

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PROPOSED  
HIGHWAY PLANS**

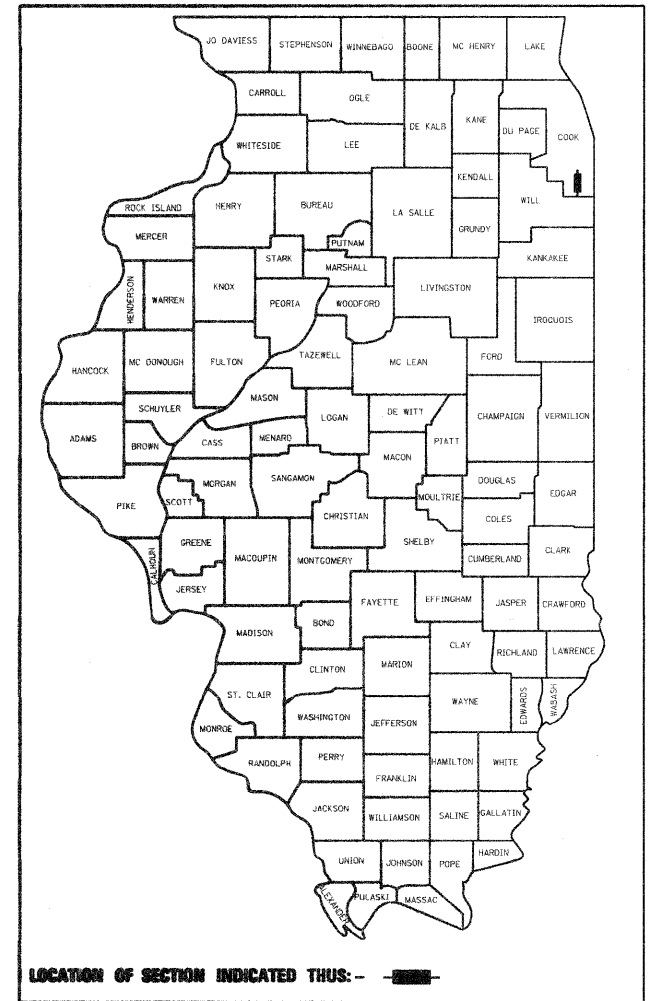
FAU ROUTE 2845 - WESTERN AVENUE (SN 016-0772)  
OVER BUTTERFIELD CREEK  
SECTION 0505-B  
PROJECT: M-2845(007)  
COOK COUNTY  
SUPERSTRUCTURE REPLACEMENT,  
RETAINING WALL REMOVAL AND REPLACEMENT  
C-91-165-11

F.A.I.L. R.T.E. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 1
ILLINOIS		CONTRACT NO. 60M78	0-91-165-11	
			*52 + 2 = 54	

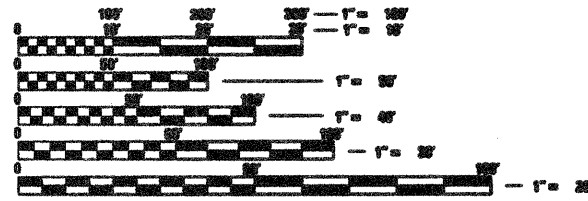
TRAFFIC DATA  
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WESTERN AVENUE

EXISTING ADT (2010) : 6,500  
POSTED ADT (2030) : 10,000  
POSTED SPEED LIMIT : 35 MPH  
DESIGN SPEED : 40 MPH

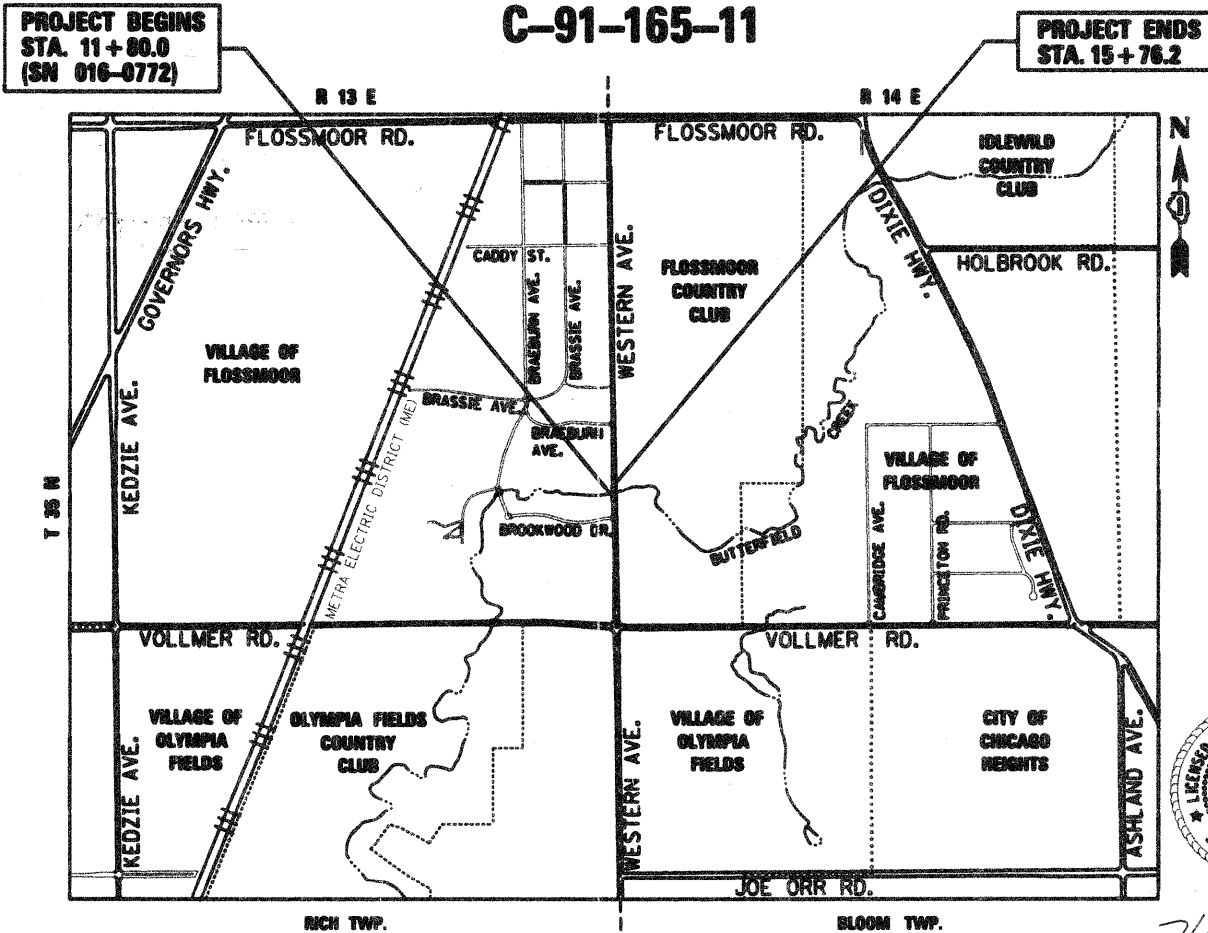


IMPROVEMENT IS LOCATED IN THE VILLAGE OF FLOSSMOOR



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.

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-832-0123  
OR 811



PROJECT ENGINEER ROBERT BORO (847) 705-4237  
PROJECT MANAGER ISSAM RAYYAN  
CONTRACT NO. 60M78



LOCATION MAP  
NOT TO SCALE  
GROSS LENGTH = 396 FT. = 0.075 MILE  
NET LENGTH = 396 FT. = 0.075 MILE

THOMAS M. HEIN, P. E.  
IL. LIC. NO. 062-053199  
EXP 11-30-2013  
DATE 10-27-11

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
SUBMITTED OCTOBER 28 20 11  
Diane M. O'Keefe  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
December 9 20 11  
Scott E. Stitt P.E.  
acting ENGINEER OF DESIGN AND ENVIRONMENT  
December 9 20 11  
William R. Fien  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

INDEX OF SHEETS  
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GENERAL NOTES - MISCELLANEOUS  
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BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOURS NOTIFICATION IS REQUIRED).

TEN FOOT (10-FT) TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE UTILITIES, THE VILLAGE OF FLOSSMOOR, AND COOK COUNTY.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OR RAISED REFLECTIVE PAVEMENT MARKINGS OUTSIDE THE REMOVAL LIMITS SHOWN ON THE PLANS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE DEPARTMENT.

BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES AND RAISED REFLECTIVE PAVEMENT MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS PRIOR TO THE PLACEMENT ON ANY TEMPORARY TRAFFIC CONTROL DEVICES.

THE RESIDENT ENGINEER SHALL CONTACT MS. PATRICE HARRIS, AREA TRAFFIC FIELD ENGINEER AT (847) 715-8422 A MINIMUM OF TWO WEEKS PRIOR TO PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.  
SAW CUTS <sup>(FULL AND PARTIAL)</sup> WILL NOT BE PAID FOR SEPERATELY, BUT SHALL BE INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE DEPARTMENT AS SHOWN.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS. THE ENGINEER, OR AN AUTHORIZED SURVEYOR OR AGENT WILL WITNESS OR OTHERWISE REFERENCE AND RESET MONUMENTS AS NECESSARY. ALL PROPERTY CORNERS EXCEPT THOSE WITHIN AREAS WHERE THE SCHEDULE SHOWS PLACEMENT OF R.O.W. MARKERS SHALL REMAIN UNDISTURBED.

THE CONTRACTOR AS REQUIRED, SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING WITH CONSTRUCTION.

THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH STATE OR LOCAL REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION.

THE CONTRACTORS OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

THE CONTRACTORS PERSONNEL SHALL NOT BE ALLOWED TO PARK PERSONAL VEHICLES IN THE WORK AREA AND/OR CONSTRUCTION LIMITS.

ACCESS SHALL BE PROVIDED AT ALL TIMES TO PROPERTIES ABUTTING THE PROPOSED IMPROVEMENT.

GENERAL NOTES - ROADWAY  
\*\*\*\*\*

THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATING NEAR ANY AND ALL EXISTING ITEMS WHICH WILL NOT BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED BY HIM AT HIS OWN EXPENSE.

ANY MAIL BOXES REQUIRING RELOCATION TO CONSTRUCT PORTIONS OF THE CONTRACT SHALL BE MOVED BY THE CONTRACTOR. THIS WORK SHALL BE DONE TO THE SATISFACTION OF THE OWNER AND THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

~~BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT). IN ACCORDANCE WITH THE BUTT JOINT AND BITUMINOUS TAPER DETAILS SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.~~

THE REMOVAL OF SINGLE RAIL, DOUBLE RAIL, RUB RAIL, AND TERMINAL SECTIONS (TAPERS AND END SECTIONS) SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE COST PER LINEAL FOOT FOR STEEL PLATE BEAM GUARD RAIL REMOVAL.

THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

GENERAL NOTES - DRAINAGE  
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THE CONTRACTOR SHALL MAINTAIN THE SURFACE DRAINAGE OF THE ROAD DURING CONSTRUCTION OF THIS PROJECT. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DITCHES, GUTTERS, CROSSROAD PIPES, OR DRAINAGE STRUCTURES DUE TO CONSTRUCTION OPERATIONS SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

GENERAL NOTES - UTILITIES  
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THE CONTRACTOR SHALL PROTECT EXISTING AND NEW UTILITIES. WHEN REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL BRACE AND SUPPORT THE UTILITIES PROPERLY IN ORDER TO PREVENT SETTLEMENT, DISPLACEMENT, OR DAMAGE TO THE UTILITIES. THE PROTECTION OF THE UTILITIES AS SPECIFIED HEREIN WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL EXISTING FACILITIES SO THE UTILITIES AND THEIR APPURTENANCES MAY BE LOCATED AND ADJUSTED OR MOVED, IF NECESSARY, PRIOR TO THE START OF CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS.

GENERAL NOTES - EROSION AND SEDIMENT CONTROL  
\*\*\*\*\*

TEMPORARY EROSION CONTROL SEEDING SHALL BE PROVIDED AT ALL ERODIBLE BARE EARTH AREAS. REFER TO SPECIAL PROVISIONS.

ALL EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND OF THE APPLICABLE STATE STANDARDS FOR THE ENTIRE DURATION OF THE CONTRACT, OR UNTIL SUCH A TIME AS DIRECTED BY THE ENGINEER.

AT ANY AREA WHERE THERE IS NO PROPOSED GRADING, THE EXISTING GROUND COVER SHALL REMAIN.

HIGHWAY STANDARDS  
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280001-06 TEMPORARY EROSION CONTROL SYSTEMS

406201-01 MAILBOX TURNOUT

420401-08 BRIDGE APPROACH PAVEMENT CONNECTOR

482001-02 HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT

515001-03 NAME PLATE FOR BRIDGES

606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER

606006-02 OUTLETS FOR CONCRETE CURB AND GUTTER, TYPE B-6.24 (8-15.60)

630001-10 STEEL PLATE BEAM GUARDRAIL

630301-05 SHOULDER WIDENING FOR TYPE 1(SPECIAL) GUARDRAIL TERMINALS

631031-10 TRAFFIC BARRIER TERMINAL, TYPE 6

635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT

635011-02 REFLECTOR MARKER AND MOUNTING DETAILS

701901-02 TRAFFIC CONTROL DEVICES

720001-01 SIGN PANEL MOUNTING DETAILS

720006-03 SIGN PANEL ERECTION DETAILS

000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

COMMITMENTS  
\*\*\*\*\*

NONE

GENERAL NOTES - IN-STREAM WORK PLAN  
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THIS PROJECT REQUIRES AN US ARMY CORPS OF ENGINEERS 404 PERMIT. THE PERMIT ISSUED TO THE DEPARTMENT DOES NOT COVER THE IN STREAM WORK BY THE CONTRACTOR, THEREFORE AFTER AWARD, THE CONTRACTOR WILL NEED TO SUBMIT THE WORK PLAN TO THE CORPS. THE CORPS WILL NOT BE PROVIDING AN APPROVAL UNLESS STATED OTHERWISE IN THE PERMIT AND IN STREAM WORK CAN COMMENCE AT THE CONTRACTORS DISCRETION. GUIDELINES ON ACCEPTABLE IN STREAM WORK TECHNIQUES CAN BE FOUND ON THE CORPS WEBSITE: HTTP://WWW.LRC.USACE.ARMY.MIL

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DESIGNED - DJB	REVISED -
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DATE - 10/20/11	REVISED -

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DRAWN - ENTRAN	REVISED -
CHECKED - TMN	REVISED -
DATE - 10/20/11	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
GENERAL NOTE & HIGHWAY STANDARDS**

SCALE: 50.0000' / IN. SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE. 2045	SECTION 0905-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 2
CONTRACT NO. 60M78			REV	

# SUMMARY OF QUANTITIES

80% FED / 20% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
				ROADWAY 0004	STRUCTURES 0014
20100110	TREE REMOVAL (6 TO 15 INCHES DIAMETER)	UNIT	8	8	0
20200100	EARTH EXCAVATION	CU YD	161	161	0
20400000	FURNISHED EXCAVATION	CU YD	65	65	0
21101615	TOPSOIL FURNISH AND PLACE, 4"	SO YD	765	765	0
25000210	SEEDING, CLASS 2A	ACRE	0.1	0.1	0.0
25000312	SEEDING, CLASS 4A	ACRE	0.1	0.1	0.0
25100630	EROSION CONTROL BLANKET	SO YD	765	765	0
28000305	TEMPORARY DITCH CHECKS	FOOT	15	15	0
28000400	PERIMETER EROSION BARRIER	FOOT	804	804	0
28000510	INLET FILTERS	EACH	1	1	0
28100107	STONE RIPRAP, CLASS A4	SO YD	344	11	333
28200200	FILTER FABRIC	SO YD	344	11	333
31102300	SUBBASE GRANULAR MATERIAL, TYPE C 6"	SO YD	410	410	0
35501308	HOT-MIX ASPHALT BASE COURSE, 6"	SO YD	19	19	0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	196	196	0
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	33	33	0
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	2	2	0
40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	67	67	0
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SO YD	60	60	0
44000100	PAVEMENT REMOVAL	SO YD	40	40	0
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SO YD	793	793	0
44000200	DRIVEWAY PAVEMENT REMOVAL	SO YD	26	26	0
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	298	298	0
44004250	PAVED SHOULDER REMOVAL	SO YD	239	239	0
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SO YD	35	35	0
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SO YD	338	338	0
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	0	1
50102400	CONCRETE REMOVAL	CU YD	68	0	68
50200100	STRUCTURE EXCAVATION	CU YD	278	0	278
50300100	FLOOR DRAINS	EACH	6	0	6
50300225	CONCRETE STRUCTURES	CU YD	153.6	0	153.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	293.6	0	293.6
50300260	BRIDGE DECK GROOVING	SO YD	571	0	571
50300300	PROTECTIVE COAT	SO YD	715	0	715
50500305	ERECTING STRUCTURAL STEEL	L SUM	1.0	0.0	1.0

80% FED / 20% STATE

CODE NO.	ITEM	UNIT	URBAN TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
				ROADWAY 0004	STRUCTURES 0014
50500505	STUD SHEAR CONNECTORS	EACH	2,880	0	2,880
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	92,280	0	92,280
50800515	BAR SPLICERS	EACH	112	0	112
	<del>FURNISHING</del> <sup>SOLDIER</sup> STEEL PILES HP SECTION	FOOT	917	0	917
51203860	TEST PILE STEEL HP14X73	EACH	2	0	2
51204650	PILE SHOES	EACH	31	0	31
51500100	NAME PLATES	EACH	1	0	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	113	0	113
52100210	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	7	0	7
52100505	ANCHOR BOLTS, 5/8"	EACH	14	0	14
52100520	ANCHOR BOLTS, 1"	EACH	14	0	14
56400300	FIRE HYDRANTS TO BE ADJUSTED	EACH	1	1	0
58700300	CONCRETE SEALER	SO FT	1,209	0	1,209
59000200	EPOXY CRACK INJECTION	FOOT	5	0	5
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	187	0	187
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	2	2	0
60600095	CLASS SI CONCRETE (OUTLET)	CU YD	3	3	0
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	100	100	0
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50	50	0
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1	1	0
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2	0
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	1	1	0
63200310	GUARDRAIL REMOVAL	FOOT	601	601	0
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	50	50	0
* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1.0	1.0	0.0
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1	1	0
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	0
67100100	MOBILIZATION	L SUM	1.0	1.0	0.0
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	1385	1385	0
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6	0
* 78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	8	8	0
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	7	7	0
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	1	1	0
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	6	6	0
X0325751	DRIVING SOLDIER PILES	FOOT	917	0	917

\* SPECIALTY ITEMS

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 DRAWN - ENTRAN  
 CHECKED - TMH  
 DATE - 10/28/11

REVISED -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
 SUMMARY OF QUANTITIES**

SCALE: 0.0000' / 1" IN. SHEET NO. OF SHEETS STA. TO STA.

P.A.U. RFE. 2845 SECTION 0908-B COUNTY COOK TOTAL SHEETS 52 SHEET NO. 3  
 CONTRACT NO. 60M78

Rev







**EXISTING LEGEND**

- (A) EXIST. HMA SURFACE COURSE, 1"
- (B) EXIST. HMA BINDER COURSE, 2"
- (C) EXIST. AGGREGATE BASE COURSE, 10"
- (D) EXIST. COMBINATION CONCRETE CURB & GUTTER
- (E) EXIST. STONE RIPRAP / BIN RETAINING WALL \*\*
- (F) EXIST. METAL GUARDRAIL
- (G) EXIST. AGGREGATE SHOULDER
- (H) HMA SURFACE REMOVAL, 2 1/4"

**PROPOSED LEGEND**

- (1) HMA SURFACE COURSE, MIX 'D', N70; 1 1/2"
- (2) LEVELING BINDER (MACHINE METHOD) N70; 3/4"
- (3) SUB-BASE GRANULAR MATERIAL, TYPE C 6"
- (4) HMA SHOULDERS, 8" ++
- (5) STEEL PLATE BEAM GUARDRAIL
- (6) DRIVEN SOLDIER PILE WALL (SEE STRUCTURE PLANS) \*\*
- (7) TOPSOIL AND SEEDING
- (8) COMB. CONCRETE CURB & GUTTER, TYPE B-6.24
- (9) HMA SHOULDER, 6"
- (10) BRIDGE PARAPET AND ANCHORED SLAB (SEE STRUCTURE PLANS)

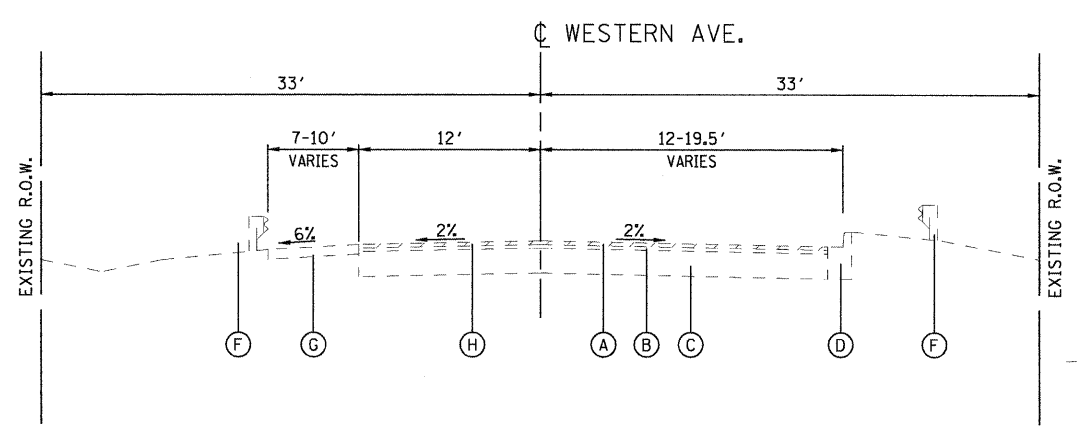
++ THE TOP 1/2 INCHES OF THE HMA SHOULDER SHALL BE HMA SURFACE COURSE AND INCLUDED IN THE COST OF HMA SHOULDERS.

**HMA MIXTURE REQUIREMENTS**

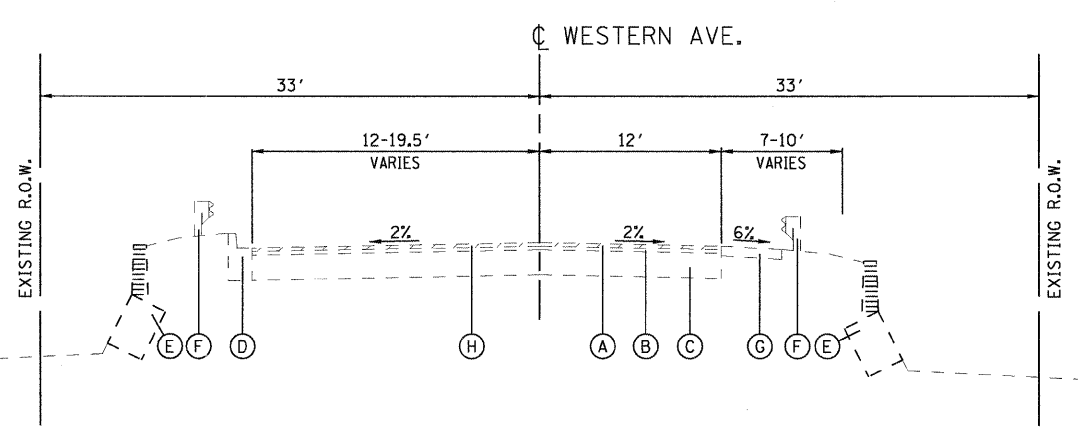
MIX DESIGNS	AIR VOIDS
<b>RESURFACING</b>	
HMA SURFACE COURSE, MIX 'D', N70, (IL-9.5mm); 1 1/2"	4% @ 70 GYRATIONS
LEVELING BINDER, N70, (IL-9.5mm); 3/4"	4% @ 70 GYRATIONS
<b>SHOULDERS</b>	
HMA SHOULDER (HMA BINDER IL-19mm); 8"	4% @ 70 GYRATIONS
HMA SHOULDER (HMA BINDER IL-19mm); 6"	4% @ 70 GYRATIONS
<b>DRIVEWAYS</b>	
HMA SURFACE COURSE, MIX 'D', N50 (IL-9.5 mm); 2"	4% @ 50 GYRATIONS
HMA BASE COURSE (HMA BINDER IL-19mm); 6"	4% @ 50 GYRATIONS

NOTE: THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/SY/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

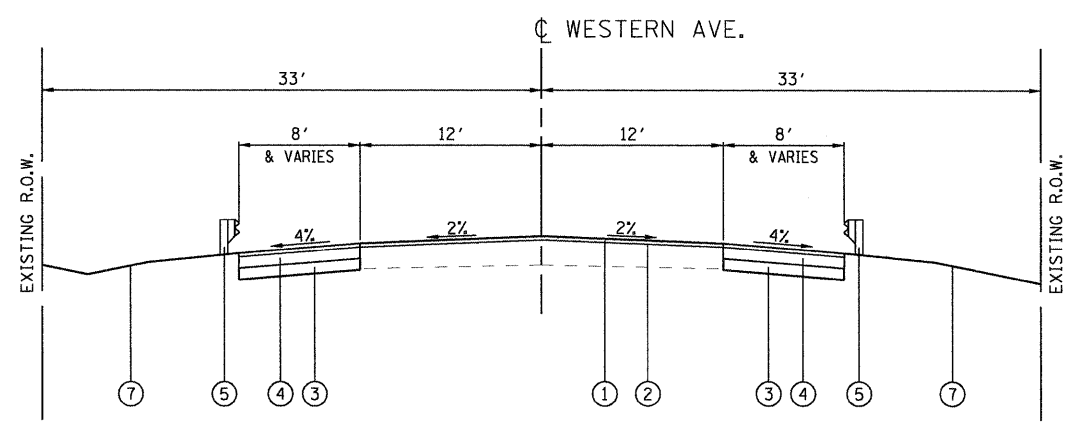


**EXISTING TYPICAL SECTION**  
FACING NORTH  
STA. 11+50.0 TO STA. 12+61.0  
N.T.S.

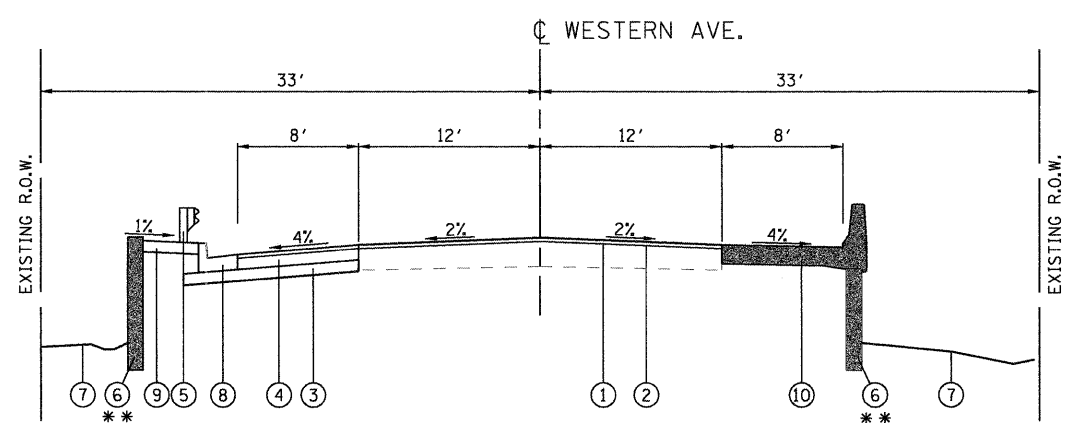


**EXISTING TYPICAL SECTION**  
FACING NORTH  
STA. 13+90.0 TO STA. 15+76.2  
N.T.S.

\*\* STONE RIPRAP / BIN RETAINING WALLS LOCATED BETWEEN STA. 13+98.2 AND STA. 14+87.7 (EAST SIDE OF ROADWAY), & STA. 13+67.6 AND STA. 14+16.4 (WESTSIDE OF ROADWAY).



**EXISTING TYPICAL SECTION**  
FACING NORTH  
STA. 11+50.0 TO STA. 12+61.0  
STA. 14+87.2 TO STA. 15+76.2  
N.T.S.



**EXISTING TYPICAL SECTION**  
FACING NORTH  
STA. 13+90.0 TO STA. 14+87.7  
N.T.S.

\*\* SOLDIER PILE WALL LOCATED BETWEEN STA. 13+67.1 AND STA. 14+43.1 (WESTSIDE OF ROADWAY).  
BRIDGE PARAPET AND ANCHORED SLAB LOCATED BETWEEN STA. 13+97.9 AND STA. 14+87.7 (EAST SIDE OF ROADWAY)

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PLOT DATE = 12/5/2011	CHECKED - TMH	REVISED -
	DATE - 10/28/11	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
TYPICAL SECTIONS**

SCALE: 50,000' / IN. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 4
CONTRACT NO. 60M78				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

# SCHEDULE OF QUANTITIES

**20100110 TREE REMOVAL (6 TO 15 UNITS DIAMETER)**

STATION	OFFSET(FT)	UNIT
14+37.0	28.6 LT	8.00
TOTAL =		8

**20200100 EARTH EXCAVATION**

STATION	CUT/FILL(SF)	STATION	CUT/FILL(SF)	CU YD
11+25.0	0.0	11+50.0	12.6	5.8
11+50.0	12.6	12+00.0	16.6	27.1
12+00.0	16.6	12+50.0	14.3	28.7
12+50.0	14.3	12+61.0	14.0	5.8
BRIDGE OMISSION				
13+90.0	17.8	14+00.0	26.8	8.3
14+00.0	26.8	14+50.0	22.0	45.2
14+50.0	22.0	15+00.0	5.3	25.2
15+00.0	5.3	15+50.0	6.1	10.6
15+50.0	6.1	15+76.2	3.1	4.5
TOTAL =				161

**20400800 FURNISHED EXCAVATION**

STATION	CUT/FILL(SF)	STATION	CUT/FILL(SF)	CU YD
EARTH EMBANKMENT CALCULATIONS				
11+25.0	0.0	11+50.0	0.3	0.2
11+50.0	0.3	12+00.0	0.1	0.4
12+00.0	0.1	12+50.0	13.4	12.6
12+50.0	13.4	12+61.0	11.2	5.0
BRIDGE OMISSION				
13+90.0	75.4	14+00.0	66.4	26.4
14+00.0	66.4	14+50.0	24.6	84.3
14+50.0	24.6	15+00.0	17.7	39.2
15+00.0	17.7	15+50.0	0.9	17.2
15+50.0	0.9	15+76.2	0.0	0.4
TOTAL EMBANKMENT QUANTITY =				185.6
FURNISHED EX. = EMBANKMENT - [SUITABLE EX. X (1 - SHRINK FACTOR)]				
SUITABLE EX	161.1 CU YD (REFER TO 20200100 EARTH EX)			
SHRINKAGE =	25.0 %			
CALCULATED FURNISHED EXCAVATION =				64.8
TOTAL =				65

**21101615 TOPSOIL FURNISH AND PLACE, 4"**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
LEFT				
11+25.0	0.0	11+50.0	8.0	11.1
11+50.0	8.0	12+00.0	13.0	58.3
12+00.0	13.0	12+50.0	12.9	71.9
12+50.0	12.9	12+61.0	12.6	15.5
12+61.0	12.6	13+90.0	2.2	87.6
13+90.0	2.2	14+00.0	2.1	2.4
14+00.0	2.1	14+50.0	0.0	5.8
14+50.0	0.0	15+00.0	10.0	27.9
15+00.0	10.0	15+50.0	6.1	44.8
15+50.0	6.1	15+76.2	7.4	19.6
RIGHT				
11+25.0	0.0	11+50.0	5.6	7.8
11+50.0	5.6	12+00.0	8.9	40.2
12+00.0	8.9	12+50.0	8.8	49.2
12+50.0	8.8	12+61.0	12.5	13.0
12+61.0	12.5	13+90.0	6.9	105.2
13+90.0	6.9	14+00.0	10.7	9.8
14+00.0	10.7	14+50.0	7.5	50.4
14+50.0	7.5	15+00.0	14.5	61.1
15+00.0	14.5	15+50.0	6.9	59.4
15+50.0	6.9	15+76.2	9.5	23.8
TOTAL =				765

**28000305 TEMPORARY DITCH CHECKS**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
15+73.5	16.5 LT	15+73.5	31.5 LT	15.0
TOTAL =				15

**28000400 PERIMETER EROSION BARRIER**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
LEFT				
11+50.0	20.0 LT	11+50.5	28.5 LT	8.5
11+50.5	28.5 LT	11+90.0	32.5 LT	39.7
11+90.0	32.5 LT	12+74.6	32.5 LT	84.6
12+74.6	32.5 LT	12+84.1	20.0 LT	15.7
13+38.8	21.6 LT	13+38.8	32.5 LT	10.9
13+38.8	32.5 LT	14+47.0	32.5 LT	108.2
14+60.2	32.5 LT	15+18.2	32.5 LT	58.1
15+18.2	32.5 LT	15+76.2	21.2 LT	59.1
RIGHT				
11+50.0	20.0 RT	11+50.0	26.1 RT	6.1
11+50.0	26.1 RT	12+00.0	29.2 RT	50.1
12+00.0	29.2 RT	12+50.0	28.9 RT	50.0
12+50.0	28.9 RT	12+84.3	32.5 RT	34.5
12+84.3	32.5 RT	13+22.2	32.5 RT	37.9
13+22.2	32.5 RT	13+12.6	20.0 RT	15.7
13+68.0	20.0 RT	13+77.6	32.5 RT	15.8
13+77.6	32.5 RT	15+07.0	32.5 RT	129.4
15+07.0	32.5 RT	15+76.2	22.5 RT	70.0
15+76.2	22.5 RT	15+76.2	13.0 RT	9.5
TOTAL =				804

**28000510 INLET FILTERS**

STATION	OFFSET(FT)	EACH
15+88.2	28.2 LT	1.0
TOTAL =		1

**28100107 STONE RIPRAP, CLASS A4**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
15+03.2	6.7	15+18.2	6.7	11.2
SEE STRUCTURAL SHEETS				333.0
TOTAL =				344

**35501308 HOT-MIX ASPHALT BASE COURSE, 6"**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
14+45.7	10.3	14+61.8	10.3	18.5
TOTAL =				19

**40600635 LEVELING BINDER (MACHINE METHOD), N70**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	TON
RATE = 112.0 POUND / SQ YD / INCH				
DEPTH = 0.75 INCH				
11+50.0	24.0	12+61.0	24.0	12.4
13+90.0	24.0	15+76.2	24.0	20.9
TOTAL =				33

**40603335 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	TON
RATE = 112.0 POUND / SQ YD / INCH				
DEPTH = 2.0 INCH				
REFER TO "35501308 HMA BASE CSE 6" FOR QUANTITY				
TOTAL =				2

**40603340 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	TON
RATE = 112.0 POUND / SQ YD / INCH				
DEPTH = 1.5 INCH				
11+50.0	24.0	12+61.0	24.0	24.9
13+90.0	24.0	15+76.2	24.0	41.7
TOTAL =				67

**42001420 BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
12+61.0	40.0	12+68.6	40.0	33.6
13+82.6	32.0	13+90.0	32.0	26.1
TOTAL =				60

**44000100 PAVEMENT REMOVAL**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
12+61.0	24.0	12+69.0	24.0	21.3
13+83.0	24.0	13+90.0	24.0	18.7
TOTAL =				40

**44000158 HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
11+50.0	24.0	12+61.0	24.0	296.0
13+90.0	24.0	15+76.2	24.0	496.5
TOTAL =				793

**44000500 COMBINATION CURB AND GUTTER REMOVAL**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
13+42.9	14.0 LT	14+92.1	21.1 LT	149.4
11+58.3	21.0 RT	13+07.0	14.0 RT	148.9
TOTAL =				298

**44004250 PAVED SHOULDER REMOVAL**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
LEFT				
11+50.0	9.1	12+10.6	4.4	45.5
12+10.6	4.4	12+55.6	6.2	26.5
13+42.9	1.3	14+92.4	8.2	78.9
14+92.4	8.2	15+06.3	0.0	6.4
RIGHT				
11+50.0	6.2	11+58.2	7.9	6.4
11+58.2	7.9	13+07.0	1.2	75.2
TOTAL =				239

**48203021 HOT-MIX ASPHALT SHOULDERS, 6"**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
13+68.1	5.7	14+13.5	3.6	23.4
14+13.5	3.6	14+43.1	3.6	11.8
TOTAL =				35

**48203029 HOT-MIX ASPHALT SHOULDERS, 8"**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
11+50.0	8.0	12+56.3	8.0	94.5
11+50.0	8.0	12+80.8	8.0	116.3
13+71.2	8.0	14+92.4	8.0	107.7
14+92.4	8.0	14+76.2	1.0	8.1
14+87.7	8.0	14+92.0	8.0	3.9
14+92.0	8.0	14+76.2	1.0	7.9
TOTAL =				338

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# SCHEDULE OF QUANTITIES

**56400300 FIRE HYDRANTS TO BE ADJUSTED**

STATION	OFFSET(FT)	EACH
14+69.2	22.6 LT	1.0
TOTAL =		1

**60300305 FRAMES AND LIDS TO BE ADJUSTED**

STATION	OFFSET(FT)	EACH
14+59.6	27.3 LT	1.0
15+68.6	9.4 RT	1.0
TOTAL =		2

**60600605 CONCRETE CURB, TYPE B**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
WESTERN AVE				
12+69.0	20.5 RT	12+84.0	20.5 RT	15.0
TOTAL =				15

**60605000 COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
13+68.1	20.6 LT	14+13.5	22.7 LT	45.5
14+13.5	22.7 LT	14+68.4	22.7 LT	54.8
TOTAL =				100

**63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
12+15.7	20.0 RT	12+40.7	20.0 RT	25.0
14+11.5	22.0 LT	14+36.5	22.0 LT	25.0
TOTAL =				50

**63100045 TRAFFIC BARRIER TERMINAL, TYPE 2**

STATION	OFFSET(FT)	EACH
14+46.0	28.8 LT	1.0
TOTAL =		1

**63100085 TRAFFIC BARRIER TERMINAL, TYPE 6**

STATION	OFFSET(FT)	EACH
12+83.9	20.0 RT	1.0
13+68.4	20.0 LT	1.0
TOTAL =		2

**63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT**

STATION	OFFSET(FT)	EACH
11+65.7	21.0 RT	1.0
TOTAL =		1

**63200310 GUARDRAIL REMOVAL**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
LEFT				
11+95.3	20.5 LT	12+09.9	19.3 LT	14.7
12+09.9	19.3 LT	14+07.5	21.3 LT	197.5
14+07.5	21.3 LT	14+45.8	27.2 LT	38.8
RIGHT				
11+53.7	23.4 RT	13+98.3	20.1 RT	244.5
13+97.5	17.3 RT	15+02.9	18.4 RT	105.4
TOTAL =				601

**78008210 POLYUREA PAVEMENT MARKING TYPE I - LINE 4"**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
WHITE EDGE LINE				
11+50.0	12.0 LT	15+76.2	12.0 LT	426.2
11+50.0	12.0 RT	15+76.2	12.0 RT	426.2
YELLOW CENTERLINE (SOLID, SKIP DASH)				
11+50.0	0.5 LT	15+76.2	0.5 LT	426.2
11+50.0	0.5 RT	15+76.2	0.5 RT	106.6
TOTAL =				1,385

**X5538200 STORM SEWERS TO BE CLEANED 24"**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
13+60.8	9.1 RT	15+68.8	9.1 RT	208.0
TOTAL =				208

**X5538400 STORM SEWERS TO BE CLEANED 30"**

STATION	OFFSET(FT)	STATION	OFFSET(FT)	FOOT
15+68.8	9.1 RT	15+88.2	28.2 LT	42.0
TOTAL =				42

**Z0004552 APPROACH SLAB REMOVAL**

STATION	WIDTH(FT)	STATION	WIDTH(FT)	SQ YD
12+69.0	24.0	12+97.6	24.0	76.1
13+52.2	24.0	13+82.0	24.0	79.4
TOTAL =				156

**Z0018500 DRAINAGE STRUCTURES TO BE CLEANED**

STATION	OFFSET(FT)	EACH
15+88.2	28.2 LT	1.0
TOTAL =		1

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 PLOT SCALE = 50.00 ' / IN.  
 PLOT DATE = 12/5/2011

DESIGNED - DJB  
 DRAWN - ENTRAN  
 CHECKED - TMH  
 DATE - 10/28/11

REVISED -  
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 REVISED -

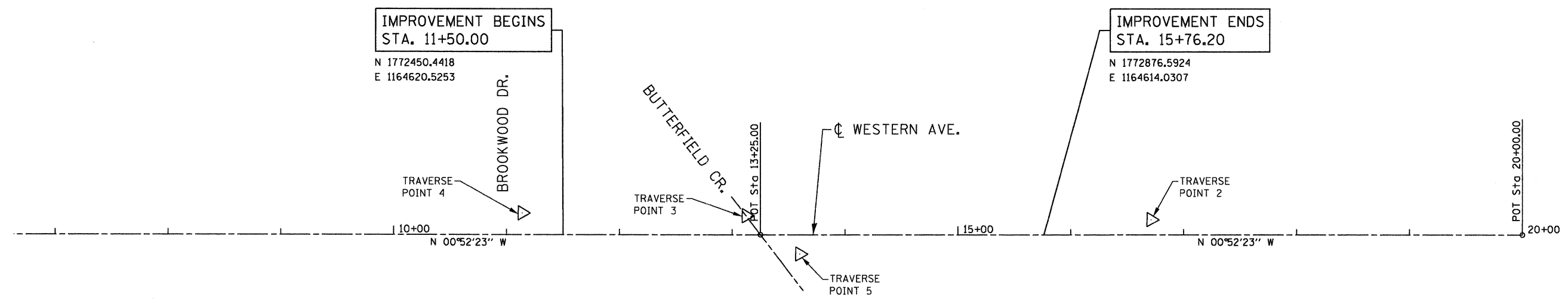
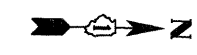
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
 SCHEDULE OF QUANTITIES**

SCALE: 50.00 ' / IN. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	6
CONTRACT NO. 60M78				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

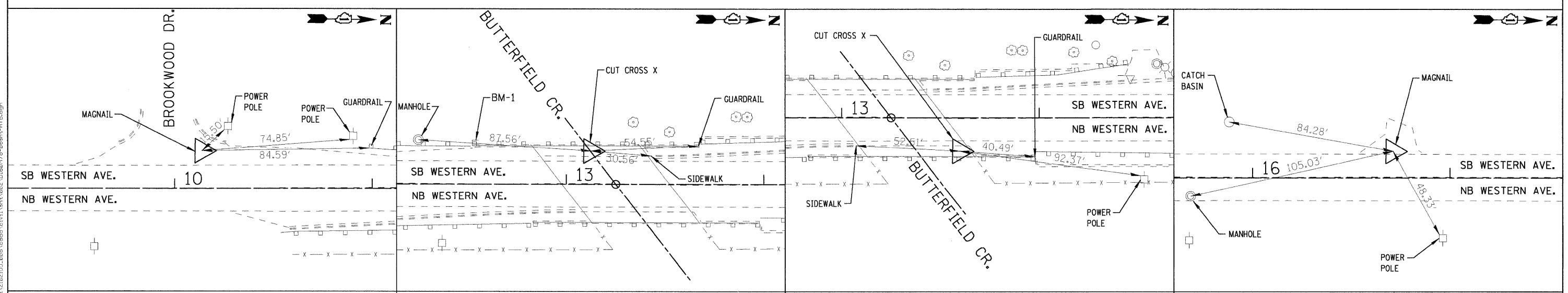




**BENCHMARK**

BM-1 CUT 'C' SOUTHEAST CORNER OF SOUTHWEST CONCRETE RETAINING WALL OF WESTERN AVE. BRIDGE OVER BUTTERFIELD CREEK. ELEV. = 654.70

NOTE:  
VERTICAL AND HORIZONTAL CONTROL  
NAVD 1988 DATUM PER GPS VRS NETWORK



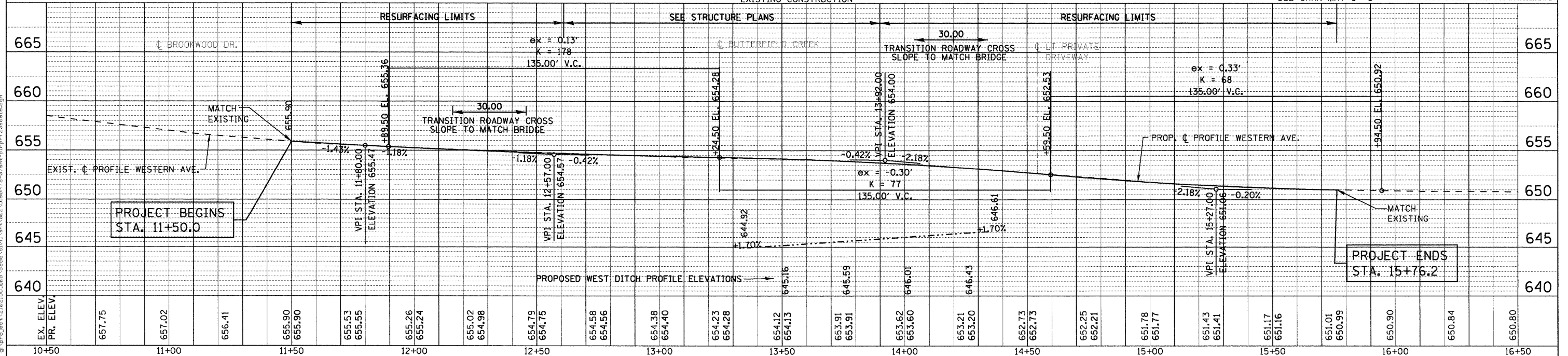
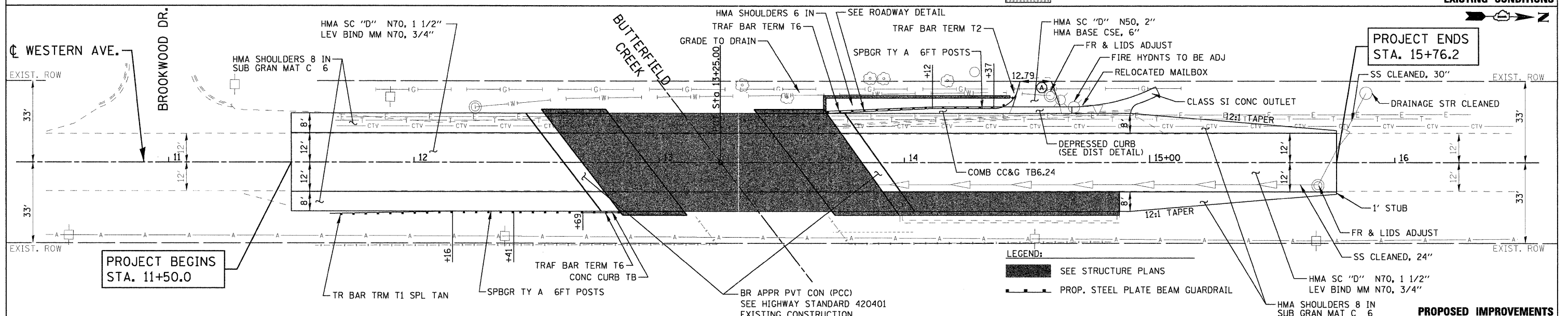
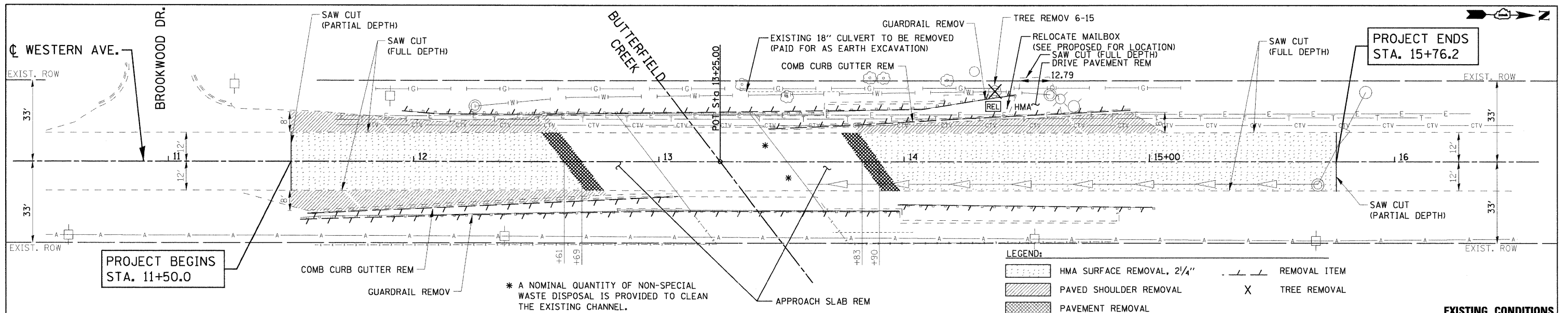
TRAVERSE POINT #4 N 1772414.0410 E 1164602.0710 STA 11+13.88, OFFSET 19.01' RT EL= 656.15	TRAVERSE POINT #3 N 1772612.5690 E 1164601.2590 STA 13+12.40, OFFSET 16.79' LT EL= 654.68	TRAVERSE POINT #5 N 1772660.4590 E 1164634.3050 STA 13+59.78, OFFSET 16.98' RT EL= 654.61	TRAVERSE POINT #2 N 1772971.3370 E 1164599.2230 STA 16+71.16, OFFSET 13.36' LT EL= 650.58
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	USER NAME = zpiend DESIGNED - DJB DRAWN - ENTRAN CHECKED - TMH DATE - 10/28/11	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>WESTERN AVENUE OVER BUTTERFIELD CREEK ALIGNMENT, TIES &amp; BENCHMARKS</b>	F.A.U. R.T.E. 2845 SECTION 0505-B COUNTY COOK TOTAL SHEETS 52 SHEET NO. 7	CONTRACT NO. 60M78 ILLINOIS FED. AID PROJECT
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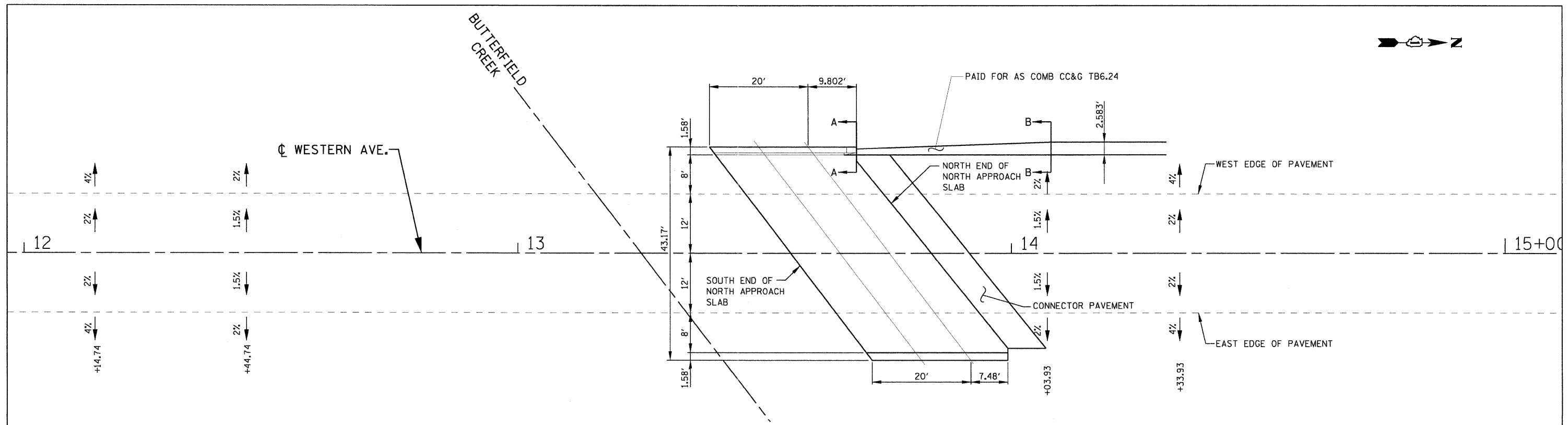
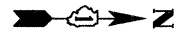
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PLANNED	
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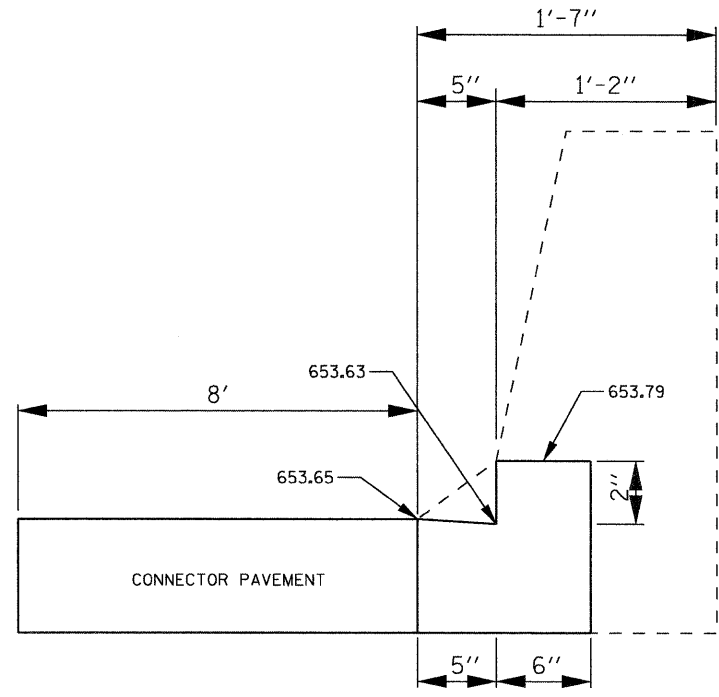
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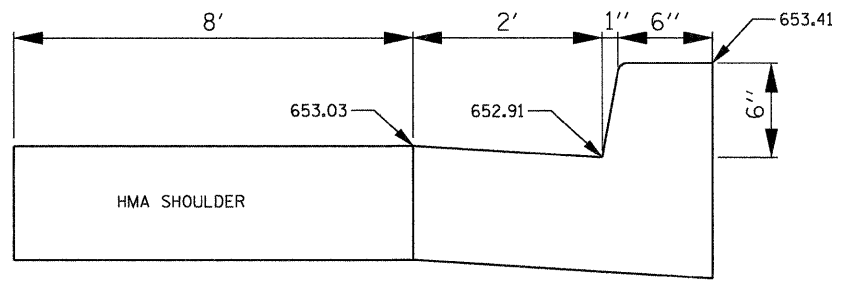
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	PLOT SCALE = 20.00' / IN.	CHECKED - TMH	REVISED -			FAU ROUTE 2845	CONTRACT NO. 60M78		ILLINOIS FED. AID PROJECT	
PLOT DATE = 12/5/2011	DATE = 10/28/11	REVISED -	REVISED -	SCALE: 1" = 20'	SHEET NO. OF SHEETS	STA. TO STA.				



