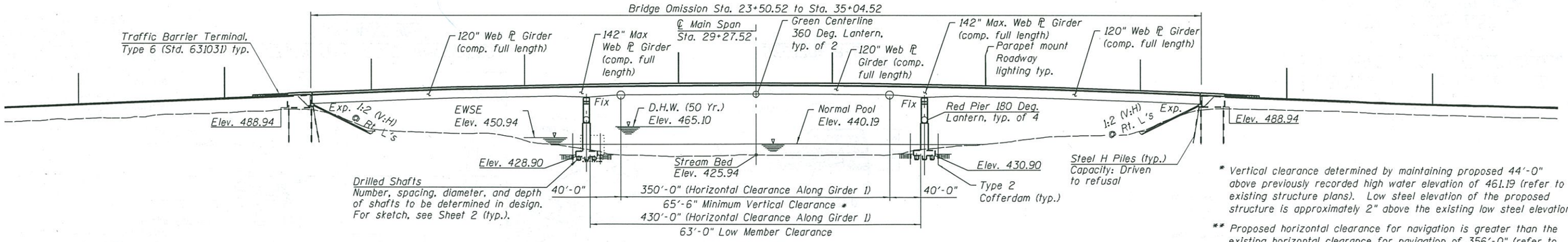
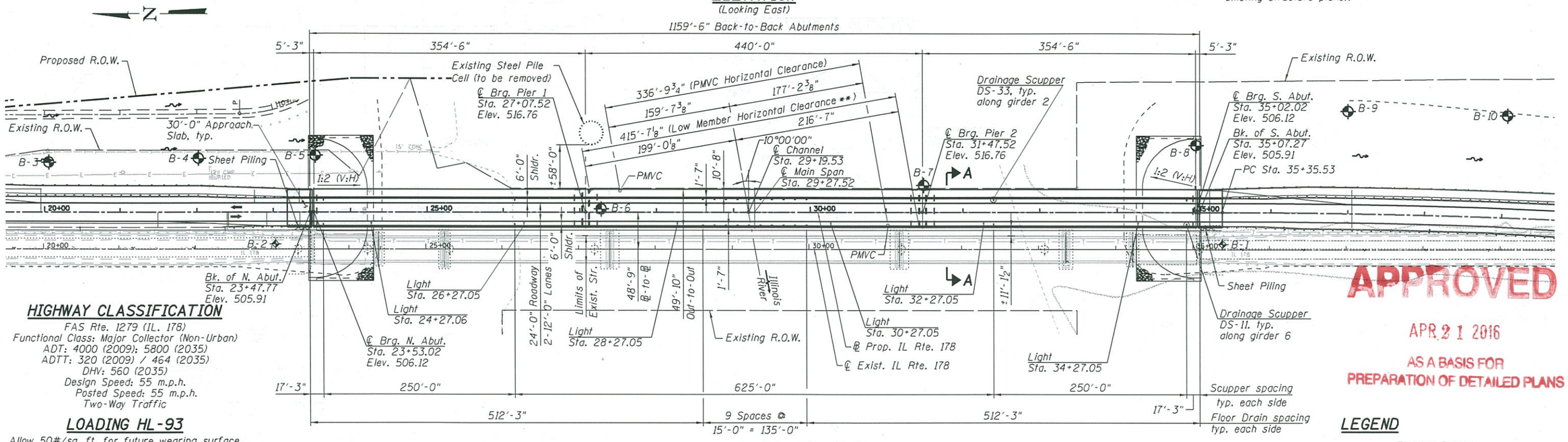
Bench Mark: U.S. Army Corps of Engineers brass disc at top of existing bridge curb of Illinois River Bridge: N.E. quadrant, Sta. 23+55.23 (existing ℄), Offset 15.55' (Lt.), Elev. 501.027.
Existing Structure: Structure No. 050-0088 was constructed in 1962 as F.A.S. Route 256, Section 1-D-E-F-P. This structure consists of 3 steel truss spans and 4 steel beam approach spans. The piers are supported on spread footings and the abutments are supported on concrete encased piles. The overall length is 1158'-0", back-to-back abutments. Structure provides 30'-0" roadway width face-to-face of curbs.
Traffic control: None, traffic shall be maintained on this structure while the new structure is under construction.
No salvage, existing structure to be removed after completing new structure construction.



