ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*	COOK	426	1
F.H.W.A. REG 4		ILLINOIS	FED. AID PROJECT DPI-0137(4)	

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

016-0133

FOR INDEX SEE SHEET 2

P - 91 - 311 - 86

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID INTERSTATE HIGHWAY

SCALES
PLAN 1" = 50'
PROFILE HORIZONTAL 1" = 50'
PROFILE VERTICAL 1" = 5'
CROSS SECTIONS 1" = 10' (HORIZ)
CROSS SECTIONS 1" = 5' (VERT)

F.A.I. ROUTE 90/94 (JOHN F. KENNEDY EXPRESSWAY)

SECTION 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

PROJECT DPI-0137(4)

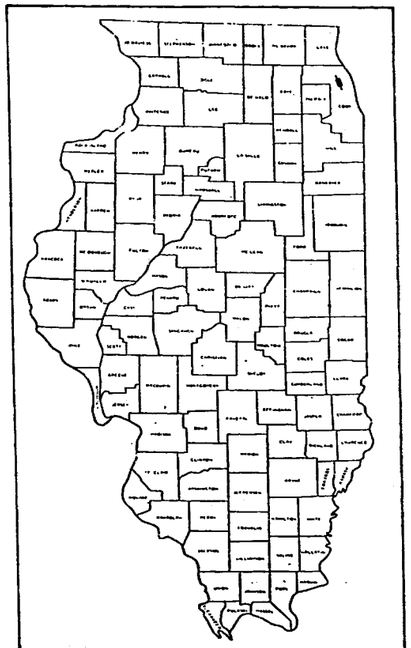
COOK COUNTY

C - 91 - 126 - 92

AREA "C"

ROADWAY AND BRIDGE DECKS (SOUTHEAST BOUND)

NORTH AVENUE TO LOGAN BOULEVARD



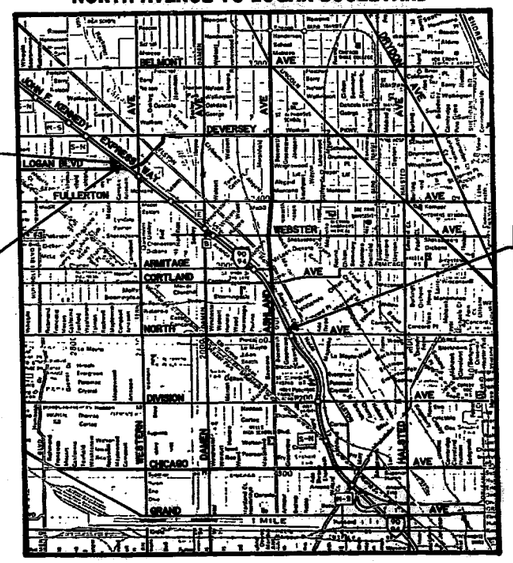
LOCATION OF SECTION INDICATED THUS:

FOR STRUCTURE DESCRIPTIONS, OMISSIONS, AND LENGTHS, SEE SHEET NO. 2

STATION EQUATION: STATION 391+11.40 BK= STATION 391+12.10 AH

END PROJECT (AREA C) STATION 390+25.00

BEGIN PROJECT (AREA C) STATION 293+28.42



NOTE: WHEREVER IN THESE PLANS BRIDGE APPROACH PAVT. (STD. 2353) SPECIAL IS REFERRED TO, IT SHALL MEAN BRIDGE APPROACH PAVEMENT (SPECIAL).

SOUTHEAST BOUND BRIDGES

ASHLAND	STA. 298+52.98	TO STA. 314+23.95
ARMITAGE	STA. 320+53.16	TO STA. 323+19.25
WEBSTER	STA. 341+62.25	TO STA. 343+98.45
DAMEN	STA. 344+99.82	TO STA. 346+98.92
FULLERTON	STA. 362+82.37	TO STA. 365+73.33
WESTERN	STA. 378+74.86	TO STA. 381+41.02
VAULTED SLAB	STA. 381+41.02	TO STA. 383+89.11
LOGAN	STA. 383+89.11	TO STA. 387+55.18

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED July 28 19 92 — DISTRICT ENGINEER

EXAMINED _____ 19__ — ENGINEER OF PLANS AND CONTRACTS

PASSED Sept 4 19 92 — ENGINEER OF DESIGN

APPROVED Sept 4 19 92 — DIRECTOR, DIVISION OF HIGHWAYS

MUNICIPALITY INVOLVEMENT - CITY OF CHICAGO

~~PILOT~~ PILOT 98633

0 100' 200' 300' 1" = 100'
0 10' 20' 30' 1" = 10'
0 50' 100' 1" = 50'
0 50' 100' 1" = 40'
0 50' 100' 1" = 30'
0 50' 100' 1" = 20'

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. 82107

Cook Sheets 1 Thru 100

LOCATION MAP
SCALE: 1" = ½ MILE

NET LENGTH = 9696.58 FT. (1.836 MILES)
GROSS LENGTH = 9696.58 FT. (1.836 MILES)

DESIGN DESIGNATION:
3574(98) TRUNK 0.047 (CRC-20)

ROBERT M. KOSS — ILLINOIS

Robert Koss

PRINTED UNDER THE AUTHORITY OF THE STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DIVISION ADMINISTRATOR _____ DATE

CONSULTANT SERVICES - P. SUN (708) 705-4523

INDEX AND STATE STANDARDS

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	X		426	2
		ILLINOIS		

X 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

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13	SUGGESTED SEQUENCE OF CONSTRUCTION
14-23	SUMMARY OF QUANTITIES
24	SCHEDULE OF QUANTITIES
25	LOCATION MAP
26-27	HORIZONTAL ALIGNMENT
28	ALIGNMENT TIES
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37-43	EXISTING REMOVAL & PROPOSED ROADWAY PLAN & PROFILE
44-49	ENTRANCE & EXIT RAMPS
50	FULLERTON AVE EXIT & WESTERN AVE ENTRANCE TERMINAL
51-54	INTERSECTION DETAILS
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294-306	DAMEN AVENUE BRIDGE PLANS
307-319	FULLERTON AVENUE BRIDGE PLANS
320-359	WESTERN AVENUE / LOGAN BOULEVARD BRIDGE PLANS
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368-369	RETAINING WALL NO. 208
370-371	RETAINING WALL NO. 209
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397	CATCH BASIN AND INLET 4X3 & 4X5 FOR H > THAN 8'
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399	STORM SEWER CONNECTION AND CONCRETE COLLAR DETAIL AND STORM SEWER PLUG
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401	STANDARD 2225-7 REINFORCEMENT FOR CONTINUOUSLY REINFORCED P.C.C. PAVEMENT
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404	CONCRETE BARRIER TRANSITION DETAILS SHEET 2 OF 3
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STATE STANDARDS

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1527-9	MANHOLE, TYPE A
1686-4	STANDARD SYMBOLS AND ABBREVIATIONS
2113-2	DETAIL OF NAME PLATE FOR BRIDGE
2122-15	P. C. CONCRETE MEDIANS
2130-12	CONCRETE CURB & GUTTER COMBINATION CURB & GUTTER
2135	DETAILS OF PERMANENT SURVEY MARKERS
2189-16	36 FT. JOINTED P.C.C. PAVEMENT
2213-4	FRAME AND LIDS TYPE 1
2217-3	GRATE, TYPE B
2230-16	STEEL PLATE BEAM GUARDRAIL
2256-10	BREAKAWAY SIGN POSTS
2298-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2299-13	DESIGN OF TRAFFIC CONTROL DEVICES
2300-3	FLAGGER TRAFFIC CONTROL SIGN
2303-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2307-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2314-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2319-5	SIGN PANEL MOUNTING DETAILS
2320-3	SIGN PANEL ERECTION DETAILS
2323-12	PAVEMENT JOINTS
2324-7	BRIDGE APPROACH SHOULDER PAVEMENT
2333-4	CONCRETE BARRIER
2336-4	TRAFFIC BARRIER TERMINAL, TYPE 1 AND 1 A
2337-2	TRAFFIC BARRIER TERMINAL, TYPE 2
2340-4	TRAFFIC BARRIER TERMINAL, TYPE 5
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2350-3	METAL POSTS FOR SIGNS
2363-1	APPLICATIONS OF TYPE A & B METAL POSTS
2381	TEMPORARY EROSION CONTROL SYSTEMS
2383-3	TEMPORARY CONCRETE BARRIER
2385	FRAME AND GRATE, TYPE 20
2386	FRAME AND GRATES, TYPE 21
2395	MANHOLE TYPE A, 6 FOOT DIAMETER
2396	TYPICAL PAVEMENT MARKINGS
2409-1	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2419	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
2423	FRAME AND GRATES TYPE 23
2424	FRAME AND GRATES, TYPE 24
2427-1	CLASS D PATCHES
2428	TWO LANE JOINTED P.C.C. PAVEMENT
2429-1	PCC SHOULDER DETAILS
TS-2147-7	STANDARD EXTRUDED ALUMINUM HIGH PANELS
TS-2341-1	MAJOR GUIDE SIGN LAYOUT ARROWS

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, FLAP AND CROSSES, NOTE BOOK, NO., DATE, BY

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, FINAL PLOT, NOTE BOOK, NO., DATE, BY, REVISIONS AND/OR ADDITIONS CHKD.

Profile

INDEX AND STANDARDS

SOUTHEAST BOUND

ROUTE:FAI-90/94(JFK EXPWY)

SCALE:

SECTION

PROJECT COOK COUNTY

c:\9088\088sbind.dgn Fri Aug 14 12:03:22 1992

D C B A 0 A B C D

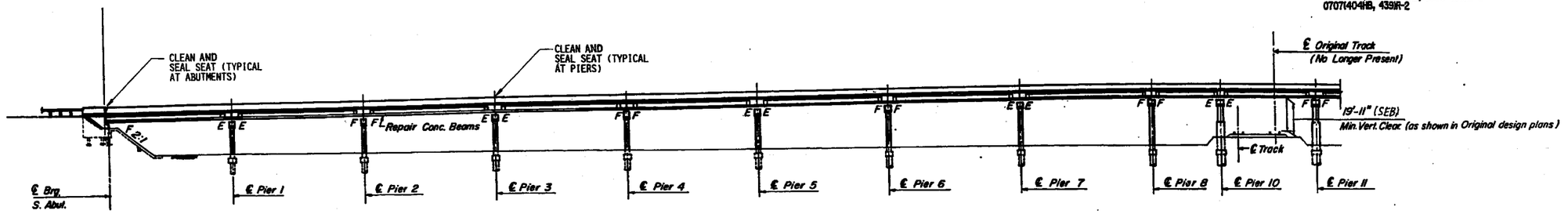
TBM - CHISELED SQUARE - TOP OF CONCRETE SLOPE OF N. ABUTMENT ADJACENT TO N.E. WINGWALL - FAI-90/94 BRIDGE OVER ASHLAND AVENUE - EL 604.09 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I 9.1 St. '94	*	COOK	426	176
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

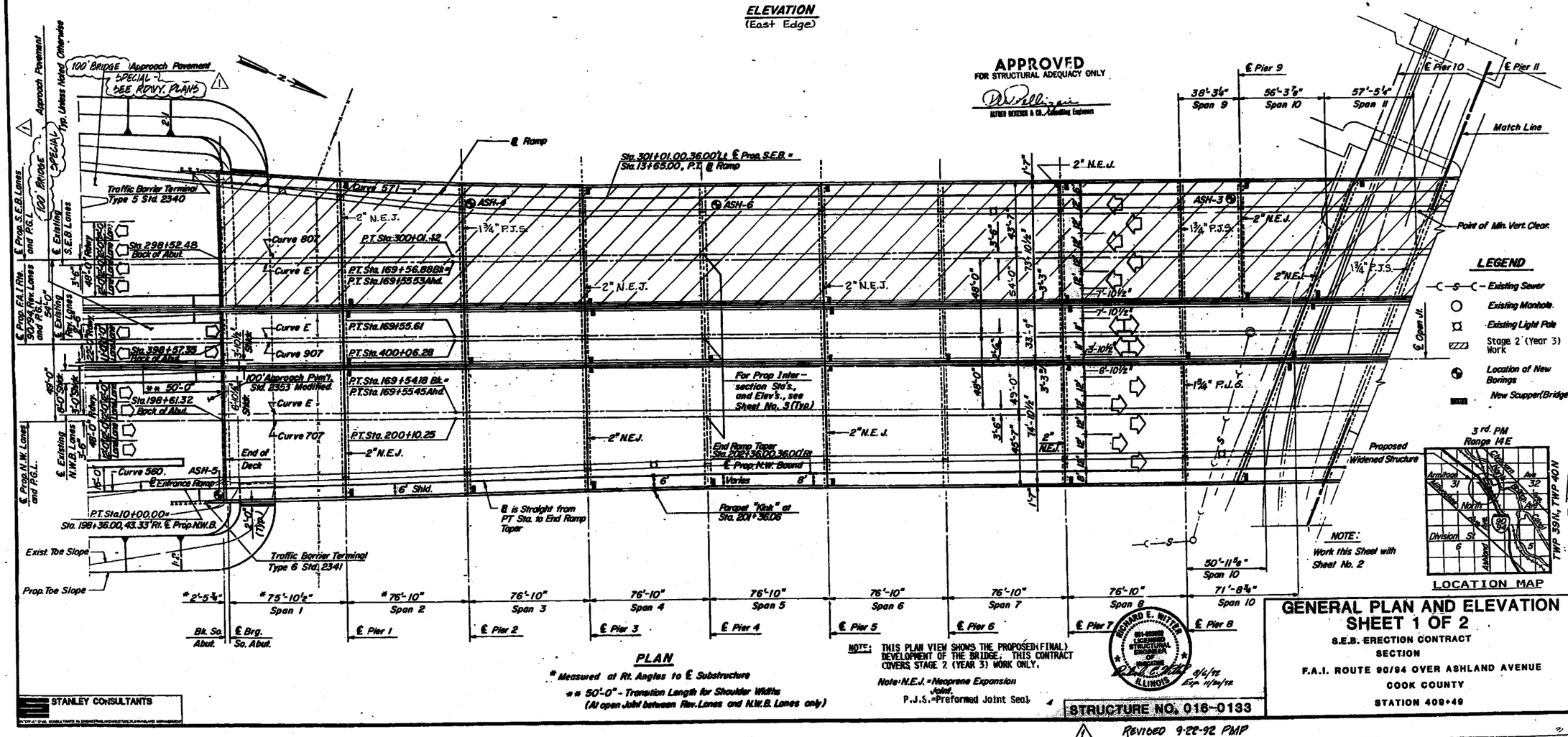
SHEET NO. 1 OF 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0605-403HB & 0707(404HB, 439IR-2



ELEVATION
(East Edge)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ALFRED BENESCH & CO., Consulting Engineers


100' Bridge Approach Pavement
SPECIAL - SEE RDWY. PLANS
℄ Ramp
Sta. 301+01.00, 36.00' Lt. ℄ Prop. S.E.B. = Sta. 13+65.00, P.I. ℄ Ramp
Traffic Barrier Terminal Type 5 Std. 2340
Curve 571
2" N.E.J.
ASH-4
ASH-6
ASH-3
1¾" P.J.S.
Curve 801
P.T. Sta. 300+01.42
Sta. 298+52.48 Back of Abut.
P.T. Sta. 169+56.88Bk = P.T. Sta. 169+55.53Ahd.
Curve E
P.T. Sta. 169+55.61
Curve 907
P.T. Sta. 400+06.28
Sta. 198+57.32 Back of Abut.
100' Approach Pvmt'. Std. 2353 Modified.
P.T. Sta. 169+54.18 Bk = P.T. Sta. 169+55.45 Ahd.
Sta. 198+61.32 Back of Abut.
Curve 707
P.T. Sta. 200+10.25
End of Deck
Curve 560
ASH-5
℄ Entrance Ramp
P.T. Sta. 10+00.00 = Sta. 198+36.00, 43.33' Rt. ℄ Prop. N.W.B.
Exist. Toe Slope
Prop. Toe Slope
Traffic Barrier Terminal Type 6 Std. 2341
For Prop Intersection Sta's., and Elev's., see Sheet No. 3 (Typ.)
End Ramp Taper Sta. 200+36.00 Rt
℄ Prop. N.W. Bound
Varies
6' Shld.
℄ is Straight from PT Sta. to End Ramp Taper
Parapet "Kink" at Sta. 201+36.06
℄ Pier 9
℄ Pier 10
℄ Pier 11
Match Line
Point of Min. Vert. Clear.
℄ Open Jt.
Proposed Widened Structure
℄ Prop. F.A.I. Rte. 90/94, Rev. Lanes and P.G.L.
℄ Existing S.E.B. Lanes
℄ Prop. N.W. Lanes and P.G.L.
℄ Existing N.W.B. Lanes
Approach Pavement Typ. Unless Noted Otherwise
100' Bridge Approach Pavement
Existing Rdwy.
Shldr.
Rev. Lanes
Const. Joint
Future Rdwy.
Future Shldr.
Future Const. Joint
Future Rev. Lanes
Future Const. Joint
Future Shldr.
Future Rdwy.
Existing Const. Joint
Existing Shldr.
Existing Rdwy.
Existing Const. Joint
Existing Shldr.
Existing Rdwy.
Future Const. Joint
Future Shldr.
Future Rdwy.

STATION 409+49
REHABILITATED 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPI-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0133

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUILT BY
CITY OF CHICAGO
WITH THE CO-OPERATION OF
COUNTY OF COOK
STATE OF ILLINOIS
FEDERAL GOVERNMENT
1958

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	177
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2 OF 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

NEW NAME PLATE
See Standard 2113-2

EXISTING NAME PLATE

Anchor with 3/8"ϕ Exp. Anchors

CLEAN AND SEAL SEAT (TYPICAL AT ABUTMENT)

NAME PLATE LOCATION AS PER STD. 2113-2 REINSTALL EXISTING NAME PLATE ADJACENT TO NEW NAME PLATE

ELEVATION
(East Edge)

PLAN

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED(FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

* Measured at Rt. Angles to ℄ Substructure
** Measured along ℄ S.E. Bound Lanes
*** Measured along ℄ Reversible Lanes
**** Measured along ℄ N.W. Bound Lanes

(a) 50'-0" Transition Length for Shoulder Width (at Open Jt. between Rev. Lanes and NW.B Lanes only)

STANLEY CONSULTANTS

GENERAL PLAN AND ELEVATION
SHEET 2 OF 2
S.E.B. ERECTION CONTRACT
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

NOTE:
Work this Sheet with Sheet No. 1.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	178
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3 OF 74 SHEETS

* 050502-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

MAINLINE HORIZONTAL CURVE DATA

	EXISTING CURVE DATA		PROPOSED CURVE DATA	
CURVE #	E (207)	F (208)	807	808
SEB PI STA	166+44.52	186+08.46	296+88.95	316+52.45
Δ	1°33'43.0"	28°41'07.9"	1°33'44.0"	28°33'58.0"
D	0°15'00.0"	1°34'59.8"	0°14'59.9"	1°33'41.7"
T	312.40'	925.29'	312.51'	934.08'
R	22,917.91'	3,618.78'	22,921.41'	3,669.07'
L	624.77'	1,811.77'	624.98'	1,825.30'
E	2.13'	116.42'	2.13'	117.05'
S	NC	0-0125 FT/FT	NC	0-020 FT/FT
CURVE #	E (307)	F (308)	907	908
REV PI STA	166+43.91	186+20.81	396+94.54	416+71.06
Δ	1°33'43.0"	28°41'07.1"	1°33'44.0"	28°33'58.0"
D	0°15'01.9"	1°33'45.2"	0°15'02.0"	1°32'20.2"
T	311.75'	937.56'	311.77'	947.83'
R	22,869.91'	3,666.78'	22,867.41'	3,723.07'
L	623.45'	1,835.79'	623.51'	1,856.22'
E	2.13'	117.97'	2.12'	118.76'
S	NC	0-0125 FT/FT	NC	0-033 FT/FT
CURVE #	E (107)	F (108)	707	708
NWB PI STA	166+43.13	186+32.93	196+99.18	216+87.50
Δ	1°33'43.0"	28°41'08.1"	1°33'44.0"	28°33'58.0"
D	0°15'03.8"	1°32'32.5"	0°15'03.9"	1°31'08.2"
T	311.09'	949.84'	311.10'	960.30'
R	22,821.91'	3,719.78'	22,818.41'	3,772.06'
L	622.15'	1,859.84'	622.17'	1,888.64'
E	2.12'	119.51'	2.12'	120.32'
S	NC	0-0125 FT/FT	NC	0-020 FT/FT

PROPOSED RAMPS HORIZONTAL CURVE DATA

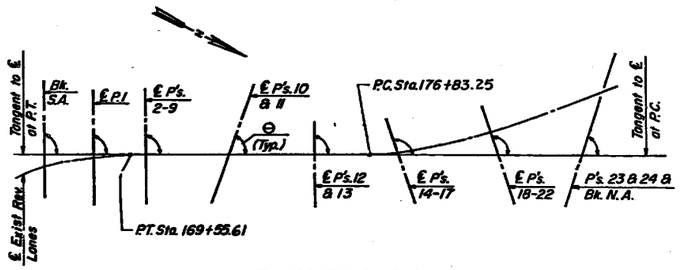
CURVE NO.	560	562	
RAMP B PI STA	8+78.43	11+41.49	
Δ	7°31'31.3"	4°07'03.0"	
D	3°05'26.0"	1°27'20.4"	
T	121.92'	141.49'	
R	1853.90'	3936.04'	
L	243.50'	282.86'	
E	4.01'	2.54'	
S	VARIES	VARIES	
CURVE NO.	571	573	574
RAMP B PI STA	11+56.53	8+01.19	11+43.17
Δ	7°26'26.185"	8°34'14.4"	7°26'57.5"
D	1°46'53.7"	2°09'34.2"	2°36'19.1"
T	209.05'	198.81'	143.17'
R	3216.00'	2653.19'	2199.19'
L	417.52'	396.88'	285.93'
E	6.79'	7.44'	4.66'
S	VARIES	0.020 FT/FT	0.020 FT/FT

PROPOSED INTERSECTION STATIONS

SUBSTRUCTURE	LOCATION S-E. BOUND LANES	REVERSIBLE LANES	N-W. BOUND LANES
BACK SO. ABUT.	298+52.48	398+57.35	198+61.32
℄ PIER 1	299+30.84	399+35.71	199+39.68
" 2	300+07.67	400+12.54	200+16.51
" 3	300+84.51	400+89.38	200+93.35
" 4	301+61.34	401+66.21	201+70.18
" 5	302+38.17	402+43.04	202+47.01
" 6	303+15.01	403+19.88	203+23.85
" 7	303+91.84	403+96.71	204+00.68
" 8	304+68.67	404+73.54	204+77.51
" 9	305+06.94	---	---
" 10	305+63.29	405+45.29	205+28.50
" 11	306+20.73	406+02.73	205+85.94
" 12	---	---	206+42.64
" 13	306+62.50	406+69.12	206+74.67
" 14	307+30.57	407+37.19	207+42.74
" 15	---	408+05.49	208+11.04
" 16	308+65.81	---	208+77.97
" 17	309+38.54	---	209+50.70
" 18	309+94.60	---	210+11.49
" 19	310+64.98	410+74.08	---
" 20	311+20.50	411+29.60	211+37.40
" 21	311+79.89	411+88.98	211+96.77
" 22	312+32.13	412+41.22	---
" 23	312+86.36	412+66.45	212+48.08
" 24	313+69.53	413+49.15	213+30.37
END OF BRIDGE DECK	314+23.95	414+03.23	213+84.16

PROPOSED INTERSECTION ELEVATIONS (PROFILE GRADE ELEVATIONS)

SUBSTRUCTURE	LOCATION S-E. BOUND LANES	REVERSIBLE LANES	N-W. BOUND LANES
BACK SO. ABUT.	613.15	613.28	613.11
℄ PIER 1	616.51	615.63	615.46
" 2	617.81	617.92	617.75
" 3	619.88	619.99	619.82
" 4	621.64	621.75	621.57
" 5	623.09	623.19	623.02
" 6	624.23	624.33	624.17
" 7	625.06	625.17	625.00
" 8	625.58	625.69	625.53
" 9	625.72	- - -	- - -
" 10	625.80	625.90	625.71
" 11	625.70	625.88	625.75
" 12	- - -	- - -	625.63
" 13	625.52	625.64	625.48
" 14	625.03	625.15	625.00
" 15	- - -	624.42	624.27
" 16	623.33	- - -	623.33
" 17	622.01	- - -	622.05
" 18	620.80	- - -	620.79
" 19	619.04	619.18	- - -
" 20	617.46	617.63	617.55
" 21	615.66	615.85	615.78
" 22	614.07	614.28	- - -
" 23	612.46	613.55	614.27
" 24	610.05	611.07	611.83
END OF BRIDGE DECK	608.87	609.73	610.34



SCHEMATIC FOOTING LAYOUT

SUBSTRUCTURE	ANGLE θ
BK. S.A.	90°-00'-00"
P. 1	90°-00'-00"
P's. 2-9	90°-00'-00"
P's. 10&11	67°-02'-48"
P's. 12&13	91°-50'-50"
P's. 16-17	91°-50'-50"
P's. 18-22	94°-28'-07"
P's. 23&24	67°-15'-35"
BK. N.A.	67°-15'-35"

STANLEY CONSULTANTS

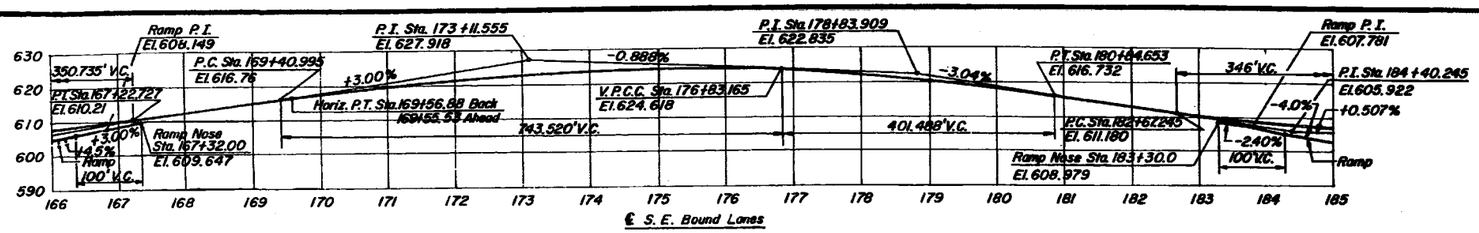
HORIZONTAL ALIGNMENT

SECTION

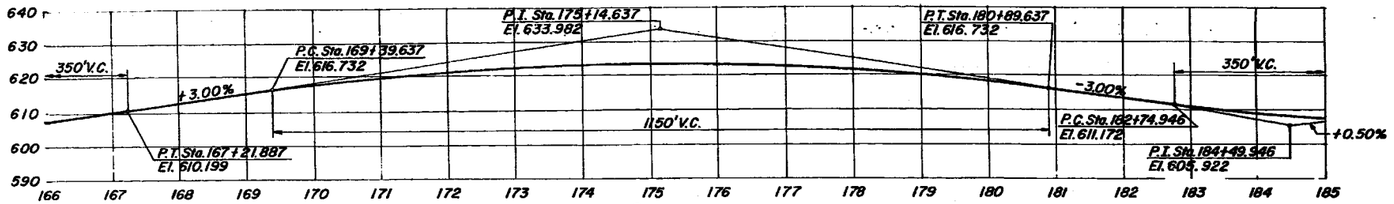
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

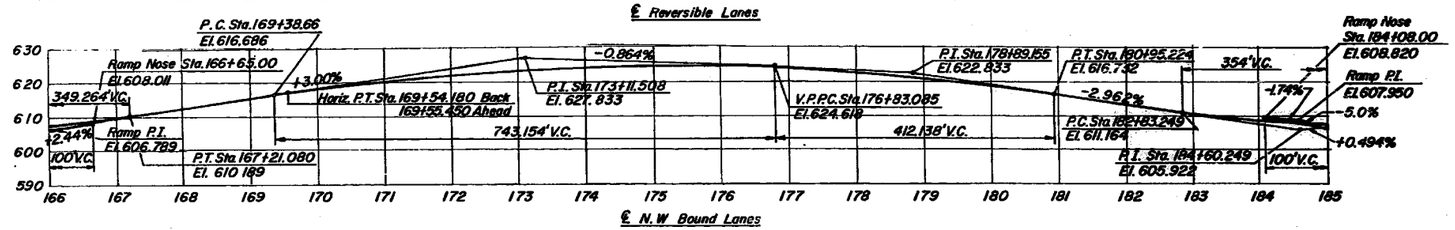
STATION 409+49



℄ S. E. Bound Lanes



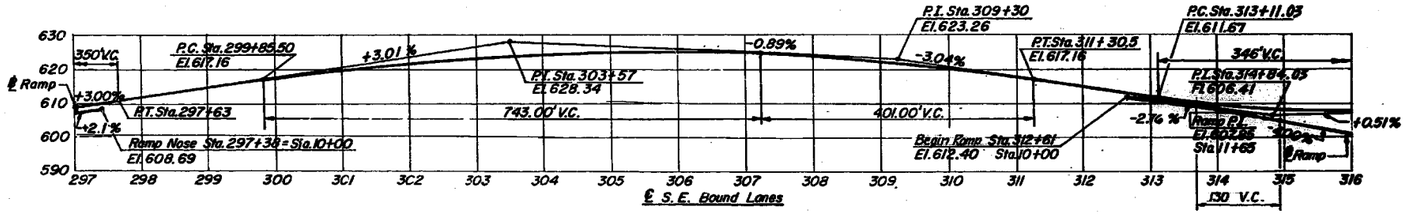
℄ Reversible Lanes



℄ N.W. Bound Lanes

ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94



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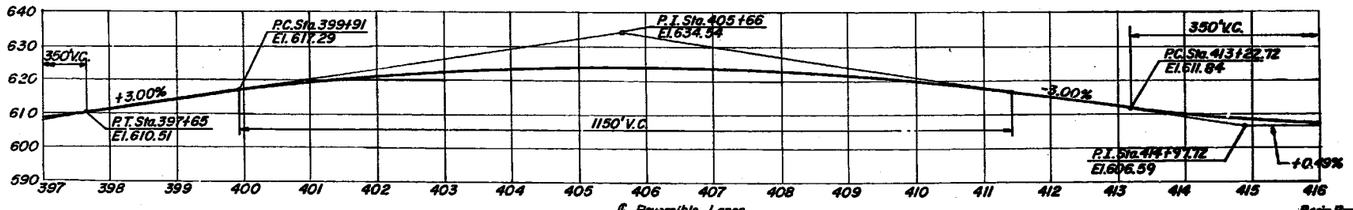
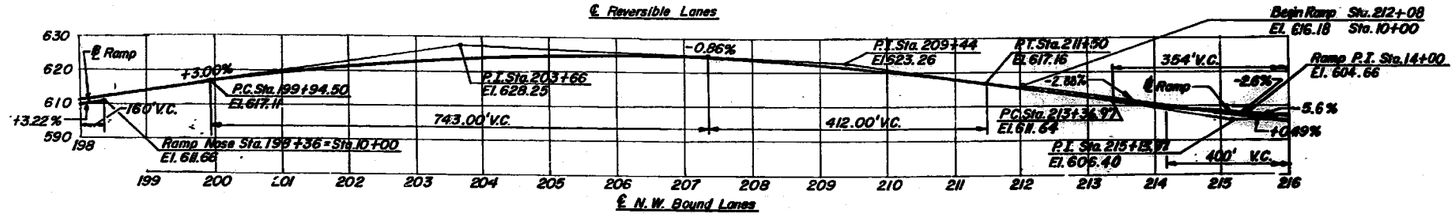


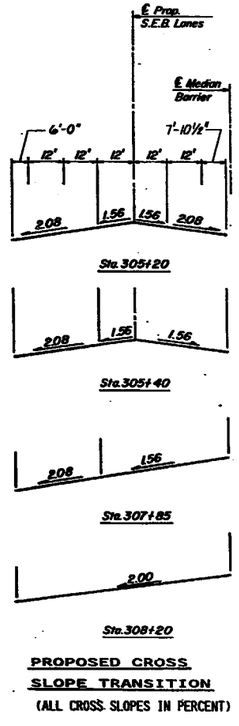
℄ Reversible Lanes



℄ N.W. Bound Lanes

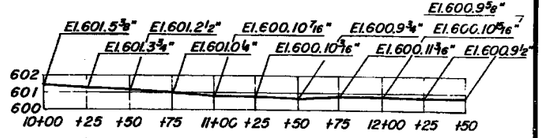
PROPOSED PROFILE GRADE

F.A.I. Rte. 90/94



PROPOSED CROSS SLOPE TRANSITION

(ALL CROSS SLOPES IN PERCENT)



EXISTING TRACK PROFILE

Scales: 1" = 40" Horiz.
1/4" = 1'-0" Vert.

EXISTING CORTLAND STREET

(Along ℄ of Roadway)

Station	Elevation
12+94	590.38
12+84	590.21
12+74	590.06
12+64	489.91
12+54	589.82
12+44	589.77
12+34	589.75
12+24	589.74
12+14	589.70
12+04	589.66
11+94	589.63
11+69	589.62
11+44	589.49
11+19	589.33
10+94	589.01
10+84	588.84
10+74	568.67
10+64	588.48
10+54	588.12
10+44	587.79
10+34	587.44
10+24	587.07
10+14	586.69
10+04	586.31
9+94	586.12
9+84	585.93
9+74	585.72

EXISTING ASHLAND AVENUE

(Along Concrete Median Gutterline)

Station	Elevation
0+00	588.64
0+10	589.07
0+20	589.46
0+30	589.86
0+40	590.24
0+50	590.55
0+60	590.86
0+70	591.15
0+80	591.36
0+90	591.55
1+00	591.68
1+25	591.78
1+50	591.90
1+75	591.89
2+00	591.83
2+25	591.81
2+50	591.82
2+75	591.86
3+00	591.85
3+25	591.87
3+50	591.83
3+60	591.70
3+70	591.54
3+80	591.40
3+90	591.06
4+00	590.74
4+10	590.39
4+20	590.01
4+30	589.63
4+50	589.24
4+60	588.80

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0508-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	179
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4 OF 74 SHEETS

STANLEY CONSULTANTS

PROFILES

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
	BRIDGE DECK GROOVING	SQ. YD.	13,932	-	13,932
	CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	3937.8	-	3937.8
	CLASS X CONCRETE	CU. YD.	-	4.8	4.8
	REINFORCING BARS (EPOXY COATED)	LBS.	943,010	420	943,430
	STRUCTURE EXCAVATION	CU. YD.	-	6	6
(5)	REMOVAL OF EXISTING CONCRETE DECK	LUMP SUM	0.3	-	0.3
(1)	PROTECTIVE COAT	SQ. YD.	15,161	-	15,161
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	1,031	-	1,031
	NEOPRENE EXPANSION JOINT 4"	LIN. FT.	47	-	47
(2)	BEAM REPOSITIONING	EACH	1	-	1
(9)	FURNISHING AND ERECTING STRUCTURAL STEEL	LBS.	10,617	-	10,617
(7)	ERECTING STRUCTURAL STEEL	LUMP SUM	0.1	-	0.1
	1" DIA. ANCHOR BOLTS	EACH	102	-	102
△1	SILICONE JOINT SEALER	LIN. FT.	124		124
(6)	CONCRETE REMOVAL	CU. YD.	2.0	5.1	7.1
	FURNISH & INSTALL BRIDGE SCUPPER-TYPE A	EACH	23	-	23
	RIVET REMOVAL AND REPLACEMENT	EACH	13	-	13
(4)	PROTECTIVE SHIELD	SQ. YD.	15,770	-	15,770
(3)	DRAINAGE SYSTEM	LUMP SUM	0.7	-	0.7
	PREFORMED JOINT SEAL 1 3/4"	LIN. FT.	389	-	389
	EPOXY CRACK SEALING	LIN. FT.	300	100	400
	EPOXY MORTAR REPAIR (DEPTH < 1 1/2")	CU. FT.	250	50	300
	FORMED CONCRETE REPAIR (1 1/2" < DEPTH < 5")	SQ. FT.	-	3560	3560
	FORMED CONCRETE REPAIR (DEPTH > 5")	SQ. FT.	-	710	710
	PROTECTIVE SURFACE TREATMENT	SQ. FT.	-	61,700	61,700
	JACK & SUPPORT EXISTING BEAM FOR BEAM REPAIR	EACH	4	-	4
	PROTECT & MAINTAIN EXISTING UNDERPASS LUMINARIES	LUMP SUM	0.4	-	0.4
	NAME PLATES	EACH	1	-	1

(1) PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE AND FACE OF BARRIER RAILS. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(2) JACKING BEAM S24.1 TO ITS FINAL POSITION.

(3) SEE SPECIAL PROVISIONS.

(4) SEE SHEET 6 FOR LIMITS OF PROTECTIVE SHIELD.

(5) INCLUDES 125,390 SQ. FT. OF EXISTING CONCRETE DECK REMOVAL AND PORTIONS OF CONCRETE DIAPHRAGMS INDICATED.

(6) INCLUDES 2.0 CU. YDS. OF CONCRETE DIAPHRAGMS CONNECTED TO BEAM S24.1.

(7) INCLUDES 840 LBS OF STRUCTURAL STEEL (DIAPHRAGM ASSEMBLIES)

(9) INCLUDES 10,617 POUNDS OF STRUCTURAL STEEL REQUIRED AT PERFORMED JOINT SEAL 1 3/4".

REHABILITATION NOTES:

SEAL CRACKS (1/16" AND WIDER) IN ABUTMENT CAPS, PIER CAPS, AND DIAPHRAGMS (WITHIN THE SOUTHEAST BOUND AREA) WITH PRESSURE INJECTED EPOXY. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "EPOXY CRACK SEALING." (SEE SPECIAL PROVISIONS).

REPAIR HOLLOW, SPALLED AND DETERIORATED CONCRETE PORTION OF ABUTMENT CAPS, PIER CAPS, AND DIAPHRAGMS, WITHIN THE SOUTHEAST BOUND AREA WITH EPOXY MORTAR OR FORMED CONCRETE. SPLICE IN REBARS WHERE REQUIRED. (SEE SPECIAL PROVISIONS).

REMOVE EXISTING ELECTRICAL CONDUIT, ELECTRICAL BOXES AND LIGHT POLES IN THE SOUTHEAST BOUND AREA. WORK IS TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR "REMOVAL OF EXISTING CONCRETE DECK." (SEE SPECIAL PROVISIONS).

CLEAN AND SEAL THE BRIDGE SEATS AT THE ABUTMENTS AND THE PIERS IN THE SOUTHEAST BOUND AREA. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "PROTECTIVE SURFACE TREATMENT."

REMOVE LOOSE ANCHOR BOLTS AND REPLACE WITH EPOXY GROUTED ANCHOR BOLTS. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR 1" DIA. ANCHOR BOLTS." (SEE SPECIAL PROVISIONS). LOCATION OF REPAIRS SHALL BE COORDINATED WITH TABLE ON THIS SHEET.

REPLACE MISSING OR LOOSE ANCHOR BOLT NUTS OR SIDE RETAINER NUTS WITH NEW NUTS CONFORMING TO ASTM A307. LOCATION OF WORK SHALL BE COORDINATED WITH TABLE ON THIS SHEET. (COST INCIDENTAL TO 1" DIA. ANCHOR BOLTS").

THE BUREAU OF BRIDGES AND STRUCTURES SHALL BE CONSULTED CONCERNING THE REPAIR OF ALL PPC BEAMS THAT EXHIBIT MORE THAN SUPERFICIAL DAMAGE.

REPLACE THE MISSING STRUCTURAL STEEL BOLTS, NUTS AND RIVETS AND REMOVE AND REPLACE THE LOOSE BOLTS, NUTS AND RIVETS WITH HIGH STRENGTH BOLTS. CROSS BRACING CONNECTION TO GIRDER G1 AT BEAM S16.2 AND GIRDER G4 A BOLT IS LOOSE. GIRDER G5 BETWEEN STRINGERS S16.1 AND S16.2 RIVETS ARE MISSING. GIRDER G6 AT STRINGER S17.12 THERE IS A LOOSE BOLT IN THE CONNECTION OF THE BOTTOM CHORD BRACING. CROSS BRACING BETWEEN STRINGERS S14.3 AND S14.4 NEAR PIER 14, ONE OF THE BOLTS ATTACHED TO THE STIFFENERS IS MISSING A NUT. CROSS BRACING BETWEEN STRINGER S14.2 AND S14.3 NEAR PIER 14, NINE OF THE TWELVE BOLTS ATTACHED TO THE STIFFENERS ARE LOOSE. ANY ADDITIONAL LOOSE OR MISSING BOLTS, NUTS AND RIVETS FOUND DURING REHABILITATION SHOULD ALSO BE REPLACED WITH HIGH STRENGTH BOLTS AS DIRECTED BY ENGINEER. METHOD OF REMOVAL SHALL BE BY MECHANICAL MEANS ONLY. NO BURNING ALLOWED. (COST INCIDENTAL TO ~~"FURNISHING AND ERECTING STRUCTURAL STEEL.")~~ "RIVET REMOVAL & REPLACEMENT.")

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183.
2. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~(AASHTO M 164, TYPE 3)~~, BOLTS 3/4"ø, 15/16" HOLES UNLESS NOTED OTHERWISE.
3. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC-SILICATE PRIMER.
4. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
5. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
6. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
7. EXPANSION BOLTS SHALL CONSIST OF APPROVED EXPANSION ANCHORS, PROVIDING MINIMUM CERTIFIED PROOF LOAD = 4,080 LBS., AND 3/4"ø X 12" HOOKED BOLTS.
8. BEAM S24.1 SHALL BE JACKED TO ITS FINAL POSITION. REFER TO SHEET 63 FOR ADDITIONAL DETAILS.
9. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.
10. THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.
11. △2 STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED ONLY AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING NEW STEEL AND ADJACENT AREAS OF EXISTING STEEL STRUCTURES".

GENERAL NOTES CON'D.:

12. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE PAINT AND ALL OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF STRINGERS (GIRDERS). THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP 11 FOR POWER TOOL CLEANING OR SP 2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK."
13. THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE FIRST COAT HAS BEEN APPLIED IN THE SHOP. THE SECOND COAT SHALL BE APPLIED IN THE FIELD UNDER THIS CONTRACT. THE THIRD COAT SHALL BE APPLIED IN THE FIELD BY OTHERS. THE COLOR OF THE ALKYD FINISH COATS SHALL BE MUNSELL NO. 2.5 YR 3/4 REDDISH BROWN FOR FASCIA OF EXTERIOR BEAMS AND THEIR BEARINGS AND MUNSELL NO. 10 YR 7/1 LIGHT GREY FOR ALL OTHER STRUCTURAL STEEL.
14. EXPANSION PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THREE COATS OF THE LEAD AND CHROMATE-FREE ALKYD PAINTING SYSTEM. THE COLOR OF THE FINISH COATS SHALL BE MUNSELL NO. 10 YR 7/1 LIGHT GREY.
15. THE REPAIR OF THE PRECAST BEAMS IN THE REVERSIBLE LANES WILL BE INCLUDED IN THIS CONTRACT IF DIRECTED BY THE ENGINEER.
16. CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE SYSTEM DURING THE REPAIR OF THE SUBSTRUCTURE. THE DRAINAGE SYSTEM SHALL COLLECT THE WATER JUST BELOW THE DECK AND DISCHARGE THE WATER AT GRADE.
17. EXISTING NAMEPLATE TO BE MOUNTED ADJACENT TO NEW NAMEPLATE, COST INCIDENTAL TO "NAMEPLATES".

ANCHOR BOLT REHABILITATION TABLE

BEAM NUMBER	BEARING	ANCHOR BOLTS: LOOSE	ANCHOR BOLTS: MISSING	ANCHOR BOLTS: DAMAGED	REMARKS
S1.5	SOUTH	EAST			
S1.6	SOUTH		WEST		
S1.7	SOUTH	EAST	EAST		
S1.8	SOUTH		WEST		
S1.9	SOUTH			EAST	
S1.8	NORTH	EAST			
S2.4	SOUTH	YES			
S2.8	NORTH	WEST			NUT NOT TIGHT
S2.14	NORTH	WEST			NUT NOT TIGHT
S2.17	NORTH	EAST			
S5.5	SOUTH			YES	
S5.6	SOUTH			YES	
S5.7	SOUTH			YES	
S5.8	SOUTH			YES	
S5.9	SOUTH			YES	
S5.15	NORTH	YES			
S6.9	SOUTH	YES			
S6.7	NORTH		EAST		
S7.15	NORTH	YES			
S8.15	SOUTH	YES			
S9.9	SOUTH			EAST	E. BOLT BENT
S11.5	NORTH	BOTH		BOTH	BOLTS BENT
S11.6	NORTH	BOTH		BOTH	BOLTS BENT
S11.7	NORTH	WEST			
S11.8	NORTH			WEST	WEST BOLT BENT
S11.10	NORTH	BOTH			
S11.12	NORTH	BOTH			
S11.13	NORTH	BOTH			
S11.14	NORTH	BOTH		BOTH	BOLTS BENT
S11.15	NORTH	BOTH		BOTH	BOLTS BENT
S11.16	NORTH	EAST			
S11.17	NORTH		BOTH		
S13.3	SOUTH	EAST			
S13.4	SOUTH	BOTH		EAST	EAST NUT MISSING
S13.5	SOUTH	WEST			
S13.6	SOUTH			EAST	EAST NUT MISSING
S13.7	SOUTH	WEST			
S13.9	SOUTH	EAST			

ANCHOR BOLT REHABILITATION TABLE

BEAM NUMBER	BEARING	ANCHOR BOLTS: LOOSE	ANCHOR BOLTS: MISSING	ANCHOR BOLTS: DAMAGED	REMARKS
S13.10	SOUTH	EAST		EAST	
G1	SOUTH			RUST	
S14.9	NORTH	EAST			
S17.3	NORTH	EAST	EAST	BOTH	
S17.4	NORTH		BOTH		
S17.5	NORTH			EAST	
S18.4	SOUTH		EAST		
S18.5	SOUTH		EAST		
S18.6	SOUTH		EAST		
S19.12	SOUTH		EAST		
S19.13	SOUTH		EAST		
S19.14	SOUTH		EAST		
S21.10	SOUTH	BOTH			
S21.13	SOUTH	BOTH			
S23.3	NORTH	EAST	WEST		EAST BOLT BENT
S23.4	NORTH	EAST	WEST		EAST BOLT BENT
S23.5	NORTH	WEST	EAST		
S23.6	NORTH		BOTH		
S23.7	NORTH		BOTH		
S23.8	NORTH	WEST		EAST	
S23.9	NORTH	EAST	WEST		
S23.10	NORTH		BOTH		
S23.11	NORTH	EAST	WEST		
S23.12	NORTH	EAST	WEST		
S23.13	NORTH	WEST		EAST	
S23.14	NORTH	WEST			
S23.15	NORTH	BOTH			
S24.3	SOUTH	BOTH			NUTS MISSING
S24.5	SOUTH	EAST			
S24.13	SOUTH	WEST			
S24.17	SOUTH	WEST			
S24.18	SOUTH	EAST			
S25.3	NORTH	WEST			
S25.4	NORTH	WEST			
S25.5	NORTH	EAST			
S25.14	NORTH	EAST			
S25.15	NORTH	WEST			

EXISTING STRUCTURE

FAI ROUTE 2, SEC 0505.3IH, BUILT IN 1958, STRUCTURE NO. 016-0133.

SUPERSTRUCTURE: APPROACH SPANS TO ASHLAND AVENUE: SIMPLY SUPPORTED PRECAST, PRESTRESSED CONCRETE I-BEAMS. ASHLAND AVENUE MAIN SPANS: PLANAR FRAME-TYPE STRUCTURE CONSISTING OF 144" RIVETED BUILT-UP COMPOSITE FASCIA GIRDERS, 96" AND 120" CROSS-GIRDERS, AND 48" LONGITUDINAL GIRDERS.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED ON CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED ON CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING UTILITIES

THE EXISTING UTILITIES HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

DESIGN SPECIFICATIONS

AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS.
LOADING HS20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

REINFORCED CONCRETE & STRUCTURE STEEL

F'C = 3,500 PSI (CONCRETE)
FY = 60,000 PSI (REINFORCEMENT)
FS = 20,000 PSI (PROPOSED STRUCTURAL STEEL)(M183)
FS = 18,000 PSI (EXISTING STRUCTURAL STEEL)

PRESTRESSED CONCRETE & PRETENSIONING STEEL

	EXISTING	PROPOSED
F'C	5,000 PSI	5,000 PSI
F'CI	4,000 PSI	4,000 PSI
F'S	248,000 PSI(7/16"ø STRANDS)	270,000 PSI(1/2"ø STRANDS)
F'SI	173,600 PSI	189,000 PSI

STANLEY CONSULTANTS

GENERAL NOTES AND BILL OF MATERIAL

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

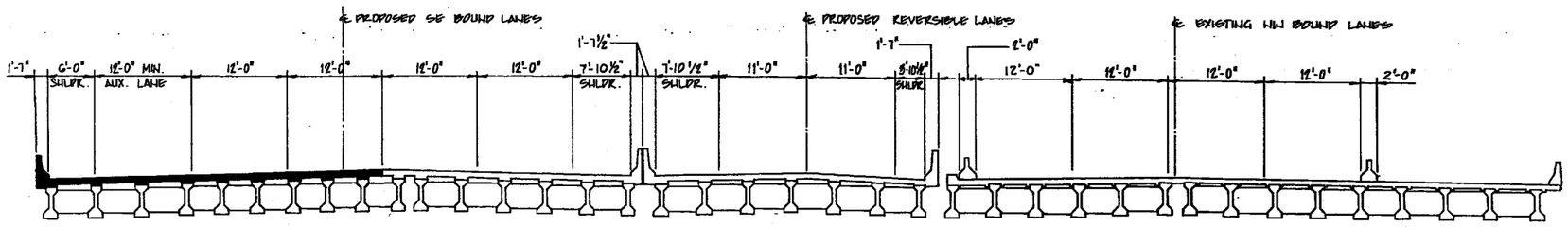
△1 △2 AS REVISED 9-22-92 PMP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

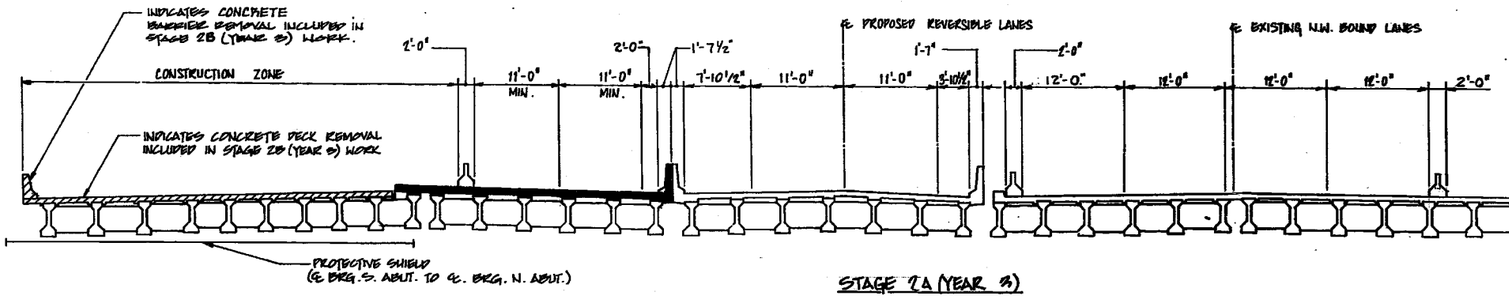
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	181
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 OF 74 SHEETS

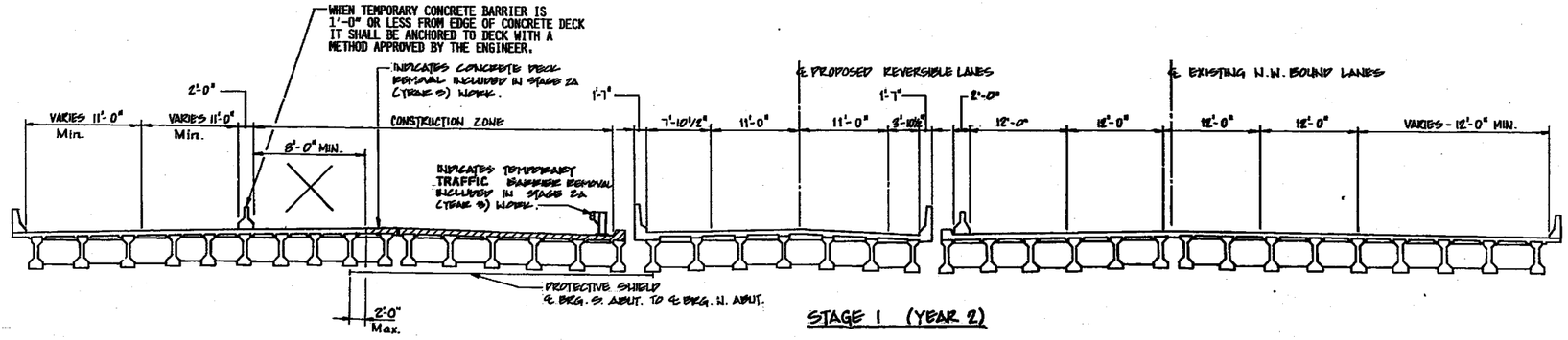
* 050512-2B, 3-IN, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0608-403HB & 07071404HB, 439IR-2



STAGE 2B (YEAR 3)



STAGE 2A (YEAR 3)



STAGE 1 (YEAR 2)

LEGEND
DENOTES PROPOSED STRUCTURE

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49..

STANLEY CONSULTANTS

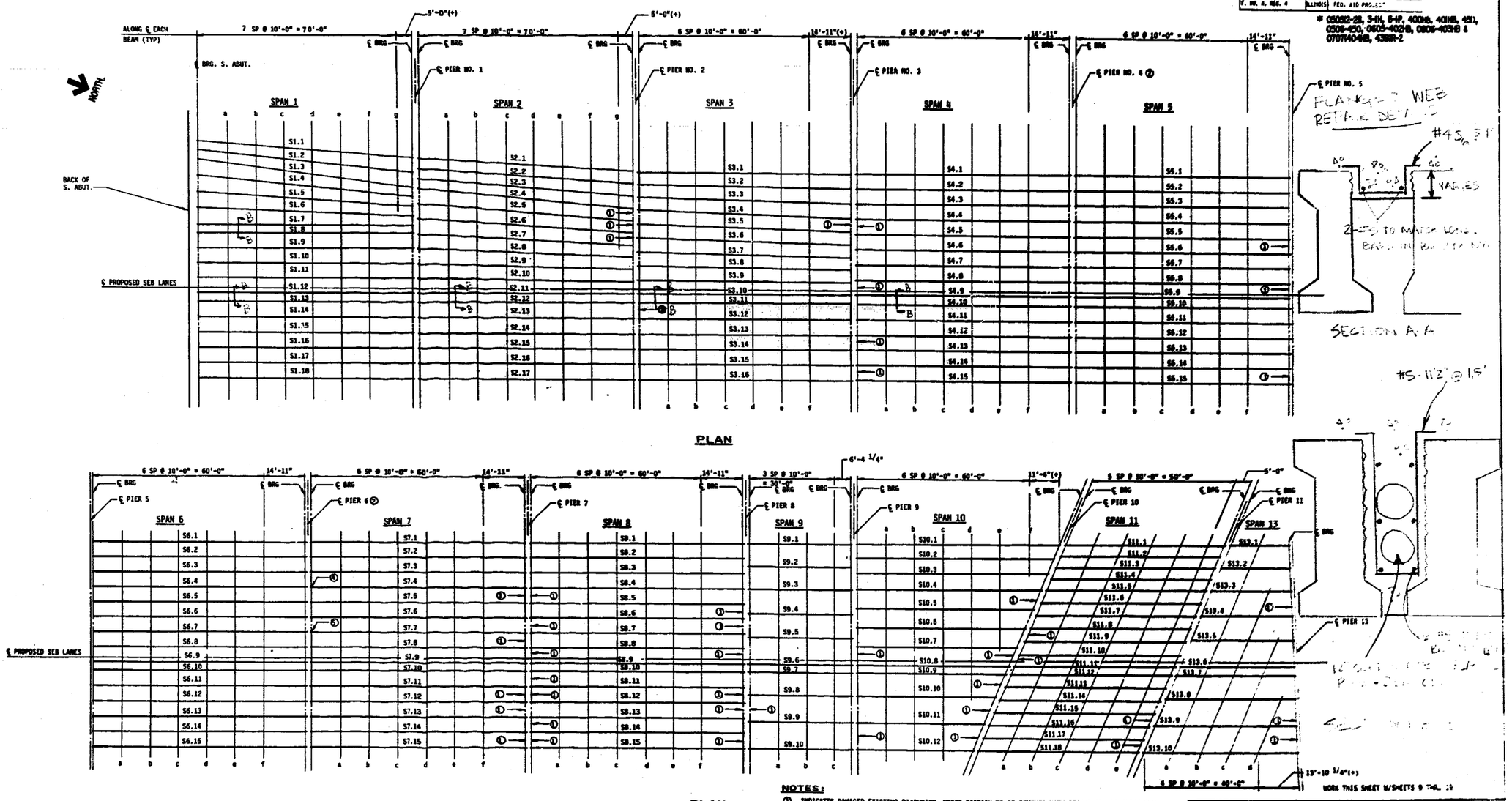
555

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	182
F. NO. 4, REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0806-403HB & 07071404HB, 439HR-2



NOTES:

① INDICATES DAMAGED EXISTING DIAPHRAGM, UPPER PORTION TO BE REMOVED WITH DECK SLAB, AS INDICATED ON DETAILS. SEE SHEET 47. REMAINING LOWER PORTION TO BE REPAIRED IN ACCORDANCE WITH "REHABILITATION NOTES" SHOWN ON SHEET 5. ANY ADDITIONAL DIAPHRAGMS THAT ARE FOUND TO BE DAMAGED DURING REHABILITATION SHOULD ALSO BE REPAIRED AS INDICATED ABOVE.

② INDICATES EXISTING DIAPHRAGM AT PIERS 4, 6, AND 20 TO BE REMOVED AND REPLACED WITH FIXED PIER DIAPHRAGM, SEE SHEET 47 FOR DETAILS.

③ INDICATES MISSING OR LOOSE BOLTS, NUTS, OR RIVETS. SEE "REHABILITATION NOTES" SHOWN ON SHEET 5.

④ INDICATES CRACK IN BOTTOM FLANGE.

⑤ INDICATES CRACK IN WEB.

⑥ EXISTING CROSS BRACING (TYP).

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 1 OF 2

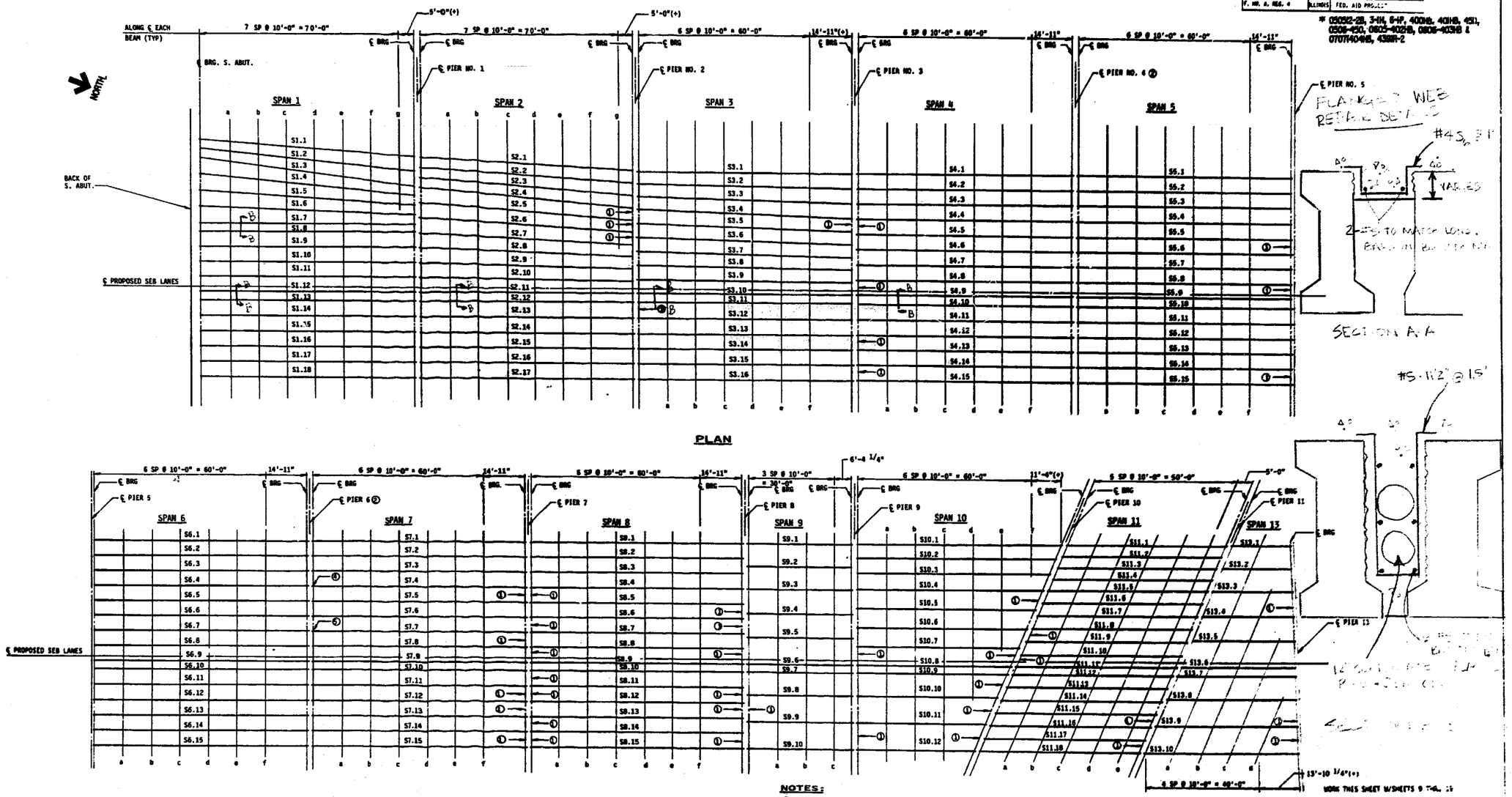
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	182
F. NO. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 of 74 SHEETS

* 0505I2-2B, 3-1H, 6-1F, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439IR-2



NOTES:

① INDICATES DAMAGED EXISTING DIAPHRAGM, UPPER PORTION TO BE REMOVED WITH DECK SLAB, AS INDICATED ON DETAILS, SEE SHEET 47, REMAINING LOWER PORTION TO BE REPAIRED IN ACCORDANCE WITH "REHABILITATION NOTES" SHOWN ON SHEET 5. ANY ADDITIONAL DIAPHRAGMS THAT ARE FOUND TO BE DAMAGED DURING REHABILITATION SHOULD ALSO BE REPAIRED AS INDICATED ABOVE.

② INDICATES EXISTING DIAPHRAGM AT PIERS 4, 6, AND 20 TO BE REMOVED AND REPLACED WITH FIXED PIER DIAPHRAGM, SEE SHEET 47 FOR DETAILS.

③ INDICATES MISSING OR LOOSE BOLTS, NUTS, OR RIVETS. SEE "REHABILITATION NOTES" SHOWN ON SHEET 5.

④ INDICATES CRACK IN BOTTOM FLANGE.

⑤ INDICATES CRACK IN WEB.

⑥ EXISTING CROSS BRACING (TYP).

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 1 OF 2

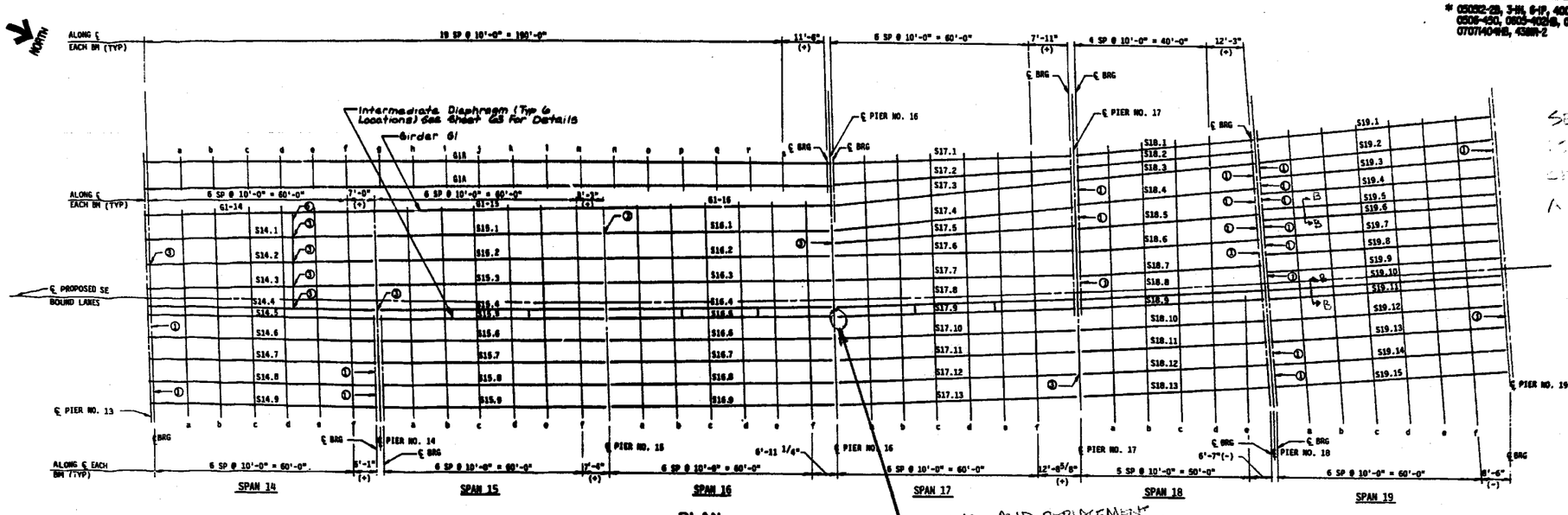
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 469+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	183
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJ.		

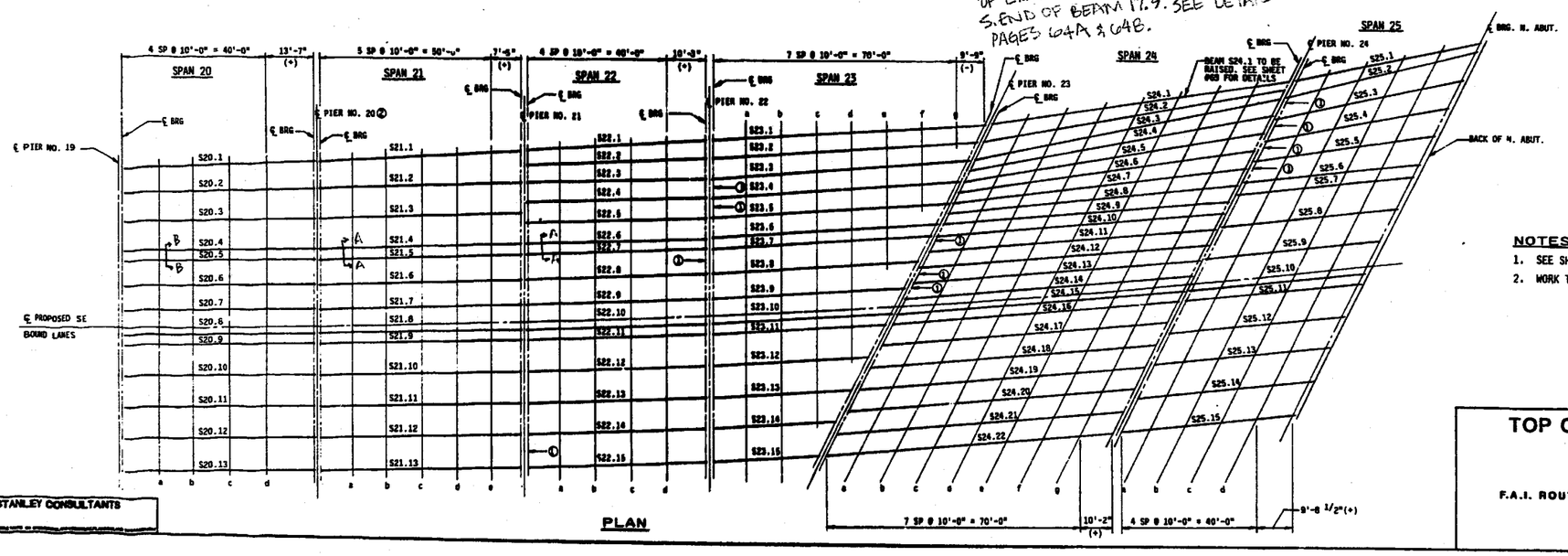
SHEET NO. 8 of 74 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707140HB, 438H-2



PLAN

REMOVAL AND REPLACEMENT OF EXISTING DETERIORATED WEB S. END OF BEAM 17.9. SEE DETAIL PAGES 64A & 64B.



PLAN

NOTES:

1. SEE SHEET 7 FOR DIAPHRAGM REHABILITATION NOTES
2. WORK THIS SHEET WITH SHEETS 19 THRU 22

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 2 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	184
F. HD. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9 of 74 SHEETS

* 05052-2B, 3-HH, 6-HP, 400HB, 40HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439R-2

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.18	BK. S. ABUT.	29852.275	30.813	612.568	612.568
	℄ BRG.	29854.758	30.829	612.643	612.643
	a	29864.771	30.891	612.943	612.957
	b	29874.784	30.948	613.243	613.269
	c	29884.798	31.001	613.543	613.572
	d	29894.811	31.050	613.844	613.874
	e	29904.824	31.094	614.144	614.172
	f	29914.838	31.134	614.445	614.466
	℄ BRG.	29929.780	31.185	614.894	614.894
BEAM S1.17	BK. S. ABUT.	29852.309	25.564	612.679	612.679
	℄ BRG.	29854.791	25.580	612.753	612.753
	a	29864.802	25.641	613.053	613.067
	b	29874.813	25.698	613.353	613.380
	c	29884.824	25.751	613.654	613.683
	d	29894.835	25.800	613.954	613.984
	e	29904.847	25.844	614.254	614.282
	f	29914.858	25.884	614.555	614.575
	℄ BRG.	29929.796	25.935	615.003	615.003
BEAM S1.16	BK. S. ABUT.	29852.343	20.314	612.789	612.789
	℄ BRG.	29854.825	20.330	612.864	612.864
	a	29864.833	20.391	613.164	613.177
	b	29874.842	20.449	613.464	613.490
	c	29884.851	20.501	613.764	613.793
	d	29894.860	20.550	614.064	614.095
	e	29904.869	20.594	614.364	614.392
	f	29914.878	20.634	614.665	614.685
	℄ BRG.	29929.813	20.685	615.113	615.113

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.15	BK. S. ABUT.	29852.378	15.064	612.900	612.900
	℄ BRG.	29854.856	15.080	612.976	612.976
	a	29864.865	15.141	613.276	613.288
	b	29874.871	15.199	613.576	613.600
	c	29884.878	15.252	613.876	613.903
	d	29894.884	15.300	614.176	614.205
	e	29904.892	15.344	614.476	614.502
	f	29914.898	15.384	614.775	614.795
	℄ BRG.	29929.829	15.435	615.223	615.223
BEAM S1.14	BK. S. ABUT.	29852.412	9.814	612.999	612.999
	℄ BRG.	29854.892	9.830	613.073	613.073
	a	29864.896	9.891	613.373	613.387
	b	29874.900	9.949	613.673	613.700
	c	29884.904	10.002	613.976	614.003
	d	29894.909	10.050	614.276	614.305
	e	29904.913	10.096	614.576	614.602
	f	29914.917	10.134	614.875	614.896
	℄ BRG.	29929.844	10.185	615.306	615.324
BEAM S1.13	BK. S. ABUT.	29852.446	4.564	613.082	613.082
	℄ BRG.	29854.926	4.580	613.156	613.156
	a	29864.927	4.642	613.456	613.470
	b	29874.929	4.699	613.756	613.783
	c	29884.931	4.750	614.057	614.086
	d	29894.933	4.800	614.357	614.387
	e	29904.935	4.844	614.657	614.685
	f	29914.937	4.884	614.958	614.978
	℄ BRG.	2992° 862	4.935	615.406	615.406

° INDICATES STA. 299+29.862(TYP)

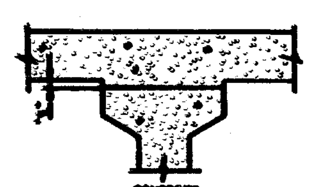
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.12	BK. S. ABUT.	29852.466	1.522	613.130	613.130
	℄ BRG.	29854.945	1.538	613.204	613.204
	a	29864.945	1.600	613.504	613.518
	b	29874.946	1.657	613.804	613.831
	c	29884.947	1.710	614.105	614.134
	d	29894.947	1.758	614.405	614.435
	e	29904.948	1.803	614.705	614.733
	f	29914.949	1.842	615.006	615.026
	℄ BRG.	29929.871	1.894	615.454	615.454
℄ PROPOSED SEB LANES	BK. S. ABUT.	29852.476	0.000	613.154	613.154
	℄ BRG.	29854.955	0.000	613.228	613.228
	a	29864.955	0.000	613.529	613.543
	b	29874.955	0.000	613.830	613.857
	c	29884.955	0.000	614.131	614.161
	d	29894.955	0.000	614.432	614.463
	e	29904.955	0.000	614.733	614.761
	f	29914.955	0.000	615.034	615.055
	℄ BRG.	29929.877	0.000	615.484	615.484
BEAM S1.11	BK. S. ABUT.	29852.500	-3.707	613.097	613.097
	℄ BRG.	29854.978	-3.691	613.171	613.171
	a	29864.977	-3.629	613.473	613.487
	b	29874.975	-3.572	613.775	613.802
	c	29884.973	-3.519	614.077	614.106
	d	29894.972	-3.471	614.379	614.409
	e	29904.970	-3.427	614.680	614.708
	f	29914.968	-3.387	614.982	615.003
	℄ BRG.	29929.888	-3.336	615.432	615.432

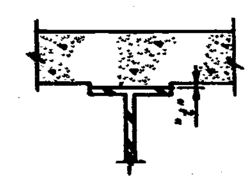
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.10	BK. S. ABUT.	29852.534	-8.936	613.016	613.016
	℄ BRG.	29855.012	-8.920	613.091	613.091
	a	29865.008	-8.858	613.393	613.406
	b	29875.004	-8.801	613.694	613.721
	c	29885.000	-8.748	613.996	614.025
	d	29894.996	-8.700	614.298	614.328
	e	29904.992	-8.656	614.599	614.627
	f	29914.988	-8.616	614.901	614.922
	℄ BRG.	29929.904	-8.565	615.351	615.351
BEAM S1.9	BK. S. ABUT.	29852.568	-14.165	612.924	612.924
	℄ BRG.	29855.045	-14.149	612.999	612.999
	a	29865.039	-14.087	613.301	613.315
	b	29875.033	-14.030	613.603	613.629
	c	29885.026	-13.977	613.905	613.934
	d	29895.020	-13.929	614.207	614.237
	e	29905.014	-13.885	614.509	614.536
	f	29915.008	-13.845	614.810	614.831
	℄ BRG.	29929.920	-13.794	615.260	615.260
BEAM S1.8	BK. S. ABUT.	29852.601	-19.394	612.816	612.816
	℄ BRG.	29855.079	-19.378	612.891	612.891
	a	29865.070	-19.316	613.193	613.207
	b	29875.061	-19.259	613.495	613.521
	c	29885.053	-19.206	613.797	613.826
	d	29895.044	-19.158	614.098	614.129
	e	29905.036	-19.114	614.400	614.428
	f	29915.027	-19.074	614.702	614.722
	℄ BRG.	29929.937	-19.023	615.152	615.152

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.7	BK. S. ABUT.	29852.621	-22.477	612.752	612.752
	℄ BRG.	29855.098	-22.461	612.827	612.827
	a	29865.088	-22.400	613.129	613.143
	b	29875.078	-22.343	613.431	613.458
	c	29885.068	-22.290	613.733	613.762
	d	29895.059	-22.241	614.035	614.065
	e	29905.049	-22.197	614.336	614.364
	f	29915.039	-22.158	614.638	614.659
	℄ BRG.	29929.946	-22.106	615.088	615.088
BEAM S1.6	BK. S. ABUT.	29852.659	-28.276	612.722	612.722
	℄ BRG.	29855 135	-28.180	612.796	612.796
	a	29865.115	-27.793	613.097	613.111
	b	29875.096	-27.411	613.397	613.424
	c	29885.077	-27.033	613.698	613.727
	d	29895.058	-26.659	613.998	614.029
	e	29905.040	-26.290	614.299	614.326
	f	29915.022	-25.925	614.599	614.620
	℄ BRG.	29929.956	-25.388	615.049	615.049
BEAM S1.5	BK. S. ABUT.	29852.697	-34.076	612.668	612.668
	℄ BRG.	29855.171	-33.899	612.745	612.745
	a	29865.131	-33.188	613.053	613.067
	b	29875.092	-32.482	613.361	613.388
	c	29885.053	-31.780	613.670	613.699
	d	29895.015	-31.082	613.978	614.008
	e	29904.978	-30.389	614.286	614.314
	f	29914.941	-29.700	614.594	614.615
	g	29924.905	-29.015	614.896	614.903
	℄ BRG.	29929.967	-28.669	614.949	614.949

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.4	BK. S. ABUT.	29852.734	-39.875	612.540	612.540
	℄ BRG.	29855.307	-39.617	612.606	612.606
	a	29865.137	-38.505	612.944	612.955
	b	29875.060	-37.556	613.235	613.261
	c	29884.999	-36.538	613.509	613.570
	d	29894.938	-35.513	613.883	613.913
	e	29904.866	-34.497	614.197	614.225
	f	29914.790	-33.406	614.511	614.532
	g	29924.733	-32.400	614.825	614.832
	℄ BRG.	29929.977	-31.930	614.990	614.990
BEAM S1.3	BK. S. ABUT.	29852.772	-45.634	612.489	612.489
	℄ BRG.	29855.264	-45.336	612.508	612.508
	a	29865.131	-43.904	612.888	612.842
	b	29875.023	-42.637	613.146	613.176
	c	29884.914	-41.294	613.467	613.496
	d	29894.807	-39.956	613.787	613.817
	e	29904.700	-38.621	614.106	614.136
	f	29914.595	-37.291	614.426	614.447
	g	29924.491	-35.966	614.745	614.752
	℄ BRG.	29929.907	-35.234	614.982	614.982
BEAM S1.2	BK. S. ABUT.	29852.791	-48.613	612.360	612.360
	℄ BRG.	29855.263	-48.340	612.446	612.446
	a	29865.182	-47.340	612.702	612.778
	b	29875.109	-46.161	613.077	613.105
	c	29885.026	-46.077	613.392	613.426
	d	29894.947	-43.950	613.707	613.740
	e	29904.870	-42.923	614.021	614.050
	f	29914.794	-41.893	614.336	614.366
	g	29924.719	-40.787	614.651	614.657
	℄ BRG.	29930.003	-40.321	614.810	614.810

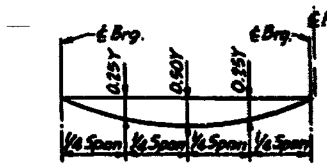
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.1	BK. S. ABUT.	29852.810	-51.547	612.307	612.307
	℄ BRG.	29855.282	-51.340	612.384	612.384
	a	29865.225	-50.511	612.695	612.714
	b	29875.170	-49.685	613.005	613.039
	c	29885.114	-48.864	613.315	613.358
	d	29895.060	-48.047	613.626	613.668
	e	29905.006	-47.235	613.936	613.970
	f	29914.953	-46.427	614.246	614.268
	g	29924.901	-45.623	614.556	614.563
	℄ BRG.	29930.018	-45.211	614.715	614.715





TO DETERMINE "t" ELEVATIONS OF THE TOP FLANGES OF THE BEAMS OR GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS", MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGES OF BEAMS OR GIRDERS.

FILLET HEIGHTS



LOCATION	0.25Y	0.50Y
BEAM S1.1	5/8"	9/16"
BEAM S1.2	5/16"	7/16"
BEAMS S1.3 THRU S1.18	5/16"	3/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:

WORK THIS SHEET WITH SHEET 7 & 8.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 1
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	*		426	184

SHEET NO. 9 of 74 SHEETS

* 050S2-2B, 3-IH, 6-IP, 400HB, 40IHB, 45I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.18	BK. S. ABUT.	29852.275	30.813	612.568	612.568
	℄	29854.758	30.829	612.643	612.643
	a	29864.771	30.891	612.943	612.957
	b	29874.784	30.948	613.243	613.269
	c	29884.798	31.001	613.543	613.572
	d	29894.811	31.050	613.844	613.874
	e	29904.824	31.094	614.144	614.172
	f	29914.838	31.134	614.445	614.466
	℄ BRG.	29929.780	31.185	614.894	614.894
BEAM S1.17	BK. S. ABUT.	29852.309	25.564	612.679	612.679
	℄ BRG.	29854.791	25.580	612.753	612.753
	a	29864.802	25.641	613.053	613.067
	b	29874.813	25.698	613.353	613.380
	c	29884.824	25.751	613.654	613.683
	d	29894.835	25.800	613.954	613.984
	e	29904.847	25.844	614.254	614.282
	f	29914.858	25.884	614.555	614.575
	℄ BRG.	29929.796	25.935	615.003	615.003
BEAM S1.16	BK. S. ABUT.	29852.343	20.314	612.789	612.789
	℄ BRG.	29854.825	20.330	612.864	612.864
	a	29864.833	20.391	613.164	613.177
	b	29874.842	20.449	613.464	613.490
	c	29884.851	20.501	613.764	613.793
	d	29894.860	20.550	614.064	614.095
	e	29904.869	20.594	614.364	614.392
	f	29914.878	20.634	614.665	614.685
	℄ BRG.	29929.813	20.685	615.113	615.113

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.15	BK. S. ABUT.	29852.378	15.066	612.980	612.980
	℄ BRG.	29854.858	15.080	612.974	612.974
	a	29864.865	15.141	613.274	613.288
	b	29874.871	15.199	613.574	613.600
	c	29884.878	15.252	613.874	613.905
	d	29894.884	15.300	614.174	614.205
	e	29904.891	15.344	614.474	614.502
	f	29914.898	15.384	614.775	614.795
	℄ BRG.	29929.829	15.435	615.223	615.223
BEAM S1.14	BK. S. ABUT.	29852.612	9.814	612.999	612.999
	℄ BRG.	29854.892	9.830	613.073	613.073
	a	29864.896	9.891	613.373	613.387
	b	29874.900	9.949	613.673	613.700
	c	29884.904	10.002	613.974	614.003
	d	29894.909	10.050	614.274	614.305
	e	29904.913	10.094	614.574	614.602
	f	29914.917	10.134	614.875	614.896
	℄ BRG.	29929.864	10.189	615.324	615.324
BEAM S1.13	BK. S. ABUT.	29852.446	4.564	613.082	613.082
	℄ BRG.	29854.926	4.580	613.156	613.156
	a	29864.927	4.642	613.456	613.470
	b	29874.929	4.699	613.756	613.783
	c	29884.931	4.752	614.057	614.086
	d	29894.933	4.800	614.357	614.387
	e	29904.935	4.844	614.657	614.685
	f	29914.937	4.884	614.958	614.978
	℄ BRG.	29929.862	4.935	615.406	615.406

(INDICATES STA. 299+29.862 TYP)

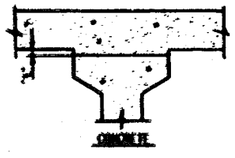
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.12	BK. S. ABUT.	29852.466	1.522	613.130	613.130
	℄ BRG.	29854.945	1.538	613.204	613.204
	a	29864.945	1.600	613.504	613.518
	b	29874.946	1.657	613.804	613.831
	c	29884.947	1.710	614.105	614.134
	d	29894.947	1.758	614.405	614.435
	e	29904.948	1.803	614.705	614.733
	f	29914.949	1.842	615.006	615.026
	℄ BRG.	29929.871	1.894	615.454	615.454
℄ PROPOSED SEB LANES	BK. S. ABUT.	29852.476	0.000	613.154	613.154
	℄ BRG.	29854.955	0.000	613.228	613.228
	a	29864.955	0.000	613.529	613.543
	b	29874.955	0.000	613.830	613.857
	c	29884.955	0.000	614.131	614.161
	d	29894.955	0.000	614.432	614.463
	e	29904.955	0.000	614.733	614.761
	f	29914.955	0.000	615.034	615.055
	℄ BRG.	29929.877	0.000	615.484	615.484
BEAM S1.11	BK. S. ABUT.	29852.500	-3.707	613.097	613.097
	℄ BRG.	29854.978	-3.691	613.171	613.171
	a	29864.977	-3.629	613.473	613.487
	b	29874.975	-3.572	613.775	613.802
	c	29884.973	-3.519	614.077	614.106
	d	29894.972	-3.471	614.379	614.409
	e	29904.970	-3.427	614.680	614.708
	f	29914.968	-3.387	614.982	615.003
	℄ BRG.	29929.868	-3.334	615.432	615.432

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.10	BK. S. ABUT.	29852.534	-8.936	613.016	613.016
	℄ BRG.	29855.012	-8.920	613.091	613.091
	a	29865.008	-8.858	613.393	613.406
	b	29875.004	-8.801	613.694	613.721
	c	29885.000	-8.748	613.996	614.025
	d	29894.996	-8.700	614.298	614.328
	e	29904.992	-8.656	614.599	614.627
	f	29914.988	-8.616	614.901	614.922
	℄ ABG.	29929.904	-8.565	615.351	615.351
BEAM S1.9	BK. S. ABUT.	29852.568	-14.165	612.924	612.924
	℄ BRG.	29855.045	-14.149	612.999	612.999
	a	29865.039	-14.087	613.301	613.315
	b	29875.033	-14.030	613.603	613.629
	c	29885.026	-13.977	613.905	613.934
	d	29895.020	-13.929	614.207	614.237
	e	29905.014	-13.885	614.509	614.536
	f	29915.008	-13.845	614.810	614.831
	℄ BRG.	29929.920	-13.794	615.260	615.260
BEAM S1.8	BK. S. ABUT.	29852.601	-19.394	612.816	612.816
	℄ BRG.	29855.079	-19.378	612.891	612.891
	a	29865.070	-19.316	613.193	613.207
	b	29875.062	-19.259	613.495	613.521
	c	29885.053	-19.206	613.797	613.826
	d	29895.044	-19.158	614.098	614.129
	e	29905.036	-19.114	614.400	614.428
	f	29915.027	-19.074	614.702	614.722
	℄ BRG.	29929.937	-19.023	615.152	615.152

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.7	BK. S. ABUT.	29852.621	-22.477	612.752	612.752
	℄ BRG.	29855.098	-22.461	612.827	612.827
	a	29865.088	-22.400	613.129	613.143
	b	29875.078	-22.343	613.431	613.458
	c	29885.068	-22.290	613.733	613.762
	d	29895.059	-22.241	614.035	614.065
	e	29905.049	-22.197	614.336	614.364
	f	29915.039	-22.158	614.638	614.659
	℄ BRG.	29929.946	-22.106	615.088	615.088
BEAM S1.6	BK. S. ABUT.	29852.659	-28.276	612.722	612.722
	℄ BRG.	29855 135	-28.180	612.796	612.796
	a	29865.115	-27.793	613.097	613.111
	b	29875.096	-27.411	613.397	613.424
	c	29885.077	-27.033	613.698	613.727
	d	29895.058	-26.659	613.998	614.029
	e	29905.040	-26.290	614.299	614.326
	f	29915.022	-25.925	614.599	614.620
	℄ BRG.	29929.956	-25.388	615.049	615.069
BEAM S1.5	BK. S. ABUT.	29852.697	-34.076	612.668	612.668
	℄ BRG.	29855.171	-33.899	612.745	612.745
	a	29865.131	-33.188	613.053	613.067
	b	29875.092	-32.482	613.361	613.388
	c	29885.053	-31.780	613.670	613.699
	d	29895.015	-31.082	613.978	614.008
	e	29904.978	-30.389	614.286	614.314
	f	29914.941	-29.700	614.594	614.615
	g	29924.905	-29.015	614.896	614.903
	℄ BRG.	29929.967	-28.669	614.949	614.949

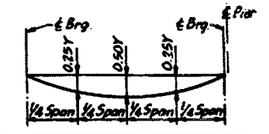
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.4	BK. S. ABUT.	29852.734	-39.875	612.940	612.940
	℄ BRG.	29855.207	-39.817	612.686	612.686
	a	29865.197	-38.589	613.961	613.959
	b	29875.066	-37.596	613.259	613.281
	c	29884.999	-36.532	613.589	613.590
	d	29894.931	-35.513	613.883	613.913
	e	29904.864	-34.497	614.197	614.225
	f	29914.798	-33.486	614.511	614.532
	g	29924.733	-32.480	614.825	614.832
	℄ BRG.	29929.977	-31.930	614.998	614.998
BEAM S1.3	BK. S. ABUT.	29852.772	-45.674	612.429	612.429
	℄ BRG.	29855.244	-45.336	612.508	612.508
	a	29865.133	-43.984	612.820	612.842
	b	29875.023	-42.837	613.140	613.174
	c	29884.914	-41.796	613.467	613.496
	d	29894.807	-39.936	613.787	613.817
	e	29904.700	-38.823	614.106	614.134
	f	29914.595	-37.791	614.426	614.447
	g	29924.491	-35.986	614.745	614.752
	℄ BRG.	29929.987	-35.231	614.922	614.922
BEAM S1.2	BK. S. ABUT.	29852.791	-46.613	612.360	612.360
	℄ BRG.	29855.263	-46.340	612.446	612.446
	a	29865.182	-45.260	612.760	612.778
	b	29875.103	-44.161	613.077	613.105
	c	29885.024	-43.077	613.392	613.426
	d	29894.947	-43.998	613.707	613.748
	e	29904.870	-42.923	614.021	614.050
	f	29914.794	-41.853	614.336	614.355
	g	29924.719	-40.787	614.651	614.657
	℄ BRG.	29930.003	-40.221	614.819	614.819

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S1.1	BK. S. ABUT.	29852.810	-51.547	612.307	612.307
	℄ BRG.	29855.282	-51.340	612.384	612.384
	a	29865.225	-50.511	612.695	612.714
	b	29875.170	-49.685	613.005	613.039
	c	29885.114	-48.866	613.315	613.358
	d	29895.060	-48.047	613.626	613.668
	e	29905.006	-47.235	613.936	613.970
	f	29914.953	-46.427	614.246	614.268
	g	29924.901	-45.623	614.556	614.563
	℄ BRG.	29930.018	-45.211	614.715	614.715



TO DETERMINE "f" ELEVATIONS OF THE TOP FLANGES OF THE BEAMS OR GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS", MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "f" ABOVE TOP FLANGES OF BEAMS OR GIRDERS.

FILLET HEIGHTS



LOCATION	0.25Y	0.50Y
BEAM S1.1	3/8"	9/16"
BEAM S1.2	5/16"	7/16"
BEAMS S1.3 THRU S1.18	5/16"	3/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:

WORK THIS SHEET WITH SHEET 7 & 8.

TOP OF SLAB ELEVATIONS
SPAN 1
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

556

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* (99332-2B, 3-IH, 6-IP, 4008B, 4018B, 4511, 0808-4SO, 0805-4028B, 0806-4038 & 0708140488, 4388-2

ROUTE NO.	SH.	SECTION	TOTAL SHTS.	SHEET NO. 10 of 74 SHEETS
	*		426 / 185	

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.17	℄ BEARING	29931.699	31.191	614.951	614.951
	a	29941.713	31.219	615.252	615.266
	b	29951.726	31.242	615.553	615.579
	c	29961.740	31.261	615.854	615.883
	d	29971.753	31.275	616.155	616.186
	e	29981.767	31.285	616.456	616.484
	f	29991.781	31.291	616.757	616.777
	℄ BEARING	30006.707	31.292	617.195	617.195
BEAM S2.16	℄ BEARING	29931.715	25.941	615.061	615.061
	a	29941.726	25.969	615.362	615.376
	b	29951.738	25.992	615.663	615.689
	c	29961.749	26.011	615.964	615.993
	d	29971.760	26.025	616.265	616.295
	e	29981.772	26.035	616.566	616.593
	f	29991.783	26.041	616.866	616.887
	℄ BEARING	30006.707	26.042	617.304	617.304
BEAM S2.15	℄ BEARING	29931.731	20.691	615.171	615.171
	a	29941.740	20.719	615.472	615.485
	b	29951.749	20.742	615.772	615.799
	c	29961.758	20.761	616.073	616.102
	d	29971.767	20.775	616.374	616.405
	e	29981.776	20.785	616.675	616.703
	f	29991.785	20.791	616.975	616.996
	℄ BEARING	30006.707	20.792	617.414	617.414

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.14	℄ BEARING	29931.747	15.441	615.281	615.281
	a	29941.756	15.469	615.581	615.595
	b	29951.760	15.492	615.882	615.908
	c	29961.767	15.511	616.183	616.212
	d	29971.774	15.525	616.484	616.514
	e	29981.781	15.535	616.785	616.812
	f	29991.787	15.541	617.085	617.106
	℄ BEARING	30006.707	15.542	617.523	617.523
BEAM S2.13	℄ BEARING	29931.763	10.191	615.381	615.381
	a	29941.767	10.219	615.682	615.696
	b	29951.772	10.242	615.983	616.009
	c	29961.776	10.261	616.283	616.313
	d	29971.781	10.275	616.584	616.615
	e	29981.785	10.285	616.885	616.913
	f	29991.790	10.291	617.185	617.206
	℄ BEARING	30006.707	10.292	617.624	617.624
BEAM S2.12	℄ BEARING	29931.779	4.941	615.464	615.464
	a	29941.781	4.969	615.764	615.778
	b	29951.783	4.992	616.065	616.091
	c	29961.785	5.011	616.366	616.395
	d	29971.787	5.025	6.6.667	616.697
	e	29981.790	5.035	616.968	616.995
	f	29991.792	5.041	617.267	617.288
	℄ BEARING	30006.707	5.042	617.706	617.706

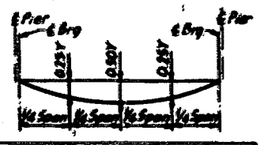
INDICATES STA. 300+06.707 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.11	℄ BEARING	29931.788	1.879	615.511	615.511
	a	29941.789	1.927	615.812	615.826
	b	29951.790	1.950	616.113	616.139
	c	29961.791	1.960	616.414	616.443
	d	29971.791	1.964	616.714	616.745
	e	29981.792	1.964	617.015	617.043
	f	29991.793	1.959	617.315	617.336
	℄ BEARING	30006.707	2.001	617.753	617.753
℄ PROP. SEB LANES	℄ BEARING	29931.794	0.000	615.541	615.541
	a	29941.794	0.000	615.842	615.856
	b	29951.794	0.000	616.143	616.170
	c	29961.794	0.000	616.444	616.473
	d	29971.794	0.000	616.745	616.776
	e	29981.794	0.000	617.044	617.074
	f	29991.794	0.000	617.346	617.367
	℄ BEARING	30006.707	0.000	617.784	617.784
BEAM S2.10	℄ BEARING	29931.804	-3.371	615.489	615.489
	a	29941.801	-3.309	615.792	615.806
	b	29951.799	-3.051	616.096	616.122
	c	29961.796	-2.807	616.399	616.428
	d	29971.794	-2.748	616.702	616.733
	e	29981.792	-2.683	617.004	617.033
	f	29991.790	-2.462	617.308	617.328
	℄ BEARING	30006.707	-2.260	617.749	617.749

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.9	℄ BEARING	29931.820	-8.642	615.407	615.407
	a	29941.812	-8.345	615.712	615.726
	b	29951.804	-8.052	616.018	616.044
	c	29961.796	-7.764	616.323	616.352
	d	29971.789	-7.480	616.628	616.659
	e	29981.781	-7.200	616.933	616.961
	f	29991.775	-6.924	617.238	617.258
	℄ BEARING	30006.707	-6.520	617.683	617.683
BEAM S2.8	℄ BEARING	29931.836	-13.913	615.315	615.315
	a	29941.821	-13.481	615.625	615.639
	b	29951.806	-13.054	615.934	615.961
	c	29961.791	-12.631	616.244	616.273
	d	29971.777	-12.212	616.553	616.583
	e	29981.763	-11.797	616.861	616.889
	f	29991.750	-11.387	617.167	617.188
	℄ BEARING	30006.707	-10.781	617.616	617.616
BEAM S2.7	℄ BEARING	29931.852	-19.184	615.206	615.206
	a	29941.828	-18.618	615.518	615.532
	b	29951.804	-18.056	615.830	615.856
	c	29961.781	-17.498	616.142	616.171
	d	29971.758	-16.945	616.454	616.484
	e	29981.736	-16.396	616.765	616.793
	f	29991.714	-15.852	617.076	617.097
	g	30001.693	-15.312	617.382	617.389
	℄ BEARING	30006.707	-15.041	617.534	617.534

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.6	℄ BEARING	29931.868	-24.655	615.106	615.106
	a	29941.833	-23.756	615.411	615.429
	b	29951.799	-23.058	615.726	615.752
	c	29961.765	-22.367	616.040	616.069
	d	29971.732	-21.679	616.354	616.385
	e	29981.699	-20.996	616.669	616.696
	f	29991.667	-20.318	616.982	617.003
	g	30001.636	-19.643	617.290	617.297
	℄ BEARING	30006.707	-19.302	617.445	617.445
BEAM S2.5	℄ BEARING	29931.884	-29.725	615.093	615.093
	a	29941.836	-28.891	615.404	615.417
	b	29951.790	-28.062	615.706	615.732
	c	29961.743	-27.236	616.009	616.036
	d	29971.698	-26.415	616.305	616.336
	e	29981.653	-25.598	616.605	616.632
	f	29991.609	-24.786	616.903	616.924
	g	30001.566	-23.978	617.198	617.205
	℄ BEARING	30006.707	-23.562	617.356	617.356
BEAM S2.4	℄ BEARING	29931.900	-34.996	616.983	616.983
	a	29941.838	-34.029	615.297	615.310
	b	29951.777	-33.066	615.610	615.636
	c	29961.717	-32.107	615.923	615.952
	d	29971.658	-31.153	616.235	616.266
	e	29981.599	-30.203	616.548	616.576
	f	29991.541	-29.257	616.860	616.881
	g	30001.484	-28.315	617.167	617.176
	℄ BEARING	30006.707	-27.822	617.326	617.326

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S2.3	℄ BEARING	29931.910	-38.396	614.913	614.913
	a	29941.862	-37.601	615.223	615.237
	b	29951.815	-36.811	615.533	615.559
	c	29961.768	-36.026	615.842	615.876
	d	29971.722	-35.244	616.152	616.187
	e	29981.677	-34.467	616.462	616.491
	f	29991.632	-33.694	616.770	616.791
	g	30001.588	-32.926	617.074	617.081
	℄ BEARING	30006.707	-32.532	617.228	617.228
BEAM S2.2	℄ BEARING	29931.921	-41.796	614.842	614.842
	a	29941.883	-41.175	615.149	615.163
	b	29951.846	-40.559	615.455	615.482
	c	29961.810	-39.947	615.762	615.794
	d	29971.774	-39.339	616.068	616.103
	e	29981.739	-38.735	616.375	616.404
	f	29991.705	-38.136	616.680	616.701
	g	30001.671	-37.541	616.980	616.987
	℄ BEARING	30006.707	-37.242	617.130	617.130
BEAM S2.1	℄ BEARING	29931.931	-45.196	614.772	614.772
	a	29941.901	-44.749	615.075	615.092
	b	29951.872	-44.307	615.378	615.411
	c	29961.843	-43.869	615.681	615.722
	d	29971.815	-43.435	615.984	616.029
	e	29981.787	-43.006	616.287	616.324
	f	29991.759	-42.581	616.589	616.614
	g	30001.733	-42.161	616.886	616.894
	℄ BEARING	30006.707	-41.952	617.032	617.032



LOCATION	0.23Y	0.50Y
BEAM S2.1	5/8"	5/16"
BEAM S2.2 & S2.3	5/16"	7/16"
BEAMS S2.4 THRU S2.17	5/16"	1/4"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 2
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

559

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.16	℄ BRG.	30008.624	31.292	617.251	617.251
	a	30018.624	31.292	617.537	617.551
	b	30028.624	31.292	617.818	617.844
	c	30038.624	31.292	618.093	618.123
	d	30048.624	31.292	618.364	618.395
	e	30058.624	31.292	618.629	618.657
	f	30068.624	31.292	618.889	618.910
	℄ BRG.	30083.547	31.292	619.268	619.268
BEAM S3.15	℄ BRG.	30008.624	26.042	617.360	617.360
	a	30018.624	26.042	617.646	617.660
	b	30028.624	26.042	617.927	617.953
	c	30038.624	26.042	618.203	618.232
	d	30048.624	26.042	618.473	618.504
	e	30058.624	26.042	618.739	618.766
	f	30068.624	26.042	618.999	619.019
	℄ BRG.	30083.547	26.042	619.377	619.377
BEAM S3.14	℄ BRG.	30008.624	20.792	617.469	617.469
	a	30018.624	20.792	617.755	617.769
	b	30028.624	20.792	618.036	618.063
	c	30038.624	20.792	618.312	618.341
	d	30048.624	20.792	618.583	618.613
	e	30058.624	20.792	618.848	618.876
	f	30068.624	20.792	619.108	619.129
	℄ BRG.	30083.547	20.792	619.486	619.486

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.13	℄ BRG.	30008.624	15.542	617.579	617.579
	a	30018.624	15.542	617.865	617.879
	b	30028.624	15.542	618.146	618.172
	c	30038.624	15.542	618.422	618.451
	d	30048.624	15.542	618.692	618.723
	e	30058.624	15.542	618.957	618.985
	f	30068.624	15.542	619.217	619.238
	℄ BRG.	30083.547	15.542	619.596	619.596
BEAM S3.12	℄ BRG.	30008.624	10.292	617.679	617.679
	a	30018.624	10.292	617.965	617.979
	b	30028.624	10.292	618.246	618.273
	c	30038.624	10.292	618.522	618.551
	d	30048.624	10.292	618.793	618.823
	e	30058.624	10.292	619.058	619.086
	f	30068.624	10.292	619.318	619.339
	℄ BRG.	30083.547	10.292	619.696	619.696
BEAM S3.11	℄ BRG.	30008.624	5.042	617.761	617.761
	a	30018.624	5.042	618.047	618.061
	b	30028.624	5.042	618.328	618.355
	c	30038.624	5.042	618.604	618.633
	d	30048.624	5.042	618.875	618.905
	e	30058.624	5.042	619.140	619.168
	f	30068.624	5.042	619.400	619.421
	℄ BRG.	30083.547	5.042	619.778	619.778

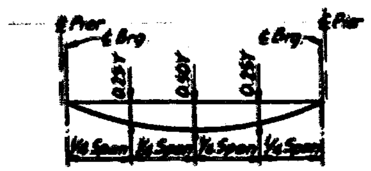
—INDICATES STA. 300+83.547(TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.10	℄ BRG.	30008.624	2.001	617.809	617.809
	a	30018.624	2.001	618.095	618.109
	b	30028.624	2.001	618.376	618.402
	c	30038.624	2.001	618.652	618.681
	d	30048.624	2.000	618.922	618.953
	e	30058.624	2.000	619.187	619.215
	f	30068.624	2.000	619.447	619.468
	℄ BRG.	30083.547	2.000	619.826	619.826
℄ PROP. SEB LANES	℄ BRG.	30008.624	0.000	617.840	617.840
	a	30018.624	0.000	618.126	618.140
	b	30028.624	0.000	618.407	618.433
	c	30038.624	0.000	618.683	618.712
	d	30048.624	0.000	618.953	618.984
	e	30058.624	0.000	619.219	619.246
	f	30068.624	0.000	619.479	619.499
	℄ BRG.	30083.547	0.000	619.857	619.857
BEAM S3.9	℄ BRG.	30008.624	-2.947	617.794	617.794
	a	30018.624	-2.879	618.081	618.095
	b	30028.623	-2.811	618.363	618.390
	c	30038.623	-2.743	618.640	618.669
	d	30048.623	-2.675	618.912	618.942
	e	30058.623	-2.607	619.178	619.206
	f	30068.622	-2.539	619.439	619.460
	℄ BRG.	30083.547	-2.437	619.819	619.819

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.8	℄ BRG.	30008.624	-7.895	617.717	617.717
	a	30018.623	-7.759	618.005	618.019
	b	30028.622	-7.623	618.288	618.314
	c	30038.621	-7.487	618.566	618.595
	d	30048.620	-7.350	618.838	618.869
	e	30058.619	-7.214	619.106	619.134
	f	30068.618	-7.078	619.368	619.389
	℄ BRG.	30083.547	-6.875	619.750	619.750
BEAM S3.7	℄ BRG.	30008.624	-12.843	617.635	617.635
	a	30018.622	-12.639	617.925	617.939
	b	30028.620	-12.435	618.210	618.237
	c	30038.618	-12.230	618.490	618.520
	d	30048.615	-12.026	618.765	618.796
	e	30058.613	-11.822	619.034	619.061
	f	30068.611	-11.617	619.297	619.318
	℄ BRG.	30083.547	-11.312	619.680	619.680
BEAM S3.6	℄ BRG.	30008.624	-17.791	617.532	617.532
	a	30018.620	-17.519	617.824	617.837
	b	30028.616	-17.246	618.110	618.136
	c	30038.613	-16.974	618.392	618.421
	d	30048.609	-16.702	618.668	618.698
	e	30058.605	-16.429	618.938	618.966
	f	30068.602	-16.157	619.204	619.225
	℄ BRG.	30083.547	-15.750	619.591	619.591

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.5	℄ BRG.	30008.624	-22.739	617.429	617.429
	a	30018.618	-22.399	617.722	617.736
	b	30028.612	-22.058	618.010	618.036
	c	30038.606	-21.718	618.292	618.322
	d	30048.601	-21.377	618.570	618.600
	e	30058.595	-21.037	618.842	618.870
	f	30068.589	-20.697	619.109	619.130
	℄ BRG.	30083.547	-20.187	619.499	619.499
BEAM S3.4	℄ BRG.	30008.624	-27.687	617.383	617.383
	a	30018.615	-27.279	617.672	617.685
	b	30028.607	-26.870	617.954	617.981
	c	30038.599	-26.462	618.232	618.261
	d	30048.590	-26.053	618.505	618.535
	e	30058.582	-25.645	618.772	618.800
	f	30068.574	-25.237	619.034	619.055
	℄ BRG.	30083.547	-24.625	619.417	619.417
BEAM S3.3	℄ BRG.	30008.624	-32.637	617.284	617.284
	a	30018.618	-32.107	617.571	617.588
	b	30028.613	-31.777	617.852	617.885
	c	30038.608	-31.448	618.129	618.169
	d	30048.602	-31.118	618.400	618.444
	e	30058.597	-30.788	618.666	618.702
	f	30068.591	-30.458	618.926	618.951
	℄ BRG.	30083.547	-29.965	619.306	619.306

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S3.2	℄ BRG.	30008.624	-37.187	617.185	617.185
	a	30018.621	-36.936	617.470	617.487
	b	30028.618	-36.685	617.750	617.783
	c	30038.614	-36.434	618.025	618.066
	d	30048.611	-36.182	618.295	618.339
	e	30058.608	-35.931	618.559	618.595
	f	30068.605	-35.680	618.818	618.843
	℄ BRG.	30083.547	-35.305	619.195	619.195
BEAM S3.1	℄ BRG.	30008.624	-41.937	617.086	617.086
	a	30018.622	-41.765	617.370	617.389
	b	30028.621	-41.592	617.648	617.685
	c	30038.619	-41.420	617.921	617.964
	d	30048.618	-41.247	618.189	618.235
	e	30058.616	-41.075	618.452	618.492
	f	30068.615	-40.902	618.709	618.738
	℄ BRG.	30083.547	-40.645	619.084	619.084



LOCATION	0.25Y	0.50Y
BEAM S3.1	7/16"	9/16"
BEAM S3.2 & S3.3	3/8"	9/16"
BEAMS S3.4 THRU S3.16	5/16"	3/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 3
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0508-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	SHEET NO.	TOT.
	*		426	187

SHEET NO. 12 of 74 SHEETS

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.15	℄ BRG.	30085.464	31.292	619.315	619.315
	a	30095.464	31.292	619.561	619.575
	b	30105.464	31.292	619.802	619.828
	c	30115.464	31.292	620.038	620.067
	d	30125.464	31.292	620.268	620.298
	e	30135.464	31.292	620.493	620.520
	f	30145.464	31.292	620.712	620.733
	℄ BRG.	30160.377	31.292	621.030	621.030
BEAM S4.14	℄ BRG.	30085.464	26.042	619.425	619.425
	a	30095.464	26.042	619.671	619.685
	b	30105.464	26.042	619.911	619.938
	c	30115.464	26.042	620.147	620.176
	d	30125.464	26.042	620.377	620.408
	e	30135.464	26.042	620.602	620.630
	f	30145.464	26.042	620.822	620.843
	℄ BRG.	30160.377	26.042	621.140	621.140
BEAM S4.13	℄ BRG.	30085.464	20.792	619.534	619.534
	a	30095.464	20.792	619.780	619.794
	b	30105.464	20.792	620.021	620.047
	c	30115.464	20.792	620.256	620.285
	d	30125.464	20.792	620.487	620.517
	e	30135.464	20.792	620.711	620.739
	f	30145.464	20.792	620.931	620.952
	℄ BRG.	30160.377	20.792	621.249	621.249

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.12	℄ BRG.	30085.464	15.542	619.663	619.663
	a	30095.464	15.542	619.889	619.903
	b	30105.464	15.542	620.130	620.156
	c	30115.464	15.542	620.366	620.395
	d	30125.464	15.542	620.596	620.626
	e	30135.464	15.542	620.821	620.849
	f	30145.464	15.542	621.041	621.061
	℄ BRG.	30160.377	15.542	621.358	621.358
BEAM S4.11	℄ BRG.	30085.464	10.292	619.744	619.744
	a	30095.464	10.292	619.990	620.004
	b	30105.464	10.292	620.231	620.257
	c	30115.464	10.292	620.466	620.495
	d	30125.464	10.292	620.696	620.727
	e	30135.464	10.292	620.921	620.949
	f	30145.464	10.292	621.141	621.162
	℄ BRG.	30160.377	10.292	621.459	621.459
BEAM S4.10	℄ BRG.	30085.464	5.042	619.826	619.826
	a	30095.464	5.042	620.072	620.086
	b	30105.464	5.042	620.313	620.339
	c	30115.464	5.042	620.548	620.577
	d	30125.464	5.042	620.778	620.809
	e	30135.464	5.042	621.003	621.031
	f	30145.464	5.042	621.223	621.244
	℄ BRG.	30160.377	5.042	621.541	621.541

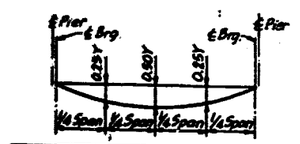
(INDICATES STA. 301+60.377 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.9	℄ BRG.	30085.464	2.000	619.874	619.874
	a	30095.464	2.000	620.119	620.133
	b	30105.464	2.000	620.360	620.387
	c	30115.464	2.000	620.596	620.625
	d	30125.464	2.000	620.826	620.856
	e	30135.464	2.000	621.051	621.079
	f	30145.464	2.000	621.271	621.291
	℄ BRG.	30160.377	2.000	621.588	621.588
℄ PROP. SEB LANES	℄ BRG.	30085.464	0.000	619.905	619.905
	a	30095.464	0.000	620.151	620.165
	b	30105.464	0.000	620.391	620.418
	c	30115.464	0.000	620.627	620.656
	d	30125.464	0.000	620.857	620.888
	e	30135.464	0.000	621.082	621.110
	f	30145.464	0.000	621.302	621.323
	℄ BRG.	30160.377	0.000	621.620	621.620
BEAM S4.8	℄ BRG.	30085.464	-3.323	619.853	619.853
	a	30095.464	-3.318	620.099	620.113
	b	30105.464	-3.314	620.340	620.366
	c	30115.464	-3.310	620.575	620.604
	d	30125.464	-3.306	620.806	620.836
	e	30135.464	-3.302	621.031	621.058
	f	30145.464	-3.298	621.250	621.271
	℄ BRG.	30160.377	-3.291	621.568	621.568

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.7	℄ BRG.	30085.464	-8.645	619.770	619.770
	a	30095.464	-8.637	620.016	620.030
	b	30105.464	-8.629	620.257	620.283
	c	30115.464	-8.620	620.492	620.521
	d	30125.464	-8.612	620.723	620.753
	e	30135.464	-8.604	620.948	620.975
	f	30145.464	-8.595	621.168	621.188
	℄ BRG.	30160.377	-8.583	621.486	621.486
BEAM S4.6	℄ BRG.	30085.464	-13.968	619.676	619.676
	a	30095.464	-13.956	619.922	619.936
	b	30105.464	-13.943	620.164	620.190
	c	30115.464	-13.931	620.399	620.428
	d	30125.464	-13.918	620.630	620.660
	e	30135.464	-13.906	620.855	620.883
	f	30145.464	-13.893	621.075	621.094
	℄ BRG.	30160.377	-13.875	621.393	621.393
BEAM S4.5	℄ BRG.	30085.464	-19.291	619.565	619.565
	a	30095.464	-19.275	619.812	619.825
	b	30105.464	-19.258	620.053	620.079
	c	30115.464	-19.241	620.289	620.318
	d	30125.464	-19.225	620.519	620.550
	e	30135.464	-19.208	620.744	620.772
	f	30145.464	-19.191	620.965	620.985
	℄ BRG.	30160.377	-19.166	621.283	621.283

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.4	℄ BRG.	30085.464	-24.614	619.464	619.464
	a	30095.464	-24.593	619.704	619.718
	b	30105.464	-24.573	619.942	619.968
	c	30115.464	-24.552	620.178	620.207
	d	30125.464	-24.531	620.409	620.439
	e	30135.464	-24.510	620.634	620.662
	f	30145.464	-24.489	620.854	620.875
	℄ BRG.	30160.377	-24.458	621.173	621.173
BEAM S4.3	℄ BRG.	30085.464	-29.954	619.353	619.353
	a	30095.464	-29.938	619.593	619.612
	b	30105.464	-29.922	619.831	619.868
	c	30115.464	-29.906	620.066	620.112
	d	30125.464	-29.889	620.297	620.347
	e	30135.464	-29.873	620.522	620.564
	f	30145.464	-29.857	620.742	620.771
	℄ BRG.	30160.377	-29.833	621.061	621.061
BEAM S4.2	℄ BRG.	30085.464	-35.294	619.242	619.242
	a	30095.464	-35.283	619.482	619.501
	b	30105.464	-35.271	619.719	619.757
	c	30115.464	-35.260	619.955	620.001
	d	30125.464	-35.248	620.185	620.235
	e	30135.464	-35.237	620.411	620.452
	f	30145.464	-35.225	620.631	620.660
	℄ BRG.	30160.377	-35.208	620.949	620.949

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S4.1	℄ BRG.	30085.464	-40.634	619.130	619.130
	a	30095.464	-40.627	619.370	619.390
	b	30105.464	-40.621	619.608	619.649
	c	30115.464	-40.614	619.843	619.889
	d	30125.464	-40.607	620.074	620.124
	e	30135.464	-40.600	620.299	620.340
	f	30145.464	-40.593	620.519	620.548
	℄ BRG.	30160.377	-40.583	620.837	620.837



LOCATION	0.25Y	0.50Y
BEAMS S4.1 THRU S4.3	7/16"	5/8"
BEAMS S4.4 THRU S4.16	5/16"	3/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS
SPAN 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STANLEY CONSULTANTS

S61

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050502-2B, 3-IN, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	108
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.15	℄ BRG.	30162.290	31.292	621.069	621.069
	a	30172.290	31.292	621.275	621.289
	b	30182.290	31.292	621.475	621.502
	c	30192.290	31.292	621.670	621.700
	d	30202.290	31.292	621.860	621.890
	e	30212.290	31.292	622.045	622.072
	f	30222.290	31.292	622.224	622.245
	℄ BRG.	30237.210	31.292	622.482	622.482
BEAM S5.14	℄ BRG.	30162.290	26.042	621.179	621.179
	a	30172.290	26.042	621.384	621.398
	b	30182.290	26.042	621.585	621.611
	c	30192.290	26.042	621.780	621.809
	d	30202.290	26.042	621.969	621.999
	e	30212.290	26.042	622.154	622.181
	f	30222.290	26.042	622.333	622.354
	℄ BRG.	30237.210	26.042	622.591	622.591
BEAM S5.13	℄ BRG.	30162.290	20.792	621.288	621.288
	a	30172.290	20.792	621.494	621.508
	b	30182.290	20.792	621.694	621.720
	c	30192.290	20.792	621.889	621.919
	d	30202.290	20.792	622.079	622.109
	e	30212.290	20.792	622.263	622.291
	f	30222.290	20.792	622.443	622.463
	℄ BRG.	30237.210	20.792	622.700	622.700

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.12	℄ BRG.	30162.290	15.542	621.398	621.398
	a	30172.290	15.542	621.603	621.617
	b	30182.290	15.542	621.803	621.830
	c	30192.290	15.542	621.998	622.028
	d	30202.290	15.542	622.188	622.218
	e	30212.290	15.542	622.373	622.400
	f	30222.290	15.542	622.552	622.573
	℄ BRG.	30237.210	15.542	622.810	622.810
BEAM S5.11	℄ BRG.	30162.290	10.292	621.498	621.498
	a	30172.290	10.292	621.704	621.717
	b	30182.290	10.292	621.904	621.930
	c	30192.290	10.292	622.099	622.129
	d	30202.290	10.292	622.289	622.319
	e	30212.290	10.292	622.473	622.501
	f	30222.290	10.292	622.653	622.673
	℄ BRG.	30237.210	10.292	622.910	622.910
BEAM S5.10	℄ BRG.	30162.290	5.042	621.580	621.580
	a	30172.290	5.042	621.786	621.799
	b	30182.290	5.042	621.986	622.012
	c	30192.290	5.042	622.181	622.211
	d	30202.290	5.042	622.371	622.401
	e	30212.290	5.042	622.555	622.583
	f	30222.290	5.042	622.735	622.755
	℄ BRG.	30237.210	5.042	622.992	622.992

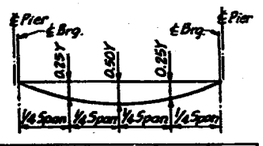
INDICATES STA. 302+37.210 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.9	℄ BRG.	30162.290	2.000	621.628	621.628
	a	30172.290	2.000	621.833	621.847
	b	30182.290	2.000	622.033	622.060
	c	30192.290	2.000	622.228	622.258
	d	30202.290	2.000	622.418	622.448
	e	30212.290	2.000	622.603	622.630
	f	30222.290	2.000	622.782	622.803
	℄ BRG.	30237.210	2.000	623.040	623.040
BEAM S5.8	℄ BRG.	30162.290	0.000	621.659	621.659
	a	30172.290	0.000	621.864	621.878
	b	30182.290	0.000	622.065	622.091
	c	30192.290	0.000	622.260	622.289
	d	30202.290	0.000	622.449	622.479
	e	30212.290	0.000	622.634	622.662
	f	30222.290	0.000	622.813	622.834
	℄ BRG.	30237.210	0.000	623.071	623.071
℄ PROP. SEB LANES	℄ BRG.	30162.290	-3.292	621.607	621.607
	a	30172.290	-3.292	621.813	621.827
	b	30182.290	-3.292	622.013	622.040
	c	30192.290	-3.292	622.208	622.238
	d	30202.290	-3.292	622.398	622.428
	e	30212.290	-3.292	622.583	622.610
	f	30222.290	-3.292	622.762	622.783
	℄ BRG.	30237.210	-3.292	623.020	623.020

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.7	℄ BRG.	30162.290	-8.583	621.525	621.525
	a	30172.290	-8.583	621.730	621.744
	b	30182.290	-8.583	621.931	621.957
	c	30192.290	-8.583	622.126	622.155
	d	30202.290	-8.583	622.315	622.345
	e	30212.290	-8.583	622.500	622.527
	f	30222.290	-8.583	622.679	622.700
	℄ BRG.	30237.210	-8.583	622.937	622.937
BEAM S5.6	℄ BRG.	30162.290	-13.875	621.432	621.432
	a	30172.290	-13.875	621.638	621.652
	b	30182.290	-13.875	621.838	621.864
	c	30192.290	-13.875	622.033	622.063
	d	30202.290	-13.875	622.223	622.253
	e	30212.290	-13.875	622.407	622.435
	f	30222.290	-13.875	622.587	622.607
	℄ BRG.	30237.210	-13.875	622.844	622.844
BEAM S5.5	℄ BRG.	30162.290	-19.167	621.322	621.322
	a	30172.290	-19.167	621.528	621.541
	b	30182.290	-19.167	621.728	621.754
	c	30192.290	-19.167	621.923	621.953
	d	30202.290	-19.167	622.113	622.143
	e	30212.290	-19.167	622.297	622.325
	f	30222.290	-19.167	622.477	622.497
	℄ BRG.	30237.210	-19.167	622.734	622.734

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.4	℄ BRG.	30162.290	-24.458	621.212	621.212
	a	30172.290	-24.458	621.417	621.431
	b	30182.290	-24.458	621.618	621.644
	c	30192.290	-24.458	621.813	621.842
	d	30202.290	-24.458	622.002	622.032
	e	30212.290	-24.458	622.187	622.215
	f	30222.290	-24.458	622.366	622.387
	℄ BRG.	30237.210	-24.458	622.624	622.624
BEAM S5.3	℄ BRG.	30162.290	-29.833	621.100	621.100
	a	30172.290	-29.833	621.305	621.325
	b	30182.290	-29.833	621.506	621.543
	c	30192.290	-29.833	621.701	621.748
	d	30202.290	-29.833	621.890	621.939
	e	30212.290	-29.833	622.075	622.116
	f	30222.290	-29.833	622.254	622.283
	℄ BRG.	30237.210	-29.833	622.512	622.512
BEAM S5.2	℄ BRG.	30162.290	-35.208	620.988	620.988
	a	30172.290	-35.208	621.193	621.213
	b	30182.290	-35.208	621.394	621.431
	c	30192.290	-35.208	621.589	621.636
	d	30202.290	-35.208	621.778	621.827
	e	30212.290	-35.208	621.963	622.004
	f	30222.290	-35.208	622.142	622.171
	℄ BRG.	30237.210	-35.208	622.400	622.400

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S5.1	℄ BRG.	30162.290	-40.583	620.876	620.876
	a	30172.290	-40.583	621.081	621.101
	b	30182.290	-40.583	621.282	621.319
	c	30192.290	-40.583	621.477	621.524
	d	30202.290	-40.583	621.666	621.715
	e	30212.290	-40.583	621.851	621.892
	f	30222.290	-40.583	622.030	622.059
	℄ BRG.	30237.210	-40.583	622.288	622.288



LOCATION	0.25Y	0.50Y
BEAMS S5.1 THRU S5.3	7/16"	5/8"
BEAMS S5.4 THRU S5.15	5/16"	3/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS

SPAN 5

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

SC-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	189
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14 OF 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.15	℄ BRG.	30239.130	31.292	622.514	622.514
	a	30249.130	31.292	622.679	622.693
	b	30259.130	31.292	622.839	622.865
	c	30269.130	31.292	622.994	623.023
	d	30279.130	31.292	623.143	623.174
	e	30289.130	31.292	623.287	623.315
	f	30299.130	31.292	623.426	623.447
	℄ BRG.	30314.040	31.292	623.624	623.624
BEAM S6.14	℄ BRG.	30239.130	26.042	622.623	622.623
	a	30249.130	26.042	622.788	622.802
	b	30259.130	26.042	622.948	622.975
	c	30269.130	26.042	623.103	623.132
	d	30279.130	26.042	623.253	623.283
	e	30289.130	26.042	623.397	623.424
	f	30299.130	26.042	623.536	623.556
	℄ BRG.	30314.040	26.042	623.733	623.733
BEAM S6.13	℄ BRG.	30239.130	20.792	622.733	622.733
	a	30249.130	20.792	622.898	622.912
	b	30259.130	20.792	623.058	623.084
	c	30269.130	20.792	623.212	623.242
	d	30279.130	20.792	623.362	623.392
	e	30289.130	20.792	623.506	623.534
	f	30299.130	20.792	623.645	623.666
	℄ BRG.	30314.040	20.792	623.843	623.843

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.12	℄ BRG.	30239.130	15.542	622.842	622.842
	a	30249.130	15.542	623.007	623.021
	b	30259.130	15.542	623.167	623.193
	c	30269.130	15.542	623.322	623.351
	d	30279.130	15.542	623.471	623.502
	e	30289.130	15.542	623.615	623.643
	f	30299.130	15.542	623.754	623.775
	℄ BRG.	30314.040	15.542	623.932	623.952
BEAM S6.11	℄ BRG.	30239.130	10.292	622.942	622.942
	a	30249.130	10.292	623.108	623.121
	b	30259.130	10.292	623.268	623.294
	c	30269.130	10.292	623.422	623.451
	d	30279.130	10.292	623.572	623.602
	e	30289.130	10.292	623.716	623.744
	f	30299.130	10.292	623.855	623.876
	℄ BRG.	30314.040	10.292	624.052	624.052
BEAM S6.10	℄ BRG.	30239.130	5.042	623.024	623.024
	a	30249.130	5.042	623.190	623.203
	b	30259.130	5.042	623.350	623.376
	c	30269.130	5.042	623.504	623.533
	d	30279.130	5.042	623.654	623.684
	e	30289.130	5.042	623.798	623.826
	f	30299.130	5.042	623.937	623.958
	℄ BRG.	30314.040	5.042	624.134	624.134

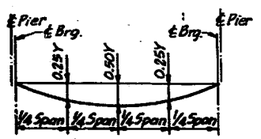
INDICATES STA. 303+14.040 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.9	℄ BRG.	30239.130	2.000	623.072	623.072
	a	30249.130	2.000	623.237	623.251
	b	30259.130	2.000	623.397	623.424
	c	30269.130	2.000	623.552	623.581
	d	30279.130	2.000	623.701	623.732
	e	30289.130	2.000	623.846	623.873
	f	30299.130	2.000	623.984	624.005
	℄ BRG.	30314.040	2.000	624.182	624.182
C PROP. SEB LANES	℄ BRG.	30239.130	0.000	623.103	623.103
	a	30249.130	0.000	623.268	623.282
	b	30259.130	0.000	623.428	623.455
	c	30269.130	0.000	623.583	623.612
	d	30279.130	0.000	623.733	623.763
	e	30289.130	0.000	623.877	623.904
	f	30299.130	0.000	624.016	624.036
	℄ BRG.	30314.040	0.000	624.213	624.213
BEAM S6.8	℄ BRG.	30239.130	-3.292	623.052	623.052
	a	30249.130	-3.292	623.217	623.231
	b	30259.130	-3.292	623.377	623.403
	c	30269.130	-3.292	623.532	623.561
	d	30279.130	-3.292	623.681	623.712
	e	30289.130	-3.292	623.825	623.853
	f	30299.130	-3.292	623.964	623.985
	℄ BRG.	30314.040	-3.292	624.162	624.162

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.7	℄ BRG.	30239.130	-8.583	622.969	622.969
	a	30249.130	-8.583	623.134	623.148
	b	30259.130	-8.583	623.294	623.321
	c	30269.130	-8.583	623.449	623.478
	d	30279.130	-8.583	623.598	623.629
	e	30289.130	-8.583	623.743	623.770
	f	30299.130	-8.583	623.882	623.902
	℄ BRG.	30314.040	-8.583	624.079	624.079
BEAM S6.6	℄ BRG.	30239.130	-13.875	622.877	622.877
	a	30249.130	-13.875	623.042	623.056
	b	30259.130	-13.875	623.202	623.228
	c	30269.130	-13.875	623.357	623.386
	d	30279.130	-13.875	623.506	623.537
	e	30289.130	-13.875	623.650	623.678
	f	30299.130	-13.875	623.789	623.810
	℄ BRG.	30314.040	-13.875	623.987	623.987
BEAM S6.5	℄ BRG.	30239.130	-19.167	622.766	622.766
	a	30249.130	-19.167	622.932	622.945
	b	30259.130	-19.167	623.092	623.118
	c	30269.130	-19.167	623.246	623.275
	d	30279.130	-19.167	623.396	623.426
	e	30289.130	-19.167	623.540	623.568
	f	30299.130	-19.167	623.679	623.700
	℄ BRG.	30314.040	-19.167	623.876	623.876

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.4	℄ BRG.	30239.130	-24.458	622.656	622.656
	a	30249.130	-24.458	622.821	622.835
	b	30259.130	-24.458	622.981	623.008
	c	30269.130	-24.458	623.136	623.165
	d	30279.130	-24.458	623.286	623.316
	e	30289.130	-24.458	623.430	623.457
	f	30299.130	-24.458	623.569	623.589
	℄ BRG.	30314.040	-24.458	623.766	623.766
BEAM S6.3	℄ BRG.	30239.130	-29.833	622.544	622.544
	a	30249.130	-29.833	622.709	622.729
	b	30259.130	-29.833	622.869	622.907
	c	30269.130	-29.833	623.024	623.070
	d	30279.130	-29.833	623.174	623.223
	e	30289.130	-29.833	623.318	623.359
	f	30299.130	-29.833	623.457	623.486
	℄ BRG.	30314.040	-29.833	623.654	623.654
BEAM S6.2	℄ BRG.	30239.130	-35.208	622.432	622.432
	a	30249.130	-35.208	622.597	622.617
	b	30259.130	-35.208	622.757	622.795
	c	30269.130	-35.208	622.912	622.958
	d	30279.130	-35.208	623.062	623.111
	e	30289.130	-35.208	623.206	623.247
	f	30299.130	-35.208	623.345	623.374
	℄ BRG.	30314.040	-35.208	623.542	623.542

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S6.1	℄ BRG.	30239.130	-40.583	622.320	622.320
	a	30249.130	-40.583	622.486	622.505
	b	30259.130	-40.583	622.649	622.683
	c	30269.130	-40.583	622.809	622.846
	d	30279.130	-40.583	622.950	623.000
	e	30289.130	-40.583	623.096	623.135
	f	30299.130	-40.583	623.233	623.262
	℄ BRG.	30314.040	-40.583	623.430	623.430



LOCATION	0.25Y	0.50Y
BEAMS S6.1 THRU S6.3	7/16"	5/8"
BEAMS S6.4 THRU S6.15	5/16"	3/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 6
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

S6.3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	CO. NO.	TOTAL SHEETS	SHT. NO.
	*		426	190
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.15	℄ BRG.	30315.960	31.292	623.648	623.648
	a	30325.960	31.292	623.773	623.784
	b	30335.960	31.292	623.893	623.914
	c	30345.960	31.292	624.007	624.034
	d	30355.960	31.292	624.116	624.146
	e	30365.960	31.292	624.220	624.244
	f	30375.960	31.292	624.319	624.335
	℄ BRG.	30390.880	31.292	624.456	624.456
BEAM S7.14	℄ BRG.	30315.960	26.042	623.758	623.758
	a	30325.960	26.042	623.883	623.894
	b	30335.960	26.042	624.002	624.024
	c	30345.960	26.042	624.117	624.144
	d	30355.960	26.042	624.226	624.255
	e	30365.960	26.042	624.330	624.354
	f	30375.960	26.042	624.428	624.445
	℄ BRG.	30390.880	26.042	624.565	624.565
BEAM S7.13	℄ BRG.	30315.960	20.792	623.867	623.867
	a	30325.960	20.792	623.992	624.003
	b	30335.960	20.792	624.112	624.133
	c	30345.960	20.792	624.226	624.253
	d	30355.960	20.792	624.335	624.365
	e	30365.960	20.792	624.439	624.463
	f	30375.960	20.792	624.538	624.554
	℄ BRG.	30390.880	20.792	624.675	624.675

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.12	℄ BRG.	30315.960	15.542	623.976	623.976
	a	30325.960	15.542	624.101	624.112
	b	30335.960	15.542	624.221	624.242
	c	30345.960	15.542	624.335	624.362
	d	30355.960	15.542	624.444	624.474
	e	30365.960	15.542	624.548	624.572
	f	30375.960	15.542	624.647	624.663
	℄ BRG.	30390.880	15.542	624.784	624.784
BEAM S7.11	℄ BRG.	30315.960	10.292	624.077	624.077
	a	30325.960	10.292	624.202	624.213
	b	30335.960	10.292	624.321	624.343
	c	30345.960	10.292	624.436	624.463
	d	30355.960	10.292	624.545	624.575
	e	30365.960	10.292	624.649	624.673
	f	30375.960	10.292	624.747	624.764
	℄ BRG.	30390.880	10.292	624.885	624.885
BEAM S7.10	℄ BRG.	30315.960	5.042	624.159	624.159
	a	30325.960	5.042	624.284	624.295
	b	30335.960	5.042	624.403	624.425
	c	30345.960	5.042	624.518	624.545
	d	30355.960	5.042	624.627	624.657
	e	30365.960	5.042	624.731	624.755
	f	30375.960	5.042	624.829	624.846
	℄ BRG.	30390.880	5.042	624.967	624.967

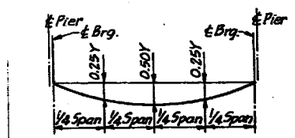
INDICATES STA. 303+90.880 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.9	℄ BRG.	30315.960	2.000	624.207	624.207
	a	30325.960	2.000	624.331	624.342
	b	30335.960	2.000	624.451	624.472
	c	30345.960	2.000	624.565	624.592
	d	30355.960	2.000	624.674	624.704
	e	30365.960	2.000	624.778	624.803
	f	30375.960	2.000	624.877	624.893
	℄ BRG.	30390.880	2.000	625.014	625.014
℄ PROP. SEB LANES	℄ BRG.	30315.960	0.000	624.238	624.238
	a	30325.960	0.000	624.363	624.374
	b	30335.960	0.000	624.482	624.504
	c	30345.960	0.000	624.597	624.624
	d	30355.960	0.000	624.706	624.735
	e	30365.960	0.000	624.810	624.834
	f	30375.960	0.000	624.908	624.925
	℄ BRG.	30390.880	0.000	625.045	625.045
BEAM S7.8	℄ BRG.	30315.960	-3.292	624.186	624.186
	a	30325.960	-3.292	624.311	624.322
	b	30335.960	-3.292	624.431	624.452
	c	30345.960	-3.292	624.545	624.572
	d	30355.960	-3.292	624.654	624.684
	e	30365.960	-3.292	624.758	624.782
	f	30375.960	-3.292	624.857	624.873
	℄ BRG.	30390.880	-3.292	624.994	624.994

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.7	℄ BRG.	30315.960	-8.583	624.104	624.104
	a	30325.960	-8.583	624.229	624.240
	b	30335.960	-8.583	624.348	624.370
	c	30345.960	-8.583	624.463	624.490
	d	30355.960	-8.583	624.572	624.601
	e	30365.960	-8.583	624.675	624.700
	f	30375.960	-8.583	624.774	624.791
	℄ BRG.	30390.880	-8.583	624.911	624.911
BEAM S7.6	℄ BRG.	30315.960	-13.875	624.011	624.011
	a	30325.960	-13.875	624.136	624.147
	b	30335.960	-13.875	624.256	624.277
	c	30345.960	-13.875	624.370	624.397
	d	30355.960	-13.875	624.479	624.509
	e	30365.960	-13.875	624.583	624.607
	f	30375.960	-13.875	624.682	624.698
	℄ BRG.	30390.880	-13.875	624.819	624.819
BEAM S7.5	℄ BRG.	30315.960	-19.167	623.901	623.901
	a	30325.960	-19.167	624.026	624.037
	b	30335.960	-19.167	624.145	624.167
	c	30345.960	-19.167	624.260	624.287
	d	30355.960	-19.167	624.369	624.399
	e	30365.960	-19.167	624.473	624.497
	f	30375.960	-19.167	624.571	624.588
	℄ BRG.	30390.880	-19.167	624.709	624.709

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.4	℄ BRG.	30315.960	-24.458	623.791	623.791
	a	30325.960	-24.458	623.916	623.927
	b	30335.960	-24.458	624.035	624.057
	c	30345.960	-24.458	624.150	624.177
	d	30355.960	-24.458	624.259	624.288
	e	30365.960	-24.458	624.363	624.387
	f	30375.960	-24.458	624.461	624.478
	℄ BRG.	30390.880	-24.458	624.598	624.598
BEAM S7.3	℄ BRG.	30315.960	-29.833	623.679	623.679
	a	30325.960	-29.833	623.804	623.823
	b	30335.960	-29.833	623.923	623.961
	c	30345.960	-29.833	624.038	624.083
	d	30355.960	-29.833	624.147	624.197
	e	30365.960	-29.833	624.251	624.292
	f	30375.960	-29.833	624.349	624.378
	℄ BRG.	30390.880	-29.833	624.487	624.487
BEAM S7.2	℄ BRG.	30315.960	-35.208	623.567	623.567
	a	30325.960	-35.208	623.692	623.711
	b	30335.960	-35.208	623.811	623.849
	c	30345.960	-35.208	623.926	623.971
	d	30355.960	-35.208	624.035	624.085
	e	30365.960	-35.208	624.139	624.180
	f	30375.960	-35.208	624.237	624.266
	℄ BRG.	30390.880	-35.208	624.375	624.375

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S7.1	℄ BRG.	30315.960	-40.583	623.455	623.455
	a	30325.960	-40.583	623.580	623.599
	b	30335.960	-40.583	623.699	623.737
	c	30345.960	-40.583	623.814	623.859
	d	30355.960	-40.583	623.923	623.973
	e	30365.960	-40.583	624.027	624.068
	f	30375.960	-40.583	624.125	624.154
	℄ BRG.	30390.880	-40.583	624.263	624.263



LOCATION	0.25Y	0.50Y
BEAMS S7.1 THRU S7.3	7/16"	5/8"
BEAMS S7.4 THRU S7.15	1/4"	3/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS
SPAN 7
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

564

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	191
F. HW. A. REG. 4	ILL. HWYS.	FED. AID PROJECT		

SHEET NO. 16 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.15	℄ BRG.	30392.790	31.292	624.473	624.473
	a	30402.790	31.292	624.557	624.569
	b	30412.790	31.292	624.637	624.658
	c	30422.790	31.292	624.711	624.738
	d	30432.790	31.292	624.779	624.809
	e	30442.790	31.292	624.843	624.867
	f	30452.790	31.292	624.901	624.918
	℄ BRG.	30467.710	31.292	624.978	624.978
BEAM S8.14	℄ BRG.	30392.790	26.042	624.582	624.582
	a	30402.790	26.042	624.667	624.678
	b	30412.790	26.042	624.746	624.768
	c	30422.790	26.042	624.820	624.847
	d	30432.790	26.042	624.889	624.919
	e	30442.790	26.042	624.952	624.977
	f	30452.790	26.042	625.011	625.027
	℄ BRG.	30467.710	26.042	625.088	625.088
BEAM S8.13	℄ BRG.	30392.790	20.792	624.692	624.692
	a	30402.790	20.792	624.776	624.787
	b	30412.790	20.792	624.855	624.877
	c	30422.790	20.792	624.929	624.957
	d	30432.790	20.792	624.998	625.028
	e	30442.790	20.792	625.062	625.086
	f	30452.790	20.792	625.120	625.136
	℄ BRG.	30467.710	20.792	625.197	625.197

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.12	℄ BRG.	30392.790	15.542	624.801	624.801
	a	30402.790	15.542	624.886	624.897
	b	30412.790	15.542	624.965	624.986
	c	30422.790	15.542	625.039	625.066
	d	30432.790	15.542	625.108	625.137
	e	30442.790	15.542	625.171	625.195
	f	30452.790	15.542	625.229	625.246
	℄ BRG.	30467.710	15.542	625.307	625.307
BEAM S8.11	℄ BRG.	30392.790	10.292	624.901	624.901
	a	30402.790	10.292	624.986	624.997
	b	30412.790	10.292	625.065	625.087
	c	30422.790	10.292	625.139	625.166
	d	30432.790	10.292	625.208	625.238
	e	30442.790	10.292	625.271	625.296
	f	30452.790	10.292	625.330	625.346
	℄ BRG.	30467.710	10.292	625.407	625.407
BEAM S8.10	℄ BRG.	30392.790	5.042	624.984	624.984
	a	30402.790	5.042	625.068	625.079
	b	30412.790	5.042	625.147	625.169
	c	30422.790	5.042	625.221	625.248
	d	30432.790	5.042	625.290	625.320
	e	30442.790	5.042	625.354	625.378
	f	30452.790	5.042	625.412	625.428
	℄ BRG.	30467.710	5.042	625.489	625.489

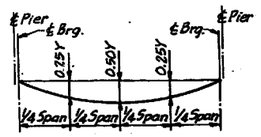
INDICATES STA. 304+67.710 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.9	℄ BRG.	30392.790	2.000	625.031	625.031
	a	30402.790	2.000	625.116	625.127
	b	30412.790	2.000	625.195	625.216
	c	30422.790	2.000	625.269	625.296
	d	30432.790	2.000	625.338	625.367
	e	30442.790	2.000	625.401	625.425
	f	30452.790	2.000	625.459	625.476
	℄ BRG.	30467.710	2.000	625.537	625.537
℄ PROP. SEB LANES	℄ BRG.	30392.790	0.000	625.062	625.062
	a	30402.790	0.000	625.147	625.158
	b	30412.790	0.000	625.226	625.248
	c	30422.790	0.000	625.300	625.327
	d	30432.790	0.000	625.369	625.399
	e	30442.790	0.000	625.432	625.457
	f	30452.790	0.000	625.491	625.507
	℄ BRG.	30467.710	0.000	625.568	625.568
BEAM S8.8	℄ BRG.	30392.790	-3.292	625.011	625.011
	a	30402.790	-3.292	625.095	625.106
	b	30412.790	-3.292	625.175	625.196
	c	30422.790	-3.292	625.249	625.276
	d	30432.790	-3.292	625.317	625.347
	e	30442.790	-3.292	625.381	625.405
	f	30452.790	-3.292	625.439	625.456
	℄ BRG.	30467.710	-3.292	625.516	625.516

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.7	℄ BRG.	30392.790	-8.583	624.928	624.928
	a	30402.790	-8.583	625.013	625.026
	b	30412.790	-8.583	625.092	625.113
	c	30422.790	-8.583	625.166	625.193
	d	30432.790	-8.583	625.235	625.265
	e	30442.790	-8.583	625.298	625.322
	f	30452.790	-8.583	625.357	625.373
	℄ BRG.	30467.710	-8.583	625.434	625.434
BEAM S8.6	℄ BRG.	30392.790	-13.875	624.836	624.836
	a	30402.790	-13.875	624.920	624.931
	b	30412.790	-13.875	625.000	625.021
	c	30422.790	-13.875	625.074	625.101
	d	30432.790	-13.875	625.142	625.172
	e	30442.790	-13.875	625.206	625.230
	f	30452.790	-13.875	625.264	625.281
	℄ BRG.	30467.710	-13.875	625.341	625.341
BEAM S8.5	℄ BRG.	30392.790	-19.167	624.726	624.726
	a	30402.790	-19.167	624.810	624.821
	b	30412.790	-19.167	624.889	624.911
	c	30422.790	-19.167	624.963	624.990
	d	30432.790	-19.167	625.032	625.062
	e	30442.790	-19.167	625.096	625.120
	f	30452.790	-19.167	625.154	625.170
	℄ BRG.	30467.710	-19.167	625.231	625.231

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.4	℄ BRG.	30392.790	-24.458	624.615	624.615
	a	30402.790	-24.458	624.700	624.711
	b	30412.790	-24.458	624.779	624.801
	c	30422.790	-24.458	624.853	624.880
	d	30432.790	-24.458	624.922	624.952
	e	30442.790	-24.458	624.985	625.010
	f	30452.790	-24.458	625.044	625.060
	℄ BRG.	30467.710	-24.458	625.121	625.121
BEAM S8.3	℄ BRG.	30392.790	-29.833	624.503	624.503
	a	30402.790	-29.833	624.588	624.607
	b	30412.790	-29.833	624.667	624.705
	c	30422.790	-29.833	624.741	624.787
	d	30432.790	-29.833	624.810	624.860
	e	30442.790	-29.833	624.873	624.915
	f	30452.790	-29.833	624.932	624.961
	℄ BRG.	30467.710	-29.833	625.009	625.009
BEAM S8.2	℄ BRG.	30392.790	-35.208	624.391	624.391
	a	30402.790	-35.208	624.476	624.495
	b	30412.790	-35.208	624.555	624.593
	c	30422.790	-35.208	624.629	624.675
	d	30432.790	-35.208	624.698	624.748
	e	30442.790	-35.208	624.761	624.803
	f	30452.790	-35.208	624.820	624.849
	℄ BRG.	30467.710	-35.208	624.897	624.897

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S8.1	℄ BRG.	30392.790	-40.583	624.279	624.279
	a	30402.790	-40.583	624.364	624.383
	b	30412.790	-40.583	624.443	624.481
	c	30422.790	-40.583	624.517	624.563
	d	30432.790	-40.583	624.586	624.636
	e	30442.790	-40.583	624.649	624.691
	f	30452.790	-40.583	624.708	624.737
	℄ BRG.	30467.710	-40.583	624.785	624.785



LOCATION	0.25Y	0.50Y
BEAMS S8.1 THRU S8.3	7/16"	5/8"
BEAMS S8.4 THRU S8.15	1/4"	3/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY).

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 8
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

565

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPAN 9

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.10	℄ BRG.	30469.624	30.583	625.010	625.010
	a	30479.624	30.583	625.054	625.059
	b	30489.624	30.583	625.093	625.098
	c	30499.624	30.583	625.127	625.131
	℄ BRG.	30505.978	30.583	625.146	625.146
BEAM S9.9	℄ BRG.	30469.624	22.083	625.187	625.187
	a	30479.624	22.083	625.231	625.236
	b	30489.624	22.083	625.270	625.276
	c	30499.624	22.083	625.304	625.308
	℄ BRG.	30505.978	22.083	625.323	625.323
BEAM S9.8	℄ BRG.	30469.624	13.583	625.364	625.364
	a	30479.624	13.583	625.408	625.414
	b	30489.624	13.583	625.447	625.453
	c	30499.624	13.583	625.481	625.485
	℄ BRG.	30505.978	13.583	625.500	625.500

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.7	℄ BRG.	30469.624	5.083	625.505	625.505
	a	30479.624	5.083	625.549	625.555
	b	30489.624	5.083	625.589	625.594
	c	30499.624	5.083	625.622	625.626
	℄ BRG.	30505.978	5.083	625.641	625.641
BEAM S9.6	℄ BRG.	30469.624	1.042	625.568	625.568
	a	30479.624	1.042	625.612	625.618
	b	30489.624	1.042	625.652	625.657
	c	30499.624	1.042	625.686	625.689
	℄ BRG.	30505.978	1.042	625.705	625.705
℄ PROP. SEB LANES	℄ BRG.	30469.624	0.000	625.584	625.584
	a	30479.624	0.000	625.629	625.634
	b	30489.624	0.000	625.668	625.673
	c	30499.624	0.000	625.702	625.706
	℄ BRG.	30505.978	0.000	625.721	625.721

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.5	℄ BRG.	30469.624	-7.458	625.468	625.468
	a	30479.624	-7.458	625.512	625.517
	b	30489.624	-7.458	625.551	625.557
	c	30499.624	-7.458	625.585	625.589
	℄ BRG.	30505.978	-7.458	625.604	625.604
BEAM S9.4	℄ BRG.	30469.624	-15.958	625.314	625.314
	a	30479.624	-15.958	625.359	625.364
	b	30489.624	-15.958	625.398	625.403
	c	30499.624	-15.958	625.432	625.436
	℄ BRG.	30505.978	-15.958	625.451	625.451
BEAM S9.3	℄ BRG.	30469.624	-24.458	625.137	625.137
	a	30479.624	-24.458	625.182	625.187
	b	30489.624	-24.458	625.221	625.226
	c	30499.624	-24.458	625.255	625.259
	℄ BRG.	30505.978	-24.458	625.274	625.274

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S9.2	℄ BRG.	30469.624	-32.520	624.969	624.969
	a	30479.624	-32.521	625.014	625.019
	b	30489.624	-32.521	625.053	625.058
	c	30499.624	-32.521	625.087	625.091
	℄ BRG.	30505.978	-32.521	625.106	625.106
BEAM S9.1	℄ BRG.	30469.624	-40.583	624.801	624.801
	a	30479.624	-40.583	624.846	624.846
	b	30489.624	-40.583	624.885	624.889
	c	30499.624	-40.583	624.919	624.919
	℄ BRG.	30505.978	-40.583	624.938	624.938

SPAN 10

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.12	℄ BRG.	30507.895	30.583	625.151	625.151
	a	30517.895	30.586	625.176	625.181
	b	30527.895	30.588	625.233	625.238
	c	30537.895	30.591	625.295	625.301
	℄ BRG.	30549.084	30.594	625.351	625.351
BEAM S10.11	℄ BRG.	30507.895	22.083	625.329	625.329
	a	30517.895	22.086	625.353	625.362
	b	30527.895	22.089	625.393	625.403
	c	30537.895	22.091	625.433	625.443
	℄ BRG.	30552.683	22.095	625.485	625.485
BEAM S10.10	℄ BRG.	30507.895	13.583	625.506	625.506
	a	30517.895	13.586	625.530	625.539
	b	30527.895	13.589	625.552	625.563
	c	30537.895	13.592	625.570	625.581
	d	30547.895	13.595	625.594	625.601
	℄ BRG.	30556.283	13.597	625.611	625.611

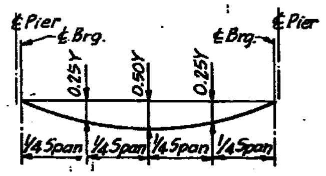
NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.9	℄ BRG.	30507.895	5.083	625.647	625.647
	a	30517.895	5.086	625.671	625.679
	b	30527.895	5.089	625.690	625.701
	c	30537.895	5.092	625.704	625.714
	d	30547.895	5.095	625.718	625.727
	℄ BRG.	30559.882	5.099	625.729	625.729
BEAM S10.8	℄ BRG.	30507.895	2.042	625.694	625.694
	a	30517.895	2.045	625.719	625.726
	b	30527.895	2.048	625.738	625.748
	c	30537.895	2.051	625.752	625.762
	d	30547.895	2.054	625.762	625.773
	℄ BRG.	30561.169	2.058	625.769	625.769
℄ PROP. SEB LANES	℄ BRG.	30507.895	0.000	625.726	625.726
	a	30517.895	0.000	625.751	625.758
	b	30527.895	0.000	625.770	625.780
	c	30537.895	0.000	625.784	625.794
	d	30547.895	0.000	625.792	625.803
	℄ BRG.	30562.041	0.000	625.796	625.796

INDICATES STA. 305+62.041 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.7	℄ BRG.	30507.895	-4.583	625.655	625.655
	a	30517.895	-4.581	625.679	625.686
	b	30527.895	-4.579	625.698	625.711
	c	30537.895	-4.576	625.712	625.727
	d	30547.895	-4.574	625.721	625.732
	e	30557.895	-4.572	625.724	625.729
	℄ BRG.	30563.977	-4.570	625.724	625.724
BEAM S10.6	℄ BRG.	30507.895	-11.208	625.551	625.551
	a	30517.895	-11.207	625.575	625.586
	b	30527.895	-11.205	625.595	625.612
	c	30537.895	-11.203	625.609	625.629
	d	30547.895	-11.201	625.617	625.634
	e	30557.895	-11.200	625.621	625.630
	℄ BRG.	30566.784	-11.198	625.619	625.619
BEAM S10.5	℄ BRG.	30507.895	-17.833	625.417	625.417
	a	30517.895	-17.832	625.442	625.452
	b	30527.895	-17.831	625.461	625.478
	c	30537.895	-17.830	625.475	625.495
	d	30547.895	-17.829	625.483	625.501
	e	30557.895	-17.828	625.487	625.499
	℄ BRG.	30569.591	-17.826	625.484	625.484

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S10.4	℄ BRG.	30507.895	-24.458	625.279	625.279
	a	30517.895	-24.458	625.304	625.313
	b	30527.895	-24.457	625.323	625.340
	c	30537.895	-24.456	625.337	625.357
	d	30547.895	-24.456	625.345	625.364
	e	30557.895	-24.455	625.349	625.363
	℄ BRG.	30572.398	-24.454	625.344	625.344
BEAM S10.3	℄ BRG.	30507.895	-29.833	625.167	625.167
	a	30517.895	-29.833	625.192	625.204
	b	30527.895	-29.833	625.211	625.234
	c	30537.895	-29.833	625.225	625.254
	d	30547.895	-29.832	625.233	625.260
	e	30557.895	-29.832	625.237	625.258
	f	30567.895	-29.832	625.235	625.243
	℄ BRG.	30574.675	-29.832	625.231	625.231
BEAM S10.2	℄ BRG.	30507.895	-35.208	625.055	625.055
	a	30517.895	-35.208	625.080	625.095
	b	30527.895	-35.209	625.099	625.126
	c	30537.895	-35.209	625.113	625.146
	d	30547.895	-35.209	625.121	625.154
	e	30557.895	-35.209	625.125	625.152
	f	30567.895	-35.209	625.123	625.137
	℄ BRG.	30576.953	-35.209	625.117	625.117
BEAM S10.1	℄ BRG.	30507.895	-40.583	624.943	624.943
	a	30517.895	-40.584	624.968	624.985
	b	30527.895	-40.584	624.987	625.019
	c	30537.895	-40.585	625.001	625.039
	d	30547.895	-40.585	625.009	625.048
	e	30557.895	-40.586	625.013	625.046
	f	30567.895	-40.586	625.011	625.031
	℄ BRG.	30579.230	-40.587	625.002	625.002



LOCATION	0.25Y	0.50Y
BEAM S9.1	0"	1/16"
BEAMS S9.2 THRU S9.10	1/16"	1/16"
BEAM S10.1	3/8"	1/2"
BEAM S10.2	5/16"	7/16"
BEAM S10.3	1/4"	3/8"
BEAMS S10.4 THRU S10.6	3/16"	1/4"
BEAM S10.7	1/8"	3/16"
BEAMS S10.8 THRU S10.11	1/8"	1/8"
BEAM S10.12	1/16"	1/16"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPANS 9 AND 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	193
F. AID & REG. #	ILLINOIS FED. AID PROJECT			

SHEET NO. 18 of 74 SHEETS

* 0505E2-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0603-402HB, 0606-403HB & 07071404HB, 439IR-2

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.18	℄ BRG.	30551.293	31.201	625.351	625.351
	a	30561.293	31.197	625.393	625.408
	b	30571.293	31.193	625.429	625.452
	c	30581.293	31.188	625.460	625.485
	d	30591.293	31.184	625.486	625.507
	e	30601.293	31.179	625.507	625.514
	℄ BRG.	30606.300	31.177	625.515	625.515
BEAM S11.17	℄ BRG.	30553.162	26.789	625.421	625.421
	a	30563.162	26.785	625.456	625.471
	b	30573.162	26.780	625.486	625.509
	c	30583.162	26.776	625.510	625.535
	d	30593.162	26.772	625.529	625.550
	e	30603.162	26.767	625.543	625.551
	℄ BRG.	30608.168	26.765	625.548	625.548
BEAM S11.16	℄ BRG.	30555.030	22.377	625.489	625.489
	a	30565.030	22.372	625.517	625.532
	b	30575.030	22.368	625.540	625.563
	c	30585.030	22.364	625.558	625.583
	d	30595.030	22.359	625.570	625.591
	e	30605.030	22.355	625.577	625.585
	℄ BRG.	30610.037	22.353	625.579	625.579

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.15	℄ BRG.	30556.899	17.964	625.554	625.554
	a	30566.899	17.960	625.575	625.590
	b	30576.899	17.956	625.592	625.615
	c	30586.899	17.951	625.603	625.628
	d	30596.899	17.947	625.609	625.630
	e	30606.899	17.943	625.610	625.617
	℄ BRG.	30611.906	17.940	625.608	625.608
BEAM S11.14	℄ BRG.	30558.768	13.552	625.617	625.617
	a	30568.768	13.548	625.632	625.647
	b	30578.768	13.543	625.641	625.665
	c	30588.768	13.539	625.646	625.671
	d	30598.768	13.535	625.645	625.667
	e	30608.768	13.530	625.639	625.647
	℄ BRG.	30613.774	13.528	625.634	625.634
BEAM S11.13	℄ BRG.	30560.636	9.140	625.677	625.677
	a	30570.636	9.135	625.685	625.701
	b	30580.636	9.131	625.689	625.712
	c	30590.636	9.127	625.687	625.712
	d	30600.636	9.122	625.679	625.701
	e	30610.636	9.118	625.667	625.674
	℄ BRG.	30615.643	9.116	625.659	625.659

INDICATES STA. 306+15.643 (TYP)

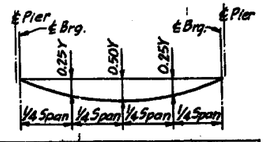
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.12	℄ BRG.	30562.505	4.728	625.735	625.735
	a	30572.505	4.723	625.737	625.748
	b	30582.505	4.719	625.734	625.752
	c	30592.505	4.715	625.725	625.745
	d	30602.505	4.710	625.711	625.727
	e	30612.505	4.706	625.692	625.698
	℄ BRG.	30617.512	4.704	625.680	625.680
BEAM S11.11	℄ BRG.	30563.480	2.425	625.765	625.765
	a	30573.480	2.421	625.763	625.774
	b	30583.480	2.417	625.756	625.774
	c	30593.480	2.412	625.744	625.764
	d	30603.480	2.408	625.727	625.743
	e	30613.480	2.406	625.704	625.710
	℄ BRG.	30618.486	2.402	625.691	625.691
℄ PROP. SEB LANES	℄ BRG.	30564.507	0.000	625.795	625.795
	a	30574.507	0.000	625.790	625.805
	b	30584.507	0.000	625.779	625.802
	c	30594.507	0.000	625.764	625.789
	d	30604.507	0.000	625.743	625.764
	e	30614.507	0.000	625.716	625.724
	℄ BRG.	30619.504	0.000	625.701	625.701

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.10	℄ BRG.	30565.377	-2.054	625.763	625.763
	a	30575.377	-2.058	625.757	625.772
	b	30585.377	-2.063	625.746	625.769
	c	30595.377	-2.067	625.730	625.755
	d	30605.377	-2.071	625.708	625.729
	e	30615.377	-2.076	625.681	625.689
	℄ BRG.	30620.384	-2.078	625.666	625.666
BEAM S11.9	℄ BRG.	30567.274	-6.533	625.692	625.692
	a	30577.274	-6.538	625.685	625.700
	b	30587.274	-6.542	625.673	625.696
	c	30597.274	-6.546	625.656	625.681
	d	30607.274	-6.551	625.633	625.655
	e	30617.274	-6.555	625.606	625.613
	℄ BRG.	30622.281	-6.557	625.590	625.590
BEAM S11.8	℄ BRG.	30569.171	-11.013	625.621	625.621
	a	30579.171	-11.017	625.614	625.629
	b	30589.171	-11.022	625.600	625.623
	c	30599.171	-11.026	625.582	625.607
	d	30609.171	-11.030	625.559	625.580
	e	30619.171	-11.035	625.530	625.537
	℄ BRG.	30624.178	-11.037	625.514	625.514

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.7	℄ BRG.	30571.068	-15.492	625.532	625.532
	a	30581.068	-15.497	625.523	625.538
	b	30591.068	-15.501	625.509	625.532
	c	30601.068	-15.505	625.490	625.515
	d	30611.068	-15.510	625.465	625.487
	e	30621.068	-15.514	625.436	625.443
	℄ BRG.	30626.075	-15.516	625.419	625.419
BEAM S11.6	℄ BRG.	30572.965	-19.972	625.437	625.437
	a	30582.965	-19.976	625.428	625.443
	b	30592.965	-19.980	625.413	625.436
	c	30602.965	-19.985	625.392	625.417
	d	30612.965	-19.989	625.367	625.388
	e	30622.965	-19.993	625.336	625.344
	℄ BRG.	30627.972	-19.996	625.319	625.319
BEAM S11.5	℄ BRG.	30574.862	-24.451	625.343	625.343
	a	30584.862	-24.455	625.332	625.347
	b	30594.862	-24.460	625.316	625.339
	c	30604.862	-24.464	625.295	625.320
	d	30614.862	-24.469	625.268	625.289
	e	30624.862	-24.473	625.236	625.244
	℄ BRG.	30629.869	-24.475	625.218	625.218

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.4	℄ BRG.	30576.571	-28.484	625.257	625.257
	a	30586.571	-28.487	625.246	625.264
	b	30596.571	-28.490	625.229	625.259
	c	30606.571	-28.492	625.207	625.241
	d	30616.571	-28.495	625.179	625.206
	e	30626.571	-28.498	625.146	625.156
	℄ BRG.	30631.573	-28.499	625.128	625.128
BEAM S11.3	℄ BRG.	30578.279	-32.518	625.172	625.172
	a	30588.279	-32.519	625.159	625.178
	b	30598.279	-32.519	625.141	625.172
	c	30608.279	-32.520	625.118	625.153
	d	30618.279	-32.521	625.090	625.117
	e	30628.279	-32.522	625.057	625.066
	℄ BRG.	30633.277	-32.523	625.038	625.038
BEAM S11.2	℄ BRG.	30579.987	-36.551	625.086	625.086
	a	30589.987	-36.550	625.072	625.091
	b	30599.987	-36.549	625.054	625.085
	c	30609.987	-36.549	625.030	625.064
	d	30619.987	-36.548	625.001	625.028
	e	30629.987	-36.547	624.966	624.976
	℄ BRG.	30634.982	-36.547	624.947	624.947

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S11.1	℄ BRG.	30581.695	-40.584	625.000	625.000
	a	30591.695	-40.582	624.986	625.008
	b	30601.695	-40.579	624.966	625.004
	c	30611.695	-40.577	624.941	624.985
	d	30621.695	-40.574	624.911	624.944
	e	30631.695	-40.572	624.876	624.888
	℄ BRG.	30636.686	-40.571	624.857	624.857



LOCATION	0.25Y	0.50Y
BEAM S11.1	3/8"	9/16"
BEAMS S11.2 THRU S11.4	5/16"	7/16"
BEAMS S11.5 THRU S11.10 AND S11.13 THRU S11.18	1/4"	5/16"
BEAMS S11.11 & S11.12	3/16"	1/4"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS
SPAN 11
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

567

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	194

SHEET NO. 10 OF 74 SHEETS

SPAN 13

BEAM S13.10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30608.699	31.334	625.517	625.517
a	30618.699	31.334	625.529	625.540
b	30628.699	31.334	625.535	625.553
c	30638.699	31.334	625.536	625.536
d	30648.699	31.333	625.532	625.547
℄ BRG.	30662.556	31.333	625.517	625.517

BEAM S13.9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30612.299	22.835	625.576	625.576
a	30622.299	22.834	625.575	625.583
b	30632.299	22.832	625.569	625.582
c	30642.299	22.830	625.557	625.570
d	30652.299	22.829	625.540	625.548
℄ BRG.	30662.281	22.827	625.518	625.518

BEAM S13.8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30615.898	14.337	625.627	625.627
a	30625.898	14.334	625.613	625.622
b	30635.898	14.330	625.594	625.604
c	30645.898	14.327	625.569	625.580
d	30655.898	14.323	625.540	625.545
℄ BRG.	30662.007	14.321	625.519	625.519

BEAM S13.7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30619.497	5.839	625.669	625.669
a	30629.497	5.833	625.643	625.648
b	30639.497	5.828	625.611	625.616
c	30649.497	5.822	625.574	625.579
℄ BRG.	30661.733	5.815	625.521	625.521

BEAM S13.6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30621.528	1.043	625.689	625.689
a	30631.528	1.039	625.656	625.661
b	30641.528	1.034	625.616	625.622
c	30651.528	1.030	625.572	625.577
℄ BRG.	30661.578	1.026	625.522	625.522

℄ PROP. SEB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30621.970	0.000	625.693	625.693
a	30631.970	0.000	625.658	625.663
b	30641.970	0.000	625.617	625.622
c	30651.970	0.000	625.571	625.576
℄ BRG.	30661.545	0.000	625.523	625.523

BEAM S13.5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30625.127	-7.456	625.566	625.566
a	30635.127	-7.460	625.529	625.534
b	30645.127	-7.464	625.487	625.492
c	30655.127	-7.467	625.439	625.443
℄ BRG.	30661.304	-7.470	625.407	625.407

BEAM S13.4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30628.726	-15.954	625.400	625.400
a	30638.726	-15.958	625.361	625.366
b	30648.726	-15.961	625.317	625.322
℄ BRG.	30661.030	-15.965	625.255	625.255

BEAM S13.3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30632.326	-24.453	625.210	625.210
a	30642.326	-24.456	625.169	625.174
b	30652.326	-24.459	625.122	625.128
℄ BRG.	30660.756	-24.461	625.080	625.080

BEAM S13.2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30635.742	-32.519	625.028	625.028
a	30645.742	-32.522	624.986	624.986
℄ BRG.	30660.496	-32.527	624.913	624.913

BEAM S13.1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30639.158	-40.585	624.846	624.846
a	30649.158	-40.589	624.802	624.802
℄ BRG.	30660.236	-40.592	624.746	624.746

GIRDER 1A

GIRDER 1A

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.706	-32.522	624.896	624.896
a	30673.704	-32.756	624.834	624.861
b	30683.701	-32.991	624.766	624.823
c	30693.698	-33.225	624.694	624.777
d	30703.695	-33.460	624.616	624.722
e	30713.693	-33.695	624.533	624.658
f	30723.739	-33.925	624.444	624.586
g	30733.831	-34.131	624.350	624.505
h	30743.923	-34.310	624.252	624.415
i	30754.017	-34.461	624.149	624.317
j	30764.111	-34.585	624.041	624.211
k	30774.206	-34.681	623.928	624.096
l	30784.301	-34.750	623.810	623.972
m	30794.397	-34.791	623.678	623.831
n	30804.493	-34.804	623.540	623.681
o	30814.588	-34.790	623.398	623.523
p	30824.684	-34.749	623.255	623.362
q	30834.779	-34.680	623.113	623.198
r	30844.874	-34.584	622.966	623.027
s	30854.968	-34.460	622.813	622.848
℄ BRG.	30866.593	-34.283	622.633	622.633

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

GIRDER 1B

GIRDER 1B

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.446	-40.583	624.729	624.729
a	30673.445	-40.731	624.669	624.693
b	30683.444	-40.878	624.604	624.652
c	30693.443	-41.026	624.533	624.605
d	30703.442	-41.173	624.457	624.549
e	30713.441	-41.321	624.376	624.485
f	30723.498	-41.465	624.289	624.412
g	30733.611	-41.584	624.197	624.321
h	30743.726	-41.676	624.100	624.242
i	30753.841	-41.741	623.999	624.146
j	30763.956	-41.778	623.892	624.041
k	30774.071	-41.787	623.781	623.928
l	30784.186	-41.769	623.665	623.807
m	30794.301	-41.724	623.536	623.671
n	30804.416	-41.650	623.402	623.526
o	30814.530	-41.549	623.263	623.373
p	30824.643	-41.421	623.122	623.216
q	30834.756	-41.265	622.981	623.057
r	30844.868	-41.082	622.835	622.889
s	30854.979	-40.870	622.685	622.715
℄ BRG.	30866.645	-40.593	622.506	622.506

SPAN 14 (CONT.)

