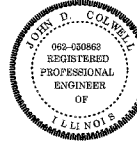


F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	*	COOK	30	1
62989				

DESIGN NUMBER
D-91-417-01



SIGNATURE *D. Moore*
DATE Apr. 25, 2008
EXPIRES Nov. 30, 2009



SIGNATURE *John D. Colwell*
DATE Apr. 25, 2008
EXPIRES Nov. 30, 2009



SIGNATURE *Brian L. Umbright*
DATE APRIL 25, 2008
EXPIRES Nov. 30, 2008

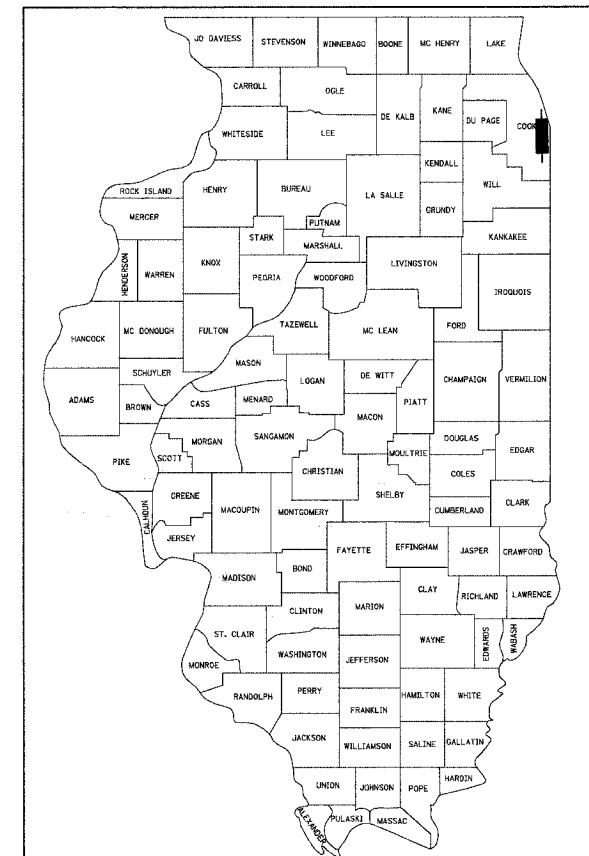
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

F.A.I. ROUTE 90/94 (DAN RYAN EXPRESSWAY)
SECTION 2122-921 PT 2-1-4

NORTHBOUND KNEE WALLS
(45TH ST TO 43RD ST)

COOK COUNTY

C-91-247-05



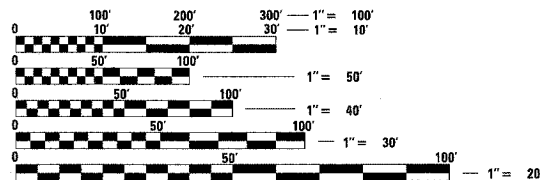
LOCATION OF SECTION INDICATED THIS: - [black rectangle] -

PROJECT LOCATED IN CITY OF CHICAGO

DESIGN DESIGNATION

LA SALLE ST: 8275 (20) URBAN COLLECTOR

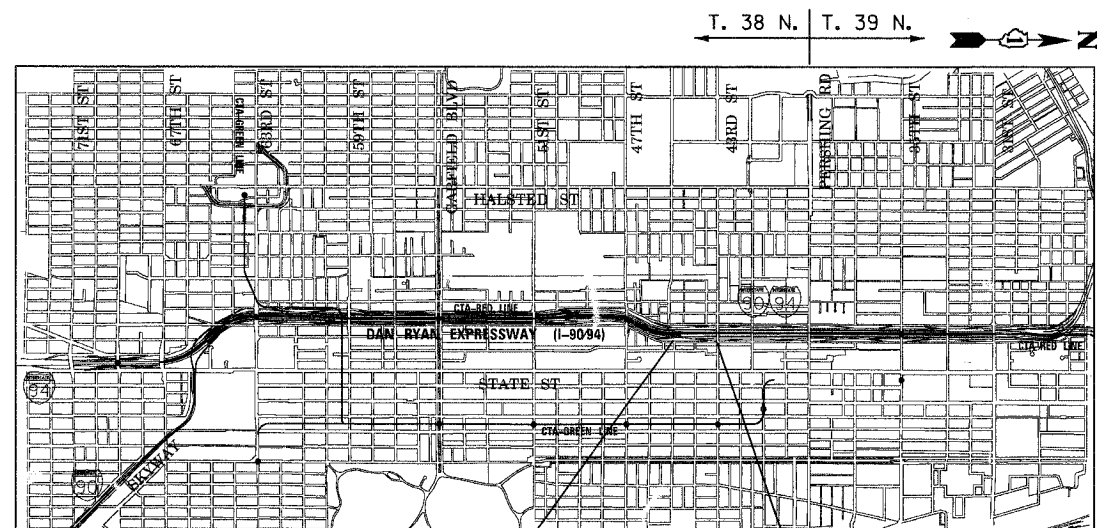
FRONTAGE ROAD:	ADT (2020)	DESIGN SPEED	POSTED SPEED
LA SALLE ST	15,000	30	25



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.

BEFORE EXCAVATING CALL:
(J.U.L.I.E.) JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811

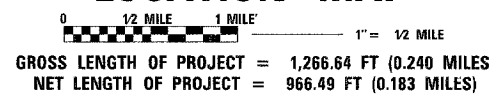
CONTRACT NO. 62989



PROJECT BEGINS
NB LA SALLE ST
STA 225 + 30

PROJECT ENDS
NB LA SALLE ST
STA 237 + 96.64

LOCATION MAP



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED APRIL 29, 2008

Diana M. O'Keefe or
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 27, 2008
Chris E. Harman
ENGINEER OF DESIGN AND ENVIRONMENT

June 27, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
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DISTRICT ONE DESIGN/CONSULTANT SERVICES PROJECT MANAGER
RAJENDRA SHAH (847) 705-4555

m:\660\cadd\civil\31B\SHEET\51660_31BCOVER.dgn

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

62989

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	QUANTITY	URBAN
				100% STATE JOOO
20200100	EARTH EXCAVATION	CU YD	207	207
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	42	42
21101645	TOPSOIL FURNISH AND PLACE, 12"	SQ YD	174	174
25000210	SEEDING, CLASS 2A	ACRE	0.02	0.02
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	10	10
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	10	10
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	10	10
25001800	SEEDING, CLASS 4 (MODIFIED)	ACRE	0.09	0.09
25100630	EROSION CONTROL BLANKET	SQ YD	542	542
44004250	PAVED SHOULDER REMOVAL	SQ YD	247	247
50300225	CONCRETE STRUCTURES	CU YD	7.8	7.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	6.4	6.4
50300300	PROTECTIVE COAT	SQ YD	33	33
50300510	RUSTICATION FINISH	SQ FT	70	70
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,430	1,430
63200310	GUARDRAIL REMOVAL	FOOT	76	76
66400550	CHAIN LINK FENCE, 4' (SPECIAL)	FOOT	1,010	1,010
67100100	MOBILIZATION	L SUM	1	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	6	6
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	26	26
X0323973	SEDIMENT CONTROL, SILT FENCE	FOOT	1,010	1,010
X0323974	SEDIMENT CONTROL, SILT FENCE MAINTENANCE	FOOT	253	253
X0324640	FLUTED KNEE WALL	FOOT	925	925
X2500322	SEEDING, CLASS 5A, (MODIFIED)	ACRE	0.09	0.09
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1

INDEX OF SHEETS

SHEET	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES AND PROJECT COMMITMENTS
3	SUMMARY OF QUANTITIES / INDEX / HIGHWAY STANDARDS
4	EXISTING AND PROPOSED TYPICAL SECTIONS
5-9	ALIGNMENT PLANS, SURVEY TIES AND CONTROL POINTS
10-13	EXISTING AND PROPOSED KNEE WALL PLANS
14-16	STRUCTURAL DETAILS
17	BD-51 DISTRICT 1, BENCHING DETAIL FOR EMBANKMENT WIDENING
18	TC-10 DISTRICT 1, TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS & DRIVEWAYS
19	TC-17 DISTRICT 1, TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES
20	TC-18 DISTRICT 1, SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS
21	TC-22 DISTRICT 1, ARTERIAL ROAD INFORMATION SIGN
22-30	CROSS SECTIONS

IDOT HIGHWAY STANDARDS

SHEET	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
664001-01	CHAIN LINK FENCE
701601-05	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701701-05	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-03	LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE, for speeds < 45 mph
701901	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006-01	SIGN PANEL ERECTION DETAILS
728001	TELESCOPING STEEL SIGN SUPPORT
731001	BASE FOR TELESCOPING STEEL SIGN SUPPORT

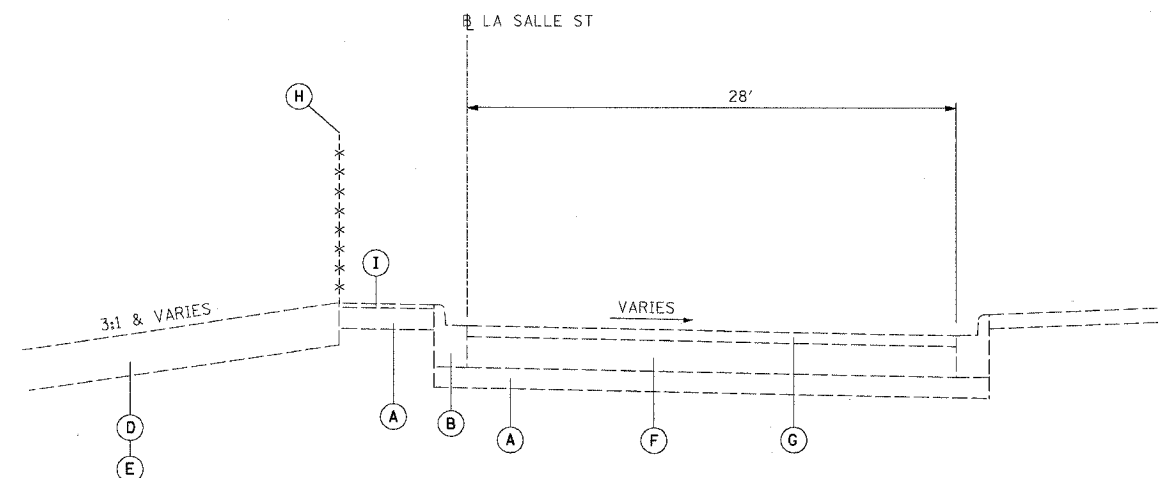
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REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION F.A.I. 94/90 (DAN RYAN EXPRESSWAY) NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)
NAME	DATE	
		SUMMARY OF QUANTITIES

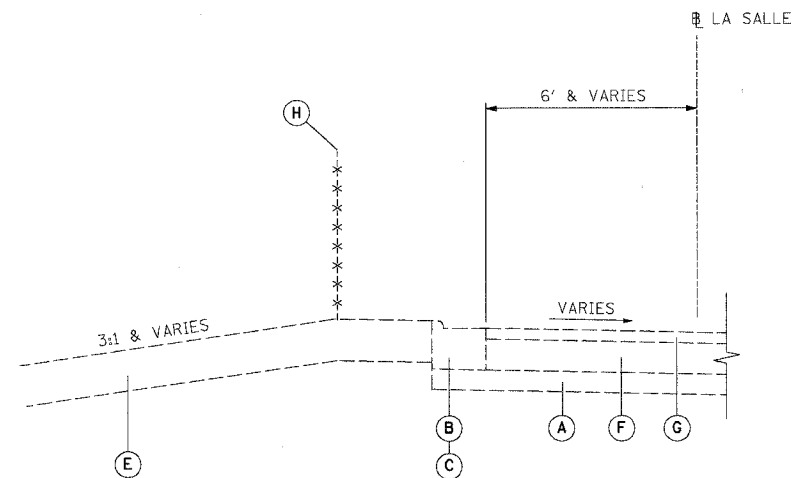
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DATE: 04/25/08 CHECKED BY:

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5/11/08 PM
4/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62989				



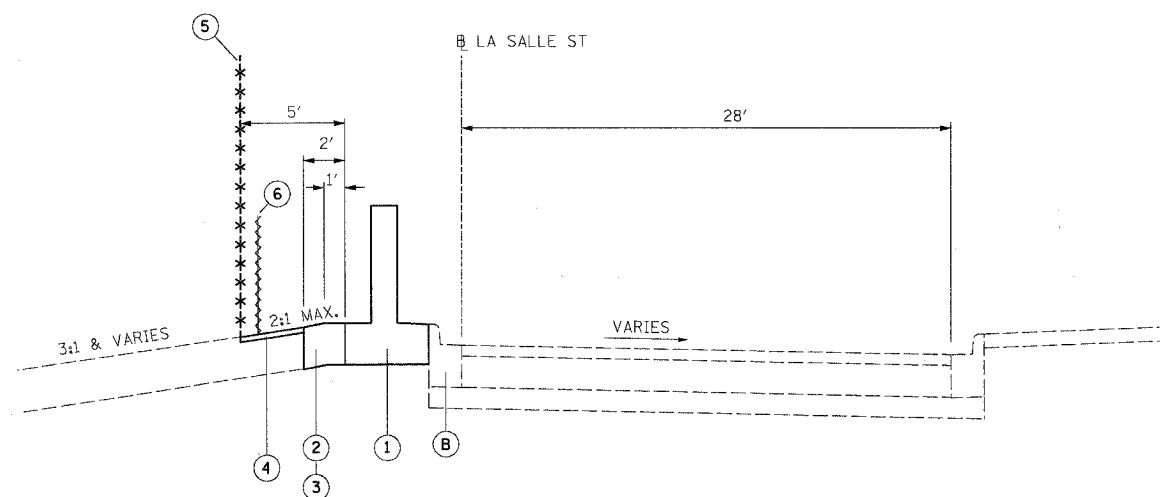
EXISTING TYPICAL SECTION
STA. 225+30 to 232+69



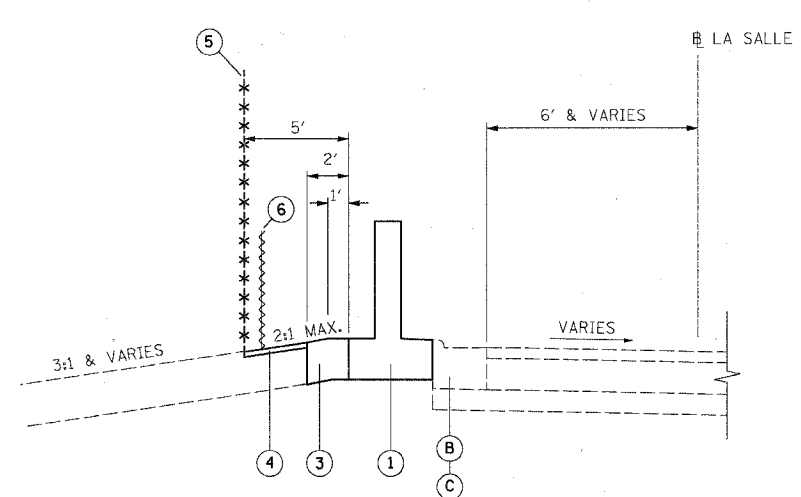
EXISTING TYPICAL SECTION
STA. 235+99.46 to 237+84.34

EXISTING LEGEND

- (A) GRANULAR MATERIAL, 6"
- (B) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
- (C) COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.24
- (D) TOPSOIL, 4"
- (E) TOPSOIL, 12"
- (F) PORTLAND CEMENT CONCRETE PAVEMENT, 9"
- (G) BITUMINOUS CONCRETE, 3"
- (H) CHAIN LINK FENCE, 4'
- (I) BITUMINOUS MEDIAN SURFACE, 1/2"



PROPOSED TYPICAL SECTION
STA. 225+30 to 232+69



PROPOSED TYPICAL SECTION
STA. 235+99.46 to 237+84.34

PROPOSED LEGEND

- (1) FLUTED KNEE WALL
- (2) SEEDING, CLASS 2A / TOPSOIL FURNISH AND PLACE, 4" / EROSION CONTROL BLANKET
- (3) SEEDING, CLASS 4 (MODIFIED) / SEEDING, CLASS 5A (MODIFIED) / TOPSOIL FURNISH AND PLACE, 12" / EROSION CONTROL BLANKET
- (4) SEEDING, CLASS 2A / SEEDING, CLASS 4 (MODIFIED) / SEEDING CLASS 5A (MODIFIED) / EROSION CONTROL BLANKET
- (5) CHAIN LINK FENCE, 4' (SPECIAL)
- (6) SEDIMENT CONTROL, SILT FENCE (TO BE REMOVED AT PROJECT COMPLETION)

NOTES:

1. THICKNESS OF EXISTING PAVEMENT AND GRANULAR MATERIAL ARE TAKEN FROM RECORD DRAWING PLANS.
2. TYPICAL SECTIONS NEED TO BE VERIFIED WITH THE PLANS AS THEY ARE A REPRESENTATION OF THE PLANS. THEY DO NOT SHOW ALL CONFIGURATIONS, JUST THE MOST PREDOMINANT.

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

TYPICAL SECTIONS

SCALE: NTS
DATE: 04/25/08

DRAWN BY: JDC
CHECKED BY: RS

TYP-1

4/24/2008 5:16:30 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

62989

PROP. CURVE SBDR10
P.I. STA = 1539+47.07
N = 1,874,803.43
E = 1,175,912.56
Δ = 25° 26' 39" (LT)
D = 3° 49' 11"
R = 1,500.00'
T = 338.65'
L = 666.13'
E = 37.75'
e = 5.9%
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 1537+03.93
T.R. = 68.20'
S.E. RUN = 315.00'
S.R. = STA 1541+69.55 TO STA 1545+52.75
P.C. STA = 1536+08.42
N = 1,874,493.81
E = 1,175,775.38
P.T. STA = 1542+74.55
N = 1,875,141.96
E = 1,175,903.41

PROP. CURVE EL4300
P.C. STA = 714+54.39
N = 1,875,675.42
E = 1,175,825.74
Δ = 0° 54' 33" (LT)
D = 0° 31' 15"
R = 11,000.00'
T = 87.27'
L = 174.54'
E = 0.35'
e = 5.9%
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 713+67.12
N = 1,875,762.70
E = 1,175,826.31
P.T. STA = 715+41.66
N = 1,875,588.15
E = 1,175,826.55

PROP. CURVE SWTH1
P.I. STA = 13+21.89
N = 1,874,747.97
E = 1,175,711.50
Δ = 28° 04' 24" (LT)
D = 4° 27' 01"
R = 1,287.50'
T = 321.89'
L = 630.84'
E = 39.63'
e = MATCH EXISTING
T.R. = MATCH EXISTING
S.E. RUN = MATCH EXISTING
P.C. STA = 10+00.00
N = 1,874,459.70
E = 1,175,568.28
P.T. STA = 16+30.84
N = 1,875,069.72
E = 1,175,702.20

PROP. CURVE EL4301
P.I. STA = 723+10.32
N = 1,874,819.53
E = 1,175,833.74
Δ = 23° 55' 56" (RT)
D = 3° 49' 11"
R = 1,500.00'
T = 317.91'
L = 626.54'
E = 33.32'
e = 5.9%
S.A. = STA 719+00.06 TO STA 720+38.59
S.R. = STA 725+72.77 TO STA 727+63.41 (1.83%)
P.C. STA = 719+92.41
N = 1,875,137.42
E = 1,175,830.77
P.T. STA = 726+48.95
N = 1,874,527.76
E = 1,175,707.50

PROP. CURVE A4701
P.I. STA = 5072+36.79
N = 1,874,030.16
E = 1,175,360.65
Δ = 14° 54' 56" (LT)
D = 4° 11' 07"
R = 1,369.00'
T = 179.20'
L = 356.38'
E = 11.68'
e = MATCH EXISTING
T.R. = MATCH EXISTING
S.E. RUN = MATCH EXISTING
P.C. STA = 5070+57.59
N = 1,874,189.71
E = 1,175,442.25
P.T. STA = 5074+13.97
N = 1,873,854.99
E = 1,175,322.86

PROP. CURVE A4700
P.I. STA = 5064+21.82
N = 1,874,765.22
E = 1,175,731.41
Δ = 22° 28' 55" (RT)
D = 3° 31' 33"
R = 1,625.00'
T = 322.97'
L = 637.62'
E = 31.78'
e = 4.4%
S.A. = STA 5060+00 (3.58%) TO 5061+21.86
S.R. = STA 5067+13.48 TO 5067+83.48
P.C. STA = 5060+98.86
N = 1,875,087.21
E = 1,175,756.48
P.T. STA = 5067+36.48
N = 1,874,477.28
E = 1,175,585.12

PROP. CURVE C4300
P.I. STA = 7054+50.07
N = 1,875,794.51
E = 1,175,741.50
Δ = 6° 44' 11" (RT)
D = 3° 49' 11"
R = 1,500.00'
T = 88.28'
L = 176.36'
E = 2.60'
e = 4.6%
S.A. = STA 7053+09.79 TO 7053+87.79
S.R. = STA 7055+12.15 TO 7055+90.15
P.C. STA = 7053+61.79
N = 1,875,881.65
E = 1,175,727.39
P.T. STA = 7055+38.15
N = 1,875,706.31
E = 1,175,745.28

PROP. CURVE NBDR09
P.I. STA = 2539+31.62
N = 1,874,770.97
E = 1,175,969.46
Δ = 23° 53' 35" (LT)
D = 3° 57' 05"
R = 1,450.00'
T = 306.79'
L = 604.67'
E = 32.10'
e = 6.0%
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 2536+24.82
T.R. = 33.10'
S.E. RUN = 320.00'
S.R. = STA 2541+22.82 TO STA 2544+75.92
P.C. STA = 2536+24.82
N = 1,874,487.21
E = 1,175,852.82
P.T. STA = 2542+29.49
N = 1,875,077.65
E = 1,175,961.17

PROP. CURVE SBLOC06
P.I. STA = 3539+38.89
N = 1,874,807.75
E = 1,175,816.77
Δ = 22° 47' 56" (LT)
D = 3° 23' 54"
R = 1,686.00'
T = 339.94'
L = 670.88'
E = 33.93'
e = 5.7%
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 3537+00.25
T.R. = 68.79'
S.E. RUN = 380.00'
S.R. = STA 3541+43.17 TO STA 3545+91.96
P.C. STA = 3535+98.96
N = 1,874,493.12
E = 1,175,688.05
P.T. STA = 3542+69.84
N = 1,875,147.67
E = 1,175,813.52

