

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS NO.
3578	15VB-1-R-1	COOK	243 3
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	CONTRACT NO. 62388

SUMMARY OF QUANTITIES		UNIT	URBAN TOTAL QTY.	ACM	ACBKE	ACM		80% FED 15% STATE 5% OAK LAWN	100% OAK LAWN	100% CHICAGO RIDGE			
				ROADWAY	BRIDGE	RETAINING WALL	TRAFFIC SIG. INTERCON.	SW HWY @ RIDGELAND	LIGHTING	LIGHTING	EMERGENCY PRE-EMPTION	PED. PUSH BUTTONS	BRIDGE SW BARRIER
				J000-2A	X371-2A	Y007	Y031-1F	Y031-1F	Y030-1E	Y030-1E	Y031-3D	Y031-1F	SFTY-2A
* 20101100	TREE TRUNK PROTECTION	EACH	10	10									
* 25200200	SUPPLEMENTAL WATERING	UNIT	114	114									
28000510	INLET FILTERS	EACH	20	20									
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1								
50202901	COFFERDAM (LOCATION-1)	EACH	1		1								
50202902	COFFERDAM (LOCATION-2)	EACH	1		1								
50500505	STUD SHEAR CONNECTORS	EACH	26.212		26.160	52							
50800515	BAR SPLICERS	EACH	3.985		3.985								
50901750	PARAPET RAILING	FOOT	417.6		417.6								
51204650	PILE SHOES	EACH	276		276								
51500100	NAME PLATES	EACH	1		1								
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	72		72								
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	46		46								
56400100	FIRE HYDRANTS TO BE MOVED	EACH	2	2									
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	3	2		1							
60208240	CATCH BASINS, TYPE C, TYPE 24 FRAME AND GRATE	EACH	2	2									
60237470	INLETS, TYPE A, TYPE 24 FRAME AND GRATE	EACH	1	1									
60250200	CATCH BASINS TO BE ADJUSTED	EACH	6	6									
60252800	CATCH BASINS TO BE RECONSTRUCTED	EACH	2	2									
60255500	MANHOLES TO BE ADJUSTED	EACH	5	5									
60257900	MANHOLES TO BE RECONSTRUCTED	EACH	1	1									
60260100	INLETS TO BE ADJUSTED	EACH	1	1									
60262700	INLETS TO BE RECONSTRUCTED	EACH	1	1									
60500050	REMOVING CATCH BASINS	EACH	7	7									
60500060	REMOVING INLETS	EACH	4	4									
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2									
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT	EACH	2	2									
67000600	ENGINEER'S FIELD LABORATORY	CAL MO	20	20									
67100100	MOBILIZATION	L SUM	1	0.4	0.5	0.1							
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	1.0									
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	515	515									
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	80	80									
M6640200	NON-SPECIAL WASTE DISPOSAL	CU M	2,190	2,190									
66900450	SPECIAL WASTE PLANS AND REPORT	L SUM	1	1									
66900530	SOIL DISPOSAL ANALYSIS	EACH	3	3									

\* SPECIALTY ITEMS

Rev. 1-4-10  
Rev. 12-29-09

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
FAU 3578 (SOUTHWEST HIGHWAY)  
OVER B&O RAILROAD AND STONY CREEK  
SUMMARY OF QUANTITIES

