

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 68352		

D-94-047-03

FOR INDEX OF SHEETS, SEE SHEET NO. 2 OF 138

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

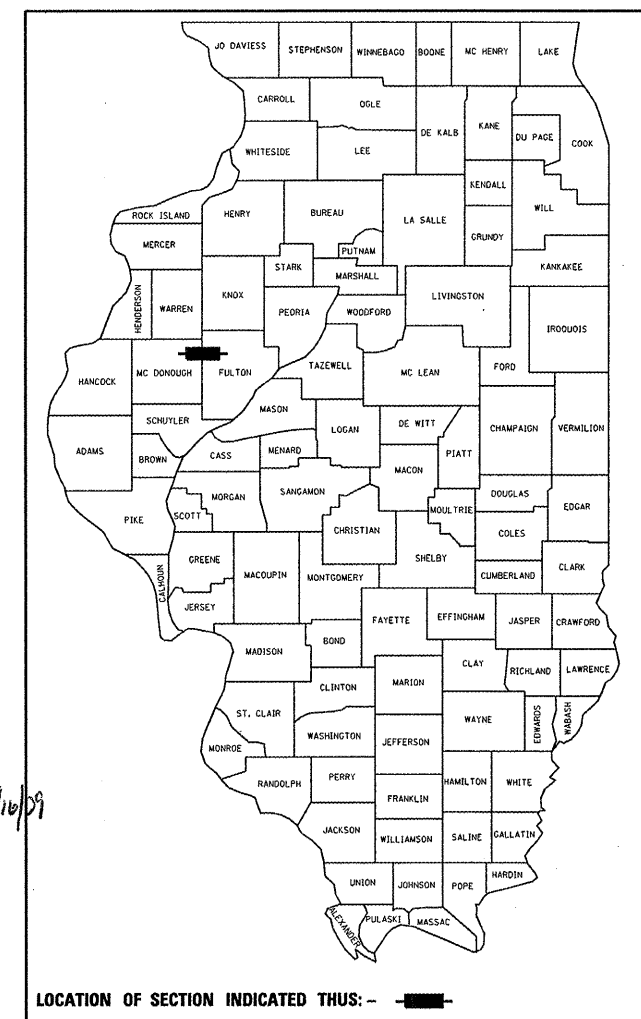
PROPOSED HIGHWAY PLANS

FAP ROUTE 685 (IL 9)
SECTION 37BR-1
PROJECT ACBRF-0685(030)
MCDONOUGH & FULTON COUNTY

C-94-055-03



Shelley L. Dintelman 10/16/09
Expires 11/30/09



LIST OF STANDARDS

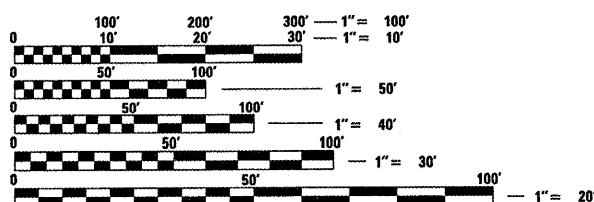
000001-05	542206-01	631031-08	701306-02	781001-03
001001-02	542301-02	635006-03	701311-03	BLR 21-8
280001-05	601001-03	635011-02	701316-04	886001-01
420001-07	601101-01	666001-01	701321-10	
420401-08	602401-02	667101-01	701326-03	
421001-02	602701-02	701006-03	701336-05	
442201-03	630001-08	701101-02	701901-01	
515001-03	630201-06	701201-03	704001-06	
542201-02	630301-05	701301-03	780001-02	

CADD STANDARDS

205001-D4	406401-D4	606101-D4	780001-D4
280001-D4	440001-D4	630101-D4	
406101-D4	542011-D4	635101-D4	
406301-D4	604301-D4	667101-D4	

DESIGN DESIGNATION

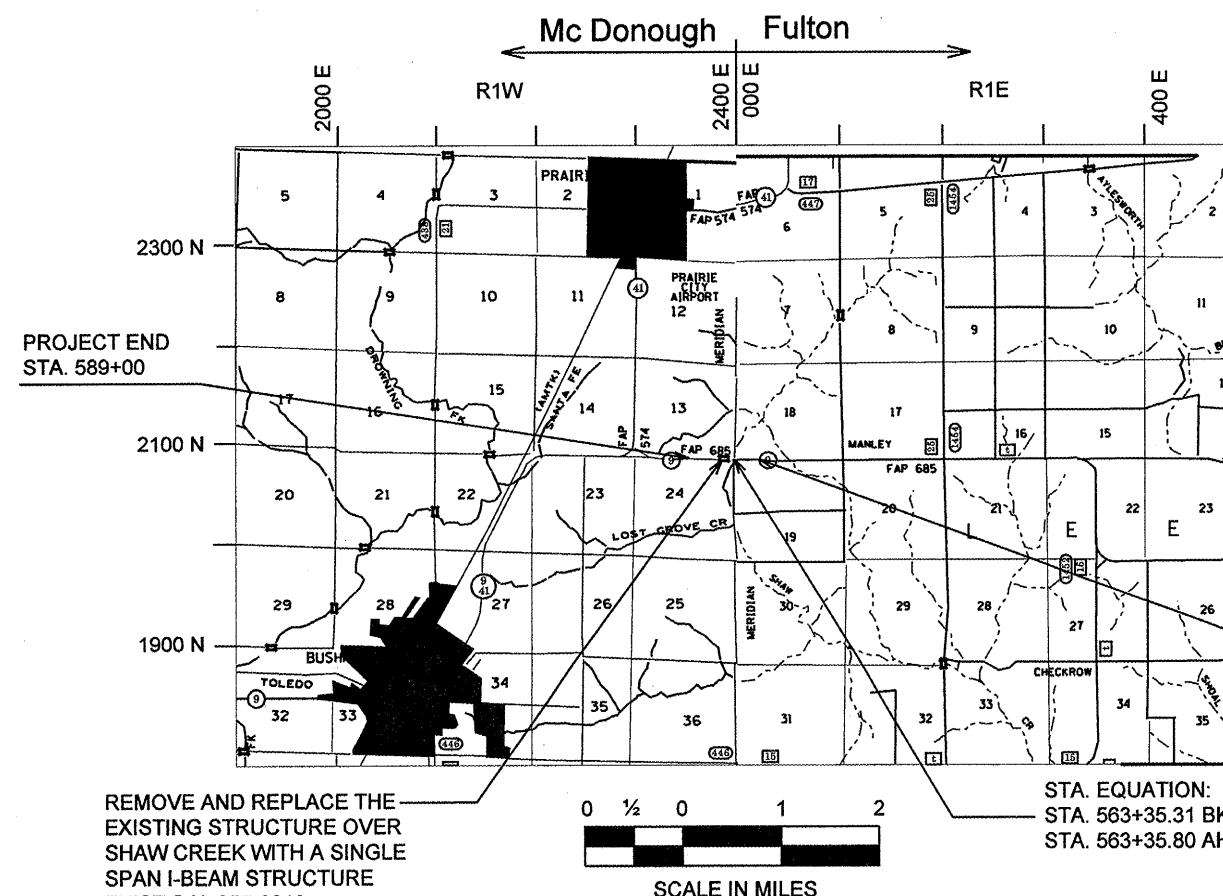
MINOR ARTERIAL (RURAL)
CURRENT ADT = 800 (2003)
POSTED SPEED = 55 MPH
PC = 85%
SU = 8.8%
MU = 6.2%



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
1-800-892-0123
OR 811

PROJECT ENGINEER: MAUREEN ADDIS 309-671-3454
PROJECT MANAGER: ELIAS ELDERZI 309-671-3459
CATALOG NO. 032750-00P
CONTRACT NO. 68352

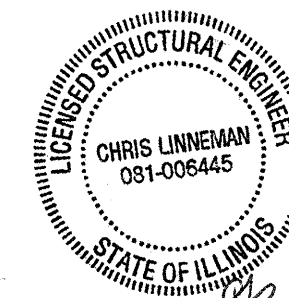


REMOVE AND REPLACE THE EXISTING STRUCTURE OVER SHAW CREEK WITH A SINGLE SPAN I-BEAM STRUCTURE
EXIST S.N. 055-0019
PROP S.N. 055-0079
AT STA 564+88.66

STA. EQUATION:
STA. 563+35.31 BK=
STA. 563+35.80 AH

GROSS LENGTH OF PROJECT = 3,179.51 FT (0.60 MILES)
NET LENGTH OF PROJECT = 3,179.51 FT (0.60 MILES)

EFK•Moen, LLC
Civil Engineering Design



10/16/2009
EXPIRES 11/30/2009
SHEETS 39-40
AND 56-76

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *OCT 20 20 09*
Charles J. Ingemore
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 4 20 09
Christine M. Reed
ENGINEER OF DESIGN AND ENVIRONMENT
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

1. UTILITIES - LOCATIONS / INFORMATION ON PLANS
THE LOCATIONS OF THE EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN --- ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.
2. PLAN ELEVATIONS - U.S.G.S. MEAN SEA LEVEL DATUM
ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED FROM U.S.G.S. MEAN SEA LEVEL DATUM.
3. ENGINEERS FIELD OFFICE
ADD THE FOLLOWING SENTENCE TO THE END OF PARAGRAPH 670.02 (i) AND 670.04 (e): ALL OF THE TELEPHONE LINES PROVIDED SHALL HAVE UNPUBLISHED NUMBERS.
4. TREE REMOVAL
THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.
5. AGGREGATE SURFACE COURSE, TYPE B
AGGREGATE SURFACE COURSE, TYPE B SHALL BE REQUIRED FOR ALL GRANULAR CONSTRUCTION OF SIDE ROADS, ENTRANCES, AND MAILBOX TURNOUTS, WHETHER OR NOT PORTIONS OF THE SURFACES THUS CONSTRUCTED ARE TO BE COVERED WITH A BITUMINOUS SURFACE, EXCEPT WHERE NOTED DIFFERENTLY ON THE PLANS.
6. PAVEMENT STATION NUMBERS & PLACEMENT
THE CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS REQUIRED TO IMPRINT PAVEMENT STATION NUMBERS IN THE FINISHED SURFACE OF THE PAVEMENT AND/OR OVERLAY. THE NUMBERS SHALL BE APPROXIMATELY 3/4 INCH (20 MM) WIDE, 5 INCHES (125 MM) HIGH AND 5/8 INCH (15 MM) DEEP.

THE PAVEMENT STATION NUMBERS SHALL BE INSTALLED AS SPECIFIED HEREIN:
INTERVAL - 200 FEET (ENGLISH STATIONING) OR 100 METERS (METRIC STATIONING)
BOTTOM OF NUMBERS - 6 INCHES (150 MM) FROM THE INSIDE EDGE OF THE PAVEMENT MARKING

LOCATION :
- 2, 3, & 5 LANE PAVEMENTS - RIGHT EDGE OF PAVEMENT IN DIRECTION OF INCREASING STATIONS
- MULTI-LANE DIVIDED ROADWAYS - OUTSIDE EDGE OF PAVEMENT IN BOTH DIRECTIONS
- RAMPS - ALONG BASELINE EDGE OF PAVEMENT

POSITION - STATIONS SHALL BE PLACED SO THEY CAN BE READ FROM THE ADJACENT SHOULDER

FORMAT - ENGLISH (METRIC) PAVEMENT STATIONS SHALL USE THIS FORMAT "XXX (XX+X00)", WHERE X REPRESENTS THE PAVEMENT STATION.

THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE COST OF THE ASSOCIATED PAVEMENT AND/OR OVERLAY PAY ITEMS.
7. BUTT JOINT CUTTING TIME RESTRICTION
BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE BITUMINOUS SURFACE COURSE.
8. PAVING SURFACE COURSE
CONTINUOUS PAVING OPERATIONS ON THE MAIN ROADWAY SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION OF THE HOT-MIX ASPHALT SURFACE. NO INTERRUPTIONS FOR SIDE ROADS, ENTRANCES, TURN LANES, ETC. WILL BE ALLOWED.
9. REFLECTIVE CRACK CONTROL PLACEMENT
REFLECTIVE CRACK CONTROL TREATMENT SHALL BE PLACED ON THE COLD MILLED SURFACE.
10. ORDERING LENGTH CONFIRMATION - DRAINAGE ITEMS
THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTH OF THE BOX/PIPE CULVERTS, STORM SEWERS, AND/OR PIPE DRAINS REQUIRED PRIOR TO ORDERING THESE ITEMS.

COMMITMENTS

COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

NO COMMITMENTS HAVE BEEN INCURRED FOR THIS PROJECT.

PROJECT SPECIFIC GENERAL NOTE

- THE EXISTING STEEL BEAM BRACING AND SUPPORT SYSTEM ARE TO BE SALVAGED AND SHALL REMAIN THE PROPERTY OF THE DEPARTMENT.
- EXISTING SHEET PILING AT RT. STATION 574+65 TO 575+00 SHALL NOT BE DISTURBED.
- ALL PERMANENT SURVEY MARKERS THAT ARE PLACED WITHIN THE LIMITS OF THE PAVEMENT SHALL BE INSTALLED 1/4" BELOW THE FINISH GRADE OF THE PAVEMENT.
- FOR THE DISK SET ON THE BRIDGE AT STA 564+41.33, 17 FT. RIGHT, THE ELEVATION SHALL BE RUN TO THE DISK, VERIFIED, STAMPED AND A MEMO SENT TO THE CHIEF OF SURVEYS/PLATS DETAILING THE LOCATION OF THE DISK AND THE ELEVATION.

BITUMINOUS MIXTURE REQUIREMENTS

MIXTURE USES(S):	SURFACE COURSE	LEVEL BINDER 3/4"	HMA BASE CSE, VAR. BNDR (10" & VAR. DEPTH) & CLASS D PATCHING	BITUMINOUS SHOULDER (TOP LIFT)	BITUMINOUS SHOULDER (LOWER LIFTS)	INCIDENTAL SURFACE COURSE
AC/PG:	PG 64-22	SBS OR SBR 70-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
RAP % (MAX):**	15%	10%	25%	30%	30%	15%
DESIGN AIR VOIDS:	4.0% @ N=50	3.0% @ N=50	4.0% @ N=50	3.0% @ N=30	4.0% @ N=30	4.0% @ N=50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5 OR IL 12.5	IL 4.75	IL 19.0	IL 9.5L	IL 19.0L	IL 9.5 OR IL 12.5
FRICITION AGGREGATE	MIXTURE D (DOLOMITE ONLY)	N.A.	N.A.	MIXTURE C	N.A.	MIXTURE C

** IF RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED, THIS WILL BE DETERMINED BY THE MATERIALS ENGINEER.

ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS, (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUND, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS WILL NEED TO BE OBTAINED AND FILED BY THE CONTRACTOR, EXCESS WASTED PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

- BDE FORM 2289 (ENVIRONMENTAL SURVEY REQUEST)
- A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
- SIGNED PROPERTY OWNER AGREEMENT FORM - D4 P10100
- COLOR PHOTOGRAPHS DEPICTING THE USE AREA
- BORROW AREA ENTRY AGREEMENT FORM - D4 P10101

PLEASE NOTE THAT A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED ENVIRONMENTAL CLEARANCES.

STATUS OF UTILITIES

VILLAGE OF MARIETTA: PRESIDENT LINDA BRADFORD
114 WASHINGTON
MARIETTA, IL 61459

ROUTE	OFFSET	LOCATION	TYPE OF UTILITY	TYPE OF CONFLICT	DISPOSITION
IL 9	45'RT. TO 30'RT.	583+75 TO 588+75	6" WATER	GRADE CHANGE	RELOCATE

AMERENIP: MR. TIM McTAGGART
1824 KNOX HIGHWAY
P.O. BOX 1500
GALESBURG, IL 61401

ROUTE	OFFSET	LOCATION	TYPE OF UTILITY	TYPE OF CONFLICT	DISPOSITION
IL 9	30'RT.	563+80	AMEREN POLE	GRADE CHANGE	RELOCATE
IL 9	34'RT.	565+95	AMEREN POLE	GRADE CHANGE	RELOCATE
IL 9	32'RT.	576+00	AMEREN POLE	GRADE CHANGE	RELOCATE
IL 9	32'RT.	579+30	AMEREN POLE	GRADE CHANGE	RELOCATE
IL 9	32'RT.	582+91	AMEREN POLE	GRADE CHANGE	RELOCATE
IL 9	33'RT.	585+54	AMEREN POLE	GRADE CHANGE	RELOCATE

VERIZON: MR. CHARLES JENKINS
330 WEST BEECHER
JACKSONVILLE, IL 62650

ROUTE	OFFSET	LOCATION	TYPE OF UTILITY	TYPE OF CONFLICT	DISPOSITION
IL 9	60'LT.	577+80 TO 578+70	BURIED TELEPHONE	CULVERT EXT.	RELOCATE
IL 9	60'LT.	581+00 TO 582+50	BURIED TELEPHONE	GRADE CHANGE	RELOCATE
IL 9	25'LT.	588+80 TO 589+00	BURIED TELEPHONE	SHOULDER	CAUTION

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	STANDARDS

EFK•Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, COMMITMENTS, INDEX OF SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Z:\08056-Show_Creek\dn\Design\Final\Plat	tsheets\02-0468352-shr-geomnote.dgn	DRAWN - JD	REVISED -			685		MCDONOUGH/ EULTON	138	2
	PLOT SCALE = 2.0000' / IN.	CHECKED - SD	REVISED -					CONTRACT NO. 68352		
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -			SCALE: N.T.S.	SHEET NO. 1 OF 1 SHEET	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT	

				ROADWAY FAP 685 80% FEDERAL 20% STATE	STRUCTURE FAP 685 80% FEDERAL 20% STATE
				FULTON	MCDONOUGH
	SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE	
CODE NO.	PAY ITEM	UNIT	TOTAL	I000-2A	X081-2A
20100500	TREE REMOVAL, ACRES	ACRE	1.3	0.4	0.9
20200100	EARTH EXCAVATION	CU YD	14378	7419	6959
20200500	EARTH EXCAVATION (WIDENING)	CU YD	2304	1219	1085
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	72		72
20300100	CHANNEL EXCAVATION	CU YD	3146		3146
20700220	POROUS GRANULAR EMBANKMENT	CU YD	17		17
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	169		169
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	103		103
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	15897	6196	9701
* 25000210	SEEDING, CLASS 2A	ACRE	3.5	1.3	2.2
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	315	117	198
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	315	117	198
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	315	117	198
* 25100115	MULCH, METHOD 2	ACRE	3.5	1.3	2.2
* 25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	5870	2155	3715
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	700	260	440
28000305	TEMPORARY DITCH CHECKS	FOOT	336	56	280
28000400	PERIMETER EROSION BARRIER	FOOT	6481	1377	5104
28000500	INLET AND PIPE PROTECTION	EACH	2	1	1
28100107	STONE RIPRAP, CLASS A4	SQ YD	515		515
28100125	STONE RIPRAP, CLASS B3	SQ YD	159	64	95
28100811	STONE DUMPED RIPRAP, CLASS A6	TON	1570		1570
28200200	FILTER FABRIC	SQ YD	2065		515
31100300	SUBBASE GRANULAR MATERIAL, TYPE A 4"	SQ YD	1086	484	602
35501400	HOT-MIX ASPHALT BASE COURSE, VARIABLE DEPTH	TON	223	6	217
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	974	555	419
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	18		18
40600215	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	TON	9.4	2	7.4
40600300	AGGREGATE (PRIME COAT)	TON	31	7	24
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160	75	85
40600990	TEMPORARY RAMP	SQ YD	625	16	609
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	692	160	532
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	146	95	51
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43		43
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	39.5		39.5
44000100	PAVEMENT REMOVAL	SQ YD	208		208
44000152	HOT-MIX ASPHALT SURFACE REMOVAL, 3/4"	SQ YD	7151	1304	5847
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	61		61
44002720	GUTTER REMOVAL (SPECIAL)	FOOT	2379	1200	1179
44201811	CLASS D PATCHES, TYPE I, 14 INCH	SQ YD	80	80	

*SPECIALTY ITEM

CODE NO.	PAY ITEM	UNIT	TOTAL	ROADWAY FAP 685 80% FEDERAL 20% STATE		STRUCTURE FAP 685 80% FEDERAL 20% STATE
				FULTON	MCDONOUGH	MCDONOUGH
				CONSTRUCTION TYPE CODE		
				I000-2A	I000-2A	X081-2A
44201815	CLASS D PATCHES, TYPE II, 14 INCH	SQ YD	206	32	174	
44201819	CLASS D PATCHES, TYPE III, 14 INCH	SQ YD	64		64	
44201821	CLASS D PATCHES, TYPE IV, 14 INCH	SQ YD	217		217	
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	2284	1200	1084	
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	494	28.4	465.6	
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	2294	510	1784	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1			1
50104400	CONCRETE HEADWALL REMOVAL	EACH	1		1	
50105220	PIPE CULVERT REMOVAL	FOOT	165	45	120	
50200100	STRUCTURE EXCAVATION	CU YD	244			244
50300225	CONCRETE STRUCTURES	CU YD	69.2			69.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	258.1			258.1
50300260	BRIDGE DECK GROOVING	SQ YD	518			518
50300280	CONCRETE ENCASEMENT	CU YD	5.6			5.6
50300300	PROTECTIVE COAT	SQ YD	662			662
50401105	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 54 IN.	FOOT	558.5			558.5
50800105	REINFORCEMENT BARS	POUND	4014		4014	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	62,950			62,950
50800515	BAR SPLICERS	EACH	566			566
51201600	FURNISHING STEEL PILES HP 12X53	FOOT	945			945
51202305	DRIVING PILES	FOOT	945			945
51203600	TEST PILE STEEL HP 12X53	EACH	2			2
51500100	NAME PLATES	EACH	1			1
54002020	EXPANSION BOLTS 3/4 INCH	EACH	52		52	
54003000	CONCRETE BOX CULVERTS	CU YD	31.3		31.3	
54201273	PIPE CULVERTS, TYPE 2 RCCP 18"	FOOT	34		34	
54201297	PIPE CULVERTS, TYPE 2 RCCP 42"	FOOT	44		44	
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1		1	
54213687	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 42"	EACH	2		2	
54248510	CONCRETE COLLAR	CU YD	4		4	
550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	79	30	49	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	107			107
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	3	1	2	
60107600	PIPE UNDERDRAINS 4"	FOOT	2293	1157	1136	
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	148			148
60219550	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 37 GRATE	EACH	2	1	1	
60600095	CLASS S1 CONCRETE (OUTLET)	CU YD	42.3	14.7	27.6	
60602600	CONCRETE GUTTER, TYPE A (MODIFIED)	FOOT	2041	1007	1034	
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	1525		1525	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	3		3	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1(SPECIAL) TANGENT	EACH	4	1	3	

*SPECIALTY ITEM

EFK Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = crespole	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
\$FILE\$		DRAWN - JD	REVISED -				685	37BR-1	MCDONOUGH/ FULTON	138	4
	PLOT SCALE = 2.0091' / IN.	CHECKED - SD	REVISED -		SCALE: N.T.S.	SHEET NO. 2 OF 3 SHEETS				CONTRACT NO. 68352	
	PLOT DATE = 10/19/2009	DATE - 10/15/09	REVISED -				FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

				ROADWAY FAP 685 80% FEDERAL 20% STATE		STRUCTURE FAP 685 80% FEDERAL 20% STATE
			TOTAL	FULTON	MCDONOUGH	MCDONOUGH
	SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE		
CODE NO.	PAY ITEM	UNIT		I000-2A	I000-2A	X081-2A
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE I(SPECIAL) FLARED	EACH	3		3	
* 63200310	GUARDRAIL REMOVAL	FOOT	2449		2449	
* 63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	43.75		43.75	
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	34	9	25	
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	11	5	6	
66700305	PERMANENT SURVEY MARKERS, TYPE II	EACH	1	1		
66700605	PERMANENT SURVEY TIES	EACH	8	8		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	2	6	
67100100	MOBILIZATION	L SUM	1		1	
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1		1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1		1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1		1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1		1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1		1	
70100600	TRAFFIC CONTROL AND PROTECTION, STANDARD 701336	L SUM	1		1	
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1		1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	120	24	96	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1		1	
70106700	TEMPORARY RUMBLE STRIP	EACH	6	3	3	
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1	0.5	0.5	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	976	211	765	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	26270	5476	20794	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	5871	1367	4504	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	387.5	50	337.5	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	362.5	50	312.5	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	9764	2139	7625	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	70		70	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	2	6	
78300100	PAVEMENT MARKING REMOVAL	SO FT	3255	554	2701	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12	4	8	
X0301512	GUARDRAIL AGGREGATE EROSION CONTROL	TON	563	18	545	
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SO FT	1200			1200
X0712400	TEMPORARY PAVEMENT	SO YD	51		51	
X0919000	TEMPORARY PAVEMENT REMOVAL	SO YD	51		51	
+ X2503100	MOWING	UNIT	64	13	51	
X4067107	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	343	77	266	
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	22			22
Z0013798	CONSTRUCTION LAYOUT	L SUM	1		1	
* Z0030030	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	1		1	
Z0030250	IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1	
Z0030350	IMPACT ATTENUATOR, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1	
Z0054500	ROCK FILL	TON	137		137	
⊙ Z0076600	TRAINEES	HOUR	5,000	2,500	2,500	

+ NON-PARTICIPATING 100% STATE
* SPECIALTY ITEM
⊙ Y080

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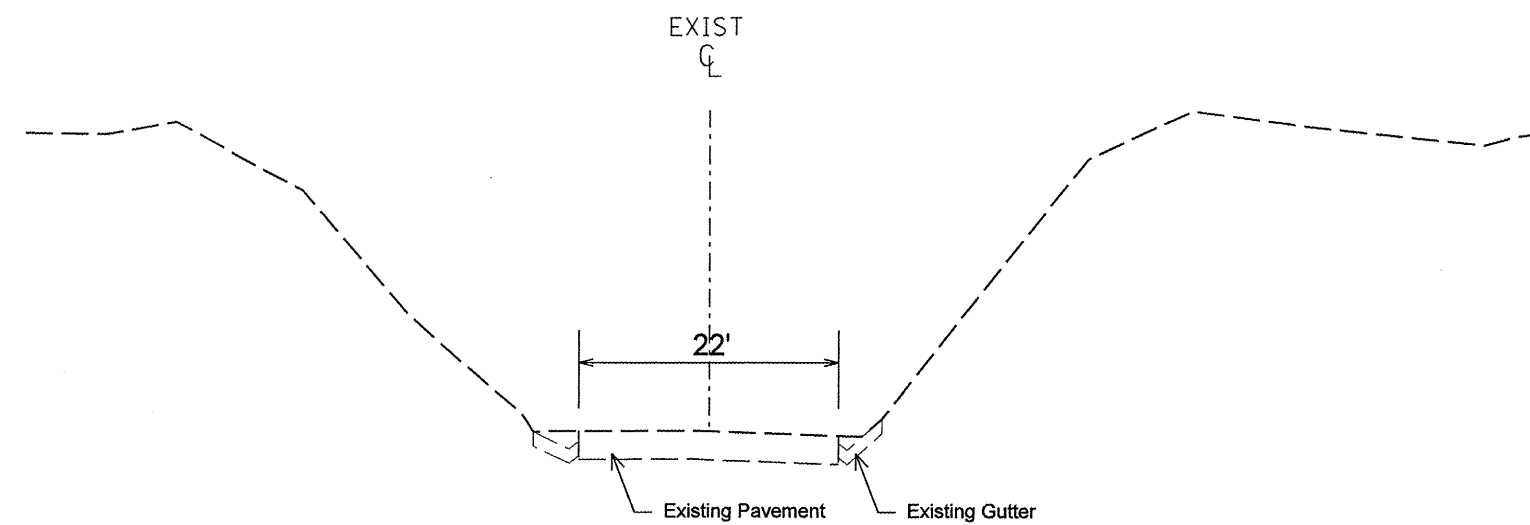
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

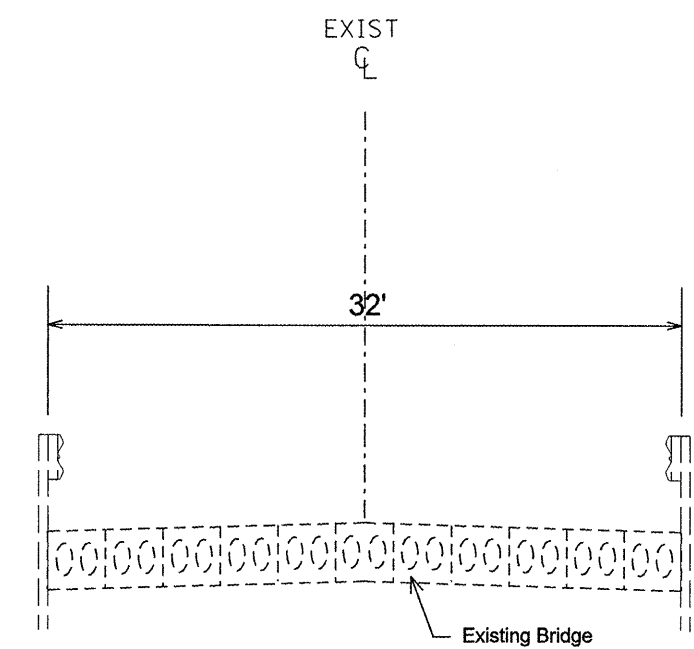
SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET NO. 3 OF 3 SHEETS

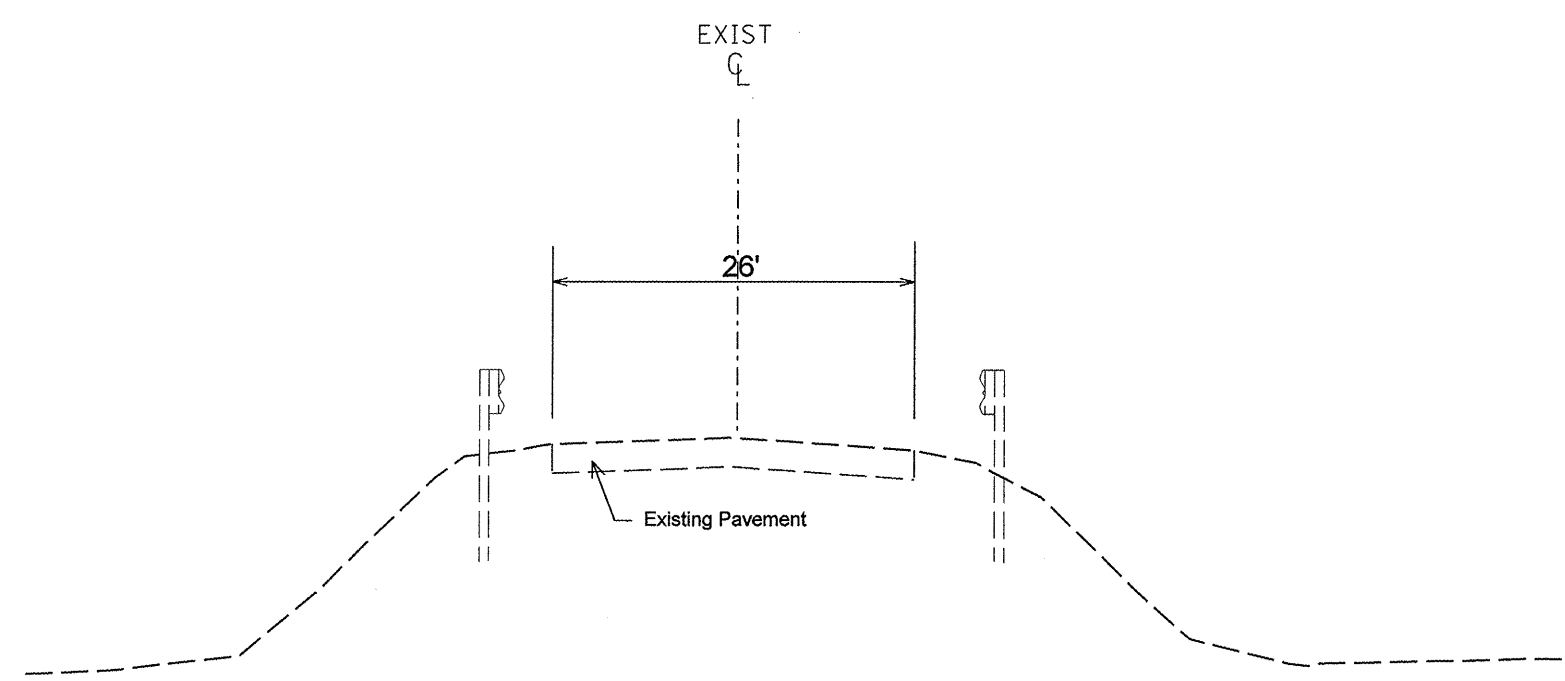
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 68352				



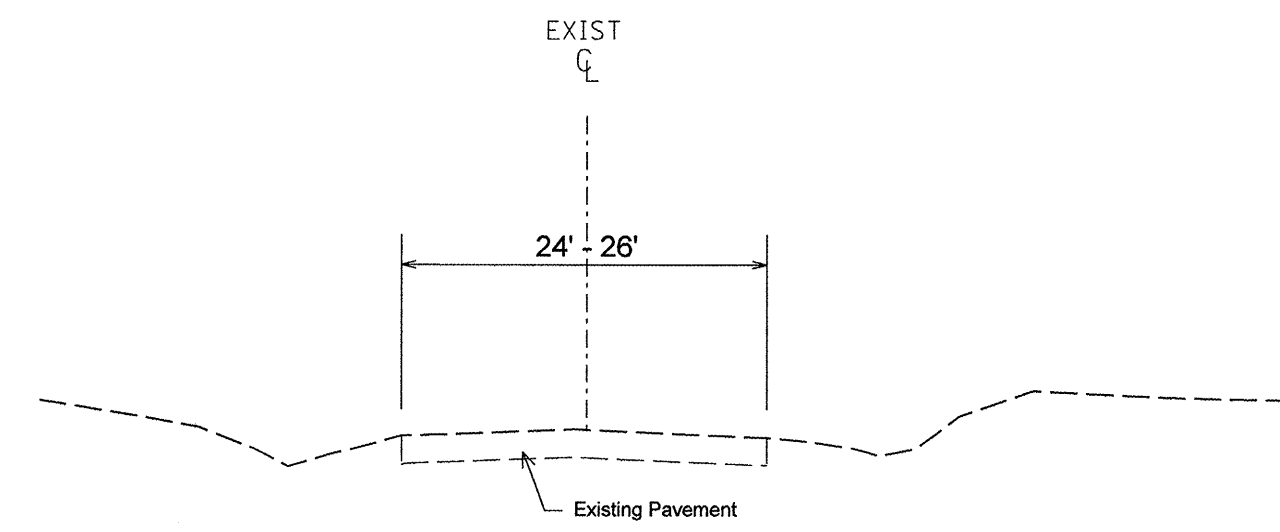
STA. 557+20 TO STA. 563+25
STA. 579+20 TO STA. 585+20



STA. 564+41 TO STA. 565+21.8



STA. 563+25 TO STA. 564+41
STA. 565+21.8 TO STA. 579+20

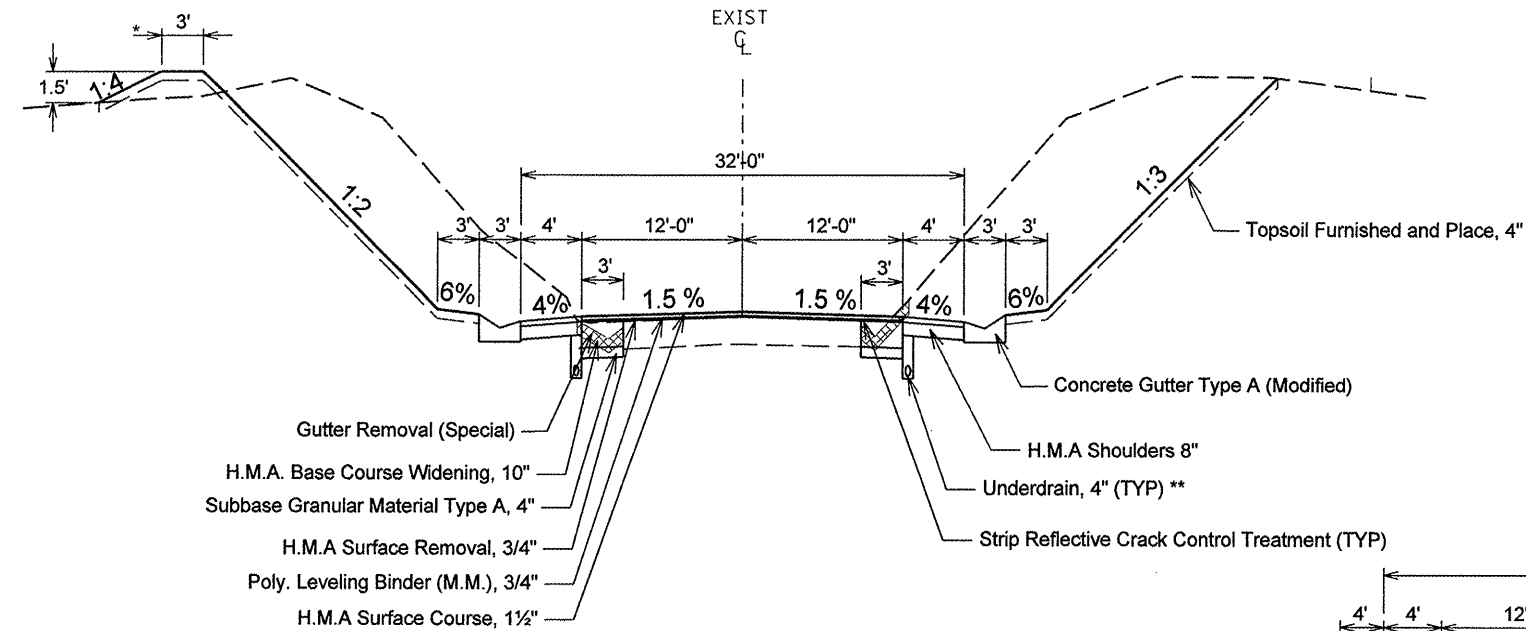


STA. 585+20 TO STA. 589+00

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	tsheets\06-0468352-shr-typical.dgn	DRAWN - JD	REVISED - ---					685	37BR-1	MCDONOUGH/ POLK	138	6
	PLOT SCALE = 10.0000 ' / IN.	CHECKED - SD	REVISED - ---		CONTRACT NO. 68352							
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED - ---		SCALE: N.T.S.	SHEET NO. 1 OF 2 SHEETS	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT			

• PROPOSED BERM
 LT STA. 557+50.00 TO STA. 562+50.00
 RT STA. 558+50.00 TO STA. 559+50.00

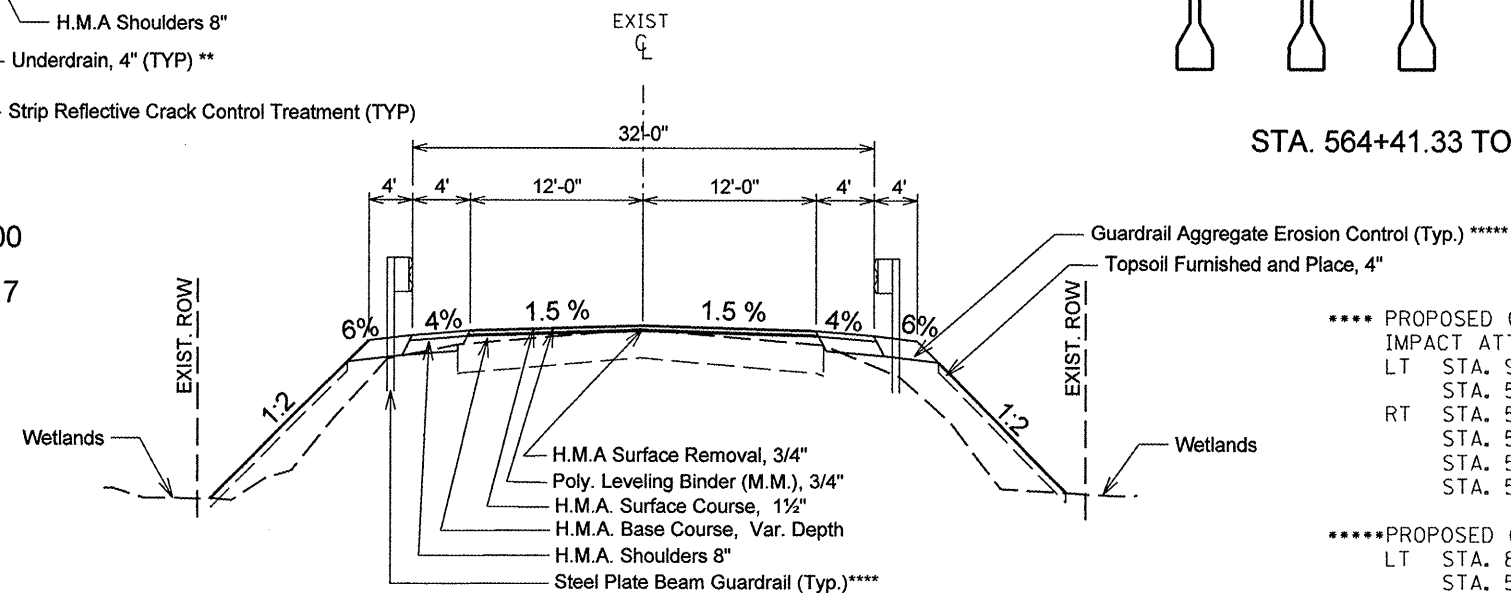


STA. 557+50 TO STA. 563+00

STA. 580+50 TO STA. 585+17

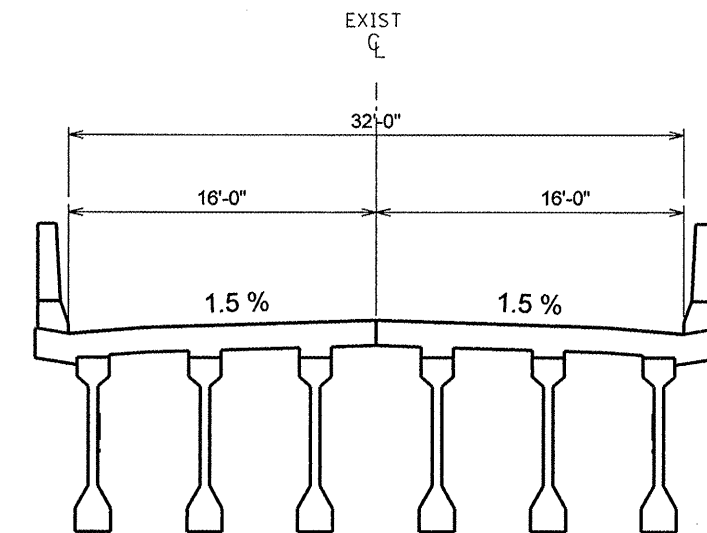
** PROPOSED UNDERDRAIN, 4"
 LT STA. 557+50.00 TO STA. 563+20.60
 STA. 578+90.90 TO STA. 585+05.96
 RT STA. 557+50.00 TO STA. 563+20.00
 STA. 580+16.82 TO STA. 585+17.00

*** PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
 LT STA. 557+50.00 TO STA. 564+08.74
 STA. 580+20.00 TO STA. 585+21.43
 RT STA. 557+50.00 TO STA. 564+01.92
 STA. 580+49.98 TO STA. 585+20.10



STA. 563+00 TO STA. 564+11.33

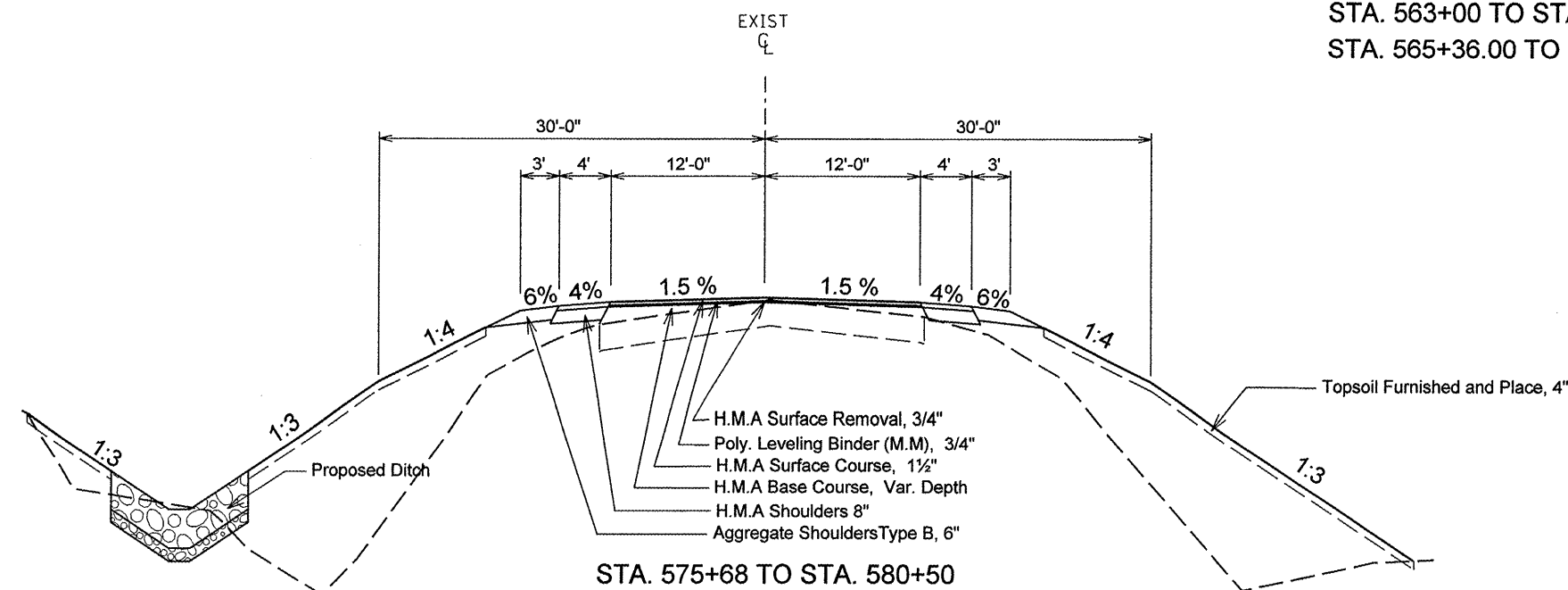
STA. 565+36.00 TO STA. 575+68



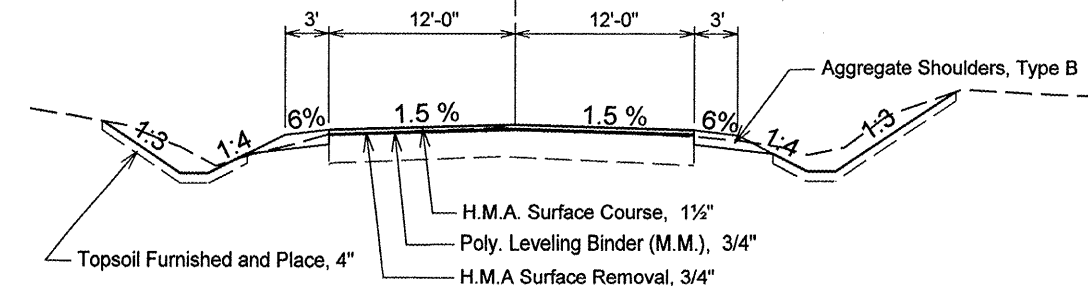
STA. 564+11.33 TO STA. 565+36.00

***** PROPOSED GUARDRAIL, TRAFFIC BARRIER TERMINAL, IMPACT ATTENUATOR
 LT STA. 564+07.81 (E 2400) TO STA. 564+36.57
 STA. 565+51.19 TO STA. 575+59.73
 RT STA. 563+17.00 TO STA. 564+25.75
 STA. 565+45.80 TO STA. 565+66.80
 STA. 566+06.76 TO STA. 572+31.54
 STA. 573+97.53 TO STA. 575+72.30

***** PROPOSED G.R. AGG. EROSION CONTROL - 8"
 LT STA. 8+76.66 (E 2400) TO STA. 564+47.83
 STA. 565+41.71 TO STA. 575+76.95
 RT STA. 563+03.25 TO STA. 564+35.61
 STA. 565+29.26 TO STA. 565+75.34
 STA. 565+97.76 TO STA. 572+59.54
 STA. 573+88.53 TO STA. 575+88.30



STA. 575+68 TO STA. 580+50



STA. 585+17 TO STA. 588+70

NOTES:

- SEE BRIDGE PLANS FOR BRIDGE APPROACH SLAB DETAILS (STA. 564+11.33 - STA. 564+41.33 & STA. 565+36.00 - STA. 565+66.00)
- SEE STANDARD 420401 FOR ADDITIONAL DETAILS OF BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

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PLOT DATE = 10/16/2009		DATE - 10/15/09	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: N.T.S. SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH/ POLK	138	7
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

GUARDRAIL SCHEDULE										
	LOCATION	REMOVAL LENGTH (FOOT)	TRAFFIC BARRIER TERMINAL TYPE 6 (EACH)	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (FLARE) (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A, 6' POSTS (FOOT)	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS) (FOOT)	GUARDRAIL MARKER TYPE A (EACH)	IMPACT ATTENUATOR (F.R.D., NARROW) TEST LEVEL 3 (EACH)
LT	563+88 TO 564+50	63								
LT	565+44 TO 575+74	1031								
LT	577+45 TO 579+07	163								
RT	564+00 TO 564+50	51								
RT	565+44 TO 565+59	15								
RT	565+79 TO 572+05	626								
RT	573+98 TO 578+97	500								
RT	565+46 TO 565+67									1
RT	563+67.5 TO 563+80						12.5		1	
RT	563+80 TO 564+26		1						2	
RT	566+57 TO 571+82						525		21	
RT	574+47 TO 575+22						75		3	
LT	563+90 TO 564+37		1						4	
LT	565+51 TO 575+09								39	
LT	565+97 TO 575+10						912.5			
LT	565+51 TO 565+97		1							
RT	563+17 TO 563+67.5			1						
RT	571+82 TO 572+32			1						
RT	575+22 TO 575+72			1						
LT	9+08 TO 9+58			1						
RT	566+07 TO 566+57				1					
RT	573+98 TO 574+47				1					
LT	575+10 TO 575+60				1					
LT	563+61 TO 563+90							43.75		
LT	9+08					1				
LT	575+59					1				
RT	563+30					1				
RT	565+67					1				
RT	566+07					1				
RT	572+32					1				
RT	573+98					1				
RT	575+72					1				
	TOTAL	2449	3	4	3	8	1525	43.75	70	1

GUARDRAIL AGGREGATE EROSION CONTROL		
	LOCATION	(TON)
LT	563+90.32 TO 564+47.83	54
LT	565+41.71 TO 575+76.95	244
RT	563+03.25 TO 564+35.61	31
RT	565+29.26 TO 575+88.30	234
	TOTAL	563

TREE REMOVAL		
	LOCATION	(ACRE)
RT	558+63 TO 566+58	0.1
RT	575+22 TO 588+77	0.7
LT	557+79 TO 563+30	0.3
LT	564+16 TO 566+72	0.1
LT	569+12 TO 571+44	0.0
LT	574+51 TO 583+11	0.1
	TOTAL	1.3

TRAFFIC CONTROL																
	LOCATION	TRAFFIC CONTROL AND PROTECTION STANDARDS							TEMPORARY RUMBLE STRIPS (EACH)	TEMPORARY CONCRETE BARRIER (FOOT)	RELOCATE TEMP CONC. BARRIER (FOOT)	IMPACT ATTENUATOR TEMPORARY (N.R.D.) TL3 (EACH)	IMPACT ATTENUATOR RELOCATE (N.R.D.) TL3 (EACH)	CHANGEABLE MESSAGE SIGN (CAL MO)	TEMPORARY BRIDGE TRAFFIC SIGNALS (EACH)	TRAFFIC CONTROL SURVEILLANCE (CAL DA)
		STANDARD 701316 (EACH)	STANDARD 701321 (EACH)	STANDARD 701306 (L SUM)	STANDARD 701201 (L SUM)	STANDARD 701326 (L SUM)	STANDARD 701336 (L SUM)	STANDARD BLR 21 (L SUM)								
RT/LT	557+20 TO 589+00	1	1	1	1	1	1	1		387.5	362.5	2	2	1	1	120
RT	539+47								1							
RT	544+47								1							
RT	549+47								1							
LT	576+72								1							
LT	581+72								1							
LT	586+72								1							
	TOTAL	1	1	1	1	1	1	1	6	387.5	362.5	2	2	1	1	120

SEEDING SCHEDULE						
	LOCATION	SEEDING CL 2A (ACRE)	NITROGEN FERTILIZER NUTRIENT (POUND)	PHOSPHORUS FERTILIZER NUTRIENT (POUND)	POTASSIUM FERTILIZER NUTRIENT (POUND)	MULCH METHOD 2 (ACRE)
RT/LT	557+00 TO 589+00	3.5	315.0	315.0	315.0	3.5
TOTAL		3.5	315.0	315.0	315.0	3.5

MISCELLANEOUS SCHEDULE				
	ENGINEER'S FIELD OFFICE TYPE A (CAL MO)	MOBILIZATION (L SUM)	CONSTRUCTION LAYOUT (L SUM)	MOWING (UNIT)
	8	1	1	64
TOTAL	8	1	1	64

CONCRETE BOX CULVERTS									
	LOCATION	CONCRETE BOX CULVERTS (CU YD)	CONCRETE COLLAR (CU YD)	ROCK FILL (TON)	EXPANSION BOLTS 3/4" (EACH)	POROUS GRANULAR EMBANKMENT (CU YD)	REINFORCEMENT BARS (POUND)	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION (SQ YD)	CONCRETE HEADWALL REMOVAL (EACH)
LT/RT	574+65.49	31.3		44.1	36	5.4	3910	35.0	
LT/RT	577+96.14		4	92.3	16	11.3	104	67.4	
LT	563+81.43								1
TOTAL		31.3	4	137	52	17	4014	103	1

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		DRAWN - JD	REVISED - ---					685	37BR-1	MC DONOUGH/ FULTON	138	8
	PLOT SCALE = 2.0000' / IN.	CHECKED - SD	REVISED - ---					CONTRACT NO. 68352				
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED - ---					FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				
					SCALE: N.T.S.	SHEET NO. 1 OF 3 SHEETS						

EROSION CONTROL

	LOCATION	PERIMETER EROSION BARRIER (FOOT)	TEMPORARY DITCH CHECKS (FOOT)	HEAVY DUTY EROSION CONTROL BLANKET (SQ YD)	TEMPORARY EROSION CONTROL SEEDING (POUND)
RT/LT	557+00 TO 589+00				700
LT	557+20 TO 578+60			3706	
RT	563+80 TO 584+38			2164	
LT	556+50 TO 563+35	722			
LT	563+56 TO 564+65	192			
LT	565+29 TO 574+35	921			
LT	574+50 TO 575+62	114			
LT	575+77 TO 578+30	270			
LT	578+65 TO 585+29	698			
LT	585+47 TO 589+00	356			
RT	557+17 TO 564+64	800			
RT	565+23 TO 565+51	33			
RT	565+56 TO 573+62	831			
RT	573+83 TO 574+53	74			
RT	574+57 TO 577+26	272			
RT	577+33 TO 580+29	291			
RT	580+00 TO 589+00	907			
LT	563+30		14		
LT	563+31		14		
LT	563+31		14		
LT	563+70		14		
LT	563+78		14		
LT	563+89		14		
LT	577+54		14		
LT	577+75		14		
LT	577+96		14		
LT	578+11		14		
LT	578+24		14		
RT	563+31		14		
RT	563+65		14		
RT	574+48		14		
RT	574+65		14		
RT	575+00		14		
RT	575+45		14		
RT	575+95		14		
RT	576+40		14		
RT	576+87		14		
RT	577+20		14		
RT	577+49		14		
RT	580+15		14		
RT	585+39		14		
TOTAL		6481	336	5870	700

CONCRETE GUTTER

	LOCATION	TYPE A (MODIFIED) (FOOT)	CLASS S1 CONC. (OUTLET) (CU YD)	GUTTER REMOVAL (SPECIAL) (FOOT)
LT	557+62.23 TO 562+64.02	502		
LT	575+61.95 TO 577+66.44	5		
LT	576+34.05 TO 577+00.00	66		
LT	579+50.00 TO 574+93.73	544		
RT	557+62.25 TO 562+67.23	505		
RT	580+85.01 TO 585+04.75	420		
LT	557+50.00 TO 564+73.00			758
LT	580+20.00 TO 585+21.00			501
RT	557+50.00 TO 563+91.00			650
RT	580+50.00 TO 585+20.00			470
LT	557+50.00 TO 557+62.23		1.2	
LT	562+64.02 TO 563+20.25		6.6	
LT	575+05.66 TO 575+61.95		6.6	
LT	577+00.00 TO 577+12.00		1.2	
LT	578+64.06 TO 579+50.00		10.8	
LT	584+93.73 TO 585+05.96		1.2	
RT	557+50.00 TO 557+62.25		1.2	
RT	562+67.23 TO 563+15.64		5.7	
RT	580+28.71 TO 580+85.01		6.6	
RT	585+04.76 TO 585+17.00		1.2	
TOTAL		2041	42.3	2379

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

LOCATION	STATION	(EACH)
29.85' LT	556+01.57	1
49.83' LT	557+00.20	1
84.80' LT	560+99.83	1
69.83' LT	563+16.01	1
99.74' LT	563+66.17	1
69.81' LT	564+00.19	1
69.81' LT	565+49.81	1
29.86' LT	567+09.77	1
29.82' LT	568+46.75	1
35.81' LT	569+75.19	1
35.81' LT	570+99.81	1
29.84' LT	571+49.79	1
29.89' LT	573+50.24	1
49.81' LT	574+00.19	1
49.81' LT	575+99.81	1
69.81' LT	576+76.87	1
69.81' LT	580+99.82	1
39.81' LT	585+55.78	1
39.81' LT	587+99.81	1
32.87' LT	588+24.77	1
32.86' RT	557+00.23	1
89.81' RT	559+50.19	1
89.81' RT	561+49.81	1
64.81' RT	562+44.33	1
64.81' RT	563+44.41	1
64.81' RT	565+74.81	1
29.88' RT	566+79.76	1
29.85' RT	573+25.22	1
89.81' RT	576+81.60	1
89.81' RT	577+49.81	1
54.81' RT	579+00.19	1
54.81' RT	582+49.81	1
39.82' RT	587+99.81	1
29.83' RT	588+99.79	1
TOTAL		34

PRIME COAT	POLYMERIZED BITUMINOUS MATERIAL (PRIME COAT) (TON)	AGGREGATE (PRIME COAT) (TON)
LT/RT	562+85.92 TO 564+09.23	0.4
LT/RT	565+68.10 TO 571+00.00	2.2
LT	557+50 TO 564+08.74	0.4
LT	580+20 TO 585+21.43	0.3
RT	557+50 TO 564+01.92	0.4
RT	580+49.98 TO 585+20.10	0.3
LT/RT	564+00.13 TO 564+16.53	0.1
LT/RT	565+60.80 TO 565+77.20	0.1
LT/RT	557+20 TO 564+09.23	0.6
LT/RT	565+68.10 TO 589+00	2.0
LT/RT	557+20 TO 564+09.23	0.6
LT/RT	565+68.10 TO 589+00	2.0
TOTAL		9.4

ENTRANCES

	LOCATION	AGGREGATE SURFACE COURSE, TYPE B (TON)	DRIVEWAY PAVEMENT REMOVAL (SQ YD)	INCIDENTAL HOT-MIX ASPHALT SURFACING (TON)	PORTLAND CEMENT CONC. DRIVEWAY PAVEMENT 8" (SQ YD)
RT	566+17.99	18			
RT	573+72.09		61		
LT	563+48.48			95.4	39.5
LT	575+90.23			27.0	
LT	585+39.67			23.5	
TOTAL		18	61	146	39.5

EARTHWORK

	LOCATION	EARTH EXCAVATION WIDENING (CU YD)	ADJUSTED FOR SHRINKAGE (CU YD)	EARTH EXCAVATION (CU YD)	ADJUSTED FOR SHRINKAGE (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)	REMOVE AND DISPOSE OF UNSUITABLE MATERIAL (CU YD)	TOPSOIL FURNISH AND PLACE, 4" (SQ YD)
LT/RT	557+20 TO 589+00			14378	10784	4704	+6080		15897
LT/RT	557+00 TO 564+41+/-	1230	923				+923		
LT/RT	565+36+/- TO 576+00	162	122				+122		
LT/RT	576+00 TO 587+50	901	676				+676		
LT/RT	587+50 TO 589+00	11	8				+8		
LT/RT	574+65.49							27	
LT/RT	577+96.14							45	
TOTAL		2304	1729	14378	10784	4704	+7809	72	15897

NOTE: SHRINKAGE CALCULATED USING 25% SHRINKAGE FACTOR (PER BDE MANUAL)

PERMANENT SURVEY MARKERS

LOCATION	STATION	TYPE I (EACH)	TYPE II (EACH)	PERMANENT SURVEY TIES (EACH)
Centerline	P.O.T. 545+00.00	1		
Centerline	P.C. 556+01.35	1		
2.33' Lt	P.L. 559+68.35	1		
Centerline	STA EON, P.T. 563+35.31 (BK) = 563+35.80 (AH)	1		
0.41' Lt	563+42.82 N.E. COR. N.E. 1/4 SEC. 24	1		4
62.75' Rt	563+44.17 S.W. COR. SEC 18		1	4
17' Rt	564+41.33 Set Tablet Permanent Benchmark	1		
Centerline	P.O.T. 564+97.10	1		
Centerline	P.C. 580+55.08	1		
1.98' Lt	P.L. 584+24.78	1		
Centerline	P.T. 587+94.46	1		
Centerline	P.O.T. 596+75.17	1		
TOTAL		11	1	8

PAVEMENT MARKING SCHEDULE

	LOCATION	TEMPORARY PAVEMENT MARKING LINE 4" (FOOT)	PAINT PAVEMENT MARKING LINE 4" (FOOT)	SHORT-TERM PAVEMENT MARKING (FOOT)	PAVEMENT MARKING REMOVAL (SQ FT)	WORK ZONE PAVEMENT MARKING REMOVAL (SQ FT)
LT/RT	557+20 TO 589+00	EDGE LINES	6360	6360	2120	
Centerline	556+47 TO 567+86	CENTER SOLID	1139	1139	380	
Centerline	574+48 TO 589+00	CENTER SOLID	1452	1452	484	
Centerline	556+47 TO 589+00	CENTER SKIP-DASH	813		271	
LT/RT	556+57 TO 569+12	STAGE 1 SOLID	1256			419
RT	556+47	STOP BAR	12			24
LT	569+72	STOP BAR	12			24
LT	557+01 TO 569+20	STAGE 2 SOLID	1220			407
RT	556+47 TO 568+50	STAGE 2 SOLID	1203			401
LT	557+20 TO 569+72	STAGE 3 SOLID	1252			418
RT	557+00 TO 569+14	STAGE 3 SOLID	1215			405
Centerline	556+47 TO 566+93	STAGE 4		314		105
LT	567+79 TO 586+92	STAGE 5 SOLID	1913			638
RT	566+93 TO 588+88	STAGE 5 SOLID	2195			732
LT	566+90 TO 587+44	STAGE 6 SOLID	2055			685
RT	567+45 TO 587+23	STAGE 6 SOLID	1978			660
RT	566+93 TO 588+88	STAGE 6 SOLID	2195			732
Centerline	566+93 TO 589+00	STAGE 7		662		221
TOTAL		26270	9764	976	3255	5871

STRIP REFLECTIVE CRACK CONTROL TREATMENT

	LOCATION	STRIP REFLECTIVE CRACK CONTROL TREATMENT (FOOT)
LT	557+50.00 TO 564+08.74	659
LT	580+20.00 TO 585+21.43	502
RT	557+50.00 TO 564+01.92	652
RT	580+49.98 TO 585+20.10	471
TOTAL		2284

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FILE NAME: Z:\00056-Shaw-Creek\Design\Final\Plotsheets\05-10-0488532-shaw-schedules.dgn

USER NAME: ad

DESIGNED: - - -

DRAWN: JD

CHECKED: SD

DATE: 10/15/09

REVISED: - - -

REVISED: - - -

REVISED: - - -

REVISED: - - -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: N.T.S.

SHEET NO. 2 OF 3 SHEETS

F.A.P.
RTE.

685

SECTION

37BR-1

COUNTY

MC DONOUGH

TOTAL SHEETS

138

SHEET NO.

