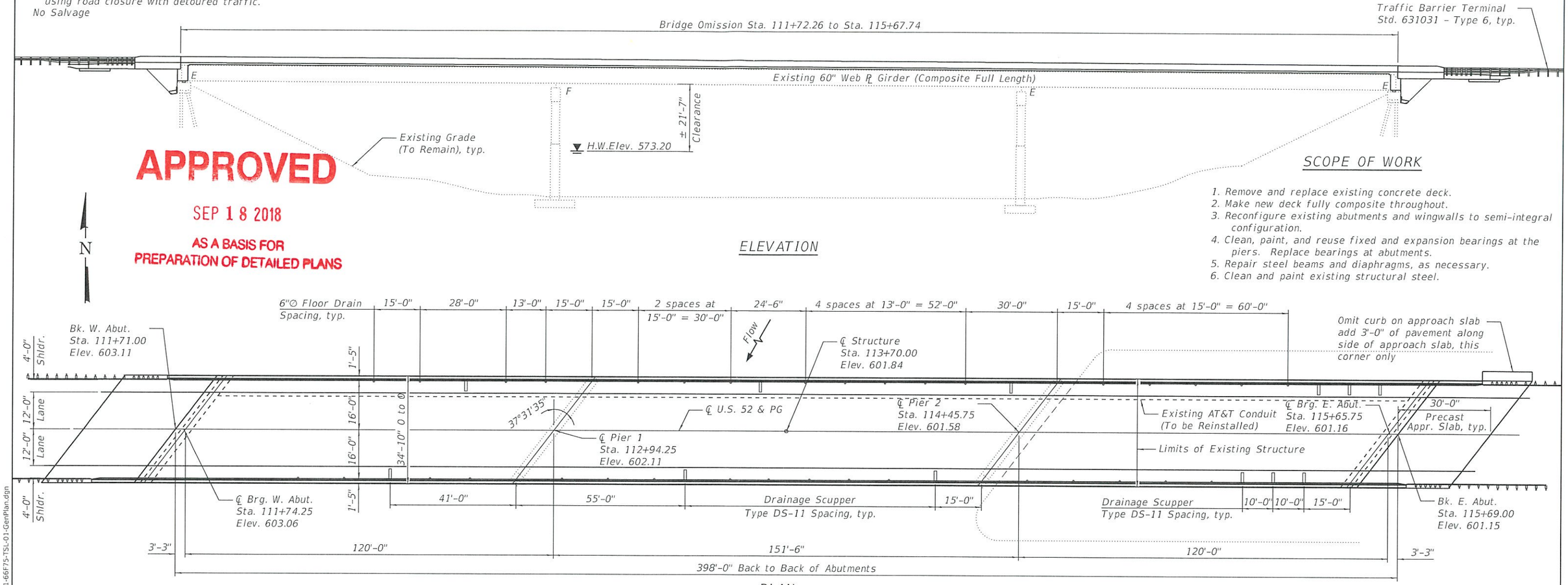
Bench Mark #26: Cut "□" on northeast corner of southwest wingwall, Sta. 111+60.24, 16.98' RT Elevation: 605.543

Existing Structure: SN 050-0201 originally constructed in 1988 under Section 124BR. The deck was patched in 2016. The structure is a 3 span steel plate girder bridge supported by concrete abutments and piers with a back-to-back abutment length of 398'-0" and the out-to-out deck width is 35'-2". Bridge to be rehabilitated as shown using road closure with detoured traffic.

No Salvage



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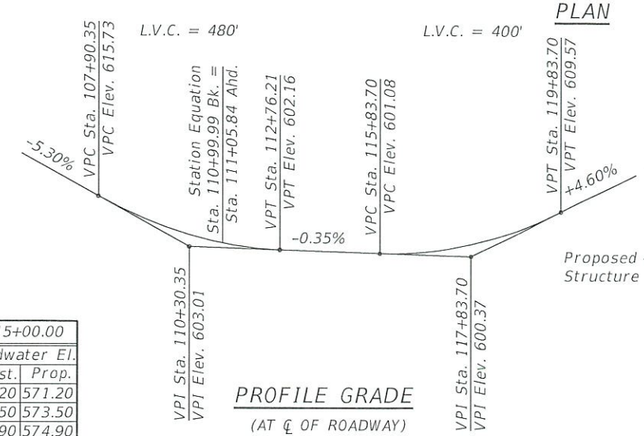
SEP 18 2018

AS A BASIS FOR PREPARATION OF DETAILED PLANS

SCOPE OF WORK

1. Remove and replace existing concrete deck.
2. Make new deck fully composite throughout.
3. Reconfigure existing abutments and wingwalls to semi-integral configuration.
4. Clean, paint, and reuse fixed and expansion bearings at the piers. Replace bearings at abutments.
5. Repair steel beams and diaphragms, as necessary.
6. Clean and paint existing structural steel.



DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)				
	W. Abut.	Pier 1	Pier 2	E. Abut.	Item 113
Q100	592.43	555.03	553.85	590.56	5
Q200	592.43	555.03	553.85	590.56	
Design	592.43	555.03	553.85	590.56	

WATERWAY INFORMATION

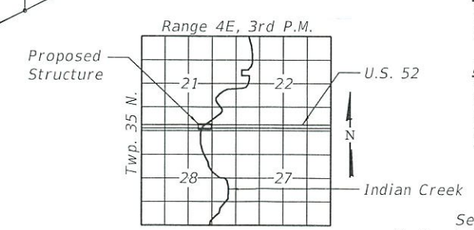
Drainage Area = 232.4 sq. mi. Low Grade Elev. 600.80 @ Sta. 115+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Ft² Exist.	Opening Ft² Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	6,110	1,216	1,216	571.00	0.30	0.30	571.20	571.20
Design	50	8,920	1,529	1,529	573.20	0.40	0.40	573.50	573.50
Base	100	10,200	1,727	1,727	574.50	0.40	0.40	574.90	574.90
Overtopping	200	11,400	1,967	1,967	576.00	0.50	0.50	576.50	576.50
Max. Calc.	500	13,000	2,026	2,026	576.40	0.50	0.50	577.00	577.00

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

LOADING HS20-44 (New Const.)



LOCATION SKETCH

DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 4,000 psi (Superstructure)
fy = 60,000 psi (Reinforcement)

FIELD UNITS (Existing Construction)

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M223 Grade 50)
fy = 36,000 psi (M183)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Horizontal Bedrock Acceleration Coefficient (A) = 0.036g
Site Coefficient (S) = 1.0

HIGHWAY CLASSIFICATION

F.A.P. Rte. 607 - U.S. Rte. 52
Functional Class: Minor Arterial
ADT: 1,872 (2020); 2,232 (2040)
ADTT: 286 (2020); 341 (2040)
DHV: 268 (2040)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
2-Way Traffic
Directional Distribution: 50/50

GENERAL PLAN & ELEVATION
U.S. ROUTE 52 OVER INDIAN CREEK
F.A.P. RTE. 607 - SEC. (124BR)ES
LASALLE COUNTY
STATION 113+70.00
STRUCTURE NO. 050-0201

FUHRMANN ENGINEERING
2852 S. 11th STREET
SPRINGFIELD, IL 62703
P: 217-529-5577

DESIGNED -	JMM	09/06/2018	REVISED -		
CHECKED -	EML	09/06/2018	REVISED -		
DRAWN -	JMM	09/06/2018	REVISED -		
CHECKED -	EML	09/06/2018	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
607	(124BR)ES	LASALLE	2	1