PROP. CURVE NBLOC07
P.I. STA = 4539+56.47
N = 1,874,785.65
E = 1,176,076.72
Δ = 28° 53' 07" (LT)
D = 3° 52' 17"
R = 1,480.00'
T = 381.17'
L = 746.13'
E = 48.30'
e = 5.9%
S.A. = END CONTINUOUSLY ROTATING PLANE AT STA 4536+66.66
T.R. = 68.49'
S.E. RUN = 393.00'
S.R. = STA 4541+90.43 TO STA 4546+51.92
P.C. STA = 4535+75.30
N = 1,874,442.48
E = 1,175,910.80
P.T. STA = 4543+21.43
N = 1,875,166.27
E = 1,176,056.22

PROP. CURVE B4700
P.I. STA = 6065+87.40
N = 1,874,784.51
E = 1,176,124.85
Δ = 24° 04' 27" (LT)
D = 4° 24' 27"
R = 1,300.00'
T = 277.18'
L = 546.17'
E = 29.22'
e = 4.9%
S.A. = STA 6061+55.16 TO 6063+58.24
S.R. = STA 6068+08.40 TO 4546+51.92
P.C. STA = 6063+10.23
N = 1,874,525.73
E = 1,176,025.56
P.T. STA = 6068+56.40
N = 1,875,061.29
E = 1,176,109.94

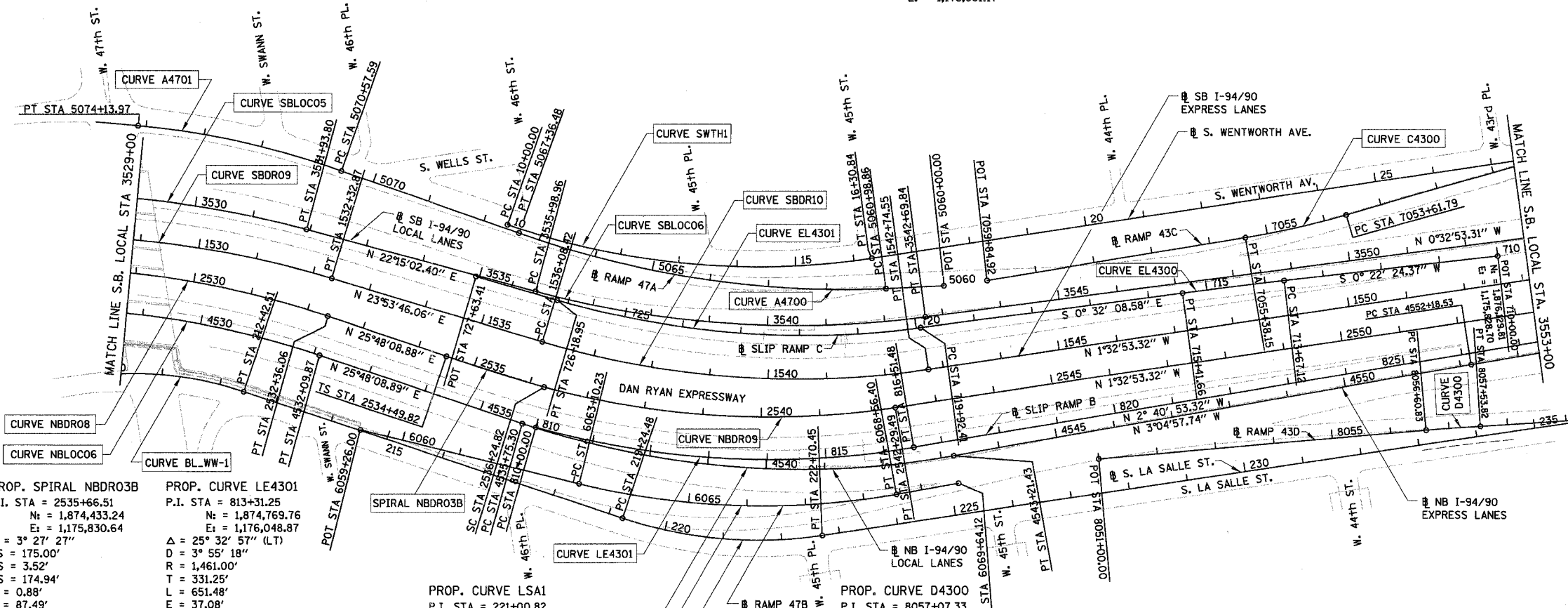
PROP. CURVE BL-WW-1
P.I. STA = 211+05.58
N = 1,873,849.12
E = 1,175,736.29
Δ = 27° 13' 24" (RT)
D = 9° 44' 58"
R = 587.69'
T = 142.30'
L = 279.23'
E = 16.98'
e = MATCH EXISTING
T.R. = MATCH EXISTING
S.E. RUN = MATCH EXISTING
P.C. STA = 209+63.28
N = 1,873,706.87
E = 1,175,740.12
P.T. STA = 212+42.51
N = 1,873,977.37
E = 1,175,797.95

PROP. SPIRAL NBDR03B
P.I. STA = 2535+66.51
N = 1,874,433.24
E = 1,175,830.64
Δ = 3° 27' 27"
LS = 175.00'
YS = 3.52'
XS = 174.94'
P = 0.88'
K = 87.49'
LT = 116.69'
ST = 58.35'
LC = 174.97'
T.S. STA = 2534+49.82
N = 1,874,328.19
E = 1,175,779.85
S.C. STA = 2536+24.82
N = 1,874,487.21
E = 1,175,852.82

PROP. CURVE LE4301
P.I. STA = 813+31.25
N = 1,874,769.76
E = 1,176,048.87
Δ = 25° 32' 57" (LT)
D = 3° 55' 18"
R = 1,461.00'
T = 331.25'
L = 651.48'
E = 37.08'
e = 5.9%
S.A. = STA 810+00.00 (4.45%) TO 810+67.35
T.R. = 71.04'
S.E. RUN = 208.68'
S.R. = STA 815+81.92 TO STA 818+61.64
P.C. STA = 810+00.00
N = 1,874,464.55
E = 1,175,920.15
P.T. STA = 816+51.48
N = 1,875,100.65
E = 1,176,033.38

PROP. CURVE LSA1
P.I. STA = 221+00.82
N = 1,874,750.89
E = 1,176,169.92
Δ = 27° 20' 30" (LT)
D = 7° 54' 10"
R = 725.00'
T = 176.34'
L = 345.97'
E = 21.14'
e = MATCH EXISTING
T.R. = MATCH EXISTING
S.E. RUN = MATCH EXISTING
P.C. STA = 219+24.48
N = 1,874,591.98
E = 1,176,093.48
P.T. STA = 222+70.45
N = 1,874,927.16
E = 1,176,164.84

PROP. CURVE D4300
P.I. STA = 8057+07.33
N = 1,876,018.11
E = 1,176,112.42
Δ = 1° 19' 55" (RT)
D = 1° 25' 57"
R = 4,000.00'
T = 46.49'
L = 92.99'
E = 0.27'
e = 2.3%
S.A. = STA 8056+54.83 TO 8056+63.83
S.R. = STA 8057+50.82 TO 8057+59.82
P.C. STA = 8056+60.83
N = 1,875,971.65
E = 1,176,110.86
P.T. STA = 8057+53.82
N = 1,876,064.53
E = 1,176,115.06



- NOTES:**
1. AVERAGE GRID TO GROUND CONVERSION FACTOR = 1.000010988654360
 2. FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
 3. FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)
ALIGNMENT PLAN
SCALE: 1"=100'
DATE: 04/25/08
DRAWN BY: JDC
CHECKED BY: RS

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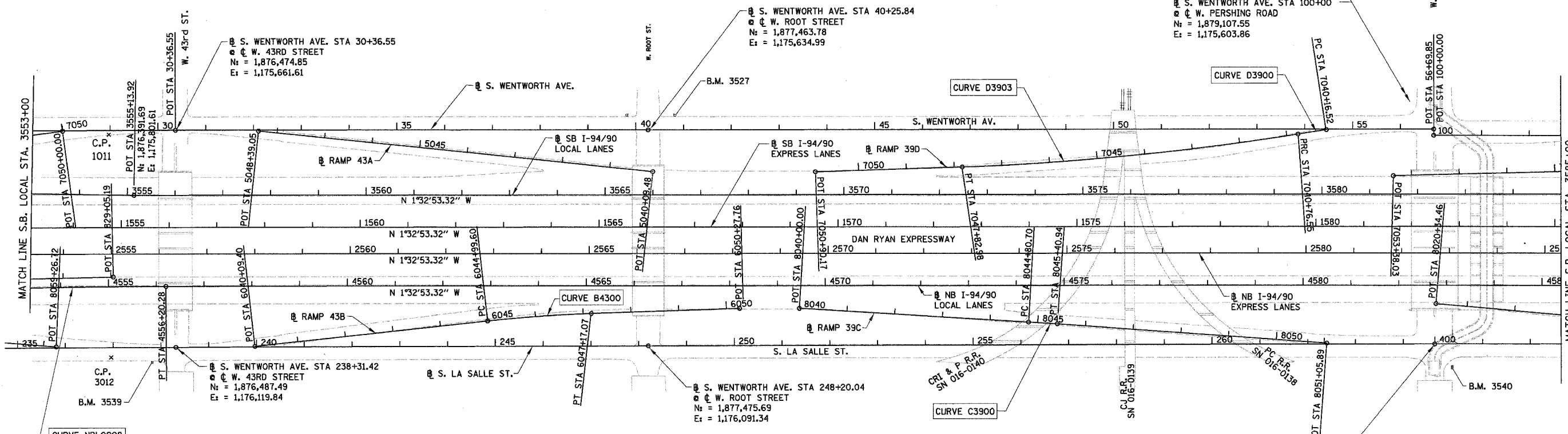
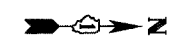
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4/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

62989

PROP. CURVE D3903
 P.I. STA = 7044+30.25
 Nt = 1,878,475.96
 Et = 1,175,675.24
 $\Delta = 7^\circ 22' 41''$ (RT)
 D = 1° 02' 40"
 R = 5,486.00'
 T = 353.70'
 L = 706.43'
 E = 11.39'
 P.C. STA = 7040+76.55
 Nt = 1,878,823.36
 Et = 1,175,608.75
 P.T. STA = 7047+82.98
 Nt = 1,878,122.90
 Et = 1,175,696.57

PROP. CURVE D3900
 P.I. STA = 7040+46.54
 Nt = 1,878,852.84
 Et = 1,175,603.11
 $\Delta = 0^\circ 47' 26''$ (LT)
 D = 1° 19' 02"
 R = 4,350.00'
 T = 30.02'
 L = 60.03'
 E = 0.10'
 P.C. STA = 7040+16.52
 Nt = 1,878,882.40
 Et = 1,175,597.87
 P.T. STA = 7040+76.55
 Nt = 1,878,823.36
 Et = 1,175,608.75



PROP. CURVE NBLOC08
 P.I. STA = 4554+19.42
 Nt = 1,876,262.66
 Et = 1,175,997.17
 $\Delta = 1^\circ 32' 04''$ (RT)
 D = 0° 22' 55"
 R = 15,000.00'
 T = 200.89'
 L = 401.75'
 E = 1.35'
 P.C. STA = 4552+18.53
 Nt = 1,876,062.07
 Et = 1,176,007.97
 P.T. STA = 4556+20.28
 Nt = 1,876,463.47
 Et = 1,175,991.74

PROP. CURVE B4300
 P.I. STA = 6046+08.39
 Nt = 1,877,246.14
 Et = 1,176,032.59
 $\Delta = 4^\circ 21' 02''$ (RT)
 D = 2° 00' 02"
 R = 2,864.00'
 T = 108.79'
 L = 217.47'
 E = 2.07'
 e = 3.02%
 S.A. = STA 6044+79.60
 TO 6045+09.60
 S.R. = STA 6047+07.07
 TO 6047+37.07
 P.C. STA = 6044+99.60
 Nt = 1,877,138.36
 Et = 1,176,047.37
 P.T. STA = 6047+17.07
 Nt = 1,877,354.72
 Et = 1,176,026.03

PROP. CURVE C3900
 P.I. STA = 8045+10.82
 Nt = 1,878,300.35
 Et = 1,176,021.08
 $\Delta = 0^\circ 41' 25''$ (RT)
 D = 1° 08' 45"
 R = 5,000.00'
 T = 30.12'
 L = 60.24'
 E = 0.09'
 P.C. STA = 8044+80.70
 Nt = 1,878,270.25
 Et = 1,176,020.07
 P.T. STA = 8045+40.94
 Nt = 1,878,330.44
 Et = 1,176,022.46

S. LASALLE ST. STA 400+00.00 AH
STA 264+66.03 BK
W. PERSHING ROAD
 Nt = 1,879,121.00
 Et = 1,176,043.89

- NOTES:**
- AVERAGE GRID TO GROUND CONVERSION
 FACTOR = 1.000010988654360
 - FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
 - FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

REVISIONS	
NAME	DATE

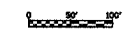
ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

ALIGNMENT PLAN

SCALE: 1"=100'
 DATE: 04/25/08

DRAWN BY: JDC
 CHECKED BY: RS

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ALT-02
 5/6/2008 PW
 4/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

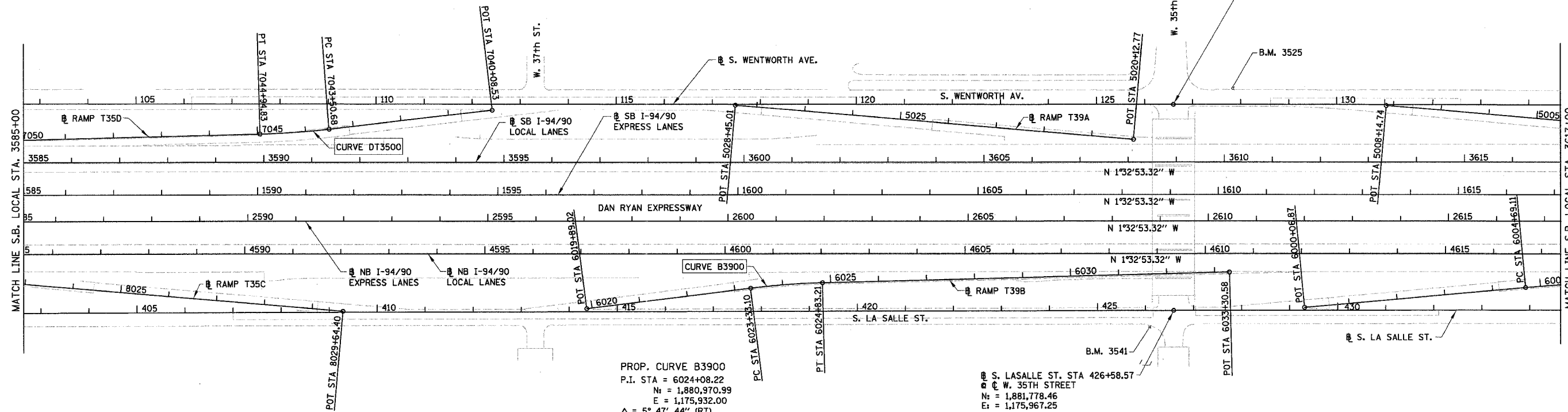
62989

PROP. CURVE DT3500
P.I. STA = 7044+22.81
N: = 1,879,939.16
E = 1,175,643.87
Δ = 5° 14' 38" (RT)
D = 3° 38' 16"
R = 1,575.00'
T = 72.13'
L = 144.15'
E = 1.65'
e = 3.6%
S.A. = STA 7043+14.68
TO 7043+59.68
S.R. = STA 7044+85.83
TO 7045+30.83
P.C. STA = 7043+50.68
N: = 1,880,010.54
E: = 1,175,633.56
P.T. STA = 7044+94.83
N: = 1,879,867.13
E: = 1,175,647.62

PROP. CURVE B3900
P.I. STA = 6024+08.22
N: = 1,880,970.99
E = 1,175,932.00
Δ = 5° 47' 44" (RT)
D = 3° 51' 39"
R = 1,484.00'
T = 75.12'
L = 150.11'
E = 1.90'
e = 3.7%
S.A. = STA 6022+97.10
TO 6023+42.10
S.R. = STA 6024+74.21
TO 6025+19.21
P.C. STA = 6023+33.10
N: = 1,880,896.76
E: = 1,175,943.46
P.T. STA = 6024+83.21
N: = 1,881,046.01
E: = 1,175,928.09

⊕ S. LASALLE ST. STA 426+58.57
⊕ W. 35TH STREET
N: = 1,881,778.46
E: = 1,175,967.25

⊕ S. WENTWORTH AVE. STA 126+60.12
⊕ W. 35TH STREET
N: = 1,881,766.77
E: = 1,175,534.71



- NOTES:**
1. AVERAGE GRID TO GROUND CONVERSION
FACTOR = 1.000010988654360
 2. FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
 3. FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

ALT-03

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

ALIGNMENT PLAN

SCALE: 1"=100'
DATE: 04/25/08

DRAWN BY: JDC
CHECKED BY: RS

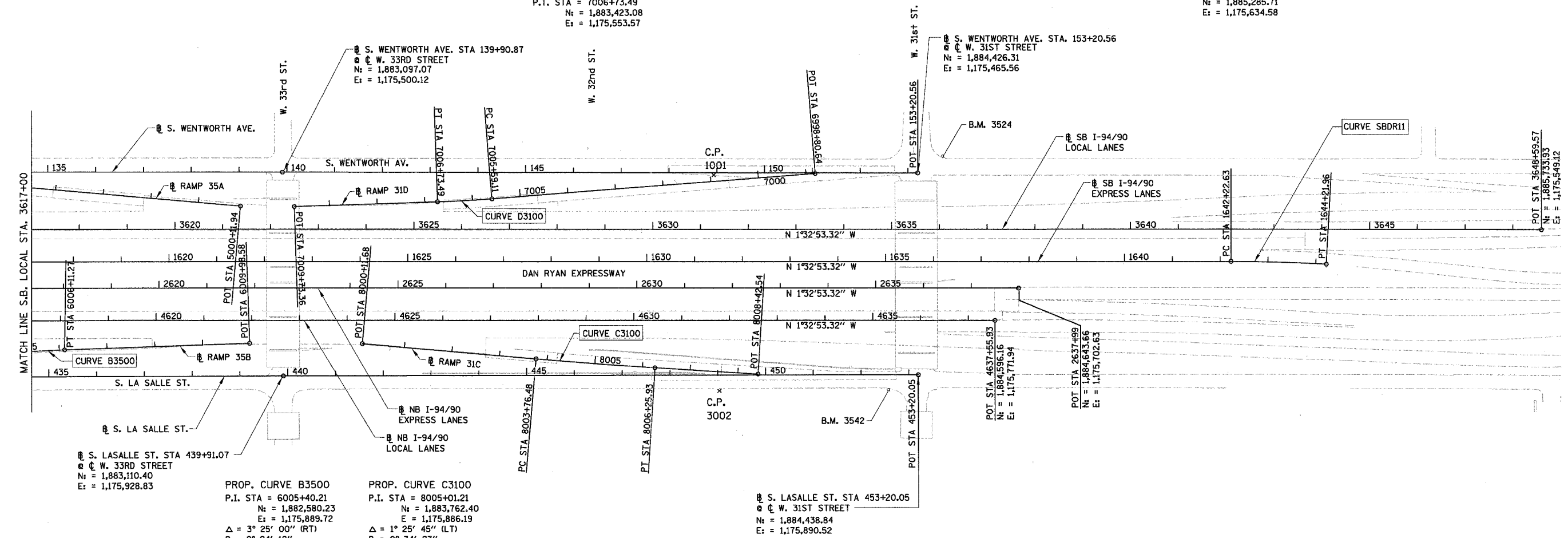
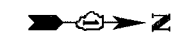
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

62989

PROP. CURVE D3100
P.I. STA = 7006+16.31
N = 1,883,480.18
E = 1,175,550.12
 $\Delta = 2^\circ 35' 11''$ (RT)
D = 2' 15" 40"
R = 2,534.00'
T = 57.20'
L = 114.38'
E = 0.65'
 $e = 2.6\%$
S.A. = STA 7005+43.11
TO 7005+63.11
S.R. = STA 7006+69.49
TO 7006+89.49
P.C. STA = 7005+59.11
N = 1,883,537.06
E = 1,175,544.09
P.T. STA = 7006+73.49
N = 1,883,423.08
E = 1,175,553.57

PROP. CURVE SBDR11
P.I. STA = 1643+22.32
N = 1,885,186.06
E = 1,175,631.95
 $\Delta = 3^\circ 03' 18''$ (RT)
D = 1' 31" 57"
R = 3,738.57'
T = 99.69'
L = 199.33'
E = 1.33'
 $e = 12.5\%$ (MATCH EXISTING)
S.A. = STA 1641+95.99
TO 1642+35.95
S.R. = N/A
P.C. STA = 1642+22.63
N = 1,885,086.40
E = 1,175,634.65
P.T. STA = 1644+21.96
N = 1,885,285.71
E = 1,175,634.58



S. LASALLE ST. STA 439+91.07
W. 33RD STREET
N = 1,883,110.40
E = 1,175,928.83

PROP. CURVE B3500
P.I. STA = 6005+40.21
N = 1,882,580.23
E = 1,175,889.72
 $\Delta = 3^\circ 25' 00''$ (RT)
D = 2' 24" 12"
R = 2,384.00'
T = 71.10'
L = 142.16'
E = 1.06'
 $e = 2.7\%$
S.A. = STA 6004+53.11
TO 6004+73.11
S.R. = STA 6006+07.27
TO 6006+27.27
P.C. STA = 6004+69.11
N = 1,882,509.63
E = 1,175,898.23
P.T. STA = 6006+11.27
N = 1,882,651.20
E = 1,175,885.43

PROP. CURVE C3100
P.I. STA = 8005+01.21
N = 1,883,762.40
E = 1,175,886.19
 $\Delta = 1^\circ 25' 45''$ (LT)
D = 0' 34" 23"
R = 10,000.00'
T = 124.73'
L = 249.45'
E = 0.78'
P.C. STA = 8003+76.48
N = 1,883,637.89
E = 1,175,878.68
P.T. STA = 8006+25.93
N = 1,883,887.05
E = 1,175,890.60

S. LASALLE ST. STA 453+20.05
W. 31ST STREET
N = 1,884,438.84
E = 1,175,890.52

- NOTES:
- AVERAGE GRID TO GROUND CONVERSION
FACTOR = 1.000010988654360
 - FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF
ALIGNMENT PLAN SHEETS.
 - FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF
ALIGNMENT PLAN SHEETS.