SCALE:                      DRAWN BY: DES  
DATE: 5-08-2009              CHECKED BY: JJC

# GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts M22, open holes 24mm  $\phi$ , unless otherwise noted.
- Calculated mass of structural steel: M270M Grade 345 = 7860 kg
- No field welding is permitted except as specified in the contract documents.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The structural steel bearing plates of the Elastomeric Bearing Assembly & the plates of the Steel Extensions shall conform to the requirements of AASHTO M270M Grade 345.
- 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 ASTM A706M Grade 420. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- 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 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm 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 3 mm adjusting shims shall be provided for each bearing and placed as detailed.
- The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- Concrete Sealer shall be applied to the seat area of the abutments and Piers 6, 11 and 15.
- 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:
  - At least 72 hours shall have elapsed from the end of the previous pour.
  - The concrete strength shall have attained a minimum flexural strength of 4.5 MPA or a minimum compressive strength of 24 MPA.
- All construction joints shall be bonded.
- All dimensions are in millimeters (mm) except as noted.
- The Inorganic zinc rich primer/Acrylic/Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be reddish brown Munsell No. 2.5YR 3/4. See special provision for "Cleaning and Painting New Metal Structures". The SSPC QP-1 Painting Contractor Certification will be required for this contract. Field painting of new structural steel provided by the Fabrication Contract is included in this contract. All work for Cleaning and Painting Structural Steel provided by the Fabrication Contract will not be paid for separately but shall be considered as included in the contract unit price for Erecting Structural Steel. The cost associated with shop priming the new Structural Steel provided by the Fabrication Contract will be included in that contract.
- Prior to beginning any work within or above the railroad right-of-way, the Contractor shall comply with the requirements set forth by Articles 107.11 and 107.12 of the Standard Specifications.
- The Contractor is solely responsible for arranging access to the site with the necessary property owners. In addition, the contractor is advised of overhead utility lines that may potentially interfere with certain construction equipment. The Contractor shall use appropriate equipment that provides adequate clearance to the utility lines or make arrangements with the respective utility companies to accommodate his specific equipment. No additional compensation will be considered for gaining access to the site, or addressing utility accommodations or any associated delays.
- See the General Notes on Sheet 2 for notes regarding access to the railroad right-of-way.
- See Sheet SA 8 for salvaging of existing structural supports.
- Seal coat thickness design is based on the Estimated Water Surface Elevation (EWSE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.
- Protective coat shall be applied to the entire surface of the sidewalk barrier.
- If the Contractor's procedures for existing beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Structures.

25. The Contractor is advised that the existing PPC Deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal of the superstructure.

