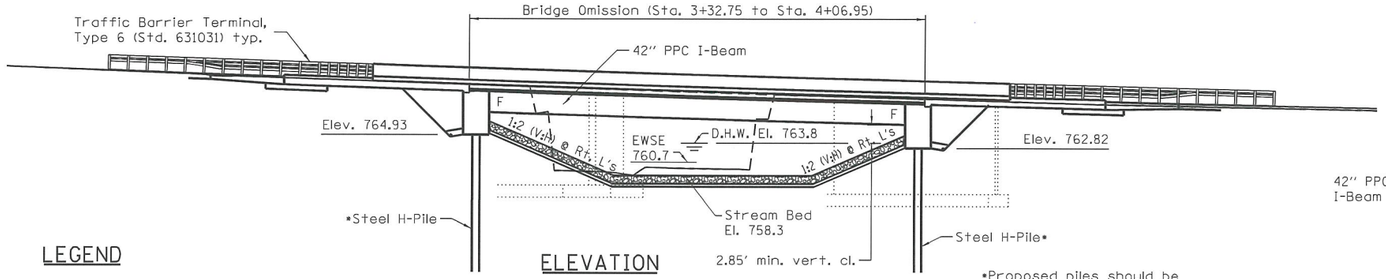
Bench Mark: BM #18 Sta. 4+90.62, 40.37' LT
Railroad Spike in power pole NE Quad of S.N. 019-0021.
Elev. 764.19

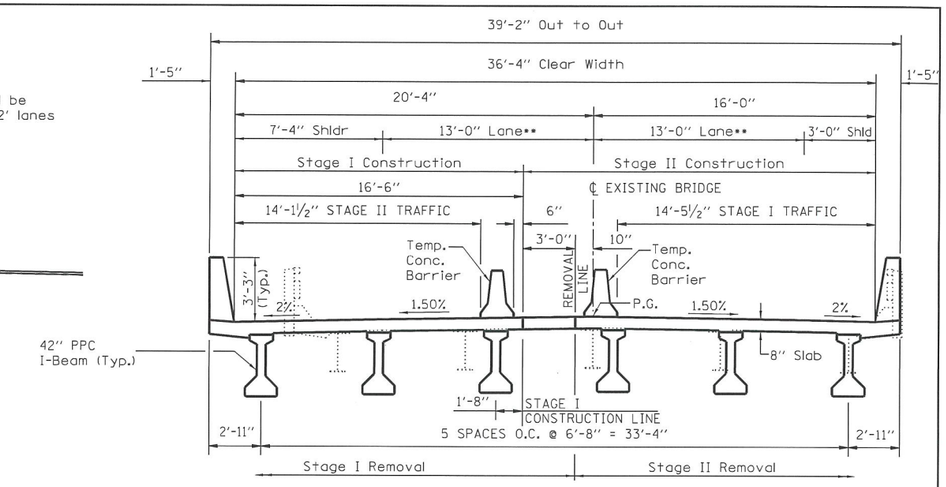
Existing Structure: SN 019-0021 built 1930 as SBI Route 72 Section 125 at Sta. 3+72.5
Re-built 1982 as FA Route 553 (IL 72). Structure consists of single span WF Beams and reinforced concrete deck supported by closed abutments on timber piles.
41'-8 3/4" Bk to Bk of Abutments.
34'-0" Out-to-Out Deck.
Structure to be removed and replaced using stage construction.

** The bridge will be striped for 12' lanes



ELEVATION

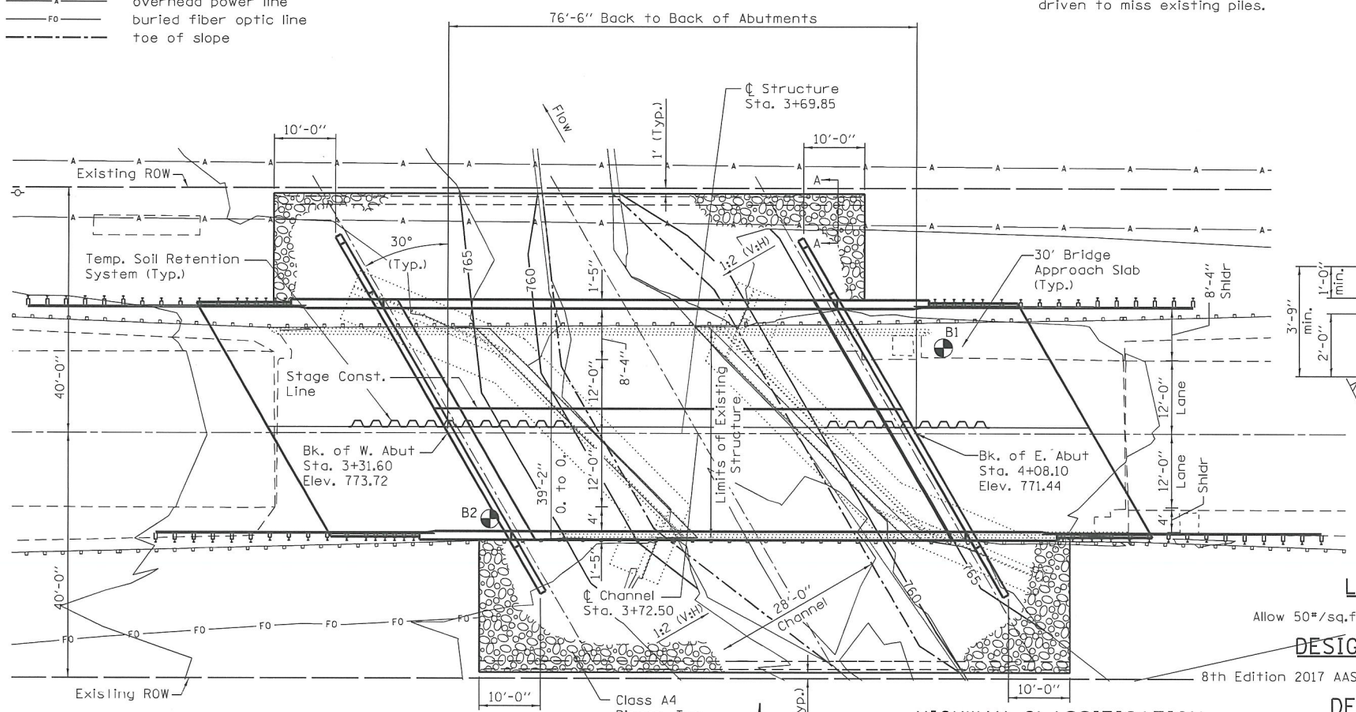
*Proposed piles should be driven to miss existing piles.



