

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	•	COOK	22	1
62999			+1	23

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 2324.6-1P-1-4

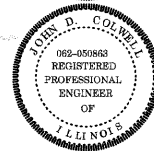
**SOUTHBOUND KNEE WALLS
(35TH ST TO 33RD ST)**

**COOK COUNTY
C-91-257-05**

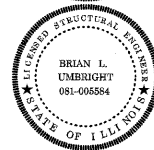
**DESIGN NUMBER
D-91-417-01**



SIGNATURE *Bennett D. Moore*
DATE Feb. 7, 2008
EXPIRES Nov. 30, 2009



SIGNATURE *John D. Colwell*
DATE Feb. 7, 2008
EXPIRES Nov. 30, 2009



SIGNATURE *Brian L. Umbricht*
DATE Feb. 7, 2008
EXPIRES Nov. 30, 2008

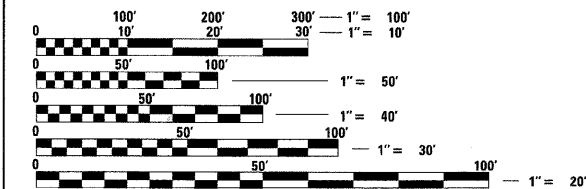


PROJECT LOCATED IN CITY OF CHICAGO

DESIGN DESIGNATION

WENTWORTH AVE; 8275 (20) URBAN COLLECTOR

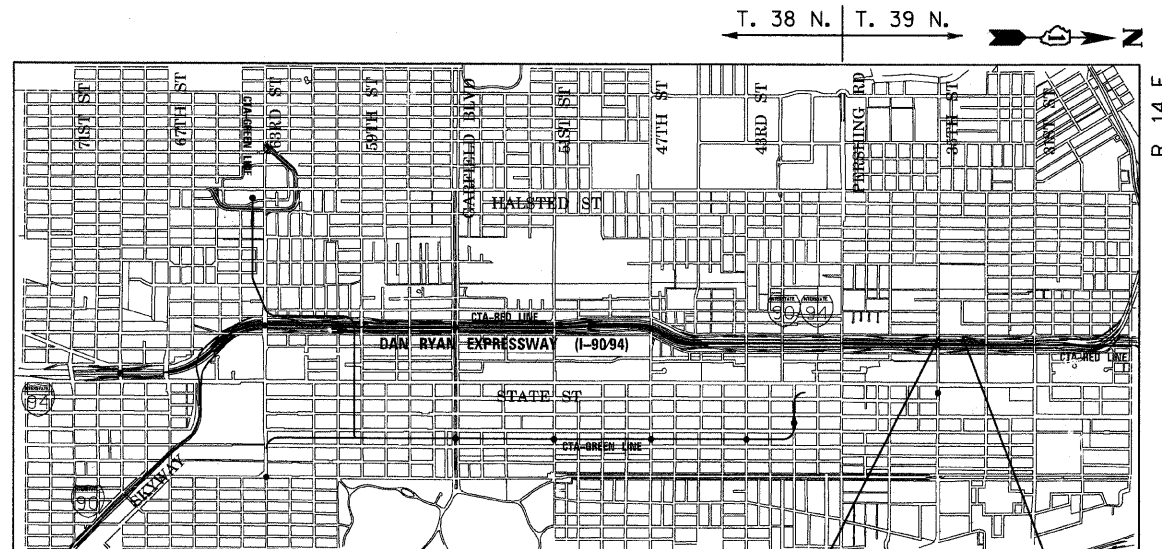
FRONTAGE ROAD:	ADT (2020)	DESIGN SPEED	POSTED SPEED
WENTWORTH AVE.	11,000	30	25



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:
CHICAGO UTILITY ALERT NETWORK
(312) 744-7000

CONTRACT NO. 62999



PROJECT BEGINS
SB WENTWORTH
STA 126+91

PROJECT ENDS
SB WENTWORTH
STA 133+16

LOCATION MAP



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED FEBRUARY 8, 20 08

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

March 21, 20 08

Eric E. Harshbarger
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

March 21, 20 08

Christine M. Reed *RD*
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com

DISTRICT ONE DESIGN/CONSULTANT SERVICES PROJECT MANAGER
RAJENDRA SHAH (847) 705-4555

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	22	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62999

GENERAL NOTES:

- THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH:
 CONTRACT 60A05 - SB FENCE AND GATES FROM 47TH PLACE TO 31ST ST
 CONTRACT 60A79 - GATEWAY LANDSCAPING AND IRRIGATION @ 35TH STREET
 CONTRACT 62303 - RECONSTRUCTION OF SOUTHBOUND LOCAL LANES AND RAMPS BETWEEN GARFIELD BOULEVARD AND 31ST ST
 CONTRACT 62583 - LIGHTING AND SURVEILLANCE 31ST ST TO I-57 INTERCHANGE
- CONTRACTOR SHALL MATCH ALL WORK COMPLETED IN CONTRACT 62301
- THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THE DRAWINGS, REPRESENT DATA RECEIVED FROM VARIOUS SOURCES. IT IS NOT GUARANTEED TO BE CORRECT OR ALL INCLUSIVE. THE CONTRACTOR MUST CONDUCT HIS OWN INVESTIGATIONS INTO THE LOCATION, SIZE, DEPTH, AND NATURE OF ANY AND ALL EXISTING UTILITIES WHICH MAY IMPACT THE WORK UNDER THIS CONTRACT. ANY EXISTING UTILITIES WHICH ARE TO REMAIN IN SERVICE MUST BE FULLY PROTECTED BY THE CONTRACTOR AND ANY DAMAGE CAUSED BY THE CONSTRUCTION MUST BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION OF ANY AND ALL SURFACE AND UNDERGROUND UTILITIES, EVEN THOUGH THEY MAY NOT BE IDENTIFIED ON THE PLANS.
- THE CONTRACTOR MUST COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITIES OF THE CITY OF CHICAGO. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR MUST CALL THE CHICAGO UTILITY ALERT NETWORK (C.U.A.N.) AT (312) 744-7000 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRICAL, TELEPHONE, CABLE, AND GAS FACILITIES (48 HOURS NOTIFICATION IS REQUIRED). THE CONTRACTOR MUST CONTACT THE CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT, PERMIT SECTION AT (312) 747-7893 FOR WATER AND CITY SEWER LOCATIONS.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM IDOT.
- WHEN ARTIFICIAL LIGHTING IS USED IN NIGHT OPERATIONS, THE CONTRACTOR MUST EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING COMMERCIAL AND RESIDENTIAL AREAS.
- USE NO. 6 EPOXY-COATED TIE BARS CONFORMING TO ARTICLE 1006.10(B)(2) OF THE STANDARD SPECIFICATIONS FOR TYING THE CURB AND GUTTER SECTIONS TO PAVEMENT AS SHOWN ON THE PLANS. THE TIE BARS WILL NOT BE PAID FOR SEPARATELY. TIE BARS USED WITH CURB AND GUTTER MUST BE INCLUDED IN THE COST OF THE COMBINATION CONCRETE CURB AND GUTTER OF THE TYPE SPECIFIED.
- CHAIN LINK FENCE REMOVAL MUST BE CONSIDERED AS PART OF CLEARING.
- IT MUST BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT NO GAP REMAINS BETWEEN PROPOSED KNEE WALLS OR WHERE PROPOSED KNEE WALL TERMINATES AND EXISTING FENCE REMAINS IN PLACE.
- THE CONTRACTOR MUST TAKE ALL NECESSARY SAFETY PRECAUTIONS TO PROTECT AND PROVIDE ACCESS TO ABUTTING PROPERTY, UTILITIES, PEDESTRIANS, AND VEHICULAR TRAFFIC.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER MUST BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR MUST PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS. THE ENGINEER OR AN AUTHORIZED SURVEYOR AGENT WILL WITNESS OR OTHERWISE REFERENCE AND RESET MONUMENTS AS NECESSARY. ALL PROPERTY CORNERS EXCEPT THOSE WITHIN AREAS WHERE THE SCHEDULE, IF PROVIDED, SHOWS PLACEMENT OF R.O.W. MARKERS MUST REMAIN UNDISTURBED.
- ALL ELEVATIONS IN THIS PLAN SET ARE BASED ON THE CHICAGO CITY DATUM. THE CONVERSION EQUATION FROM CCD TO NAVD 88 IS: NAVD 88 ELEVATION = CCD + 579.19.

- BARRICADES: THE CONTRACTOR MUST PROVIDE AND INSTALL TWO WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED - ONE WEIGHTED SANDBAG ACROSS EACH BOTTOM RAIL. ALL TYPE III BARRICADES REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- SUPERSTRUCTURE RATING COARSE AGGREGATE MUST BE USED IN THE CONCRETE BARRIER WALL CONCRETE MIXTURE.
- LOCATIONS OF ACCESS CONTROL FENCING AS SHOWN ON THE PLANS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO BETTER FIT FIELD CONDITIONS.
- THE LOCATION OF VARIOUS ITEMS SUCH AS PAVEMENT, BARRIER WALLS, ELECTRICAL SYSTEMS AND DRAINAGE STRUCTURES BUILT IN CONTRACTS UNDER CONSTRUCTION DURING THE PREPARATION OF THESE PLANS IS BASED ON THE PUBLISHED CONTRACT PLAN DRAWINGS AVAILABLE DURING DESIGN. THE CONTRACTOR MUST FIELD VERIFY LIMITS, LOCATIONS AND ELEVATIONS OF THESE PREVIOUSLY CONSTRUCTED ITEMS.
- CRUSHING PLANT AND CONCRETE PLANT LOCATIONS REQUIRE CITY OF CHICAGO APPROVAL.
- THE CONTRACTOR IS ALERTED THAT THERE ARE EXISTING CTA UTILITY FACILITIES WITHIN, ADJACENT TO, AND CROSSING UNDER THE EXPRESSWAY FROM THE FRONTAGE ROADS TO THE CTA OPERATING AREA. THE EXACT LOCATION OF THESE FACILITIES IS NOT KNOWN. THE CONTRACTOR MUST CONTACT THE CTA AT 312-681-3860 FOR LOCATIONS OF THESE FACILITIES BEFORE PROCEEDING WITH ANY WORK WITHIN OR ADJACENT TO THE CTA OPERATING AREA. FOR ADDITIONAL INFORMATION REGARDING BURIED CONDUITS, CONTACT MR. RICK STRAUBEL, MANAGER TECH SUPPORT, AT 312-922-0508.
- THE CONTRACTOR MUST USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS THAT WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE.
- THE CONTRACTOR MUST MAINTAIN THE SURFACE DRAINAGE OF ALL ROADWAYS DURING CONSTRUCTION OF THIS PROJECT. WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR MUST PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINS, SEWERS, AND CATCH BASINS. THE CONTRACTOR MUST PROVIDE FACILITIES TO TAKE IN ALL STORM WATER WHICH WILL BE RECEIVED BY THESE DRAINS AND SEWERS AND DISCHARGE THE SAME. THE CONTRACTOR MUST PROVIDE AND MAINTAIN A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER RECEIVED FROM THESE TEMPORARY CONNECTIONS UNTIL INSTALLATION IS COMPLETE INCLUDING PAVEMENT. THIS WORK MUST NOT BE PAID FOR SEPERATELY BUT MUST BE CONSIDERED INCLUDED IN THE COST OF THIS CONTRACT.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF EXISTING PLANT MATERIAL FOR WHICH THE CONTRACT DOES NOT PROVIDE REMOVAL. THE PROTECTION OF EXISTING PLANT MATERIAL AND THE REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL DAMAGED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 201 OF THE STANDARD SPECIFICATIONS.
- ALL RELOCATION OF EXISTING SIGNS IN CONFLICT WITH PROPOSED CONSTRUCTION SHALL CONFORM TO ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS. EXISTING SIGNS TO BE RELOCATED IN PROPOSED CONCRETE MEDIAN SURFACE SHALL BE INSTALLED USING A SLEEVE OR BY CORING THE CONCRETE MEDIAN SURFACE. THE SLEEVE AND CORING OPERATIONS SHALL BE AS DIRECTED AND APPROVED BY THE ENGINEER. EXISTING SIGNS TO BE RELOCATED ONTO PROPOSED KNEE WALL FOOTINGS SHALL BE INSTALLED ACCORDING TO SECTIONS 728 AND 731 OF THE STANDARD SPECIFICATIONS. LABOR AND MATERIALS FOR RELOCATION OF EXISTING SIGNS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCLUDED IN THE COST OF THE FLUTED KNEE WALL.
- THE INTENT OF THE CONTRACT DOCUMENTS IS TO CONSTRUCT THE FLUTED KNEE WALL BEHIND THE EXISTING CURB AND GUTTER. ANY DAMAGE TO THE EXISTING CURB AND GUTTER SHALL BE REPAIRED TO THE ORIGINAL CONDITION OF THE CURB AND GUTTER BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

GENERAL NOTES: CITY OF CHICAGO

- IN CASE OF DAMAGE TO CITY OF CHICAGO SEWERS, PRIVATE AND PUBLIC DRAINS, SEWER STRUCTURES AND/OR BENCH MONUMENTS, THE CONTRACTOR MUST IMMEDIATELY CONTACT THE DEPARTMENT OF WATER MANAGEMENT AT (312) 747-7892 OR (312) 747-7893.
- BENCH MONUMENT LOCATIONS WITHIN THE LIMITS OF THE IMPROVEMENT CAN BE OBTAINED FROM THE DEPARTMENT OF WATER MANAGEMENT AT 333 SOUTH STATE STREET, SUITE 410, CHICAGO, IL 60604. THE CONTRACTOR IS RESPONSIBLE FOR THE COST OF REPLACING ANY BENCH MONUMENT DAMAGED OR DESTROYED DURING CONSTRUCTION.
- IN LOCATIONS WHERE THE MAIN SEWERS, DRAINAGE STRUCTURES, PUBLIC, AND PRIVATE DRAIN CONNECTIONS ARE DISTURBED OR DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO RESTORE AND REPLACE THE DAMAGED FACILITIES AT HIS/HER OWN EXPENSE TO THE SATISFACTION OF THE DEPARTMENT OF WATER MANAGEMENT. THE SEWER FLOWS MUST BE MAINTAINED AT ALL TIMES.
- EXTREME CAUTION IS TO BE TAKEN TO ENSURE THAT NO FACILITY OWNED AND MAINTAINED BY THE DEPARTMENT OF WATER MANAGEMENT IS DAMAGED DURING CONSTRUCTION. IF ANY DAMAGE OCCURS TO ANY FACILITIES, THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE COST OF REPAIRING OR REPLACING THEM.
- CITY OF CHICAGO WATER VALVE VAULTS AND SEWER STRUCTURES MUST NOT BE CLOSED, COVERED OR OTHERWISE OBSTRUCTED DURING CONSTRUCTION WITHOUT WRITTEN PERMISSION FROM THE CITY OF CHICAGO DEPARTMENT OF WATER MANAGEMENT.
- THE CHICAGO TRANSIT AUTHORITY (CTA) HAS BUS OPERATIONS ALONG WENTWORTH AVENUE/WELLS STREET. THE CONTRACTOR MUST INFORM THE CTA REPRESENTATIVE MS. CHARLENE RIFFER (GENERAL MANAGER CONSTRUCTION) OF THE ON-GOING PROJECT SCHEDULE STARTING 28 DAYS BEFORE THE START OF CONSTRUCTION AT (312) 681-3851.

BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbainc.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

GENERAL NOTES

SCALE: NONE
 DATE: 02/08/08

DRAWN BY: JDC
 CHECKED BY: RS

2/12/2008 3:40:04 PM n:\66000\94\90\132E\132E SHEET 5660_32E.pwd\000.dgn

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

62999

SUMMARY OF QUANTITIES

URBAN

CODE NO.	ITEM	UNIT	QUANTITY	100% STATE JOOO
20200100	EARTH EXCAVATION	CU YD	132	132
21101645	TOPSOIL FURNISH AND PLACE, 12"	SQ YD	132	132
25000210	SEEDING, CLASS 2A	ACRE	0.08	0.08
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	8	8
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	8	8
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	8	8
25000800	GROUND PREPARATION FOR SEEDING	ACRE	0.05	0.05
25100630	EROSION CONTROL BLANKET	SQ YD	364	364
42001300	PROTECTIVE COAT	SQ YD	27	27
44004250	PAVED SHOULDER REMOVAL	SQ YD	49	49
50300225	CONCRETE STRUCTURES	CU YD	2.5	2.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1.9	1.9
50300300	PROTECTIVE COAT	SQ YD	71	71
50300510	RUSTICATION FINISH	SQ FT	35	35
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	400	400
60618324	CONCRETE MEDIAN SURFACE, 6" (SPECIAL)	SQ FT	188	188
66400550	CHAIN LINK FENCE, 4' (SPECIAL)	FOOT	580	580
67100100	MOBILIZATION	L SUM	1	1
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	26	26
X0323973	SEDIMENT CONTROL, SILT FENCE	FOOT	624	624
X0323974	SEDIMENT CONTROL, SILT FENCE MAINTENANCE	FOOT	156	156
X0324640	FLUTED KNEE WALL	FOOT	494	494
X6065740	CONCRETE MEDIAN SURFACE, 5" (MODIFIED)	SQ FT	48	48
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	6	6
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
Z0030020	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	1	1
Z0076600	TRAINEES	HOUR		
44002300	CURB REMOVAL (PARTIAL)	FOOT	59	59

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
10-11	EXISTING AND PROPOSED KNEE WALL PLANS
12-13A	STRUCTURAL DETAILS
14	BD-51 DISTRICT 1, BENCHING DETAIL FOR EMBANKMENT WIDENING
15	TC-10 DISTRICT 1, TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS & DRIVEWAYS
16	TC-17 DISTRICT 1, TRAFFIC CONTROL DETAILS FOR FREEWAY SHOULDER CLOSURES PARTIAL RAMP CLOSURES
17	TC-18 DISTRICT 1, SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS
18	TC-22 DISTRICT 1, ARTERIAL ROAD INFORMATION SIGN
19-22	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
701801-05	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

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)
SUMMARY OF QUANTITIES
INDEX OF SHEETS
HIGHWAY STANDARDS
SCALE: NONE
DATE: 02/08/08
DRAWN BY: JDC
CHECKED BY: DDM

SOQ-1

3-40-05 PM
2/12/2008

Rev

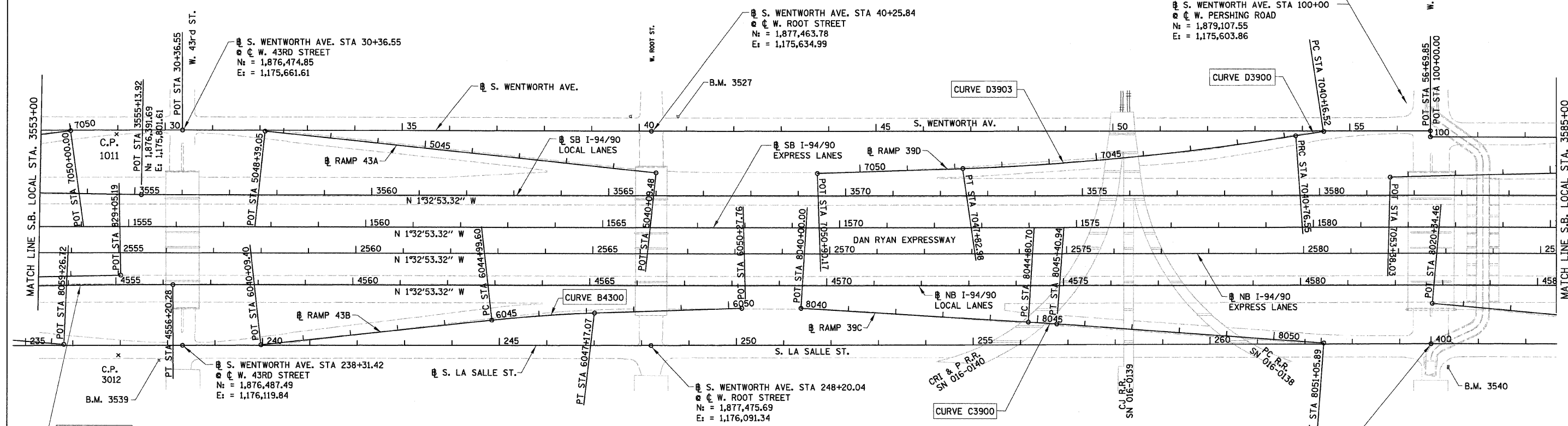
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999		2324.6-1P-1-4		

PROP. CURVE D3903
P.I. STA = 7044+30.25
Nt = 1,878,475.96
Et = 1,175,675.24
Δ = 7° 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
Δ = 0° 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

⊕ S. WENTWORTH AVE. STA 56+69.85
⊕ W. PERSHING ROAD
Nt = 1,879,107.55
Et = 1,175,590.76

⊕ S. WENTWORTH AVE. STA 100+00
⊕ W. PERSHING ROAD
Nt = 1,879,107.55
Et = 1,175,603.86



PROP. CURVE NBLOC08
P.I. STA = 4554+19.42
Nt = 1,876,262.66
Et = 1,175,997.17
Δ = 1° 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
Δ = 4° 21' 02" (RT)
D = 2° 00' 02"
R = 2,864.00'
T = 108.79'
L = 217.47'
E = 2.07'
θ = 3.0%
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
Δ = 0° 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.

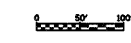
REVISIONS	
NAME	DATE
REVISED	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

ALIGNMENT PLAN

SCALE: 1"=100'
DATE: 03/06/08
DRAWN BY: JDC
CHECKED BY: RS

BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



I:\680\road\94\90\3525\SHEETS\660_32\FINAL\01.dwg
 12/30/02 PM
 3/6/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999	2324.6-1P-1-4			

PROP. CURVE DT3500
 P.I. STA = 7044+22.81
 N_t = 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_t = 1,880,010.54
 E_t = 1,175,633.56
 P.T. STA = 7044+94.83
 N_t = 1,879,867.13
 E_t = 1,175,647.62

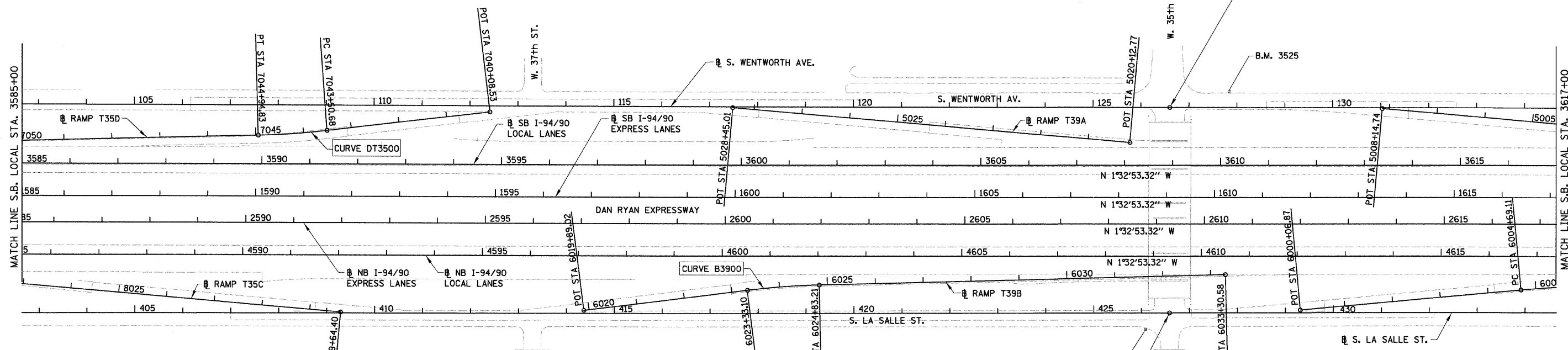
PROP. CURVE B3900
 P.I. STA = 6024+08.22
 N_t = 1,880,970.99
 E = 1,175,932.00
 Δ = 5° 47' 44" (RT)
 D = 3° 51' 39"
 R = 1,484.00'
 T = 75.12'
 L = 150.11'
 E = 1.90'
 e = 3.7%
 S.A. = STA 6022+97.10
 TO 6023+42.10
 S.R. = STA 6024+74.21
 TO 6025+19.21
 P.C. STA = 6023+33.10
 N_t = 1,880,896.76
 E_t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

S. LASALLE ST. STA 426+58.57
 @ W. 35TH STREET
 N_t = 1,881,778.46
 E_t = 1,175,967.25

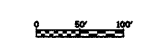
- NOTES:
1. AVERAGE GRID TO GROUND CONVERSION
FACTOR = 1.000010988654360
 2. FOR BENCH MARK INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.
 3. FOR RAMP P.O.T. INFORMATION, SEE SHEET ALT-16 OF ALIGNMENT PLAN SHEETS.

REVISIONS	
NAME	DATE
REVISED	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
 F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)
ALIGNMENT PLAN
 SCALE: 1"=100'
 DATE: 03/06/08
 DRAWN BY: JDC
 CHECKED BY: RS



BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbandainc.com

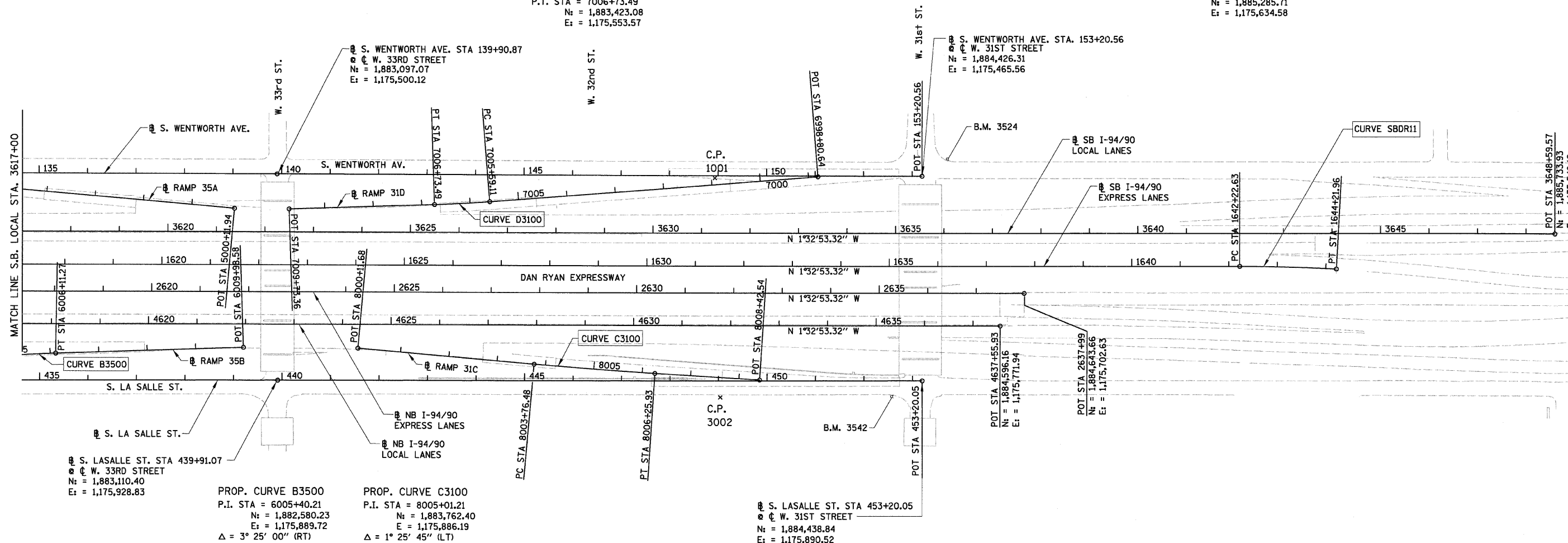


ALT-03
 12-36/13 PM
 3/76/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999		2324.6-1P-1-4		

PROP. CURVE D3100
P.I. STA = 7006+16.31
N_t = 1,883,480.18
E = 1,175,550.12
Δ = 2° 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_t = 1,883,537.06
E_t = 1,175,544.09
P.T. STA = 7006+73.49
N_t = 1,883,423.08
E_t = 1,175,553.57

PROP. CURVE SBDR11
P.I. STA = 1643+22.32
N_t = 1,885,186.06
E = 1,175,631.95
Δ = 3° 03' 18" (RT)
D = 1° 31' 57"
R = 3,738.57'
T = 99.69'
L = 199.33'
E = 1.33'
e = ±2.5% (MATCH EXISTING)
S.A. = STA 1641+95.99
TO 1642+35.95
S.R. = N/A
P.C. STA = 1642+22.63
N_t = 1,885,086.40
E_t = 1,175,634.65
P.T. STA = 1644+21.96
N_t = 1,885,285.71
E_t = 1,175,634.58



S. LASALLE ST. STA 439+91.07
@ W. 33RD STREET
N_t = 1,883,110.40
E_t = 1,175,928.83

PROP. CURVE B3500
P.I. STA = 6005+40.21
N_t = 1,882,580.23
E_t = 1,175,889.72
Δ = 3° 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_t = 1,882,509.63
E_t = 1,175,898.23
P.T. STA = 6006+11.27
N_t = 1,882,651.20
E_t = 1,175,895.43

PROP. CURVE C3100
P.I. STA = 8005+01.21
N_t = 1,883,762.40
E_t = 1,175,886.19
Δ = 1° 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_t = 1,883,637.89
E_t = 1,175,878.68
P.T. STA = 8006+25.93
N_t = 1,883,887.05
E_t = 1,175,890.60

S. LASALLE ST. STA 453+20.05
@ W. 31ST STREET
N_t = 1,884,438.84
E_t = 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.