℄ PROP. SEB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.463	0.000	625.512	625.512
a	30673.463	0.000	625.455	625.476
b	30683.463	0.000	625.393	625.430
c	30693.463	0.000	625.325	625.370
d	30703.463	0.000	625.252	625.296
e	30713.463	0.000	625.174	625.208
f	30722.154	0.000	625.102	625.120
℄ PIER NO.14	30730.574	0.000	625.028	625.028

BEAM S14.3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.380	-2.555	625.473	625.473
a	30673.375	-2.876	625.411	625.436
b	30683.370	-3.198	625.343	625.388
c	30693.365	-3.520	625.271	625.329
d	30703.360	-3.841	625.193	625.254
e	30713.355	-4.163	625.110	625.166
f	30723.355	-4.481	625.021	625.065
℄ PIER NO.14	30730.438	-4.692	624.956	624.988

BEAM S14.2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.145	-9.843	625.360	625.360
a	30673.140	-10.164	625.298	625.325
b	30683.135	-10.486	625.231	625.280
c	30693.130	-10.807	625.158	625.223
d	30703.125	-11.129	625.081	625.154
e	30713.119	-11.451	624.998	625.070
f	30723.130	-11.769	624.909	624.976
℄ PIER NO.14	30730.227	-11.981	624.844	624.904

GIRDER G1-14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30662.910	-17.131	625.221	625.221
a	30672.905	-17.452	625.157	625.182
b	30682.900	-17.774	625.088	625.136
c	30692.895	-18.095	625.014	625.079
d	30702.890	-18.417	624.935	625.013
e	30712.884	-18.738	624.851	624.935
f	30722.903	-19.057	624.761	624.847
℄ PIER NO.14	30730.014	-19.269	624.694	624.780

GIRDER G1-14

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30662.675	-24.419	625.070	625.070
a	30672.670	-24.740	625.007	625.027
b	30682.665	-25.062	624.938	624.979
c	30692.660	-25.383	624.864	624.924
d	30702.655	-25.705	624.785	624.862
e	30712.649	-26.026	624.701	624.792
f	30722.675	-26.345	624.611	624.709
℄ PIER NO.14	30729.800	-26.558	624.544	624.648

SPAN 14

BEAM S14.9

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30664.474	31.344	625.515	625.515
a	30674.474	31.344	625.497	625.509
b	30684.474	31.344	625.474	625.495
c	30694.474	31.343	625.446	625.470
d	30704.474	31.343	625.412	625.436
e	30714.474	31.343	625.373	625.393
f	30724.422	31.347	625.330	625.337
℄ BRG.	30730.523	31.362	625.301	625.301

BEAM S14.8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30664.262	24.775	625.513	625.513
a	30674.262	24.774	625.487	625.500
b	30684.262	24.774	625.456	625.478
c	30694.262	24.774	625.420	625.445
d	30704.262	24.773	625.378	625.402
e	30714.262	24.773	625.331	625.351
f	30724.222	24.778	625.279	625.287
℄ BRG.	30730.334	24.792	625.245	625.245

BEAM S14.7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30664.050	18.205	625.513	625.513
a	30674.050	18.205	625.478	625.491
b	30684.050	18.205	625.439	625.460
c	30694.050	18.204	625.394	625.419
d	30704.050	18.204	625.344	625.368
e	30714.050	18.204	625.289	625.309
f	30724.022	18.208	625.229	625.236
℄ BRG.	30730.145	18.222	625.189	625.189

INDICATES STA. 307+30.145 (TYP)

BEAM S14.6

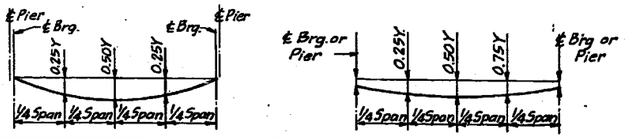
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.638	11.636	625.512	625.512
a	30673.638	11.635	625.470	625.482
b	30683.638	11.635	625.422	625.443
c	30693.638	11.635	625.369	625.394
d	30703.638	11.634	625.310	625.334
e	30713.638	11.634	625.247	625.267
f	30723.821	11.638	625.178	625.186
℄ BRG.	30729.954	11.652	625.134	625.134

BEAM S14.5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.626	5.066	625.512	625.512
a	30673.626	5.066	625.461	625.474
b	30683.626	5.066	625.405	625.427
c	30693.626	5.065	625.344	625.369
d	30703.626	5.065	625.277	625.301
e	30713.626	5.065	625.206	625.225
f	30723.619	5.068	625.129	625.136
℄ BRG.	30729.764	5.082	625.079	625.079

BEAM S14.4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ BRG.	30663.545	2.557	625.512	625.512
a	30673.545	2.560	625.458	625.480
b	30683.545	2.563	625.399	625.437
c	30693.545	2.564	625.334	625.380
d	30703.545	2.568	625.265	625.309
e	30713.545	2.571	625.190	625.224
f	30723.542	2.578	625.110	625.126
℄ PIER NO.14	30730.649	2.597	625.050	625.050



LOCATION	0.25Y	0.50Y
BEAMS S13.1 AND S13.2	0"	0"
BEAMS S13.3 THRU S13.7	1/16"	1/16"
BEAM S13.8	1/8"	1/8"
BEAM S13.9	1/8"	3/16"
BEAM S13.10	3/16"	1/4"

LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-14	0"	7/16"	13/16"	1 1/8"	1 1/4"
BEAM S14.1	0"	1/2"	13/16"	1"	1"
BEAM S14.2	0"	1/2"	13/16"	7/8"	11/16"
BEAM S14.3	0"	7/16"	11/16"	11/16"	3/8"
BEAM S14.4	0"	3/8"	9/16"	3/8"	0"
BEAMS S14.5 THRU S14.9	0"	1/4"	5/16"	1/4"	0"

DEAD LOAD DEFLECTION DIAGRAMS

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS GIRDERS 1A AND 1B SPANS 13 AND 14

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+48

STANLEY CONSULTANTS

542

* 050512-2B, 3-HH, 6-HP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	194

SHEET NO. 19 of 74 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPAN 13

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.10	℄ BRG.	30608.699	31.334	625.517	625.517
	a	30618.699	31.334	625.529	625.540
	b	30628.699	31.334	625.535	625.553
	c	30638.699	31.334	625.536	625.556
	d	30648.699	31.333	625.532	625.547
	℄ BRG.	30662.556	31.333	625.517	625.517
BEAM S13.9	℄ BRG.	30612.299	22.835	625.576	625.576
	a	30622.299	22.834	625.575	625.583
	b	30632.299	22.832	625.569	625.582
	c	30642.299	22.830	625.557	625.570
	d	30652.299	22.829	625.540	625.548
	℄ BRG.	30662.281	22.827	625.518	625.518
BEAM S13.8	℄ BRG.	30615.898	14.337	625.627	625.627
	a	30625.898	14.334	625.613	625.622
	b	30635.898	14.330	625.594	625.604
	c	30645.898	14.327	625.569	625.580
	d	30655.898	14.323	625.540	625.545
	℄ BRG.	30662.007	14.321	625.519	625.519

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.7	℄ BRG.	30619.497	5.839	625.669	625.669
	a	30629.497	5.833	625.643	625.648
	b	30639.497	5.828	625.611	625.616
	c	30649.497	5.822	625.574	625.579
	℄ BRG.	30661.733	5.815	625.521	625.521
BEAM S13.6	℄ BRG.	30621.528	1.043	625.689	625.689
	a	30631.528	1.039	625.656	625.661
	b	30641.528	1.034	625.616	625.622
	c	30651.528	1.030	625.572	625.577
	℄ BRG.	30661.578	1.026	625.522	625.522
℄ PROP. SEB LANES	℄ BRG.	30621.970	0.000	625.693	625.693
	a	30631.970	0.000	625.658	625.663
	b	30641.970	0.000	625.617	625.622
	c	30651.970	0.000	625.571	625.576
	℄ BRG.	30661.545	0.000	625.523	625.523

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.5	℄ BRG.	30625.127	-7.456	625.566	625.566
	a	30635.127	-7.460	625.529	625.534
	b	30645.127	-7.464	625.487	625.492
	c	30655.127	-7.467	625.439	625.443
	℄ BRG.	30661.304	-7.470	625.407	625.407
BEAM S13.4	℄ BRG.	30628.726	-15.954	625.400	625.400
	a	30638.726	-15.958	625.361	625.366
	b	30648.726	-15.961	625.317	625.322
	℄ BRG.	30661.030	-15.965	625.255	625.255
BEAM S13.3	℄ BRG.	30632.326	-24.453	625.210	625.210
	a	30642.326	-24.456	625.169	625.174
	b	30652.326	-24.459	625.122	625.128
	℄ BRG.	30660.756	-24.461	625.080	625.080
BEAM S13.2	℄ BRG.	30635.742	-32.519	625.028	625.028
	a	30645.742	-32.522	624.986	624.986
	℄ BRG.	30660.496	-32.527	624.913	624.913

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S13.1	℄ BRG.	30639.158	-40.585	624.846	624.846
	a	30649.158	-40.589	624.802	624.802
	℄ BRG.	30660.236	-40.592	624.746	624.746

GIRDER 1A

GIRDER	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER 1A	℄ BRG.	30663.706	-32.522	624.896	624.896
	a	30673.704	-32.756	624.834	624.861
	b	30683.701	-32.991	624.766	624.823
	c	30693.698	-33.225	624.694	624.777
	d	30703.695	-33.460	624.616	624.722
	e	30713.693	-33.695	624.533	624.658
	f	30723.739	-33.925	624.444	624.586
	g	30733.831	-34.131	624.350	624.505
	h	30743.923	-34.310	624.252	624.415
	i	30754.017	-34.461	624.149	624.317
	j	30764.111	-34.585	624.041	624.211
	k	30774.206	-34.681	623.928	624.096
	l	30784.301	-34.750	623.810	623.972
	m	30794.397	-34.791	623.678	623.831
	n	30804.493	-34.804	623.540	623.681
	o	30814.588	-34.790	623.398	623.523
	p	30824.684	-34.749	623.255	623.362
	q	30834.779	-34.680	623.113	623.198
	r	30844.874	-34.584	622.966	623.027
	s	30854.968	-34.460	622.813	622.848
	℄ BRG.	30866.593	-34.283	622.633	622.633

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

GIRDER 1B

GIRDER	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
GIRDER 1B	℄ BRG.	30663.446	-40.583	624.729	624.729
	a	30673.445	-40.731	624.669	624.693
	b	30683.444	-40.878	624.604	624.652
	c	30693.443	-41.026	624.533	624.605
	d	30703.442	-41.173	624.457	624.549
	e	30713.441	-41.321	624.376	624.485
	f	30723.498	-41.465	624.289	624.412
	g	30733.611	-41.584	624.197	624.331
	h	30743.726	-41.676	624.100	624.242
	i	30753.841	-41.741	623.999	624.146
	j	30763.956	-41.778	623.892	624.041
	k	30774.071	-41.787	623.781	623.928
	l	30784.186	-41.769	623.665	623.807
	m	30794.301	-41.724	623.536	623.671
	n	30804.416	-41.650	623.402	623.526
	o	30814.530	-41.549	623.263	623.373
	p	30824.643	-41.421	623.122	623.216
	q	30834.756	-41.265	622.981	623.057
	r	30844.868	-41.082	622.835	622.889
	s	30854.979	-40.870	622.685	622.715
	℄ BRG.	30866.645	-40.593	622.506	622.506

SPAN 14

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S14.9	℄ BRG.	30664.474	31.344	625.515	625.515
	a	30674.474	31.344	625.497	625.509
	b	30684.474	31.344	625.474	625.495
	c	30694.474	31.343	625.446	625.470
	d	30704.474	31.343	625.412	625.436
	e	30714.474	31.343	625.373	625.393
	f	30724.422	31.347	625.330	625.337
	℄ BRG.	30730.523	31.362	625.301	625.301
BEAM S14.8	℄ BRG.	30664.262	24.775	625.513	625.513
	a	30674.262	24.774	625.487	625.500
	b	30684.262	24.774	625.456	625.478
	c	30694.262	24.774	625.420	625.445
	d	30704.262	24.773	625.378	625.402
	e	30714.262	24.773	625.331	625.351
	f	30724.222	24.778	625.279	625.287
	℄ BRG.	30730.334	24.792	625.245	625.245
BEAM S14.7	℄ BRG.	30664.050	18.205	625.513	625.513
	a	30674.050	18.205	625.478	625.491
	b	30684.050	18.205	625.439	625.460
	c	30694.050	18.204	625.394	625.419
	d	30704.050	18.204	625.344	625.368
	e	30714.050	18.204	625.289	625.309
	f	30724.022	18.208	625.229	625.236
	℄ BRG.	30730.145	18.222	625.189	625.189

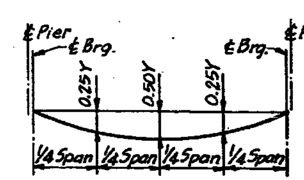
INDICATES STA. 307+30.145 (TYP)

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S14.6	℄ BRG.	30663.838	11.636	625.512	625.512
	a	30673.838	11.635	625.470	625.482
	b	30683.838	11.635	625.422	625.443
	c	30693.838	11.635	625.369	625.394
	d	30703.838	11.634	625.310	625.334
	e	30713.838	11.634	625.247	625.267
	f	30723.821	11.638	625.178	625.186
	℄ BRG.	30729.954	11.652	625.134	625.134
BEAM S14.5	℄ BRG.	30663.626	5.066	625.512	625.512
	a	30673.626	5.066	625.461	625.474
	b	30683.626	5.066	625.405	625.427
	c	30693.626	5.065	625.344	625.369
	d	30703.626	5.065	625.277	625.301
	e	30713.626	5.065	625.206	625.225
	f	30723.619	5.068	625.129	625.136
	℄ BRG.	30729.764	5.082	625.079	625.079
BEAM S14.4	℄ BRG.	30663.545	2.557	625.512	625.512
	a	30673.545	2.560	625.458	625.480
	b	30683.545	2.563	625.399	625.437
	c	30693.545	2.564	625.334	625.380
	d	30703.545	2.568	625.265	625.309
	e	30713.545	2.571	625.190	625.224
	f	30723.542	2.578	625.110	625.126
	℄ PIER NO.14	30730.649	2.597	625.050	625.050

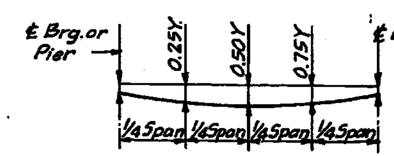
SPAN 14 (CONT.)

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	30663.463	0.000	625.512	625.512
	a	30673.463	0.000	625.455	625.476
	b	30683.463	0.000	625.393	625.430
	c	30693.463	0.000	625.325	625.370
	d	30703.463	0.000	625.252	625.296
	e	30713.463	0.000	625.174	625.208
	f	30722.154	0.000	625.102	625.120
	℄ PIER NO.14	30730.574	0.000	625.028	625.028
BEAM S14.3	℄ BRG.	30663.380	-2.555	625.473	625.473
	a	30673.375	-2.876	625.411	625.436
	b	30683.370	-3.198	625.343	625.388
	c	30693.365	-3.520	625.271	625.329
	d	30703.360	-3.841	625.193	625.254
	e	30713.355	-4.163	625.110	625.166
	f	30723.355	-4.481	625.021	625.065
	℄ PIER NO.14	30730.438	-4.692	624.956	624.988
BEAM S14.2	℄ BRG.	30663.145	-9.843	625.360	625.360
	a	30673.140	-10.164	625.298	625.325
	b	30683.135	-10.486	625.231	625.280
	c	30693.130	-10.807	625.158	625.223
	d	30703.125	-11.129	625.081	625.154
	e	30713.119	-11.451	624.998	625.070
	f	30723.130	-11.769	624.909	624.976
	℄ PIER NO.14	30730.227	-11.981	624.844	624.904

BEAM	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S14.1	℄ BRG.	30662.910	-17.131	625.221	625.221
	a	30672.905	-17.452	625.157	625.182
	b	30682.900	-17.774	625.088	625.136
	c	30692.895	-18.095	625.014	625.079
	d	30702.890	-18.417	624.935	625.013
	e	30712.884	-18.738	624.851	624.935
	f	30722.903	-19.057	624.761	624.847
	℄ PIER NO.14	30730.014	-19.269	624.694	624.780
GIRDER G1-14	℄ BRG.	30662.675	-24.419	625.070	625.070
	a	30672.670	-24.740	625.007	625.027
	b	30682.665	-25.062	624.938	624.979
	c	30692.660	-25.383	624.864	624.924
	d	30702.655	-25.705	624.785	624.862
	e	30712.649	-26.026	624.701	624.792
	f	30722.675	-26.345	624.611	624.709
	℄ PIER NO.14	30729.800	-26.558	624.544	624.648



LOCATION	0.25Y	0.50Y
BEAMS S13.1 AND S13.2	0"	0"
BEAMS S13.3 THRU S13.7	1/16"	1/16"
BEAM S13.8	1/8"	1/8"
BEAM S13.9	1/8"	3/16"
BEAM S13.10	3/16"	1/4"



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-14	0"	7/16"	13/16"	1-1/8"	1 1/4"
BEAM S14.1	0"	1/2"	13/16"	1"	1"
BEAM S14.2	0"	1/2"	13/16"	7/8"	11/16"
BEAM S14.3	0"	7/16"	11/16"	11/16"	3/8"
BEAM S14.4	0"	3/8"	9/16"	3/8"	0"
BEAMS S14.5 THRU S14.9	0"	1/4"	5/16"	1/4"	0"

DEAD LOAD DEFLECTION DIAGRAMS

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
GIRDERS 1A AND 1B
SPANS 13 AND 14

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

565

* 0505(2-2), 3-IH, 6-IP, 400HB, 401HB, 431, 0506-430, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	SHEET NO.	TOTAL SHEETS
	*		426	195

SHEET NO. 20 of 74 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SPAN 15

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S15.9	℄ BRG.	30732.437	31.628	625.295	625.295
	a	30742.348	31.569	625.241	625.263
	b	30742.260	31.316	625.180	625.222
	c	30742.173	31.100	625.115	625.167
	d	30772.088	30.912	625.043	625.096
	e	30782.001	30.730	624.967	625.008
	f	30791.919	30.616	624.884	624.905
	℄ PIER NO.15	30799.186	30.534	624.821	624.821
BEAM S15.8	℄ BRG.	30732.256	25.414	625.239	625.239
	a	30742.184	25.344	625.176	625.198
	b	30752.111	24.901	625.108	625.149
	c	30762.044	24.488	625.034	625.085
	d	30771.976	24.496	624.955	625.006
	e	30781.908	24.334	624.870	624.912
	f	30791.842	24.200	624.779	624.804
	℄ PIER NO.15	30799.121	24.118	624.710	624.716
REAM S15.7	℄ BRG.	30732.075	19.000	625.183	625.183
	a	30742.020	18.729	625.112	625.134
	b	30751.964	18.486	625.036	625.076
	c	30761.914	18.270	624.954	625.004
	d	30771.863	18.081	624.866	624.918
	e	30781.813	17.918	624.773	624.817
	f	30791.764	17.783	624.674	624.702
	℄ PIER NO.15	30799.056	17.702	624.599	624.610

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S15.6	℄ BRG.	30731.892	12.586	625.128	625.128
	a	30741.855	12.315	625.049	625.068
	b	30751.819	12.071	624.964	625.001
	c	30761.784	11.854	624.874	624.920
	d	30771.750	11.665	624.778	624.826
	e	30781.717	11.502	624.676	624.718
	f	30791.685	11.367	624.569	624.599
	℄ PIER NO.15	30798.990	11.285	624.488	624.503
BEAM S15.5	℄ BRG.	30731.683	5.256	625.065	625.065
	a	30741.668	5.120	624.977	624.993
	b	30751.654	5.012	624.885	624.915
	c	30761.640	4.931	624.787	624.826
	d	30771.627	4.877	624.684	624.725
	e	30781.613	4.851	624.576	624.613
	f	30791.600	4.851	624.463	624.491
	℄ PIER NO.15	30798.925	4.869	624.377	624.394
BEAM S15.4	℄ PIER NO.14	30730.649	2.597	625.050	625.050
	a	30740.641	2.457	624.960	624.975
	b	30750.634	2.344	624.865	624.891
	c	30760.628	2.258	624.764	624.798
	d	30770.621	2.200	624.658	624.694
	e	30780.615	2.168	624.547	624.580
	f	30790.609	2.164	624.431	624.457
	℄ PIER NO.15	30798.897	2.182	624.331	624.349

INDICATES STA. 307+98.897 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ PIER NO. 14	30730.574	0.000	625.028	625.028
	a	30740.574	0.000	624.936	624.951
	b	30750.574	0.000	624.839	624.866
	c	30760.574	0.000	624.736	624.770
	d	30770.574	0.000	624.628	624.664
	e	30780.574	0.000	624.515	624.548
	f	30790.574	0.000	624.396	624.422
	℄ PIER NO. 15	30798.875	0.000	624.293	624.311
BEAM S15.3	℄ PIER NO. 14	30730.438	-4.692	624.956	624.988
	a	30740.448	-4.967	624.860	624.910
	b	30750.459	-5.215	624.758	624.825
	c	30760.471	-5.435	624.652	624.731
	d	30770.484	-5.628	624.541	624.627
	e	30780.498	-5.794	624.425	624.512
	f	30790.513	-5.932	624.300	624.383
	℄ PIER NO. 15	30798.812	-6.026	624.190	624.267
BEAM S15.2	℄ PIER NO. 14	30730.227	-11.981	624.844	624.904
	a	30740.256	-12.256	624.746	624.824
	b	30750.287	-12.504	624.644	624.727
	c	30760.319	-12.725	624.536	624.640
	d	30770.352	-12.918	624.424	624.532
	e	30780.386	-13.085	624.307	624.413
	f	30790.421	-13.223	624.177	624.276
	℄ PIER NO. 15	30798.737	-13.318	624.060	624.150

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S15.1	℄ PIER NO. 14	30730.014	-19.269	624.694	624.780
	a	30740.063	-19.545	624.596	624.696
	b	30750.114	-19.794	624.494	624.605
	c	30760.166	-20.015	624.386	624.505
	d	30770.219	-20.209	624.274	624.394
	e	30780.274	-20.375	624.156	624.274
	f	30790.329	-20.514	624.027	624.137
	℄ PIER NO. 15	30798.661	-20.609	623.911	624.013
GIRDER G1-15	℄ PIER NO. 14	30729.800	-26.558	624.544	624.648
	a	30739.870	-26.834	624.446	624.559
	b	30749.941	-27.083	624.343	624.463
	c	30760.013	-27.305	624.236	624.360
	d	30770.086	-27.499	624.123	624.249
	e	30780.161	-27.666	624.006	624.131
	f	30790.236	-27.805	623.877	624.000
	℄ PIER NO. 15	30798.585	-27.900	623.763	623.879

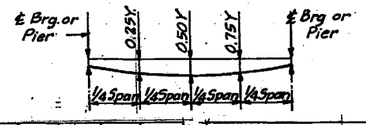
SPAN 16

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S16.9	℄ PIER NO.15	30799.186	30.534	624.821	624.821
	a	30809.104	30.446	624.729	624.759
	b	30819.021	30.385	624.633	624.686
	c	30828.939	30.351	624.497	624.563
	d	30838.857	30.344	624.354	624.421
	e	30848.775	30.363	624.205	624.263
	f	30858.693	30.410	624.052	624.091
	℄ PIER NO.16	30865.573	30.459	623.944	623.966
BEAM S16.8	℄ PIER NO.15	30799.121	24.118	624.710	624.716
	a	30809.086	24.030	624.610	624.643
	b	30819.051	23.948	624.505	624.559
	c	30828.926	23.934	624.389	624.434
	d	30838.841	23.927	624.228	624.291
	e	30848.756	23.947	624.077	624.133
	f	30858.731	23.994	623.923	623.962
	℄ PIER NO.16	30865.623	24.042	623.815	623.838
BEAM S16.7	℄ PIER NO.15	30799.056	17.702	624.599	624.610
	a	30809.009	17.613	624.491	624.526
	b	30818.960	17.552	624.378	624.431
	c	30828.912	17.517	624.241	624.304
	d	30838.865	17.510	624.097	624.160
	e	30848.817	17.530	623.948	624.002
	f	30858.769	17.577	623.794	623.832
	℄ PIER NO.16	30865.674	17.626	623.686	623.709

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S16.6	℄ PIER NO.15	30798.990	11.285	624.488	624.503
	a	30808.959	11.197	624.372	624.407
	b	30818.923	11.135	624.251	624.301
	c	30828.899	11.101	624.113	624.170
	d	30838.869	11.094	623.968	624.026
	e	30848.838	11.113	623.819	623.869
	f	30858.808	11.161	623.665	623.700
	℄ PIER NO.16	30865.724	11.209	623.556	623.579
BEAM S16.5	℄ PIER NO.15	30798.925	4.869	624.377	624.394
	a	30808.911	4.780	624.253	624.285
	b	30818.896	4.719	624.124	624.167
	c	30828.885	4.684	623.985	624.033
	d	30838.872	4.677	623.840	623.888
	e	30848.860	4.697	623.691	623.732
	f	30858.847	4.744	623.536	623.567
	℄ PIER NO.16	30865.775	4.793	623.427	623.449
BEAM S16.4	℄ PIER NO.15	30798.897	2.182	624.331	624.349
	a	30808.891	2.093	624.203	624.233
	b	30818.885	2.031	624.071	624.109
	c	30828.879	1.997	623.931	623.974
	d	30838.874	1.989	623.786	623.829
	e	30848.869	2.009	623.637	623.674
	f	30858.863	2.057	623.482	623.510
	℄ PIER NO.16	30865.796	2.105	623.373	623.394

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ PIER NO.15	30798.875	0.000	624.293	624.311
	a	30808.875	0.000	624.165	624.194
	b	30818.875	0.000	624.031	624.065
	c	30828.875	0.000	623.891	623.934
	d	30838.875	0.000	623.747	623.799
	e	30848.875	0.000	623.596	623.634
	f	30858.875	0.000	623.441	623.469
	℄ PIER NO.16	30865.813	0.000	623.330	623.350
BEAM S16.3	℄ PIER NO.15	30798.812	-6.026	624.190	624.267
	a	30808.829	-6.115	624.052	624.132
	b	30818.845	-6.177	623.908	623.997
	c	30828.862	-6.212	623.767	623.841
	d	30838.879	-6.219	623.622	623.684
	e	30848.896	-6.199	623.472	623.517
	f	30858.913	-6.152	623.317	623.341
	℄ PIER NO.16	30865.862	-6.103	623.208	623.215
BEAM S16.2	℄ PIER NO.15	30798.737	-13.318	624.060	624.150
	a	30808.773	-13.407	623.914	624.007
	b	30818.810	-13.469	623.764	623.855
	c	30828.846	-13.503	623.622	623.705
	d	30838.883	-13.511	623.476	623.546
	e	30848.920	-13.491	623.326	623.376
	f	30858.957	-13.443	623.171	623.195
	℄ PIER NO.16	30865.920	-13.394	623.061	623.066

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S16.1	℄ PIER NO.15	30798.661	-20.609	623.911	624.013
	a	30808.717	-20.698	623.767	623.866
	b	30818.774	-20.760	623.618	623.711
	c	30828.831	-20.795	623.476	623.558
	d	30838.888	-20.802	623.330	623.397
	e	30848.945	-20.782	623.180	623.226
	f	30859.002	-20.735	623.024	623.046
	℄ PIER NO.16	30865.978	-20.686	622.914	622.917
GIRDER G1-16	℄ PIER NO.15	30798.585	-27.900	623.763	623.879
	a	30808.661	-27.990	623.620	623.728
	b	30818.738	-28.052	623.473	623.569
	c	30828.815	-28.087	623.330	623.413
	d	30838.892	-28.094	623.184	623.251
	e	30848.969	-28.074	623.033	623.081
	f	30859.046	-28.026	622.878	622.905
	℄ PIER NO.16	30866.037	-27.977	622.768	622.768



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-15	1 1/4"	1 7/16"	1 1/2"	1 1/2"	1 3/8"
BEAM S15.1	1"	1 5/16"	1 7/16"	1 3/8"	1 1/4"
BEAM S15.2	11/16"	1 1/16"	1 1/4"	1 1/4"	1 1/16"
BEAM S15.3	3/8"	3/4"	1"	1 1/16"	15/16"
BEAM S15.4	0"	1/4"	7/16"	3/8"	3/16"
BEAM S15.5	0"	5/16"	1/2"	7/16"	3/16"
BEAM S15.6	0"	3/8"	9/16"	1/2"	1/8"
BEAM S15.7	0"	1/4"	5/8"	1/2"	1/8"
BEAM S15.8	0"	7/16"	5/8"	1/2"	1/16"
BEAM S15.9	0"	7/16"	5/8"	1/2"	0"

LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
GIRDER G1-16	1 3/8"	1 3/16"	15/16"	9/16"	0"
BEAM S16.1	1 1/4"	1 1/8"	15/16"	9/16"	0"
BEAM S16.2	1 1/16"	1 1/8"	15/16"	9/16"	1/16"
BEAM S16.3	15/16"	15/16"	13/16"	9/16"	1/16"
BEAM S16.4	3/16"	7/16"	1/2"	7/16"	1/4"
BEAM S16.5	3/16"	7/16"	9/16"	1/2"	1/4"
BEAM S16.6	3/16"	7/16"	11/16"	5/8"	1/4"
BEAM S16.7	1/8"	9/16"	3/4"	5/8"	1/4"
BEAM S16.8	1/16"	9/16"	3/4"	11/16"	1/4"
BEAM S16.9	0"	3/8"	13/16"	11/16"	1/4"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS
SPANS 15 AND 16

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

569

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0502-28, 3-IN, 6-IP, 400HB, 401HB, 451, 0506-450, 0603-402HB, 0606-403HB & 0707404HB, 439R-2

	*		426	196	

SHEET NO. 2 OF 74 SHEETS

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.13	℄ PIER NO.16	30865.573	30.459	623.944	623.966
	a	30875.489	30.619	623.783	623.832
	b	30885.404	30.806	623.618	623.688
	c	30895.319	31.020	623.449	623.529
	d	30905.232	31.261	623.275	623.355
	e	30915.143	31.528	623.096	623.164
	f	30925.053	31.824	622.913	622.958
	℄ PIER NO.17	30937.657	32.238	622.673	622.680
BEAM S17.12	℄ PIER NO.16	30865.623	24.042	623.815	623.838
	a	30875.557	24.202	623.634	623.702
	b	30885.489	24.390	623.489	623.556
	c	30895.421	24.604	623.319	623.397
	d	30905.351	24.845	623.145	623.222
	e	30915.279	25.114	622.966	623.031
	f	30925.207	25.409	622.782	622.826
	℄ PIER NO.17	30937.832	25.824	622.541	622.547
BEAM S17.11	℄ PIER NO.16	30865.674	17.626	623.686	623.709
	a	30875.624	17.786	623.524	623.571
	b	30885.574	17.974	623.359	623.424
	c	30895.523	18.188	623.189	623.262
	d	30905.470	18.430	623.014	623.087
	e	30915.416	18.699	622.835	622.896
	f	30925.361	18.994	622.650	622.691
	℄ PIER NO.17	30938.008	19.410	622.409	622.413

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

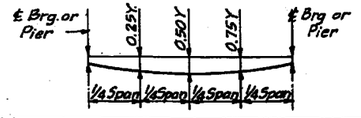
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.10	℄ PIER NO.16	30865.724	11.209	623.556	623.579
	a	30875.692	11.370	623.395	623.438
	b	30885.659	11.557	623.229	623.287
	c	30895.625	11.772	623.059	623.124
	d	30905.590	12.014	622.884	622.948
	e	30915.554	12.283	622.704	622.758
	f	30925.515	12.580	622.519	622.554
	℄ PIER NO.17	30938.185	12.996	622.277	622.280
BEAM S17.9	℄ PIER NO.16	30865.775	4.793	623.427	623 449
	a	30875.762	4.747	623.261	623.297
	b	30885.749	4.729	623.091	623.138
	c	30895.736	4.738	622.916	622.968
	d	30905.723	4.774	622.736	622.786
	e	30915.710	4.837	622.552	622.593
	f	30925.696	4.928	622.363	622.389
	℄ PIER NO.17	30938.404	5.082	622.115	622.115
BEAM S17.8	℄ PIER NO.16	30865.796	2.105	623.373	623.394
	a	30875.791	2.118	623.298	623.240
	b	30885.785	2.157	623.039	623.080
	c	30895.778	2.224	622.865	622.910
	d	30905.772	2.317	622.686	622.729
	e	30915.765	2.438	622.503	622.537
	f	30925.757	2.587	622.315	622.335
	℄ BRG.	30937.509	2.796	622.087	622.087

INDICATES STA. 309+37.509 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ PIER NO.16	30865.813	0.000	623.330	623.350
	a	30875.813	0.000	623.165	623.197
	b	30885.813	0.000	622.995	623.036
	c	30895.813	0.000	622.820	622.865
	d	30905.813	0.000	622.639	622.682
	e	30915.813	0.000	622.453	622.488
	f	30925.813	0.000	622.262	622.282
	℄ BRG.	30937.586	0.000	622.029	622.029
BEAM S17.7	℄ PIER NO.16	30865.862	-6.103	623.208	623.215
	a	30875.877	-5.941	623.045	623.066
	b	30885.891	-5.752	622.879	622.909
	c	30895.904	-5.535	622.708	622.744
	d	30905.916	-5.292	622.532	622.567
	e	30915.926	-5.021	622.351	622.379
	f	30925.935	-4.722	622.165	622.182
	℄ BRG.	30937.705	-4.337	621.940	621.940
BEAM S17.6	℄ PIER NO.16	30865.920	-13.394	623.061	623.066
	a	30875.955	-13.232	622.898	622.924
	b	30885.989	-13.043	622.731	622.772
	c	30896.022	-12.826	622.560	622.609
	d	30906.054	-12.582	622.383	622.433
	e	30916.084	-12.311	622.202	622.243
	f	30926.113	-12.012	622.016	622.041
	℄ BRG.	30937.907	-11.626	621.790	621.790

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.5	℄ PIER NO.16	30865.949	-17.040	622.987	622.991
	a	30875.990	-17.386	622.815	622.842
	b	30886.033	-17.704	622.638	622.683
	c	30896.078	-17.995	622.455	622.511
	d	30906.124	-18.258	622.268	622.324
	e	30916.172	-18.494	622.077	622.123
	f	30926.220	-18.703	621.880	621.908
	℄ BRG.	30938.109	-18.914	621.641	621.641
BEAM S17.4	℄ PIER NO.16	30865.978	-20.686	622.914	622.917
	a	30876.011	-21.392	622.734	622.763
	b	30886.047	-22.071	622.550	622.597
	c	30896.087	-22.723	622.361	622.420
	d	30906.131	-23.348	622.166	622.228
	e	30916.178	-23.945	621.967	622.021
	f	30926.228	-24.515	621.774	621.810
	℄ BRG.	30938.283	-25.162	621.528	621.528
BEAM S17.3	℄ BRG.	30869.984	-27.944	622.705	622.705
	a	30880.034	-28.685	622.524	622.539
	b	30890.088	-29.399	622.339	622.367
	c	30900.146	-30.086	622.148	622.182
	d	30910.207	-30.745	621.953	621.986
	e	30920.273	-31.377	621.753	621.779
	f	30930.341	-31.982	621.548	621.560
	℄ BRG.	30938.487	-32.451	621.378	621.378

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S17.2	℄ BRG.	30870.042	-34.253	622.578	622.578
	a	30880.127	-34.691	622.463	622.418
	b	30890.214	-35.102	622.223	622.250
	c	30900.304	-35.485	622.038	622.072
	d	30910.396	-35.841	621.848	621.880
	e	30920.489	-36.169	621.653	621.679
	f	30930.585	-36.470	621.453	621.465
	℄ BRG.	30938.606	-36.689	621.291	621.291
BEAM S17.1	℄ BRG.	30870.100	-40.563	622.450	622.450
	a	30880.211	-40.697	622.281	622.296
	b	30890.322	-40.802	622.107	622.135
	c	30900.435	-40.881	621.927	621.961
	d	30910.547	-40.932	621.743	621.776
	e	30920.660	-40.955	621.554	621.580
	f	30930.773	-40.950	621.360	621.372
	℄ BRG.	30938.725	-40.928	621.203	621.203



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
BEAMS S17.1 THRU S17.3	0"	5/16"	7/16"	5/16"	0"
BEAM S17.4	0"	9/16"	3/4"	1/2"	0"
BEAM S17.5	1/16"	1/2"	11/16"	1/2"	0"
BEAM S17.6	1/16"	7/16"	9/16"	7/16"	0"
BEAM S17.7	1/16"	5/16"	7/16"	5/16"	0"
BEAM S17.8	1/4"	1/2"	1/2"	3/8"	0"
BEAM S17.9	1/4"	9/16"	5/8"	7/16"	0"
BEAM S17.10	1/4"	11/16"	3/4"	9/16"	0"
BEAM S17.11	1/4"	3/4"	7/8"	5/8"	1/16"
BEAM S17.12	1/4"	3/4"	15/16"	11/16"	1/16"
BEAM S17.13	1/4"	13/16"	15/16"	11/16"	1/16"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTE:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 17

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 40IHB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707f404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	197
F. AP. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 22 of 74 SHEETS

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.13	℄ PIER NO.17	30937.657	32.238	622.673	622.680
	a	30947.569	32.075	622.468	622.488
	b	30957.481	31.938	622.259	622.287
	c	30967.395	31.829	622.045	622.074
	d	30977.308	31.746	621.826	621.849
	e	30987.222	31.691	621.602	621.612
	℄ BRG.	30993.738	31.669	621.452	621.452
BEAM S18.12	℄ PIER NO.17	30937.832	25.824	622.541	622.547
	a	30947.761	25.660	622.336	622.355
	b	30957.691	25.523	622.126	622.154
	c	30967.622	25.413	621.911	621.940
	d	30977.553	25.330	621.692	621.715
	e	30987.484	25.274	621.468	621.478
	℄ BRG.	30993.718	25.252	621.324	621.325
BEAM S18.11	℄ PIER NO.17	30938.008	19.410	622.409	622.413
	a	30947.955	19.245	622.204	622.222
	b	30957.902	19.107	621.993	622.020
	c	30967.849	18.996	621.778	621.806
	d	30977.798	18.913	621.558	621.590
	e	30987.746	18.856	621.333	621.343
	℄ BRG.	30993.698	18.836	621.197	621.197

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

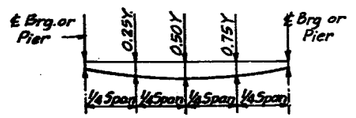
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.2	℄ BRG.	30940.543	-36.701	621.252	621.252
	a	30950.638	-37.065	621.040	621.044
	b	30960.734	-37.401	620.823	620.831
	c	30970.833	-37.710	620.601	620.610
	d	30980.933	-37.991	620.374	620.391
	℄ BRG.	30993.516	-38.303	620.085	620.085
BEAM S18.1	℄ BRG.	30940.662	-40.860	621.166	621.166
	a	30950.773	-41.035	620.958	620.962
	b	30960.885	-41.183	620.744	620.752
	c	30970.998	-41.304	620.526	620.534
	d	30981.112	-41.397	620.322	620.327
	℄ BRG.	30993.506	-41.473	620.021	620.021

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.10	℄ PIER NO.17	30938.185	12.996	622.277	622.280
	a	30948.148	12.830	622.071	622.088
	b	30958.113	12.682	621.860	621.886
	c	30968.078	12.580	621.645	621.672
	d	30978.043	12.496	621.424	621.445
	e	30988.009	12.439	621.199	621.208
	℄ BRG.	30993.677	12.419	621.089	621.089
BEAM S18.9	℄ PIER NO.17	30938.404	5.082	622.115	622.115
	a	30948.389	5.187	621.914	621.928
	b	30958.374	5.319	621.707	621.731
	c	30968.358	5.477	621.497	621.521
	d	30978.341	5.664	621.281	621.301
	e	30988.323	5.877	621.061	621.089
	℄ BRG.	30993.657	6.002	620.943	620.941
BEAM S18.8	℄ BRG.	30939.432	2.547	622.043	622.043
	a	30949.425	2.502	621.838	621.846
	b	30959.418	2.483	621.629	621.639
	c	30969.411	2.482	621.414	621.424
	d	30979.404	2.529	621.195	621.205
	℄ BRG.	30993.647	2.637	620.874	620.874

INDICATES STA. 309+93.647 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	30939.503	0.000	621.991	621.991
	a	30949.503	0.000	621.787	621.794
	b	30959.503	0.000	621.577	621.588
	c	30969.503	0.000	621.362	621.373
	d	30979.503	0.000	621.143	621.152
	℄ BRG.	30993.638	0.000	620.821	620.821
BEAM S18.7	℄ BRG.	30939.629	-4.471	621.899	621.899
	a	30949.640	-4.615	621.692	621.699
	b	30959.652	-4.732	621.479	621.490
	c	30969.665	-4.821	621.262	621.273
	d	30979.678	-4.884	621.040	621.051
	℄ BRG.	30993.623	-4.925	620.723	620.723
BEAM S18.6	℄ BRG.	30939.826	-11.489	621.755	621.755
	a	30949.855	-11.733	621.545	621.552
	b	30959.885	-11.949	621.330	621.340
	c	30969.916	-12.139	621.110	621.121
	d	30979.942	-12.301	620.886	620.896
	℄ BRG.	30993.599	-12.477	620.573	620.573

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S18.5	℄ BRG.	30940.025	-18.507	621.610	621.610
	a	30950.070	-18.852	621.398	621.406
	b	30960.117	-19.169	621.181	621.191
	c	30970.166	-19.459	620.959	620.969
	d	30980.216	-19.722	620.731	620.742
	℄ BRG.	30993.575	-20.029	620.422	620.422
BEAM S18.4	℄ BRG.	30940.224	-25.525	621.482	621.482
	a	30950.285	-25.972	621.269	621.277
	b	30960.348	-26.392	621.051	621.062
	c	30970.413	-26.784	620.829	620.839
	d	30980.480	-27.148	620.601	620.611
	℄ BRG.	30993.551	-27.581	620.298	620.298
BEAM S18.3	℄ BRG.	30940.424	-32.543	621.337	621.337
	a	30950.499	-33.093	621.122	621.130
	b	30960.577	-33.616	620.902	620.912
	c	30970.658	-34.111	620.677	620.687
	d	30980.741	-34.579	620.447	620.457
	℄ BRG.	30993.526	-35.133	620.148	620.148



LOCATION	BRG.	0.25Y	0.50Y	0.75Y	BRG.
BEAMS S18.1 & S18.2	0"	1/16"	1/8"	1/16"	0"
BEAMS S18.3 THRU S18.8	0"	1/8"	1/8"	1/8"	0"
BEAM S18.9	0"	3/16"	5/16"	3/16"	0"
BEAM S18.10	0"	1/4"	5/16"	1/4"	0"
BEAM S18.11	1/16"	1/4"	5/16"	1/4"	0"
BEAMS S18.12 & S18.13	1/16"	1/4"	3/8"	1/4"	0"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS
SPAN 18
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

571

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-29, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	198
F. HW. A. REG. #	ILLINOIS	FED. AID PROJECT		

SHEET NO. 23 OF 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.15	℄ BRG.	30995.638	31.892	621.413	621.413
	a	31005.552	31.835	621.179	621.192
	b	31015.466	31.805	620.941	620.964
	c	31025.380	31.802	620.698	620.727
	d	31035.294	31.825	620.451	620.478
	e	31045.208	31.876	620.198	620.220
	f	31055.121	31.954	619.941	619.951
	℄ BRG.	31063.516	32.041	619.720	619.720
BEAM S19.14	℄ BRG.	30995.621	25.330	621.282	621.282
	a	31005.553	25.273	621.048	621.060
	b	31015.484	25.242	620.810	620.832
	c	31025.416	25.239	620.566	620.595
	d	31035.348	25.263	620.318	620.346
	e	31045.279	25.314	620.065	620.087
	f	31055.210	25.392	619.807	619.818
	℄ BRG.	31063.620	25.479	619.586	619.586
BEAM S19.13	℄ BRG.	30995.604	18.767	621.151	621.151
	a	31005.553	18.710	620.917	620.929
	b	31015.503	18.680	620.678	620.700
	c	31025.452	18.677	620.434	620.463
	d	31035.401	18.701	620.185	620.213
	e	31045.350	18.752	619.932	619.954
	f	31055.299	18.830	619.674	619.684
	℄ BRG.	31063.724	18.917	619.452	619.452

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.12	℄ BRG.	30995.587	12.205	621.020	621.020
	a	31005.554	12.148	620.786	620.798
	b	31015.521	12.117	620.546	620.569
	c	31025.488	12.114	620.302	620.331
	d	31035.455	12.138	620.053	620.081
	e	31045.422	12.190	619.799	619.821
	f	31055.388	12.268	619.540	619.551
	℄ BRG.	31063.828	12.356	619.318	619.318
BEAM S19.11	℄ BRG.	30995.570	5.643	620.890	620.890
	a	31005.554	5.585	620.654	620.667
	b	31015.539	5.555	620.415	620.436
	c	31025.524	5.552	620.179	620.194
	d	31035.509	5.576	619.920	619.944
	e	31045.494	5.628	619.666	619.687
	f	31055.478	5.706	619.407	619.417
	℄ BRG.	31063.932	5.794	619.184	619.184
BEAM S19.10	℄ BRG.	30995.562	2.684	620.831	620.831
	a	31005.555	2.615	620.595	620.604
	b	31015.547	2.572	620.355	620.371
	c	31025.540	2.557	620.109	620.129
	d	31035.533	2.569	619.859	619.878
	e	31045.526	2.609	619.605	619.621
	f	31055.519	2.675	619.345	619.353
	℄ BRG.	31063.981	2.753	619.121	619.121

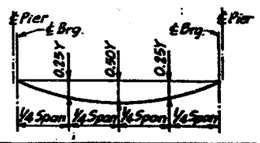
INDICATES STA. 310+63.981 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	30995.555	0.000	620.777	620.777
	a	31005.555	0.000	620.543	620.552
	b	31015.555	0.000	620.303	620.319
	c	31025.555	0.000	620.058	620.077
	d	31035.555	0.000	619.808	619.827
	e	31045.555	0.000	619.552	619.568
	f	31055.555	0.000	619.291	619.298
	℄ BRG.	31064.025	0.000	619.065	619.065
BEAM S19.9	℄ BRG.	30995.548	-2.555	620.726	620.726
	a	31005.555	-2.625	620.490	620.502
	b	31015.562	-2.667	620.250	620.271
	c	31025.569	-2.683	620.004	620.029
	d	31035.577	-2.670	619.754	619.778
	e	31045.584	-2.631	619.498	619.520
	f	31055.591	-2.564	619.238	619.249
	℄ BRG.	31064.065	-2.486	619.014	619.014
BEAM S19.8	℄ BRG.	30995.534	-7.795	620.622	620.622
	a	31005.556	-7.865	620.385	620.397
	b	31015.577	-7.907	620.144	620.166
	c	31025.599	-7.922	619.898	619.923
	d	31035.620	-7.910	619.648	619.672
	e	31045.642	-7.870	619.392	619.413
	f	31055.663	-7.803	619.132	619.142
	℄ BRG.	31064.149	-7.725	618.907	618.907

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.7	℄ BRG.	30995.520	-13.035	620.517	620.517
	a	31005.556	-13.104	620.281	620.293
	b	31015.592	-13.147	620.039	620.061
	c	31025.628	-13.162	619.793	619.818
	d	31035.664	-13.149	619.542	619.566
	e	31045.700	-13.109	619.286	619.307
	f	31055.735	-13.042	619.025	619.035
	℄ BRG.	31064.234	-12.964	618.800	618.800
BEAM S19.6	℄ BRG.	30995.597	-18.274	620.413	620.413
	a	31005.556	-18.344	620.176	620.185
	b	31015.607	-18.386	619.934	619.950
	c	31025.657	-18.401	619.687	619.707
	d	31035.707	-18.389	619.436	619.455
	e	31045.758	-18.349	619.179	619.195
	f	31055.808	-18.281	618.918	618.926
	℄ BRG.	31064.318	-18.203	618.693	618.693
BEAM S19.5	℄ BRG.	30995.498	-21.378	620.351	620.351
	a	31005.557	-21.439	620.114	620.123
	b	31015.616	-21.472	619.872	619.889
	c	31025.674	-21.478	619.625	619.645
	d	31035.733	-21.456	619.374	619.393
	e	31045.792	-21.407	619.117	619.133
	f	31055.850	-21.330	618.856	618.864
	℄ BRG.	31064.368	-21.244	618.631	618.631

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.4	℄ BRG.	30995.486	-25.993	620.286	620.286
	a	31005.556	-26.166	620.048	620.060
	b	31015.627	-26.312	619.806	619.828
	c	31025.699	-26.430	619.559	619.583
	d	31035.771	-26.521	619.307	619.331
	e	31045.844	-26.584	619.050	619.071
	f	31055.917	-26.620	618.788	618.798
	℄ BRG.	31064.455	-26.629	618.562	618.562
BEAM S19.3	℄ BRG.	30995.474	-30.607	620.194	620.194
	a	31005.554	-30.893	619.954	619.966
	b	31015.636	-31.151	619.709	619.731
	c	31025.719	-31.382	619.459	619.484
	d	31035.804	-31.585	619.205	619.229
	e	31045.889	-31.761	618.945	618.966
	f	31055.976	-31.909	618.680	618.691
	℄ BRG.	31064.563	-32.014	618.452	618.452
BEAM S19.2	℄ BRG.	30995.461	-35.222	620.102	620.102
	a	31005.551	-35.620	619.859	619.871
	b	31015.642	-35.991	619.612	619.634
	c	31025.736	-36.334	619.360	619.384
	d	31035.831	-36.649	619.103	619.127
	e	31045.928	-36.938	618.840	618.861
	f	31056.027	-37.198	618.573	618.583
	℄ BRG.	31064.631	-37.398	618.342	618.342

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S19.1	℄ BRG.	30995.444	-41.482	619.977	619.977
	a	31005.556	-41.739	619.737	619.752
	b	31015.668	-41.968	619.492	619.519
	c	31025.782	-42.169	619.242	619.276
	d	31035.897	-42.343	618.987	619.020
	e	31046.013	-42.490	618.727	618.754
	f	31056.130	-42.608	618.462	618.475
	℄ BRG.	31064.717	-42.688	618.233	618.233



LOCATION	0.25Y	0.50Y
BEAM S19.1	5/16"	7/16"
BEAMS S19.2 THRU S19.4, S19.7 THRU S19.9 & S19.11	1/8"	5/16"
BEAMS S19.5,S19.6 & S19.10	3/16"	1/4"
BEAMS S19.12 THRU S19.15	1/8"	3/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 19
SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

572

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	199
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2-4 of 74 SHEETS

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.13	℄ BRG.	31065.416	32.072	619.669	619.669
	a	31075.329	32.022	619.399	619.406
	b	31085.243	32.000	619.124	619.136
	c	31095.156	32.004	618.843	618.858
	d	31105.070	32.036	618.559	618.569
	℄ BRG.	31118.553	32.122	618.166	618.164
BEAM S20.12	℄ BRG.	31065.523	25.510	619.535	619.535
	a	31075.454	25.461	619.264	619.272
	b	31085.385	25.439	618.988	619.001
	c	31095.316	25.444	618.708	618.722
	d	31105.247	25.476	618.423	618.433
	℄ BRG.	31118.754	25.563	618.027	618.027
BEAM S20.11	℄ BRG.	31065.630	18.948	619.401	619.401
	a	31075.579	18.900	619.129	619.137
	b	31085.527	18.878	618.853	618.866
	c	31095.4[illegible]	18.883	618.572	618.586
	d	31105.4[illegible]	18.916	618.286	618.297
	℄ BRG.	31118.956	19.003	617.890	617.890

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

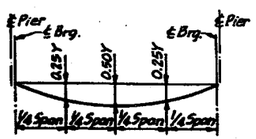
	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.2	℄ BRG.	31066.568	-37.429	618.289	618.289
	a	31076.669	-37.635	618.012	618.020
	b	31086.771	-37.813	617.730	617.743
	c	31096.874	-37.963	617.442	617.457
	d	31106.978	-38.086	617.150	617.161
	℄ BRG.	31120.749	-38.208	616.744	616.744
BEAM S20.1	℄ BRG.	31066.656	-42.649	618.183	618.183
	a	31076.769	-42.951	617.903	617.911
	b	31086.884	-43.225	617.618	617.631
	c	31097.001	-43.472	617.329	617.343
	d	31107.119	-43.691	617.034	617.044
	℄ BRG.	31120.931	-43.946	616.624	616.624

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.10	℄ BRG.	31065.738	12.387	619.267	619.267
	a	31075.704	12.338	618.995	619.002
	b	31085.671	12.317	618.718	618.731
	c	31095.637	12.323	618.436	618.451
	d	31105.604	12.356	618.150	618.160
	℄ BRG.	31119.159	12.444	617.752	617.752
BEAM S20.9	℄ BRG.	31065.846	5.825	619.133	619.133
	a	31075.830	5.777	618.860	618.868
	b	31085.814	5.756	618.583	618.596
	c	31095.799	5.762	618.300	618.315
	d	31105.783	5.796	618.013	618.024
	℄ BRG.	31119.362	5.885	617.615	617.615
BEAM S20.8	℄ BRG.	31065.896	2.784	619.070	619.070
	a	31075.888	2.736	618.798	618.805
	b	31085.881	2.715	618.520	618.530
	c	31095.874	2.721	618.237	618.248
	d	31105.866	2.755	617.950	617.961
	℄ BRG.	31119.457	2.844	617.552	617.552

INDICATES STA. 311+19.457 (TYP)

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP.SEB LANES	℄ BRG.	31065.942	0.000	619.014	619.014
BEAM S20.7	a	31075.942	0.000	618.741	618.749
	b	31085.942	0.000	618.464	618.474
	c	31095.942	0.000	618.181	618.191
	d	31105.942	0.000	617.893	617.903
	℄ BRG.	31119.545	0.000	617.492	617.492
BEAM S20.6	℄ BRG.	31066.012	-4.205	618.928	618.928
	a	31076.023	-4.253	618.654	618.662
	b	31086.035	-4.273	618.376	618.389
	c	31096.046	-4.266	618.093	618.107
	d	31106.058	-4.232	617.805	617.815
	℄ BRG.	31119.675	-4.142	617.405	617.405
	℄ BRG.	31066.128	-11.193	618.785	618.785
	a	31076.158	-11.241	618.511	618.518
	b	31086.189	-11.261	618.232	618.245
	c	31096.220	-11.254	617.948	617.962
	d	31106.251	-11.219	617.659	617.670
	℄ BRG.	31119.893	-11.128	617.259	617.259

	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S20.5	℄ BRG.	31066.244	-18.182	618.642	618.642
	a	31076.294	-18.229	618.367	618.375
	b	31086.344	-18.249	618.088	618.098
	c	31096.394	-18.241	617.803	617.814
	d	31106.444	-18.206	617.514	617.524
	℄ BRG.	31120.113	-18.114	617.113	617.113
BEAM S20.4	℄ BRG.	31066.293	-21.223	618.580	618.580
	a	31076.353	-21.270	618.305	618.312
	b	31086.412	-21.290	618.023	618.035
	c	31096.470	-21.282	617.740	617.751
	d	31106.528	-21.246	617.451	617.461
	℄ BRG.	31120.208	-21.154	617.049	617.049
BEAM S20.3	℄ BRG.	31066.431	-29.326	618.455	618.455
	a	31076.511	-29.452	618.180	618.188
	b	31086.592	-29.551	617.900	617.913
	c	31096.673	-29.622	617.615	617.629
	d	31106.754	-29.666	617.325	617.335
	℄ BRG.	31120.478	-29.681	616.922	616.922



LOCATION	0.25Y	0.50Y
BEAMS S20.1 THRU S20.3, S20.6,S20.7,S20.9 THRU S20.13	1/8"	3/16"
BEAMS S20.4,S20.5 & S20.8	1/8"	1/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS
INTERNATIONAL CIVIL CONSULTANTS IN ENGINEERING,ARCHITECTURE,PLANNING,AND MANAGEMENT

TOP OF SLAB ELEVATIONS
SPAN 20
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

573

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0506-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	200
F. AID. A. REG. #	ILLINOIS	FED. AID PROJECT		

SHEET NO. 25 of 74 SHEETS

SPAN 21

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.13	℄ BRG.	31120.454	32.119	618.107	618.107
	a	31130.367	32.069	617.807	617.815
	b	31140.280	32.046	617.506	617.518
	c	31150.194	32.050	617.204	617.219
	d	31160.107	32.081	616.903	616.915
	e	31170.020	32.139	616.603	616.608
	℄ BRG.	31177.414	32.200	616.379	616.379
BEAM S21.12	℄ BRG.	31120.658	25.560	617.970	617.970
	a	31130.589	25.509	617.670	617.677
	b	31140.520	25.484	617.367	617.379
	c	31150.451	25.487	617.065	617.080
	d	31160.382	25.517	616.764	616.775
	e	31170.313	25.574	616.463	616.468
	℄ BRG.	31177.720	25.634	616.239	616.239
BEAM S21.11	℄ BRG.	31120.864	19.001	617.833	617.833
	a	31130.812	18.948	617.532	617.539
	b	31140.761	18.923	617.229	617.241
	c	31150.710	18.924	616.926	616.941
	d	31160.658	18.953	616.624	616.635
	e	31170.607	19.009	616.323	616.328
	℄ BRG.	31178.027	19.068	616.098	616.098

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.10	℄ BRG.	31121.070	12.641	617.695	617.695
	a	31131.036	12.388	617.394	617.401
	b	31141.002	12.361	617.090	617.102
	c	31150.969	12.362	616.787	616.802
	d	31160.935	12.389	616.484	616.496
	e	31170.901	12.444	616.182	616.188
	℄ BRG.	31178.336	12.503	615.957	615.957
BEAM S21.9	℄ BRG.	31121.277	5.882	617.558	617.558
	a	31131.261	5.827	617.255	617.263
	b	31141.245	5.799	616.951	616.964
	c	31151.229	5.799	616.648	616.663
	d	31161.213	5.825	616.345	616.356
	e	31171.197	5.879	616.042	616.047
	℄ BRG.	31178.645	5.937	615.817	615.817
BEAM S21.8	℄ BRG.	31121.373	2.842	617.494	617.494
	a	31131.345	2.787	617.192	617.199
	b	31141.357	2.760	616.887	615.899
	c	31151.350	2.760	616.583	616.598
	d	31161.342	2.786	616.280	616.291
	e	31171.335	2.841	615.977	615.982
	℄ BRG.	31178.709	2.899	615.751	615.751

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31121.463	0.000	617.435	617.435
	a	31131.463	0.000	617.133	617.140
	b	31141.463	0.000	616.829	616.841
	c	31151.463	0.000	616.525	616.540
	d	31161.463	0.000	616.220	616.232
	e	31171.463	0.000	615.916	615.922
	℄ BRG.	31178.926	0.000	615.689	615.689
BEAM S21.7	℄ BRG.	31121.595	-4.155	617.348	617.348
	a	31131.606	-4.209	617.044	617.052
	b	31141.617	-4.235	616.739	616.752
	c	31151.629	-4.235	616.435	616.450
	d	31161.440	-4.207	616.131	616.142
	e	31171.652	-4.152	615.828	615.833
	℄ BRG.	31179.120	-4.093	615.601	615.601
BEAM S21.6	℄ BRG.	31121.817	-11.151	617.201	617.201
	a	31131.848	-11.204	616.897	616.904
	b	31141.878	-11.231	616.591	616.604
	c	31151.909	-11.229	616.286	616.301
	d	31161.940	-11.201	615.982	615.993
	e	31171.970	-11.145	615.678	615.683
	℄ BRG.	31179.453	-11.086	615.452	615.452

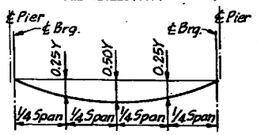
LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.5	℄ BRG.	31122.041	-18.147	617.054	617.054
	a	31132.090	-18.200	616.750	616.757
	b	31142.140	-18.226	616.444	616.456
	c	31152.190	-18.224	616.138	616.153
	d	31162.240	-18.195	615.833	615.844
	e	31172.290	-18.138	615.528	615.534
	℄ BRG.	31179.787	-18.078	615.302	615.302
BEAM S21.4	℄ BRG.	31122.138	-21.177	616.991	616.991
	a	31132.196	-21.230	616.686	616.693
	b	31142.254	-21.255	616.380	616.392
	c	31152.312	-21.253	616.074	616.089
	d	31162.370	-21.223	615.768	615.780
	e	31172.428	-21.166	615.464	615.469
	℄ BRG.	31179.932	-21.106	615.237	615.237
BEAM S21.3	℄ BRG.	31122.412	-29.704	616.865	616.865
	a	31132.493	-29.756	616.561	616.571
	b	31142.575	-29.780	616.256	616.273
	c	31152.657	-29.777	615.951	615.971
	d	31162.739	-29.746	615.647	615.664
	e	31172.820	-29.688	615.343	615.352
	℄ BRG.	31180.341	-29.627	615.117	615.118

SPAN 21 (CONT.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S21.2	℄ BRG.	31122.687	-38.231	616.686	616.686
	a	31132.792	-38.282	616.381	616.392
	b	31142.898	-38.305	616.075	616.093
	c	31153.003	-38.301	615.770	615.790
	d	31163.109	-38.270	615.465	615.482
	e	31173.214	-38.211	615.161	615.169
	℄ BRG.	31180.752	-38.149	614.935	614.935
BEAM S21.1	℄ BRC.	31122.875	-44.018	616.564	616.564
	a	31132.990	-44.379	616.253	616.264
	b	31143.107	-44.713	615.941	615.958
	c	31153.226	-45.019	615.629	615.649
	d	31163.347	-45.298	615.318	615.334
	e	31173.469	-45.549	615.007	615.015
	℄ BRG.	31181.119	-45.720	614.772	614.772

INDICATES STA 311+81.119(TYP)

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.



LOCATION	0.25Y	0.50Y
BEAMS S21.1 THRU S21.3	3/16"	1/4"
BEAMS S21.4 THRU S21.13	1/8"	3/16"
BEAMS S22.1 & S22.2	1/16"	1/8"
BEAMS S22.3 THRU S22.15	1/8"	1/8"

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

SPAN 22

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.15	℄ BRG.	31179.316	32.297	616.322	616.322
	a	31189.229	32.145	616.019	616.027
	b	31199.142	32.151	615.717	615.728
	c	31209.055	32.163	615.416	615.427
	d	31218.968	32.203	615.115	615.124
	℄ BRG.	31229.195	32.272	614.806	614.806
BEAM S22.14	℄ BRG.	31179.625	25.641	616.181	616.181
	a	31189.556	25.601	615.878	615.886
	b	31199.486	25.587	615.576	615.586
	c	31209.417	25.601	615.274	615.284
	d	31219.348	25.641	614.973	614.981
	℄ BRG.	31229.593	25.711	614.663	614.663
BEAM S22.13	℄ BRG.	31179.936	19.076	616.040	616.040
	a	31189.884	19.036	615.737	615.745
	b	31199.832	19.023	615.434	615.444
	c	31209.781	19.038	615.132	615.142
	d	31219.729	19.079	614.830	614.838
	℄ BRG.	31229.993	19.151	614.519	614.519

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.12	℄ BRG.	31180.248	12.510	615.899	615.899
	a	31190.214	12.471	615.595	615.604
	b	31200.180	12.460	615.292	615.302
	c	31210.146	12.475	614.989	615.000
	d	31220.112	12.518	614.687	614.696
	℄ BRG.	31230.394	12.590	614.376	614.376
BEAM S22.11	℄ BRG.	31180.561	5.945	615.758	615.758
	a	31190.544	5.907	615.454	615.462
	b	31200.528	5.896	615.150	615.161
	c	31210.512	5.913	614.847	614.857
	d	31220.496	5.956	614.544	614.553
	℄ BRG.	31230.796	6.030	614.232	614.232
BEAM S22.10	℄ BRG.	31180.706	2.907	615.693	615.693
	a	31190.698	2.869	615.389	615.397
	b	31200.690	2.859	615.085	615.095
	c	31210.682	2.876	614.781	614.791
	d	31220.674	2.920	614.478	614.486
	℄ BRG.	31230.983	2.994	614.166	614.166

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31180.845	0.000	615.631	615.631
	a	31190.845	0.000	615.327	615.335
	b	31200.845	0.000	615.023	615.033
	c	31210.845	0.000	614.718	614.729
	d	31220.845	0.000	614.414	614.423
	℄ BRG.	31231.168	0.000	614.100	614.100
BEAM S22.9	℄ BRG.	31181.041	-4.085	615.543	615.543
	a	31191.052	-4.122	615.238	615.246
	b	31201.063	-4.131	614.933	614.944
	c	31211.074	-4.114	614.629	614.640
	d	31221.085	-4.068	614.326	614.334
	℄ BRG.	31231.414	-3.993	614.013	614.013
BEAM S22.8	℄ BRG.	31181.377	-11.077	615.393	615.393
	a	31191.407	-11.113	615.087	615.096
	b	31201.438	-11.121	614.782	614.793
	c	31211.468	-11.102	614.478	614.488
	d	31221.498	-11.056	614.173	614.182
	℄ BRG.	31231.847	-10.980	613.860	613.860

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.7	℄ BRG.	31181.719	-18.869	615.263	615.263
	a	31191.766	-18.896	614.957	614.949
	b	31201.814	-18.911	614.651	614.641
	c	31211.863	-18.891	614.346	614.336
	d	31221.913	-18.844	614.041	614.030
	℄ BRG.	31232.201	-17.946	613.707	613.707
BEAM S22.6	℄ BRG.	31181.861	-21.897	615.178	615.178
	a	31191.919	-21.939	614.871	614.880
	b	31201.977	-21.947	614.568	614.576
	c	31212.035	-21.938	614.268	614.270
	d	31222.093	-21.886	613.965	613.963
	℄ BRG.	31232.471	-21.813	613.641	613.641
BEAM S22.5	℄ BRG.	31182.137	-26.778	615.112	615.112
	a	31192.210	-26.766	614.805	614.813
	b	31202.284	-26.727	614.499	614.509
	c	31212.357	-26.660	614.193	614.203
	d	31222.429	-26.566	613.886	613.895
	℄ BRG.	31232.810	-26.440	613.571	613.571

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.4	℄ BRG.	31182.413	-32.459	614.998	614.998
	a	31192.502	-32.396	614.695	614.703
	b	31202.591	-32.307	614.392	614.402
	c	31212.679	-32.189	614.089	614.100
	d	31222.766	-32.044	613.787	613.796
	℄ BRG.	31233.150	-31.867	613.477	613.477
BEAM S22.3	℄ BRG.	31182.691	-38.140	614.876	614.876
	a	31192.755	-38.027	614.573	614.581
	b	31202.899	-37.887	614.271	614.281
	c	31213.001	-37.719	613.969	613.979
	d	31223.103	-37.523	613.668	613.676
	℄ BRG.	31233.491	-37.294	613.358	613.358
BEAM S22.2	℄ BRG.	31182.876	-41.925	614.795	614.795
	a	31192.991	-42.078	614.486	614.490
	b	31203.106	-42.203	614.178	614.186
	c	31213.222	-42.300	613.871	613.879
	d	31223.339	-42.370	613.564	613.568
	℄ BRG.	31233.813	-42.414	613.246	613.246

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S22.1	℄ BRG.	31183.062	-45.711	614.714	614.714
	a	31193.180	-46.128	614.400	614.404
	b	31203.300	-46.513	614.086	614.094
	c	31213.422	-46.879	613.773	613.781
	d	31223.547	-47.214	613.460	613.465
	℄ BRG.	31234.137	-47.534	613.134	613.134

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS SPANS 21 AND 22

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	201
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 26 of 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.15	℄ BRG.	31231.099	32.265	614.748	614.748
	a	31241.012	32.232	614.446	614.447
	b	31250.925	32.227	614.144	614.148
	℄ BRG.	31265.280	32.268	613.708	613.708
BEAM S23.14	℄ BRG.	31231.501	25.704	614.604	614.604
	a	31241.431	25.663	614.302	614.302
	b	31251.362	25.649	613.999	614.004
	c	31261.292	25.661	613.697	613.697
	℄ BRG.	31269.249	25.691	613.456	613.456
BEAM S23.13	℄ BRG.	31231.904	19.144	614.461	614.461
	a	31241.852	19.095	614.157	614.157
	b	31251.800	19.073	613.854	613.859
	c	31261.748	19.079	613.552	613.552
	℄ BRG.	31273.233	19.119	613.203	613.203

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.12	℄ BRG.	31232.308	12.584	614.317	614.317
	a	31242.274	12.529	614.013	614.022
	b	31252.240	12.501	613.710	613.720
	c	31262.206	12.500	613.406	613.417
	d	31272.172	12.527	613.104	613.109
	℄ BRG.	31277.230	12.551	612.951	612.951
BEAM S23.11	℄ BRG.	31232.714	6.023	614.174	614.174
	a	31242.697	5.963	613.869	613.878
	b	31252.681	5.930	613.565	613.575
	c	31262.665	5.925	613.261	613.271
	d	31272.649	5.947	612.958	612.965
	℄ BRG.	31281.242	5.987	612.697	612.697
BEAM S23.10	℄ BRG.	31232.902	2.987	614.107	614.107
	a	31242.894	2.925	613.802	613.810
	b	31252.886	2.890	613.498	613.508
	c	31262.878	2.883	613.194	613.204
	d	31272.870	2.903	612.890	612.899
	℄ BRG.	31283.104	2.951	612.580	612.580

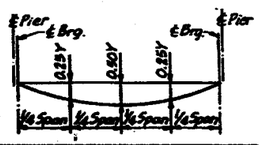
INDICATES STA. 312+83.104 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP SEB LANES	℄ BRG.	31233.088	0.000	614.042	614.042
BEAM S23.9	a	31243.088	0.000	613.738	613.746
	b	31253.088	0.000	613.434	613.444
	c	31263.088	0.000	613.130	613.140
	d	31273.088	0.000	612.825	612.834
	℄ BRG.	31284.916	0.000	612.466	612.466
BEAM S23.8	℄ BRG.	31233.337	-3.999	613.955	613.955
	a	31243.348	-4.067	613.649	613.656
	b	31253.359	-4.108	613.343	613.356
	c	31263.370	-4.121	613.039	613.053
	d	31273.381	-4.107	612.734	612.745
	℄ BRG.	31287.404	-4.041	612.309	612.309
BEAM S23.7	℄ BRG.	31233.773	-10.986	613.802	613.802
	a	31243.803	-11.058	613.695	613.506
	b	31253.833	-11.104	613.189	613.207
	c	31263.863	-11.121	612.884	612.904
	d	31273.894	-11.112	612.579	612.596
	e	31283.924	-11.075	612.274	612.283
	℄ BRG.	31291.722	-11.028	612.038	612.038

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.7	℄ BRG.	31234.211	-17.972	613.648	613.648
	a	31244.260	-18.049	613.341	613.348
	b	31254.309	-18.098	613.035	613.047
	c	31264.359	-18.120	612.729	612.744
	d	31274.408	-18.114	612.423	612.435
	e	31284.458	-18.081	612.118	612.126
	℄ BRG.	31296.056	-18.009	611.767	611.767
BEAM S23.6	℄ BRG.	31234.402	-21.008	613.582	613.582
	a	31244.459	-21.084	613.274	613.281
	b	31254.517	-21.133	612.968	612.979
	c	31264.575	-21.154	612.661	612.676
	d	31274.633	-21.148	612.356	612.368
	e	31284.691	-21.115	612.050	612.059
	℄ BRG.	31297.936	-21.029	611.649	611.649
BEAM S23.5	℄ BRG.	31234.744	-26.435	613.512	613.512
	a	31244.815	-26.560	613.205	613.218
	b	31254.888	-26.659	612.899	612.921
	c	31264.961	-26.730	612.658	612.683
	d	31275.034	-26.773	612.376	612.402
	e	31285.108	-26.789	612.095	612.115
	f	31295.181	-26.777	611.807	611.814
	℄ BRG.	31301.513	-26.756	611.623	611.623

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.4	℄ BRG.	31235.086	-31.862	613.419	613.419
	a	31245.173	-32.032	613.111	613.126
	b	31255.260	-32.175	612.803	612.830
	c	31265.348	-32.291	612.560	612.589
	d	31275.436	-32.379	612.295	612.325
	e	31285.525	-32.440	612.031	612.059
	f	31295.615	-32.473	611.769	611.786
	℄ BRG.	31305.101	-32.479	611.523	611.523
BEAM S23.3	℄ BRG.	31235.430	-37.288	613.300	613.300
	a	31245.531	-37.500	612.990	613.005
	b	31255.633	-37.684	612.682	612.706
	c	31265.736	-37.841	612.432	612.462
	d	31275.839	-37.970	612.166	612.197
	e	31285.943	-38.071	611.901	611.928
	f	31296.048	-38.145	611.637	611.655
	℄ BRG.	31308.700	-38.199	611.308	611.308
BEAM S23.2	℄ BRG.	31235.756	-42.418	613.187	613.187
	a	31245.866	-42.800	612.874	612.899
	b	31255.979	-43.154	612.562	612.610
	c	31266.093	-43.480	612.304	612.363
	d	31276.209	-43.779	612.034	612.099
	e	31286.326	-44.050	611.765	611.819
	f	31296.445	-44.294	611.496	611.536
	g	31306.565	-44.510	611.229	611.244
	℄ BRG.	31312.762	-44.629	611.066	611.066

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S23.1	℄ BRG.	31236.083	-47.548	613.075	613.075
	a	31246.201	-48.081	612.759	612.782
	b	31256.322	-48.586	612.443	612.490
	c	31266.44	-49.063	612.177	612.235
	d	31276.571	-49.513	611.903	611.971
	e	31286.699	-49.935	611.630	611.687
	f	31296.830	-50.330	611.358	611.405
	g	31306.962	-50.697	612.087	611.110
	℄ BRG.	31316.822	-51.028	610.824	610.824



LOCATION	0.25Y	0.50Y
BEAMS S23.1 & S23.2	9/16"	13/16"
BEAMS S23.3 & S23.4	5/16"	3/8"
BEAM S23.5	1/4"	5/16"
BEAMS S23.6, S23.7 & S23.9	1/8"	3/16"
BEAM S23.8	3/16"	1/4"
BEAMS S23.10 THRU S23.12	1/8"	1/8"
BEAMS S23.13 THRU S23.15	0"	1/16"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN ANY PART OF THE ENGINEER'S WORKING DRAWINGS. USE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

TOP OF SLAB ELEVATIONS
SPAN 23
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

RAPID REPRODUCTIONS, INC. FL0409

Cook 0505(2-28, 3-1H, 6-1P, Etc., Sheets 201 Thru 300

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	202

SHEET NO. 21 of 74 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.22	℄ BRG.	31267.997	32.252	613.625	613.625
	a	31277.909	32.165	613.322	613.338
	b	31287.822	32.106	613.019	613.051
	c	31297.736	32.073	612.717	612.754
	d	31307.649	32.068	612.416	612.457
	e	31317.562	32.089	612.116	612.152
	f	31327.475	32.138	611.825	611.856
	g	31337.388	32.214	611.545	611.561
	℄ BRG.	31347.515	32.319	611.269	611.269
BEAM S24.21	℄ BRG.	31270.641	27.875	613.457	613.457
	a	31280.565	27.788	613.154	613.169
	b	31290.490	27.728	612.851	612.882
	c	31300.415	27.695	612.548	612.585
	d	31310.340	27.689	612.246	612.288
	e	31320.265	27.710	611.948	611.984
	f	31330.190	27.759	611.659	611.691
	g	31340.115	27.834	611.381	611.397
	℄ BRG.	31350.291	27.939	611.108	611.108
BEAM S24.20	℄ BRG.	31273.292	23.500	613.289	613.289
	a	31283.228	23.412	612.985	613.001
	b	31293.164	23.352	612.682	612.713
	c	31303.101	23.318	612.379	612.415
	d	31313.038	23.312	612.077	612.118
	e	31322.975	23.333	611.780	611.817
	f	31332.911	23.381	611.494	611.525
	g	31342.848	23.456	611.219	611.235
	℄ BRG.	31353.075	23.562	610.947	610.947

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.19	℄ BRG.	31275.948	19.126	613.121	613.121
	a	31285.896	19.039	612.817	612.832
	b	31295.844	18.978	612.513	612.544
	c	31305.793	18.944	612.210	612.246
	d	31315.742	18.937	611.907	611.949
	e	31325.690	18.958	611.613	611.650
	f	31335.639	19.006	611.329	611.361
	g	31345.587	19.081	611.057	611.073
	℄ BRG.	31355.864	19.186	610.786	610.786
BEAM S24.18	℄ BRG.	31278.611	14.755	612.953	612.953
	a	31288.571	14.667	612.648	612.663
	b	31298.531	14.606	612.344	612.375
	c	31308.492	14.572	612.040	612.077
	d	31318.452	14.565	611.739	611.780
	e	31328.412	14.585	611.447	611.483
	f	31338.373	14.632	611.166	611.197
	g	31348.333	14.707	610.895	610.911
	℄ BRG.	31358.661	14.813	610.626	610.626
BEAM S24.17	℄ BRG.	31281.281	10.386	612.784	612.784
	a	31291.25[illegible]	10.297	612.479	612.492
	b	31301.224	10.236	612.174	612.200
	c	31311.196	10.201	611.870	611.902
	d	31321.169	10.194	611.570	611.607
	e	31331.141	10.214	611.281	611.312
	f	31341.113	10.261	611.002	611.029
	g	31351.085	10.336	610.734	610.748
	℄ BRG.	31361.464	10.442	610.467	610.467

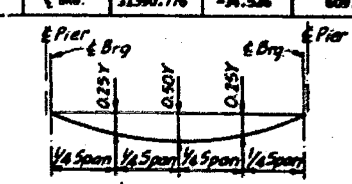
INDICATES STA. 313+61.464 (TYP)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.16	℄ BRG.	31283.957	6.018	612.615	612.615
	a	31293.940	5.929	612.310	612.323
	b	31303.924	5.868	612.005	612.031
	c	31313.908	5.833	611.701	611.732
	d	31323.892	5.825	611.403	611.439
	e	31333.876	5.845	611.116	611.147
	f	31343.860	5.892	610.840	610.866
	g	31353.843	5.966	610.574	610.588
	℄ BRG.	31364.274	6.073	610.309	610.309
BEAM S24.15	℄ BRG.	31285.831	2.966	612.497	612.497
	a	31295.823	2.872	612.191	612.204
	b	31305.815	2.806	611.886	611.912
	c	31315.807	2.766	611.582	611.613
	d	31325.800	2.754	611.286	611.322
	e	31335.792	2.769	611.000	611.032
	f	31345.785	2.812	610.726	610.752
	g	31355.777	2.881	610.462	610.476
	℄ BRG.	31366.266	2.984	610.197	610.197
℄ PROP. SEB LANES	℄ BRG.	31287.656	0.000	612.382	612.382
	a	31297.656	0.000	612.078	612.091
	b	31307.656	0.000	611.774	611.800
	c	31317.656	0.000	611.471	611.502
	d	31327.656	0.000	611.177	611.213
	e	31337.656	0.000	610.893	610.924
	f	31347.656	0.000	610.619	610.645
	g	31357.656	0.000	610.356	610.369
	℄ BRG.	31368.193	0.000	610.089	610.089

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.14	℄ BRG.	31288.408	-1.221	612.335	612.335
	a	31298.411	-1.315	612.029	612.045
	b	31308.415	-1.382	611.723	611.754
	c	31318.419	-1.422	611.420	611.456
	d	31328.423	-1.435	611.126	611.168
	e	31338.426	-1.420	610.843	610.880
	f	31348.430	-1.378	610.571	610.602
	g	31358.434	-1.309	610.310	610.326
	℄ BRG.	31368.974	-1.207	610.046	610.046
BEAM S24.13	℄ BRG.	31290.992	-5.406	612.173	612.173
	a	31301.006	-5.501	611.866	611.882
	b	31311.021	-5.568	611.560	611.591
	c	31321.036	-5.609	611.258	611.295
	d	31331.051	-5.622	610.967	611.008
	e	31341.067	-5.608	610.686	610.723
	f	31351.082	-5.566	610.416	610.448
	g	31361.097	-5.498	610.158	610.174
	℄ BRG.	31371.683	-5.395	609.896	609.896
BEAM S24.12	℄ BRG.	31293.581	-9.589	612.010	612.010
	a	31303.607	-9.684	611.704	611.719
	b	31313.633	-9.753	611.397	611.428
	c	31323.660	-9.794	611.097	611.134
	d	31333.686	-9.807	610.808	610.850
	e	31343.713	-9.793	610.530	610.567
	f	31353.740	-9.752	610.263	610.294
	g	31363.766	-9.684	610.006	610.023
	℄ BRG.	31374.408	-9.582	609.746	609.746

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.11	℄ BRG.	31296.176	-13.770	611.848	611.848
	a	31306.213	-13.866	611.541	611.556
	b	31316.251	-13.935	611.235	611.266
	c	31326.289	-13.976	610.937	610.973
	d	31336.327	-13.990	610.650	610.692
	e	31346.365	-13.977	610.374	610.411
	f	31356.403	-13.936	610.109	610.141
	g	31366.441	-13.868	609.856	609.872
	℄ BRG.	31377.135	-13.766	609.597	609.597
BEAM S24.10	℄ BRG.	31298.777	-17.949	611.685	611.685
	a	31308.825	-18.046	611.378	611.393
	b	31318.875	-18.115	611.072	611.103
	c	31328.924	-18.157	610.777	610.814
	d	31338.974	-18.172	610.493	610.534
	e	31349.024	-18.159	610.219	610.256
	f	31359.073	-18.119	609.957	609.988
	g	31369.123	-18.051	609.705	609.722
	℄ BRG.	31379.868	-17.948	609.448	609.448
BEAM S24.9	℄ BRG.	31300.720	-21.065	611.564	611.564
	a	31310.778	-21.151	611.256	611.272
	b	31320.836	-21.209	610.952	610.983
	c	31330.894	-21.240	610.659	610.695
	d	31340.952	-21.244	610.377	610.418
	e	31351.010	-21.220	610.105	610.142
	f	31361.068	-21.169	609.845	609.876
	g	31371.126	-21.091	609.595	609.612
	℄ BRG.	31381.852	-20.977	609.341	609.341

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.8	℄ BRG.	31302.501	-23.914	611.453	611.453
	a	31312.563	-24.206	611.276	611.288
	b	31322.626	-24.470	610.972	610.997
	c	31332.691	-24.707	610.668	610.698
	d	31342.756	-24.917	610.362	610.398
	e	31352.823	-25.099	610.054	610.086
	f	31362.891	-25.254	609.746	609.772
	g	31372.960	-25.381	609.496	609.511
	℄ BRG.	31384.819	-25.496	609.207	609.207
BEAM S24.7	℄ BRG.	31304.285	-26.763	611.542	611.542
	a	31314.346	-27.254	611.257	611.274
	b	31324.411	-27.719	610.970	611.005
	c	31334.478	-28.156	610.682	610.723
	d	31344.548	-28.565	610.391	610.437
	e	31354.619	-28.948	610.096	610.139
	f	31364.683	-29.302	609.799	609.836
	g	31374.748	-29.630	609.510	609.533
	℄ BRG.	31387.794	-30.012	609.120	609.120
BEAM S24.6	℄ BRG.	31306.071	-29.610	611.547	611.547
	a	31316.129	-30.296	611.280	611.297
	b	31326.192	-30.935	611.010	611.045
	c	31336.258	-31.586	610.737	610.770
	d	31346.327	-32.190	610.465	610.511
	e	31356.399	-32.766	610.194	610.237
	f	31366.475	-33.315	609.924	609.962
	g	31376.554	-33.837	609.647	609.672
	℄ BRG.	31390.776	-34.526	609.241	609.241



LOCATION	0.25Y	0.50Y
BEAM S24.1	5/8"	15/16"
BEAM S24.2	13/16"	1 1/8"
BEAMS S24.3 THRU S24.7	7/16"	9/16"
BEAMS S24.8, S24.15 THRU S24.17	5/16"	7/16"
BEAMS S24.9 THRU S24.14,	3/8"	1/2"
S24.18 THRU S24.22		

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.5	℄ BRG.	31307.860	-32.457	611.452	611.452
	a	31317.912	-33.331	611.173	611.191
	b	31327.968	-34.178	610.896	610.930
	c	31338.030	-34.998	610.619	610.659
	d	31348.095	-35.790	610.343	610.388
	e	31358.165	-36.555	610.067	610.111
	f	31368.239	-37.293	609.792	609.830
	g	31378.318	-38.003	609.509	609.536
	℄ BRG.	31393.765	-39.038	609.059	609.059
BEAM S24.4	℄ BRG.	31309.652	-35.302	611.345	611.345
	a	31319.694	-36.359	611.063	611.079
	b	31329.742	-37.389	610.781	610.815
	c	31339.795	-38.391	610.501	610.541
	d	31349.854	-39.366	610.221	610.266
	e	31359.919	-40.314	609.941	609.985
	f	31369.988	-41.235	609.661	609.700
	g	31380.063	-42.128	609.372	609.400
	℄ BRG.	31396.762	-43.547	608.875	608.875
BEAM S24.3	℄ BRG.	31311.447	-38.147	611.238	611.238
	a	31321.476	-39.381	610.952	610.969
	b	31331.513	-40.587	610.667	610.700
	c	31341.556	-41.767	610.383	610.423
	d	31351.605	-42.919	610.099	610.144
	e	31361.661	-44.044	609.816	609.860
	f	31371.723	-45.142	609.531	609.570
	g	31381.790	-46.212	609.237	609.266
	℄ BRG.	31399.767	-48.054	608.690	608.690

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S24.2	℄ BRG.	31315.572	-44.666	610.992	610.992
	a	31325.650	-45.631	610.711	610.742
	b	31335.732	-46.568	610.430	610.493
	c	31345.820	-47.478	610.150	610.228
	d	31355.913	-48.360	609.871	609.961
	e	31366.011	-49.215	609.593	609.678
	f	31376.113	-50.043	609.308	609.381
	g	31386.220	-50.843	609.014	609.064
	℄ BRG.	31402.451	-52.070	608.523	608.523
BEAM S24.1	℄ BRG.	31319.713	-51.181	610.746	610.746
	a	31329.831	-51.865	610.469	610.494
	b	31339.954	-52.521	610.193	610.243
	c	31350.080	-53.150	609.919	609.982
	d	31360.209	-53.751	609.644	609.720
	e	31370.342	-54.324	609.369	609.437
	f	31380.478	-54.871	609.084	609.140
	g	31390.617	-55.389	608.791	608.827
	℄ BRG.	31405.142	-56.083	608.356	608.356

NOTES:
SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 24

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	SHEET NO. 28 OF 74 SHEETS
	*	426 203	

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.15	℄ BRG.	31350.156	32.328	611.199	611.199
	a	31360.068	32.287	610.940	610.940
	b	31369.981	32.273	610.691	610.697
	c	31379.894	32.286	610.452	610.459
	d	31389.807	32.326	610.225	610.225
	℄ BRG.	31400.354	32.398	609.994	609.994
	BK.N.ABUT.	31403.483	32.426	609.928	609.928
BEAM S25.14	℄ BRG.	31354.331	25.758	610.957	610.957
	a	31364.261	25.716	610.702	610.702
	b	31374.191	25.702	610.457	610.463
	c	31384.122	25.714	610.222	610.229
	d	31394.052	25.754	609.999	609.999
	℄ BRG.	31404.658	25.826	609.772	609.772
	BK.N.ABUT.	31407.795	25.853	609.707	609.707
BEAM S25.13	℄ BRG.	31358.521	19.193	610.717	610.717
	a	[illegible]1.468	19.151	610.466	610.466
	b	[illegible]8.417	19.135	610.224	610.231
	c	31388.365	19.147	609.994	610.000
	d	31398.313	19.186	609.774	609.774
	℄ BRG.	31408.977	19.258	609.550	609.550
	BK.N.ABUT.	31412.122	19.285	609.487	609.487

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.12	℄ BRG.	31362.725	12.632	610.679	610.679
	a	31372.691	12.590	610.231	610.231
	b	31382.657	12.574	609.994	610.000
	c	31392.623	12.585	609.767	609.773
	d	31402.588	12.624	609.551	609.551
	℄ BRG.	31413.311	12.696	609.331	609.331
	BK.N.ABUT.	31416.464	12.723	609.269	609.269
BEAM S25.11	℄ BRG.	31365.965	6.877	610.242	610.242
	a	31376.929	6.834	609.998	609.998
	b	31386.912	6.817	609.766	609.771
	c	31396.896	6.828	609.562	609.568
	d	31406.879	6.867	609.330	609.330
	℄ BRG.	31417.641	6.139	609.113	609.113
	BK.N.ABUT.	31420.822	6.166	609.052	609.052
BEAM S25.10	℄ BRG.	31368.911	2.933	610.132	610.132
	a	31378.902	2.991	609.890	609.890
	b	31388.894	2.977	609.656	609.665
	c	31398.886	2.998	609.438	609.444
	d	31408.878	3.030	609.220	609.220
	℄ BRG.	31419.640	3.109	609.013	609.013
	BK.N.ABUT.	31422.843	3.132	608.953	608.953

INDICATES STA. 31+22.845 (TYP.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31370.873	0.000	610.023	610.023
	a	31380.873	0.000	609.784	609.784
	b	31390.873	0.000	609.554	609.561
	c	31400.873	0.000	609.335	609.341
	d	31410.873	0.000	609.127	609.127
	℄ BRG.	31421.750	0.000	608.911	608.911
	BK.N.ABUT.	31434.937	0.000	608.850	608.850
BEAM S25.9	℄ BRG.	31374.441	-5.499	609.827	609.827
	a	31384.456	-5.536	609.590	609.598
	b	31394.471	-5.545	609.364	609.377
	c	31404.486	-5.527	609.148	609.162
	d	31414.501	-5.482	608.944	608.952
	℄ BRG.	31425.363	-5.402	608.734	608.734
	BK.N.ABUT.	31428.537	-5.373	608.675	608.675
BEAM S25.8	℄ BRG.	31379.997	-14.023	609.524	609.524
	a	31390.036	-14.055	609.292	609.300
	b	31400.074	-14.059	609.071	609.085
	c	31410.113	-14.036	608.861	608.875
	d	31420.151	-13.986	608.662	608.670
	℄ BRG.	31431.072	-13.900	608.458	608.458
	BK.N.ABUT.	31434.256	-13.869	608.401	608.401

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.7	℄ BRG.	31385.580	-22.538	609.224	609.224
	a	31395.641	-22.565	608.997	609.606
	b	31405.703	-22.564	608.782	608.795
	c	31415.765	-22.536	608.577	608.591
	d	31425.827	-22.481	608.384	608.392
	℄ BRG.	31436.808	-22.389	608.185	608.185
	BK.N.ABUT.	31440.001	-22.356	608.130	608.130
BEAM S25.6	℄ BRG.	31387.680	-25.729	609.130	609.130
	a	31397.750	-25.750	608.836	608.845
	b	31407.821	-25.744	608.631	608.641
	c	31417.892	-25.710	608.509	608.519
	d	31427.962	-25.649	608.309	608.317
	℄ BRG.	31438.952	-25.550	608.041	608.041
	BK.N.ABUT.	31442.148	-25.516	608.040	608.040
BEAM S25.5	℄ BRG.	31391.413	-31.385	609.081	609.081
	a	31401.493	-31.746	608.843	608.851
	b	31411.575	-32.079	608.439	608.449
	c	31421.659	-32.386	608.346	608.356
	d	31431.744	-32.664	608.069	608.079
	℄ BRG.	31444.000	-32.966	607.709	607.709
	BK.N.ABUT.	31447.280	-33.040	607.619	607.619

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.4	℄ BRG.	31395.157	-37.037	609.064	609.064
	a	31405.236	-37.721	608.757	608.765
	b	31415.319	-38.377	608.442	608.452
	c	31425.406	-39.007	608.117	608.128
	d	31435.496	-39.608	607.785	607.794
	℄ BRG.	31449.069	-40.374	607.323	607.323
	BK.N.ABUT.	31452.433	-40.556	607.207	607.207
BEAM S25.3	℄ BRG.	31398.913	-42.685	608.832	608.832
	a	31408.983	-43.675	608.515	608.523
	b	31419.057	-44.638	608.189	608.202
	c	31429.138	-45.573	607.854	607.868
	d	31439.223	-46.482	607.510	607.521
	℄ BRG.	31456.158	-47.776	606.985	606.985
	BK.N.ABUT.	31457.607	-48.066	606.861	606.861
BEAM S25.2	℄ BRG.	31402.681	-48.329	608.599	608.599
	a	31412.733	-49.609	608.272	608.279
	b	31422.792	-50.862	607.936	607.948
	c	31432.858	-52.087	607.590	607.605
	d	31442.931	-53.286	607.236	607.247
	℄ BRG.	31459.269	-55.170	606.643	606.643
	BK.N.ABUT.	31462.803	-55.568	606.512	606.512

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.1	℄ BRG.	31408.887	-56.270	606.266	606.266
	a	31418.136	-57.041	607.958	607.950
	b	31428.265	-57.709	607.650	607.622
	c	31438.400	-58.301	607.368	607.323
	d	31448.538	-58.790	606.917	606.917
	℄ BRG.	31462.593	-59.404	606.461	606.461
	BK.N.ABUT.	31466.106	-59.563	606.286	606.286

LOCATION	0.25Y	0.50Y
BEAMS S25.1 THRU S25.3, S25.7 THRU S25.9	1/8"	3/16"
BEAMS S25.4 THRU S25.6	1/8"	1/8"
BEAMS S25.10 THRU S25.15	0"	1/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN ANY FIELD OF THE SUPERSTRUCTURE AS WORKING POINTS. USE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 25

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

	*		426	203

SHEET NO. 28 OF 74 SHEETS

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.15	℄ BRG.	31350.156	32.328	611.199	611.199
	a	31360.068	32.287	610.940	610.940
	b	31369.981	32.273	610.691	610.697
	c	31379.894	32.286	610.452	610.459
	d	31389.807	32.326	610.225	610.225
	℄ BRG.	31400.354	32.398	609.994	609.994
	BK.N.ABUT.	31403.483	32.426	609.928	609.928
BEAM S25.14	℄ BRG.	31354.331	25.758	610.957	610.957
	a	31364.261	25.716	610.702	610.702
	b	31374.191	25.702	610.457	610.463
	c	31384.122	25.714	610.222	610.229
	d	31394.052	25.754	609.999	609.999
	℄ BRG.	31404.658	25.826	609.772	609.772
	BK.N.ABUT.	31407.795	25.853	609.707	609.707
BEAM S25.13	℄ BRG.	31358.521	19.193	610.717	610.717
	a	31368.468	19.151	610.466	610.466
	b	31378.417	19.135	610.224	610.231
	c	31388.365	19.147	609.994	610.000
	d	31398.313	19.186	609.774	609.774
	℄ BRG.	31408.977	19.258	609.550	609.550
	BK.N.ABUT.	31412.122	19.285	609.487	609.487

NOTE: OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.12	℄ BRG.	31362.725	12.632	610.479	610.479
	a	31372.691	12.590	610.231	610.231
	b	31382.657	12.574	609.994	610.000
	c	31392.623	12.585	609.767	609.773
	d	31402.588	12.624	609.551	609.551
	℄ BRG.	31413.311	12.696	609.331	609.331
	BK.N.ABUT.	31416.464	12.723	609.269	609.269
BEAM S25.11	℄ BRG.	31366.965	6.877	610.242	610.242
	a	31376.929	6.834	609.998	609.998
	b	31386.912	6.817	609.764	609.771
	c	31396.896	6.828	609.542	609.548
	d	31406.879	6.867	609.330	609.330
	℄ BRG.	31417.641	6.139	609.113	609.113
	BK.N.ABUT.	31420.822	6.166	609.052	609.052
BEAM S25.10	℄ BRG.	31368.911	3.033	610.132	610.132
	a	31378.902	2.991	609.890	609.890
	b	31388.894	2.977	609.658	609.665
	c	31398.886	2.990	609.436	609.444
	d	31408.878	3.030	609.228	609.229
	℄ BRG.	31419.690	3.149	609.013	609.013
	BK.N.ABUT.	31422.849	3.132	608.955	608.955

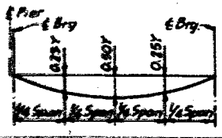
INDICATES STA. 314+22.845 (TYP.)

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
℄ PROP. SEB LANES	℄ BRG.	31370.873	0.000	610.023	610.023
	a	31380.873	0.000	609.784	609.784
	b	31390.873	0.000	609.554	609.561
	c	31400.873	0.000	609.335	609.341
	d	31410.873	0.000	609.127	609.127
	℄ BRG.	31421.750	0.000	608.911	608.911
	BK.N.ABUT.	31424.937	0.000	608.850	608.850
BEAM S25.9	℄ BRG.	31374.441	-5.499	609.827	609.827
	a	31384.456	-5.536	609.590	609.598
	b	31394.471	-5.545	609.364	609.377
	c	31404.486	-5.527	609.148	609.162
	d	31414.501	-5.482	608.944	608.952
	℄ BRG.	31425.363	-5.402	608.734	608.734
	BK.N.ABUT.	31428.537	-5.373	608.675	608.675
BEAM S25.8	℄ BRG.	31379.997	-14.023	609.524	609.524
	a	31390.036	-14.055	609.292	609.300
	b	31400.074	-14.059	609.071	609.085
	c	31410.113	-14.036	608.861	608.875
	d	31420.151	-13.986	608.662	608.670
	℄ BRG.	31431.072	-13.900	608.458	608.458
	BK.N.ABUT.	31434.256	-13.869	608.401	608.401

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.7	℄ BRG.	31385.580	-22.538	609.224	609.224
	a	31395.641	-22.565	608.997	609.006
	b	31405.703	-22.564	608.782	608.795
	c	31415.765	-22.536	608.577	608.591
	d	31425.827	-22.481	608.384	608.392
	℄ BRG.	31436.808	-22.389	608.185	608.185
	BK.N.ABUT.	31440.001	-22.356	608.130	608.130
BEAM S25.6	℄ BRG.	31387.680	-25.729	609.130	609.130
	a	31397.750	-25.750	608.836	608.845
	b	31407.821	-25.744	608.631	608.641
	c	31417.892	-25.710	608.509	608.519
	d	31427.962	-25.649	608.309	608.317
	℄ BRG.	31438.952	-25.550	608.041	608.041
	BK.N.ABUT.	31442.148	-25.516	608.040	608.040
BEAM S25.5	℄ BRG.	31391.413	-31.385	609.081	609.081
	a	31401.493	-31.746	608.843	608.851
	b	31411.575	-32.079	608.639	608.649
	c	31421.659	-32.386	608.346	608.356
	d	31431.744	-32.664	608.069	608.079
	℄ BRG.	31444.000	-32.966	607.709	607.709
	BK.N.ABUT.	31447.280	-33.040	607.619	607.619

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.4	℄ BRG.	31395.157	-37.037	609.064	609.064
	a	31405.236	-37.721	608.757	608.765
	b	31415.319	-38.377	608.442	608.452
	c	31425.406	-39.007	608.117	608.128
	d	31435.496	-39.608	607.785	607.794
	℄ BRG.	31449.069	-40.374	607.323	607.323
	BK.N.ABUT.	31452.433	-40.556	607.207	607.207
BEAM S25.3	℄ BRG.	31398.913	-42.685	608.832	608.832
	a	31408.983	-43.675	608.515	608.523
	b	31419.057	-44.638	608.189	608.202
	c	31429.138	-45.573	607.854	607.868
	d	31439.223	-46.482	607.510	607.521
	℄ BRG.	31454.158	-47.776	606.985	606.985
	BK.N.ABUT.	31457.607	-48.066	606.861	606.861
BEAM S25.2	℄ BRG.	31402.681	-48.329	608.599	608.599
	a	31412.733	-49.609	608.272	608.279
	b	31422.792	-50.862	607.936	607.948
	c	31432.858	-52.087	607.590	607.605
	d	31442.931	-53.286	607.236	607.247
	℄ BRG.	31459.269	-55.170	606.643	606.643
	BK.N.ABUT.	31462.803	-55.568	606.512	606.512

LOCATION		STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BEAM S25.1	℄ BRG.	31408.887	-50.270	608.266	608.266
	a	31418.134	-51.041	607.998	607.998
	b	31428.265	-51.709	607.696	607.622
	c	31438.489	-52.301	607.388	607.383
	d	31448.598	-52.798	606.917	606.917
	℄ BRG.	31462.593	-53.384	606.461	606.461
	BK.N.ABUT.	31466.186	-53.517	606.268	606.268



LOCATION	0.25Y	0.50Y
BEAMS S25.1 THRU S25.3, S25.7 THRU S25.9	1/8"	3/16"
BEAMS S25.4 THRU S25.6	3/8"	1/8"
BEAMS S25.10 THRU S25.15	0"	1/8"

DEAD LOAD DEFLECTION DIAGRAM
(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN ANY FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

NOTES:

SEE SHEET 9 FOR NOTES & FILLET HEIGHT DETAIL.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SPAN 25

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

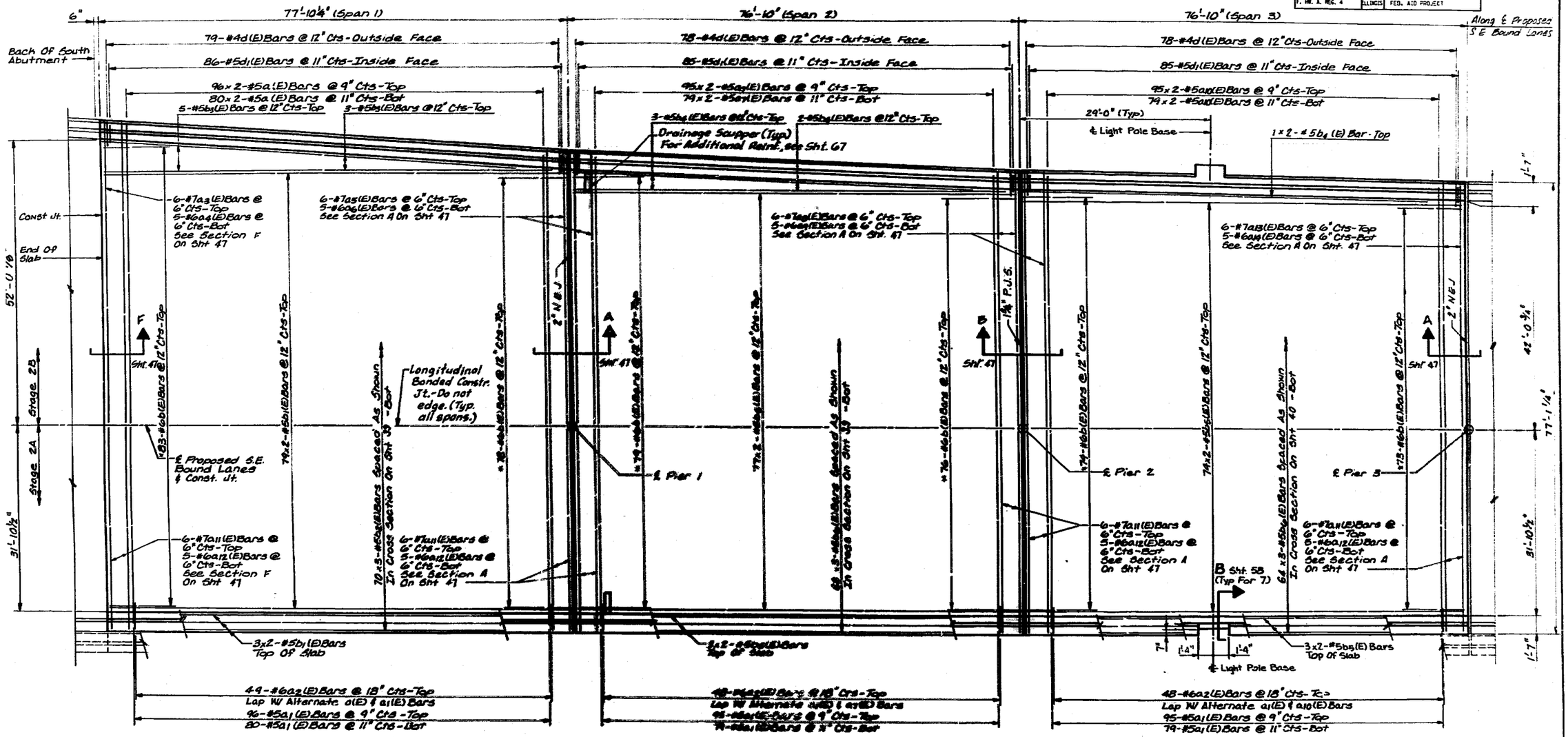
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05092-28, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 3707H404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	204
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 29 of 74 SHEETS



PLAN

* Alternate with #5 "b" (E) Longitudinal Top Bars.

NOTES:

1. SEE SHEETS 47, 48 & 49 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIAL.
2. BARS SCHEDULED THUS 20#3-@5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. SEE SHEET 49 FOR FILLET REINFORCING.
5. MINIMUM LAP SPLICE LENGTHS FOR: #5 BAR - 1'-9"
   #6 BAR - 2'-6"
   #7 BAR - 3'-0"
   #8 BAR - 3'-6"
6. FOR BRIDGE SCUPPER DETAIL SEE SHEETS 66 & 67.
7. CUT BARS TO CLEAR DRAINAGE SCUPPERS.
8. BAR SPLICERS WILL BE USED ACROSS LONGITUDINAL CONSTRUCTION JOINT. SIZE AND SPACING TO MATCH TRANSVERSE SLAB BARS. SEE SHEET 62 FOR BAR SPLICER DETAILS.

SUPERSTRUCTURE PLAN
SHEET 1 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

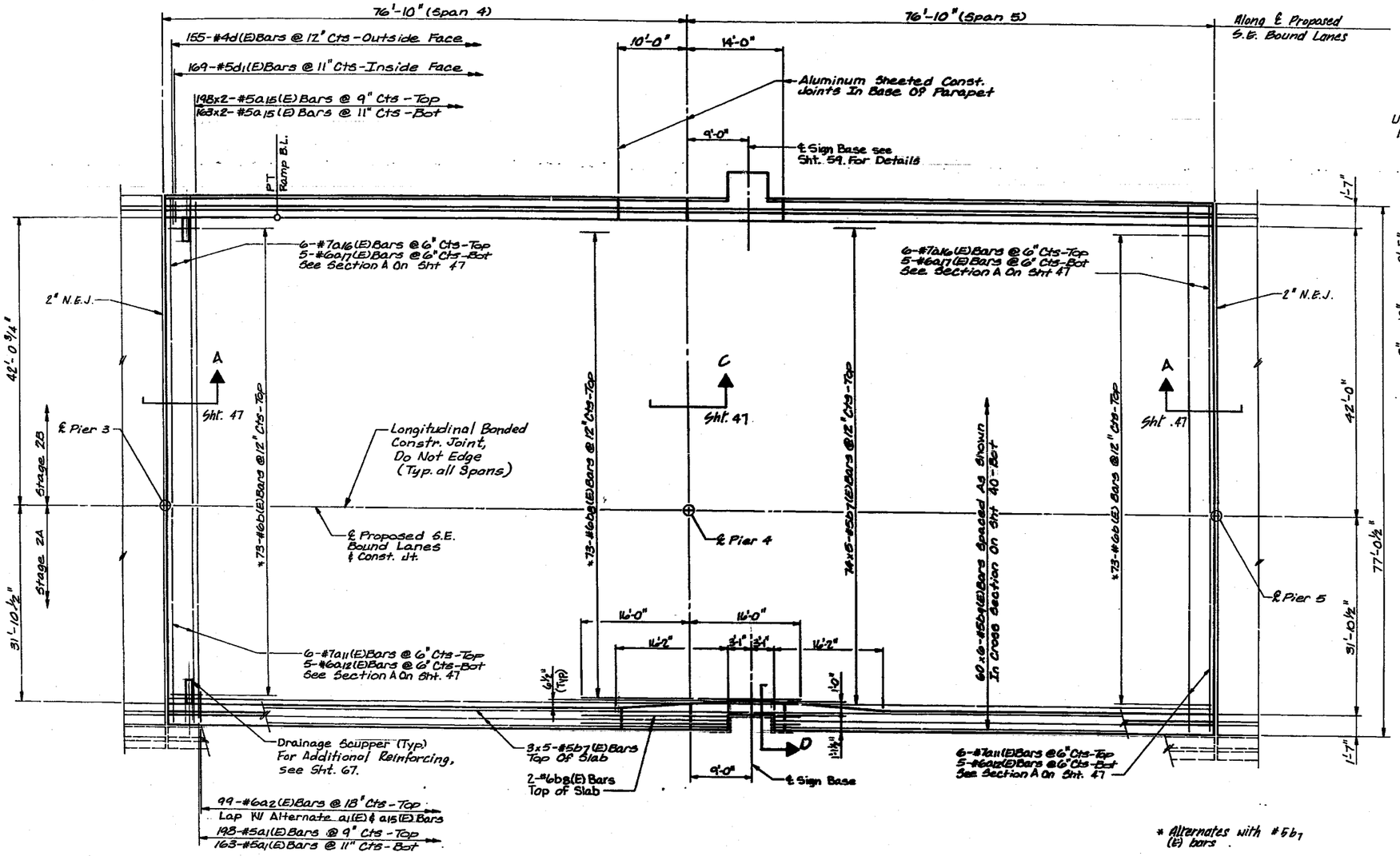
575

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	205
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

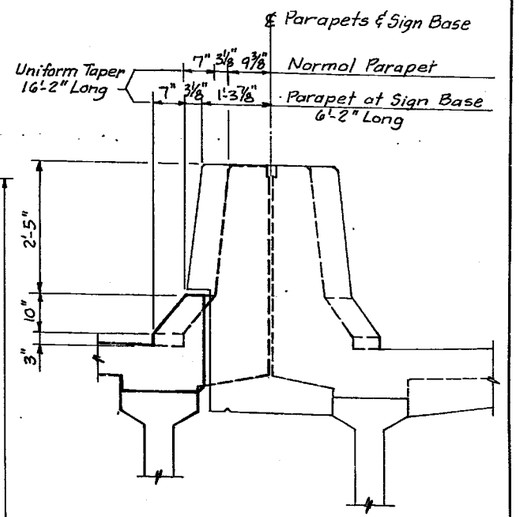
SHEET NO. 30 of 74 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



PLAN

* Alternates with #5b7 (E) bars.



SECTION D

NOTES:
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEET 40

STANLEY CONSULTANTS

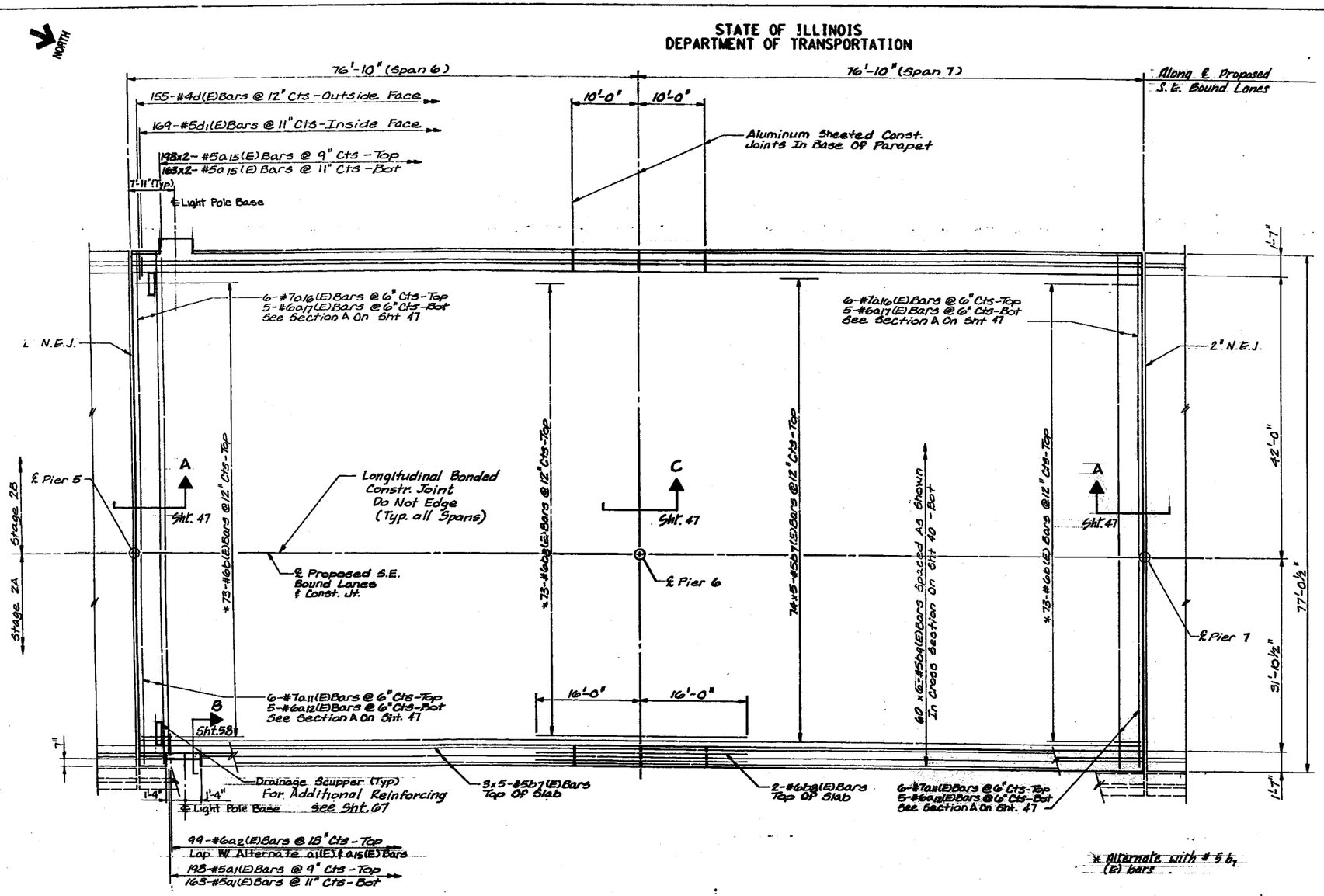
SUPERSTRUCTURE PLAN
SHEET 2 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	206
F. HR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 31 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



PLAN

* Alternate with #5 b7 (E) bars

NOTES:
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEET 40

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 3 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

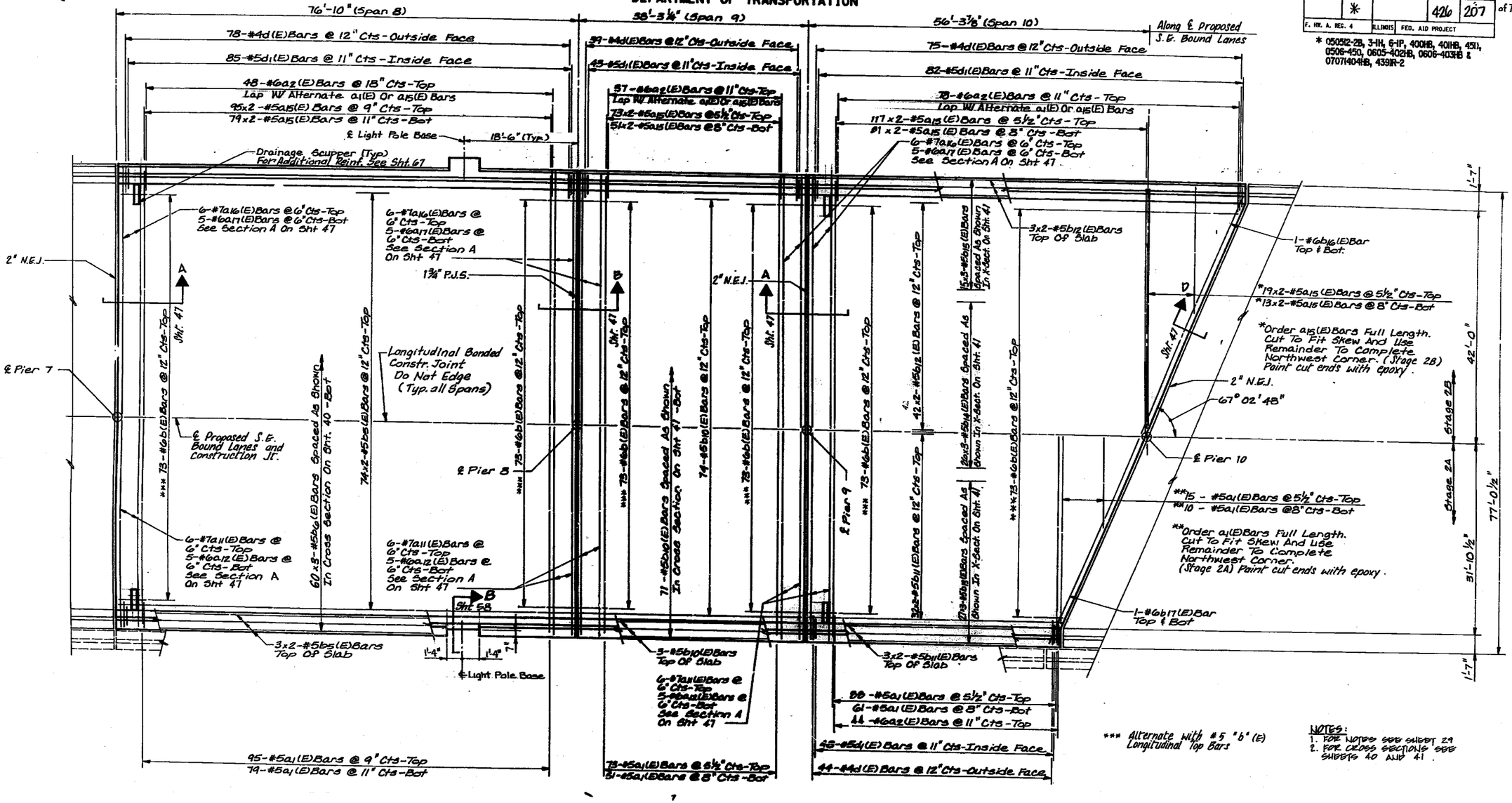
NORTH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	207
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 32 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



*** Alternate with #5 "b" (E) Longitudinal Top Bars

NOTES:
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTIONS SEE SHEETS 40 AND 41.

PLAN

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

SUPERSTRUCTURE PLAN
SHEET 4 OF 10

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	208
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 33 OF 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

NORTH

57'-5¼" (Span 11)

41'-9⅝" (Span 13)

Along ℄ Proposed S.E. Bound Lanes

*25x2-#5a18(E) Bars @ 9" Cts-Top
*21x2-#5a18(E) Bars @ 11" Cts-Bot

*Order a18(E) Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner Of Span 11. Point cut ends with epoxy.

54-#4d(E) Bars @ 12" Cts-Outside Face
64-#5d1(E) Bars @ 11" Cts-Inside Face
40-#6a2(E) Bars @ 18" Cts-Top
Lap W/ Alternate a18(E) Bars
53x2-#5a18(E) Bars @ 9" Cts-Top
44x2-#5a18(E) Bars @ 11" Cts-Bot

23-#4d(E) bars @ 12" Cts.
25-#5d1(E) bars @ 11" Cts.
23-#6a2(E) bars @ 11" Cts.
Lap W/ Alternate a18(E) Bars
44x2-#5a18(E) bars @ 5½" Cts-Top
32x2-#5a18(E) bars @ 8" Cts-Bot

***Order a18(E) Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner Of Span 13. (Stage 2B) Paint cut ends With Epoxy.

1¾" P.T.S.
5x2-#5bz4(E) Bars Top Of Slab
℄ Light Pole Base
1-#6bz7(E) Bar Top & Bot
1-#6bz1(E) Bar Top & Bot
1-#6bz0(E) bar Top and Bot.
1-#6bz2(E) bar Top and Bot.
1-#6bz0(E) Bar Top & Bot
11x3-#5bz4(E) Bars Spaced As Shown In Cross Section On Sht. 41 -Bot
20x2-#5a18(E) Bars @5½" Cts -Top
44x2-#5a18(E) Bars @8" Cts -Bot
18x3-#5bz4(E) Bars Spaced As Shown In X-Sect. On Sht. 41 -Bot
11x3-#5bz4(E) Bars Spaced As Shown In Cross Section On Sht. 41 -Bot
15-#5a1(E) Bars @5½" Cts -Top
11-#5a1(E) Bars @ 8" Cts -Bot
℄ Light Pole Base
3x2-#5bz8(E) Bars Top Of Slab
3x2-#5bz5(E) Bars Top Of Slab

Sht. 47 (D)
Sht. 47 (E)
Sht. 47 (H)
Sht. 47 (A)
Sht. 47 (B)

6-#7a16(E) Bars @ 6" Cts.- Top
5-#6d17(E) Bars @ 6" Cts.- Bot.
See Section H on Sht. 47
4" N.E.J.
℄ Pier 13
℄ Proposed S.E. Bound Lanes and Const. Jt.
6-#7a11(E) Bars @ 6" Cts. - Top
5-#6a11(E) Bars @ 6" Cts. - Bot.
See Section A On Sheet 47
2" N.E.J.

73-#6b(E) bars @ 12" Cts-Top Alternate with Longitudinal Top Bars (TYP.)
74x2-#5bz8(E) Bars @ 12" Cts-Top
75-#6b(E) bars @ 12" Cts. (TYP.)
68x3-#5bz4(E) Bars Spaced As Shown In Cross Section On Sht. 42 -Bot
73-#6b(E) bars @ 12" Cts.-Top
73-#6b(E) bars @ 12" Cts.-Top Alternate with Longitudinal Top Bars (TYP.)
42x2-#5bz6(E) bars @ 12" Cts-Top
32x2-#5bz6(E) bars @ 12" Cts-Top

Stage 2A
Stage 2B
1'-0"
42'-0"
77'-0½"
31'-10½"
1'-7"
3'-6"
10'-1" (Typ.)
7"
14"x14"

℄ Proposed S.E. Bound Lanes
℄ Const. Jt.
67°02'48"
℄ Pier 10
℄ Pier 11
Longitudinal Banded Constr. Joint Do Not Edge (Typ. all Spans)
Drainage Scupper (Typ.) For Additional Reinf., see Sht. 67.

**19 - #5a14(E) Bars @ 9" Cts-Top
**15 - #5a14(E) Bars @ 11" Cts-Bot

**Order a14(E) Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northeast Corner Of Span 11. Point cut ends with epoxy.

59-#5a14(E) Bars @ 9" Cts-Top
49-#5a14(E) Bars @ 11" Cts-Bot
40-#6a2(E) Bars @ 18" Cts-Top
Lap W/ Alternate a14(E) Bars

82-#5a1(E) bars @ 5½" Cts.-Top
50-#5a1(E) bars @ 8" Cts.- Bot.
80-#6a2(E) bars @ 11" Cts.- Top
Lap W/ Alternate a14(E) Bars
63-#5d1(E) bars @ 11" Cts.- Inside Face
57-#4d(E) bars @ 12" Cts.- Outside Face

****Order a14(E) Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner Of Span 13. (Stage 2A) Paint cut ends with Epoxy.

NOTES:
1. FOR NOTES SEE SHEET 29.
2. FOR CROSS SECTION SEE SHEETS 41 AND 42.

PLAN

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 5 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

5-F10

392

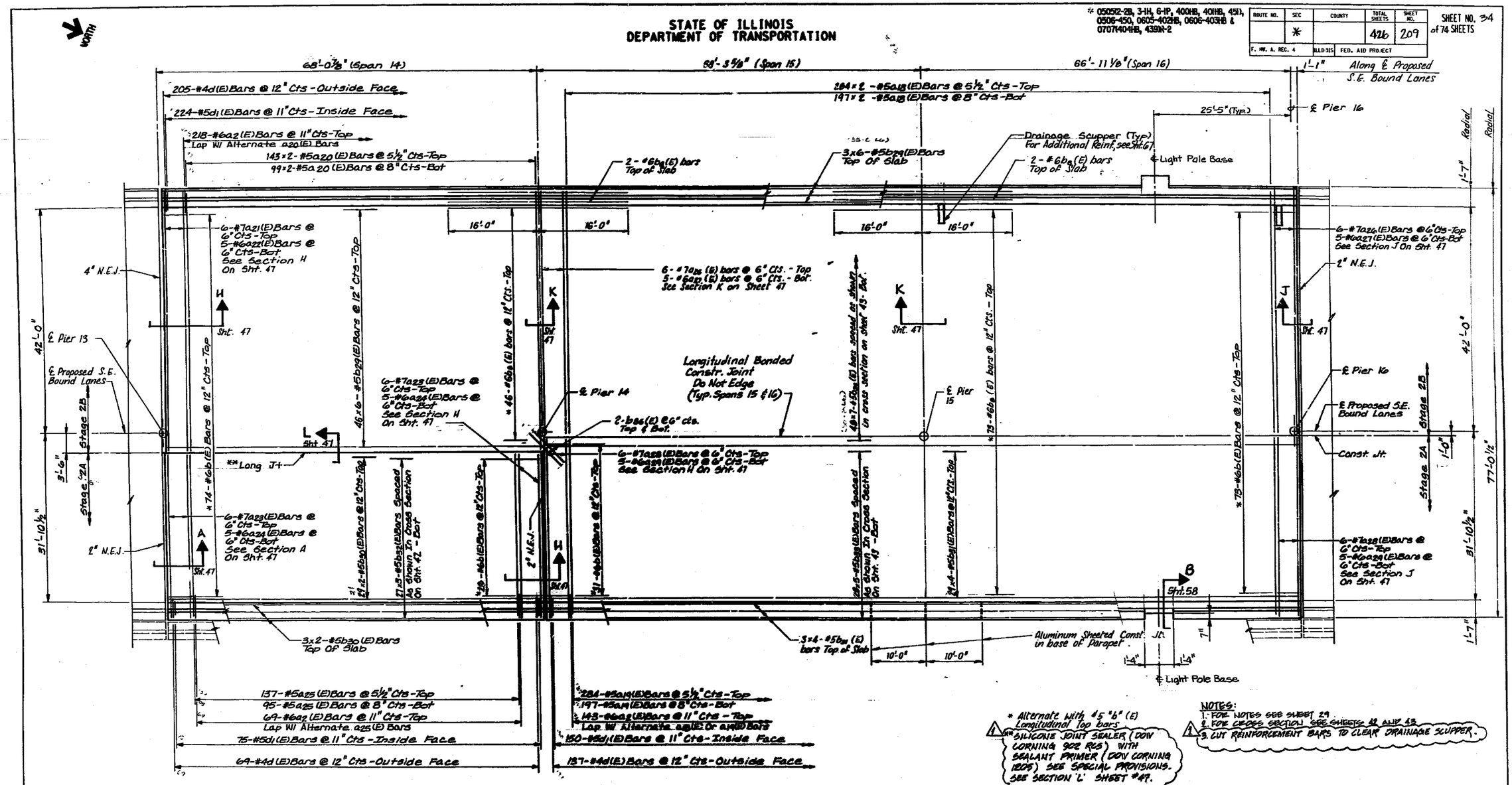
3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707-404HB, 439N-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	209
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 34 of 74 SHEETS



PLAN

* Alternate with #5 "b" (E) Longitudinal Top bars

** SILICONE JOINT SEALER (DOW CORNING 902 RCS) WITH SEALANT PRIMER (DOW CORNING 1205) SEE SPECIAL PROVISIONS. SEE SECTION 'L' SHEET #47.

NOTES:
1. FOR NOTES SEE SHEET 29.
2. FOR CROSS SECTION SEE SHEETS 42 AND 43.
3. CUT REINFORCEMENT BARS TO CLEAR DRAINAGE SCUPPER.

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN

SHEET 6 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

AS REVISED 9-22-92 PMP

583

3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707T404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	210
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 35 of 74 SHEETS

NORTH

1'-1" | 71'-8 3/4" (Span 17) | 56'-0 5/8" (Span 18) | 70'-4 3/4" (Span 19)

73-#4d(E)Bars @ 12" Cts-Outside Face
79-#5d1(E)Bars @ 11" Cts-Inside Face
72-#6a2(E)Bars @ 11" Cts-Top
Lap W/ Alternate a30(E) Bars
145 x2-#5a30(E)Bars @ 5½" Cts-Top
101 x2-#5a30(E)Bars @ 8" Cts-Bot
3x2-#5b36(E)Bars Top Of Slab
1x2-#5b35(E)Bar-Top

55-#4d(E)Bars @ 12" Cts-Outside Face
60-#5d1(E)Bars @ 11" Cts-Inside Face
56-#6a2(E)Bars @ 11" Cts-Top
Lap W/ Alternate a33(E) Bars
111x2-#5a33(E)Bars @ 5½" Cts-Top
77x2-#5a33(E)Bars @ 8" Cts-Bot
3x2-#5b38(E)Bars Top Of Slab
1x2-#5b37(E) Bar-Top

111x2-#5a35(E)Bars @ 7" Cts-Top
79x2-#5a35(E)Bars @ 10" Cts-Bot
24'-0" (Typ.)
Along ℄ Proposed S.E. Bound Lanes
1x2-#5b45(E)Bar-Top
℄ Light Pole Base
Drainage Scupper (Typ) For Additional Reinf., See Sht. 67

Radial | Radial

6-#7a26(E)Bars @ 6" Cts-Top
5-#6a27(E)Bars @ 6" Cts-Bot
See Section J On Sht. 47

6-#7a41(E)Bars @ 6" Cts-Top
5-#6a45(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

6-#7a35(E)Bars @ 6" Cts-Top
5-#6a37(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

6-#7a35(E)Bars @ 6" Cts-Top
5-#6a39(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

6-#7a40(E)Bars @ 6" Cts-Top
5-#6a43(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

2" N.E.J.

42'-0"

℄ Pier 16

Sht. 47 J

60x3-#5b40(E)Bars Spaced As shown In Cross Section On Sht. 45 - Bot

46x2-#5b36(E)Bars @ 12" Cts-Top

6-#7a31(E)Bars @ 6" Cts-Top
5-#6a33(E)Bars @ 6" Cts-Bot
See Section B On Sht. 47

*45-#6b(E)Bars @ 12" Cts-Top

H (Sim)

℄ Pier 17

*46-#6b(E)Bars @ 12" Cts-Top

Sht. 47

1¾" P.J.S.

L Sht. 47

** Long Jt

Const. Jt.

Stage 2A | Stage 2B

1'-0"

31'-10½"

℄ Proposed S.E. Bound Lanes

*73-#6b(E)Bars @ 12" Cts-Top

6-#7a28(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section J On Sht. 47

24x4-#5b39(E)Bars @ 12" Cts-Top

2-b36(E) @ 6" cts. Top & Bot.

*28-#6b(E)Bars @ 12" Cts-Top

6'-3"

8-#7a28(E)bars @ 6" Cts.-Top
5-#6a29(E)bars @ 6" Cts.-Bot.
See Section K on Sheet 47

K Sht. 47

16'-0" | 16'-0"

41x3-#5b43(E)Bars Spaced As shown In Cross Section On Sht. 44 - Bot

47x2-#5b38(E)Bars @ 12" Cts-Top

*47-#6b(E)Bars @ 12" Cts-Top

Sht. 47 A

℄ Pier 18

*75-#6b(E)Bars @ 12" Cts-Top

H

Longitudinal Bonded Constr. Joint Do Not Edge (Typ. Spans 17 & 19)

45x2-#5b43(E)Bars @ 12" Cts-Top

*76-#6b(E)Bars @ 12" Cts-Top

Sht. 47 A

2" N.E.J.

℄ Pier 19

℄ Proposed S.E. Bound Lanes

Const. Jt.

44'-1 1/8"

79'-1 3/8"

6-#7a28(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

6-#7a28(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section H On Sht. 47

6-#7a25(E)Bars @ 6" Cts-Top
5-#6a24(E)Bars @ 6" Cts-Bot
See Section H On Sht. 47

66x3-#5b44(E)Bars Spaced As shown In Cross Section On Sht. 44 - Bot

31x2-#5b45(E)Bars @ 12" Cts-Top

B Sht. 58

7"

1'-4" | 1'-4"

3x2-#5b45(E)Bars Top Of Slab

℄ Light Pole Base

3x4-#5b39(E)Bars Top Of Slab

10'-0" | 10'-0"

2-#6b(E) bars Top of Slab

Aluminum Sheeted Const. Jt. in base of Parapet.

145-#5a19(E)Bars @ 5½" Cts-Top
101-#5a19(E)Bars @ 8" Cts-Bot
72-#6a2(E)Bars @ 11" Cts-Top
Lap W/ Alternate a19(E) Bars

117-#5a35(E)Bars @ 5½" Cts-Top
81-#5a35(E)Bars @ 8" Cts-Bot
59-#6a2(E)Bars @ 11" Cts-Top
Lap W/ Alternate a35(E) Bars

111-#5a19(E)Bars @ 7" Cts-Top
79-#6a19(E)Bars @ 10" Cts-Bot
56-#6a2(E)Bars @ 14" Cts-Top
Lap W/ Alternate a19(E) Or a35(E) Bars

143-#5d1(E)Bars @ 11" Cts-Inside Face
131-#4d(E)Bars @ 12" Cts-Outside Face

78-#5d1(E)Bars @ 11" Cts-Inside Face
71-#4d(E)Bars @ 12" Cts-Outside Face

NOTES:
1. FOR NOTES SEE SHEET 29.
2. FOR CROSS SECTION SEE SHEETS 43 AND 44.
3. CUT REINFORCEMENT BARS TO CLEAR DRAINAGE SCUPPER. (1)

* Alternate with #5 "b" (E) Longitudinal Top bars.

** SIL-CONE JOINT SEALER (DOW CORNING 902 RCS) WITH SEALANT PRIMER (DOW CORNING 1205) SEE SPECIAL PROVISION. SEE SECTION L- SHEET 49.

PLAN

SUPERSTRUCTURE PLAN
SHEET 7 OF 10

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

(1) REVISED 9-22-92 PMP

584

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	211
F. HW. A. REC. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 316 of 74 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

NORTH

55'-6 1/4" (Span 20) | 59'-4 9/16" (Span 21) | 52'-2 7/8" (Span 22)

Along ℄ Proposed S.E. Bound Lanes

116-#4d(E)Bars @ 12" Cts-Outside Face
126-#5d1(E)Bars @ 11" Cts-Inside Face
120-#6a2(E)Bars @ 11" Cts-Top
Lap W/ Alternate a19(E), a44(E) Or a45(E) Bars
120x2-#5a44(E)Bars @ 5½" Cts-Top
83x2-#5a44(E)Bars @ 8" Cts-Bot
120x2-#5a45(E)Bars @ 5½" Cts-Top
83x2-#5a45(E)Bars @ 8" Cts-Bot

53-#4d(E)Bars @ 12" Cts-Outside Face
58-#5d1(E)Bars @ 11" Cts-Inside Face
41-#6a2(E)Bars @ 14" Cts-Top
Lap W/ Alternate a19(E) Or a44(E) Bars
80x2-#5a46(E)Bars @ 7" Cts-Top
57x2-#5a46(E)Bars @ 10" Cts-Bot

Aluminum Sheeted Const. Jt. in base of Parapet
1x2-#5b47(E) Bar-Top
1-#5b48(E) Bar-Top
1-#5b52(E) Bar-Top
1-#5b53(E) Bar-Top
Drainage Scupper (Typ) For Additional Reinf., see Sht. 67
Radial
1'-7"

6-#7a40(E)Bars @ 6" Cts-Top
5-#6a41(E)Bars @ 6" Cts-Top
See Section A On Sht. 41
6-#7a41(E)Bars @ 6" Cts-Top
5-#6a48(E)Bars @ 6" Cts-Bot
See Section A On Sht. 41
6-#7a49(E)Bars @ 6" Cts-Top
5-#6a50(E)Bars @ 6" Cts-Bot
See Section A On Sht. 41

2" N.E.J.
A
Sht. 47
C
Sht. 47
44'-1 1/8"
48'-11 5/8"
℄ Pier 19
℄ Pier 20
℄ Pier 21
℄ Pier 22
℄ Proposed S.E. Bound Lanes
Const Jt
Stage 2A
Stage 2B
1'-0"
84'-0 1/8"
31'-10 1/2"

Longitudinal Bonded Constr. Joint Do Not Edge (Typ. all Spans)

*76-#6b1(E)Bars @ 12" Cts-Top
77x3-#5b46(E)Bars @ 12" Cts-Top
*76-#6b99(E)Bars @ 12" Cts-Top
76x4-#5b50(E)Bars Spaced As Shown In Cross Section On Sht. 46 -Bot
*78-#6b1(E)Bars @ 12" Cts-Top
*79-#6b1(E)Bars @ 12" Cts-Top
80x2-#5b51(E)Bars @ 12" Cts-Top
Spaced As Shown In Cross Section On Sht. 45 -Bot
47x8-#5b54(E)Bars
*81-#6b1(E)Bars @ 12" Cts-Top

6-#7a28(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section A On Sht. 41
6-#7a38(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section A On Sht. 41
6-#7a28(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section A On Sht. 41

12'-0" | 12'-0"
8'-0" | 8'-0"
3x3-#5b46(E)Bars Top Of Slab
2-#6b99(E)bars Top of Slab
3x2-#5b51(E)Bars Top Of Slab

240-#5a19(E)Bars @ 5½" Cts-Top
166-#5a19(E)Bars @ 8" Cts-Bot
80-#5a19(E)Bars @ 7" Cts-Top
97-#5a19(E)Bars @ 10" Cts-Bot

* Alternate with #5 '6" (E) Longitudinal Top Bars.

NOTES:
1. FOR NOTES SEE SHEET 29.
2. FOR CROSS SECTION SEE SHEET 45.

PLAN

STANLEY CONSULTANTS

SUPERSTRUCTURE PLAN
SHEET 8 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	212
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 37 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

NORTH

54'-2⅞" (Span 23) | 89'-2⅛" (Span 24) | Along ℄ Proposed S.E. Bound Lanes

84-#4d(E)Bars @ 12" Cts-Outside Face
92-#5d1(E)Bars @ 11" Cts-Inside Face
70-#6a2(E)Bars @ 14" Cts-Top
Lap W/ Alternate a51(E) Bars
88x2-#5a51(E)Bars @ 7" Cts-Top
62x2-#5a51(E)Bars @ 10" Cts-Bot

88-#4d(E)Bars @ 12" Cts-Outside Face
96-#5d1(E)Bars @ 11" Cts-Inside Face
76-#6a2(E)Bars @ 14" Cts-Top
Lap W/ Alternate a52(E) Bars
91x2-#5a52(E) Bars @ 7" Cts-Top
62x2-#5a52(E) Bars @ 10" Cts-Bot

*Order a51(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner Of Span 23.(Stage 2B) Paint Cut Ends with Epoxy

5'-9" (Typ)

℄ Light Pole Base

*28x2-#5a51(E)Bars @ 7" Cts-Top
*19x2-#5a51(E)Bars @ 10" Cts-Bot

**51x2-#5a52(E)Bars @ 7" Cts-Top
**40x2-#5a52(E)Bars @ 10" Cts-Bot

**Order a52(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner Of Span 24.(Stage 2B) Paint Cut Ends with Epoxy

1x2-#5b55(E)Bar-Top
3x2-#5b56(E)Bar-Top
3x3-#5b57(E)Bars Top Of Slab
1x3-#5b69(E)Bar-Top
3x3-#5b70(E)Bars-Top
4x2-#5b71(E)Bars-Top

Radial
Radial
1'-7"

Drainage Scupper (Typ) For Additional Reinf, see Sht. 67

Sht. 47 A

6-#7a49(E)Bars @ 6" Cts-Top
5-#6a50(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

2" N.E.J.

17x3-#5b66(E)Bars Spaced As Shown In X-Sect On Sht. 45 -Bot
16x2-#5b67(E) Bars @ 12" Cts-Top
10x3-#5b68(E)Bars Spaced As Shown In X-Sect On Sht. 45 -Bot
8x2-#5b69(E) Bars @ 12" Cts-Top

1¾" P.J.E.

Sht. 47 E

31°04'21"

1x2-#6b67(E)Bar Top & Bot

℄ Pier 23

1-#6b68(E)Bar Top & Bot

84-#6b1(E)Bars @ 12" Cts-Top

84-#6b1(E) Bars @ 12" Cts-Top

11-24-#5b72(E)Bars Spaced As Shown In Cross Section On Sht 46 -Bot

89-#6b1(E)Bars @ 12" Cts-Top

Longitudinal Bonded Constr. Joint Do Not Edge (Typ. all Spans)

Sht. 47 D

32°22'02"

1x2-#6b74(E)Bar Top & Bot

℄ Pier 24

℄ Proposed S.E. Bound Lanes

Const Jt

1-#6b68(E)Bar Top & Bot

Stage 2A | Stage 2B

1'-0"

48'-11 5/16"

31'-10½"

92'-8 9/16"

57'-7 7/16"

℄ Pier 22

℄ Proposed S.E. Bound Lanes

6-#7a28(E)Bars @ 6" Cts-Top
5-#6a29(E)Bars @ 6" Cts-Bot
See Section A On Sht. 47

80-#6b1(E)Bars @ 12" Cts-Top Longitudinal Top Bars
Alternate with #5b1(E)Bars

7"

Sht. 58 B

3x2-#5b62(E) Bars-Top Of Slab

℄ Light Pole Base

42-#5d1(E)Bars @ 11" Cts-Inside Face
38-#4d(E)Bars @ 12" Cts-Outside Face
30-#6a2(E)Bars @ 14" Cts-Top
Lap W/ Alternate a19(E) Bars
59-#5a19(E) Bars @ 7" Cts-Top
42-#5a19(E) Bars @ 10" Cts-Bot

***Order a19(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Northwest Corner Of Span 23.(Stage 2A) Paint Cut Ends with Epoxy

3x3-#5b73(E)Bars Top Of Slab

111-#5a19(E)Bars @ 7" Cts-Top
70-#5a19(E)Bars @ 10" Cts-Bot
92-#5d1(E)Bars @ 11" Cts-Inside Face
84-#4d(E)Bars @ 12" Cts-Outside Face
72-#6a2(E)Bars @ 14" Cts-Top
Lap W/ Alternate a19(E) Bars
***17-#5a19(E)Bars @ 7" Cts-Top
***13-#5a19(E)Bars @ 10" Cts-Bot

****34-#5a19(E)Bars @ 7" Cts-Top
****26-#5a19(E)Bars @ 10" Cts-Bot

****Order a19(E)Bars Full Length. Cut To Fit Skew And Use Remainder To Complete Southeast Corner Of Span 24.(Stage 2A) Paint Cut Ends with Epoxy.

NOTES:
1. FOR NOTES SEE SHEET 29.
2. FOR CROSS SECTION SEE SHEET 45 AND 46.

PLAN

STANLEY CONSULTANTS

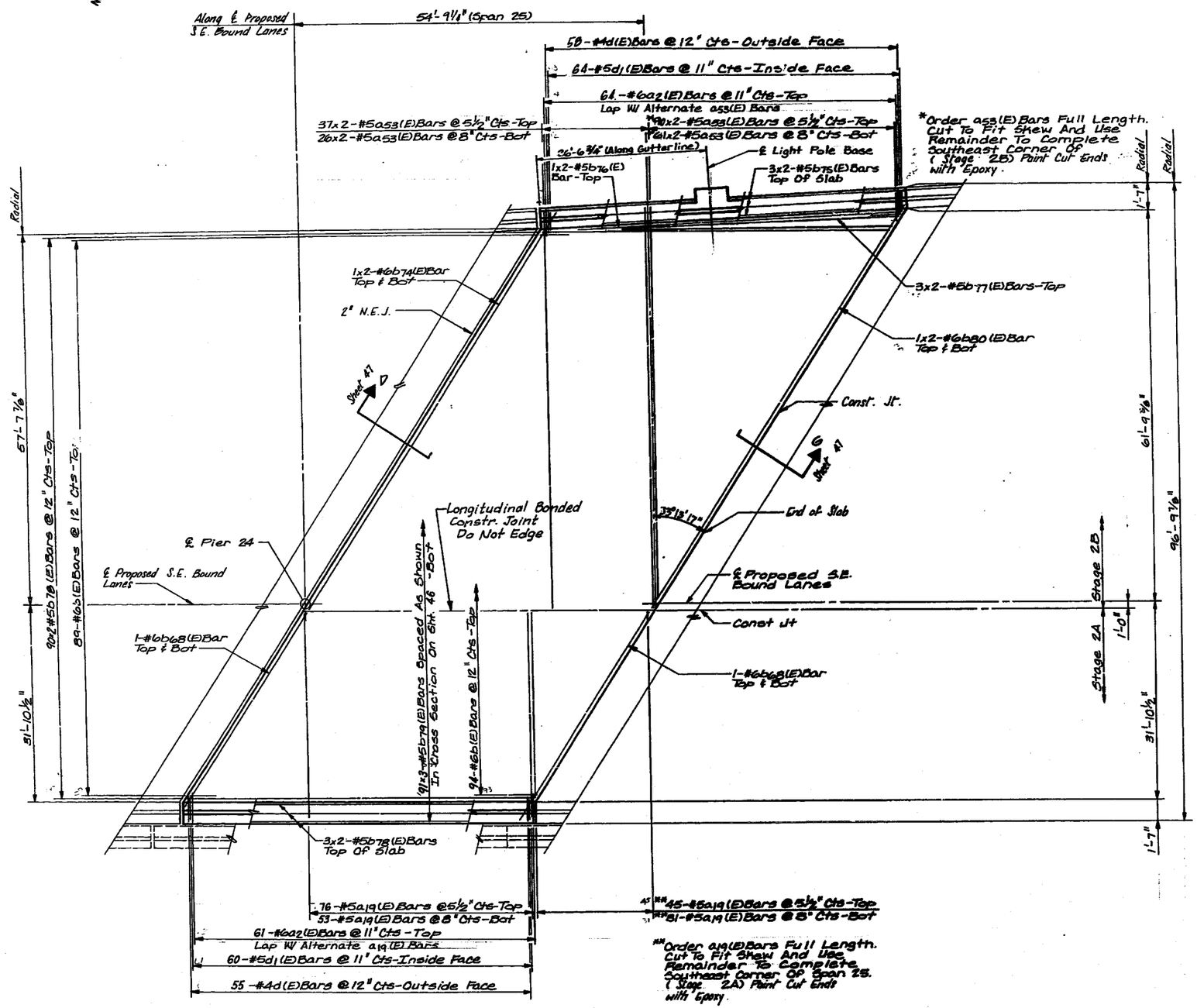
SUPERSTRUCTURE PLAN
SHEET 9 OF 10
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	213
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30 of 74 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

NOTES:
1. FOR NOTES SEE SHEET 29
2. FOR CROSS SECTION SEE SHEET 46

SUPERSTRUCTURE PLAN
SHEET 10 OF 10

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

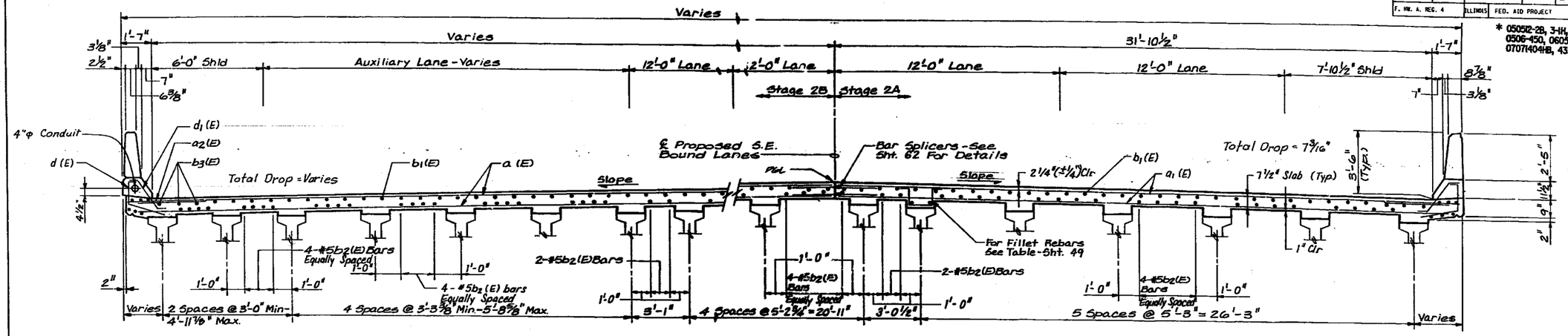
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

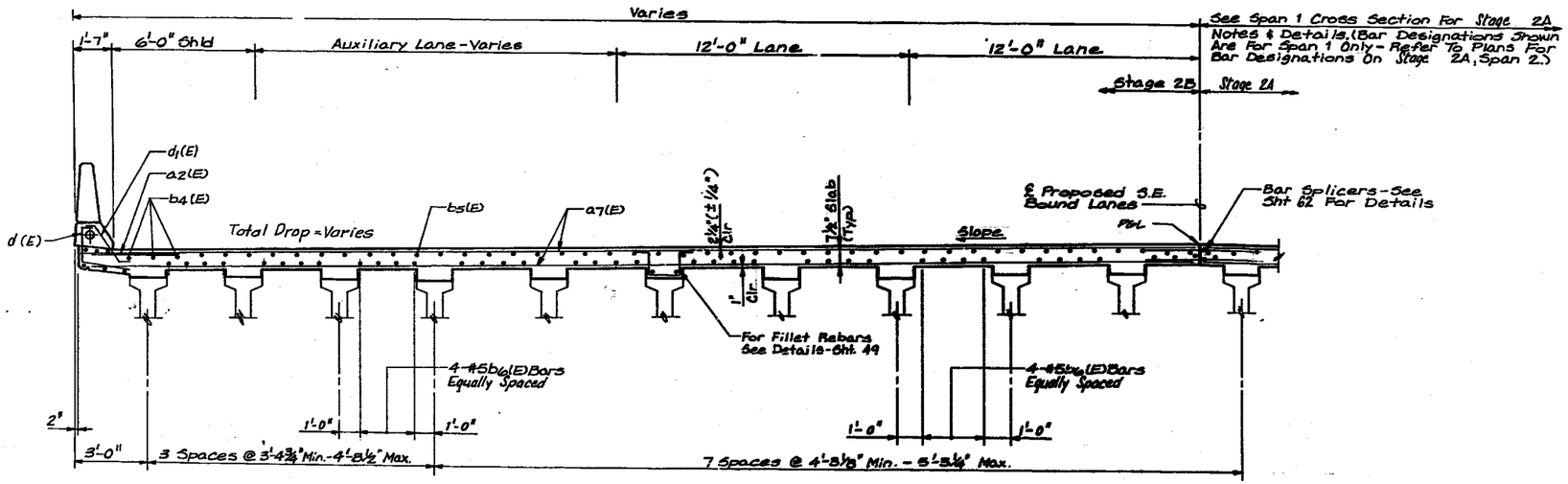
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	214
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 39 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2



CROSS SECTION-SPAN 1
(Looking Up Station)



CROSS SECTION - SPAN 2
(Looking Up Station)

NOTES:
1. SEE SHEETS 47 AND 48 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIALS.
2. BARS INDICATED THUS 20 x 3 - #5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. MINIMUM LAP SPLICE LENGTH FOR #5 LONGITUDINAL BARS = 1'-9".
4. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
5. SEE SHEET 49 FOR FILLET REINFORCING DETAILS.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION
SHEET 1 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49.59

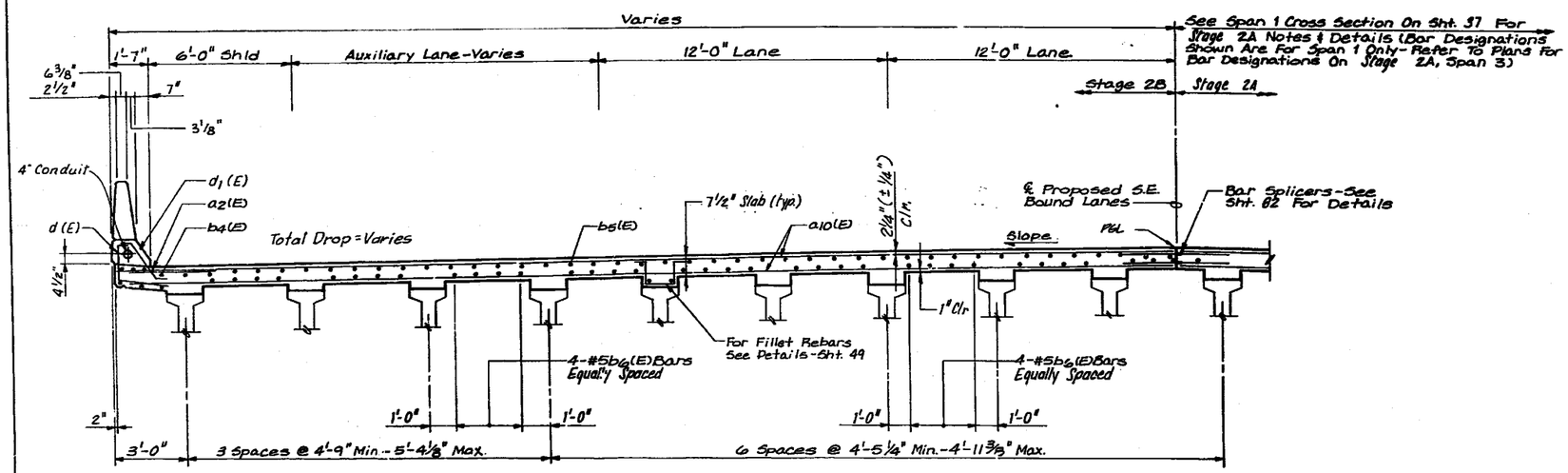
SHT 1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

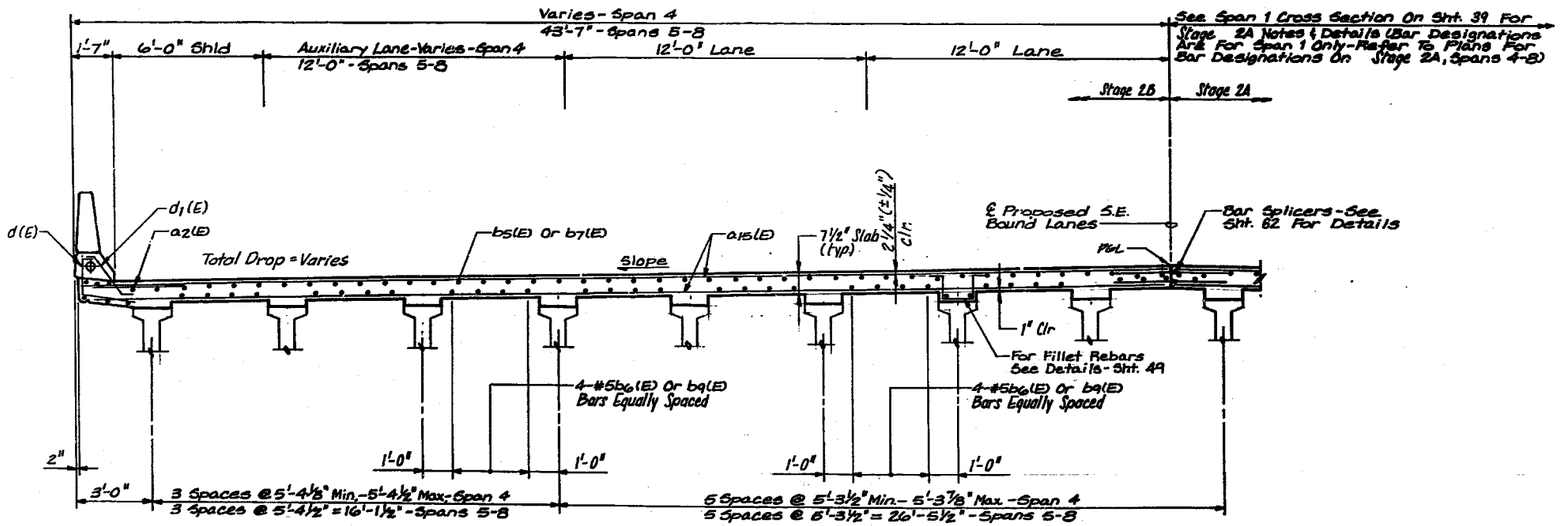
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	215
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 40 of 74 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



CROSS SECTION - SPAN 3
(Looking Up Station)



CROSS SECTION - SPANS 4 THRU 8
(Looking Up Station)

NOTES:
1. FOR NOTES SEE SHEET 39

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 2 OF 8

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

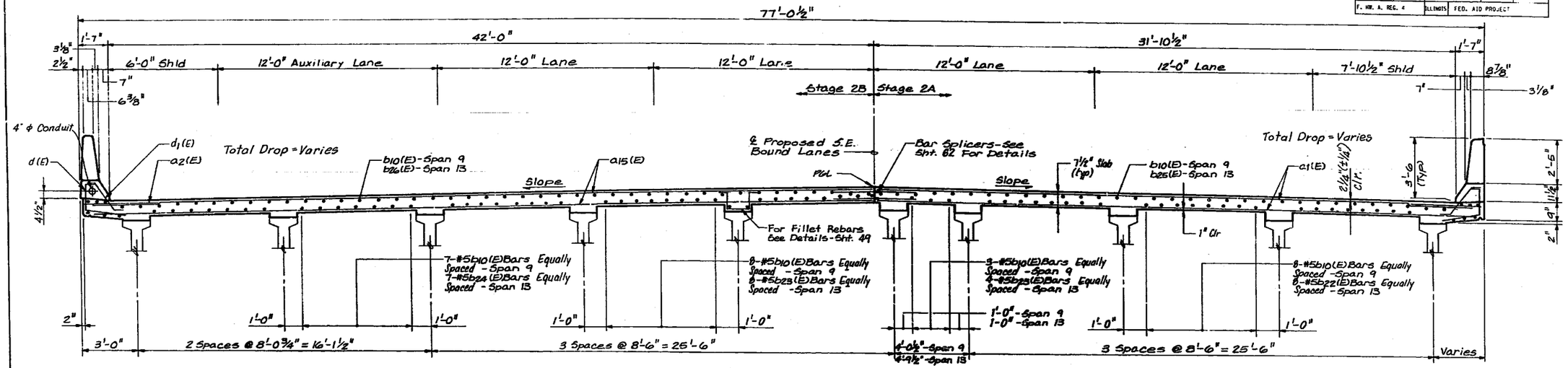
in 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

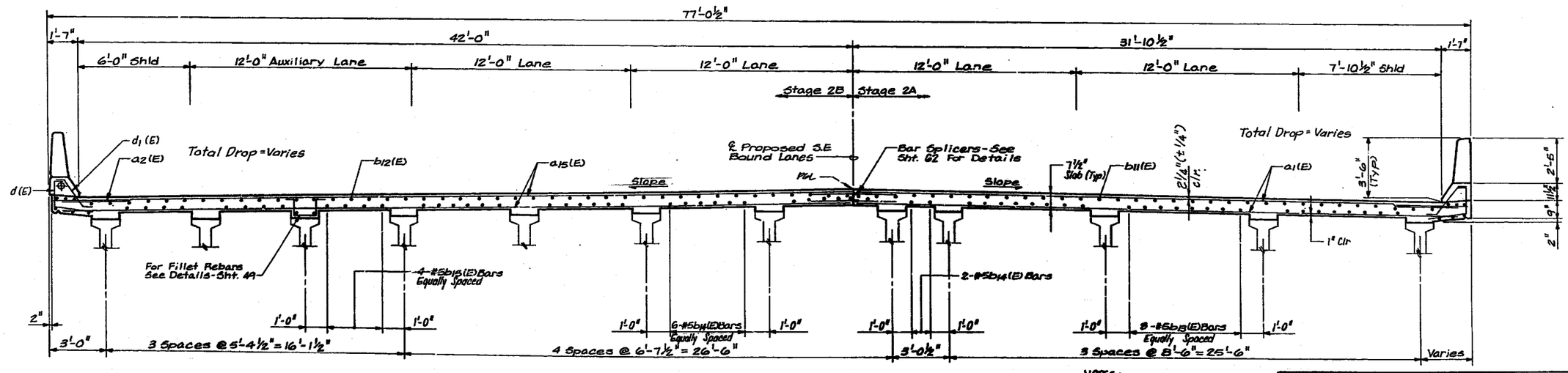
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	216
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 41 of 74 SHEETS



CROSS SECTION-SPAN 9 & SPAN 13
(Looking Up Station)



CROSS SECTION-SPAN 10
(Looking Up Station)

NOTES:
1. FOR NOTES SEE SHEET 39.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 3 OF 8

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

SHT 3

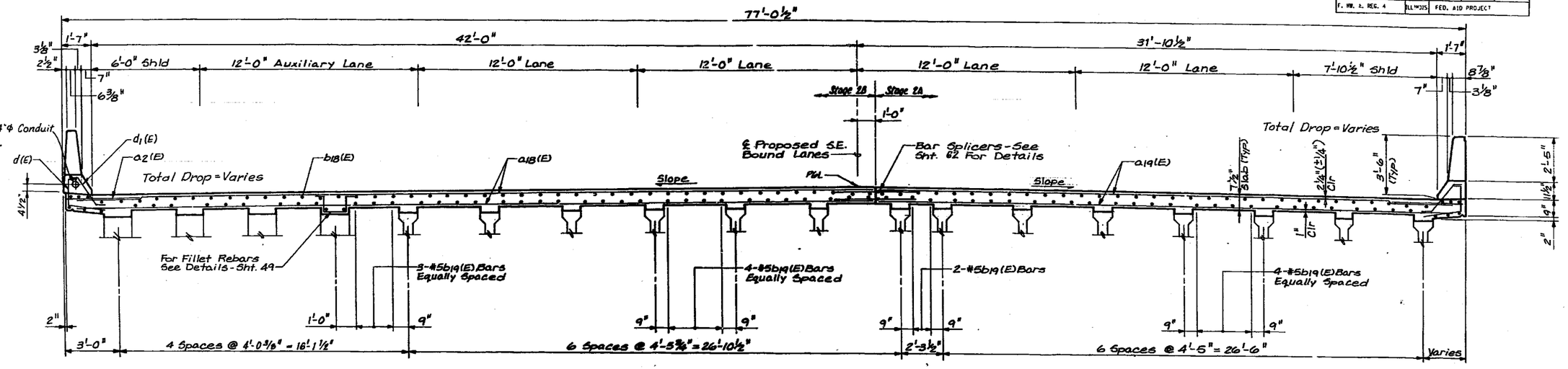
590

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

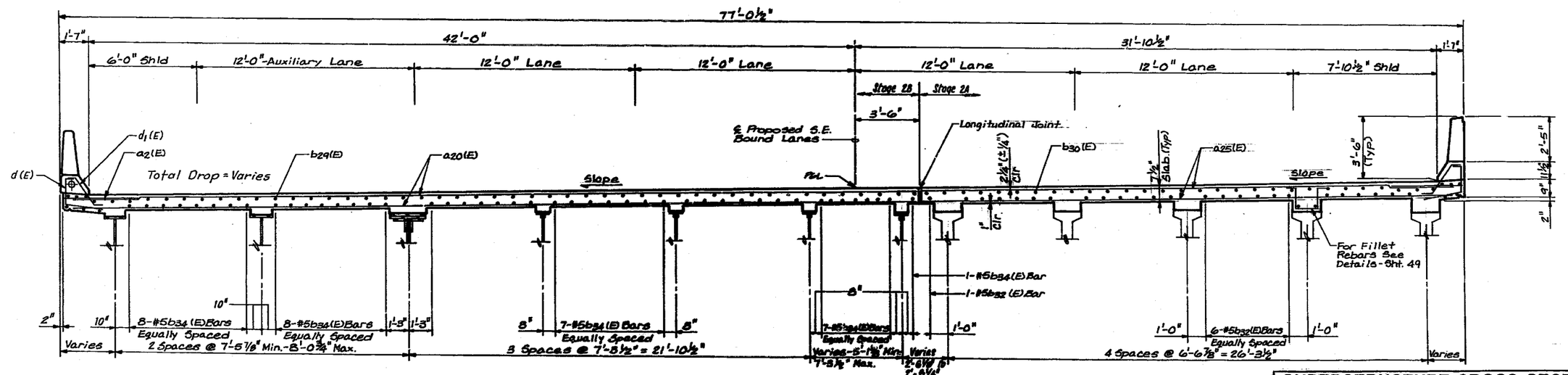
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	217
F. HW. & REG. 4	ILL 315	FED. AID PROJECT		

SHEET NO. 42 of 74 SHEETS



CROSS SECTION - SPAN 11
(Looking Up Station)



CROSS SECTION - SPAN 14
(Looking Up Station)

NOTES:
FOR NOTES SEE SHEET 39.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 4 OF 8

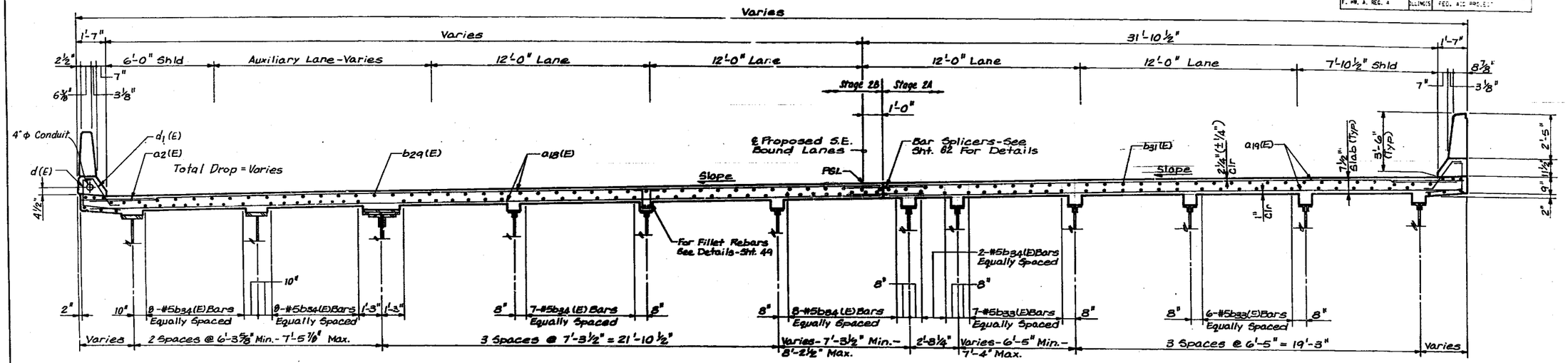
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

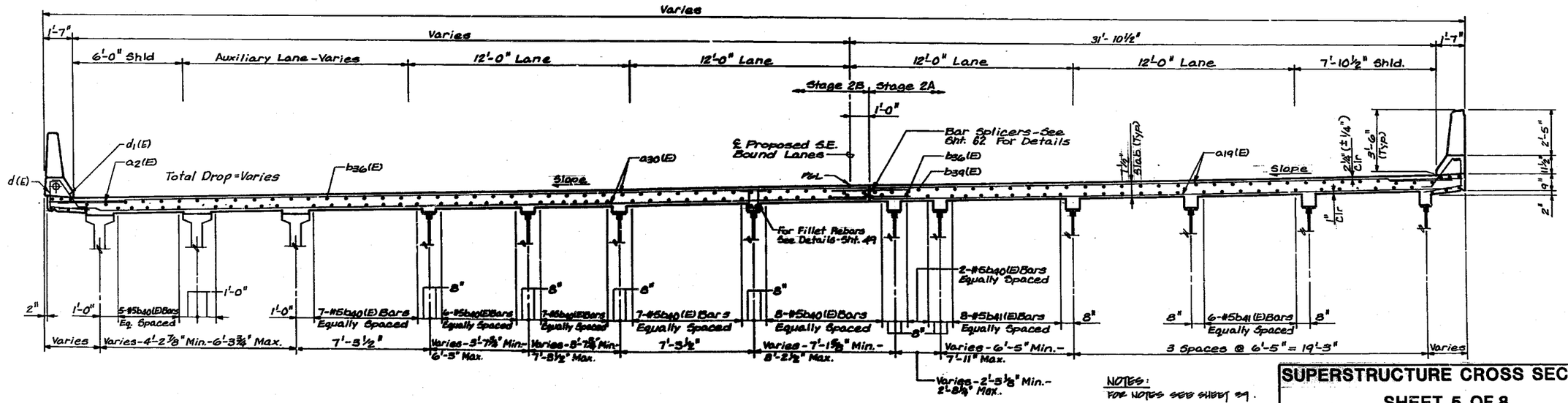
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-150, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	218
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 43 of 74 SHEETS



CROSS SECTION - SPAN 15 & SPAN 16
(Looking Up Station)



CROSS SECTION - SPAN 17
(Looking Up Station)

NOTES:
FOR NOTES SEE SHEET 89.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 5 OF 8

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

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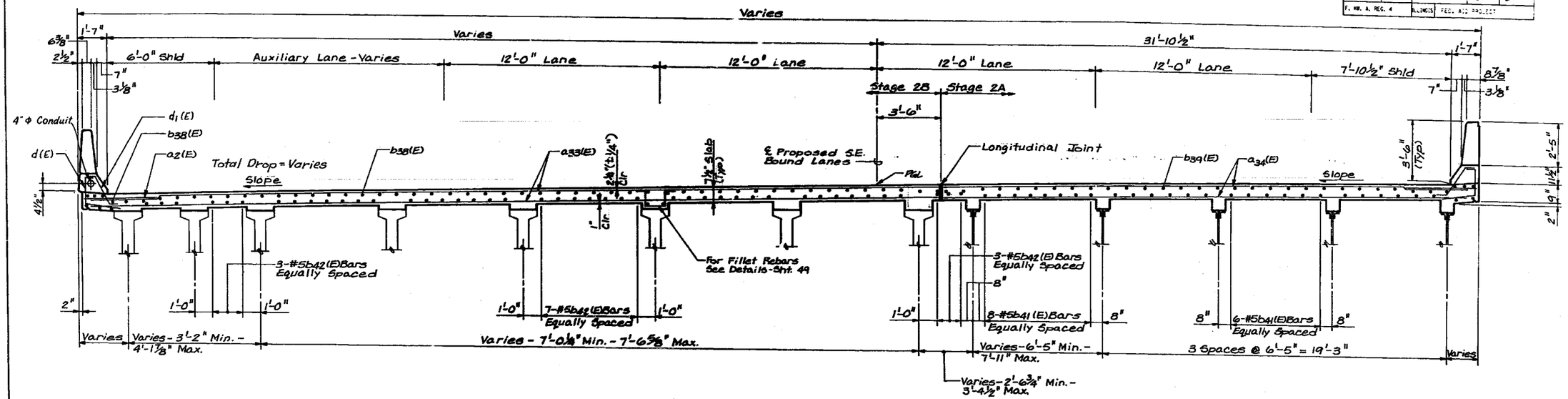
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

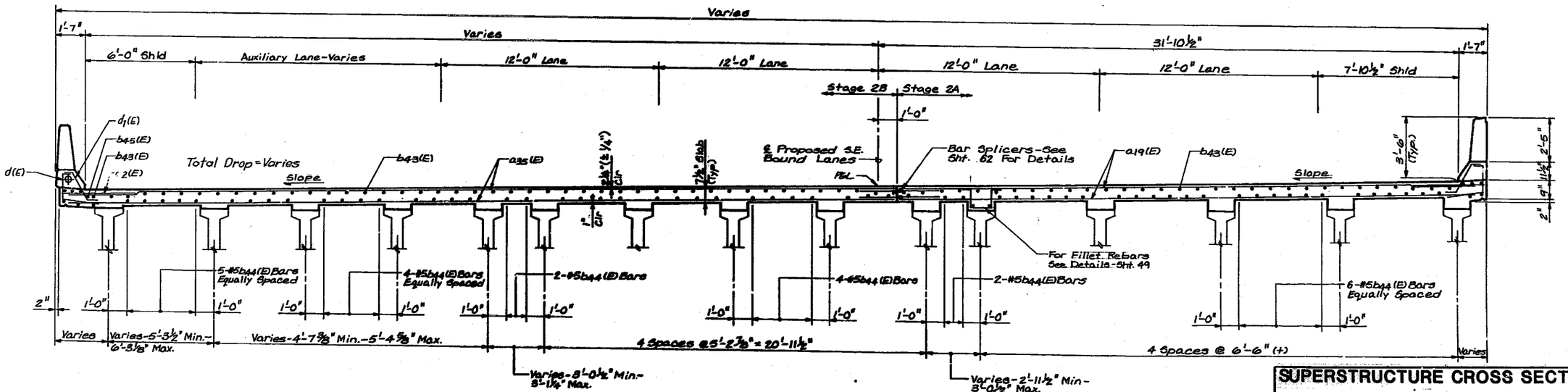
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	219
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 44 OF 74 SHEETS



CROSS SECTION - SPAN 18
(Looking Up Station)



CROSS SECTION - SPAN 19
(Looking Up Station)

NOTE:
For Notes See Sheet 39.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION

SHEET 6 OF 8

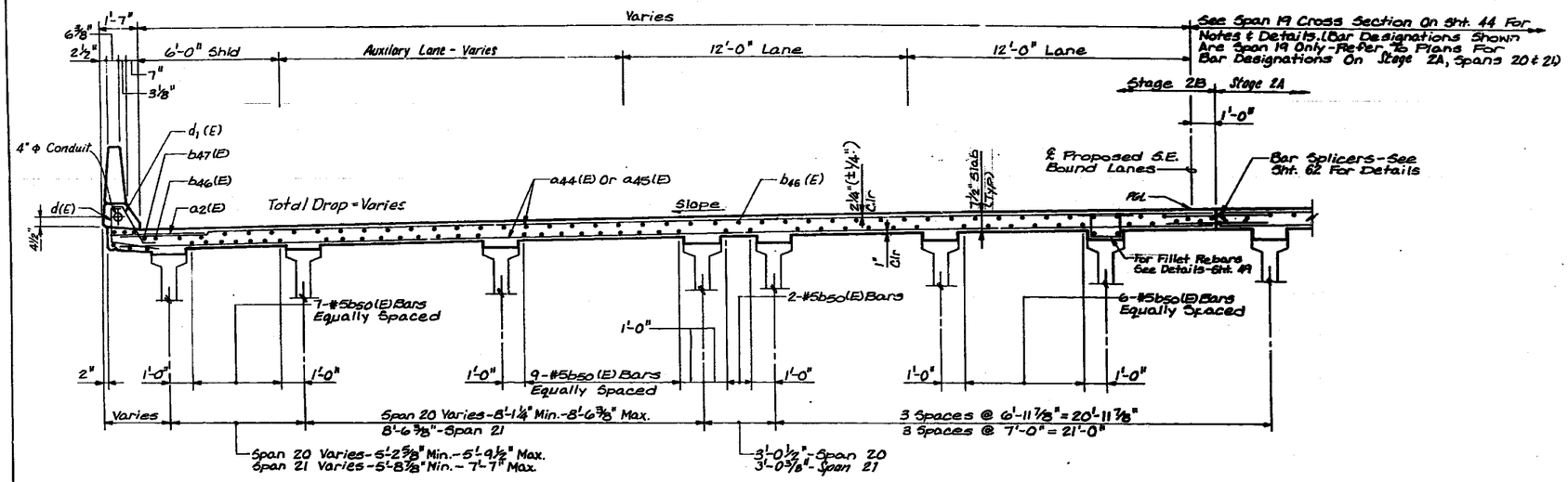
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

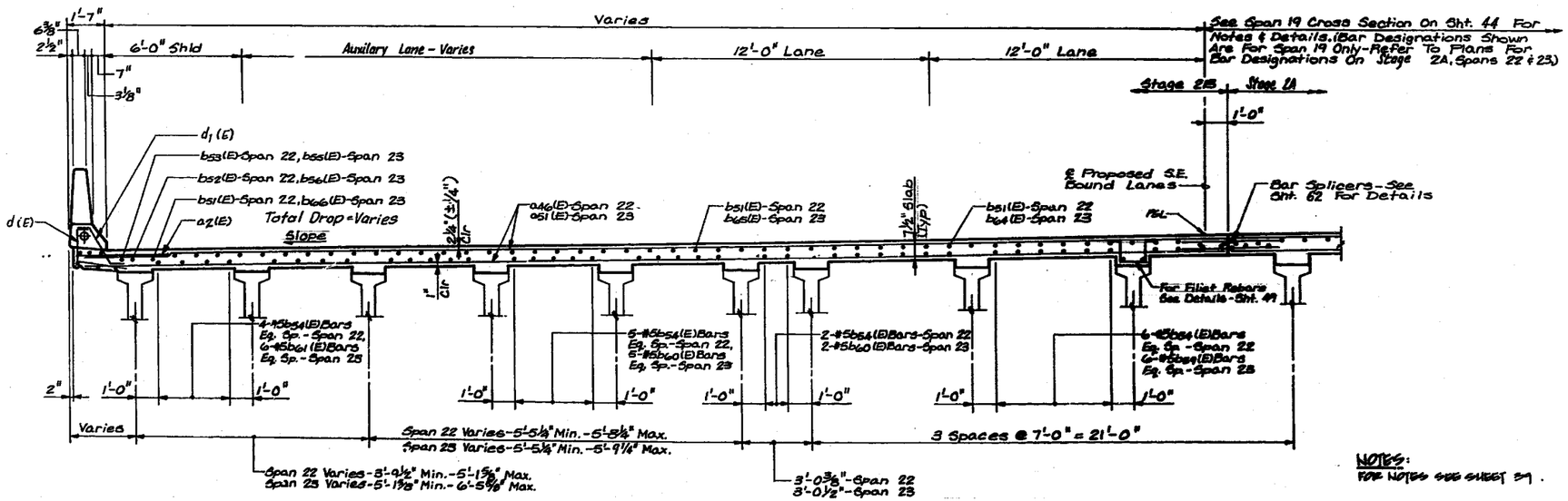
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	120
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 45 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



CROSS SECTION - SPAN 20 & SPAN 21
(Looking Up Station)



CROSS SECTION - SPAN 22 & SPAN 23
(Looking Up Station)

NOTES:
FOR NOTES SEE SHEET 3H.