26. Slipforming of the concrete parapets is not allowed.

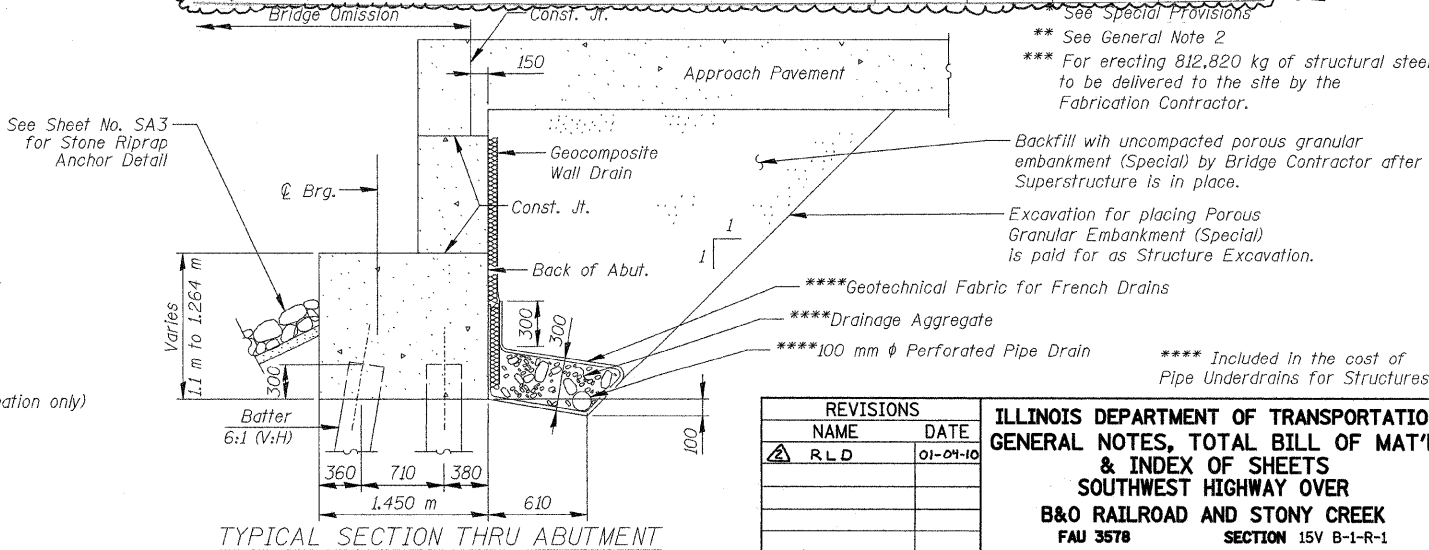
# INDEX OF SHEETS

SA1	General Plan and Elevation - Unit I
SA2	General Plan and Elevation - Unit II
SA3	General Plan and Elevation- Unit III & Unit IV
SA4	General Notes, Total Bill of Mat'l & Index of Sheets
SA5	Construction Staging & Removal Details - Unit I
SA6	Construction Staging & Removal Details - Unit II
SA7	Construction Staging & Removal Details - Unit III & IV
SA8	Temporary Superstructure Support Removal
SA8A	Temporary Superstructure Support Removal II
SA9	Top of Slab Elevations - Unit I - A
SA10	Top of Slab Elevations - Unit I - B
SA11	Top of Slab Elevations - Unit I - C
SA12	Top of Slab Elevations - Unit I - D
SA13	Top of Slab Elevations - Unit III - A
SA14	Top of Slab Elevations - Unit III - B
SA15	Top of Slab Elevations - Unit III - C
SA16	Top of Slab Elevations - Unit IV - A
SA17	Top of Slab Elevations - Unit IV - B
SA18	Top of Slab Elevations - Unit IV - C
SA18A	Top of Slab Elevations - APPR. PAV'T
SA19	Superstructure - Unit I
SA20	Superstructure Details - Unit I - A
SA21	Superstructure Details - Unit I - B
SA22	Superstructure - Unit II
SA23	Superstructure Details - Unit II
SA23A	Superstructure Details - Unit II - A
SA24	Superstructure - Unit III
SA25	Superstructure Details - Unit III - A
SA26	Superstructure Details - Unit III - B
SA27	Superstructure - Unit IV
SA28	Superstructure Details - Unit IV - A
SA29	Superstructure Details - Unit IV - B
SA30	Modular Expansion Joint
SA30A	Modular Expansion Joint
SA30B	Modular Expansion Joint
SA30C	Expansion Joint Details
SA31	Drainage Scupper Details
SA32	Bicycle Railing Details I
SA32A	Bicycle Railing Details II
SA33	Framing Plan - Unit I
SA34	Framing Plan - Unit III
SA35	Framing Plan - Unit IV
SA35A	End Diaphragms at Modular Jnts.
SA36	Beam Details - Unit I
SA37	Beam Details - Unit III
SA38	Beam Details - Unit IV
SA39	Lighting Support Bracket Details
SA40	Bearing Details - Unit I South Abutment & Pier 3
SA41	Bearing Details - Unit I Piers 1, 2, 4, & 5
SA42	Bearing Details - Piers 6 & 11
SA43	Steel Extension Details - Unit II
SA44	Bearing Details - Unit III Piers 12, 13, 14 & 15
SA45	Bearing Details - Unit IV Piers 15, 16, 17 and N. Abut
SA46	Anchor Bolt Details
SA47	South Abutment
SA48	South Abutment Details
SA49	North Abutment
SA50	North Abutment Details
SA51	Pier 1
SA52	Pier 2
SA53	Pier 3
SA54	Pier 4
SA55	Pier 5
SA56	Piers 6 & 11 - Removal
SA57	Pier 6
SA58	Pier 12
SA59	Pier 13
SA60	Pier 14
SA61	Pier 15
SA62	Pier 16
SA63	Pier 17
SA64	Temporary Concrete Barrier
SA65A	Pile Detail
SA66	SA78 - Soil Boring Logs
SA79	SA110 - Interim Bridge Plans (For Information only)

