Bench Mark: Iron rod with yellow cap at Sta. 722+92.37, 4.19' Rt. ℄ I-80, Elev. 556.54.

Existing Structure: S.N. 099-0062 (EB) and S.N. 099-0063 (WB) were built in 1964 under F.A.I. Route 80 Project I-80-4(36)134, Section 99-4B-1. The structures were repaired in 1990, 1998, 2001, and 2011. The work included repair of the concrete deck and substructure, and replacement of the expansion joints, waterproofing membrane and bituminous overlay. Existing dual structures consist of three single span reinforced concrete deck on composite W36 rolled steel beams supported by pile bent abutments and multi-column concrete piers founded on spread footings. The approach slabs are supported on timber piles. The structure measures 265'-5" back to back of abutments. The out to out deck width varies from 48'-0" to 54'-5 1/2" at the Eastbound structure and 51'-1" to 54'-11 1/4" at the Westbound structure. Existing superstructure, concrete slopewalls, pier caps and approach slabs are to be removed and replaced. The substructure will remain, except the pier caps and abutment stems will be rebuilt.

Stage Construction will be utilized to maintain traffic.

WATERWAY INFORMATION **

Drainage Area = 109 sq.mi. Low Grade Elev. 563.97 @ Sta. 723+00

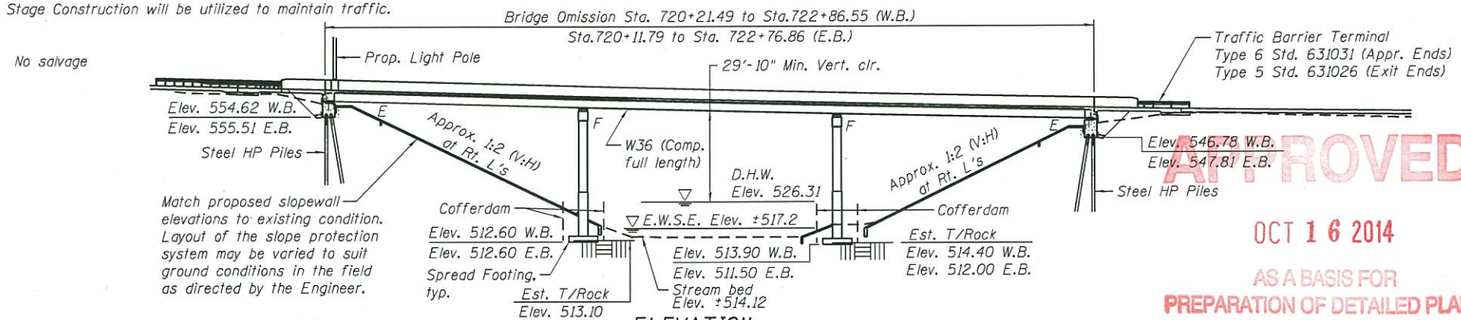
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	6,230	775	775	522.83	0.70	0.42	523.53	523.25
Design	50	10,660	1,163	1,163	526.31	0.48	0.37	526.79	526.68
Base	100	13,750	1,420	1,420	582.39	0.43	0.40	528.82	528.79
Overtopping	>500	-	-	-	-	-	-	-	-
Max. Calc.	500	23,203	2,197	2,197	534.02	0.62	0.57	534.64	534.59

