Bench Mark: Chisled "□" on crash wall at the east end of Pier 1 of SN 010-0100. Elev. 772.23.

Existing Structure: S.N. 010-0100 built 1965 as F.A.U. 7158 (Mattis Ave.), Section 10-34HB-3 at Station 24+90.58. The existing structure consists of a four span steel wide flange beam bridge supported by open stub abutments on concrete piles and multi-column reinforced concrete piers. 332'-4" back-to-back abutments. 33'-8" out-to-out deck. Structure to be removed and replaced using stage construction.

No Salvage

HIGHWAY CLASSIFICATION

F.A.U. 7158 - Mattis Avenue
Functional Class: Minor Arterial
ADT: 5,800 (2013); 6,700 (2040)
ADTT: 476 (2013); 550 (2040)
DHV: 701 (2040)
Design Speed: 45 m.p.h.
Posted Speed: 45 m.p.h.
2 -Way Traffic
Directional Distribution: 50:50

F.A.I. 57
Functional Class: Interstate
ADT: 22,200 (2013); 33,400 (2040)
ADTT: 5,775 (2013); 9,420 (2040)
DHV: 2,250 (2040)
Design Speed: 75 m.p.h.
Posted Speed: 70 m.p.h.
2-Way Traffic
Directional Distribution: 50:50

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
f'c = 4,000 psi (superstructure concrete)
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

