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 t 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. 016-2448 was originally built in 1960 under section 0.101.6-IP. F.A.I. Route Number 94 carries WB I-290 traffic to NB I-90/94. The existing structure consists of a 5-span multi-beam superstructure and has an overall length of approx. 287'-0" and an out-to-out width of 29'-0". The existing superstructure consists of with 7" thick concrete deck with $1\frac{1}{2}$" overlay. The existing substructure units are founded on drilled shafts and sub piers and consist of a closed abutment and multi columns piers. The existing structure is to be removed and replaced.

Traffic Control: Existing Ramp WN will be closed during construction and traffic will be detoured via local roads. Existing Ramp NW will be closed and traffic will be shifted onto the new Ramp NW (S.N. 016-1705). Existing Ramp EN will be replaced with a ramp on a new alignment. Traffic must be maintained on parts of existing Ramp EN during the construction of Ramp WN (S.N. 016-1706).

No Salvage.

Notes:
1. All structural steel shall be galvanized or metalized (thermal spraying).
2. Span lengths are measured along ℄ & PGL Ramp WN.
3. For Section A-A, see Sheet 2 of 3.
4. For other Highway Classifications, see Sheet 3 of 3.

HIGHWAY CLASSIFICATION

Ramp WN
Functional Class: Interstate
ADT: 7,200 (2012); 9,000 (2040)
ADTT: 204 (2012); 255 (2040)
DHV: 790 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: 100:0

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

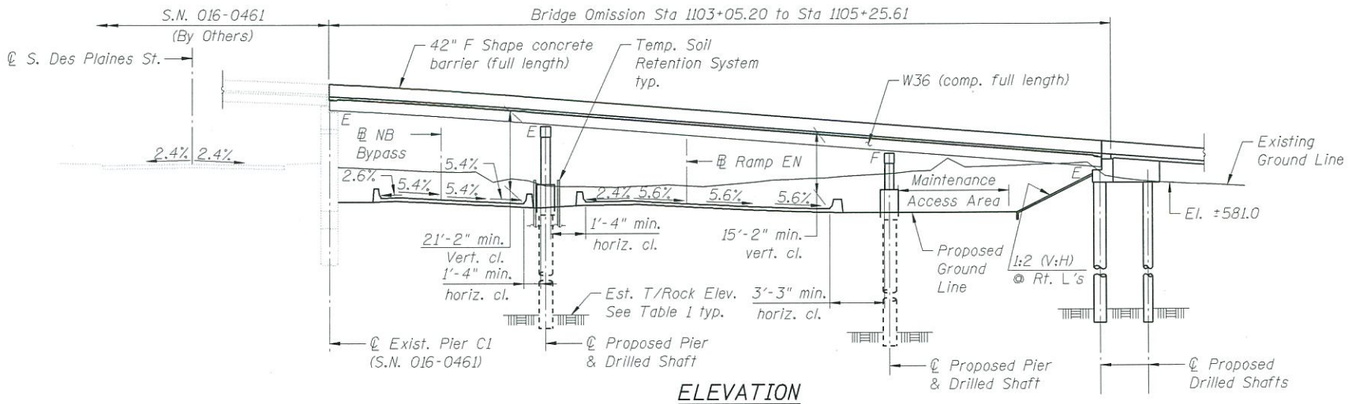
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