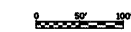
REVISIONS	
NAME	DATE
REVISOR	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

ALIGNMENT PLAN

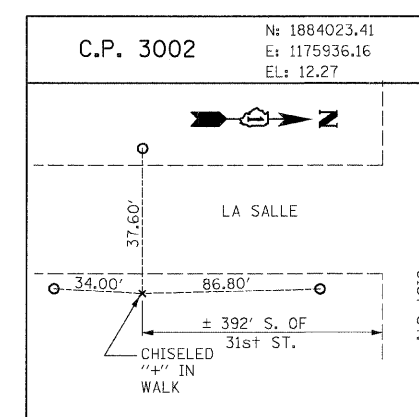
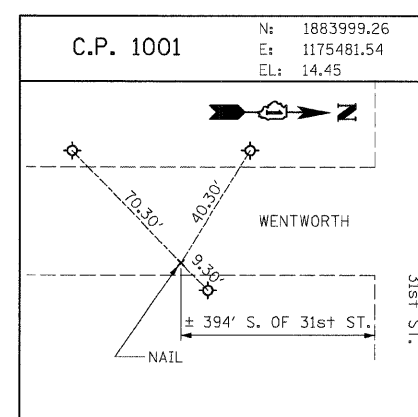
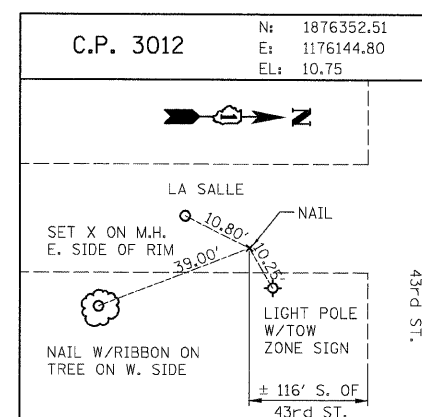
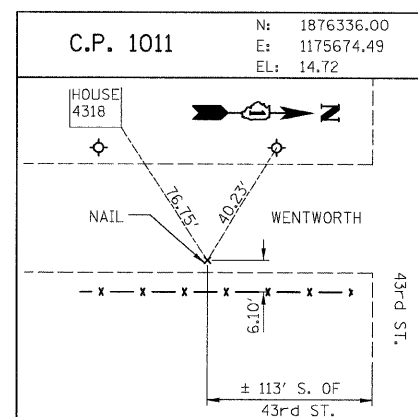
SCALE: 1"=100'
DATE: 03/06/08
DRAWN BY: JDC
CHECKED BY: RS

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



12/26/2008 3:16:27 PM
N:\660\road\94\90\35E\SHEETS\660_32CAL\01.dgn

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	22	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999		2324.6-1P-1-4		



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.

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



REVISIONS	
NAME	DATE
REVISED	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

ALIGNMENT PLAN

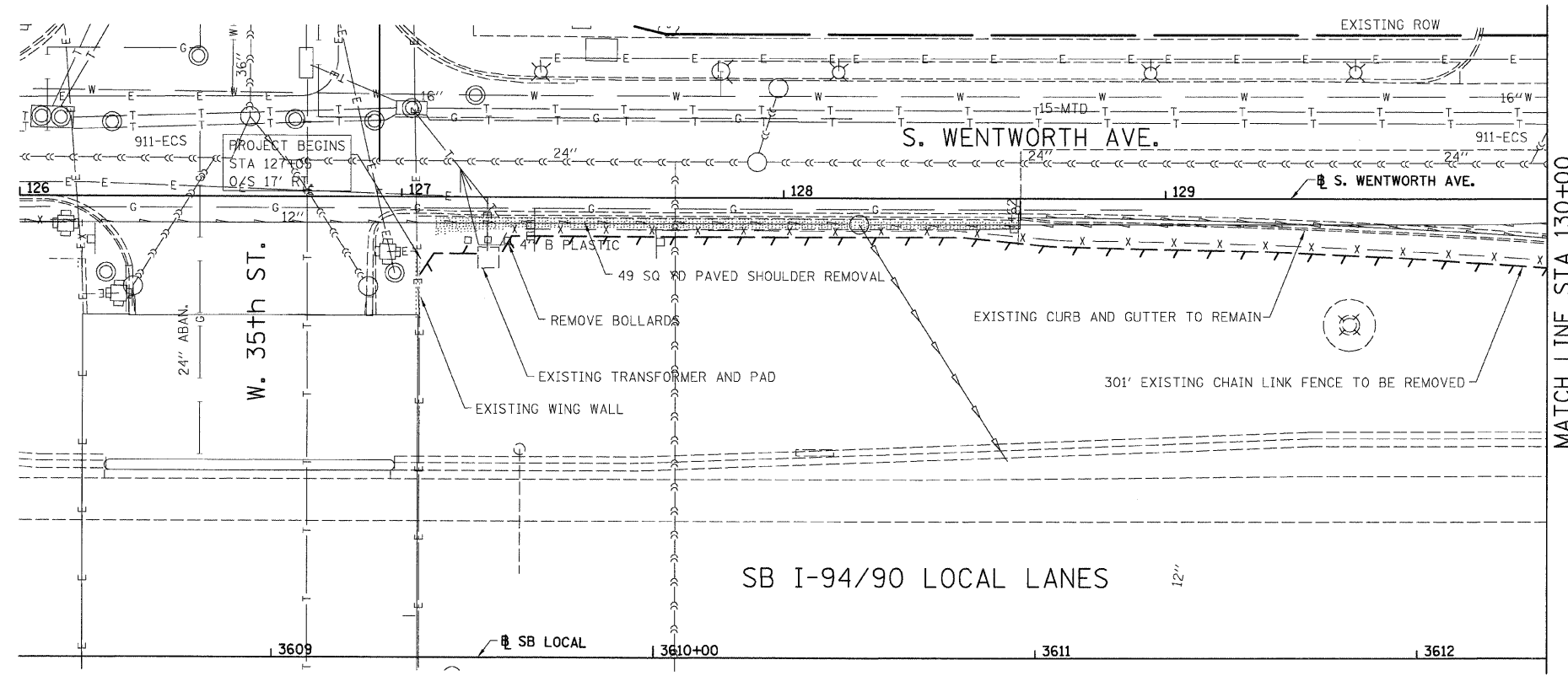
SCALE: 1"=100'
DATE: 03/06/08

DRAWN BY: JDC
CHECKED BY: RS

ALT-05

12:38:43 PM
3/6/2008

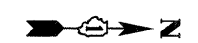
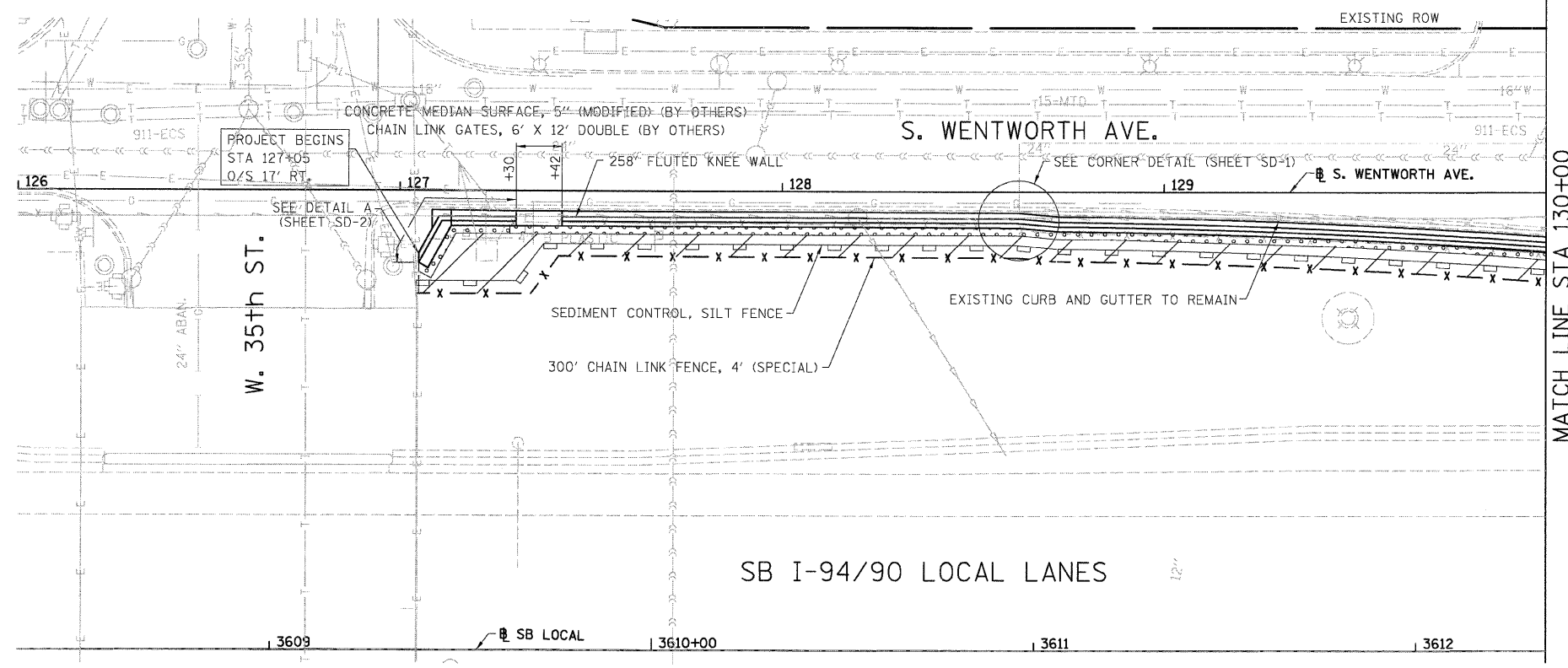
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999		2324.6-1P-1-4		



- LEGEND:
- PAVED SHOULDER REMOVAL
 - LINEAR REMOVALS

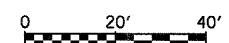
NOTE:
COST OF REMOVE BOLLARDS INCLUDED WITH EARTH EXCAVATION.

EXISTING CONDITIONS AND REMOVAL
PROPOSED IMPROVEMENTS



- LEGEND:
- GROUND PREPARATION FOR SEEDING, CLASS 2A EROSION CONTROL BLANKET
 - TOPSOIL FURNISH AND PLACE, 12\"/>

- 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
REVISED	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