* Vertical clearance determined by maintaining proposed 44'-0" above previously recorded high water elevation of 461.19 (refer to existing structure plans). Low steel elevation of the proposed structure is approximately 2" above the existing low steel elevation.

** Proposed horizontal clearance for navigation is greater than the existing horizontal clearance for navigation of 356'-0" (refer to existing structure plans).

ELEVATION
(Looking East)



HIGHWAY CLASSIFICATION
FAS Rte. 1279 (IL. 178)
Functional Class: Major Collector (Non-Urban)
ADT: 4000 (2009); 5800 (2035)
ADTT: 320 (2009) / 464 (2035)
DHV: 560 (2035)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic

LOADING HL-93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2014 AASHTO LRFD Bridge Design Specifications, 7th Edition
(AASHTO LRFD - Pedestrian Live Load Deflection Criteria L/1000)

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 50W)
fy = 70,000 psi (M270 Grade 70W), for flanges over piers only

SEISMIC DATA
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.07
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.12
Soil Site Class = C
Operational Category = Essential

DESIGN SCOUR (Q_{100} & Q_{500}) ELEVATION TABLE

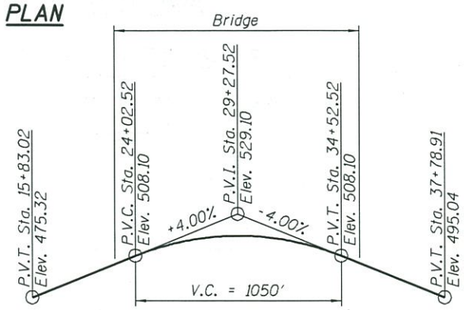
Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	S. Abut.
	490.44	430.90	432.90	490.44

WATERWAY INFORMATION

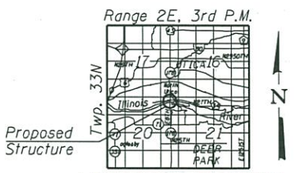
Drainage Area = 11,060 sq. mi. Low Grade Elev. 505.45 Ft. @ Sta. 23+50.52
Max. Recorded HWE = 467.00 Ft. (@ ℄ Rdwy.)

Flood	Freq. Yr.	Q (cfs)	Opening (sq. ft.) Exist.	Opening (sq. ft.) Prop.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	94,000	20231	20734	461.7	0.9	0.8	462.6	462.5
Design	50	124,000	23249	23957	465.1	0.1	0.1	465.2	465.2
Base	100	137,000	24359	25146	466.3	0.1	0.1	466.4	466.4
Max. Calc.	500	163,000	26323	27240	468.4	0.2	0.1	468.6	468.5

PLAN



PROPOSED PROFILE GRADE



LOCATION SKETCH

LEGEND
Existing Bridge
Proposed Bridge
Soil Boring Location Performed by IDOT (2012)
Soil Boring Location
PMVC Point of Minimum Vertical Clearance

APPROVED
APR 21 2016
AS A BASIS FOR PREPARATION OF DETAILED PLANS

GENERAL PLAN
IL 178 OVER ILLINOIS RIVER (PUBLIC WATER)
F.A.S. ROUTE 1279 - SEC. (1)BR & I
LASALLE COUNTY
STATION 29+27.52
STRUCTURE NO. 050-0256

PARSONS BRINCKERHOFF

FILE NAME = pateld	DESIGNED - Y. Ali	REVISED -	
	CHECKED - A. Hammad	REVISED -	
PLOT SCALE = NONE	DRAWN - D. C. Patel	REVISED -	
PLOT DATE = 4/18/2016	CHECKED - A. Hammad	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1279	(1)BR & I	LASALLE		
		CONTRACT NO. 66992		
	ILLINOIS FED. AID PROJECT			