COMBINATION CONCRETE CURB AND GUTTER TYPE B6.24 TRANSITION TO PARAPET



SECTION A-A  
N.T.S.  
☉ STA 13+67.28  
PR ☉ ELEVATION 653.99



SECTION B-B  
N.T.S.  
☉ STA 14+11.51  
PR ☉ ELEVATION 653.43

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PLOT DATE = 12/5/2011	CHECKED - TMH	REVISED -
	DATE - 10/28/11	REVISED -

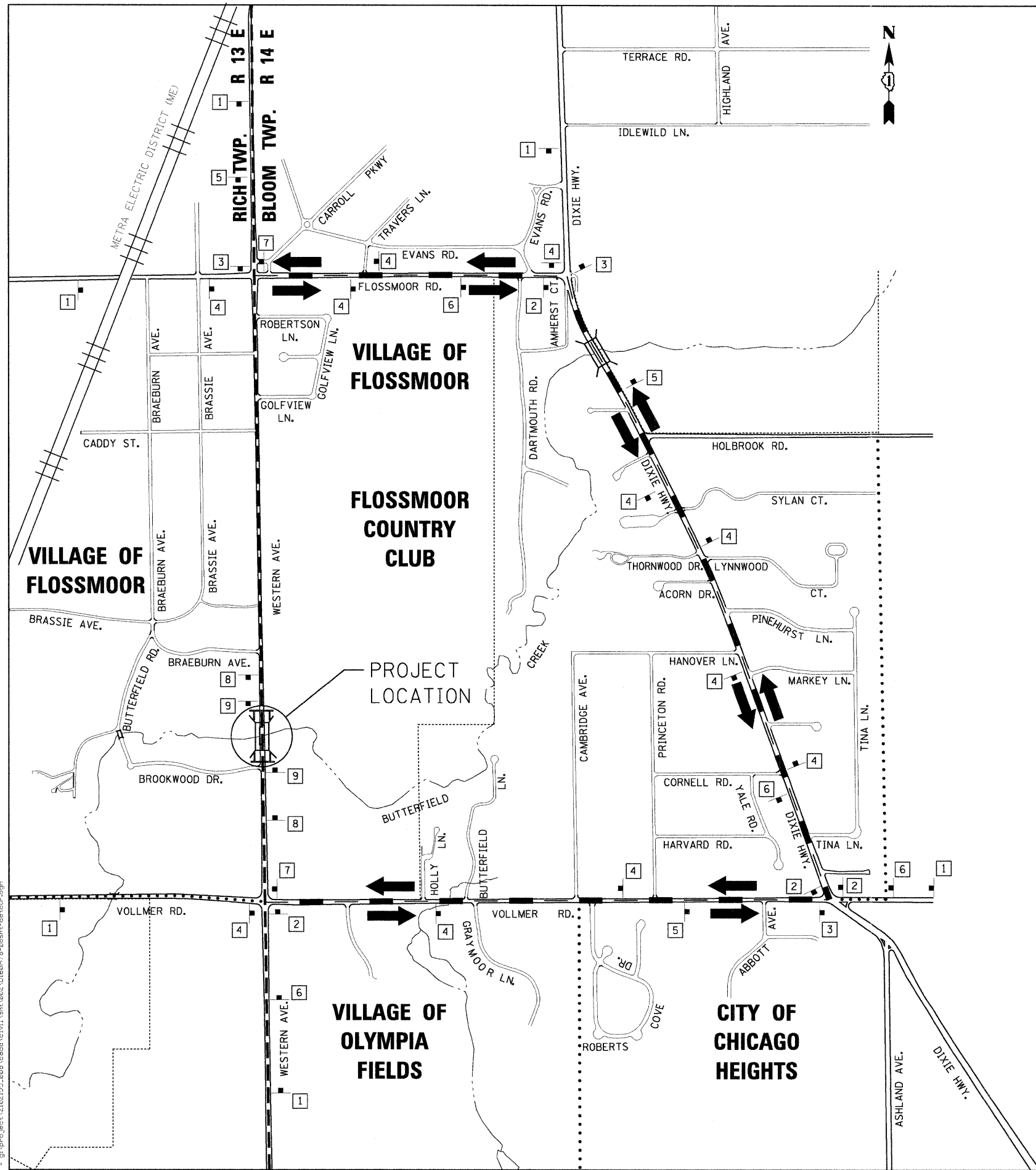
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
ROADWAY DETAILS**

SCALE: 10,000' / IN. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 2845	SECTION 0500B01	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 8A
FAU ROUTE 2845		CONTRACT NO. 60M78		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				





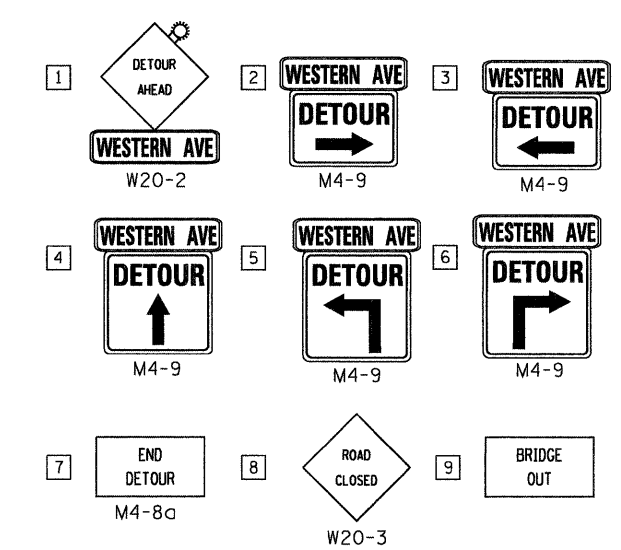
- LEGEND:**
- PROPOSED TRAFFIC CONTROL SIGN
  - TYPE III BARRICADE WITH A MINIMUM OF TWO (2) FLASHING WARNING LIGHTS
  - DETOUR ROUTE
  - MUNICIPALITY BOUNDARY LIMITS

**NOTES:**

LOCATIONS OF SIGNS ARE APPROXIMATE, THE ENGINEER WILL ESTABLISH THE ACCEPTABLE LOCATIONS OF BARRICADES AND SIGNS.

CONTRACTOR TO MAINTAIN ACCESS TO PUBLIC AND PRIVATE DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION.

DETOUR TO BE PAID FOR AS "TRAFFIC CONTROL AND PROTECTION, SPECIAL"



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PLOT DATE = 12/5/2011	CHECKED - TMH	REVISED -
	DATE - 10/28/11	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
DETOUR PLAN**

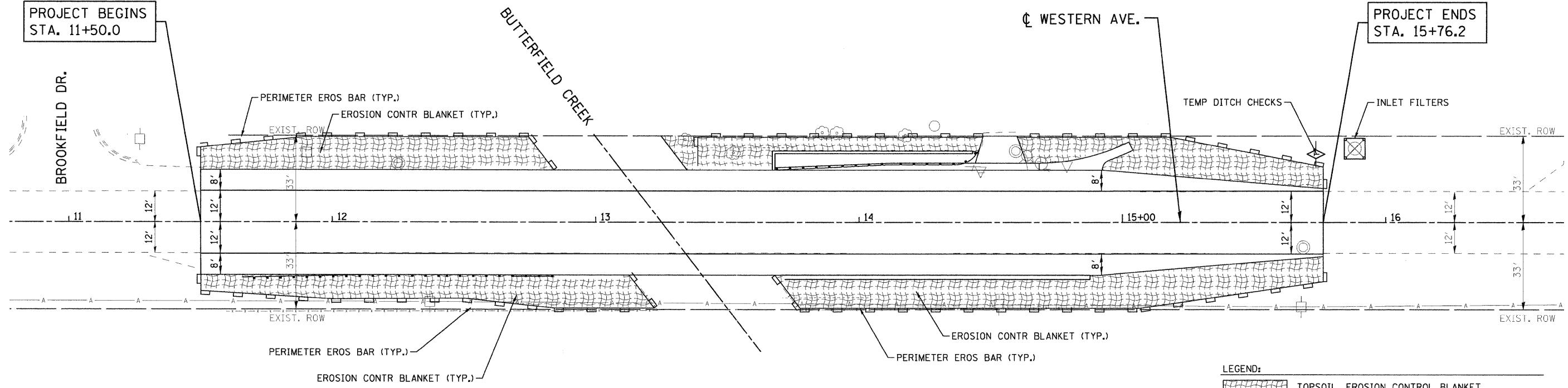
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F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 9
CONTRACT NO. 60M78				
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



PROJECT BEGINS  
STA. 11+50.0

PROJECT ENDS  
STA. 15+76.2



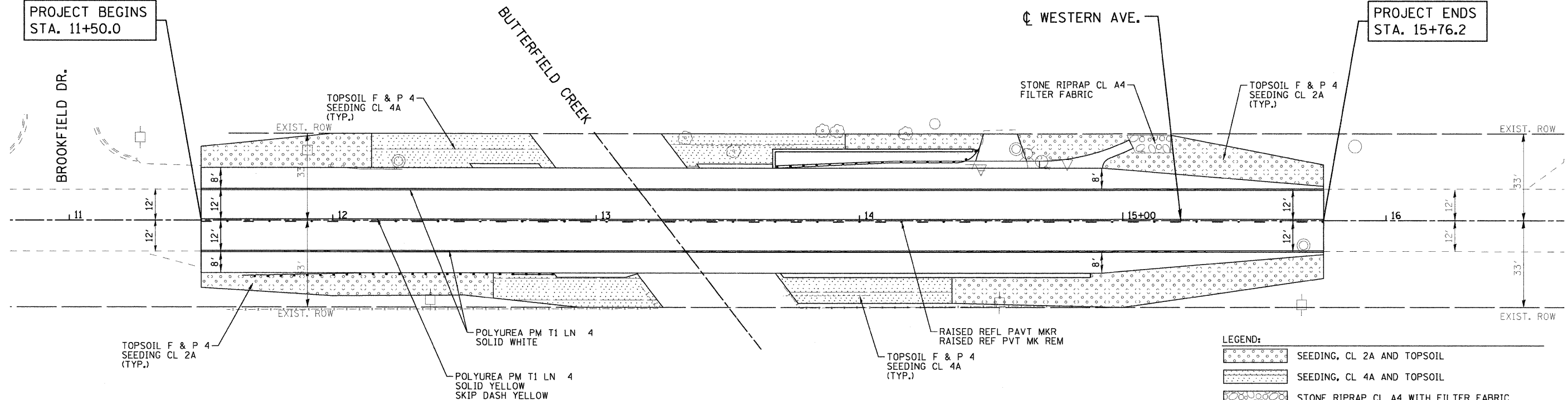
- LEGEND:**
- TOPSOIL, EROSION CONTROL BLANKET
  - PERIMETER EROSION BARRIER
  - TEMPORARY DITCH CHECK
  - INLET FILTER

**EROSION CONTROL PLAN**



PROJECT BEGINS  
STA. 11+50.0

PROJECT ENDS  
STA. 15+76.2



- LEGEND:**
- SEEDING, CL 2A AND TOPSOIL
  - SEEDING, CL 4A AND TOPSOIL
  - STONE RIPRAP CL A4 WITH FILTER FABRIC
  - RAISED REFLECTIVE PAVEMENT MARKER-(2 WAY AMBER) 80' C-C
  - YELLOW SKIP DASH

NOTE: REFER TO DISTRICT 1 DETAILS FOR ADDITIONAL INFORMATION ON "RAISED REFLECTIVE PAVEMENT MARKERS (SNOW PLOW RESISTANT)" AND "TYPICAL PAVEMENT MARKINGS."

**LANDSCAPING & PAVEMENT MARKING**

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USER NAME = zpienid	DESIGNED - DJB	REVISED -
PLOT SCALE = 20.00' / IN.	DRAWN - ENTRAN	REVISED -
PLOT DATE = 12/5/2011	CHECKED - TMH	REVISED -
	DATE - 10/28/11	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
EROSION CONTROL PLAN, LANDSCAPING & PAVEMENT MARKING**

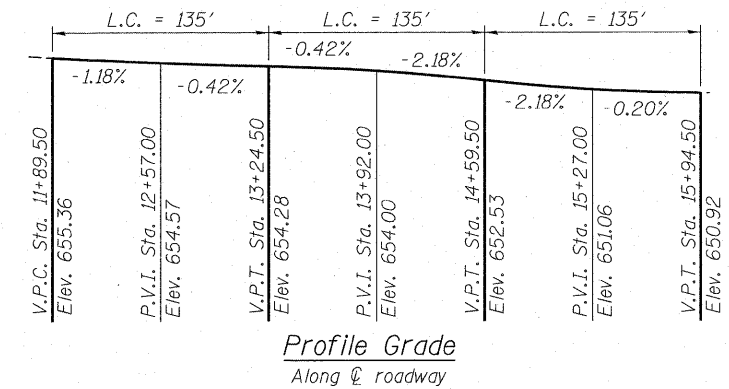
SCALE: 20.00' / IN. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 10
FAU ROUTE 2845		CONTRACT NO. 60M78		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

**BENCHMARK:** Square cut on the south east corner of south west wingwall of the Western Avenue Bridge over Butterfield Creek, Elevation 654.70.  
**Existing Structure:** S.N. 016-0772 built in 1960 as a FAU 2845, Section 62742 at Station 13+25. Structure consists of 1 span PPC deck beam structure supported on cantilevered type reinforced concrete abutments. Groups of untreated timber piles support the abutments and wingwalls. The bridge spans 53'-0" center-to-center of bearing and 57'-8" back-to-back of abutments along center line of Western Avenue. The structure width is 40'-0" out-to-out of deck. Existing elements to be removed include wearing surface, PPC deck beams, approaches and joints. Replace superstructure with 8" concrete deck supported on steel beams. Approach slabs to be replaced with structural approach slabs. Remove and reconstruct abutment caps to accommodate new superstructure. Provide riprap protection at abutments. Remove existing bin retaining walls and replace with new driven soldier pile retaining walls with C.I.P. Facing.

Complete closure and detour shall be the method of traffic control.

No salvage.



**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.096g  
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.16g  
 Soil Site Class = D

**LOADING HL-93**

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

**DESIGN SPECIFICATIONS**

AASHTO LRFD Bridge Design Specifications, 5th Edition, with 2010 Interims 17th Edition - AASHTO Standard Specifications for Highway Bridges (Driven Soldier Pile Wall Design)

**DESIGN STRESSES**

FIELD UNITS (New Construction)

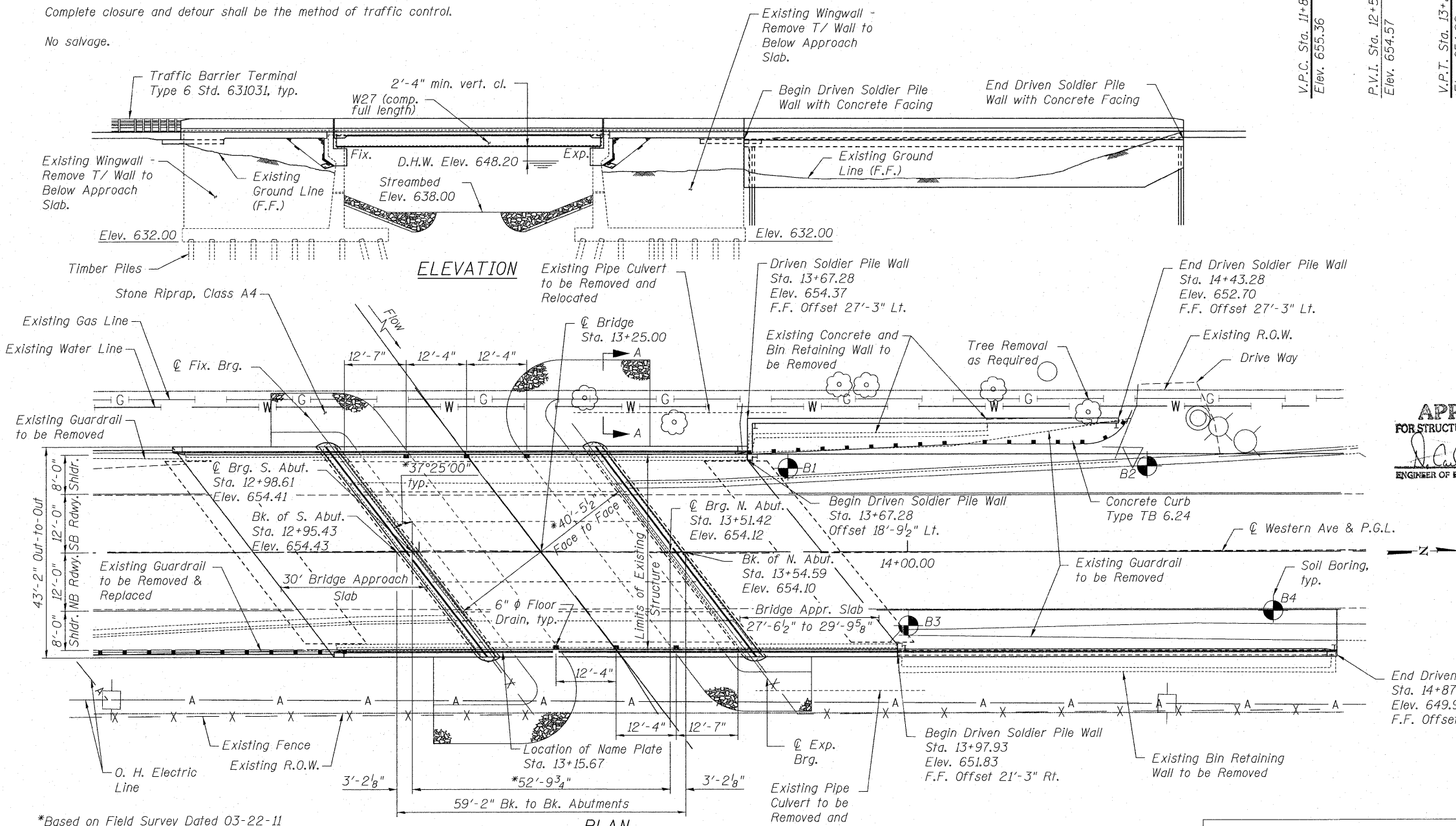
f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 fy = 50,000 psi (M270 Grade 50)  
 Soldier Piles Shall Be M270 Grade 36

**DESIGN STRESSES**

FIELD UNITS (Exist. Construction)

f'c = 3,500 psi  
 fs = 20,000 psi (Reinforcement)

**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY  
 [Signature]  
 ENGINEER OF BRIDGES AND STRUCTURES



\*Based on Field Survey Dated 03-22-11

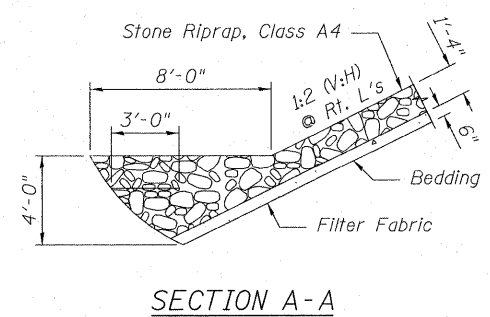
**WATERWAY INFORMATION TABLE**

Drainage Area = 21.7 sq miles | Proposed Low Grade Elev. = 654.77 feet @ Sta. 13+55.00 | Max. Recorded H.W.E. = 649.0

Flood	Freq. Yr.	Discharge C.F.S.	Waterway Opening		Natural H.W.E.	Created Head		Headwater Elevation	
			Existing	Proposed		Existing	Proposed	Existing	Proposed
Design	10	1730	372.7	372.7	647.8	1.4	1.3	649.2	649.1
Base	50	2430	399.0	399.0	648.2	1.2	0.8	649.4	649.0
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	2890	419.5	419.5	648.5	1.8	1.3	650.3	649.8
		4040	445.2	445.2	649.2	4.0	2.9	653.2	652.1

**DESIGN SCOUR ELEVATION TABLE**

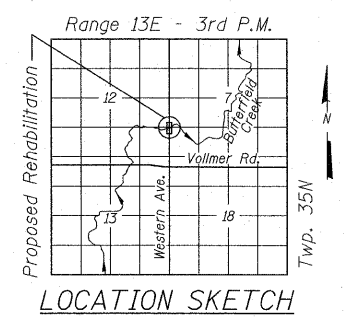
Design Scour Elevation (ft.)	N. Abut.	S. Abut.
	634.75	634.75



These plans are for the erection of the bridge. All work shown related to the Beam and Bearing Fabrication Contract is for information only. It is not included in this contract, and is identified as "Not Included in this Contract" or "For Information only"



RAGHAD ADEIS DAHMAN, S.E.  
 IL. LIC. NO. 081-006300  
 EXP. 11-30-2012  
 DATE 12-17-2011



**GENERAL PLAN & ELEVATION**  
**WESTERN AVENUE OVER**  
**BUTTERFIELD CREEK**  
**F.A.U. 2845 - SECTION 0505-B**  
**COOK COUNTY**  
**STATION 13+25.00**  
**STRUCTURE NO. 016-0772**

**APEX CONSULTING ENGINEERS, LLC**  
 111 E. Wacker Drive, Suite 520  
 Chicago, IL 60601  
 Phone (312) 977-0660 Fax (312) 977-0661

USER NAME =	DESIGNED - HAA	REVISED -
PLOT SCALE =	CHECKED - RAD	REVISED -
PLOT DATE = 12/8/2011	DRAWN - HAA	REVISED -
	CHECKED - RAD	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 016-0772**  
 SHEET NO. 51 OF 534 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	11
CONTRACT NO. 60M78			ILLINOIS FED. AID PROJECT	



INDEX OF SHEETS

- S1 General Plan and Elevation
- S2 General Data
- S3 Removal Plan
- S4 Top of Deck Elevations (1 of 2)
- S5 Top of Deck Elevations (2 of 2)
- S6 South Approach Slab Elevations
- S7 North Approach Slab Elevations
- S8 Deck Plan and Section
- S9 Parapet and Superstructure Details
- S10 Preformed Joint Strip Seal
- S11 Bridge South Approach Slab Details
- S12 Bridge North Approach Slab Details
- S13 Bridge Approach Slab Details
- S14 Framing Plan and Girder Elevation
- S15 Structural Steel Detail
- S16 Bearing Details
- S17 Cantilever Forming Brackets for Superstructures with W27 Beams and Smaller
- S18 South Abutment Plan and Elevation
- S19 South Abutment Details
- S20 North Abutment Plan and Elevation
- S21 North Abutment Details
- S22 Wing Walls Elevation and Details
- S23 Retaining Walls Plan and Elevation
- S24 Retaining Walls Section and Details
- S25 Soldier Pile Plan and Elevation
- S26 Bar Splicer Assembly and Mechanical Splicer Details
- S27 HP Pile Details
- S28 Soil Boring Logs
- S29 Existing Bridge Plans (1 of 6)
- S30 Existing Bridge Plans (2 of 6)
- S31 Existing Bridge Plans (3 of 6)
- S32 Existing Bridge Plans (4 of 6)
- S33 Existing Bridge Plans (5 of 6)
- S34 Existing Bridge Plans (6 of 6)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		333	333
Filter Fabric	Sq. Yd.		333	333
Concrete Removal	Cu. Yd.		68.0	68.0
Removal of Existing Superstructures	Each	1		1
Structure Excavation	Cu. Yd.		278	278
Floor Drains	Each	6		6
Concrete Structures	Cu. Yd.		153.6	153.6
Concrete Superstructure	Cu. Yd.	293.6		293.6
Bridge Deck Grooving	Sq. Yd.	571		571
Protective Coat	Sq. Yd.	715		715
Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1,533	1,347	2,880
Reinforcement Bars, Epoxy Coated	Pound	64,140	28,140	92,280
Bar Splicers	Each	112		112
Furnishing Soldier Piles HP Sections	Foot		917	917
Driving Soldier Piles	Foot		917	917
Pile Shoes	Each		31	31
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	113.0		113.0
Erecting Elastomeric Bearing Assembly, Type I	Each	7		7
Anchor Bolt 5/8"	Each	14		14
Anchor Bolt 1"	Each	14		14
Concrete Sealer	Sq. ft.		1,209	1,209
Epoxy Crack Injection	Foot		5	5
Geocomposite Wall Drain	Sq. Yd.		187	187
Porous Granular Embankment, Special	Cu. Yd.		218	218
Retaining Wall Removal	Foot		193	193
Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)	Sq. ft.		23	23
Pipe Underdrains for Structures 4"	Foot		298	298
Untreated Timber Lagging	Sq. ft.		979	979
Asbestos Bearing Pad Removal	Each	39		39
Conduit Attached to Structure, 4" Dia., PVC Coated Galvanized Steel	Foot	126		126

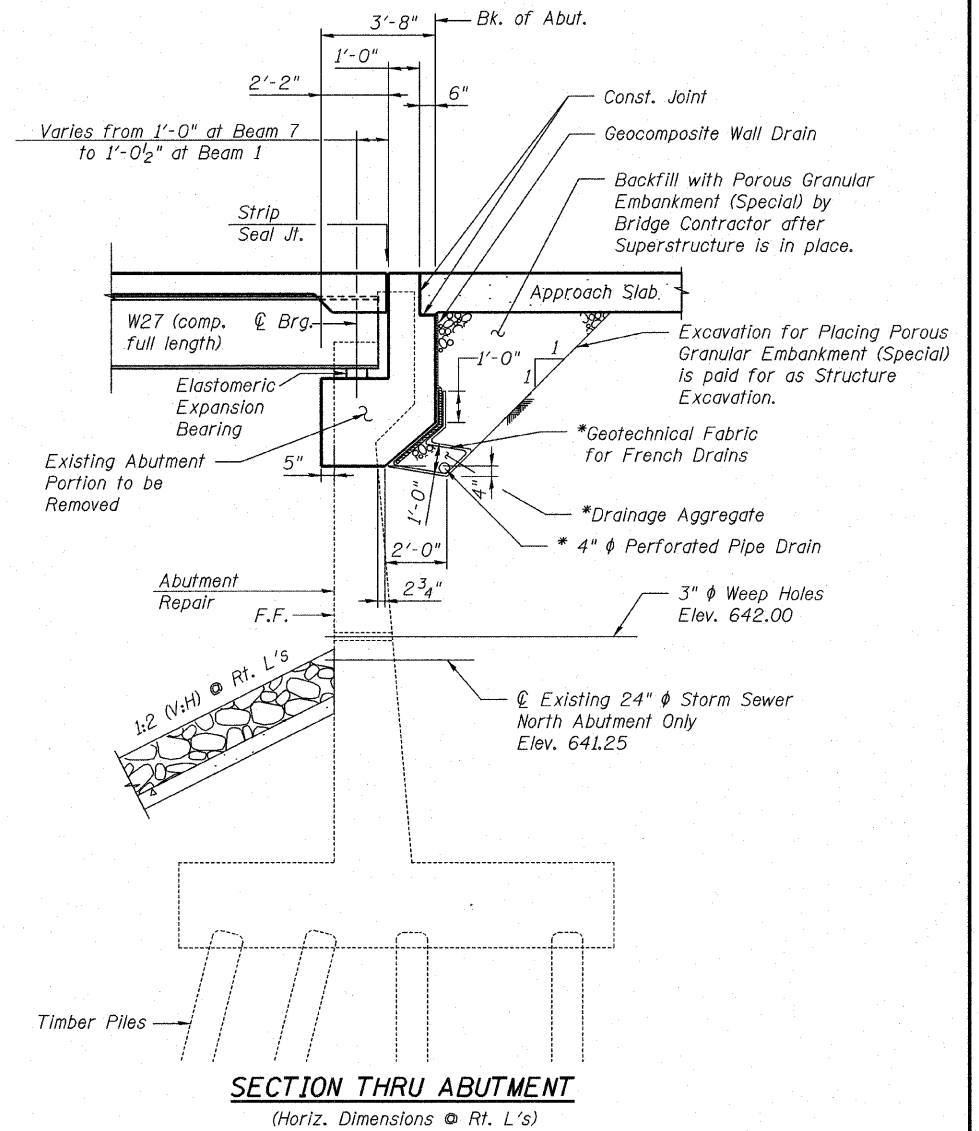
GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4"  $\phi$ , holes 5/8"  $\phi$ , unless otherwise noted.
2. Calculated weight of Structural Steel:  
Grade 50 Structural Steel = 39,000 #  
Grade 36 Structural Steel = 7,000 #
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. Concrete Sealer shall be applied to the designated areas of the exposed surface of the new abutment caps and backwall.
6. The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception that masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Reddish Brown (Munsell No 2.5YR 3/4).
7. Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
8. Slip forming of parapets is not allowed.
9. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
10. The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.

STATION 13+25.00  
REBUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.U.2845 - SEC. 0505-B  
LOADING HL-93  
STRUCTURE NO.016-0772

**NAME PLATE**  
See Std. 515001

Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.

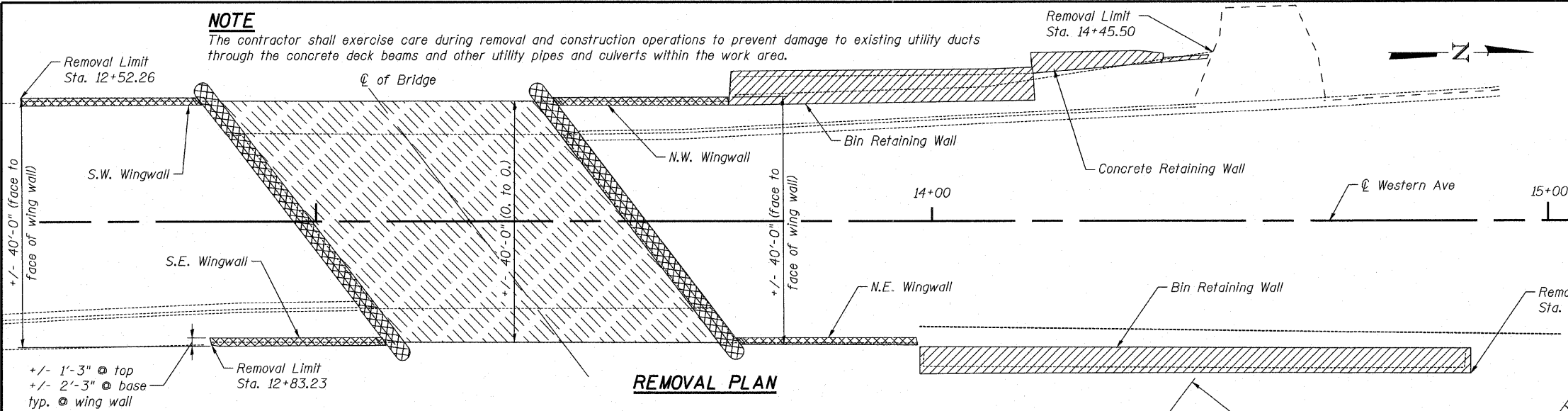


\*Included in the cost of Pipe Underdrains for Structures 4".

All drainage system components shall extend the full length of the abutments except an outlet pipe shall extend until intersecting with the wingwalls. The wingwalls shall be cored to accept the Outlet Pipe. The Outlet Pipe shall not be located closer than 2'-0" to the top of the wingwall. This work shall be included in the pay item for Pipe Underdrains for Structures 4".

**NOTE**

The contractor shall exercise care during removal and construction operations to prevent damage to existing utility ducts through the concrete deck beams and other utility pipes and culverts within the work area.



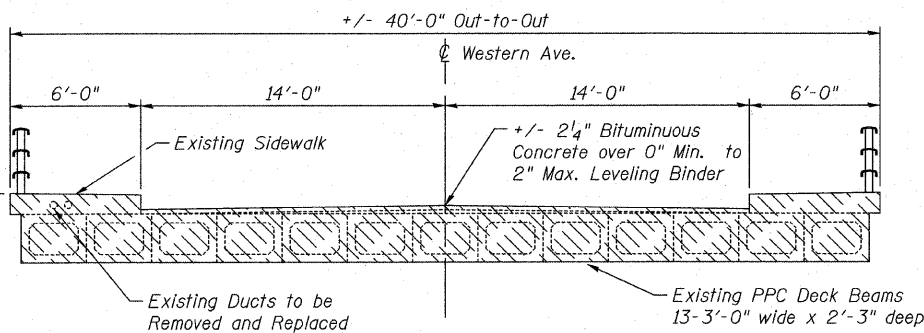
**REMOVAL  
BILL OF MATERIAL**

Retaining Wall Removal	Foot	193
Concrete Removal	Cu Yd	68.0
Removal of Existing Superstructures	Each	1
Asbestos Bearing Pad Removal	Each	39

Note:  
Asbestos Bearing Pad Removal is paid for as one each per pad.

**REMOVAL PLAN**

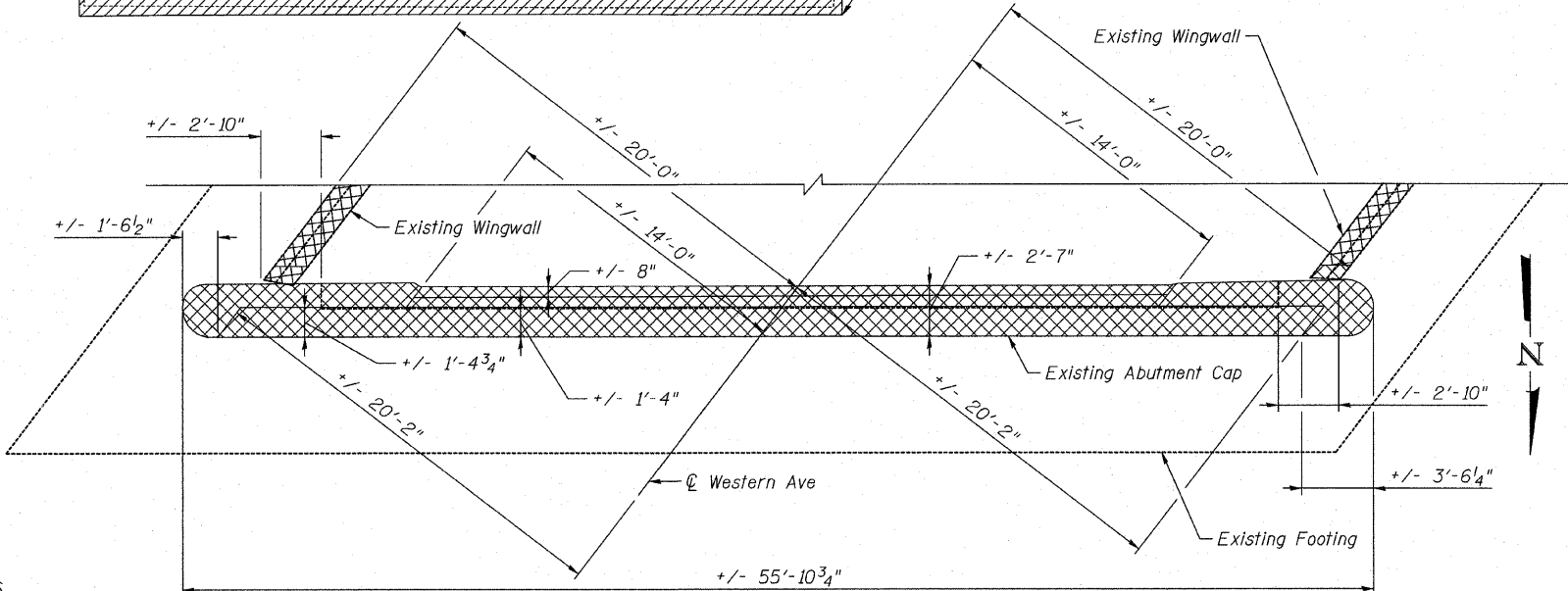
+/- 1'-3" @ top  
+/- 2'-3" @ base  
typ. @ wing wall



**DECK BEAM REMOVAL**

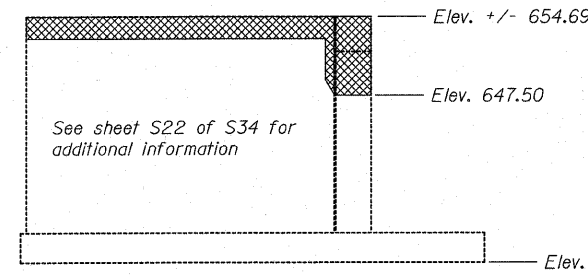
**LEGEND**

- Removal of Existing Superstructures
- Concrete Removal
- Retaining Wall Removal



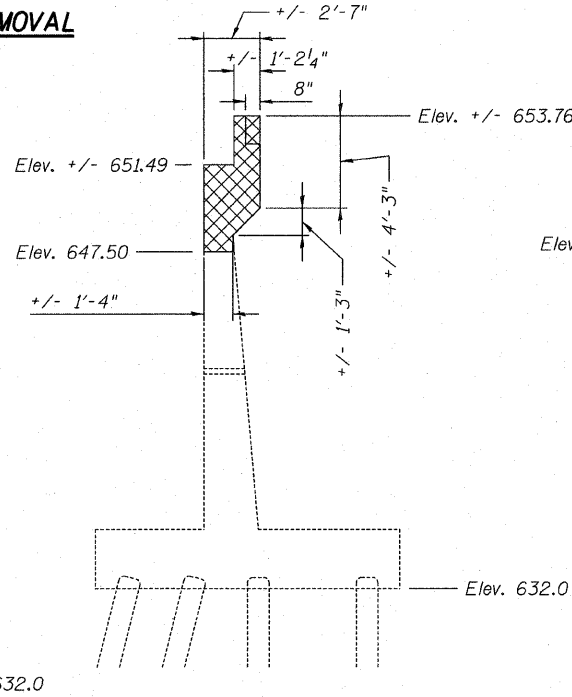
**ABUTMENT CAP REMOVAL - PLAN VIEW**

(South Abutment Shown, North Abutment Similar)

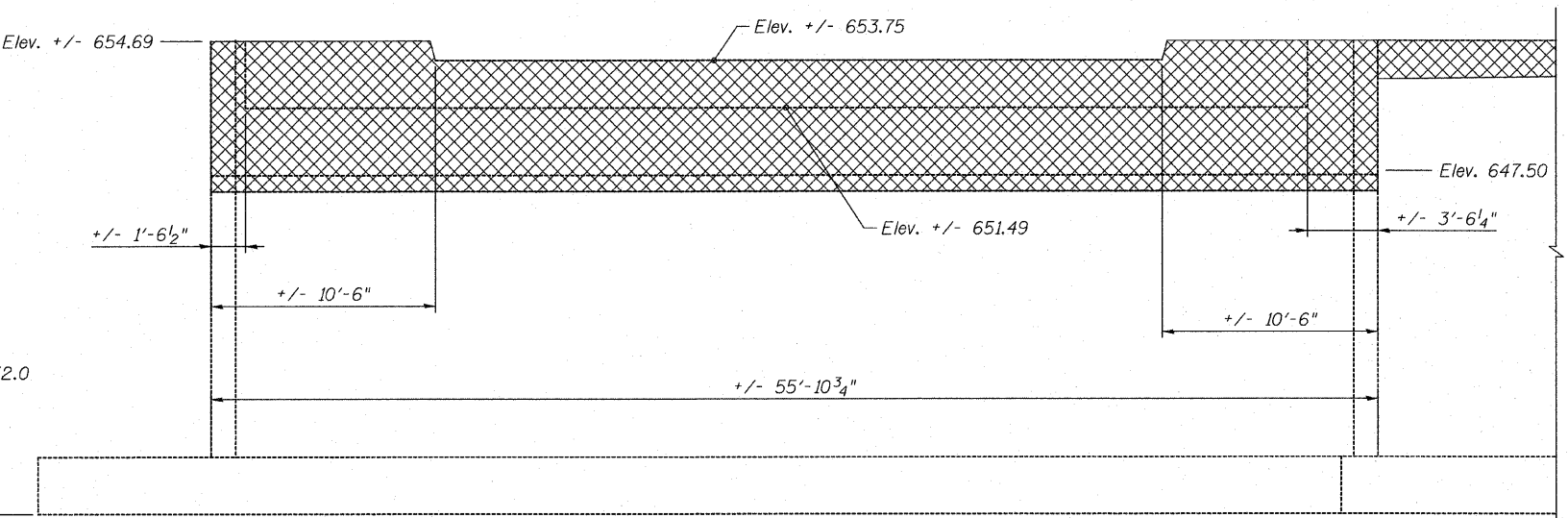


**WINGWALL REMOVAL - ELEVATION**

(Elevations taken along F.F. / Wingwall U.N.O.)



**ABUTMENT CAP REMOVAL CROSS SECTION**



**ABUTMENT CAP REMOVAL - ELEVATION**

(South Abutment Shown, North Abutment Similar)

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 620  
Chicago, IL 60601  
Phone (312) 977-0660 Fax (312) 977-0661

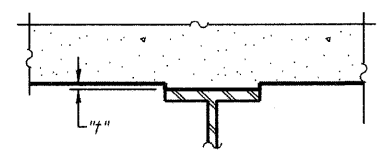
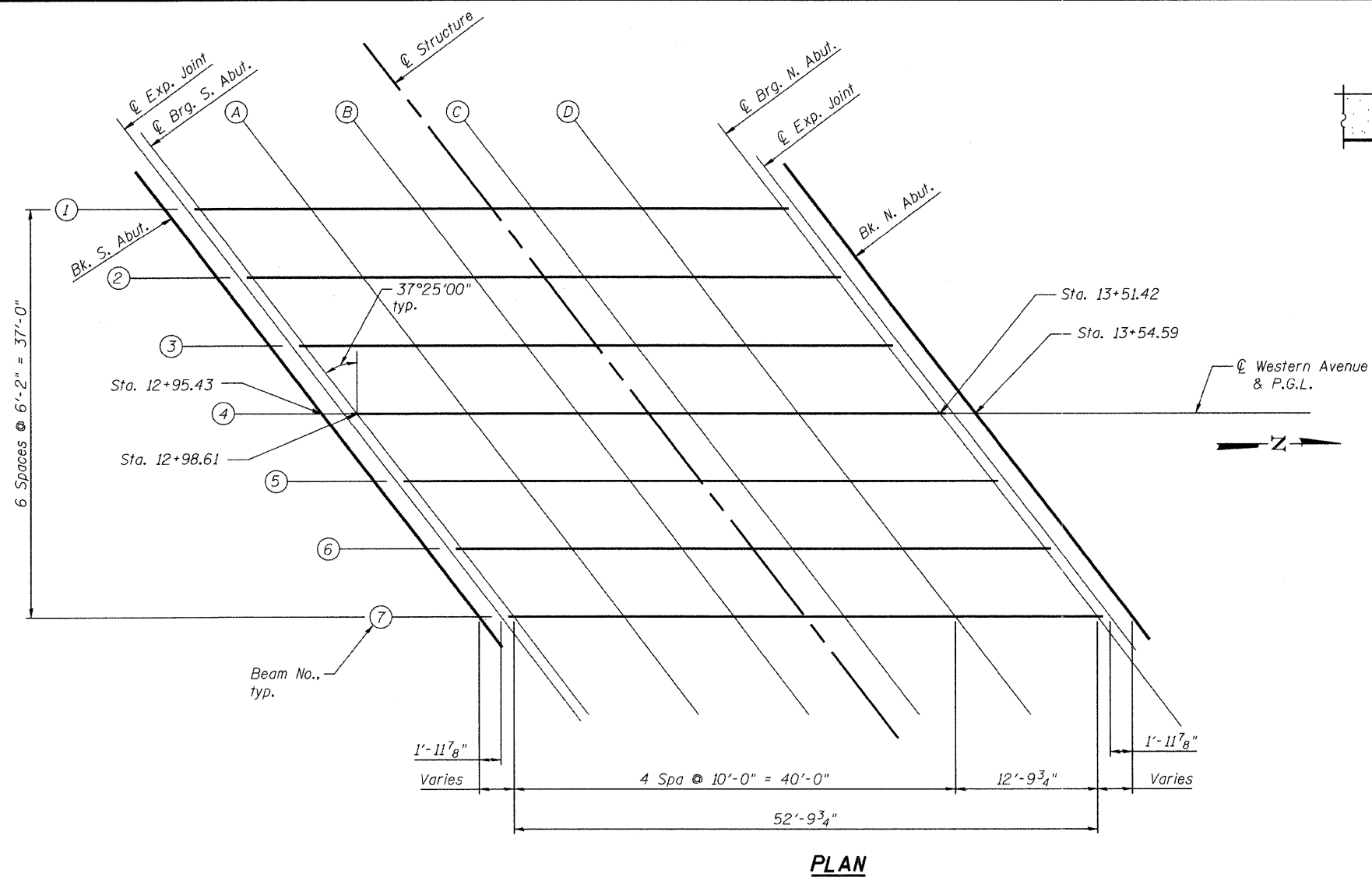
USER NAME =  
PLOT SCALE =  
PLOT DATE = 12/9/2011

DESIGNED - HAA	REVISOR
CHECKED - RAD	REVISOR
DRAWN - HAA	REVISOR
CHECKED - RAD	REVISOR

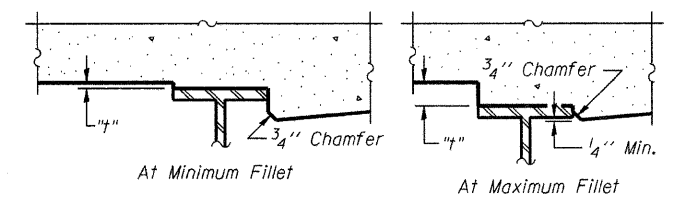
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN  
S.N. 016-0772**  
SHEET NO. S3 OF S34 SHEETS

F.A.I. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 13
CONTRACT NO. 60M78				ILLINOIS FED. AID PROJECT



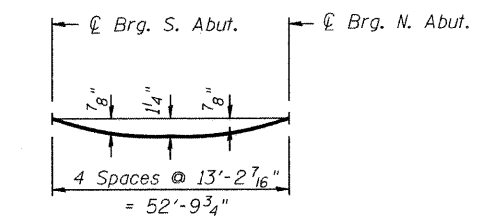
**INTERIOR BEAM**



**EXTERIOR BEAM**

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals as shown in Sheet S5 of S33. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown in Sheet S5 of S33, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in Sheet S5 of S33.