ALT-04

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REVISIONS	
NAME	DATE

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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

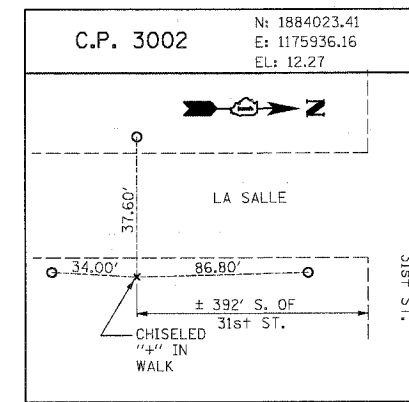
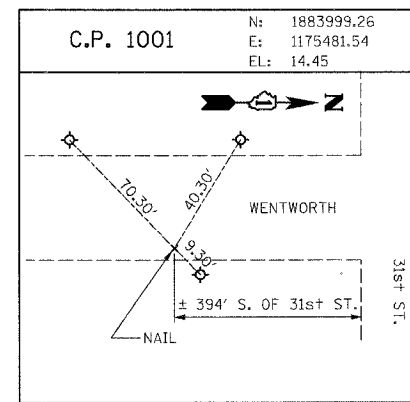
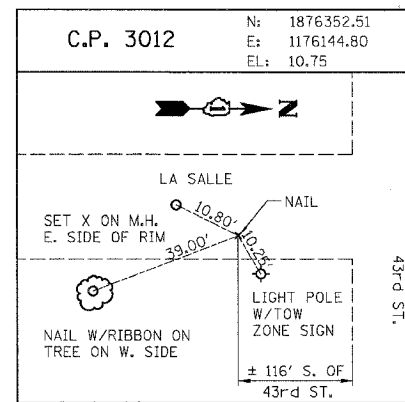
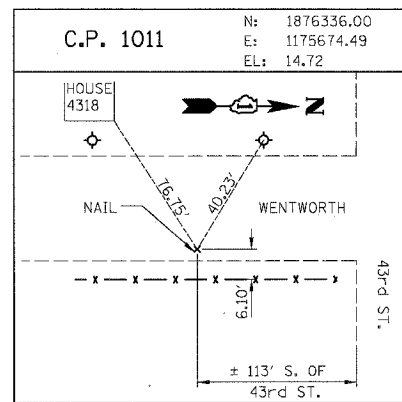
ALIGNMENT PLAN

SCALE: 1"=100'
DATE: 04/25/08

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RAMP P.O.T. COORDINATE INFORMATION

POINT	DESCRIPTION	STATION	NORTH	EAST
BEGIN	RAMP 47A	5060+00.00	1,875,185.77	1,175,764.15
END	RAMP 47A	5074+13.97	1,873,854.99	1,175,322.86
BEGIN	RAMP 47B	6059+26.00	1,874,166.99	1,175,887.94
END	RAMP 47B	6069+64.12	1,875,168.85	1,176,104.15
BEGIN	RAMP 43C	7050+00.00	1,876,238.80	1,175,669.59
END	RAMP 43C	7059+84.92	1,875,259.95	1,175,764.44
BEGIN	RAMP 43D	8051+00.00	1,875,411.12	1,176,092.10
END	RAMP 43D	8059+26.72	1,876,237.16	1,176,124.86
BEGIN	RAMP 43A	5040+09.48	1,877,475.98	1,175,723.30
END	RAMP 43A	5048+39.05	1,876,648.91	1,175,658.90
BEGIN	RAMP 43B	6040+09.40	1,876,652.70	1,176,113.96
END	RAMP 43B	6050+27.76	1,877,664.85	1,176,007.29
BEGIN	RAMP 39D	7040+16.52	1,878,882.40	1,175,597.87
END	RAMP 39D	7050+90.17	1,877,816.27	1,175,715.09
BEGIN	RAMP 39C	8040+00.00	1,877,789.82	1,176,003.91
END	RAMP 39C	8051+05.89	1,878,894.81	1,176,048.24

POINT	DESCRIPTION	STATION	NORTH	EAST
BEGIN	RAMP T35D	7040+08.53	1,880,349.18	1,175,584.62
END	RAMP T35D	7053+38.03	1,879,025.07	1,175,691.43
BEGIN	RAMP T35C	8020+34.46	1,879,121.15	1,175,958.93
END	RAMP T35C	8029+64.40	1,880,049.40	1,176,014.92
BEGIN	RAMP T39A	5020+12.77	1,881,685.70	1,175,610.45
END	RAMP T39A	5028+45.01	1,880,854.96	1,175,560.34
BEGIN	RAMP T39B	6019+89.02	1,880,556.70	1,175,995.95
END	RAMP T39B	6033+30.58	1,881,892.23	1,175,884.04
BEGIN	RAMP 35A	5000+11.94	1,883,011.02	1,175,573.65
END	RAMP 35A	5008+14.74	1,882,209.69	1,175,525.14
BEGIN	RAMP 35B	6000+06.87	1,882,050.72	1,175,953.56
END	RAMP 35B	6009+98.58	1,883,037.81	1,175,862.08
BEGIN	RAMP 31D	6998+80.64	1,884,211.76	1,175,472.66
END	RAMP 31D	7009+73.36	1,883,123.75	1,175,571.65
BEGIN	RAMP 31C	8000+11.68	1,883,273.75	1,175,856.72
END	RAMP 31C	8008+42.54	1,884,103.52	1,175,898.24

BENCH MARK NO. 3524 ELEV. 15.17
DESCRIPTION:
CROSS CUT ON NORTH FLANGE BOLT OF FIRE HYDRANT AT THE NORTHWEST CORNER OF 31st ST. AND WENTWORTH AVE.

BENCH MARK NO. 3525 ELEV. 16.93
DESCRIPTION:
CROSS CUT ON NORTHWEST FLANGE BOLT OF FIRE HYDRANT AT THE NORTHWEST CORNER OF 35th ST. AND WENTWORTH AVE.

BENCH MARK NO. 3526 ELEV. 17.37
DESCRIPTION:
CROSS CUT ON NORTHWEST FLANGE BOLT OF FIRE HYDRANT AT THE WENTWORTH GARDEN OFFICE ALONG THE WEST SIDE OF WENTWORTH AVE.

BENCH MARK NO. 3527 ELEV. 15.63
DESCRIPTION:
CROSS CUT ON NORTHERLY FLANGE BOLT OF FIRE HYDRANT AT THE NORTHWEST CORNER OF ROOT ST. AND WENTWORTH AVE.

BENCH MARK NO. 3539 ELEV. 13.10
DESCRIPTION:
CROSS CUT ON EASTERLY BOLT OF LIGHT POLE BASE AT THE SOUTHEAST CORNER OF 43rd ST. AND LA SALLE ST.

BENCH MARK NO. 3540 ELEV. 12.33
DESCRIPTION:
SQUARE CUT ON THE SOUTHWEST CORNER OF THE TRAFFIC CONTROL BOX AT THE NORTHEAST CORNER OF 39th ST. AND LA SALLE ST.

BENCH MARK NO. 3541 ELEV. 14.78
DESCRIPTION:
CROSS CUT ON THE SOUTHWEST BOLT OF LIGHT POLE BASE AT THE SOUTH EAST CORNER OF 35th ST. AND LA SALLE ST.

BENCH MARK NO. 3542 ELEV. 13.57
DESCRIPTION:
CROSS CUT ON THE EASTERLY FLANGE BOLT OF THE FIRE HYDRANT AT THE INTERSECTION OF 31st ST. AND LA SALLE ST.

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REVISIONS	
NAME	DATE

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F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

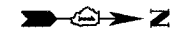
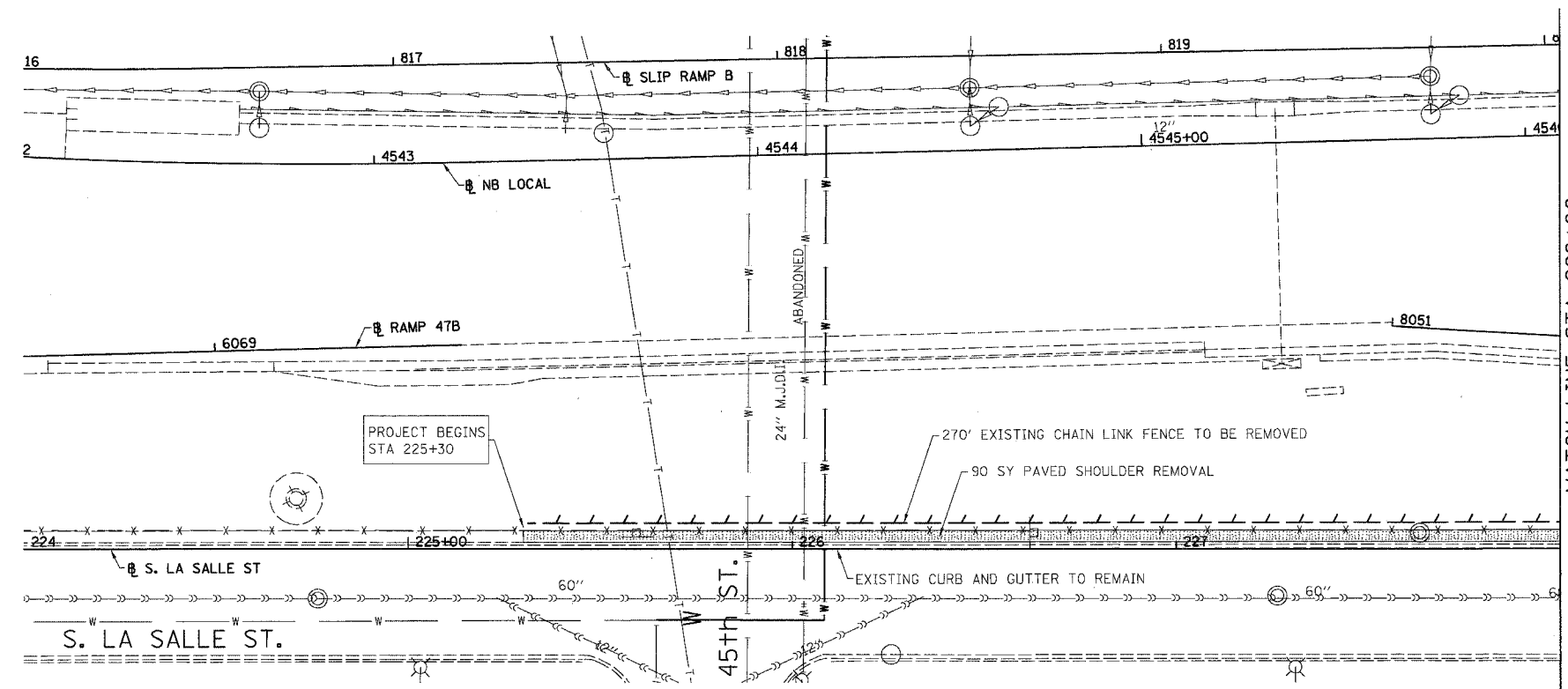
ALIGNMENT PLAN

SCALE: 1"=100'
DATE: 04/25/08
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ALT-05

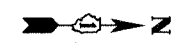
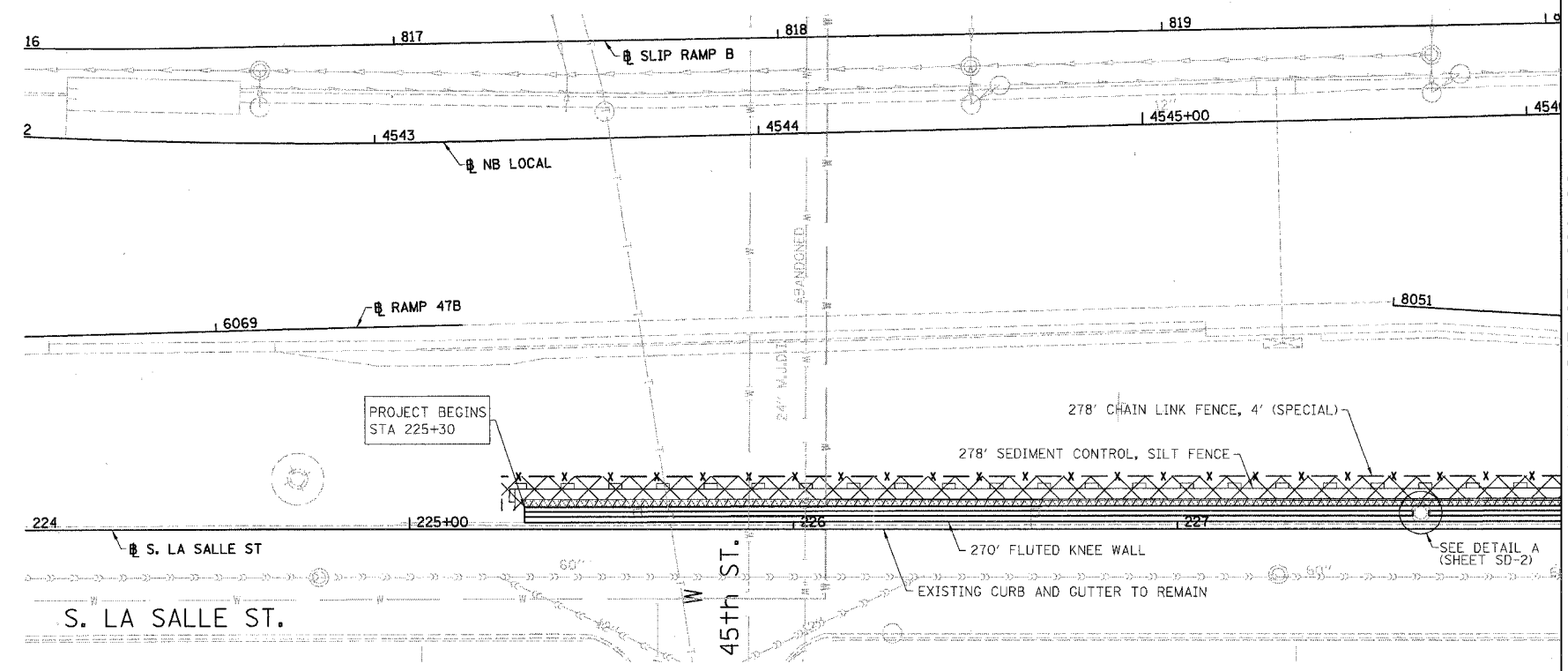
5/3/08 PH
4/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62989				



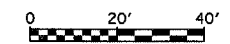
- LEGEND:
- PAVED SHOULDER REMOVAL
 - LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL
PROPOSED IMPROVEMENTS



- LEGEND:
- SEEDING, CLASS 2A
EROSION CONTROL BLANKET
 - SEEDING, CLASS 4 (MODIFIED)
SEEDING CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET
 - TOPSOIL FURNISH AND PLACE, 4"
SEEDING, CLASS 2A
EROSION CONTROL BLANKET
 - TOPSOIL FURNISH AND PLACE, 12"
SEEDING CLASS 4 (MODIFIED)
SEEDING, CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET

- NOTES:
1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
 2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

**EXISTING AND PROPOSED
KNEE WALL PLANS**

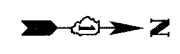
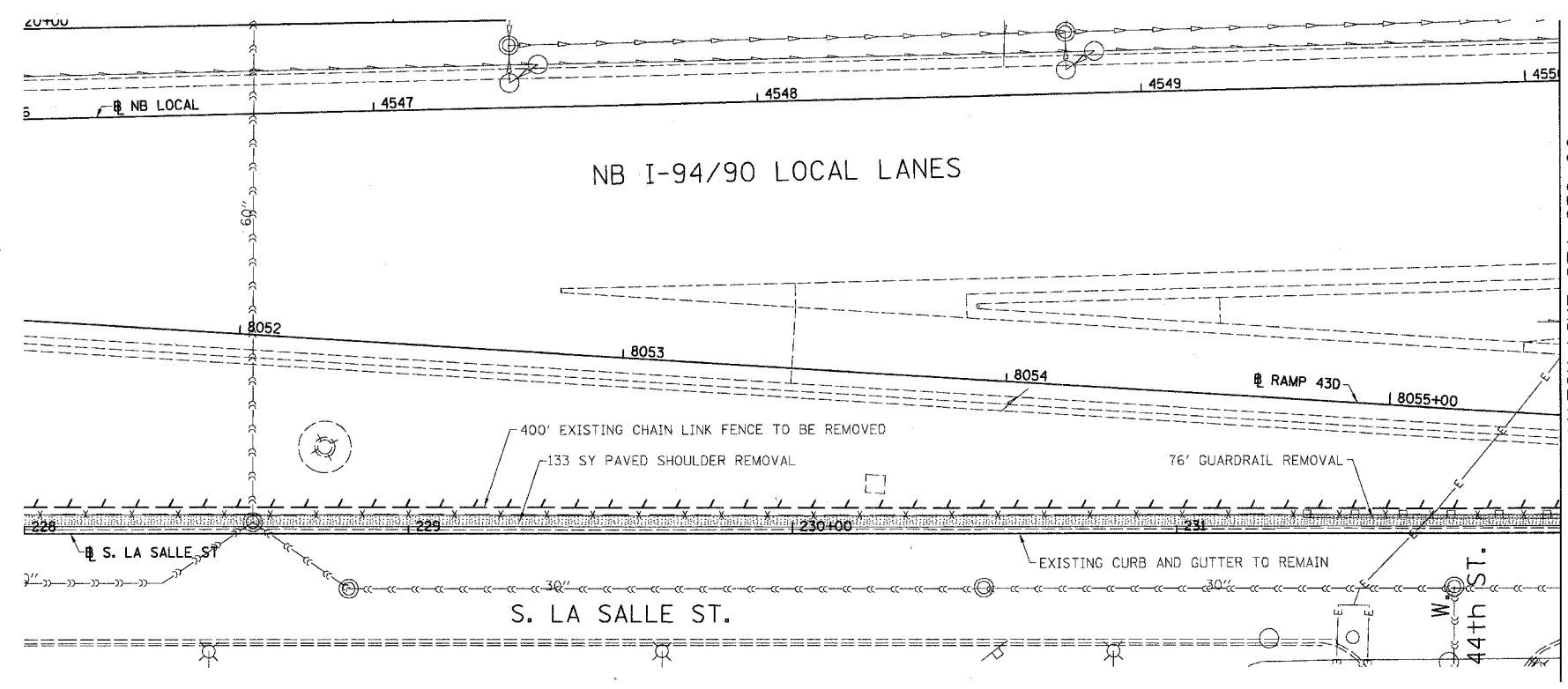
SCALE: 1"=20'
DATE: 04/25/08



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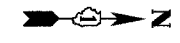
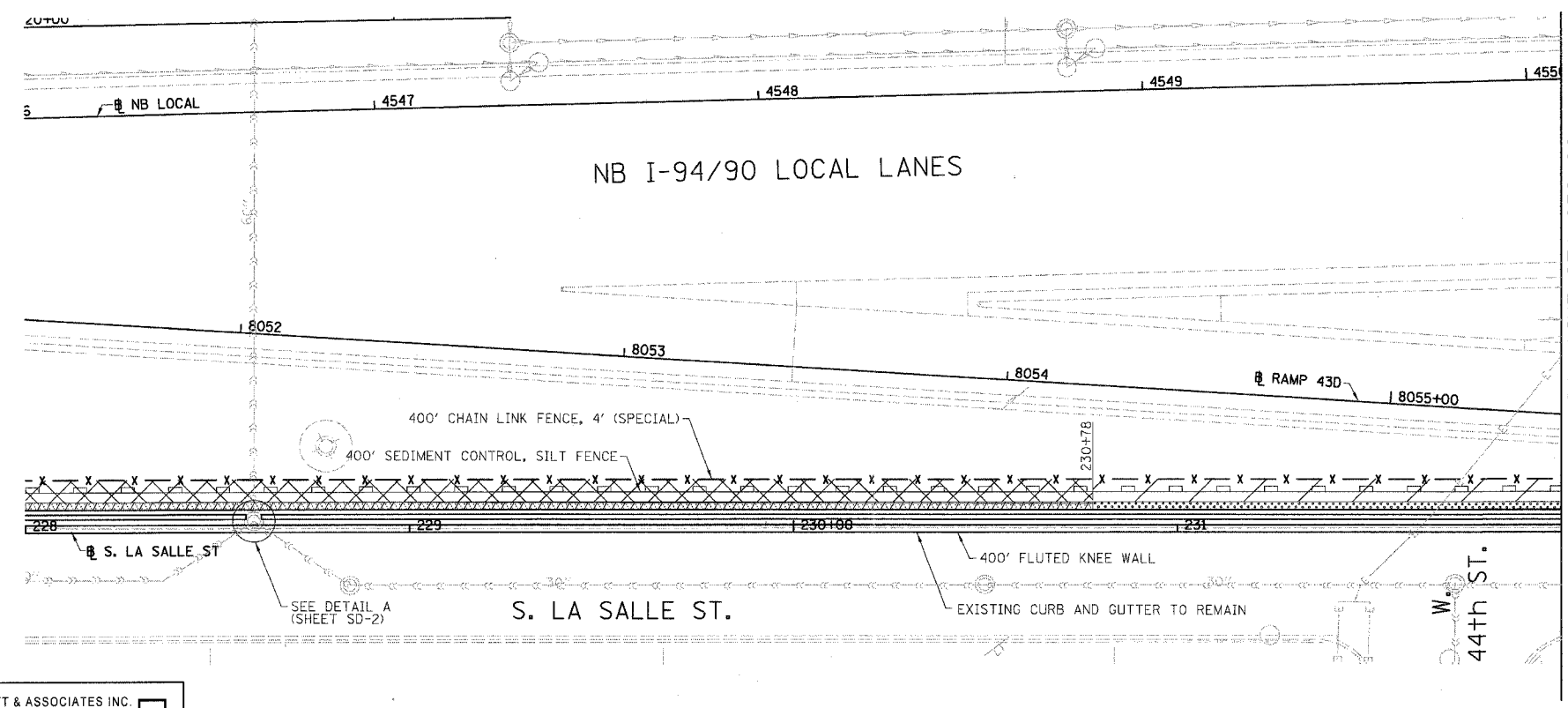
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F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
62989				



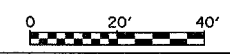
- LEGEND:
-  PAVED SHOULDER REMOVAL
 -  LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL
PROPOSED IMPROVEMENTS



- LEGEND:
-  SEEDING, CLASS 2A
EROSION CONTROL BLANKET
 -  SEEDING, CLASS 4 (MODIFIED)
SEEDING CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET
 -  TOPSOIL FURNISH AND PLACE, 4"
SEEDING, CLASS 2A
EROSION CONTROL BLANKET
 -  TOPSOIL FURNISH AND PLACE, 12"
SEEDING CLASS 4 (MODIFIED)
SEEDING, CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET

- NOTES:
1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
 2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

EXISTING AND PROPOSED
KNEE WALL PLANS

SCALE: 1"=20'
DATE: 04/25/08

DRAWN BY: JDC
CHECKED BY: DDM

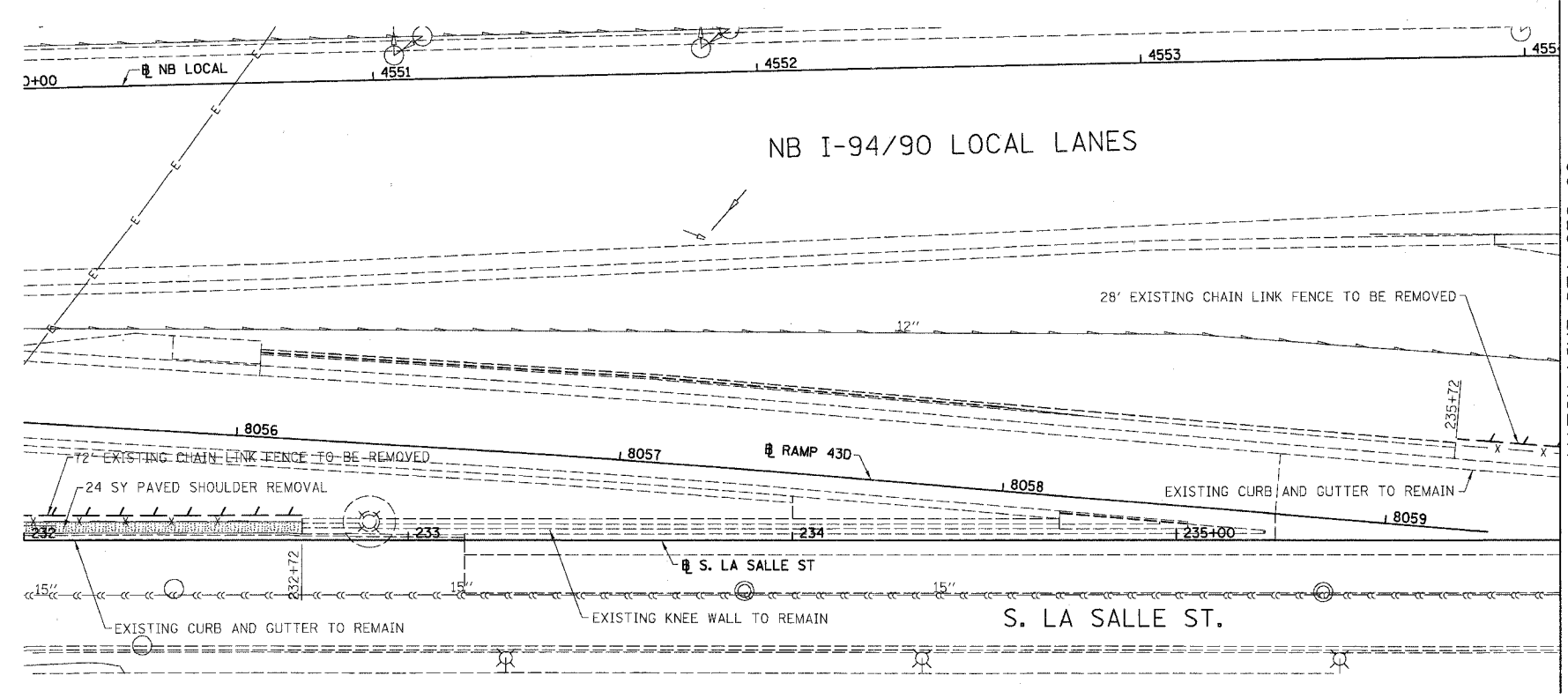
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PL-2
5/3/08
4/24/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

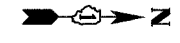
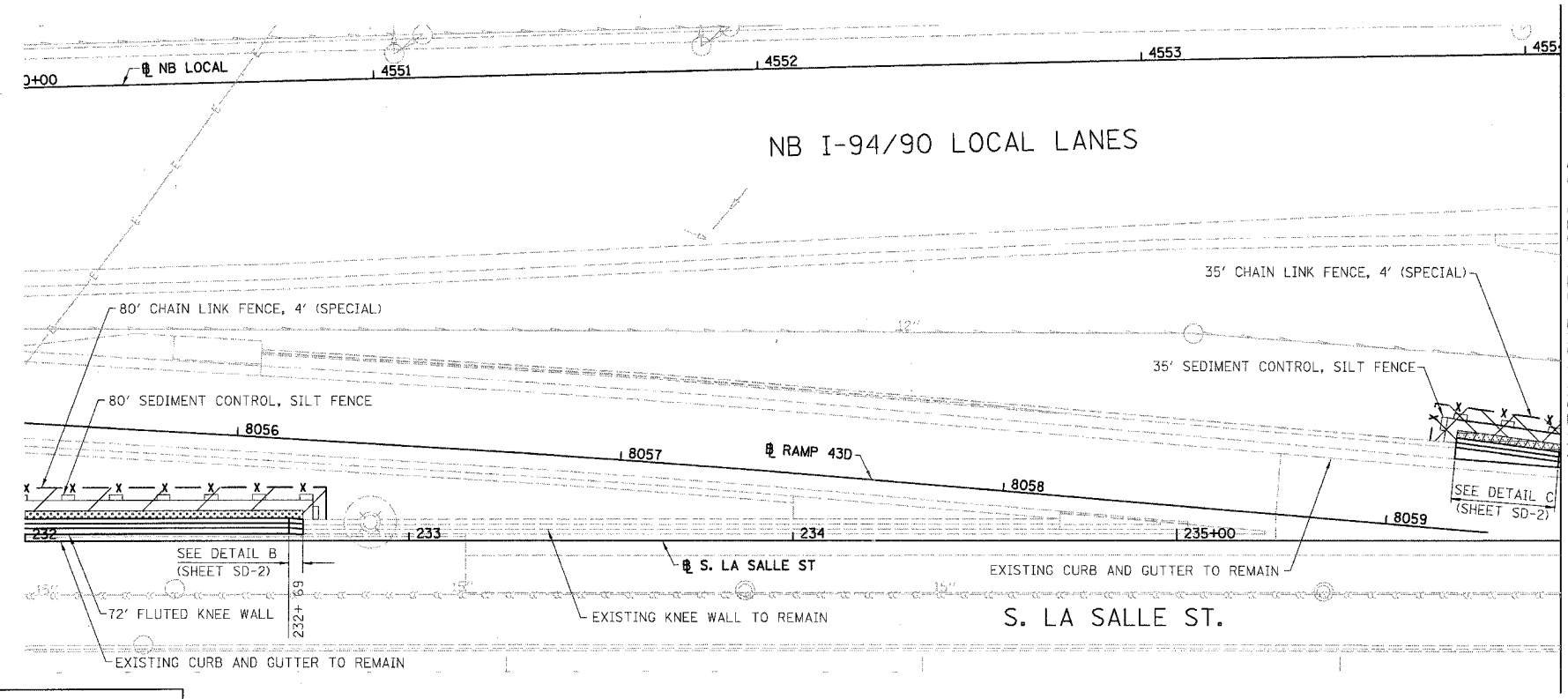
62989



LEGEND:

- PAVED SHOULDER REMOVAL
- LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL
PROPOSED IMPROVEMENTS

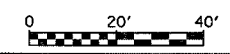


LEGEND:

- SEEDING, CLASS 2A
EROSION CONTROL BLANKET
- SEEDING, CLASS 4 (MODIFIED)
SEEDING CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET
- TOPSOIL FURNISH AND PLACE, 4"
SEEDING, CLASS 2A
EROSION CONTROL BLANKET
- TOPSOIL FURNISH AND PLACE, 12"
SEEDING CLASS 4 (MODIFIED)
SEEDING, CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET

NOTES:

1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



PL-3

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

EXISTING AND PROPOSED
KNEE WALL PLANS

SCALE: 1"=20'
DATE: 04/25/08

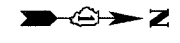
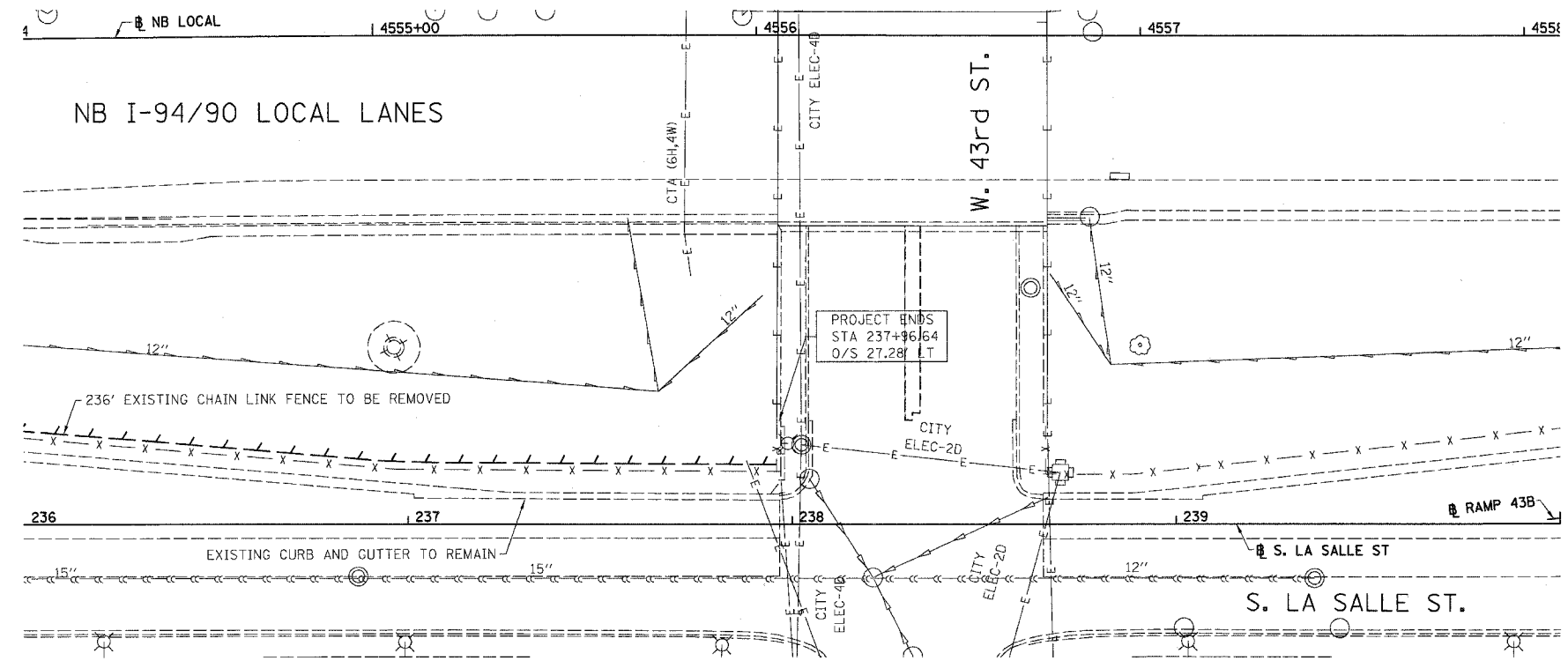
DRAWN BY: JDC
CHECKED BY: DDM



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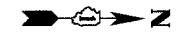
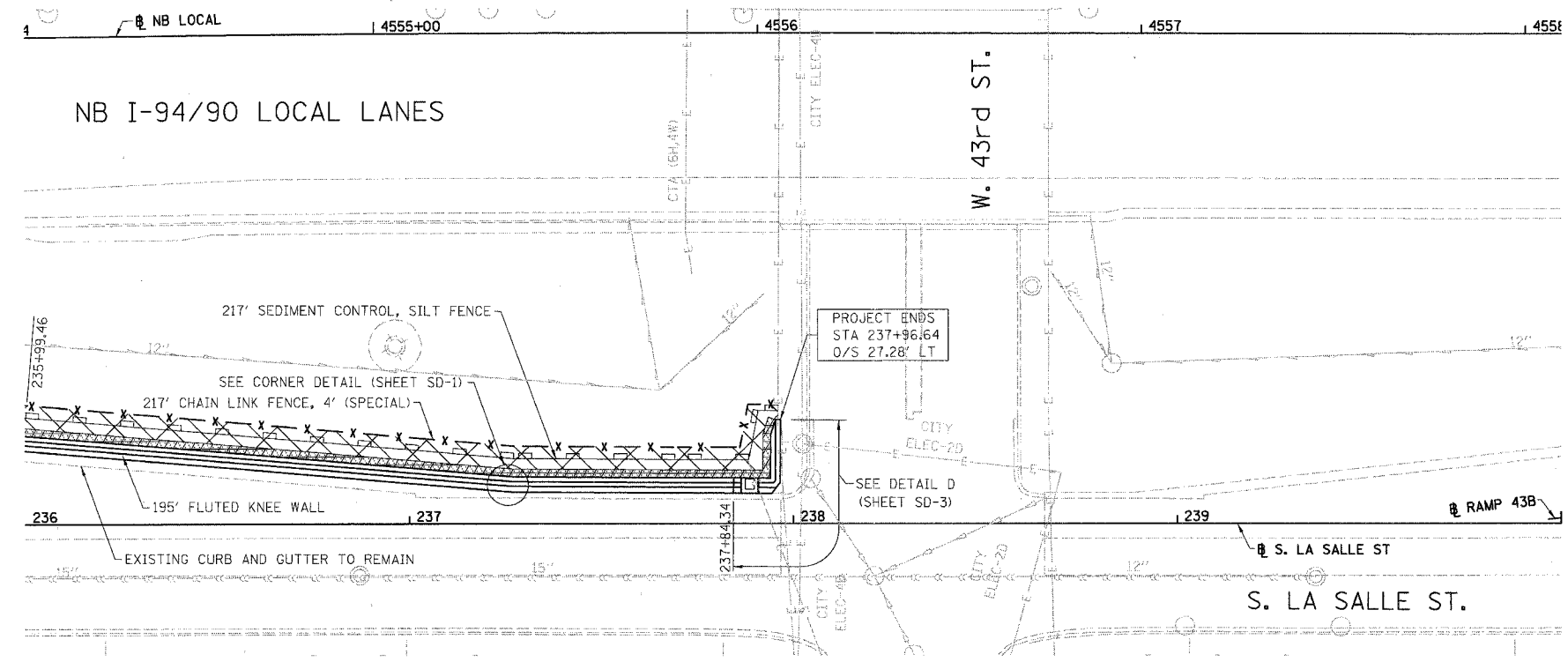
5/13/08 PM 4/24/2008

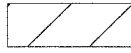


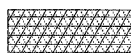
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62989				



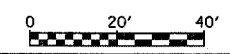
- LEGEND:
-  PAVED SHOULDER REMOVAL
 -  LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL
PROPOSED IMPROVEMENTS



- LEGEND:
-  SEEDING, CLASS 2A
EROSION CONTROL BLANKET
 -  SEEDING, CLASS 4 (MODIFIED)
SEEDING CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET
 -  TOPSOIL FURNISH AND PLACE, 4"
SEEDING, CLASS 2A
EROSION CONTROL BLANKET
 -  TOPSOIL FURNISH AND PLACE, 12"
SEEDING CLASS 4 (MODIFIED)
SEEDING, CLASS 5A (MODIFIED)
EROSION CONTROL BLANKET

- NOTES:
1. SEE STRUCTURAL DETAIL FOR FLUTED KNEE WALL DETAILS.
 2. ALL POINT CALLOUTS ARE TAKEN AT THE EDGE OF THE KNEE WALL BASE.



PL-4

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

EXISTING AND PROPOSED
KNEE WALL PLANS

SCALE: 1"=20'
DATE: 04/25/08

DRAWN BY: JDC
CHECKED BY: DDM

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7/24/2008 5:35:32 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62989				

BILL OF MATERIAL



Item	Unit	Qty.*
Concrete Structures	Cu. Yd.	0.15
Concrete Superstructure	Cu. Yd.	0.13
Reinforcement Bars, Epoxy Coated	Pound	22.69
Rustication Finish	Sq. Ft.	1.83
Protective Coat	Sq. Yd.	0.62

* Quantities are per foot of Fluted Knee Wall and are provided for estimating purposes only. See Note 5.

NOTES:

1. Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
2. Concrete: $f'c = 3500$ psi
3. Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details. Cost included with "Fluted Knee Wall".
4. At locations where Fluted Knee Wall abuts a rigid Structure, a $\frac{1}{2}$ " thick Preformed Expansion Joint Filler conforming to the shape of the Structure shall be installed between the Wall and the Structure.
5. "Fluted Knee Wall" shall include Concrete Superstructure stem, Concrete Structures foundation, Reinforcement Bars, Epoxy Coated, all form liners for Rustication Finish, Protective Coat and Preformed Joint Filler (P.J.F.).
6. Apply Protective Coat to top and front face of stem and top of Frontage Road side of foundation.
7. Cost included with "Fluted Knee Wall".
8. Chain Link Fence 42" Attached to Structure (Special) will not be paid for in this Contract, but shall be furnished and installed in a future Contract by others.
9. See Roadway Plans for limits of excavation for Fluted Knee Wall.

LEGEND:

-  Chain Link Fabric
-  Rustication Finish
- E.F. = Each Face

SHEET SD-1

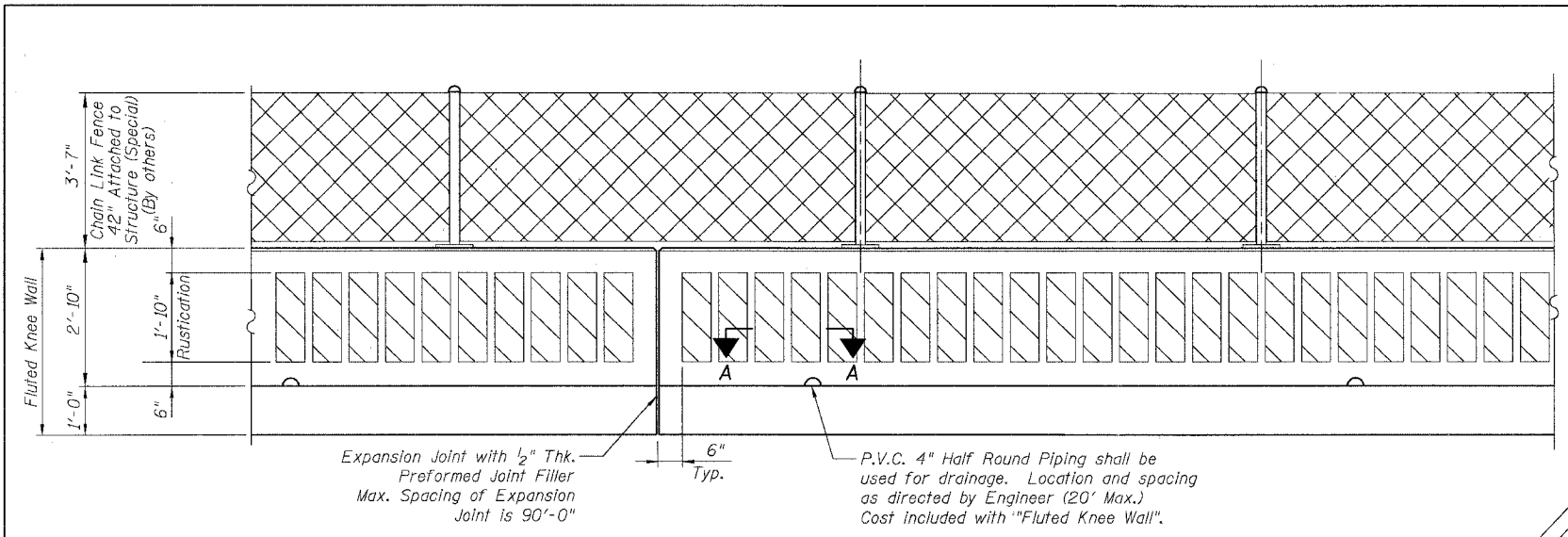
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