STANLEY CONSULTANTS

SUPERSTRUCTURE CROSS SECTION
SHEET 7 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

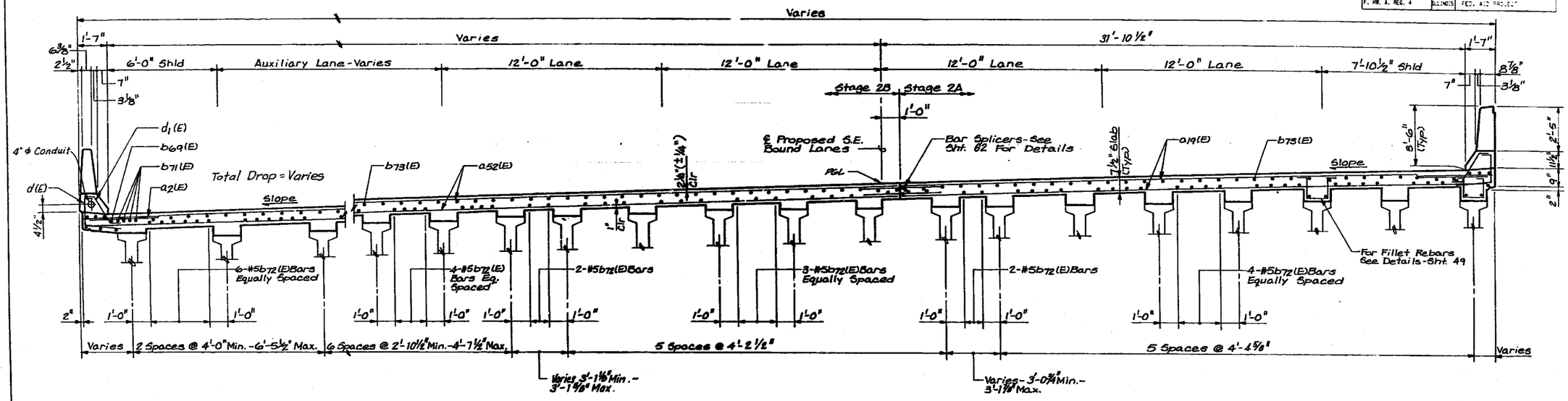
MARK REPRODUCTIONS, INC. 763-8989

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

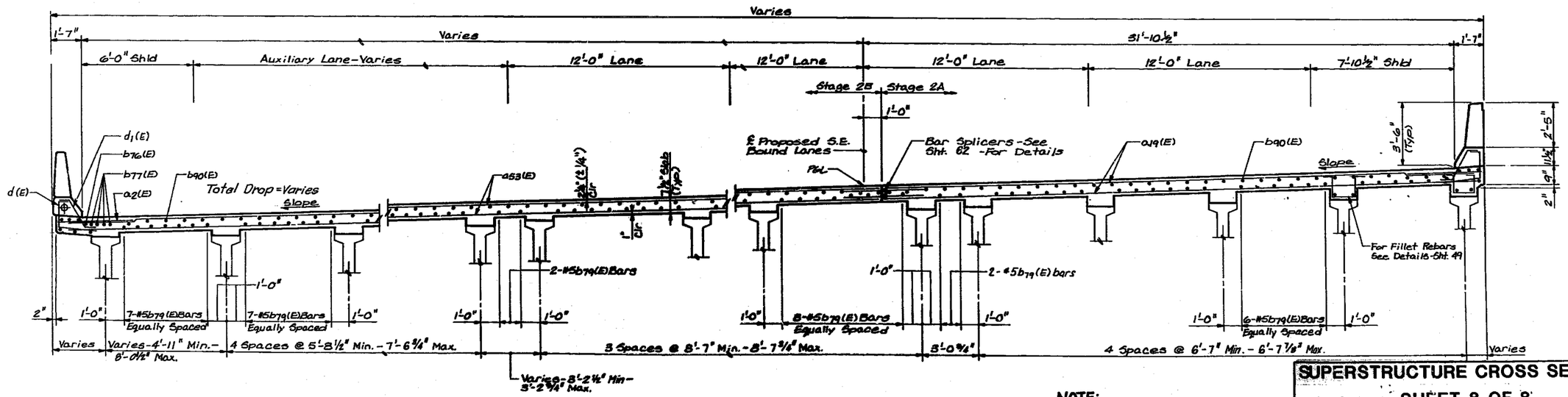
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	221
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 46 of 74 SHEETS



CROSS SECTION - SPAN 24
(Looking Up Station)



CROSS SECTION - SPAN 25
(Looking Up Station)

NOTE:
For Notes See Sheet 39.

SUPERSTRUCTURE CROSS SECTION
SHEET 8 OF 8
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

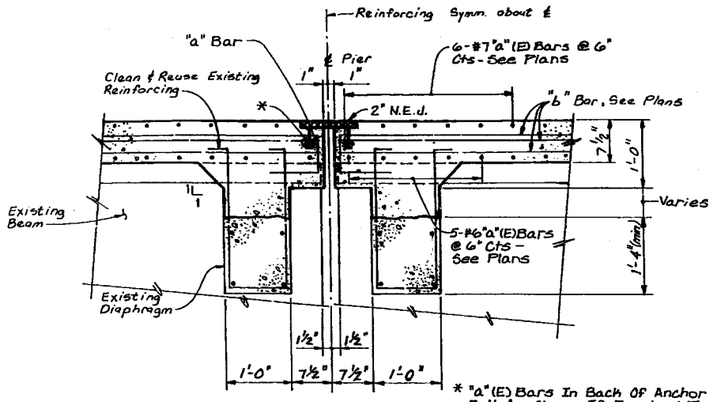
545

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	222
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

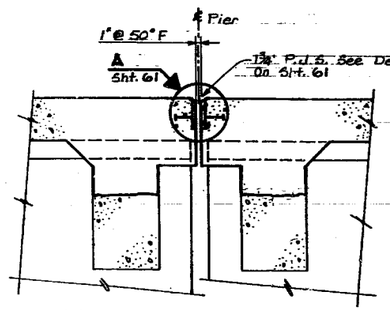
SHEET NO. 47 of 74 SHEETS

NOTE:
COST OF 3/4" EXP BOLTS INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE.



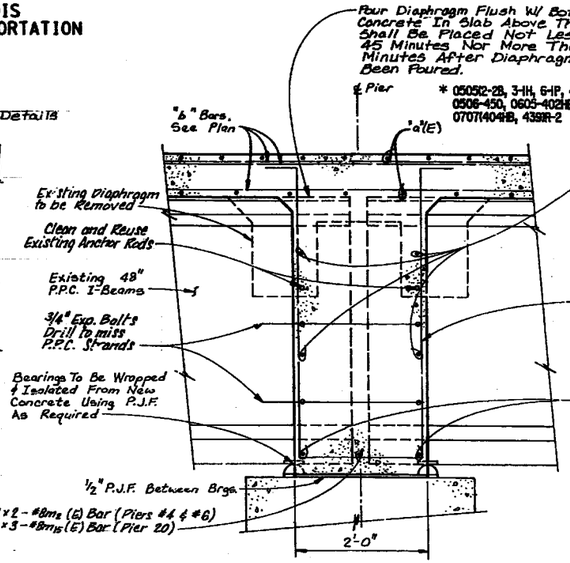
* "a"(E) Bars In Back Of Anchor Bolt As Shown If Required To Maintain 1" Clear (+0-⅛"). Anchor Bolts Should Be Tied To "a"(E) Bars.

SECTION A



Note:
For Additional Notes, Reinforcing & Dims. See Section A.

SECTION B

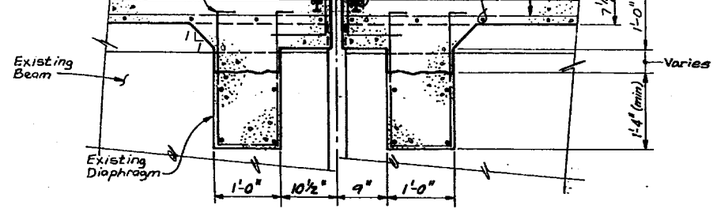


4 - #4m1 (E) Bars @ Piers #4 & #6 (13 Sets Centered Between Beams - Except Use 4 - #4m4 (E) Bars Between Beams #4.9 & #4.10, #6.9 & #6.10)
Pier 20: 4 - #4m3 (E) Bars Between Beams #20.1 & #20.2
4 - #4m2 (E) Bars Between Beams #20.2 - #20.4
4 - #4m1 (E) Bars Between Beams #20.4 & #20.5, #20.8 & #20.9
4 - #4m6 (E) Bars Between Beams #20.5 - #20.8
4 - #4m9 (E) Bars Between Beams #20.9 - #20.13

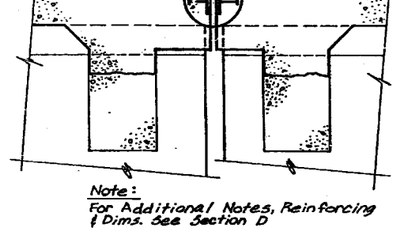
4 - #4s (E) Bars @ 15" Cts. @ Piers #4 & #6 (13 Sets Centered Between Beams - Except Use 2 #4s (E) Bars Between Beams #4.9 & #4.10, #6.9 & #6.10)
Pier 20: 4 - #4s (E) Bars Eq. Spaced Between Beams #20.1 & #20.2
6 - #4s (E) Bars Eq. Spaced Between Beams #20.2 - #20.4
5 - #4s (E) Bars Eq. Spaced Between Beams #20.5 - #20.8
5 - #4s (E) Bars Eq. Spaced Between Beams #20.9 - #20.13
2 - #4s (E) Bars Eq. Spaced Between Beams #20.4 #20.5, #20.8 & #20.9

2 - #8m (E) Bars @ Piers #4 & #6 (13 Sets Centered Between Beams - Except Use 2 - #8m3 (E) Bars Between Beams #4.9 & #4.10, #6.9 & #6.10)
Pier 20: 2 - #8m10 (E) Bars Between Beams #20.1 & #20.2
2 - #8m11 (E) Bars Between Beams #20.2 - #20.4
2 - #8m12 (E) Bars Between Beams #20.4 & #20.5, #20.8 & #20.9
2 - #8m13 (E) Bars Between Beams #20.5 - #20.8
2 - #8m14 (E) Bars Between Beams #20.9 - #20.13

SECTION C

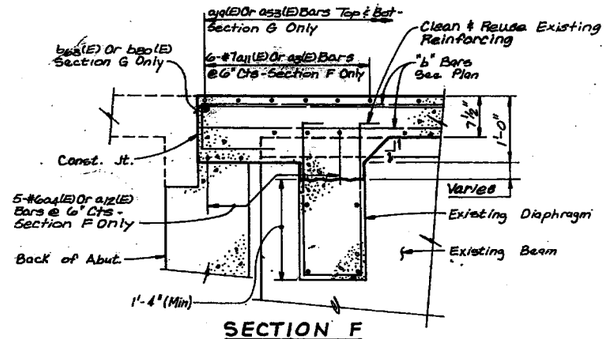


SECTION D

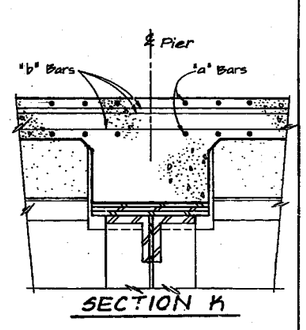


Note:
For Additional Notes, Reinforcing & Dims. See Section D

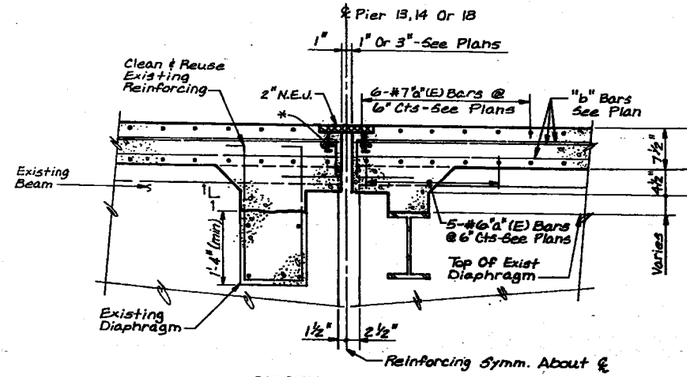
SECTION E



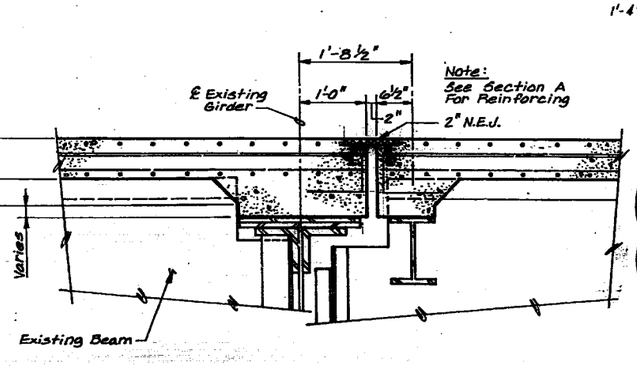
SECTION F
SECTION G



SECTION K

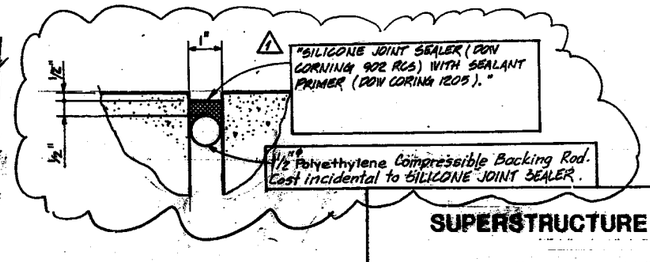


SECTION H



Note:
See Section A For Reinforcing

SECTION J



SECTION L

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

1 AS REVISED 9-22-72 PMP

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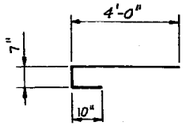
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

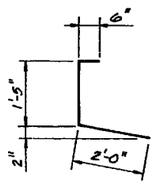
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	223
F. HWY. A. REG. #	ILLINOIS	FED. AID PROJECT		

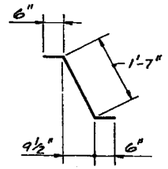
SHEET NO. 48 of 74 SHEETS



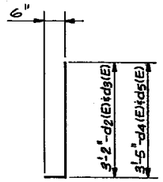
BAR b(E)



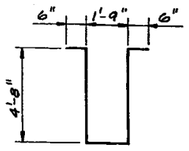
BAR d(E)



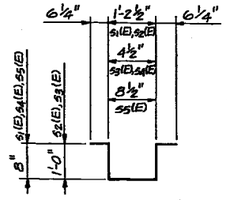
BAR d_1(E)



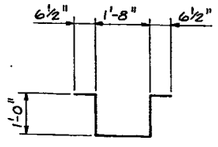
BARS d_2(E), d_3(E), d_4(E) & d_5(E)



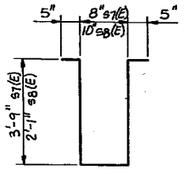
BAR s(E)



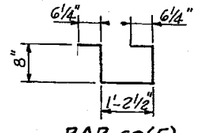
BARS s1(E), s2(E), s3(E), s4(E) & s5(E)



BAR s6(E)



BARS s7(E) & s8(E)



BAR s9(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a1(E)	352	#5	27'-6"	
a1(E)	1884	#5	32'-9"	
a2(E)	2637	#6	4'-0"	
a3(E)	6	#7	53'-0"	
a4(E)	5	#6	53'-0"	
a5(E)	12	#7	47'-7"	
a6(E)	10	#6	47'-7"	
a7(E)	348	#5	24'-8"	
a8(E)	12	#7	44'-5"	
a9(E)	10	#6	44'-5"	
a10(E)	348	#5	23'-2"	
a11(E)	96	#7	32'-9"	
a12(E)	80	#6	32'-9"	
a13(E)	6	#7	43'-1"	
a14(E)	5	#6	43'-1"	
a15(E)	2720	#5	22'-6"	
a16(E)	60	#7	43'-0"	
a17(E)	50	#6	43'-0"	
a18(E)	1248	#5	23'-0"	
a19(E)	2187	#5	31'-9"	
a20(E)	484	#5	24'-2"	
a21(E)	6	#7	46'-7"	
a22(E)	5	#6	46'-7"	
a23(E)	18	#7	29'-5"	
a24(E)	15	#6	29'-5"	
a25(E)	430	#5	29'-5"	
a26(E)	18	#7	44'-1"	
a27(E)	15	#6	44'-1"	
a28(E)	66	#7	31'-11"	
a29(E)	55	#6	31'-11"	
a30(E)	492	#5	2'-2"	
a31(E)	6	#7	44'-4"	
a32(E)	5	#6	44'-4"	
a33(E)	376	#5	24'-2"	
a35(E)	380	#5	23'-11"	
a36(E)	6	#7	44'-11"	
a37(E)	5	#6	44'-11"	
a38(E)	6	#7	47'-5"	
a39(E)	5	#6	47'-5"	
a40(E)	12	#7	46'-2"	
a41(E)	10	#6	46'-2"	
a42(E)	6	#7	46'-10"	
a43(E)	5	#6	46'-10"	
a44(E)	406	#5	24'-8"	
a45(E)	406	#5	25'-5"	
a46(E)	274	#5	26'-4"	
a47(E)	12	#7	49'-2"	
a48(E)	10	#6	49'-2"	
a49(E)	12	#7	51'-0"	
a50(E)	10	#6	51'-0"	
a51(E)	390	#5	27'-2"	
a52(E)	496	#5	30'-8"	
a53(E)	428	#5	32'-9"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	2915	#6	5'-5"	
b1(E)	170	#5	39'-8"	
b2(E)	312	#5	27'-1"	
b3(E)	8	#5	39'-0"	
b4(E)	7	#5	38'-6"	
b5(E)	486	#5	39'-2"	
b6(E)	864	#5	26'-8"	
b7(E)	800	#5	32'-1"	
b8(E)	309	#6	32'-0"	
b9(E)	1080	#5	27'-0"	
b10(E)	91	#5	37'-11"	
b11(E)	70	#5	28'-10"	
b12(E)	90	#5	37'-9"	
b13(E)	99	#5	18'-8"	
b14(E)	114	#5	22'-3"	
b15(E)	63	#5	25'-9"	
b16(E)	2	#6	45'-4"	
b17(E)	2	#6	35'-6"	
b18(E)	160	#5	29'-5"	
b19(E)	312	#5	20'-3"	
b20(E)	4	#6	33'-3"	
b21(E)	4	#6	46'-7"	
b22(E)	105	#5	19'-9"	
b23(E)	108	#5	16'-0"	
b24(E)	63	#5	11'-6"	
b25(E)	70	#5	28'-10"	
b26(E)	90	#5	21'-8"	
b27(E)	2	#6	46'-0"	
b28(E)	2	#6	34'-4"	
b29(E)	294	#5	35'-4"	
b30(E)	64	#5	34'-8"	
b31(E)	128	#5	35'-8"	
b32(E)	111	#5	23'-9"	
b33(E)	200	#5	28'-7"	
b34(E)	406	#5	30'-8"	
b35(E)	2	#5	34'-0"	
b36(E)	98	#5	36'-7"	
b37(E)	2	#5	25'-0"	
b38(E)	100	#5	28'-10"	
b39(E)	128	#5	33'-2"	
b40(E)	180	#5	25'-0"	
b41(E)	190	#5	27'-0"	
b42(E)	177	#5	19'-9"	
b43(E)	164	#5	35'-11"	
b44(E)	282	#5	24'-6"	
b45(E)	2	#5	32'-0"	
b46(E)	249	#5	39'-4"	
b47(E)	2	#5	40'-0"	
b48(E)	1	#5	39'-0"	
b49(E)	80	#6	24'-0"	
b50(E)	408	#5	30'-0"	
b51(E)	172	#5	26'-10"	
b52(E)	1	#5	38'-0"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b53(E)	1	#5	22'-0"	
b54(E)	219	#5	18'-6"	
b55(E)	2	#5	39'-6"	
b56(E)	6	#5	35'-0"	
b57(E)	9	#5	28'-9"	
b58(E)	102	#5	18'-1"	
b59(E)	84	#5	25'-0"	
b60(E)	75	#5	27'-0"	
b61(E)	84	#5	22'-3"	
b62(E)	38	#5	22'-11"	
b63(E)	30	#5	27'-8"	
b64(E)	36	#5	33'-2"	
b65(E)	32	#5	38'-0"	
b66(E)	48	#5	29'-1"	
b67(E)	8	#6	32'-2"	
b68(E)	10	#6	37'-6"	
b69(E)	3	#5	29'-8"	
b70(E)	9	#5	30'-0"	
b71(E)	8	#5	36'-0"	
b72(E)	492	#5	22'-1"	
b73(E)	264	#5	28'-10"	
b74(E)	8	#6	35'-0"	
b75(E)	6	#5	29'-6"	
b76(E)	2	#5	28'-0"	
b77(E)	6	#5	23'-0"	
b78(E)	186	#5	28'-2"	
b79(E)	363	#5	19'-3"	
b80(E)	4	#6	38'-2"	
b81(E)				
b82(E)	8	#5	6'-0"	
b83(E)	8	#6	7'-0"	
b84(E)	192	#5	2'-0"	
b85(E)	144	#5	5'-0"	
b86(E)	8	#5	6'-0"	
c(E)	3198	#4	3'-11"	
c1(E)	3491	#5	2'-7"	
c2(E)	2492	#4	3'-8"	
c3(E)	2721	#5	3'-8"	
c4(E)	706	#4	3'-11"	
c5(E)	770	#5	3'-11"	
e(E)	88	#4	19'-2"	
e1(E)	12	#8	28'-4"	
e2(E)	4	#5	39'-9"	
e3(E)	200	#4	18'-11"	
e4(E)	36	#8	28'-0"	
e5(E)	24	#5	39'-2"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e6(E)	192	#4	16'-5"	
e7(E)	32	#8	35'-1"	
e8(E)	32	#5	34'-2"	
e9(E)	80	#4	9'-9"	
e10(E)	20	#5	9'-9"	
e11(E)	20	#8	9'-9"	
e12(E)	80	#4	18'-10"	
e13(E)	4	#5	37'-11"	
e14(E)	4	#8	37'-11"	
e15(E)	136	#4	18'-3"	
e16(E)	4	#8	38'-8"	
e17(E)	4	#5	37'-9"	
e18(E)	8	#8	30'-5"	
e19(E)	8	#5	29'-5"	
e20(E)	8	#4	22'-3"	
e21(E)	2	#8	22'-3"	
e22(E)	2	#5	22'-3"	
e23(E)	24	#4	19'-0"	
e24(E)	4	#8	30'-8"	
e25(E)	4	#5	29'-8"	
e26(E)	64	#4	15'-5"	
e27(E)	12	#8	36'-11"	
e28(E)	12	#5	35'-5"	
e29(E)	4	#8	30'-10"	
e30(E)	4	#5	29'-11"	
e31(E)	32	#4	16'-9"	
e32(E)	32	#4	17'-8"	
e33(E)	4	#8	37'-6"	
e34(E)	4	#5	36'-6"	
e35(E)	48	#4	17'-9"	
e36(E)	4	#8	28'-9"	
e37(E)	4	#5	27'-9"	
e38(E)	64	#4	17'-4"	
e39(E)	8	#8	36'-10"	
e40(E)	8	#5	35'-10"	
e41(E)	72	#4	15'-7"	
e42(E)	12	#8	25'-5"	
e43(E)	12	#5	24'-6"	
e44(E)	32	#4	7'-9"	
e45(E)	8	#8	7'-9"	
e46(E)	8	#5	7'-9"	
e47(E)	48	#4	16'-10"	
e48(E)	8	#8	27'-5"	
e49(E)	8	#5	26'-5"	
e50(E)	88	#4	17'-2"	
e51(E)	8	#8	27'-10"	
e52(E)	8	#5	26'-10"	
e53(E)	80	#4	16'-4"	
e54(E)	12	#8	30'-0"	
e55(E)	12	#5	28'-9"	
e56(E)	6	#8	31'-4"	
e57(E)	6	#5	30'-1"	
e58(E)	24	#4	14'-0"	
e59(E)	4	#8	30'-6"	
e60(E)	4	#5	29'-7"	
e61(E)	4	#8	23'-1"	
e62(E)	4	#8	28'-10"	
e63(E)	4	#5	27'-10"	

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
e64(E)	2	#8	36'-9"	
e65(E)	2	#5	36'-9"	
e66(E)	4	#5	22'-1"	
e67(E)	4	#5	39'-8"	
e68(E)	32	#4	15'-2"	
e69(E)	4	#8	32'-6"	
e70(E)	4	#5	31'-7"	
e71(E)	4	#8	35'-8"	
e72(E)	4	#5	34'-9"	
e73(E)	24	#4	18'-6"	
e74(E)	4	#8	29'-10"	
e75(E)	4	#5	28'-11"	
e76(E)	4	#5	13'-9"	
e77(E)	4	#8	13'-9"	
e78(E)	16	#4	13'-9"	
e79(E)	24	#4	12'-6"	
m(E)	52	#6	3'-2"	
m1(E)	104	#4	3'-7"	
m2(E)	4	#8	40'-0"	
m3(E)	4	#6	1'-1"	
m4(E)	8	#4	1'-4"	
m5(E)	4	#4	4'-0"	
m6(E)	8	#4	6'-9"	
m7(E)	8	#4	1'-3"	
m8(E)	12	#4	5'-3"	
m9(E)	16	#4	4'-10"	
m10(E)	2	#6	3'-8"	
m11(E)	4	#6	6'-5"	
m12(E)	4	#6	0'-11"	
m13(E)	6	#6	4'-11"	
m14(E)	8	#6	4'-6"	
m15(E)	3	#8	28'-3"	
m16(E)	2	#6	6'-8"	
m17(E)	4	#4	6'-8"	
m18(E)	2	#6	4'-5"	
m19(E)	4	#4	5'-7"	
m20(E)	2	#6	3'-4"	
m21(E)	4	#4	4'-7"	
m22(E)	2	#6	3'-10"	
m23(E)	4	#4	3'-10"	
s(E)	163	#4	12'-1"	
s1(E)	17711	#4	3'-7"	
s2(E)	478	#4	4'-3"	
s3(E)	472	#5	3'-5"	
s4(E)	2030	#5	2'-9"	
s5(E)	1008	#4	3'-1"	
s6(E)	203	#4	4'-9"	
s7(E)	9	#4	9'-0"	
s8(E)	10	#4	5'-10"	
s9(E)	141	#4	3'-7"	
Reinforcement Bars (Epoxy Coated)			Lbs.	94,760
Class X Concrete Superstructures			Cu. Yds.	3930.3

Reinforcement bars designated (E) shall be epoxy coated.

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS & ENGINEERS, ARCHITECTURE, PLANNING AND MANAGEMENT

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

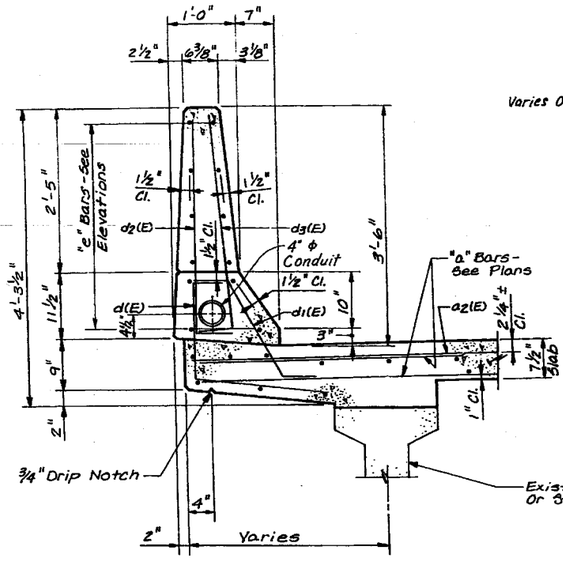
597

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

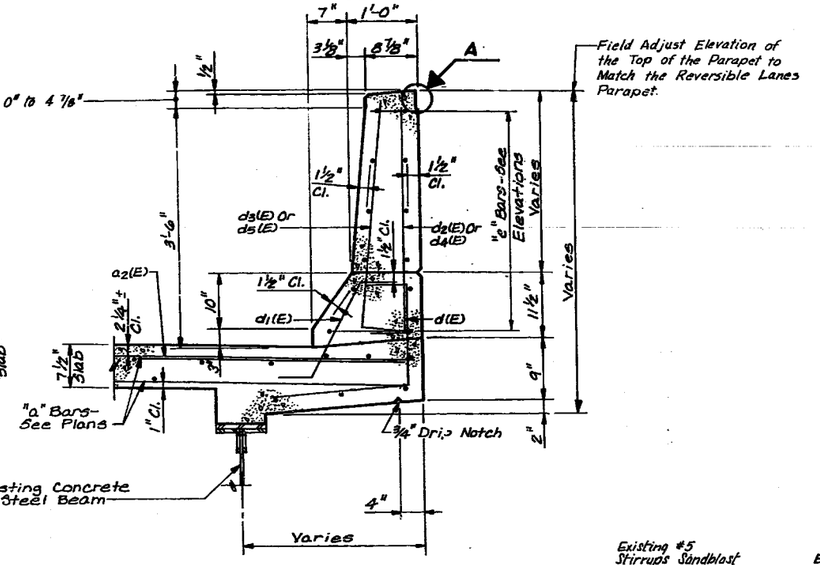
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	FED. AID PROJECT
	*		426	224
F. HWY. ADM. REG. 4	ILLINOIS	FED. AID PROJECT		

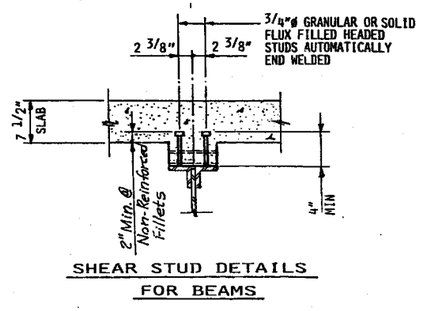
SHEET NO. 457 of 74 SHEETS



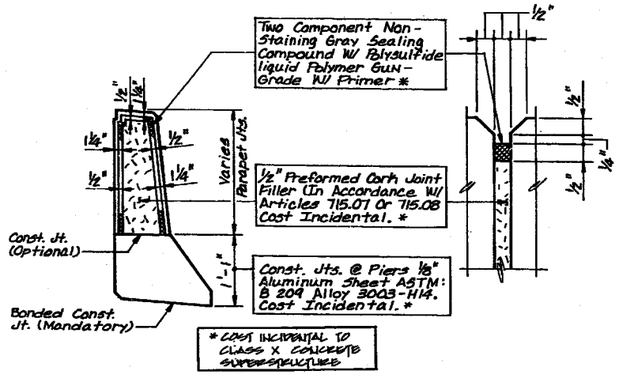
SECTION @ WEST PARAPET



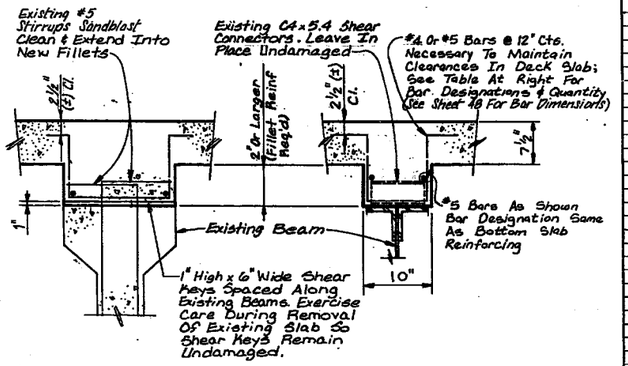
SECTION @ EAST PARAPET



SHEAR STUD DETAILS FOR BEAMS

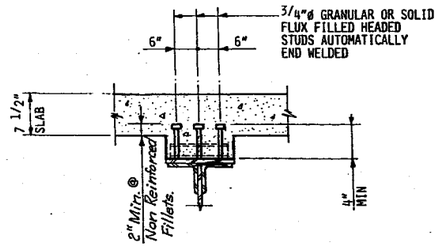


PARAPET JOINT DETAILS

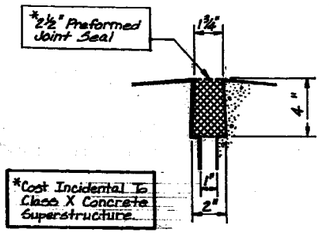


Concrete Beam Steel Beam

FILLET REINFORCING DETAILS



SHEAR STUD DETAILS FOR GIRDERS



DETAIL A

NOTES:
CARE SHOULD BE TAKEN DURING REMOVAL OF EXISTING DECK TO MINIMIZE DAMAGE TO EXISTING CHANNEL SHEAR CONNECTORS AND EXISTING SHEAR STUDS. ANY EXISTING CHANNEL SHEAR CONNECTORS OR EXISTING SHEAR STUDS THAT ARE DAMAGED SHALL BE REPLACED WITH SHEAR STUDS AT CONTRACTOR'S EXPENSE.

BEAM FILLET REINFORCING TABLE

BEAM NUMBER	BAR QUANTITY	BAR NUMBER
S1.1-S1.5, S2.1-S2.6	77 EACH	s1(E)
S1.6-S1.17, S2.7-S2.17, S3.1-S3.16, S4.1-4.15,S5.1-S5.15,S6.1-S6.15, S7.1-S7.15,S8.1-S8.15	76 EACH	s1(E
S9.1-S9.10,S13.5	38 EACH	s1(E
S10.1	73	s1(E
S10.2	71	s1(E
S10.3, S14.5-S14.7, S23.5	68 EACH	s1(E
S10.4	66	s1(E)
S10.5	63	s1(E)
S10.6	60	s1(E)
S10.7	58	s1(E)
S11.1-S11.18	56 EACH	s1(E)
S13.1	23	s1(E)
S13.2	26	s1(E)
S13.3	30	s1(E)
S13.4	34	s1(E)
S13.6	42	s1(E)
S13.7	44	s1(E)
S13.8	48	s1(E)
S13.9	51	s2(E)
S13.10, S20.13	55 EACH	s2(E)
S14.1-S14.4, S15.1-S15.4	68 EACH	s4(E)
S14.8-S14.9	68 EACH	s2(E)
S15.5-S15.9,S16.1-S16.7	67 EACH	s4(E)
S17.4-S17.10	73 EACH	s4(E)
S17.11-S17.13	74 EACH	s3(E)
S18.3-S18.8, S25.3	56 EACH	s1(E)
S18.9-S18.11	57 EACH	s4(E)
S18.12-S18.13	58 EACH	s3(E)
S19.2-S19.14	70 EACH	s1(E)
S19.15	70	s2(E)
S20.1-S20.12, S23.9, S25.4	55 EACH	s1(E)
S21.1-S21.12, S23.8	59 EACH	s1(E)
S21.13	59	s2(E)
S22.3-S22.15, S23.10, S25.6-S25.14	52 EACH	s1(E)
S23.1	81	s1(E)
S23.2	78	s1(E)
S23.3	74	s1(E)
S23.4	71	s1(E)
S23.11	50	s1(E)
S23.12	47	s1(E)
S23.13	43	s1(E)
S23.14	39	s1(E)
S23.15	36	s1(E)
S24.1	86	s9(E)
S24.2, S24.4	88 EACH	s1(E)
S24.3	89	s1(E)
S24.5	87	s1(E)
S24.6	85	s1(E)
S24.7	84	s1(E)
S24.8-S24.10	83 EACH	s1(E)
S24.11-S24.22	82 EACH	s1(E)
S25.2	58	s1(E)
S25.5	54	s1(E)
S25.15	52	s2(E)
S16.8-S16.9	67 EACH	s3(E)
81	203	s6(E)
S10.8	56	s1(E)
S10.9	54	s1(E)
S10.10	51	s1(E)
S10.11	49	s1(E)
S10.12	47	s1(E)
S23.6	65	s1(E)
S23.7	62	s1(E)
S25.1	55	s9(E)

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

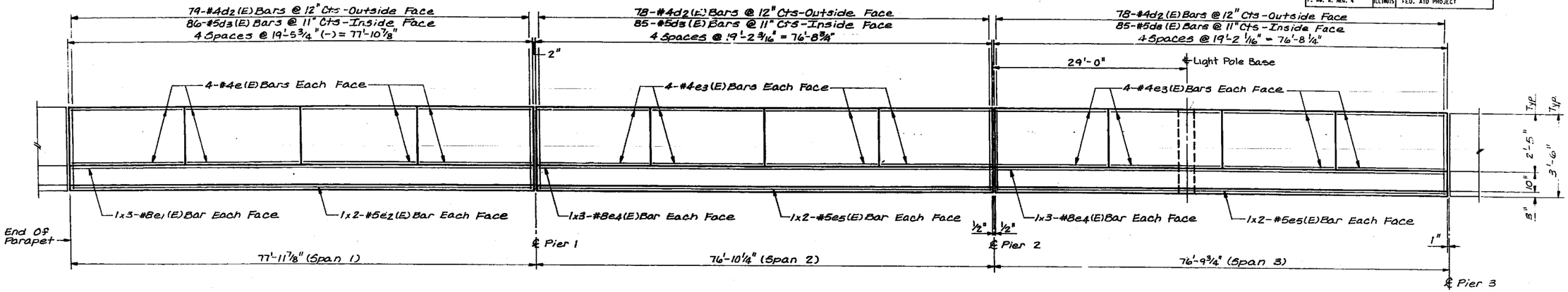
548
3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

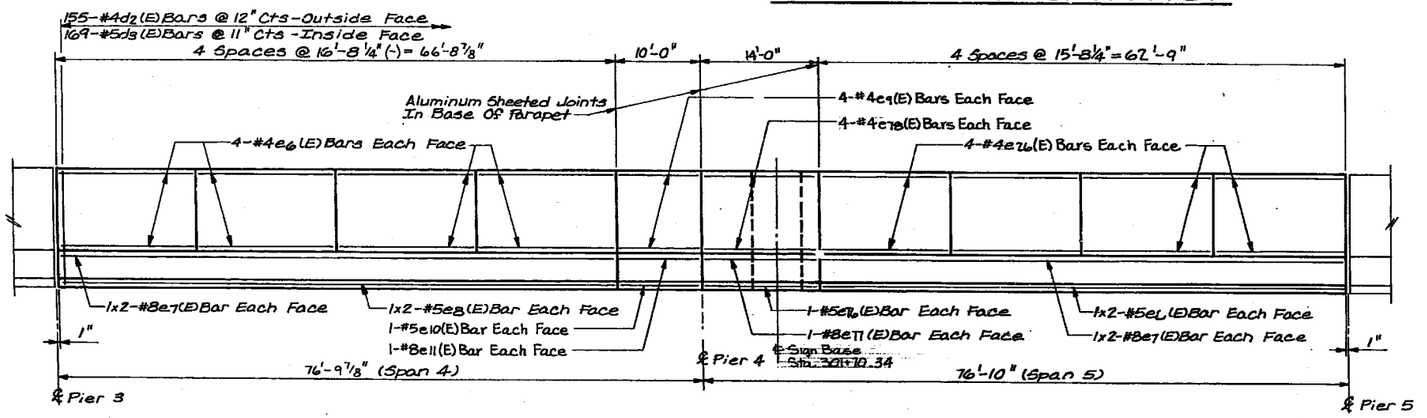
* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	225
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

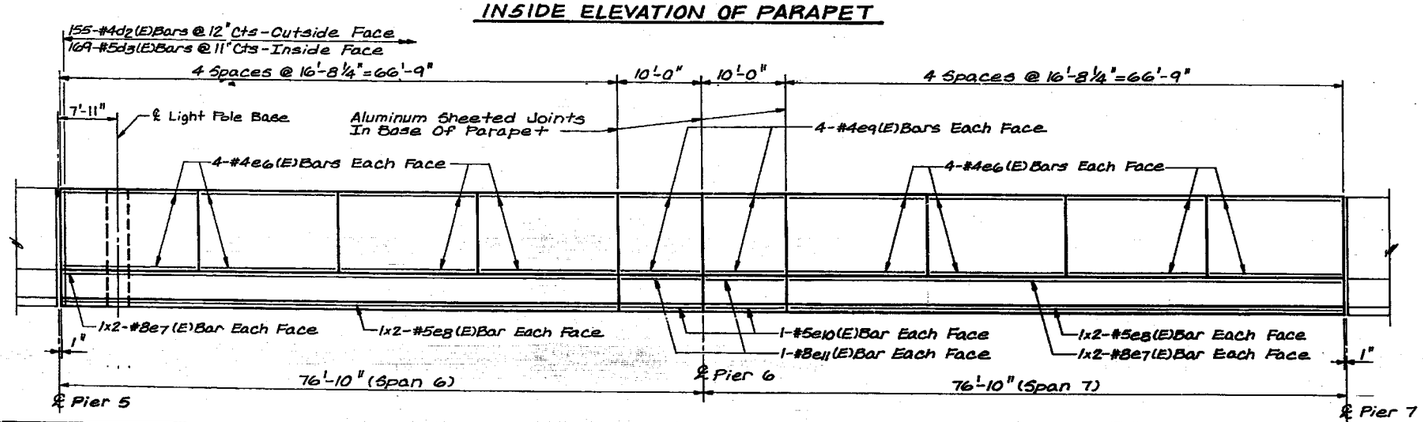
SHEET NO. 50 of 74 SHEETS



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

STANLEY CONSULTANTS

NOTES:
1. SEE SHEET 49 FOR SUPERSTRUCTURE DETAILS.
2. SEE SHEET 48 FOR BILL OF MATERIAL.
3. MINIMUM LAP #8 BAR: 8'-6"
   MINIMUM LAP #5 BAR: 1'-9"

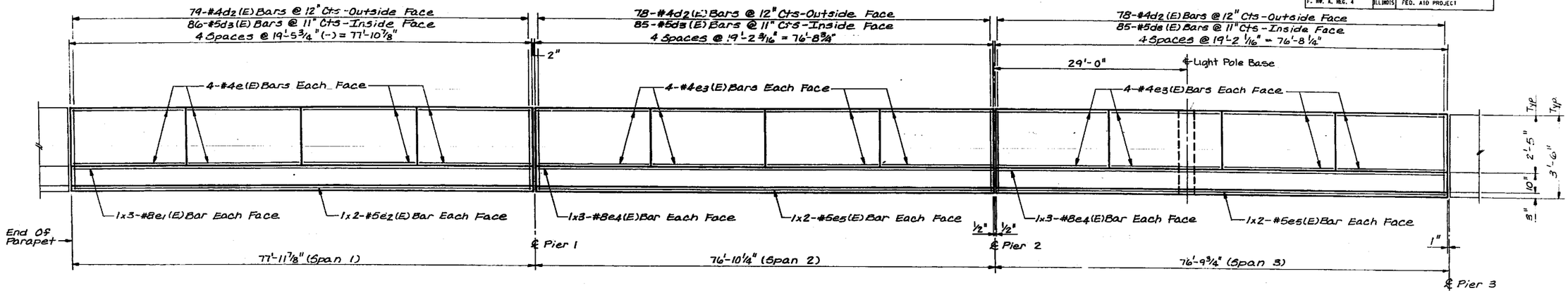
PARAPET DETAILS - WEST SIDE
SHEET 1 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

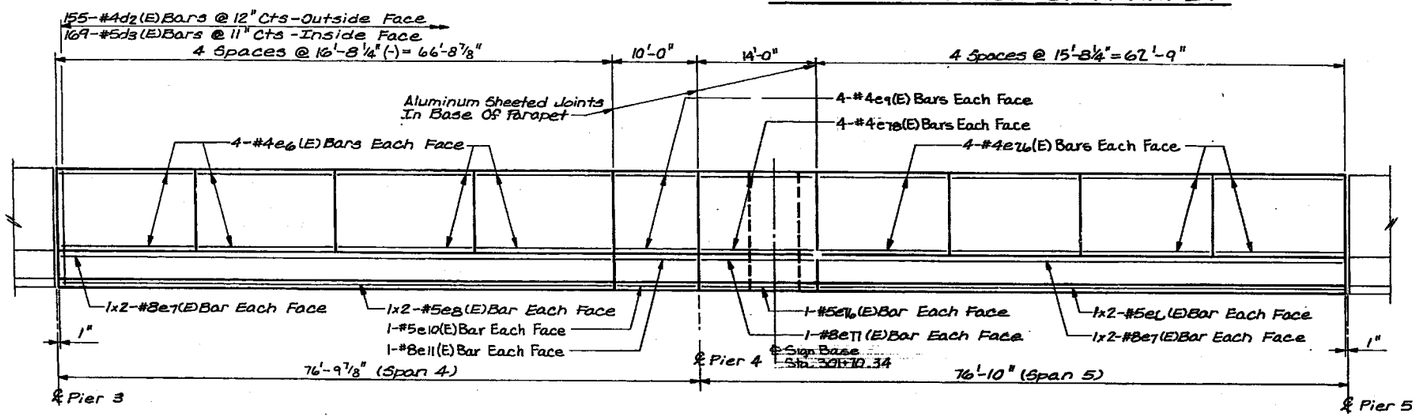
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	225
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

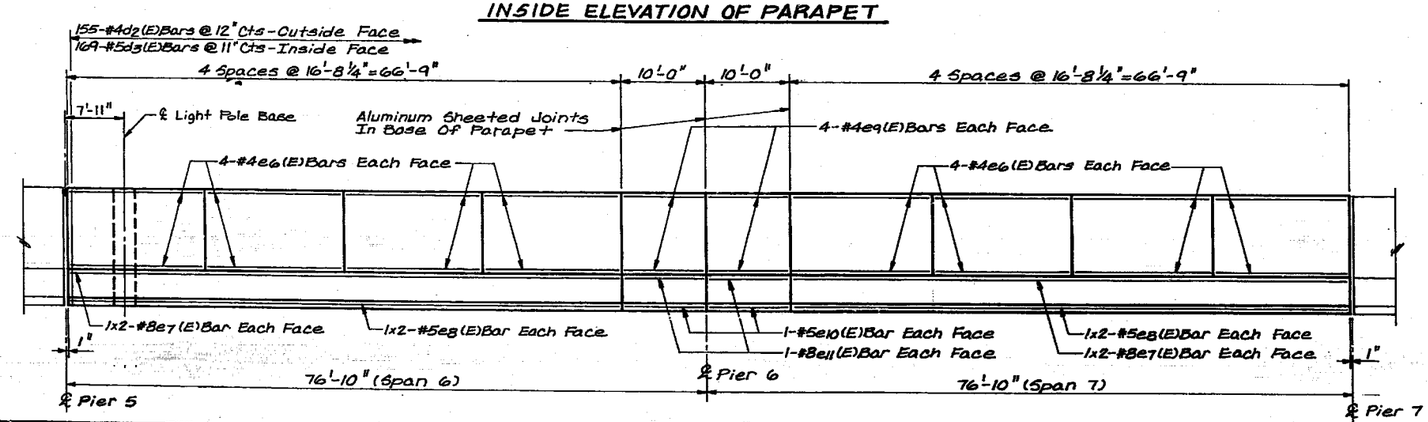
SHEET NO. 80 of 74 SHEETS



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. SEE SHEET 49 FOR SUPERSTRUCTURE DETAILS.
2. SEE SHEET 48 FOR BILL OF MATERIAL.
3. MINIMUM LAP #8 BAR: 5'-6"
   MINIMUM LAP #5 BAR: 1'-9"

STANLEY CONSULTANTS

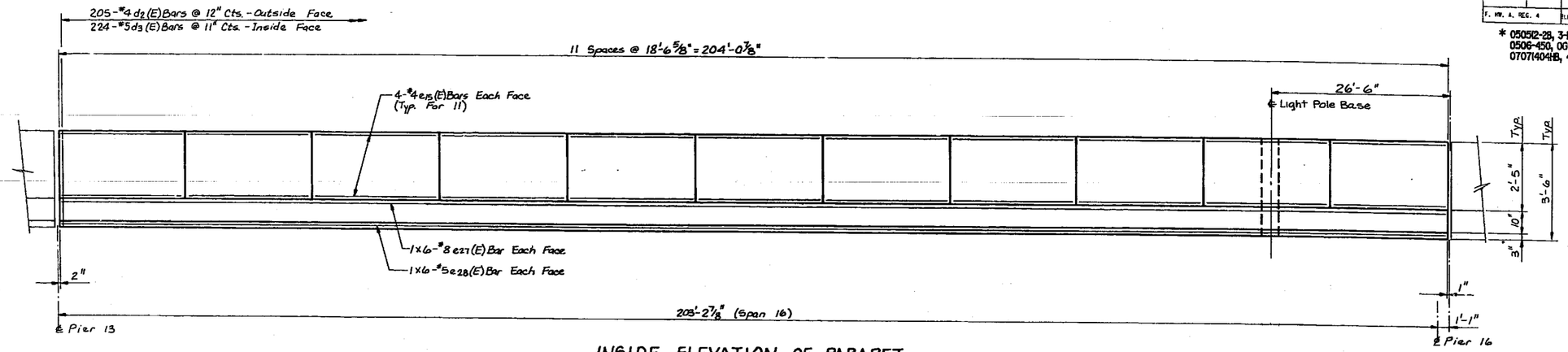
PARAPET DETAILS - WEST SIDE
SHEET 1 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

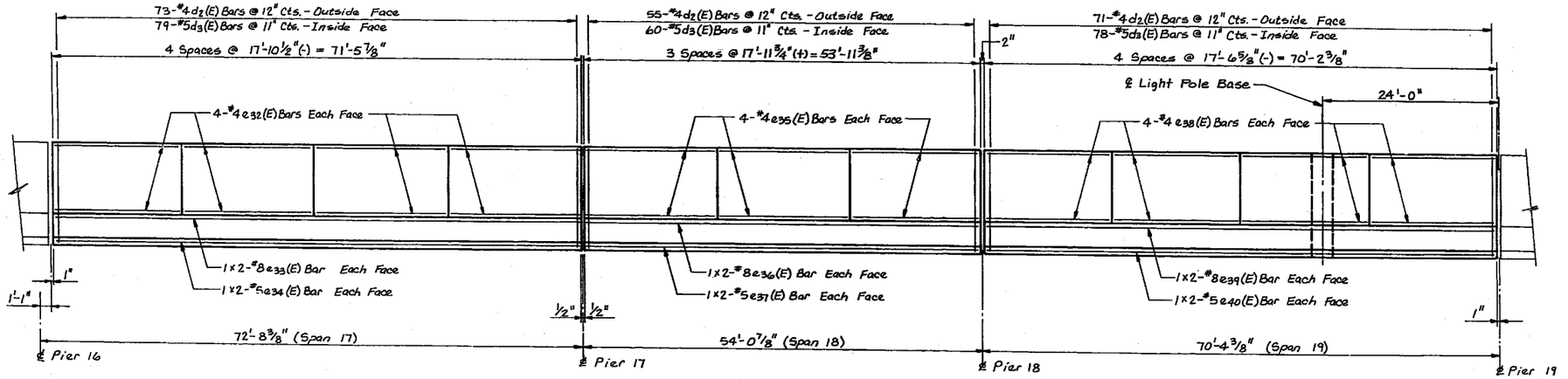
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	227
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 52 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:

1. For Notes See Sht. 50 .

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 3 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

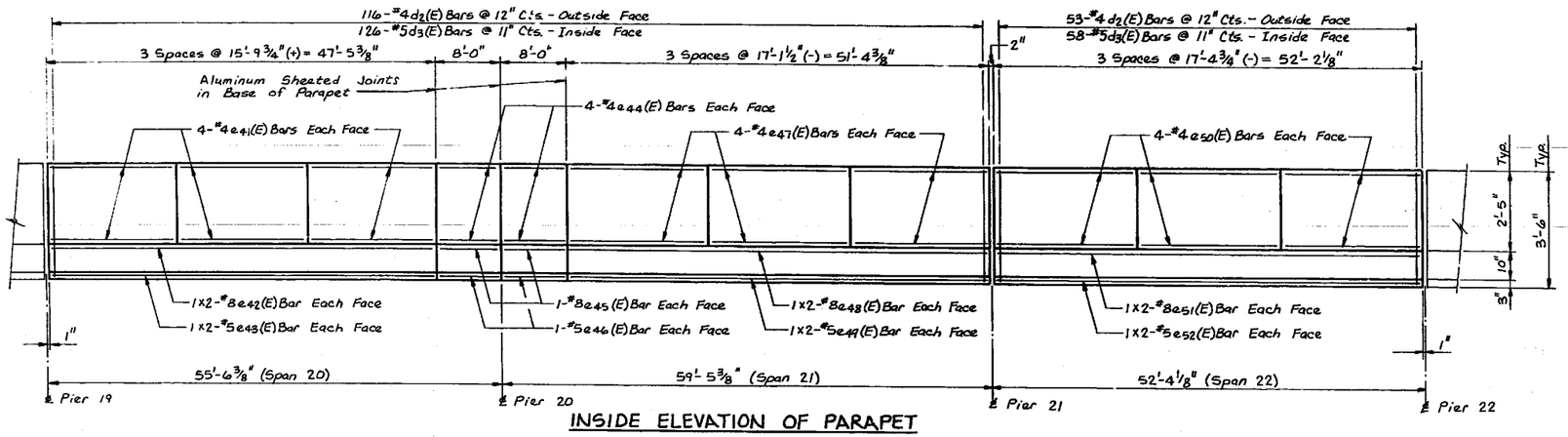
601

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

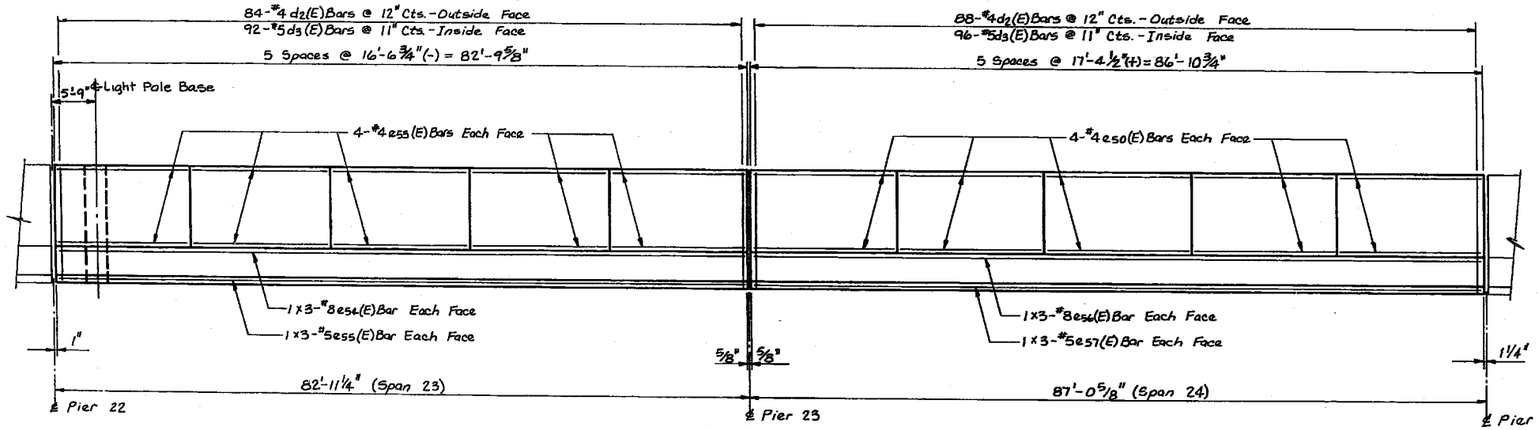
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	128
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 53 of 74 SHEETS

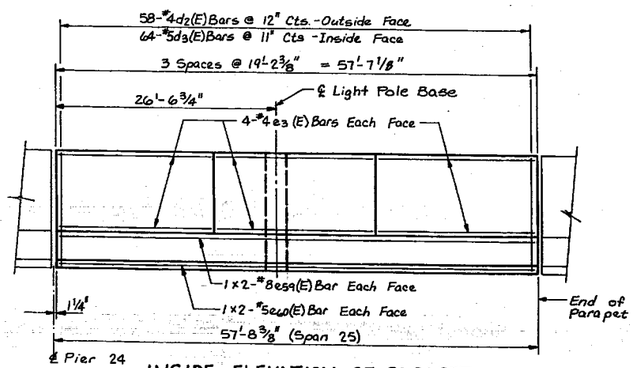
* 05052-28, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 01-71404HB, 439IR-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
FOR NOTES SEE SHEET 50

STANLEY CONSULTANTS

PARAPET DETAILS - WEST SIDE
SHEET 4 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

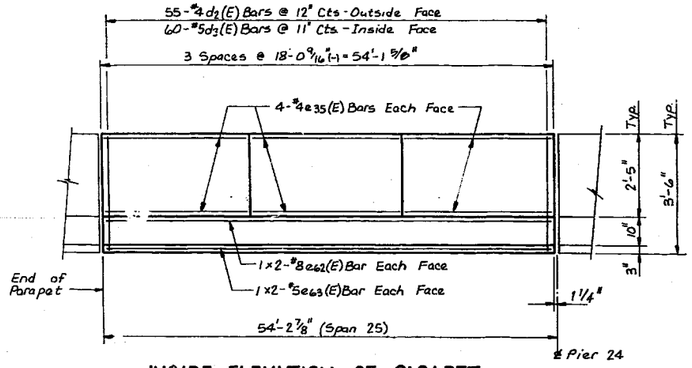
602

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

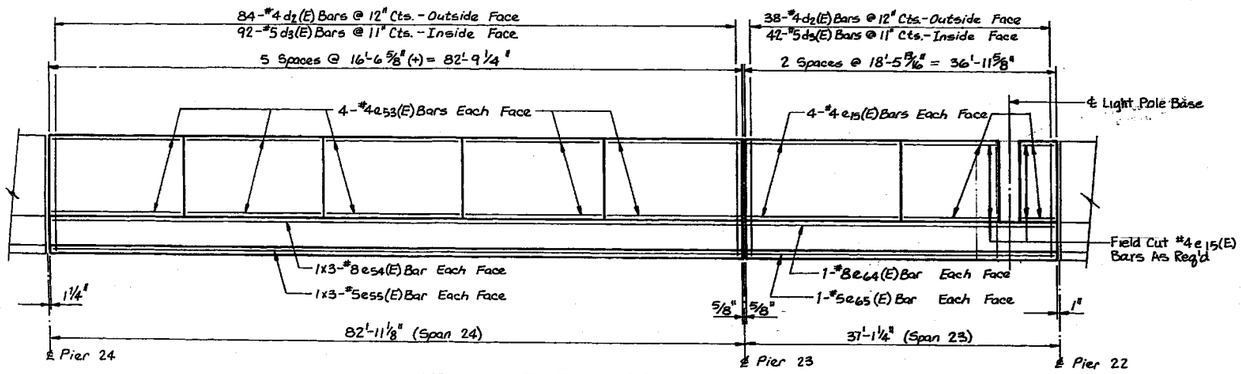
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	229
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 54 of 74 SHEETS

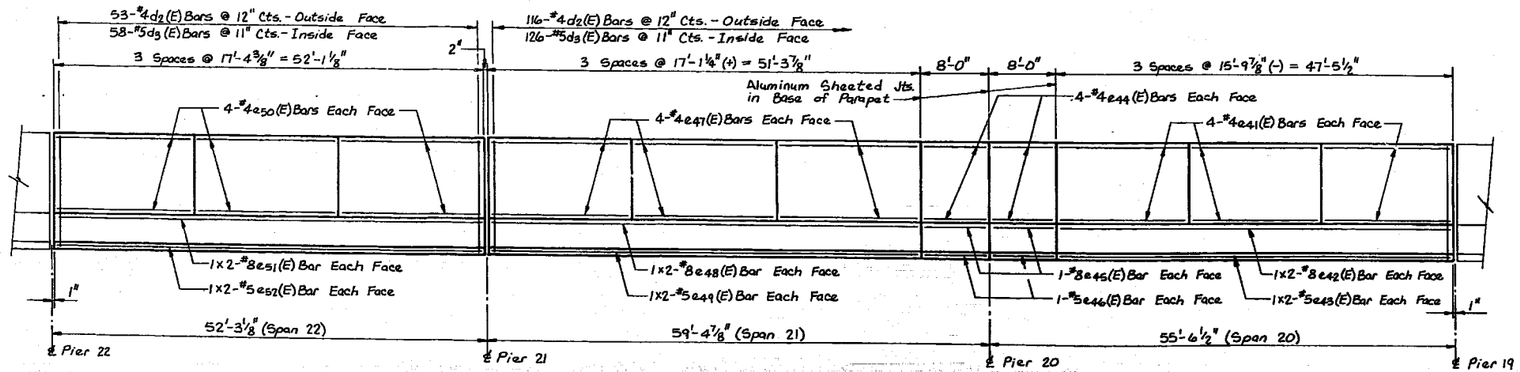
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. FOR NOTES SEE SHEET 50.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 1 OF 4

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

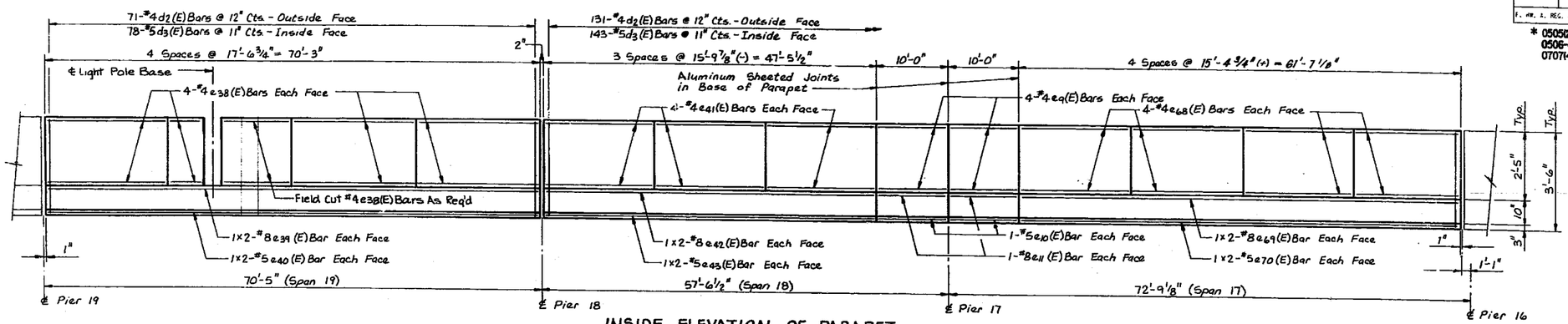
663

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

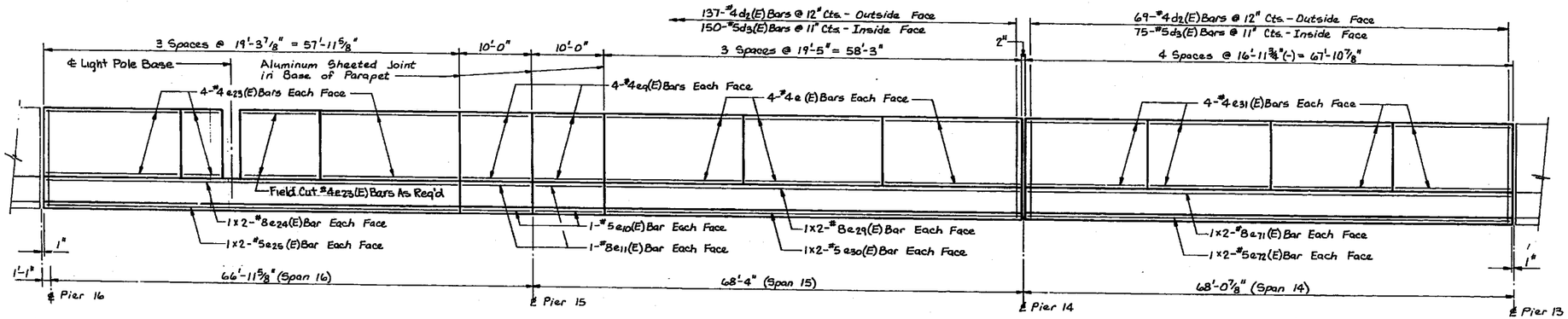
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	230
F. AID. I. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 55 of 74 SHEETS

* 05051-2B, 3-IH, 6-IP, 400HB, 401HB, 451H, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. FOR NOTES SEE SHEET 30.

STANLEY CONSULTANTS

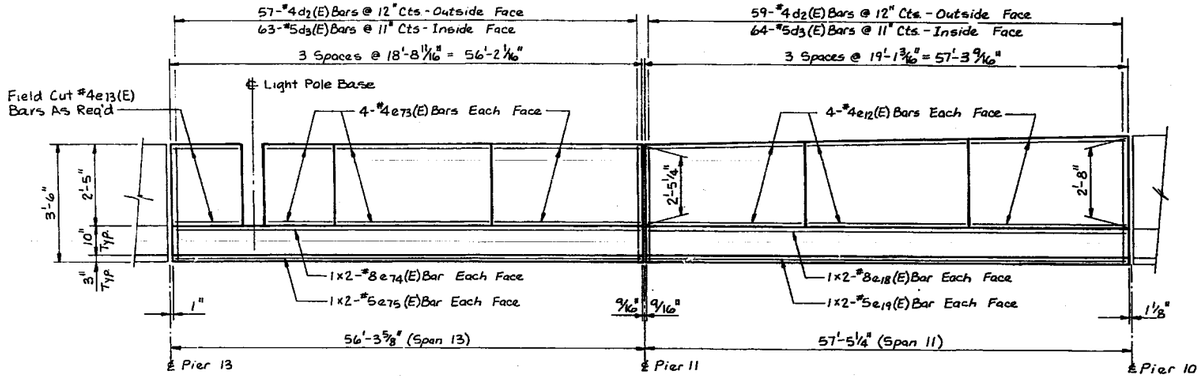
PARAPET DETAILS - EAST SIDE
SHEET 2 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

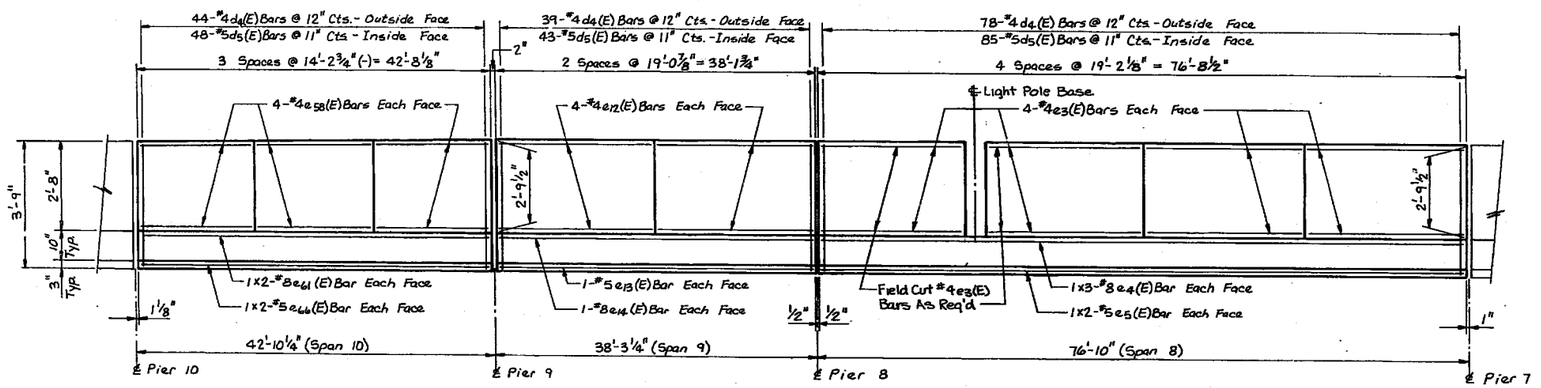
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	231
F. AID. & REG. #	ILLINOIS	FED. AID PROJECT		

SHEET NO. 30 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. FOR NOTES SEE SHEET 50.

STANLEY CONSULTANTS

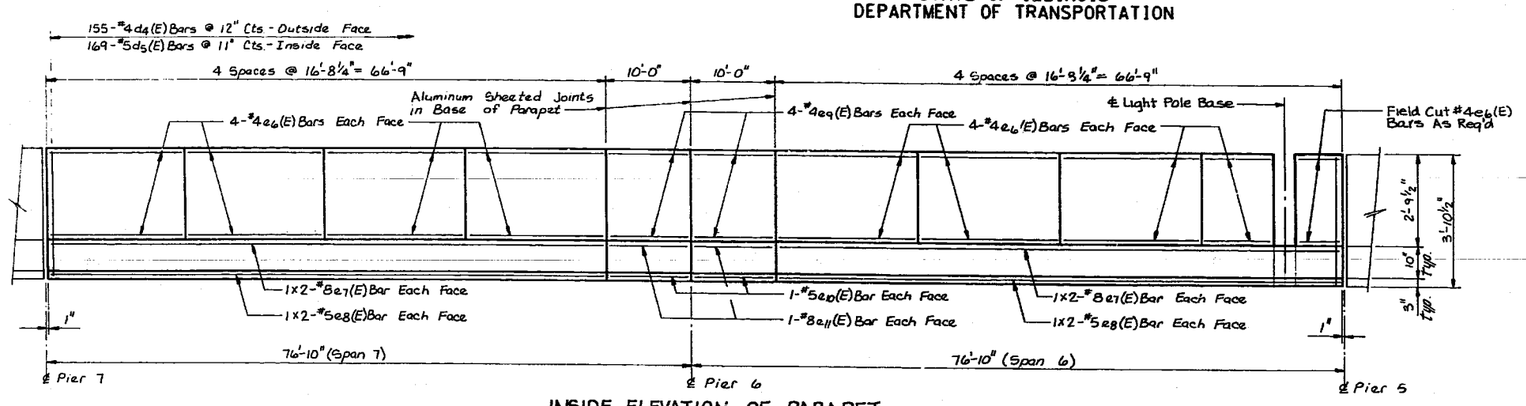
PARAPET DETAILS – EAST SIDE
SHEET 3 OF 4
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

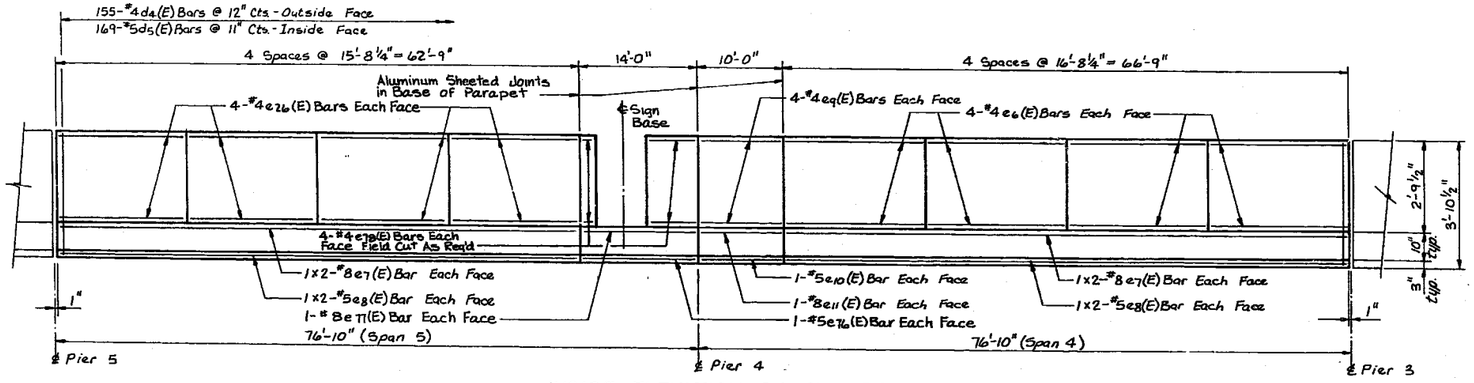
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	232
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 57 of 74 SHEETS

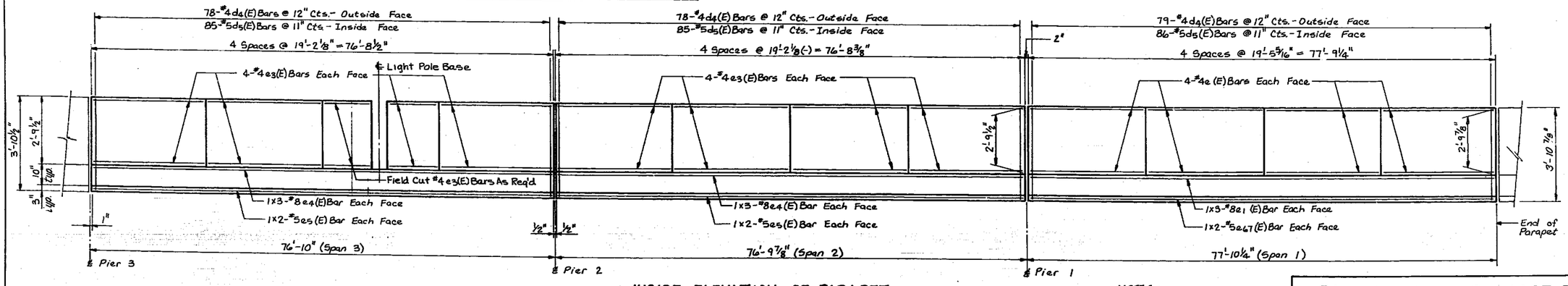
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 4391R-2



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET



INSIDE ELEVATION OF PARAPET

NOTES:
1. FOR NOTES SEE SHEET 50.

STANLEY CONSULTANTS

PARAPET DETAILS - EAST SIDE
SHEET 4 OF 4

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

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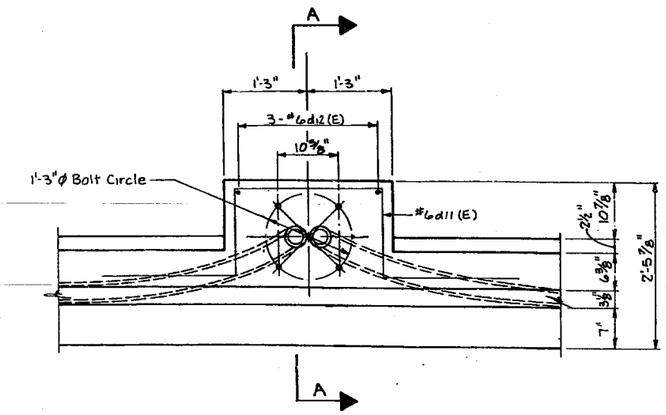
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

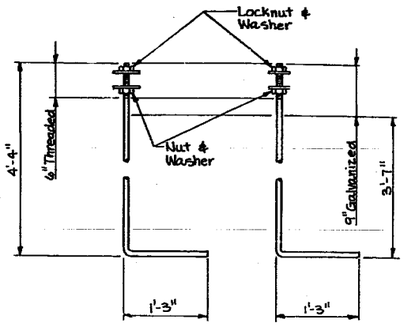
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	233
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

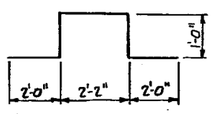
SHEET NO. 58 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

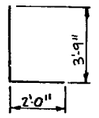


PLAN





BAR d11(E)



BAR d12(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d11(E)	64	#6	8'-2"	
d12(E)	24	#6	5'-9"	L
REINFORCING BARS (EPOXY COATED)			LBS.	1,000
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	2.8

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED

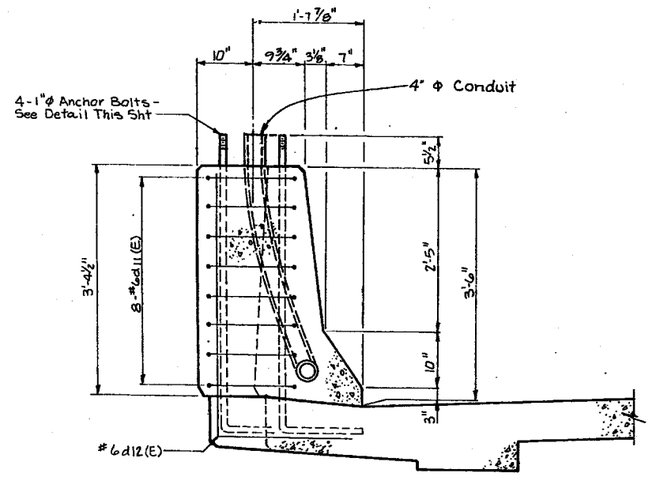
BAR DIMENSIONS SHOWN ARE OUT TO OUT.

BILL OF MATERIAL INCLUDES 8 LIGHT POLE SUPPORTS.

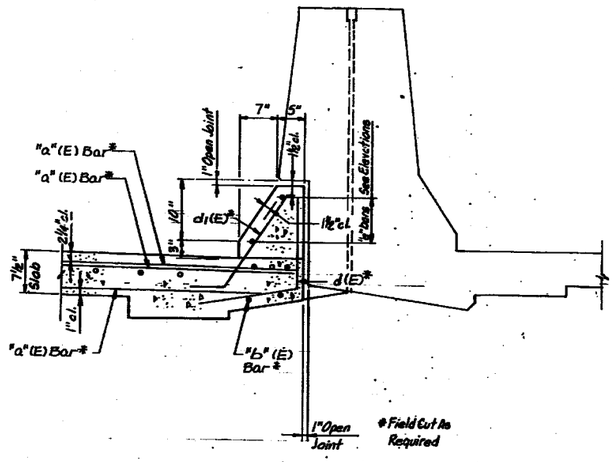
1"ϕ ANCHOR BOLTS (ASTM 687)

COST OF 1" ϕ ANCHOR BOLTS TO BE INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE

NOTE: PROVIDE 2 FLAT WASHERS, 1 REGULAR NUT & 1 LOCKNUT FOR EACH BOLT. ALL NUTS & WASHERS MUST BE GALVANIZED.



SECTION A-A



SECTION B
For Location See Sheet 29

PARAPET MOUNTED LIGHT POLES

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 408+49

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

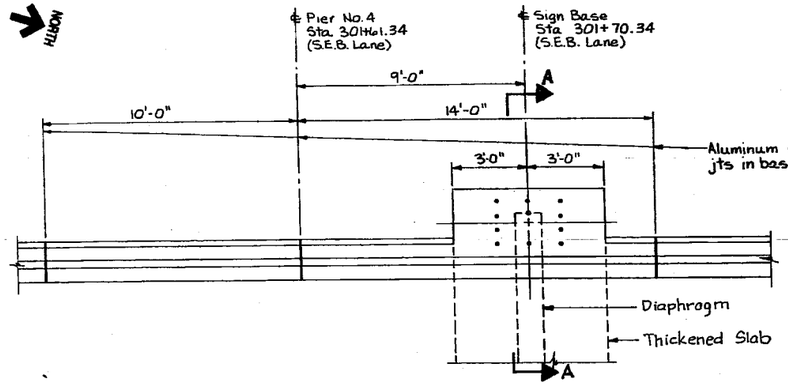
MARK REPRODUCIBLE, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

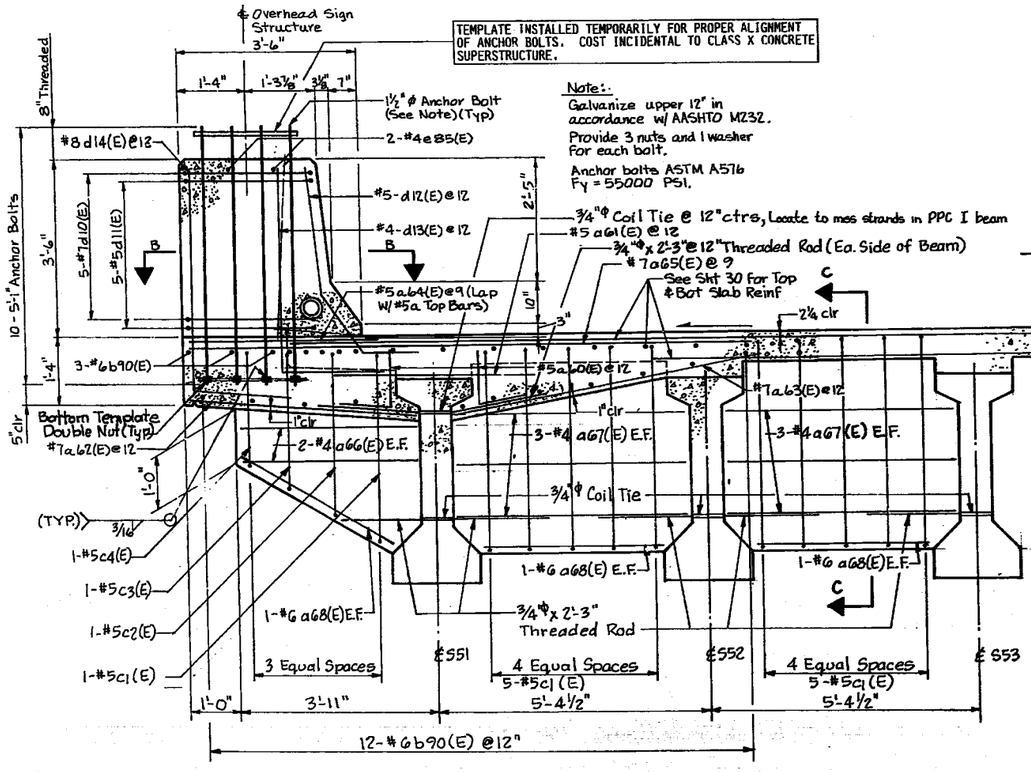
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	234
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 59 of 74 SHEETS



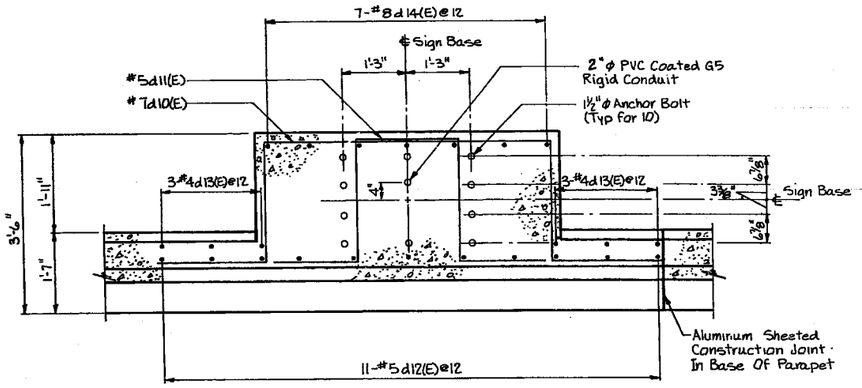
PLAN - SIGN BASE NEAR PIER NO. 4



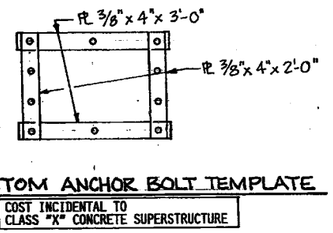
Note:
Galvanize upper 12" in accordance w/ AASHTO M232.
Provide 3 nuts and 1 washer for each bolt.
Anchor bolts ASTM A576 Fy = 55000 PSI.

SECTION A-A

COST OF ANCHOR BOLTS AND ¾"ϕ THREADED RODS INCIDENTAL TO CLASS "X" CONCRETE SUPERSTRUCTURE

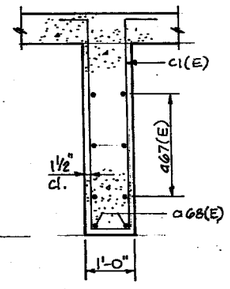


SECTION B-B

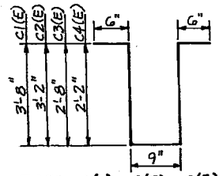


BOTTOM ANCHOR BOLT TEMPLATE

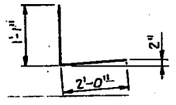
COST INCIDENTAL TO CLASS "X" CONCRETE SUPERSTRUCTURE



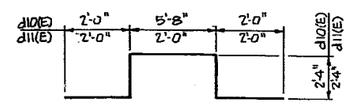
SECTION C-C



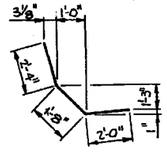
BARS c1(E), c2(E), c3(E) & c4(E)



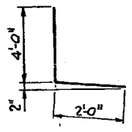
BAR a60(E)



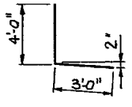
BARS d10(E) & d11(E)



BAR d12(E)



BAR d13(E)



BAR d14(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a60(E)	14	#5	3'-1"	L
a61(E)	7	#5	4'-6"	——
a62(E)	7	#7	4'-3"	——
a63(E)	7	#7	6'-6"	——
a64(E)	9	#5	5'-0"	——
a65(E)	9	#7	11'-6"	——
a66(E)	4	#4	3'-6"	——
a67(E)	12	#4	4'-6"	——
a68(E)	6	#6	3'-4"	——
b90(E)	15	#6	5'-8"	——
c1(E)	11	#5	9'-1"	⊓
c2(E)	1	#5	8'-1"	⊓
c3(E)	1	#5	7'-1"	⊓
c4(E)	1	#5	6'-1"	⊓
d10(E)	5	#7	14'-4"	⊓
d11(E)	5	#5	10'-8"	⊓
d12(E)	11	#5	6'-0"	L
d13(E)	6	#4	6'-0"	L
d14(E)	7	#8	7'-0"	L
e85(E)	2	#4	5'-8"	——
REINFORCING BARS (EPOXY COATED)			LBS.	1,250
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	4.7

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
BAR DIMENSIONS SHOWN ARE OUT TO OUT.

NOTE:
OVERHEAD SIGNS MUST BE PERPENDICULAR TO THE FLOW OF TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY IN THE FIELD THE LOCATION AND THE ANGLE OF THE ANCHOR BOLT GROUP IN ORDER TO PROPERLY ERECT THE SIGN.

PARAPET MOUNTED SIGN BASE

SECTION
F.A.I. ROUTE 80/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

60

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	235
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 60 of 74 SHEETS

* 05052-2B, 3-IH, 6-IP; 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

BEAM MOMENT TABLE

BEAM NUMBER		S14.3 S14.1	S14.2	S14.4	S15.3 S15.1	S15.2	S15.4	S15.5	S15.8 S15.7 S15.6	S15.9	S16.3 S16.1	S16.2	S16.4	S16.5	S16.8 S16.7 S16.6	S16.9	S17.4	S17.5	S17.6	S17.7	S17.8	S17.9	S17.12 S17.11 S17.10	S17.13	S18.9	S18.10	S18.11	S18.12	S18.13	GIRDER G1
Is	in⁴	16,770	17,284	15,479	16,770	19,093	17,553	17,553	17,553	14,610	16,770	17,284	16,770	17,553	17,553	17,553	17,553	17,553	19,872	19,872	19,872	15,479	17,729	17,553	15,479	15,479	15,479	15,479	12,547	2,093.8
Ic(n=9)	in⁴	55,249	57,915	40,971	55,249	68,061	47,493	47,493	50,242	37,163	55,249	57,915	50,903	45,642	50,242	50,242	49,600	47,428	59,581	63,110	56,708	43,264	57,083	47,428	43,264	46,629	46,629	46,629	32,866	2,515.6
Ic(n=27)	in⁴	38,534	40,058	28,227	38,534	45,642	33,158	33,158	35,488	26,834	38,534	40,058	34,705	31,714	35,488	35,486	34,923	33,106	40,671	43,696	38,419	30,006	38,953	33,106	30,006	32,922	32,922	32,922	23,639	2,247.2
Ss	in³	929.9	985.4	783.5	929.9	1,200.9	880.1	880.1	880.1	642.6	929.9	985.4	929.9	880.1	880.1	880.1	880.1	880.1	1,109.1	1,109.1	1,109.1	783.5	1,010.3	880.1	783.5	783.5	783.5	783.5	548.4	27,280.8
Sc(n=9)	in³	1357.1	1437.3	1,099.7	1,357.1	1,756.5	1,224.3	1,224.3	1,241.0	906.8	1,357.1	1,437.3	1,332.6	1,212.4	1,241.0	1,241.0	1,237.2	1,223.9	1,555.2	1,574.2	1,538.6	1,115.0	1,456.8	1,223.9	1,115.0	1,135.8	1,135.8	1,135.8	796.8	28,875.6
Sc(n=27)	in³	1246.5	1320.2	989.2	1,246.5	1,611.4	1,112.6	1,112.6	1,135.2	821.3	1,246.5	1,320.2	1,210.8	1,097.5	1,135.2	1,135.2	1,129.9	1,112.1	1,420.5	1,447.9	1,398.2	1,008.7	1,331.5	1,112.1	1,008.7	1,037.4	1,037.4	1,037.4	717.3	27,909.4
DL	k/ft	0.897	0.897	0.569	0.908	0.908	0.695	0.667	0.819	0.697	0.908	0.908	0.719	0.636	0.809	0.786	0.804	0.695	0.804	0.928	0.703	0.644	0.829	0.704	0.666	0.806	0.806	0.806	0.612	2.06
MDL	k-ft	504.8	504.8	320.2	529.5	529.5	405.3	377.6	463.7	394.6	508.0	508.0	402.2	355.8	452.6	439.7	512.3	442.9	512.3	591.4	448.0	419.6	540.2	458.7	255.5	316.0	316.0	316.0	245.0	25,1[illegible]
SDL	k/ft	0.182	0.182	0.101	0.184	0.184	0.131	0.247	0.247	0.247	0.186	0.186	0.137	0.247	0.247	0.247	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.218	0.246	0.246	0.246	0.246	0.246	0.321
MSDL	k-ft	102.4	102.4	56.8	107.3	107.3	76.4	139.8	139.8	139.8	104.1	104.1	76.6	138.2	138.2	138.2	138.9	138.9	138.9	138.9	138.9	142.0	142.0	142.0	94.4	96.4	96.4	96.4	98.5	4,593
MLL	k-ft	619.0	619.0	340.8	639.9	639.9	453.7	419.9	557.6	537.0	628.7	628.7	461.3	386.0	543.2	532.9	574.1	479.1	574.1	686.3	466.9	448.9	609.9	587.3	332.5	437.4	437.4	437.4	427.3	6,228
MIMP	k-ft	160.9	160.9	88.6	165.7	165.7	117.5	109.2	145.0	139.6	164.1	164.1	120.3	100.7	141.8	139.1	146.4	122.2	146.4	175.0	119.1	114.0	154.9	149.2	92.1	120.7	120.7	120.7	117.5	953
MLL+I	k-ft	779.9	779.9	429.4	805.6	805.6	571.2	529.1	702.6	676.6	792.8	792.8	581.6	486.7	685.0	672.0	720.5	601.3	720.5	861.3	586.0	562.9	764.8	736.5	424.6	558.1	558.1	558.1	544.8	7,181
fs (DL)	ksi	6.51	6.14	4.90	6.83	5.29	5.53	5.15	6.32	7.37	6.56	6.19	5.19	4.85	6.17	6.00	6.99	6.04	5.54	6.40	4.85	6.43	6.42	6.25	3.91	4.84	4.84	4.84	5.36	11.0
fs (SDL)	ksi	0.99	0.93	0.69	1.03	0.80	0.82	1.51	1.48	2.04	1.00	0.95	0.76	1.51	1.46	1.46	1.48	1.50	1.17	1.15	1.19	1.69	1.28	1.53	1.12	1.12	1.12	1.12	1.65	2.0
fs (LL+I)	ksi	6.90	6.51	4.69	7.12	5.50	5.60	5.19	6.79	8.95	7.00	6.61	5.23	4.81	6.62	6.49	6.99	5.90	5.56	6.57	4.57	6.06	6.30	7.22	4.57	5.90	5.90	5.90	8.20	3.0
fs TOTAL	ksi	14.40	13.58	10.28	14.98	11.59	11.95	11.85	14.59	18.36	14.56	13.75	11.18	11.17	14.25	13.95	15.46	13.44	12.27	14.12	10.61	14.18	14.00	15.00	9.60	11.86	11.86	11.86	15.21	16.0
VR	k	41.1	41.1	25.7	41.6	41.6	30.8	29.9	40.4	35.5	43.7	43.7	30.8	25.7	36.2	35.5	41.5	38.5	41.5	44.1	31.0	29.0	40.9	35.9	27.6	39.1	39.1	39.1	34.4	127.5

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

BEAM REACTION TABLE

BEAM NUMBER		S14.3 S14.1	S14.2	S14.4	S15.3 S15.1	S15.2	S15.4	S15.5	S15.8 S15.7 S15.6	S15.9	S16.3 S16.1	S16.2	S16.4	S16.5	S16.8 S16.7 S16.6	S16.9	S17.4	S17.5	S17.6	S17.7	S17.8	S17.9	S17.12 S17.11 S17.10	S17.13	S18.9	S18.10	S18.11	S18.12	S18.13	GIRDER G1
R_{DL}	k	36.2	36.2	22.5	37.3	37.3	28.2	30.8	35.9	31.8	36.6	36.6	28.6	29.5	35.3	34.6	36.5	32.6	36.5	40.9	32.9	31.1	37.8	33.3	25.3	29.5	29.5	29.5	24.3	550.6
R_{LL}	k	45.9	45.9	35.7	46.5	46.5	39.1	38.4	45.5	35.5	48.7	48.7	39.1	34.5	40.6	35.5	46.3	43.4	46.3	49.1	39.4	38.1	45.9	35.9	36.7	44.2	44.2	44.2	34.4	131.5
IMP	k	11.9	11.9	9.3	12.0	12.0	10.1	10.0	11.8	9.2	12.7	12.7	10.2	9.0	10.6	9.2	11.8	11.1	11.8	12.5	10.0	9.7	11.7	9.1	10.2	12.2	12.2	12.2	9.5	20.1
R TOTAL	k	94.0	94.0	67.5	95.8	95.8	77.4	79.2	93.2	76.5	98.0	98.0	77.9	73.0	86.5	79.3	94.6	87.1	94.6	102.5	82.3	78.9	95.4	78.3	72.2	85.9	85.9	85.9	68.2	702.2

STANLEY CONSULTANTS

MOMENT AND REACTION TABLE

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

609

3

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
4"	3"	2½" Min.

INSTALLATION NOTES

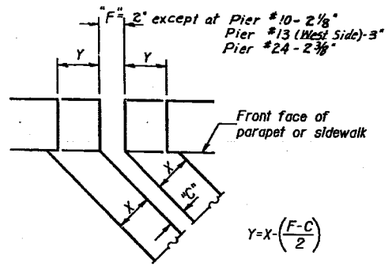
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

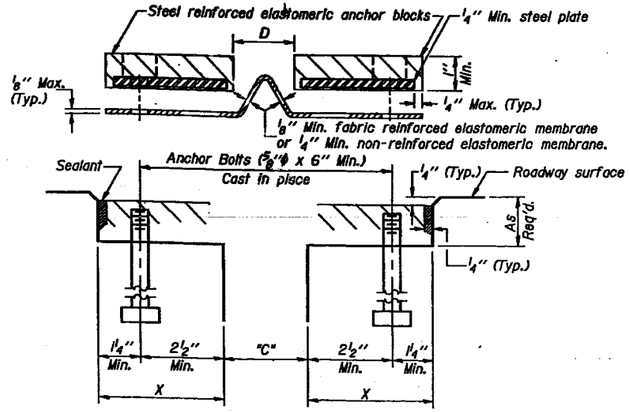
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CROSS SECTION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

				SHEET NO. 61
	*		4216	2236 of 74 SHEETS
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

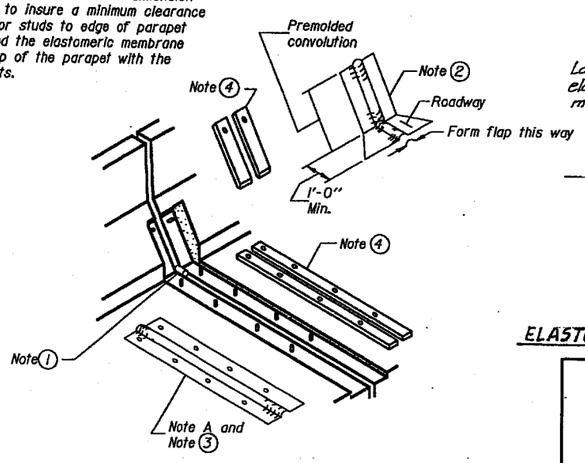
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

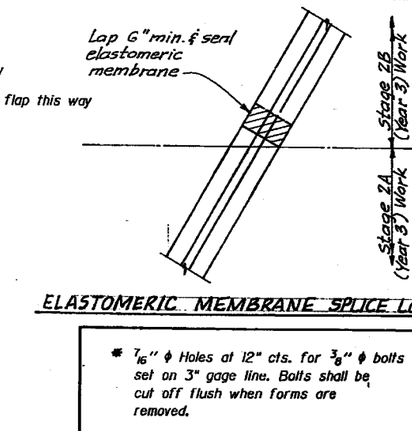
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

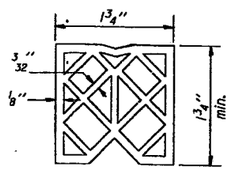
All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.



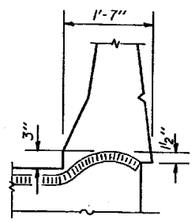
AT PARAPET



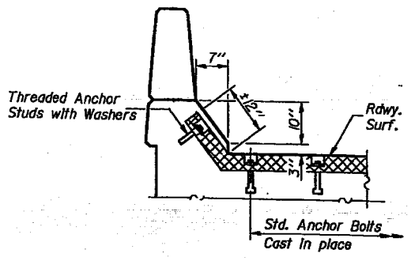
ELASTOMERIC MEMBRANE SPLICE LOCATIONS



PREFORMED JOINT SEAL (1¾")

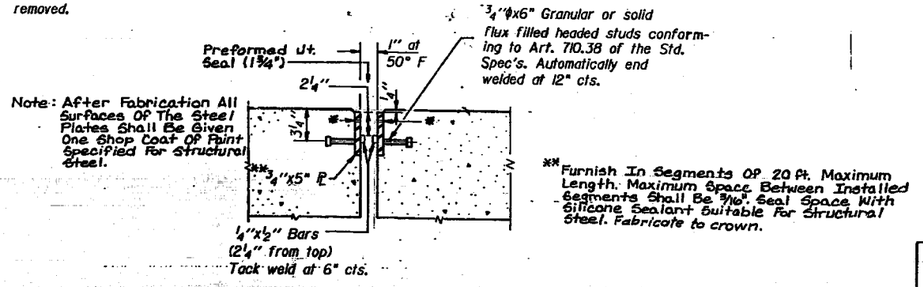


TYP. END OF SEAL TREATMENTS



AT PARAPET

* 7/16" ϕ Holes at 12" cts. for ⅜" ϕ bolts set on 3" gage line. Bolts shall be cut off flush when forms are removed.

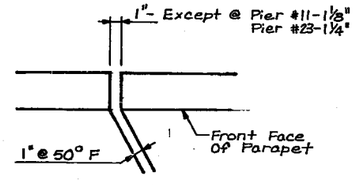


Note: After Fabrication All Surfaces Of The Steel Plates Shall Be Given One Shop Coat Of Paint Specified For Structural Steel.

** Furnish In Segments Of 20 Ft. Maximum Length. Maximum Space Between Installed Segments Shall Be 3/16". Seal Space With Silicone Sealant Suitable For Structural Steel. Fabricate to crown.

DETAIL "A"

PREFORMED JOINT SEAL (1¾")



FORMING BLOCKING SKETCH

STANLEY CONSULTANTS

EJ-CS 12-31-87

EXPANSION JOINT AND PREFORMED JOINT SEAL DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

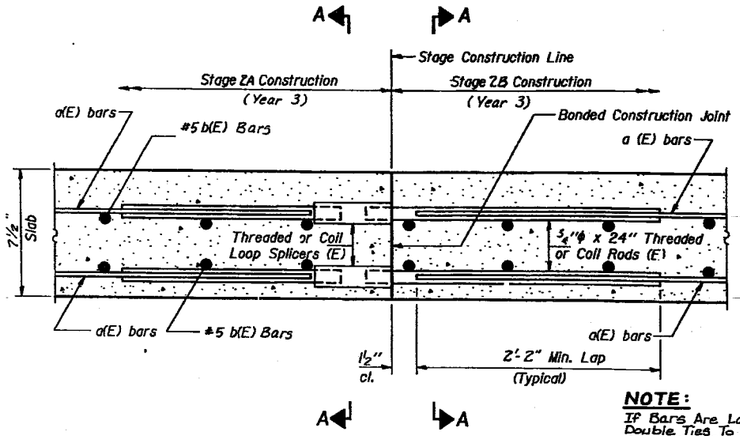
ORG.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	237

SHEET NO. 62 of 74 SHEETS

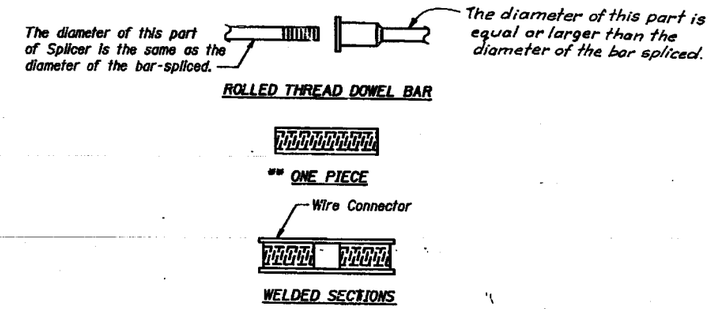
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



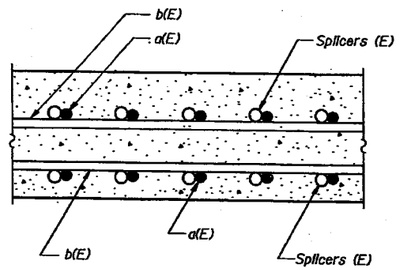
SECTION THRU SLAB

NOTE:
If Bars Are Lapped, Provide Double Ties To Prevent Movement Due To Traffic During Stage 2B Pour.



SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

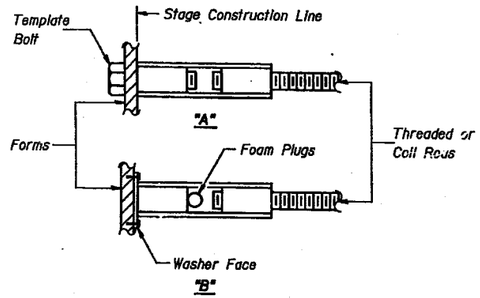


SECTION A-A

SPLICER DETAILS

(No. Req'd. 4260)

Cost Incidental to Reinforcement Bars (Epoxy Coated).



INSTALLATION AND SETTING METHODS

"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) $= 1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) $= 1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

In Slabs

#5 bar lap with ¾"φ Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
#6 bar lap with ⅞"φ Splicer (Coupler) x 2'-7" Splicer Rods	Minimum Capacity = 33.1 kips-tension Minimum Pull-out Strength = 13.3 kips-tension
#7 bar lap with 1"φ Splicer (Coupler) x 3'-5" Splicer Rods	Minimum Capacity = 45.1 kips-tension Minimum Pull-out Strength = 18.0 kips-tension

STANLEY CONSULTANTS

BSD-1 12-31-87

STAGE CONSTRUCTION
BAR SPLICER
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

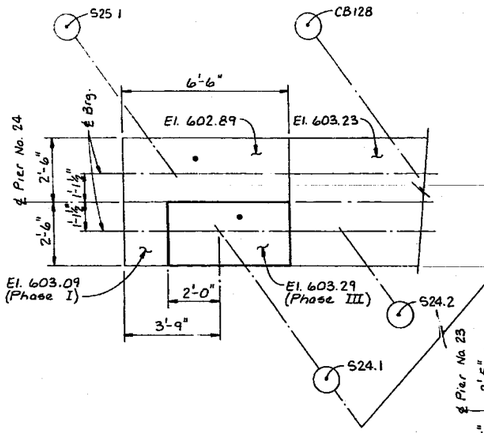
611 3

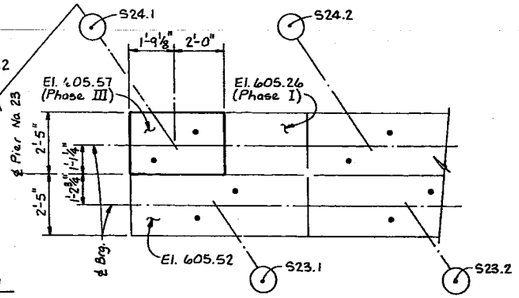
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	238
F. HB. A. RET. 4	ILLINOIS	FED. AID PROJECT		

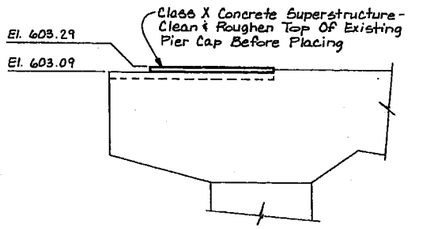
SHEET NO. 63 of 74 SHEETS

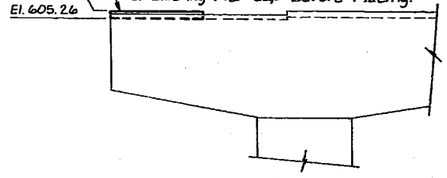
* 05051-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2





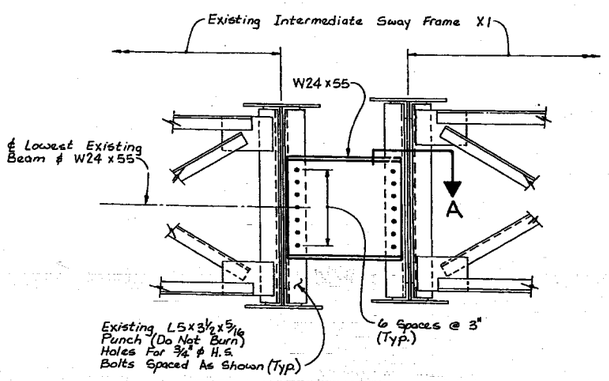
PLAN



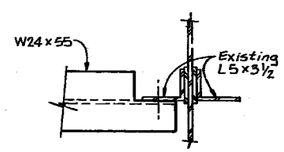


ELEVATION

PIER STEP MODIFICATIONS - PIERS NO. 23 & 24

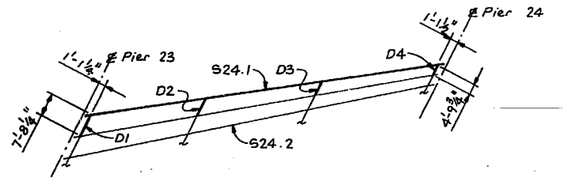


INTERMEDIATE DIAPHRAGM (6 REQ'D.)
@ Spans 15, 16 & 17

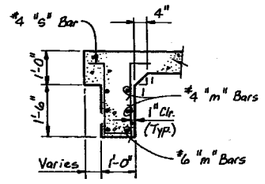


SECTION A

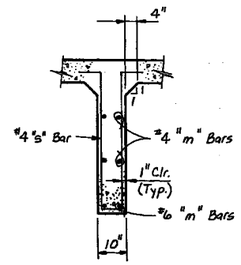
FOR ERECTION ONLY



PLAN - DIAPHRAGM REPLACEMENT

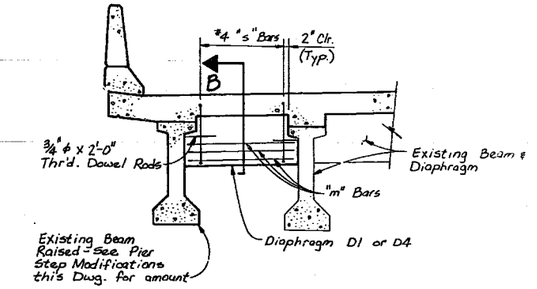


SECTION B

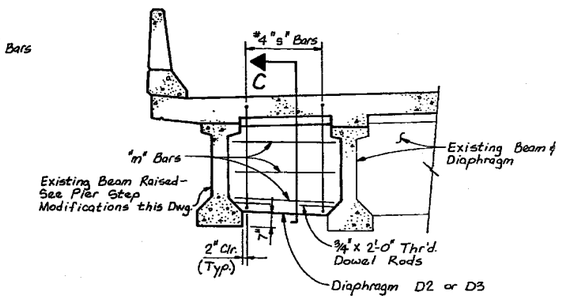


SECTION C

DIAPHRAGM REINFORCEMENT			
DIAPHRAGM	NO. OF BARS PER DIAPHRAGM		
	STIRRUPS	BOTTOM BARS	SIDE BARS
D1	6-#4s8(E)	2-#6m16(E)	4-#4m17(E)
D2	5-#4s7(E)	2-#6m18(E)	4-#4m19(E)
D3	4-#4s7(E)	2-#6m20(E)	4-#4m21(E)
D4	4-#4s8(E)	2-#6m22(E)	4-#4m23(E)



DIAPHRAGM ELEVATION @ PIERS



INTERMEDIATE DIAPHRAGM ELEVATION

STANLEY CONSULTANTS

MISCELLANEOUS DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

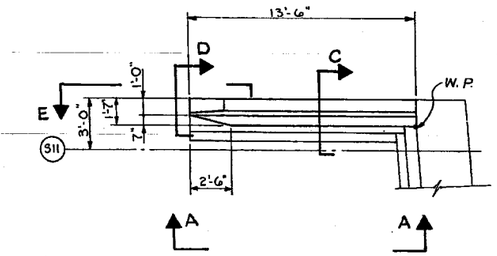
612

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

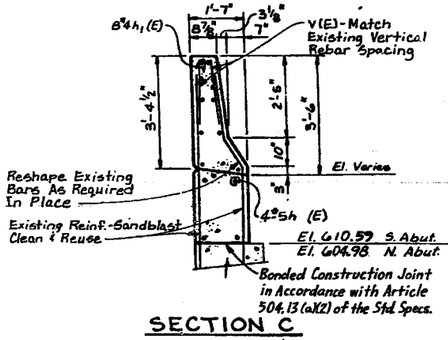
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	239
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 64 of 74 SHEETS

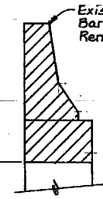
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 06C6-403HB & 07071404HB, 439IR-2



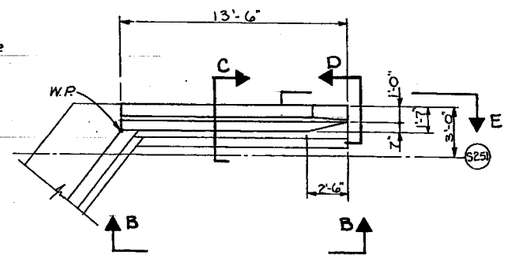
PLAN



SECTION C



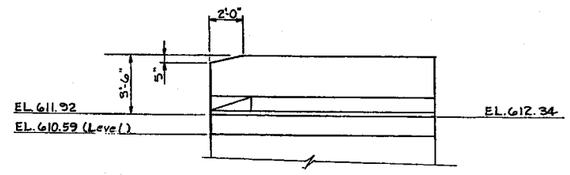
SECTION C
(EXISTING)



PLAN

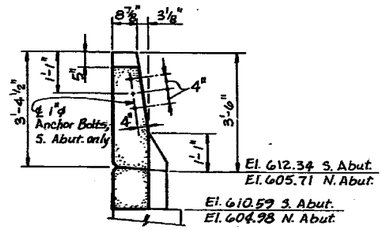
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	8	#5	13'-2"	——
h1(E)	16	#4	13'-2"	——
V(E)	56	#6	2'-0"	——
Reinforcement Bars (Epoxy Coated)			Lbs.	420
Structural Excavation			Cu.Yds.	6
Class "X" Concrete			Cu.Yds.	4.8
Concrete Removal			Cu.Yds.	5.1

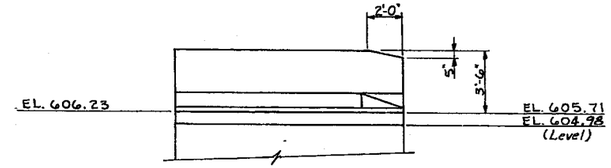


ELEVATION A-A

SOUTH ABUTMENT - WEST END

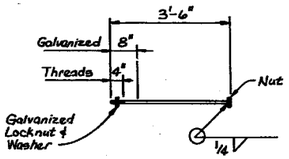


VIEW D

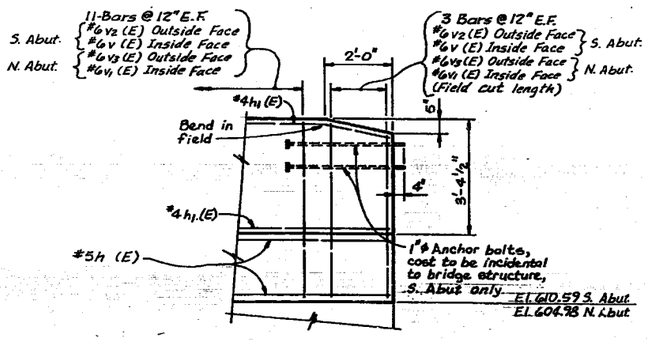


ELEVATION B-B

NORTH ABUTMENT - WEST END



1"ø ANCHOR BOLT



VIEW E

Reinforcement bars designated (E) shall be epoxy coated.

All bar dimensions are out-to-out.

▨ Indicates concrete removal.

STANLEY CONSULTANTS

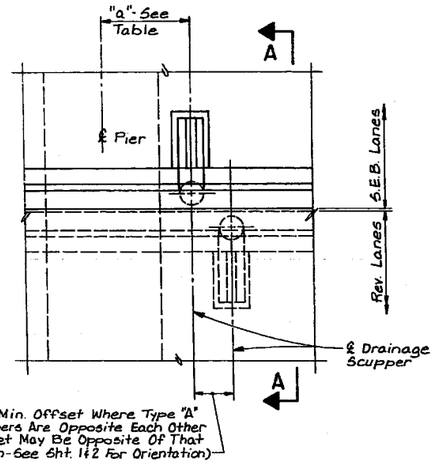
SOUTH ABUTMENT - WEST END
NORTH ABUTMENT - WEST END
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	240
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

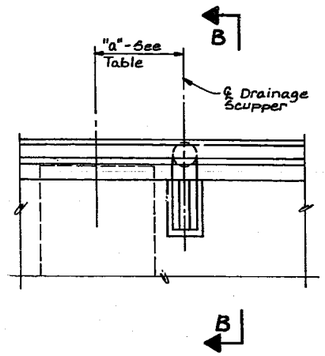
SHEET NO. 65 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451),
0506-450, 0605-402HB, 0606-403HB &
0707(404HB, 439)R-2

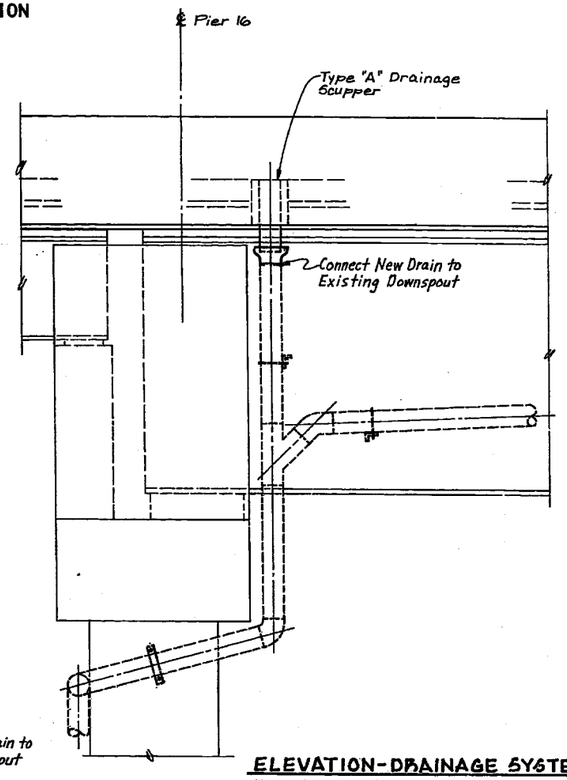


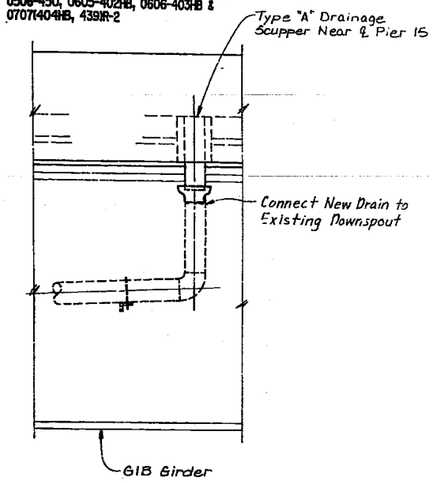
1'-6" Min. Offset Where Type "A" Scuppers Are Opposite Each Other (Offset May Be Opposite Of That Shown-See Sht. 1 of 2 For Orientation)

PLAN

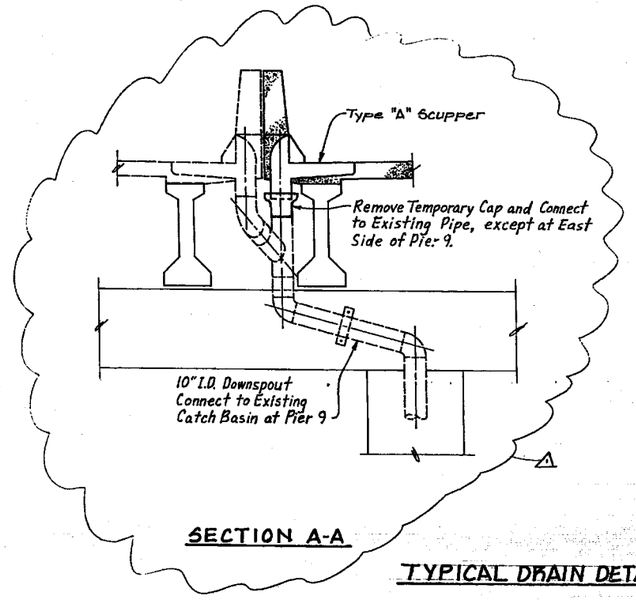


PLAN

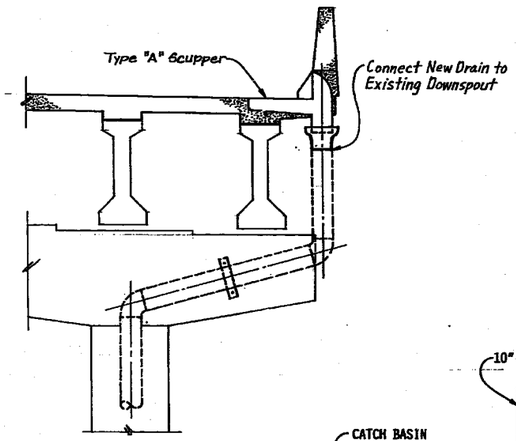




ELEVATION-DRAINAGE SYSTEM @ SPAN 16
(Looking East)

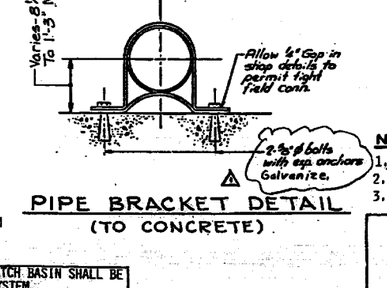


SECTION A-A



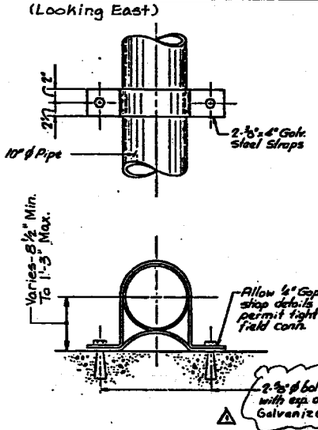
SECTION B-B

TYPICAL DRAIN DETAILS

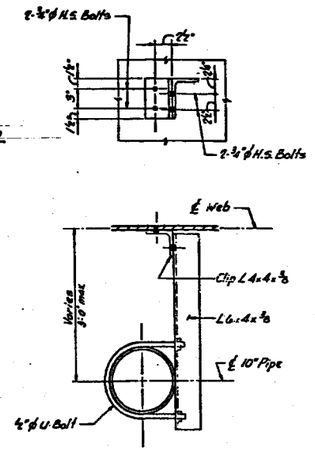


NOTES:
1. CONNECTION TO EXISTING CATCH BASIN SHALL BE INCIDENTAL TO DRAINAGE SYSTEM.
2. REMOVE EXISTING 6"ø C.I. DOWNSPOUT CONNECTION AND FILL IN HOLE IN CATCH BASIN AS NEEDED.

DOWNSPOUT DRAINAGE SYSTEM CONNECTION TO CATCH BASIN DETAIL



PIPE BRACKET DETAIL
(TO CONCRETE)



PIPE BRACKET DETAIL
(TO BEAM WEB)

NOTES:
1. SEE SHEETS 1 AND 2 FOR LOCATION AND ORIENTATION OF DRAINS.
2. FOR BRIDGE SCUPPER DETAILS SEE SHEETS 66 AND 67.
3. LOCATE DRAINS TO CLEAR ALL DIAPHRAGMS.

DRAINAGE SCUPPER LOCATION TABLE

LOCATION	PIER 1	PIER 3	PIER 5	PIER 7	PIER 9	PIER 10	PIER 13	PIER 15	PIER 16	PIER 17	PIER 18	PIER 19	PIER 20	PIER 21	PIER 22	PIER 23	PIER 24
TYPE(EAST)	A	A	A	A	A	A	A	-	-	-	-	-	-	-	-	-	-
DIMENSION a**	5'-0"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	3'-6"	-	-	-	-	-	-	-	-	-	-
TYPE(WEST)	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
DIMENSION a**	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	3'-6"	5'-9"	5'-9"

** SEE SHEETS 1 AND 2 FOR ORIENTATION OF DRAINAGE SCUPPERS
*SCUPPER DOWNSPOUT ON EAST SIDE OF PIER 9 WILL CONNECT TO DRAINAGE STRUCTURE NO. (4) REFER TO SHEET 75 FOR TYPE AND LOCATION.

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

DRAINAGE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

⚠ As Revised 9-22-92 PMP

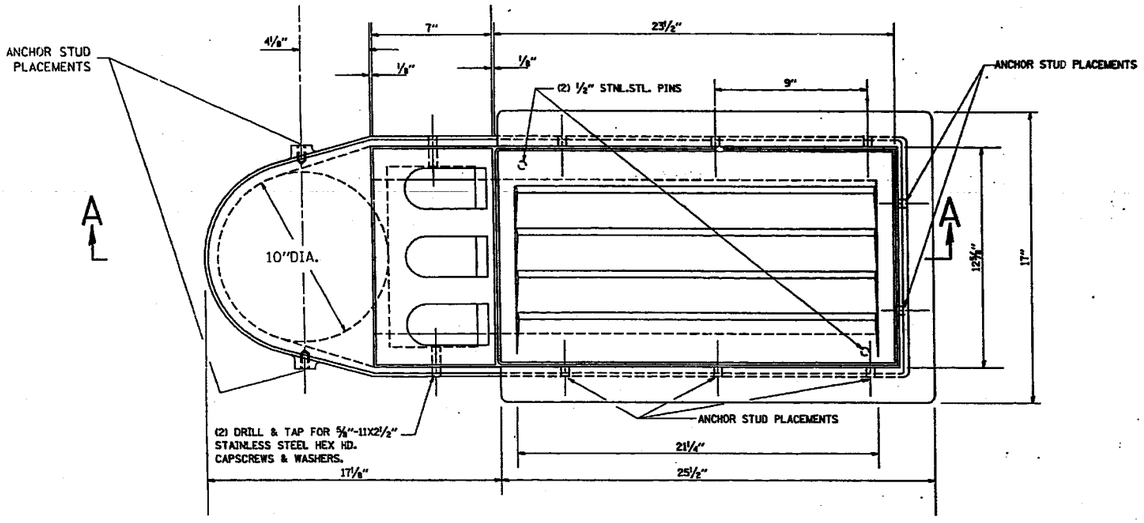
614

DUPE REPRODUCTIONS, INC.

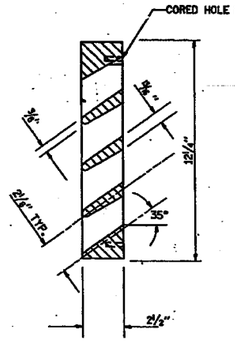
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	341
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

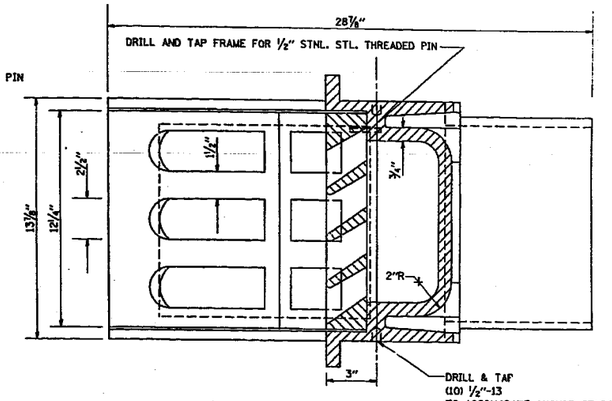
SHEET NO. 66 OF 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



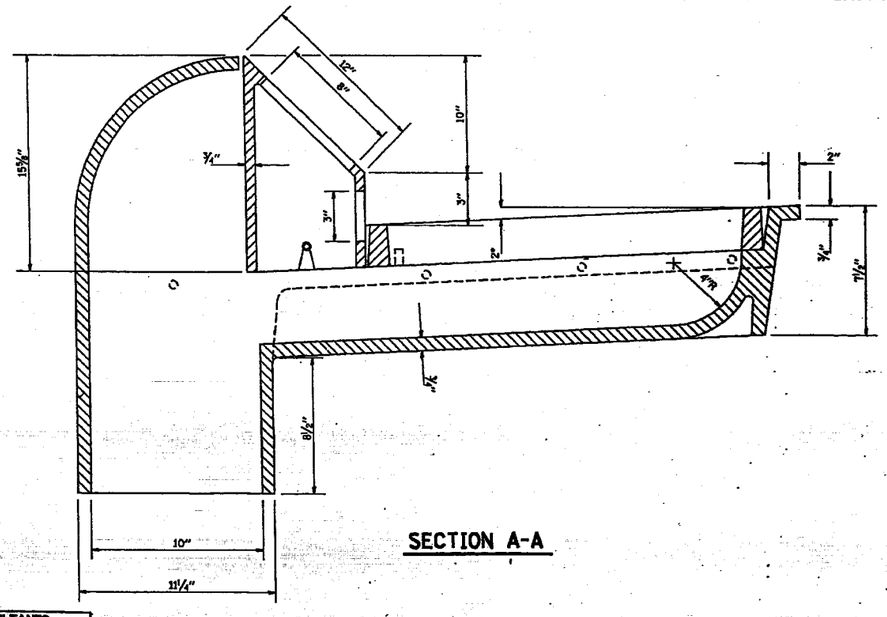
PLAN





BRIDGE SCUPPER - TYPE "A"

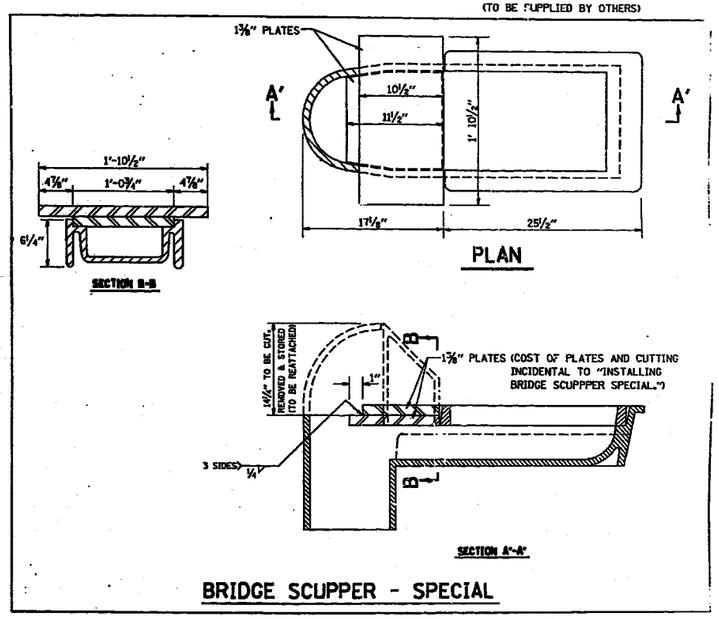
NF - 0332 445
ESTIMATED WEIGHT 512*



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS)



BRIDGE SCUPPER - SPECIAL

ONLY FOR MEDIAN PARAPET DURING STAGED CONSTRUCTION. (MEDIAN PARAPET IS OMITTED TEMPORARILY.)

MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

BRIDGE SCUPPER - TYPE A SHEET 1 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

STANLEY CONSULTANTS

VI-CS-1

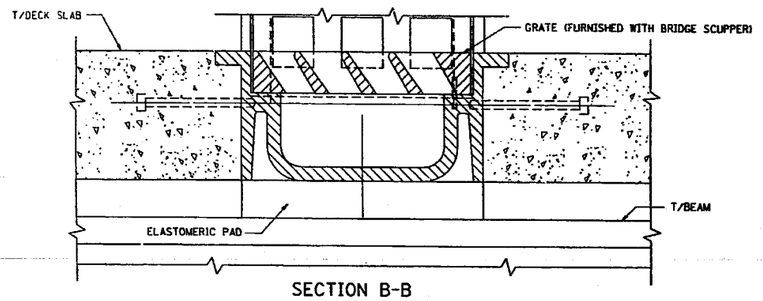
ZF4d110,73ZDISTSTD6.DGN
395400.185:712

615

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		420	242
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

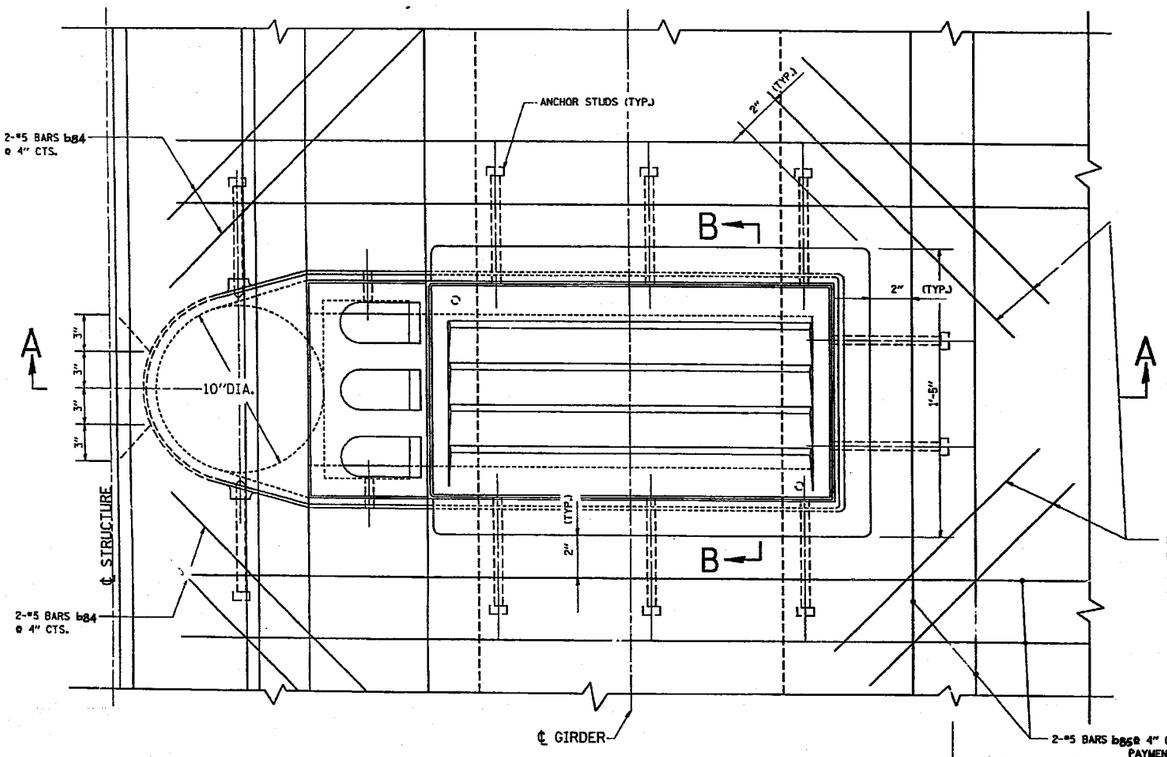
SHEET NO. 67 of 74 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707404HB, 439R-2

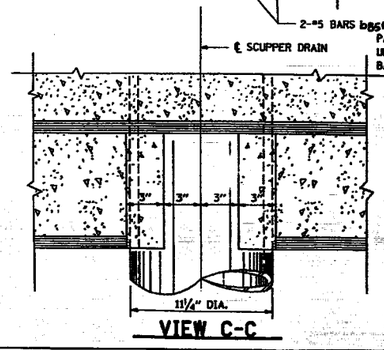


SECTION B-B

STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.



PLAN



VIEW C-C

REINFORCEMENT BAR SCHEDULE

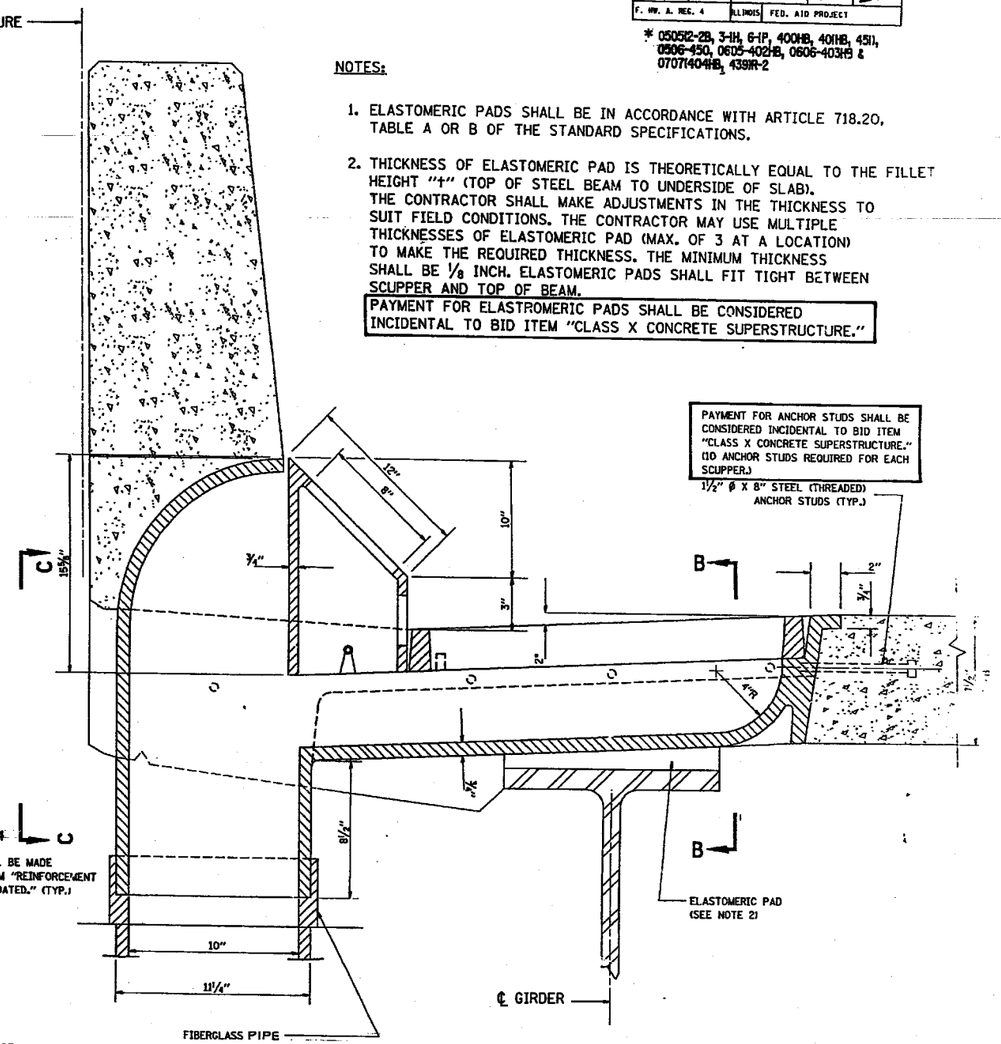
MARK	NO.	SIZE	LENGTH	SHAPE
b84(E)	8	#5	2'-0"	——
b85(E)	6	#5	5'-0"	——

NOTES:

1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 718.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.
2. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE ⅛ INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

PAYMENT FOR ELASTROMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."

PAYMENT FOR ANCHOR STUDS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE." (10 ANCHOR STUDS REQUIRED FOR EACH SCUPPER.)



SECTION A-A

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "A" SCUPPERS ARE USED AT OUTSIDE PARAPET.)

BRIDGE SCUPPER - TYPE A
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

STANLEY CONSULTANTS

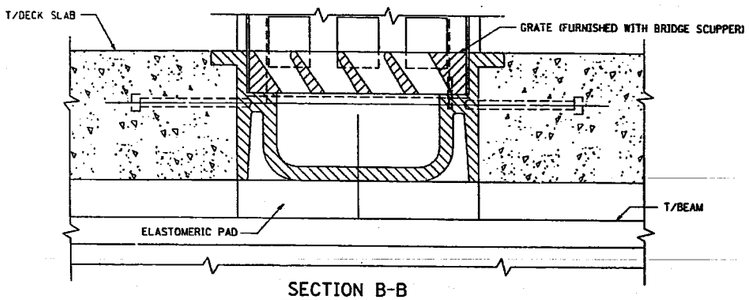
VI=CS-4

ZF4E110,7JZDISTSTD6.DGN
309000.1852857

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		420	242
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

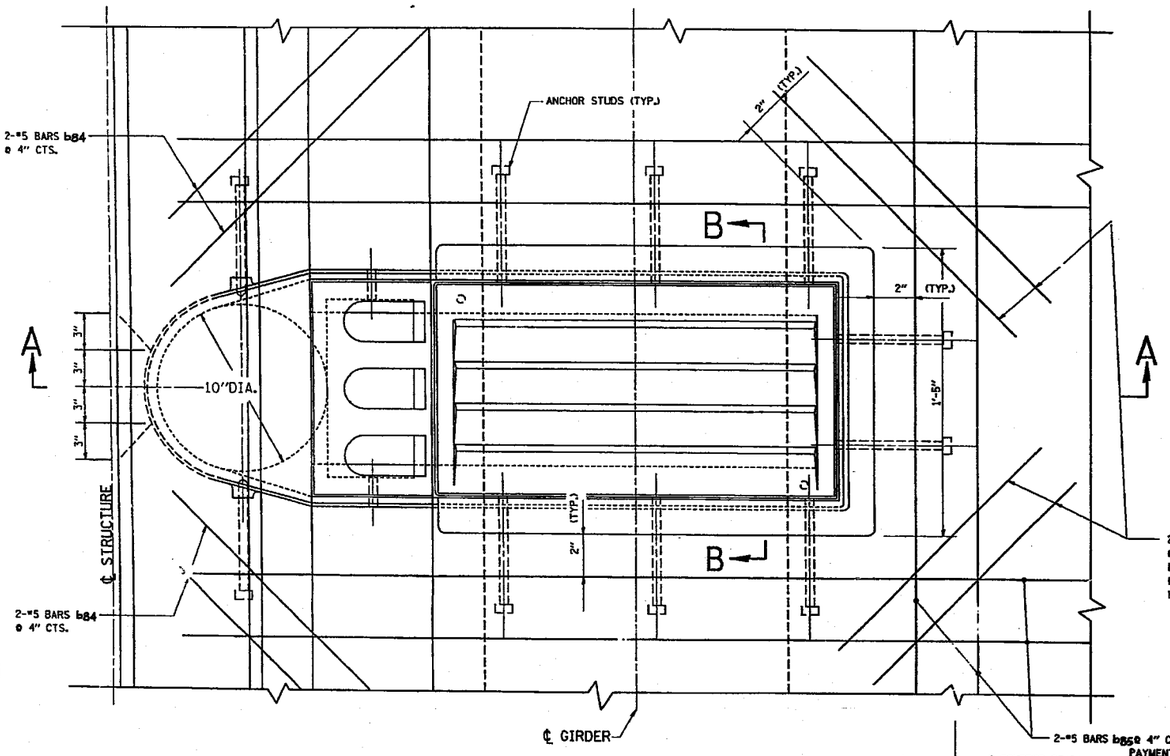
SHEET NO. 67 of 74 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403H3 & 0707(404HB, 439IR-2

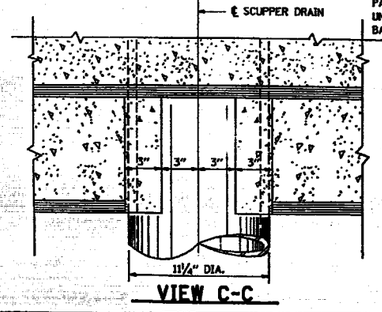


SECTION B-B

STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.



PLAN



VIEW C-C

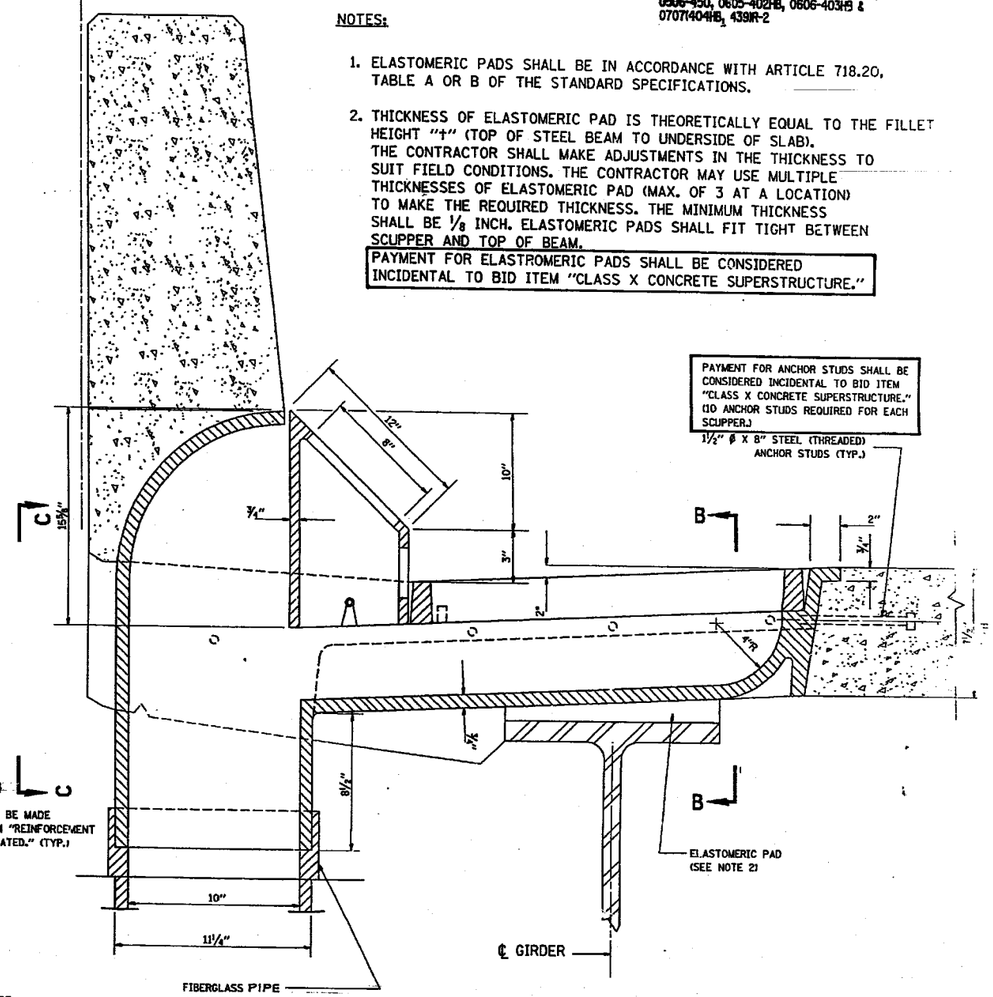
2-#5 BARS b84 @ 4" CTS. PAYMENT SHALL BE MADE UNDER BID ITEM "REINFORCEMENT BARS EPOXY COATED." (TYP.)

NOTES:

1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 718.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.
2. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE ⅛ INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM.

PAYMENT FOR ELASTROMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."

PAYMENT FOR ANCHOR STUDS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE." (10 ANCHOR STUDS REQUIRED FOR EACH SCUPPER.)



SECTION A-A

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "A" SCUPPERS ARE USED AT OUTSIDE PARAPET.)

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
b84(E)	8	#5	2'-0"	——
b85(E)	5	#5	5'-0"	——

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INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

BRIDGE SCUPPER - TYPE A
SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

VI=CS-4

ZF4:E110,73ZDISTSTD6.DGN
309000.1852857

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

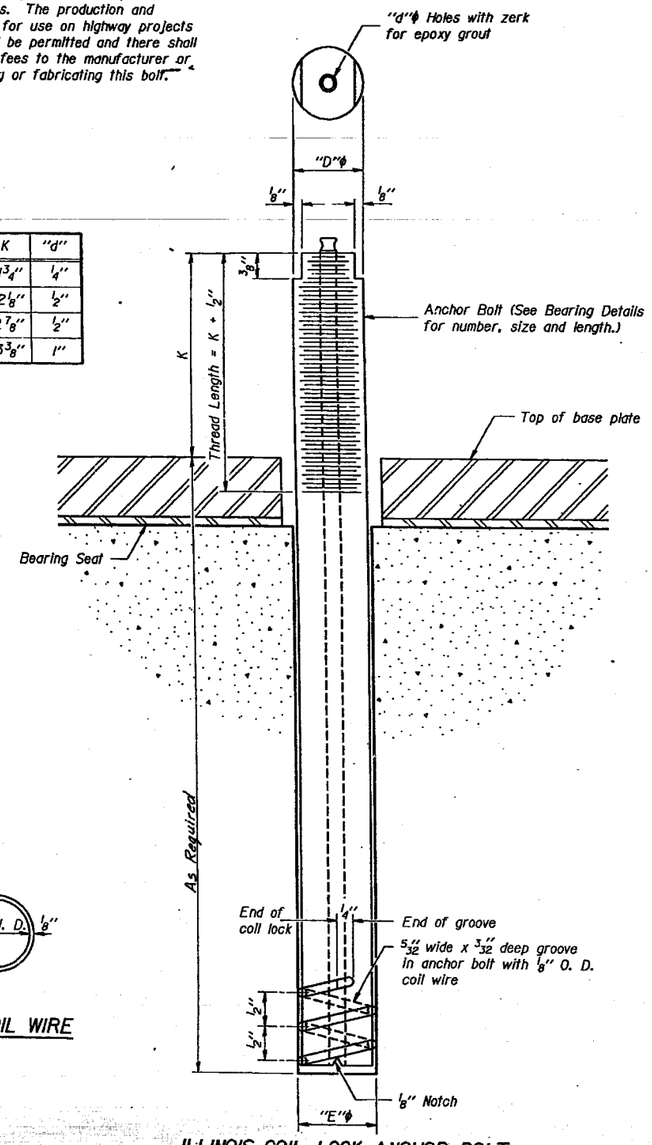
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	243

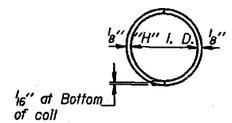
SHEET NO. 68 of 74 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB. 439IR-2

D	E	H	K	"d"
1"	1⅛"	13/16"	1¾"	¼"
1½"	1⅝"	1 5/16"	2⅛"	½"
2"	2⅛"	1 13/16"	2 7/8"	½"
2½"	2 5/8"	2 5/16"	3⅜"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for **"1" Diameter Anchor Bolts."**

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ABB-1 12-1-83

ANCHOR BOLT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

STATION 409+49

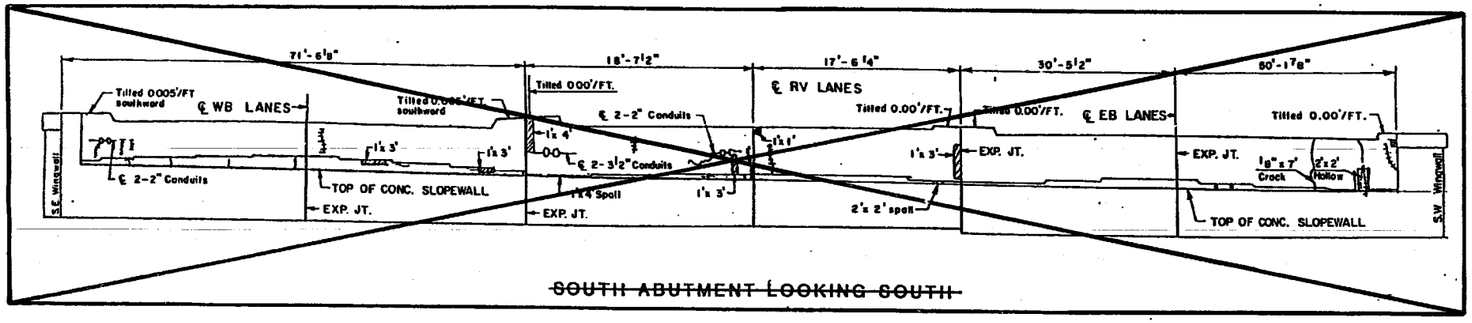
617 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707f404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*	-	426	244
F. AM. A. SEC. 4	ILLINOIS	FED. AID PROJECT:		

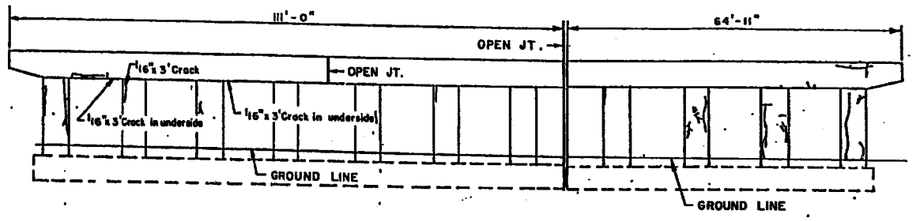
SHEET NO. 69 of 74 SHEETS



~~SOUTH ABUTMENT LOOKING SOUTH~~

NOTES:

1. THIS DRAWING SHOWS AREAS WHERE CONCRETE SPALLING AND CRACKING HAVE BEEN OBSERVED AT THE EXISTING PIERS AND ABUTMENTS.
2. TO DETERMINE EXACT AREAS WHERE DETERIORATION REQUIRES CONCRETE REPAIR, CONCRETE SURFACES SHALL BE SOUNDED WITH HAMMER TO DETECT LOOSE OR DEFECTIVE AREAS THAT MAY EXIST.
3. SEE SPECIAL PROVISIONS FOR PROCEDURES DESCRIBING THE REHABILITATION WORK.
4. REPAIR AREAS SHOWN REFLECT AN INDEPENDENT FIELD INSPECTION PERFORMED UNDER THE DIRECTION OF IDOT. REPAIR OF THE EXISTING SUBSTRUCTURE SHALL INCLUDE BUT NOT BE LIMITED TO THESE AREAS. ALL LIMITS OF REPAIR SHALL BE AS DIRECTED BY THE ENGINEER.
5. FOR REPAIR DEPTHS < 1-1/2", USE EPOXY MORTAR REPAIR (SEE SPECIAL PROVISIONS.
6. ANY AREAS REQUIRING REPAIR WHICH ARE INACCESSIBLE DURING THIS CONTRACT SHALL BE NOTED AS SUCH ON THE CONSTRUCTION PLANS AS DIRECTED BY THE ENGINEER. REPAIR OF THESE AREAS SHALL BE INCLUDED IN A FUTURE CONTRACT.
7. FOR CONCRETE REMOVAL AND REPLACEMENT DETAILS, SEE "CONCRETE REPAIR DETAILS" ELSEWHERE IN THE PLANS.
8. PIER REPAIR WORK THIS CONTRACT WILL BE FROM THE APPROXIMATE EDGE OF RECONSTRUCTED REVERSIBLE LANES TO PIER EXTENSION CONSTRUCTED AS A PART OF SUBSTRUCTURE WIDENING CONTRACT.



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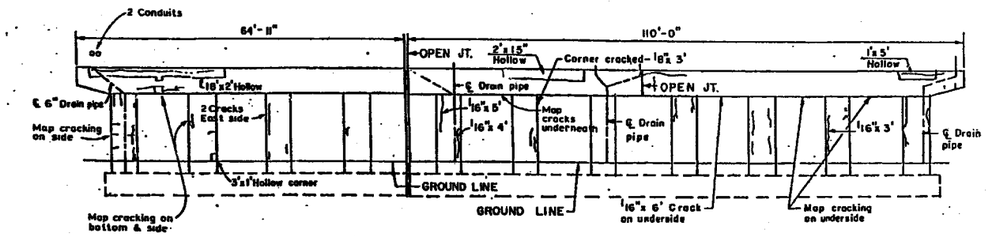
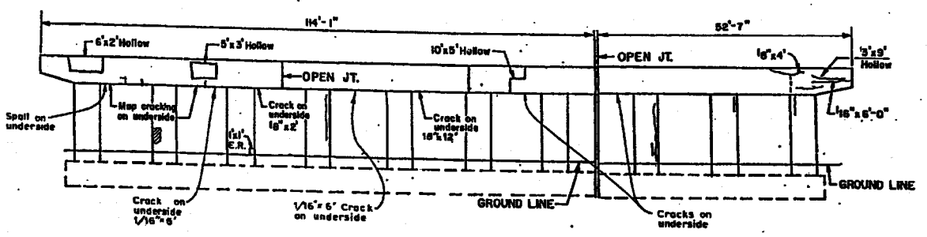


PIER NO. 1 - LOOKING SOUTH



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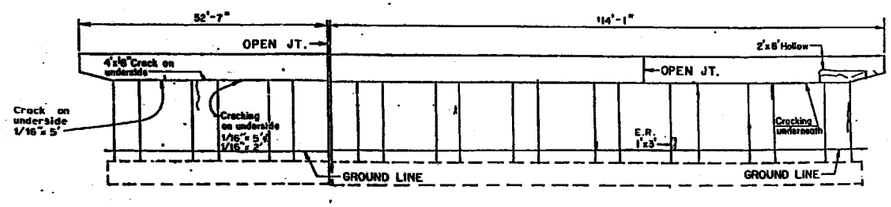


PIER NO. 2 - LOOKING SOUTH

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

SUBSTRUCTURE REHABILITATION SHEET 1 OF 6

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

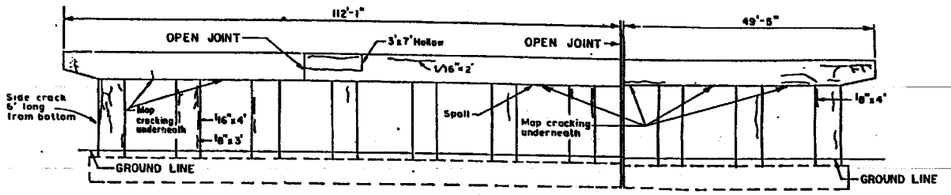
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	245
F. NO. & REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 70 of 74 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



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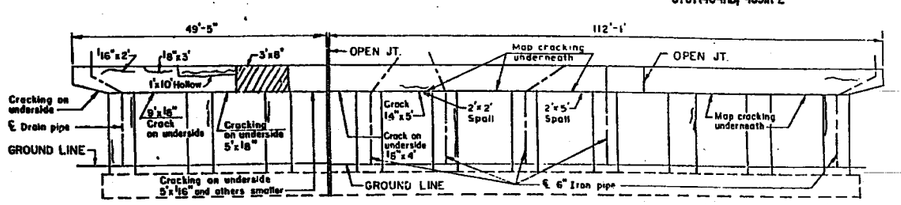

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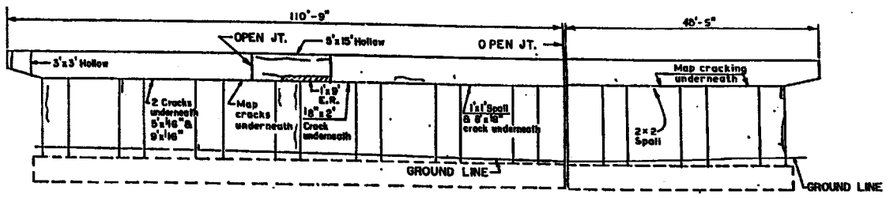

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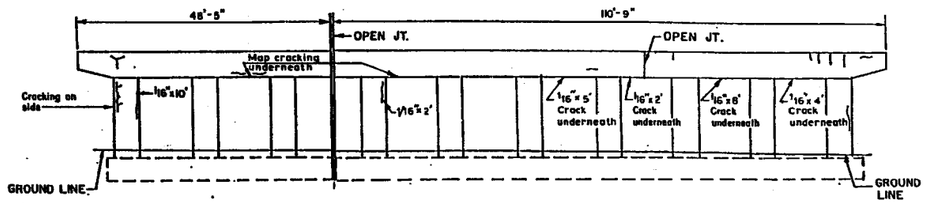

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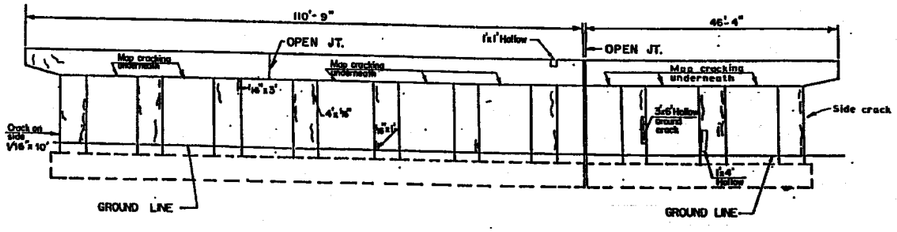

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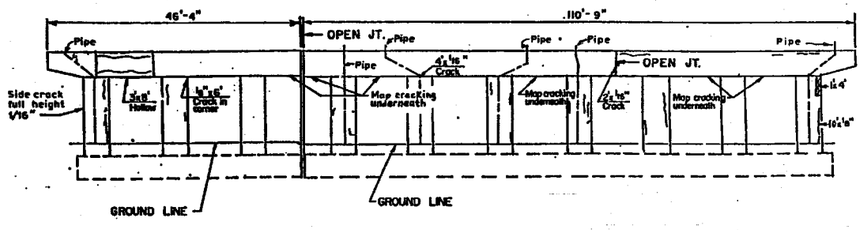


PIER NO. 5 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 2 OF 6

SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

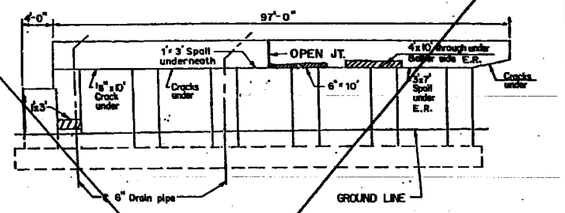
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050S2-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	246
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 71 of 74 SHEETS



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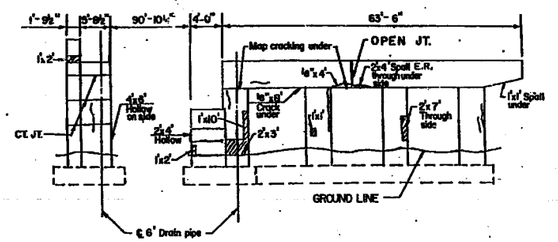

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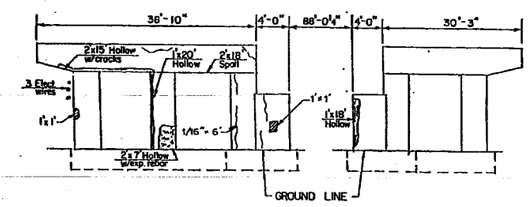

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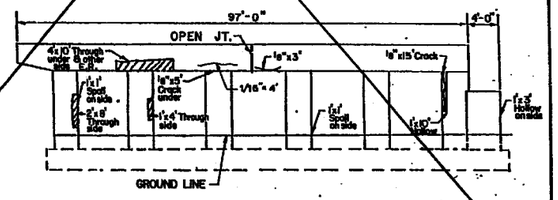

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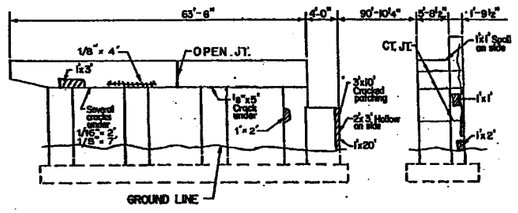

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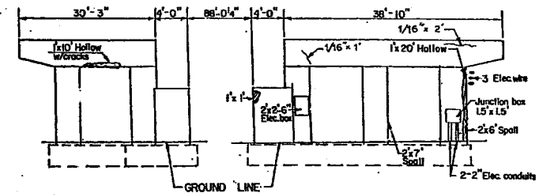

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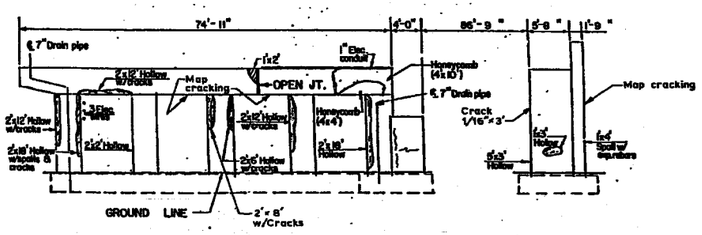

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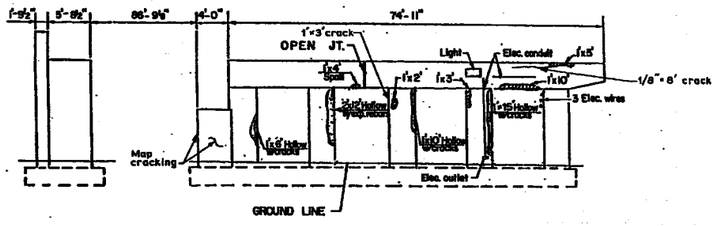


PIER NO. 18 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6.

