

MODEL: 20 MODEL FILE NAME: p:\p\hdp\hds\001\HDR\_US\_Centrol\_01\Documents\1\DOT\DOT\_PTB\_192-05\_Foster-19016.0\_CAD\_BIM\6.2\_WIP\6.2\_3\_CADD\_Sheet\Roadway\Summary of Quantities

CODE NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	0006 ROADWAY 90% FED/ 10% STATE	0010 BRIDGE REPLACEMENT 90% FED/ 10% STATE
50800530	MECHANICAL SPLICERS	EACH	288		288
50901730	BRIDGE FENCE RAILING	FOOT	17		17
50901739	BRIDGE FENCE RAILING, CURVED	FOOT	784		784
51100100	SLOPE WALL 4 INCH	SQ YD	734		734
* 51201600	FURNISHING STEEL PILES HP12X53	FOOT	11,657		11,657
* 51202305	DRIVING PILES	FOOT	11,657		11,657
* 51203600	TEST PILE STEEL HP12X53	EACH	4		4
* 51204650	PILE SHOES	EACH	234		234
* 51500100	NAME PLATES	EACH	1		1
* 51602000	PERMANENT CASING	FOOT	795		795
* 51603000	DRILLED SHAFT IN SOIL	CU YD	283.2		283.2
* 51604000	DRILLED SHAFT IN ROCK	CU YD	9.5		9.5
* 52000110	PREFORMED JOINT STRIP SEAL	FOOT	247.5		247.5
* 52100520	ANCHOR BOLTS, 1"	EACH	104		104
* 52100540	ANCHOR BOLTS, 1 1/2"	EACH	52		52
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	3,641		3,641
52318802	DRAINAGE SYSTEM FOR STRUCTURES	L SUM	1		1
54210182	PIPE ELBOW, 12"	EACH	19	19	



**LEGEND**

\* - DENOTES SPECIALTY ITEM  
\*\* - NON PARTICIPATING ITEM

HDR  
9450 W. BRYN MAWR AVE.  
ROSEMONT, IL 60018

USER NAME = YPARK	DESIGNED - YP	REVISED -
	DRAWN - YP	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED - DJP	REVISED -
PLOT DATE = 3/13/2024	DATE - 06/20/2022	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES  
FOSTER AVENUE**

SCALE: N.T.S. SHEET 5 OF 20 SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90	2019-045-BR&T	COOK	280	8
CONTRACT NO. 62J23			ILLINOIS FED. AID PROJECT NO. NHPP-XFIF(742)	

REVISED SHEET 5/28/2024

Benchmark: Fire hydrant at Northeast corner of Foster Ave and I-90 WB Entrance Ramp.  
Top of chain bolt, Elev. 616.92.

Existing Structure: S.N. 016-1100 Built as FA-173 in 1958 under Sec. 267-1313.1-15D. The structure consists of four simple spans with a 6" reinforced concrete deck resting on 60" built-up steel plate girders in spans 2 and 3, and 36WF steel beams in spans 1 and 4. Span lengths are 61'-7", 127'-9", 127'-9" and 69'-6". The structure is skewed 52°41'30" and is 395'-4½" long x 83'-0" wide. Substructure consists of closed abutments and column piers supported on spread footings. Microsilica concrete overlay, concrete repairs and joint repairs were completed in 1992 under Sec. 1313.1-I(90). Substructure concrete repairs were completed in 2002 under Sec. 2002-052 BR. Permanent protective shielding was installed in 2011 under Sec. 2010-064-I.

Traffic along Foster Ave to be detoured during bridge reconstruction.

Salvage: The Contractor shall salvage the existing aluminum Bridge Railing including all posts, railings, and all attachments. The aluminum Bridge Railing shall be transported and unloaded by the Contractor to the District Bridge Yard in Elk Grove Village at 1101 Biesterfeld Road during the week days Monday-Friday, and between the hours of 8am and 2pm. The Contractor shall notify the District Bridge Office 48 hours in advance of the delivery at (847) 956-1444. Cost included in Removal of Existing Structures.