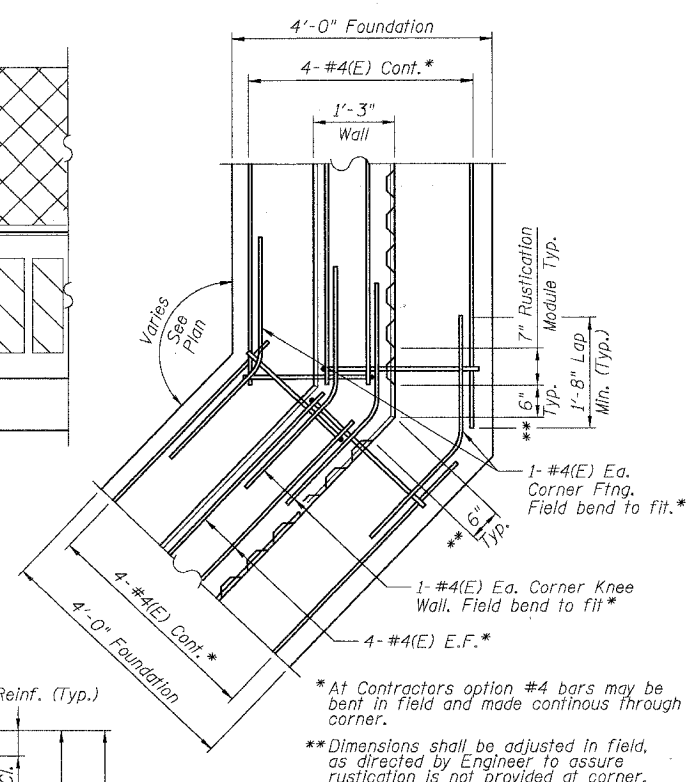
FLUTED KNEE WALL

SCALE: NTS
 DATE: 04/25/08

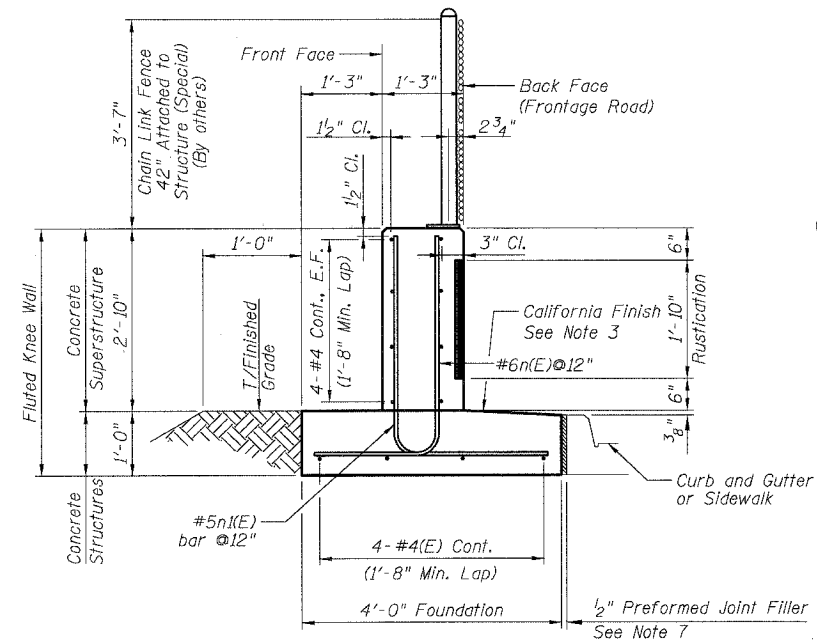
DRAWN BY: LAM
 CHECKED BY: BLU



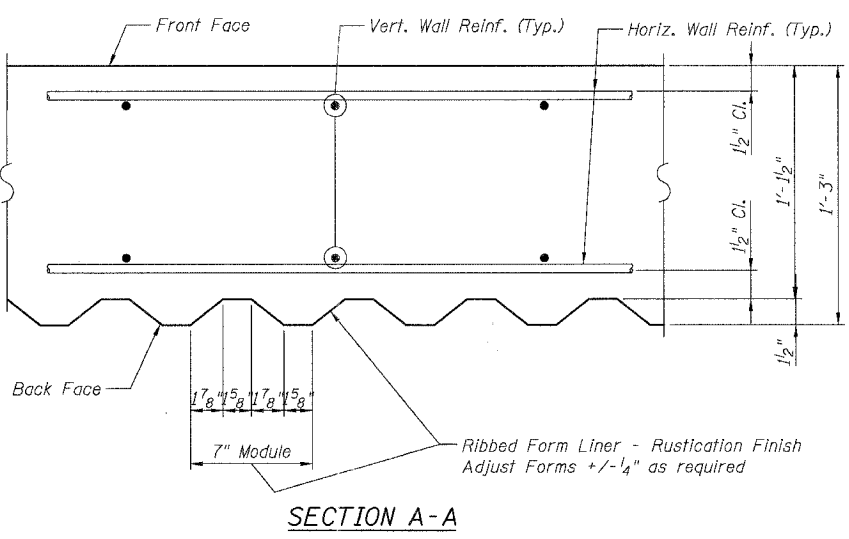
BACK FACE ELEVATION - FLUTED KNEE WALL



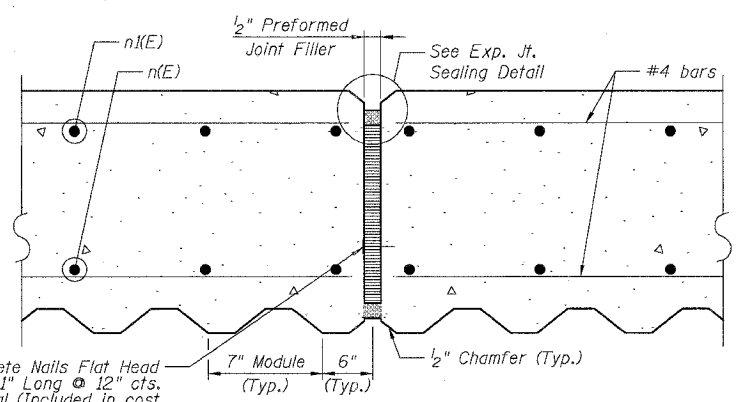
TYPICAL FLUTED KNEE WALL CORNER DETAIL



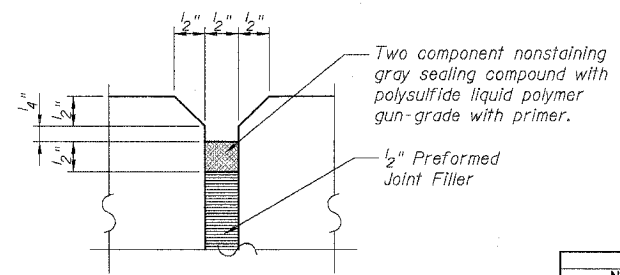
TYPICAL SECTION FLUTED KNEE WALL



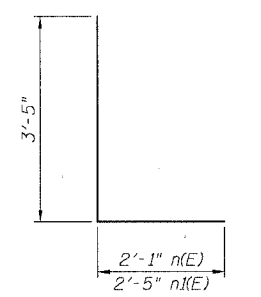
SECTION A-A



EXPANSION JOINT DETAIL



EXPANSION JOINT SEALING DETAIL

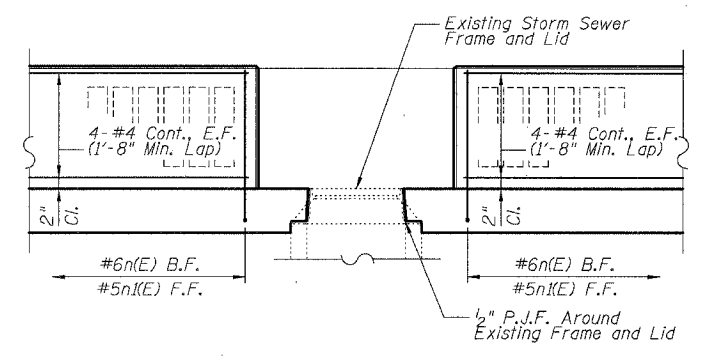


BARS n(E) & n(E)

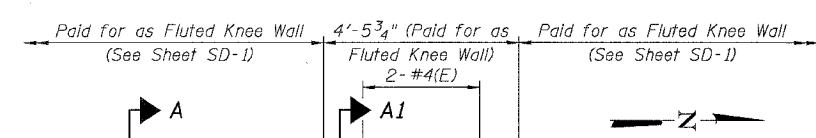
BOWMAN, BARRETT & ASSOCIATES INC.
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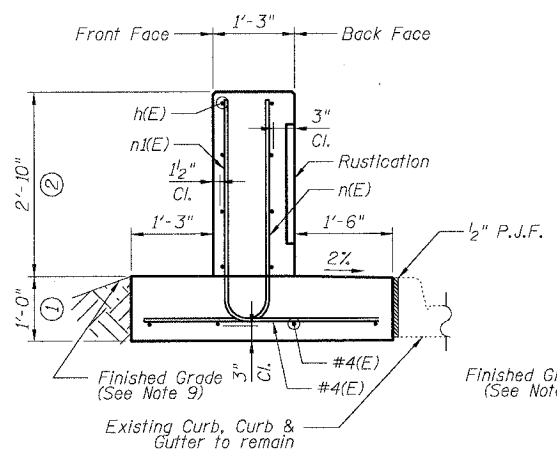
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62989				



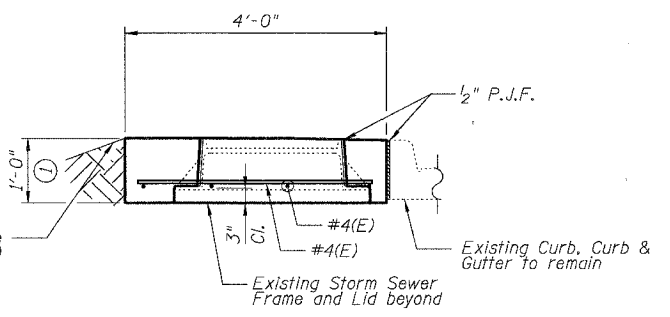
DETAIL A - ELEVATION



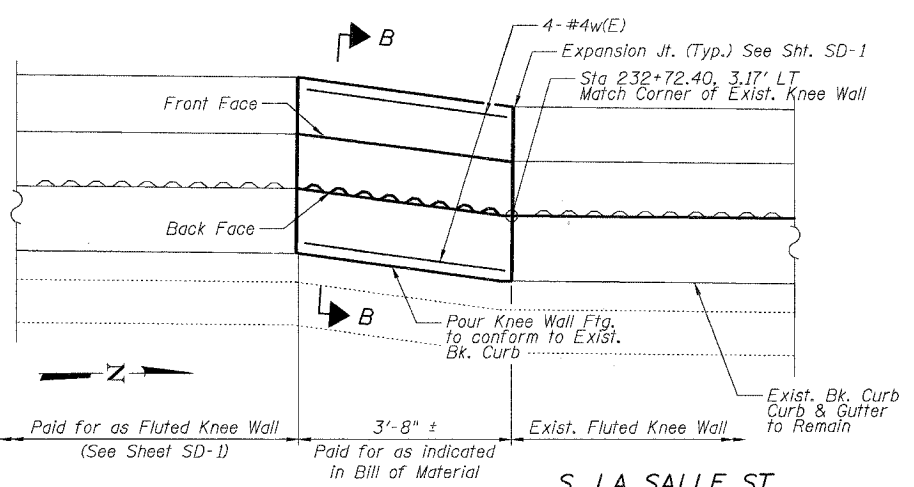
DETAIL A - PLAN



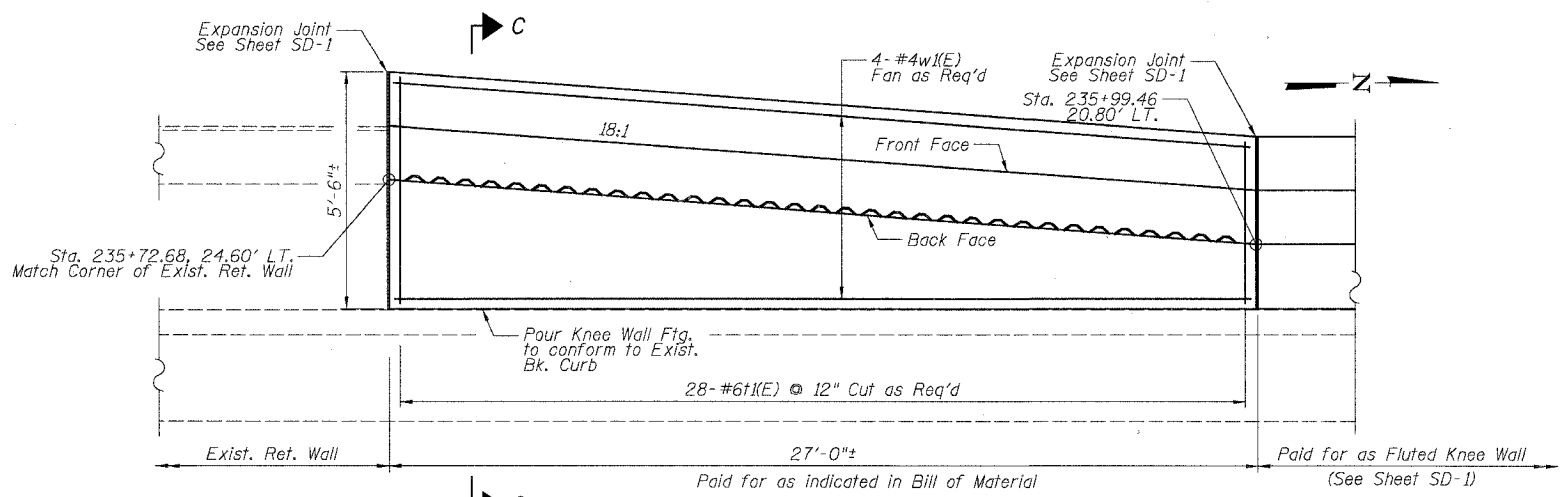
SECTION A-A



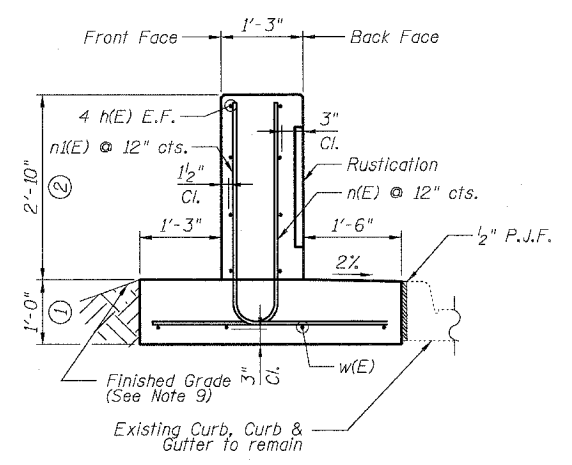
SECTION A1-A1



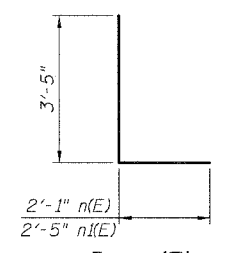
DETAIL B



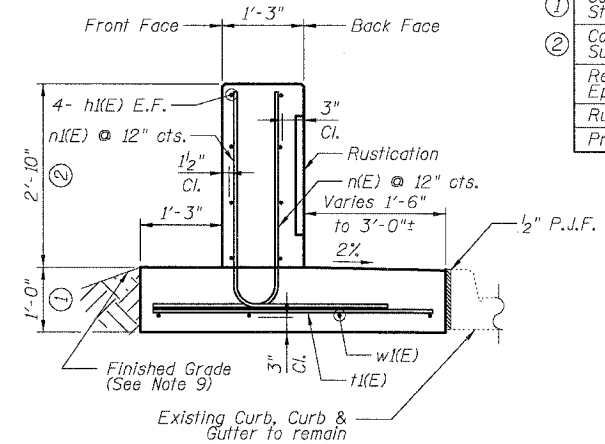
DETAIL C



SECTION B-B



Bar n(E) & n1(E)



SECTION C-C

DETAIL B REINFORCEMENT SCHEDULE AND BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	8	#4	3'-2"	
n(E)	4	#6	5'-6"	L
n1(E)	4	#5	5'-10"	L
w(E)	4	#4	3'-2"	
Item	Unit	Qty.		
① Concrete Structures	Cu. Yd.	0.6		
② Concrete Superstructure	Cu. Yd.	0.5		
Reinforcement Bars, Epoxy Coated	Pound	90		
Rustication Finish	Sq. Ft.	7		
Protective Coat	Sq. Yd.	3		

DETAIL C REINFORCEMENT SCHEDULE AND BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	8	#4	26'-8"	
n(E)	28	#6	5'-6"	L
n1(E)	28	#5	5'-10"	L
11(E)	28	#6	5'-2"	
w1(E)	4	#4	26'-8"	
Item	Unit	Qty.		
① Concrete Structures	Cu. Yd.	4.8		
② Concrete Superstructure	Cu. Yd.	3.6		
Reinforcement Bars, Epoxy Coated	Pound	840		
Rustication Finish	Sq. Ft.	50		
Protective Coat	Sq. Yd.	19		

NOTES:

- All stations and offsets measured from S. La Salle St. \pm .
- Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
- Concrete: $f'c = 3500$ psi
- Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details.
- At locations where Fluted Knee Wall abuts a rigid structure, a 2" thick Preformed Expansion Joint Filler conforming to the shape of the structure shall be installed between the Fluted Knee Wall and the Structure.
- Apply Protective Coat to top and back face of stem and top of Frontage Road side of foundation.
- For Fluted Knee Wall standard details, see Sheet SD-1
- B.F. = Back Face (Frontage Road Side)
F.F. = Front Face (Expressway Side)
E.F. = Each Face
- Shape finished grade as required to match existing conditions.
- P.J.F. included in cost of concrete structures.

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REVISIONS	NAME	DATE

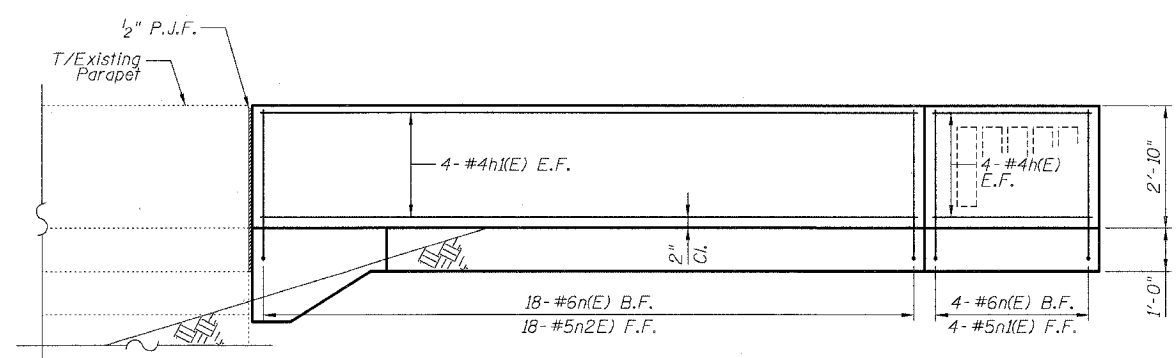
SHEET SD-2
ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)
DETAILS A, B, & C
SCALE: NTS
DATE: 04/25/08
DRAWN BY: TL
CHECKED BY: BLU

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	30	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62989				

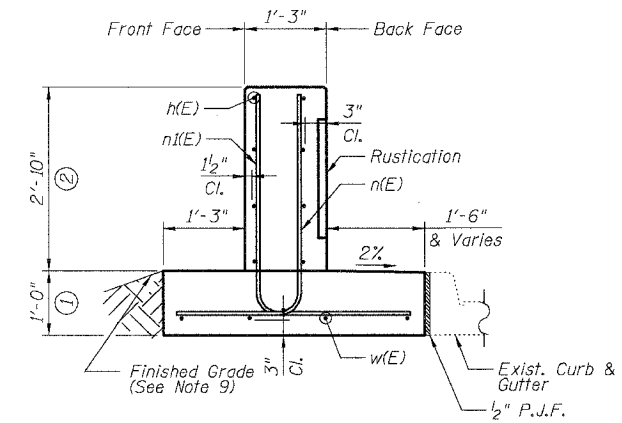
DETAIL D REINFORCEMENT SCHEDULE AND BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	8	#4	4'-2"	—
h1(E)	8	#4	16'-2"	—
h2(E)	2	#4	4'-0"	—
n(E)	22	#6	5'-6"	L
n1(E)	4	#5	5'-10"	L
n2(E)	18	#5	4'-0"	—
t(E)	16	#6	2'-2"	—
w(E)	4	#4	5'-4"	—
w1(E)	3	#4	11'-2"	—
w2(E)	3	#4	3'-6"	—
Item		Unit	Qty.	
①	Concrete Structures	Cu. Yd.	2.4	
②	Concrete Superstructure	Cu. Yd.	2.3	
	Reinforcement Bars, Epoxy Coated	Pound	500	
	Rustication Finish	Sq. Ft.	13	
	Protective Coat	Sq. Yd.	11	

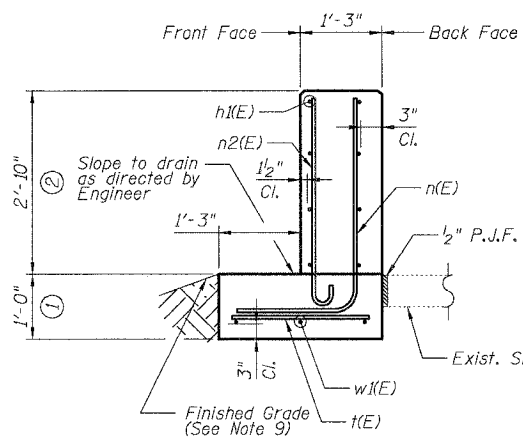
- NOTES:**
- All stations and offsets measured from S. La Salle St. @.
 - Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
 - Concrete: f'c = 3500 psi
 - Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details.
 - At locations where Fluted Knee Wall abuts a rigid Structure, a 1/2" thick Preformed Expansion Joint Filler conforming to the shape of the Structure shall be installed between the Fluted Knee Wall and the Structure.
 - Apply Protective Coat to top and back face of stem and top of Frontage Road side of foundation.
 - For Fluted Knee Wall standard details, see Sheet SD-1
 - B.F. = Back Face (Frontage Road Side)
F.F. = Front Face (Expressway Side)
E.F. = Each Face
 - Shape finished grade as required to match existing conditions.
 - P.J.F. included in cost of concrete structures.