9

CONTRACT NO. 68352

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

PAVEMENT										
		PAVEMENT REMOVAL (SQ YD)	HMA BASE COURSE, VARIABLE DEPTH (TON)	HMA BASE COURSE WIDENING, 10'' (SQ YD)	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 (TON)	HMA SURFACE COURSE, 1-1/2'' MIX D, N50 (TON)	CLASS D PATCHES TYPE I	CLASS D PATCHES TYPE II	CLASS D PATCHES TYPE III	CLASS D PATCHES TYPE IV
	LOCATION						14 INCH (SQ YD)	14 INCH (SQ YD)	14 INCH (SQ YD)	14 INCH (SQ YD)
LT/RT	557+20.00 TO 589+00.00						80	206	64	217
LT/RT	557+20.00 TO 564+09.23				77	160.9				
LT/RT	565+68.10 TO 589+00.00				266	531.1				
LT	557+50.00 TO 564+10.53			282.7						
LT	565+77.20 TO 585+21.43			232.9						
RT	557+50.00 TO 564+02.41			274.4						
RT	566+12.76 TO 585+20.10			183.7						
LT/RT	565+68.10 TO 571+00.00		22.9							
LT/RT	562+85.92 TO 564+09.23		199.5							
LT/RT	564+01.53 TO 564+50.50	128.9								
LT/RT	565+44.01 TO 565+76.15	78.2								
	TOTAL	207.1	222.4	973.7	343	692	80	206	64	217

HMA SURFACE REMOVAL - BUTT JOINT		
	LOCATION	(SQ YD)
LT/RT	557+20 TO 557+50	74.8
LT/RT	588+70 TO 589+00	85.0
	TOTAL	159.8

TEMPORARY RAMP		
	LOCATION	(SQ YD)
LT/RT	557+20 TO 557+26	16
LT	563+97 TO 564+16.53	31
LT	565+66 TO 567+41	307
RT	563+97 TO 564+11.33	17
RT	565+62.10 TO 565+41	236
LT/RT	588+94 TO 589+00	18
	TOTAL	625

PAVEMENT								
		TEMPORARY PAVEMENT REMOVAL (SQ YD)	TEMPORARY PAVEMENT (SQ YD)	HMA SURFACE REMOVAL 3/4" (SQ YD)	HMA SHOULDERS 8" (SQ YD)	AGGREGATE SHOULDERS TYPE B 6" (SQ YD)	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) (SQ YD)	SUBBASE GRANULAR MATERIAL TYPE A 4" (SQ YD)
	LOCATION							
LT/RT	564+00.13 TO 564+50.50	23	23					
LT/RT	565+44.04 TO 566+12.78	28	28					
LT/RT	557+50.00 TO 564+08.25			1310				
LT/RT	565+68.10 TO 588+70.00			5841				
LT	557+20.00 TO 563+00.00				254			
LT	567+00.00 TO 585+78.66				893			
RT	557+20.00 TO 563+03.25				256			
RT	565+66.80 TO 585+17.00				891			
LT	563+01.35 TO 563+19.85					193.3		
RT	577+12.00 TO 588+70.00					299.8		
LT/RT	564+00.13 TO 564+16.53						21.5	23.3
LT/RT	565+60.80 TO 565+77.20						21.5	23.3
LT	557+50.00 TO 564+10.53							304.1
LT	565+77.20 TO 585+21.43							253.3
RT	557+50.00 TO 564+02.41							291.5
RT	566+12.76 TO 585+20.10							189.9
	TOTAL	51	51	7151	2294	493.1	43	1086

RAISED REFLECTIVE PAVEMENT MARKER (REMOVAL)		
	LOCATION	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL (EACH)
Centerline	559+53	1
Centerline	561+13	1
Centerline	561+93	1
Centerline	562+73	1
Centerline	566+33	1
Centerline	571+89	1
Centerline	572+69	1
Centerline	573+48	1
Centerline	578+25	1
Centerline	582+20	1
Centerline	587+80	1
Centerline	588+58	1
	TOTAL	12

DRAINAGE														
		STORM SEWER	PIPE CULVERTS		PRC		MANHOLE TYPE A 4' DIA. TYPE 37 GRATE (EACH)	INLET AND PIPE PROTECTION (EACH)	CONCRETE HEADWALL PIPE DRAINS (EACH)	4" PIPE UNDERDRAINS (FOOT)	PIPE CULVERT REMOVAL (FOOT)	FILTER FABRIC (SQ YD)	STONE RIPRAP CLASS A4 (SQ YD)	STONE RIPRAP CLASS B3 (SQ YD)
		18" CLASS A TYPE 2 (FOOT)	18" RCCP TYPE 2 (FOOT)	42" RCCP TYPE 2 (FOOT)	18" FES (EACH)	42" FES (EACH)								
	LOCATION													
LT	563+20.50 TO 563+99.85	79												
LT	563+99.85 TO 564+30.91		34											
RT	577+65.98 TO 577+77.32			20				1						
LT	578+16.91 TO 578+30.45			24				1						
LT	564+30.74 TO 564+36.44				1									
RT	577+61.40 TO 577+66.20					1								
LT	578+30.23 TO 578+35.03					1								
LT	578+90.90								1					
RT	563+20.00								1					
RT	580+16.82								1					
LT	557+50.00 TO 563+20.60									577				
LT	578+90.90 TO 585+05.96									626				
RT	557+50.00 TO 563+20.00									580				
RT	580+16.82 TO 585+17.00									510				
LT	563+20.50						1							
LT	563+99.85						1							
LT	563+34.00 TO 563+76.00										45			
LT	563+82.00 TO 564+73.00										100			
RT	563+78.00 TO 563+91.00										20			
LT	578+28 TO 578+67											54	54	
RT	574+50 TO 577+66											461	461	
RT	563+79 TO 564+11													46
LT	563+21 TO 8+95													64
RT	9+04 TO 564.02													49
	TOTAL	79	34	44	1	2	2	2	3	2293	165	515	515	159

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FILE NAME =	USER NAME = crespole	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULE OF QUANTITIES		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - JD	REVISED -				685	37BR-1	MC DONOUGH/ FLINT	138	10
	PLOT SCALE = 2.0091' /' IN.	CHECKED - SD	REVISED -				CONTRACT NO. 68352				
	PLOT DATE = 10/19/2009	DATE - 10/15/09	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
				SCALE: N.T.S.		SHEET NO. 3 OF 3 SHEETS					

COORDINATE TABLE			
STATION	OFFSET	NORTHING	EASTING
P.O.T. 545+00.00	0.00	1,426,854.9994	2,220,906.2103
F.A.S. RTE. 685 PROP. CURVE IL9EXCL3:			
P.C. 556+01.35	0.00	1,426,868.0246	2,219,804.9380
P.L. 559+68.35	0.00	1,426,872.3650	2,219,437.9636
P.T. 563+35.31	0.00	1,426,886.0120	2,219,071.2175
STA. EON. 563+35.31 (BK) = 563+35.80 (AH)	0.00	1,426,886.0120	2,219,071.2175
STA. EON. 563+48.48 (IL 9) = 10+00.00 (E2400)	0.00	1,426,886.4834	2,219,058.5481
P.O.T. 564+97.10	0.00	1,426,892.0100	2,218,910.0290
F.A.S. RTE. 685 PROP. CURVE IL9EXCL4:			
P.C. 580+55.08	0.00	1,426,949.9440	2,217,353.1252
P.L. 584+24.78	0.00	1,426,963.6915	2,216,983.6780
P.T. 587+94.46	0.00	1,426,985.3464	2,216,614.6099
P.O.T. 587+94.46	0.00	1,426,985.3464	2,216,614.6099
P.O.T. 596+75.17	0.00	1,427,036.9330	2,215,735.4097

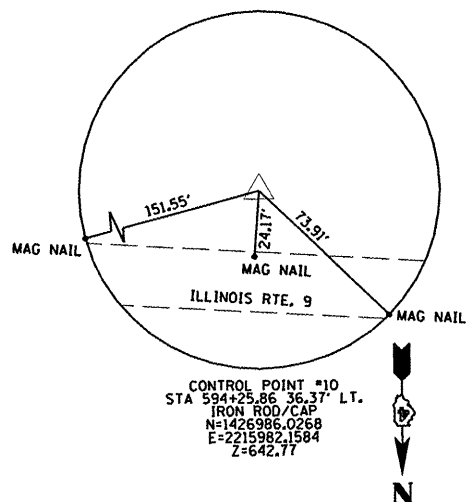
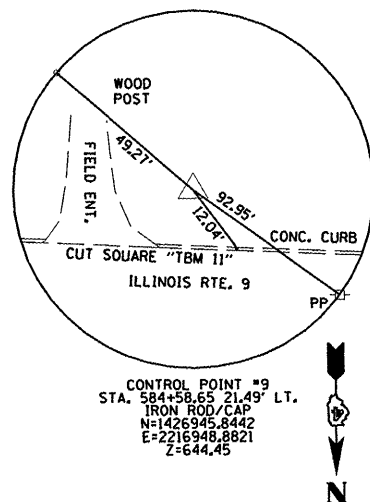
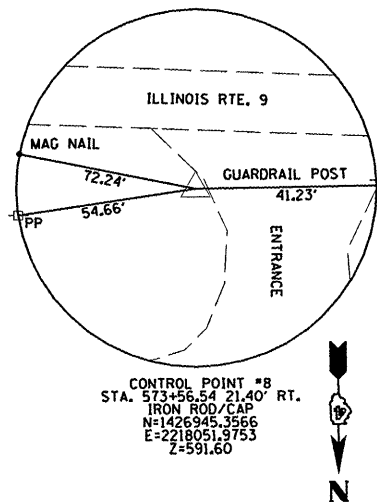
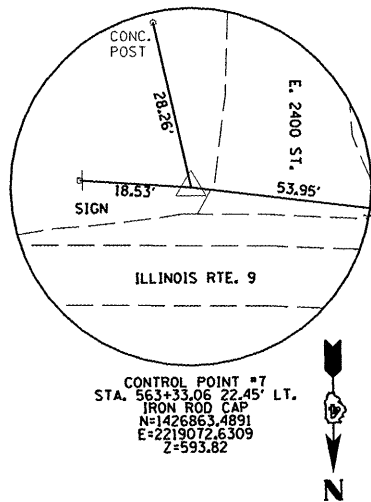
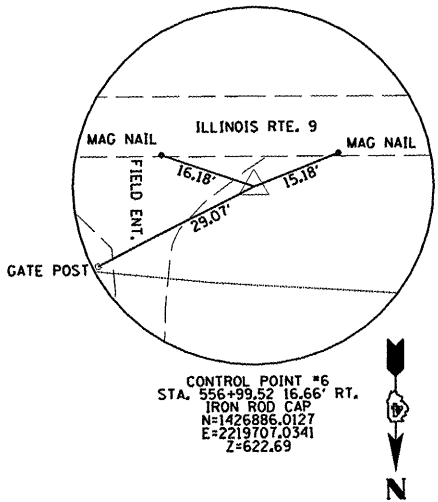
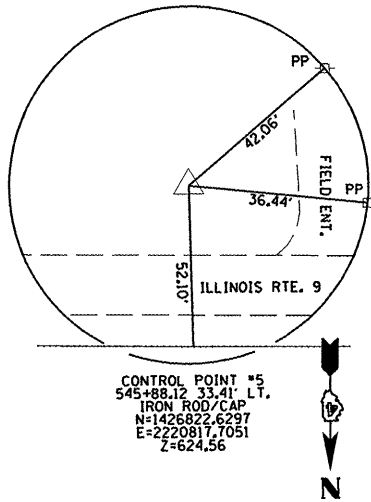
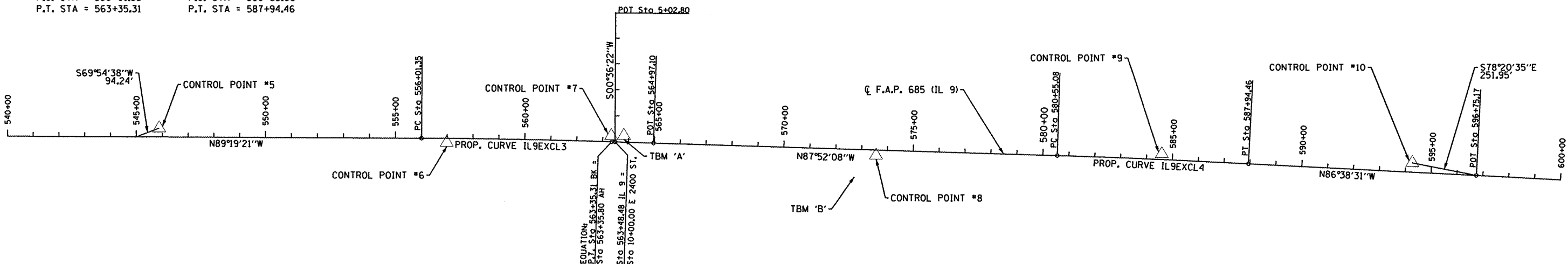
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 PI STA. = 559+68.35
 $\Delta = 1^\circ 27' 12''$ (RT)
 $D = 0^\circ 11' 53''$
 $R = 28,933.69'$
 $T = 367.00'$
 $L = 733.96'$
 $E = 2.33'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 P.C. STA = 556+01.35
 P.T. STA = 563+35.31

PROP. CURVE IL9EXCL4
 PI STA. = 584+24.78
 $\Delta = 1^\circ 13' 37''$ (RT)
 $D = 0^\circ 09' 57''$
 $R = 34,528.43'$
 $T = 369.70'$
 $L = 739.38'$
 $E = 1.98'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 P.C. STA = 580+55.08
 P.T. STA = 587+94.46

BENCHMARKS:

TBM "A" CHISED SQUARE IN CENTER OF HEADWALL FOR 16" CMP
 24.5' SOUTH OF THE CENTERLINE OF ROUTE 9 AND 36' WEST OF THE
 CENTERLINE OF OF E. 2400 STREET. ELEVATION = 590.98

 TBM "B" CHISED "L" ON THE SOUTHWEST CORNER OF CONCRETE HEADWALL
 OF A WATER STORAGE STRUCTURE AT A WATER TREATMENT PLANT
 FOR VILLAGE OF PRAIRIE CITY, APPROXIMATELY 108' NORTH OF THE
 CENTERLINE OF ROUTE 9 AT STATION 572+85 +/- ELEVATION = 596.96

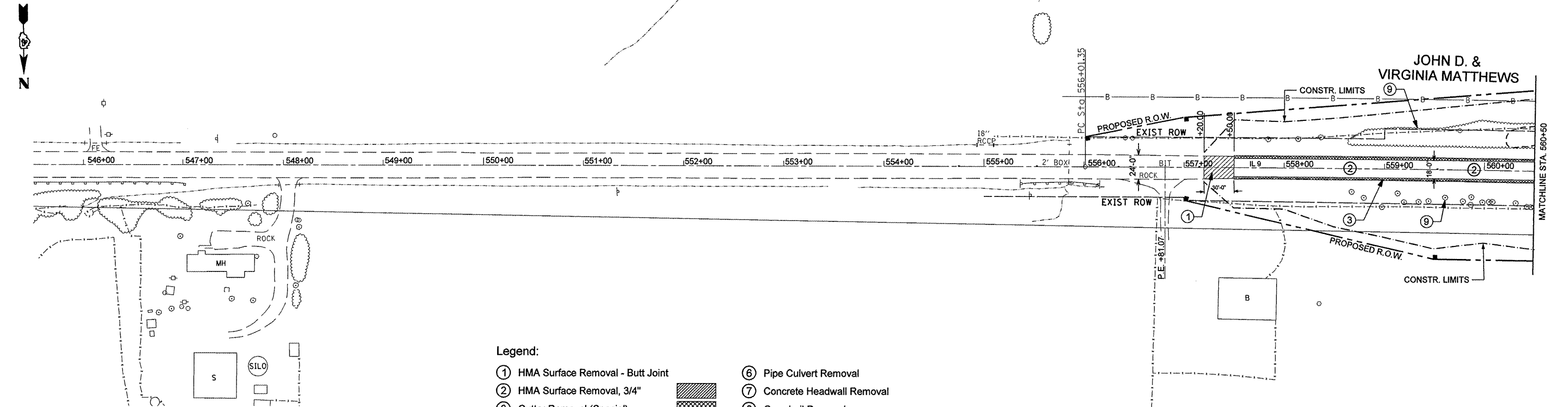


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	PLOT SCALE = 400.0000' / IN.	CHECKED - SD	REVISED -					CONTRACT NO. 68352		
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -					FED. ROAD DIST. NO. - [ILLINOIS] FED. AID PROJECT		

PLAN	SURVEYED	BY	DATE
	NOTED		
NOTE BOOK	ALIGNED	CHECKED	
	NO.		
NO.	CADD	FILE NAME	

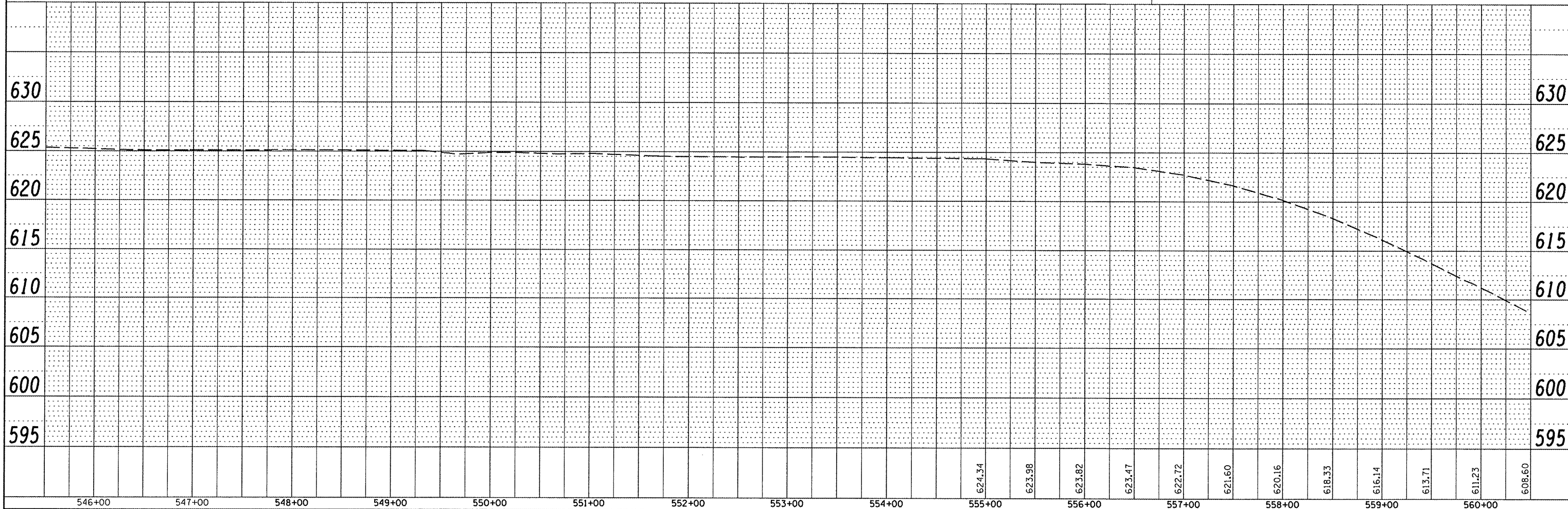
PROFILE	SURVEYED	BY	DATE
	NOTED		
NOTE BOOK	GRADES	CHECKED	
	NO.		
NO.	STRUCTURE	NOTATION	CHKD



- NOTES:
1. STRUCTURE REMOVAL WILL INCLUDE AREA OUTSIDE ABUTMENTS AS SHOWN.
 2. ALL TREES ARE TO BE REMOVED WITHIN CONSTRUCTION LIMITS.

- Legend:
- | | |
|------------------------------------|-----------------------------|
| ① HMA Surface Removal - Butt Joint | ⑥ Pipe Culvert Removal |
| ② HMA Surface Removal, 3/4" | ⑦ Concrete Headwall Removal |
| ③ Gutter Removal (Special) | ⑧ Guardrail Removal |
| ④ Pavement Removal | ⑨ Tree Removal (Acre) |
| ⑤ Structure Removal | ⑩ Driveway Pavement Removal |

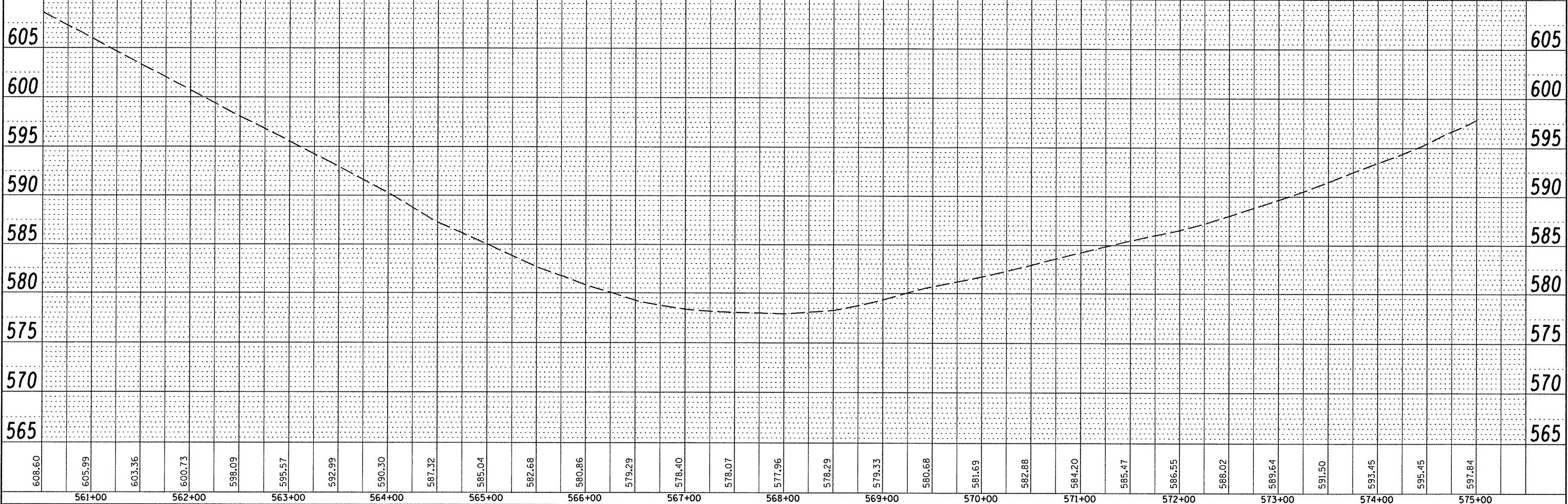
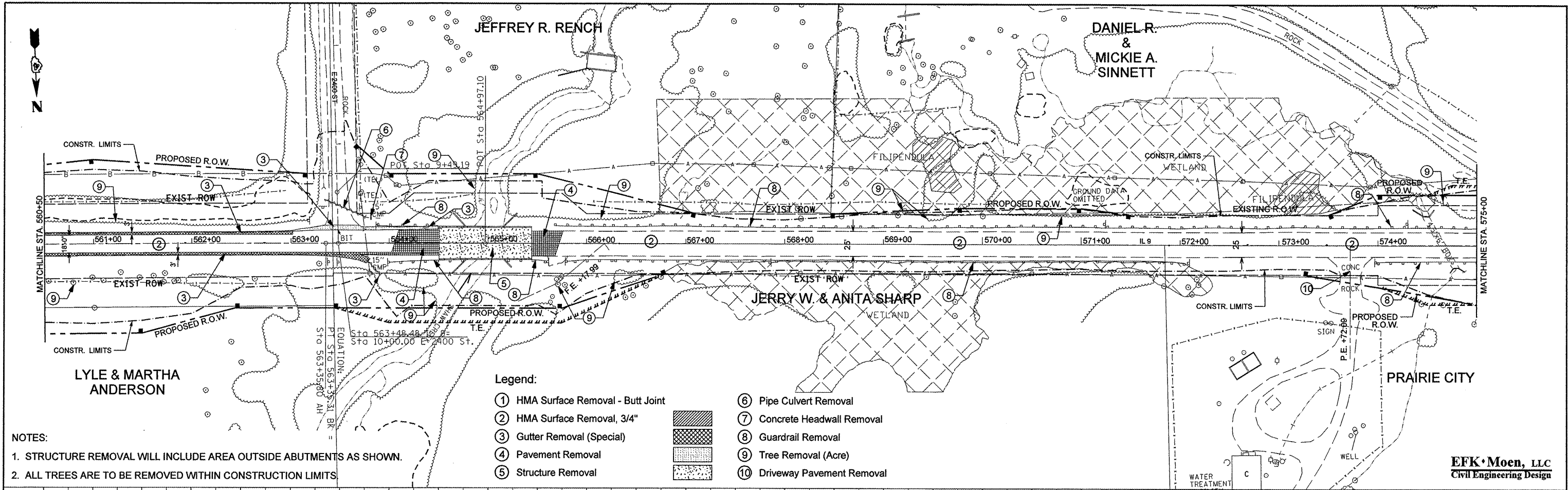
EFK Moen, LLC
Civil Engineering Design



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	PLOT SCALE = 100,0000' / IN.	CHECKED - SD	REVISED -							
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -							

DATE	BY
DESIGNED	JD
CHECKED	SD
REVISIONS	
NO.	
FILE NAME	

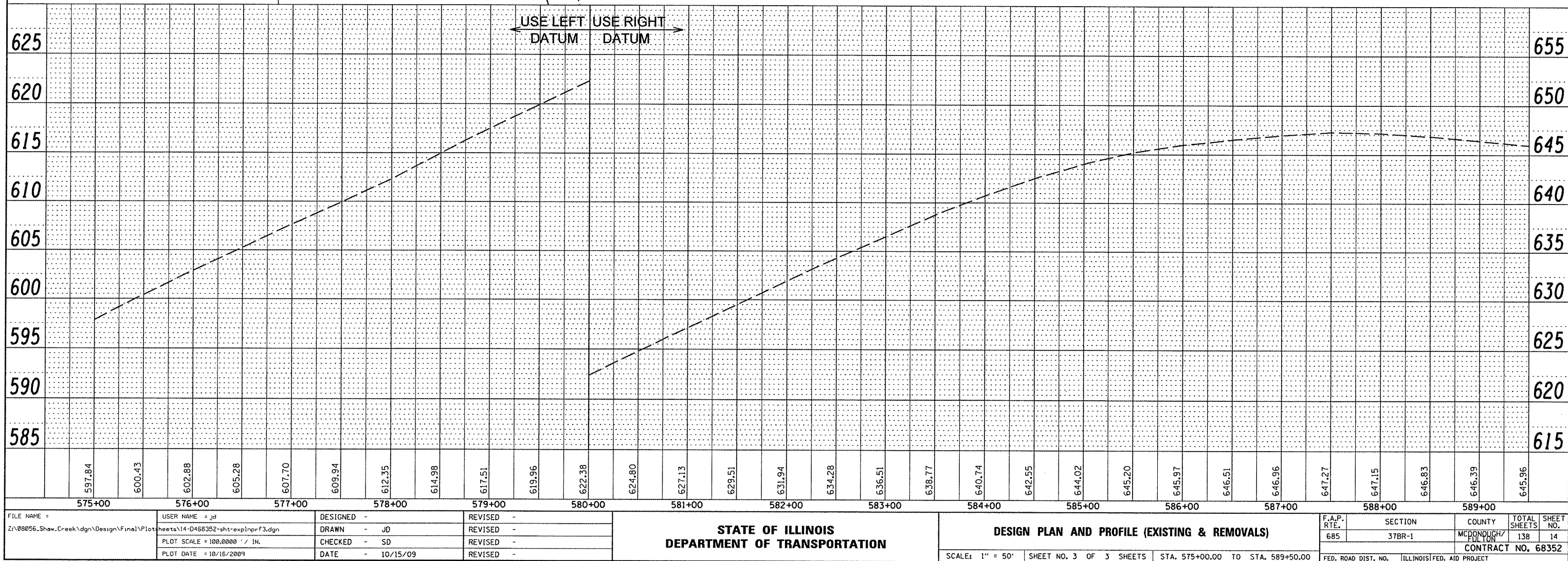
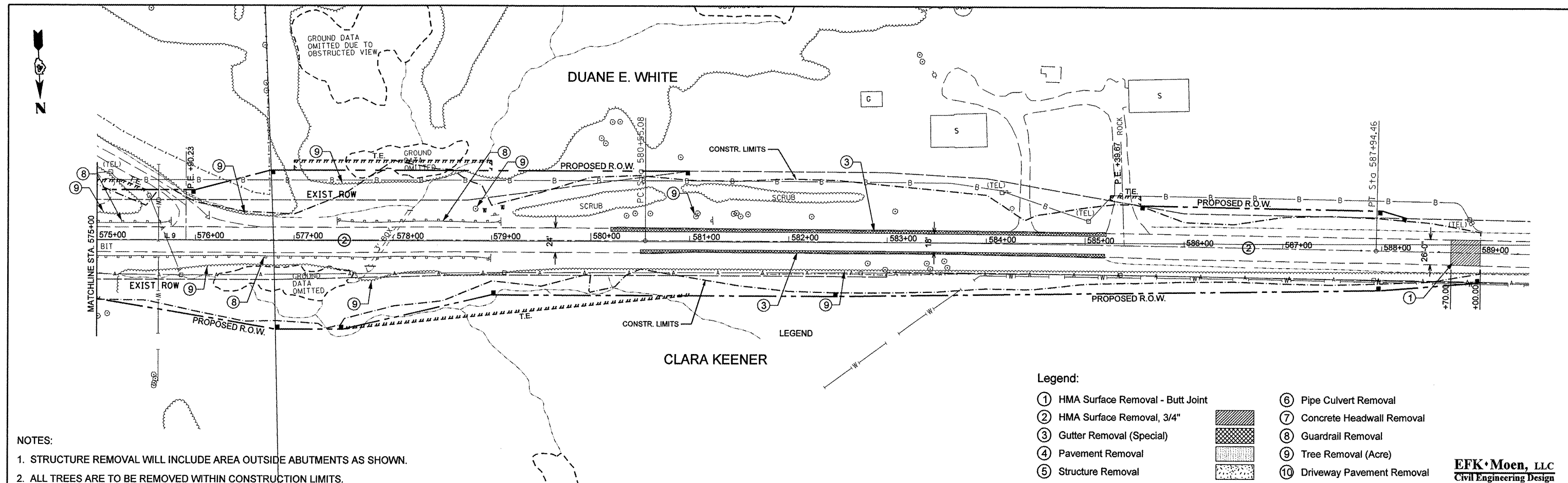
DATE	BY
DESIGNED	JD
CHECKED	SD
REVISIONS	
NO.	
FILE NAME	



FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DESIGN PLAN AND PROFILE (EXISTING & REMOVALS)	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE 100.0000' / 1" IN.	CHECKED - SD	REVISIONS	REVISED -					CONTRACT NO. 68352		
PLOT DATE 10/16/2009	DATE - 10/15/09	REVISIONS	REVISED -					FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT

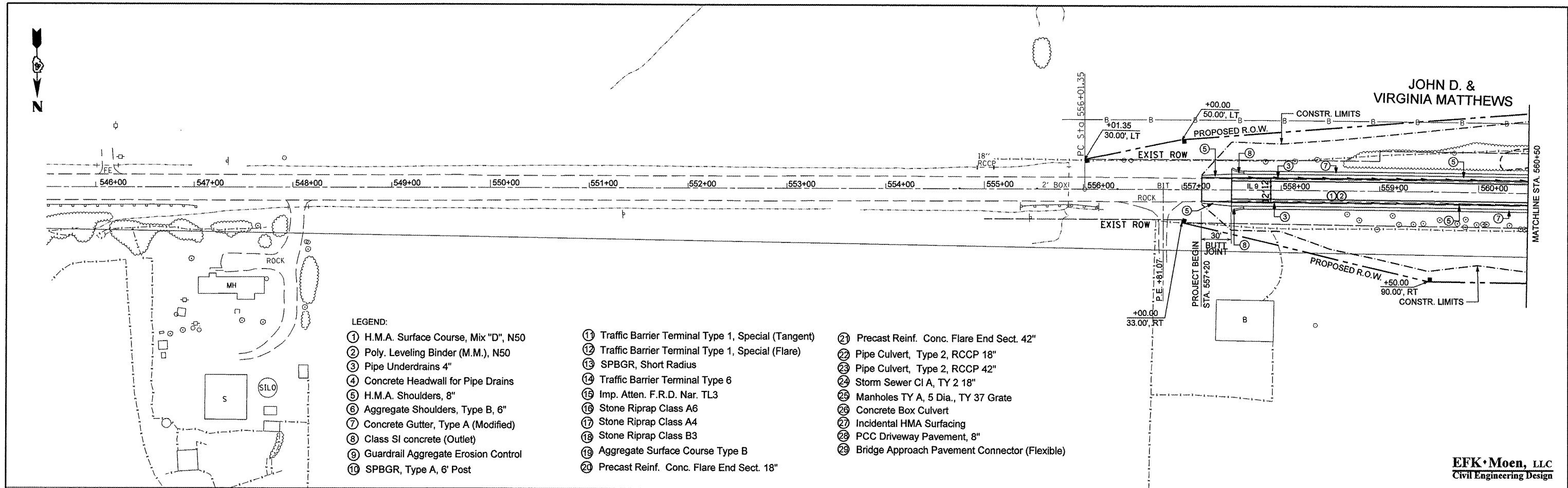
SCALE: 1" = 50' SHEET NO. 2 OF 3 SHEETS STA. 560+50.00 TO STA. 575+00.00

PROFILE	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	GRADES CHECKED _____		
	B.M. NOTED _____		
NO. _____	STRUCTURE NOTATIONS CHKD _____		

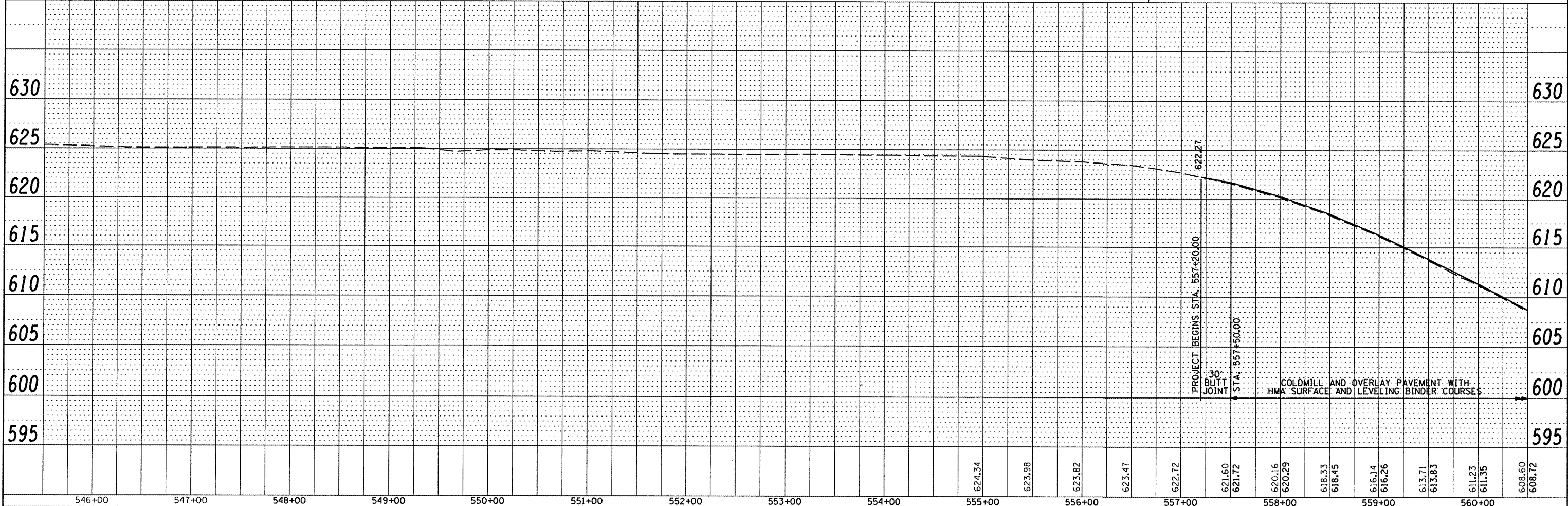


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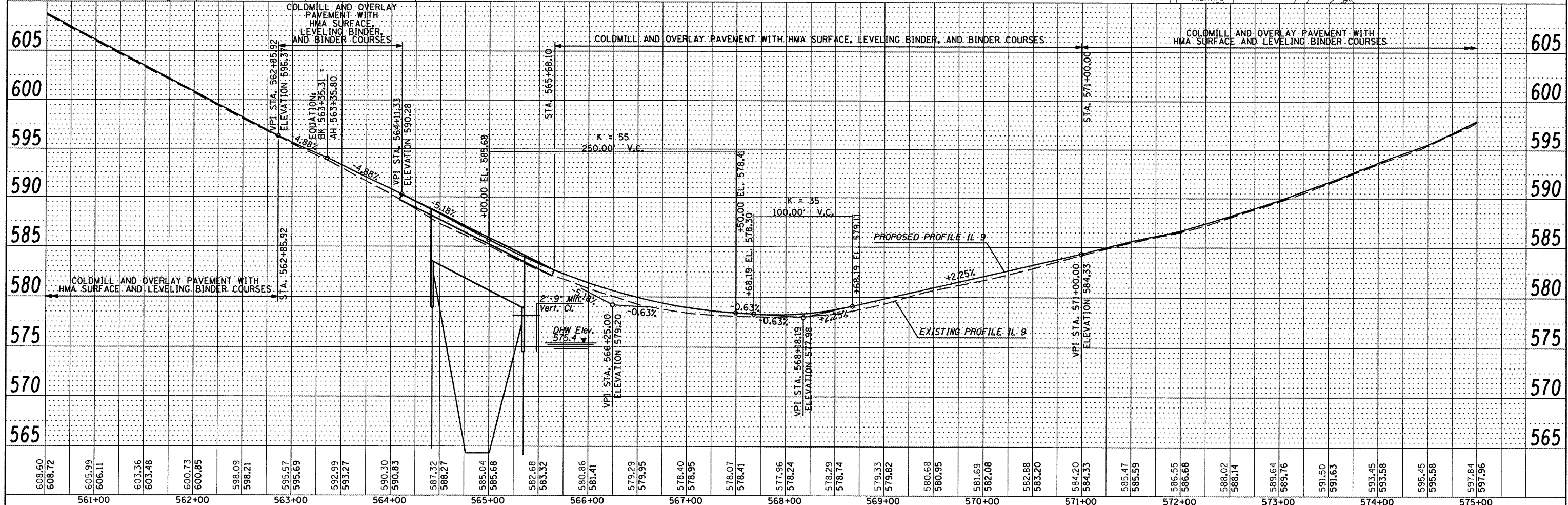
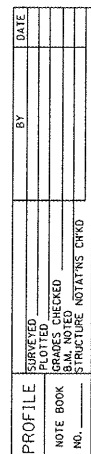
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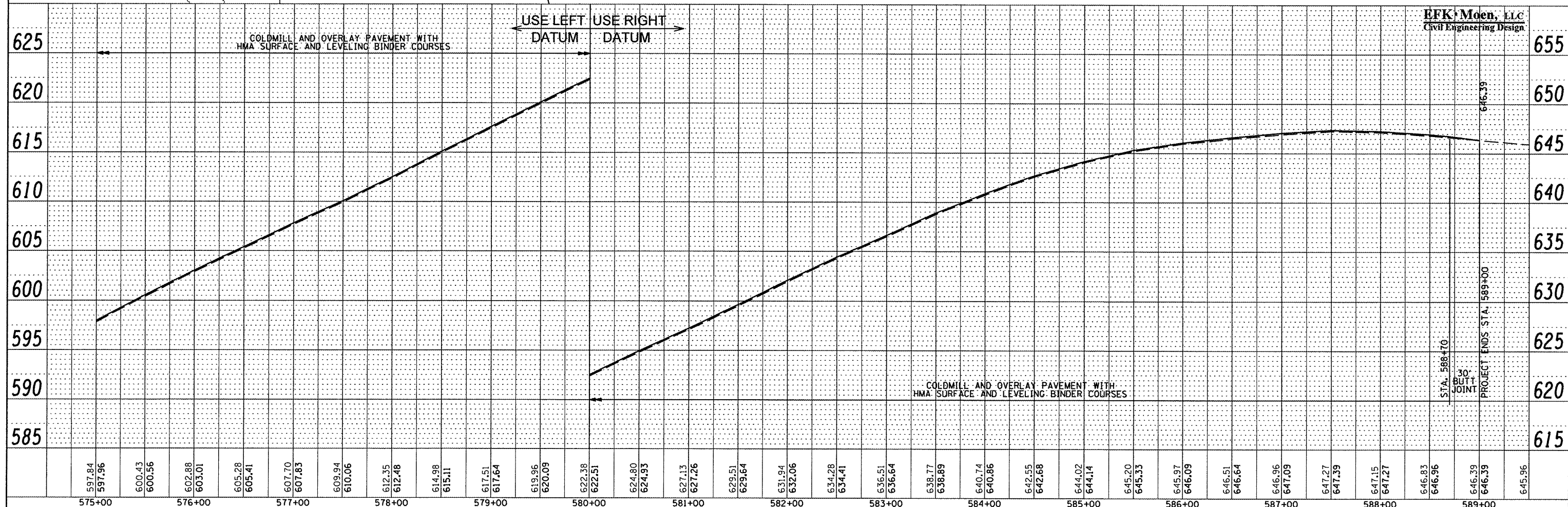
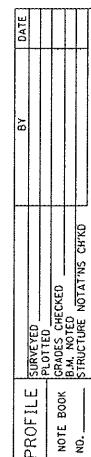
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FILE NAME =	USER NAME = jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DESIGN PLAN AND PROFILE	F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT SCALE = 100.0000' / IN.	CHECKED - SD	REVISED -	CONTRACT NO. 68352							
PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

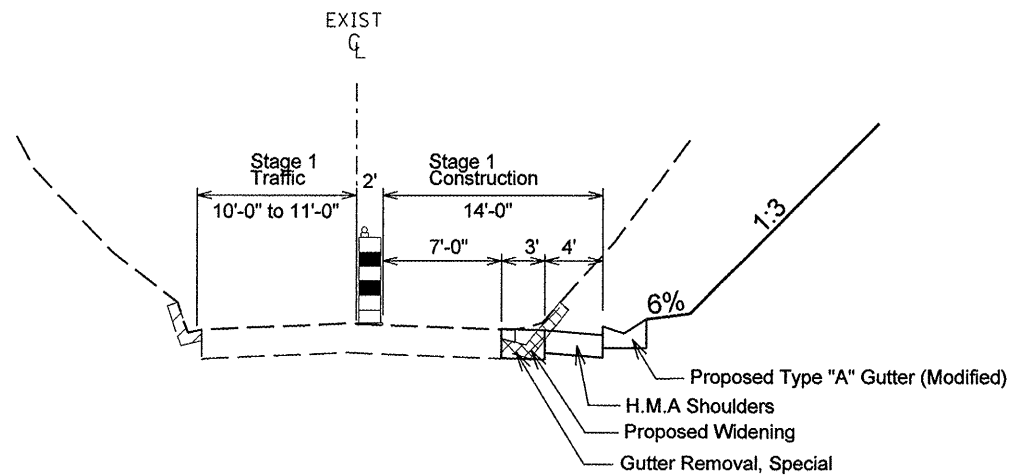


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PLOT SCALE = 100.0000 ' / IN.	CHECKED - SD	REVISED -	CONTRACT NO. 68352									
PLOT DATE = *DATE*	DATE - 10/15/09	REVISED -										
				SCALE: 1" = 50'	SHEET NO. 2 OF 3 SHEETS	STA. 560+50.00 TO STA. 575+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT				

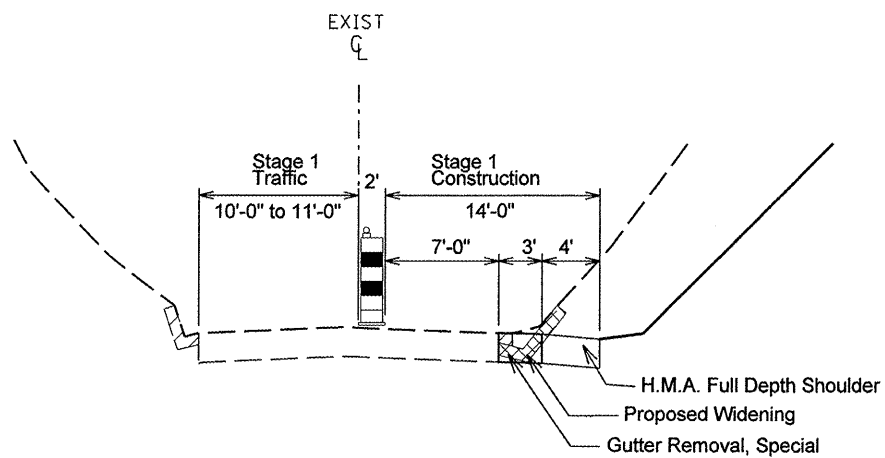


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	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -		SCALE: 1" = 50'	SHEET NO. 3 OF 3 SHEETS	STA. 575+00.00 TO STA. 589+50.00	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					

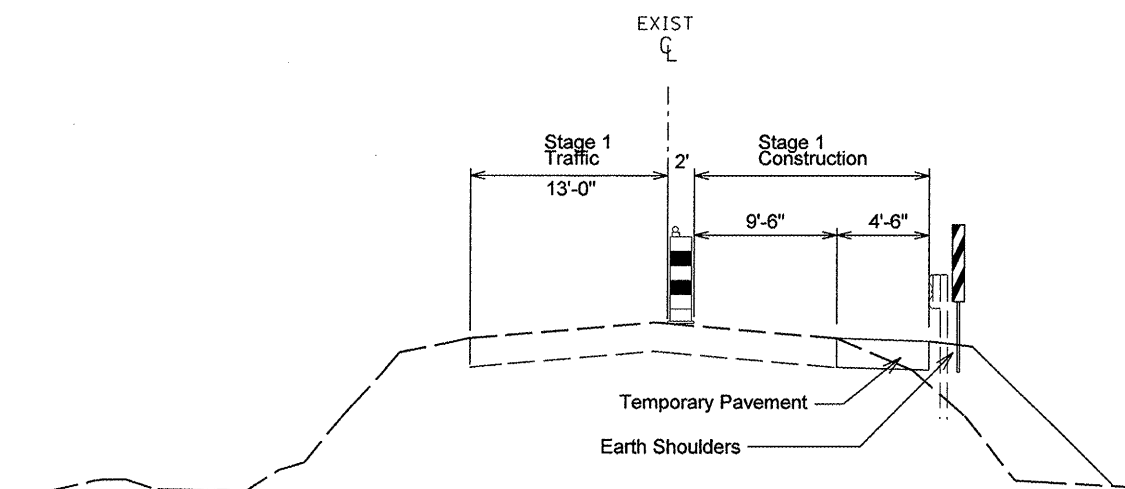
STAGE 1



STA. 557+50 TO STA. 563+03.25



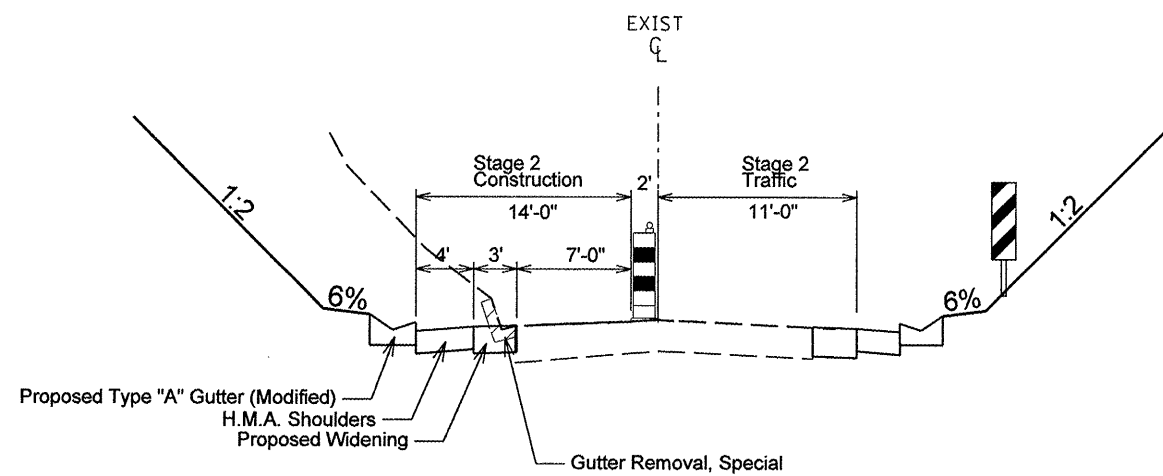
STA. 563+03.25 TO STA. 564+02.64
STA. 566+12.76 TO STA. 568+50.00



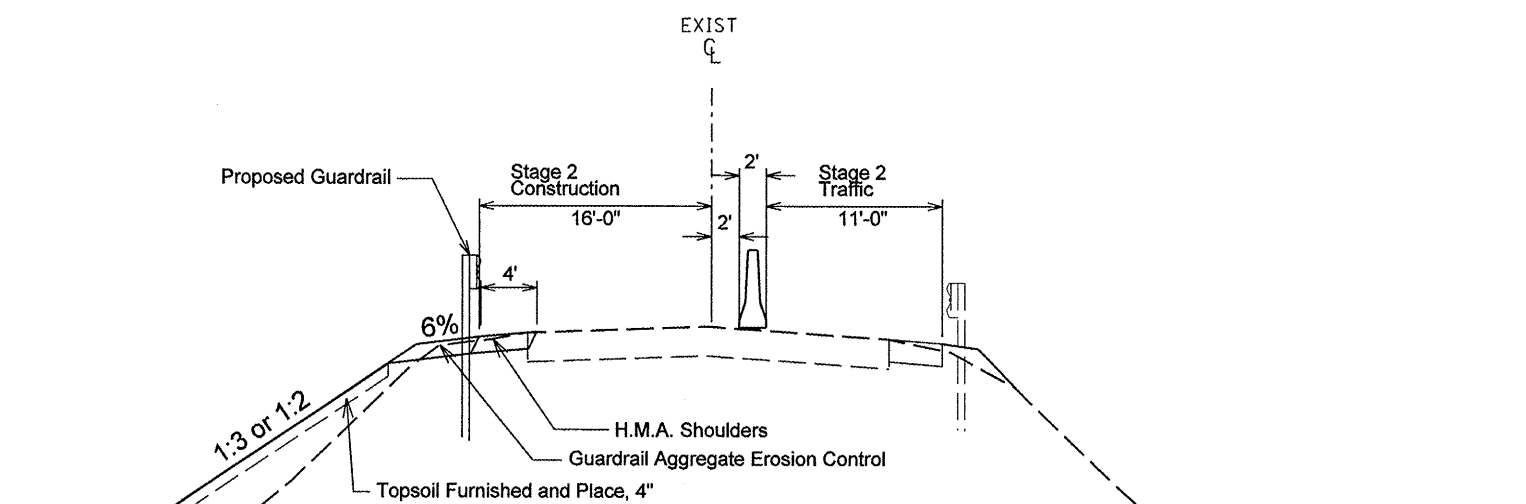
STA. 564+02.64 TO STA. 564+50.50*
STA. 565+44.04 TO STA. 566+12.76*

* TEMPORARY PAVEMENT TO BE REPLACED WITH BRIDGE APPROACH PAVEMENT, BRIDGE, SHOULDER AND ENTRANCE IN STAGE 3

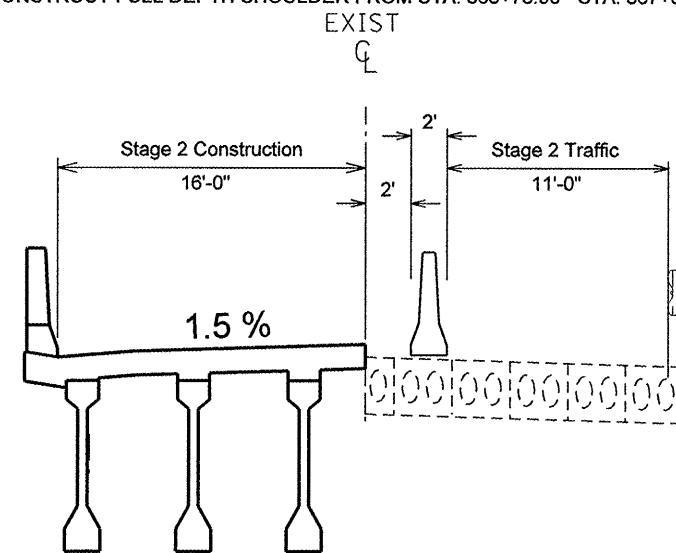
STAGE 2



STA. 557+50 TO STA. 563+00



STA. 563+00 TO STA. 564+14.25
CONSTRUCT FULL DEPTH SHOULDER FROM STA. 563+00 - STA. 564+10.53
STA. 565+69.90 TO STA. 567+75
CONSTRUCT FULL DEPTH SHOULDER FROM STA. 565+75.90 - STA. 567+00



STA. 564+11.33 TO STA. 565+66.00*
* INCLUDES BRIDGE APPROACH PAVEMENT

NOTES:

TWO CHANGEABLE MESSAGE SIGNS (CMS) SHALL BE PLACED IN ADVANCE OF THE PROJECT FOR BOTH DIRECTIONS OF TRAVEL FOR ONE WEEK PRIOR TO THE START OF CONSTRUCTION. THE CMS MAY THEN BE REMOVED AND USED AT THE DISCRETION OF THE ENGINEER. THE COST OF THE SETTING, REMOVING, AND MAINTAINING SHALL BE INCLUDED IN THE COST OF THE PAY ITEM.

EFK Moen, LLC
Civil Engineering Design

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

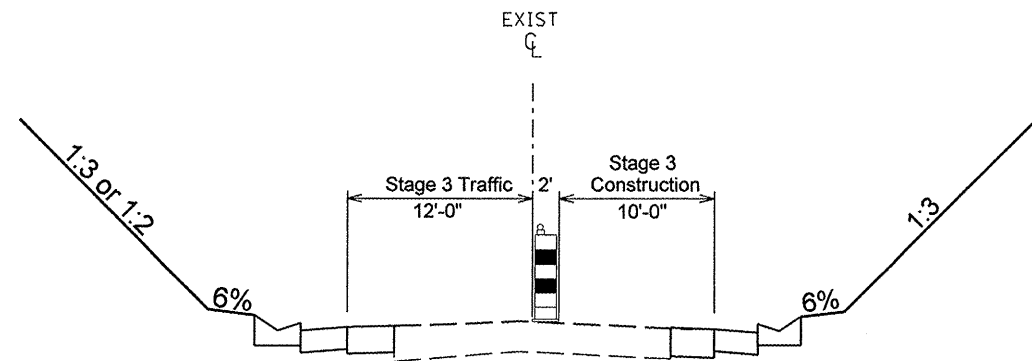
STAGING AND TRAFFIC CONTROL

SCALE: N.T.S. SHEET NO. 1 OF 16 SHEETS

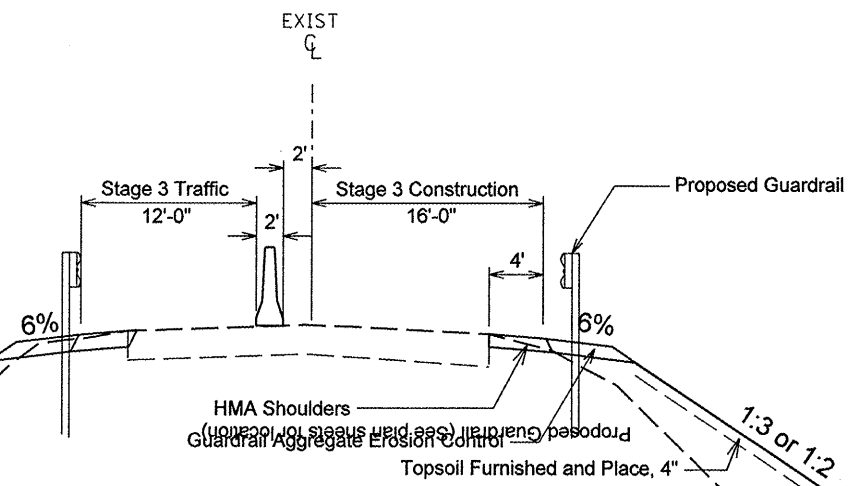
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685	37BR-1	MC DONOUGH / FULTON	138	18
CONTRACT NO. 68352				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

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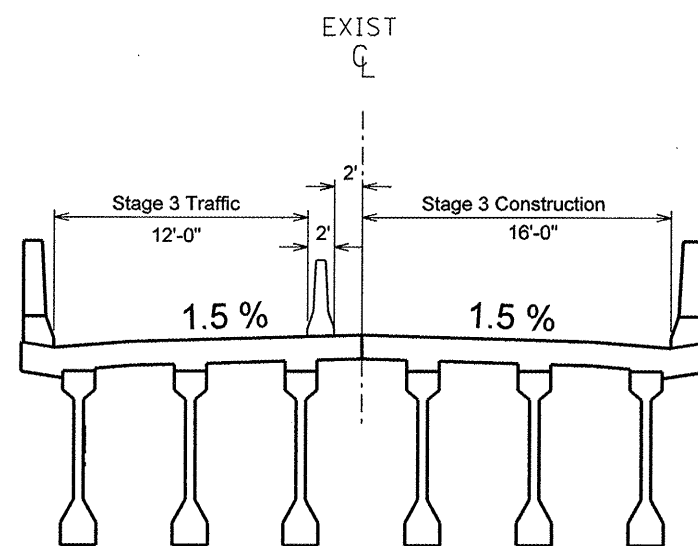
STAGE 3



STA. 557+50 TO STA. 563+00

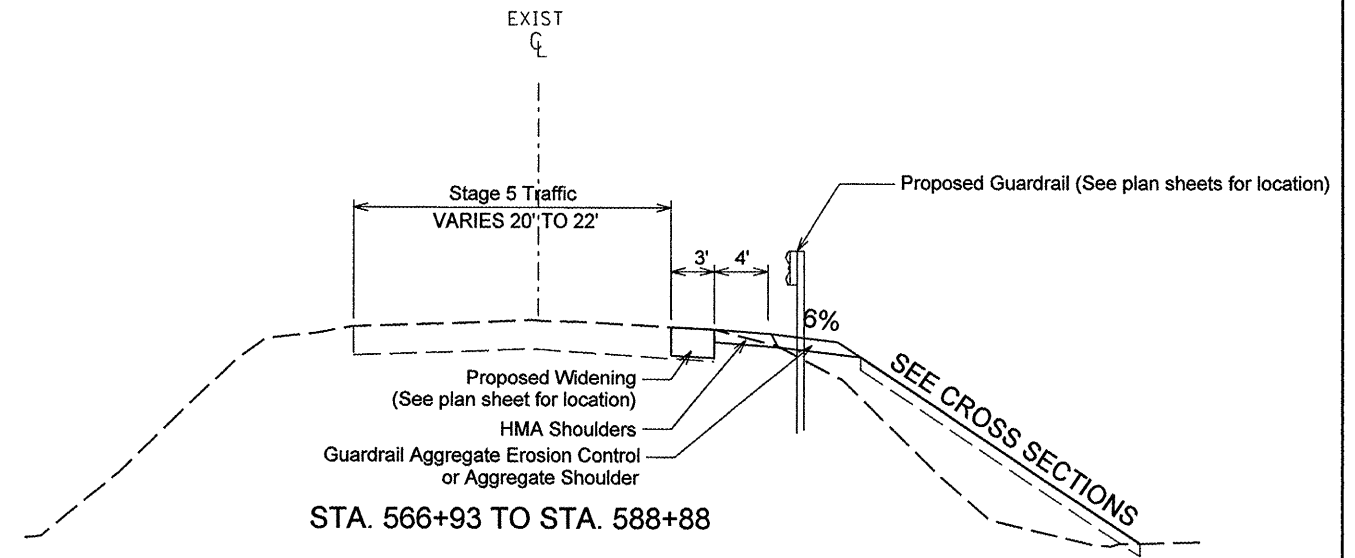


STA. 563+39.74 TO STA. 564+11.33
STA. 565+66 TO STA. 566+18



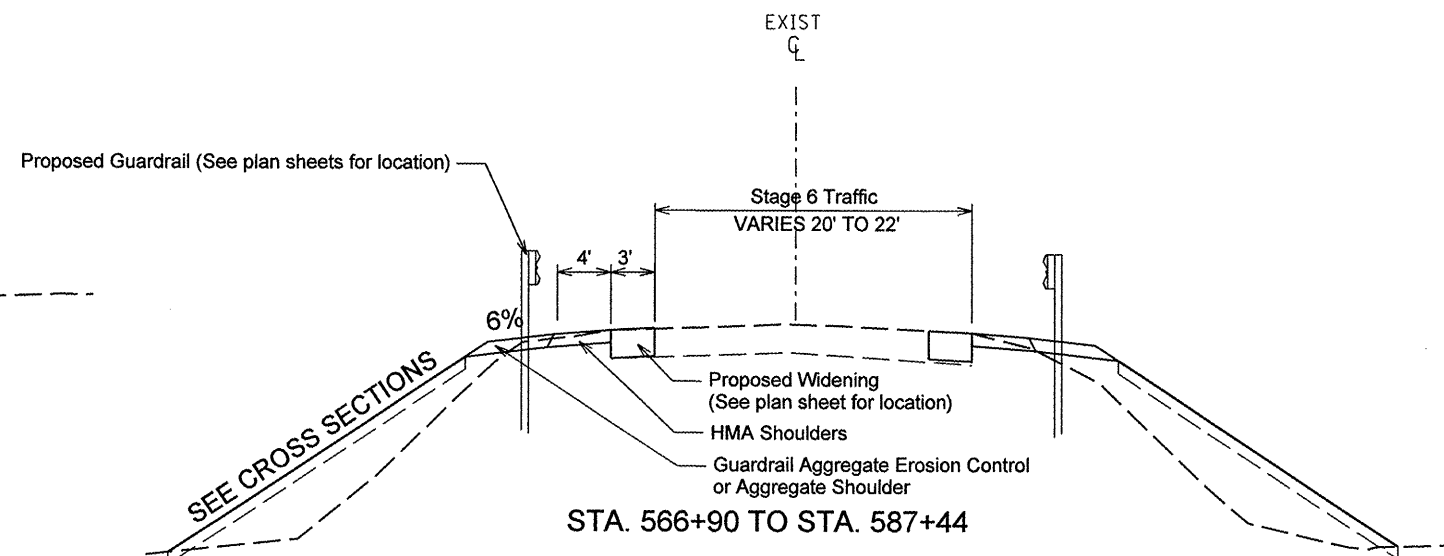
STA. 564+11.33 TO STA. 565+66.00*
* INCLUDES BRIDGE APPROACH PAVEMENT

STAGE 5



STA. 566+93 TO STA. 588+88

STAGE 6



STA. 566+90 TO STA. 587+44

NOTES:

TWO CHANGEABLE MESSAGE SIGNS (CMS) SHALL BE PLACED IN ADVANCE OF THE PROJECT FOR BOTH DIRECTIONS OF TRAVEL FOR ONE WEEK PRIOR TO THE START OF CONSTRUCTION. THE CMS MAY THEN BE REMOVED AND USED AT THE DISCRETION OF THE ENGINEER. THE COST OF THE SETTING, REMOVING, AND MAINTAINING SHALL BE INCLUDED IN THE COST OF THE PAY ITEM.