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 500  
Chicago, IL 60601  
Phone (312) 977-0960 Fax (312) 977-0961

USER NAME =  
PLOT SCALE =  
PLOT DATE = 10/27/2011

DESIGNED - HAA  
CHECKED - RAD  
DRAWN - HAA  
CHECKED - RAD

REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TOP OF DECK ELEVATIONS (1 OF 2)**  
**STRUCTURE NO. 016-0772**

SHEET NO. S4 OF S34 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	14
				<b>CONTRACT NO. 60M78</b>
ILLINOIS FED. AID PROJECT				



<b>Beam 1</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	12+81.26	-18.50	654.21	654.21
☉ Exp. Joint	12+83.26	-18.50	654.20	654.20
☉ Brg S. Abut.	12+84.46	-18.50	654.19	654.19
A	12+94.46	-18.50	654.13	654.19
B	13+04.46	-18.50	654.07	654.18
C	13+14.46	-18.50	654.02	654.14
D	13+24.46	-18.50	653.97	654.06
☉ Brg N. Abut.	13+37.27	-18.50	653.91	653.91
☉ Exp. Joint	13+38.47	-18.50	653.90	653.90
Bk. N. Abut.	13+40.46	-18.50	653.89	653.89

<b>Beam 2</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	12+85.99	-12.33	654.30	654.30
☉ Exp. Joint	12+87.98	-12.33	654.29	654.29
☉ Brg S. Abut.	12+89.18	-12.33	654.28	654.28
A	12+99.18	-12.33	654.22	654.29
B	13+09.18	-12.33	654.17	654.28
C	13+19.18	-12.33	654.12	654.24
D	13+29.18	-12.33	654.08	654.16
☉ Brg N. Abut.	13+41.98	-12.33	654.00	654.00
☉ Exp. Joint	13+43.18	-12.33	654.00	654.00
Bk. N. Abut.	13+45.17	-12.33	653.98	653.98

<b>Beam 3</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	12+90.71	-6.17	654.37	654.37
☉ Exp. Joint	12+92.70	-6.17	654.35	654.35
☉ Brg S. Abut.	12+93.89	-6.17	654.35	654.35
A	13+03.89	-6.17	654.29	654.36
B	13+13.89	-6.17	654.24	654.35
C	13+23.89	-6.17	654.19	654.31
D	13+33.89	-6.17	654.15	654.23
☉ Brg N. Abut.	13+46.70	-6.17	654.07	654.07
☉ Exp. Joint	13+47.89	-6.17	654.06	654.06
Bk. N. Abut.	13+49.88	-6.17	654.04	654.04

<b>Beam 4 &amp; ☉ Western Ave &amp; PGL</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	12+95.43	0.00	654.43	654.43
☉ Exp. Joint	12+97.43	0.00	654.42	654.42
☉ Brg S. Abut.	12+98.61	0.00	654.41	654.41
A	13+08.61	0.00	654.36	654.43
B	13+18.61	0.00	654.31	654.42
C	13+28.61	0.00	654.27	654.39
D	13+38.61	0.00	654.21	654.30
☉ Brg N. Abut.	13+51.42	0.00	654.12	654.12
☉ Exp. Joint	13+52.60	0.00	654.12	654.12
Bk. N. Abut.	13+54.59	0.00	654.10	654.10

<b>Beam 5</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	13+00.16	6.17	654.31	654.31
☉ Exp. Joint	13+02.15	6.17	654.30	654.30
☉ Brg S. Abut.	13+03.33	6.17	654.29	654.29
A	13+13.33	6.17	654.24	654.31
B	13+23.33	6.17	654.20	654.31
C	13+33.33	6.17	654.15	654.27
D	13+43.33	6.17	654.09	654.17
☉ Brg N. Abut.	13+56.14	6.17	653.99	653.99
☉ Exp. Joint	13+57.31	6.17	653.98	653.98
Bk. N. Abut.	13+59.30	6.17	653.97	653.97

<b>Beam 6</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	13+04.88	12.33	654.19	654.19
☉ Exp. Joint	13+06.88	12.33	654.18	654.18
☉ Brg S. Abut.	13+08.05	12.33	654.17	654.17
A	13+18.05	12.33	654.13	654.19
B	13+28.05	12.33	654.08	654.20
C	13+38.05	12.33	654.03	654.15
D	13+48.05	12.33	653.96	654.05
☉ Brg N. Abut.	13+60.85	12.33	653.86	653.86
☉ Exp. Joint	13+62.02	12.33	653.85	653.85
Bk. N. Abut.	13+64.01	12.33	653.83	653.83

<b>Beam 7</b>				
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	13+09.61	18.50	654.04	654.04
☉ Exp. Joint	13+11.60	18.50	654.03	654.03
☉ Brg S. Abut.	13+12.76	18.50	654.03	654.03
A	13+22.76	18.50	653.98	654.05
B	13+32.76	18.50	653.94	654.05
C	13+42.76	18.50	653.88	654.00
D	13+52.76	18.50	653.80	653.89
☉ Brg N. Abut.	13+65.57	18.50	653.69	653.69
☉ Exp. Joint	13+66.73	18.50	653.68	653.68
Bk. N. Abut.	13+68.72	18.50	653.66	653.66

**WEST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Appr. Slab	12+50.74	-20.00	654.41
A1	12+60.74	-20.00	654.33
A2	12+70.74	-20.00	654.25
N. End of S. Appr. Slab	12+80.74	-20.00	654.18

**WEST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Appr. Slab	12+56.87	-12.00	654.52
A1	12+66.87	-12.00	654.44
A2	12+76.87	-12.00	654.37
N. End of S. Appr. Slab	12+86.87	-12.00	654.30

**☉ WESTERN AVENUE & PGL**

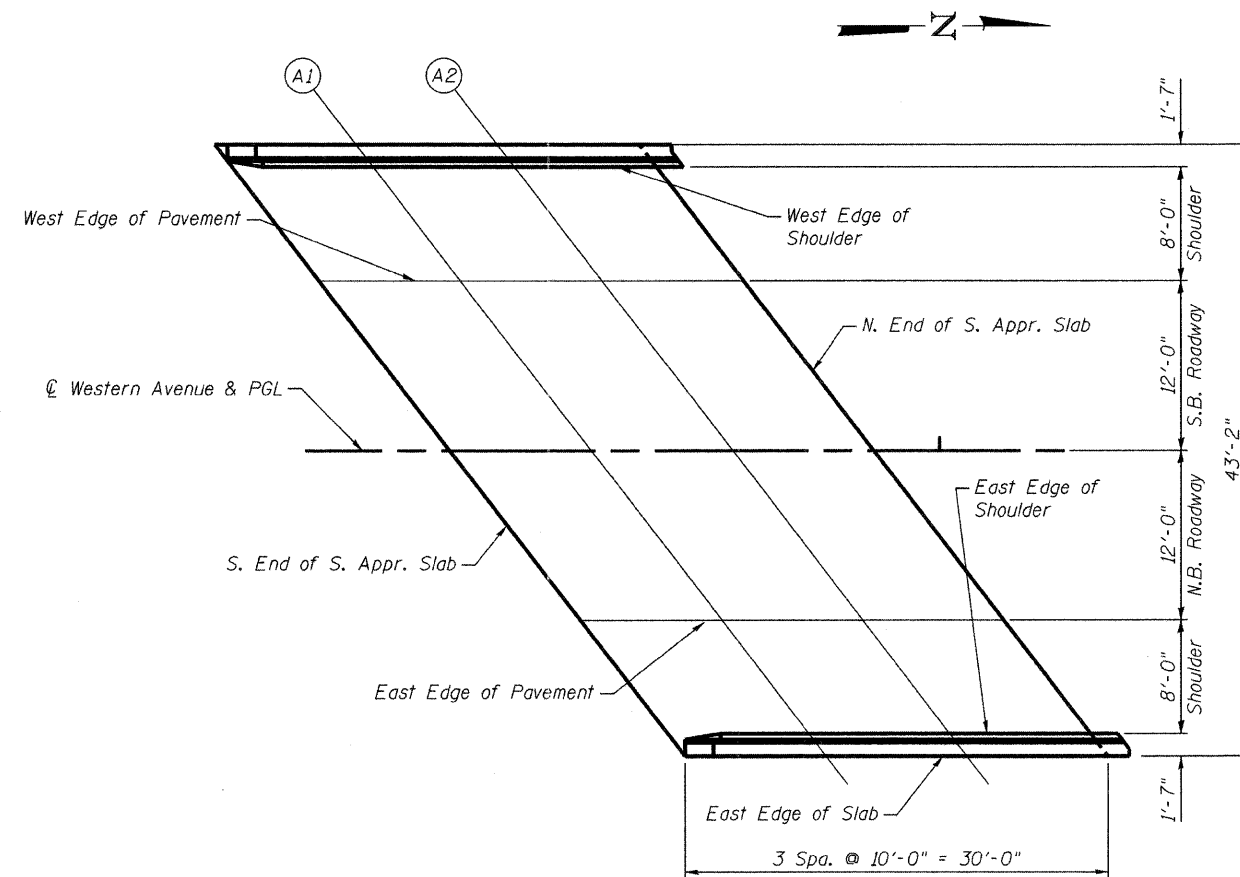
Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Appr. Slab	12+66.06	0.00	654.63
A1	12+76.06	0.00	654.55
A2	12+86.06	0.00	654.49
N. End of S. Appr. Slab	12+96.06	0.00	654.43

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Appr. Slab	12+75.26	12.00	654.38
A1	12+85.26	12.00	654.31
A2	12+95.26	12.00	654.25
N. End of S. Appr. Slab	13+05.26	12.00	654.20

**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
S. End of S. Appr. Slab	12+81.39	20.00	654.18
A1	12+91.39	20.00	654.11
A2	13+01.39	20.00	654.06
N. End of S. Appr. Slab	13+11.39	20.00	654.00



**SOUTH APPROACH SLAB PLAN**

**WEST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
S. End of N. Appr. Slab	13+38.69	-20.00	653.87
A3	13+48.69	-20.00	653.80
A4	13+58.69	-20.00	653.72
N. End of N. Appr. Slab	13+67.28	-20.00	653.65

**WEST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
S. End of N. Appr. Slab	13+44.80	-12.00	653.99
A3	13+54.80	-12.00	653.92
A4	13+64.80	-12.00	653.83
N. End of N. Appr. Slab	13+72.75	-12.00	653.75

**☉ WESTERN AVENUE & PGL**

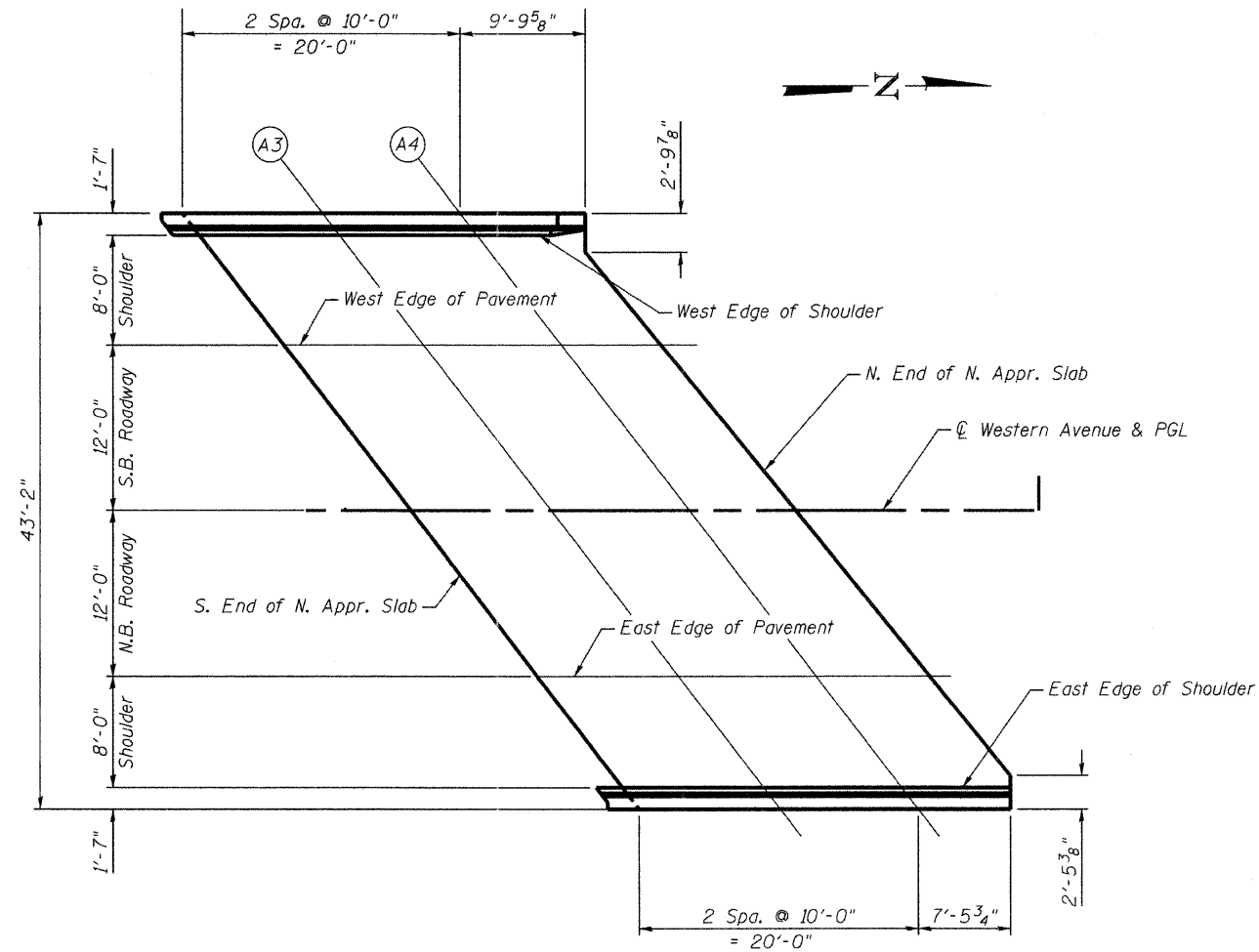
Location	Station	Offset	Theoretical Grade Elevations
S. End of N. Appr. Slab	13+53.96	0.00	654.10
A3	13+63.96	0.00	654.02
A4	13+73.96	0.00	653.92
N. End of N. Appr. Slab	13+82.46	0.00	653.82

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
S. End of N. Appr. Slab	13+63.13	12.00	653.85
A3	13+73.13	12.00	653.75
A4	13+83.13	12.00	653.63
N. End of N. Appr. Slab	13+92.16	12.00	653.52

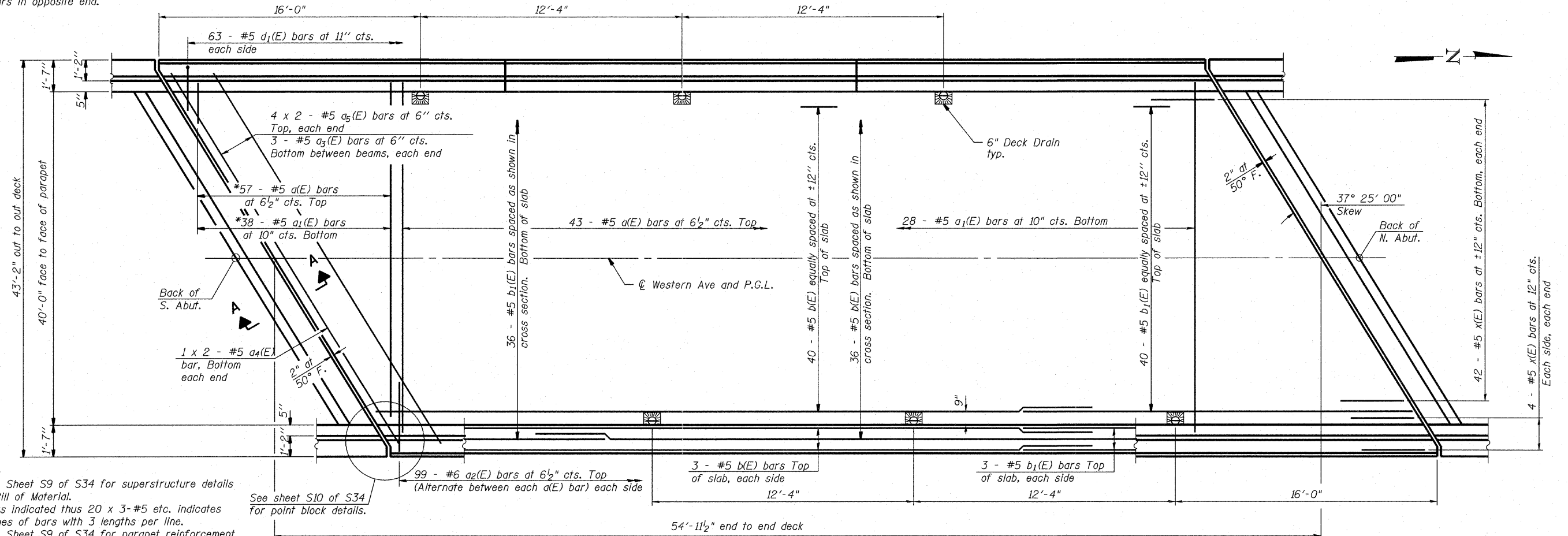
**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
S. End of N. Appr. Slab	13+69.24	20.00	653.63
A3	13+79.24	20.00	653.52
A4	13+89.24	20.00	653.40
N. End of N. Appr. Slab	13+97.93	20.00	653.28



**NORTH APPROACH SLAB PLAN**

\* Order a(E) & a<sub>1</sub>(E) bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.



Notes:  
See Sheet S9 of S34 for superstructure details and Bill of Material.  
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
See Sheet S9 of S34 for parapet reinforcement.  
See Sheet S9 of S34 for Section A-A.

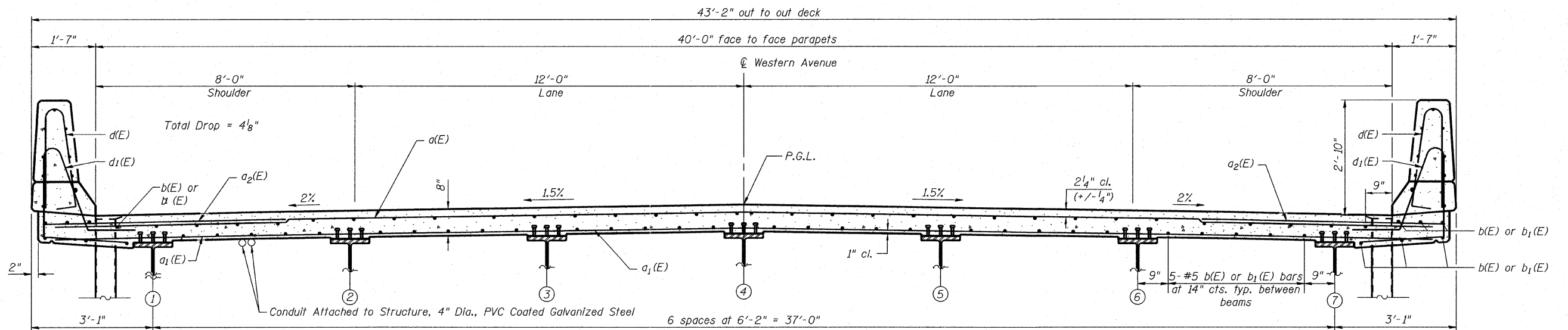
See sheet S10 of S34 for point block details.

Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Base Sheet EJ-SSJ.

**PLAN**

**MINIMUM BAR LAP**

(Deck)  
#5 bar = 2'-7"



**CROSS SECTION**  
(Looking North)

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 500  
Chicago, IL 60601  
Phone (312) 977-0660 Fax (312) 977-0661

USER NAME =  
DESIGNED - RAD  
CHECKED - HAA  
DRAWN - WHI  
PLOT SCALE =  
PLOT DATE = 12/8/2011

DESIGNED - RAD  
CHECKED - HAA  
DRAWN - WHI  
CHECKED - RAD

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REVISED  
REVISED  
REVISED

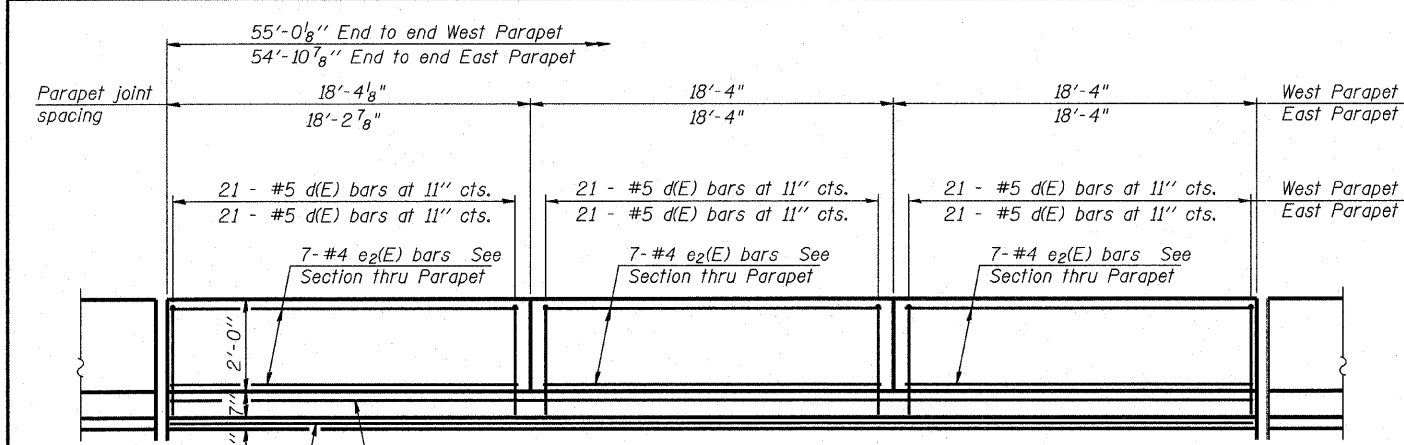
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DECK PLAN AND SECTION  
STRUCTURE NO. 016-0772

SHEET NO. 58 OF S34 SHEETS

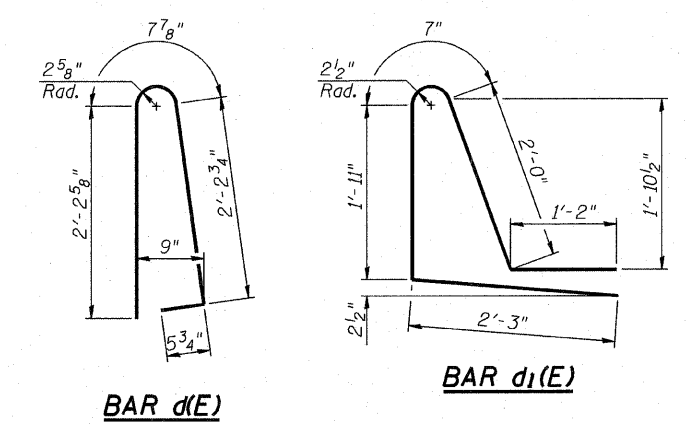
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	18
CONTRACT NO. 60M78				

ILLINOIS FED. AID PROJECT



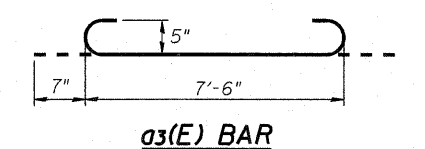
**INSIDE ELEVATION OF PARAPET**

1x2 #4 e1(E) bar, Back Face  
1x2 #8 e(E) bar, Front Face

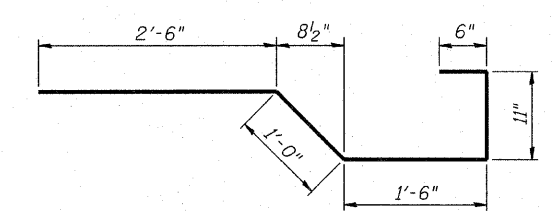


**BAR d(E)**

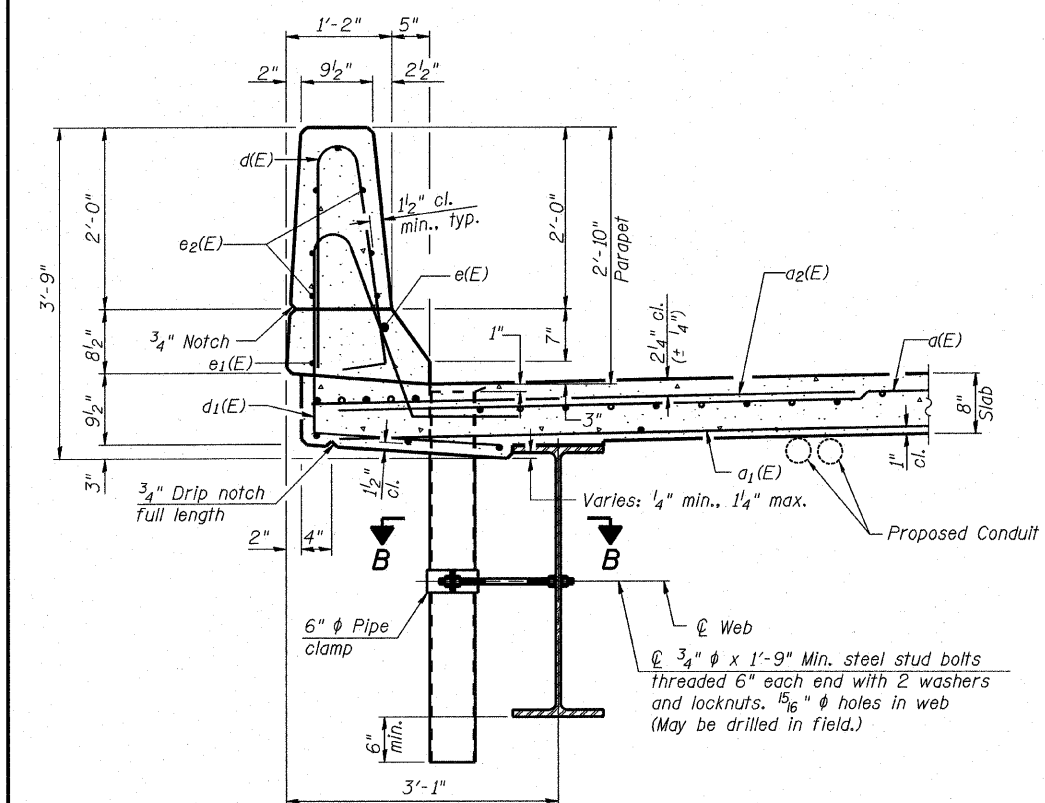
**BAR d1(E)**



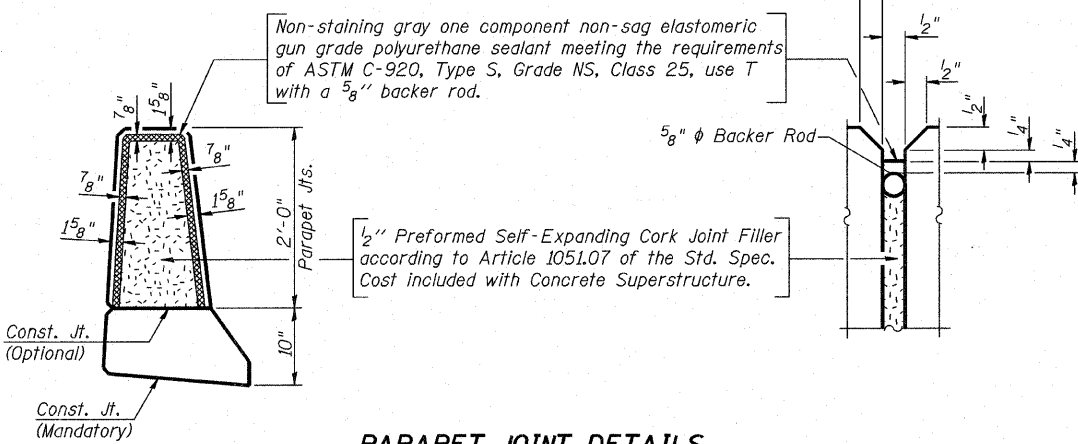
**a3(E) BAR**



**BAR x(E)**



**SECTION THRU PARAPET**



**PARAPET JOINT DETAILS**

**Notes:**  
Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the 2012 Illinois Department of Transportation Standard Specifications. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coating's Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

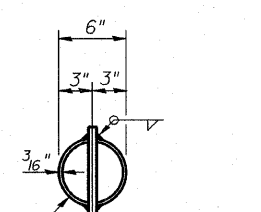
**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	100	# 5	42'-6"	—
a1(E)	66	# 5	42'-2"	—
a2(E)	198	# 6	6'-6"	—
a3(E)	36	# 5	8'-8"	—
a4(E)	4	# 5	28'-8"	—
a5(E)	16	# 5	28'-10"	—
b(E)	82	# 5	36'-2"	—
b1(E)	82	# 5	21'-8"	—
d(E)	126	# 5	5'-7"	—
d1(E)	126	# 5	7'-11"	—
e(E)	4	# 8	30'-3"	—
e1(E)	4	# 4	28'-8"	—
e2(E)	42	# 4	18'-0"	—
x(E)	100	# 5	6'-5"	—
Reinforcement Bars, Epoxy Coated		Pound	19,790	
Concrete Superstructure		Cu. Yds.	86.6	
Floor Drains		Each	6	

Bars indicated thus 1 x 2 #8 etc. indicates 1 line of bars with 2 lengths per line.

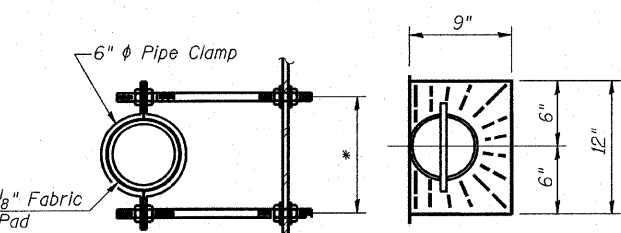
**MINIMUM BAR LAP**

(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"



**TOP PLAN**

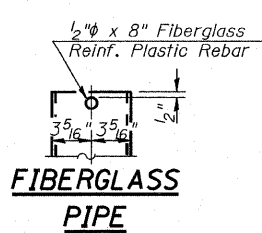
(Showing Aluminum Tube)



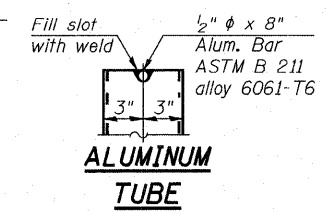
**SECTION B-B**

\* Dimension as required by Pipe Clamp

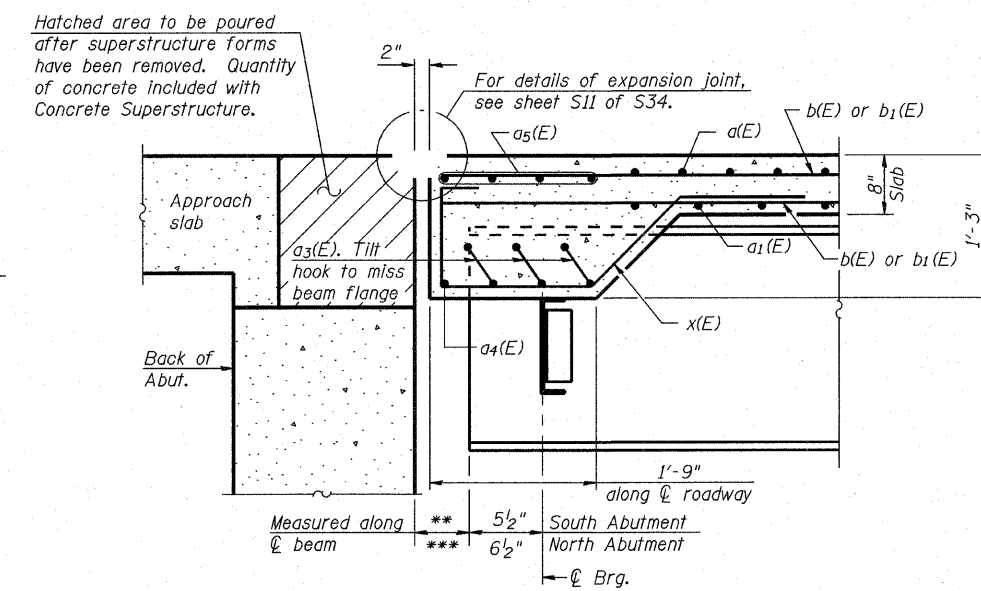
**TOP PLAN**



**FIBERGLASS PIPE**



**ALUMINUM TUBE**



**SECTION A-A**

See Sheet S8 of S34

\*\* Varies from 9 5/8" to 10 1/8"  
\*\*\* Varies from 8 5/8" to 9 1/8"

**APEX CONSULTING ENGINEERS, LLC**  
111 E. Wacker Drive, Suite 830  
Chicago, IL 60601  
Phone (312) 977-6660 Fax (312) 977-0661

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DESIGNED - HAA  
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DRAWN - HAA  
PLOT DATE = 12/8/2011

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DRAWN - HAA  
CHECKED - RAD

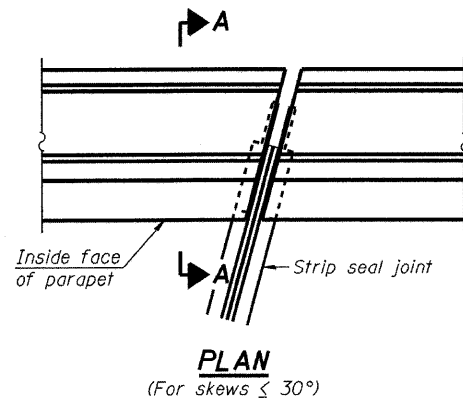
REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

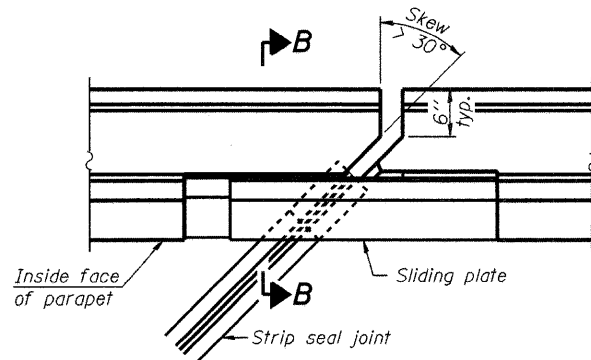
**PARAPET AND SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 016-0772**  
SHEET NO. S9 OF S34 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	19
			CONTRACT NO. 60M78	
ILLINOIS FED. AID PROJECT				

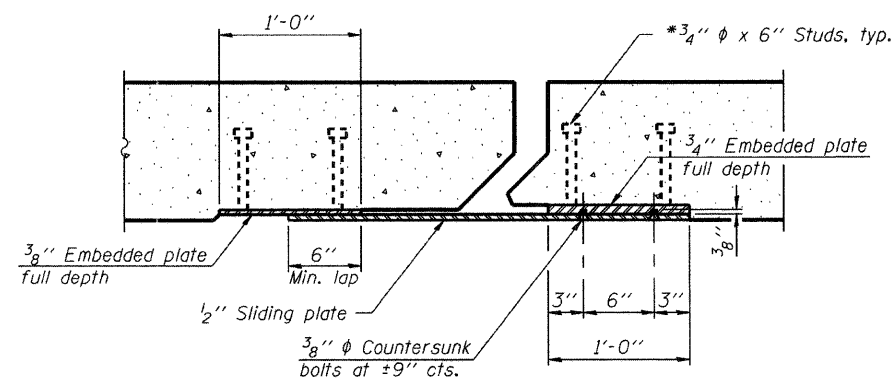




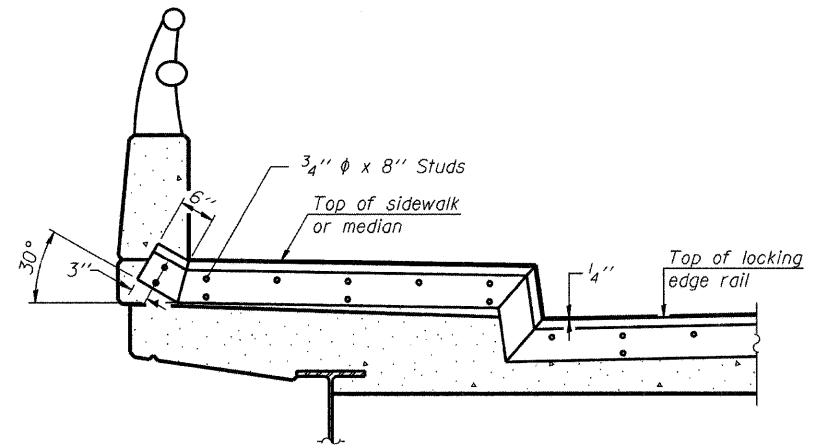
**PLAN**  
(For skews  $\le 30^\circ$ )



**PLAN**  
(For skews  $> 30^\circ$ )  
Showing point block

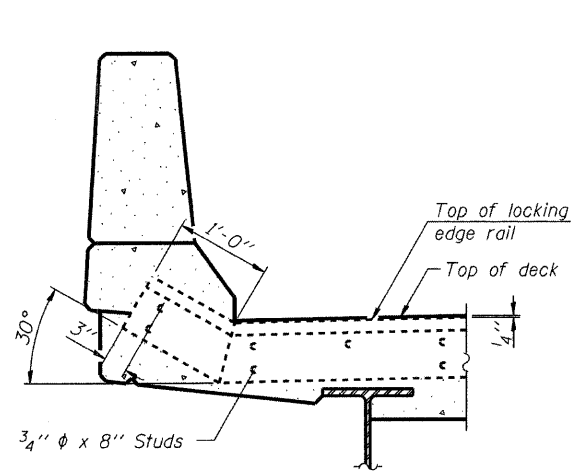


**SECTION C-C**

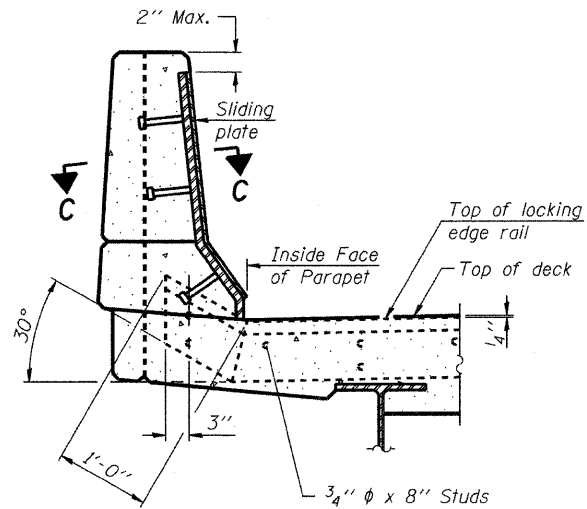


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

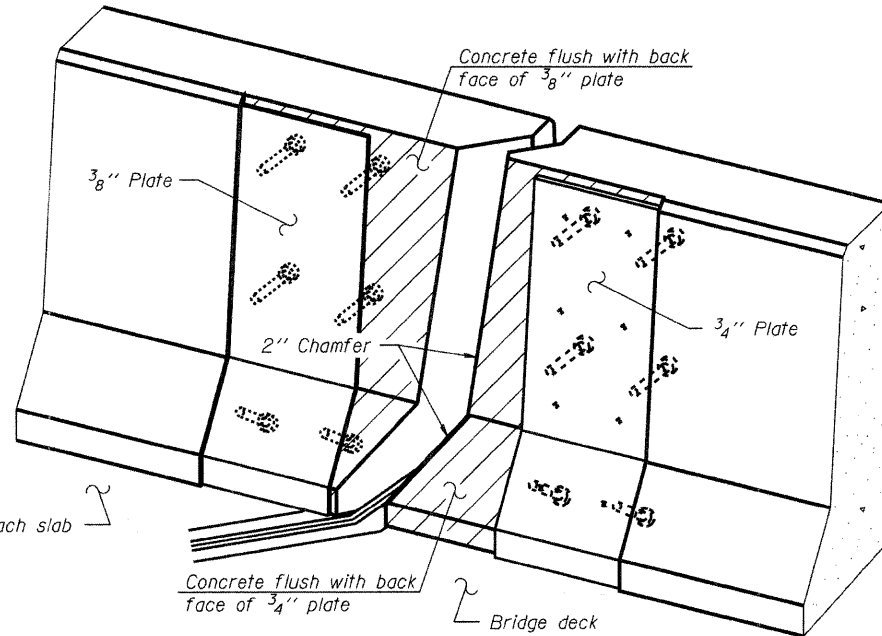
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



**SECTION A-A**



**SECTION B-B**



**TRIMETRIC VIEW**  
(Showing back plates only)

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

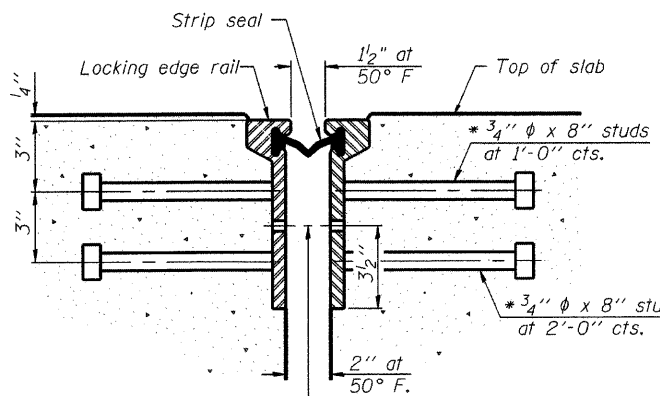
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

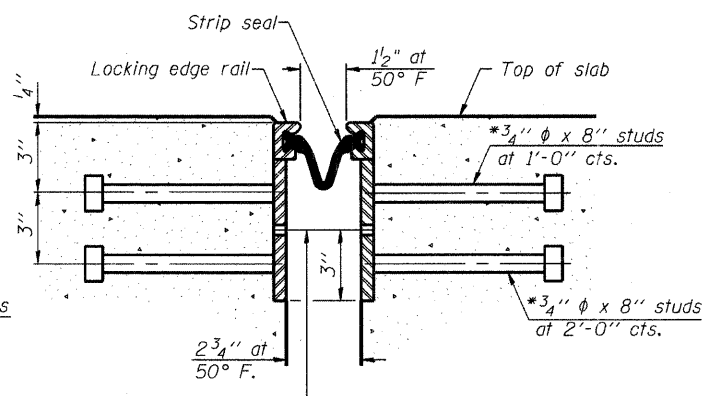
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

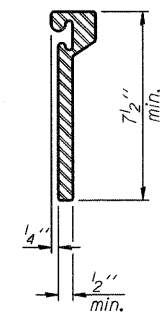
Parapet plates and anchorage studs for skews  $> 30^\circ$  included in the cost of Preformed Joint Strip Seal.



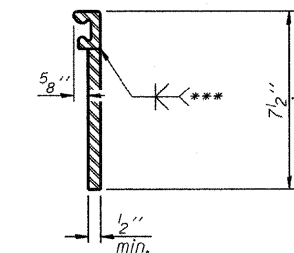
**SECTION THRU ROLLED RAIL JOINT**



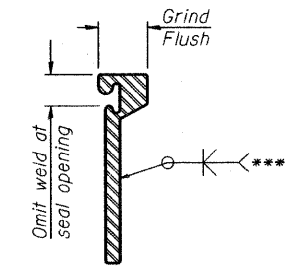
**SECTION THRU WELDED RAIL JOINT**



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.

Roller rail shown, welded rail similar.

\*\*\* Back gauge not required if complete joint penetration is verified by mock-up.

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	113

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

EJ-SSJ

7-1-10

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 630  
Chicago, IL 60601  
Phone (312) 977-0900 Fax (312) 977-0951

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PLOT DATE = 10/27/2011	DRAWN -	REVISED
	CHECKED - RAD	REVISED

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DEPARTMENT OF TRANSPORTATION

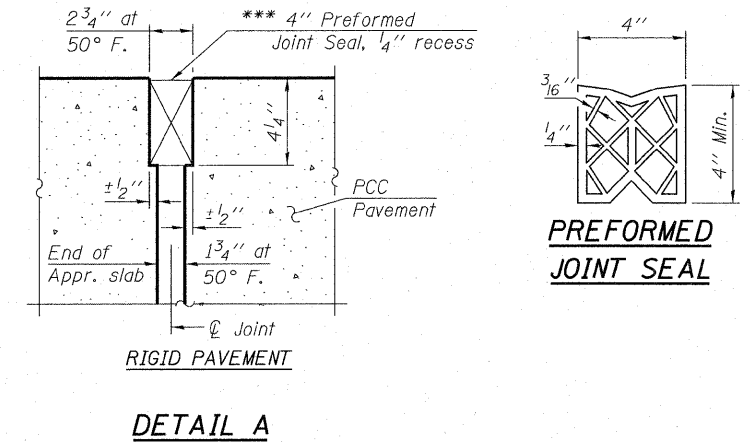
PREFORMED JOINT STRIP SEAL  
STRUCTURE NO.

SHEET NO. S10 OF S34 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	20
CONTRACT NO. 60M78			ILLINOIS FED. AID PROJECT	

Notes:  
 See sheet S13 of S34 for Sections C-C & D-D.  
 $a_{10}$  (E),  $a_{11}$  (E) and  $a_{12}$  (E) bar spacings measured along  $\varnothing$  Rdwy.

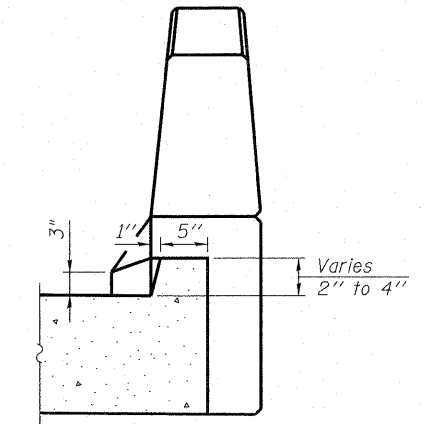
\*\*\* Cost included with Concrete Superstructure.