**Elevations from Hydraulic Report were converted to NAVD88.

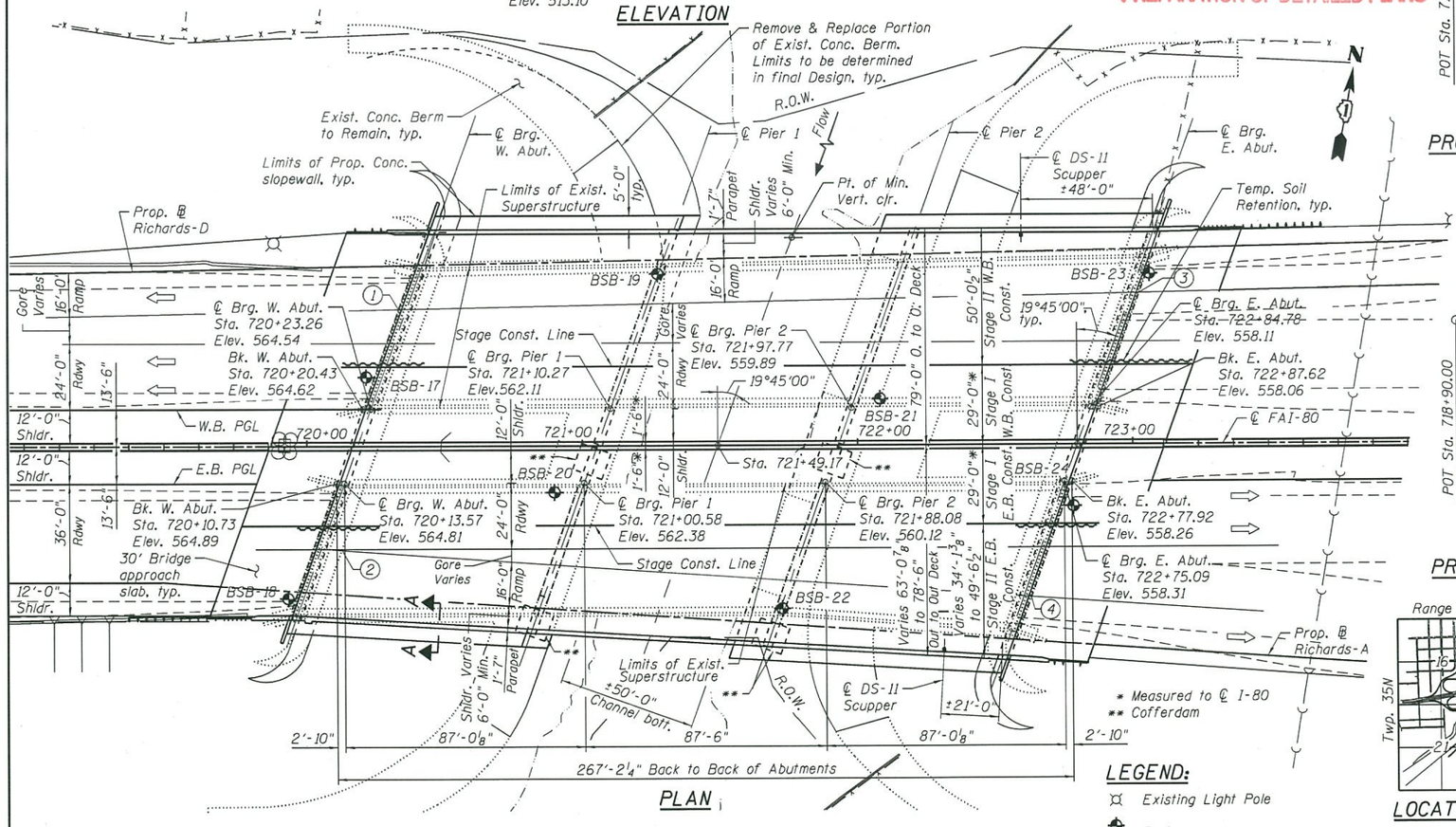
HIGHWAY CLASSIFICATION

F.A.I. Rte. 80 EB
Functional Class: Interstate
ADT: 59,870 (2010); 75,800 (2030)
ADTT:9,420 (2010); 11,930 (2030)
DHV: 6,060 (2030)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
One Way Traffic

F.A.I. Rte. 80 WB
Functional Class: Interstate
ADT: 47,920 (2010); 60,680 (2030)
ADTT:9,930 (2010); 12,570 (2030)
DHV: 4,850 (2030)
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
One Way Traffic