EFK Moen, LLC
Civil Engineering Design

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING AND TRAFFIC CONTROL

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH	138	19
CONTRACT NO. 68352				

SCALE: N.T.S. SHEET NO. 2 OF 16 SHEETS

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

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TEMPORARY BRIDGE TRAFFIC SIGNALS NOTES (STAGE 1, 2, AND 3)

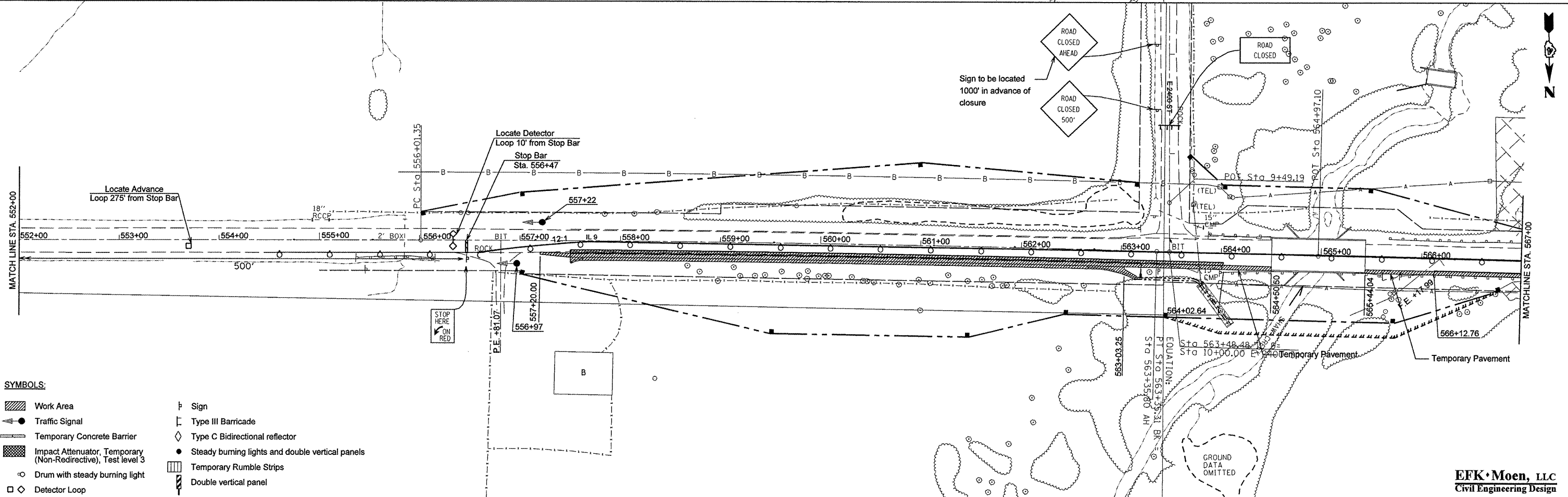
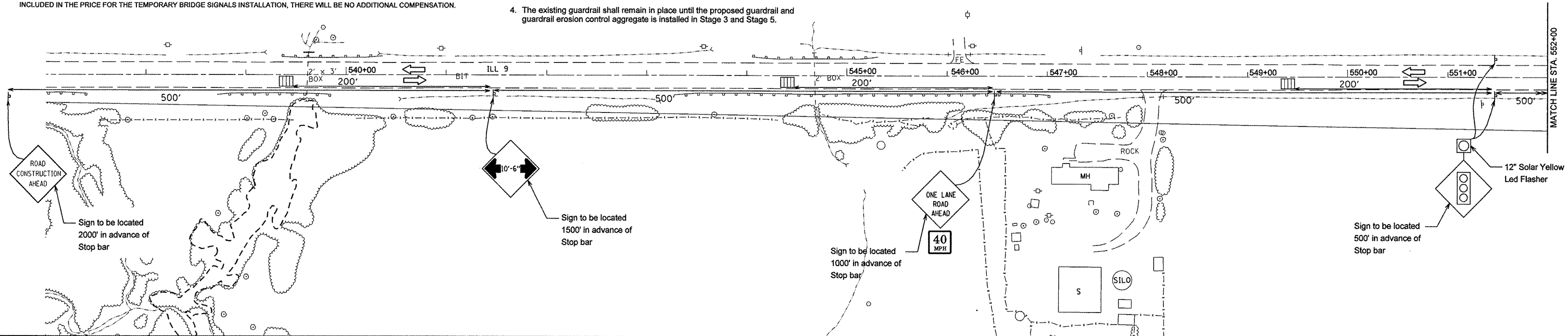
1. TWO PHASE SIGNAL OPERATION. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS.
2. STOP BAR PLACEMENT, TEMPORARY CONCRETE BARRIER, AND SIGNAL PLACEMENT/ DETAILS SHALL BE AS SHOWN.
3. ADVANCE WARNING SIGNS ARE REQUIRED AS SHOWN. THE CONTRACTOR SHALL INSTALL HIGH INTENSITY SOLAR POWERED YELLOW FLASHERS ON THE ADVANCE WARNING SIGN. THE CONTRACTOR SHALL RETURN THE FLASHERS TO THE TRAFFIC CONTROL SUPERVISOR UPON REMOVAL OF THE TEMPORARY BRIDGE SIGNALS.
4. ALL TRAFFIC SIGNAL AND ADVANCE WARNING FLASHER SECTIONS SHALL HAVE 12" DIAMETER LENSES.
5. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
6. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL M.U.T.C.D. REQUIREMENTS.
7. ALL LABOR AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE PRICE FOR THE TEMPORARY BRIDGE SIGNALS INSTALLATION, THERE WILL BE NO ADDITIONAL COMPENSATION.

STAGE 1 CONSTRUCTION
(Sequence of construction / Applications)

1. Set up Traffic Control for Stage 1 Construction per Stage 1 Plans and Standard 701316.
2. On the right, remove existing gutter, outlet and shoulder and construct pavement widening, 5-3/4" of the 8" HMA shoulder, and Type A Gutter from Sta. 557+20 to Sta. 563+03.25, pavement widening and 5-3/4" of the 8" HMA shoulder from Sta. 563+03.25 to Sta. 564+02.64, and temporary pavement from Sta. 564+02.64 to Sta. 564+50.50 (full depth shoulder shall be constructed from Sta. 563+03.25 to Sta. 564+02.64).
3. On the right, remove existing shoulder and construct temporary pavement from Sta. 565+44.04 to Sta. 566+12.76 and 5-3/4" of the 8" HMA shoulder from Sta. 566+12.76 to Sta. 568+50 (full depth shoulder shall be constructed from Sta. 566+12.76 to Sta. 568+50). Ingress and egress shall be maintained for all entrances during construction.
4. The existing guardrail shall remain in place until the proposed guardrail and guardrail erosion control aggregate is installed in Stage 3 and Stage 5.

NOTES:

- ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.
- THE REMAINING 2-1/4" OF THE 8" HMA SHOULDER SHALL BE PLACED IN STAGE 4.
- ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.



- SYMBOLS:**
- Work Area
 - Traffic Signal
 - Temporary Concrete Barrier
 - Impact Attenuator, Temporary (Non-Redirective), Test level 3
 - Drum with steady burning light
 - Detector Loop
 - Sign
 - Type III Barricade
 - Type C Bidirectional reflector
 - Steady burning lights and double vertical panels
 - Temporary Rumble Strips
 - Double vertical panel

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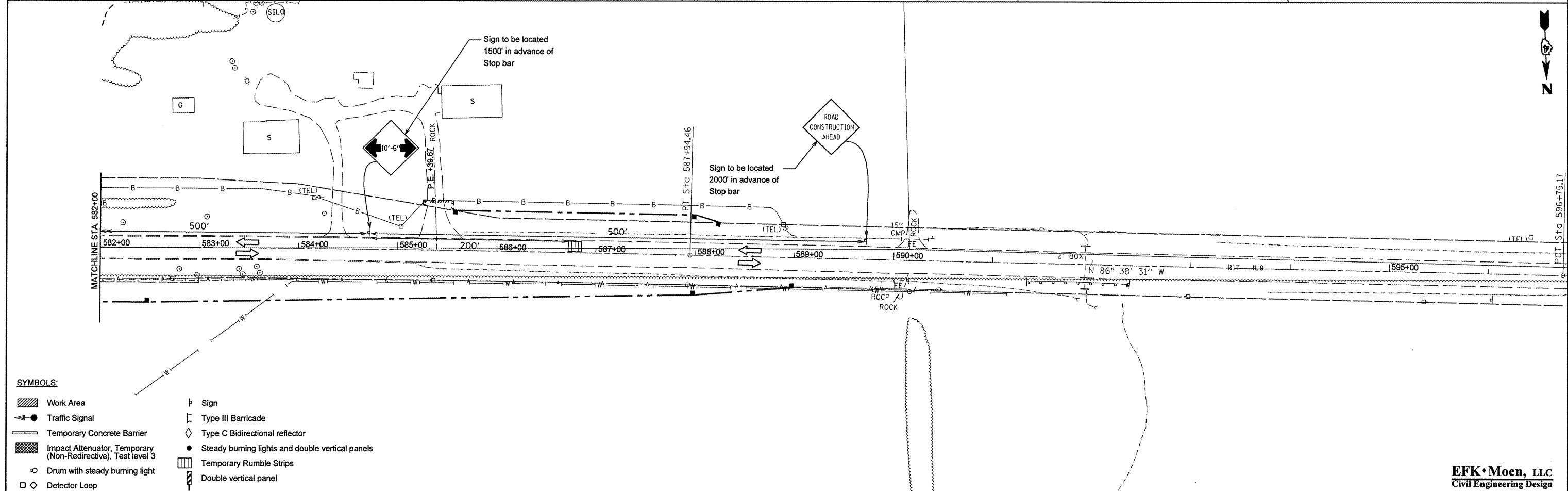
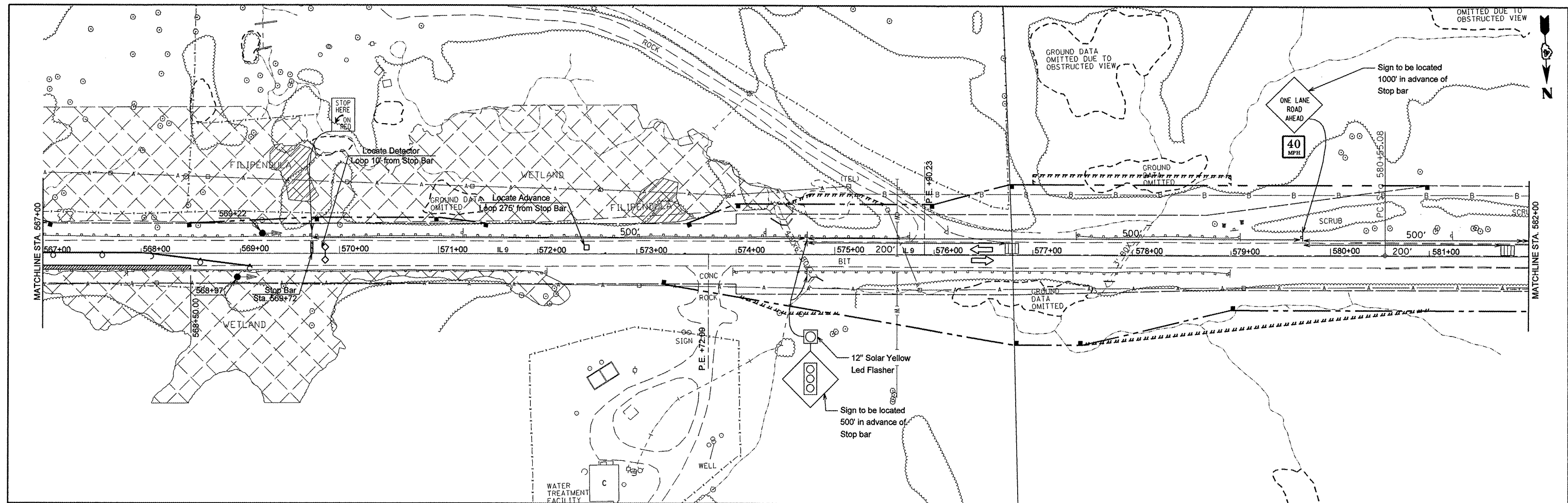
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 PLAN

SCALE: 1" = 50' SHEET NO. 3 OF 16 SHEETS STA. 540+00.00 TO STA. 567+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	378R-1	MC DONOUGH	138	20
CONTRACT NO. 68352				

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PLOT DATE = 10/16/2009		CHECKED - SD	REVISED -
		DATE - 10/15/09	REVISED -



SYMBOLS:

- | | |
|--|--|
| Work Area | Sign |
| Traffic Signal | Type III Barricade |
| Temporary Concrete Barrier | Type C Bidirectional reflector |
| Impact Attenuator, Temporary (Non-Redirective), Test level 3 | Steady burning lights and double vertical panels |
| Drum with steady burning light | Temporary Rumble Strips |
| Detector Loop | Double vertical panel |

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PLOT DATE = 10/16/2009	DATE - 10/15/09		REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE 1 PLAN

SCALE: 1" = 50' SHEET NO. 4 OF 16 SHEETS STA. 567+00.00 TO STA. 596+75.17

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/PORTER	138	21
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EFK Moen, LLC
Civil Engineering Design

TEMPORARY BRIDGE TRAFFIC SIGNALS NOTES (STAGE 1, 2, AND 3)

1. TWO PHASE SIGNAL OPERATION. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS.
2. STOP BAR PLACEMENT, TEMPORARY CONCRETE BARRIER, AND SIGNAL PLACEMENT/ DETAILS SHALL BE AS SHOWN.
3. ADVANCE WARNING SIGNS ARE REQUIRED AS SHOWN. THE CONTRACTOR SHALL INSTALL HIGH INTENSITY SOLAR POWERED YELLOW FLASHERS ON THE ADVANCE WARNING SIGN. THE CONTRACTOR SHALL RETURN THE FLASHERS TO THE TRAFFIC CONTROL SUPERVISOR UPON REMOVAL OF THE TEMPORARY BRIDGE SIGNALS.
4. ALL TRAFFIC SIGNAL AND ADVANCE WARNING FLASHER SECTIONS SHALL HAVE 12" DIAMETER LENSES.
5. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
6. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL M.U.T.C.D. REQUIREMENTS.
7. ALL LABOR AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE PRICE FOR THE TEMPORARY BRIDGE SIGNALS INSTALLATION, THERE WILL BE NO ADDITIONAL COMPENSATION.

STAGE 2 CONSTRUCTION (Sequence of construction / Applications)

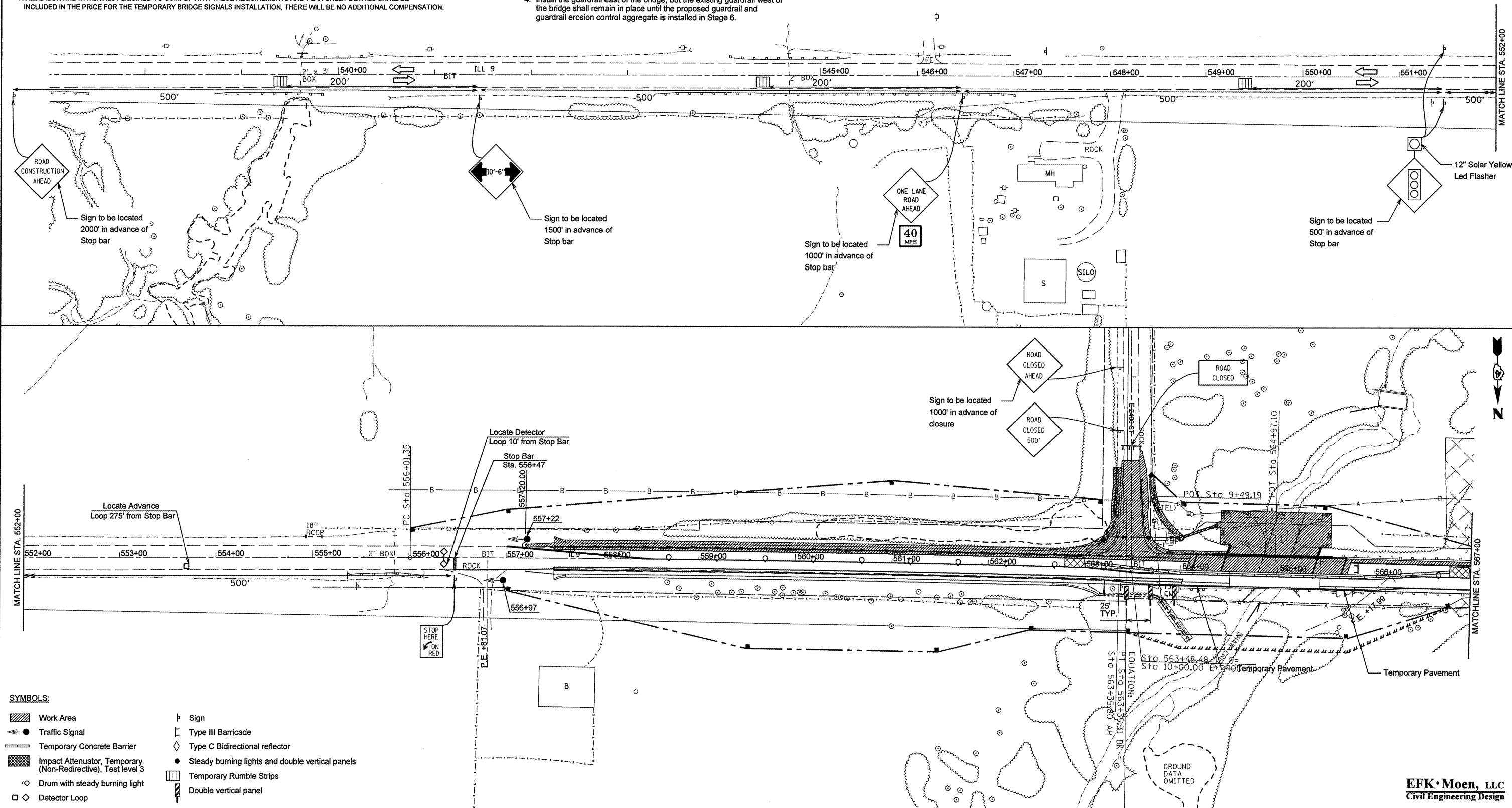
1. Set up Traffic Control for Stage 2 Construction per Stage 2 Plans and Standard 701321.
2. On the left, remove existing gutter, outlet and shoulder and construct all improvements, including pavement widening, pavement, 5-3/4" of the 8" HMA shoulders, and the left side of the bridge from Sta. 557+20 to Sta. 568+50 (full depth shoulders shall be constructed from Sta. 563+00 to Sta. 564+10.53 and Sta. 565+75.90 to Sta. 567+00). Construct storm sewer improvements under E 2400 St. and improvements to E 2400 St.
3. Install temporary ramps on either side of the bridge at a taper rate of 40:1 (H.V.).
4. Install the guardrail east of the bridge, but the existing guardrail west of the bridge shall remain in place until the proposed guardrail and guardrail erosion control aggregate is installed in Stage 6.

NOTES:

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

THE REMAINING 2-1/4" OF THE 8" HMA SHOULDER SHALL BE PLACED IN STAGE 4.

ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.



SYMBOLS:

- Work Area
- Traffic Signal
- Temporary Concrete Barrier
- Impact Attenuator, Temporary (Non-Redirective), Test level 3
- Drum with steady burning light
- Detector Loop
- Sign
- Type III Barricade
- Type C Bidirectional reflector
- Steady burning lights and double vertical panels
- Temporary Rumble Strips
- Double vertical panel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 PLAN

SCALE: 1" = 50' SHEET NO. 5 OF 16 SHEETS STA. 540+00.00 TO STA. 567+00.00

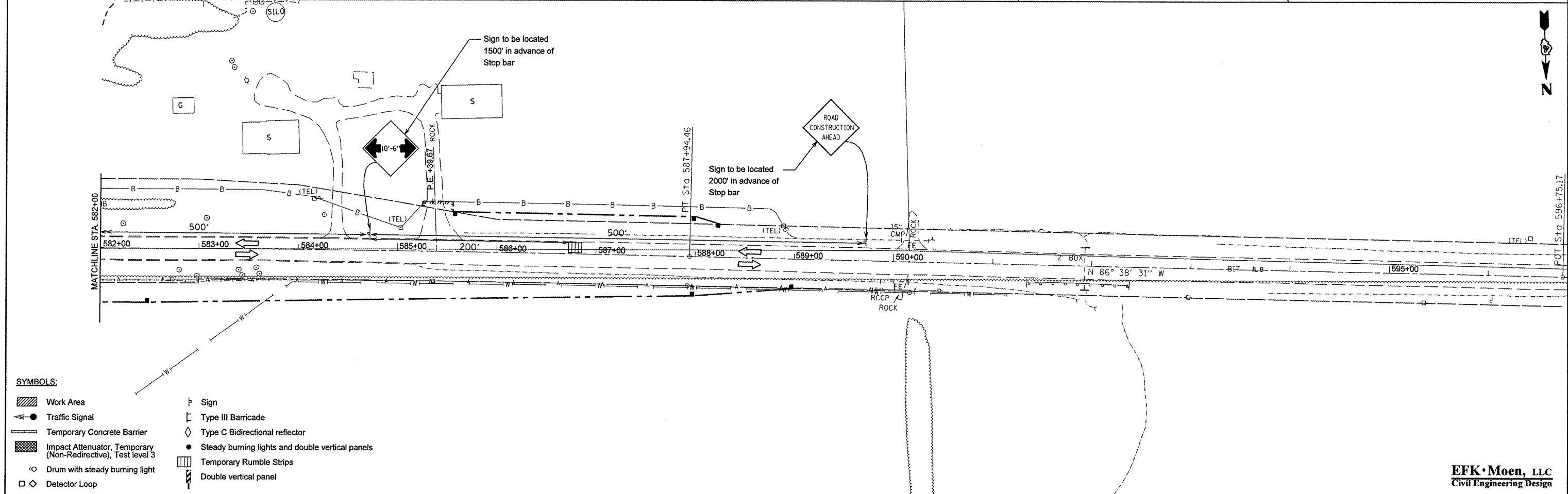
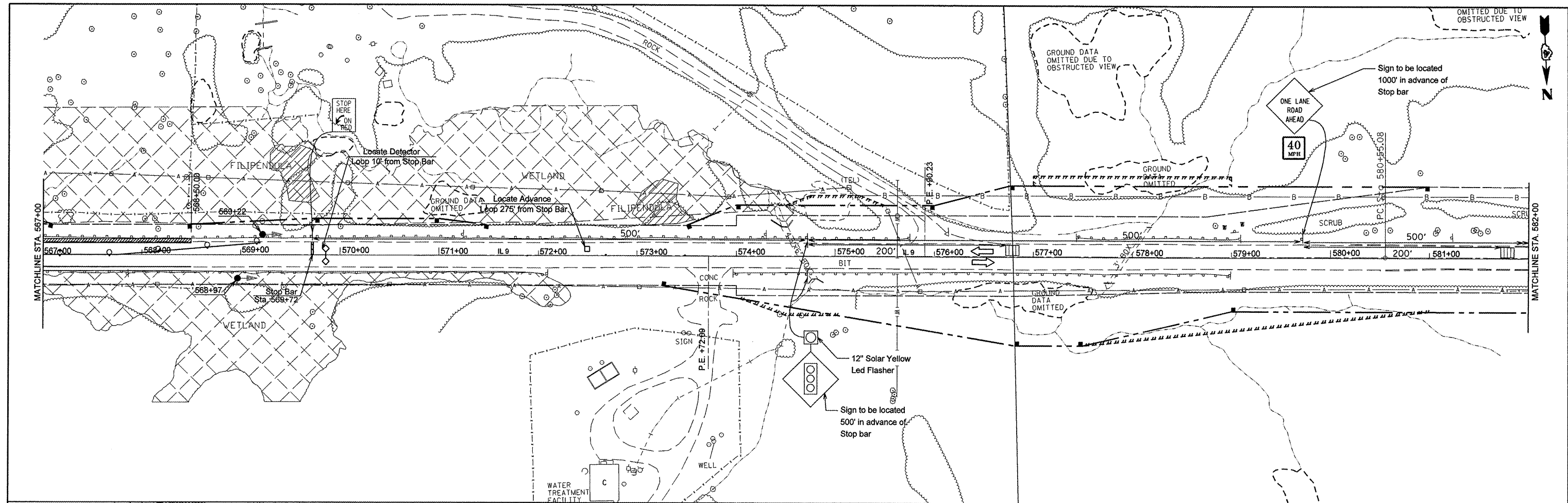
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH/ POLK	138	22
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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DESIGNED -
DRAWN - JD
CHECKED - SD
DATE - 10/15/09

REVISED -
REVISED -
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REVISED -

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Civil Engineering Design



SYMBOLS:

- | | |
|--|--|
| Work Area | Sign |
| Traffic Signal | Type III Barricade |
| Temporary Concrete Barrier | Type C Bidirectional reflector |
| Impact Attenuator, Temporary (Non-Redirective), Test level 3 | Steady burning lights and double vertical panels |
| Drum with steady burning light | Temporary Rumble Strips |
| Detector Loop | Double vertical panel |

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE 2 PLAN

SCALE: 1" = 50' SHEET NO. 6 OF 16 SHEETS STA. 567+00.00 TO STA. 596+75.17

F.A.P. RTE. 685	SECTION 37BR-1	COUNTY MC DONOUGH/ POLK	TOTAL SHEETS 138	SHEET NO. 23
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EFK Moen, LLC
Civil Engineering Design

TEMPORARY BRIDGE TRAFFIC SIGNALS NOTES (STAGE 1, 2, AND 3)

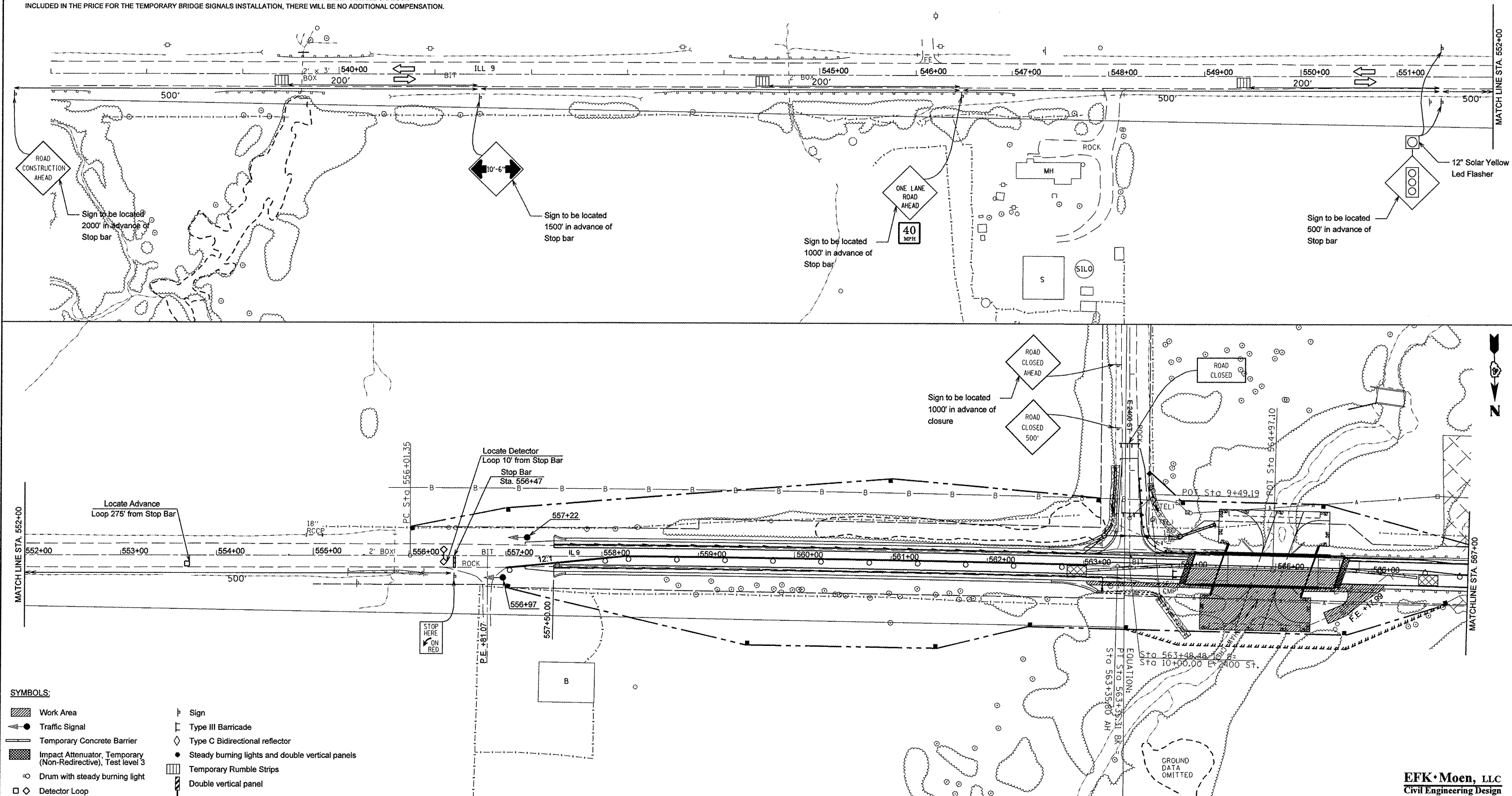
1. TWO PHASE SIGNAL OPERATION. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS.
2. STOP BAR PLACEMENT, TEMPORARY CONCRETE BARRIER, AND SIGNAL PLACEMENT/ DETAILS SHALL BE AS SHOWN.
3. ADVANCE WARNING SIGNS ARE REQUIRED AS SHOWN. THE CONTRACTOR SHALL INSTALL HIGH INTENSITY SOLAR POWERED YELLOW FLASHERS ON THE ADVANCE WARNING SIGN. THE CONTRACTOR SHALL RETURN THE FLASHERS TO THE TRAFFIC CONTROL SUPERVISOR UPON REMOVAL OF THE TEMPORARY BRIDGE SIGNALS.
4. ALL TRAFFIC SIGNAL AND ADVANCE WARNING FLASHER SECTIONS SHALL HAVE 12" DIAMETER LENSES.
5. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE PLANS OR DIRECTED BY THE ENGINEER.
6. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL M.U.T.C.D. REQUIREMENTS.
7. ALL LABOR AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE PRICE FOR THE TEMPORARY BRIDGE SIGNALS INSTALLATION, THERE WILL BE NO ADDITIONAL COMPENSATION.

STAGE 3 CONSTRUCTION
(Sequence of construction / Applications)

1. Set up Traffic Control for Stage 3 Construction per Stage 3 Plans and Standard 701321.
2. On the right, remove temporary pavement and construct the right side of the bridge, bridge approach pavement, 5-3/4" of the 8" HMA shoulders and the entrance at Sta. 566+17.99. Ingress and egress shall be maintained to all entrances during construction.
3. Install temporary ramps on either side of the bridge at a taper rate of 40:1 (H:V).
4. Install the guardrail on the northwest and northeast corners of the bridge.

NOTES:

- ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.
- THE REMAINING 2-1/4" OF THE 8" HMA SHOULDER SHALL BE PLACED IN STAGE 4.
- ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.



SYMBOLS:

- Work Area
- Traffic Signal
- Temporary Concrete Barrier
- Impact Attenuator, Temporary (Non-Reductive), Test level 3
- Drum with steady burning light
- Detector Loop
- Sign
- Type III Barricade
- Type C Bidirectional reflector
- Steady burning lights and double vertical panels
- Temporary Rumble Strips
- Double vertical panel

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

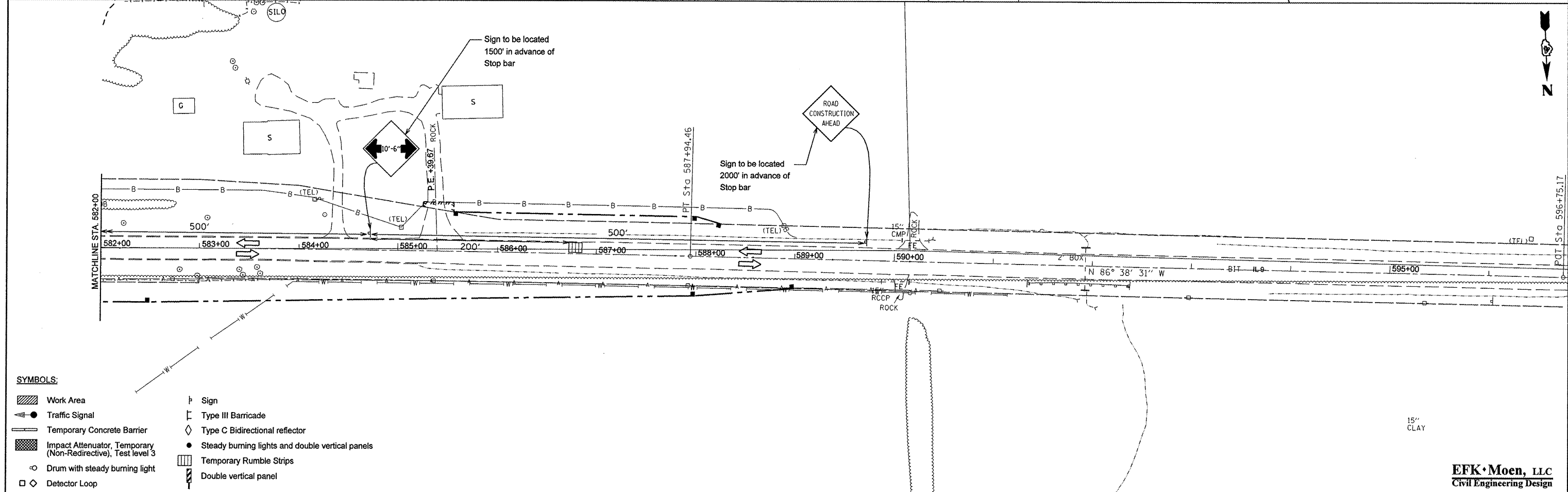
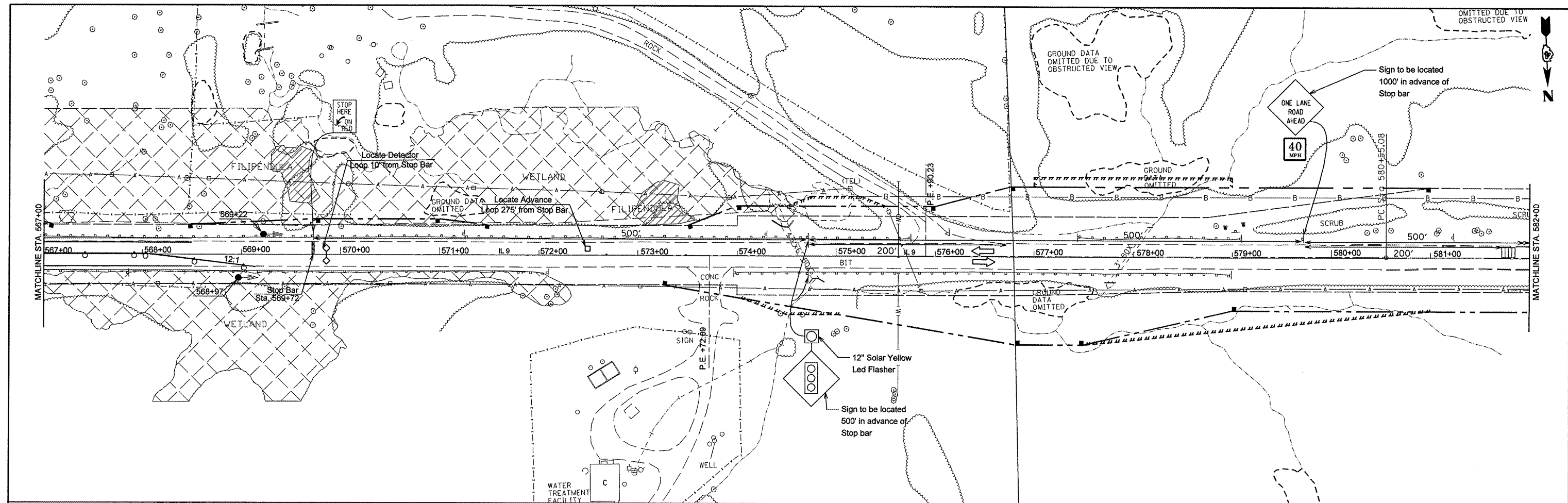
STAGE 3 PLAN

SCALE: 1" = 50' SHEET NO. 7 OF 16 SHEETS STA. 540+00.00 TO STA. 567+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/	138	24
CONTRACT NO. 68352				

EFK Moen, LLC
Civil Engineering Design

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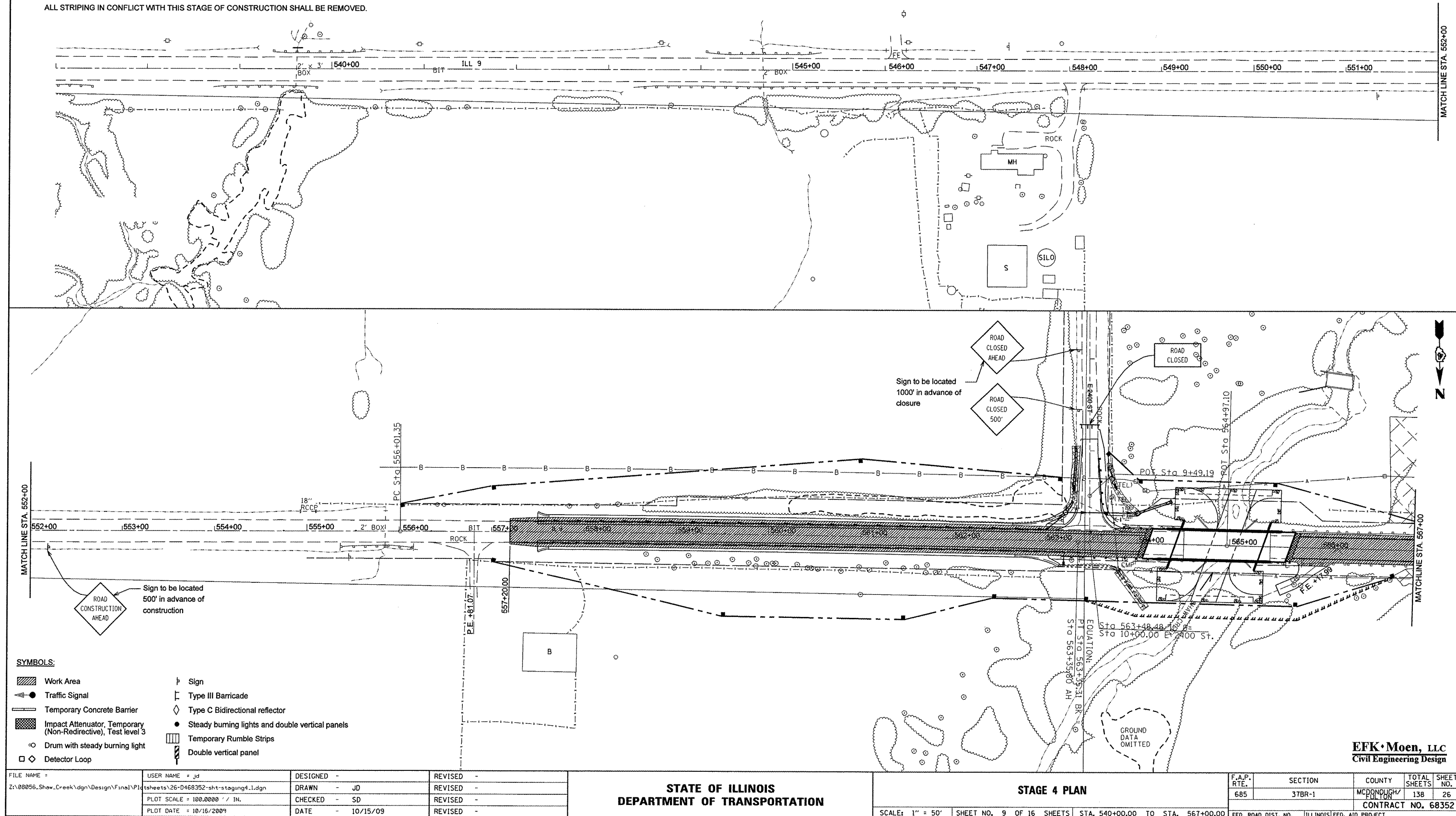


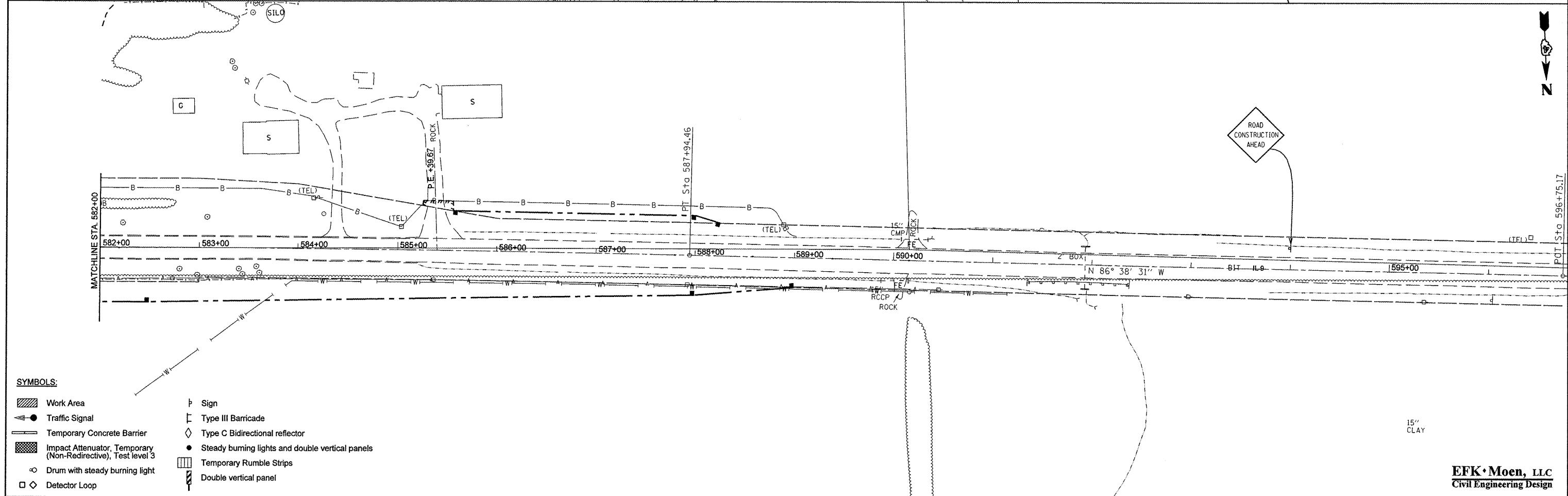
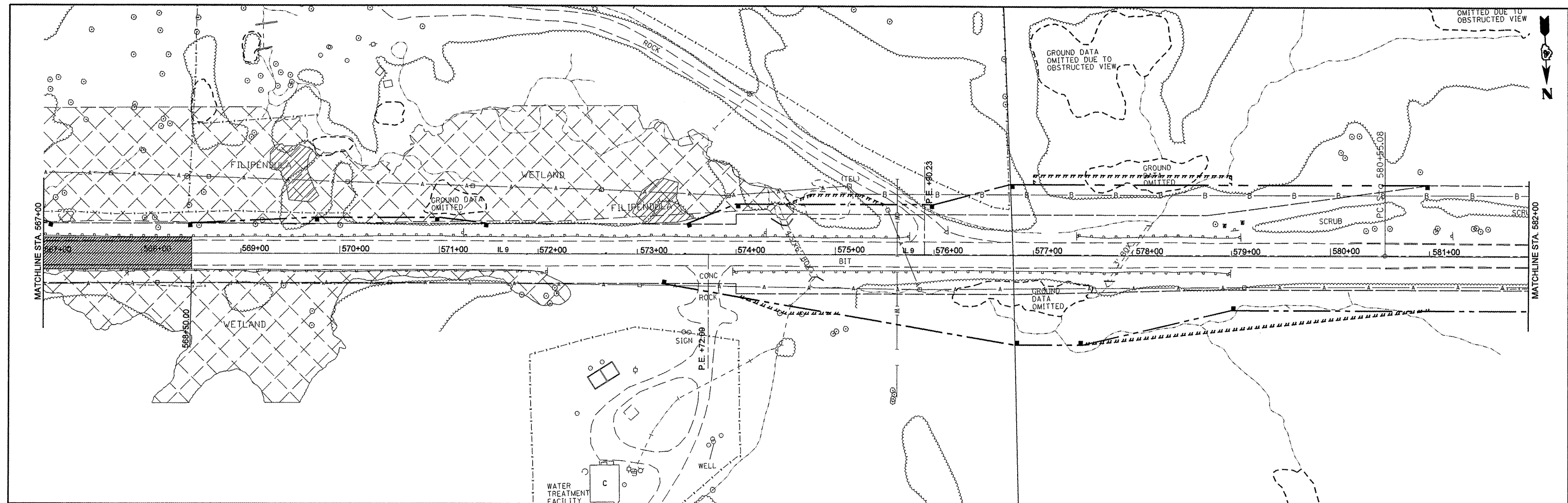
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1. Set up Traffic Control for Stage 4 Construction per Stage 4 Plans and Standard 701306.
2. Wedge/level or mill/overlay pavement and place the remaining 2-1/4" of the 8" HMA shoulders from Sta. 556+47 to Sta. 568+50.
3. Temporary stripe pavement until final pavement striping is placed in Stage 7.
4. Reopen E 2400 St. to traffic.

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.
ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.





SYMBOLS:

- | | |
|--|--|
| Work Area | Sign |
| Traffic Signal | Type III Barricade |
| Temporary Concrete Barrier | Type C Bidirectional reflector |
| Impact Attenuator, Temporary (Non-Redirective), Test level 3 | Steady burning lights and double vertical panels |
| Drum with steady burning light | Temporary Rumble Strips |
| Detector Loop | Double vertical panel |

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE 4 PLAN

SCALE: 1" = 50' SHEET NO. 10 OF 16 SHEETS STA. 567+00.00 TO STA. 596+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FULTON	138	27
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EFK Moen, LLC
Civil Engineering Design

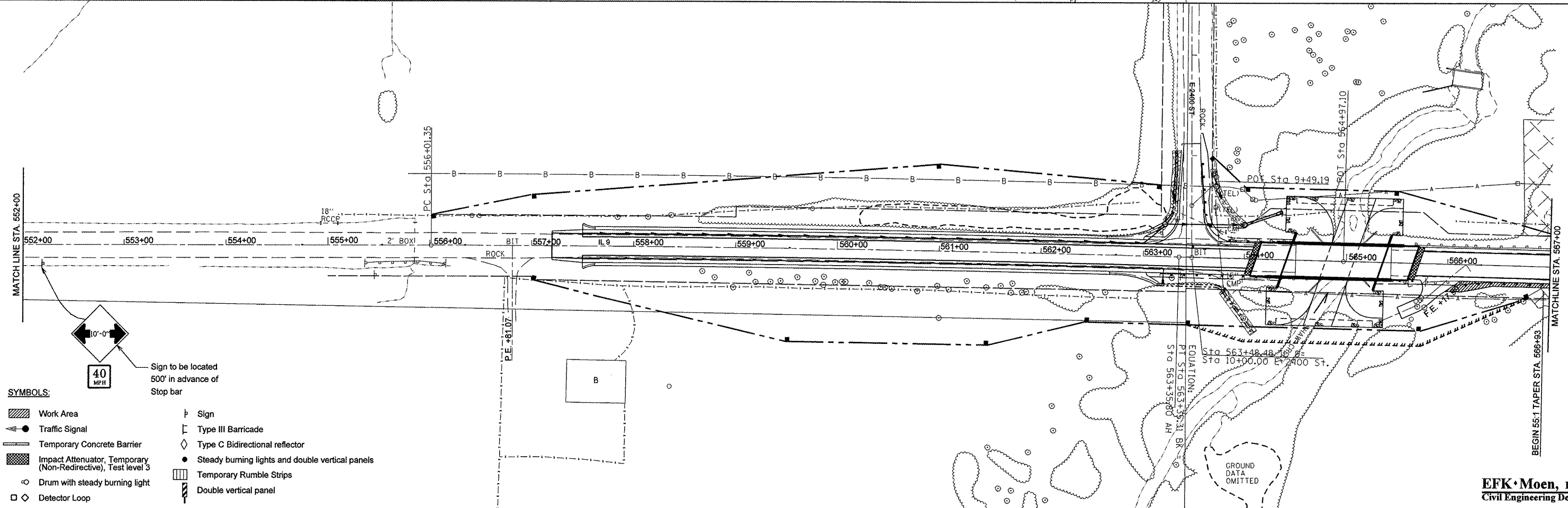
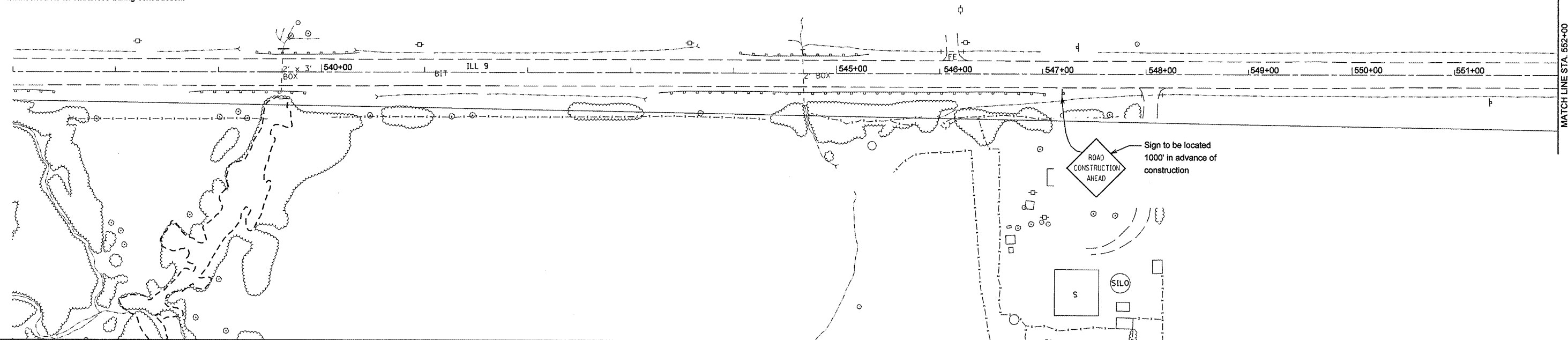
1. Set up Traffic Control for Stage 5 Construction per Stage 5 Plans and Standard 701326. During non-working hours when the drop-off adjacent to the driving lane is greater than 2", regardless of the length or number of times the treatment must be applied, the contractor shall at no direct pay wedge Type A Aggregate (or similar) from the edge of pavement a 1:3 slope.
2. Pavement widening and earthwork along wetlands shall be constructed from the pavement. No equipment or disturbance will be allowed in the wetland.
3. On the right, remove existing gutter, outlet and shoulder and construct 5-3/4" of 8" HMA shoulder from Sta. 568+50 to Sta. 580+49, pavement widening, 5-3/4" of 8" HMA shoulder and gutter from Sta. 580+49 to Sta. 585+20, and 5-3/4" of 8" HMA shoulder from Sta. 585+20 to Sta. 588+70, and entrances at Sta. 573+72.09. Ingress and egress shall be maintained for all entrances during construction.

- NOTES:

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

THE REMAINING 2-1/4" OF THE 8" HMA SHOULDER SHALL BE PLACED IN STAGE 7.

ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.



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Civil Engineering Design

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE 5 PLAN

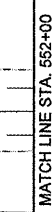
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FULTON	138	28
CONTRACT NO. 68352				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

- NOTES:

THE REMAINING 2-1/4" OF THE 8" HMA SHOULDER SHALL BE PLACED IN STAGE 7.

ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.



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Civil Engineering Design

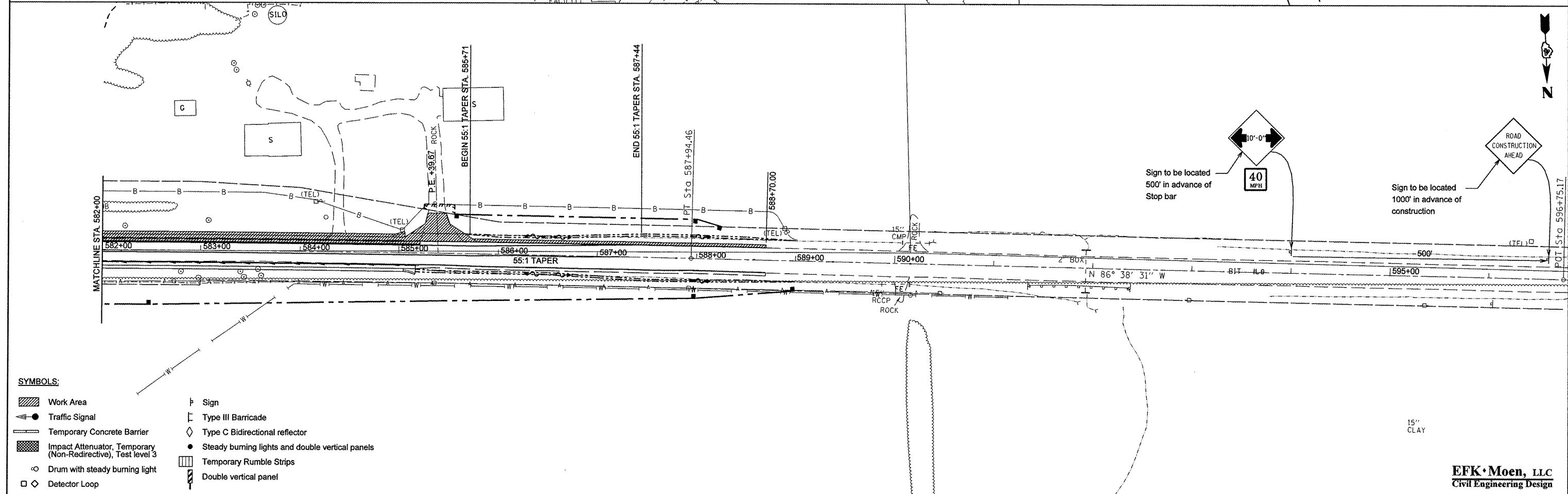
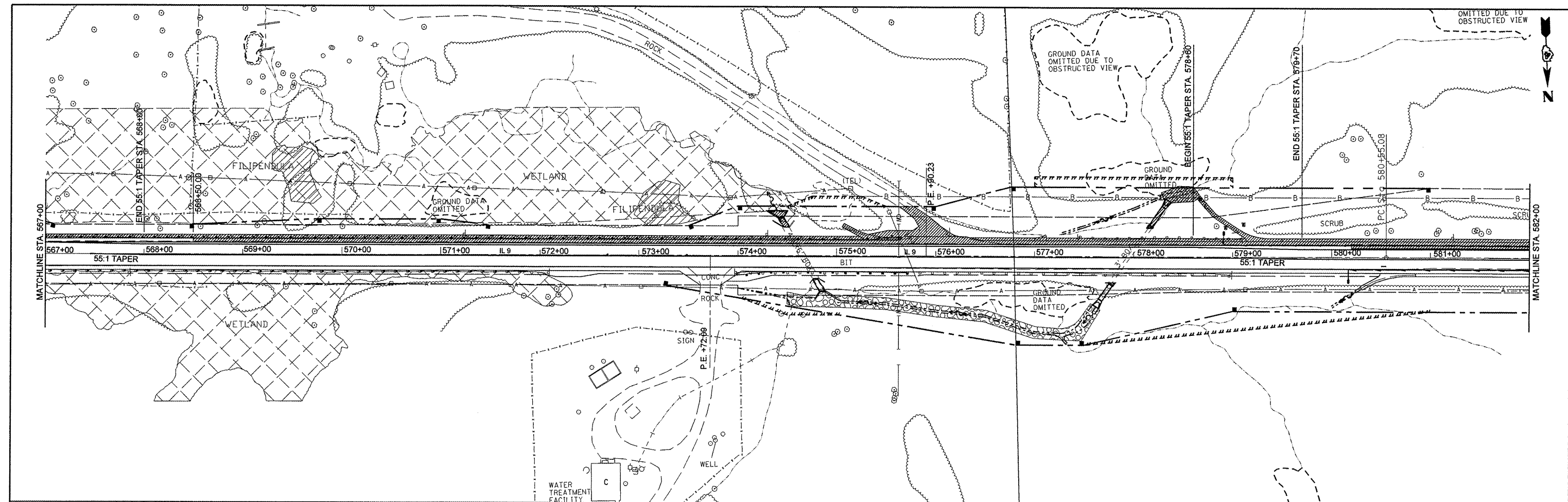
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	PLOT DATE = 10/16/2009	DATE = 10/15/09	REVISED =

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE 6 PLAN

SCALE: 1" = 50'	SHEET NO. 13 OF 16 SHEETS	STA. 540+00.00 TO STA. 567+00.00
-----------------	---------------------------	----------------------------------

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FULTON	138	30
CONTRACT NO. 68352				



SYMBOLS:

- Work Area
- Traffic Signal
- Temporary Concrete Barrier
- Impact Attenuator, Temporary (Non-Redirective), Test level 3
- Drum with steady burning light
- Detector Loop
- Sign
- Type III Barricade
- Type C Bidirectional reflector
- Steady burning lights and double vertical panels
- Temporary Rumble Strips
- Double vertical panel

FILE NAME =	USER NAME =	DESIGNED -	REVISED -
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PLOT DATE = 10/16/2009		DATE - 10/15/09	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE 6 PLAN

SCALE: 1" = 50' SHEET NO. 14 OF 16 SHEETS STA. 567+00.00 TO STA. 596+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	31
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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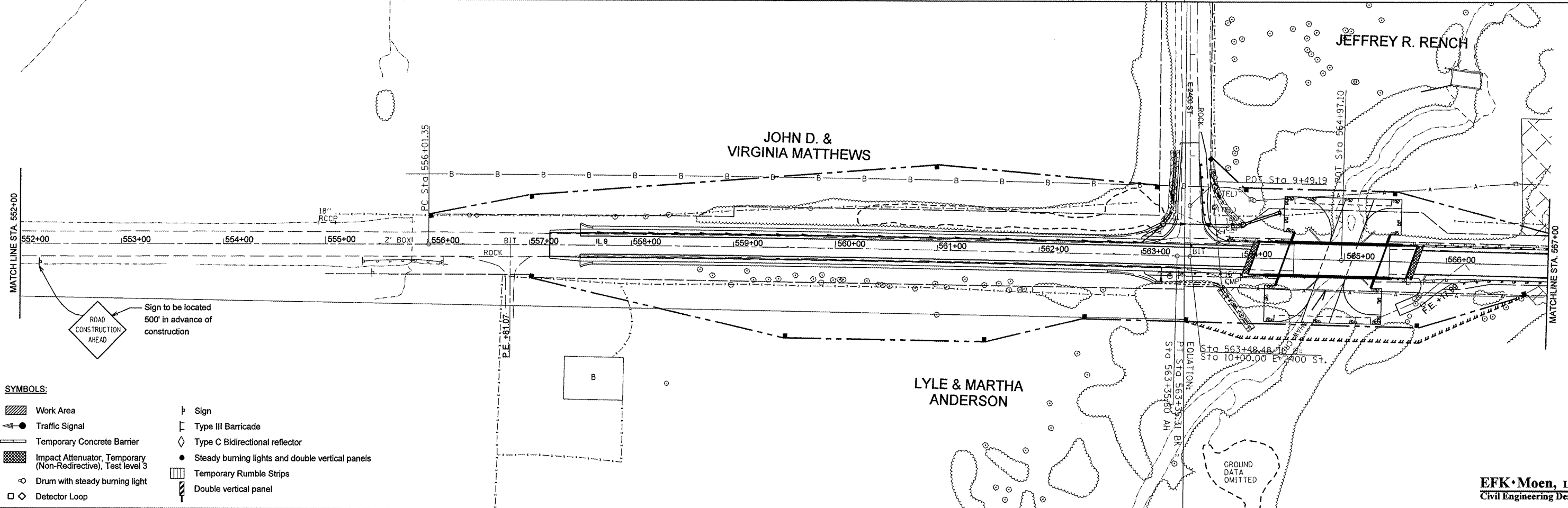
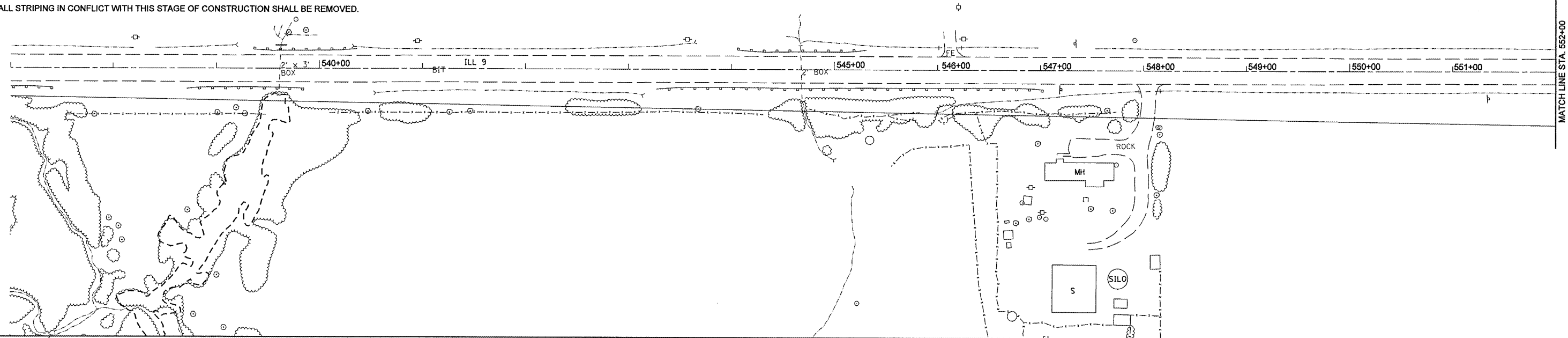
STAGE 7 CONSTRUCTION
(Sequence of construction / Applications)

1. Set up Traffic Control for Stage 7 Construction per Stage 7 plans, Standard 701306.
2. Wedge/level or mill/overlay pavement and place the remaining 2-1/4" of the 8" HMA shoulders from Sta. 568+50 to Sta. 585+79.
3. Temporary stripe pavement until final pavement striping is placed.
4. Set up Traffic Control according to Standard 701311.
5. Final stripe pavement from Sta. 557+20 to Sta. 589+00.

NOTES:

ALL SIGNS IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE COVERED.

ALL STRIPING IN CONFLICT WITH THIS STAGE OF CONSTRUCTION SHALL BE REMOVED.