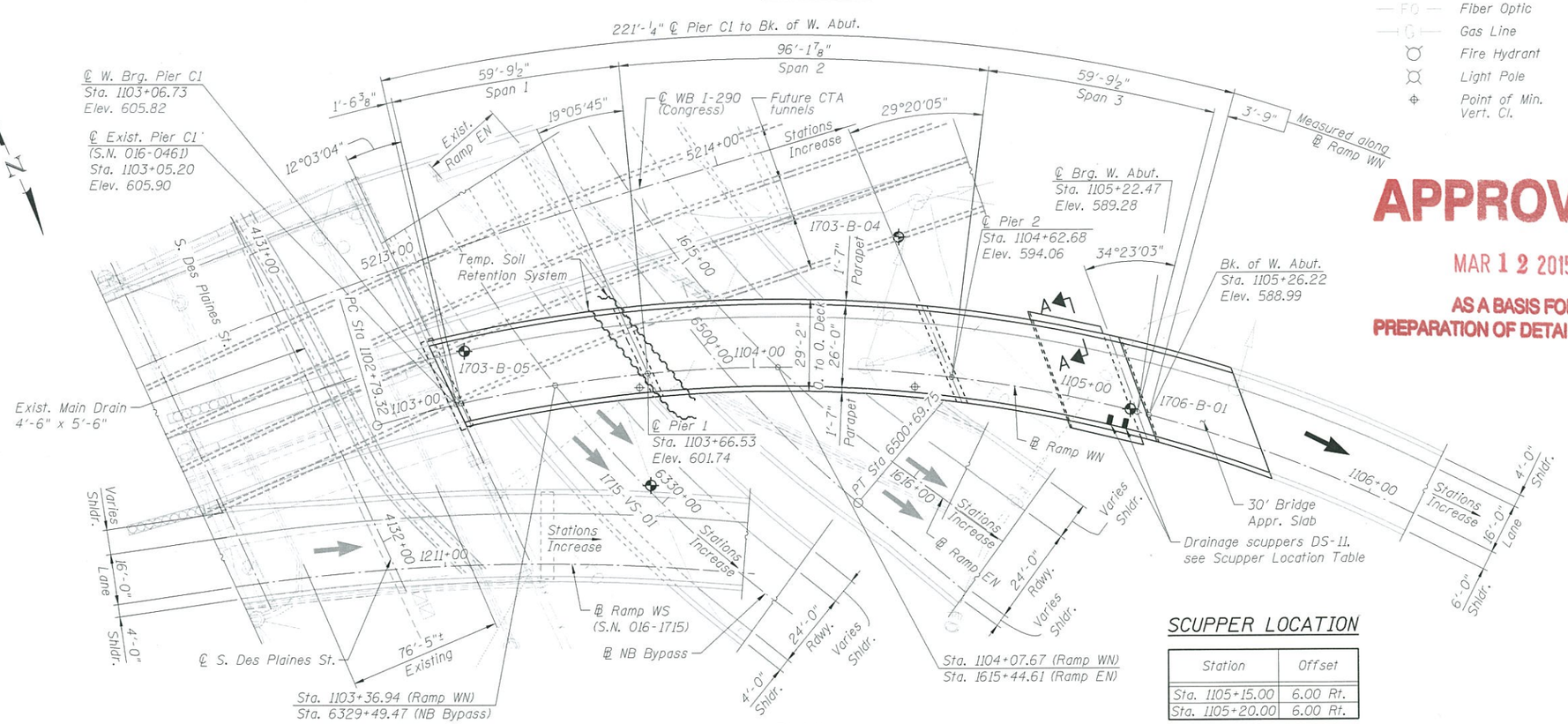
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.085g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.144g
Soil Site Class = D

TABLE 1

	Approx. T/Ground Elev.	Approx. T/Rock Elev.
Pier 1	581.42	480.40
Pier 2	581.52	478.70
W. Abut.	582.92	477.40



ELEVATION



PLAN

LEGEND:

- Soil Boring Location
- W — Water Line
- E — Electric
- T — Telephone line
- CTV — Television line
- Combined Sewer
- Storm Sewer
- FO — Fiber Optic
- G — Gas Line
- Fire Hydrant
- Light Pole
- Point of Min. Vert. Cl.

SCUPPER LOCATION

Station	Offset
Sta. 1105+15.00	6.00 Rt.
Sta. 1105+20.00	6.00 Rt.

