Bench Mark: Square cut at center of door entrance to 707 W. Harrison St; South side of Harrison St. ±90' west of west line of Des Plaines. Elevation 597.47.
A + cut in the SE anchor bolt at the 11th street light N. of Roosevelt on the W. side of Halsted. Elev. = 594.06.

Existing Structure: S.N. 016-1030 was originally built in 1953 as F.A. Route Number 131, Section 2424.23 B. The existing structure consists of 7 spans: 1 approach span of reinforced concrete superstructure and 6 main spans of multi-unit steel continuous multi-beam superstructures. The existing structure has an overall length of 502'-0" and an out-to-out width of 57'-6". The substructure units are founded on sub-piers and consist of 8 multi column piers. The existing bridge is to be removed and replaced.

Traffic Control: Two lanes of traffic will be maintained on existing S.N. 016-1030 (WB I-290) utilizing stage construction.

No Salvage.

TABLE 1

	Estimated T/Ground Elev.	Estimated T/Rock Elev.
Pier 1	584.00	478.70
Pier 2	577.05	475.50
Pier 3	573.34	479.10
W. Abut	590.26	479.60

HIGHWAY CLASSIFICATION

WB I-290 (Congress)
Functional Class: Interstate
ADT: 29,700 (2012); 31,000 (2040)
ADTT: 460 (2012); 480 (2040)
DHV: 2,130 (2040)
Design Speed: 45 m.p.h.
Posted Speed: 45 m.p.h.
One-Way Traffic
Directional Distribution: NA

F.A.I. Rte. NB 90/94
Functional Class: Interstate
ADT: 96,700 (2012); 81,000 (2040)
ADTT: 11,217 (2012); 9,396 (2040)
DHV: 4,780 (2040)
Design Speed: 60 m.p.h.
Posted Speed: 45 m.p.h.
One-Way Traffic
Directional Distribution: NA

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications 7th Edition

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

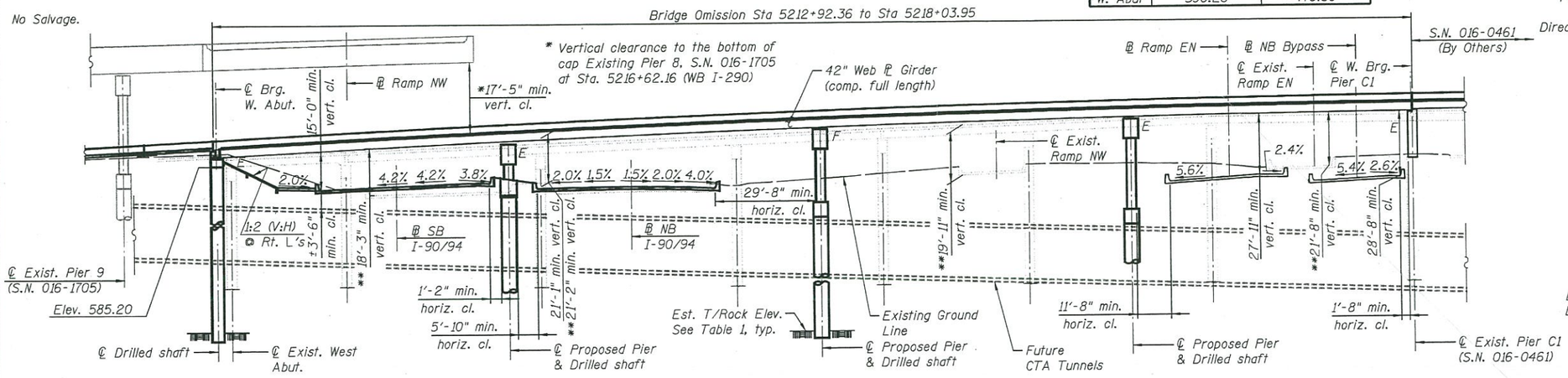
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.144g
Soil Site Class = D

