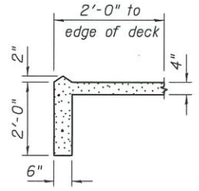
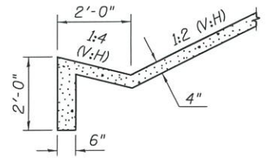
BENCHMARK: BM 300 Chiseled "L" on SE corner of conc. "V" ditch under SN 077-0026, Sta. 227+89 (I-57), 61.4' RT, elev. 341.27

EXISTING STRUCTURE:
SN 077-0026 was originally built in 1965 as F.A.I. 57, Section 77-1HB-3. The structure consists of four spans of a reinforced concrete deck on six W30x108 steel girders on reinforced concrete piers and open abutments. The abutments are supported on metal shell piles. The piers are supported on timber and metal shell piles. Back-to-back distance between abutments is 207'-0". The superstructure width is 28'-0" clear between the inside faces of the concrete curbs and 33'-8" out-to-out. The bridge is skewed 6°-52'-40" Right Forward. Traffic shall be maintained utilizing stage construction.

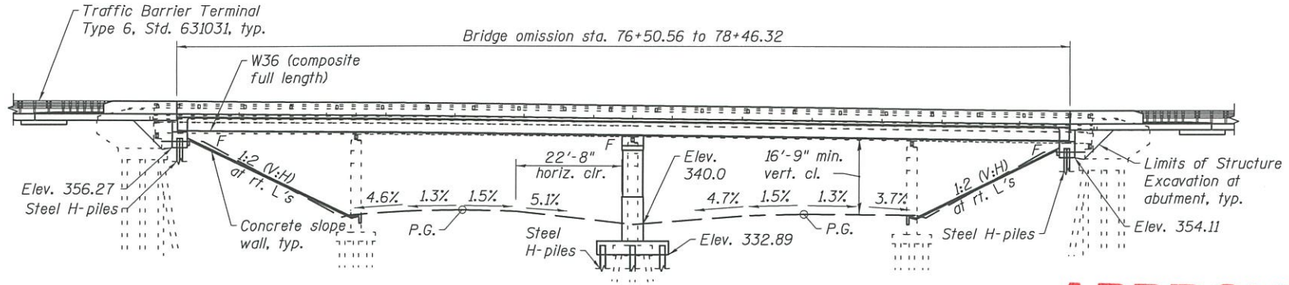
No salvage.