LEGEND

E.R.	EXPOSED REINFORCING BAR
~	CRACKS
++++	CRACKS WITH LEACHING
▥	LEACHING
▨	SPALLS

SUBSTRUCTURE REHABILITATION
SHEET 3 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

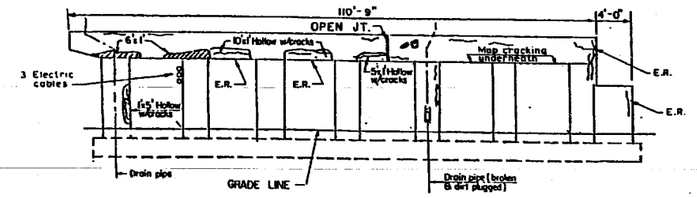
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

	*			426	247

SHEET NO. 72 of 74 SHEETS



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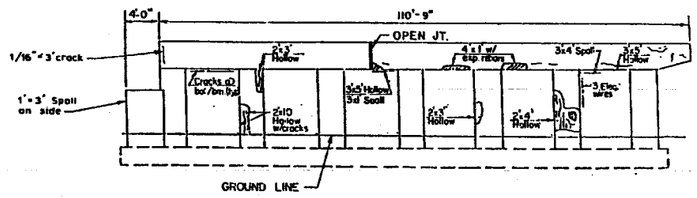


PIER NO. 19 - LOOKING SOUTH

LEGEND

E.R. EXPOSED REINFORCING BAR

CRACKS

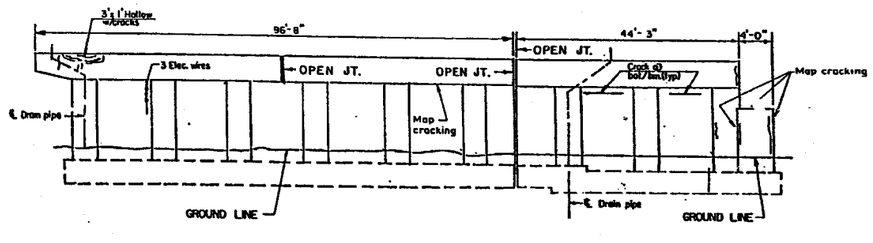
CRACKS WITH LEACHING

LEACHING

SPALLS

NOTE:

FOR NOTES, SEE SHEET 1 OF 6



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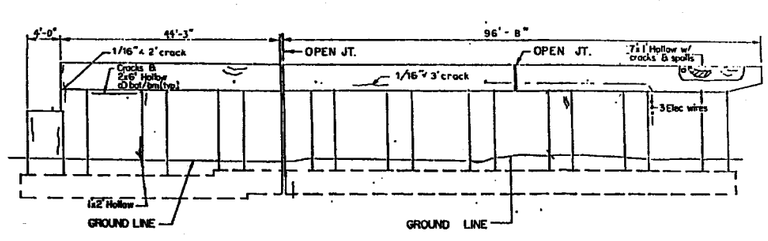

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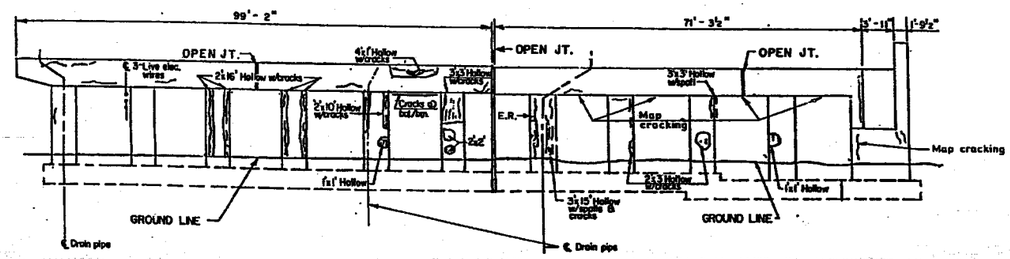

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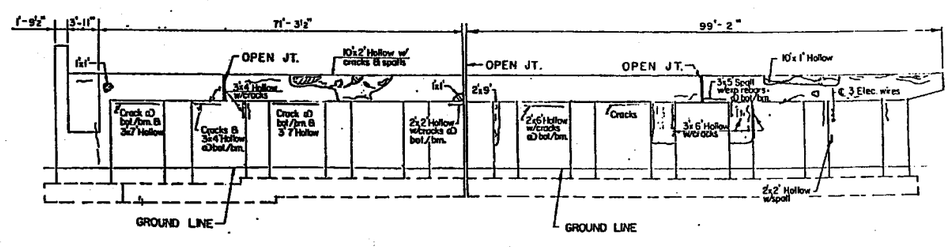


PIER NO. 21 - LOOKING SOUTH

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION

SHEET 4 OF 6

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

COOK COUNTY

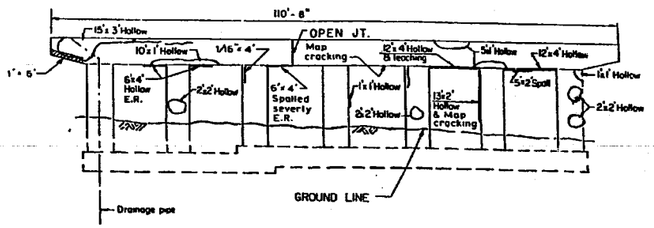
STATION 409+49

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	*		426	248

SHEET No. 73 of 74 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2



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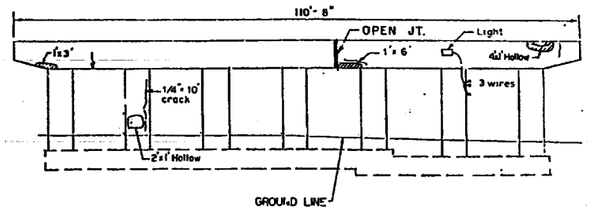

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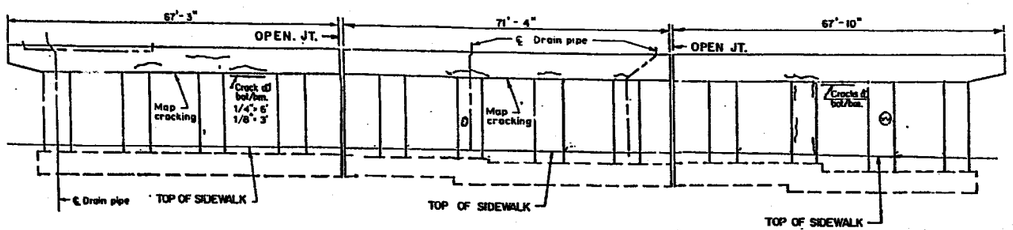

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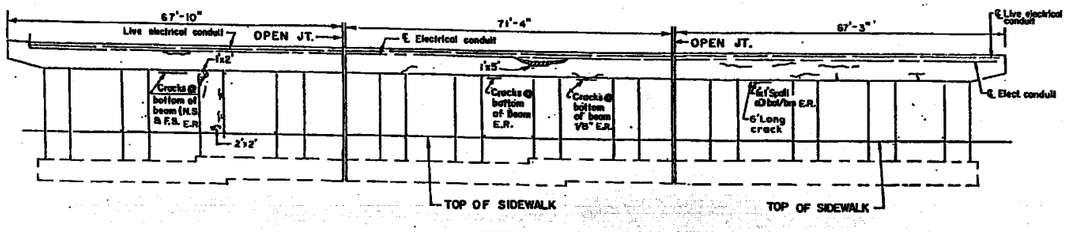


PIER NO. 23 - LOOKING SOUTH

NOTE:
FOR NOTES, SEE SHEET 1 OF 6

LEGEND

E.R.	EXPOSED REINFORCING BAR
	CRACKS
	CRACKS WITH LEACHING
	LEACHING
	SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION

SHEET 5 OF 6

SECTION

F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE

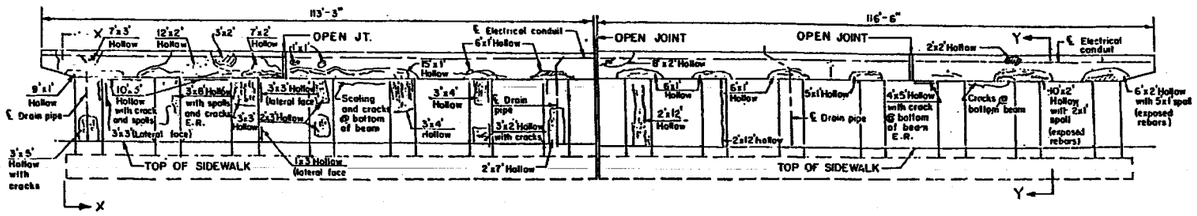
COOK COUNTY

STATION 409+49

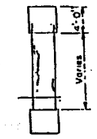
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

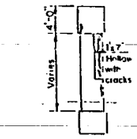
	*		426 249	74 of 74 Sheets

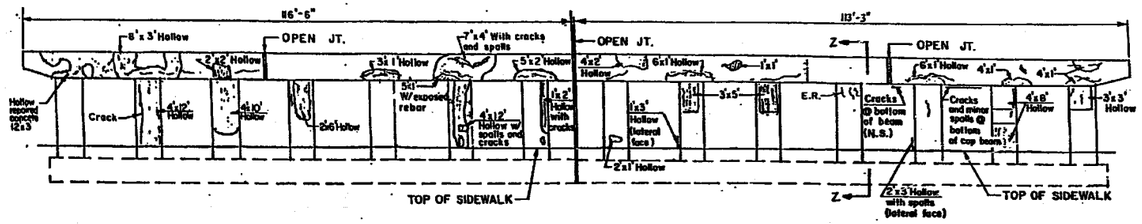
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



PIER NO. 24 - LOOKING NORTH







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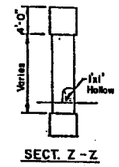
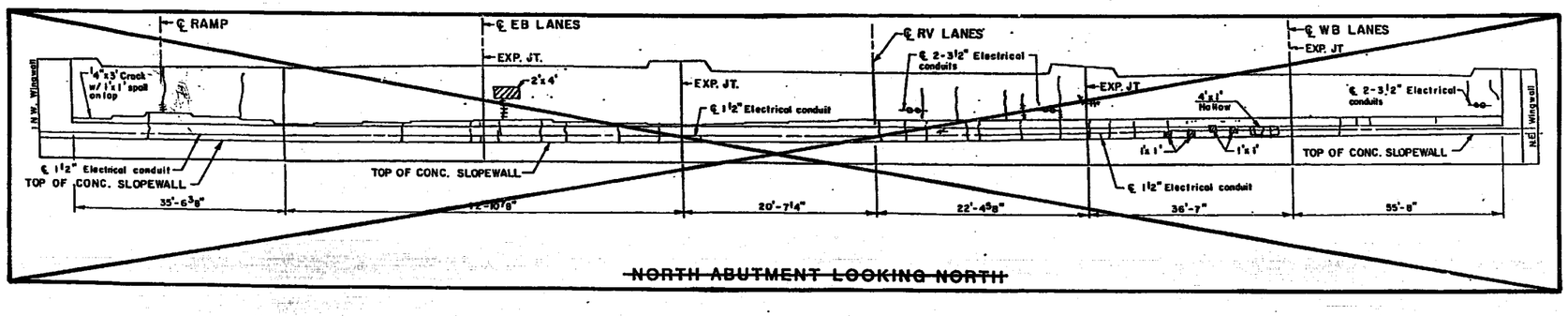




~~NORTH ABUTMENT LOOKING NORTH~~

NOTE:
FOR NOTES, SEE SHEET 1 OF 6

LEGEND
E.R. EXPOSED REINFORCING BAR
CRACKS
CRACKS WITH LEACHING
LEACHING
SPALLS

STANLEY CONSULTANTS

SUBSTRUCTURE REHABILITATION
SHEET 6 OF 6
SECTION
F.A.I. ROUTE 90/94 OVER ASHLAND AVENUE
COOK COUNTY
STATION 409+49

NOTES:

1. THE COST OF REMOVAL OF MISCELLANEOUS ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. SEE I.D.O.T. SPECIAL PROVISIONS AEC-200#01-00-89
2. EXISTING STORM SEWER MANHOLES ARE BURIED AND HAVE NOT BEEN LOCATED. THE EXISTING STORM SEWER HAS BEEN SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL LOCATE EXISTING STORM SEWER LINE PRIOR TO CONSTRUCTION OF PROPOSED STORM SEWER.

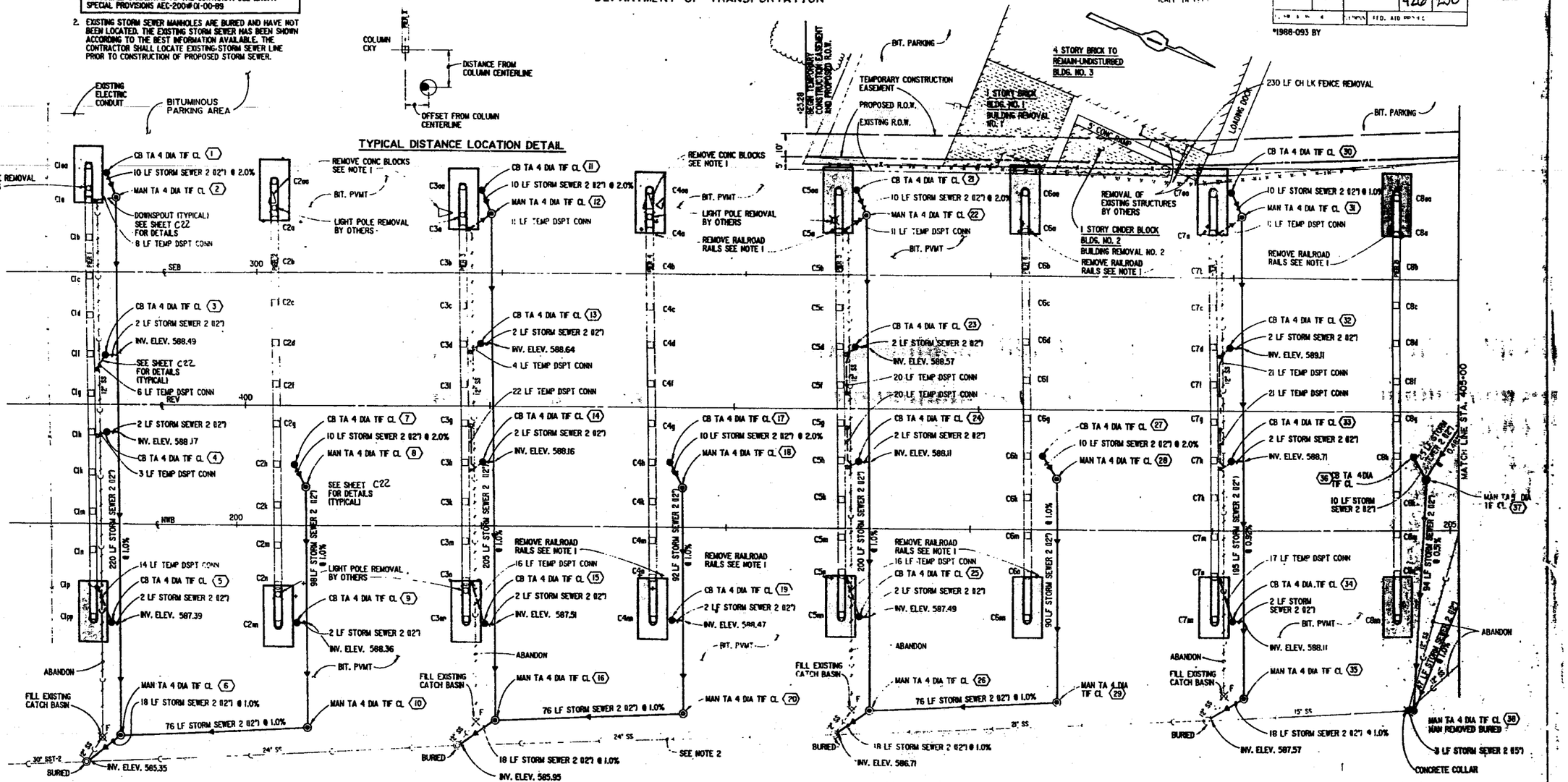
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE IN FEET 20 0 20 40

			TOTAL SHEETS	SHEET NO.
			426	250
		FED. AID PROJECT		

SHEET NO. SHEETS

*1988-093 BY



STRUCTURE NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA4	CB TA 4	MH TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 5	MH TA 4
FRAME / LID	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL	TIF/CL
DIST, DIR, * COLUMN NO.	℄ C1aa	2' W C1a	℄ C1f	℄ C1h	℄ C1pp	48' W C1pp	℄ C2h	9' E C2h	℄ C2aa	42' E C2aa	℄ C3aa	9' E C3aa	℄ C3d	℄ C3h	℄ C3aa	38' E C4h	℄ C4h	9' E C4h	℄ C4aa	38' E C4aa	℄ C5aa	9' E C5aa	℄ C5d	℄ C5h	℄ C5aa	36' E C6a	℄ C6h	9' E C6a	34' E C6aa	℄ C7aa	9' E C7aa	℄ C7d	℄ C7h	℄ C7aa	30' E C7aa	℄ C8h	9' E C8h	9' E C8aa
OFFSET, DIR	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	12.5' NW	8.5' NW	12.5' NW	8.5' NW	8.5' NW	8.5' NW	12.5' NW	8.5' NW	12.5' NW	7.5' NW
RIM ELEVATION	593.43	593.66	593.92	593.92	593.75	592.72	594.50	594.03	593.99	593.61	593.47	593.56	593.90	594.27	594.30	593.82	593.38	593.70	594.28	593.70	593.42	593.40	593.58	593.95	594.07	594.26	593.26	593.35	593.3	593.05	593.73	593.24	593.62	594.49	593.20	593.50	593.66	592.29
INV, DIR	589.43,N	589.23, S	588.67,NW	588.42,NW	587.75,NW	588.93,NW	590.00,N	588.92,NE	588.49,NW	587.94,SW	589.47,N	589.17,NE	588.90,NW	588.52,NW	587.80,NW	587.12,NW	589.38,N	588.02,NE	588.78,NW	588.10,SW	588.42,N	588.12,NE	588.83,NW	588.45,NW	587.82,NW	587.12,NW	589.25,N	588.86,NE	588.35,NW	587.86,SW	588.85,NE	588.65,NE	588.41,NW	588.07,NW	588.49,NW	587.85,SW	588.00,NE	588.68,NE	588.00,SE
INV, DIR	--	589.13,NE	--	--	--	588.93,SW	--	588.80,S	--	587.89,SE	--	589.27,S	--	--	--	587.12,SW	--	588.18,S	--	587.88,SE	--	588.22,S	--	--	--	587.12,SW	--	588.06,S	587.86,SE	--	588.75,S	--	--	--	587.75,E	--	588.48,S	588.00,SW
INV, DIR	--	--	--	--	--	588.53,SE	--	--	--	--	--	--	--	--	--	586.13,E	--	--	--	--	--	--	--	--	--	586.88,E	--	--	--	--	--	--	--	--	--	--	588.80,S	588.00,W
																																					588.83,NW	

* SEE TYPICAL DISTANCE LOCATION DETAIL.

SUBSTRUCTURE WIDENING

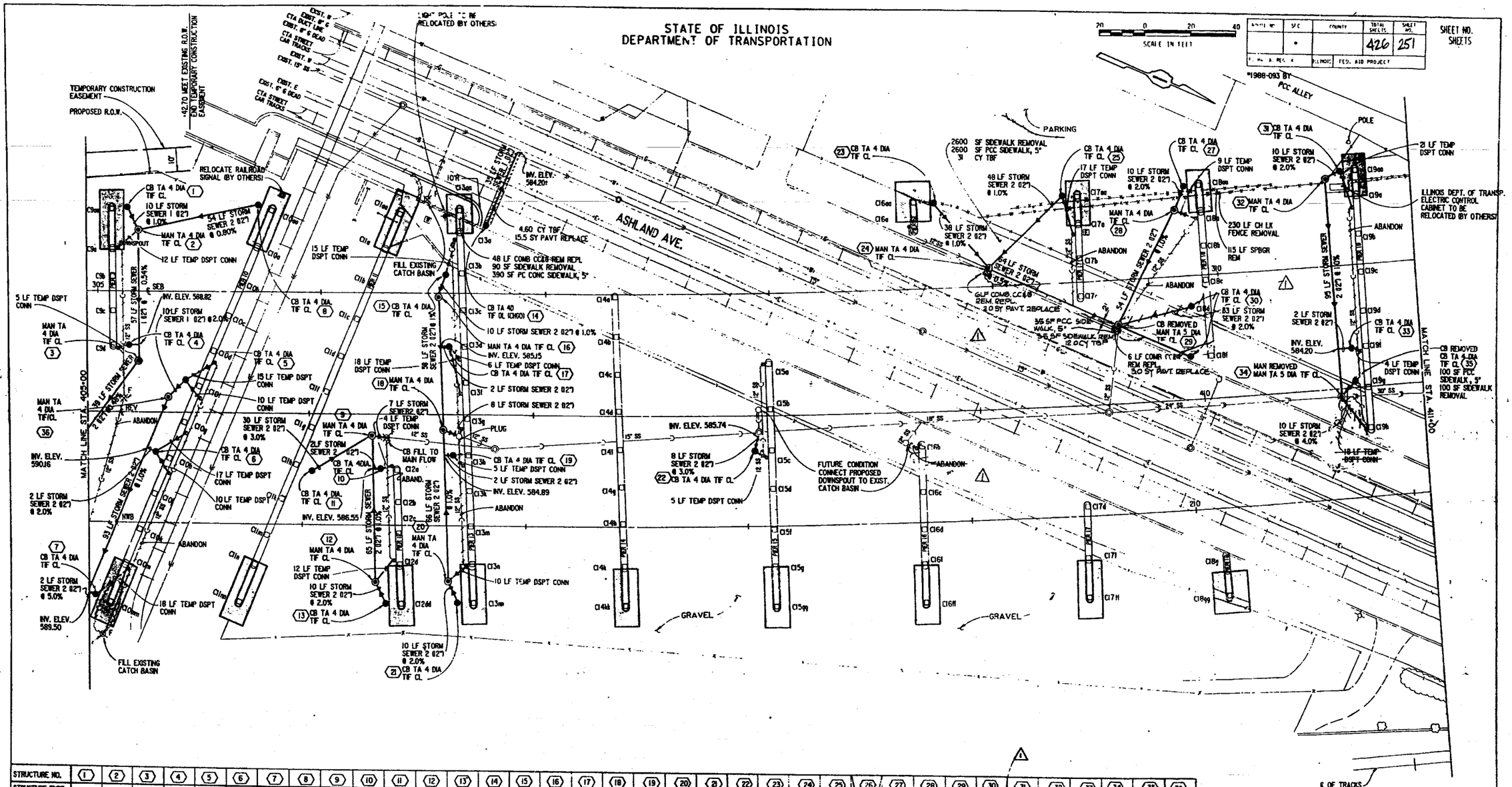
ASHLAND AVE. STA. 399+00 TO STA. 405+00
ROUTE: FAI-90/94 (JFK EXPWY)
SCALE:
SECTION
PROJECT COOK COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO.	SHEETS
TOTAL SHEETS	426
SHEET NO.	251

SCALE IN FEET 20 0 20 40

*1988-093 BY



STRUCTURE NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 4	MH TA 5	CB TA 4	CB TA 4	MH TA 4	CB TA 4	MH TA 5	CB TA 4	MH TA 4
FRAME / LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/OL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	REPLACE EXISTING MANHOLE	3' W C19g	9' E C10f
DIST, DIR COLUMN NO.	℄ C9aa	9' E C9aa	7' E C9d	℄ C9d	6' W C10f	℄ C10h	℄ C10mm	℄ C10 aa	14.5' W C12e	℄ C12a	℄ C11h	9' W C12dd	℄ C12dd		℄ C13b	9' E C13b	℄ C13d	10.5' W C13h	℄ C13h	9' W C13aa	℄ C13aa	℄ C15c	℄ C16dd	18' E C16aa	℄ C17aa	9'E C18aa	℄ C18aa	9' E C18ee	REPLACE EXISTING CATCH BASIN	5' E C18f	℄ C19aa	9' E C19aa	℄ C19f		8.5' S	9' E C10f
OFFSET, DIR	8.5' N	12.5' N	12.5' N	8.5' N	6.5' S	6.5' S	6.5' S	8.5' S	12.5' S	8.5' S	6.5' N	12.5' S	8.5' S		8.5' S	12.5' S	8.5' S	12.5' S	8.5' S	12.5' S	8.5' S	8.5' S	8.5' N	8.5' N	6.5' S	12.5' S	8.5' S	12.5' S	8.5' S	8.5' S	8.5' S	12.5' S	8.5' S			10.5' S
RIM ELEV.	591.93	591.95	592.59	592.44	594.85	594.26	594.48	594.58	590.36	590.57	595.02	591.60	591.73	585.90	589.10	589.74	590.38	590.27	590.53	591.48	591.56	591.48	591.88	591.16	592.30	592.01	592.60	592.42	591.57	591.90	591.88	591.38	591.38	591.40	598.00
INV, DIR	589.16,NE	589.08,E	588.79,E	588.94,S	590.85,SE	590.26,S	589.60,S	589.98,SE	586.15,N	586.57,S	589.52,NW	587.53,NE	587.73,SW	584.55	585.60,E	585.37,E	585.88	584.68,W	585.03,S	585.45,W	587.86,SW	585.98,W	587.38,E	587.00,W	587.80,E	587.14E	588.60,E	588.21,E	EXIST) 586.57,E	587.35,SE	588.40,E	584.93,E	584.38,S	EXIST) 582.48,N	584.90,SE	590.40,E
INV, DIR	–	588.54,NW	588.79,W	–	–	–	–	–	586.62,SE	–	–	587.05,W	–	–	–	585.50,W	–	584.78,E	–	586.86,NE	–	–	–	587.32,W	–	587.60W	–	588.40,W	586.67,S	–	–	586.20,W	–	EXIST) 582.58,S	–	590.65,W
INV, DIR	–	588.08,SE	588.80,W	–	–	–	–	–	586.40,E	–	–	–	–	–	–	–	–	584.78,W	–	–	–	–	–	587.00SW	–		–	–	587.67,W	–	–	–	–	583.98,W	–	–
INV, DIR																								EXIST, S					586.67,NW	–	–	–	–		–	–

SUBSTRUCTURE WIDENING

ASHLAND AVE. STA. 405+00 TO STA. 411+00

ROUTE: FAI-90/94 (JFK EXPWY)

SCALE:

SECTION

PROJECT COOK COUNTY

REV: 1 SCT 2/15/90

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	252
F.A.P. RTE. #	ILLINOIS	FED. AID PROJECT		

SHEET NO. SHEETS

*1988-093 BY

SCALE IN FEET 20 0 20 40

STRUCTURE NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
STRUCTURE TYPE AND DIAMETER	CB TA 4	MH TA 4	MH TA 5	CB TA 4	CB TA 4	MH TA 4	MH TA 4	CB TA 4	CB TA 4	CB TA 4	MH TA 4	CB TA 4	CB TA 4	MH TA 4	MH TA 5	CB TA 4	MH TA 4	CB TA 4	CB TA 4	MH TA 4
FRAME / LID	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL	TF/CL
DIST, DIR COLUMN NO.	℄ C20aa	9' E C20aa	9' W C20h	℄ C20h	℄ C21aa	9' E C21aa	4' W C21h	℄ C21h	℄ C22aa	℄ C23aa	9' E C23aa	5' W C23a	℄ C23h	6' W C23h	14' E C24aa	℄ C24aa	9' E C24aa	℄ C24h	4' E C24h	8' W C24a
OFFSET, DIR	8.5' S	12.5' S	12.5' S	8.5' S	8.5' S	12.5' S	12.5' S	8.5' S	8.5' N	8.5' S	12.5' S	8.5' S	8.5' S	12.5' S	6' N	8.5' S	11.5' S	8.5' S	8.5' S	11.5' S
RIM ELEV.	591.21	591.37	590.52	590.33	591.67	591.74	590.13	589.82	592.28	589.73	590.90	589.97	589.14	589.98	586.89	590.85	590.80	589.95	589.55	589.05
INV, DIR	585.71,E	584.02,NE	(EXIST.) 581.61,NW	583.83,S	586.17,E	583.94,NE	(EXIST.) 581.46,NW	584.32,S	586.78,NW	585.23,E	584.54,E	583.47,S	583.64,S	(EXIST.) 581.49,N	580.62,SW	586.35,E	586.05,N	585.45,S	585.05,S	584.31,W
INV, DIR	–	585.51,W	(EXIST.) 581.62,SE	–	–	585.87,W	(EXIST.) 581.49,SE	–	–	–	585.82,SE	–	–	(EXIST.) 581.50,S	580.81,N	–	585.95,E	–	–	584.21,NE
INV, DIR	–	–	583.12,SW	–	–	–	582.98,SW	–	–	–	585.03,W	–	–	582.98,W	–	–	–	–	–	–
INV, DIR			583.61,N				583.42,N							585.01,SW						

SUBSTRUCTURE WIDENING

ASHLAND AVE. TO CORTLAND ST.
ROUTE: FAI-90/94 (JFK EXPWY)
SCALE:
SECTION
PROJECT COOK COUNTY

D C B A 0 A B C D

TBM - CHISELED SQUARE - EAST CORNER OF SE WINGWALL
F.A.I - 90/94 BRIDGE OVER ARMITAGE AVENUE.
EL 609.22 (U.S.G.S. DATUM)

STATION 421+55.44
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPI-0137(A)
LOADING HS20 & ALT.
STR. NO. 016-0132

NEW NAME PLATE
SEE STD. 2113-2

HORIZONTAL CURVE DATA

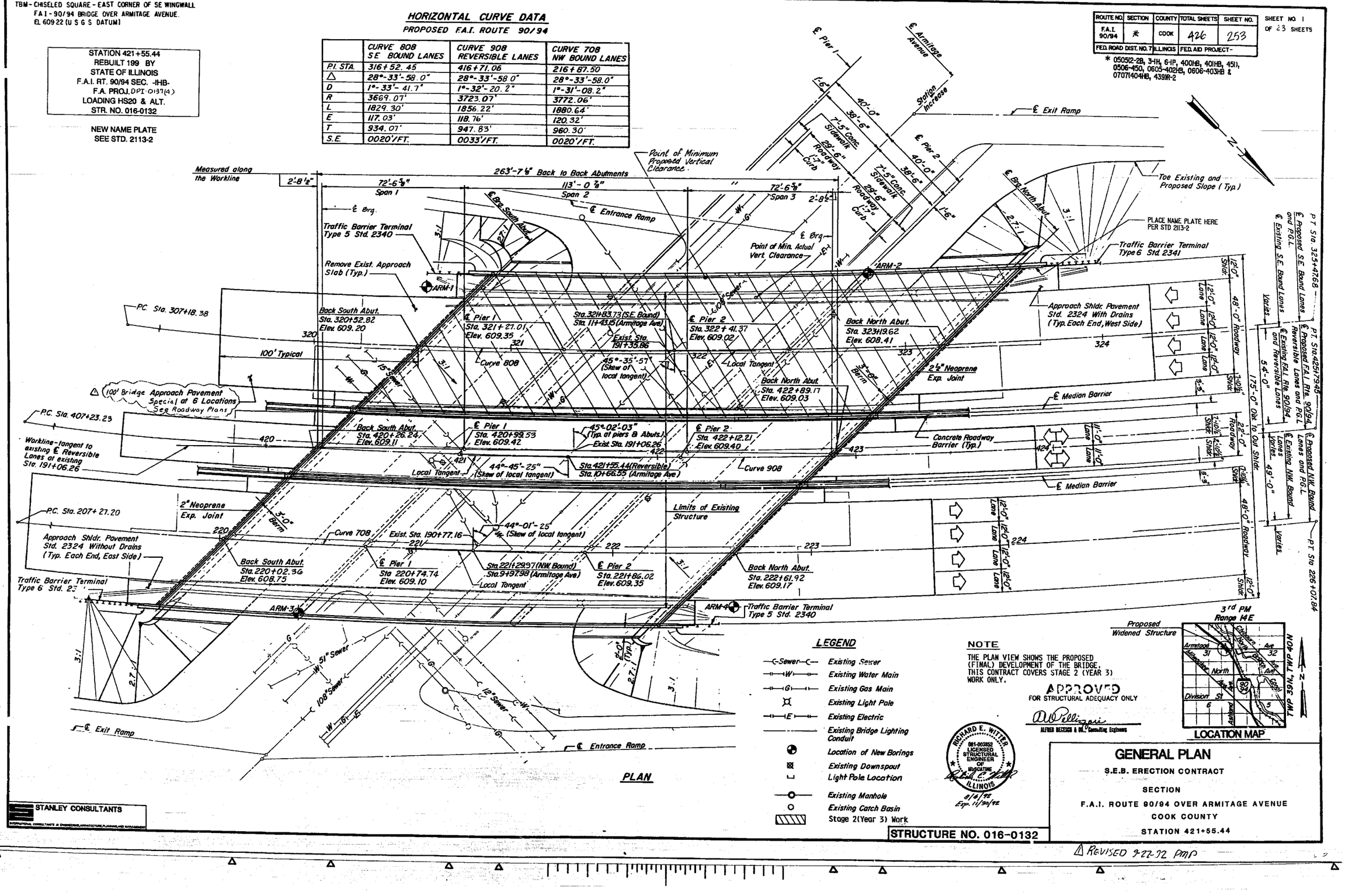
PROPOSED F.A.I. ROUTE 90/94

	CURVE 808 SE BOUND LANES	CURVE 908 REVERSIBLE LANES	CURVE 708 NW BOUND LANES
P.I. STA.	316+52.45	416+71.06	216+87.50
△	28°-33'-58.0"	28°-33'-58.0"	28°-33'-58.0"
D	1°-33'-41.7"	1°-32'-20.2"	1°-31'-08.2"
R	3669.07'	3723.07'	3772.06'
L	1829.30'	1856.22'	1880.64'
E	117.03'	118.76'	120.32'
T	934.07'	947.83'	960.30'
S.E.	0020'/FT.	0033'/FT.	0020'/FT.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	253
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 23 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



PLAN

LEGEND

- Existing Sewer
- Existing Water Main
- Existing Gas Main
- Existing Light Pole
- Existing Electric
- Existing Bridge Lighting Conduit
- Location of New Borings
- Existing Downspout
- Light Pole Location
- Existing Manhole
- Existing Catch Basin
- Stage 2 (Year 3) Work

NOTE

THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ALFRED BENESCH & CO., Consulting Engineers

RICHARD E. WITTER
081-003852
LICENSED STRUCTURAL ENGINEER OF
ILLINOIS
8/8/92
Exp. 11/30/92

Proposed Widened Structure

3rd PM Range 14E

LOCATION MAP

GENERAL PLAN

S.E.B. ERECTION CONTRACT

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

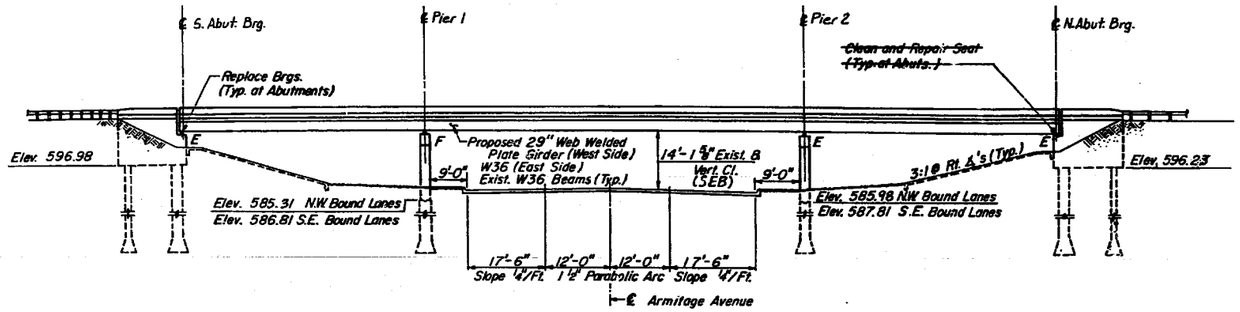
COOK COUNTY

STATION 421+55.44

STRUCTURE NO. 016-0132

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

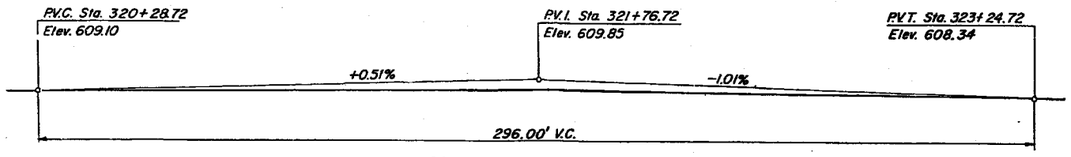
△ REVISED 7-22-92 PMP



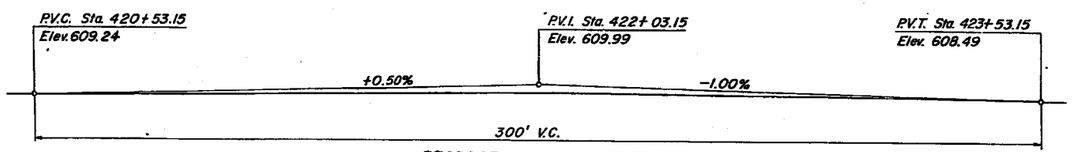
ELEVATION
Looking West
(Dimensions at Right Angles)

PROFILE GRADE
ARMITAGE AVENUE
(Along ℄ Roadway)

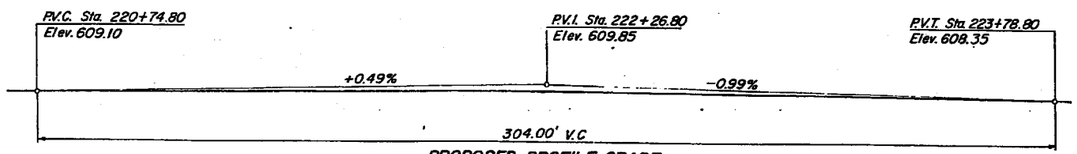
Station	Elevation
9+10	588.19
+20	588.21
+30	588.22
+40	588.31
+50	588.38
+60	588.43
+70	588.49
+80	588.57
+90	588.63
10+00	588.70
+10	588.76
+20	588.87
+30	588.95
+55	589.20
+80	589.44
11+05	589.68
+30	589.94
+40	590.03
+50	590.11
+60	590.20
+70	590.29
+80	590.39
+90	590.55
12+00	590.67
+10	590.79
+20	590.89
12+30	590.96



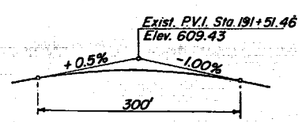
PROPOSED PROFILE GRADE
F.A.I. Rte. 90/94
℄ S.E. Bound Lanes



PROPOSED PROFILE GRADE
F.A.I. Rte. 90/94
℄ Reversible Lanes



PROPOSED PROFILE GRADE
F.A.I. Rte. 90/94
℄ N.W. Bound Lanes



ORIGINAL THEORETICAL PROFILE GRADE
F.A.I. Rte. 90/94
℄ S.E. Bound Lanes
℄ Reversible Lanes
℄ N.W. Bound Lanes

Anchor with 3/8"ϕ Exp Anchors

BUILT BY
CITY OF CHICAGO
WITH THE COOPERATION OF
COUNTY OF COOK
STATE OF ILLINOIS
FEDERAL GOVERNMENT
1992

EXISTING NAME PLATE

STANLEY CONSULTANTS

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M183.
2. ~~EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC SILICATE PRIMER.~~
3. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
4. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53, GRADE 60.
5. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
6. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED). SHIMS PROVIDED BY OTHERS.
7. THE CONCRETE FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTERLINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.
8. ~~CLEAN AND PAINT THE EXISTING BEARINGS NOT BEING REPLACED AND STRUCTURAL STEEL UTILIZING METHODS I AND II. THE BOTTOM AND OUTSIDE FACES OF THE EXISTING FASCIA BEAMS, ALL REMAINING BEARING ASSEMBLIES, THE BOTTOM FLANGES AND BEAM FACES ADJACENT TO LONGITUDINAL JOINTS AND ALL STRUCTURAL STEEL WITHIN FIVE FEET OF TRANSVERSE DECK JOINTS SHALL BE CLEANED BY METHOD I. REMAINDER OF STRUCTURAL STEEL SHALL BE CLEANED BY METHOD II.~~
9. FASTENERS SHALL BE HIGH STRENGTH BOLTS ~~(AASHTO M 164, TYPE 3)~~ BOLTS 7/8"ϕ; OPEN HOLES 15/16"ϕ, UNLESS OTHERWISE NOTED.
10. ~~RELOCATE EXISTING NAME PLATE. LOCATION SHOWN ON GENERAL PLAN SHEET 1.~~
11. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.
12. THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

△1 13. EXIST. STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED ONLY AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING NEW STEEL AND ADJACENT AREAS OF EXISTING STEEL STRUCTURES."

14. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE PAINT, AND ALL FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF STRINGERS (GIRDERS). THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP11 FOR POWER TOOL CLEANING OR SP2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK."
15. THE THREE COAT LEAD AND CHROMATE-FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE FIRST COAT HAS BEEN APPLIED IN THE SHOP. THE SECOND COAT SHALL BE APPLIED IN THE FIELD UNDER THIS CONTRACT. THE THIRD COAT SHALL BE APPLIED IN THE FIELD BY OTHERS. THE COLOR OF THE ALKYD FINISH COATS SHALL BE MUNSELL NO. 2.5 YR 3/4 REDDISH BROWN FOR THE FASCIA OF THE EXTERIOR BEAMS AND THEIR BEARINGS AND MUNSELL NO. 10 YR 7/1 LIGHT GREY FOR ALL OTHER STRUCTURAL STEEL.

* 0505.2-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	254
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 23 SHEETS

EXISTING STRUCTURE

STA. 191+06.262, FAI-2 ROUTE, SEC. 0505.2-2B, BUILT IN 1960, STRUCTURE NO. 016-0132.

SUPERSTRUCTURE: CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK ON ROLLED STEEL BEAMS WITH COVER PLATES.

SUBSTRUCTURE: PILE BENT ABUTMENT, MULTIPLE COLUMN PIERS, BOTH SUPPORTED BY CONCRETE CAISSONS.

SUPERSTRUCTURE DECK TO BE REPLACED. SUPERSTRUCTURE TO BE MODIFIED TO A CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

TEMPORARY DECK: CONTINUOUS COMPOSITE REINFORCED CONCRETE DECK ON WELDED PLATE GIRDERS (WEST SIDE) OR ON WIDE FLANGE BEAMS (EAST SIDE).

DESIGN SPECIFICATIONS

AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS.

LOADING HS 20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

F'C = 3,500 PSI (CONCRETE)
FY = 60,000 PSI (REINFORCEMENT)
FY = 36,000 PSI (PROPOSED STRUCTURAL STEEL)
FS = 18,000 PSI (EXISTING STRUCTURAL STEEL)

REHABILITATION NOTES

REMOVE EXISTING ROLLER BEARINGS ON BEAMS 17 THRU 26 AT ABUTMENTS INCLUDING TOP PLATE. GRIND CONTINUOUS FILLET WELD SMOOTH AFTER REMOVING TOP PLATE. REPLACE WITH ELASTOMERIC EXPANSION BEARINGS. REMOVAL WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REMOVE EXISTING BEARINGS".

JACK AND REPOSITION ROCKER TYPE EXPANSION BEARINGS TO THEIR CORRECT POSITION AT A TEMPERATURE SETTING OF 50°F FOR BEAMS 19, 23, 25 AND 26, AT PIER 2. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REPOSITION BEARINGS".

REMOVE LOOSE ANCHOR BOLTS AT PIER 2, BEARING 18 AND REPLACE WITH EPOXY GROUTED ANCHOR BOLTS. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "1" DIAMETER ANCHOR BOLTS".

~~CLEAN AND SEAL THE BRIDGE SEATS AT THE ABUTMENTS IN THE SE BOUND LANES AREA. WORK WILL BE PAID FOR AT LUMP SUM PRICE FOR "BRIDGE SEAT SEALER," (SEE SPECIAL PROVISIONS).~~

EXISTING UTILITIES

THE EXISTING UTILITIES SHOWN ON GENERAL PLAN SHEET 1 HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

ELEVATION, NOTES & DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

△1 REVISED 3-22-92 PMP

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	255
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3 of 23 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
	CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	513.0	-	513.0
	CLASS X CONCRETE	CU. YDS.	-	11.0	11.0
	REINFORCEMENT BARS (EPOXY COATED)	LBS.	143,520	3,290	146,810
	BRIDGE DECK GROOVING	SQ. YDS.	1992	-	1992
4	ERECTING STRUCTURAL STEEL	LUMP SUM	0.4	-	0.4
2	REMOVAL OF EXISTING CONCRETE DECK	LUMP SUM	0.1	-	0.1
	CONCRETE REMOVAL	CU. YDS.	-	17.9	17.9
1	PROTECTIVE COAT	SQ. YDS.	2,210	-	2,210
	PROTECT AND MAINTAIN EXISTING UNDERPASS LUMINAIRE	LUMP SUM	-	0.1	0.1
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	96	-	96
	NEOPRENE EXPANSION JOINT 2 1/2"	LIN. FT.	103	-	103
△1	REMOVAL OF TEMPORARY SLAB SUPPORT SYSTEM	LUMP SUM	0.3	-	0.3
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10	-	10
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6	-	6
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH	4	-	4
	1" DIAMETER ANCHOR BOLTS	EACH	2	-	2
6	JACK AND REPOSITION BEARINGS	EACH	4	-	4
5	JACK AND REMOVE EXISTING BEARINGS	EACH	20	-	20
3	PROTECTIVE SHIELD	SQ. YDS.	2,330	-	2,330
	TEMPORARY SLAB SUPPORT SYSTEM	LUMP SUM	0.3	-	0.3
	RIVET REMOVAL AND REPLACEMENT	EACH	2	-	2
	PROTECTIVE SURFACE TREATMENT	SQ. YDS.	-	110	110
	NAME PLATE	EACH	1	-	1

1. PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE AND FACE OF BARRIER RAILS. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.
2. INCLUDES 18,386 SQ. FT. OF EXISTING CONCRETE DECK REMOVAL.
3. SEE SHEET 4 FOR LIMITS.
4. INCLUDES 13,640 POUNDS OF STRUCTURAL STEEL TO BE ERECTED. STEEL ITEMS INCLUDE DIAPHRAGM ASSEMBLIES BETWEEN BEAMS 21 & 22, ABUTMENT BEARING SIDE RETAINERS, ANCHOR BOLTS AND COVER PLATE END SPLICE ASSEMBLIES.
5. D.L. REACTION = 11k ABUTMENTS(D.L. OF BEAM + 200 LBS PER LIN.FT.CONST.D.L.)
6. D.L. REACTION = 53k PIER #2(D.L. OF BEAM + 200 LBS PER LIN.FT.CONST.D.L.)

△1 Revised 9-29-92 PMP

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

BILL OF MATERIAL

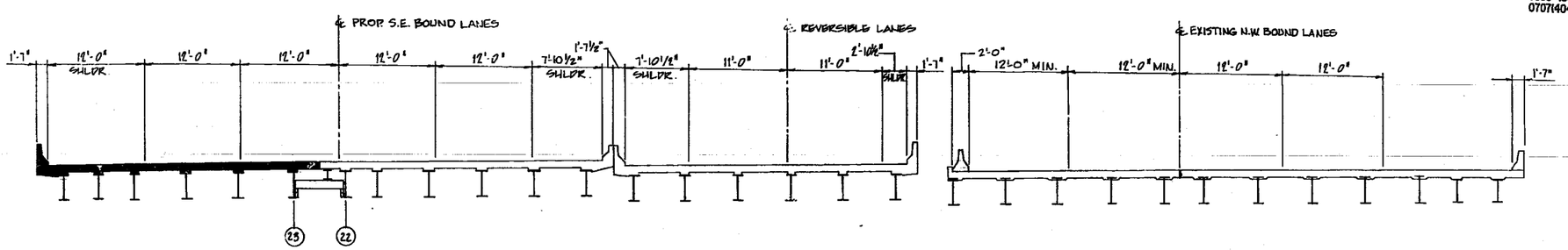
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

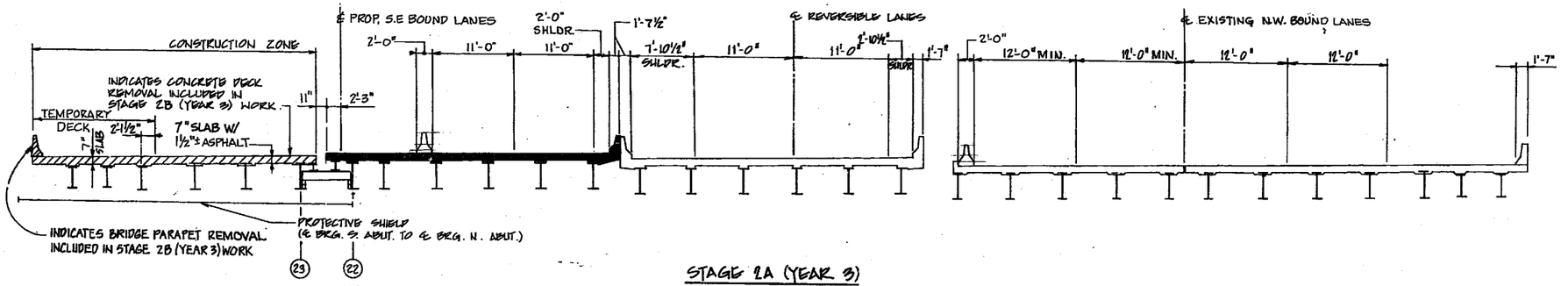
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	256
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 4 OF 23 SHEETS

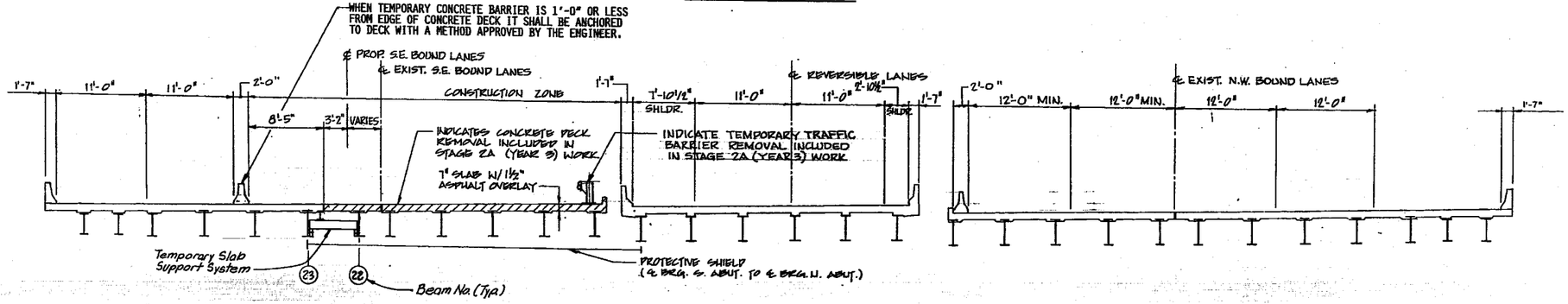
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707140-HB, 439R-2



STAGE 2B (YEAR 3)



STAGE 2A (YEAR 3)



STAGE 1 (YEAR 2)

LEGEND
DENOTES PROPOSED STRUCTURE
Denotes Concrete Deck Removal

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	257
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5 of 23 SHEETS

* 05051-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2

BEAM NO. 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32021.975	32.861	609.718	609.718
℄ ABUT. BRG.	32024.685	32.744	609.730	609.730
a	32034.589	32.333	609.771	609.775
b	32044.495	31.950	609.808	609.813
c	32054.403	31.593	609.841	609.843
d	32064.312	31.264	609.869	609.864
e	32074.224	30.961	609.893	609.880
f	32084.137	30.685	609.913	609.898
℄ PIER 1	32097.320	30.361	609.931	609.931
g	32107.236	30.148	609.940	609.971
h	32117.153	29.963	609.944	610.014
i	32127.071	29.804	609.944	610.053
j	32136.989	29.673	609.940	610.079
k	32146.909	29.568	609.930	610.086
l	32156.829	29.491	609.917	610.077
m	32166.749	29.440	609.899	610.048
n	32176.669	29.417	609.876	610.000
o	32186.590	29.420	609.848	609.935
p	32196.510	29.451	609.817	609.864
℄ PIER 2	32210.629	29.541	609.764	609.764
q	32220.548	29.638	609.722	609.709
r	32230.467	29.761	609.674	609.660
s	32240.385	29.911	609.622	609.614
t	32250.303	30.088	609.567	609.566
u	32260.219	30.293	609.506	609.510
v	32270.134	30.524	609.441	609.446
℄ ABUT. BRG.	32283.316	30.873	609.347	609.347
BK. N. ABUT.	32286.029	30.951	609.327	609.327

INDICATES STA. 322+86.029 (TYP)

BEAM NO. 18

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32028.027	26.347	609.619	609.619
℄ ABUT. BRG.	32030.742	26.234	609.630	609.630
a	32040.663	25.840	609.669	609.679
b	32050.587	25.473	609.704	609.720
c	32060.513	25.133	609.734	609.750
d	32070.441	24.820	609.759	609.769
e	32080.370	24.534	609.781	609.783
f	32090.300	24.276	609.798	609.793
℄ PIER 1	32103.507	23.973	609.813	609.813
g	32113.440	23.778	609.819	609.840
h	32123.374	23.609	609.820	609.871
i	32133.310	23.468	609.817	609.897
j	32143.246	23.353	609.810	609.914
k	32153.182	23.266	609.797	609.915
l	32163.119	23.205	609.781	609.902
m	32173.056	23.172	609.759	609.871
n	32182.993	23.166	609.734	609.827
o	32192.931	23.187	609.704	609.768
p	32202.868	23.235	609.670	609.703
℄ PIER 2	32217.010	23.350	609.612	609.612
q	32226.946	23.463	609.566	609.561
r	32236.881	23.604	609.516	609.515
s	32246.816	23.772	609.461	609.469
t	32256.749	23.967	609.402	609.416
u	32266.682	24.188	609.339	609.356
v	32276.613	24.437	609.271	609.284
℄ ABUT. BRG.	32289.815	24.810	609.173	609.173
BK. N. ABUT.	32292.532	24.893	609.152	609.152

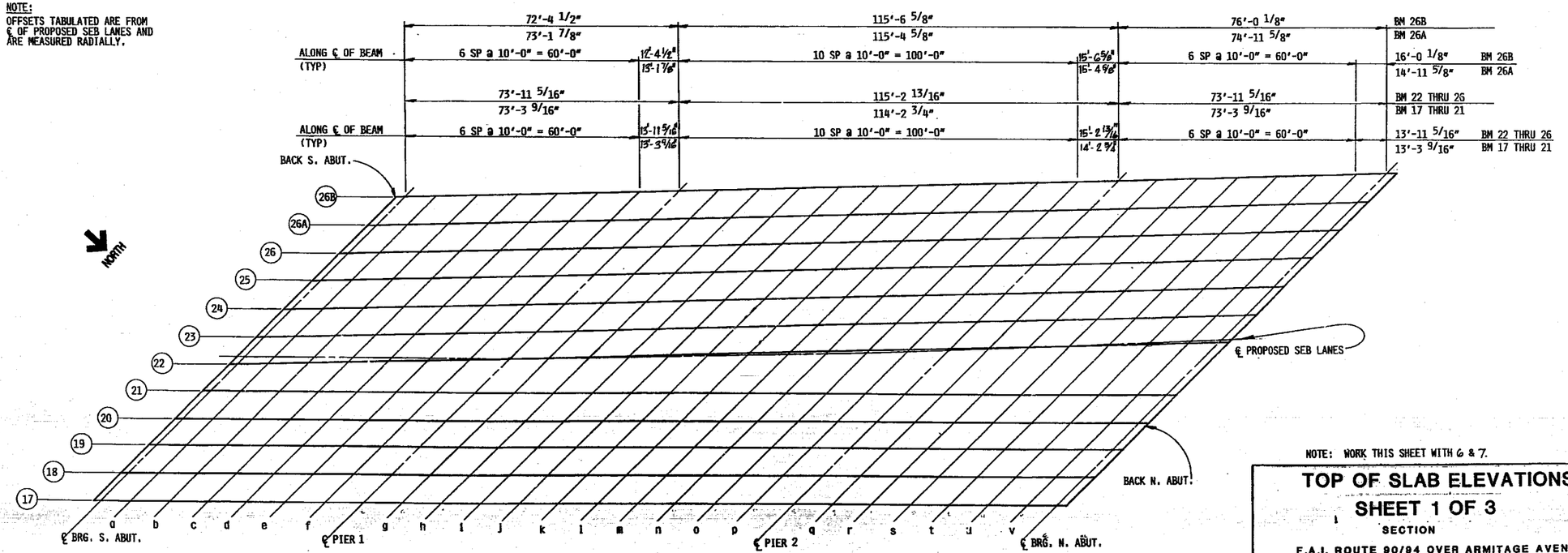
BEAM NO. 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32034.099	19.842	609.519	609.519
℄ ABUT. BRG.	32036.819	19.734	609.530	609.530
a	32046.759	19.357	609.566	609.576
b	32056.701	19.007	609.598	609.614
c	32066.645	18.684	609.626	609.642
d	32076.590	18.387	609.649	609.659
e	32086.537	18.118	609.666	609.668
f	32096.485	17.876	609.681	609.676
℄ PIER 1	32109.715	17.597	609.692	609.692
g	32119.666	17.418	609.695	609.716
h	32129.618	17.266	609.693	609.744
i	32139.570	17.142	609.688	609.768
j	32149.523	17.044	609.678	609.782
k	32159.477	16.974	609.663	609.781
l	32169.431	16.931	609.644	609.765
m	32179.385	16.915	609.619	609.731
n	32189.339	16.926	609.591	609.684
o	32199.293	16.964	609.557	609.621
p	32209.247	17.029	609.520	609.553
℄ PIER 2	32223.413	17.169	609.458	609.458
q	32233.365	17.300	609.410	609.405
r	32243.317	17.498	609.356	609.355
s	32253.267	17.644	609.299	609.307
t	32263.217	17.856	609.236	609.250
u	32273.165	18.096	609.170	609.187
v	32283.112	18.362	609.098	609.111
℄ ABUT. BRG.	32296.336	18.759	608.996	608.996
BK. N. ABUT.	32299.057	18.846	608.975	608.975

BEAM NO. 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32040.194	13.349	609.417	609.417
℄ ABUT. BRG.	32042.919	13.245	609.427	609.427
a	32052.877	12.884	609.461	609.471
b	32062.836	12.551	609.490	609.506
c	32072.798	12.244	609.515	609.531
d	32082.761	11.965	609.535	609.545
e	32092.726	11.713	609.550	609.552
f	32102.692	11.488	609.562	609.557
℄ PIER 1	32115.945	11.230	609.570	609.570
g	32125.913	11.069	609.569	609.590
h	32135.882	10.934	609.566	609.617
i	32145.852	10.826	609.557	609.637
j	32155.823	10.746	609.544	609.648
k	32165.793	10.693	609.526	609.644
l	32175.764	10.667	609.503	609.624
m	32185.735	10.668	609.476	609.588
n	32195.706	10.697	609.445	609.538
o	32205.677	10.752	609.409	609.473
p	32215.647	10.835	609.368	609.401
℄ PIER 2	32229.837	11.000	609.302	609.302
q	32239.806	11.148	609.251	609.246
r	32249.773	11.324	609.195	609.194
s	32259.740	11.527	609.134	609.142
t	32269.706	11.757	609.068	609.082
u	32279.671	12.015	608.998	609.015
v	32289.633	12.299	608.924	608.937
℄ ABUT. BRG.	32302.878	12.719	608.818	608.818
BK. N. ABUT.	32305.604	12.812	608.795	608.795

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES AND ARE MEASURED RADIALLY.



PLAN

NOTE: WORK THIS SHEET WITH 6 & 7.

TOP OF SLAB ELEVATIONS

SHEET 1 OF 3

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STANLEY CONSULTANTS

622

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	258
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 of 23 SHEETS

BEAM NO. 21

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32046.309	6.865	609.314	609.314
℄ ABUT. BRG.	32049.039	6.766	609.323	609.323
a	32059.015	6.422	609.354	609.361
b	32068.993	6.105	609.381	609.392
c	32078.973	5.815	609.403	609.414
d	32088.954	5.553	609.420	609.425
e	32098.936	5.317	609.433	609.431
f	32108.920	5.109	609.441	609.435
℄ PIER 1	32122.196	4.875	609.446	609.446
g	32132.182	4.730	609.443	609.463
h	32142.169	4.613	609.435	609.482
i	32152.156	4.522	609.424	609.497
j	32162.144	4.459	609.408	609.502
k	32172.131	4.423	609.388	609.495
l	32182.119	4.415	609.361	609.471
m	32192.107	4.433	609.332	609.434
n	32202.095	4.479	609.298	609.382
o	32212.082	4.552	609.258	609.316
p	32222.069	4.652	609.214	609.245
℄ PIER 2	32236.282	4.842	609.145	609.145
q	32246.268	5.008	609.090	609.084
r	32256.252	5.202	609.030	609.026
s	32266.235	5.422	608.966	608.969
t	32276.217	5.670	608.898	608.907
u	32286.197	5.945	608.825	608.836
v	32296.176	6.247	608.748	608.757
℄ ABUT. BRG.	32309.442	6.691	608.638	608.638
BK. N. ABUT.	32312.172	6.788	608.614	608.614

BEAM NO. 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32050.252	2.702	609.247	609.247
℄ ABUT. BRG.	32053.008	2.582	609.256	609.256
a	32062.993	2.163	609.283	609.290
b	32072.980	1.772	609.306	609.317
c	32082.969	1.408	609.324	609.335
d	32092.960	1.071	609.338	609.344
e	32102.953	0.761	609.347	609.346
f	32112.947	0.478	609.353	609.347
℄ PIER 1	32126.884	0.130	609.351	609.351
g	32136.882	-0.087	609.344	609.366
h	32146.881	-0.278	609.334	609.380
i	32156.880	-0.440	609.318	609.391
j	32166.881	-0.576	609.299	609.393
k	32176.882	-0.684	609.273	609.380
l	32186.884	-0.765	609.245	609.355
m	32196.886	-0.819	609.211	609.314
n	32206.888	-0.846	609.172	609.258
o	32216.890	-0.845	609.129	609.189
p	32226.892	-0.817	609.082	609.115
℄ PIER 2	32242.135	-0.722	609.000	609.000
q	32252.136	-0.625	608.941	608.935
r	32262.137	-0.501	608.877	608.873
s	32272.137	-0.350	608.808	608.811
t	32282.136	-0.171	608.736	608.745
u	32292.134	0.035	608.658	608.669
v	32302.131	0.268	608.575	608.584
℄ ABUT. BRG.	32316.067	0.638	608.454	608.454
BK. N. ABUT.	32318.827	0.718	608.428	608.428

℄ OF PROPOSED SEB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32052.819	0.000	609.203	609.203
℄ ABUT. BRG.	32055.464	0.000	609.213	609.213
a	32065.464	0.000	609.248	609.255
b	32075.464	0.000	609.278	609.289
c	32085.464	0.000	609.302	609.312
d	32095.464	0.000	609.321	609.326
e	32105.464	0.000	609.335	609.333
f	32115.464	0.000	609.344	609.338
℄ PIER 1	32127.013	0.000	609.348	609.348
g	32137.013	0.000	609.346	609.366
h	32147.013	0.000	609.339	609.386
i	32157.013	0.000	609.327	609.400
j	32167.013	0.000	609.309	609.403
k	32177.013	0.000	609.287	609.394
l	32187.013	0.000	609.259	609.369
m	32197.013	0.000	609.226	609.328
n	32207.013	0.000	609.188	609.273
o	32217.013	0.000	609.145	609.204
p	32227.013	0.000	609.097	609.128
℄ PIER 2	32241.374	0.000	609.019	609.019
q	32251.374	0.000	608.958	608.952
r	32261.374	0.000	608.892	608.888
s	32271.374	0.000	608.821	608.824
t	32281.374	0.000	608.745	608.754
u	32291.374	0.000	608.663	608.674
v	32301.374	0.000	608.577	608.587
w	32311.374	0.000	608.485	608.489
℄ ABUT. BRG.	32316.768	0.000	608.434	608.434
BK. N. ABUT.	32319.615	0.000	608.406	608.406

BEAM NO. 23

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32056.457	-3.821	609.141	609.141
℄ ABUT. BRG.	32059.219	-3.937	609.148	609.148
a	32069.222	-4.339	609.173	609.183
b	32079.227	-4.713	609.193	609.209
c	32089.235	-5.060	609.209	609.225
d	32099.244	-5.380	609.219	609.229
e	32109.254	-5.673	609.226	609.228
f	32119.267	-5.938	609.228	609.223
℄ PIER 1	32133.229	-6.262	609.223	609.223
g	32143.244	-6.462	609.214	609.235
h	32153.261	-6.635	609.199	609.249
i	32163.278	-6.781	609.181	609.261
j	32173.296	-6.899	609.158	609.261
k	32183.314	-6.990	609.130	609.248
l	32193.333	-7.053	609.098	609.219
m	32203.353	-7.089	609.061	609.174
n	32213.372	-7.098	609.020	609.114
o	32223.391	-7.080	608.973	609.039
p	32233.411	-7.034	608.922	608.958
℄ PIER 2	32248.679	-6.912	608.837	608.837
q	32258.697	-6.797	608.774	608.769
r	32268.714	-6.655	608.707	608.706
s	32278.731	-6.486	608.635	608.642
t	32288.746	-6.289	608.559	608.573
u	32298.761	-6.066	608.479	608.496
v	32308.774	-5.814	608.394	608.407
℄ ABUT. BRG.	32322.732	-5.419	608.267	608.267
BK. N. ABUT.	32325.496	-5.334	608.240	608.240

BEAM NO. 24

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32062.685	-10.334	609.032	609.032
℄ ABUT. BRG.	32065.451	-10.445	609.039	609.039
a	32075.473	-10.830	609.061	609.071
b	32085.496	-11.187	609.078	609.094
c	32095.522	-11.517	609.091	609.107
d	32105.549	-11.820	609.100	609.110
e	32115.578	-12.095	609.102	609.104
f	32125.608	-12.343	609.101	609.096
℄ PIER 1	32139.596	-12.644	609.092	609.092
g	32149.629	-12.826	609.081	609.102
h	32159.663	-12.982	609.063	609.113
i	32169.698	-13.110	609.042	609.122
j	32179.733	-13.210	609.016	609.119
k	32189.769	-13.283	608.985	609.103
l	32199.805	-13.329	608.949	609.070
m	32209.842	-13.348	608.910	609.023
n	32219.878	-13.339	608.865	608.959
o	32229.915	-13.303	608.816	608.882
p	32239.951	-13.239	608.762	608.798
℄ PIER 2	32255.245	-13.090	608.671	608.671
q	32265.279	-12.957	608.606	608.601
r	32275.313	-12.797	608.536	608.535
s	32285.346	-12.610	608.461	608.468
t	32295.378	-12.396	608.381	608.395
u	32305.409	-12.154	608.298	608.315
v	32315.438	-11.885	608.209	608.222
℄ ABUT. BRG.	32329.419	-11.464	608.079	608.079
BK. N. ABUT.	32332.187	-11.374	608.053	608.053

BEAM NO. 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32068.934	-16.837	608.922	608.922
℄ ABUT. BRG.	32071.706	-16.943	608.928	608.928
a	32081.746	-17.310	608.947	608.957
b	32091.788	-17.651	608.962	608.978
c	32101.832	-17.964	608.972	608.988
d	32111.877	-18.249	608.977	608.987
e	32121.924	-18.507	608.978	608.980
f	32131.972	-18.738	608.973	608.968
℄ PIER 1	32145.984	-19.014	608.960	608.960
g	32156.035	-19.179	608.944	608.965
h	32166.087	-19.317	608.925	608.975
i	32176.140	-19.427	608.901	608.981
j	32186.193	-19.510	608.872	608.975
k	32196.246	-19.566	608.838	608.956
l	32206.300	-19.594	608.799	608.920
m	32216.353	-19.595	608.756	608.869
n	32226.407	-19.568	608.709	608.803
o	32236.460	-19.515	608.657	608.723
p	32246.513	-19.433	608.609	608.645
℄ PIER 2	32261.833	-19.256	608.504	608.504
q	32271.884	-19.106	608.435	608.430
r	32281.935	-18.928	608.361	608.360
s	32291.984	-18.723	608.284	608.291
t	32302.033	-18.490	608.201	608.215
u	32312.079	-18.230	608.114	608.131
v	32322.125	-17.942	608.022	608.035
℄ ABUT. BRG.	32336.128	-17.496	607.890	607.890
BK. N. ABUT.	32338.900	-17.401	607.864	607.864

INDICATES STA. 323+38.900 (TYP)

BEAM NO. 26

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32075.206	-23.328	608.810	608.810
℄ ABUT. BRG.	32077.982	-23.430	608.815	608.815
a	32088.041	-23.780	608.831	608.839
b	32098.101	-24.103	608.843	608.857
c	32108.164	-24.399	608.850	608.864
d	32118.227	-24.667	608.853	608.863
e	32128.292	-24.908	608.851	608.854
f	32138.359	-25.121	608.847	608.844
℄ PIER 1	32152.396	-25.373	608.826	608.826
g	32162.464	-25.521	608.808	608.824
h	32172.534	-25.641	608.785	608.822
i	32182.604	-25.734	608.757	608.816
j	32192.675	-25.799	608.725	608.802
k	32202.745	-25.837	608.688	608.776
l	32212.816	-25.848	608.647	608.737
m	32222.887	-25.831	608.601	608.685
n	32232.958	-25.786	608.550	608.620
o	32243.028	-25.714	608.495	608.544
p	32253.098	-25.615	608.435	608.461
℄ PIER 2	32268.443	-25.411	608.334	608.334
q	32278.511	-25.242	608.262	608.259
r	32288.578	-25.046	608.186	608.186
s	32298.644	-24.823	608.105	608.112
t	32308.709	-24.572	608.019	608.032
u	32318.772	-24.294	607.928	607.942
v	32328.834	-23.988	607.834	607.845
℄ ABUT. BRG.	32342.859	-23.516	607.702	607.702
BK. N. ABUT.	32345.636	-23.416	607.676	607.676

NOTE: OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES AND ARE MEASURED RADIALLY.

GIRDER NO. 26A

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32080.531	-28.814	608.715	608.715
℄ ABUT. BRG.	32083.283	-28.882	608.719	608.719
a	32093.360	-29.114	608.736	608.746
b	32103.438	-29.318	608.747	608.762
c	32113.518	-29.495	608.753	608.766
d	32123.598	-29.644	608.755	608.760
e	32133.679	-29.766	608.753	608.749
f	32143.760	-29.861	608.745	608.736
℄ PIER 1	32157.024	-29.943	608.728	608.728
g	32167.106	-29.974	608.710	608.738
h	32177.188	-29.987	608.686	608.752
i	32187.270	-30.078	608.656	608.764
j	32197.353	-30.142	608.622	608.766
k	32207.436	-30.179	608.583	608.751
l	32217.519	-30.188	608.539	608.713
m	32227.602	-30.169	608.491	608.651
n	32237.684	-30.123	608.438	608.567
o	32247.767	-30.050	608.379	608.466
p	32258.187	-30.000	608.314	608.360
℄ PIER 2	32273.368	-29.975	608.207	608.207
q	32283.450	-29.924	608.130	608.122
r	32293.532	-29.846	608.048	608.044
s	32303.614	-29.740	607.962	607.968
t	32313.694	-29.607	607.871	607.886
u	32323.774	-29.446	607.776	607.796
v	32333.853	-29.258	607.678	607.695
℄ ABUT. BRG.	32348.938	-28.925	607.533	607.533
BK. N. ABUT.	32351.758	-28.856	607.505	607.505

NOTE: WORK THIS SHEET WITH S & 7

TOP OF SLAB ELEVATIONS
SHEET 2 OF 3

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

COOK COUNTY

STATION 421+55.44

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

323

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	259
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 of 23 SHEETS

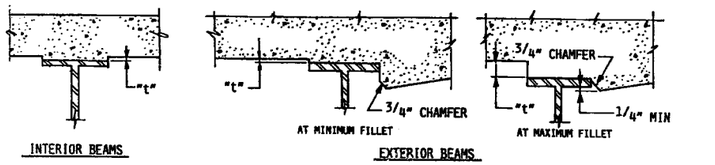
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

GIRDER NO. 26B

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	32085.872	-34.292	608.617	608.617
℄ ABUT. BRG.	32088.600	-34.327	608.623	608.623
a	32098.694	-34.437	608.637	608.647
b	32108.789	-34.521	608.649	608.664
c	32118.884	-34.576	608.655	608.668
d	32128.979	-34.604	608.656	608.661
e	32139.074	-34.605	608.653	608.648
f	32149.169	-34.578	608.645	608.636
℄ PIER 1	32161.663	-34.507	608.629	608.629
g	32171.758	-34.419	608.611	608.639
h	32181.852	-34.327	608.588	608.654
i	32191.946	-34.417	608.556	608.664
j	32202.040	-34.480	608.518	608.662
k	32212.135	-34.515	608.477	608.645
l	32222.230	-34.522	608.431	608.605
m	32232.325	-34.502	608.379	608.560
n	32242.420	-34.455	608.324	608.453
o	32252.514	-34.380	608.263	608.351
p	32262.608	-34.380	608.196	608.243
℄ PIER 2	32278.306	-34.533	608.078	608.078
q	32288.401	-34.596	607.996	607.988
r	32298.496	-34.632	607.909	607.905
s	32308.591	-34.640	607.818	607.823
t	32318.686	-34.621	607.723	607.738
u	32328.781	-34.574	607.623	607.643
v	32338.876	-34.500	607.522	607.539
℄ ABUT. BRG.	32355.034	-34.324	607.363	607.363
BK. N. ABUT.	32357.899	-34.285	607.334	607.334

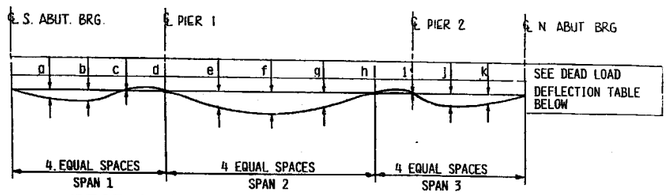
INDICATES STA. 323+57.899 (TYP)

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF SEB LANES AND ARE MEASURED RADIALLY.



TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHT DETAILS



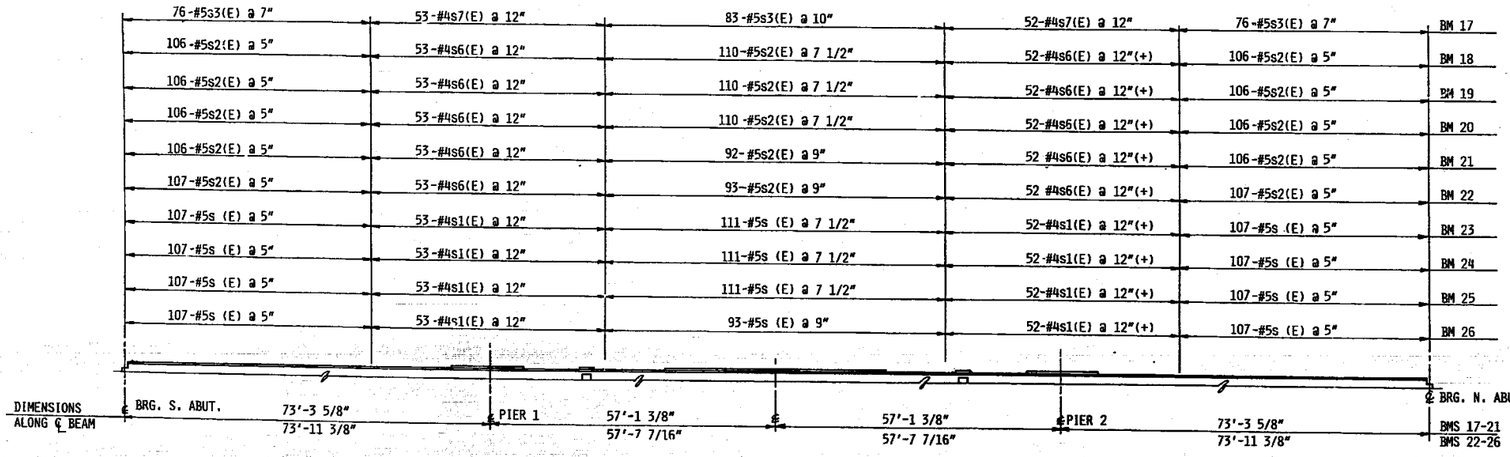
DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.

DEAD LOAD DEFLECTION TABLE (INCHES)

BEAMS	a	b	c	d	e	f	g	h	i	j	k
17	1/16	1/16	-3/16	0	1 1/4	1 5/16	1 1/4	0	-3/16	1/16	1/16
21, 22 & 26	1/8	1/8	-1/16	0	13/16	1 1/4	13/16	0	-1/16	1/8	1/8
18-20 & 23-25	3/16	1/8	0	0	15/16	1 1/2	15/16	0	0	1/8	3/16
26A & 26B	3/16	1/8	-1/16	0	1 1/4	2 1/8	1 1/4	0	-1/16	3/16	1/4



REINFORCED FILLET LOCATIONS

NOTES:
1. WORK THIS SHEET WITH 5 & 6.
2. FOR BEAM FILLET DETAIL, SEE SHEET 9.

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

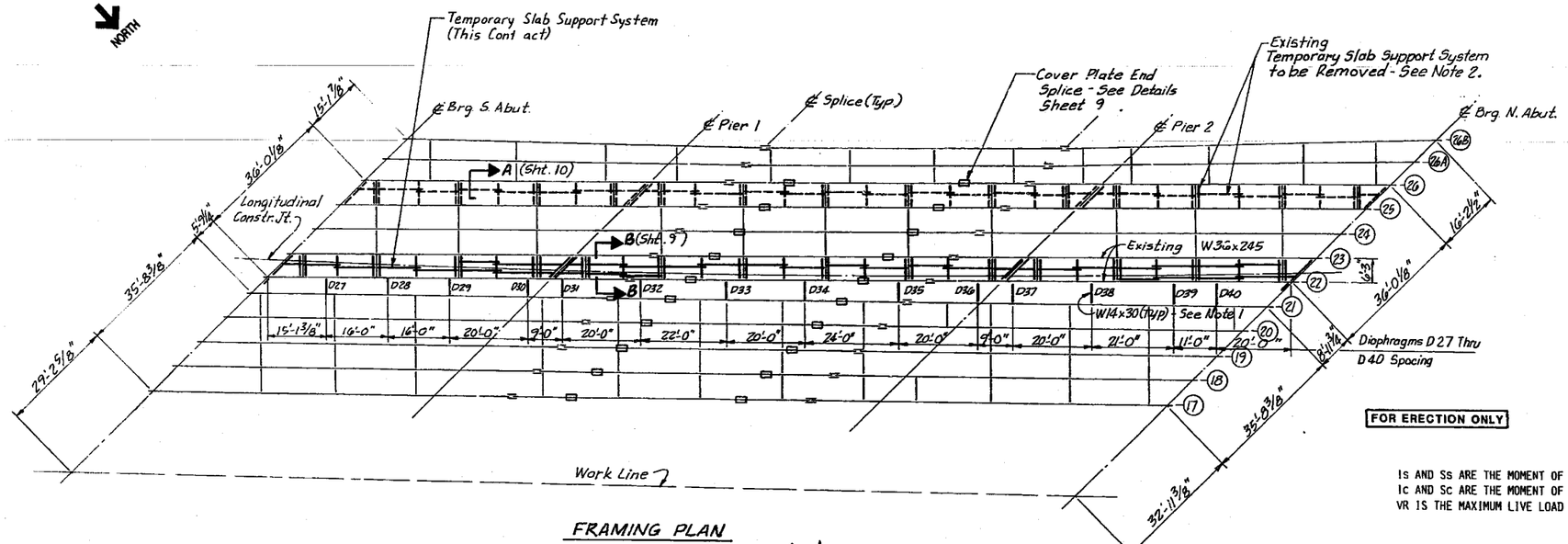
624

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

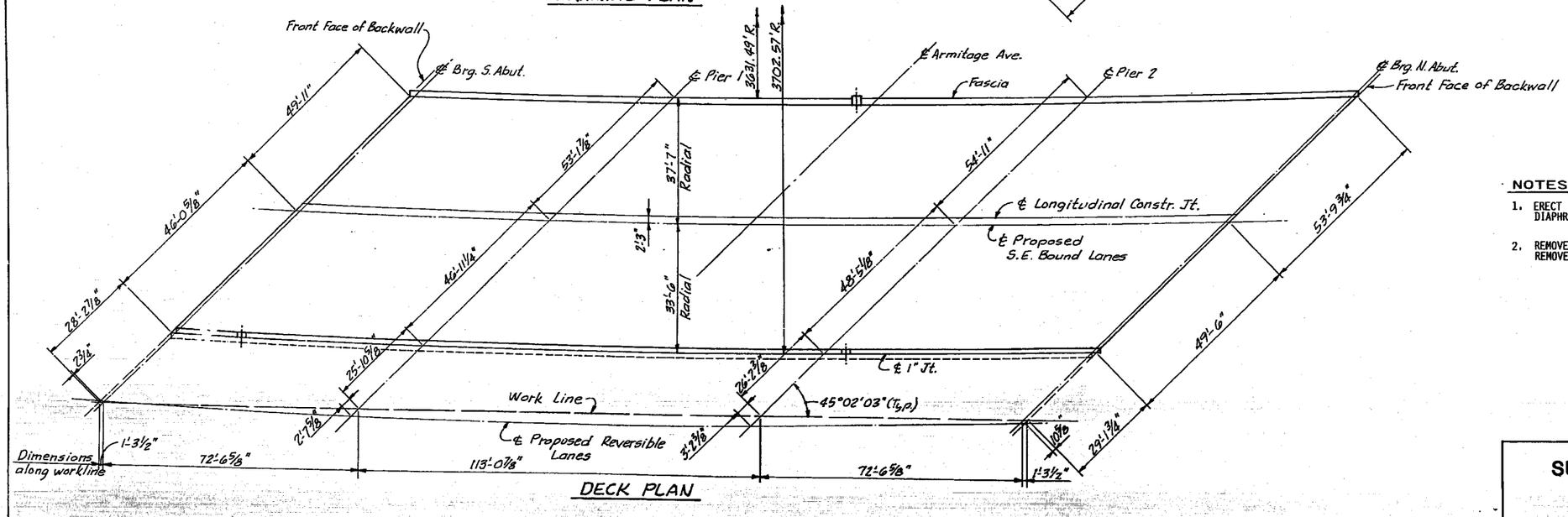
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	260
F. HWY. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. ___ of 23 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



FRAMING PLAN



DECK PLAN

GIRDER MOMENT TABLE		INTERIOR GIRDER		
		.4 SPAN 1	PIER 1 & 2	.5 SPAN 2
Is	(in4)	16100.0	24457.0	20306.0
Ic n=9	(in4)	40817.0	-	47546.0
Ic n=27	(in4)	27303.0	-	32577.0
Ss	(in3)	893.0	1293.7	1088.5
Sc n=9	(in3)	1375.4	-	1594.0
Sc n=27	(in3)	1170.5	-	1373.4
DL	(k/ft)	0.96	1.15	1.20
MDL	(k-ft)	189.7	1081.9	848.0
fs DL	(ksi)	2.55	10.04	9.35
SDL	(k/ft)	0.225	0.225	0.225
MSDL	(k-ft)	76.0	190.5	194.4
MLL	(k-ft)	495.5	432.4	728.5
MIMP	(k-ft)	124.9	98.9	152.2
MLL+I	(k-ft)	620.4	531.3	880.7
fs SDL	(ksi)	0.78	1.77	1.76
fs LL+I	(ksi)	5.41	4.92	6.63
fs TOTAL	(ksi)	8.74	16.73	17.68
VR	(k)	46.6	-	47.0

GIRDER REACTION TABLE		INTERIOR GIRDER	
		N & S ABUT	PIER 1 & 2
R_{DL}	(k)	26.5	141.5
R_{LL}	(k)	33.1	52.6
IMP	(k)	8.4	12.0
R TOTAL	(k)	68.0	206.1

FOR ERECTION ONLY

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

℄ TO ℄ DISTANCE @ DIAPHRAGM LOCATIONS: BETWEEN BEAMS 21 & 22			
D27	4'-2 1/16"	D34	5'-2 5/8"
D28	4'-3 11/16"	D35	5'-5 1/8"
D29	4'-5 5/16"	D36	5'-7 3/16"
D30	4'-7 3/8"	D37	5'-8 1/16"
D31	4'-8 5/16"	D38	5'-10 1/8"
D32	4'-10 3/8"	D39	6'-0 5/16"
D33	5'-0 5/8"	D40	6'-1 7/16"

NOTES:

1. ERECT STRUCTURAL STEEL DIAPHRAGMS BETWEEN BEAMS 21 AND 22. DIAPHRAGMS ARE TO BE INSTALLED PERPENDICULAR TO BEAM 22
2. REMOVE TEMPORARY SLAB SUPPORT SYSTEM BETWEEN BEAMS 25 AND 26. REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.

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SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

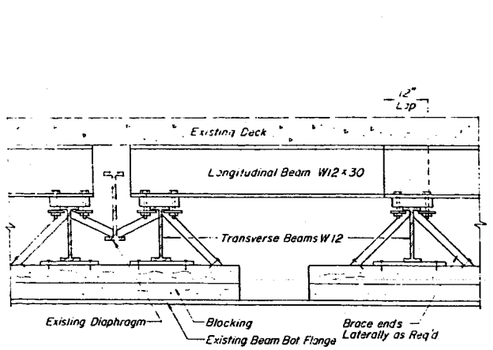
625

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

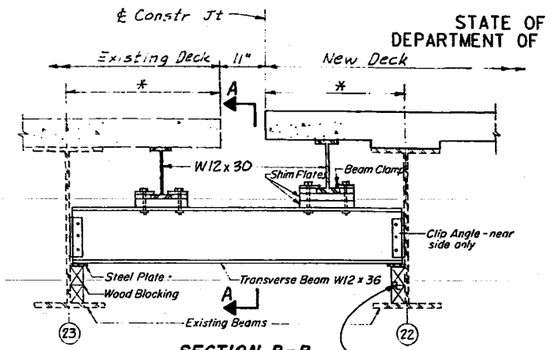
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		420	261
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. of 23 SHEETS

* 0505(2-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



SECTION A-A

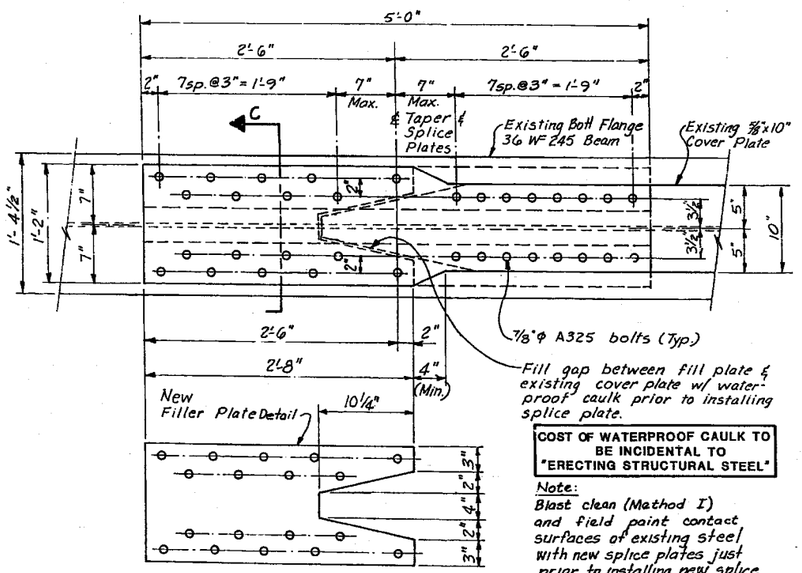


SECTION B-B
For Location see Sheet 8.

Spike together & provide a retainer clip for bottom flange.

* Temporary Support Required Only When This Dimension is 2'-0" or Greater.

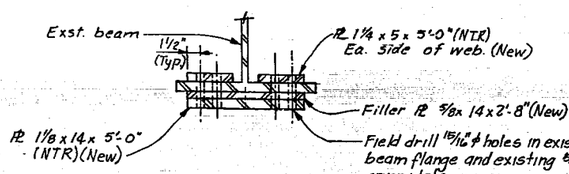
TEMPORARY SUPPORT - EDGE DECK



COST OF WATERPROOF CAULK TO BE INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

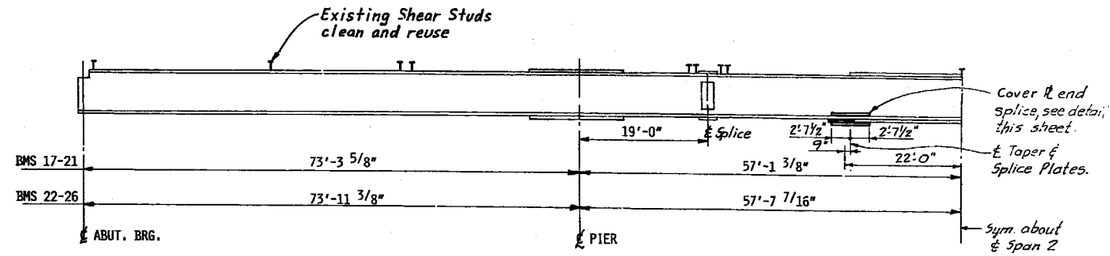
Note:
Blast clean (Mathod I) and field paint contact surfaces of existing steel with new splice plates just prior to installing new splice plates.

COVER PLATE END SPLICE DETAIL
(20 Req'd.)



SECTION C
"NTR" indicates Notch Toughness Requirement

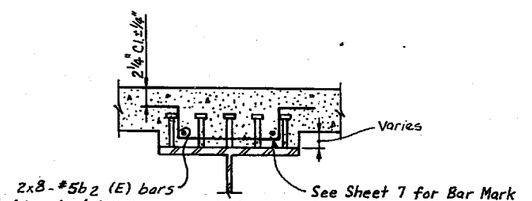
NOTE:
CLAMP THE NEW COVER PLATES IN PLACE AND FIELD DRILL THE HOLES THROUGH THE NEW FILL PLATES, EXISTING COVER PLATES, AND BEAM FLANGE USING THE NEW COVER PLATE AS A TEMPLATE. COST OF FIELD DRILLING SHALL BE INCLUDED IN ERECTING STRUCTURAL STEEL.



BEAM ELEVATION - BMS 17 TO 26

TEMPORARY SLAB SUPPORT NOTES:

1. ALL BOLTS ARE 3/4" DIA. HIGH STRENGTH. BOLT HOLES SHALL BE 15/16" DIA. EXCEPT SLOTTED HOLES WHICH ARE 13/16" X 1 1/2".
2. SLAB SUPPORT ASSEMBLY SHALL BE IN PLACE PRIOR TO DECK REMOVAL, AND SHALL REMAIN IN PLACE UNTIL SUPPORTED DECK IS REMOVED DURING STAGE 2B CONSTRUCTION.
3. TIMBER BLOCKING SHALL BE OF SOUND CONDITION FREE OF ROT AND DEFECTS WHICH WILL MAKE THE TIMBER UNSUITABLE FOR THE INTENDED USE. ALL BLOCKING SHALL BE SECURED BY CLAMPS, SPIKES OR OTHER APPROVED MEANS, TO PREVENT SHIFTING DUE TO TRAFFIC AND CONSTRUCTION VIBRATIONS.
4. ALL DETAILS AND DRAWINGS SHOWN FOR THE TEMPORARY SLAB SUPPORT SYSTEM ARE FOR INFORMATION ONLY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO SUBMIT PLANS, DESIGN, AND DETAIL FOR THE TEMPORARY SLAB SUPPORT SYSTEM TO THE ENGINEER FOR HIS WRITTEN APPROVAL. THESE PLANS, DESIGN AND DETAILS SHALL BE PREPARED AND SEALED BY AN ILLINOIS LICENSED STRUCTURAL ENGINEER.
6. COST OF THE SLAB SUPPORT SYSTEM, INCLUDING ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY, SHALL BE INCLUDED IN THE LUMP SUM BID FOR "TEMPORARY SLAB SUPPORT SYSTEM".
7. NO DRILLING OR WELDING WILL BE ALLOWED ON THE EXISTING BEAMS, EXCEPT AS SHOWN. ALL REQUIRED HOLES SHALL BE DRILLED, NO BURNING ALLOWED.



SECTION THRU BEAM FILLET
(Showing Special Fillet Reinforcing)

FOR ERECTION ONLY

BILL OF MATERIAL

Item	Unit	Total
Erecting Structural Steel	LUMP SUM	1

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SUPERSTRUCTURE DETAILS

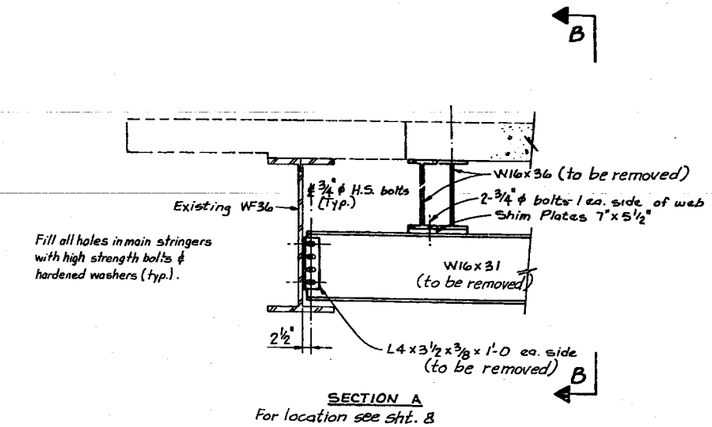
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

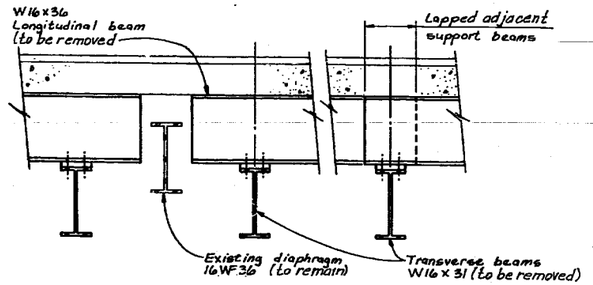
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	262
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10 of 23 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

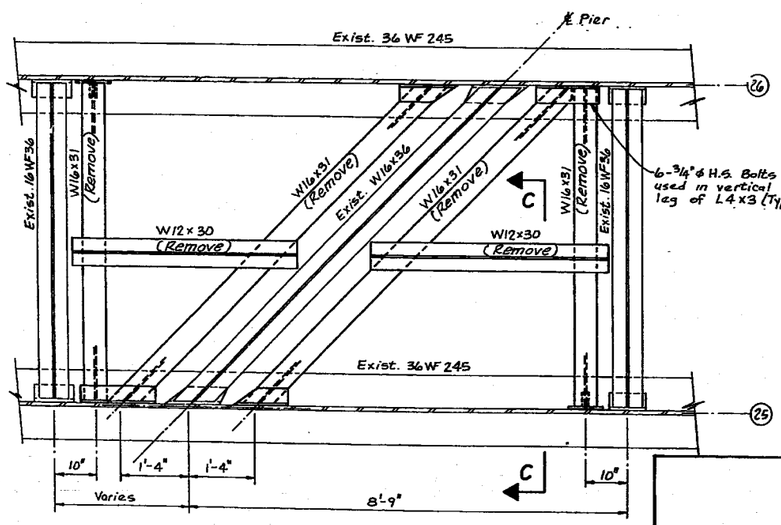


SECTION A
For location see Sht. 8



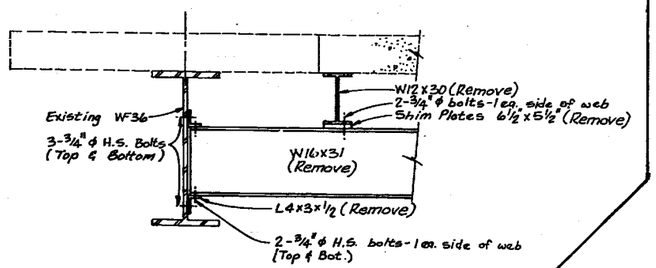
VIEW B-B

TEMPORARY SUPPORT STEEL
(TO BE REMOVED AS NOTED)

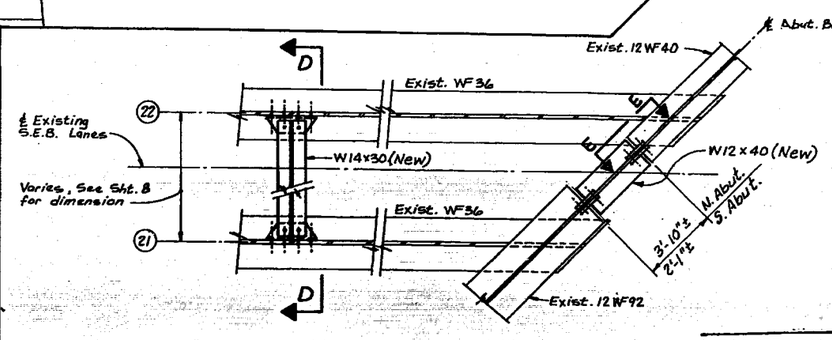


PARTIAL PLAN

TEMPORARY SUPPORT STEEL
(TO BE REMOVED AS NOTED)

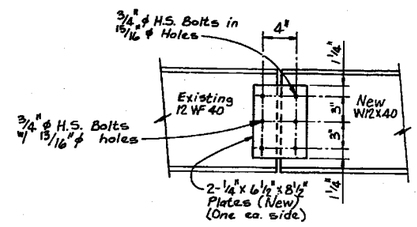


SECTION C-C

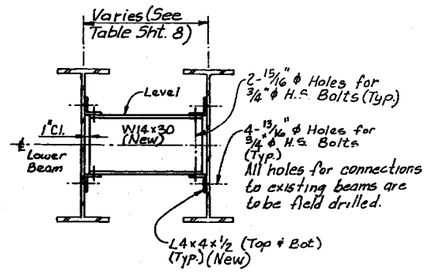


PARTIAL PLAN

FOR ERECTION ONLY



SECTION E-E
Note: All holes in existing steel to be field drilled.



SECTION D-D

NOTE: "A" - TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL OVERSIZED HOLES.

NOTE: COST OF FIELD DRILLING IS INCIDENTAL TO "ERECTING STRUCTURAL STEEL"

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SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

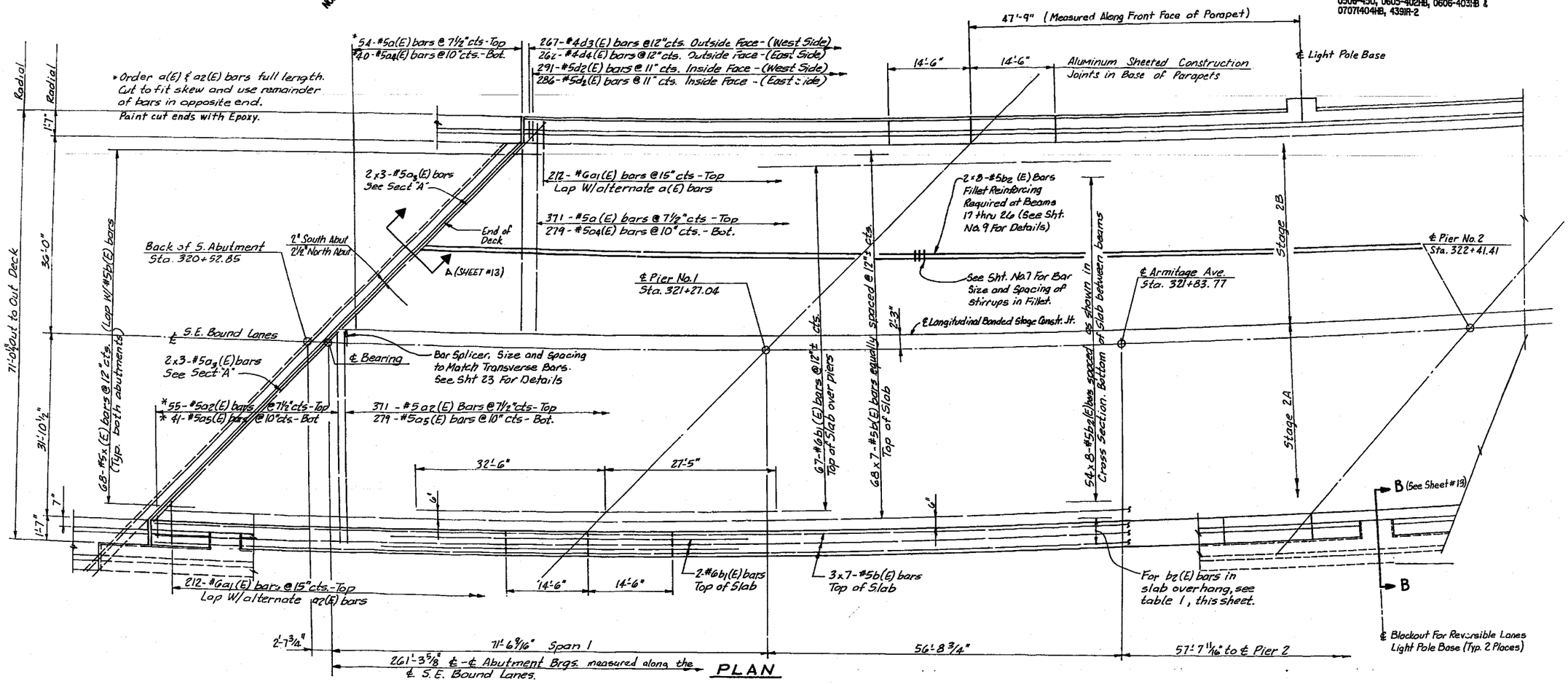
627

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	263
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11 of 29 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



PLAN

TABLE 1

	b2(E) Bar Location **	Number of Lines	Number of b2(E) Bars/Line
West Slab Overhang	0'-2" to 265'-10"	3	8
East Slab Overhang	0'-2" to 35'-4"	2	1
	33'-2" to 68'-4"	3	1
	66'-2" to 233'-4"	4	5
	231'-2" to 261'-0"	3	1

** Distance from South end of slab along edge of slab.

NOTES:

1. SEE SHEET #13 & #14 SUPERSTRUCTURE. DETAILS AND BILL OF MATERIAL.
2. BARS INDICATED THUS, 20 X 3-#5 ETC. INDICATES 20 LENGTHS OF BARS WITH 3 BARS PER LINE.
3. REINFORCING BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. EDGES OF DECK AND BARRIER RAILS ARE CURVED. FOR CURVATURE DATA, SEE "DECK PLAN" ON SHEET # 8 . PLACE LONGITUDINAL b2(E) BOTTOM BARS BETWEEN BEAMS IN STRAIGHT LINES PARALLELING BEAMS. PLACE TRANSVERSE BARS a1(E), a3(E), & a2(E) PERPENDICULAR TO BEAMS. PLACE LONGITUDINAL b1(E) TOP BARS ON CURVATURE PARALLELING CENTERLINE OF BRIDGE.
5. FOR ADDITIONAL REINFORCEMENT OF THE FILLETS NOT SHOWN ON THIS PLAN, SEE SHEET 7.

Size	Min Bar Lap
#5	1'-8"
#8	3'-8"

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SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

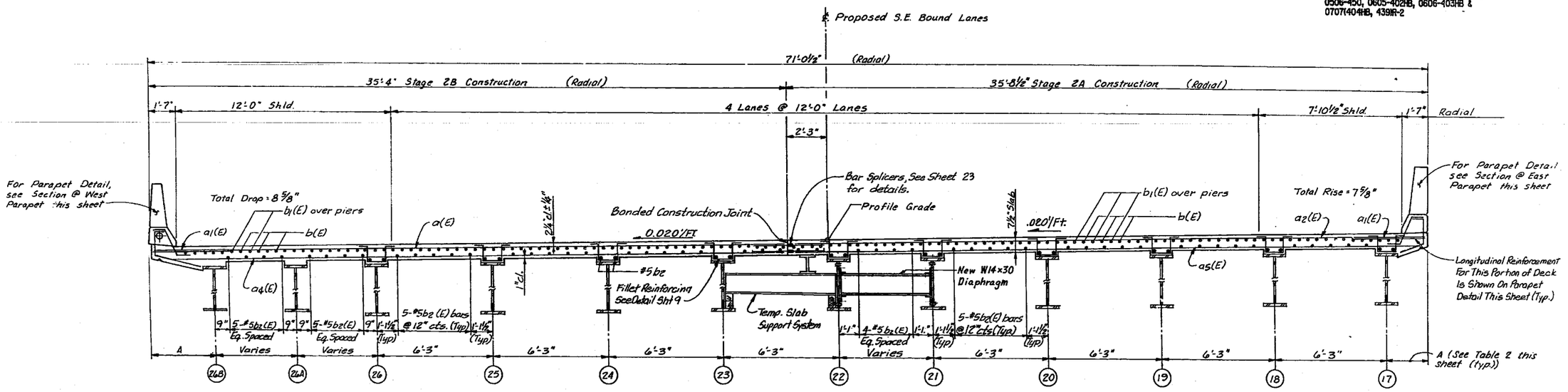
626

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

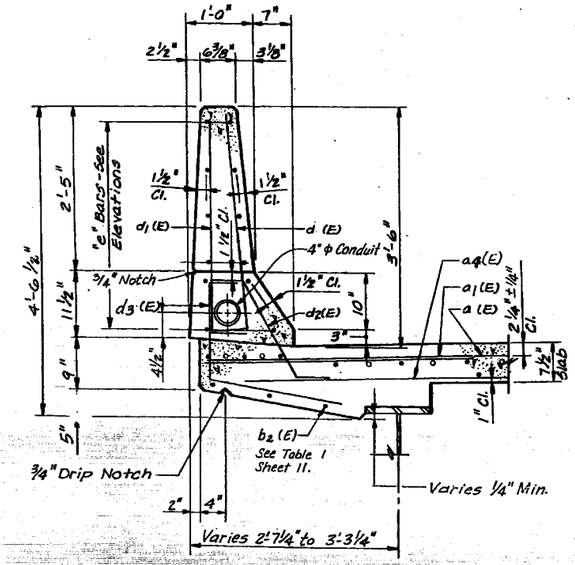
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	264
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 12 of 23 SHEETS

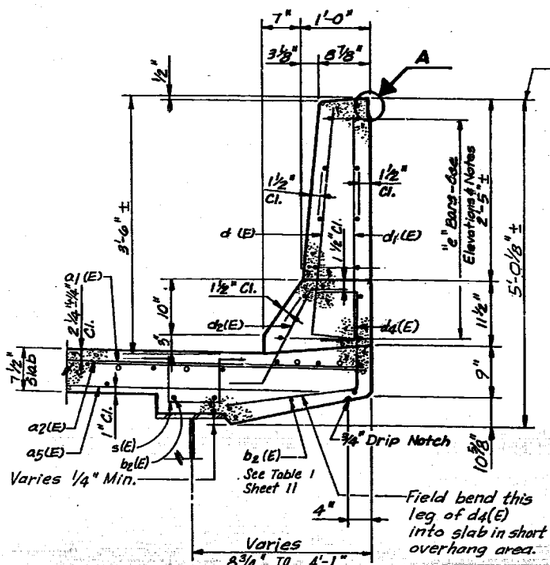
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



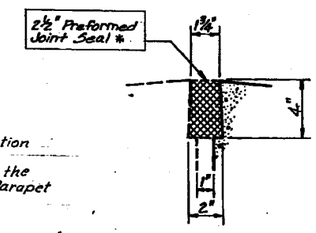
CROSS SECTION
(Looking Up Station)



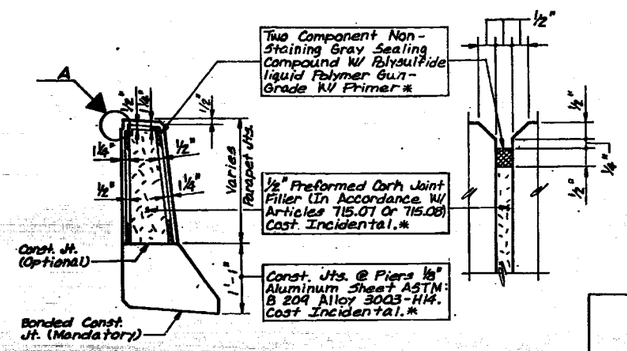
SECTION @ WEST PARAPET



SECTION @ EAST PARAPET



DETAIL A



PARAPET JOINT DETAILS

*Cost incidental to Class X Concrete Superstructure

Table 2		
	A Dimension	
	West Side	East Side
℄ Brg. S. Abut.	3'-2 5/8"	0'-8¾"
℄ Pier 1	3'-0⅜"	3'-0⅛"
℄ Pier 2	3'-0⅜"	3'-11⅛"
℄ Brg. N. Abut.	3'-3¼"	2'-8½"

Notes:
1. Reinforcing Bars Designated (E) Shall be Epoxy coated.
2. See Sheet 13 & 14 for Superstructure Details and Bill of Materials.
3. Field cut "e" bars & "b" bars as required for blockout for light pole base located on East Parapet.

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

COOK COUNTY

STATION 421+55.44

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INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

C79

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	265
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13 of 23 SHEETS

West Side: 267 - #4 d_1 (E) bars @ 12" Cts. (Outside Face); 291 - #5 d (E) bars @ 11" Cts. (Inside Face)
East Side: 262 - #4 d_1 (E) bars @ 12" Cts. (Outside Face); 286 - #5 d (E) bars @ 11" Cts. (Inside Face)

West Side / East Side: 4 Spaces @ 14'-9 7/8" (14) = 59'-3 5/8" - Span 1; 4 Spaces @ 15'-5 1/4" = 61'-9" - Span 3

℄ Pier 1 (West Side) / Pier 2 (East Side)

14'-6" / 14'-6" | 14'-6" / 14'-6"

5 Spaces @ 17'-3 3/4" (11) = 86'-6 7/8" - Span 2
5 Spaces @ 16'-10 11/16" (9) = 84'-4 1/4" - Span 2

℄ Pier 2 (West Side) / Pier 1 (East Side)

14'-6" / 14'-6" | 14'-6" / 14'-6"

4 Spaces @ 15'-10 3/16" (9) = 63'-4 7/8" - Span 3
4 Spaces @ 16'-6 1/16" = 66'-0 1/4" - Span 1

West Side / East Side — Dimension along front face of barrier

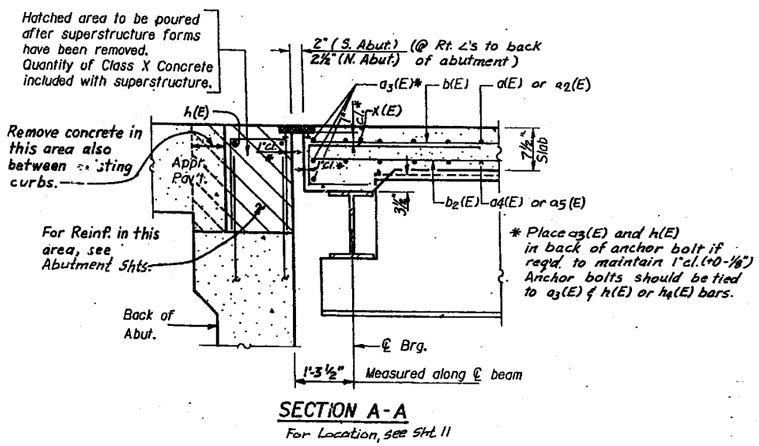
{4-#4c (E) Each Face - Span 1 (West Side); 4-#4c1 (E) Each Face - Span 3 (East Side)}
{4-#4e2 (E) E.F. (West Side); 4-#4e2 (E) E.F. (East Side)}
{4-#4c3 (E) Each Face (West Side); 4-#4e4 (E) Each Face (East Side)}
4-#4e2 (E) E.F. (West Side); 4-#4e2 (E) E.F. (East Side)
{4-#4e5 (E) Each Face - Span 3 (West Side); 4-#4c6 (E) Each Face - Span 1 (East Side)}

2'-2 1/2" | 10" | 3"

1x 2-#8e7 (E) Each Face - Span 1 (West Side); 1x 2-#8e8 (E) Each Face - Span 3 (East Side)
1x 2-#5e12 (E) Each Face - Span 1 (West Side); 1x 2-#5e13 (E) Each Face - Span 3 (East Side)
#8e17 (E) E.F.
#5e18 (E) E.F.
1x 3-#8e9 (E) Each Face - Span 2
1x 3-#5e14 (E) Each Face - Span 2
#8e11 (E) E.F.
#5e18 (E) E.F.
1x 2-#8e10 (E) Each Face - Span 3 (West Side); 1x 2-#8e11 (E) Each Face - Span 1 (East Side)
1x 2-#5e15 (E) Each Face - Span 3 (West Side); 1x 2-#5e16 (E) Each Face - Span 1 (East Side)

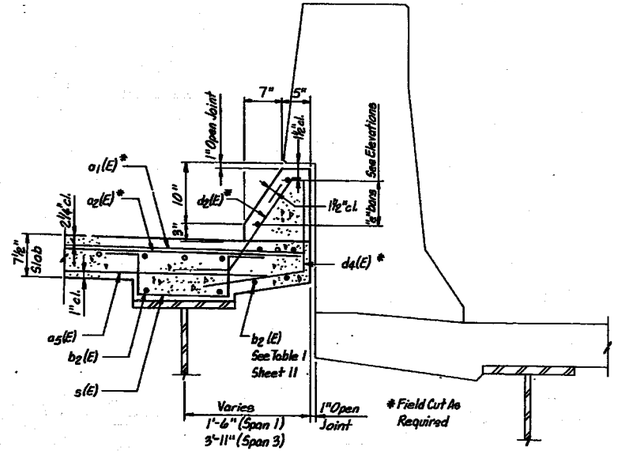
INSIDE ELEVATION OF PARAPET

Min. Bar Laps
#5 - 1'-8"
#8 - 3'-8"



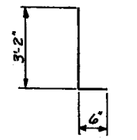
SECTION A-A

For Location, see Sht. 11

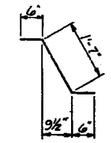


SECTION B-B

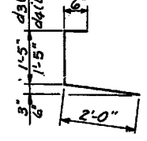
For Location See Sheet 11



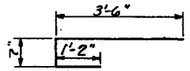
BARS d(E) & d_1(E)



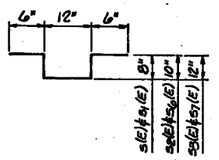
BAR d_2(E)



BAR d_3(E) & d_4(E)



BAR x (E)



BAR s(E), s_1(E), s_2(E), s_3(E), s_4(E) & s_5(E) & s_7(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
c(E)	425	#5	34'-10"	
c_1(E)	424	#6	4'-0"	
c_2(E)	426	#5	35'-4"	
c_3(E)	24	#5	26'-4"	
c_4(E)	319	#5	34'-3"	
c_5(E)	320	#5	34'-7"	
b(E)	518	#5	39'-11"	
b_1(E)	142	#6	59'-11"	
b_2(E)	644	#5	35'-4"	
d(E)	577	#5	3'-8"	L
d_1(E)	529	#4	3'-8"	⌋
d_2(E)	577	#5	2'-7"	⌐
d_3(E)	267	#4	3'-11"	⊏
d_4(E)	262	#4	3'-11"	⊏
e(E)	32	#4	14'-6"	
e_1(E)	32	#4	15'-1"	
e_2(E)	64	#4	14'-2"	
e_3(E)	40	#4	17'-0"	
e_4(E)	40	#4	16'-6"	
e_5(E)	32	#4	15'-6"	
e_6(E)	32	#4	14'-2"	
e_7(E)	4	#8	31'-8"	
e_8(E)	4	#8	32'-11"	
e_9(E)	12	#8	31'-10"	
e_{10}(E)	4	#8	33'-9"	
e_{11}(E)	4	#8	31'-1"	
e_{12}(E)	4	#5	30'-6"	
e_{13}(E)	4	#5	31'-9"	
e_{14}(E)	12	#5	30'-3"	
e_{15}(E)	4	#5	32'-7"	
e_{16}(E)	4	#5	29'-11"	
e_{17}(E)	16	#8	14'-2"	
e_{18}(E)	16	#5	14'-2"	
s(E)	1282	#5	3'-4"	⊔
s_1(E)	420	#4	3'-4"	⊔
s_2(E)	1577	#5	3'-8"	⊔
s_3(E)	235	#5	4'-0"	⊔
s_6(E)	525	#4	3'-8"	⊔
s_7(E)	105	#4	4'-0"	⊔
x(E)	136	#5	5'-3"	⊏
REINFORCEMENT BARS (EPOXY COATED)			LBS.	143,420
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	512.7

NOTE:
All bar dimensions are out-to-out.
Reinforcing beams designated (E) to be epoxy coated.

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SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

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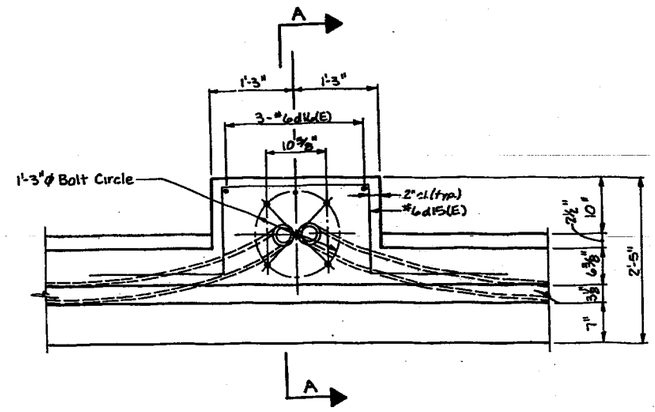
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

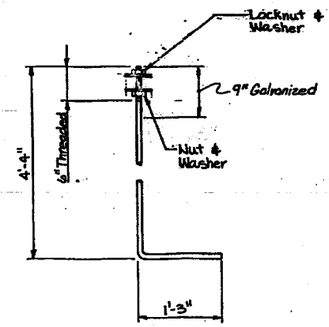
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	266
F. AV. A. RES. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14 of 23 SHEETS

* 050312-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0505-402HB, 0606-403HB & 07071404HB, 4391R-2

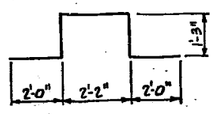


PLAN

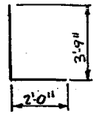


1"ϕ ANCHOR BOLT (ASTM A687)

COST OF 1" ϕ ANCHOR BOLTS TO BE INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE.



BAR d15 (E)

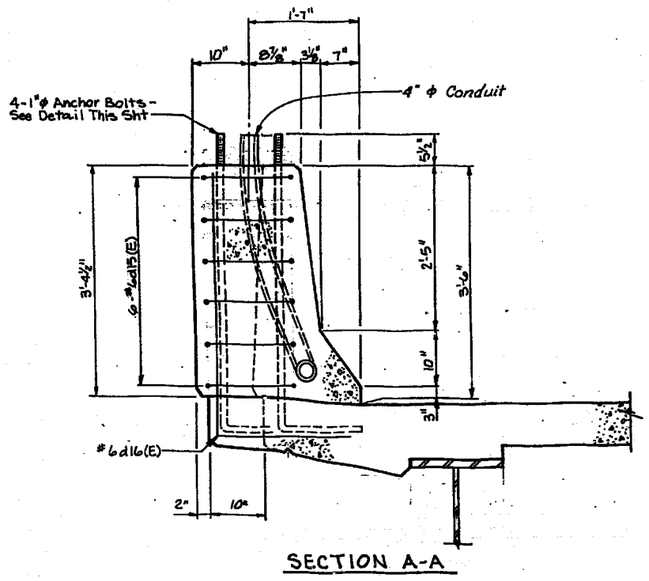


BAR d16(E)

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d15(E)	6	#6	8'-8"	
d16(E)	3	#6	5'-9	
REINFORCING BARS (EPOXY COATED)			LBS.	100
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	0.3

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
BAR DIMENSIONS SHOWN ARE OUT TO OUT.



SECTION A-A

STANLEY CONSULTANTS

PARAPET MOUNTED LIGHT POLES

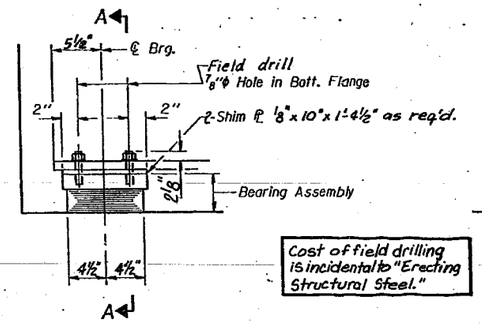
SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+56.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

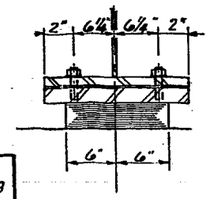
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	267

SHEET NO. 15 of 23 SHEETS

* 0505-2-2B, 3-1H, 6-1P, 400HB, 401HB, 450, 0506-450, 0605-402HB, 0606-403HB & 0707-404HB, 439HR-2



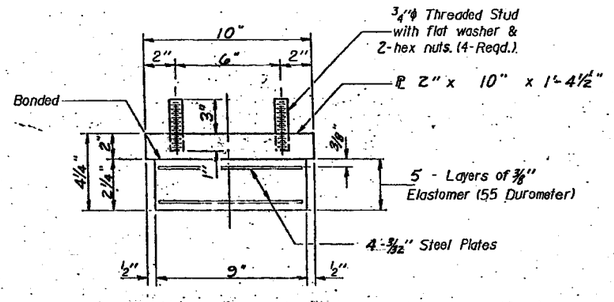
Cost of field drilling is incidental to "Erecting Structural Steel."



ELEVATION AT SOUTH ABUT.

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY
(6 Req'd.)

Note: Shim plates shall not be placed under Bearing Assembly.

BILL OF MATERIAL

Location	Item	Unit	Total
Beams 18-20, 23-25	Install Elastomeric Bearing Assembly Type I	Each	6

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I-2-E1 12-1-83

BEARING DETAILS

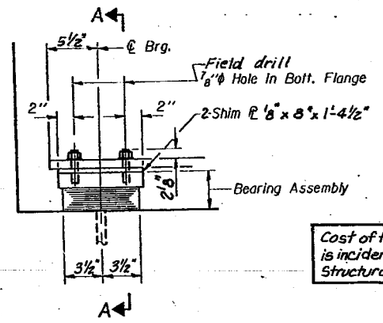
SECTION
F.A.I. ROUTE 80/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+85.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

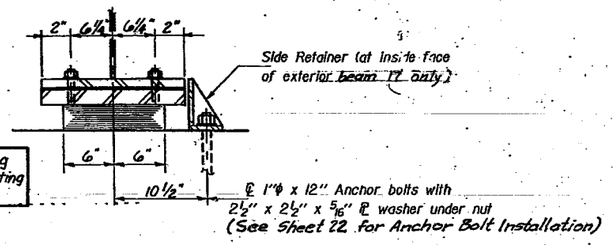
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	26B
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 16 of 23 SHEETS

* 0505(2-2B, 3-1H, 6-1F, 400HB, 401HB, 450, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



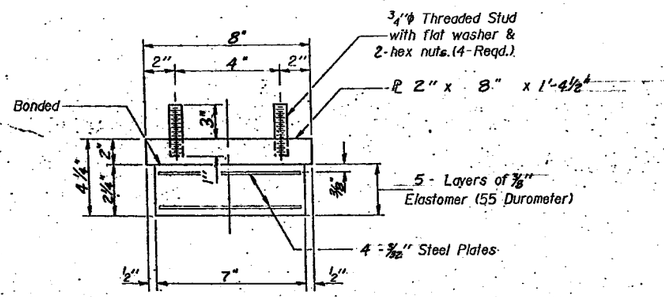
ELEVATION AT SOUTH ABUT.



Cost of field drilling is incidental to "Erecting Structural Steel"

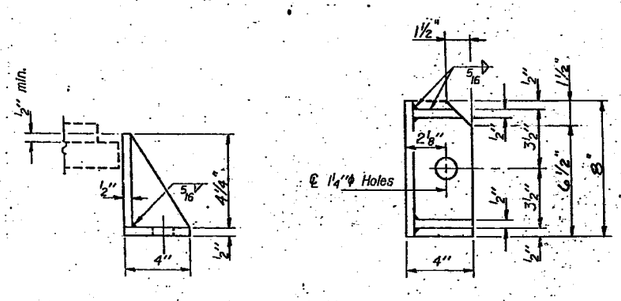
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY
(4 Req'd)

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER (1 Req'd)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Location	Item	Unit	Total
Beam 17, 21, 22 & 26	Install Elastomeric Bearing Assembly Type I	Each	4

[redacted] DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

PREPARED BY STANLEY CONSULTANTS

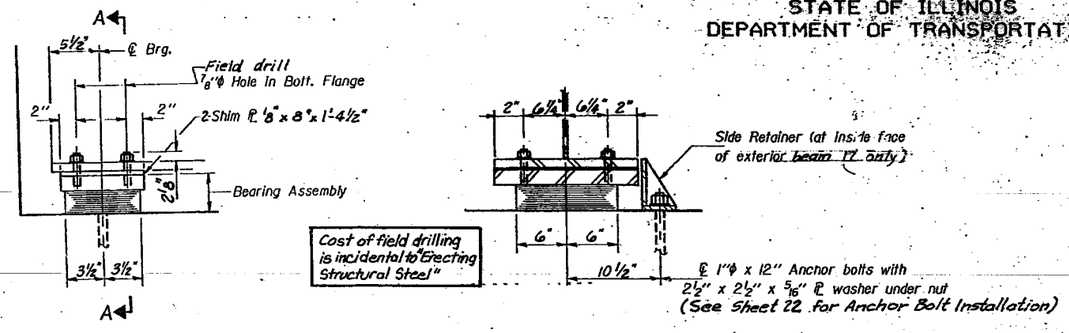
I-2-E1 12-1-83

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	268

SHEET NO. 16 of 23 SHEETS

* 0505(2-2), 3-1H, 6-1F, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

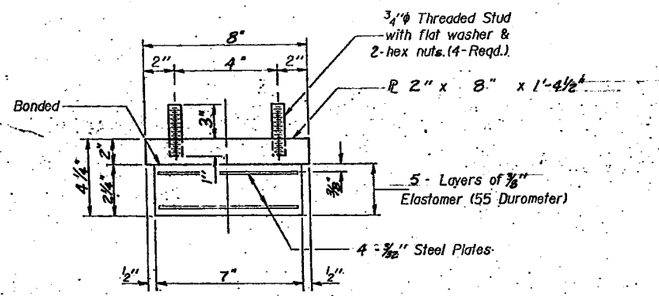


Cost of field drilling is incidental to "Erecting Structural Steel"

ELEVATION AT SOUTH ABUT.

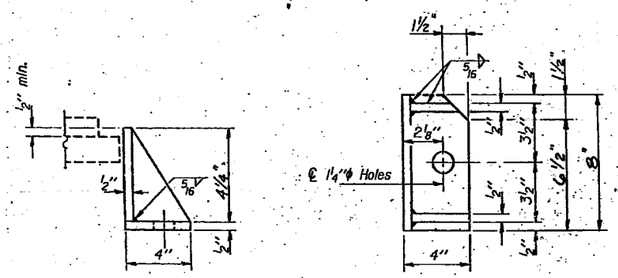
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY
(4 Req'd)

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER (1 Req'd)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Location	Item	Unit	Total
Beam 17, 21, 22 & 26	Install Elastomeric Bearing Assembly Type I	Each	4

[redacted] DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

PREPARED BY STANLEY CONSULTANTS

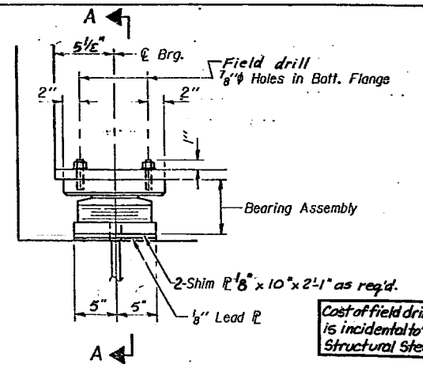
I-2-E1 12-1-83

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

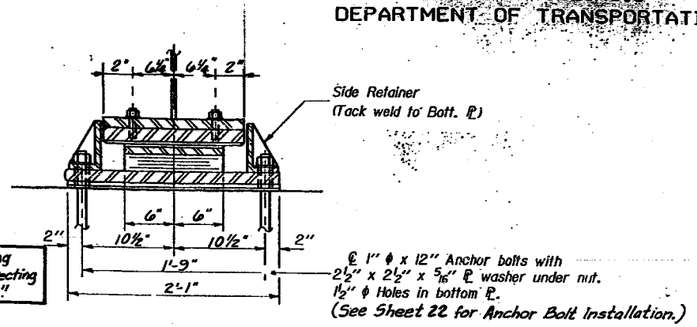
	*		426	269

SHEET NO. 17 of 23 SHEETS

* 0505R2-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-45D, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



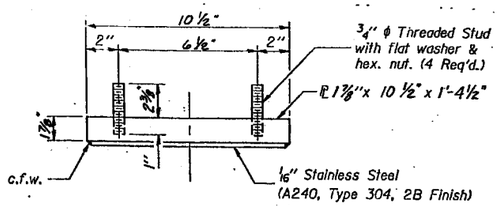
ELEVATION AT NORTH ABUT.



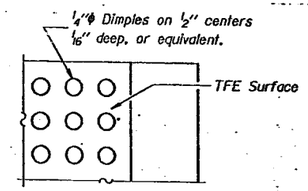
Cost of field drilling is incidental to "Erecting Structural Steel."

SECTION A-A

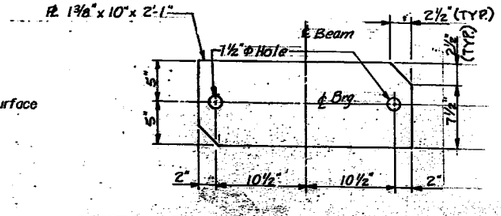
TYPE II TFE ELASTOMERIC EXP. BRG.



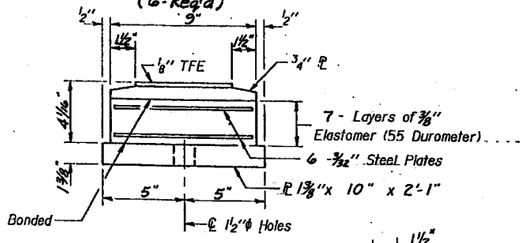
TOP BEARING ASSEMBLY
(6-Req'd)

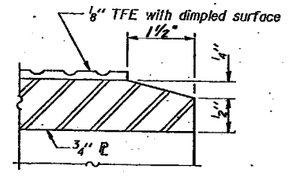


PLAN-TFE SURFACE



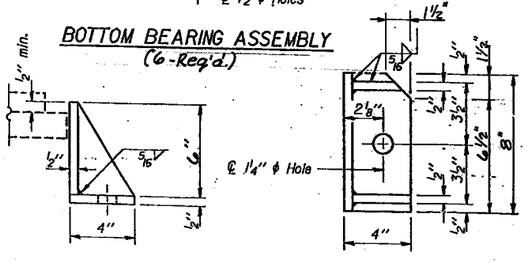
BOTTOM BEARING PLATE DETAIL AT NORTH ABUTMENT





SECTION THRU TFE

BOTTOM BEARING ASSEMBLY
(6-Req'd.)

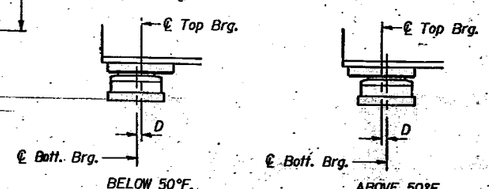


SIDE RETAINER (12-Req'd.)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BELOW 50°F.
(Move bott. brg. away from fixed brg.)

ABOVE 50°F.
(Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Location	Item	Unit	Total
Beams 18-20, 23-25	Install Elastomeric Bearing Assembly Type II	Each	6

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I-2-E2 12-1-83

BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

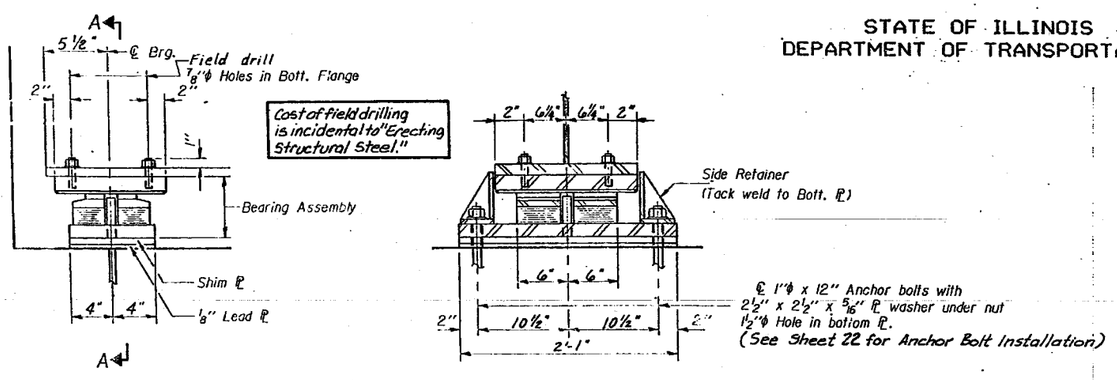
634
3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		416	270

SHEET NO. 18 of 23 SHEETS

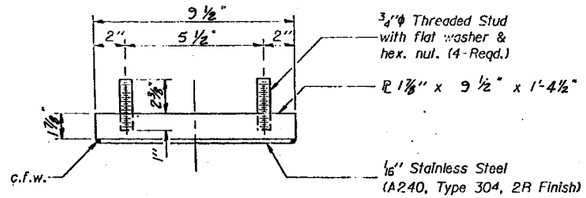
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2



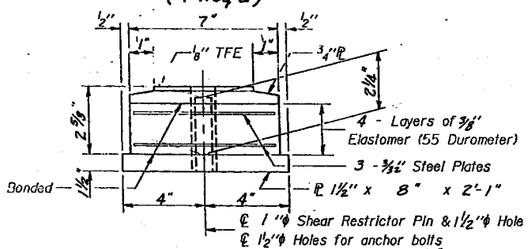
ELEVATION AT NORTH ABUT.

SECTION A-A

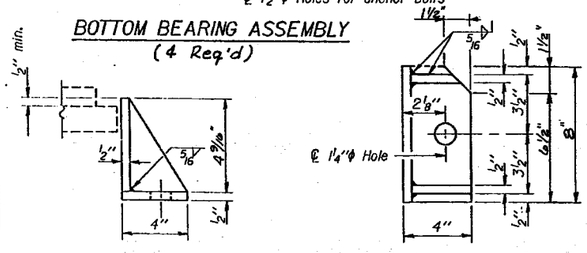
TYPE III ELASTOMERIC EXP. BRG.



TOP BEARING ASSEMBLY
(4 Req'd)

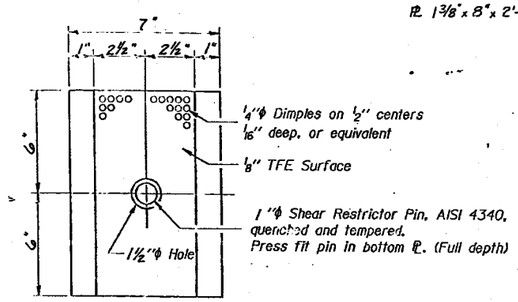


BOTTOM BEARING ASSEMBLY
(4 Req'd)

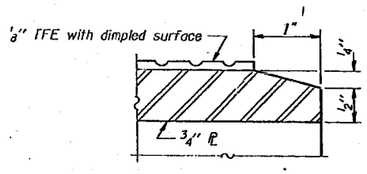


SIDE RETAINER (8-Req'd)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



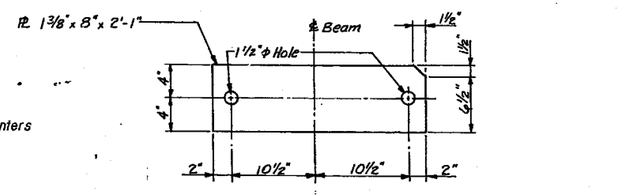
PLAN-TFE ELASTOMERIC BRG.



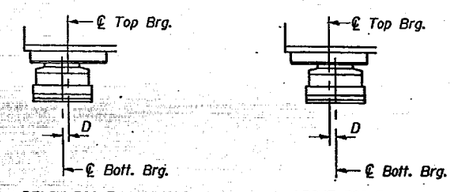
SECTION THRU TFE

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BOTTOM BEARING PLATE DETAIL AT NORTH ABUTMENT



SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.

BILL OF MATERIAL

Location	Item	Unit	Total
Beams 17, 21, 22 & 26	Install Elastomeric Bearing Assembly Type III	Each	4

BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

PREPARED BY STANLEY CONSULTANTS

I-2-E3 12-1-83

635

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.

INSTALLATION NOTES

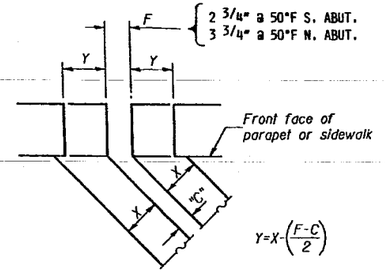
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

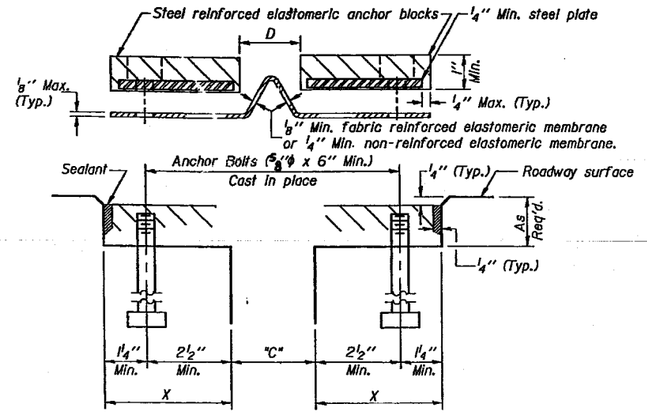
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

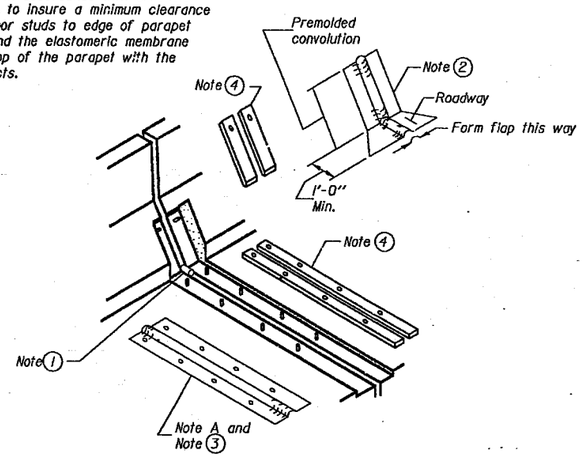
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



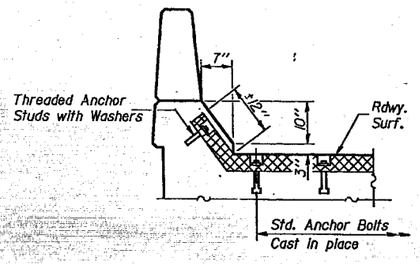
FORMING BLOCKOUT SKETCH



CROSS SECTION



AT PARAPET



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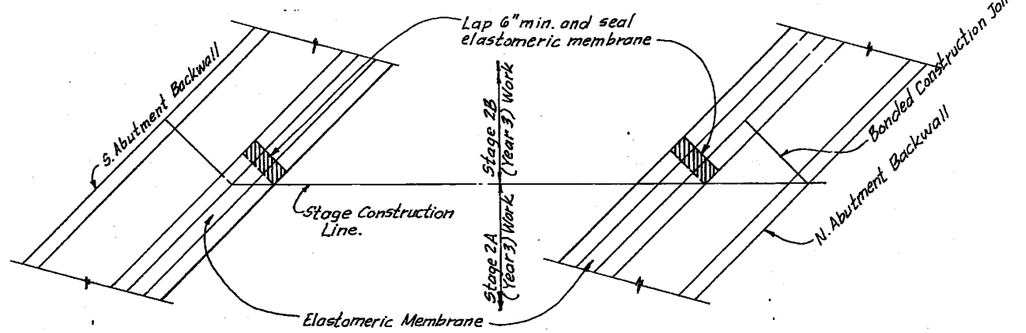


ELASTOMERIC MEMBRANE SPLICE LOCATIONS

STANLEY CONSULTANTS

EJ-CS 12-31-87

ORG.

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	271
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19 of 23 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.

EXPANSION JOINT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

COOK COUNTY

STATION 421+55.44

636

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

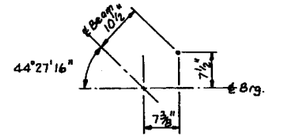
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	272
F. AR. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 20 of 23 SHEETS

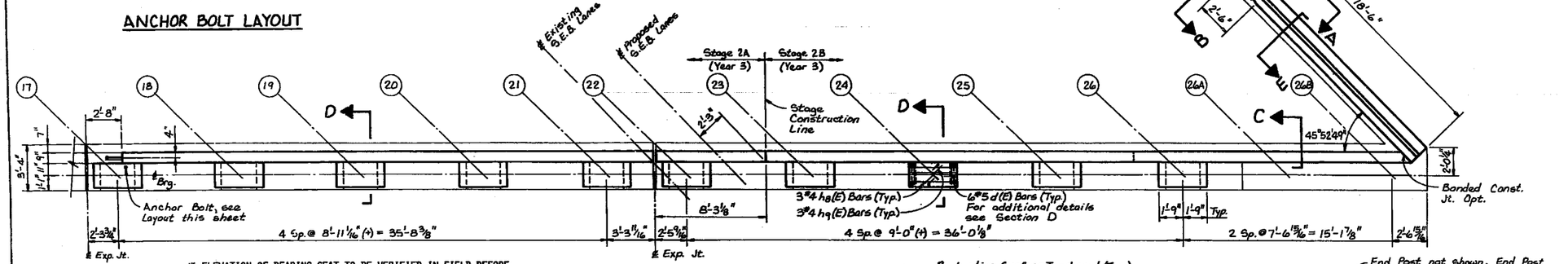
NORTH

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ANCHOR BOLT LAYOUT

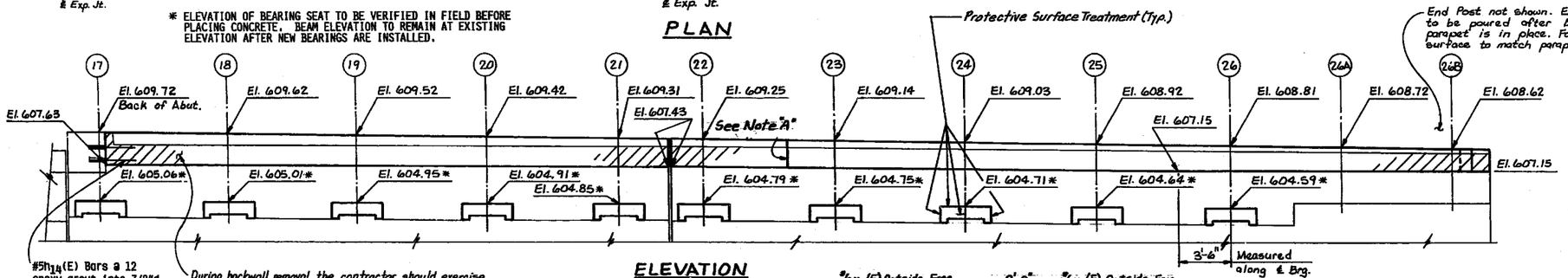


PLAN



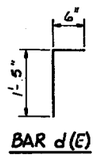
* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.

ELEVATION

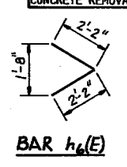


BILL OF MATERIAL

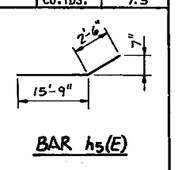
BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	60	#5	1'-11"	
d_1(E)	73	#5	2'-0"	
h_1(E)	12	#5	24'-4"	
$h_1$1(E)	6	#5	7'-11"	
$h_1$2(E)	12	#5	20'-3"	
$h_1$3(E)	8	#4	18'-2"	
$h_1$4(E)	2	#5	18'-2"	
$h_1$5(E)	2	#5	18'-3"	
$h_1$6(E)	2	#5	4'-4"	
$h_1$7(E)	2	#5	5'-8"	
$h_1$8(E)	30	#4	3'-2"	
$h_1$9(E)	30	#4	1'-6"	
$h_2$0(E)	2	#5	3'-3"	
u(E)	36	#5	2'-9"	
u_1(E)	30	#5	3'-3"	
u_2(E)	29	#5	3'-9"	
v(E)	37	#6	2'-0"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	1610
CLASS X CONCRETE			CU.YDS.	5.9
CONCRETE REMOVAL			CU.YDS.	9.3



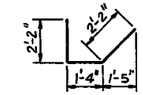
BAR d(E)



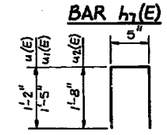
BAR h_6(E)



BAR h_5(E)

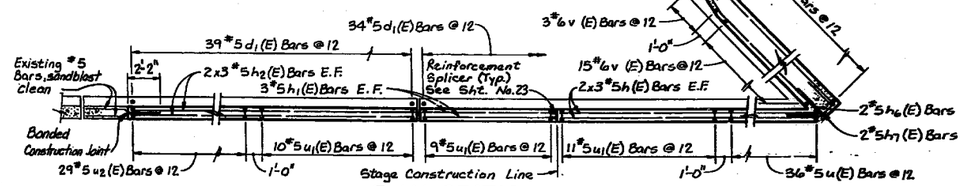


BAR h_7(E)

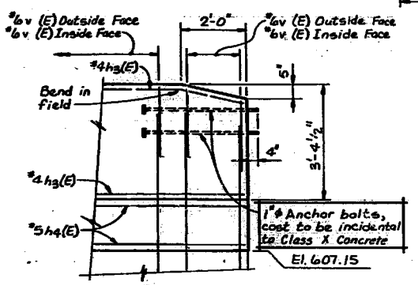


BARS u(E), u_1(E) & u_2(E)

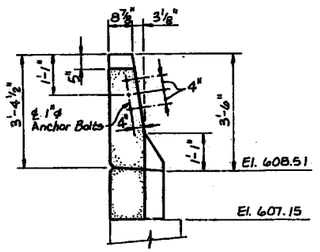
PLAN-SECTION



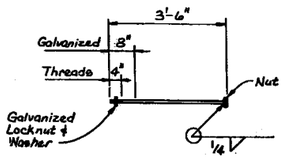
VIEW A



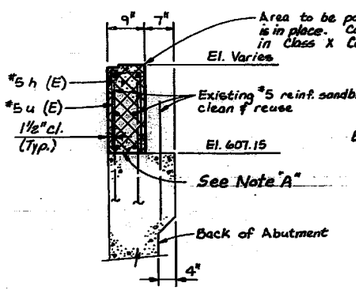
VIEW B



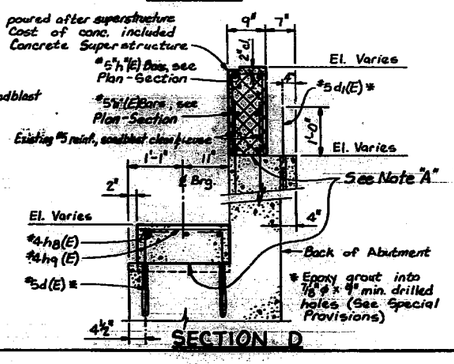
NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.



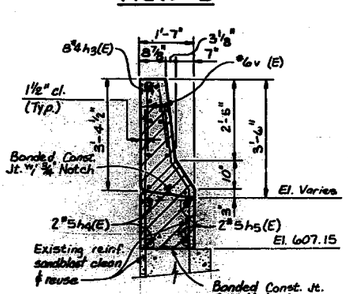
1"ø ANCHOR BOLT



SECTION C



SECTION D



SECTION E

NOTES:

- ▨ INDICATES CONCRETE REMOVAL
- (E) INDICATES EPOXY COATED REINFORCEMENT BARS.
- ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
- SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.
- ALL BAR DIMENSIONS ARE OUT TO OUT.
- MIN. BAR LAP #5 = 2'-2"

SOUTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

COOK COUNTY

STATION 421+55.44

STANLEY CONSULTANTS

C37

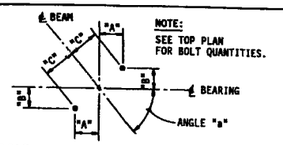
2/4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	273
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 21 of 23 SHEETS

NOTE:
SEE TOP PLAN FOR BOLT QUANTITIES.



ANCHOR BOLT LAYOUT

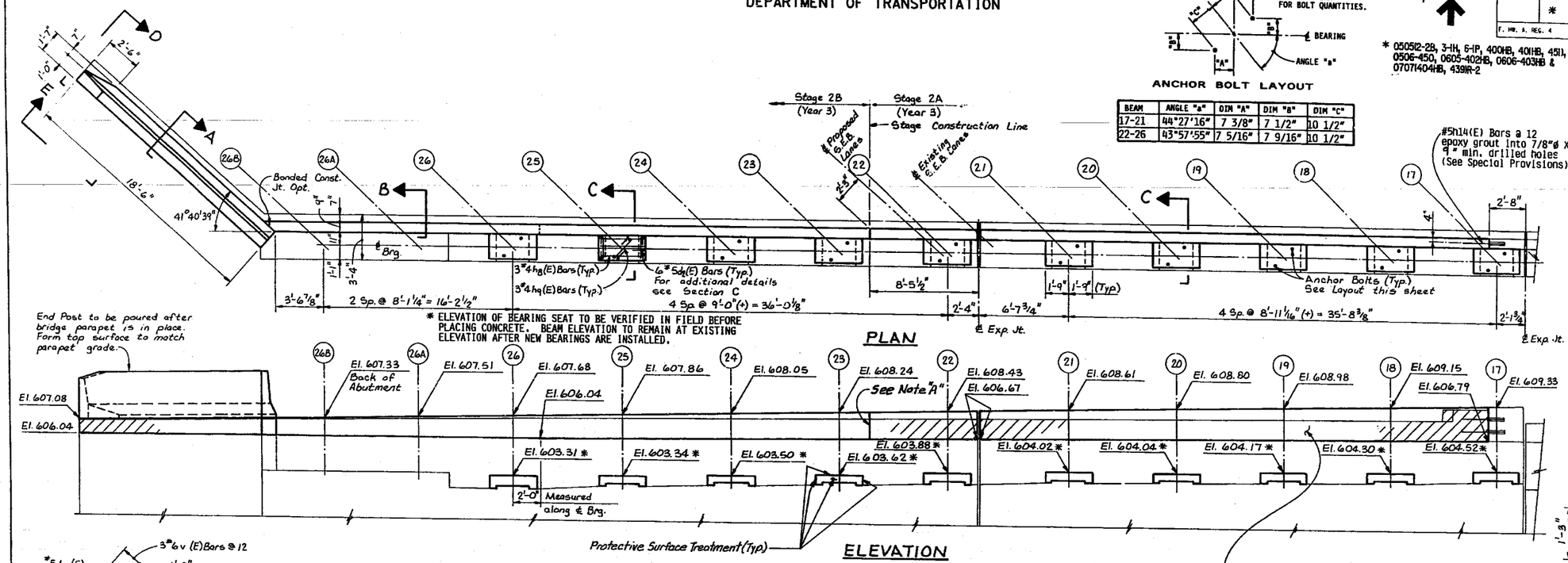
BEAM	ANGLE "a"	DIM "A"	DIM "B"	DIM "C"
17-21	44°27'16"	7 3/8"	7 1/2"	10 1/2"
22-26	43°57'55"	7 5/16"	7 9/16"	10 1/2"

NORTH

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 070714O4HB, 439IR-2

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d_1(E)	78	#5	2'-0"	
d_2(E)	60	#5	1'-9"	
h_3(E)	8	#4	18'-2"	
h_4(E)	2	#5	18'-2"	
h_5(E)	2	#5	18'-3"	
h_8(E)	30	#4	3'-2"	
h_9(E)	30	#4	1'-6"	
h_{10}(E)	12	#5	26'-9"	
h_{11}(E)	6	#5	8'-2"	
h_{12}(E)	12	#5	21'-10"	
h_{13}(E)	4	#5	6'-2"	
h_{14}(E)	2	#5	3'-3"	
u_3(E)	22	#5	2'-5"	
u_4(E)	28	#5	3'-1"	
u_5(E)	41	#5	3'-5"	
u_6(E)	6	#5	3'-11"	
u_7(E)	4	#5	4'-5"	
v (E)	38	#6	2'-0"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	1680	
CLASS X CONCRETE		CU. YDS.	5.1	
CONCRETE REMOVAL		CU. YDS.	8.6	

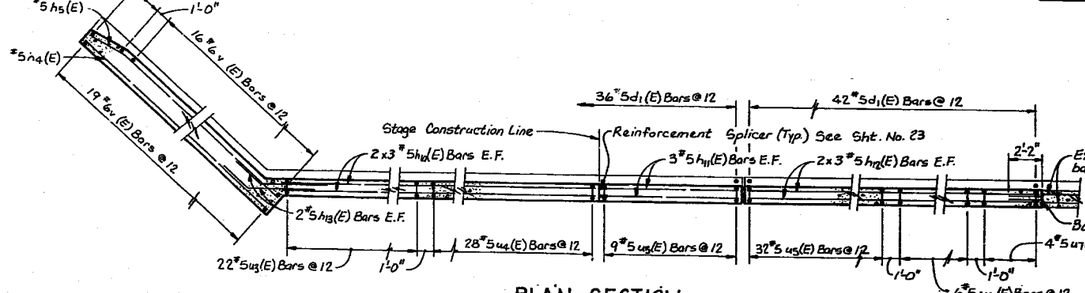


PLAN

* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.

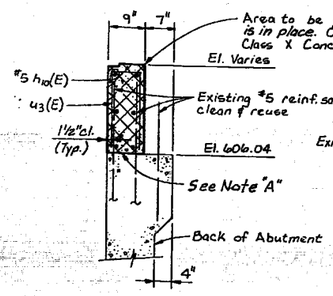
ELEVATION

During backwall removal, the contractor should exercise methods to prevent any damage, nicking or gouging to existing reinforcement to be reused. Damaged rebars should be replaced by epoxy grouted #5 dowel bars.

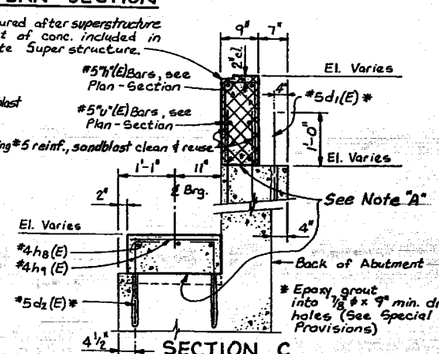


PLAN - SECTION

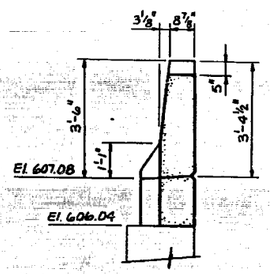
SECTION A



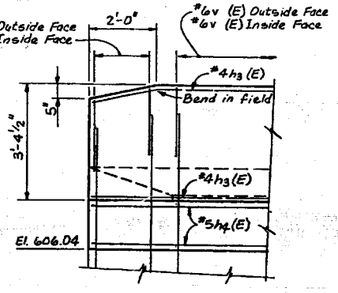
SECTION B



SECTION C



VIEW D



VIEW E

BAR d_2(E)

BAR h_{13}(E)

BAR h_5(E)

BARS u_3(E) - u_7(E)

NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(d)(2) OF THE STD. SPECS.

NOTES:

▨ INDICATES CONCRETE REMOVAL

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.

ALL BAR DIMENSIONS ARE OUT TO OUT.

MIN. BAR LAP #5 = 2'-2"

STANLEY CONSULTANTS

NORTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

COOK COUNTY

STATION 421+55.44

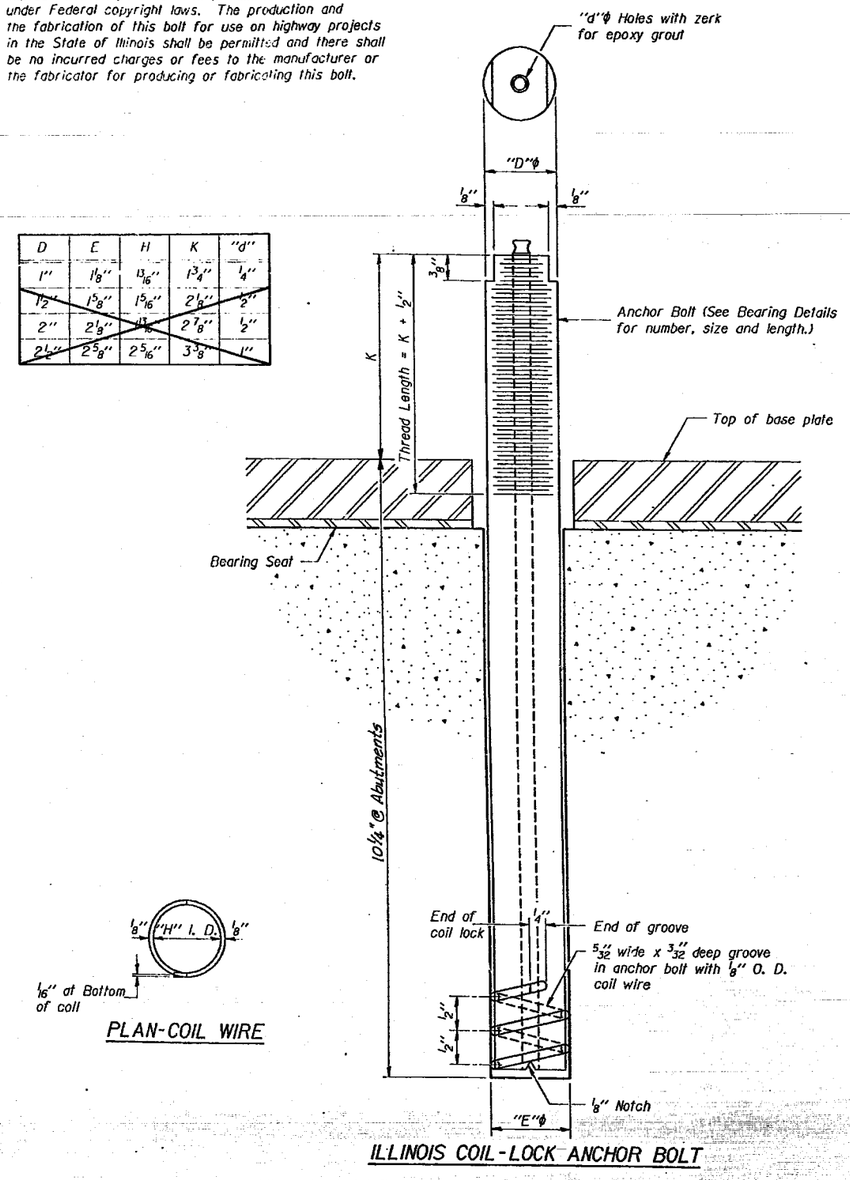
The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	274
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22 of 23 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/2"	2"
2"	2 1/2"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"

PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, ~~furnished and~~ installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Erecting Structural Steel."

STANLEY CONSULTANTS

ABB-1 12-1-83

ANCHOR BOLT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE

COOK COUNTY

STATION 421+55.44

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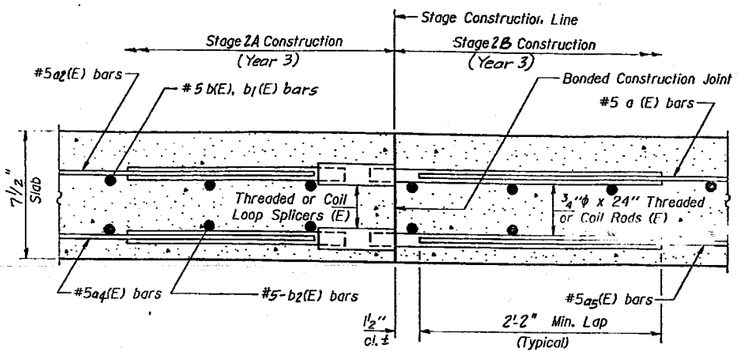
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

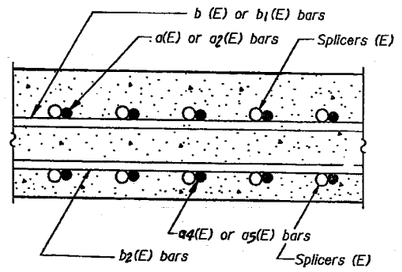
ROUTE SEC.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	275 of 23 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



Note: If bars are lapped, provide double ties to prevent traffic vibration movements during Stage 2B pour.

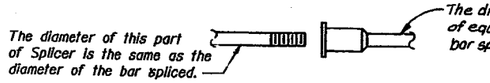
SECTION THRU SLAB



SECTION A-A

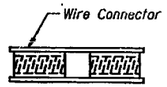
SPLICER DETAILS
(No. Req'd. 840)

Cost Incidental to Reinforcement Bars (Epoxy Coated).



ROLLED THREAD DOWEL BAR (E)

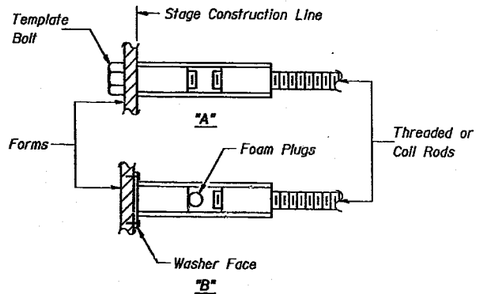
** ONE PIECE (E)



WELDED SECTIONS (E)

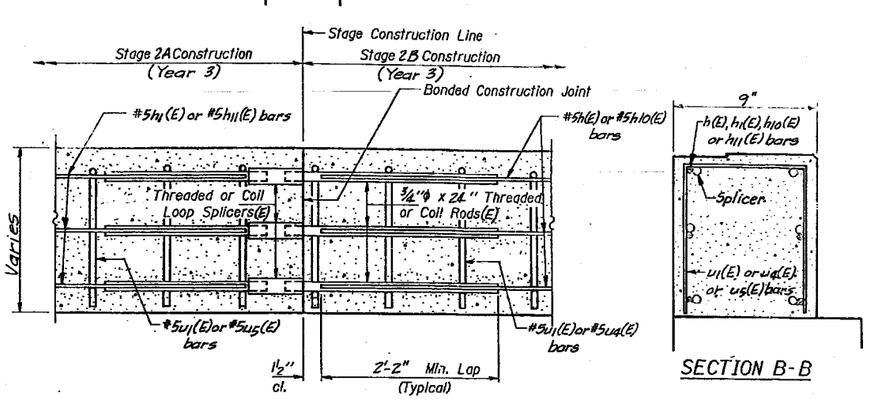
SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



SECTION THRU ABUTMENTS

SECTION B-B

SPLICER DETAILS
(No. Req'd. 12)

Cost Incidental to Reinforcement Bars (Epoxy Coated)

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

① Minimum Capacity = 1.25 x fy x A_t (Tension in kips)

② Minimum "Full-out Strength = 1.25 x fs_{allow} x A_t (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
" = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

#5 bar lap with ¾"ϕ Splicer (Coupler) x 2'-0" Splicer Rods — Minimum Capacity = 23.0 kips-tension; Minimum Pull-out Strength = 9.2 kips-tension

STANLEY CONSULTANTS

BSD-1 12-31-87

STAGE CONSTRUCTION BAR SPLICER

SECTION
F.A.I. ROUTE 90/94 OVER ARMITAGE AVENUE
COOK COUNTY
STATION 421+55.44

640

TBM- CHISELED SQUARE - SE WINGWALL - F.A.I.- 90/94 BRIDGE OVER WEBSTER AVENUE. - EL 606.06 (U.S.G.S. DATUM)

STATION 422+45.56
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPT-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0131

NEW NAME PLATE
SEE STD. 2113-2

* 050502-2B, 3-IH, 6-IF, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1 OF 18 SHEETS

236'-2½" Back to Back of Abutments
3'-7¼" | 68'-0" Span 3 | 93'-0" Span 2 | 68'-0" Span 1 | 3'-7¼"
Retaining Wall 213
101' Bridge Approach Pavement Special (One Continuous Slab Spanning Webster Ave. and Damen Ave. Abutments.)
Proposed Toe of Slope
Existing Toe of Slope
PLACE NAME PLATE HERE PER STD 2113-2
100' Bridge Approach Pavement Special @ 2 Locations (South End)
℄ Brg. South Abut.
Point of Min. Proposed Vertical Clearance
℄ Pier 2
℄ Pier 1
WEB-2
℄ Brg. North Abut.
Roadway Barrier Continuous between Damen & Webster Ave. Abutments
WEB-3
℄ Proposed S.E. Bound Lanes and P.G.L.
℄ Existing S.E. Bound Lanes
℄ Proposed F.A.I. Rte. 90/94 Reversible Lanes and P.G.L.
℄ Existing F.A.I. Rte. 90/94 Reversible Lanes
Back South Abut. Sta. 341+62.25 Elev. 608.10
℄ Pier 2 Sta. 342+33.85 Elev. 608.80
Exist. Sta. 33+15.42 (S.E.B.)
15°S
℄ Pier 1 Sta. 343+26.85 Elev. 609.40
Back North Abut. Sta. 343+98.45 Elev. 609.58
2" Neoprene Exp. Joint
Sta. 342+80.35 (S.E. Bound) Sta. 3+74.00 (Webster Ave.)
Back North Abut Sta. 443+43.66 Elev. 609.42
2½" Neoprene Exp Joint
Remove Existing Approach Slab (Typ.)
75'-0" Berm
51°-22'-00" (Typ.)
℄ 1" Jt.
Temp. Sheet Piling (Ea. Abutment)
Approach Shld. Pvmt Std. 2324 w/Drains (Typ.)
Back South Abut. Sta. 441+27.46 Elev. 607.42
℄ Pier 2 Sta. 441+99.06 Elev. 608.14
Exist. Sta. 32+55.36 (Rev. Lanes)
℄ Pier 1 Sta. 442+92.06 Elev. 609.01
105'-10⅝" Bridge Approach Pavement Special See Roadway Plans
℄ 1" Jt.
100' Bridge Approach Pavement Special
℄ Existing N.W. Bound Lanes
℄ Proposed N.W. Bound Lanes and P.G.L.
Sta. 442+45.56 (Rev. Lanes) Sta. 2+87.51 (Webster Ave.)
61'-0" Berm
Begin P.G. Line Ramp Sta. 8+48.84 ℄ Ramp = Sta. 240+73.17 ℄ NWB
51°-22'-00" (Typ. at Abuts. and Piers)
Sta. 242+11.63 (N.W. Bound) Sta. 2+09.02 (Webster Ave)
℄ Proposed Ramp
Back South Abut. Sta. 240+93.53 Elev. 606.80
℄ Pier 2 Sta. 241+65.18 Elev. 607.52
Existing Sta. 31+95.31 (N.W.B.)
Nose Sta. 242+25.00
℄ Pier 1 Sta. 242+58.13 Elev. 608.45
Back North Abut. Sta. 243+29.73 Elev. 609.08
Ramp P.G.L.
Back South Abut. Sta. 8+22.30
℄ Pier 2 Sta. 9+03.44 Elev. 606.72
15°S
Pt. of Min. Vert. Clearance
Corrugated Median
330:11 Taper
Back North Abut. Sta. 10+44.41 Elev. 608.06
100' Bridge Approach Pavement Special Sta. 244+05.00
Sta. 245+55.00
Traffic Barrier Terminal Tybe 6 Std. 2341
WEB-1
℄ Pier 2 Sta. 8+88.05
Sta. 9+29.32 (℄ Ramp) Sta. 1+32.90 (Webster Ave.)
℄ Pier 1 Sta 9+69.58
Nose Sta. 10+05.48 Ramp
Taper 30:1
WEB-4
Traffic Barrier Terminal Type 5 Std. 2340
Back North Abut. Sta. 10+30.00
Existing and Proposed Top of Slope
P.C. Sta. 7+34.88 Ramp = Sta. 239+58.19 ℄ Prop. N.W. Bound Lanes
Sta. 240+36.94 ℄ Prop. N.W. Bound Lanes (Inside Face of Parapet)
P.T. Sta. 10+05.48 Ramp
℄ Webster Ave.
Traffic Barrier Terminal Tybe 6 Std. 2341
2'-0" (Typ.)
1'-6" Curb
24'-0" Std. Incr.
48'-0" Roadway
27'-6⅜"
29'-03⅜"
6'-0" Shldr.
3'-6⅜" Curb
2'-0"
1'-6"
2:1
Varies
44'-0"
36'-0"
24'-0"
6'-0" Shldr.
8'-0" Shldr.
16'-0" Ramp
18'-0"
4'-0" Shldr.
6'-0" Shldr.
16'-0" Ramp
6'-0" Shldr.
2:1
Varies
36'-0"
6'-0"
3'-6"
12'-0"
12'-0"
12'-0"
12'-0"
48'-0" Roadway
24'-0"
1'-0"
1'-0" Shldr.
54'-0"
1'-0" Shldr.
12'-0" Roadway
12'-0" Roadway
3'-6"
7'-10½" Shldr.
11'-0"
22'-0" Roadway
1'-10½" Shldr.
3'-3" Conc. Rdy. Barrier
49'-0"

PLAN

HORIZONTAL CURVE DATA

℄ PROPOSED RAMP

P.I. Sta.	8+70.47
Δ	9°-27'-39.0"
D	3°-29'-47.9"
R	1638.60
L	270.57'
E	5.60'
T	135.59'
S.E.	0.048 'Ft.

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

LEGEND

- Sewer — Existing Sewer
- Existing Light Pole
- Existing Manhole
- New Scupper (Bridge)
- Location of New Borings
- Stage 2 (Year 3) WORK

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ALFRED BENESCH & Co., Consulting Engineers

RICHARD E. WITTER
081-003352
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
9/6/12
Exp. 11/30/12

3rd. PM Range 14E
TWP 40N
Proposed Widened Structure
Division St.
Diversey Ave.
Ashland Ave.
Fullerton Ave.
Webster Ave.
Damen Ave.
Western Ave.
Oakley Ave.
Leavitt St.
Hoyne Ave.
Wood St.
29
30
31
32

LOCATION PLAN

STANLEY CONSULTANTS

STRUCTURE NO. 016 - 0131

GENERAL PLAN

S.E.B. ERECTION CONTRACT

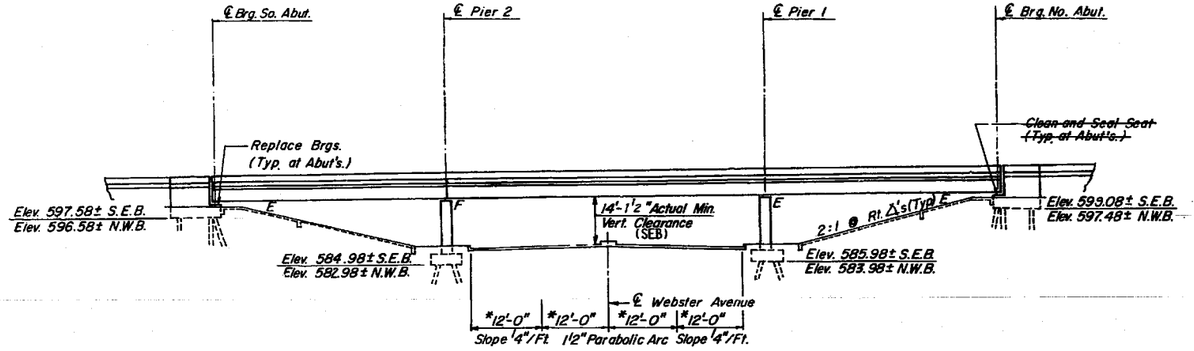
SECTION

F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE

COOK COUNTY

STATION 442+45.56

△ As Revised 9-21-4: PMP



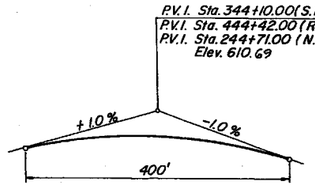
ELEVATION

*Dimensions At Right Angles

PROFILE GRADE

WEBSTER AVENUE

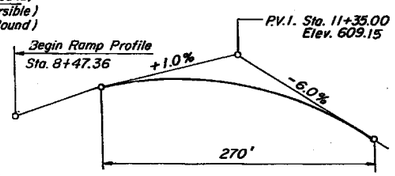
Station	Elevation
0+82	588.05
0+92	588.11
1+02	588.02
1+12	588.07
1+22	588.15
1+32	588.17
1+42	588.22
1+52	588.28
1+62	588.31
1+87	588.46
2+12	588.66
2+37	588.81
2+62	589.01
2+87	589.20
3+12	589.33
3+37	589.54
3+62	589.77
3+72	589.89
3+82	590.00
3+92	590.24
4+02	590.32
4+12	590.48
4+22	590.64
4+32	590.82



PROPOSED PROFILE GRADE

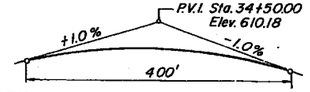
F.A.I. Rte. 90/94

℄ S.E. Bound Lanes
℄ Reversible Lanes
℄ N.W. Bound Lanes



PROPOSED PROFILE GRADE

N.W. Bound Exit Ramp



ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. Rte. 90/94

℄ S.E. Bound Lanes
℄ Reversible Lanes
℄ N.W. Bound Lanes

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
(5)	CLASS X CONCRETE SUPERSTRUCTURES	CU. YDS.	503.6	-	503.6
	CLASS X CONCRETE	CU. YDS.	-	41.1	41.1
	REINFORCEMENT BARS (EPOXY COATED)	LBS.	117,830	5,290	123,120
	BRIDGE DECK GROOVING	SQ. YDS.	1782	-	1782
(5)	ERECTING STRUCTURAL STEEL	LUMP SUM	0.1	-	0.1
(2)	REMOVAL OF EXISTING CONCRETE DECK	LUMP SUM	0.1	-	0.1
	CONCRETE REMOVAL	CU. YDS.	-	49.7	49.7
(1)	PROTECTIVE COAT	SQ. YDS.	2,027	-	2,027
	NEOPRENE EXPANSION JOINT 2"	LIN. FT.	116	-	116
	NEOPRENE EXPANSION JOINT 2 1/2"	LIN. FT.	116	-	116
	REMOVAL OF TEMP. SLAB SUPPORT SYSTEM	LUMP SUM	0.1	-	0.1
	POROUS GRANULAR EMBANKMENT	CU. YDS.	-	87	87
	STRUCTURE EXCAVATION	CU. YDS.	-	68.8	68.8
	TEMPORARY SHEET PILING	SQ. FT.	-	300	300
	PROTECT AND MAINTAIN EXISTING UNDERPASS LUMINAIRE	LUMP SUM	-	0.1	0.1
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10	-	10
	INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH	10	-	10
	STUD SHEAR CONNECTORS	EACH	4,641	-	4,641
	RIVET REMOVAL & REPLACEMENT	EACH	5	-	5
	1" DIAMETER ANCHOR BOLTS	EACH	2	-	2
	PROTECTIVE SURFACE TREATMENT	SQ. YDS.	-	168	168
(6)	JACK AND REMOVE EXISTING BEARINGS	EACH	20	-	20
	NAME PLATE	EACH	1	-	1
(3)	PROTECTIVE SHIELD	SQ. YD.	2,095	-	2,095

(1)- PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE AND FACE OF BARRIER RAILS. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(2)- INCLUDES 16,470 SQ. FT. OF EXISTING CONCRETE DECK REMOVAL.

