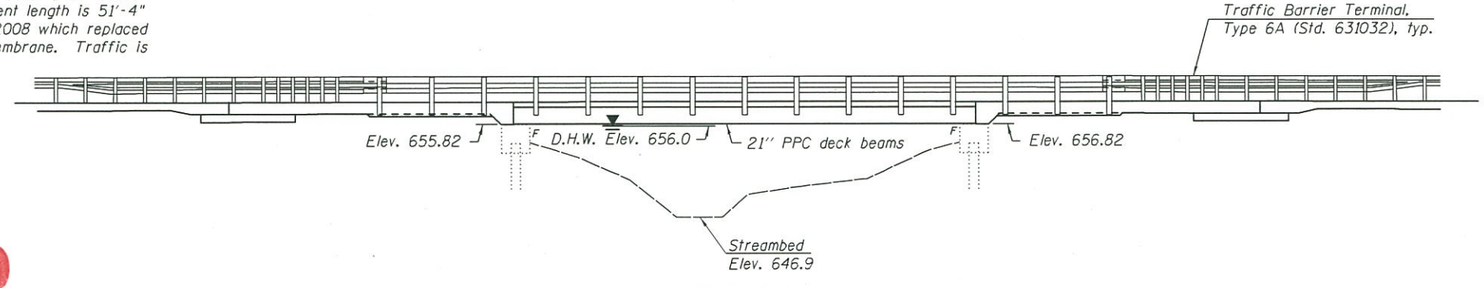
Benchmark: Brass disk on northeast wingwall Sta. 295+00 offset 16' left, elevation 657.663.
Permanent marker (GPS 0070) 250' west of bridge Sta. 292+20 offset 67' right, elevation 663.904.

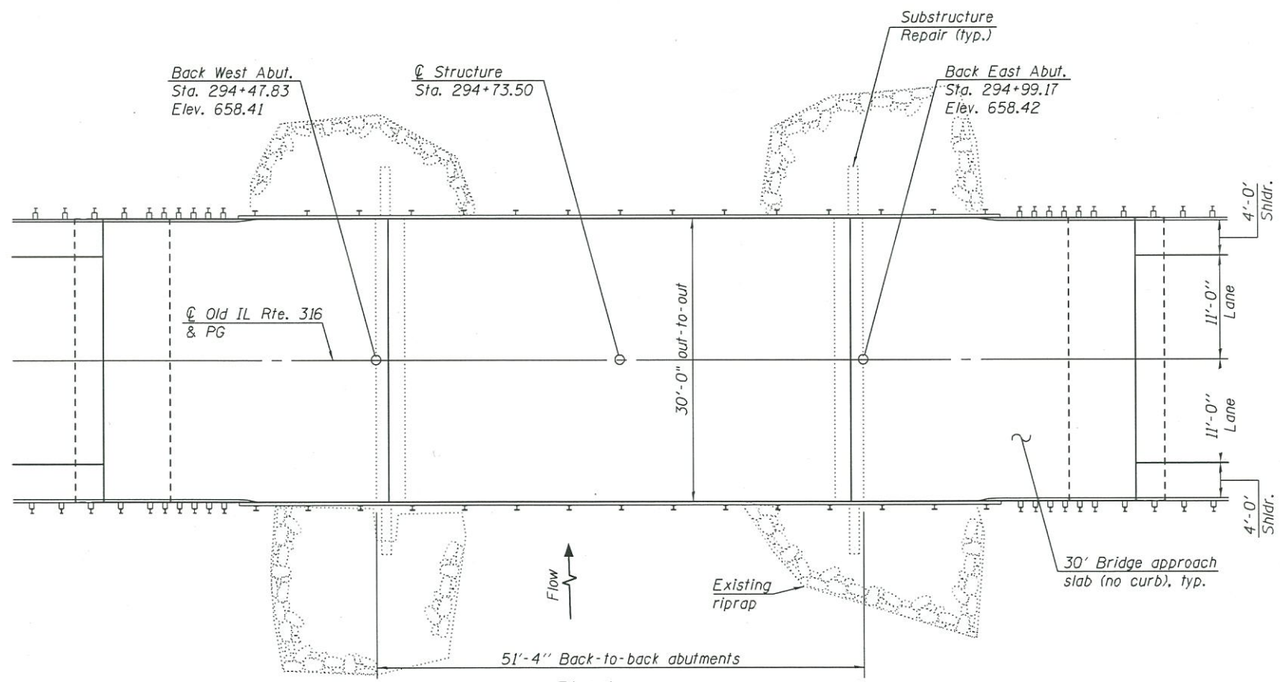
Existing structure: S.N. 015-0070 built in 1986 as F.A.S. Route 1669, Section 6BR-3 at Sta. 294+73.5 as a single span precast prestressed concrete deck beam bridge. Back-to-back of abutment length is 51'-4" supported on steel H-piles. Repairs were made in 2008 which replaced the bituminous wearing surface and waterproofing membrane. Traffic is to be detoured during construction.