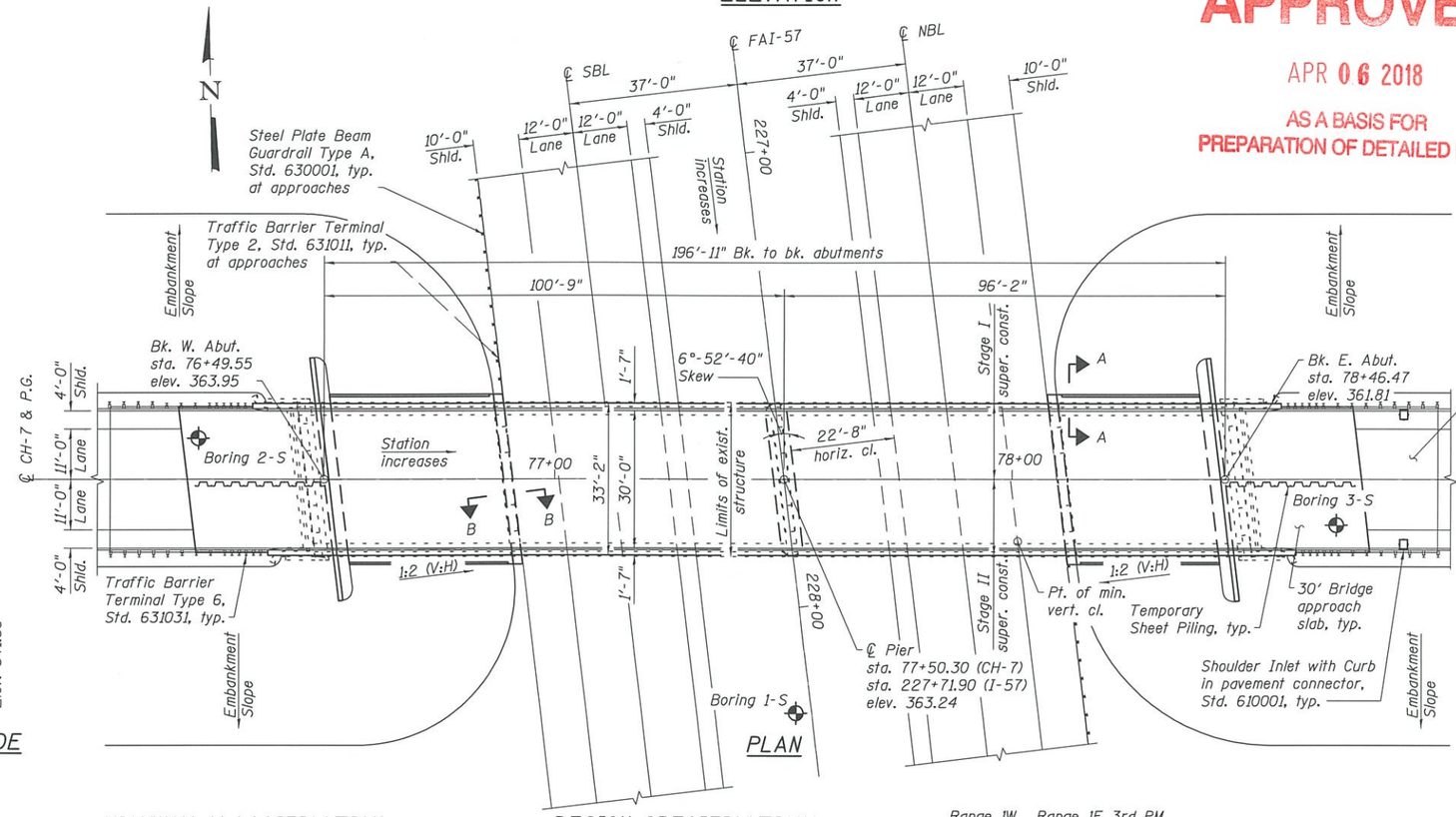
SECTION A-A



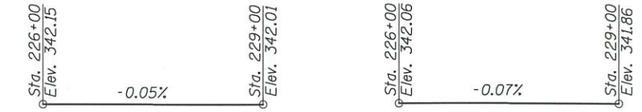
SECTION B-B



ELEVATION

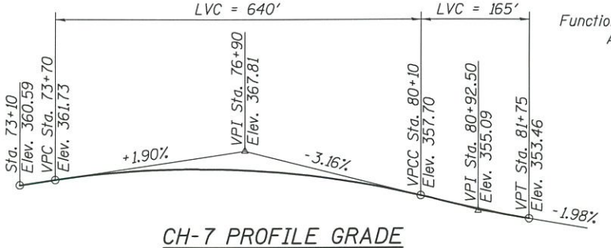


PLAN



I-57 SBL PROFILE GRADE
(Along existing ℄ lanes)

I-57 NBL PROFILE GRADE
(Along existing ℄ lanes)



CH-7 PROFILE GRADE
(Along ℄ roadway)

HIGHWAY CLASSIFICATION

F.A.S. Route 938 (CH-7)
Functional Class: Major Collector (Non-Urban)
ADT: 1860 (2019); 2270 (2039)
DHV: 160 (2039)
ADTT: 85 (2019); 105 (2039)
Design Speed: 55 mph
Posted Speed: 55 mph
Two Way Traffic
Directional Distribution: 50:50

F.A.I. Route 57 (I-57)
Functional Class: Interstate
ADT: 13070 (2019); 17600 (2039)
DHV: 1230 (2039)
ADTT: 6010 (2019); 8095 (2039)
Design Speed: 70 mph
Posted Speed: 70 mph
Two Way Traffic
Directional Distribution: 50:50

SEISMIC DATA

Seismic Performance Zone (SPZ) = 4
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.677g
Design Spectral Acceleration at 0.2 sec. (S_{Ds}) = 1.648g
Soil Site Class = D

DESIGN SPECIFICATIONS

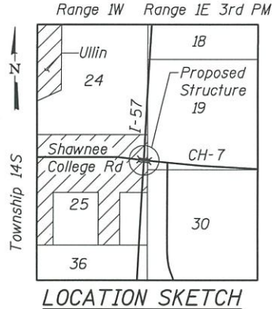
2017 AASHTO LRFD
Bridge Design Specifications 8th Edition

LOADING HL-93

Allow 50 psf for future wearing surface

DESIGN STRESSES FIELD UNITS

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



LOCATION SKETCH

APPROVED
APR 06 2018
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN & ELEVATION
F.A.S. 938 (CH-7) OVER I-57
F.A.I. RTE. 57 - SECTION (77-1-3)BR-1
PULASKI COUNTY
STATION 77+50.30
STRUCTURE NO. 077-0041

ESCA CONSULTANTS, INC.

