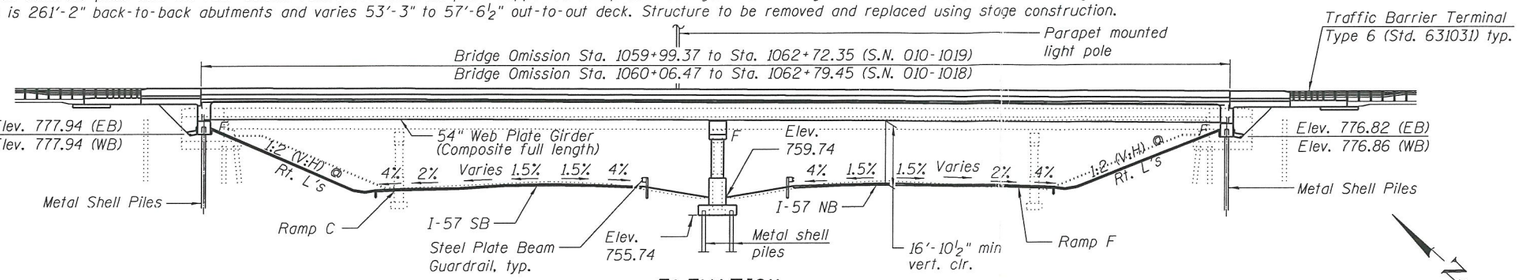
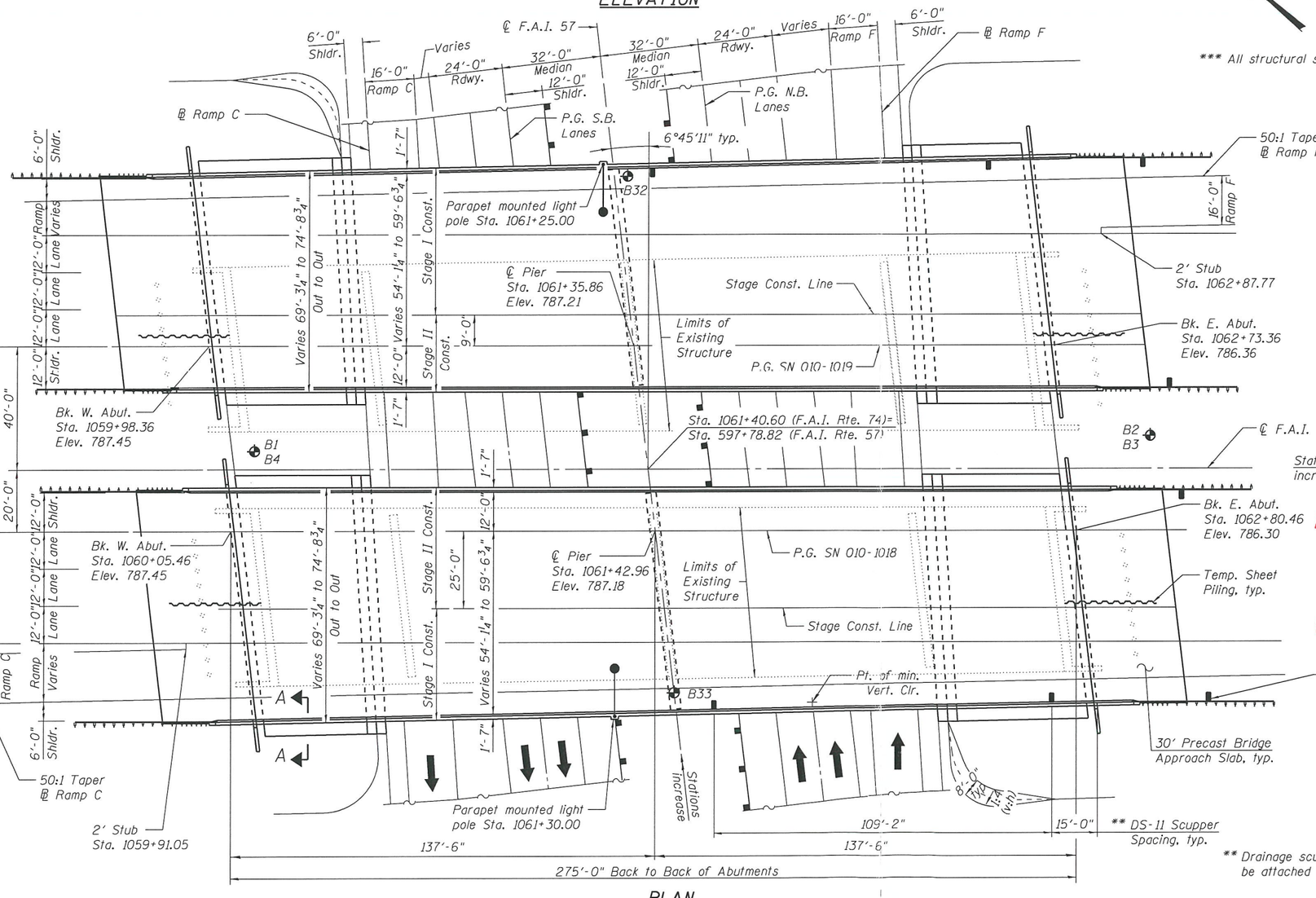
Bench Mark: Chisled "□" on top of the SW corner of the SW wingwall of the westbound bridge. Sta. 1059+99.73, 12.54' LT. Elev. 787.79.