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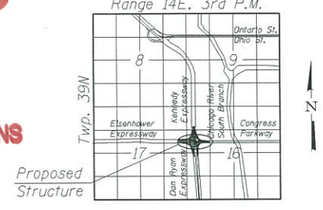

LOCATION SKETCH

GENERAL PLAN & ELEVATION
RAMP WN OVER
I-90/94 NB BYPASS/RAMP EN
F.A.I. RTE. 90/94/290
SECTION 2014-013R&B-R
COOK COUNTY
STATION 1104+07.67
STRUCTURE NO. 016-1706

PARSONS BRINCKERHOFF

FILE NAME = USER	DESIGNED - PJL	REVISED -
	CHECKED - AH	REVISED -
PLOT SCALE = NONE	DRAWN - DCP	REVISED -
PLOT DATE = 2/23/2015	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1706
SHEET NO. 1 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-013R&B-R	COOK	3	1
		CONTRACT NO. 60X93		
	ILLINOIS FED. AID PROJECT			

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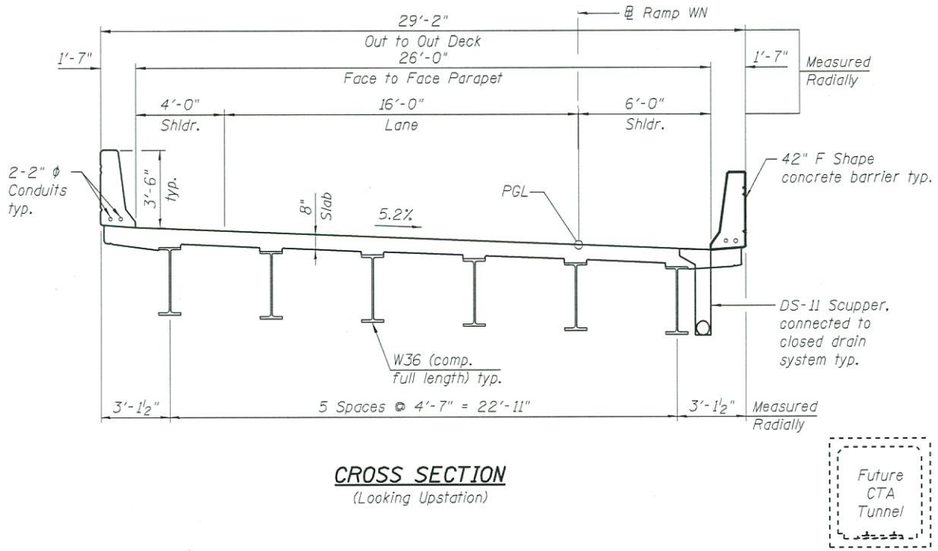
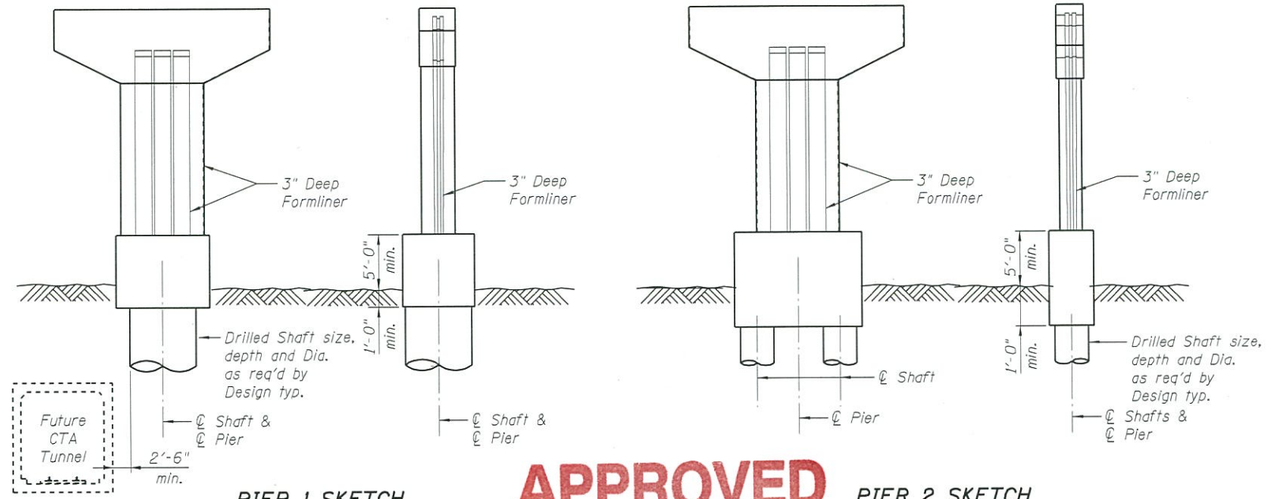