SYMBOLS:

- | | |
|--|--|
| Work Area | Sign |
| Traffic Signal | Type III Barricade |
| Temporary Concrete Barrier | Type C Bidirectional reflector |
| Impact Attenuator, Temporary (Non-Redirective), Test level 3 | Steady burning lights and double vertical panels |
| Drum with steady burning light | Temporary Rumble Strips |
| Detector Loop | Double vertical panel |

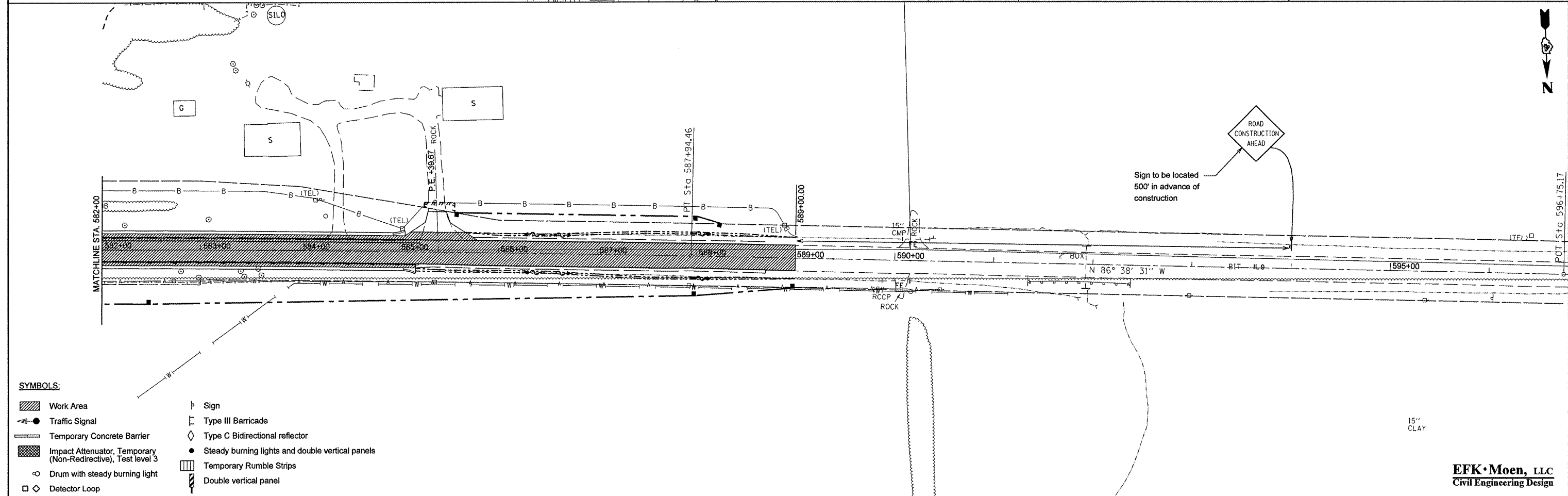
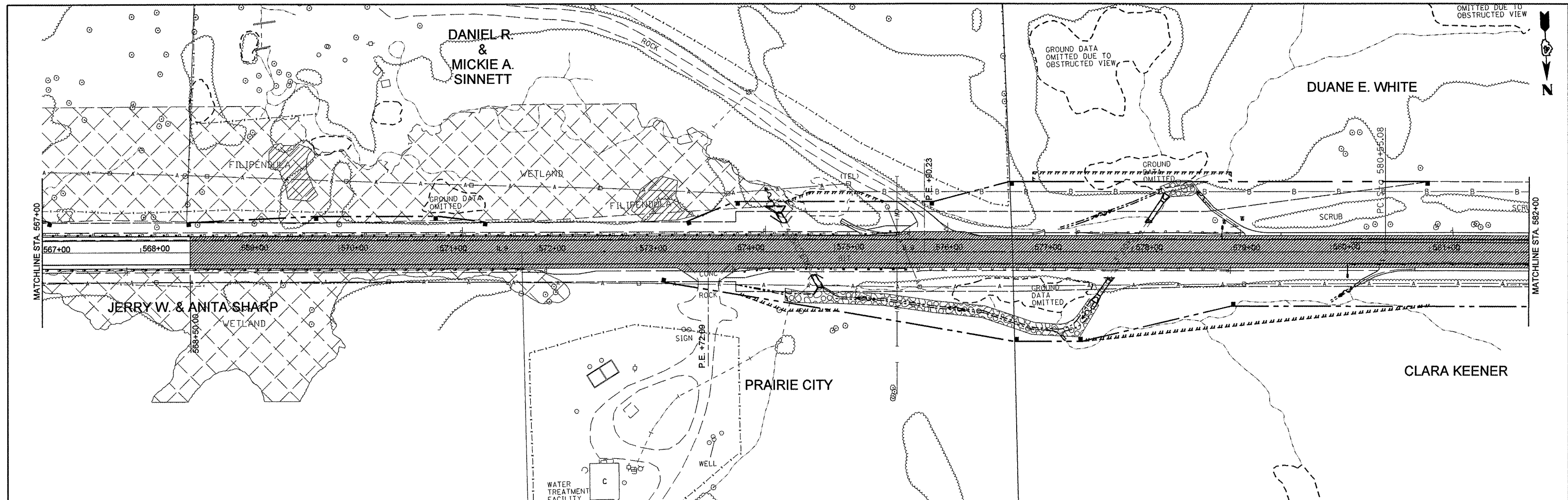
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 7 PLAN

SCALE: 1" = 50' SHEET NO. 15 OF 16 SHEETS STA. 540+00.00 TO STA. 567+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/	138	32
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SYMBOLS:

- Work Area
- Traffic Signal
- Temporary Concrete Barrier
- Impact Attenuator, Temporary (Non-Reductive), Test level 3
- Drum with steady burning light
- Detector Loop
- Sign
- Type III Barricade
- Type C Bidirectional reflector
- Steady burning lights and double vertical panels
- Temporary Rumble Strips
- Double vertical panel

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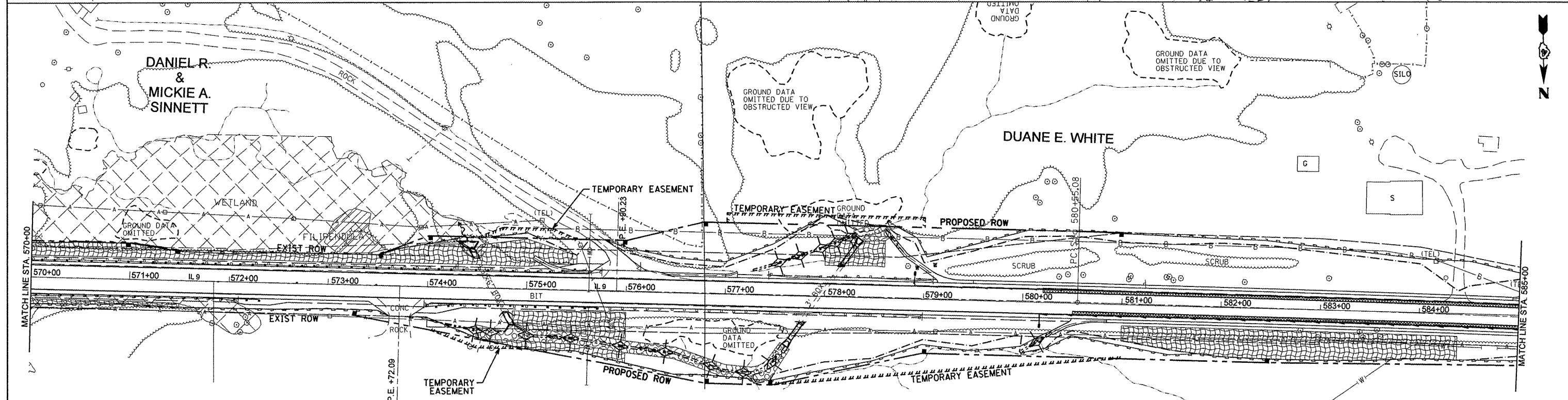
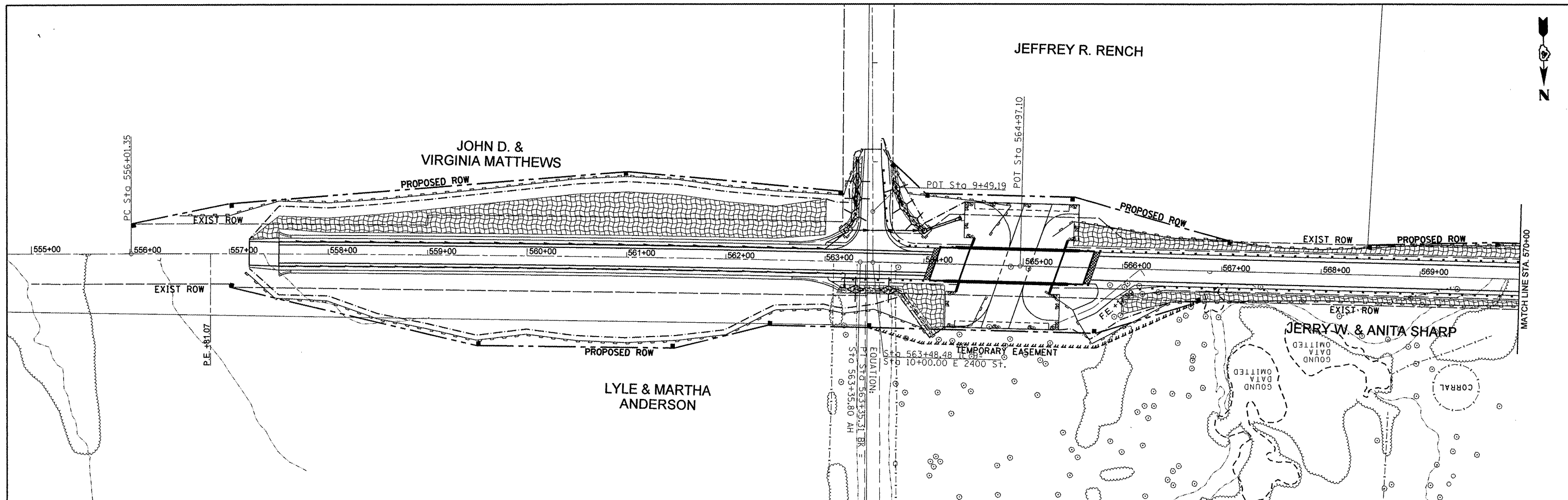
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE 7 PLAN

SCALE: 1" = 50' SHEET NO. 16 OF 16 SHEETS STA. 567+00.00 TO STA. 596+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ POLK	138	33
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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Civil Engineering Design



NOTE:
SEED AND MULCH. SEE CROSS-SECTIONS AND SCHEDULE OF QUANTITIES FOR LOCATIONS.

PRAIRIE CITY

TEMPORARY EROSION CONTROL

PERMANENT EROSION CONTROL

CLARA KEENER

PERIMETER EROSION BARRIER

EROSION CONTROL BLANKET

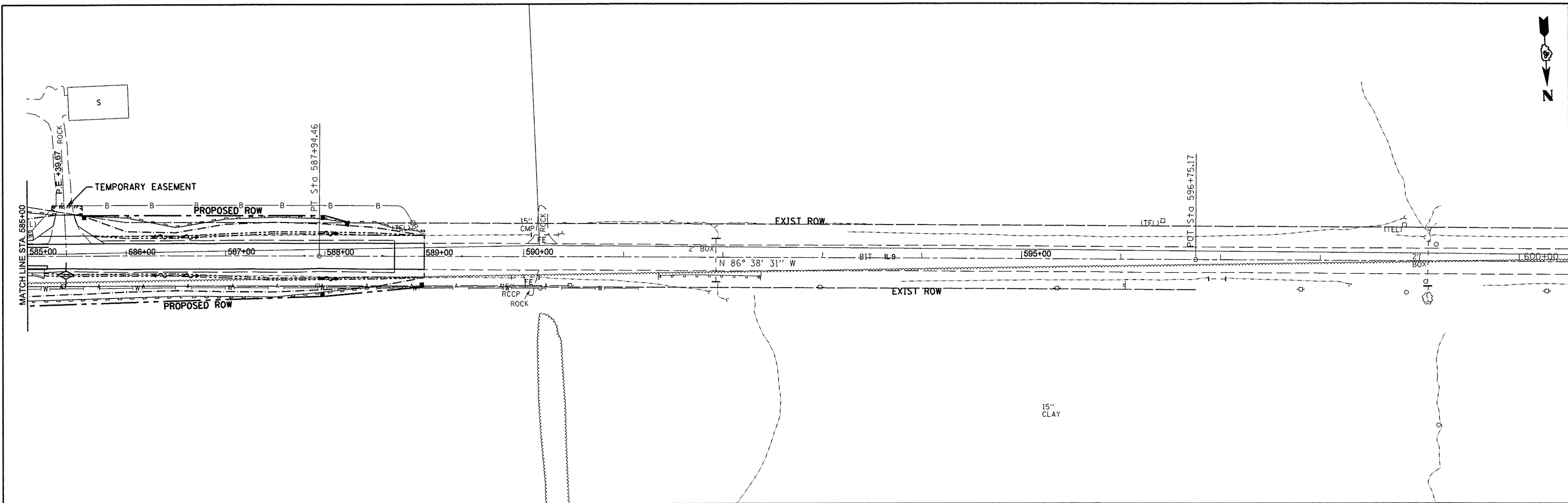
STONE RIPRAP

INLET AND PIPE PROTECTION

TEMPORARY DITCH CHECK

FILE NAME =	USER NAME = jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION AND SEDIMENT CONTROL	F.A.P. RTE. 685	SECTION 37BR-1	COUNTY MCDONOUGH/ POLK	TOTAL SHEETS 138	SHEET NO. 34	CONTRACT NO. 68352
Z:\08056_Show_Creek\dgn\Design\Final\Plotsheets\34-D468352-shr-erosl.dgn		DRAWN - JD	REVISED -								
PLOT SCALE = 100.0000 ' / IN.		CHECKED - SD	REVISED -								
PLOT DATE = 10/15/2009		DATE - 10/15/09	REVISED -								
SCALE: 1" = 50'						SHEET NO. 1 OF 2 SHEETS		STA. 555+00.00 TO STA. 585+00.00		FED. ROAD DIST. NO.	

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Civil Engineering Design



NOTE:
SEED AND MULCH. SEE CROSS-SECTIONS AND
SCHEDULE OF QUANTITIES FOR LOCATIONS.

- TEMPORARY EROSION CONTROL

 - PERIMETER EROSION BARRIER
 - INLET AND PIPE PROTECTION
 - TEMPORARY DITCH CHECK
- PERMANENT EROSION CONTROL

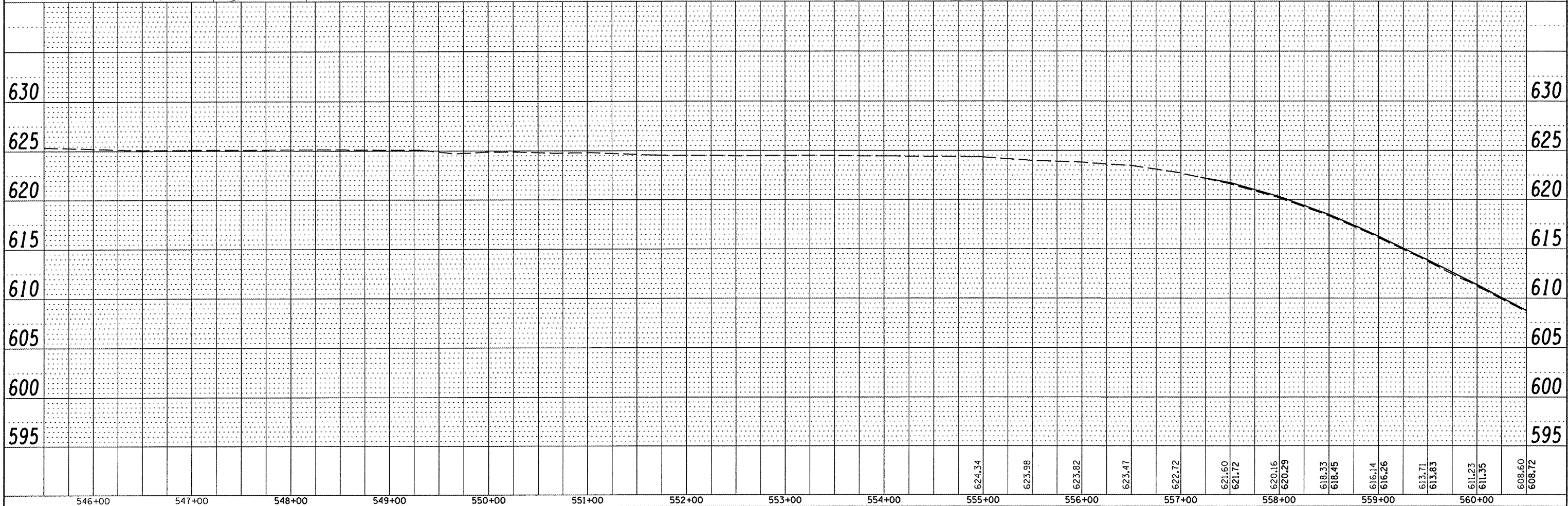
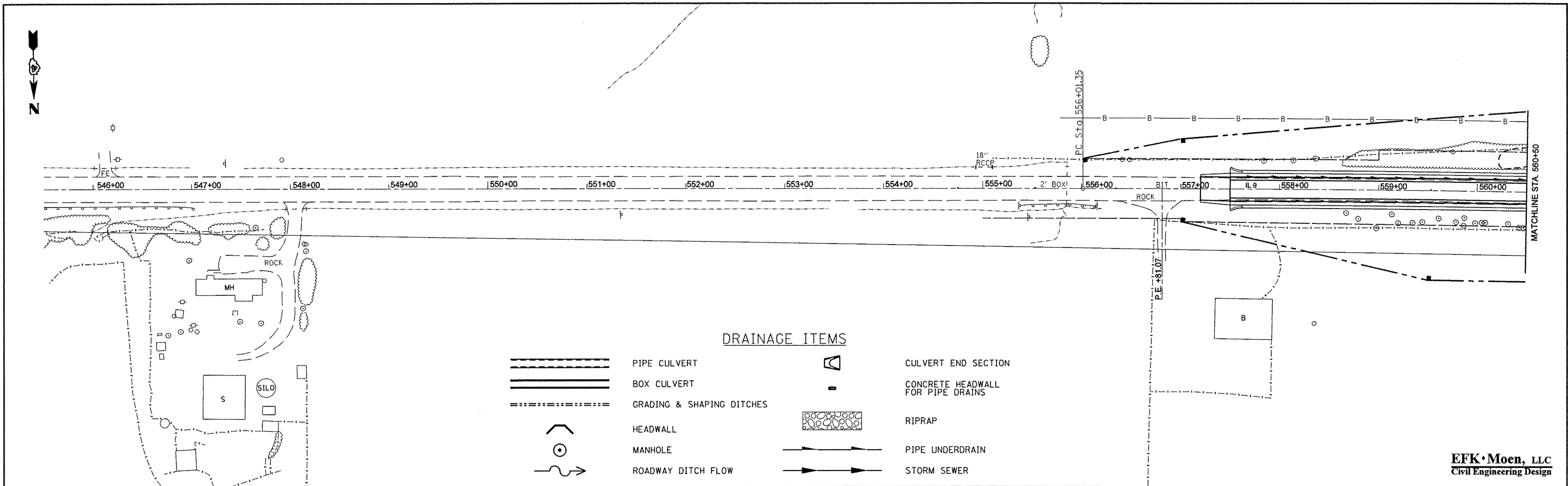
 - EROSION CONTROL BLANKET
 - STONE RIPRAP

FILE NAME = Z:\08056.Show_Creek\Design\Final\VP1	USER NAME = jd tsheets\35-D468352-shr-eros2.dgn PLOT SCALE = 100.0000' / IN. PLOT DATE = 10/16/2009	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EROSION AND SEDIMENT CONTROL	SCALE: 1" = 50'	SHEET NO. 2 OF 2 SHEETS	STA. 585+00.00 TO STA. 600+00.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - JD	REVISED -						685	37BR-1	MCDONOUGH/ PILTON	138	35
		CHECKED - SD	REVISED -						CONTRACT NO. 68352				
		DATE - 10/15/09	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

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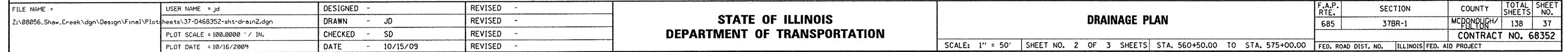
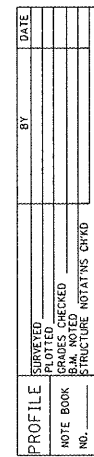
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	NO.	
NOTE BOOK	CHECKED	
	NO.	
ADD FILE NAME	CHECKED	
	NO.	

PROFILE	REVISION	DATE
	NO.	
NOTE BOOK	CHECKED	
	NO.	
ADD FILE NAME	CHECKED	
	NO.	



FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DRAINAGE PLAN	SCALE: 1" = 50'	SHEET NO. 1 OF 3 SHEETS	STA. 545+50.00 TO STA. 560+50.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLT SCALE 100.0000' / IN.	SD	CHECKED -	REVISED -						CONTRACT NO. 68352				
PLT DATE 10/16/2009	10/15/09	DATE -	REVISED -						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

△ STORM SEWER & ○ CULVERT TABLE										
NO.	FROM (UPSTREAM)		TO (DOWNSTREAM)		GRADE	TYPE	DIAMETER	LENGTH	PRECAST REINF. CONC. FLARED END SEC. 18"	INVERT
	STA.	OFFSET	STA.	OFFSET						
3	563+20.50	31.60' LT	563+99.85	33.12' LT	3.0%	CLASS A TYPE 2 SS	18	78.89		
4	563+99.85	33.12' LT	564+36.44	46.65' LT	4.6%	RCCP TYPE 2	18	32.93	1	577.23
5	574+85.84	36.40' RT	574+78.71	23.65' RT	3.40%	4.5' X 6' CONCRETE BOX CULVERT		14.6		584.63
6	574+49.28	28.98' LT	574+43.69	38.99' LT	3.40%	4.5' X 6' CONCRETE BOX CULVERT		11.5		581.69



Bar	No.	Size	Length	Shape
a ₁	18	#5	6'-11"	
a ₁	12	#5	6'-4"	
a ₂	7	#4	5'-10"	
d	5	#4	4'-6"	
h	15	#5	6'-6"	
h ₁	12	#4	6'-3"	
h ₂	24	#5	6'-6"	
h ₃	11	#6	8'-0"	
h ₄	10	#6	6'-6"	
h ₅	4	#6	6'-7"	
h ₆	9	#7	17'-4"	
h ₇	10	#7	8'-0"	
h ₈	10	#6	10'-9"	
h ₉	16	#5	6'-0"	
s	13	#4	3'-9"	
s ₁	6	#4	3'-11"	
v	32	#4	6'-9"	
v ₁	4	#5	5'-0"	
v ₂	8	#4	9'-9"	
Reinforcement Bars			Lbs.	1850
Expansion Bolts 3/4"			Each	18
Concrete Box Culverts			Cu. Yds.	16.3

$$\begin{aligned} f_y &= 60,000 \text{ psi} \\ f'_c &= 3,500 \text{ psi} \end{aligned}$$

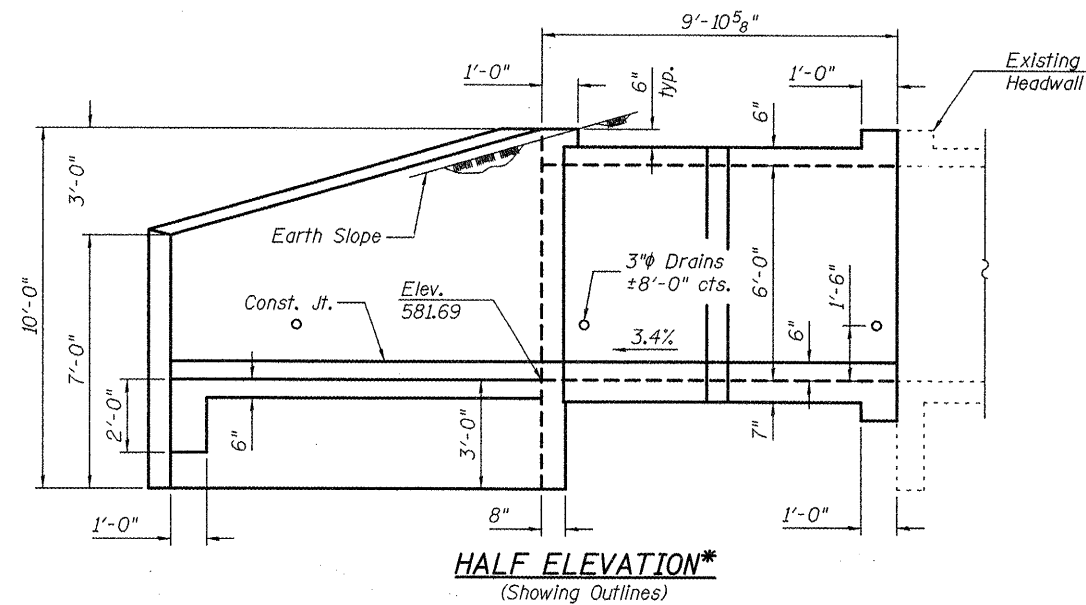
NOTES

1. A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. Reinforcement bars shall conform to the requirements of ASTM A 706. See Special Provisions.
3. Bars indicated thus 12 x 4 - #5, etc. indicates 12 lines of bars with 4 lengths per line.
4. Work this Sheet with Sheet 41.
5. When lapping sheets of welded wire fabric, the outermost cross wires of each fabric shall not be less than 8 inches.

A circular professional seal for a Licensed Structural Engineer in the State of Illinois. The outer ring contains the text "LICENSED STRUCTURAL ENGINEER" at the top and "STATE OF ILLINOIS" at the bottom. In the center, the name "CHRIS LINNEMAN" and the license number "081-006445" are printed. The seal is stamped in black ink on a white background.

NOIS
10/16/2009
EXPIRES 11/30/2010

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*Note: Dimensions at Rt. L's to $\mathbb{C}$ Roadway

SHOWING REINFORCEMENT

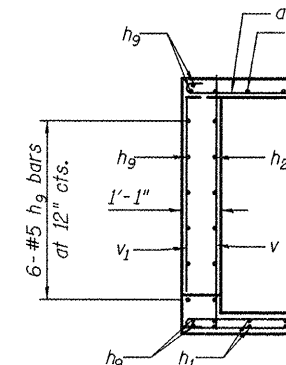
<u>MIN. LAPS</u>	
BAR SIZE	BOX EXT.
#4	1'-4"
#5	1'-8"

PLAN

SHOWING OUTLINES

- (A) 2-#6 h_4 bars in
Top of Top Edge Beam &
Bottom of Bottom Edge Beam
(Cut to fit)
- (B) 2-#6 h_4 bars in
Bottom of Top Edge Beam
Top of Bottom Beam (Cut to fit)
- (C) 7-#4 s bars at 12" cts. Top
- (D) 2-#6 h_4 bars in
Top of Headwall
- (E) 2-#6 h_5 bars in
Bottom of Headwall
- (F) 2-#6 h_5 bars in
Top of Bottom Slab

SECTION A-A



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BOX CULVERT EXTENSION STA. 574+65.49
SOUTH END (DOWNSTREAM)

SCALE: N.T.S.	SHEET NO. 1 OF 6 SHEETS	STA.	TO STA.
---------------	-------------------------	------	---------

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH	138	39
		CONTRACT NO. 68352		
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	18	#5	6'-11"	U
a ₁	22	#5	6'-4"	U
a ₂	8	#4	5'-10"	U
d	5	#4	4'-6"	U
h ₃	11	#6	8'-0"	U
h ₄	10	#6	6'-6"	U
h ₅	4	#6	6'-7"	U
h ₆	9	#7	17'-4"	U
h ₇	10	#7	8'-0"	U
h ₈	10	#6	10'-9"	U
h ₉	16	#5	6'-0"	U
h ₁₀	15	#5	8'-3"	U
h ₁₁	12	#4	7'-2"	U
h ₁₂	24	#5	8'-3"	U
s	13	#4	3'-9"	U
s ₁	6	#4	3'-11"	U
v	46	#4	6'-9"	U
v ₁	4	#5	5'-0"	U
v ₂	8	#4	9'-9"	U
Reinforcement Bars				Lbs. 2060
Expansion Bolts ^{3/4"}				Each 18
Concrete Box Culverts				Cu. Yds. 15.0

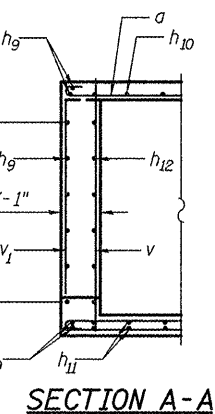
DESIGN STRESSES

fy = 60,000 psi
f'c = 3,500 psi

LOADING HS 20-44 & ALT.

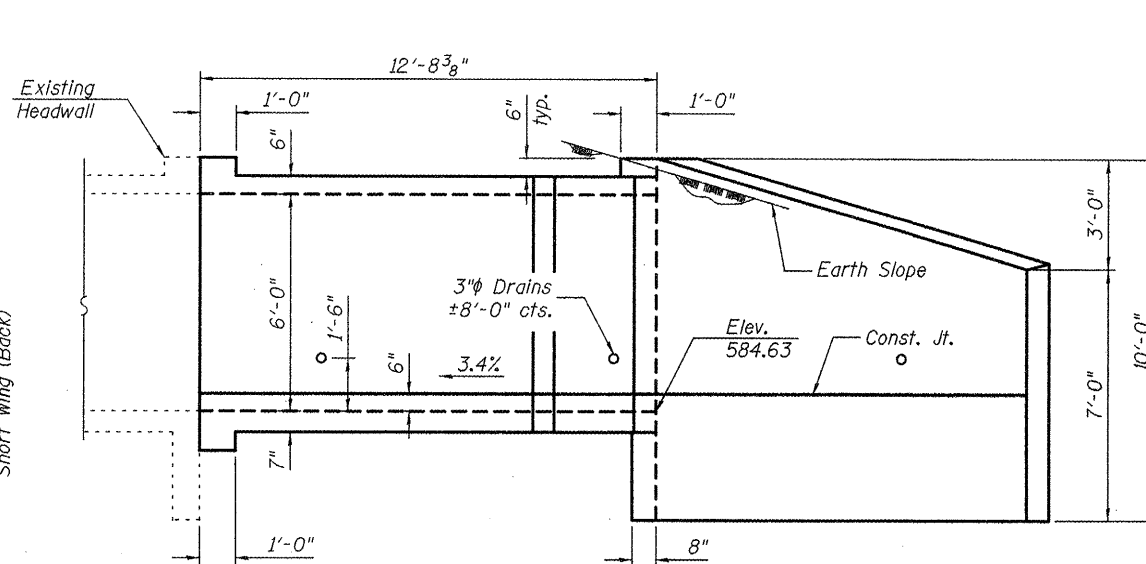
NOTES

1. A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
2. Reinforcement bars shall conform to the requirements of ASTM A 706. See Special Provisions.
3. Bars indicated thus 12 x 4 - #5, etc. indicates 12 lines of bars with 4 lengths per line.
4. Work this Sheet with Sheet 41.

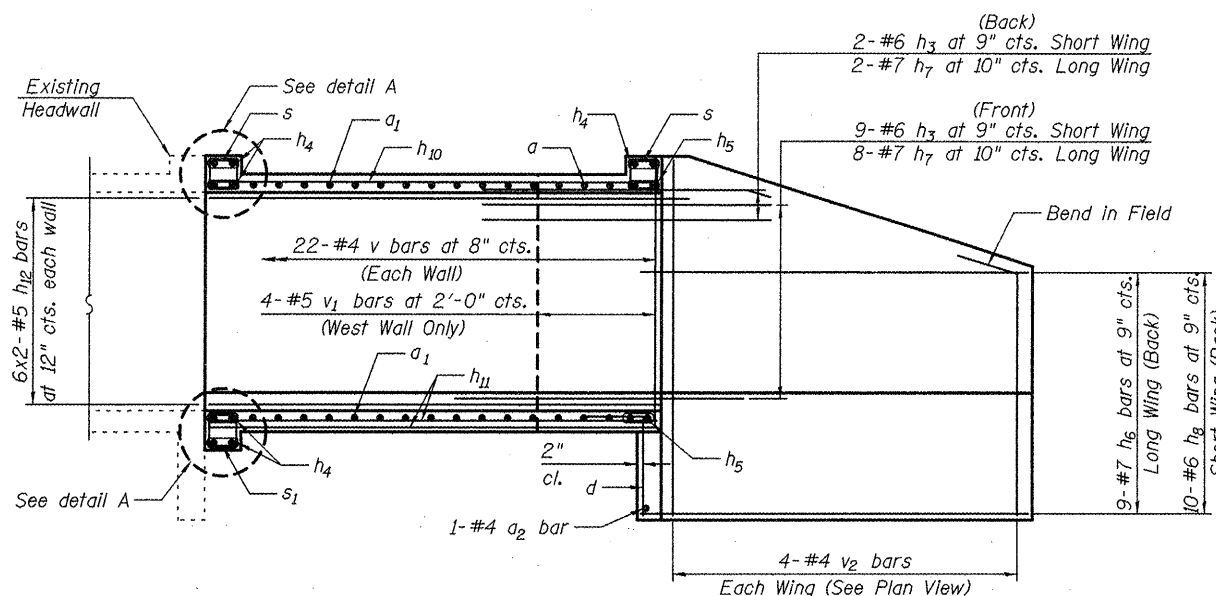


SECTION THRU HEADWALL
(Up Stream End Only)

HALF ELEVATION*
Showing outlines

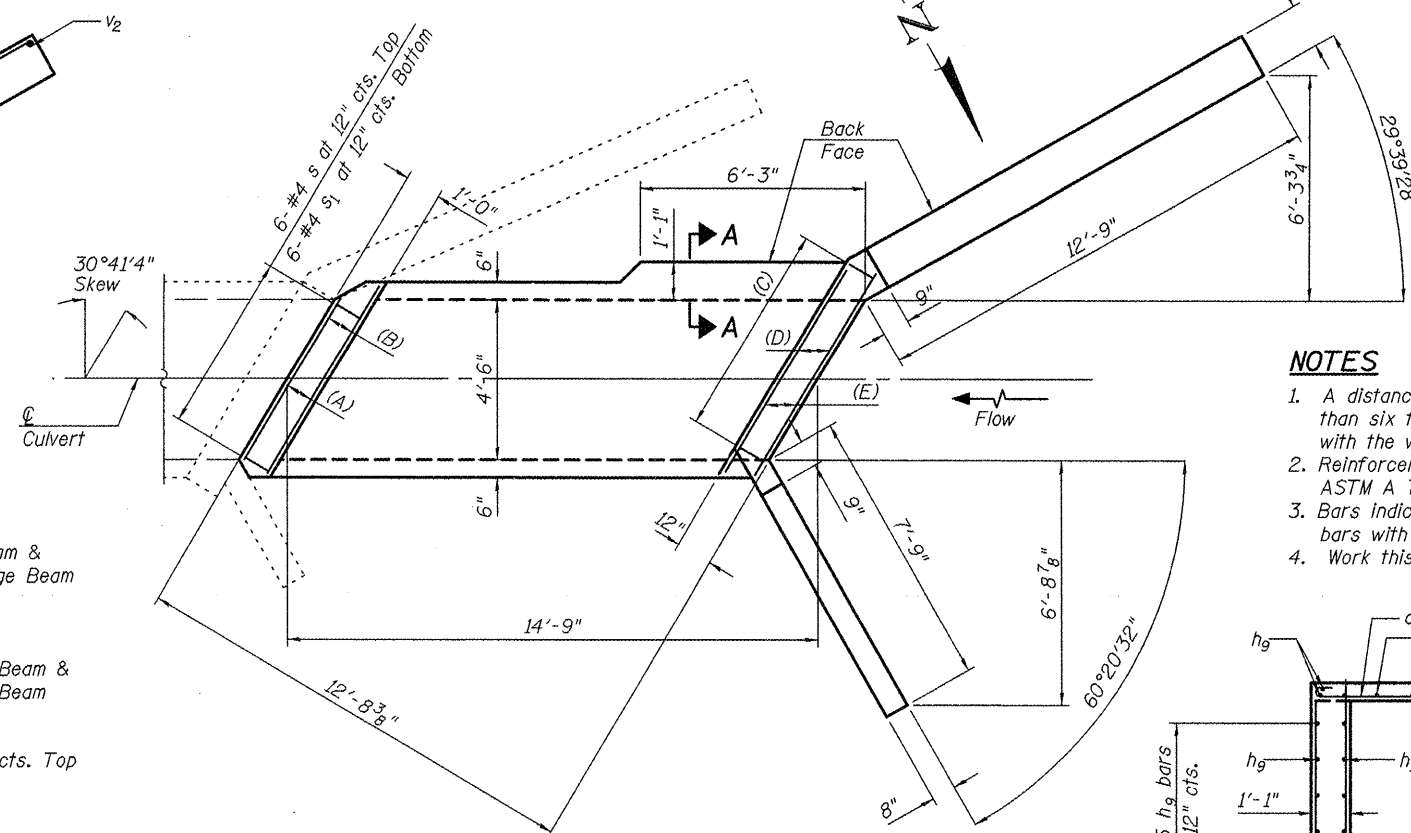


HALF LONGITUDINAL SECTION
Showing reinforcement



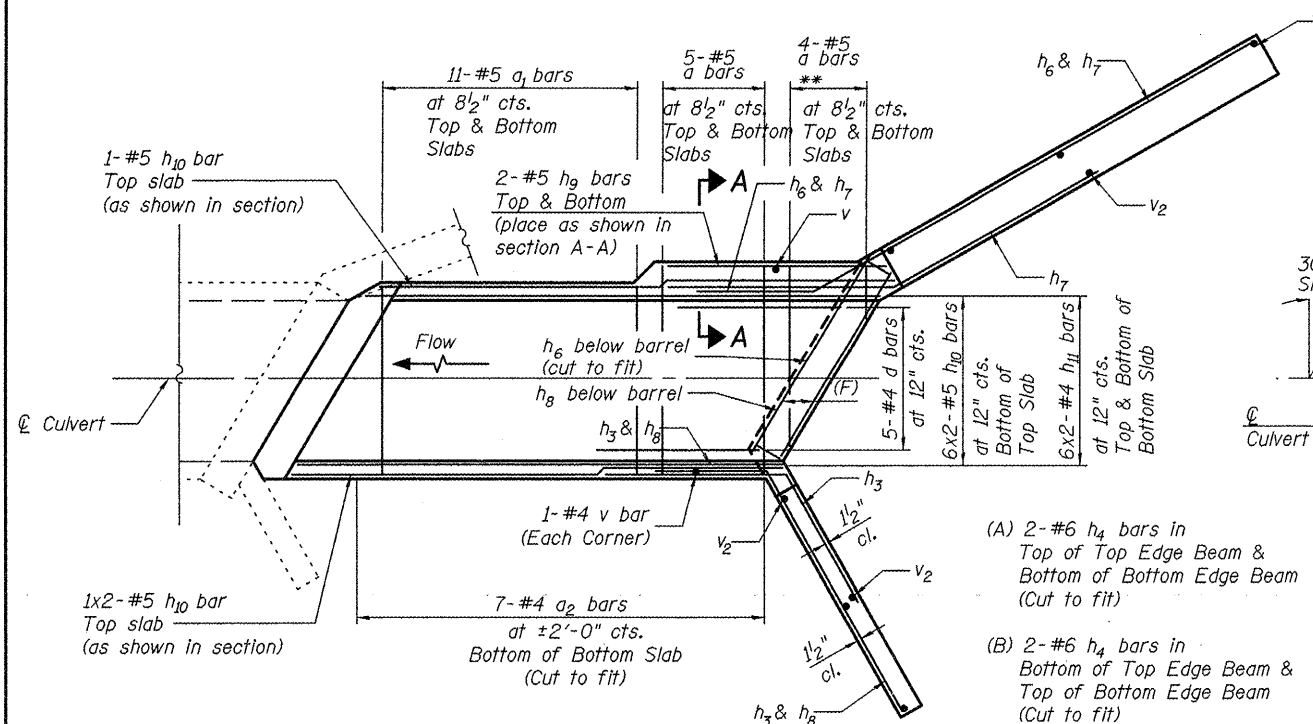
* Note: Dimensions at Rt. L's to C Roadway
** a bars in skew portion of the slab shall be ordered full length & cut to fit. Balance of bar to be used in opposite end of slab.

SHOWING OUTLINES



PLAN

SHOWING REINFORCEMENT



MIN. LAPS

BAR SIZE	BOX EXT.
#4	1'-4"
#5	1'-8"

FILE NAME =	USER NAME = SEC	DESIGNED - PMM	REVISED -
#FILE#		DRAWN - DP	REVISED -
	PLOT SCALE = NTS	CHECKED -	REVISED -
	PLOT DATE = 9/23/2009	DATE - 9/23/09	REVISED -

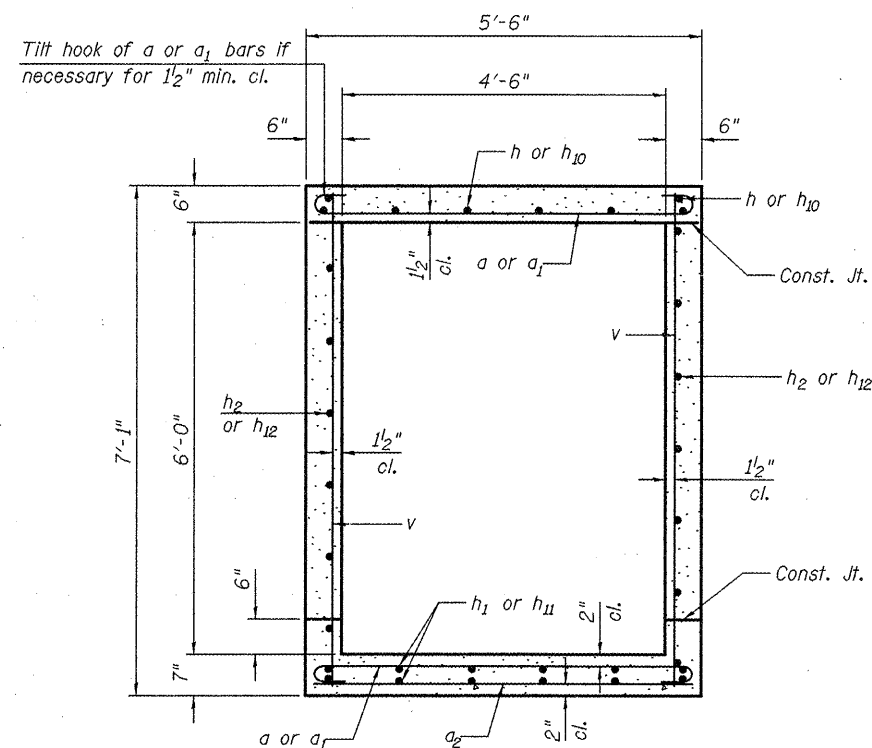
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BOX CULVERT EXTENSION STA. 574 + 65.49
NORTH END (UPSTREAM)

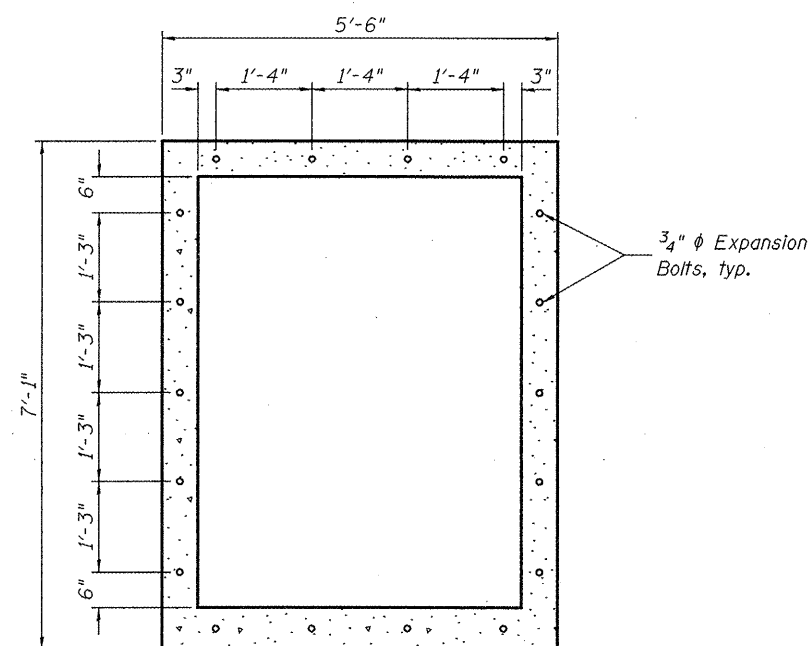
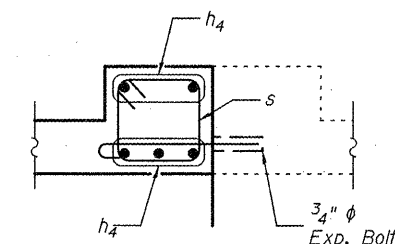
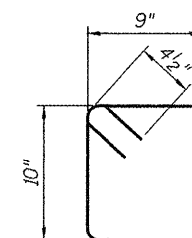
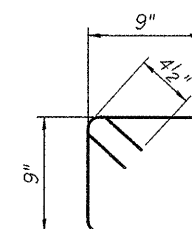
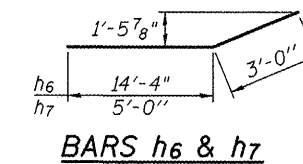
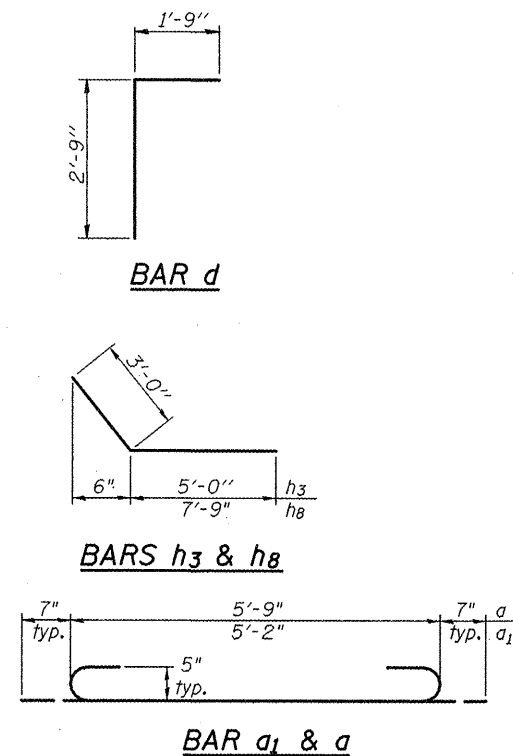
SCALE: N.T.S. SHEET NO. 2 OF 6 SHEETS STA. TO STA.

F.A.S. RTE. 685	SECTION 37BR-1	COUNTY MCDONOUGH	TOTAL SHEETS 138	SHEET NO. 40
CONTRACT NO. 68352				ILLINOIS FED. AID PROJECT

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SECTION THRU BARREL



EXPANSION BOLT LAYOUT

EFK Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = SEC	DESIGNED - PMM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BOX CULVERT EXTENSION STA. 574 + 65.49			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - DP	REVISED -		DETAILS			685	37BR-1	MCDONOUGH	138	41
	PLOT SCALE = NTS	CHECKED -	REVISED -		SCALE: N.T.S.	SHEET NO. 3 OF 6 SHEETS	STA.	TO STA.			CONTRACT NO. 68352	
	PLOT DATE = 9/23/2009	DATE - 9/23/09	REVISED -								ILLINOIS FED. AID PROJECT	



Page 1 of 2

Date 10/23,24/2008

COUNTY	<u>McDonough</u>	DRILLING METHOD	<u>CME 750 w/HSA</u>	HAMMER TYPE	<u>Automatic</u>
--------	------------------	-----------------	----------------------	-------------	------------------

BORING NO.	B-104
Station	574+58
Offset	10 ft Rt
Ground Surface Elev.	596.0

D	B	U	M
E	L	C	O
P	O	S	I
T	W		S
H	S	Qu	T
(ft)	(/6'')	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:

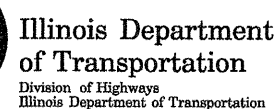
First Encounter	<u>Not Observed</u>	ft
Upon Completion	_____	ft
After _____ Hrs.	_____	ft

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

ASPHALT - 7 inches		595.4				SAND: Grayish brown, fine (A-3) (continued)	WH	-	18
CONCRETE - 10 inches							1		
		594.6				Mud rotary drilling started at 19.5 feet.	2		
FILL: Brown clay, trace sand, fine gravel (A-7)			1				3	-	
			2	2.1	16		3		
			2	S			3		
			2				4	-	
		592.0	3	2.0	20		5		
FILL: Brown silty clay, trace sand (A-7)			3	B			2		
		591.0	-5	2			-25	4	-
FILL: Brown clay, trace sand, fine gravel (A-7)			3	0.9	16		4		
			3	B			3		
			3				4	-	
			2	2.7	22		4		
Becomes gray			3	B			2		
Becomes greenish gray and bluish gray			2				3	-	
			2	0.5	25		4		
			2	P			3		
Becomes brown and gray			1				3	-	
			-10	2	0.3		-30	3	
			2	P			3		
		585.0	2				3	-	
FILL: Dark brown silty clay, trace sand (A-6)			2	1.0	31		6		
		583.7	3	B			3		
PEAT: Black			1				6	-	
			1	<0.25	69		13		
		582.5	2	P			9		
SILTY CLAY LOAM: Dark brown, trace to some organics (A-7)			1				11	-	
			1	0.8	48		13		
		581.0	-15	2	B		-35	8	
CLAY: Gray and bluish gray (A-7)		580.5	1				8	-	
		580.0	1	<0.25	43		8		
SILTY CLAY LOAM: Black, some organics (A-6)			1	P			4		
			1				6	-	
SANDY CLAY: Gray and dark brown, trace fine gravel (A-6)			1	0.5	22		10		
			2	B			6		
Becomes grayish brown		577.0	1				6	-	
			2	<0.25	22		9		
SAND: Grayish brown, fine (A-3)			4	P					
			-20	WH			-40		
						Deposits of fine to coarse gravel from about 36 to 37.5 feet.			
						Sample inadvertently drilled through.			

The Unconfined Compressive Strength (UCS) Failure Mode is Indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



Page 2 of 2

Date 10/23,24/2008

COUNTY	McDonough	DRILLING METHOD	CME 750 w/HSA	HAMMER TYPE	Automatic
--------	-----------	-----------------	---------------	-------------	-----------

BORING NO.	B-104
Station	574+58
Offset	10 ft Rt
Ground Surface Elev.	596.0

D E P T H	B L O W S	U C S Qu	M O I S T
(ft)	(/6")	(tsf)	(%)

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:

First Encounter	Not Observed	ft
Upon Completion	-	ft
After - hrs	-	ft

D E P T H	B L O W S	U C S Qu	M C J S T
(ft)	(/6")	(tsf)	(%)

[illegible]

The Unconfined Compressive Strength (UCS) Failure Mode Is Indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) Is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

FILE NAME =	USER NAME = SEC	DESIGNED - ---	REVISED -
\$FILEL\$		DRAWN - SEC	REVISED -
	PLOT SCALE = NTS	CHECKED - ---	REVISED -
	PLOT DATE = 9/23/2009	DATE - 9/23/09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

BOX CULVERT EXTENSION BORING LOGS

SCALE: N.T.S.	SHEET NO. 1 OF 2 SHEETS	STA.	TO STA.
---------------	-------------------------	------	---------

F.A.S. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH	138	42
		CONTRACT NO. 68352		
		TITLWOTS FEE AID PROJECT		

EFK • Moen, LLC
Civil Engineering Design



Illinois Department
of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 1

Date 10/27/08

ROUTE FAP 685 DESCRIPTION IL Route 9 over Shaw Creek - Culvert & Side Slope LOGGED BY SCI

SECTION 37 BR-1 LOCATION Approximately 0.8 mile east of IL 41; NW 1/4, Sec. 19, TWP. 7N, RNG. 1E
Latitude , Longitude

COUNTY McDonough DRILLING METHOD CME 750 w/HSA HAMMER TYPE Automatic

STRUCT. NO.	D	B	U	M	Surface Water Elev.	D	B	U	M
Station	E	L	C	O	Stream Bed Elev.	E	L	C	O
	P	O	S	I		P	O	S	I
BORING NO.	T	W		S	Groundwater Elev.:	T	W		S
Station	H	S	Qu	T	First Encounter	H	S	Qu	T
Offset					Upon Completion				
Ground Surface Elev.	(ft)	(/6")	(tsf)	(%)	After Hrs.	(ft)	(/6")	(tsf)	(%)
FILL: Cinders and sand, trace fine gravel	2				CLAY LOAM: Brown (A-7) (continued)	3	1.5	28	
	5	-	9			4	B		
	2					2			
	3				Shelby tube obtained in offset boring (B-105ST - Sta. 577+76/13'Rt, El. 611.4) from 21 to 23 feet.	3	0.5	29	
608.9	2	0.8	25			2	B		
FILL: Brown silty clay loam (A-7)	2	P			587.9	2			
608.2	2					4	0.3	26	
FILL: Brown clay loam (A-7)	3	0.8	21		SILTY LOAM: Brown (A-4)	4	P		
	3	B				2			
	-5	2				-25	3	0.3	26
	3	0.6	28			5	P		
605.2	3	B			585.2	1			
FILL: Brown and greenish gray silty clay loam (A-7)	2				SAND: Brown, fine (A-3)	3	-	20	
	2	1.9	28			5			
	3	B				WH			
	3					2	-	22	
Becomes brown	4	1.3	27			3			
602.2	4	B			Tremie pipe used to wash hollow stem auger and to collect SPT sample below 28.5 feet.	4			
FILL: Greenish gray and brown clay (A-7)	2					5	-		
601.2	3	1.2	28			8			
	5	B				5			
FILL: Brown sandy clay loam (A-4)	2					7	-		
	3	0.6	19			9			
	3	B				5			
	2					6	-		
	2	0.8	20			10			
	3	B				6			
	1					8	-		
	3	0.6	25		576.7	13			
	3	B			End of Boring at 34.5 ft.	-35			
595.7	1								
SILTY CLAY: Dark brown (A-6)	2	0.4	23						
	2	B							
594.2	2								
CLAY LOAM: Brown (A-7)	3	0.7	23						
	4	B							
	2								
	3	2.1	25						
	5	B							
	2								
-20	2					-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

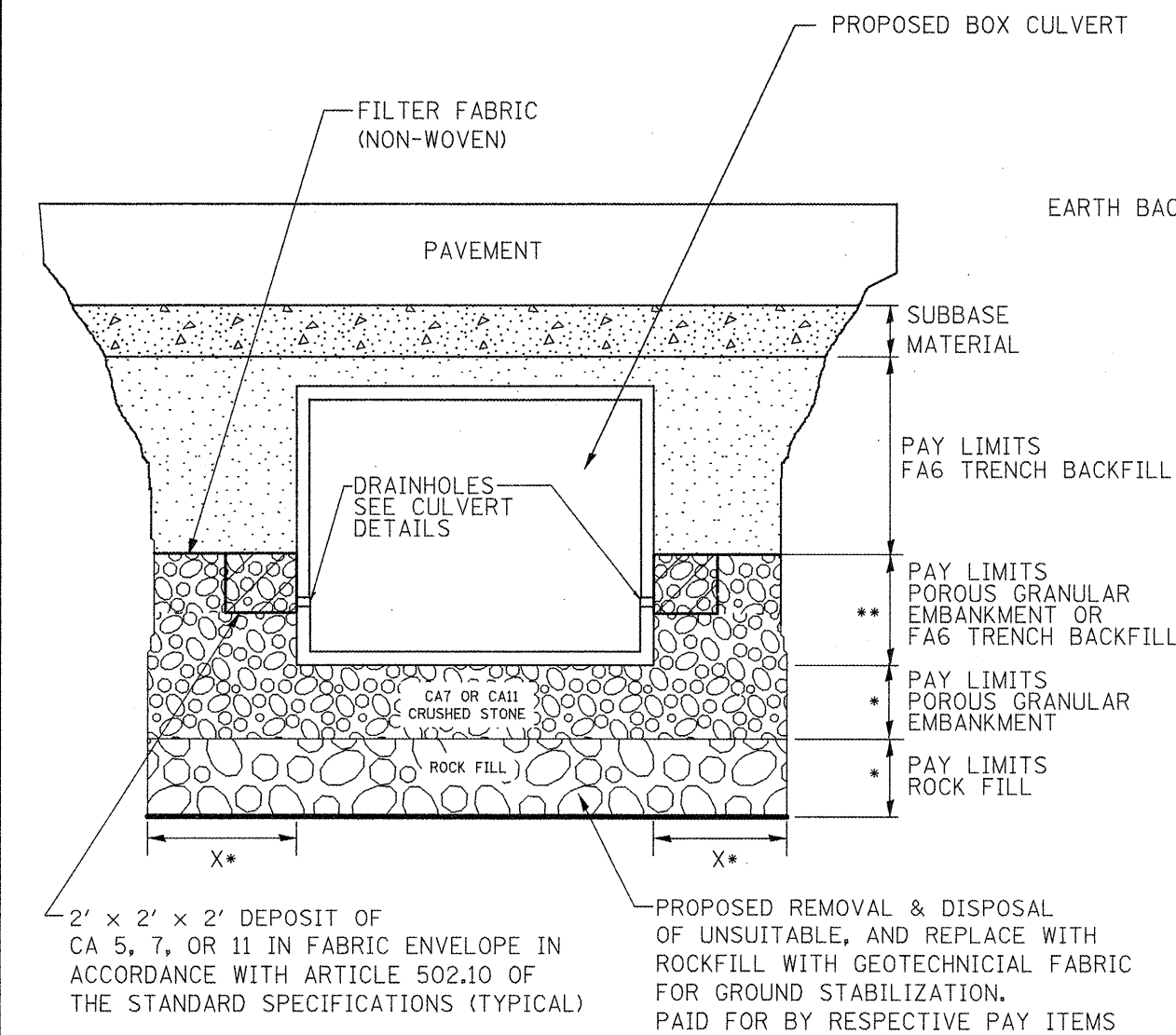
BBS, form 137 (Rev. 8-99)

EFK•Moen, LLC
Civil Engineering Design

FILE NAME =	USER NAME = SEC	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BOX CULVERT EXTENSION BORING LOGS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - SEC	REVISED -			685	37BR-1	MCDONOUGH	138	43
	PLOT SCALE = NTS	CHECKED -	REVISED -					CONTRACT NO. 68352		
	PLOT DATE = 9/23/2009	DATE - 9/23/09	REVISED -			SCALE: N.T.S.	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT

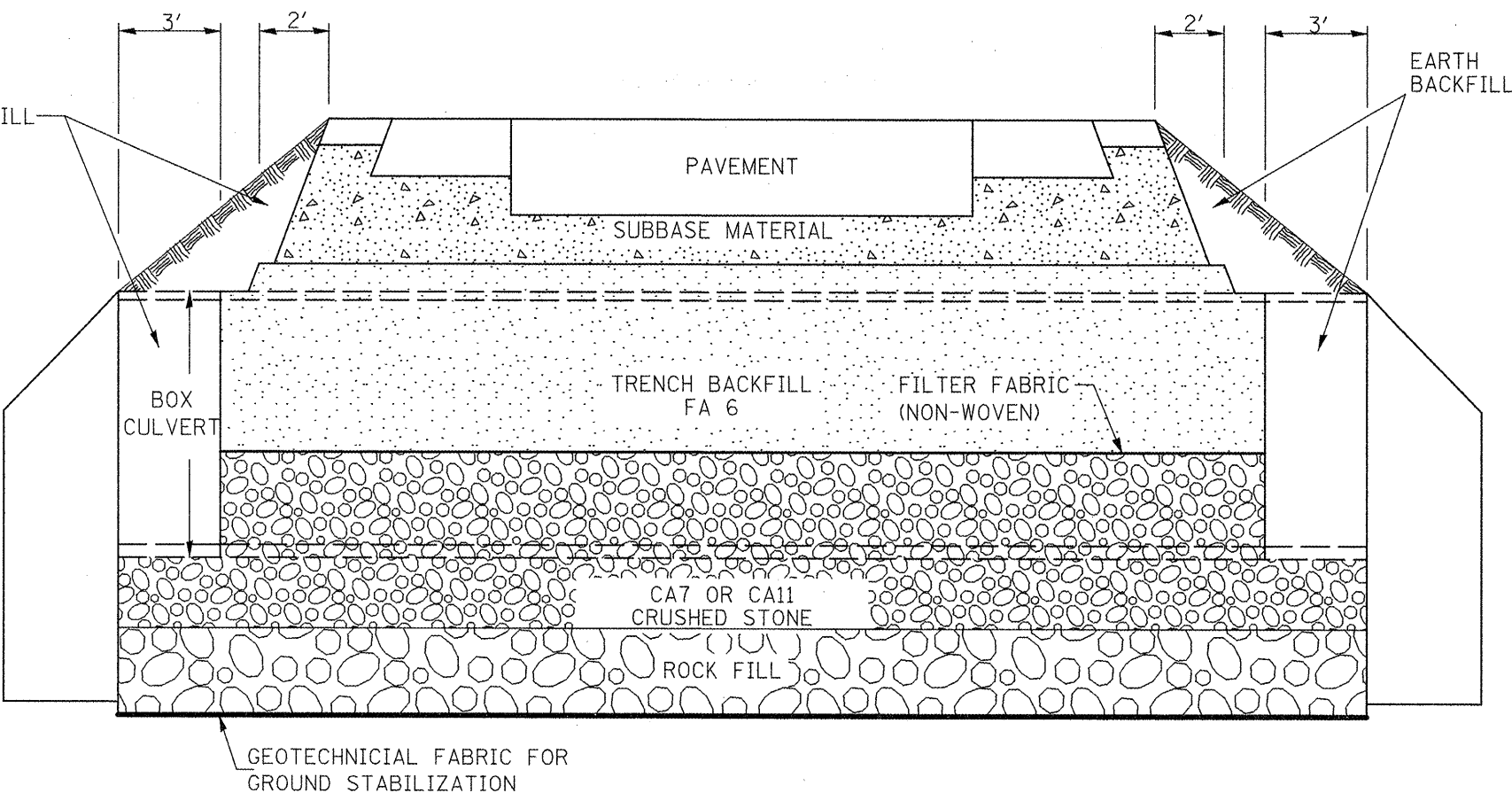
ROADWAY PROFILE
VIEW

ROADWAY CROSS SECTION
VIEW



* SEE UNDERCUT DETAIL FOR DEPTHS AND WIDTHS. IF THERE IS NO UNDERCUT, X = 2 FEET AND SEE NOTE 3 THIS SHEET.

** EXTEND THE POROUS GRANULAR EMBANKMENT TO THE TOP OF THE DRAINHOLE FILTER FABRIC ENVELOPES. IF THE BOX CULVERT DOES NOT HAVE DRAINHOLES, THEN BEGIN PLACING TRENCH BACKFILL AT THE BOTTOM OF THE CULVERT.

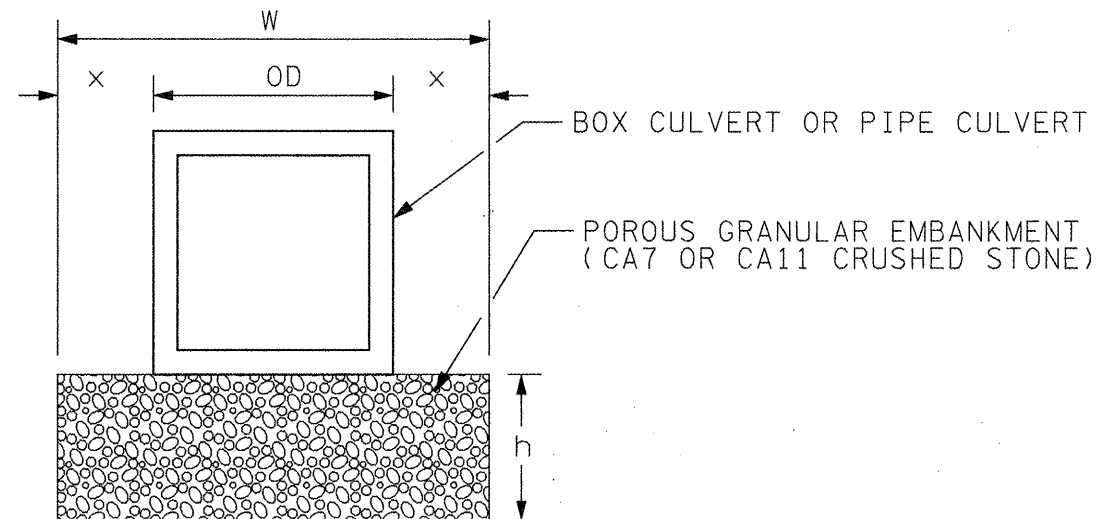


NOTES:

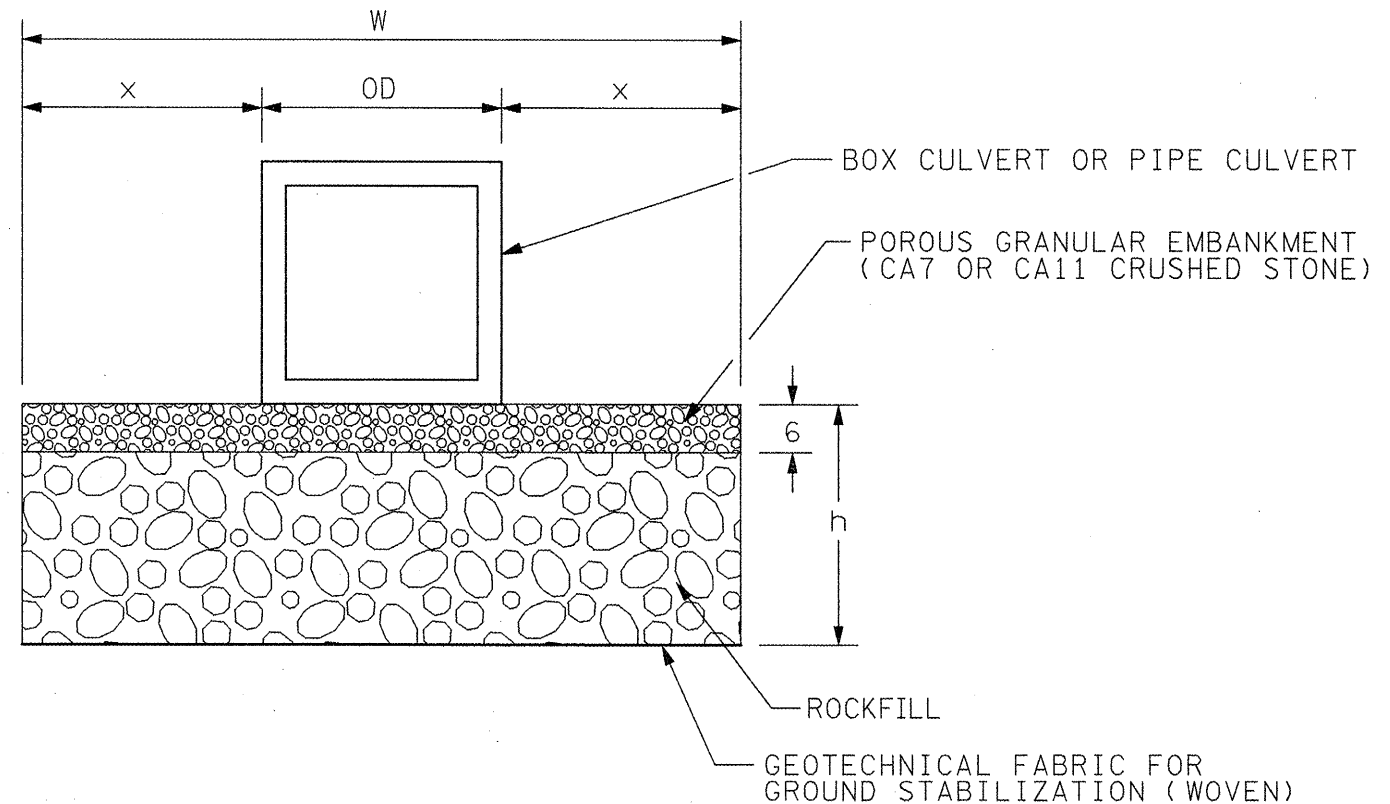
1. EXCEPT AS SPECIFIED IN THIS DETAIL, THE PLACEMENT AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
2. TRENCH BACKFILL SHALL BE COMPACTED BY EITHER METHOD 2 OR METHOD 3 SPECIFIED IN ARTICLE 550.07, OR IN ACCORDANCE WITH METHOD 1 SPECIFIED IN ARTICLE 550.07, EXCEPT THAT THE COMPACTED LIFTS SHALL NOT EXCEED 8" IN THICKNESS. TRENCH BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD LAB DENSITY.
3. IF NO UNDERCUT IS REQUIRED, A 6" MINIMUM LAYER OF POROUS GRANULAR EMBANKMENT SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF PRECAST BOX CULVERTS AS SPECIFIED IN ARTICLE 540.06 OF THE STANDARD SPECIFICATIONS.