Salvage: None.

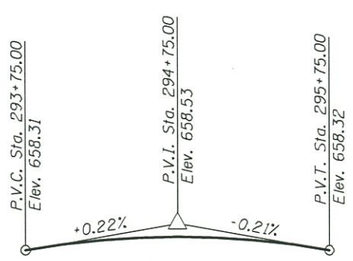


ELEVATION

APPROVED
JUN 15 2016
AS A BASIS FOR PREPARATION OF DETAILED PLANS



PLAN



PROFILE GRADE
(Along Old IL Rte. 316)

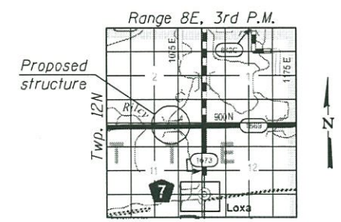
WATERWAY INFORMATION

Drainage Area = 2.6 mi.²

Existing Overtopping Elev. 657.73 @ Sta. 293+50
Proposed Overtopping Elev. 657.98 @ Sta. 287+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	675	184	184	654.7	0.5	0.5	655.2	655.2
Design	50	1100	240	240	656.0	0.5	0.5	656.5	656.5
Base	100	1290	240	240	656.5	0.7	0.7	657.2	657.2
Overtopping Existing	200	1492	240		656.9	0.9		657.8	
Overtopping Proposed	260	1563		240	657.0		1.0		658.0

10 Year velocity through existing bridge = 3.7 ft/s. 10 Year velocity through proposed bridge = 3.7 ft/s.



LOCATION SKETCH

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 and 2016 Interims
1995 FHWA Seismic Retrofit Manual

DESIGN STRESSES

FIELD UNITS (NEW CONST.)
f'c = 3,500 psi (Substructure)
f'c = 4,000 psi (Approaches)
f'c = 5,000 psi (Concrete Wearing Surface)

FIELD UNITS (EXISTING CONST.)
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½" ϕ Low Lax Strands)
fpbt = 201,960 psi (½" ϕ Low Lax Strands)

HIGHWAY CLASSIFICATION

F.A.S. Rte. 1669 - Old IL Rte. 316
Functional Class: Minor Arterial
ADT: 2350 (2018); 2850 (2038)
ADTT: 226 (2018)
DHV: 247
Design Speed: 60 m.p.h.
Posted Speed: 55 m.p.h.
Two-Way Traffic
Directional Distribution: 56:44

LOADING HL-93 (NEW CONST.)
HS-20-44 (EXIST. CONST.)

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

SEISMIC DATA

Seismic Performance Category (SPC) = A
Horizontal bedrock acceleration coefficient = 0.06g
Site Coefficient (S) = 1.5

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	E. Abut.	Item 113
0100	652.82	652.82	8
0200	652.82	652.82	
Design	652.82	652.82	
Check	652.82	652.82	

GENERAL PLAN & ELEVATION
OLD ILLINOIS ROUTE 316 OVER RILEY CREEK BRANCH
F.A.S. RTE. 1669 - SEC. (6BR3)BR
COLES COUNTY
STATION 294+73.5
STRUCTURE NO. 015-0070

