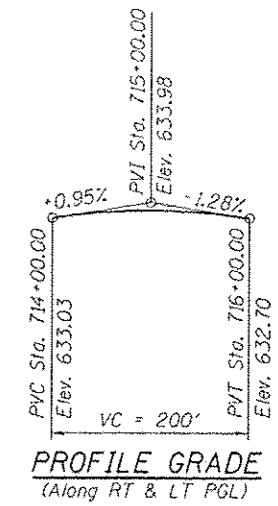
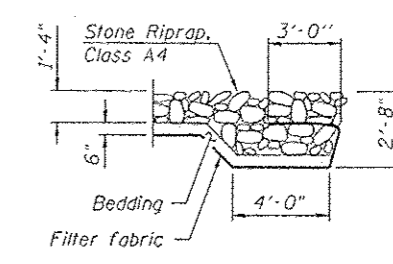
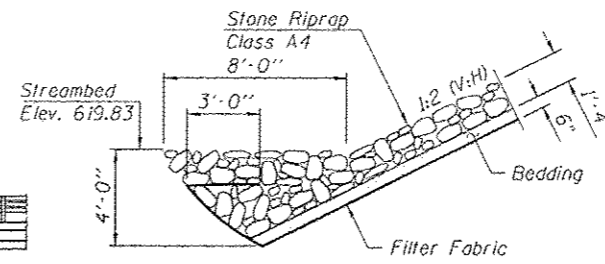
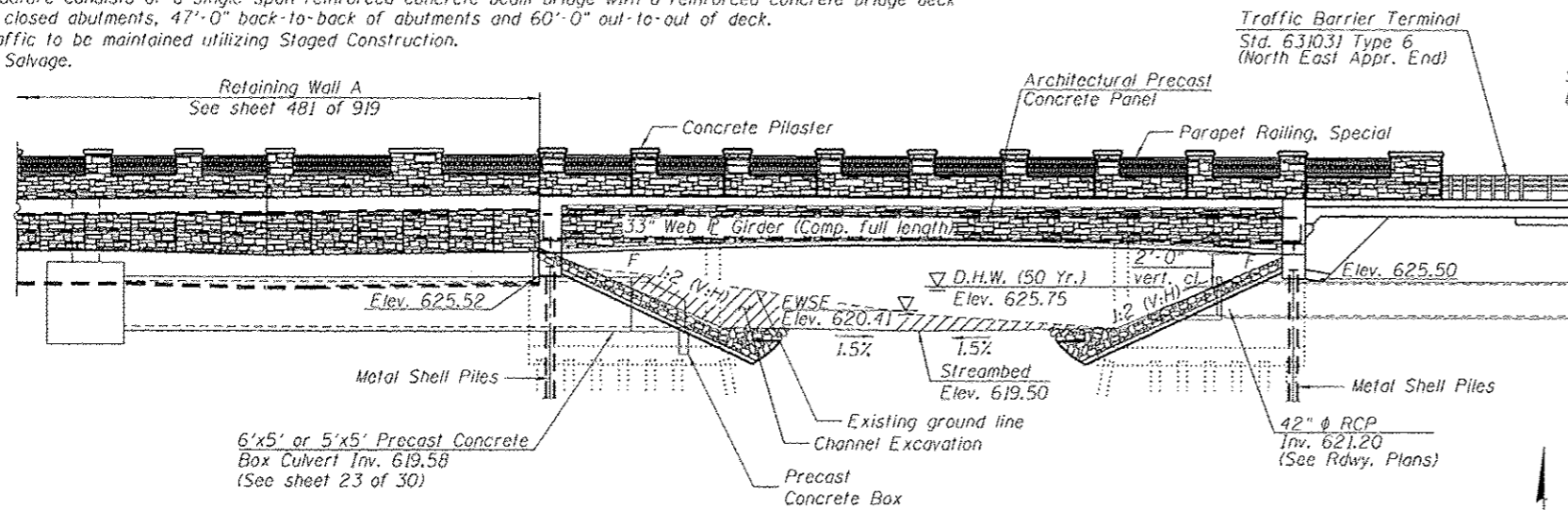


Bench Mark: Square cut on SE corner of handrail at NE corner of bridge over Middle Fork of the North Branch of the Chicago River at Willow Road. Elev. 633.16
 Existing Structure: S.N. 016-0535, built in 1941 as S.A. Route 110, Section 110-1922.4-MFT. The existing structure consists of a single-span reinforced concrete beam bridge with a reinforced concrete bridge deck on closed abutments, 47'-0" back-to-back of abutments and 60'-0" out-to-out of deck.
 Traffic to be maintained utilizing Staged Construction.
 No Salvage.



WATERWAY INFORMATION

Drainage Area = 24.1 sq. mi. Low Grade Elev. 630.44 at Sta. 707+00 (Exist.)
 Low Grade Elev. 629.25 at Sta. 709+50 (Prop.)