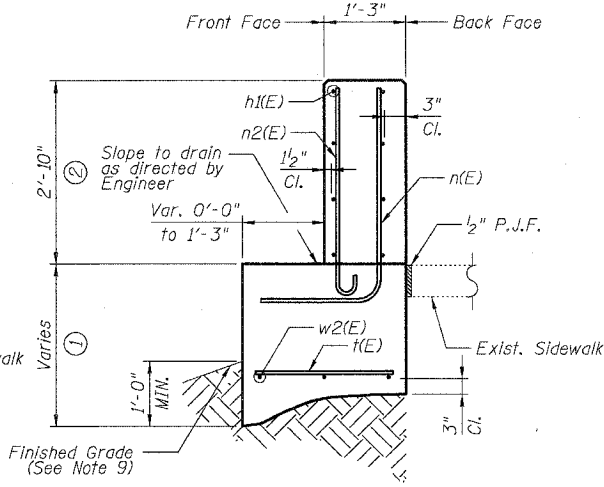
UNFOLDED FRONT FACE ELEVATION



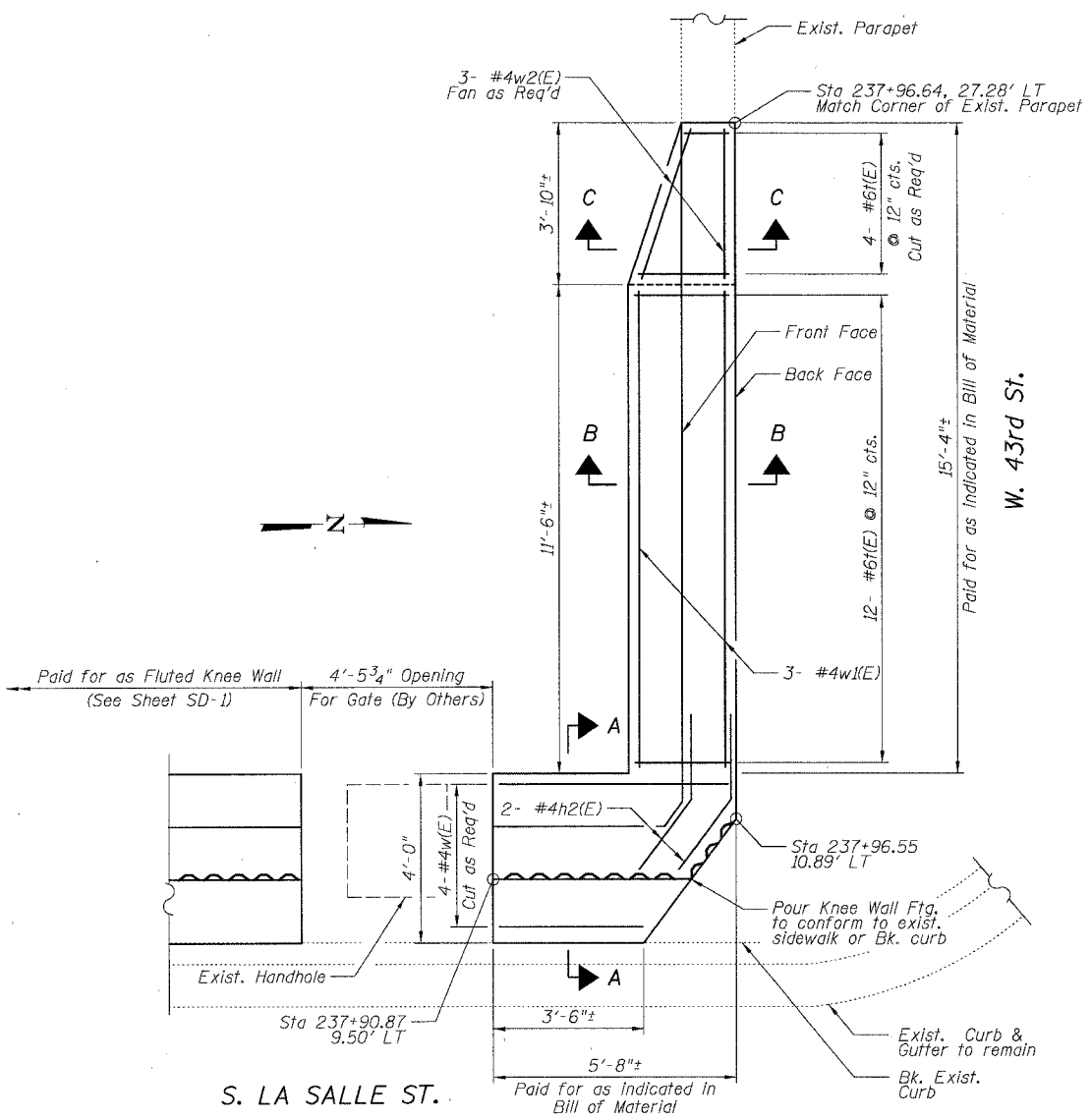
SECTION A-A



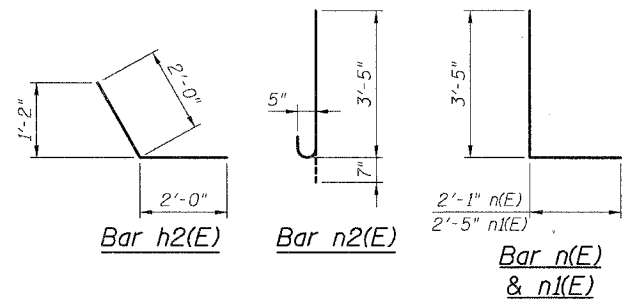
SECTION B-B



SECTION C-C



DETAIL D - PLAN



REVISIONS	
NAME	DATE

SHEET SD-3

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (45TH ST TO 43RD ST)

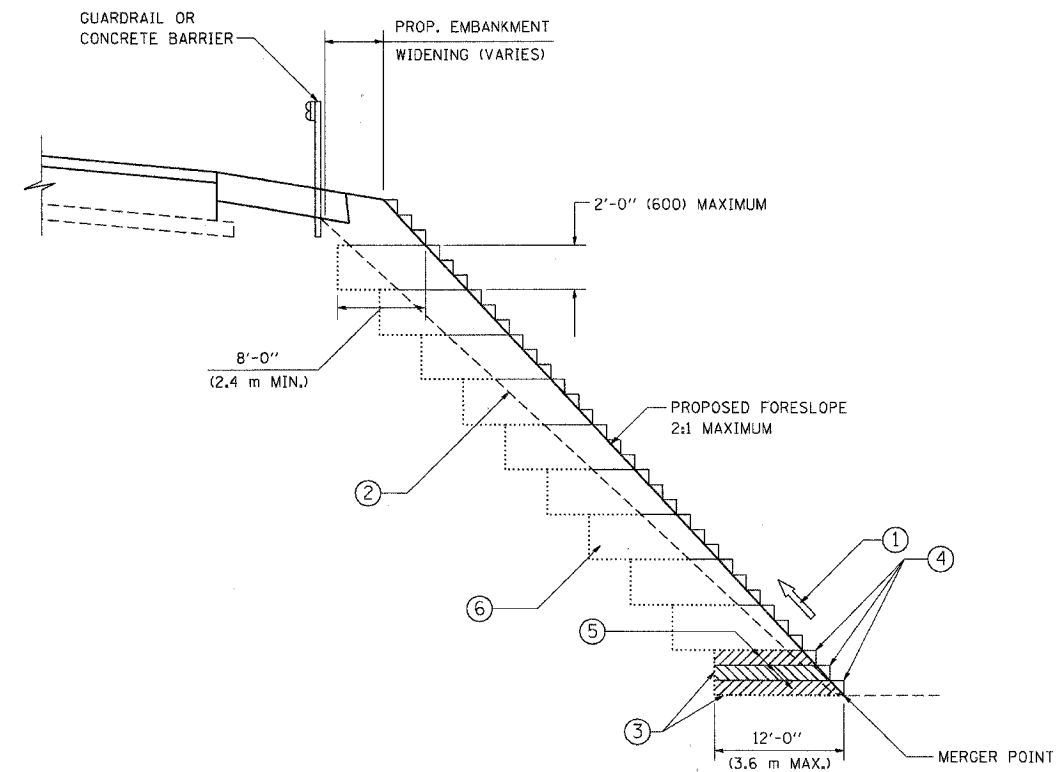
DETAIL D

SCALE: NTS
DATE: 04/25/08

DRAWN BY: TL
CHECKED BY: BLU

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CONSULTING ENGINEERS
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CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	17
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TYPICAL BENCHING DETAIL
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

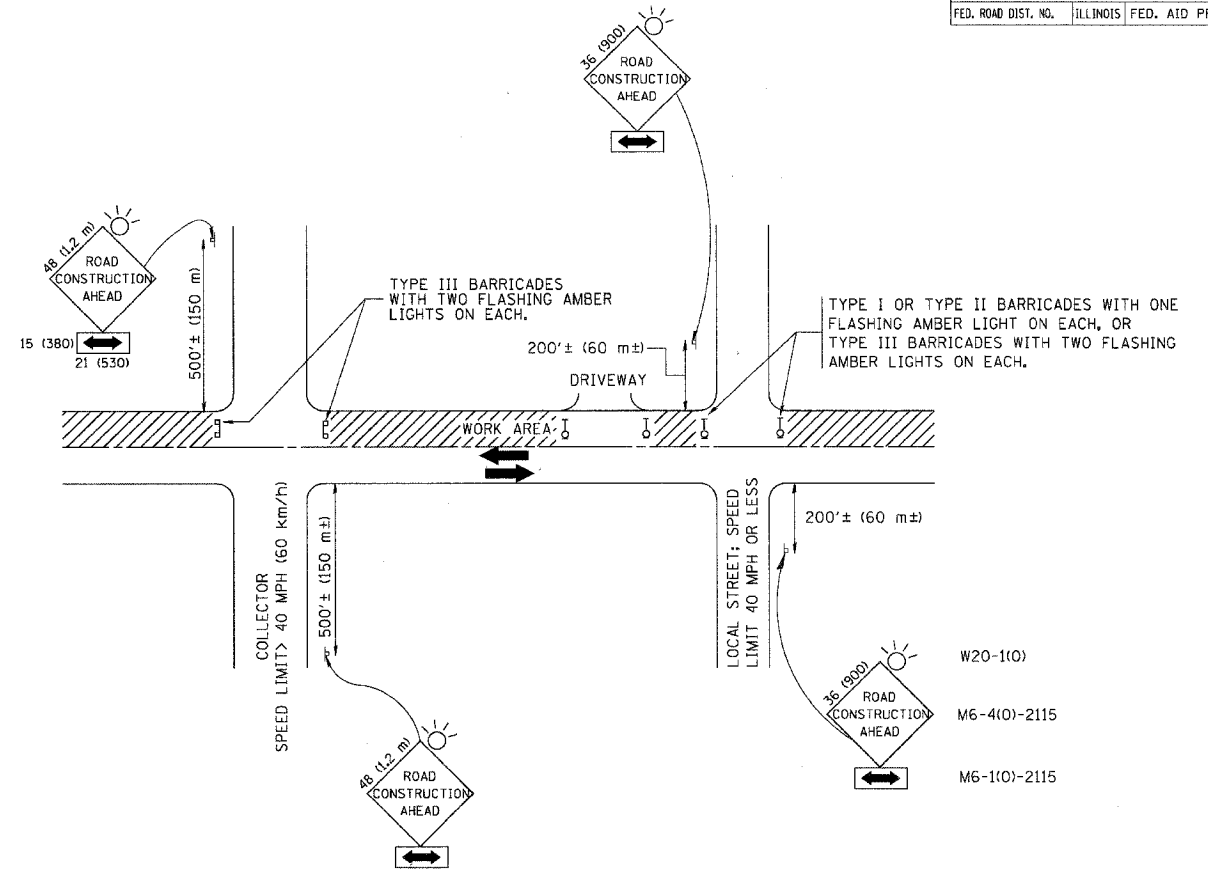
REVISIONS	
NAME	DATE
	06/16/04

ILLINOIS DEPARTMENT OF TRANSPORTATION
**BENCHING DETAIL
FOR EMBANKMENT
WIDENING**

SCALE: VERT. NONE
HORIZ.

DRAWN BY: CADD
CHECKED BY: S.E.B.
BD-51

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

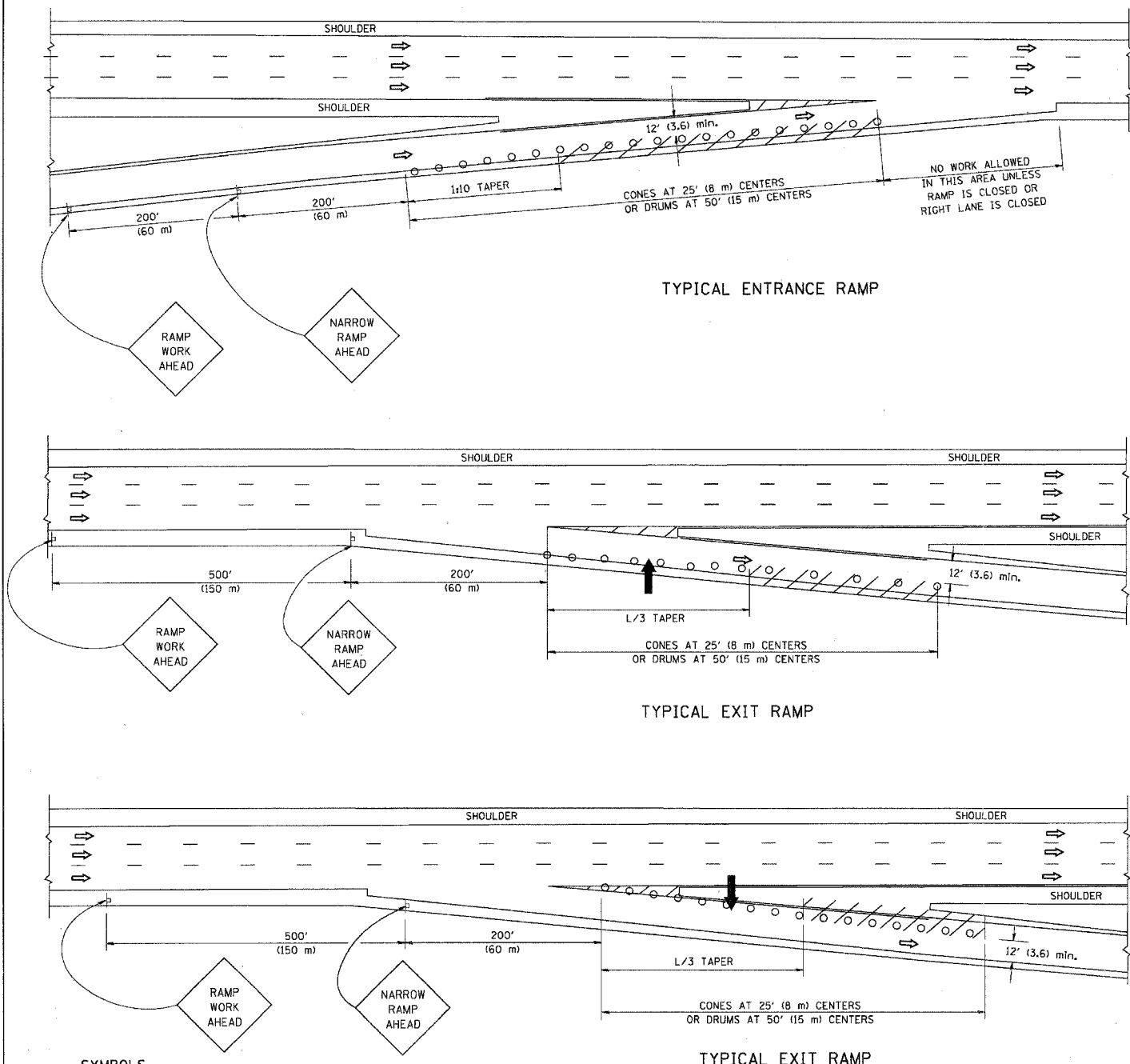
REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE

DRAWN BY
 CHECKED BY
 TC-10

PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP

TYPICAL EXIT RAMP

TYPICAL EXIT RAMP

SYMBOLS

- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

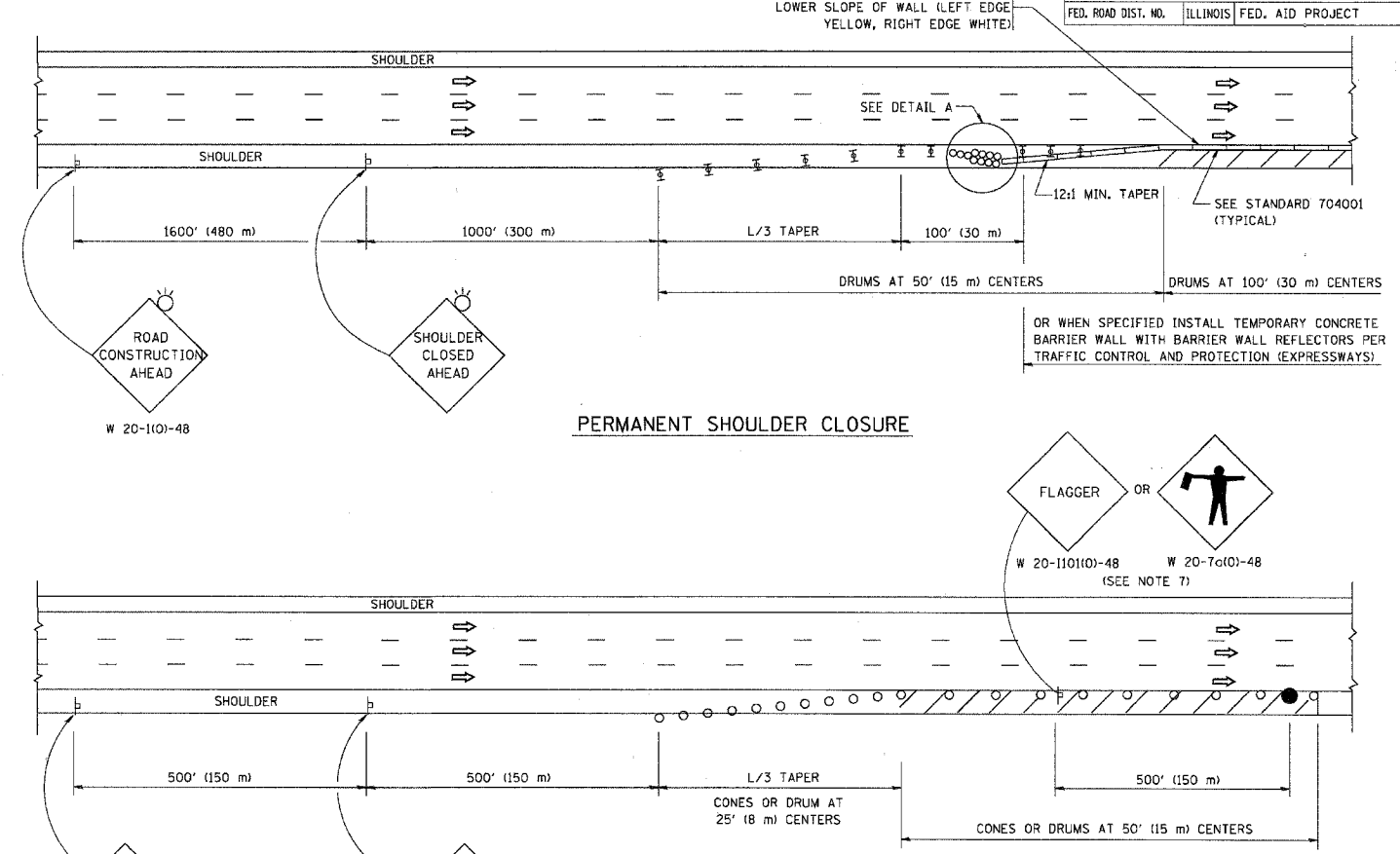
GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

SPEED LIMIT		FORMULAS
45 mph (80 km/h)	METRIC	$L=0.65(W)(S)$
OR GREATER:	ENGLISH	$L=(W)(S)$

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)
2. PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.

SHOULDER CLOSURE DETAILS

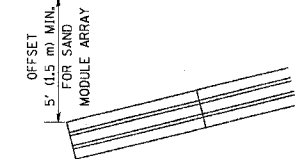


PERMANENT SHOULDER CLOSURE

DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:
1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCR OACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.

ARRAY DESIGN PER MANUFACTURER TO BE NCHRP 350 COMPLIANT FOR POSTED SPEED.



DETAIL "A"
IMPACT ATTENUATOR, TEMPORARY
(SEE NOTE 5)

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
DWS	11/96
JAF	12/02
NCHRP 350	04/03
JAF	2/06
SPB	1/07

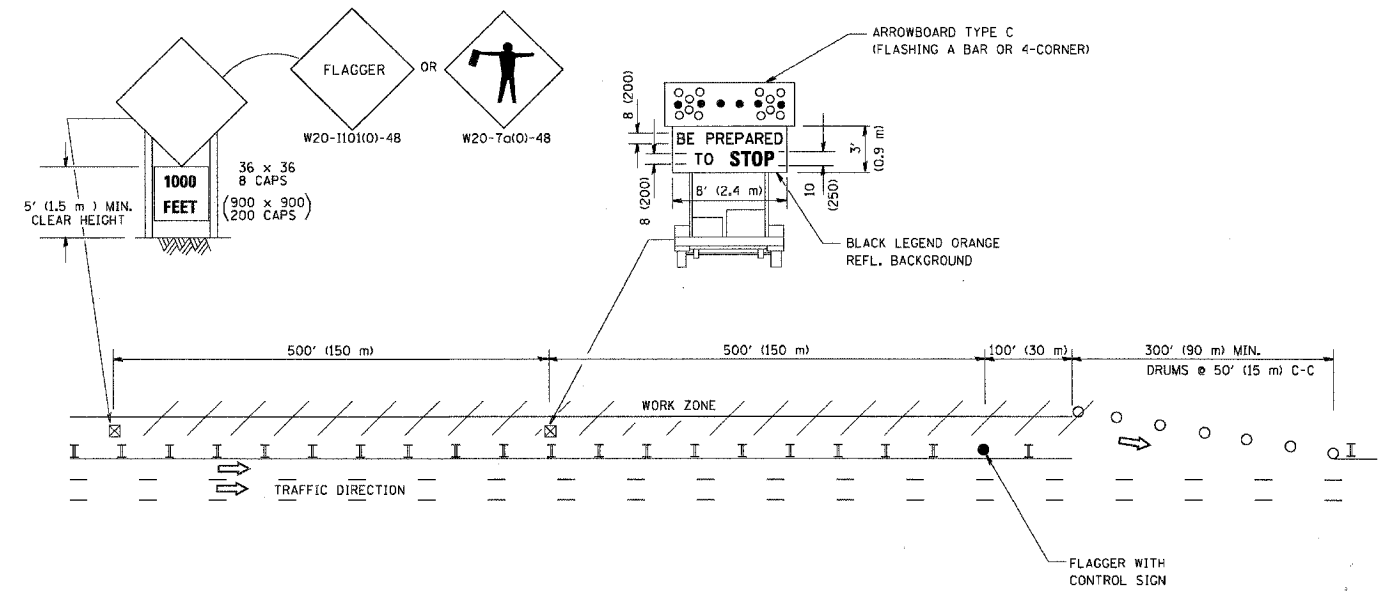
ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES
DESIGNED BY: DWS
DRAWN BY:
CHECKED BY:
SCALE: NONE
TC-17

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	19
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

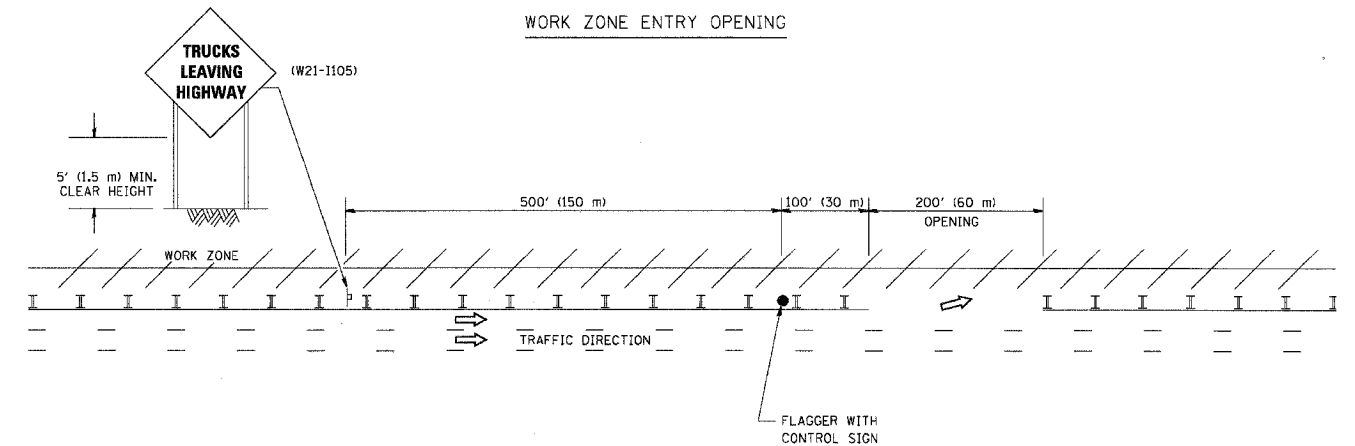
CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. The Arrowboard, the Flagger Ahead trailer mounted sign, and the Trucks Leaving Highway sign shall be removed or turned away from traffic and the exit and entry openings shall be closed when the flagging operation ceases.
2. Work Zone Exit Openings should be a minimum of one half mile apart.
3. Exiting the work zone at any place other than at a Work Zone Exit Opening will be prohibited.
4. All vehicles shall enter the work zone at entry openings, using their turn signals to warn motorists