### LOADING HL-93

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

### DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

### SEISMIC DATA

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.059g  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.107g  
Soil Site Class = C

Notes:

No freefall deck drains will be permitted in the span over the tracks.

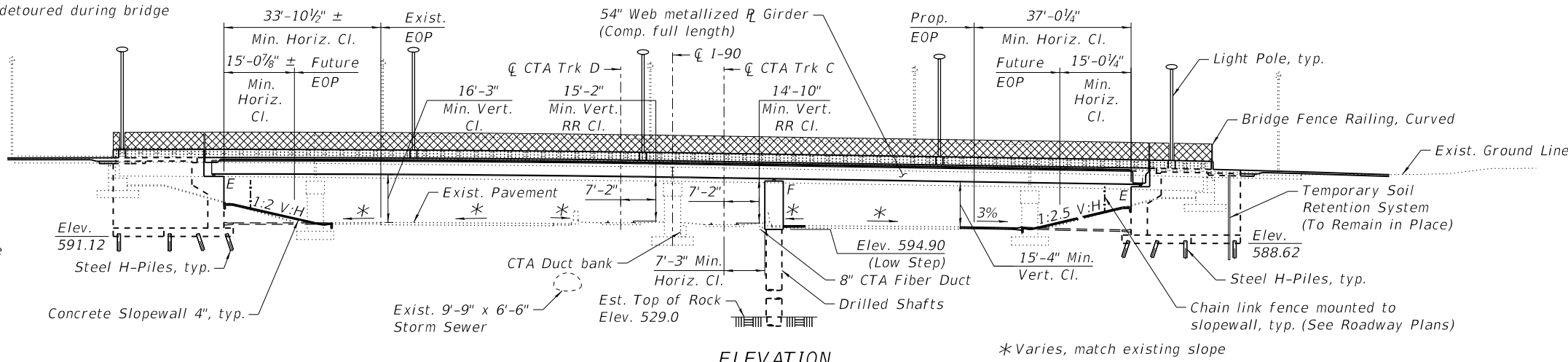
### DESIGN STRESSES

#### EXISTING UNITS

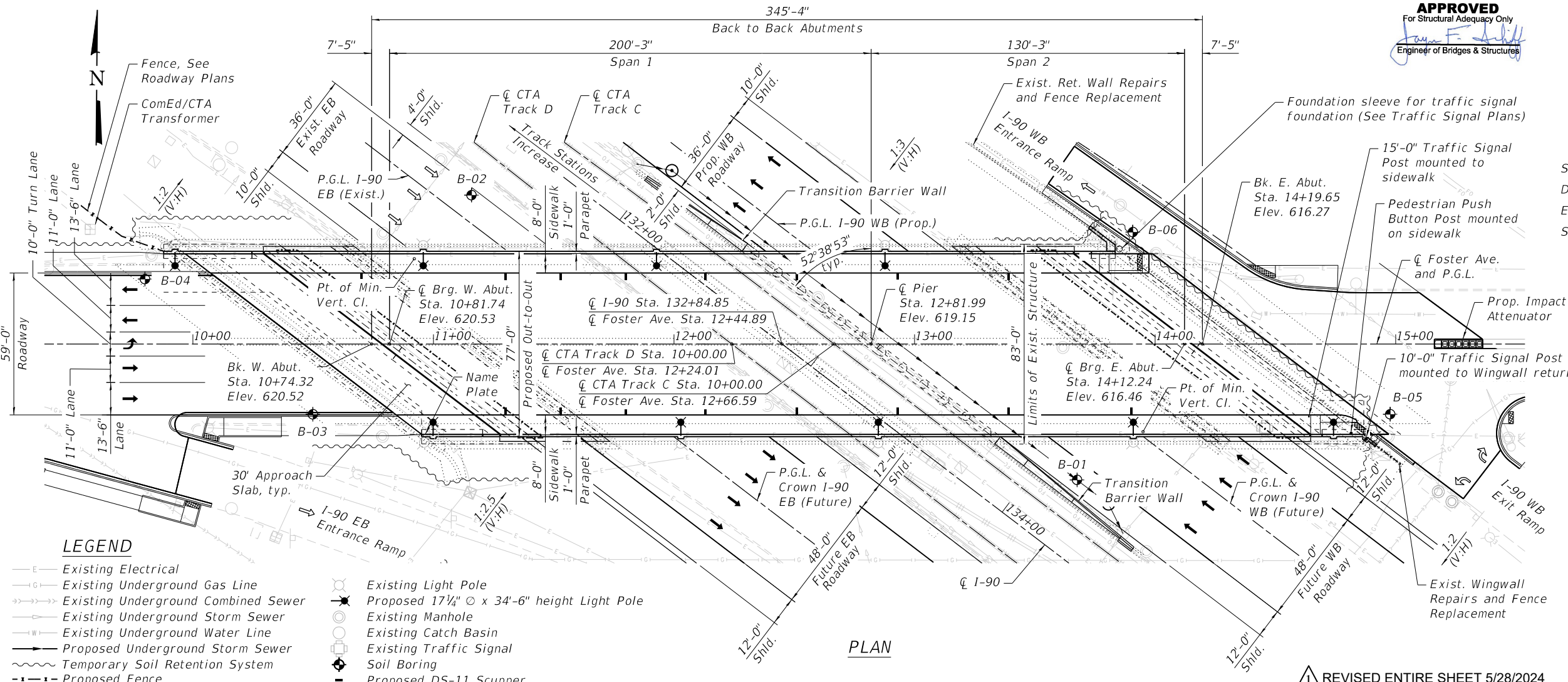
f'c = 3,500 psi  
fy = 40,000 psi (Reinforcement)

#### FIELD UNITS

f'c = 4,000 psi (Superstructure and Drilled Shaft Concrete)  
f'c = 3,500 psi (Substructure Concrete)  
fy = 60,000 psi (Reinforcement)  
fy = 50,000 psi (M270 Grade 50)



ELEVATION

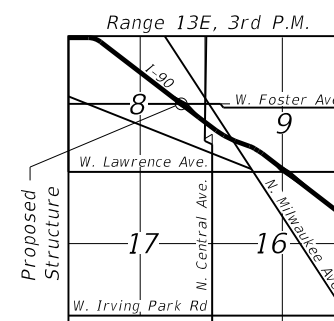


PLAN

APPROVED  
For Structural Adequacy Only  
James F. [Signature]  
Engineer of Bridges & Structures