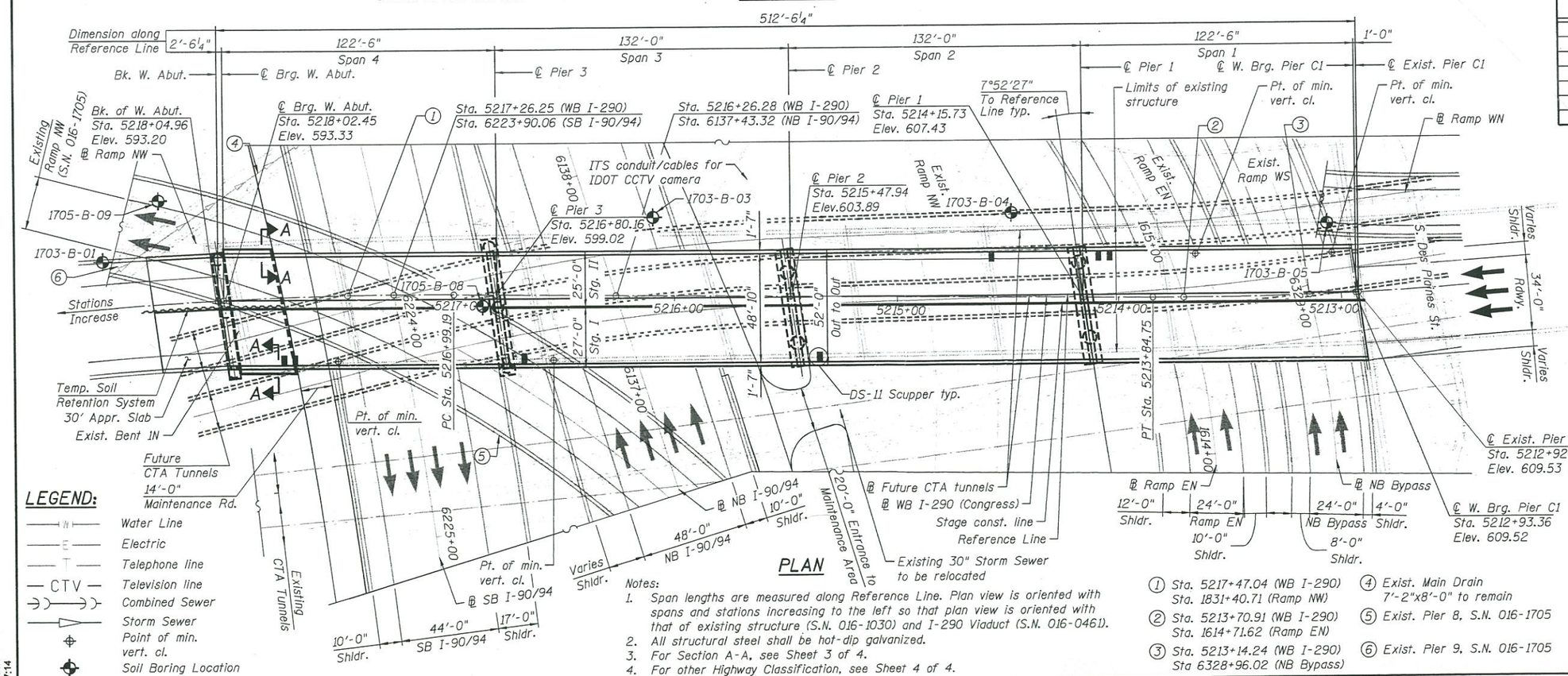
SCUPPER LOCATION

Station	Offset
5214+04.23	20.91' Rt.
5214+09.23	21.02' Rt.
5214+57.31	20.49' Rt.
5215+34.75	29.08' Lt.
5216+67.49	30.41' Lt.
5217+71.75	29.88 Lt.
5217+76.75	29.70' Lt.



** Interim vertical clearance

ELEVATION



PLAN

Notes:
1. Span lengths are measured along Reference Line. Plan view is oriented with spans and stations increasing to the left so that plan view is oriented with that of existing structure (S.N. 016-1030) and I-290 Viaduct (S.N. 016-0461).
2. All structural steel shall be hot-dip galvanized.
3. For Section A-A, see Sheet 3 of 4.
4. For other Highway Classification, see Sheet 4 of 4.

① Sta. 5217+47.04 (WB I-290) Sta. 1831+40.71 (Ramp NW)
② Sta. 5213+70.91 (WB I-290) Sta. 1614+71.62 (Ramp EN)
③ Sta. 5213+14.24 (WB I-290) Sta 6328+96.02 (NB Bypass)
④ Exist. Main Drain 7'-2"x8'-0" to remain
⑤ Exist. Pier 8, S.N. 016-1705
⑥ Exist. Pier 9, S.N. 016-1705

LEGEND:

- W — Water Line
- E — Electric
- T — Telephone line
- CTV — Television line
- Combined Sewer
- Storm Sewer
- Point of min. vert. cl.
- Soil Boring Location

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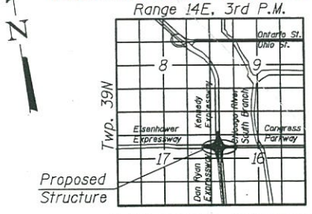