SHEET SA 4 of SA110

# TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
* Porous Granular Embankment, Special	Cu m		171	171
Stone Riprap, Class A4	Sq m		623	623
Filter Fabric	Sq m		623	623
Removal of Existing Structures	Each		1	1
Concrete Removal	Cu m	85.8	12.5	98.3
Structure Excavation	Cu m		1,491	1,491
Cofferdam Excavation	Cu m		560	560
Cofferdam (Location - 1)	Each		1	1
Cofferdam (Location - 2)	Each		1	1
Concrete Structures	Cu m		1,378.7	1,378.7
Concrete Superstructure	Cu m	1,798.2		1,798.2
Bridge Deck Grooving	Sq m	4,971		4,971
Seal Coat Concrete	Cu m		155.5	155.5
Protective Coat	Sq m	7,366	16	7,382
** Furnishing and Erecting Structural Steel	kg	7,860		7,860
*** Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	26,160		26,160
Reinforcement Bars, Epoxy Coated	kg	255,760	91,520	347,280
Elastomeric Bearing Assembly, Type I	Each	72		72
Elastomeric Bearing Assembly, Type II	Each	46		46
Furnishing Steel Piles HP310X79	m		3,599.2	3,599.2
Driving Piles	m		3,599.2	3,599.2
Test Pile Steel HP310X79	Each		7	7
Pile Shoes	Each		276	276
Name Plates	Each	1		1
Concrete Sealer	Sq m		99	99
Geocomposite Wall Drain	Sq m		109	109
* Pipe Underdrains for Structures 100mm	m		64	64
* Temporary Soil Retention System	Sq m		61.6	61.6
Bicycle Railing	m	417.6		417.6
Protective Shield	Sq m	371.4		371.4
Drainage Scuppers, DS-11	Each	34		34
Bar Splicers	Each	3,567	418	3,985
* Jacking Existing Superstructure	L Sum			1
* Tie-Rod Assemblies	Each		24	24
Anchor Bolts, M24	Each		40	40
* Anchor Bolts, M30	Each		136	136
Anchor Bolts, M36	Each		196	196
Preformed Joint Strip Seal	m	64.3		64.3
* Modular Expansion Joint 160mm	m	36.6		36.6
* Cleaning Bridge Scuppers and Downspouts	Each	8.0		8.0
* Mechanical Splicers	Each	1,094		1,094
* Conduit Attached To Structure, 50 mm Dia, Rigid Galvanized Steel, PVC Coated	m	424		424
Parapet Railing	m	417.6		417.6



REVISIONS	
NAME	DATE
RLD	01-09-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
GENERAL NOTES, TOTAL BILL OF MAT'L  
& INDEX OF SHEETS  
SOUTHWEST HIGHWAY OVER  
B&O RAILROAD AND STONY CREEK  
FAU 3578 SECTION 15V B-1-R-1  
STRUCTURE NUMBER 016-2771  
COOK COUNTY STATION 4+716.497  
SCALE: NONE DRAWN BY: E. Mroozek  
DATE: 6/17/09 CHECKED BY: G. Hattestad

