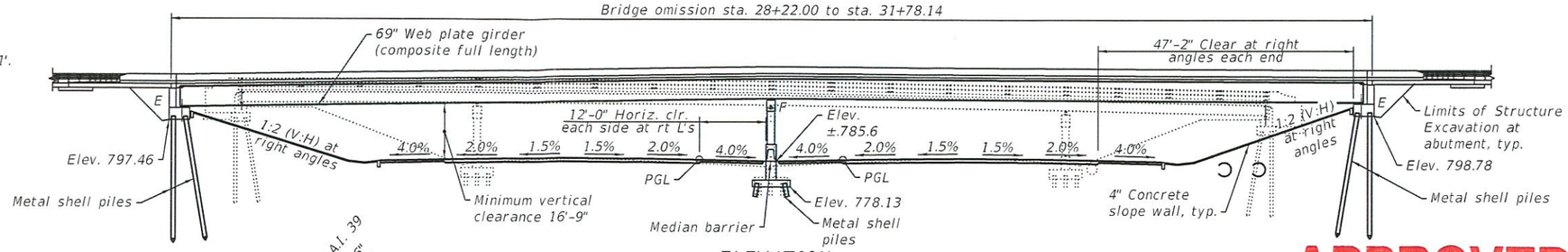
BENCHMARK: #401 – Cut square on southerly of center crash wall of bridge under Perryville Rd. – Elev. 788.53

EXISTING STRUCTURE:
SN101-0098 was originally constructed in 1963 under FAP 194, Section 4-HB-3. The structure is a 4 span, concrete deck on continuous steel beam superstructure with concrete piers and pile bent abutments. The piers are supported by timber piles and the abutments are supported by concrete piles. The skew is 50°-01'. The structure was repainted in 1980. The west fascia beam between piers 2 and 3 was replaced in 1999 and again in 2007. The structure length is 304'-6" bk. to bk. abutments and the deck width is 33'-8" out-to-out.

Traffic shall be maintained by detour. The bridge will be closed to traffic during construction.

No salvage.

Up to ¼" may be ground off the bridge deck, the approach slabs, and the pavement connectors.



ELEVATION

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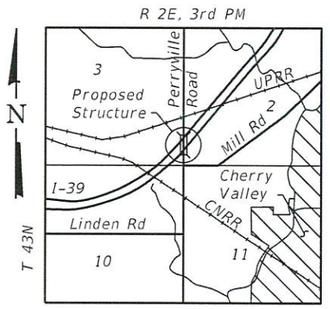
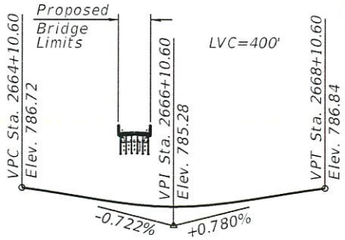
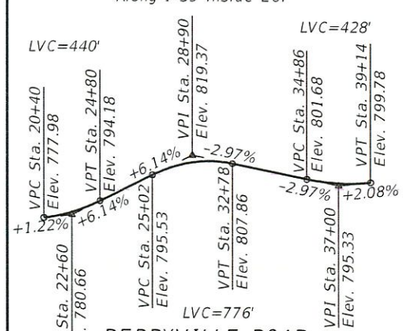
NOV 27 2018
AS A BASIS FOR PREPARATION OF DETAILED PLANS