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

FILE NAME =	USER NAME = dp	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DETAIL OF EXCAVATION AND BACKFILL FOR BOX CULVERTS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*FILE#		DRAWN -	REVISED -					685	37BR-1	MC DONOUGH/ FULTON	138	44
	PLOT SCALE = 2,0000' / IN.	CHECKED -	REVISED -					CONTRACT NO. 68352				
	PLOT DATE = 10/16/2009	DATE -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 2 SHEETS	STA. 574+00.00 TO STA. 575+00.00	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



ALTERNATE I: FOR 12" TO 18" UNDERCUT



ALTERNATE II: FOR 18" TO 36" UNDERCUT

CULVERT LOCATION	UNDERCUT			
	DEPTH	WIDTH		
	h	x	OD	W
EXTENSION ON BOX @ 574+65.49, UPSTREAM & DOWNSTREAM	30"	2'-6"	5'-6"	10'-6"

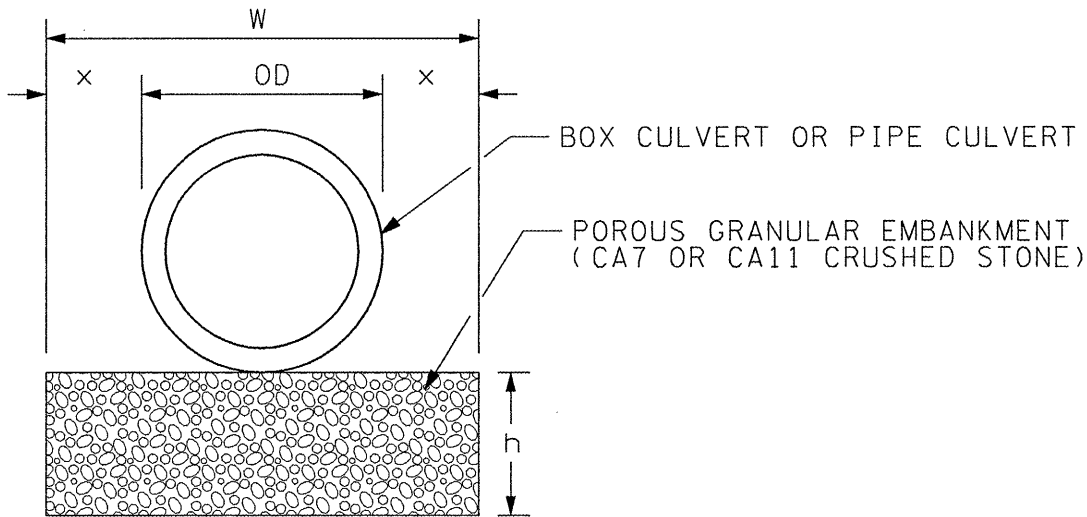
GENERAL NOTES:

- Undercut if the Dynamic Cone Penetrometer tests indicate soil strength is less than 1 ton/sq ft.
- DEFINITIONS:
 OD = Outside Diameter or outside width of box culvert
 h = Depth of undercut (for precast box culverts, the upper 6" is included in the cost of culvert).
 x = h or min. width specified in Sec. 542.04, which ever is greater for pipe culverts.
 x = h or minimum 2 feet, which ever is greater for box culverts.
 W = Width of undercut = $2x + OD$
- For undercuts greater than 36", use Alternate II with undercut treatments as directed by the District Geotechnical Engineer.

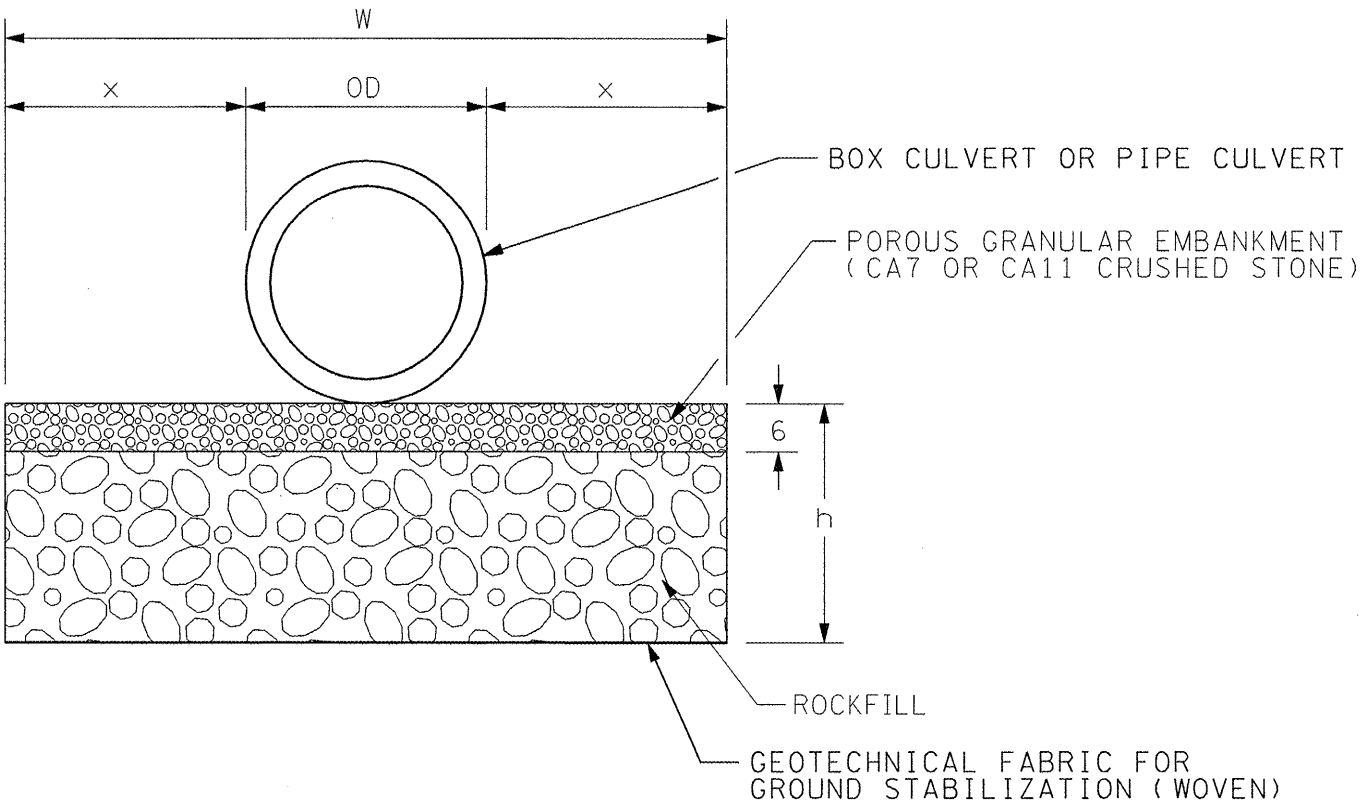
All dimensions are in inches (millimeters) unless otherwise noted.

FILE NAME =	USER NAME = dp	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	UNSUITABLE EXCAVATION TREATMENT FOR CULVERTS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FILEL		DRAWN -	REVISED -			685	37BR-1	MCDONOUGH/FULTON	138	45
	PLOT SCALE = 2.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 68352				
	PLOT DATE = 10/16/2009	DATE -	REVISED -			SCALE: NONE	SHEET NO. 2 OF 2 SHEETS	STA. 574+00.00 TO STA. 574+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

DESIGNER NOTES: 1. CHECK WITH THE DISTRICT GEOTECHNICAL ENGINEER FOR USE OF THIS DRAWING AND FOR UNDERCUT DEPTHS IF NOT PROVIDED OR SHOWN IN PROJECT SOILS REPORT. 2. ASSURE TREATMENT AREAS ARE SHOWN IN PLANS AND ON CROSS SECTIONS. 3. INCLUDE SOIL BORINGS FOR TREATED AREAS.



ALTERNATE I: FOR 12" TO 18" UNDERCUT



ALTERNATE II: FOR 18" TO 36" UNDERCUT

CULVERT LOCATION	UNDERCUT			
	DEPTH	WIDTH		
	h	x	OD	W
577+96.14	30"	30"	51"	111"

GENERAL NOTES:

- Undercut if the Dynamic Cone Penetrometer tests indicate soil strength is less than 1 ton/sq ft.
- DEFINITIONS:
OD = Outside Diameter or outside width of box culvert
h = Depth of undercut (for precast box culverts, the upper 6" is included in the cost of culvert).
x = h or min. width specified in Sec. 542.04, which ever is greater for pipe culverts.
x = h or minimum 2 feet, which ever is greater for box culverts.
W = Width of undercut = 2x + OD
- For undercuts greater than 36", use Alternate II with undercut treatments as directed by the District Geotechnical Engineer.

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

FILE NAME =	USER NAME = jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	UNSUITABLE EXCAVATION TREATMENT FOR CULVERTS				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
Z:\08056_Shaw_Creek\dgn\Design\Final\Plotsheets\46-0468352-culvert_detail_sheet.dgn		DRAWN - LE	REVISED -						685	37BR-1	MCDONOUGH/ FULTON	138	46
	PLOT SCALE = 2.0000 ' / IN.	CHECKED - SD	REVISED -		CONTRACT NO. 68352								
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -		SCALE: NTS	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

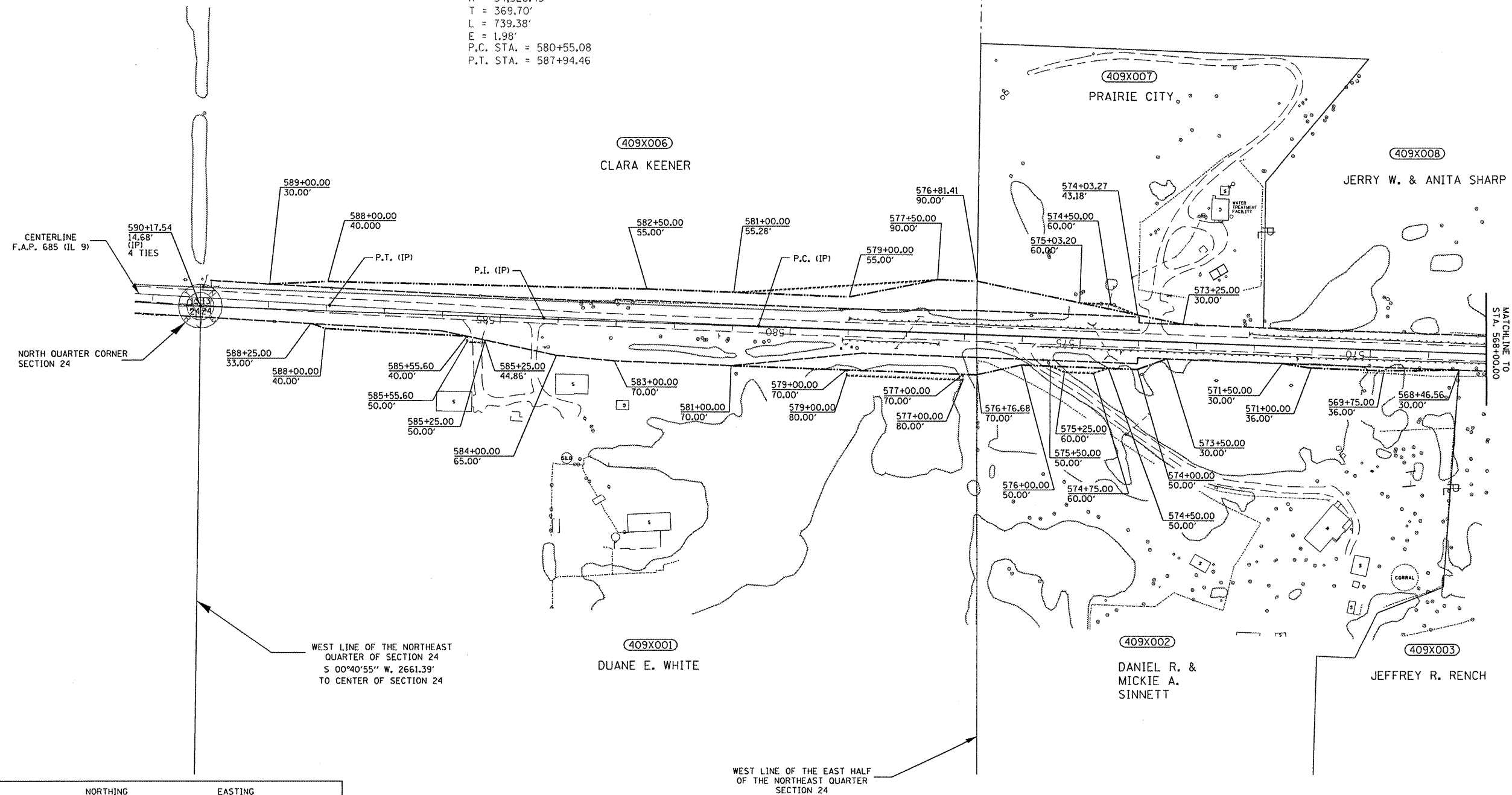
LEGEND
PROPOSED TEMPORARY EASEMENT LINE
PROPOSED RIGHT OF WAY LINE
EXISTING RIGHT OF WAY LINE
PERMANENT SURVEY MARKER

SECTION 13 T7N R1W



EXIST. CURVE IL9EXCL4
PI STA. = 584+24.78
 $\Delta = 1^\circ 13' 37''$ (RT)
D = 0° 09' 57"
R = 34,528.43'
T = 369.70'
L = 739.38'
E = 1.98'
P.C. STA. = 580+55.08
P.T. STA. = 587+94.46

WEST LINE OF THE EAST HALF
OF THE SOUTHEAST QUARTER
SECTION 13



CORNER	NORTHING	EASTING
NORTHWEST CORNER OF THE NORTHEAST QUARTER OF SECTION 24	1,426,983.760	2,216,391.049

POINT	NORTHING	EASTING
PC	1,426,949.944	2,217,353.125
PI	1,426,963.691	2,216,983.678
PT	1,426,985.346	2,216,614.610

SECTION 24 T7N R1W

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

SCALE: 1" = 100' SHEET NO. 1 OF 2 SHEETS STA. 556+01.35 TO STA. 568+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ EULTON	138	47
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

LEGEND
PROPOSED TEMPORARY EASEMENT LINE
PROPOSED RIGHT OF WAY LINE
EXISTING RIGHT OF WAY LINE
PERMANENT SURVEY MARKER

SECTION 13 T7N R1W

SECTION 18 T7N R1E

EXIST. CURVE IL9EXCL3
PI STA. = 559+68.35
 $\Delta = 1^{\circ} 27' 12''$ (RT)
D = 0° 11' 53"
R = 28,933.69'
T = 367.00'
L = 733.96'
E = 2.33'
P.C. STA. = 556+01.35
P.T. STA. = 563+35.31



STATION EQUATION:
STA 563+35.31 BK=
STA 563+35.80 AH

EAST QUARTER CORNER
SECTION 24 TO NORTHEAST CORNER SECTION 24
N 00° 57' 46" E Distance 2,741.68'

NORTHEAST CORNER SECTION 24
TO NORTHWEST CORNER SECTION 19
N 00° 59' 58" E Distance 63.06'

NORTHWEST CORNER SECTION 19 TO
WEST QUARTER CORNER SECTION 7
TOWNSHIP 7 NORTH, RANGE 1 EAST
N 00° 54' 05" E Distance 7,821.09'

NORTHWEST CORNER SECTION 19 TO
NORTH QUARTER CORNER SECTION 19
S 88° 20' 06" E Distance 3,070.87'

NORTHEAST CORNER SECTION 24
TO NORTH QUARTER CORNER SECTION 24
N 87° 54' 17" W Distance 2,674.82'

CORNER	NORTHING	EASTING
WEST QUARTER CORNER OF SECTION 7 TOWNSHIP 7 NORTH RANGE 1 EAST	1,434,769.142	2,219,188.221
EAST QUARTER CORNER SECTION 24	1,424,144.569	2,219,018.119
NORTHEAST CORNER SECTION 24	1,426,885.966	2,219,064.083
NORTHWEST CORNER SECTION 19	1,426,949.020	2,219,065.183
NORTHEAST CORNER OF THE NORTHWEST QUARTER OF SECTION 19	1,426,859.794	2,222,134.755

POINT	NORTHING	EASTING
PC	1,426,868.025	2,219,804.938
PI	1,426,872.365	2,219,437.964
PT	1,426,886.012	2,219,071.217

SECTION 24 T7N R1W

EXISTING CENTERLINE
TOWNSHIP ROAD 2400E

EAST LINE OF
THE SOUTHEAST
QUARTER SECTION 24

SECTION 19 T7N R1E

(409X008)
JERRY W. & ANITA SHARP

NORTHWEST CORNER
SECTION 19
563+44.17
62.74'
(IP)
4 TIES

(409X005)
LYLE AND MARTHA ANDERSON
REVOCABLE LIVING TRUST

(409X003)
JEFFREY R. RENCH

(409X009)
TODD G. &
MICHELLE L. RODEFFER

(409X004)
JOHN D. &
VIRGINIA
MATTHEWS

532+71.59
19.32'
NORTHEAST CORNER
OF THE NORTHWEST
QUARTER OF SECTION 19

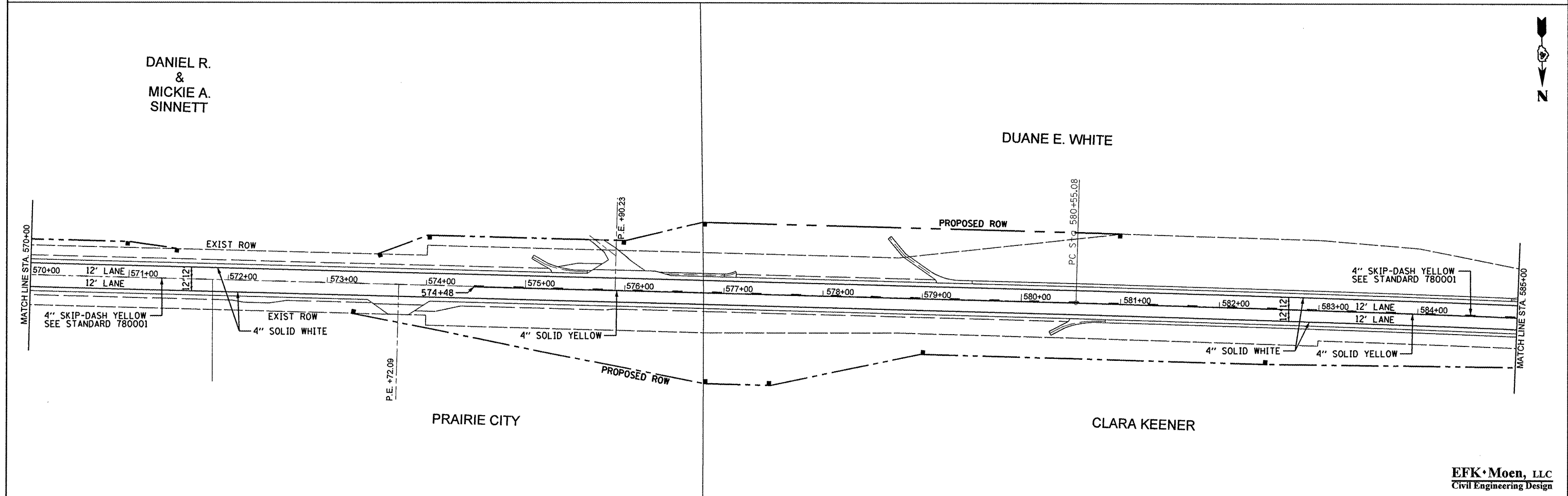
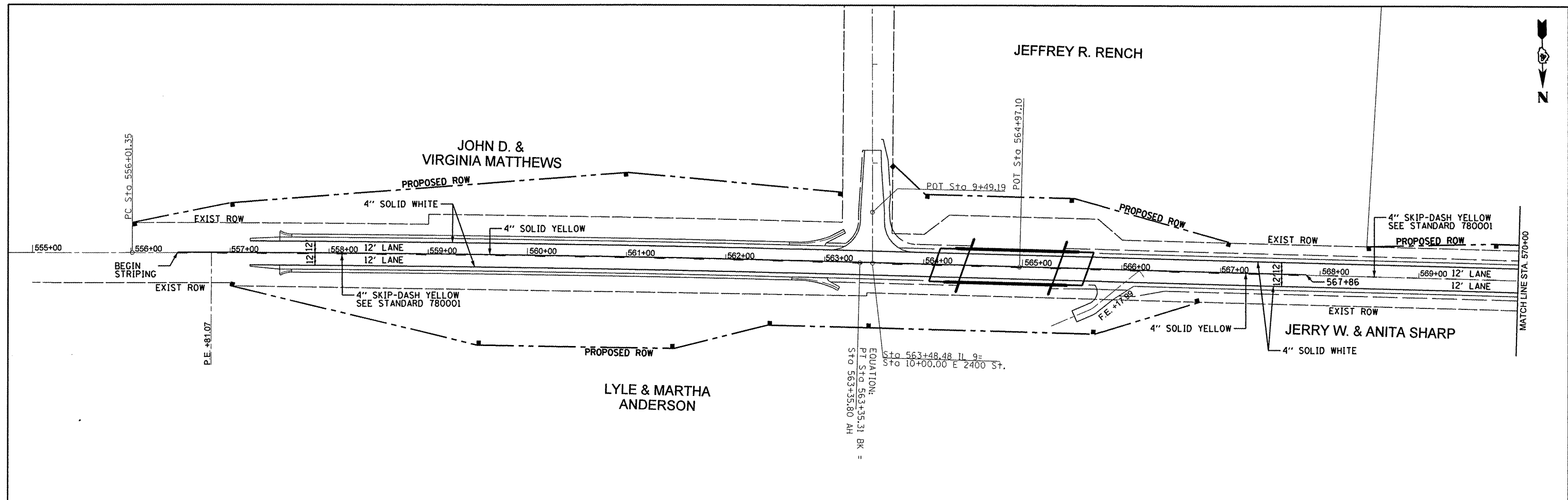
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	PLOT DATE = 05/04/2009	DATE - 10/15/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

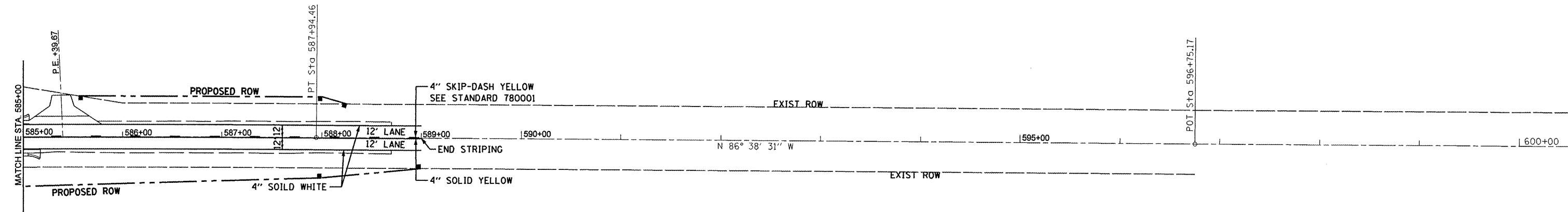
RIGHT OF WAY PLANS

PROJECT	JOB NO. R94-009-06
SHEET NO. 2 OF 2 SHEETS	STA. 568+00.00 TO STA. 589+00.00

F.A.F. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FBI TON	138	48
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



FILE NAME = Z:\08056.Shaw.Creek\dgn\Design\Final\Pl		USER NAME = jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
tsheets\49-D468352-sht-pmk 1.dgn			DRAWN - MK	REVISED -				685	37BR-1	MCDONOUGH	138	49
PLOT SCALE = 100.0000' / IN.			CHECKED - SD	REVISED -				CONTRACT NO. 68352				
PLOT DATE = 10/16/2009			DATE - 10/15/09	REVISED -				FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



EFK Moen, LLC
Civil Engineering Design

FILE NAME = Z:\08056_Show_Creek\dgn\Design\Final\Pl	USER NAME = jd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT MARKING	F.A.P. SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
	tsheets\50-D468352-shr-pmk 2.dgn	DRAWN - MK	REVISED -			685	37BR-1	MCDONOUGH/ POLSON	138	50
	PLOT SCALE = 100.0000 ' / IN.	CHECKED - SD	REVISED -			CONTRACT NO. 68352				
	PLOT DATE = 10/16/2009	DATE - 10/15/09	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
SCALE: 1" = 50'						SHEET NO. 2 OF 2 SHEETS	STA. 585+00.00 TO STA. 600+00.00			

B.M. Chiseled square in N.W. Wingwall Elev. 100.00
Existing Structure - Built in 1924 as S.B.L. Rt. 9, Section 37B.
Sta. 564+91. R.C.D. & Super. to be removed utilizing
stage construction. No salvage. R.C. Abut. caps to be
rebuilt and widened.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	BY	REVISION	DATE	BY	REVISION
9/27/88	BR	McDonough	11/11/88	BR	5
DATE	BY	REVISION	DATE	BY	REVISION
9/27/88	BR	McDonough	11/11/88	BR	5

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

An alternate strand pattern using Extra High Strength Prestressing strand (270 K.S.I.) is permitted.

Expansion bolts shall consist of self-drilling expansion anchors and 3/8"x12" hooked bolts.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

Expansion guards shall be fabricated and erected in accordance with Article 503.07(c) of the Standard Specifications and are included in quantity of structural steel.

For Waterproofing Membrane System see Special Provisions.

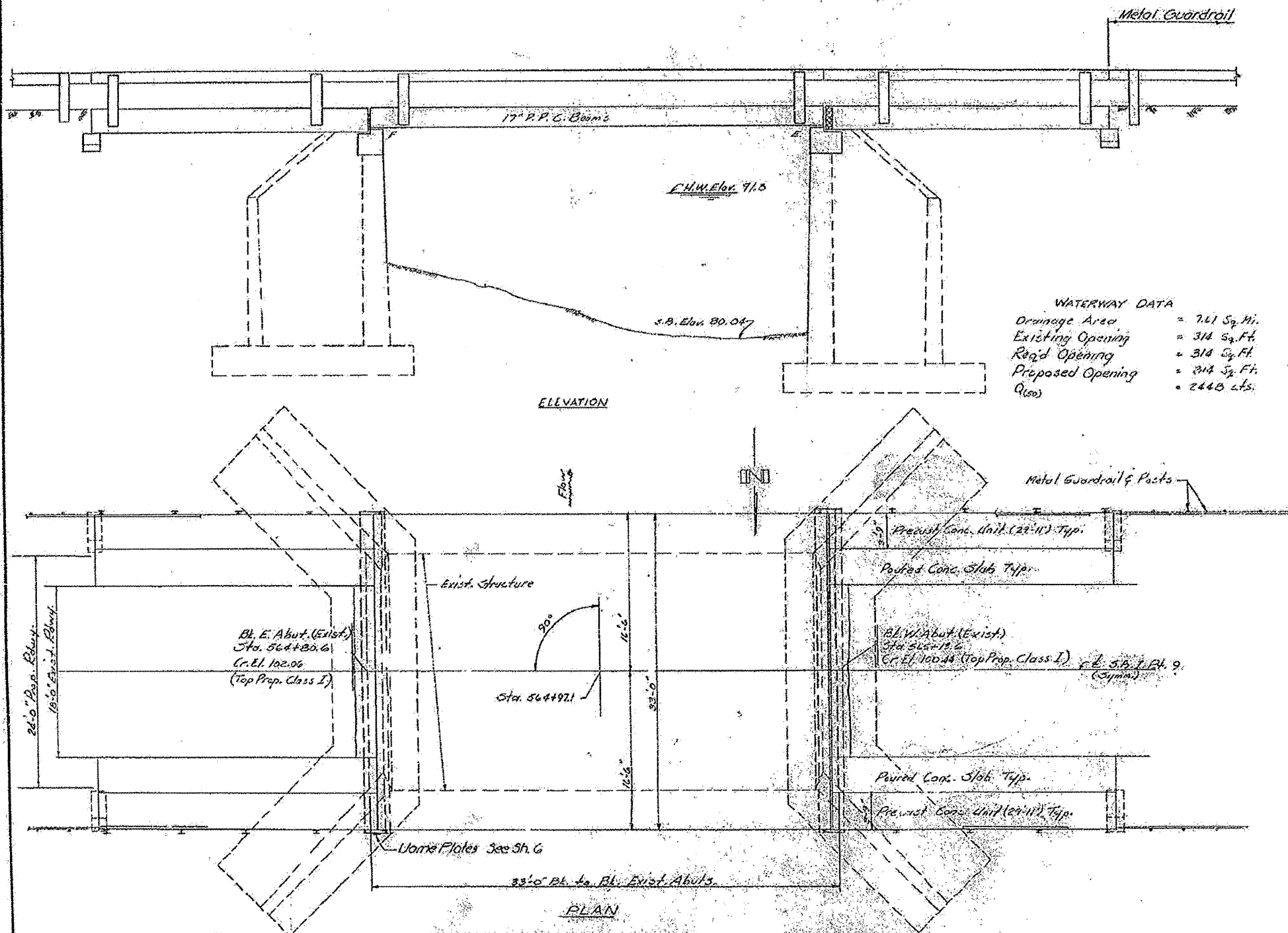
The top surface of the beams shall be finished in accordance with Article 505.06 of the Std. Specs. except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.

All Structural Steel shall be shop painted with two coats of basic lead silico chromate paint.

FOR INFORMATIONAL
PURPOSES ONLY

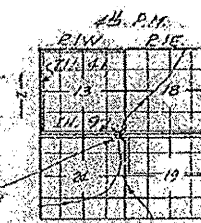
WATERWAY DATA

Drainage Area	= 7.11 Sq. Mi.
Existing Opening	= 314 Sq. Ft.
Req'd Opening	= 314 Sq. Ft.
Proposed Opening	= 314 Sq. Ft.
Q ₁₀₀	= 244.0 cfs.



TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Portland Cement				
Mortar Filling Course	Lin. Ft.	315		315
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yds.		6	6
Class X Concrete	Cu. Yds.	0.7	16.6	17.3
P.C. Deck Beams 17"	Sq. Ft.	1067		1067
Steel Railing (Type 5)	Lin. Ft.	187		187
Reinforcement Bars	Lbs.	110	2660	2770
Waterproofing Membrane System	Sq. Yds.	120		120
Preformed Joint Sealant	Lin. Ft.	33		33
Form Removal and P.C.				
Replacement Type 1 10"	Sq. Yds.	8		8
Precast Conc. Endcap Slab	Sq. Ft.	449		449
Portland Cement Concrete Pavement 10"	Sq. Yds.	50		50
Pavement Fabric	Sq. Yds.	50		50
Expansion Bolts 3/8"	Each	76	50	126
Temporary Guardrail	Lin. Ft.	33		33
Structural Steel	Lbs.	2290		2290
Form Plates	Each	1		1
Bituminous Concrete Surface Course Class I	Tons	59		59



LOCATION SKETCH

GENERAL PLAN & ELEVATION
BRIDGE OVER LOST GROVE CREEK
S.B.L. RT. 9, SEC. 37BR
MC DONOUGH COUNTY

DESIGNED	J.T. Downing
CHECKED	J.M. Patel
DRAWN	10/23
CHECKED	J.M.P.

EXAMINED	10/23
PASSED	10/23
APPROVED	10/23

PRECAST PRESTRESSED UNITS

F ₁ = 5000 p.s.i.
F ₂ = 4000 p.s.i.
F ₃ = 283,000 p.s.i. (1/2" strands)
F ₄ = 173,400 p.s.i. (3/4" strands)

PRECAST UNITS

F ₁ = 4,500 p.s.i.
F ₂ = 1,000 p.s.i.

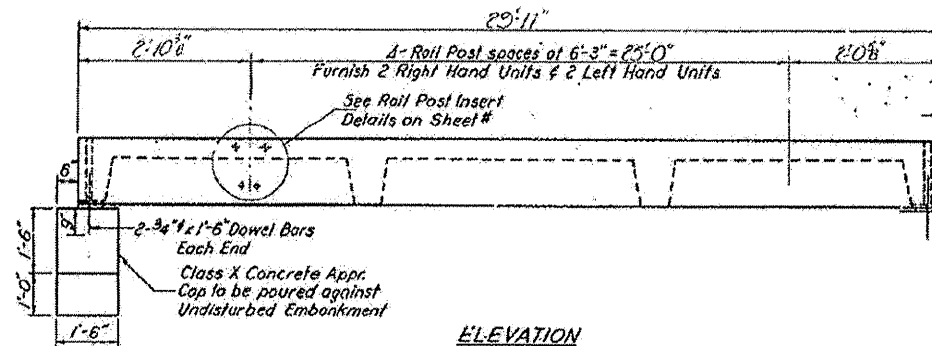
FIELD UNITS

F ₁ = 1,000 p.s.i. (5/8")
F ₂ = 20,000 p.s.i. (1/2")

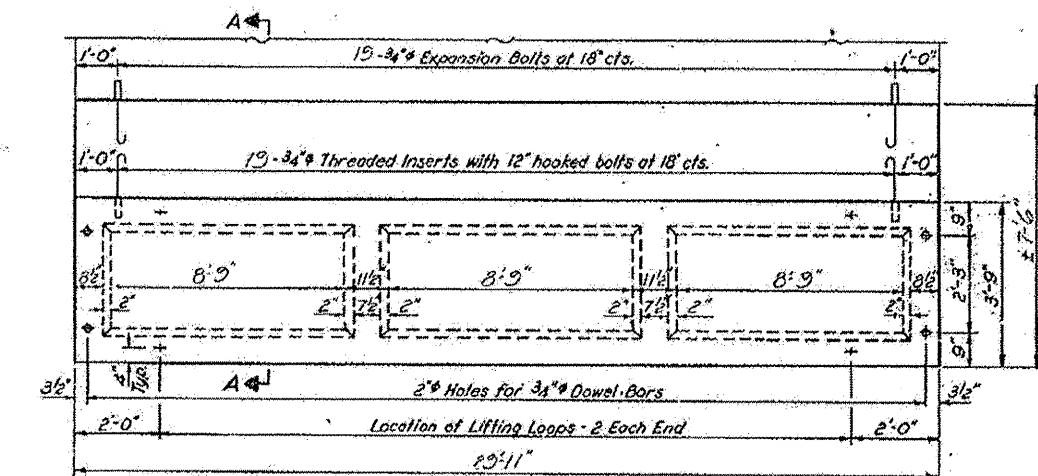
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
STATION 564+91.00
REBUILT BY
STATE OF ILLINOIS
S.B.L. RT. 9, SEC. 37BR
LOADING 115.20

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

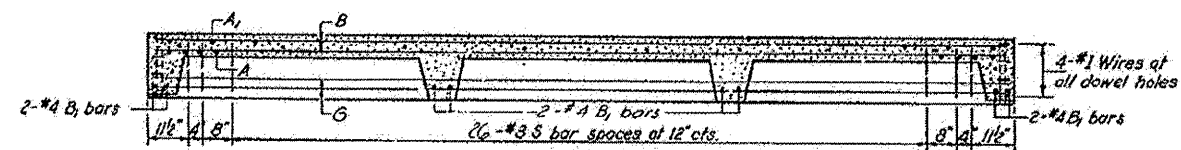
ROUTE NO.	SECTION	PROJECT	DATE	BY	CHECKED
U.S. 31	370R	McDonough	11	B	
FILE NO.	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5



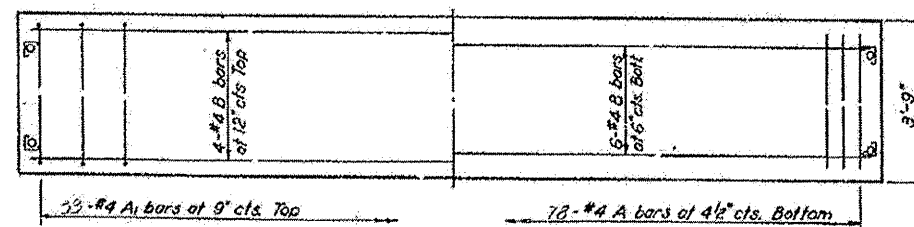
ELEVATION



PARTIAL PLAN OF APPROACH



LONGITUDINAL SECTION

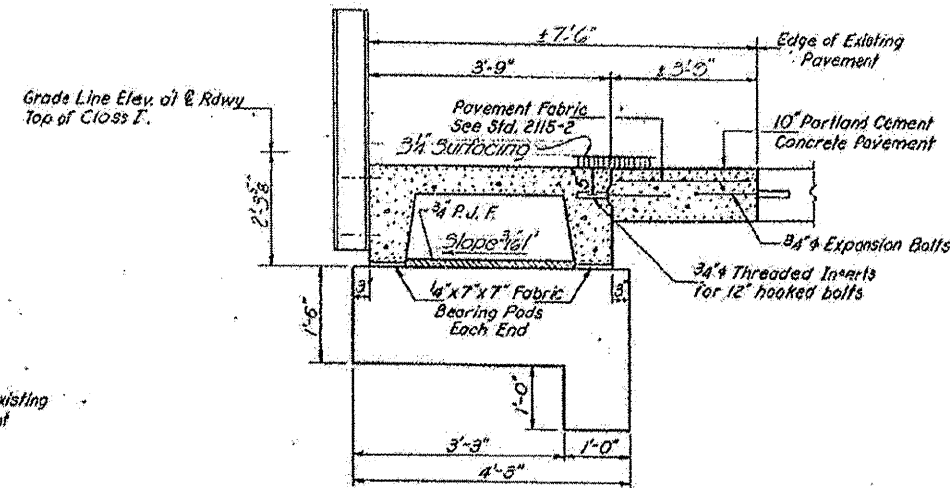


SLAB REINFORCEMENT

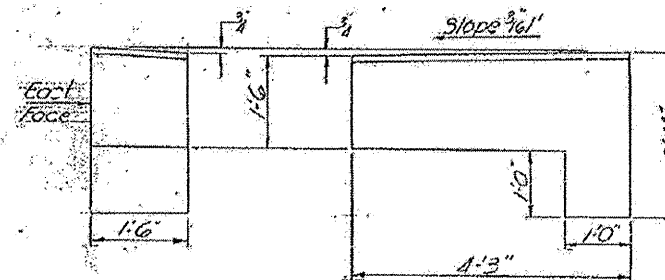
DESIGNED	J. J. Downing
CHECKED	J. M. Pule
DRAWN	J. L. Armstrong
CHECKED	J. M. P.

EXAMINED	June 3, 1911
PASSED	W. C. Baumgardner
APPROVED	Richard H. Hollerman

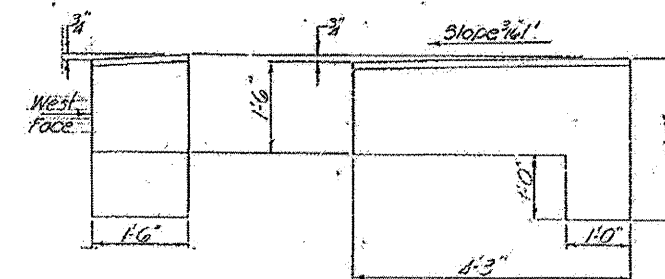
Grade Line Elev. of Rwy.
Top of Cross I.



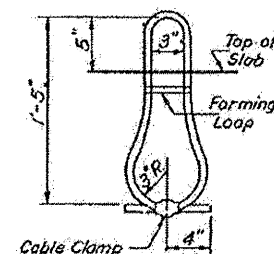
SECTION A-A



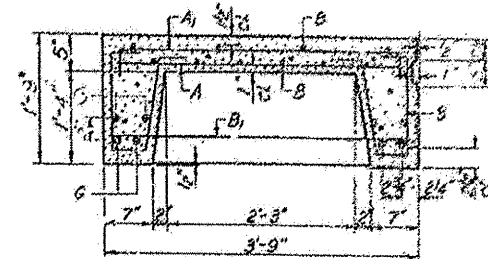
DETAIL OF WEST APPROACH CAPS



DETAIL OF EAST APPROACH CAPS



LIFTING LOOP DETAIL



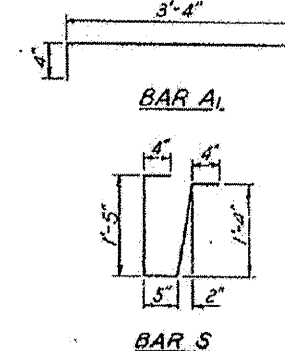
SECTION THRU PRECAST UNIT

FOR INFORMATIONAL
PURPOSES ONLY

BAR LIST - ONE UNIT

Reinforcement to be cast into slab

Bar	No.	Size	Length	Shape
A	75	#4	3'-9"	
A1	50	#4	4'-0"	
B	10	#4	3'-9"	
B1	8	#4	3'-6"	
G	5	#4	3'-6"	
S	31	#3	3'-10"	



BAR S

NOTES

Unless otherwise approved by the Engineer, lifting loops shall be 1/2" 6x25 class wire rope with fiber core and shall have a minimum ultimate strength of 21,000 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and 3/4" hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab". The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

FOUR UNITS

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq. Ft.	2.22
Portland Cement Concrete Pavement (10)	Sq. Yds.	1.1
Pavement Fabric	Sq. Yds.	1.0
Expansion Bolts 3/4"	Each	75
Class X Concrete	Cu. Yds.	1.6

STRESSES

$f_c = 4,500$ psi.

$f_t = 1,800$ psi.

$f_s = 20,000$ psi.

$n = 8$

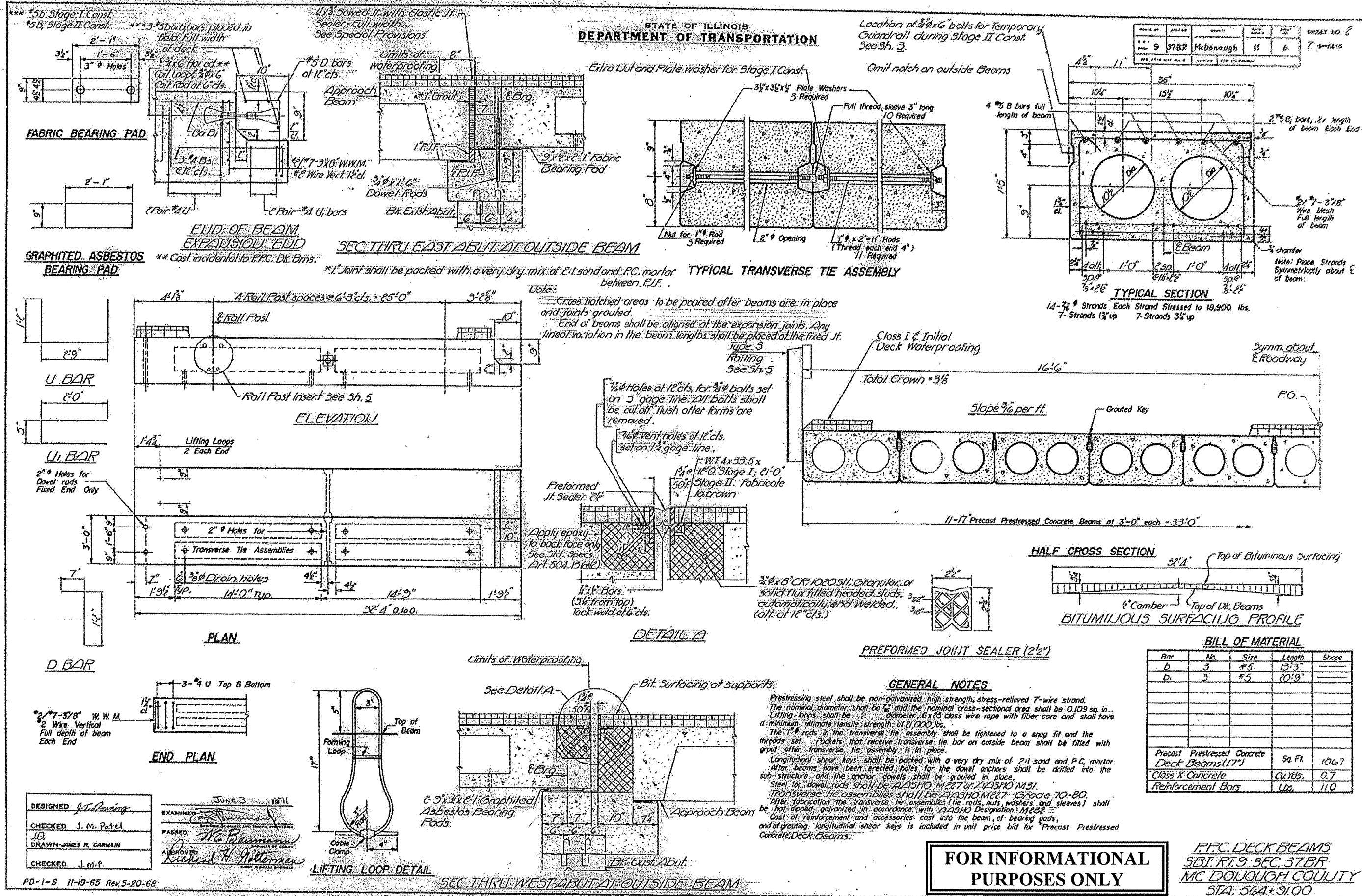
LOADING HS-20

APPROACH DETAILS

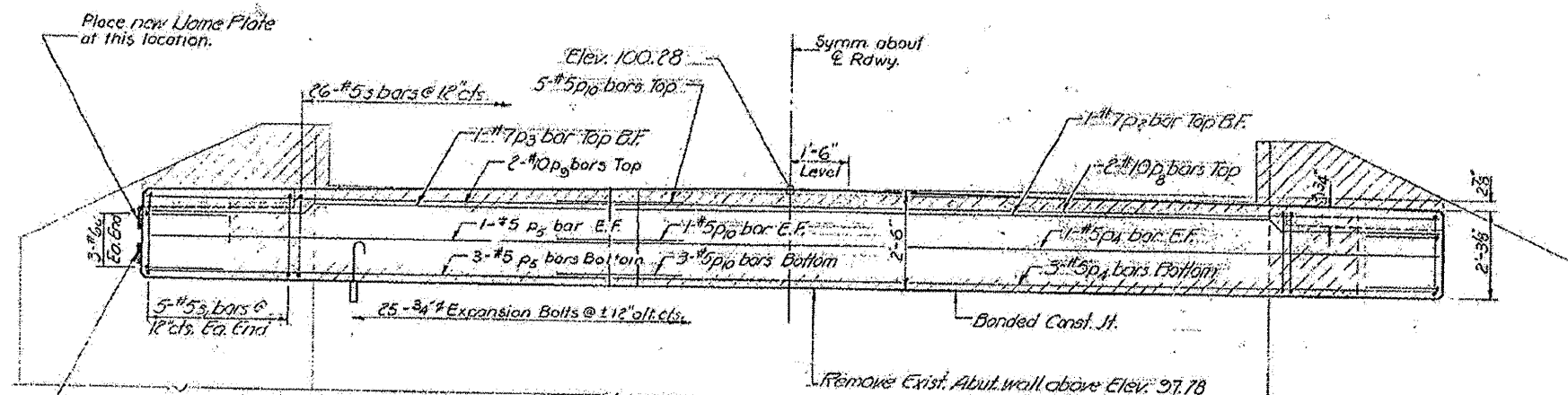
SEE PL. 3 SEC. 7-1-11

MC DONOUGH & SONS

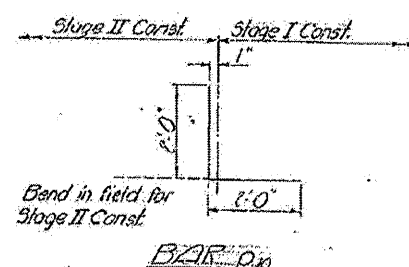
STA. 564+31.00



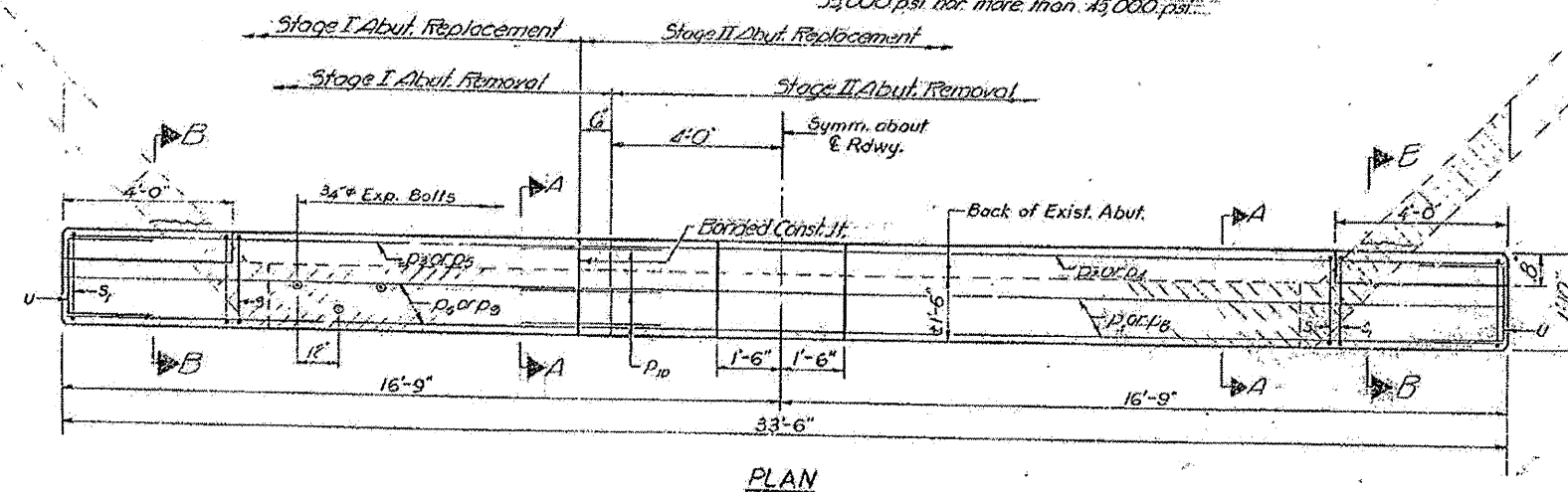
DATE	TIME	LOCATION	REMARKS
10/9	3:30 PM	McDonough	11



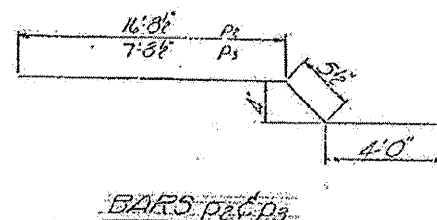
ELEVATION
(LOOKING EAST)



Pro Bars shall conform to the requirements of A235H, M31 or M53 except that the minimum yield strength shall not be less than 53,000 psi nor more than 45,000 psi.

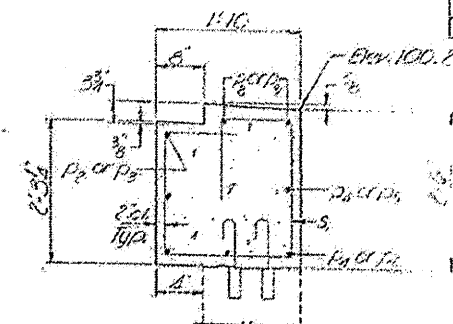


PLAN

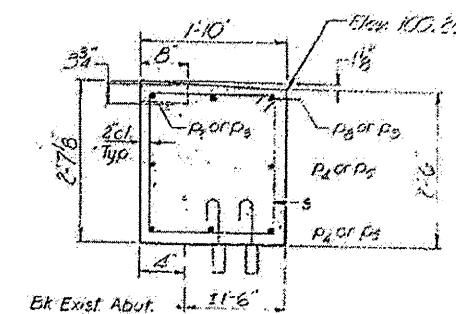


Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

Expansion bolts shall be anchored in sound concrete. All edges shall have standard 3/4" diamfers except as noted.

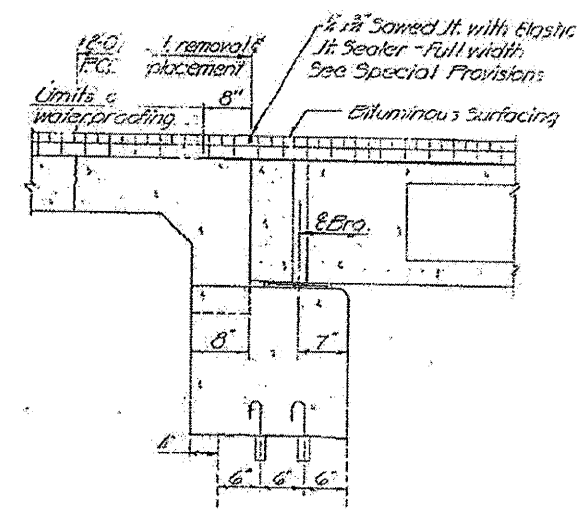


SECTION B-E



SECTION A-A

**FOR INFORMATIONAL
PURPOSES ONLY**



SEC. THRU. ABUT. AT E RDWY.
(LOOKING SOUTH)

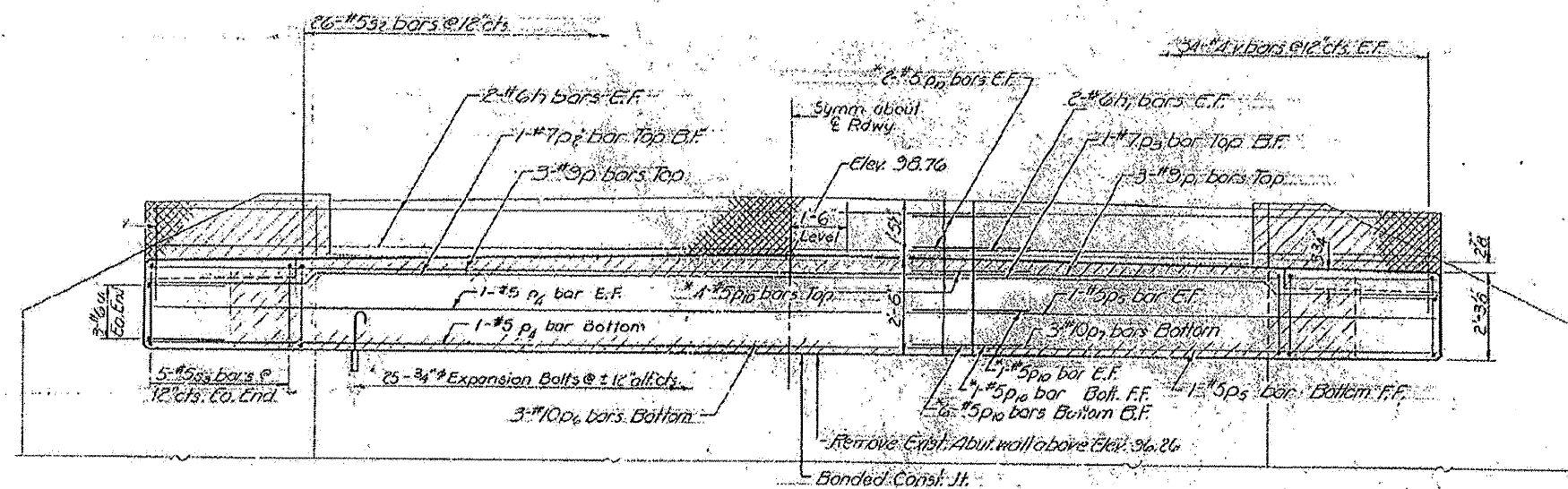
BILL OF MATERIAL			
Box	No.	Size	Length Shop
P ₁	2	#10	8'
P ₂	2	#10	8'
P ₃	1	#7	3'
P ₄	1	#7	3'
P ₅	2	#5	3'
P ₆	3	#5	1' 0"
P ₇	0	#5	2' 0"
S	86	#5	7' 10"
S	10	#5	6' 2"
	6	#6	3' 0"
Class 1 Concrete		Cutout	5.2
Reinforcement Bars		Each	4.7
Expansion Bolt		Each	3.0
Concrete Removal		12.0	5

EAST ABUTMENT
SBL RT. 3 SEC. 37ER
MC DONOUGH COUNTY
STA. 564+31.00

DESIGNED *J.T. Dossing*
CHECKED *J. m. Patel*
DRAWN *J.L. Armstrong*
CHECKED *J. m. p*

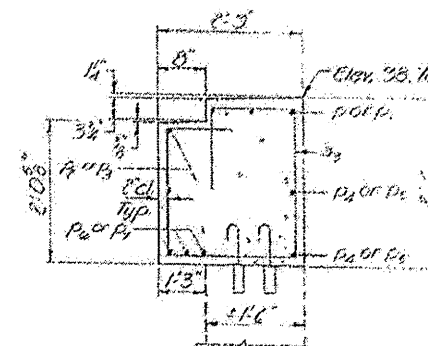
JUN 23 1971
 EXAMINED *[Signature]*
 SPECIAL AG GROUPS AND TRAFFIC TECHNOLOGIES
 PASSED *WE Baumann*
 IN CHARGE OF OFFICE
 APPROVED *Richard H. Gorterman*

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

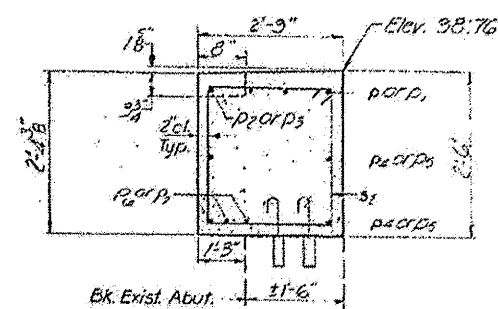


ELEVATION
(LOOKING WEST)

*Note for Detail of Pro bar see sh. #6

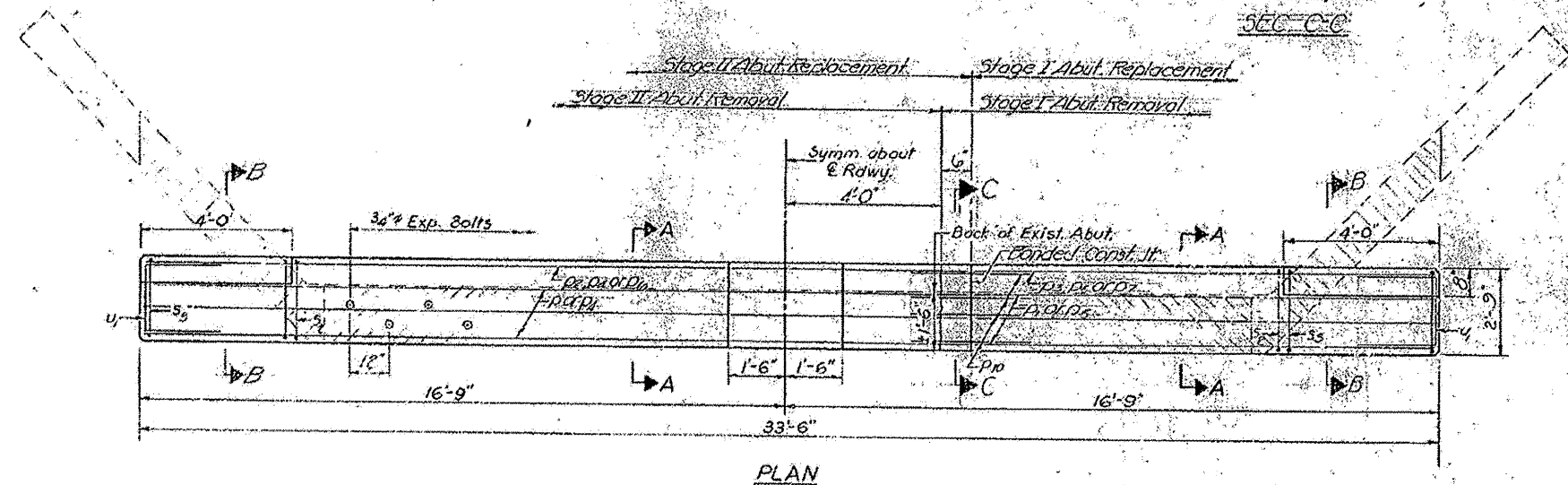


SECTION B-B

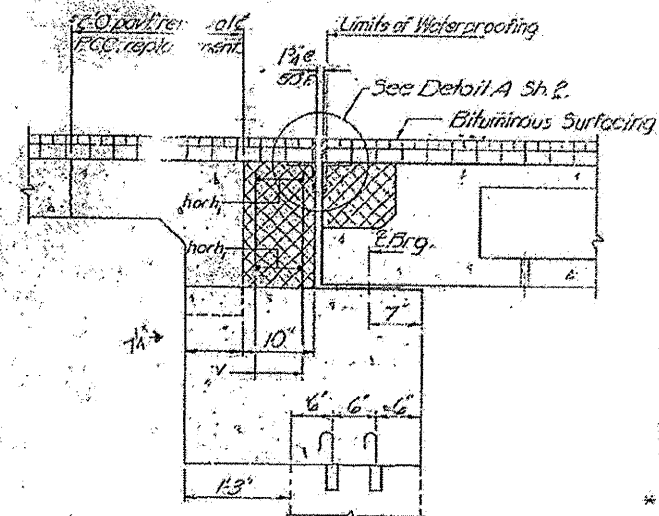


SECTION A-A

**FOR INFORMATIONAL
PURPOSES ONLY**



PLAN



SEC. THRU ABUT. AT E ROWY.
(LOOKING NORTH)

NOTE

Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.

Expansion bolts shall be anchored in sound concrete.
All edges shall have standard 3/4" chamfers except as noted.

Cross hatched area indicates area to be poured after beams are in place and joints grouted.

BILL OF MATERIAL				
Bar	Up	Size	Length	Notes
A	4	#6	8' 0"	
B	4	#6	8' 0"	
C	3	#8	8' 0"	
D	3	#8	8' 0"	
E	1	#7	12' 0"	
F	1	#7	12' 0"	
G	3	#5	8' 0"	
H	3	#5	8' 0"	
I	3	#5	8' 0"	
J	3	#5	8' 0"	
K	17	#5	10' 0"	
L	24	#5	3' 8"	
M	12	#5	3' 8"	
N	6	#6	6' 0"	
O	68	#4	8' 6"	
Class 10 Concrete			CU. YD.	2.2
Reinforcement Bars			Lbs.	12.5
Expansion Joints			Feet	25
Concrete Removal			Cu. YD.	

WEST ABUTMENT
SBI RT 9 SEC 37BR
MCDONOUGH COUNTY
STA. 564+31.00

DESIGNED	<i>J. F. Dowling</i>	EXAMINED	<i>J. F. Dowling</i>
CHECKED	<i>J. M. Patel</i>	PASSED	<i>H. B. Bousman</i>
DRAWN	<i>J. L. Armstrong</i>	APPROVED	<i>Richard L. Holloman</i>
CHECKED	<i>J. M. P.</i>		

Bench Mark: Chiseled "□" on corner of Southwest wingwall S.N. 055-0019, Elev. 582.37
Existing Structure: S.N. 055-0019 was built in 1924 as part of SBI Rte. 9 Sec. 37B at Sta. 564+91.00. In 1975 the bridge was widened and the superstructure was replaced with PPC deck beams. The current structure is 32'-6" wide between railings and spans 33'-0" back to back abutments with no skew. The substructure consists of closed abutments on piles. Structure is to be removed and replaced utilizing stage construction to maintain one lane of traffic during construction.

Salvage: See Special Provisions.

