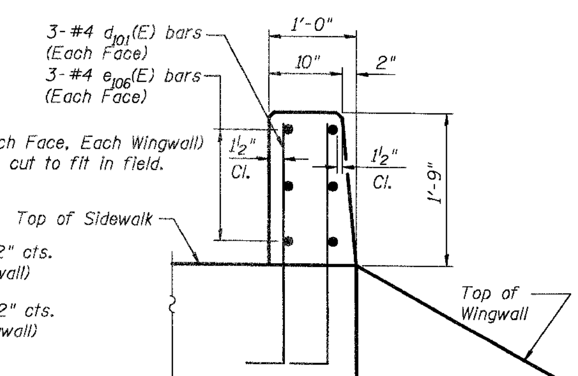
All elevations given at back of abutment unless noted otherwise.

See Sheet SW-25 for Section A-A.



ELEVATION

Looking West



PARAPET DETAIL

BEAM SEAT ELEVATION TABLE

Beam #	1W	2W	3W	4W	5W	6W	7W	8W	9W	10W
Seat Elevation	635.61	635.77	635.93	636.05	636.16	636.04	635.92	635.76	635.60	635.44

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

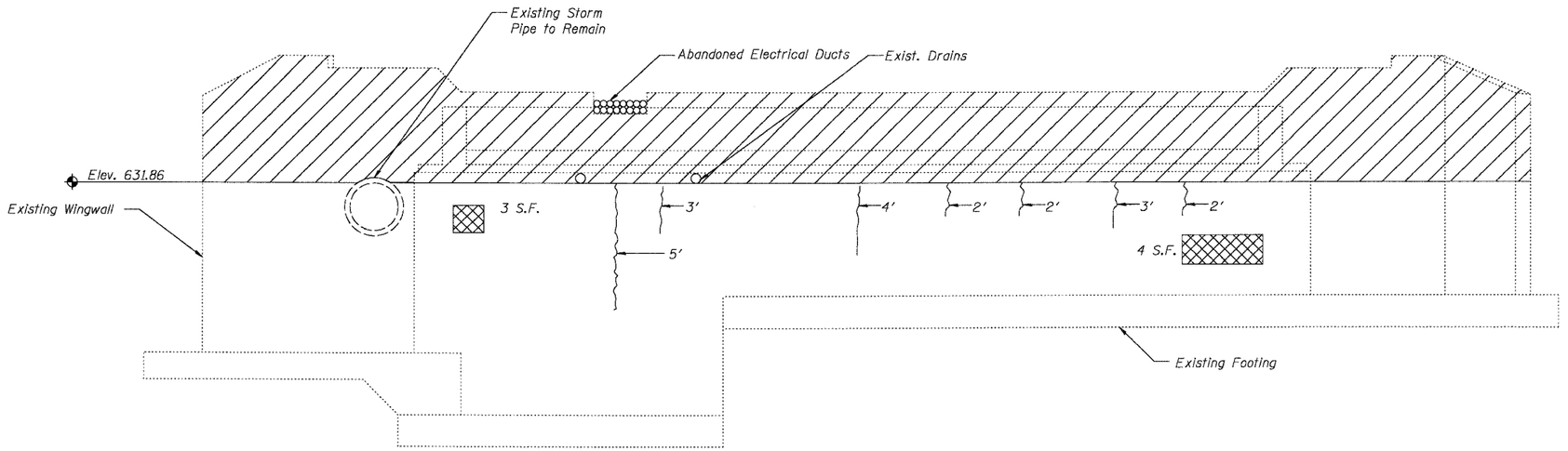
WEST ABUTMENT PLAN AND ELEVATION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

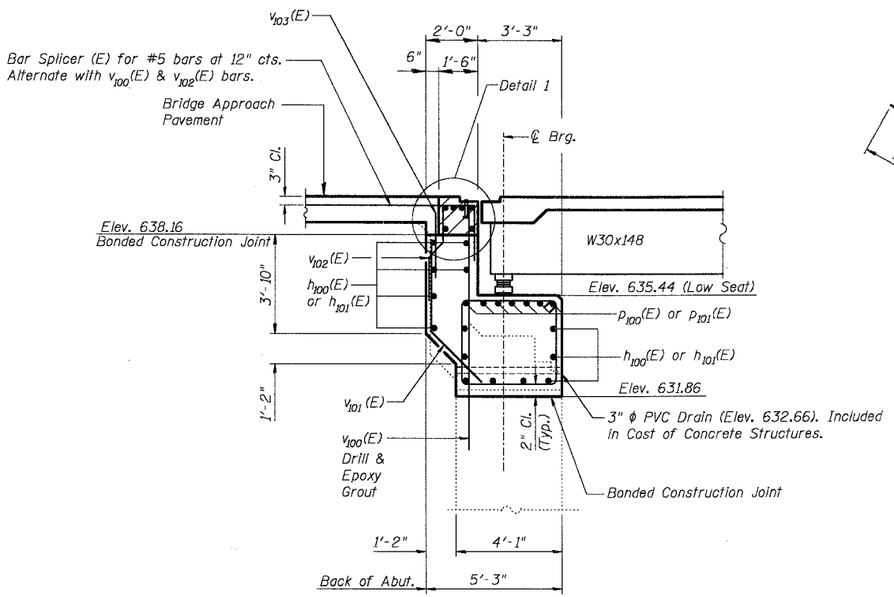
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	66
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

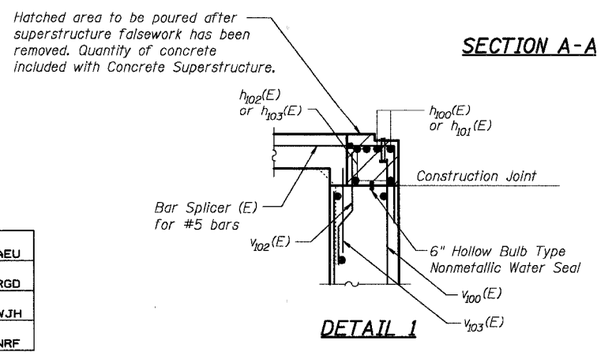
SHEET NO. SW-25
SW-30 SHEETS



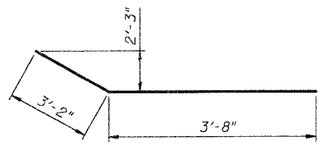
ELEVATION
Looking West



SECTION A-A

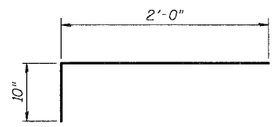


DETAIL 1

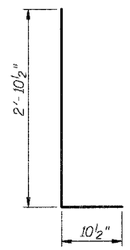


BAR v_{101} (E)

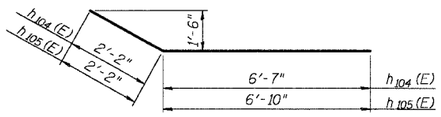
BAR v_{102} (E)



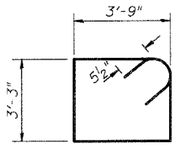
BAR v_{107} (E)



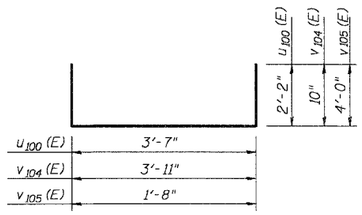
BAR d_{101} (E)



BARS h_{104} (E) & h_{105} (E)



BAR s_{100} (E)



BARS u_{100} (E), v_{104} (E) & v_{105} (E)

BILL OF MATERIAL
WEST ABUTMENT

Bar	No.	Size	Length	Shape
d_{101}(E)	6	#6	3'-9"	
e_{106}(E)	6	#4	1'-8"	
h_{100}(E)	16	#5	38'-10"	
h_{101}(E)	16	#5	34'-8"	
h_{102}(E)	4	#6	38'-10"	
h_{103}(E)	4	#6	34'-8"	
h_{104}(E)	16	#5	8'-9"	
h_{105}(E)	16	#5	9'-0"	
h_{106}(E)	3	#5	13'-9"	
h_{107}(E)	3	#5	5'-8"	
h_{108}(E)	4	#5	16'-10"	
h_{109}(E)	4	#5	20'-3"	
h_{110}(E)	3	#5	1'-2"	
h_{111}(E)	3	#5	1'-8"	
p_{100}(E)	7	#7	38'-10"	
p_{101}(E)	7	#7	34'-8"	
s_{100}(E)	75	#5	14'-11"	
u_{100}(E)	8	#5	7'-11"	
v_{100}(E)	75	#5	8'-4"	
v_{101}(E)	75	#5	6'-10"	
v_{102}(E)	54	#5	2'-6"	
v_{103}(E)	54	#5	2'-4"	
v_{104}(E)	54	#4	5'-7"	
v_{105}(E)	22	#5	9'-8"	
v_{106}(E)	28	#5	8'-0"	
v_{107}(E)	6	#5	2'-10"	
Reinforcement Bars, Epoxy Coated		Pound	6,650	
Concrete Removal		Cu. Yd.	41.2	
Concrete Structures		Cu. Yd.	74.0	
Structure Excavation		Cu. Yd.	53	
Bridge Seat Sealer		Sq. Ft.	241	
Epoxy Crack Sealing		Foot	21	
Structural Repair of Concrete (Less than or equal to 5")		Sq. Ft.	7	
Bicycle Railing, Special		Foot	11	

LEGEND

Indicates Concrete Removal Areas

Indicates Epoxy Crack Sealing

Indicates Structural Repair of Concrete

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

Work this sheet with sheet SW-24.

See Sheet SW-2 for abutment drainage detail.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

WEST ABUTMENT DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

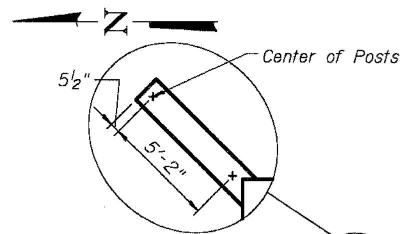
DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	67

FED. ROAD DIST. NO. 1 — ILLINOIS — FED. AID PROJECT-

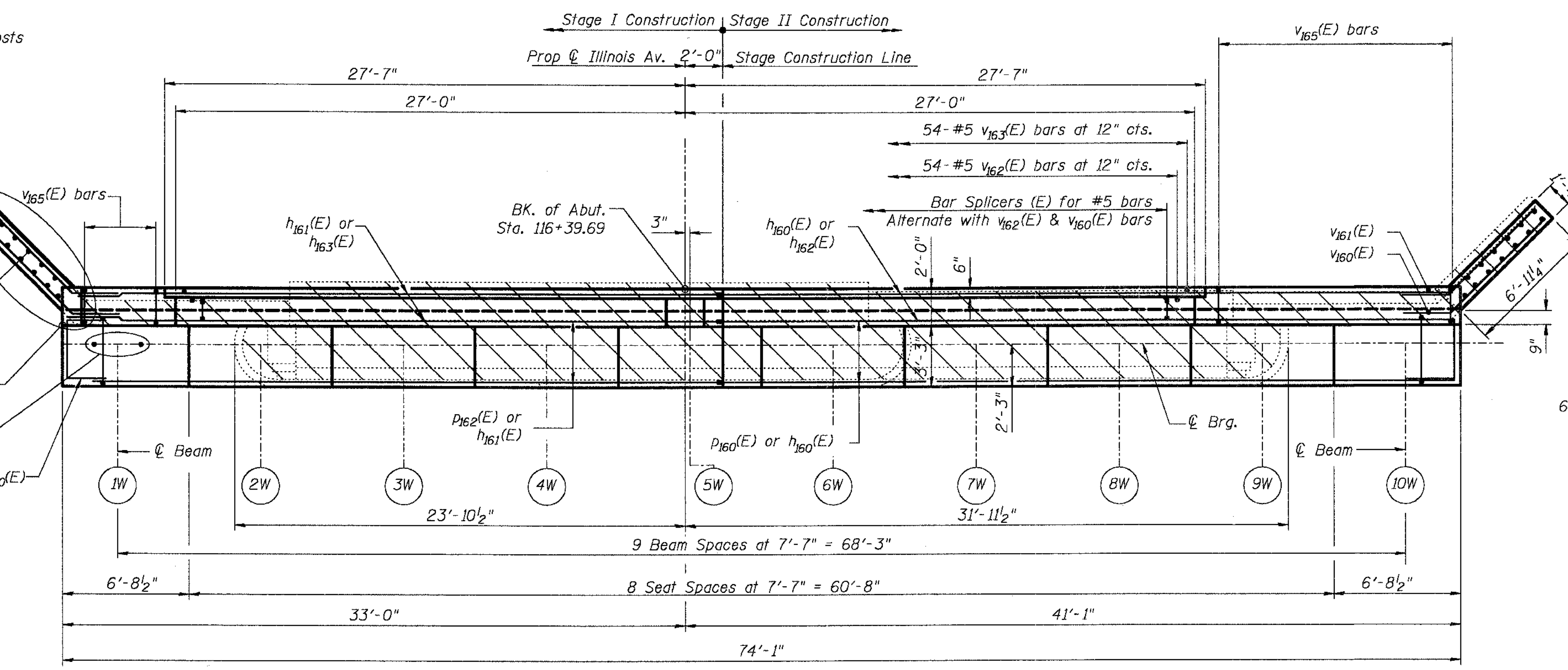
CONTRACT #83867

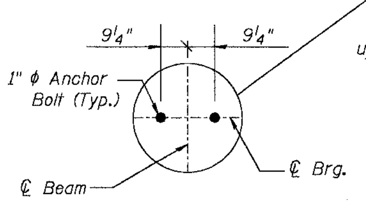
SHEET NO. SW-26
SW-30 SHEETS



POST SPACING

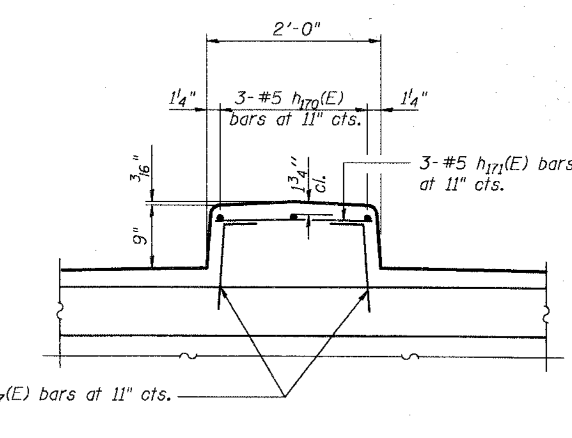
(See sheet SW-17 for railing details) typ. each wingwall





ANCHOR BOLT DETAIL

TOP PLAN



MEDIAN DETAIL

NOTES:

Work this sheet with sheet SW-27 and SW-17.

Space reinforcement in abutment seat to miss anchor bolts.

Contractor to field verify dimensions of existing abutment and wingwalls and locations of existing storm pipe in wingwall.

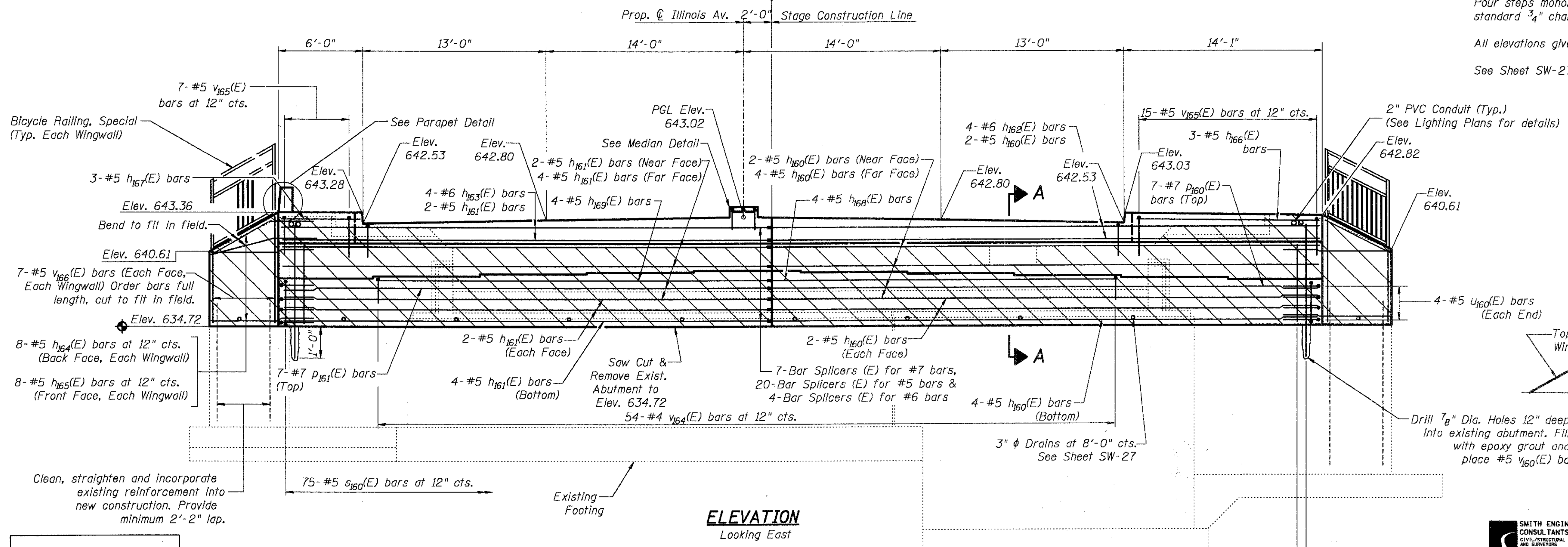
Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Cost included in pay item "Concrete Removal".

Drill and epoxy grout #5 v_{160}(E) bars in drilled holes with a minimum depth of 12" according to to Article 584 of the Standard Specs.

Pour steps monolithically with abutment cap. All edges shall have standard ¾" chamfers except as noted.

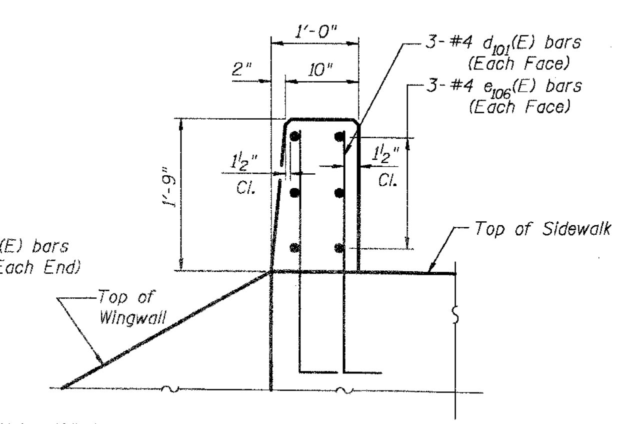
All elevations given at back of abutment unless noted otherwise.

See Sheet SW-27 for Section A-A.



ELEVATION

Looking East



PARAPET DETAIL

BEAM SEAT ELEVATION TABLE

Beam #	1W	2W	3W	4W	5W	6W	7W	8W	9W	10W
Seat Elevation	638.67	638.83	638.99	639.11	639.22	639.10	638.98	638.82	638.66	638.50

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

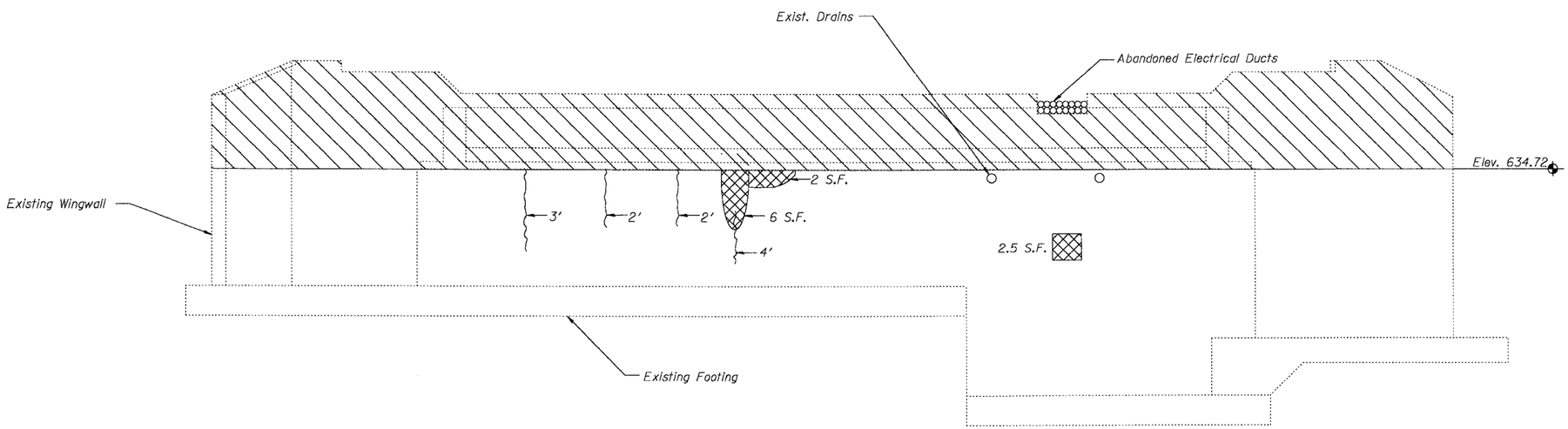
EAST ABUTMENT PLAN AND ELEVATION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

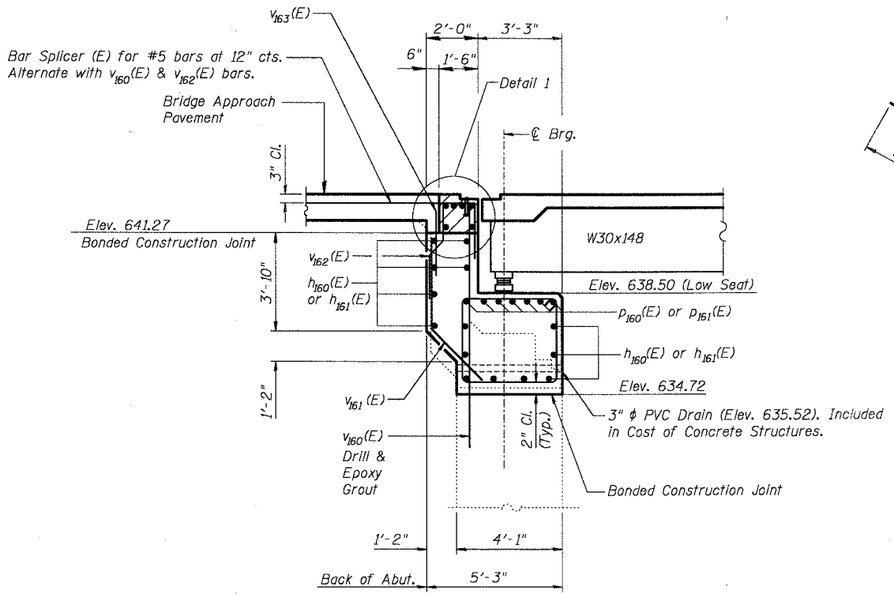
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	68
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

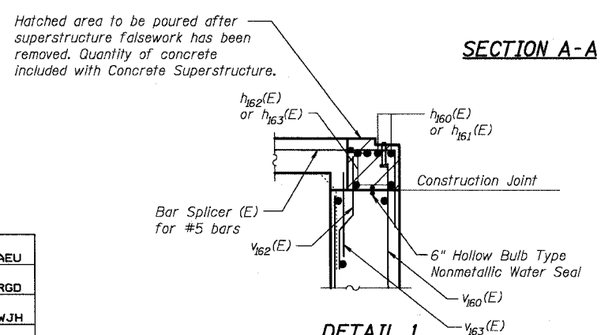
SHEET NO. SW-27
SW-30 SHEETS



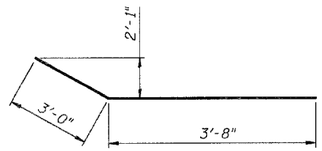
ELEVATION
Looking East



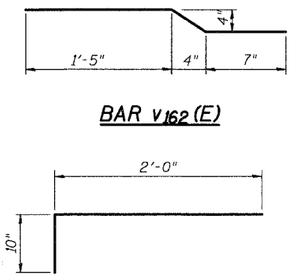
SECTION A-A



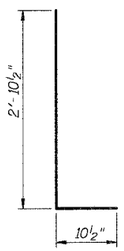
DETAIL 1



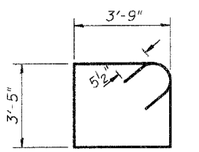
BAR v_{161} (E)



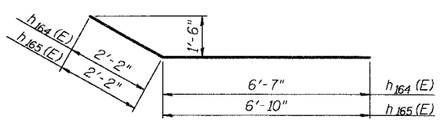
BAR v_{167} (E)



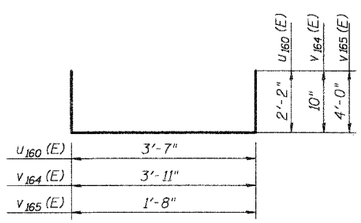
BAR d_{101} (E)



BAR s_{160} (E)



BARS h_{164} (E) & h_{165} (E)



BARS u_{160} (E), v_{164} (E) & v_{165} (E)

LEGEND

Indicates Concrete Removal Areas

Indicates Epoxy Crack Sealing

Indicates Structural Repair of Concrete

BILL OF MATERIAL
EAST ABUTMENT

Bar	No.	Size	Length	Shape
d_{101}(E)	6	#6	3'-9"	
e_{106}(E)	6	#4	1'-8"	
h_{160}(E)	16	#5	38'-10"	
h_{161}(E)	16	#5	34'-8"	
h_{162}(E)	4	#6	38'-10"	
h_{163}(E)	4	#6	34'-8"	
h_{164}(E)	16	#5	8'-9"	
h_{165}(E)	16	#5	9'-0"	
h_{166}(E)	3	#5	13'-9"	
h_{167}(E)	3	#5	5'-8"	
h_{168}(E)	4	#5	16'-10"	
h_{169}(E)	4	#5	20'-3"	
h_{170}(E)	3	#5	1'-2"	
h_{171}(E)	3	#5	1'-8"	
p_{160}(E)	7	#7	38'-10"	
p_{161}(E)	7	#7	34'-8"	
s_{160}(E)	75	#5	15'-3"	
u_{160}(E)	8	#5	7'-11"	
v_{160}(E)	75	#5	8'-4"	
v_{161}(E)	75	#5	6'-8"	
v_{162}(E)	54	#5	2'-6"	
v_{163}(E)	54	#5	2'-4"	
v_{164}(E)	54	#4	5'-7"	
v_{165}(E)	22	#5	9'-8"	
v_{166}(E)	28	#5	8'-3"	
v_{167}(E)	6	#5	2'-10"	
Reinforcement Bars, Epoxy Coated		Pound	6,670	
Concrete Removal		Cu. Yd.	41.2	
Concrete Structures		Cu. Yd.	74.0	
Structure Excavation		Cu. Yd.	53	
Bridge Seat Sealer		Sq. Ft.	241	
Epoxy Crack Sealing		Foot	11	
Structural Repair of Concrete (Less than or equal to 5")		Sq. Ft.	11	
Bicycle Railing, Special		Foot	11	

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

Work this sheet with sheet SW-26.

See Sheet SW-2 for abutment drainage detail.

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

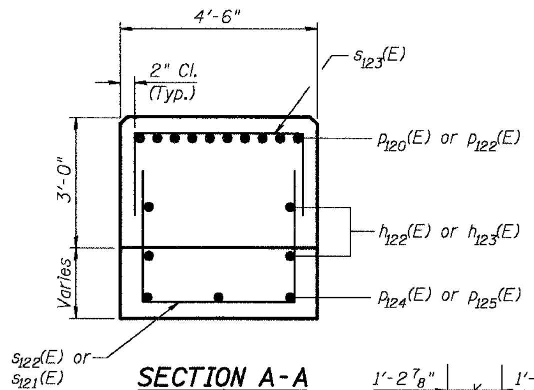
REVISIONS

NAME	DATE

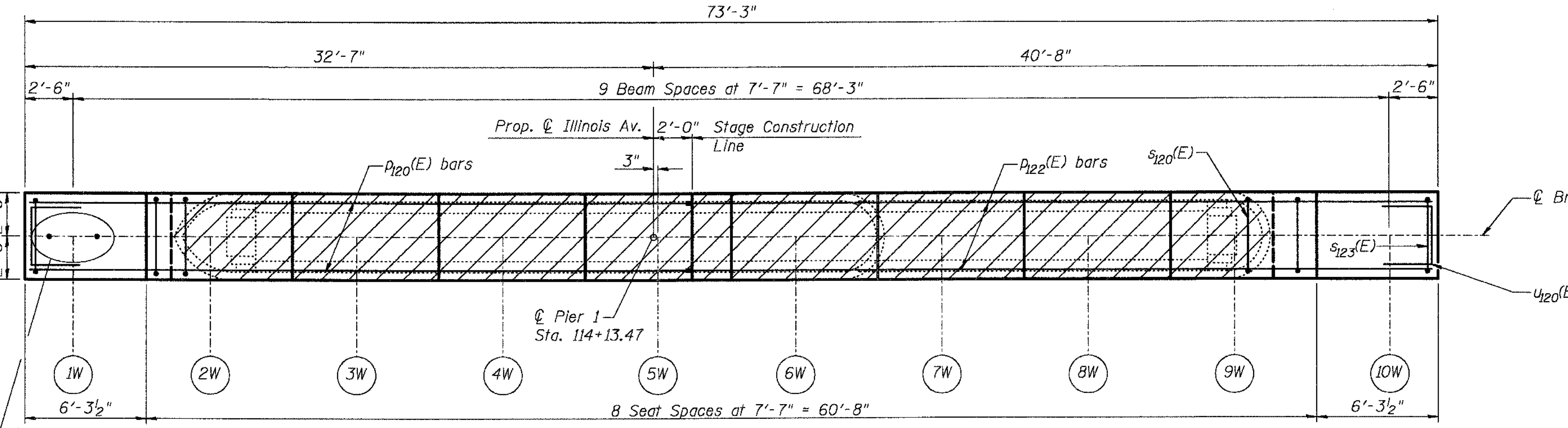
CITY OF AURORA

EAST ABUTMENT DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

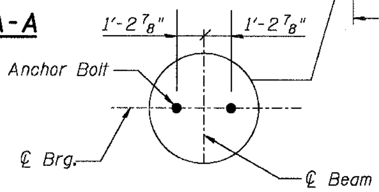
DATE 7-28-2006



SECTION A-A



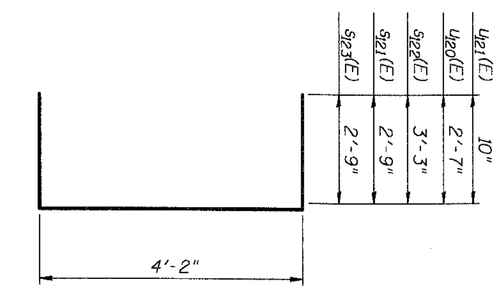
TOP PLAN



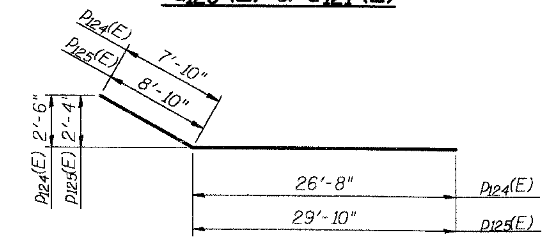
ANCHOR BOLT DETAIL

BEAM SEAT ELEVATION TABLE

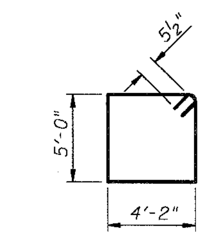
Beam #	1W	2W	3W	4W	5W	6W	7W	8W	9W	10W
Seat Elevation	636.47	636.63	636.79	636.91	637.02	636.90	636.78	636.62	636.46	636.30



BARS s_{123} (E), s_{121} (E), s_{122} (E)
u_{120} (E) & u_{121} (E)



BARS p_{124} (E) & p_{125} (E)



BAR s_{120}(E)

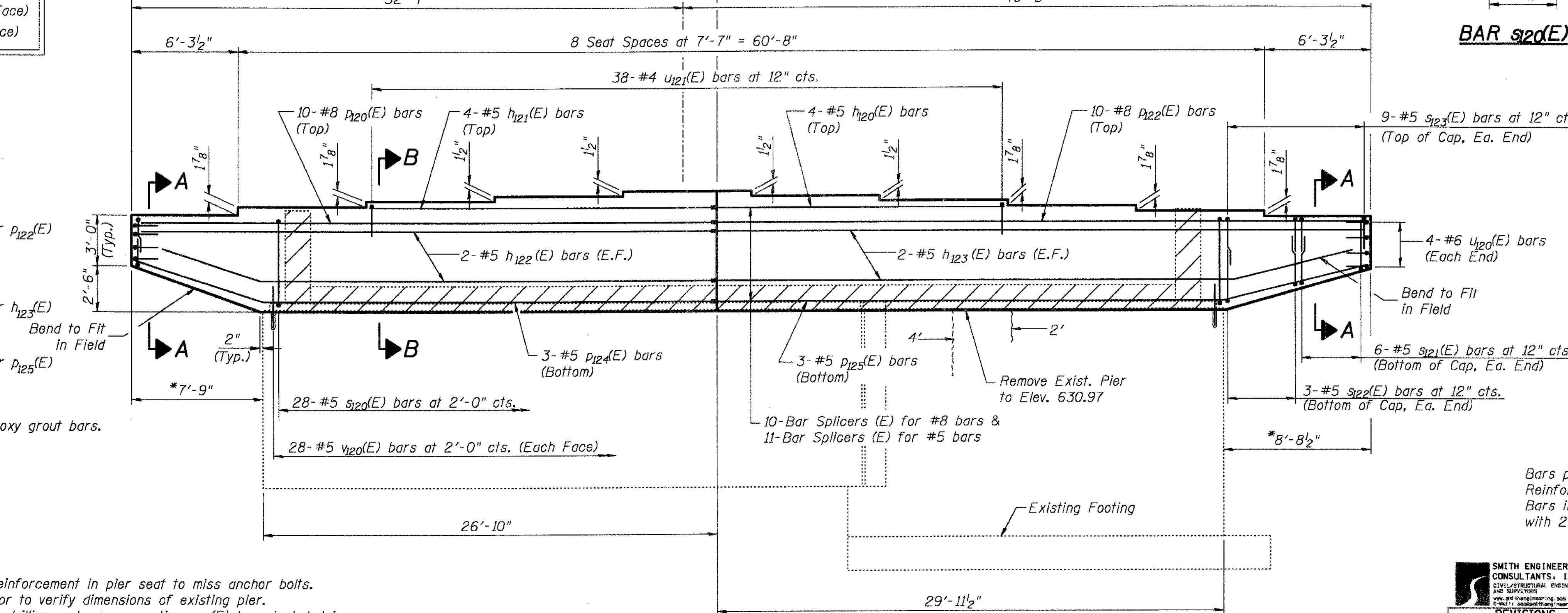
BILL OF MATERIAL
PIER 1

Bar	No.	Size	Length	Shape
h_{120}(E)	4	#5	16'-10"	——
h_{121}(E)	4	#5	20'-3"	——
h_{122}(E)	4	#5	34'-3"	——
h_{123}(E)	4	#5	38'-4"	——
p_{120}(E)	10	#8	34'-3"	——
p_{122}(E)	10	#8	38'-4"	——
p_{124}(E)	3	#5	34'-6"	
p_{125}(E)	3	#5	38'-8"	
s_{120}(E)	28	#5	19'-3"	□
s_{121}(E)	12	#5	9'-8"	⊓
s_{122}(E)	6	#5	10'-8"	⊓
s_{123}(E)	18	#5	9'-8"	⊓
u_{120}(E)	8	#6	9'-4"	⊓
u_{121}(E)	38	#4	5'-10"	⊓
v_{120}(E)	56	#5	2'-10"	——
Reinforcement Bars, Epoxy Coated			Pound	3,980
Concrete Removal			Cu. Yd.	14.1
Concrete Structures			Cu. Yd.	66.6
Epoxy Crack Sealing			Foot	6

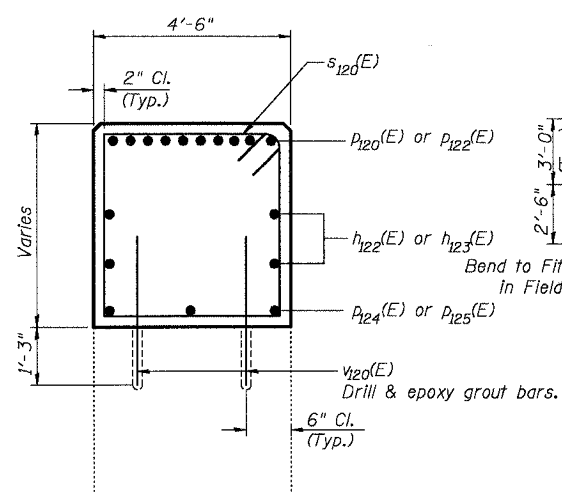
Bars p_{121}(E) & p_{123}(E) are not used.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2 - #5 etc. indicates 1 line of bars with 2 lengths per line.

LEGEND:

- Indicates Concrete Removal Areas
- Indicates Epoxy Crack Sealing (Near Face)
- Indicates Epoxy Crack Sealing (Far Face)



ELEVATION
Looking East
*Measured Along ℄ of Pier



SECTION B-B

NOTES:

1. Space reinforcement in pier seat to miss anchor bolts.
2. Contractor to verify dimensions of existing pier.
3. Cost for drilling and epoxy grouting v_{120}(E) bars included in cost of Reinforcement Bars, Epoxy Coated.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

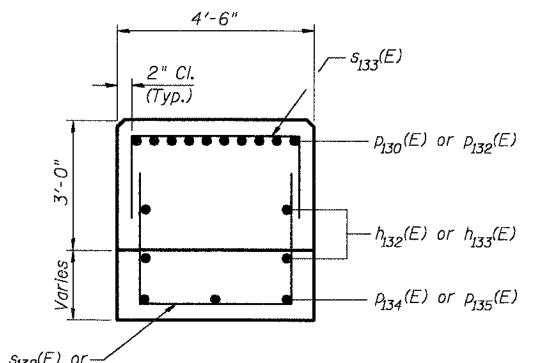
REVISIONS

NAME	DATE

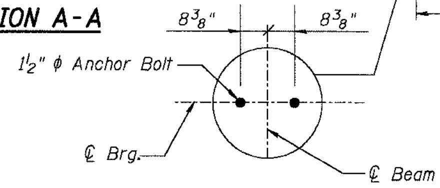
CITY OF AURORA

PIER 1 DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

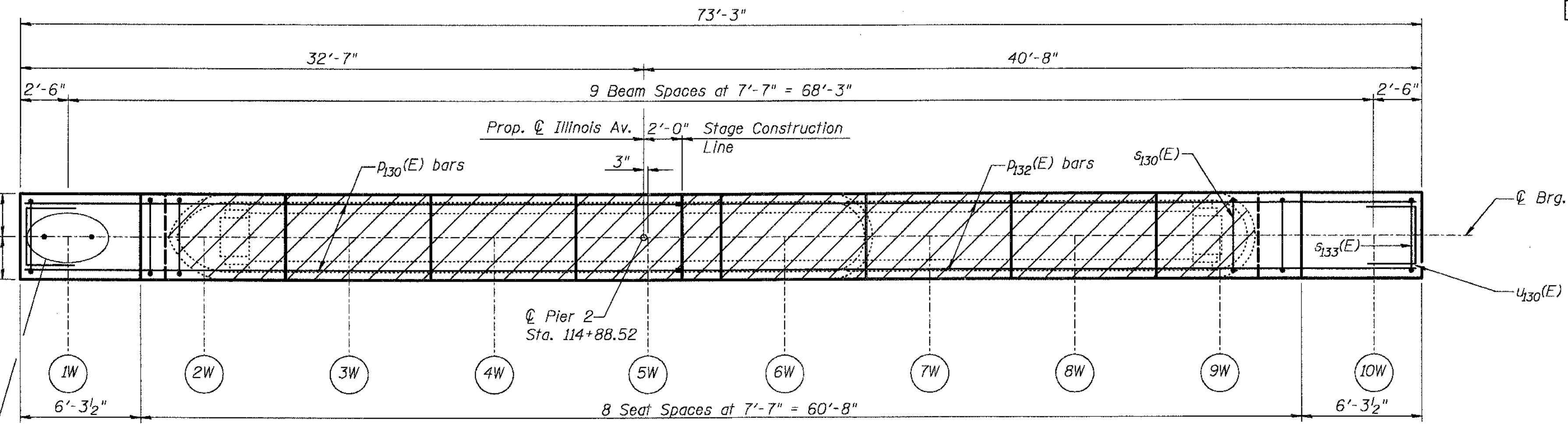
DATE 7-28-2006



SECTION A-A



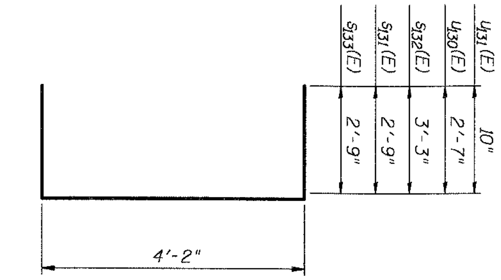
ANCHOR BOLT DETAIL



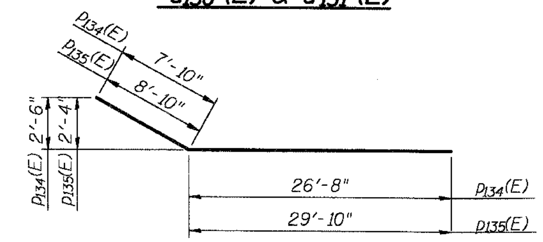
TOP PLAN

BEAM SEAT ELEVATION TABLE

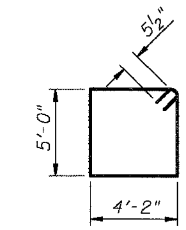
Beam #	1W	2W	3W	4W	5W	6W	7W	8W	9W	10W
Seat Elevation	637.54	637.70	637.85	637.98	638.09	637.97	637.84	637.69	637.53	637.37



BARS s_{133} (E), s_{131} (E), s_{132} (E) u_{130} (E) & u_{131} (E)



BARS p_{134} (E) & p_{135} (E)



BAR s_{130}(E)

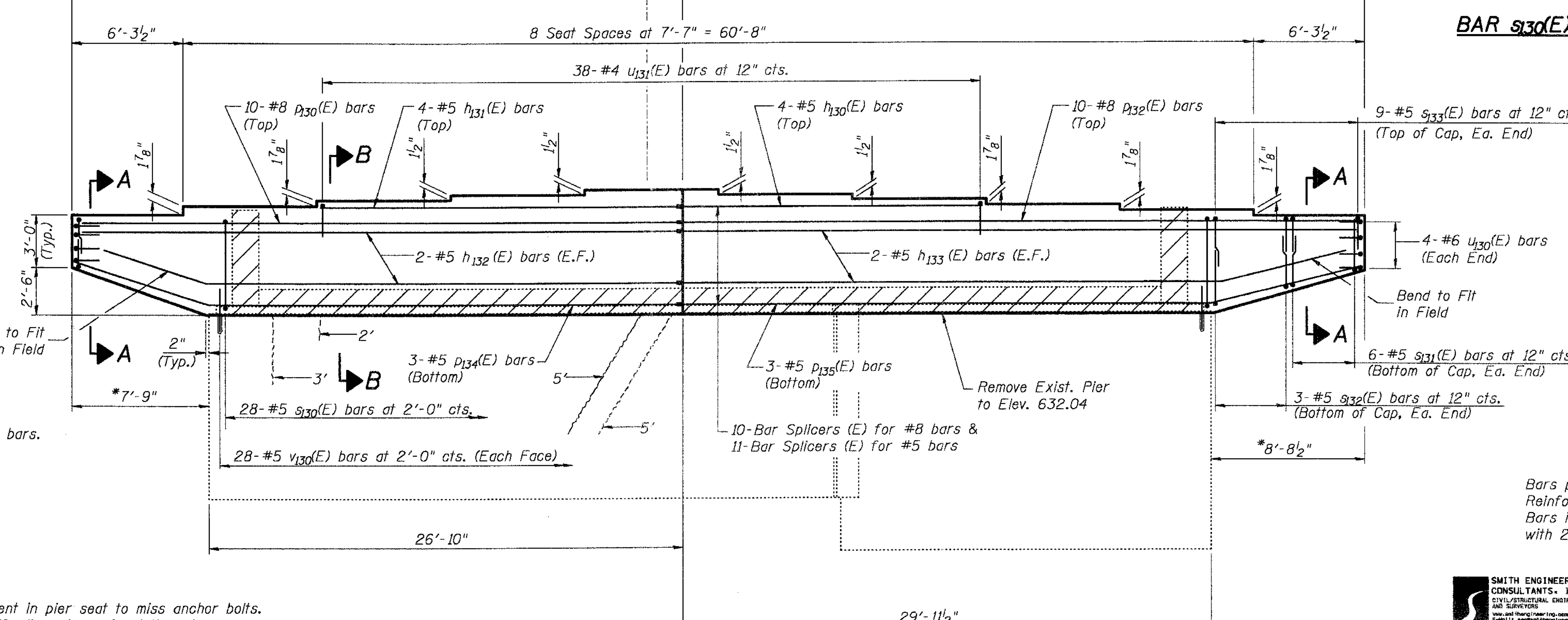
BILL OF MATERIAL
PIER 2

Bar	No.	Size	Length	Shape
h_{130}(E)	4	#5	16'-10"	—
h_{131}(E)	4	#5	20'-3"	—
h_{132}(E)	4	#5	34'-3"	—
h_{133}(E)	4	#5	38'-4"	—
p_{130}(E)	10	#8	34'-3"	—
p_{132}(E)	10	#8	38'-4"	—
p_{134}(E)	3	#5	34'-6"	⌣
p_{135}(E)	3	#5	38'-8"	⌣
s_{130}(E)	28	#5	19'-3"	□
s_{131}(E)	12	#5	9'-8"	⊓
s_{132}(E)	6	#5	10'-8"	⊓
s_{133}(E)	18	#5	9'-8"	⊓
u_{130}(E)	8	#6	9'-4"	⊓
u_{131}(E)	38	#4	5'-10"	⊓
v_{130}(E)	56	#5	2'-10"	—
Reinforcement Bars, Epoxy Coated		Pound	3,980	
Concrete Removal		Cu. Yd.	16.5	
Concrete Structures		Cu. Yd.	66.6	
Epoxy Crack Sealing		Foot	15	

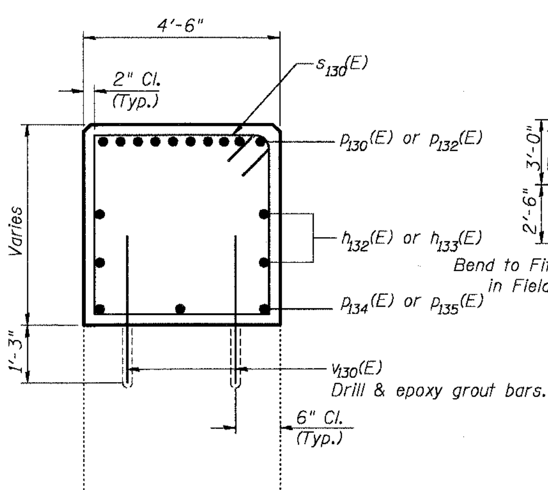
Bars p_{131}(E) & p_{133}(E) are not used.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2 - #5 etc. indicates 1 line of bars with 2 lengths per line.