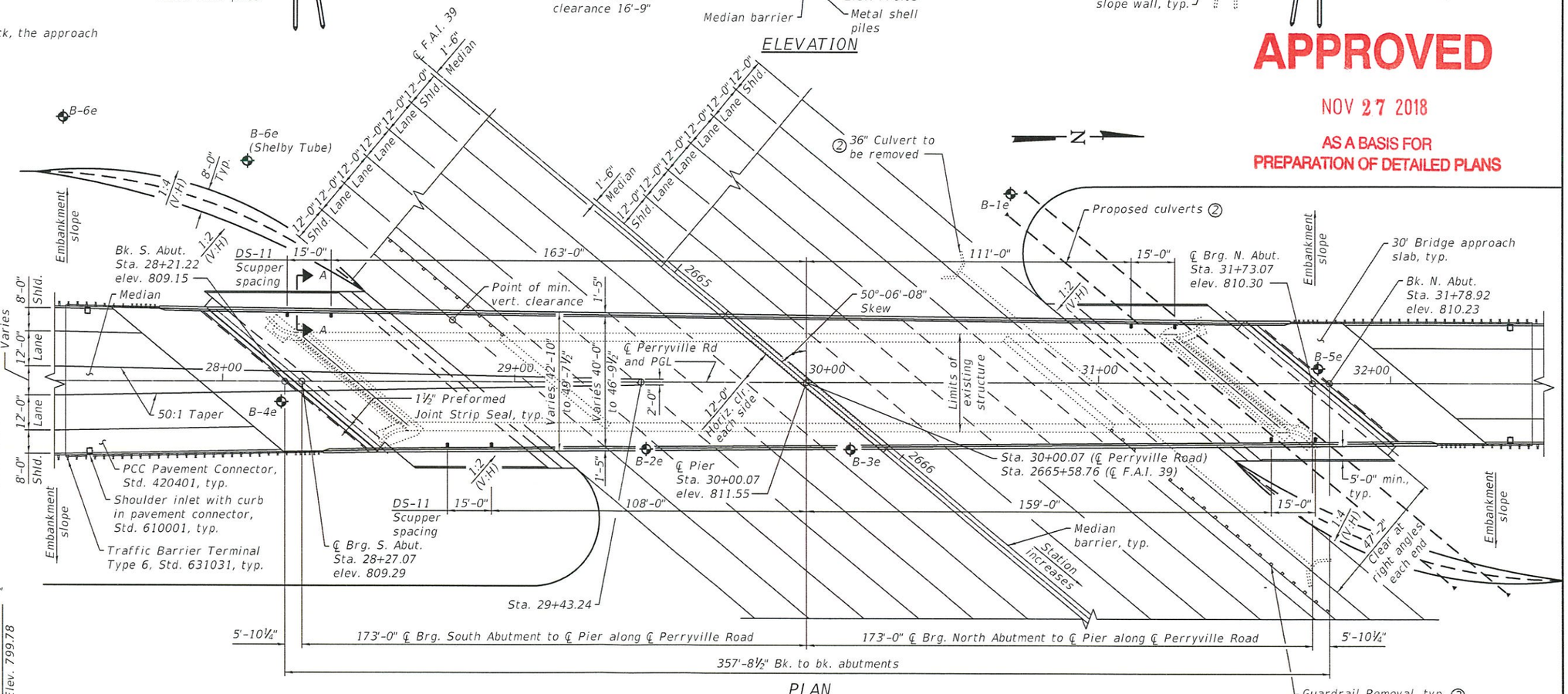
LOCATION SKETCH



I-39 PROFILE GRADE
Along I-39 inside EOP



PERRYVILLE ROAD PROFILE GRADE
Along ℄ Perryville Road
(PG shows the final elevations after grinding)



PLAN

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.056
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.101
Soil Site Class = C

LOADING HL-93

Allow 50 psf for future wearing surface

HIGHWAY CLASSIFICATION

F.A.U. 5148 (Perryville Rd)
Functional Class: Minor Arterial
ADT: 7330 (2018)/8110 (2040)
DHV: 810 (2040)
ADTT: 541 (2018)/599 (2040)
Design Speed: 45 mph
Posted Speed: 45 mph
Directional Distribution: 50:50

F.A.I. 39 (I-39)
Functional Class: Interstate
ADT: 56083 (2018)/106610 (2040)
DHV: 10600 (2040)
ADTT: 16478 (2018)/32000 (2040)
Design Speed: 70 mph
Posted Speed: 65 mph
Directional Distribution: 50:50

1 All structural steel shall be metallized or galvanized.
2 See Roadway Plans

DESIGN SPECIFICATIONS

2017 AASHTO LRFD
Bridge Design Specifications 8th Edition

DESIGN STRESSES FIELD UNITS

f'c = 3,500 psi (substructure)
f'c = 4,000 psi (superstructure)
fy = 50,000 psi (AASHTO M270 Grade 50) 1
fy = 60,000 psi (reinforcement)

GENERAL PLAN AND ELEVATION
PERRYVILLE ROAD OVER I-39 & US 20
F.A.U. RTE 5148 – SECTION (201-3)K & (4-1, 5)R
WINNEBAGO COUNTY
STATION 30+00.07
STRUCTURE NO. 101-0206

