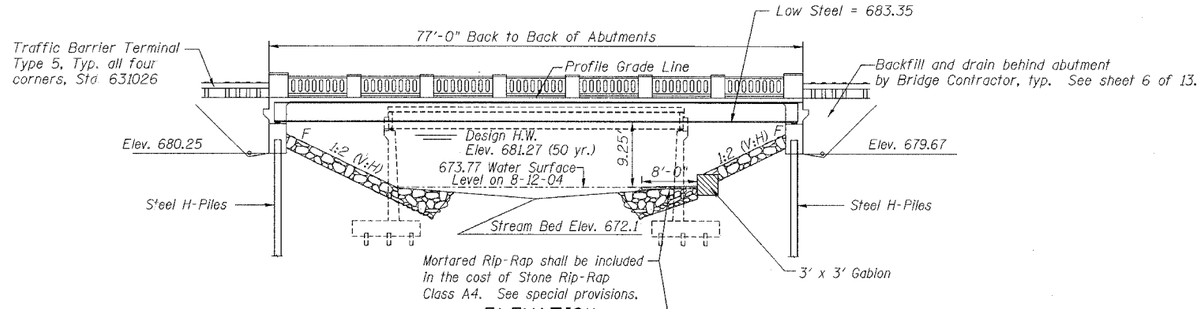
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2661	00-00095-11-BR	LAKE	28	10
GENERAL PLAN AND ELEVATION				
C-91-169-00	ILLINOIS			

CONTRACT NO.: 83789

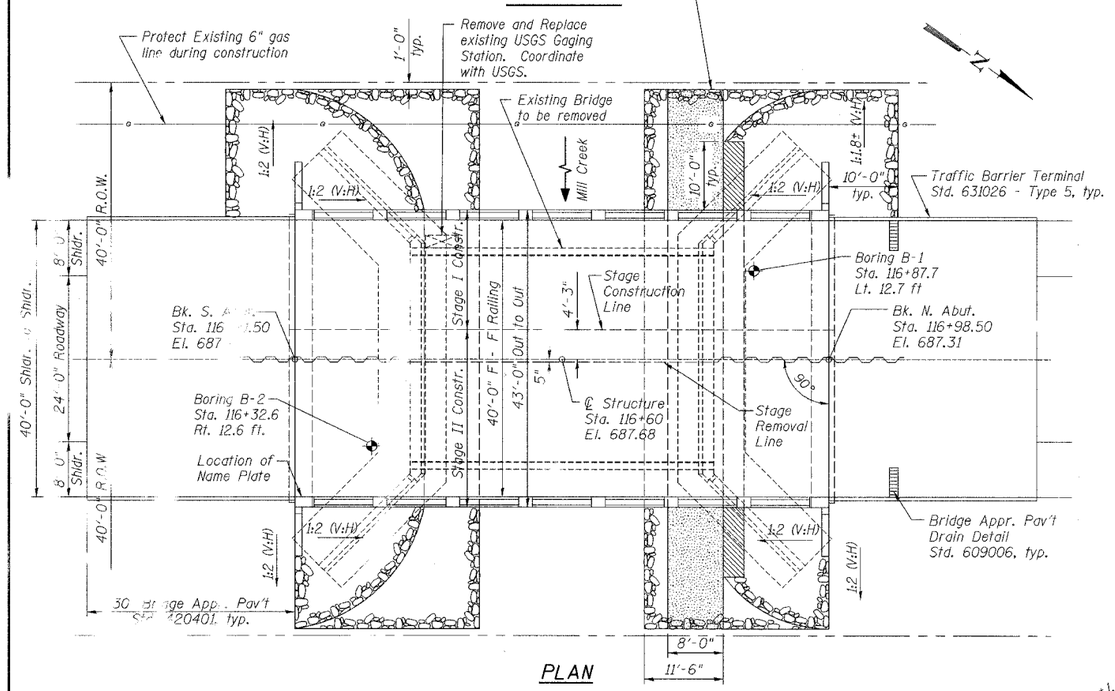
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BENCH MARK:
Chisled " □ " in the Southwest wingwall of S.N. 049-3016
Elevation = 686.12 Sta. 116+39.7, 17' Left

EXISTING STRUCTURE:
S.N. 049-3016, Estimated to have been constructed in 1949 consists of one steel beam span with 7" concrete deck and vertical concrete abutments. The structure length is approximately 42 ft. Bk. to Bk. of abutments. The contractor is to remove the existing structure as required. (No Salvage) The road shall be kept open to traffic at all times of construction by means of staged construction.