CROSS SECTION
(Looking Upstation)



PIER 1 SKETCH
(Looking Upstation)

PIER 2 SKETCH
(Looking Upstation)

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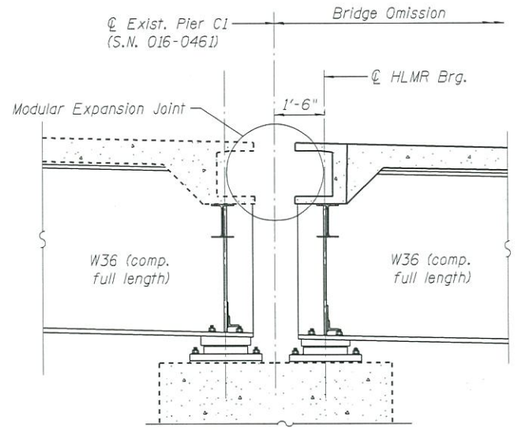
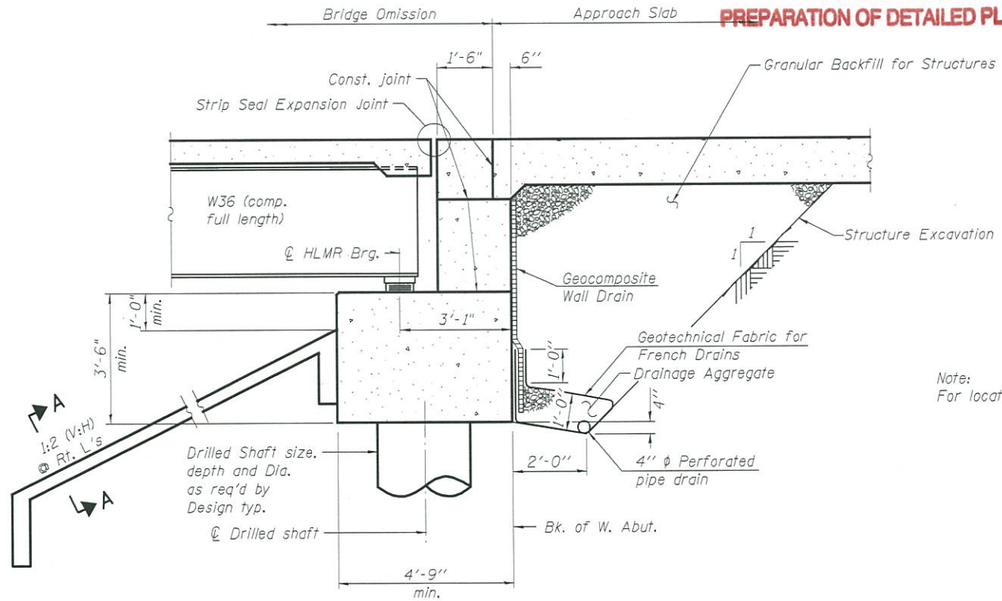
MAR 12 2015

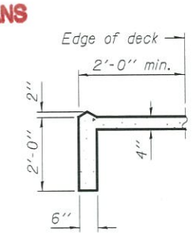
AS A BASIS FOR PREPARATION OF DETAILED PLANS



SECTION THRU PIER C1
(Horiz. dim. @ Rt. L's ℄ Exist. Pier C1, S.N. 016-0461)



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



SECTION A-A

Note:
For location of Section A-A, see Sheet 1 of 3.