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

REVISIONS	
NAME	DATE
DWS	8/98
JAF	4/03
JAF	2/06
SPB	1/07

ILLINOIS DEPARTMENT OF TRANSPORTATION
SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS

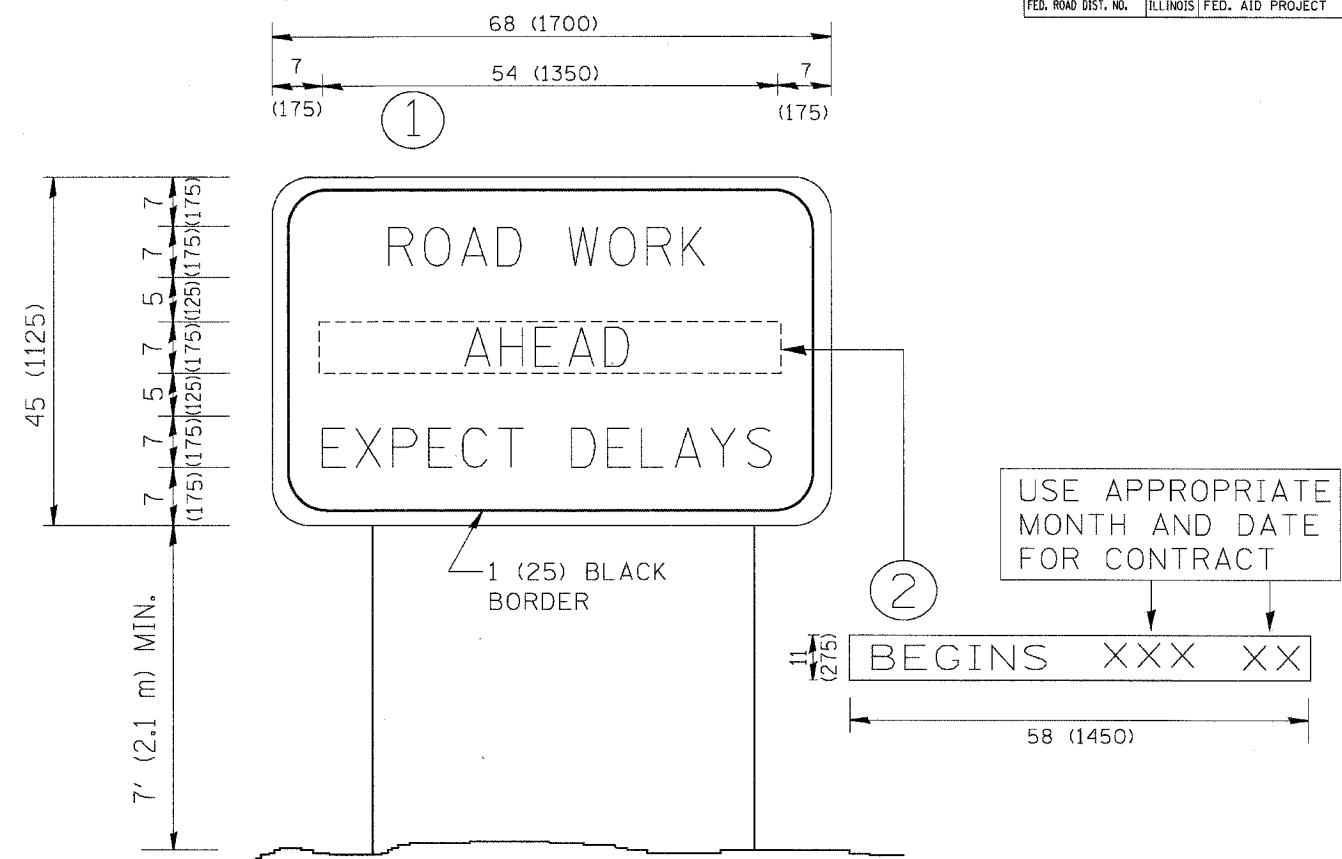
SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-18

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	21
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)
UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUICIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION
**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NONE

DRAWN BY DESIGN

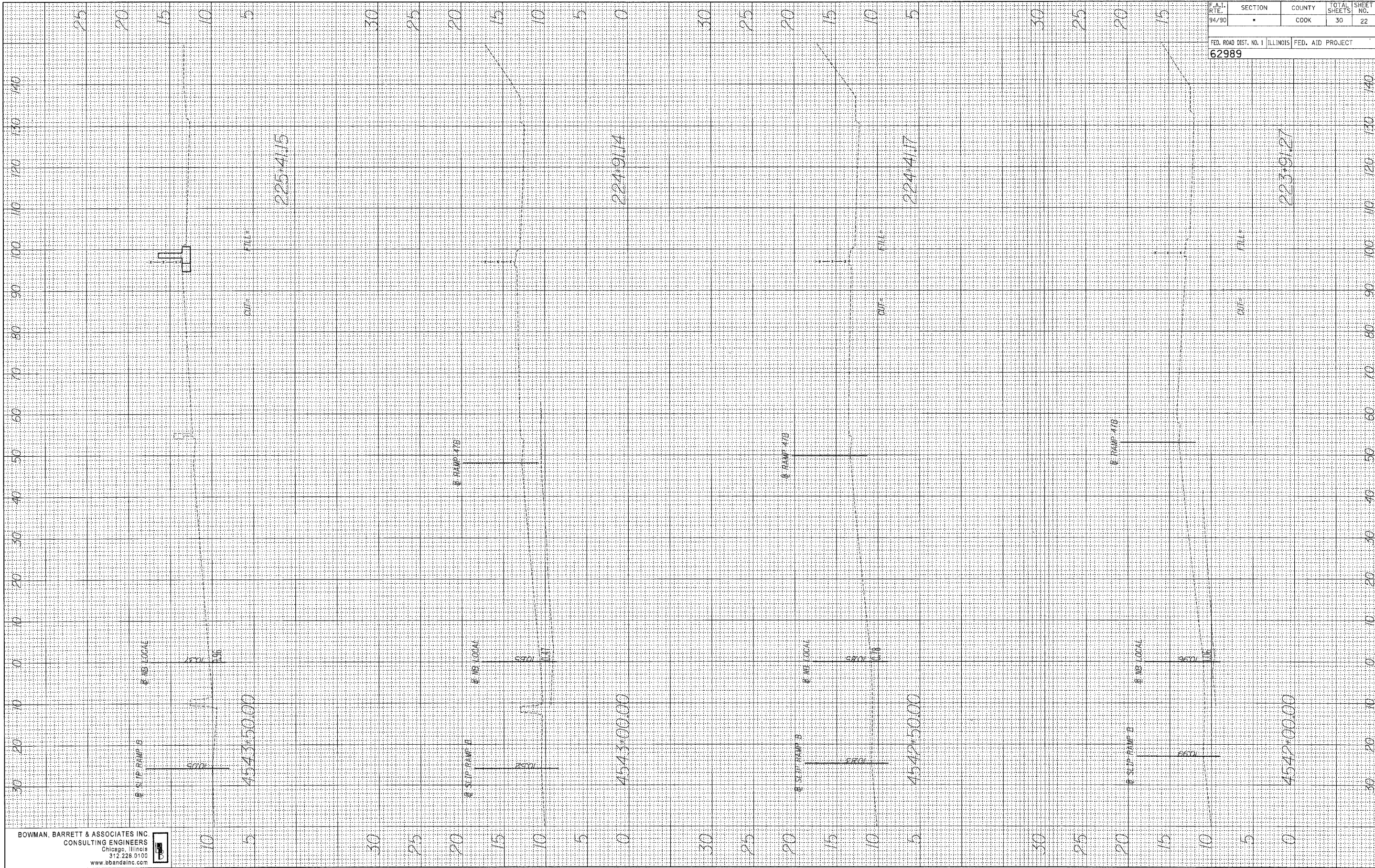
CHECKED BY

TC22

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

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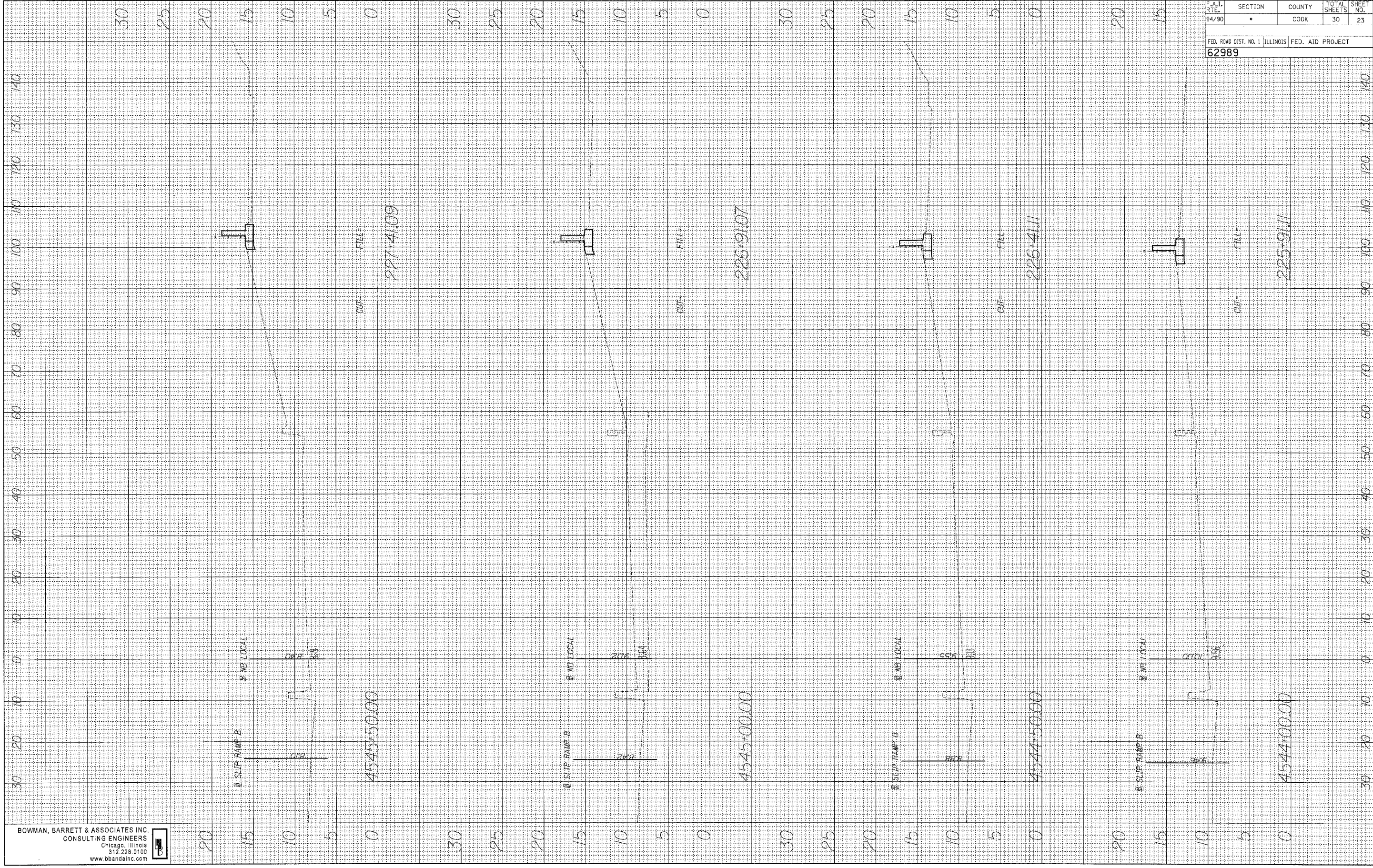


F.A.I. RATE:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	30	22
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62989				

ORIGINAL SURVEY PLOTTED BY DATE
 NOTE BOOK TEMPLATE
 NO. AREAS CHECKED

FINAL SURVEY PLOTTED BY DATE
 NOTE BOOK TEMPLATE
 NO. AREAS CHECKED

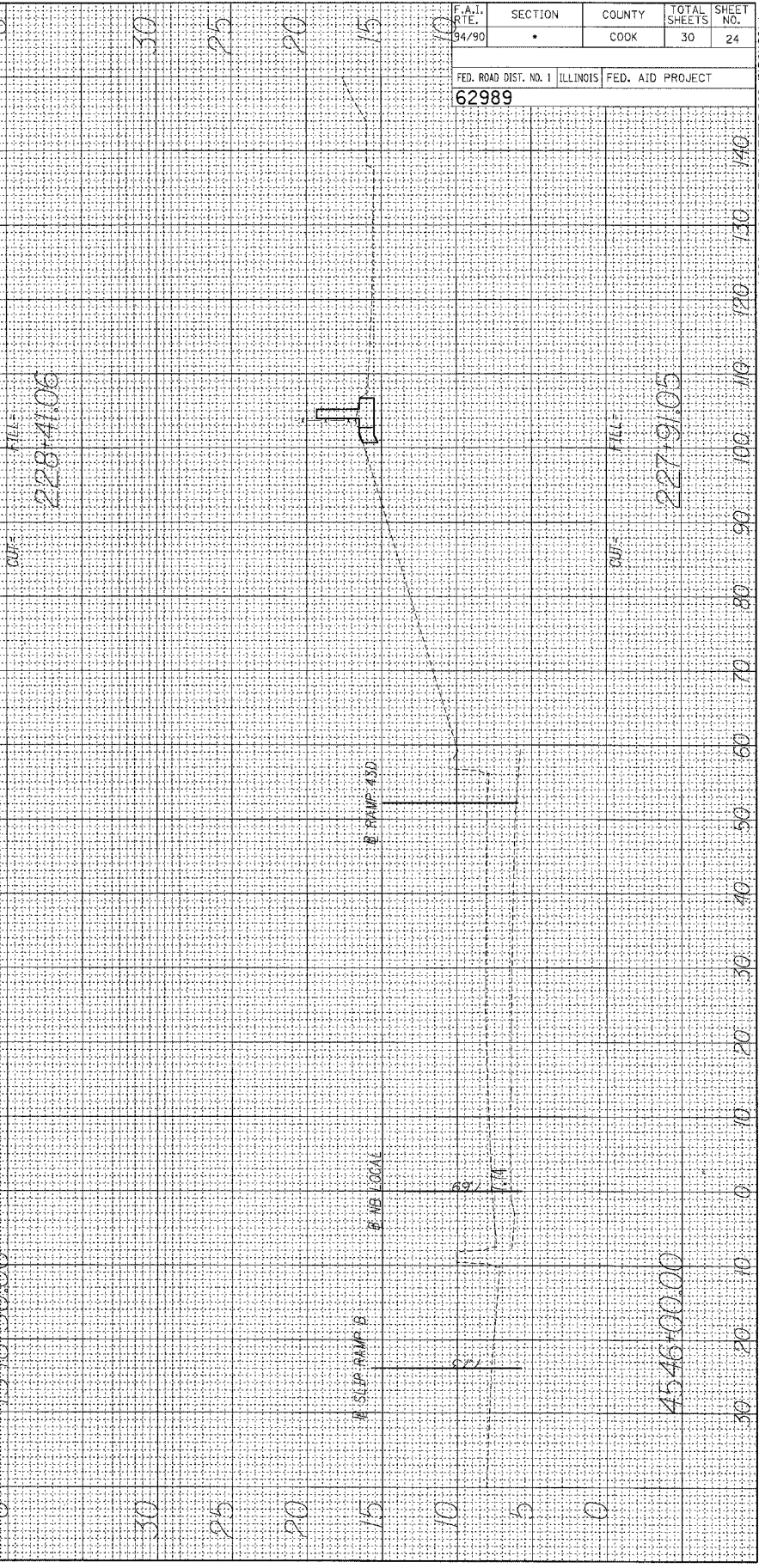
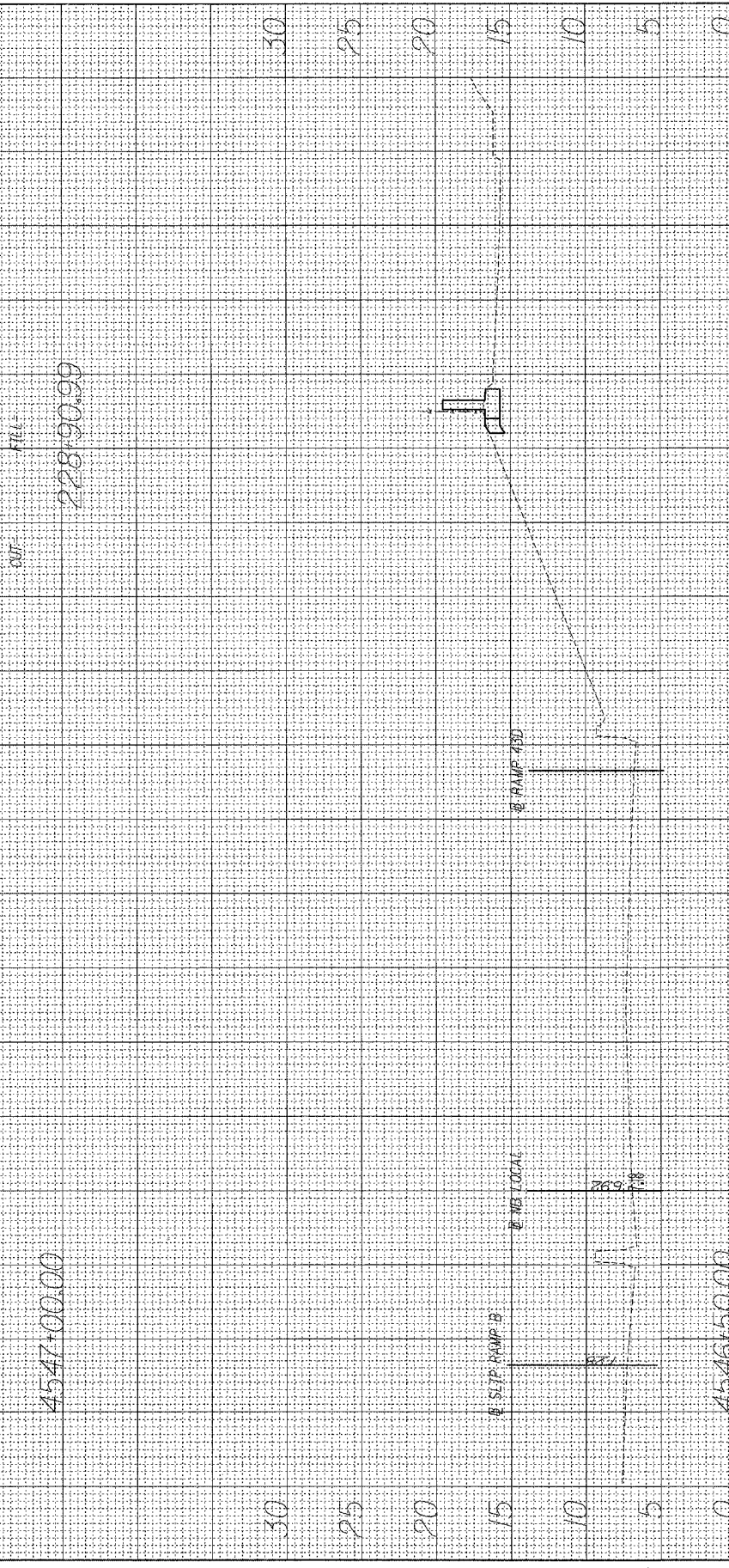
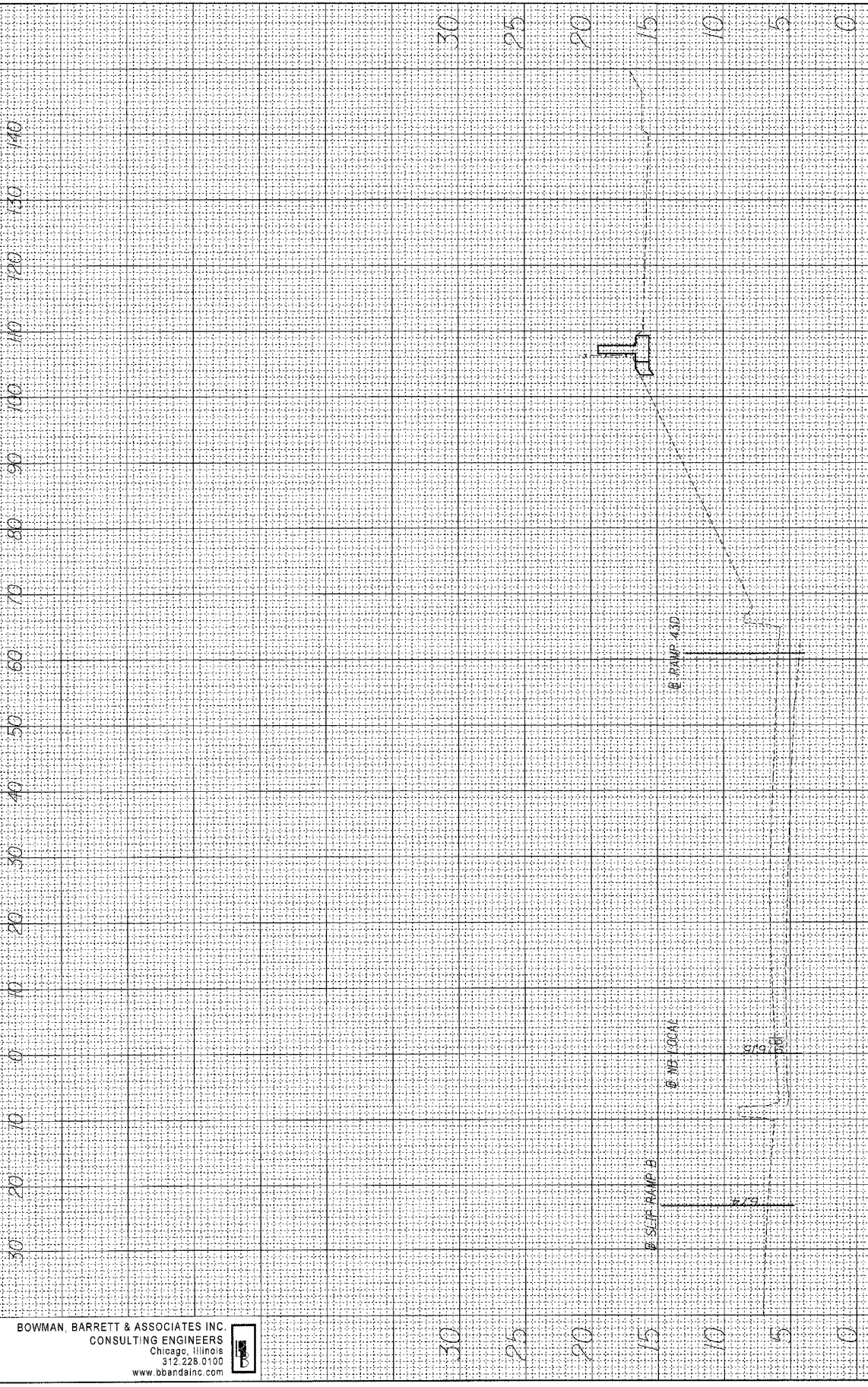
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	30	23
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62989				