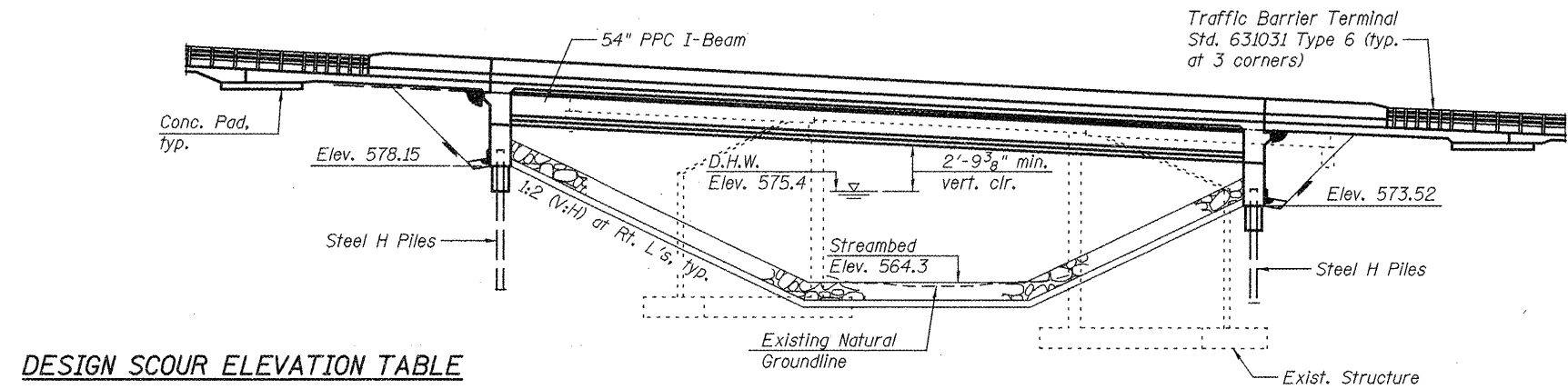
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
3. Stage Construction Details
4. Temporary Soil Retention System & Excavation Limits
5. Temporary Concrete Barrier for Stage Construction
6. Top of Slab Elevations (1 of 2)
7. Top of Slab Elevations (2 of 2)
8. Top of Approach Slab Elevations
9. Superstructure
10. Superstructure Details
11. Diaphragm Details
12. Bridge Approach Slab Details (1 of 2)
13. Bridge Approach Slab Details (2 of 2)
14. Framing Plan
15. 54" PPC I-beam
16. 54" PPC I-beam Details
17. East Abutment
18. West Abutment
19. HP Pile Details
20. Bar Splicer Assembly Details
21. Boring Logs

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		3146	3146
Porous Granular Embankment, Special	Cu. Yd.		169	169
Stone Dumped Riprap, Class A6	Ton		1570	1570
Filter Fabric	Sq. Yd.		1550	1550
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		244	244
Concrete Structures	Cu. Yd.		69.2	69.2
Concrete Superstructure	Cu. Yd.	258.1		258.1
Bridge Deck Grooving	Sq. Yd.	518		518
Concrete Encasement	Cu. Yd.		5.6	5.6
Protective Coat	Sq. Yd.	662		662
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54 in.	Foot	558.5		558.5
Reinforcement Bars, Epoxy Coated	Pound	51,440	11,510	62,950
Bar Splicers	Each	502	64	566
Furnishing Steel Piles HP12x53	Foot		945	945
Driving Piles	Foot		945	945
Test Pile Steel HP12x53	Each		2	2
Name Plates	Each	1		1
Geocomposite Wall Drain	Sq. Yd.		107	107
Pipe Underdrains for Structures, 4"	Foot		148	148
Temporary Soil Retention System	Sq. Ft.		1200	1200
Asbestos Bearing Pad Removal	Each		22	22



DESIGN SCOUR ELEVATION TABLE

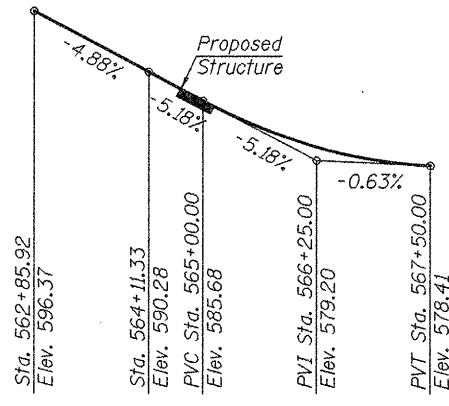
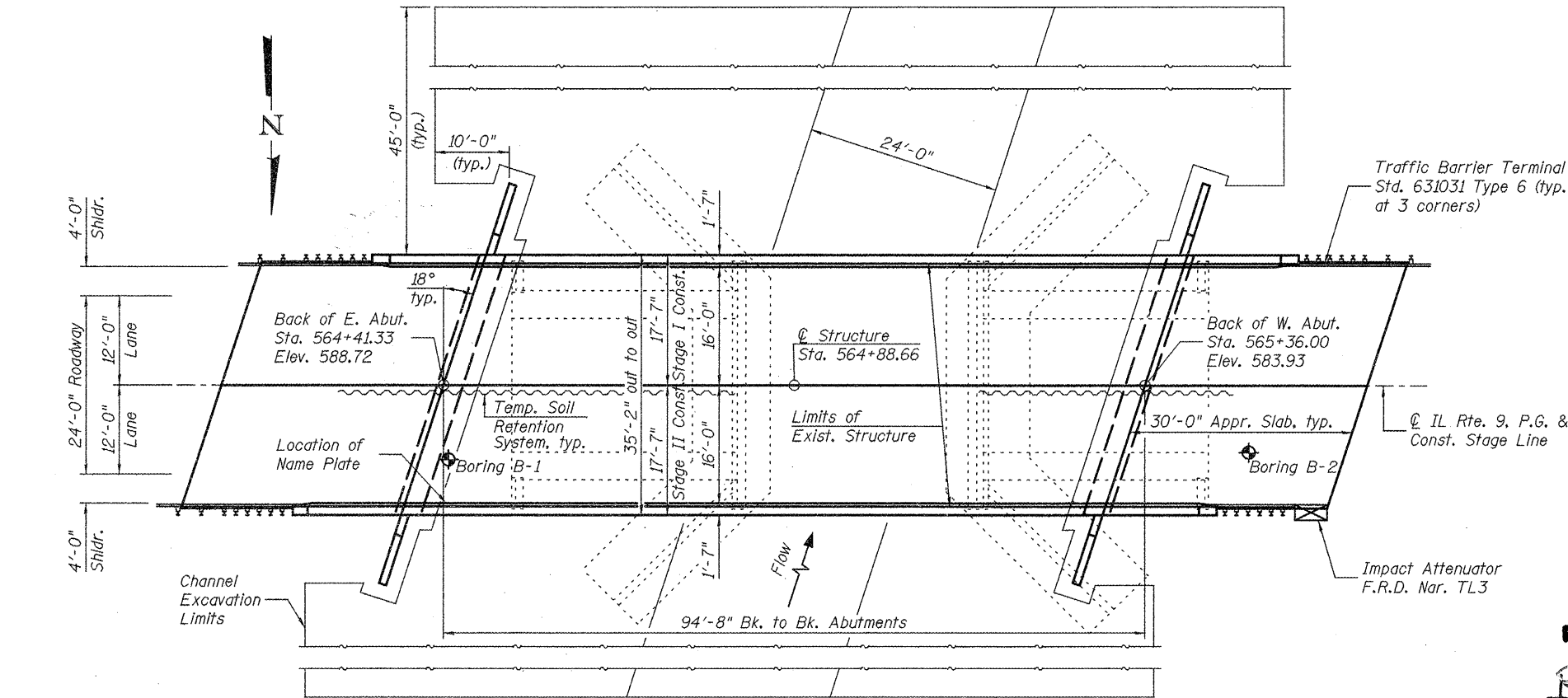
Design Scour Elevation (ft.)	E. Abut.	W. Abut.
	575.15	570.52

ELEVATION

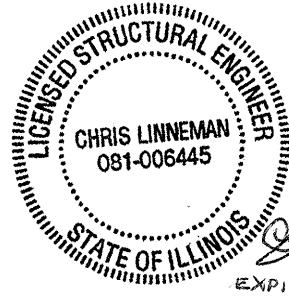
WATERWAY INFORMATION

Drainage Area = 7.20 mi. ²			Existing Low Grade Elev. 578.46 @ Sta. 568+00						
			Proposed Low Grade Elev. 578.46 @ Sta. 568+00						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	1600	284	429	574.1	0.4	0.4	574.5	574.5
Base	50	2650	322	517	575.4	1.5	1.3	576.9	576.7
Overtopping	100	3140	337	553	575.9	1.9	1.6	577.8	577.5
Max. Calc.	500	4350	367	627	576.9	3.0	2.1	579.9	579.0

10 Year Velocity through Existing Bridge = 5.5 fps
10 Year Velocity through Proposed Bridge = 3.5 fps



PROFILE GRADE
(along E roadway)



11/18/2009
EXPIRES 11/30/2010

APPROVED
For Structural Adequacy Only

Ralph E. Anderson (PE)
Engineer of Bridges & Structures

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f_c = 6,000 psi
f_{ai} = 5,000 psi
f_{pu} = 270,000 psi (1/2" φ Low Relaxation Strands)
f_{pbt} = 201,960 psi (1/2" φ Low Relaxation Strands)

LOADING HL-93

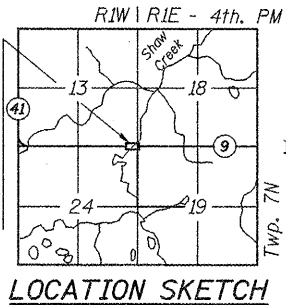
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
with 2008 Interims

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.110g
Design Spectral Acceleration at 0.2 sec. (S_{Ds}) = 0.167g
Soil Site Class = D



GENERAL PLAN & ELEVATION
IL ROUTE 9 OVER SHAW CREEK
F.A.P. ROUTE 685 SEC. 37BR-1
MCDONOUGH COUNTY
STATION 564+88.66
STRUCTURE NO. 055-0079

EFK Moen, LLC
Civil Engineering Design
331 Salem Place
Suite 225
Fairview Heights, IL 62208
Phone 618-206-4250
Fax 618-206-4253

SHEET NO. 1 21 SHEETS	F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
	685	37BR-1		MCDONOUGH	138	56
				CONTRACT NO. 68352		
	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

DESIGNED SEC
CHECKED CDL
DRAWN SEC
CHECKED CDL

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

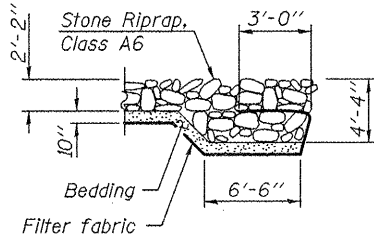
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

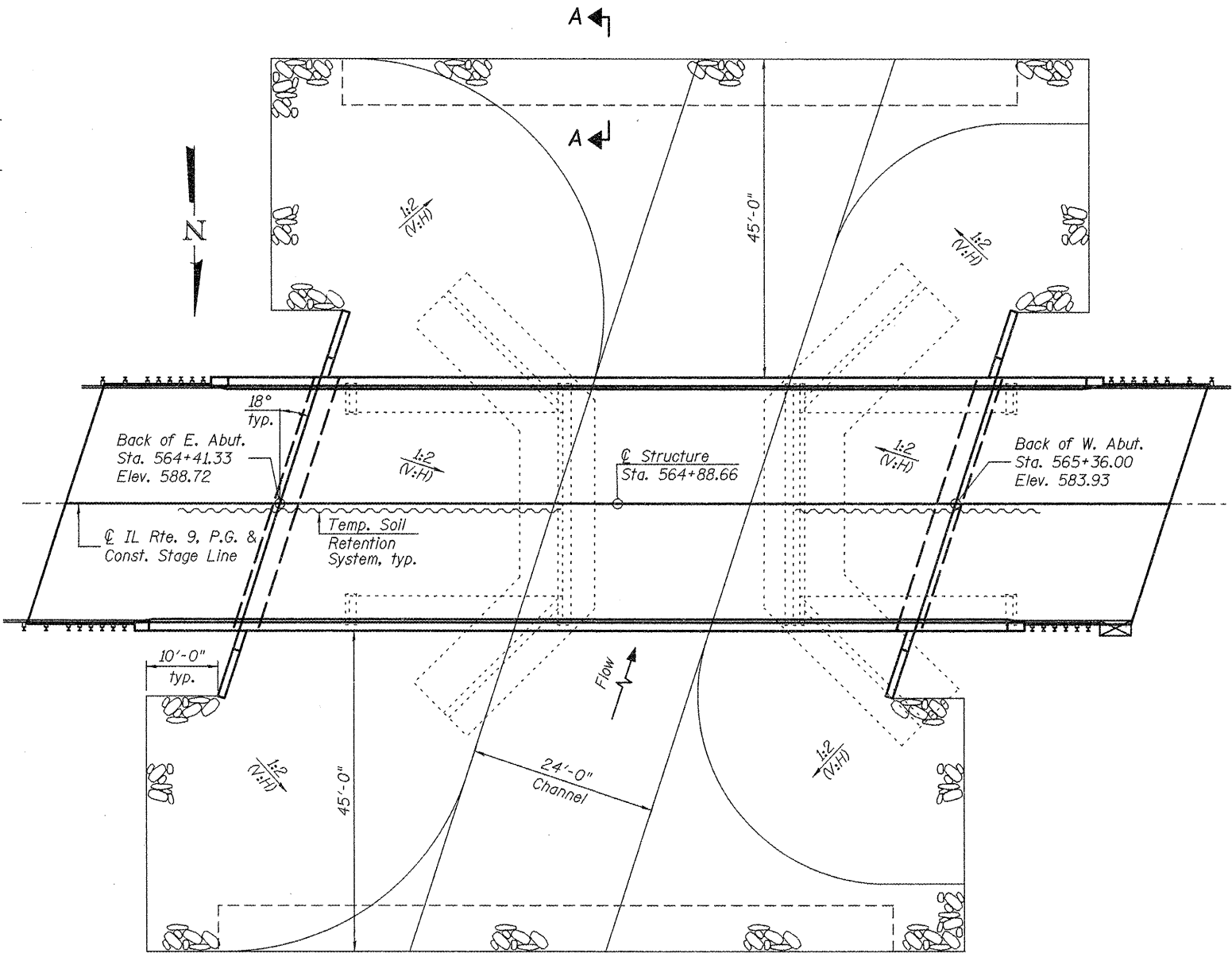
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

Slip forming of the parapets is not allowed.

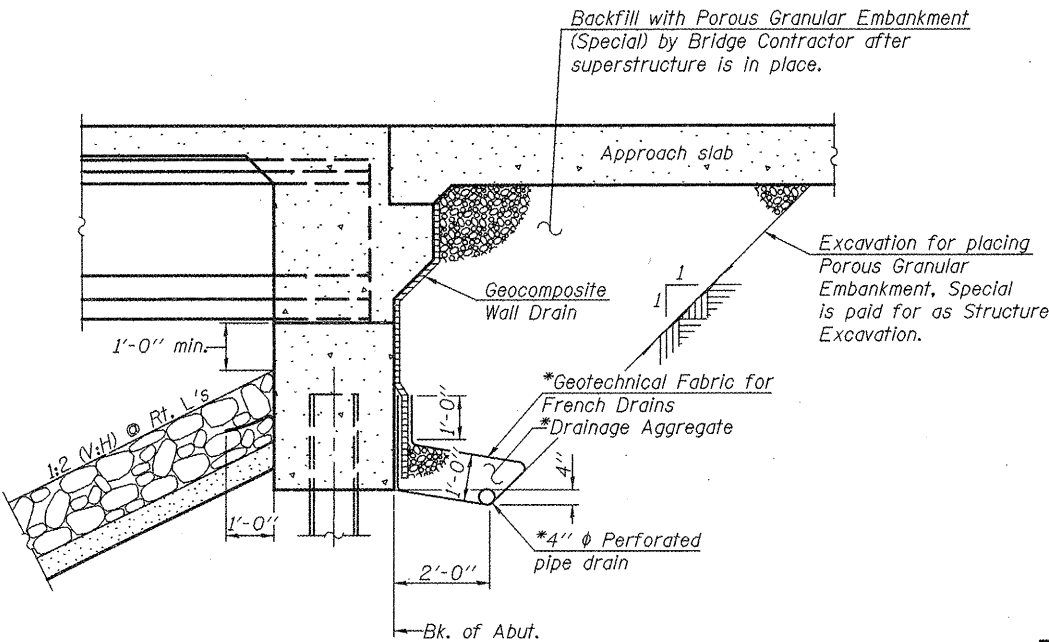
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A



PLAN OF RIPRAP LAYOUT



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

*Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

DESIGNED	SEC
CHECKED	CDL
DRAWN	SEC
CHECKED	CDL

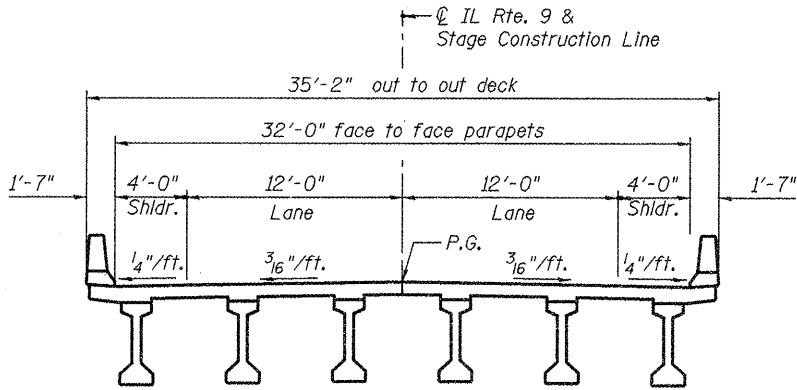
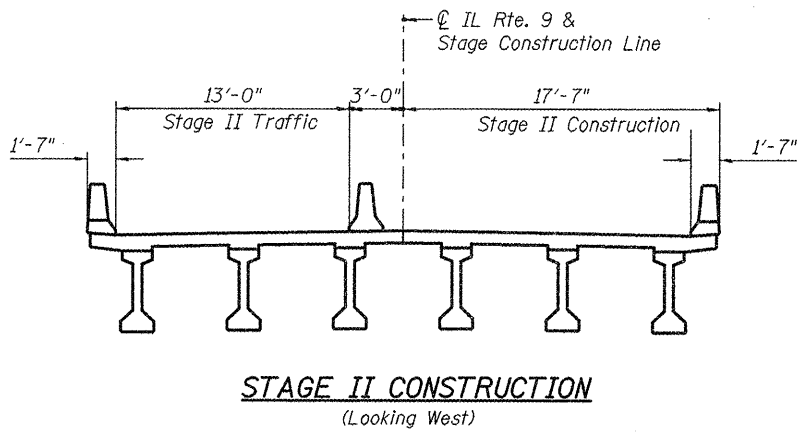
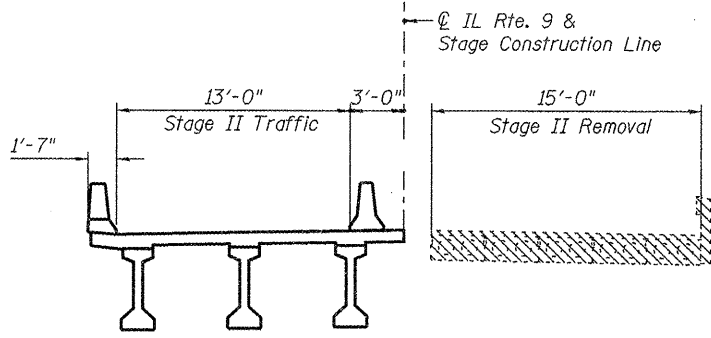
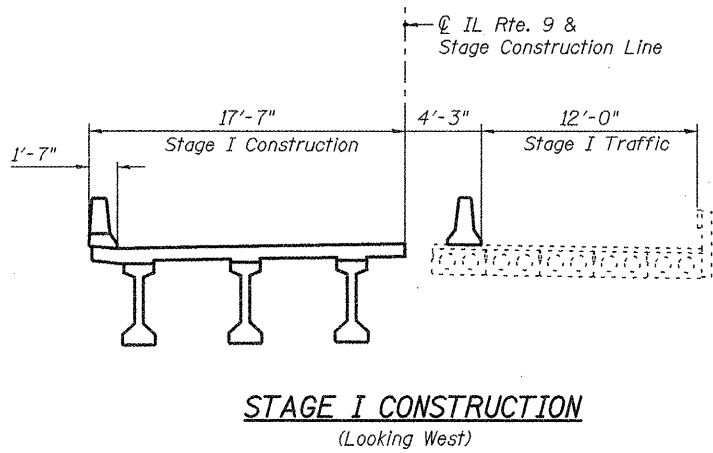
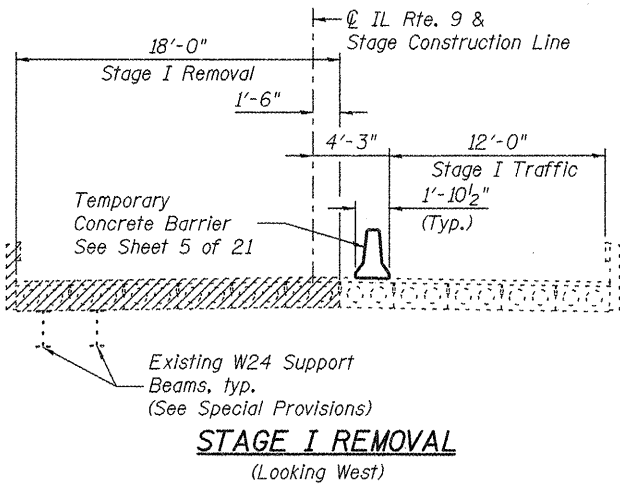
STATION 564+88.66
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE. 685 SEC. 37BR-1
LOADING HL-93
STRUCTURE NO. 055-0079

NAME PLATE
See Std. 515001

GENERAL DATA
STRUCTURE NO. 055-0079

SHEET NO. 2 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

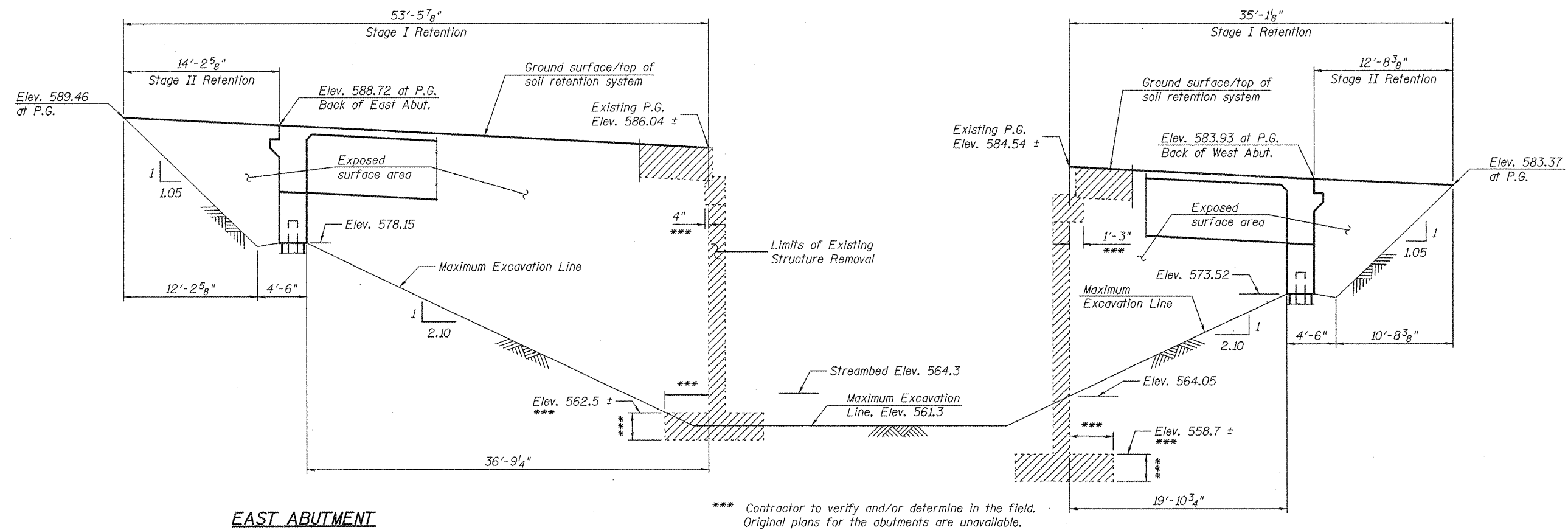


Notes:
Hatched area indicates Removal of Existing Structures.
For quantity and location of Temporary Construction Barrier, see Roadway Plans.

DESIGNED	PMM
CHECKED	SEC
DRAWN	PMM
CHECKED	SEC

<u>STAGE CONSTRUCTION DETAILS</u>					
<u>STRUCTURE NO. 055-0079</u>					
		EFK•Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	
				Phone 618-206-4250 Fax 618-206-4253	
SHEET NO. 3 21 SHEETS	F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS
	685	37BR-1		MCDONOUGH	138
				CONTRACT NO. 68352	
	FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

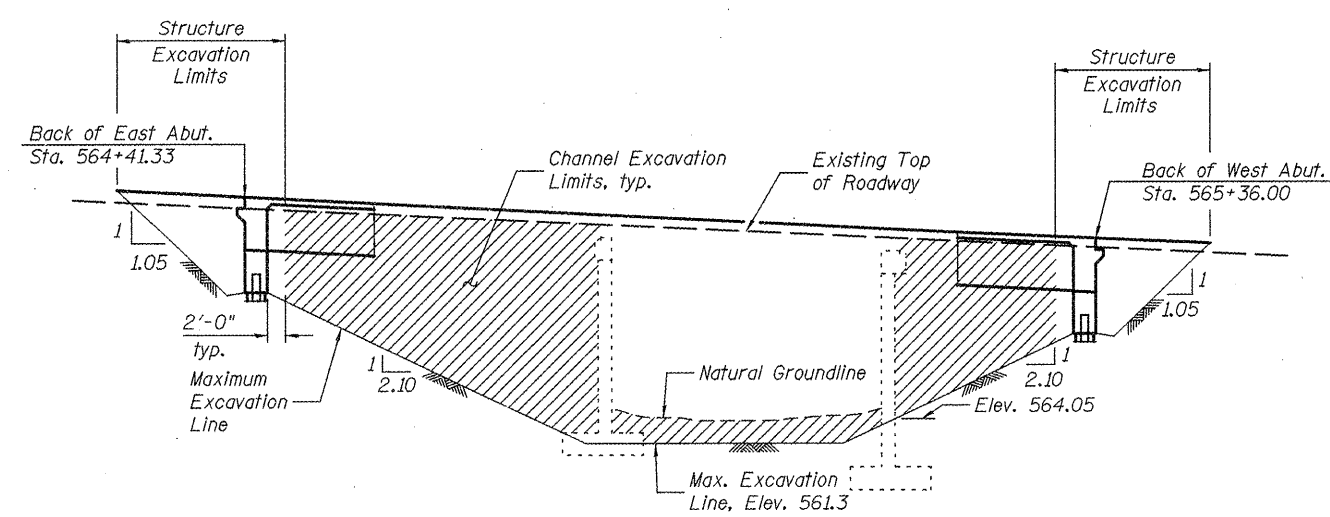


EAST ABUTMENT

WEST ABUTMENT

Note:
A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

TEMPORARY SOIL RETENTION SYSTEM



EAST ABUTMENT

WEST ABUTMENT

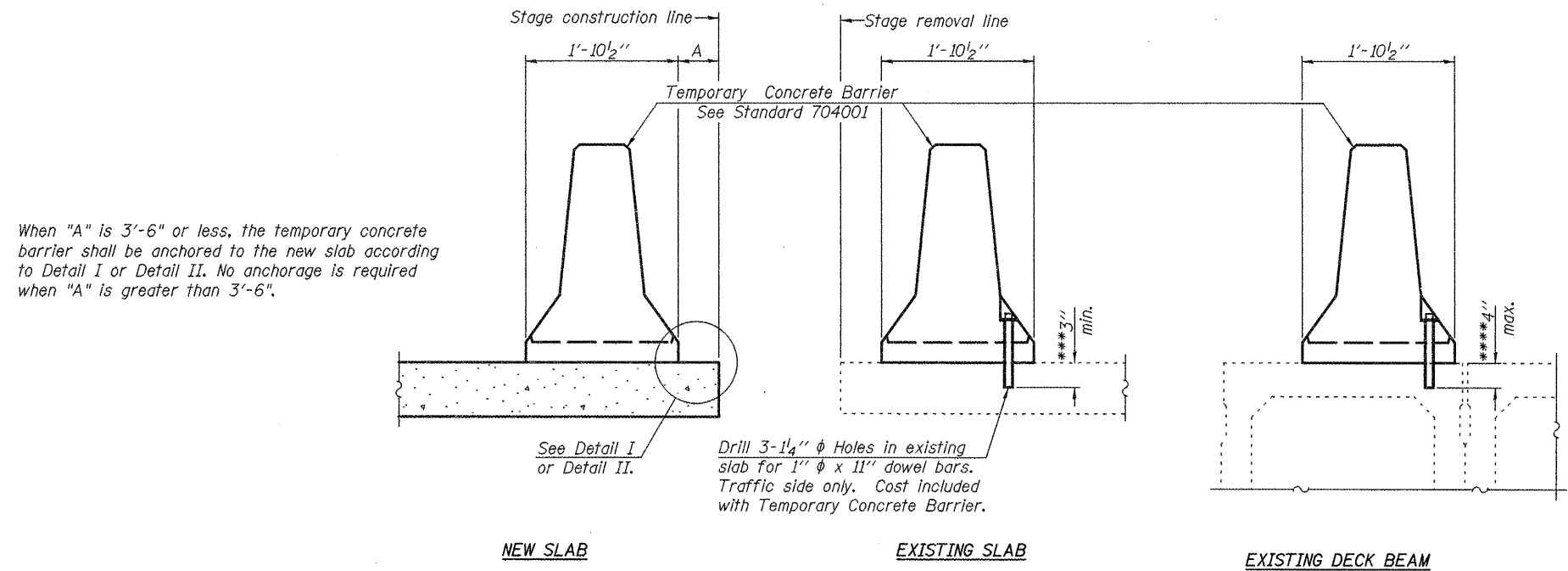
EXCAVATION LIMITS

**TEMPORARY SOIL RETENTION
SYSTEM & EXCAVATION LIMITS
STRUCTURE NO. 055-0079**

DESIGNED SEC
CHECKED CDL
DRAWN SEC
CHECKED CDL

SHEET NO. 4 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	CONTRACT NO. 68352			
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTIONS THRU SLAB OR DECK BEAM

NOTES

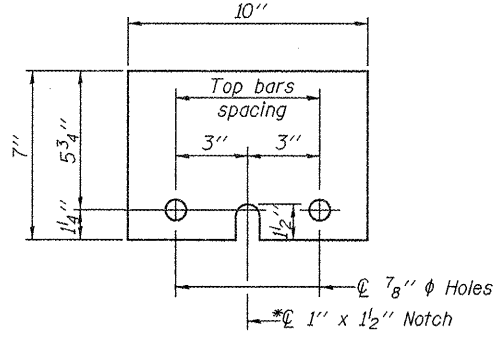
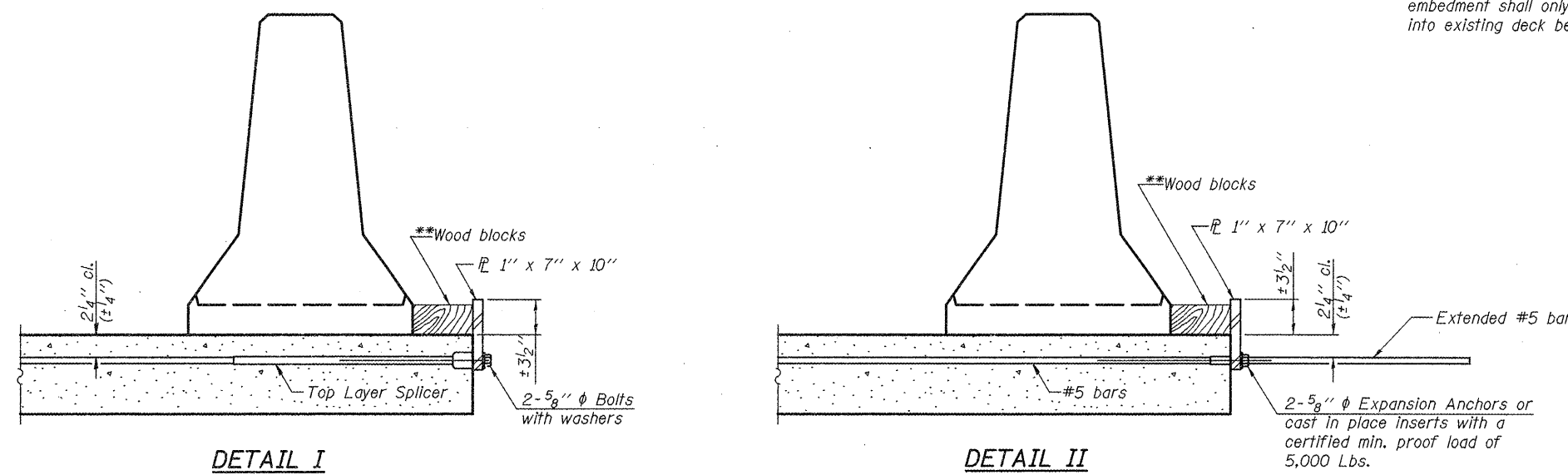
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel $\bar{P}$ to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate $\bar{C}$ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel $\bar{P}$ to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate $\bar{C}$ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



STEEL RETAINER $\bar{P}$ 1" x 7" x 10"

* Required only with Detail II

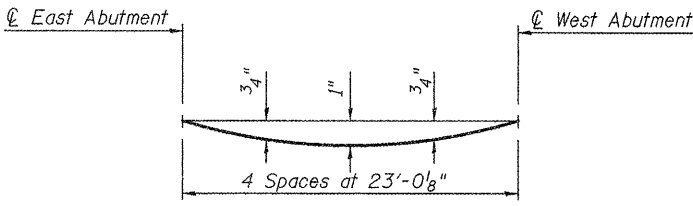
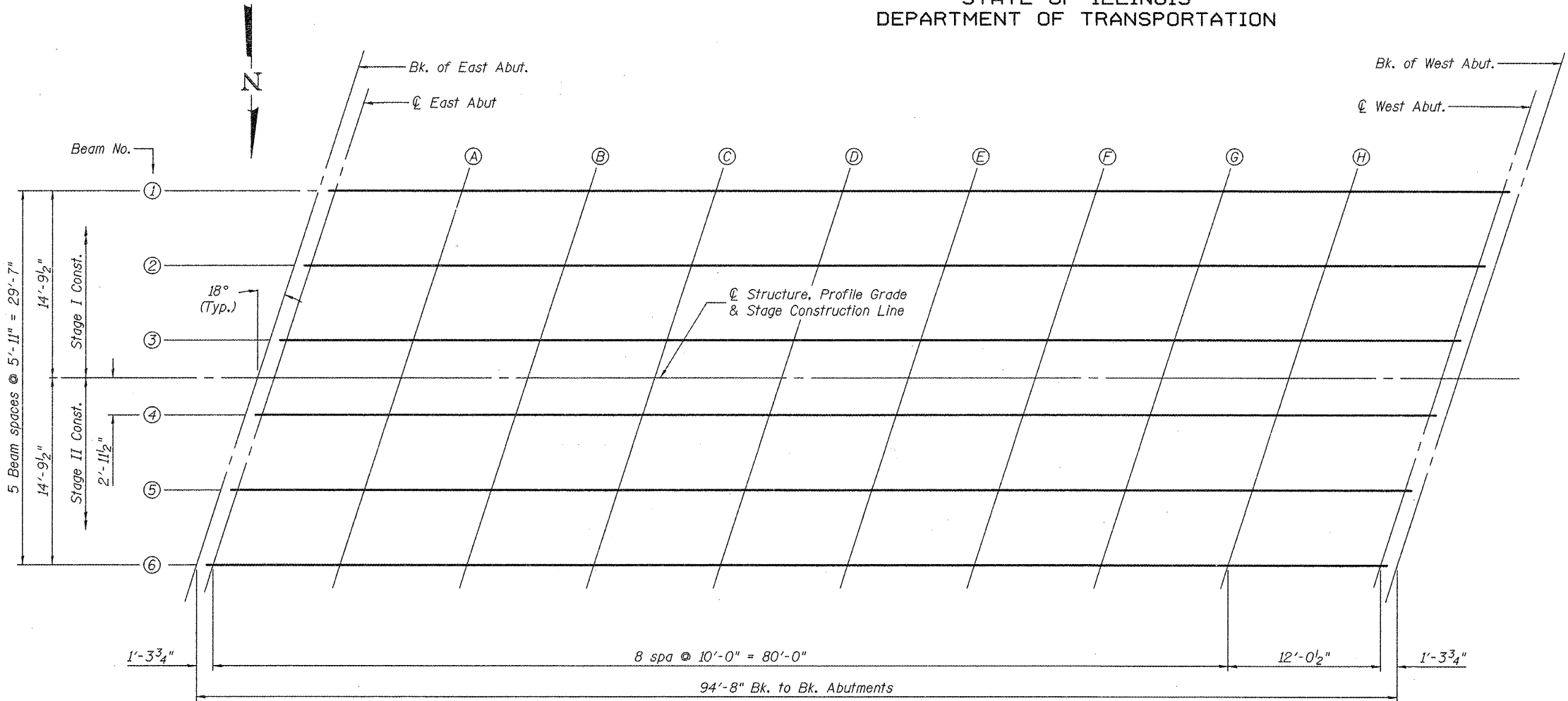
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 055-0079

DESIGNED	SEC
CHECKED	CDL
DRAWN	SEC
CHECKED	CDL

**Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

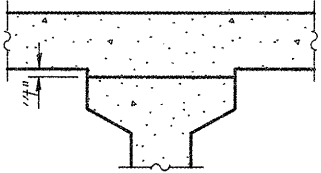
SHEET NO. 5 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
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	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT

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DEPARTMENT OF TRANSPORTATION



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete, excluding beams).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 7 of 21.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown below, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS

PLAN

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+46.13	-14.79	588.23	588.23
C.L. East Abut.	564+47.45	-14.79	588.16	588.16
A	564+57.45	-14.79	587.64	587.67
B	564+67.45	-14.79	587.12	587.17
C	564+77.45	-14.79	586.60	586.67
D	564+87.45	-14.79	586.09	586.16
E	564+97.45	-14.79	585.57	585.65
F	565+07.45	-14.79	585.05	585.12
G	565+17.45	-14.79	584.56	584.61
H	565+27.45	-14.79	584.08	584.11
C.L. West Abut.	565+39.49	-14.79	583.53	583.53
Bk. West Abut.	565+40.80	-14.79	583.47	583.47

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+44.21	-8.88	588.43	588.43
C.L. East Abut.	564+45.52	-8.88	588.37	588.37
A	564+55.52	-8.88	587.85	587.87
B	564+65.52	-8.88	587.33	587.38
C	564+75.52	-8.88	586.81	586.88
D	564+85.52	-8.88	586.29	586.37
E	564+95.52	-8.88	585.77	585.86
F	565+05.52	-8.88	585.26	585.33
G	565+15.52	-8.88	584.76	584.82
H	565+25.52	-8.88	584.28	584.31
C.L. West Abut.	565+37.56	-8.88	583.72	583.72
Bk. West Abut.	565+38.88	-8.88	583.66	583.66

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+42.29	-2.96	588.63	588.63
C.L. East Abut.	564+43.60	-2.96	588.56	588.56
A	564+53.60	-2.96	588.04	588.07
B	564+63.60	-2.96	587.52	587.57
C	564+73.60	-2.96	587.00	587.07
D	564+83.60	-2.96	586.48	586.56
E	564+93.60	-2.96	585.97	586.05
F	565+03.60	-2.96	585.45	585.52
G	565+13.60	-2.96	584.95	585.01
H	565+23.60	-2.96	584.46	584.49
C.L. West Abut.	565+35.64	-2.96	583.90	583.90
Bk. West Abut.	565+36.96	-2.96	583.84	583.84

(Sheet 1 of 2)

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 055-0079

DESIGNED PMM
CHECKED CTW
DRAWN SEC
CHECKED CTW

PI-E 10-1-08

SHEET NO. 6 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	CONTRACT NO. 68352			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

☞ ROADWAY, PROFILE GRADE & STAGE CONST. LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+41.33	0.00	588.72	588.72
C.L. East Abut.	564+42.64	0.00	588.65	588.65
A	564+52.64	0.00	588.14	588.16
B	564+62.64	0.00	587.62	587.67
C	564+72.64	0.00	587.10	587.17
D	564+82.64	0.00	586.58	586.66
E	564+92.64	0.00	586.06	586.14
F	565+02.64	0.00	585.54	585.62
G	565+12.64	0.00	585.04	585.10
H	565+22.64	0.00	584.55	584.59
C.L. West Abut.	565+34.68	0.00	583.99	583.99
Bk. West Abut.	565+36.00	0.00	583.93	583.93

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+40.37	2.96	588.73	588.73
C.L. East Abut.	564+41.68	2.96	588.66	588.66
A	564+51.68	2.96	588.14	588.17
B	564+61.68	2.96	587.62	587.67
C	564+71.68	2.96	587.10	587.17
D	564+81.68	2.96	586.58	586.66
E	564+91.68	2.96	586.07	586.15
F	565+01.68	2.96	585.55	585.62
G	565+11.68	2.96	585.04	585.10
H	565+21.68	2.96	584.55	584.59
C.L. West Abut.	565+33.72	2.96	583.99	583.99
Bk. West Abut.	565+35.03	2.96	583.93	583.93

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+38.44	8.88	588.73	588.73
C.L. East Abut.	564+39.76	8.88	588.66	588.66
A	564+49.76	8.88	588.15	588.17
B	564+59.76	8.88	587.63	587.68
C	564+69.76	8.88	587.11	587.18
D	564+79.76	8.88	586.59	586.67
E	564+89.76	8.88	586.07	586.15
F	564+99.76	8.88	585.55	585.63
G	565+09.76	8.88	585.04	585.10
H	565+19.76	8.88	584.55	584.59
C.L. West Abut.	565+31.80	8.88	583.99	583.99
Bk. West Abut.	565+33.11	8.88	583.92	583.93

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. East Abut.	564+36.52	14.79	588.73	588.73
C.L. East Abut.	564+37.84	14.79	588.66	588.66
A	564+47.84	14.79	588.14	588.16
B	564+57.84	14.79	587.62	587.67
C	564+67.84	14.79	587.10	587.17
D	564+77.84	14.79	586.58	586.66
E	564+87.84	14.79	586.07	586.14
F	564+97.84	14.79	585.55	585.62
G	565+07.84	14.79	585.03	585.09
H	565+17.84	14.79	584.54	584.57
C.L. West Abut.	565+29.87	14.79	583.97	583.97
Bk. West Abut.	565+31.19	14.79	583.91	583.91

(Sheet 2 of 2)

TOP OF SLAB ELEVATIONS

STRUCTURE NO. 055-0079

DESIGNED PMM
CHECKED CTW
DRAWN PMM
CHECKED CTW

PI-E1

10-1-08

SHEET NO. 7 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	CONTRACT NO. 68352			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
East End East Appr. Slab	564+16.53	-16.00	589.74
J	564+26.53	-16.00	589.22
K	564+36.53	-16.00	588.70
West End East Appr. Slab	564+46.53	-16.00	588.18
East End West Appr. Slab	565+41.19	-16.00	583.43
L	565+51.19	-16.00	582.99
M	565+61.19	-16.00	582.58
West End of West Appr. Slab	565+71.19	-16.00	582.18

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
East End East Appr. Slab	564+15.23	-12.00	589.89
J	564+25.23	-12.00	589.37
K	564+35.23	-12.00	588.85
West End East Appr. Slab	564+45.23	-12.00	588.33
East End West Appr. Slab	565+39.89	-12.00	583.57
L	565+49.89	-12.00	583.13
M	565+59.89	-12.00	582.71
West End of West Appr. Slab	565+69.89	-12.00	582.31

ROADWAY, PROFILE GRADE & STAGE CONST. LINE

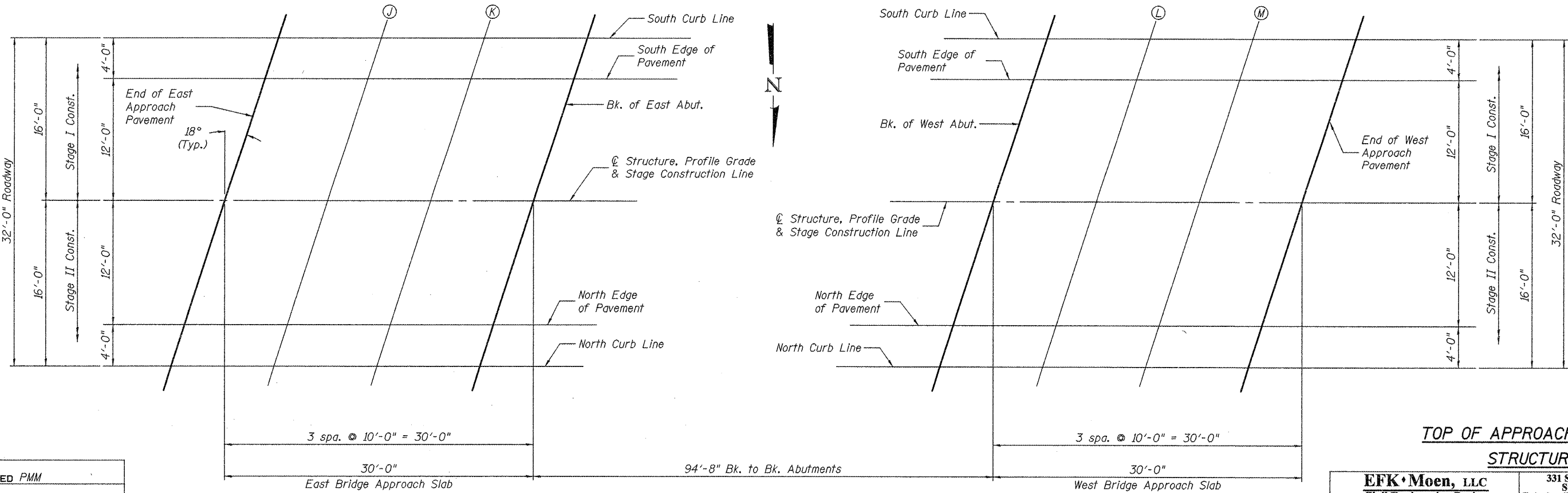
Location	Station	Offset	Theoretical Grade Elevations
East End East Appr. Slab	564+11.33	0.00	590.28
J	564+21.33	0.00	589.76
K	564+31.33	0.00	589.24
West End East Appr. Slab	564+41.33	0.00	588.72
East End West Appr. Slab	565+36.00	0.00	583.93
L	565+45.99	0.00	583.49
M	565+55.99	0.00	583.06
West End of West Appr. Slab	565+65.99	0.00	582.66

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
East End East Appr. Slab	564+07.43	12.00	590.29
J	564+17.43	12.00	589.77
K	564+27.43	12.00	589.25
West End East Appr. Slab	564+37.43	12.00	588.74
East End West Appr. Slab	565+32.09	12.00	583.92
L	565+42.09	12.00	583.47
M	565+52.09	12.00	583.04
West End of West Appr. Slab	565+62.09	12.00	582.62

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
East End East Appr. Slab	564+06.13	16.00	590.26
J	564+16.13	16.00	589.76
K	564+26.13	16.00	589.24
West End East Appr. Slab	564+36.13	16.00	588.72
East End West Appr. Slab	565+30.80	16.00	583.90
L	565+40.80	16.00	583.45
M	565+50.80	16.00	583.01
West End of West Appr. Slab	565+60.80	16.00	582.59



PLAN

TOP OF APPROACH SLAB ELEVATIONS

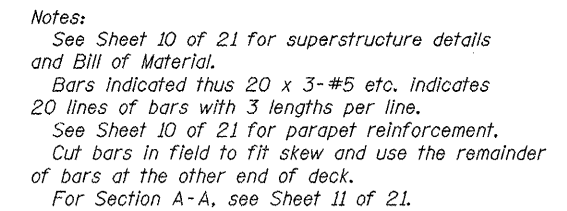
STRUCTURE NO. 055-0079

DESIGNED	PMM
CHECKED	CTW
DRAWN	PMM
CHECKED	CTW

PA-E 10-1-08

SHEET NO. 8		21 SHEETS		EFFECTIVE DATE	
F.A.P. RTE.		SECTION		COUNTY	
685		37BR-1		MCDONOUGH	
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT	
TOTAL SHEETS		SHEET NO.		CONTRACT NO.	
138		63		68352	

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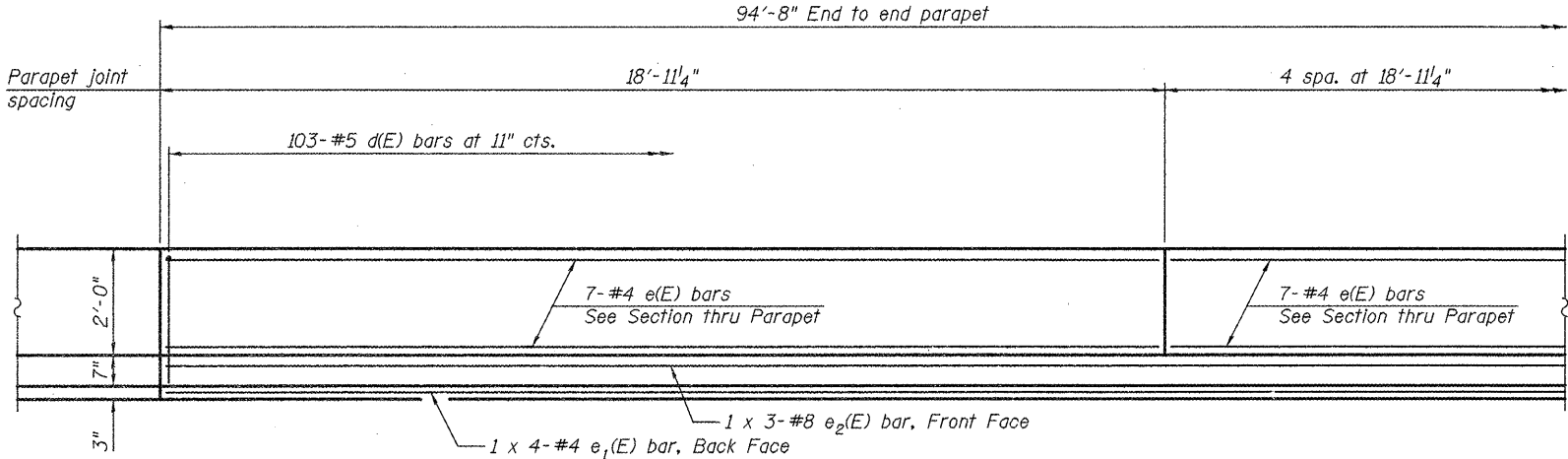
MIN. BAR LAP
#5 Bar = 2'-2"



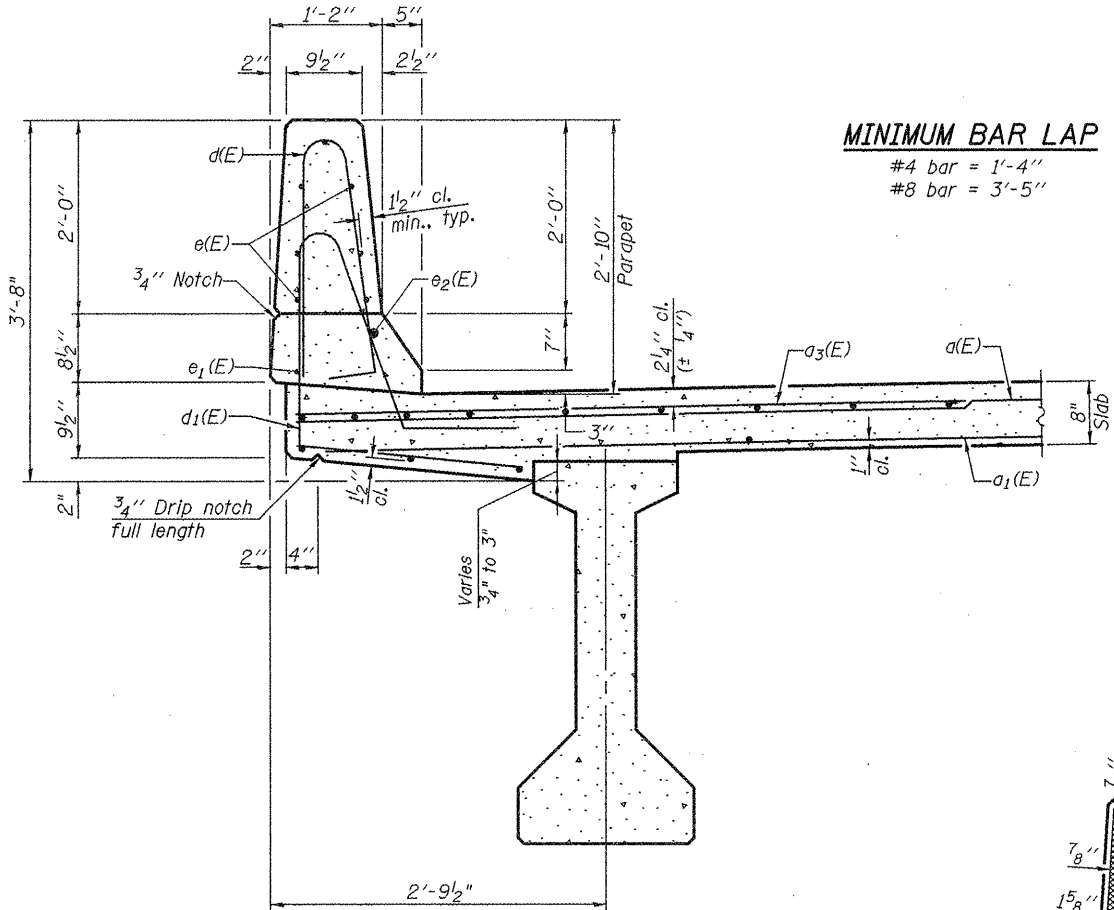
10-1-08

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9	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	685	37BR-1	MCDONOUGH	138	64
	CONTRACT NO. 68352				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



INSIDE ELEVATION OF PARAPET

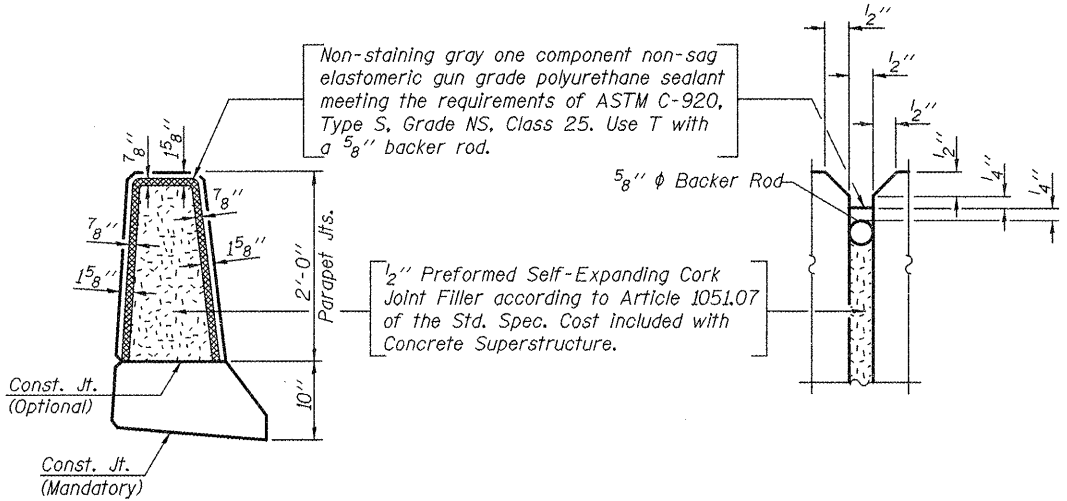


SECTION THRU PARAPET

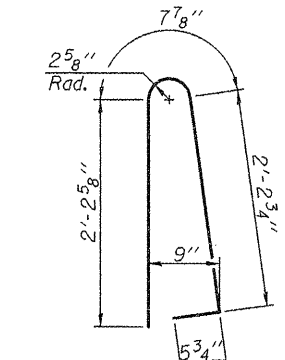
MINIMUM BAR LAP

#4 bar = 1'-4"

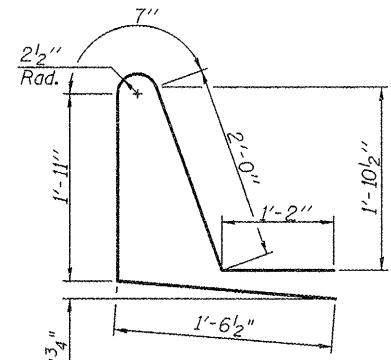
#8 bar = 3'-5"



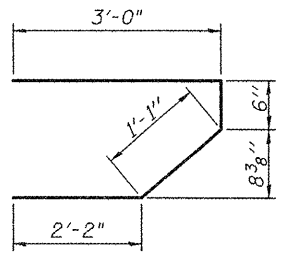
PARAPET JOINT DETAILS



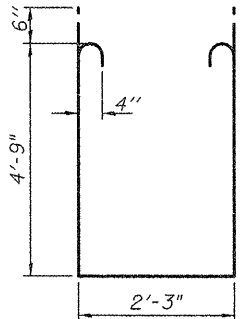
BAR d(E)



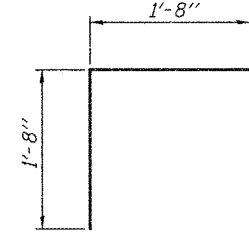
BAR d₁(E)



BAR s(E)



BAR s₁(E)



BAR v(E)

SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	322	#5	17'-1"	—
a ₁ (E)	226	#5	16'-9"	—
a ₂ (E)	8	#5	18'-0"	—
a ₃ (E)	318	#6	6'-0"	—
b(E)	152	#5	25'-3"	—
b ₁ (E)	160	#5	20'-8"	—
d(E)	206	#5	5'-7"	⌋
d ₁ (E)	206	#5	7'-3"	⌋
e(E)	70	#4	18'-7"	—
e ₁ (E)	8	#4	24'-9"	—
e ₂ (E)	6	#8	33'-9"	—
m(E)	8	#6	18'-1"	—
m ₁ (E)	20	#6	18'-1"	—
m ₂ (E)	36	#6	8'-0"	—
m ₃ (E)	8	#6	3'-11"	—
m ₄ (E)	8	#6	1'-7"	—
s(E)	72	#5	6'-9"	⌋
s ₁ (E)	64	#4	12'-9"	⌋
v(E)	72	#5	3'-4"	⌋
Reinforcement Bars, Epoxy Coated			Lbs.	27,030
Concrete Superstructure			Cu. Yds.	141.7

Bars indicated thus 20 x 3-#5 etc. indicates
20 lines of bars with 3 lengths per line.

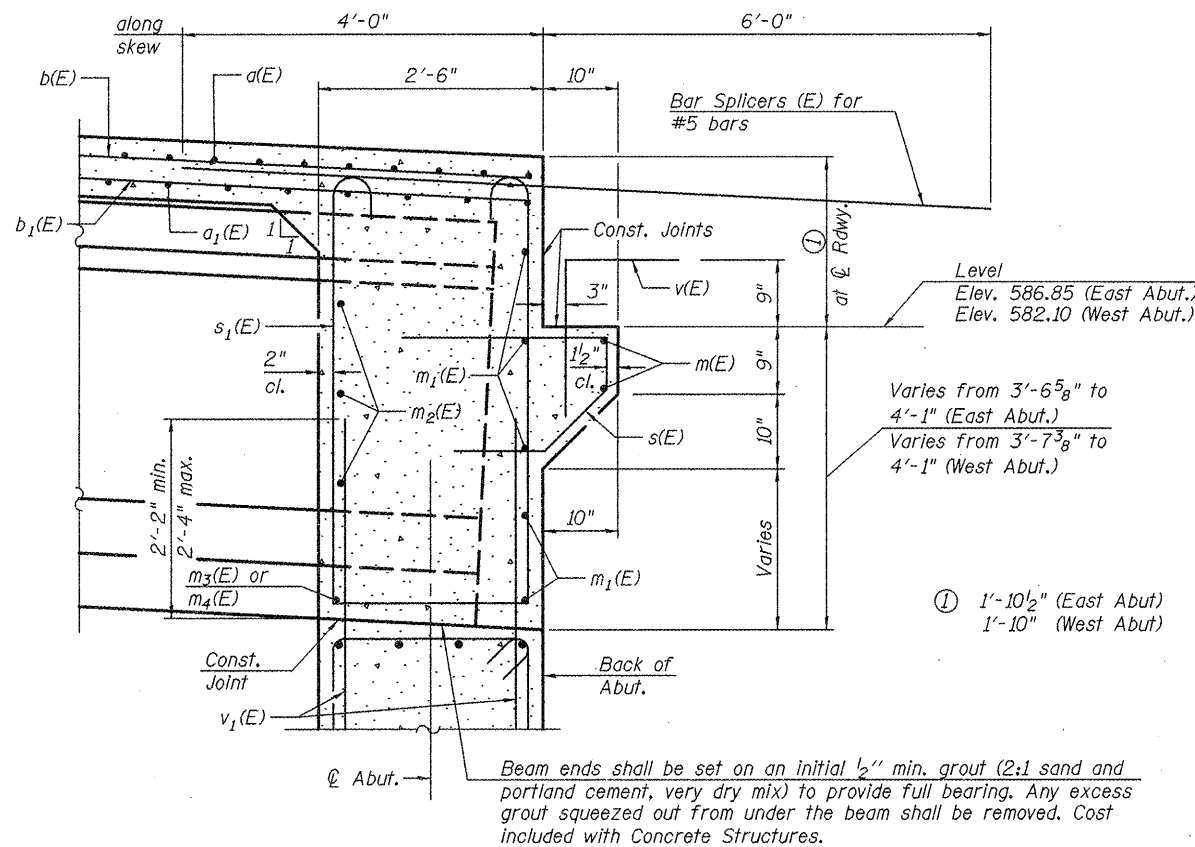
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 055-0079

DESIGNED SEC
CHECKED CTW
DRAWN SEC
CHECKED CTW

PI-I-D 10-1-08

SHEET NO. 10 21 SHEETS	EFK•Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
CONTRACT NO. 68352				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A

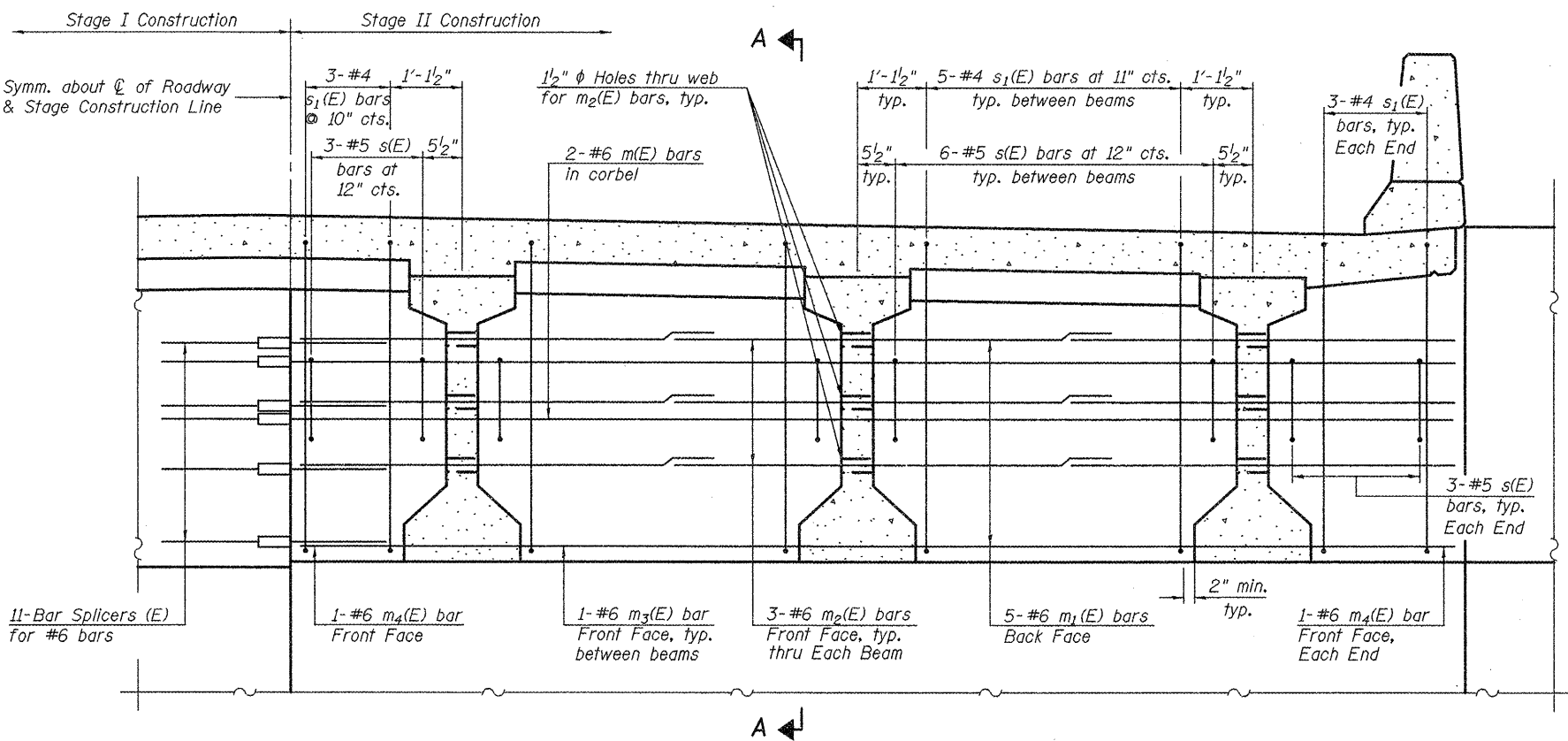
Dimensions at right angles to abutment, except as shown.

MIN. BAR LAP

#6 bar = 2'-9"

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 21.
Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 21.
For details of bars s(E) and s₁(E) see sheet 10 of 21.
The s(E) and s₁(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.



PART DIAPHRAGM ELEVATION AT ABUTMENT

Note:
Vertical bars, v(E) and v₁(E), not shown for clarity.