Existing Structures: S.N. 010-0018(19) built in 1965 as F.A.I. 57 Section 10-34HB-1. In 1989, the superstructure, wingwalls, and bearings were replaced on both structures. Each structure is a composite (positive moment regions only) four-span continuous rolled W36 steel beam bridge with a reinforced concrete deck. The open stub abutments are supported on concrete piles with the four column reinforced concrete piers supported on spread footings. The existing structures are skewed 6°45'11" right forward Each structure is 261'-2" back-to-back abutments and varies 53'-3" to 57'-6½" out-to-out deck. Structure to be removed and replaced using stage construction.

No Salvage



ELEVATION



PLAN

*** All structural steel shall be metallized

HIGHWAY CLASSIFICATION

F.A.I. Rte. 74
Functional Class: Interstate
ADT: 38,900 (2013); 59,900 (2040)
ADTT: 7,350 (2013); 13,720 (2040)
DHV: 3,961 (2040)
Design Speed: 75 m.p.h.
Posted Speed: 70 m.p.h.
2 -Way Traffic
Directional Distribution: 50:50

F.A.I. 57
Functional Class: Interstate
ADT: 32,400 (2013); 49,900 (2040)
ADTT: 9,450 (2013); 14,170 (2040)
DHV: 2,146 (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

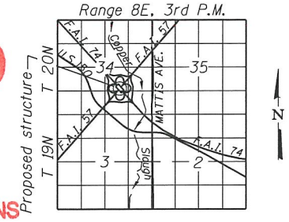
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.135 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.234g
Soil Site Class = D

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims.

Note:
Up to ¼ inch may be ground off the bridge deck and the bridge approach slabs.

APPROVED
OCT 11 2019
AS A BASIS FOR PREPARATION OF DETAILED PLANS



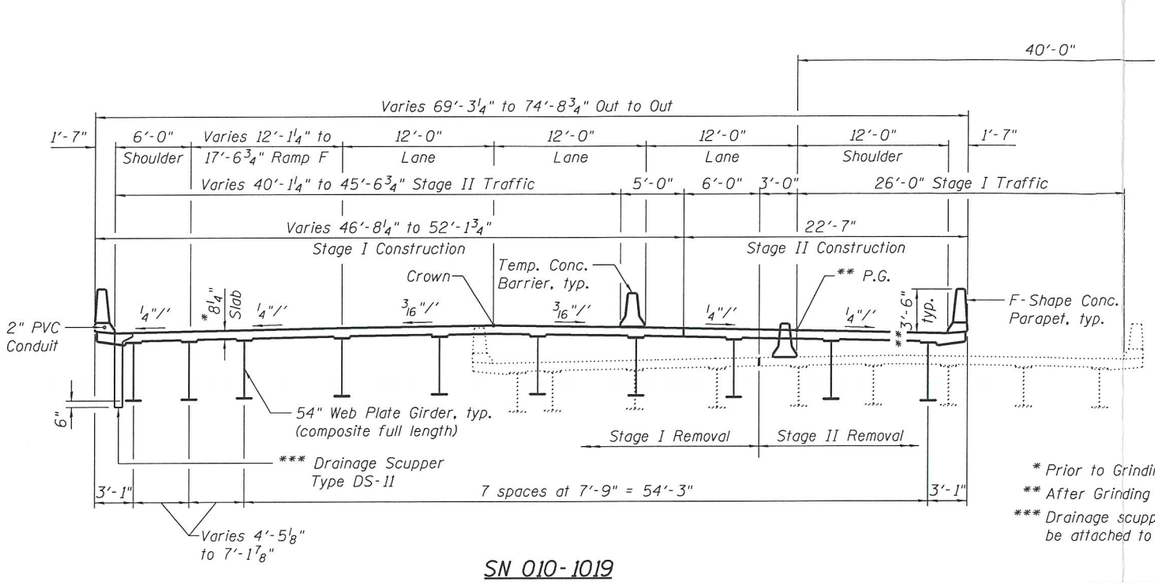
LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.I. RTE. 74 OVER F.A.I. RTE. 57
SECTION (10-34)BR, BR-1 & (10-5-1)BR-1
CHAMPAIGN COUNTY
STATION 1061+40.60
STRUCTURE NO. 010-1018 & 010-1019