LEGEND:

- (hatch) Indicates Concrete Removal Areas
- ——— Indicates Epoxy Crack Sealing (Near Face)
- - - - - Indicates Epoxy Crack Sealing (Far Face)



ELEVATION
Looking East
*Measured Along ℄ of Pier



SECTION B-B

NOTES:

1. Space reinforcement in pier seat to miss anchor bolts.
2. Contractor to verify dimensions of existing pier.
3. Cost for drilling and epoxy grouting v_{130}(E) bars included in cost of Reinforcement Bars, Epoxy Coated.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

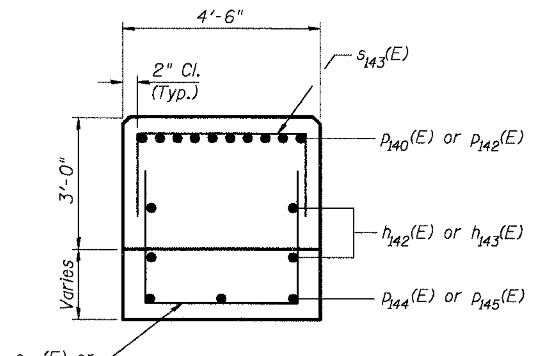
PIER 2 DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

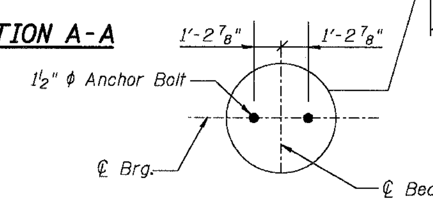
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	71
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

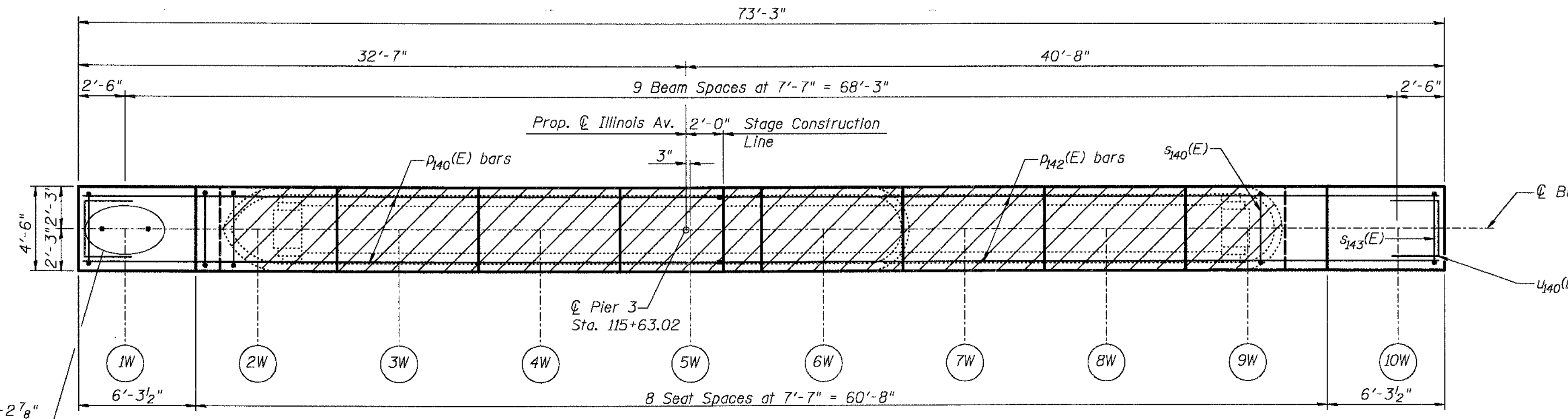
SHEET NO. SW-30
SW-30 SHEETS



SECTION A-A



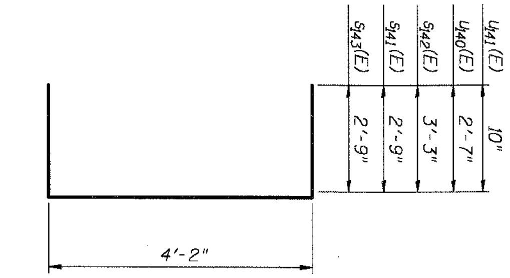
ANCHOR BOLT DETAIL



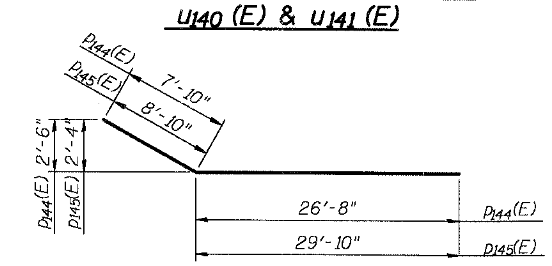
TOP PLAN

BEAM SEAT ELEVATION TABLE

Beam #	1W	2W	3W	4W	5W	6W	7W	8W	9W	10W
Seat Elevation	638.18	638.34	638.50	638.62	638.73	638.62	638.49	638.33	638.17	638.02



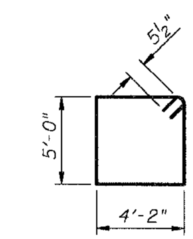
BARS s_{143}(E), s_{141}(E), s_{142}(E) u_{140}(E) & u_{141}(E)



BARS p_{144}(E) & p_{145}(E)

BILL OF MATERIAL PIER 3

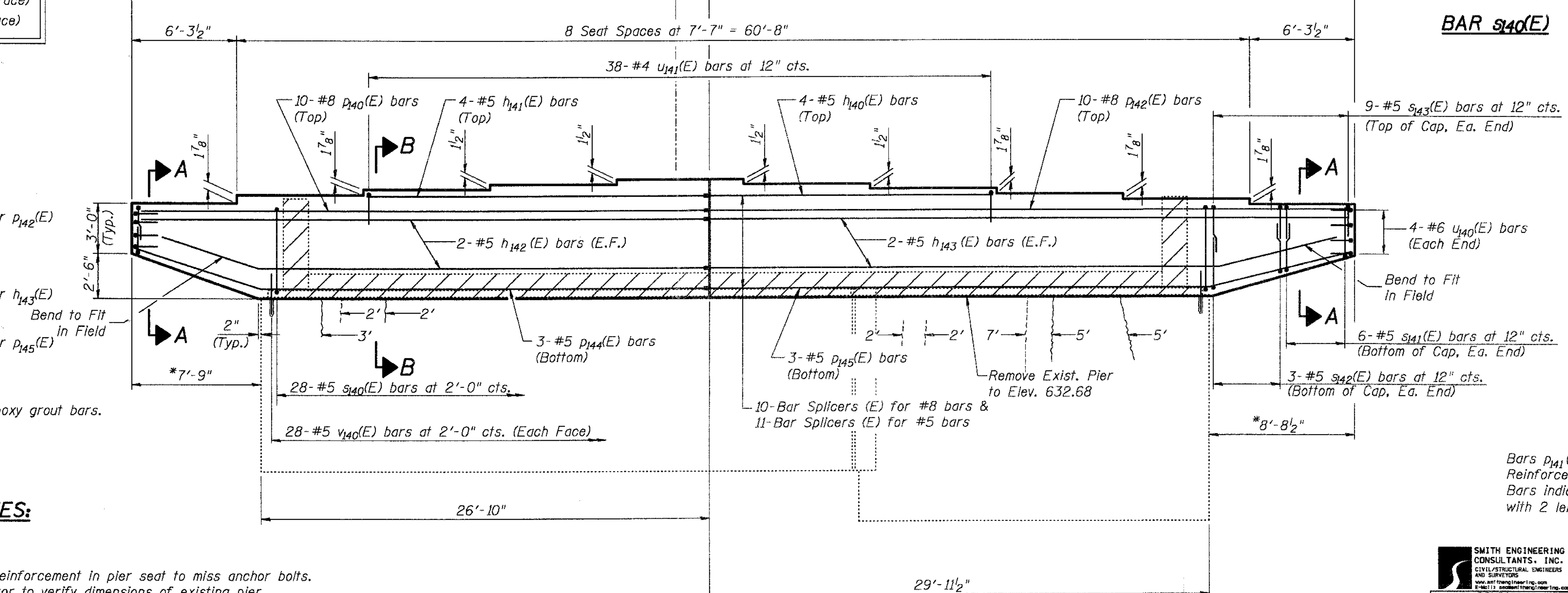
Bar	No.	Size	Length	Shape
h_{140}(E)	4	#5	16'-10"	——
h_{141}(E)	4	#5	20'-3"	——
h_{142}(E)	4	#5	34'-3"	——
h_{143}(E)	4	#5	38'-4"	——
p_{140}(E)	10	#8	34'-3"	——
p_{142}(E)	10	#8	38'-4"	——
p_{144}(E)	3	#5	34'-6"	⌞——
p_{145}(E)	3	#5	38'-8"	⌞——
s_{140}(E)	28	#5	19'-3"	□
s_{141}(E)	12	#5	9'-8"	⊓
s_{142}(E)	6	#5	10'-8"	⊓
s_{143}(E)	18	#5	9'-8"	⊓
u_{140}(E)	8	#6	9'-4"	⊓
u_{141}(E)	38	#4	5'-10"	⊓
v_{140}(E)	56	#5	2'-10"	——
Reinforcement Bars, Epoxy Coated			Pound	3,980
Concrete Removal			Cu. Yd.	13.7
Concrete Structures			Cu. Yd.	66.6
Epoxy Crack Sealing			Foot	28



BAR s_{140}(E)

LEGEND:

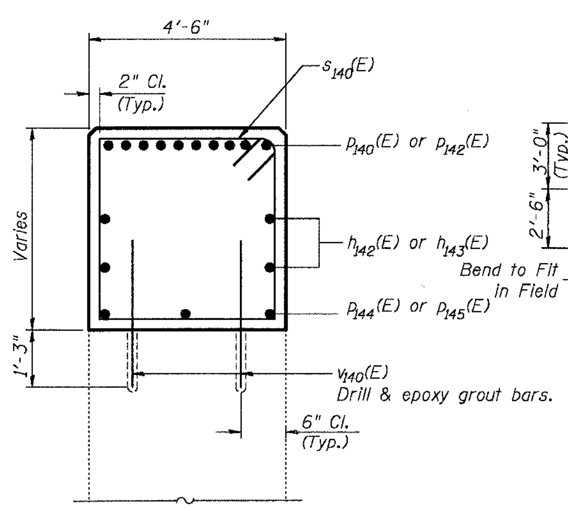
- Indicates Concrete Removal Areas
- Indicates Epoxy Crack Sealing (Near Face)
- Indicates Epoxy Crack Sealing (Far Face)



ELEVATION

Looking East

*Measured Along ℄ of Pier



SECTION B-B

Bars p_{141}(E) & p_{143}(E) are not used.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2 - #5 etc. indicates 1 line of bars with 2 lengths per line.

NOTES:

1. Space reinforcement in pier seat to miss anchor bolts.
2. Contractor to verify dimensions of existing pier.
3. Cost for drilling and epoxy grouting v_{140}(E) bars included in cost of Reinforcement Bars, Epoxy Coated.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

PIER 3 DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6009

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	72
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. ST-1
ST-12 SHEETS

Benchmark:
Cut square on Northwest Wingwall (West Bridge)
Elev. = 639.93

Existing Structure:
12'-0" wide by 8'-0" high by 65'-11" long cast-in-place reinforced concrete tunnel with reinforced concrete wingwalls supported on spread footings. Tunnel built in 1949 under Sec. 14B-CS, S.A.R. 24 Ext. (Kane County Sec. 118-B M.F.T.) and widened in 1976.

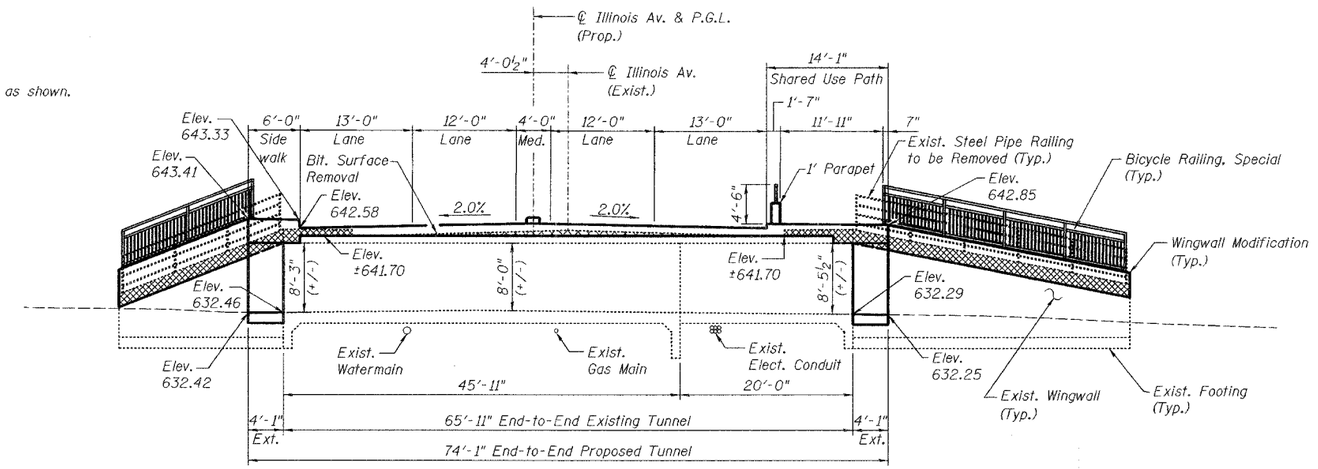
Salvage:
Existing tunnel to be lengthened. Wingwalls and footings to remain as shown. Existing Steel Pipe Railing to be removed and disposed.

Staging:
One lane of traffic in each direction to be maintained during construction utilizing staged construction.

LEGEND:

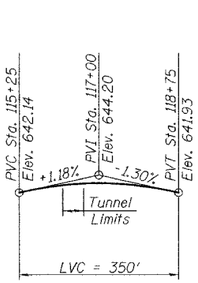
- 12" ϕ Watermain (Abandoned)
- 8" ϕ Gas Main (Abandoned)
- (10)-5" ϕ PVC Electrical Conduits (Abandoned)

INDEX OF SHEETS



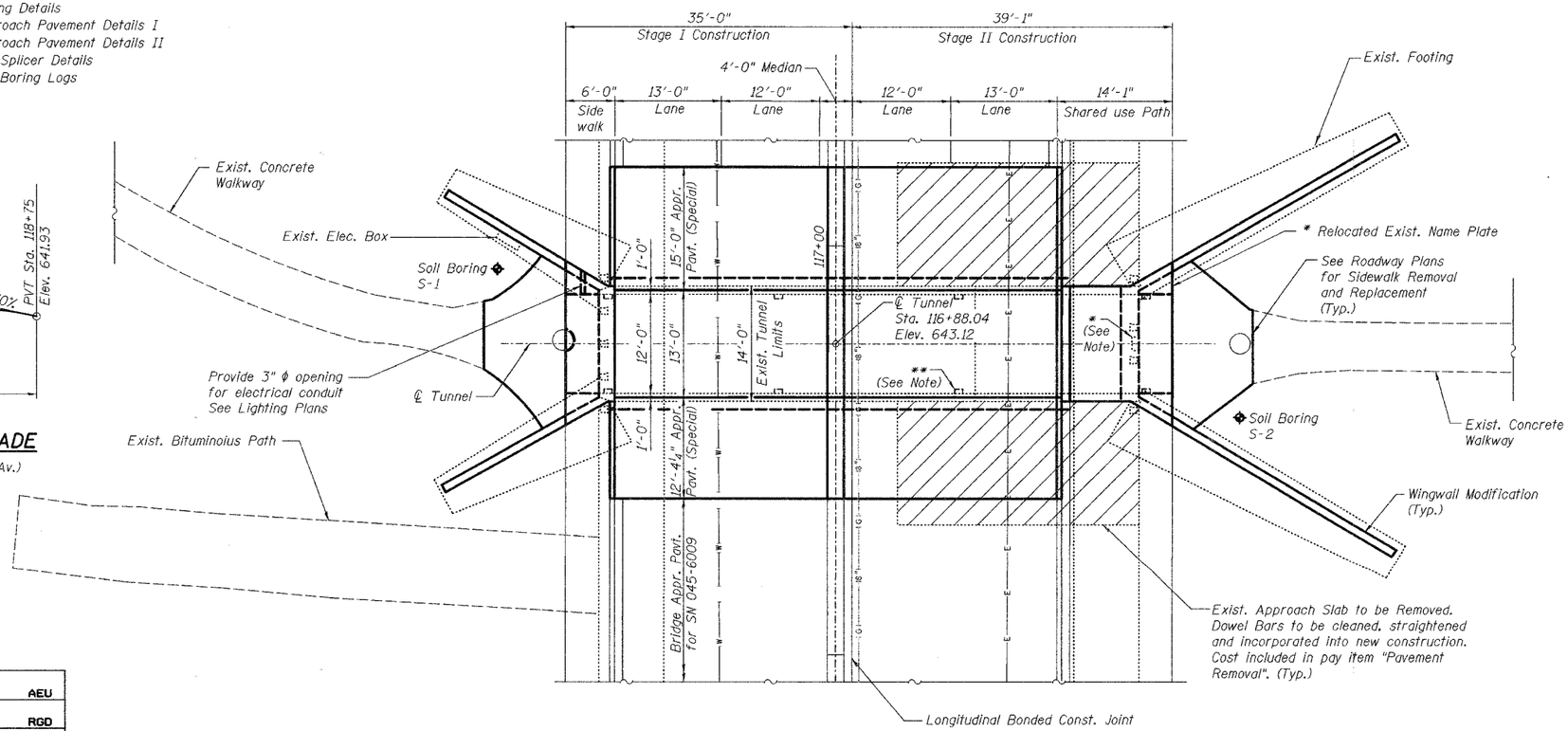
LONGITUDINAL SECTION

(Elevations shown are at the ℄ of the Tunnel)



PROFILE GRADE

(Along ℄ Illinois Av.)



PLAN

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th Ed.

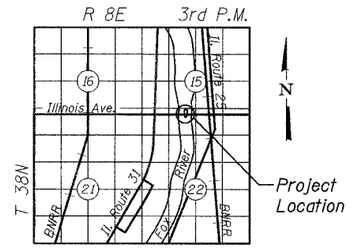
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

LOADING HS20-44

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



LOCATION SKETCH

NOTES:

* *Remove, clean, and relocate existing bronze name plate. Cost included in Concrete Structures.*

** *Wall mounted luminaires. See Lighting Plans for locations.*

STATE OF ILLINOIS
ROBERT G. DAVIES
081-004698
MCHENRY, IL
LICENSED STRUCTURAL ENGINEER

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 for Highway Bridges".

Robert G. Davies 9/3/06
Robert G. Davies Date
Licensed Structural Engineer
License Expires November 30, 2006

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

GENERAL PLAN AND ELEVATION
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	73
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. ST-2
ST-12 SHEETS

TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Concrete Removal	Cu. Yd.	16.1
	Bridge Rail Removal	Foot	36
	Structure Excavation	Cu. Yd.	6.0
	Concrete Structures	Cu. Yd.	31.4
	Concrete Superstructure	Cu. Yd.	44.7
*	Protective Coat	Sq. Yd.	127
	Structural Repair of Concrete (Depth Equal to or less than 5 in.)	Sq. Ft.	130
	Reinforcement Bars, Epoxy Coated	Pound	17,370
	Expansion Bolts 3/4 Inch	Each	56
*	Bicycle Railing, Special	Foot	134
	Bar Splicers	Each	28
*	Handrail Removal	Foot	116
*	Bridge Approach Pavement (Special)	Sq. Yd.	168

*Indicates Item Requires a Special Provision.

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322, Grade 60.

All new concrete exposed to earth shall be waterproofed according to Article 503.18 of the Standard Specifications.

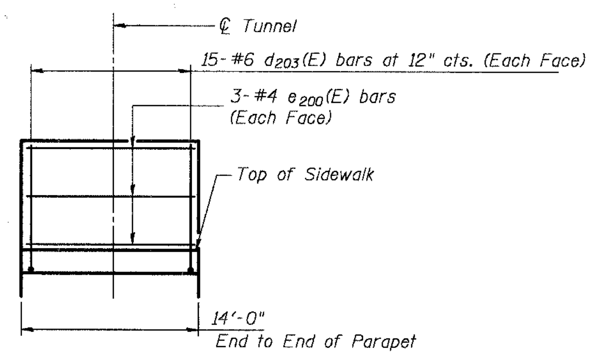
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction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

All Construction Joints shall be bonded.

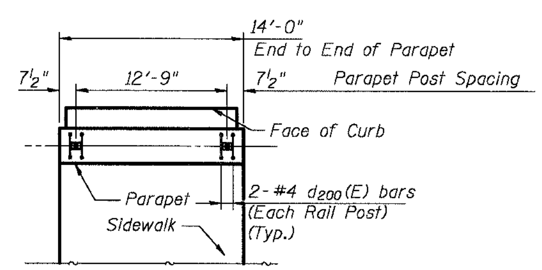
For Lighting Details, see Lighting Plans.

The information shown in these plans concerning the type and location of utilities is not guaranteed to be accurate or all-inclusive. The Contractor is responsible for making his own determination as to the existence of type, size and location of all underground and overhead utilities as may be necessary to avoid conflict with construction operations and/or damage to the utility.

Cost for Rubbed Finish is included in the cost for Concrete Structures.

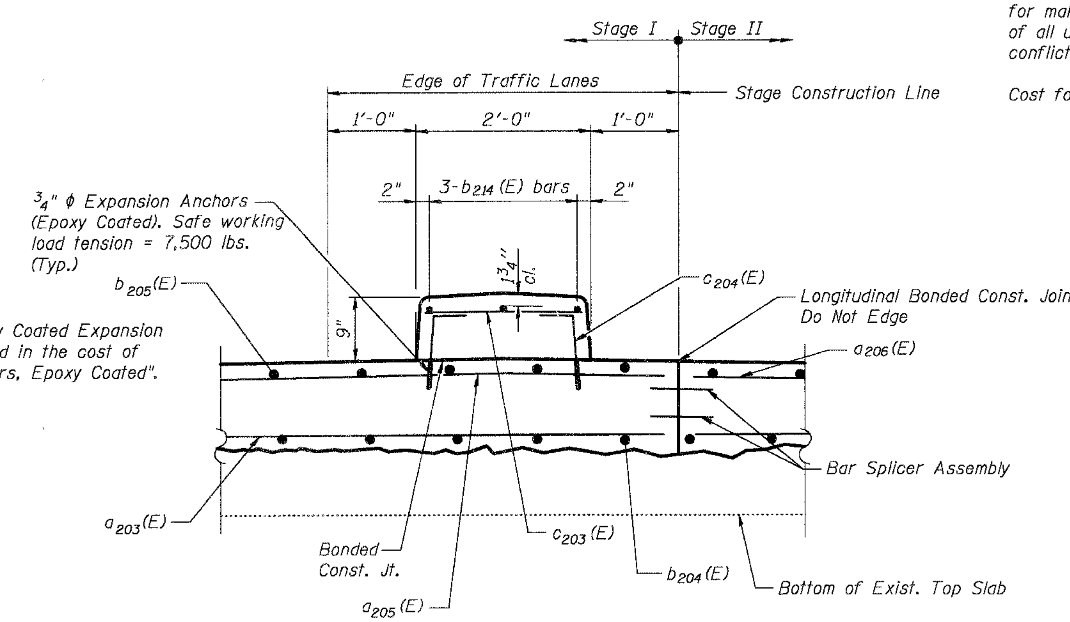


INSIDE ELEVATION OF SOUTH PARAPET



TOP PLAN OF SOUTH PARAPET

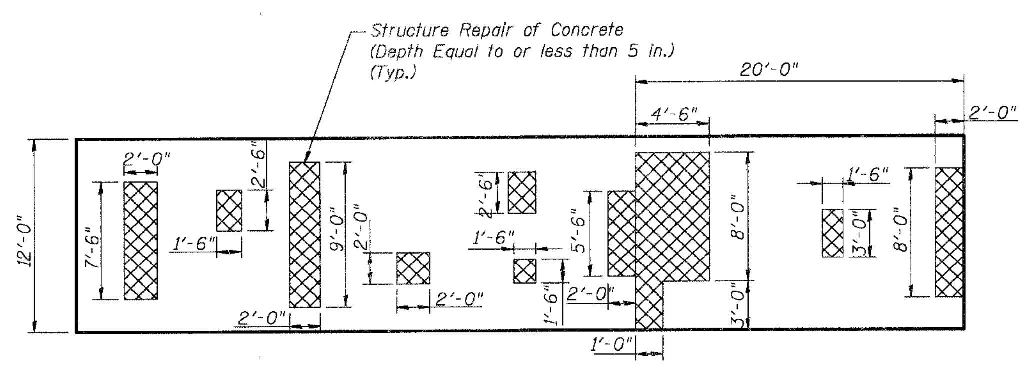
See Roadway Drawing for adjacent parapets not located on the tunnel.
See Sheet ST-7 for Bill of Material.



NOTE:
The Cost of Epoxy Coated Expansion Anchors is included in the cost of "Reinforcement Bars, Epoxy Coated".

SECTION THRU MEDIAN

(Looking East)
See Sheet ST-5 for Bill of Material.



BOTTOM OF EXISTING TOP SLAB

N.T.S.

N

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
www.smithengineering.com
E-Mail: sec@smithengineering.com

REVISIONS	
NAME	DATE

CITY OF AURORA

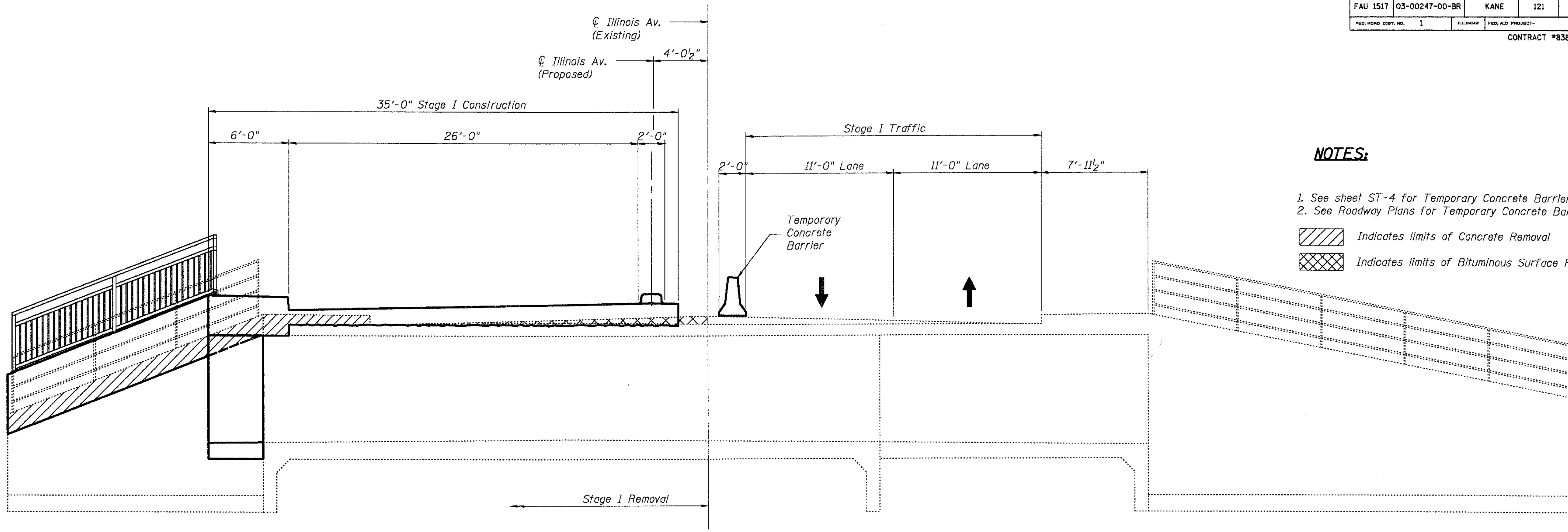
GENERAL NOTES AND BILL OF MATERIAL
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	74
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. ST-3
ST-12 SHEETS



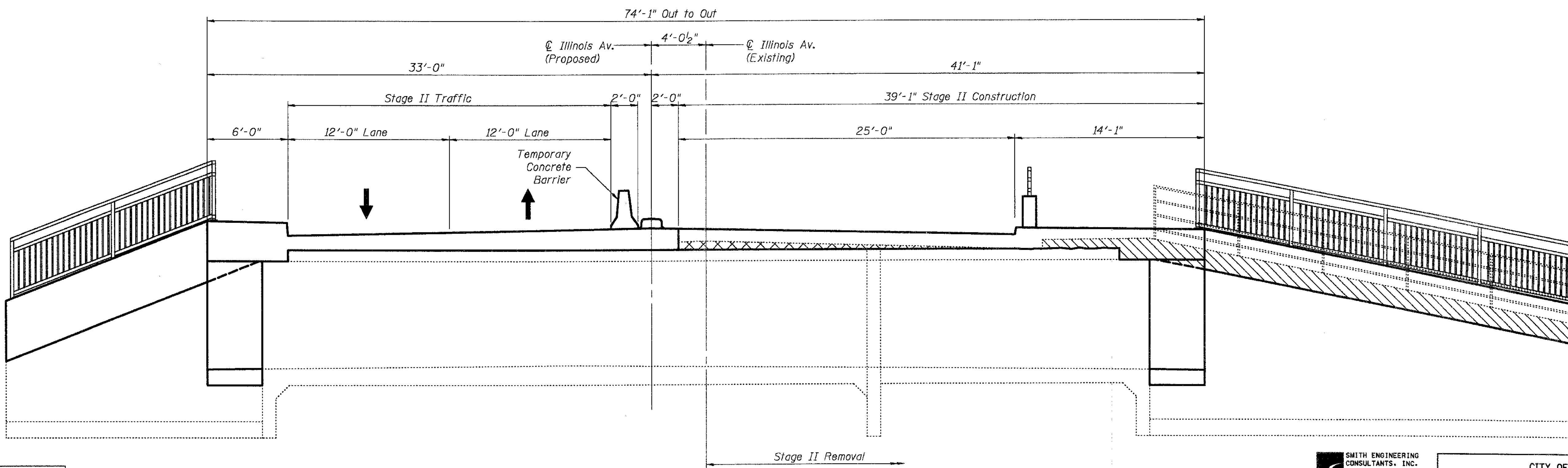
STAGE I
(Looking East)

NOTES:

1. See sheet ST-4 for Temporary Concrete Barrier Details
2. See Roadway Plans for Temporary Concrete Barrier quantity.

Indicates limits of Concrete Removal

Indicates limits of Bituminous Surface Removal



STAGE II
(Looking East)

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

STAGE CONSTRUCTION DETAILS
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

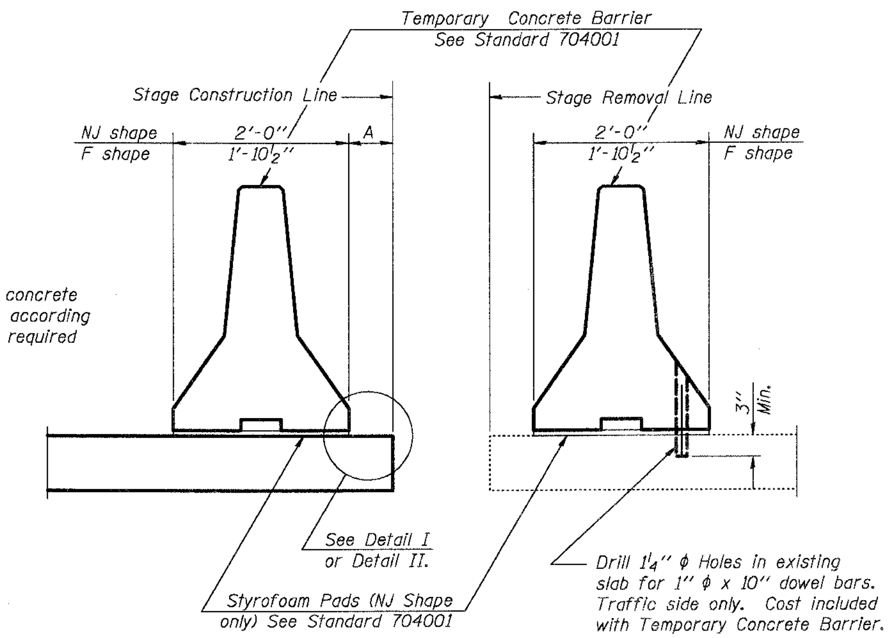
DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	75
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. ST-4
ST-12 SHEETS

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".



NEW SLAB

EXISTING SLAB

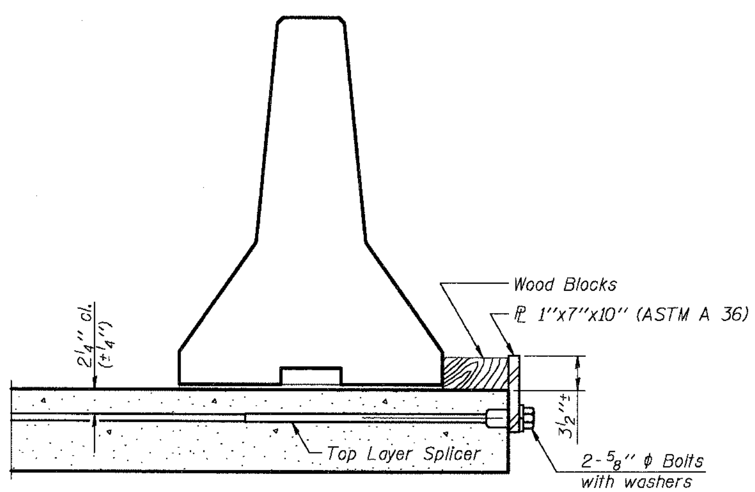
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

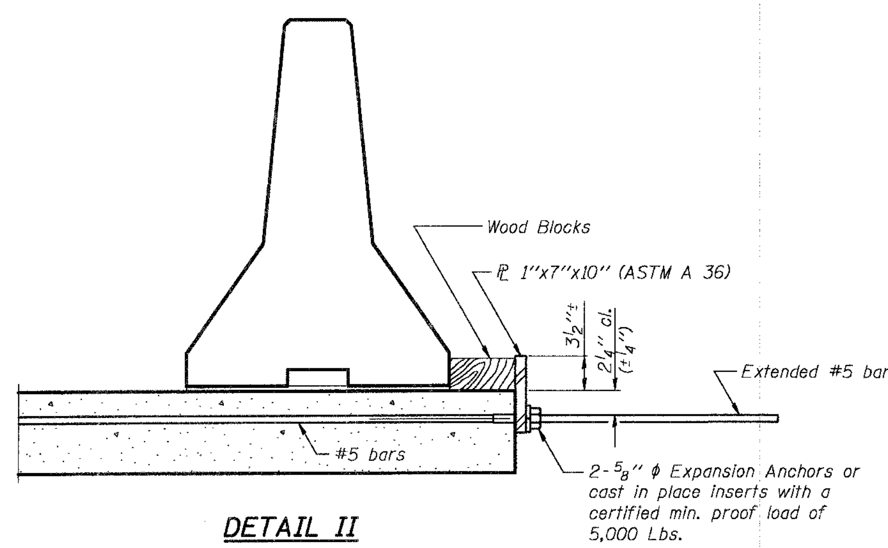
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



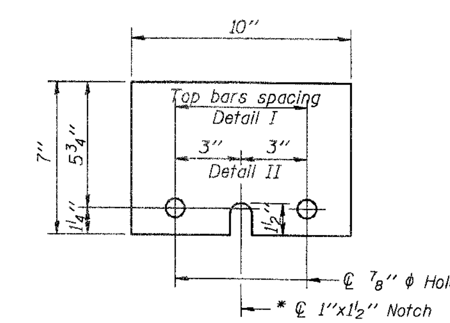
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



ℙ 1"x7"x10"

* Required only with Detail II

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

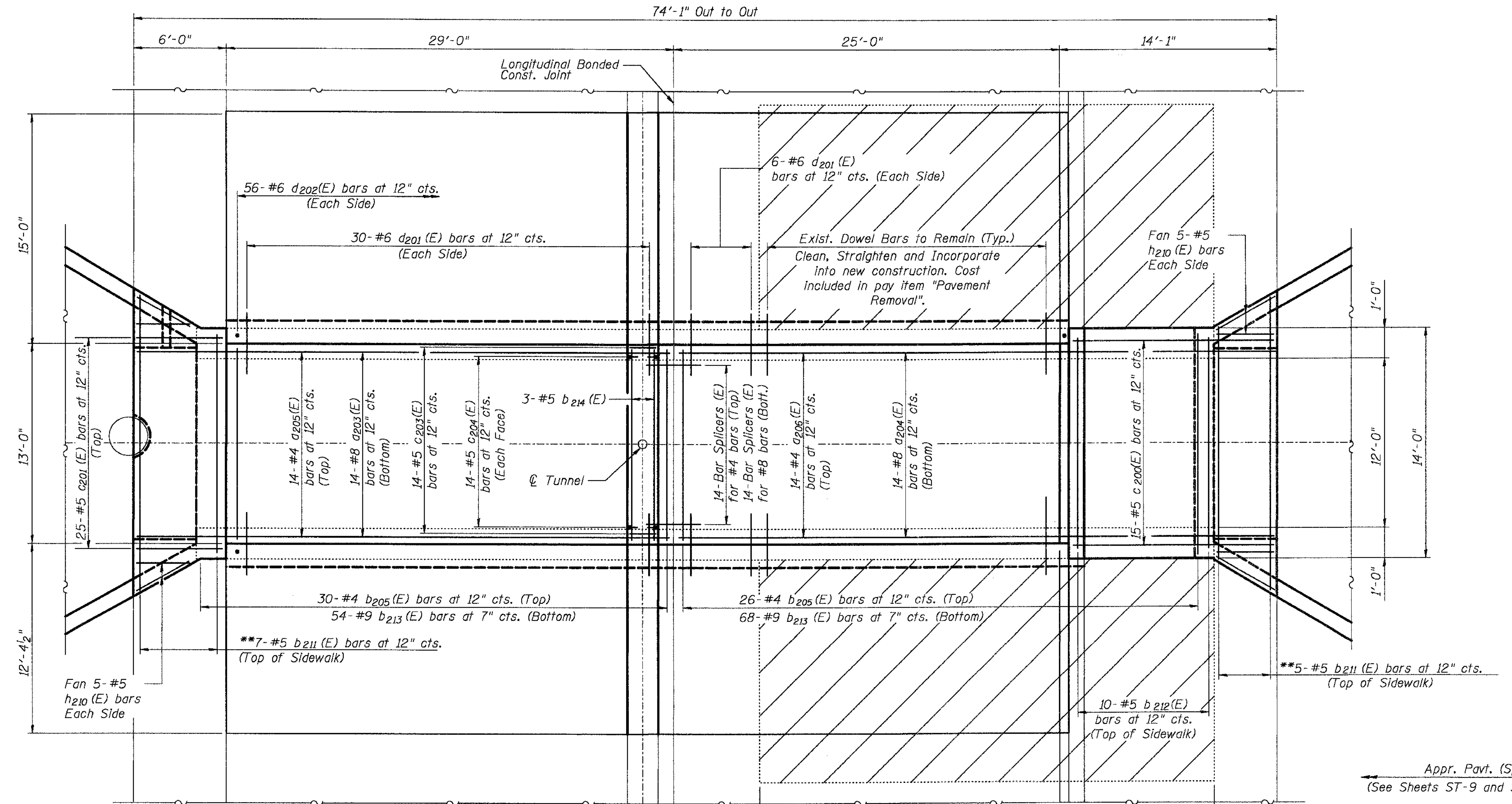
SMITH ENGINEERING CONSULTANTS, INC.

REVISIONS	
NAME	DATE

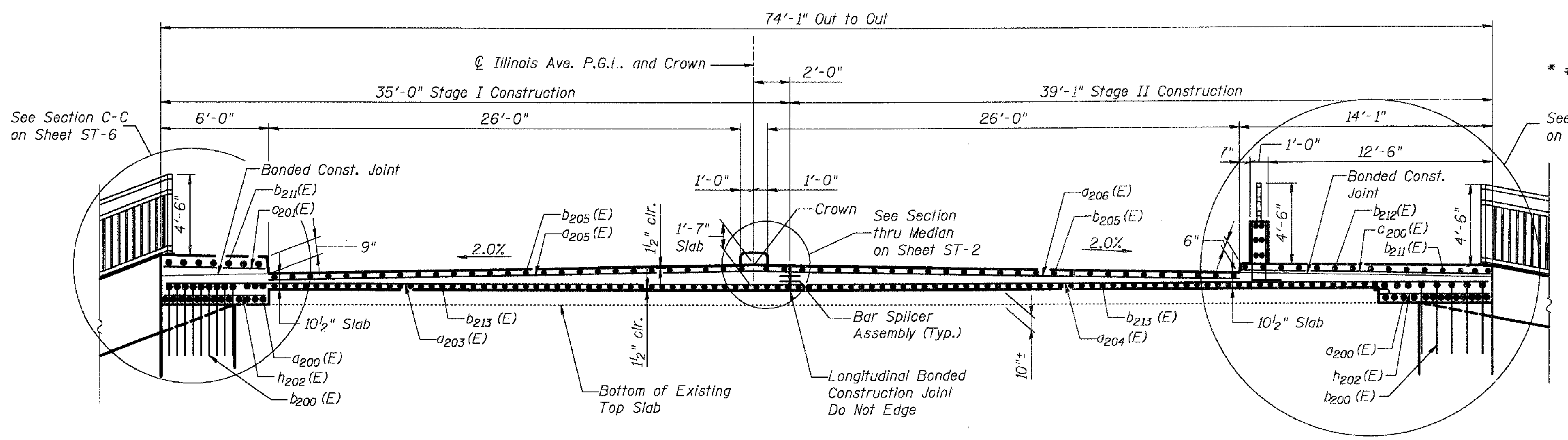
CITY OF AURORA

TEMPORARY CONCRETE BARRIER
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006



TOP PLAN



TYPICAL DECK CROSS SECTION

(Looking East)

LEGEND:

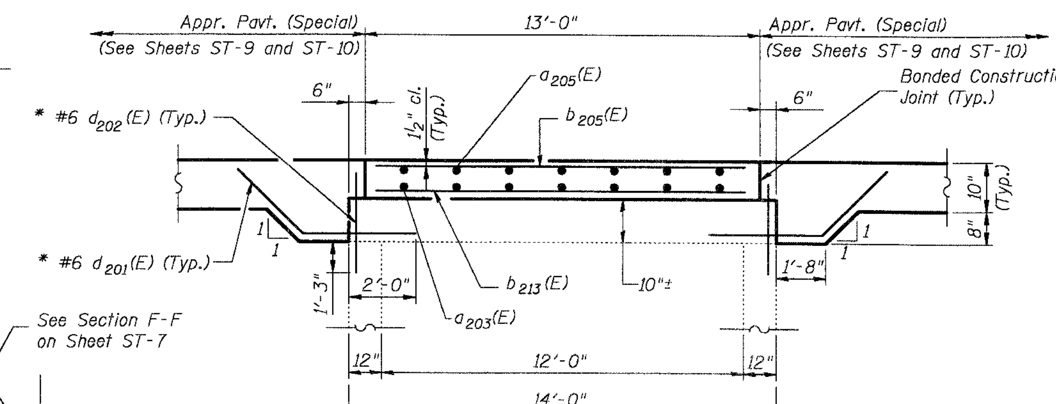
▱ Existing Approach Pavement to be removed

BILL OF MATERIALS

Bar	No.	Size	Length	Shape
a_{203}(E)	14	# 8	34'-8"	—
a_{204}(E)	14	# 8	38'-9"	—
a_{205}(E)	14	# 4	28'-10"	—
a_{206}(E)	14	# 4	24'-10"	—
b_{204}(E)	122	# 9	12'-8"	—
b_{205}(E)	56	# 4	12'-8"	—
b_{206}(E)	3	# 5	12'-8"	—
b_{211}(E)	12	# 5	18'-5"	—
b_{212}(E)	10	# 5	13'-8"	—
c_{200}(E)	15	# 5	13'-8"	—
c_{201}(E)	15	# 5	5'-8"	—
c_{203}(E)	14	# 5	1'-8"	—
c_{204}(E)	28	# 5	1'-3"	┌
d_{201}(E)	72	# 6	5'-1"	—
d_{202}(E)	112	# 6	3'-0"	—
h_{206}(E)	30	# 5	6'-8"	—
h_{210}(E)	20	# 5	3'-9"	—
Reinforcement Bars, Epoxy Coated			Pound	10,980
Concrete Superstructure			Cu. Yd.	44.7
Protective Coat			Sq. Yd.	127

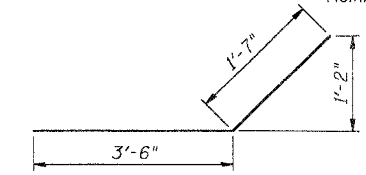
NOTES:

Reinforcement bars designated (E) shall be epoxy coated.
Work this sheet with sheets ST-6 and ST-7.
See sheet ST-2 for Section Thru Median.
See sheets ST-9 and ST-10 for Approach Pavement (Special) Details.

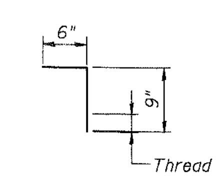


SECTION THRU TOP OF DECK

Approach Pavement (Special) Reinforcement not shown.



BAR d_{201}(E)



BAR c_{204}(E)

* Drill and Epoxy Grout bars in drilled holes according to Article 584 of the Standard Specifications.

** Order bars full length and cut to fit in the field.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC. CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

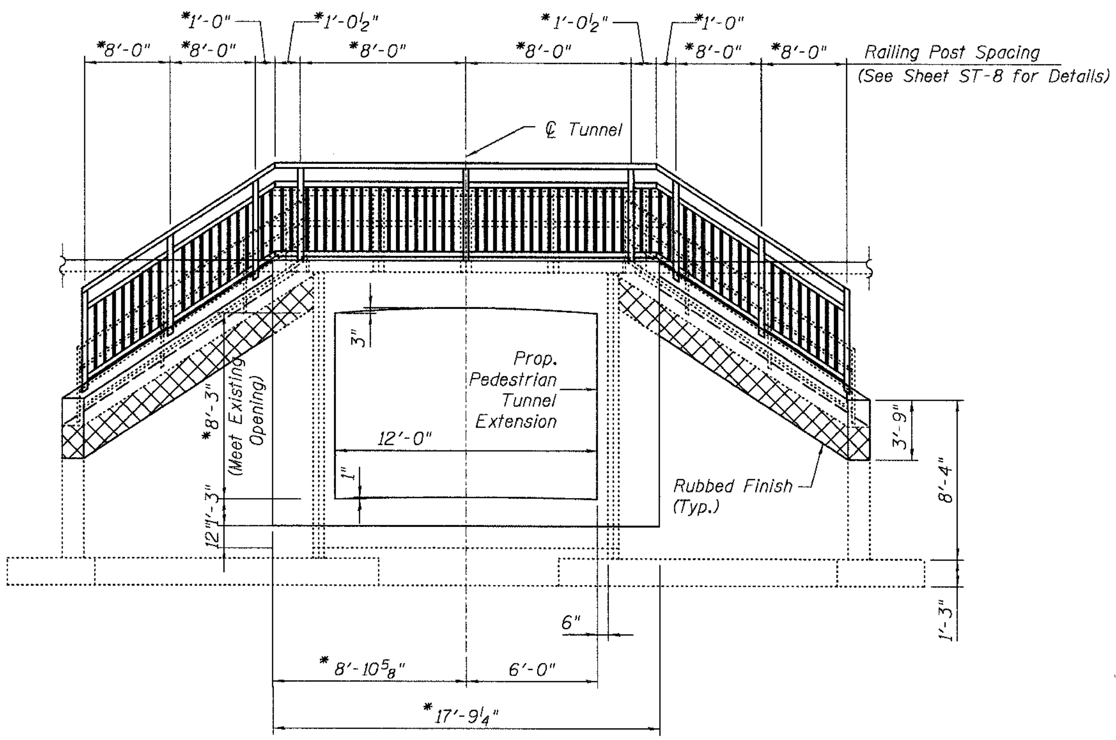
TUNNEL DETAILS
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	77
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

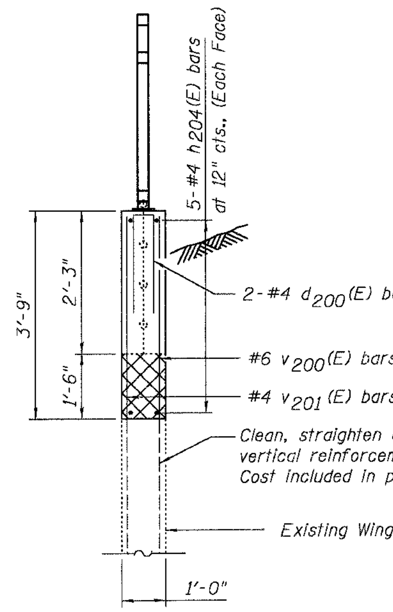
CONTRACT #83867

SHEET NO. ST-6
ST-12 SHEETS

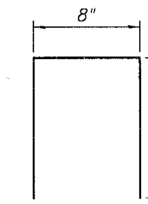


NORTH END ELEVATION

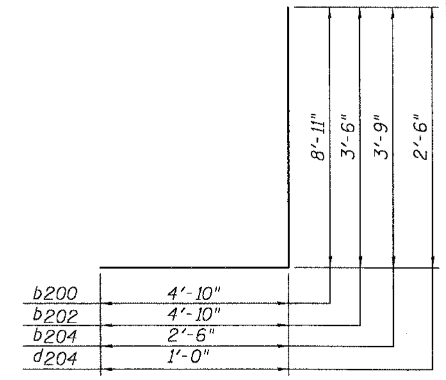
* Verify dimension in the field



SECTION B-B



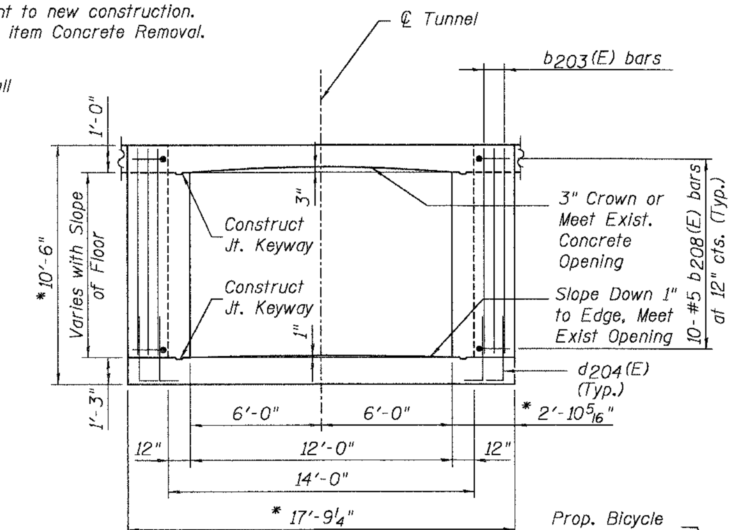
BAR d200(E)



BARS b200(E), b202(E), b204(E) and d204(E)

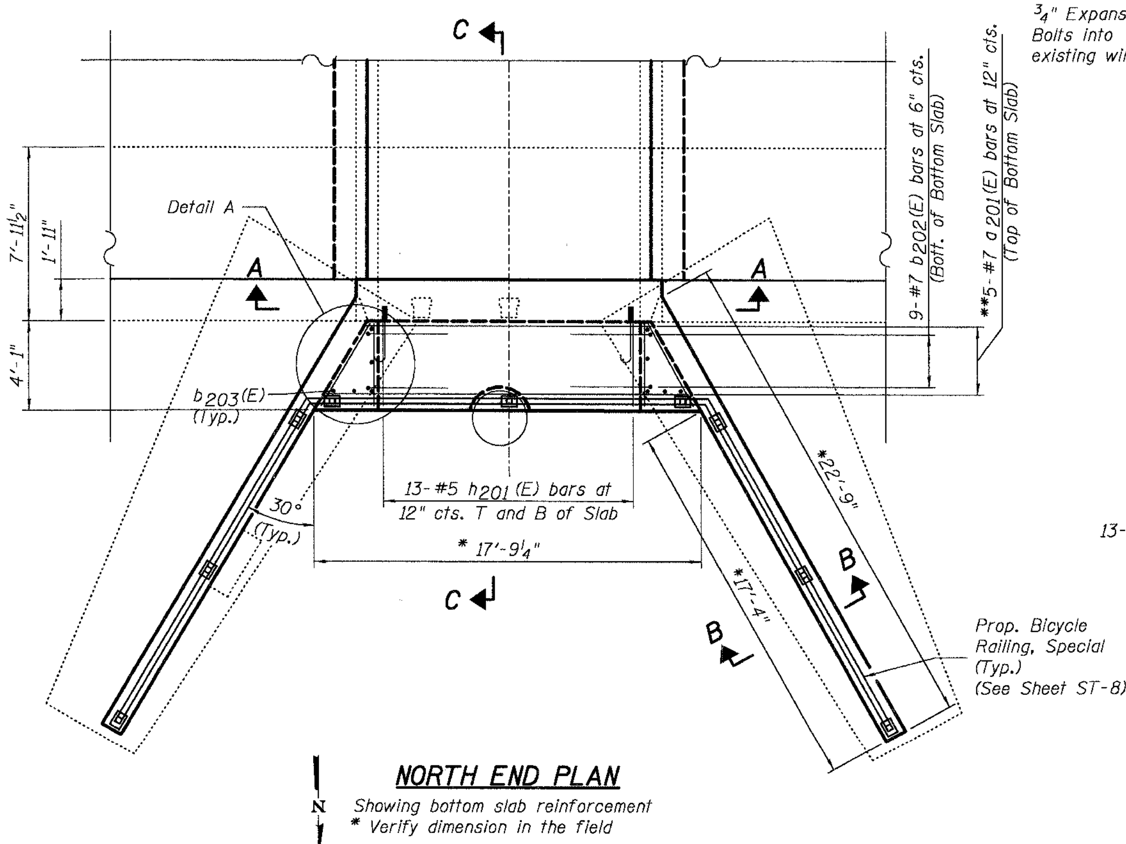
NORTH EXTENSION BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a200(E)	13	# 7	18'-5"	straight
a201(E)	5	# 7	17'-3"	straight
b200(E)	18	# 7	13'-9"	bent
b201(E)	10	# 7	8'-11"	straight
b202(E)	18	# 7	8'-4"	bent
b203(E)	14	# 5	9'-5"	straight
b204(E)	20	# 5	6'-3"	bent
d200(E)	14	# 4	2'-2"	U
d204(E)	6	# 5	3'-6"	bent
h201(E)	62	# 5	3'-9"	straight
h202(E)	13	# 5	5'-8"	straight
h204(E)	20	# 4	22'-6"	straight
v200(E)	46	# 6	3'-7"	straight
v201(E)	46	# 4	3'-7"	straight
Reinforcement Bars, Epoxy Coated			Pound	2,950
Concrete Structures			Cu. Yd.	14.1
Expansion Bolts 3/4 Inch			Each	28
Concrete Removal			Cu. Yd.	7.2



SECTION A-A

* Verify dimensions in the field

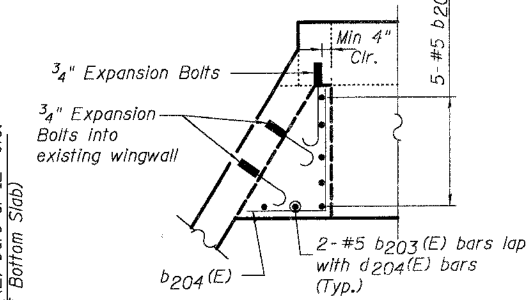


NORTH END PLAN

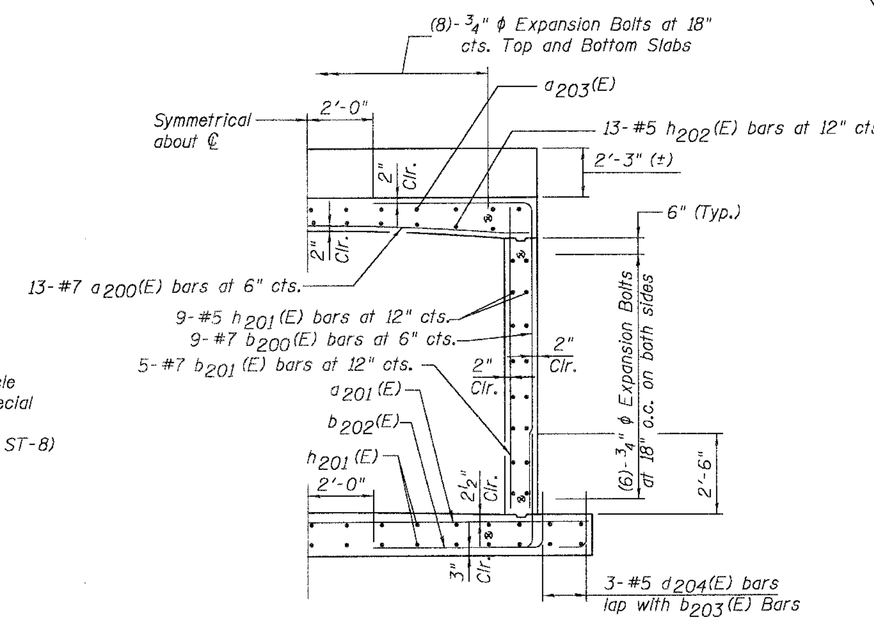
Showing bottom slab reinforcement

* Verify dimension in the field

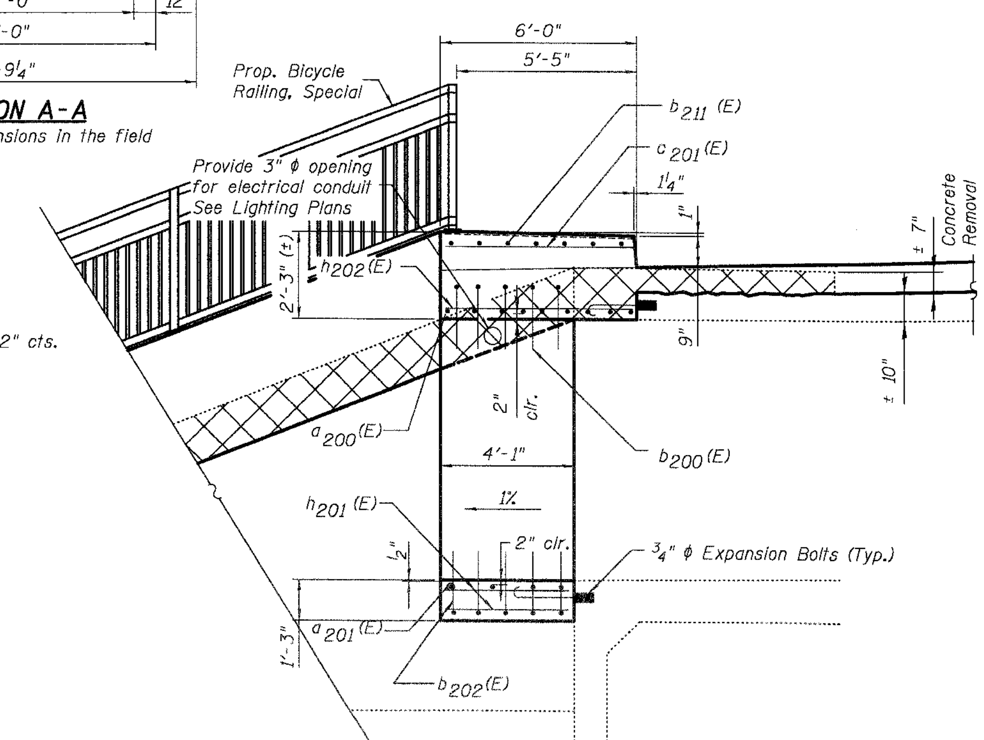
** Order Bars full length and cut to fit in the field.