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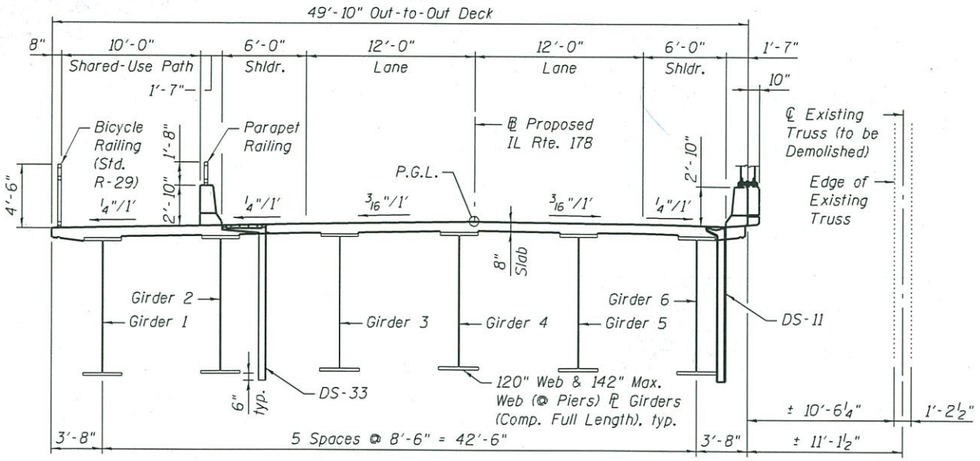
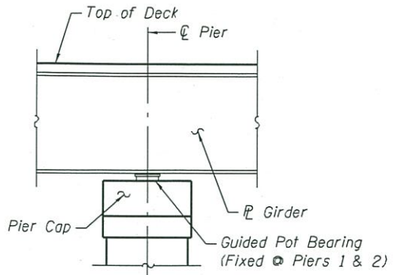


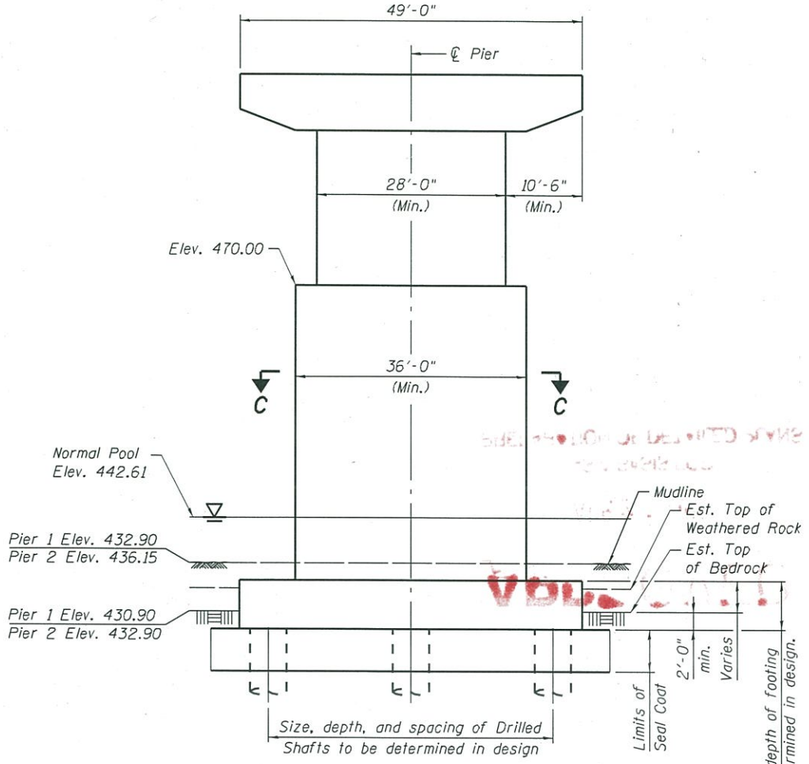
SECTION A-A

(Looking South)

Design beams and stage cross frames to accommodate future deck replacement/staging.