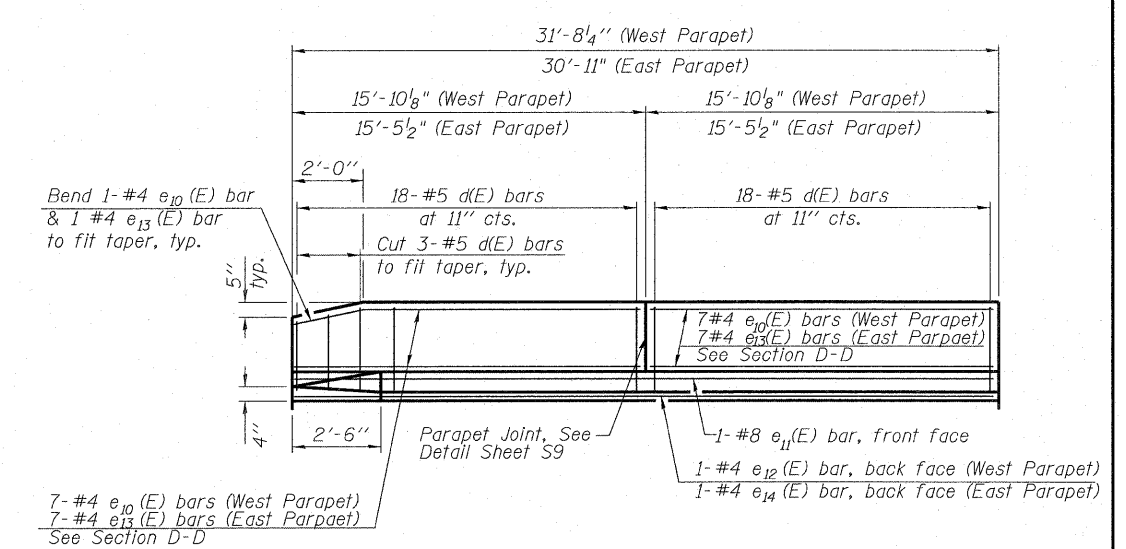
DETAIL A

**MINIMUM BAR LAPS**

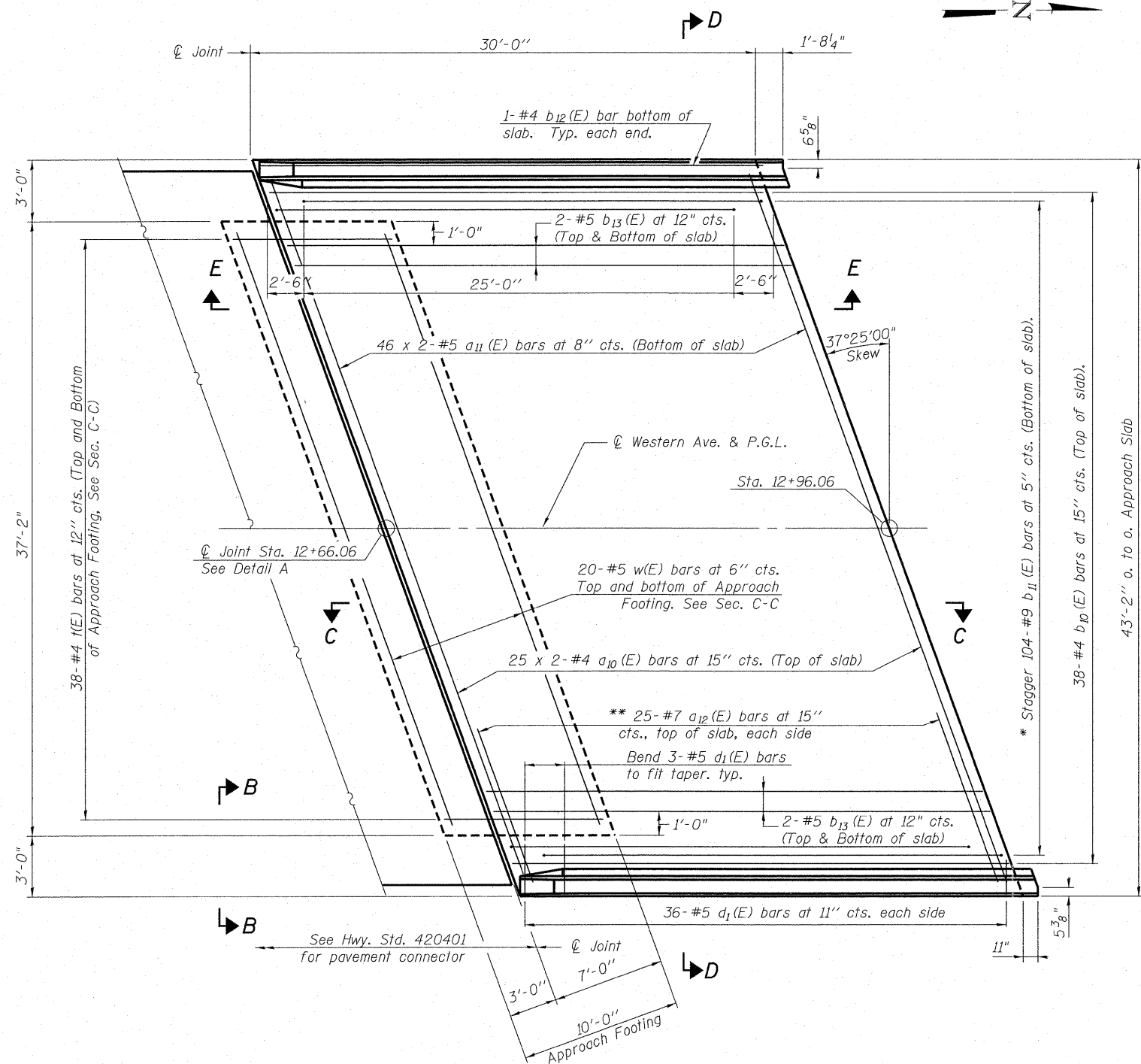
(Approach Slab)  
 #4 Bar = 2'-4"  
 #5 Bar = 2'-7"  
 Bars indicated thus 1 x 2 #4 etc. indicates 1 line of bars with 2 lengths per line.



VIEW B-B



VIEW E-E



SOUTH APPROACH SLAB - PLAN

\* Tilt #9  $b_{11}$  (E) bars as required to maintain clearance.  
 \*\* Space between  $a_{10}$  (E) bars, typ. each parapet.

**APEX**  
 CONSULTING ENGINEERS, LLC  
 111 E. Wacker Drive, Suite 520  
 Chicago, IL 60601  
 Phone (312) 977-0660 Fax (312) 977-0661

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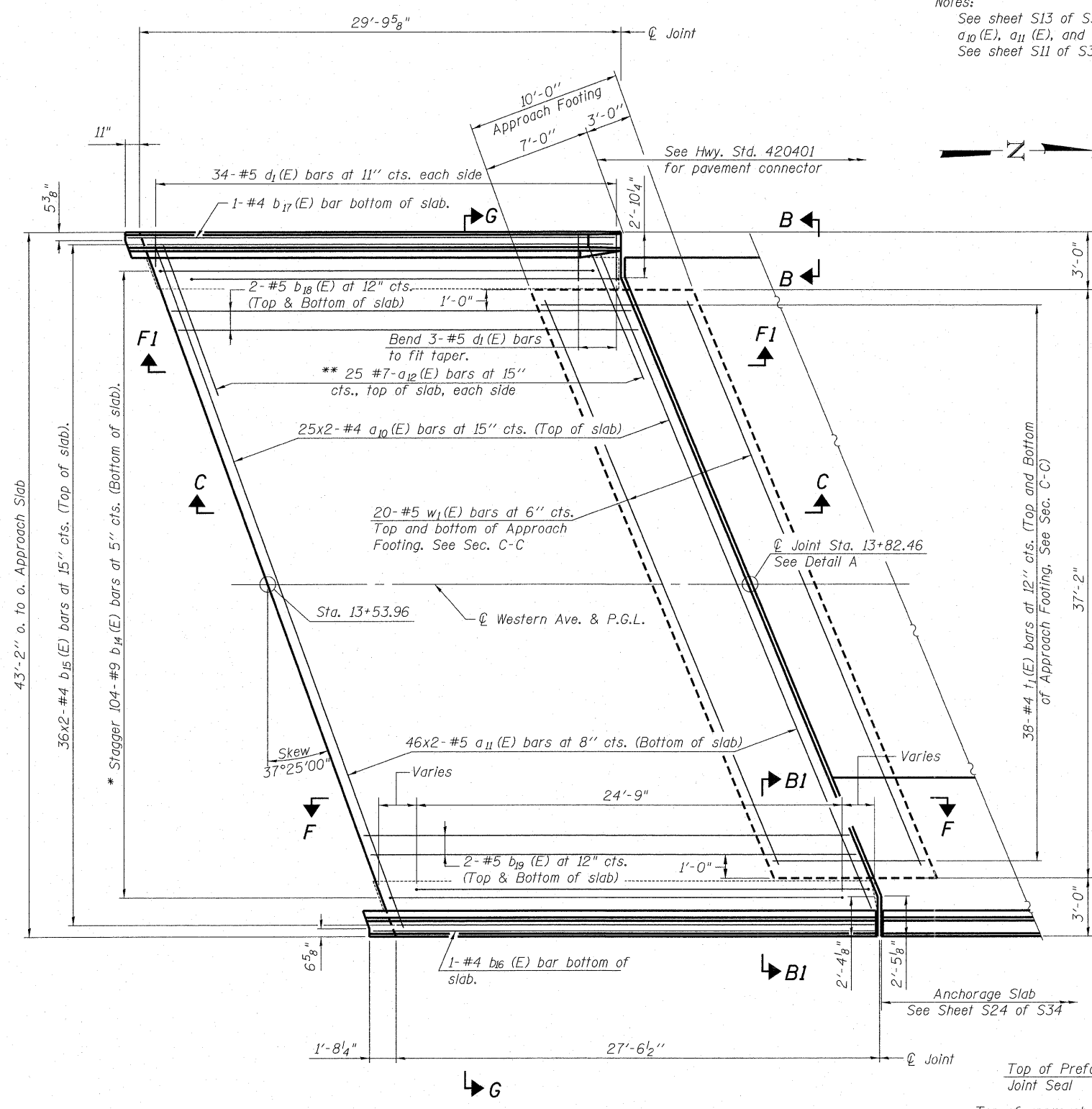
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BRIDGE SOUTH APPROACH SLAB DETAIL  
 STRUCTURE NO. 016-0772

SHEET NO. S11 OF S34 SHEETS

F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 21
				CONTRACT NO. 60M78
ILLINOIS FED. AID PROJECT				

Notes:  
 See sheet S13 of S34 for Sections C-C & G-G.  
 $a_{10}(E)$ ,  $a_{11}(E)$ , and  $a_{12}(E)$  bar spacings measured along  $\varnothing$  Rdwy.  
 See sheet S11 of S34 for View B-B.



**NORTH APPROACH SLAB - PLAN**

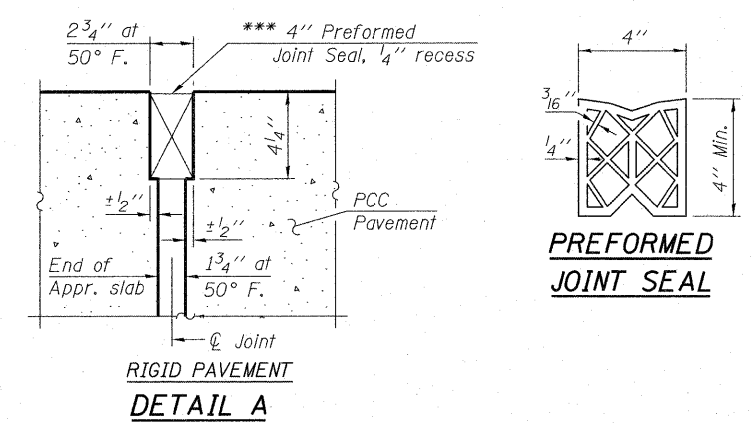
**MINIMUM BAR LAPS**  
 (Approach Slab)

#4 Bar = 2'-4"  
 #5 Bar = 2'-7"

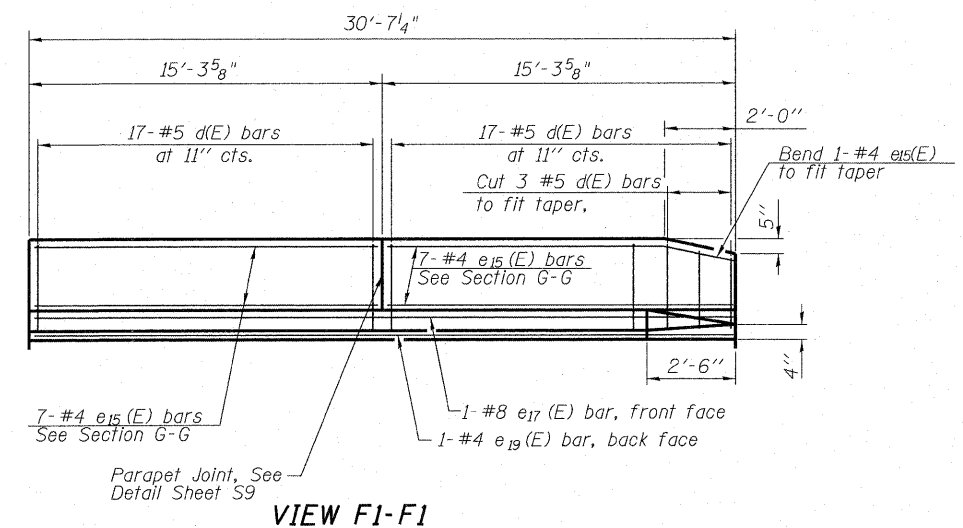
Bars indicated thus 1 x 2 #4 etc. indicates 1 line of bars with 2 lengths per line.

\* Tilt #9  $b_{14}(E)$  bars as required to maintain clearance.  
 \*\* Space between  $a_{10}(E)$  bars, typ. each parapet.

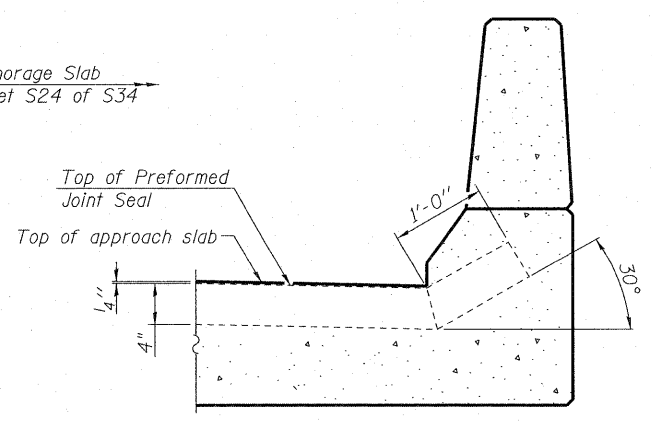
\*\*\* Cost included with Concrete Superstructure.



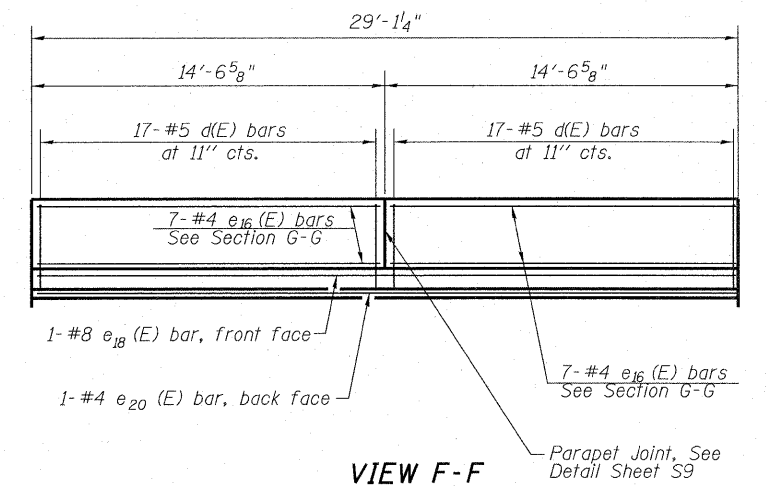
**RIGID PAVEMENT DETAIL A**



**VIEW F1-F1**



**SECTION B1-B1**



**VIEW F-F**

**APEX**  
 CONSULTING ENGINEERS, LLC  
 111 E. Wacker Drive, Suite 520  
 Chicago, IL 60601  
 Phone (312) 977-0660 Fax (312) 977-0661

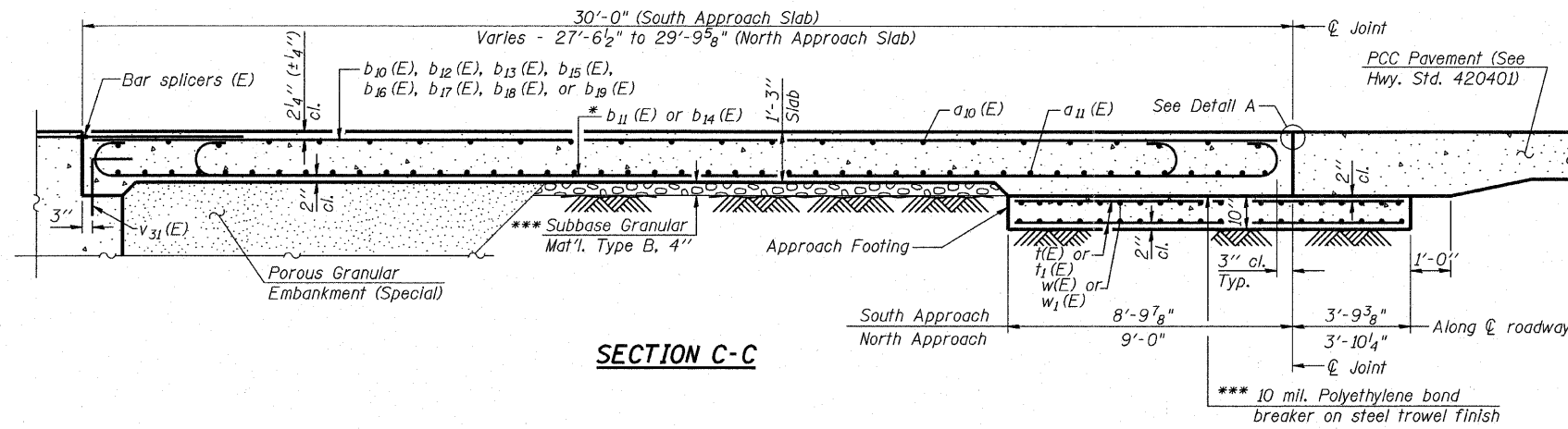
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PLOT SCALE =	CHECKED - RAD	REVISED
PLOT DATE = 11/7/2011	DRAWN - WHI	REVISED
	CHECKED - RAD	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BRIDGE NORTH APPROACH SLAB DETAILS**  
**STRUCTURE NO. 016-0772**

SHEET NO. S12 OF S34 SHEETS

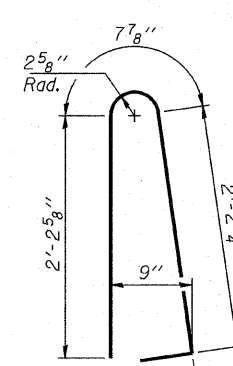
F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 22
CONTRACT NO. 60M78			ILLINOIS FED. AID PROJECT	



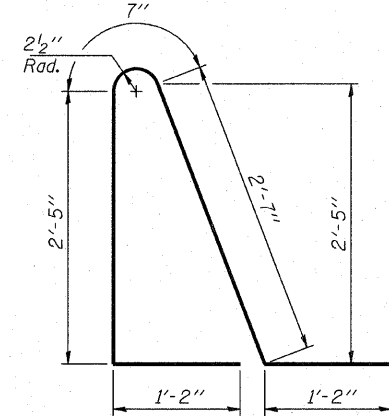
**SECTION C-C**

**Notes:**

See sheet S11 of S34 for Detail A and View B-B.  
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For  $v_{31}(E)$  bar details, see sheets S19 and S21 of S34.  
 The approach footing maximum applied service bearing pressure ( $Q_{max}$ ) = 2.0 ksf.  
 For bar splicer details, see sheet S26 of S34.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet S2 of S34.  
 For additional parapet details, see sheets S9, S11 and S12 of S34.



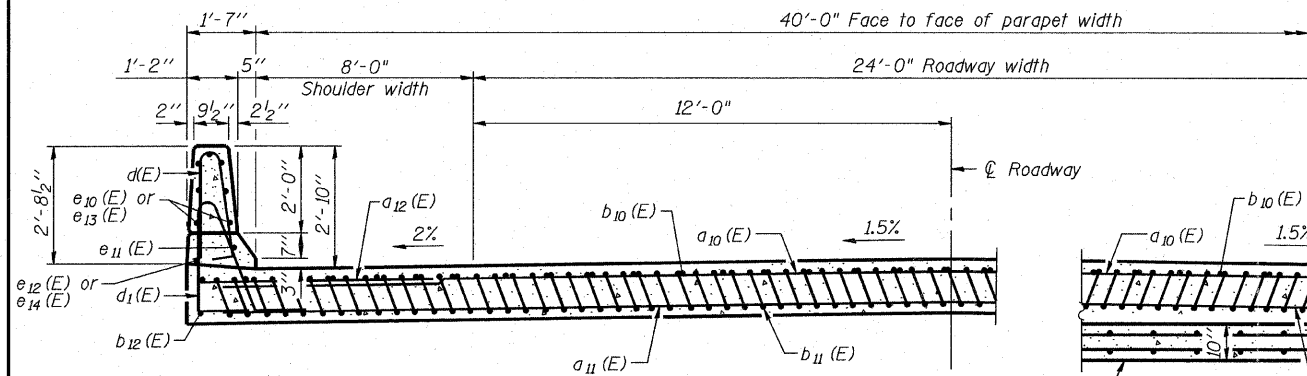
**BAR d(E)**



**BAR d1(E)**

**TWO APPROACHES  
BILL OF MATERIAL**

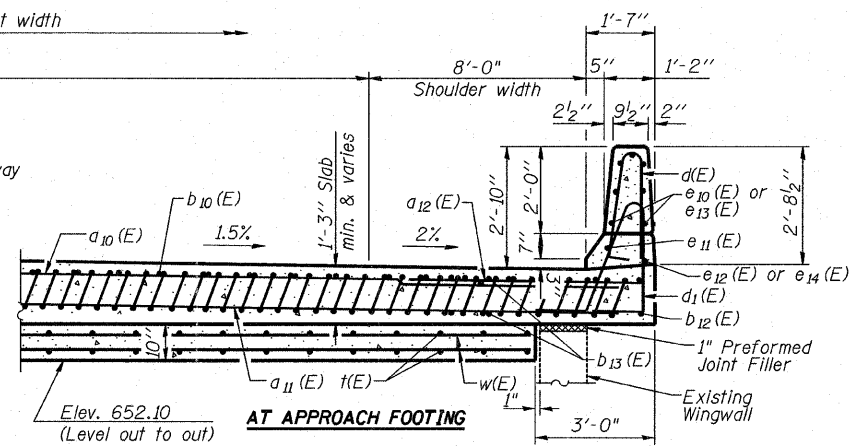
Bar	No.	Size	Length	Shape
$a_{10}(E)$	100	# 4	28'-6"	—
$a_{11}(E)$	184	# 5	28'-10"	—
$a_{12}(E)$	100	# 7	7'-5"	—
$b_{10}(E)$	38	# 4	29'-8"	—
$b_{11}(E)$	104	# 9	29'-9"	—
$b_{12}(E)$	2	# 4	29'-9"	—
$b_{13}(E)$	8	# 5	29'-9"	—
$b_{14}(E)$	104	# 9	27'-3"	—
$b_{15}(E)$	72	# 4	16'-6"	—
$b_{16}(E)$	1	# 4	27'-1"	—
$b_{17}(E)$	1	# 4	29'-5"	—
$b_{18}(E)$	4	# 5	27'-6"	—
$b_{19}(E)$	4	# 5	28'-11"	—
$d(E)$	140	# 5	5'-7"	—
$d_1(E)$	140	# 5	7'-11"	—
$e_{10}(E)$	14	# 4	15'-5"	—
$e_{11}(E)$	2	# 8	30'-0"	—
$e_{12}(E)$	1	# 4	31'-3"	—
$e_{13}(E)$	14	# 4	15'-1"	—
$e_{14}(E)$	1	# 4	30'-6"	—
$e_{15}(E)$	14	# 4	15'-0"	—
$e_{16}(E)$	14	# 4	14'-2"	—
$e_{17}(E)$	1	# 8	29'-10"	—
$e_{18}(E)$	1	# 8	29'-4"	—
$e_{19}(E)$	1	# 4	30'-8"	—
$e_{20}(E)$	1	# 4	28'-2"	—
$t(E)$	76	# 4	12'-3"	—
$t_1(E)$	75	# 4	12'-6"	—
$w(E)$	40	# 5	46'-10"	—
$w_1(E)$	40	# 5	47'-6"	—
Concrete Superstructure		Cu. Yd.	152.5	
Concrete Structures		Cu. Yd.	31.0	
Reinforcement Bars, Epoxy Coated		Pound	42,090	



**NEAR ABUTMENT**

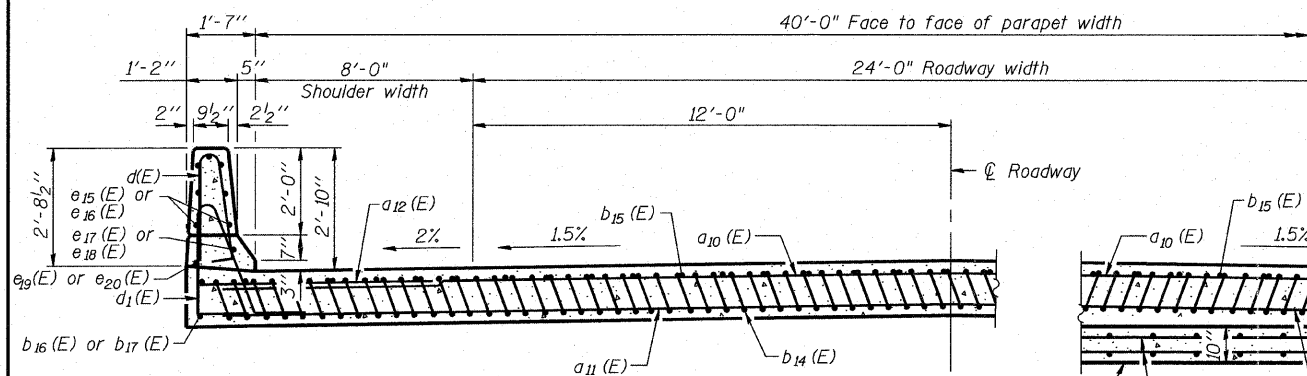
**SECTION D-D**

(See Plan for dimensions not shown)



**AT APPROACH FOOTING**

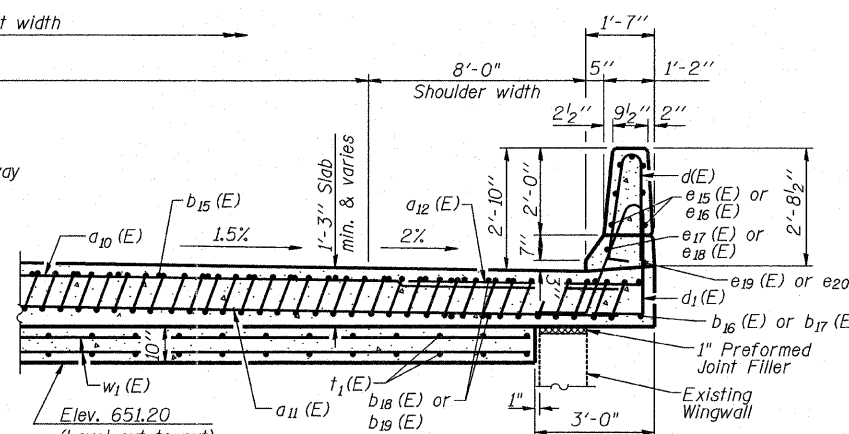
\* Tilt #9  $b_{11}(E)$  or  $b_{14}(E)$  bars as required to maintain clearance.  
 \*\*\* Cost included with Concrete Superstructure.



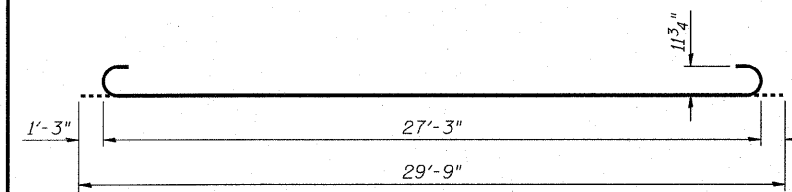
**NEAR ABUTMENT**

**SECTION G-G**

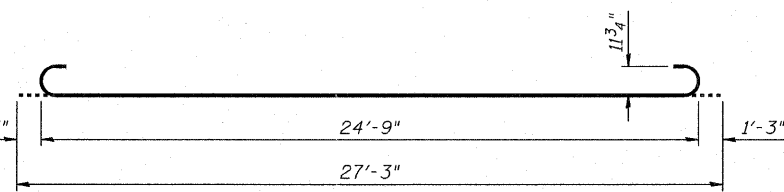
(See Plan for dimensions not shown)



**AT APPROACH FOOTING**



**BAR b11(E)**



**BAR b14(E)**

**APEX**  
 CONSULTING ENGINEERS, LLC  
 111 E. Wacker Drive, Suite 830  
 Chicago, IL 60601  
 Phone: (312) 977-0500 Fax: (312) 977-0661

USER NAME =  
 PLOT SCALE =  
 PLOT DATE = 12/08/2011

DESIGNED - HAA  
 CHECKED - RAD  
 DRAWN - WHI  
 CHECKED - RAD

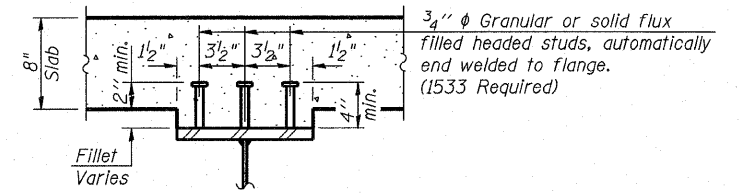
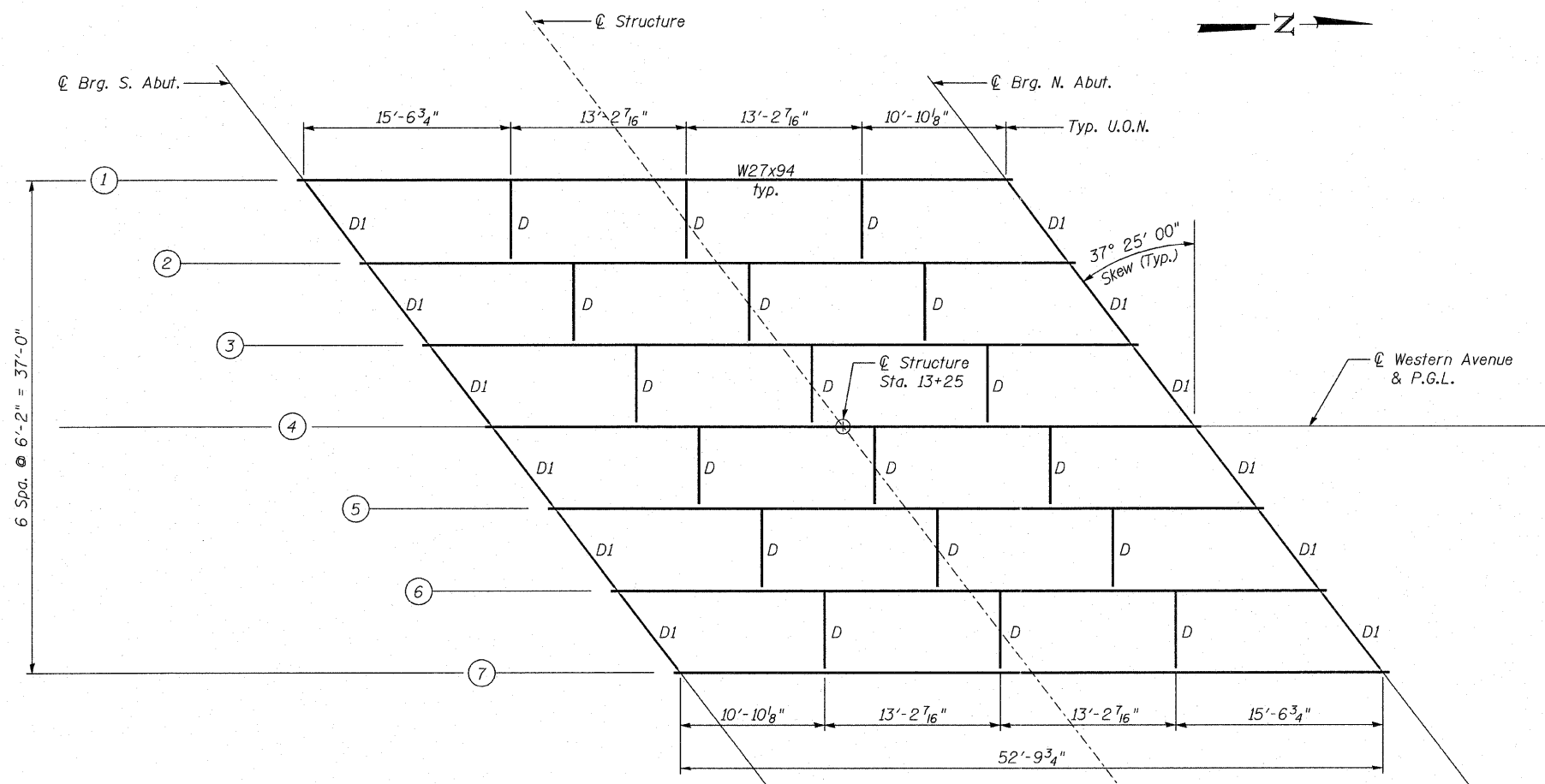
REVISED  
 REVISED  
 REVISED  
 REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 016-0772**

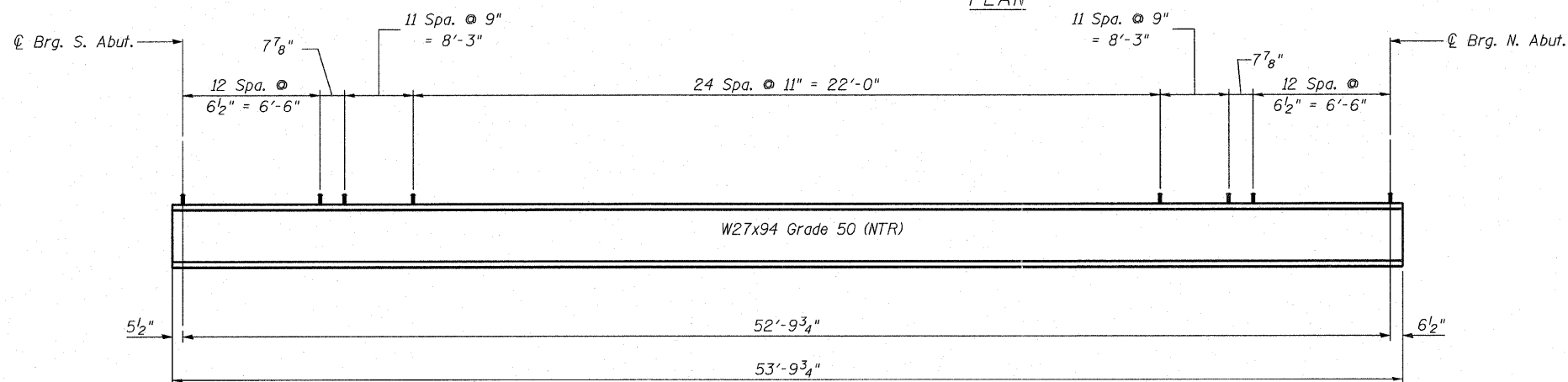
SHEET NO. S13 OF S34 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	23
CONTRACT NO. 60M78			ILLINOIS FED. AID PROJECT	



TOP OF BEAM ELEVATION TABLE  
(For fabrication use only)

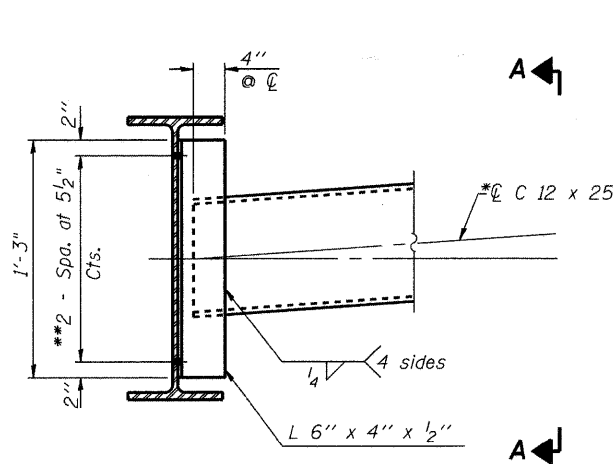
Beam	Ⓞ Brg. S. Abut.	Ⓞ Brg. N. Abut.
1	653.47	653.19
2	653.56	653.29
3	653.63	653.35
4	653.70	653.41
5	653.58	653.28
6	653.46	653.14
7	653.31	652.98



Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

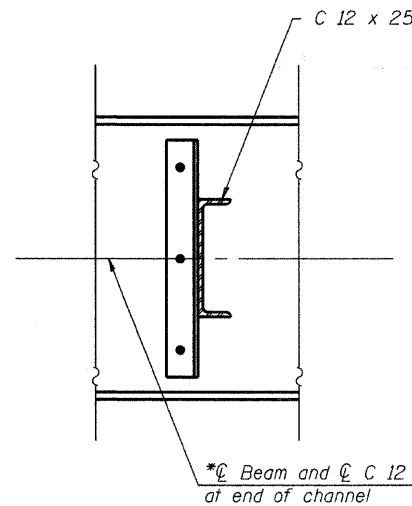
Structural Steel is furnished in a separate contract. Cost for erecting Structural Steel is included in this contract as "Erecting Structural Steel".



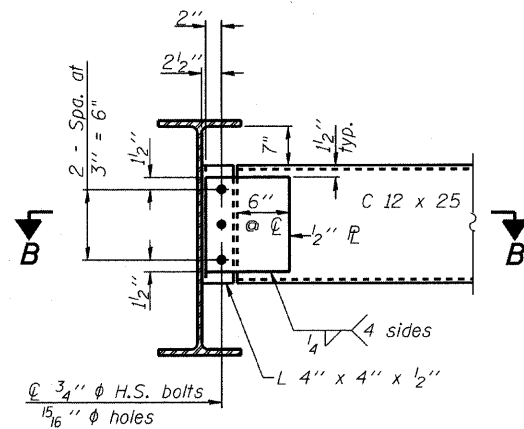


**INTERIOR DIAPHRAGM D**

Note:  
Two hardened washers required for each set of oversized holes.  
\*Alternate channels (C 12 x 30) are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.  
\*\*3/4"  $\phi$  HS bolts, 15/16"  $\phi$  holes

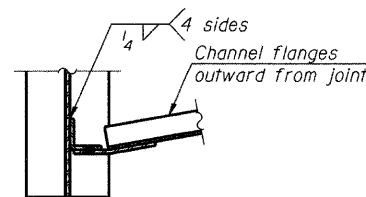


**SECTION A-A**



**END DIAPHRAGM D1**

Note:  
Two hardened washers required for each set of oversized holes.



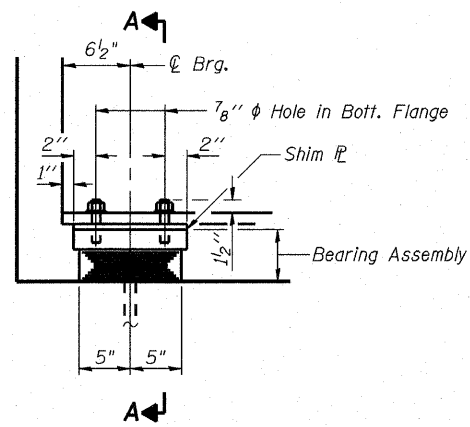
**SECTION B-B**

INTERIOR GIRDER MOMENT TABLE		
0.5 Span		
$I_s$	(in <sup>4</sup> )	3,270
$I_c(n)$	(in <sup>4</sup> )	10,383
$I_c(3n)$	(in <sup>4</sup> )	7,688
$S_s$	(in <sup>3</sup> )	243
$S_c(n)$	(in <sup>3</sup> )	390
$S_c(3n)$	(in <sup>3</sup> )	352
DC1	(k/')	0.736
M <sub>DC1</sub>	('k)	257
DC2	(k/')	0.129
M <sub>DC2</sub>	('k)	45
DW	(k/')	0.286
M <sub>DW</sub>	('k)	100
M <sub>l + IM</sub>	('k)	560
M <sub>u</sub> (Strength I)	('k)	1,506
$\phi_r M_n$	('k)	2,091
$f_s$ DC1	(ksi)	12.70
$f_s$ DC2	(ksi)	1.53
$f_s$ DW	(ksi)	3.41
$f_s$ (l + IM)	(ksi)	17.23
$f_s$ (Service II)	(ksi)	40.04
0.95R <sub>n</sub> F <sub>yf</sub>	(ksi)	47.50
V <sub>f</sub>	(k)	23.75

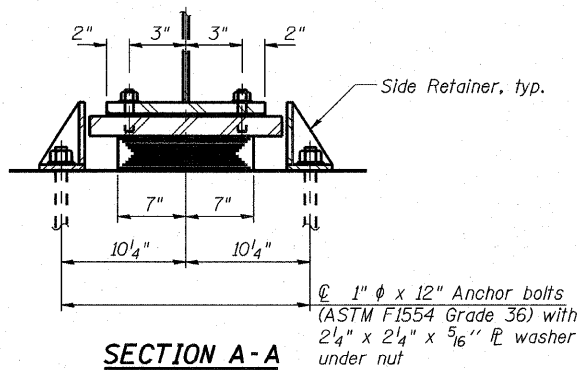
INTERIOR GIRDER REACTION TABLE		
Abut.		
R <sub>DC1</sub>	(k)	20.1
R <sub>DC2</sub>	(k)	3.4
R <sub>DW</sub>	(k)	7.6
R <sub>l + IM</sub>	(k)	79.4
R <sub>Total</sub>	(k)	110.5

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

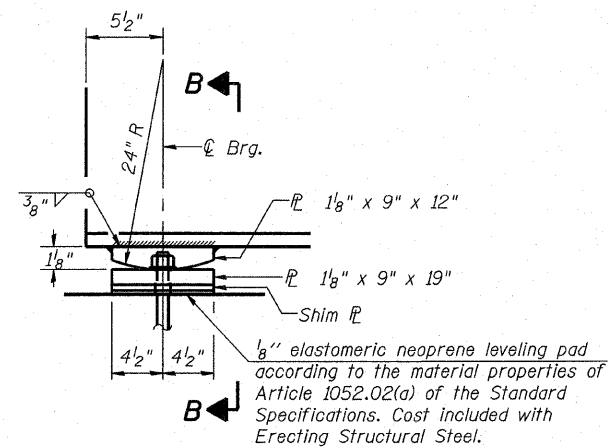
$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).  
 $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).  
 $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).  
DC1: Un-factored non-composite dead load (kips/ft.).  
M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).  
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).  
M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).  
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).  
M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
M<sub>l + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).  
M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>l + IM</sub>  
 $\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).  
 $f_s$  DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).  
M<sub>DC1</sub> / S<sub>nc</sub>  
 $f_s$  DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).  
M<sub>DC2</sub> / S<sub>c(3n)</sub>.  
 $f_s$  DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).  
M<sub>DW</sub> / S<sub>c(3n)</sub>.  
 $f_s$  (l + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).  
M<sub>l + IM</sub> / S<sub>c(n)</sub>.  
 $f_s$  (Service II): Sum of stresses as computed below (ksi).  
 $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s(l + IM)$   
0.95R<sub>n</sub>F<sub>yf</sub>: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).  
V<sub>f</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.



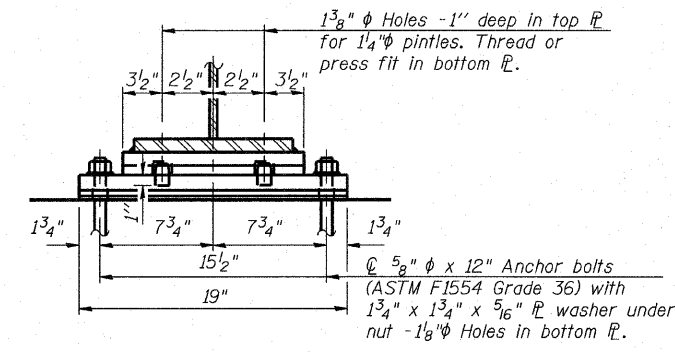
**ELEVATION AT N. ABUT.**



**SECTION A-A**



**ELEVATION AT S. ABUT.**



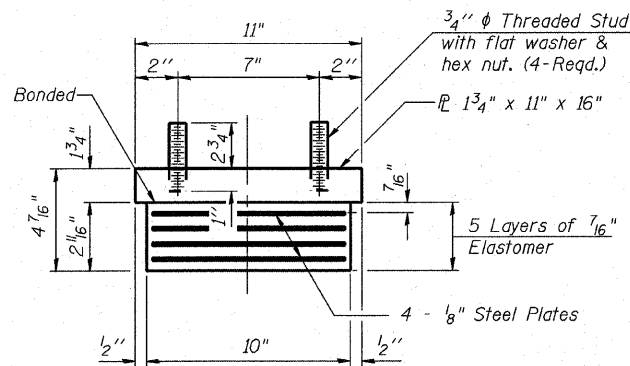
**SECTION B-B**

**TYPE I ELASTOMERIC EXP. BRG.**

The Structural Steel Plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50

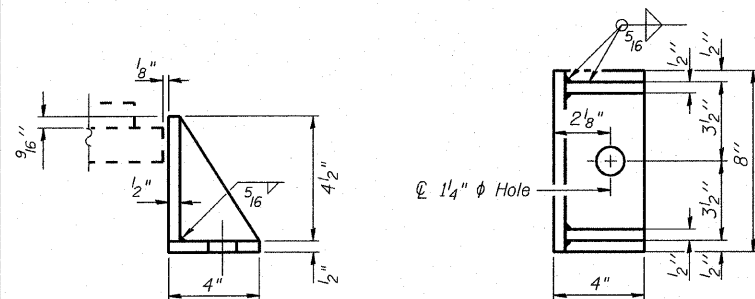
**FIXED BEARING**

The Structural Steel Plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50



**BEARING ASSEMBLY**

Note: Shim plates shall not be placed under Bearing Assembly.