DETAIL A



HALF SECTION A-A SHOWING REINFORCEMENT



SECTION C-C

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

NOTES

Reinforcement Bars designated (E) shall be Epoxy Coated.
Cost of Rubbed Finish included in the pay item Concrete Structures.

LEGEND

Indicates limits Concrete Removal.

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

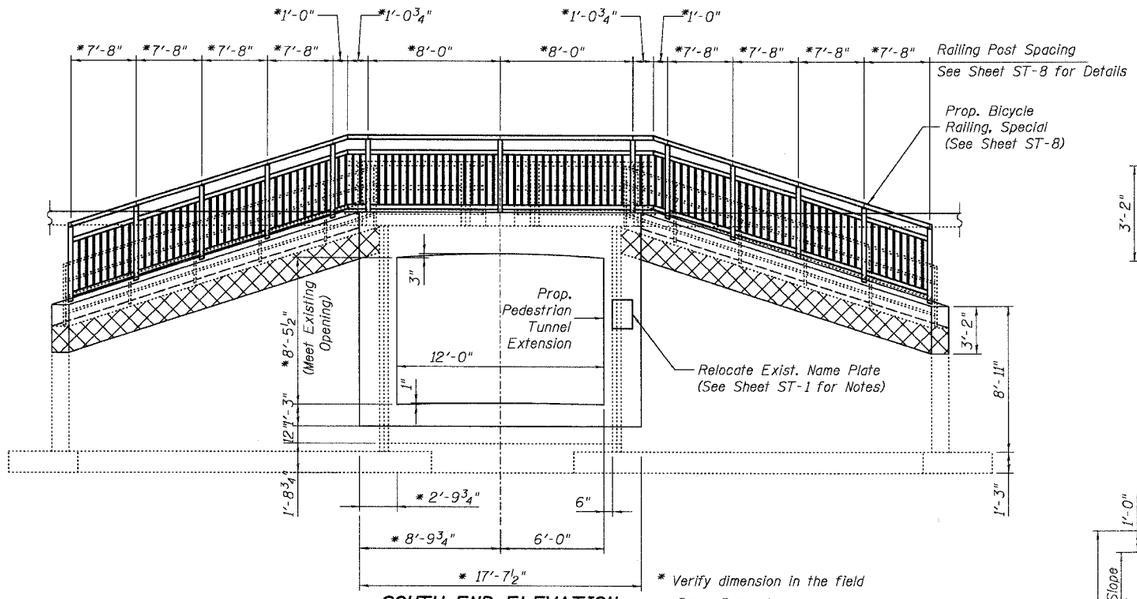
TUNNEL EXTENSION DETAILS - NORTH END
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

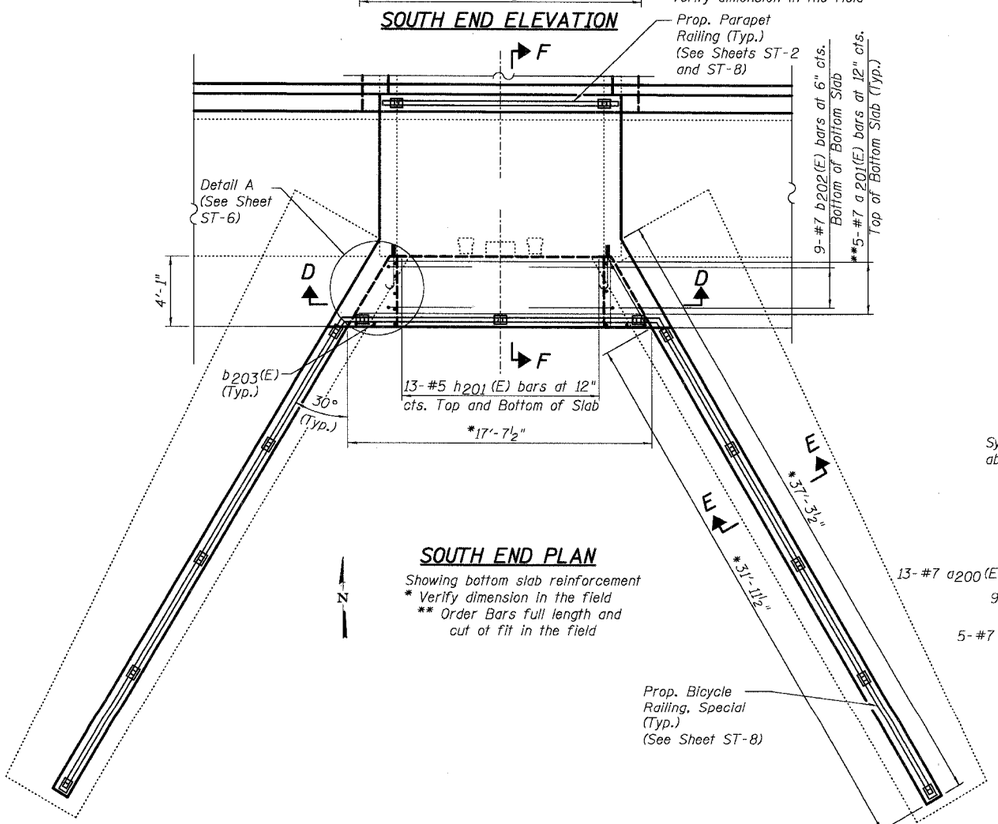
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	78
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

SHEET NO. ST-7
ST-12 SHEETS

CONTRACT #83867

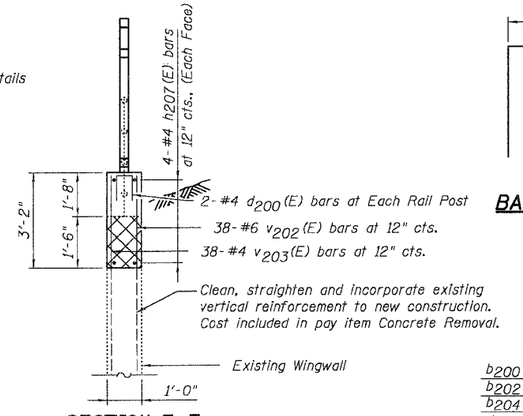


SOUTH END ELEVATION

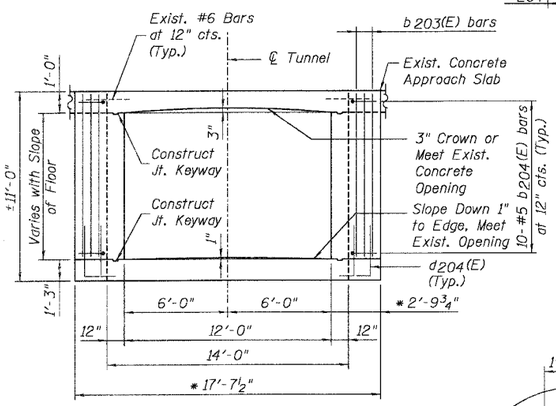


SOUTH END PLAN

Showing bottom slab reinforcement
* Verify dimension in the field
** Order Bars full length and cut of fit in the field

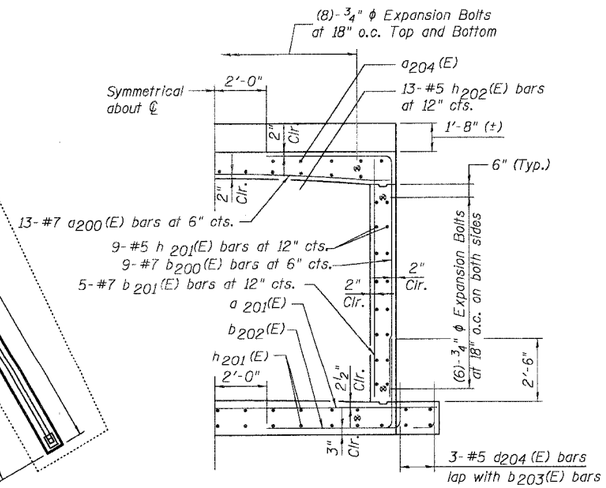


SECTION E-E

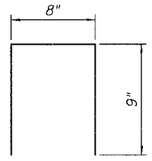


SECTION D-D

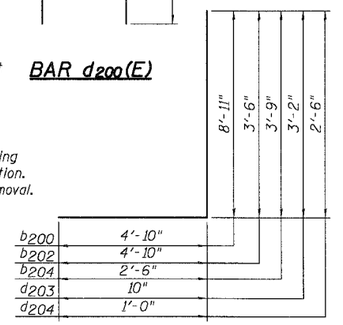
* Verify dimension in the field



HALF SECTION D-D
SHOWING REINFORCEMENT



BAR d200(E)



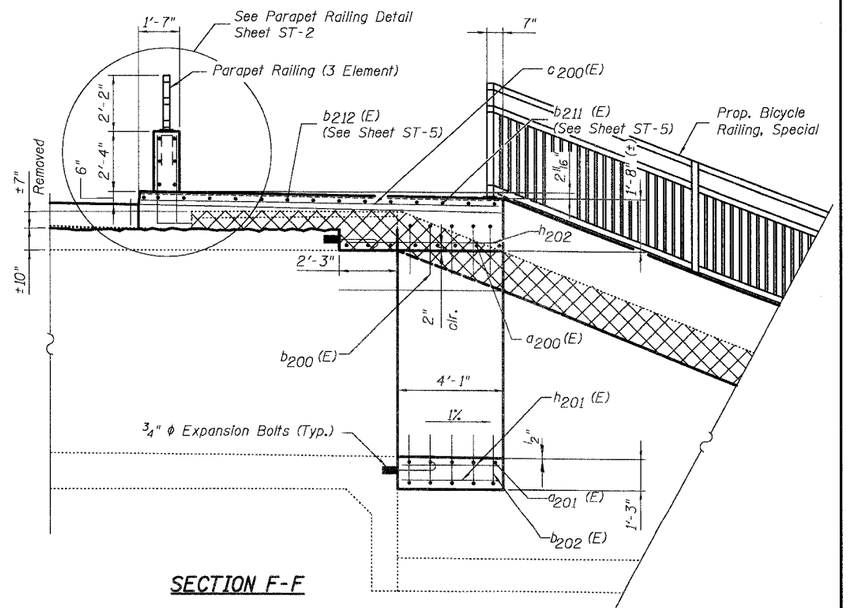
b200	4'-10"
b202	4'-10"
b204	2'-6"
d203	10"
d204	1'-0"

BAR b200(E), b202(E), b204(E), d203(E) and d204(E)

SOUTH EXTENSION BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d200(E)	13	# 7	18'-5"	
d201(E)	5	# 7	17'-3"	
b200(E)	18	# 7	13'-9"	
b201(E)	10	# 7	8'-11"	
b202(E)	18	# 7	8'-4"	
b203(E)	14	# 5	9'-5"	
b204(E)	20	# 5	6'-3"	
h201(E)	62	# 5	3'-9"	
h202(E)	13	# 5	6'-0"	
h207(E)	16	# 4	37'-0"	
d200(E)	26	# 4	2'-2"	
d203(E)	30	# 6	4'-0"	
d204(E)	6	# 5	3'-6"	
e200(E)	6	# 4	13'-8"	
v202(E)	76	# 6	3'-0"	
v203(E)	76	# 4	3'-0"	
Reinforcement Bars, Epoxy Coated			Pound	3,440
Concrete Structures			Cu. Yd.	17.3
Expansion Bolts 3/4 Inch			Each	28
Concrete Removal			Cu. Yd.	8.9

Notes:
Reinforcement Bars designated (E) shall be Epoxy Coated.
Cost of Rubbed Finish included in the pay item Concrete Structures



SECTION F-F

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

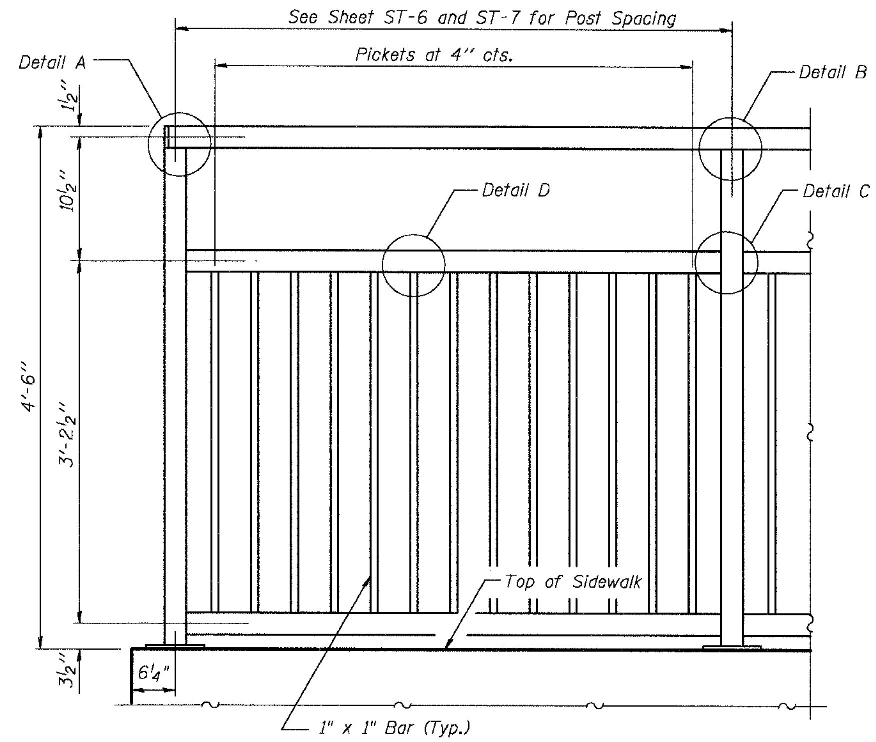
TUNNEL EXTENSION DETAILS - SOUTH END
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

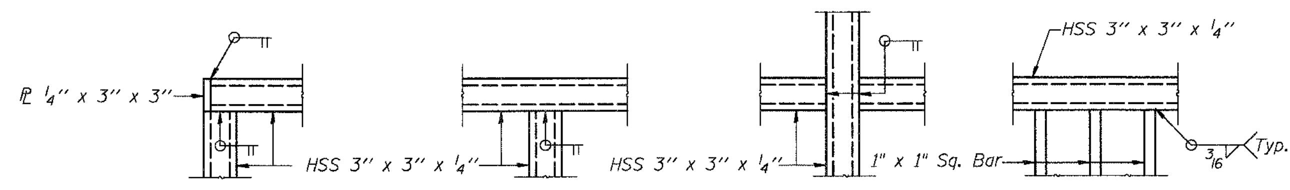
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	79
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

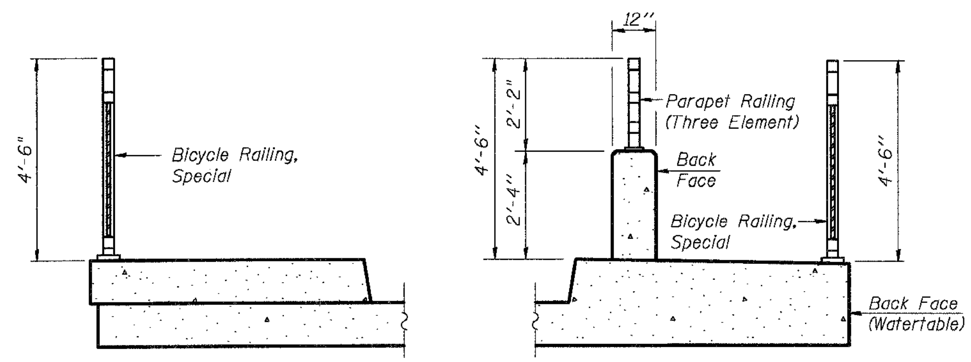
SHEET NO. ST-8
ST-12 SHEETS



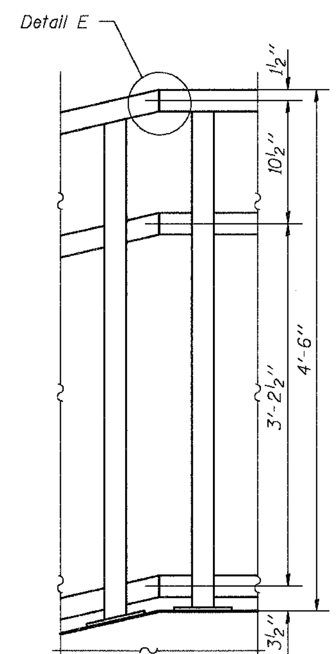
BICYCLE RAILING



DETAIL A DETAIL B DETAIL C DETAIL D



SECTION THRU SIDEWALK SECTION THRU SHARED USE PATH



BICYCLE RAILING ON WINGWALL CORNERS

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Bicycle Railing, Special or Parapet Railing.

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

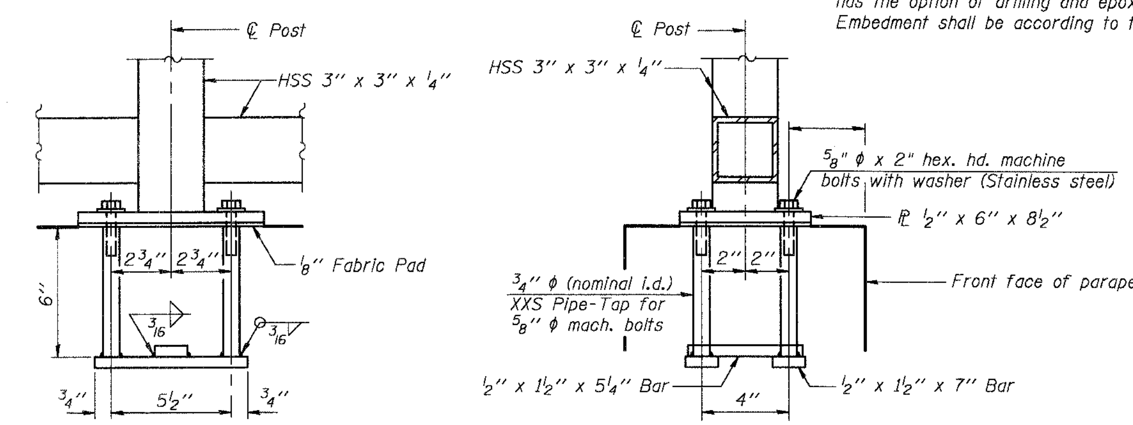
The Three Element Parapet Railing, furnished and installed shall not be paid for separately but shall be included in the unit bid price for Bicycle Railing, Special.

If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

Space reinforcement to miss anchor rods.

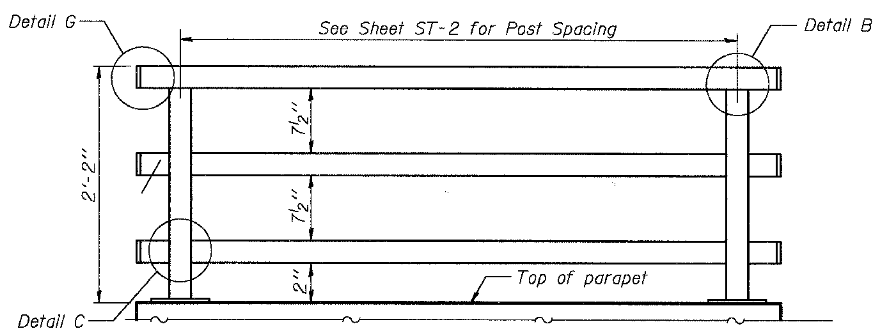
All post, railing, pickets, splices, and anchor devices shall be powder coated black. The powder coating system to be used shall be approved by the engineer prior to the coating process.

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting ⅝" ϕ anchor rods. Embedment shall be according to the manufacturer's specifications.



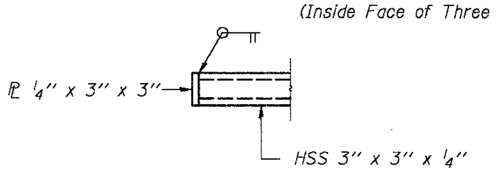
ANCHOR BOLT DETAILS

Parapet Railings

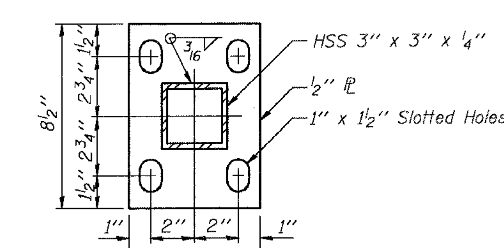


PARAPET RAILING ELEVATION

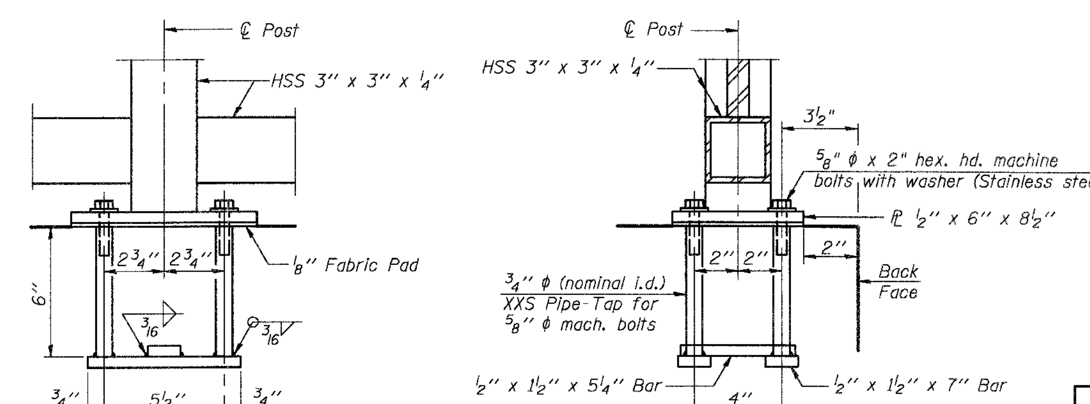
(Inside Face of Three Element Rail)



DETAIL G



BASE ℞ - BP1

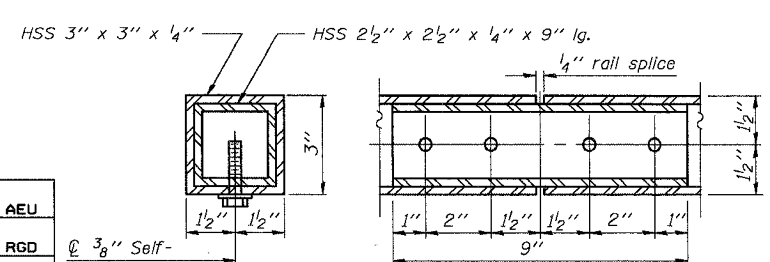


ANCHOR BOLT DETAILS

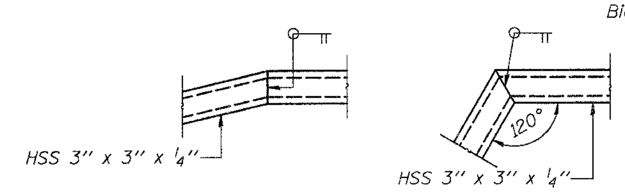
Bicycle Railing

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing, Special	Foot	134



RAIL SPLICE



DETAIL E DETAIL E Plan

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

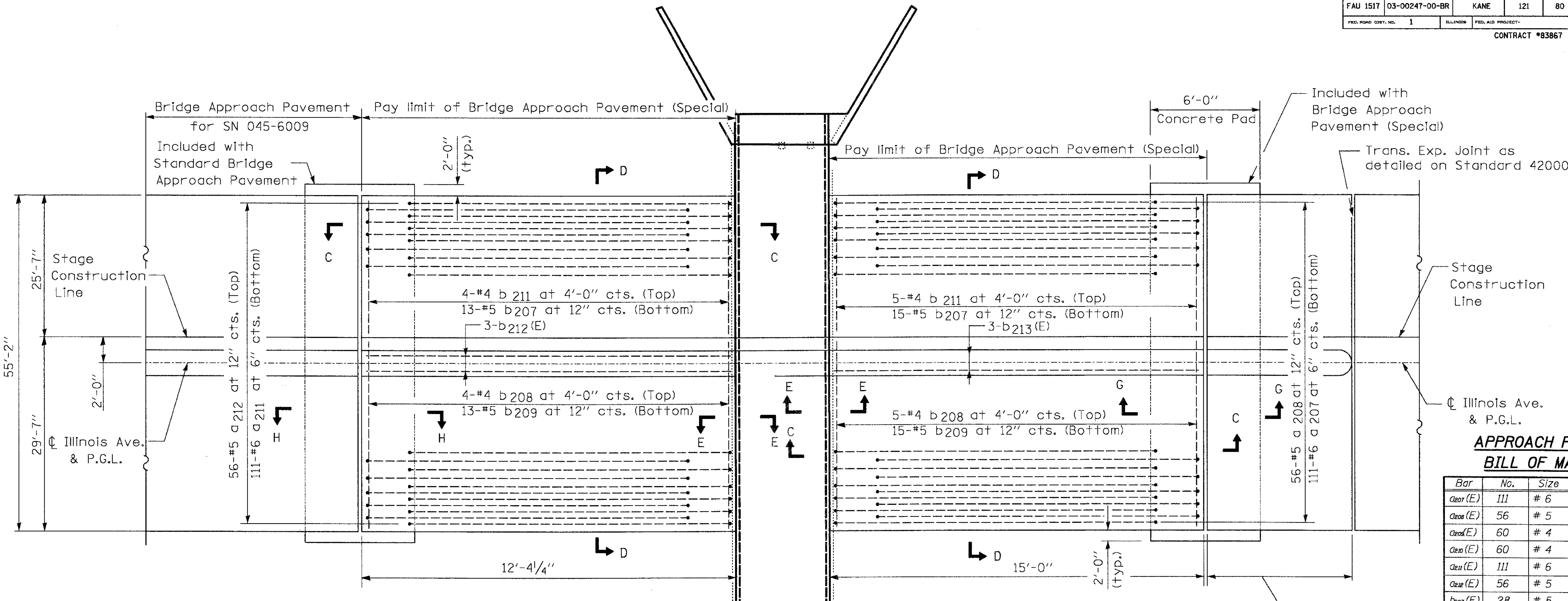
RAILING DETAILS
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	80
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

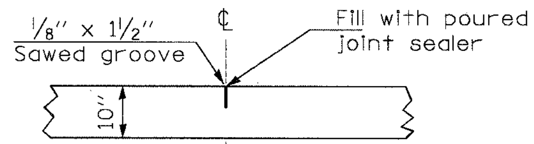
CONTRACT #83867

SHEET NO. ST-9
ST-12 SHEETS



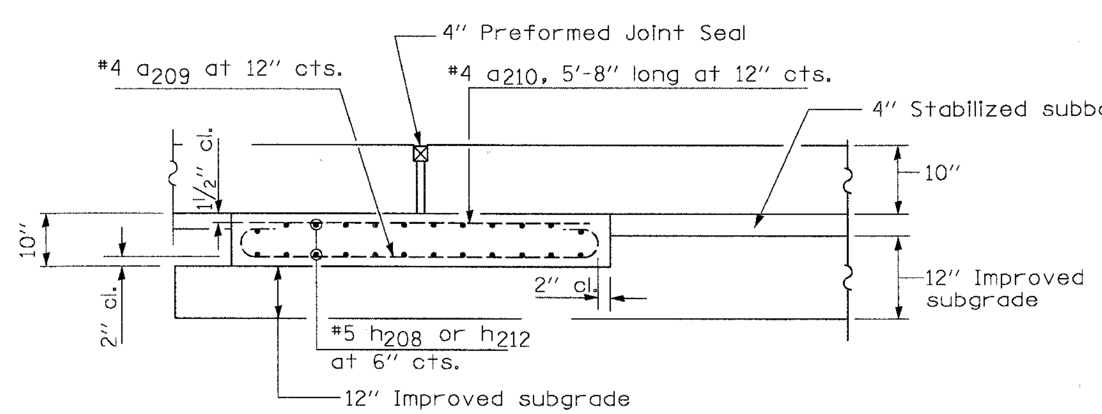
PLAN

* Saw ℄ or lane edge if poured two or more lane widths at a time.



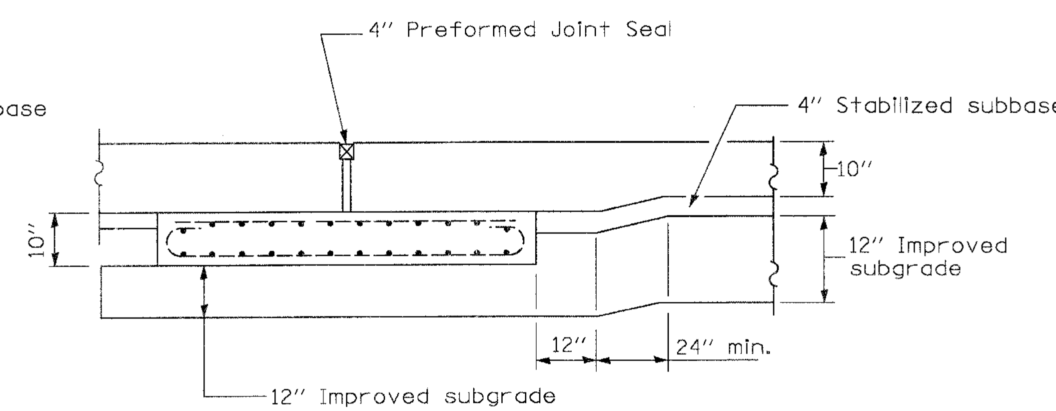
SAWED JOINT DETAIL*

(Reinforcement Not Shown)



SECTION G-G - RIGID PAVEMENT

(Showing reinforcement)



SECTION H-H - RIGID PAVEMENT

Work with Bridge Approach Pavement Standard.

APPROACH PAVEMENT BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a207 (E)	111	# 6	16'-6"	hooked
a208 (E)	56	# 5	14'-8"	straight
a209 (E)	60	# 4	6'-8"	hooked
a210 (E)	60	# 4	5'-8"	straight
a211 (E)	111	# 6	13'-10"	hooked
a212 (E)	56	# 5	12'-0"	straight
b207 (E)	28	# 5	25'-3"	straight
b208 (E)	9	# 4	29'-3"	straight
b209 (E)	28	# 5	29'-3"	straight
b210 (E)	12	# 6	4'-0"	straight
b211 (E)	9	# 4	25'-3"	straight
b212 (E)	3	# 5	12'-0"	straight
b213 (E)	3	# 5	14'-8"	straight
c203 (E)	29	# 5	1'-8"	straight
c204 (E)	29	# 5	1'-3"	straight
h208 (E)	24	# 5	27'-3"	straight
h212 (E)	24	# 5	31'-3"	straight
Bridge Approach Pavement (Special)			Sq. Yd.	168

GENERAL NOTES

Work this Sheet with Sheet ST-10.

All reinforcement bars shall be epoxy coated.

THICKNESS-"t"=Thickness of Pavement.

Hooked bars are detailed on Sheet ST-10.

Reinforment Bars, Epoxy Coated shall not be paid for separately buy included in the cost of Bridge Apporach Pavement (Special).

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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NAME	DATE

CITY OF AURORA

APPROACH PAVEMENT DETAILS I
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

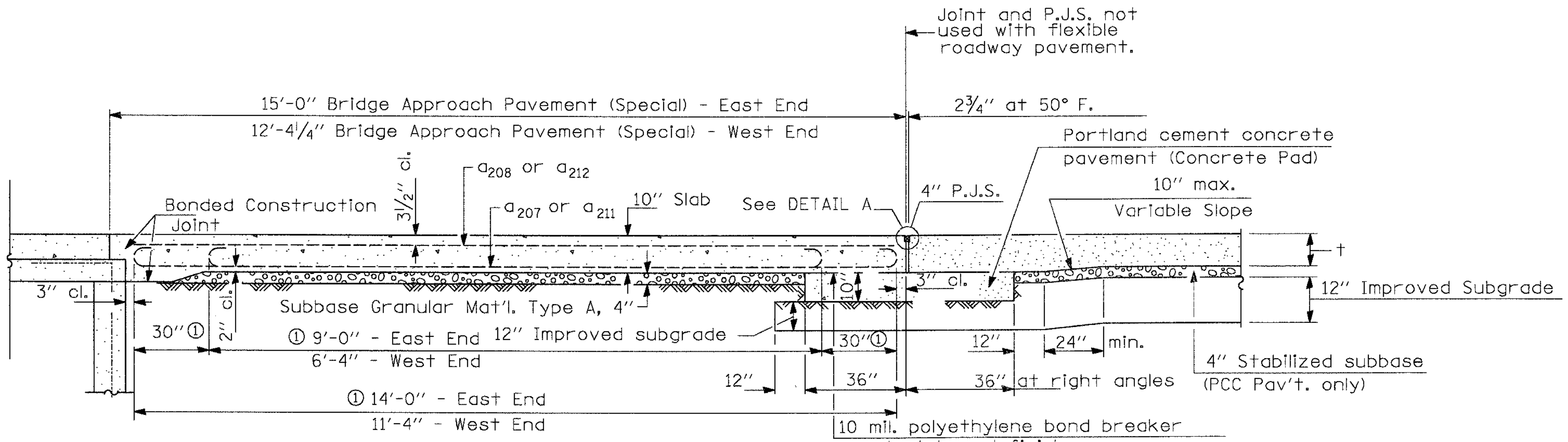
DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	81
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

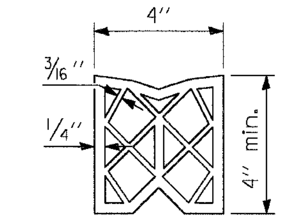
SHEET NO. ST-10

ST-12 SHEETS

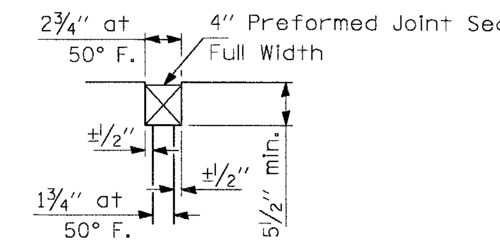


SECTION C-C

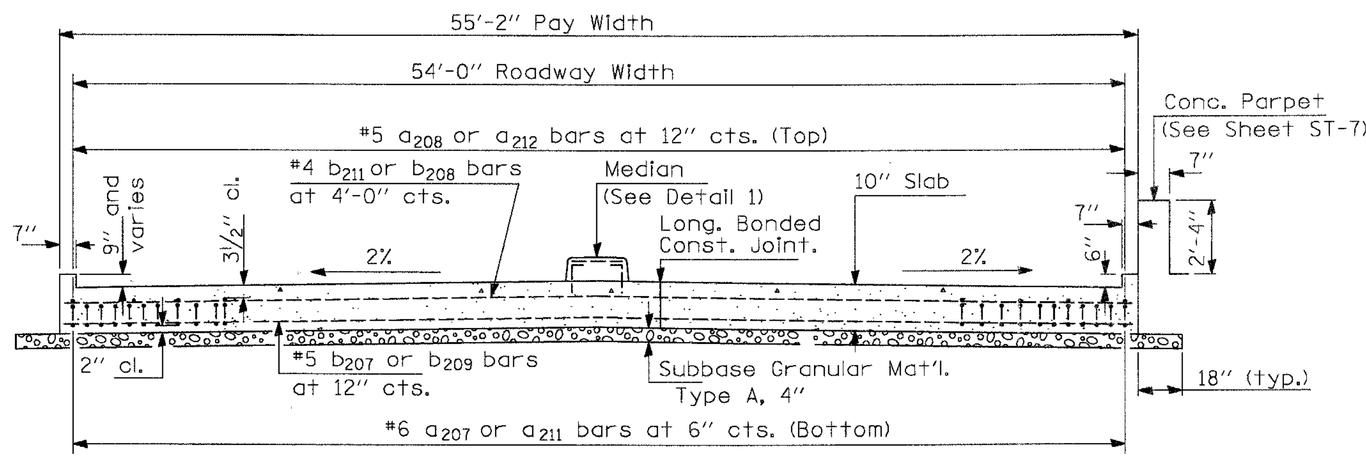
① Stagger #9 a_{207} and a_{211} bars as shown on plan - full width
Tilt a_{207} and a_{211} bars in field to meet minimum clearance.



PREFORMED JOINT SEAL

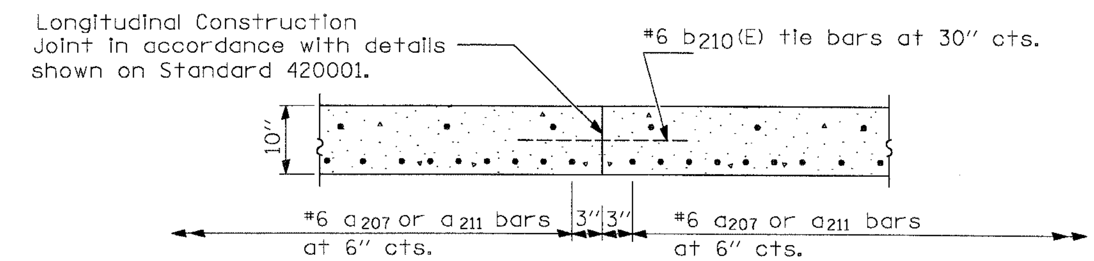


DETAIL A

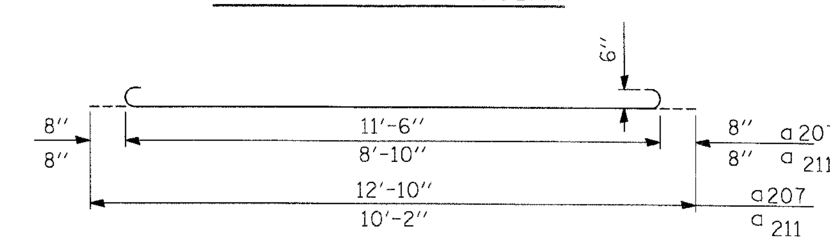


SECTION D-D

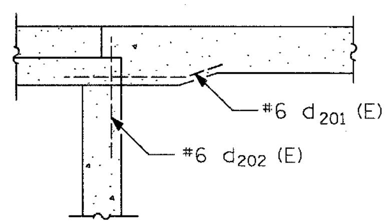
(See Plan for Dimensions not shown)
All reinforcement bars shall be epoxy coated.



LONGITUDINAL CONSTRUCTION JOINT

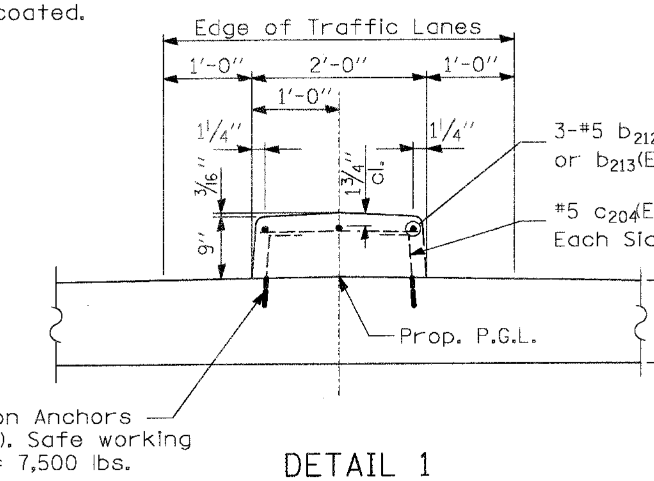


BAR a_{207} or a_{211}

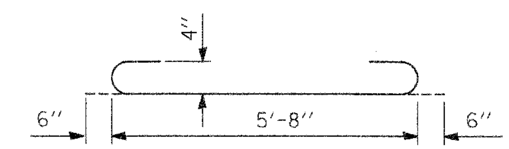


SECTION E-E

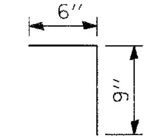
(See Section Thru Top of Deck on Sheet ST-5)



DETAIL 1



BAR a_{209}



BAR c_{204}

DESIGN STRESSES

f_y = 60,000 p.s.i.
f'_c = 3,500 p.s.i.
n = 8.5

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

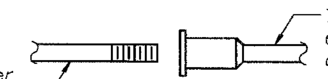
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

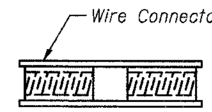
APPROACH PAVEMENT DETAILS II
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006



ROLLED THREAD DOWEL BAR

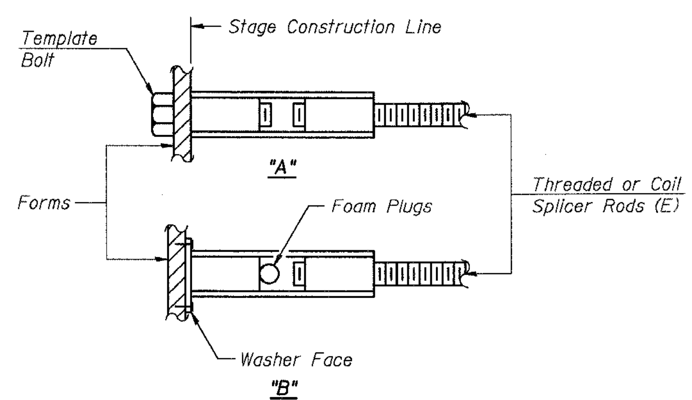
** ONE PIECE



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.

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 (Tension in kips) $= 1.25 \times fy \times A_t$

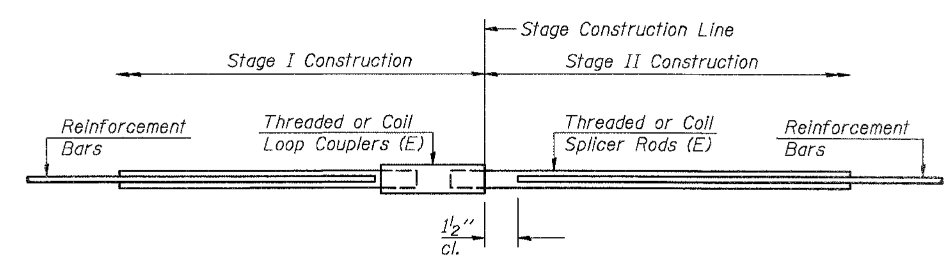
② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
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	Strength Requirements: Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



STANDARD

Bar Size	No. Assemblies Required	Location
#4	14	Top Slab
#8	14	Top Slab

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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CITY OF AURORA

BAR SPLICER DETAILS
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	83
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

CONTRACT #83867

SHEET NO. ST-12
ST-12 SHEETS

CHICAGO TESTING LABORATORY, INC.

FOUNDATION BORING LOG (REVISED)

SHEET 1 OF 1

PROJECT Illinois Avenue over the Fox River CTL FILE # 06MC205 — DATE 1/31/06
ROUTE F.A.P. 1517 — LOCATION SE 1/4, Sec. 15, T 38 N, R 8 E — BORED BY VI
SECTION 03-00247-00-BR — DRILLING METHOD Continuous Flight Auger — LOGGED BY DS
COUNTY Kane — HAMMER TYPE Rope/Cathead — CHECKED BY CC
STRUCTURE
NUMBER
BORING S-1
STATION 116+95
OFFSET 43' L of CL

WATER SURFACE EL. 689.1
GROUND WATER AT COMPLETION 4.7'
AFTER 18 HOURS 3.6'

GROUND SURFACE EL. 692.8

Description	Depth M (Ft)	N/6"	Qu tsf	W %
Black and Dark Brown Clay LOAM, stiff, A-6: FILL	1	10 8 7	1.0 P	30
Dark Brown PEAT, A-8	(5)	4 3 3	0.25	48
Grey Organic SILT to Organic Silty CLAY, trace Shells, A-8	2	2 3 3	<0.25 P	39
Grey SAND (f-c), trace to little Gravel, A-1-b	3 (10)	4 12 13	0.25 -	42 19
	4	12 13 14		12
weathered dolomite		13 50/2"		11 7
Spoon Refusal @ 14.2'	(15) 5 6 (20)			

Depth scale (continued): 7, (25), 8, 9 (30), 10, (35), 11, 12, (40)

N-Standard Penetration Test-
Blows per foot to drive 2 inch
O.D. Split Spoon Sampler 12 inches
with 140 lbs. hammer falling 30 inches

Qu- Unconfined Compressive Strength (tsf)
W- Water Content-percentage of oven dry weight (%)

Type failure: B- Bulge Failure
S- Shear Failure
E- Estimated Value
P-Penetrometer

CHICAGO TESTING LABORATORY, INC.

FOUNDATION BORING LOG (REVISED)

SHEET 1 OF 1

PROJECT Illinois Avenue over the Fox River CTL FILE # 06MC205 — DATE 1/31/06
ROUTE F.A.P. 1517 — LOCATION SE 1/4, Sec. 15, T 38 N, R 8 E — BORED BY VI
SECTION 03-00247-00-BR — DRILLING METHOD Continuous Flight Auger — LOGGED BY DS
COUNTY Kane — HAMMER TYPE Rope/Cathead — CHECKED BY CC
STRUCTURE
NUMBER
BORING S-2
STATION 116+81
OFFSET 58' R of CL

WATER SURFACE EL. 689.1
GROUND WATER AT COMPLETION 4.1'
AFTER 19 HOURS 3.3'

GROUND SURFACE EL. 692.7

Description	Depth M (Ft)	N/6"	Qu tsf	W %
±13" Dark Brown Silty Clay LOAM/ TOPSOIL, A-7-6: FILL				
Brown Sandy LOAM, A-2: FILL	1	10 16 12	2.0 P	15
	(5)	5 6 6		36
Dark Grey Organic SILT with Shells, A-8	2	1 1 1	<0.25 P	87 50
Light Grey Organic SILT and SAND with Shells, A-8				
Light Grey SAND with Shells, trace Gravel, A-1-b	3 (10)	8 8 4		35
Grey SAND (f-c) and GRAVEL A-1-b	4	13 25 36		13
weathered dolomite bedrock End of Boring @ 13.6' (spoon refusal/ auber refusal)	(15) 5 6 (20)	50/0"		10

Depth scale (continued): 7, (25), 8, 9 (30), 10, (35), 11, 12, (40)

N-Standard Penetration Test-
Blows per foot to drive 2 inch
O.D. Split Spoon Sampler 12 inches
with 140 lbs. hammer falling 30 inches

Qu- Unconfined Compressive Strength (tsf)
W- Water Content-percentage of oven dry weight (%)

Type failure: B- Bulge Failure
S- Shear Failure
E- Estimated Value
P-Penetrometer

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

SOIL BORING LOGS
PEDESTRIAN TUNNEL
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	84
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SE-1
SE-27 SHEETS

Benchmark:
Cut square on Southeast Wingwall (East Bridge)
Elev. = 639.88

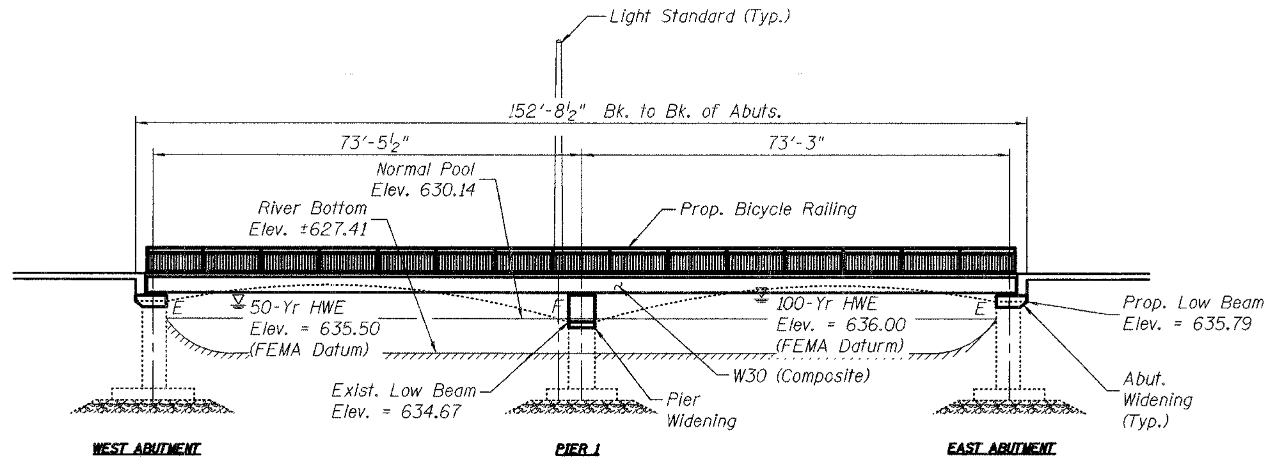
Existing Structure:
No. 045-6008 Built in 1949 under Sec. 14B-CS, S.A.R. 24 Ext. (Kane County Sec. 118-B M.F.T.), and widened in 1976. The Superstructure consists of 2-continuous reinforced concrete T-Beam spans measuring 150'-2⅝" back to back of abutments and 65'-11" out to out deck supported by one reinforced concrete pier and two reinforced concrete closed abutments founded on rock.

Salvage:
Reuse existing substructures.