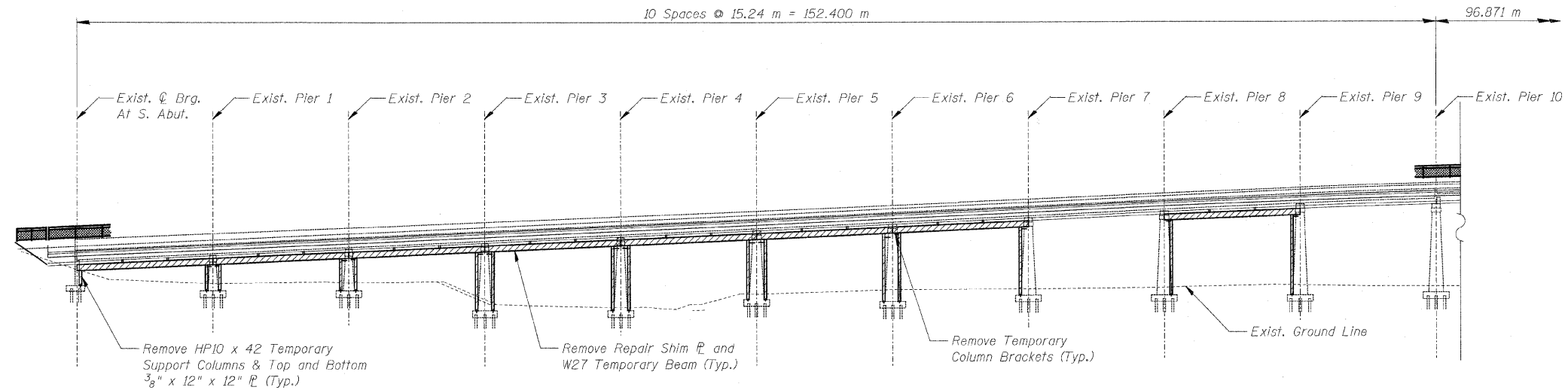
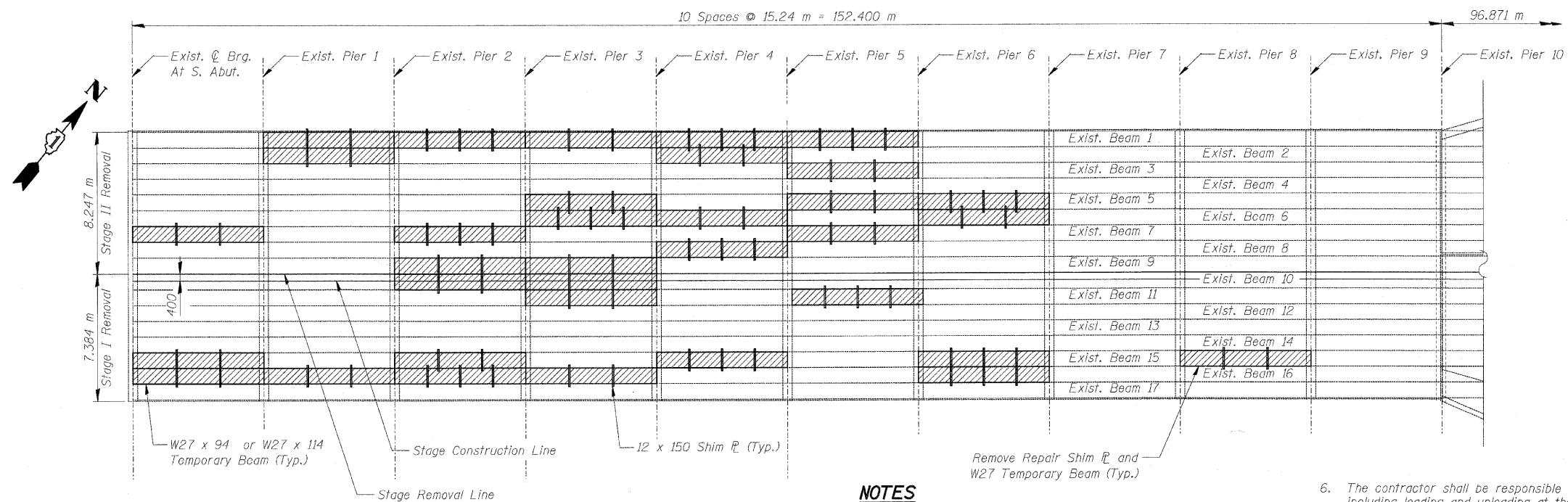
**PATRICK**  
ENGINEERING INC.  
LISLE, ILLINOIS

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SHEET SA 8 of SA110

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3578	15V B-1-R-1	COOK	243	95
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 62388				

**PARTIAL ELEVATION****PARTIAL PLAN****LEGEND**

	Temporary Superstructure Support Removal
	Existing Structure
	Temporary Support System