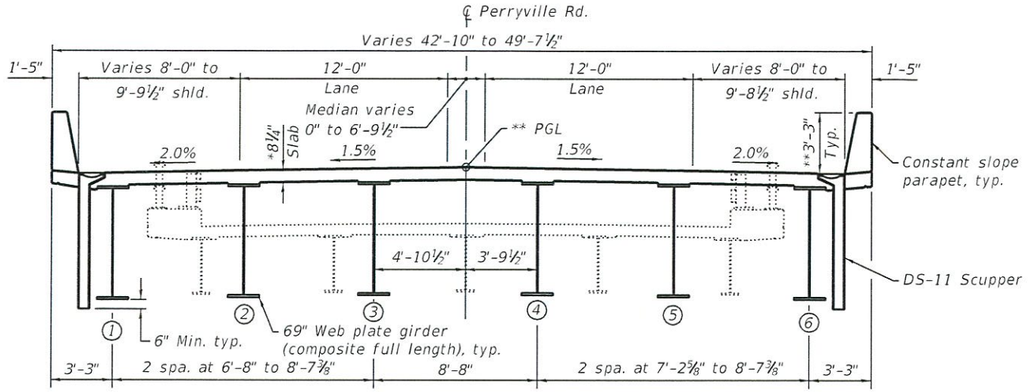
ESCA CONSULTANTS, INC.

USER NAME = kja		DESIGNED - KJA	07/18	REVISED - - -	
ESCA PROJECT NO. 1148.15		CHECKED - ELH	07/18	REVISED - - -	
PLOT SCALE = 8:2 '/ in.		DRAWN - KJA	07/18	REVISED - - -	
PLOT DATE = 11/28/2018	10:14:39 AM	CHECKED - ELH	11/18	REVISED - - -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5148	(201-3)K & (4-1, 5)R	WINNEBAGO	-	-
		CONTRACT NO. 64C24		
	ILLINOIS FED. AID PROJECT			

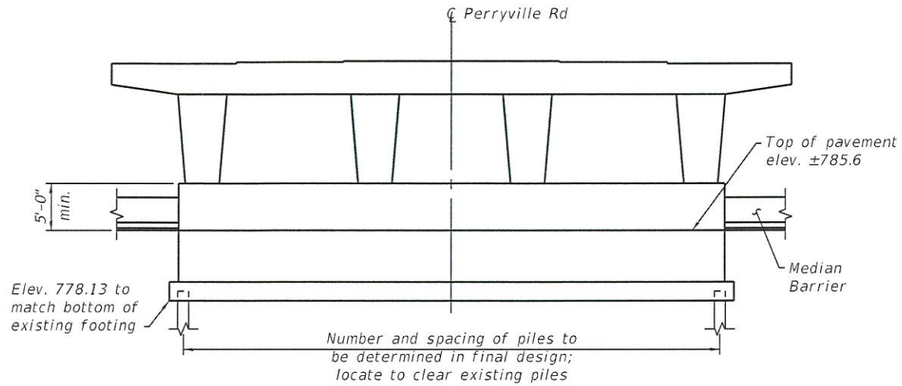


PROPOSED CROSS SECTION

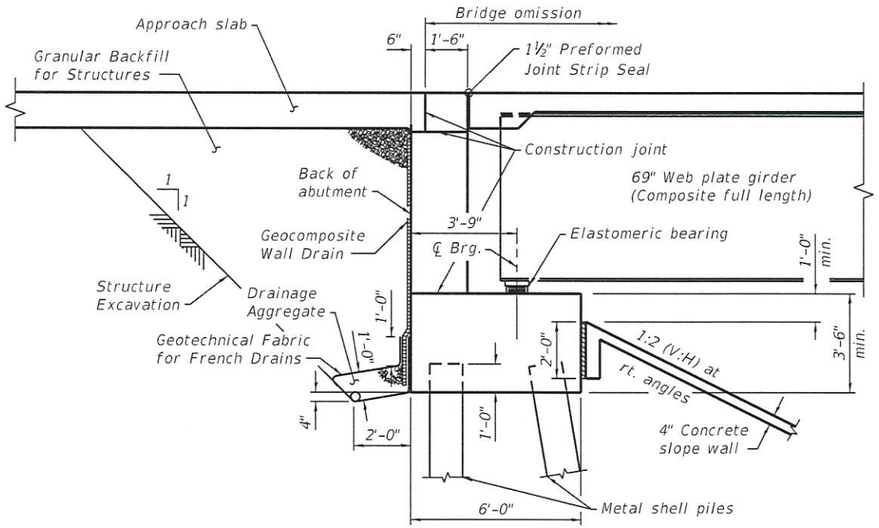
(Looking North)