(3)- SEE SHEET 3 FOR LIMITS.

(5)- INCLUDES 1870 POUNDS OF STRUCTURAL STEEL TO BE ERECTED. STEEL ITEMS INCLUDE DIAPHRAGM ASSEMBLIES BETWEEN BEAMS 5 AND 6, ABUTMENT BEARING SIDE RETAINERS AND ANCHOR BOLTS.

(6) D.L. REACTION = 11^{k} (D.L. OF BM. + 200 LBS PER LIN. FT. CONST. D.L.)

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	277
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 18 SHEETS

DESIGN SPECIFICATIONS
AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS

LOADING HS 20-44 AND ALTERNATE MILITARY LOADING
ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

F'C = 3,500 PSI	(CONCRETE)
FY = 60,000 PSI	(REINFORCEMENT)
FS = 20,000 PSI	(PROPOSED STRUCTURAL STEEL)
FS = 18,000 PSI	(EXISTING STRUCTURAL STEEL)

EXISTING UTILITIES
THE EXISTING UTILITIES SHOWN ON GENERAL PLAN SHEET 1 HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

REHABILITATION NOTES
REMOVE EXISTING ROLLER BEARINGS ON BEAMS 1 THRU 10 AT ABUTMENTS INCLUDING TOP PLATE BY AIR ARC METHOD. GRIND CONTINUOUS FILLET WELD SMOOTH AFTER REMOVING TOP PLATE. REPLACE WITH ELASTOMERIC EXPANSION BEARINGS. REMOVAL WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REMOVE EXISTING BEARINGS." (SEE SPECIAL PROVISIONS).

REMOVE LOOSE ANCHOR BOLTS AT PIER 2, BEARING 7 AND REPLACE WITH EPOXY GROUTED ANCHOR BOLTS. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "1" DIAMETER ANCHOR BOLTS." (SEE SPECIAL PROVISIONS).

~~CLEAN AND SEAL THE BRIDGE SEATS AT THE ABUTMENTS IN THE S.E. BOUND LANES AREA. WORK WILL BE PAID FOR AT LUMP SUM PRICE FOR "BRIDGE SEAT SEALER."~~

GENERAL NOTES (CONT'D):

13. THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

⚠ M. EXIST. STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED ONLY AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING NEW STEEL AND ADJACENT AREAS OF EXISTING STEEL STRUCTURES."

15. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE PAINT, AND ALL FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF STRINGERS (GIRDERS). THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP11 FOR POWER TOOL CLEANING OR SP2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK."

16. THE THREE COAT LEAD AND CHROMATE-FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE FIRST COAT HAS BEEN APPLIED IN THE SHOP. THE SECOND COAT SHALL BE APPLIED IN THE FIELD UNDER THIS CONTRACT. THE THIRD COAT SHALL BE APPLIED IN THE FIELD BY OTHERS. THE COLOR OF THE ALKYD FINISH COATS SHALL BE MUNSELL NO. 2.5 YR 3/4 REDDISH BROWN FOR THE FASCIA OF THE EXTERIOR BEAMS AND THEIR BEARINGS AND MUNSELL NO. 10 YR 7/1 LIGHT GREY FOR ALL OTHER STRUCTURAL STEEL.

EXISTING STRUCTURE
STA 32+55.362, FAI-2 ROUTE, SEC 0505-400HB, BUILT IN 1960, STRUCTURE NO. 016-0131.

SUPERSTRUCTURE: CONTINUOUS, NON-COMPOSITE, REINFORCED CONCRETE DECK WITH ROLLED STEEL BEAMS WITH COVER PLATES AT THE PIERS.

SUBSTRUCTURE: PILE BENT ABUTMENTS, MULTIPLE COLUMN PIERS, BOTH SUPPORTED BY METAL SHELL C.I.P. CONCRETE PILES.

SUPERSTRUCTURE DECK TO BE REPLACED. SUPERSTRUCTURE TO BE MODIFIED TO A CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

TEMPORARY DECK: CONTINUOUS COMPOSITE REINFORCED CONCRETE DECK ON WELDED PLATE GIRDERS.

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183.

~~2. EXPANSION JOINT PLATES AND ATTACHED BARS SHALL BE SHOP PAINTED WITH THE ZINC SILICATE PRIMER.~~

3. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER IN WRITING.

4. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

5. ~~THE CONTRACTOR SHALL MAKE ALLOWANCE FOR THE DEFLECTION OF FORMS, SHRINKAGE AND SETTLEMENT OF FALSEWORK, IN ADDITION TO ALLOWANCE FOR DEAD LOAD DEFLECTION.~~

6. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

7. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED). SHIMS PROVIDED BY OTHERS.

8. THE CONCRETE, FOR BRIDGE FLOORS FINISHED IN ACCORDANCE WITH ARTICLE 503.15 OF THE STANDARD SPECIFICATIONS, SHALL BE PLACED AND COMPACTED PARALLEL TO THE SKEW IN UNIFORM INCREMENTS ALONG CENTERLINE OF BRIDGE. THE FINISHING MACHINE, WHEN REQUIRED, SHALL BE SET PARALLEL TO THE SKEW FOR STRIKING OFF AND SCREEDING THE CONCRETE.

9. CLEAN AND PAINT THE EXISTING BEARINGS NOT BEING REPLACED AND STRUCTURAL STEEL UTILIZING METHODS I AND II. THE BOTTOM AND OUTSIDE FACES OF THE EXISTING FASCIA BEAMS, ALL REMAINING BEARING ASSEMBLIES, THE BOTTOM FLANGES AND BEAM FACES ADJACENT TO LONGITUDINAL JOINTS AND ALL STRUCTURAL STEEL WITHIN FIVE FEET OF TRANSVERSE DECK JOINTS SHALL BE CLEANED BY METHOD I. REMAINDER OF STRUCTURAL STEEL SHALL BE CLEANED BY METHOD II.

10. THE INFORMATION SHOWN FOR THE TEMPORARY SHEET PILING IS ESTIMATED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A DESIGN OF THE TEMPORARY SHEET PILING AND ASSOCIATED MEMBERS, IF REQUIRED, SUBJECT TO THE APPROVAL OF THE ENGINEER.

~~11. RELOCATE EXISTING NAMEPLATE. LOCATION SHOWN ON GENERAL PLAN SHEET 3.~~

12. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.

ELEVATION, GENERAL NOTES AND BILL OF MATERIAL

SECTION

F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE

COOK COUNTY

STATION 442+45.56

⚠ REVISED 9-22-92 PMP

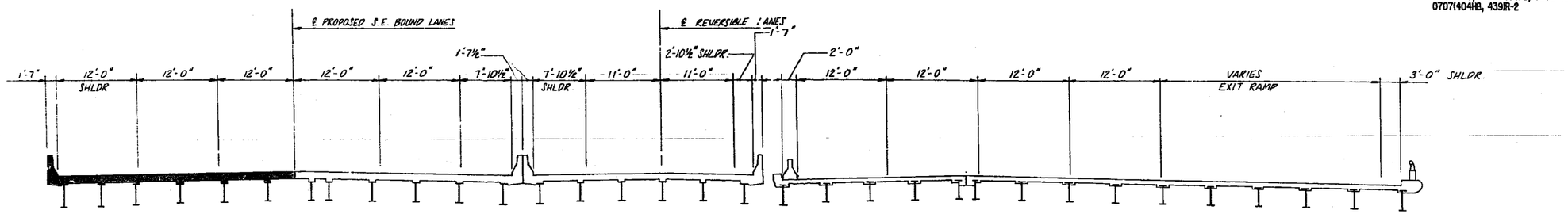
3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

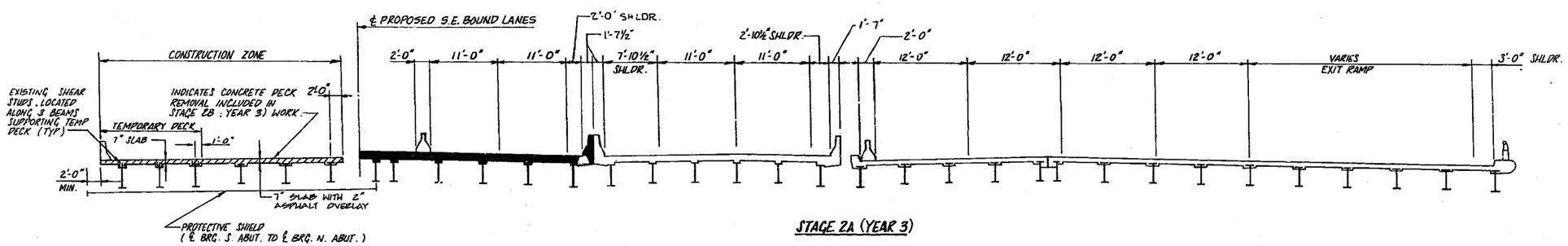
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	278
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
18 SHEETS

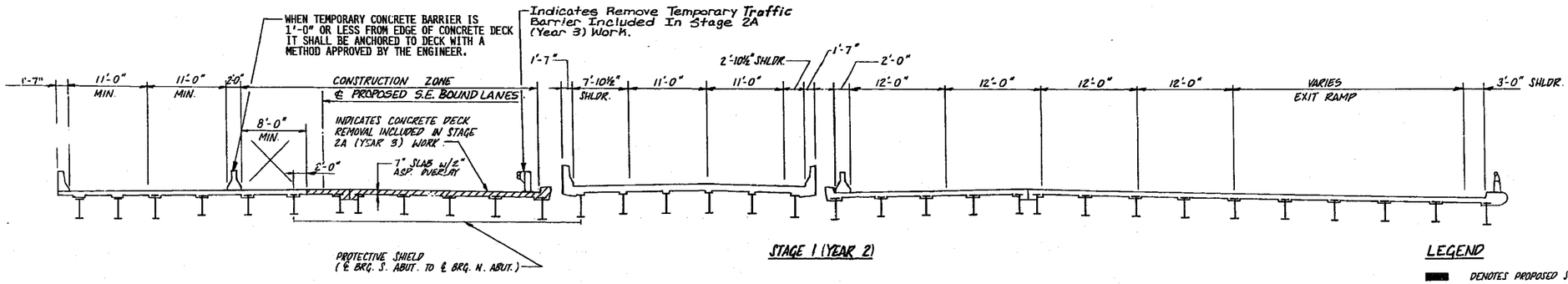
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



STAGE 2B (YEAR 3)



STAGE 2A (YEAR 3)



STAGE 1 (YEAR 2)

LEGEND

DENOTES PROPOSED STRUCTURE
DENOTES CONCRETE DECK REMOVAL

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

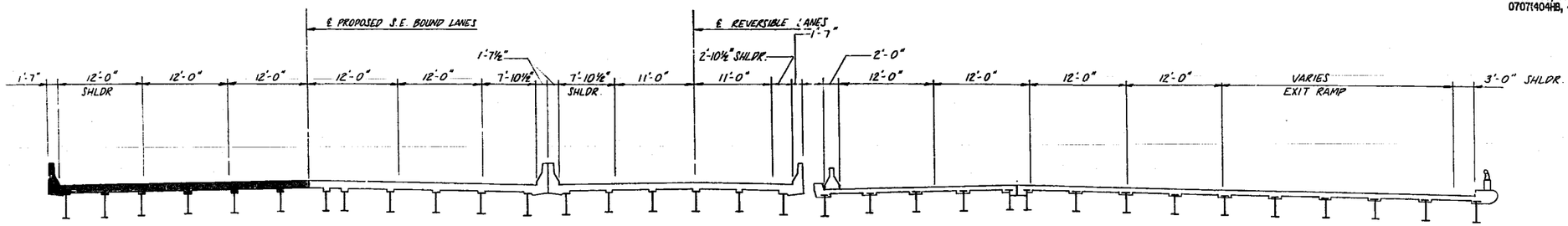
STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

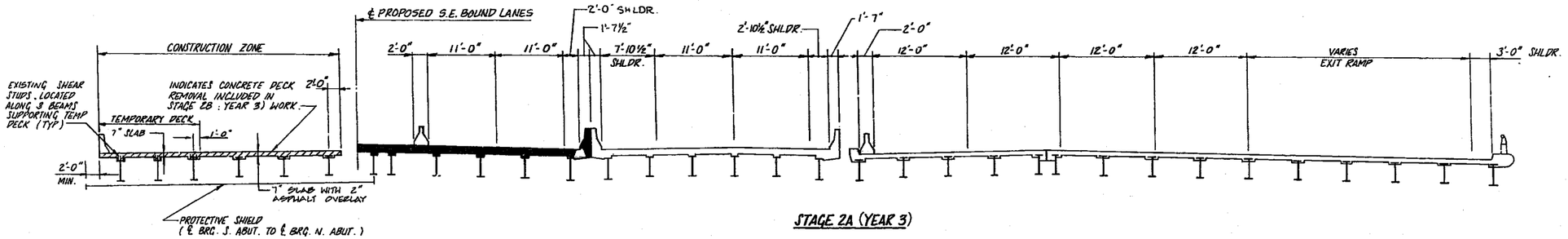
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	278
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT:	

SHEET NO. 3
18 SHEETS

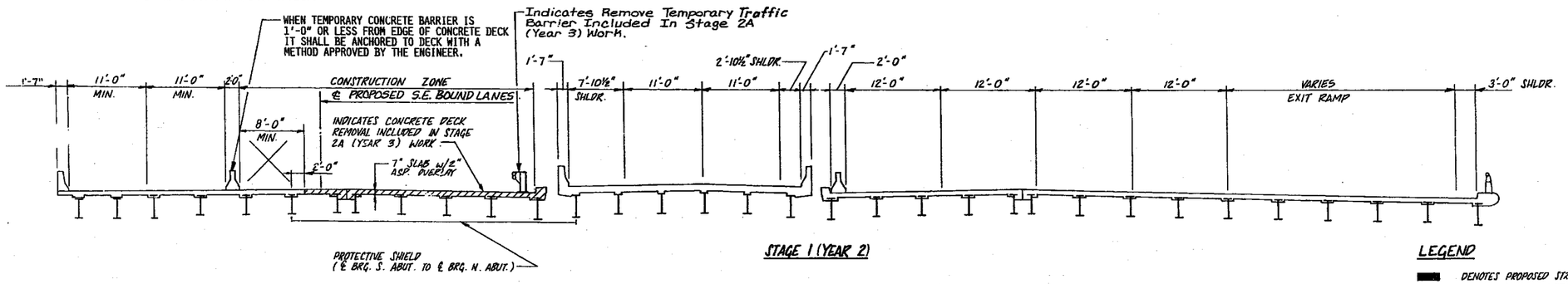
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



STAGE 2B (YEAR 3)



STAGE 2A (YEAR 3)



STAGE 1 (YEAR 2)

LEGEND

- DENOTES PROPOSED STRUCTURE
- DENOTES CONCRETE DECK REMOVAL

STANLEY CONSULTANTS

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050S2-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	280
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5
18 SHEETS

BEAM NO. 3

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34175.700	-10.750	608.176	608.176
℄ BEARING	34179.300	-10.750	608.212	608.212
a	34189.300	-10.750	608.312	608.325
b	34199.300	-10.750	608.412	608.433
c	34209.300	-10.750	608.512	608.534
d	34219.300	-10.750	608.610	608.626
e	34229.300	-10.750	608.703	608.710
f	34239.300	-10.750	608.791	608.791
℄ PIER 2	34247.300	-10.750	608.858	608.858
g	34257.300	-10.750	608.937	608.947
h	34267.300	-10.750	609.011	609.038
j	34277.300	-10.750	609.080	609.123
k	34287.300	-10.750	609.144	609.197
m	34297.300	-10.750	609.203	609.257
n	34307.300	-10.750	609.257	609.303
p	34317.300	-10.750	609.306	609.338
q	34327.300	-10.750	609.350	609.365
℄ PIER 1	34340.300	-10.750	609.400	609.400
r	34350.300	-10.750	609.432	609.433
s	34360.300	-10.750	609.460	609.468
t	34370.300	-10.750	609.482	609.500
u	34380.300	-10.750	609.500	609.522
v	34390.300	-10.750	609.512	609.531
w	34400.300	-10.750	609.520	609.530
℄ BEARING	34408.300	-10.750	609.522	609.522
BACK N. ABUT.	34411.910	-10.750	609.522	609.522

BEAM NO. 4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34167.570	-4.250	608.196	608.196
℄ BEARING	34171.170	-4.250	608.232	608.232
a	34181.170	-4.250	608.332	608.345
b	34191.170	-4.250	608.432	608.453
c	34201.170	-4.250	608.532	608.554
d	34211.170	-4.250	608.632	608.648
e	34221.170	-4.250	608.729	608.736
f	34231.170	-4.250	608.821	608.822
℄ PIER 2	34239.170	-4.250	608.892	608.892
g	34249.170	-4.250	608.975	608.984
h	34259.170	-4.250	609.053	609.079
j	34269.170	-4.250	609.126	609.169
k	34279.170	-4.250	609.194	609.247
m	34289.170	-4.250	609.257	609.311
n	34299.170	-4.250	609.315	609.361
p	34309.170	-4.250	609.368	609.400
q	34319.170	-4.250	609.416	609.431
℄ PIER 1	34332.170	-4.250	609.471	609.471
r	34342.170	-4.250	609.508	609.509
s	34352.170	-4.250	609.539	609.548
t	34362.170	-4.250	609.566	609.583
u	34372.170	-4.250	609.587	609.609
v	34382.170	-4.250	609.604	609.623
w	34392.170	-4.250	609.615	609.626
℄ BEARING	34400.170	-4.250	609.621	609.621
BACK N. ABUT.	34403.780	-4.250	609.623	609.623

INDICATES STA. 344+03.780(TYP.)

℄ PROPOSED S.E. BOUND LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34162.250	0.000	608.210	608.210
℄ BEARING	34165.860	0.000	608.246	608.246
a	34175.860	0.000	608.346	608.356
b	34185.860	0.000	608.446	608.463
c	34195.860	0.000	608.545	608.564
d	34205.860	0.000	608.646	608.659
e	34215.860	0.000	608.745	608.751
f	34225.860	0.000	608.840	608.839
℄ PIER 2	34233.860	0.000	608.912	608.912
g	34243.860	0.000	608.997	609.006
h	34253.860	0.000	609.078	609.102
j	34263.860	0.000	609.154	609.191
k	34273.860	0.000	609.225	609.271
m	34283.860	0.000	609.290	609.338
n	34293.860	0.000	609.351	609.392
p	34303.860	0.000	609.407	609.435
q	34313.860	0.000	609.458	609.471
℄ PIER 1	34326.860	0.000	609.516	609.516
r	34336.860	0.000	609.555	609.556
s	34346.860	0.000	609.589	609.597
t	34356.860	0.000	609.619	609.633
u	34366.860	0.000	609.643	609.661
v	34376.860	0.000	609.662	609.678
w	34386.860	0.000	609.676	609.685
℄ BEARING	34394.860	0.000	609.684	609.684
BACK N. ABUT.	34398.460	0.000	609.687	609.687

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.

BEAM NO. 5

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34159.430	2.250	608.146	608.146
℄ BEARING	34163.040	2.250	608.182	608.182
a	34173.040	2.250	608.282	608.293
b	34183.040	2.250	608.382	608.400
c	34193.040	2.250	608.482	608.500
d	34203.040	2.250	608.582	608.596
e	34213.040	2.250	608.682	608.688
f	34223.040	2.250	608.778	608.778
℄ PIER 2	34231.040	2.250	608.852	608.852
g	34241.040	2.250	608.939	608.948
h	34251.040	2.250	609.021	609.044
j	34261.040	2.250	609.098	609.135
k	34271.040	2.250	609.170	609.216
m	34281.040	2.250	609.237	609.284
n	34291.040	2.250	609.299	609.340
p	34301.040	2.250	609.356	609.384
q	34311.040	2.250	609.409	609.422
℄ PIER 1	34324.040	2.250	609.469	609.469
r	34334.040	2.250	609.510	609.510
s	34344.040	2.250	609.545	609.552
t	34354.040	2.250	609.576	609.590
u	34364.040	2.250	609.601	609.620
v	34374.040	2.250	609.622	609.638
w	34384.040	2.250	609.638	609.646
℄ BEARING	34392.040	2.250	609.646	609.646
BACK N. ABUT.	34395.640	2.250	609.650	609.650

BEAM NO. 6

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34156.310	4.750	608.076	608.076
℄ BEARING	34159.910	4.750	608.112	608.112
a	34169.910	4.750	608.212	608.222
b	34179.910	4.750	608.312	608.329
c	34189.910	4.750	608.412	608.430
d	34199.910	4.750	608.512	608.525
e	34209.910	4.750	608.612	608.618
f	34219.910	4.750	608.710	608.709
℄ PIER 2	34227.910	4.750	608.784	608.784
g	34237.910	4.750	608.873	608.882
h	34247.910	4.750	608.957	608.980
j	34257.910	4.750	609.035	609.073
k	34267.910	4.750	609.109	609.155
m	34277.910	4.750	609.178	609.225
n	34287.910	4.750	609.241	609.282
p	34297.910	4.750	609.300	609.328
q	34307.910	4.750	609.354	609.367
℄ PIER 1	34320.910	4.750	609.416	609.416
r	34330.910	4.750	609.458	609.459
s	34340.910	4.750	609.495	609.503
t	34350.910	4.750	609.528	609.542
u	34360.910	4.750	609.555	609.573
v	34370.910	4.750	609.577	609.593
w	34380.910	4.750	609.594	609.603
℄ BEARING	34388.910	4.750	609.604	609.604
BACK N. ABUT.	34392.520	4.750	609.608	609.608

BEAM NO. 7

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34148.180	11.250	607.893	607.893
℄ BEARING	34151.780	11.250	607.929	607.929
a	34161.780	11.250	608.029	608.041
b	34171.780	11.250	608.129	608.150
c	34181.780	11.250	608.229	608.250
d	34191.780	11.250	608.329	608.345
e	34201.780	11.250	608.429	608.436
f	34211.780	11.250	608.529	608.529
℄ PIER 2	34219.780	11.250	608.607	608.607
g	34229.780	11.250	608.699	608.709
h	34239.780	11.250	608.787	608.814
j	34249.780	11.250	608.870	608.913
k	34259.780	11.250	608.948	609.001
m	34269.780	11.250	609.021	609.075
n	34279.780	11.250	609.088	609.135
p	34289.780	11.250	609.151	609.183
q	34299.780	11.250	609.209	609.224
℄ PIER 1	34312.780	11.250	609.276	609.276
r	34322.780	11.250	609.323	609.324
s	34332.780	11.250	609.364	609.373
t	34342.780	11.250	609.400	609.418
u	34352.780	11.250	609.432	609.454
v	34362.780	11.250	609.458	609.477
w	34372.780	11.250	609.479	609.489
℄ BEARING	34380.780	11.250	609.492	609.492
BACK N. ABUT.	34384.380	11.250	609.497	609.497

BEAM NO. 8

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34140.040	17.750	607.680	607.680
℄ BEARING	34143.640	17.750	607.716	607.716
a	34153.640	17.750	607.816	607.829
b	34163.640	17.750	607.916	607.937
c	34173.640	17.750	608.016	608.038
d	34183.640	17.750	608.116	608.132
e	34193.640	17.750	608.216	608.223
f	34203.640	17.750	608.316	608.316
℄ PIER 2	34211.640	17.750	608.396	608.396
g	34221.640	17.750	608.493	608.503
h	34231.640	17.750	608.585	608.611
j	34241.640	17.750	608.672	608.714
k	34251.640	17.750	608.753	608.806
m	34261.640	17.750	608.830	608.885
n	34271.640	17.750	608.902	608.949
p	34281.640	17.750	608.969	609.001
q	34291.640	17.750	609.031	609.046
℄ PIER 1	34304.640	17.750	609.104	609.104
r	34314.640	17.750	609.154	609.155
s	34324.640	17.750	609.199	609.208
t	34334.640	17.750	609.240	609.257
u	34344.640	17.750	609.275	609.297
v	34354.640	17.750	609.305	609.325
w	34364.640	17.750	609.331	609.341
℄ BEARING	34372.640	17.750	609.347	609.347
BACK N. ABUT.	34376.250	17.750	609.354	609.354

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TOP OF SLAB ELEVATIONS
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

645 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	231
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 18 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

BEAM NO. 9

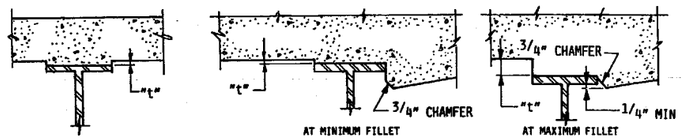
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34131.910	24.250	607.463	607.463
℄ BEARING	34135.510	24.250	607.500	607.500
a	34145.510	24.250	607.599	607.612
b	34155.510	24.250	607.699	607.720
c	34165.510	24.250	607.799	607.821
d	34175.510	24.250	607.899	607.915
e	34185.510	24.250	608.000	608.007
f	34195.510	24.250	608.099	608.100
℄ PIER 2	34203.510	24.250	608.179	608.179
g	34213.510	24.250	608.279	608.289
h	34223.510	24.250	608.375	608.402
j	34233.510	24.250	608.466	608.509
k	34243.510	24.250	608.552	608.605
m	34253.510	24.250	608.633	608.687
n	34263.510	24.250	608.709	608.755
p	34273.510	24.250	608.780	608.811
q	34283.510	24.250	608.845	608.860
℄ PIER 1	34296.510	24.250	608.924	608.924
r	34306.510	24.250	608.978	608.979
s	34316.510	24.250	609.027	609.036
t	34326.510	24.250	609.072	609.089
u	34336.510	24.250	609.111	609.133
v	34346.510	24.250	609.146	609.165
w	34356.510	24.250	609.175	609.185
℄ BEARING	34364.510	24.250	609.195	609.195
BACK N. ABUT.	34368.120	24.250	609.203	609.203

BEAM NO. 10

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BACK S. ABUT.	34123.780	30.750	607.247	607.247
℄ BEARING	34127.380	30.750	607.283	607.283
a	34137.380	30.750	607.383	607.397
b	34147.380	30.750	607.483	607.507
c	34157.380	30.750	607.583	607.607
d	34167.380	30.750	607.683	607.701
e	34177.380	30.750	607.783	607.791
f	34187.380	30.750	607.883	607.883
℄ PIER 2	34195.380	30.750	607.963	607.963
g	34205.380	30.750	608.063	608.074
h	34215.380	30.750	608.162	608.192
j	34225.380	30.750	608.257	608.306
k	34235.380	30.750	608.347	608.407
m	34245.380	30.750	608.432	608.494
n	34255.380	30.750	608.512	608.565
p	34265.380	30.750	608.587	608.623
q	34275.380	30.750	608.657	608.674
℄ PIER 1	34288.380	30.750	608.740	608.740
r	34298.380	30.750	608.799	608.800
s	34308.380	30.750	608.852	608.862
t	34318.380	30.750	608.901	608.921
u	34328.380	30.750	608.944	608.969
v	34338.380	30.750	608.983	609.005
w	34348.380	30.750	609.016	609.028
℄ BEARING	34356.380	30.750	609.039	609.039
BACK N. ABUT.	34359.980	30.750	609.049	609.049

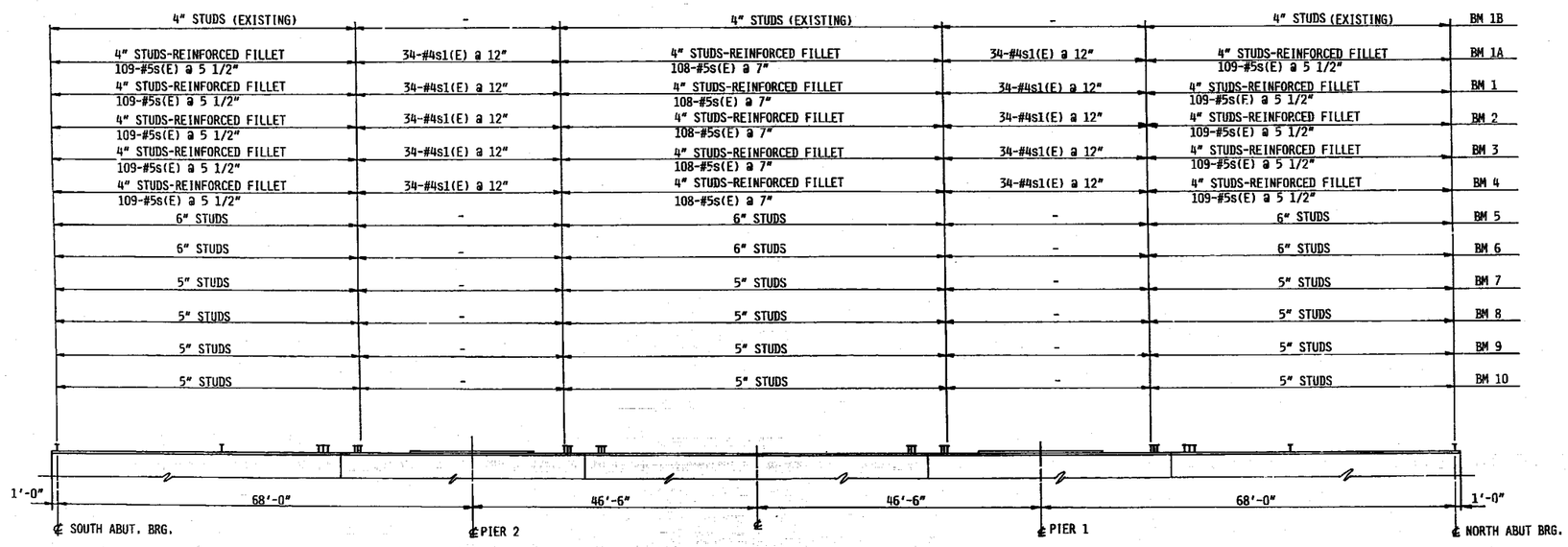
INDICATES STA. 343+59.980(TYP)

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.



TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN ON SHT 4. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHT DETAILS



SHEAR STUD LENGTHS AND REINFORCED FILLET LOCATIONS

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

TOP OF SLAB ELEVATIONS
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

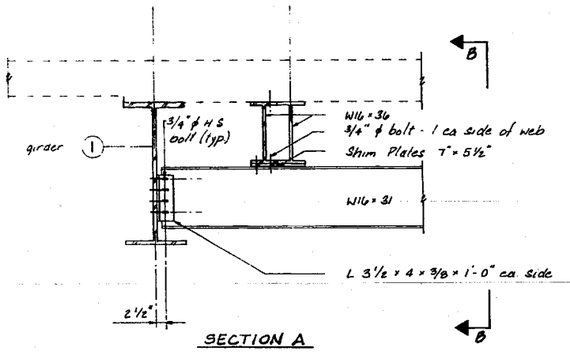
646 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

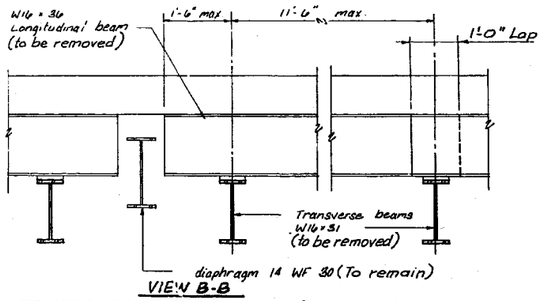
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	282
F. AID. R. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
18 SHEETS

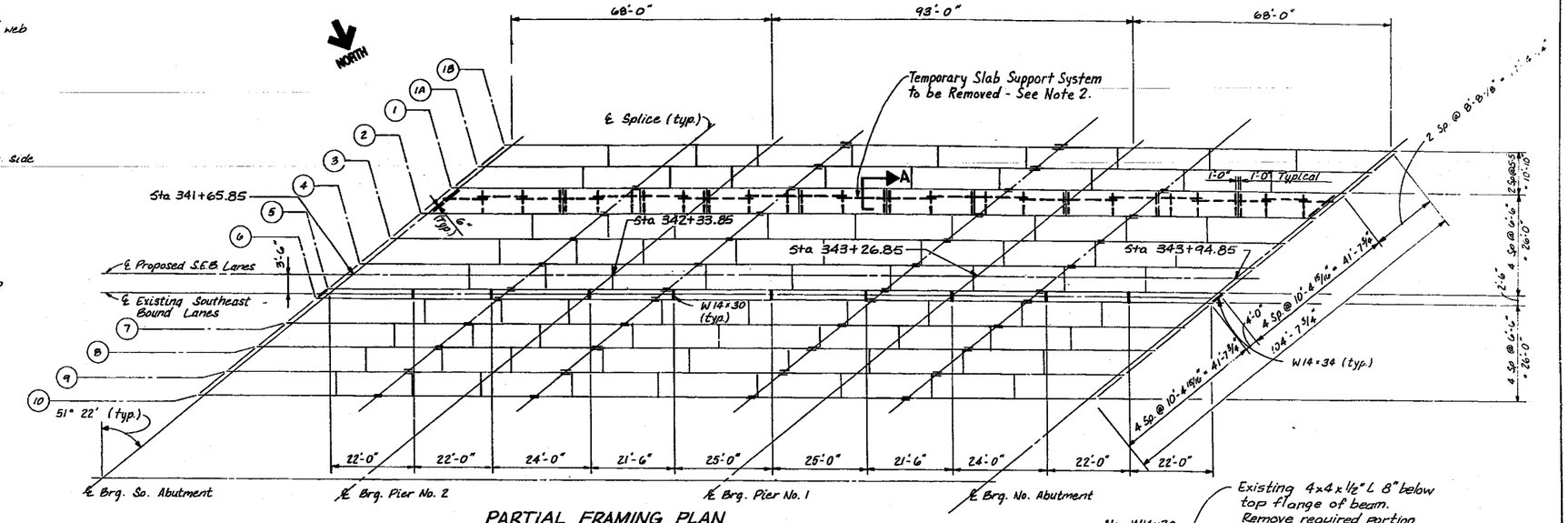


SECTION A

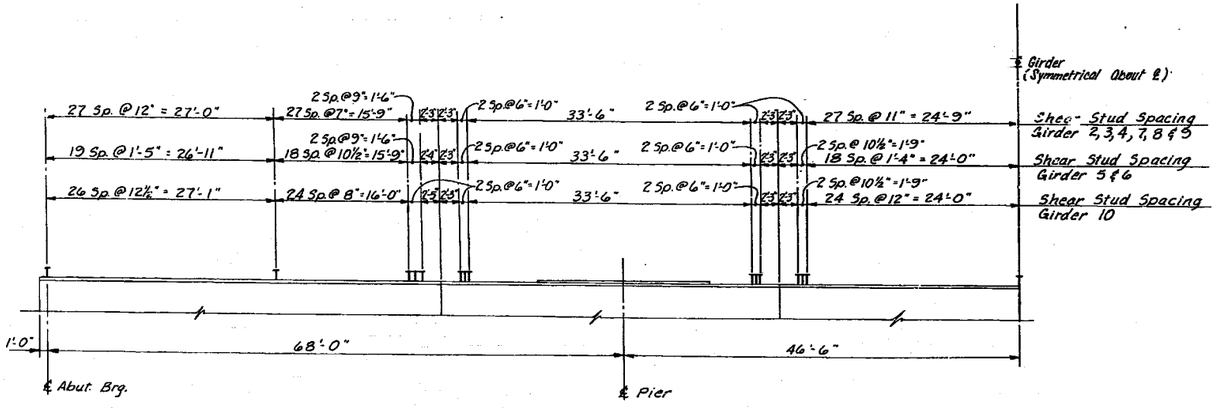


VIEW B-B

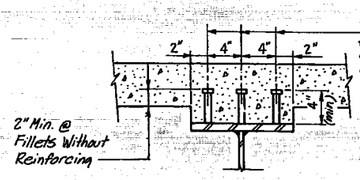
TEMPORARY SUPPORT STEEL (TO BE REMOVED)



PARTIAL FRAMING PLAN



GIRDER SHEAR STUD SPACING

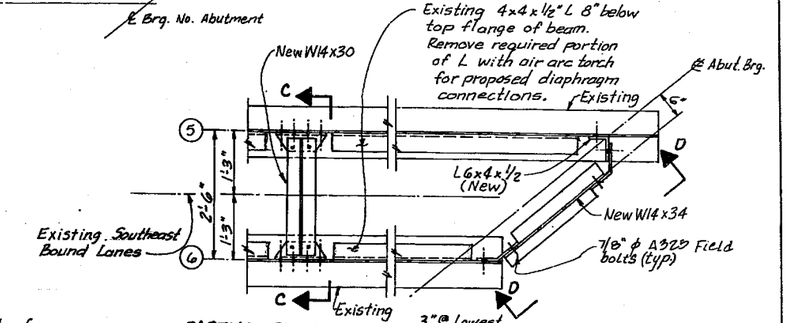


Note: Existing Studs on Beams 1, 1A & 1B shall be left in place if undamaged.

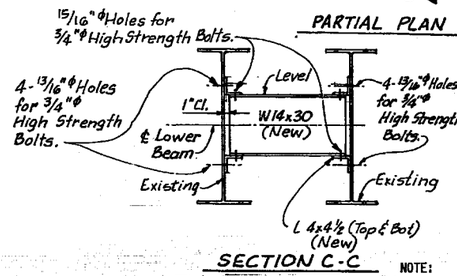
SHEAR STUD DETAIL

NOTES:

1. ERECT STRUCTURAL STEEL DIAPHRAGMS BETWEEN BEAMS 5 AND 6 (STRUCTURAL STEEL PROVIDED BY OWNER).
2. REMOVE TEMPORARY SLAB SUPPORT SYSTEM BETWEEN BEAMS 1 AND 2. REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.

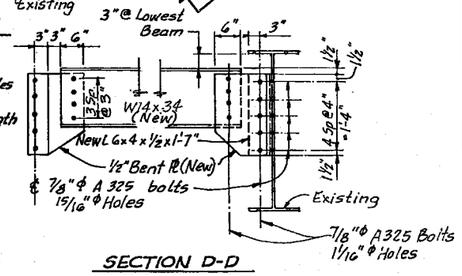


PARTIAL PLAN



SECTION C-C

Cost of field drilling is incidental to "Erecting Structural Steel".



SECTION D-D

NOTE:
ALL HOLES IN EXISTING STEEL TO BE DRILLED. NO BURNING ALLOWED. TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL OVERSIZED HOLES.

FOR ERECTION ONLY

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING, AND MANAGEMENT

FRAMING PLAN

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

C47

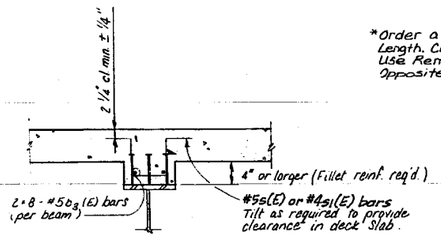
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	283
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 8
18 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

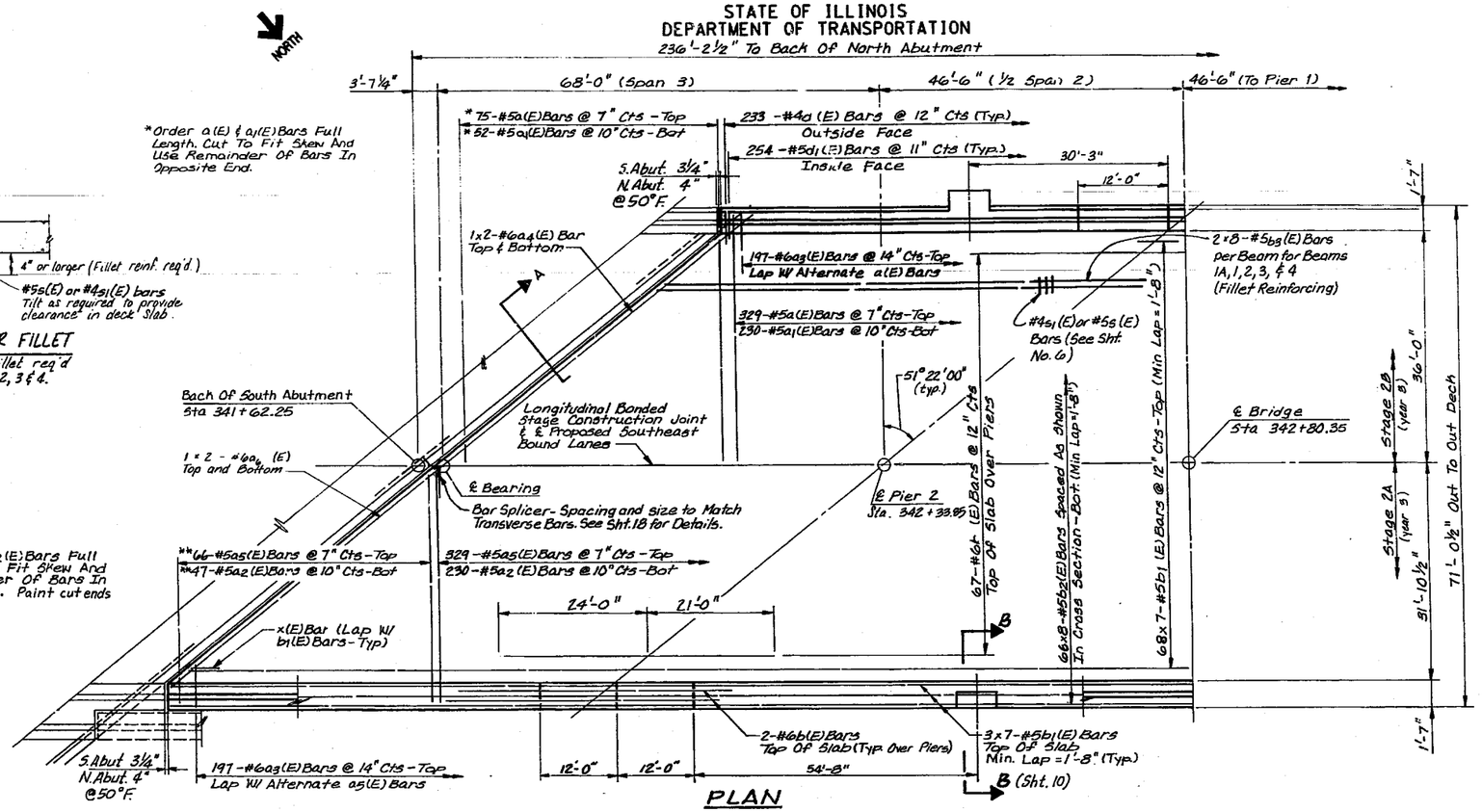
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

236'-2½" To Back Of North Abutment

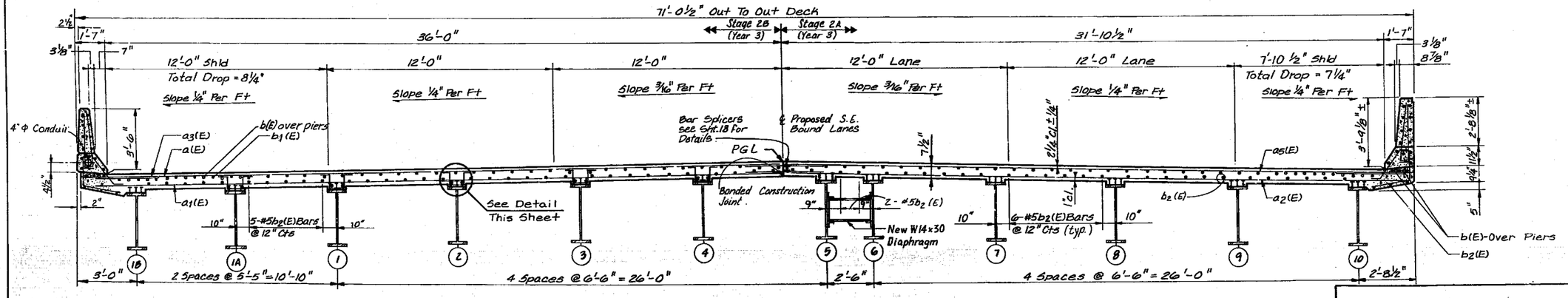


SECTION THRU GIRDER FILLET

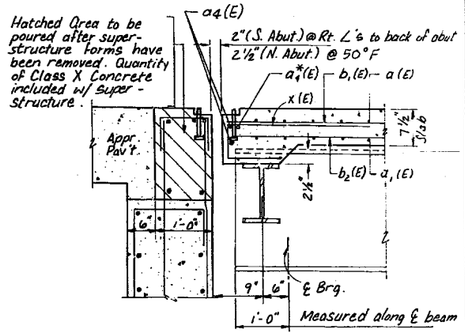
Note: Reinforcement in fillet req'd for Beams 1A, 1, 2, 3 & 4.



PLAN



CROSS SECTION
(Looking Up Station)



SECTION A

*Place a4(E) bars in back of anchor bolt as shown if required to maintain 1'cl(-0-⅛") Anchor bolts should be tied to a4(E) bars.

NOTES:

1. SEE SHEET 9 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIALS.
2. BARS INDICATED THUS 20X3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION

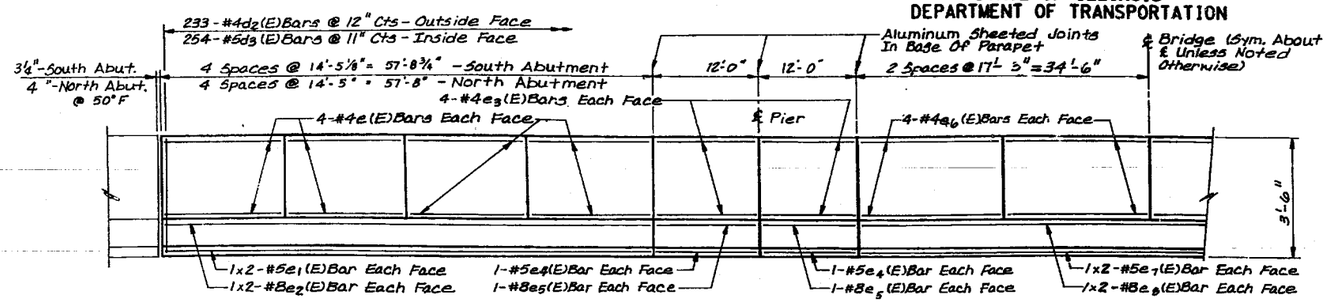
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE

COOK COUNTY

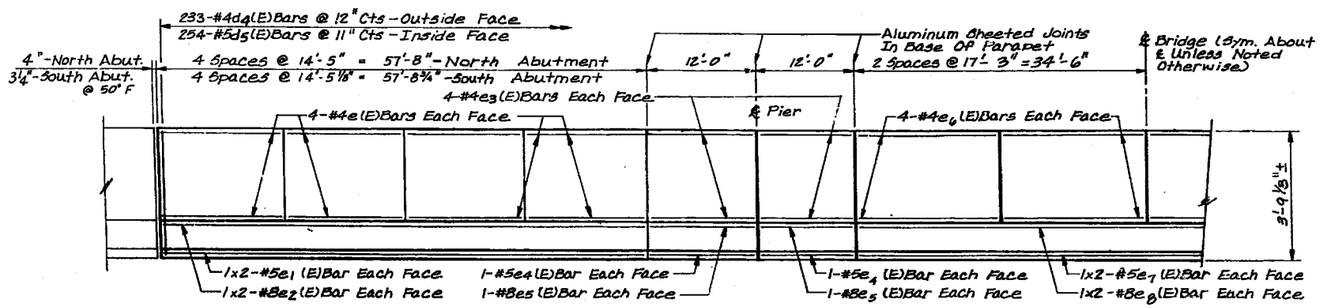
STATION 442+45.56

42

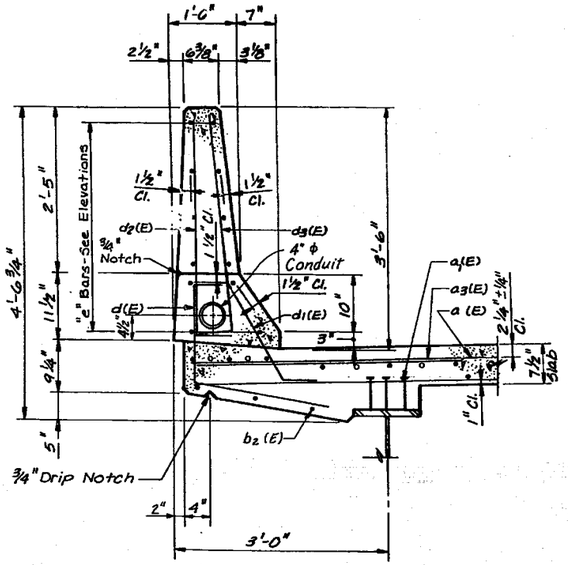
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



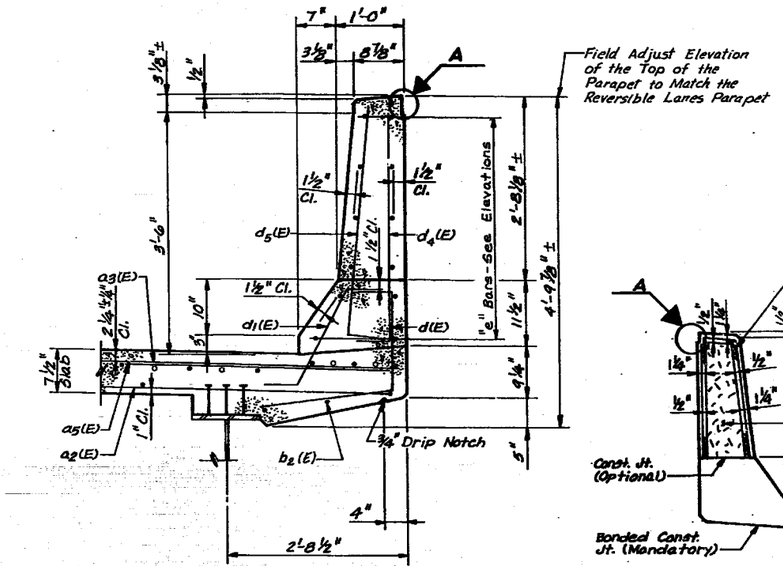
INSIDE ELEVATION OF WEST PARAPET



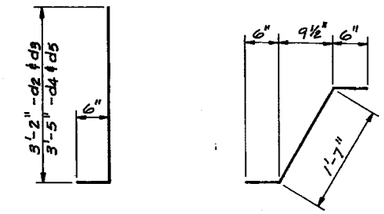
INSIDE ELEVATION OF EAST PARAPET



SECTION @ WEST PARAPET

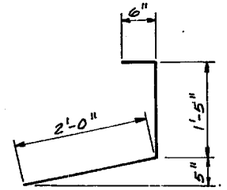


SECTION @ EAST PARAPET

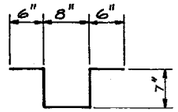


BARS $d_2(E), d_3(E), d_4(E)$ ℄ $d_5(E)$

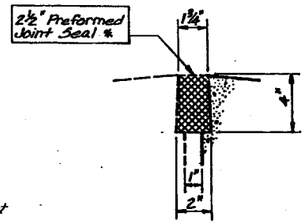
BAR $d_1(E)$



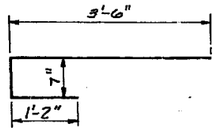
BAR d(E)



BAR s(E) ℄ $s_1(E)$



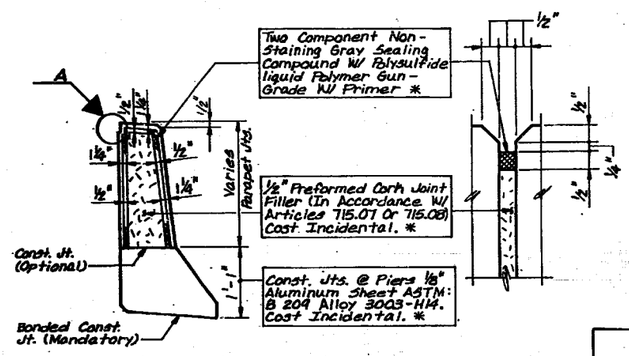
DETAIL A



BAR x(E)

Min. Bar Laps

#5 = 1'-8"
#6 = 2'-0"
#8 = 3'-8"



PARAPET JOINT DETAILS

*Cost Incidental to Class X Concrete Superstructures

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		420	284
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 05051-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707f404HB, 439IR-2

SHEET NO. 9
18 SHEETS

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
$a(E)$	404	#5	36'-5"	
$a_1(E)$	282	#5	36'-5"	
$a_2(E)$	277	#5	32'-4"	
$a_3(E)$	394	#6	4'-0"	
$a_4(E)$	8	#6	31'-0"	
$a_5(E)$	395	#5	32'-4"	
$a_6(E)$	8	#6	26'-6"	
$b(E)$	142	#6	45'-0"	
$b_1(E)$	518	#5	34'-10"	
$b_2(E)$	528	#5	30'-9"	
$b_3(E)$	80	#5	30'-9"	
$d(E)$	466	#4	3'-11"	
$d_1(E)$	508	#5	2'-7"	
$d_2(E)$	233	#4	3'-8"	
$d_3(E)$	254	#5	3'-8"	
$d_4(E)$	233	#4	3'-11"	
$d_5(E)$	254	#5	3'-11"	
$e(E)$	128	#4	14'-0"	
$e_1(E)$	16	#5	29'-8"	
$e_2(E)$	16	#8	30'-8"	
$e_3(E)$	64	#4	11'-8"	
$e_4(E)$	16	#5	11'-8"	
$e_5(E)$	16	#8	11'-8"	
$e_6(E)$	64	#4	17'-0"	
$e_7(E)$	8	#5	35'-4"	
$e_8(E)$	8	#8	36'-4"	
$s(E)$	1630	#5	2'-10"	
$s_1(E)$	340	#4	2'-10"	
X(E)	148	#5	5'-3"	
Reinforcement Bars (Epoxy Coated)		LBS.	117,730	
Class X Concrete Superstructures		CU. YDS.	503.3	

Reinforcement bars designated (E) shall be epoxy coated.

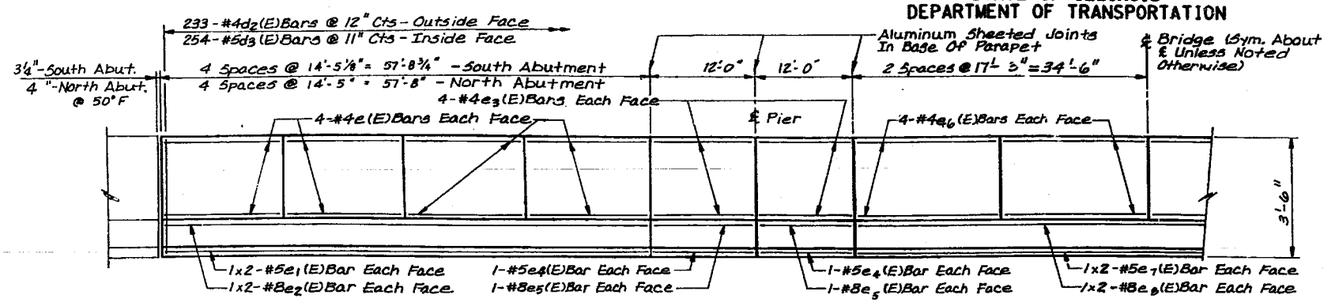
All bar dimensions are out-to-out.

STANLEY CONSULTANTS

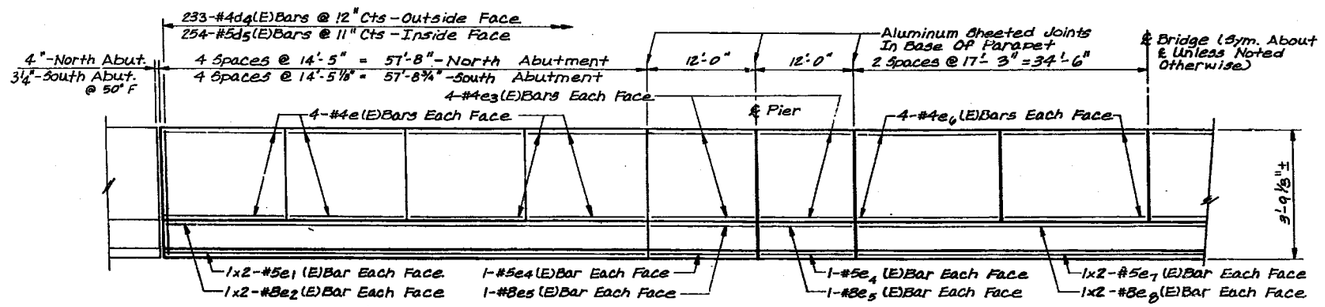
SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

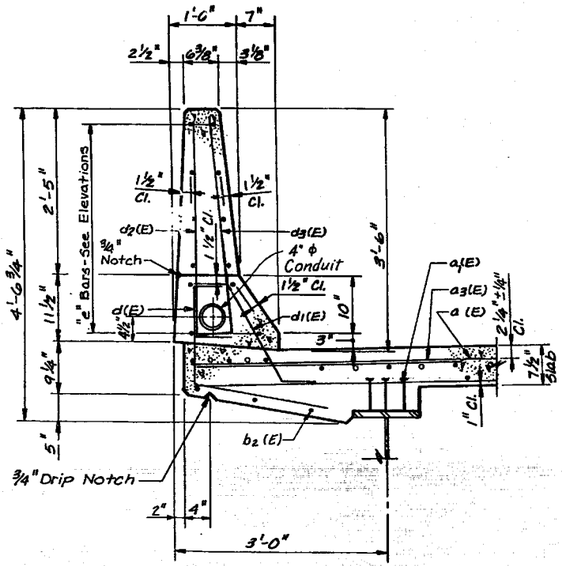
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



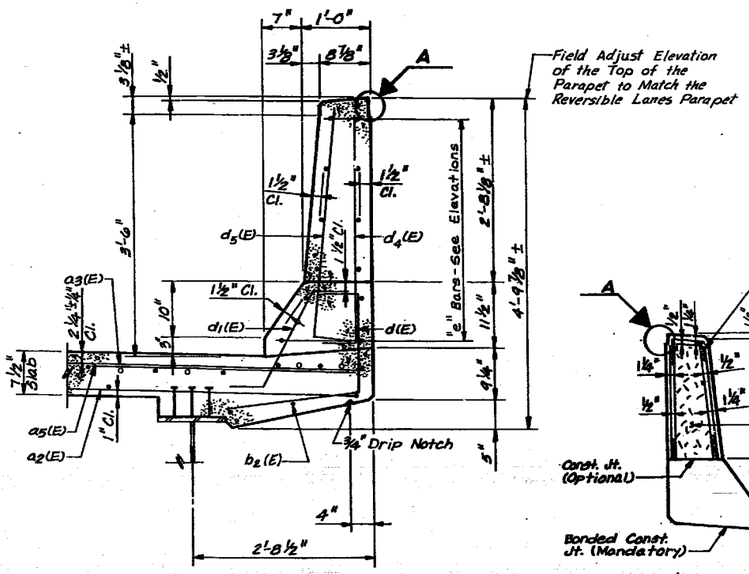
INSIDE ELEVATION OF WEST PARAPET



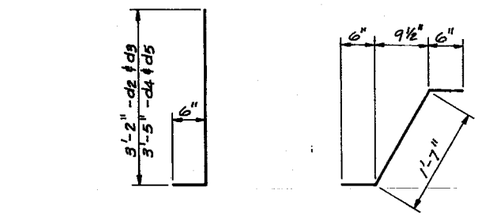
INSIDE ELEVATION OF EAST PARAPET



SECTION @ WEST PARAPET

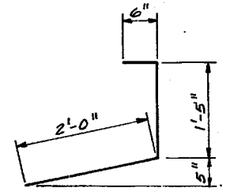


SECTION @ EAST PARAPET

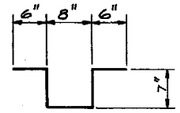


BARS $d_2(E), d_3(E), d_4(E)$ ℄ $d_5(E)$

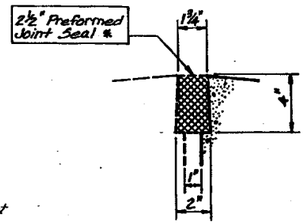
BAR $d_1(E)$



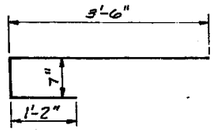
BAR d(E)



BAR $s(E)$ ℄ $s_1(E)$



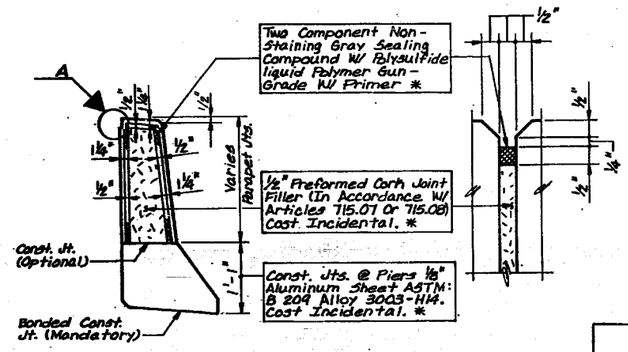
DETAIL A



BAR x(E)

Min. Bar Laps

#5 = 1'-8"
#6 = 2'-0"
#8 = 3'-8"



PARAPET JOINT DETAILS

*Cost Incidental to Class X Concrete Superstructures

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		420	284
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439M-2

SHEET NO. 9
10 SHEETS

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
$a(E)$	404	#5	36'-5"	
$a_1(E)$	282	#5	36'-5"	
$a_2(E)$	277	#5	32'-4"	
$a_3(E)$	394	#6	4'-0"	
$a_4(E)$	8	#6	31'-0"	
$a_5(E)$	395	#5	32'-4"	
$a_6(E)$	8	#6	26'-6"	
$b(E)$	142	#6	45'-0"	
$b_1(E)$	518	#5	34'-10"	
$b_2(E)$	528	#5	30'-9"	
$b_3(E)$	80	#5	30'-9"	
$d(E)$	466	#4	3'-11"	⌋
$d_1(E)$	508	#5	2'-7"	⌋
$d_2(E)$	233	#4	3'-8"	L
$d_3(E)$	254	#5	3'-8"	L
$d_4(E)$	233	#4	3'-11"	L
$d_5(E)$	254	#5	3'-11"	L
$e(E)$	128	#4	14'-0"	
$e_1(E)$	16	#5	29'-8"	
$e_2(E)$	16	#8	30'-8"	
$e_3(E)$	64	#4	11'-8"	
$e_4(E)$	16	#5	11'-8"	
$e_5(E)$	16	#8	11'-8"	
$e_6(E)$	64	#4	17'-0"	
$e_7(E)$	8	#5	35'-4"	
$e_8(E)$	8	#8	36'-4"	
$s(E)$	1630	#5	2'-10"	⊔
$s_1(E)$	340	#4	2'-10"	⊔
$x(E)$	148	#5	5'-3"	⊏

Reinforcement Bars (Epoxy Coated)	LBS.	117,730
Class X Concrete Superstructures	CU. YDS.	503.3

Reinforcement bars designated (E) shall be epoxy coated.

All bar dimensions are out-to-out.

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

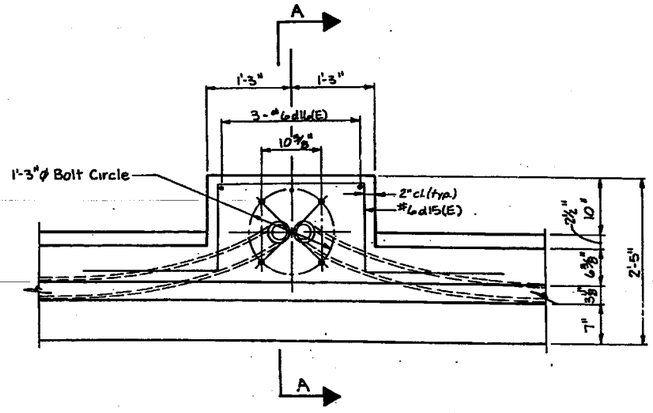
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

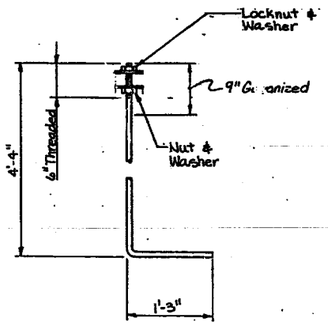
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	285
F. AP. A. RES. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
18 SHEETS

* 0505(2-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(40-1HB, 439IR-2

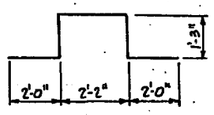


PLAN

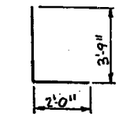


1"ϕ ANCHOR BOLT (ASTM A 687)

COST OF 1" ϕ ANCHOR BOLTS TO BE INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE



BAR d15 (E)

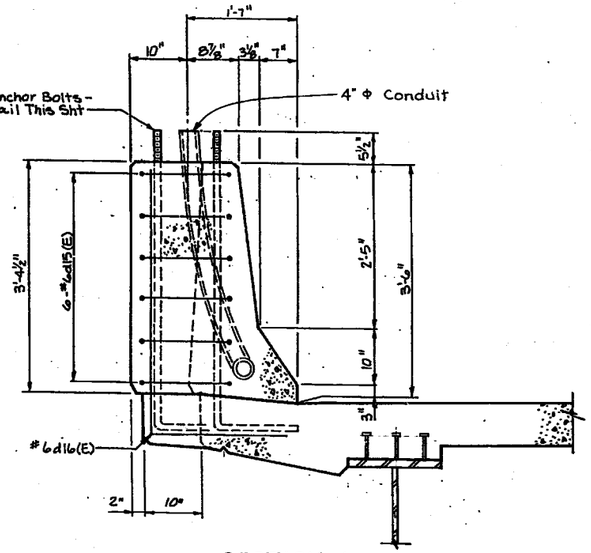


BAR d16 (E)

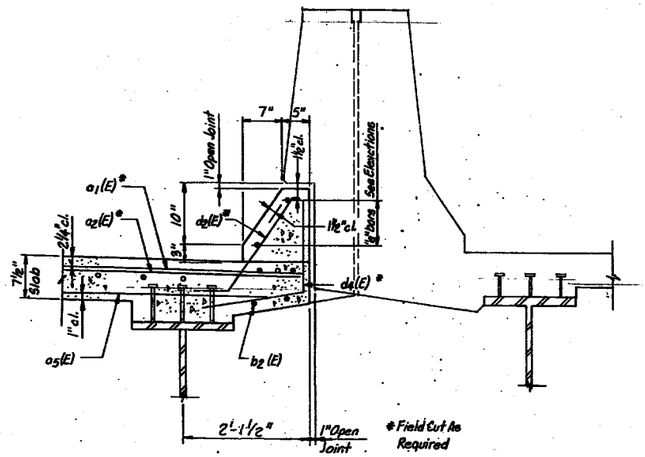
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d15(E)	6	#6	8'-8"	
d16(E)	3	#6	5'-9	L
REINFORCING BARS (EPOXY COATED)			LBS.	100
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	0.3

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED
BAR DIMENSIONS SHOWN ARE OUT TO OUT.



SECTION A-A



SECTION B-B
For Location See Sheet 8

STANLEY CONSULTANTS

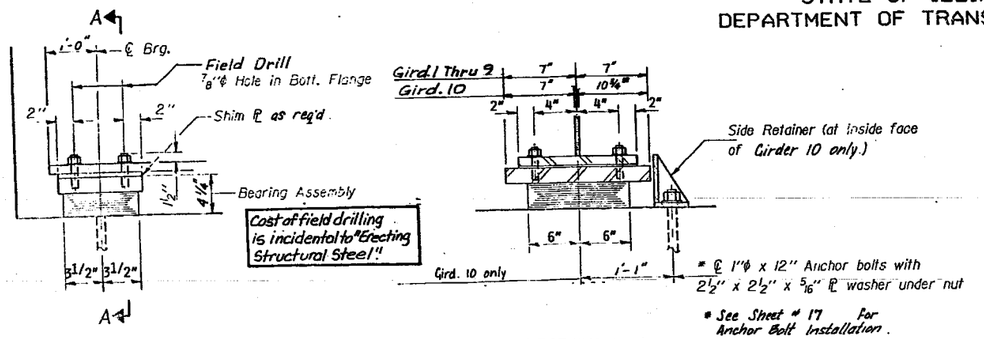
PARAPET MOUNTED LIGHT POLES

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		496	286
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		18 SHEETS

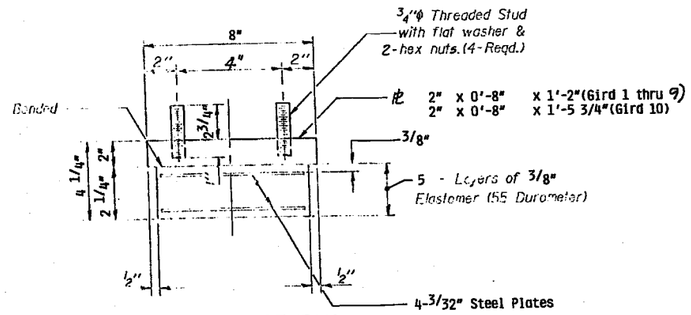
* 05092-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0603-402HB, 0606-403HB & 07071404HB, 439IR-2



ELEVATION AT SOUTH ABUT.

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



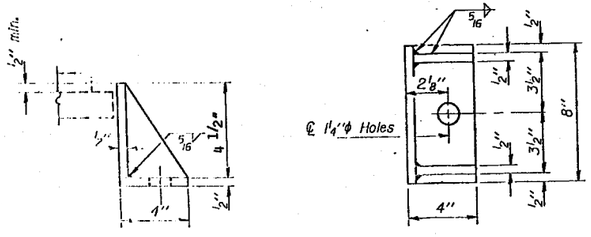
BEARING ASSEMBLY
(10 Reqd)

Note: Shim plates shall not be placed under Bearing Assembly.

GIRDER MOMENT TABLE		GIRDERS 1A & 1B			GIRDER 1			GIRDERS 2,3,4,7,8 & 9			GIRDERS 5 & 6			GIRDER 10		
		0.4 SPAN 1	PIER	0.5 SPAN 2	0.4 SPAN 1	PIER	0.5 SPAN 2	0.4 SPAN 1	PIER	0.5 MIDDLE SPAN	0.4 SPAN 1	PIER	0.5 MIDDLE SPAN	0.4 SPAN 1	PIER	0.5 MIDDLE SPAN
Is	in⁴	6870	11074	7283	9750	14611	9750	12103	17562	12103	10470	14456	10470	9739	14601	9738
Ic(n=9)	in⁴	17209	---	18556	24869	---	24869	30808	---	30808	24840	---	24840	25677	---	25677
Ic(n=27)	in⁴	12639	---	13511	17739	---	17739	21726	---	21726	17453	---	17453	18177	---	18177
Ss	in³	407.1	646.6	446.7	541.5	781.7	541.5	663.6	924.8	663.6	579.1	775.4	579.1	541.0	781.3	541.0
Sc(n=9)	in³	570.6	---	622.9	794.4	---	794.4	982.6	---	982.6	836.6	---	836.6	810.9	---	810.9
Sc(n=27)	in³	518.6	---	567.0	707.2	---	707.2	868.1	---	868.1	734.9	---	734.9	718.9	---	718.9
DL	k/ft	0.666	0.723	0.672	0.763	0.818	0.763	0.872	0.931	0.872	0.659	0.703	0.659	0.789	0.843	0.789
MDL	k-ft	179.2	503.4	230.1	206.2	545.3	281.3	236.7	620.7	324.0	181.0	462.3	251.4	213.1	563.7	290.8
fs (DL)	ksi	5.28	9.34	6.18	4.57	8.37	6.23	4.28	8.05	5.86	3.75	7.15	5.21	4.73	8.66	6.45
SDL	k/ft	0.194	0.194	0.194	0.217	0.217	0.217	0.240	0.240	0.240	0.194	0.194	0.194	0.194	0.194	0.194
MSDL	k-ft	61.3	125.3	93.2	69.9	135.8	108.4	78.3	149.2	122.4	63.4	120.7	99.1	63.4	120.1	99.2
MLL	k-ft	392.7	315.1	461.2	433.6	340.4	524.2	469.7	363.8	582.7	325.2	251.9	403.1	459.3	355.8	571.5
MIMP	k-ft	101.7	80.9	105.8	112.8	81.7	120.5	122.1	88.4	134.0	84.5	60.4	92.7	119.4	85.4	131.4
MLL+I	k-ft	494.4	396.0	567.0	546.4	422.1	644.7	591.8	452.2	716.7	409.7	312.3	495.8	578.7	441.2	702.9
fs (SDL)	ksi	1.41	2.33	1.97	1.19	2.08	1.84	1.08	1.94	1.69	1.04	1.87	1.62	1.06	1.84	1.66
fs (LL+I)	ksi	10.40	7.35	10.92	8.25	8.56	9.74	7.23	5.87	8.75	5.88	4.83	7.11	8.56	6.78	10.40
fs TOTAL	ksi	17.09	19.02	19.07	14.01	16.94	17.81	12.59	15.86	16.30	10.67	13.85	13.94	14.35	17.28	18.51
VR	k	40.4	---	41.3	43.9	---	40.3	48.8	---	49.5	33.8	---	34.2	47.7	---	48.4

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

GIRDER REACTION TABLE		GIRDERS 1A & 1B		GIRDER 1		GIRDERS 2,3,4,7,8 & 9		GIRDERS 5 & 6		GIRDER 10	
		ABUT	PIER	ABUT	PIER	ABUT	PIER	ABUT	PIER	ABUT	PIER
R_{DL}	k	20.3	80.7	23.5	89.8	26.7	101.7	20.6	77.8	23.5	90.0
R_{LL}	k	34.2	45.5	37.5	50.6	40.2	54.4	33.7	42.7	30.6	46.1
IMP	k	8.8	11.7	9.8	12.1	10.4	13.2	8.8	10.2	7.9	11.1
R TOTAL	k	63.3	137.9	70.8	152.5	77.3	169.3	63.1	130.7	62.0	147.2



SIDE RETAINER (1 Reqd)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Girder	Item	Unit	Total
1 Thru 10	Install Elastomeric Bearing Assembly Type 1	Each	10

BEARING DETAILS AND MOMENT AND REACTION TABLE
SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

STANLEY CONSULTANTS

I-2-EI 12-1-83

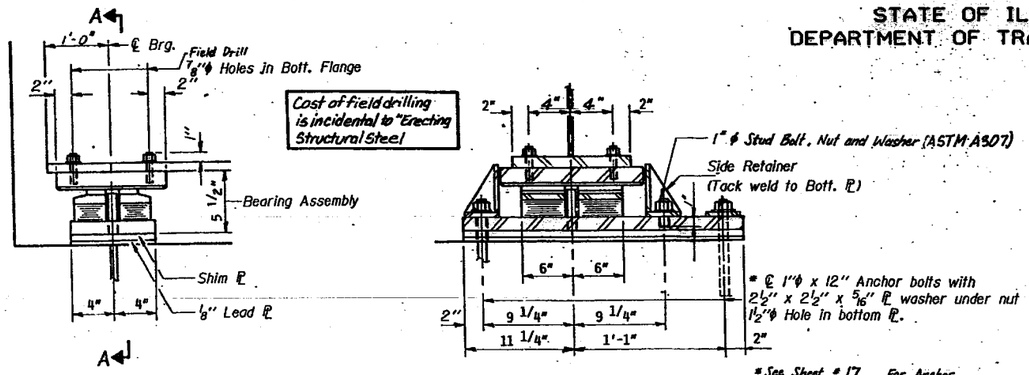
651

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	287

SHEET NO. 12
10 SHEETS

* 05092-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2



Cost of field drilling is incidental to "Erecting Structural Steel"

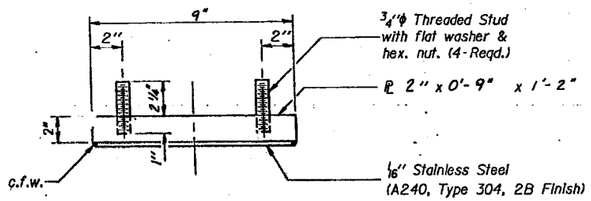
ELEVATION AT NORTH ABUT.

* ℄ 1"ϕ x 12" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" ℙ washer under nut 1 1/2"ϕ Hole in bottom ℙ.

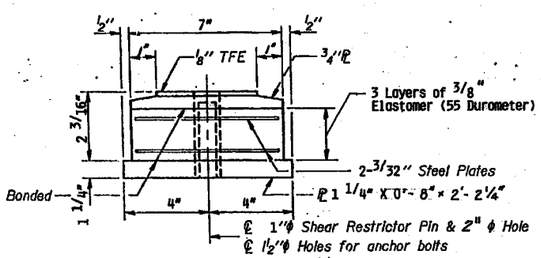
* See Sheet # 17 For Anchor Bolt Installation.

SECTION A-A

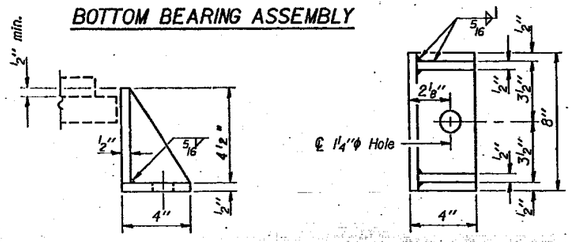
TYPE III ELASTOMERIC EXP. BRG. (10 REQ'D.)



TOP BEARING ASSEMBLY

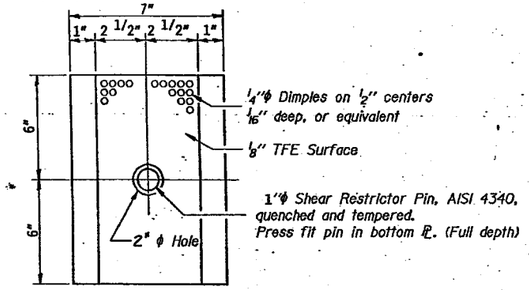


BOTTOM BEARING ASSEMBLY

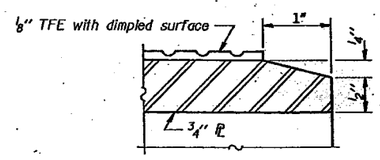


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(20 REQ'D)



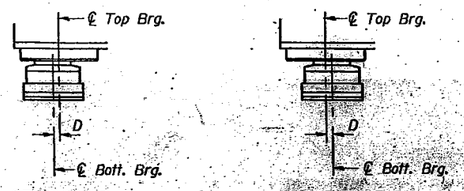
PLAN-TFE ELASTOMERIC BRG.



SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100° of expansion for every 15° temp. change from the normal temp. of 50° F.

BILL OF MATERIAL

Girder	Item	Unit	Total
1 thru 10	Install Elastomeric Bearing Assembly Type III	Each	8

[redacted]

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.66

[redacted]
I-2-E3 12-1-83

652

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1½" Min.
2½"	2½"	1¾" Min.

INSTALLATION NOTES

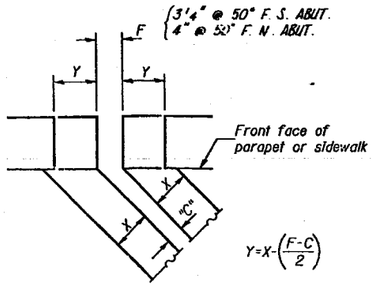
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

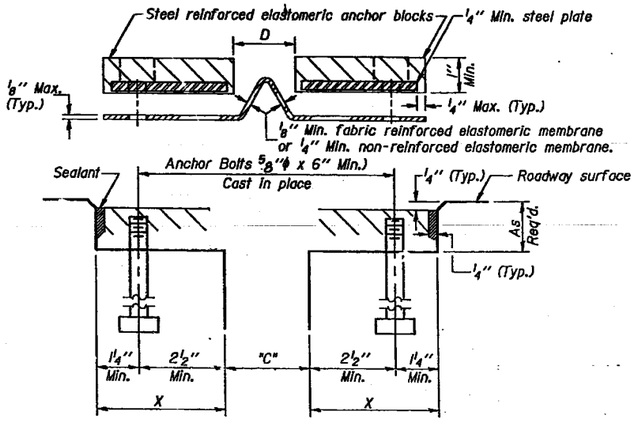
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

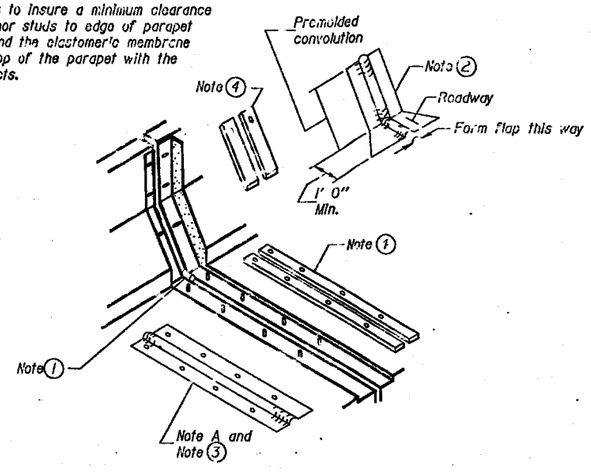
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane ..." also be installed to the lop of the parapet with the anchor studs spaced at ±12" cts.



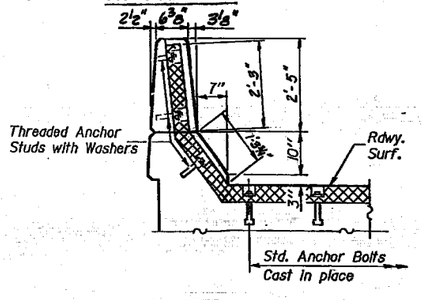
FORMING BLOCKOUT SKETCH



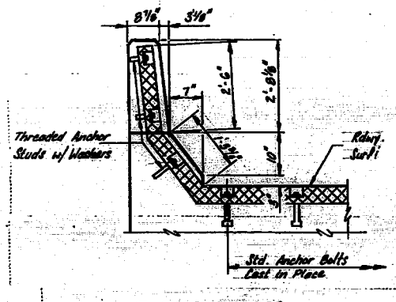
CROSS SECTION



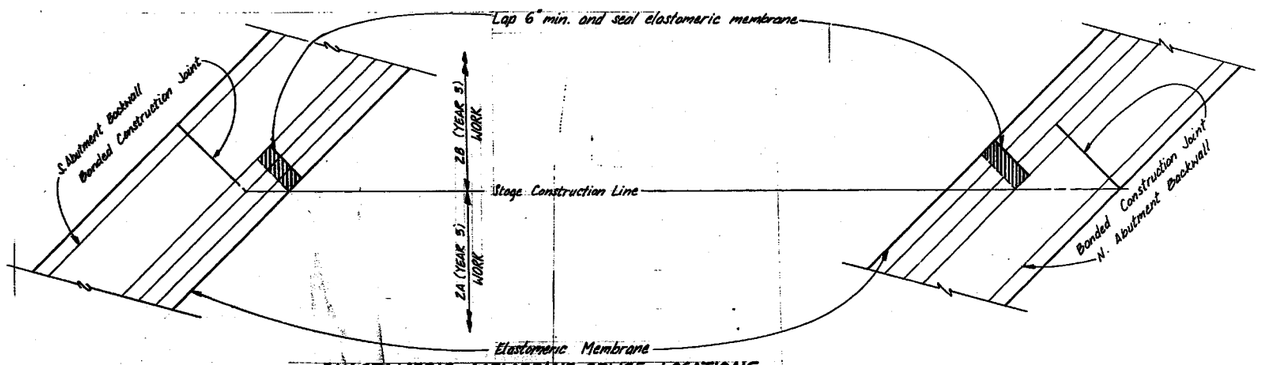
AT PARAPET



AT WEST PARAPET



AT EAST PARAPET



ELASTOMERIC MEMBRANE SPLICE LOCATIONS

STANLEY CONSULTANTS

EJ-CS 12-31-87

ORG.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0502R-2B, 3-1H, 6-1P, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	288
FED. ROAD DIST. NO. 7	STATE	FED. AID PROJECT-		

SHEET NO. 13
18 SHEETS

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

All anchor bolts for expansion joint shall be cast-in-place and tied to transverse reinforcing bars in deck.

EXPANSION JOINT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

654

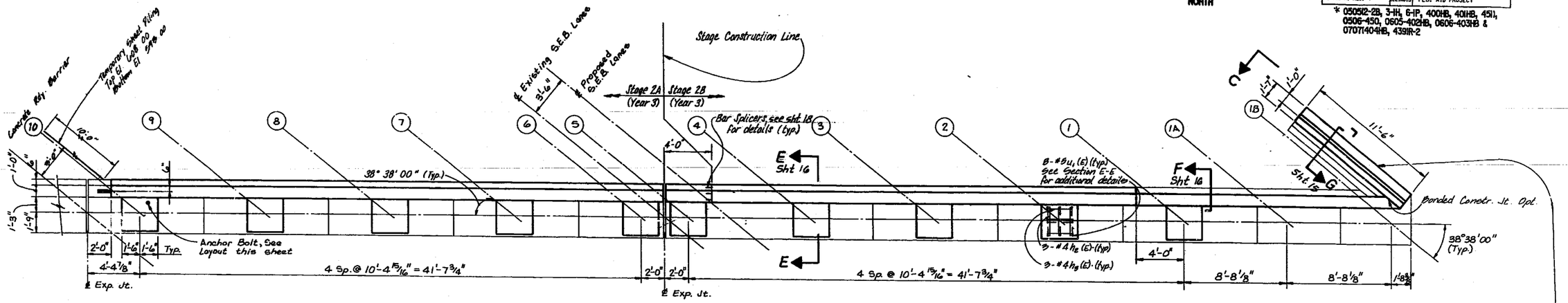
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	289
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

SHEET NO. 14
18 SHEETS

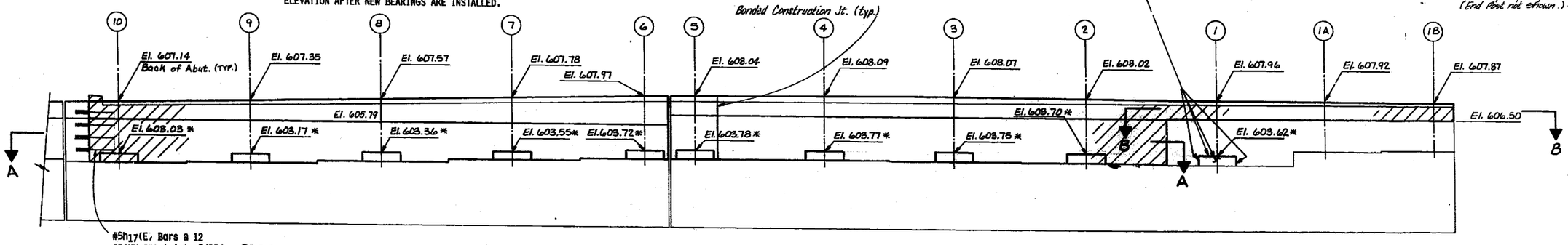
NORTH



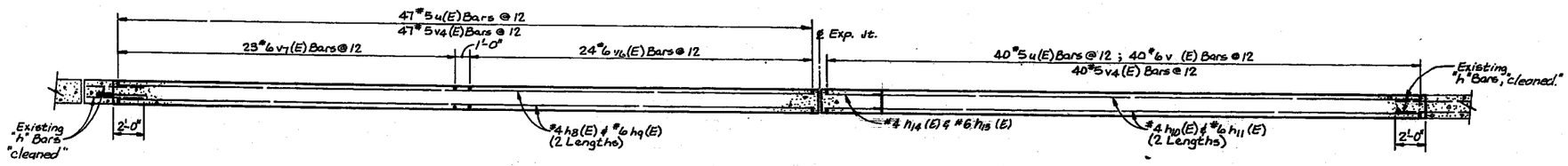
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade. (End Post not shown.)

PLAN

* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.



ELEVATION



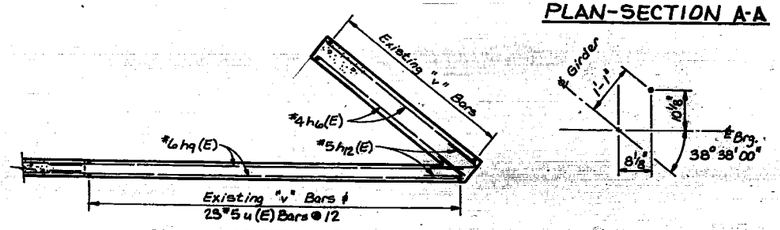
NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

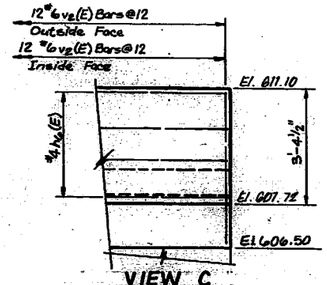
▨ INDICATES CONCRETE REMOVAL

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLT.



PLAN - SECTION B-B

ANCHOR BOLT LAYOUT



VIEW C

PLAN-SECTION A-A

STANLEY CONSULTANTS

SOUTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

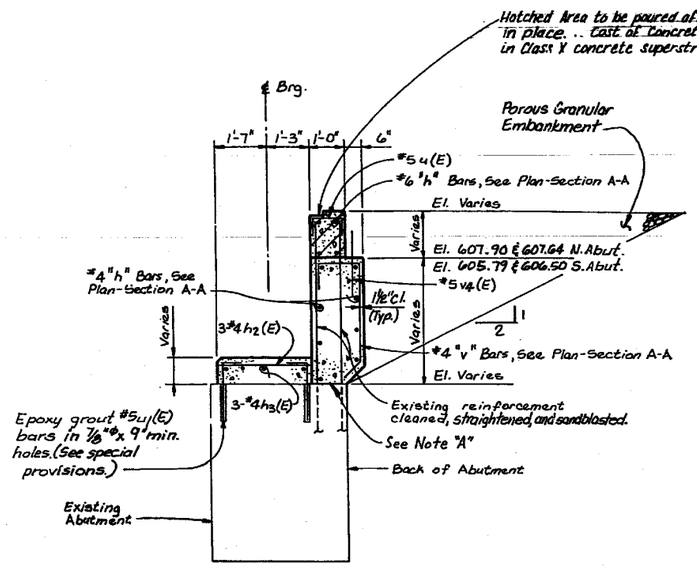
655 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

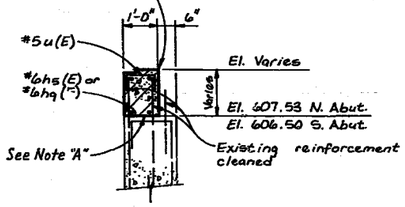
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		476	290
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15
18 SHEETS

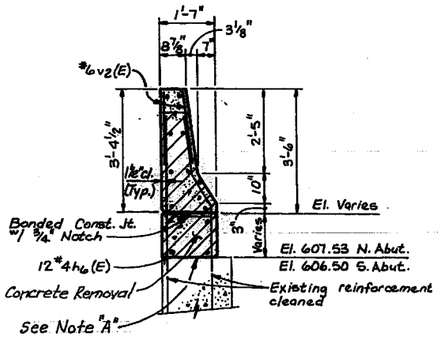
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



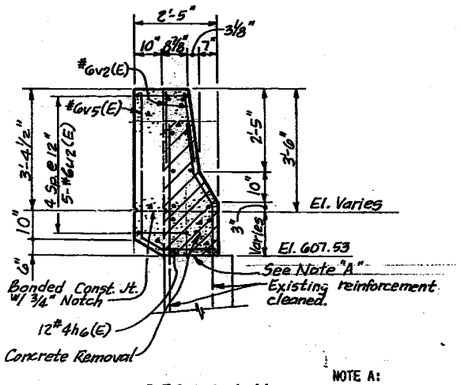
SECTION E-E
Sht. 14 & 16



SECTION F
Sht. 14 & 16

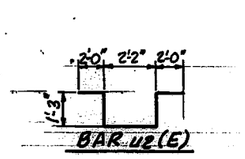


SECTION G
Sht. 14

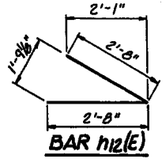


SECTION H
Sht. 16

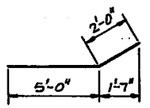
NOTE A:
BONDED CONSTR. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.



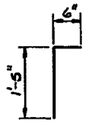
BAR u2(E)



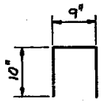
BAR h12(E)



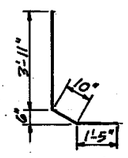
BAR h7(E)



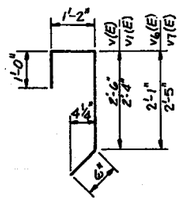
BAR u1(E)



BAR u(E)



BAR v5(E)



BARS v(E), v1(E), v6(E) & v7(E)

BILL OF MATERIAL
NORTH ABUTMENT - WEST END

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	16	#4	18'-8"	
h1(E)	8	#6	19'-0"	
h2(E)	30	#4	2'-6"	
h3(E)	30	#4	2'-8"	
h4(E)	16	#4	22'-0"	
h5(E)	12	#6	22'-4"	
h6(E)	12	#4	11'-2"	
h7(E)	4	#5	7'-0"	
h15(E)	4	#6	8'-6"	
h16(E)	8	#4	8'-6"	
u(E)	109	#5	2'-5"	
u1(E)	80	#5	1'-11"	
u2(E)	5	#6	8'-8"	
v(E)	47	#4	5'-2'	
v1(E)	40	#4	5'-0"	
v2(E)	24	#6	2'-0"	
v4(E)	87	#5	2'-0"	
v5(E)	3	#6	6'-2"	
h17(E)	4	#5	3'-3"	
STRUCTURE EXCAVATION			CU. YDS.	35.3
CLASS X CONCRETE			CU. YDS.	21.5
CONCRETE REMOVAL			CU. YDS.	25.0
REINFORCEMENT BARS (EPOXY COATED)			LBS.	2,470

BILL OF MATERIAL
SOUTH ABUTMENT - WEST END

BAR	NO.	SIZE	LENGTH	SHAPE
v2(E)	30	#4	2'-6'	
v3(E)	30	#4	2'-8"	
v6(E)	12	#4	11'-2"	
v8(E)	16	#4	24'-0"	
v9(E)	12	#6	24'-4"	
v10(E)	16	#4	18'-8"	
v11(E)	8	#6	19'-0"	
h12(E)	4	#5	5'-4"	
v13(E)	4	#6	3'-6"	
v14(E)	8	#4	3'-6"	
u(E)	110	#5	2'-5"	
u1(E)	80	#5	1'-11"	
v (E)	40	#6	5'-2"	
v2(E)	24	#6	2'-0"	
v3(E)	12	#6	4'-5"	
v4(E)	87	#5	2'-0"	
v6(E)	24	#6	4'-9"	
v7(E)	23	#6	5'-1"	
h17(E)	4	#5	3'-3"	
STRUCTURE EXCAVATION			CU. YDS.	33.5
CLASS X CONCRETE			CU. YDS.	19.6
CONCRETE REMOVAL			CU. YDS.	24.7
REINFORCEMENT BARS (EPOXY COATED)			LBS.	2,820

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

ABUTMENT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

STANLEY CONSULTANTS

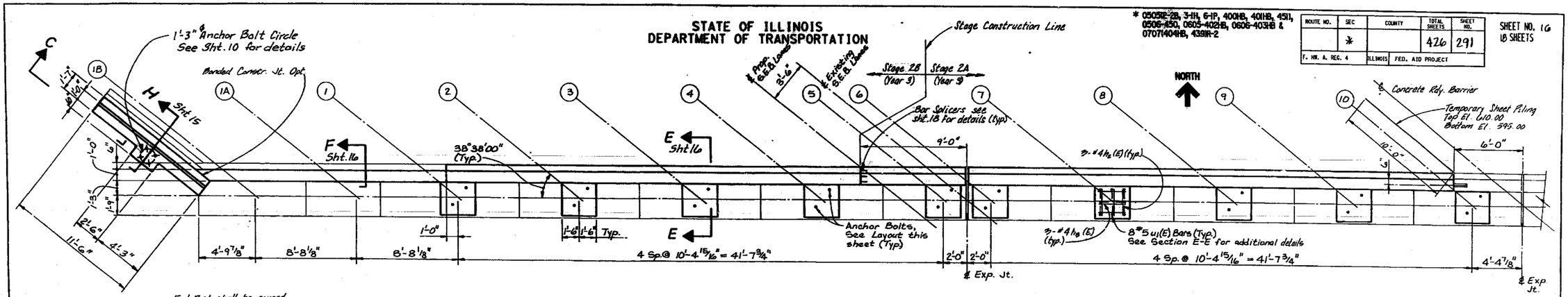
656 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

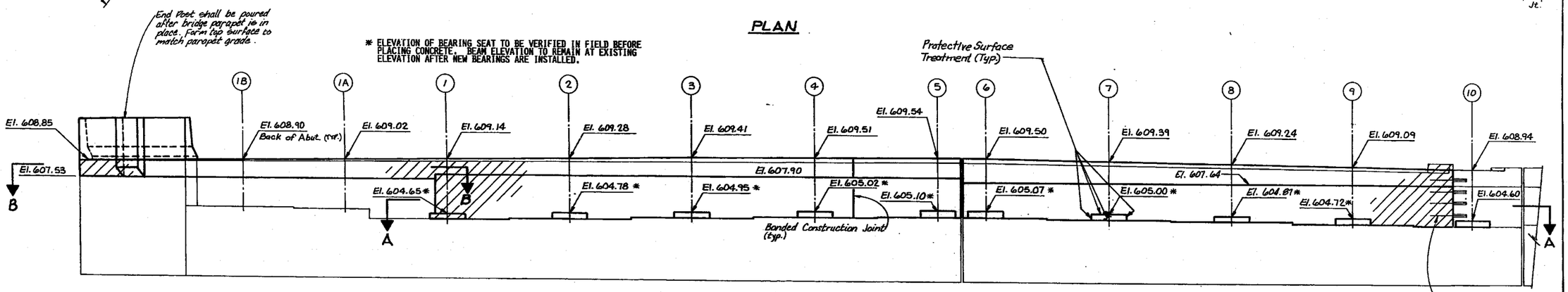
* 050592-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

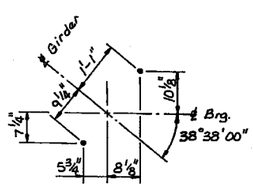
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	291
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 16
18 SHEETS



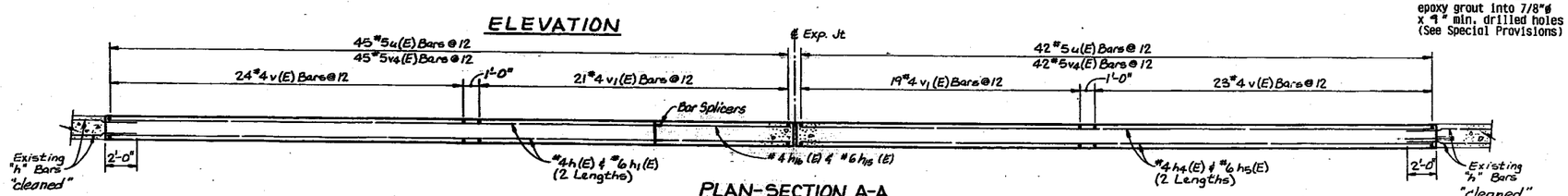
PLAN



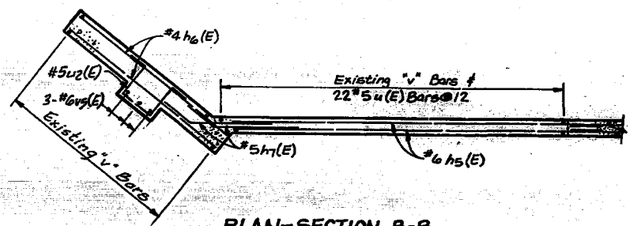


ANCHOR BOLT LAYOUT

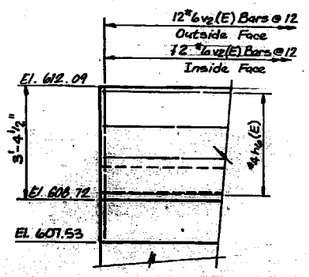
ELEVATION



PLAN-SECTION A-A



PLAN-SECTION B-B



VIEW C

NOTES:

(E) INDICATES EPOXY COATED REINFORCEMENT BARS

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

▨ INDICATES CONCRETE REMOVAL

SPACE REINFORCEMENT IN BEAM SEATS TO MISS ANCHOR BOLTS.

STANLEY CONSULTANTS

NORTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE

COOK COUNTY

STATION 442+45.56

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

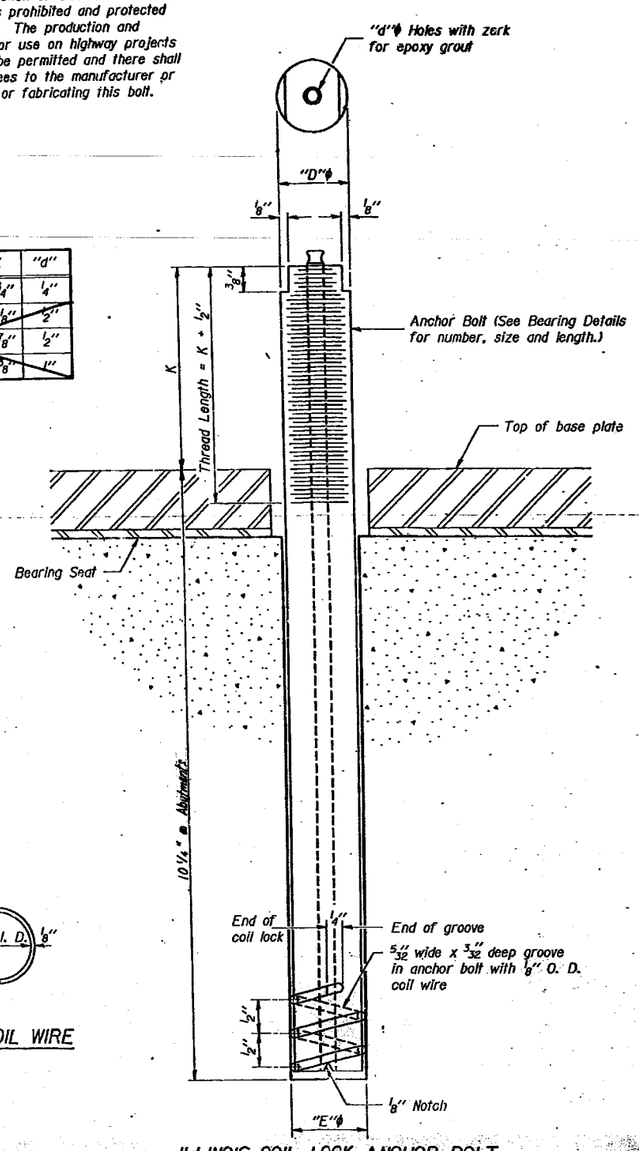
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	292
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

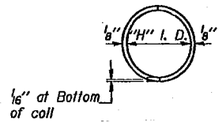
SHEET NO. 17
18 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2

D	E	H	K	"d"
1"	1 1/8"	15/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 5/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, ~~furnished and~~ installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Erecting Structural Steel."

STANLEY CONSULTANTS

ABB-1 12-1-83

ANCHOR BOLT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+46.66

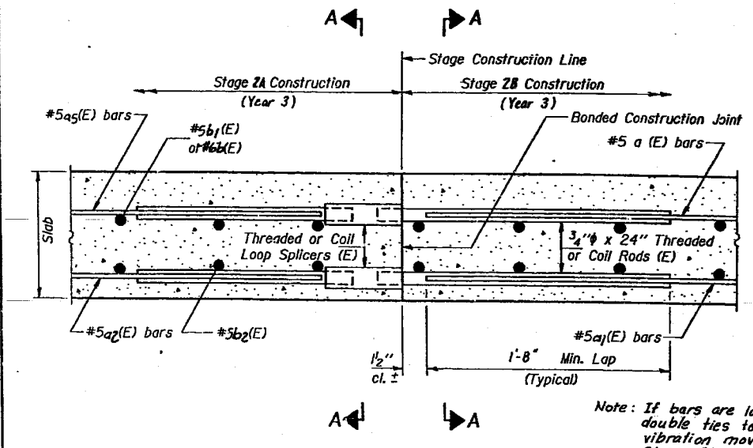
6-58

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

METRIC NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	293
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

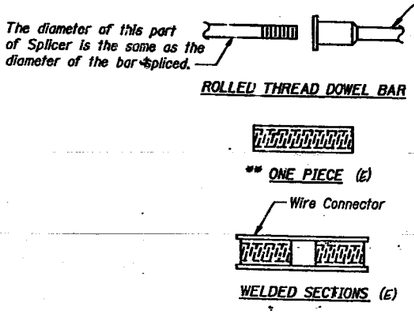
SHEET NO. 18
18 SHEETS

* 050502-2B, 3-114, 6-4P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707404HB, 4398R-2



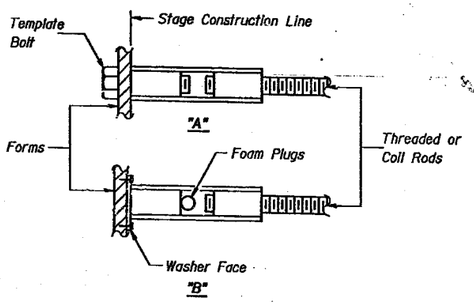
SECTION THRU SLAB

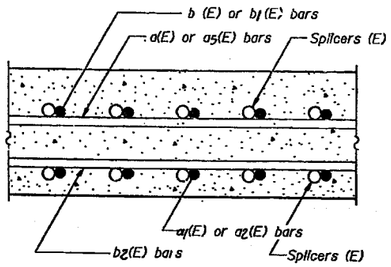
Note: If bars are lapped, provide double ties to prevent traffic vibration movements during Stage 2B pour.



SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.





SECTION A-A

SPLICER DETAILS

(No. Req'd. 686)

Cost Incidental to Reinforcement Bars (Epoxy Coated).

INSTALLATION AND SETTING METHODS

"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress-area-equal-to-or-greater-than-that-of-the-lapped-reinforcement bars.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

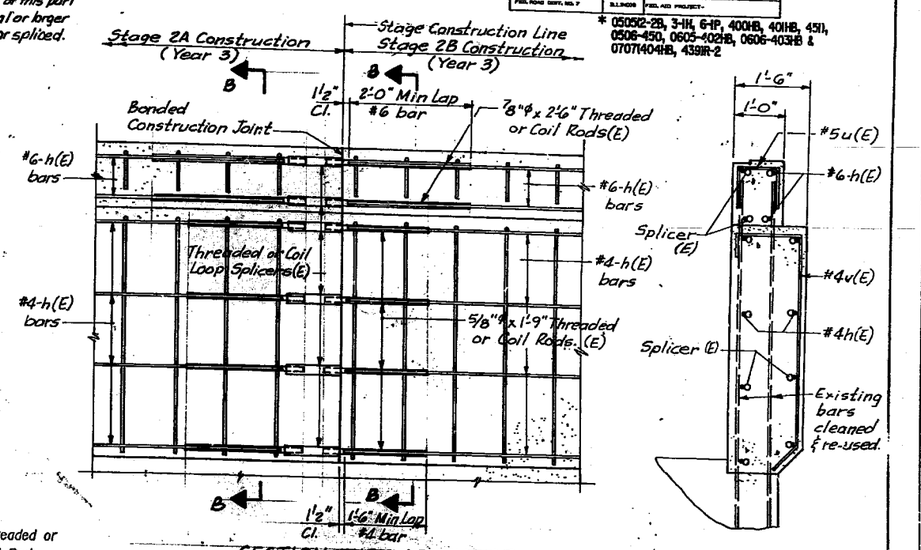
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

In Slab	#5 bar lap with 3/4"ϕ Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension; Minimum Pull-out Strength = 9.2 kips-tension
In Backwall	#4 bar lap with 5/8"ϕ Splicer (Coupler) x 1'-9" Splicer Rods	Minimum Capacity = 15.0 kips-tension; Minimum Pull-out Strength = 6.0 kips-tension
	#6 bar lap with 7/8"ϕ Splicer (Coupler) x 2'-6" Splicer Rods	Minimum Capacity = 33.0 kips-tension; Minimum Pull-out Strength = 13.2 kips-tension



SECTION THRU ABUTMENT

SECTION B-B

SPLICER DETAILS

(No. Req'd. 24)

Cost Incidental to Reinforcement Bars.

STANLEY CONSULTANTS

BSD-1 12-31-87

STAGE CONSTRUCTION JOINT DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WEBSTER AVENUE
COOK COUNTY
STATION 442+45.56

659

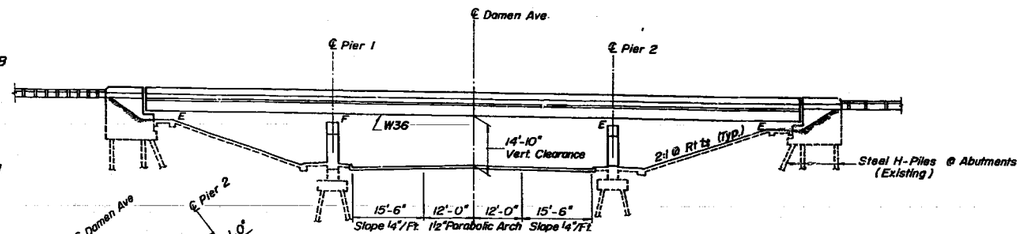
TBM # 59 - Chiseled Top of NE Corner - North Wing Wall -West Abutment - F.A.I. 90/94 Bridge Over Damen Avenue El. 606.37 (U S G S Datum)

EXISTING STRUCTURE DATA

Sta. 36 + 81.188 FAI ROUTE 2, Sec 0505-401 HB
Built in 1957 Structure No. 016-0130

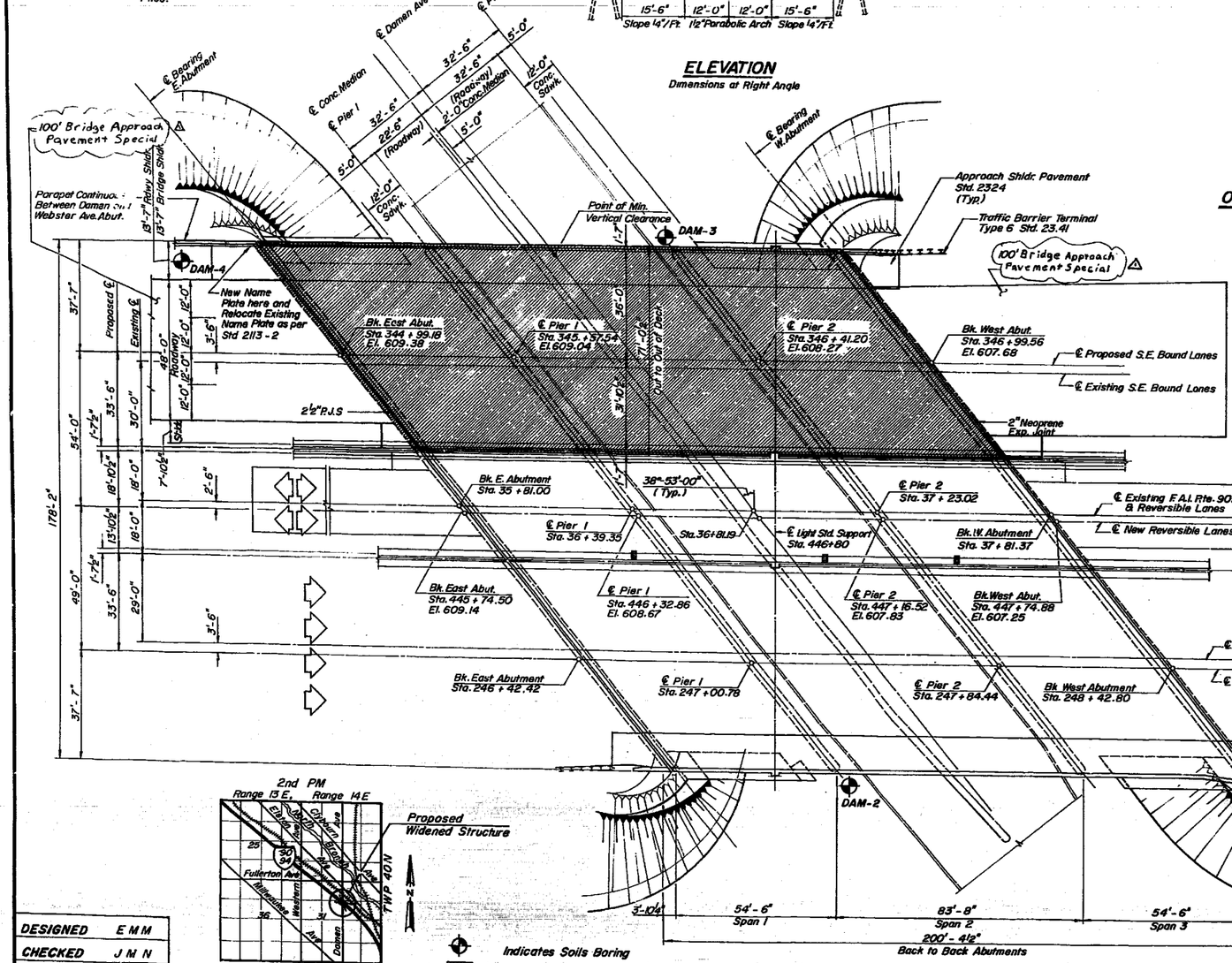
Superstructure : Continuous, Non-Composite Reinforced Concrete Deck w/Rolled Steel Beams.

Substructure : Pile Bent Abutments, Multiple Column Piers, Both Supported by Metal Shell C.I.P. Concrete Piles.



ELEVATION

Dimensions at Right Angle



LOCATION MAP

Proposed Widened Structure

Indicates Soils Boring

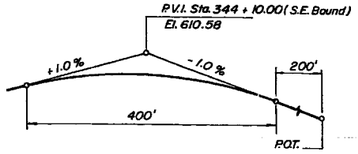
Indicates Limits of Southeast Roadway Work

New Scupper - Bridge

PLAN

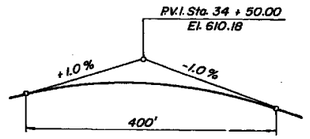
DESIGNED	E M M
CHECKED	J M N
DRAWN	F Q M
CHECKED	E M M

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 459) R-2



PROPOSED PROFILE GRADE

F.A.I. ROUTE 90/94
℄ Southeast Bound Lanes



ORIGINAL THEORETICAL PROFILE GRADE

F.A.I. ROUTE 90/94
℄ Southeast Bound Lanes

Notes for Bill of Material

(1) Includes Deck Surface & Face of Barrier, See Special Provisions for Curing & Texturing Bridge Deck.

(2) See Sheets Nos. 8 & 10.

(3) Refers to Beam (26) at Pier 2. Also includes switching bearings under Beams (26A) & (26B) from Pier 1 to Pier 2 and vice versa.

(4) Remove loose Anchor Bolts on Beams (18) (19) & (20) at Pier 2 and Replace with Epoxy Grouted Anchor Bolts.

(5) Includes Removal of Bearings at Abutments and Piers Under Beams (26A) & (26B)

APPROVED FOR STRUCTURAL ADEQUACY ONLY
D. Bellizzi
ALFRED BENESCH & CO., Consulting Engineers

STATE OF ILLINOIS
EFREN M. MIRANDA
41956
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

ROUTE NO	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	496	294
FED-ROAD DIST. NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO. 1 OF 13 SHEETS

NOTE :
1. See Sheet #2 for Index of Drawings and General Notes.

DESIGN SPECIFICATIONS

AASHTO (1980) with 1990 Interim Specifications.

LOADING HS 20-44 AND ALTERNATE MILITARY LOADING

Allow 25 PSF for Future Wearing Surface

DESIGN STRESSES

f'c = 3,500 psi (Concrete)
fy = 60,000 psi (Reinforcement)
fs = 20,000 psi (Proposed Structural Steel) M183
fs = 18,000 psi (Existing Structural Steel)

SCOPE OF WORK

SOUTHEAST ROADWAY MAJOR WORK ITEM

(ERECTION CONTRACT)

1. Remove & Replace Deck of Southeast Bound Lanes.
2. Install Bearings at Abutments.
3. Modify Abutment Backwall.
4. Erect Structural Steel.

STATION 446 + 74.69
REBUILT IN 19__ BY__
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC 055-401HB
F.A. PROJ. DPI-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0130

NAME PLATE

(STD 2113)

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUB	SUPER	TOTAL
(1)	~~Removal of Temp. Slab Support System~~	~~L. Sum~~	—	~~0.1~~	~~0.1~~
	Removal of Existing Concrete Deck	L. Sum	—	0.1	0.1
	Concrete Removal	Cu. Yd.	21.6	—	21.6
(2)	Erecting Structural Steel	L. Sum	—	0.1	0.1
	Class X Concrete	Cu. Yd.	20.9	—	20.9
	Class X Concrete Superstructure	Cu. Yd.	—	407.7	407.7
	Reinforcement Bars Epoxy Coated	Pound	2700	115540	118240
(1)	Protective Coat	Sq. Yd.	—	1661	1661
	Neoprene Expansion Joint 2"	Lin. Ft.	—	92	92
	Preformed Joint Seal 2½"	Lin. Ft.	—	92	92
	Install Elast. Bearing Assembly Type I	Each	—	12	12
	Install Elast. Bearing Assembly Type II	Each	—	12	12
	Stud Shear Connectors	Each	—	5148	5148
(5)	Jack & Remove Existing Bearing	Each	—	24	24
	Protective Shield	Sq. Yd.	—	1416	1416
(3)	Jack & Reposition Existing Bearing	Each	—	5	5
(4)	1" Diameter Anchor Bolts	Each	6	—	6
	Name Plate	Each	—	1	1
	Structure Excavation	Cu. Yd.	33	—	33
	Temporary Slab Support System	L. Sum	—	0.3	0.3
	F & E Structural Steel	Pound	—	4950	4950
	Protect and Maintain Existing Underpass Luminaires	L. Sum	—	0.1	0.1
	Porous Granular Embankment	Cu. Yd.	2	—	2
	Bridge Deck Grooving	Sq. Yd.	—	1439	1439
	Protective Surface Treatment	Sq. Ft.	150	—	150

GENERAL PLAN AND ELEVATION (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

COOK COUNTY

STATION 446+74.69

Δ As Revised 9-22-92 PMP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	295
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 OF 13 SHEETS

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0506-402HB, 0606-403HB & 0707 (404 HB, 439) R-2

INDEX OF DRAWING

SHEET NO.	DESCRIPTION
1.	GENERAL PLAN & ELEVATION
2.	CONSTRUCTION STAGING
3.	TOP OF SLAB ELEVATIONS
4.	TOP OF SLAB ELEVATIONS
5.	SUPERSTRUCTURE DETAILS
6.	SUPERSTRUCTURE DETAILS
7.	EXPANSION DEVICES
8.	FRAMING PLAN AND DETAILS
9.	FRAMING DETAILS
10.	BEARING AND BOLSTER DETAILS
11.	ABUTMENT REHABILITATION
12.	ANCHOR BOLT DETAILS
13	BAR SPLICER DETAILS

GENERAL NOTES

— All Structural Steel shall be AASHTO M183 Grade 36. Weight of Steel to be Erected = 2410 Lbs.

— Plan Dimensions and Details Relative to Existing Structure have been taken from Existing Plans and are Subject to Nominal Construction Variations. It shall be the Contractor's Responsibility to Verify such Dimensions and Details in the Field and make necessary Approved Adjustments Prior to Construction or Ordering of Materials. Such Variations shall not be Cause for Additional Compensation for a Change in the Scope of the Work, however, the Contractor will be Paid for the Quantity Actually Furnished at the Unit Price Bid for the Work.

— Reinforcement Bars shall Conform to the Requirements of AASHTO M-31, M-42 or M-53 Grade 60.

— Bearing Seat Surfaces shall be Constructed or Adjusted to the Designated Elevations within a Tolerance of ⅛". Adjustment shall be Made either by Grinding the surface or by Shimming the Bearing. Two ⅛" Adjusting Shims of the Dimensions of the Bottom Bearing Plate, shall be Provided for each Bearing in Addition to All other Plates or Shims. For Type I Elastomeric Bearings, Shims of the Dimensions of Top Plate shall be Provided and Placed as Detailed. All Shims provided by others

— The three coat lead and chromate-free alkyd paint system shall be used for shop and field painting of new structural steel. The first coat has been applied in the shop. The second coat shall be applied in the field under this contract. The third coat shall be applied in the field by others. The color of the alkyd finish coats shall be Munsell No. 2.5 YR 3/4 Reddish Brown for the fascia of exterior beams and their bearings and Munsell No. 10 YR 7/1 Light Grey for all other structural steel.

— Field Welding of Construction Accessories will not be permitted to the Bottom Flange of Beams or Girders nor to the Top Flange for a Distance Equal to One-Fourth the Span Length each way from the Pier Supports. Field Welding in other areas will be Permitted Only when Approved by the Engineer.

— Contractor must use Extreme Care when doing Concrete Removal as not to Nick, Cut or Damage Any of the Structural Steel or any Existing Reinforcement that will be Incorporated into the New Work.

— The Concrete, for Bridge Floors Finished in Accordance with Article 503.15 of the Standard Specifications, shall be placed and compacted Parallel to the Skew in Uniform increments along Centerline of Bridge. The finishing Machine, when required, shall be set Parallel to the Skew for Striking off and Screeding the Concrete.

— Expansion plates and attached bars shall be shop painted with three coats of the lead and chromate-free alkyd painting system. The color of the finish coat shall be Munsell No. 10 YR 7/1. Light Grey.

— Contractor shall Protect and Maintain all service for Utility Lines at the bridge during all Stages of Construction.

— Existing Name Plate to be mounted adjacent to new Name Plate. Cost Incidental to Name Plate.

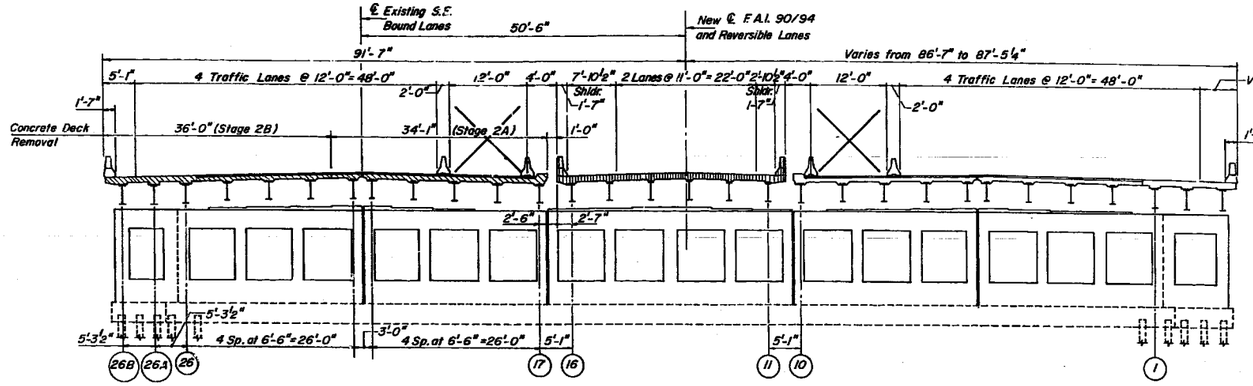
— Prior to Pouring the New Concrete for the Deck, All loose Rust, loose mill scale, loose paint and all other foreign Material shall be removed from the Embedded Portions of Flanges of Stringers (Girders). The removal shall be accomplished in accordance with the requirements of SSPC Surface Preparation Specifications SP-11 for power tool cleaning or SP-2 for hand tool cleaning. Cost shall be incidental to "Removal of Existing Conc. Deck.

⚠ — EXIST. Structural Steel shall only be cleaned and painted as required by the Special provision "Cleaning and Painting New Steel and Adjacent Areas of Existing Steel Structures."

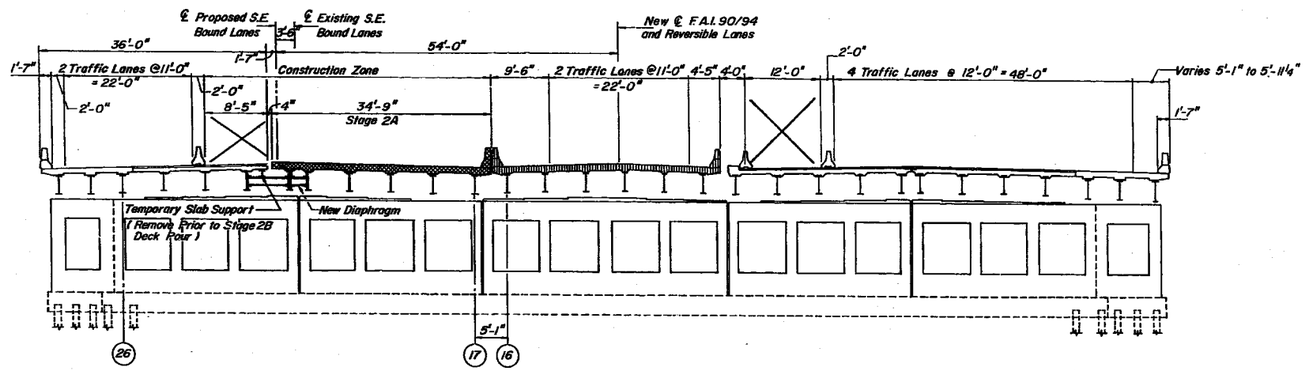
— All contact surface Areas of the Existing Structural Steel to which New Structural Steel is to be connected shall be free of Paint and Lacquer.

— The Contractor is required to Mark on Top of the Existing Concrete Deck, The locations of the Top Flange of all the Steel Beams prior to any removal of the bridge concrete deck saw-cutting directly over the top of the beam flanges is not permitted.

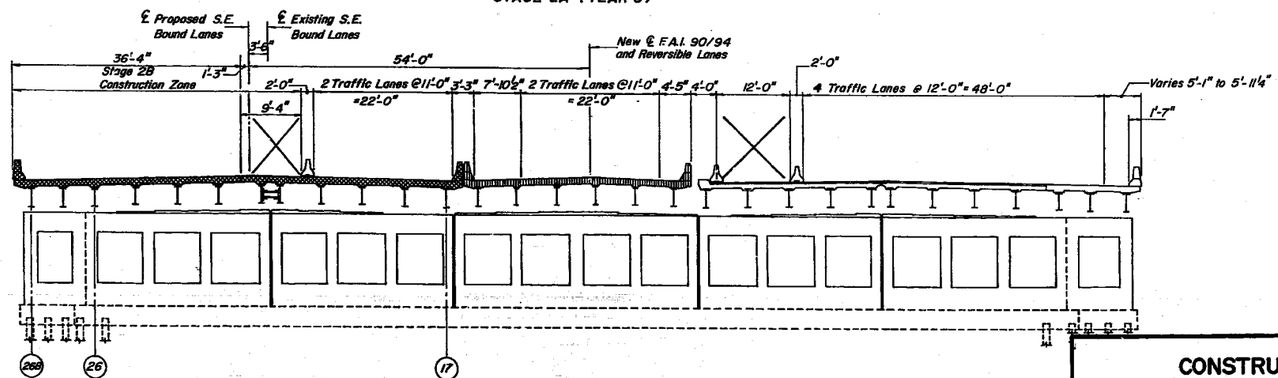
— Protective Surface Treatment shall be applied to the new Bolsters of the abutments.



EXISTING CROSS SECTION
STAGE I (YEAR 2)



PROPOSED CROSS SECTION
STAGE 2A (YEAR 3)



PROPOSED CROSS SECTION
STAGE 2B (YEAR 3)

Indicates Stage I Work (YEAR 2)

Indicates Concrete Deck Removal Included in this Phase

Indicates New Concrete Deck

Indicates Temporary Concrete Barrier

Indicates Construction Lanes

DESIGNED	EMM
CHECKED	JMN
DRAWN	JPM
CHECKED	EMM

CONSTRUCTION STAGING (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

COOK COUNTY

STATION 446+74.69

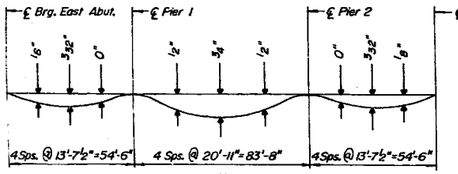
Alfred Benesch & Company, Consulting Engineers, Chicago, Illinois

⚠ REVISED 9-22-92 PMP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	296
FED. ROAD DIST. NO.1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3 OF 13 SHEETS

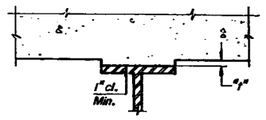
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439) R-2



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note : The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at stations shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet no. 3 & 4, minus floor thickness equals the fillet heights above top flange of beams.

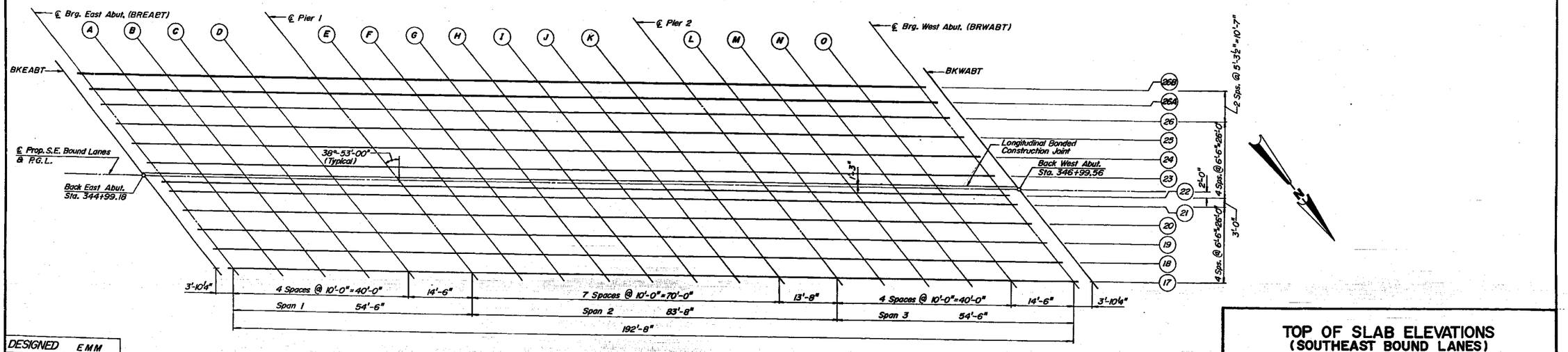
FILLET HEIGHTS

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEM26B	BKEABT	34471.291	34.584	608.828	608.828
	BREABT	34475.141	34.584	608.815	608.815
	A	34485.141	34.584	608.780	608.787
	B	34495.141	34.584	608.740	608.750
	C	34505.141	34.584	608.695	608.702
	D	34515.141	34.584	608.645	608.646
	BPIER1	34529.645	34.584	608.564	608.566
	E	34539.645	34.584	608.501	608.517
	F	34549.645	34.584	608.434	608.472
	G	34559.645	34.584	608.362	608.429
	H	34569.645	34.584	608.284	608.361
	I	34579.645	34.584	608.202	608.275
	J	34589.645	34.584	608.115	608.173
	K	34599.645	34.584	608.022	608.049
	BPIER2	34613.312	34.584	607.888	607.888
	L	34623.312	34.584	607.788	607.785
	M	34633.312	34.584	607.688	607.691
	N	34643.312	34.584	607.588	607.598
	O	34653.312	34.584	607.488	607.498
	BRWABT	34667.812	34.584	607.343	607.363
	BKWABT	34671.666	34.584	607.305	607.305

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEM26A	BKEABT	34475.558	29.292	608.924	608.924
	BREABT	34479.408	29.292	608.911	608.911
	A	34489.408	29.292	608.874	608.881
	B	34499.408	29.292	608.832	608.842
	C	34509.408	29.292	608.785	608.791
	D	34519.408	29.292	608.732	608.733
	BPIER1	34533.912	29.292	608.648	608.648
	E	34543.912	29.292	608.583	608.599
	F	34553.912	29.292	608.514	608.552
	G	34563.912	29.292	608.480	608.506
	H	34573.912	29.292	608.360	608.437
	I	34583.912	29.292	608.276	608.349
	J	34593.912	29.292	608.186	608.245
	K	34603.912	29.292	608.092	608.118
	BPIER2	34617.579	29.292	607.956	607.956
	L	34627.579	29.292	607.856	607.852
	M	34637.579	29.292	607.756	607.759
	N	34647.579	29.292	607.656	607.665
	O	34657.579	29.292	607.556	607.565
	BRWABT	34672.079	29.292	607.411	607.411
	BKWABT	34675.933	29.292	607.372	607.372

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEM26	BKEABT	34479.826	24.000	609.020	609.020
	BREABT	34483.676	24.000	609.006	609.006
	A	34493.676	24.000	608.967	608.973
	B	34503.676	24.000	608.923	608.933
	C	34513.676	24.000	608.873	608.880
	D	34523.676	24.000	608.819	608.820
	BPIER1	34538.180	24.000	608.731	608.731
	E	34548.180	24.000	608.665	608.680
	F	34558.180	24.000	608.593	608.631
	G	34568.180	24.000	608.516	608.583
	H	34578.180	24.000	608.435	608.512
	I	34588.180	24.000	608.348	608.422
	J	34598.180	24.000	608.257	608.315
	K	34608.180	24.000	608.160	608.167
	BPIER2	34621.847	24.000	608.024	608.024
	L	34631.847	24.000	607.924	607.920
	M	34641.847	24.000	607.824	607.826
	N	34651.847	24.000	607.724	607.733
	O	34661.847	24.000	607.624	607.633
	BRWABT	34676.347	24.000	607.479	607.479
	BKWABT	34680.201	24.000	607.440	607.440

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEM25	BKEABT	34485.068	17.500	609.137	609.137
	BREABT	34488.918	17.500	609.122	609.122
	A	34498.918	17.500	609.080	609.086
	B	34508.918	17.500	609.033	609.043
	C	34518.918	17.500	608.981	608.987
	D	34528.918	17.500	608.924	608.925
	BPIER1	34543.422	17.500	608.832	608.832
	E	34553.422	17.500	608.763	608.779
	F	34563.422	17.500	608.689	608.727
	G	34573.422	17.500	608.610	608.677
	H	34583.422	17.500	608.526	608.603
	I	34593.422	17.500	608.436	608.510
	J	34603.422	17.500	608.342	608.401
	K	34613.422	17.500	608.243	608.270
	BPIER2	34627.089	17.500	608.107	608.107
	L	34637.089	17.500	608.007	608.003
	M	34647.089	17.500	607.907	607.909
	N	34657.089	17.500	607.807	607.816
	O	34667.089	17.500	607.707	607.716
	BRWABT	34681.589	17.500	607.562	607.562
	BKWABT	34685.443	17.500	607.523	607.523



PLAN

DESIGNED	EMM
CHECKED	JMN
DRAWN	RAA jr.
CHECKED	EMM

Nakawatase, Wynn & Associates, Inc.

TOP OF SLAB ELEVATIONS (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

COOK COUNTY

STATION 446+74.69

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	297
FED. ROAD DIST. NO.1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 4 OF 13 SHEETS

*.0505 (2-2B, 3-IH, 6-IP, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707-404HB, 439) R-2.

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEAM24	BKEABT	34490.309	11.000	609.286	609.286
	BREABT	34494.159	11.000	609.231	609.231
	A	34504.159	11.000	609.186	609.192
	B	34514.159	11.000	609.136	609.147
	C	34524.159	11.000	609.082	609.088
	D	34534.159	11.000	609.022	609.023
	BPIER1	34548.663	11.000	608.927	608.927
	E	34558.663	11.000	608.855	608.871
	F	34568.663	11.000	608.778	608.816
	G	34578.663	11.000	608.696	608.763
	H	34588.662	11.000	608.610	608.687
	I	34598.663	11.000	608.518	608.591
	J	34608.663	11.000	608.421	608.480
	K	34618.663	11.000	608.321	608.388
	BPIER2	34632.330	11.000	608.184	608.184
	L	34642.330	11.000	608.084	608.081
	M	34652.330	11.000	607.984	607.987
	N	34662.330	11.000	607.884	607.894
	O	34672.330	11.000	607.784	607.794
	BRWABT	34686.830	11.000	607.639	607.639
	BKWABT	34690.684	11.000	607.601	607.601
BEAM23	BKEABT	34495.551	4.500	609.327	609.327
	BREABT	34499.401	4.500	609.310	609.310
	A	34509.401	4.500	609.262	609.269
	B	34519.401	4.500	609.210	609.220
	C	34529.401	4.500	609.153	609.160
	D	34539.401	4.500	609.091	609.092
	BPIER1	34553.905	4.500	608.992	608.992
	E	34563.905	4.500	608.917	608.933
	F	34573.905	4.500	608.838	608.875
	G	34583.905	4.500	608.753	608.820
	H	34593.905	4.500	608.664	608.741
	I	34603.905	4.500	608.570	608.643
	J	34613.905	4.500	608.470	608.529
	K	34623.905	4.500	608.370	608.397
	BPIER2	34637.572	4.500	608.234	608.234
	L	34647.572	4.500	608.134	608.130
	M	34657.572	4.500	608.034	608.037
	N	34667.572	4.500	607.934	607.943
	O	34677.572	4.500	607.834	607.883
	BRWABT	34692.072	4.500	607.689	607.689
	BKWABT	34695.926	4.500	607.650	607.650
LONGITUDINAL BONDED CONST. JOINT	BEABT	34498.170	1.250	609.366	609.366
	BEABT	34502.020	1.250	609.348	609.348
	A	34512.020	1.250	609.300	609.354
	B	34522.020	1.250	609.246	609.256
	C	34532.020	1.250	609.188	609.194
	D	34542.020	1.250	609.124	609.124
	BPIER 1	34556.520	1.250	609.023	609.023
	E	34566.520	1.250	608.968	608.983
	F	34576.520	1.250	608.867	608.905
	G	34586.520	1.250	608.781	608.847
	H	34596.520	1.250	608.690	608.767
	I	34606.520	1.250	608.595	608.668
	J	34616.520	1.250	608.495	608.553
	K	34626.520	1.250	608.395	608.421
	BPIER 2	34640.190	1.250	608.258	608.258
	L	34650.190	1.250	608.158	608.158
	M	34660.190	1.250	608.058	608.061
	N	34670.190	1.250	607.958	607.968
	O	34680.190	1.250	607.858	607.880
	BRWABT	34694.690	1.250	607.713	607.713
	BKWABT	34698.540	1.250	607.674	607.674

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEAM22	BKEABT	34500.793	-2.000	609.343	609.343
	BSEABT	34504.643	-2.000	609.325	609.325
	A	34514.643	-2.000	609.275	609.281
	B	34524.643	-2.000	609.220	609.230
	C	34534.643	-2.000	609.160	609.167
	D	34548.683	-2.000	609.095	609.096
	BPIER1	34559.147	-2.000	608.993	608.993
	E	34569.147	-2.000	608.915	608.931
	F	34579.147	-2.000	608.833	608.871
	G	34589.147	-2.000	608.746	608.813
	H	34599.147	-2.000	608.656	608.731
	I	34609.147	-2.000	608.557	608.631
	J	34619.147	-2.000	608.457	608.516
	K	34629.147	-2.000	608.357	608.384
	BPIER2	34642.814	-2.000	608.221	608.221
	L	34652.814	-2.000	608.121	608.117
	M	34662.814	-2.000	608.021	608.023
	N	34672.814	-2.000	607.921	607.930
	O	34682.814	-2.000	607.821	607.830
	BRWABT	34697.314	-2.000	607.676	607.676
	BKWABT	34701.158	-2.000	607.637	607.637
BEAM21	BKEABT	34503.212	-5.000	609.284	609.284
	BREABT	34507.062	-5.000	609.266	609.266
	A	34517.062	-5.000	609.215	609.222
	B	34527.062	-5.000	609.159	609.169
	C	34537.062	-5.000	609.098	609.104
	D	34547.062	-5.000	609.032	609.033
	BPIER1	34561.566	-5.000	608.927	608.927
	E	34571.566	-5.000	608.849	608.865
	F	34581.566	-5.000	608.766	608.803
	G	34591.566	-5.000	608.678	608.744
	H	34601.566	-5.000	608.586	608.661
	I	34611.566	-5.000	608.486	608.559
	J	34621.566	-5.000	608.386	608.485
	K	34631.566	-5.000	608.286	608.313
	BPIER2	34645.233	-5.000	608.149	608.149
	L	34655.233	-5.000	608.049	608.046
	M	34665.233	-5.000	607.949	607.952
	N	34675.233	-5.000	607.849	607.859
	O	34685.233	-5.000	607.749	607.759
	BRWABT	34699.733	-5.000	607.604	607.604
	BKWABT	34703.587	-5.000	607.566	607.566

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEAM20	BKEABT	34508.454	-11.500	609.158	609.158
	BREABT	34512.304	-11.500	609.138	609.138
	A	34522.304	-11.500	609.085	609.091
	B	34532.304	-11.500	609.026	609.036
	C	34542.304	-11.500	608.962	608.969
	D	34552.304	-11.500	608.894	608.898
	BPIER1	34566.808	-11.500	608.785	608.785
	E	34576.808	-11.500	608.704	608.720
	F	34586.808	-11.500	608.618	608.656
	G	34596.808	-11.500	608.527	608.594
	H	34606.808	-11.500	608.432	608.509
	I	34616.808	-11.500	608.332	608.405
	J	34626.808	-11.500	608.232	608.290
	K	34636.808	-11.500	608.132	608.158
	BPIER2	34650.475	-11.500	607.995	607.995
	L	34660.475	-11.500	607.895	607.891
	M	34670.475	-11.500	607.795	607.798
	N	34680.475	-11.500	607.695	607.704
	O	34690.475	-11.500	607.595	607.606
	BRWABT	34704.975	-11.500	607.450	607.450
	BKWABT	34708.829	-11.500	607.412	607.412
BEAM19	BKEABT	34513.696	-18.000	608.998	608.998
	BREABT	34517.545	-18.000	608.978	608.978
	A	34527.545	-18.000	608.921	608.928
	B	34537.545	-18.000	608.860	608.870
	C	34547.545	-18.000	608.798	608.800
	D	34557.545	-18.000	608.723	608.724
	BPIER1	34572.049	-18.000	608.610	608.610
	E	34582.049	-18.000	608.527	608.542
	F	34592.049	-18.000	608.438	608.476
	G	34602.049	-18.000	608.345	608.412
	H	34612.049	-18.000	608.246	608.323
	I	34622.049	-18.000	608.146	608.220
	J	34632.049	-18.000	608.046	608.105
	K	34642.049	-18.000	607.946	607.973
	BPIER2	34655.717	-18.000	607.810	607.810
	L	34665.716	-18.000	607.710	607.706
	M	34675.716	-18.000	607.610	607.612
	N	34685.717	-18.000	607.510	607.519
	O	34695.716	-18.000	607.410	607.419
	BRWABT	34710.217	-18.000	607.265	607.265
	BKWABT	34714.070	-18.000	607.226	607.226

BEAM	LINE	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BEAM18	BKEABT	34518.937	-24.500	608.835	608.835
	BREABT	34522.787	-24.500	608.813	608.813
	A	34532.787	-24.500	608.754	608.761
	B	34542.787	-24.500	608.691	608.701
	C	34552.787	-24.500	608.622	608.628
	D	34562.787	-24.500	608.548	608.549
	BPIER1	34577.291	-24.500	608.432	608.432
	E	34587.291	-24.500	608.346	608.361
	F	34597.291	-24.500	608.256	608.292
	G	34607.291	-24.500	608.158	608.225
	H	34617.291	-24.500	608.058	608.135
	I	34627.291	-24.500	607.958	608.032
	J	34637.291	-24.500	607.858	607.917
	K	34647.291	-24.500	607.758	607.785
	BPIER2	34660.958	-24.500	607.622	607.622
	L	34670.958	-24.500	607.522	607.518
	M	34680.958	-24.500	607.422	607.425
	N	34690.958	-24.500	607.322	607.331
	O	34700.958	-24.500	607.222	607.231
	BRWABT	34715.458	-24.500	607.077	607.077
	BKWABT	34719.312	-24.500	607.038	607.038
BEAM17	BKEABT	34524.179	-31.000	608.670	608.670
	BREABT	34528.029	-31.000	608.648	608.648
	A	34538.029	-31.000	608.586	608.592
	B	34548.029	-31.000	608.520	608.530
	C	34558.029	-31.000	608.448	608.454
	D	34568.029	-31.000	608.372	608.372
	BPIER1	34582.523	-31.000	608.252	608.252
	E	34592.533	-31.000	608.163	608.178
	F	34602.533	-31.000	608.069	608.107
	G	34612.533	-31.000	607.971	608.037
	H	34622.533	-31.000	607.871	607.948
	I	34632.533	-31.000	607.771	607.848
	J	34642.533	-31.000	607.671	607.729
	K	34652.533	-31.000	607.571	607.597
	BPIER2	34666.200	-31.000	607.434	607.434
	L	34676.200	-31.000	607.334	607.330
	M	34686.200	-31.000	607.234	607.237
	N	34696.200	-31.000	607.134	607.143
	O	34706.200	-31.000	607.034	607.043
	BRWABT	34720.700	-31.000	606.889	606.889
	BKWABT	34724.554	-31.000	606.850	606.850

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

Nakayasu, Wynn & Associates, Inc.

TOP OF SLAB ELEVATIONS (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

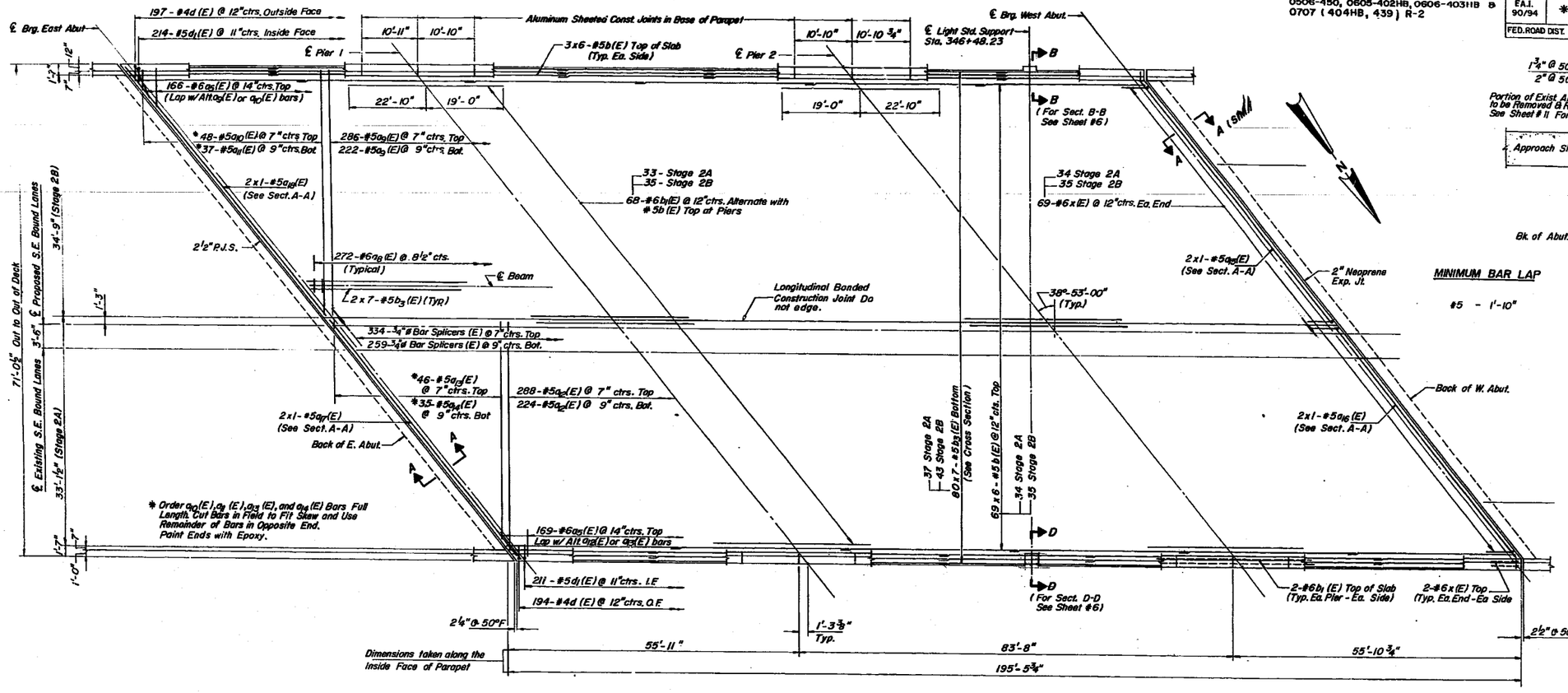
COOK COUNTY

STATION 446+74.69

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	298
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5 OF 13 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451)
0506-450, 0505-402HB, 0606-403HB &
0707 (404HB, 439) R-2



PLAN

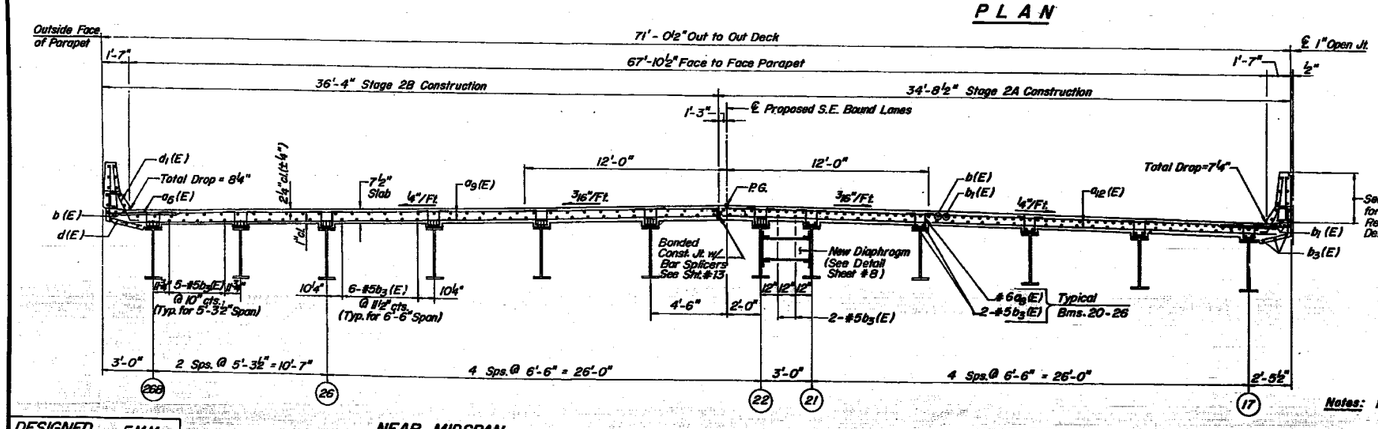
SECTION A-A
AT RIGHT Δ
Note: For Expansion Device, See Sheet # 7

MINIMUM BAR LAP
#5 - 1'-10"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a5(E)	335	#6	4'-0"	
a8(E)	3264	#6	3'-1"	
a9(E)	508	#5	35'-4"	
a10(E)	48	#5	39'-4"	
a11(E)	37	#5	35'-4"	
a12(E)	512	#5	33'-9"	
a13(E)	46	#5	33'-9"	
a14(E)	35	#5	33'-9"	
a15(E)	4	#5	45'-7"	
a16(E)	4	#5	43'-6"	
a17(E)	4	#5	44'-2"	
a18(E)	4	#5	46'-4"	
b(E)	450	#5	34'-3"	
b1(E)	144	#6	41'-10"	
b3(E)	630	#5	29'-4"	
d(E)	391	#4	3'-11"	
d1(E)	425	#5	2'-7"	
x(E)	138	#6	5'-9"	

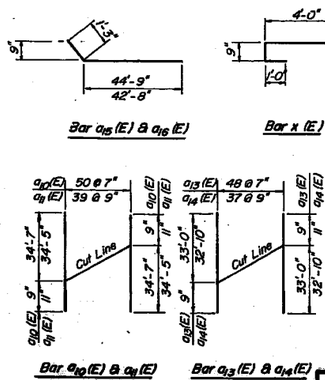
ITEM	UNIT	TOTAL
Class X Concrete (Superstructure)	Cu. Yd.	364.2
Reinforcement Bars (Epoxy Coated)	Pound	108360
Protective Coat	Sq. Yd.	1477
Concrete Deck Removal	L. S.	1
Bridge Deck Grooving	Sq. Yd.	1439



NEAR MIDSPAN

NEAR PIER

CROSS SECTION
(Looking West)
Note: See Sht. #8 for Temporary Slab Support System



Notes: 1. Reinforcement Bars Designated Thus: 68 x 6 - #5, etc. Indicates 68 Lines of Bars with 6 Lengths Per Line.
2. Reinforcement Bars Designated (E) Shall be Epoxy Coated.

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM/JPM
CHECKED	EMM

SUPERSTRUCTURE DETAILS (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

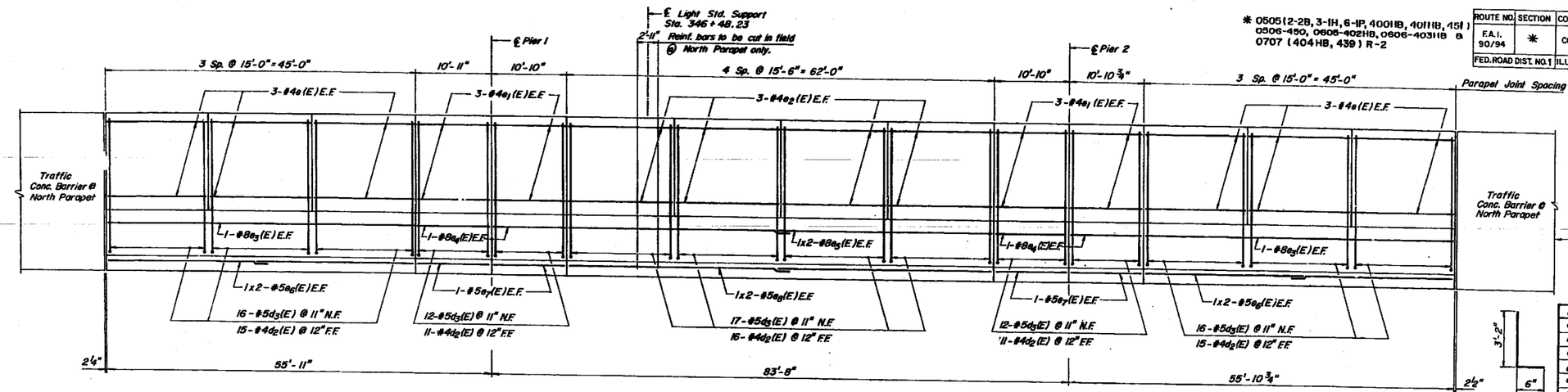
COOK COUNTY

STATION 448+74.69

* 0505(2-2B, 3-1H, 6-1P, 4001IB, 4011IB, 4511)
0506-450, 0605-402HB, 0606-403IIB &
0707 (404HB, 439) R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	299
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 OF 13 SHEETS



E.F. = Each Face
F.F. = Far Face
N.F. = Near Face

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d_2 (E)	396	# 4	3'-8"	
d_3 (E)	424	# 5	3'-8"	
d_{10} (E)	3	# 6	5'-1"	
d_{11} (E)	6	# 6	8'-11"	
d_{12} (E)	3	# 4	2'-11"	
d_{13} (E)	3	# 5	3'-7"	
e (E)	72	# 4	14'-8"	
e_1 (E)	48	# 4	10'-6"	
e_2 (E)	48	# 4	15'-2"	
e_3 (E)	8	# 8	44'-8"	
e_4 (E)	16	# 8	10'-6"	
e_5 (E)	8	# 8	32'-2"	
e_6 (E)	16	# 5	23'-2"	
e_7 (E)	16	# 5	10'-6"	
e_8 (E)	8	# 5	31'-8"	
e_{10} (E)	1	# 8	7'-0"	

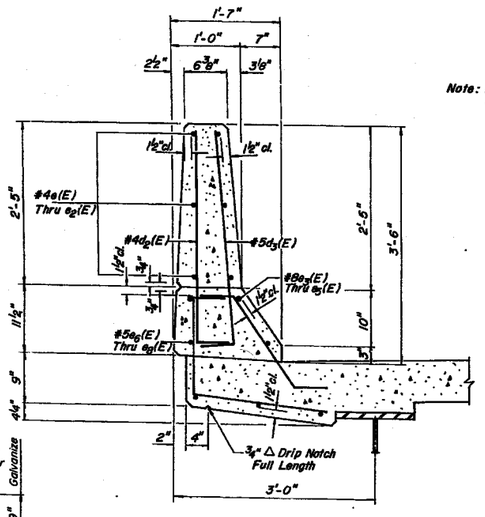
ITEM	UNIT	TOTAL
Class X Concrete (Superstructure)	Cu. Yd.	43.5
Reinforcement Bars (Epoxy Coated)	Pound	7180
Protective Coat	Sq. Yd.	184

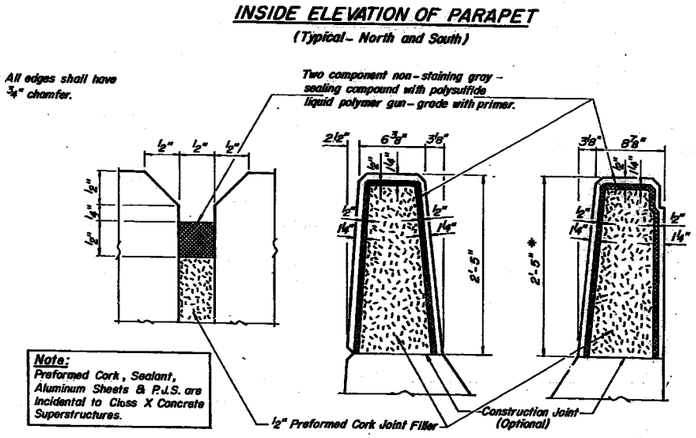
Notes:
1. Reinforcement Bars Designated Thus: 1x2-#5, Indicates 1 Line of Bar with 2 Lengths.
2. Reinforcement Bars Designated (E) shall be Epoxy Coated.

Bars d_2 (E) & d_3 (E)

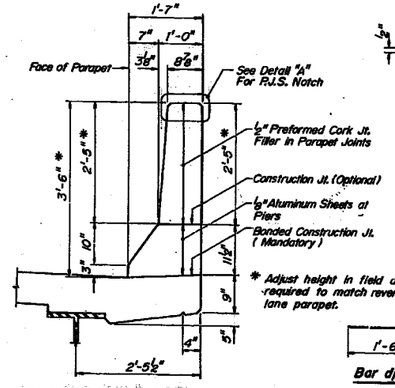
INSIDE ELEVATION OF PARAPET
(Typical - North and South)

Note: All edges shall have ¾" chamfer.



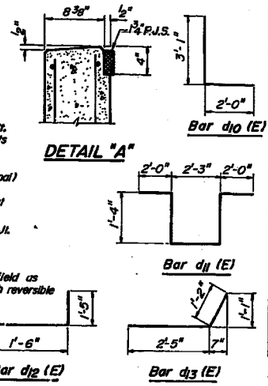


Note:
Preformed Cork, Sealant, Aluminum Sheets & P.J.S. are Incidental to Class X Concrete Superstructures.



CONCRETE PARAPET
(North Parapet)

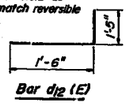
Note: For Reinforcement Bars not Shown, See South Parapet.



Bar d_{10} (E)

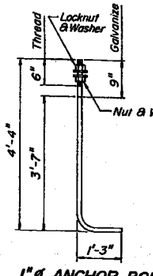
DETAIL "A"

Bar d_{11} (E)



Bar d_{12} (E)

Bar d_{13} (E)

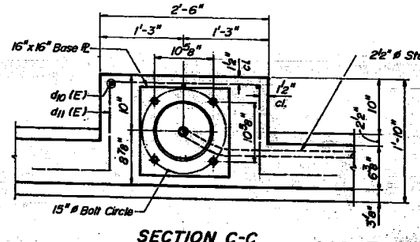


1" ø ANCHOR BOLT

Note: 1"ø x 5'-7" Anchor Bolt - Provide 2 flat washers, 1 regular nut & 1 locknut for each bolt. All nuts & washers must be galvanized. Cost incidental to Class X Conc. Superstructure.

CONCRETE PARAPET REINFORCEMENT
(South Parapet)

Note: For Reinforcement Bars not Shown or Noted, See Sheet #5.



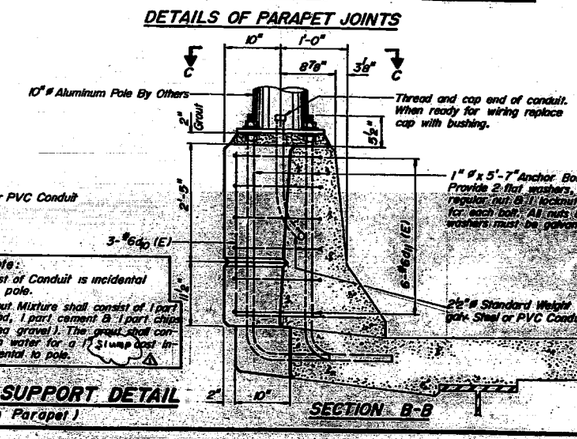
SECTION C-C

Note:
Cost of Conduit is incidental to pole.
Grout Mixture shall consist of 1 part sand, 1 part cement & 1 part chips (pea gravel). The grout shall contain water for a 7" Slump cast incidental to pole. △

SOUTH PARAPET

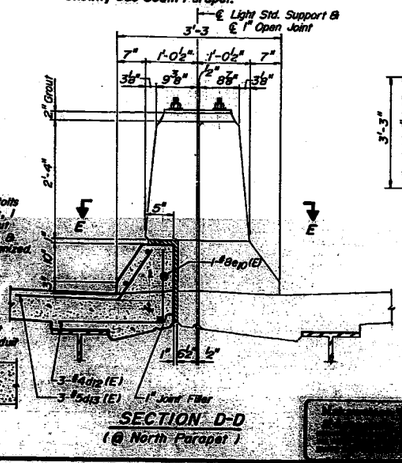
NORTH PARAPET

DETAILS OF PARAPET JOINTS

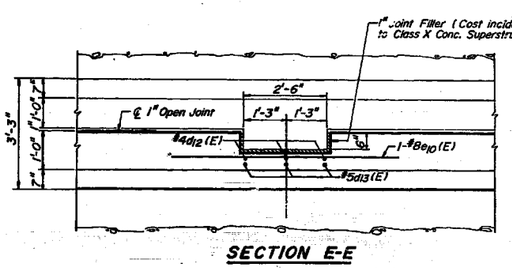


SECTION B-B

LIGHT STD. SUPPORT DETAIL
(@ South Parapet)



SECTION D-D
(@ North Parapet)



SECTION E-E

DESIGNED	EMM
CHECKED	JMN
DRAWN	RAA/JPM
CHECKED	EMM

SUPERSTRUCTURE DETAILS
(SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER DAMEN AVENUE
COOK COUNTY
STATION 448+74.69

△ As Revised 9-22-94 pmb

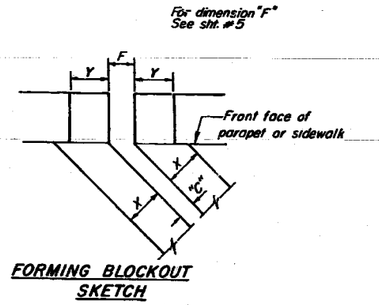
Joint Size	"C" at 50°F	"D" at 50°F
2	2"	1½" min.

INSTALLATION NOTES

Use anchor blocks and continuous seal as anchor bolt location templates.

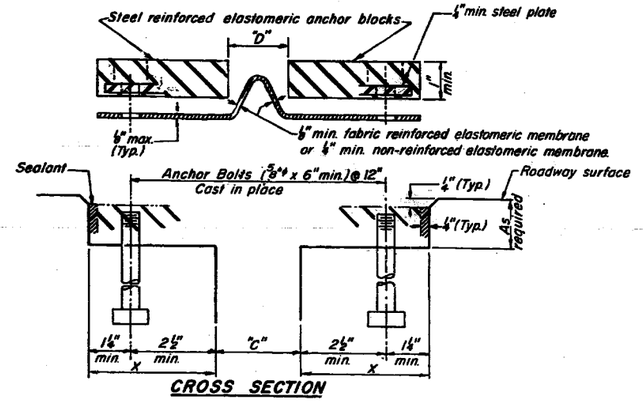
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A— Maximum spacing of anchor bolts shall be 12" centers



FORMING BLOCKOUT SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CROSS SECTION

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 4391 R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO
F.A.I. 90/94	*	COOK	426	300
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 OF 13 SHEETS

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

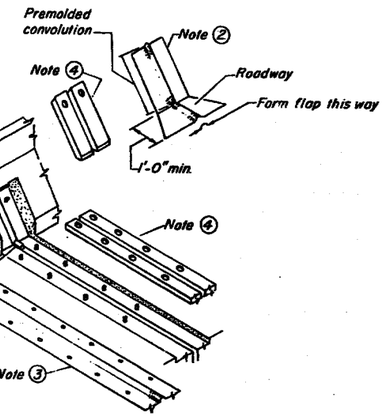
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

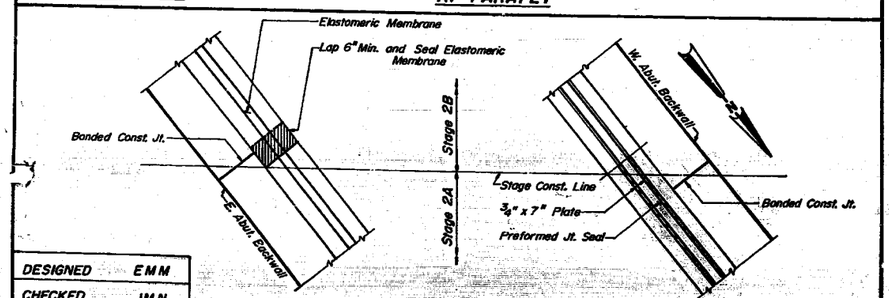
All Anchors for Neoprene Expansion Joints Shall be Cast-in-Place & tied to Transverse Deck Bars.

NEOPRENE EXPANSION JOINT 2"
(AT WEST ABUTMENT)



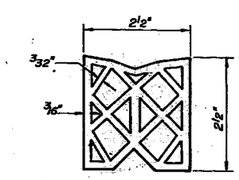
AT PARAPET

AT PARAPET



EXPANSION JOINT DETAIL AT SPLICE LOCATION

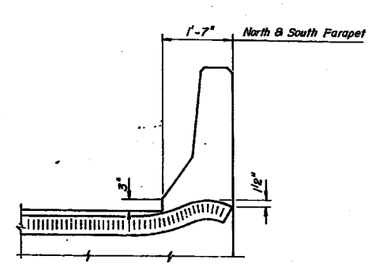
DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM



PREFORMED JOINT SEAL 2½"
(AT EAST ABUTMENT)

NOTE: After Fabrication All Surfaces of the Steel Plates shall be given one Shop Coat of Paint Specified for Structural Steel.

** Furnish in Segments of 20 ft. Maximum Length. Maintain Gaps Between Installed Segments and Fill Gap Space with Silicone Sealant Suitable for Structural Steel.



END OF SEAL TREATMENTS

BILL OF MATERIAL

ITEM	UNIT	TOTAL
2" Neoprene Exp. Joint	Lin. Ft.	92
2½" Preformed Jt. Seal	Lin. Ft.	92

Wt. of Structural Steel = 4950 Pounds *

*Furnish & Erect in this contract.