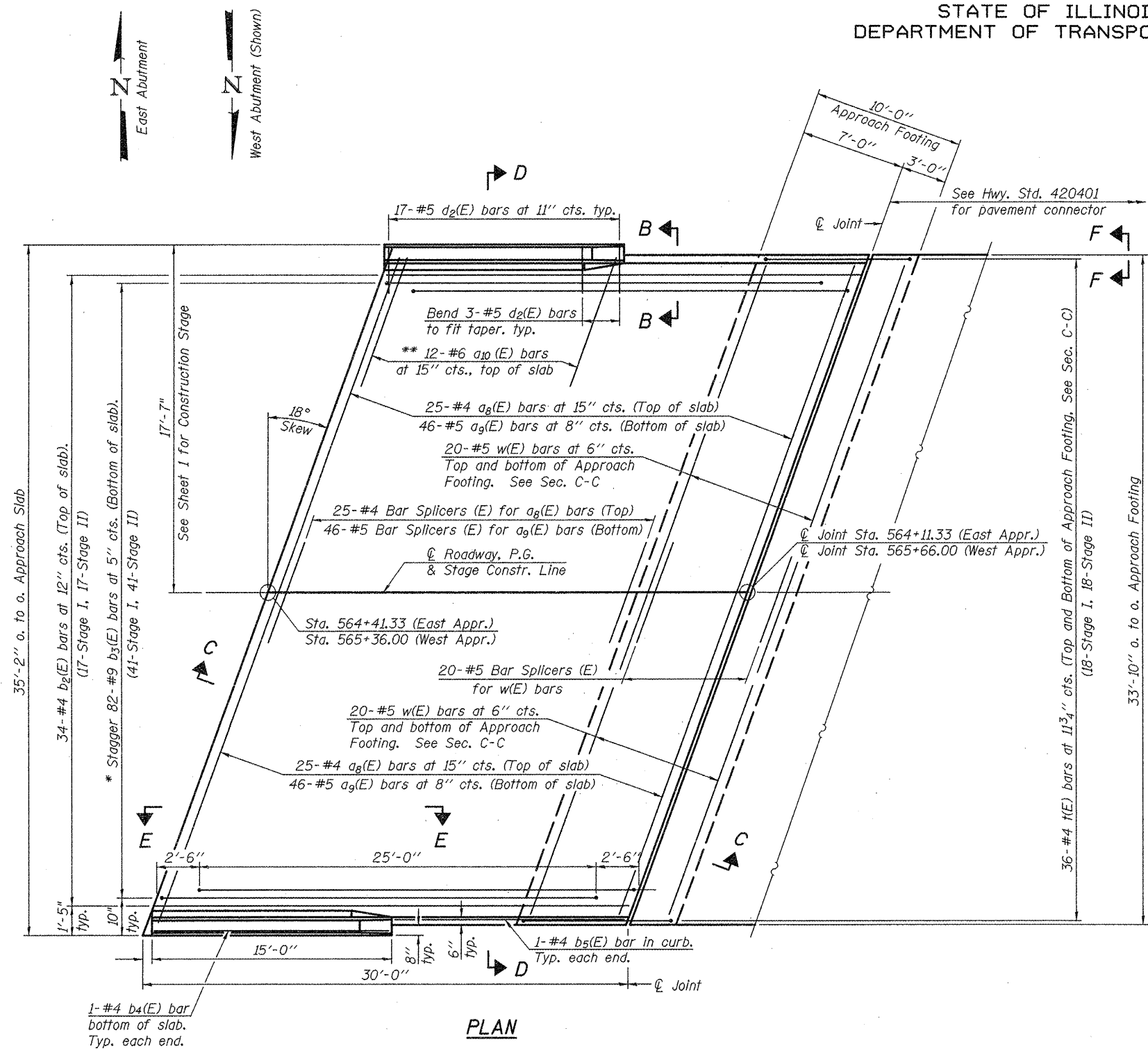
DIAPHRAGM DETAILS
STRUCTURE NO. 055-0079

DESIGNED SEC
CHECKED CTW
DRAWN SEC
CHECKED CTW

SHEET NO. 11 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	CONTRACT NO. 68352			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

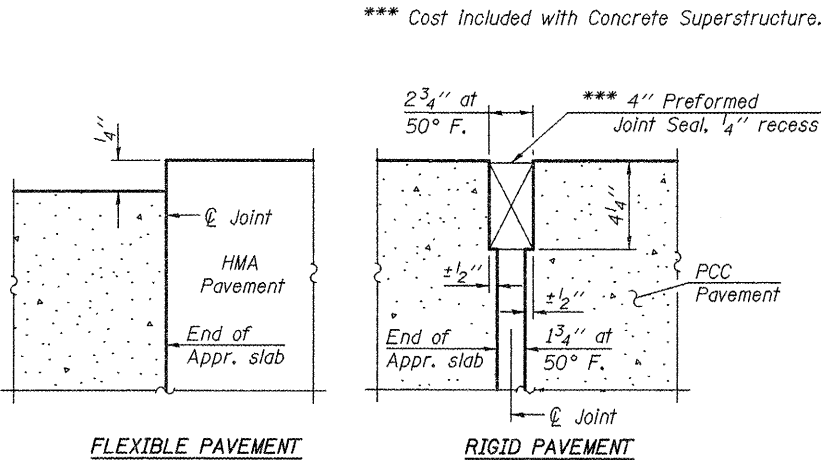
STATE OF ILLINOIS
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Notes:
See sheet 13 of 21 for Sections C-C & D-D and View E-E.
a_g(E), a_g(E), and w(E) bar spacings measured parallel to C Rdwy.

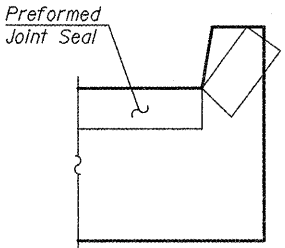
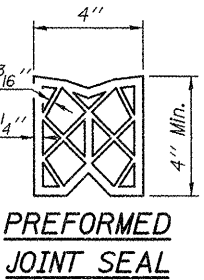


PLAN

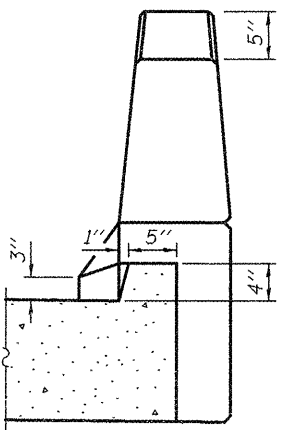
* Tilt #9 b₃(E) bars as required to maintain clearance.
** Alternate with a₈(E) bars. typ. each parapet.



DETAIL A



VIEW F-F



VIEW B-B

(Exit ends only)

(Sheet 1 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 055-0079

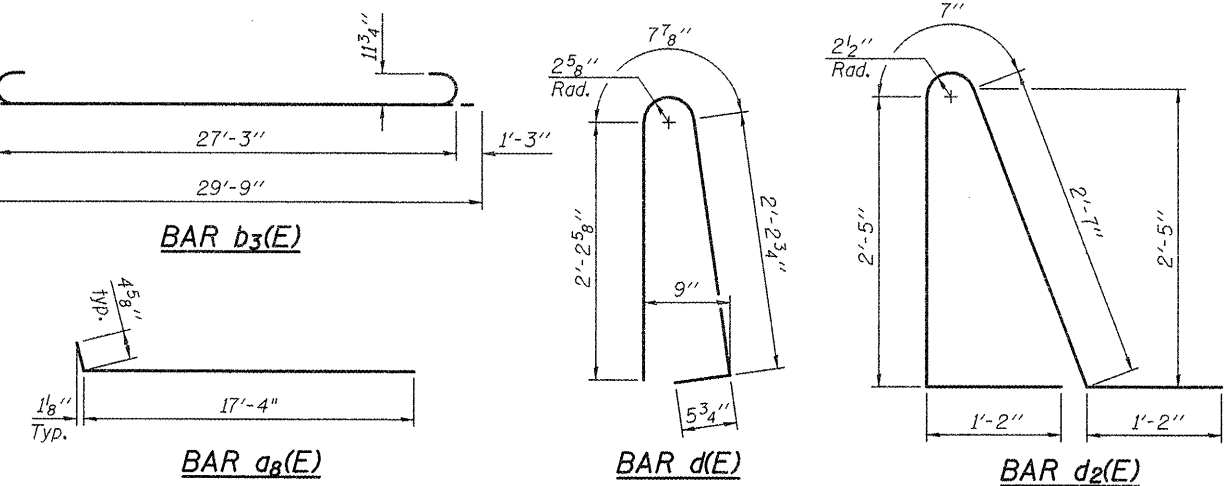
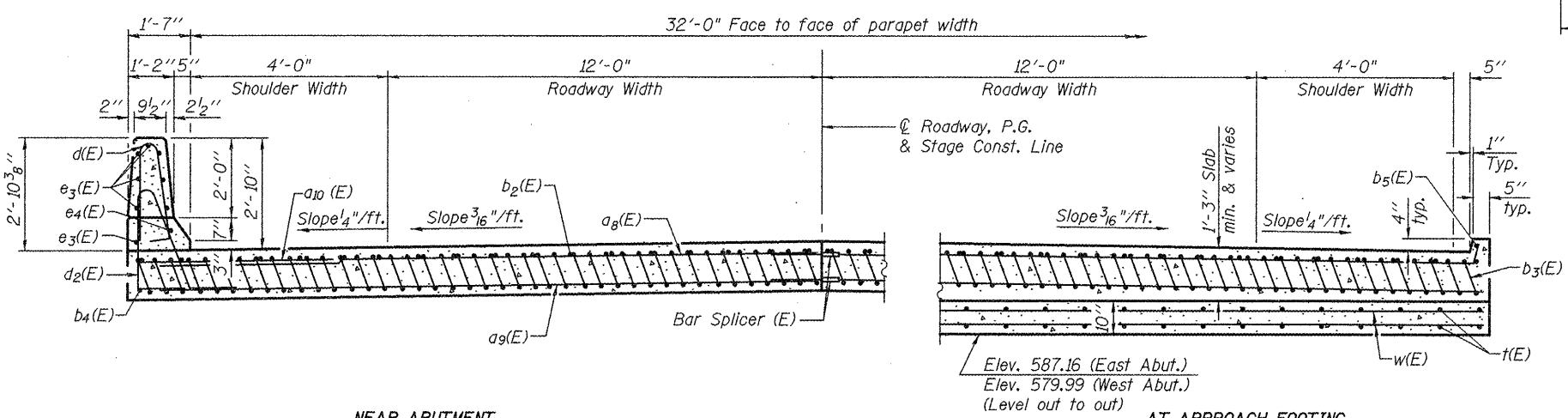
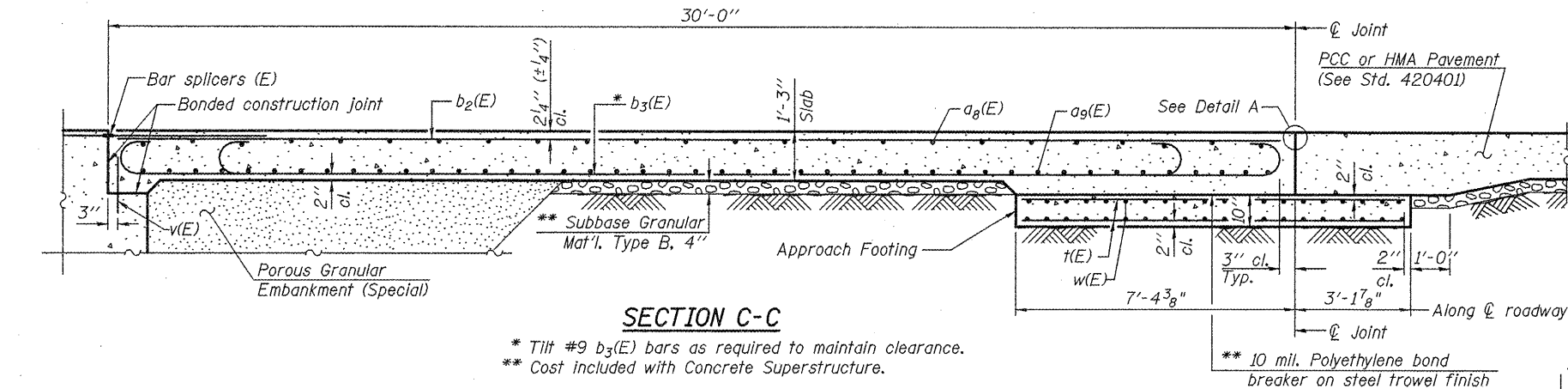
DESIGNED SEC
CHECKED CTW
DRAWN SEC
CHECKED CTW

BA-L 10-31-08

SHEET NO. 12 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	685	37BR-1	MCDONOUGH	138	67
	CONTRACT NO. 68352				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

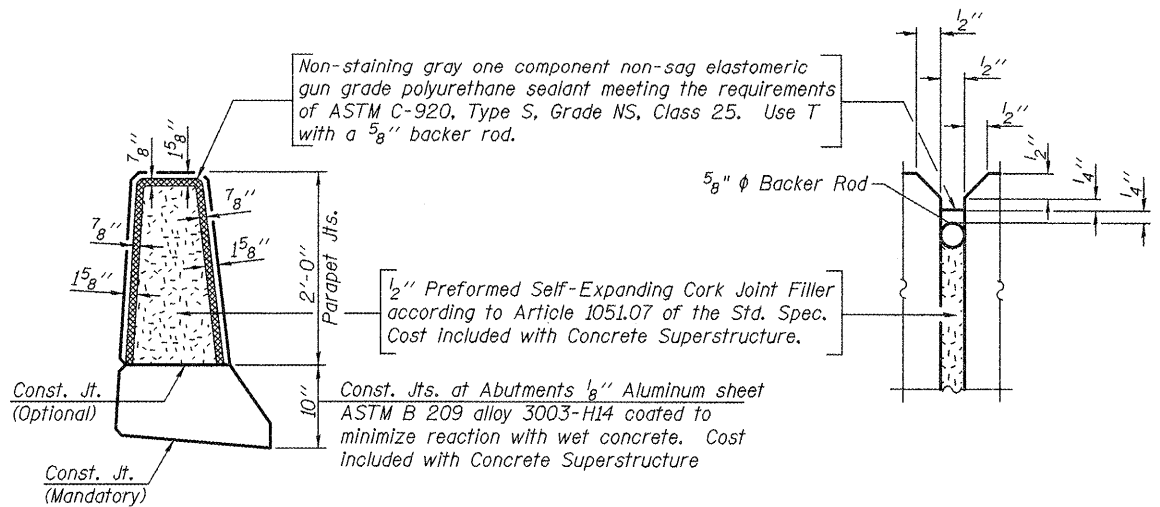
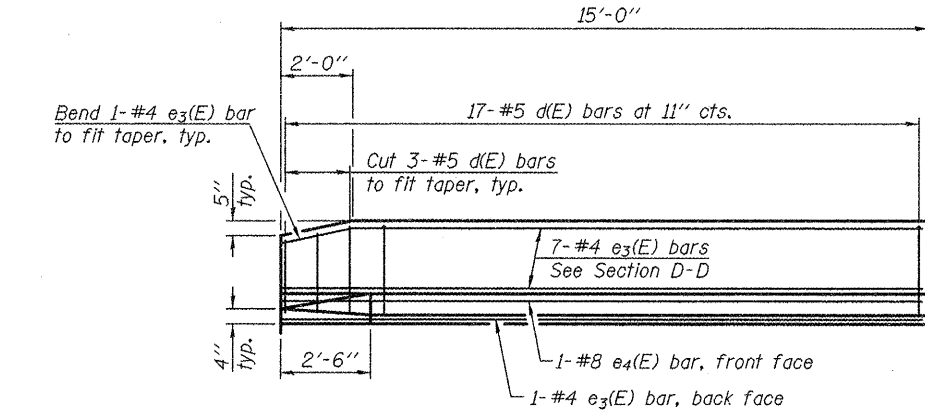
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 12 of 21 for Detail A.
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(E) bar details, see sheet 10 of 21.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 20 of 21.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 21.



TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a8(E)	100	#4	17'-9"	
a9(E)	184	#5	17'-5"	
a10(E)	48	#6	6'-0"	
b2(E)	68	#4	29'-8"	
b3(E)	164	#9	29'-9"	
b4(E)	4	#4	14'-8"	
b5(E)	4	#4	14'-4"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e3(E)	32	#4	14'-8"	
e4(E)	4	#8	14'-8"	
t(E)	144	#4	10'-2"	
w(E)	160	#5	17'-5"	
Concrete Superstructure			Cu. Yd.	116.4
Concrete Structures			Cu. Yd.	22.0
Reinforcement Bars, Epoxy Coated			Pound	28,300



DESIGNED SEC
CHECKED CTW
DRAWN SEC
CHECKED CTW

BA-L 10-31-08

(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 055-0079

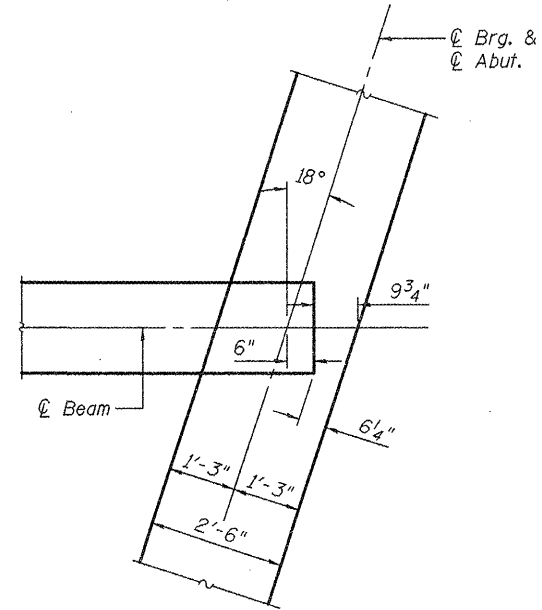
SHEET NO. 13 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

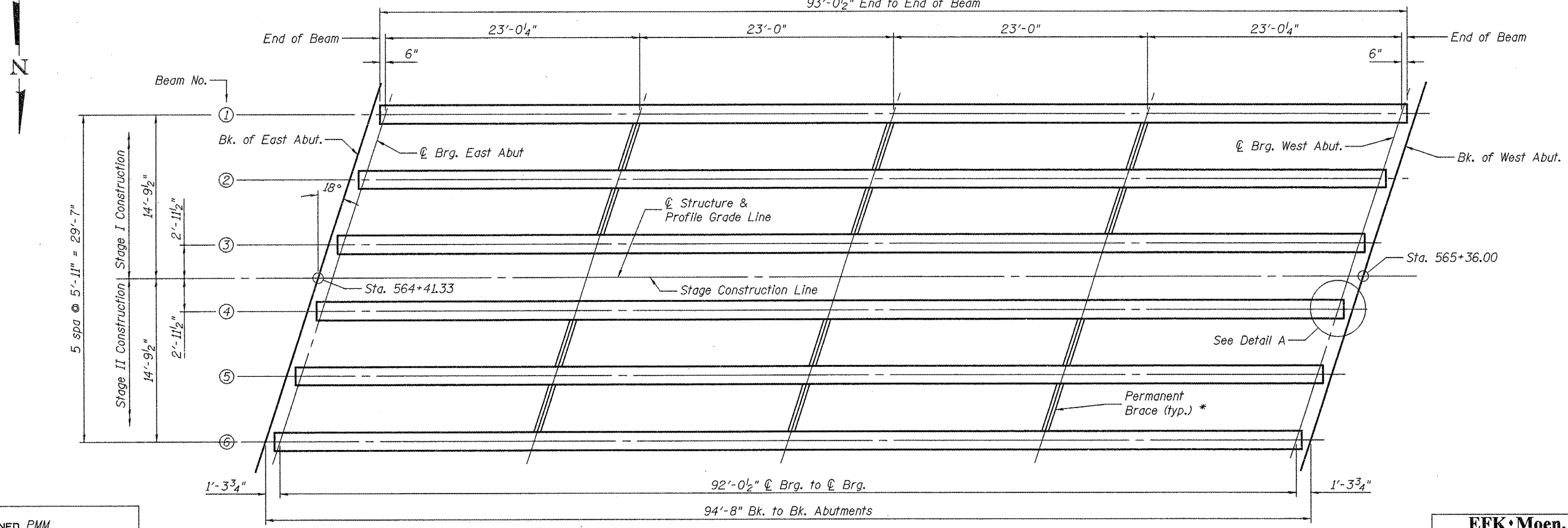
INTERIOR BEAM MOMENT TABLE		
	0.5 Sp. 1	
I	(in ⁴)	213715
I'	(in ⁴)	490525
S _b	(in ³)	8559
S _b '	(in ³)	12628
S _t	(in ³)	7362
S _t '	(in ³)	32364
DC1	(k/')	1.26
M _{DC1}	(k)	1338.3
DC2	(k/')	0.15
M _{DC2}	(k)	158.8
DW	(k/')	0.267
M _{DW}	(k)	282.7
M _{L + IM}	(k)	1387.0

INTERIOR BEAM REACTION TABLE		
	Abutment	
R _{DC1}	(k)	58.0
R _{DC2}	(k)	6.9
R _{DW}	(k)	12.3
R _{L + IM}	(k)	81.3
R _{Total}	(k)	158.5

I: Non-composite moment of inertia of beam section (in⁴).
I': Composite moment of inertia of beam section (in⁴).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam (in³).
S_b': Composite section modulus for the bottom fiber of the prestressed beam (in³).
S_t: Non-composite section modulus for the top fiber of the prestressed beam (in³).
S_t': Composite section modulus for the top fiber of the prestressed beam (in³).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: 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_{DC2}: 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_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{L + IM}: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).



DETAIL A



FRAMING PLAN

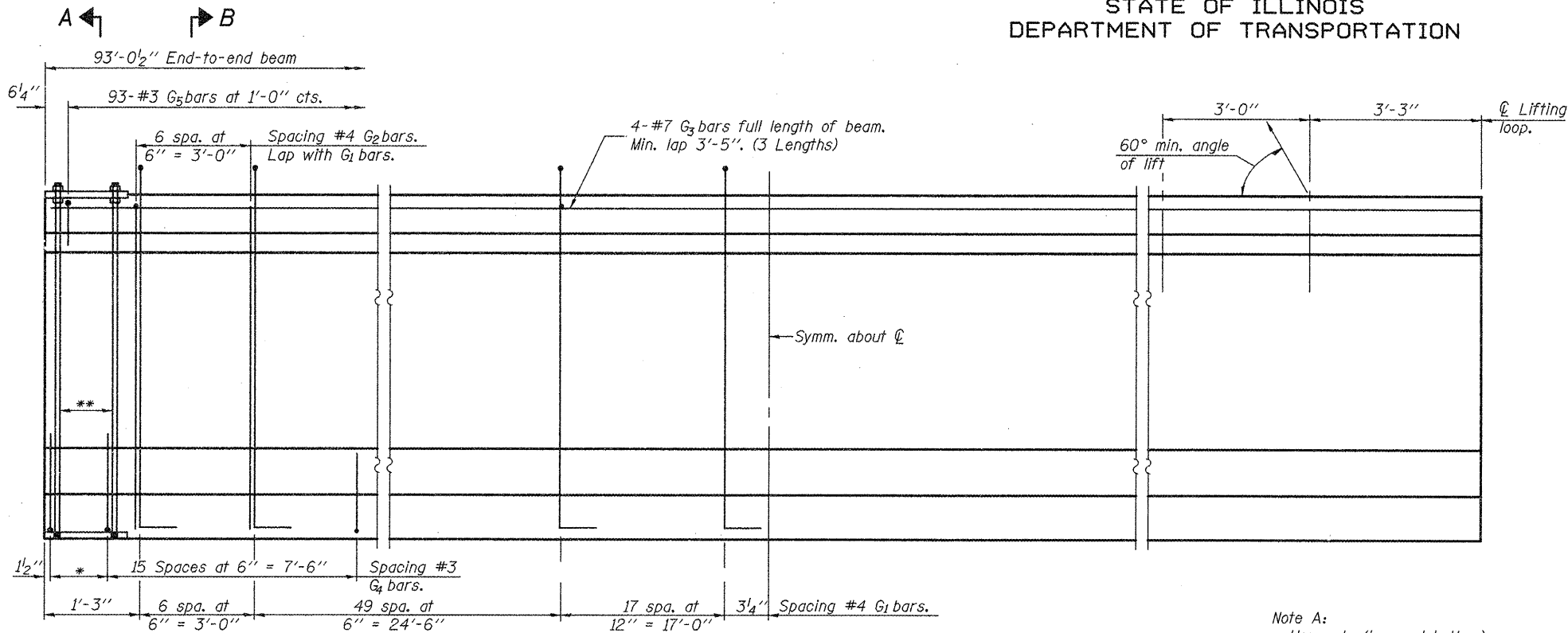
* Cost Included in Furnishing and Erecting Precast Prestressed I-Beams, 54 in.

FRAMING PLAN
STRUCTURE NO. 055-0079

DESIGNED PMM
CHECKED CTW
DRAWN SEC
CHECKED CTW

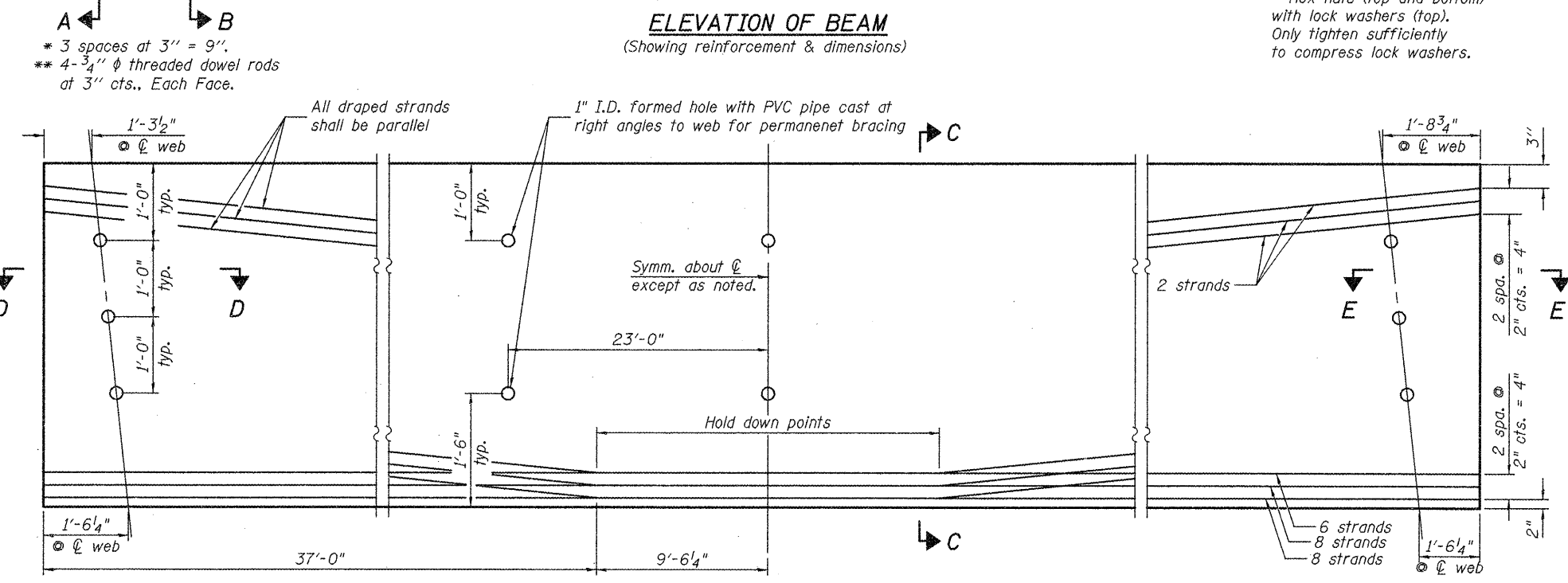
		<u>EFK Moen, LLC</u> <u>Civil Engineering Design</u>		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253	
SHEET NO. 14		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
21 SHEETS		685	37BR-1	MCDONOUGH	138	69	
				CONTRACT NO. 68352			
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

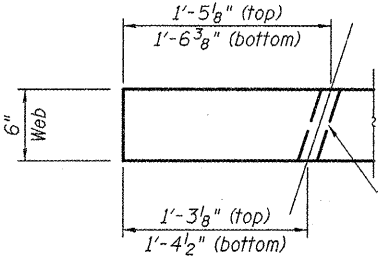


ELEVATION OF BEAM
(Showing reinforcement & dimensions)

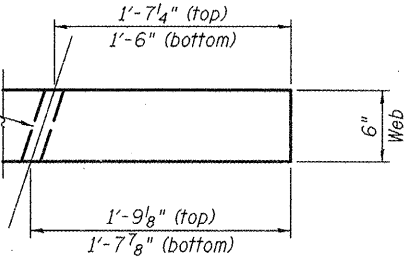
Note A:
Hex nuts (top and bottom)
with lock washers (top).
Only tighten sufficiently
to compress lock washers.



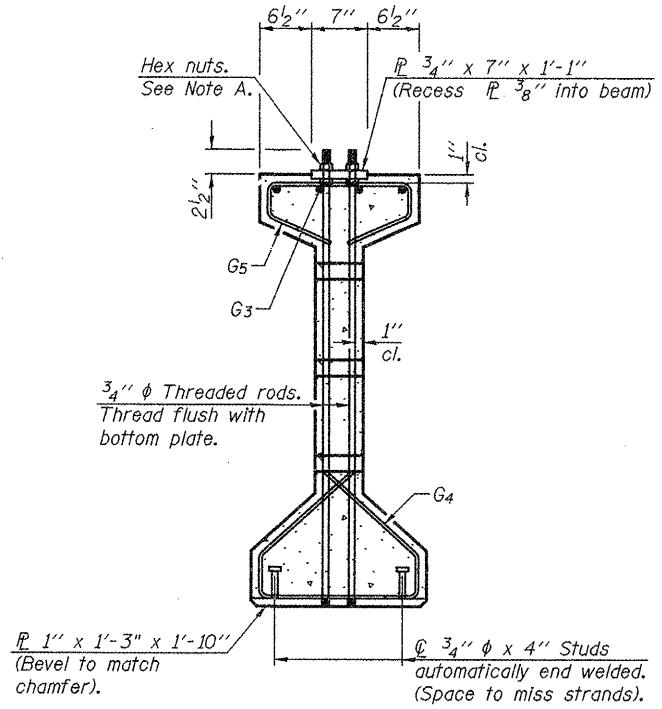
ELEVATION OF BEAM
(Showing prestressing steel)



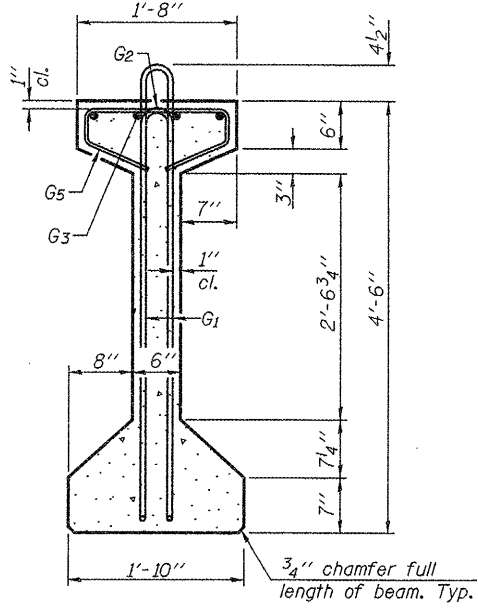
SECTION D-D



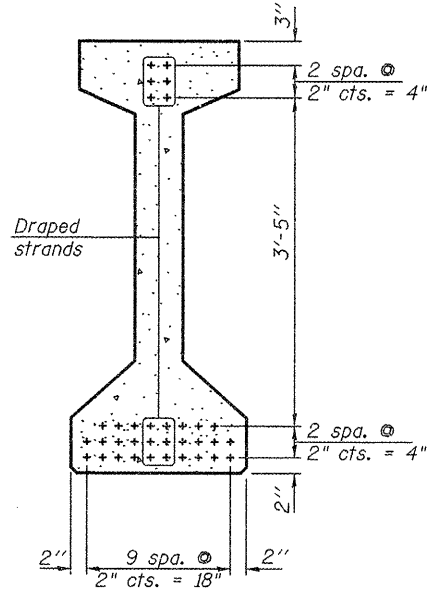
SECTION E-E



SECTION A-A



SECTION B-B



SECTION C-C

*****BAR LIST
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	146	#4	10'-5"	⏏
G2	14	#4	8'-8"	⏏
G3	12	#7	33'-3"	—
G4	38	#3	4'-11"	⏏
G5	93	#3	3'-5"	⏏

***For information only

Notes:
See sheet 16 of 21 for additional details
and Bill of Material.
Required release strength, f'ci, shall
be 5,000 psi.

DESIGNED PMM
CHECKED CTW
DRAWN SEC
CHECKED CTW

PI-4-54 10-1-08

54" PPC I-BEAM

STRUCTURE NO. 055-0079

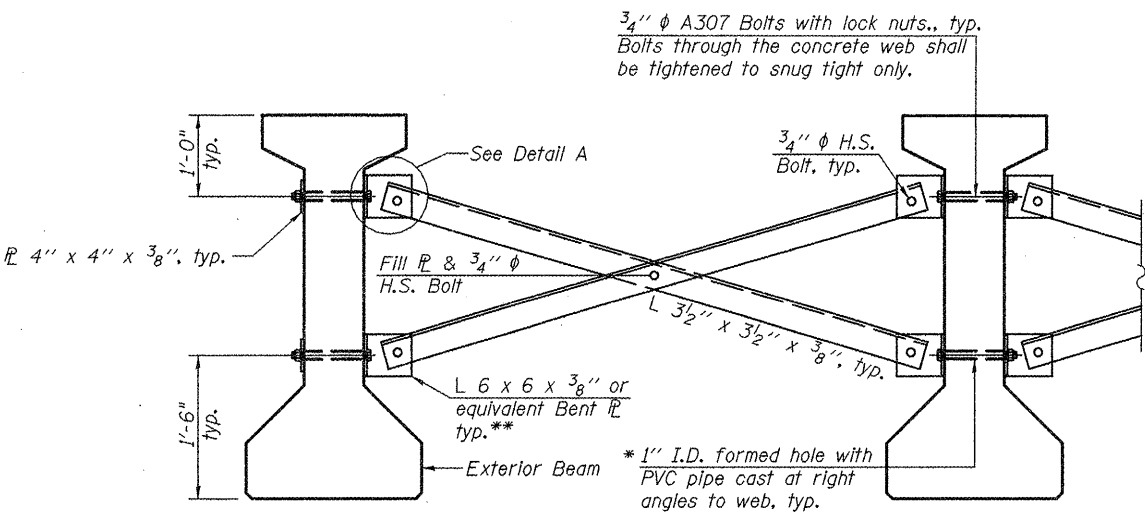
		EFK • Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253		
SHEET NO. 15 21 SHEETS	F.A.P. RTE.	SECTION			COUNTY		TOTAL SHEETS	SHEET NO.
	685	37BR-1			MCDONOUGH		138	70
						CONTRACT NO. 68352		
	FED. ROAD DIST. NO.			ILLINOIS	FED. AID PROJECT			

**54" PPC I-BEAM
STRUCTURE NO. 055-0079**

EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253	
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

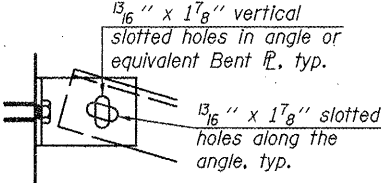
NOTES



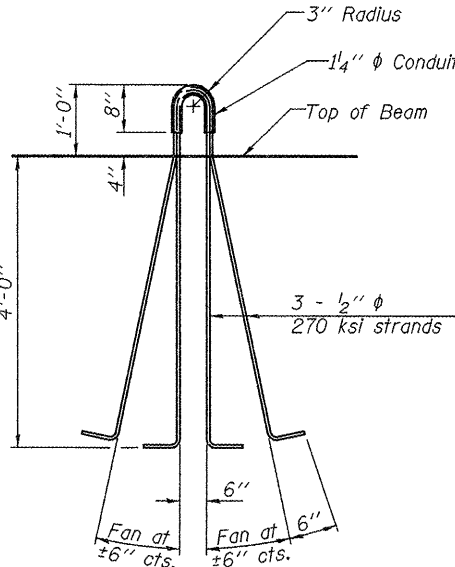
** Connection angle shall be adjusted to match bridge skew.

* Fabricator shall locate to miss strands within permissible tolerances.

Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 15/16" ϕ unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.



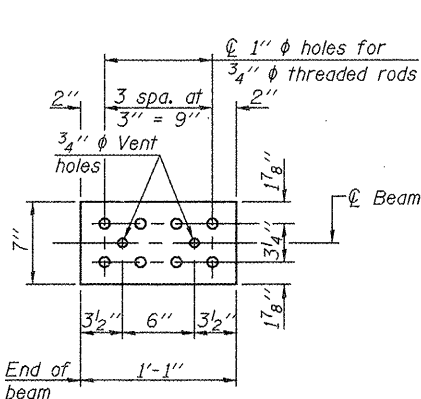
DETAIL A



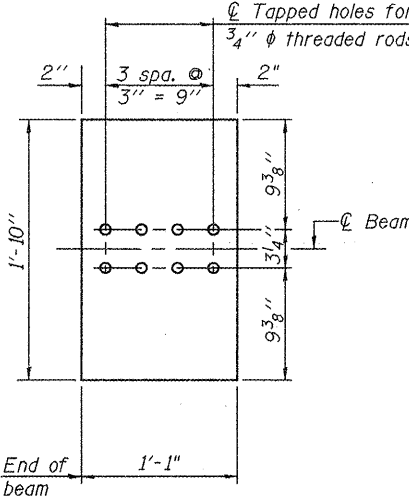
LIFTING LOOP DETAIL

PERMANENT BRACING DETAILS

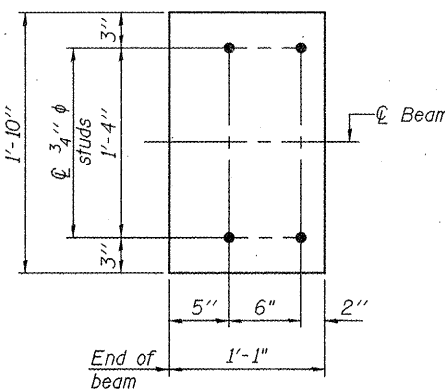
Cost of permanent bracing included with Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"



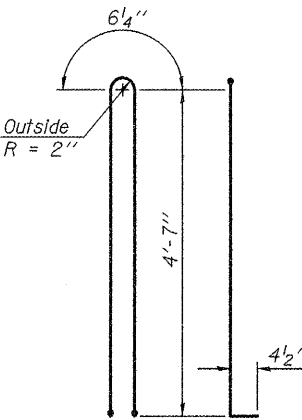
TOP PLATE



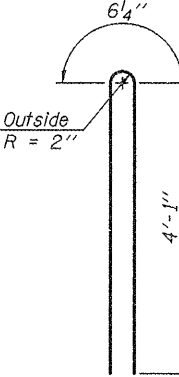
BOTTOM PLATE
(Showing threaded rods)



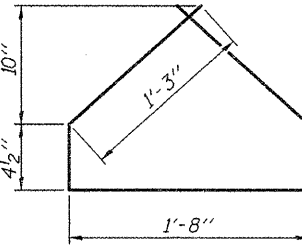
BOTTOM PLATE
(Showing studs)



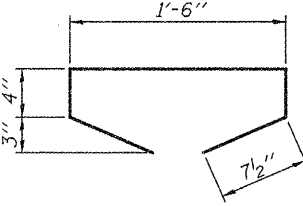
BAR G1



BAR G2



BAR G4



BAR G5

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	558.5

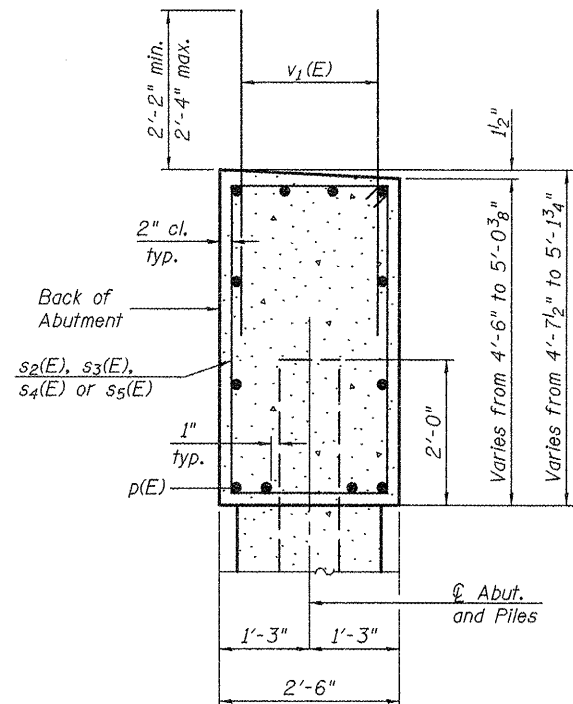
54" PPC I-BEAM DETAILS
STRUCTURE NO. 055-0079

DESIGNED PMM
CHECKED CTW
DRAWN SEC
CHECKED CTW

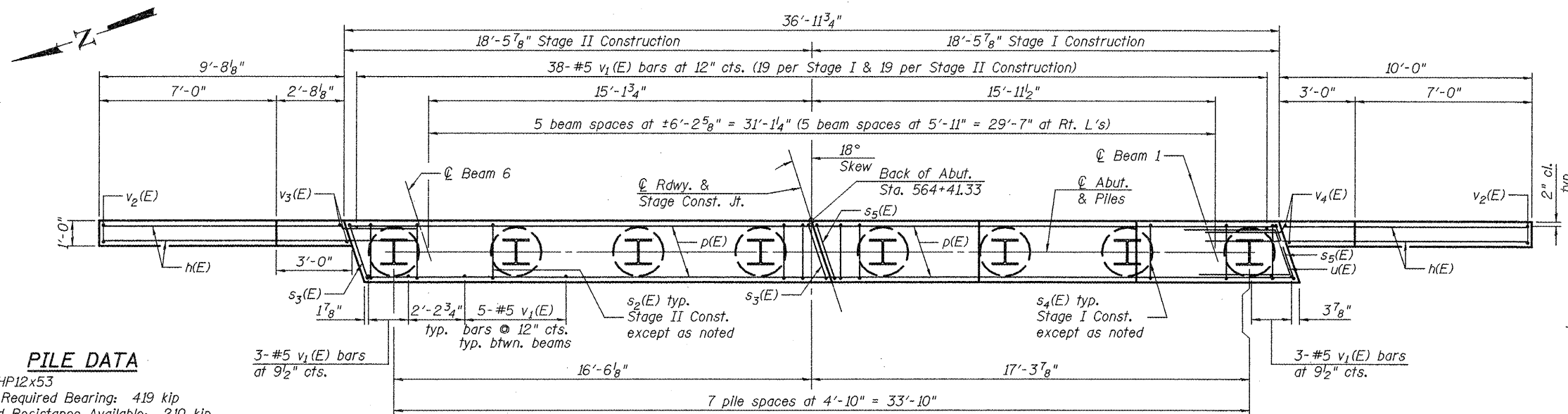
PI-4-54D 10-1-08

SHEET NO. 16 21 SHEETS	EFK•Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	685	37BR-1	MCDONOUGH	138	71
	CONTRACT NO. 68352				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



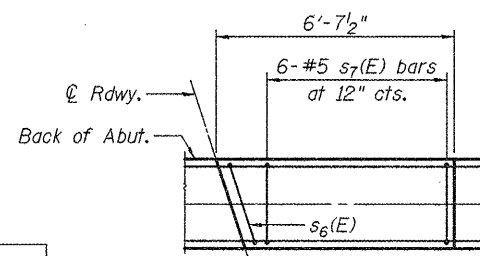
SEC. THRU ABUT.

ELEVATION

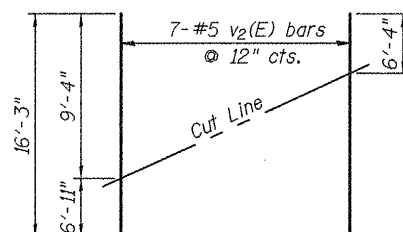
PLAN

PILE DATA

Type: HP12x53
Nominal Required Bearing: 419 kip
Factored Resistance Available: 210 kip
Est. Length: 68 ft
No. Production Piles: 7
No. Test Piles: 1

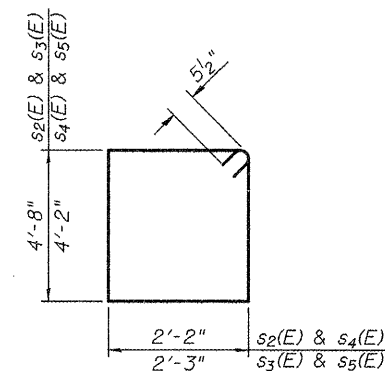


VIEW A-A



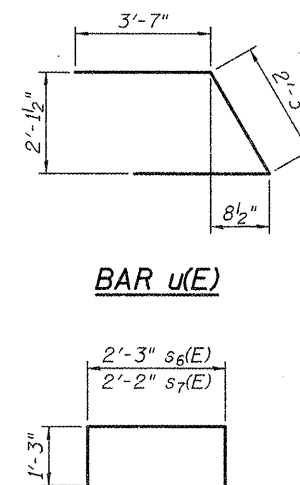
FIELD CUTTING DIAGRAM

Order $v_2(E)$ full length. Cut as shown and use remainder of bars in opposite face.



BARS $s_2(E)$, $s_3(E)$, $s_4(E)$ & $s_5(E)$

BAR $u(E)$



BAR $s_6(E)$ & $s_7(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	88	#6	13'-6"	
p(E)	24	#6	18'-2"	
p ₁ (E)	4	#6	5'-5"	
s ₂ (E)	15	#5	14'-7"	
s ₃ (E)	2	#5	14'-9"	
s ₄ (E)	15	#5	13'-7"	
s ₅ (E)	2	#5	13'-9"	
s ₆ (E)	1	#5	4'-9"	
s ₇ (E)	6	#5	4'-8"	
u(E)	8	#6	9'-5"	
v ₁ (E)	69	#5	4'-6"	
v ₂ (E)	14	#5	16'-3"	
v ₃ (E)	8	#5	10'-4"	
v ₄ (E)	8	#5	9'-8"	
Structure Excavation			Cu. Yd.	123.0
Concrete Structures			Cu. Yd.	23.7
Reinforcement Bars, Epoxy Coated			Pound	3,850
Furnishing Steel Piles, HP12x53			Foot	476
Driving Piles			Foot	476
Test Pile Steel HP12x53			Each	1
Concrete Encasement			Cu. Yd.	2.8

For details of Bar Splicers, see sheet 20 of 21.
For details of piles and Concrete Encasement,
see sheet 19 of 21.

EAST ABUTMENT

STRUCTURE NO. 055-0079

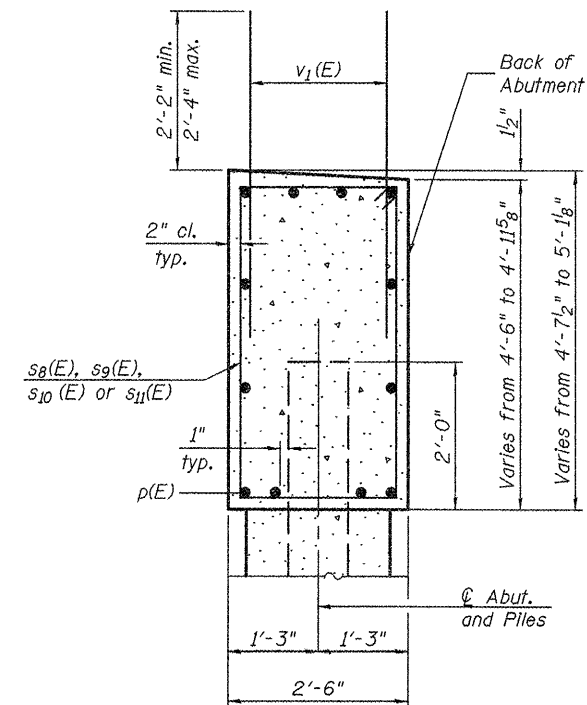
DESIGNED	SEC
CHECKED	CDL
DRAWN	SEC
CHECKED	CDL

AI-L

10-1-08

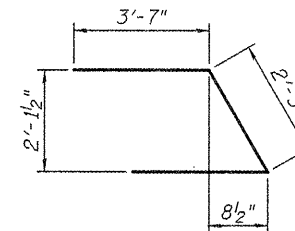
		EFK • Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253	
SHEET NO. 17 21 SHEETS	F.A.P. RTE.	SECTION			COUNTY		TOTAL SHEETS
	685	37BR-1			MCDONOUGH		SHEET NO. 138 72
					CONTRACT NO. 68352		
	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SEC. THRU ABUT.

ELEVATION


$$\text{BAR } u(E)$$

BAR $s_{12}(E)$ & $s_{13}(E)$

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_1(E)$	84	#6	13'-6"	
$p_1(E)$	24	#6	18'-2"	
$p_1(E)$	4	#6	5'-5"	
$s_8(E)$	15	#5	13'-7"	
$s_9(E)$	2	#5	13'-9"	
$s_{10}(E)$	15	#5	14'-7"	
$s_{11}(E)$	2	#5	14'-9"	
$s_{12}(E)$	1	#5	4'-9"	
$s_{13}(E)$	6	#5	4'-8"	
$u(E)$	8	#6	9'-5"	
$v_1(E)$	69	#5	4'-6"	
$v_5(E)$	14	#5	16'-0"	
$v_6(E)$	8	#5	9'-8"	
$v_7(E)$	8	#5	10'-2"	
Structure Excavation			Cu. Yd.	121.0
Concrete Structures			Cu. Yd.	23.5
Reinforcement Bars, Epoxy Coated			Pound	3,770
Furnishing Steel Piles, HP12x53			Foot	469
Driving Piles			Foot	469
Test Pile Steel HP12x53			Each	1
Concrete Encasement			Cu. Yd.	2.8

For details of Bar Splicers, see sheet 20 of 21.
For details of piles and Concrete Encasement,
see sheet 19 of 21.

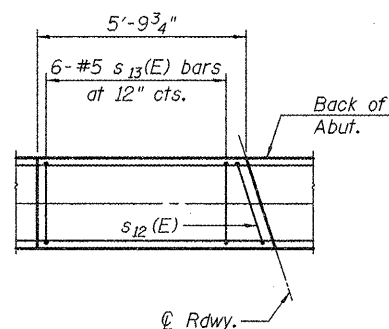
WEST ABUTMENT

STRUCTURE NO. 055-0079

<u>EFK • Moen, LLC</u> <u>Civil Engineering Design</u>		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253	
8	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	685	37BR-1	MCDONOUGH	138	73
	CONTRACT NO. 68352				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

PILE DATA

Type: HP12x53
Nominal Required Bearing: 419 kip
Factored Resistance Available: 210 kip
Est. Length: 67 ft
No. Production Piles: 7
No. Test Piles: 1

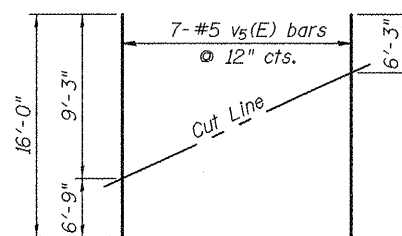


VIEW A-A

DESIGNED	SEC
CHECKED	CDL
DRAWN	SEC
CHECKED	CDL

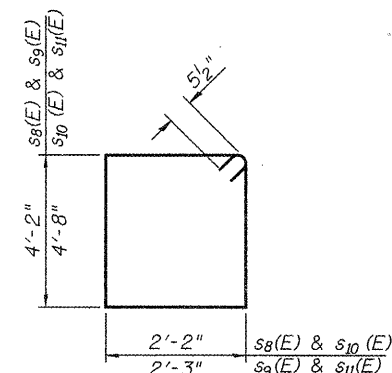
AI-L

10-1-08



FIELD CUTTING DIAGRAM

Order $v_5(E)$ full length. Cut as shown and use remainder of bars in opposite face.

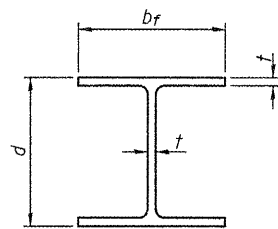


BARS $s_8(E)$, $s_9(E)$, $s_{10}(E)$ & $s_{11}(E)$

SHEET NO. 18

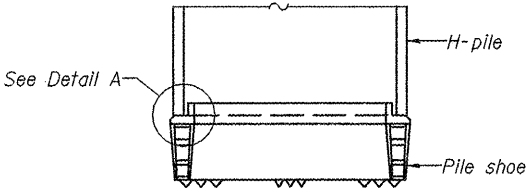
21 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

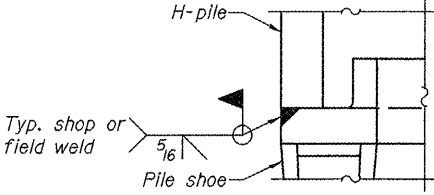


STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/2"	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"

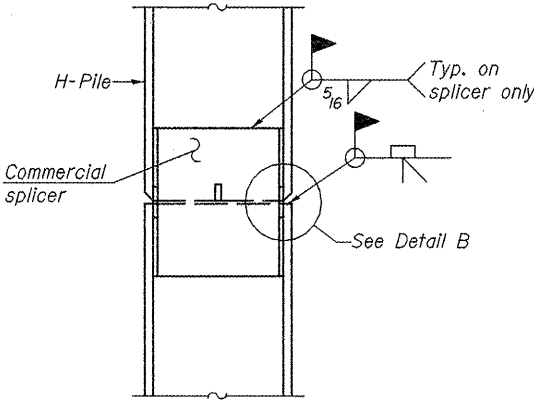


ELEVATION

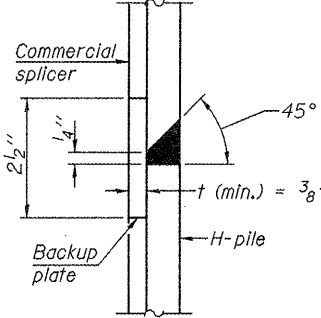


DETAIL A

H-PILE SHOE ATTACHMENT

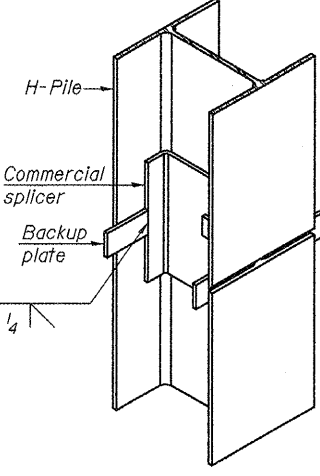


ELEVATION

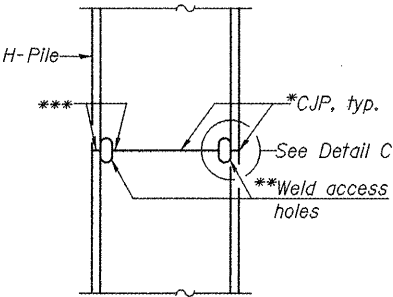


DETAIL "B"

WELDED COMMERCIAL SPLICE

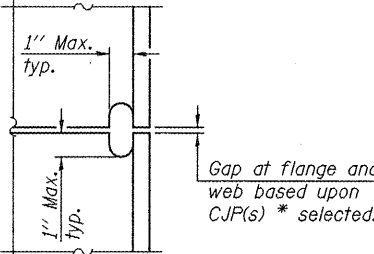


ISOMETRIC VIEW

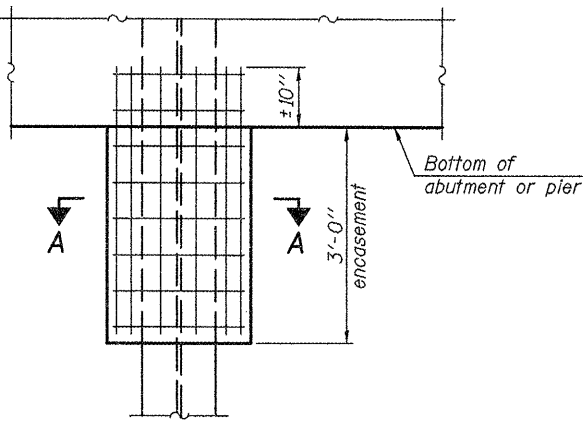


ELEVATION

COMPLETE PENETRATION WELD SPLICE

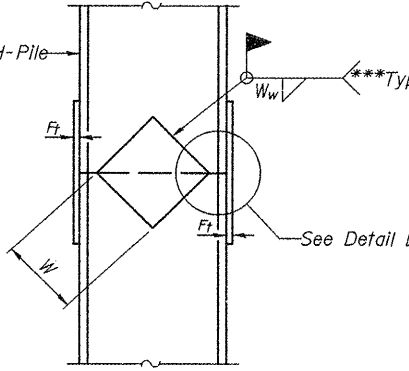


DETAIL C

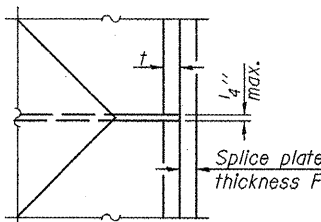


ELEVATION

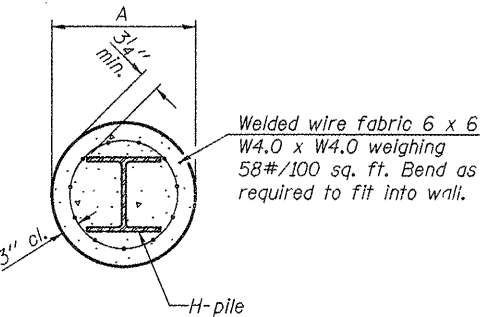
PILE ENCASEMENT



ELEVATION

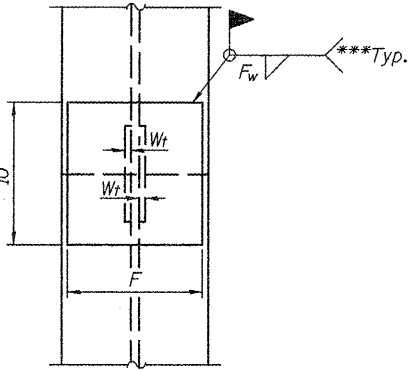


DETAIL D



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

SECTION A-A



END VIEW

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

WELDED PLATE FIELD SPLICE

HP PILE DETAILS
STRUCTURE NO. 055-0079

DESIGNED SEC
CHECKED CDL
DRAWN SEC
CHECKED CDL

F-HP 10-1-08

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
*** Interrupt welds 1/4" from end of each pile.

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

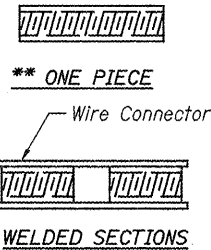
SHEET NO. 19 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	CONTRACT NO. 68352			
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

The diameter of this part is equal or larger than the diameter of bar spliced.

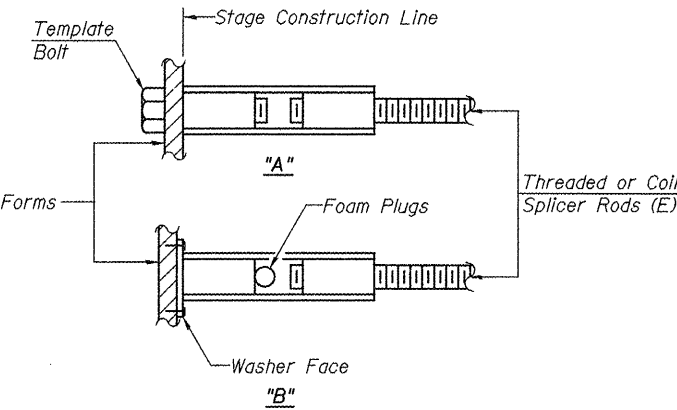
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



BAR SPLICER ASSEMBLY ALTERNATIVES

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



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

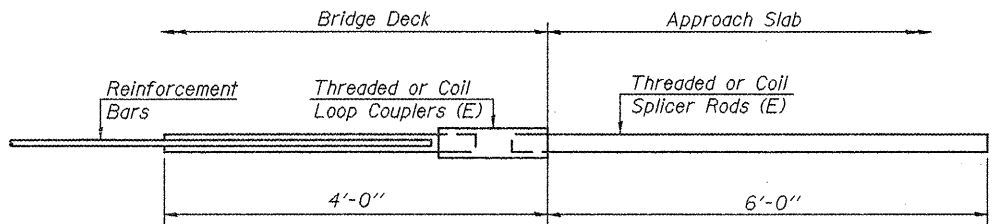
All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

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

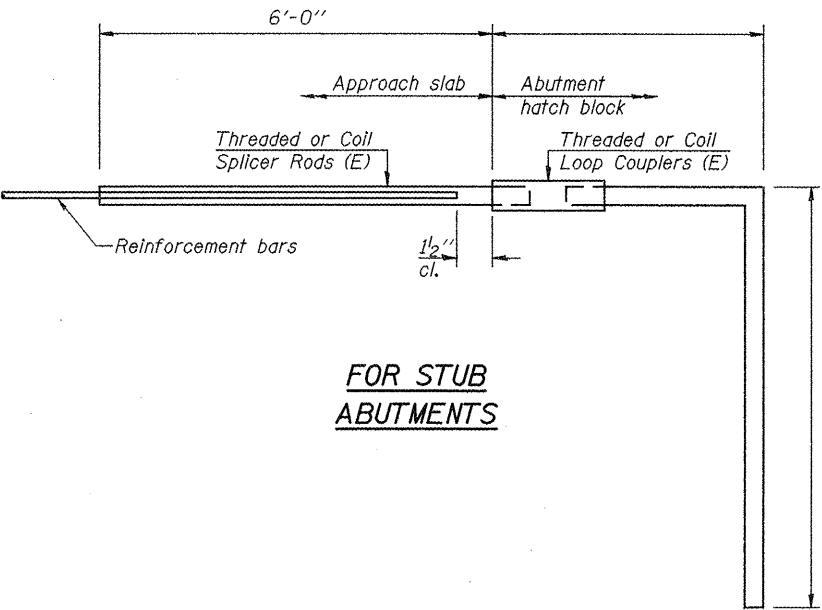
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



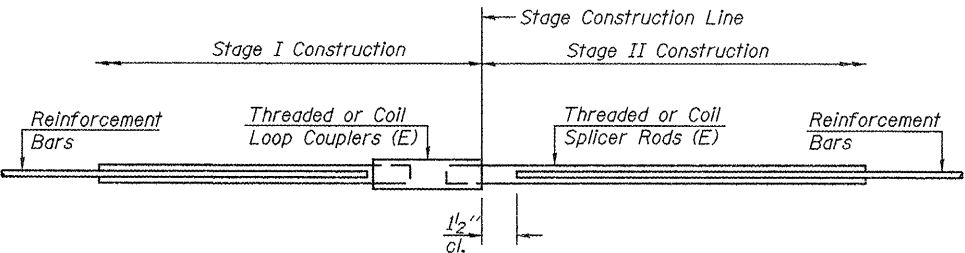
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 64



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required =



STANDARD

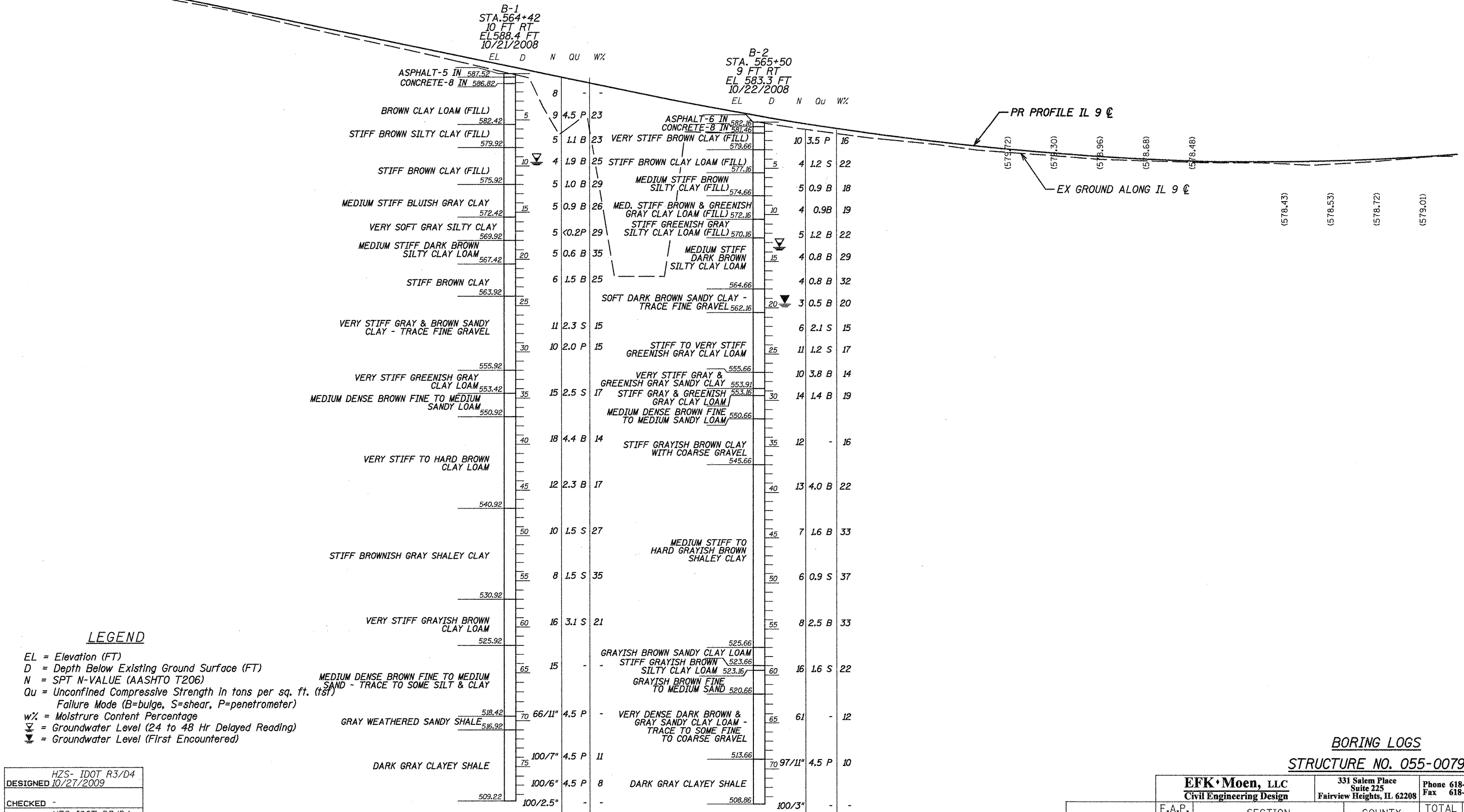
Bar Size	No. Assemblies Required	Location
#4	50	Approach Slab
#5	92	Approach Slab
#5	274	Deck Slab
#5	40	Appr. Footing
#6	22	Abut. Diaphragm
#6	24	Abutment

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 055-0079

SHEET NO. 20 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208	Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
	685	37BR-1	MCDONOUGH	138
	FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT

DESIGNED SEC
CHECKED CDL
DRAWN SEC
CHECKED CDL

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LEGEND

EL = Elevation (FT)
D = Depth Below Existing Ground Surface (FT)
N = SPT N-VALUE (AASHTO T206)
QU = Unconfined Compressive Strength in tons per sq. ft. (tsf)
Failure Mode (B=bulge, S=shear, P=penetrometer)
w% = Moisture Content Percentage
▽ = Groundwater Level (24 to 48 Hr Delayed Reading)
▽ = Groundwater Level (First Encountered)

BORING LOGS

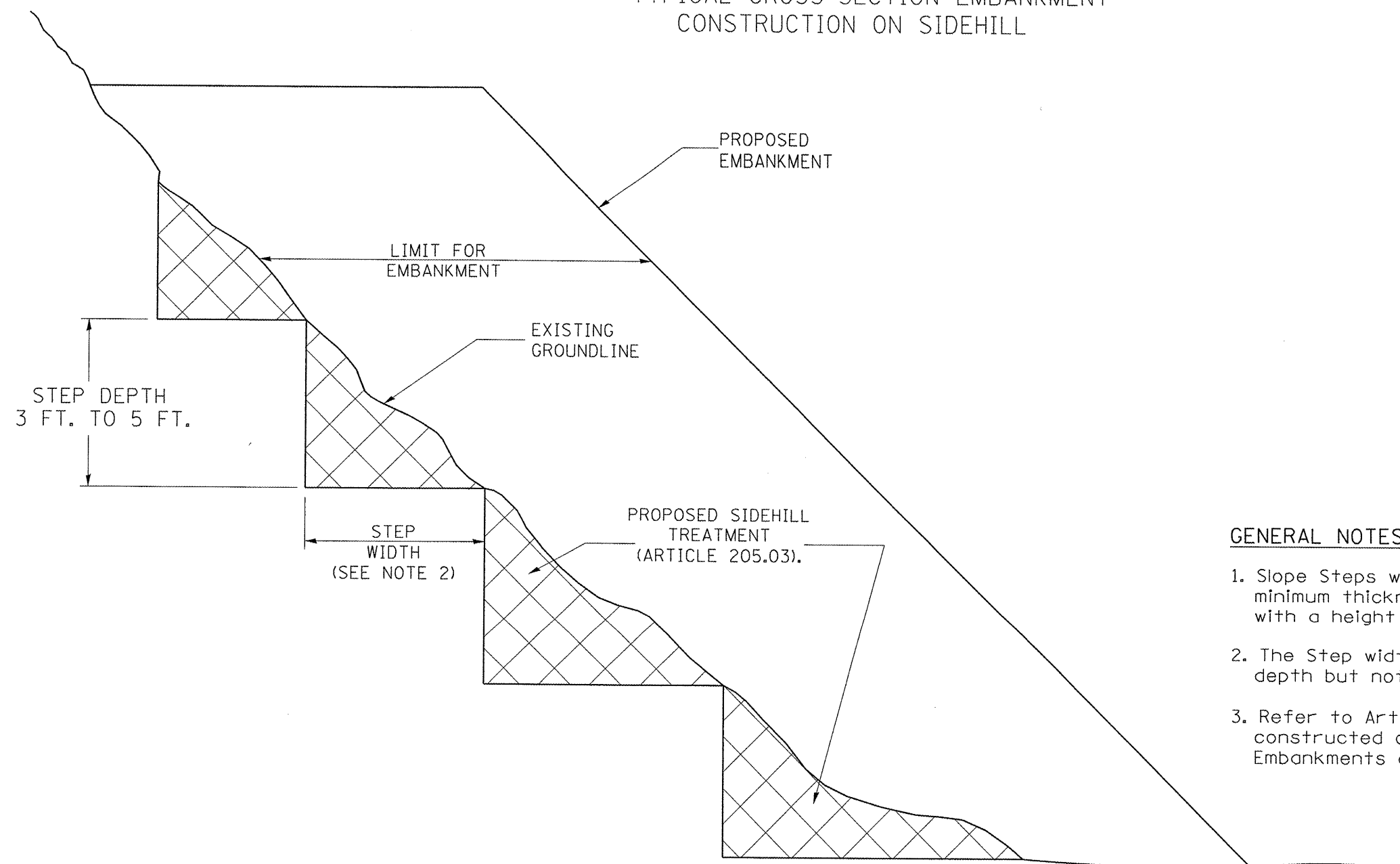
STRUCTURE NO. 055-0079

DESIGNED	HZS- IDOT R3/D4 10/27/2009
CHECKED	-
DRAWN	HZS- IDOT R3/D4 10/27/2009
CHECKED	-

SHEET NO. 21 21 SHEETS	EFK Moen, LLC Civil Engineering Design		331 Salem Place Suite 225 Fairview Heights, IL 62208		Phone 618-206-4250 Fax 618-206-4253
	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	685	37BR-1	MCDONOUGH	138	76
	CONTRACT NO. 68352				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	3TBR-1	MCDONOUGH/ FULTON	138	77
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

SLOPE STEPS DETAIL
TYPICAL CROSS-SECTION EMBANKMENT
CONSTRUCTION ON SIDEHILL



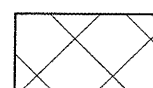
GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

DESIGNER NOTE:

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

REPLACEMENT MATERIAL:



STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFICATION).