LOCATION SKETCH

GENERAL PLAN & ELEVATION
WB I-290 (CONGRESS) OVER I-90/94
F.A.I. ROUTE 90/94/290
SECTION 2014-004R&B
COOK COUNTY
STATION 5216+26.28
STRUCTURE NO. 016-1703

PARSONS BRINCKERHOFF	FILE NAME = USER	DESIGNED - PJL	REVISED -
		CHECKED - AH	REVISED -
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -
	PLOT DATE = 12/3/2014	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1703

SHEET NO. 1 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004R&B	COOK	4	1
		CONTRACT NO. 60X78		
	ILLINOIS FED. AID PROJECT			

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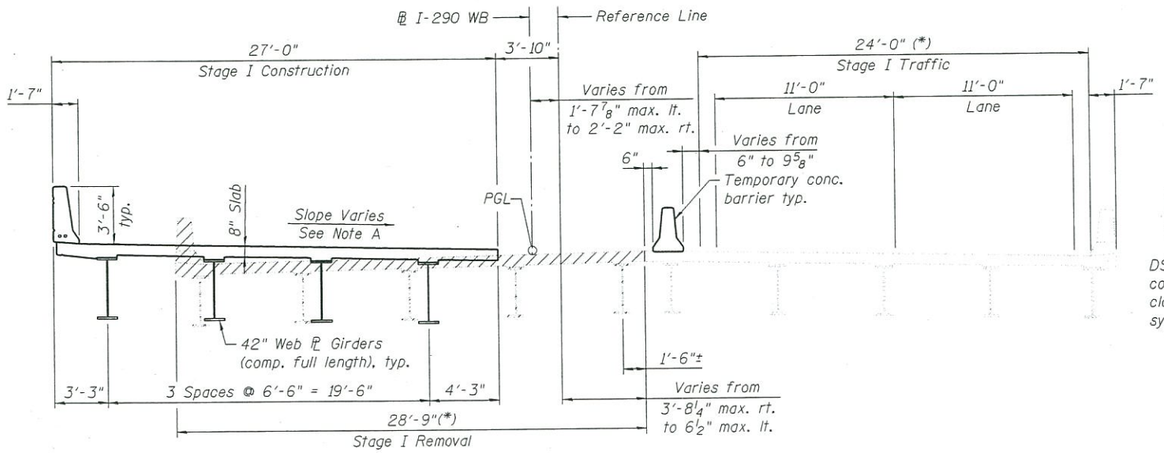
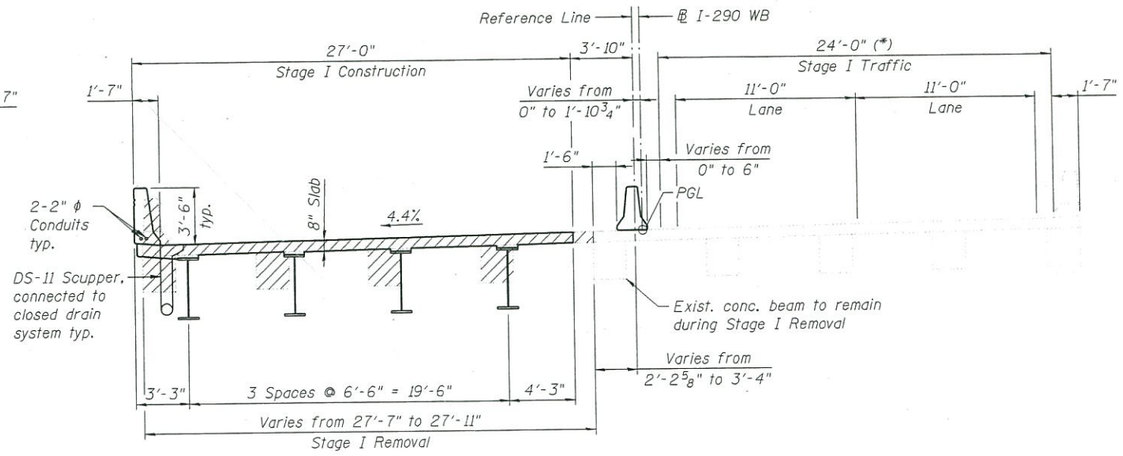


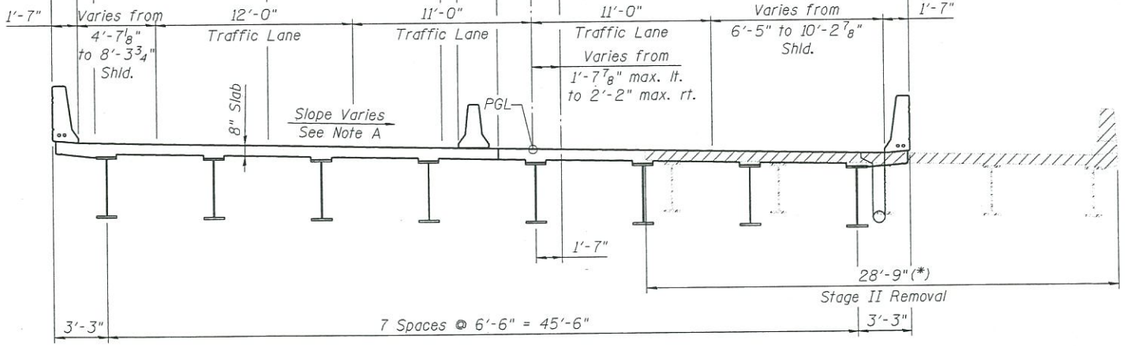
CROSS SECTION EXCLUDING WEST END - STAGE I

(Looking Upstation, Sta. 5212+92.36 to 5217+48.08)
(Dimensions are measured perpendicular to Reference Line U.N.O.)



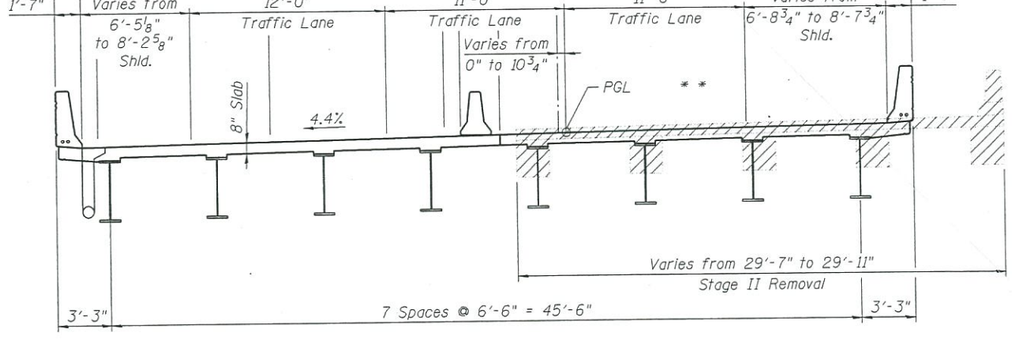
CROSS SECTION AT WEST END - STAGE I

(Looking Upstation, Sta. 5217+48.08 to 5218+03.95)
(Dimensions are measured perpendicular to Reference Line U.N.O.)



CROSS SECTION EXCLUDING WEST END - STAGE II

(Looking Upstation, Sta. 5212+92.36 to 5217+48.08)
(Dimensions are measured perpendicular to Reference Line U.N.O.)



CROSS SECTION AT WEST END - STAGE II

(Looking Upstation, Sta. 5217+48.08 to 5218+03.95)
(Dimensions are measured perpendicular to Reference Line U.N.O.)

* Exist. deck width is measured perpendicular to exist. ℄.

** Varies from 0' - 1'-0"

NOTES:

Note A: (Direction of slope referenced from left edge of pavement)
Full S.E. (4.4%) Sta. 5211+99.79 to Sta. 5213+35.86
Transition (4.4% to -2.0%) Sta. 5213+35.86 to Sta. 5215+48.86
Normal (-2.0%) Sta. 5215+48.86 to Sta. 5216+68.08
Transition (-2.0% to -4.4%) Sta. 5216+68.08 to Sta. 5217+48.08

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AS A BASIS FOR
PREPARATION OF DETAILED PLANS

DETAILS
WB I-290 (CONGRESS)
OVER I-90/94
F.A.I. ROUTE 90/94/290
SECTION 2014-004R&B
COOK COUNTY
STATION 5216+26.28
STRUCTURE NO. 016-1703

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PLOT DATE = 12/3/2014	CHECKED - JIG	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1703
SHEET NO. 2 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004R&B	COOK	4	2
		CONTRACT NO. 60X78		
ILLINOIS FED. AID PROJECT				