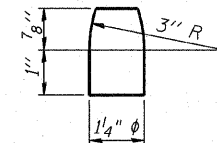


**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Furnishing Elastomeric Bearing Assembly, Type I.



**PINTLE**

For Information Only

**BILL OF MATERIAL**

Item	Unit	Total
Erecting Elastomeric Bearing Assembly Type I	Each	7
Anchor Bolts 5/8"	Each	14
Anchor Bolts 1"	Each	14

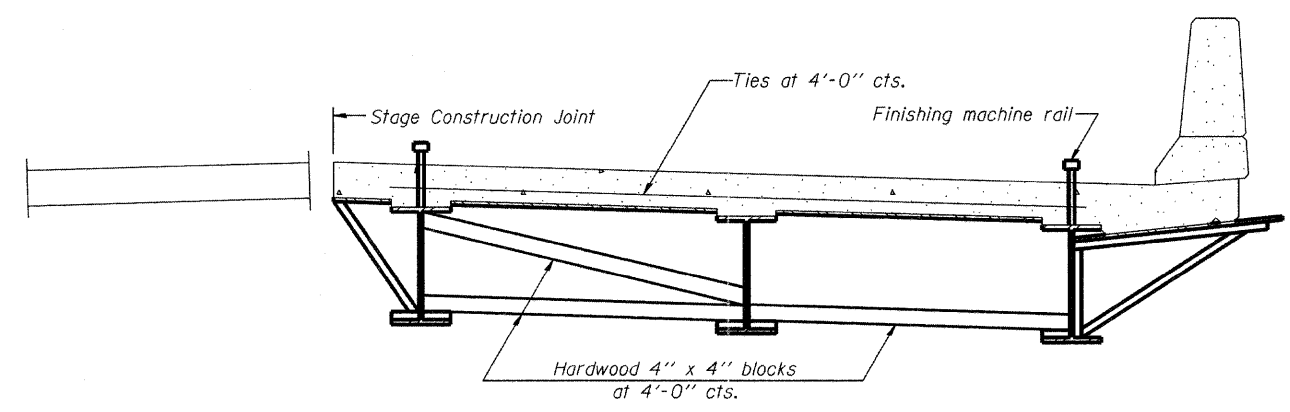
These plans are for the erection of the bridge. All work shown related to the Beam and Bearing Fabrication Contract is for information only. It is not included in this contract, and is identified as "Not Included in this Contract" or "For Information Only"

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

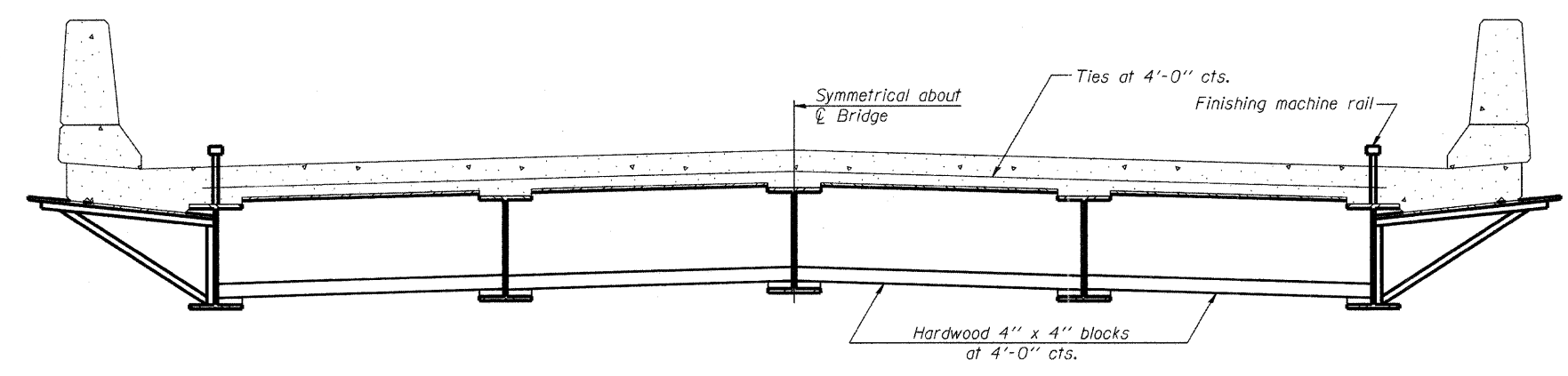
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR  
STAGE CONSTRUCTION



FORM BRACES FOR  
STANDARD CONSTRUCTION

SB-1

7-1-10

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 620  
Chicago, IL 60601  
Phone (312) 977-0660 Fax (312) 977-0961

USER NAME =	DESIGNED -	REVISED
PLOT SCALE =	CHECKED -	REVISED
PLOT DATE = 10/27/2011	DRAWN -	REVISED
	CHECKED -	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH  
W27 BEAMS AND SMALLER  
STRUCTURE NO. 016-0772**

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	27
				<b>CONTRACT NO. 60M78</b>
ILLINOIS FED. AID PROJECT				

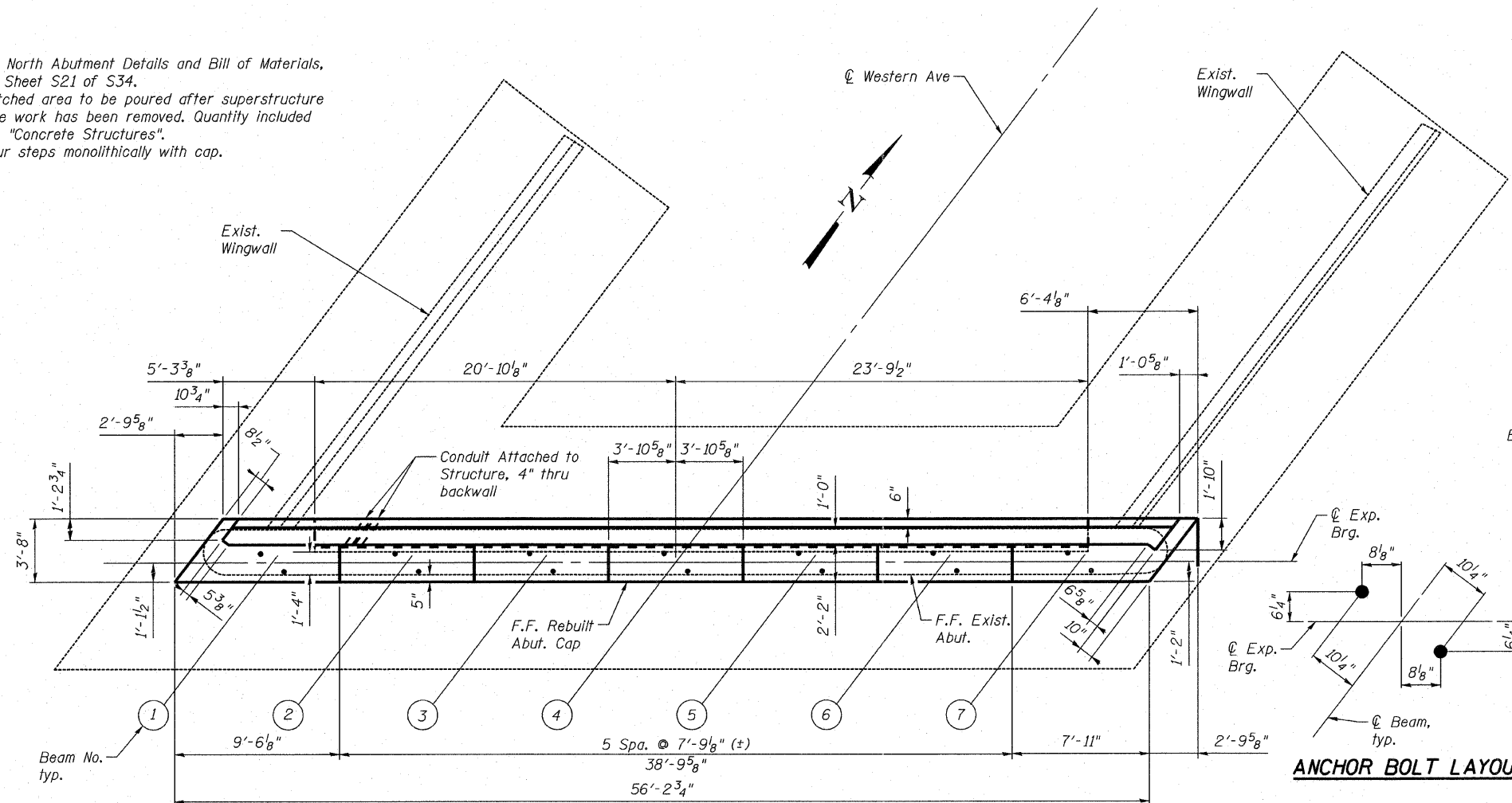
SHEET NO. 517 OF 534 SHEETS



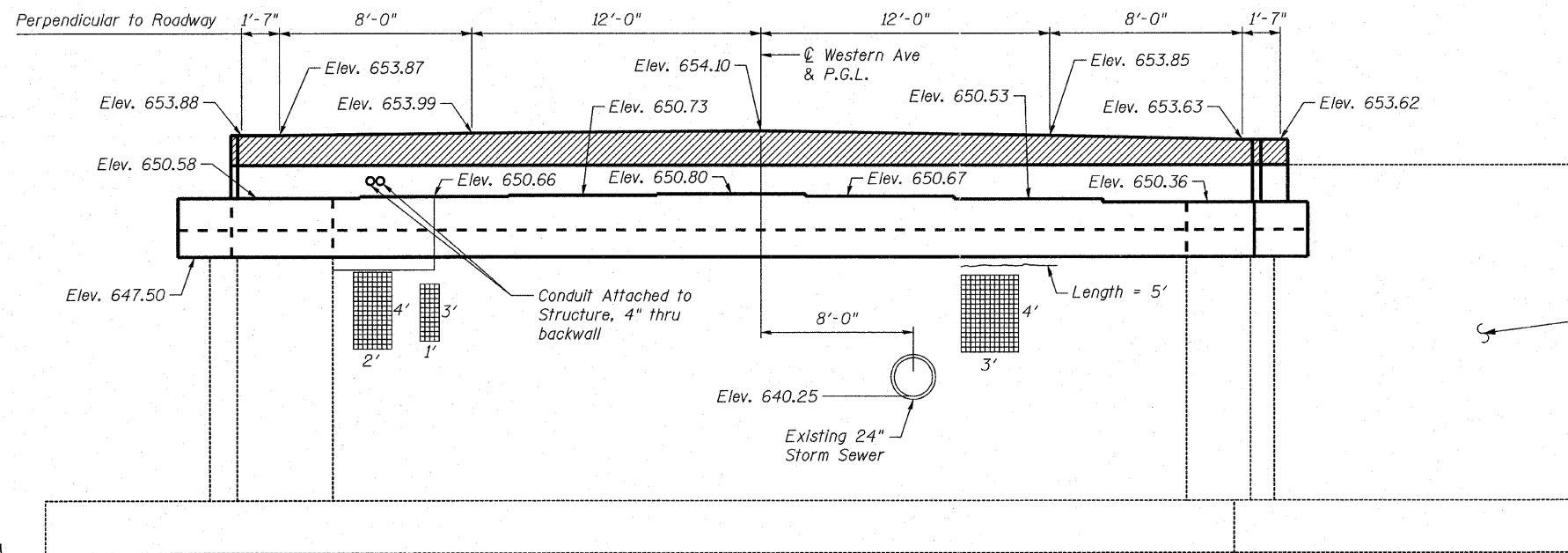




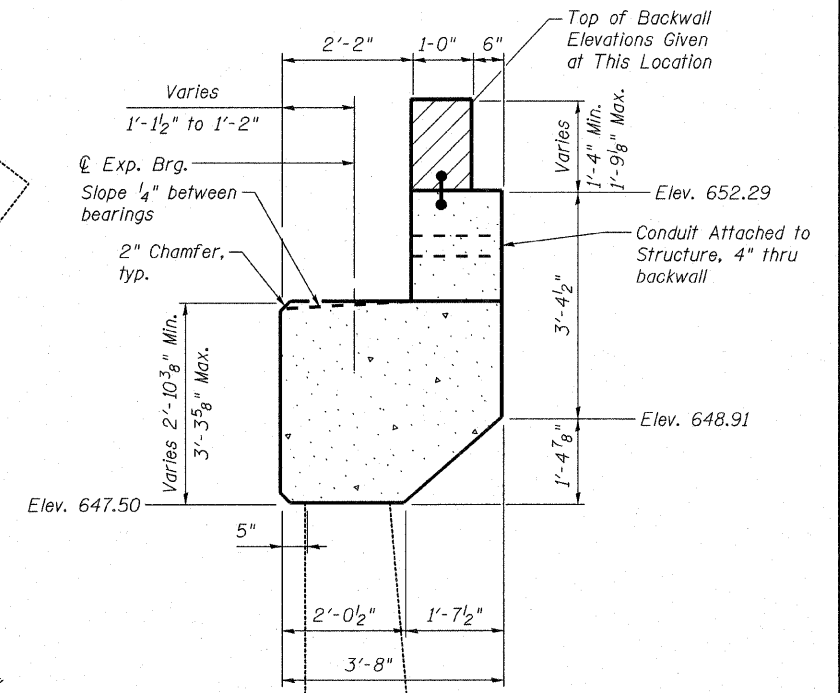
- Notes:  
 1. For North Abutment Details and Bill of Materials, see Sheet S21 of S34.  
 2. Hatched area to be poured after superstructure false work has been removed. Quantity included with "Concrete Structures".  
 3. Pour steps monolithically with cap.



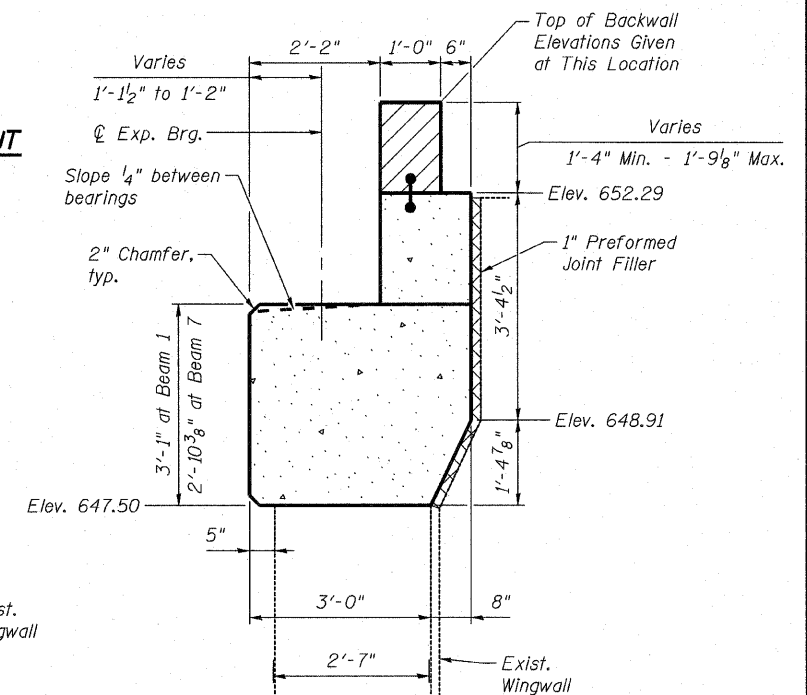
**NORTH ABUTMENT PLAN**



**NORTH ABUTMENT ELEVATION**






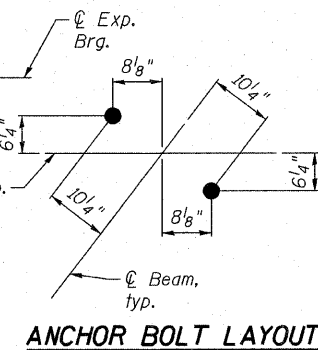
**SECTION THRU NORTH ABUTMENT CAP**



**SECTION THRU NORTH ABUTMENT CAP AT WINGWALL**

**Legend**

-  Structural Repair of Concrete (Depth Less than 5")
-  Hatched area to be poured after superstructure false work has been removed
-  Epoxy Crack Injection

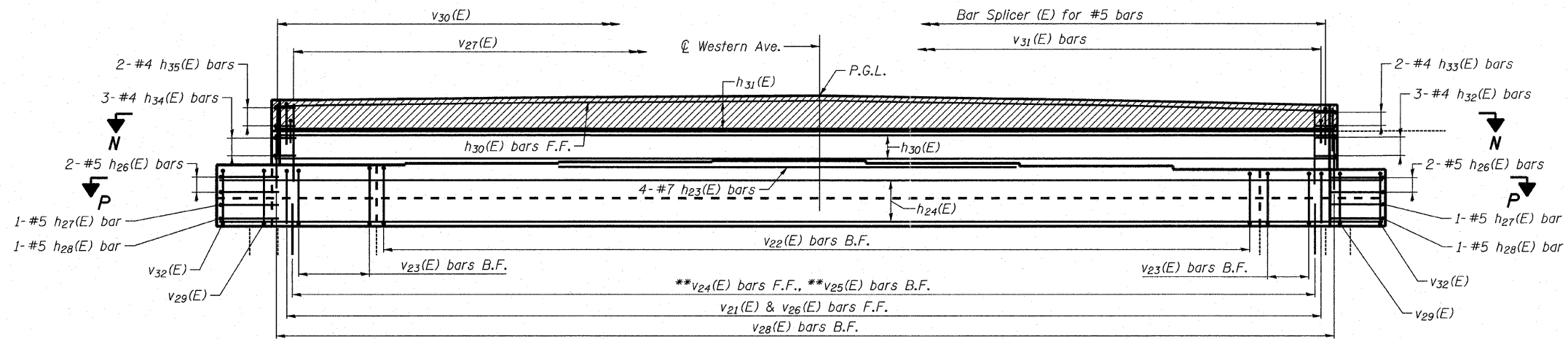


**ANCHOR BOLT LAYOUT**

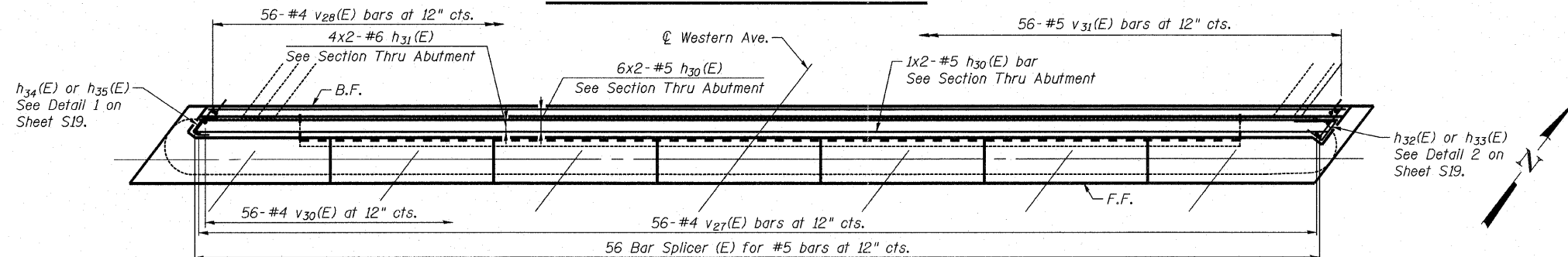
<b>APEX</b> CONSULTING ENGINEERS, LLC 111 R. Wacker Drive, Suite 530 Chicago, IL 60601 Phone (312) 977-6960 Fax (312) 977-0681	USER NAME =	DESIGNED - HAA	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>NORTH ABUTMENT PLAN AND ELEVATION</b> <b>STRUCTURE NO. 016-0772</b> SHEET NO. S20 OF S34 SHEETS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE =	CHECKED - RAD	REVISED			2845	0505-B	COOK	52	30
	PLOT DATE = 12/8/2011	DRAWN - HAA	REVISED			CONTRACT NO. 60M78				
		CHECKED - RAD	REVISED			ILLINOIS FED. AID PROJECT				

**NORTH ABUTMENT BILL OF MATERIAL**

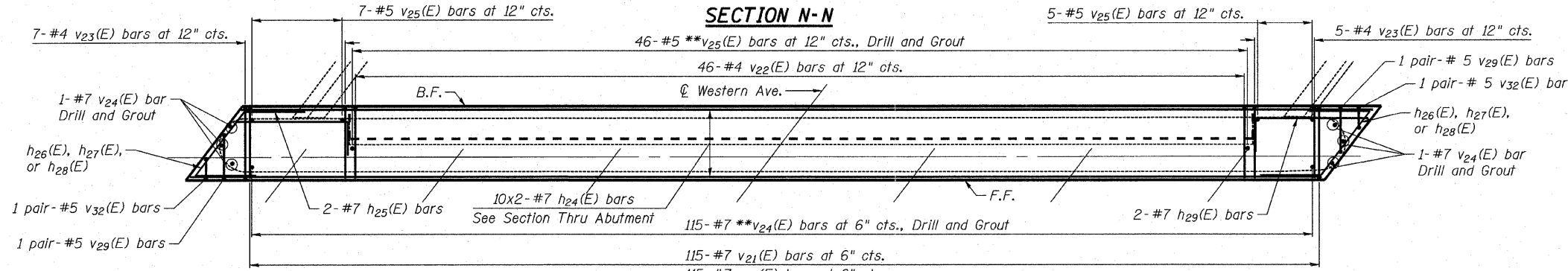
Bar	No.	Size	Length	Shape
h23(E)	4	# 7	23'-0"	—
h24(E)	20	# 7	31'-1"	—
h25(E)	2	# 7	7'-0"	┌
h26(E)	4	# 5	10'-3"	└
h27(E)	2	# 5	9'-10"	└
h28(E)	2	# 5	8'-4"	└
h29(E)	2	# 7	8'-0"	┌
h30(E)	14	# 5	28'-10"	—
h31(E)	8	# 6	29'-3"	—
h32(E)	3	# 4	4'-11"	└
h33(E)	2	# 4	4'-0"	└
h34(E)	3	# 4	5'-0"	└
h35(E)	2	# 4	4'-2"	└
v21(E)	115	# 7	6'-11"	┌
v22(E)	46	# 4	4'-10"	└
v23(E)	12	# 4	5'-3"	└
v24(E)	121	# 7	5'-6"	—
v25(E)	58	# 5	3'-6"	—
v26(E)	115	# 7	4'-4"	└
v27(E)	56	# 4	4'-9"	—
v28(E)	56	# 4	3'-0"	—
v29(E)	4	# 5	6'-11"	└
v30(E)	56	# 4	3'-0"	└
v31(E)	56	# 5	3'-9"	└
v32(E)	4	# 5	4'-7"	└
Reinforcement Bars, Epoxy Coated	Pound	8,010		
Concrete Structures	Cu. Yds.	28.4		
Concrete Sealer	Sq. Ft.	595		
Structure Excavation	Cu. Yds.	44		
Epoxy Crack Injection	Foot	5		
Structure Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	23		



**NORTH ABUTMENT CAP - ELEVATION**



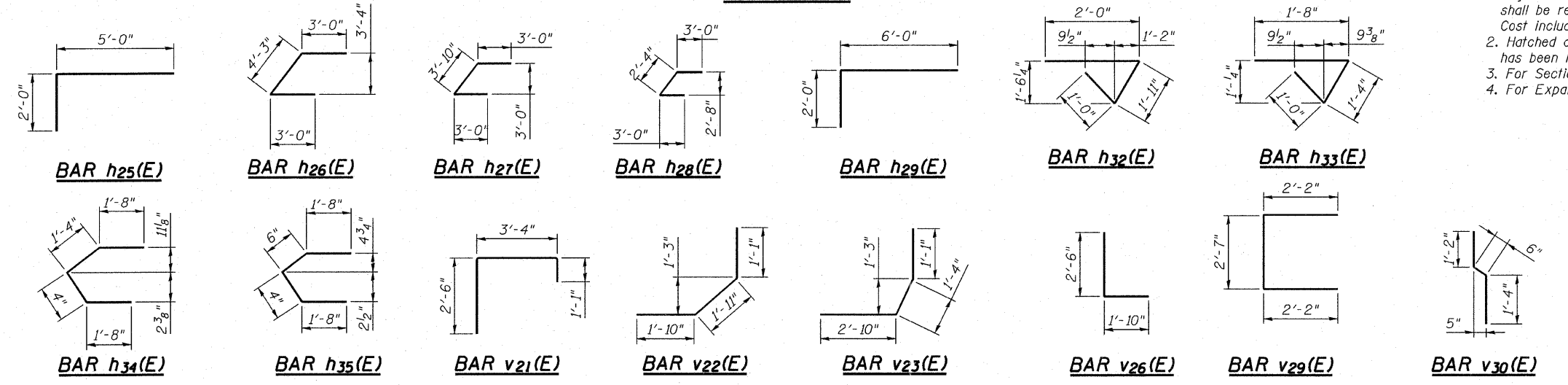
**SECTION N-N**



**SECTION P-P**

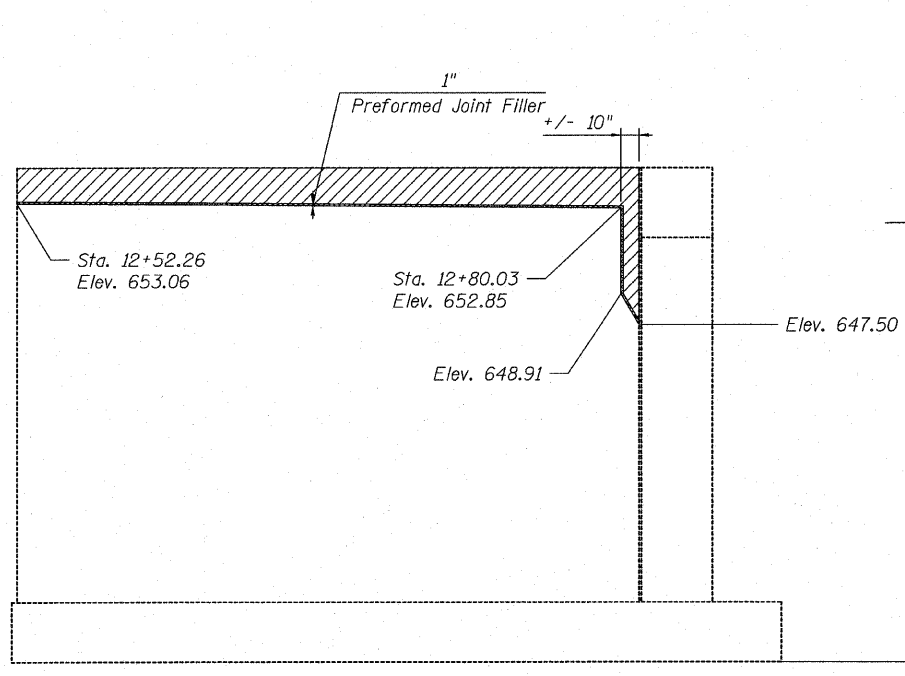
\*\* Epoxy Grout v24(E) and v25(E) bars in 9" min. drilled holes according to Art. 584 of the Standard Specifications.

- Notes:
- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using approved bar splicer or anchorage system. Cost included with "Concrete Removal".
  - Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with "Concrete Superstructures".
  - For Section Thru Abutment and Section at Abutment End, see Sheet S19 of S34.
  - For Expansion Joint details, see Sheet S10 of S34.

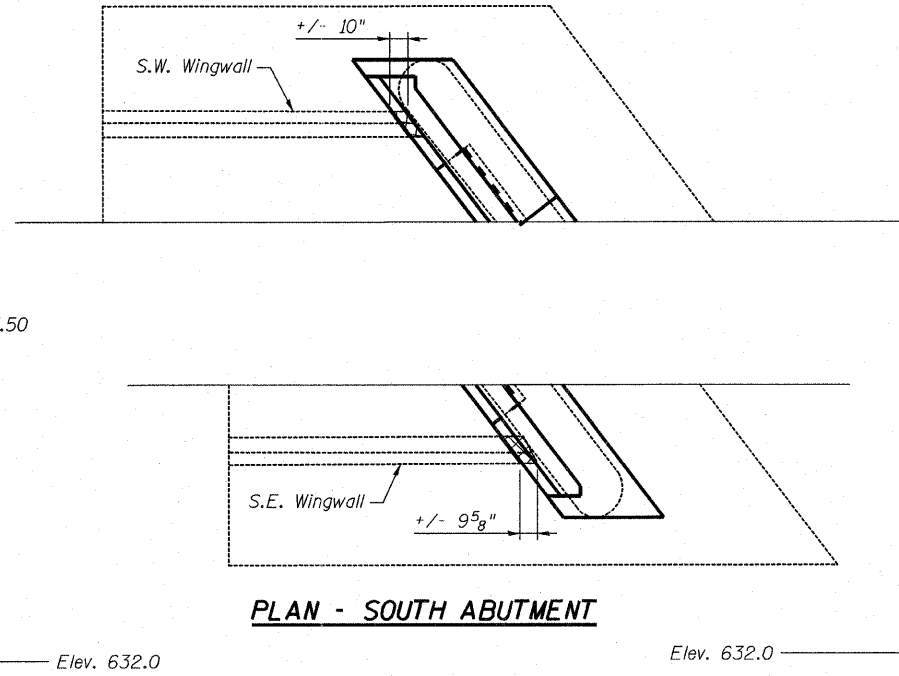


**MINIMUM BAR LAPS**

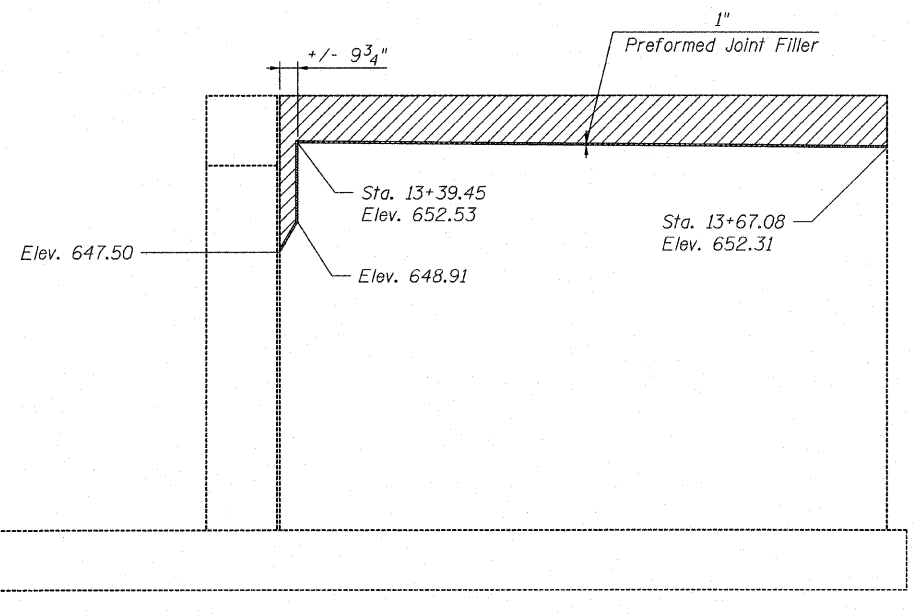
(Abutments)  
 #5 bar = 3'-8"  
 #6 bar = 4'-5"  
 #7 bar = 5'-10"



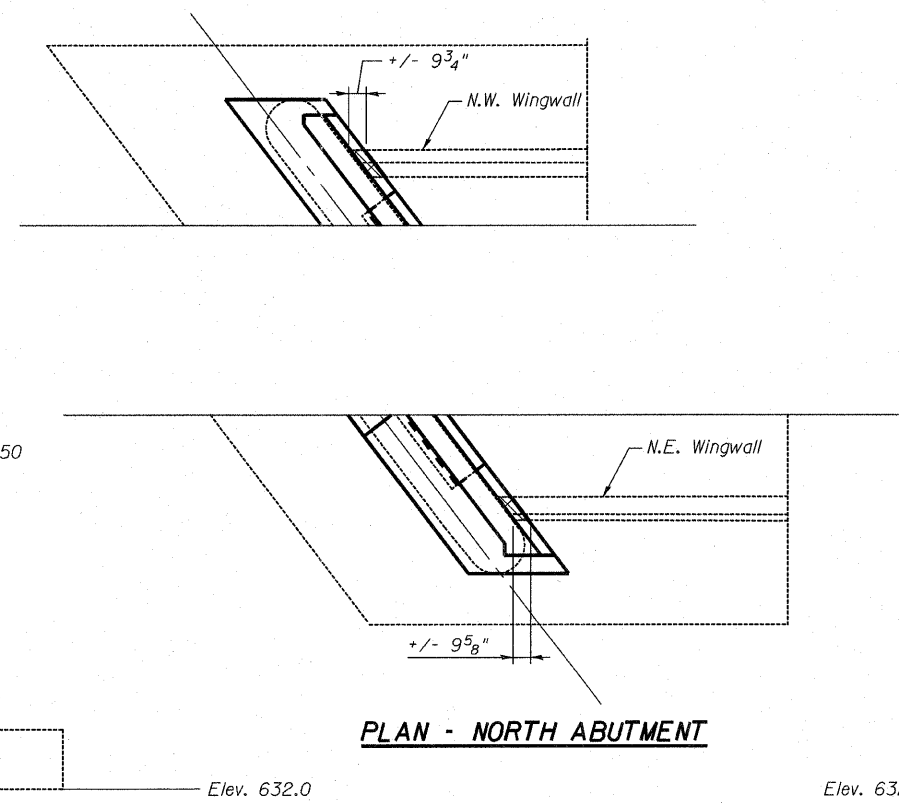
**SOUTH WEST WINGWALL - ELEVATION**  
(Elevations taken along F.F. / Wingwall U.N.O.)



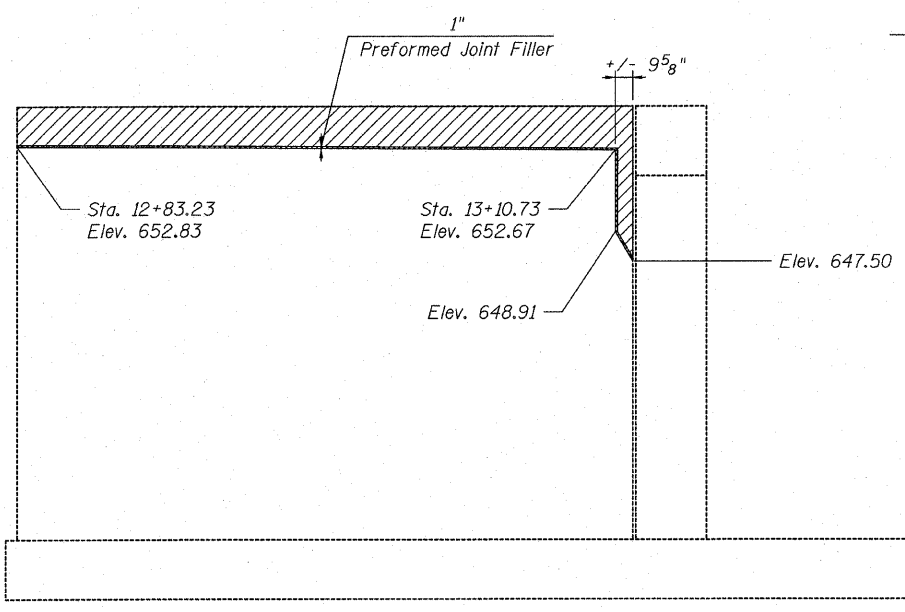
**PLAN - SOUTH ABUTMENT**



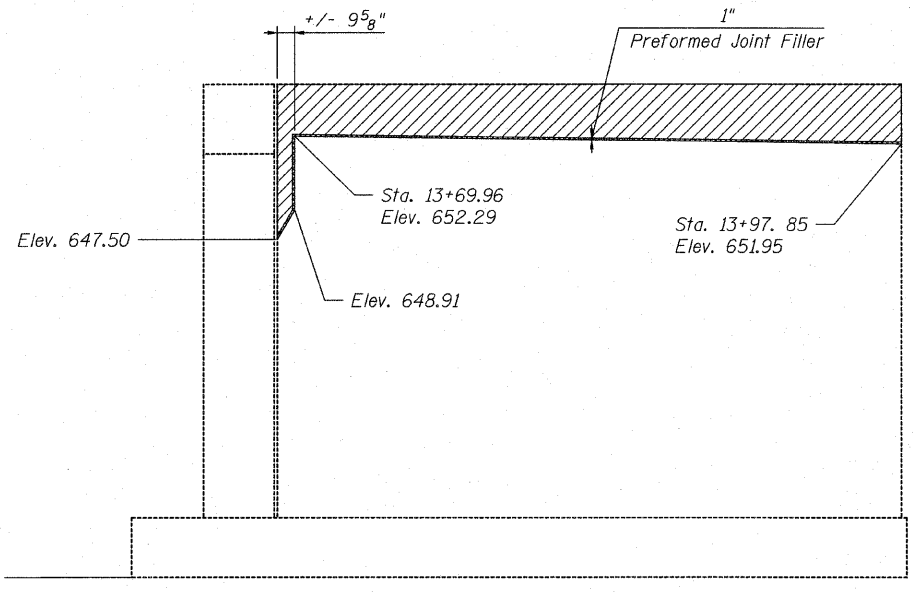
**NORTH WEST WINGWALL - ELEVATION**  
(Elevations taken along F.F. / Wingwall U.N.O.)



**PLAN - NORTH ABUTMENT**



**SOUTH EAST WINGWALL - ELEVATION**  
(Elevations taken along F.F. / Wingwall U.N.O.)



**NORTH EAST WINGWALL - ELEVATION**  
(Elevations taken along F.F. / Wingwall U.N.O.)

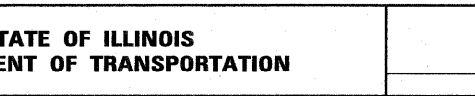
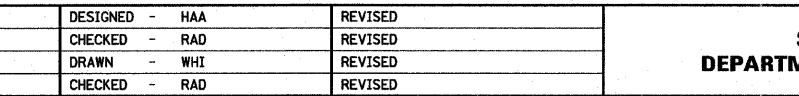
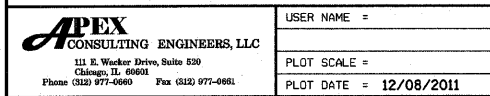
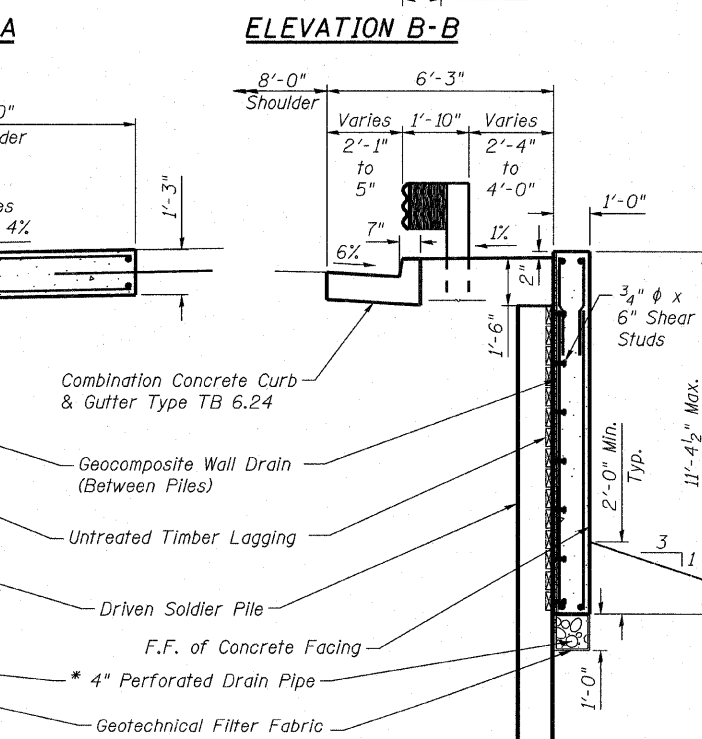
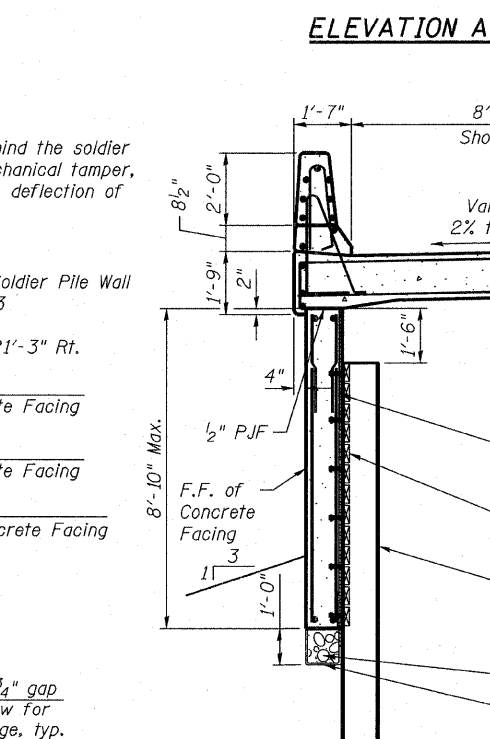
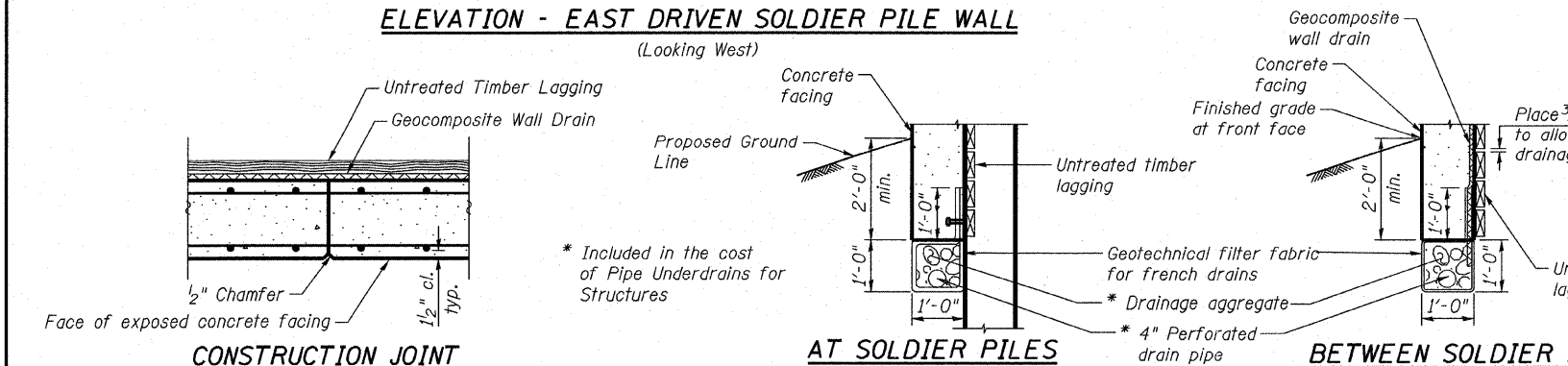
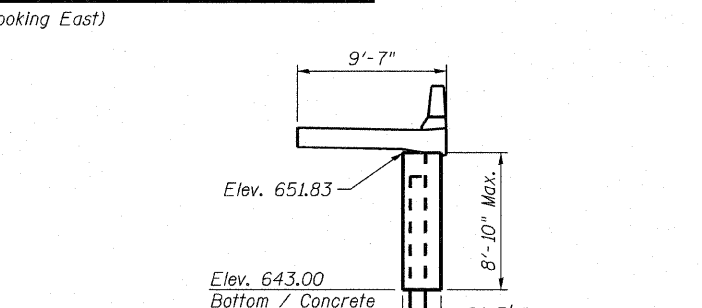
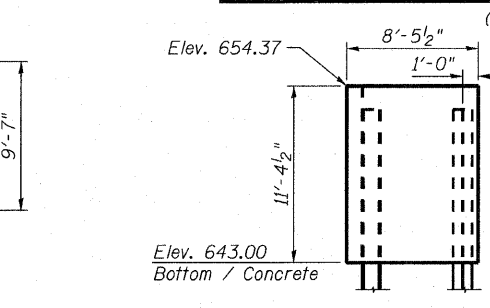
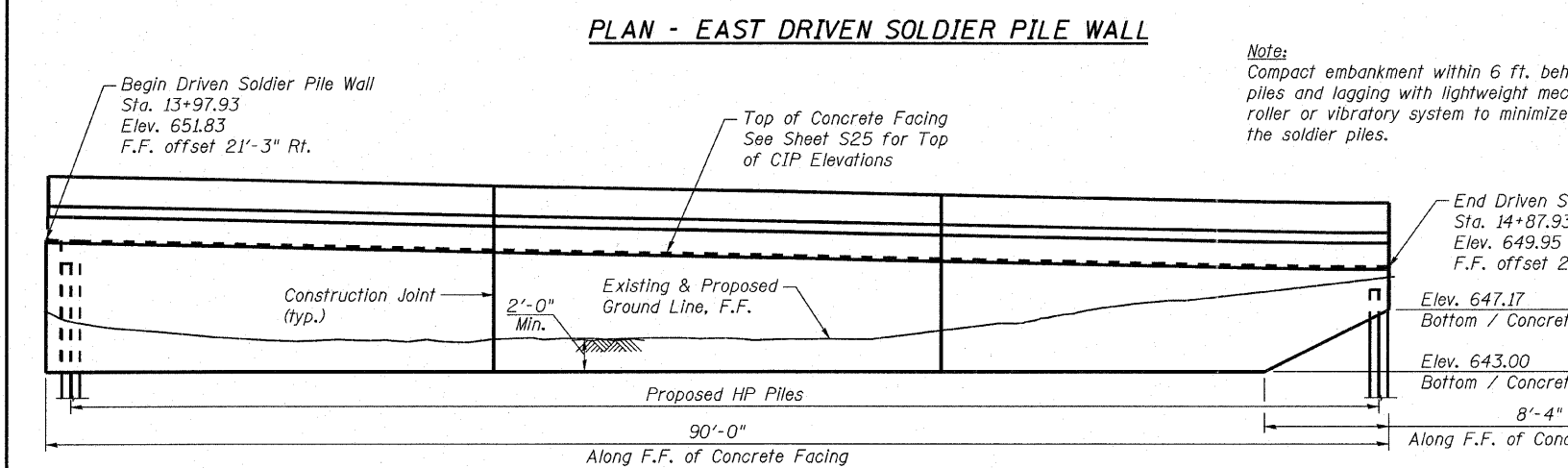
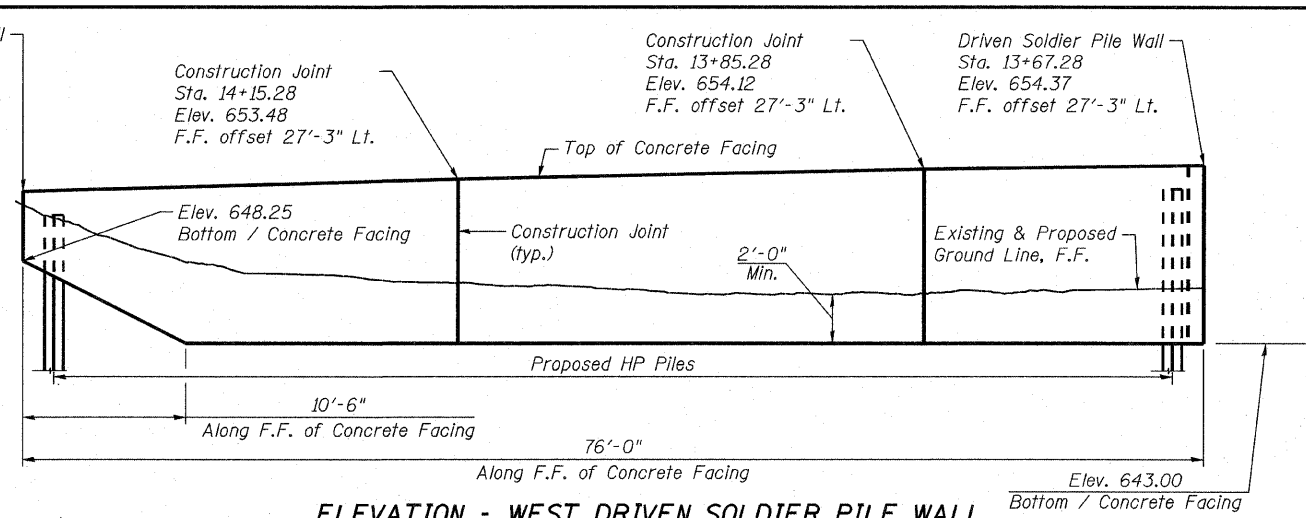
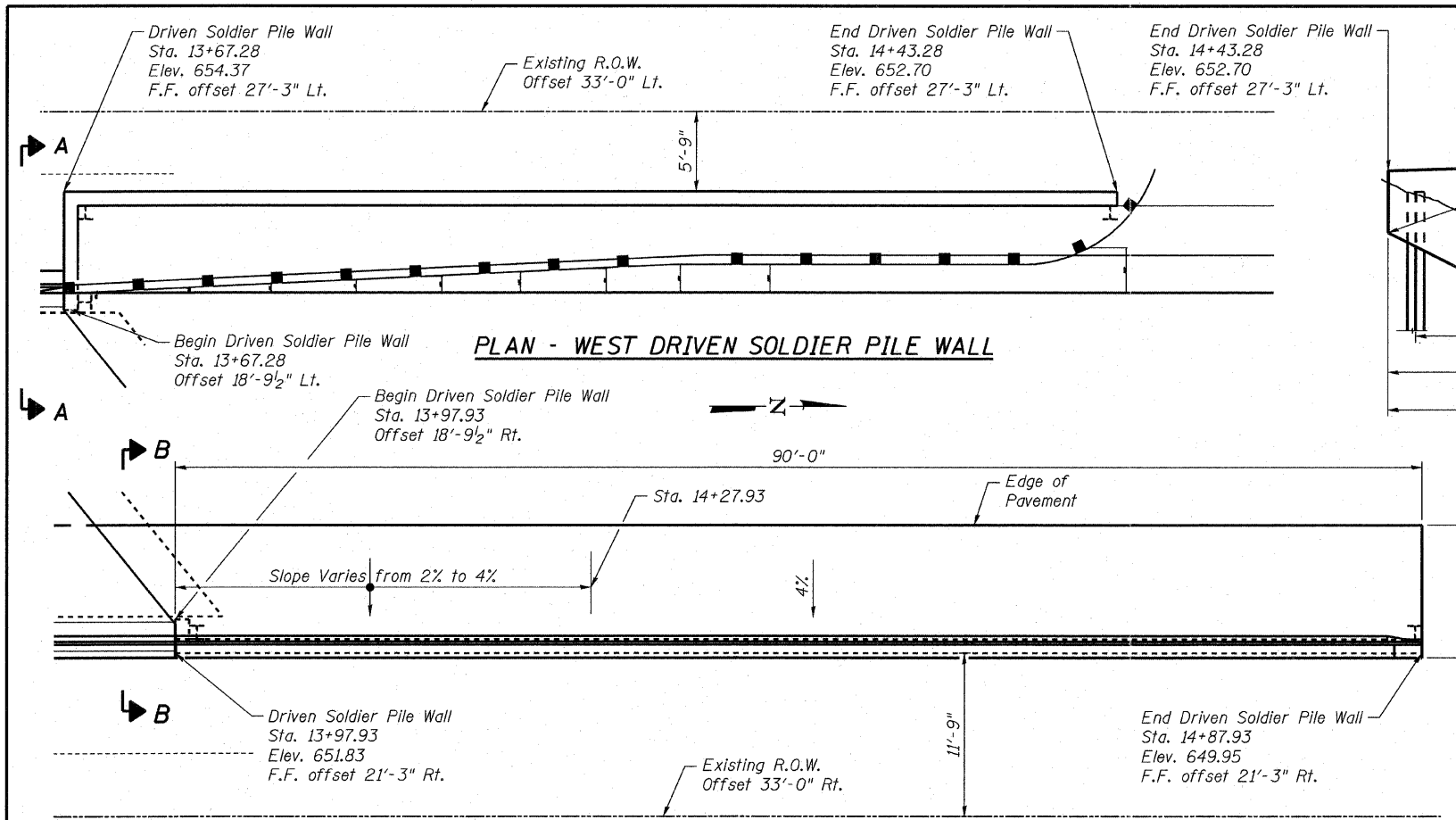
**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 820  
Chicago, IL 60601  
Phone (312) 977-0990 Fax (312) 977-0681

USER NAME =	DESIGNED - HAA	REVISED
PLOT SCALE =	CHECKED - RAD	REVISED
PLOT DATE = 12/08/2011	DRAWN - HAA	REVISED
	CHECKED - RAD	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**WING WALLS ELEVATION AND DETAILS**  
**S.N. 016-0772**  
SHEET NO. S22 OF S34 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	32
CONTRACT NO. 60M78			ILLINOIS FED. AID PROJECT	



Note:  
Compact embankment within 6 ft. behind the soldier piles and lagging with lightweight mechanical tamper, roller or vibratory system to minimize deflection of the soldier piles.

