

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
592	121-1R, 121HB	ST. CLAIR	239	138
F.H.W.A. REGION 7		ILLINOIS FED. AID PROJECT		

SHEET NO. 2  
SHEETS: 23

**GENERAL NOTES**

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60 (IL MODIFIED). SEE SPECIAL PROVISIONS

THE CONTRACTOR SHALL DRIVE ONE METAL SHELL TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AND AT EACH PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES. THE METAL SHELL PILES SHALL BE ACCORDING TO ASTM A 252 GRADE 3. THE TEST PILES SHALL BE DRIVEN TO 100 PERCENT OF THE NOMINAL REQUIRED BEARING INDICATED IN THE PILE DATA INFORMATION.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

IN ADDITION TO ALL OTHER REQUIREMENTS OF SECTION 512 OF THE STANDARD SPECIFICATIONS, SPLICES FOR METAL SHELL PILES SHALL DEVELOP THE FULL CAPACITY OF THE STEEL'S CROSS SECTIONAL AREA OF THE PILE FOR TENSION, SHEAR AND BENDING FORCES. ONE APPROVED METHOD OF ACHIEVING THIS REQUIREMENT IS FULL PENETRATION BUTT WELDING OF THE ENTIRE CROSS SECTION. OTHER TYPES OF SPLICES MEETING THE FULL CAPACITY REQUIREMENT MAY BE ALLOWED SUBJECT TO THE APPROVAL OF THE ENGINEER. ANY PROPOSAL BY THE CONTRACTOR TO USE AN ALTERNATE SPLICE METHOD MUST INCLUDE ADEQUATE DOCUMENTATION DEMONSTRATING THAT THE FULL TENSION, SHEAR AND BENDING CAPACITIES WILL BE MET. APPROPRIATE WELDER QUALIFICATIONS WILL BE REQUIRED FOR THE POSITIONS AND PROCESSES USED IN SPLICING ALL PILES. NONDESTRUCTIVE TESTING OF COMPLETED WELDS WILL BE LIMITED TO VISUAL INSPECTION.

FASTENERS SHALL BE AASHTO M164 TYPE 1, MECHANICALLY GALVANIZED BOLTS. BOLTS 7/8 IN. Ø, HOLES 5/8 IN. Ø, UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 223,954 POUNDS AASHTO M270 GRADE 50  
33,488 POUNDS AASHTO M270 GRADE 36

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 SHALL BE GRAY, MUNSELL NO. 5B 7/1. SEE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING NEW METAL STRUCTURES."

NO FIELD WELDING IS PERMITTED EXCEPT AS SPECIFIED IN THE CONTRACT DOCUMENTS.

ALL CROSS FRAMES OR DIAPHRAGMS SHALL BE INSTALLED AS STEEL IS ERECTED AND SECURED WITH ERECTION PINS AND BOLTS EXCEPT AS OTHERWISE NOTED. INDIVIDUAL CROSS FRAMES OR DIAPHRAGMS AT SUPPORTS MAY BE TEMPORARILY DISCONNECTED TO INSTALL BEARING ANCHOR RODS.

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.

BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES AND SHIMS.

CONCRETE PILES AT THE ABUTMENTS SHALL BE DRIVEN IN 18" DIAMETER HOLES PRECORED THROUGH THE EMBANKMENT ACCORDING TO ARTICLE 512.09(c) OF THE STANDARD SPECIFICATIONS. AT THE WEST ABUTMENT, THE PRECORE SHALL EXTEND TO ELEVATION 396.50 AS REQUESTED BY CENTERPOINT ENERGY. CENTERPOINT ENERGY SHALL BE NOTIFIED PRIOR TO DRIVING PILE AT THE WEST ABUTMENT. AT THE EAST ABUTMENT, THE PRECORE SHALL EXTEND TO ELEVATION 406.50. THE COST FOR PRECORING AND BACKFILLING THE PILES WILL BE INCLUDED IN THE COST FOR DRIVING PILES.

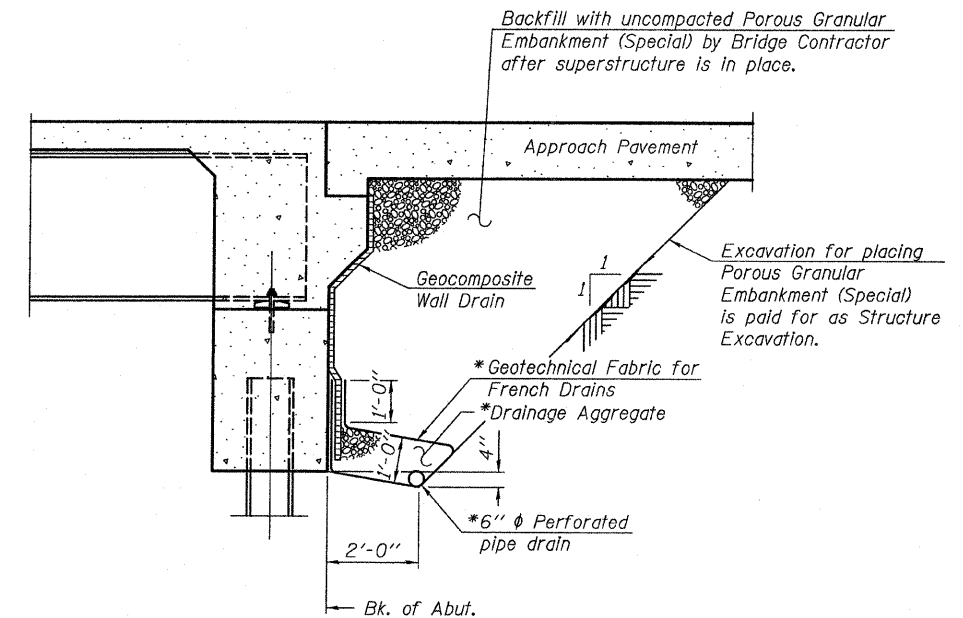
CONCRETE SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6"x6"-W4.0xW4.0, WEIGHING 58 LBS. PER 100 SQ. FT.