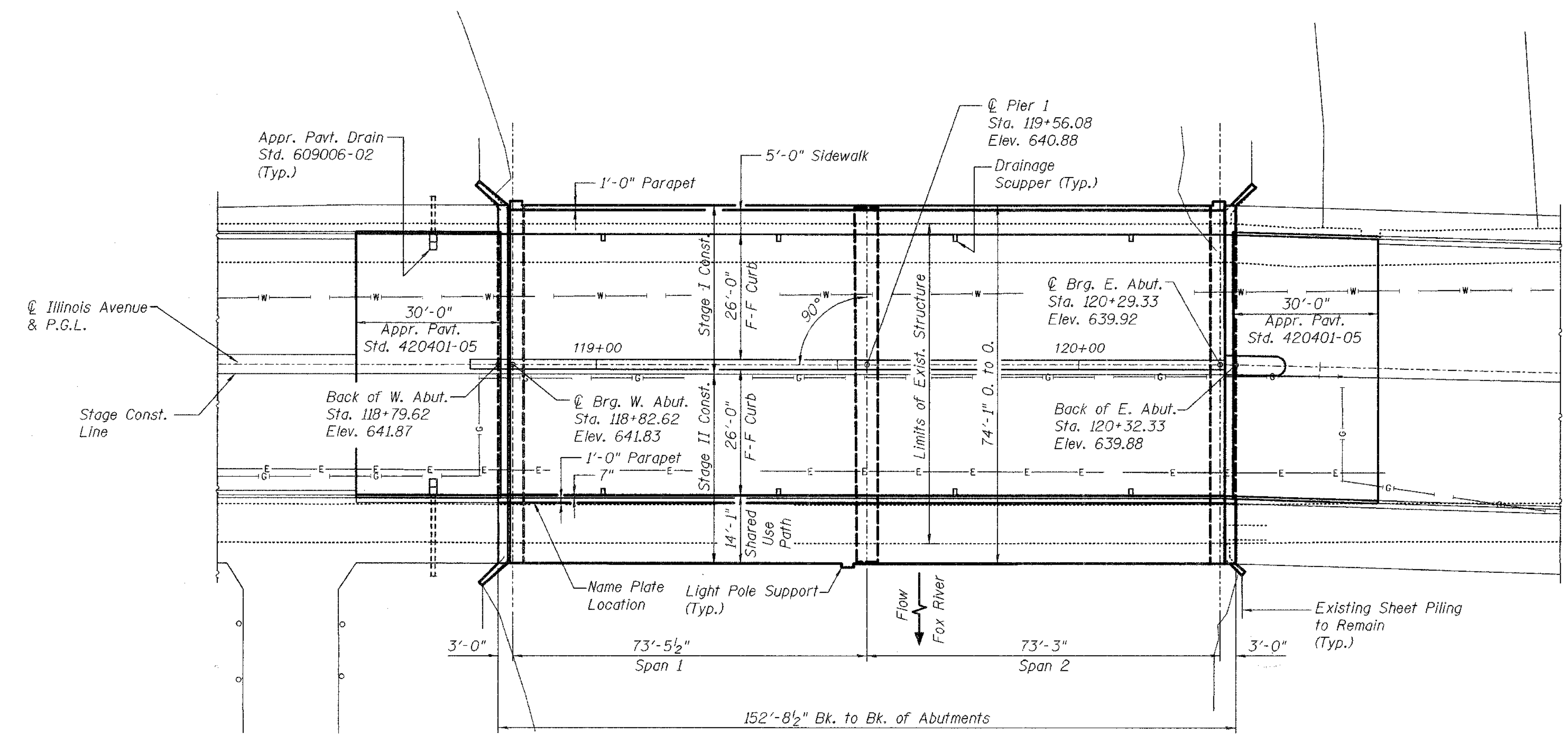
Staging:
One lane of traffic in each direction shall be maintained during construction utilizing staged construction.

LEGEND

—W— 12" Watermain (Abandoned)
—G— 8" Gas Main (To be Abandoned by NICOR Prior to Construction)
—E— (10)-5" PVC Electrical Conduits (Abandoned)



ELEVATION



PLAN

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications - 17th Ed.

LOADING HS20-44

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

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 50,000 psi (M270 Gr. 50 Structural Steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4%g
Site Coefficient (S) = 1.0

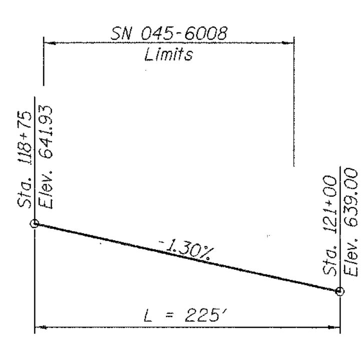
To the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

Andrew E. Underwager 8-3-06
Licensed Structural Engineer Date
License Expires November 30, 2006

FOX RIVER
BUILT 2007 BY
CITY OF AURORA
SEC 03-00247-00-BR
STATION 119+55.97
STR. NO. 045-6008
LOADING HS20

NAME PLATE

See Std. 515001-02



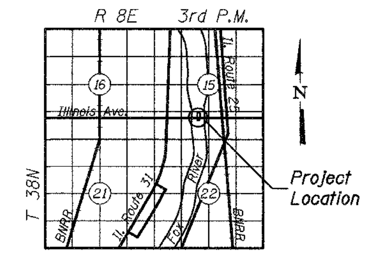
PROFILE GRADE

(Along ℄ Illinois Av.)

WATERWAY INFORMATION

Drainage Area = 1,705 Sq. Mi. Low Grade Elev. 639.52 @ Sta. - 121+74.61

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10								
Design	50	8,600	3,159.16	3,178.16	635.50	0	0	635.50	635.50
Base	100	9,420	3,285.84	3,318.92	636.00	0	0	636.00	636.00
Overtopping									
Max. Calc.	500								



LOCATION SKETCH

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

GENERAL PLAN & ELEVATION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	85
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

SHEET NO. SE-2
SE-27 SHEETS

CONTRACT #83867

GENERAL NOTES

Fasteners shall be high strength bolts.
Bolts $\frac{7}{8}$" ϕ, open holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 284,339 lbs.

Field welding of construction accessories will not be permitted to beams.

Anchor bolts shall be set before bolting diaphragms over supports.

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322, Grade 60.

Backfill shall be placed behind the abutment after the superstructure has been poured and the falsework removed. See Article 502.10 of the Standard Specifications.

The back face of closed abutments and their wingwalls shall be waterproofed according to Article 503.18 of the Standard Specifications.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two $\frac{1}{8}$" adjusting shims shall be provided for each bearing and placed as detailed.

Bridge Seat Sealer shall be applied to the seat area of the abutments.

When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown, the next pour shall not be made until both of the following requirements are met:

1. *At least 72 hours shall have elapsed from the end of the previous pour.*
2. *The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3,500 psi.*

All construction joints shall be bonded.

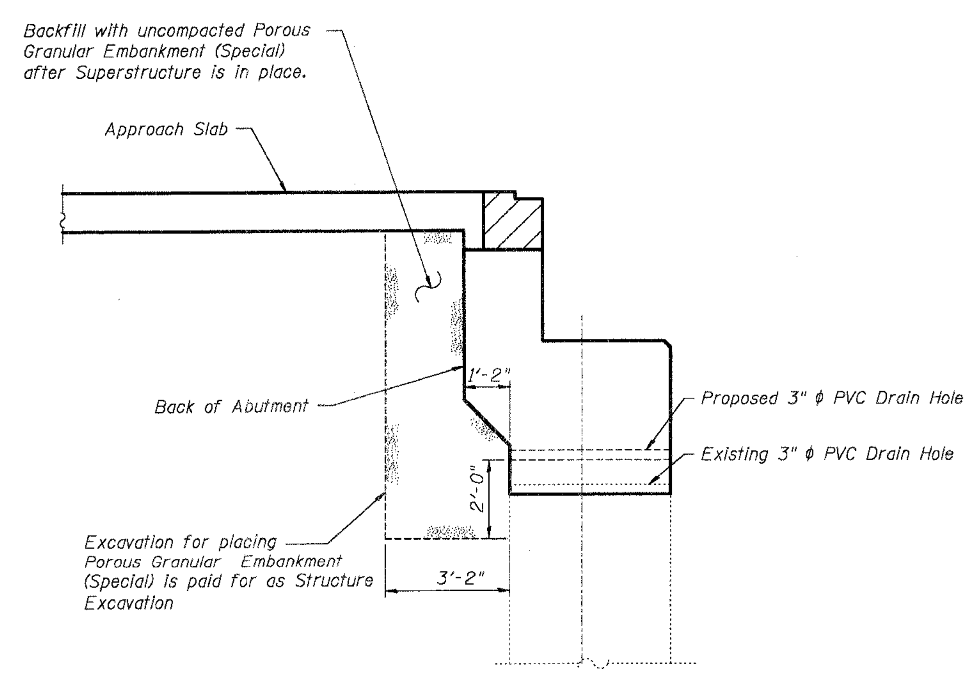
Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I Removal.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number NE2006043 which was issued for the permanent construction.

The organic zinc rich primer / epoxy / urethane paint system shall be used for painting of new structural steel except where otherwised noted. The entire system shall be shop applied, with exception the that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat shall be gray, Munsell No. 5B 7/1. See special provision for "Cleaning and Painting New Metal Structures".

The information shown in these plans concerning the type and location of utilities is not guaranteed to be accurate or all-inclusive. The Contractor is responsible for making his own determination as to the existence of type, size and location of all underground and overhead utilities as may be necessary to avoid conflict with construction operations and/or damage to the utility.

During Phase I, the Contractor shall maintain sidewalk access and lighting on the south side. During Phase II, the new lighting on the north side shall be operational and new sidewalk accessible.



ABUTMENT DRAINAGE DETAIL

TOTAL BILL OF MATERIAL - 045-6008

	ITEM	UNIT	TOTAL
*	Porous Granular Embankment (Special)	Cu. Yd.	106
*	Removal of Existing Superstructures, No. 2	Each	1
	Concrete Removal	Cu. Yd.	98.9
	Structure Excavation	Cu. Yd.	106
	Concrete Structures	Cu. Yd.	214.6
	Concrete Superstructure	Cu. Yd.	359.7
	Bridge Deck Grooving	Sq. Yd.	792
*	Protective Coat	Sq. Yd.	1,371
	Elastomeric Bearing Assembly, Type I	Each	20
	Structural Repair of Concrete (Depth Equal To Or Less Than 5 In.)	Sq. Ft.	22.5
	Furnishing and Erecting Structural Steel	L. Sum	0.34
	Stud Shear Connectors	Each	4,680
	Reinforcement Bars, Epoxy Coated	Pound	100,240
	Name Plates	Each	1
	Bridge Seat Sealer	Sq. Ft.	482
	Epoxy Crack Sealing	Foot	18
*	Bridge Joint System (Expansion), 1"	Foot	152.7
	Drainage Scuppers, DS-11	Each	8
	Parapet Railing	Foot	148
*	Bicycle Railing, Special	Foot	170
	Bar Splicers	Each	715

**Indicates Item Requires a Special Provision.*

INDEX OF STRUCTURE SHEETS - 045-6008

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

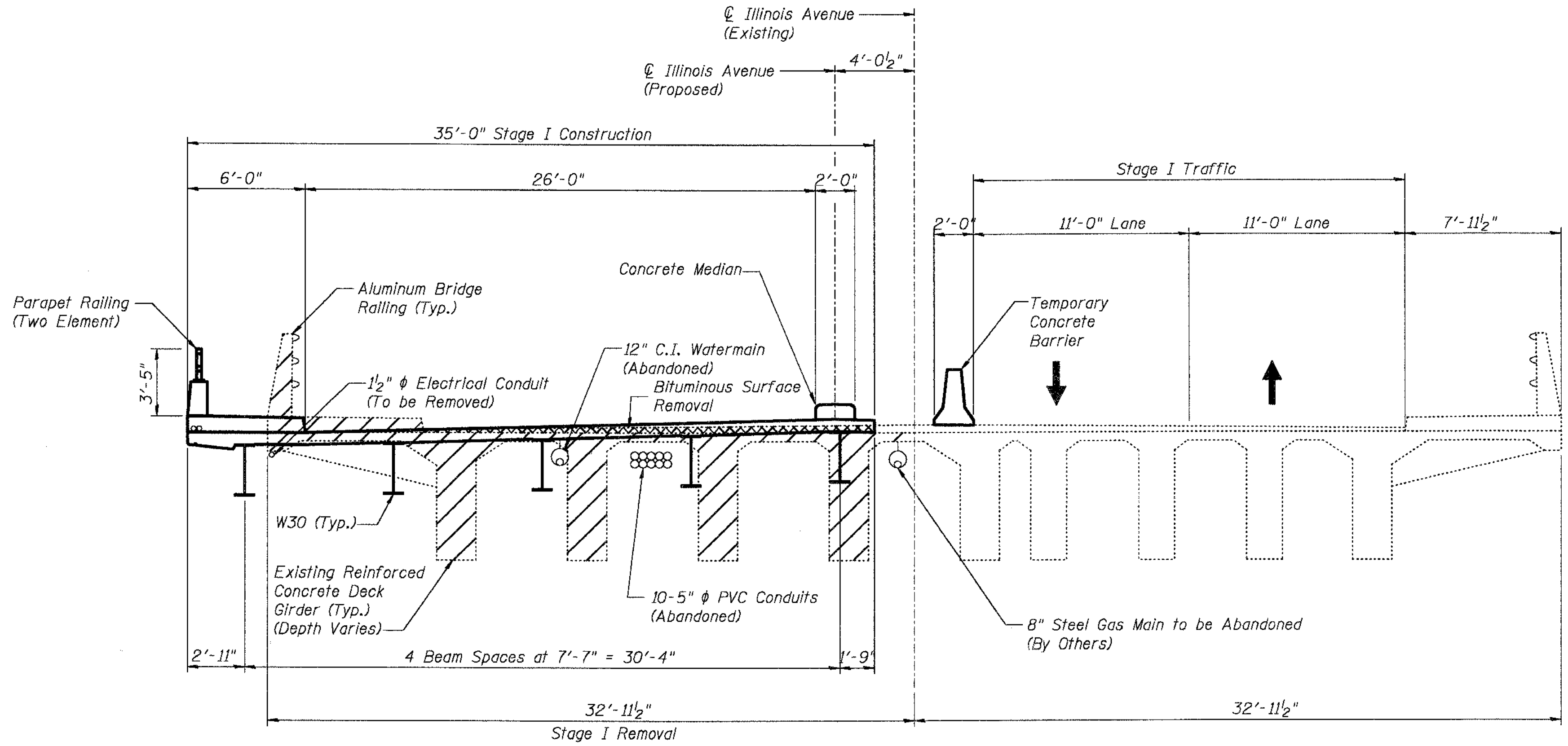
GENERAL NOTES, INDEX & QUANTITIES
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

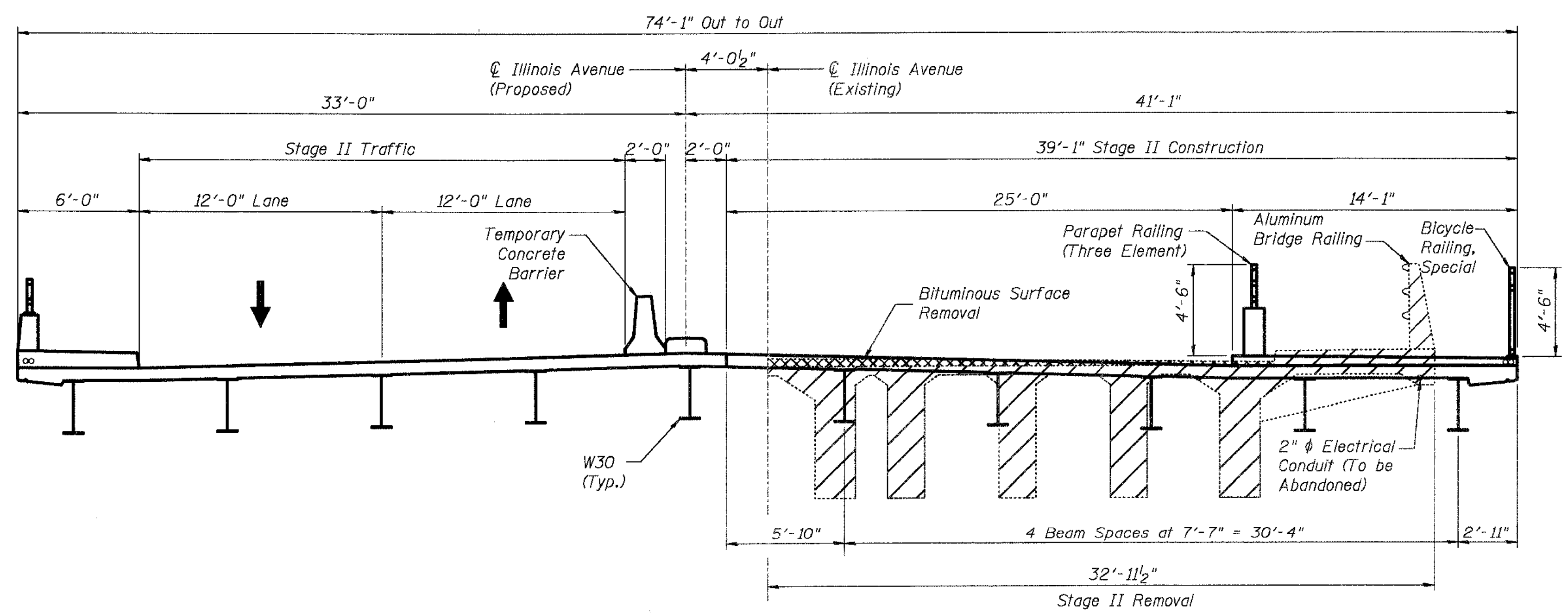
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	86
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	

CONTRACT #83867

SHEET NO. SE-3
SE-27 SHEETS



STAGE I
(Looking East)



STAGE II
(Looking East)

NOTES:

Contractor may remove existing superstructure as required utilizing permanent lane closures for a period of not longer than 5 continuous days.

Prior to any permanent lane closures, the Contractor shall notify the City 72 hours in advance and obtain all necessary permits. See Roadway Plans for detour route requirements.

See Sheet SE-4 for Temporary Concrete Barrier Details.

See Roadway Plans for Temporary Concrete Barrier Quantity.

The removal and disposal of abandoned utilities shall be the Contractor's responsibility. The cost of this work shall be included in the cost of "Removal of Existing Superstructures, No. 2".

The removal and disposal of the existing aluminum railing shall be included in the cost of "Removal of Existing Superstructures, No. 2".

Indicates limits of "Removal of Existing Superstructures, No. 2".

Indicates limits of Bituminous Surface Removal. See Roadway Plans for quantity.

BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Superstructures, No. 2	Each	1

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

STAGE CONSTRUCTION DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

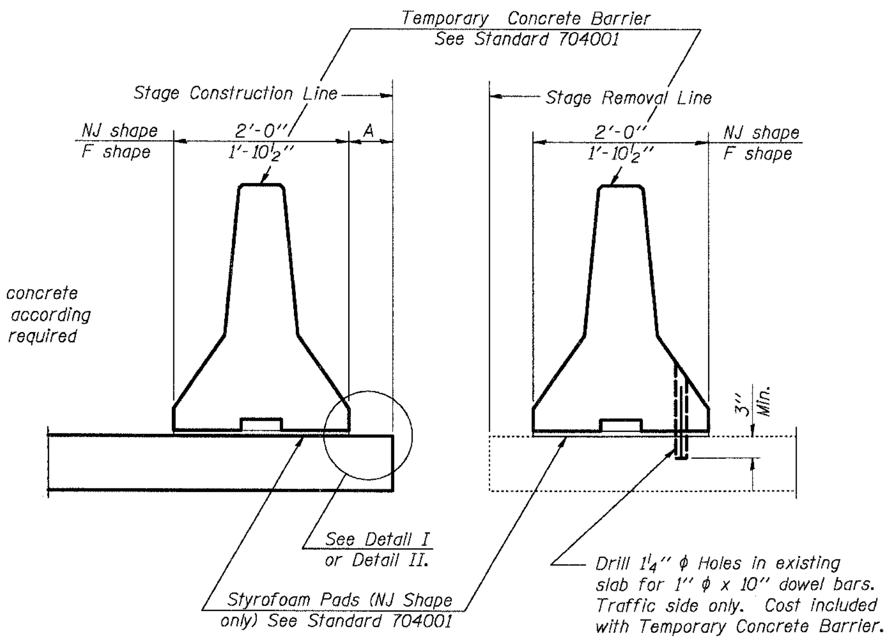
DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	87
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SE-4
SE-27 SHEETS

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".



NEW SLAB

EXISTING SLAB

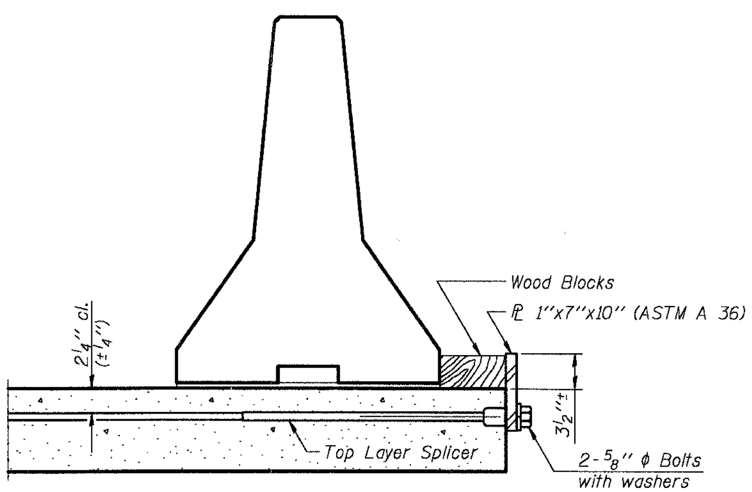
SECTIONS THRU SLAB

NOTES

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

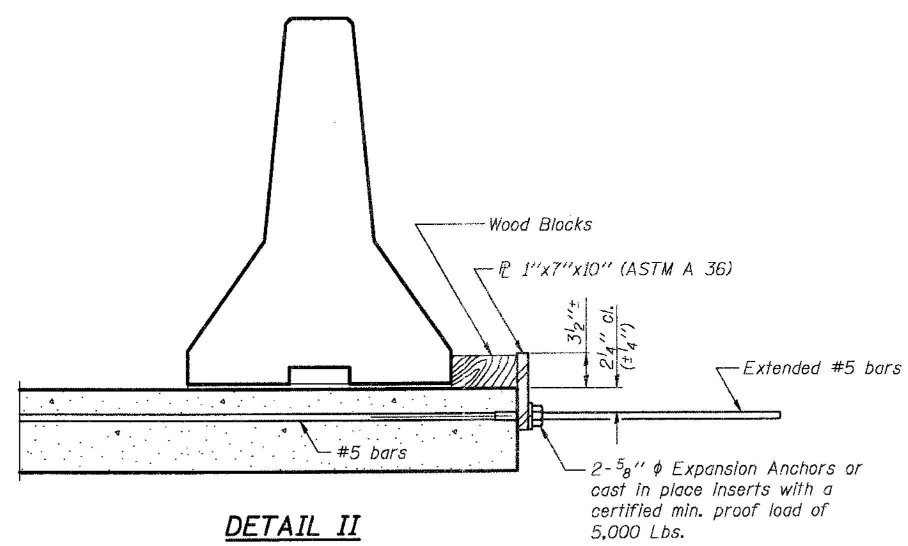
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



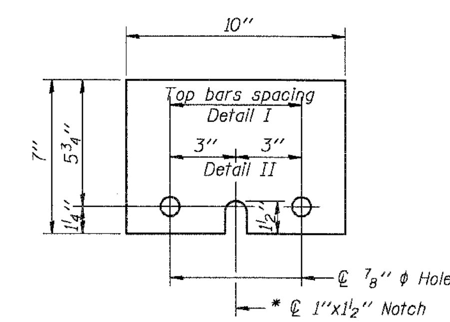
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



ℙ 1"x7"x10"

* Required only with Detail II

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
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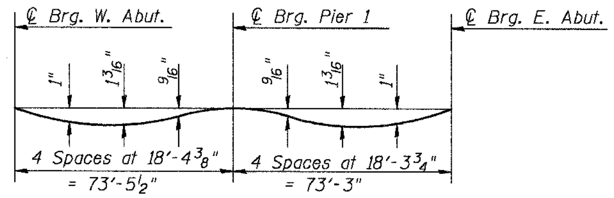
REVISIONS	
NAME	DATE

CITY OF AURORA

TEMPORARY CONCRETE BARRIER
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

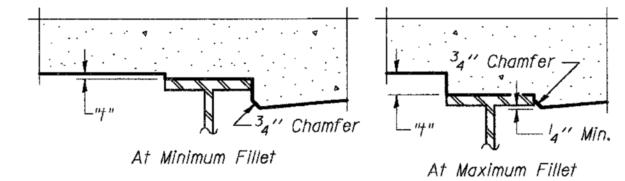
DATE 7-28-2006



DEAD LOAD DEFLECTION DIAGRAM

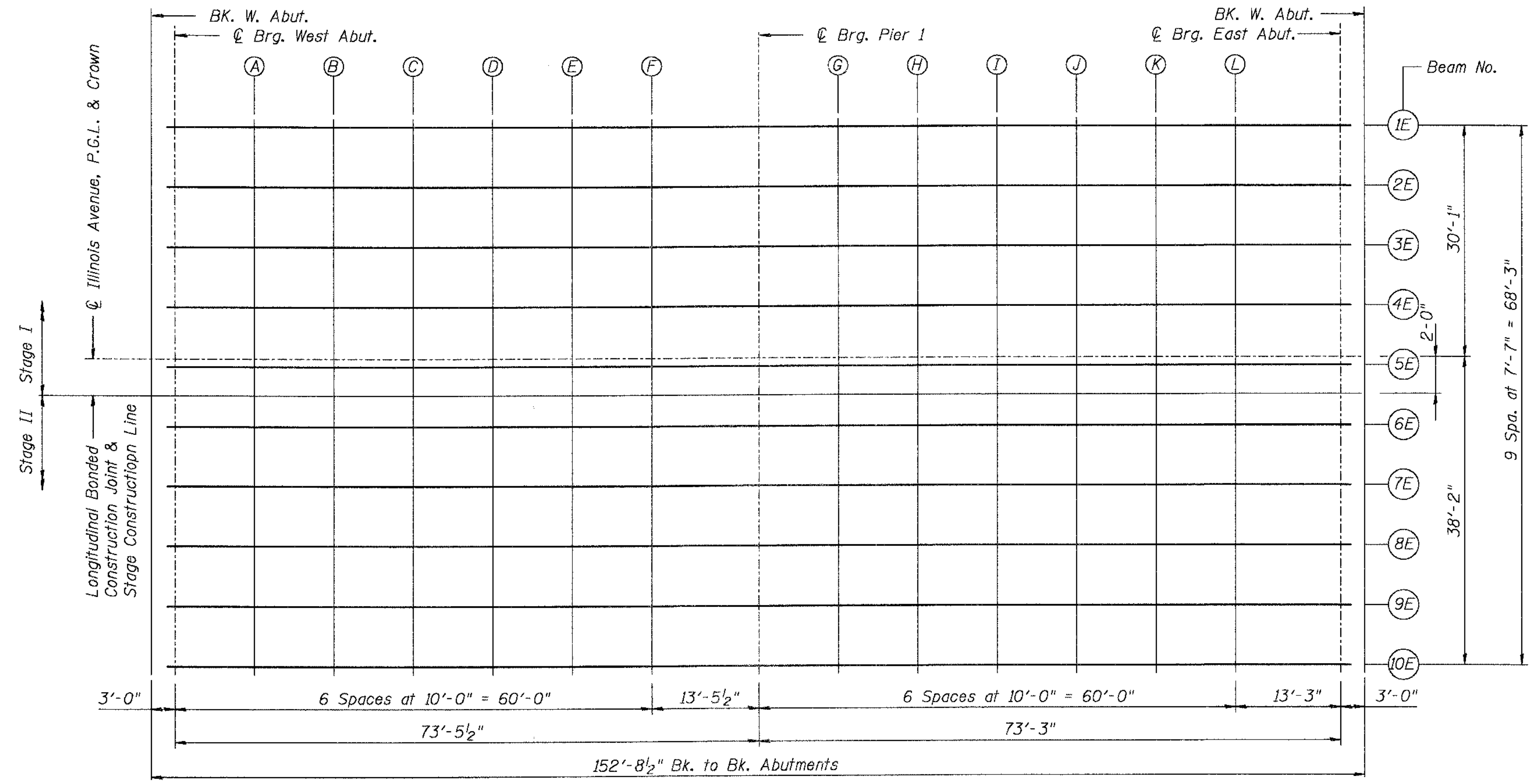
(Includes weight of concrete only.)

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 as shown below.



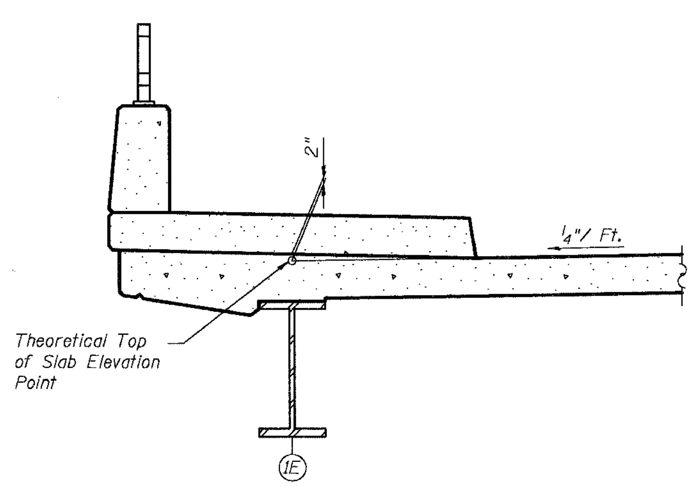
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet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

FILLET HEIGHTS

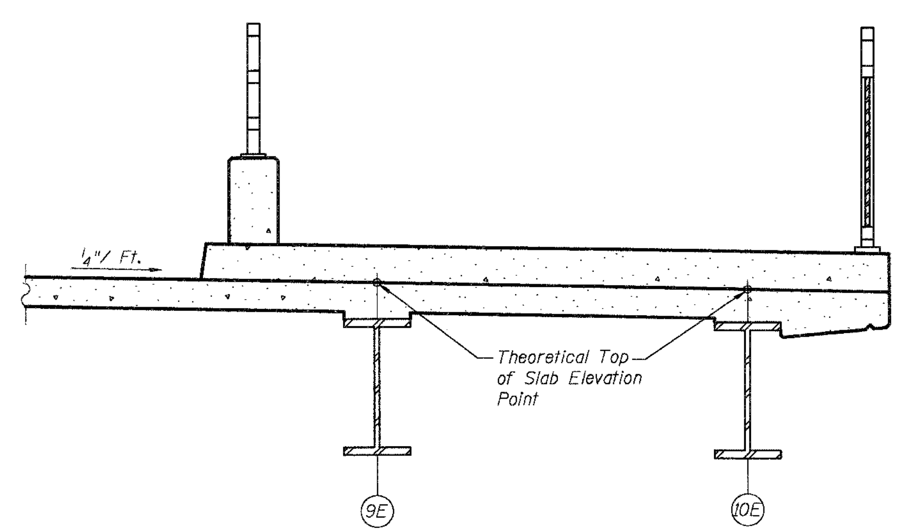


PLAN

N



SECTION THRU SIDEWALK



SECTION THRU SHARED USE PATH

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (1 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

BEAM 1E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	-30.083	641.32	641.32
℄ Brg.W. Abut.	118+82.62	-30.083	641.28	641.28
A	118+92.62	-30.083	641.15	641.20
B	119+02.62	-30.083	641.02	641.10
C	119+12.62	-30.083	640.89	640.99
D	119+22.62	-30.083	640.76	640.85
E	119+32.62	-30.083	640.63	640.69
F	119+42.62	-30.083	640.50	640.52
℄ Brg. Pier 1	119+56.08	-30.083	640.32	640.32
G	119+66.08	-30.083	640.19	640.21
H	119+76.08	-30.083	640.06	640.11
I	119+86.08	-30.083	639.93	640.01
J	119+96.08	-30.083	639.80	639.90
K	120+06.08	-30.083	639.67	639.76
L	120+16.08	-30.083	639.54	639.61
℄ Brg. E. Abut.	120+29.3	-30.083	639.37	639.37
Bk. E. Abut.	120+32.3	-30.083	639.33	639.33

BEAM 2E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	-22.500	641.47	641.47
℄ Brg.W. Abut.	118+82.62	-22.500	641.44	641.44
A	118+92.62	-22.500	641.31	641.36
B	119+02.62	-22.500	641.18	641.26
C	119+12.62	-22.500	641.05	641.15
D	119+22.62	-22.500	640.92	641.01
E	119+32.62	-22.500	640.79	640.85
F	119+42.62	-22.500	640.66	640.68
℄ Brg. Pier 1	119+56.08	-22.500	640.48	640.48
G	119+66.08	-22.500	640.35	640.37
H	119+76.08	-22.500	640.22	640.27
I	119+86.08	-22.500	640.09	640.17
J	119+96.08	-22.500	639.96	640.06
K	120+06.08	-22.500	639.83	639.92
L	120+16.08	-22.500	639.70	639.76
℄ Brg. E. Abut.	120+29.3	-22.500	639.53	639.53
Bk. E. Abut.	120+32.3	-22.500	639.49	639.49

BEAM 3E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	-14.917	641.63	641.63
℄ Brg.W. Abut.	118+82.62	-14.917	641.59	641.59
A	118+92.62	-14.917	641.46	641.51
B	119+02.62	-14.917	641.33	641.42
C	119+12.62	-14.917	641.20	641.30
D	119+22.62	-14.917	641.07	641.16
E	119+32.62	-14.917	640.94	641.01
F	119+42.62	-14.917	640.81	640.84
℄ Brg. Pier 1	119+56.08	-14.917	640.64	640.64
G	119+66.08	-14.917	640.51	640.52
H	119+76.08	-14.917	640.38	640.43
I	119+86.08	-14.917	640.25	640.33
J	119+96.08	-14.917	640.12	640.22
K	120+06.08	-14.917	639.99	640.08
L	120+16.08	-14.917	639.86	639.92
℄ Brg. E. Abut.	120+29.3	-14.917	639.69	639.69
Bk. E. Abut.	120+32.3	-14.917	639.65	639.65

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (2 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

BEAM 4E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	-7.333	641.76	641.76
℄ Brg.W. Abut.	118+82.62	-7.333	641.72	641.72
A	118+92.62	-7.333	641.59	641.64
B	119+02.62	-7.333	641.46	641.54
C	119+12.62	-7.333	641.33	641.43
D	119+22.62	-7.333	641.20	641.29
E	119+32.62	-7.333	641.07	641.13
F	119+42.62	-7.333	640.94	640.96
℄ Brg. Pier 1	119+56.08	-7.333	640.76	640.76
G	119+66.08	-7.333	640.63	640.65
H	119+76.08	-7.333	640.50	640.55
I	119+86.08	-7.333	640.37	640.45
J	119+96.08	-7.333	640.24	640.34
K	120+06.08	-7.333	640.11	640.20
L	120+16.08	-7.333	639.98	640.05
℄ Brg. E. Abut.	120+29.3	-7.333	639.81	639.81
Bk. E. Abut.	120+32.3	-7.333	639.77	639.77

PROFILE GRADE LINE, CENTERLINE & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	0.000	641.87	641.87
℄ Brg.W. Abut.	118+82.62	0.000	641.83	641.83
A	118+92.62	0.000	641.70	641.75
B	119+02.62	0.000	641.57	641.66
C	119+12.62	0.000	641.44	641.54
D	119+22.62	0.000	641.31	641.40
E	119+32.62	0.000	641.18	641.24
F	119+42.62	0.000	641.05	641.08
℄ Brg. Pier 1	119+56.08	0.000	640.88	640.88
G	119+66.08	0.000	640.75	640.76
H	119+76.08	0.000	640.62	640.67
I	119+86.08	0.000	640.49	640.57
J	119+96.08	0.000	640.36	640.45
K	120+06.08	0.000	640.23	640.32
L	120+16.08	0.000	640.10	640.16
℄ Brg. E. Abut.	120+29.3	0.000	639.92	639.92
Bk. E. Abut.	120+32.3	0.000	639.88	639.88

BEAM 5E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	0.250	641.87	641.87
℄ Brg.W. Abut.	118+82.62	0.250	641.83	641.83
A	118+92.62	0.250	641.70	641.75
B	119+02.62	0.250	641.57	641.65
C	119+12.62	0.250	641.44	641.54
D	119+22.62	0.250	641.31	641.40
E	119+32.62	0.250	641.18	641.24
F	119+42.62	0.250	641.05	641.07
℄ Brg. Pier 1	119+56.08	0.250	640.87	640.87
G	119+66.08	0.250	640.74	640.76
H	119+76.08	0.250	640.61	640.66
I	119+86.08	0.250	640.48	640.56
J	119+96.08	0.250	640.35	640.45
K	120+06.08	0.250	640.22	640.31
L	120+16.08	0.250	640.09	640.16
℄ Brg. E. Abut.	120+29.3	0.250	639.92	639.92
Bk. E. Abut.	120+32.3	0.250	639.88	639.88

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (3 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

STAGE CONSTRUCTION LINE & LONGITUDINAL BONDED CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	2.000	641.84	641.84
℄ Brg.W. Abut.	118+82.62	2.000	641.80	641.80
A	118+92.62	2.000	641.67	641.72
B	119+02.62	2.000	641.54	641.63
C	119+12.62	2.000	641.41	641.51
D	119+22.62	2.000	641.28	641.37
E	119+32.62	2.000	641.15	641.21
F	119+42.62	2.000	641.02	641.05
℄ Brg. Pier 1	119+56.08	2.000	640.84	640.84
G	119+66.08	2.000	640.71	640.73
H	119+76.08	2.000	640.58	640.63
I	119+86.08	2.000	640.45	640.54
J	119+96.08	2.000	640.32	640.42
K	120+06.08	2.000	640.19	640.29
L	120+16.08	2.000	640.06	640.13
℄ Brg. E. Abut	120+29.3	2.000	639.89	639.89
Bk. E. Abut.	120+32.3	2.000	639.85	639.85

BEAM 6E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	7.833	641.75	641.75
℄ Brg.W. Abut.	118+82.62	7.833	641.71	641.71
A	118+92.62	7.833	641.58	641.63
B	119+02.62	7.833	641.45	641.54
C	119+12.62	7.833	641.32	641.42
D	119+22.62	7.833	641.19	641.28
E	119+32.62	7.833	641.06	641.12
F	119+42.62	7.833	640.93	640.96
℄ Brg. Pier 1	119+56.08	7.833	640.75	640.75
G	119+66.08	7.833	640.62	640.64
H	119+76.08	7.833	640.49	640.54
I	119+86.08	7.833	640.36	640.45
J	119+96.08	7.833	640.23	640.33
K	120+06.08	7.833	640.10	640.20
L	120+16.08	7.833	639.97	640.04
℄ Brg. E. Abut.	120+29.3	7.833	639.80	639.80
Bk. E. Abut.	120+32.3	7.833	639.76	639.76

BEAM 7E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	15.417	641.62	641.62
℄ Brg.W. Abut.	118+82.62	15.417	641.58	641.58
A	118+92.62	15.417	641.45	641.50
B	119+02.62	15.417	641.32	641.41
C	119+12.62	15.417	641.19	641.29
D	119+22.62	15.417	641.06	641.15
E	119+32.62	15.417	640.93	641.00
F	119+42.62	15.417	640.80	640.83
℄ Brg. Pier 1	119+56.08	15.417	640.63	640.63
G	119+66.08	15.417	640.50	640.51
H	119+76.08	15.417	640.37	640.42
I	119+86.08	15.417	640.24	640.32
J	119+96.08	15.417	640.11	640.21
K	120+06.08	15.417	639.98	640.07
L	120+16.08	15.417	639.85	639.91
℄ Brg. E. Abut.	120+29.3	15.417	639.68	639.68
Bk. E. Abut.	120+32.3	15.417	639.64	639.64

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

TOP OF DECK ELEVATIONS (4 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

BEAM 8E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	23.000	641.46	641.46
℄ Brg.W. Abut.	118+82.62	23.000	641.42	641.42
A	118+92.62	23.000	641.29	641.34
B	119+02.62	23.000	641.16	641.25
C	119+12.62	23.000	641.03	641.14
D	119+22.62	23.000	640.90	641.00
E	119+32.62	23.000	640.77	640.84
F	119+42.62	23.000	640.64	640.67
℄ Brg. Pier 1	119+56.08	23.000	640.47	640.47
G	119+66.08	23.000	640.34	640.36
H	119+76.08	23.000	640.21	640.26
I	119+86.08	23.000	640.08	640.16
J	119+96.08	23.000	639.95	640.05
K	120+06.08	23.000	639.82	639.91
L	120+16.08	23.000	639.69	639.75
℄ Brg. E. Abut.	120+29.3	23.000	639.52	639.52
Bk. E. Abut.	120+32.3	23.000	639.48	639.48

BEAM 9E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	30.583	641.31	641.31
℄ Brg.W. Abut.	118+82.62	30.583	641.27	641.27
A	118+92.62	30.583	641.14	641.19
B	119+02.62	30.583	641.01	641.09
C	119+12.62	30.583	640.88	640.98
D	119+22.62	30.583	640.75	640.84
E	119+32.62	30.583	640.62	640.68
F	119+42.62	30.583	640.49	640.51
℄ Brg. Pier 1	119+56.08	30.583	640.31	640.31
G	119+66.08	30.583	640.18	640.20
H	119+76.08	30.583	640.05	640.10
I	119+86.08	30.583	639.92	640.00
J	119+96.08	30.583	639.79	639.89
K	120+06.08	30.583	639.66	639.75
L	120+16.08	30.583	639.53	639.60
℄ Brg. E. Abut.	120+29.3	30.583	639.36	639.36
Bk. E. Abut.	120+32.3	30.583	639.32	639.32

BEAM 10E

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	118+79.62	38.167	641.15	641.15
℄ Brg.W. Abut.	118+82.62	38.167	641.11	641.11
A	118+92.62	38.167	640.98	641.03
B	119+02.62	38.167	640.85	640.94
C	119+12.62	38.167	640.72	640.82
D	119+22.62	38.167	640.59	640.68
E	119+32.62	38.167	640.46	640.52
F	119+42.62	38.167	640.33	640.36
℄ Brg. Pier 1	119+56.08	38.167	640.15	640.15
G	119+66.08	38.167	640.02	640.04
H	119+76.08	38.167	639.89	639.94
I	119+86.08	38.167	639.76	639.85
J	119+96.08	38.167	639.63	639.73
K	120+06.08	38.167	639.50	639.60
L	120+16.08	38.167	639.37	639.44
℄ Brg. E. Abut.	120+29.3	38.167	639.20	639.20
Bk. E. Abut.	120+32.3	38.167	639.16	639.16

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

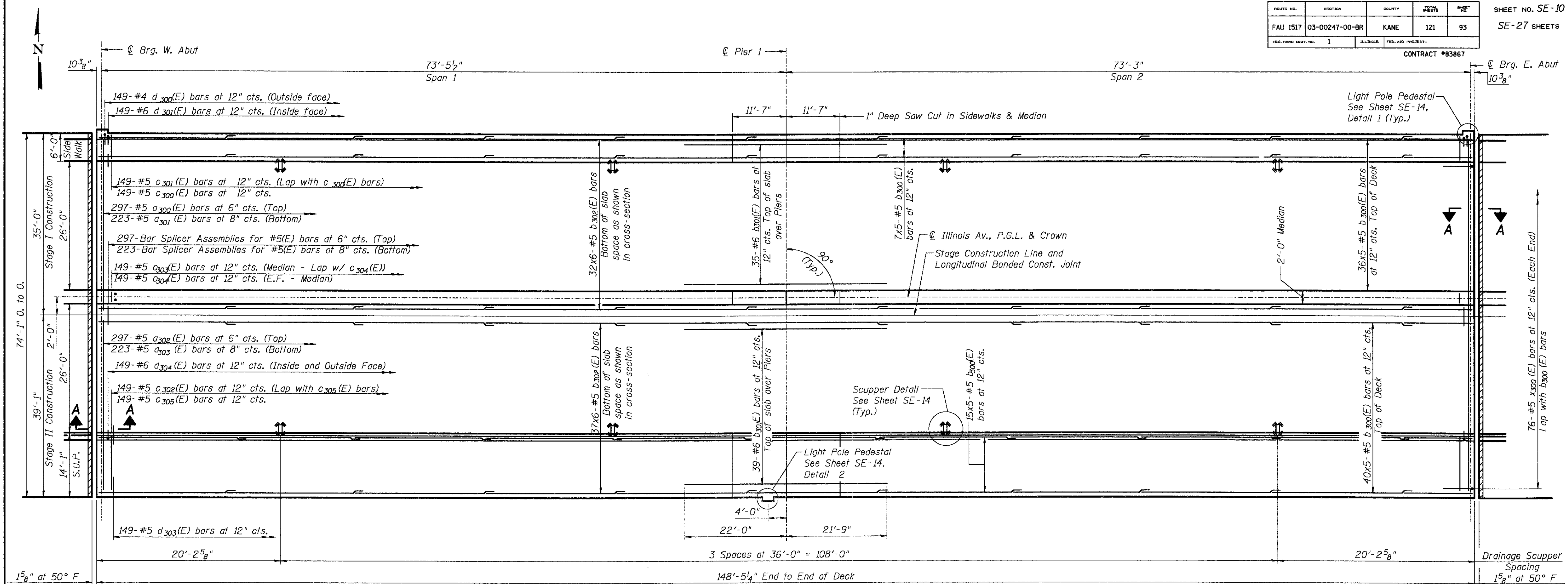
TOP OF DECK ELEVATIONS (5 of 5)
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	93
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

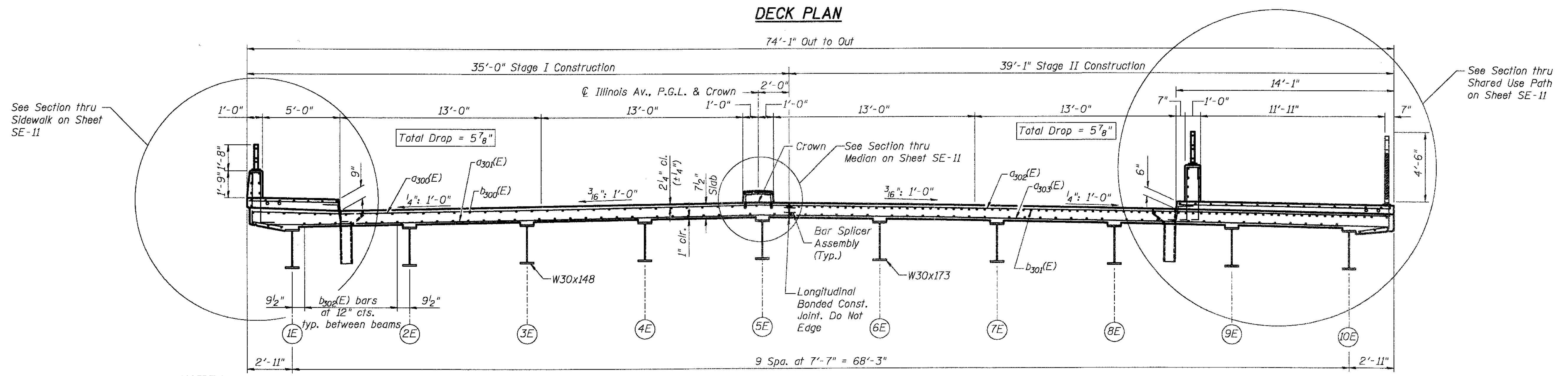
CONTRACT #83867

SHEET NO. SE-10
SE-27 SHEETS



N
℄ Brg. W. Abut
℄ Pier 1
℄ Brg. E. Abut
73'-5½" Span 1
73'-3" Span 2
149-#4 d 300(E) bars at 12" cts. (Outside face)
149-#6 d 301(E) bars at 12" cts. (Inside face)
1" Deep Saw Cut in Sidewalks & Median
Light Pole Pedestal See Sheet SE-14, Detail 1 (Typ.)
149-#5 c 301(E) bars at 12" cts. (Lap with c 300(E) bars)
149-#5 c 300(E) bars at 12" cts.
297-#5 a 300(E) bars at 6" cts. (Top)
223-#5 a 301(E) bars at 8" cts. (Bottom)
297-Bar Splicer Assemblies for #5(E) bars at 6" cts. (Top)
223-Bar Splicer Assemblies for #5(E) bars at 8" cts. (Bottom)
149-#5 c 303(E) bars at 12" cts. (Median - Lap w/ c 304(E))
149-#5 c 304(E) bars at 12" cts. (E.F. - Median)
32x6-#5 b 302(E) bars Bottom of slab space as shown in cross-section
35-#6 b 301(E) bars at 12" cts. Top of slab over Piers
7x5-#5 b 300(E) bars at 12" cts.
℄ Illinois Av., P.G.L. & Crown
Stage Construction Line and Longitudinal Bonded Const. Joint
2'-0" Median
36x5-#5 b 300(E) bars at 12" cts. Top of Deck
297-#5 a 302(E) bars at 6" cts. (Top)
223-#5 a 303(E) bars at 8" cts. (Bottom)
149-#6 d 304(E) bars at 12" cts. (Inside and Outside Face)
149-#5 c 302(E) bars at 12" cts. (Lap with c 305(E) bars)
149-#5 c 305(E) bars at 12" cts.
37x6-#5 b 302(E) bars Bottom of slab space as shown in cross-section
39-#6 b 301(E) bars at 12" cts. Top of slab over Piers
Scupper Detail See Sheet SE-14 (Typ.)
15x5-#5 b 300(E) bars at 12" cts.
40x5-#5 b 300(E) bars at 12" cts. Top of Deck
76-#5 x 300(E) bars at 12" cts. (Each End) Lap with b 300(E) bars
Light Pole Pedestal See Sheet SE-14, Detail 2
6'-0" Side Walk
35'-0" Stage I Construction
26'-0"
74'-1" O. to O.
2'-0"
39'-1" Stage II Construction
14'-1" S.U.P.
11'-7"
90° (Typ.)
4'-0"
22'-0"
21'-9"
149-#5 d 303(E) bars at 12" cts.
20'-2⅝"
3 Spaces at 36'-0" = 108'-0"
1⅝" at 50° F
148'-5¼" End to End of Deck
Drainage Scupper Spacing
10⅜"
A

DECK PLAN



74'-1" Out to Out
35'-0" Stage I Construction
39'-1" Stage II Construction
℄ Illinois Av., P.G.L. & Crown
See Section thru Sidewalk on Sheet SE-11
See Section thru Shared Use Path on Sheet SE-11
See Section thru Median on Sheet SE-11
Crown
Total Drop = 5⅞"
a300(E)
a301(E)
b300(E)
a302(E)
a303(E)
b301(E)
¼": 1'-0"
3/16": 1'-0"
7½" Slab
1" clr.
Bar Splicer Assembly (Typ.)
Longitudinal Bonded Const. Joint. Do Not Edge
W30x148
W30x173
b302(E) bars at 12" cts. typ. between beams
1E 2E 3E 4E 5E 6E 7E 8E 9E 10E
2'-11"
9 Spa. at 7'-7" = 68'-3"
13'-0"
5'-0"
1'-0"
14'-1"
11'-11"
4'-6"
Near Midspan
Near Piers

TYPICAL DECK CROSS SECTION
(Looking East)

NOTES:

Min. Lap length for #5 Bars = 2'-2"
Min. Lap length for #6 Bars = 2'-7"
Reinforcement Bars designated (E) shall be epoxy coated.
Work this sheet with sheets SE-11 thru SE-14.
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.
See Sheet SE-11 for Section A-A.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

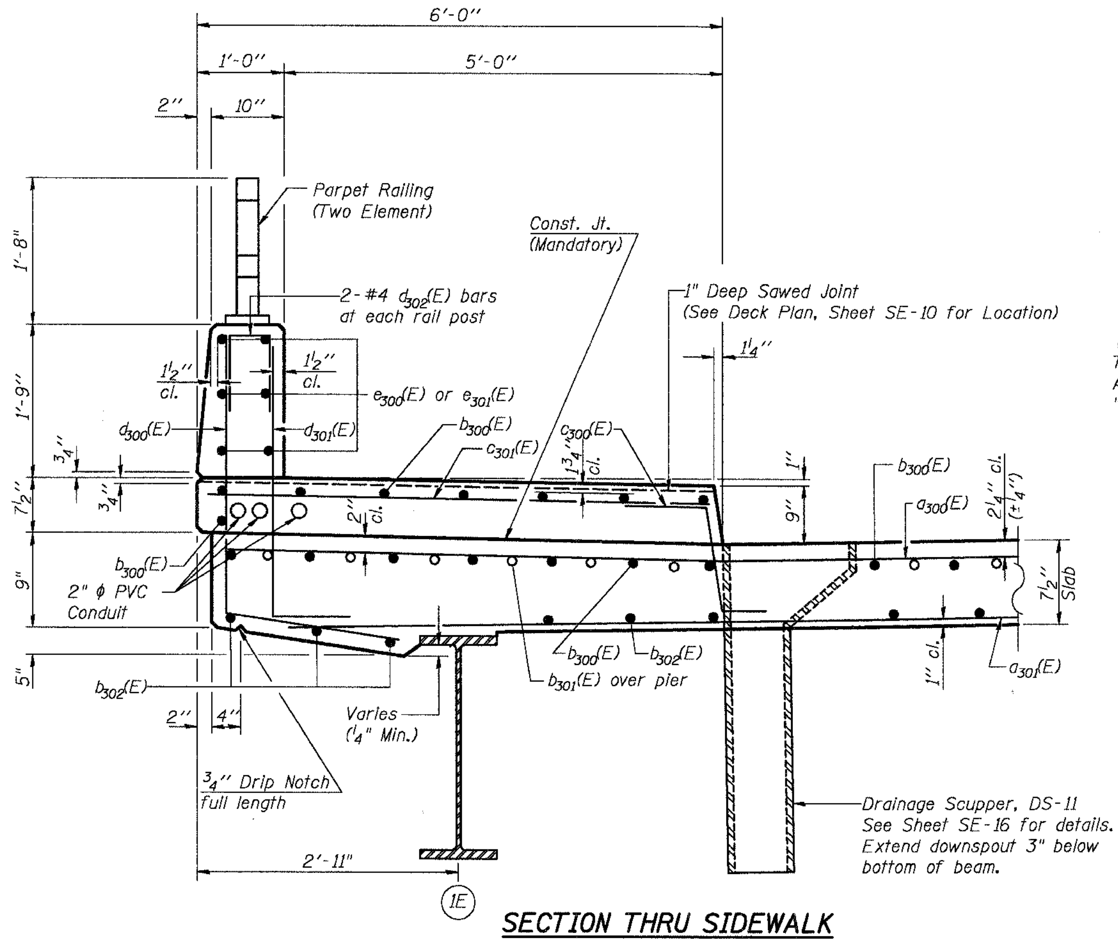
DECK PLAN & CROSS SECTION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	94
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

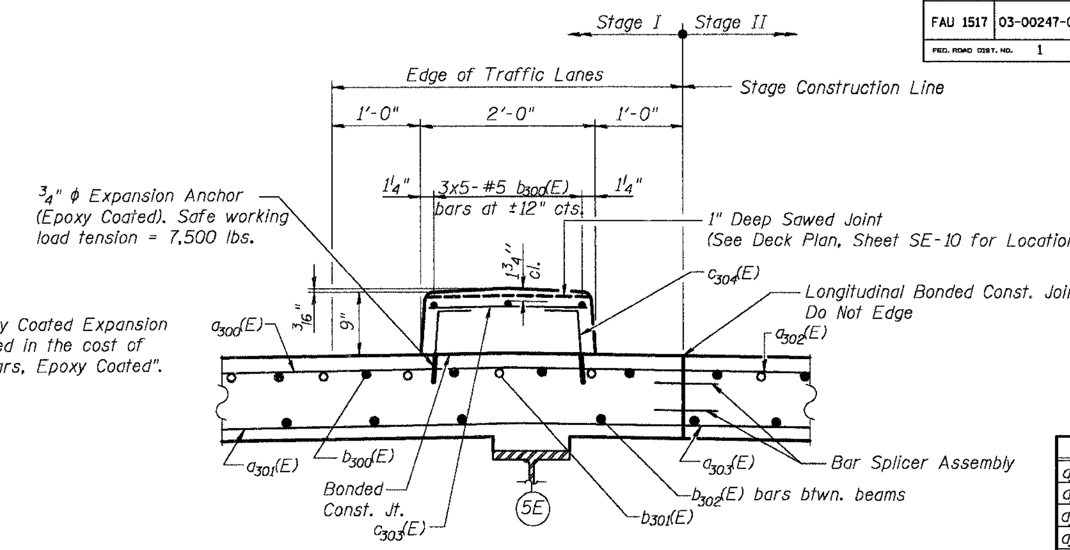
CONTRACT #83867

SHEET NO. SE-11
SE-27 SHEETS

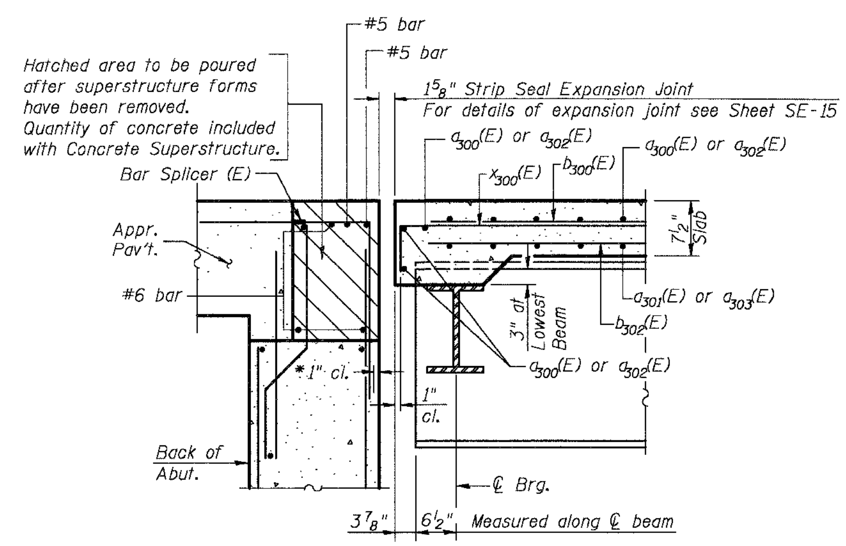


SECTION THRU SIDEWALK

NOTE:
The Cost of Epoxy Coated Expansion Anchors is included in the cost of "Reinforcement Bars, Epoxy Coated".