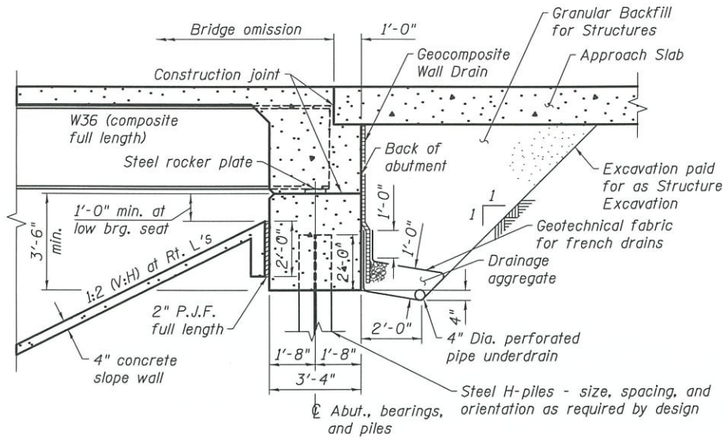
USER NAME = kja	DESIGNED - KJA	09/17	REVISED -	
ESCA PROJECT NO. 1835.08	CHECKED - RDP	09/17	REVISED -	
PLOT SCALE = 0.2 ' / in.	DRAWN - KJA	01/18	REVISED -	
PLOT DATE = 4/5/2018 1:06:35 PM	CHECKED - RDP/ELH	04/18	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 2 SHEETS

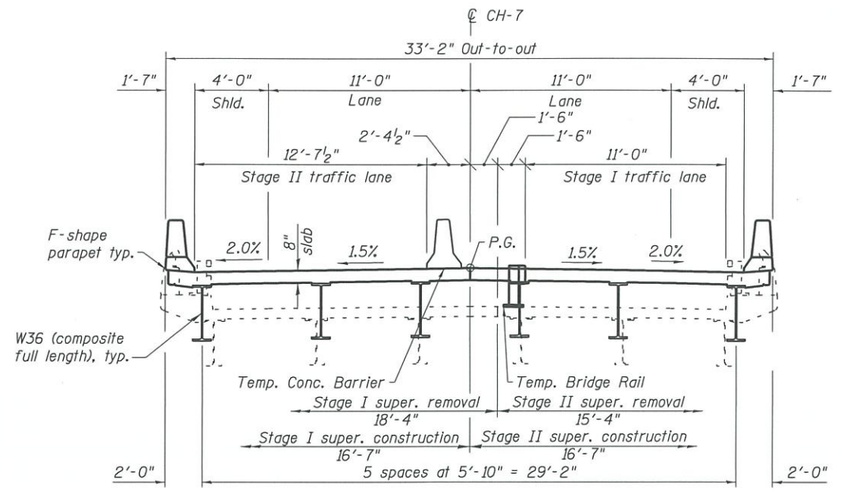
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(77-1-3)BR-1	PULASKI	-	-
		CONTRACT NO. 78454		
		ILLINOIS FED. AID PROJECT		

PRINT DRIVER = LPD_E_B_4c1of6
STYLE NAME = ESCA-Modified
FILE NAME = D:\1835\78454-01-TS..dgn



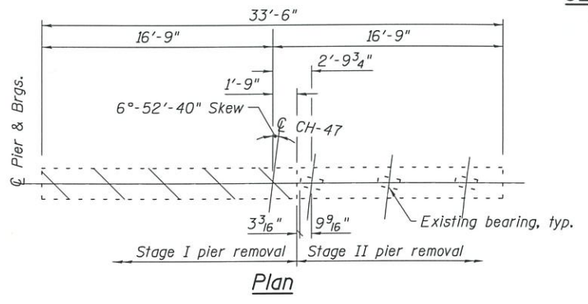
SECTION THROUGH ABUTMENT

(Horizontal dimensions at rt. L's)