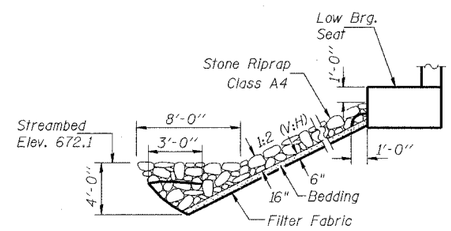
ELEVATION



PLAN

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.
Layout of slope protection system may be varied in the field to suit ground condition as directed by the Engineer.
The Contractor shall drive one (1) steel HP12 x 53 test pile in a permanent location at both Abutments as directed by the Engineer before ordering the remainder of piles.
Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$"Φ, open holes $\frac{15}{16}$"Φ, unless otherwise noted.
Calculated mass of Structural Steel = 75,780 lbs (M270 Grade 50)
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges and web.
Field welding of construction accessories will not be permitted to the bottom flange of girders. Field welding in other areas will be permitted only when approved by the Engineer.
The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B-3/6. See Special Provision for "Cleaning and Painting New Metal Structures".
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
Anchor bolts shall be set before bolting diaphragms over supports.
All exposed concrete edges shall have a $\frac{3}{4}$" x 45 deg. chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground level.
Do not scale dimensions for construction, scale applies only to full size drawings.
No construction joints except those shown on the plans will be allowed unless ordered by the Engineer.
After the girders are set, all elevations for determining fillet heights shall be taken at one time.
Contractor to protect all utilities during construction. See Plan and Profile sheet in Roadway Plans for further information.
Excavation behind existing abutment walls shall be done before removing the existing superstructure. The Contractor shall sawcut the existing abutments at the stage removal line before Stage I removal.
all construction joints shall be bonded.



STONE RIPRAP ANCHOR DETAIL

LOADING HS20-44

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.034
Site Coefficient (S) = 1.0

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		898	898
Porous Granular Embankment	Cu. Yd.		189	189
Stone Riprap, Class A4	Sq. Yd.		506	506
Filter Fabric	Sq. Yd.		527	527
Gabions	Cu. Yd.		21	21
Removal of Existing Structure	Each	1		1
Structure Excavation	Cu. Yd.		225	225
Concrete Structures	Cu. Yd.		35.4	35.4
Concrete Superstructure	Cu. Yd.	112.3		112.3
Bridge Deck Grooving	Sq. Yd.	325		325
Concrete Handrail	Cu. Yd.	15.6		15.6
Protective Coat	Sq. Yd.	419		419
Furnishing & Erecting Structural Steel	Pound	75,780		75,780
Stud Shear Connectors	Each	1134		1134
Reinforcement Bars, Epoxy Coated	Pound	25,110	3580	28,690
Furnishing Steel Piles - HP12x53	Feet		864	864
Driving Steel Piles	Feet		864	864
Test Piles Steel HP12x53	Each		2	2
Temporary Sheet Piling	Sq. Ft.		1573	1578
Name Plates	Each	1		1
Bar Splicers	Each	321	12	333

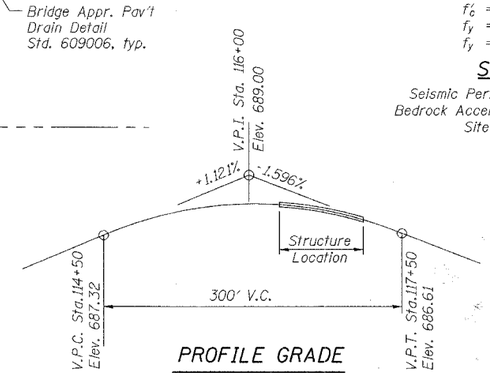
STATION 116+60
BUILT 20__ BY
LAKE COUNTY
HUNT CLUB ROAD (CO. HW. 15)
SECTION 00-00095-11-BR
LOADING HS20-44
STR. NO. 049-3072

NAME PLATE

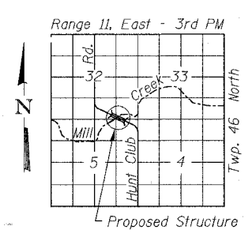
See Std. 515001

INDEX OF SHEETS

1. GENERAL PLAN AND ELEVATION
2. STAGE CONSTRUCTION DETAILS
3. TOP OF SLAB ELEVATIONS
4. SUPERSTRUCTURE
5. SUPERSTRUCTURE DETAILS
6. DIAPHRAGM DETAILS
7. FRAMING PLAN AND DETAILS
8. SOUTH ABUTMENT DETAILS
9. NORTH ABUTMENT DETAILS
10. ANCHOR BOLT DETAILS
11. TEMPORARY CONCRETE BARRIER
12. BAR SPLICER DETAILS
13. BORING LOGS



PROFILE GRADE
ALONG ℄ ROADWAY



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 61.9 sq. mi. Low Grade Elev. = 687.25 @ Sta. 116+60

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.
Design	50	2645	312	433	681.27	0.51	0.14	681.78	681.41
Base	100	3220	326	467	681.70	0.83	0.28	682.59	682.04
Overtopping									
Max. Calc.	500	4386	364	514	682.48	2.11	0.66	684.59	683.14

PLANS PREPARED BY

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Design Firm License Illinois #184 000838
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ALI A. GHARAMTI
061-005080
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
STATE OF ILLINOIS

Signature
Date 12/30/04
Exp. Date 11/30/06

GENERAL PLAN AND ELEVATION
HUNT CLUB ROAD OVER
MILL CREEK
SECTION 00-00095-11-BR
LAKE COUNTY
STATION 116+60.00
STRUCTURE NO. 049-3072

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