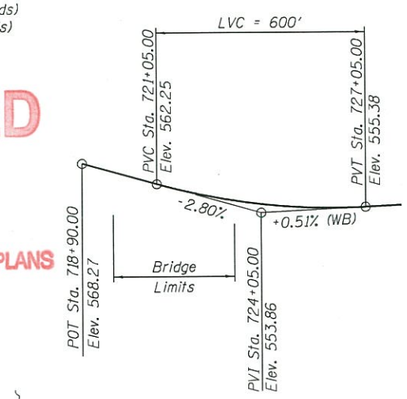


ELEVATION

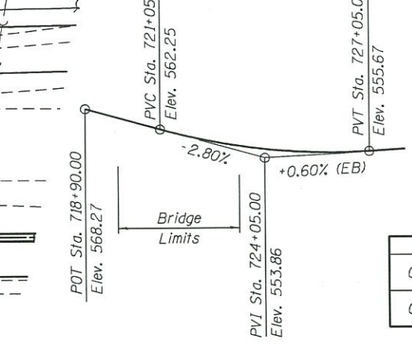


PLAN

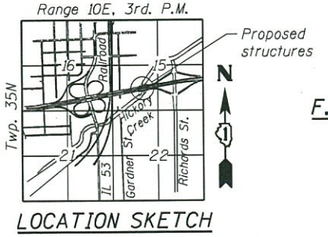
LEGEND:
- Existing Light Pole
- Boring



PROFILE GRADE PROP. I-80 WB



PROFILE GRADE PROP. I-80 EB



LOCATION SKETCH

LOADING HL-93

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

DESIGN SPECIFICATIONS

NEW CONSTRUCTION:
2012 AASHTO LRFD Bridge Design Specifications, 6th Edition, with 2013 Interims

EXISTING PIERS AND ABUTMENTS:
1995 FHWA Seismic Retrofitting Manual for Highway Bridges

DESIGN STRESSES

FIELD UNITS (NEW CONST.)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

FIELD UNITS (EXIST. CONST.)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)
fy = 36,000 psi (Structural steel)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.068g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.125g
Soil Site Class = C

ROADWAY TAPERS

Location	Sta.	Offset
1	720+33.49	48'-4¾"
2	720+04.83	37'-5¼"
3	723+02.62	55'-3¼"
4	722+62.78	55'-6½"

DESIGN SCOUR ELEVATION TABLE

		W. Abut.	Pier 1	Pier 2	E. Abut.
0.100	W.B.	554.62	514.40	514.40	546.78
	E.B.	555.51			547.81
0500	W.B.	554.62	514.40	514.40	546.78
	E.B.	555.51			547.81

APPROVED
OCT 16 2014
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN AND ELEVATION
I-80 OVER HICKORY CREEK
F.A.I. RTE. 80 - SEC. 2013-008B & 2013-009B
WILL COUNTY
STATION 721+49.17
STRUCTURE NO. 099-0062 (E.B.)
STRUCTURE NO. 099-0063 (W.B.)

HBP Illinois Partners

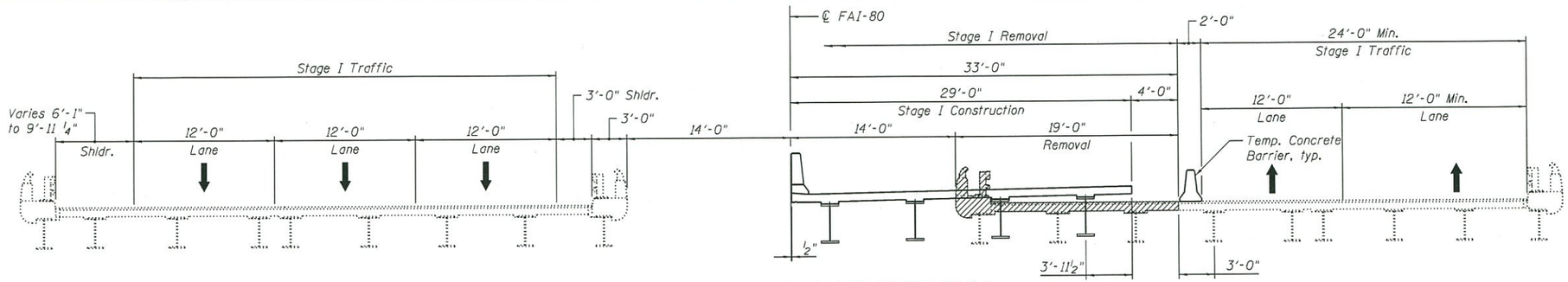
USER NAME = lkeltte	DESIGNED - ACF	REVISED
	CHECKED - PCA	REVISED
PLOT SCALE = 0.166666 ' / in.	DRAWN - LK	REVISED
PLOT DATE = 9/4/2014	CHECKED - ACF	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