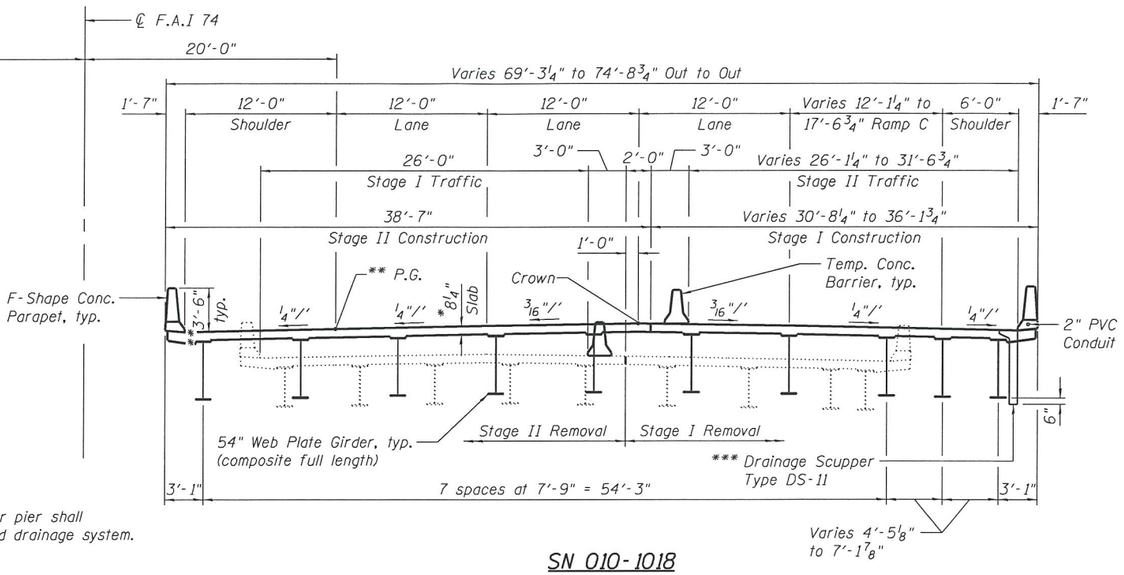
** Drainage scuppers near pier shall be attached to a closed drainage system.

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

FILE NAME = 010101819)-70B38-TSL-001.dgn	USER NAME =	DESIGNED - EPT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE - 618 997 1110		CHECKED - BWP	REVISED -			74	*	CHAMPAIGN		
	PLOT SCALE =	DRAWN - BJV	REVISED -						CONTRACT NO. 70B38	
	PLOT DATE = 3/31/2017	CHECKED - BWP	REVISED -		SHEET NO. 1 OF 2 SHEETS			ILLINOIS	FED. AID PROJECT	



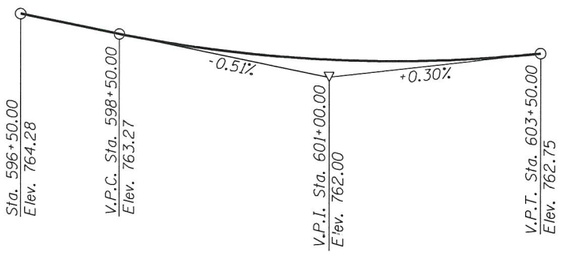
SN 010-1019



SN 010-1018

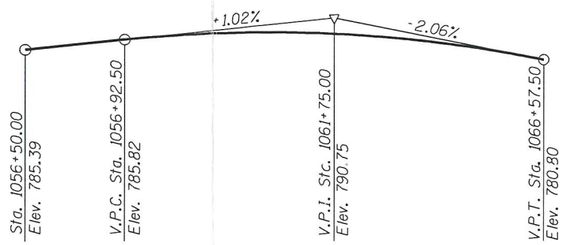
* Prior to Grinding
** After Grinding
*** Drainage scuppers near pier shall be attached to a closed drainage system.

