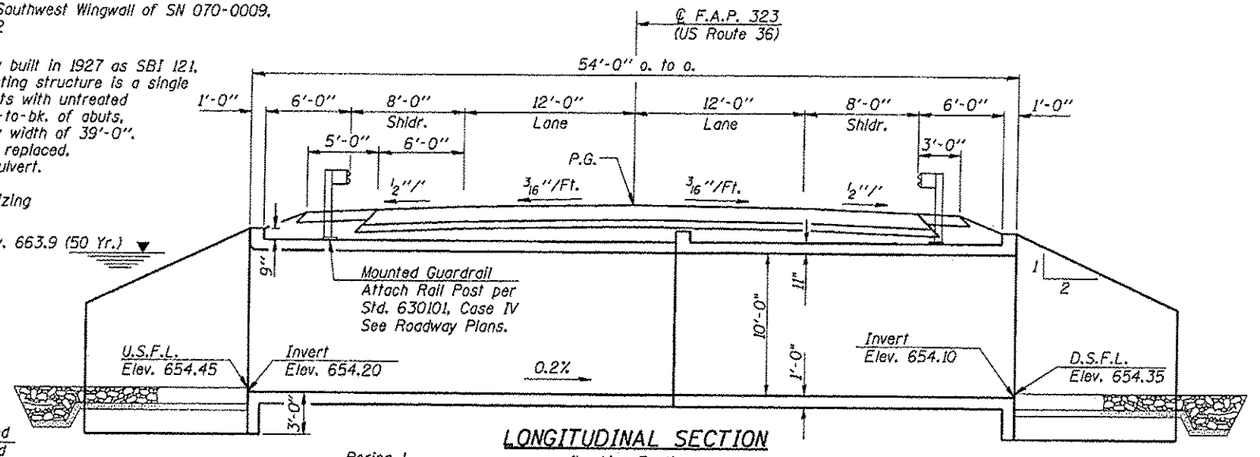
B.M. #4666-1 Chiseled Square on top of Southwest Wingwall of SN 070-0009. Station 316+58.00, 21.91' Rt., Elev. 667.02

Existing Structure: SN 070-0009, originally built in 1927 as SBI 121, Section 142B at Station 316+75. The existing structure is a single span RC T-beam bridge on closed abutments with untreated timber pile supported footings, 33'-0" bk.-to-bk. of abuts, 42'-4" o.-o. of deck with a clear roadway width of 39'-0". The existing structure will be removed and replaced, in stages, with a double 12'x10' CIP box culvert.

Traffic shall be maintained at all times utilizing Stage Construction.

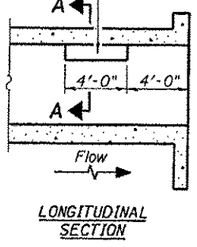
No Salvage.

Note: Precast culvert option will not be allowed at this site.

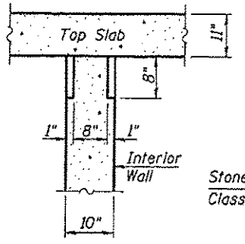


LONGITUDINAL SECTION
(Looking East)

Notch formed by rough finished board attached to and removed with form work, each interior wall. (Do not chamfer).