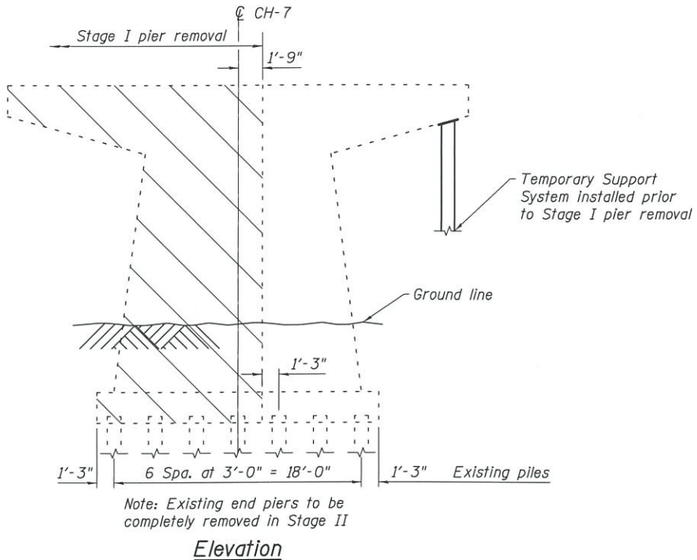


CROSS SECTION

(Looking East)



Plan

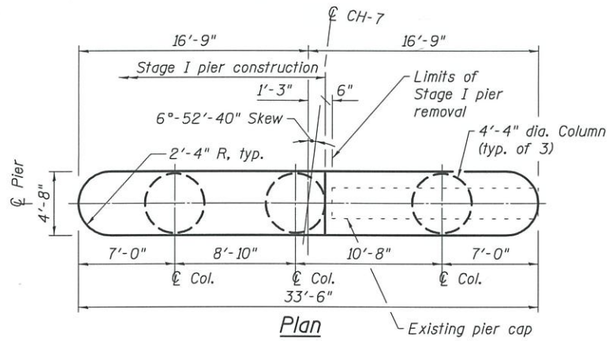


Note: Existing end piers to be completely removed in Stage II

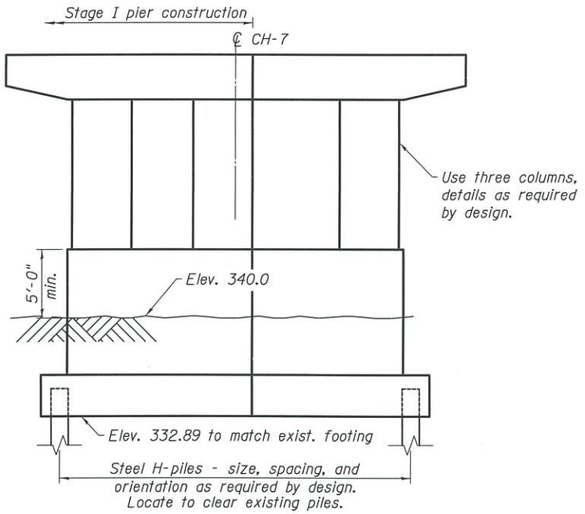
Elevation

CENTER PIER REMOVAL SKETCH

(Looking East)



Plan



Elevation

PIER SKETCH

(Looking East)

APPROVED

APR 06 2018

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS
F.A.S. 938 (CH-7) OVER I-57
F.A.I. RTE. 57 - SECTION (77-1-3)BR-1
PULASKI COUNTY
STATION 77+50.30
STRUCTURE NO. 077-0041

PRINT DRIVER = LDO_E_B.pdrv
PLOT STYLE TABLE = ESCA.ctb
MODEL NAME = PLOT
FILE NAME = P:\2016\2016-77454-GE2-TTL.dgn

ESCA CONSULTANTS, INC.

USER NAME = kja	DESIGNED - KJA	09/17	REVISED -	
ESCA PROJECT NO. 1035.08	CHECKED - RDP	09/17	REVISED -	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(77-1-3)BR-1	PULASKI	-	-
		CONTRACT NO. 78454		
	ILLINOIS FED. AID PROJECT			