

Bench Mark: BM_RR_01: Square cut on light pole foundation at SW corner of Russell Rd. and I-94 NB exit Elev. 742.887.
 BM_RR_02: Square cut on north curb Russell Rd. ± 90 ft west of I-94 SB exit Elev. 753.758.

Existing Structure : S.N. 049-0078 was built in 1959 with two lane roadway under FAI-94 Section 49-1 HB at Sta. 14+52.377. The existing structure has three simple spans, with a length of 151'-5 1/4" back-to-back of abutments, and a constant out-to-out width of 35'-2". The superstructure consists of a 9" thick reinforced concrete deck built composite with 42" deep PPC I-beams. The substructure consists of two stub abutments on concrete piles and two multi-column shoulder piers on spread footings.

The existing bridge is to be removed and replaced. Traffic shall be maintained using a detour.

No Salvage.

These plans are for the fabrication of the structural steel and bearings. All work shown that is not related to the fabrication is identified as "Not included in this contract" or For information only."

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.074g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.117g
 Soil Site Class = D

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications with 2010 Interims

LOADING HL-93

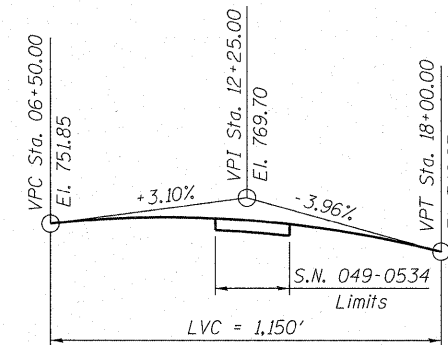
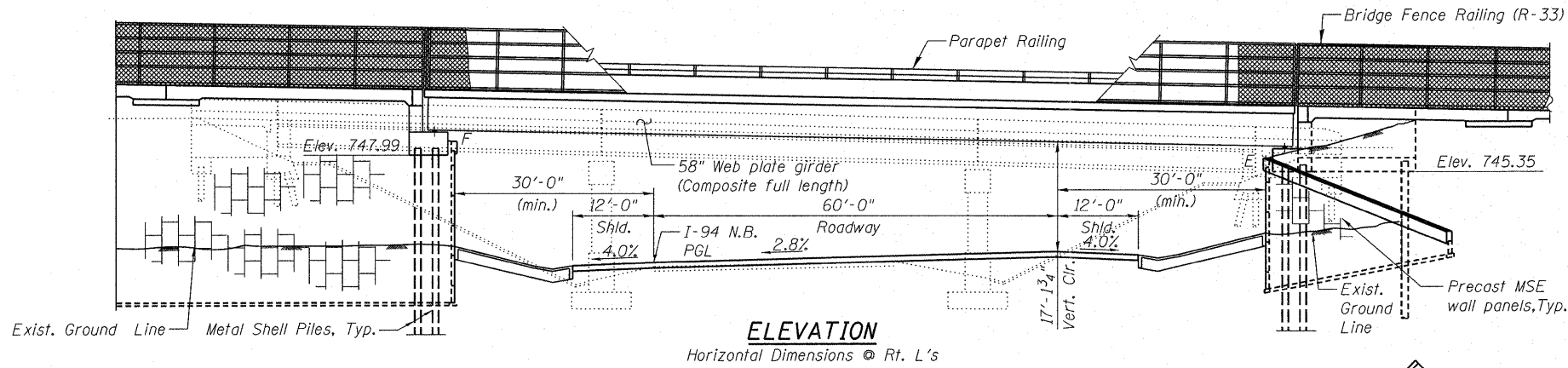
Allow 50#/sq. ft. for future wearing surface.