EXPANSION DEVICES
(SOUTHEAST BOUND LANES)
SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

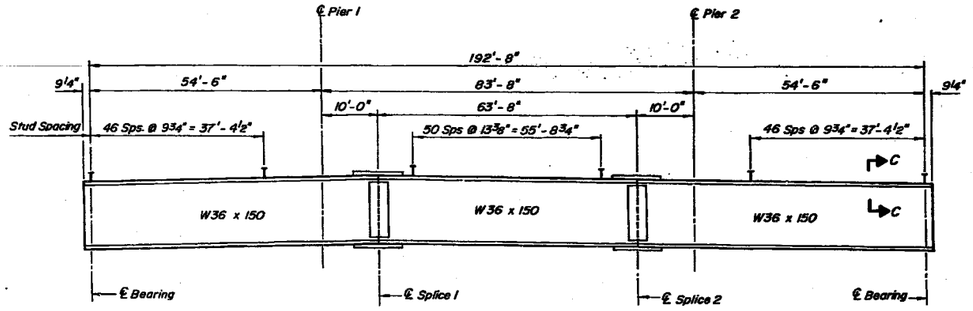
COOK COUNTY

STATION 446+74.69

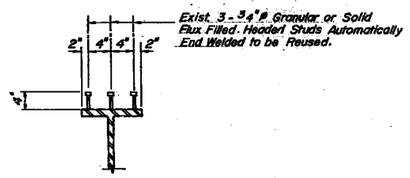
ROUTE NO	SECTION	COUNTY	TOTAL SHEET	SHEET NO
F.A.I. 90/94	*	COOK	426	302
FED ROAD DIST NO.1	ILLINOIS	FED.AID PROJECT		

SHEET NO. 9
OF 13 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2



ELEVATION - BEAMS 26A and 26B (Existing)
(For Information Only - No Work Required in this Contract)



SECTION A-A

INTERIOR BEAM MOMENT TABLE			
	0.4 Sp 1 or 3	Pier 1 or 2	0.5 Sp. 2
Is (in⁴)	9040	9040	9040
Ic (in4)	20532	——	20532
Ss (in³)	504	504	504
Sc (in3)	698	——	698
℄ (ft/l)	.698	.698	.698
M℄ (ik)	111.6	368.4	254.6
fs-non-comp(ksi)	2.66	8.77	6.96
S℄ (ft/l)	.234	234	234
MS℄ (ik)	42.5	123.3	101.8
M℄ (ik)	290.0	220.0	427.8
M Imp (ik)	80.8	57	102.5
TOTAL (ik)	413.3	400.3	632.1
fs-comp(ksi)	7.11	9.55	10.87
fs TOTAL (ksi)	9.77	18.3	16.93
VR (k)	38.9	——	39.9

INTERIOR BEAM REACTION TABLE		
	Abut.	Pier
R℄ (k)	17.7	75.8
R℄ (k)	31.8	40.5
Imp (k)	8.9	10.5
RTOTAL (k)	58.4	126.8

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs TOTAL.

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs TOTAL

VR is the maximum ℄ + impact shear range in Span.

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

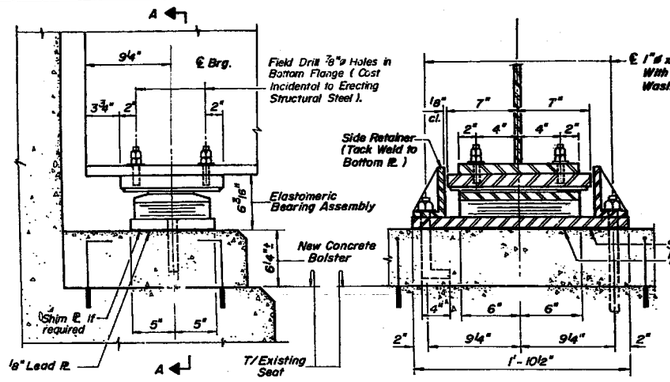
FRAMING DETAILS
(SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

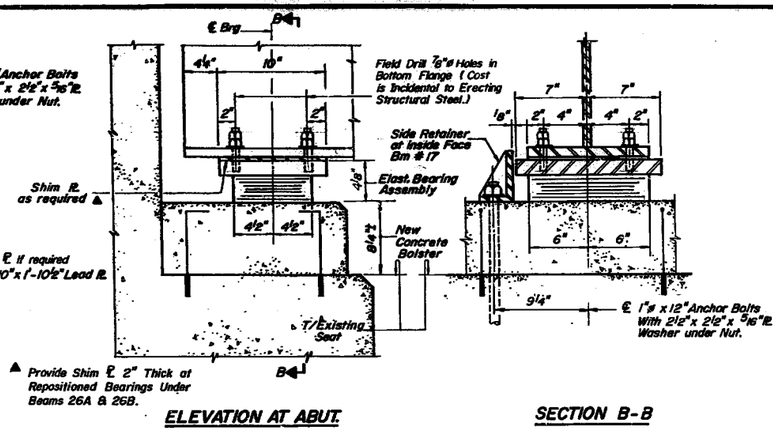
COOK COUNTY

STATION 446+74.89



ELEVATION AT ABUT.

SECTION A-A



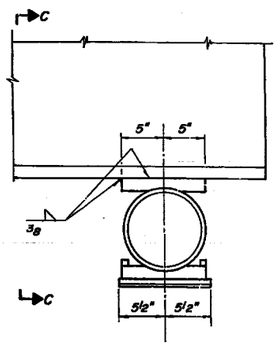
ELEVATION AT ABUT.

SECTION B-B

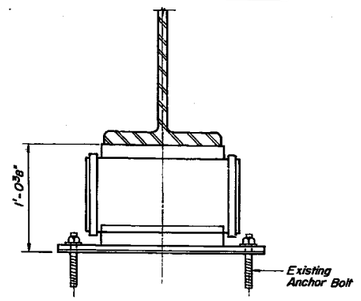
* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0606-402HB, 0606-403HB & 0707 (404HB, 439) R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	303
FED. ROAD DIST. NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO. 10 OF 13 SHEETS



ELEVATION



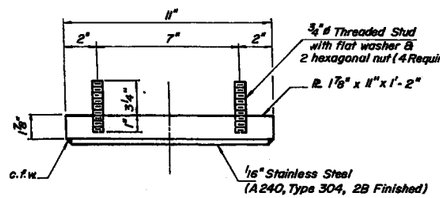
VIEW C-C

EXISTING BEARING AT ABUTMENTS

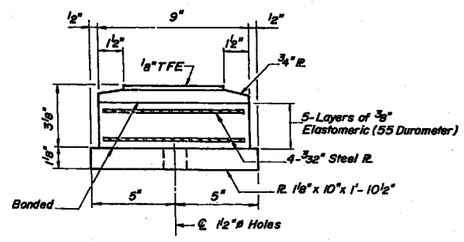
NOTE: Remove existing roller bearings on Beam (17) thru (26) including top plate using Air Arc method. Grind remaining remnants of weld smooth in long direction, after removing Top Plate. Cost incidental to Jack and Remove existing bearing. Do not remove more than 1/16" depth of flange material during gouging and grinding.
Remove existing Elastomeric Bearings under Beams 26A & 26B. Cost Incidental to Jack and Remove existing Bearing. Install the Elastomeric Bearing removed from East Abutment to the West Abutment & vice versa. Cost Incidental to Install Elastomeric Bearing Assembly Type I or II.

TYPE II TFE ELASTOMERIC EXPANSION BEARING AT WEST ABUTMENT

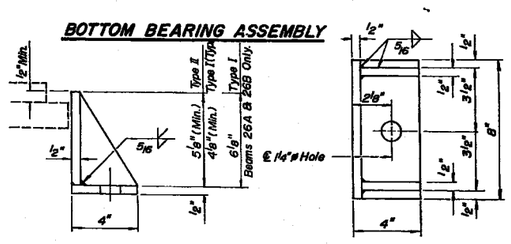
JACKING REACTION = 18k



TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



SIDE RETAINER

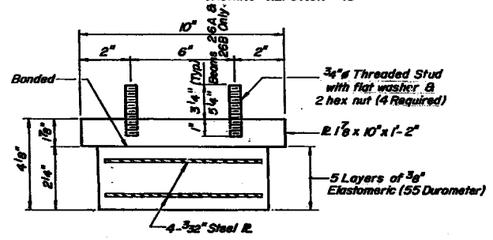
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

NUMBER REQUIRED = 21

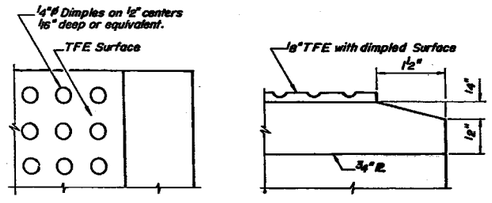
DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

TYPE I TFE ELASTOMERIC EXPANSION BEARING AT EAST ABUTMENT

JACKING REACTION = 18k



TOP BEARING ASSEMBLY

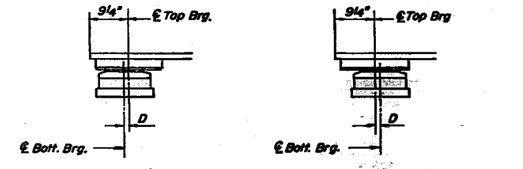


PLAN-TFE SURFACE

SECTION THRU TFE

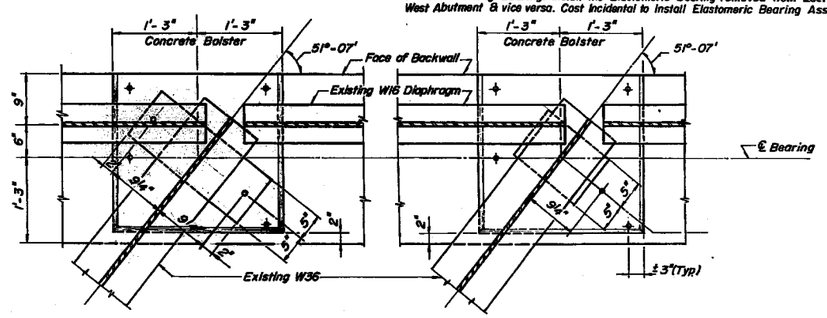
NOTE The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

D = 1/8" per each 100' of expansion for every 15° temp. change



PLAN OF BEARING / BOLSTER (West Abutment)

PLAN OF BEARING / BOLSTER (East Abutment)

NOTE: Top of Bearing Assembly and Side Retainer not Shown for Clarity.

+ Indicates #6 bars to be Drilled and Epoxy Grouted (See Sht #11
o Indicates 1"ø Anchor Bolts

INSTALL IN THIS CONTRACT

Wt. of Structural Steel this Sheet = 350 Pounds *

* Furnished in previous contract.

BILL OF MATERIAL

ITEM	UNIT	TOTAL	
Install Elastomeric Bearing Assembly Type I	Each	12	**
Install Elastomeric Bearing Assembly Type II	Each	12	**

** Includes Repositioned Bearings under Bearing 26A & 26B.

BEARING AND BOLSTER DETAILS (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

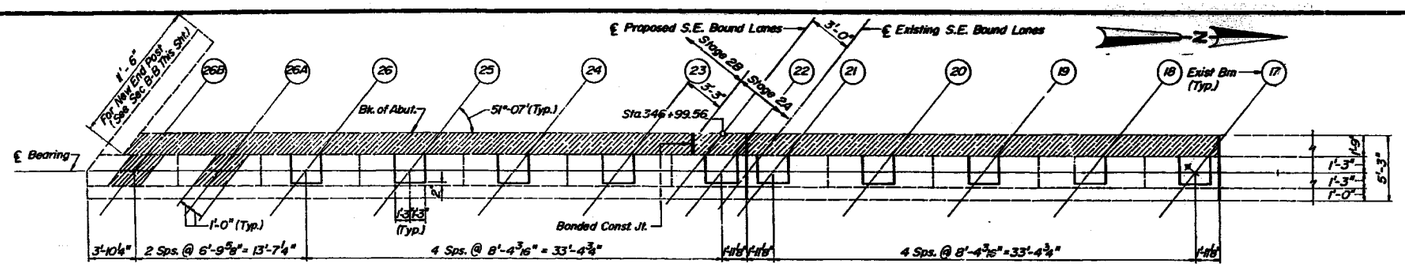
COOK COUNTY

STATION 446+74.69

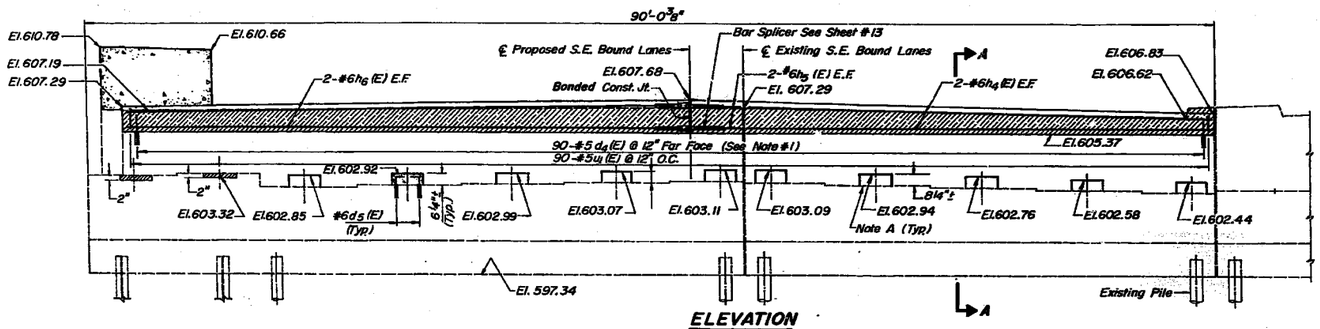
ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	304
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11 OF 13 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) I
0506-450, 0606-402HB, 0606-403HB &
0707 (404HB, 439) R-2



PLAN



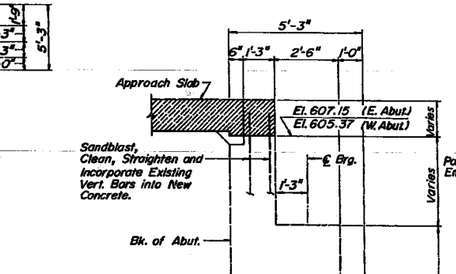
ELEVATION

WEST ABUTMENT

E. F. Each Face

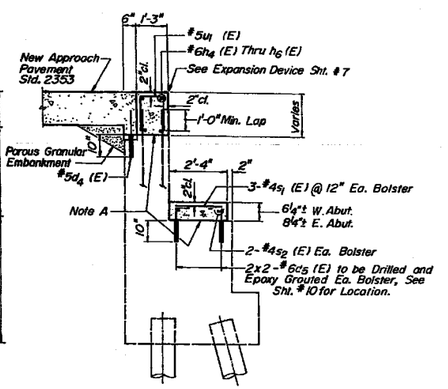
Indicates Concrete Removal

Note #1 Drill and Epoxy Grout #5 d_4 (E) Bars in ⅞"ø x 10" Deep Hole. Drill and Epoxy Grout #6 d_5 (E) Bars in 1"ø x 10" Deep Hole. Cost Incidental to Reinforcement Bars, Epoxy Coated (See Special Provisions)

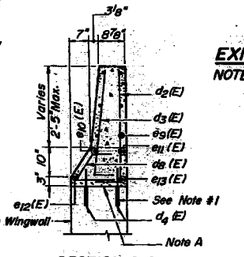


EXISTING SECTION A-A

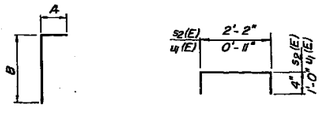
NOTE: Existing Expansion Device in portion of Abutment Backwall to be removed is not shown.



PROPOSED SECTION A-A



SECTION C-C



Bars d_2 (E) thru d_7 (E)

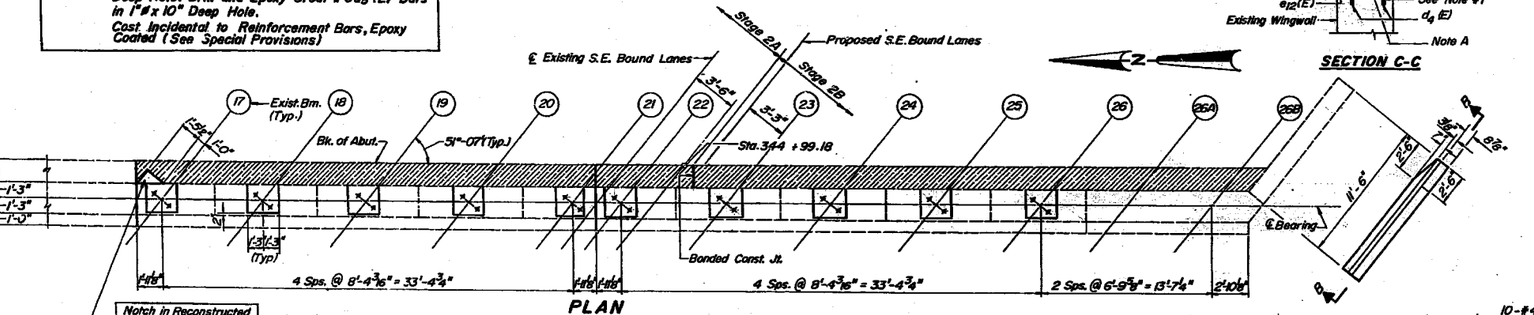
Bars s_2 (E) & u_1 (E)

BAR	A	B
d_2 (E)	6"	3'-2"
d_3 (E)	6"	3'-2"
d_5 (E)	6½"	1'-5½"
d_6 (E)	6"	3'-0"
d_7 (E)	6"	2'-10"

BILL OF MATERIAL

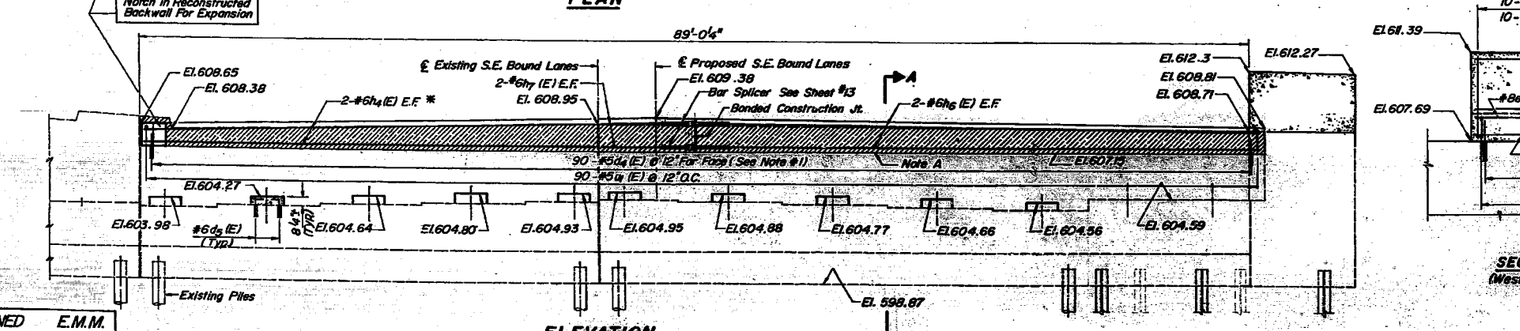
BAR	NO.	SIZE	LENGTH	SHAPE
d_2 (E)	20	#4	3'-8"	
d_3 (E)	20	#5	3'-8"	
d_4 (E)	228	#5	1'-10"	
d_5 (E)	80	#6	2'-0"	
d_6 (E)	4	#5	3'-6"	
d_7 (E)	4	#5	3'-4"	
d_8 (E)	24	#5	2'-0"	
e_9 (E)	12	#4	11'-2"	
e_{10} (E)	2	#8	11'-2"	
e_{11} (E)	2	#8	11'-2"	
e_{12} (E)	2	#5	11'-2"	
e_{13} (E)	2	#5	11'-2"	
h_4 (E)	8	#6	37'-0"	
h_5 (E)	4	#6	4'-0"	
h_6 (E)	8	#6	45'-3"	
h_7 (E)	4	#6	7'-6"	
s_1 (E)	60	#4	2'-0"	
s_2 (E)	40	#4	2'-6"	
u_1 (E)	180	#5	1'-11"	

ITEM	UNIT	TOTAL
Concrete Removal	Cu.Yd.	21.6
Class X Concrete	Cu.Yd.	20.9
Reinf. Bars Epoxy Coated	Pound	2700
Structure Excavation	Cu.Yd.	33
Porous Granular Embankment	Cu.Yd.	2
Protective Surface Treatment	Sq.Ft.	150



PLAN

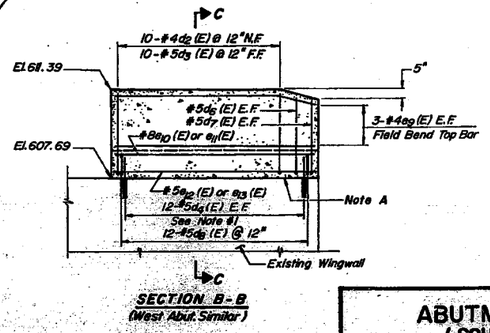
Notch in Reconstructed Backwall For Expansion



ELEVATION

EAST ABUTMENT

* Cut Near Face Bar To Fit Notch



SECTION B-B
(West Abut. Similar)

Note A
Bonded Construction Joint in Accordance with Art. 504.13 (a) (2) of the Standard Specification.

DESIGNED	E.M.M.
CHECKED	J.M.N.
DRAWN	FOM/RAA Jr.
CHECKED	E.M.M.

ABUTMENT REHABILITATION
(SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER DAMEN AVENUE

COOK COUNTY

STATION 446+74.69

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

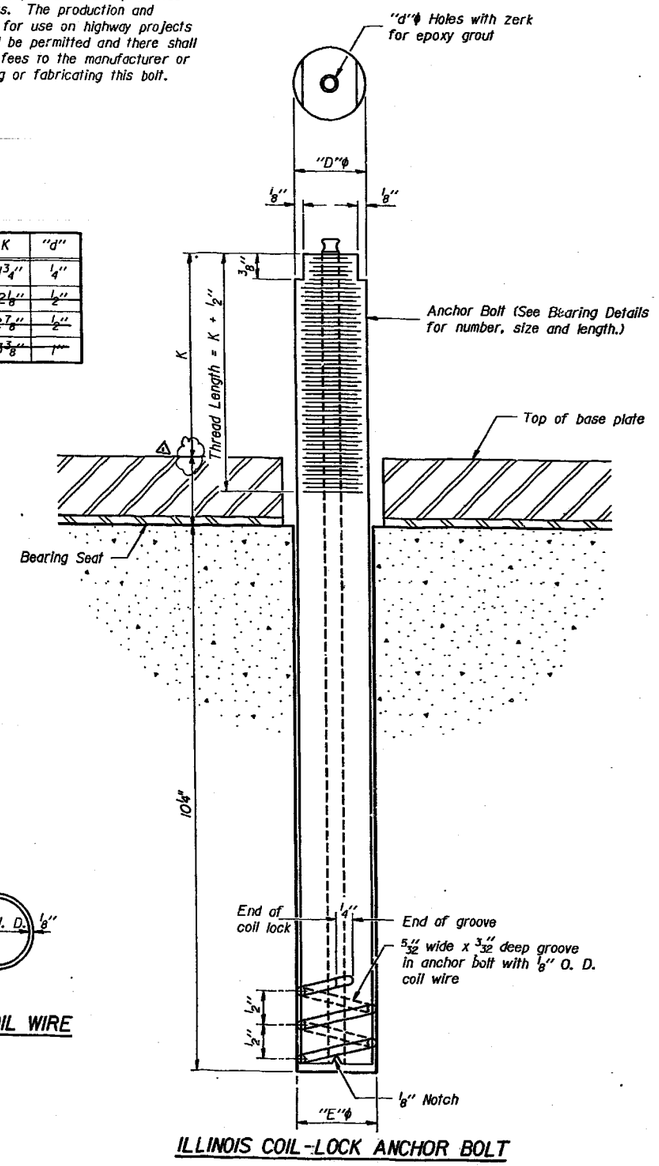
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	305
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

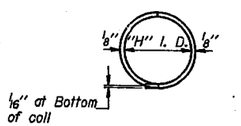
SHEET NO. 12 of 13 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0603-402HB, 0606-403HB & 07071404HB, 4398R-2

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
~~1 1/2"~~	~~1 5/8"~~	~~1 5/16"~~	~~2 1/8"~~	~~1/2"~~
~~2"~~	~~2 1/8"~~	~~1 13/16"~~	~~2 7/8"~~	~~1/2"~~
~~2 1/2"~~	~~2 5/8"~~	~~2 5/16"~~	~~3 3/8"~~	~~1"~~



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "**Erecting Structural Steel**"

INSTALL IN THIS CONTRACT

ANCHOR BOLT DETAILS
(SOUTHEAST BOUND LANES)
SECTION
F.A.I. ROUTE 90/94 OVER DAMEN AVENUE
COOK COUNTY
STATION 446+74.69

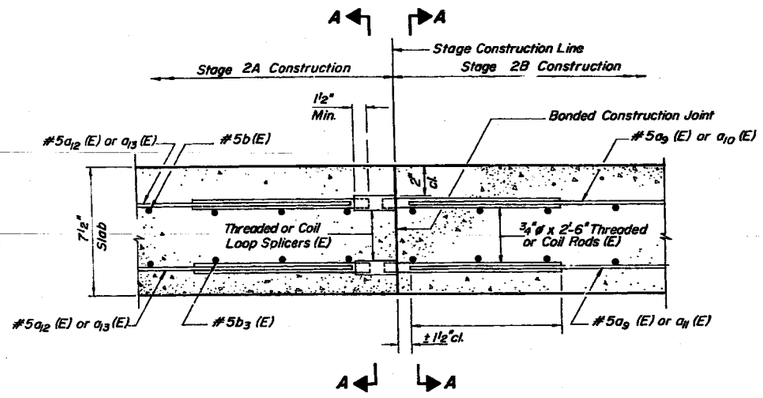
ABB-1 12-1-83

△ As revised 9-22-92 pmp

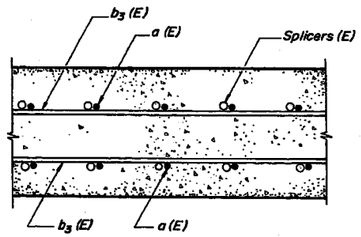
ROUTE NO	SECTION	COUNTY	TOTAL SHEET	SHEET NO
F.A.I. 90/94	*	COOK	426	306
FED. ROAD DIST. NO. 1	ILLINOIS	FED AID PROJECT		

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0505-402HB, 0606-403HB & 0707 (404HB, 439) R-2

SHEET NO. 13 OF 13 SHEETS



SECTION THRU SLAB

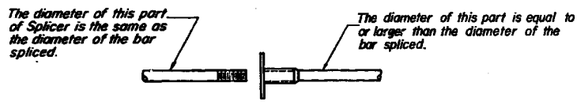


SECTION A-A

SPLICER DETAILS

Cost of Bar Splicer (Coupler) is incidental to Reinforcement Bars (Epoxy Coated).

No. Required = 596 (Slab)
8 (Abutment)



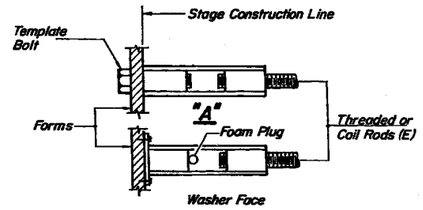
ROLLED THREAD DOWEL BAR

**ONE PIECE

WELDED SECTIONS

SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A563, Grade C, D or DH may be used



INSTALLATION AND SETTING METHODS

"A" Set splicer by means of a template bolt
"B" Set splicer by nailing to wood forms or cementing to steel forms.
(E) Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars.

Splicer rods shall extend minimum 1½" inches into the couplers.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other system of similar design maybe submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements.

① Minimum Capacity = $1.25 \times f_y \times A_t$ (Tension in kips)

② Minimum * Pull-out strength = $1.25 \times fs_{allow} \times A_t$ (Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* 28 day concrete.

Typical Splicer (Coupler) Assembly Sizes:

In Slabs	#5 bar lap with ¾"ø Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips - tension	Minimum Pull-out Strength = 9.2 kips - tension
In Sub-structure	#7 bar lap with 1"ø Splicer (Coupler) x 3'-6" Splicer Rods	Minimum Capacity = 45.1 kips - tension	Minimum Pull-out Strength = 18.0 kips - tension
	#8 bar lap with 1¼"ø Splicer (Coupler) x 4'-6" Splicer Rods	Minimum Capacity = 58.9 kips - tension	Minimum Pull-out Strength = 23.6 kips - tension

DESIGNED	E M M
CHECKED	J M N
DRAWN	F Q M
CHECKED	E M M

Nakawatase, Wyns & Associates, Inc.

BAR SPLICER DETAILS (SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER DAMEN AVENUE
COOK COUNTY
STATION 446+74.69

TBM - CP #4324. PK Nail in Shoulder of South Approach NWB Lanes Adjacent to SE Wingwall - F.A.I. 90/94 Bridge over Fullerton Avenue El. 610.06 (USGS Datum)

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2

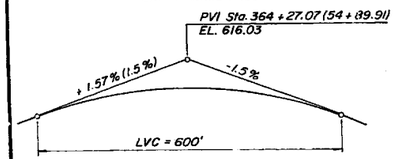
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	307
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1 OF 13 SHEETS

EXISTING STRUCTURE DATA

Sta 53 + 90, 91, FAI-2 Route, Sec. 0605 402 HF, Built in 1960, Structure No. 016-0129

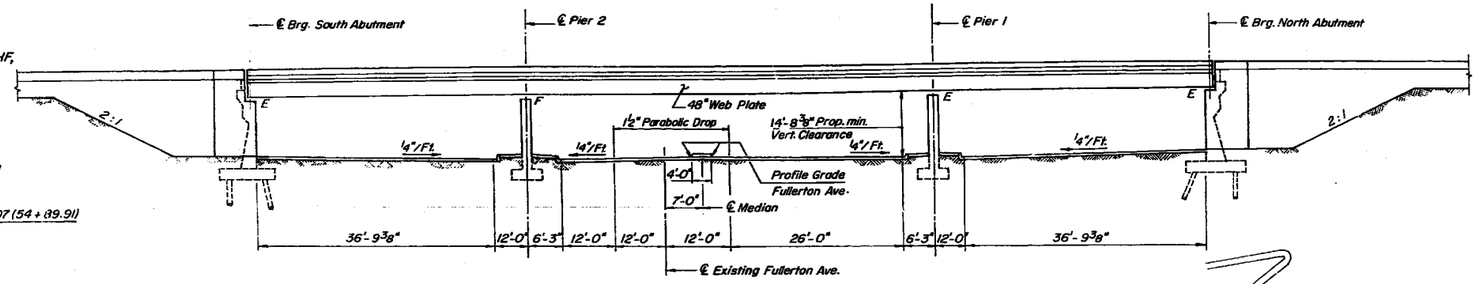
Superstructure	Continuous, Composite, Reinforced Concrete Deck with Steel Plate Girders.
Substructure	Cantilever Abutments, Multiple Column Piers. Both Supported By Metal Shell C.I.P. Concrete Piles.



PROPOSED PROFILE GRADE

( ) INDICATES EXISTING

LOCATION MAP



ELEVATION

STATION 463 + 79.77
REBUILT IN 19___ BY___
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC
F.A. PROJ. DPI-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0129

NAME PLATE
(STD 2113)

DESIGN SPECIFICATIONS

AASHTO (1989) with 1990 Interim Specifications.

LOADING HS 20-44 AND ALTERNATE MILITARY LOADING

Allow 25 PSF for Future Wearing Surface.

DESIGN STRESSES

f'c = 3,500 psi (Concrete)
fy = 60,000 psi (Reinforcement)
fs = 20,000 psi (Prop. Struct'l & Exist. Girders 26A & 26B)
fs = 18,000 psi (Existing Structural Steel)

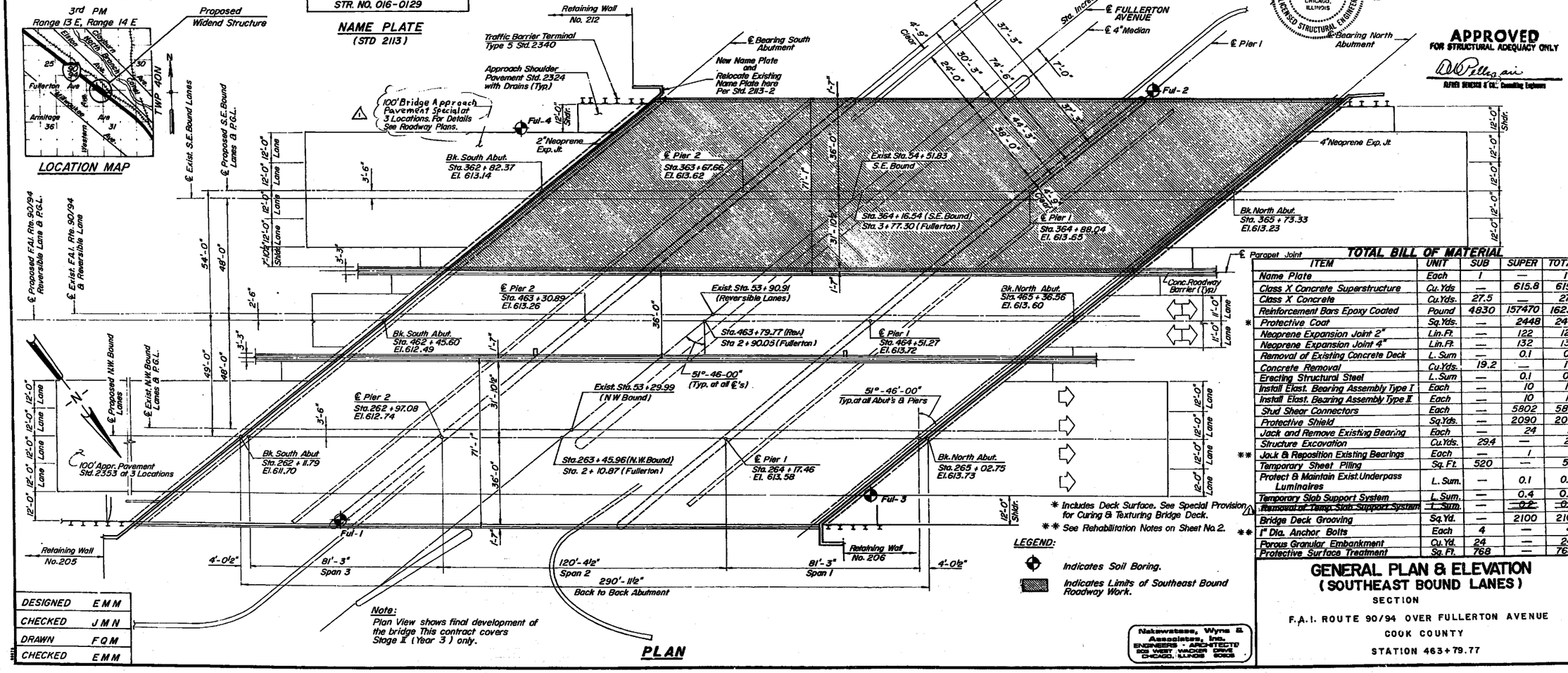
SCOPE OF WORK

SOUTHEAST ROADWAY MAJOR WORK ITEM
(ERECTION CONTRACT)

1. Remove and Replace Deck of Southeast Bound Lanes.
2. Install Bearings at Abutments
3. Erect Structural Steel

STATE OF ILLINOIS
EFREN M. MIRANDA
No. 39[illegible]
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
ALFRED BENESCH & CO., Consulting Engineers



PLAN

* Includes Deck Surface. See Special Provision for Curing & Texturing Bridge Deck.
** See Rehabilitation Notes on Sheet No. 2.

LEGEND:
- Indicates Soil Boring.
- Indicates Limits of Southeast Bound Roadway Work.

Note: Plan View shows final development of the bridge This contract covers Stage II (Year 3) only.

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

Nakawatase, Wyns & Associates, Inc.
ENGINEERS - ARCHITECTS
205 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUB	SUPER	TOTAL
	Name Plate	Each	1	—	1
	Class X Concrete Superstructure	Cu. Yds	—	615.8	615.8
	Class X Concrete	Cu. Yds.	27.5	—	27.5
	Reinforcement Bars Epoxy Coated	Pound	4830	157470	162300
*	Protective Coat	Sq. Yds.	—	2448	2448
	Neoprene Expansion Joint 2"	Lin. Ft.	—	122	122
	Neoprene Expansion Joint 4"	Lin. Ft.	—	132	132
	Removal of Existing Concrete Deck	L. Sum	—	0.1	0.1
	Concrete Removal	Cu. Yds.	19.2	—	19.2
	Erecting Structural Steel	L. Sum	—	0.1	0.1
	Install Elast. Bearing Assembly Type I	Each	—	10	10
	Install Elast. Bearing Assembly Type II	Each	—	10	10
	Stud Shear Connectors	Each	—	5802	5802
	Protective Shield	Sq. Yds.	—	2090	2090
	Jack and Remove Existing Bearing	Each	—	24	24
	Structure Excavation	Cu. Yds.	29.4	—	29.4
**	Jack & Reposition Existing Bearings	Each	—	1	1
	Temporary Sheet Piling	Sq. Ft.	520	—	520
	Protect & Maintain Exist. Underpass Luminaires	L. Sum.	—	0.1	0.1
	Temporary Slab Support System	L. Sum.	—	0.4	0.4
	~~Removal of Temp. Slab Support System~~	~~L. Sum.~~	—	~~0.2~~	~~0.2~~
	Bridge Deck Grooving	Sq. Yd.	—	2100	2100
**	1" Dia. Anchor Bolts	Each	4	—	4
	Porous Granular Embankment	Cu. Yd.	24	—	24
	Protective Surface Treatment	Sq. Ft.	768	—	768

GENERAL PLAN & ELEVATION
(SOUTHEAST BOUND LANES)
SECTION

F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE

COOK COUNTY

STATION 463 + 79.77

△ As Revised 9-22-92 PMP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	308
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2 OF 13 SHEETS

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2

INDEX OF DRAWING

SHEET NO.	DESCRIPTION
1.	GENERAL PLAN & ELEVATION
2.	CONSTRUCTION STAGING
3	TOP OF SLAB ELEVATIONS
4.	TOP OF SLAB ELEVATIONS
5.	SUPERSTRUCTURE DETAILS
6.	SUPERSTRUCTURE DETAILS
7.	EXPANSION DEVICES
8.	FRAMING PLAN AND DETAILS
9.	FRAMING DETAILS
10.	BEARING DETAILS
11.	ABUTMENT REHABILITATION
12.	ANCHOR BOLT DETAILS
13.	BAR SPLICER DETAILS

GENERAL NOTES:

- All Structural Steel shall be AASHTO M183. Weight for Erection = 3850 Lbs.
- Existing Name Plate to be mounted adjacent to New Name Plate. Cost incidental to Name Plate.
- Protective Surface Treatment shall be applied to New Concrete Bolsters at the Abutments.
- Expansion plates and attached bars shall be shop painted with three coats of the lead and chromate-free alkyd painting system. The color of the finish coats shall be Munsell No. 10 YR 7/1 Light Grey.
- Existing Structural steel shall be cleaned and painted only as required by the special provision "Cleaning and painting new steel and adjacent areas of existing steel structures."
- Field Welding of Construction Accessories will not be Permitted to the Bottom Flange of Girders nor to the Top Flange for a Distance equal to one-fourth the Span length each way from the Pier Supports. Field Welding in other areas will be Permitted only when approved by the Engineer.
- Reinforcement Bars shall conform to the requirements of AASHTO M-31, M-42 or M-42 or M-53 Grade 60.
- All contact surface areas of the existing structural steel to which new structural steel is to be connected shall be free of paint or lacquer.
- Plan Dimensions and Details relative to Existing Structure have been taken From Existing Plans and are subject to Nominal construction variations. It shall be the Contractor's roponsibility to verify such Dimensions and Details in the Field and make necessary approved Adjustments prior to construction or ordering Materials. Such variations shall not be Cause for Additional Compensation For a Change in the Scope of the Work, however the, Contractor will be Paid for the Quantity actually furnished at the Unit Price Bid for the Work.
- Bearing Seat surfaces shall be Constructed or Adjusted to the Designated Elevations within a Tolerance of 1/8" inch. Adjustment shall be made either by Grinding the Surface or by Shimming the Bearing. Two 1/8" Adjusting Shims, of the dimensions of the bottom Bearing Plate, shall be provided for each Bearing in addition to all other Plates or Shims. All shims provided by others.
- The Concrete, for Bridge Floors Finished in Accordance with Article 503.15 of the Standard Specifications, shall be placed and compacted parallel to the Skew in Uniform Increments along Centerline of Bridge, The Finishing Machine, when required, shall be set parallel to the Skew for Striking off and Screening the concrete.
- Prior to pouring the new concrete for the deck, all loose rust, loose mill scale, loose paint and all foreign material shall be removed from the embedded portions of flanges of stringers (girders). The removal shall be accomplished in accordance with the requirements of the SSPC surface preparation specifications SP11 for power tool cleaning or SP2 for hand tool cleaning. Cost shall be incidental to "Removal of Existing Concrete Deck".
- The three coat lead and chromate-free alkyd paint system shall be used for shop and field painting of new structural steel. The first coat has been applied in the shop. The second coat shall be applied in the field under this contract. The third coat shall be applied in the field by others. The color of the alkyd finish coats shall be Munsell No. 2.5 YR 3/4 Reddish Brown for the fascia of exterior beams and their bearings and Munsell No. 10 YR 7/1 Light Grey for all other structural steel.
- The Contractor is required to mark on top of the existing concrete deck, the locations of the top flange of all the steel beams or girders, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the beam or girder flanges is not permitted.

The information shown for temporary sheet piling is estimated. It is the contractors responsibility to provide a design and computation of temporary sheet piling and associated members, if required, subject to the approval of the Engineer.

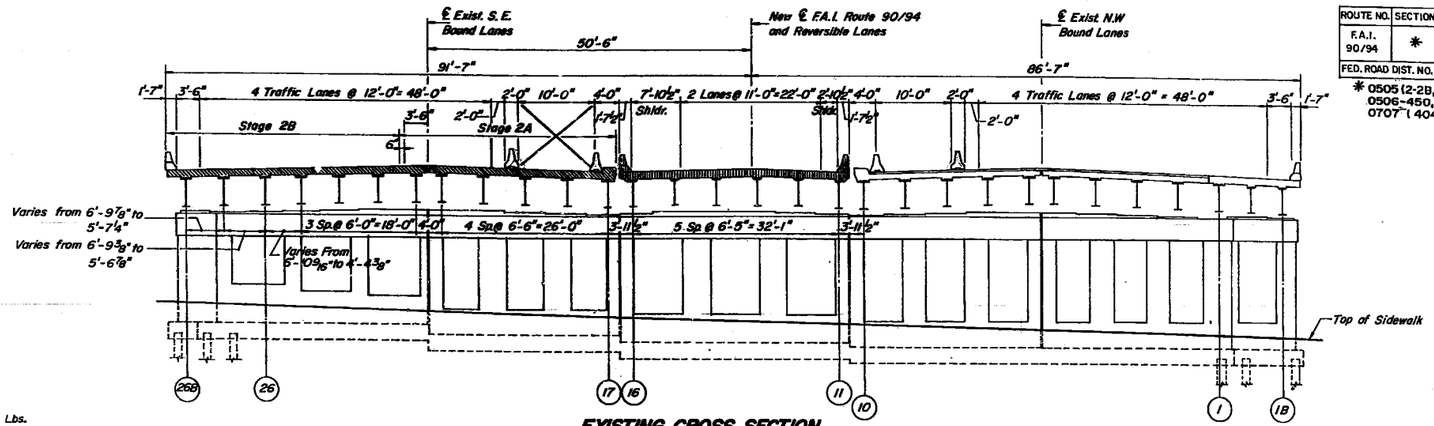
REHABILITATION NOTES:

Remove loose anchor bolt at Pier 1 Bearing 24, 25 & 26 and at Pier 2 Bearing 26 and replace with Expoxy Grouted Anchor Bolt.

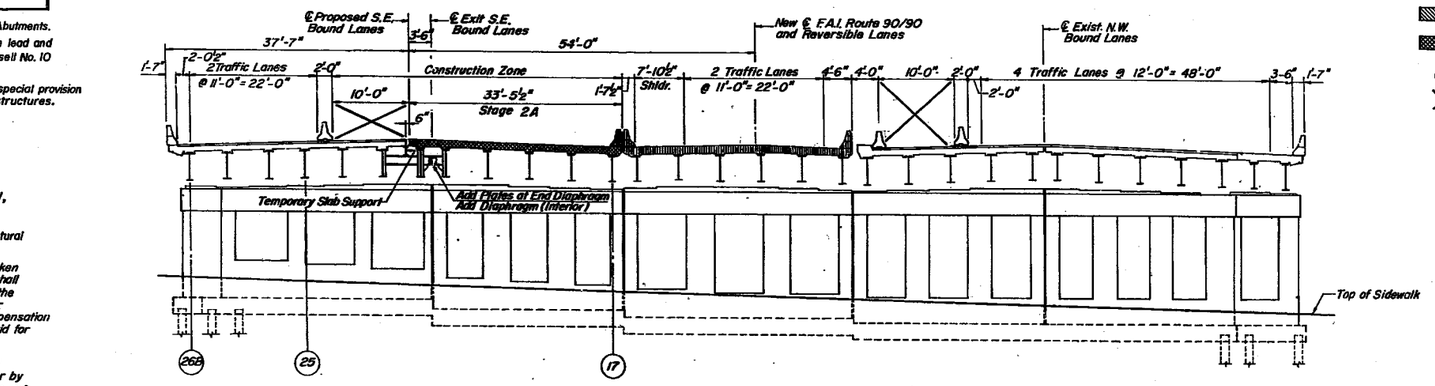
Replace missing or loose anchor bolt nuts at Pier 2, Bearing 23, 26A & 26B (Incidental to Construction)

Jack and Reposition Rocker Type Expansion Bearing to its correct position a temperature setting of 50°F for Girder 26 at Pier 1.

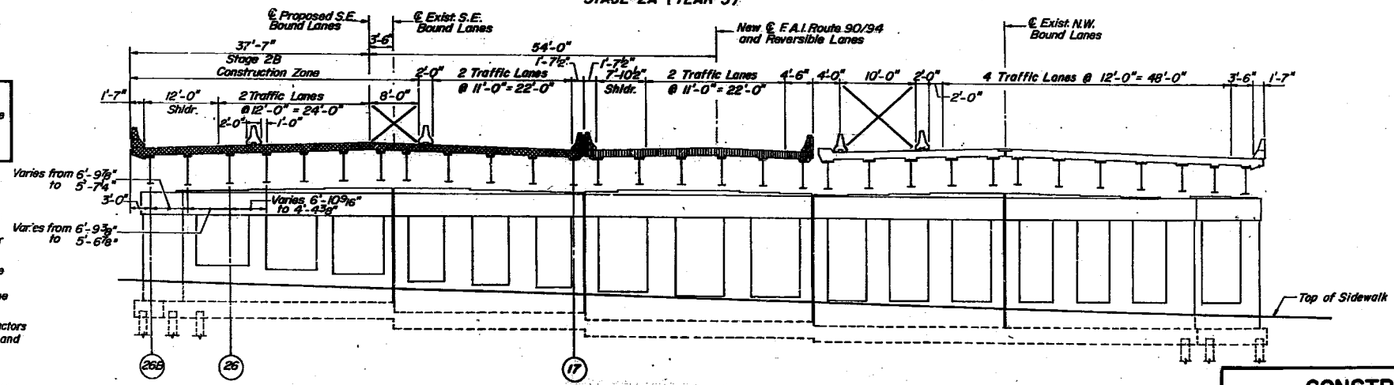
DESIGNED	EMM
CHECKED	JMN
DRAWN	JPM
CHECKED	EMM



EXISTING CROSS SECTION
STAGE 1 (YEAR 2)



PROPOSED CROSS SECTION
STAGE 2A (YEAR 3)



PROPOSED CROSS SECTION
STAGE 2B (YEAR 3)

Indicates Stage 1 Work
Indicates Concrete Deck Removal Included in this Phase
Indicates New Concrete Deck
Indicates Temporary Concrete Barrier
Indicates Construction Lanes

CONSTRUCTION STAGING (SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

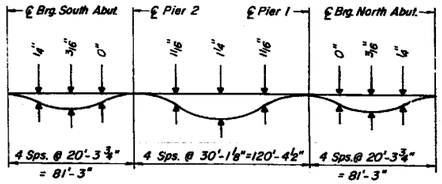
Hasbrouck, Wyne & Associates, Inc. ARCHITECTS ENGINEERS 1 South Wacker Drive Chicago

△ REVISED 9-22-92 PMP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	420	309
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3 OF 13 SHEETS

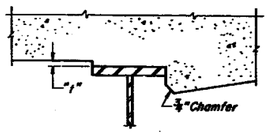
* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707E (404 HB, 439) R-2



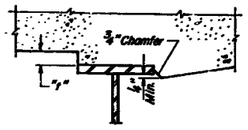
DEAD LOAD DEFLECTION DIAGRAM

(Includes Weight of Concrete Only)

Note: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown below.



At Minimum Fillet



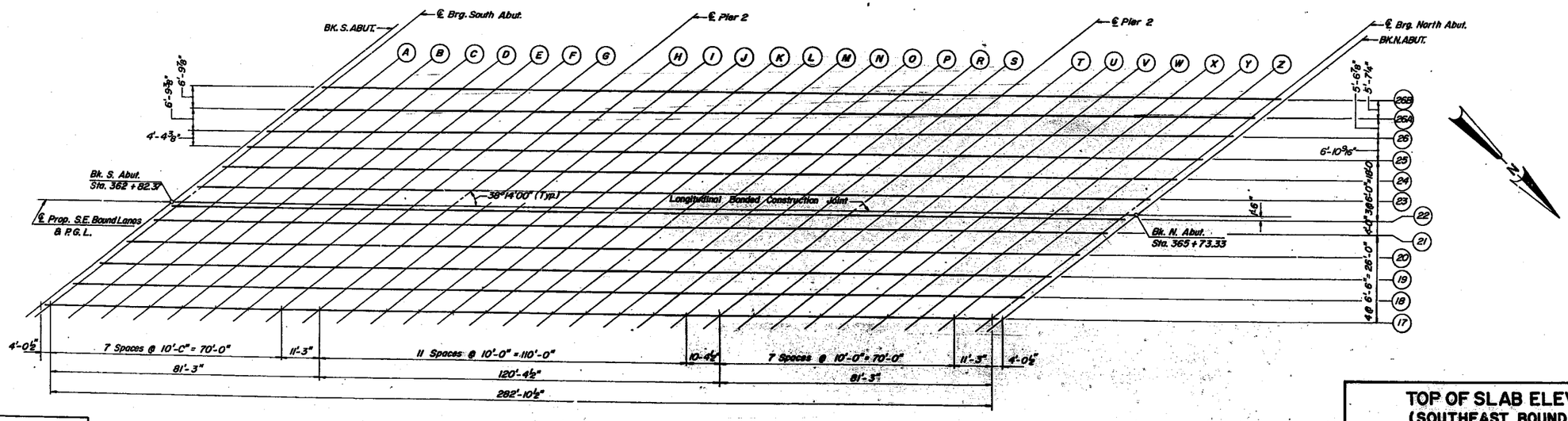
At Maximum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at stations shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet no. 3 & 4 minus slab thickness equals the fillet heights above top flange of beams.

FILLET HEIGHTS

P. G. L. 8 LONGITUDINAL BONDED CONST. JT.

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BK S ABT	36282.370	0.000	613.142	613.142
BR S ABT	36286.410	0.000	613.172	613.172
A	36296.410	0.000	613.245	613.258
B	36306.410	0.000	613.313	613.333
C	36316.410	0.000	613.376	613.398
D	36326.410	0.000	613.433	613.452
E	36336.410	0.000	613.486	613.496
F	36346.410	0.000	613.533	613.533
G	36356.410	0.000	613.575	613.572
B PIER 2	36367.660	0.000	613.617	613.617
H	36377.660	0.000	613.648	613.662
I	36387.660	0.000	613.674	613.709
J	36397.660	0.000	613.695	613.753
K	36407.660	0.000	613.711	613.790
L	36417.660	0.000	613.722	613.818
M	36427.660	0.000	613.728	613.830
N	36437.660	0.000	613.728	613.823
O	36447.660	0.000	613.724	613.805
P	36457.660	0.000	613.715	613.775
R	36467.660	0.000	613.700	613.736
S	36477.660	0.000	613.680	613.695
B PIER 1	36488.040	0.000	613.654	613.654
T	36498.040	0.000	613.624	613.620
U	36508.040	0.000	613.589	613.589
V	36518.040	0.000	613.548	613.556
W	36528.040	0.000	613.503	613.521
X	36538.040	0.000	613.452	613.475
Y	36548.040	0.000	613.396	613.418
Z	36558.040	0.000	613.335	613.349
BR N ABT	36569.290	0.000	613.260	613.260
BK N ABT	36573.330	0.000	613.232	613.232



PLAN

DESIGNED	EMM
CHECKED	JMN
DRAWN	JPM/FQM
CHECKED	EMM

Hutchinson, Wyne & Associates, Inc. CONSULTING ENGINEERS & ARCHITECTS CHICAGO, ILLINOIS 60606

TOP OF SLAB ELEVATIONS (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE

COOK COUNTY

STATION 463+79.77

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO. 4
F.A.I. 90/94	*	COOK	426	310	OF 13 SHEETS
FED ROAD DIST. NO. 1	ILLINOIS	FED AID PROJECT			

* 0505 (2-2B, 3-1H, 6-1R, 400HB, 401HB, 451) 0506-480, 0603-402HB, 0606-403HB & 0707FL404HB, 439) R-2

GIRDER NO. 26B

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BKSABT	36326.223	34.580	612.774	612.774
BRSABT	36330.262	34.580	612.796	612.796
A	36340.261	34.580	612.847	612.860
B	36350.259	34.580	612.892	612.912
C	36360.258	34.580	612.932	612.954
D	36370.256	34.580	612.967	612.986
E	36380.255	34.580	612.997	613.006
F	36390.253	34.580	613.022	613.022
G	36400.252	34.580	613.042	613.038
BPIER 2	36411.502	34.580	613.058	613.058
H	36421.502	34.580	613.067	613.081
I	36431.502	34.580	613.071	613.106
J	36441.502	34.580	613.070	613.128
K	36451.502	34.580	613.063	613.142
L	36461.502	34.580	613.052	613.148
M	36471.502	34.580	613.035	613.137
N	36481.502	34.580	613.013	613.108
O	36491.502	34.580	612.986	613.067
P	36501.502	34.580	612.954	613.014
R	36511.502	34.580	612.917	612.953
S	36521.502	34.580	612.875	612.890
BPIER 1	36531.877	34.580	612.826	612.826
T	36541.877	34.580	612.773	612.769
U	36551.877	34.580	612.715	612.715
V	36561.877	34.580	612.652	612.660
W	36571.877	34.580	612.584	612.602
X	36581.877	34.580	612.511	612.534
Y	36591.877	34.580	612.433	612.455
Z	36601.877	34.580	612.349	612.363
BRNABT	36613.127	34.580	612.250	612.250
BKNABT	36617.168	34.580	612.212	612.212

GIRDER NO. 26A

BKSABT	36317.566	27.730	612.867	612.867
BRSABT	36321.627	27.747	612.890	612.890
A	36331.679	27.788	612.948	612.958
B	36341.732	27.829	612.994	613.018
C	36351.784	27.870	613.038	613.060
D	36361.836	27.911	613.076	613.095
E	36371.888	27.952	613.110	613.119
F	36381.940	27.993	613.138	613.138
G	36391.992	28.034	613.162	0.000
BPIER 2	36403.302	28.080	613.182	613.182
H	36413.358	28.124	613.194	613.208
I	36423.414	28.168	613.201	613.236
J	36433.470	28.212	613.203	613.261
K	36443.526	28.256	613.200	613.279
L	36453.582	28.300	613.191	613.287
M	36463.638	28.344	613.178	613.279
N	36473.694	28.388	613.159	613.253
O	36483.749	28.432	613.135	613.215
P	36493.805	28.476	613.106	613.165
R	36503.861	28.520	613.071	613.106
S	36513.917	28.564	613.032	0.000
BPIER 1	36524.350	28.610	612.985	612.985
T	36534.401	28.650	612.936	612.932
U	36544.451	28.690	612.880	612.881
V	36554.502	28.730	612.820	612.828
W	36564.552	28.769	612.755	612.773
X	36574.603	28.809	612.684	612.707
Y	36584.654	28.849	612.608	612.630
Z	36594.704	28.889	612.527	612.549
BRNABT	36606.011	28.934	612.430	612.433
BKNABT	36610.073	28.950	612.394	612.398

GIRDER NO. 26

BKSABT	36308.961	20.950	612.955	612.955
BRSABT	36313.043	20.983	612.980	612.980
A	36323.187	21.065	613.038	613.051
B	36333.251	21.147	613.091	613.111
C	36343.355	21.229	613.139	613.161
D	36353.460	21.311	613.181	613.200
E	36363.564	21.394	613.218	613.227
F	36373.668	21.476	613.250	613.250
G	36383.772	21.558	613.277	0.000
BPIER 2	36395.141	21.650	613.301	613.301
H	36405.250	21.736	613.317	613.331
I	36415.358	21.821	613.327	613.363
J	36425.467	21.907	613.333	613.391
K	36435.575	21.992	613.333	613.412
L	36445.684	22.078	613.327	613.424
M	36455.793	22.163	613.317	613.418
N	36465.901	22.249	613.301	613.395
O	36476.010	22.335	613.280	613.359
P	36486.118	22.420	613.254	613.312
R	36496.227	22.506	613.223	613.256
S	36506.336	22.591	613.186	0.000
BPIER 1	36516.823	22.680	613.142	613.142
T	36526.928	22.762	613.095	613.091
U	36537.032	22.844	613.043	613.043
V	36547.136	22.926	612.985	612.993
W	36557.240	23.008	612.922	612.940
X	36567.344	23.090	612.854	612.877
Y	36577.448	23.172	612.781	612.802
Z	36587.553	23.254	612.702	612.715
BRNABT	36598.920	23.347	612.608	612.613
BKNABT	36603.003	23.380	612.572	612.572

GIRDER NO. 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BKSABT	36303.313	16.500	613.011	613.011
BRSABT	36307.353	16.500	613.037	613.037
A	36317.353	16.500	613.099	613.112
B	36327.353	16.500	613.156	613.176
C	36337.353	16.500	613.208	613.230
D	36347.353	16.500	613.255	613.274
E	36357.353	16.500	613.297	613.306
F	36367.353	16.500	613.334	613.334
G	36377.353	16.500	613.365	613.361
BPIER 2	36388.604	16.500	613.394	613.394
H	36398.604	16.500	613.415	613.429
I	36408.604	16.500	613.431	613.466
J	36418.604	16.500	613.441	613.499
K	36428.604	16.500	613.446	613.525
L	36438.604	16.500	613.446	613.542
M	36448.604	16.500	613.441	613.543
N	36458.604	16.500	613.431	613.526
O	36468.604	16.500	613.416	613.497
P	36478.604	16.500	613.396	613.456
R	36488.604	16.500	613.370	613.406
S	36498.604	16.500	613.340	613.355
BPIER 1	36508.979	16.500	613.303	613.303
T	36518.979	16.500	613.262	613.258
U	36528.979	16.500	613.216	613.216
V	36538.979	16.500	613.165	613.173
W	36548.979	16.500	613.108	613.126
X	36558.979	16.500	613.047	613.070
Y	36568.979	16.500	612.980	613.002
Z	36578.979	16.500	612.909	612.923
BRNABT	36590.229	16.500	612.822	612.822
BKNABT	36594.271	16.500	612.789	612.789

GIRDER NO. 24

BKSABT	36295.697	10.500	613.075	613.075
BRSABT	36299.737	10.500	613.104	613.104
A	36309.737	10.500	613.170	613.183
B	36319.737	10.500	613.231	613.251
C	36329.737	10.500	613.287	613.309
D	36339.737	10.500	613.337	613.356
E	36349.737	10.500	613.383	613.392
F	36359.737	10.500	613.423	613.423
G	36369.737	10.500	613.459	613.455
BPIER 2	36380.989	10.500	613.493	613.493
H	36390.989	10.500	613.517	613.531
I	36400.989	10.500	613.536	613.571
J	36410.989	10.500	613.551	613.609
K	36420.989	10.500	613.560	613.639
L	36430.989	10.500	613.564	613.660
M	36440.989	10.500	613.563	613.665
N	36450.989	10.500	613.557	613.652
O	36460.989	10.500	613.545	613.626
P	36470.989	10.500	613.529	613.589
R	36480.989	10.500	613.507	613.543
S	36490.989	10.500	613.481	613.496
BPIER 1	36501.364	10.500	613.448	613.448
T	36511.364	10.500	613.411	613.407
U	36521.364	10.500	613.369	613.369
V	36531.364	10.500	613.321	613.329
W	36541.364	10.500	613.269	613.287
X	36551.364	10.500	613.211	613.238
Y	36561.364	10.500	613.149	613.171
Z	36571.364	10.500	613.081	613.095
BRNABT	36582.614	10.500	612.998	612.998
BKNABT	36586.656	10.500	612.967	612.967

GIRDER NO. 23

BKSABT	36288.082	4.500	613.114	613.114
BRSABT	36292.122	4.500	613.144	613.144
A	36302.122	4.500	613.214	613.227
B	36312.122	4.500	613.279	613.299
C	36322.122	4.500	613.338	613.360
D	36332.122	4.500	613.393	613.412
E	36342.122	4.500	613.443	613.452
F	36352.122	4.500	613.487	613.487
G	36362.122	4.500	613.526	613.522
BPIER 2	36373.373	4.500	613.564	613.564
H	36383.373	4.500	613.593	613.607
I	36393.373	4.500	613.616	613.651
J	36403.373	4.500	613.634	613.692
K	36413.373	4.500	613.647	613.726
L	36423.373	4.500	613.655	613.751
M	36433.373	4.500	613.658	613.760
N	36443.373	4.500	613.656	613.751
O	36453.373	4.500	613.649	613.730
P	36463.373	4.500	613.636	613.696
R	36473.373	4.500	613.618	613.634
S	36483.373	4.500	613.596	613.611
BPIER 1	36493.748	4.500	613.567	613.567
T	36503.748	4.500	613.533	613.529
U	36513.748	4.500	613.495	613.495
V	36523.748	4.500	613.452	613.460
W	36533.748	4.500	613.403	613.421
X	36543.748	4.500	613.350	613.373
Y	36553.748	4.500	613.291	613.313
Z	36563.748	4.500	613.227	613.241
BRNABT	36574.998	4.500	613.149	613.149
BKNABT	36579.040	4.500	613.119	613.119

GIRDER NO. 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BKSABT	36280.866	-1.500	613.103	613.103
BRSABT	36284.506	-1.500	613.134	613.134
A	36294.506	-1.500	613.208	613.221
B	36304.506	-1.500	613.277	613.297
C	36314.506	-1.500	613.340	613.362
D	36324.506	-1.500	613.399	613.418
E	36334.506	-1.500	613.452	613.461
F	36344.506	-1.500	613.501	613.501
G	36354.506	-1.500	613.544	613.540
BPIER 2	36365.758	-1.500	613.586	613.586
H	36375.758	-1.500	613.619	613.633
I	36385.758	-1.500	613.646	613.681
J	36395.758	-1.500	613.668	613.726
K	36405.758	-1.500	613.685	613.764
L	36415.758	-1.500	613.697	613.793
M	36425.758	-1.500	613.703	613.805
N	36435.758	-1.500	613.705	613.800
O	36445.758	-1.500	613.702	613.783
P	36455.758	-1.500	613.693	613.753
R	36465.758	-1.500	613.679	613.715
S	36475.758	-1.500	613.660	613.675
BPIER 1	36486.133	-1.500	613.635	613.635
T	36496.133	-1.500	613.606	613.602
U	36506.133	-1.500	613.572	613.572
V	36516.133	-1.500	613.532	613.540
W	36526.133	-1.500	613.488	613.506
X	36536.133	-1.500	613.438	613.461
Y	36546.133	-1.500	613.383	613.405
Z	36556.133	-1.500	613.323	613.337
BRNABT	36567.383	-1.500	613.249	613.249
BKNABT	36571.425	-1.500	613.221	613.221

GIRDER NO. 21

BKSABT	36275.389	-5.500	613.000	613.000
BRSABT	36279.429	-5.500	613.032	613.032
A	36289.429	-5.500	613.108	613.121
B	36299.429	-5.500	613.180	613.200
C	36309.429	-5.500	613.246	613.268
D	36319.429	-5.500	613.307	613.326
E	36329.429	-5.500	613.363	613.372
F	36339.429	-5.500	613.414	613.414
G	36349.429	-5.500	613.460	613.456
BPIER 2	36360.681	-5.500	613.505	613.505
H	36370.681	-5.500	613.540	613.554
I	36380.681	-5.500	613.570	613.605
J	36390.681	-5.500	613.595	613.653
K	36400.681	-5.500	613.614	613.693
L	36410.681	-5.500	613.629	613.725
M	36420.681	-5.500	613.638	613.740
N	36430.681	-5.500	613.642	613.737
O	36440.681	-5.500	613.641	613.722
P	36450.681	-5.500	613.635	613.695
R	36460.681	-5.500	613.624	613.660
S	36470.681	-5.500	613.608	613.623
BPIER 1	36481.056	-5.500	613.586	613.586
T	36491.056	-5.500	613.559	613.555
U	36501.056	-5.500	613.527	613.527
V	36511.056	-5.500	613.490	613.498
W	36521.056	-5.500	613.448	613.466
X	36531.056	-5.500	613.401	613.424
Y	36541.056	-5.500	613.349	613.371
Z	36551.056	-5.500	613.291	613.305
BRNABT	36562.306	-5.500	613.221	613.221
BKNABT	36566.348	-5.500	613.194	613.194

GIRDER NO. 20

BKSABT	36267.139	-12.000	612.829	612.829
BRSABT	36271.179	-12.000	612.863	612.863
A	36281.179	-12.000	612.944	612.957
B	36291.179	-12.000	613.020	613.040
C	36301.179	-12.000	613.090	613.112
D	36311.179	-12.000	613.155	613.174
E	36321.179	-12.000	613.216	613.225
F	36331.179	-12.000	613.271	613.271
G	36341.179	-12.000	613.321	613.317
BPIER 2	36352.431	-12.000	613.371	613.371
H	36362.431	-12.000	613.410	613.424
I	36372.431	-12.000	613.444	613.479
J	36382.431	-12.000	613.473	613.531
K	36392.431	-12.000	613.497	613.576
L	36402.431	-12.000	613.515	613.611
M	36412.431	-12.000	613.529	613.631
N	36422.431	-12.000	613.537	613.632
O	36432.431	-12.000	613.541	613.622
P	36442.431	-12.000	613.539	613.599
R	36452.431	-12.000	613.532	613.568
S	36462.431	-12.000	613.520	613.535
BPIER 1	36472.806	-12.000	613.502	613.502
T	36482.806	-12.000	613.480	613.476
U	36492.806	-12.000	613.452	613.452
V	36502.806	-12.000	613.419	613.427
W	36512.806	-12.000	613.381	613.399
X	36522.806	-12.000	613.339	613.362
Y	36532.806	-12.000	613.290	613.312
Z	36542.806	-12.000	613.237	613.251
BRNABT	36554.056	-12.000	613.171	613.171
BKNABT	36558.097	-12.000	613.146	613.146

GIRDER NO. 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
BKSABT	36258.889	-18.500	612.622	612.622
BRSABT	36262.929	-18.500	612.657	612.657
A	36272.929	-18.500	612.742	612.755
B	36282.929	-18.500	612.822	612.842
C	36292.929	-18.500	612.897	612.919
D	36302.929	-18.500	612.966	612.985
E	36312.929	-18.500	613.031	613.040
F	36322.929	-18.500	613.090	613.090
G	36332.929	-18.500	613.144	613.140
BPIER 2	36344.181	-18.500	613.199	613.199
H	36354.181	-18.500	613.243	613.257
I	36364.181	-18.500	613.281	613.316
J	36374.181	-18.500	613.314	613.372
K	36384.181	-18.500	613.342	613.421
L	36394.181	-18.500	613.365	613.461
M	36404.181	-18.500	613.383	613.485
N	36414.181	-18.500	613.395	613.490
O	36424.181	-18.500	613.403	613.488
P	36434.181	-18.500	613.405	613.465
R	36444.181	-18.500	613.403	613.439
S	36454.181	-18.500	613.395	613.410
BPIER 1	36466.556	-18.500	613.381	613.381
T	36474.556	-18.500	613.363	613.359
U	36484.556	-18.500	613.340	613.340
V	36494.556	-18.500	613.311	613.319
W	36504.556	-18.500	613.278	613.296
X	36514.556	-18.500	613.239	613.262
Y	36524.556	-18.500	613.195	613.217
Z	36534.556	-18.500	613.146	613.160
BRNABT	36545.806	-18.500	613.085	613.085
BKNABT	36549.847	-18.500	613.061	613.061

GIRDER NO. 18

BKSABT	36250.639	-25.000	612.411	612.411
BRSABT	36254.679	-25.000	612.448	612.448
A	36264.679	-25.000	612.537	612.550
B	36274.679	-25.000	612.621	612.641
C	36284.679	-25.000	612.700	612.722
D	36294.679	-25.000	612.774	612.793
E	36304.679	-25.000	612.843	612.852
F	36314.679	-25.000	612.906	612.906
G	36324.679	-25.000	612.965	612.961
BPIER 2	36335.930	-25.000	613.024	613.024
H	36345.930	-25.000	613.072	613.086
I	36355.930	-25.000	613.114	613.149
J	36365.930	-25.000	613.152	613.210
K	36375.930	-25.000	613.184	613.263
L	36385.930	-25.000	613.211	613.307
M	36395.930	-25.000	613.233	613.335
N	36405.930	-25.000	613.250	613.345
O	36415.930	-25.000	613.262	613.343
P	36425.930	-25.000	613.268	613.328
R	36435.930	-25.000	613.270	613.306
S	36445.930	-25.000	613.266	613.281
BPIER 1	36456.305	-25.000	613.257	613.257
T	36466.305	-25.000	613.243	613.239
U	36476.305	-25.000	613.224	613.224
V	36486.305	-25.000	613.200	613.208
W	36496.305	-25.000	613.170	613.188
X	36506.305	-25.000	613.136	613.159
Y	36516.305	-25.000	613.096	613.118
Z	36526.305	-25.000	613.051	613.065
BRNABT	36537.555	-25.000	612.995	612.995
BKNABT	36541.597	-25.000	612.973	612.973

GIRDER NO. 17

BKSABT	36242.389	-31.500	612.196	612.196
BRSABT	36246.429	-31.500	612.235	612.235
A	36256.429	-31.500	612.329	612.342
B	36266.429	-31.500	612.417	612.437
C	36276.429	-31.500	612.500	612.522
D	36286.429	-31.500	612.578	612.597
E	36296.429	-31.500	612.651	612.660
F	36306.429	-31.500	612.719	612.719
G	36316.429	-31.500	612.781	612.777
BPIER 2	36327.680	-31.500	612.846	612.846
H	36337.680	-31.500	612.897	612.911
I	36347.680	-31.500	612.944	612.979
J	36357.680	-31.500	612.986	613.044
K	36367.680	-31.500	613.022	613.101
L	36377.680	-31.500	613.053	613.149
M	36387.680	-31.500	613.080	613.182
N	36397.680	-31.500	613.101	613.196
O	36407.680	-31.500	613.117	613.198
P	36417.680	-31.500	613.128	613.188
R	36427.680	-31.500	613.133	613.169
S	36437.680	-31.500	613.134	613.149
BPIER 1	36448.055	-31.500	613.129	613.129
T	36458.055	-31.500	613.119	613.115
U	36468.055	-31.500	613.105	613.105

GIRDER NO. 17 (Continued)

V	36478.055	-31.500	613.085	613.093
W	36488.055	-31.500	613.059	613.077
X	36498.055	-31.500	613.029	613.052
Y	36508.055	-31.500	612.994	613.016
Z	36518.055	-31.500	612.953	612.957
BRNABT	36529.305	-31.500	612.902	612.902
BKNABT	36533.347	-31.500	612.881	612.881

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

Natawatsas, Wyns & Associates, Inc.
ENGINEERS : ARCHITECTS
829 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606

TOP OF SLAB ELEVATIONS
(SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE

COOK COUNTY

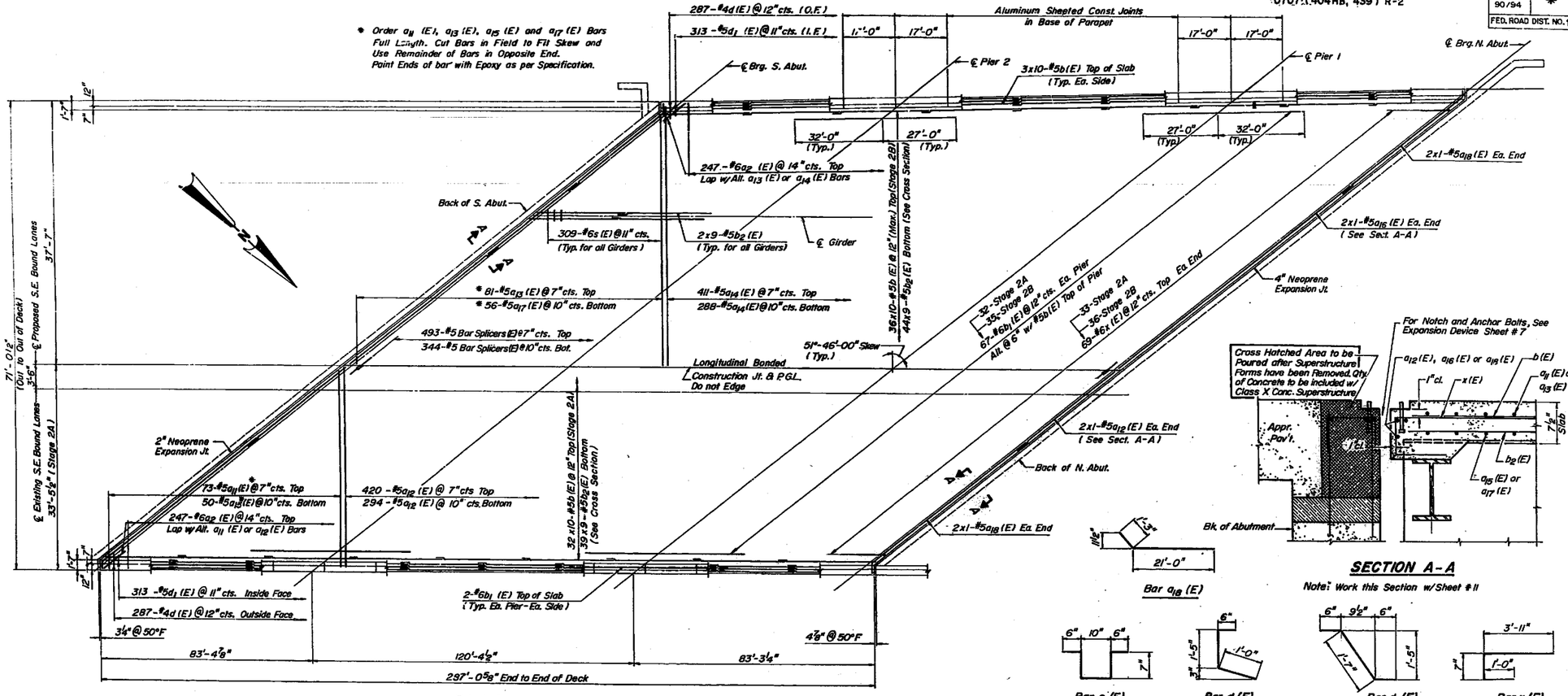
STATION 463+79.77

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451)
0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2

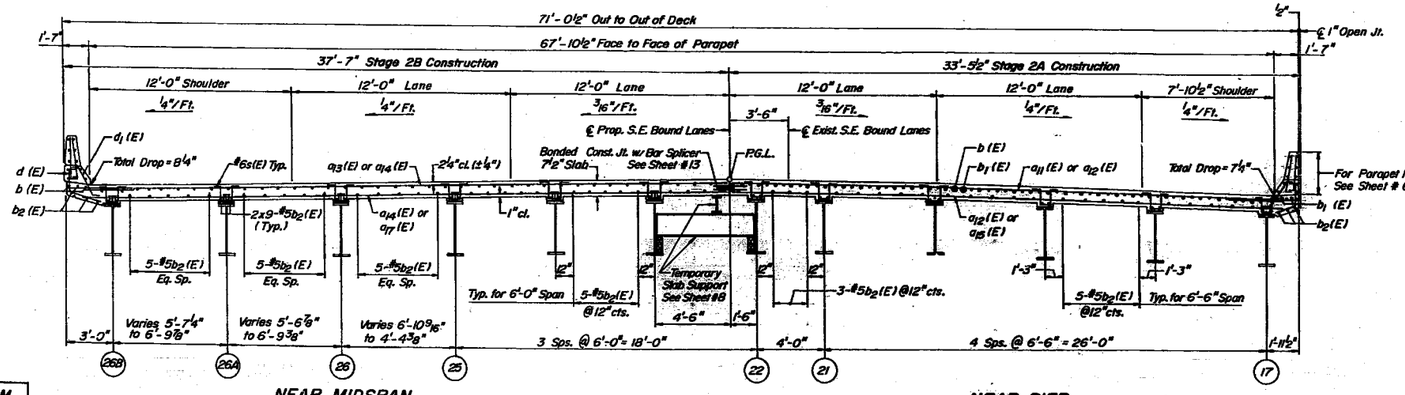
ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	311
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5 OF 13 SHEETS

* Order a_{11} (E), a_{13} (E), a_{15} (E) and a_{17} (E) Bars Full Length. Cut Bars in Field to Fit Skew and Use Remainder of Bars in Opposite End. Point Ends of bar with Epoxy as per Specification.



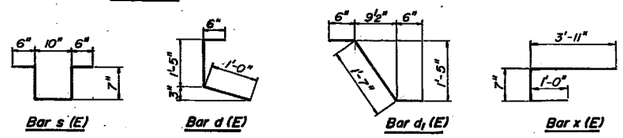
PLAN

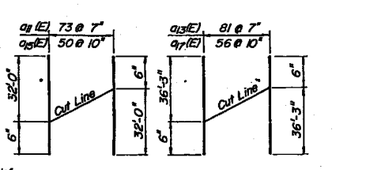


NEAR MIDSPAN — NEAR PIER

CROSS SECTION
LOOKING NORTH

SECTION A-A
Note: Work this Section w/ Sheet # 11





BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a_2 (E)	494	#6	4'-0"	
a_{11} (E)	73	#5	32'-6"	
a_{12} (E)	718	#5	32'-7"	
a_{13} (E)	81	#5	36'-9"	
a_{14} (E)	699	#5	36'-8"	
a_{15} (E)	50	#5	32'-6"	
a_{16} (E)	4	#5	38'-11"	
a_{17} (E)	56	#5	36'-9"	
a_{18} (E)	8	#5	22'-3"	
b (E)	740	#5	30'-6"	
b_1 (E)	142	#6	59'-0"	
b_2 (E)	747	#5	33'-7"	
d (E)	574	#4	2'-11"	
d_1 (E)	626	#5	2'-7"	
s (E)	3708	#6	3'-0"	
x (E)	138	#6	5'-6"	

ITEM	UNIT	TOTAL
Class X Concrete - Superstructure	Cu. Yd.	543.1
Reinforcement Bars - Epoxy Coated	Pound	146810
Protective Coat	Sq. Yd.	2164
Concrete Deck Removal	L.S.	1
Bridge Deck Grooving	Sq. Yd.	2100

Notes:
1. Reinforcement Bars Designated Thus: 36 x 10 - #5, Indicates 36 Lines of Bars with 10 length Per Line.
2. Reinforcement Bars Designated (E) shall be Epoxy Coated.
3. See Sheet #6 for Parapet Details.

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM/RAA Jr.
CHECKED	EMM

Minimum Bar Lap
#5 - 1'-8"

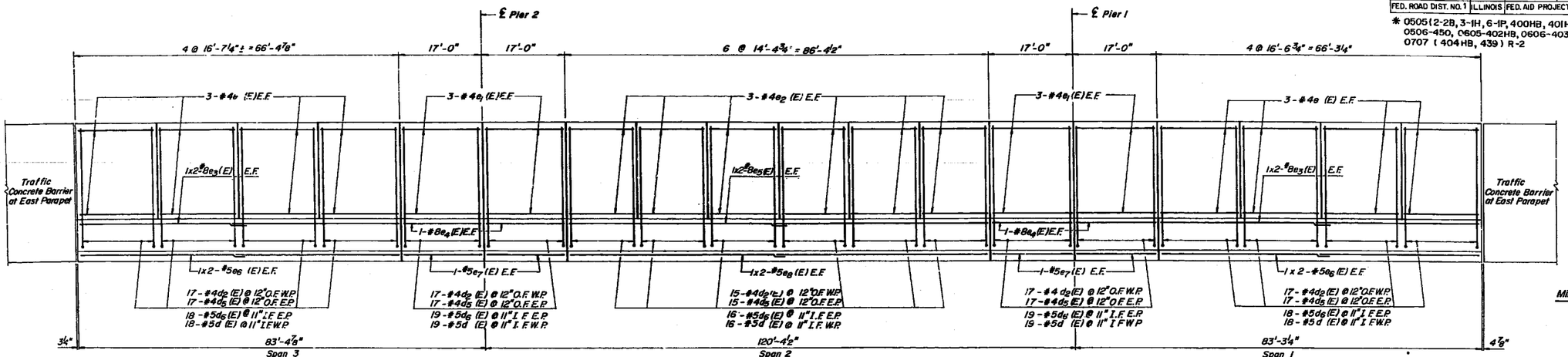
SUPERSTRUCTURE DETAILS (SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	-*	COOK	426	312
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 OF 13 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2



E.F - Each Face
O.F - Outside Face
I.F. Inside Face
W.P - West Parapet
E.P - East Parapet

Minimum Bar Lap

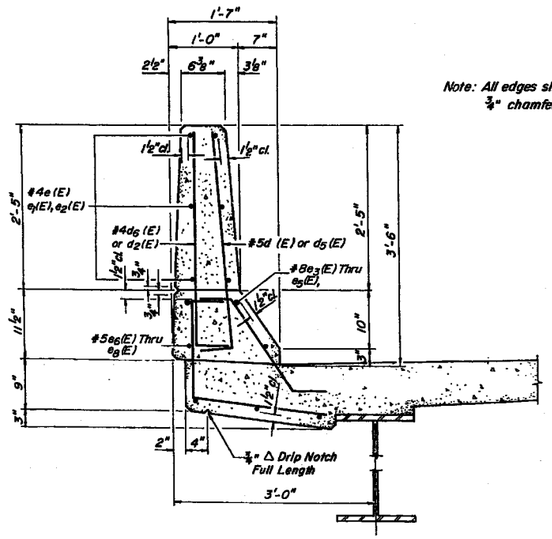
#5 - 2'-2"
#8 - 4'-6"

INSIDE ELEVATION OF PARAPET

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d (E)	316	#5	3'-8"	L
d_2 (E)	294	#4	3'-8"	L
d_5 (E)	294	#4	4'-0"	L
d_6 (E)	316	#5	4'-0"	L
e (E)	96	#4	16'-3"	—
e_1 (E)	48	#4	16'-8"	—
e_2 (E)	72	#4	14'-1"	—
e_3 (E)	16	#8	34'-10"	—
e_4 (E)	16	#8	16'-8"	—
e_5 (E)	8	#8	44'-10"	—
e_6 (E)	16	#5	34'-2"	—
e_7 (E)	16	#5	16'-8"	—
e_8 (E)	8	#5	44'-2"	—

ITEM	UNIT	TOTAL
Class X Concrete - Superstructure	Cu. Yd.	72.7
Reinforcement Bars - Epoxy Coated	Pound	10660
Protective Coat	Sq. Yd.	284

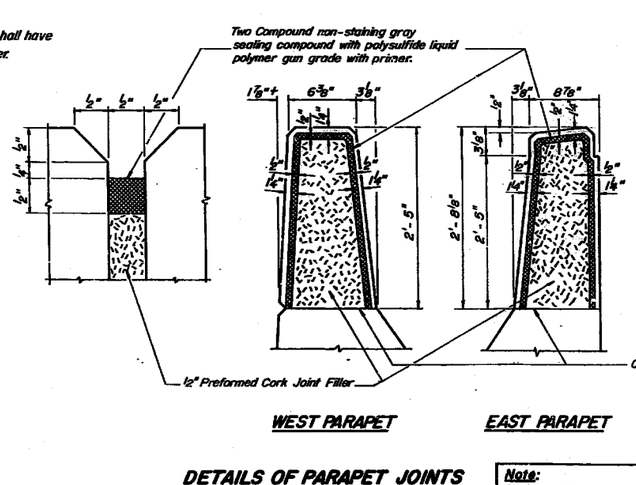


Note: All edges shall have 3/4" chamfer.

CONCRETE PARAPET REINFORCEMENT

(West Parapet)

Note: For Reinforcement Bars not Shown or Noted, See Sheet #5.

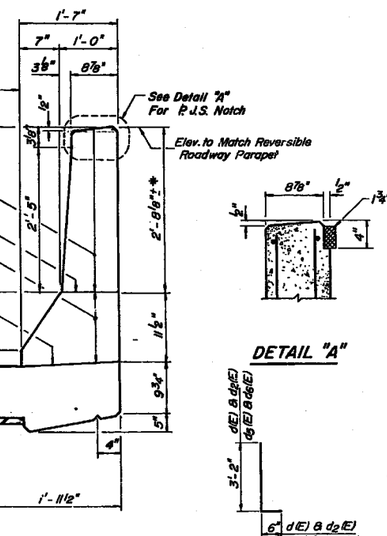


WEST PARAPET

EAST PARAPET

DETAILS OF PARAPET JOINTS

Note:
Preformed Cork, Sealer, Aluminum Sheets & P.J.S. shall be Incidental to Class X Concrete Supestructure.



* Adjust height in field as required to match Reversible Lane Parapet.

CONCRETE PARAPET

(East Parapet)

Note: For Reinforcement Bars not Shown, See West Parapet.

DETAIL "A"

Bars d(E), d_2(E), d_5(E) & d_6(E)

Notes:
1. Reinforcement Bars Designated Thus: 1x2-#5 Indicates 1 Line of Bar with 2 Lengths.
2. Reinforcement Bars Designated (E) Shall be Epoxy Coated.

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

SUPERSTRUCTURE DETAILS (SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

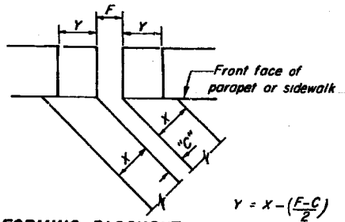
Joint Size	"C" at 50°F	"D" at 50°F
2	2"	1½" min.
4	3"	2½" min.

INSTALLATION NOTES

Use anchor blocks and continuous seal as anchor bolt location templates.

1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE: Maximum spacing of anchor bolts shall be 12" centers



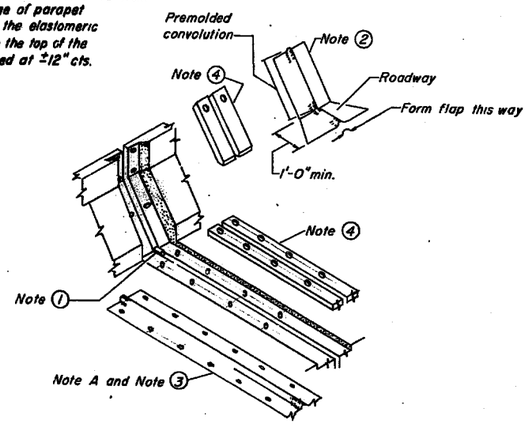
FORMING BLOCKOUT SKETCH

For Dimension F, See Sheet #5

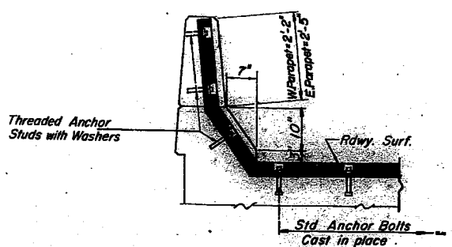
SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.

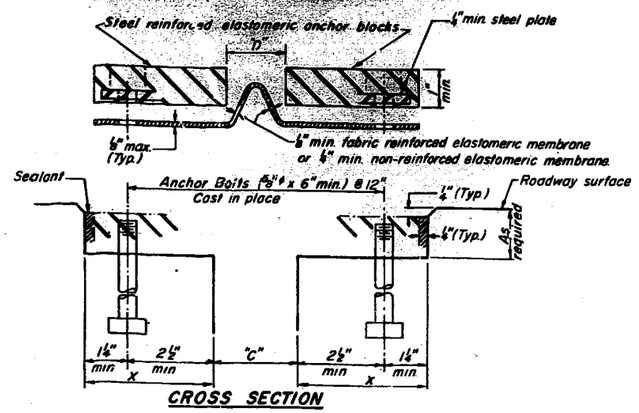


AT PARAPET

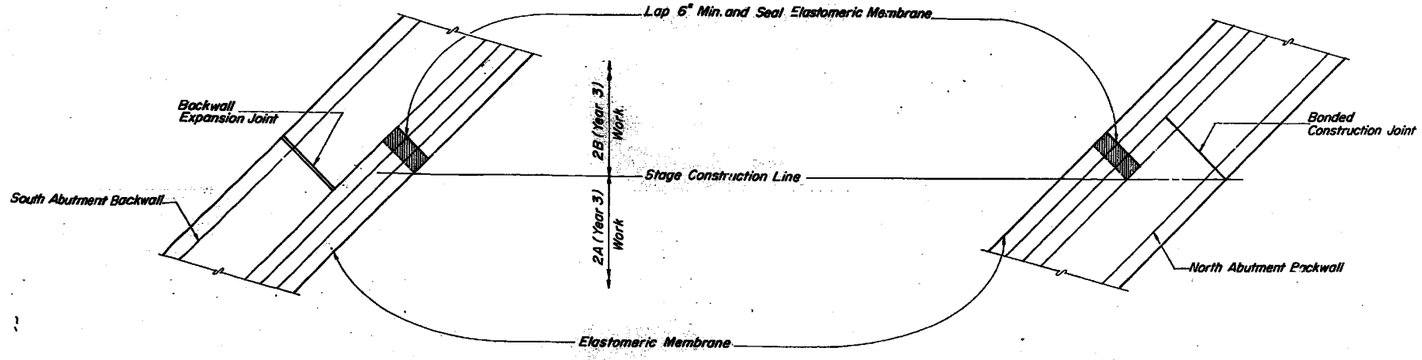


AT PARAPET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CROSS SECTION



ELASTOMERIC MEMBRANE SPLICE LOCATIONS

DESIGNED	E M M
CHECKED	J M N
DRAWN	F Q M
CHECKED	E M M

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	313
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

SHEET NO. 7 OF 13 SHEETS

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete Blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

All anchors for Neoprene Expansion Joint shall be cast in place and tied to transverse Deck Bars.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
2" Neoprene Exp. Joint	Lin. Ft.	122
4" Neoprene Exp. Joint	Lin. Ft.	132

EXPANSION DEVICES
(SOUTHEAST BOUND LANES)
SECTION

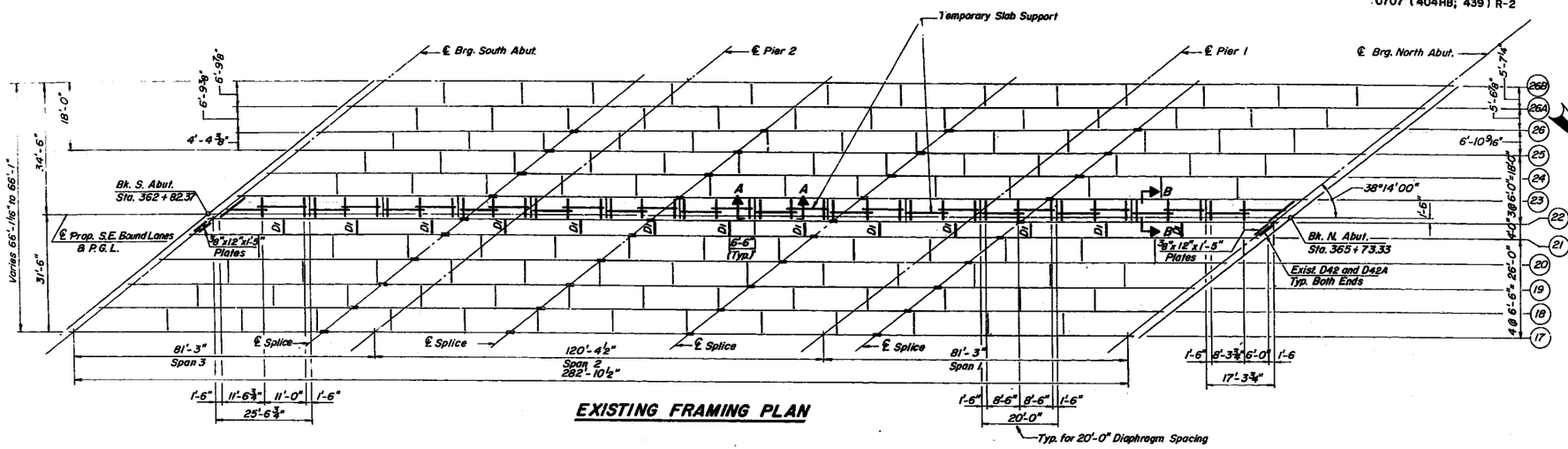
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE

COOK COUNTY

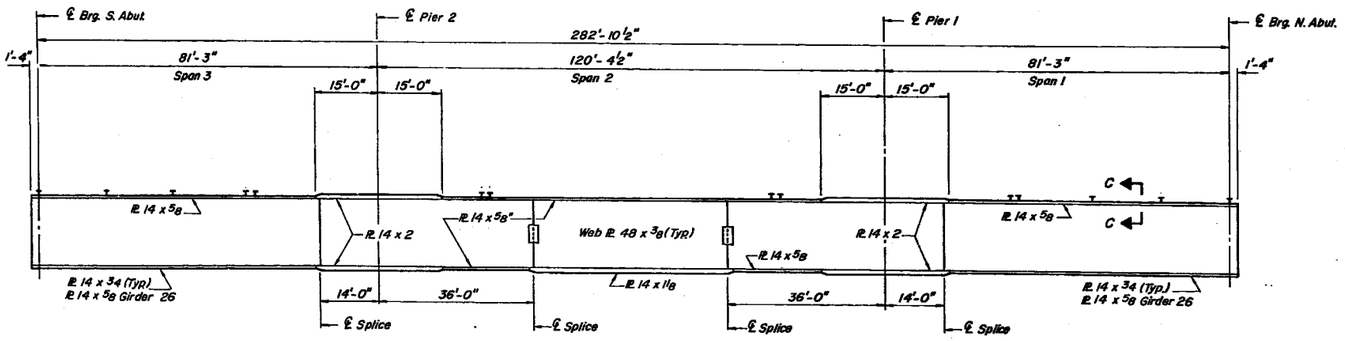
STATION 463+79.77

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.	SHEET NO. 8
F.A.I. 90/94	*	COOK	426	314	OF 13 SHEETS
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT			

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707-(404HB; 439) R-2

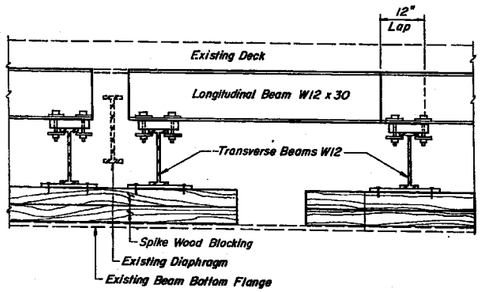


EXISTING FRAMING PLAN

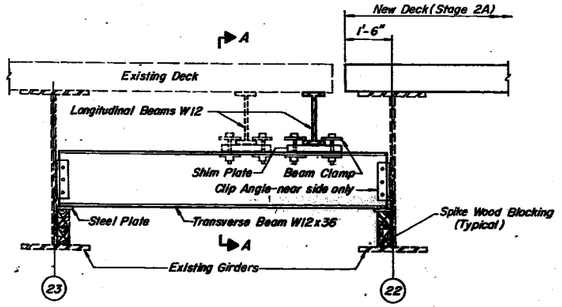


EXISTING GIRDER ELEVATION (17-26)

For Girders 26A and 26B See Sheet # 9

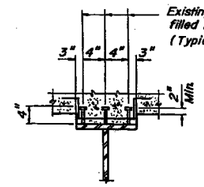


SECTION A-A

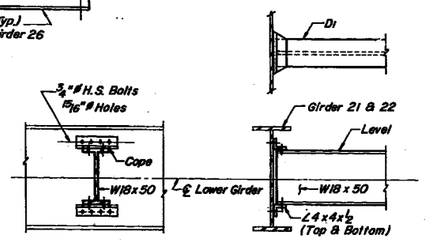


SECTION B-B

SUGGESTED TEMPORARY SUPPORT - EDGE EXIST. DECK



SECTION C-C



INTERIOR DIAPHRAGM D1

Notes For Temporary Slab Support:

All bolts are ⅞" Dia. High Strength. Bolt holes shall be 15⁄16" Dia. except slotted holes which are 15⁄16" x 1 1⁄2".

Slab support assembly shall be in place prior to deck removal and shall remain in place until supported deck is removed during stage 2B Construction.

Timber blocking shall be of sound condition free of rot and defects which will make the timber unsuitable for the intended use. All blocking shall be secured by clamps, spikes or other approved means, to prevent shifting due to traffic and construction vibrations.

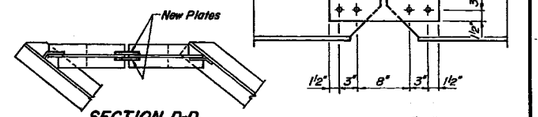
All details and drawings shown for the temporary slab support system are for information only.

The contractor shall be responsible to submit plans, design and detail for the temporary slab support system to the Engineer for his written approval. These plans, design and details shall be prepared and sealed by an Illinois Licensed Structural Engineer.

Cost of the slab support system, including all materials, labor and equipment necessary shall be included in the lump sum bid for "Temporary Slab Support System."

No drilling or welding will be allowed on the existing beams, except as shown. All required holes shall be drilled. No burning allowed.

Diaphragms D1 (W18 x 50) and Plates ⅜"x12"x1'-5", and all miscellaneous connections are furnished in earlier contract.



SECTION D-D

DETAIL "A"

Note: Two Hardened Washers shall be provided at 15⁄16"ø Holes for Diaphragms and Plates.

All holes in existing steel shall be drilled. No burning will be permitted. Cost incidental to Erecting Structural Steel.

INTERIOR GIRDER MOMENT TABLE

	0.4 Span 1	Pier	0.5 Span 2
Is (in⁴)	14817	38475	17419
Ic (in⁴)	40870	—	50970
Ss (in³)	628	1480	828
Sc (in³)	914	—	1185
℄ (k/1)	0.800	0.931	0.819
M ℄ (1k)	235	996	483
fs-non-comp. (ksi)	4.49	8.08	7.0
S ℄ (k/1)	0.258	0.258	0.258
Ms ℄ (1k)	99	279	203
M ℄ (1k)	570	602	739
M Imp (1k)	138	133	151
TOTAL (1k)	807	1014	1093
fs-comp. (ksi)	10.60	8.22	11.07
fs TOTAL (ksi)	15.09	16.30	18.07
VR (k)	49.3	—	50.0

INTERIOR GIRDER REACTION TABLE

	Abut.	Pier
R ℄ (k)	27.5	125.8
R ℄ (k)	40.7	63.0
Imp (k)	9.8	13.8
R TOTAL (k)	78.0	202.6

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs TOTAL.

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs TOTAL.

VR is the maximum ℄ + Impact shear range in span.

NEW PLATES FOR EXIST. END DIAPHRAGMS

Wt. Structural Steel this Sheet = 3420 Lbs. *

* Furnished in previous contract.

ERECT IN THIS CONTRACT ONLY

DESIGNED	EMM
CHECKED	JMN
DRAWN	JPM/FQM
CHECKED	EMM

FRAMING PLAN AND DETAILS (SOUTHEAST BOUND LANES)

SECTION

F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE

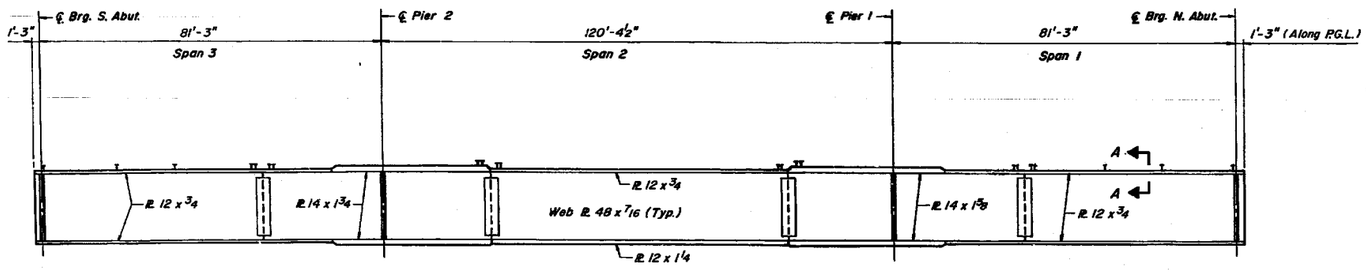
COOK COUNTY

STATION 463+79.77

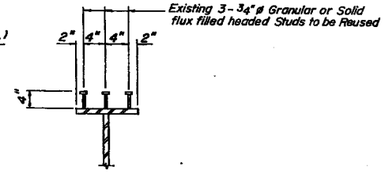
*0505 (2-2B, 3-1H, 6-1R, 400HB, 401HB, 451)
0506 (450, 0605-402HB, 0606-403HB &
0707 (404HB, 439) R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	315
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9 OF 13 SHEETS



EXISTING GIRDER ELEVATION
Girders 26A and 26B (For Information only)



SECTION A-A

GIRDER 26A MOMENT TABLE			
	0.4 Span 3	Pier 2	0.5 Span 2
Is (in⁴)	14732	30035	17982
Ic (in⁴)	36822		47486
Ss (in³)	595	1166	820
Sc (in³)	853		1153
℄ (k/l)	0.796	0.867	0.777
M℄ (l k)	251	970	512
fs-non-comp.(ksi)	5.07	9.98	7.49
S℄ (k/l)	0.249	0.249	0.249
Ms℄ (l k)	103	261	218
M℄ (l k)	580	570	780
M Imp (l k)	140	127	159
TOTAL (l k)	823	958	1157
fs-comp. (ksi)	11.58	9.86	12.04
fs TOTAL (ksi)	1664	19.84	19.53
VR (k)	50.7		47.8

GIRDER 26A REACTION TABLE		
	S. Abut.	Pier #2
R℄ (k)	27.9	123.2
R℄ (k)	41.9	63.8
Imp (k)	10.2	14.1
R TOTAL (k)	80.0	201.1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs TOTAL.

Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs TOTAL.

VR is the maximum ℄ + impact shear range in span.

DESIGNED	EMM
CHECKED	JMN
DRAWN	JPM
CHECKED	EMM

Hanson, Wyns & Associates, Inc.
Consulting Engineers
Chicago, Illinois 60606

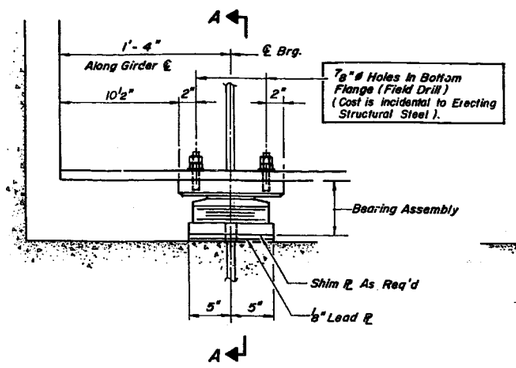
FRAMING DETAILS
(SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

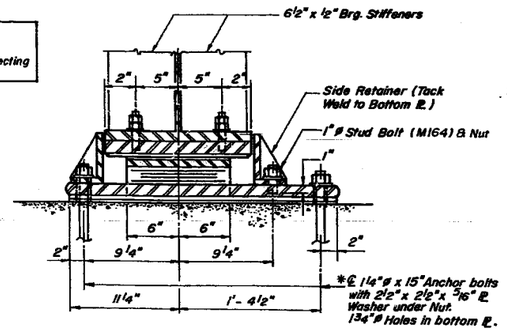
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 90/94	*	COOK	426	316
FED ROAD DIST NO.	ILLINOIS	FED AID PROJECT		

SHEET NO 10 OF 13 SHEETS

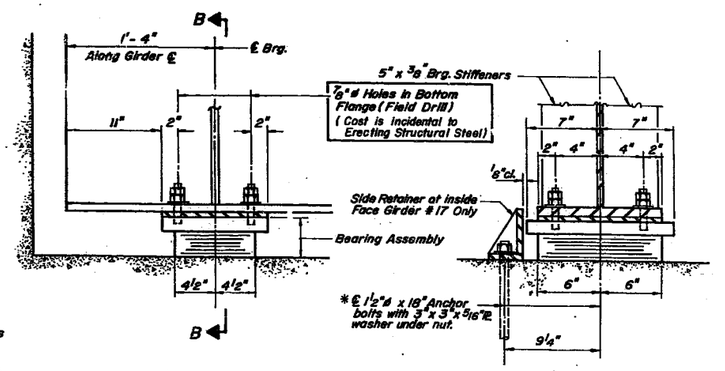
* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0606-402HB, 0606-403HB & 0707-(404HB, 439) R-2



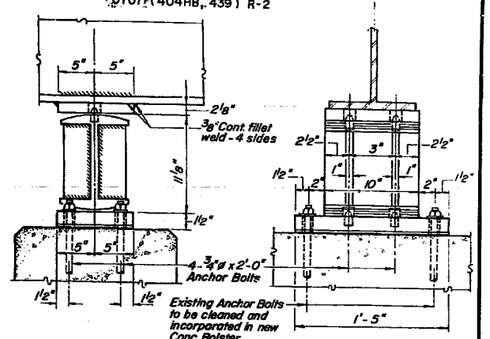
ELEVATION AT NORTH ABUT.



SECTION A-A



SECTION B-B



ELEVATION AT SOUTH ABUT.

EXISTING BEARING AT ABUTMENT

NOTE: Remove Existing Bearings on Girders 17 thru 26 including top plate using Air Method. Grind remaining remnants of weld smooth in long direction after removing Top Plate. Do not remove more than ⅛" depth of flange material during gouging and grinding.

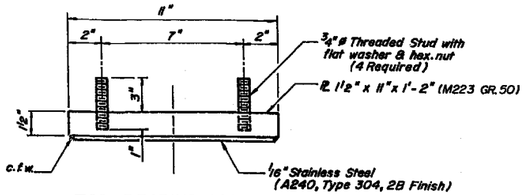
TYPE II TFE ELASTOMERIC EXPANSION BEARING

(NO. REQUIRED = 10)
JACKING REACTION = 28ᵏ

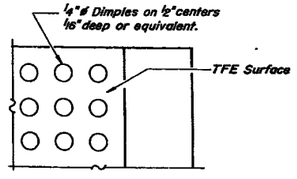
* See Sheet #12 for Anchor Bolt Installation.

TYPE I TFE ELASTOMERIC EXPANSION BEARING

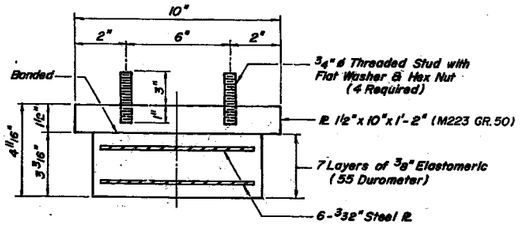
(NO. REQUIRED = 10)
JACKING REACTION = 28ᵏ

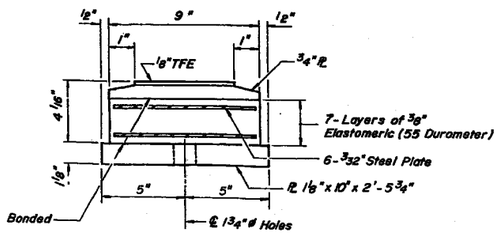


TOP BEARING ASSEMBLY

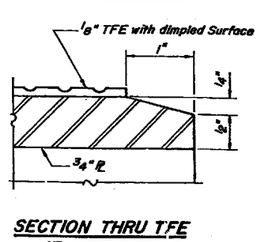


PLAN-TFE SURFACE

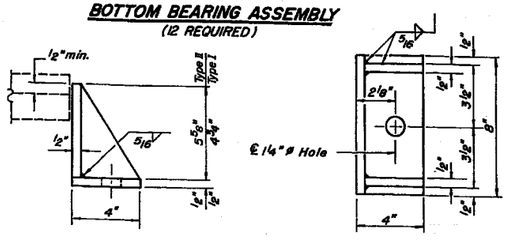




BOTTOM BEARING ASSEMBLY
(12 REQUIRED)



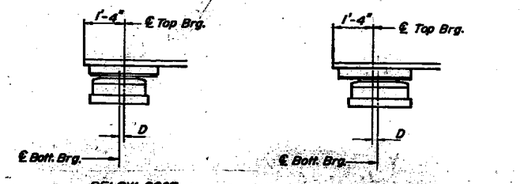
SECTION THRU TFE
(Type II Typical)



SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
No. Required = 21

NOTE: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BELOW 50°F. (Move bott. brg. away from fixed brg.)

ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.
D = ⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Install Elastomeric Bearing Assembly Type I	Each	10
Install Elastomeric Bearing Assembly Type II	Each	10

Wt. Structural Steel This Sheet = 430 Lbs. *

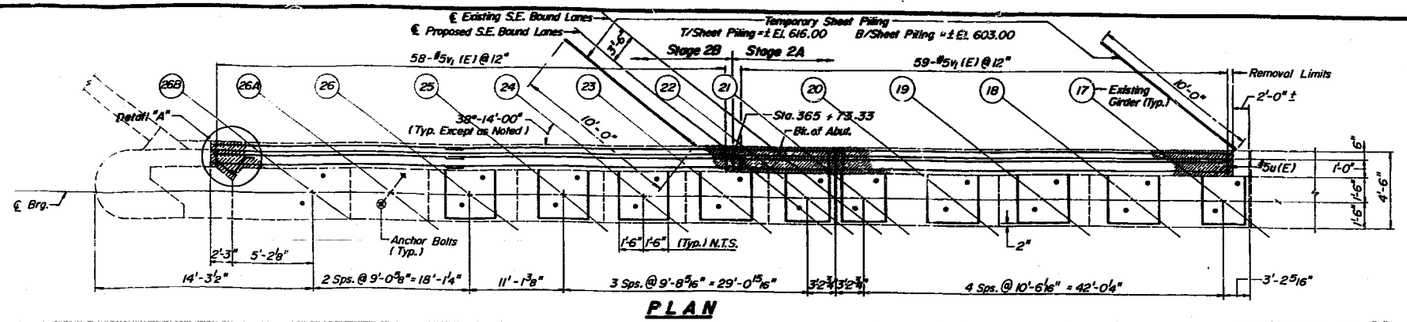
*Furnished in previous contract.

INSTALL IN THIS CONTRACT

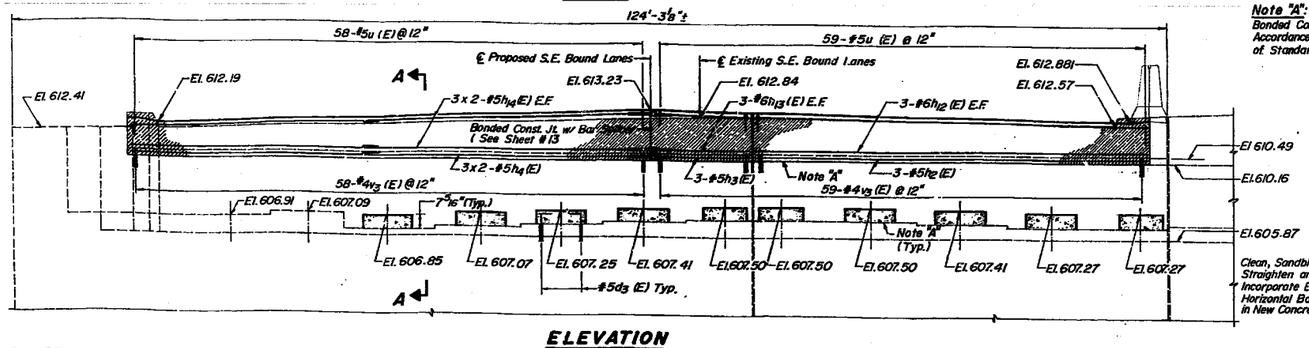
DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

BEARING DETAILS (SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

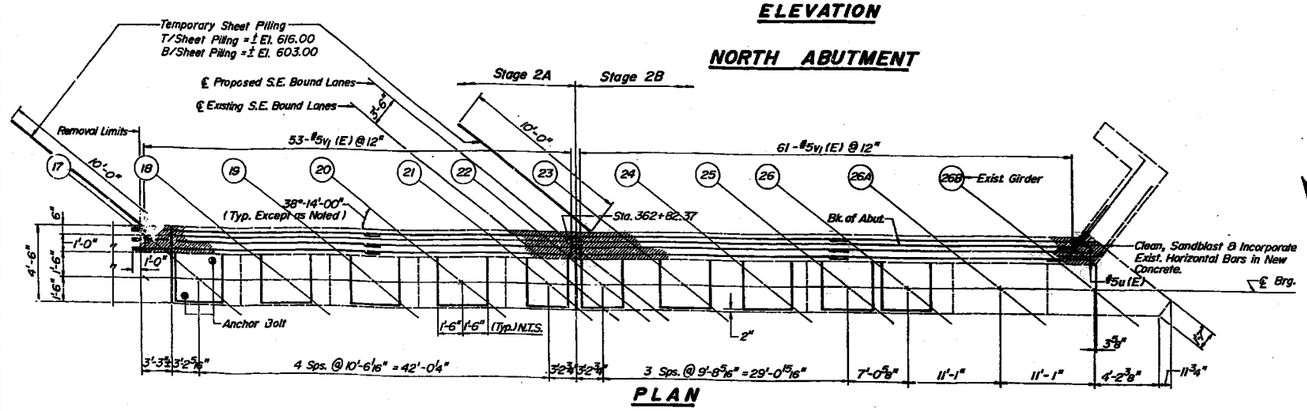


PLAN

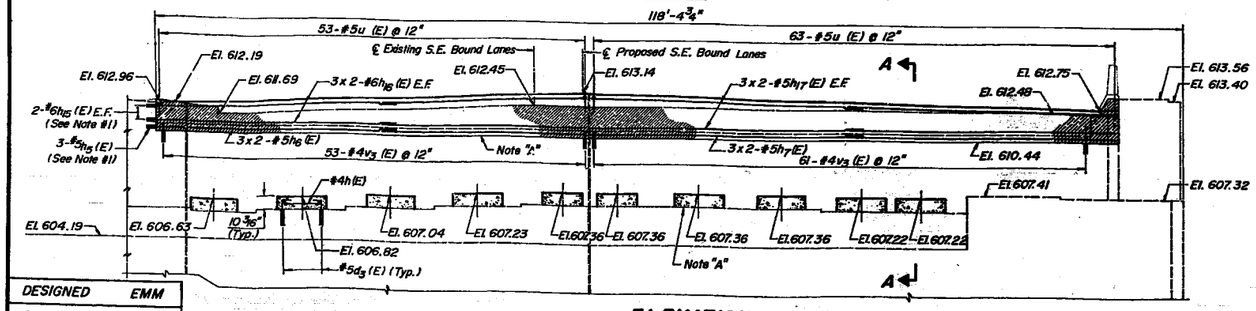


ELEVATION

NORTH ABUTMENT



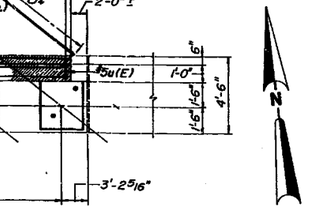
PLAN



ELEVATION

SOUTH ABUTMENT

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM/RAA/k
CHECKED	EMM

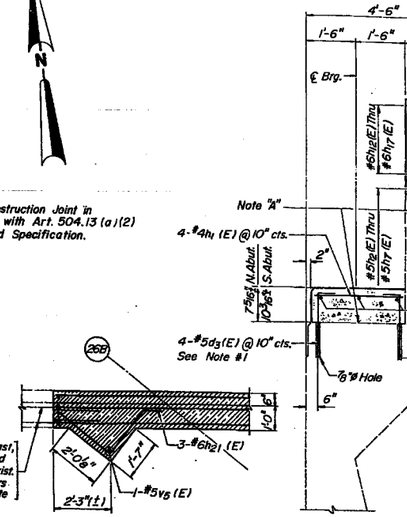


* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	317
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11 OF 13 SHEETS

Note "A": Bonded Construction Joint in Accordance with Art. 504.13 (a)(2) of Standard Specification.



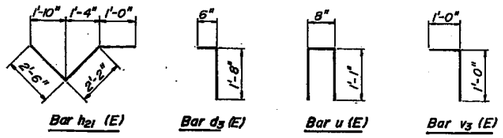
DETAIL "A"

SECTION A-A
Note: Work w/ Sheet #5

BILL OF MATERIAL

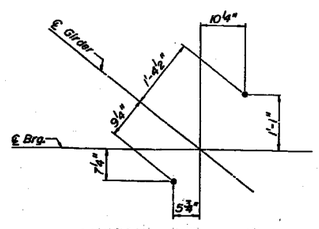
BAR	NO	SIZE	LENGTH	SHAPE
d_3 (E)	80	#5	1'-11"	L
h (E)	60	#4	2'-8"	—
h_1 (E)	80	#4	2'-6"	—
h_2 (E)	3	#5	46'-1"	—
h_3 (E)	3	#5	11'-4"	—
h_4 (E)	6	#5	30'-5"	—
h_5 (E)	3	#5	3'-10"	—
h_6 (E)	6	#5	25'-4"	—
h_7 (E)	6	#5	31'-9"	—
h_{12} (E)	6	#6	46'-1"	—
h_{13} (E)	6	#6	11'-4"	—
h_{14} (E)	12	#6	30'-5"	—
h_{15} (E)	4	#6	4'-1"	—
h_{16} (E)	12	#6	25'-1"	—
h_{17} (E)	12	#6	31'-9"	—
h_{21} (E)	4	#6	5'-8"	✓
u (E)	233	#5	2'-10"	⊓
v_1 (E)	231	#5	2'-0"	—
v_3 (E)	231	#4	1'-8"	L
v_5 (E)	1	#5	1'-3"	—

ITEM	UNIT	TOTAL
Class X Concrete	Cu. Yds.	27.5
Reinforcement Bars (Epoxy Coated)	Pound	4830
Concrete Removal	Cu. Yds.	19.2
Structure Excavation	Cu. Yds.	29.4
Temporary Sheet Piling	Sq. Ft.	520
Porous Granular Embankment	Cu. Yd.	24
Protective Surface Treatment	Sq. Ft.	768



DRILL & EPOXY GROUT BARS AS FOLLOWS:

BAR	HOLE DIAMETER	DEPTH OF HOLE
d_3 (E)	⅞"	9"
h_5 (E)	⅞"	9"
h_{15} (E)	1"	1'-0"
v_3 (E)	¾"	6"



ANCHOR BOLT LAYOUT
(TYPICAL ALL GIRDERS)

LEGEND:

E.F — Each Face
N.T.S. — Not to Scale
▨ — Indicates Concrete Removal
Note #1 — Drill & Epoxy Grout into Exist. Abutment (See Special Provisions)

Reinforcement Bars Designated (E) Shall be Epoxy Coated.

Minimum Bar Lap
#5 — 2'-2"
#6 — 2'-7"

Reviewed, Wyne & Associates, Inc. Chicago, Illinois

ABUTMENT REHABILITATION
(SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463 + 79.77

△ As Revised 9-22-92 pmp

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

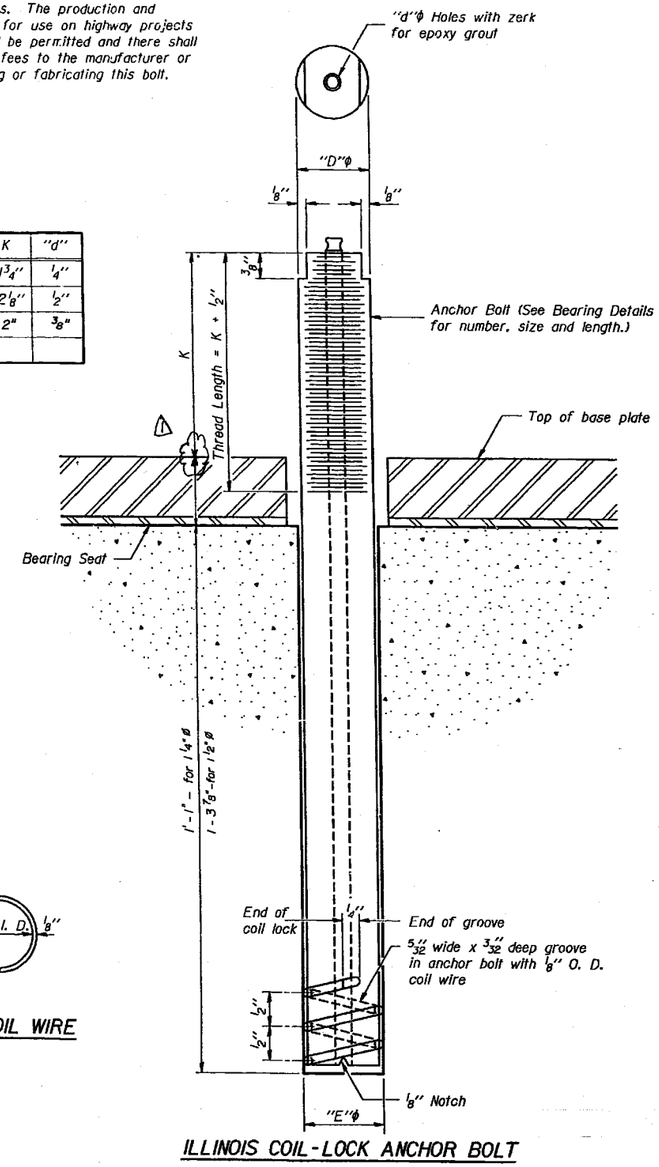
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	318
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

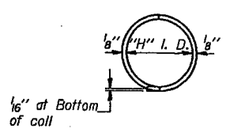
SHEET NO. 12 OF 13 SHEETS

* 0505 (2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Erecting Structural Steel".

INSTALL IN THIS CONTRACT

ABB-1 12-1-83

Nakawatase, Wyne & Associates, Inc. ENGINEERS ARCHITECTS 205 WEST WACKER DRIVE CHICAGO, ILLINOIS 60606

ANCHOR BOLT DETAILS
(SOUTHEAST BOUND LANES)

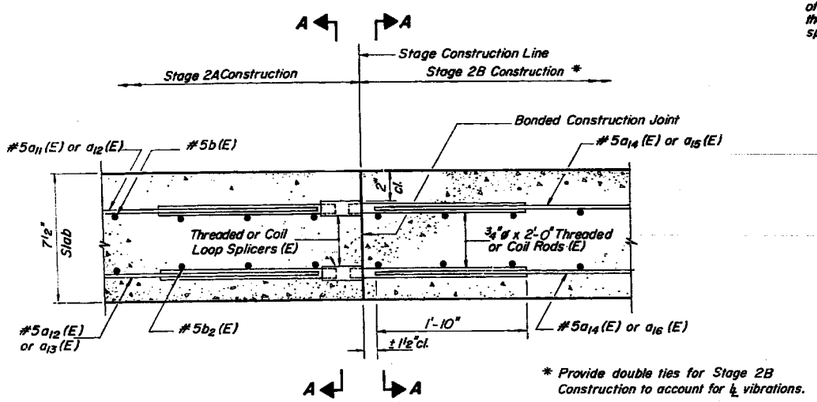
SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

△1 As Revised 9-22-92 PMP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
F.A.I. 90/94	*	COOK	426	319
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

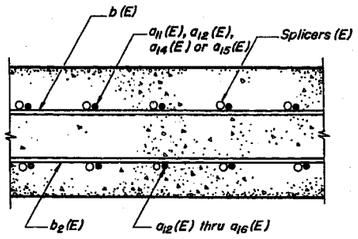
SHEET NO. 13 OF 13 SHEETS

* 0505(2-2B, 3-1H, 6-1P, 400HB, 401HB, 451) 0506-450, 0605-402HB, 0606-403HB & 0707 (404HB, 439) R-2



* Provide double ties for Stage 2B Construction to account for ℄ vibrations.

SECTION THRU SLAB

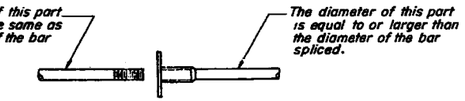


SECTION A-A

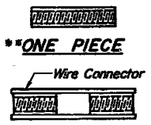
SPLICER DETAILS

Cost of Bar Splicer (Coupler) is incidental to Reinforcement Bars (Epoxy Coated).

No. Required: 837 - Slab
9 - Abutment



ROLLED THREAD DOWEL BAR

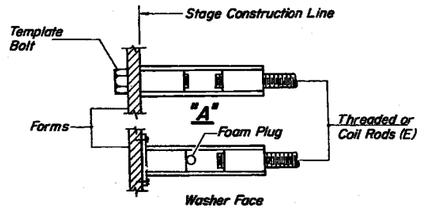


**ONE PIECE

WELDED SECTIONS

SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A563, Grade C, D or DH may be used



INSTALLATION AND SETTING METHODS

"A" Set splicer by means of a template bolt
"B" Set splicer by nailing to wood forms or cementing to steel forms.
(E) Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal or greater than that of the lapped reinforcement bars.

Splicer rods shall extend minimum 1½" inches into the couplers.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other system of similar design maybe submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements.

① Minimum Capacity = 125 x fy x A_t (Tension in kips)

② Minimum * Pull-out strength = 125 x fs_{allow} x A_t (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi

fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_t = Tensile stress area of lapped reinforcement bars.

* 28 day concrete.

Typical Splicer (Coupler) Assembly Sizes:

In Slabs — #5 bar lap with ¾"ø Splicer (Coupler) x 2'-0" Splicer Rods — Minimum Capacity = 23.0 kips - tension; Minimum Pull-out Strength = 9.2 kips - tension

In Substructure — #7 bar lap with 1"ø Splicer (Coupler) x 3'-6" Splicer Rods — Minimum Capacity = 45.1 kips - tension; Minimum Pull-out Strength = 18.0 kips - tension

In Substructure — #8 bar lap with 1⅛"ø Splicer (Coupler) x 4'-6" Splicer Rods — Minimum Capacity = 58.9 kips - tension; Minimum Pull-out Strength = 23.6 kips - tension

DESIGNED	EMM
CHECKED	JMN
DRAWN	FQM
CHECKED	EMM

Nakawatase, Wyns & Associates, Inc.
ENGINEERS - ARCHITECTS
225 WEST WACKER DRIVE
CHICAGO, ILLINOIS 60606

BAR SPLICER DETAILS
(SOUTHEAST BOUND LANES)

SECTION
F.A.I. ROUTE 90/94 OVER FULLERTON AVENUE
COOK COUNTY
STATION 463+79.77

WESTERN

TBM – CHISELED SQUARE – S.E. CORNER OF E. ABUTMENT N WINGWALL – FAI–90/94 BRIDGE OVER WESTERN AVENUE – EL. 609.13 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	320
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 1 OF 40 SHEETS

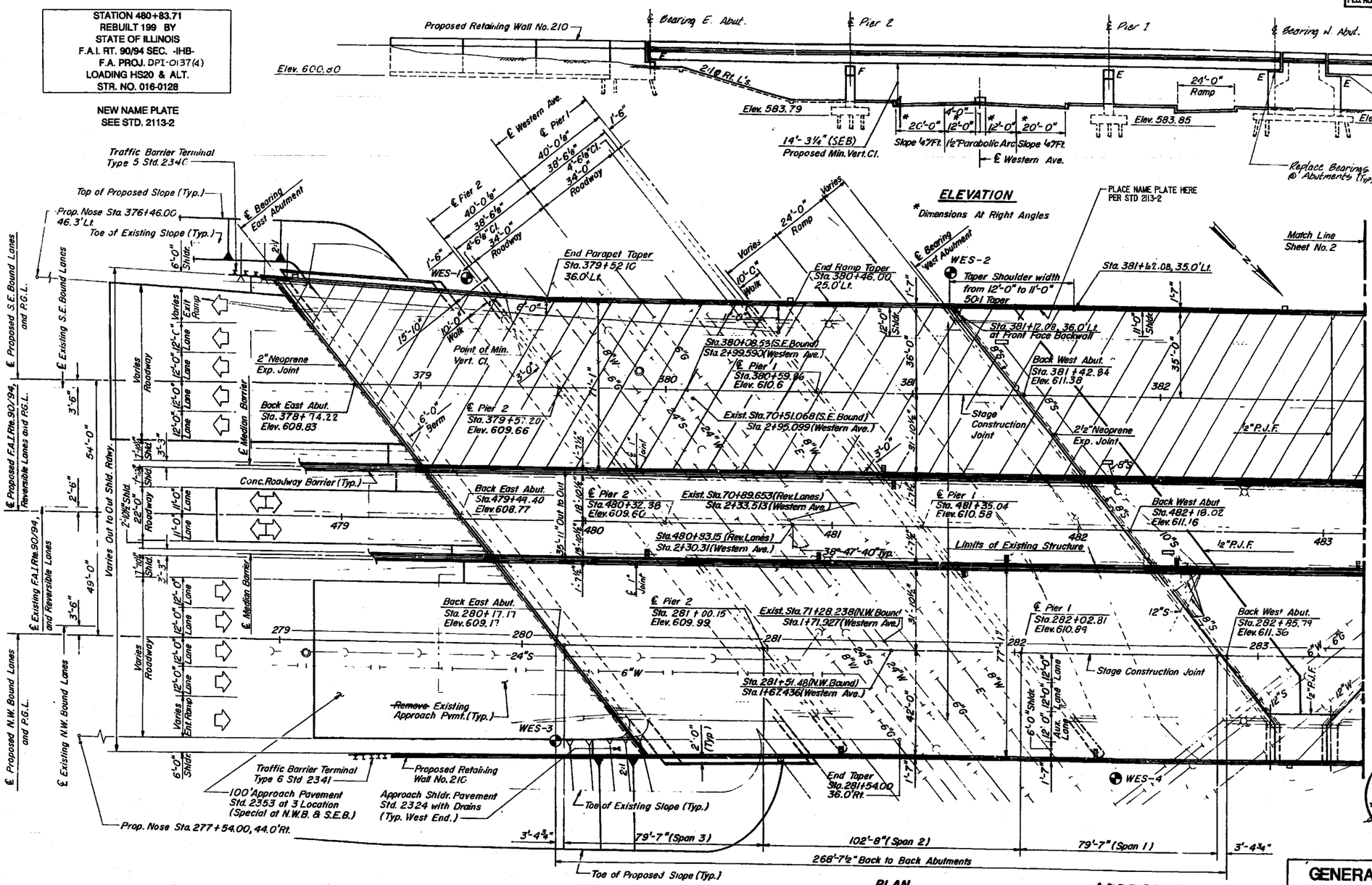
* 0505(2-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

STATION 480+83.71
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPI-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0128

NEW NAME PLATE
SEE STD. 2113-2

ELEVATION

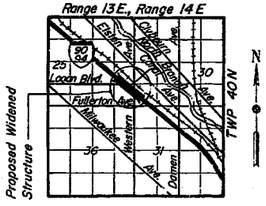
*Dimensions At Right Angles



PLAN

LEGEND

- Existing Sewer
- Existing Water Main
- Existing Gas Main
- Existing Electric
- Existing Bridge Lighting Conduit
- Existing Light Pole
- Existing Manhole
- Existing Catch Basin
- Existing Inlet
- Location of New Borings
- New Scupper (Bridge)
- Stage 2 (Year 3) Work



LOCATION MAP

RICHARD E. WITTER
081-002852
LICENSED STRUCTURAL ENGINEER OF ILLINOIS
2/4/92
Exp. 11/30/92

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Alfred Benesch & Co., Consulting Engineers

NOTE:
THE PLAN VIEW SHOWS THE PROPOSED (FINAL) DEVELOPMENT OF THE BRIDGE. THIS CONTRACT COVERS STAGE 2 (YEAR 3) WORK ONLY.

STANLEY CONSULTANTS

STRUCTURE NO. 016-0128

GENERAL PLAN AND ELEVATION

S.E.B. ERECTION CONTRACT

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVENUE

COOK COUNTY

STATION 480+83.71

LOGAN

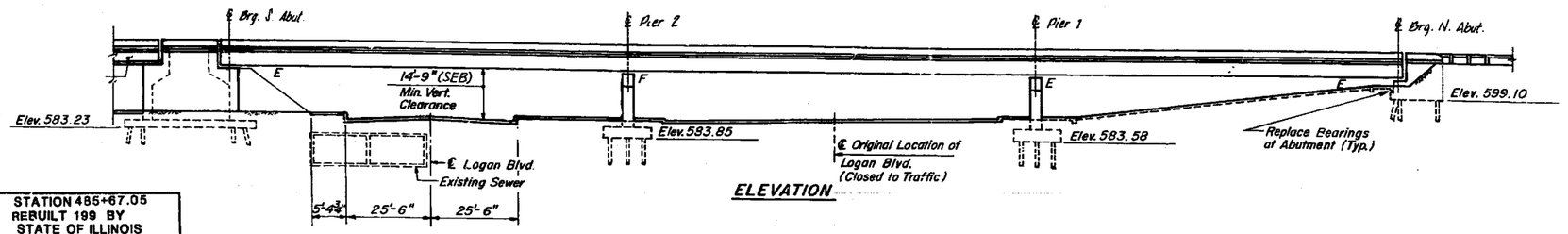
TBM – CHISELED SQUARE – NE. CORNER OF N. ABUTMENT W. WINGWALL – FAI–90/94 BRIDGE OVER LOGAN BOULEVARD – EL. 608.59 (U.S.G.S. DATUM)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	321
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2 OF 40 SHEETS



ELEVATION

STATION 485+67.05
REBUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 90/94 SEC. -IHB-
F.A. PROJ. DPI-0137(4)
LOADING HS20 & ALT.
STR. NO. 016-0127

RELOCATE EXISTING NAME PLATE ADJACENT TO NEW NAME PLATE

COST OF RELOCATION INCIDENTAL TO "NAME PLATE"

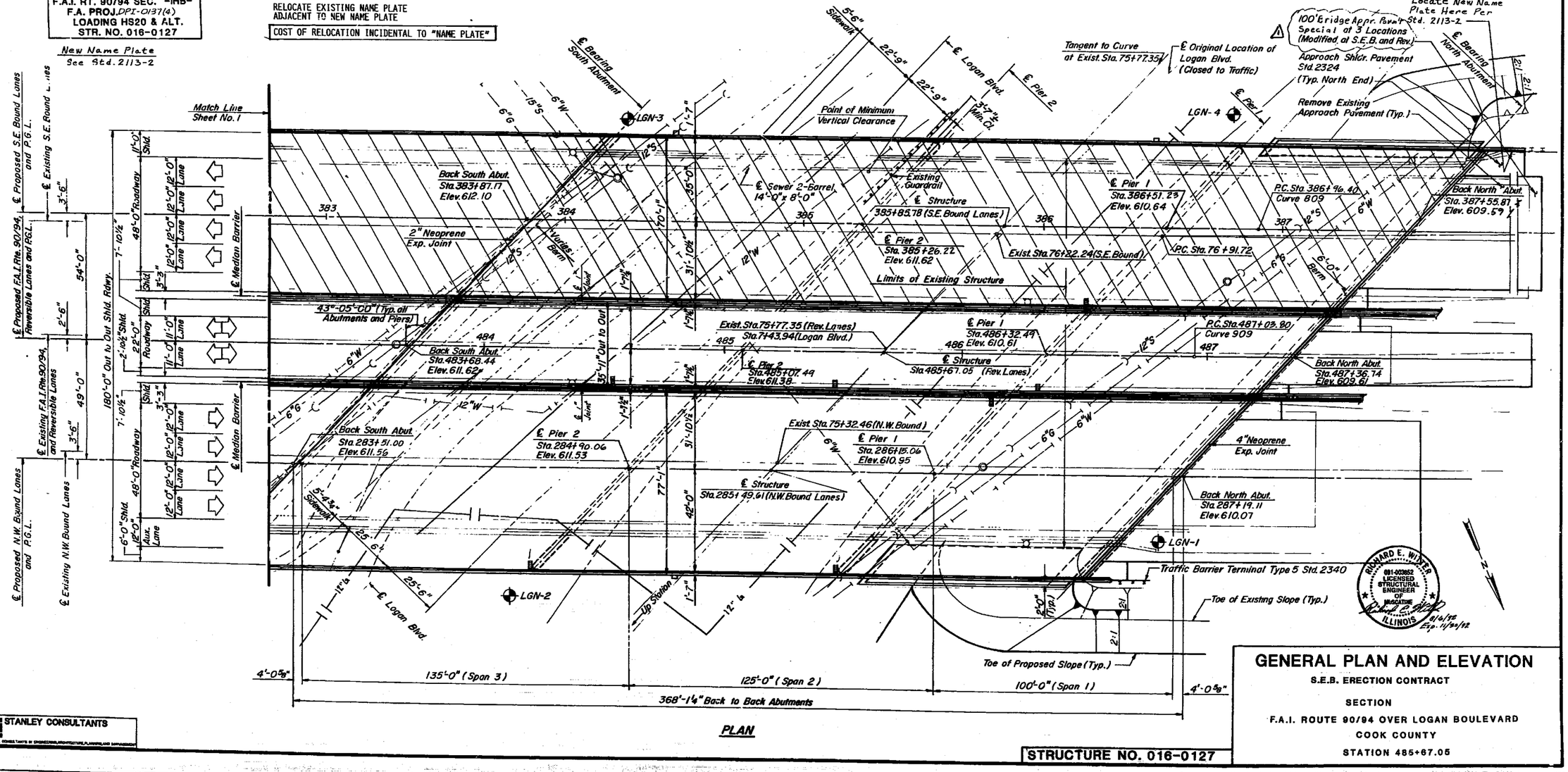
New Name Plate See Std. 2113-2

HORIZONTAL CURVE DATA

PROPOSED F.A.I. ROUTE 90/94

	CURVE 809 S.E. BOUND LANES	CURVE 909 REVERSIBLE LANES
P.I. STA.	389+04.11	488+73.92
△	6°-17'-2.54"	3°-56'-58.09"
D	1°-30'-51.0"	1°-09'-40.0"
R	3783.84'	4934.00'
L	415.00'	340.11'
E	5.70'	2.93'
T	207.71'	170.12'
S.E.	0.034'/Ft.	0.026'/Ft.

Locate New Name Plate Here Per Std. 2113-2



PLAN

RICHARD E. WINTER 081-003652 LICENSED STRUCTURAL ENGINEER OF ILLINOIS 9/8/92 Exp. 11/30/92

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

GENERAL PLAN AND ELEVATION

S.E.B. ERECTION CONTRACT

SECTION

F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

STRUCTURE NO. 016-0127

661

△ As Revised 9-22-92 PMP

PROFILE GRADE
LOGAN BLVD.
(Along ℄ Roadway)

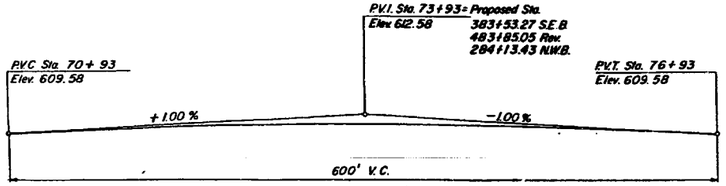
Station	Elevation
5+92	590.05
6+02	590.01
6+12	590.02
6+22	589.93
6+32	589.88
6+42	589.87
6+52	589.88
6+62	589.96
6+72	590.00
6+82	590.02
6+92	590.04
7+17	590.16
7+42	590.30
7+67	590.38
7+92	590.52
8+02	590.55
8+12	590.52
8+22	590.46
8+32	590.44
8+42	590.36
8+52	590.17
8+62	590.02
8+72	589.85
8+82	589.65
8+92	589.43
9+02	589.14
9+12	588.87

NOTE: ELEVATIONS TAKEN FROM EXISTING PLANS.

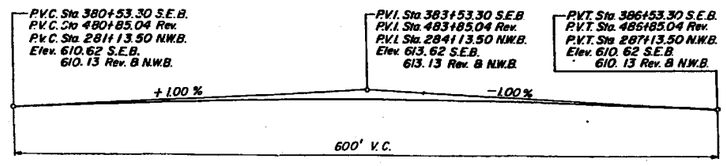
PROFILE GRADE
WESTERN AVENUE
(Along West Edge of Median)

Station	Elevation
0+83	588.43
0+93	588.56
1+03	588.64
1+13	588.72
1+23	588.74
1+33	588.73
1+43	588.78
1+53	588.79
1+63	588.78
1+73	588.80
1+83	588.87
2+08	588.94
2+33	589.08
2+58	589.05
2+83	589.29
2+93	589.39
3+03	589.50
3+13	589.63
3+23	589.78
3+33	589.94
3+43	590.18
3+53	590.46
3+63	590.79
3+73	591.17
3+83	591.55
4+08	592.44
4+33	593.14

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ORIGINAL THEORETICAL PROFILE



PROPOSED PROFILE GRADE
FAI. RTE. 90/94

TOTAL BILL OF MATERIAL

ITEM	UNIT	WESTERN AVENUE			VAULTED SLAB			LOGAN BOULEVARD		
		SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	671.6	-	671.6	920.0	-	920.0	901.2	-	901.2
CLASS X CONCRETE	CU. YDS.	-	24.9	24.9	-	-	-	-	14.3	14.3
REINFORCEMENT BARS	POUND	-	-	-	-	-	-	-	-	-
REINFORCEMENT BARS (EPOXY COATED)	POUND	158,410	3,910	162,320	225,070	-	225,070	208,920	2,590	211,510
PROTECTIVE COAT (1)	SQ. YDS.	2,290	-	2,290	2,100	-	2,100	3,060	-	3,060
NEOPRENE EXPANSION JOINT 2"	LIN. FT.	97	-	97	-	-	-	94	-	94
NEOPRENE EXPANSION JOINT 2 1/2"	LIN. FT.	90	-	90	-	-	-	-	-	-
NEOPRENE EXPANSION JOINT 4"	LIN. FT.	-	-	-	-	-	-	94	-	94
BRIDGE DECK GROOVING	SQ. YDS.	2030	-	2030	1859	-	1859	2707	-	2707
REMOVAL OF EXISTING CONCRETE DECK (2)	LUMP SUM	0.1	-	0.1	0.1	-	0.1	0.1	-	0.1
CONCRETE REMOVAL	CU. YDS.	-	19.2	19.2	-	-	-	-	8.3	8.3
REMOVAL OF TEMP. SLAB SUPPORT SYSTEM *	LUMP SUM	0.3	-	0.3	-	-	-	0.3	-	0.3
PROTECT AND MAINTAIN EXISTING UNDERPASS LUMINAIRE	LUMP SUM	-	0.1	0.1	-	-	-	-	0.1	0.1
ERECTING STRUCTURAL STEEL (3)	LUMP SUM	0.1	-	0.1	-	-	-	0.1	-	0.1
INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10	-	10	-	-	-	10	-	10
INSTALL ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	10	-	10	-	-	-	10	-	10
NAME PLATE	EACH	1	-	1				1	-	1
STUD SHEAR CONNECTOR	EACH	5,796	-	5,796	-	-	-	6,474	-	6,474
JACK AND REMOVE EXISTING BEARINGS (6)	EACH	20	-	20	-	-	-	20	-	20
JACK AND REPOSITION BEARINGS (7)	EACH	1	-	1	-	-	-	2	-	2
1" DIAMETER ANCHOR BOLTS	EACH	-	4	4	-	-	-	-	3	3
RIVET REMOVAL & REPLACEMENT	EACH	10	-	10				30	-	30
PROTECTIVE SHIELD (4)	SQ. YDS.	2,225	-	2,225	-	-	-	3,333	-	3,333
FURNISH & INSTALL BRIDGE SCUPPER-TYPE A	EACH	1	-	1	-	-	-	1	-	1
DRAINAGE SYSTEM (5)	LUMP SUM	0.1	-	0.1	-	-	-	0.2	-	0.2
PROTECTIVE SURFACE TREATMENT	SQ. YDS.	-	100	100	-	-	-	-	85	85

(1) PROTECTIVE COAT QUANTITY INCLUDES DECK SURFACE AND FACE OF BARRIER RAILS. SEE SPECIAL PROVISIONS FOR CURING AND TEXTURING BRIDGE DECK.

(2) INCLUDES 18,800 SQ. FT. FOR WESTERN AVE., 17,600 SQ. FT. FOR VAULTED SLAB, AND 25,100 SQ. FT. FOR LOGAN BLVD. OF EXISTING CONCRETE DECK REMOVAL.

(3) INCLUDES 6230 POUNDS OF STRUCTURAL STEEL. STEEL ITEMS INCLUDE DIAPHRAGM ASSEMBLIES BETWEEN BEAMS 20 & 21, ABUTMENT BEARING SIDE RETAINERS AND ANCHOR BOLTS.

(4) SEE SHEET 4 FOR LIMITS OF PROTECTIVE SHIELD

(5) SEE SPECIAL PROVISIONS

(6) D.L. REACTION = 13k WESTERN AVE. ABUTMENTS
15k LOGAN BLVD. NORTH ABUT.
30k LOGAN BLVD. SOUTH ABUT.
(D.L. OF BEAM + 200 LBS PER LIN. FT. CONST. D.L.)

(7) D.L. REACTION = 50k WESTERN AVE. PIER #1
46k LOGAN BLVD. PIER #1
(D.L. OF BEAM + 200 LBS PER LIN. FT. CONST. D.L.)

STANLEY CONSULTANTS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	322
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
40 SHEETS

GENERAL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE AASHTO M 183 EXCEPT AS NOTED.

3. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER IN WRITING.

4. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

5. THE CONTRACTOR SHALL MAKE ALLOWANCE FOR THE DEFLECTION OF FORMS, SHRINKAGE AND SETTLEMENT OF FALSEWORK, IN ADDITION TO ALLOWANCE FOR DEAD LOAD DEFLECTION. (VAULTED SLAB ONLY).

6. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

7. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. (FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED). SHIMS PROVIDED BY OTHERS.

8. ALL CONTACT SURFACE AREAS OF THE EXISTING STRUCTURAL STEEL TO WHICH NEW STRUCTURAL STEEL IS TO BE CONNECTED SHALL BE FREE OF PAINT OR LACQUER.

9. THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE BRIDGE CONCRETE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES NOT PERMITTED.

10. EXIST. STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED ONLY AS REQUIRED BY THE SPECIAL PROVISION "CLEANING AND PAINTING NEW STEEL AND ADJACENT AREAS OF EXISTING STRUCTURES."

GENERAL NOTES CONT'D.:

11. PRIOR TO POURING THE NEW CONCRETE FOR THE DECK, ALL LOOSE RUST, LOOSE MILL SCALE, LOOSE PAINT AND ALL FOREIGN MATERIAL SHALL BE REMOVED FROM THE EMBEDDED PORTIONS OF FLANGES OF STRINGERS (GIRDERS). THE REMOVAL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SSPC SURFACE PREPARATION SPECIFICATIONS SP11 FOR POWER TOOL CLEANING OR SP2 FOR HAND TOOL CLEANING. COST SHALL BE INCIDENTAL TO "REMOVAL OF EXISTING CONCRETE DECK."

12. THE THREE COAT LEAD AND CHROMATE-FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE FIRST COAT HAS BEEN APPLIED IN THE SHOP. THE SECOND COAT SHALL BE APPLIED IN THE FIELD UNDER THIS CONTRACT. THE THIRD COAT SHALL BE APPLIED IN THE FIELD BY OTHERS. THE COLOR OF THE ALKYD FINISH COATS SHALL BE MUNSELL NO. 2.5 YR 3/4 REDDISH BROWN FOR THE FASCIA OF THE EXTERIOR BEAMS AND THEIR BEARINGS AND MUNSELL NO. 10 YR 7/1 LIGHT GREY FOR ALL OTHER STRUCTURAL STEEL.

REHABILITATION NOTES-LOGAN BOULEVARD

REMOVE EXISTING ROCKER TYPE EXPANSION BEARINGS AT ABUTMENTS ON GIRDERS 16 THRU 25 INCLUDING TOP PLATE BY AIR ARC METHOD. GRIND CONTINUOUS FILLET WELD SMOOTH AFTER REMOVING TOP PLATE. REPLACE WITH ELASTOMERIC EXPANSION BEARINGS. REMOVAL WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REMOVE EXISTING BEARINGS."

JACK AND REPOSITION ROCKER TYPE EXPANSION BEARINGS TO THEIR CORRECT POSITION AT A TEMPERATURE SETTING OF 50°F FOR GIRDERS 18 & 19 AT PIER 1. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REPOSITION BEARINGS."

REMOVE DAMAGED ANCHOR BOLT AT PIER 1, BEARING 17; PIER 2, BEARINGS 19 & 20 AND REPLACE WITH EPOXY GROUTED ANCHOR BOLT. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "1" DIAMETER ANCHOR BOLTS."

REPLACE SHEARED OR MISSING RIVETS AT GIRDERS 22, 23, & 24 AT NORTH ABUTMENT AND GIRDER 25 NEAR PIER 2 AS DIRECTED BY ENGINEER. METHOD OF REMOVAL SHALL BE BY MECHANICAL MEANS ONLY, NO BURNING ALLOWED. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "RIVET REMOVAL AND REPLACEMENT."

REHABILITATION NOTES-WESTERN AVENUE

REMOVE EXISTING ROLLER TYPE EXPANSION BEARINGS AT ABUTMENTS ON BEAMS 16 THRU 25 INCLUDING TOP PLATE BY AIR ARC METHOD. GRIND CONTINUOUS FILLET WELD SMOOTH AFTER REMOVING TOP PLATE. REPLACE WITH ELASTOMERIC EXPANSION BEARINGS. REMOVAL WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REMOVE EXISTING BEARINGS."

REMOVE DAMAGED ANCHOR BOLT AT PIER 2, BEARINGS 18,22,23, & 24 AND REPLACE WITH EPOXY GROUTED ANCHOR BOLT. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "1" DIAMETER ANCHOR BOLTS."

JACK AND REPOSITION ROCKER TYPE EXPANSION BEARING TO THE CORRECT POSITION AT A TEMPERATURE SETTING OF 50°F FOR BEAM 21 AT PIER 1. WORK WILL BE PAID FOR AT CONTRACT UNIT PRICE FOR "JACK AND REPOSITION BEARINGS."

DESIGN SPECIFICATIONS

AASHTO (1989) WITH 1990 & 1991 INTERIM SPECIFICATIONS

LOADING: HS 20-44 AND ALTERNATE MILITARY LOADING

ALLOW 25 PSF FOR FUTURE WEARING SURFACE.

DESIGN STRESSES

F'C = 3,500 PSI (CONCRETE)
FY = 60,000 PSI (REINFORCEMENT)
FY = 50,000 PSI (PROPOSED STRUCTURAL STEEL FOR LOGAN BLVD.)
FS = 27,000 PSI (EXISTING STRUCTURAL STEEL FOR LOGAN BLVD.)
FY = 36,000 PSI (PROPOSED STRUCTURAL STEEL FOR WESTERN AVE.)
FS = 18,000 PSI (EXISTING STRUCTURAL STEEL FOR WESTERN AVE.)

EXISTING UTILITIES

THE EXISTING UTILITIES SHOWN ON SHEETS 1 & 2 HAVE BEEN TAKEN FROM THE ORIGINAL BRIDGE PLANS AND FROM FIELD OBSERVATIONS. THE INFORMATION SHOWN CONCERNING TYPE AND LOCATION IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

EXISTING STRUCTURE - WESTERN AVENUE

STA 70+89.653, FAI-2 ROUTE, SEC 0606.403-HF, BUILT IN 1960, STRUCTURE NO. 016-0128.

SUPERSTRUCTURE: CONTINUOUS, NON-COMPOSITE, REINFORCED CONCRETE DECK WITH ROLLED STEEL BEAMS WITH COVER PLATES AT THE PIERS.

SUBSTRUCTURE: EAST-PILE BENT ABUTMENT, WEST CANTILEVERED ABUTMENT AND MULTIPLE COLUMN PIERS. WEST ABUTMENT AND PIERS SUPPORTED BY CREOSOTED TIMBER PILES AND EAST ABUTMENT SUPPORTED BY CONCRETE PILES.

SUPERSTRUCTURE DECK TO BE REPLACED. SUPERSTRUCTURE TO BE CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING STRUCTURE - VAULTED APPROACH SLAB

FAI-2 ROUTE, SEC 0606.403-HF, BUILT IN 1960

SUPERSTRUCTURE: CONTINUOUS, REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE BEAMS.

SUBSTRUCTURE: PILE BENTS SUPPORTED BY CREOSOTED TIMBER PILES.

SUPERSTRUCTURE DECK TO BE REPLACED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

EXISTING STRUCTURE - LOGAN BOULEVARD

STA 75+77.349, FAI-2 ROUTE, SEC 0606.403-HF, BUILT IN 1960, STRUCTURE NO. 016-0127.

SUPERSTRUCTURE: CONTINUOUS, NON-COMPOSITE, REINFORCED CONCRETE DECK WITH STEEL PLATE GIRDERS WITH COVER PLATES.

SUBSTRUCTURE: PILE BENT ABUTMENTS SUPPORTED BY CONCRETE PILES AND MULTIPLE COLUMN PIERS SUPPORTED BY CREOSOTED TIMBER PILES.

SUPERSTRUCTURE DECK TO BE REPLACED. SUPERSTRUCTURE TO BE CONTINUOUS, COMPOSITE, REINFORCED CONCRETE DECK. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

GENERAL NOTES & BILL OF MATERIAL

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

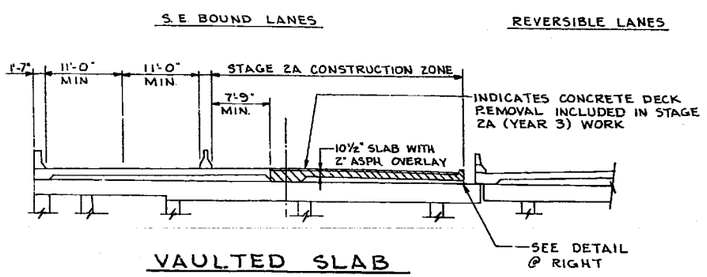
1 REVISED 7-22-92 PMP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

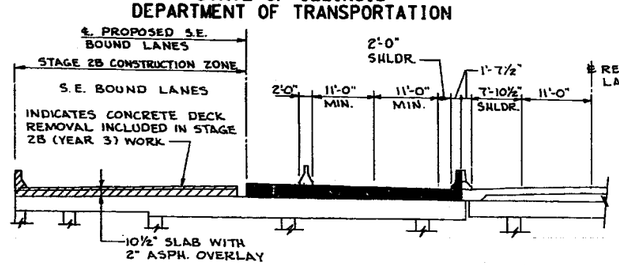
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	323
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

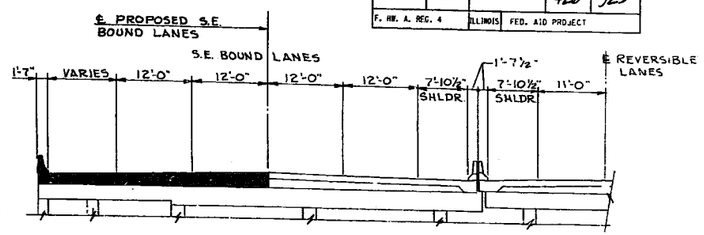
SHEET NO. 4
40 SHEETS



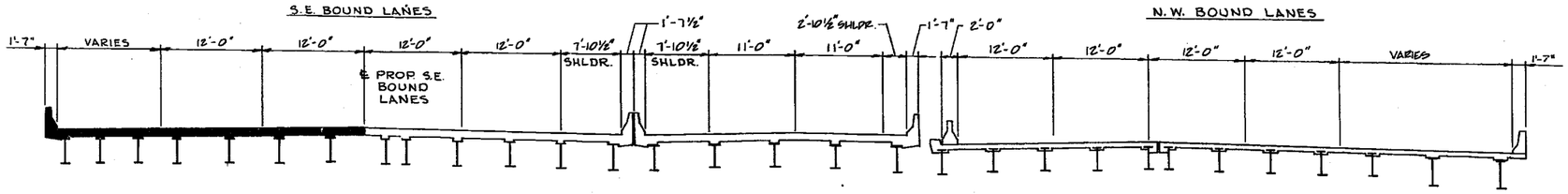
VAULTED SLAB
STAGE 1 (YEAR 2)



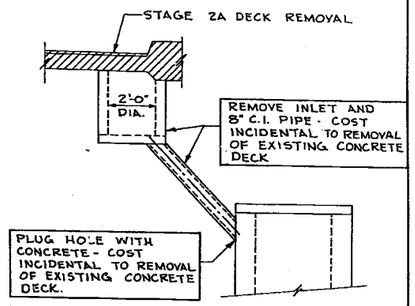
VAULTED SLAB
STAGE 2A (YEAR 3)



VAULTED SLAB
STAGE 2B (YEAR 3)

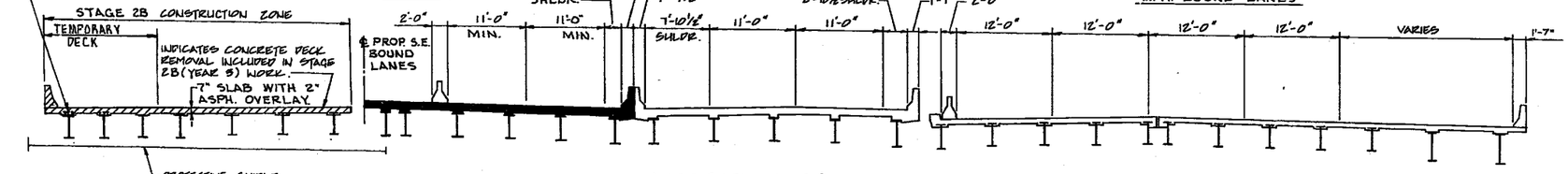


WESTERN AVENUE (LOGAN BLVD SIMILAR)
STAGE 2B (YEAR 3)

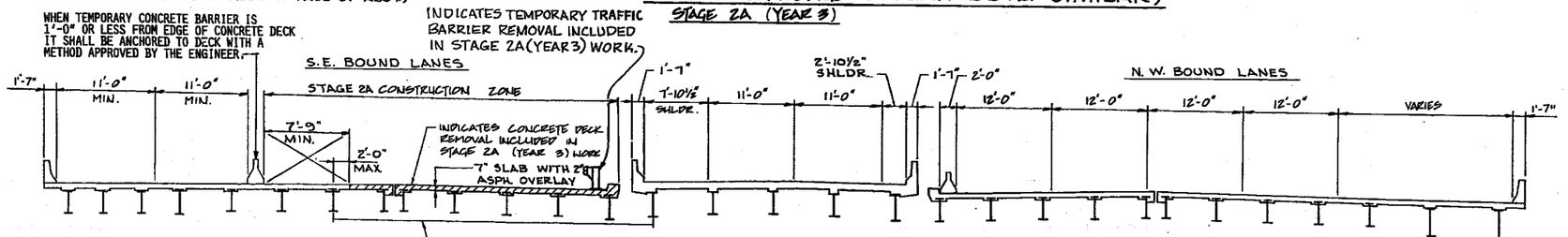


DETAIL AT EXISTING RIGHT GUTTER
(BETWEEN WEST ABUT. OF WESTERN AVE. AND BENT # 13)

EXISTING SHEAR STUDS LOCATED ALONG OUTSIDE BEAMS SUPPORTING TEMP DECK:
3 GIRDERS - EAST ABUT. TO PIER # 2 WESTERN AVE.
2 GIRDERS - REMAINDER OF WESTERN AVE.
1 GIRDER - LOGAN BLVD.



WESTERN AVENUE (LOGAN BLVD. SIMILAR)
STAGE 2A (YEAR 3)



WESTERN AVENUE (LOGAN BLVD. SIMILAR)
STAGE 1 (YEAR 2)

LEGEND
- DENOTES PROPOSED STRUCTURE
- DENOTES CONCRETE DECK REMOVAL

STANLEY CONSULTANTS

BRIDGE CONSTRUCTION STAGING

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	324
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
40 SHEETS

BEAM NO. 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37899.140	31.000	608.495	608.495
℄ ABUT. BRG.	37902.540	31.000	608.529	608.529
a	37912.540	31.000	608.629	608.646
b	37922.540	31.000	608.729	608.759
c	37932.540	31.000	608.829	608.865
d	37942.540	31.000	608.929	608.963
e	37952.540	31.000	609.029	609.054
f	37962.540	31.000	609.129	609.142
g	37972.540	31.000	609.229	609.232
℄ PIER 2	37982.120	31.000	609.325	609.325
h	37992.120	31.000	609.425	609.433
i	38002.120	31.000	609.525	609.546
j	38012.120	31.000	609.625	609.662
k	38022.120	31.000	609.725	609.774
l	38032.120	31.000	609.825	609.878
m	38042.120	31.000	609.925	609.976
n	38052.120	31.000	610.025	610.065
o	38062.120	31.000	610.124	610.149
p	38072.120	31.000	610.219	610.230
℄ PIER 1	38084.790	31.000	610.335	610.335
q	38094.790	31.000	610.423	610.427
r	38104.790	31.000	610.507	610.521
s	38114.790	31.000	610.589	610.614
t	38124.790	31.000	610.666	610.700
u	38134.790	31.000	610.741	610.776
v	38144.790	31.000	610.812	610.842
w	38154.790	31.000	610.880	610.896
℄ ABUT. BRG.	38164.370	31.000	610.942	610.942
BK. W. ABUT.	38167.760	31.000	610.963	610.963

BEAM NO. 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37893.860	24.438	608.579	608.579
℄ ABUT. BRG.	37897.260	24.438	608.613	608.613
a	37907.260	24.438	608.713	608.732
b	37917.260	24.438	608.813	608.847
c	37927.260	24.438	608.913	608.953
d	37937.260	24.438	609.013	609.051
e	37947.260	24.438	609.113	609.141
f	37957.260	24.438	609.213	609.228
g	37967.260	24.438	609.313	609.317
℄ PIER 2	37976.840	24.438	609.409	609.409
h	37986.840	24.438	609.509	609.518
i	37996.840	24.438	609.609	609.633
j	38006.840	24.438	609.709	609.750
k	38016.840	24.438	609.809	609.863
l	38026.840	24.438	609.909	609.969
m	38036.840	24.438	610.009	610.066
n	38046.840	24.438	610.109	610.154
o	38056.840	24.438	610.209	610.237
p	38066.840	24.438	610.306	610.319
℄ PIER 1	38079.510	24.438	610.424	610.424
q	38089.510	24.438	610.514	610.513
r	38099.510	24.438	610.600	610.616
s	38109.510	24.438	610.683	610.711
t	38119.510	24.438	610.762	610.800
u	38129.510	24.438	610.839	610.879
v	38139.510	24.438	610.912	610.945
w	38149.510	24.438	610.981	611.000
℄ ABUT. BRG.	38159.090	24.438	611.045	611.045
BK. W. ABUT.	38162.490	24.438	611.067	611.067

BEAM NO. 18

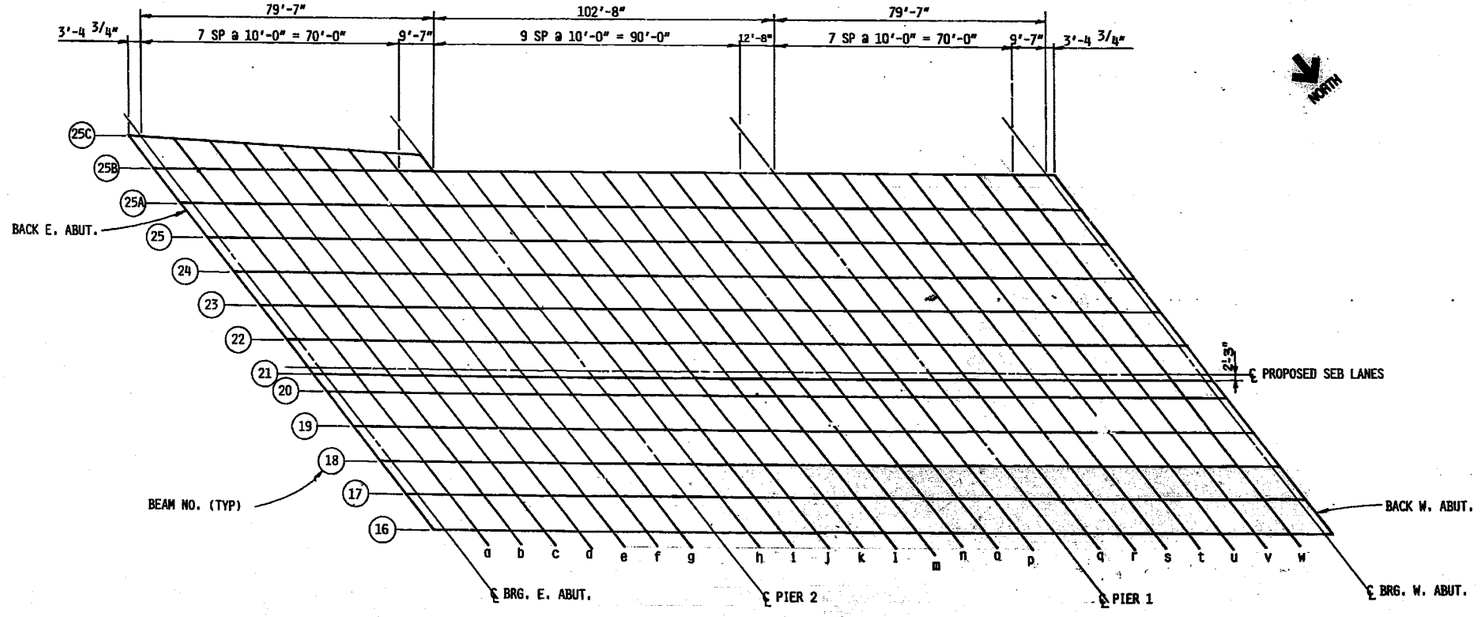
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37888.590	17.875	608.663	608.663
℄ ABUT. BRG.	37891.980	17.875	608.697	608.697
a	37901.980	17.875	608.797	608.816
b	37911.980	17.875	608.897	608.931
c	37921.980	17.875	608.997	609.037
d	37931.980	17.875	609.097	609.135
e	37941.980	17.875	609.197	609.225
f	37951.980	17.875	609.297	609.312
g	37961.980	17.875	609.397	609.401
℄ PIER 2	37971.570	17.875	609.493	609.493
h	37981.570	17.875	609.593	609.602
i	37991.570	17.875	609.693	609.717
j	38001.570	17.875	609.793	609.834
k	38011.570	17.875	609.893	609.947
l	38021.570	17.875	609.993	610.053
m	38031.570	17.875	610.093	610.150
n	38041.570	17.875	610.193	610.238
o	38051.570	17.875	610.293	610.322
p	38061.570	17.875	610.392	610.404
℄ PIER 1	38074.230	17.875	610.512	610.512
q	38084.230	17.875	610.604	610.608
r	38094.230	17.875	610.692	610.707
s	38104.230	17.875	610.776	610.805
t	38114.230	17.875	610.858	610.896
u	38124.230	17.875	610.936	610.976
v	38134.230	17.875	611.010	611.043
w	38144.230	17.875	611.082	611.100
℄ ABUT. BRG.	38153.820	17.875	611.147	611.147
BK. W. ABUT.	38157.210	17.875	611.169	611.169

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.