**NOTES**

- Refer to existing plans if additional details are required. The Existing Bridge Plans and Temporary Support Plans are available from IDOT and will be made available to the Contractor upon written request.
- Payment for removal of the Temporary Superstructure Support System will be included with Removal of Existing Structures.
- Work this sheet with sheet Nos. SA5 and SA7.
- Shim Plates shall be cut along Stage Removal Line in order to maintain support for the existing prestressed box beams that carry traffic during Stage I Construction.
- The contractor shall salvage all existing steel support members including I-beams, columns, and shims and deliver them to a location specified by the Engineer. The Engineer shall be given at least 48-hour notice before delivery.

- The contractor shall be responsible for all handling of material including loading and unloading at the designated location. The contractor shall provide suitable blocking to keep all material off the ground and in between consecutive layers. In no event shall the contractor stack the material more than four layers in height. All cost associated with this work including but not limited to removing, handling, delivery (up to 35-miles), and blocking shall not be paid for separately but shall be included in the cost for Removal of Existing Structures.

REVISIONS	
NAME	DATE
RLD	01-04-10

**ILLINOIS DEPARTMENT OF TRANSPORTATION**  
**TEMPORARY SUPERSTRUCTURE**  
**SUPPORT REMOVAL I**  
**SOUTHWEST HIGHWAY OVER**  
**B&O RAILROAD AND STONY CREEK**  
**FAU 3578 SECTION 15V B-1-R-1**  
**STRUCTURE NUMBER 016-2771**  
**COOK COUNTY STATION 44716.497**  
**SCALE: NONE DRAWN BY: M. Tryon**  
**DATE: 6/17/09 CHECKED BY: G. Hatlestad**

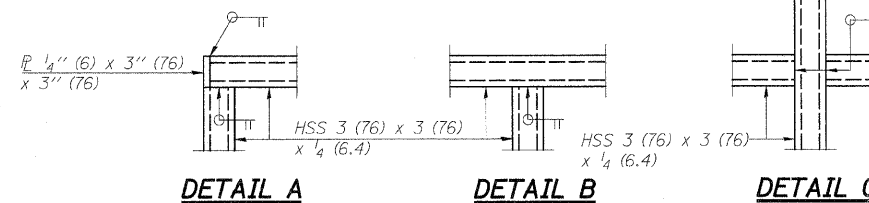
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**ENGINEERING INC.**  
**LISLE, ILLINOIS**