CONTRACT NO. 66F75

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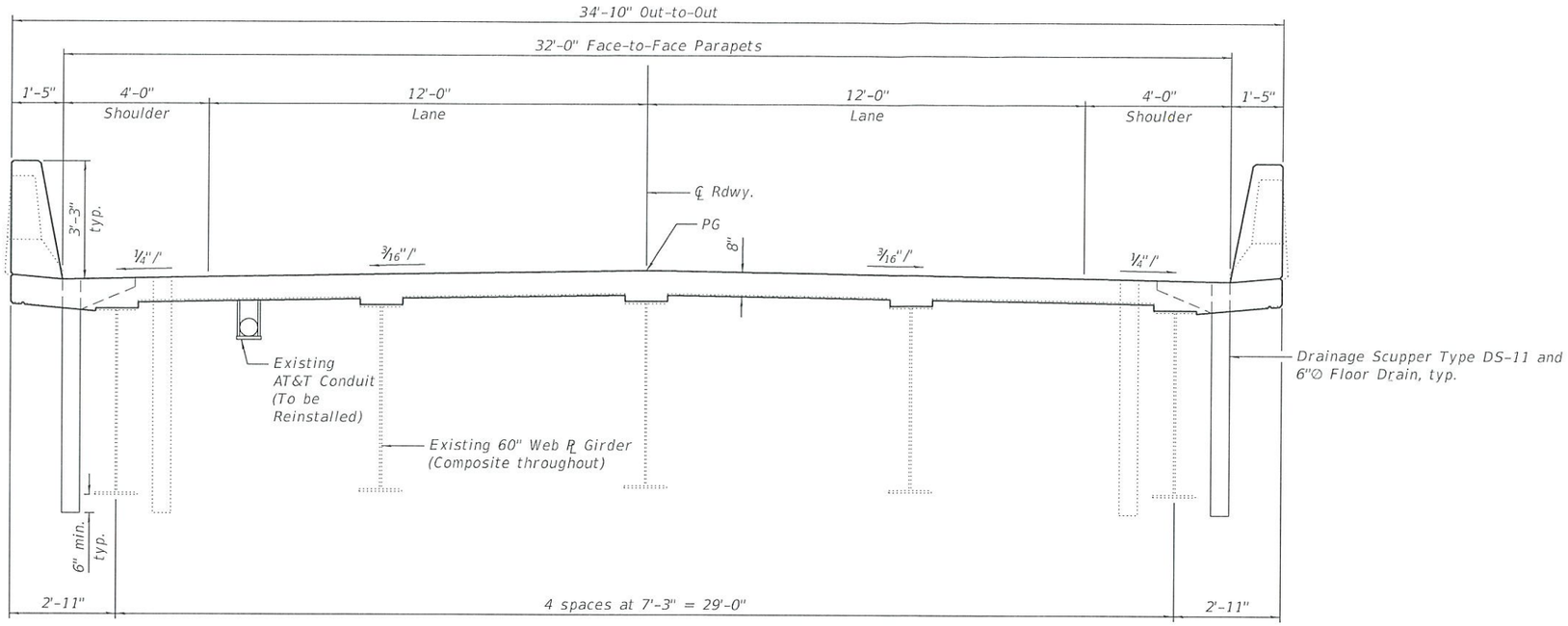
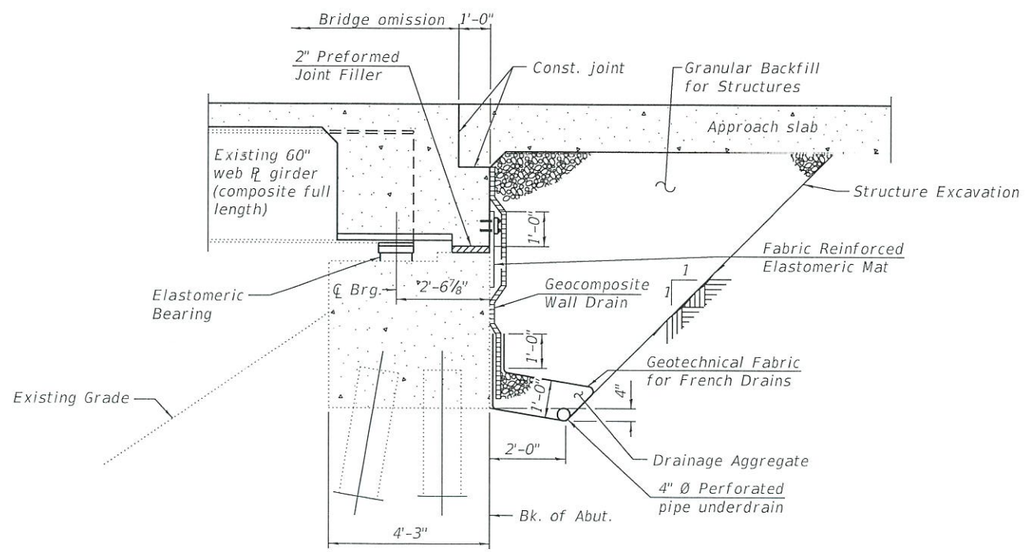


CROSS SECTION

(Looking East)



SECTION THRU SEMI-INTEGRAL ABUTMENT

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

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SEP 18 2018

AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS

U.S. ROUTE 52 OVER INDIAN CREEK

F.A.P. RTE. 607 - SEC. (124BR)ES

LASALLE COUNTY

STATION 113+70.00

STRUCTURE NO. 050-0201

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CHECKED -	EML	09/06/2018	REVISED -		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
607	(124BR)ES	LASALLE	2	2

CONTRACT NO. 66F75

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