EXISTING AND PROPOSED
KNEE WALL PLANS

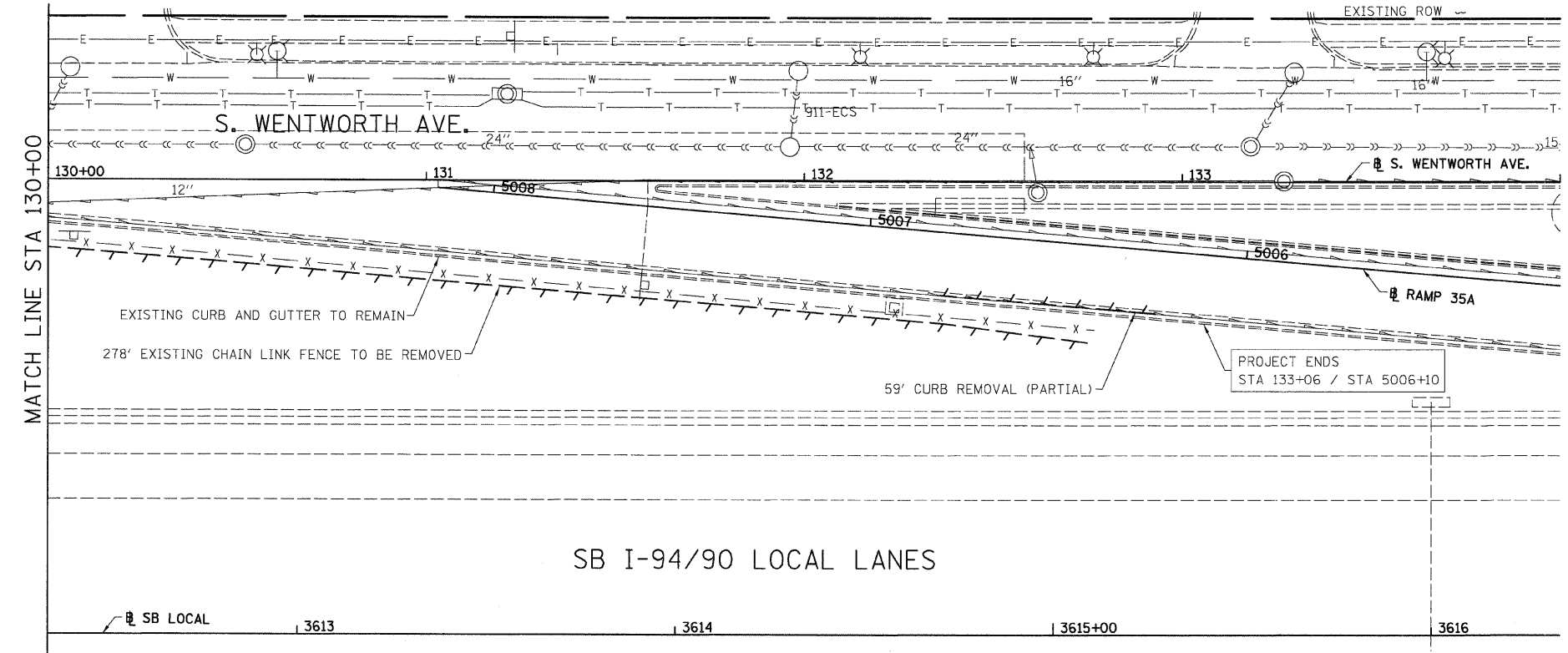
SCALE: 1"=20'
DATE: 03/06/08

DRAWN BY: JDC
CHECKED BY: ODM

BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com

3/16/2008 7:09:46 PM

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999		2324.6-1P-1-4		

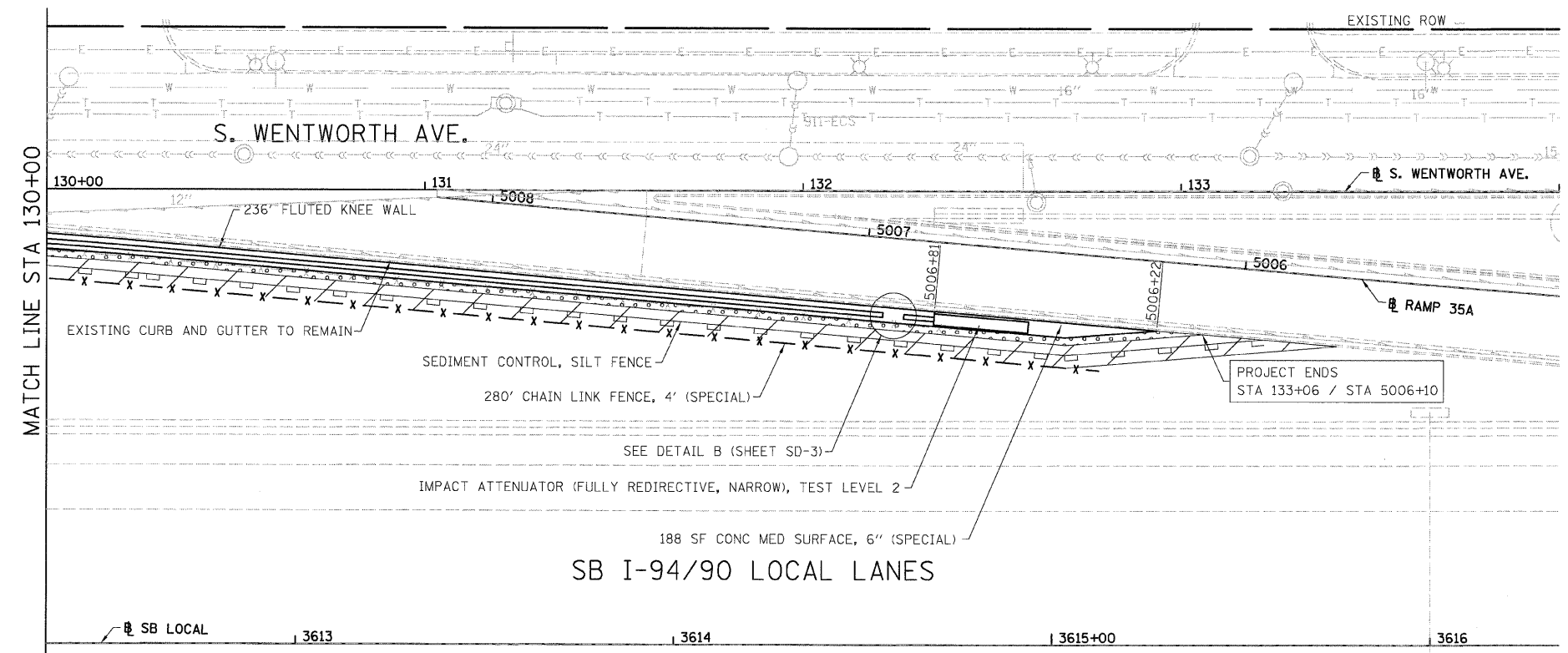


LEGEND:

PAVED SHOULDER REMOVAL

LINEAR REMOVALS

EXISTING CONDITIONS AND REMOVAL
PROPOSED IMPROVEMENTS

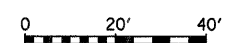


LEGEND:

GROUND PREPARATION FOR SEEDING
SEEDING, CLASS 2A
EROSION CONTROL BLANKET

TOPSOIL FURNISH AND PLACE, 12"
SEEDING, CLASS 2A
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
REVISED	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

EXISTING AND PROPOSED
KNEE WALL PLANS

SCALE: 1"=20'
DATE: 03/06/08

DRAWN BY: JDC
CHECKED BY: DDM

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbandainc.com



7.056.31 FM 3/16/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999	2324.6-1P-1-4			

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

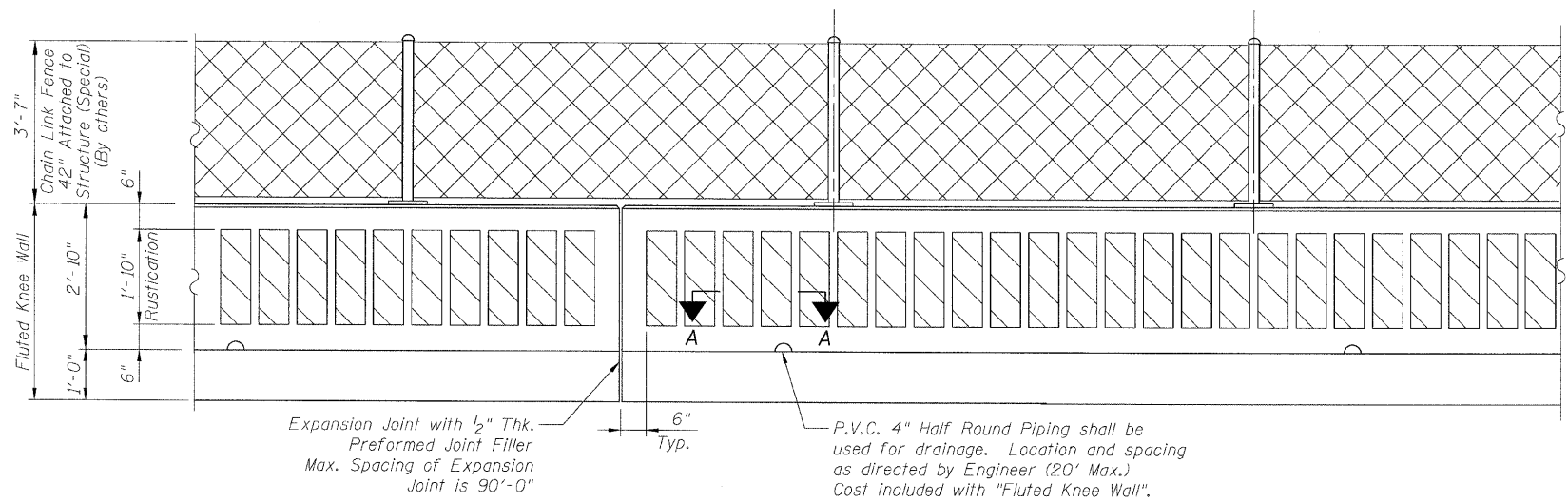
* Quantities are per foot of Fluted Knee Wall and are provided for estimating purposes only. See Note 5.

NOTES:

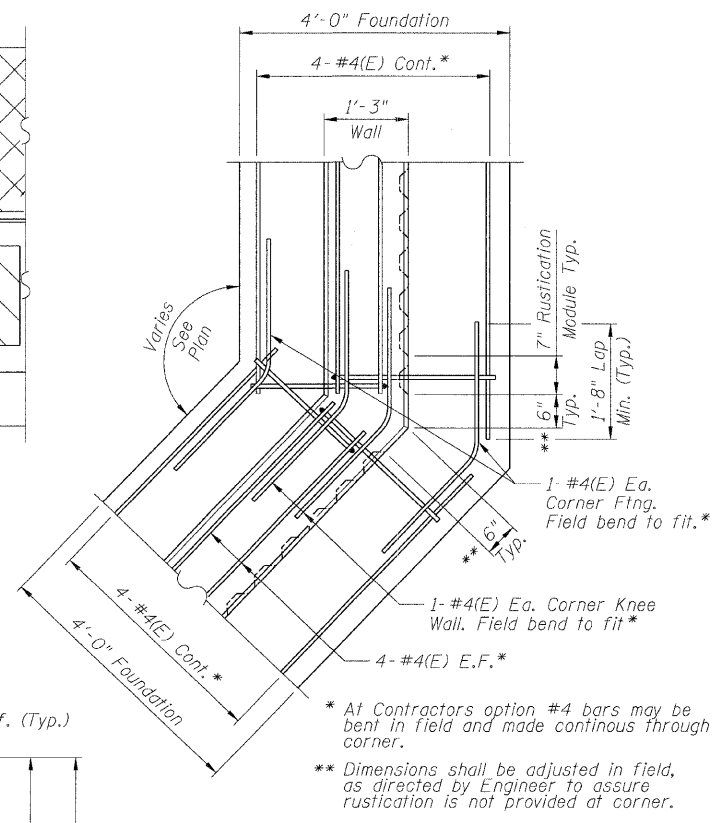
1. Back Face is face adjacent to Frontage Rd. and Front Face is face adjacent to Expressway.
2. Concrete: f'c = 3500 psi
3. Provide California Finish on top of foundation between stem and Frontage Road. See Roadway Details. Cost included with "Fluted Knee Wall".
4. At locations where Fluted Knee Wall abuts a rigid Structure, a 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:

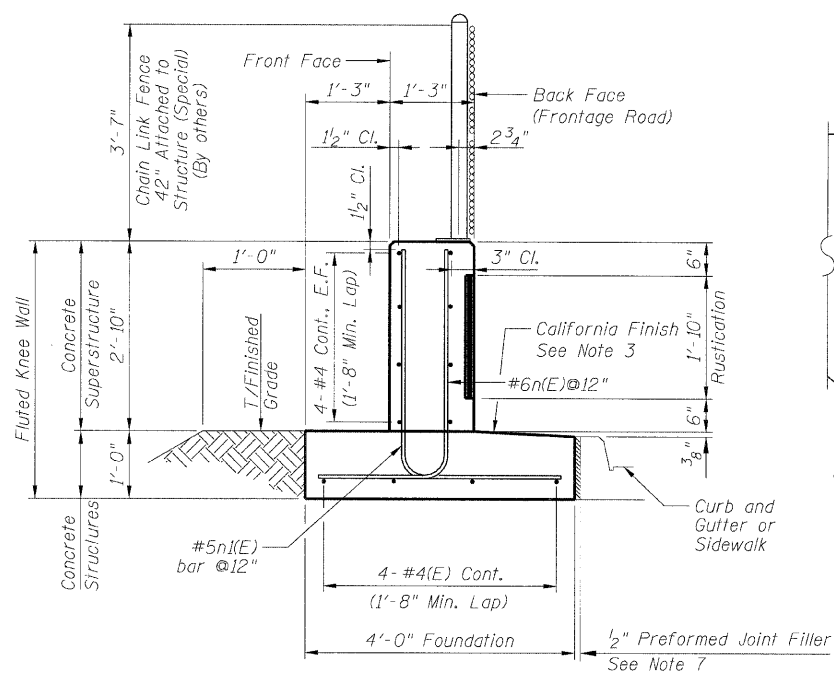
-  Chain Link Fabric
-  Rustication Finish
- E.F. = Each Face



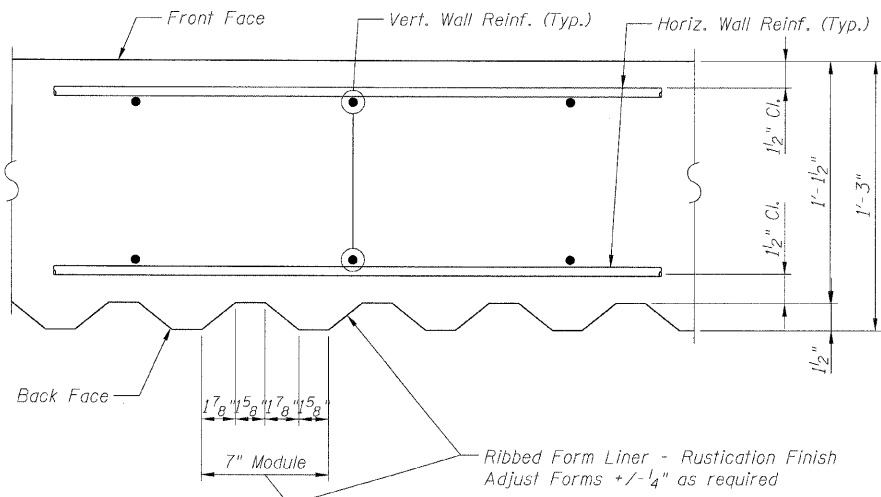
BACK FACE ELEVATION - FLUTED KNEE WALL



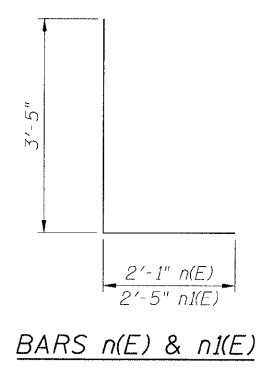
TYPICAL FLUTED KNEE WALL CORNER DETAIL



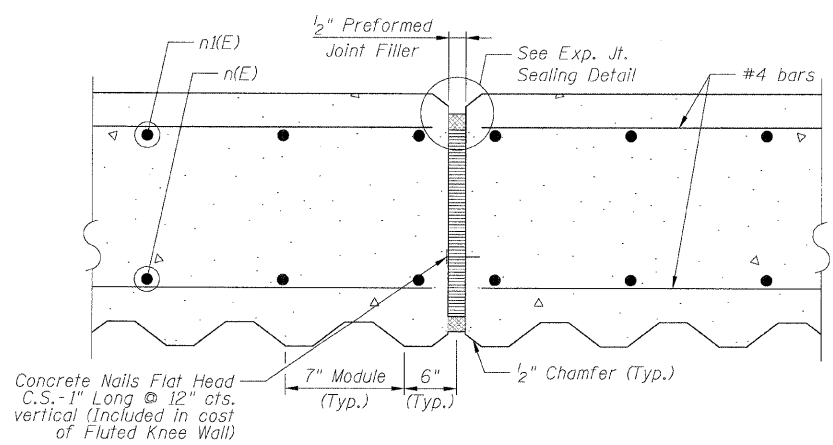
TYPICAL SECTION FLUTED KNEE WALL



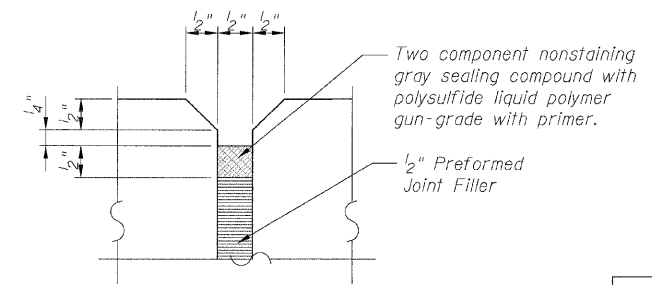
SECTION A-A



BARS n(E) & n(E)



EXPANSION JOINT DETAIL



EXPANSION JOINT SEALING DETAIL

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

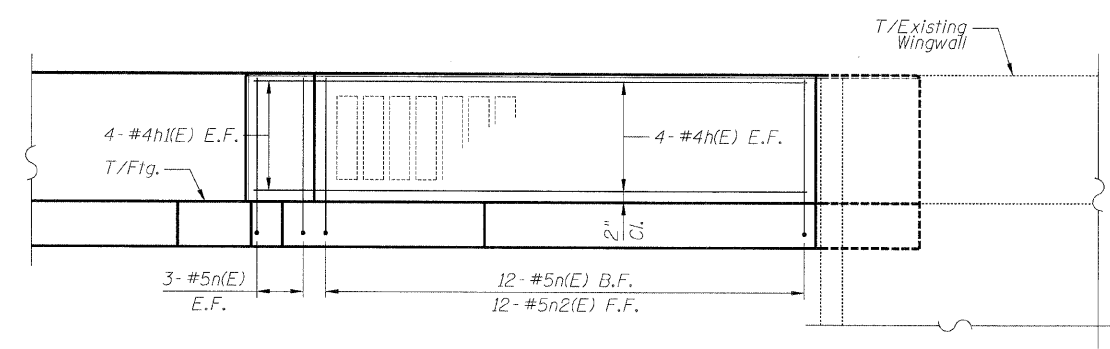
REVISIONS	
NAME	DATE
REVISED	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
SOUTHBOUND KNEE WALLS (35TH ST TO 33RD ST)
FLUTED KNEE WALL
SCALE: N.T.S. DRAWN BY: LAM
DATE: 03/06/08 CHECKED BY: BLU