DESIGNED -	Frank W. Sharpe
CHECKED -	
DRAWN -	R. Laughlin
CHECKED -	

June 15, 2016

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

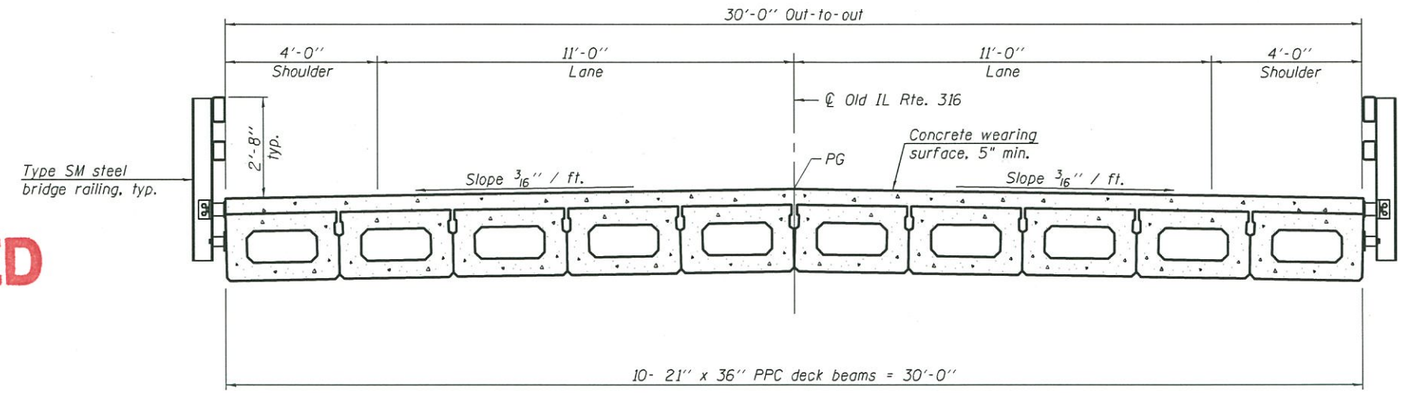
SHEET NO. 1 OF 2 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1669	(6BR3)BR	COLES		
		CONTRACT NO. 74561		
		ILLINOIS FED. AID PROJECT		

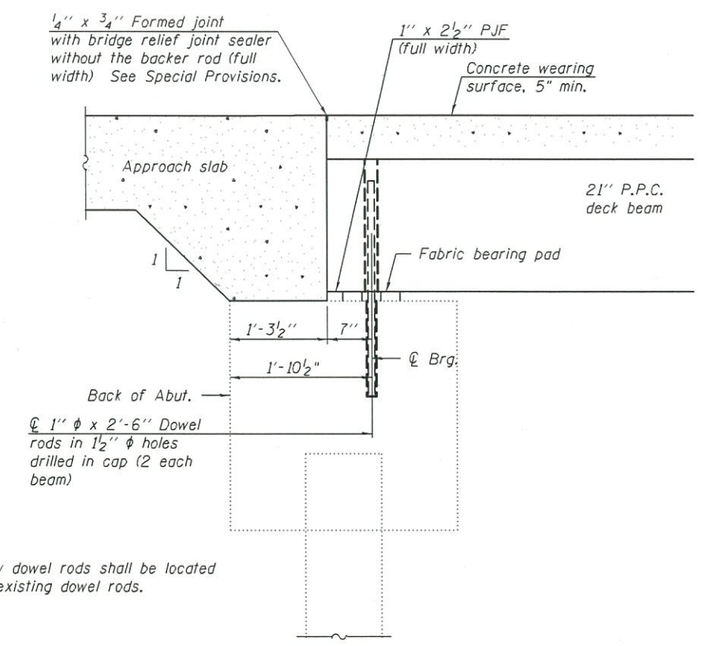
APPROVED

JUN 15 2016

AS A BASIS FOR
PREPARATION OF DETAILED PLANS



CROSS SECTION
(Looking East)



Note:
New dowel rods shall be located to miss existing dowel rods.

SECTION THRU ABUTMENT

DETAILS
OLD ILLINOIS ROUTE 316 OVER
RILEY CREEK BRANCH
F.A.S. RTE. 1669 - SEC. (6BR3)BR
COLES COUNTY
STATION 294+73.5
STRUCTURE NO. 015-0070

DESIGNED -	Frank W. Sharpe
CHECKED -	
DRAWN -	R. Laughlin
CHECKED -	

June 15, 2016

STATE OF ILLINOIS
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