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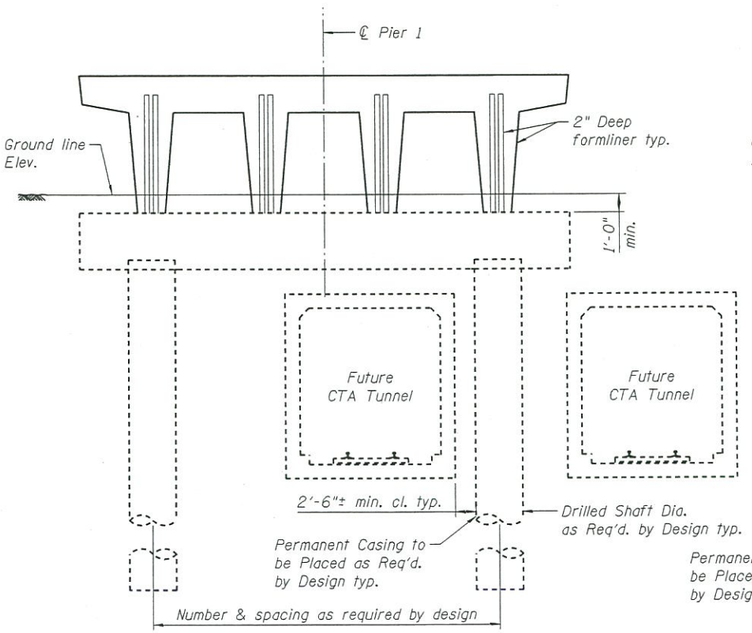
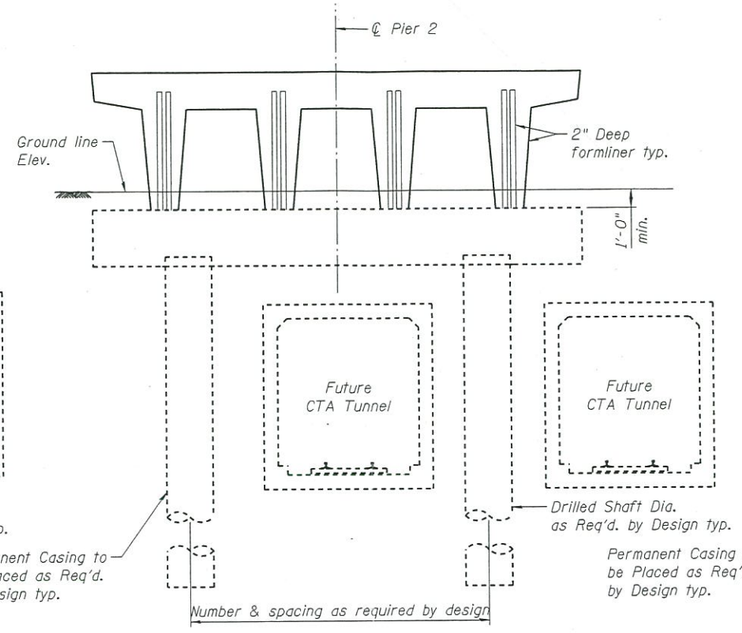
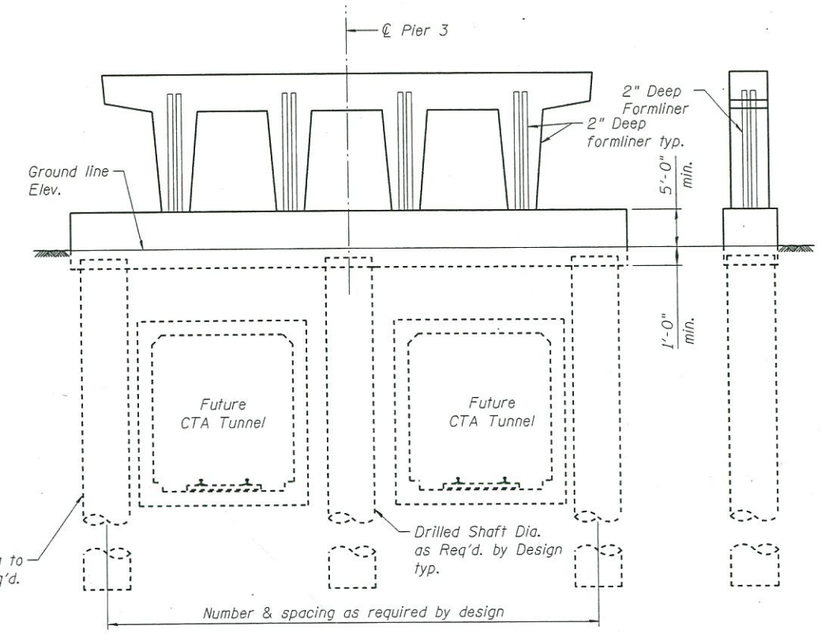