11/6/2008 11:32:51 AM 32E/SHEET 5/680_32E/SW/504.dgn 7:28:25 PM 3/6/2008

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	13
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

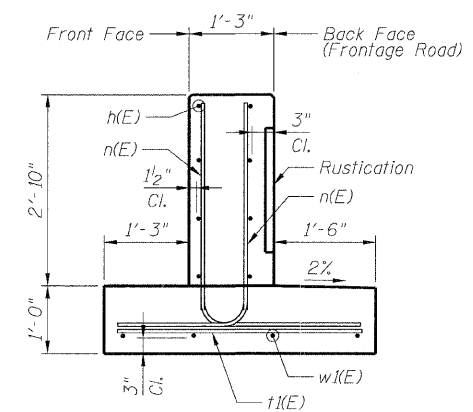
62999



ELEVATION

DETAIL A REINFORCEMENT SCHEDULE AND BILL OF MATERIAL

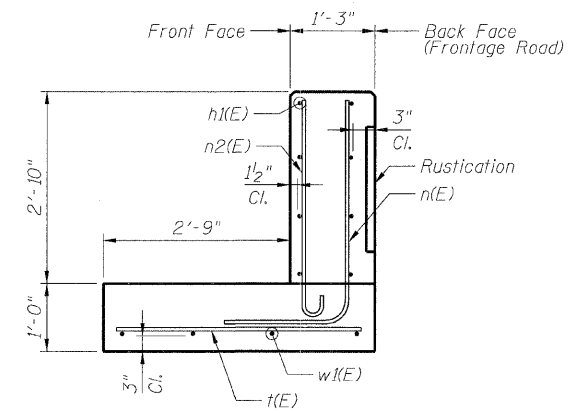
Bar	No.	Size	Length	Shape
h1(E)	8	#4	10'-9"	—
h2(E)	8	#4	2'-10"	—
h3(E)	2	#4	4'-0"	—
n(E)	18	#5	5'-6"	L
n2(E)	15	#5	4'-0"	—
t(E)	20	#6	3'-8"	—
w(E)	4	#4	12'-4"	—
w1(E)	4	#4	4'-8"	—
Item		Unit	Qty.	
Concrete Structures		Cu. Yd.	2.5	
Concrete Superstructure		Cu. Yd.	1.9	
Reinforcement Bars, Epoxy Coated		Pound	400	
Rustication Finish		Sq. Ft.	35	
Protective Coat		Sq. Yd.	8	



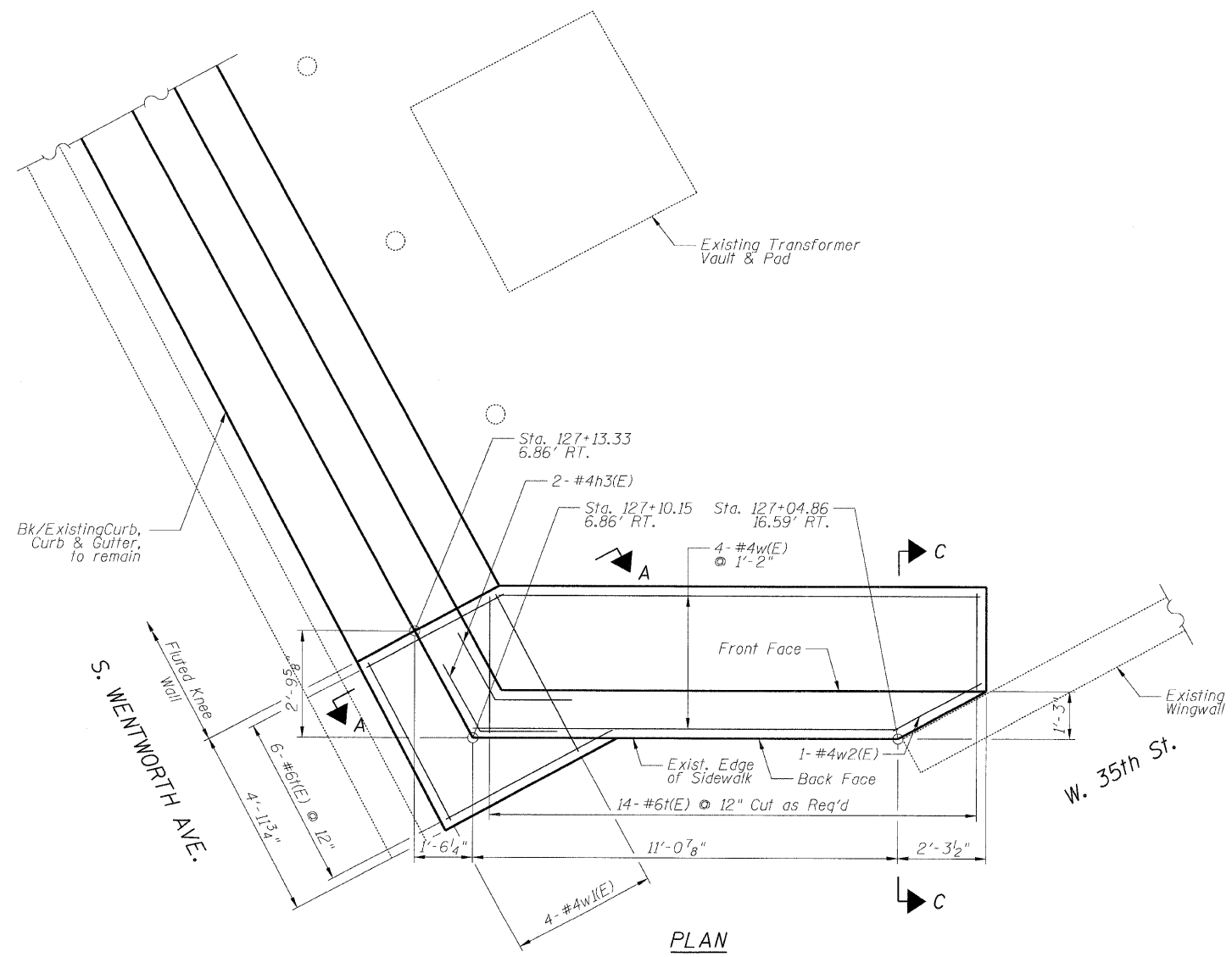
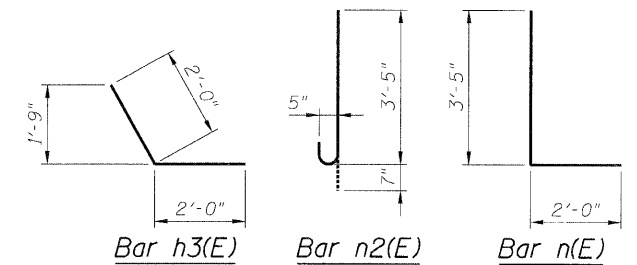
SECTION B-B

NOTES:

- All stations and offsets measured from S. Wentworth Ave. \bar{C} .
- 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" thick Preformed Expansion Joint Filler conforming to the shape of the Structure shall be installed between the Wall and the Structure.
- Apply Protective Coat to top and front 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
F.F. = Front Face
E.F. = Each Face



SECTION C-C



PLAN

BOWMAN, BARRETT & ASSOCIATES INC.
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
NORTHBOUND KNEE WALLS (35TH ST TO 33RD ST)

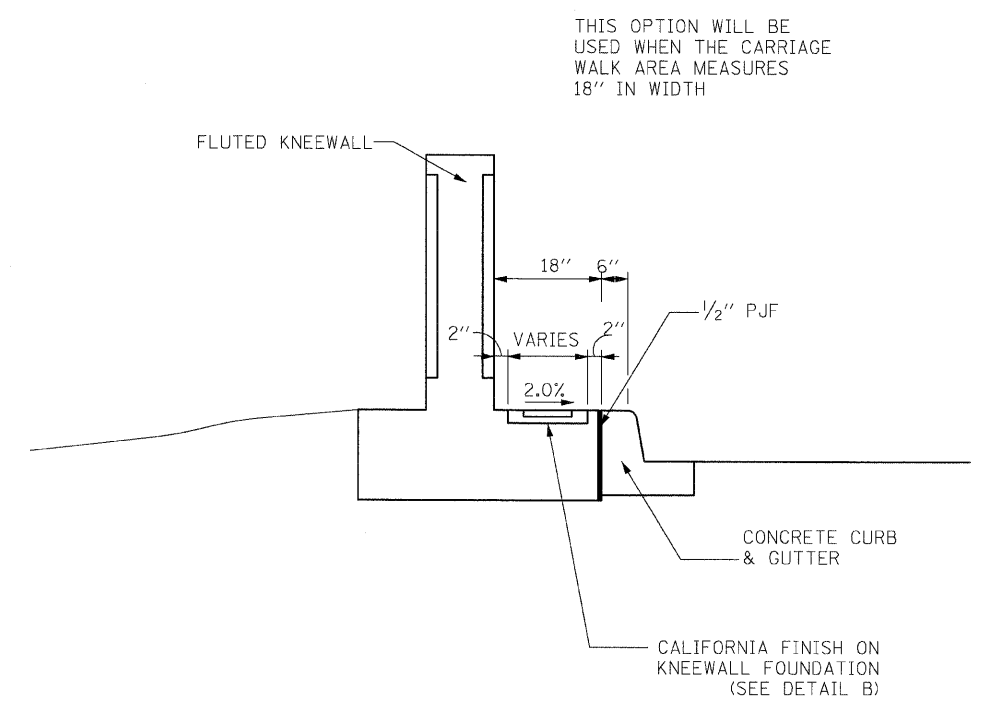
DETAIL A

SCALE: N.T.S.
DATE: 03/06/08

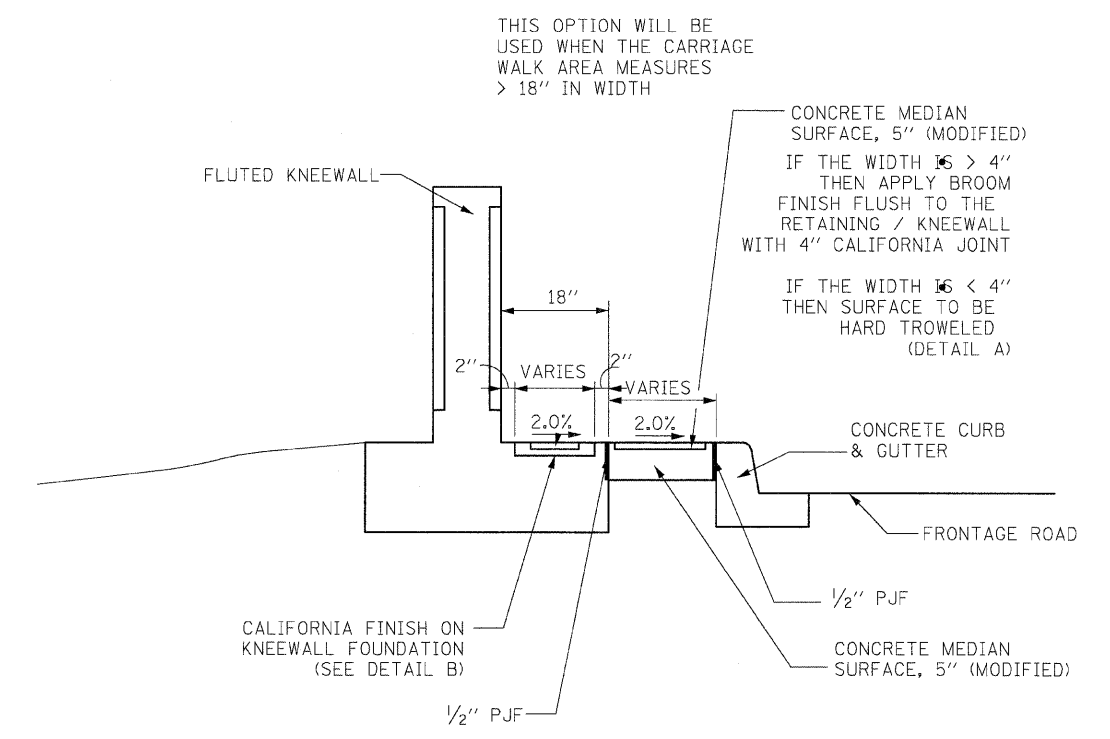
DRAWN BY: PAH
CHECKED BY: BLU

11/6/00 00:00:00 3/16/2008 3:21:50 PM

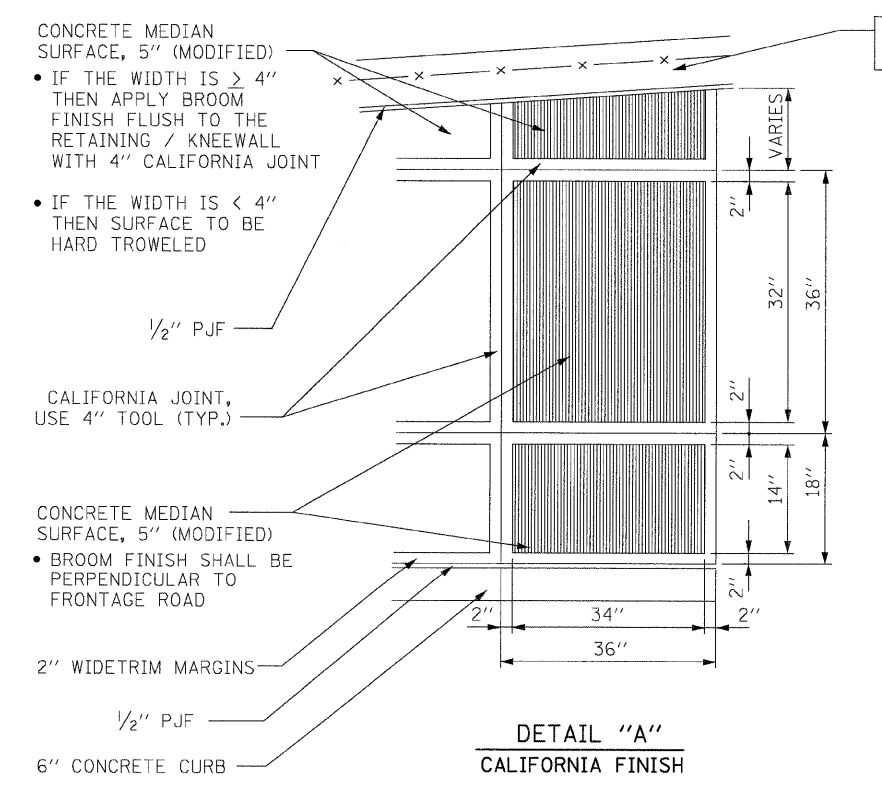
F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90		COOK	22	13A
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
62999	2324.6-1P-1-4			