SECTION THRU MEDIAN

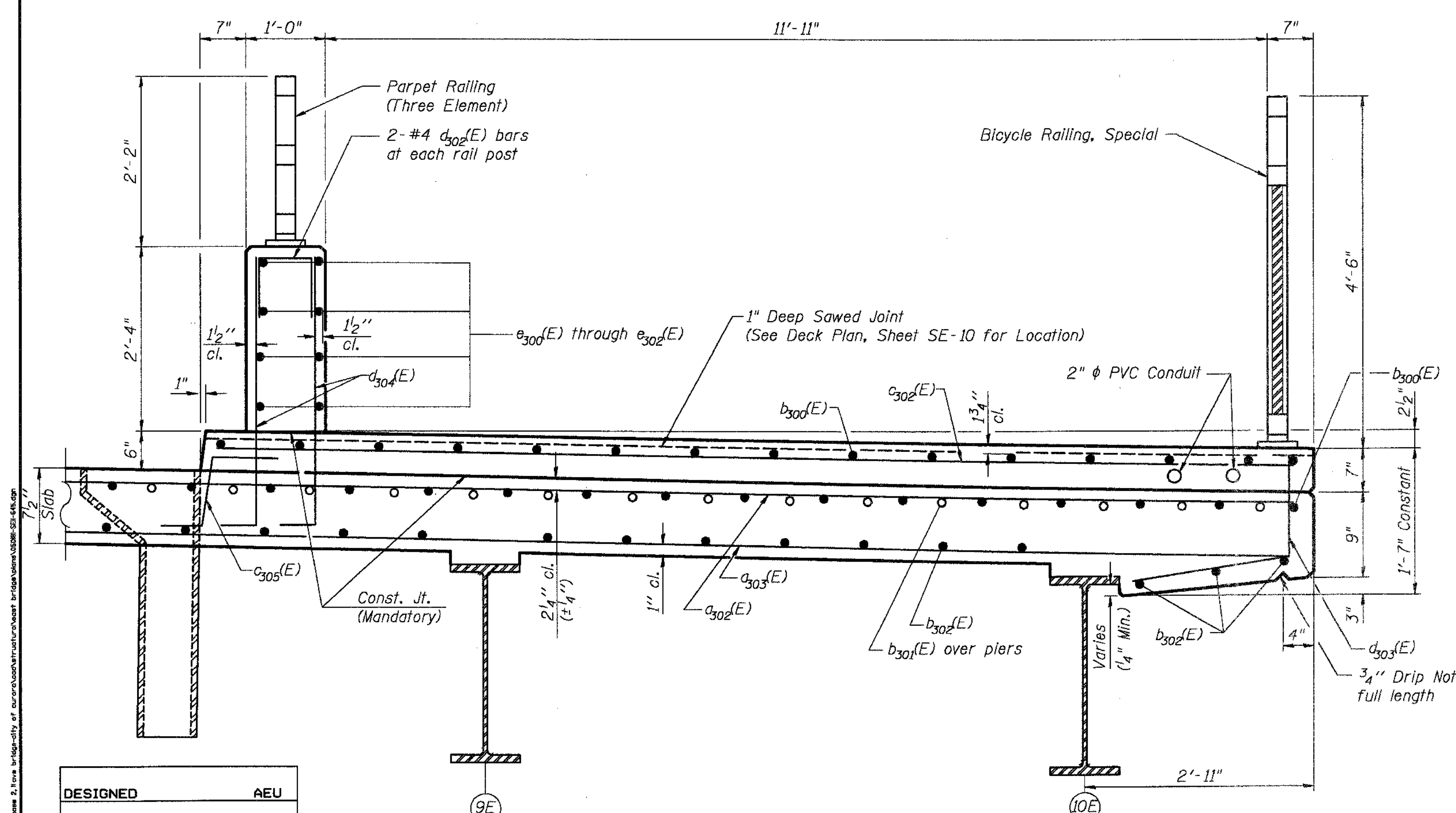


SECTION A-A

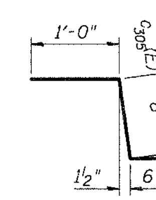
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{300}(E)	297	#5	34'-6"	
a_{301}(E)	223	#5	34'-4"	
a_{302}(E)	297	#5	38'-9"	
a_{303}(E)	223	#5	38'-7"	
b_{300}(E)	515	#5	30'-11"	
b_{301}(E)	74	#6	43'-9"	
b_{302}(E)	414	#5	26'-2"	
b_{303}(E)	64	#5	1'-6"	
c_{300}(E)	149	#5	2'-5"	
c_{301}(E)	149	#5	5'-8"	
c_{302}(E)	149	#5	13'-9"	
c_{303}(E)	149	#5	1'-8"	
c_{304}(E)	298	#5	1'-3"	
c_{305}(E)	149	#5	2'-2"	
d_{300}(E)	149	#4	4'-10"	
d_{301}(E)	149	#6	3'-9"	
d_{302}(E)	64	#4	2'-0"	
d_{303}(E)	149	#5	3'-3"	
d_{304}(E)	298	#6	4'-1"	
d_{305}(E)	8	#4	1'-8"	
d_{306}(E)	3	#6	8'-11"	
d_{307}(E)	6	#6	3'-10"	
d_{308}(E)	3	#6	2'-5"	
d_{309}(E)	12	#6	1'-8"	
e_{300}(E)	84	#4	15'-4"	
e_{301}(E)	24	#4	11'-4"	
e_{302}(E)	12	#4	15'-7"	
x_{300}(E)	152	#5	4'-1"	
Reinforcement Bars, Epoxy Coated			Pound	82,710
Concrete Superstructure			Cu. Yd.	359.7
Bridge Deck Grooving			Sq. Yd.	792
Protective Coat			Sq. Yd.	1,371

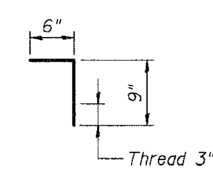
Reinforcement bars designated (E) shall be epoxy coated.



SECTION THRU SHARED USE PATH

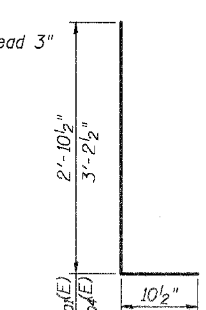


BARS c300(E) and c305(E)

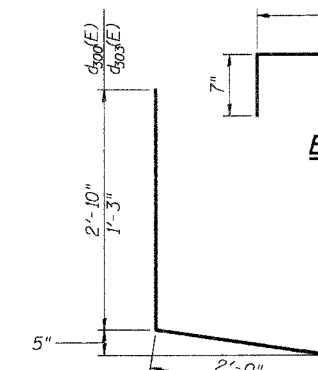


BAR c304(E)

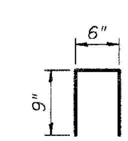
BAR x300(E)



BARS d301(E) and d304(E)



BARS d300(E) and d303(E)



BAR d302(E)

Notes:

Work this sheet with sheets SE-10 and SE-12 through SE-14.
See sheet SE-10 for Section A-A.
For Parapet Railing and Bicycle Railing, Special details see Sheet SE-17.
For Bar Splicer Assembly details see Sheet SE-22.
The cost of furnishing and installing 2" ϕ conduit is included in the unit cost of Concrete Superstructures.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

SUPERSTRUCTURE DETAILS I
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

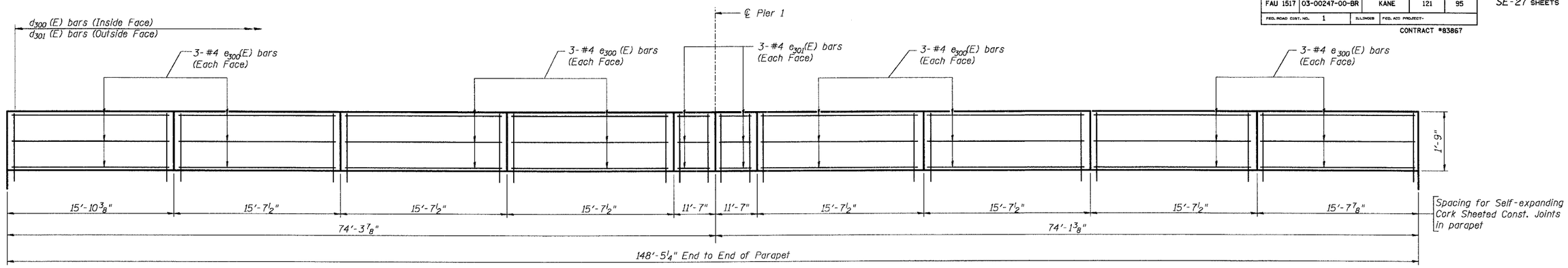
DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	95
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

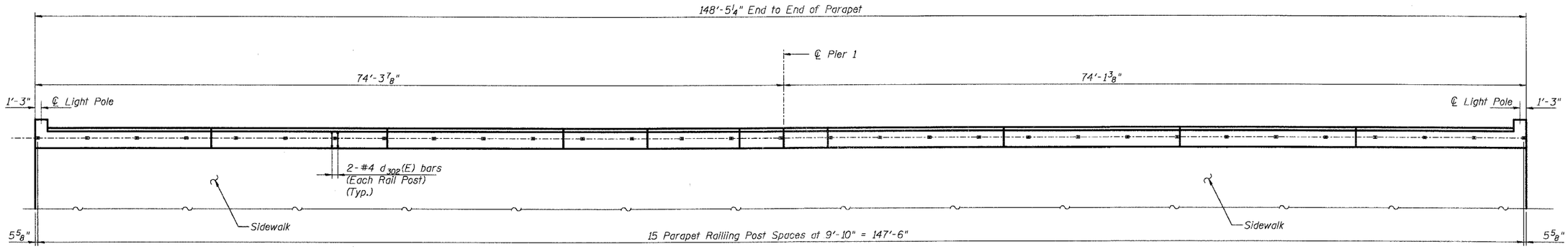
CONTRACT #83867

SHEET NO. SE-12

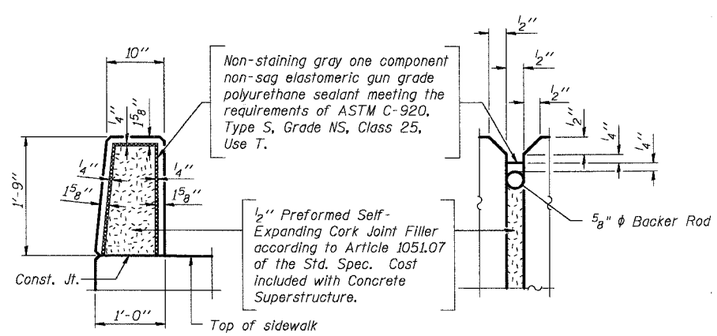
SE-27 SHEETS



INSIDE ELEVATION OF NORTH PARAPET



TOP PLAN OF NORTH PARAPET



PARAPET JOINT DETAILS

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

Notes:

Work this Sheet with Sheets SE-10, SE-11 & SE-14.

For parapet railing details see Sheet SE-11.

For light pole support details see Sheet SE-14.

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

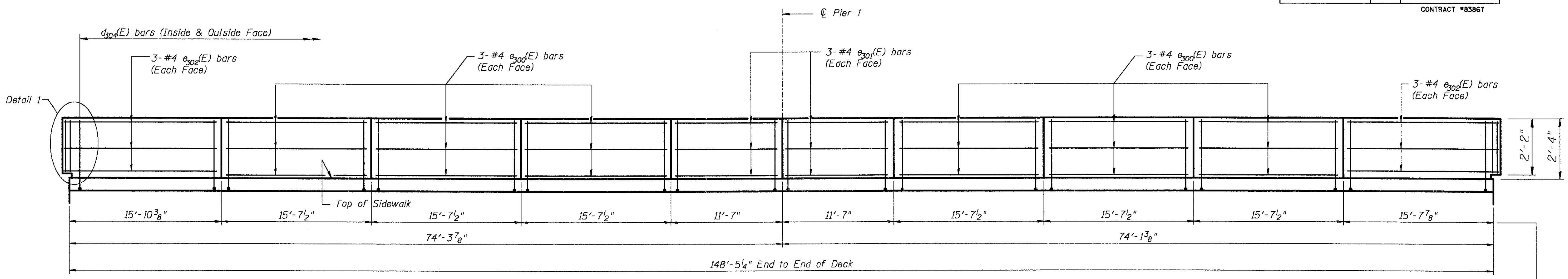
SUPERSTRUCTURE DETAILS II
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

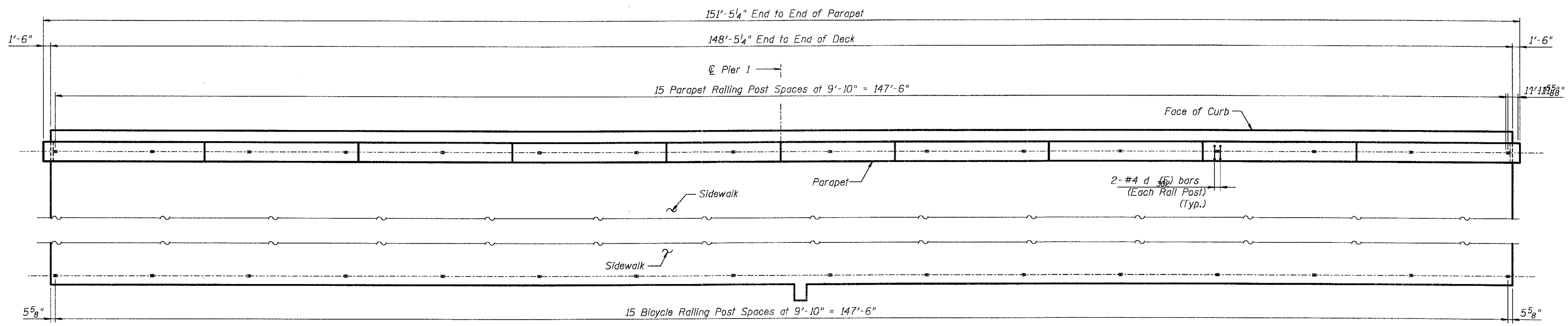
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	96
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

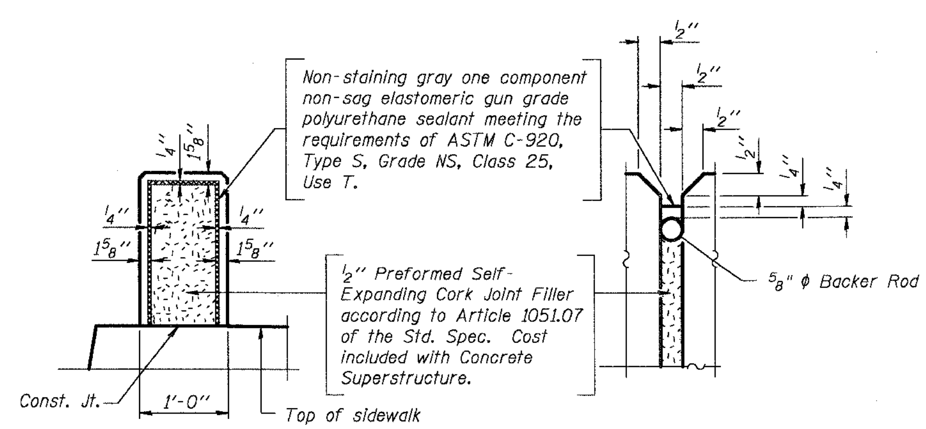
SHEET NO. SE-13
SE-27 SHEETS



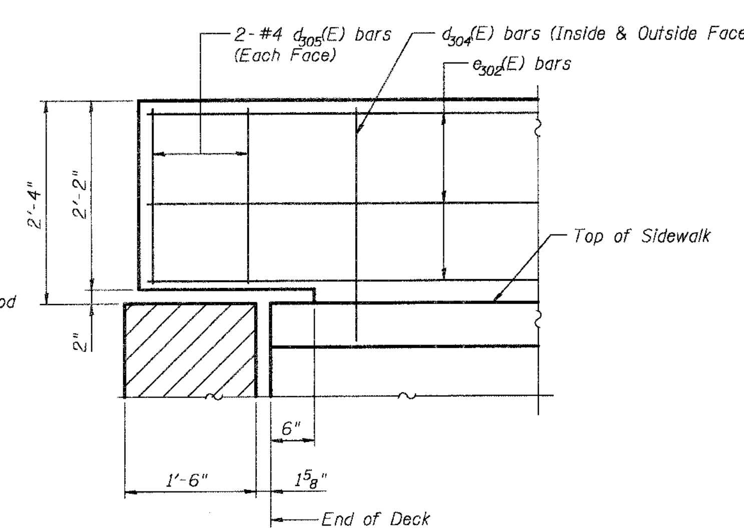
INSIDE ELEVATION OF SOUTH PARAPET



TOP PLAN OF SHARED USE PATH



SOUTH PARAPET JOINT DETAILS



DETAIL 1

Typical at both ends of Parapet

Notes:

Work this Sheet with Sheets SE-10, SE-11 & SE-14.

For parapet railing details see Sheet SE-11.

For light pole support details see Sheet SE-14.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

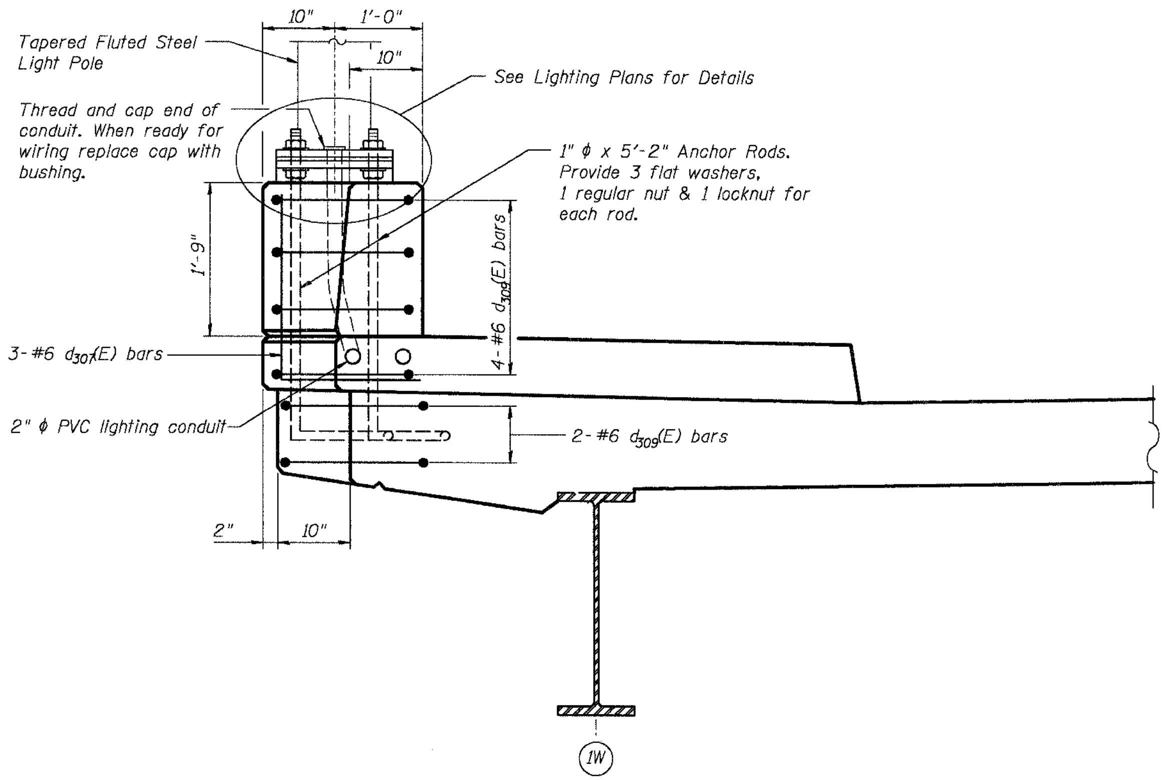
SUPERSTRUCTURE DETAILS III
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

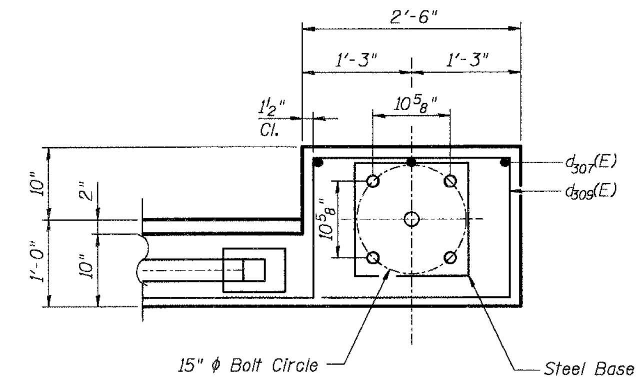
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	97
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

SHEET NO. SE-14
SE-27 SHEETS

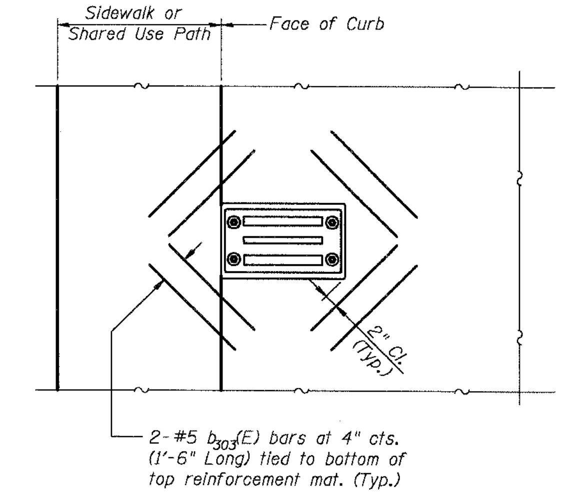
CONTRACT #83867



SECTION - DETAIL 1

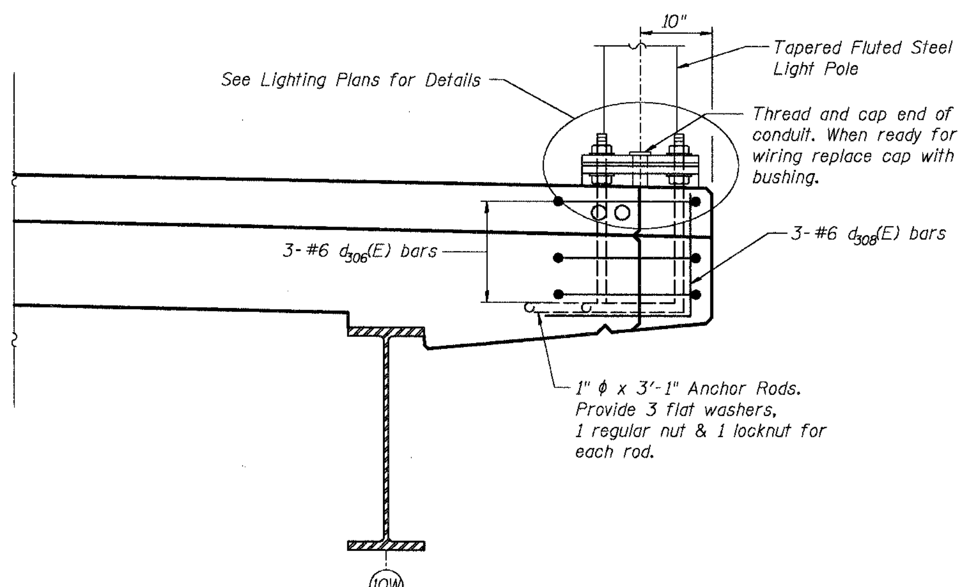


PLAN - DETAIL 1

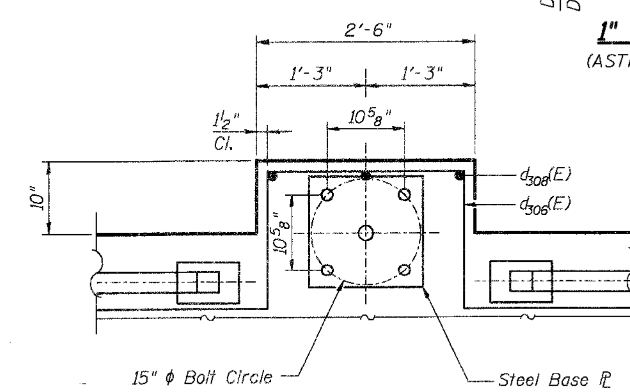


SCUPPER DETAIL - PLAN

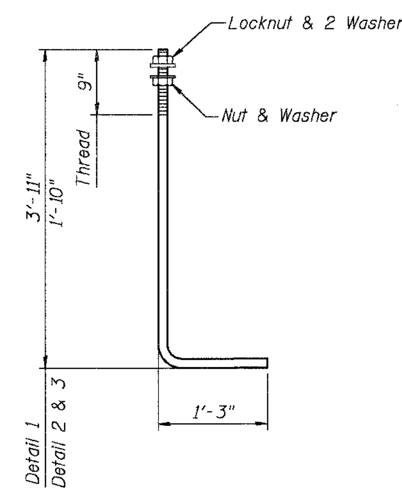
LIGHT POLE MOUNTED ON CONCRETE PARAPET DETAILS



SECTION - DETAIL 2 & 3

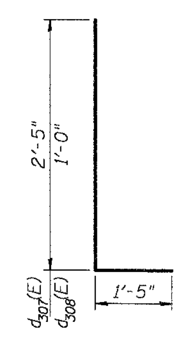


PLAN - DETAIL 2

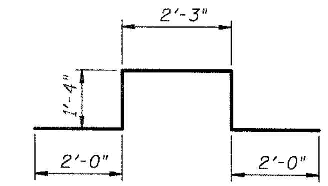


1" ϕ ANCHOR ROD

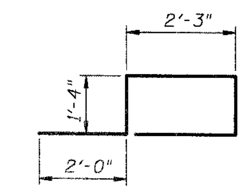
(ASTM F1554 Grade 105)



BARS d_{307}(E) & d_{308}(E)



BAR d_{306}(E)



BAR d_{309}(E)

Notes:

Work this sheet with sheets SE-10 through SE-13.
For Bill of Material see Sheet SE-11.

LIGHT POLE MOUNTED ON SHARED USE PATH DETAIL

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
www.smithengineering.com

REVISIONS	
NAME	DATE

CITY OF AURORA

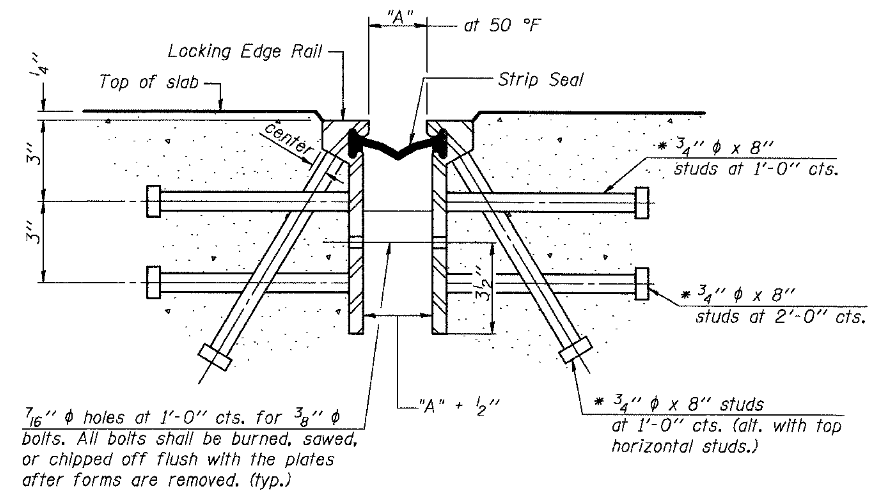
SUPERSTRUCTURE DETAILS IV
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	98
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

SHEET NO. SE-15
SE-27 SHEETS

CONTRACT #83867

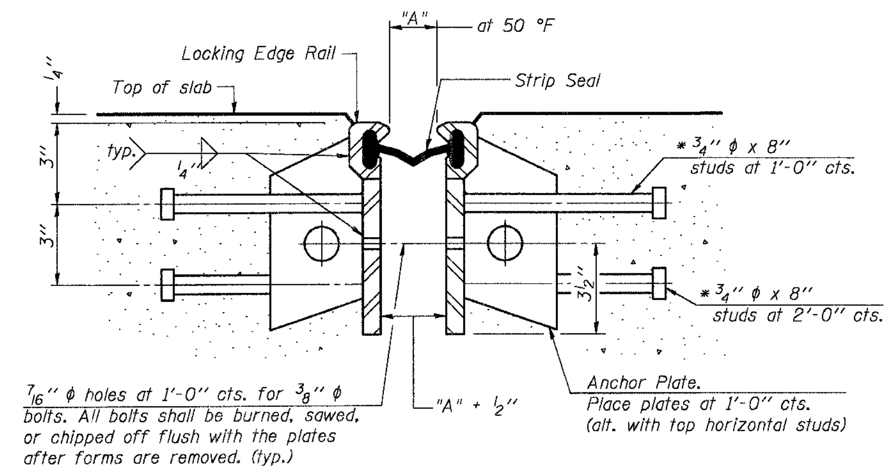


SECTION THRU ROLLED RAIL EXP. JOINT

(209 Studs Required)

Required Strip Seal rated movement	"A"
1"	1⅛"

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



SECTION THRU WELDED RAIL EXP. JOINT

(169 Studs Required)
(40 Anchor Plates Required)

GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of ¼". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

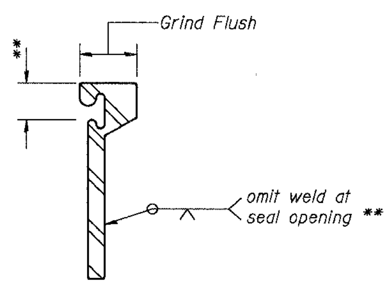
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

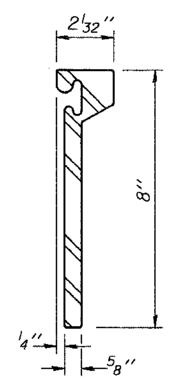
BILL OF MATERIAL

Item	Unit	Total
Bridge Joint System Expansion, 1"	Foot	152.7

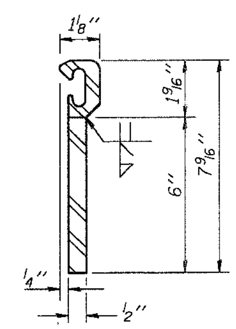


LOCKING EDGE RAIL SPLICE

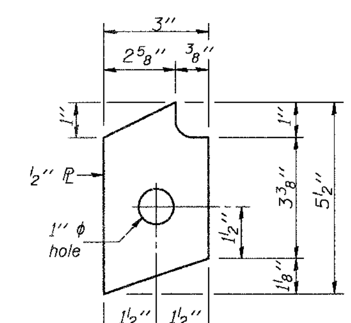
The inside of the locking edge rail groove shall be free of weld residue.



ROLLED (EXTRUDED) RAIL



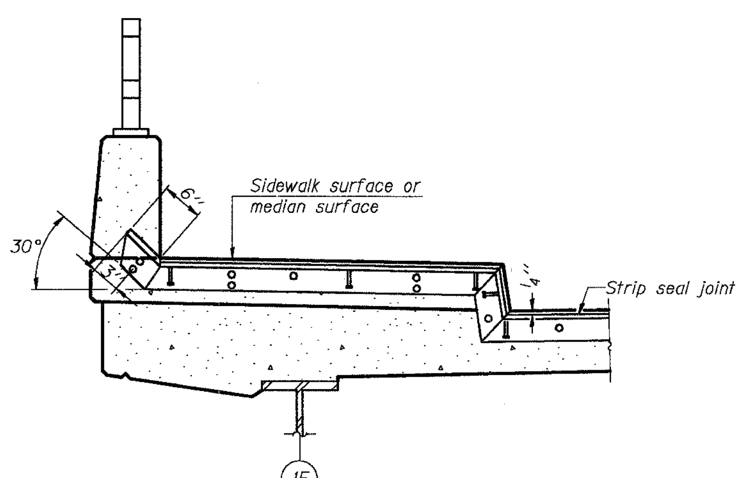
WELDED RAIL



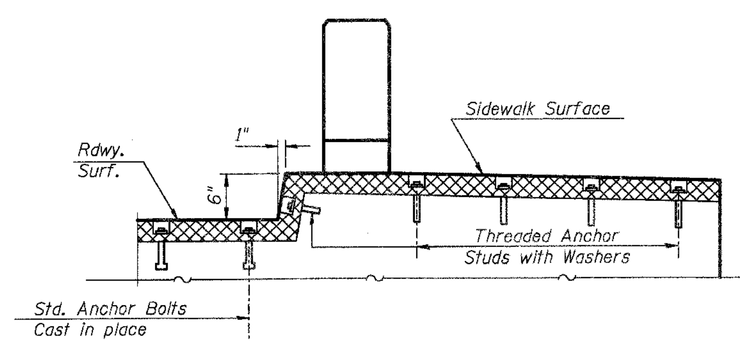
ANCHOR ℙ

(for welded rail)

LOCKING EDGE RAILS



AT SIDEWALK OR MEDIAN



AT SHARED USE PATH TYPICAL END TREATMENTS

TYPICAL END TREATMENTS

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

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

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

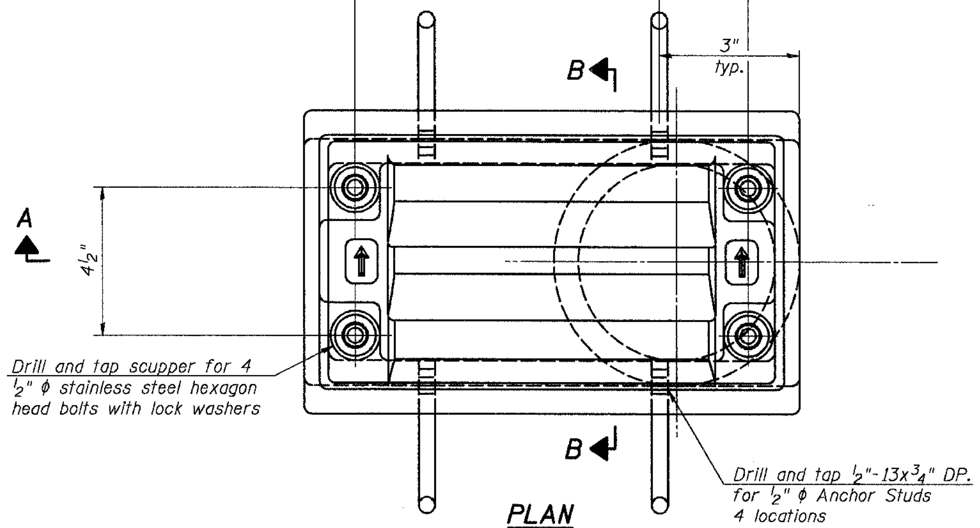
STRIP SEAL EXPANSION JOINTS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

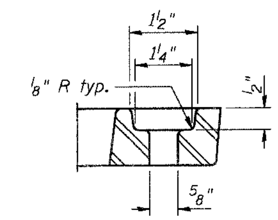
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	99
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

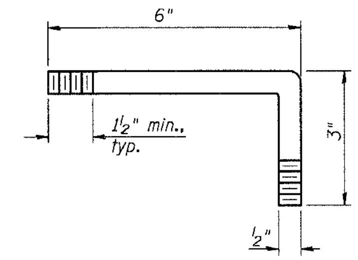
SHEET NO. SE-16
SE-27 SHEETS



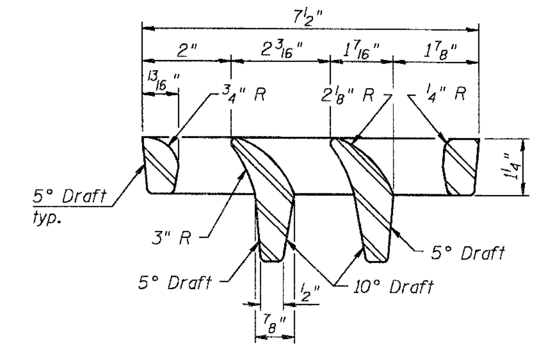
PLAN



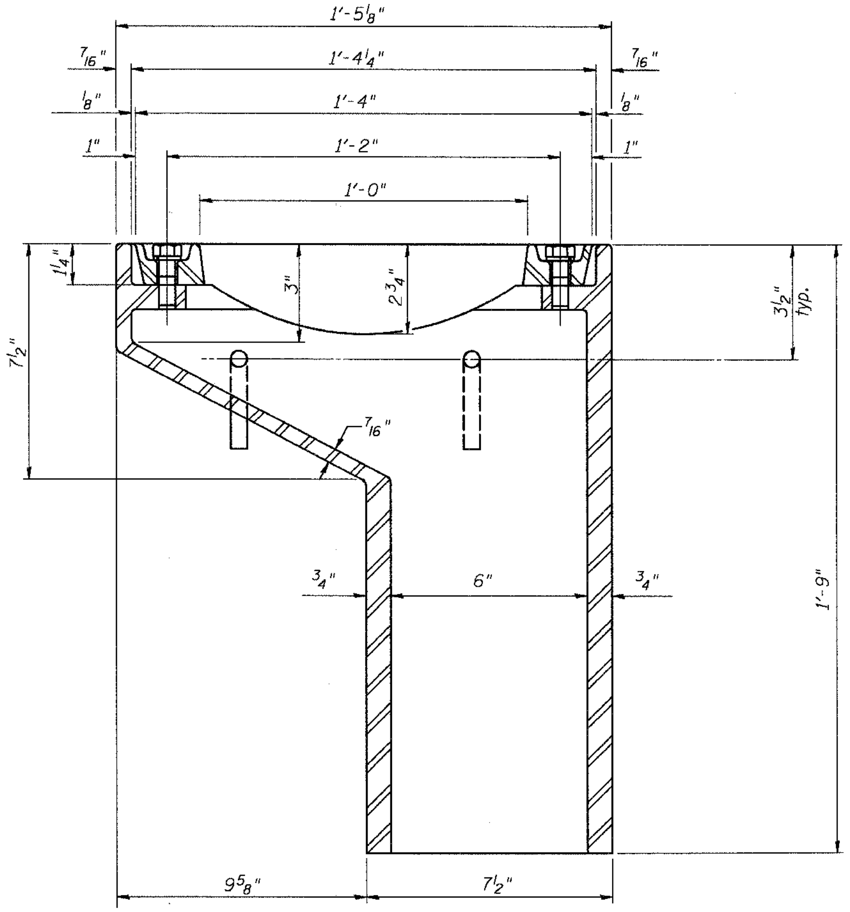
BOLT HOLE DETAIL



ANCHOR STUD DETAIL

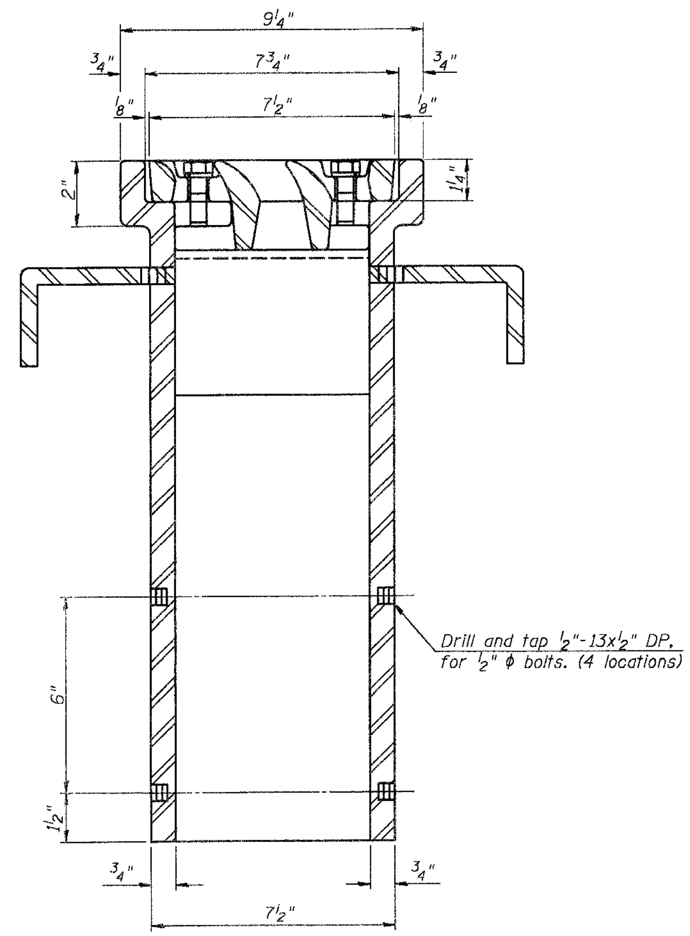


VANE GRATE DETAIL



SECTION A-A

See sheet of for scupper location relative to parapet.



SECTION B-B

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.

The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. 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 cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.

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-11.

BILL OF MATERIAL

Item	Unit	Quantity
Drainage Scuppers, DS-11	Each	8

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

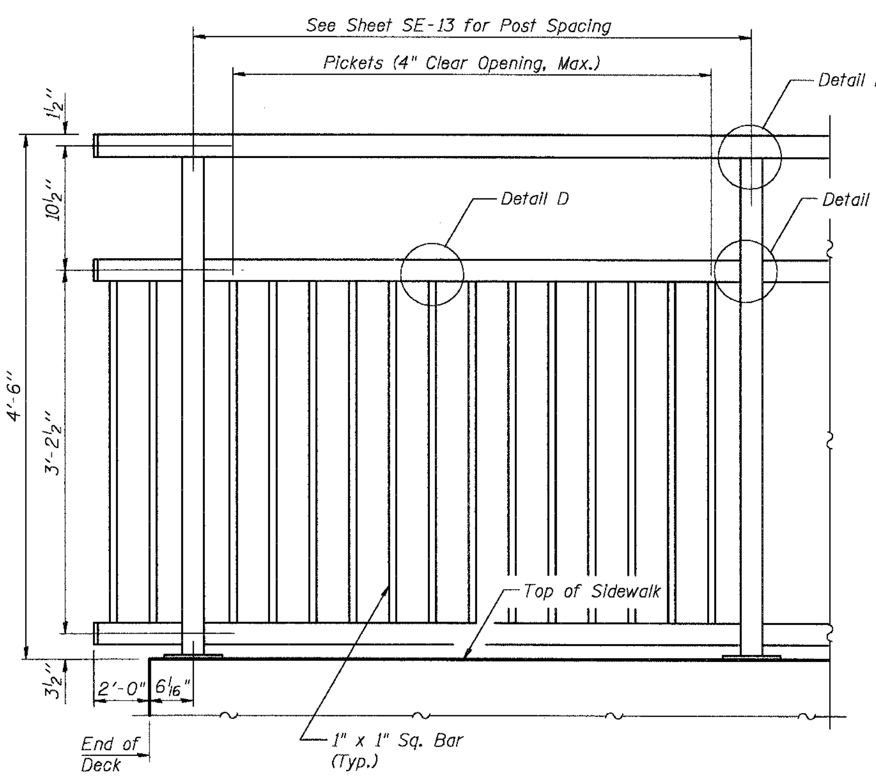
DRAINAGE SCUPPER, DS-11
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

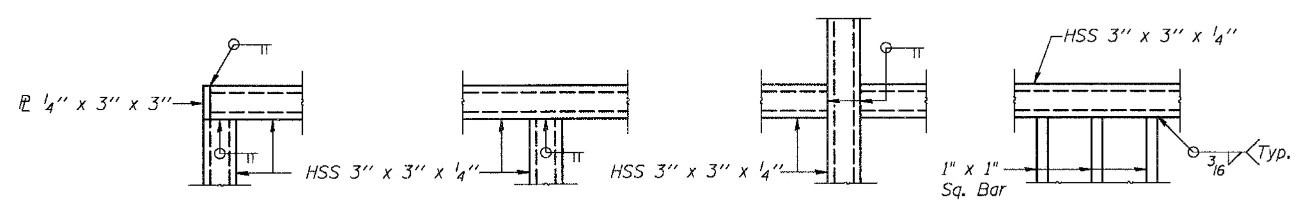
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	100
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

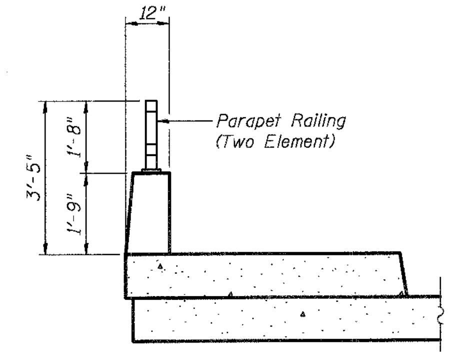
SHEET NO. SE-17
SE-27 SHEETS



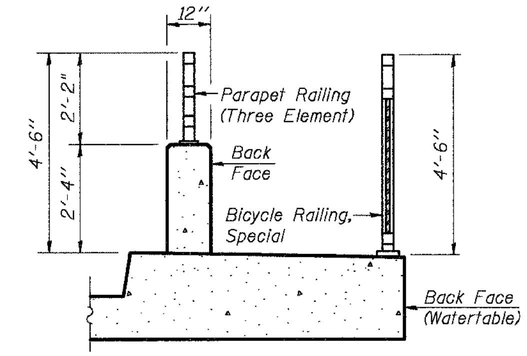
BICYCLE RAILING



DETAIL A   DETAIL B   DETAIL C   DETAIL D



SECTION THRU SIDEWALK



SECTION THRU SHARED USE PATH

NOTES

Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the Contract Unit Price per foot for Bicycle Railing, Special or Parapet Railing.

Hollow structural sections shall conform to the requirements of ASTM designation A 500, Grade B, structural steel tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36.

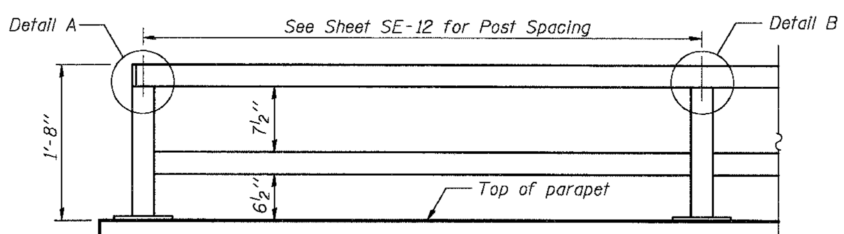
The Three Element Parapet Railing, furnished and installed shall not be paid for separately but shall be included in the unit bid price for Bicycle Railing, Special.

If the option of drilling and epoxy grouting the anchor rods is chosen, the Contractor shall use the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge shall be sealed with pre-measured amounts of the adhesive chemical.

Space reinforcement to miss anchor rods.