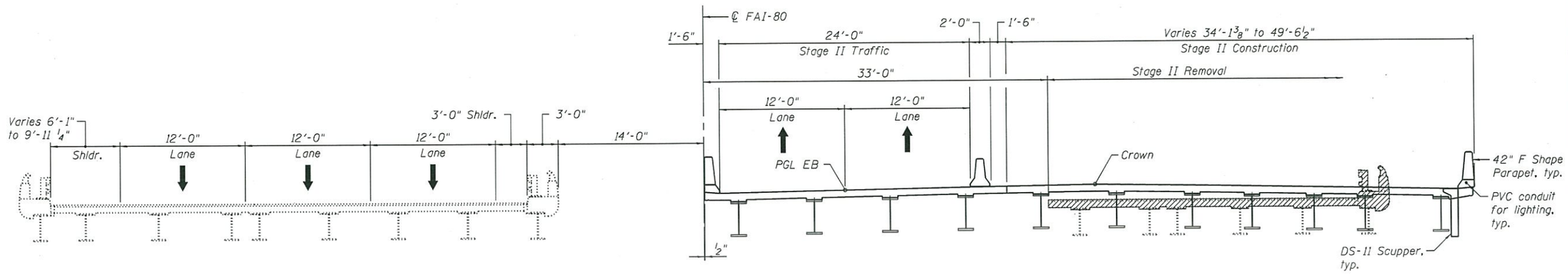
SHEET NO. 1 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2013-008B & 2013-009B	WILL	4	
CONTRACT NO. 60W34 & 60W35				
ILLINOIS	FED. AID PROJECT			

pw:\\hntbw356.hntb.org:PWGreat_Lakes\Documents\Chicago Projects\46314 I-80\Phase II- Near Term Improvement (Group A)\Design\CADD\Structure (TS&L) Sheets\0990062-0990063-60W34-60W35-TSL.dgn



STAGE I REMOVAL AND CONSTRUCTION (E.B.)



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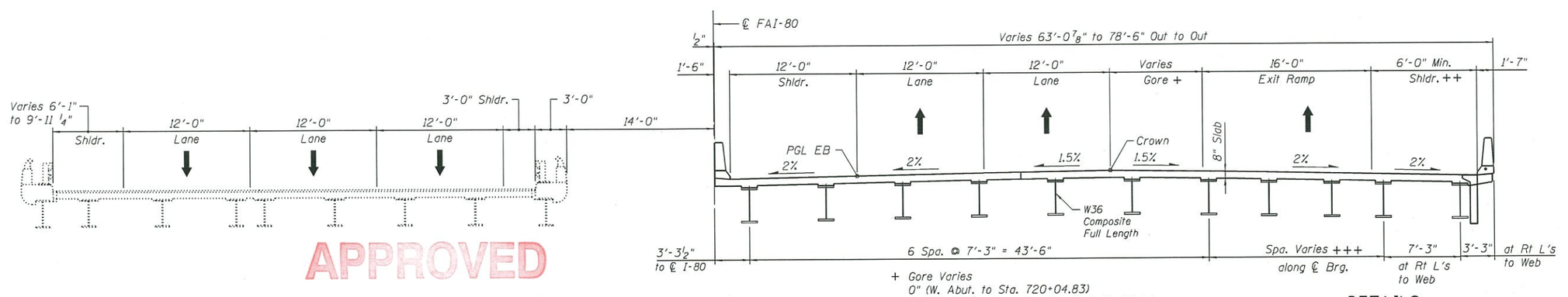

+ Gore Varies
0" (W. Abut. to Sta. 720+04.83)
0" to 18'-0 1/2" (Sta. 720+04.83 to E. Abut.)

++ Shoulder Varies
8'-8 3/4" to 6'-0" (W. Abut. to E. Abut.)