The contractor is responsible for design and performance of the lagging using no less than a 3 inch nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 520  
Chicago, IL 60601  
Phone (312) 977-6660 Fax (312) 977-6661

USER NAME =  
DESIGNED - HAA  
CHECKED - RAD  
DRAWN - WHI  
PLOT DATE = 12/08/2011

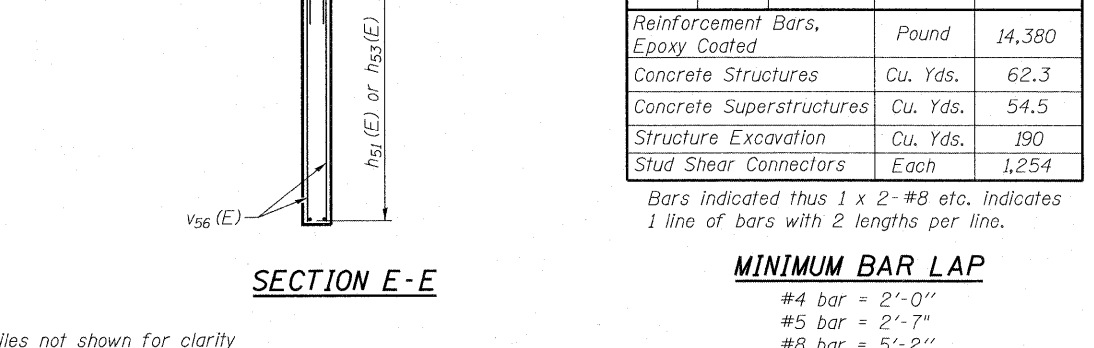
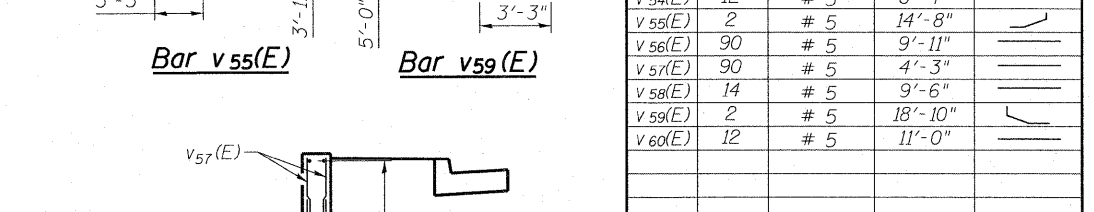
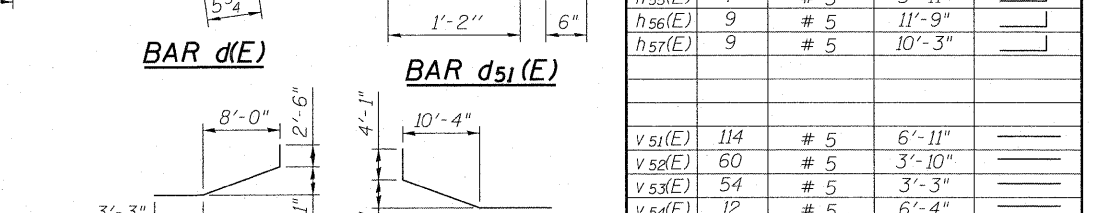
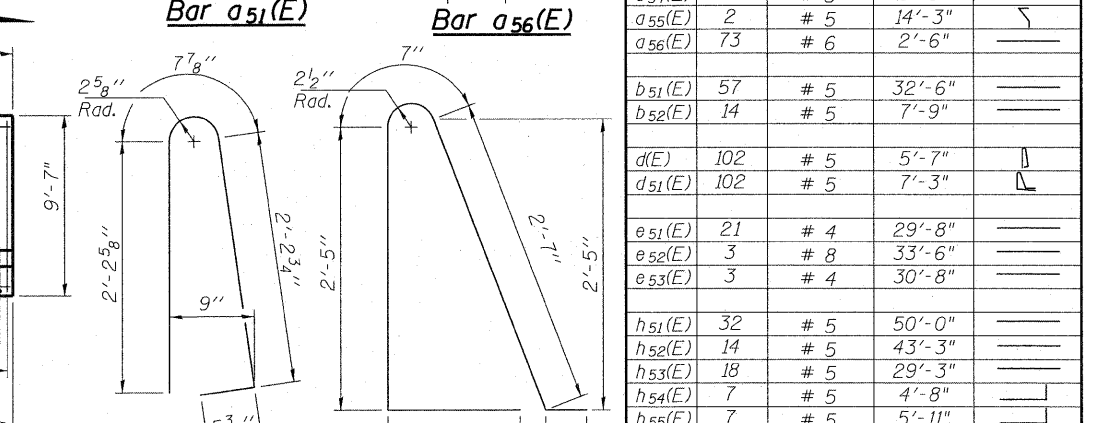
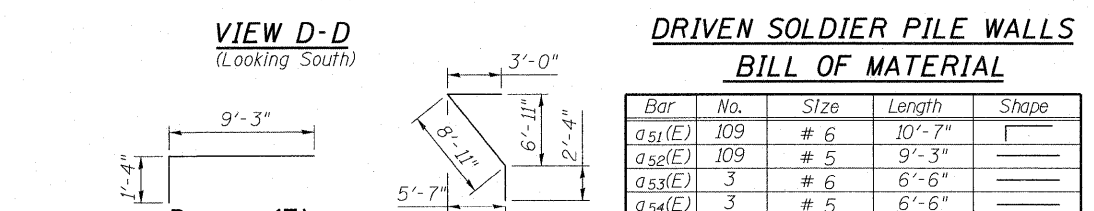
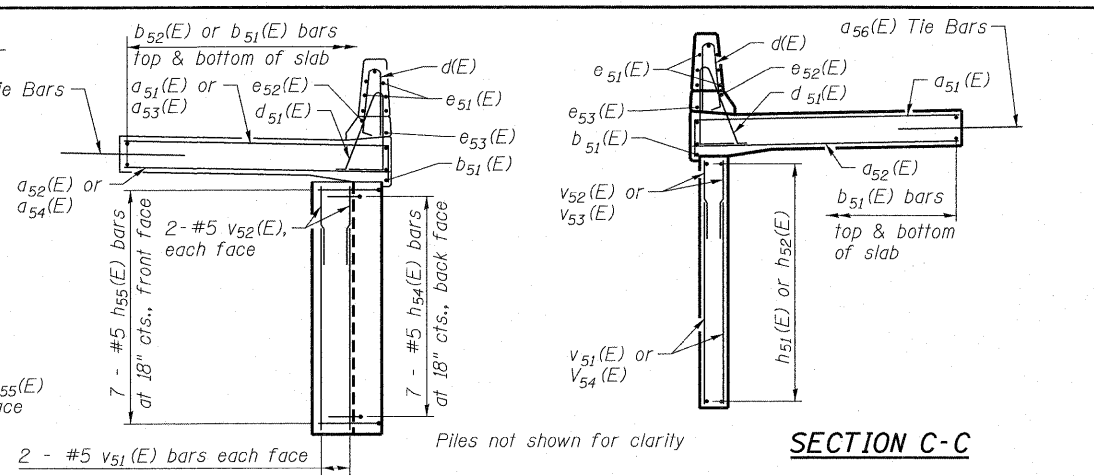
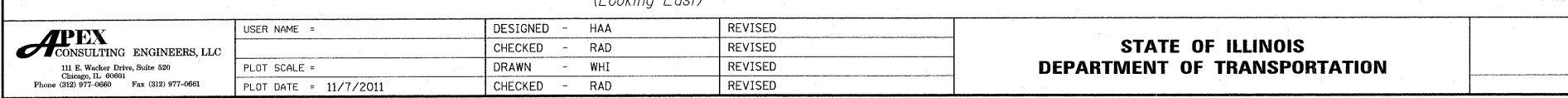
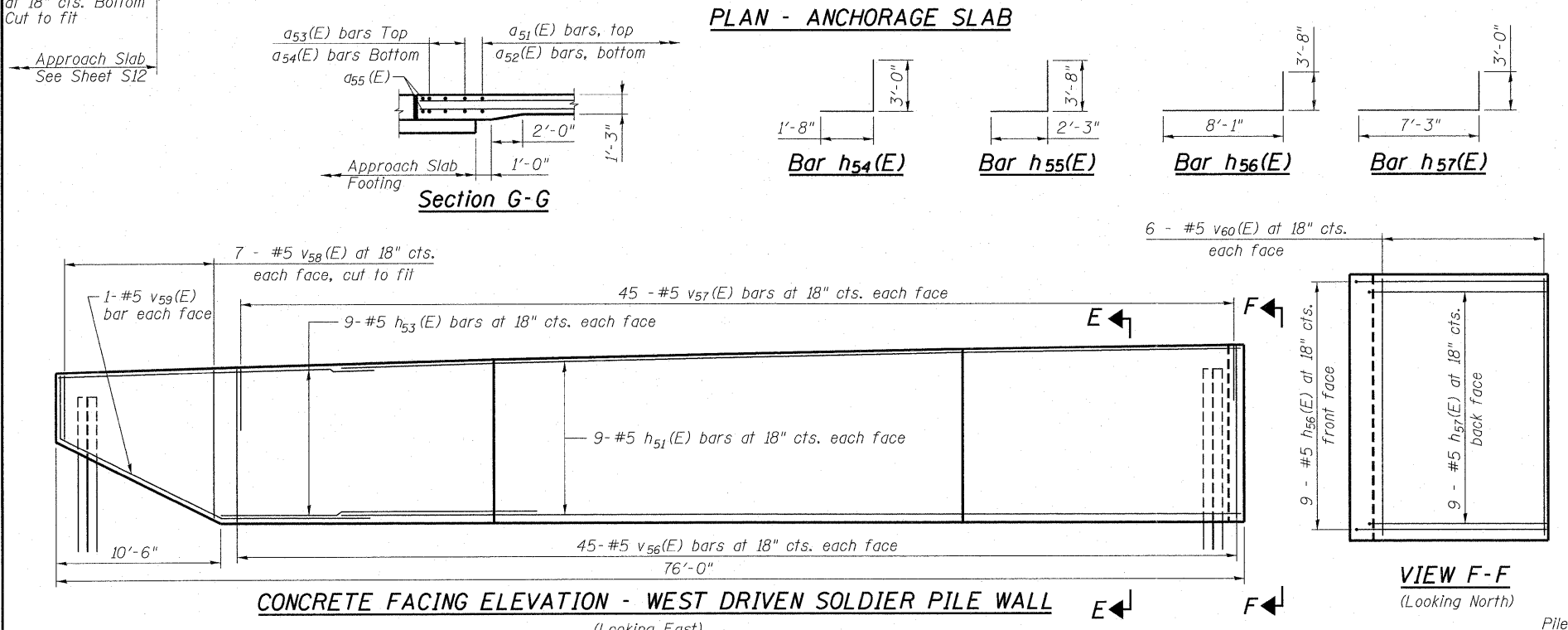
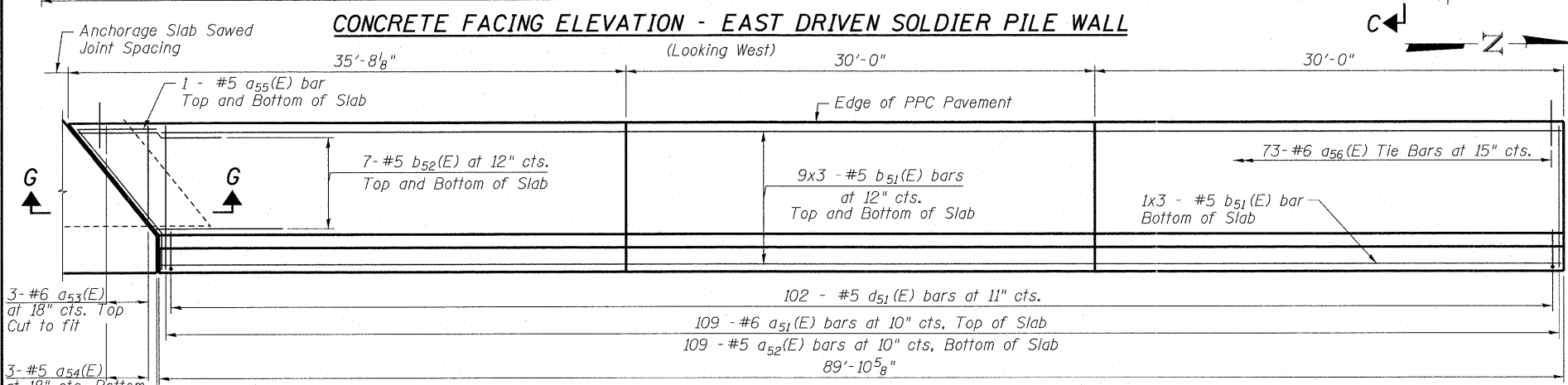
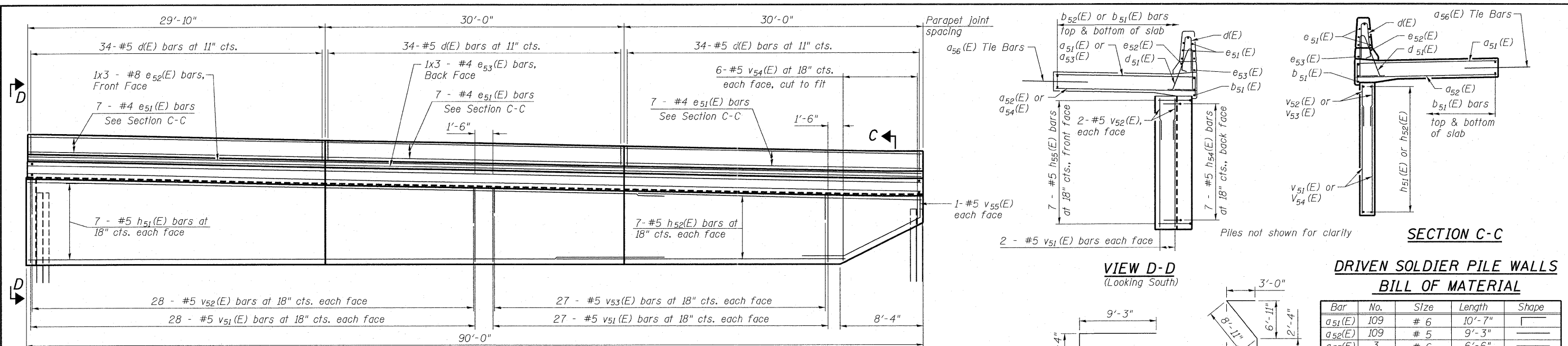
DESIGNED - HAA  
CHECKED - RAD  
DRAWN - WHI  
PLOT DATE = 12/08/2011

REVIS  
REVIS  
REVIS  
REVIS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

RETAINING WALLS PLAN AND ELEVATION  
S.N. 016-0772  
SHEET NO. S23 OF S34 SHEETS

F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 33
CONTRACT NO. 60M78				ILLINOIS FED. AID PROJECT



**DRIVEN SOLDIER PILE WALLS  
BILL OF MATERIAL**

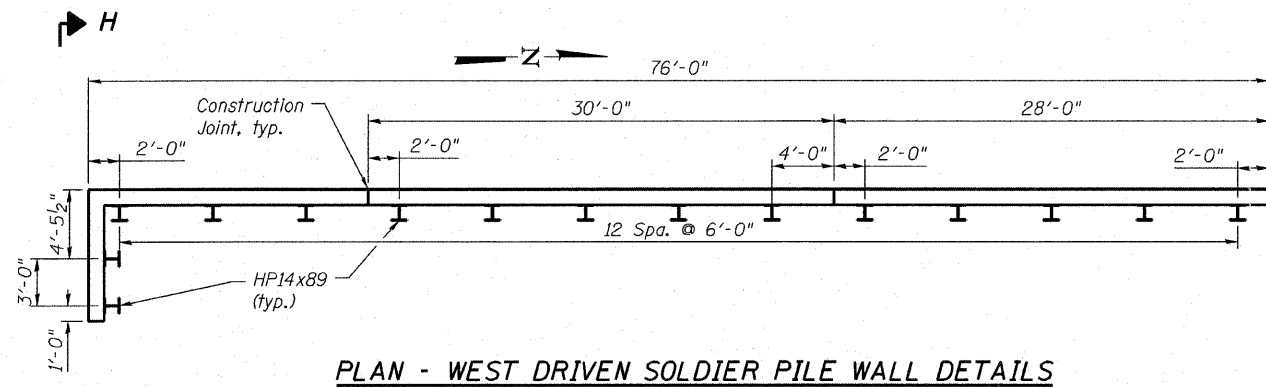
Bar	No.	Size	Length	Shape
a51(E)	109	# 6	10'-7"	┌
a52(E)	109	# 5	9'-3"	┌
a53(E)	3	# 6	6'-6"	┌
a54(E)	3	# 5	6'-6"	┌
a55(E)	2	# 5	14'-3"	┌
a56(E)	73	# 6	2'-6"	┌
b51(E)	57	# 5	32'-6"	┌
b52(E)	14	# 5	7'-9"	┌
d(E)	102	# 5	5'-7"	┌
d51(E)	102	# 5	7'-3"	┌
e51(E)	21	# 4	29'-8"	┌
e52(E)	3	# 8	33'-6"	┌
e53(E)	3	# 4	30'-8"	┌
h51(E)	32	# 5	50'-0"	┌
h52(E)	14	# 5	43'-3"	┌
h53(E)	18	# 5	29'-3"	┌
h54(E)	7	# 5	4'-8"	┌
h55(E)	7	# 5	5'-11"	┌
h56(E)	9	# 5	11'-9"	┌
h57(E)	9	# 5	10'-3"	┌
v51(E)	114	# 5	6'-11"	┌
v52(E)	60	# 5	3'-10"	┌
v53(E)	54	# 5	3'-3"	┌
v54(E)	12	# 5	6'-4"	┌
v55(E)	2	# 5	14'-8"	┌
v56(E)	90	# 5	9'-11"	┌
v57(E)	90	# 5	4'-3"	┌
v58(E)	14	# 5	9'-6"	┌
v59(E)	2	# 5	18'-10"	┌
v60(E)	12	# 5	11'-0"	┌

Item	Unit	Quantity
Reinforcement Bars, Epoxy Coated	Pound	14,380
Concrete Structures	Cu. Yds.	62.3
Concrete Superstructures	Cu. Yds.	54.5
Structure Excavation	Cu. Yds.	190
Stud Shear Connectors	Each	1,254

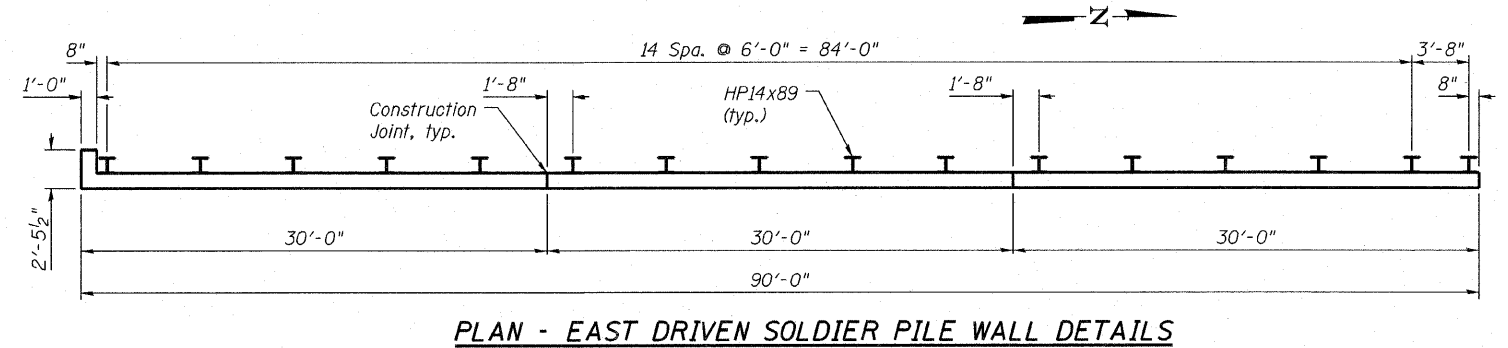
Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

**MINIMUM BAR LAP**  
 #4 bar = 2'-0"  
 #5 bar = 2'-7"  
 #8 bar = 5'-2"

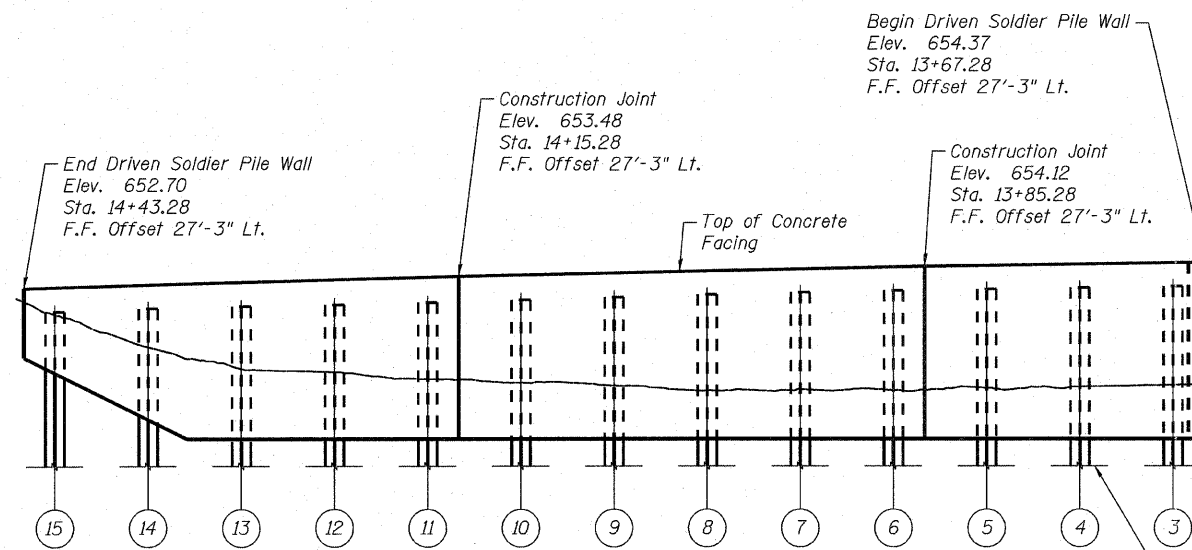




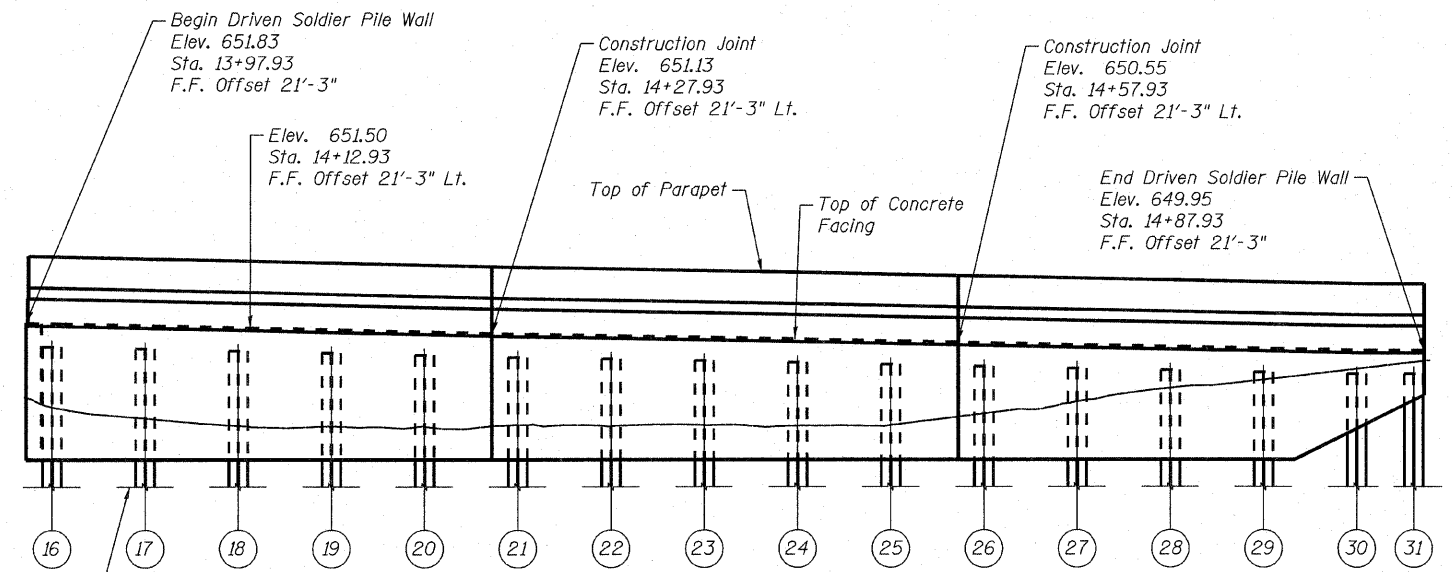
PLAN - WEST DRIVEN SOLDIER PILE WALL DETAILS



PLAN - EAST DRIVEN SOLDIER PILE WALL DETAILS



ELEVATION - WEST DRIVEN SOLDIER PILE WALL DETAILS  
(Looking East)



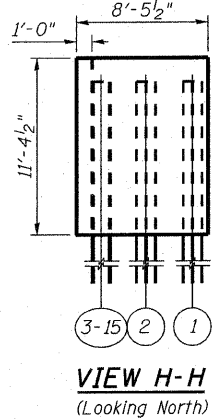
ELEVATION - EAST DRIVEN SOLDIER PILE WALL DETAILS  
(Looking West)

Top of Pile Elevations  
West Driven Soldier Pile Wall

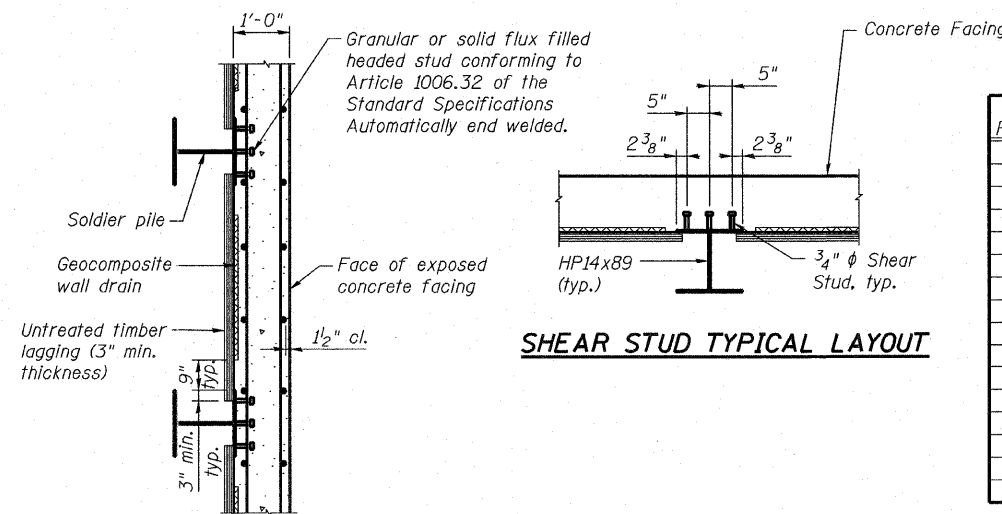
Pile No.	Length	Top Elev.	No. Studs Per Pile	Stud Spacing
1	31'-0"	652.70	3 x 19 = 57	18 Spa. @ 6" = 9'-0"
2	31'-0"	652.70	3 x 19 = 57	18 Spa. @ 6" = 9'-0"
3	31'-0"	652.67	3 x 19 = 57	18 Spa. @ 6" = 9'-0"
4	31'-0"	652.58	3 x 19 = 57	18 Spa. @ 6" = 9'-0"
5	31'-0"	652.49	3 x 19 = 57	18 Spa. @ 5.75" = 8'-7 1/2"
6	31'-0"	652.39	3 x 19 = 57	18 Spa. @ 5.75" = 8'-7 1/2"
7	31'-0"	652.28	3 x 18 = 54	17 Spa. @ 6" = 8'-6"
8	31'-0"	652.13	3 x 18 = 54	17 Spa. @ 6" = 8'-6"
9	31'-0"	651.97	3 x 18 = 54	17 Spa. @ 5.75" = 8'-1 3/4"
10	31'-0"	651.80	3 x 17 = 51	16 Spa. @ 6" = 8'-0"
11	31'-0"	651.64	3 x 17 = 51	16 Spa. @ 6" = 8'-0"
12	31'-0"	651.47	3 x 17 = 51	16 Spa. @ 5.75" = 7'-8"
13	31'-0"	651.36	3 x 17 = 51	16 Spa. @ 5.75" = 7'-8"
14	31'-0"	651.24	3 x 14 = 42	13 Spa. @ 5.75" = 6'-2 3/4"
15	31'-0"	651.02	3 x 8 = 24	7 Spa. @ 5.25" = 3'-3/4"

Top of Pile Elevations  
East Driven Soldier Pile Wall

Pile No.	Length	Top Elev.	No. Stud Per Pile	Stud Spacing
16	28'-3"	650.28	3 x 15 = 45	14 Spa. @ 5.75" = 6'-8 1/2"
17	28'-3"	650.15	3 x 14 = 42	13 Spa. @ 6" = 6'-6"
18	28'-3"	650.01	3 x 14 = 42	13 Spa. @ 6" = 6'-6"
19	28'-3"	649.87	3 x 14 = 42	13 Spa. @ 5.75" = 6'-2 3/4"
20	28'-3"	649.73	3 x 13 = 39	12 Spa. @ 6" = 6'-0"
21	28'-3"	649.59	3 x 13 = 39	12 Spa. @ 6" = 6'-0"
22	28'-3"	649.48	3 x 13 = 39	12 Spa. @ 5.75" = 5'-9"
23	28'-3"	649.37	3 x 13 = 39	12 Spa. @ 5.75" = 5'-9"
24	28'-3"	649.25	3 x 13 = 39	12 Spa. @ 5.5" = 5'-6"
25	28'-3"	649.12	3 x 12 = 36	11 Spa. @ 6" = 5'-6"
26	28'-3"	649.00	3 x 12 = 36	11 Spa. @ 5.75" = 5'-3 1/4"
27	28'-3"	648.87	3 x 12 = 36	11 Spa. @ 5.75" = 5'-3 1/4"
28	28'-3"	648.75	3 x 12 = 36	11 Spa. @ 5.5" = 5'-1/2"
29	28'-3"	648.63	3 x 11 = 33	10 Spa. @ 6" = 5'-0"
30	28'-3"	648.52	3 x 7 = 21	6 Spa. @ 5.25" = 2'-8 1/2"
31	28'-3"	648.45	3 x 3 = 9	2 Spa. @ 5.25" = 10 1/2"

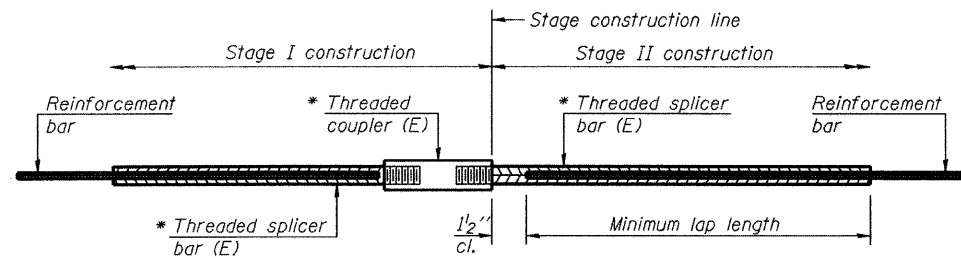


VIEW H-H  
(Looking North)



SECTION THRU DRILLED  
SOLDIER PILE WALL

SHEAR STUD TYPICAL LAYOUT



**STANDARD BAR SPLICER ASSEMBLY**

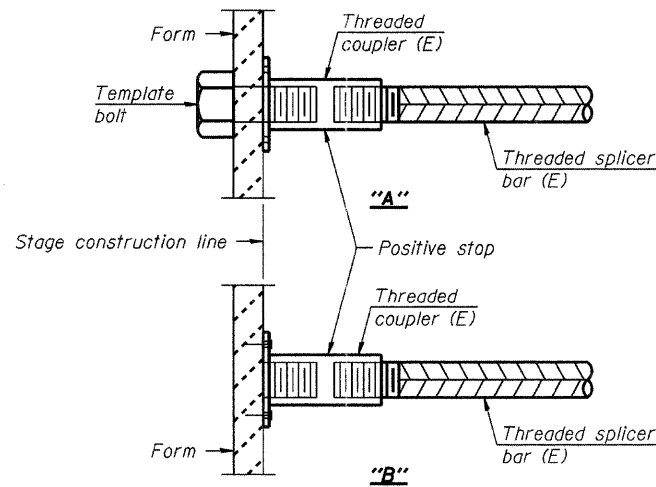
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

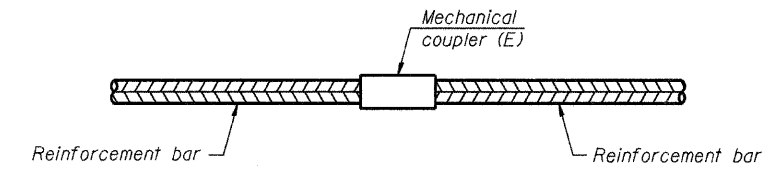
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



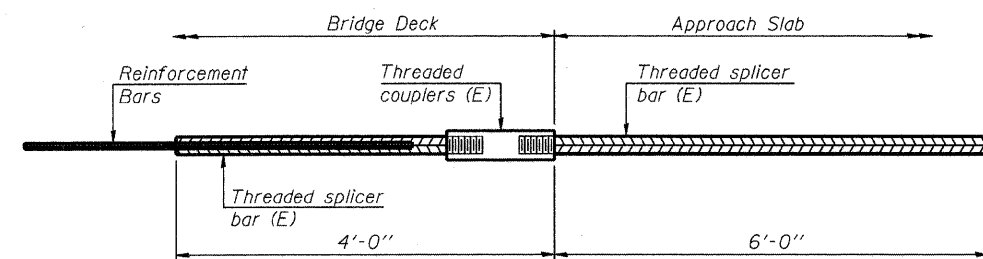
**INSTALLATION AND SETTING METHODS**

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



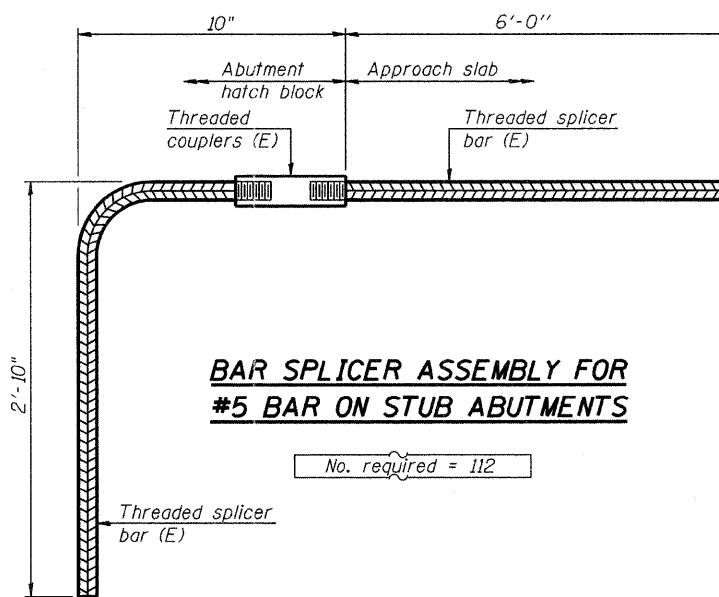
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required = 112



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required = 112

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See special provision for Mechanical Splicers.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

7-1-10

**APEX**  
 CONSULTING ENGINEERS, LLC  
 111 E. Wacker Drive, Suite 520  
 Chicago, IL 60601  
 Phone (312) 977-0980 Fax (312) 977-0981

USER NAME =  
 PLOT SCALE =  
 PLOT DATE = 10/27/2011

DESIGNED - HAA  
 CHECKED - RAD  
 DRAWN - WHI  
 CHECKED - RAD

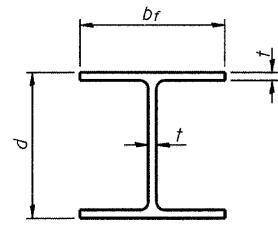
REVISED  
 REVISED  
 REVISED  
 REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 016-0772

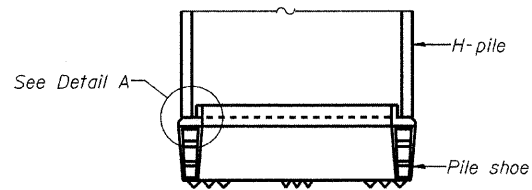
SHEET NO. S26 OF S34 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	36
CONTRACT NO. 60M78				
ILLINOIS FED. AID PROJECT				

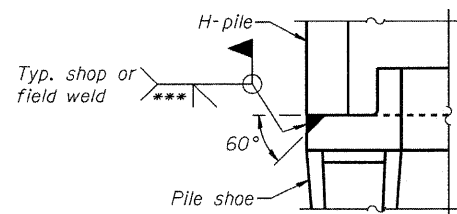


**STEEL PILE TABLE**

Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

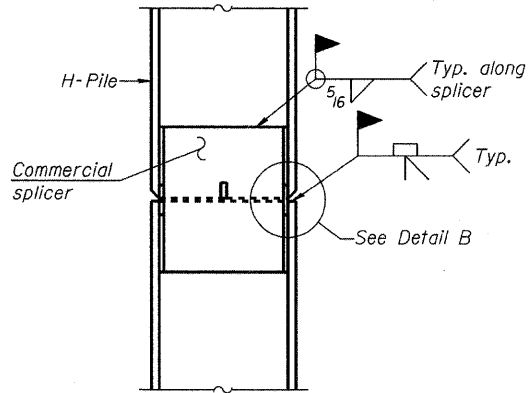


**ELEVATION**

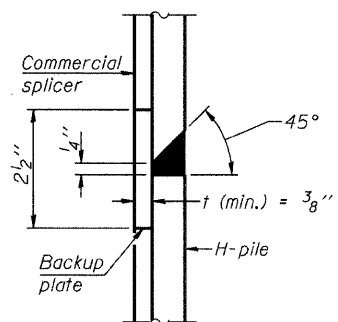


**DETAIL A**

**H-PILE SHOE ATTACHMENT**

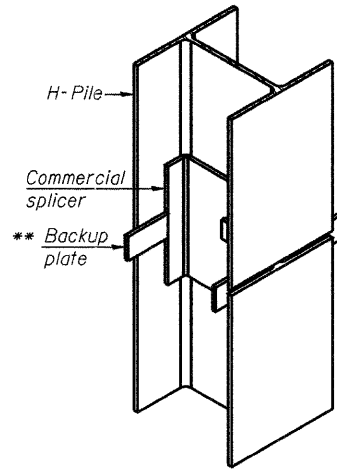


**ELEVATION**

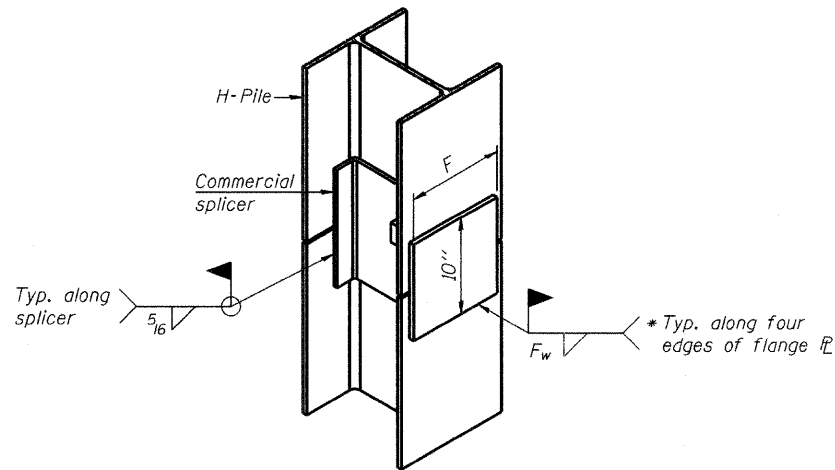


**DETAIL "B"**

**WELDED COMMERCIAL SPLICE**



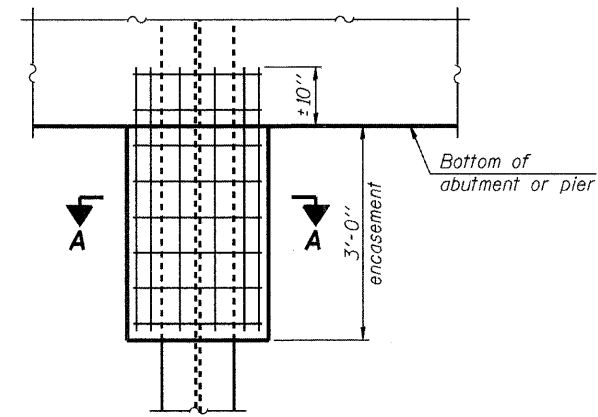
**ISOMETRIC VIEW**



**ISOMETRIC VIEW**

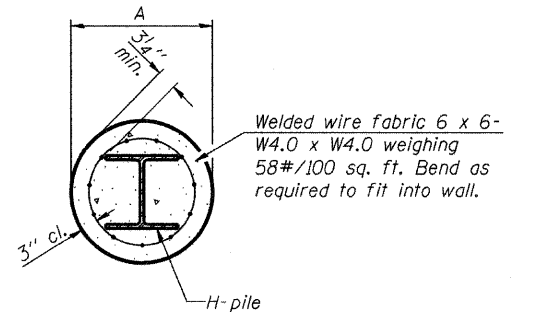
**WELDED COMMERCIAL SPLICE ALTERNATE**

- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).



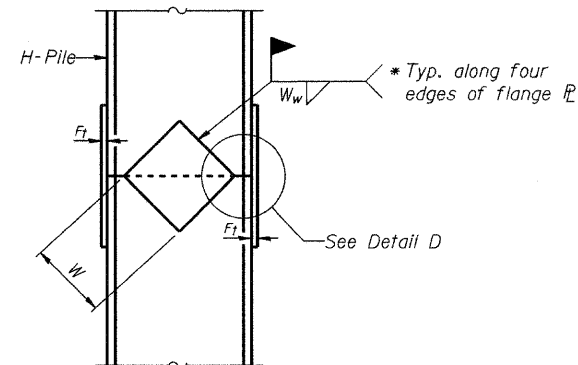
**ELEVATION**

**PILE ENCASEMENT**

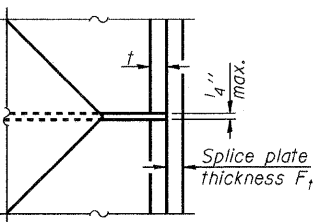


Note:  
Forms for encasement may be omitted when soil conditions permit.

**SECTION A-A**

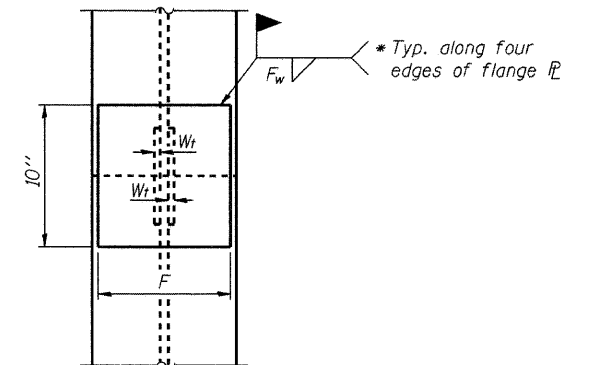


**ELEVATION**



**DETAIL D**

**WELDED PLATE FIELD SPLICE**



**END VIEW**

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5 1/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5 1/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5 1/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1 1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1 1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1 1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1 1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1 1/2"	3/8"

Note:  
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP

7-1-10

**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 600  
Chicago, IL 60601  
Phone (312) 977-0660 Fax (312) 977-0661

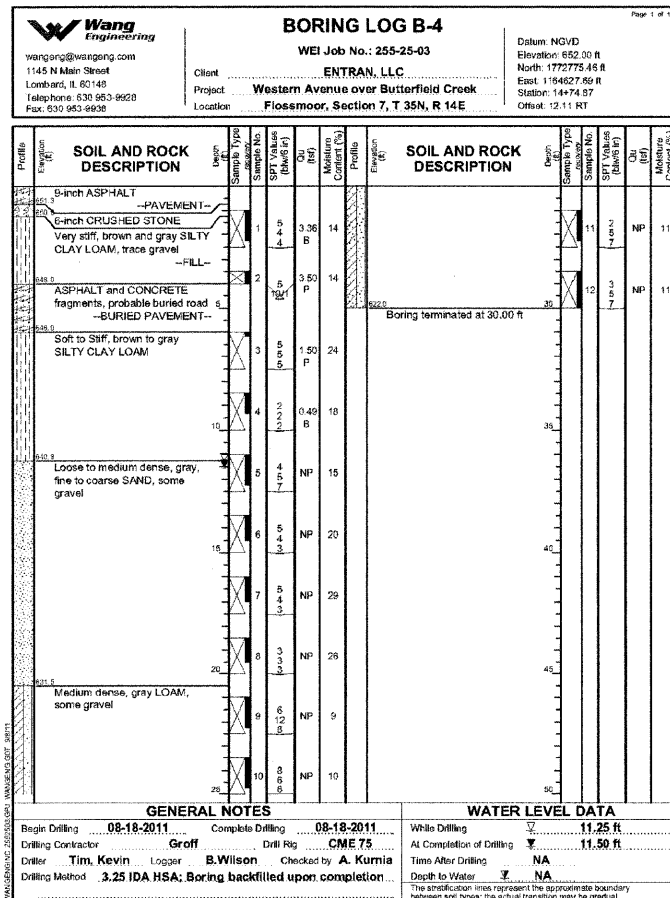
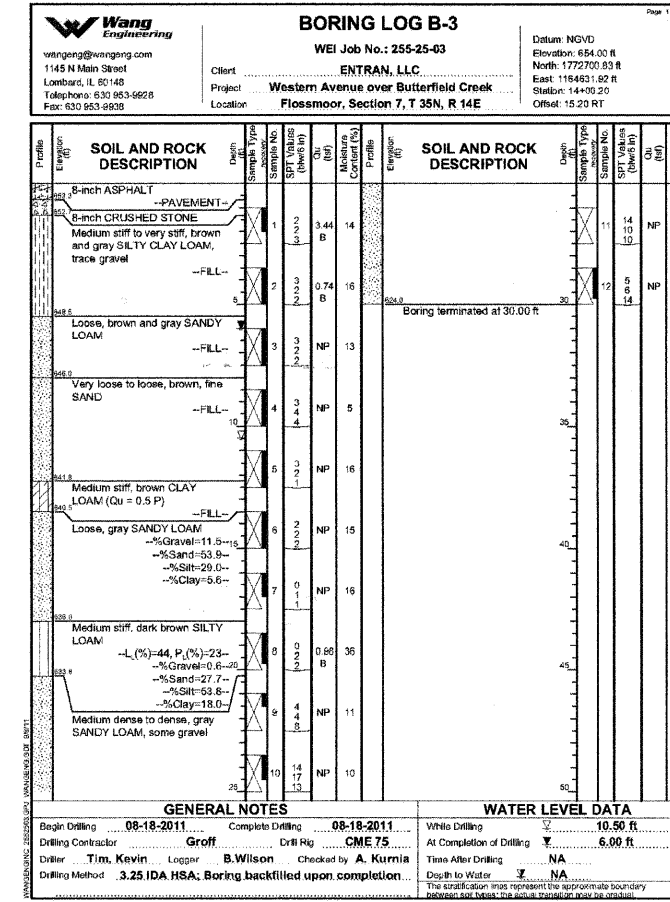
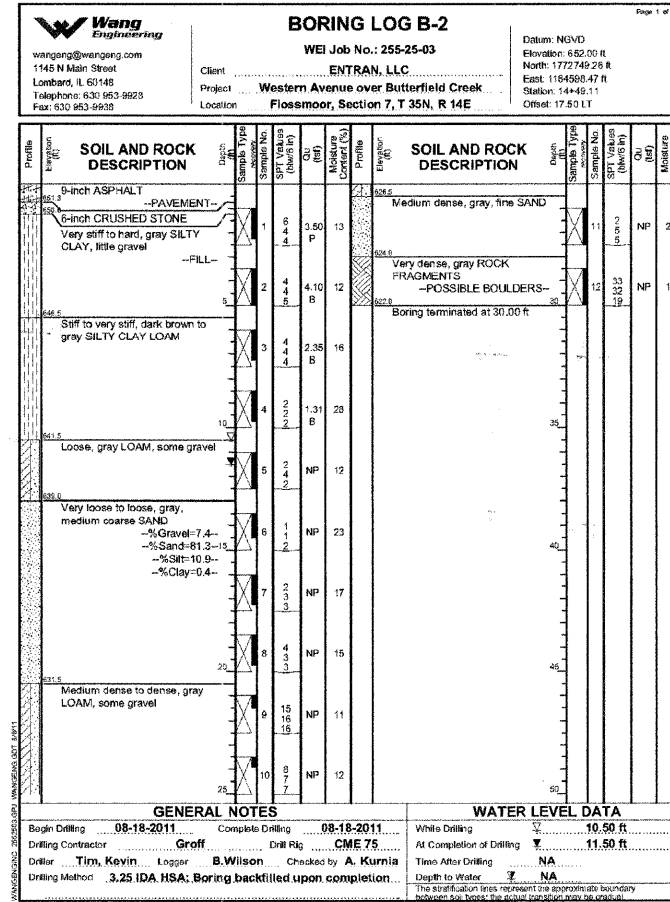
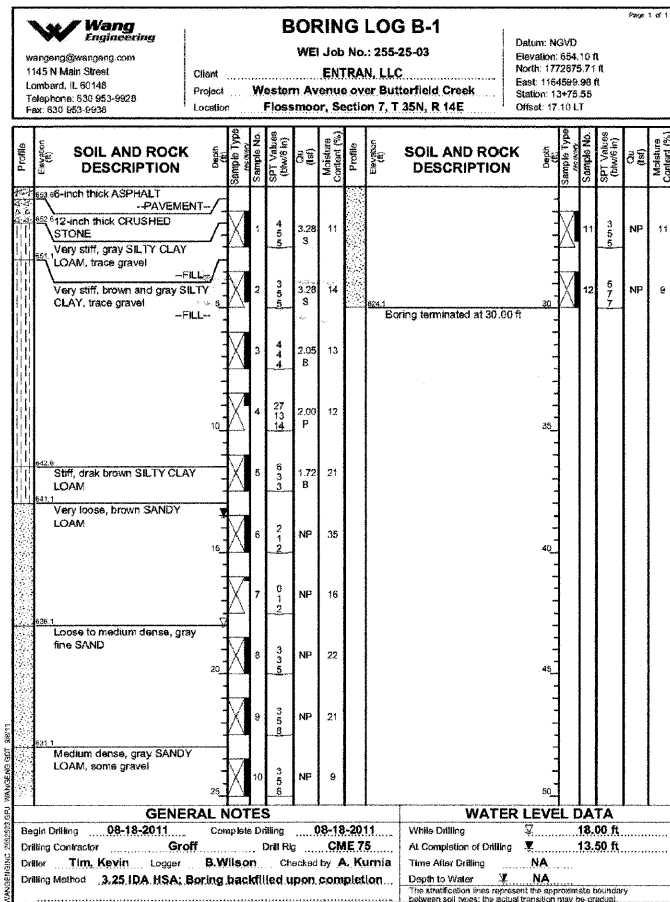
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PLOT DATE = 10/27/2011	DRAWN -
	CHECKED -

REVISOR	REVISION
REVISOR	REVISION
REVISOR	REVISION
REVISOR	REVISION

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS**  
**STRUCTURE NO. 016-0772**  
SHEET NO. 527 OF 534 SHEETS

F.A.I.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	37
CONTRACT NO. 60M78				ILLINOIS FED. AID PROJECT