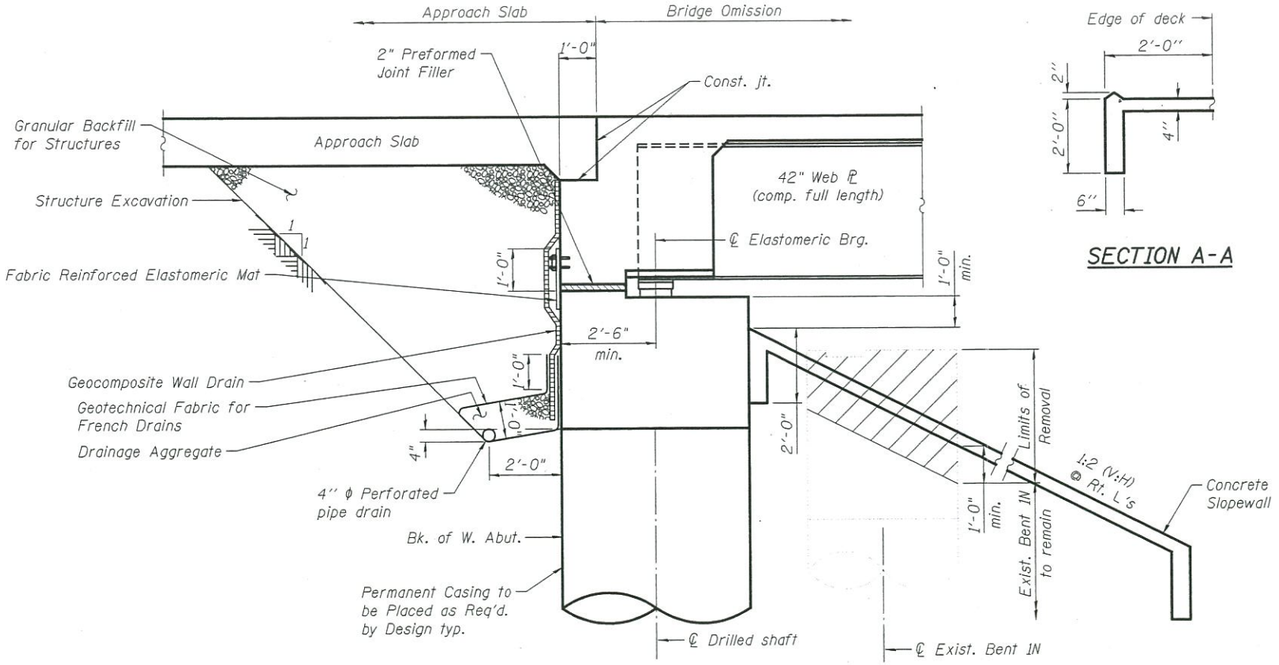
Pier 1 SKETCH
(Looking West)



Pier 2 SKETCH
(Looking West)

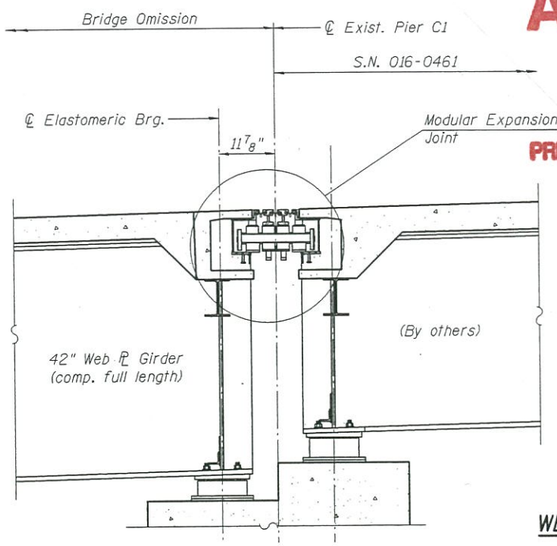


Pier 3 SKETCH
(Looking West)



SECTION THRU SEMI-INTEGRAL WEST ABUTMENT
(Horiz. dim. @ Rt. L's)

SECTION A-A



SECTION THRU PIER C1
(Horiz. dim. @ Rt. L's ℄ Pier C1)

Note:
For location of Section A-A, see Sheet 1 of 4.