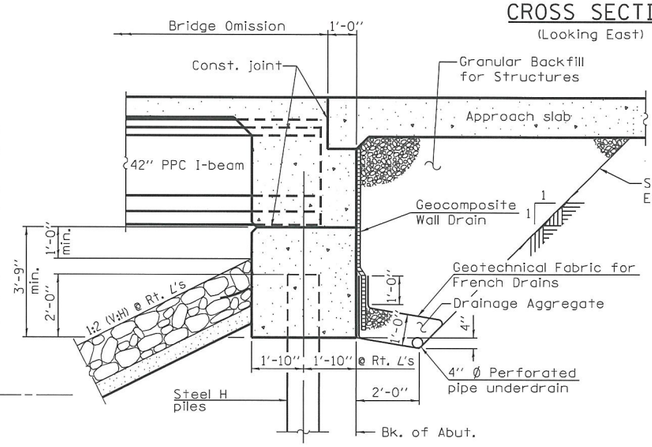
CROSS SECTION
(Looking East)

LEGEND

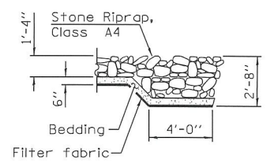
- overhead power line
- buried fiber optic line
- toe of slope



PLAN



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)



SECTION A-A

APPROVED
APR 24 2019
AS A BASIS FOR PREPARATION OF DETAILED PLANS

LOADING HL 93

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

DESIGN SPECIFICATIONS

8th Edition 2017 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2"Ø low lax. strands)
fpbt = 201,960 psi (1/2"Ø low lax. strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.058
Design Spectral Acceleration at 0.2 sec. (SDS) = 0.107
Soil Site Class = C

HIGHWAY CLASSIFICATION

F.A.P. Route 553 - IL 72
Functional Class: Minor Arterial
ADT: 2258 (2020); 2688 (2040)
DHV: 248 (2020) 296 (2040)
ADTT: 684 (2020) 814 (2040)
Design Speed: 55 m.p.h.
Posted Speed: 55 m.p.h.
2-way Traffic Directional Distr. 50:50

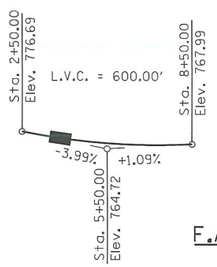
WATERWAY INFORMATION

Drainage Area = 2.9 sq. mi. Low Grade Elev. = 766.8 ft

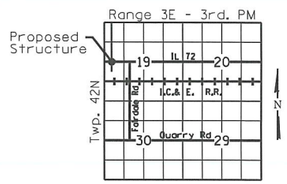
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	330	81	109	763.3	0.7	0.4	764.1	763.7
Hydraulic Design	50	530	91	127	763.8	1.4	0.7	765.2	764.5
Base/Scour Design	100	630	95	134	763.9	1.7	0.9	765.7	764.8
Scour Check	200	690	97	138	764	2.0	1.0	766.0	765.1
Max. Calc.	500	860	103	149	764.3	2.5	1.3	766.8	765.6
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	E. Abut.	Item 113
0100	764.93	762.82	8
0200	764.93	762.82	
Design	764.93	762.82	
Check	764.93	762.82	



PROFILE GRADE
(along ℄ roadway)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL 72 OVER TRIBUTARY TO
KISHWAUKEE RIVER
F.A.P. RTE. 553-SECTION (125BR-1)ES
DEKALB COUNTY
STATION 3+69.85
SN 019-0050 (PROP.)

FILE NAME = 0190050-66H52-TSL-001.dgn	USER NAME = CHAMLIN	DESIGNED - JKC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
CHAMLIN & ASSOCIATES, INC.		DRAWN - LAG	REVISED -			553	(125BR-1)ES	DEKALB	
	PLOT SCALE = 24.0000 ' / in.	CHECKED - JKC	REVISED -					CONTRACT NO. 66H52	
	PLOT DATE = 4/23/2019	DATE - 1/15/19	REVISED -		SCALE: 1"=10' SHEET 1 OF 1 SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT	