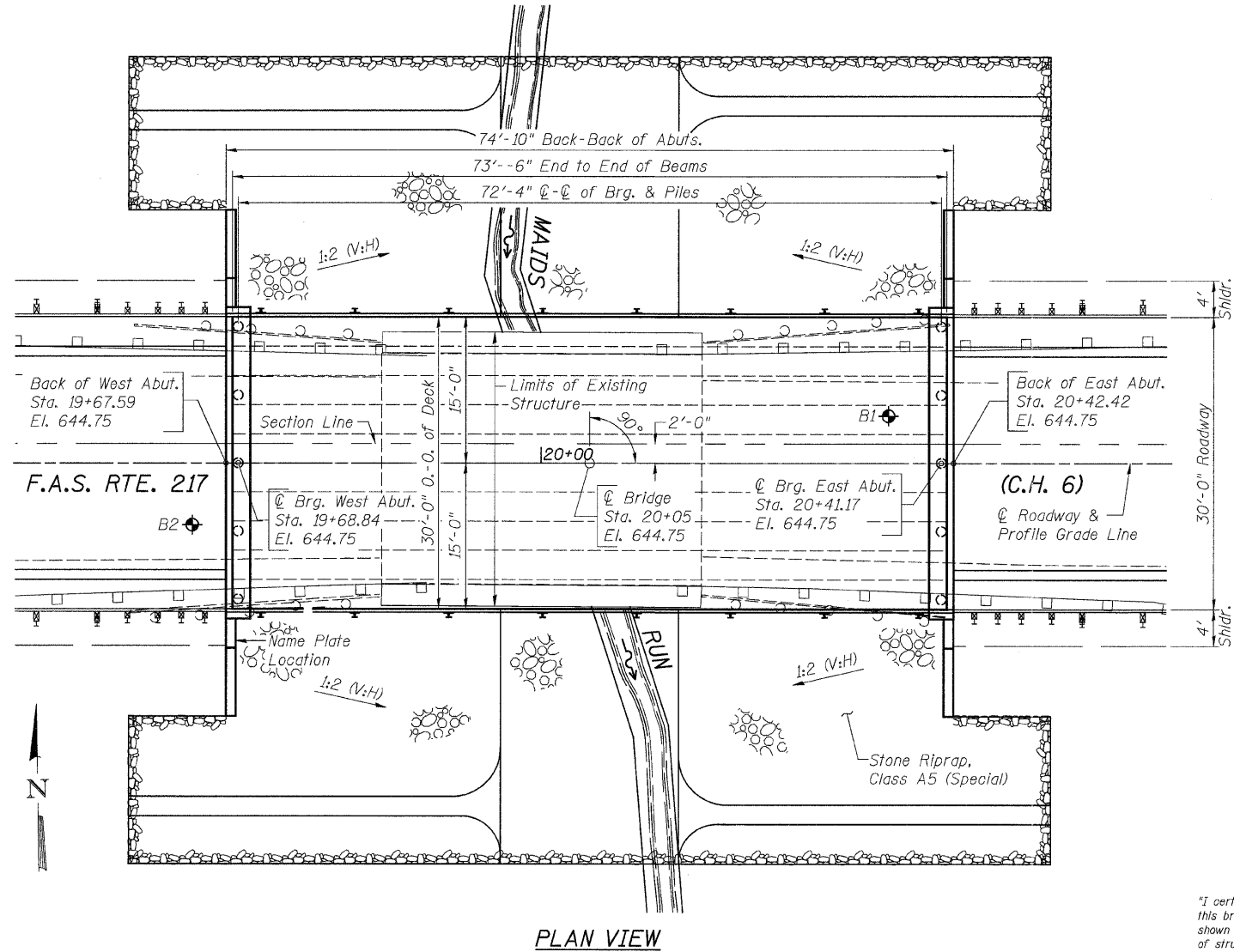
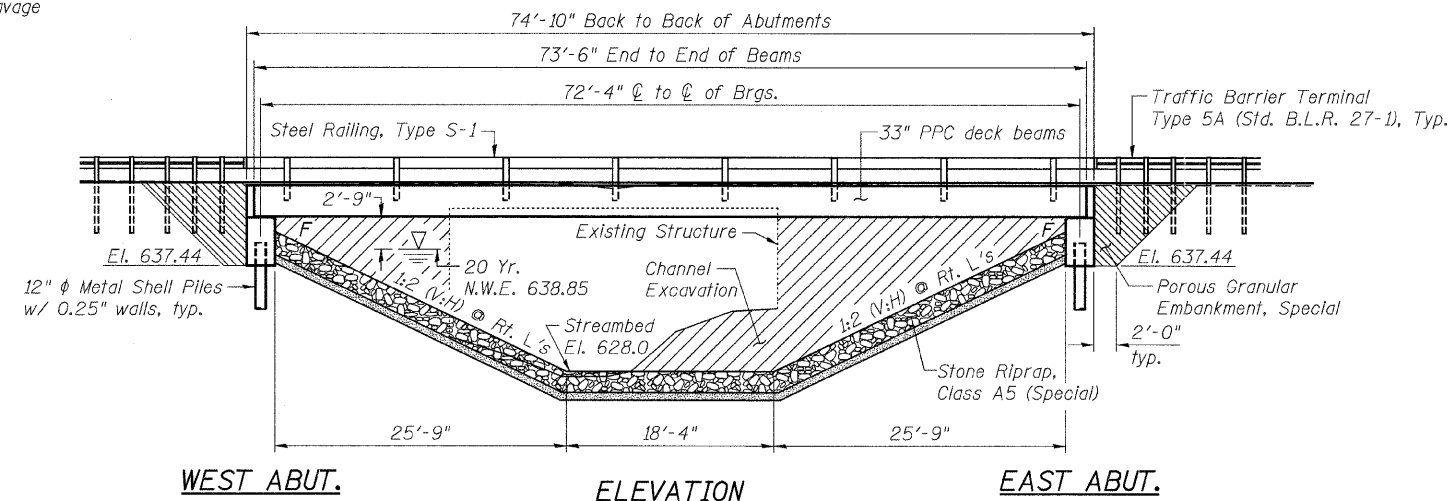


EXISTING STRUCTURE: S.N. 066-3030

Originally built in 1958 under Section 24B. The existing structure is a single span (1 @ 31'-0") reinforced concrete slab bridge on closed abutments with wooden piles. 33'-0" back to back of abutments and 28'-0" out to out of deck. Structure to be removed and replaced. Road shall be closed to traffic during construction.

No slavage

BENCH MARK: Chisled "□" on the C of the North hub guard of Existing Bridge
El. 645.29



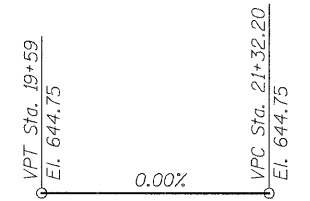
INDEX OF SHEETS

- 1 General Plan & Elevation
- 2 Riprap & Pile Layout
- 3 33" x 36" PPC Deck Beam
- 4 33" x 36" PPC Deck Beam Details
- 5 West Abutment Details
- 6 East Abutment Details
- 7 Steel Railing, Type S1 Details
- 8 Metal Shell Pile Details
- 9-10 Boring Logs

MAIDS RUN
BUILT 2012 BY
MERCER COUNTY
SECTION 05-00096-00-BR
F.A.S. RT. 217 STATION 20+05
STR. NO. 066-3031 LOADING HL-93

NAME PLATE LETTERING

Refer to Std. 515001-03



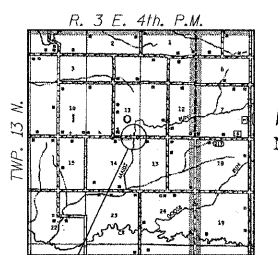
WATERWAY INFORMATION

DRAINAGE AREA	6.90 Sq. Mi.
DESIGN DISCHARGE (20 YR.)	1,270 C.F.S.
EXISTING OPENING	242 Sq. Ft.
REQUIRED OPENING	412 Sq. Ft.
PROPOSED OPENING	412 Sq. Ft.
CREATED HEAD (20 YR.)	< 0.5'
100 YR. DISCHARGE	1,920 C.F.S.
CREATED HEAD (100 YR.)	< 1.0'
HIGH WATER ELEV. (100 YR.)	640.18 Ft.



Brian K. Converse
DATE: 12/5/2011
EXPIRES 11/30/12

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans, the design is an economical one for the style of structure and complies with requirements of the current AASHTO Bridge Design Specifications."



TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.	—	630	630
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	37	—	37
Removal of Existing Structures	Each	—	—	1
Structure Excavation	Cu. Yd.	—	240	240
Concrete Structures	Cu. Yd.	—	38.0	38.0
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	2,205	—	2,205
Reinforcement Bars, Epoxy Coated	Pound	—	4,600	4,600
Steel Railing, Type S1	Foot	150	—	150
Furnishing Metal Pile Shells 12" x 0.250"	Foot	—	448	448
Driving Piles	Foot	—	448	448
Test Pile Metal Shells	Each	—	2	2
Pile Shoes	Each	—	10	10
Name Plates	Each	1	—	1
Waterproofing Membrane System	Sq. Yd.	249.5	—	249.5
Portland Cement Mortar Fairing Course	Foot	662	—	662
Permanent Survey Marker, Type I	Each	—	1	1
Porous Granular Embankment, Special	Ton	—	200	200
Stone Riprap, Class A5 (Special)	Ton	—	747	747

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
- * See Special Provisions.
- ** Channel to be transitioned to fit proposed structure inside Right-Of-Way.

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th. Edition and 2011 Interim

DESIGN STRESSES

FIELD UNITS

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 (1/2" φ Low Lax Strands)
fpbt = 201,960 psi (1/2" φ Low Lax Strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.093g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.135g
Soil Site Class = D

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut. 637.44	E. Abut. 637.44
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GENERAL PLAN & ELEVATION
C.H. 6 OVER MAIDS RUN CREEK
F.A.S. RT. 217 - SEC. 05-00096-00-BR
MERCER COUNTY
STATION 20+05
STRUCTURE NO. 066-3031



DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - RON ALLEN	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -

MERCER COUNTY
F.A.S. 217 (C.H. 6) OVER MAIDS RUN
STATION 20+05

STRUCTURAL SHEET NO. 1 OF 10 SHEETS

F.A.S. RTE. 217	SECTION 05-00096-00-BR	COUNTY MERCER	TOTAL SHEETS 21	SHEET NO. 8
WHA# 1128006		CONTRACT NO. 89432		
[ILLINOIS] FED. AID PROJECT BRS-0217102				

FILE = S:\S\Project\1128006\B-bridge Drawings\1128006_GFC.dgn