CURVE DATA

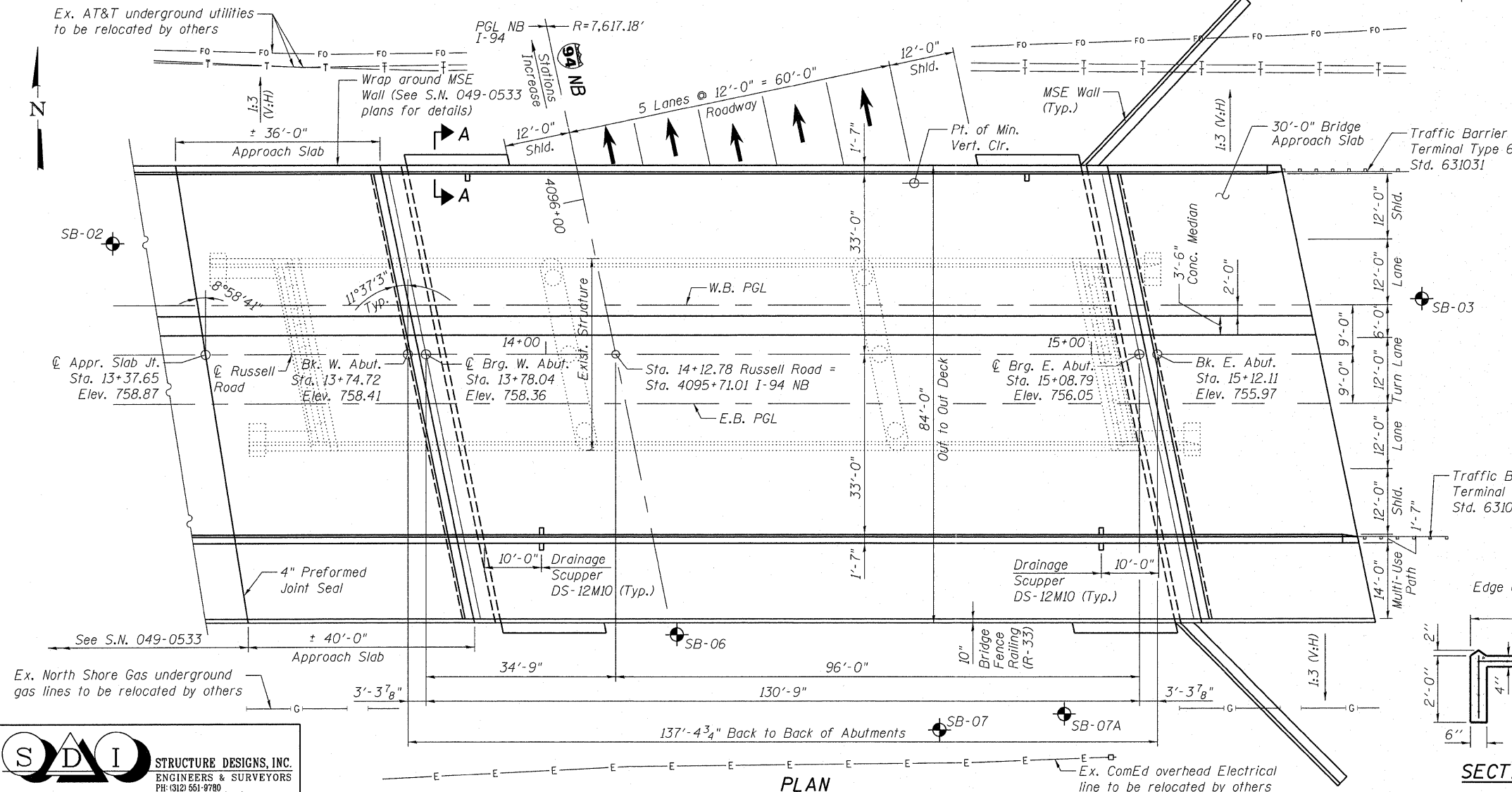
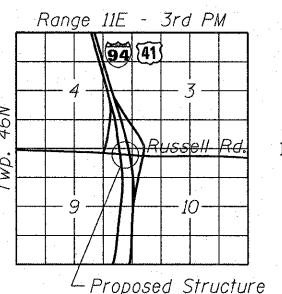
(NB I-94)
 P.I. = Sta. 4094+52.48
 Δ = 15° 57' 58" (LT)
 D = 0° 45' 08"
 R = 7,617.18'
 L = 2,122.61'
 T = 1,068.23'
 E = 74.54'
 e = 2.8%
 P.C. STA. = 4083+84.25
 P.T. STA. = 4105+06.86

DESIGN STRESSES
FIELD UNITS

f'_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 50,000 psi (AASHTO M270 Grade 50)
 f_y = 36,000 psi (AASHTO M270 Grade 36)



PROFILE GRADE
 (Northbound I-94)



STATION 14+12.78
 BUILT 2012 BY
 STATE OF ILLINOIS
 FAU RTE. 1199 SEC. 49-1HBR
 LOADING HL-93
 STR. NO. 049-0534

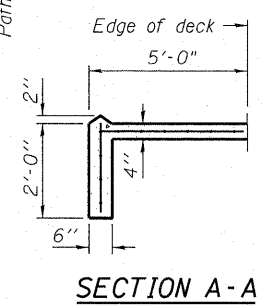
NAME PLATE
 See Std. 515001

FOR INFORMATION ONLY



Signed: *Olufemi A. Oladeinde* 12/06/2011
 OLUFEMI A. OLADEINDE, P.E., S.E. Date
 LICENSE EXPIRES 11-30-2012

GENERAL PLAN & ELEVATION
RUSSELL ROAD OVER NORTHBOUND I-94
F.A.U. RTE. 1199 - SEC. 2011-056-F
LAKE COUNTY
STATION 14+12.78
STRUCTURE NO. 049-0534



SDI STRUCTURE DESIGNS, INC.
 ENGINEERS & SURVEYORS
 PH: (312) 551-9780
 www.structuredesignsinc.com

FILE NAME =	USER NAME =	DESIGNED - LRT / AG	REVISIONS -
		CHECKED - OAO / LRT	REVISIONS -
	PLOT SCALE = N.T.S.	DRAWN - TCS / AG	REVISIONS -
	PLOT DATE = 09/01/2011	CHECKED - AG	REVISIONS -

DESIGNED - LRT / AG	REVISIONS -
CHECKED - OAO / LRT	REVISIONS -
DRAWN - TCS / AG	REVISIONS -
CHECKED - AG	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1199	2011-056-F	LAKE	19	12
CONTRACT NO. 60P69			ILLINOIS FED. AID PROJECT	

SHEET NO. OF SHEETS