BEAM NO. 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37883.310	11.313	608.743	608.743
℄ ABUT. BRG.	37886.710	11.313	608.777	608.777
a	37896.710	11.313	608.877	608.897
b	37906.710	11.313	608.977	609.011
c	37916.710	11.313	609.077	609.118
d	37926.710	11.313	609.177	609.215
e	37936.710	11.313	609.277	609.305
f	37946.710	11.313	609.377	609.392
g	37956.710	11.313	609.477	609.481
℄ PIER 2	37966.290	11.313	609.573	609.573
h	37976.290	11.313	609.673	609.682
i	37986.290	11.313	609.773	609.797
j	37996.290	11.313	609.873	609.915
k	38006.290	11.313	609.973	610.028
l	38016.290	11.313	610.073	610.134
m	38026.290	11.313	610.173	610.230
n	38036.290	11.313	610.273	610.318
o	38046.290	11.313	610.373	610.402
p	38056.290	11.313	610.473	610.486
℄ PIER 1	38068.960	11.313	610.596	610 596
q	38078.960	11.313	610.689	610.693
r	38088.960	11.313	610.779	610.794
s	38098.960	11.313	610.865	610.894
t	38108.960	11.313	610.948	610.986
u	38118.960	11.313	611.028	611.068
v	38128.960	11.313	611.104	611.138
w	38138.960	11.313	611.178	611.196
℄ ABUT. BRG.	38148.540	11.313	611.244	611.244
BK. W. ABUT.	38151.940	11.313	611.268	611.268

INDICATES STA. 381+51.940(TYP)



STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 1 OF 3

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050S2-2B, 3-IH, 6-IP, 400HB, 401HB, 45II, 0506-450, 0605-402HB, 0606-403HB & 0707-404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	325
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6 40 SHEETS

BEAM NO. 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37878.040	4.750	608.793	608.793
℄ ABUT. BRG.	37881.430	4.750	608.827	608.827
a	37891.430	4.750	608.927	608.941
b	37901.430	4.750	609.027	609.051
c	37911.430	4.750	609.127	609.156
d	37921.430	4.750	609.227	609.255
e	37931.430	4.750	609.327	609.347
f	37941.430	4.750	609.427	609.438
g	37951.430	4.750	609.527	609.529
℄ PIER 2	37961.020	4.750	609.623	609.623
h	37971.020	4.750	609.723	609.729
i	37981.020	4.750	609.823	609.840
j	37991.020	4.750	609.923	609.953
k	38001.020	4.750	610.023	610.063
l	38011.020	4.750	610.123	610.167
m	38021.020	4.750	610.223	610.264
n	38031.020	4.750	610.323	610.356
o	38041.020	4.750	610.423	610.444
p	38051.020	4.750	610.523	610.532
℄ PIER 1	38063.680	4.750	610.648	610.648
q	38073.680	4.750	610.743	610.745
r	38083.680	4.750	610.834	610.845
s	38093.680	4.750	610.922	610.943
t	38103.680	4.750	611.007	611.035
u	38113.680	4.750	611.089	611.117
v	38123.680	4.750	611.167	611.191
w	38133.680	4.750	611.242	611.256
℄ ABUT. BRG.	38143.270	4.750	611.311	611.311
BK. W. ABUT.	38146.660	4.750	611.334	611.334

BEAM NO. 21

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37876.030	2.250	608.812	608.812
℄ ABUT. BRG.	37879.420	2.250	608.846	608.846
a	37889.420	2.250	608.946	608.960
b	37899.420	2.250	609.046	609.070
c	37909.420	2.250	609.146	609.176
d	37919.420	2.250	609.246	609.273
e	37929.420	2.250	609.346	609.366
f	37939.420	2.250	609.446	609.457
g	37949.420	2.250	609.546	609.548
℄ PIER 2	37959.010	2.250	609.642	609.642
h	37969.010	2.250	609.742	609.748
i	37979.010	2.250	609.842	609.859
j	37989.010	2.250	609.942	609.972
k	37999.010	2.250	610.042	610.081
l	38009.010	2.250	610.142	610.185
m	38019.010	2.250	610.242	610.282
n	38029.010	2.250	610.342	610.375
o	38039.010	2.250	610.442	610.463
p	38049.010	2.250	610.542	610.551
℄ PIER 1	38061.670	2.250	610.667	610.667
q	38071.670	2.250	610.763	610.765
r	38081.670	2.250	610.855	610.866
s	38091.670	2.250	610.944	610.964
t	38101.670	2.250	611.030	611.057
u	38111.670	2.250	611.112	611.140
v	38121.670	2.250	611.191	611.214
w	38131.670	2.250	611.266	611.279
℄ ABUT. BRG.	38141.260	2.250	611.335	611.335
BK. W. ABUT.	38144.650	2.250	611.359	611.359

℄ OF PROPOSED SEB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37874.220	0.000	608.829	608.829
℄ ABUT. BRG.	37877.610	0.000	608.863	608.863
a	37887.610	0.000	608.963	608.977
b	37897.610	0.000	609.063	609.087
c	37907.610	0.000	609.163	609.192
d	37917.610	0.000	609.263	609.290
e	37927.610	0.000	609.363	609.383
f	37937.610	0.000	609.463	609.474
g	37947.610	0.000	609.563	609.565
℄ PIER 2	37957.200	0.000	609.659	609.659
h	37967.200	0.000	609.759	609.765
i	37977.200	0.000	609.859	609.876
j	37987.200	0.000	609.959	609.989
k	37997.200	0.000	610.059	610.098
l	38007.200	0.000	610.159	610.202
m	38017.200	0.000	610.259	610.299
n	38027.200	0.000	610.359	610.392
o	38037.200	0.000	610.459	610.480
p	38047.200	0.000	610.559	610.568
℄ PIER 1	38059.860	0.000	610.685	610.685
q	38069.860	0.000	610.781	610.784
r	38079.860	0.000	610.874	610.885
s	38089.860	0.000	610.963	610.984
t	38099.860	0.000	611.050	611.077
u	38109.860	0.000	611.132	611.161
v	38119.860	0.000	611.212	611.236
w	38129.860	0.000	611.288	611.301
℄ ABUT. BRG.	38139.450	0.000	611.358	611.358
BK. W. ABUT.	38142.840	0.000	611.382	611.382

BEAM NO. 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37870.380	-4.781	608.716	608.716
℄ ABUT. BRG.	37873.770	-4.781	608.750	608.750
a	37883.770	-4.781	608.850	608.869
b	37893.770	-4.781	608.950	608.984
c	37903.770	-4.781	609.050	609.090
d	37913.770	-4.781	609.150	609.188
e	37923.770	-4.781	609.250	609.278
f	37933.770	-4.781	609.350	609.365
g	37943.770	-4.781	609.450	609.454
℄ PIER 2	37953.360	-4.781	609.546	609.546
h	37963.360	-4.781	609.646	609.655
i	37973.360	-4.781	609.746	609.770
j	37983.360	-4.781	609.846	609.887
k	37993.360	-4.781	609.946	610.001
l	38003.360	-4.781	610.046	610.106
m	38013.360	-4.781	610.146	610.203
n	38023.360	-4.781	610.246	610.291
o	38033.360	-4.781	610.346	610.375
p	38043.360	-4.781	610.446	610.459
℄ PIER 1	38056.020	-4.781	610.572	610.572
q	38066.020	-4.781	610.670	610.674
r	38076.020	-4.781	610.764	610.779
s	38086.020	-4.781	610.855	610.883
t	38096.020	-4.781	610.942	610.980
u	38106.020	-4.781	611.026	611.066
v	38116.020	-4.781	611.107	611.140
w	38126.020	-4.781	611.184	611.203
℄ ABUT. BRG.	38135.610	-4.781	611.255	611.255
BK. W. ABUT.	38139.000	-4.781	611.280	611.280

BEAM NO. 23

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK E. ABUT.	37864.720	-11.813	608.550	608.550
¿ ABUT. BRG.	37868.120	-11.813	608.584	608.584
a	37878.120	-11.813	608.684	608.703
b	37888.120	-11.813	608.784	608.817
c	37898.120	-11.813	608.884	608.924
d	37908.120	-11.813	608.984	609.021
e	37918.120	-11.813	609.084	609.111
f	37928.120	-11.813	609.184	609.198
g	37938.120	-11.813	609.284	609.287
℄ PIER 2	37947.700	-11.813	609.380	609.380
h	37957.700	-11.813	609.479	609.488
i	37967.700	-11.813	609.580	609.604
j	37977.700	-11.813	609.679	609.721
k	37987.700	-11.813	609.779	609.834
l	37997.700	-11.813	609.880	609.940
m	38007.700	-11.813	609.979	610.036
n	38017.700	-11.813	610.080	610.125
o	38027.700	-11.813	610.179	610.208
p	38037.700	-11.813	610.279	610.292
℄ PIER 1	38050.370	-11.813	610.406	610.406
q	38060.370	-11.813	610.505	610.509
r	38070.370	-11.813	610.601	610.616
s	38080.370	-11.813	610.694	610.722
t	38090.370	-11.813	610.783	610.821
u	38100.370	-11.813	610.869	610.909
v	38110.370	-11.813	610.952	610.985
w	38120.370	-11.813	611.031	611.050
℄ ABUT. BRG.	38129.950	-11.813	611.104	611.104
BK. W. ABUT.	38133.350	-11.813	611.129	611.129

BEAM NO. 24

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37859.070	-18.844	608.348	608.348
℄ ABUT. BRG.	37862.460	-18.844	608.382	608.382
a	37872.460	-18.844	608.482	608.501
b	37882.460	-18.844	608.582	608.615
c	37892.470	-18.844	608.682	608.722
d	37902.460	-18.844	608.782	608.819
e	37912.460	-18.844	608.882	608.909
f	37922.460	-18.844	608.982	608.996
g	37932.460	-18.844	609.082	609.085
℄ PIER 2	37942.050	-18.844	609.177	609.177
h	37952.050	-18.844	609.277	609.286
i	37962.050	-18.844	609.377	609.402
j	37972.050	-18.844	609.477	609.519
k	37982.050	-18.844	609.577	609.632
l	37992.050	-18.844	609.677	609.738
m	38002.050	-18.844	609.777	609.834
n	38012.050	-18.844	609.877	609.923
o	38022.050	-18.844	609.977	610.006
p	38032.050	-18.844	610.077	610.090
℄ PIER 1	38044.710	-18.844	610.204	610.204
q	38054.710	-18.844	610.304	610.308
r	38064.710	-18.844	610.402	610.417
s	38074.720	-18.844	610.497	610.525
t	38084.710	-18.844	610.588	610.626
u	38094.710	-18.844	610.676	610.716
v	38104.710	-18.844	610.760	610.793
w	38114.710	-18.844	610.841	610.860
℄ ABUT. BRG.	38124.300	-18.844	610.916	610.916
BK. W. ABUT.	38127.700	-18.844	610.942	610.942

INDICATES STA. 381+27.700 (TYP)

BEAM NO. 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37853.420	-25.875	608.145	608.145
℄ ABUT. BRG.	37856.820	-25.875	608.179	608.179
a	37866.820	-25.875	608.279	608.295
b	37876.820	-25.875	608.379	608.407
c	37886.820	-25.875	608.479	608.513
d	37896.820	-25.875	608.579	608.611
e	37906.820	-25.875	608.679	608.702
f	37916.820	-25.875	608.779	608.791
g	37926.820	-25.875	608.879	608.882
℄ PIER 2	37936.400	-25.875	608.974	608.974
h	37946.400	-25.875	609.074	609.081
i	37956.400	-25.875	609.174	609.196
j	37966.400	-25.875	609.274	609.310
k	37976.400	-25.875	609.374	609.421
l	37986.400	-25.875	609.474	609.526
m	37996.400	-25.875	609.574	609.623
n	38006.400	-25.875	609.674	609.713
o	38016.400	-25.875	609.774	609.800
p	38026.400	-25.875	609.874	609.885
℄ PIER 1	38039.070	-25.875	610.001	610.001
q	38049.070	-25.875	610.101	610.105
r	38059.070	-25.875	610.201	610.214
s	38069.070	-25.875	610.297	610.321
t	38079.070	-25.875	610.390	610.423
u	38089.070	-25.875	610.480	610.514
v	38099.070	-25.875	610.566	610.594
w	38109.070	-25.875	610.649	610.665
℄ ABUT. BRG.	38118.650	-25.875	610.726	610.726
BK. W. ABUT.	38122.040	-25.875	610.752	610.752

GIRDER NO. 25A

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37849.540	-30.708	608.005	608.005
℄ ABUT. BRG.	37852.930	-30.708	608 039	608.039
a	37862.930	-30.708	608.139	608.170
b	37872.930	-30.708	608.239	608.293
c	37882.930	-30.708	608.339	608.403
d	37892.930	-30.708	608.439	608.499
e	37902.930	-30.708	608.539	608.583
f	37912.930	-30.708	608.639	608.663
g	37922.930	-30.708	608.739	608.746
℄ PIER 2	37932.510	-30.708	608.835	608.835
h	37942.510	-30.708	608.935	608.943
i	37952.510	-30.708	609.035	609.061
j	37962.510	-30.708	609.135	609.182
k	37972.510	-30.708	609.235	609.300
l	37982.510	-30.708	609.335	609.407
m	37992.510	-30.708	609.435	609.503
n	38002.510	-30.708	609.535	609.587
o	38012.510	-30.708	609.635	609.666
p	38022.510	-30.708	609.735	609.747
℄ PIER 1	38035.180	-30.708	609.862	609.862
q	38045.180	-30.708	609.962	609.970
r	38055.180	-30.708	610.062	610.087
s	38065.180	-30.708	610.159	610.205
t	38075.180	-30.708	610.254	610.314
u	38085.180	-30.708	610.345	610.408
v	38095.180	-30.708	610.432	610.486
w	38105.180	-30.708	610.517	610.547
℄ ABUT. BRG.	38114.760	-30.708	610.594	610.594
BK. W. ABUT.	38118.160	-30.708	610.621	610.621

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.
WORK THIS SHEET WITH SHEET #5

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050S2-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	325
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6
40 SHEETS

BEAM NO. 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37878.040	4.750	608.793	608.793
℄ ABUT. BRG.	37881.430	4.750	608.827	608.827
a	37891.430	4.750	608.927	608.941
b	37901.430	4.750	609.027	609.051
c	37911.430	4.750	609.127	609.156
d	37921.430	4.750	609.227	609.255
e	37931.430	4.750	609.327	609.347
f	37941.430	4.750	609.427	609.438
g	37951.430	4.750	609.527	609.529
℄ PIER 2	37961.020	4.750	609.623	609.623
h	37971.020	4.750	609.723	609.729
i	37981.020	4.750	609.823	609.840
j	37991.020	4.750	609.923	609.953
k	38001.020	4.750	610.023	610.063
l	38011.020	4.750	610.123	610.167
m	38021.020	4.750	610.223	610.266
n	38031.020	4.750	610.323	610.356
o	38041.020	4.750	610.423	610.444
p	38051.020	4.750	610.523	610.532
℄ PIER 1	38063.680	4.750	610.648	610.648
q	38073.680	4.750	610.743	610.745
r	38083.680	4.750	610.834	610.845
s	38093.680	4.750	610.922	610.943
t	38103.680	4.750	611.007	611.035
u	38113.680	4.750	611.089	611.117
v	38123.680	4.750	611.167	611.191
w	38133.680	4.750	611.242	611.256
℄ ABUT. BRG.	38143.270	4.750	611.311	611.311
BK. W. ABUT.	38146.660	4.750	611.334	611.334

BEAM NO. 21

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DSFLECTION
BK. E. ABUT.	37876.030	2.250	608.812	608.812
℄ ABUT. BRG.	37879.420	2.250	608.846	608.846
a	37889.420	2.250	608.946	608.960
b	37899.420	2.250	609.046	609.070
c	37909.420	2.250	609.146	609.178
d	37919.420	2.250	609.246	609.273
e	37929.420	2.250	609.346	609.366
f	37939.420	2.250	609.446	609.457
g	37949.420	2.250	609.546	609.548
℄ PIER 2	37959.010	2.250	609.642	609.642
h	37969.010	2.250	609.742	609.748
i	37979.010	2.250	609.842	609.859
j	37989.010	2.250	609.942	609.972
k	37999.010	2.250	610.042	610.081
l	38009.010	2.250	610.142	610.185
m	38019.010	2.250	610.242	610.282
n	38029.010	2.250	610.342	610.375
o	38039.010	2.250	610.442	610.463
p	38049.010	2.250	610.542	610.551
℄ PIER 1	38061.670	2.250	610.667	610.667
q	38071.670	2.250	610.763	610.765
r	38081.670	2.250	610.855	610.866
s	38091.670	2.250	610.944	610.964
t	38101.670	2.250	611.030	611.057
u	38111.670	2.250	611.112	611.140
v	38121.670	2.250	611.191	611.214
w	38131.670	2.250	611.266	611.279
℄ ABUT. BRG.	38141.260	2.250	611.335	611.335
BK. W. ABUT.	38144.650	2.250	611.359	611.359

℄ OF PROPOSED SEB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37874.220	0.000	608.829	608.829
℄ ABUT. BRG.	37877.610	0.000	608.863	608.863
a	37887.610	0.000	608.963	608.977
b	37897.610	0.000	609.063	609.087
c	37907.610	0.000	609.163	609.192
d	37917.610	0.000	609.263	609.290
e	37927.610	0.000	609.363	609.383
f	37937.610	0.000	609.463	609.474
g	37947.610	0.000	609.563	609.565
℄ PIER 2	37957.200	0.000	609.659	609.659
h	37967.200	0.000	609.759	609.765
i	37977.200	0.000	609.859	609.876
j	37987.200	0.000	609.959	609.989
k	37997.200	0.000	610.059	610.098
l	38007.200	0.000	610.159	610.202
m	38017.200	0.000	610.259	610.299
n	38027.200	0.000	610.359	610.392
o	38037.200	0.000	610.459	610.480
p	38047.200	0.000	610.559	610.568
℄ PIER 1	38059.860	0.000	610.685	610.685
q	38069.860	0.000	610.781	610.784
r	38079.860	0.000	610.874	610.885
s	38089.860	0.000	610.963	610.984
t	38099.860	0.000	611.050	611.077
u	38109.860	0.000	611.132	611.161
v	38119.860	0.000	611.212	611.236
w	38129.860	0.000	611.288	611.301
℄ ABUT. BRG.	38139.450	0.000	611.358	611.358
BK. W. ABUT.	38142.840	0.000	611.382	611.382

BEAM NO. 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37870.380	-4.781	608.716	608.716
℄ ABUT. BRG.	37873.770	-4.781	608.750	608.750
a	37883.770	-4.781	608.850	608.869
b	37893.770	-4.781	608.950	608.984
c	37903.770	-4.781	609.050	609.090
d	37913.770	-4.781	609.150	609.188
e	37923.770	-4.781	609.250	609.278
f	37933.770	-4.781	609.350	609.365
g	37943.770	-4.781	609.450	609.454
℄ PIER 2	37953.360	-4.781	609.546	609.546
h	37963.360	-4.781	609.646	609.655
i	37973.360	-4.781	609.746	609.770
j	37983.360	-4.781	609.846	609.887
k	37993.360	-4.781	609.946	610.001
l	38003.360	-4.781	610.046	610.106
m	38013.360	-4.781	610.146	610.203
n	38023.360	-4.781	610.246	610.291
o	38033.360	-4.781	610.346	610.375
p	38043.360	-4.781	610.446	610.459
℄ PIER 1	38056.020	-4.781	610.572	610.572
q	38066.020	-4.781	610.670	610.674
r	38076.020	-4.781	610.764	610.779
s	38086.020	-4.781	610.855	610.883
t	38096.020	-4.781	610.942	610.980
u	38106.020	-4.781	611.026	611.066
v	38116.020	-4.781	611.107	611.140
w	38126.020	-4.781	611.184	611.203
℄ ABUT. BRG.	38135.610	-4.781	611.255	611.255
BK. W. ABUT.	38139.000	-4.781	611.280	611.280

BEAM NO. 23

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORRTICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK E. ABUT.	37864.720	-11.813	608.550	608.550
℄ ABUT. BRG.	37868.120	-11.813	608.584	608.584
a	37878.120	-11.813	608.684	608.703
b	37888.120	-11.813	608.784	608.817
c	37898.120	-11.813	608.884	608.924
d	37908.120	-11.813	608.984	609.021
e	37918.120	-11.813	609.084	609.111
f	37928.120	-11.813	609.184	609.198
g	37938.120	-11.813	609.284	609.287
℄ PIER 2	37947.700	-11.813	609.380	609.380
h	37957.700	-11.813	609.479	609.488
i	37967.700	-11.813	609.580	609.604
j	37977.700	-11.813	609.679	609.721
k	37987.700	-11.813	609.779	609.834
l	37997.700	-11.813	609.880	609.940
m	38007.700	-11.813	609.979	610.036
n	38017.700	-11.813	610.080	610.125
o	38027.700	-11.813	610.179	610.208
p	38037.700	-11.813	610.279	610.292
℄ PIER 1	38050.370	-11.813	610.406	610.406
q	38060.370	-11.813	610.505	610.509
r	38070.370	-11.813	610.601	610.616
s	38080.370	-11.813	610.694	610.722
t	38090.370	-11.813	610.783	610.821
u	38100.370	-11.813	610.869	610.909
v	38110.370	-11.813	610.952	610.985
w	38120.370	-11.813	611.031	611.050
℄ ABUT. BRG.	38129.950	-11.813	611.104	611.104
BK. W. ABUT.	38133.350	-11.813	611.129	611.129

BEAM NO. 24

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37859.070	-18.844	608.348	608.348
℄ ABUT. BRG.	37862.460	-18.844	608.382	608.382
a	37872.460	-18.844	608.482	608.501
b	37882.460	-18.844	608.582	608.615
c	37892.470	-18.844	608.682	608.722
d	37902.460	-18.844	608.782	608.819
e	37912.460	-18.844	608.882	608.909
f	37922.460	-18.844	608.982	608.996
g	37932.460	-18.844	609.082	609.085
℄ PIER 2	37942.050	-18.844	609.177	609.177
h	37952.050	-18.844	609.277	609.286
i	37962.050	-18.844	609.377	609.402
j	37972.050	-18.844	609.477	609.519
k	37982.050	-18.844	609.577	609.632
l	37992.050	-18.844	609.677	609.738
m	38002.050	-18.844	609.777	609.834
n	38012.050	-18.844	609.877	609.923
o	38022.050	-18.844	609.977	610.006
p	38032.050	-18.844	610.077	610.090
℄ PIER 1	38044.710	-18.844	610.204	610.204
q	38054.710	-18.844	610.304	610.308
r	38064.710	-18.844	610.402	610.417
s	38074.720	-18.844	610.497	610.525
t	38084.710	-18.844	610.588	610.626
u	38094.710	-18.844	610.676	610.716
v	38104.710	-18.844	610.760	610.793
w	38114.710	-18.844	610.841	610.860
℄ ABUT. BRG.	38124.300	-18.844	610.916	610.916
BK. W. ABUT.	38127.700	-18.844	610.942	610.942

INDICATES STA. 381+27.700 (TYP)

BEAM NO. 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37853.420	-25.875	608.145	608.145
℄ ABUT. BRG.	37856.820	-25.875	608.179	608.179
a	37866.820	-25.875	608.279	608.295
b	37876.820	-25.875	608.379	608.407
c	37886.820	-25.875	608.479	608.513
d	37896.820	-25.875	608.579	608.611
e	37906.820	-25.875	608.679	608.702
f	37916.820	-25.875	608.779	608.791
g	37926.820	-25.875	608.879	608.882
℄ PIER 2	37936.400	-25.875	608.974	608.974
h	37946.400	-25.875	609.074	609.081
i	37956.400	-25.875	609.174	609.196
j	37966.400	-25.875	609.274	609.310
k	37976.400	-25.875	609.374	609.421
l	37986.400	-25.875	609.474	609.526
m	37996.400	-25.875	609.574	609.623
n	38006.400	-25.875	609.674	609.713
o	38016.400	-25.875	609.774	609.800
p	38026.400	-25.875	609.874	609.885
℄ PIER 1	38039.070	-25.875	610.001	610.001
q	38049.070	-25.875	610.101	610.105
r	38059.070	-25.875	610.201	610.214
s	38069.070	-25.875	610.297	610.321
t	38079.070	-25.875	610.390	610.423
u	38089.070	-25.875	610.480	610.514
v	38099.070	-25.875	610.566	610.594
w	38109.070	-25.875	610.649	610.665
℄ ABUT. BRG.	38118.650	-25.875	610.726	610.726
BK. W. ABUT.	38122.040	-25.875	610.752	610.752

GIRDER NO. 25A

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37849.540	-30.708	608.005	608.005
℄ ABUT. BRG.	37852.930	-30.708	608 039	608.039
a	37862.930	-30.708	608.139	608.170
b	37872.930	-30.708	608.239	608.293
c	37882.930	-30.708	608.339	608.403
d	37892.930	-30.708	608.439	608.499
e	37902.930	-30.708	608.539	608.583
f	37912.930	-30.708	608.639	608.663
g	37922.930	-30.708	608.739	608.746
℄ PIER 2	37932.510	-30.708	608.835	608.835
h	37942.510	-30.708	608.935	608.963
i	37952.510	-30.708	609.035	609.061
j	37962.510	-30.708	609.135	609.182
k	37972.510	-30.708	609.235	609.300
l	37982.510	-30.708	609.335	609.407
m	37992.510	-30.708	609.435	609.503
n	38002.510	-30.708	609.535	609.587
o	38012.510	-30.708	609.635	609.666
p	38022.510	-30.708	609.735	609.747
℄ PIER 1	38035.180	-30.708	609.862	609.862
q	38045.180	-30.708	609.962	609.970
r	38055.180	-30.708	610.062	610.087
s	38065.180	-30.708	610.159	610.205
t	38075.180	-30.708	610.254	610.314
u	38085.180	-30.708	610.345	610.408
v	38095.180	-30.708	610.432	610.486
w	38105.180	-30.708	610.517	610.547
℄ ABUT. BRG.	38114.760	-30.708	610.594	610.594
BK. W. ABUT.	38118.160	-30.708	610.621	610.621

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.
WORK THIS SHEET WITH SHEET #5

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	326
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
40 SHEETS

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

GIRDER NO. 25B

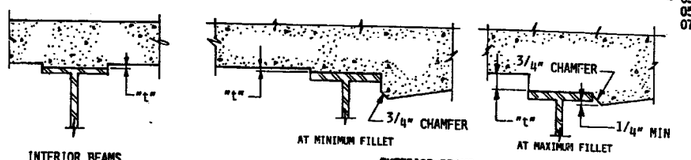
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37845.610	-35.583	607.864	607.864
℄ ABUT. BRG.	37849.010	-35.583	607.898	607.898
a	37859.010	-35.583	607.998	608.030
b	37869.010	-35.583	608.098	608.152
c	37879.010	-35.583	608.198	608.262
d	37889.010	-35.583	608.298	608.358
e	37899.010	-35.583	608.398	608.443
f	37909.010	-35.583	608.498	608.523
g	37919.010	-35.583	608.598	608.606
℄ PIER 2	37928.590	-35.583	608.694	608.694
h	37938.590	-35.583	608.794	608.802
i	37948.590	-35.583	608.894	608.920
j	37958.590	-35.583	608.994	609.041
k	37968.590	-35.583	609.094	609.159
l	37978.590	-35.583	609.194	609.266
m	37988.590	-35.583	609.294	609.362
n	37998.590	-35.583	609.394	609.446
o	38008.590	-35.583	609.494	609.526
p	38018.590	-35.583	609.594	609.607
℄ PIER 1	38031.260	-35.583	609.721	609.721
q	38041.260	-35.583	609.821	609.829
r	38051.260	-35.583	609.921	609.946
s	38061.260	-35.583	610.020	610.065
t	38071.260	-35.583	610.116	610.176
u	38081.260	-35.583	610.208	610.272
v	38091.260	-35.583	610.297	610.350
w	38101.260	-35.583	610.383	610.413
℄ ABUT. BRG.	38110.840	-35.583	610.462	610.462
BK. W. ABUT.	38114.240	-35.583	610.489	610.489

GIRDER NO. 25C

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. E. ABUT.	37841.773	-40.364	607.726	607.726
℄ ABUT. BRG.	37845.260	-40.250	607.764	607.764
a	37855.530	-39.915	607.873	607.931
b	37865.799	-39.580	607.983	608.089
c	37876.069	-39.245	608.093	608.231
d	37886.338	-38.910	608.202	608.353
e	37896.607	-38.575	608.312	608.447
f	37906.877	-38.240	608.422	608.522
g	37917.146	-37.904	608.531	608.584
℄ PIER 2	37926.987	-37.583	608.636	608.636

INDICATES STA. 379+26.987 (TYP)

NOTE:
OFFSETS TABULATED ARE FROM ℄ PROPOSED SEB LANES.
WORK THIS SHEET WITH SHEET #5

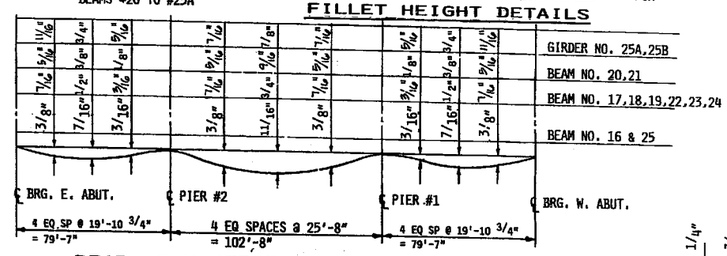


INTERIOR BEAMS

EXTERIOR BEAMS

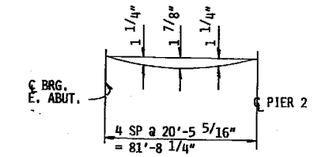
TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF BEAMS. SEE SHEET 5 FOR "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" FOR BEAMS #16 TO #19
SEE SHEET 6 FOR "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" FOR BEAMS #2G TO #25A

FILLET HEIGHT DETAILS

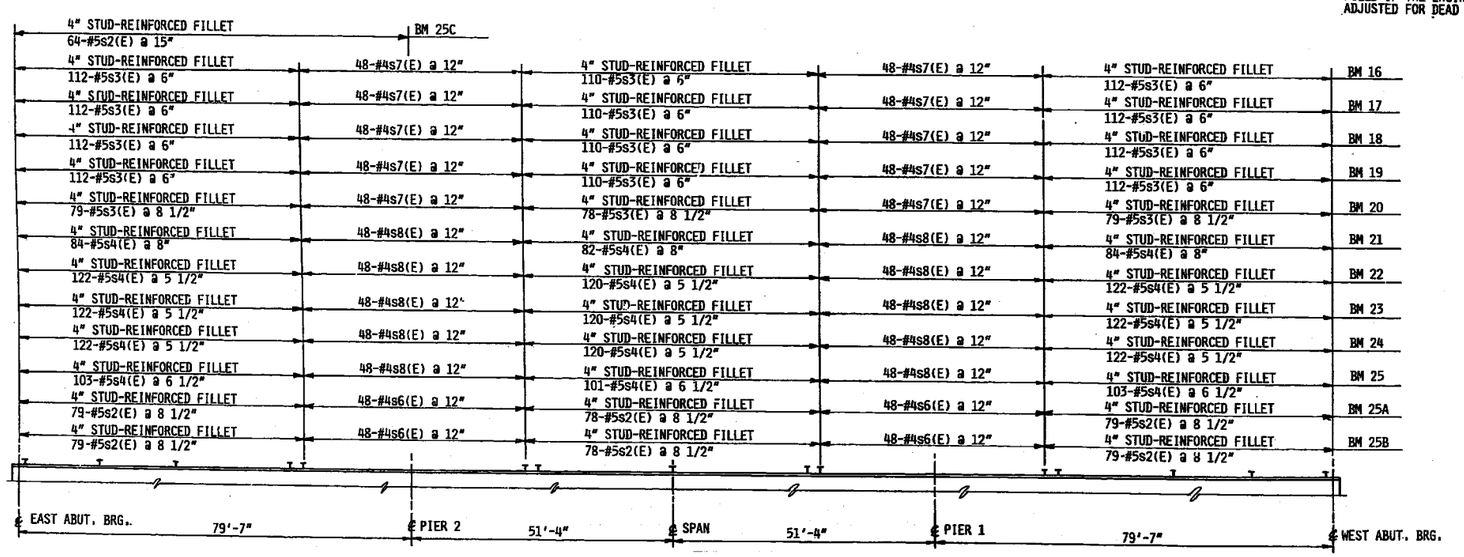


DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)
NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.



GIRDER 25C



SHEAR STUD LENGTHS AND REINFORCED FILLET LOCATIONS

STANLEY CONSULTANTS

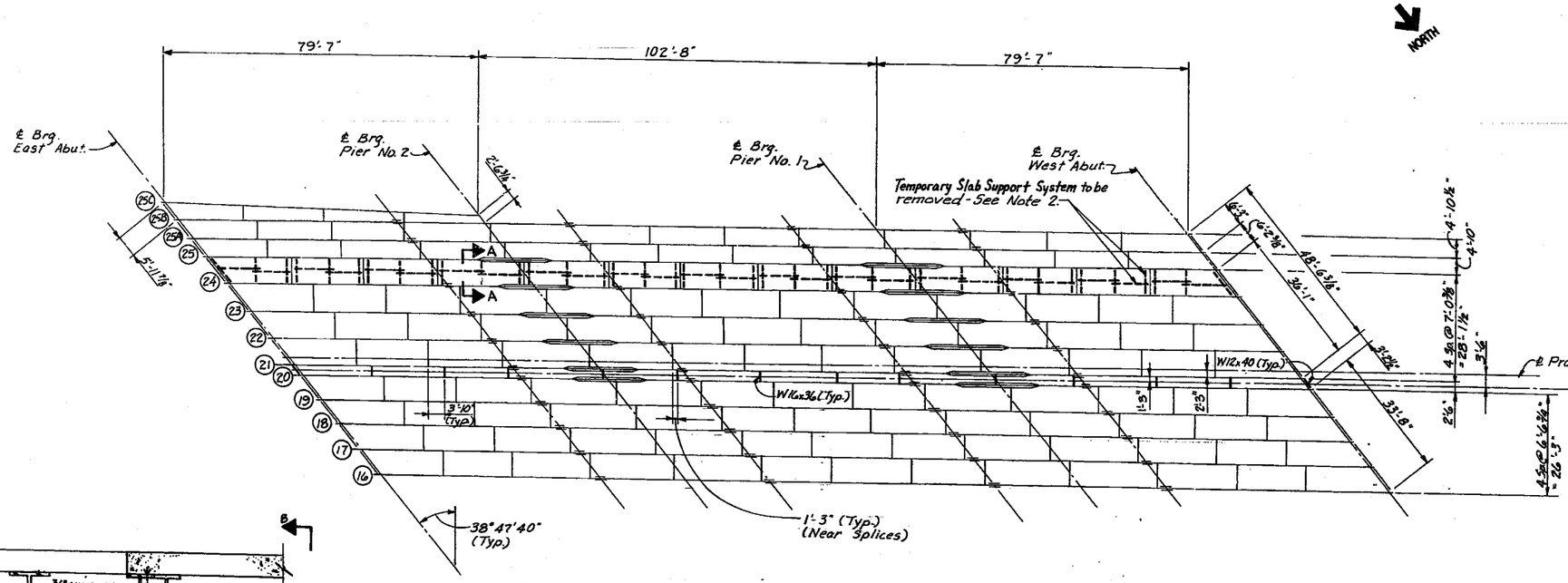
TOP OF SLAB ELEVATIONS
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

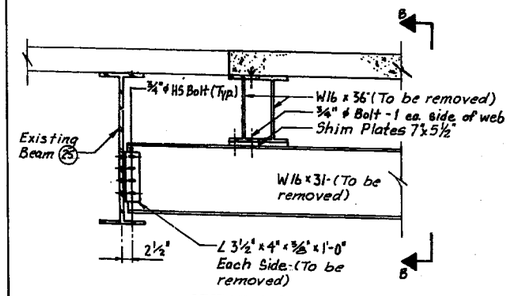
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		420	327
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

* 050512-2B, 3-IH, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

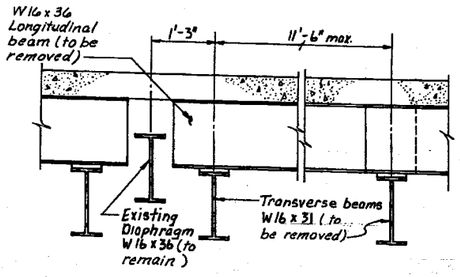
SHEET NO. 8
40 SHEETS



PLAN

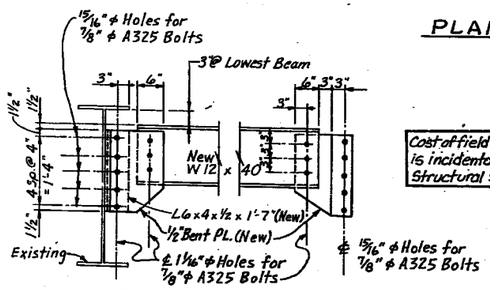


SECTION A-A



DETAIL B-B

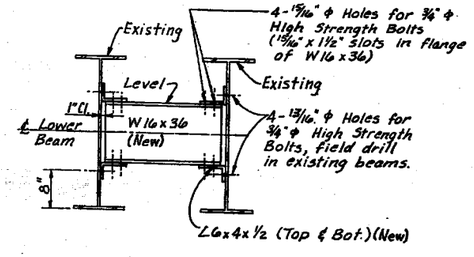
TEMPORARY SLAB SUPPORT STEEL
(TO BE REMOVED AS NOTED)



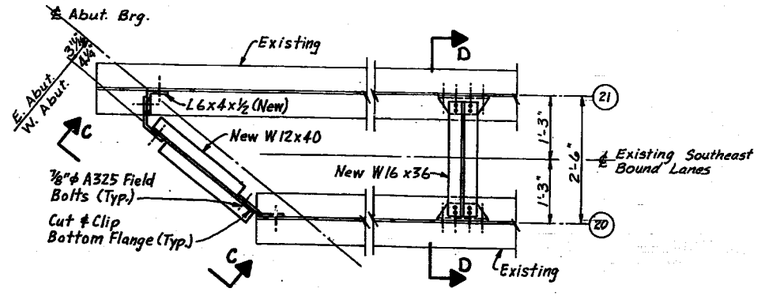
SECTION C-C

Cost of field drilling is incidental to "Erecting Structural Steel".

FOR ERECTION ONLY



SECTION D-D



PARTIAL PLAN

NOTE: "A" - TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL OVERSIZED HOLES.

NOTES:

1. ERECT STRUCTURAL STEEL DIAPHRAGMS BETWEEN BEAMS 20 AND 21 (STRUCTURAL STEEL PROVIDED BY OWNER).
2. REMOVE TEMPORARY SLAB SUPPORT SYSTEM BETWEEN BEAMS 24 AND 25. REMOVED MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR.
3. ~~ALL HOLES PROVIDED FOR EXISTING SLAB SUPPORT STRUCTURAL STEEL SHALL BE FILLED WITH HIGH STRENGTH STEEL BOLTS A325 WITH WASHERS EACH SIDE.~~
~~COST SHALL BE INCIDENTAL TO STRUCTURAL STEEL REMOVAL~~

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STANLEY CONSULTANTS

667

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	328
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9
40 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

NORTH

29-#4d5(E) Bars @ 12" Cts. Outside Face
29-#4d6(E) Bars @ 12" Cts. Outside Face
109'-6 3/4" Along Outside of Parapet
269'-3 3/8" End to End of Deck Along Outside of Parapet

3'-4 3/4" | 79'-7" (Span 3) | 102'-8" (Span 2) | 79'-7" (Span 1) | 3'-4 3/4" *

4'-0"
*32-#5a1(E) Bars @ 6 1/2" Cts-Top
*23-#5a1(E) Bars @ 9" Cts-Bot

8-#5b3(E) @ 12" Max-Top
4-#5b4(E) @ 13" Max-Bot
7-#5b3(E) @ 12" Max-Top
3-#5b4(E) @ 13" Max-Bot
6-#5b3(E)-Top
2x2-#5b4(E) Bot

End Taper

Aluminum Sheeted Const. Joints in Base of Parapet

* Order a1(E) & a2(E) Bars Full Length Cut To Fit Shew And Use Remainder Of Bars to Fill Out End of Deck. Paint cut ends with epoxy.

13'-3" (Typ) | 13'-3" (Typ) | 18'-10"

℄ LIGHT POLE BASE. SEE SHEET 35 For Details

250-#6a3(E) Bars @ 13" Cts - Top
Lap w/ Alternate a1(E), a1(E) a2(E) or a3(E) Bars
212-#4d4(E) Bars @ 12" Cts. Outside Face
295-#5d1(E) Bars @ 11" Cts. Inside Face
3x6-#5b1(E) Bars Top of Slab

1'-7"

1" | 41'-9 5/8" | Stage 2B (Year 3) | Stage 2A (Year 3) | 31'-10 1/2"

47-#5a1(E) Bars @ 6 1/2" Cts. - Top
34-#5a1(E) Bars @ 9" Cts. - Bot.
47-#5a2(E) Bars @ 6 1/2" Cts. - Top
34-#5a2(E) Bars @ 9" Cts. - Bot.

* 369-#5a3(E) Bars @ 6 1/2" Cts. - Top
* 267-#5a3(E) Bars @ 9" Cts. - Bot.

See Sht. No. 7 For Stirrups Size and Spacing in Fillets

2x8-#5b2(E) Bars Ea. Beam for Beams 1a to 25B. 2x3-#5b4(E) Bars Beam 25C. Fillet Reinforcing (See Sht. No. 11 For Details)

1x2-#6a4(E) Bars Top & Bot. (Min. Lap = 2'-0")

1x2-#6a2(E) Bars Top & Bottom (Min. Lap = 2'-0") (Year 3)

℄ Bearing

Back Of East Abutment Sta. 378+74.22

38° 47' 40"

℄ Pier 2

Bar Splicer Size and Spcg. To Match Transverse Bars (See Sht. No. 37)

67-#6b(E) Bars @ 12" Cts Top Of Slab Over Piers (Alternate with #5b(E) Bars (Typ.))

℄ Longitudinal Bonded Stage Construction Joint & ℄ Proposed Southeast Bound Lanes

68x9-#5b1(E) Bars @ 12" Cts. - Top (Min. Lap = 1'-8")

58x8-#5b2(E) Bars Spaced As Shown In Cross Section - Bot. (Min. Lap = 1'-8")

℄ Pier 1

2 1/2"

Back Of West Abutment Sta. 381+42.84

℄ Bearing

1x2-#6a3(E) Bars Top & Bottom (Min. Lap = 2'-0") @ both Abutments

Sht #11

442-#5a4(E) Bars @ 6 1/2" Cts - Top
320-#5a4(E) Bars @ 9" Cts - Bot

26'-6" (Typ) | 26'-6" (Typ)

B (Sht. 35)

Drainage Scupper See Sht. 38 & 39 For Details

**** 68-#5x(E) Bars (Lap w/ b1(E) Bars)

Sht #11

36'-0" | 71'-0 1/2" Out To Out Deck

** Order a4(E) Bars Full Length. Cut To Fit Shew And Use Remainder Of Bars In Opposite End. Paint cut ends with epoxy. (Typ.)

1/2" Exp. Jr. over top of backwall

2-#6b(E) Bars Top Of Slab (Typ)

3x9-#5b1(E) Bars Top Of Slab

4'-0"

289 #5d1(E) Bars @ 11" Cts - Inside Face
265-#4d(E) Bars @ 12" Cts - Outside Face

** 48-#5a4(E) Bars @ 6 1/2" Cts-Top
** 35-#5a4(E) Bars @ 9" Cts-Bot

245-#6a5(E) Bars @ 13" Cts-Top
Lap W/ Alternate a4(E) Bars

2 5/8" | 80'-11 3/8" | 102'-8" | 80'-10 3/4" | 3 1/4"

PLAN

Varies 71'-0 1/2" to 76'-10 1/8"

Varies 36'-0" to 41'-9 5/8"

264'-6 1/8" End to End of Deck

6 3/8" | 2 1/2" | 1'-7" | Varies - 12'-0" to 17'-9 5/8" (±) | 12'-0" Lane | 12'-0" Lane | 12'-0" Lane | 31'-10 1/2" | 12'-0" Lane | 7'-10 1/2" Shldr. | 1'-7" | 3 1/8" | 8 3/8"

4" ϕ Conduit | 7" | 3 1/8" | 3'-6" | 4 1/2" | 2"

Slope 1/4" Per Ft
Total Drop Varies 8 1/4" to 9 3/4"

Slope 1/4" Per Ft | Slope 3/16" Per Ft | Slope 3/16" Per Ft | Slope 1/4" Per Ft | Slope 1/4" Per Ft | Slope 1/4" Per Ft

Total Drop = 7 1/4"

a5(E) | a1(E) | b1(E) | a1(E) | #5b4(E) | Varies

℄ Proposed S.E. Bound Lanes ℄ P.G. Line

Stage 2B (Year 3) | Stage 2A (Year 3)

Bar Splicers - See Sht #37 For Details

See Sht #11 for detail of fillet reinforcing

Bonded Const. Joint

2'-6" (24") ± Cr. (Typ.) | 7 1/2" | 5'-6" | 7'-6" ± | 2'-5" ± | 1'-11 1/2" | 5"

a4(E) | a4(E)

*** @ East Abutment: 73-#5x(E) Bars (Lap with b1(E) & b3(E) Bars)

10" Min. | 10" Min. | 4-#5b2(E) @ 11" Cts | 4-#5b2(E) @ 11" Cts | 1'-0 3/4" | 1'-0 1/2" | 4'-10 1/2" | 4'-10"

25C | 25B | 25A | 25 | 24 | 23 | 1'-0 1/4" | 6-#5b2(E) Bars @ 12" Cts | 1'-0 1/4" | 22 | 1'-3" | 1'-3" | 21 | 20 | New W16x36 Diaphragm | 1'-0 3/8" | 5-#5b2(E) Bars @ 13 1/2" Cts | 1'-0 3/8" | 19 | 18 | 17 | 16 | 2'-5 1/2"

4 Spaces @ 7'-0 7/8" = 28'-1 1/2" | 2'-6" | 4 Spaces @ 6'-6 3/4" = 26'-3"

Varies - 1'-3" To 3'-1 7/8" (±) | Varies 2'-0" to 4'-8"

CROSS SECTION
(Looking Up Station)

NOTES:

1. SEE SHEET 10 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIALS.
2. BARS INDICATED THUS 20X3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. MINIMUM LAP #5 BARS = 1'-8"

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

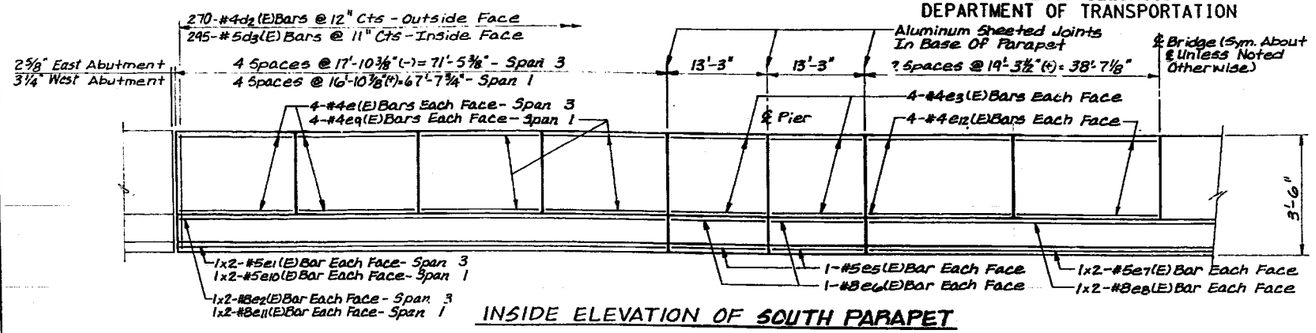
668

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

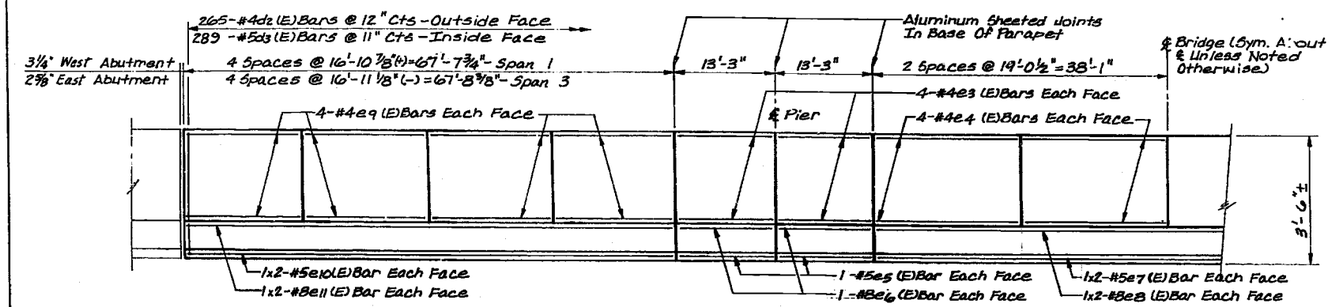
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	329
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10
40 SHEETS

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

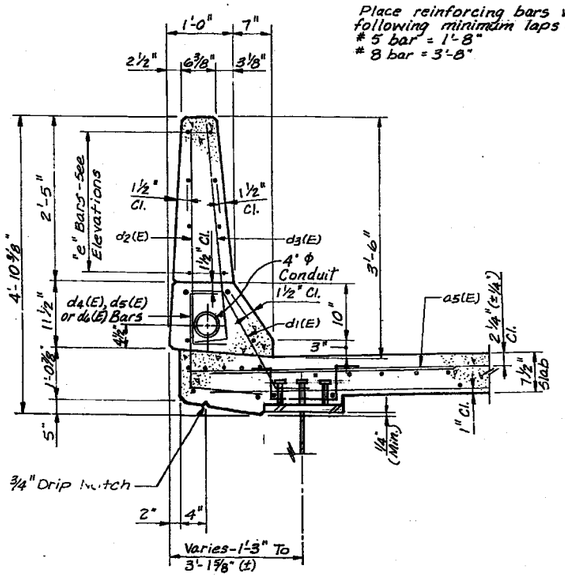


INSIDE ELEVATION OF SOUTH PARAPET

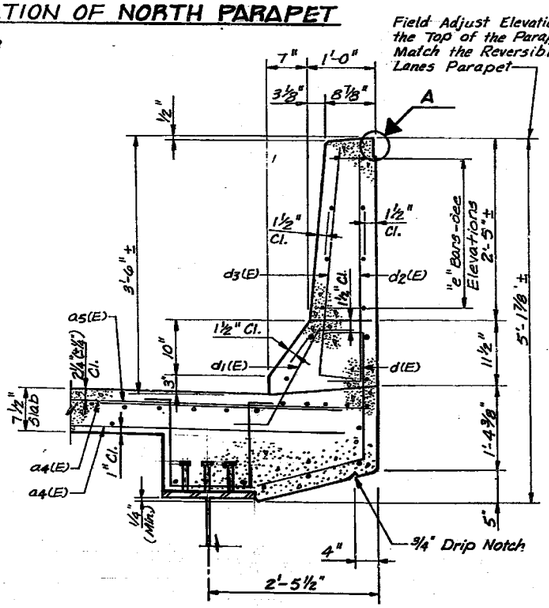


INSIDE ELEVATION OF NORTH PARAPET

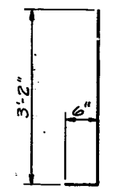
Place reinforcing bars with following minimum laps:
5 bar = 1'-8"
8 bar = 3'-8"



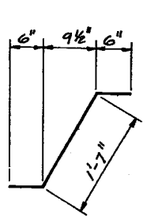
SECTION @ SOUTH PARAPET



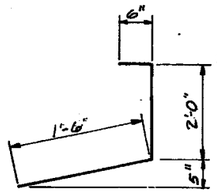
SECTION @ NORTH PARAPET



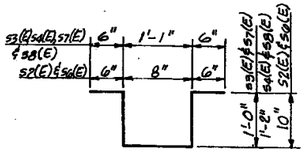
BARS d2(E), d3(E)



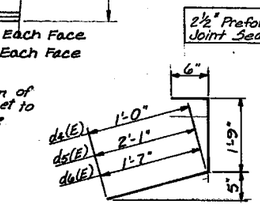
BAR d1(E)



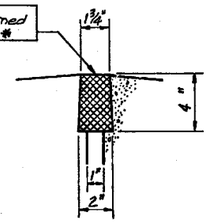
BAR d(E)



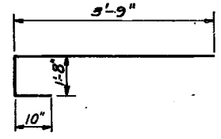
BARS s2(E), s3(E), s4(E), s6(E) s7(E) ℄ s8(E)



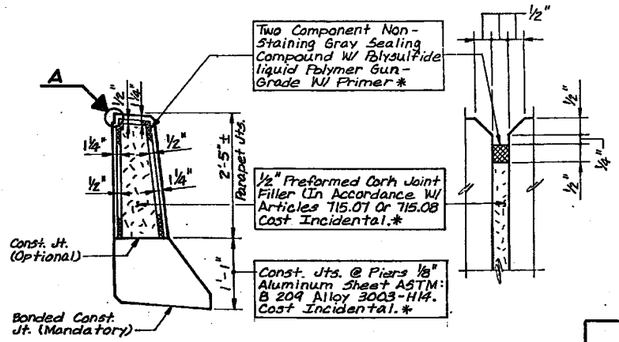
BARS d4(E), d5(E), d6(E)



DETAIL A



BAR x(E)



PARAPET JOINT DETAILS

* Cost Incidental to Class X Concrete Superstructure

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	55	#5	41'-0"	
a1(E)	81	#5	39'-8"	
a2(E)	4	#6	27'-9"	
a3(E)	8	#6	22'-3"	
a4(E)	845	#5	32'-10"	
a5(E)	495	#6	4'-0"	
a6(E)	4	#6	25'-3"	
a7(E)	81	#5	38'-4"	
a8(E)	636	#5	37'-0"	
b(E)	142	#6	53'-0"	
b1(E)	657	#5	30'-10"	
b2(E)	694	#5	34'-6"	
b3(E)	21	#5	32'-6"	
b4(E)	17	#5	28'-9"	
d(E)	265	#4	4'-0"	
d1(E)	584	#5	2'-7"	
d2(E)	535	#4	3'-8"	
d3(E)	584	#5	3'-8"	
d4(E)	212	#4	3'-3"	
d5(E)	29	#4	4'-4"	
d6(E)	29	#4	3'-10"	
e(E)	32	#4	17'-7"	
e1(E)	4	#5	36'-5"	
e2(E)	4	#8	37'-4"	
e3(E)	64	#4	13'-0"	
e4(E)	32	#4	18'-9"	
e5(E)	16	#5	13'-0"	
e6(E)	16	#8	13'-0"	
e7(E)	8	#5	39'-4"	
e8(E)	8	#8	40'-3"	
e9(E)	96	#4	16'-7"	
e10(E)	12	#5	34'-6"	
e11(E)	12	#8	35'-5"	
e12(E)	32	#4	19'-0"	
s2(E)	536	#5	3'-4"	
s6(E)	192	#4	3'-4"	
s3(E)	1572	#5	4'-1"	
s4(E)	1649	#5	4'-5"	
s7(E)	480	#4	4'-1"	
s8(E)	480	#4	4'-5"	
s11(E)	8	#5	2'-0"	
s12(E)	6	#5	5'-0	
x(E)	141	#5	6'-3"	
Reinforcement Bars (Epoxy Coated)		Lbs.	158,200	
Class X Concrete Superstructures		Cu. Yds.	670.9	

Reinforcement Bars Designated (E) shall be Epoxy Coated.
All Bar dimensions are out-to-out.

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SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

669

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-28, 3-IH, 6-IP, 400HB, 401HB, 4-IH, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	330
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
40 SHEETS

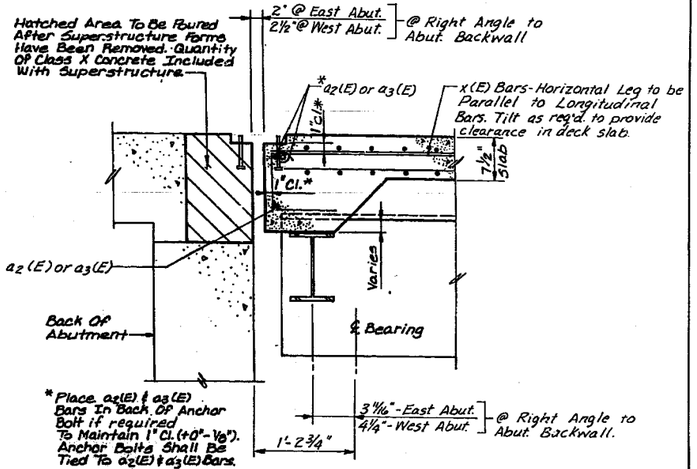
GIRDER MOMENT SCHEDULE

		GIRDERS 25A & 25B			GIRDER 25C	BEAMS 17, 18, 19			BEAMS 22, 23, 24		
		0.4 SPAN 1	PIER	0.5 SPAN 2	0.5 SPAN	0.4 SPAN 1	PIER	0.5 SPAN 2	0.4 SPAN 1	PIER	0.5 SPAN 2
Is	in4	5931	12902	5931	7476	14988	21236	14988	16092	22401	16092
Ic(n=9)	in4	16004	-	16004	20008	46780	-	46780	54769	-	54769
Ic(n=27)	in4	11434	-	11434	13509	30780	-	30780	35355	-	35355
Ss	in3	406	782	406	623	836	1144	836	893	1201	893
Sc(n=9)	in3	578	-	578	848	1412	-	1412	1596	-	1596
Sc(n=27)	in3	524	-	524	763	1206	-	1206	1351	-	1351
DL	k/ft	0.612	0.715	0.612	0.551	1.024	1.094	1.024	1.118	1.188	1.118
MDL	k-ft	222	632	202	460	409	926	430	448	1007	471
fs(NON-COMP)	ksi	6.6	9.7	6.0	8.9	5.9	9.7	6.2	6.0	10.1	6.3
SDL	k/ft	0.190	0.190	0.190	0.119	0.253	0.253	0.253	0.265	0.265	0.265
MSDL	k-ft	83	166	97	99	122	194	157	129	199	168
MLL	k-ft	418	381	462	522	591	430	671	636	449	726
MIMP	k-ft	102	88	101	126	145	99	147	155	104	160
MLL+I	k-ft	520	469	563	648	736	529	818	791	553	886
fs COMP(SDL)	ksi	1.9	2.5	2.2	1.6	1.2	2.0	1.6	1.2	2.0	1.5
fs COMP(LL+I)	ksi	10.8	7.2	11.7	9.2	6.3	5.5	7.0	6.0	5.5	6.7
fs TOTAL	ksi	19.3	19.4	19.9	19.7	13.4	17.2	14.8	13.2	17.6	14.5
VR	k	37.0	-	37.6	40.0	49.5	-	50.3	52.9	-	53.8

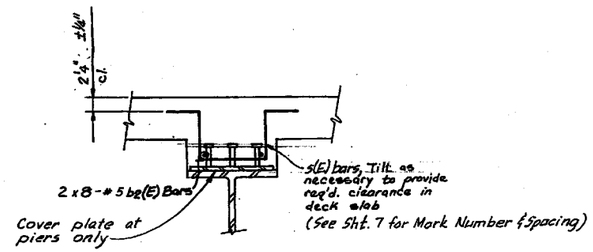
GIRDER REACTION TABLE

		GIRDERS 25A & 25B		GIRDER 25C		BEAMS 17, 18, 19		BEAMS 22, 23, 24	
		ABUT.	PIER	ABUT.	PIER	ABUT.	PIER	ABUT.	PIER
RDL	k	22.3	87.4	29.9	24.9	37.0	132.0	40.1	142.7
RLL	k	32.1	45.9	32.2	32.2	41.8	59.3	44.8	63.3
IMP	k	7.8	10.6	7.8	7.8	10.0	13.6	10.7	14.6
R TOTAL	k	62.2	143.9	69.9	64.9	88.8	204.9	95.6	220.6

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.



SECTION A-A



SECTION THRU BEAMS 16 to 25C

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS, MOMENT AND REACTION TABLES

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVENUE

COOK COUNTY

STATION 480+83.71

670

Joint Size	"C" at 50°F	"D" at 50°F	Location
2"	2"	1½" Min.	East Abut.- Western South Abut.- Logan
2½"	2½"	1¾" Min.	West Abut.- Western
4"	3"	2½" Min.	North Abut.- Logan

INSTALLATION NOTES

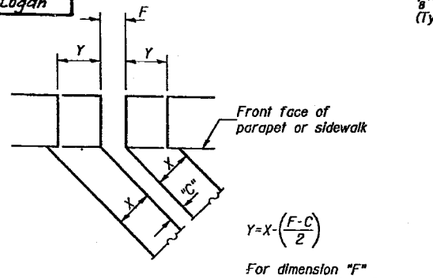
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

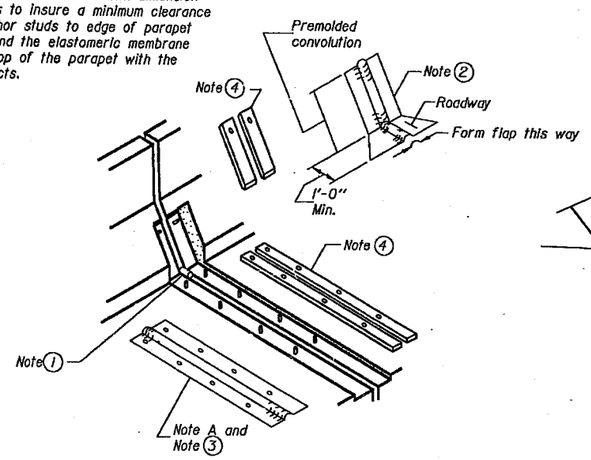
For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



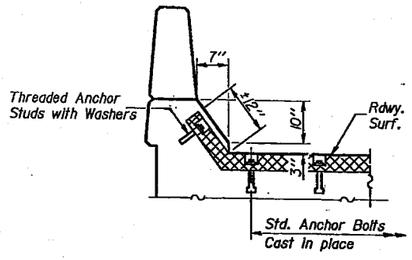
$Y = X - \left(\frac{F-C}{2}\right)$

For dimension "F" see sheets # 9, 10, 26 & 27

FORMING BLOCKOUT SKETCH

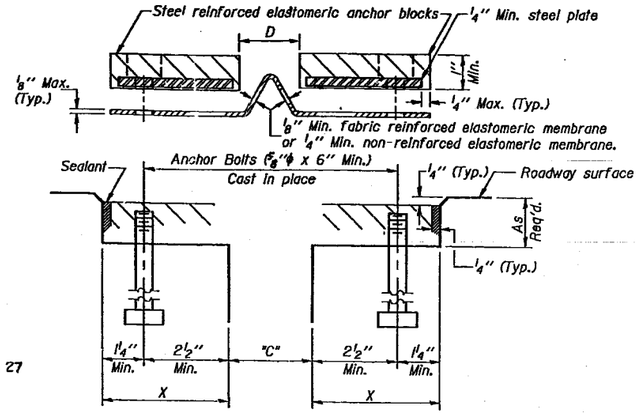


AT PARAPET



AT PARAPET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



CROSS SECTION

* 050512-28, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

COUNTY	SHEET NO.
	SHEET NO. 12
	40 SHEETS

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.

The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

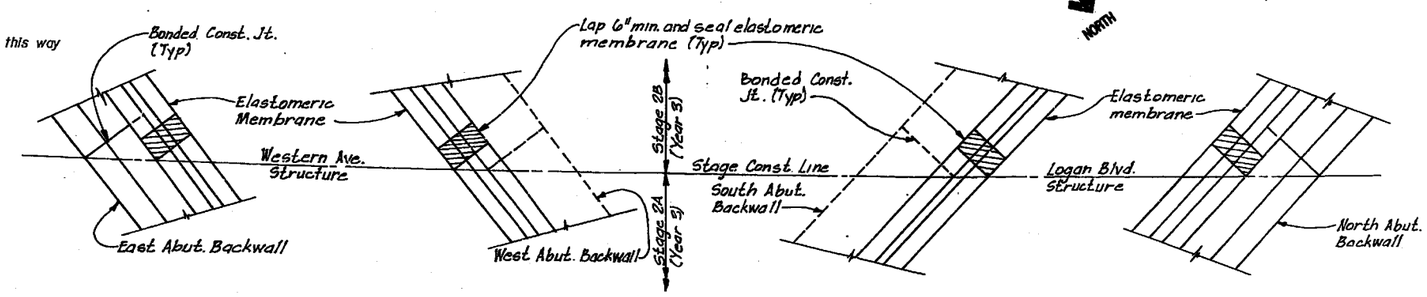
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

All anchor bolts for expansion joints shall be cast-in-place and tied to transverse reinforcing bars in deck.



ELASTOMERIC MEMBRANE SPLICE LOCATIONS

STANLEY CONSULTANTS

EJ-CS 12-31-87

EXPANSION JOINT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

ORG.

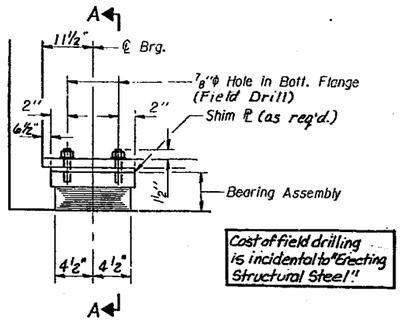
671

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

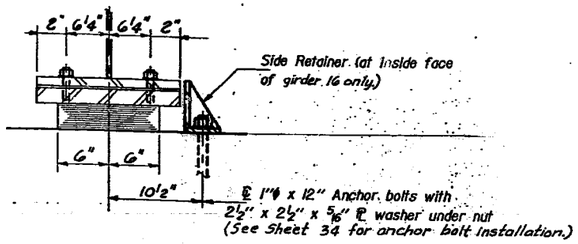
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	332
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT:	

SHEET NO. 13
40 SHEETS

* 0502(2-28, 3-1H, 6-1P, 400HB, 401HB, 451),
0506-450, 0605-402HB, 0606-403HB &
07071404HB, 4391R-2

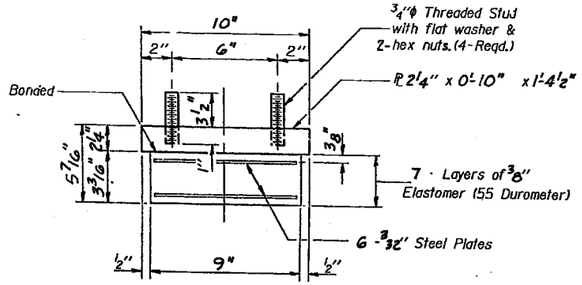


ELEVATION AT EAST ABUT.



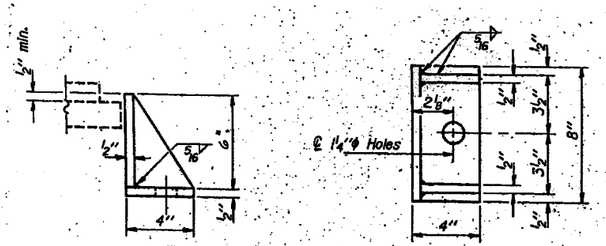
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.
10- Required



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER (1-Req'd.)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Girders	Item	Unit	Total
16 Thru 25	Unistrut Elastomeric Bearing Assembly Type I	Each	10

STANLEY CONSULTANTS

1-2-EI 12-1-83

BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

PH 3

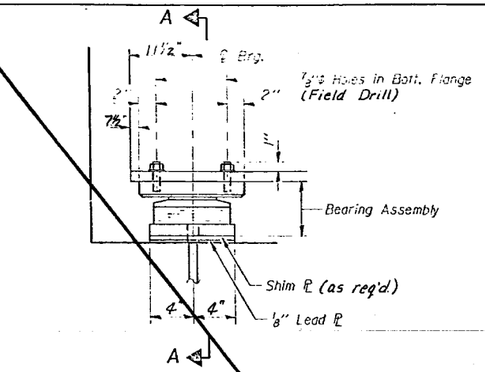
672

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

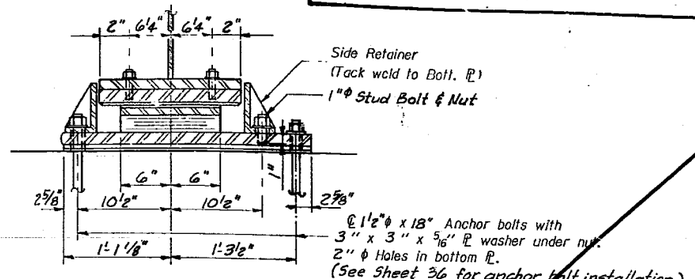
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	333
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14
40 SHEETS

* 050502-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 4391R-2

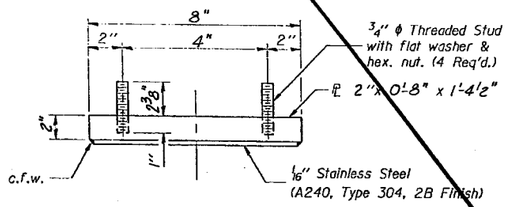


ELEVATION AT EAST ABUT.

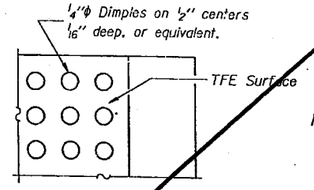


SECTION A-A

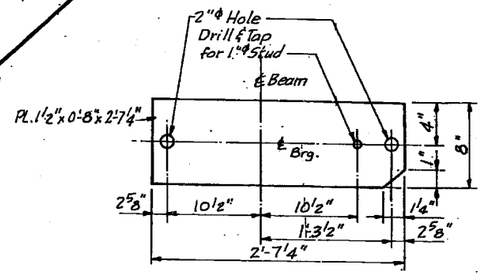
TYPE II TFE ELASTOMERIC EXP. BRG.



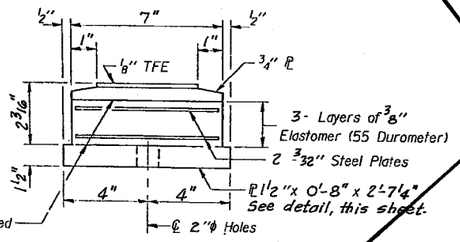
TOP BEARING ASSEMBLY



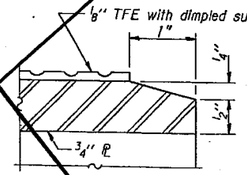
PLAN-TFE SURFACE



BOTTOM BEARING PLATE DETAIL



BOTTOM BEARING ASSEMBLY



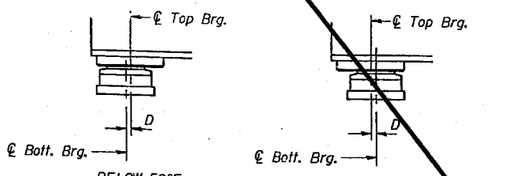
SECTION THRU TFE

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-compohent, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

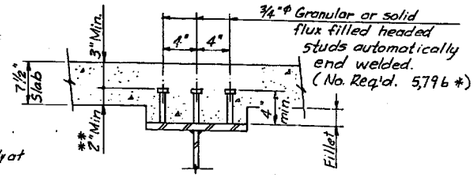
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (6 req'd.)



SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



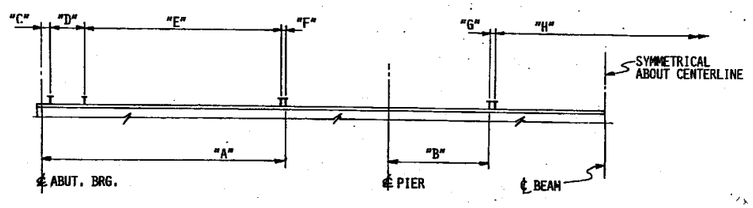
** Dimension applies only at unreinforced fillets.

SHEAR STUD DETAIL

* BEAM NO. 16,17,18,19 = 606 STUDS/BEAM
BEAM NO. 20 = 405 STUDS
BEAM NO. 21 = 423 STUDS
BEAM NO. 22,23,24 = 666 STUDS/BEAM
BEAM NO. 25 = 546 STUDS

SHEAR STUD SPACING TABLE (BEAMS 16-25)

BEAM	A	B	C	D	E	F	G	H
16,17,18,19	55'-8"	23'-11"	-	19 SP @ 10" = 15'-10"	40 SP @ 11 1/2" = 38'-4"	6 SP @ 3" = 1'-6"	6 SP @ 3" = 1'-6"	57 SP @ 11"(-) = 51'-10"
20	55'-8"	23'-11"	-	12 SP @ 1'-3 1/2"=15'-6"	27 SP @ 1'-5 1/2"(-)=39'-2"	4 SP @ 3" = 1'-0"	4 SP @ 3" = 1'-0"	38 SP @ 1'-5"(-) =52'-10"
21	55'-8"	23'-11"	-	14 SP @ 1'-2 1/2"=16'-11"	27 SP @ 1'-5"(-) = 37'-9"	4 SP @ 3" = 1'-0"	4 SP @ 3" = 1'-0"	40 SP @ 1'-4"(-)=52'-10"
22,23,24	55'-8"	23'-11"	1"	20 SP @ 9 1/2" = 15'-10"	44 SP @ 10 1/2"(-)=38'-0"	7 SP @ 3" = 1'-9"	7 SP @ 3" = 1'-9"	63 SP @ 10"(-)=51'-4"
25	55'-8"	23'-11"	-	16 SP @ 11 ½" = 15'- 4"	36 SP @ 1'-1"(-) = 38'-10"	6 SP @ 3" = 1'-6"	6 SP @ 3" = 1'-6"	51 SP @ 1'-0"(+) = 51'-10"



BEAM 16-25 SHEAR STUD SPACING

SHEAR STUD DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STANLEY CONSULTANTS

I-2-E2 12-1-83

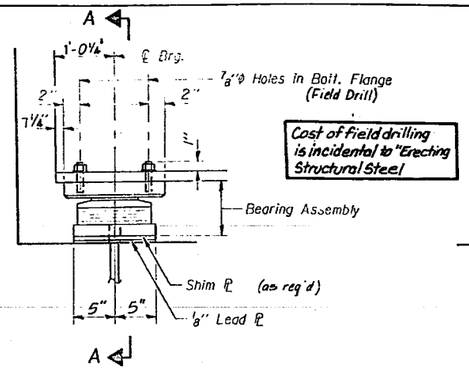
673 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.I.	*		426	334
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

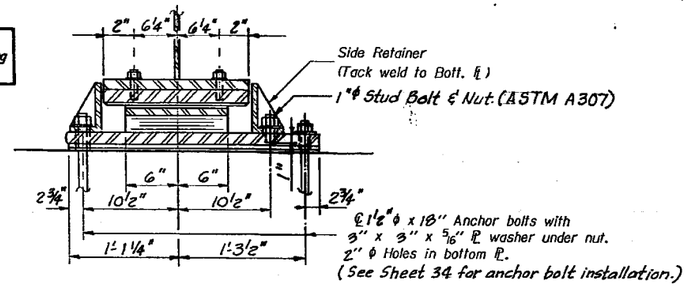
SHEET NO. 15
40 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IK-2



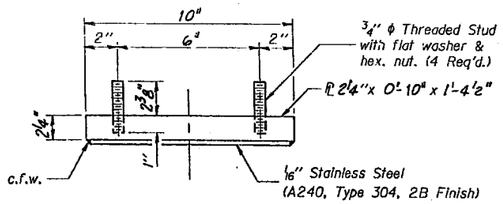
ELEVATION AT WEST ABUT.

Cost of field drilling is incidental to "Erecting Structural Steel"

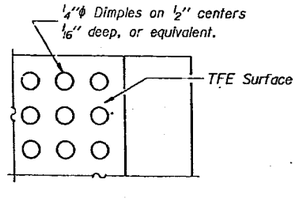


SECTION A-C

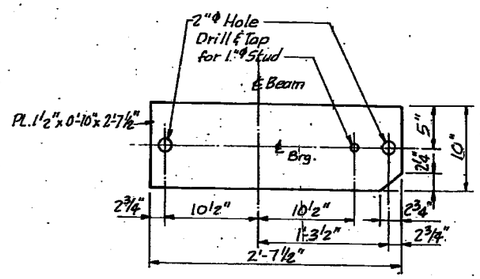
TYPE II TFE ELASTOMERIC EXP. BRG. (10 Req'd.)



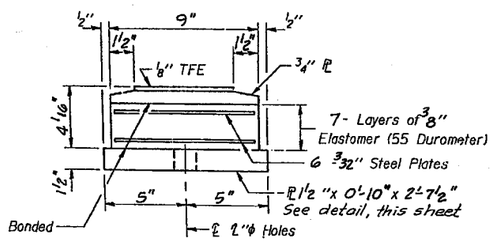
TOP BEARING ASSEMBLY



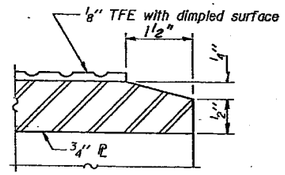
PLAN-TFE SURFACE



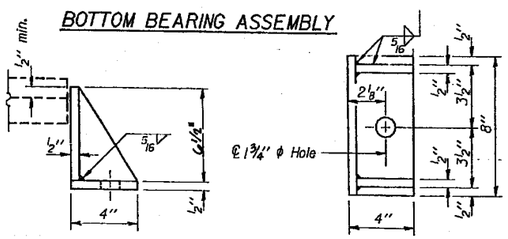
BOTTOM BEARING PLATE DETAIL



BOTTOM BEARING ASSEMBLY



SECTION THRU TFE

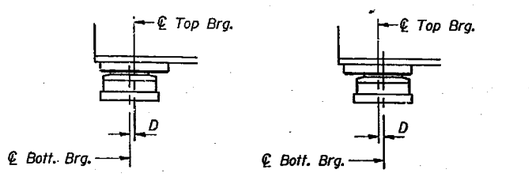


SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(20 Req'd.)

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BELOW 50°F. (Move bott. brg. away from fixed brg.)

ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Girders	Item	Unit	Total
16 Thru 25	Install Elastomeric Bearing Assembly Type II	Each	10

BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

STANLEY CONSULTANTS

I-2-E2 12-1-83

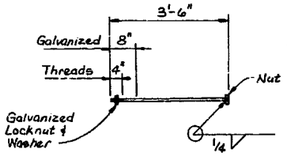
674 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

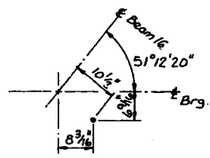
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	335
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

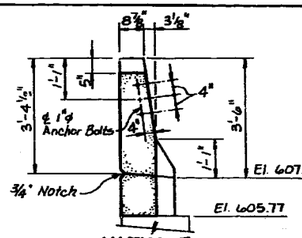
SHEET NO. 16
40 SHEETS



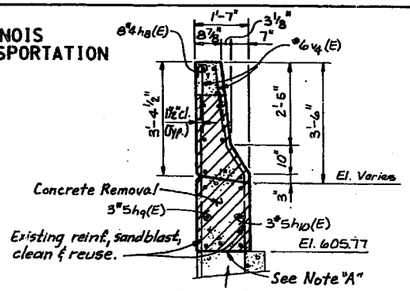
1" ϕ ANCHOR BOLT
(End of Parapet)



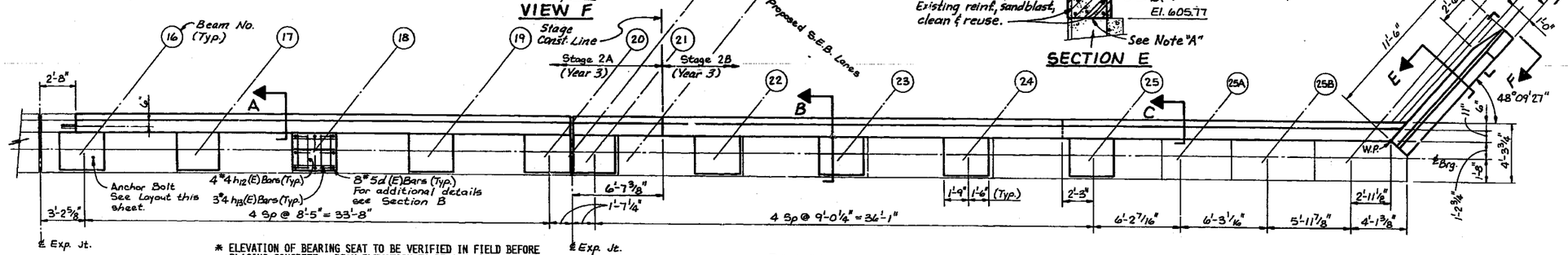
ANCHOR BOLT LAYOUT



VIEW F

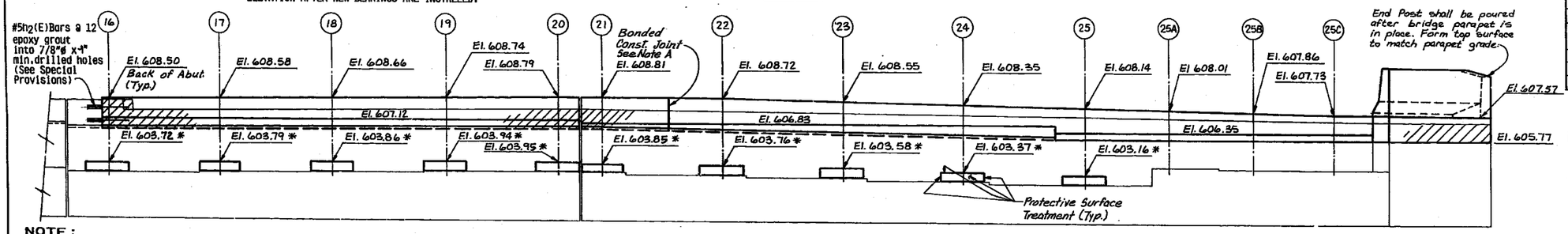


SECTION E

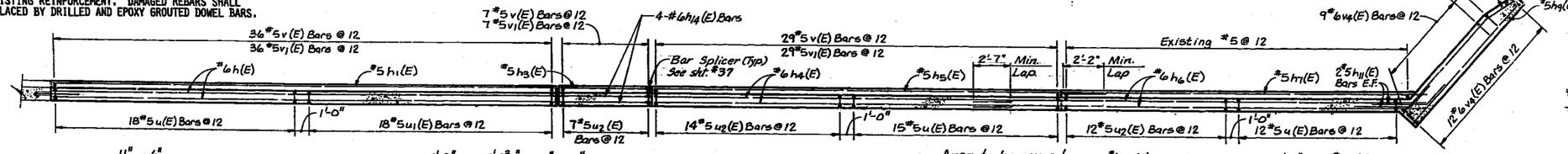


* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.

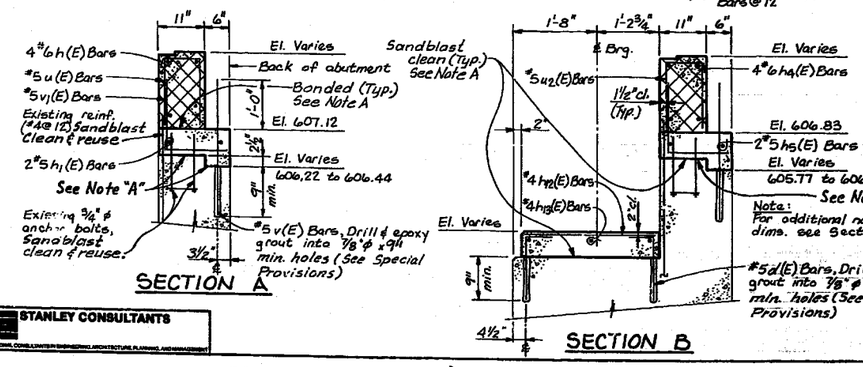
PLAN

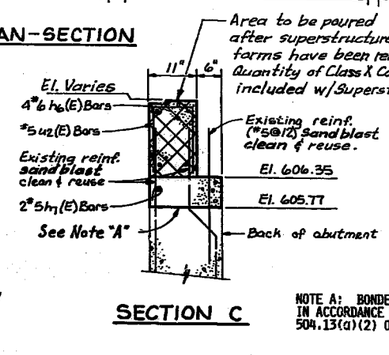


ELEVATION

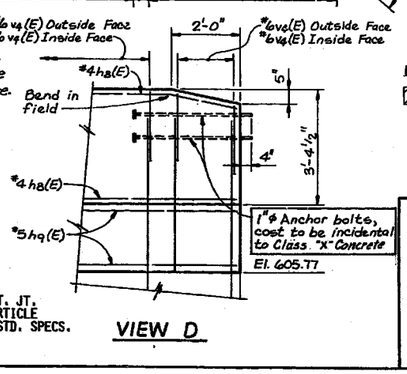


PLAN-SECTION



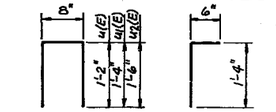


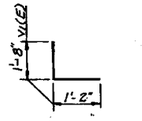
NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	4	#6	35'-6"	
h1(E)	2	#5	35'-6"	
h2(E)	2	#5	3'-3"	
h3(E)	2	#5	6'-4"	
h4(E)	4	#6	25'-0"	
h5(E)	2	#5	30'-10"	
h6(E)	4	#6	32'-0"	
h7(E)	2	#5	24'-6"	
h8(E)	8	#4	11'-2"	
h9(E)	3	#5	11'-2"	
h10(E)	3	#5	11'-3"	
h11(E)	4	#5	6'-0"	
h12(E)	40	#4	2'-5"	
h13(E)	30	#4	3'-0"	
h14(E)	4	#6	6'-3	
u(E)	45	#5	3'-0"	
u1(E)	18	#5	3'-4"	
u2(E)	33	#5	3'-8"	
d(E)	80	#5	1'-10"	
v(E)	72	#5	2'-10"	
v1(E)	72	#5	2'-10"	
v4(E)	24	#6	2-0"	
Reinforcement Bars (Epoxy Coated)		Lbs.	2070	
Class "X" Concrete		Cu. Yds.	8.1	
Concrete Removal		Cu. Yds.	7.3	





BAR v1(E)

NOTE:

DURING CONCRETE REMOVAL THE CONTRACTOR SHALL USE METHODS THAT WILL NOT DAMAGE, CUT, NICK, OR GOUGE THE EXISTING REINFORCEMENT. DAMAGED REBARS SHALL BE REPLACED BY DRILLED AND EPOXY GROUTED DOWEL BARS.

NOTES:

▨ INDICATES CONCRETE REMOVAL

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.

ALL BAR DIMENSIONS ARE OUT TO OUT.

STANLEY CONSULTANTS

EAST ABUTMENT - SOUTH END

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVENUE

COOK COUNTY

STATION 480+83.71

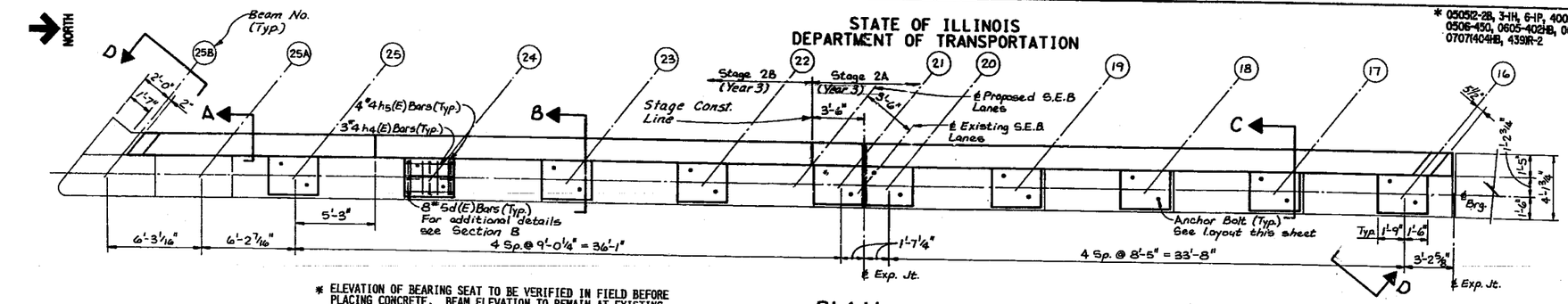
675 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 0505(2-28, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2

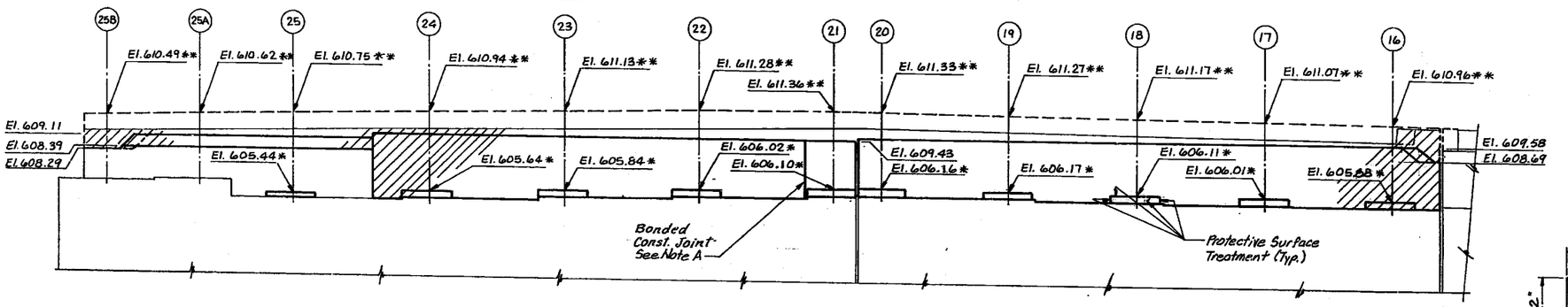
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	336
F. AID. I. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 17
40 SHEETS



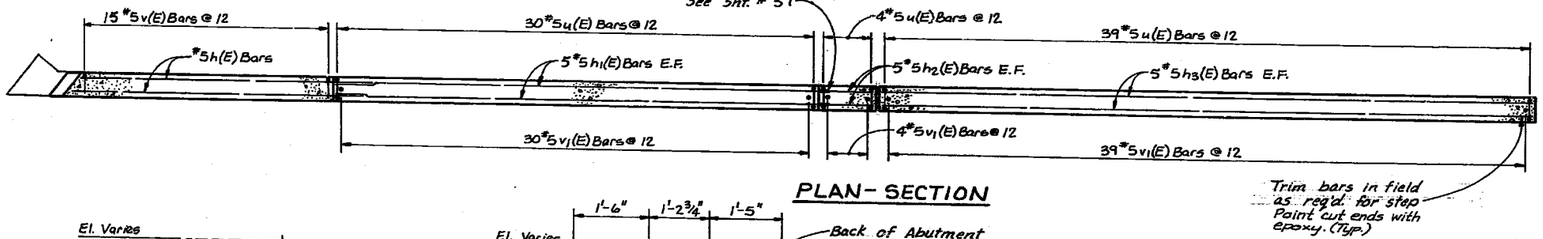
* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.

PLAN

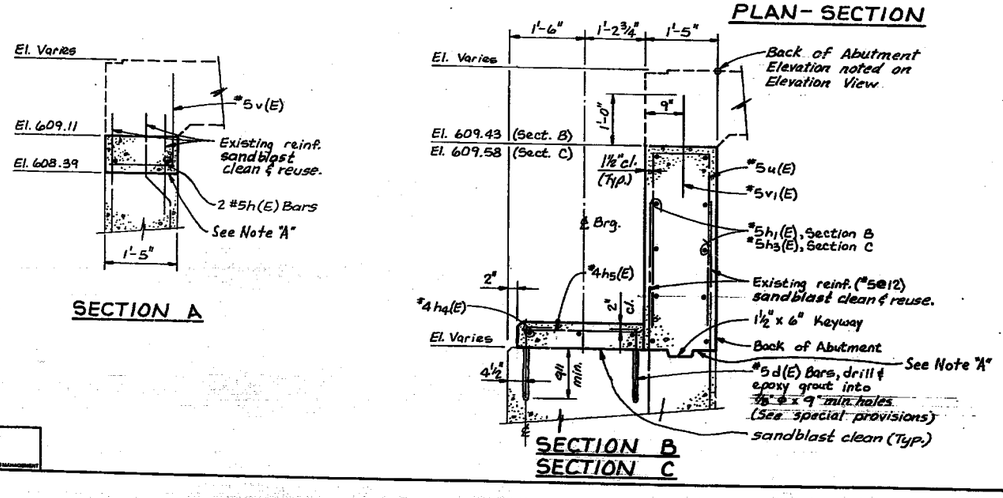


ELEVATION

** See Section A Elevations noted are at top of vaulted slab.

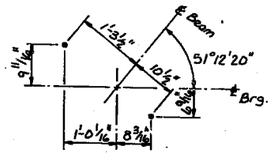


PLAN - SECTION



SECTION B
SECTION C

SECTION A



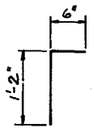
ANCHOR BOLT LAYOUT

NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.

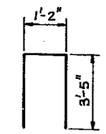
NOTE:
DURING CONCRETE REMOVAL THE CONTRACTOR SHALL USE METHODS THAT WILL NOT DAMAGE, CUT, NICK, OR GOUGE THE EXISTING REINFORCEMENT. DAMAGED REBARS SHALL BE REPLACED BY DRILLED AND EPOXY GROUTED DOWEL BARS.

BILL OF MATERIAL

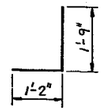
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	80	#5	1'-8"	
n(E)	2	#5	17'-9"	
n1(E)	10	#5	28'-9"	
n2(E)	10	#5	3'-3"	
n3(E)	10	#5	38'-2"	
h4(E)	30	#4	3'-0"	
h5(E)	40	#4	2'-3"	
u(E)	73	#5	8'-0"	
v(E)	15	#5	2'-11"	
v1(E)	73	#5	2'-0"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	1,840	
CLASS "X" CONCRETE		CU. YDS.	16.8	
CONCRETE REMOVAL		CU. YDS.	12.0	



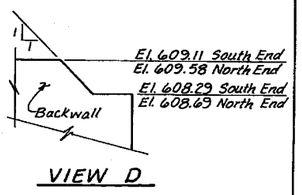
BAR d(E)



BAR u(E)



BAR v(E)



VIEW D

NOTES:
INDICATES CONCRETE REMOVAL
(E) INDICATES EPOXY COATED REINFORCEMENT BARS.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.
ALL BAR DIMENSIONS ARE OUT TO OUT.

STANLEY CONSULTANTS

WEST ABUTMENT - SOUTH END

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVENUE
COOK COUNTY
STATION 480+83.71

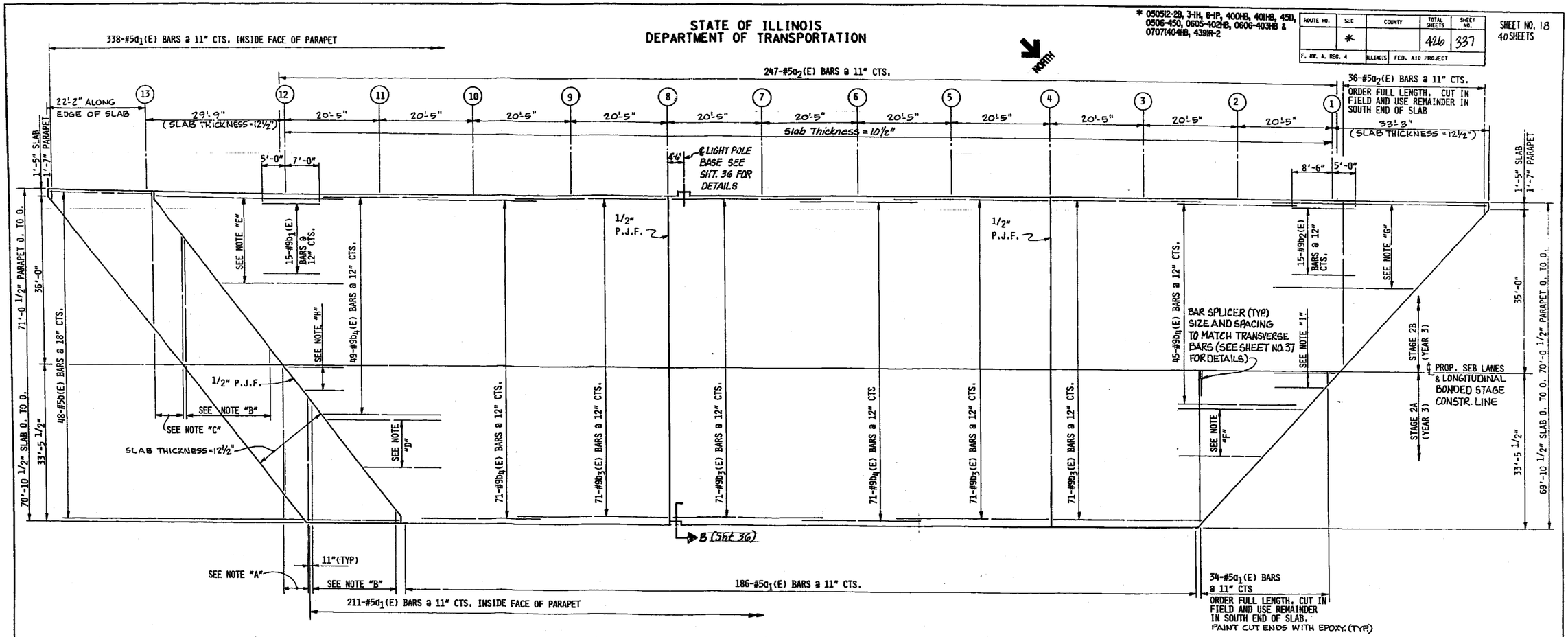
676

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	337
F. AW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 18
40 SHEETS



TOP OF SLAB REINFORCING PLAN

MIN. LAP FOR #9 BARS = 4'-6"

- SEE SHEET #19 FOR ADDITIONAL SLAB DIMENSIONS.

NOTES:

A. 6-#5a(E) BARS @ 11" CTS.
B. 24-#5a(E) BARS @ 11" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN SOUTH END OF SLAB.
C. 10-#5a(E) BARS @ 11" CTS.
D. 11-#9b_5(E) BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.
E. 19-#9b_6(E) BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.
F. 11-#9b_7(E) BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.
G. 23-#9b_8(E) BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.
H. 6-#9b_9(E) BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.
I. 4-#9b_{10}(E) BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

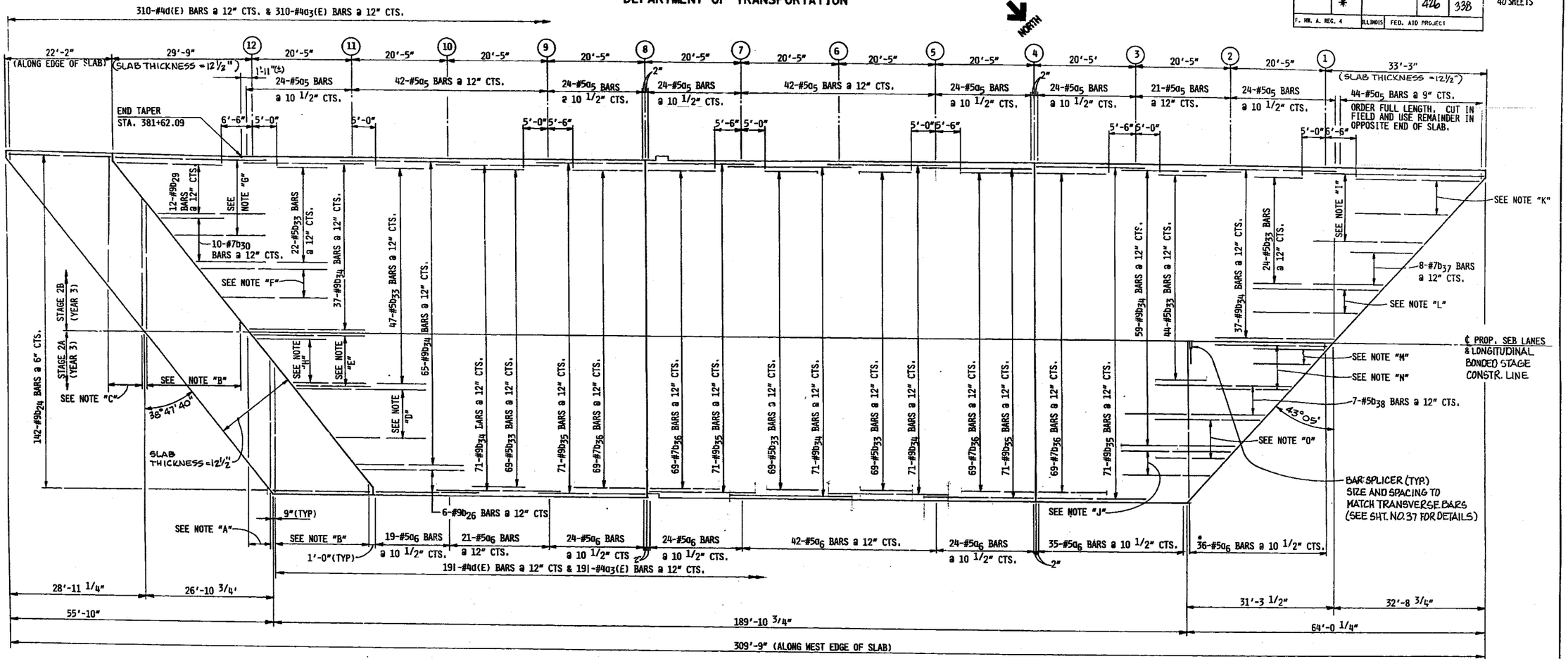
SECTION
F.A.I. ROUTE 90/94 VAULTED APPROACH SLAB
COOK COUNTY
STATION 485+87.05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOT'L SHEETS	SHEET NO.
	*		426	338
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 19
40 SHEETS



BOTTOM OF SLAB REINFORCING PLAN

MIN. LAP FOR #9 BARS = 4'-6" (ALL REINFORCING TO BE EPOXY COATED)
SLAB THICKNESS = 10½" FROM BENT #1 TO BENT #12

* ORDER FULL LENGTH, CUT IN FIELD AND USE REMAINDER IN OPPOSITE END OF SLAB, PAINT CUT ENDS WITH EPOXY. (TYP.)

SEE SHEET #18 FOR ADDITIONAL SLAB DIMENSIONS.

NOTES:

A. 7-#5a_4 BARS @ 9" CTS.

B. 30-#5a_4 BARS @ 9" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN SOUTH END OF SLAB.

C. 12-#5a_4 BARS @ 9" CTS.

D. 11-#7b_{25} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

E. 12-#9b_{27} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

F. 7-#7b_{32} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

G. 17-#9b_{31} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

H. 11-#7b_{28} BARS @ 12" CTS.

I. 17-#9b_{39} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

J. 6-#9b_{40} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

K. 8-#9b_{41} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

L. 6-#7b_{42} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

M. 4-#7b_{43} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

N. 10-#9b_{44} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

O. 9-#7b_{45} BARS @ 12" CTS. ORDER FULL LENGTH. CUT IN FIELD AND USE REMAINDER IN ADJACENT PART OF SLAB.

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 VAULTED APPROACH SLAB
COOK COUNTY
STATION 485+87.06

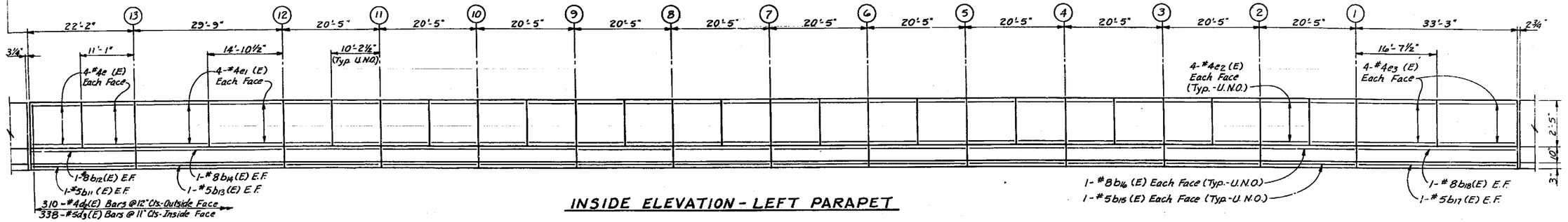
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

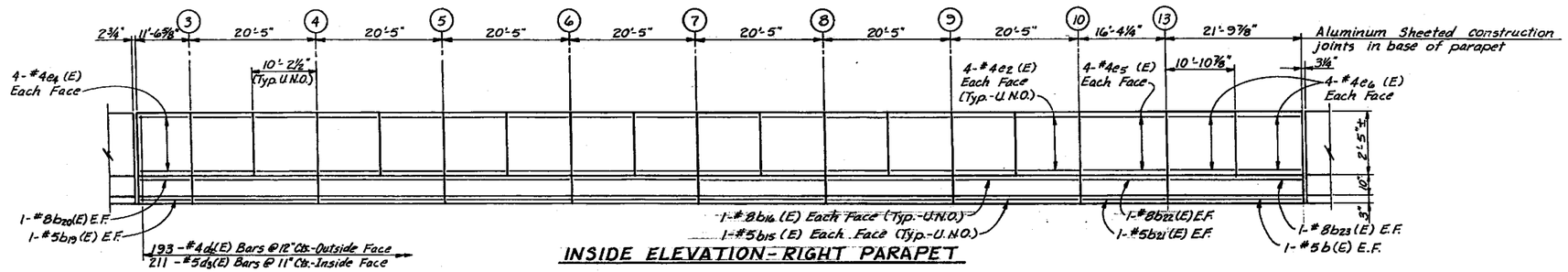
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	389
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 2C
40 SHEETS

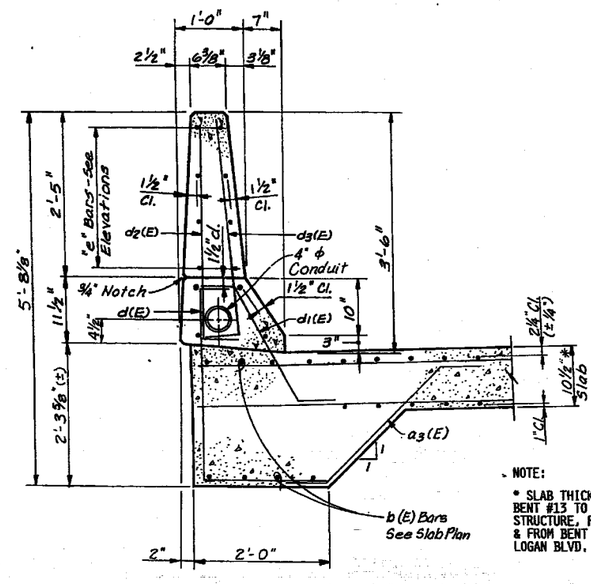
Aluminum Sheeted construction joints in base of parapet



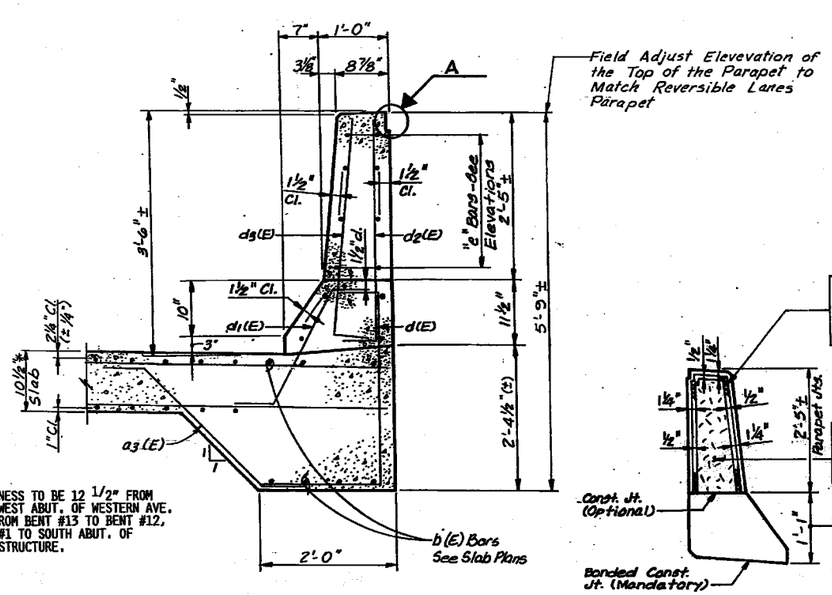
INSIDE ELEVATION - LEFT PARAPET



INSIDE ELEVATION - RIGHT PARAPET

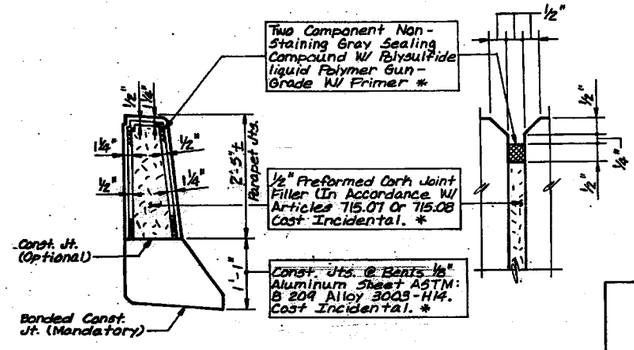


SECTION @ LEFT PARAPET



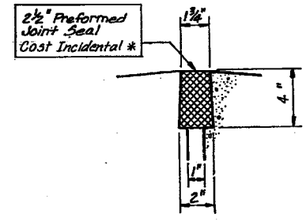
SECTION @ RIGHT PARAPET

NOTE:
* SLAB THICKNESS TO BE 12 1/2" FROM BENT #13 TO WEST ABUT. OF WESTERN AVE. STRUCTURE, FROM BENT #13 TO BENT #12, & FROM BENT #1 TO SOUTH ABUT. OF LOGAN BLVD. STRUCTURE.



PARAPET JOINT DETAILS

* Cost Incidental to Class X Concrete Superstructure



DETAIL A

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 VAULTED APPROACH SLAB
COOK COUNTY
STATION 485+87.05

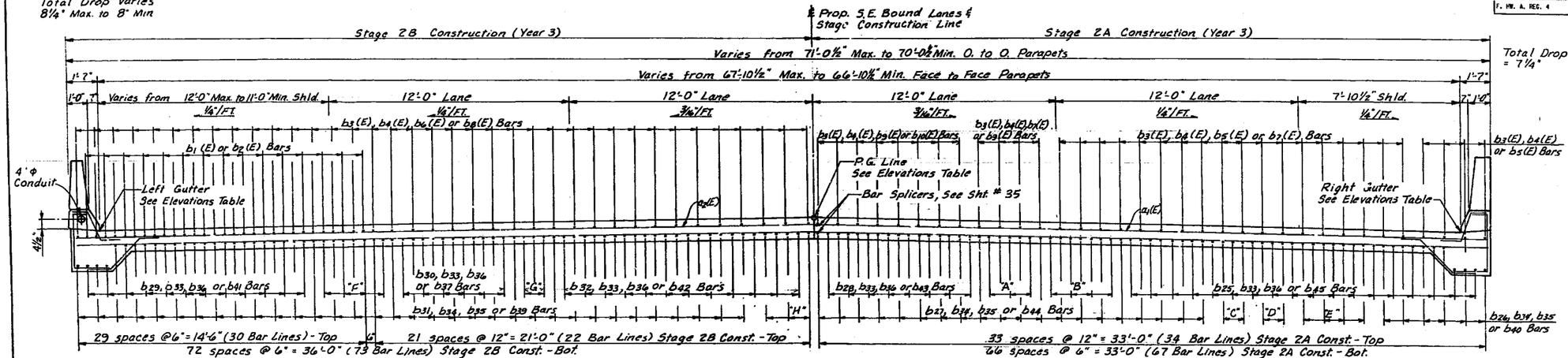
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*	-	426	340
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 21
40 SHEETS

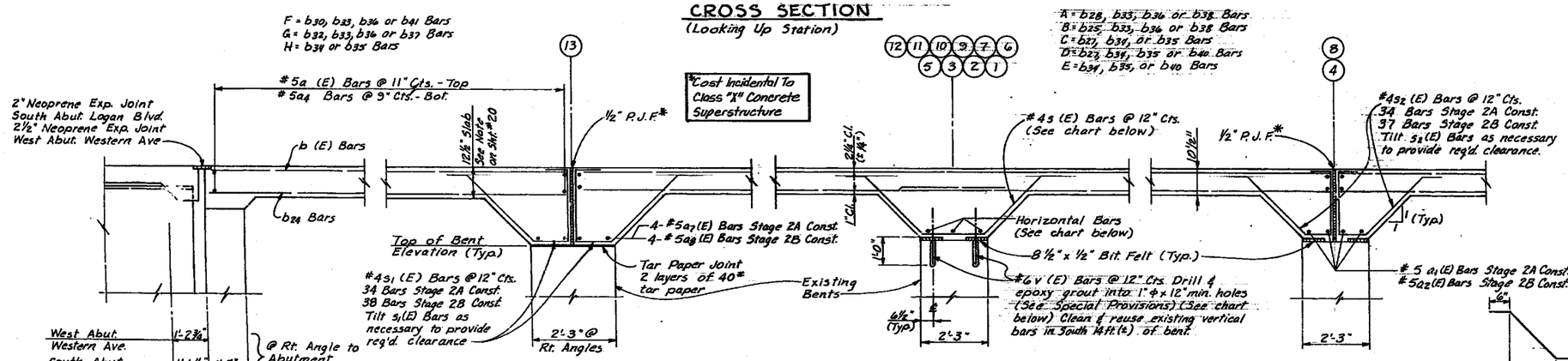


Total Drop = 7¼"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
b11(E)	2	#5	21'-10"	
b12(E)	2	#8	21'-10"	
b13(E)	2	#5	29'-6"	
b14(E)	2	#8	29'-6"	
b15(E)	36	#5	20'-1"	
b16(E)	36	#8	20'-1"	
b17(E)	2	#5	33'-0"	
b18(E)	2	#8	33'-0"	
b19(E)	2	#5	11'-3"	
b20(E)	2	#8	11'-3"	
b21(E)	2	#5	16'-0"	
b22(E)	2	#8	16'-0"	
b23(E)	2	#8	21'-6"	
b24(E)	142	#9	21'-6"	
b25(E)	11	#7	38'-10"	
b26(E)	6	#9	21'-8"	
b27(E)	12	#9	29'-0"	
b28(E)	11	#7	15'-6"	
b29(E)	12	#9	23'-1"	
b30(E)	10	#7	14'-8"	
b31(E)	17	#9	38'-0"	
b32(E)	7	#7	44'-6"	
b33(E)	344	#5	10'-5"	
b34(E)	411	#9	24'-11"	
b35(E)	284	#9	22'-6"	
b36(E)	276	#7	14'-9"	
b37(E)	8	#7	13'-6"	
b38(E)	7	#5	27'-9"	
b39(E)	17	#9	41'-0"	
b40(E)	6	#9	35'-0"	
b41(E)	8	#9	40'-0"	
b42(E)	6	#7	43'-3"	
b43(E)	4	#7	22'-4"	
b44(E)	10	#9	27'-9"	
b45(E)	9	#7	25'-9"	
d(E)	501	#4	5'-3"	
d1(E)	549	#5	2'-10"	
d2(E)	503	#4	3'-8"	
d3(E)	549	#5	3'-8"	
e(E)	16	#4	10'-9"	
e1(E)	16	#4	14'-6"	
e2(E)	288	#4	9'-10"	
e3(E)	16	#4	16'-4"	
e4(E)	8	#4	11'-3"	
e5(E)	8	#4	16'-0"	
e6(E)	16	#4	10'-7"	
v(E)	942	#6	2'-0"	
s(E)	612	#4	9'-7"	
s1(E)	144	#4	7'-5"	
s2(E)	284	#4	7'-2"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	224,920
CLASS "X" CONCRETE SUPERSTRUCTURE.			CU. YDS.	919.7

CROSS SECTION
(Looking Up Station)



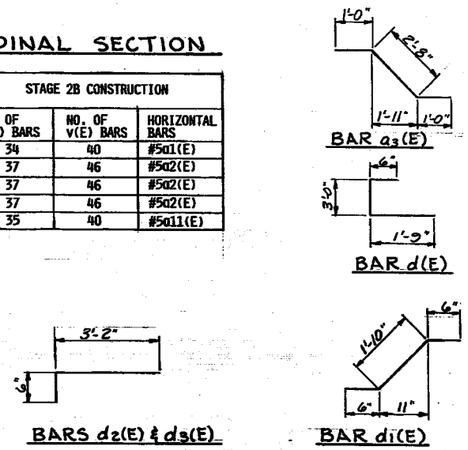
ELEVATIONS TABLE

BENT NO.	TOP OF BENT EL.	SLAB ELEVATIONS		
		LEFT GUTTER	℄ PROP SEB	RIGHT GUTTER
13	608.54	610.64	611.52	611.07
12	608.67	610.85	611.52	-
11	608.80	610.97	611.64	-
10	608.90	611.08	611.75	611.15
9	609.00	611.18	611.85	611.25
8	609.08	611.26	611.93	611.33
7	609.14	611.32	611.99	611.39
6	609.20	611.38	612.05	611.45
5	609.23	611.41	612.08	611.48
4	609.26	611.44	612.11	611.51
3	609.27	611.45	612.12	611.52
2	609.27	611.45	612.12	-
1	609.25	611.43	612.10	-

FOR SLAB ELEVATIONS @ WEST ABUT. OF WESTERN AVE. SEE SHEETS 5 TO 7 . FOR SLAB ELEVATIONS @ SOUTH ABUT. OF LOGAN BLVD. SEE SHEETS 22 TO 24.

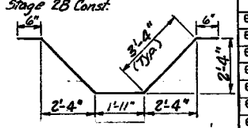
PARTIAL LONGITUDINAL SECTION

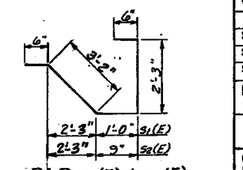
BENT NUMBER	STAGE 2A CONSTRUCTION			STAGE 2B CONSTRUCTION		
	NO. OF s(E) BARS	NO. OF v(E) BARS	HORIZONTAL BARS	NO. OF s(E) BARS	NO. OF v(E) BARS	HORIZONTAL BARS
1	-	-	-	34	40	#5a1(E)
2	19	38	#5a9(E)	37	46	#5a2(E)
3,5,6,7,9,10	34	68	#5a1(E)	37	46	#5a2(E)
11	24	48	#5a10(E)	37	46	#5a2(E)
12	-	-	-	35	40	#5a11(E)



BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	64	#5	26'-9"	
a1(E)	249	#5	33'-0"	
a2(E)	315	#5	36'-0"	
a3(E)	501	#4	4'-8"	
a4(E)	79	#5	26'-9"	
a5(E)	293	#5	36'-0"	
a6(E)	225	#5	33'-0"	
a7(E)	4	#5	42'-6"	
a8(E)	4	#5	47'-0"	
a9(E)	3	#5	18'-6"	
a10(E)	3	#5	22'-10"	
a11(E)	3	#5	33'-10"	
b(E)	50	#5	21'-6"	
b1(E)	15	#9	12'-0"	
b2(E)	15	#9	13'-6"	
b3(E)	284	#9	32'-9"	
b4(E)	236	#9	24'-11"	
b5(E)	11	#9	32'-6"	
b6(E)	19	#9	55'-10"	
b7(E)	11	#9	31'-6"	
b8(E)	23	#9	58'-6"	
b9(E)	6	#9	18'-3"	
b10(E)	4	#9	18'-9"	





REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

SUPERSTRUCTURE DETAILS

SECTION

F.A.I. ROUTE 90/94 VAULTED APPROACH SLAB

COOK COUNTY

STATION 485+87.05

STANLEY CONSULTANTS

CBC

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050502-28, 3-IH, 6-IP, 400HS, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	341
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 22
40 SHEETS

GIRDER NO. 16

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38358.180	31.000	611.536	611.536
℄ S. ABUT. BRG.	38362.230	31.000	611.535	611.535
a	38372.230	31.000	611.531	611.556
b	38382.230	31.000	611.523	611.570
c	38392.230	31.000	611.511	611.578
d	38402.230	31.000	611.497	611.577
e	38412.230	31.000	611.479	611.567
f	38422.230	31.000	611.458	611.548
g	38432.230	31.000	611.433	611.521
h	38442.230	31.000	611.405	611.486
i	38452.230	31.000	611.374	611.441
j	38462.230	31.000	611.339	611.392
k	38472.230	31.000	611.301	611.337
l	38482.230	31.000	611.260	611.279
m	38492.230	31.000	611.230	611.236
℄ PIER 2	38497.230	31.000	611.239	611.239
n	38507.230	31.000	611.253	611.248
o	38517.230	31.000	611.254	611.250
p	38527.230	31.000	611.251	611.253
q	38537.230	31.000	611.245	611.256
r	38547.230	31.000	611.236	611.256
s	38557.230	31.000	611.224	611.249
t	38567.230	31.000	611.208	611.234
u	38577.230	31.000	611.189	611.212
v	38587.230	31.000	611.166	611.183
w	38597.230	31.000	611.140	611.149
x	38607.230	31.000	611.111	611.114
y	38617.230	31.000	611.079	611.079
℄ PIER 1	38622.238	31.000	611.061	611.061
z	38632.238	31.000	611.023	611.031
aa	38642.238	31.000	610.983	611.004
bb	38652.238	31.000	610.939	610.975
cc	38662.238	31.000	610.893	610.942
dd	38672.238	31.000	610.847	610.905
ee	38682.238	31.000	610.801	610.860
ff	38692.213	31.001	610.754	610.808
gg	38702.132	31.022	610.709	610.750
hh	38712.051	31.069	610.664	610.686
℄ N. ABUT. BRG.	38722.015	31.143	610.620	610.620
BK. N. ABUT.	38726.032	31.180	610.603	610.603

GIRDER NO. 17

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38364.320	24.438	611.671	611.671
℄ S. ABUT. BRG.	38368.370	24.438	611.670	611.670
a	38378.370	24.438	611.663	611.694
b	38388.370	24.438	611.653	611.712
c	38398.370	24.438	611.640	611.722
d	38408.370	24.438	611.623	611.723
e	38418.370	24.438	611.603	611.712
f	38428.370	24.438	611.580	611.692
g	38438.370	24.438	611.553	611.662
h	38448.370	24.438	611.523	611.623
i	38458.370	24.438	611.489	611.573
j	38468.370	24.438	611.453	611.517
k	38478.370	24.438	611.413	611.457
l	38488.370	24.438	611.369	611.393
m	38498.370	24.438	611.359	611.367
℄ PIER 2	38503.370	24.438	611.356	611.356
n	38513.370	24.438	611.347	611.341
o	38523.370	24.438	611.334	611.329
p	38533.370	24.438	611.318	611.320
q	38543.370	24.438	611.299	611.311
r	38553.370	24.438	611.276	611.298
s	38563.370	24.438	611.250	611.278
t	38573.370	24.438	611.221	611.250
u	38583.370	24.438	611.189	611.215
v	38593.370	24.438	611.153	611.172
w	38603.370	24.438	611.113	611.123
x	38613.370	24.438	611.071	611.073
y	38623.370	24.438	611.025	611.025
℄ PIER 1	38628.375	24.438	611.001	611.001
z	38638.375	24.438	610.950	610.959
aa	38648.375	24.438	610.896	610.919
bb	38658.375	24.438	610.838	610.878
cc	38668.375	24.438	610.780	610.835
dd	38678.375	24.438	610.723	610.787
ee	38688.375	24.438	610.665	610.732
ff	38698.316	24.449	610.609	610.669
gg	38708.253	24.486	610.552	610.598
hh	38718.189	24.549	610.496	610.521
℄ N. ABUT. BRG.	38728.169	24.638	610.441	610.441
BK. N. ABUT.	38732.193	24.682	610.420	610.420

INDICATES STA 387+32.193 (TYP)

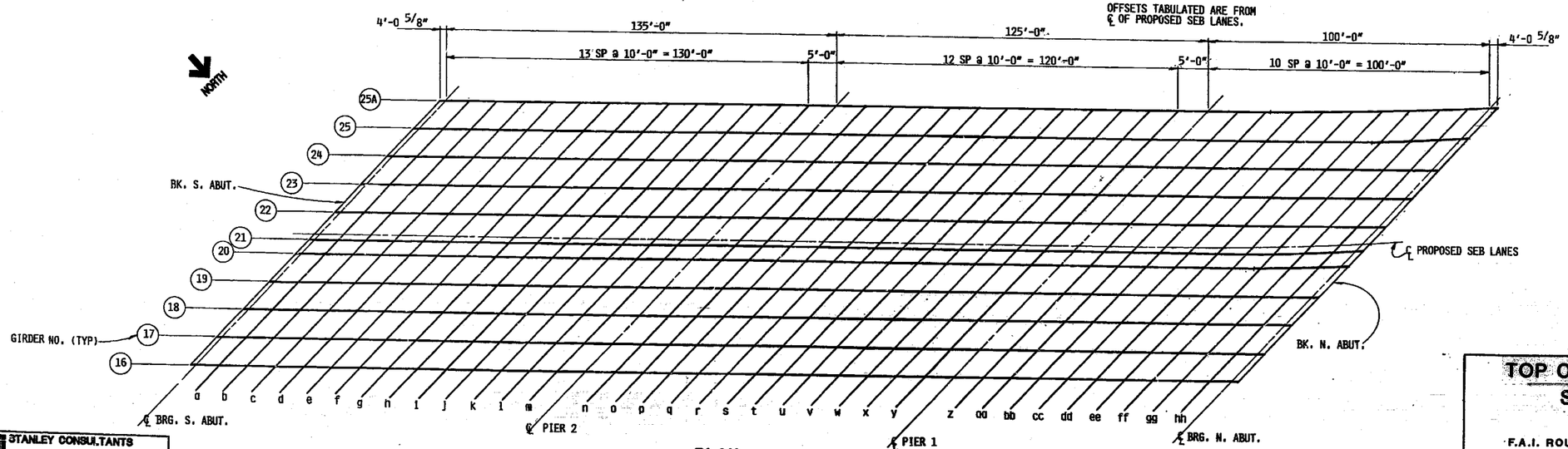
GIRDER NO. 18

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38370.450	17.875	611.805	611.805
℄ S. ABUT. BRG.	38374.510	17.875	611.803	611.803
a	38384.510	17.875	611.794	611.825
b	38394.510	17.875	611.782	611.841
c	38404.510	17.875	611.766	611.849
d	38414.510	17.875	611.748	611.848
e	38424.510	17.875	611.726	611.835
f	38434.510	17.875	611.700	611.813
g	38444.510	17.875	611.671	611.781
h	38454.510	17.875	611.639	611.739
i	38464.510	17.875	611.604	611.688
j	38474.510	17.875	611.565	611.630
k	38484.510	17.875	611.523	611.567
l	38494.510	17.875	611.487	611.511
m	38504.510	17.875	611.459	611.466
℄ PIER 2	38509.510	17.875	611.448	611.448
n	38519.510	17.875	611.425	611.420
o	38529.510	17.875	611.399	611.395
p	38539.510	17.875	611.370	611.372
q	38549.510	17.875	611.337	611.349
r	38559.510	17.875	611.301	611.323
s	38569.510	17.875	611.262	611.289
t	38579.510	17.875	611.219	611.248
u	38589.510	17.875	611.173	611.199
v	38599.510	17.875	611.124	611.143
w	38609.510	17.875	611.071	611.081
x	38619.510	17.875	611.015	611.018
y	38629.510	17.875	610.956	610.956
℄ PIER 1	38634.513	17.875	610.925	610.925
z	38644.513	17.875	610.861	610.870
aa	38654.513	17.875	610.793	610.816
bb	38664.513	17.875	610.724	610.764
cc	38674.513	17.875	610.655	610.710
dd	38684.513	17.875	610.586	610.650
ee	38694.488	17.879	610.517	610.584
ff	38704.441	17.906	610.449	610.509
gg	38714.394	17.959	610.381	610.427
hh	38724.347	18.038	610.315	610.340
℄ N. ABUT. BRG.	38734.344	18.144	610.250	610.250
BK. N. ABUT.	38738.375	18.194	610.223	610.223

GIRDER NO. 19

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38376.590	11.313	611.934	611.934
℄ S. ABUT. BRG.	38380.640	11.313	611.931	611.931
a	38390.640	11.313	611.920	611.951
b	38400.640	11.313	611.906	611.965
c	38410.640	11.313	611.888	611.971
d	38420.640	11.313	611.868	611.968
e	38430.640	11.313	611.843	611.953
f	38440.640	11.313	611.816	611.929
g	38450.640	11.313	611.785	611.895
h	38460.640	11.313	611.751	611.851
i	38470.640	11.313	611.714	611.797
j	38480.640	11.313	611.673	611.738
k	38490.640	11.313	611.629	611.673
l	38500.640	11.313	611.581	611.605
m	38510.640	11.313	611.542	611.549
℄ PIER 2	38515.640	11.313	611.525	611.525
n	38525.640	11.313	611.489	611.483
o	38535.640	11.313	611.449	611.445
p	38545.640	11.313	611.407	611.408
q	38555.640	11.313	611.360	611.372
r	38565.640	11.313	611.311	611.333
s	38575.640	11.313	611.258	611.286
t	38585.640	11.313	611.202	611.231
u	38595.640	11.313	611.143	611.169
v	38605.640	11.313	611.080	611.099
w	38615.640	11.313	611.013	611.023
x	38625.640	11.313	610.944	610.947
y	38635.640	11.313	610.871	610.872
℄ PIER 1	38640.650	11.313	610.834	610.834
z	38650.650	11.313	610.755	610.764
aa	38660.650	11.313	610.676	610.699
bb	38670.650	11.313	610.596	610.636
cc	38680.650	11.313	610.515	610.570
dd	38690.646	11.313	610.435	610.499
ee	38700.616	11.330	610.355	610.422
ff	38710.586	11.373	610.275	610.335
gg	38720.556	11.442	610.197	610.243
hh	38730.526	11.538	610.120	610.145
℄ N. ABUT. BRG.	38740.540	11.660	610.043	610.043
BK. N. ABUT.	38744.577	11.716	610.012	610.012

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.



PLAN

STANLEY CONSULTANTS

TOP OF SLAB ELEVATIONS
SHEET 1 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

621

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	342
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 23
40 SHEETS

GIRDER NO. 20

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT	38382.730	4.750	612.031	612.031
℄ S. ABUT. BRG.	38386.780	4.750	612.027	612.027
a	38396.780	4.750	612.014	612.037
b	38406.780	4.750	611.998	612.041
c	38416.780	4.750	611.979	612.038
d	38426.780	4.750	611.956	612.028
e	38436.780	4.750	611.930	612.008
f	38446.780	4.750	611.900	611.981
g	38456.780	4.750	611.867	611.946
h	38466.780	4.750	611.831	611.903
i	38476.780	4.750	611.792	611.852
j	38486.780	4.750	611.749	611.796
k	38496.780	4.750	611.703	611.735
l	38506.780	4.750	611.655	611.672
m	38516.780	4.750	611.610	611.616
℄ PIER 2	38521.780	4.750	611.587	611.587
n	38531.780	4.750	611.537	611.533
o	38541.780	4.750	611.484	611.481
p	38551.780	4.750	611.428	611.429
q	38561.780	4.750	611.368	611.377
r	38571.780	4.750	611.305	611.321
s	38581.780	4.750	611.239	611.259
t	38591.780	4.750	611.169	611.190
u	38601.780	4.750	611.097	611.115
v	38611.780	4.750	611.020	611.034
w	38621.780	4.750	610.941	610.948
x	38631.780	4.750	610.858	610.860
y	38641.780	4.750	610.772	610.772
℄ PIER 1	38646.788	4.750	610.727	610.727
z	38656.788	4.750	610.636	610.642
aa	38666.788	4.750	610.544	610.561
bb	38676.788	4.750	610.452	610.481
cc	38686.788	4.750	610.361	610.401
dd	38696.778	4.758	610.269	610.316
ee	38706.766	4.791	610.178	610.226
ff	38716.769	4.833	610.087	610.131
gg	38727.078	4.581	609.987	610.019
hh	38737.388	4.356	609.887	609.904
℄ N. ABUT. BRG.	38747.745	4.159	609.787	609.787
BK. N. ABUT.	38751.922	4.087	609.746	609.746

GIRDER NO. 21

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38385.070	2.250	612.068	612.068
℄ S. ABUT. BRG.	38389.120	2.250	612.064	612.064
a	38399.120	2.250	612.050	612.072
b	38409.120	2.250	612.033	612.075
c	38419.120	2.250	612.013	612.071
d	38429.120	2.250	611.989	612.060
e	38439.120	2.250	611.962	612.040
f	38449.120	2.250	611.932	612.012
g	38459.120	2.250	611.898	611.977
h	38469.120	2.250	611.861	611.933
i	38479.120	2.250	611.821	611.881
j	38489.120	2.250	611.777	611.826
k	38499.120	2.250	611.731	611.763
l	38509.120	2.250	611.682	611.699
m	38519.120	2.250	611.632	611.638
℄ PIER 2	38524.120	2.250	611.606	611.606
n	38534.120	2.250	611.551	611.547
o	38544.120	2.250	611.493	611.490
p	38554.120	2.250	611.432	611.434
q	38564.120	2.250	611.367	611.376
r	38574.120	2.250	611.299	611.316
s	38584.120	2.250	611.228	611.249
t	38594.120	2.250	611.153	611.175
u	38604.120	2.250	611.075	611.095
v	38614.120	2.250	610.994	611.008
w	38624.120	2.250	610.909	610.917
x	38634.120	2.250	610.821	610.823
y	38644.120	2.250	610.730	610.730
℄ PIER 1	38649.126	2.250	610.683	610.683
z	38659.126	2.250	610.587	610.593
aa	38669.126	2.250	610.491	610.508
bb	38679.126	2.250	610.395	610.425
cc	38689.126	2.250	610.299	610.340
dd	38699.120	2.263	610.203	610.252
ee	38709.114	2.302	610.108	610.158
ff	38719.124	2.351	610.013	610.058
gg	38729.439	2.105	609.908	609.942
hh	38739.756	1.887	609.803	609.821
℄ N. ABUT. BRG.	38750.120	1.695	609.698	609.698
BK. N. ABUT.	38754.300	1.626	609.655	609.655

INDICATES STA. 387+54.300 (TYP)

℄ OF PROPOSED SEB LANES

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38387.170	0.000	612.101	612.101
℄ S. ABUT. BRG.	38391.220	0.000	612.096	612.096
a	38401.220	0.000	612.082	612.104
b	38411.220	0.000	612.064	612.106
c	38421.220	0.000	612.043	612.102
d	38431.220	0.000	612.019	612.090
e	38441.220	0.000	611.991	612.069
f	38451.220	0.000	611.960	612.040
g	38461.220	0.000	611.926	612.004
h	38471.220	0.000	611.888	611.960
i	38481.220	0.000	611.847	611.908
j	38491.220	0.000	611.803	611.850
k	38501.220	0.000	611.755	611.787
l	38511.220	0.000	611.704	611.722
m	38521.220	0.000	611.650	611.656
℄ PIER 2	38526.220	0.000	611.622	611.622
n	38536.220	0.000	611.562	611.558
o	38546.220	0.000	611.500	611.497
p	38556.220	0.000	611.434	611.435
q	38566.220	0.000	611.364	611.373
r	38576.220	0.000	611.292	611.309
s	38586.220	0.000	611.216	611.237
t	38596.220	0.000	611.137	611.159
u	38606.220	0.000	611.054	611.073
v	38616.220	0.000	610.968	610.982
w	38626.220	0.000	610.879	610.886
x	38636.220	0.000	610.786	610.788
y	38646.220	0.000	610.690	610.690
℄ PIER 1	38651.230	0.000	610.641	610.641
z	38661.230	0.000	610.541	610.547
aa	38671.230	0.000	610.441	610.458
bb	38681.230	0.000	610.341	610.371
cc	38691.231	0.000	610.241	610.282
dd	38701.248	0.000	610.141	610.190
ee	38711.290	0.000	610.040	610.090
ff	38721.358	0.000	609.939	609.984
gg	38731.450	0.000	609.839	609.874
hh	38741.568	0.000	609.737	609.755
℄ N. ABUT. BRG.	38751.758	0.000	609.635	609.635
BK. N. ABUT.	38755.874	0.000	609.594	609.594

GIRDER NO. 22

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38391.640	-4.781	612.021	612.021
℄ S. ABUT. BRG.	38395.700	-4.781	612.015	612.015
a	38405.700	-4.781	612.000	612.031
b	38415.700	-4.781	611.980	612.040
c	38425.700	-4.781	611.958	612.040
d	38435.700	-4.781	611.932	612.032
e	38445.700	-4.781	611.903	612.012
f	38455.700	-4.781	611.871	611.984
g	38465.700	-4.781	611.835	611.945
h	38475.700	-4.781	611.796	611.897
i	38485.700	-4.781	611.753	611.838
j	38495.700	-4.781	611.707	611.773
k	38505.700	-4.781	611.658	611.703
l	38515.700	-4.781	611.606	611.630
m	38525.700	-4.781	611.550	611.558
℄ PIER 2	38530.700	-4.781	611.521	611.521
n	38540.700	-4.781	611.460	611.454
o	38550.700	-4.781	611.396	611.391
p	38560.700	-4.781	611.328	611.331
q	38570.700	-4.781	611.258	611.270
r	38580.700	-4.781	611.184	611.208
s	38590.700	-4.781	611.106	611.136
t	38600.700	-4.781	611.025	611.056
u	38610.700	-4.781	610.941	610.969
v	38620.700	-4.781	610.854	610.874
w	38630.700	-4.781	610.763	610.774
x	38640.700	-4.781	610.669	610.672
y	38650.700	-4.781	610.571	610.572
℄ PIER 1	38655.702	-4.781	610.521	610.521
z	38665.702	-4.781	610.421	610.430
aa	38675.702	-4.781	610.321	610.346
bb	38685.702	-4.781	610.221	610.264
cc	38695.710	-4.776	610.113	610.171
dd	38705.722	-4.745	610.005	610.074
ee	38715.735	-4.689	609.898	609.969
ff	38725.746	-4.606	609.791	609.855
gg	38735.758	-4.497	609.685	609.734
hh	38745.768	-4.362	609.581	609.607
℄ N. ABUT. BRG.	38755.823	-4.200	609.477	609.477
BK. N. ABUT.	38759.878	-4.127	609.436	609.436

NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES.
WORK THIS SHEET WITH SHEET 22

15/16"	1 3/16"	1 11/16"		1/16"	5/16"	9/16"		9/16"	9/16"	5/16"		GIRDER 16
1 1/4"	1 9/16"	1 7/8"		1/16"	7/16"	1/4"		7/16"	7/8"	3/4"		GIRDERS 17,18,19
7/8"	1 1/8"	5/8"		0"	5/16"	3/16"		5/16"	5/8"	9/16"		GIRDERS 20, 21
1 1/4"	1 9/16"	7/8"		1/16"	7/16"	1/4"		7/16"	15/16"	9/16"		GIRDERS 22 TO 25
2 11/16"	3 5/16"	1 3/4"		-1/8"	5/16"	3/16"		11/16"	1 5/16"	1 1/16"		GIRDER 25A

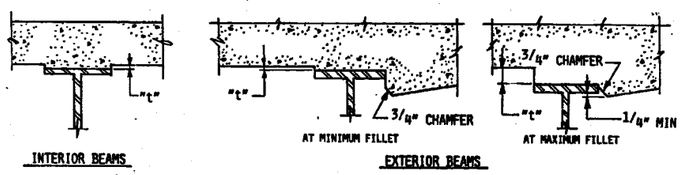
4 SP @ 33'-9"=135'-0" | 4 SP @ 31'-3" = 125'-0" | 4 SP @ 25'-0"=100'-0"

℄ S. ABUT. BRG. ℄ PIER 2 ℄ PIER 1 ℄ N. ABUT. BRG.

DEAD LOAD DEFLECTION DIAGRAM

(INCLUDES WEIGHT OF CONCRETE ONLY)

NOTE: THE ABOVE DEFLECTIONS ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS AS SHOWN.



TO DETERMINE "t": AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT INTERVALS SHOWN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" SHOWN, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF GIRDERS. SEE SHEET 22 FOR "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION" FOR GIRDERS #16 TO #19. SEE SHEET 24 FOR "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTION FOR GIRDERS #23 TO #25A.

FILLET HEIGHT DETAILS

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

TOP OF SLAB ELEVATIONS
SHEET 2 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050502-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	343
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2-3
40 SHEETS

GIRDER NO. 23

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38398.220	-11.813	611.902	611.902
℄ S. ABUT. BRG.	38402.270	-11.813	611.895	611.895
a	38412.270	-11.813	611.877	611.909
b	38422.270	-11.813	611.856	611.915
c	38432.270	-11.813	611.832	611.914
d	38442.270	-11.813	611.804	611.904
e	38452.270	-11.813	611.772	611.882
f	38462.270	-11.813	611.738	611.851
g	38472.270	-11.813	611.699	611.810
h	38482.270	-11.813	611.658	611.759
i	38492.270	-11.813	611.614	611.698
j	38502.270	-11.813	611.566	611.631
k	38512.270	-11.813	611.514	611.559
l	38522.270	-11.813	611.460	611.484
m	38532.270	-11.813	611.402	611.409
℄ PIER 2	38537.270	-11.813	611.371	611.371
n	38547.270	-11.813	611.308	611.303
o	38557.270	-11.813	611.242	611.238
p	38567.270	-11.813	611.172	611.175
q	38577.270	-11.813	611.099	611.112
r	38587.270	-11.813	611.023	611.047
s	38597.270	-11.813	610.943	610.973
t	38607.270	-11.813	610.860	610.891
u	38617.270	-11.813	610.774	610.802
v	38627.270	-11.813	610.684	610.705
w	38637.270	-11.813	610.591	610.602
x	38647.270	-11.813	610.495	610.498
y	38657.270	-11.813	610.396	610.396
℄ PIER 1	38662.278	-11.813	610.346	610.346
z	38672.278	-11.813	610.245	610.254
aa	38682.278	-11.813	610.145	610.170
bb	38692.287	-11.811	610.031	610.074
cc	38702.318	-11.790	609.910	609.968
dd	38712.349	-11.742	609.791	609.860
ee	38722.380	-11.668	609.671	609.742
ff	38732.410	-11.568	609.553	609.617
gg	38742.439	-11.442	609.436	609.485
hh	38752.468	-11.289	609.319	609.345
℄ N. ABUT. BRG.	38762.541	-11.109	609.204	609.204
BK. N. ABUT.	38766.602	-11.029	609.157	609.157

GIRDER NO. 24

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38404.800	-18.844	611.746	611.746
℄ S. ABUT. BRG.	38408.850	-18.844	611.739	611.739
a	38418.850	-18.844	611.718	611.750
b	38428.850	-18.844	611.695	611.754
c	38438.850	-18.844	611.668	611.750
d	38448.850	-18.844	611.638	611.738
e	38458.850	-18.844	611.604	611.714
f	38468.850	-18.844	611.567	611.680
g	38478.850	-18.844	611.527	611.638
h	38488.850	-18.844	611.484	611.585
i	38498.850	-18.844	611.437	611.521
j	38508.850	-18.844	611.387	611.452
k	38518.850	-18.844	611.333	611.378
l	38528.850	-18.844	611.276	611.300
m	38538.850	-18.844	611.216	611.224
℄ PIER 2	38543.850	-18.844	611.185	611.185
n	38553.850	-18.844	611.120	611.114
o	38563.850	-18.844	611.051	611.047
p	38573.850	-18.844	610.979	610.981
q	38583.850	-18.844	610.904	610.917
r	38593.850	-18.844	610.826	610.850
s	38603.850	-18.844	610.744	610.773
t	38613.850	-18.844	610.659	610.690
u	38623.850	-18.844	610.570	610.598
v	38633.850	-18.844	610.478	610.499
w	38643.850	-18.844	610.383	610.394
x	38653.850	-18.844	610.284	610.287
y	38663.850	-18.844	610.184	610.185
℄ PIER 1	38668.854	-18.844	610.135	610.135
z	38678.854	-18.844	610.035	610.044
aa	38688.854	-18.844	609.927	609.952
bb	38698.902	-18.831	609.805	609.848
cc	38708.951	-18.793	609.685	609.743
dd	38719.000	-18.728	609.560	609.629
ee	38729.049	-18.636	609.429	609.500
ff	38739.097	-18.519	609.298	609.362
gg	38749.145	-18.375	609.169	609.218
hh	38759.191	-18.204	609.041	609.067
℄ N. ABUT. BRG.	38769.282	-18.007	608.913	608.913
BK. N. ABUT.	38773.351	-17.920	608.863	608.863

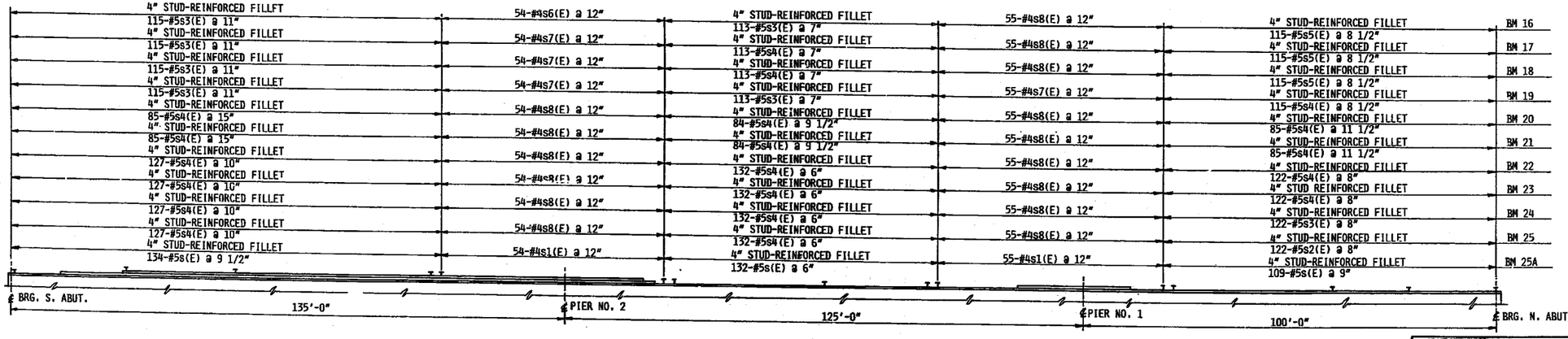
INDICATES STA 387+73.351 (TYP)

GIRDER NO. 25

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ABUT.	38411.370	-25.875	611.587	611.587
℄ S. ABUT. BRG.	38415.420	-25.875	611.579	611.579
a	38425.420	-25.875	611.557	611.589
b	38435.420	-25.875	611.531	611.590
c	38445.420	-25.875	611.502	611.585
d	38455.420	-25.875	611.470	611.571
e	38465.420	-25.875	611.434	611.544
f	38475.420	-25.875	611.395	611.508
g	38485.420	-25.875	611.352	611.463
h	38495.420	-25.875	611.307	611.408
i	38505.420	-25.875	611.258	611.342
j	38515.420	-25.875	611.205	611.270
k	38525.420	-25.875	611.150	611.194
l	38535.420	-25.875	611.091	611.115
m	38545.420	-25.875	611.028	611.036
℄ PIER 2	38550.420	-25.875	610.996	610.996
n	38560.420	-25.875	610.928	610.923
o	38570.420	-25.875	610.858	610.854
p	38580.420	-25.875	610.784	610.787
q	38590.420	-25.875	610.706	610.720
r	38600.420	-25.875	610.626	610.651
s	38610.420	-25.875	610.542	610.573
t	38620.420	-25.875	610.454	610.487
u	38630.420	-25.875	610.364	610.393
v	38640.420	-25.875	610.269	610.292
w	38650.420	-25.875	610.172	610.183
x	38660.420	-25.875	610.072	610.075
y	38670.420	-25.875	609.972	609.973
℄ PIER 1	38675.429	-25.875	609.922	609.922
z	38685.429	-25.875	609.822	609.831
aa	38695.472	-25.870	609.700	609.726
bb	38705.540	-25.840	609.579	609.623
cc	38715.608	-25.784	609.457	609.519
dd	38725.676	-25.701	609.312	609.384
ee	38735.743	-25.593	609.170	609.244
ff	38745.826	-25.474	609.026	609.093
gg	38756.218	-25.648	608.871	608.921
hh	38766.612	-25.794	608.716	608.742
℄ N. ABUT. BRG.	38777.053	-25.912	608.561	608.561
BK. N. ABUT.	38781.263	-25.951	608.498	608.498

GIRDER NO. 25A

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEADLOAD DEFLECTION
BK. S. ARUT.	38418.580	-33.583	611.412	611.412
℄ S. ABUT. BRG.	38422.630	-33.583	611.403	611.403
a	38432.630	-33.583	611.378	611.451
b	38442.630	-33.583	611.350	611.489
c	38452.630	-33.583	611.318	611.515
d	38462.630	-33.583	611.284	611.523
e	38472.630	-33.583	611.245	611.508
f	38482.630	-33.583	611.204	611.473
g	38492.630	-33.583	611.159	611.419
h	38502.630	-33.583	611.111	611.347
i	38512.630	-33.583	611.0o0	611.255
j	38522.630	-33.583	611.005	611.154
k	38532.630	-33.583	610.947	611.046
l	38542.630	-33.583	610.885	610.938
m	38552.630	-33.583	610.821	610.838
℄ PIER 2	38557.630	-33.583	610.787	610.787
n	38567.630	-33.583	610.717	610.702
o	38577.630	-33.583	610.644	610.626
p	38587.630	-33.583	610.568	610.555
q	38597.630	-33.583	610.488	610.487
r	38607.630	-33.583	610.405	610.417
s	38617.630	-33.583	610.318	610.340
t	38627.630	-33.583	610.229	610.254
u	38637.630	-33.583	610.135	610.160
v	38647.630	-33.583	610.039	610.056
w	38657.630	-33.583	609.940	609.946
x	38667.630	-33.583	609.840	ь09.838
y	38677.630	-33.583	609.739	609.738
℄ PIER 1	38682.631	-33.583	609.690	609.690
z	38692.670	-33.582	609.573	609.590
aa	38702.758	-33.559	609.451	609.494
bb	38712.968	-33.638	609.326	609.396
cc	38723.198	-33.709	609.170	609.263
dd	38733.427	-33.753	609.007	609.115
ee	38743.657	-33.769	608.843	608.952
ff	38753.887	-33.759	608.680	608.777
gg	38764.116	-33.721	608.519	608.591
hh	38774.346	-33.657	608.358	608.394
℄ W. ABUT. BRG.	38784.567	-33.565	608.198	608.198
BK. N. ABUT.	38788.764	-33.519	608.133	608.133



NOTE:
OFFSETS TABULATED ARE FROM ℄ OF PROPOSED SEB LANES. WORK THIS SHEET WITH SHEET 22.

SHEAR STUD LENGTHS AND REINFORCED FILLET LOCATIONS

STANLEY CONSULTANTS
INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

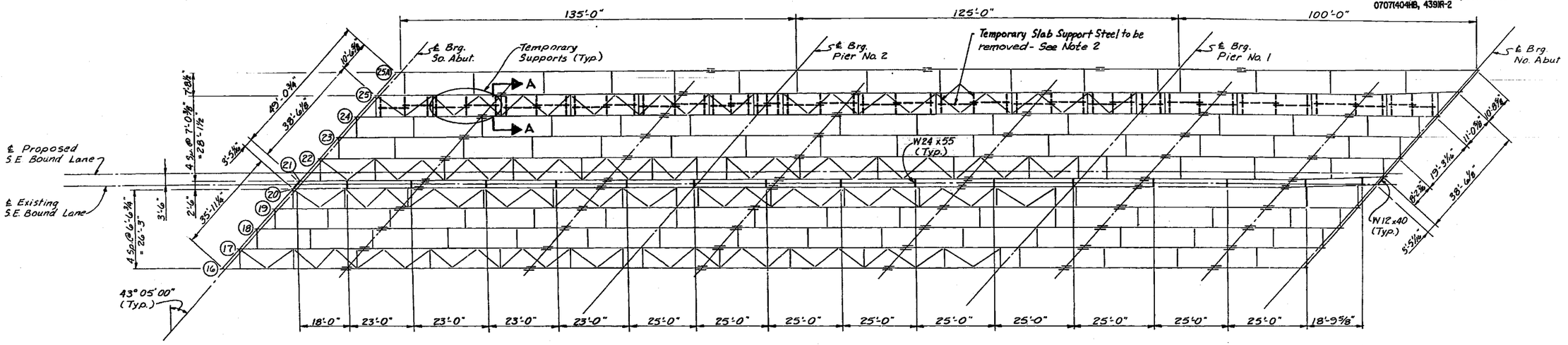
TOP OF SLAB ELEVATIONS
SHEET 3 OF 3
SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+87.05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

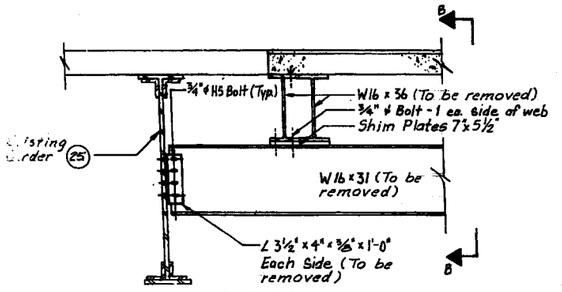
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	344
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 25
40 SHEETS

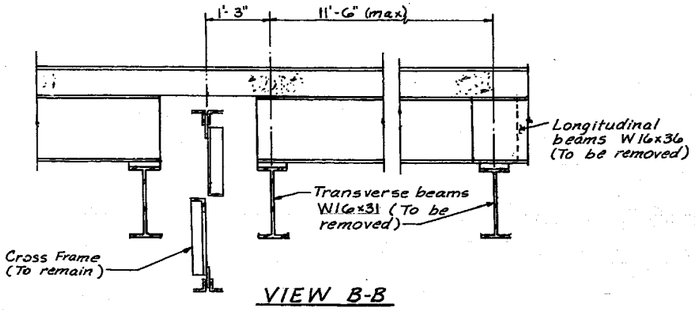
* 050512-28, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



PLAN

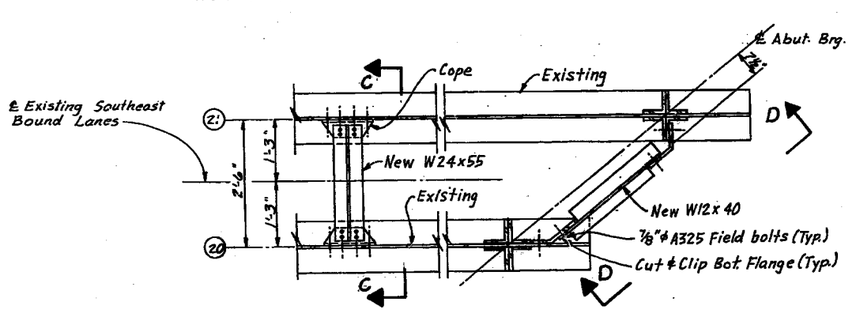


SECTION A-A



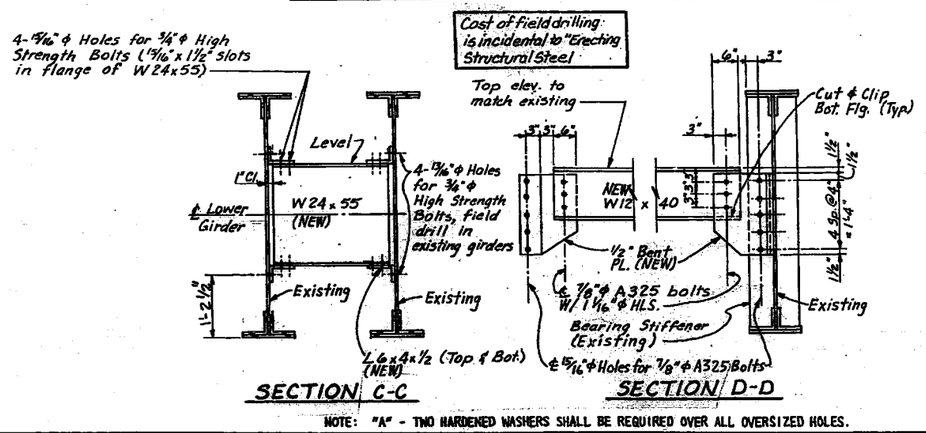
VIEW B-B

TEMPORARY SLAB SUPPORT STEEL
(TO BE REMOVED AS NOTED)



PARTIAL PLAN

FOR ERECTION ONLY



SECTION C-C

SECTION D-D

NOTE: "A" - TWO HARDENED WASHERS SHALL BE REQUIRED OVER ALL OVERSIZED HOLES.

NOTES:

1. ERECT STRUCTURAL STEEL DIAPHRAGMS BETWEEN GIRDERS 20 AND 21 (STRUCTURAL STEEL PROVIDED BY OWNER).
2. REMOVE TEMPORARY SLAB SUPPORT SYSTEM BETWEEN BEAMS 24 AND 25. REMOVED MATERIALS SHALL BECOME PROPERTY OF THE CONTRACTOR.
3. ~~ALL~~ HOLES PROVIDED FOR EXISTING SLAB SUPPORT STRUCTURAL ~~STEEL~~ SHALL BE FILLED ~~WITH~~ HIGH STRENGTH STEEL BOLTS A325 ~~WITH WASHERS~~ EACH SIDE.
~~COST~~ SHALL BE INCIDENTAL TO STRUCTURAL STEEL REMOVAL

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	345
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 26
40SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

NORTH

4'-0 5/8" | 135'-0" (Span 3) | 125'-0" (Span 2) | 100'-0" (Span 1) | 4'-0 5/8"

*65-#5a(E) Bars @ 6" Cts - Top
*47-#5a(E) Bars @ 8½" Cts - Bot

*Order a(E) Bars Full Length. Cut To Fit Skew And Use Remainder Of Bars In Opposite End.

366-#4d4(E) Bars @ 12" Cts - Outside Face
399-#5d1(E) Bars @ 11" Cts - Inside Face
366-#6a2(E) Bars @ 12" Cts - Top
Lap W/ Alternate a(E) Bars

19'-6" | 19'-6" | 107'-9"

℄ LIGHT POLE BASE
SEE SHEET 35 FOR DETAILS

15'-3" | 15'-3" | 35'-9"

364'-10¼" End to End Along Outside of Parapet

4½"

℄ LIGHT POLE BASE

666-#5a(E) Bars @ 6" Cts - Top
469-#5a(E) Bars @ 8½" Cts - Bot

Sht #28

2 x 10-#5b4 (E) Bars Ea. Girder Fillet Reinforcing (See Sht. No. 28 For Detail)

See Sht. No. 24 For Size and Spacing of Stirrups in Fillets

Sht #28

1'-7"

35'-0"

66-#6b2(E) Bars @ 12" Cts - Top Of Slab Over Piers Lap with 66-#6b4(E) Bars 12" Cts.

58 x 11-#5b1(E) Bars Spaced As Shown In Cross Section - Bot. (Min. Lap = 1'-8")

43° 05' 00" (Typ)

Longitudinal Banded Stage Construction Joint & ℄ Proposed Southeast Bound Lanes

66-#6b3(E) Bars @ 12" Cts - Top Of Slab Over Piers

67-#10-#5b1(E) Bars @ 12" Cts - Top (Min. Lap = 1'-8")

℄ Bearing

1-#6a3(E) Bar Top & Bottom (@ Each Abut.)

Stage 2B (Year 3)

Stage 2A (Year 3)

35'-0"

31'-10½"

70'-0½" Out To Out Deck

Back Of South Abutment Sta 383+87.17

℄ Bearing

℄ Pier 2

℄ Pier 1

Back Of North Abutment Sta 387+55.81

1-#6a4(E) Bar Top & Bottom (@ Each Abut.)

Bar Splicers (Typ.) Size and Spacing to Match Transverse Bars (See Sht. No. 37 For Details)

67-#5 x(E) Bars Lap w/ b1(E) Bars (Typ. @ Each Abutment)

670-#5a1(E) Bars @ 6" Cts - Top
473-#5a1(E) Bars @ 8½" Cts - Bot

Drainage Scupper See Sht. 38 & 37 For details

32'-9" | 38'-11" | 27'-0" | 25'-0"

2'-5" Min. Lap

bg(E) | bg(E)

℄ (Sht. 35)

31'-10½"

2¾"

343'-10¼" End to End Along Outside of Parapet

365-#6a2(E) Bars @ 12" Cts - Top
Lap W/ Alternate a1(E) Bars

2-#6b2(E) Bars Top Of Slab

2-#6b2(E) Bars Top of Slab (Lap with b2(E) Bars)

3 x 10-#5b1(E) Bars Top Of Slab

2-#6b3(E) Bars Top Of Slab

398-#5d1(E) Bars @ 11" Cts - Inside Face

365-#4d(E) Bars @ 12" Cts - Outside Face

**59-#5a1(E) Bars @ 6" Cts - Top
**42-#5a1(E) Bars @ 8½" Cts - Bot

PLAN

** Order a1(E) Bars Full Length. Cut to Fit Skew And Use Remainder of Bars in Opposite End. Paint Cut Ends with Epoxy (Typ.)

71'-0½"

1'-7" | 35'-0" | 31'-10½" | 1'-7"

6⅜" | 2½" | 4½" | 4" ϕ Conduit | 7" | 3⅛" | Total Drop Varies | 8'-6" | 11'-0" Shldr. | 12'-0" Lane | 12'-0" Lane | 12'-0" Lane | 12'-0" Lane | 12'-0" Lane | 7'-10½" Shldr. | 3⅛" | 8⅞"

Varies | Varies | Varies | Varies | Varies | Total Drop Varies

Stage 2B (Year 3) | Stage 2A (Year 3)

4" ϕ Conduit

a2(E) | b1(E) | a(E) | a(E) | a1(E) | a1(E) | b(E)

2¼" Cl. (2 ¼")

7½" Slab

3'-6" ± | 2'-5" ± | 1'-4½" | 11¼" | 6"

℄ Proposed S.E. Bound Lanes ℄ P.G. Line

Bar Splicers - See Sht. #37 For Details

See Sht. # 28 for details of fillet reinforcing

Bonded Const. Joint

New W24x55 Diaphragm

1'-1" | 7-#5b(E) Bars @ 11" Cts (Max) | 1'-1" | 1'-1⅞" | 6-#5b(E) Bars @ 11½" Cts (Max) | 1'-1⅞" | 1'-3" | 1'-3" | 1'-2⅜" | 5-#5b(E) Bars @ 12½" Cts (Max) | 1'-2⅜"

2" | 25A | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16

Varies 2'-9¾" To 3'-0¾" | Varies 7'-8½" To 7'-10" | Varies 7'-0⅜" To 8'-0⅜" | 2 Spaces @ 7'-0⅜" = 14'-0¾" | Varies 7'-0⅜" To 5'-11⅜" | Varies 6'-6¾" To 7'-7¼" | 3 Spaces @ 6'-6¾" = 19'-8¼" | Varies - 2'-3⅜" To 2'-5½"

CROSS SECTION
(Looking Up Station)

NOTES:

1. SEE SHEET 28 FOR SUPERSTRUCTURE DETAILS AND BILL OF MATERIALS.
2. BARS INDICATED THUS 20X3-#5 ETC. INDICATES 20 LINES OF BARS WITH 3 LENGTHS PER LINE.
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. MINIMUM LAP #5 BARS 1'-8"

STANLEY CONSULTANTS

SUPERSTRUCTURE DETAILS

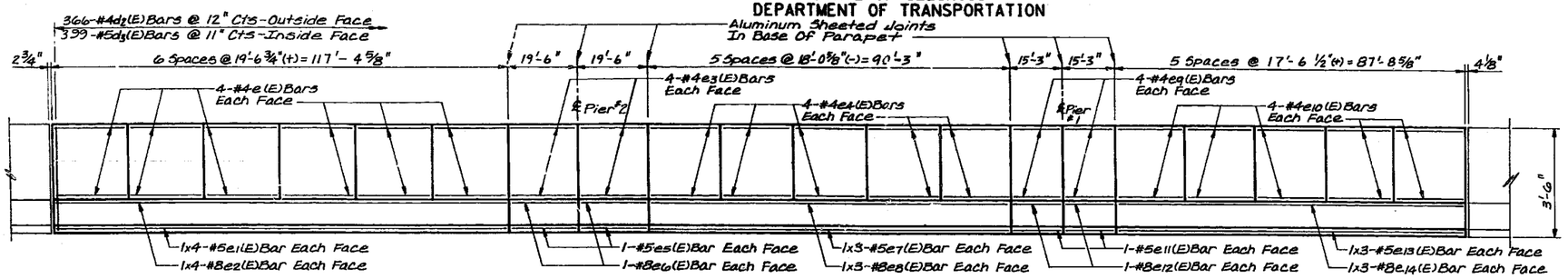
SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

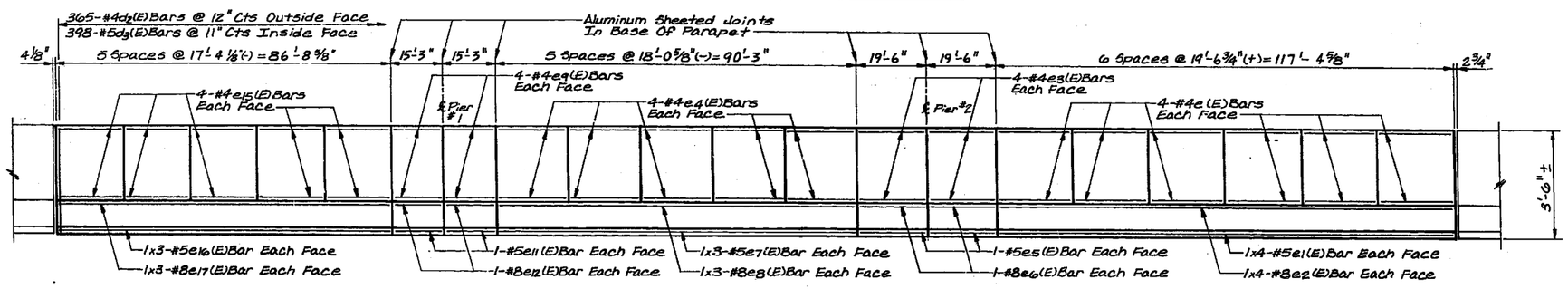
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	346
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 27
40 SHEETS

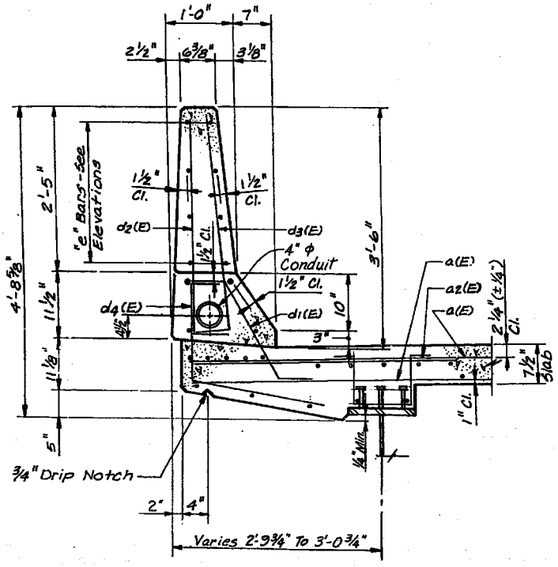
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



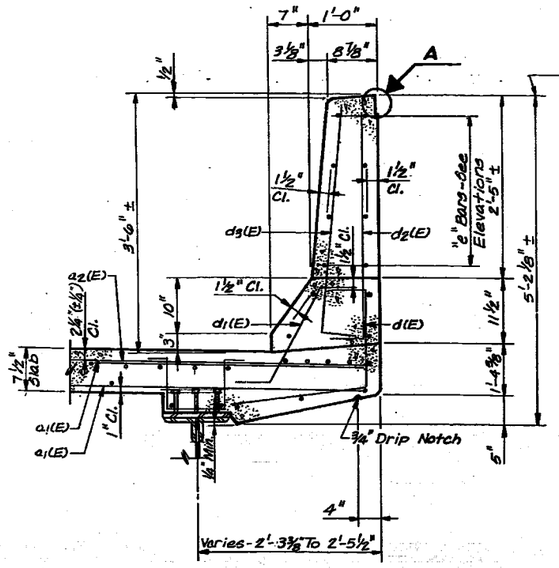
INSIDE ELEVATION OF WEST PARAPET



INSIDE ELEVATION OF EAST PARAPET

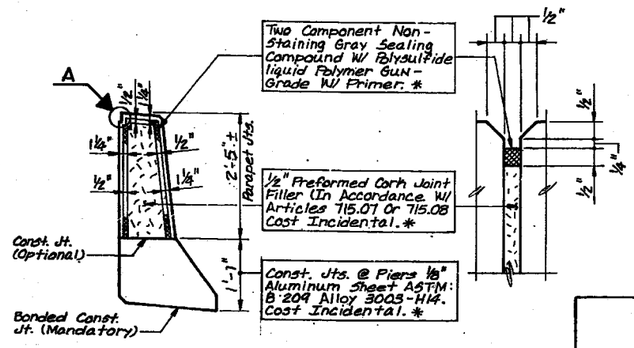


SECTION @ WEST PARAPET



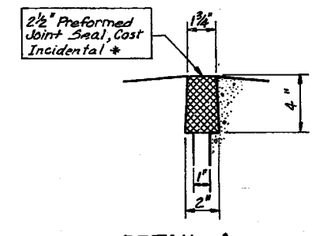
SECTION @ EAST PARAPET

Note:
Min. Laps to be:
1'-8" for #5 Bar
3'-8" for #8 Bar



PARAPET JOINT DETAILS

* Cost Incidental to Class X Concrete Superstructures.



DETAIL A

SUPERSTRUCTURE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

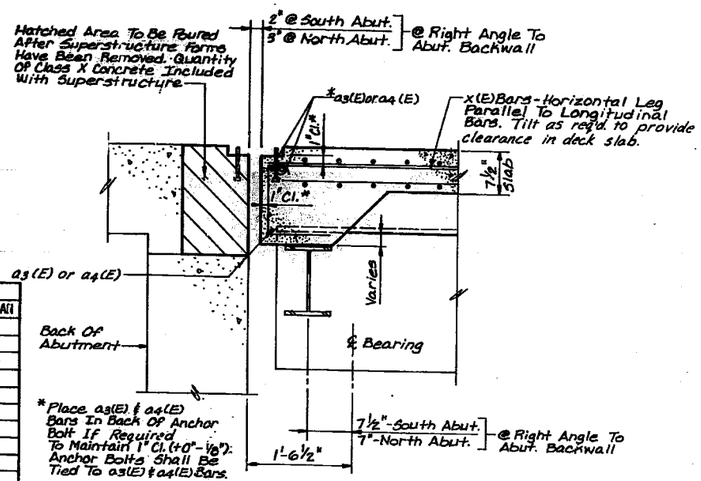
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

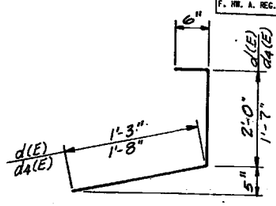
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	347
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

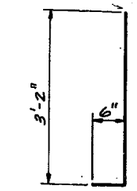
SHEET NO. 28
40 SHEETS



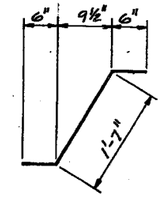
SECTION A-A
(Typ. @ Each Abutment)



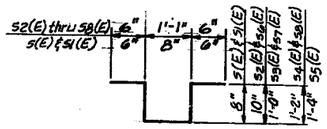
BARS d(E), d4(E)



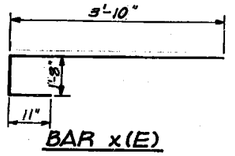
BARS d2(E), d3(E)



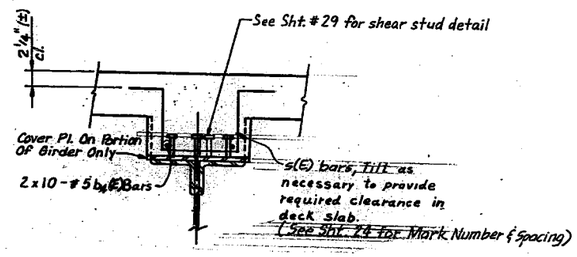
BAR d1(E)



BARS s(E) Thru s8(E)



BAR x(E)



SECTION THRU GIRDERS 16 TO 25A

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	1247	#5	36'-0"	
d1(E)	1244	#5	32'-10"	
d2(E)	731	#6	4'-0"	
d3(E)	4	#6	47'-9"	
d4(E)	4	#6	43'-6"	
D(E)	638	#5	34'-9"	
D1(E)	730	#5	38'-1"	
D2(E)	70	#6	29'-1"	
D3(E)	70	#6	52'-0"	
D4(E)	240	#5	37'-10"	
b5(E)	24	#5	2'-0"	
b6(E)	12	#5	7'-0"	
b7(E)	12	#6	7'-0"	
d(E)	365	#4	3'-9"	⌐
d1(E)	797	#5	2'-7"	⌐
d2(E)	731	#4	3'-8"	⌐
d3(E)	797	#5	3'-8"	⌐
d4(E)	366	#4	3'-9"	⌐
b8(E)	70	#6	45'-0"	
e(E)	96	#4	19'-3"	
e1(E)	16	#5	30'-6"	
e2(E)	16	#8	31'-11"	
e3(E)	32	#4	19'-2"	
e4(E)	80	#4	17'-8"	
e5(E)	8	#5	19'-2"	
e6(E)	8	#8	19'-2"	
e7(E)	12	#5	31'-1"	
e8(E)	12	#8	32'-4"	
e9(E)	32	#4	14'-11"	
e10(E)	40	#4	17'-3"	
e11(E)	8	#5	14'-11"	
e12(E)	8	#8	14'-11"	
e13(E)	6	#5	30'-3"	
e14(E)	6	#8	31'-6"	
e15(E)	40	#4	17'-0"	
e16(E)	6	#5	29'-11"	
e17(E)	6	#8	31'-2"	
s(E)	375	#5	3'-0"	⊔
s1(E)	109	#4	3'-0"	⊔
s2(E)	122	#5	3'-9"	⊔
s3(E)	808	#5	4'-1"	⊔
s4(E)	2129	#5	4'-5"	⊔
s5(E)	345	#5	4'-9"	⊔
s6(E)	54	#4	3'-9"	⊔
s7(E)	217	#4	4'-1"	⊔
s8(E)	819	#4	4'-5"	⊔
s9(E)	8	#5	2'-0"	
s10(E)	6	#5	5'-0"	
X(E)	134	#5	6'-5"	⊏
Reinforcement Bars (Epoxy Coated)			Lbs.	208,710
Class X Concrete Superstructures			Cu. Yds.	900.5

Reinforcement Bars Designated (E) shall be Epoxy Coated.
All bar dimensions are out to out.