SHEET SA 32 of SA110

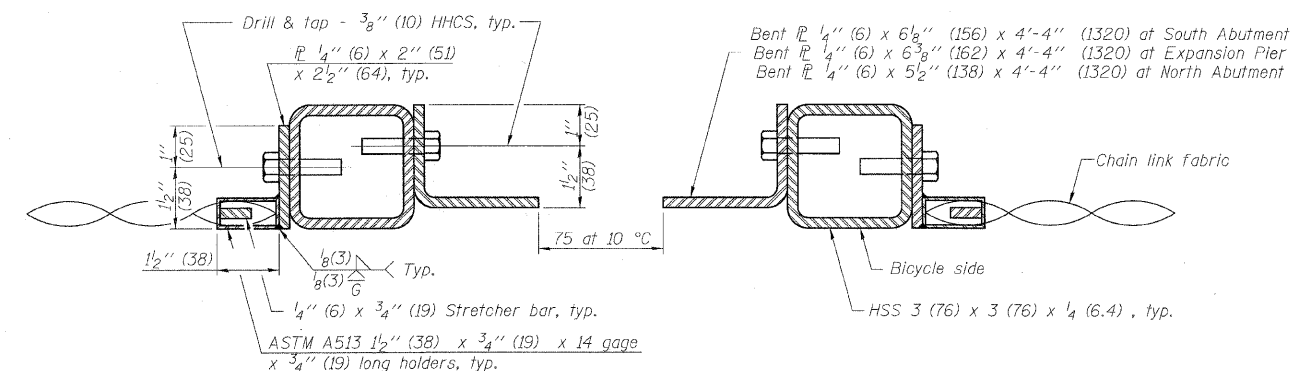
CONTRACT NO. 62388



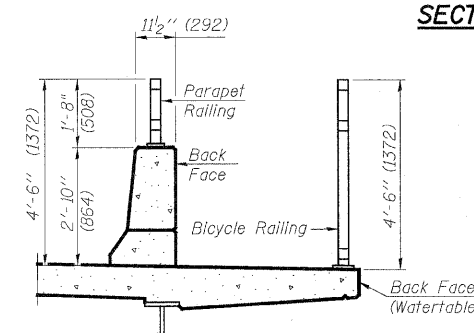
**DETAIL A**

**DETAIL B**

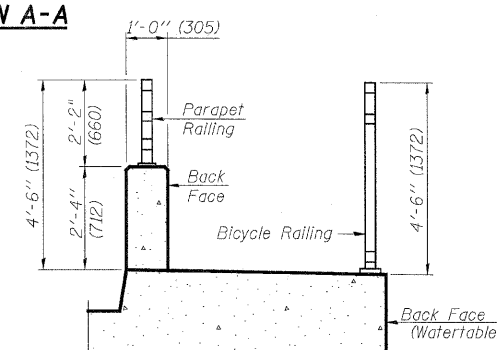
DETAIL C



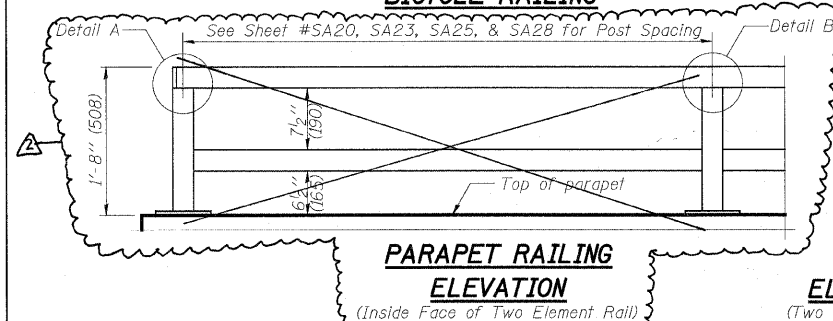
**SECTION A-A**



SECTION THRU DECK

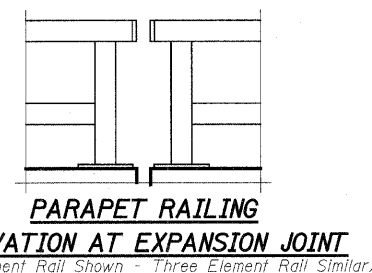


SECTION THRU SIDEWALK



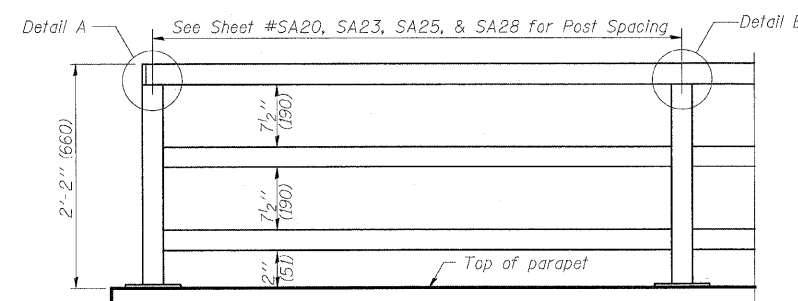
PARAPET RAILING  
ELEVATION

(Inside Face of Two Element Rail)



### PARAPET RAILING

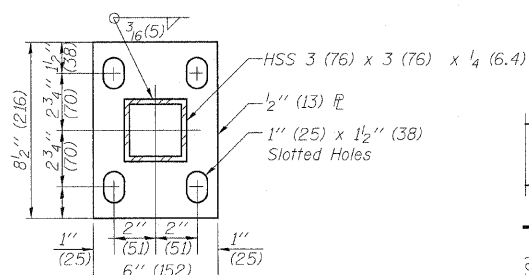
**ELEVATION AT EXPANSION JOINT**  
(Two Element Rail Shown - Three Element Rail Similar.)