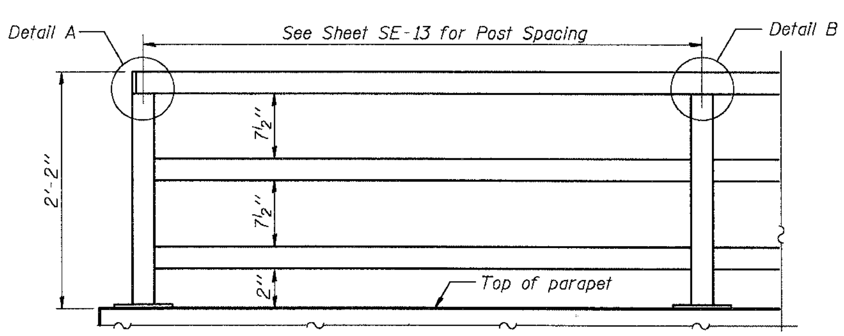
All post, railing, pickets, splices, and anchor devices shall be powder coated black. The powder coating system to be used shall be approved by the engineer prior to the coating process.

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and epoxy grouting ⅝" ϕ anchor rods. Embedment shall be according to the manufacturer's specifications.



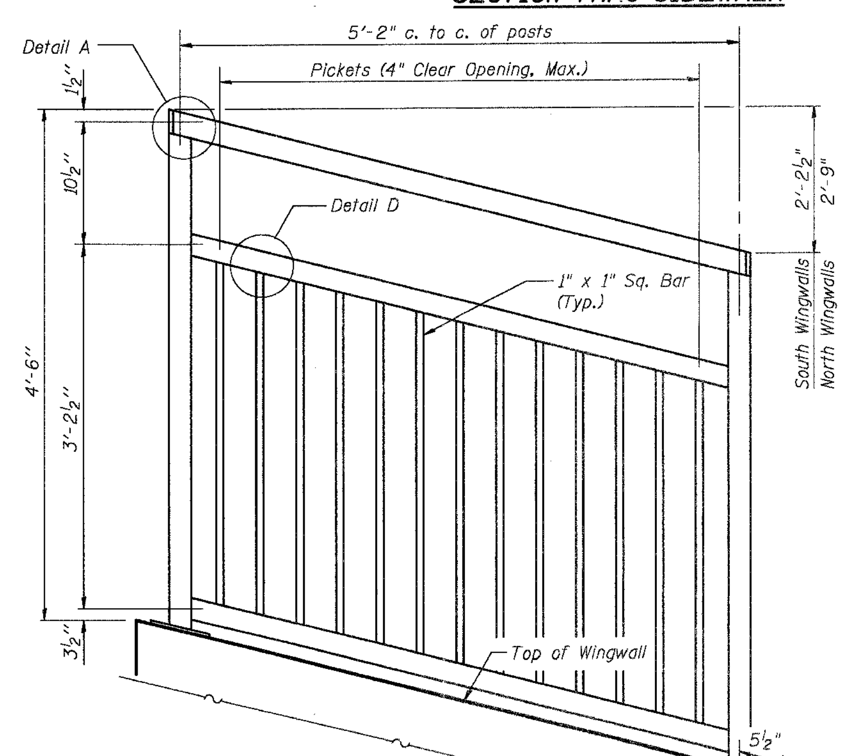
PARAPET RAILING ELEVATION

(Inside Face of Two Element Rail)



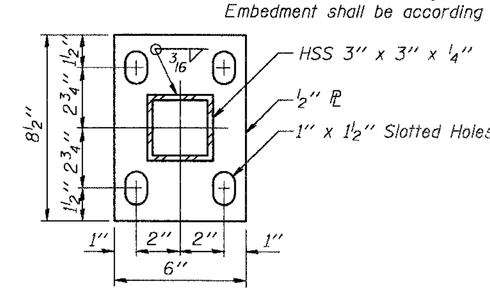
PARAPET RAILING ELEVATION

(Inside Face of Three Element Rail)

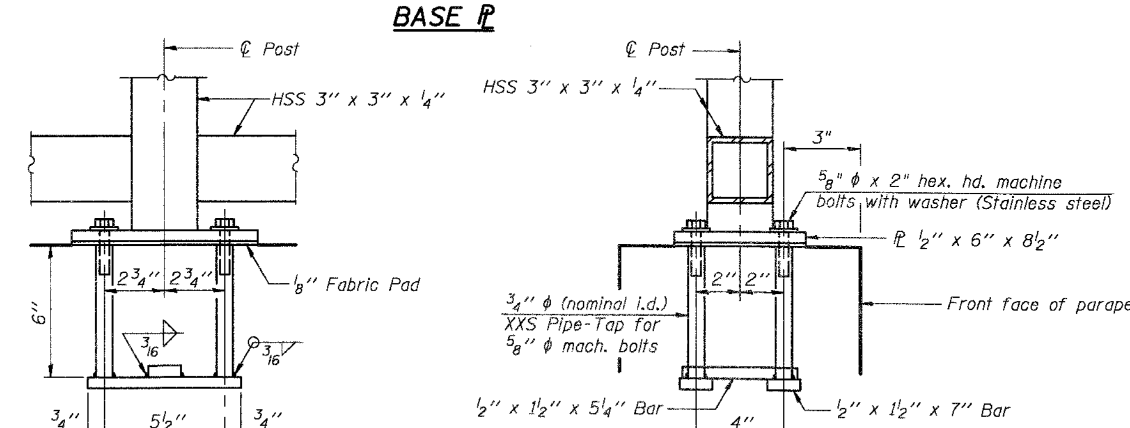


BICYCLE RAILING ON WINGWALL

Work with Sheets SE-24 to SE-27

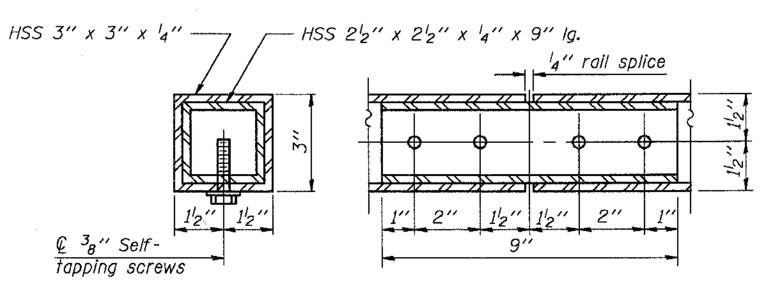


BASE ℗

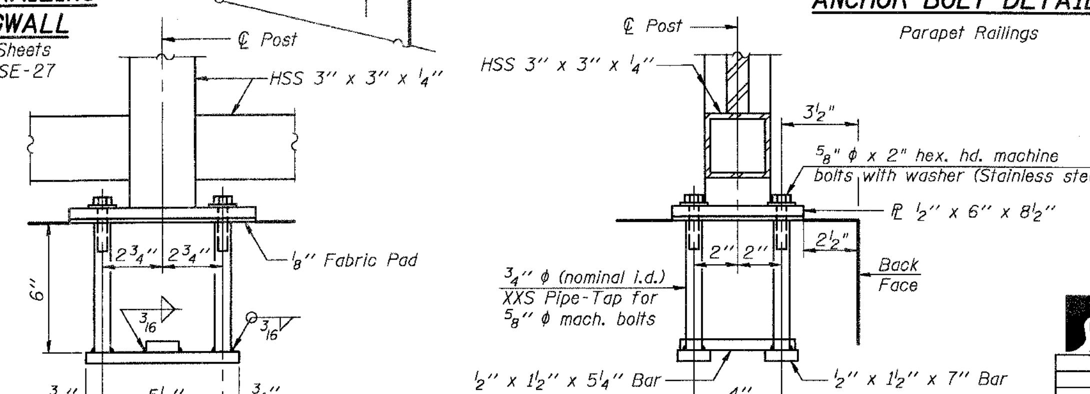


ANCHOR BOLT DETAILS

Parapet Railings



RAIL SPLICE



ANCHOR BOLT DETAILS

Bicycle Railing

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing, Special	Foot	148
Parapet Railing	Foot	148

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

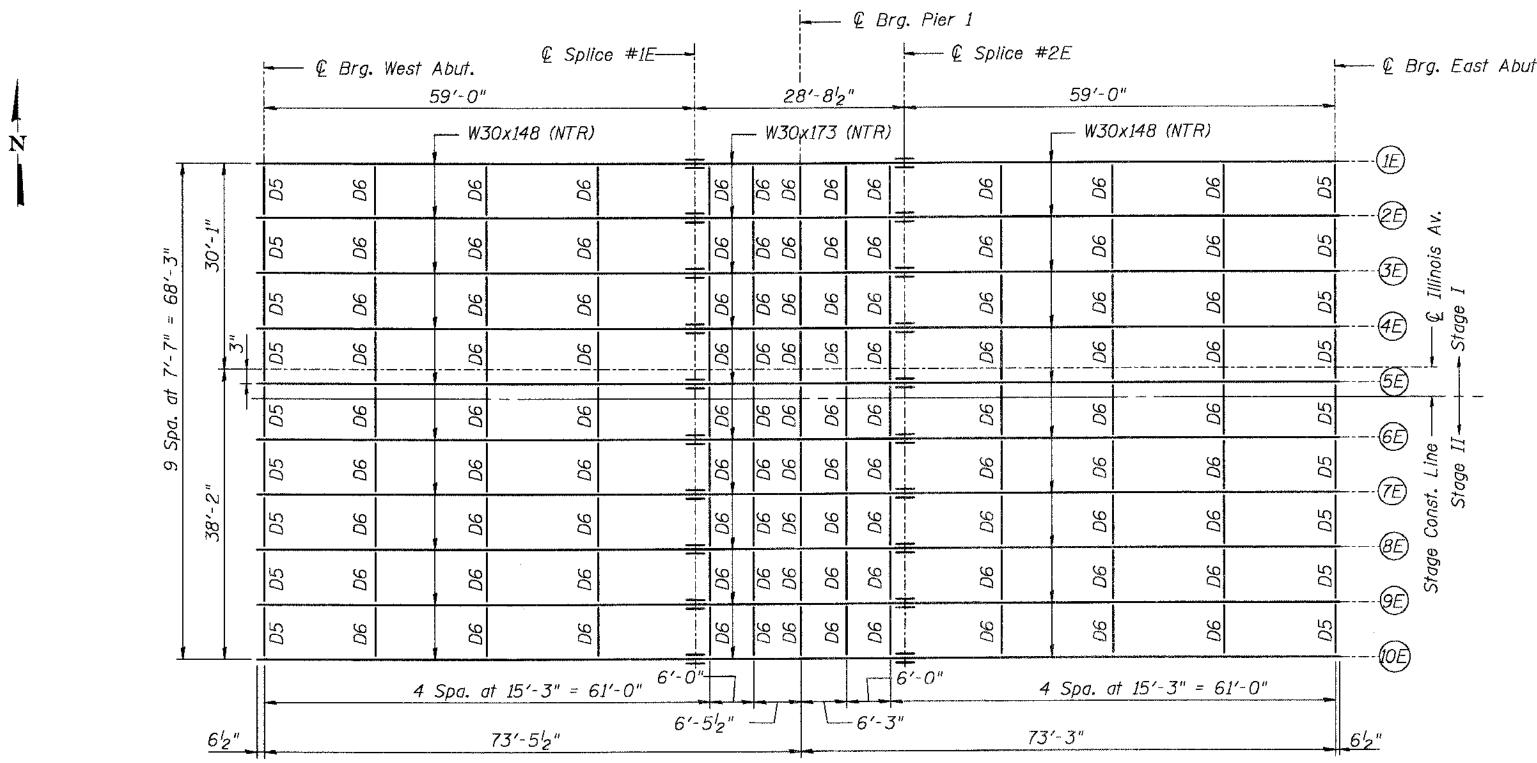
SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

BRIDGE RAILING DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006



FRAMING PLAN

NOTES:

All material shall be AASHTO M270 Grade 50.

NTR indicates notch toughness requirements.

See Sheet SE-19 for typical beam elevation and framing details.

INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1	Pier 1	0.5 Sp. 2
Is	(in^4)	6,680	8,230	6,680
Ic (n)	(in^4)	17,020	-	17,020
Ic (3n)	(in^4)	12,596	-	12,596
Ss	(in^3)	436	540	436
Sc (n)	(in^3)	622	-	622
Sc (3n)	(in^3)	566	-	566
Z	(in^3)	-	607	-
DL	(k/ft.)	1.00	1.56	
MDL	('k)	391	943	406
sDL	(k/ft.)	0.56	-	0.56
MsDL	('k)	242	-	250
MLL	('k)	627	330	625
M (Imp)	('k)	157	82	157
$\frac{5}{3}$[MLL+M(Imp)]	('k)	1307	687	1,303
Ma	('k)	2522	2,119	2,547
Mu	('k)	3,015	2,529	3,015
fsDL non-comp	(k.s.i.)	10.8	21.0	11.2
fsDL (comp)	(k.s.i.)	5.1		5.3
fs$\frac{5}{3}$(LL+Imp)	(k.s.i.)	25.2	15.3	25.1
fs (Overload)	(k.s.i.)	41.1	36.3	41.6
fs (Total)	(k.s.i.)	-		
VR	(k)	57.1		57.1

INTERIOR GIRDER REACTION TABLE

		W. Abut.	Pier 1	E. Abut.
RDL	(k)	42.6	142.9	43.4
RLL	(k)	42.3	56.5	42.2
Imp.	(k)	10.6	14.2	10.6
R (Total)	(k)	95.5	213.6	96.2

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

$Ic_{(n)}$ and $Sc_{(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$Ic_{(3n)}$ and $Sc_{(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)

VR is the maximum Live Load + Impact shear range in span.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[MDL + MsDL + $\frac{5}{3}$(MLL + M(Imp))].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to MDL + MsDL + $\frac{5}{3}$(MLL + M(Imp)).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[MDL + MsDL + $\frac{5}{3}$(MLL + M(Imp))].

TOP OF BEAM ELEVATIONS (For Fabrication Use Only)

LOCATION	WEST ABUT.	EAST ABUT.	PIER 1	SPLICE 1E	SPLICE 2E
Beam 1E	640.59	638.68	639.53	639.72	639.35
Beam 2E	640.75	638.84	639.69	639.88	639.50
Beam 3E	640.91	639.00	639.85	640.03	639.66
Beam 4E	641.03	639.12	639.97	640.16	639.78
Beam 5E	641.14	639.23	640.08	640.27	639.90
Beam 6E	641.02	639.11	639.96	640.15	639.78
Beam 7E	640.90	638.99	639.84	640.02	639.65
Beam 8E	640.74	638.83	639.68	639.87	639.49
Beam 9E	640.58	638.67	639.52	639.71	639.33
Beam 10E	640.42	638.51	639.36	639.55	639.18

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

CITY OF AURORA

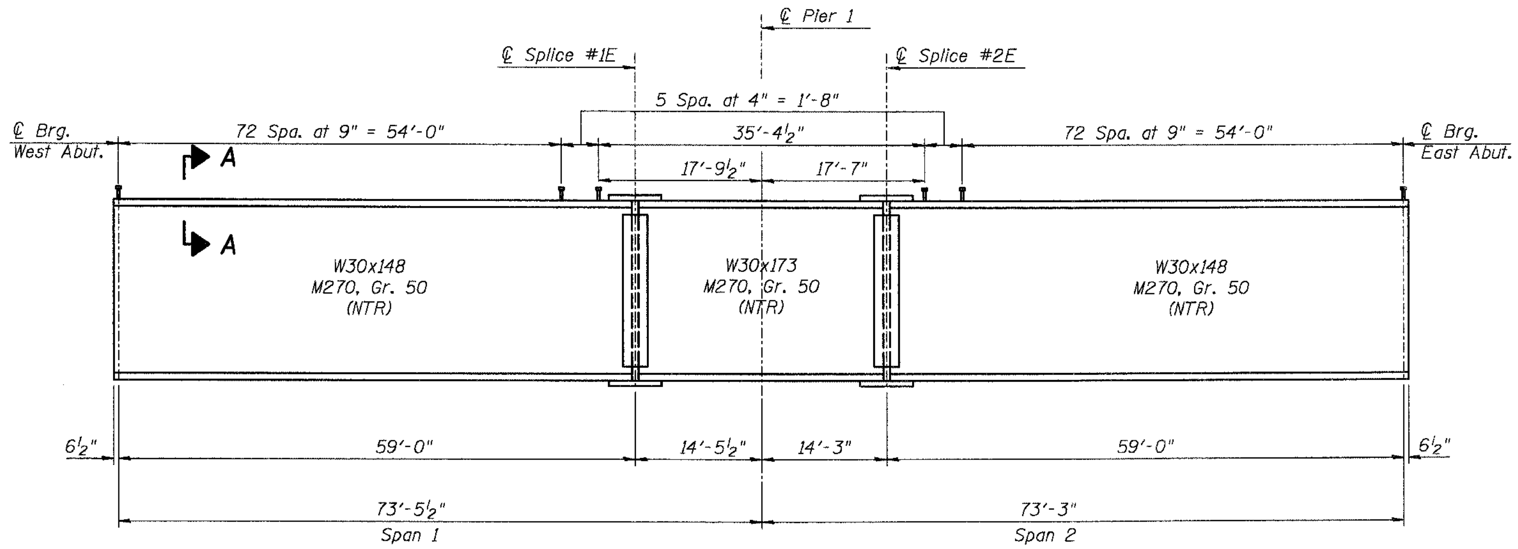
STEEL FRAMING PLAN
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	102
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT-	

CONTRACT #83867

SHEET NO. SE-19
SE-27 SHEETS



TYPICAL BEAM ELEVATION

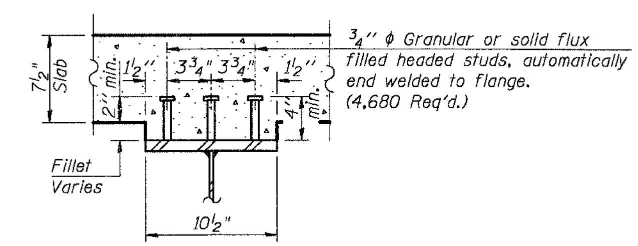
"NTR" denotes beams to which Notch Toughness requirements are applicable

BILL OF MATERIAL

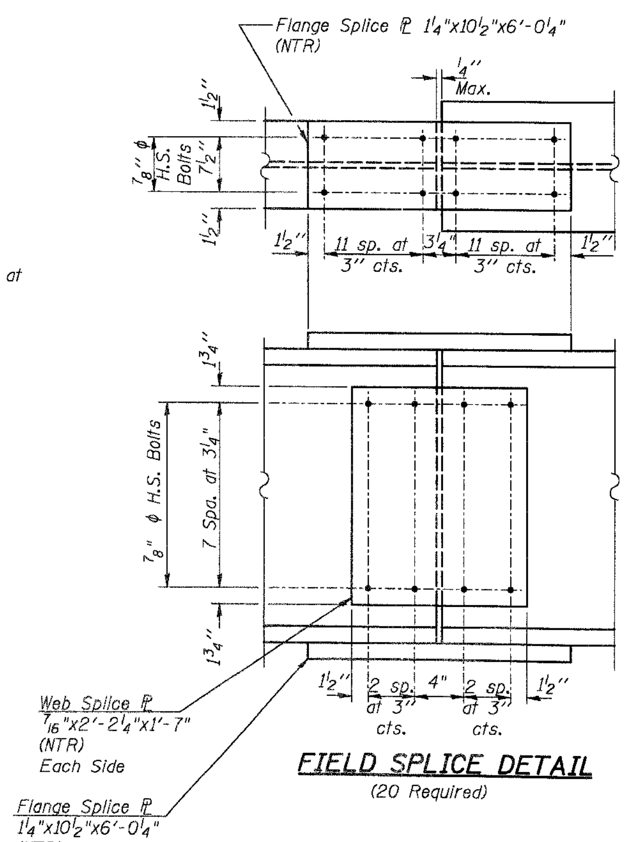
Item	Unit	Quantity
Furnishing & Erecting Structural Steel	L. Sum	0.34
Stud Shear Connectors	Each	4,680

Notes:

Work this Sheet with Sheet SE-18.
For bearing details see Sheet SE-20.
All splice material shall be M270 Grade 50.

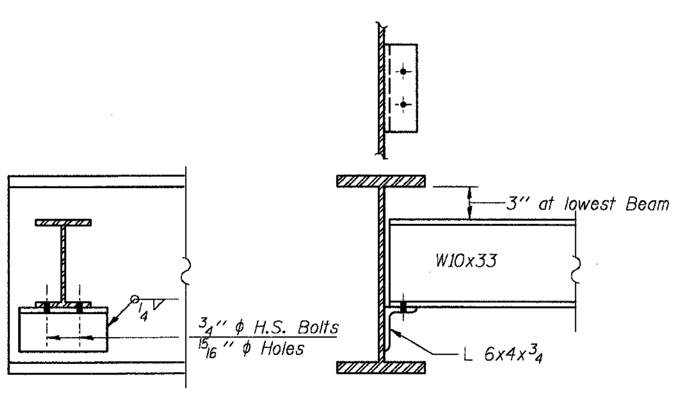


SECTION A-A



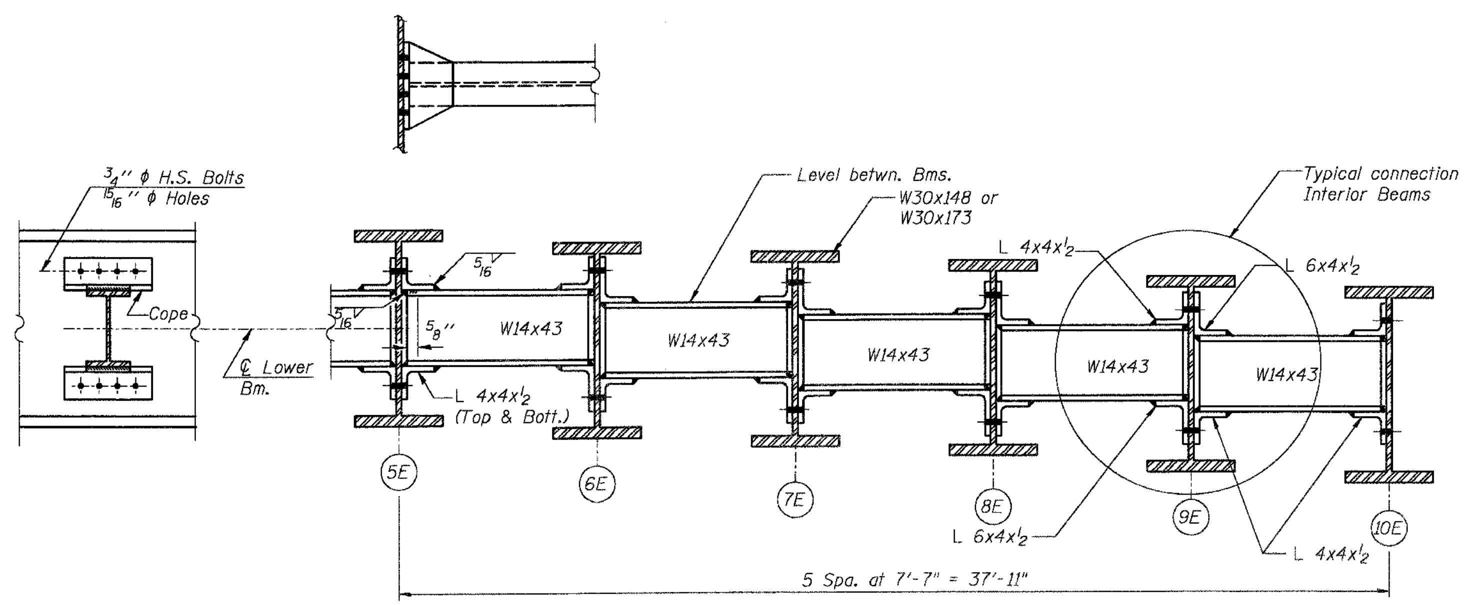
FIELD SPLICE DETAIL

(20 Required)



DIAPHRAGM D5

(18 Required)



DIAPHRAGM D6

(99 Required)

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

Note:
Two hardened washers shall be required over all oversize holes for diaphragms.

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

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CITY OF AURORA

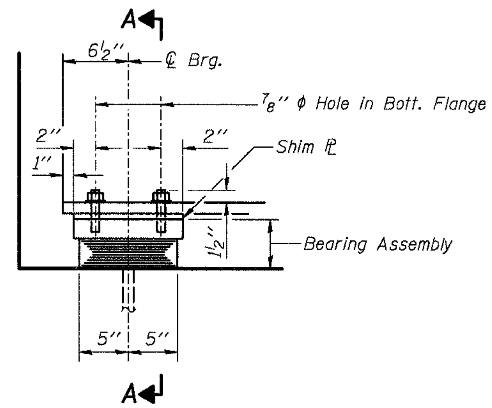
STEEL FRAMING DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

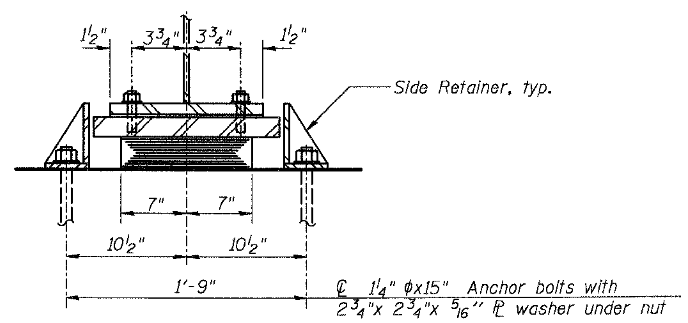
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	103
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SE-20
SE-27 SHEETS

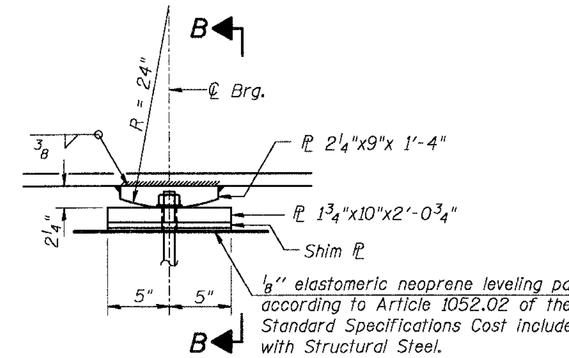


ELEVATION AT ABUTS.

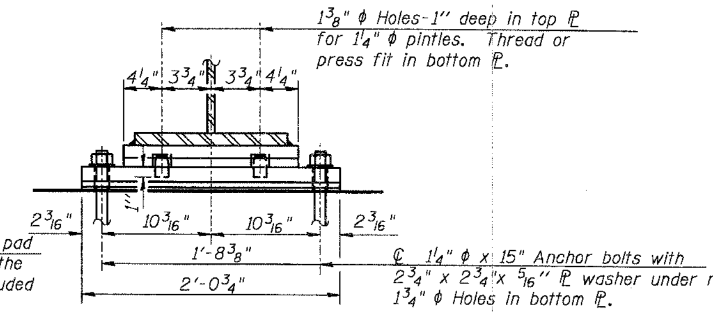


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



ELEVATION AT PIER 1

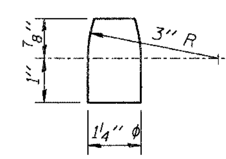


SECTION B-B

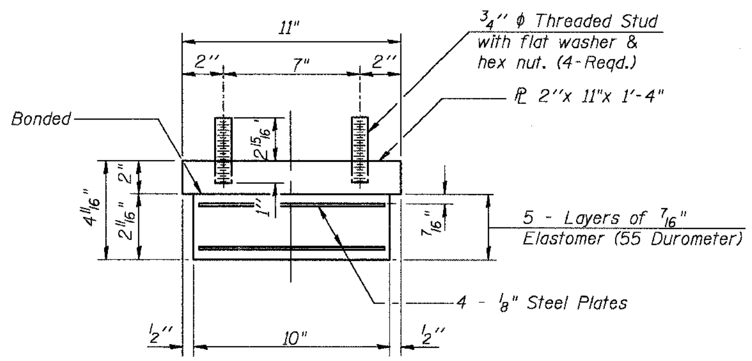
FIXED BEARING

Notes:

See sheet SE-21 for Anchor Bolt installation.

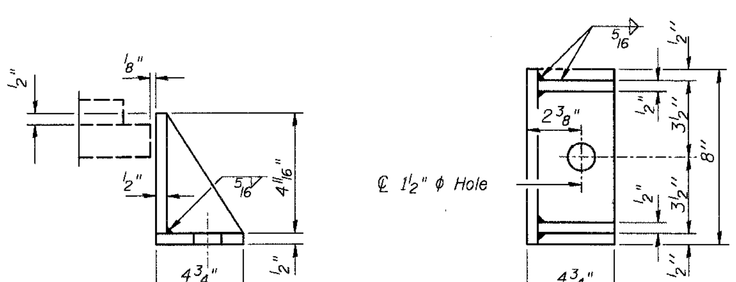


PINTLE



BEARING ASSEMBLY

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



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.

BILL OF MATERIAL

Item	Unit	Quantity
Elastomeric Bearing Assembly, Type I	Each	20

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
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REVISIONS	
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CITY OF AURORA

BEARING DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

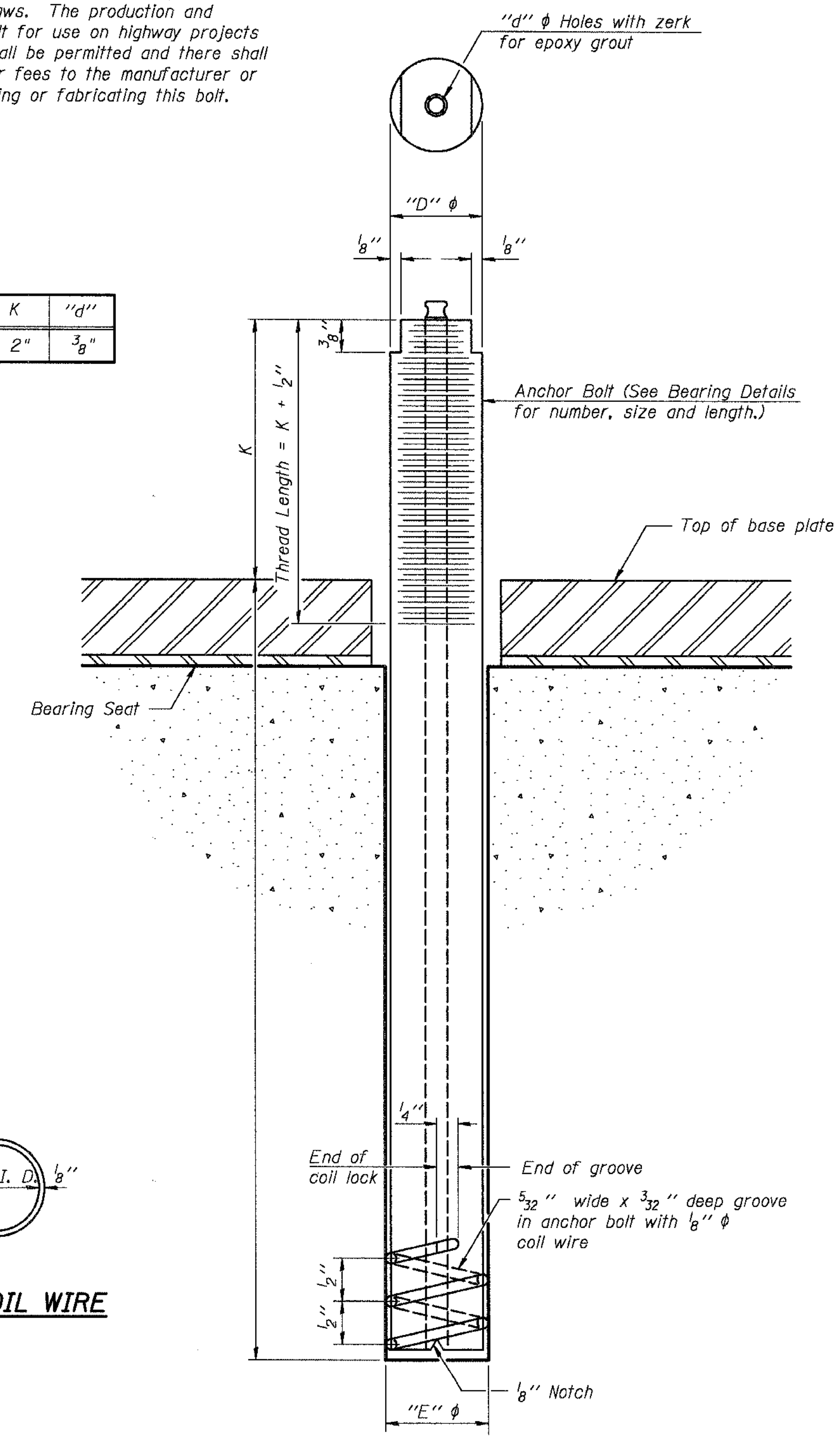
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	104
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

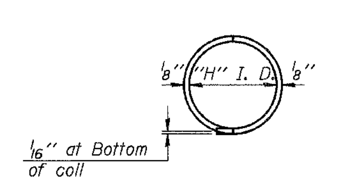
SHEET NO. SE-21
SE-27 SHEETS

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Size	Type
Abutments	1 1/4" ϕ	A 307
Pier 1	1 1/4" ϕ	A 307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

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NAME	DATE

CITY OF AURORA

ANCHOR BOLT DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	105

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT-

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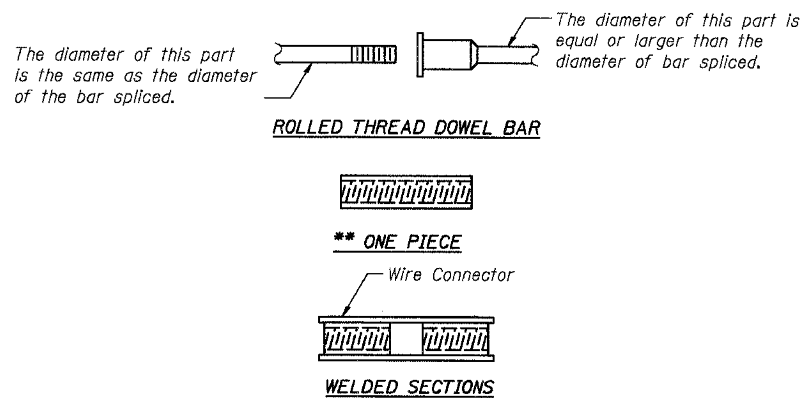
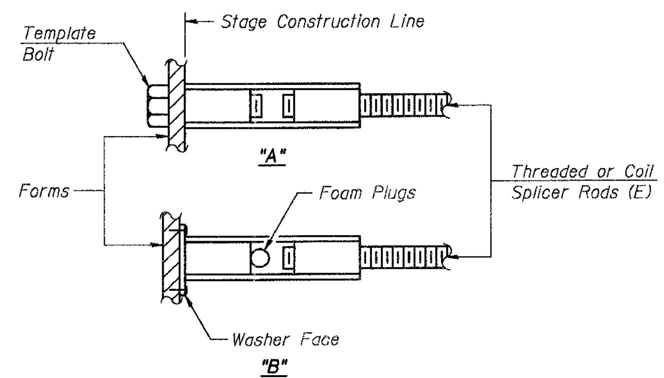
SHEET NO. SE-22
SE-27 SHEETS



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.

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:

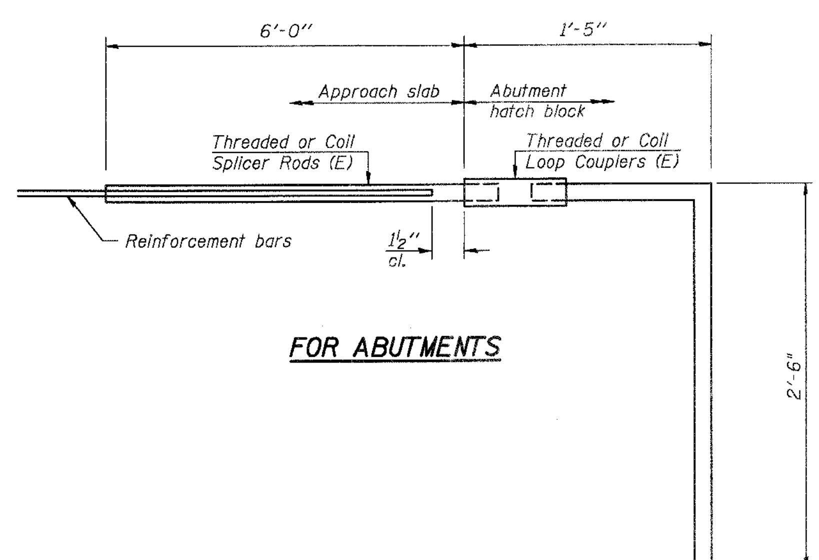
① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

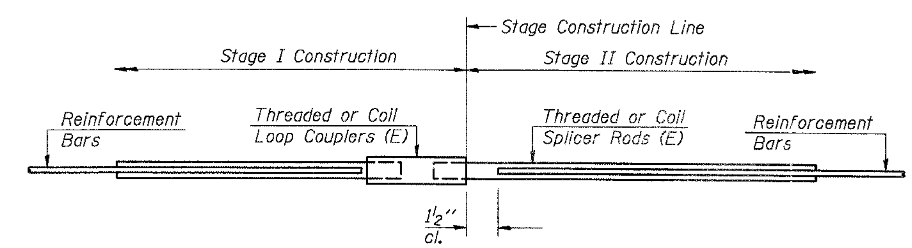
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



FOR ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 112



STANDARD

Bar Size	No. Assemblies Required	Location
#5	297	Deck
#5	223	Deck
#5	20	W. Abut.
#6	4	W. Abut.
#7	7	W. Abut.
#5	11	Pier 1
#8	10	Pier 1
#5	20	E. Abut.
#6	4	E. Abut.
#7	7	E. Abut.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
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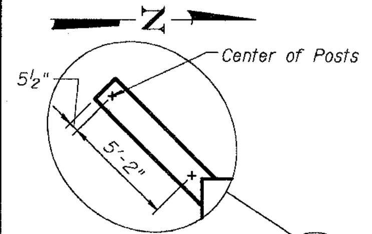
CITY OF AURORA

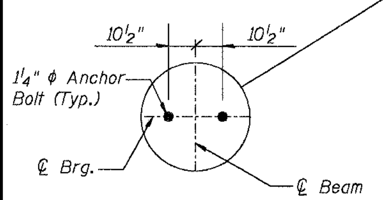
BAR SPLICER DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

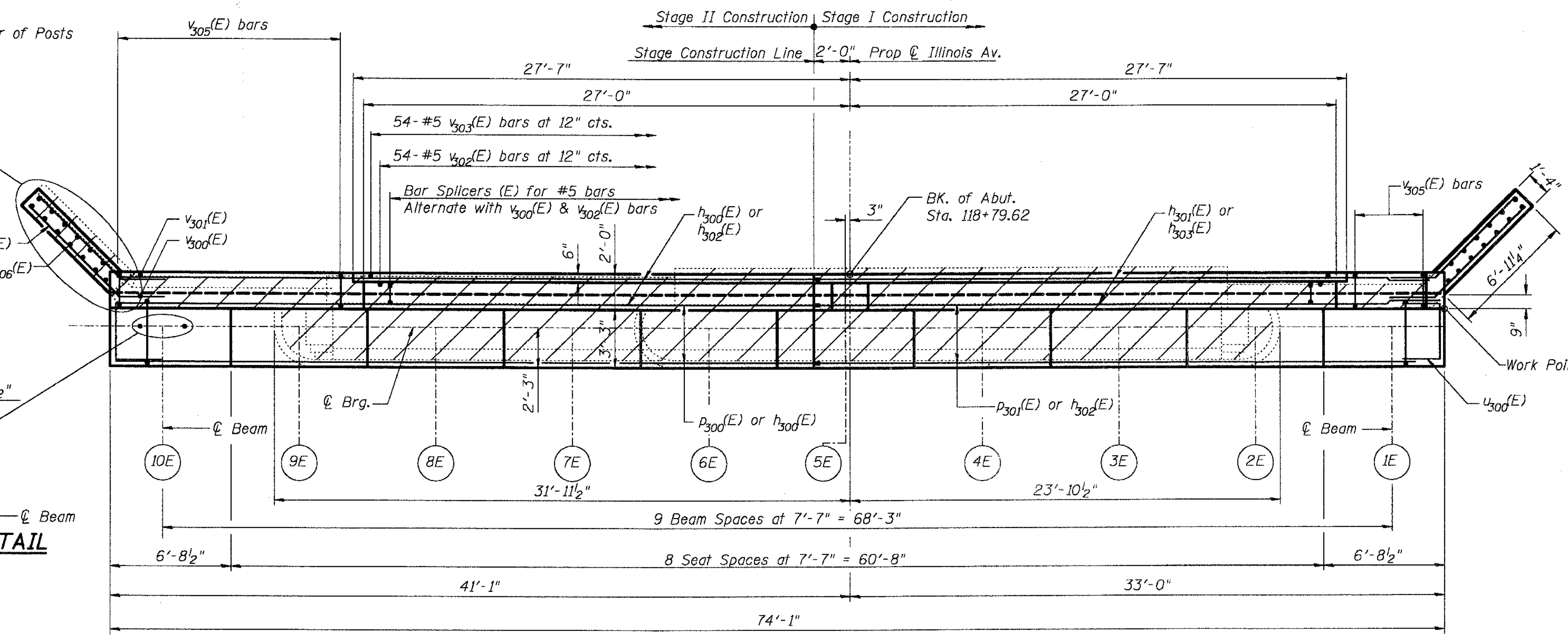


POST SPACING

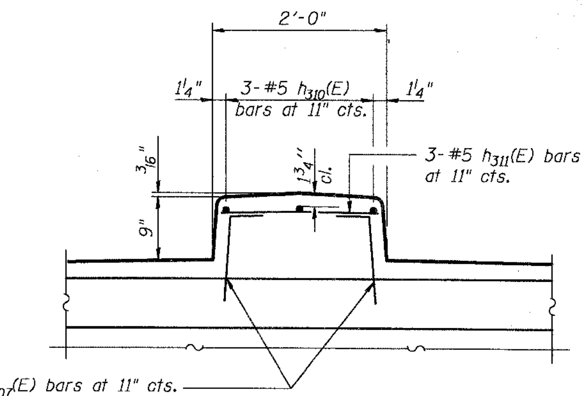
(See sheet SE-17 for railing details) typ. each wingwall



ANCHOR BOLT DETAIL



TOP PLAN



MEDIAN DETAIL

NOTES:

Work this sheet with sheet SE-24.

Space reinforcement in abutment seat to miss anchor bolts.

Contractor to field verify dimensions of existing abutment and wingwalls.

Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Cost included in pay item "Concrete Removal".

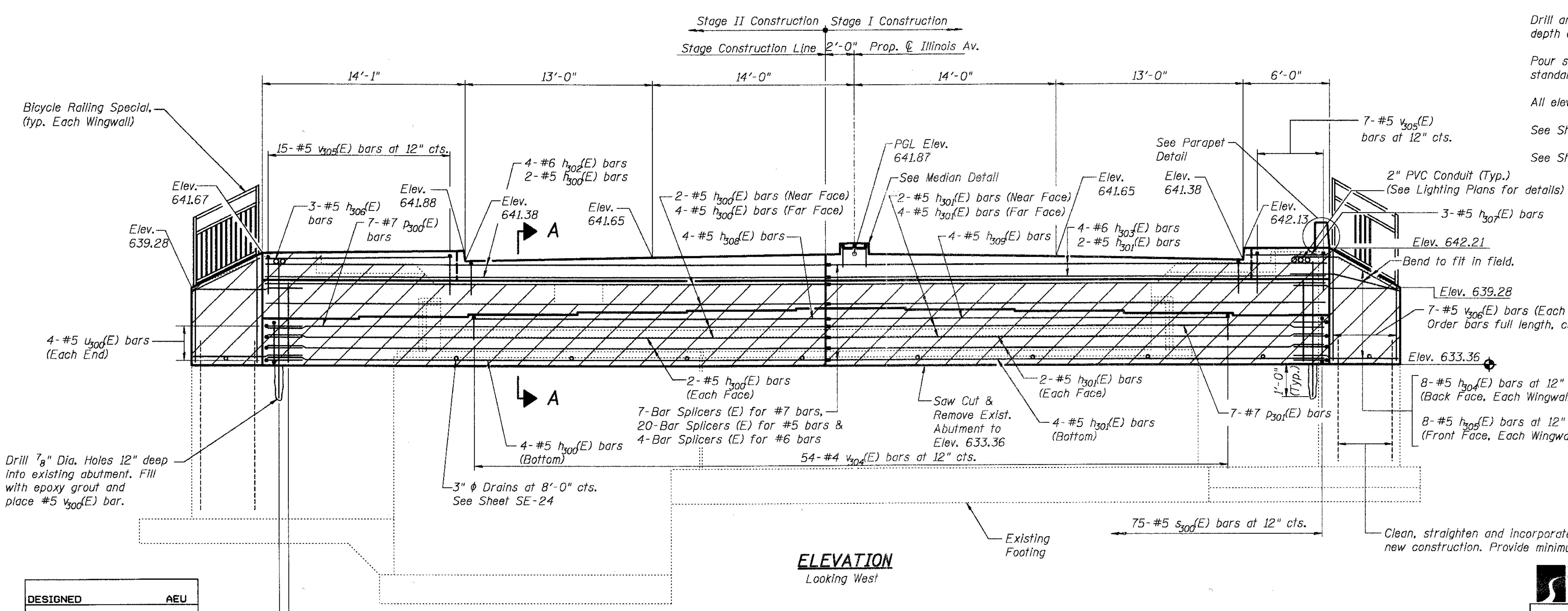
Drill and epoxy grout #5 v_{300}(E) bars in drilled holes with a minimum depth of 12" according to to Article 584 of the Standard Specs.

Pour steps monolithically with abutment cap. All edges shall have standard ¾" chamfers except as noted.

All elevations given at back of abutment unless noted otherwise.

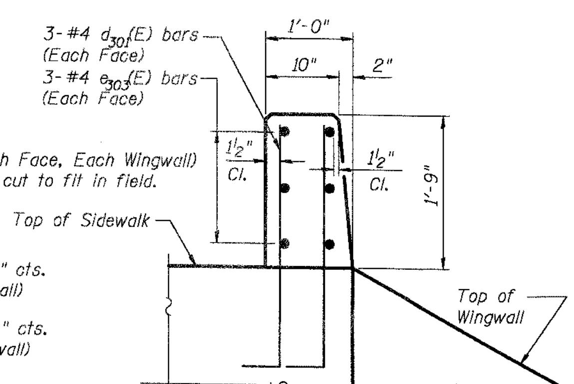
See Sheet SE-24 for Section A-A.

See Sheet SE-17 for Bicycle Railing, Special details.



ELEVATION

Looking West



PARAPET DETAIL

BEAM SEAT ELEVATION TABLE

Beam #	1E	2E	3E	4E	5E	6E	7E	8E	9E	10E
Seat Elevation	637.65	637.80	637.96	638.09	638.20	638.08	637.95	637.79	637.64	637.48

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

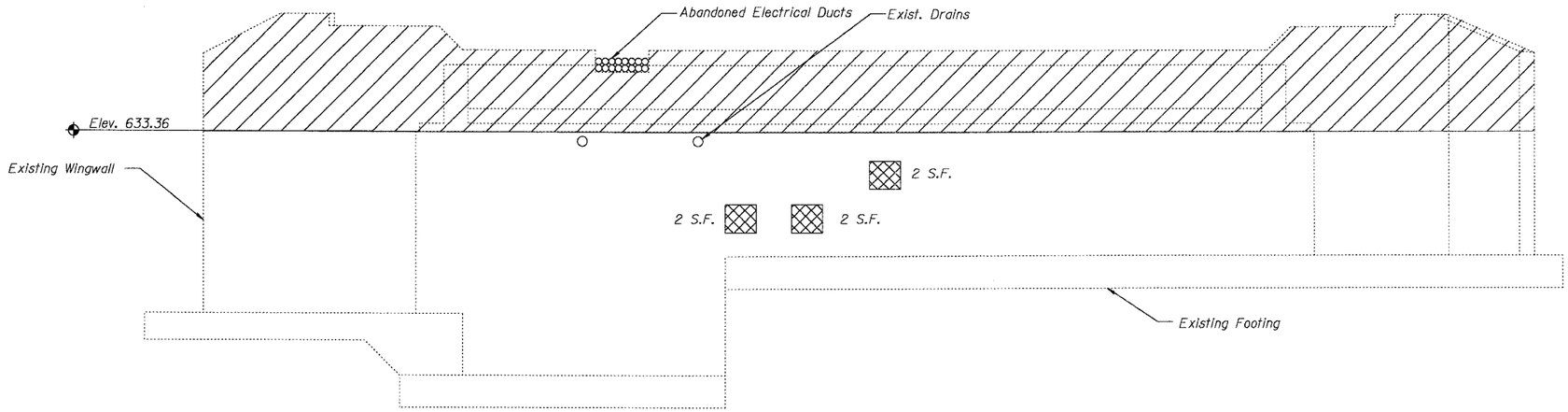
WEST ABUTMENT PLAN AND ELEVATION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

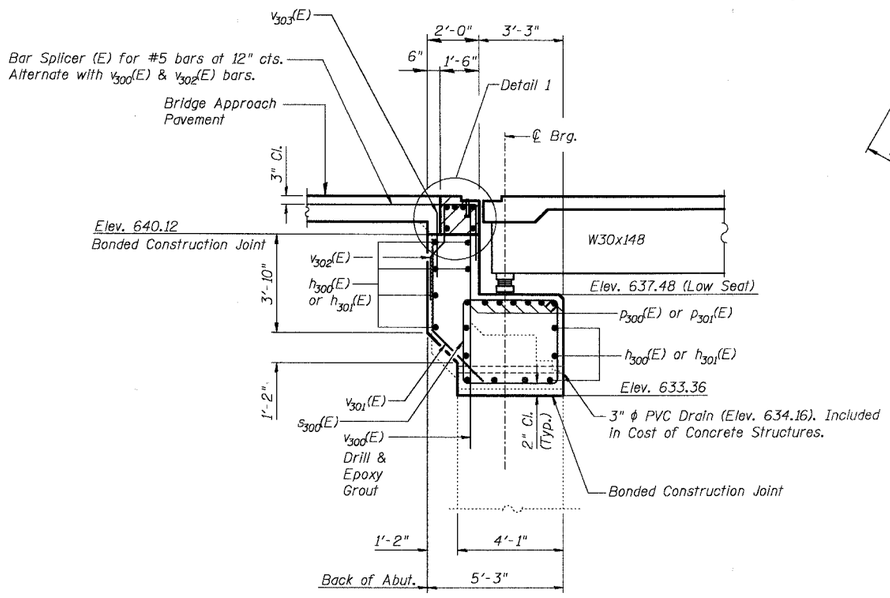
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	107
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

SHEET NO. SE-24
SE-27 SHEETS

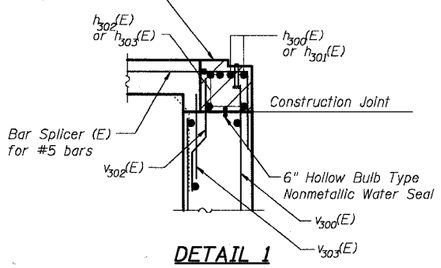


ELEVATION
Looking West

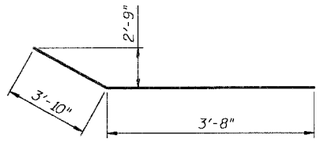


SECTION A-A

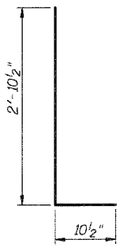
Hatched area to be poured after superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.