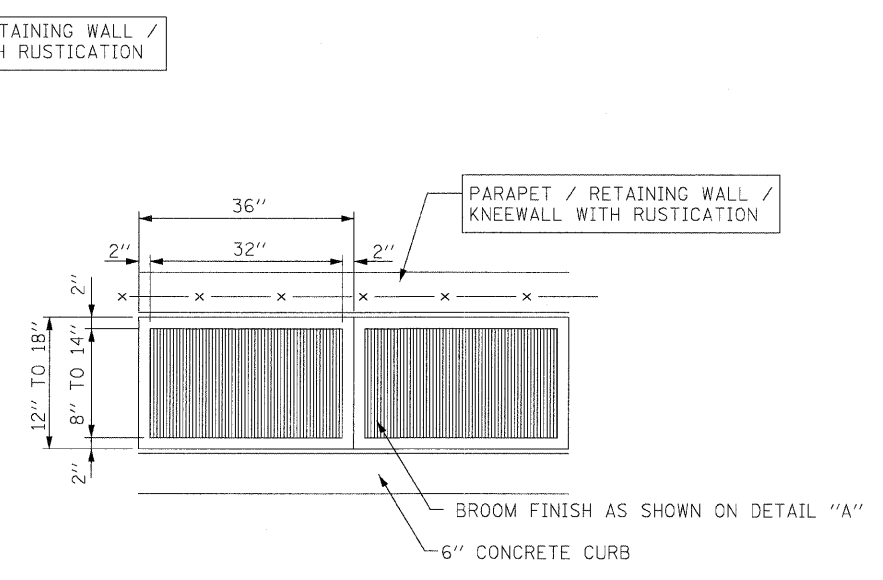
CARRIAGE WALK
WIDTH = 18"



CARRIAGE WALK
WIDTH > 18"



DETAIL "A"
CALIFORNIA FINISH



DETAIL "B"
CALIFORNIA FINISH

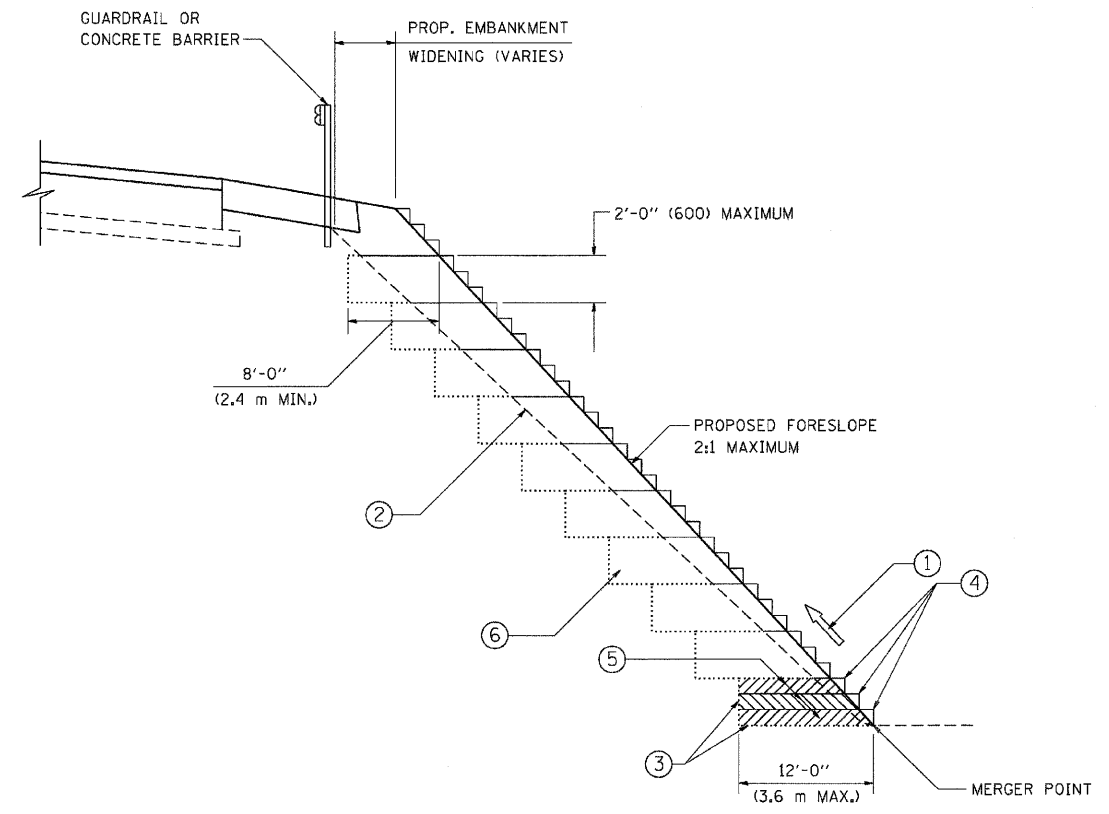
REVISIONS	
NAME	DATE
NEW SHEET	3-6-08

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
 GARFIELD BLVD TO 31ST STREET (NB LOCAL LANES)
 ROADWAY DETAILS
CONCRETE MEDIAN SURFACE 5" (MODIFIED) CALIFORNIA FINISH
 SCALE: NONE DRAWN BY: CTE
 DATE: 03/06/08 CHECKED BY: JDC

BOWMAN, BARRETT & ASSOCIATES INC.
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbainc.com

RAGSDORF/DAVIS/22E/SHEET 13A/03/06/08

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	22	14
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

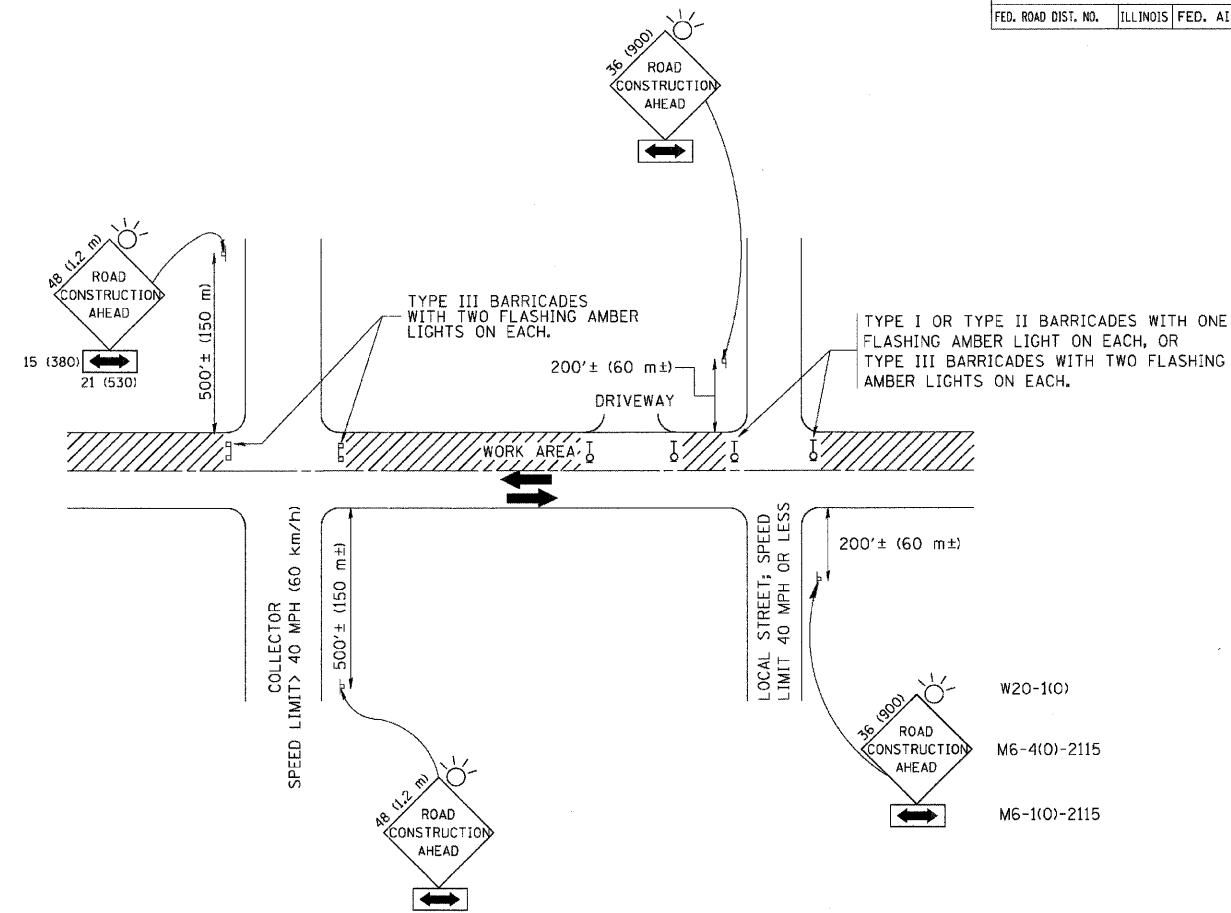
ILLINOIS DEPARTMENT OF TRANSPORTATION

BENCHING DETAIL
FOR EMBANKMENT
WIDENING

SCALE: VERT. NONE
HORIZ.

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

CONTRACT NO.				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	22	15
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

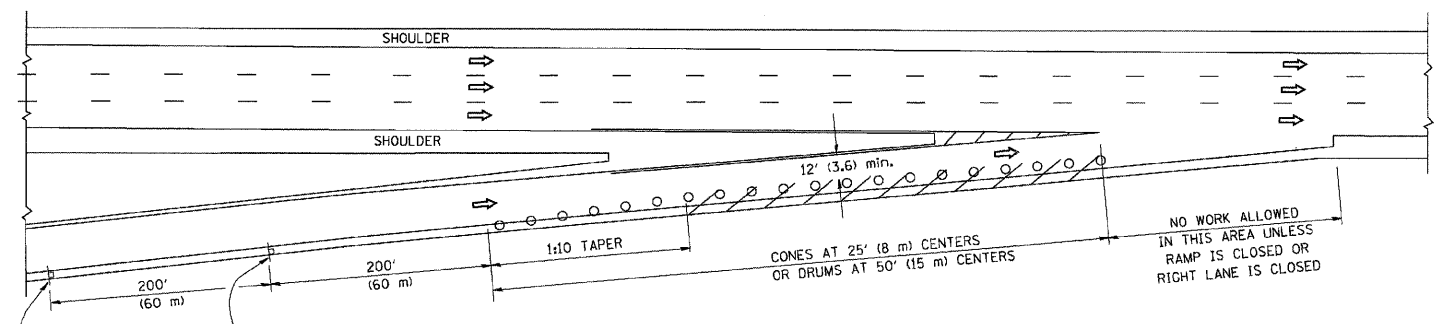
CHECKED BY

TC-10

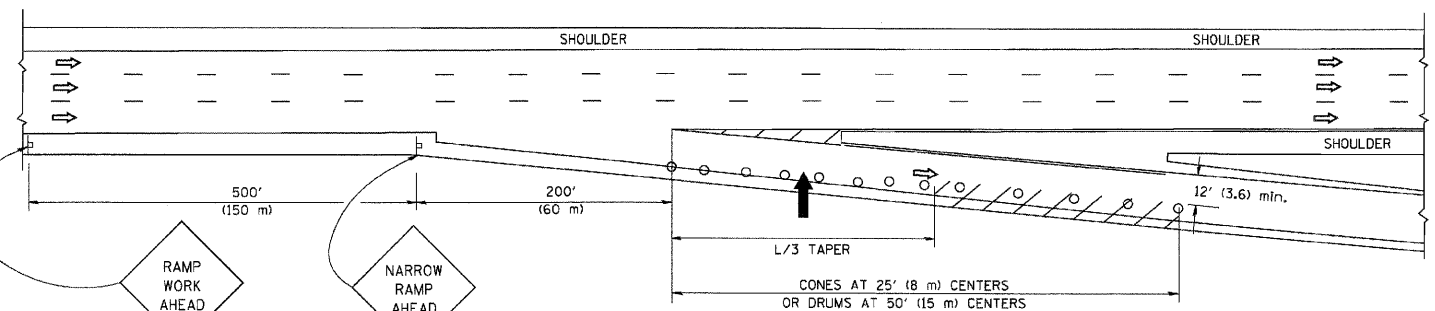
PARTIAL RAMP CLOSURE DETAILS

SHOULDER CLOSURE DETAILS

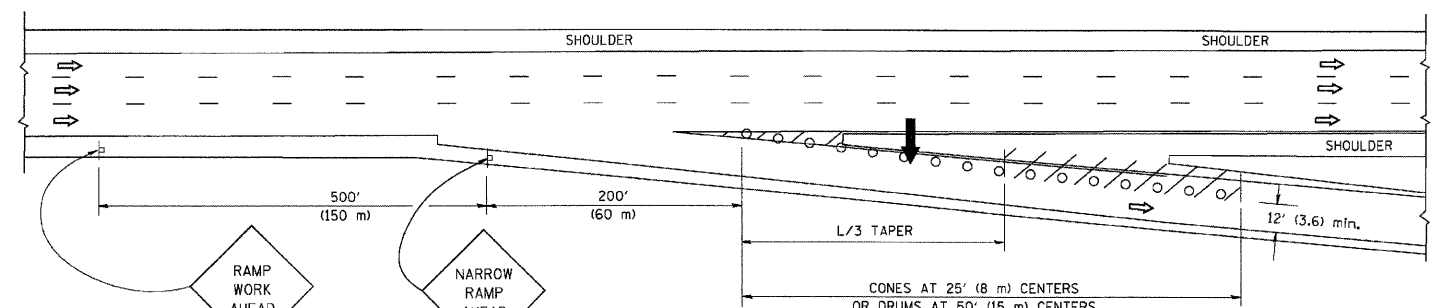
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	22	16
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