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AS A BASIS FOR PREPARATION OF DETAILED PLANS

DETAILS
WB I-290 (CONGRESS)
OVER I-90/94
F.A.I. ROUTE 90/94/290
SECTION 2014-004R&B
COOK COUNTY
STATION 5216+26.28
STRUCTURE NO. 016-1703

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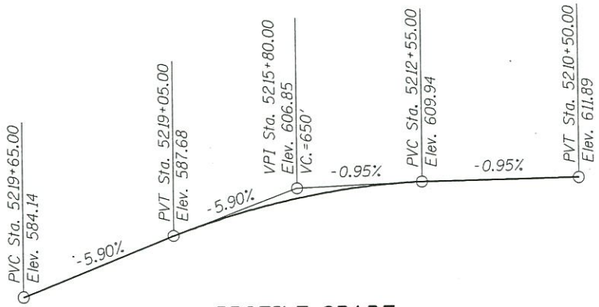
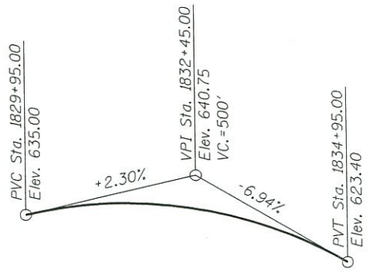
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1703
SHEET NO. 3 OF 4 SHEETS

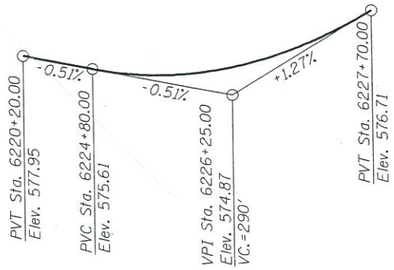
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004R&B	COOK	4	3
		CONTRACT NO. 60X78		
	ILLINOIS FED. AID PROJECT			



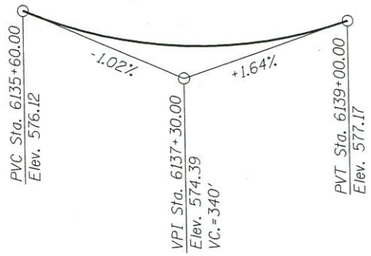
PROFILE GRADE
(Along ℄ WB I-290 (Congress))



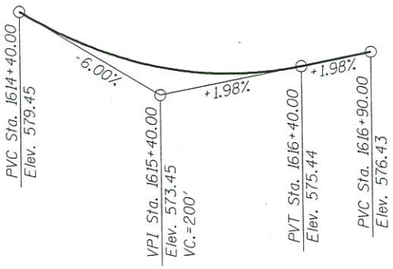
PROFILE GRADE
(Along ℄ Ramp NW)



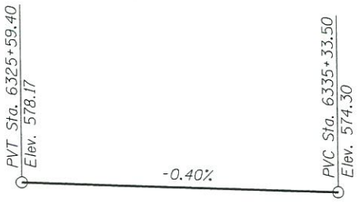
PROFILE GRADE
(Along ℄ SB I-90/94)



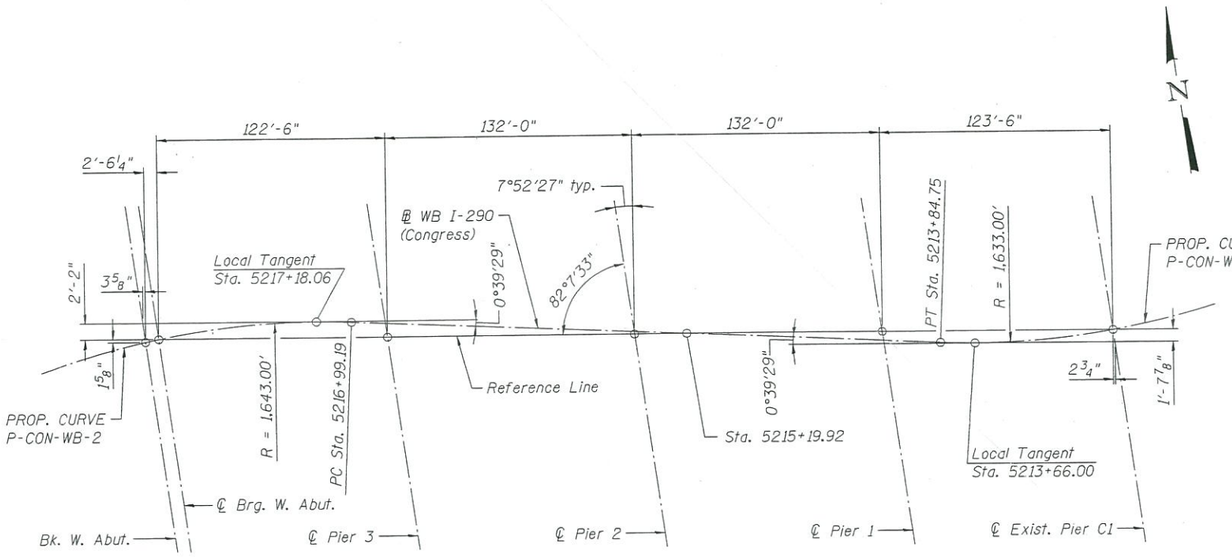
PROFILE GRADE
(Along ℄ NB I-90/94)