STATE OF ILLINOIS  
MAEN A. FARHAT  
081.008545  
LICENSED STRUCTURAL ENGINEER

Signed: Maen Farhat  
Date: 3/11/2024  
Expires: 11/30/2024  
Sheets: 231-233, 237-238, 242-243



LOCATION SKETCH

GENERAL PLAN AND ELEVATION  
FOSTER AVE OVER I-90  
F.A.I. RTE. 90  
SEC. 2019-045-BR&T  
COOK COUNTY  
STATION 12+44.89  
STRUCTURE NO. 016-1669

REVISED ENTIRE SHEET 5/28/2024

MODEL: Default  
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HDR  
9450 W. BRYN MAWR AVE.  
ROSEMONT, IL 60018

USER NAME =	DESIGNED - RGB	REVISOR -
PLOT SCALE =	CHECKED - MBQ	REVISION -
PLOT DATE = 03/11/2024	DRAWN - JM	REVISION -
	CHECKED - RGB	REVISION -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SHEET 1 OF 77 SHEETS

F.A.I. RTE. 90	SECTION 2019-045-BR&T	COUNTY COOK	TOTAL SHEETS 280	SHEET NO. 176
CONTRACT NO. 62J23				
ILLINOIS FED. AID PROJECT NO. NHPP-XF17(742)				