+++ Girder Spacing Varies
1 Spa. @ ±6'-6" at W. Abut.
2 Spa. @ ±4'-4" to ± 7'-6" at Pier 1
3 Spa. @ ±4'-10" to ± 7'-6" at Pier 2
3 Spa. @ ±7'-6" at E. Abut.

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FINAL CONTRACT 60W34

All dimensions taken at Rt L's to ℄ I-80 except as noted)

DETAILS
I-80 OVER
HICKORY CREEK
F.A.I. RTE. 80 - SEC. 2013-008B & 2013-009B
WILL COUNTY
STATION 721+49.17
STRUCTURE NO. 099-0062 (E.B.)
STRUCTURE NO. 099-0063 (W.B.)

USER NAME = lkalita	DESIGNED - ACF	REVISED	
	CHECKED - PCA	REVISED	
PLOT SCALE = 0.166666 ' / in.	DRAWN - LK	REVISED	
PLOT DATE = 8/28/2014	CHECKED - ACF	REVISED	

HBP Illinois Partners

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2013-008B & 2013-009B	WILL	4	
	CONTRACT NO. 60W34 & 60W35			
	ILLINOIS FED. AID PROJECT			

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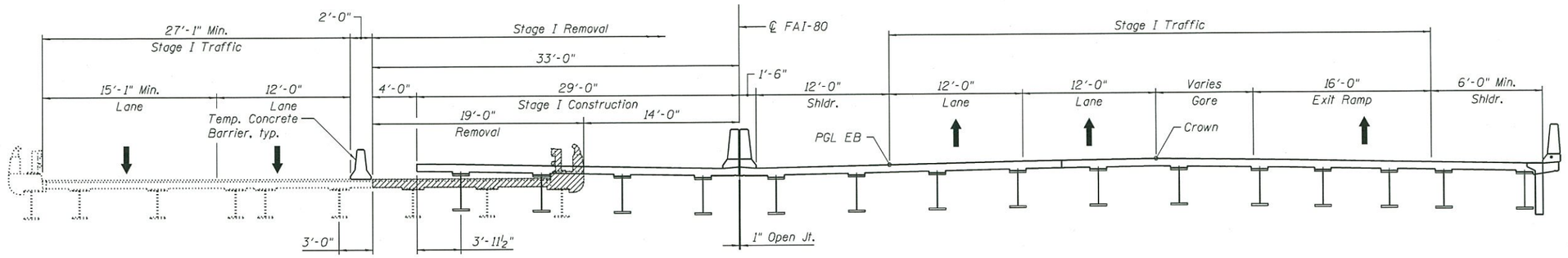

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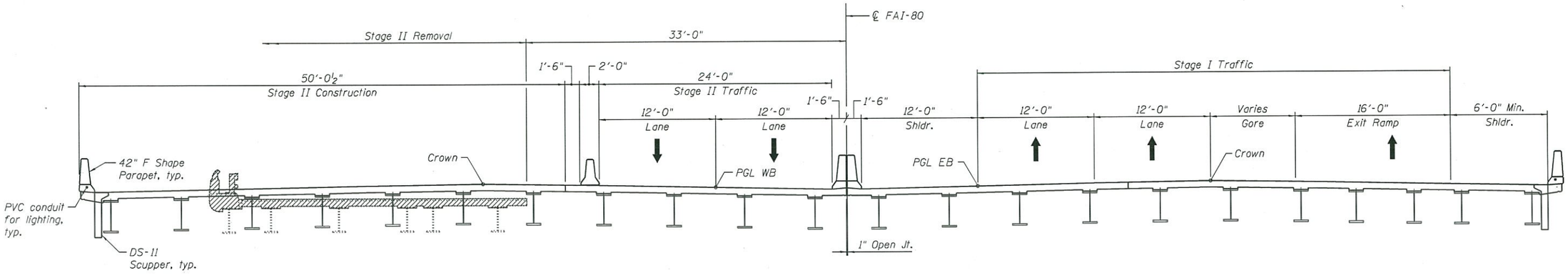
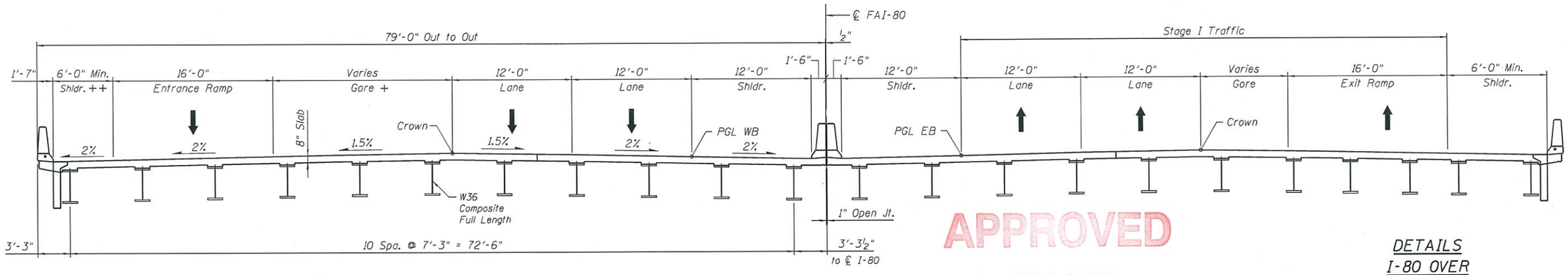