PROFILE GRADE
(Along ℄ Ramp EN)



PROFILE GRADE
(Along ℄ NB Bypass)



N

OFFSET SKETCH

CURVE DATA
(WB I-290)

PROP. CURVE P-CON-WB-1
PI Sta. = 5212+68.02
Δ = 8° 12′ 18" (Rt.)
D = 3° 30′ 31"
R = 1,633.00′
T = 117.13′
L = 233.85′
E = 4.20′
e = 4.40%
T.R. = 67′
S.E. Run = 147′
P.C. Sta. = 5211+50.90
P.T. Sta. = 5213+84.75
DS = 45

PROP. CURVE P-CON-WB-2
PI Sta. = 5218+24.26
Δ = 8° 42′ 22" (Lt.)
D = 3° 29′ 14"
R = 1,643.00′
T = 125.07′
L = 249.65′
E = 4.75′
e = 4.40%
T.R. = NA
S.E. Run = 97′
P.C. Sta. = 5216+99.19
P.T. Sta. = 5219+48.84
DS = 45

CURVE DATA
(Ramp NW)

PROP. CURVE P-CIR-NW-6
PI Sta. = 1831+44.22
Δ = 88° 30′ 25" (Lt.)
D = 10° 36′ 37"
R = 540.00′
T = 526.11′
L = 834.16′
E = 213.92′
e = 5.40%
T.R. = 39′
S.E. Run = 105′
P.C. Sta. = 1826+18.11
P.T. Sta. = 1834+52.27
DS = 35

CURVE DATA
(SB I-90/94)

PROP. CURVE P-KDR-SB-3
PI Sta. = 6224+30.06
Δ = 11° 28′ 39" (Rt.)
D = 2° 41′ 06"
R = 2,134.00′
T = 214.46′
L = 427.48′
E = 10.75′
e = 4.20%
T.R. = NA
S.E. Run = 203′
P.C. Sta. = 6222+15.60
P.T. Sta. = 6226+43.08
DS = 60

CURVE DATA
(Ramp EN)

PROP. CURVE P-CIR-EN-2
PI Sta. = 1624+72.31
Δ = 158° 53′ 11" (Lt.)
D = 16° 51′ 06"
R = 340.00′
T = 1,824.37′
L = 942.85′
E = 1,515.78′
e = 5.60%
T.R. = 36′
S.E. Run = 102′
P.C. Sta. = 1606+47.94
P.T. Sta. = 1615+90.79
DS = 30

CURVE DATA
(NB Bypass)

PROP. CURVE P-NCD-NX-4
PI Sta. = 6328+76.78
Δ = 59° 05′ 41" (Lt.)
D = 14° 08′ 50"
R = 405.00′
T = 229.58′
L = 417.72′
E = 60.54′
e = 5.40%
T.R. = 36′
S.E. Run = 98′
P.C. Sta. = 6326+47.20
P.T. Sta. = 6330+64.91
DS = 30

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JAN 21 2015
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

HIGHWAY CLASSIFICATION

	SB I-90/94	Ramp NW	Ramp EN	NB Bypass
Functional Class	Interstate	Interstate	Interstate	Interstate
ADT (2012)	100,100	32,500	26,600	NA
ADT (2040)	98,000	36,000	31,000	17,000
ADTT (2012)	11,351	2,483	1,032	NA
ADTT (2040)	11,113	2,750	1,203	387
DHV (2040)	6,340	2,790	1,910	1,680
Design Speed	60 m.p.h.	35 m.p.h.	30 m.p.h.	30 m.p.h.
Posted Speed	45 m.p.h.	35 m.p.h.	30 m.p.h.	NA
	One-Way Traffic			
	Directional Distribution 100:0			

PROFILES & CURVE DATA
WB I-290 (CONGRESS)
OVER I-90/94
F.A.I. ROUTE 90/94/290
SECTION 2014-004R&B
COOK COUNTY
STATION 5216+26.28
STRUCTURE NO. 016-1703

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1703
SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-004R&B	COOK	4	4
		CONTRACT NO. 60X78		
	ILLINOIS FED. AID PROJECT			