LOADING HL-93

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

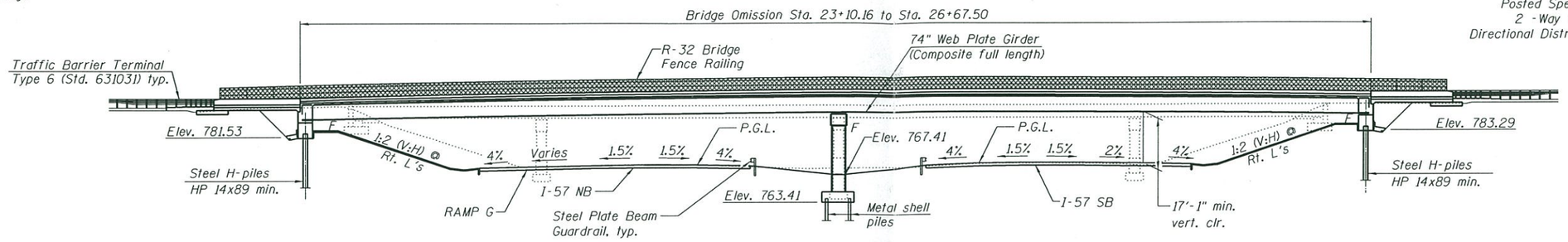
SEISMIC DATA

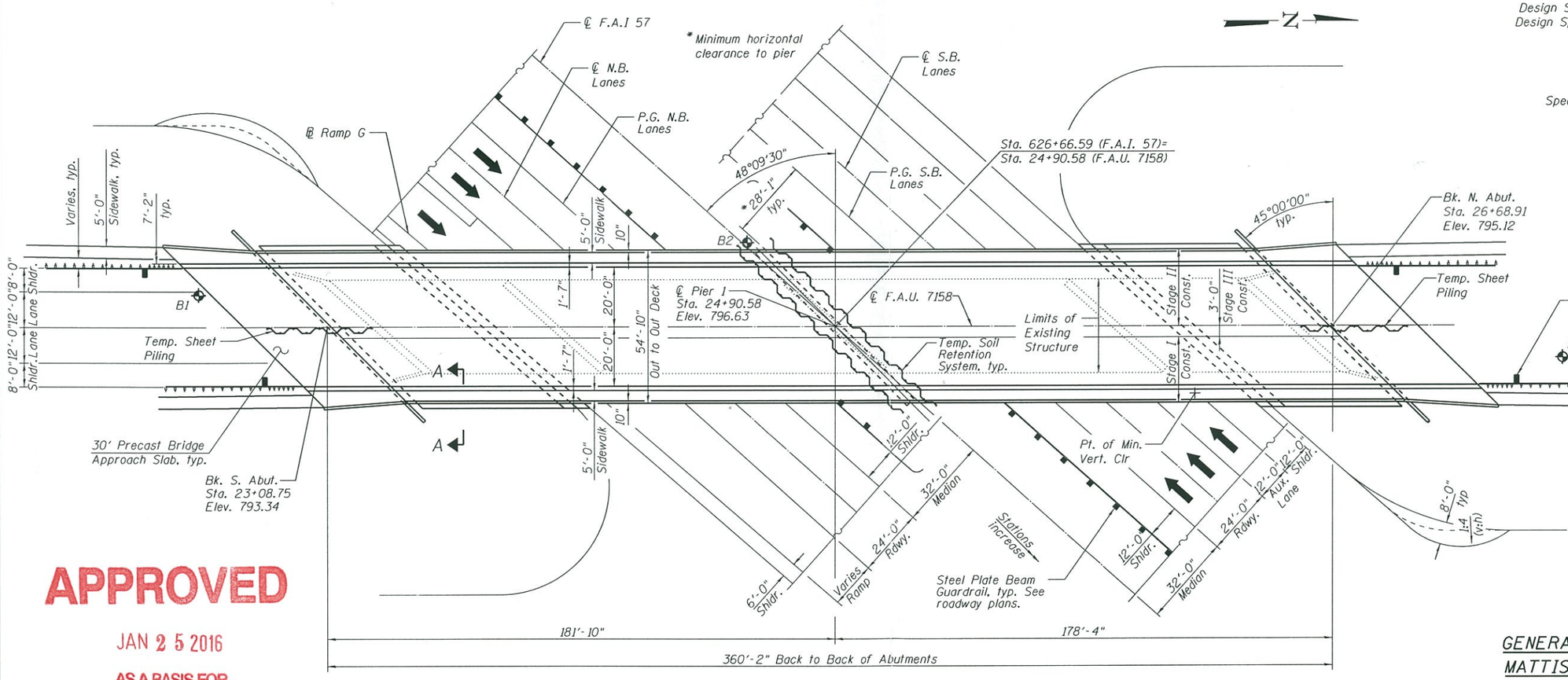
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.135 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.234 g
Soil Site Class = D

DESIGN SPECIFICATIONS

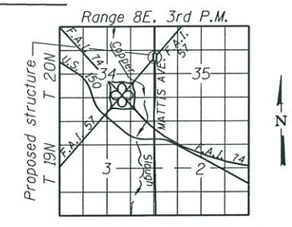
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 Interims.