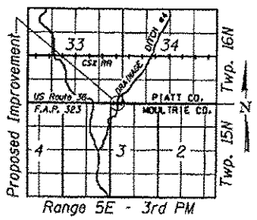


LONGITUDINAL SECTION

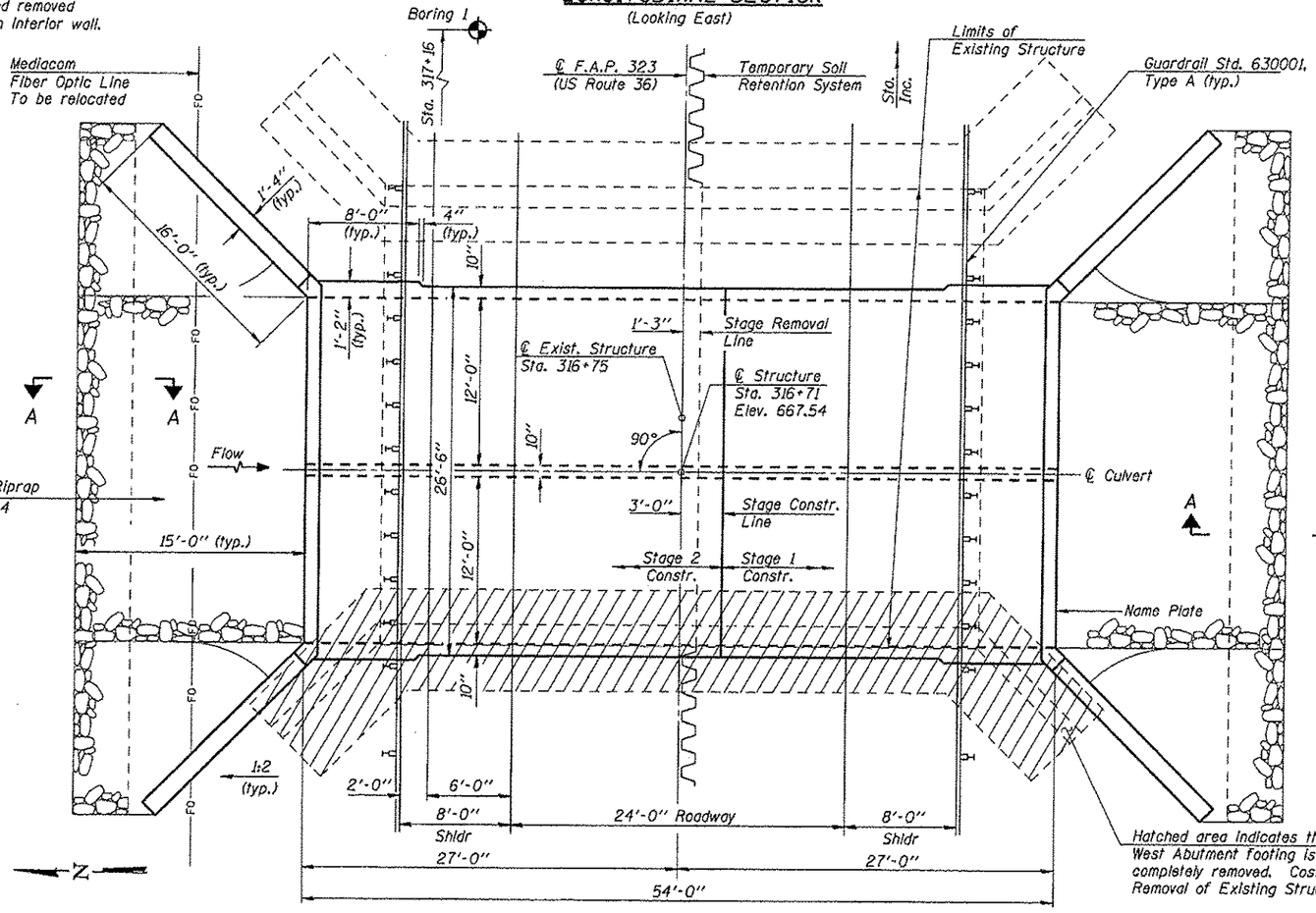


SECTION A-A

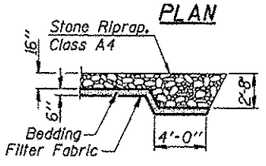
PHOEBE NESTING SITE DETAILS
(Downstream End Only)



LOCATION SKETCH



PLAN



SECTION A-A

Boring 2

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	US	DS
	651.20	651.10

WATERWAY INFORMATION

Drainage Area = 10.3 Sq. Mi. Existing Low Grade Elev: 667.35 ft. @ Sta. 316+56.4
Proposed Low Grade Elev: 667.50 ft. @ Sta. 316+71

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	534	198	190	662.4	-	0.5	662.4	662.9
Design	50	797	243	226	663.9	0.1	0.7	664.0	664.6
Base	100	905	252	233	664.2	-	1.0	664.2	665.2
Overtopping									
Max. Calc.	500	1159	257	240	665.0	0.3	1.9	665.3	666.9

10 year velocity through existing bridge = 2.85 fps
10 year velocity through proposed culvert = 2.82 fps

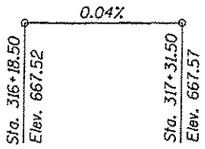
GENERAL NOTES

1. Layout of slope protection system may be varied in field to suit ground conditions as directed by Engineer.

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Stone Riprap, Class A4	Sq. Yd.	138
Filter Fabric	Sq. Yd.	138
Removal of Existing Structures	Each	1
Concrete Box Culverts	Cu. Yd.	198.5
Reinforcement Bars	Pound	37580
Temporary Soil Retention System	Sq. Ft.	307
Name Plates	Each	1
Bar Splicers	Each	142



PROFILE GRADE
(along ℄ F.A.P. Rte. 323)

STATION 316+71
BUILT 20 BY
STATE OF ILLINOIS
F.A.P RTE. 323
SEC. (142BY)BR
LOADING HS20
STR. NO. 070-2018

NAME PLATE
See Std. 515001

DESIGN SPECIFICATIONS
2002 AASHTO

LOADING HS20-44

Allow 50#/Sq. Ft. for future wearing surface

DESIGN STRESSES
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

INDEX OF SHEETS

GENERAL PLAN
US ROUTE 36 OVER DRAINAGE DITCH NO. 4
F.A.P. ROUTE 323 SECTION (142BY)BR
MOULTRIE COUNTY
STATION 316+71
STRUCTURE NO. 070-2018

MICHAEL D. CUMMINS
081-004822
LICENSED STRUCTURAL ENGINEER OF SPRINGFIELD, ILLINOIS
Michael D. Cummins (8/6/14)
(Expires 11/30/2014)

CEC Cummins Engineering Corporation
Civil and Structural Engineering

JOB = 2223.1	DESIGNED A.A.N. & T.S.H.
FILE = 0702018-74165-001-gpe.dgn	CHECKED M.D.C.
DATE = 8/5/2014	DRAWN T.S.H.
	CHECKED M.D.C.

Sheet	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1 of 7	323	(142BY)BR	MOULTRIE	35	24
			CONTRACT NO. 74165		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		