DETAILS
RAMP WN OVER
I-90/94 NB BYPASS/RAMP EN
F.A.I. RTE. 90/94/290
SECTION 2014-013R&B-R
COOK COUNTY
STATION 1104+07.67
STRUCTURE NO. 016-1706

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		CHECKED - AH	REVISED -
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -
	PLOT DATE = 2/23/2015	CHECKED - JIG	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE NO. 016-1706

SHEET NO. 2 OF 3 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94/290	2014-013R&B-R	COOK	3	2
		CONTRACT NO. 60X93		
	ILLINOIS FED. AID PROJECT			

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CURVE DATA
(Ramp WN)

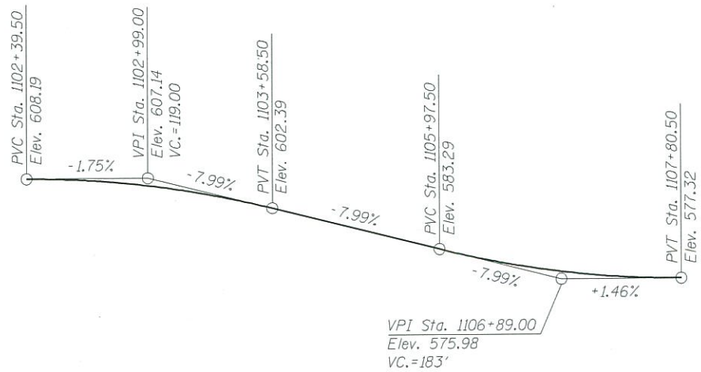
PROP. CURVE P-CIR-WN-2
P.I. Sta. = 1105+88.67
Δ = 69° 00' 44" (Rt.)
D = 12° 43' 57"
R = 450.00'
T = 309.35'
L = 542.02'
E = 96.07'
e = 5.20%
T.R. = NA
S.E. Run = 46'
P.C. Sta. = 1102+79.32
P.T. Sta. = 1108+21.34
DS = 30

CURVE DATA
(Ramp EN)

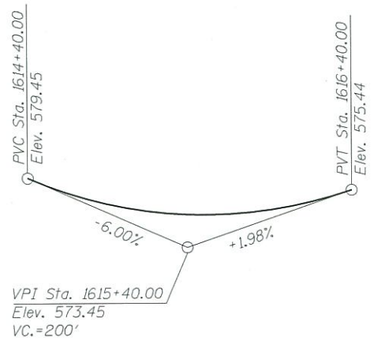
PROP. CURVE P-CIR-EN-2
P.I. Sta. = 1624+72.31
Δ = 158° 53' 11" (Lt.)
D = 16° 51' 06"
R = 340.00'
T =1,824.37'
L = 942.85'
E = 1,515.78'
e = 5.60%
T.R. = 36'
S.E. Run = 102'
P.C. Sta. = 1606+47.94
P.T. Sta. = 1615+90.79
DS = 30

CURVE DATA
(NB Bypass)

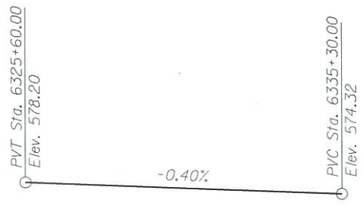
PROP. CURVE P-NCD-NX-4
P.I. Sta. = 6328+76.78
Δ = 59° 05' 41" (Lt.)
D = 14° 08' 50"
R = 405.00'
T = 229.58'
L = 417.72'
E = 60.54'
e = 5.40%
T.R. = 36
S.E. Run = 98'
P.C. Sta. = 6326+47.20
P.T. Sta. = 6330+64.91
DS = 30