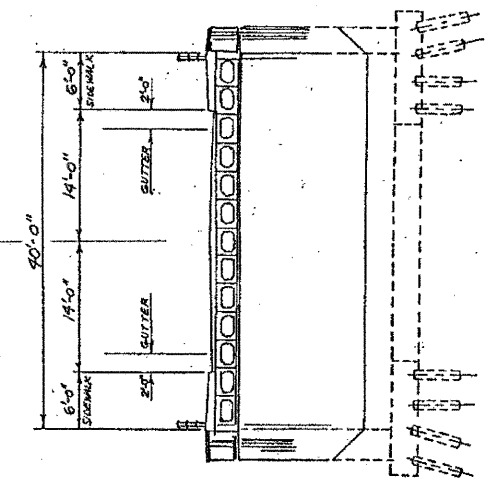
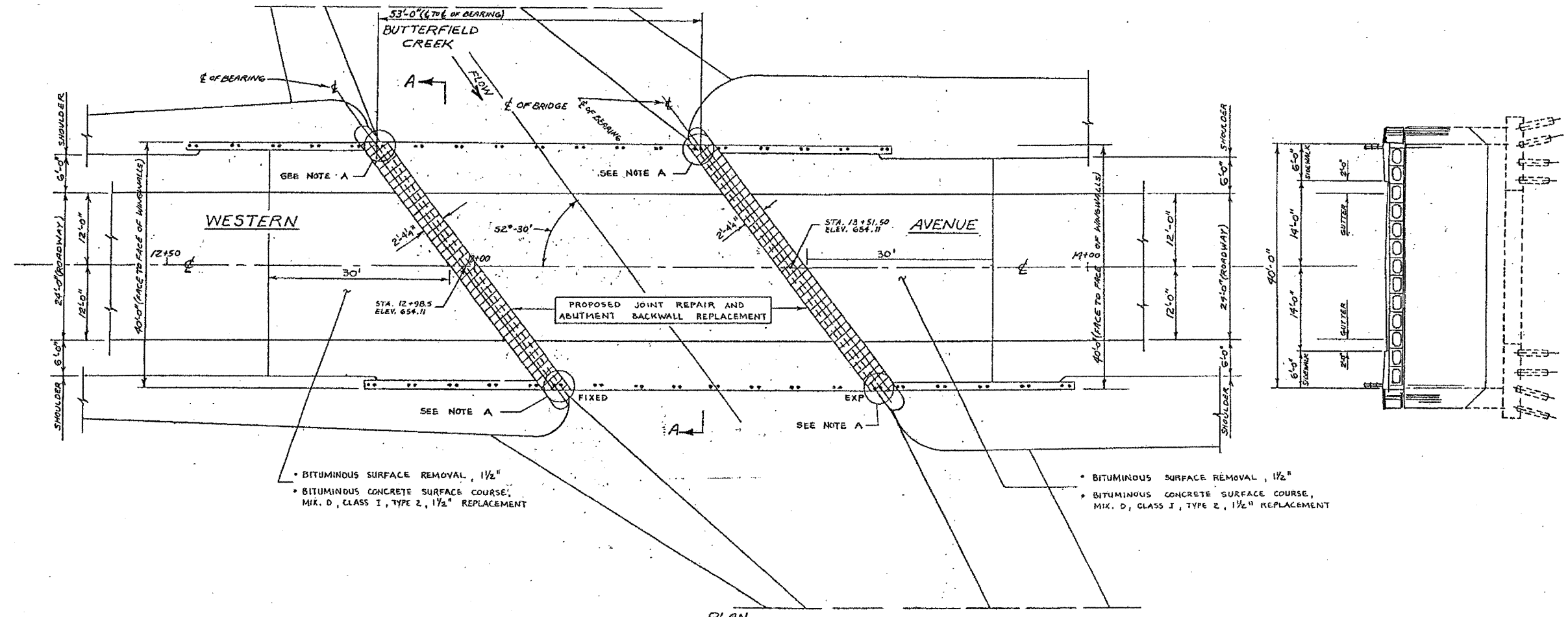


Existing boring stations are based on @ Bridge at 13+25.00 = @ Proposed Bridge Sta. 13+25.00

USER NAME =	DESIGNED -	REVISED
PLOT SCALE =	CHECKED -	REVISED
PLOT DATE = 10/27/2011	DRAWN - WHI	REVISED
	CHECKED - RAD	REVISED

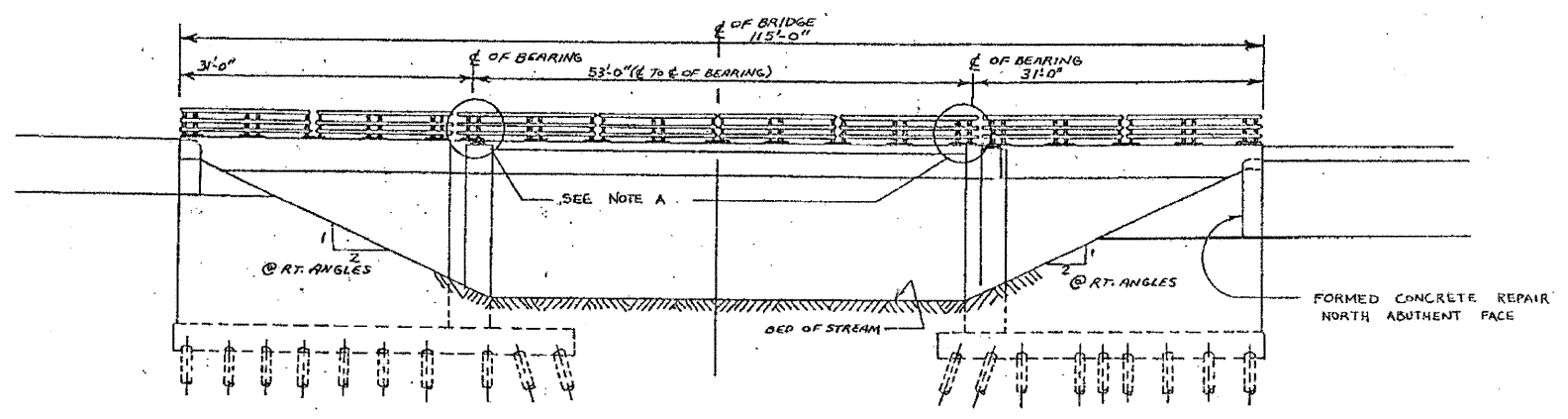
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	38
CONTRACT NO. 60M78				
ILLINOIS FED. AID PROJECT				

PAGE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	39
STA.	TO STA.			
	TU A1A			
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



- BITUMINOUS SURFACE REMOVAL, 1 1/2"
- BITUMINOUS CONCRETE SURFACE COURSE, MIX. D, CLASS I, TYPE 2, 1 1/2" REPLACEMENT

PLAN



EAST ELEVATION

NOTE A: EXISTING RAIL TO BE REMOVED TEMPORARILY AND ANCHOR BOLTS SALVAGED IN NEW BONDED PREFORMED JOINT SYSTEM CONSTRUCTION.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN & ELEVATION**  
**WESTERN AVE.**

SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_

DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

**APEX**  
 CONSULTING ENGINEERS, LLC  
 111 E. Wacker Drive, Suite 600  
 Chicago, IL 60601  
 Phone (312) 977-0660 Fax (312) 977-0661

USER NAME =	DESIGNED -	REVISED
PLOT SCALE =	CHECKED -	REVISED
PLOT DATE = 10/27/2011	DRAWN -	REVISED
	CHECKED -	REVISED

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS (1 OF 6)  
 S.N. 016-0772

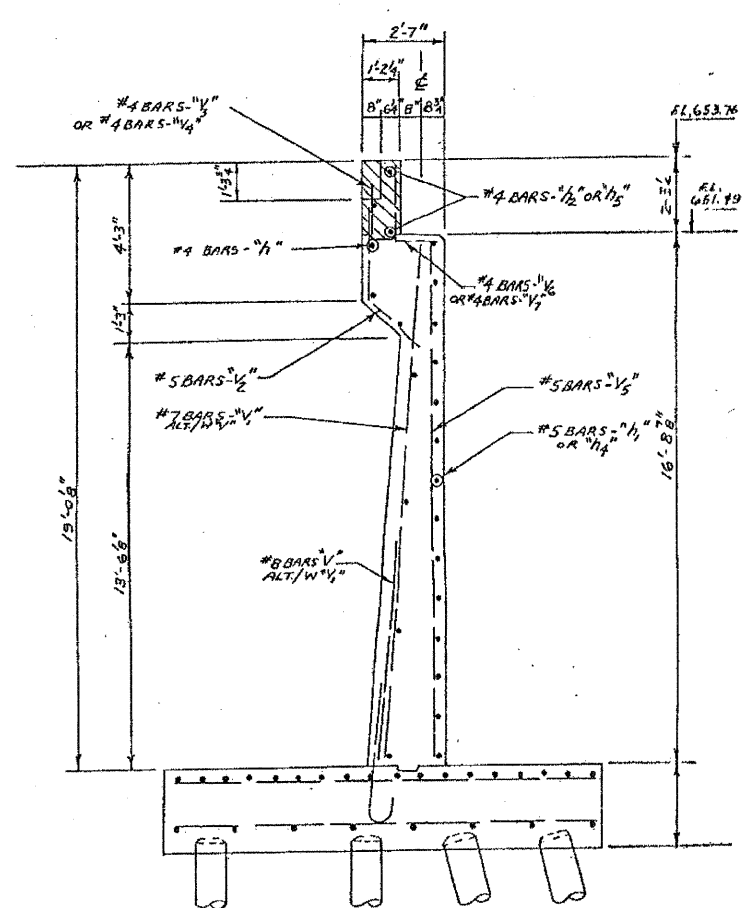
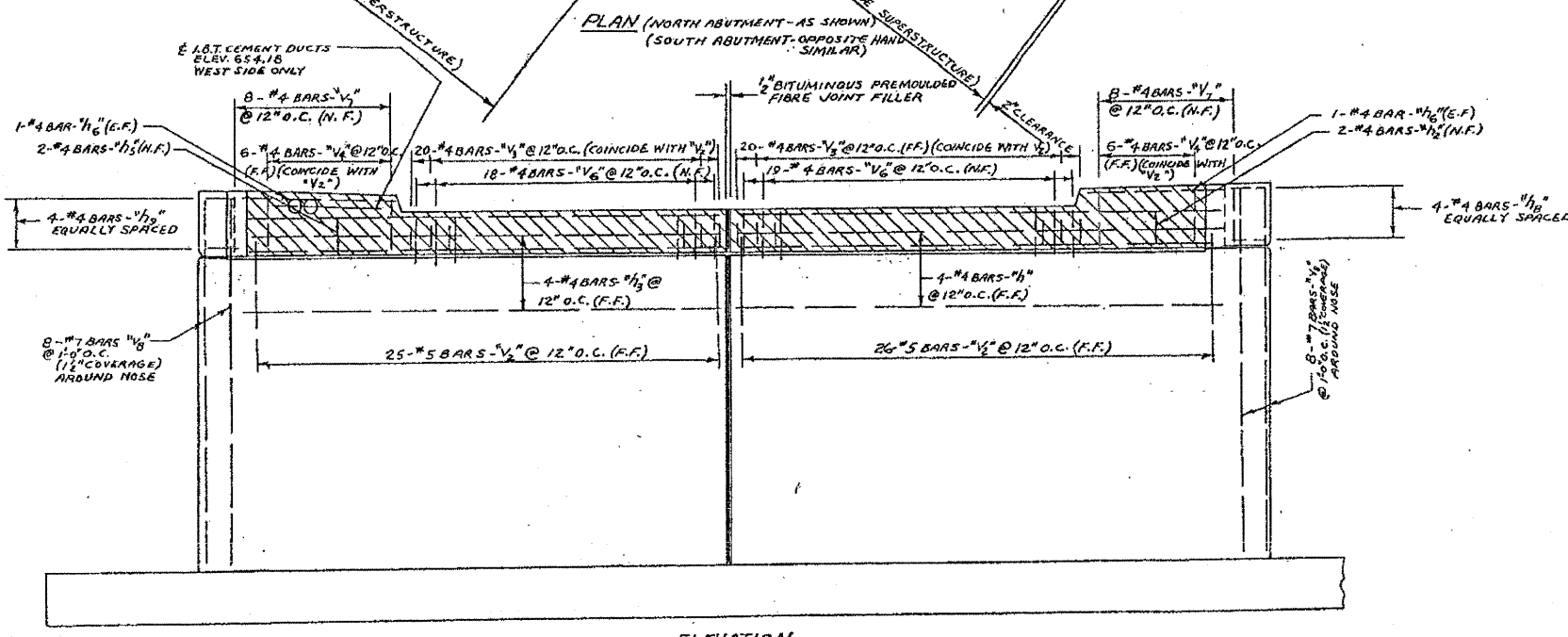
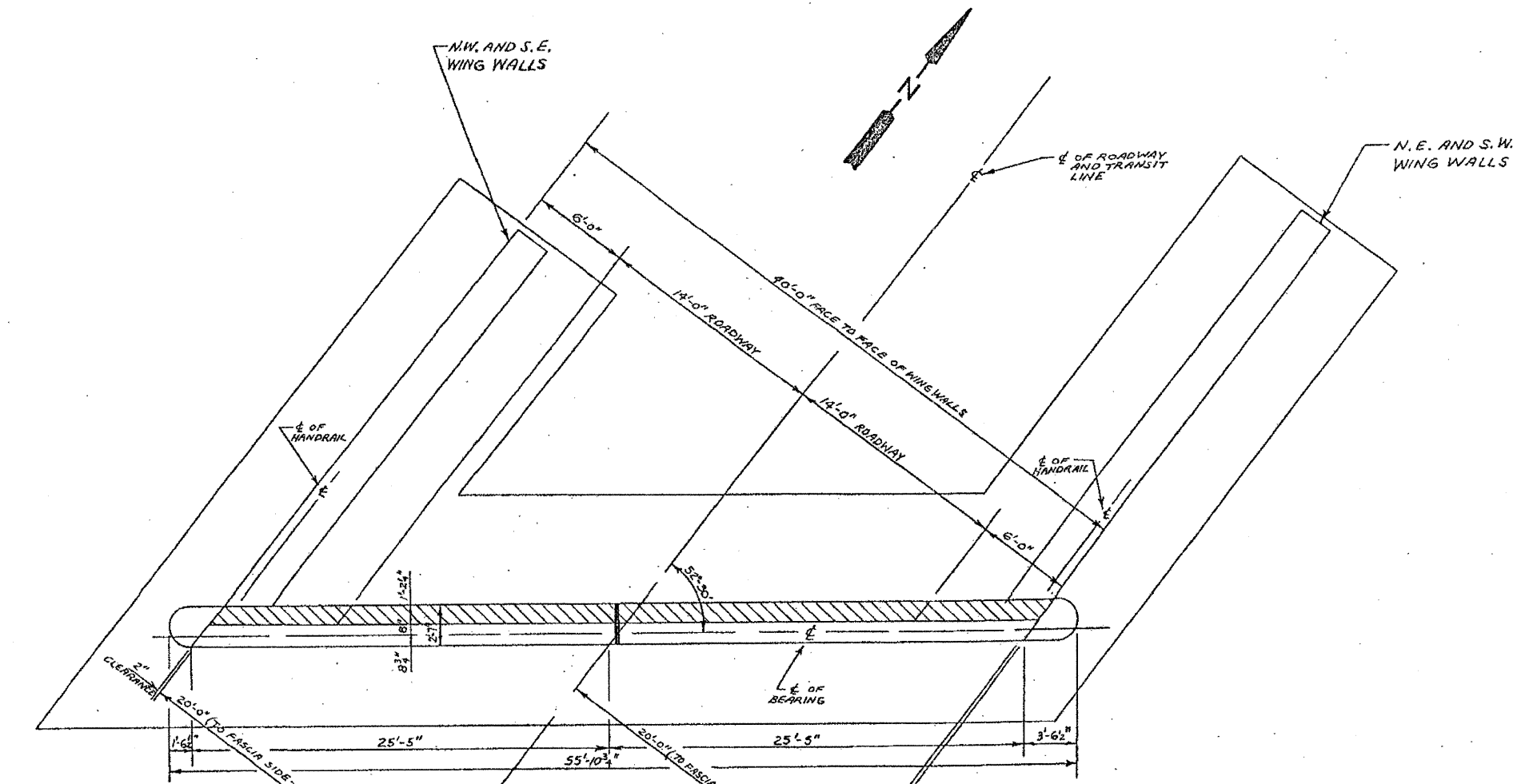
SHEET NO. S29 OF S34 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	39
				CONTRACT NO. 60M78
ILLINOIS FED. AID PROJECT				





F.A.U. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505 I-DL	COOK	16	7
STA.		TO STA.		
FED. AID DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

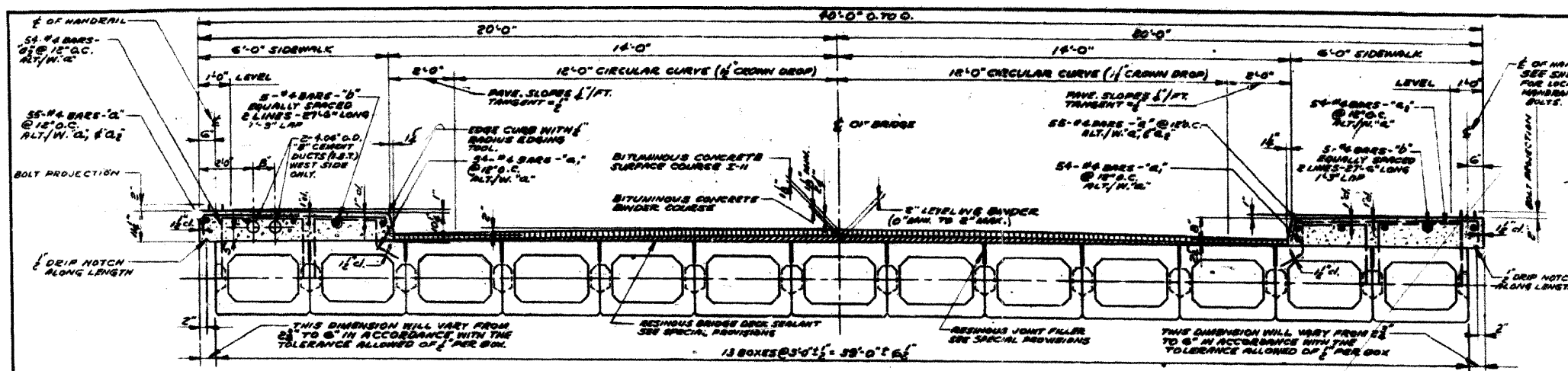


**LEGEND**  
 F.F. = FAR FACE  
 N.F. = NEAR FACE  
 E.F. = EACH FACE  
 T. = TOP  
 B. = BOTTOM  
 = CONG. REM.

SECTION THRU ABUTMENT

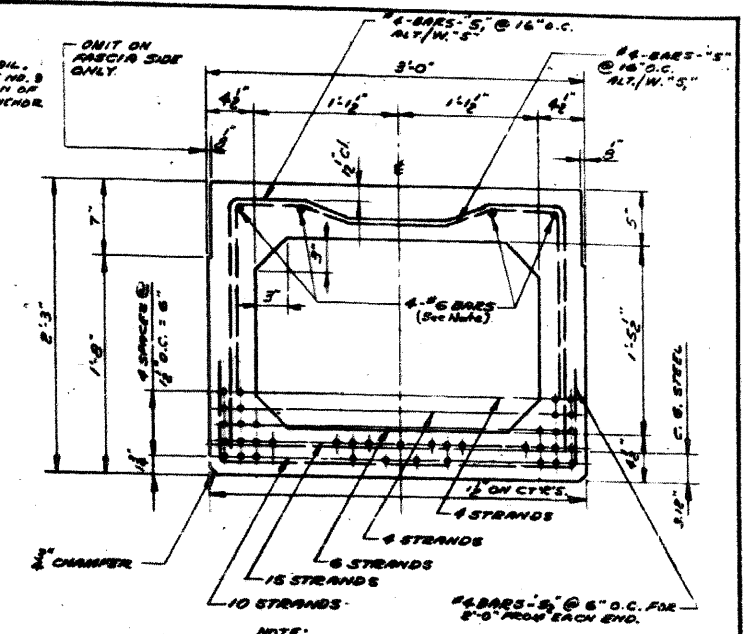
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 ABUTMENT BACKWALL  
 CONCRETE REMOVAL PLAN  
 SCALE: VERT. \_\_\_\_\_  
 HORIZ. \_\_\_\_\_  
 DATE \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_



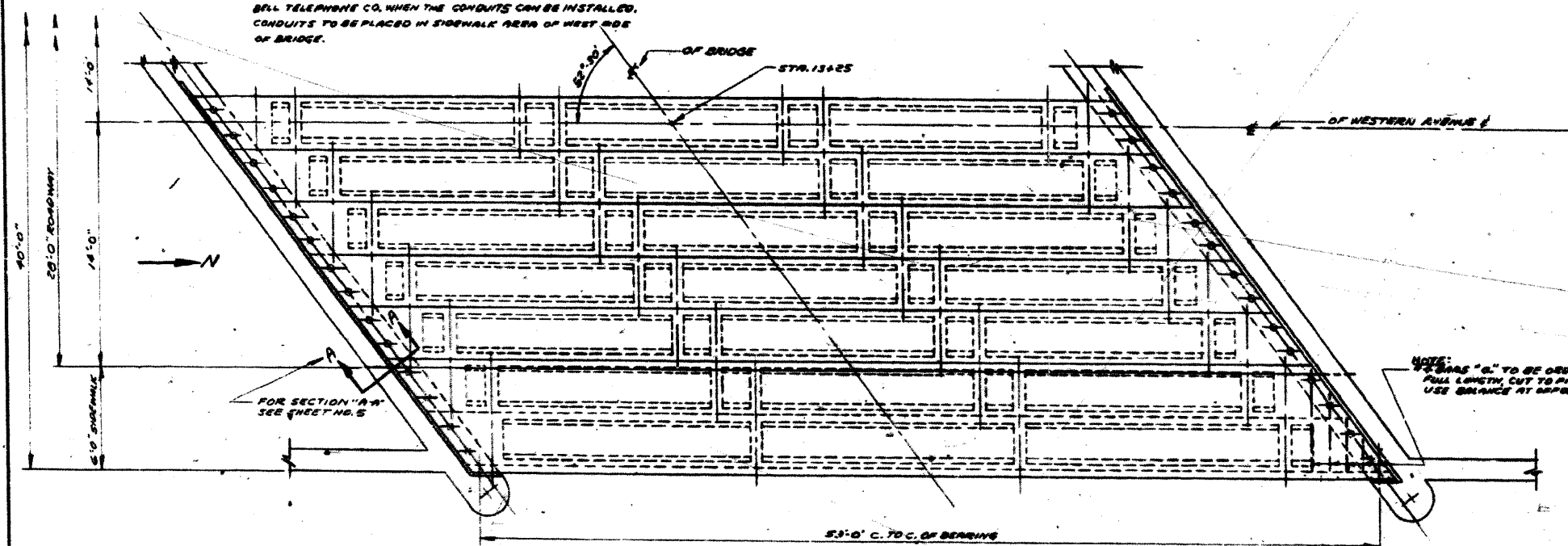
NOTE: ILLINOIS BELL TELEPHONE CO. TO FURNISH AND INSTALL "B" CEMENT CONDUITS WITH THEIR OWN PIPES. THIS WORK IS TO BE COORDINATED BY THE CONTRACTOR CONTACTING THE ILLINOIS BELL TELEPHONE CO. WHEN THE CONDUITS CAN BE INSTALLED. CONDUITS TO BE PLACED IN SIDEWALK AREA OF WEST SIDE OF BRIDGE.

TYPICAL SECTION  
SCALE: 1/4" = 1'-0"

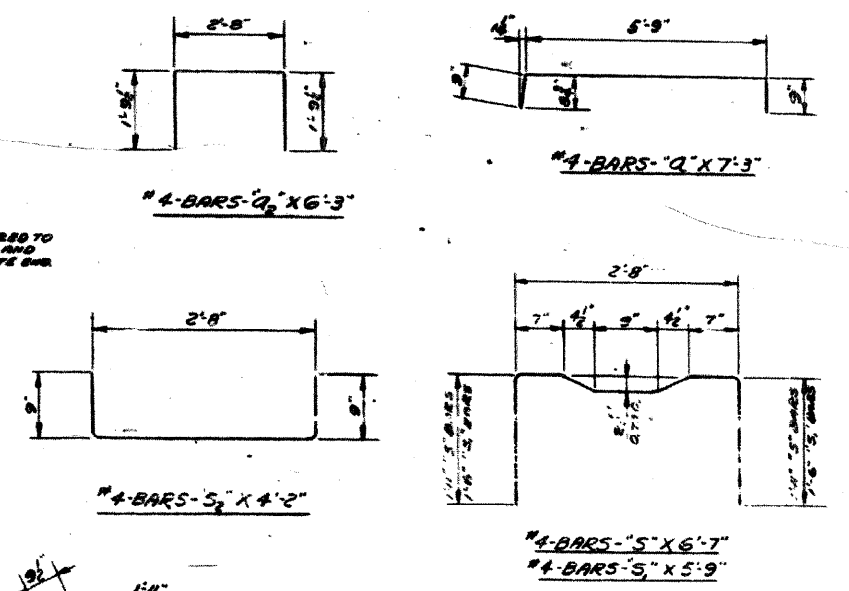


NOTE: TOTAL OF 39 - #6 THREE STRANDS (LOCATED AS SHOWN)

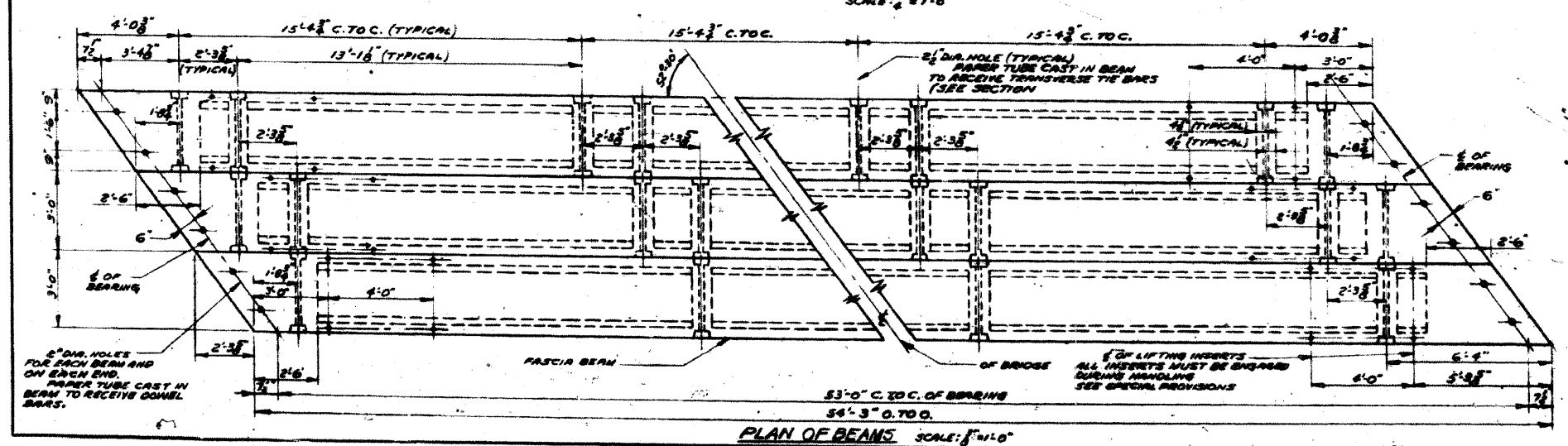
SECTION A-A  
SCALE: 1/4" = 1'-0"



HALF PLAN  
SCALE: 1/4" = 1'-0"



NOTE: THE SPICES OF #6 TOP BARS SHALL BE STAGGERED SO THAT NO MORE THAN TWO (2) OCCUR AT ANY POSITION WITH A MINIMUM OF 2'-0" BETWEEN ADJACENT GROUPS OF SPICES.



PLAN OF BEAMS SCALE: 1/4" = 1'-0"

REVISIONS		
DATE	BY	DESCRIPTION

DEPARTMENT OF HIGHWAYS COOK COUNTY, ILLINOIS			
DANIEL RYAN PRESIDENT BOARD OF COMMISSIONERS	WILLIAM J. MORTIMER SUPERINTENDENT OF HIGHWAYS		
DETAILS OF SUPERSTRUCTURE WESTERN AVENUE BRIDGE OVER BUTTERFIELD CREEK			
COMPUTED	B.B. RIMAN	PROJECT	064-0605 M.F.T.
DRAWN	F. TAMMERSBAH	SCALE	AS SHOWN
CHECKED	R.N. LAUSE	APPROVED	M.P. [Signature]
APPROVED	[Signature]	DATE	1960 054 4 17

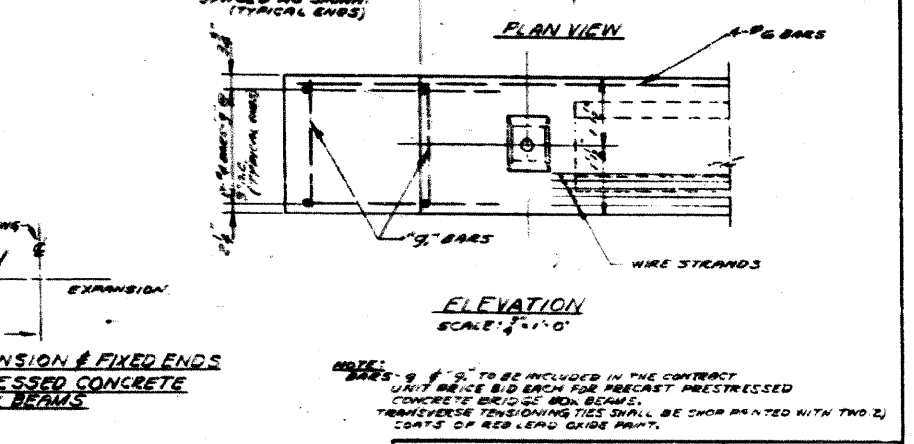
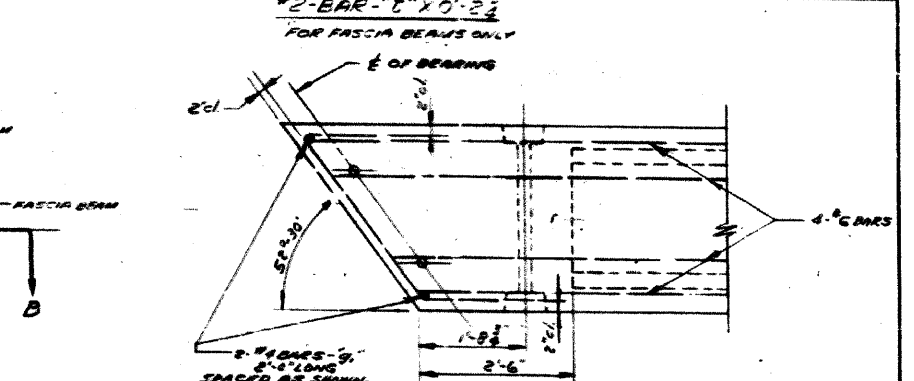
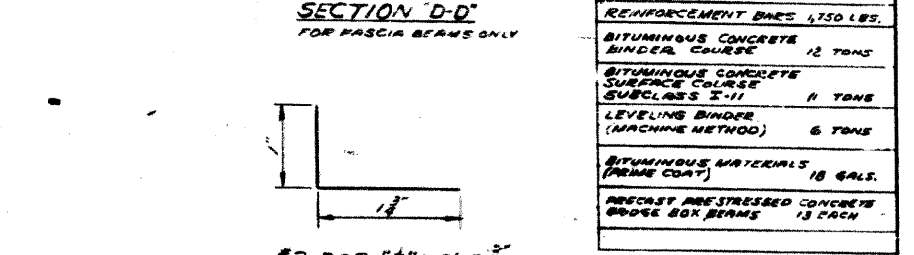
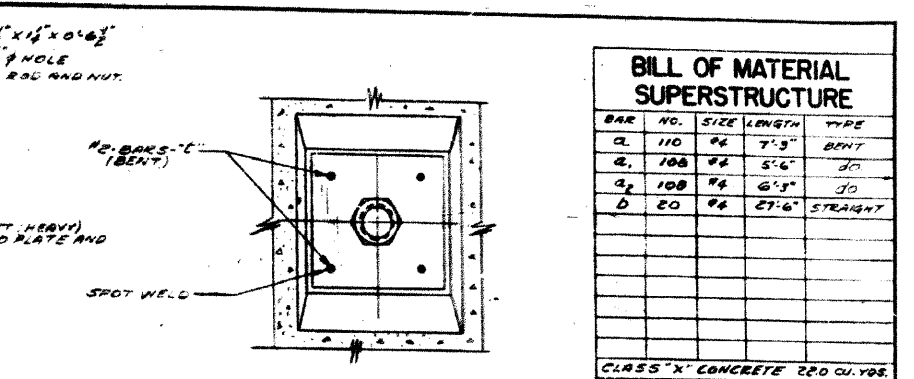
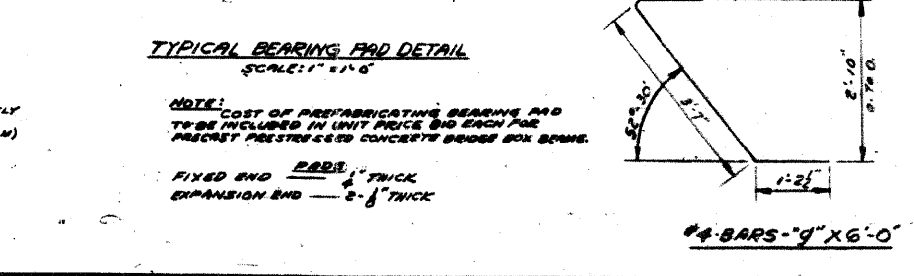
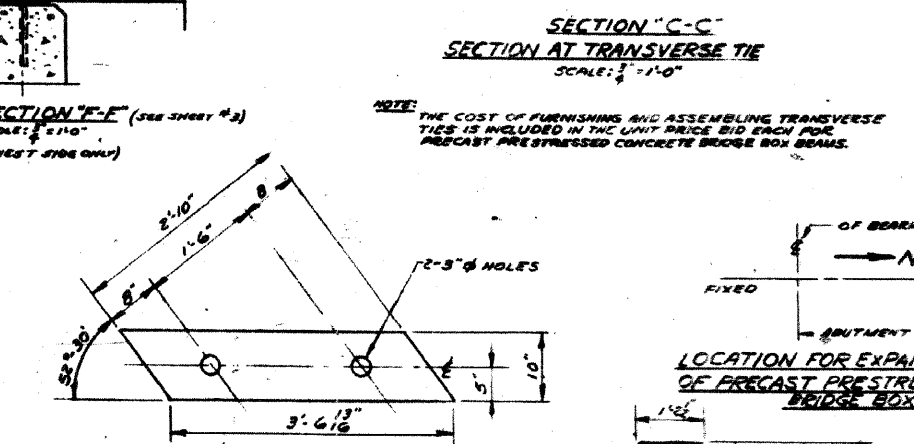
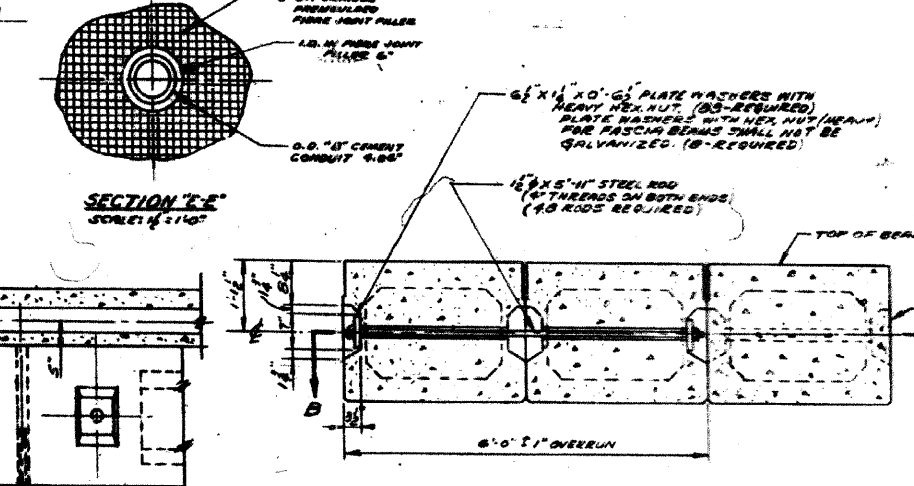
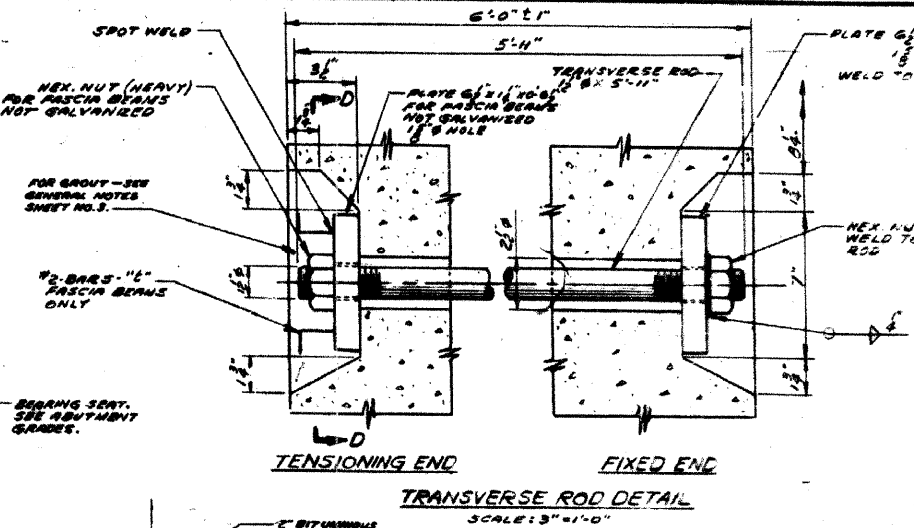
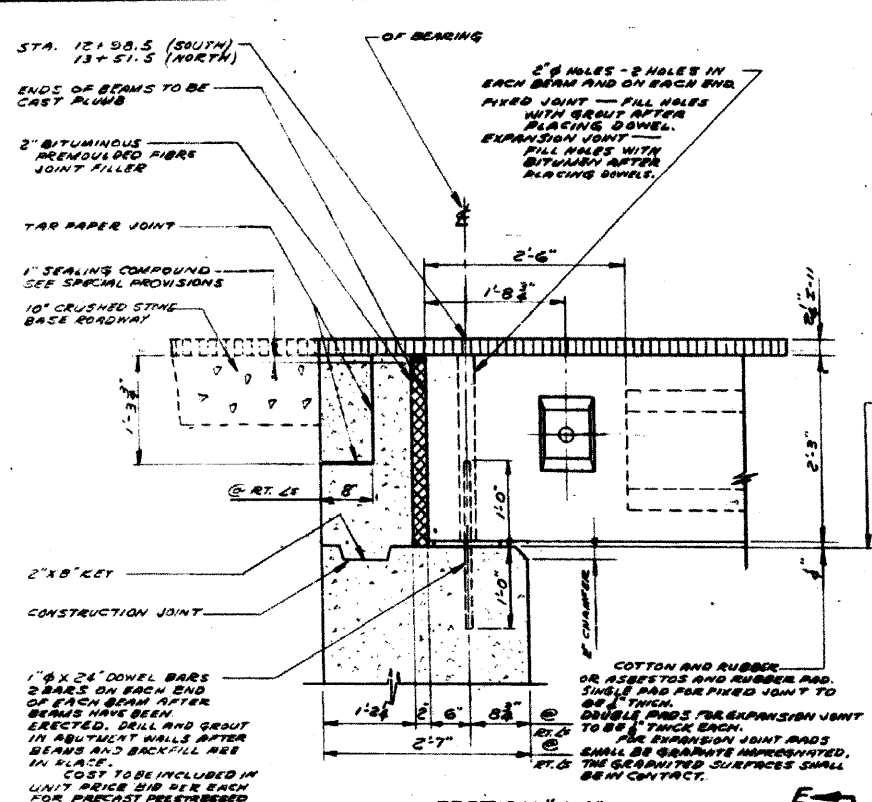
**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 520  
Chicago, IL 60601  
Phone (312) 977-0990 Fax (312) 977-0991

USER NAME =	DESIGNED -	REVISED
PLOT SCALE =	CHECKED -	REVISED
PLOT DATE = 10/27/2011	DRAWN -	REVISED
	CHECKED -	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS (4 OF 6)  
S.N. 016-0772  
SHEET NO. 532 OF 534 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	42
CONTRACT NO. 60M78				
ILLINOIS FED. AID PROJECT				



BILL OF MATERIAL SUPERSTRUCTURE				
BAR NO.	SIZE	LENGTH	TYPE	
CL	110	84	7'-3"	BENT
CL	108	84	5'-6"	JO
CL	108	84	6'-3"	JO
D	20	84	27'-6"	STRAIGHT
CLASS "X" CONCRETE 220 CU. YDS.				
REINFORCEMENT BARS 4,750 LBS.				
BITUMINOUS CONCRETE BINDER COURSE 12 TONS				
BITUMINOUS CONCRETE SURFACE COURSE SUBCLASS I-II 11 TONS				
LEVELING BINDER (MACHINE METHOD) 6 TONS				
BITUMINOUS MATERIALS (PRIME COAT) 18 GALS.				
PRECAST PRESTRESSED CONCRETE BRIDGE BOX BEAMS 13 EACH				

DEPARTMENT OF HIGHWAYS				
COOK COUNTY, ILLINOIS				
DANIEL RYAN		WILLIAM J. MORTIMER		
DETAILS OF SUPERSTRUCTURE				
WESTERN AVENUE BRIDGE				
OVER BUTTERFIELD CREEK				
COMPUTED	B. S. RIMAR	PROJECT	054-0505 M.F.T	
DRAWN	F. TAMMBAUM	SCALE	AS SHOWN	
CHECKED	B. N. LAUSE	APPROVED		
APPROVED	11 1960	FISCAL YEAR	1960	054
			5	17

REVISIONS		
DATE	BY	DESCRIPTION

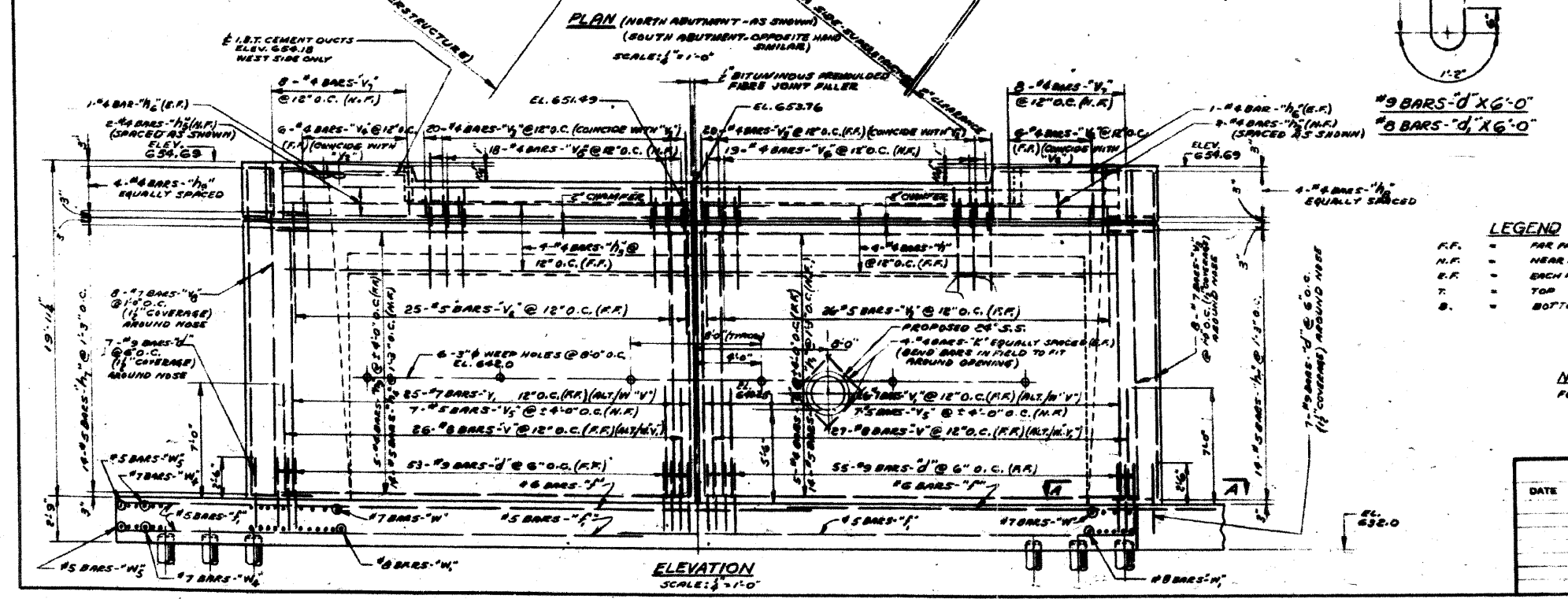
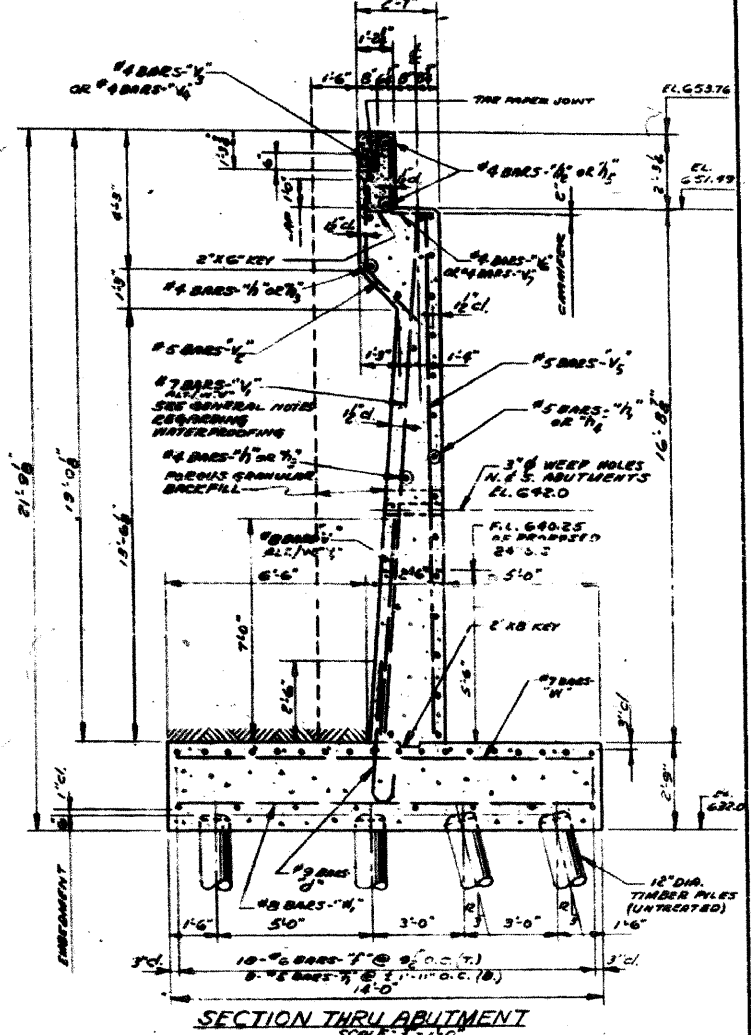
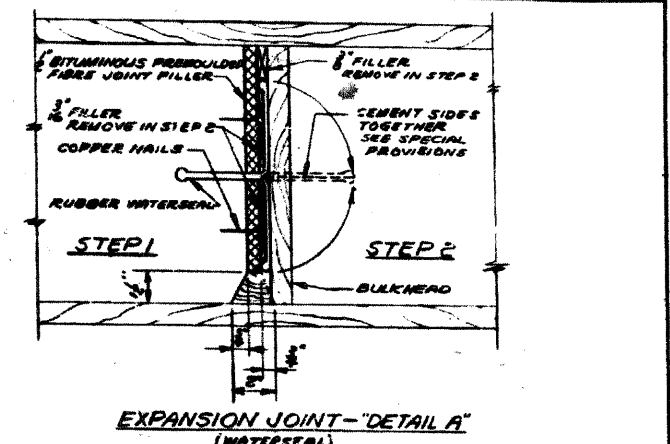
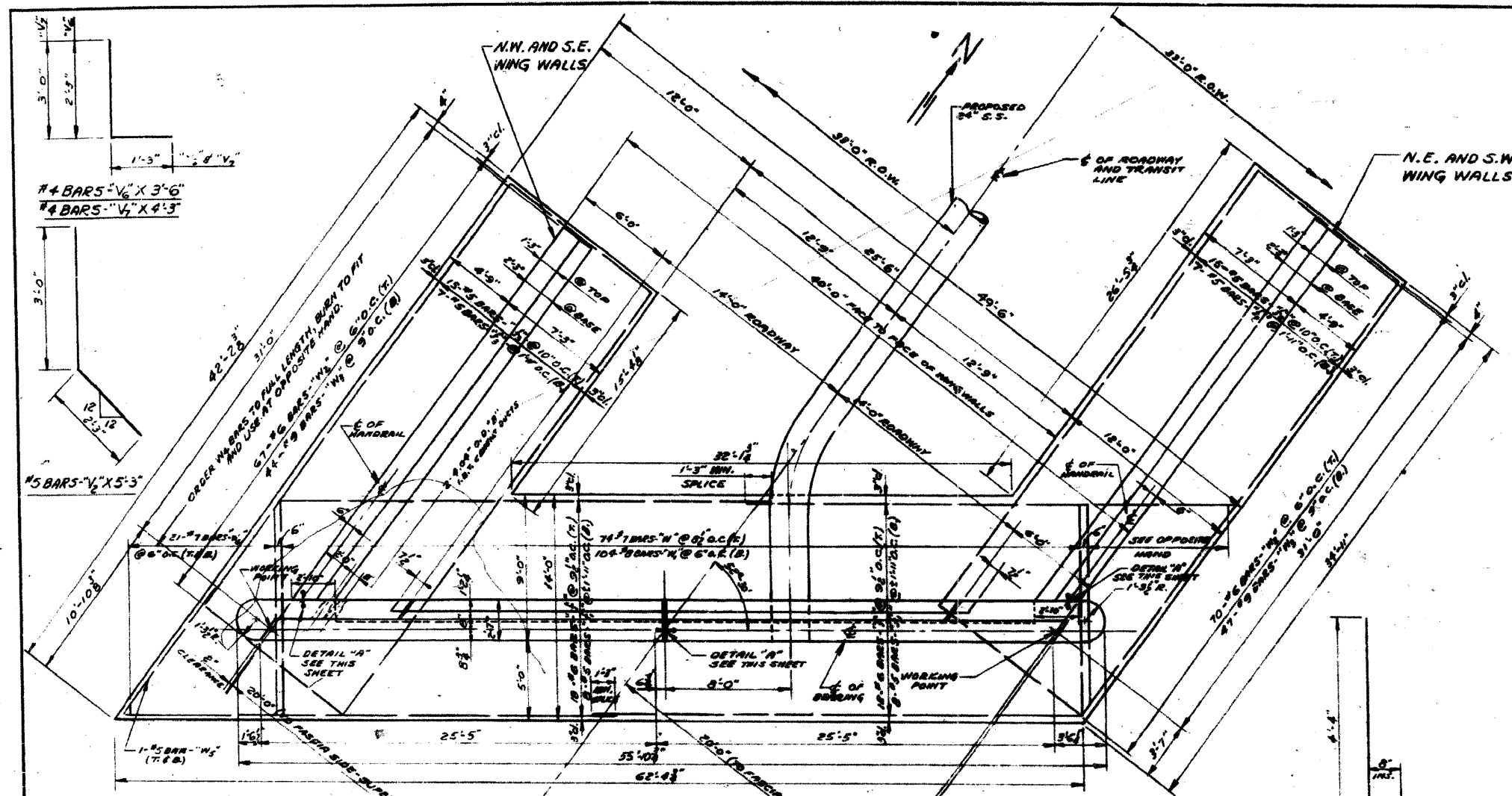
**APEX**  
CONSULTING ENGINEERS, LLC  
111 E. Wacker Drive, Suite 800  
Chicago, IL 60601  
Phone (312) 977-0660 Fax (312) 977-0661