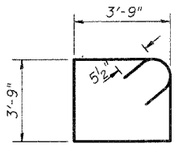
DETAIL 1



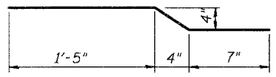
BAR $v_{301}(E)$



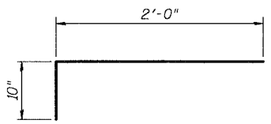
BAR $d_{301}(E)$



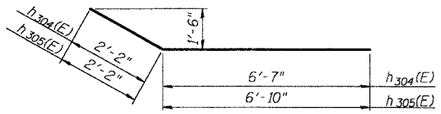
BAR $s_{300}(E)$



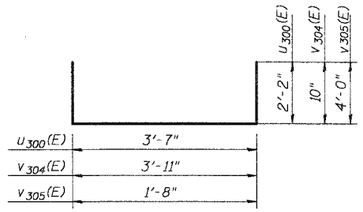
BAR $v_{302}(E)$



BAR $v_{307}(E)$



BARS $h_{304}(E)$ & $h_{305}(E)$



BARS $u_{300}(E)$, $v_{304}(E)$ & $v_{305}(E)$

LEGEND

Indicates Concrete Removal Areas

Indicates Structural Repair of Concrete

BILL OF MATERIAL
WEST ABUTMENT

Bar	No.	Size	Length	Shape
$d_{301}(E)$	6	#6	3'-9"	
$e_{303}(E)$	6	#4	1'-8"	
$h_{300}(E)$	16	#5	38'-10"	
$h_{301}(E)$	16	#5	34'-8"	
$h_{302}(E)$	4	#6	38'-10"	
$h_{303}(E)$	4	#6	34'-8"	
$h_{304}(E)$	16	#5	8'-9"	
$h_{305}(E)$	16	#5	9'-0"	
$h_{306}(E)$	3	#5	13'-9"	
$h_{307}(E)$	3	#5	5'-8"	
$h_{308}(E)$	4	#5	16'-10"	
$h_{309}(E)$	4	#5	20'-3"	
$h_{310}(E)$	3	#5	1'-2"	
$h_{311}(E)$	3	#5	1'-8"	
$p_{300}(E)$	7	#7	38'-10"	
$p_{301}(E)$	7	#7	34'-8"	
$s_{300}(E)$	75	#5	15'-11"	
$u_{300}(E)$	8	#5	7'-11"	
$v_{300}(E)$	75	#5	8'-10"	
$v_{301}(E)$	75	#5	7'-6"	
$v_{302}(E)$	54	#5	2'-6"	
$v_{303}(E)$	54	#5	2'-4"	
$v_{304}(E)$	54	#4	5'-7"	
$v_{305}(E)$	22	#5	9'-8"	
$v_{306}(E)$	28	#5	8'-4"	
$v_{307}(E)$	6	#5	2'-10"	
Reinforcement Bars, Epoxy Coated		Pound	6,830	
Concrete Removal		Cu. Yd.	41.2	
Concrete Structures		Cu. Yd.	74.0	
Structure Excavation		Cu. Yd.	53	
Bridge Seat Sealer		Sq. Ft.	241	
Structural Repair of Concrete (Less than or equal to 5")		Sq. Ft.	6	
Bicycle Railing, Special		Foot	11	

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

Work this sheet with sheet SE-23.

See Sheet SE-2 for abutment drainage detail.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
www.smithengineering.com
E-MAIL: mail@smithengineering.com

REVISIONS	
NAME	DATE

CITY OF AURORA

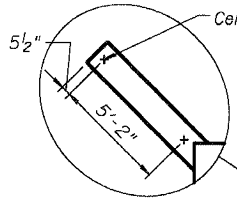
WEST ABUTMENT DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	108
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

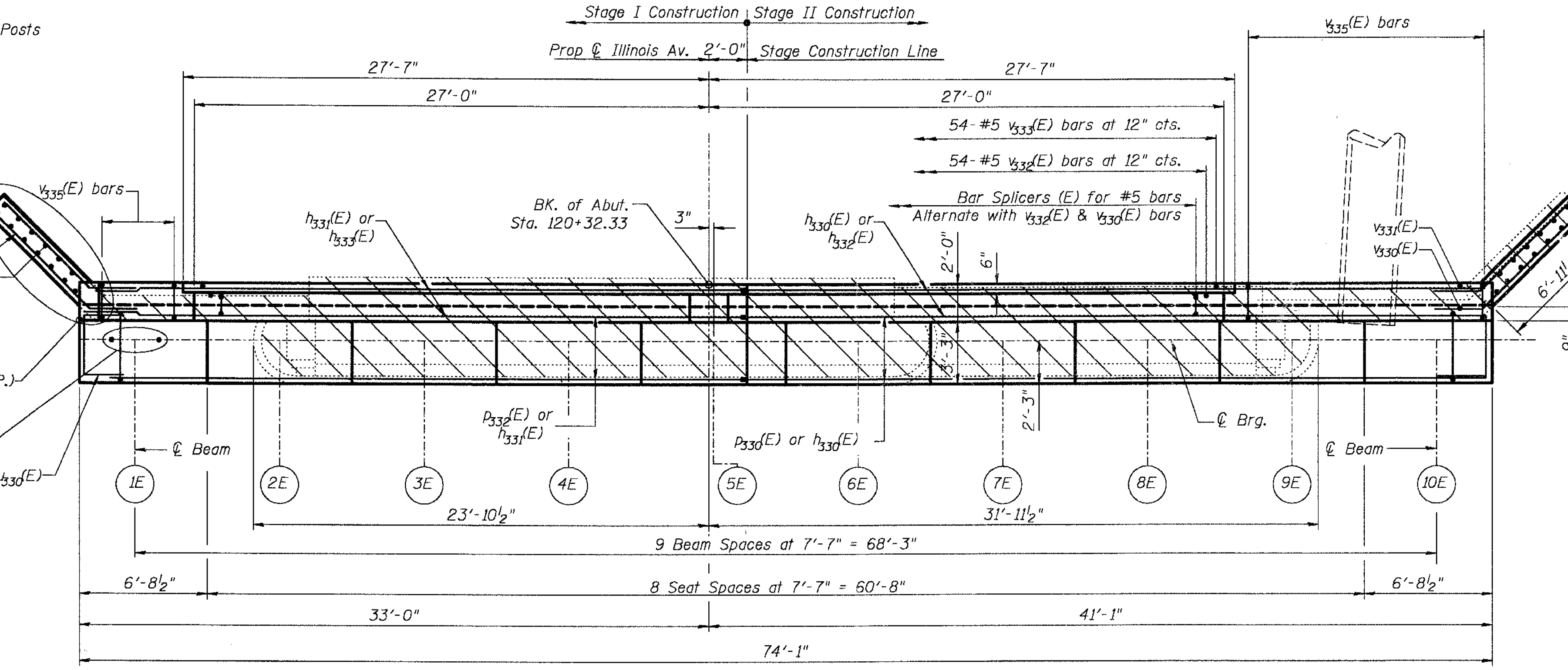
CONTRACT #83867

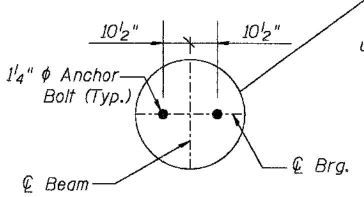
SHEET NO. SE-25
SE-27 SHEETS



POST SPACING

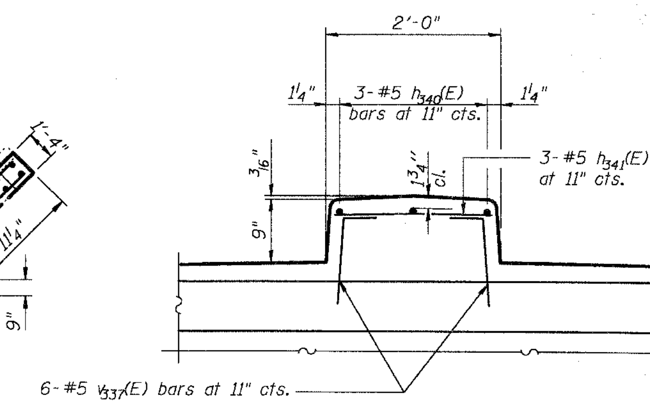
(See sheet SE-17 for railing details) typ. each wingwall





ANCHOR BOLT DETAIL

TOP PLAN



MEDIAN DETAIL

NOTES:

Work this sheet with sheet SE-26.

Space reinforcement in abutment seat to miss anchor bolts.

Contractor to field verify dimensions of existing abutment and wingwalls and locations of existing storm pipe in wingwall.

Existing reinforcement extending into removal area shall be cleaned, straightened and incorporated into the new construction. Cost included in pay item "Concrete Removal".

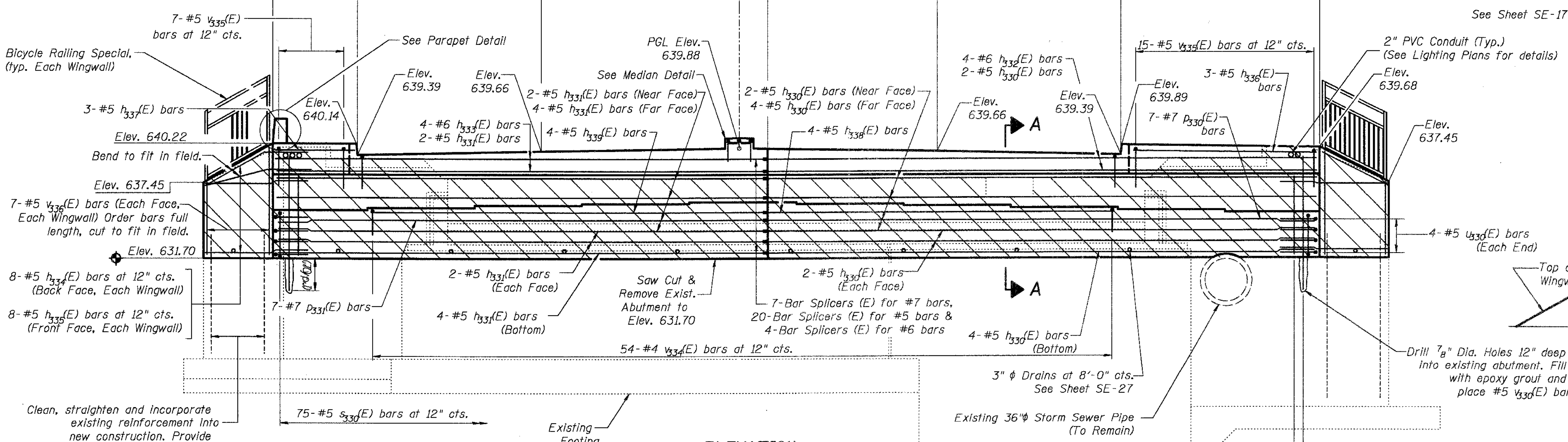
Drill and epoxy grout #5 v_{330}(E) bars in drilled holes with a minimum depth of 12" according to to Article 584 of the Standard Specs.

Pour steps monolithically with abutment cap. All edges shall have standard ¾" chamfers except as noted.

All elevations given at back of abutment unless noted otherwise.

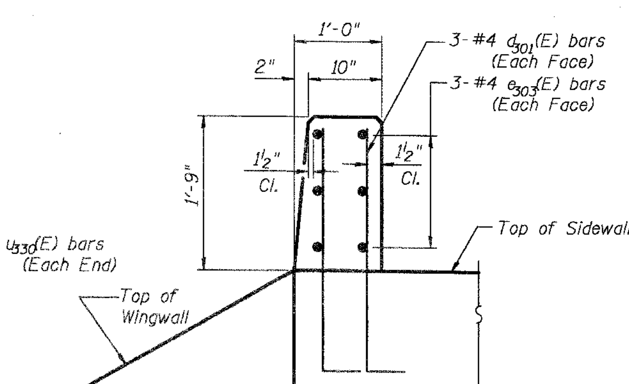
See Sheet SE-26 for Section A-A.

See Sheet SE-17 for Bicycle Railing, Special Detail.



ELEVATION

Looking East



PARAPET DETAIL

BEAM SEAT ELEVATION TABLE

Beam #	1E	2E	3E	4E	5E	6E	7E	8E	9E	10E
Seat Elevation	635.74	635.89	636.05	636.18	636.29	636.17	636.04	635.88	635.73	635.57

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

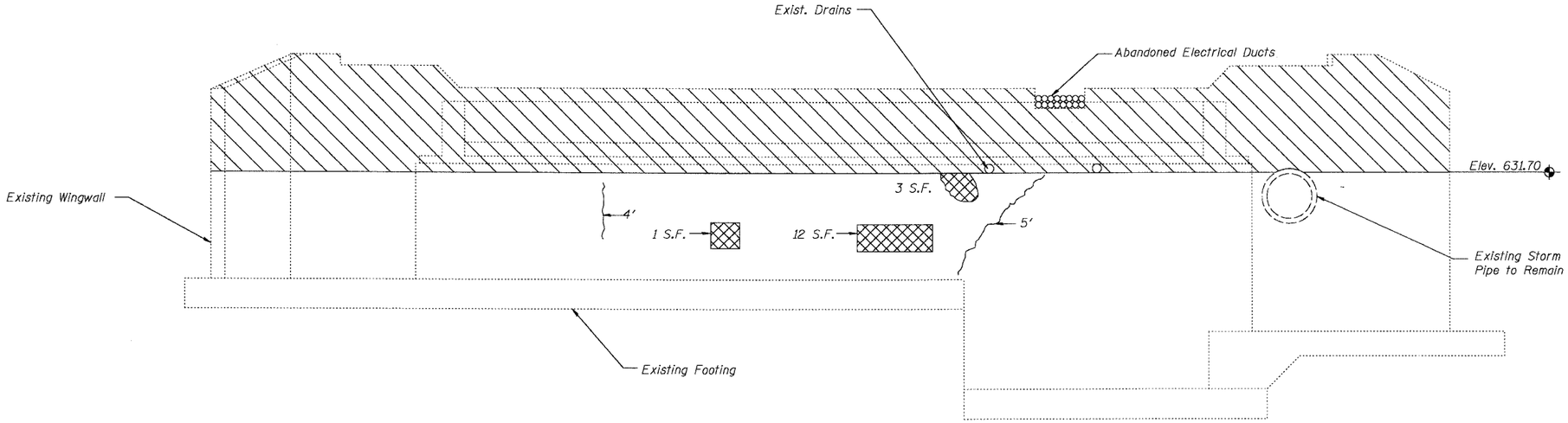
EAST ABUTMENT PLAN AND ELEVATION
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

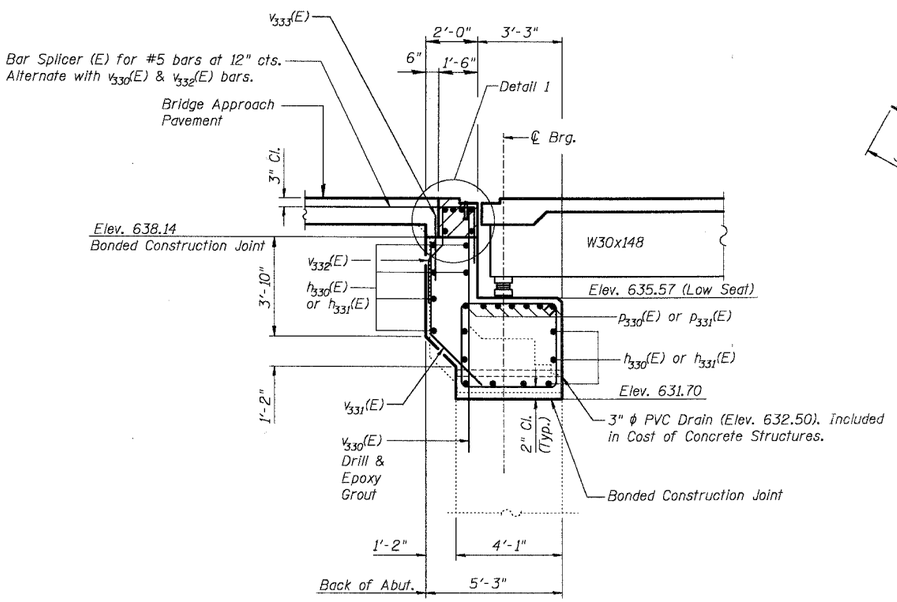
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	109
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT-		

CONTRACT #83867

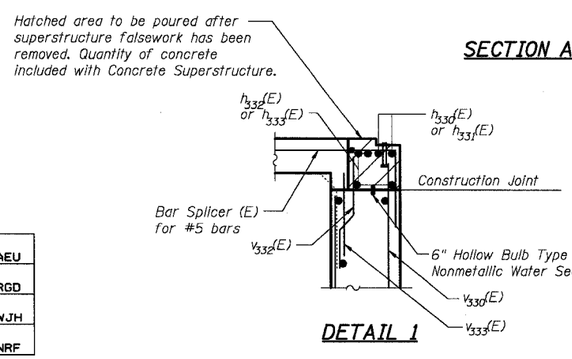
SHEET NO. SE-26
SE-27 SHEETS



ELEVATION
Looking East

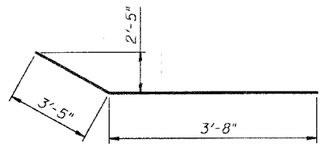


SECTION A-A

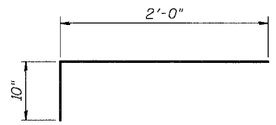


DETAIL 1

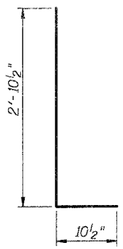
BAR $v_{332}(E)$



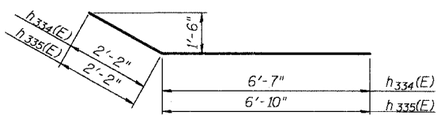
BAR $v_{331}(E)$



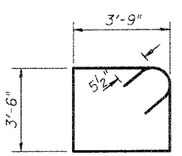
BAR $v_{337}(E)$



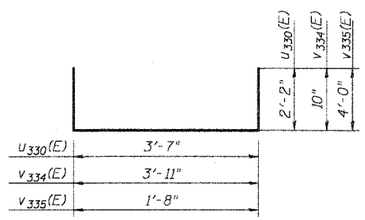
BAR $d_{301}(E)$



BARS $h_{334}(E)$ & $h_{335}(E)$



BAR $s_{330}(E)$



BARS $u_{330}(E)$, $v_{334}(E)$ & $v_{335}(E)$

BILL OF MATERIAL
EAST ABUTMENT

Bar	No.	Size	Length	Shape
$d_{301}(E)$	6	#6	3'-9"	
$e_{303}(E)$	6	#4	1'-8"	
$h_{330}(E)$	16	#5	38'-10"	
$h_{331}(E)$	16	#5	34'-8"	
$h_{332}(E)$	4	#6	38'-10"	
$h_{333}(E)$	4	#6	34'-8"	
$h_{334}(E)$	16	#5	8'-9"	
$h_{335}(E)$	16	#5	9'-0"	
$h_{336}(E)$	3	#5	13'-9"	
$h_{337}(E)$	3	#5	5'-8"	
$h_{338}(E)$	4	#5	16'-10"	
$h_{339}(E)$	4	#5	20'-3"	
$h_{340}(E)$	3	#5	1'-2"	
$h_{341}(E)$	3	#5	1'-8"	
$p_{330}(E)$	7	#7	38'-10"	
$p_{331}(E)$	7	#7	34'-8"	
$s_{330}(E)$	75	#5	15'-5"	
$u_{330}(E)$	8	#5	7'-11"	
$v_{330}(E)$	75	#5	8'-6"	
$v_{331}(E)$	75	#5	7'-1"	
$v_{332}(E)$	54	#5	2'-6"	
$v_{333}(E)$	54	#5	2'-4"	
$v_{334}(E)$	54	#4	5'-7"	
$v_{335}(E)$	22	#5	9'-8"	
$v_{336}(E)$	28	#5	8'-0"	
$v_{337}(E)$	6	#5	2'-10"	
Reinforcement Bars, Epoxy Coated		Pound	6,720	
Concrete Removal		Cu. Yd.	41.2	
Concrete Structures		Cu. Yd.	74.0	
Structure Excavation		Cu. Yd.	53	
Bridge Seat Sealer		Sq. Ft.	241	
Epoxy Crack Sealing		Foot	9	
Structural Repair of Concrete (Less than or equal to 5")		Sq. Ft.	16	
Bicycle Railing Special		Foot	11	

LEGEND

Indicates Concrete Removal Areas

Indicates Epoxy Crack Sealing

Indicates Structural Repair of Concrete

NOTES:

Reinforcement bars designated (E) shall be epoxy coated.

Work this sheet with sheet SE-25.

See Sheet SE-2 for abutment drainage detail.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS	
NAME	DATE

CITY OF AURORA

EAST ABUTMENT DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

DATE 7-28-2006

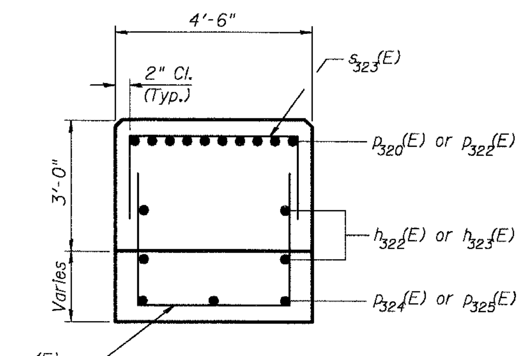
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1517	03-00247-00-BR	KANE	121	110

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT-

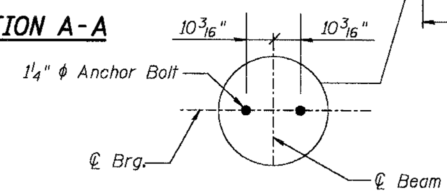
CONTRACT *83867

SHEET NO. SE-27

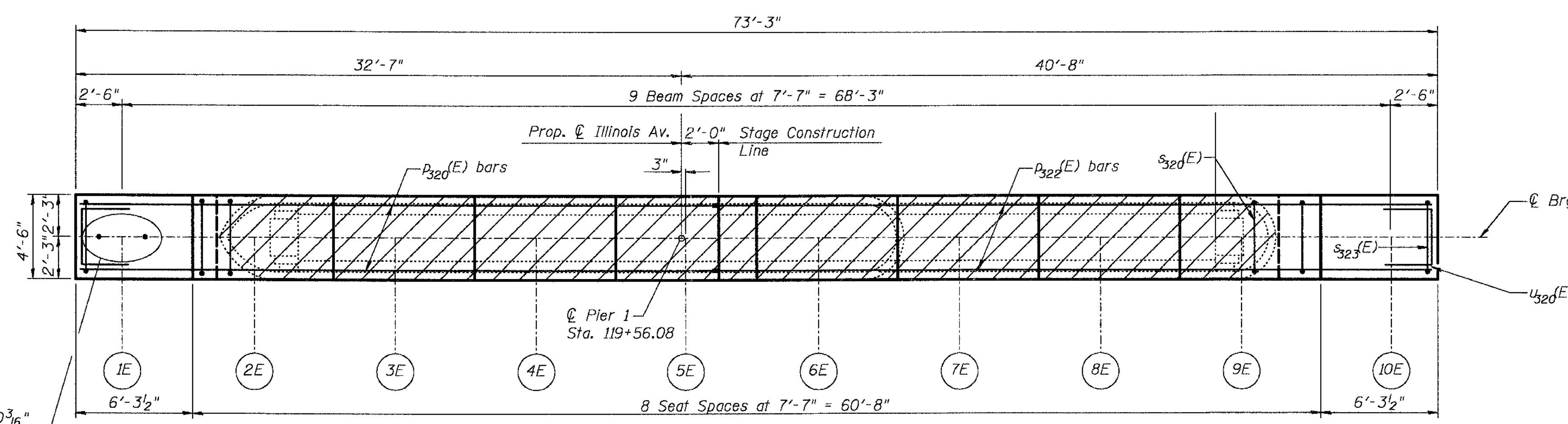
SE-27 SHEETS



SECTION A-A



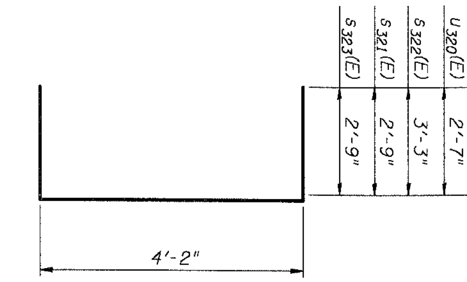
ANCHOR BOLT DETAIL



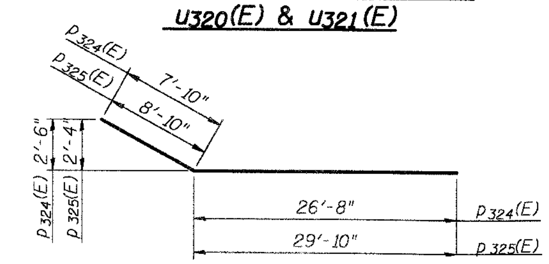
TOP PLAN

BEAM SEAT ELEVATION TABLE

Beam #	1E	2E	3E	4E	5E	6E	7E	8E	9E	10E
Seat Elevation	636.64	636.80	636.96	637.08	637.19	637.07	636.95	636.79	636.63	636.47

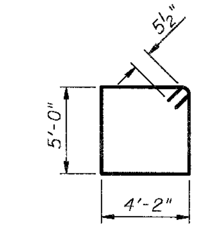


BARS s_{323}(E), s_{321}(E), s_{322}(E) u_{320}(E) & u_{321}(E)



BARS p_{324}(E) & p_{325}(E)

BILL OF MATERIAL PIER 1



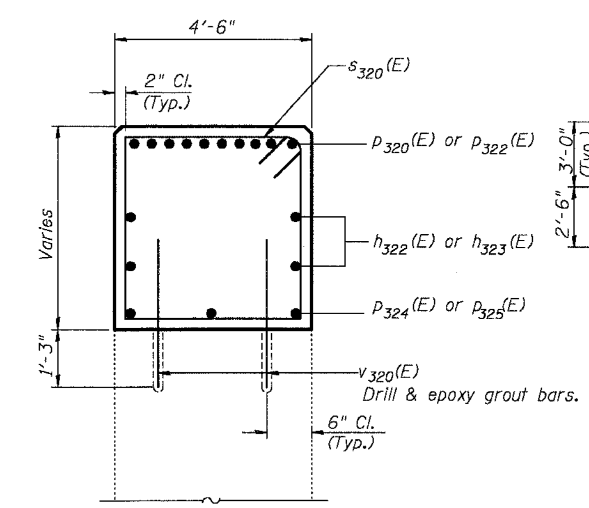
BAR s_{320}(E)

Bar	No.	Size	Length	Shape
h_{320}(E)	4	#5	16'-10"	—
h_{321}(E)	4	#5	20'-3"	—
h_{322}(E)	4	#5	34'-3"	—
h_{323}(E)	4	#5	38'-4"	—
p_{320}(E)	10	#8	34'-3"	—
p_{322}(E)	10	#8	38'-4"	—
p_{324}(E)	3	#5	34'-6"	⌊
p_{325}(E)	3	#5	38'-8"	⌊
s_{320}(E)	28	#5	19'-3"	□
s_{321}(E)	12	#5	9'-8"	⊓
s_{322}(E)	6	#5	10'-8"	⊓
s_{323}(E)	18	#5	9'-8"	⊓
u_{320}(E)	8	#6	9'-4"	⊓
u_{321}(E)	38	#4	5'-10"	⊓
v_{320}(E)	56	#5	2'-10"	—
Reinforcement Bars, Epoxy Coated		Pound	3,980	
Concrete Removal		Cu. Yd.	16.5	
Concrete Structures		Cu. Yd.	66.6	
Epoxy Crack Sealing		Foot	9	

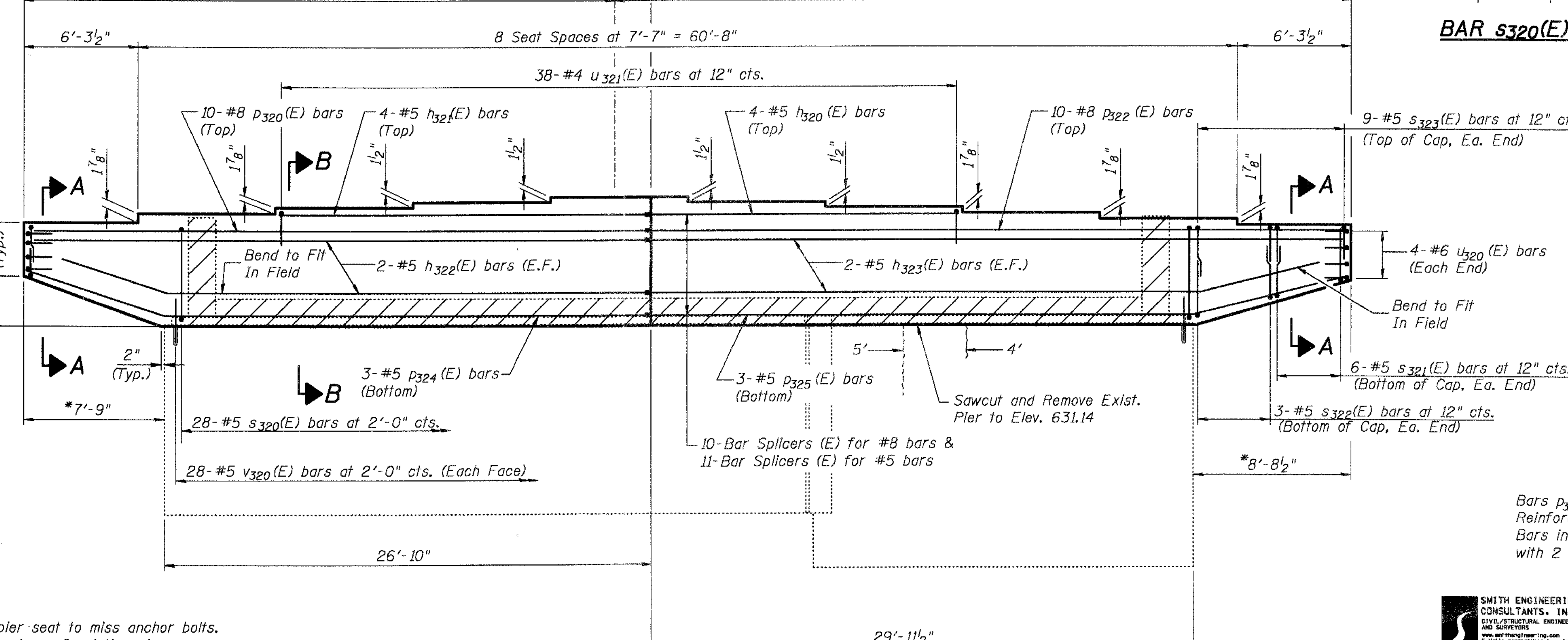
Bars p_{321}(E) & p_{323}(E) are not used.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2 - #5 etc. indicates 1 line of bars with 2 lengths per line.

LEGEND:

- ▨ Indicates Concrete Removal Areas
- ——— Indicates Epoxy Crack Sealing (Near Face)
- - - - Indicates Epoxy Crack Sealing (Far Face)



SECTION B-B



ELEVATION

Looking East

*Measured Along ℄ of Pier

NOTES:

Space reinforcement in pier seat to miss anchor bolts.
Contractor to verify dimensions of existing pier.
Cost for drilling and epoxy grouting v_{320} (E) bars included in cost of Reinforcement Bars, Epoxy Coated.

DESIGNED	AEU
CHECKED	RGD
DRAWN	WJH
CHECKED	NRF

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS

REVISIONS

NAME	DATE

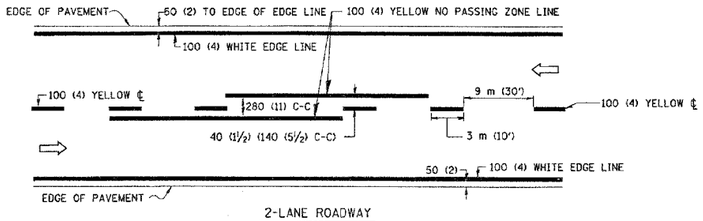
CITY OF AURORA

PIER 1 DETAILS
ILLINOIS AVENUE
OVER THE FOX RIVER
SECTION NO. 03-00247-00-BR
KANE COUNTY
STRUCTURE NO. 045-6008

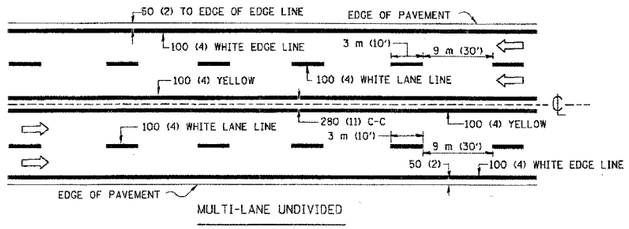
DATE 7-28-2006

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1517	03-00247-00-BR	KANE	121	111
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

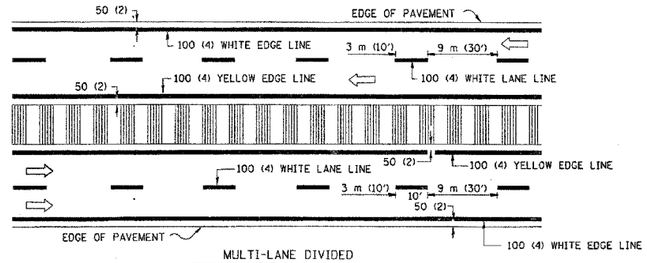
CONTRACT #: 83867



2-LANE ROADWAY



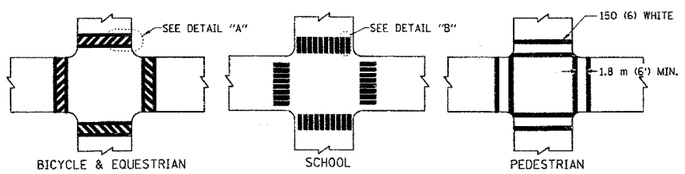
MULTI-LANE UNDIVIDED



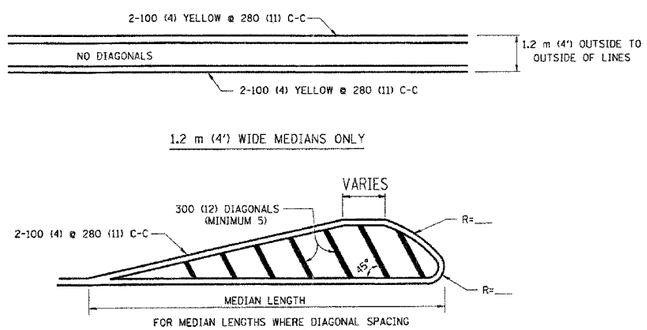
MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

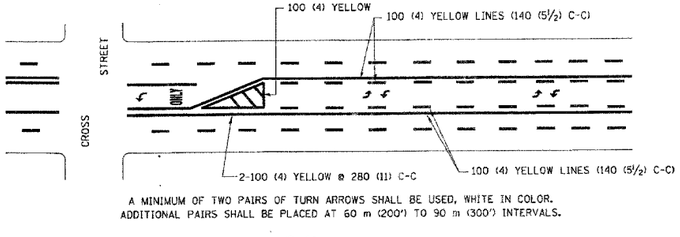
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

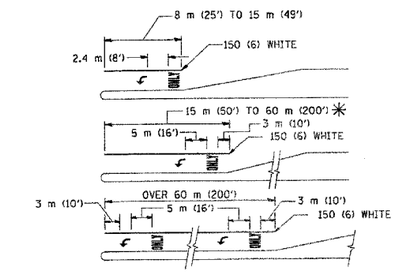


TYPICAL CROSSWALK MARKING

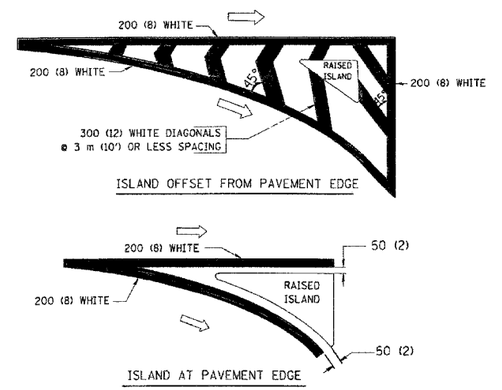




TYPICAL PAINTED MEDIAN MARKING



TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVEDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	100 (4) 2 @ 100 (4)	SOLID SOLID	YELLOW YELLOW	140 (5½) C-C FROM SKIP-DASH CENTERLINE 280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4) 125 (5) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION 2.4 m (8') LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5½) 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 @ 150 (6) 300 (12) @ 45° 300 (12) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 1.8 m (6') APART 600 (2') APART 600 (2') APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45° NO DIAGONALS USED FOR 1.2 m (4') WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m² (3.6 SQ. FT.) EACH "X"=5.0 m² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in millimeters (inches) 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

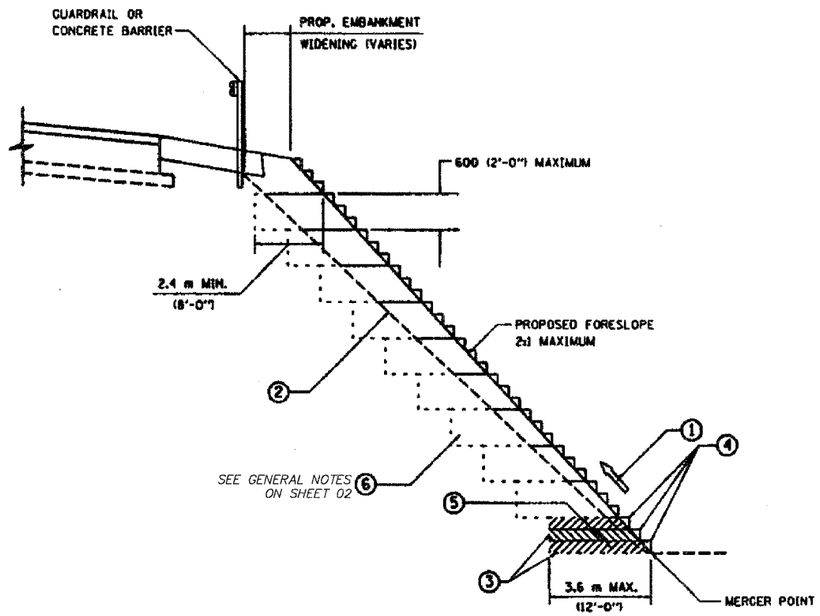
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE
DATE 11/20/01
DRAWN BY CADD
CHECKED BY

TC-13

Tue Nov 20 16:04:19 2001
\\dlcaddl\projects\diststd\tc13.dgn LV=35
VI=TC13

glish\tc13.prk: 15:46:03 11/20/2001



TYPICAL BENCHING DETAIL FOR EMBANKMENT

NOTES:

1. CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
2. EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.04 OF THE STANDARD SPECIFICATIONS.
3. BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
4. TRIM TO FINAL SLOPE.
5. EQUAL 200 (8-INCH) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.06 OF THE STANDARD SPECIFICATIONS.
6. EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION (SPECIAL)". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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

REVISIONS	
NAME	DATE
KMA	09-2006

ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL FOR EMBANKMENT WIDENING

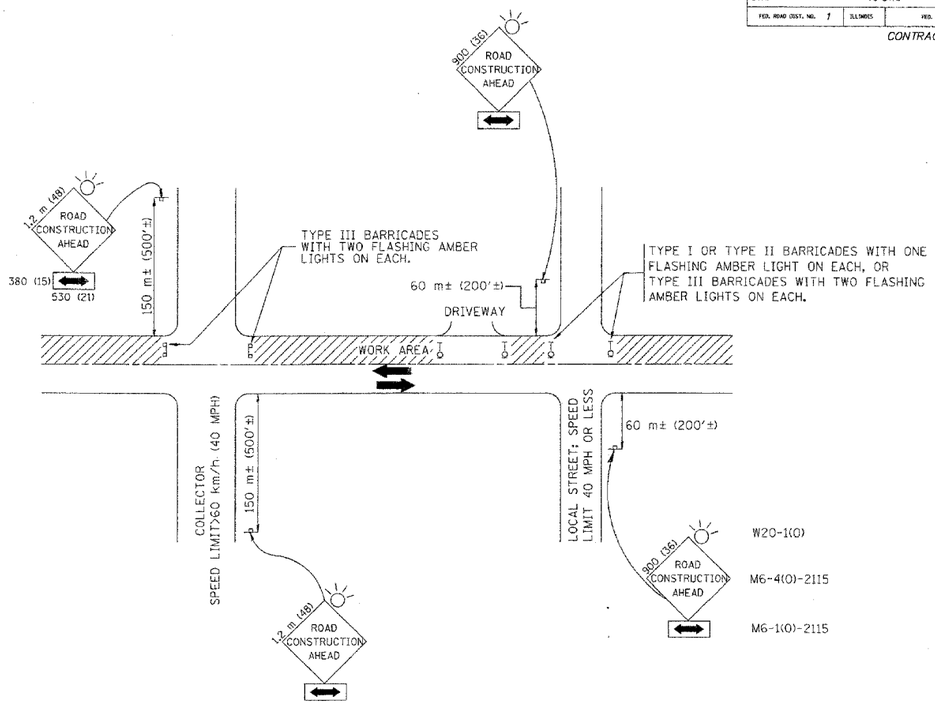
SCALE: NONE — DRAWN BY: CADD

DATE 10/18/2002 — CHECKED BY: S.E.S.

80-5I

F. A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
1517	03-00247-00-BR	KANE	121	112
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT #: 83867



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

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

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

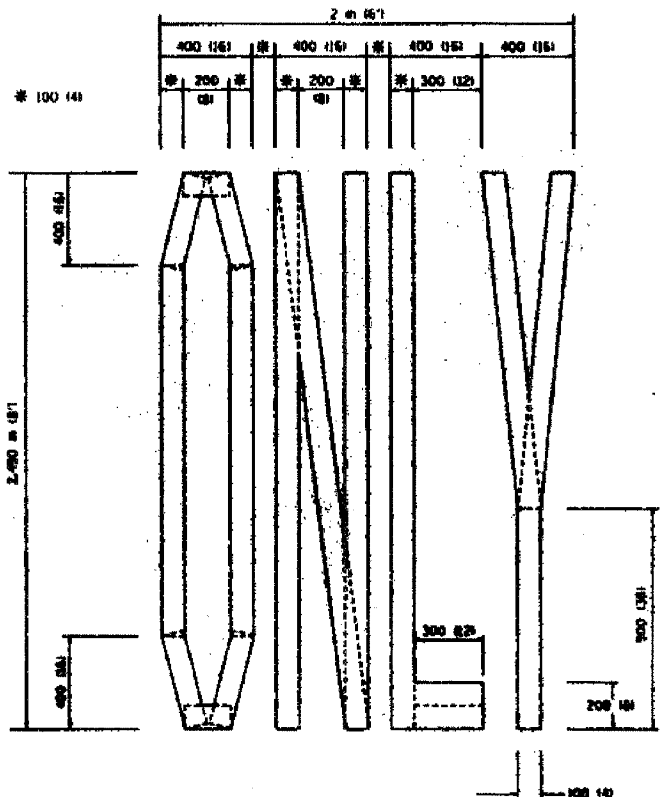
SCALE: NONE — DRAWN BY

DATE: 11/20/01 — CHECKED BY

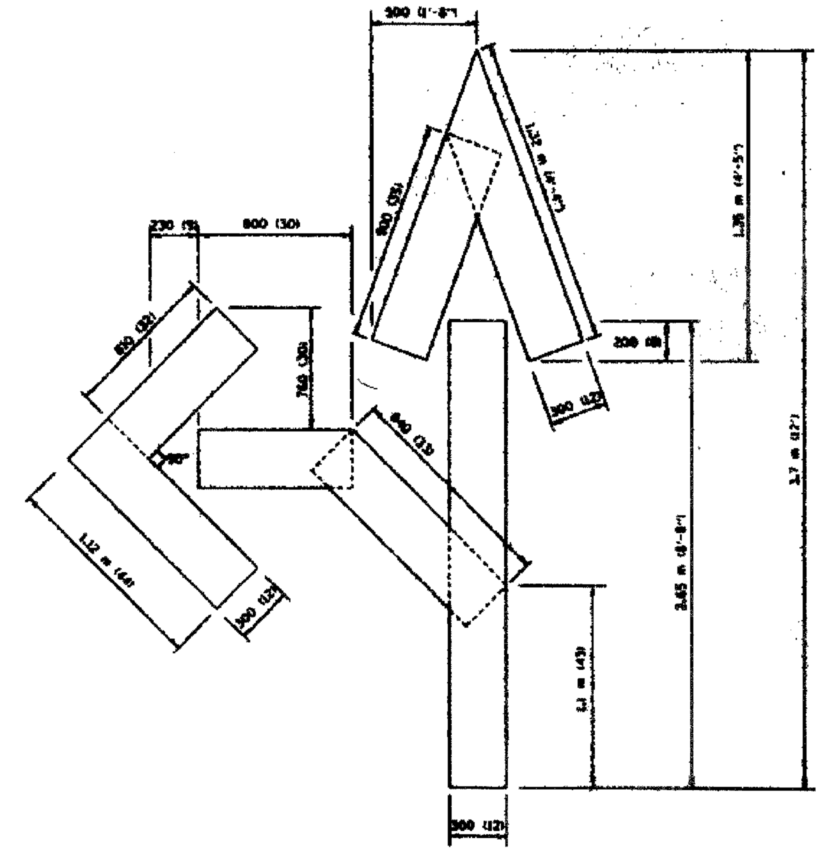
TC-10

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	113

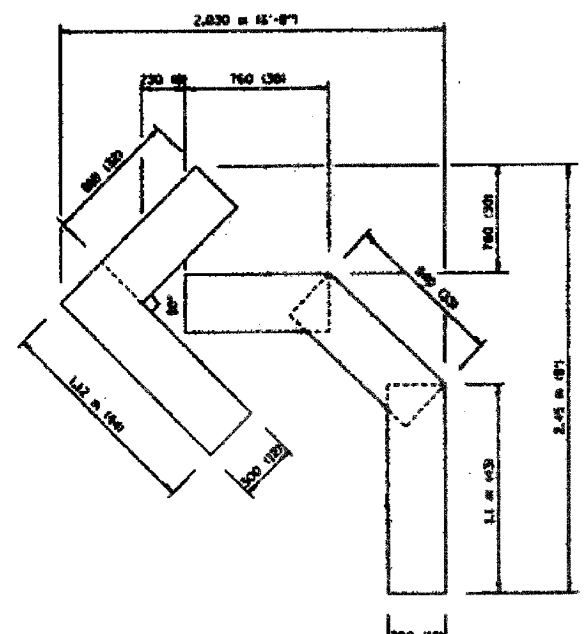
CONTRACT #: 83867



QUANTITY
100 (4) LINE = 19.7 m (64.1 ft.)
1.97 sq. m (21.1 sq. ft.)



QUANTITY
100 (4) LINE = 25.3 m (82.5 ft.)
2.53 sq. m (27.5 sq. ft.)



QUANTITY
100 (4) LINE = 13.9 m (45.5 ft.)
1.39 sq. m (15.2 sq. ft.)

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

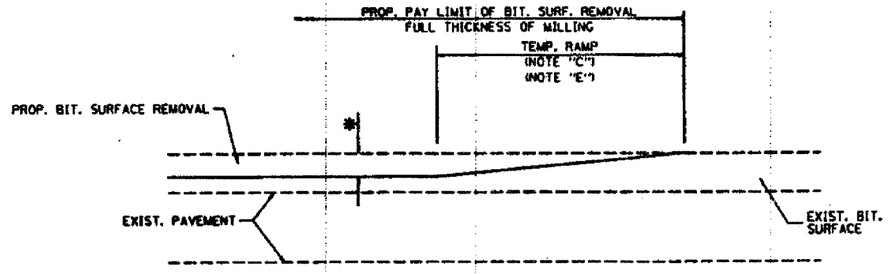
REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

SCALE: NONE
DATE 10/18/2002
DRAWN BY CADD
CHECKED BY
TC-16
REVISION DATE 08/28/00

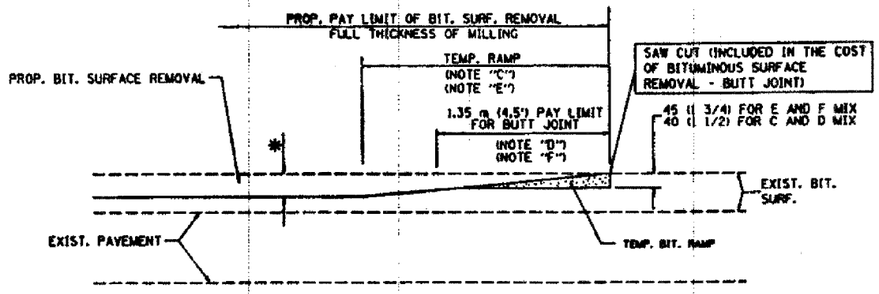
LV-36,63



MILLED TEMPORARY RAMP

(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

OPTION 1

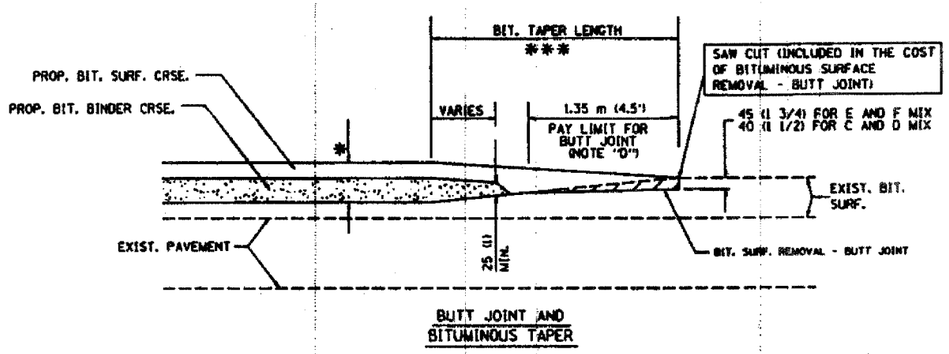


BITUMINOUS CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND BIT. TAPER SEE DETAIL BELOW)

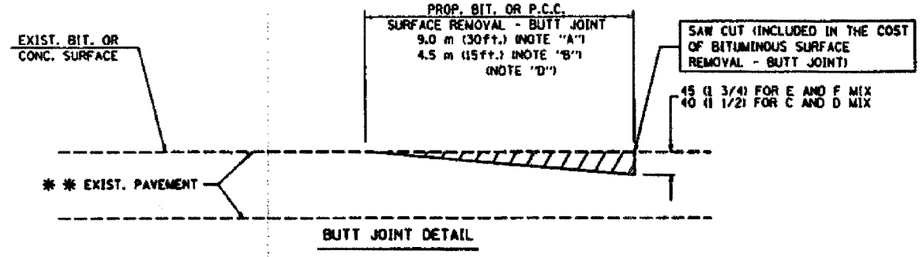
OPTION 2

TYPICAL TEMPORARY RAMP

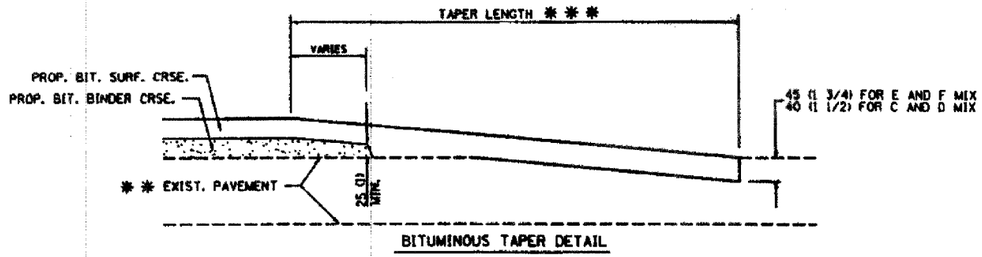


BUTT JOINT AND BITUMINOUS TAPER

TYPICAL BUTT JOINT AND BITUMINOUS TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



BITUMINOUS TAPER DETAIL

TYPICAL BUTT JOINT AND BITUMINOUS TAPER FOR RESURFACING ONLY

** PC CONCRETE, BITUMINOUS OR BITUMINOUS 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 BITUMINOUS SURFACE.

D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED BITUMINOUS COURSES.

E: TAPER THE TEMP. RAMP AT A RATE OF 900 (3 ft.) PER INCH OF MILLING THICKNESS.

F: INSTALLATION AND REMOVAL OF THE 1.35 m (4.5') TEMP. BIT. RAMP WILL BE PAID AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT".

G: SEE ARTICLE 406.18 AND 406.24 OF THE STANDARD SPECIFICATIONS FOR "BITUMINOUS AND PCC SURFACE REMOVAL, BUTT JOINT".

* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.