TYPICAL ENTRANCE RAMP



TYPICAL EXIT RAMP



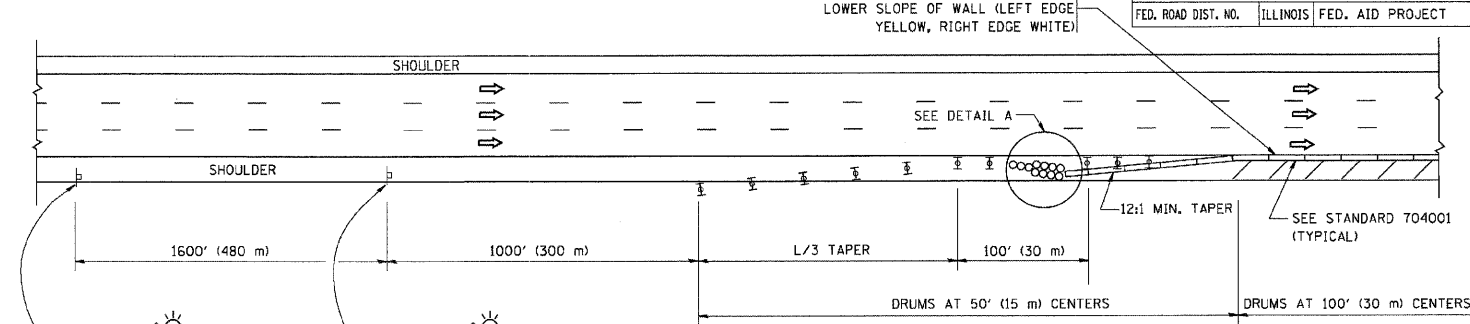
TYPICAL EXIT RAMP

SYMBOLS

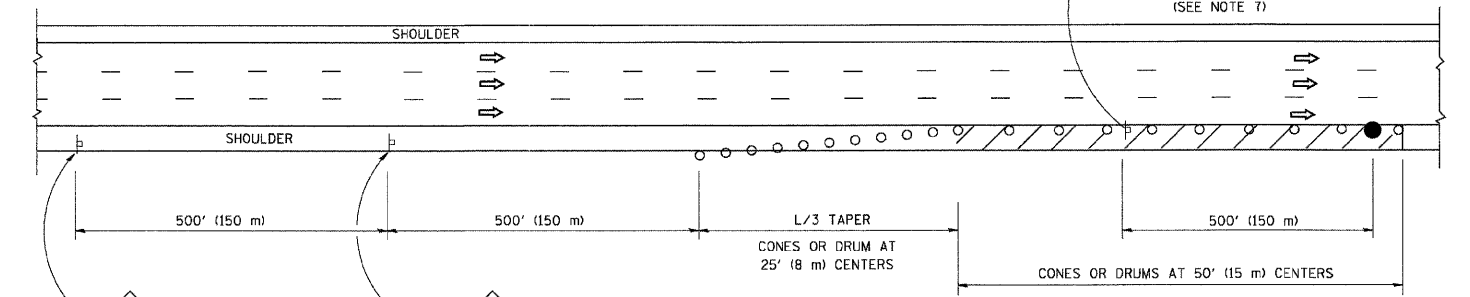
- ARROWBOARD
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE, DRUM OR VERTICAL BARRICADE WITH STEADY BURN MONO-DIRECTIONAL LIGHT
- CONE, DRUM OR BARRICADE

GENERAL NOTES

- THE "L" DISTANCE EQUALS:
SPEED LIMIT FORMULAS
45 mph (80 km/h) METRIC ENGLISH
OR GREATER: $L=0.65(W)(S)$ $L=(W)(S)$
W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)
- PLASTIC DRUMS WITH HIGH PERFORMANCE REFLECTIVE SHEETING AND STEADY BURNING LIGHTS ARE REQUIRED FOR ALL NIGHTTIME CLOSURES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.



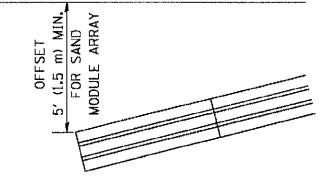
PERMANENT SHOULDER CLOSURE



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)

- THE IMPACT ATTENUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE "TRAFFIC BARRIER TERMINAL, TYPE III, TEMPORARY" DEVICE TO MEET NCHRP350 FOR POSTED SPEED.
- AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
- THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
 - FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
 - THE WORK AVTIVITY REQUIRES FREQUENT ENCR OACHMENT INTO THE LANE OPEN TO TRAFFIC.
 THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.

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

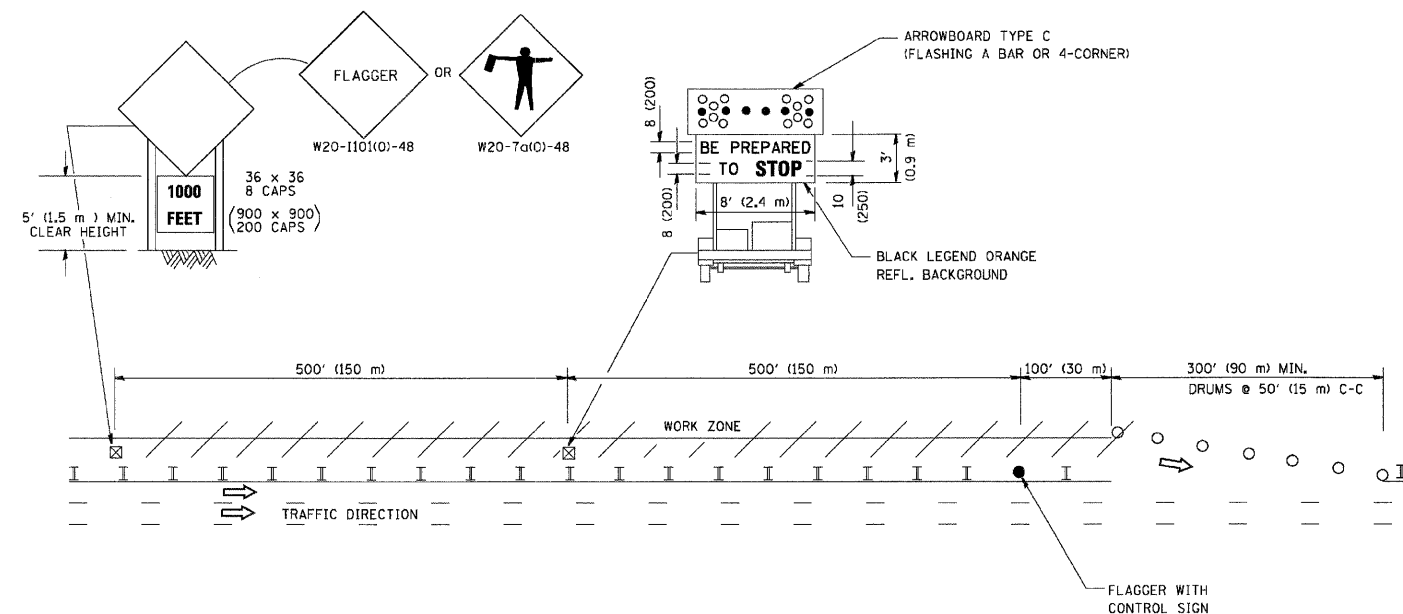
ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL DETAILS
FOR FREEWAY
SHOULDER CLOSURES
PARTIAL RAMP CLOSURES
DESIGNED BY: DWS
DRAWN BY:
CHECKED BY:
SCALE: NONE

PLOT DATE = 3/7/2007
FILE NAME = K:\distsvc\107.dgn
PLOT SCALE = 50.0000 / IN.
USER NAME = bboard1

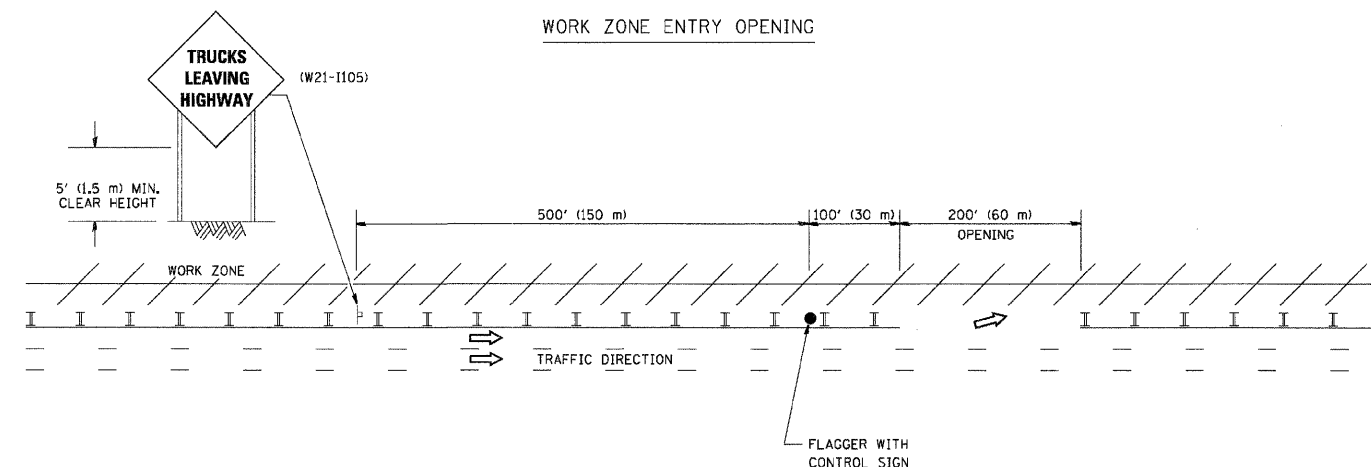
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	*	COOK	22	17
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

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

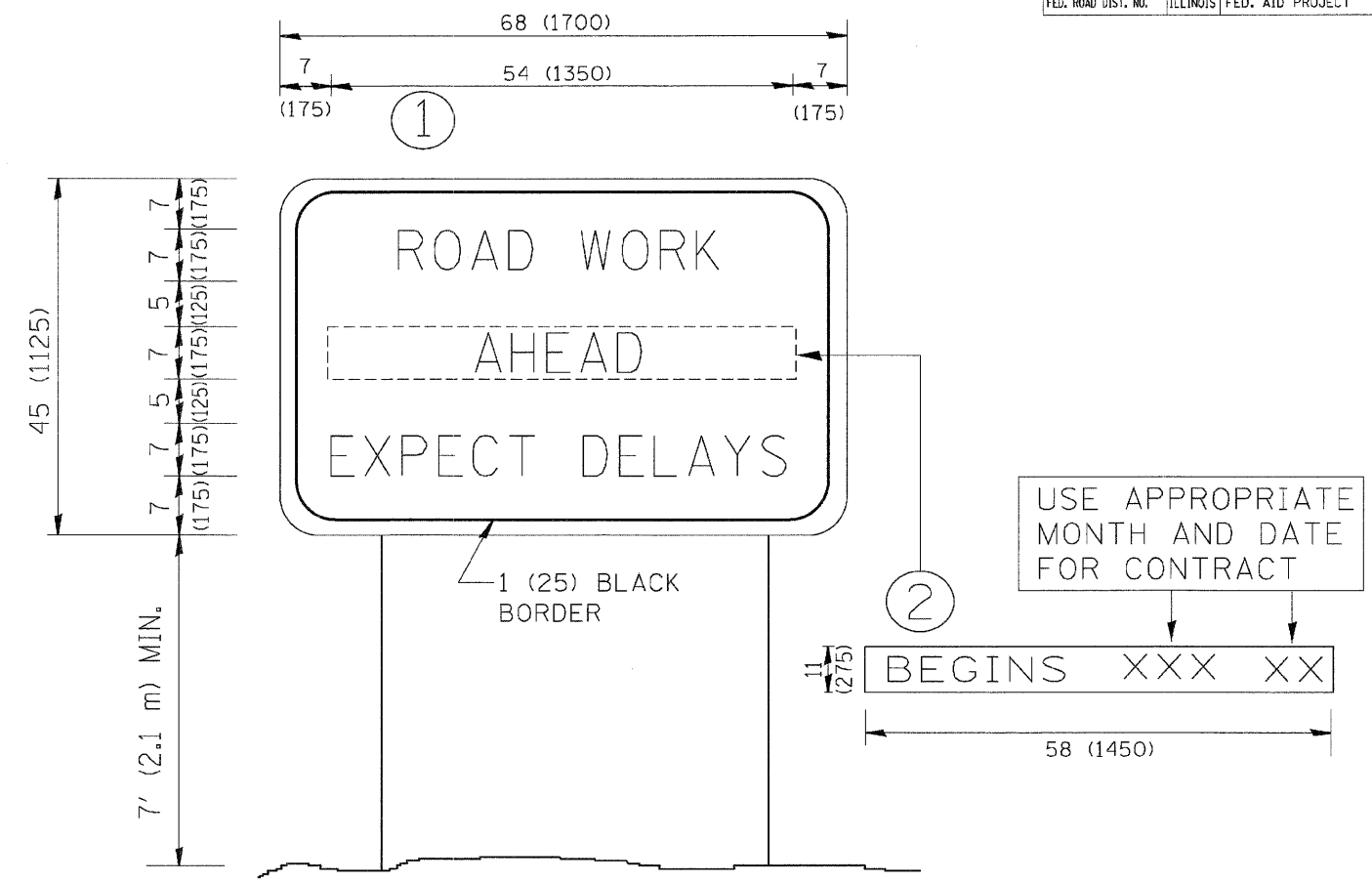
ILLINOIS DEPARTMENT OF TRANSPORTATION
SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-18



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. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE

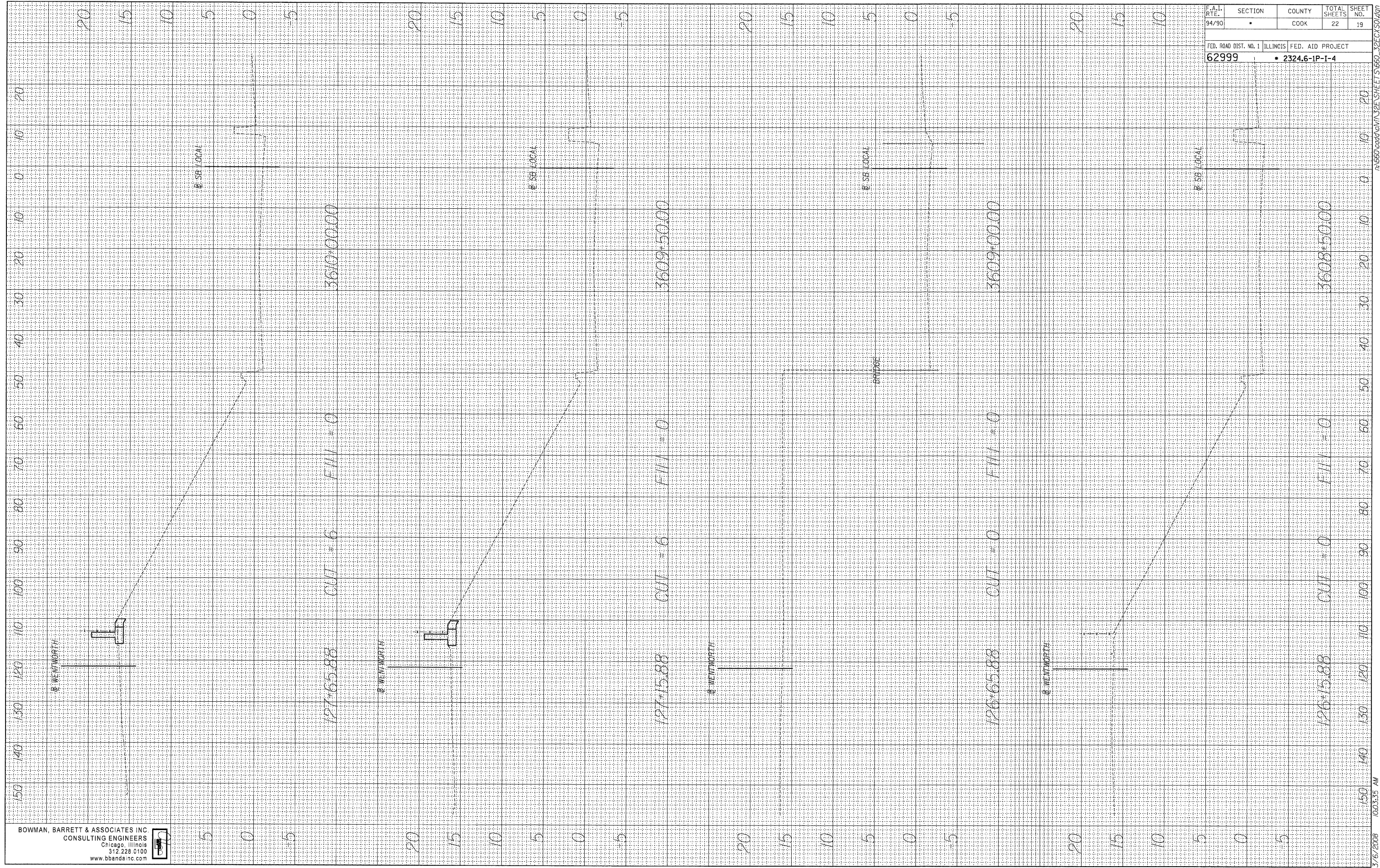
DRAWN BY DESIGN

CHECKED BY

TC22

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

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



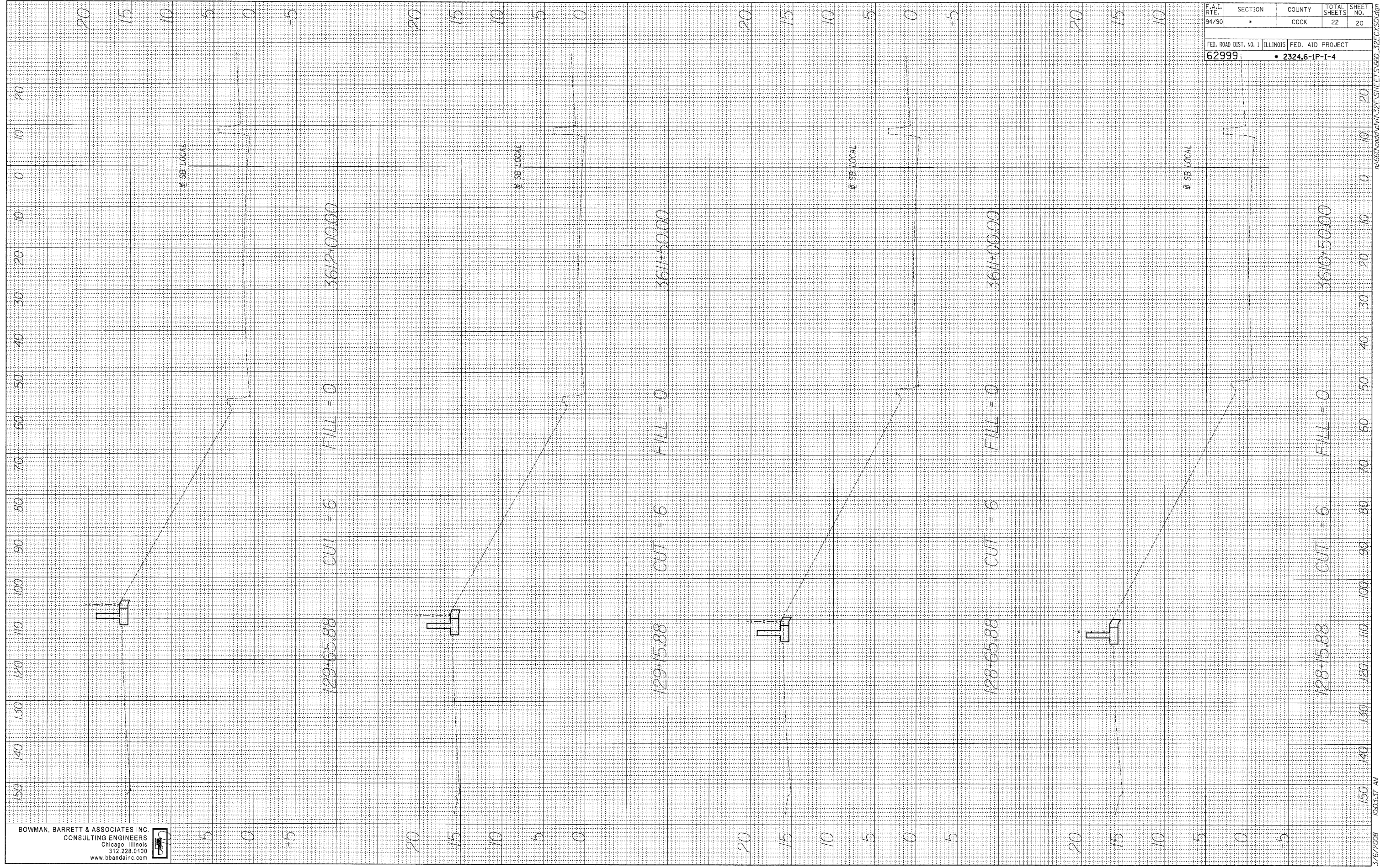
BOWMAN, BARRETT & ASSOCIATES INC
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbainc.com

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	22	19
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
62999		• 2324.6-1P-1-4		

3/6/2008 10:03:35 AM

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

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



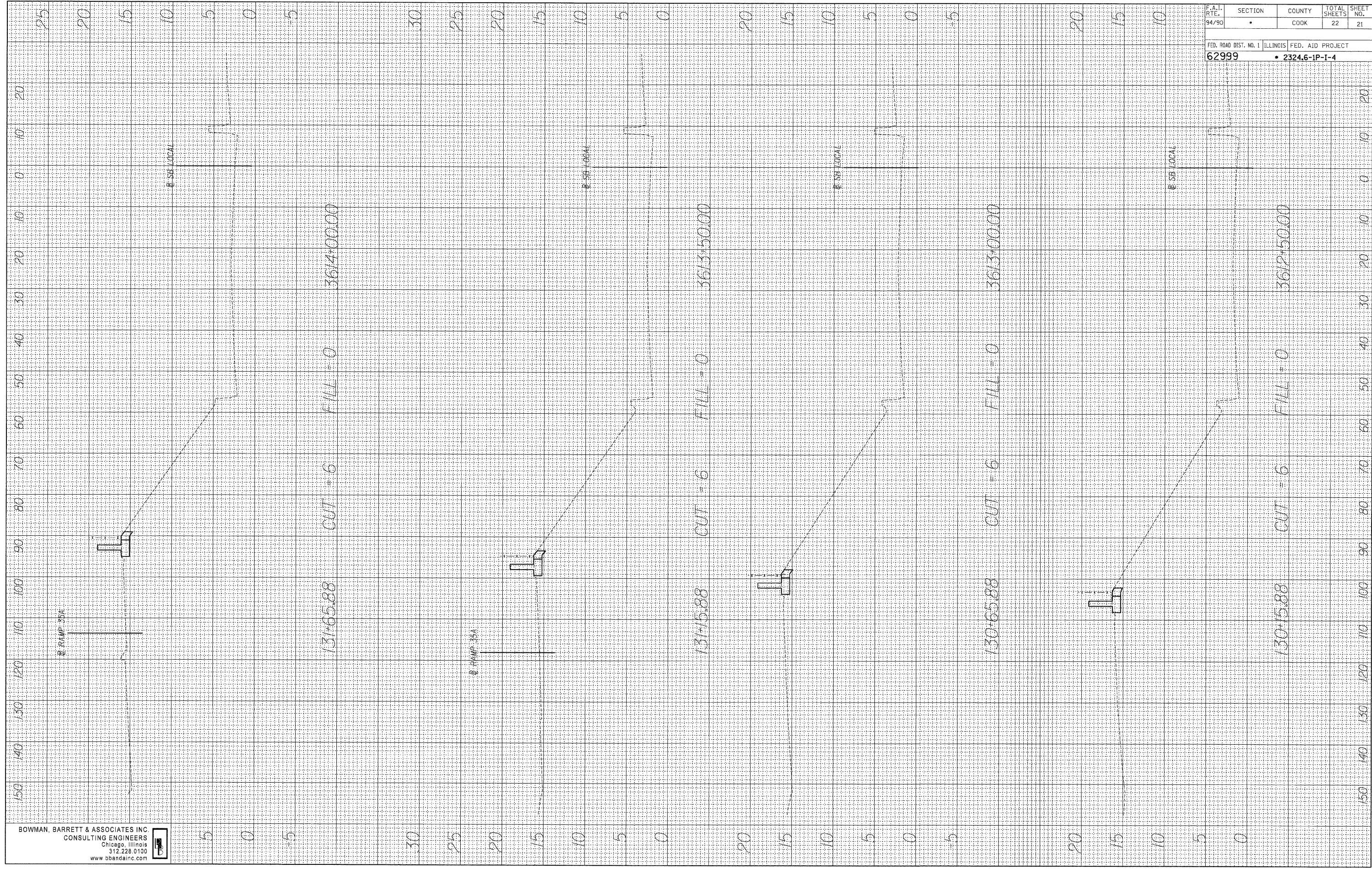
BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, ILLINOIS
312.228.0100
www.bbainc.com

F.A.I. RTE. 94/90	SECTION •	COUNTY COOK	TOTAL SHEETS 22	SHEET NO. 20
FED. ROAD DIST. NO. 1 62999		ILLINOIS FED. AID PROJECT • 2324.6-1P-I-4		

3/6/2008 10:03:37 AM

FINAL SURVEY SURVEYED PLOTTED DATE
 NOTE BOOK TEMPLATE BY
 AREAS CHECKED

ORIGINAL SURVEY SURVEYED PLOTTED DATE
 NOTE BOOK TEMPLATE BY
 AREAS CHECKED



BOWMAN BARRETT & ASSOCIATES INC
 CONSULTING ENGINEERS
 Chicago, Illinois
 312.228.0100
 www.bbainc.com

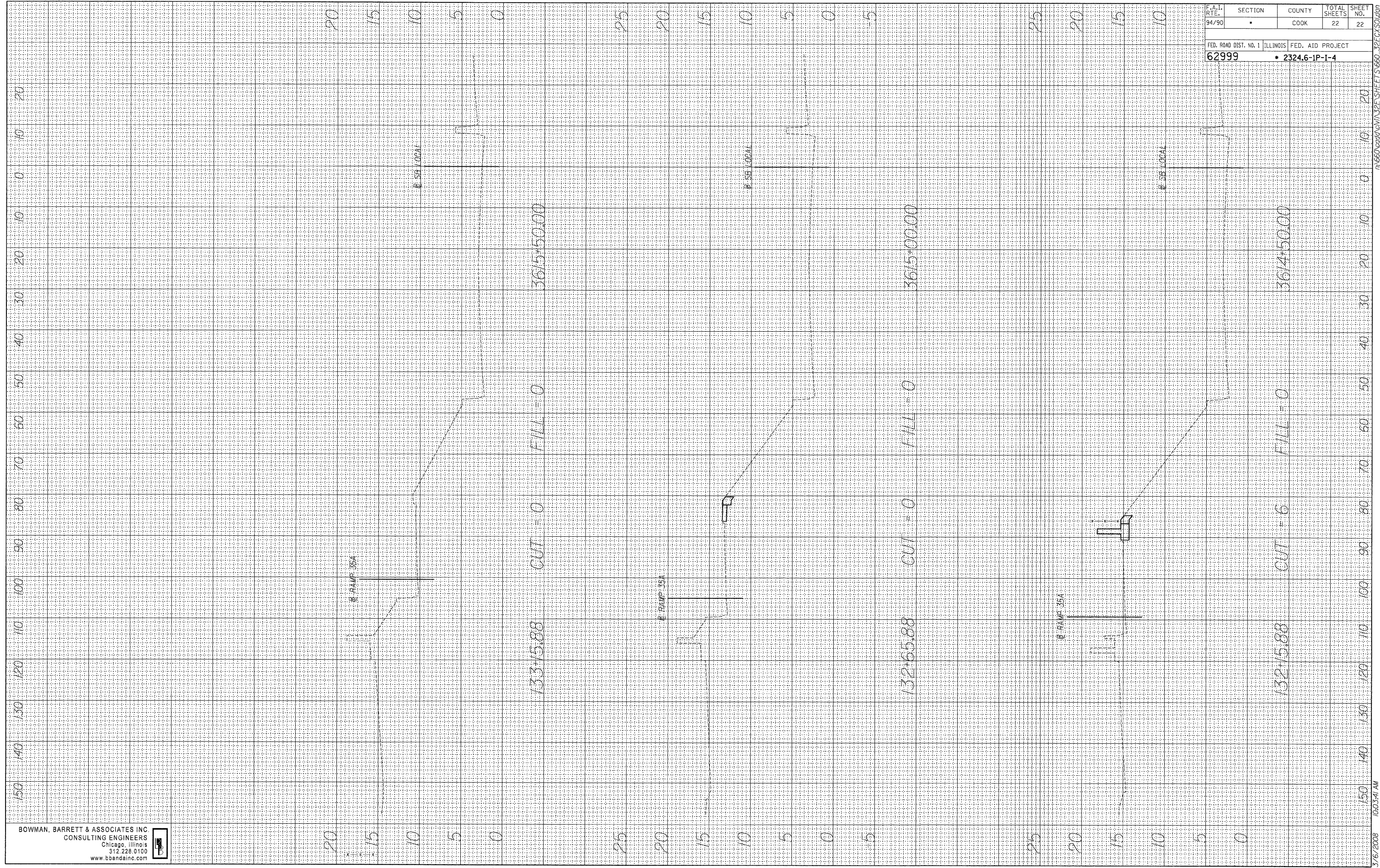
F.A.I. RTE. 94/90	SECTION •	COUNTY COOK	TOTAL SHEETS 22	SHEET NO. 21
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
62999		• 2324.6-1P-1-4		

3/6/2008 10:03:39 AM

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

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

BOWMAN, BARRETT & ASSOCIATES INC
CONSULTING ENGINEERS
Chicago, Illinois
312.228.0100
www.bbainc.com



F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	•	COOK	22	22
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		
62999		• 2324.6-1P-1-4		

3/6/2008 10:03:41 AM