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK NO.	PLATED		
	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK NO.	PLATED		
	TEMPLATE		
	AREAS CHECKED		



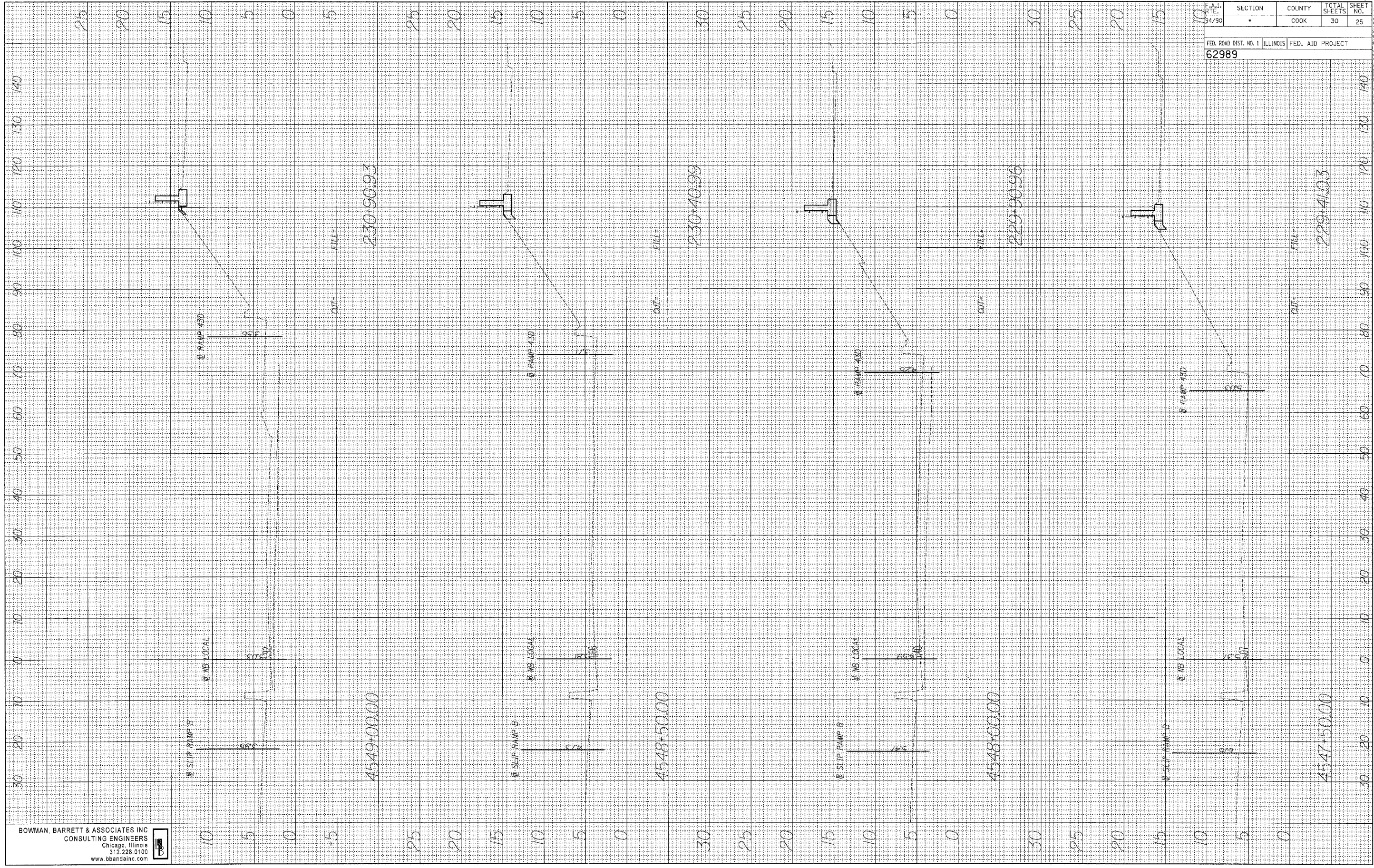
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F.A.I. RTE. 94/90	SECTION	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 24
FED. ROAD DIST. NO. 1		ILLINOIS		FED. AID PROJECT
62989				

FINAL SURVEY PLOTTED
 NOTE BOOK NO. _____
 BY _____ DATE _____
 SURVEY PLOTTED TEMPLATE AREAS CHECKED

ORIGINAL SURVEY PLOTTED
 NOTE BOOK NO. _____
 BY _____ DATE _____
 SURVEY PLOTTED TEMPLATE AREAS CHECKED



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F.A.I. R.T.E. 94/90	SECTION	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 25
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62989				

7/24/2008 7:35:55 PM

ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

BY _____ DATE _____

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

NO. _____

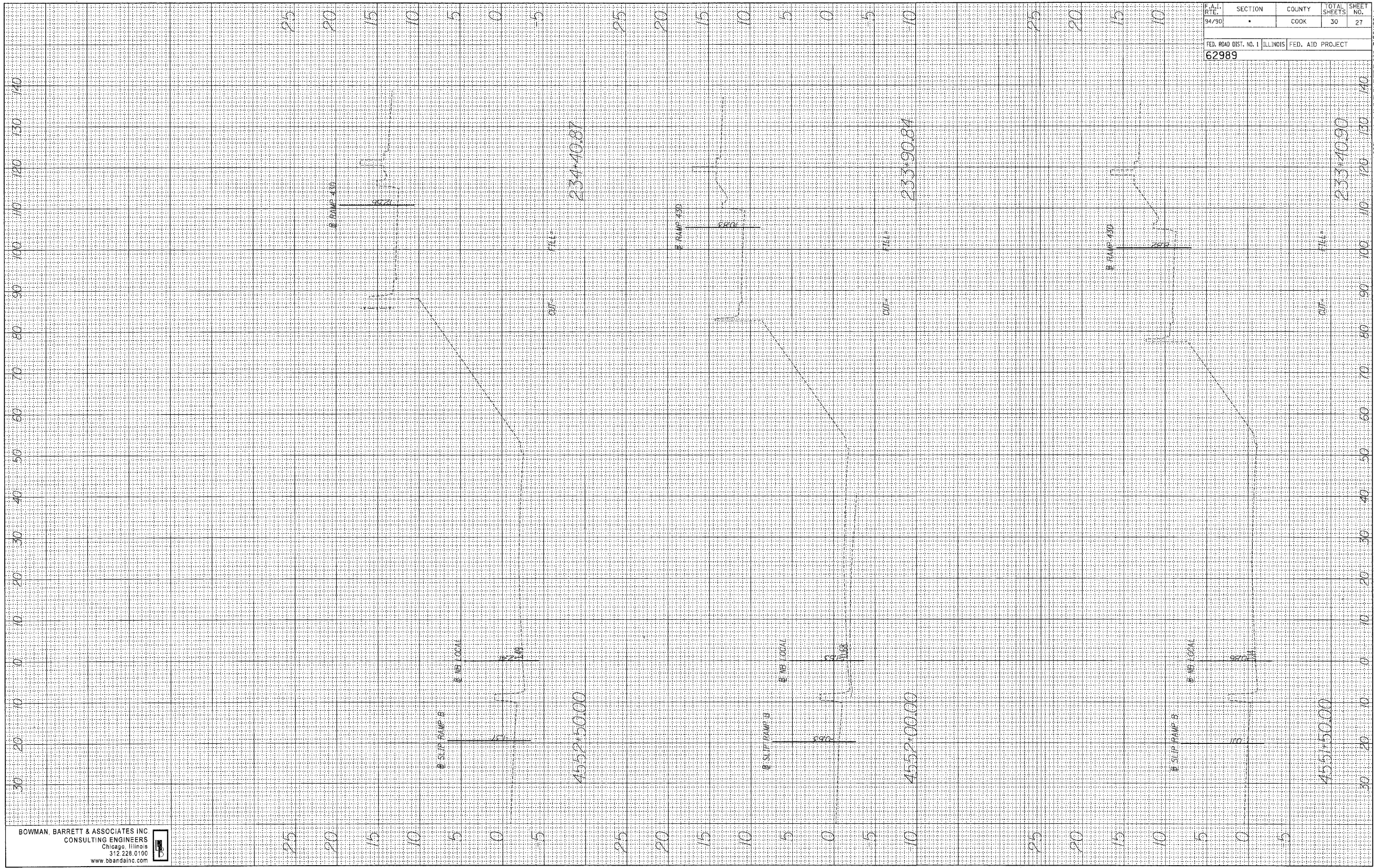
ORIGINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

BY _____ DATE _____

FINAL SURVEY PLOTTED TEMPLATE AREAS CHECKED

NO. _____

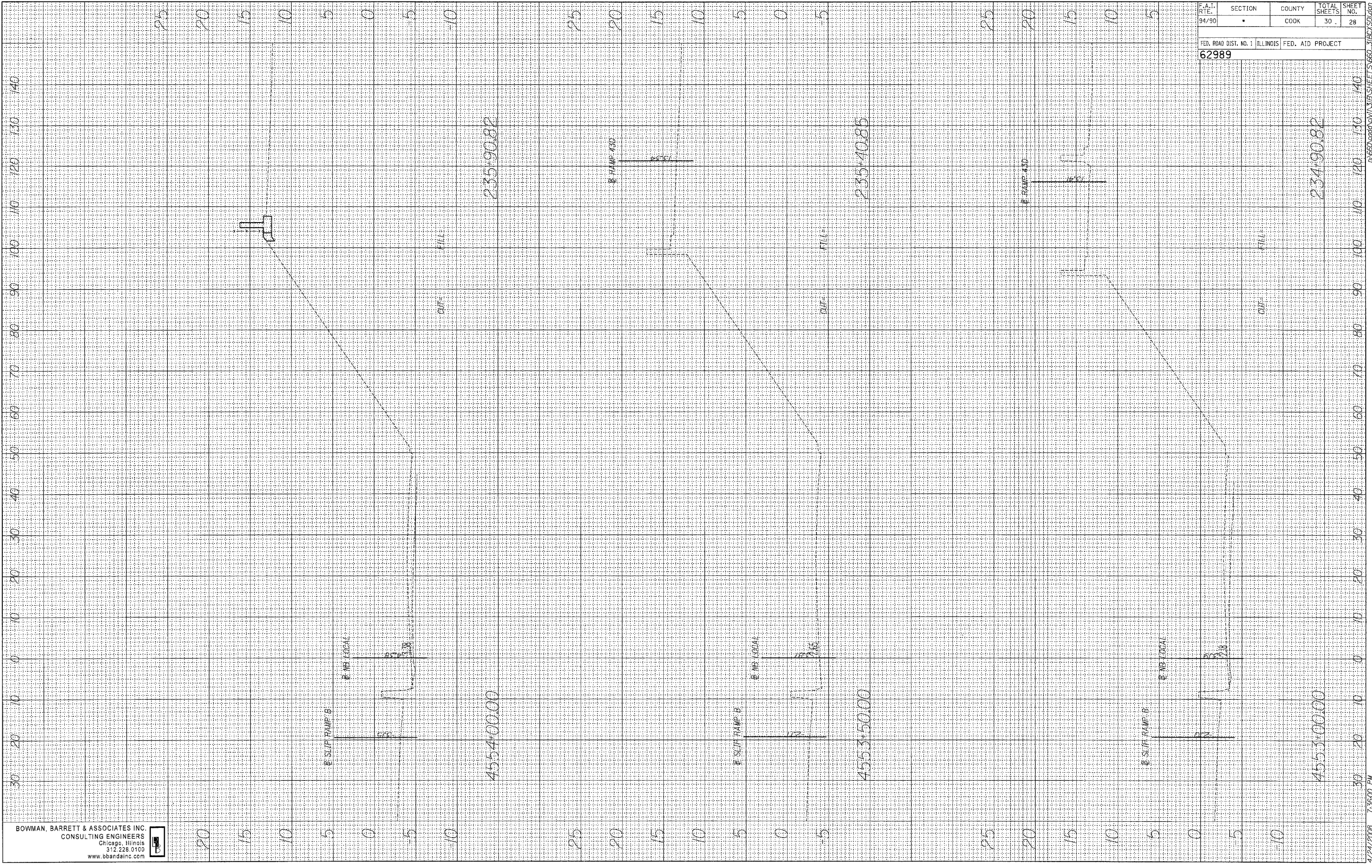
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F.A.I. RTE. 94/90	SECTION •	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 27
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62989				

FINAL SURVEY
 SURVEYED BY _____ DATE _____
 PLOTTED BY _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

ORIGINAL SURVEY
 SURVEYED BY _____ DATE _____
 PLOTTED BY _____
 NOTE BOOK NO. _____
 AREAS CHECKED _____

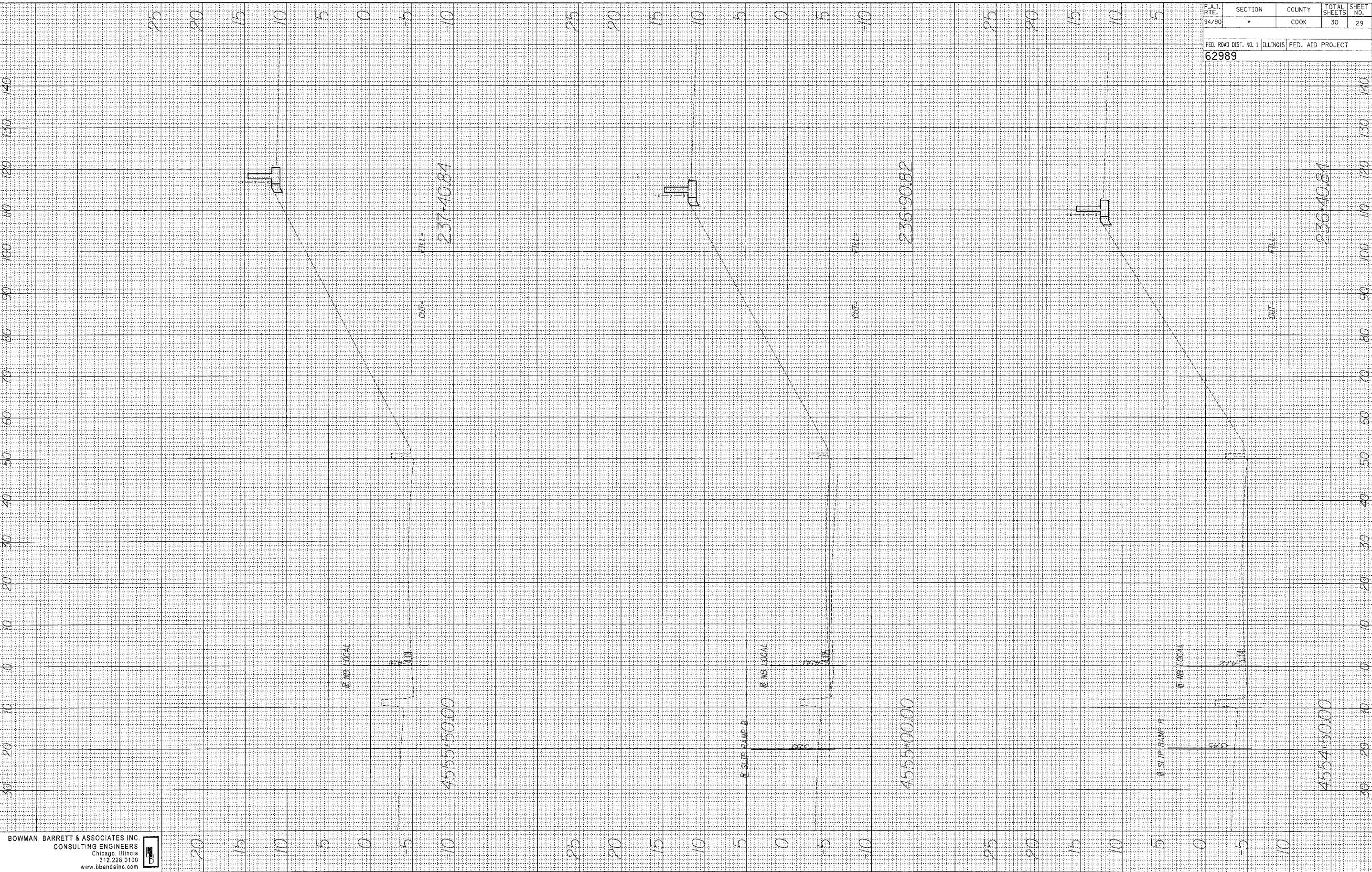


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F.A.I. RTE. 94/90	SECTION •	COUNTY COOK	TOTAL SHEETS 30	SHEET NO. 28
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT 62989				

FINAL SURVEY SURVEYED BY DATE
 NOTE BOOK NO. PLOTTED PLATE AREAS CHECKED

ORIGINAL SURVEY SURVEYED BY DATE
 NOTE BOOK NO. PLOTTED PLATE AREAS CHECKED



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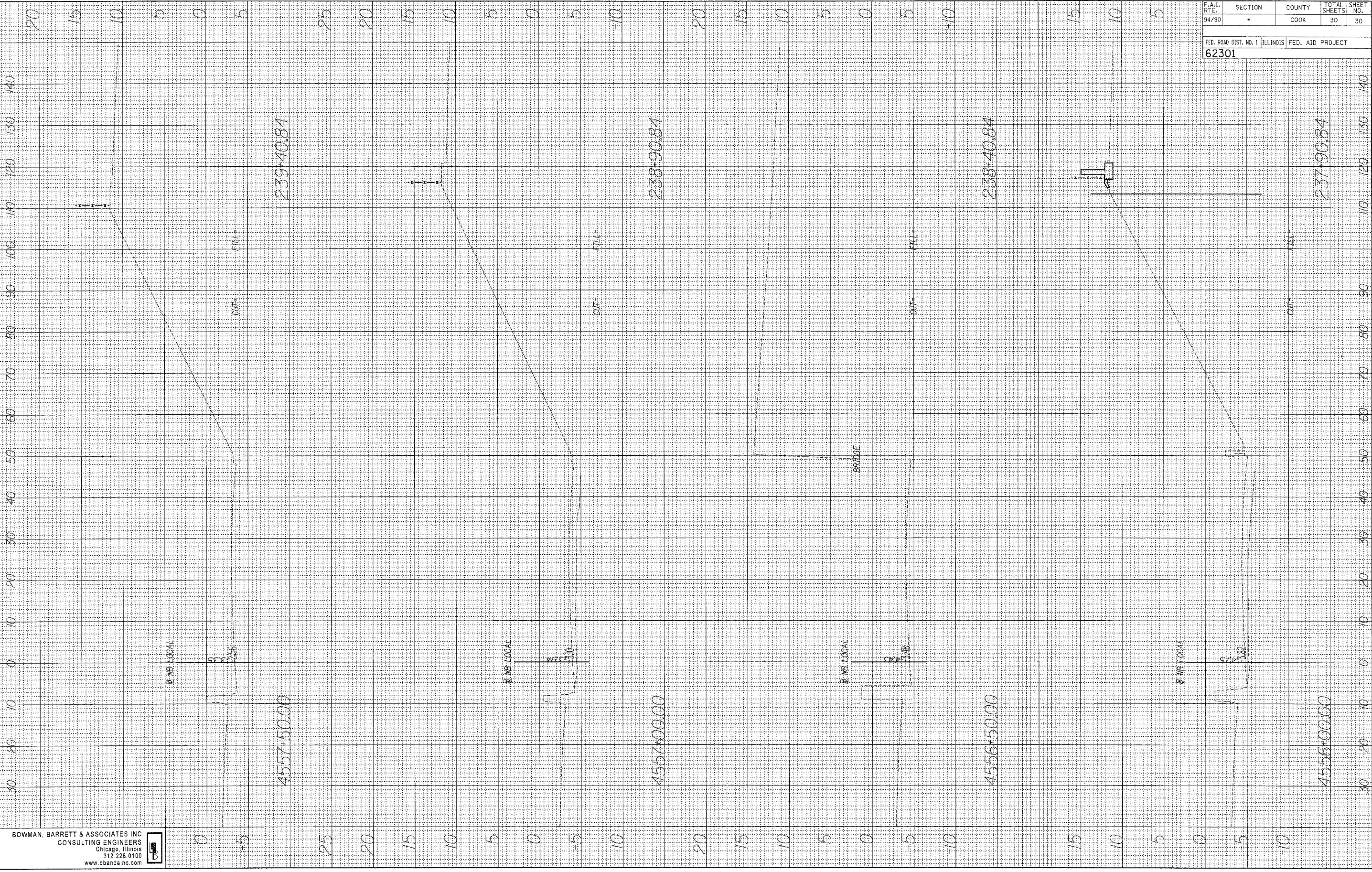
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	30	29

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT
62989

FINAL SURVEY SUBMITTED BY DATE
 NOTE BOOK PLOTTED
 AREAS CHECKED

ORIGINAL SURVEY SUBMITTED BY DATE
 NOTE BOOK PLOTTED
 AREAS CHECKED

F.A.I. RT.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	30	30
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
62301				



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