STAGE II REMOVAL AND CONSTRUCTION (W.B.)



\+ Gore Varies
12'-4 3/4" to 17'-9 5/16" (W. Abut. to E.Abut.)
++ Shoulder Varies
11'-5 3/8" to 6'-0" (W. Abut. to E.Abut.)

FINAL CONTRACT 60W35

APPROVED
OCT 16 2014
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

DETAILS
I-80 OVER
HICKORY CREEK
F.A.I. RTE. 80 - SEC. 2013-008B & 2013-009B
WILL COUNTY
STATION 721+49.17
STRUCTURE NO. 099-0062 (E.B.)
STRUCTURE NO. 099-0063 (W.B.)

HBP Illinois Partners

USER NAME = lkalita	DESIGNED - ACF	REVISED
	CHECKED - PCA	REVISED
PLOT SCALE = 0.166666 ' / in.	DRAWN - LK	REVISED
PLOT DATE = 8/28/2014	CHECKED - ACF	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 3 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2013-008B & 2013-009B	WILL	4	
	CONTRACT NO. 60W34 & 60W35			
	ILLINOIS FED. AID PROJECT			

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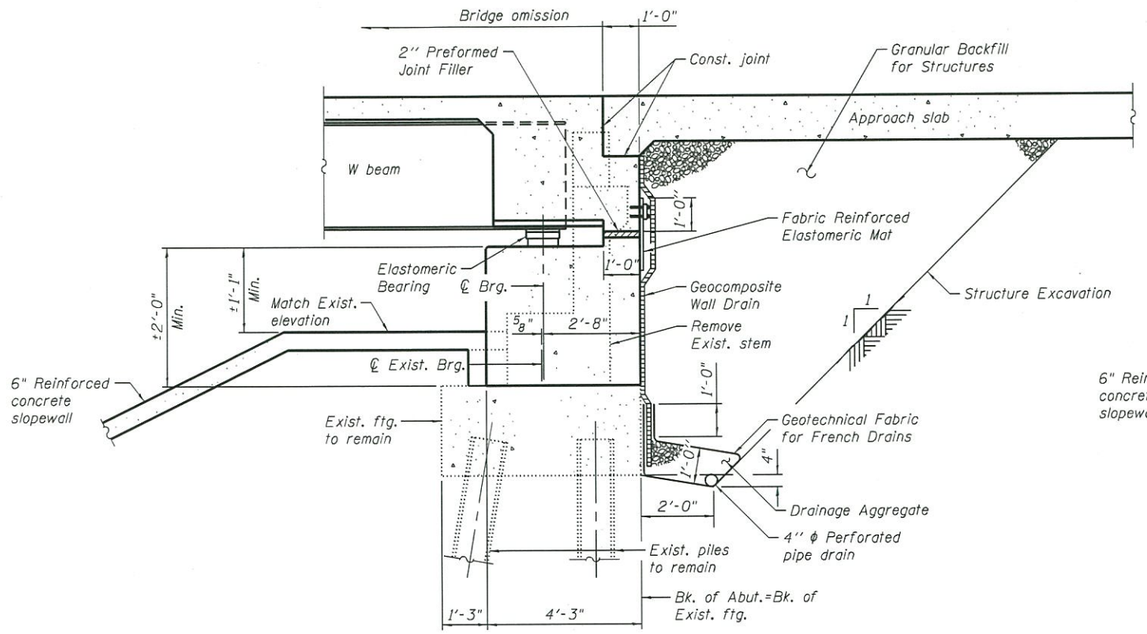
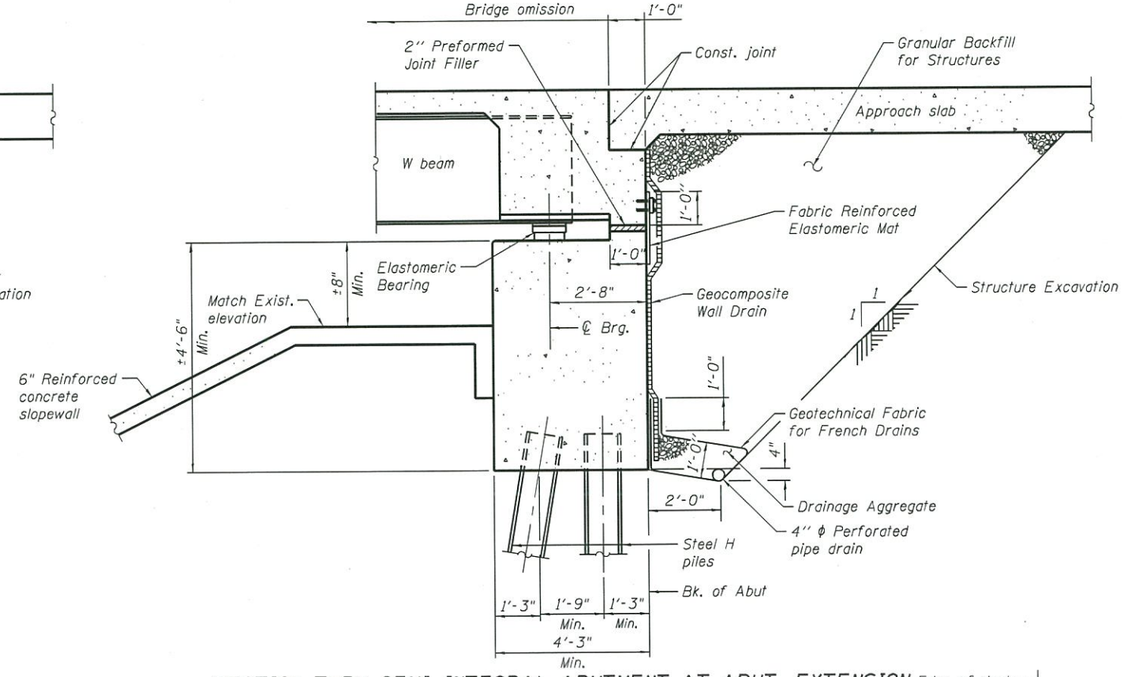


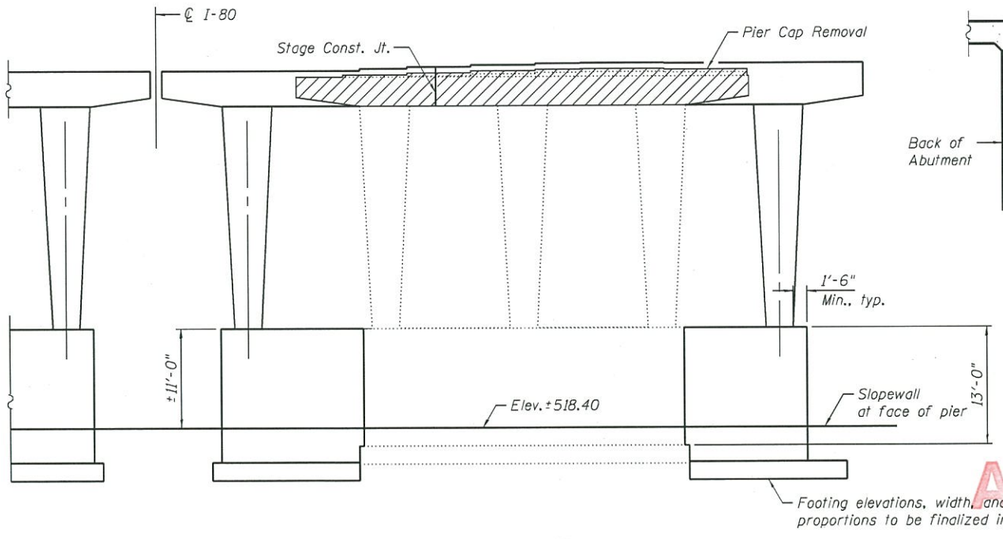
SECTION THRU SEMI-INTEGRAL ABUTMENT AT EXIST. ABUT.