GIRDER MOMENT TABLE		GIRDER 17, 18, 19					GIRDER 25A				
		0.4 S. SPAN	PIER #2	0.5 MIDDLE SPAN	PIER #1	0.6 N. SPAN	0.4 S. SPAN	PIER #2	0.5 MIDDLE SPAN	PIER #1	0.6 N. SPAN
Is	in⁴	69,521	69,521	27,843	42,458	27,843	25,646	52,080	18,381	27,129	19,424
Ic(n=9)	in⁴	138,055	-	75,672	-	75,672	72,369	-	46,593	-	49,837
Ic(n=27)	in⁴	101,939	-	54,888	-	54,888	50,672	-	34,529	-	36,685
Ss	in³	2,326	2,326	976	1,463	976	1,208	1,877	687	996	747
Sc(n=9)	in³	2,909	-	1,431	-	1,431	1,693	-	997	-	1,077
Sc(n=27)	in³	2,666	-	1,293	-	1,293	1,545	-	903	-	977
DL	k/ft	1.164	1.164	0.981	1.047	0.981	0.933	1.065	0.885	0.929	0.890
MDL	k-ft	1,749	1,948	364	1,184	706	1,196	2,173	213	1,023	663
fs (DL)	ksi	9.0	10.1	4.5	9.7	8.7	11.9	13.9	3.7	12.3	10.6
SDL	k/ft	0.255	0.255	0.255	0.255	0.255	0.260	0.260	0.260	0.260	0.260
MSDL	k-ft	401	424	171	277	201	384	504	149	268	210
MLL	k-ft	1,108	854	783	646	785	1,206	1,110	854	720	870
MIMP	k-ft	213	168	156	136	175	232	218	171	152	193
MLL+I	k-ft	1,321	1,022	939	782	960	1,438	1,328	1,025	872	1,063
fs (SDL)	ksi	1.8	2.2	1.6	2.3	1.9	3.0	3.2	2.0	3.2	2.6
fs (LL+I)	ksi	5.5	5.3	7.9	6.4	8.1	10.2	8.5	12.3	10.5	11.8
fs TOTAL	ksi	16.3	17.6	14.0	18.4	18.7	25.1	25.6	18.0	26.0	25.0
VR	k	55.4	-	53.3	-	50.6	63.2	-	61.5	-	56.4

GIRDER MOMENT TABLE		GIRDER 22, 23, 24				
		0.4 S. SPAN	PIER #2	0.5 MIDDLE SPAN	PIER #1	0.6 N. SPAN
Is	in⁴	73,398	73,398	27,843	42,458	27,843
Ic(n=9)	in⁴	149,681	-	79,381	-	79,381
Ic(n=27)	in⁴	109,764	-	57,550	-	57,550
Ss	in³	2,445	2,445	976	1,463	976
Sc(n=9)	in³	3,098	-	1,467	-	1,467
Sc(n=27)	in³	2,[illegible]	-	1,324	-	1,324
DL	k/ft	1.[illegible]24	1.224	1.025	1.091	1.025
MDL	k-ft	1,843	2,040	379	1,236	738
fs (DL)	ksi	9.0	10.0	4.7	10.1	9.1
SDL	k/ft	0.265	0.265	0.265	0.265	0.265
MSDL	k-ft	417	440	180	284	210
MLL	k-ft	1,189	911	838	682	844
MIMP	k-ft	229	179	167	143	187
MLL+I	k-ft	1,418	1,090	1,005	825	1,031
fs (SDL)	ksi	1.8	2.2	1.6	2.3	1.9
fs (LL+I)	ksi	5.5	5.3	8.2	6.8	8.4
fs TOTAL	ksi	16.3	17.5	14.5	19.2	19.4
VR	k	59.2	-	57.0	-	54.1

GIRDER REACTION TABLE		GIRDER 17, 18, 19				GIRDER 25A			
		S. ABUT.	PIER #2	PIER #1	N. ABUT.	S. ABUT.	PIER #2	PIER #1	N. ABUT.
RDL	k	75.9	200.0	148.4	47.4	61.5	192.8	134.2	44.8
RLL	k	44.0	76.8	68.3	42.8	49.3	88.4	76.5	47.9
IMP	k	8.5	15.1	14.4	9.5	9.5	17.3	16.1	10.6
R TOTAL	k	128.4	291.9	231.1	99.7	120.3	298.5	226.8	103.3

GIRDER REACTION TABLE		GIRDER 22, 23, 24			
		S. ABUT.	PIER #2	PIER #1	N. ABUT.
RDL	k	79.7	209.5	154.7	49.5
RLL	k	47.2	82.3	72.9	45.9
IMP	k	9.1	16.1	15.4	10.2
R TOTAL	k	136.0	307.9	243.0	105.6

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION.
Ic AND Sc ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING fs.
VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

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SUPERSTRUCTURE DETAILS
MOMENT & REACTION TABLES

SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

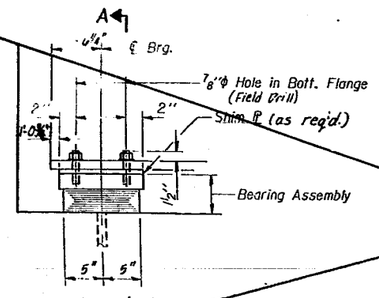
687
3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

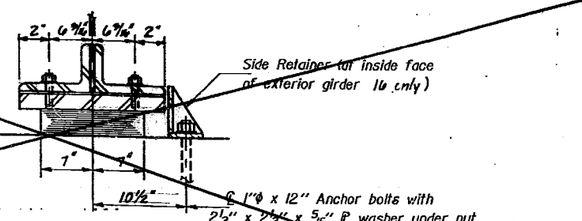
ROUTE NO.	SECTION	COUNTY	TOT. SHEETS	SHEET NO.
F.A.I.	*		426	348
F.A.S. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 29
40 SHEETS

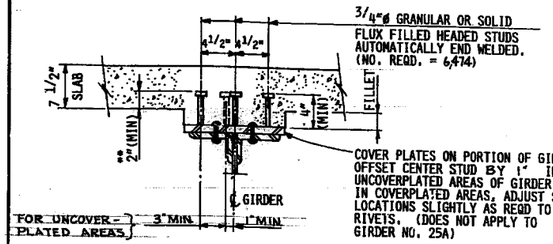
* 050S2-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



ELEVATION AT SOUTH ABUT.



SECTION A-A

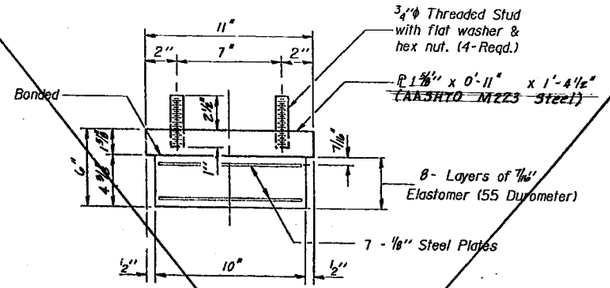


SHEAR STUD DETAIL

* GIRDER NO. 16,17,18,19 = 633 STUDS/GIRDER
GIRDER NO. 20,21 = 489 STUDS/GIRDER
GIRDER NO. 22,23,24, = 741 STUDS/GIRDER
GIRDER NO. 25 = 741 STUDS

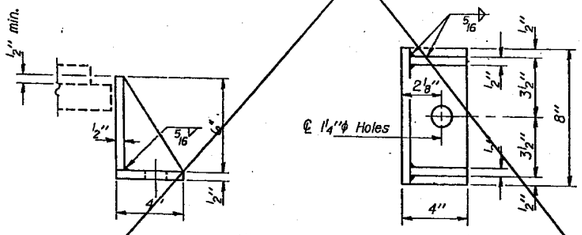
** DIMENSION APPLIES ONLY AT UNREINFORCED FILLETS

TYPE I ELASTOMERIC EXP. BRG.



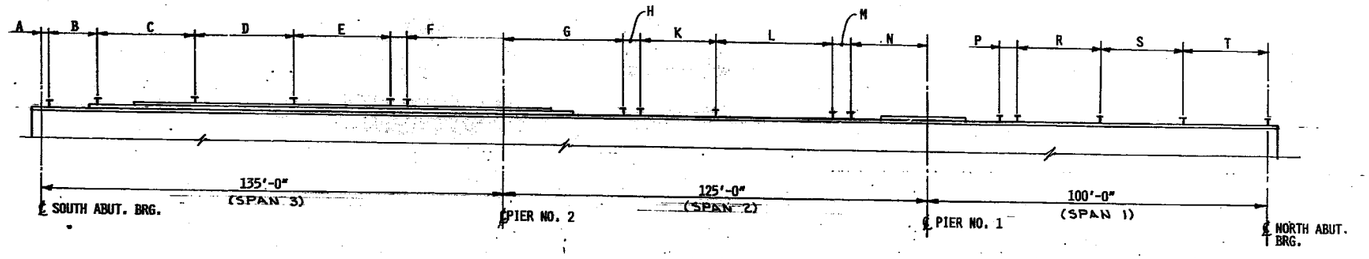
BEARING ASSEMBLY (3 REQ'D)

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER (1 REQ'D)

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



GIRDER ELEVATION

(GIRDER 25A DOES NOT HAVE COVER PLATES)

SHEAR STUD SPACING DIMENSIONS

DIMENSION LOCATION	GIRDERS 22-25	GIRDERS 20, 21	GIRDERS 16-19	~~GIRDER 25A~~
A	9"	3"	3"	0"
B	21 SP @ 1'-0" = 21'-0"	9 SP @ 1'-8" = 15'-0"	17 SP @ 1'-3" = 21'-3"	26 SP @ 1'-0" = 26'-0"
C	15 SP @ 1'-3" = 18'-9"	19 SP @ 2'-0" = 38'-0"	9 SP @ 1'-6" = 13'-6"	69 SP @ 1'-1"(+)= 76'-2"
D	9 SP @ 1'-8" = 15'-0"	13 SP @ 2'-0" = 26'-0"	10 SP @ 1'-9" = 17'-6"	-
E	30 SP @ 1'-7" = 47'-6"	12 SP @ 2'-0" = 24'-0"	29 SP @ 1'-9" = 50'-9"	-
F	9 SP @ 3" = 2'-3"	6 SP @ 3" = 1'-6"	7 SP @ 3" = 1'-9"	8 SP @ 3" = 2'-0"
G	35'-7"	36'-1"	35'-10"	25'-2"
H	9 SP @ 3" = 2'-3"	6 SP @ 3" = 1'-6"	7 SP @ 3" = 1'-9"	8 SP @ 3" = 2'-0"
K	30 SP @ 10" = 25'-0"	20 SP @ 1'-3" = 25'-0"	28 SP @ 11" = 25'-8"	56 SP @ 10"(+)=47'-8"
L	33 SP @ 1'-1"(+)=36'-2"	20 SP @ 1'-10" = 36'-8"	27 SP @ 1'-4" = 36'-0"	
M	9 SP @ 3" = 2'-3"	6 SP @ 3" = 1'-6"	7 SP @ 3" = 1'-9"	8 SP @ 3" = 2'-0"
N	23'-9"	24'-3"	24'-0"	28'-2"
P	9 SP @ 3" = 2'-3"	6 SP @ 3" = 1'-6"	7 SP @ 3" = 1'-9"	8 SP @ 3" = 2'-0"
R	33 SP @ 1'-2" = 38'-6"	20 SP @ 1'-10 1/2"=37'-6"	28 SP @ 1'-4"(+)=37'-9"	
S	27 SP @ 1'-1"(+)=29'-8"	10 SP @ 1'-10"(+)=25'-11"	20 SP @ 1'-4"=26'-8"	53 SP @ 1'-0"(+)=54'-6"
T	10 SP @ 1'-0" = 10'-0"	9 SP @ 1'-8" = 15'-0"	12 SP @ 1'-2" = 14'-0"	24 SP @ 10 1/2"=21'-0"

SHEAR STUD DETAILS

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I-2-E1 12-1-83

SHEAR STUD DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

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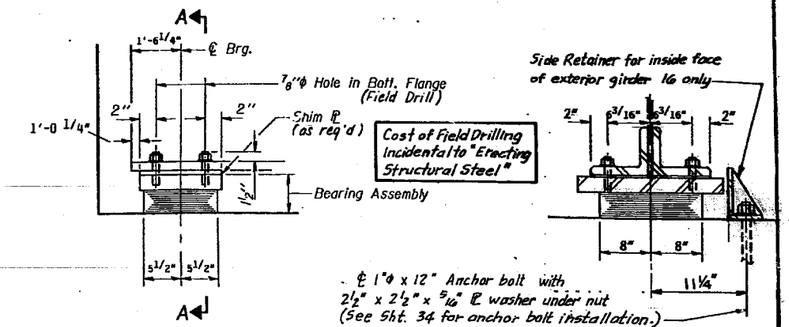
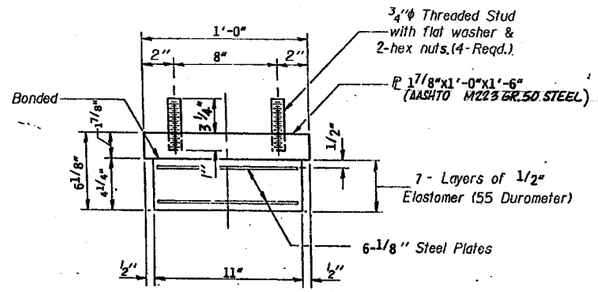


ELEVATION AT SOUTH ABUT.

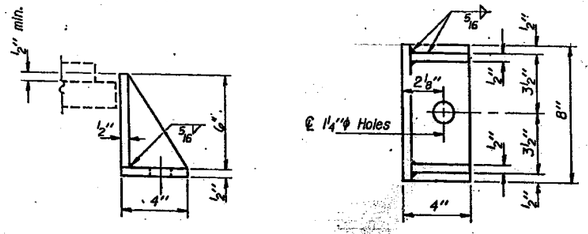
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.
10 REQ'D.



BEARING ASSEMBLY (10-REQD)

Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER (1 REQ'D)

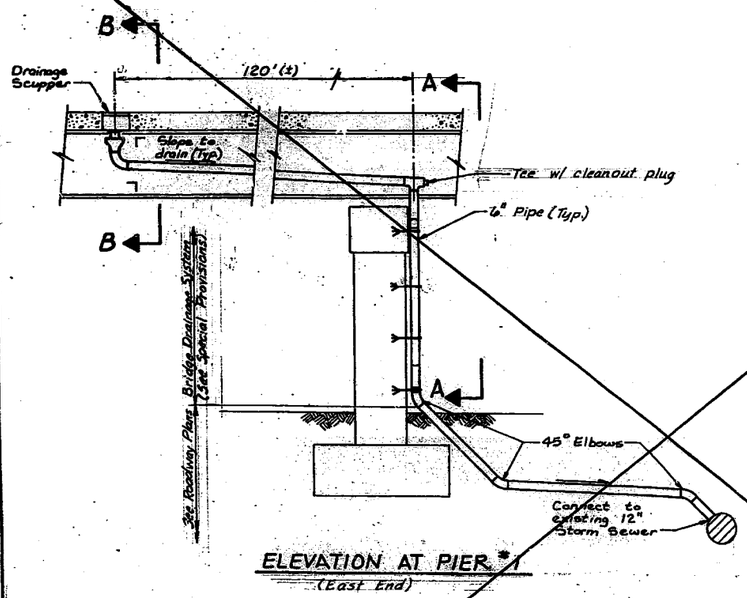
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

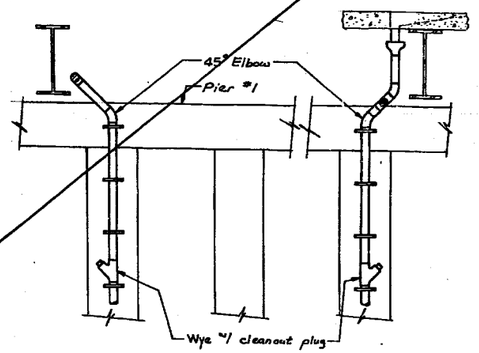
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		415	349
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 30
40 SHEETS

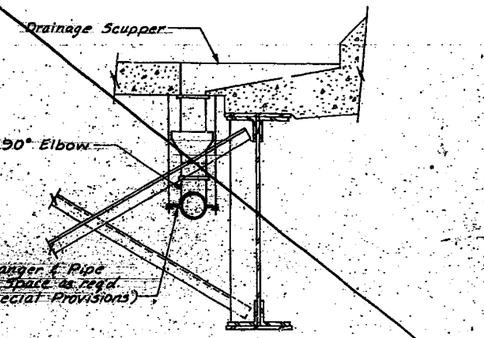
* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



ELEVATION AT PIER #1
(East End)



SECTION A-A



SECTION B-B
Locate Drains Clear of Diaphragm

BILL OF MATERIAL

Location	Item	Unit	Total
Girders 16 - 25	Install Elastomeric Bearing Assembly Type I	Each	10

BEARING DETAILS
SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 488+07.05

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I-2-EI 12-1-83

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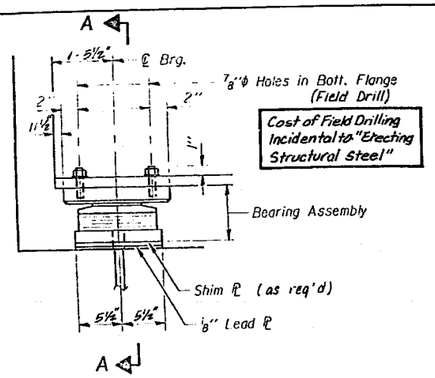
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.	*		426	350
FED. ROAD DIST. NO. 7	ILLINOIS			

SHEET NO. 31
40 SHEETS

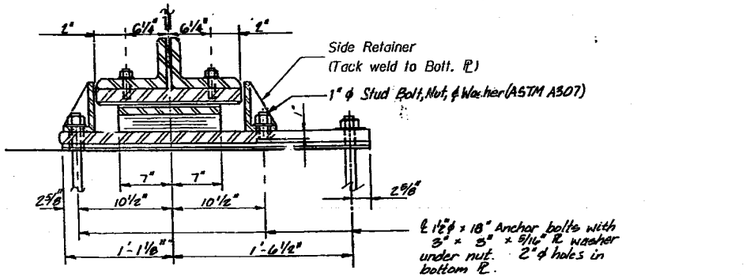
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439)R-2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Cost of Field Drilling Incidental to "Erecting Structural Steel"

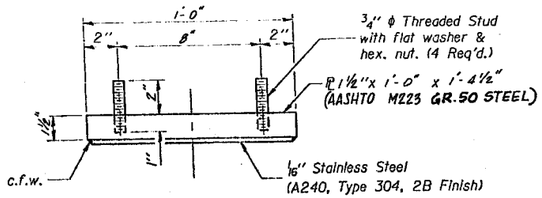
ELEVATION AT NORTH ABUT.



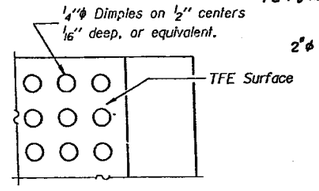
(See Sheet 34 for anchor bolt installation.)

SECTION A-A

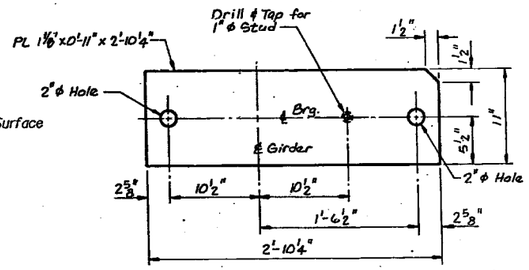
TYPE II TFE ELASTOMERIC EXP. BRG. (10 REQ'D.)



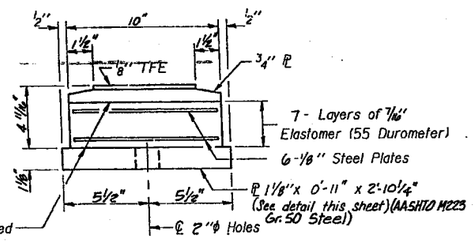
TOP BEARING ASSEMBLY



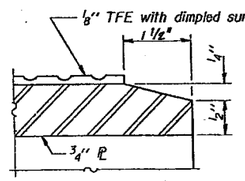
PLAN-TFE SURFACE



BOTTOM BEARING PLATE DETAIL
(AASHTO M223 GR. 50 STEEL)



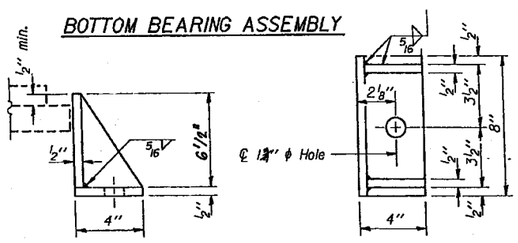
TOP BEARING ASSEMBLY



SECTION THRU TFE

Note: The ⅛" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

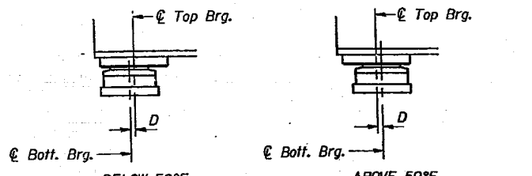
Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BOTTOM BEARING ASSEMBLY

SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (14 Req'd)



BELOW 50°F. (Move bott. brg. away from fixed brg.)

ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Location	Item	Unit	Total
Girders 16-25	Install Elastomeric Bearing Assembly Type II	Each	10

BEARING DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

I-2-E2 12-1-83

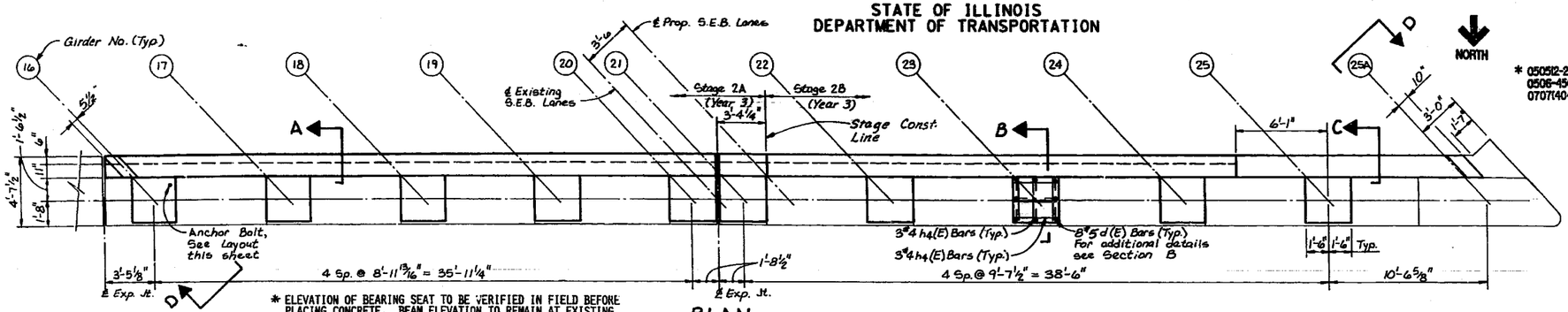
690 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	351
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

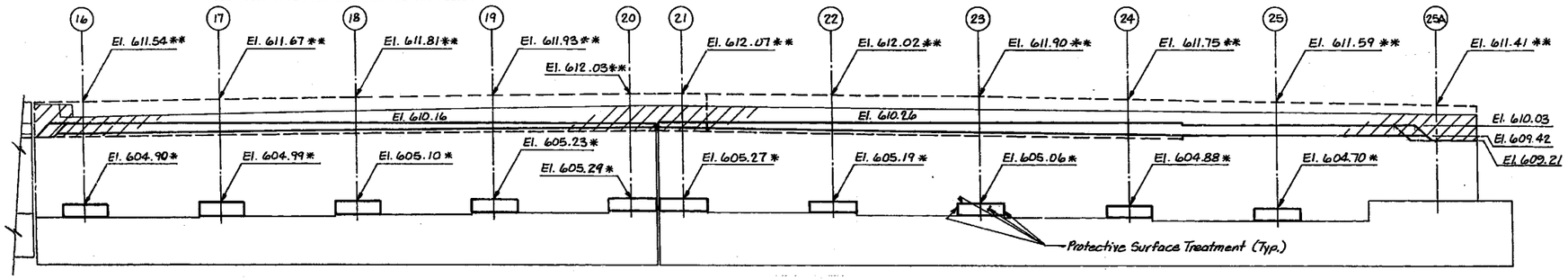
SHEET NO. 32
40 SHEETS

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439R-2



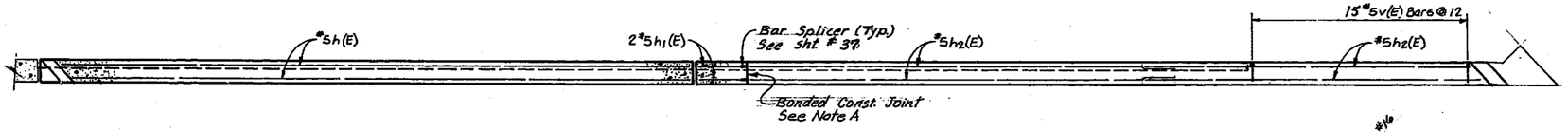
* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.

PLAN

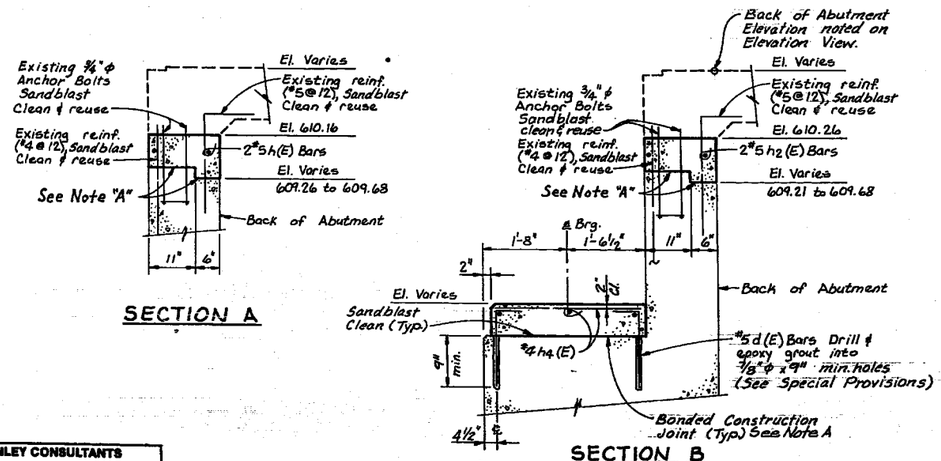


ELEVATION

** See Section B Elevations noted are at top of vaulted slab.

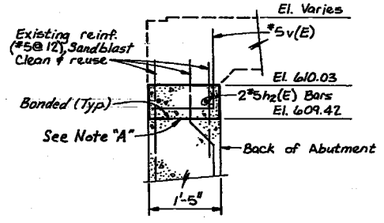


PLAN-SECTION



SECTION A

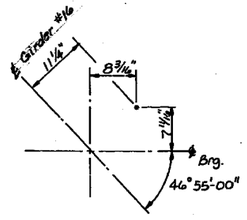
SECTION B



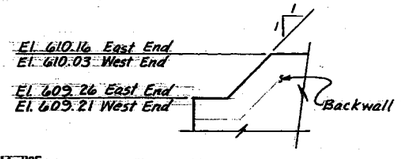
SECTION C

NOTE:

DURING CONCRETE REMOVAL THE CONTRACTOR SHALL USE METHODS THAT WILL NOT DAMAGE, CUT, NICK, OR GOUGE THE EXISTING REINFORCEMENT. DAMAGED REBARS SHALL BE REPLACED BY DRILLED AND EPOXY GROUTED DOWEL BARS.



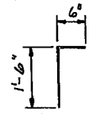
ANCHOR BOLT LAYOUT



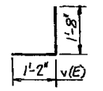
VIEW D

BILL OF MATERIAL

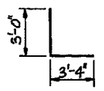
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	80	#5	2'-0"	⌐
h1(E)	2	#5	39'-4"	—
h1(E)	2	#5	3'-1"	—
h2(E)	4	#5	24'-2"	—
h4(E)	60	#4	2'-9"	—
v(E)	15	#5	2'-10"	⌐
REINFORCEMENT BARS (EPOXY COATED)			LBS.	510
CLASS "X" CONCRETE			CU. YDS.	5.7
CONCRETE REMOVAL			CU. YDS.	1.0



BAR d(E)



BAR v(E)



BAR h5(E)

NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.

NOTES:

INDICATES CONCRETE REMOVAL

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.

ALL BAR DIMENSIONS ARE OUT TO OUT.

SOUTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

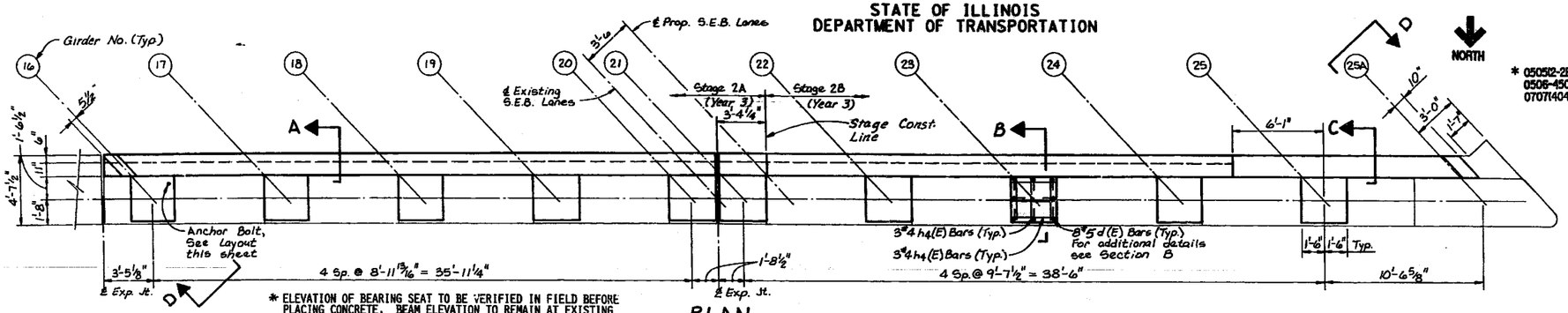
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	351
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

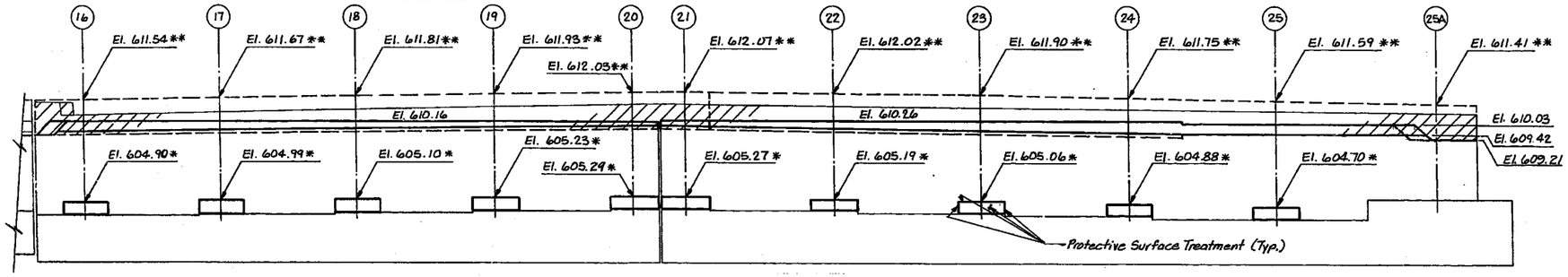
SHEET NO. 32
40 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439R-2



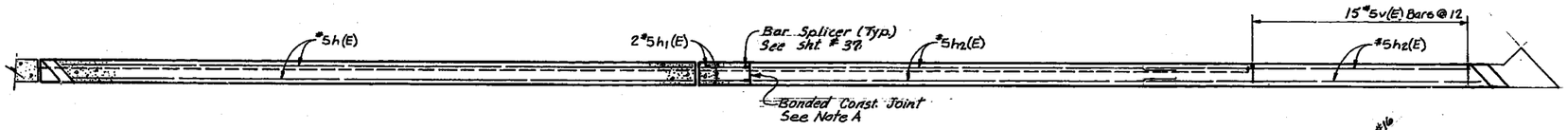
* ELEVATION OF BEARING SEAT TO BE VERIFIED IN FIELD BEFORE PLACING CONCRETE. BEAM ELEVATION TO REMAIN AT EXISTING ELEVATION AFTER NEW BEARINGS ARE INSTALLED.

PLAN

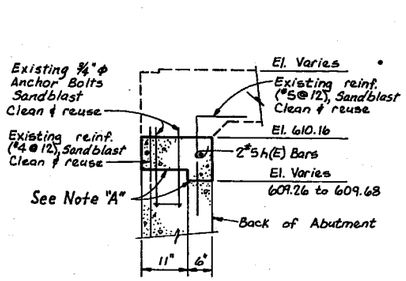


ELEVATION

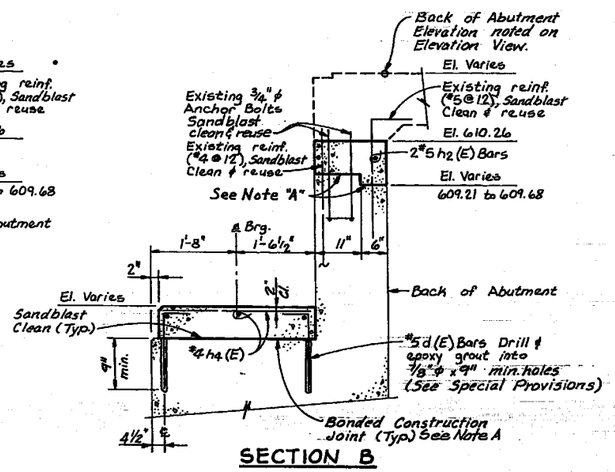
** See Section B Elevations noted are at top of vaulted slab.



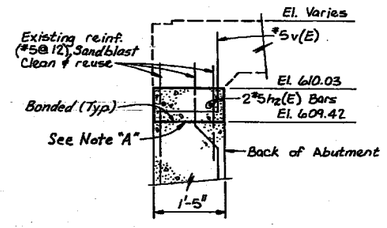
PLAN-SECTION



SECTION A

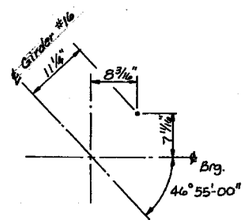


SECTION B

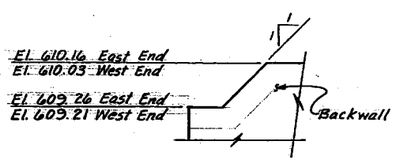


SECTION C

NOTE:
DURING CONCRETE REMOVAL THE CONTRACTOR SHALL USE METHODS THAT WILL NOT DAMAGE, CUT, NICK, OR GOUGE THE EXISTING REINFORCEMENT. DAMAGED REBARS SHALL BE REPLACED BY DRILLED AND EPOXY GROUTED DOWEL BARS.



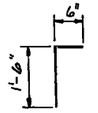
ANCHOR BOLT LAYOUT



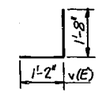
VIEW D

BILL OF MATERIAL

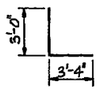
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	80	#5	2'-0"	
h1(E)	2	#5	39'-4"	
h11(E)	2	#5	3'-1"	
h12(E)	4	#5	24'-2"	
h4(E)	60	#4	2'-9"	
v(E)	15	#5	2'-10"	
REINFORCEMENT BARS (EPOXY COATED)			LBS.	510
CLASS "X" CONCRETE			CU. YDS.	5.7
CONCRETE REMOVAL			CU. YDS.	1.0



BAR d(E)



BAR v(E)



BAR h5(E)

NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.

NOTES:
INDICATES CONCRETE REMOVAL
(E) INDICATES EPOXY COATED REINFORCEMENT BARS.
ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.
SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.
ALL BAR DIMENSIONS ARE OUT TO OUT.

SOUTH ABUTMENT - WEST END

SECTION
F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD
COOK COUNTY
STATION 486+67.05

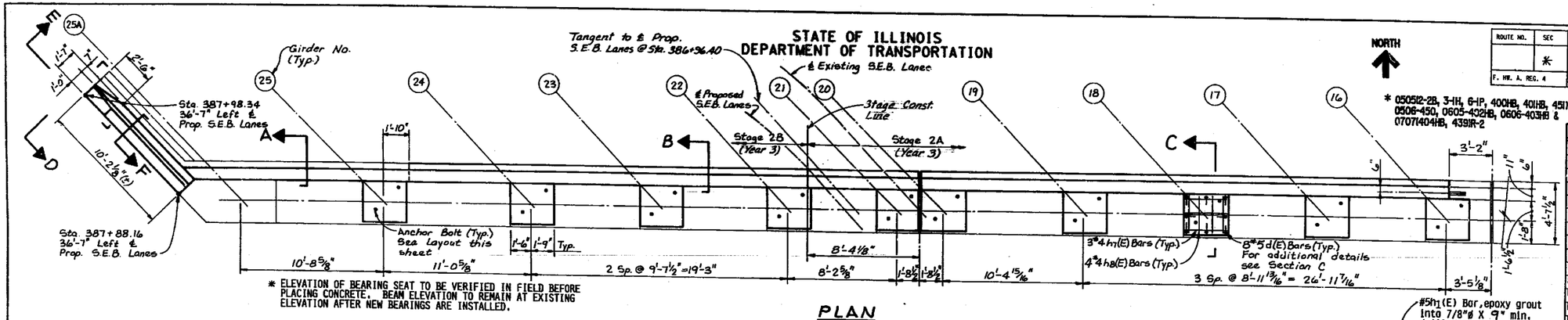
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

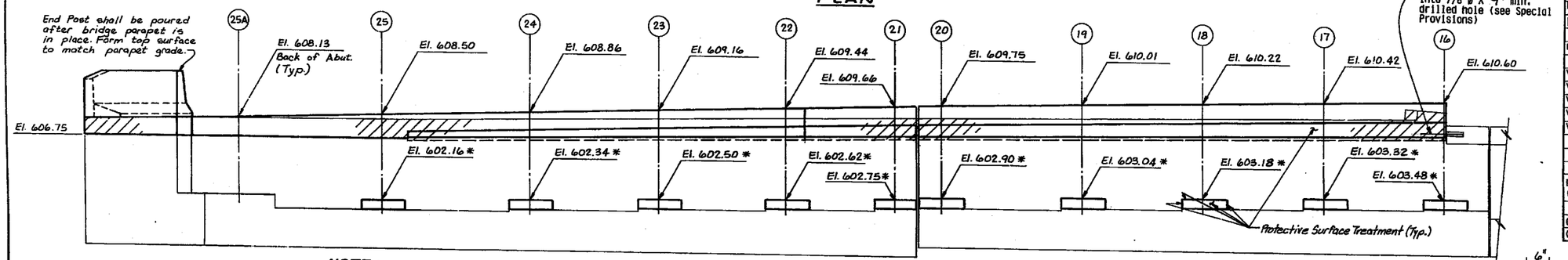
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	352
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 33
40 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-432HB, 0606-403HB & 0707140-4HB, 439JR-2



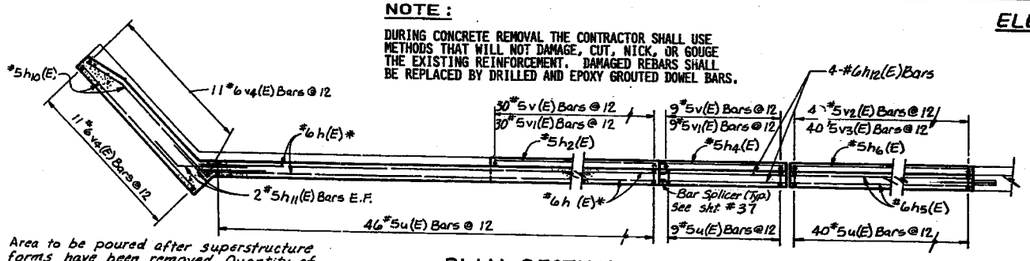
PLAN



ELEVATION

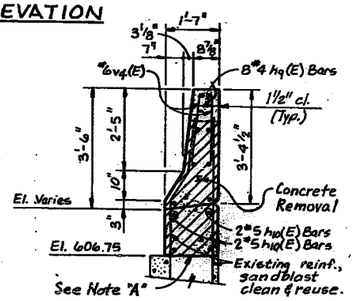
NOTE:

DURING CONCRETE REMOVAL THE CONTRACTOR SHALL USE METHODS THAT WILL NOT DAMAGE, CUT, NICK, OR GOUGE THE EXISTING REINFORCEMENT. DAMAGED REBARS SHALL BE REPLACED BY DRILLED AND EPOXY GROUTED DOWEL BARS.

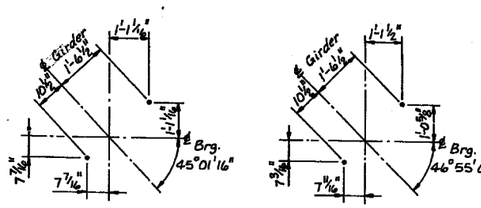


PLAN-SECTION

* Min. Lap for #6 bar = 2'-7"



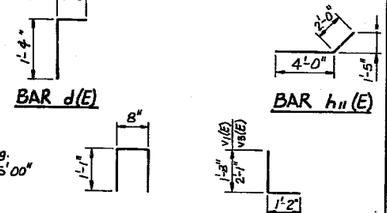
SECTION F



GIRDERS 20, 21 & 25

GIRDERS 16-19 & 22-24

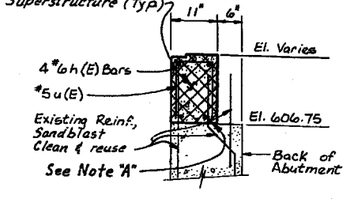
ANCHOR BOLT LAYOUT



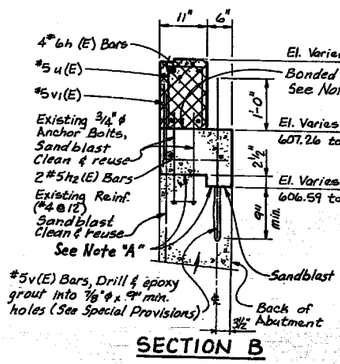
NOTE A: BONDED CONST. JT. IN ACCORDANCE WITH ARTICLE 504.13(a)(2) OF THE STD. SPECS.

BILL OF MATERIAL

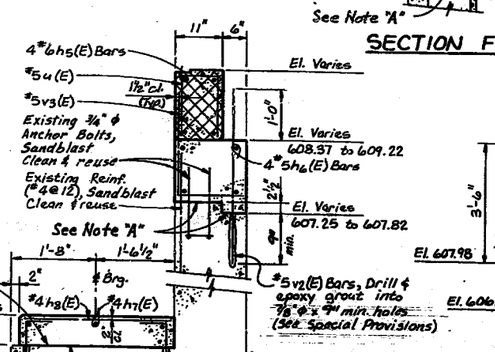
BAR	NO.	SIZE	LENGTH	SHAPE
d(E)	80	#5	1'-10"	
h(E)	8	#6	24'-8"	
h1(E)	1	#5	3'-3"	
h2(E)	2	#5	29'-9"	
h4(E)	2	#5	8'-0"	
h5(E)	4	#6	39'-0"	
h6(E)	4	#5	39'-1"	
h7(E)	30	#4	3'-0"	
h8(E)	40	#4	2'-9"	
h9(E)	8	#4	9'-11"	
h10(E)	4	#5	9'-11"	
h11(E)	4	#5	6'-0"	
h12(E)	4	#6	8'-0"	
u(E)	95	#5	2'-10"	
v(E)	39	#5	2'-11"	
v1(E)	39	#5	2'-10"	
v2(E)	40	#5	3'-2"	
v3(E)	40	#5	3'-3"	
v4(E)	22	#6	2'-0"	
REINFORCEMENT BARS (EPOXY COATED)		LBS.	2080	
CLASS "X" CONCRETE		CU.YDS.	8.6	
CONCRETE REMOVAL		CU.YDS.	7.2	



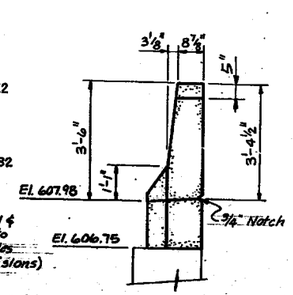
SECTION A



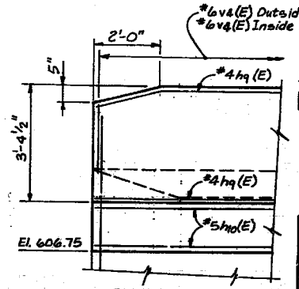
SECTION B



SECTION C



VIEW D



VIEW E

NOTES:

▨ INDICATES CONCRETE REMOVAL

(E) INDICATES EPOXY COATED REINFORCEMENT BARS.

ALL EDGES SHALL HAVE STANDARD 3/4" CHAMFER EXCEPT AS NOTED.

SPACE REINFORCEMENT IN BEAM SEAT TO MISS ANCHOR BOLTS.

ALL BAR DIMENSIONS ARE OUT TO OUT.

NORTH ABUTMENT - WEST END

SECTION

F.A.I. ROUTE 90/94 OVER LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

STANLEY CONSULTANTS

INTERNATIONAL CONSULTANTS IN ENGINEERING, ARCHITECTURE, PLANNING AND MANAGEMENT

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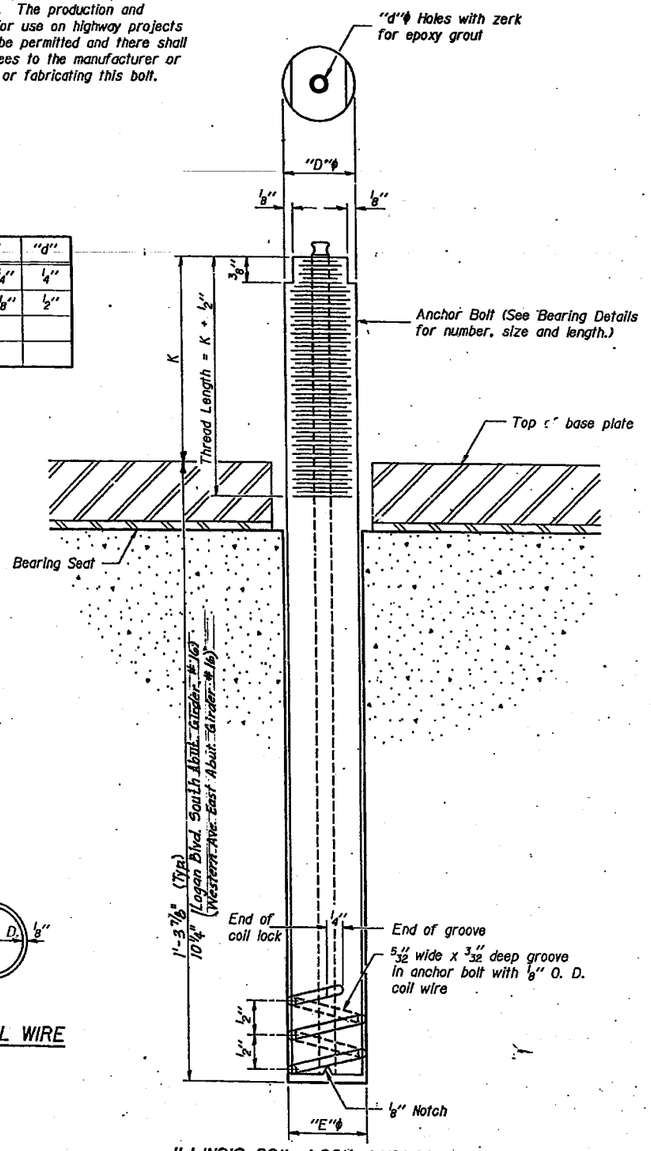
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

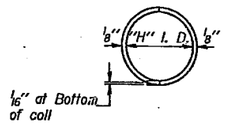
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A.	*		426	353
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 34
40 SHEETS

* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system comforming to ASTM C881, Type I, Grade I and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, ~~Furnished and~~ installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for ~~"Furnishing and~~ Erecting Structural Steel".

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ABB-1 12-1-83

ANCHOR BOLT DETAILS

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

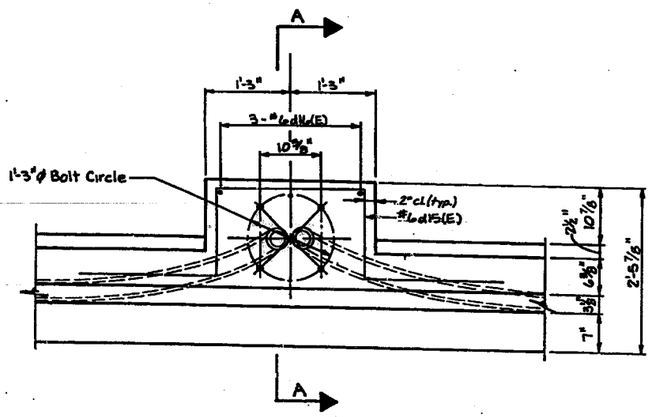
693

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

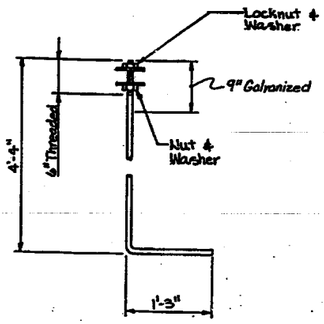
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	354
F. HW. A. RES. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 35
40 SHEETS

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2



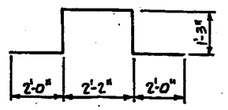
PLAN



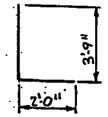
1"ϕ ANCHOR BOLT (ASTM A 687)

COST OF 1" ϕ ANCHOR BOLTS TO BE INCIDENTAL TO CLASS X CONCRETE SUPERSTRUCTURE

NOTE: PROVIDE 2 FLAT WASHERS, 1 REGULAR NUT & 1 LOCKNUT FOR EACH BOLT. ALL NUTS & WASHERS MUST BE GALVANIZED.



BAR d15 (E)



BAR d16 (E)

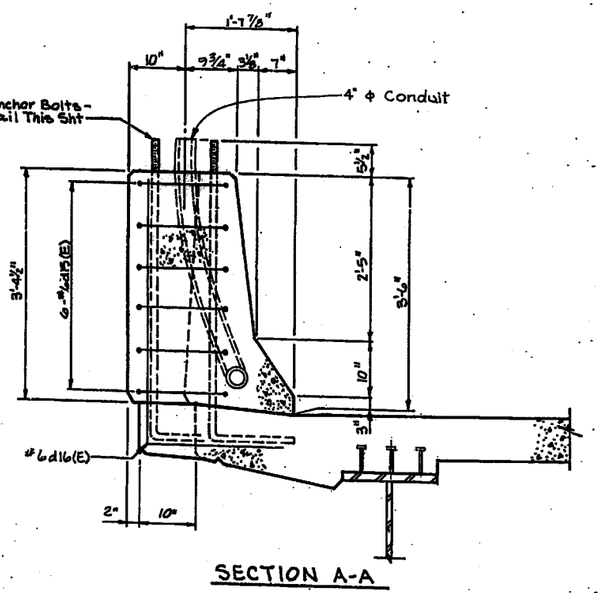
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
d15(E)	24	#6	8'-8"	
d16(E)	12	#6	5'-9	L
REINFORCING BARS (EPOXY COATED)			LBS.	420
CLASS X CONCRETE SUPERSTRUCTURE			CU.YDS.	1.4

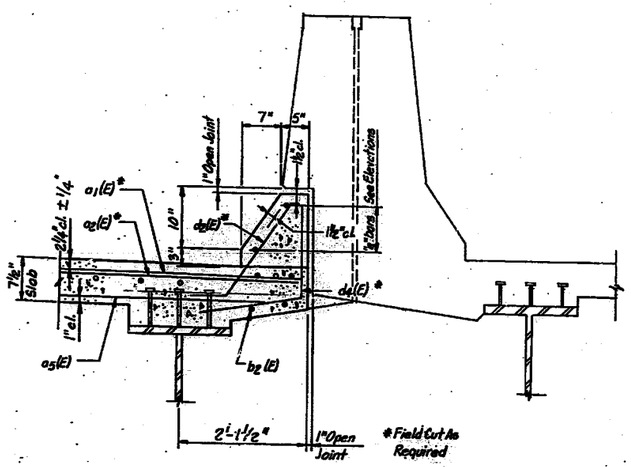
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED

BAR DIMENSIONS SHOWN ARE OUT TO OUT.

BILL OF MATERIAL INCLUDES 4 LIGHT POLE SUPPORTS.



SECTION A-A



SECTION B-B

For Location See Sheet 9 & 26

PARAPET MOUNTED LIGHT POLES

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVE. & LOGAN BOULEVARD

COOK COUNTY

STATION 485+87.05

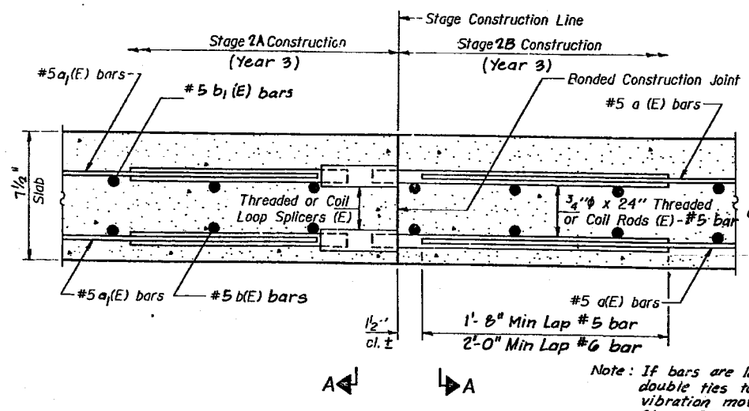
STANLEY CONSULTANTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.	*		426	356

SHEET NO. 37
40 SHEETS

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439IR-2

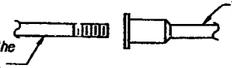


SECTION THRU SLAB
(Logan Blvd. Structure shown - others similar)

Note: If bars are lapped, provide double ties to prevent traffic vibration movements during Stage 2B pour.

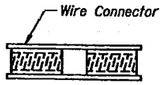
The diameter of this part of Splicer is the same as the diameter of the bar spliced.

The diameter of this part is equal or larger than the diameter of bar spliced.



ROLLED THREAD DOWEL BAR

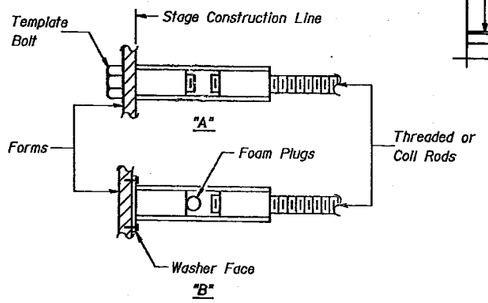
** ONE PIECE

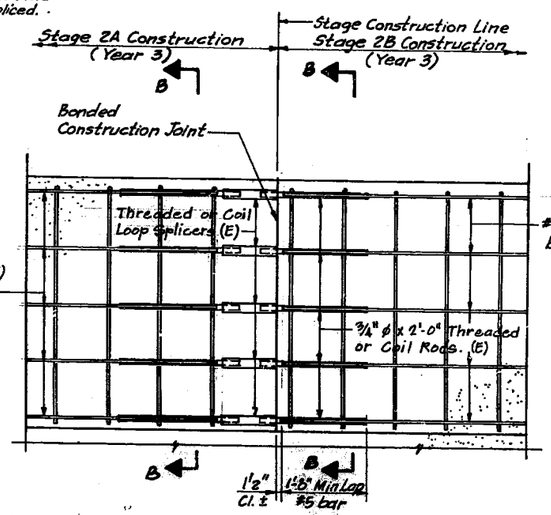


WELDED SECTIONS

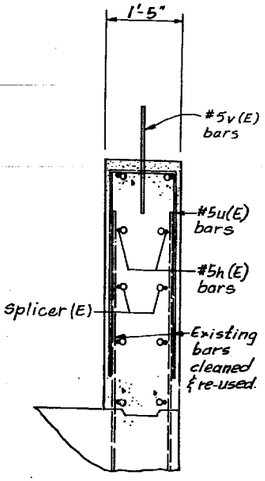
SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.

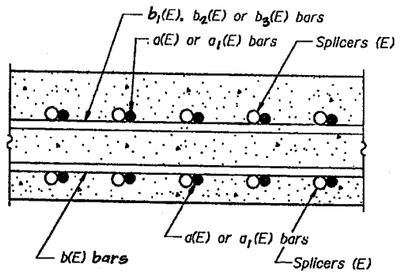




SECTION THRU WEST ABUTMENT WESTERN AVE.
(SOUTH ABUTMENT LOGAN BLVD. SIMILAR)



SECTION B-B



SECTION A-A

SPLICER DETAILS
(No. Req'd. 2688)*

* 8-#6(E) & 2678 - #5(E)
Cost Incidental to Reinforcement Bars (Epoxy Coated).

INSTALLATION AND SETTING METHODS

"A" : Set splicer by means of a template bolt.
"B" : Set splicer by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length and have effective tensile stress area equal to or greater than that of the lapped reinforcement bars.

All reinforcement bars shall be lapped and tied to the splicer rods.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

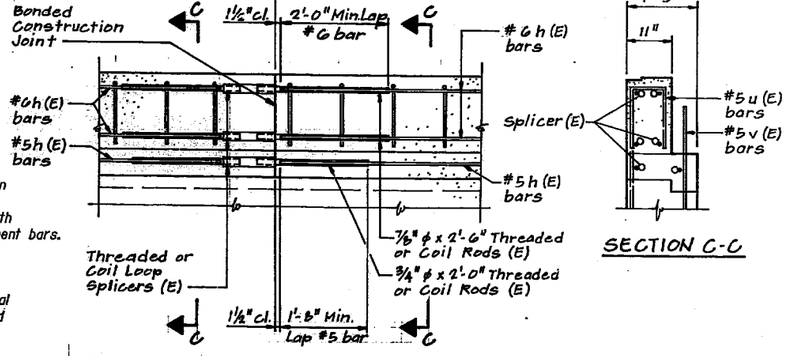
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

Where fy = Yield strength of lapped reinforcement bars in ksi.
fs_{allow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

#5 bar lap with ¾"ϕ Splicer (Coupler) x 2'-0" Splicer Rods	Minimum Capacity = 23.0 kips-tension Minimum Pull-out Strength = 9.2 kips-tension
#6 bar lap with ⅞"ϕ Splicer (Coupler) x 2'-6" Splicer Rods	Minimum Capacity = 33.0 kips-tension Minimum Pull-out Strength = 13.2 kips-tension



SECTION C-C

SECTION THRU EAST ABUTMENT WESTERN AVE.
(NORTH ABUTMENT LOGAN BLVD. SIMILAR)

SPLICER DETAILS
(No. Req'd = 24)**

**	
East Abut. Western Ave = 2-#5(E) 4-#6(E)	Cost Incidental to Reinforcement Bars (Epoxy Coated)
West Abut. Western Ave = 10-#5(E)	
South Abut. Logan Blvd. = 2-#5(E)	
North Abut. Logan Blvd. = 2-#5(E) 4-#6(E)	

STAGE CONSTRUCTION BAR SPLICER

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

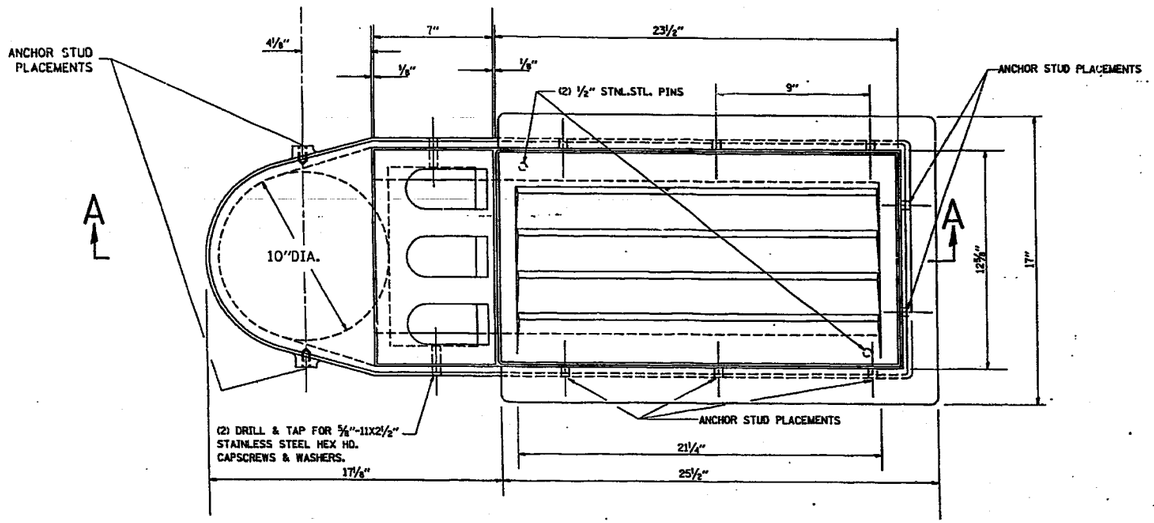
STANLEY CONSULTANTS
BSD-1 12-31-87

696

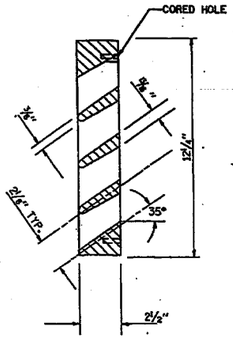
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	357
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

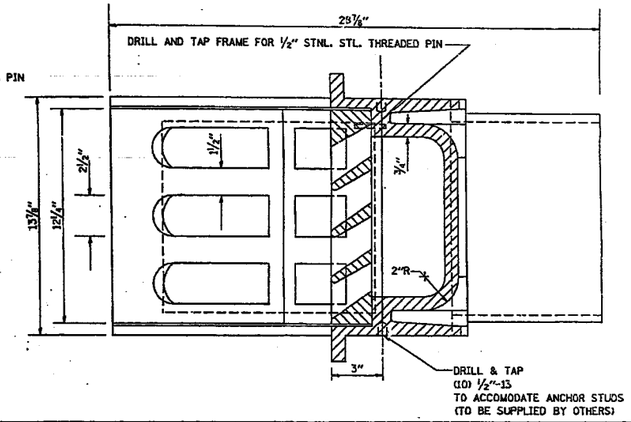
SHEET NO. 38
40 SHEETS

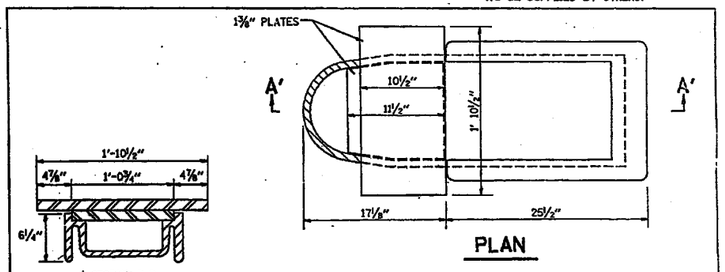
* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451J, 0506-450, 0505-402HB, 0606-403HB & 0707(404HB, 439IR-2



PLAN

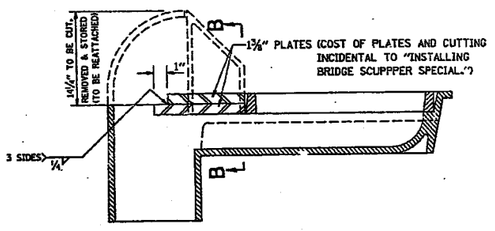






SECTION B-B

PLAN



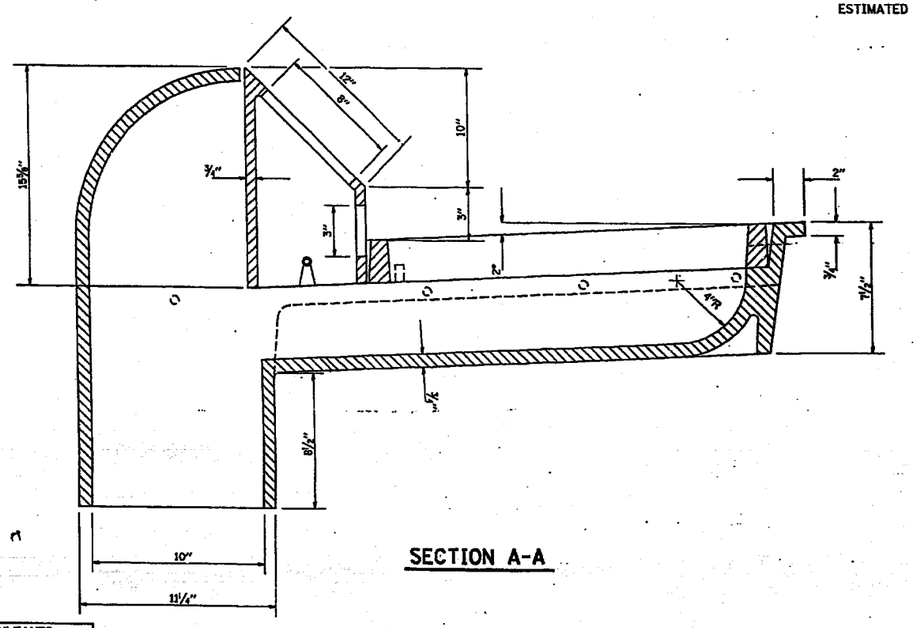
SECTION A'-A'

BRIDGE SCUPPER - SPECIAL

ONLY FOR MEDIAN PARAPET
DURING STAGED CONSTRUCTION.
(MEDIAN PARAPET IS OMITTED TEMPORARILY.)

BRIDGE SCUPPER - TYPE "A"

NF - 0332 445
ESTIMATED WEIGHT 512*



SECTION A-A

SCHEDULE OF QUANTITIES	
STRUCTURE	NO. REQUIRED
TOTAL	

NOTE: A NEOPRENE PAD SHALL BE PROVIDED BETWEEN THE SCUPPER AND THE BEAM. (BY OTHERS)

MATERIAL: CAST GREY IRON ASTM A-48, CLASS 35B
FINISH: NONE

BRIDGE SCUPPER-TYPE "A" SHEET 1 OF 2

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

STANLEY CONSULTANTS

VI=CS-1

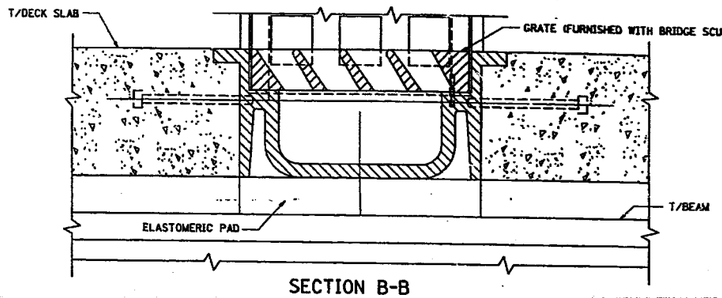
ZF4d110,77ZDISTST06.DGN
...5400...1851712

697 CS-1

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	358
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

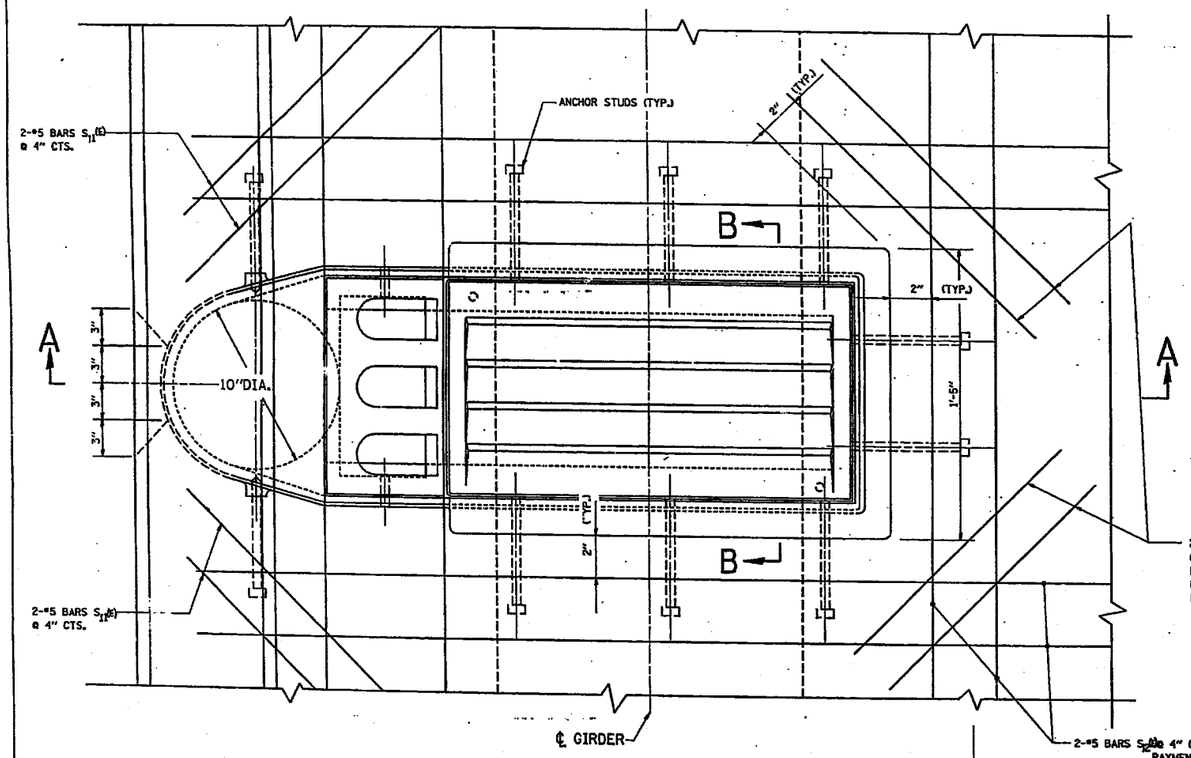
SHEET NO. 39
40 SHEETS

* 05052-23, 3-IH, 6-IP, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



SECTION B-B

STEEL REINFORCING IN PARAPETS AND DECK SLAB SHOWN ON DECK SLAB AND PARAPET CONTRACT PLANS.

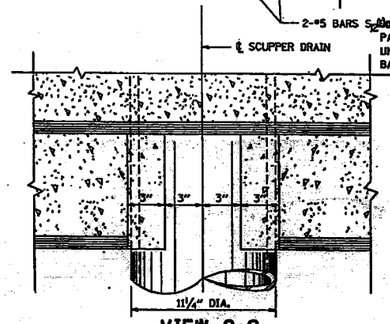


PLAN

2-#5 BARS S11(E) @ 4" CTS.
PAYMENT SHALL BE MADE UNDER BID ITEM "REINFORCEMENT BARS EPOXY COATED." (TYP.)

REINFORCEMENT BAR SCHEDULE

MARK	NO.	SIZE	LENGTH	SHAPE
S_{11}(E)	8	#5	2'-0"	——
S_{12}(E)	6	#5	5'-0"	——

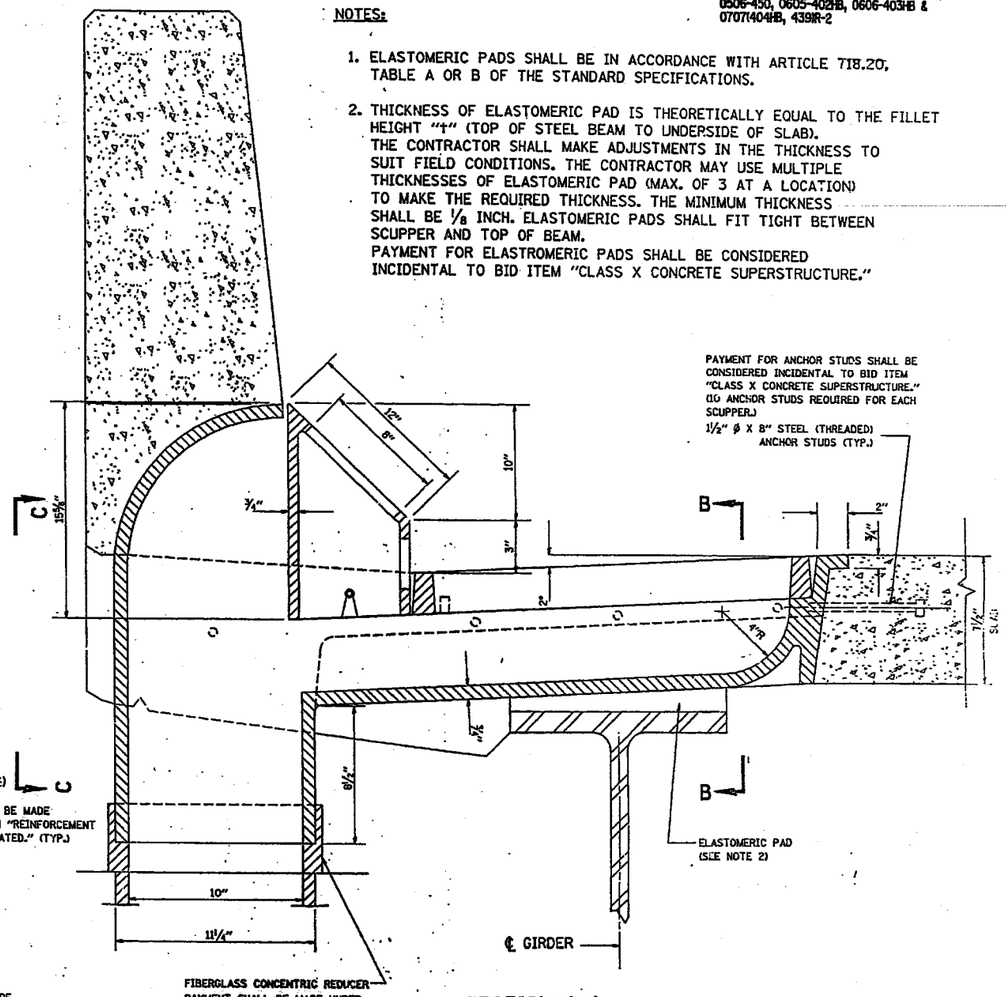


VIEW C-C

NOTES:

1. ELASTOMERIC PADS SHALL BE IN ACCORDANCE WITH ARTICLE 718.20, TABLE A OR B OF THE STANDARD SPECIFICATIONS.
2. THICKNESS OF ELASTOMERIC PAD IS THEORETICALLY EQUAL TO THE FILLET HEIGHT "t" (TOP OF STEEL BEAM TO UNDERSIDE OF SLAB). THE CONTRACTOR SHALL MAKE ADJUSTMENTS IN THE THICKNESS TO SUIT FIELD CONDITIONS. THE CONTRACTOR MAY USE MULTIPLE THICKNESSES OF ELASTOMERIC PAD (MAX. OF 3 AT A LOCATION) TO MAKE THE REQUIRED THICKNESS. THE MINIMUM THICKNESS SHALL BE ⅛ INCH. ELASTOMERIC PADS SHALL FIT TIGHT BETWEEN SCUPPER AND TOP OF BEAM. PAYMENT FOR ELASTROMERIC PADS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE."

PAYMENT FOR ANCHOR STUDS SHALL BE CONSIDERED INCIDENTAL TO BID ITEM "CLASS X CONCRETE SUPERSTRUCTURE." (10 ANCHOR STUDS REQUIRED FOR EACH SCUPPER.)
1½" ø X 8" STEEL (THREADED) ANCHOR STUDS (TYP.)



SECTION A-A

SECTION THRU MEDIAN PARAPET-SHOWN

(SIMILAR IF TYPE "A" SCUPPERS ARE USED AT OUTSIDE PARAPET.)

BRIDGE SCUPPER-TYPE "A" SHEET 2 OF 2

SECTION

F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD

COOK COUNTY

STATION 485+67.05

STANLEY CONSULTANTS

VI=CS-4

ZF4:E110,TJZDISTSTD6.DGN
309000.1852857

698

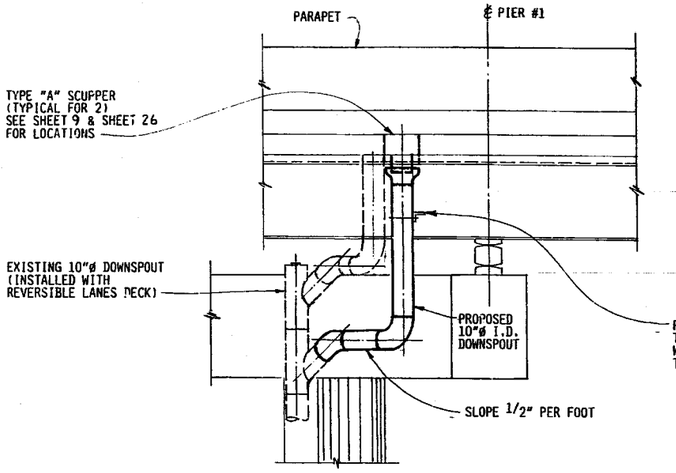
CS-4

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

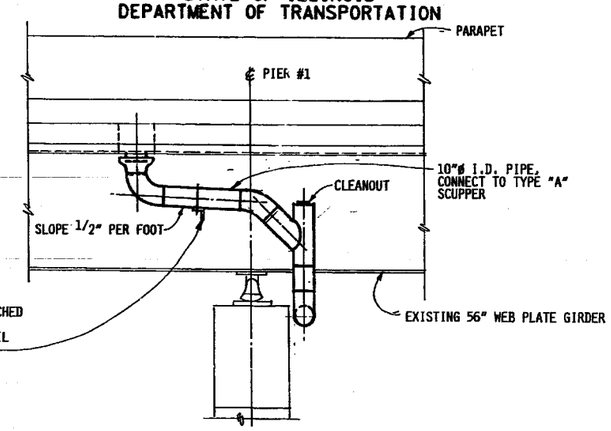
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB. 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
	*		426	359
F. AM. A. REG. 4	ILLINOIS	FED. AID PROJECT		

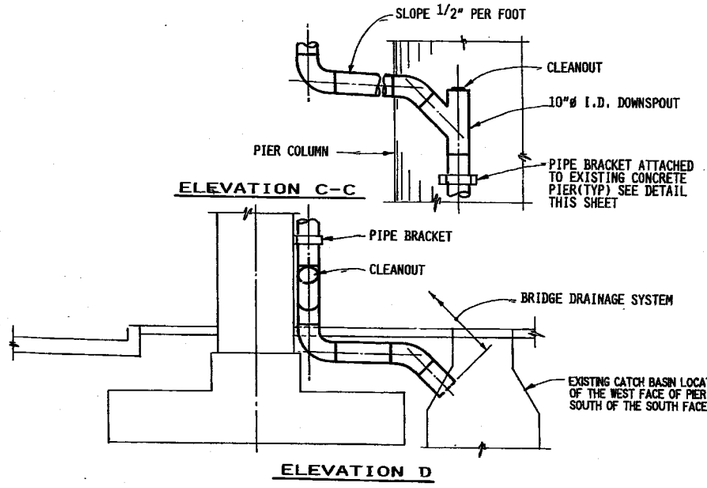
SHEET NO. 40
40 SHEETS



ELEVATION A-A

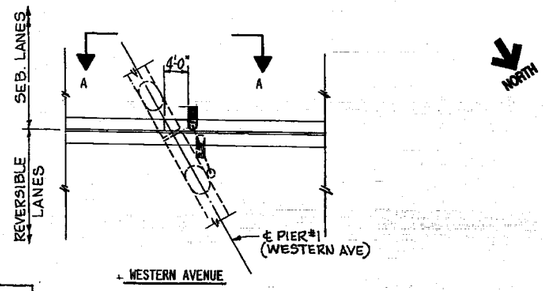


ELEVATION B-B

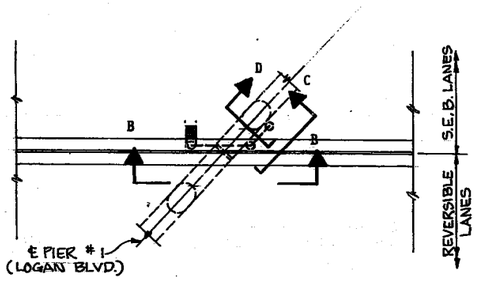


ELEVATION C-C

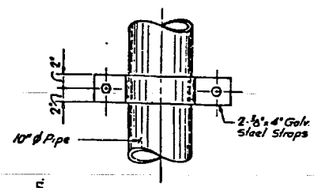
ELEVATION D

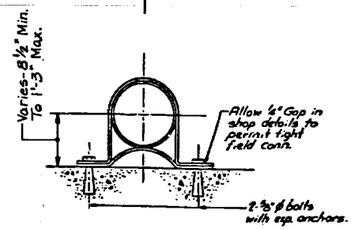


DRAINAGE LOCATION PLAN

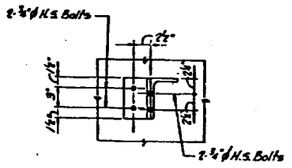


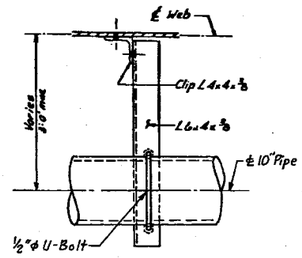
LOGAN BOULEVARD





PIPE BRACKET DETAIL
(TO CONCRETE)





PIPE BRACKET DETAIL
(TO BEAM WEB)

Note: Space Pipe Support Brackets as recommended by pipe manufacturer

STANLEY CONSULTANTS

DRAINAGE DETAILS

SECTION
F.A.I. ROUTE 90/94 OVER WESTERN AVE & LOGAN BOULEVARD
COOK COUNTY
STATION 485+67.05

BENCHMARK:

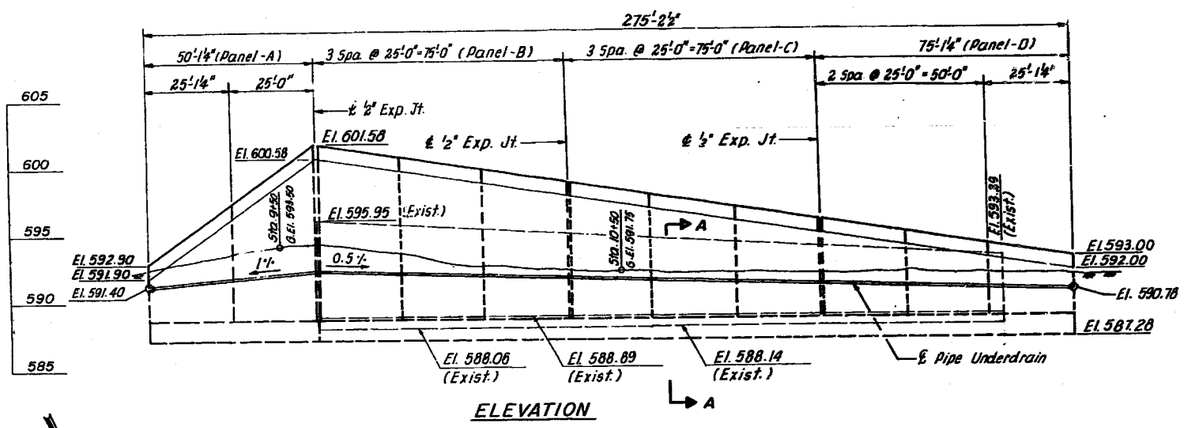
Armitage Avenue Bridge Benchmark - cut □ in the top of East Wingwall South Abutment.
El 609.29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

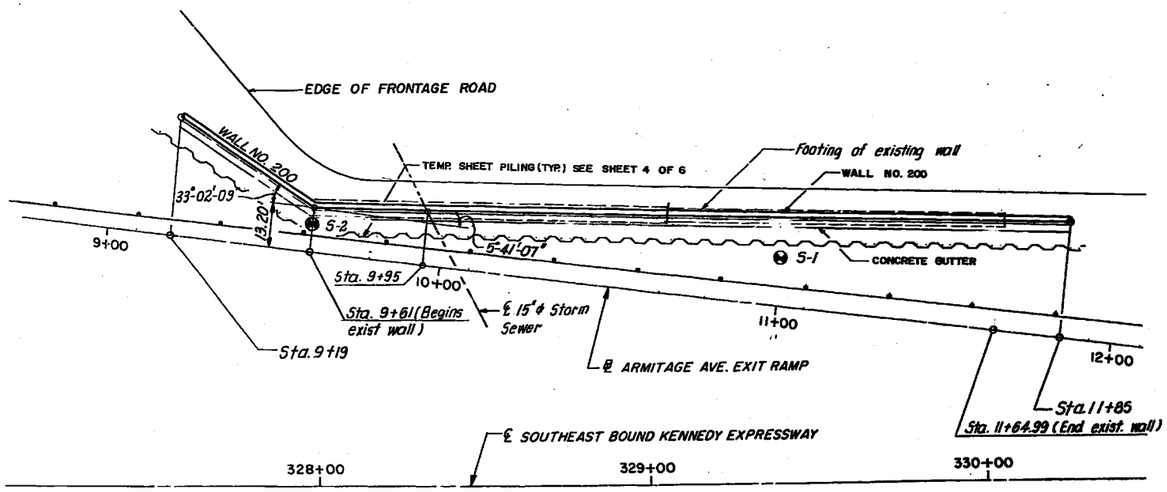
** 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451L, 0506-450, 0603-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	**	COOK	426	360
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1
SHEETS 6



ELEVATION

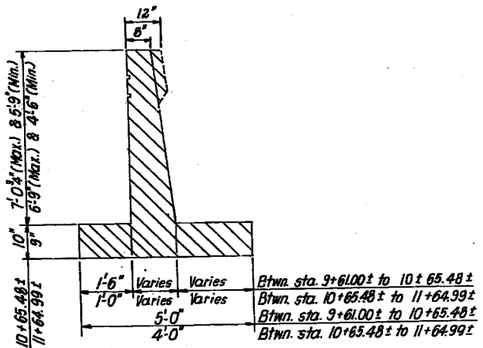


PLAN

TOTAL BILL OF MATERIALS

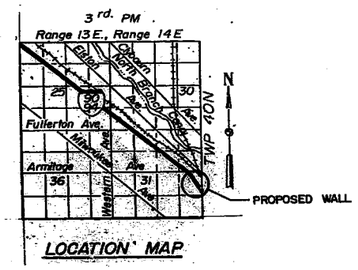
	ITEM	UNIT	QUANTITY
*	Concrete Retaining Wall Removal	Cu. Yds	71.2
	Structure Excavation	Cu. Yds.	414
*	Class X Concrete Retaining Wall	Cu. Yds.	187.1
	Reinforcement Bars, Epoxy Coated	Lbs.	9160
	Reinforcement Bars	Lbs.	8340
*	Rustication Finish	Sq. Ft.	1172
*	Temporary Sheet Piling	Sq. Ft.	9467
*	Geocomposite Wall Drain	Sq. Yd.	134
*	Pipe Underdrain For Structure 6"	Lin. Ft.	275
	Pipe Drains 6"	Lin. Ft.	8
*	Storm Sewers, Special 15"	Lin. Ft.	20
*	Class X Concrete Collar	Each	2

* See Special Provisions.

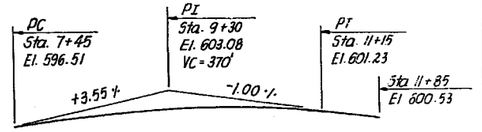


SECTION A-A (EXIST)

Note: Dimensions are taken from existing plans.



LOCATION MAP



ARMITAGE AVE. EXIT RAMP PROFILE

DESIGN CRITERIA

DESIGN SPECIFICATIONS
AASHTO 1989 Standard Specifications for Highway Bridges with 1990 & 1991 Interims.

DESIGN LOADING
Equivalent liquid Pressure = 40 pcf
Earth Dry weight = 120 pcf
Surcharge = 2'-0"

DESIGN METHOD
Load Factor

DESIGN STRESSES
Concrete Fc = 3,500 psi
Reinforcement fy = 60,000 psi
Allowable Bearing Pressure = 2.3 ksf (Btwn. Sta. 9+19 to 10+30.5)
& 1.3 ksf (Btwn. Sta. 10+30.5 to 11+85)

GENERAL NOTES:

A Geocomposite Wall Drain shall be installed on the back face of the retaining wall.

An underdrain pipe shall be situated within a 2'-0"x2'-0" block of CA-5 or CA-7 coarse aggregate. The 2'-0"x2'-0" block of coarse aggregate shall be wrapped completely in Geotextile filter fabric. An 18" minimum lap will be required where the fabric must be lapped.

At the vertical expansion joints a hollow bulb type nonmetallic water seal shall be used. See article 503.10 and 718.12 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

The back face of retaining walls shall be waterproofed according to Article 503.11 of the Standard Specifications.

Bar indicates thus 12x4.-#5 etc. indicates 12 lines of bars with 4 lengths per line.

Reinforcement bars designated (E) shall be epoxy coated.

For soil borings see sht. # 6 of 6.

Temporary Sheet Piling should be co-ordinated with the Storm Sewer Special 15" at sta. 9+95.00.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

STATE OF ILLINOIS
RALPH E. ANDERSON
81-2935
REGISTERED PROFESSIONAL ENGINEER
Exp. 11-30-92
Date 07-20-92

LEGEND

▨ Indicates Concrete Retaining Wall Removal

REVISIONS	
NAME	DATE

EJM Engineering, P.C.
411 South Wells Suite 202
Chicago, Illinois 60607

RETAINING WALL NO. 200
GENERAL PLAN & ELEVATION

F.A.I. ROUTE 90/94
OVER ARMITAGE AVE.
COOK COUNTY
STATION 9+19 TO 11+85
S.N. 016-W200

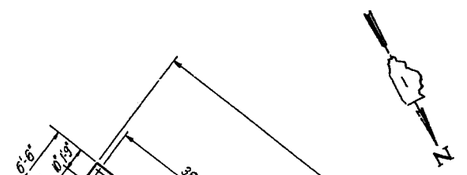
As Revised 8-27-92 PHD

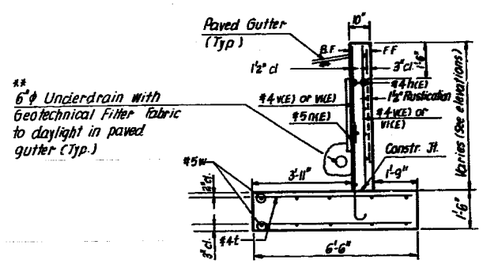
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451), 0506-450, 0605-402HB, 0606-403HB & 0707140-HB, 439IR-2

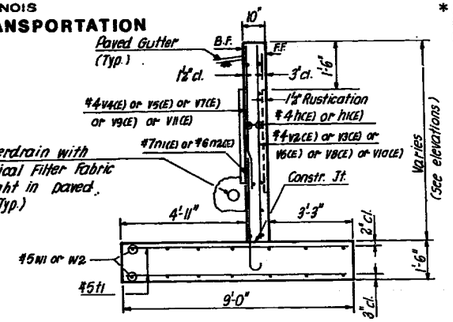
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	361
FED ROAD DIST NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO 2
SHEETS 6

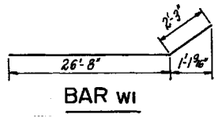




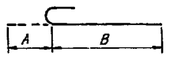
SECTION A-A



SECTION B-B

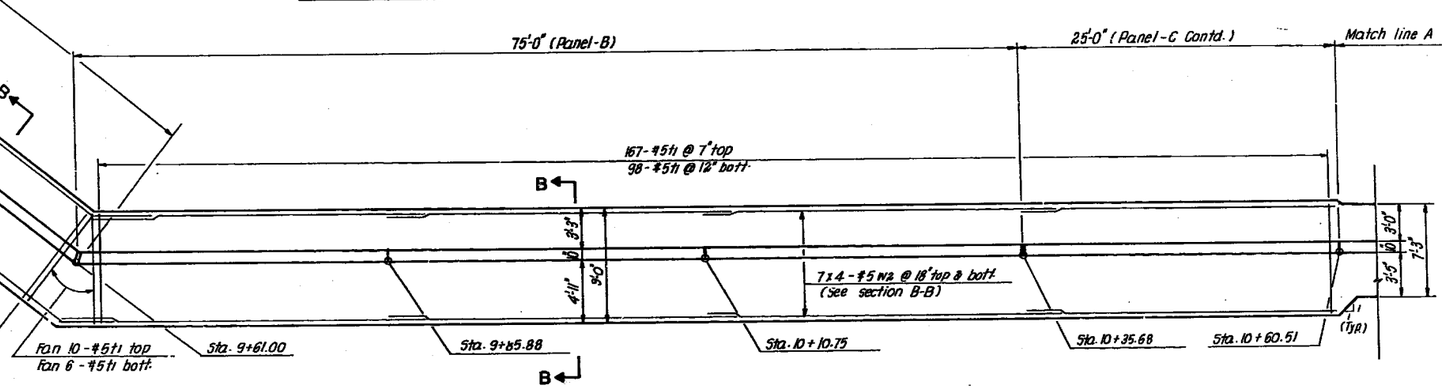


BAR W1

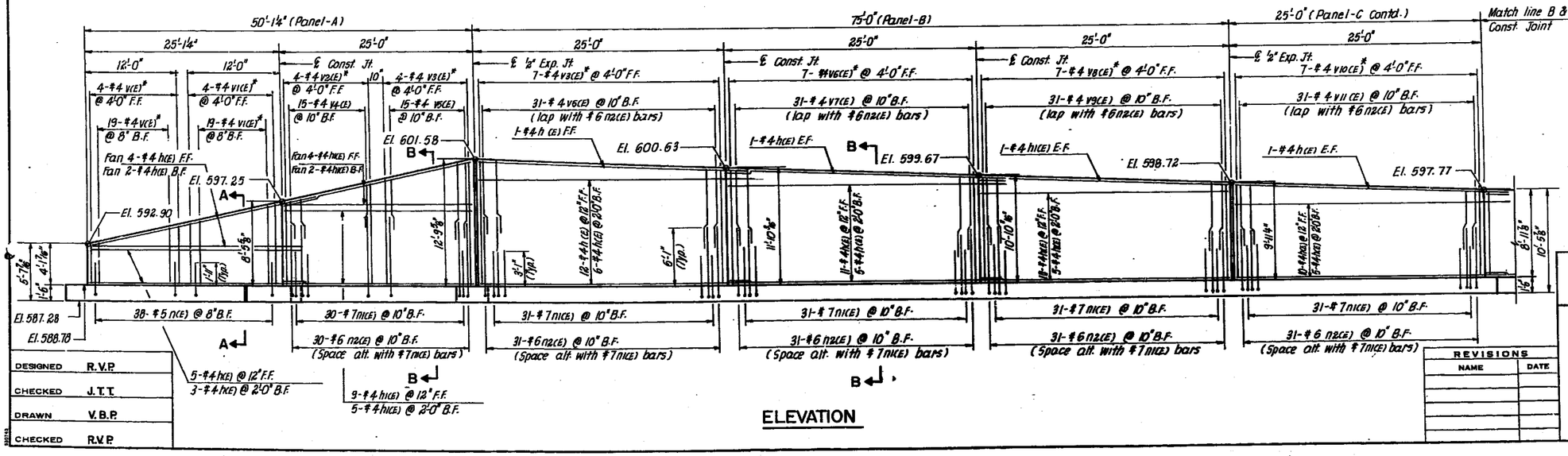


BAR n(E), n1(E), & n2(E)

BAR \ DIM	A	B
n(E)	7"	3'-1"
n1(E)	10"	4'-3"
n2(E)	8"	7'-3"



PLAN



ELEVATION

MIN. BAR LAP

SIZE	LAP
#4	1'-8"
#5	2'-2"

* Cut to fit
** For location and elevations see sht. #1 of 6

NOTES:
For match line A & B see sht #3 of 6
For Const Joint & Exp. Joint details see sht. #4 of 6.
Work this sht. with sht. # 4 of 6.

LEGEND
E.F. denotes Each Face
B.F. denotes Back Face
F.F. denotes Front Face

DESIGNED	R.V.P.
CHECKED	J.T.T.
DRAWN	V.B.P.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

EJM Engineering, P.C.
411 South Wells Suite 202
Chicago, Illinois 60607

RETAINING WALL NO. 200
WALL DETAILS-I

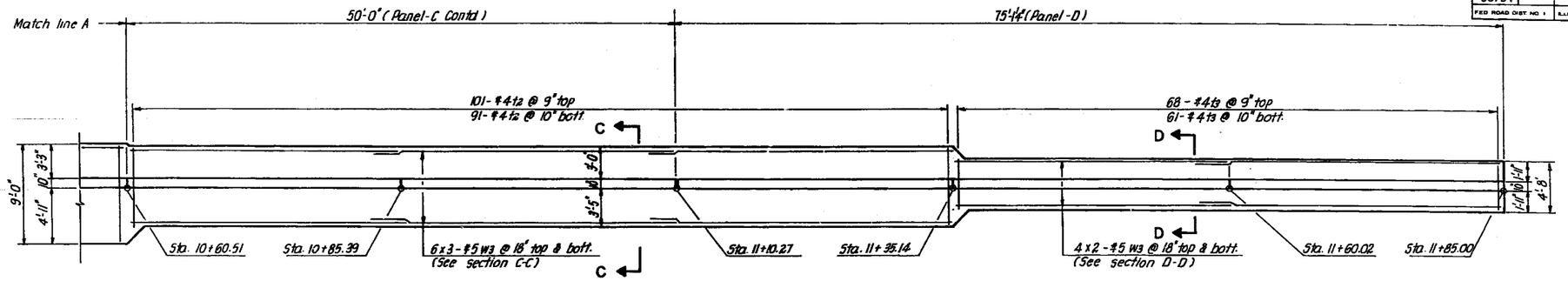
F.A.I. ROUTE 90/94
OVER ARMITAGE AVE.
COOK COUNTY
STATION 9+19 TO 11+85
S.N. 016-W200

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

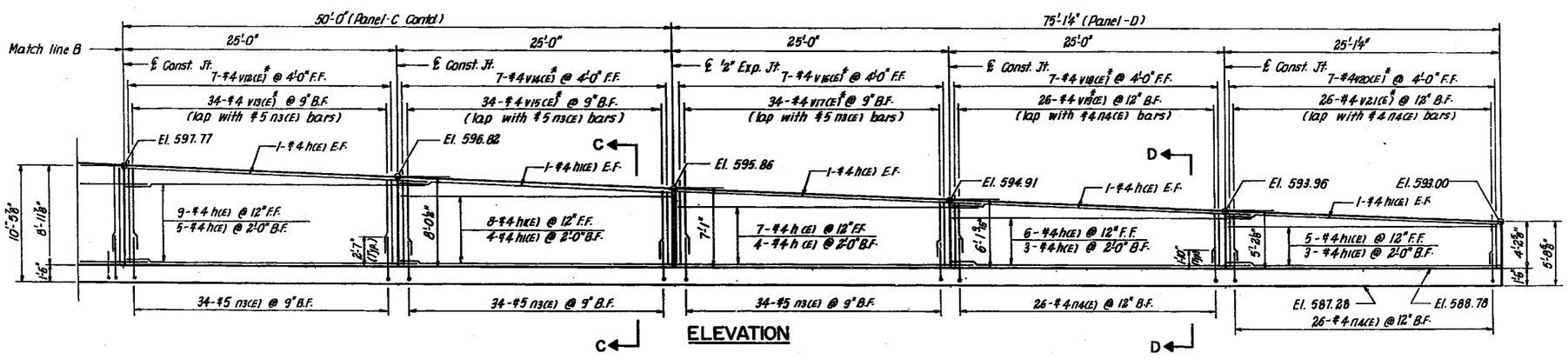
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	362
FED ROAD DIST NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO 3
SHEETS 6



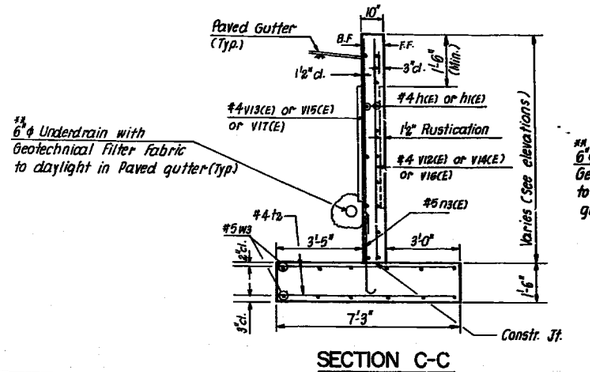
PLAN



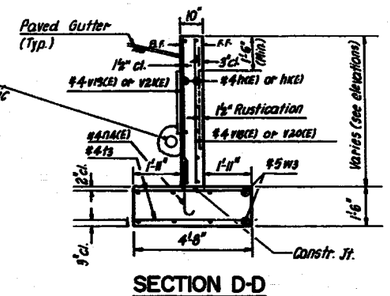
ELEVATION

* Cut to fit
** For locations & elevations see sht. #1 of 6.

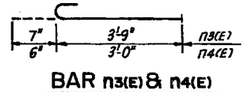
NOTE: For Const. Joint & Exp. Joint details see sht # 4 of 6. Work this sht. with sht # 4 of 6.



SECTION C-C



SECTION D-D



BAR n3(E) & n4(E)

MIN. BAR LAP

SIZE	LAP
#4	1'-8"
#5	2'-2"

LEGEND
E.F. denotes End face
B.F. denotes Back face
F.F. denotes Front face

DESIGNED	R.V.P.
CHECKED	J.T.T.
DRAWN	V.B.P.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

EJM Engineering, P.C.
411 South Wells Suite 202
Chicago, Illinois 60607

RETAINING WALL NO. 200
WALL DETAILS-II

F.A.I. ROUTE 90/94
OVER ARMITAGE AVE.
COOK COUNTY
STATION 9+19 TO 11+85
S.N. 016-W200

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-28, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2

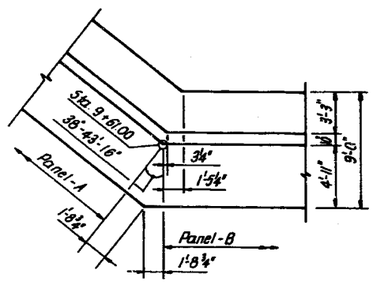
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	363
FED ROAD DIST NO. 1	ILLINOIS	FED AID PROJECT		

SHEET NO 4
SHEETS 6

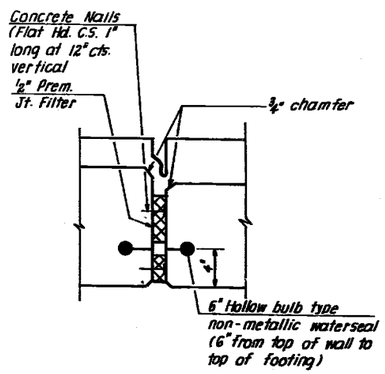
BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
h1(E)	109	#4	26'-8"	—
h11(E)	61	#4	24'-9"	—
n1(E)	38	#5	3'-8"	⊂
n11(E)	154	#7	5'-1"	⊂
n12(E)	154	#6	7'-11"	⊂
n13(E)	102	#5	4'-4"	⊂
n14(E)	52	#4	3'-6"	⊂
t	69	#4	6'-2"	—
t1	342	#5	8'-8"	—
t2	192	#4	6'-11"	—
t3	129	#4	4'-4"	—
V(E)	23	#4	6'-0"	—
V1(E)	23	#4	8'-1"	—
V2(E)	4	#4	10'-3"	—
V3(E)	11	#4	12'-6"	—
V4(E)	15	#4	6'-3"	—
V5(E)	46	#4	8'-5"	—
V6(E)	7	#4	11'-7"	—
V7(E)	31	#4	7'-6"	—
V8(E)	7	#4	10'-7"	—
V9(E)	31	#4	6'-6"	—
V10(E)	7	#4	9'-8"	—
V11(E)	31	#4	5'-7"	—
V12(E)	7	#4	8'-8"	—
V13(E)	34	#4	8'-2"	—
V14(E)	7	#4	7'-9"	—
V15(E)	34	#4	7'-2"	—
V16(E)	7	#4	6'-9"	—
V17(E)	34	#4	6'-3"	—
V18(E)	7	#4	5'-10"	—
V19(E)	26	#4	6'-0"	—
V20(E)	7	#4	4'-10"	—
V21(E)	26	#4	5'-0"	—
W	10	#5	26'-0"	—
W1	14	#5	28'-11"	⌒
W2	56	#5	27'-1"	—
W3	52	#5	26'-6"	—

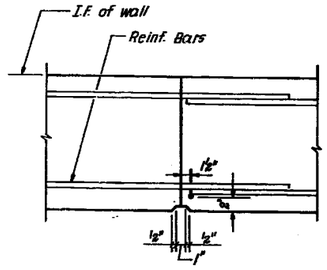
ITEM	UNIT	TOTAL
Reinf. bars, epoxy coated	Lbs.	9160
Reinf. bars	Lbs.	8340



FOOTING CURVATURE DETAILS



EXPANSION JOINT DETAIL



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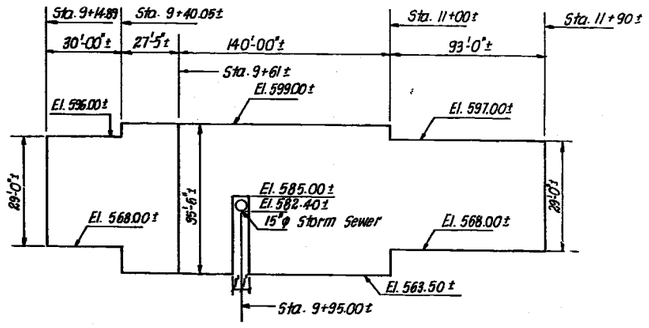
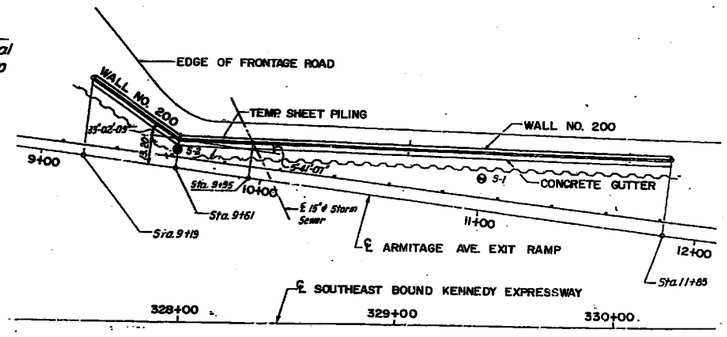
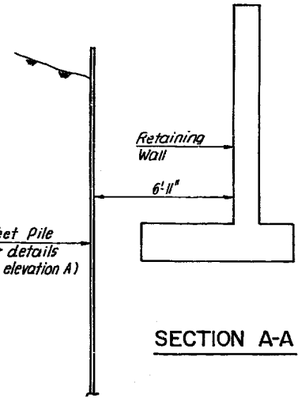


ELEVATION A



PLAN



SECTION A-A

TEMPORARY SHEET PILING DETAILS

NOTE:
The details shown here for Temporary Sheet Piling is for information only. It is the Contractor's responsibility to provide a design and computations of the Temporary Sheet Piling and associated members, if required, subject to the approval of the Engineer.

DESIGNED	R.V.P
CHECKED	J.T.T.
DRAWN	V.B.P
CHECKED	R.V.P

REVISIONS	
NAME	DATE

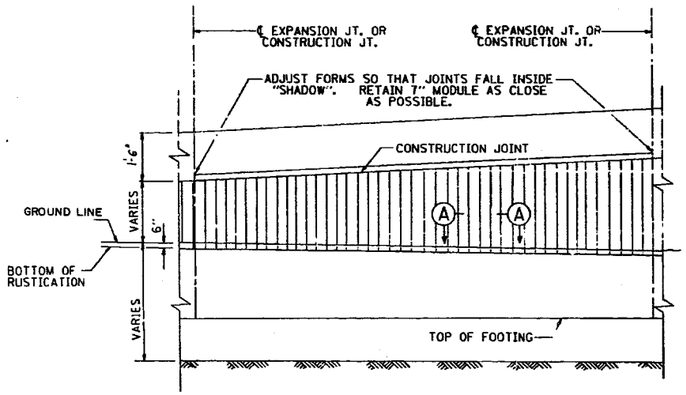
EJM — EJM Engineering, P.C.
411 South Wells Suite 202
Chicago, Illinois 60607

RETAINING WALL NO. 200
WALL DETAILS-III

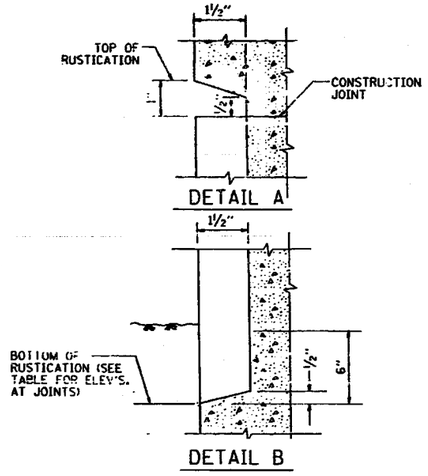
F.A.I. ROUTE 90/94
OVER ARMITAGE AVE.
COOK COUNTY
STATION 9+19 TO 11+85
S.N. 016-W200

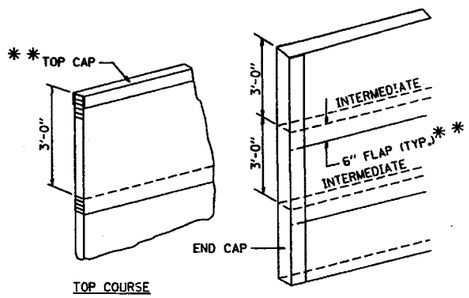
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	364
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

* 050512-2B, 3-IH, 6-IP, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB, 439R-2



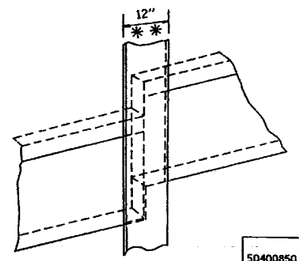
ELEVATION-TYPICAL ARCHITECTURAL FINISH





GEOCOMPOSITE WALL DRAIN DETAILS

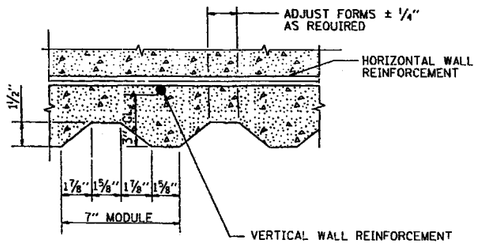
** SEE RECURRING SPECIAL PROVISION #43 FOR GEOCOMPOSITE WALL DRAIN



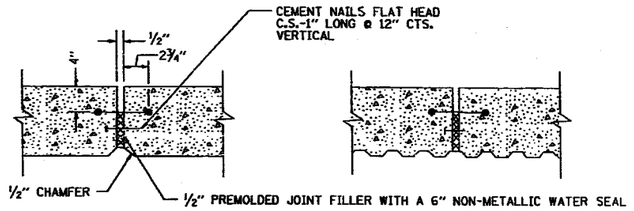
PAY ITEMS **

50400850	*	CLASS X CONCRETE (RETAINING WALL)	(C.Y.
50400510	*	RUSTICATION FINISH	(S.F.
60709582	*	PIPE UNDERDRAINS FOR STRUCTURES 6"	(L.F.
Z0027750	*	GEOCOMPOSITE WALL DRAIN	(S.Y.
60700200		PIPE DRAINS 6"	(L.F.

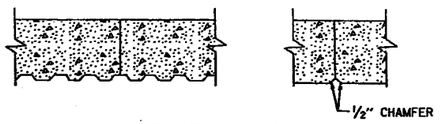
* SEE SPECIAL PROVISIONS
** FOR QUANTITY SEE SHEET NO. 1 OF 6



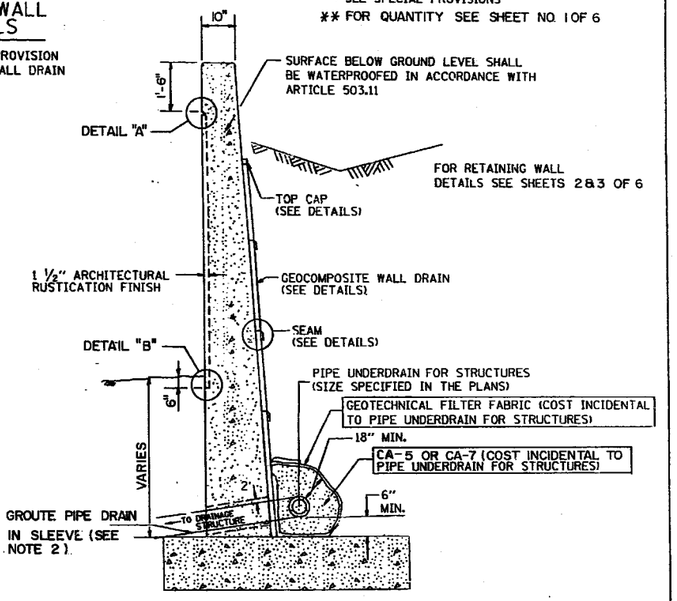
SECTION A-A



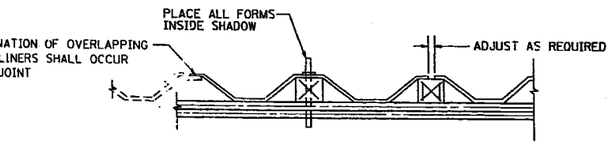
EXPANSION JOINT DETAIL



CONSTRUCTION JOINT DETAIL



TYPICAL SECTION THRU RETAINING WALL



SUGGESTED FORMWORK DETAIL

PANEL-A	
STATION	ELEVATION
9+19.00	592.00
9+40.05	592.68
9+61.00	592.62

PANEL-B	
STATION	ELEVATION
9+61.00	592.62
9+85.88	591.90
10+10.75	591.45
10+35.63	591.32

PANEL-C	
STATION	ELEVATION
10+35.63	591.32
10+60.51	591.20
10+85.57	591.07
11+10.27	591.00

PANEL-D	
STATION	ELEVATION
11+10.27	591.00
11+35.14	591.00
11+60.02	591.00
11+85.00	591.00

NOTE 1
PIPE DRAIN SLOPE:
PRIOR TO THE PLACEMENT OF THE PIPE UNDERDRAIN SLEEVE THE ENGINEER SHALL DETERMINE THE SLOPE REQUIRED FOR THE PIPE UNDERDRAIN TO ENTER BELOW THE DRAINAGE STRUCTURE LID AT OR BELOW THE MINIMUM DISTANCE SHOWN ON THE DETAILS FOR THE STRUCTURE.

NOTE 2
PIPE DRAIN
THE PIPE DRAIN SHALL TERMINATE AT A DRAINAGE STRUCTURE.
THE COST OF THE SLEEVE AND GROUT SHALL BE INCIDENTAL TO PIPE DRAINS.

REVISIONS	
NAME	DATE

EJM Engineering, P.C.
413 South Wells Suite 202
Chicago, Illinois 60607

RETAINING WALL NO. 200 RUSTICATION DETAILS

F.A.I. ROUTE 90/94
OVER ARMITAGE AVE.
COOK COUNTY
STATION 9+19 TO 11+85
S.N. 016-W200

DATE: 9-7-89
FILE: D:\S44\E10.72\D1\S1\T05.DGN

VI = BD28

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707I404HB, 439IR-2

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FA.I. 90/94	*	COOK	426	365
FED ROAD DIST NO 1		ILLINOIS	FED AID PROJECT	

SHEET NO 6
SHEETS 6

BORING S-1

Project: Retaining Wall
Armitage Ave. Exit Ramp
Drilled along North Wood Ct.
County: Cook

Sheet: 1 of 1
Date: 08/09/90
Drilled By: EI/MS/CO
Checked By: RM
EI # 1313

Station: 11+40
Offset: 12' from receiving wall
Elev: -2.0
Datum: Top of Fire Hydrant

	N	Qu TSF	w %	Surface Water Elevation None Ground water Elev While Drilling Dry Ground water Elev at Completion Dry Ground water Elev After 24 HRS N/A	N	Qu TSF	w %
Topsoil -1.0				Boring terminated at 25 ft (Elevation -27.0)			
SILTY CLAY TO SILTY CLAY LOAM FILL; trace gravel; brown; Very stiff	6 4 7	2.49 S-S	15	Solid stem augers used full depth. Boring backfilled upon completion.			
Grades to brown - mottled (A-6-FILL) -7.5	11 7 3	1.6 P	17	* - Sample too fractured for Rtmc == - Sample too granular for Rtmc or Qp			
SILTY CLAY TO SILTY CLAY LOAM; trace gravel; grey-brown (mottled); Stiff	4 4 5	1.91 B	16				
	6 6 5	1.51 B	16				
Grades to grey	3 2 6	1.11 B	17				
Grades to Medium Stiff	2 2 2	0.5 B	17				
Grades to soft (A-6) -10.0	2 2 4	0.4 B	16				
SILTY CLAY TO CLAY; trace gravel; grey; Soft to Very soft	2 2 3	0.39 B	16				
Grades to Medium Stiff	3 3 -	0.51 B	16				
(A-7-6) -25.0							
SAND; trace gravel; grey; medium dense (A-2-6) -27.0	2 4 24	== -	15				

N - Standard Penetration Test
Blows per foot to drive a 2" OD Split Spoon Sampler one foot with a 140 pound hamer falling 30 inches

Qu - Unconfined Compressive Strength (TSF)
w - Moisture Content (% oven dry weight)
A - Auger Boring — no blow counts

Failure Type:
B - Bulge
S - Shear
F - Fractured
P - Penetrometer

BORING S-2

Project: Retaining Wall
Armitage Ave. Exit Ramp
Drilled along Avondale St.
County: Cook

Sheet: 1 of 1
Date: 08/09/90
Drilled By: EI/MS/CO
Checked By: RM
EI # 1313

Station: 9+61
Offset: 6' from receiving wall
Elev: -4.15
Datum: Top of Fence, North end

	N	Qu TSF	w %	Surface Water Elevation None Ground water Elev While Drilling Dry Ground water Elev at Completion Dry Ground water Elev After 24 HRS N/A	N	Qu TSF	w %
Asphalt (2 to 6 inches)				Boring terminated at 25 ft (Elevation -29.15)			
Crushed Gravel / Concrete -4.15	9 6 10	--	16	Solid stem augers used full depth. Boring backfilled upon completion.			
SANDY LOAM TO SANDY CLAY LOAM FILL; stone gravel; brown; medium dense (A-1-b-6-FILL) -10.15	4 4 4	0	16	* - Sample too fractured for Rtmc == - Sample too granular for Rtmc or Qp 0 - Not enough sample recovery for Rtmc or Qp			
SILTY CLAY TO SILTY CLAY LOAM; trace gravel; trace organics; Black	4 3 5	0	15				
Grades brown; Very stiff	4 5 10	2.0 P	15				
Grades to brown-grey (mottled); Stiff	3 4 6	2.26 B	16				
Grades to grey; Medium Stiff	2 2 3	1.85 B	17				
(A-6) -23.15	2 2 4	0.99 B	17				
SILTY CLAY TO CLAY; trace gravel; grey; Medium Stiff	1 1 3	0.54	16				
Grades to Soft (A-7-6) -28.15	2 3 4	0.51	16				
SAND; trace gravel; grey; dense (A-2-6) -27.0	7 13 19	0.48 --	16 15				

N - Standard Penetration Test
Blows per foot to drive a 2" OD Split Spoon Sampler one foot with a 140 pound hamer falling 30 inches

Qu - Unconfined Compressive Strength (TSF)
w - Moisture Content (% oven dry weight)
A - Auger Boring — no blow counts

Failure Type:
B - Bulge
S - Shear
F - Fractured
P - Penetrometer

DESIGNED	R.V.P.
CHECKED	J.T.T.
DRAWN	V.B.P.
CHECKED	R.V.P.

REVISIONS	
NAME	DATE

EJM E-gineering, P.C.
411 South Wells, Suite 202
Chicago, Illinois 60607

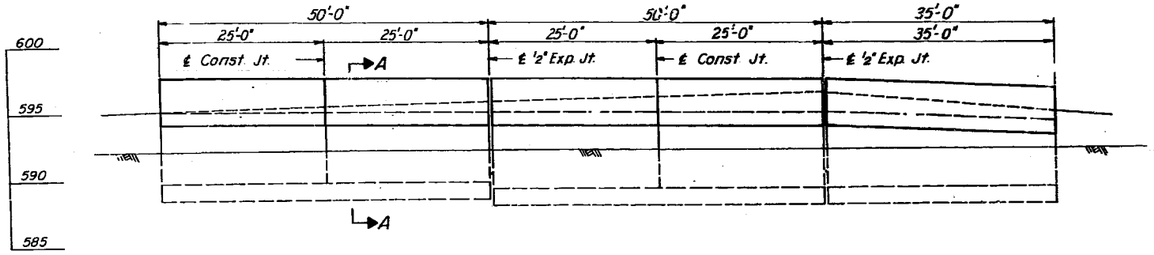
RETAINING WALL NO. 200
SOIL BORINGS

F.A.I. ROUTE 90/94
OVER ARMITAGE AVE.
COOK COUNTY
STATION 9+19 TO 11+85
S.N. 016-W200

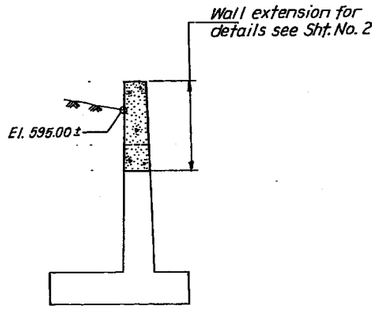
BENCHMARK

Armitage Avenue Bridge Benchmark - cut □ in the top of East Wingwall South Abutment
El. 609.29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

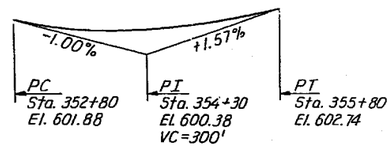


SECTION A-A

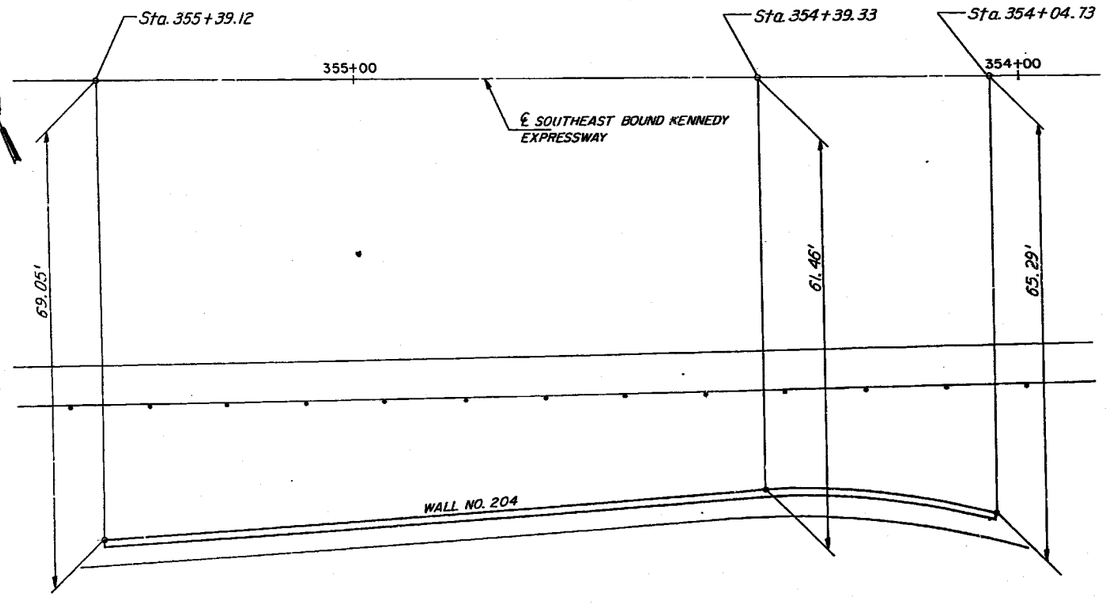
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	366
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1
SHEETS 2

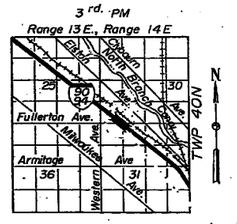
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 4511, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 4391R-2



SEB KENNEDY EXPRESSWAY PROFILE



PLAN



LOCATION MAP

GENERAL NOTES

DESIGN CRITERIA

DESIGN SPECIFICATIONS

AASHTO 1989 Standard Specifications for Highway Bridges with 1990 & 1991 Interims.

DESIGN STRESSES

Concrete f'_c = 3,500 P.S.I.
Reinforcement f_y = 60,000 P.S.I.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations it shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and ¾" ϕ x 12" hooked bolts.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

STATE OF ILLINOIS
JACOB T. TSENG
81-2885
LICENSED STRUCTURAL ENGINEER
Chicago, ILLINOIS
Exp. 11-30-92
Date 07-30-92

REVISIONS	
NAME	DATE

RETAINING WALL NO. 204
GENERAL PLAN & ELEVATION

F.A.I. ROUTE 90/94
OVER FULLERTON AVE.
COOK COUNTY
STATION 354+04.73 TO 355+39.12

△ As Revised 9-22-92 FHP
△

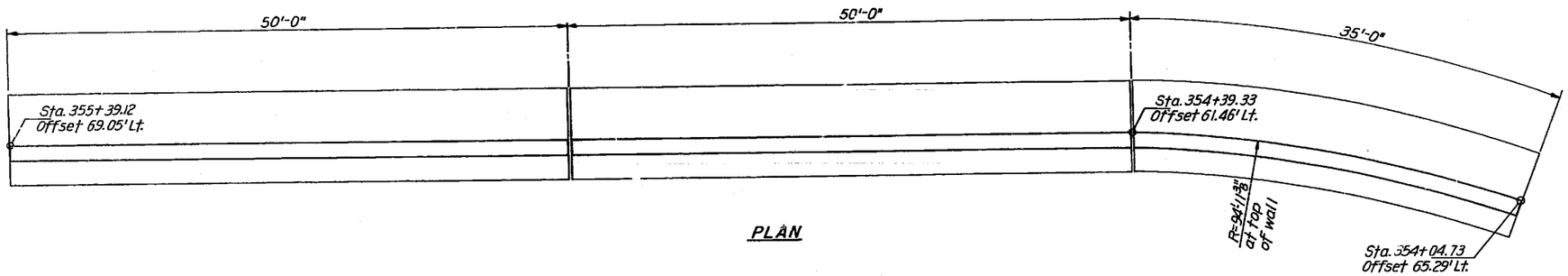
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Note:
Offsets shown are from ℄ Southeast Bound Kennedy Expressway to top of existing wall.

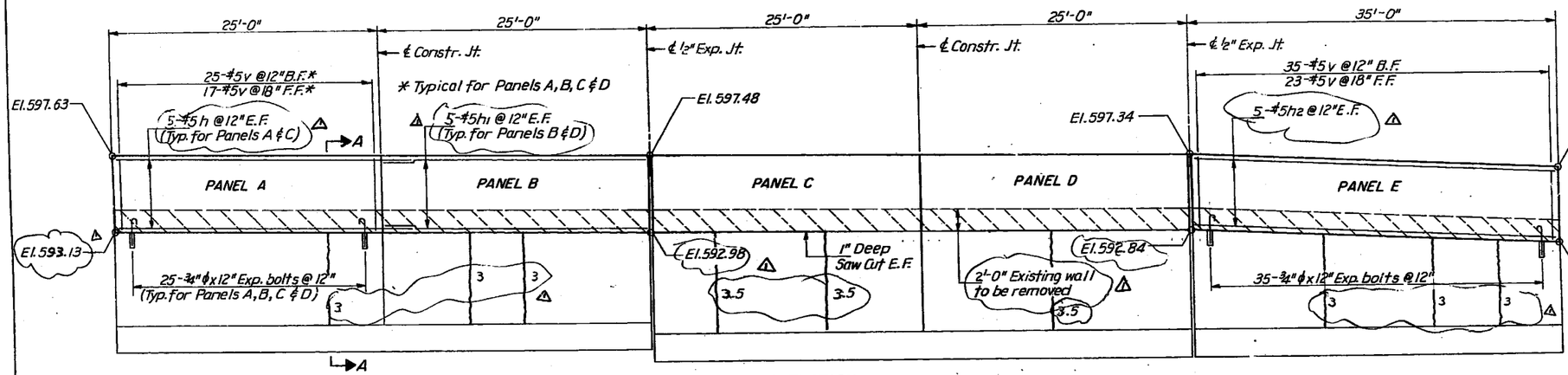
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	367
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
SHEETS 2

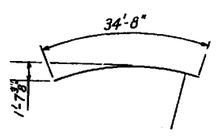
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404HB. 439IR-2



PLAN



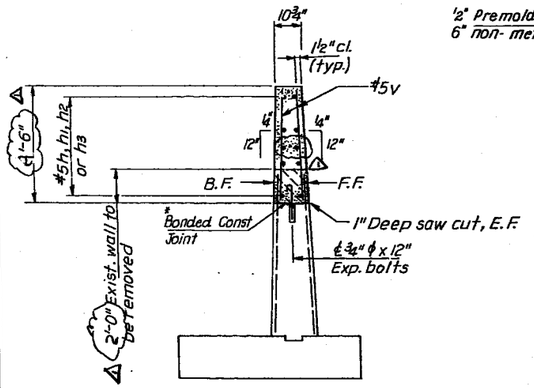
ELEVATION



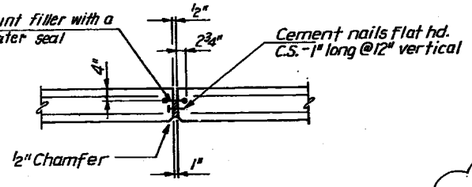
BARS h2 & h3

TOTAL BILL OF MATERIAL

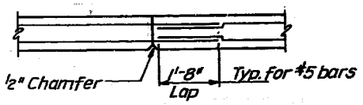
BAR	NO.	SIZE	LENGTH	SHAPE
h	20	#5	21'-0"	—
h1	20	#5	24'-8"	—
h2	10	#5	34'-8"	—
v	226	#5	4'-4"	—
Concrete Removal			Cu.Yds.	10.4
Class X Concrete			Cu.Yds.	22.3
Reinforcement Bars			Lbs.	2460
Epoxy Crack Sealing			Lin.Ft.	28.5 **
¾"ϕx12" Exp. bolts			Each	



SECTION A-A



EXPANSION JOINT DETAIL



CONSTRUCTION JOINT DETAIL

APPROVED
FOR STRUCTURAL ADEQUACY ONLY.
Ralph E. Anderson
Engineer of Bridges and Structures

LEGEND

Indicates concrete removal, existing vertical reinforcement bars extending into removed area shall be cleaned and incorporated into the new construction.

4 Indicates Epoxy Crack Sealing in Lin.Ft.

B.F. Indicates Back face
F.F. Indicates Front face
E.F. Indicates Each face

* Bonded Construction Joint in accordance with article 504.13 (a) 2 of the Standard Specifications.
** See Special Provisions

REVISIONS	
NAME	DATE

RETAINING WALL NO. 204
WALL DETAILS

F.A.I. ROUTE 90/94
OVER FULLERTON AVE.
COOK COUNTY
STATION 354+04.73 TO 355+39.12

△ As Revised 9-22-92 PMP

BENCHMARK

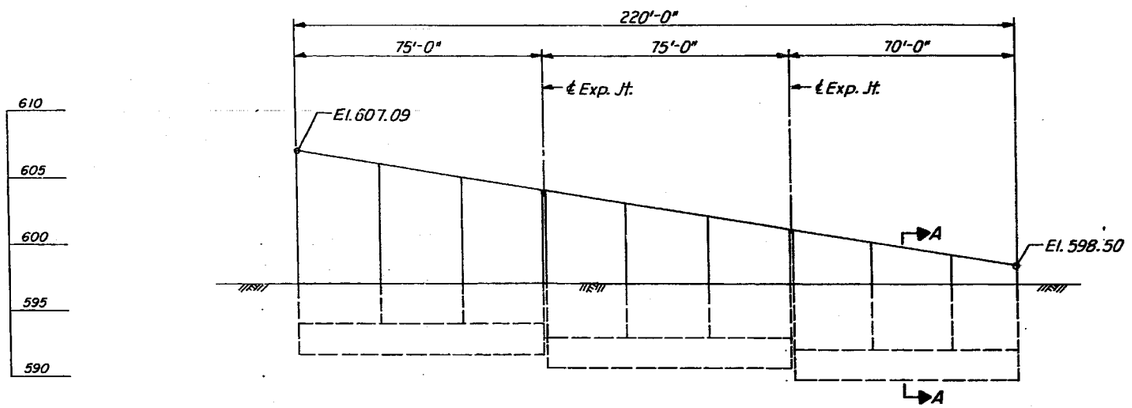
Armitage Avenue Bridge Benchmark - cut O in the top of East Wingwall South Abutment
El 609.29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

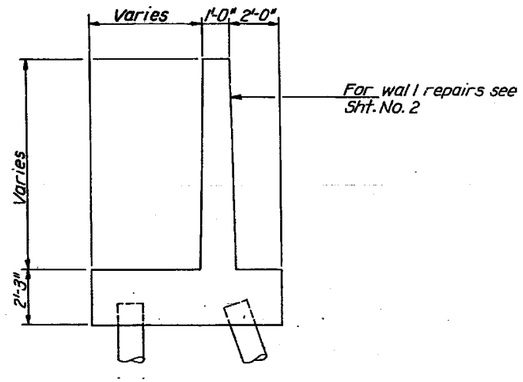
* 0502I2-2B, 3-IH, 6-IP, 400HB, 40IHE, 45I, 05JJ-450, 0605-402HB, 0606-403HB & 0707(404HB, 4398R-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	368
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

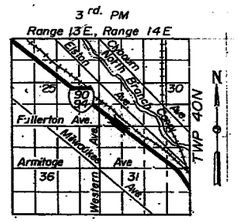
SHEET NO. 1
SHEETS 2



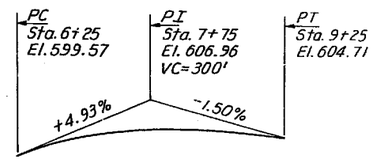
ELEVATION



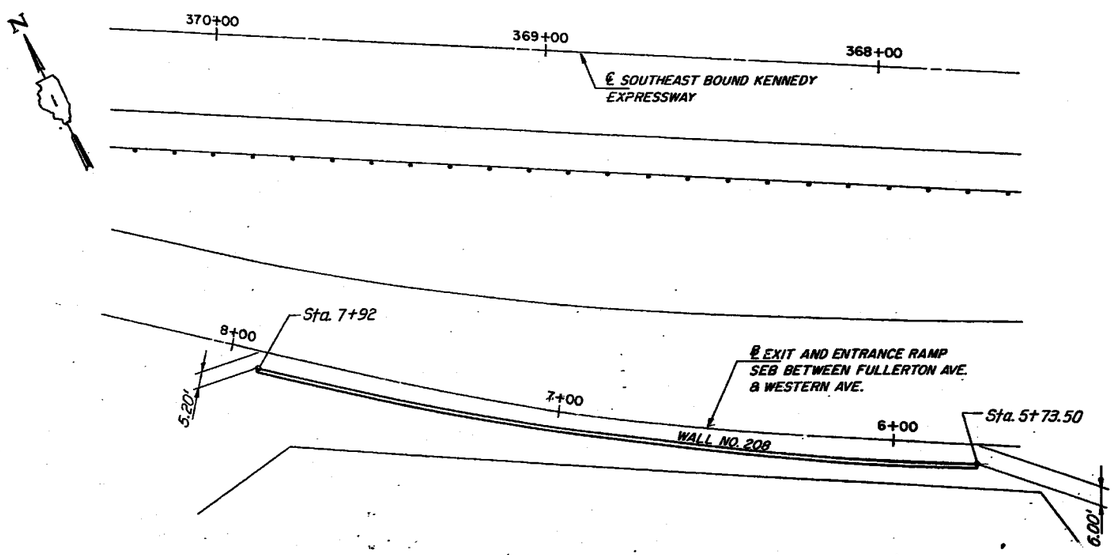
SECTION A-A



LOCATION MAP



RAMP PROFILE



PLAN

GENERAL NOTES

DESIGN CRITERIA

DESIGN SPECIFICATIONS

AASHTO 1989 Standard Specifications for Highway Bridges with 1990 & 1991 Interims

Concrete f'_c = 3,500 P.S.I.
Reinforcement fy = 60,000 P.S.I.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Engineer of Bridges and Structures

STATE OF ILLINOIS
JACOB T. TREVO
LICENSED STRUCTURAL ENGINEER
81-2885
CHICAGO, ILLINOIS
Exp. 11-30-92
Date 07-30-92

REVISIONS	
NAME	DATE

RETAINING WALL NO. 208
GENERAL PLAN & ELEVATION

F.A.I. ROUTE 90/94
OVER FULLERTON AVE.
COOK COUNTY
STATION 5+73.50 TO 7+92

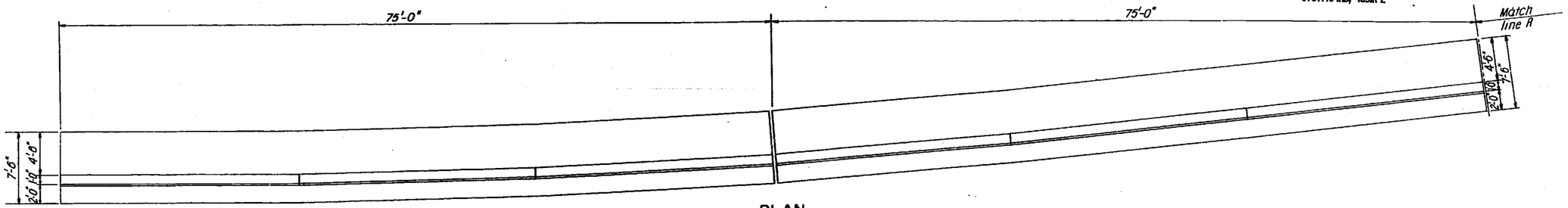
⚠ REVISED 3-22-92 PMP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

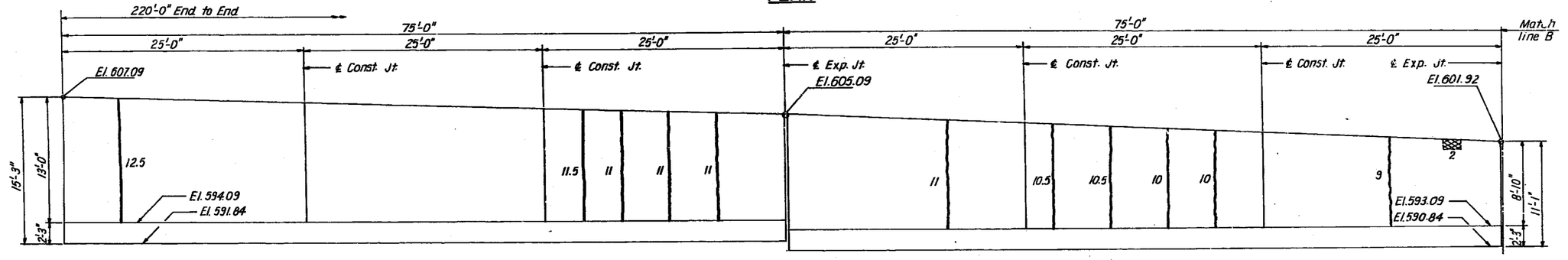
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	369
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
SHEETS 2

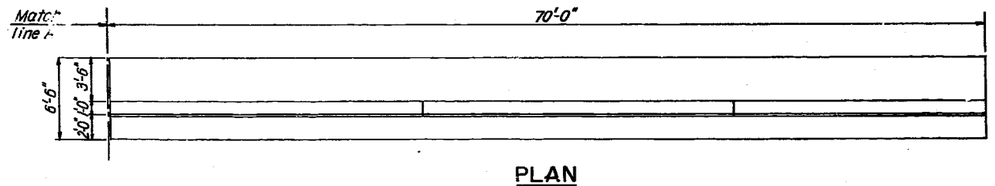
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



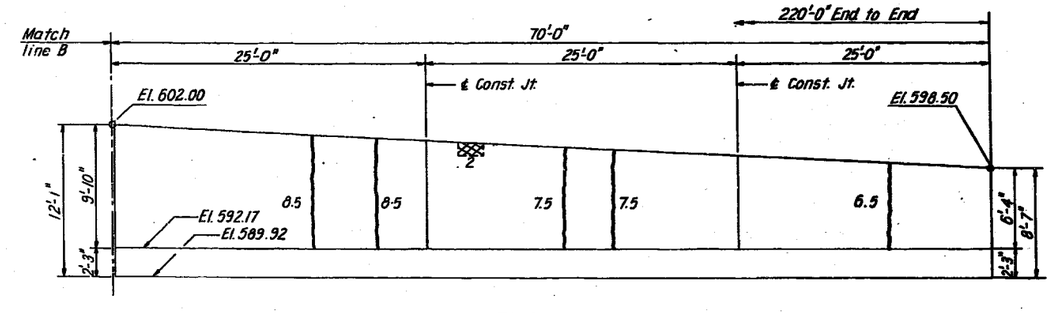
PLAN



ELEVATION



PLAN



ELEVATION

LEGEND

$\frac{\#}{2}$ Indicates formed Concrete Repair in square foot.

$\frac{\#}{5}$ Indicates Epoxy Crack Sealing in Lin. Ft.

* See Special Provisions.

⚠ TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
* Epoxy Crack Sealing	Lin. Ft.	156.5
* Formed Concrete Repair (Depth equal to or less than 5"	Sq. Ft.	4.0

REVISIONS	
NAME	DATE

RETAINING WALL NO. 208
WALL DETAILS

FA.I. ROUTE 90/94
OVER FULLERTON AVE.
COOK COUNTY
STATION 5+73.50 TO 7+92

⚠ As Revised 9-22-92 PMP

BENCHMARK

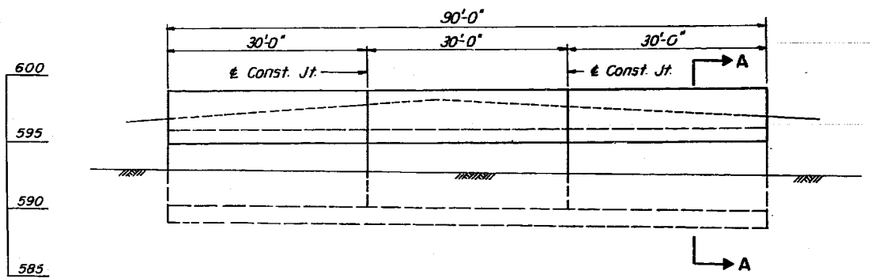
Armitage Avenue Bridge Benchmark - cut II in the top of East Wingwall South Abutment El. 609.29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

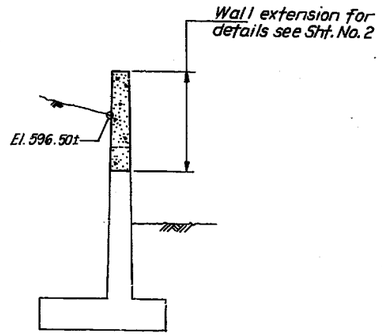
* 050512-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 0707(404)HB, 439IR-2

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94		COOK	426	370
F. HW. A. REG. 4		ILLINOIS	FED. AID PROJECT	

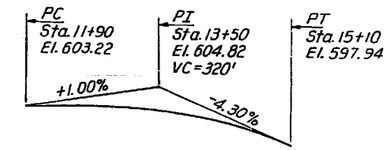
SHEET NO. 1
SHEETS 2



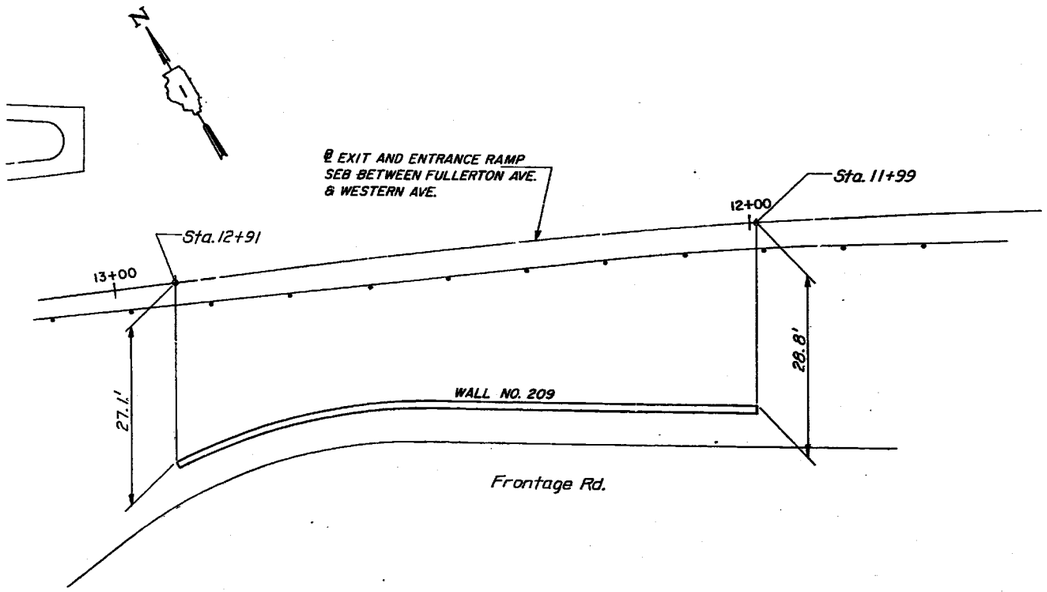
ELEVATION



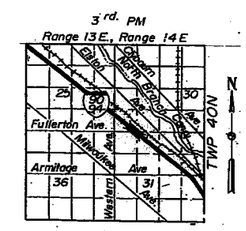
SECTION A-A



RAMP PROFILE



PLAN



LOCATION MAP

GENERAL NOTES

DESIGN CRITERIA

DESIGN SPECIFICATIONS

AASHTO 1989 Standard Specifications for Highway Bridges with 1990 & 1991 Interims.

DESIGN STRESSES

Concrete $f'c = 3,500$ P.S.I.
Reinforcement $fy = 60,000$ P.S.I.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustment prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and 3/4" ϕ x 12" hooked bolts.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

STATE OF ILLINOIS
JACOB T. TSENG
91-2885
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER
Jacob T. Tseng
Exp. 11-30-92
Date 07-20-92

REVISIONS	
NAME	DATE

RETAINING WALL NO. 209
GENERAL PLAN & ELEVATION

F.A.I. ROUTE 90/94
OVER WESTERN AVE.
COOK COUNTY
STATION 11+99 TO 12+91

1 REVISED 9-22-92 PMP

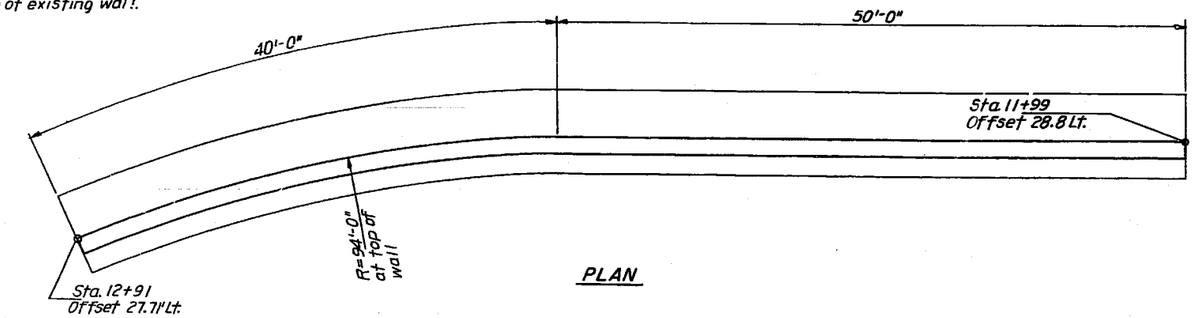
Note:
Offsets shown are from ℄ of Exit Ramp to top of existing wall.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

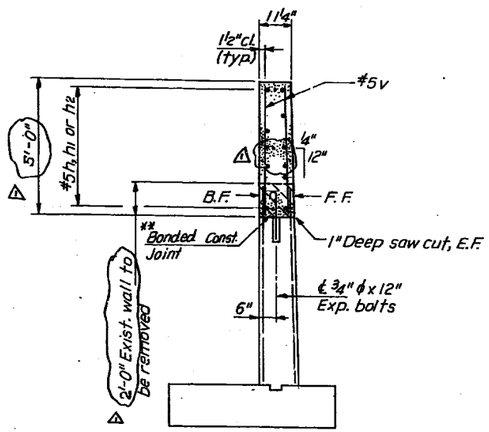
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94		COOK	426	371
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
SHEETS 2

* 0502-28, 3-1H, 6-1P, 400HB, 401HB, 451, 0506-450, 0605-402HB, 0606-403HB & 0707/404HB, 439R-2



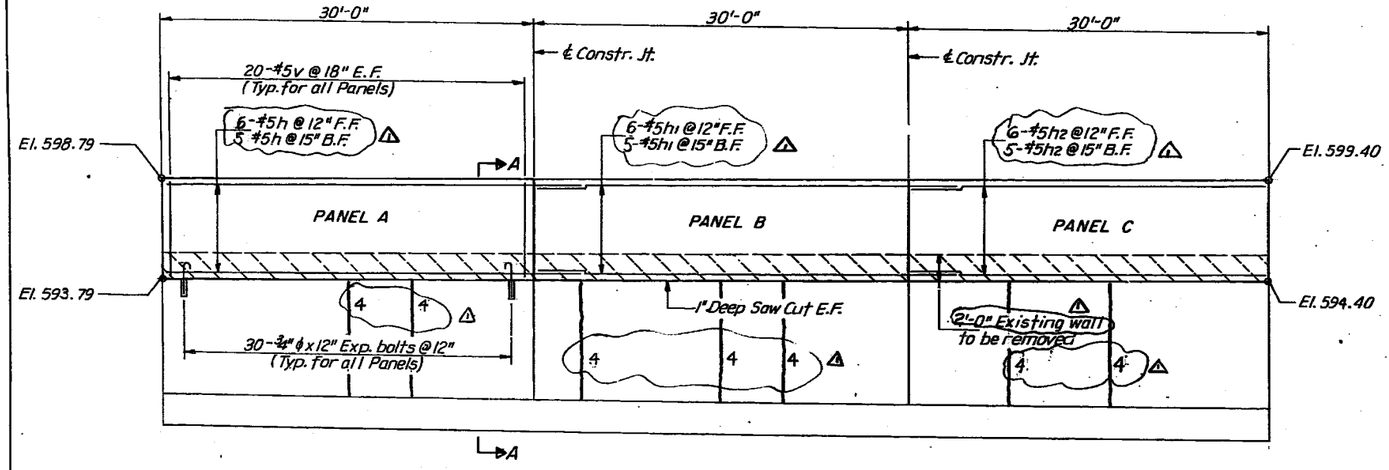
PLAN



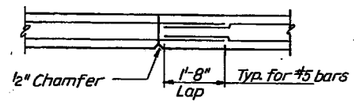
SECTION A-A

TOTAL BILL OF MATERIAL

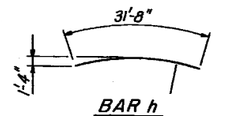
BAR	NO.	SIZE	LENGTH	SHAPE
h	11	#5	31'-8"	—
h1	11	#5	31'-8"	—
h2	11	#5	31'-8"	—
	A			
v	120	#5	4'-10"	—
			A	
Concrete Removal			Cu. Yds.	6.8
Class X Concrete			Cu. Yds.	16.5 A
Reinforcement Bars			Lbs.	1700
* Epoxy Crack Sealing			Lin. Ft.	38
3/4" ϕ x 12" Exp. bolts			Each	90



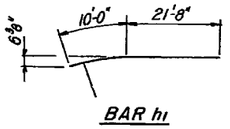
ELEVATION



CONSTRUCTION JOINT DETAIL



BAR h



BAR h1

LEGEND

▨ Indicates concrete removal, existing vertical reinforcement bars extending into removed area shall be cleaned and incorporated into the new construction.

4 * Indicates Epoxy Crack Sealing in Lin. Ft.

B.F. Indicates Back Face
F.F. Indicates Front Face
E.F. Indicates Each face

* See Special Provisions.
** Bonded Const. Joint in accordance with article 504.13(a) 2 of the Standard Specifications.

REVISIONS	
NAME	DATE

RETAINING WALL NO. 209
WALL DETAILS

F.A.I. ROUTE 90/94
OVER WESTERN AVE.
COOK COUNTY
STATION 11+99 TO 12+91

△ As Revised 9-22-92 PMP

BENCHMARK:

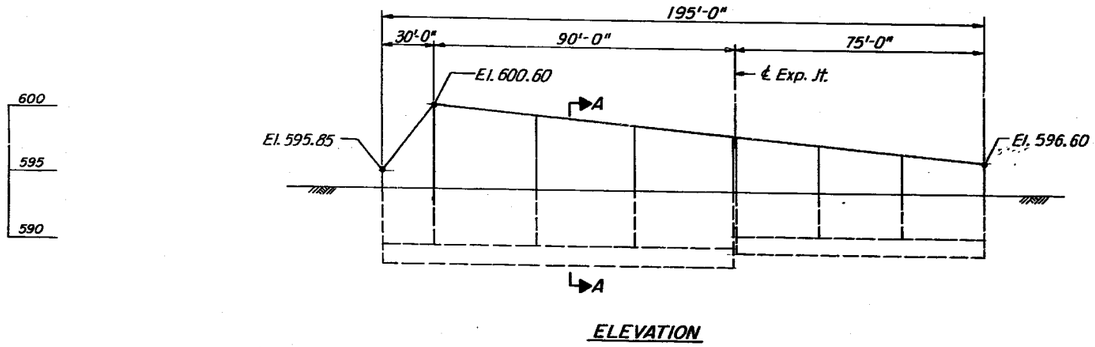
Armitage Avenue Bridge Benchmark - cut □ in the top of East Wingwall South Abutment
El 609.29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

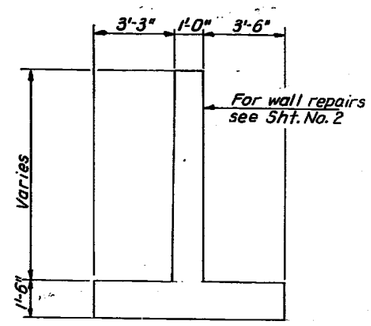
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	426	372
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
SHEETS 2

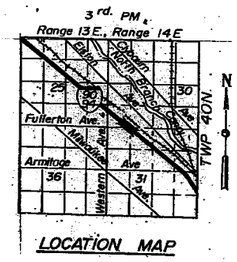
* 05052-2B, 3-1H, 6-1P, 400HB, 401HB, 451I, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2



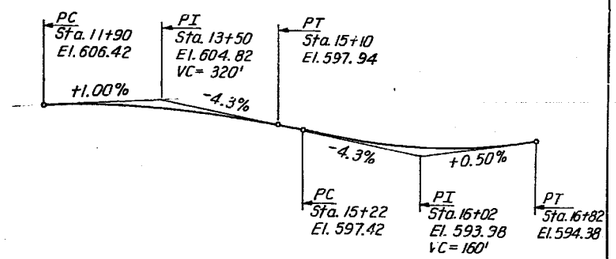
ELEVATION



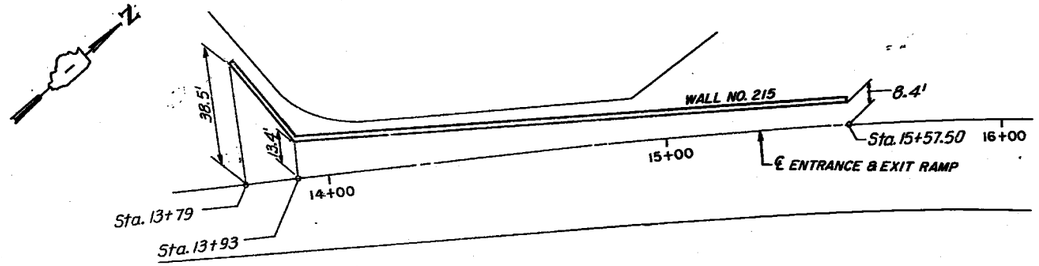
SECTION A-A

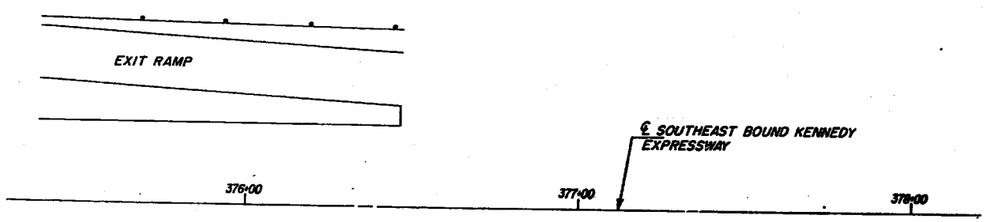


LOCATION MAP



RAMP PROFILE





PLAN

GENERAL NOTES

DESIGN CRITERIA

DESIGN SPECIFICATIONS

AASHTO 1989 Standard Specifications for Highway Bridges with 1990 & 1991 Interims.

DESIGN STRESSES

Concrete f'_c = 3,500 P.S.I.
Reinforcement f_y = 60,000 P.S.I.

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APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
Engineer of Bridges and Structures

STATE OF ILLINOIS
RALPH E. ANDERSON
91-2885
REGISTERED STRUCTURAL ENGINEER
URBANA, ILLINOIS

Exp. 11-30-92
Date 07-20-92

REVISIONS	
NAME	DATE

RETAINING WALL NO. 215
GENERAL PLAN & ELEVATION

F.A.I. ROUTE 90/94
OVER FULLERTON AVE.
COOK COUNTY
STATION 13+79 TO 15+57.50

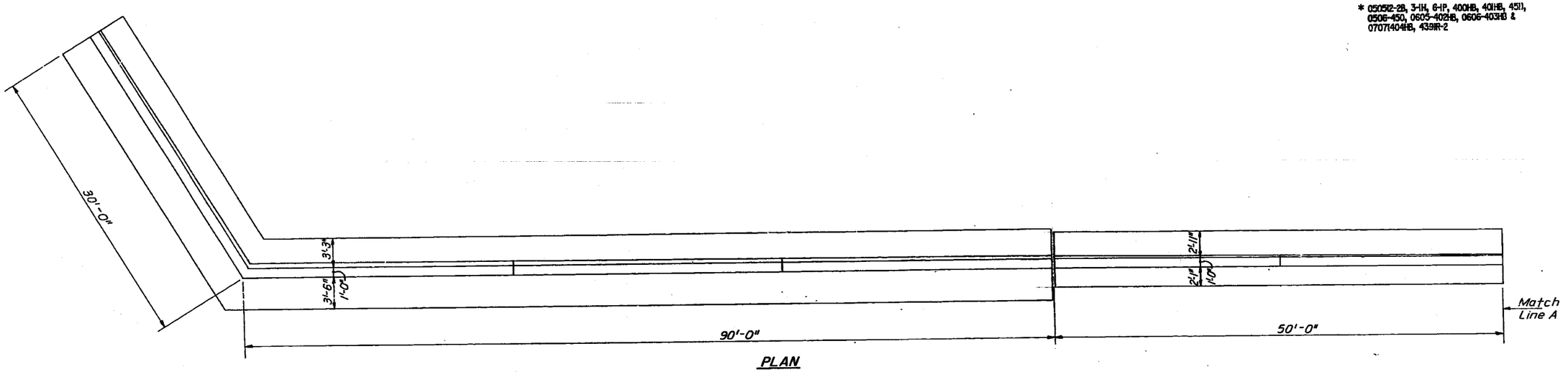
△ REVISED 9-22-92 AMP

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 90/94	*	COOK	428	373
F. HW. A. REG. 4	ILLINOIS	FED. AID PROJECT		

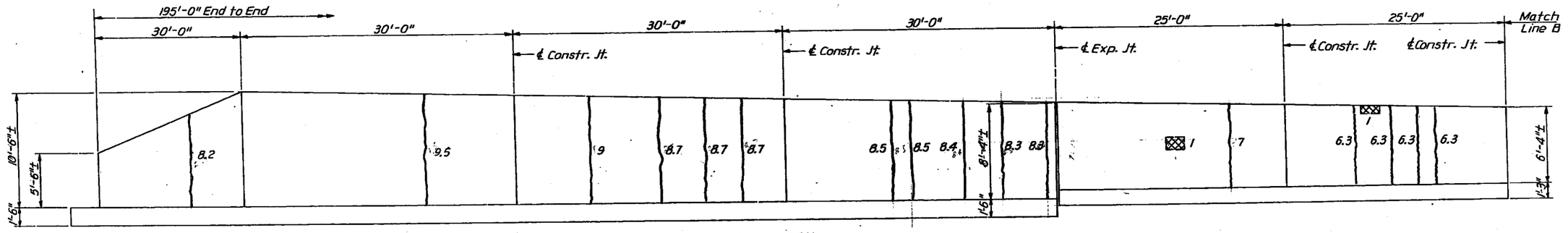
SHEET NO. 2
SHEETS 2

* 05052-2B, 3-IH, 6-IP, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07071404HB, 439IR-2

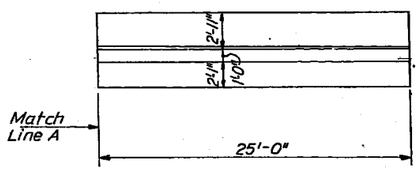
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



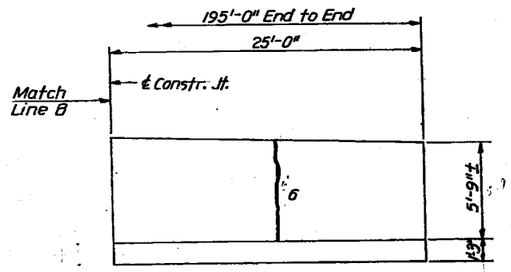
PLAN



ELEVATION



PLAN



ELEVATION

LEGEND

2 — Indicates Formed Concrete Repair in square foot.

5 * Indicates Epoxy Crack Sealing in Lin. Ft.

TOTAL BILL OF MATERIALS		
ITEM	UNIT	QUANTITY
* Epoxy Crack Sealing	Lin. Ft.	133.0
* Formed Concrete Repair (Depth equal to or less than 5"	Sq. Ft.	0.54

* See Special Provisions.

REVISIONS	
NAME	DATE

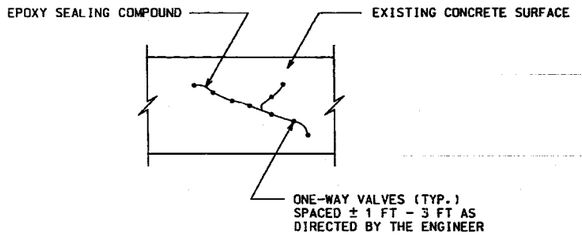
RETAINING WALL NO. 215
WALL DETAILS

F.A.I. ROUTE 90/94
OVER FULLERTON AVE.
COOK COUNTY
STATION 13+79 TO 15+57.50

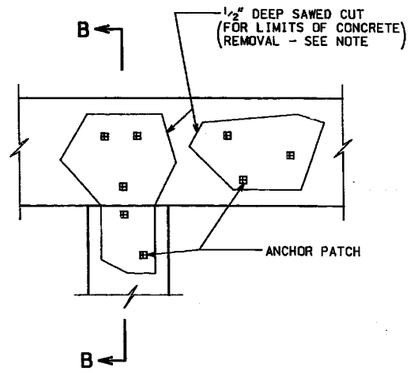
4 REV 9/22/92

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-90/94	*	COOK	446	412
STA.		TO STA.		
FED.ROAD DIST.NO.7	ILLINOIS	PROJECT		

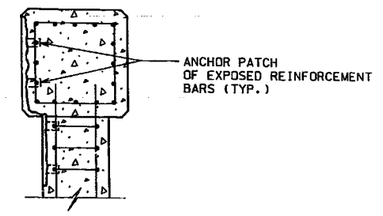
* 050502-2B, 3-1H, 6-1P, 400HB, 401HB, 451J, 0506-450, 0605-402HB, 0606-403HB & 07074044HB, 439JR-2



EPOXY CRACK SEALING

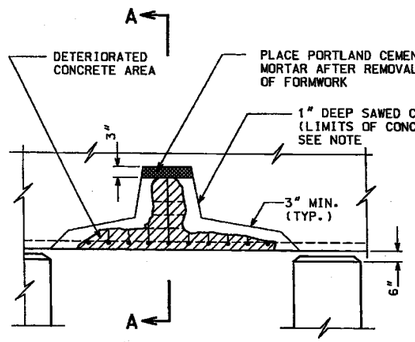


ELEVATION

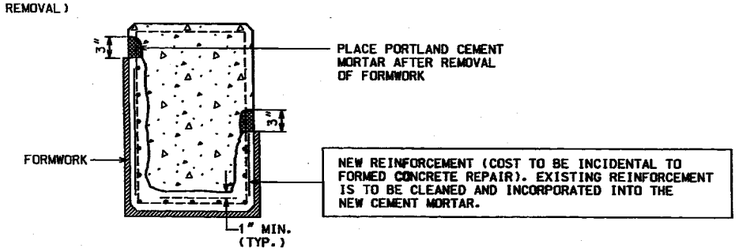


SECTION B-B

EPOXY MORTAR REPAIR (DEPTH LESS THAN 1.5")

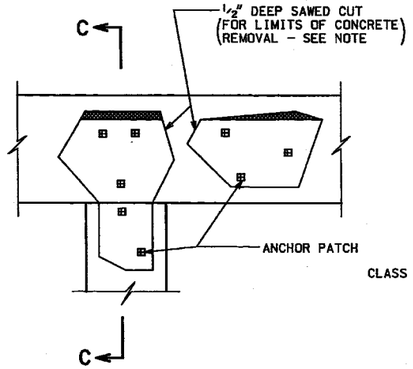


LIMITS OF CONCRETE REMOVAL

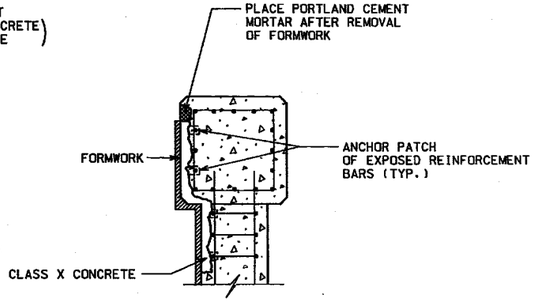


SECTION A-A

FORMED CONCRETE REPAIR (DEPTH GREATER THAN 5")



ELEVATION



SECTION C-C

FORMED CONCRETE REPAIR (DEPTH EQUAL TO OR LESS THAN 5")

NOTE:
LIMITS OF DETERIORATED CONCRETE TO
DETERMINED AS FOLLOWS:
AREAS AROUND EXISTING SPALLS TO BE TAPPED
WITH HAMMER FOR DULL HOLLOW SOUND TO
INDICATE THE EXTENT OF UNSOUND CONCRETE.

REVISIONS	
NAME	DATE
CAK/RLP	2-21-90
CAK/ARZ	8-9-90

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1 STANDARD

CONCRETE STRUCTURE REPAIR DETAILS

SCALE: NONE DRAWN BY CAD/CAK
DATE 1/90 CHECKED BY JSN

AMERICAN ENGINEERING COMPANY CONSULTING ENGINEERS ROLLING MEADOWS, ILLINOIS