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	814	120	202	624.18	0.04	0.00	624.22	623.90
Base	100	943	210	330	626.23	0.10	0.00	626.33	626.12
Max. Calc.	500	1388	258	387	627.34	0.18	0.02	627.52	627.36

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevations (ft.)		
	W. Abut.	E. Abut.
0/100	625.52	625.50
0/500	625.52	625.50

STATION 714+87.44
 BUILT 20... BY
 STATE OF ILLINOIS
 F.A.P. RT. 0305
 SEC. (1920.01,1518,
 2022&1922.4B)R
 LOADING HL-93
 STR. NO. 016-2844

NAME PLATE

LOADING HL-93

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

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)

PRECAST UNITS

$f'_c = 4,500$ psi (Precast Panel)
 $f'_c = 5,000$ psi (Precast Culvert)
 $f_y = 65,000$ psi (Welded Wire Fabric, Precast Culvert)

SEISMIC DATA

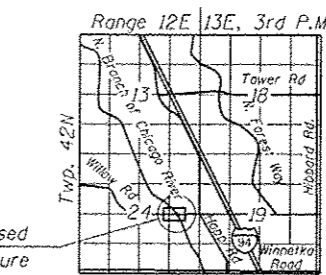
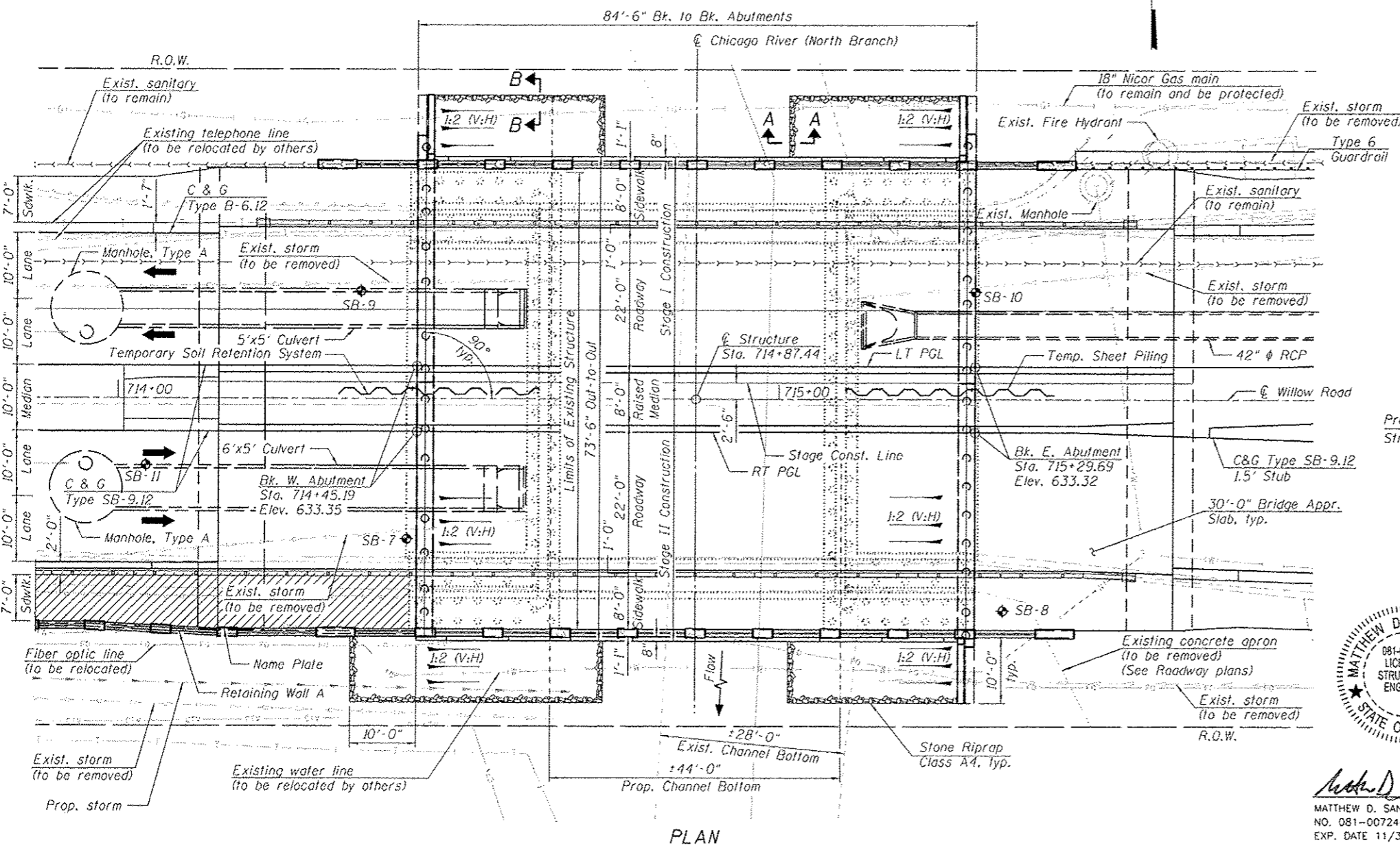
Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.058g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.102g
 Soil Site Class = C

GENERAL PLAN AND ELEVATION

**WILLOW ROAD OVER
 MIDDLE FORK OF NORTH BRANCH
 OF THE CHICAGO RIVER**

F.A.P. RTE. 0305
 SEC. (1920.01,1518,2022&1922.4B)R

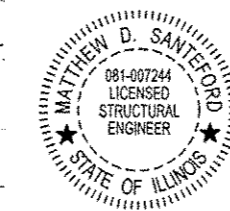
COOK COUNTY
 STATION 714+87.44
 STRUCTURE NO. 016-2844



LOCATION SKETCH

APPROVED
 For Structural Adequacy Only

Matthew D. Santeford
 Engineer of Bridges & Structures



Matthew D. Santeford 12/3/2012
 MATTHEW D. SANTEFORD, P.E., S.E.
 NO. 081-007244
 EXP. DATE 11/30/2012



USER NAME = jrmickow	DESIGNED - JRM	REVISED -
DESIGNED - JRM	CHECKED - MDS	REVISED -
PLLOT SCALE = 20:0 (1" = 20')	DRAWN - DMG	REVISED -
PLLOT DATE = 12/3/2012	CHECKED - MDS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0305	(1920.01,1518,2022&1922.4B)R	COOK	919	451

CONTRACT NO. 60T35
 ILLINOIS FED. AID PROJECT