* Prior to grinding

** After grinding

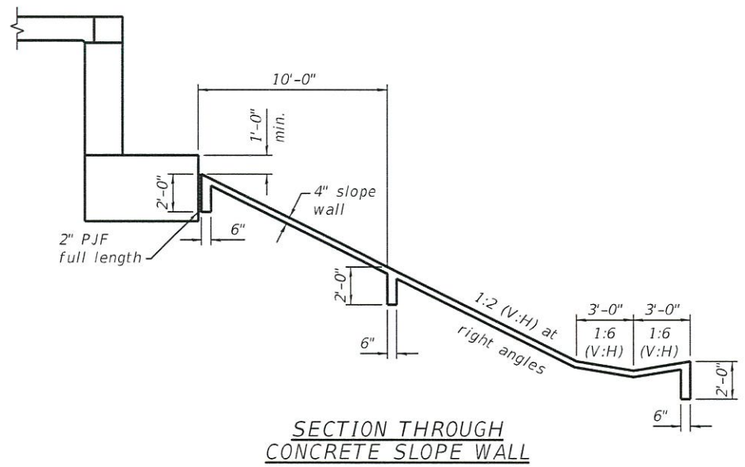


PIER SKETCH

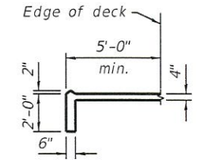


SECTION THROUGH ABUTMENT

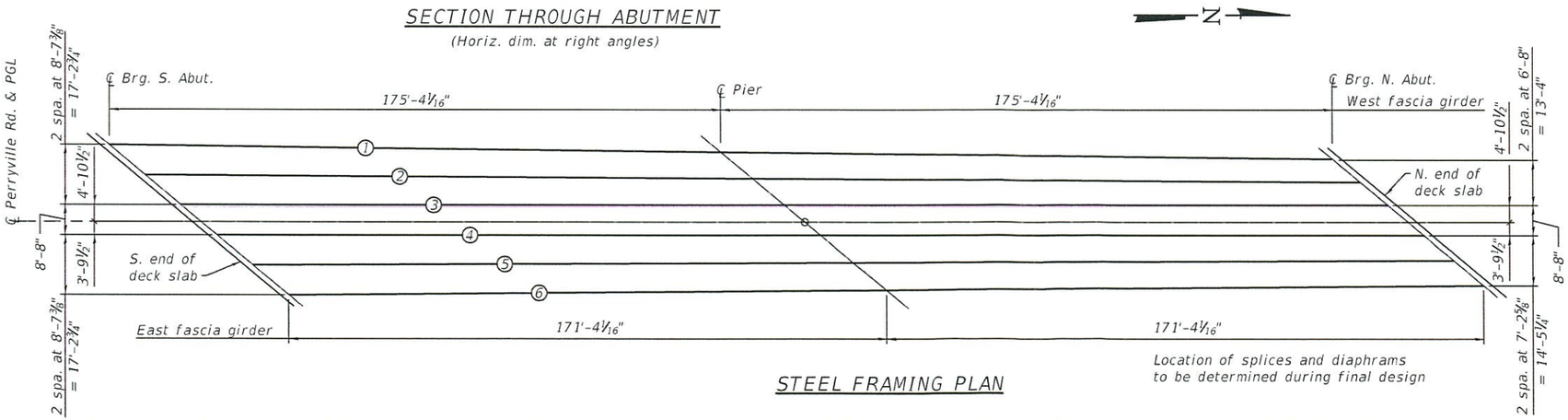
(Horiz. dim. at right angles)



SECTION THROUGH CONCRETE SLOPE WALL



SECTION A-A



STEEL FRAMING PLAN

Location of splices and diaphrams to be determined during final design

APPROVED

NOV 27 2018

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS

PERRYVILLE ROAD OVER I-39 & US 20

F.A.U. RTE 5148 - SECTION (201-3)K & (4-1, 5)R

WINNEBAGO COUNTY

STATION 30+00.07

STRUCTURE NO. 101-0206

ESCA CONSULTANTS, INC.

USER NAME = kjo		DESIGNED - KJA 07/18		REVISED - - -	
ESCA PROJECT NO. 1140.15		CHECKED - ELH 07/18		REVISED - - -	
PLOT SCALE = 8:2 '' / in.		DRAWN - KJA 07/18		REVISED - - -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5148	(201-3)K & (4-1, 5)R	WINNEBAGO	-	-
		CONTRACT NO. 64C24		
		ILLINOIS FED. AID PROJECT		