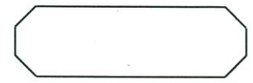


SECTION THRU PIER 1 & 2



PIER SKETCH

(Piers 1 & 2)

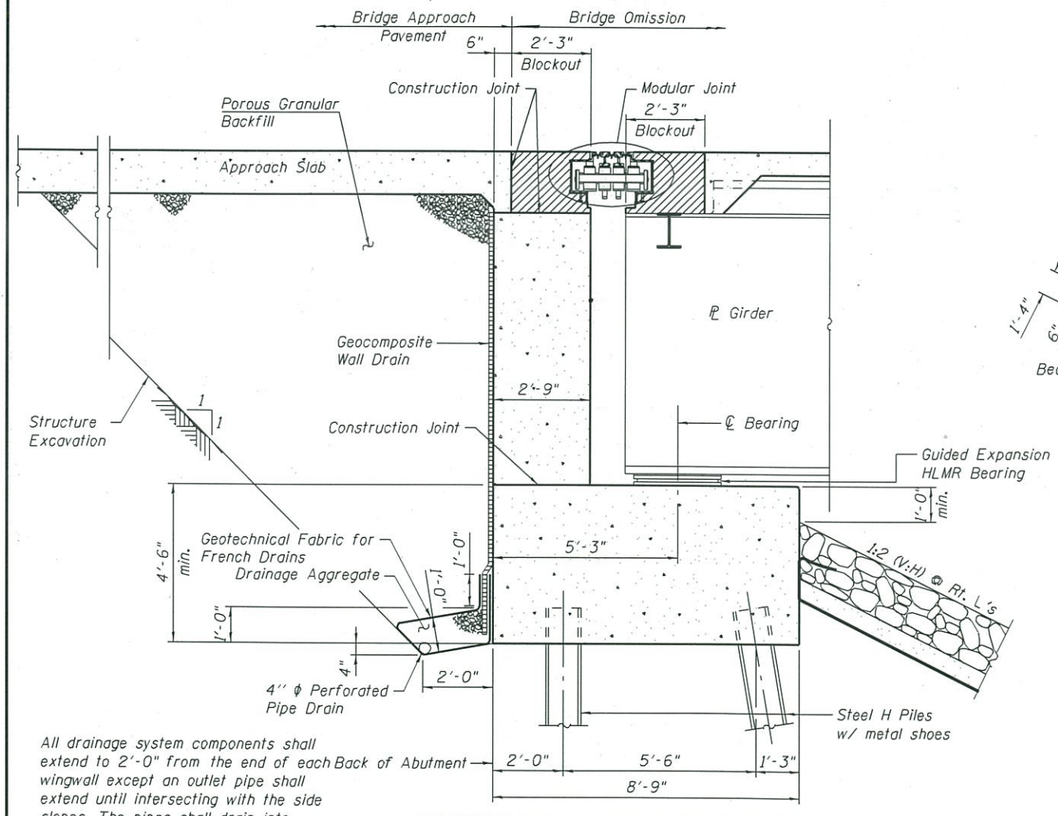


SECTION C-C

Notes:

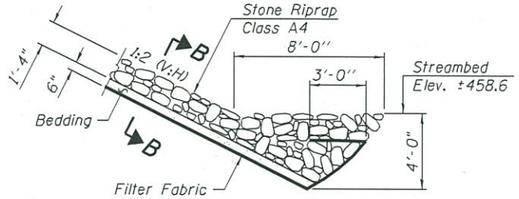
Mudline elevation taken at centerline pier.

Rock excavation (underwater) and drilled shaft placement prior to placing cofferdam and seal coat.

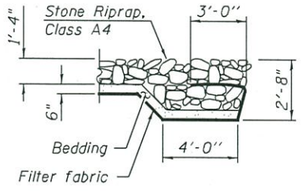


SECTION THRU PILE SUPPORTED STUB ABUTMENT

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



SECTION THRU SLOPEWALL



SECTION B-B

DETAILS
IL 178 OVER
ILLINOIS RIVER (PUBLIC WATER)
F.A.S. ROUTE 1279 - SEC. (1)BR & I
LASALLE COUNTY
STATION 29+27.52
STRUCTURE NO. 050-0256

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PARSONS BRINCKERHOFF	FILE NAME = pateld	DESIGNED - Y. Ali	REVISED -
		CHECKED - A. Hammad	REVISED -
	PLOT SCALE = NONE	DRAWN - D. C. Patel	REVISED -
	PLOT DATE = 4/18/2016	CHECKED - A. Hammad	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 2 OF SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1279	(1)BR & I	LASALLE		
		CONTRACT NO. 66992		
	ILLINOIS	FED. AID PROJECT		