ELEVATION





PLAN



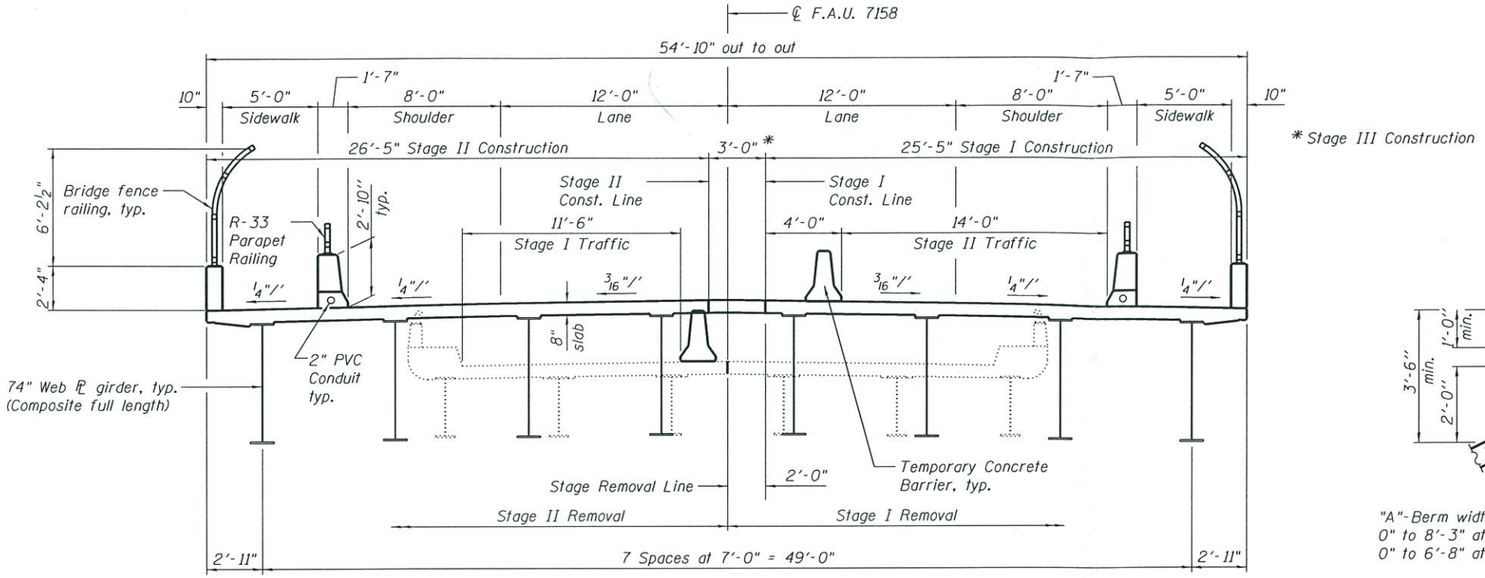
LOCATION SKETCH

APPROVED
JAN 25 2016
AS A BASIS FOR PREPARATION OF DETAILED PLANS

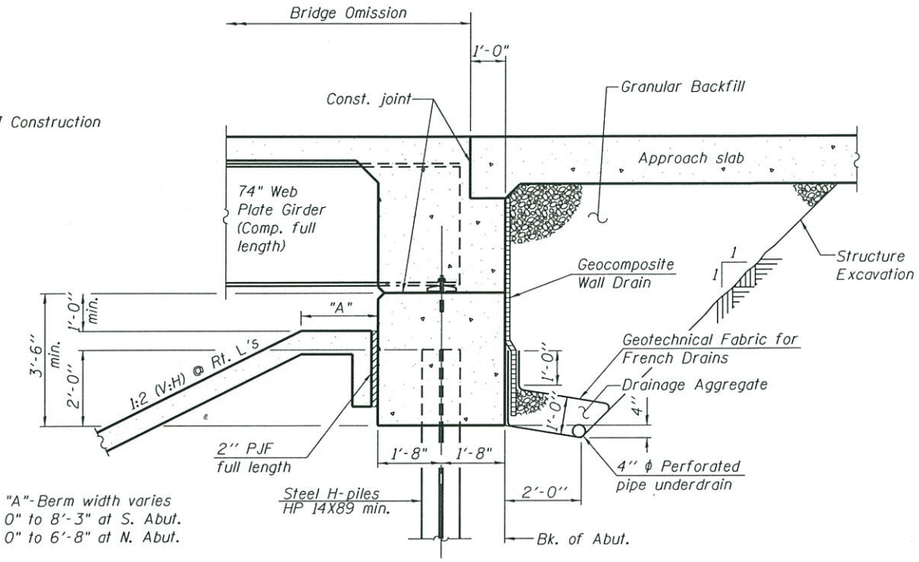
GENERAL PLAN & ELEVATION
MATTIS AVE. OVER F.A.I. 57
F.A.U. 7158-SECTION (10-34)BR, BR-1 & (10-5-1)BR-1
CHAMPAIGN COUNTY
STATION 24+90.58
STRUCTURE NO. 010-1100

*** (10-34)BR, BR-1 & (10-5-1)BR-1

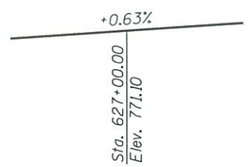
FILE NAME = 0101100-70B38-TSL-001.dgn	USER NAME =	DESIGNED - BWP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 413 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE - 618.997.8196		CHECKED - RSB	REVISED -			7158	***	CHAMPAIGN		
	PLOT SCALE =	DRAWN - BJV	REVISED -					CONTRACT NO. 70B38		
	PLOT DATE = 11/20/2015	CHECKED - RSB	REVISED -		SHEET NO. 1 OF 2 SHEETS			ILLINOIS FED. AID PROJECT		