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE = 10/27/2011	DRAWN -	REVISED -
	CHECKED -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS (5 OF 6)  
S.N. 016-0772  
SHEET NO. 533 OF 534 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	43
CONTRACT NO. 60M78				
ILLINOIS FED. AID PROJECT				



**LEGEND**

R.F.	=	FACE
N.F.	=	NEAR FACE
E.F.	=	EACH FACE
T.	=	TOP
B.	=	BOTTOM

**NOTE:**  
FOR GENERAL NOTES SEE SHEET NO. 1

**REVISIONS**

DATE	BY	DESCRIPTION

**DEPARTMENT OF HIGHWAYS**  
COOK COUNTY, ILLINOIS

DANIEL RYAN  
SUPERVISOR OF HIGHWAYS

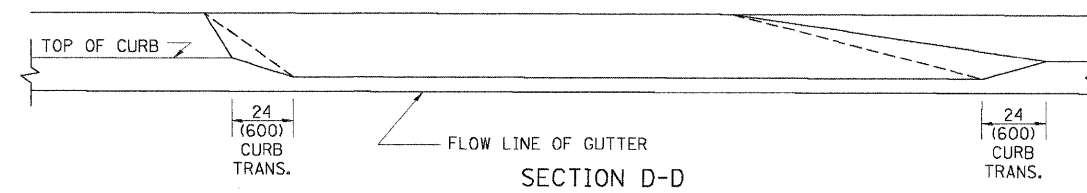
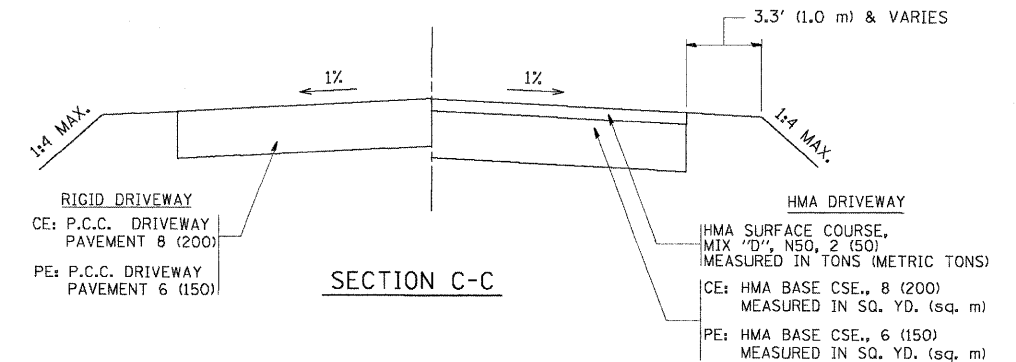
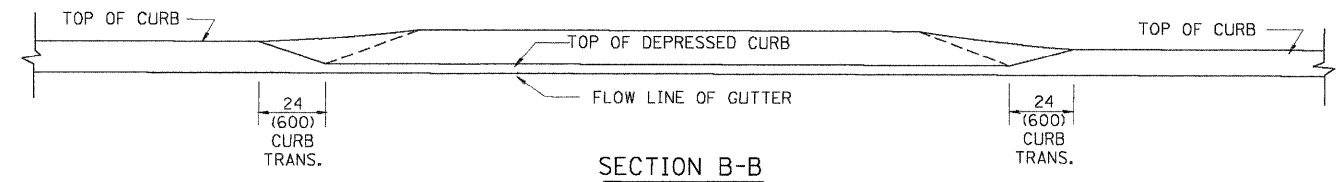
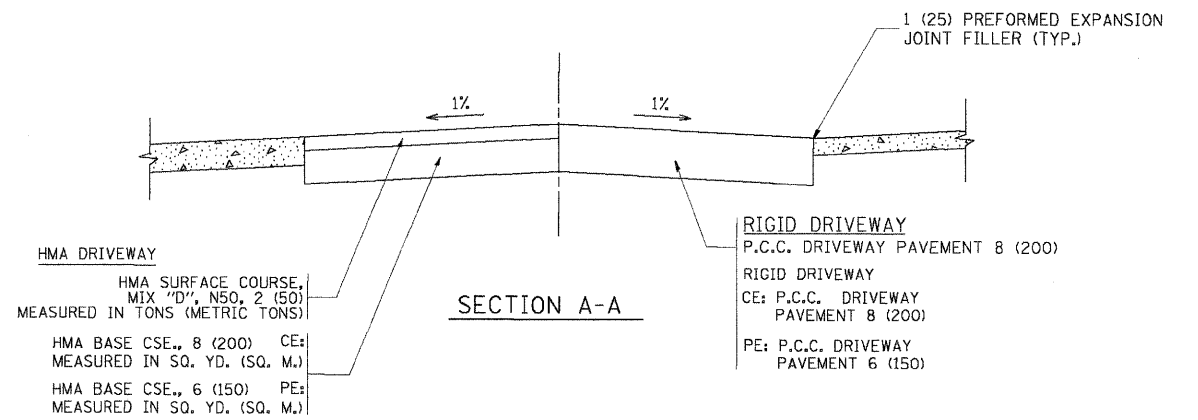
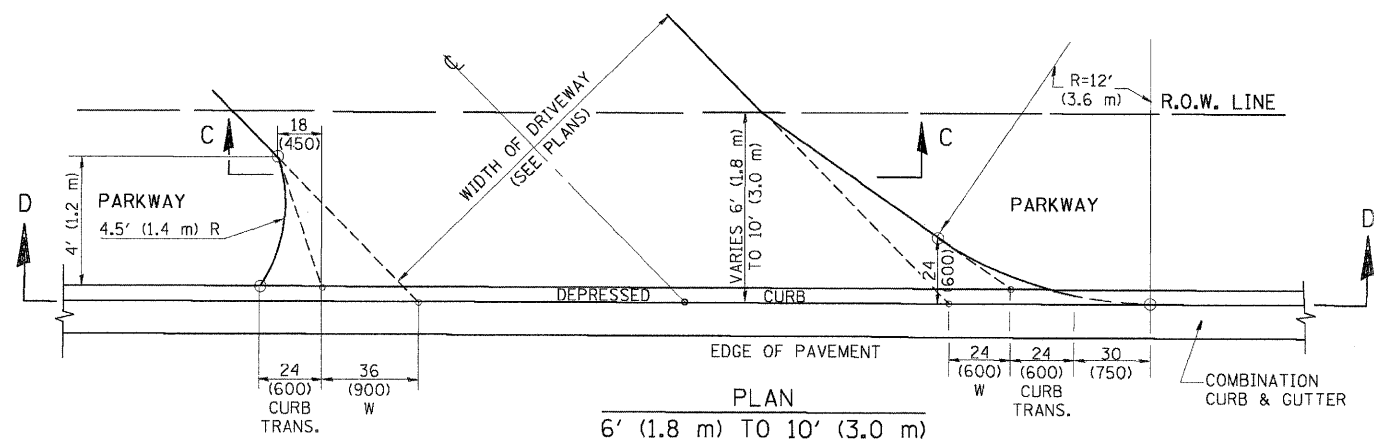
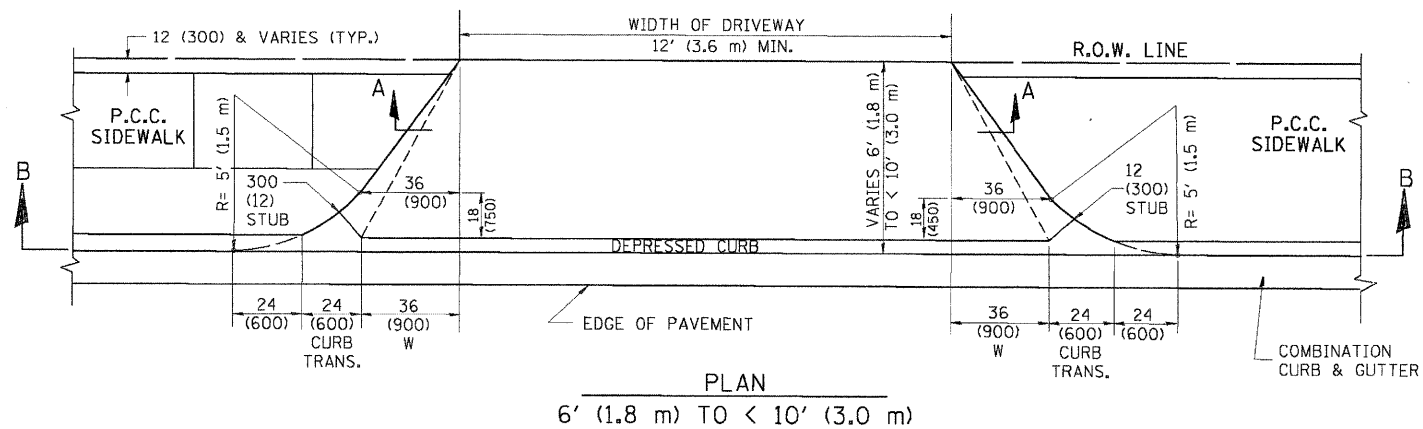
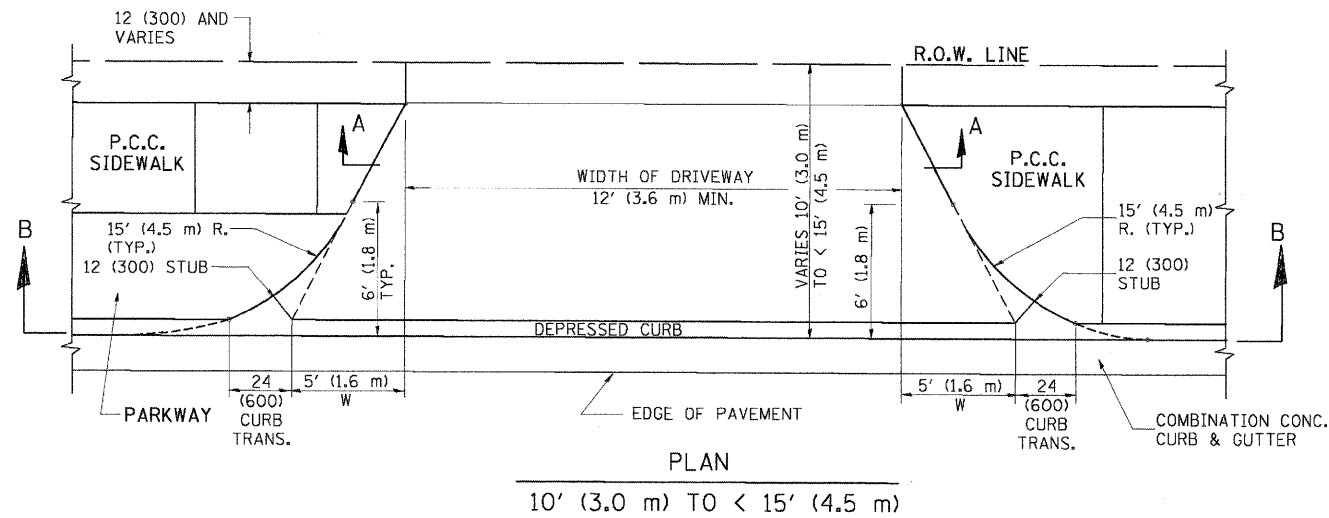
WILLIAM J. MORTIMER  
SUPERINTENDENT OF HIGHWAYS

**DETAILS OF ABUTMENT & WING WALLS**  
**WESTERN AVENUE BRIDGE**  
**OVER BUTTERFIELD CREEK**

COMPUTED BY B. B. RYAN PROJECT 054-0505 M.F.T.  
DRAWN BY F. TAMMERMANN SCALE AS SHOWN  
CHECKED BY E. N. LAUGE APPROVED [Signature]

APPROVED [Signature] DATE 10/27/2011  
FISCAL YEAR 1960





**GENERAL NOTES**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

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

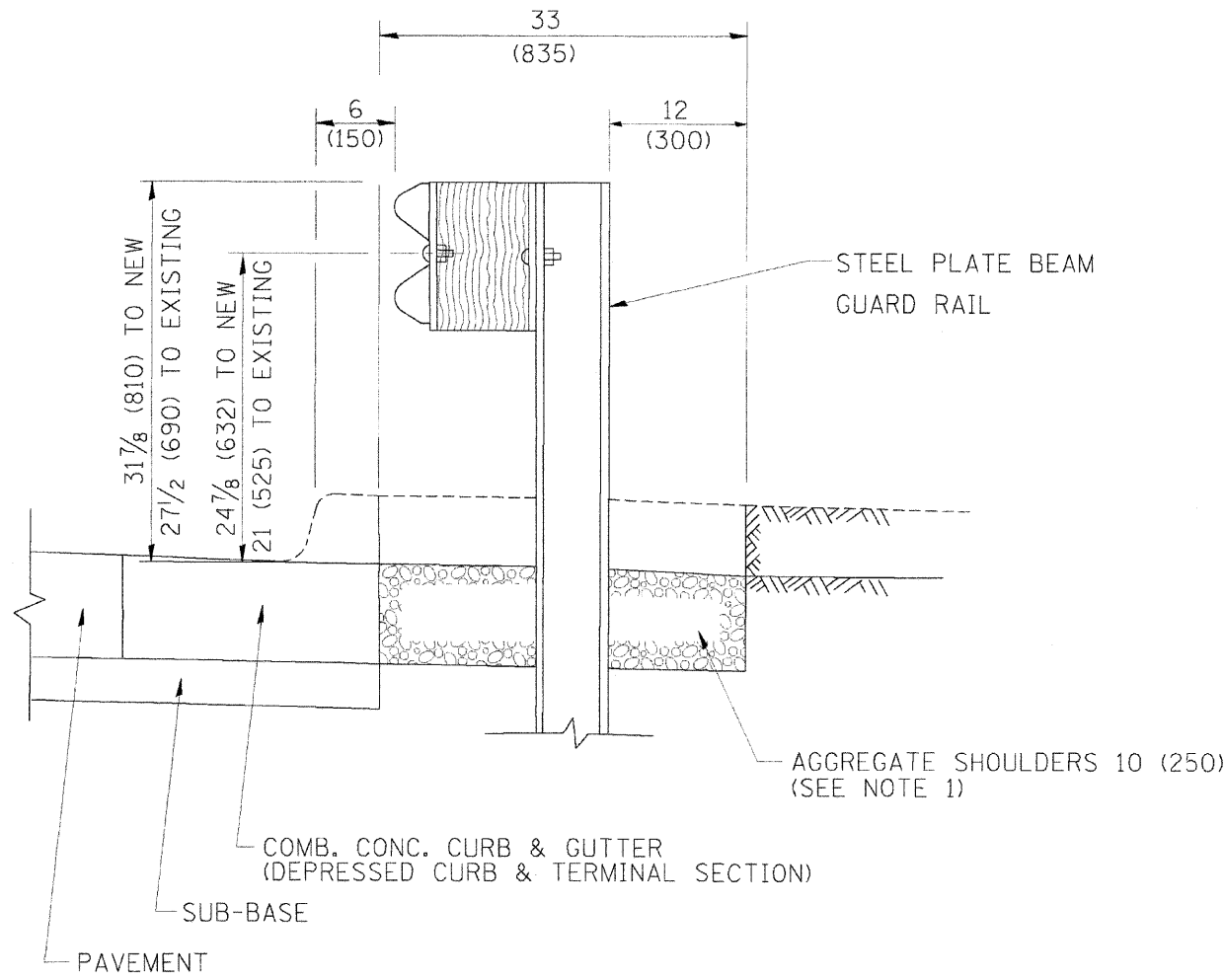
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	PLOT SCALE = 50.0000' / 1"	CHECKED -	REVISED - R. BORO 01-01-07
	PLOT DATE = 9/8/2011	DATE - 11-06-95	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DRIVEWAY DETAILS  
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

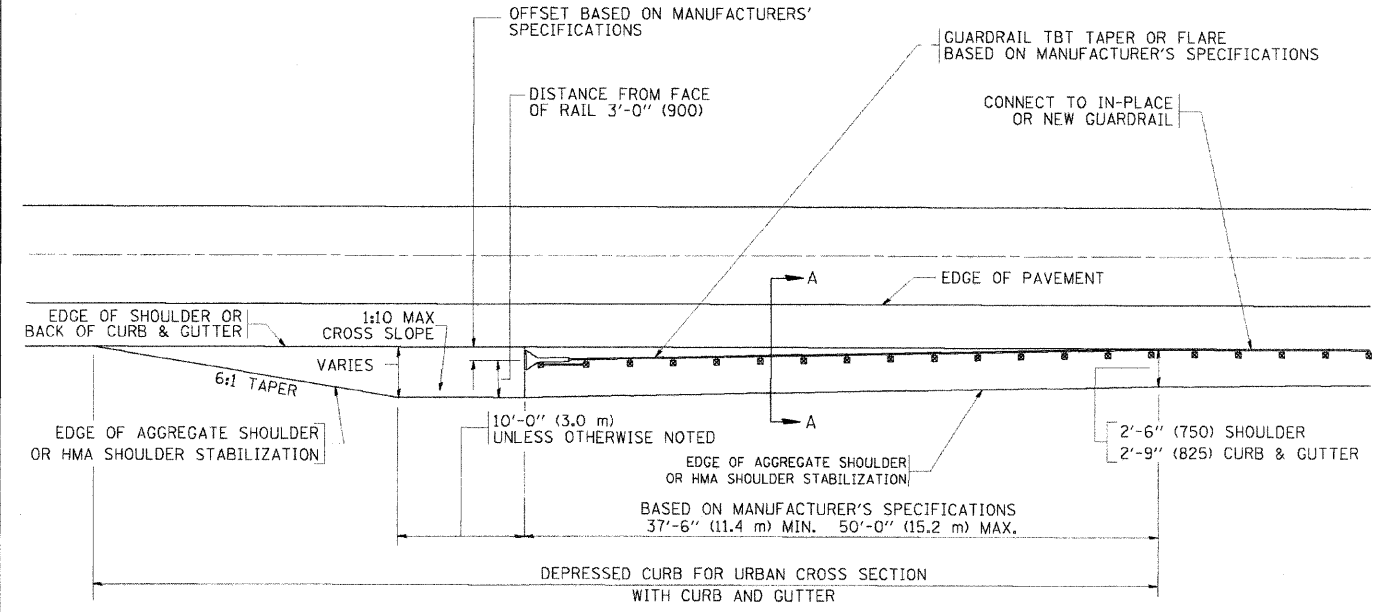
F.A.P. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 45
BD400-02 (BD-02)			CONTRACT NO. 60M78	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
  2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
  3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

**DETAILS FOR STEEL PLATE BEAM  
GUARD RAIL ADJACENT TO CURB AND GUTTER  
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]**



**DEPRESSED CURB AND GUTTER AND  
SHOULDER TREATMENT AT TBT TY. 1 SPL.**

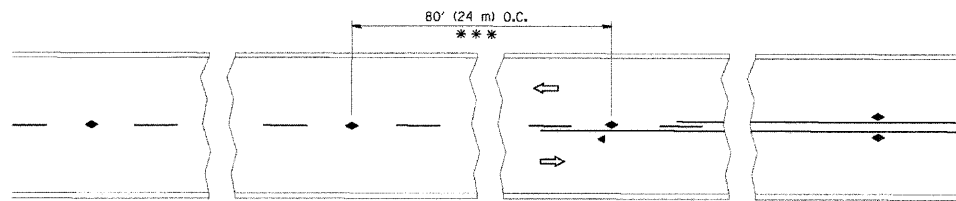
BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL  
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

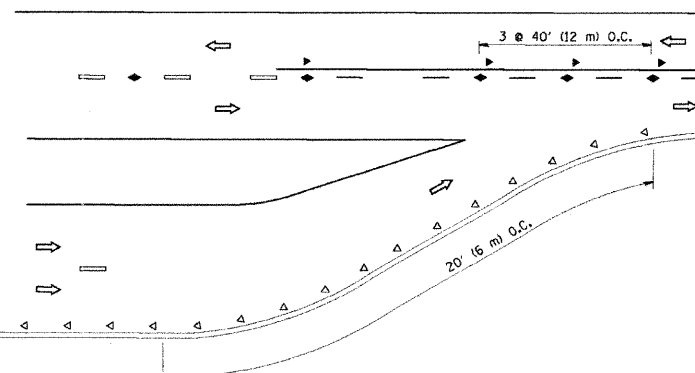
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est_low_work\pwwid01\017\AK053N\20090315\16094.dgn	DRAWN -	REVISOR - R. BORO 01-01-07	REVISED - R. BORO 12-08-2008			<b>BD600-10 (BD 34)</b>		CONTRACT NO. 60M78			
PLOT SCALE = 49,9999 / IN.	CHECKED -	REVISOR - R. BORO 09-14-2009				SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. TO STA.	
PLOT DATE = 9/21/2009	DATE - 09-22-90					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					



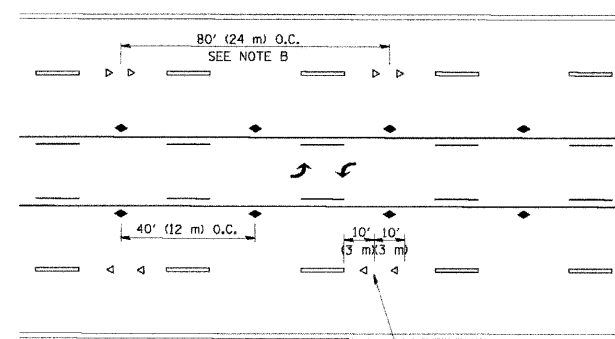


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

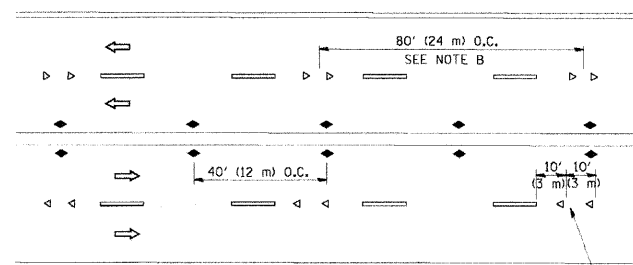
TWO-LANE/TWO-WAY



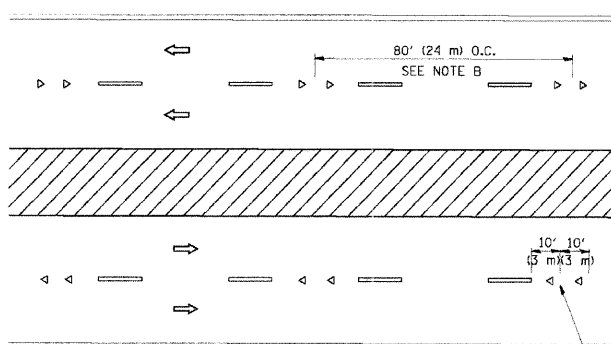
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

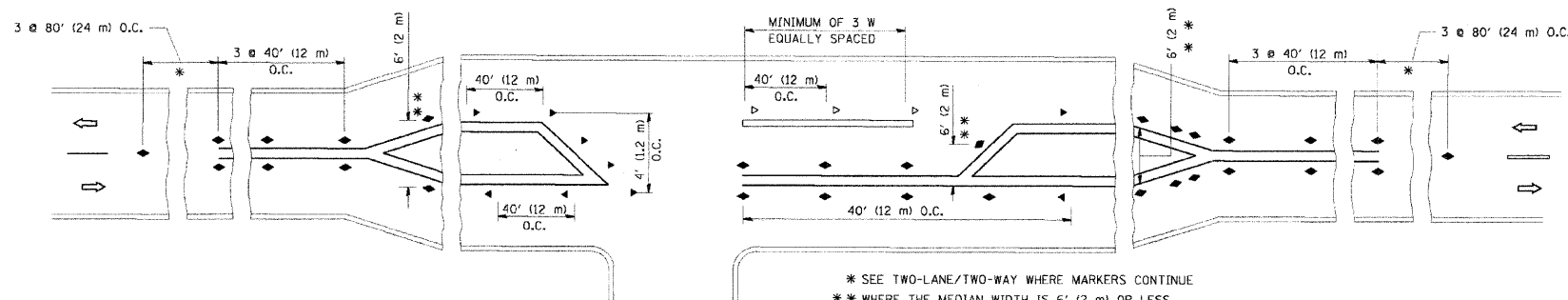
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

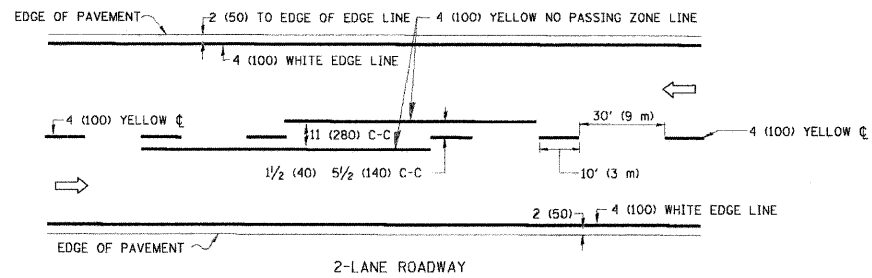
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME *	USER NAME = Legso	DESIGNED -	REVISED - T. RAMMACHER 09-19-94
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	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09

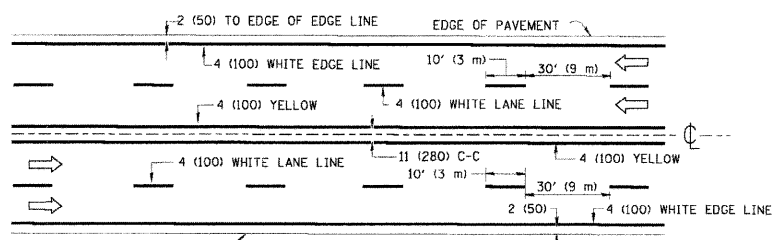
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TYPICAL APPLICATIONS			
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

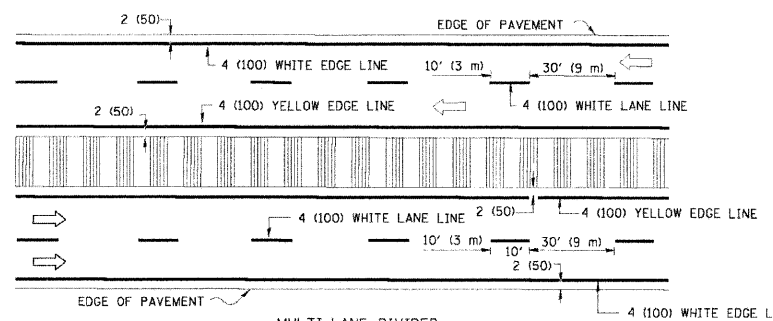
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	47
TC-11			CONTRACT NO. 60M78	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY



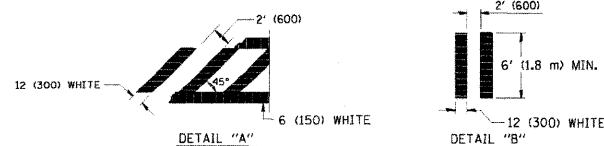
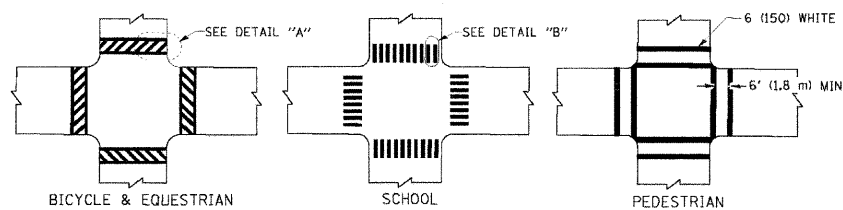
MULTI-LANE UNDIVIDED



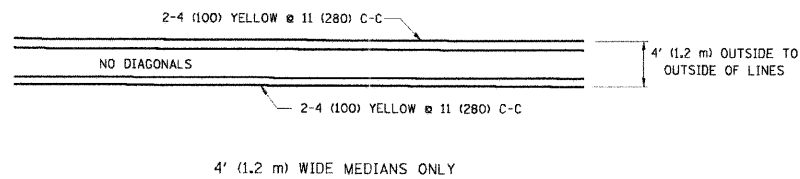
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

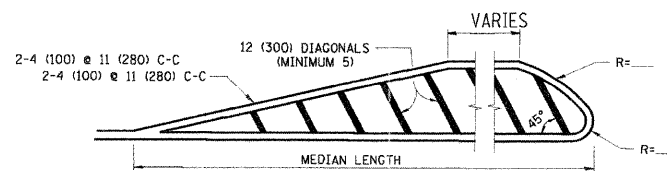
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



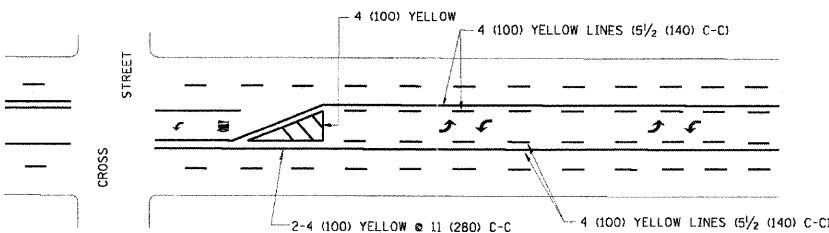
4' (1.2 m) WIDE MEDIANS ONLY



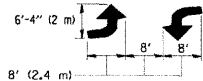
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))  
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)  
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

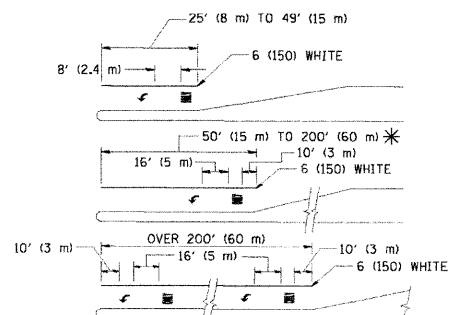


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

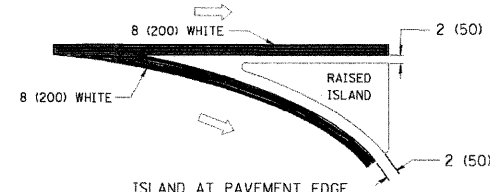
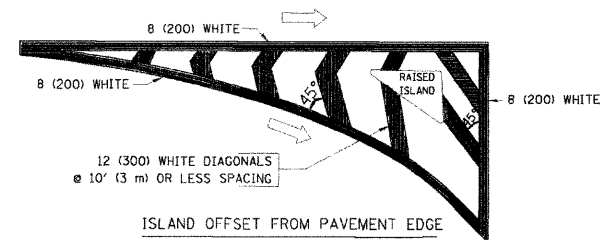


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

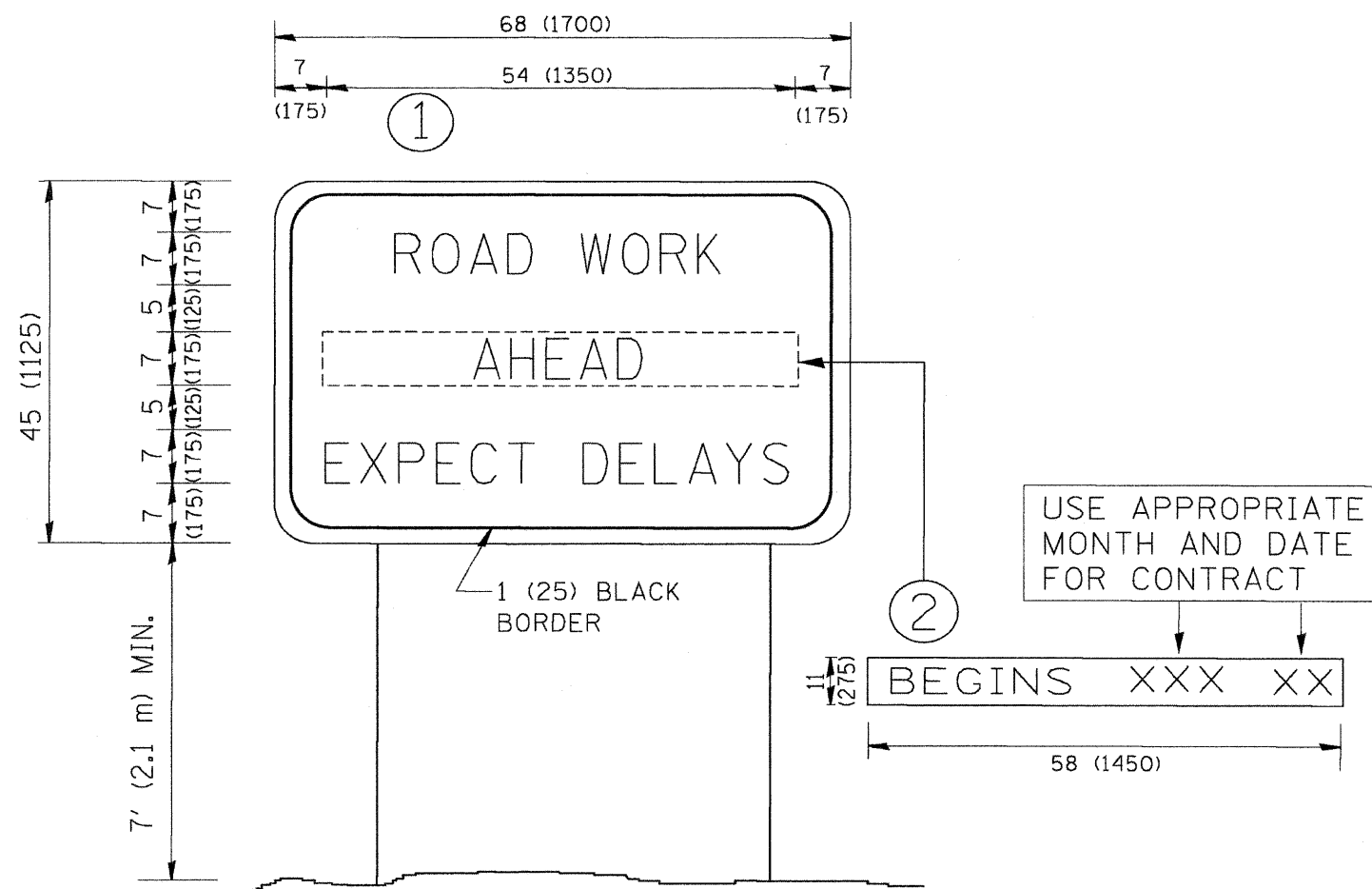
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 48
TC-13			CONTRACT NO. 60M78	
FED. ROAD DIST. NO. 1 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.

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		DRAWN -	REVISED - R. MIRS 12-11-97
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

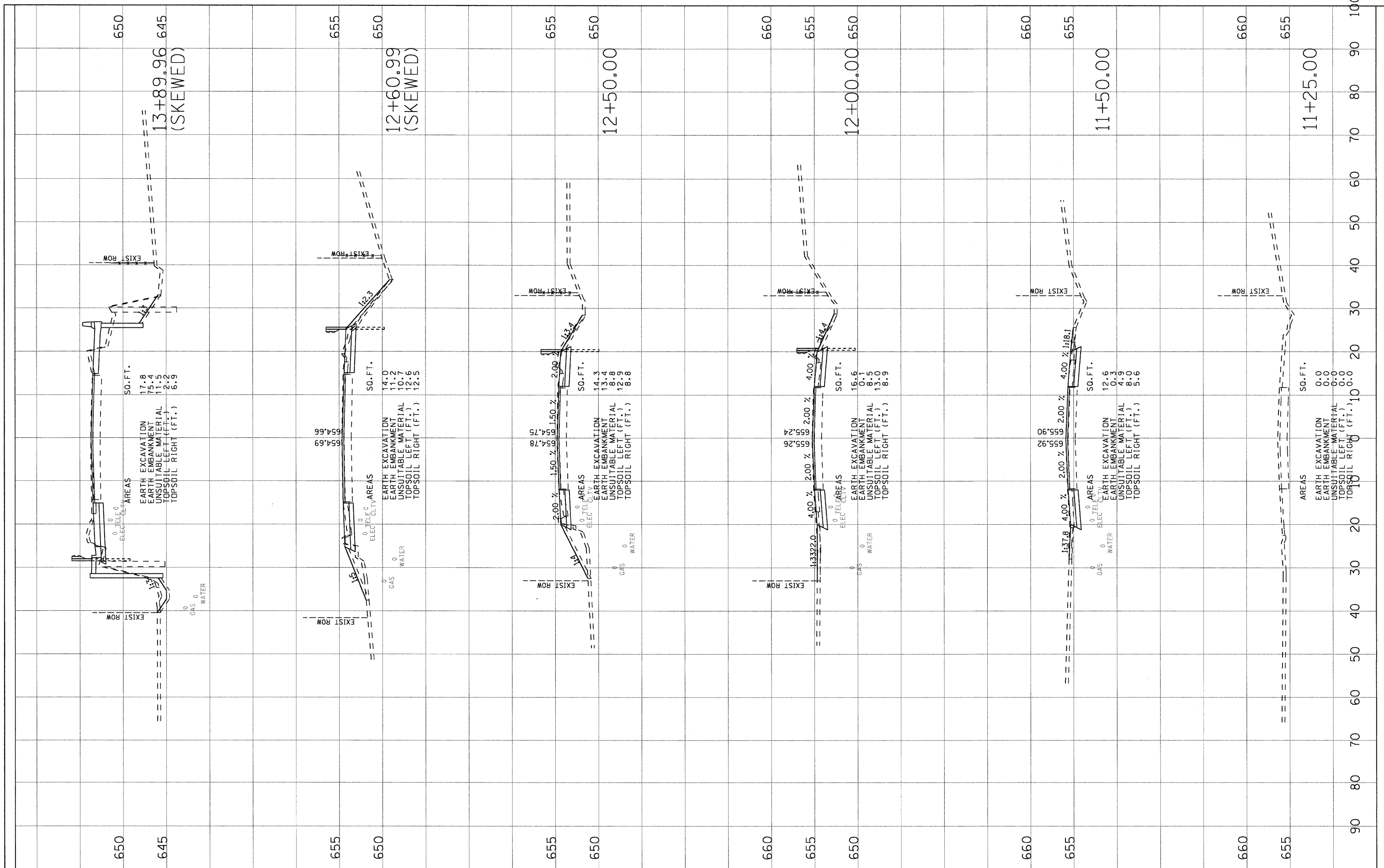
**ARTERIAL ROAD  
INFORMATION SIGN**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	49
<b>TC-22</b>			<b>CONTRACT NO. 60M78</b>	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

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

ORIGINAL SURVEY	SURVEYED	BY	DATE
SURVEY	PLOTTED		
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 DRAWN - ENTRAN  
 CHECKED - TMH  
 DATE - 10/28/11

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

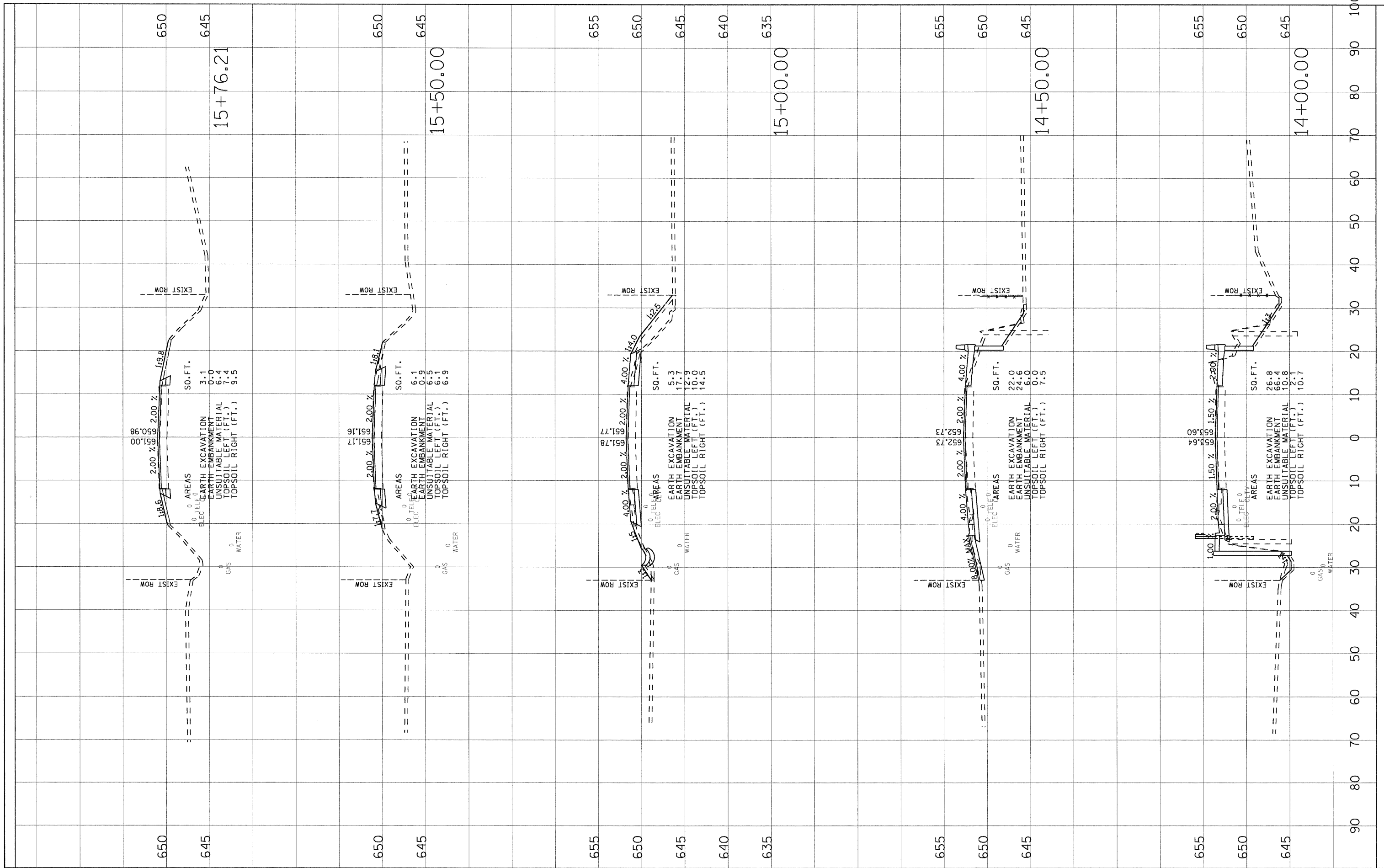
**WESTERN AVENUE OVER BUTTERFIELD CREEK  
 CROSS SECTION PLANS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

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CONTRACT NO. 60M78				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SUBMITTED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
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 CHECKED - TMH  
 DATE - 10/28/11

REVISED -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
 CROSS SECTION PLANS**

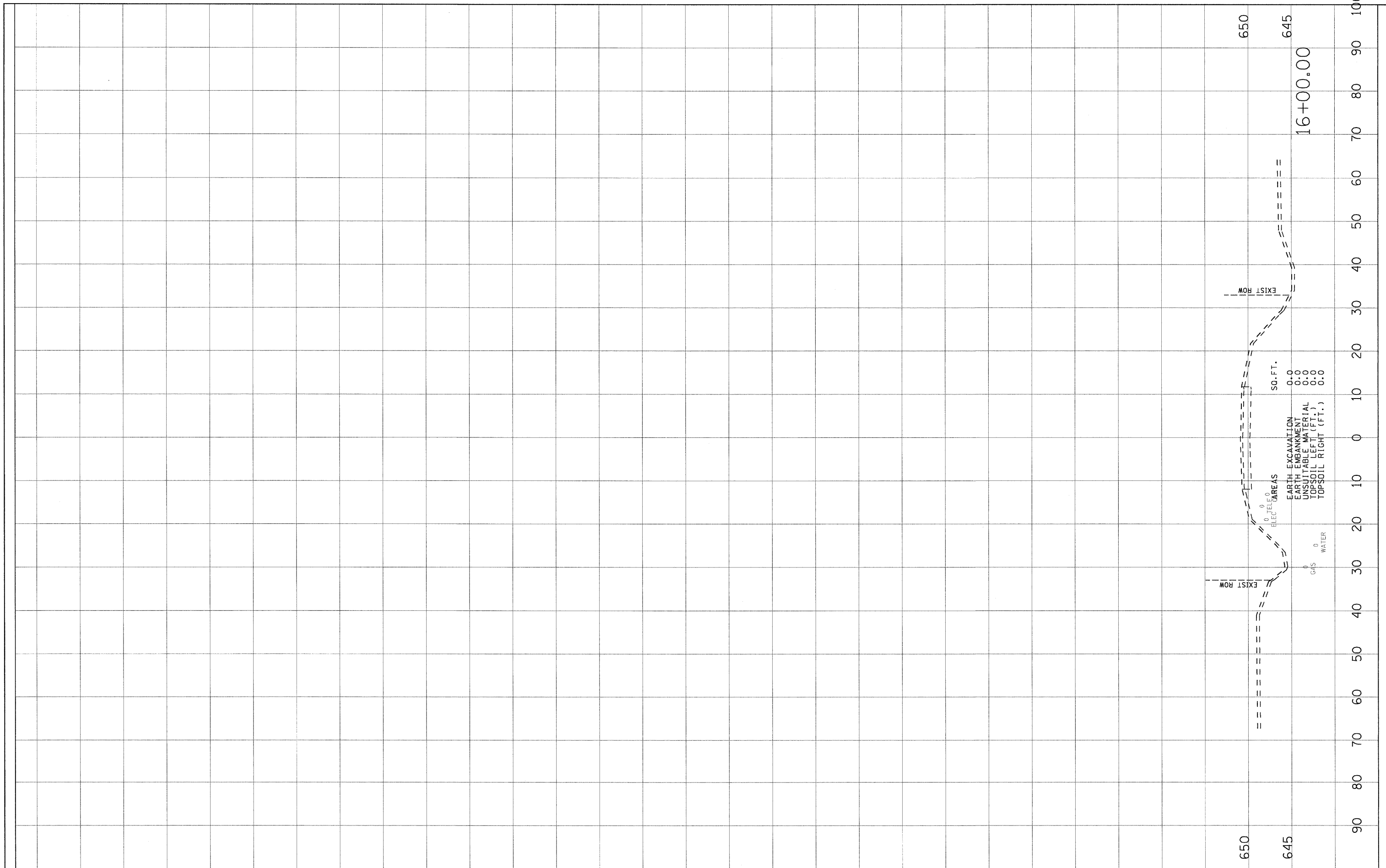
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F.A.U. RTE. 2845	SECTION 0505-B	COUNTY COOK	TOTAL SHEETS 52	SHEET NO. 51
CONTRACT NO. 60M78				
ILLINOIS FED. AID PROJECT				



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

ORIGINAL	SURVEYED	BY	DATE
SURVEY	ROUTED		
NOTE BOOK	TEMPLATE		
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DESIGNED	-	DJB	REVISED	-
DRAWN	-	ENTRAN	REVISED	-
CHECKED	-	TMH	REVISED	-
DATE	-	10/28/11	REVISED	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**WESTERN AVENUE OVER BUTTERFIELD CREEK  
 CROSS SECTION PLANS**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2845	0505-B	COOK	52	52
CONTRACT NO.60M78			ILLINOIS FED. AID PROJECT	