

064-0029

BRIDGE GENERAL NOTES

CLASS X CONCRETE SHALL BE USED THROUGHOUT EXCEPT AS OTHERWISE NOTED. CONCRETE FOR FLOOR SLABS SHALL BE PLACED IN ONE CONTINUOUS OPERATION BETWEEN CONSTRUCTION JOINTS SHOWN AND SHALL BE FINISHED IN ACCORDANCE WITH ARTICLES 508.16 OF THE STANDARD SPECIFICATIONS. COARSE AGGREGATE TO BE USED IN PARAPET HANDRAILS AND WINGWALLS OF ABUTMENTS MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIGNITE AND SOFT SANDSTONE. PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR. ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN. ALL STRUCTURAL STEEL SHALL CONFORM TO A.S.T.M. A36 EXCEPT AS OTHERWISE NOTED. THE SHOP CONNECTIONS FOR STRUCTURAL STEEL SHALL BE WELDED. WELDING SHALL BE IN ACCORDANCE WITH CURRENT SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES OF THE AMERICAN WELDING SOCIETY AND AS NOTED ON THE PLANS AND IN THE SPECIAL PROVISIONS. ALL FIELD CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS EXCEPT AS OTHERWISE NOTED. ALL BOLTS SHALL BE 3/4" DIAMETER IN 13/16" HOLES EXCEPT IN GIRDER FLANGE SPLICES WHICH SHALL BE 7/8" DIAMETER IN 15/16" HOLES. HOLES FOR SPLICES IN GIRDERS AND SPLICE PLATES SHALL BE PUNCHED 11/16" DIAMETER AND REAMED TO CORRECT SIZE WITH GIRDERS ASSEMBLED FULL LENGTH IN THE SHOP IN PROPER POSITION. ASSEMBLY OF GIRDERS SHALL BE WITH OR WITHOUT CROSSFRAMES. LEAVE ASSEMBLED FOR INSPECTION. ALL ROCKERS, BOLSTERS, PINTLES, BEARING PLATES, LEAD PLATES AND ANCHOR BOLTS SHALL BE FABRICATED AND SET IN ACCORDANCE WITH SECTION 507 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. ESTIMATED WEIGHT 13,490 POUNDS. ROADWAY EXPANSION ANGLES SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH SECTION 507 OF THE STANDARD SPECIFICATIONS AND ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. ESTIMATED WEIGHT 5,310 POUNDS. ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSS FRAMES OVER THE PIER AND ABUTMENTS. STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF PAINT EXCEPT AS OTHERWISE SPECIFIED. ALL PAINT SHALL BE FURNISHED AND APPLIED BY THE CONTRACTOR. SEE SECTION 509 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS. THE EXPOSED SURFACES OF THE EXPANSION ANGLES SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED. SHOP INSPECTION OF STRUCTURAL STEEL AND RADIOGRAPHIC INSPECTION OF WELDS SHALL BE BY ILLINOIS DIVISION OF HIGHWAYS BEFORE PAINTING. STUD SHEAR CONNECTORS ON THE BEAM FLANGES SHALL BE PLACED IN THE FIELD AFTER THE STEEL HAS BEEN ERECTED AND THE DECK FORMS ARE IN PLACE.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF 1/4 OF THE SPAN EACH WAY FROM THE PIER ON THE TOP FLANGES OF GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED BY THE DEPARTMENT OF PUBLIC WORKS AND BUILDINGS, AUGUST 1, 1988 SHALL APPLY. The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete. Class "A" Excavation For Structures includes excavation for slope wall.

STATION 350+00.04  
BUILT 196 BY  
STATE OF ILLINOIS  
F.A.I. RT. 24 SECT. 64-34B-1  
F.A. PROJ. 1-24-1(24)  
LOADING HS 20  
(SEE STATE OF ILLINOIS STD 213-1)

LETTERING FOR NAME PLATE

TOTAL	SUPER	SUB	UNIT	PAY ITEM
1,135	--	1,135	CU.YD.	CLASS A EXCAVATION FOR STRUCTURES
2,667	2,667	--	SQ.FT.	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)
1,329.4	697.2	632.2	CU.YD.	CLASS X CONCRETE
2,770	2,770	--	SQ.YD.	PROTECTIVE COAT
1	1	--	L. SUM	FURNISHING & ERECTING STRUCTURAL STEEL
235,490	167,820	67,670	LB.	REINFORCEMENT BARS
2	--	2	EACH	NAME PLATES
431	--	431	SQ.YD.	SLOPEWALL 4 INCH
184	184	--	LIN.FT.	PERFORMED JOINT SEALER
485	485	--	LIN.FT.	ALUMINUM RAILING
7,200	7,200	--	EACH	STUD SHEAR CONNECTORS

\* CALCULATED WEIGHT OF STRUCTURAL STEEL = 515,230 Lbs. F.A.I. 24 PROPOSED STRUCTURE

DESIGN DATA

HIGHWAY CLASSIFICATION	CHV	M.P.H.	DESIGNATION
F.A.I. RTE. 24	2230	70	B1 (1987)
U.S. RTE. 45	870	70	B2 (1987)

DESIGN LOAD  
L.L. = HS20-44  
FUTURE D.L. = 25 P.S.F.

DESIGN STRESSES

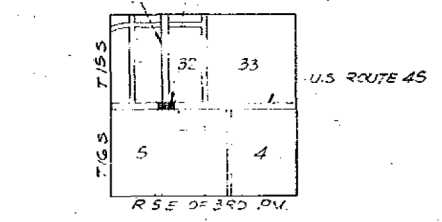
CONCRETE (CAST-IN-PLACE)

$f_c = 3,500$  P.S.I.  
 $f_c = 1,200$  P.S.I. (DECK)  
 $f_c = 1,400$  P.S.I. (SUBSTRUCTURE)  
 $f_c = 1,000$  P.S.I. (WITH EARTH PRESSURE)  
 $v = 75$  P.S.I. (FOOTINGS)  
 $n = 10$

PRECAST PRESTRESSED UNITS

$f_c = 5,000$  P.S.I.  
 $f_{ci} = 4,000$  P.S.I.  
 $f_s = 248,000$  P.S.I. (7/16" DIA. STRANDS)  
 $f_{ti} = 173,500$  P.S.I. (7/16" DIA. STRANDS)

REINFORCING STEEL  
 $f_s = 20,000$  P.S.I.  
 STRUCTURAL STEEL  
 $f_s = 20,000$  P.S.I. (A36)  
 ALLOWABLE SOIL PRESSURE  
 ABUTMENTS = 4,000 P.S.F.  
 PIERS = 4,200 P.S.F.  
 MAX. L.L. DEFLECTION  
 1/1250 (COMPOSITE)



LOCATION SKETCH

GENERAL PLAN & ELEVATION  
GRADE SEPARATION  
U.S. ROUTE 45  
OVER F.A.I. ROUTE 24  
F.A. PROJECT  
F.A.I. ROUTE 24 SECTION 64-34B-1  
MASSAC COUNTY  
STATION 342+00.04

FILE NAME =	USER NAME = Dahmer,ja	DESIGNED -	REVISED -
et:\pw\work\p\dahmer\ja\0384974\7849-sht-plen.dgn		DRAWN -	REVISED -
Default	PLOT SCALE = 4.1888 1/ in.	CHECKED -	REVISED -
	PLOT DATE = 3/20/2014	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

064-0029  
US 45 OVER I-24  
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR. D9	BRIDGE PAINT 2014-2	*	22	18
CONTRACT NO. 78419				
ILLINOIS FED. AID PROJECT				