(Horiz. dim. @ Rt. L's)

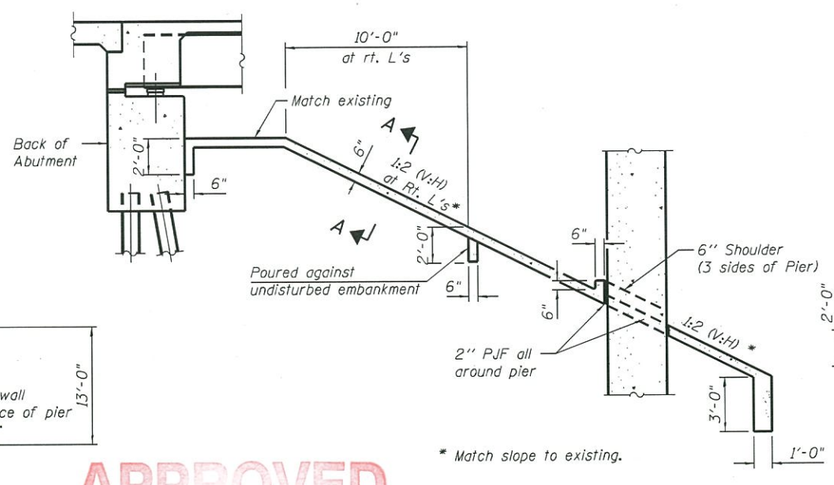


SECTION THRU SEMI-INTEGRAL ABUTMENT AT ABUT. EXTENSION

(Horiz. dim. @ Rt. L's)

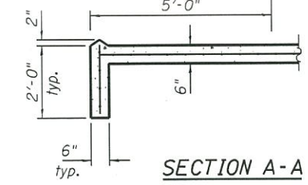


PIER SKETCH

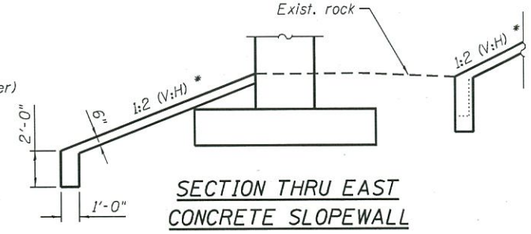


* Match slope to existing.

SECTION THRU WEST CONCRETE SLOPEWALL



SECTION A-A



SECTION THRU EAST CONCRETE SLOPEWALL

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OCT 16 2014
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DETAILS
I-80 OVER HICKORY CREEK
F.A.I. RTE. 80 - SEC. 2013-008B & 2013-009B
WILL COUNTY
STATION 721+49.17
STRUCTURE NO. 099-0062 (E.B.)
STRUCTURE NO. 099-0063 (W.B.)

HBP Illinois Partners	USER NAME = lkalita	DESIGNED - ACF	REVISED
		CHECKED - PCA	REVISED
	PLOT SCALE = 0.166666 ' / in.	DRAWN - LK	REVISED
	PLOT DATE = 8/28/2014	CHECKED - ACF	REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2013-008B & 2013-009B	WILL	4	
	CONTRACT NO. 60W34 & 60W35			
	ILLINOIS FED. AID PROJECT			

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