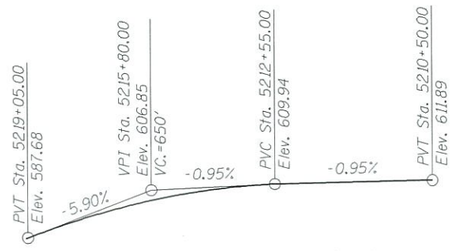
PROFILE GRADE
(Along ℄ Ramp WN)



PROFILE GRADE
(Along ℄ Ramp EN)



PROFILE GRADE
(Along ℄ NB Bypass)



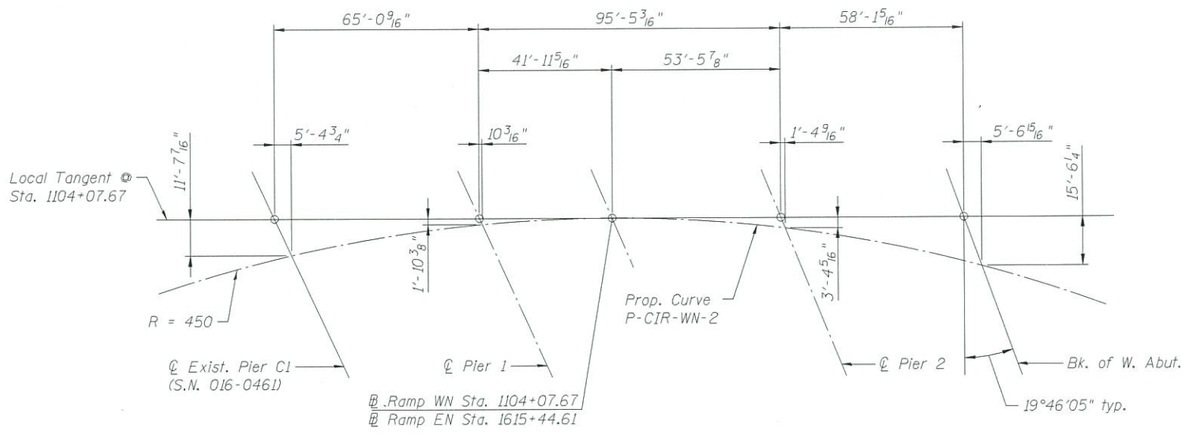
PROFILE GRADE
(Along ℄ WB I-290 (Congress))

HIGHWAY CLASSIFICATION

NB Bypass
Functional Class: Interstate
ADT: NA (2012); 17,000 (2040)
ADTT: NA (2012); 387 (2040)
DHV: 1,680 (2040)
Design Speed: 30 m.p.h.
Posted Speed: NA
One-Way Traffic
Directional Distribution: NA

Ramp EN
Functional Class: Interstate
ADT: 26,600 (2012); 31,000 (2040)
ADTT: 1,032 (2012); 1,203 (2040)
DHV: 1,910 (2040)
Design Speed: 30 m.p.h.
Posted Speed: 30 m.p.h.
One-Way Traffic
Directional Distribution: NA

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



OFFSET SKETCH

APPROVED
MAR 12 2015
AS A BASIS FOR
PREPARATION OF DETAILED PLANS

DETAILS
RAMP WN OVER
I-90/94 NB BYPASS/RAMP EN
F.A.I. RTE. 90/94/290
SECTION 2014-013R&B-R
COOK COUNTY
STATION 1104+07.67
STRUCTURE NO. 016-1706

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		CHECKED - AH	REVISED -			90/94/290	2014-013R&B-R	COOK	3	3
	PLOT SCALE = NONE	DRAWN - DCP	REVISED -						CONTRACT NO. 60X93	
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