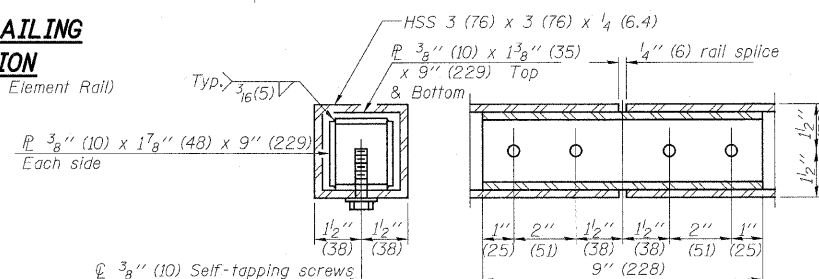
### PARAPET RAILING

ELEVATION

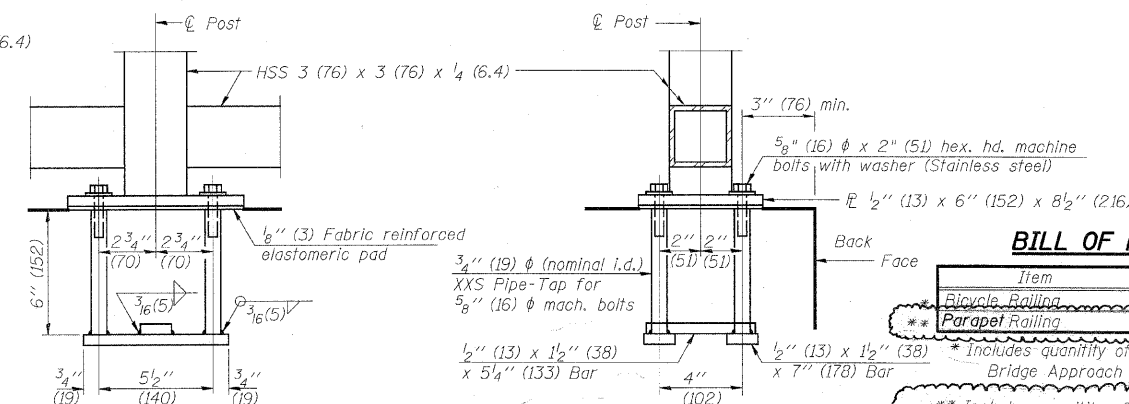
ELEVATION  
(Inside Face of Three Element Rail)



*BASE  $\mathbb{P}$*



### RAIL SPLICE



### ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 5/8" (16)  $\phi$  anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

<u><b>BILL OF MATERIAL</b></u>			
	<i>Item</i>	<i>Unit</i>	<i>Quantity</i>
	Bicycle Railing	m	417.6
**	Parapet Railing	m	417.6

(38) \* Includes quantity of Bicycle Railing on Bridge Approach Pavements  
 \*\* Includes quantity of Parapet Railing on Bridge Approach Pavements

### BILL OF MATERIAL

### BICYCLE RAILING

REVISIONS	
NAME	DATE
A RLD	01-04-16

ILLINOIS DEPARTMENT OF TRANSPORTATION

BICYCLE RAILING DETAILS I

SOUTHWEST HIGHWAY OVER

**B&O RAILROAD AND STONY CREEK**

FAU 3578 SECTION 15V B-1-R-1  
STRUCTURE NUMBER 016-2771

COOK COUNTY STATION 4+716.497

SCALE: NONE  
DATE: 6/17/09

DRAWN BY: E. Mroozek  
CHECKED BY: A. Yargolodu

All dimensions are in millimeters (mm) except as noted.

R-29

10-1-08 (10'-0" (3.048 m) Maximum Post Spacing)

**PATRICK**  
ENGINEERING INC.  
LISLE, ILLINOIS

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