CROSS SECTION
(Looking East)



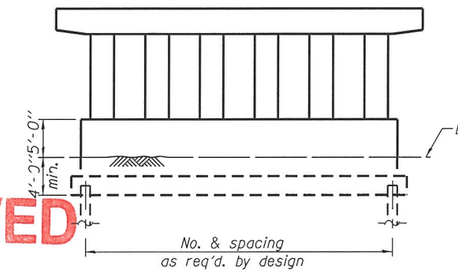
LVC = 500'

PROFILE GRADE F.A.I. 57



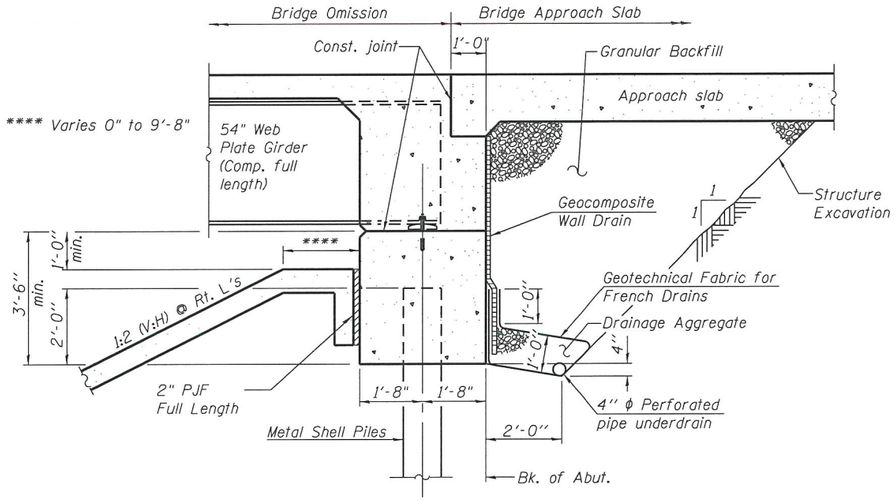
LVC = 965'

PROFILE GRADE F.A.I. 74
(The profile grade shows the final elevations after grinding)

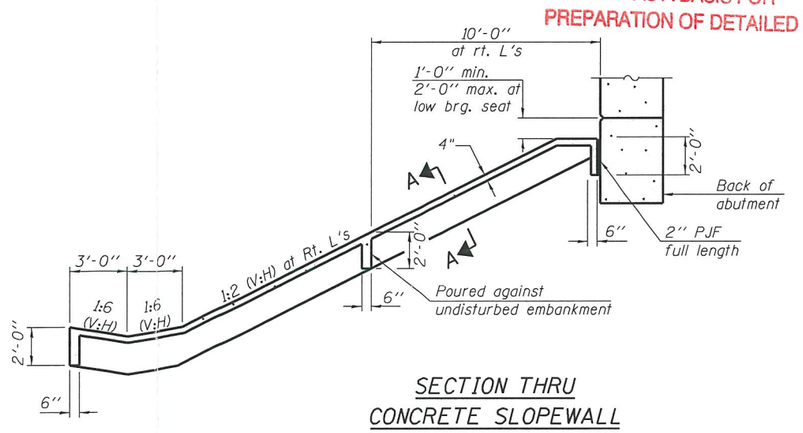


PIER SKETCH

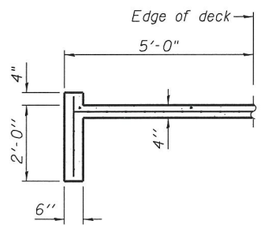
APPROVED
OCT 11 2019
AS A BASIS FOR PREPARATION OF DETAILED PLANS



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



SECTION THRU CONCRETE SLOPEWALL



SECTION A-A

STAGING & DETAILS
F.A.I. RTE. 74 OVER F.A.I. RTE. 57
SECTION (10-34)BR, BR-1 & (10-5-1)BR-1
CHAMPAIGN COUNTY
STATION 1061+40.60
STRUCTURE NO. 010-1018 & 010-1019

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

FILE NAME = 0101018(19)-70B38-TSL-002.dgn	USER NAME =	DESIGNED - EPT	REVISED -
BACON | FARMER | WORKMAN ENGINEERING & TESTING, INC. 403 NORTH COURT STREET MARION, ILLINOIS 62959 PHONE - 618 997 1930		CHECKED - BWP	REVISED -
	PLOT SCALE =	DRAWN - BJV	REVISED -
	PLOT DATE = 3/31/2017	CHECKED - BWP	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 2 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	*	CHAMPAIGN		
		CONTRACT NO. 70B38		
		ILLINOIS FED. AID PROJECT		