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

SLIP FORMING OF THE CONCRETE PARAPET IS NOT ALLOWED.

**TOTAL BILL OF MATERIALS**

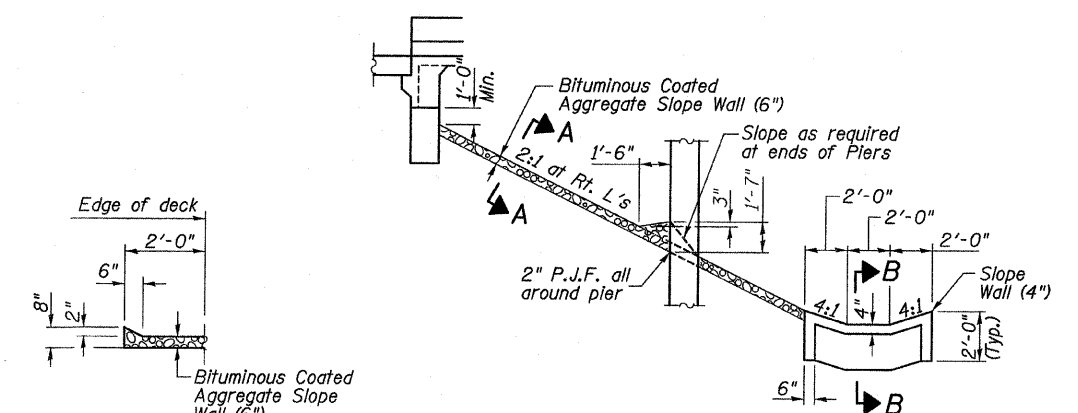
ITEM	UNIT	SUPER	SUBSTR.	TOTAL
POROUS GRANULAR EMBANKMENT (SPECIAL)	CU YD	---	216	216
STRUCTURE EXCAVATION	CU YD	---	502	502
CONCRETE STRUCTURES	CU YD	---	506.0	506.0
CONCRETE SUPERSTRUCTURE	CU YD	479.0	---	479.0
BRIDGE DECK GROOVING	SQ YD	1094	---	1094
PROTECTIVE COAT	SQ YD	1639	---	1639
FURNISHING & ERECTING STRUCTURAL STEEL	L SUM	1	---	1
STUD SHEAR CONNECTORS	EACH	6204	---	6204
REINFORCEMENT BARS, EPOXY COATED	POUND	110630	31850	142480
SLOPE WALL 4 INCH	SQ YD	---	119	119
BITUMINOUS COATED AGGREGATE SLOPE WALL 6"	SQ YD	---	1014	1014
FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	---	5426	5426
DRIVING PILES	FOOT	---	5426	5426
TEST PILE METAL SHELLS	EACH	---	4	4
NAME PLATES	EACH	1	---	1
BAR SPLICERS	EACH	160	---	160
BRIDGE FENCE RAILING	FOOT	324	---	324
PIPE UNDERDRAIN FOR STRUCTURES, 6"	FOOT	---	140	140
GEOCOMPOSITE WALL DRAIN	SQ YD	---	166	166



**SECTION THRU INTEGRAL ABUTMENT**  
(Horiz. dim. @ Rt. L's)

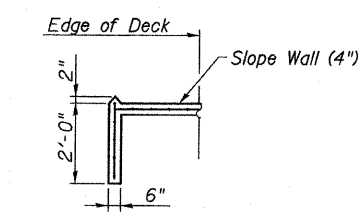
\* Included in the cost of Pipe Underdrains for Structures, 6".

Note:  
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



**SECTION A-A**

**SECTION THRU SLOPEWALL**  
(Dimensions at Rt. L's)



**SECTION B-B**

**GENERAL NOTES, DETAILS & TOTAL BILL OF MATERIALS**  
F.A.P. 592 (IL Rte. 157) OVER  
UNION PACIFIC RAILROAD  
SECTION 121-1R, 121HB  
ST. CLAIR COUNTY  
STATION 5029+64.85  
STRUCTURE NO. 082-0303

BLOCK NAME  
 NORTH PARALLEL  
 SOUTH PARALLEL  
 PLOT DATE = 2/6/2008  
 FILE NAME = H:\V\21015\Microstat\Struct\0303\planmkt.dgn  
 PLOT SCALE = 1/8"=1'-0"  
 USER NAME = USER8