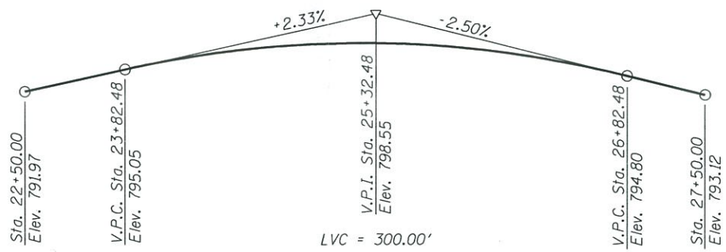
CROSS SECTION
(Looking North)



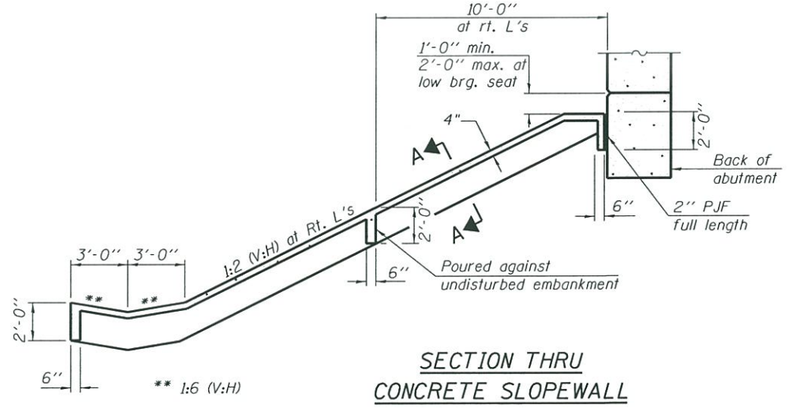
SECTION THRU INTEGRAL ABUTMENT
(Horizontal Dimensions @ Rt. L's)



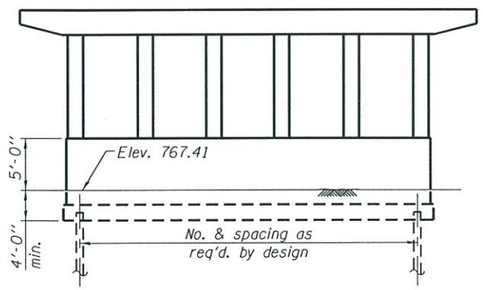
PROFILE GRADE F.A.I. 57
(along N.B. & S.B. PGL)



PROFILE GRADE F.A.U. 7158 (MATTIS AVE.)
(along ℄ roadway)

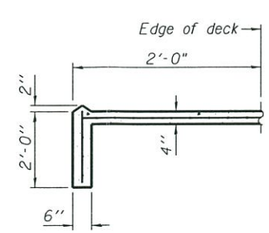


SECTION THRU CONCRETE SLOPEWALL



PIER SKETCH

APPROVED
JAN 25 2016
AS A BASIS FOR PREPARATION OF DETAILED PLANS



SECTION A-A

STAGING & DETAILS
MATTIS AVE. OVER F.A.I. 57
F.A.U. 7158-SECTION (10-34)BR, BR-1 & (10-5-1)BR-1
CHAMPAIGN COUNTY
STATION 24+90.58
STRUCTURE NO. 010-1100

***(10-34)BR,BR-1 & (10-5-1)BR-1

FILE NAME = 0101100-70B38-TSL-002.dgn	USER NAME =	DESIGNED - BWP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
BFW BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC.		CHECKED - RSB	REVISED -			7158	***	CHAMPAIGN	
	PLOT SCALE =	DRAWN - BJV	REVISED -					CONTRACT NO. 70B38	
	PLOT DATE = 11/20/2015	CHECKED - RSB	REVISED -		SHEET NO. 2 OF 2 SHEETS			ILLINOIS FED. AID PROJECT	