*** 6.1 m (20') PER 25 (1) RESURFACING (NOTE "A")
3.0 m (10') PER 25 (1) RESURFACING (NOTE "B")

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

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR PER SQUARE METER (SQUARE YARD.) AS "BITUMINOUS SURFACE REMOVAL - BUTT JOINT" OR AS "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

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND BITUMINOUS TAPER DETAILS

SCALE: NONE

DRAWN BY

DATE PLOTTED: 10/18/2002

CHECKED BY

80400-05 (VI-8032)

REVISION DATE: 04/05/02

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517 03-00247-00-BR	KANE	121	114
STA.	TO STA.		

CONTRACT #: 83867

"DATE-TIME"
"DGN-SPEC"
VI-8032

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	115
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CONTRACT #: 83867

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

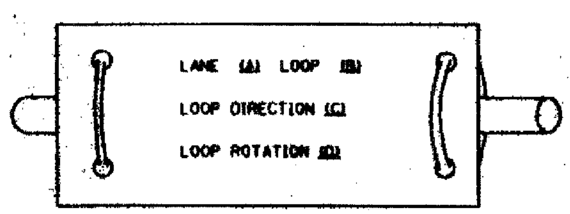
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS. WHERE NEW CONCRETE PAVEMENT IS PROPOSED, THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

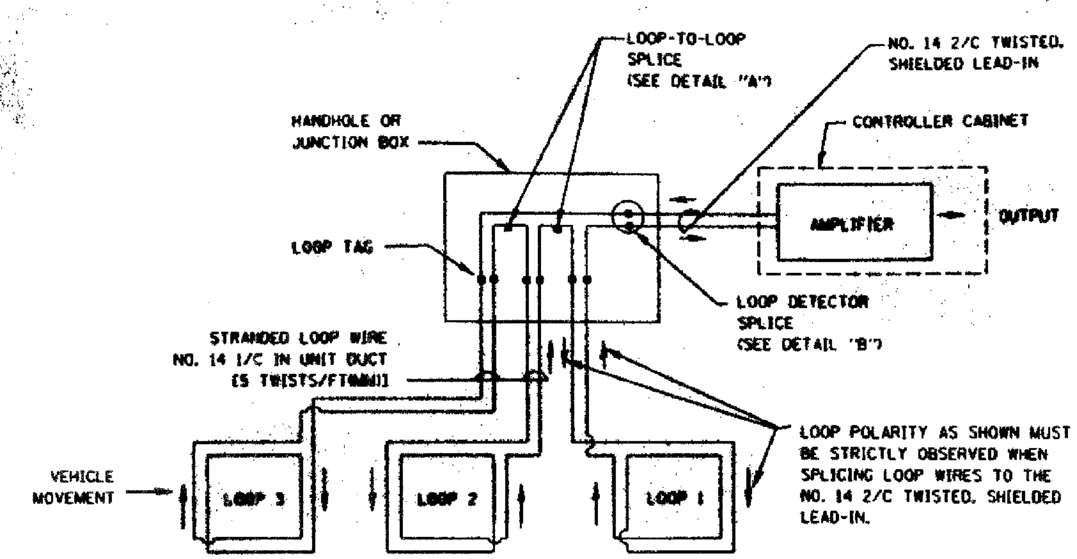


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

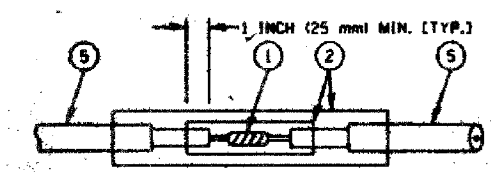
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

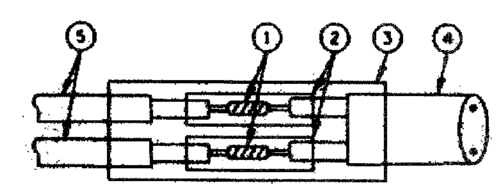


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

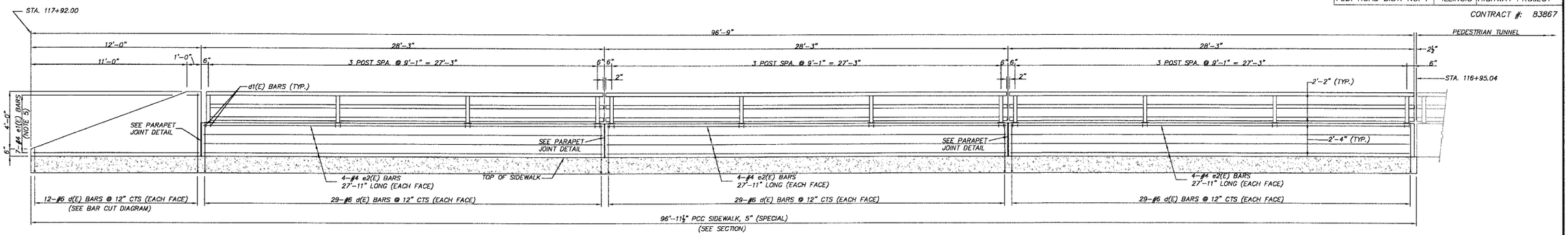
SCALE: VERT. HORIZ. NONE
DATE 10/10/2002

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

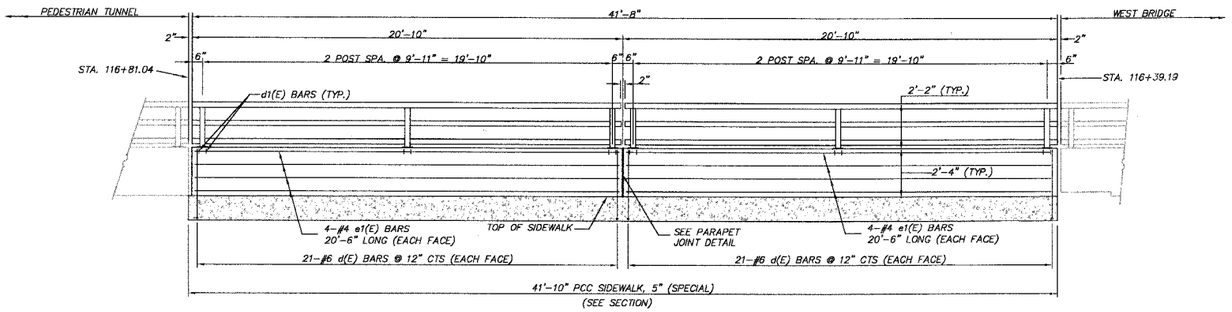
REVISION DATE: [illegible]

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	116
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS HIGHWAY PROJECT		

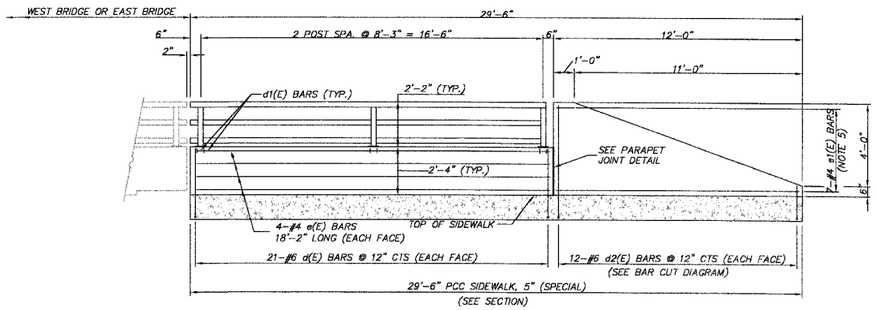
CONTRACT #: 83867



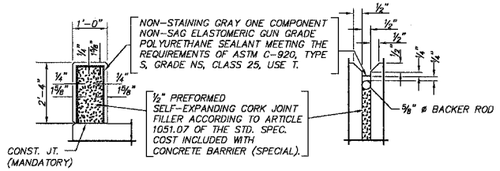
ELEVATION
LOOKING AT ROADWAY FACE
STA. 116+95.04 TO STA. 117+92



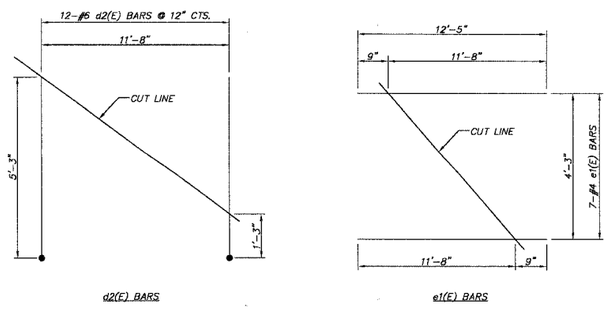
ELEVATION
LOOKING AT ROADWAY FACE
STA. 116+39.19 TO STA. 116+81.04



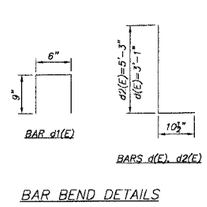
ELEVATION
LOOKING AT ROADWAY FACE
STA. 113+06.72 TO STA. 113+36.72
STA. 120+31.83 TO STA. 120+61.83 (OPPOSITE HAND)



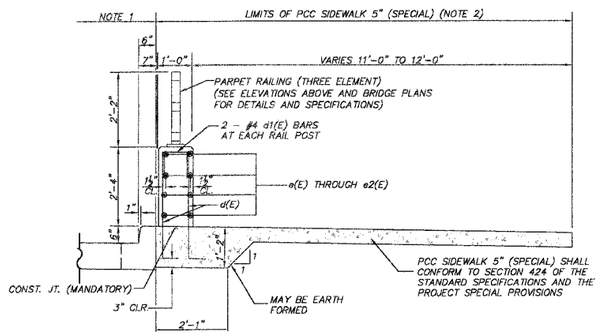
PARAPET JOINT DETAILS



BAR CUT DIAGRAMS



BAR BEND DETAILS



SECTION

NOTES

1. BRIDGE APPROACH PAVEMENT STA. 113+06.72 TO STA. 113+36.72, STA. 116+39.19 TO STA. 116+69.19, AND STA. 120+31.38 TO STA. 120+61.83. BRIDGE APPROACH PAVEMENT (SPECIAL) STA. 116+69.19 TO 116+81.54 AND STA. 116+94.54 TO STA. 117+09.54. PCC PAVEMENT 10" (JOINTED) AND COMB. CONC. CURB AND GUTTER, TYPE B-6.12 STA. 117+09.54 TO STA. 117+92
2. 12'-1" STA. 113+06.72 TO STA. 113+36.72 AND STA. 120+31.83 TO STA. 120+61.83
   13'-1" STA. 116+39.19 TO STA. 116+81.54 AND STA. 116+94.54 TO STA. 117+92
3. d(E) AND d2(E) BARS SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "PCC SIDEWALK, 5" (SPECIAL)."
4. d1(E) BARS, e(E) BARS, AND THE 3 ELEMENT PARAPET RAILING SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE ITEM "CONCRETE BARRIER (SPECIAL)"
5. PROVIDE e1(E) BARS FULL LENGTH AND TRIM IN ACCORDANCE WITH BAR CUT DIAGRAM MAINTAINING 1½" CLEAR COVER. USE REMAINDER IN OPPOSITE FACE.

SMITH ENGINEERING CONSULTANTS, INC.
CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
■ McHENRY ■ HUNTLEY ■ YORKVILLE
ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
PCC SIDEWALK 5" (SPECIAL) AND CONCRETE BARRIER (SPECIAL) DETAIL

REVISIONS		
	NAME	DATE
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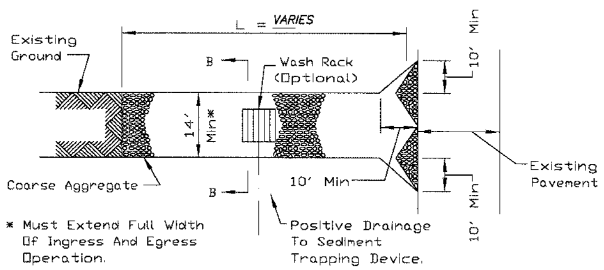
SCALE: "NTS"
DRAWN BY CFR
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VER. CE-115
COMB. FILES: 05181-809n.dwg

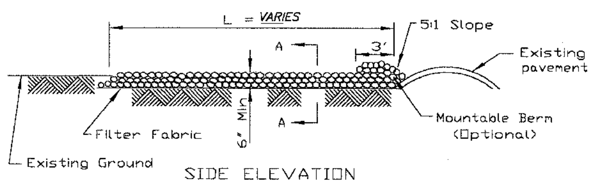
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	117
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867

STABILIZED CONSTRUCTION ENTRANCE PLAN



PLAN VIEW



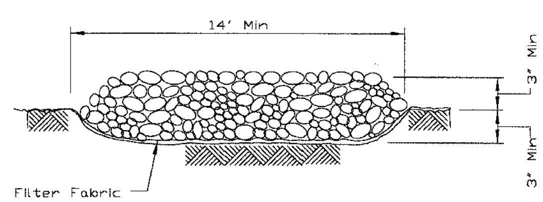
SIDE ELEVATION

NOTES:

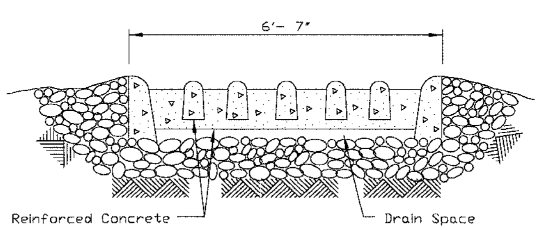
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table I or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
2. Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
3. Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
4. If wash racks are used they shall be installed according to the manufacturer's specifications.

REFERENCE		STANDARD DWG. NO.
Project ____	NRCS Natural Resources Conservation Service	IL-630
Designed ____ Date ____		SHEET 1 OF 2
Checked ____ Date ____		DATE 8-18-94
Approved ____ Date ____		

STABILIZED CONSTRUCTION ENTRANCE PLAN

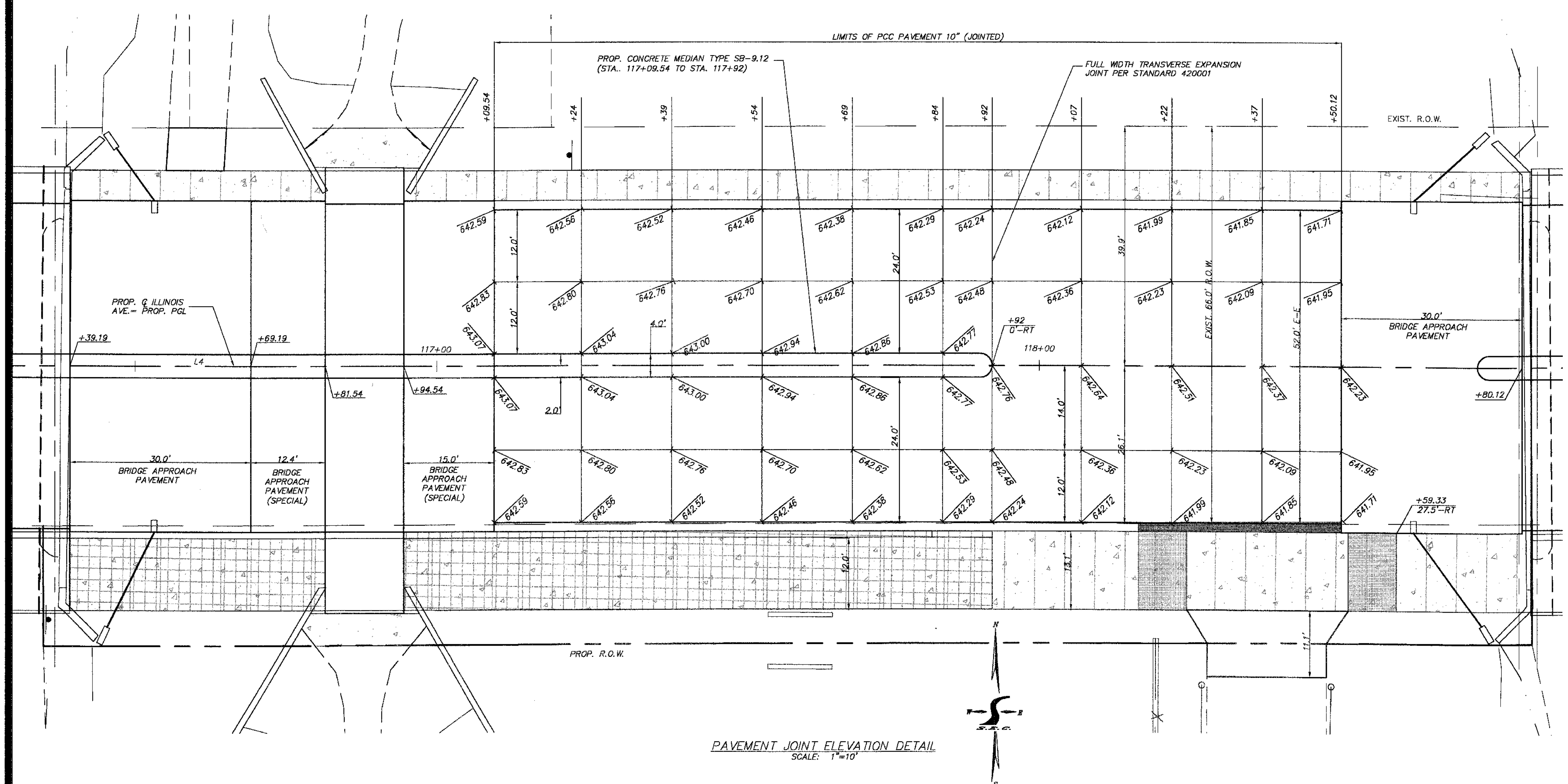


SECTION A-A

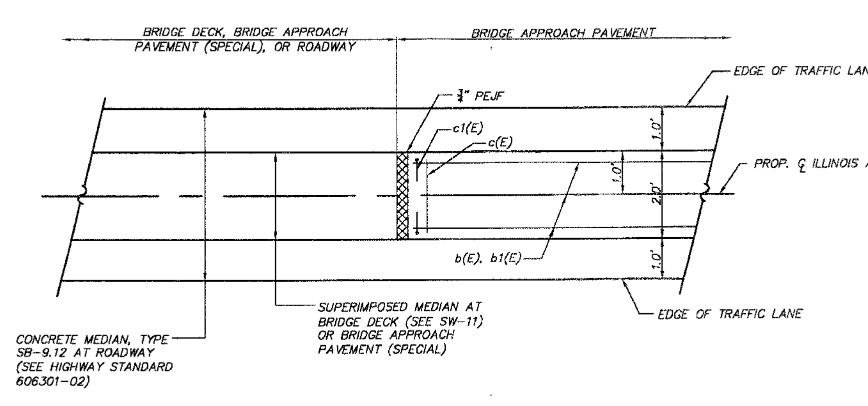


SECTION B-B

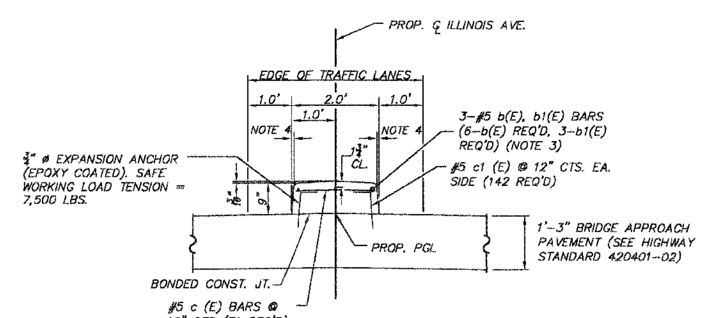
REFERENCE		STANDARD DWG. NO.
Project ____	NRCS Natural Resources Conservation Service	IL-630
Designed ____ Date ____		SHEET 2 OF 2
Checked ____ Date ____		DATE 8-18-94
Approved ____ Date ____		



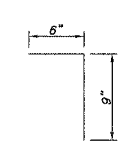
PAVEMENT JOINT ELEVATION DETAIL
SCALE: 1"=10'



PLAN AT END OF BRIDGE APPROACH PAVEMENT



SECTION



c(E) BAR

MEDIAN DETAIL AT BRIDGE APPROACH PAVEMENT
STA. 113+06.72 TO STA. 113+36.72
STA. 116+39.19 TO STA. 116+69.19
STA. 120+31.83 TO STA. 120+42.83

NOTES

1. WORK THIS DETAIL WITH HIGHWAY STANDARDS 420401-05 AND 606301-02.
2. THE COST OF THE EPOXY COATED EXPANSION ANCHORS, c(E) BARS, c1(E) BARS, b(E) BARS, AND b1(E) BARS SHOWN ON THIS DETAIL SHALL BE INCLUDED IN THE COST OF "BRIDGE APPROACH PAVEMENT."
3. 3 - 28'-8" LONG #5 b(E) BARS REQUIRED IN MEDIAN AT BRIDGE APPROACH PAVEMENTS FROM STA. 113+06.72 TO STA. 113+36.72 AND STA. 116+39.19 TO STA.116+69.19. 3 - 10'-8" LONG #5 b1(E) BARS REQUIRED IN MEDIAN AT BRIDGE APPROACH PAVEMENT FROM STA. 120+31.83 TO STA. 120+42.83. FIELD BEND b(E) AND b1(E) BARS AT NOSES OF MEDIANS TO MAINTAIN $1\frac{3}{4}$" CLEAR COVER. (SEE SECTIONS F-F AND G-G IN HIGHWAY STANDARD 606301-02)
4. VARIES FROM $1\frac{1}{4}$" AT THE ENDS OF BRIDGES AND ADJACENT TO BRIDGE APPROACH PAVEMENT (SPECIAL) (STATIONS 113+36.72, 116+36.19, 116+69.19, AND 120+31.83) TO 2" AT ROADWAY (STA. 113+06.72).

REVISIONS		
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McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
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ILLINOIS PROFESSIONAL DESIGN FIRM # 184-000108

ILLINOIS DEPARTMENT OF TRANSPORTATION

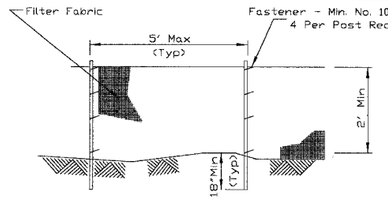
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
STANDARD CONSTRUCTION DETAILS

SCALE: "NTS" DRAWN BY CFR
DATE 07-28-2006 CHECKED BY JLP

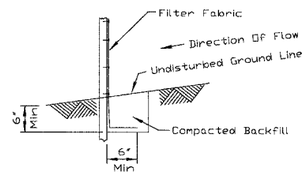
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	118
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	HIGHWAY PROJECT	

CONTRACT #: 83867

SILT FENCE PLAN



ELEVATION

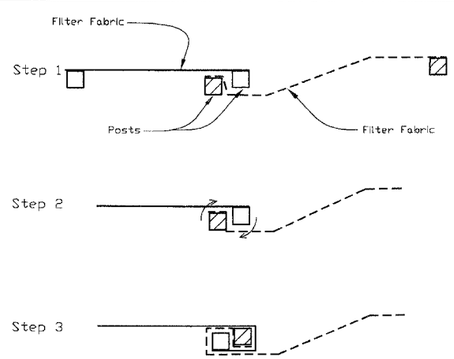


FABRIC ANCHOR DETAIL

NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 for nonwoven and 50 for woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE		STANDARD DWG. NO.
Project		IL-620
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 2
Checked ____ Date ____		DATE 11-20-01
Approved ____ Date ____		

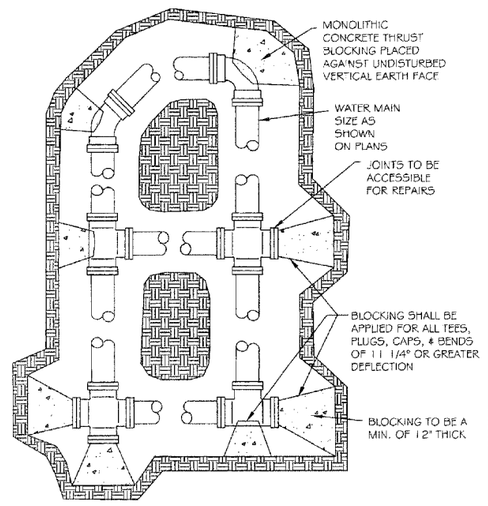
SILT FENCE



ATTACHING TWO SILT FENCES

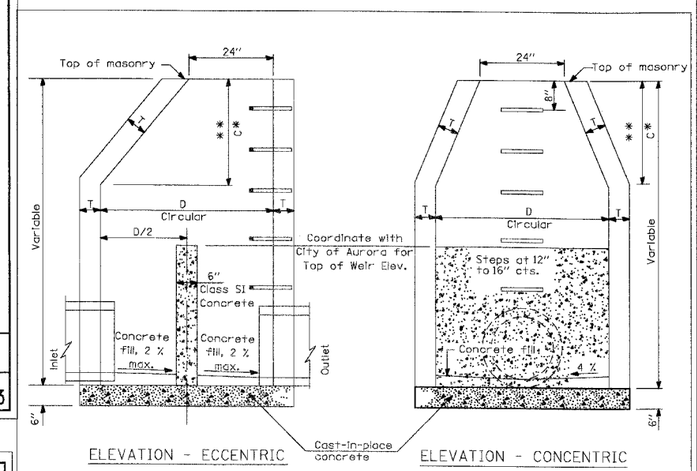
NOTES:
1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Drive both posts a minimum of 18 inches into the ground and bury the flap.

REFERENCE		STANDARD DWG. NO.
Project		IL-620(W)
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 2 OF 2
Checked ____ Date ____		DATE 1-29-99
Approved ____ Date ____		



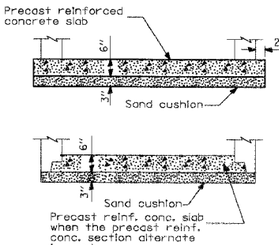
REVISIONS			THRUST BLOCKING	
DATE:	BY:		SCALE: NOT TO SCALE	CHECKED: DF
			DATE: 1/04	DRAWN: NM
				DRAWING NUMBER: EXHIBIT III-C-3

AURORA ENGINEERING



ELEVATION - ECCENTRIC

ELEVATION - CONCENTRIC



ALTERNATE BOTTOM SLAB

ALTERNATE MATERIALS FOR WALLS	D	C	T (min.)
Concrete Masonry Unit	5'-0"	3'-9"	5"
Brick Masonry	5'-0"	3'-9"	8"
Precast Reinforced Concrete Section	5'-0"	3'-9"	5"
Cast-in-place Concrete	5'-0"	3'-9"	6"

GENERAL NOTES

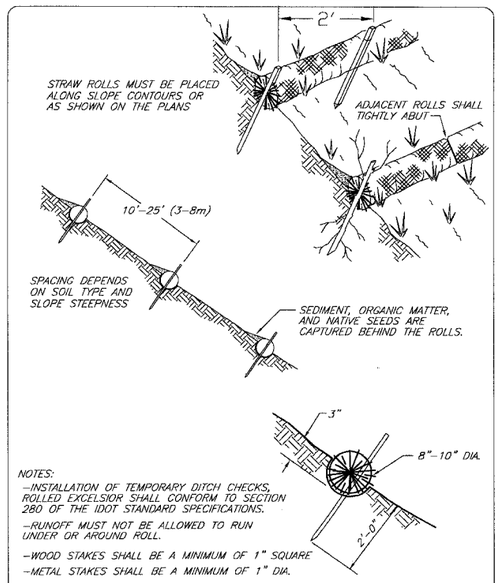
See Standard 602701 for details of steps.

* Dimension "C" for Precast Reinforced Concrete Sections may vary from the dimension given to plus 6".

** See Standard 602601 for Optional Precast Reinforced Concrete Flat Slab Top.

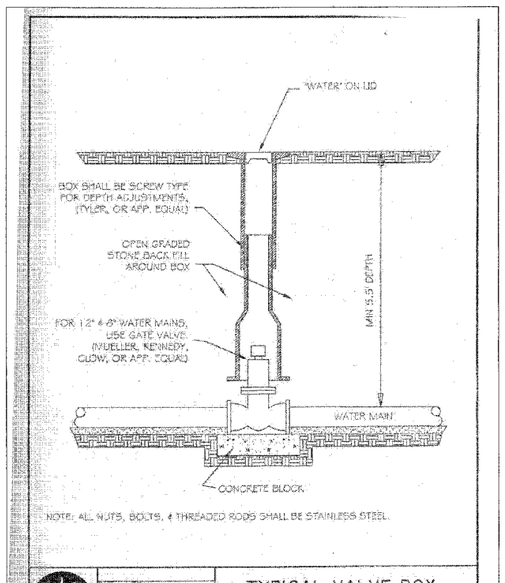
All dimensions are in millimeters (inches) unless otherwise shown.

MANHOLE TYPE A SPECIAL 5' DIA.
TYPE 1 FRAME, CLOSED LID



NOTES:
-INSTALLATION OF TEMPORARY DITCH CHECKS, ROLLED EXCELSIOR SHALL CONFORM TO SECTION 280 OF THE IDOT STANDARD SPECIFICATIONS.
-RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.
-WOOD STAKES SHALL BE A MINIMUM OF 1" SQUARE
-METAL STAKES SHALL BE A MINIMUM OF 1" DIA.
-STAKES SHALL BE A MINIMUM OF 48" LONG.

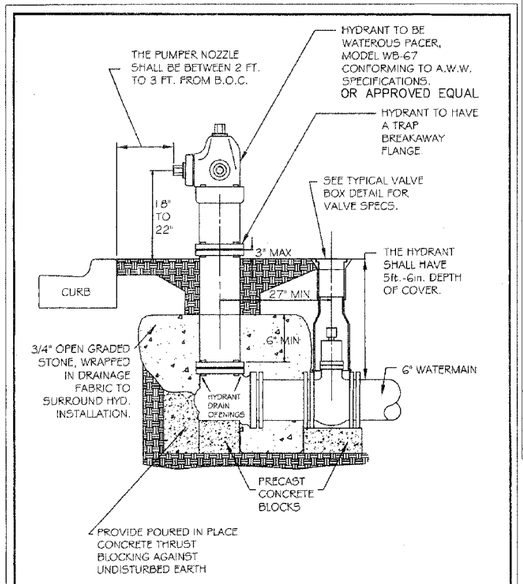
TEMPORARY DITCH CHECKS, ROLLED EXCELSIOR
NOT TO SCALE



NOTE: ALL NUTS, BOLTS, & THREADED RODS SHALL BE STAINLESS STEEL.

REVISIONS			TYPICAL VALVE BOX	
DATE:	BY:		SCALE: NOT TO SCALE	CHECKED: DF
			DATE: 1/04	DRAWN: NM
				DRAWING NUMBER: EXHIBIT III-C-5

AURORA ENGINEERING



REVISIONS			HYDRANT INSTALLATION	
DATE:	BY:		SCALE: NOT TO SCALE	CHECKED: DF
8/02	NM, redrawn		DATE: 8/02	DRAWN: NM/SAZ
1/04	SAZ, redrawn			DRAWING NUMBER: EXHIBIT III-C-7

AURORA ENGINEERING

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CIVIL/STRUCTURAL ENGINEERS AND SURVEYORS
4500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1778 FAX: 815-385-1781
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
STANDARD CONSTRUCTION DETAILS

REVISIONS		
	NAME	DATE
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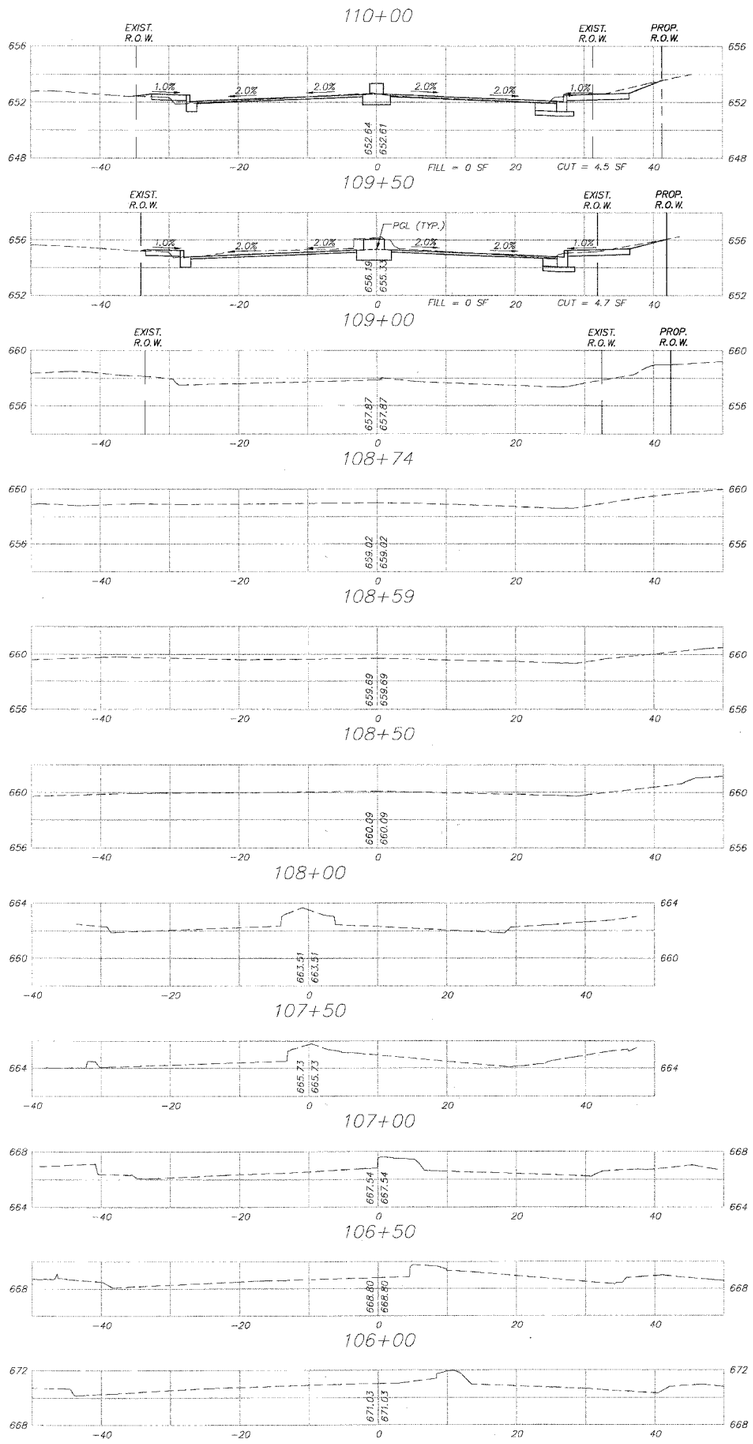
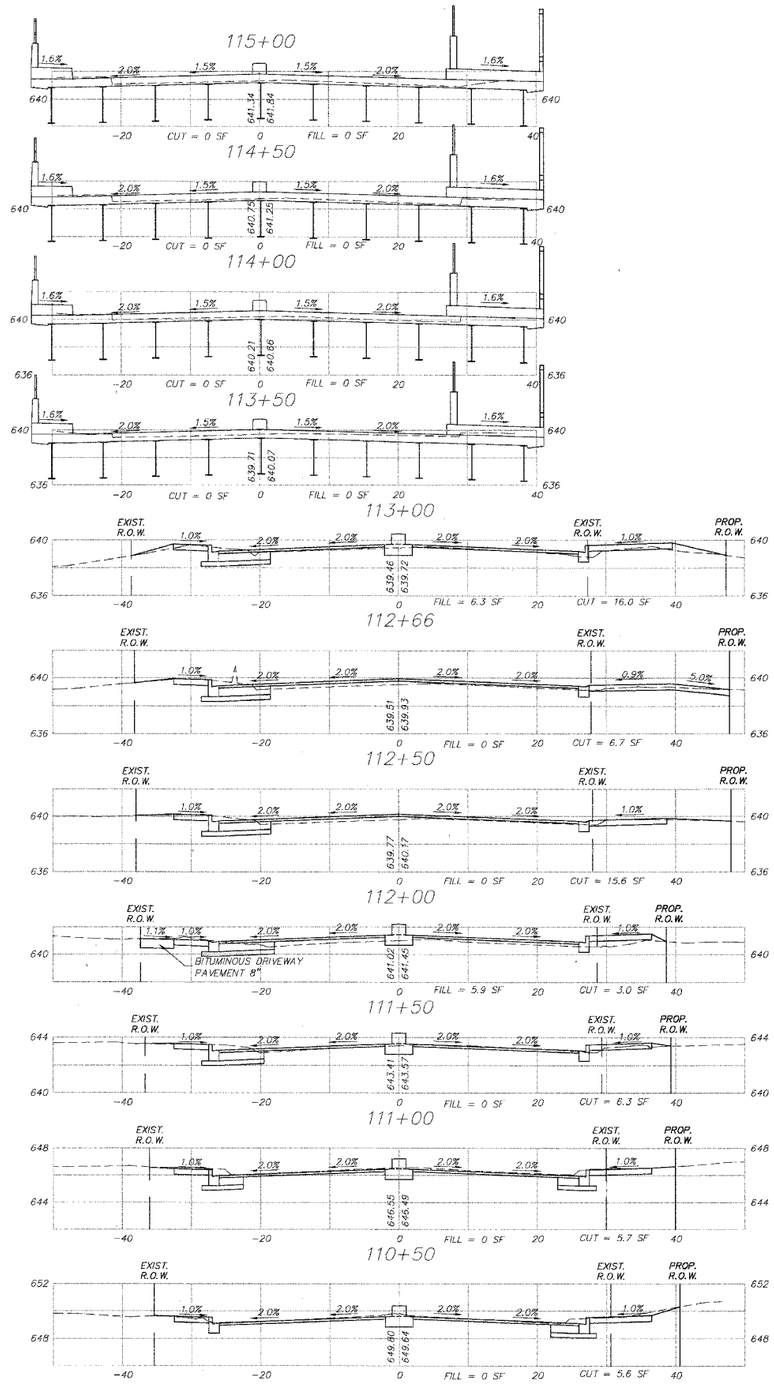
SCALE: "NTS"
DRAWN BY WJH
DATE 07-28-2006
CHECKED BY JLP

PLOT FILE: STANDARD
VIEW: CE-118
ESMP. FILE: 050181-609b.dwg

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	119
STA.	106+00	TO STA.	115+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867





PLOT FILE STANDARD
VIEW: CE-119
COMP. FILE: 060181-603.dwg

REVISIONS		
	NAME	DATE
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1.	KMA	09-13-2006

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1500 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1776 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
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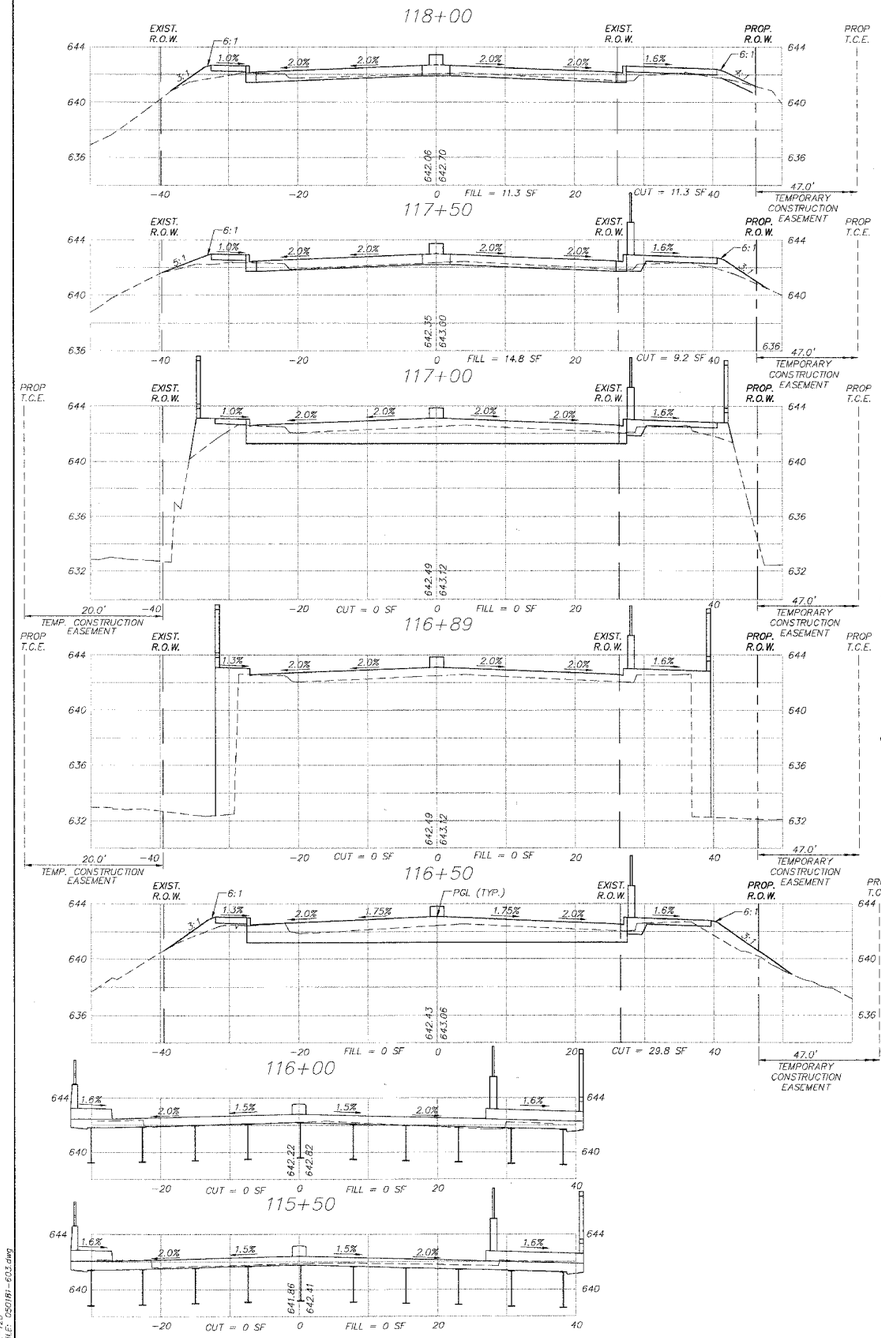
ILLINOIS DEPARTMENT OF TRANSPORTATION

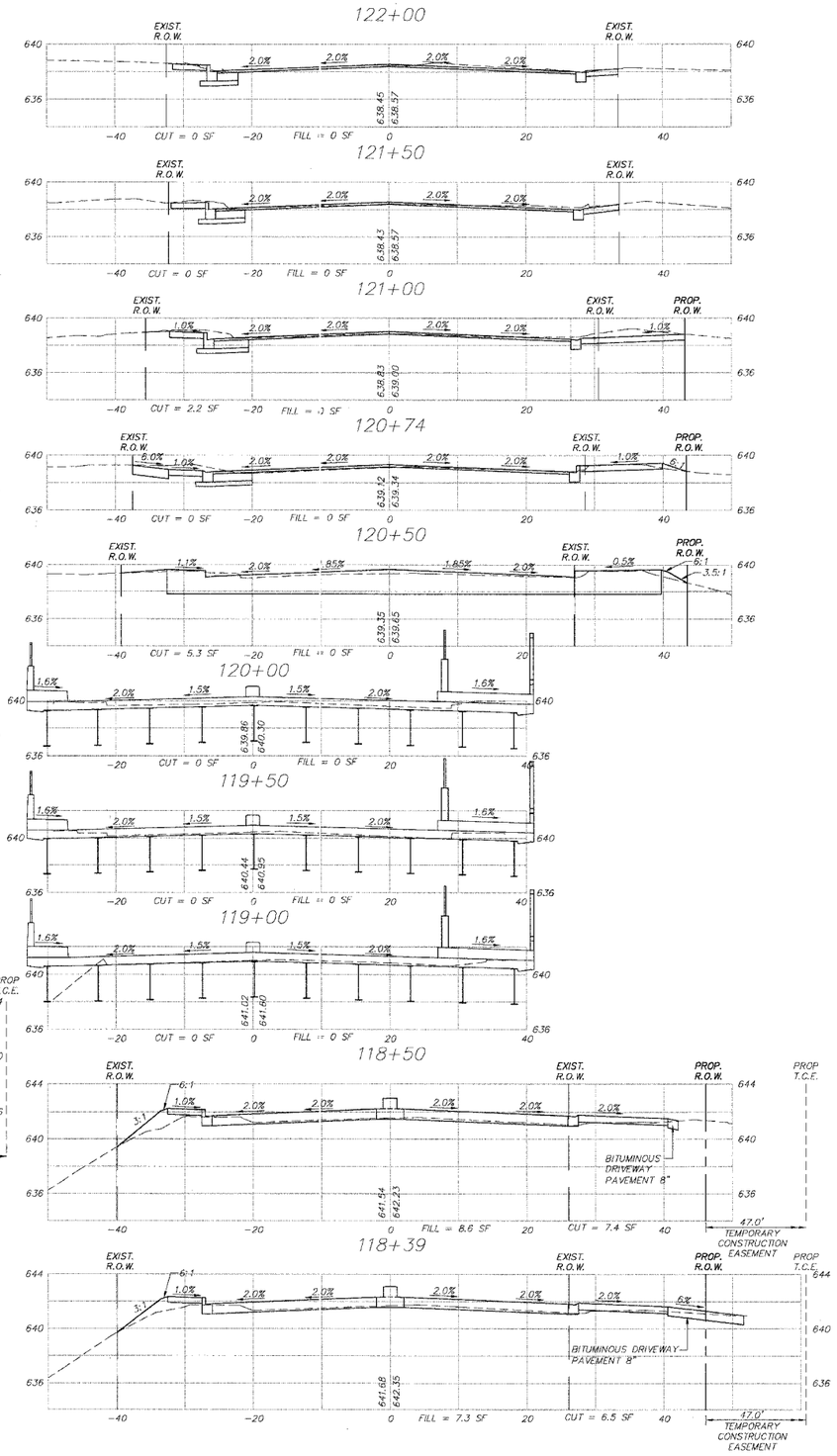
CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
CROSS SECTIONS
STA. 106+00 TO STA. 115+00

SCALE: H. 1" = 10' - V. 1" = 5'
DRAWN BY MPL
DATE 07-28-2006
CHECKED BY JLP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	120
STA.	115+50	TO STA.	122+00	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

CONTRACT #: 83867





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CROSS SECTIONS
STA. 115+50 TO STA. 122+00

SCALE: H. 1" = 10' – V. 1" = 5' DRAWN BY MPL

DATE 07-28-2006 CHECKED BY JLP

REVISIONS		
	NAME	DATE
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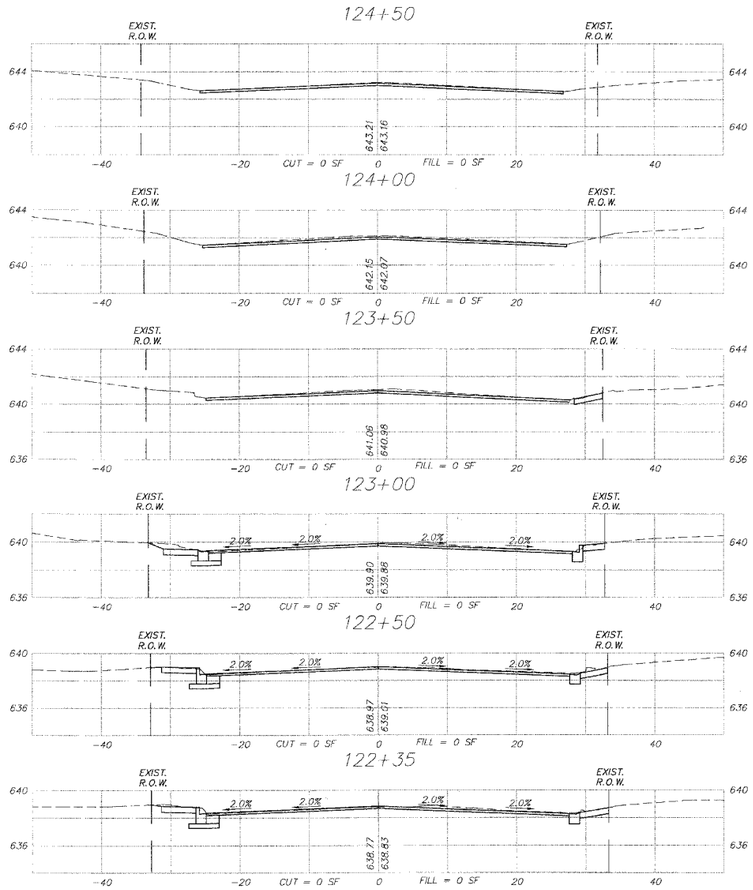
1.	KMA	09-13-2006

PLOT FILE: STANDARD
VIEW: CE-120
COMP. FILE: 120191-603.dwg



EARTHWORK TABLE

	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL					FURNISHED EXCAVATION				
Station	Area (sf)	Avg. Area (sf)	Length (ft)	Volume (cf)	Volume (cy)	Area (sf)	Avg. Area (sf)	Length (ft)	Volume (cf)	Volume (cy)
10600	0					0				
		0	50	0	0.0		0	50	0	0.0
10650	0					0				
		0	50	0	0.0		0	50	0	0.0
10700	0					0				
		0	50	0	0.0		0	50	0	0.0
10750	0					0				
		0	50	0	0.0		0	50	0	0.0
10800	0					0				
		0	50	0	0.0		0	50	0	0.0
10850	0					0				
		0	50	0	0.0		0	50	0	0.0
10900	0					0				
		2.35	50	117.5	4.4		0	50	0	0.0
10950	4.7					0				
		4.6	50	230	8.5		0	50	0	0.0
11000	4.5					0				
		5.05	50	252.5	9.4		0	50	0	0.0
11050	5.6					0				
		5.65	50	282.5	10.5		0	50	0	0.0
11100	5.7					0				
		6	50	300	11.1		0	50	0	0.0
11150	6.3					0				
		4.65	50	232.5	8.6		2.95	50	147.5	5.5
11200	3					5.9				
		9.3	50	465	17.2		2.95	50	147.5	5.5
11250	15.6					0				
		11.15	16	178.4	6.6		0	16	0	0.0
11266	6.7					0				
		11.35	34	385.9	14.3		3.15	34	107.1	4.0
11300	16					6.3				
		8	50	400	14.8		3.15	50	157.5	5.8
11350	0					0				
		0	250	0	0.0		0	250	0	0.0
11600	0					0				
		14.9	50	745	27.6		0	50	0	0.0
11650	29.8					0				
		14.9	39	581.1	21.5		0	39	0	0.0
11689	0					0				
		0	11	0	0.0		0	11	0	0.0
11700	0					0				
		4.6	50	230	8.5		7.4	50	370	13.7
11750	9.2					14.8				
		10.25	50	512.5	19.0		13.05	50	652.5	24.2
11800	11.3					11.3				
		8.9	39	347.1	12.9		9.3	39	362.7	13.4
11839	6.5					7.3				
		6.95	11	76.45	2.8		7.95	11	87.45	3.2
11850	7.4					8.6				
		3.7	50	185	6.9		4.3	50	215	8.0
11900	0					0				
		0	100	0	0.0		0	100	0	0.0
12000	0					0				
		2.65	50	132.5	4.9		0	50	0	0.0
12050	5.3					0				
		2.65	24	63.6	2.4		0	24	0	0.0
12074	0					0				
		1.1	26	28.6	1.1		0	26	0	0.0
12100	2.2					0				
		1.1	50	55	2.0		0	50	0	0.0
12150	0					0				
		0	50	0	0.0		0	50	0	0.0
12200	0					0				
		0	50	0	0.0		0	50	0	0.0
12250	0					0				
		0	50	0	0.0		0	50	0	0.0
12300	0					0				
		0	50	0	0.0		0	50	0	0.0
12350	0					0				
		0	50	0	0.0		0	50	0	0.0
12400	0					0				
		0	50	0	0.0		0	50	0	0.0
12450	0					0				
				Total	215				Total	83

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1517	03-00247-00-BR	KANE	121	121
STA.	122+35	TO STA.	124+50	
FED. ROAD DIST. NO. 1	ILLINOIS	HIGHWAY PROJECT		

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4620 PRIME PARKWAY, SUITE 201
McHENRY, ILLINOIS 60050
PH: 815-385-1776 FAX: 815-385-1781
www.smithengineering.com E-MAIL: sec@smithengineering.com
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CITY OF AURORA
ILLINOIS AVENUE OVER THE FOX RIVER
CROSS SECTIONS
STA. 115+50 TO STA. 122+00

SCALE: H. 1" = 10' - V. 1" = 5' DRAWN BY MPL

DATE 07-28-2006 CHECKED BY JLP

PLOT FILE STANDARD
VIEW: CE-121
COMP. FILE: 250181-813.dwg