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

**SLOPE STEPS
DETAIL**

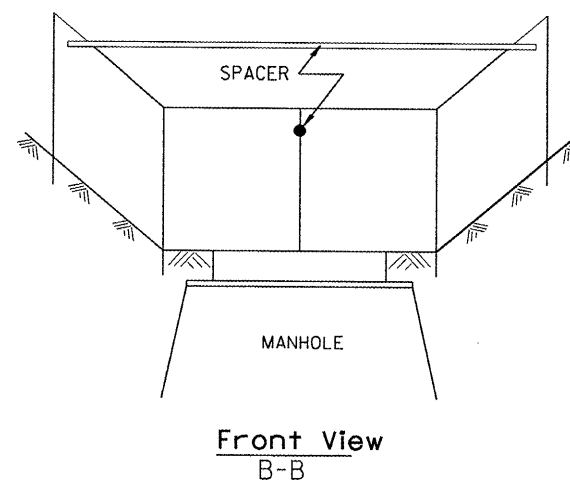
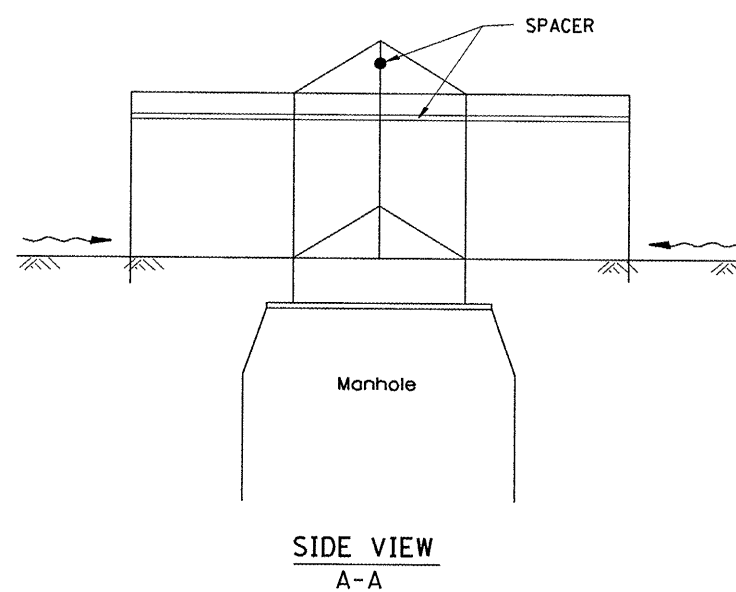
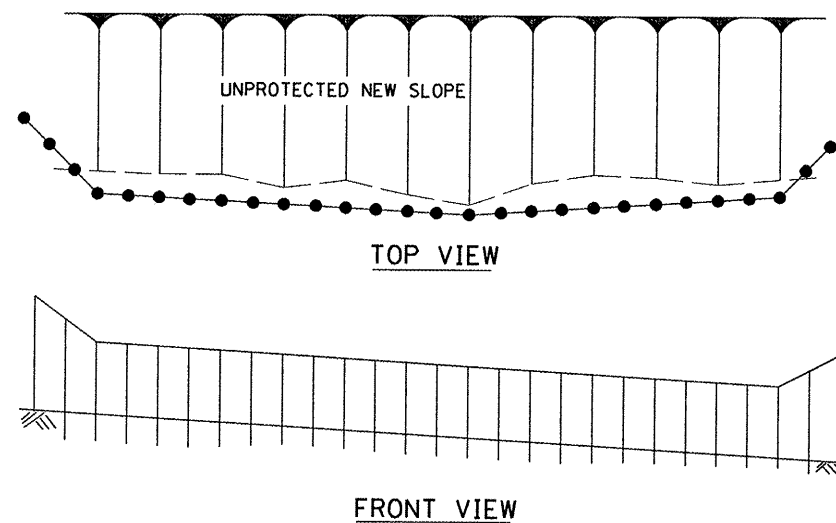
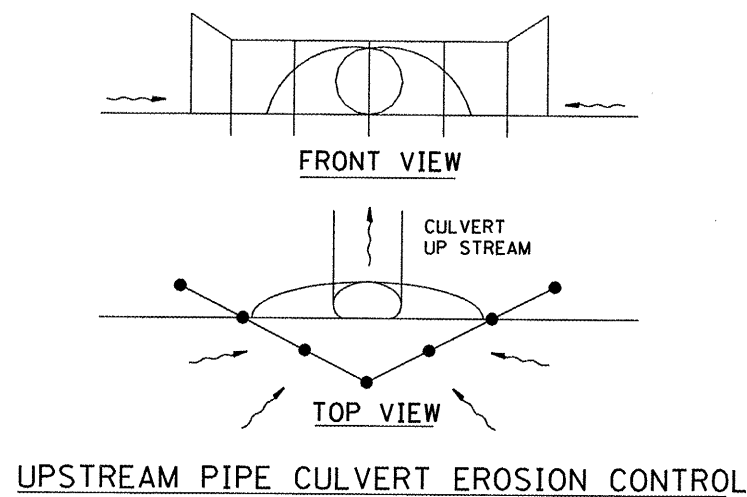
DATE	REVISIONS	BY
1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

CADD STD. NO. 205001-D4
SCALE: NOT DRAWN TO SCALE

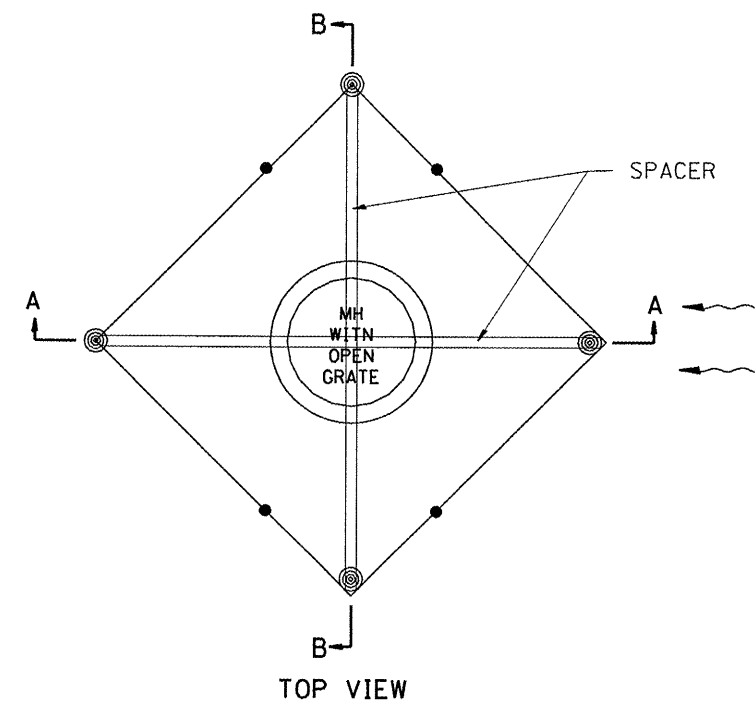
DRAWN BY CADD
CHECKED BY

205001-D4

Designer NOTES:
1. Designer to modify this Special Detail sheet, as needed, for inclusion in plans.
2. Include Highway Standard 280001 "TEMPORARY EROSION CONTROL SYSTEM."



EROSION CONTROL
AT
OPEN GRATE MAN HOLE



GENERAL NOTES:

1. This work shall be performed in accordance with Sections 280 & 1081, of the Standard Specifications.
2. Additional Timber or Metal Post shall be installed, as needed.

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

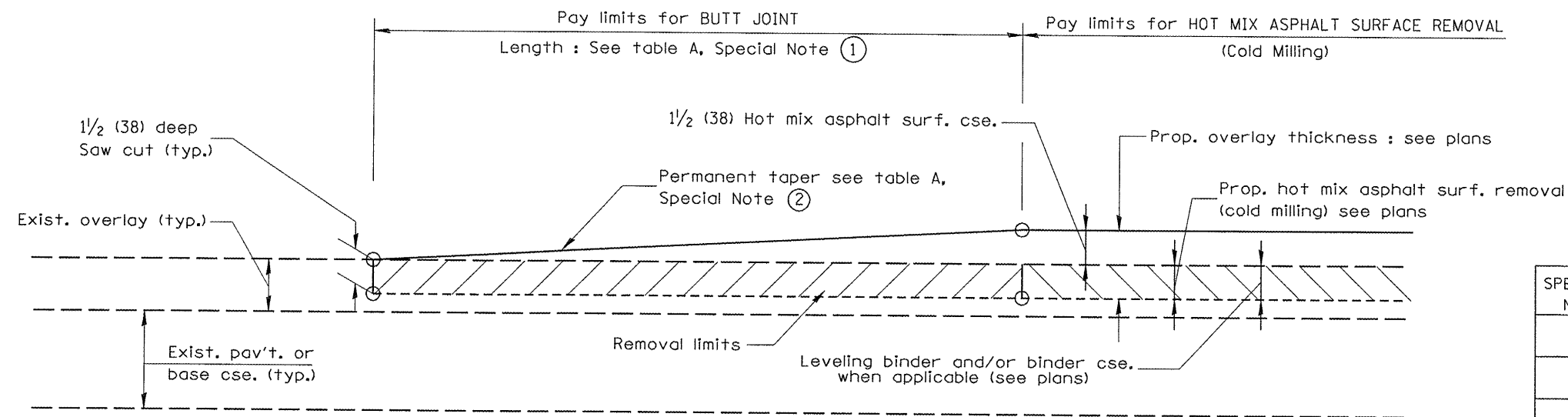
DATE	REVISIONS	BY
1-1-97	RENUM. A-12.05, NEW REVISION BOX	T.P.
3-11-03	ELIMINATED SILT FENCE DITCH CHECK	M.M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SPECIAL DETAIL SHEET	
TYPICAL APPLICATION OF SILT FILTER FENCE	
CADD DETAIL 280001-D4	DRAWN BY CADD
SCALE: NOT DRAWN TO SCALE	CHECKED BY

280001-D4

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FULTON	138	78
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	79
STA. 557+20.00 TO STA. 589+00.00				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



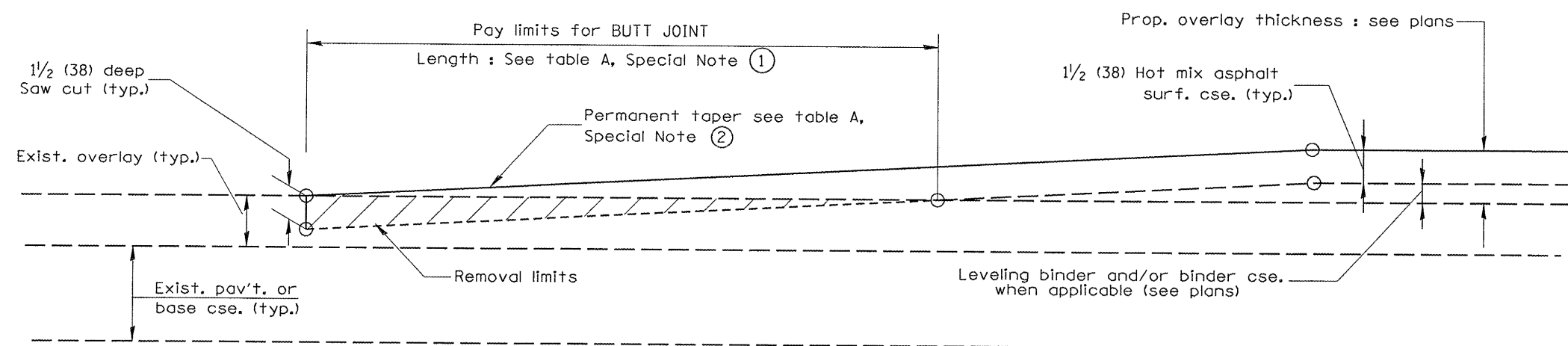
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

TABLE A
(LENGTHS AND TAPER RATES)

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
②	PERMANENT TAPER RATE	1:480	1:240
③	TEMPORARY RAMP TAPER RATE	1:80	1:40
④	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
⑤	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

GENERAL NOTES

- The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
- The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
- The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



CASE 2 : NO HOT MIX ASHALT SURFACE REMOVAL (COLD MILLING)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

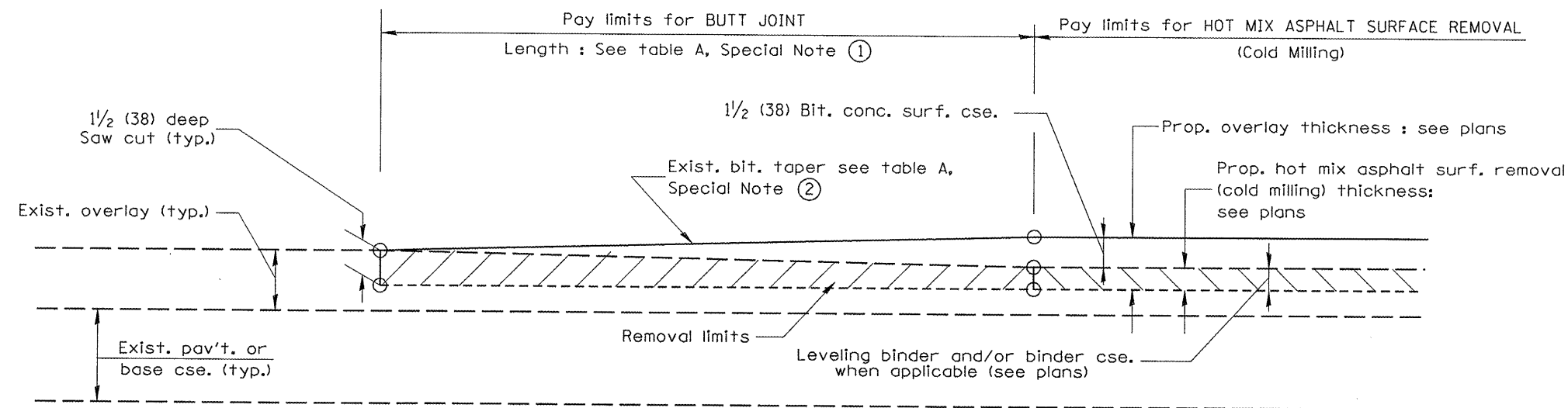
DATE	REVISIONS	BY
1-1-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
4-1-97	CORRECTION TO DEPTH	J.A.
9-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

BUTT JOINTS
CADD STD NO. 406101-D4 SHEET 1 OF 3
SCALE: NOT DRAWN TO SCALE
DRAWN BY CADD
CHECKED BY
DATE

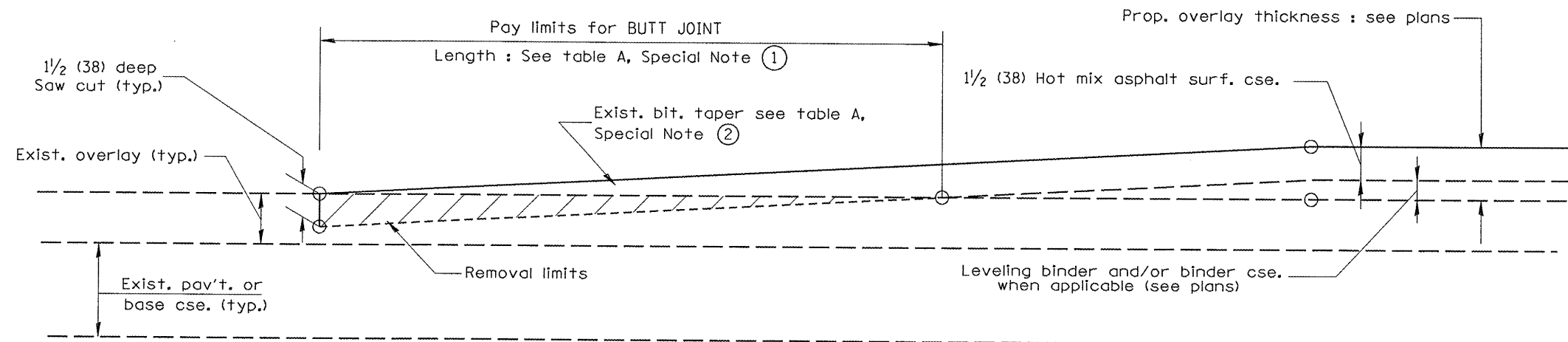
406101-D4 (1)

DESIGNER NOTES:
1. Include District Special Provision for Butt Joints & for Hot Mix Asphalt Removal (Cold Milling).
2. The butt joints pay item includes the saw cut & temporary ramp. Payment for the Butt Joint applies whether or not the project features Hot Mix Asphalt Removal (Cold Milling).

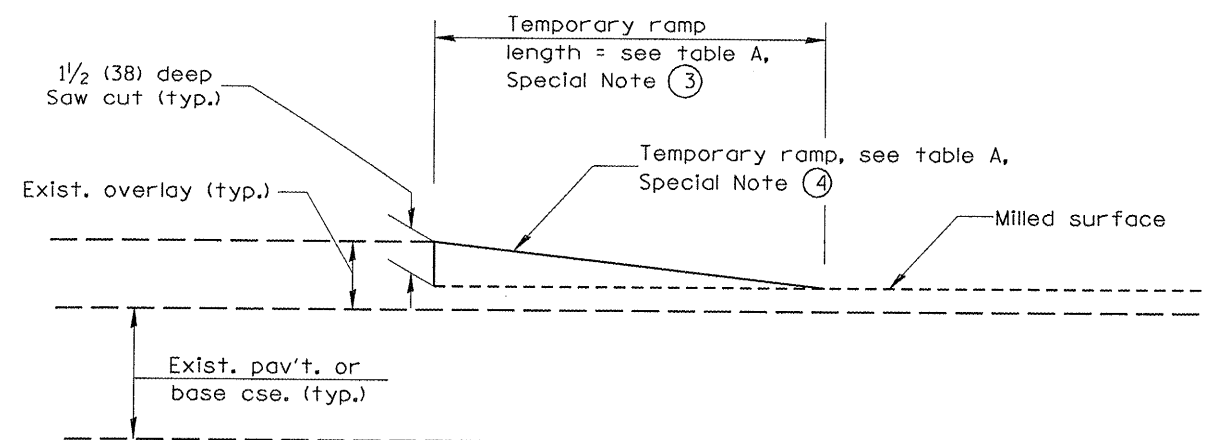
CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH/FULTON	138	80
STA. 557+20.00 TO STA. 589+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



CASE 3 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER



DETAIL TEMPORARY RAMP

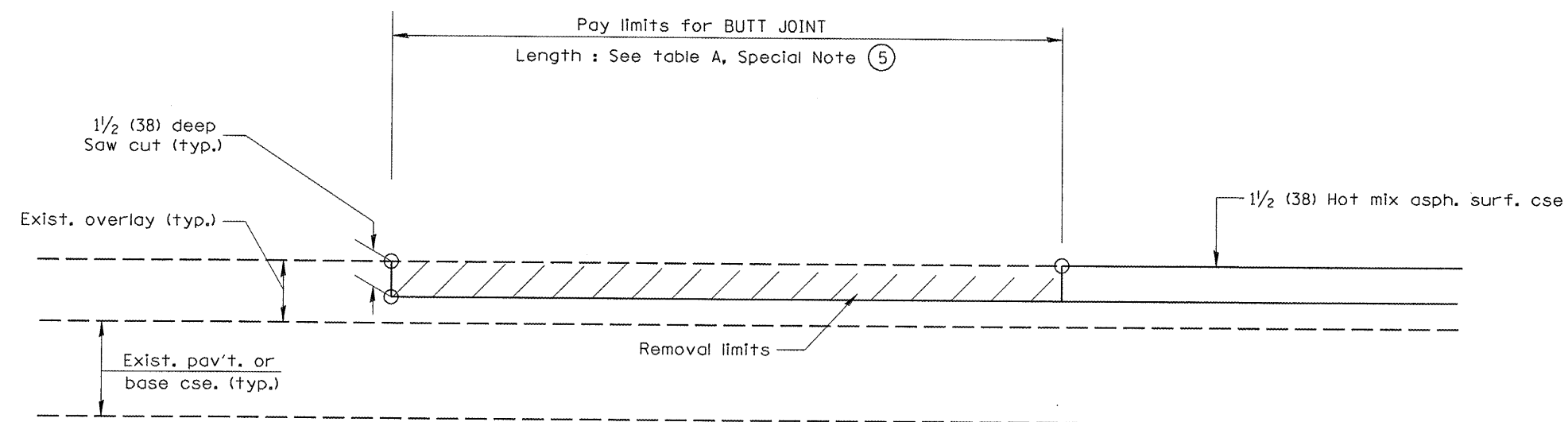
All dimensions are in inches (millimeters)
unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BUTT JOINTS
CADD STD NO. 406101-D4 SHEET 2 OF 3
SCALE: NOT DRAWN TO SCALE
DRAWN BY CADD
CHECKED BY

406101-D4 (2)

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FULTON	138	81
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

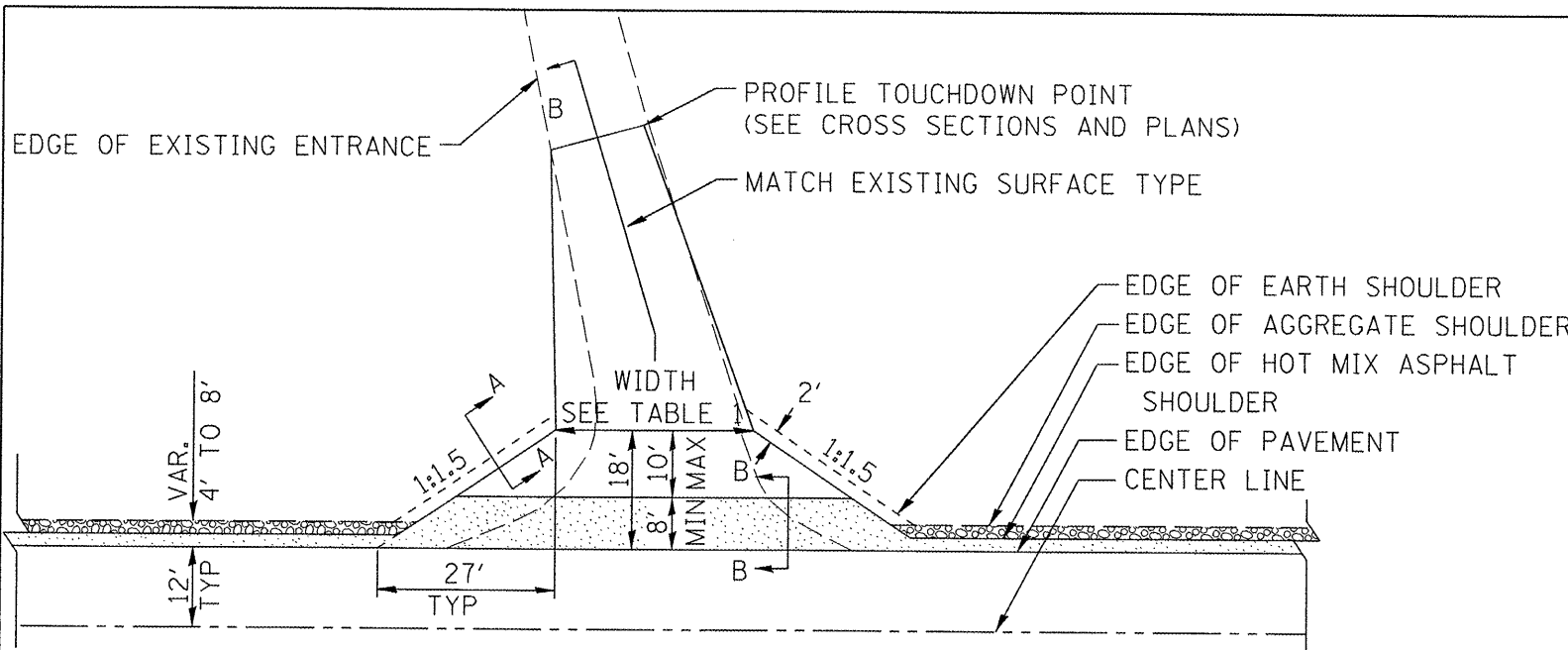
All dimensions are in inches (millimeters)
unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BUTT JOINTS
CADD STD NO. 406101-D4 SHEET 3 OF 3
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
CHECKED BY

406101-D4 (3)

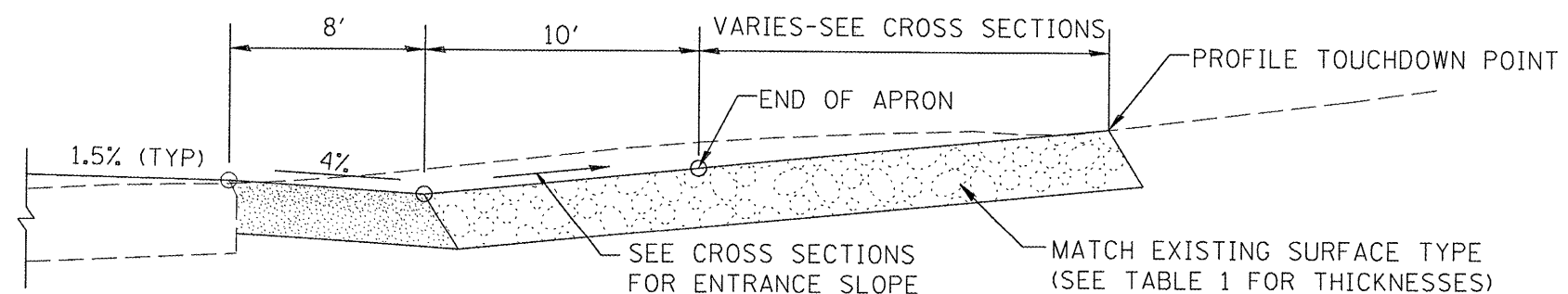
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH	138	82
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



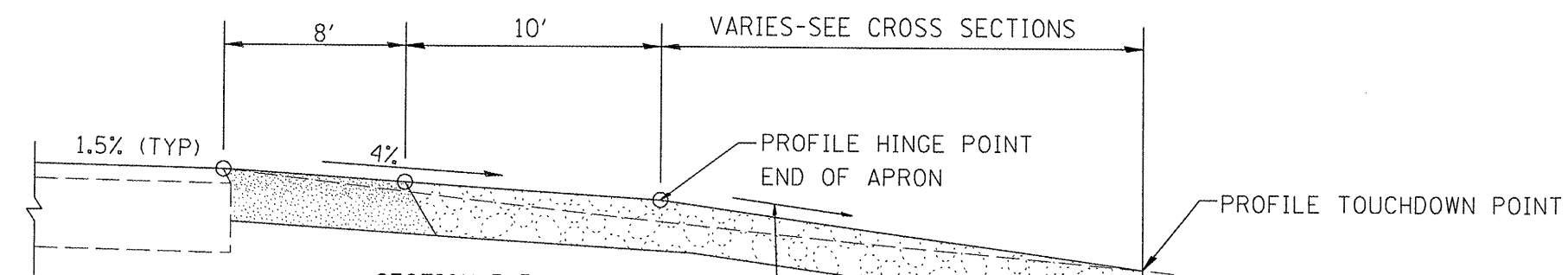
HOT MIX ASPHALT SHOULDER, 8"
AGGREGATE SHOULDER, TYPE B, 6"

PLAN

COMMERCIAL / FARM-RELATED ENTRANCE

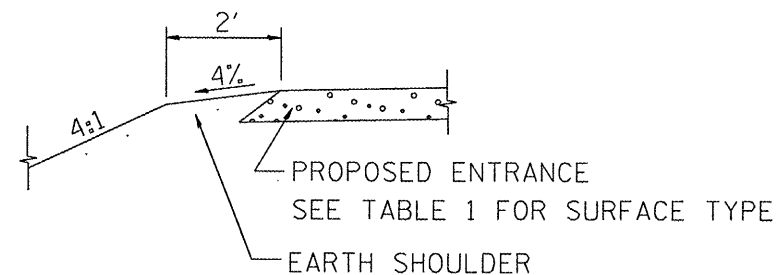


SECTION B-B
RECONSTRUCTED RURAL ENTRANCE
(EXISTING ENTRANCE HIGHER THAN APRON)



SECTION B-B
RECONSTRUCTED RURAL ENTRANCE
(EXISTING ENTRANCE LOWER THAN APRON)

TABLE 1								
RURAL ENTRANCE DESIGN								
ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT		COMMERCIAL			
					1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	12'(3.6m) Min.	24'(7.2m) Max.	20' (6.1m)Max.	30' (9.0m)Max.	14'(4.3m) Min.	24'(7.2m) Max.	24'(7.2m) Min.	35'(10.7m) Max.
FLARE	1:1.5							
MAX. GRADE (G)	12%		12%		10%			
SURFACE TYPE								
INCIDENTAL HOT MIX ASPHALT SURFACING	6"		—		8"			
AGGREGATE SURFACE COURSE	6"		8"		8"			
PCC DRIVEWAY PAVEMENT	6"		—		7"			



SECTION A-A
SHOULDER TREATMENT FOR RURAL ENTRANCES

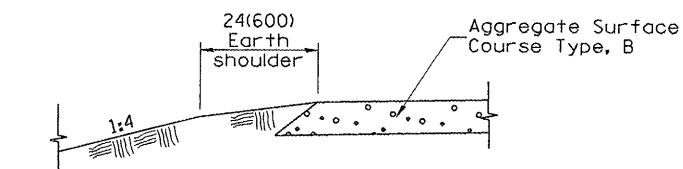
GENERAL NOTES

- ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.
- A MINIMUM 8' PAVED SHOULDER SHALL BE CONSTRUCTED BETWEEN LOCATIONS WHERE THE RURAL ENTRANCE IS LESS THAN 50' FROM AN ADJACENT SIDEROAD, ENTRANCE OR MAILBOX TURNOUT.
- A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH SHOWN IN TABLE 1, TO THE EXISTING ENTRANCE WIDTH.

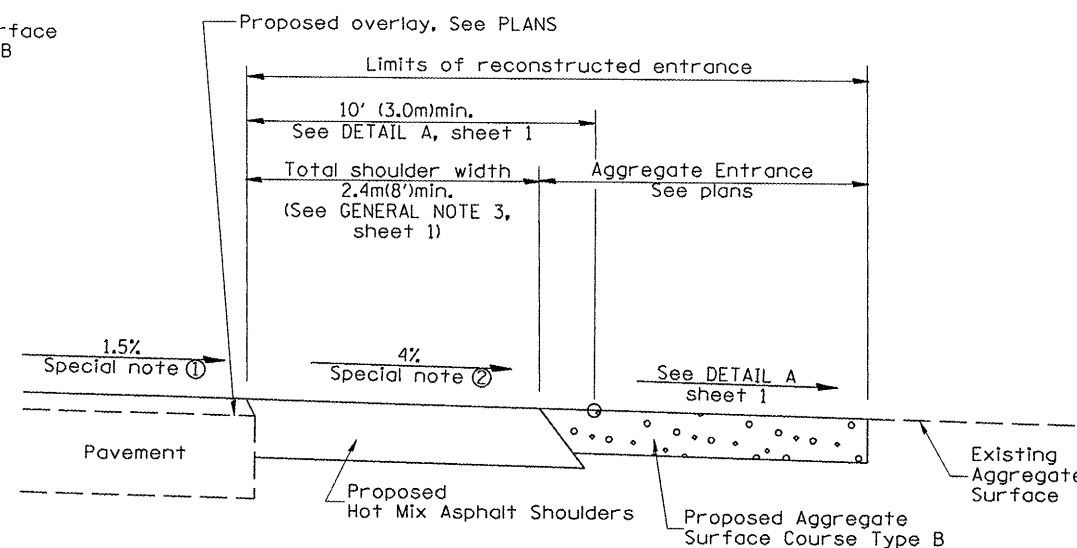
DATE	REVISIONS	BY
1-1-97	RENUM. C-103.06, NEW REVISION BOX	T.P.
7-1-97	REVISE DESIGNER NOTES	J.A.
1-17-03	ADJUST DESIGN, CHANGE ENTRANCE	J.A.T.R.
9-15-05	RADIUS FOR FLARE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD
RURAL ENTRANCES FOR
"3R" PROJECTS
SHEET 1 OF 2
CADD STD NO. 406301-D4
SCALE: NOT DRAWN TO SCALE
DRAWN BY CADD
CHECKED BY: T. PICKERING
DATE

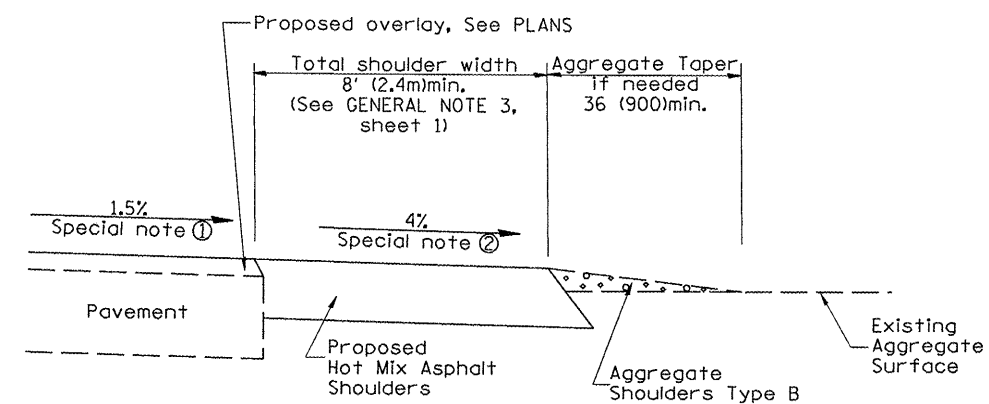
CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	83
STA. 557+20.00 TO STA. 589+00.00			FED. AID PROJECT	
FED. ROAD DIST. NO.			ILLINOIS	



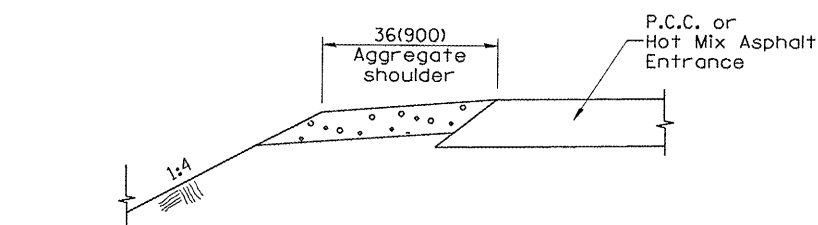
SECTION A-A
SHOULDER TREATMENT FOR AGGREGATE ENTRANCES



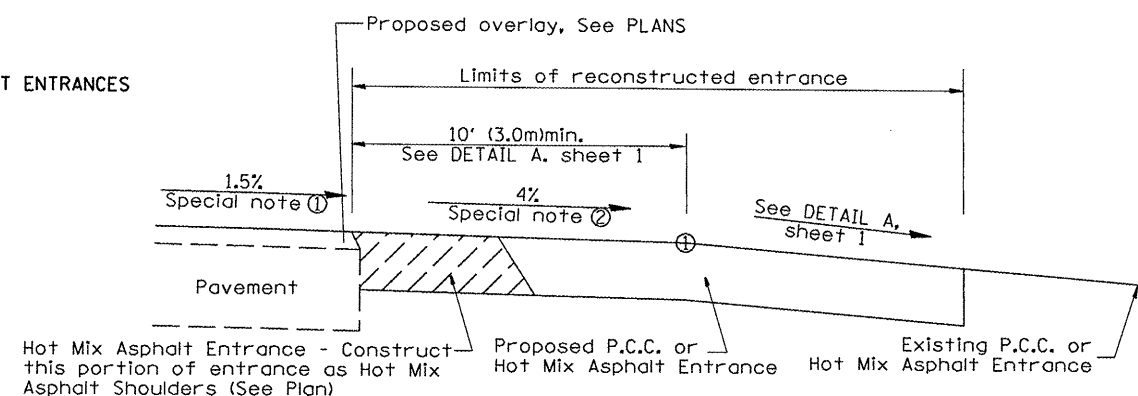
SECTION B-B
RECONSTRUCTED AGGREGATE ENTRANCE



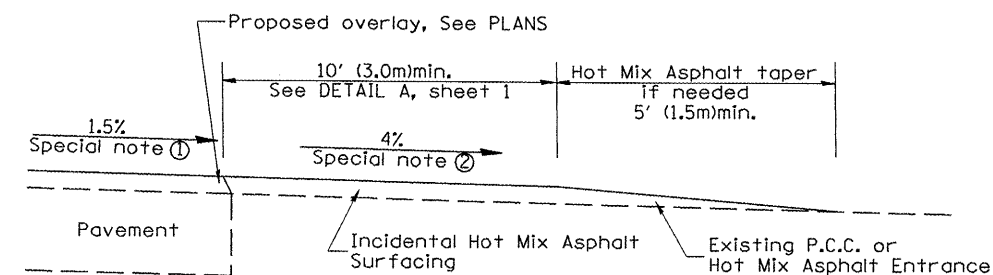
SECTION B-B
EXISTING AGGREGATE ENTRANCE



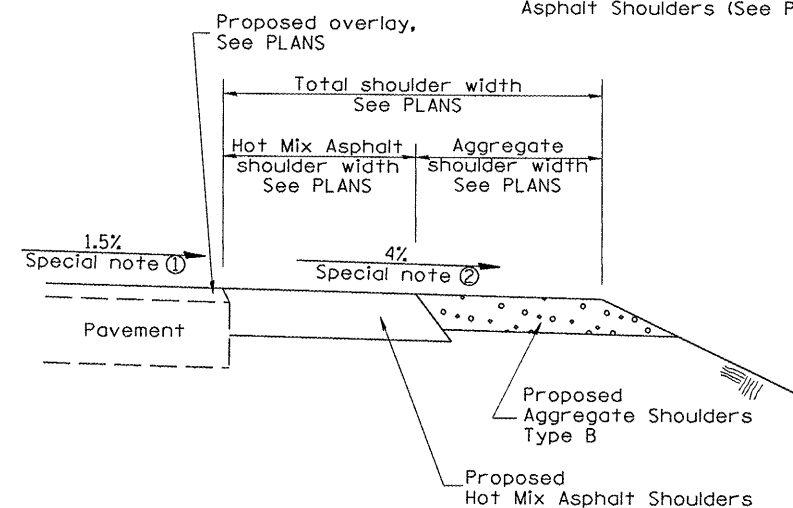
SECTION C-C
SHOULDER TREATMENT FOR P.C.C. OR HOT MIX ASPHALT ENTRANCES



SECTION D-D
RECONSTRUCTED P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION D-D
EXISTING P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION E-E
MAINLINE SHOULDER TREATMENT

SPECIAL NOTES

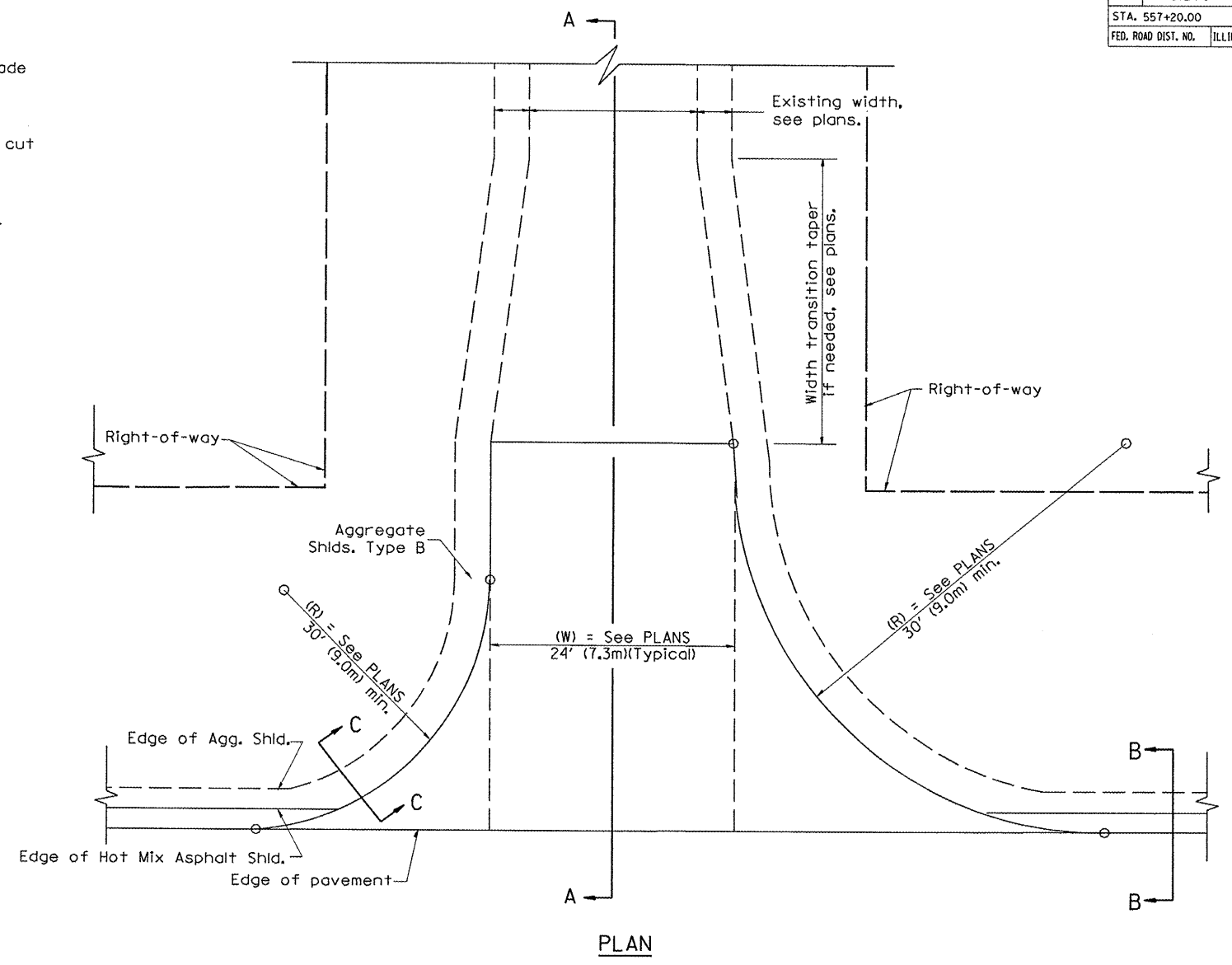
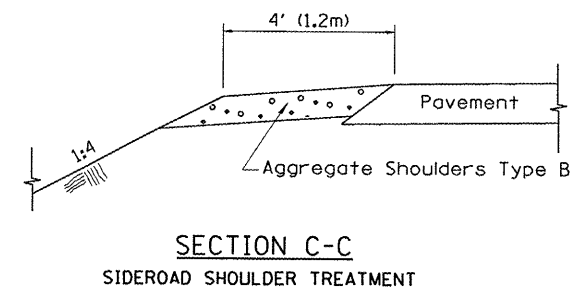
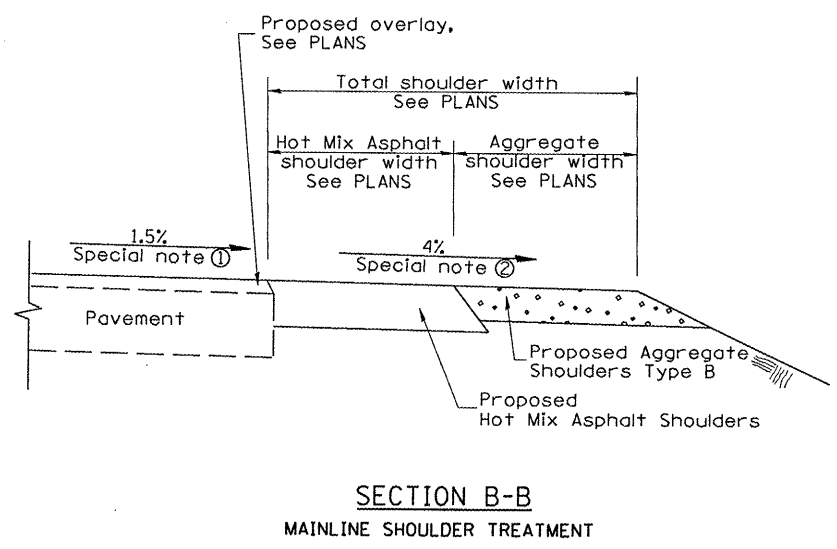
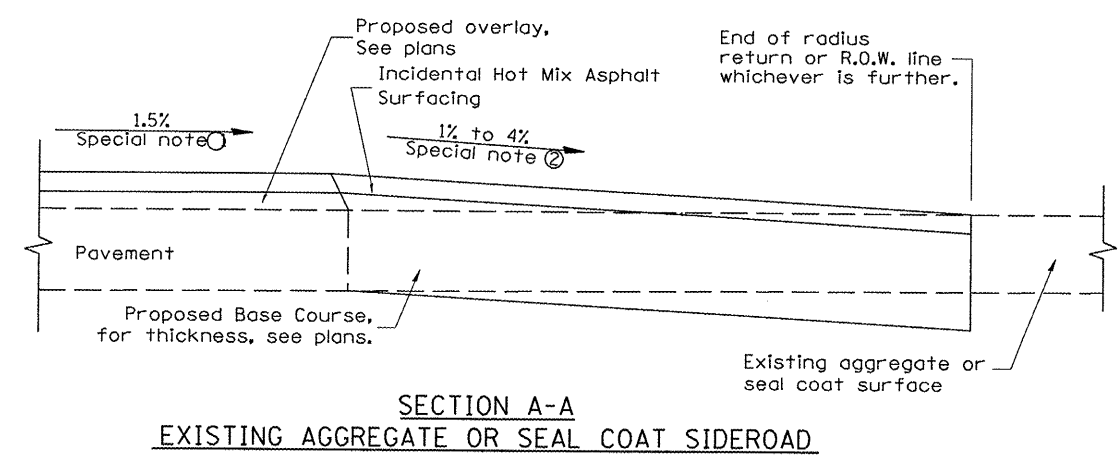
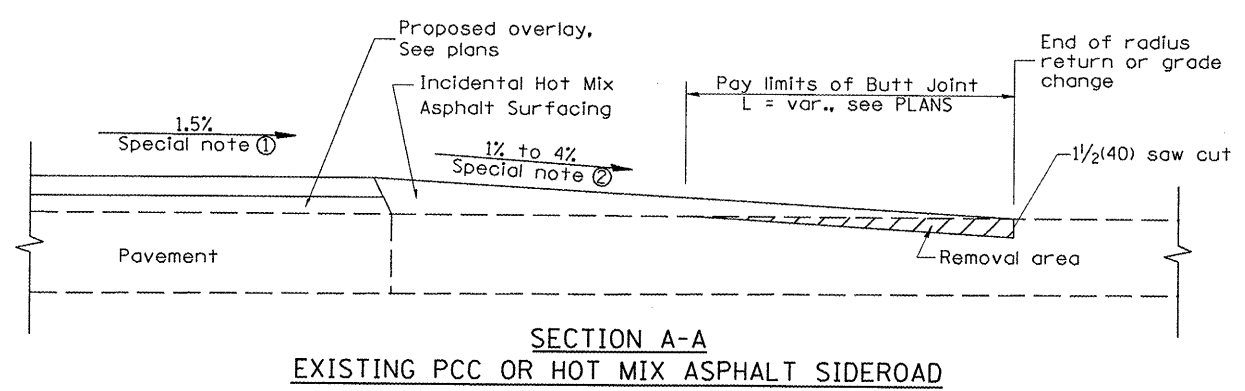
- ① The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.
- ② The shoulder slope shall control the entrance profile for a distance of 10' (3.0m) minimum from the pavement edge. The shoulder cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6' (1.8m) and wider and 12% for shoulders 4' (1.2m) and less. Where 12' (366cm) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H). All dimensions are in inches (millimeters) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
RURAL ENTRANCES FOR "3R" PROJECTS	
SHEET 2 OF 2	
CADD STD NO. 406301-D4	DRAWN BY CADD
SCALE: NOT DRAWN TO SCALE	CHECKED BY: T. PICKERING

406301-D4(2)

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	84
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



SPECIAL NOTES

- ① The mainline pavement cross-slope is 1.5% for tangent alignment. See Plans for cross-slope on superelevated horizontal curves.
- ② The sideroad profile should drain away from the mainline at 1% to 4% for 50' (15.0m) to 100' (30.0m), or as a minimum to the end of the radius return. When the sideroad is on the high side of a mainline superelevated curve, - 2% maximum should be provided in order to minimize breakover at the pavement edge. See plans for sideroad profiles.

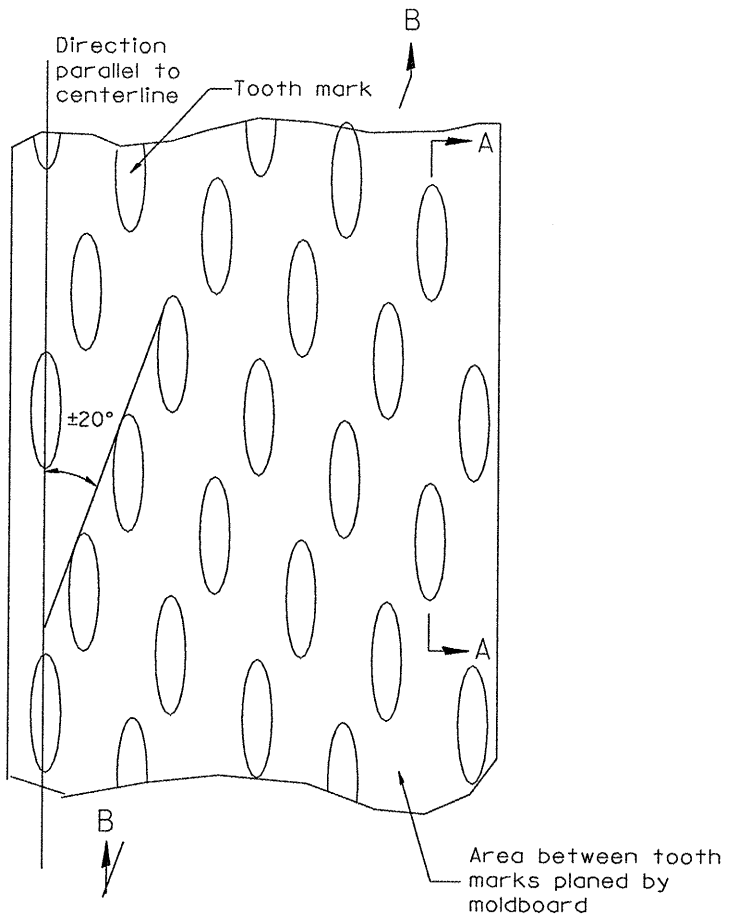
All dimensions are in inches (millimeters) unless otherwise noted.

DATE	REVISIONS	BY
1-1-97	RENUM. C-105.02, NEW REVISION BOX	T.P.
7-1-97	REVISE DESIGNER NOTES	J.A.
9-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
RURAL SIDEROADS FOR "3R" PROJECTS	
CADD STD NO. 406401-D4	
DRAWN BY CADD	CHECKED BY: T. PICKERING

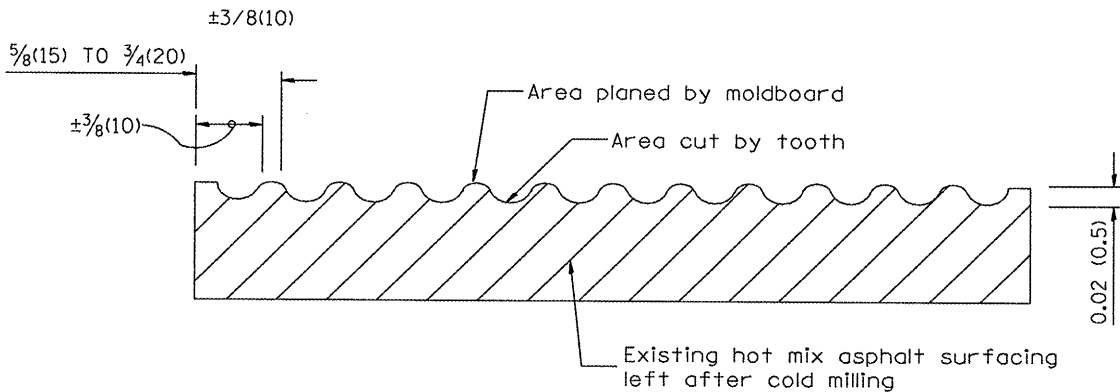
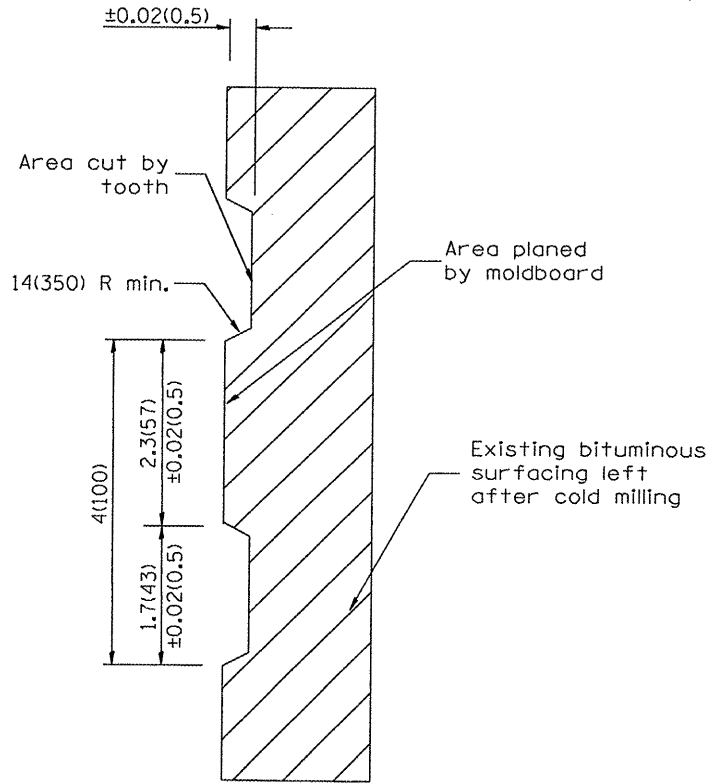
406401-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ PULASKI	138	85
STA. 557+20.00 TO STA. 589+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



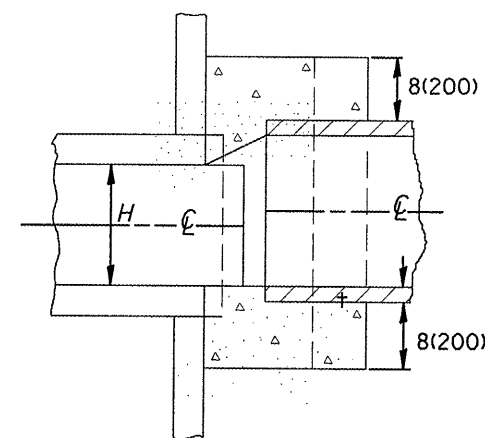
All dimensions are in inches (millimeters) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)	
CADD STD NO. 440001-D4	
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
DATE	CHECKED BY

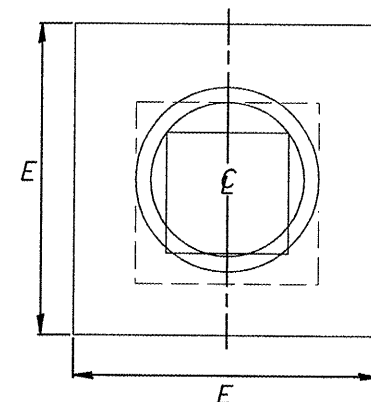
DATE	REVISIONS	BY
1-1-97	RENUM. C-104.01, NEW REVISION BOX	T. P.
4-20-98	REMOVED MILLING DETAIL FROM STD.	J. A.
9-08-98	CORRECT NOTE LEADER PLACEMENT	R. W.
10-16-06	REVISED TO 2007 SPEC.	M.A.

DESIGNER NOTE
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.

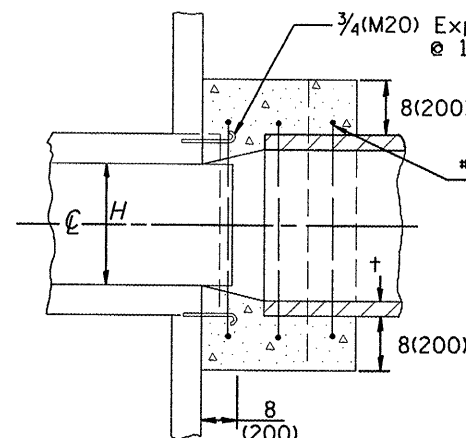
CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH	138	86
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



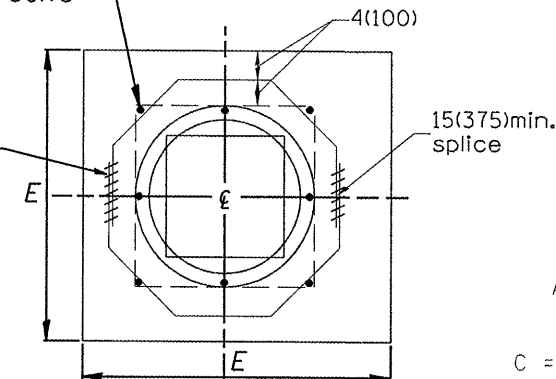
SECTION A-A



END VIEW



SECTION A-A



END VIEW

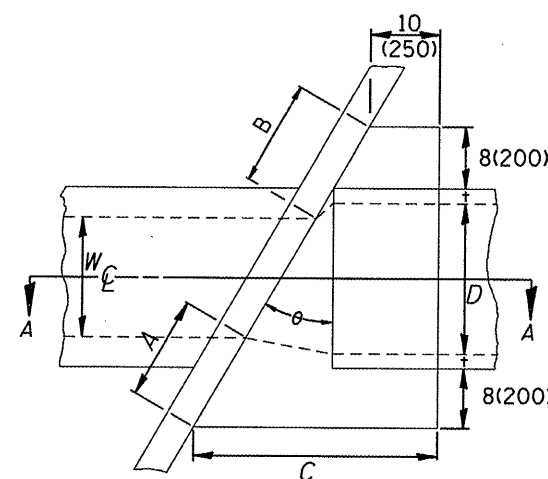
$$A = B = \frac{D - W}{2} + t + 8(200)$$

$$\cos \theta$$

$$C = \tan \theta [D + 2t + 16(410)] + 10(250)$$

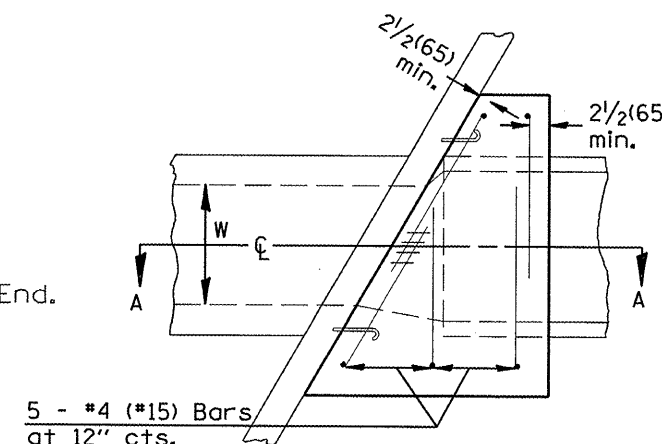
$$G = \frac{D + 2t + 8(200)}{2.4142 [\cos \theta]}$$

(Note: 'G' is based upon maximum skewed length)

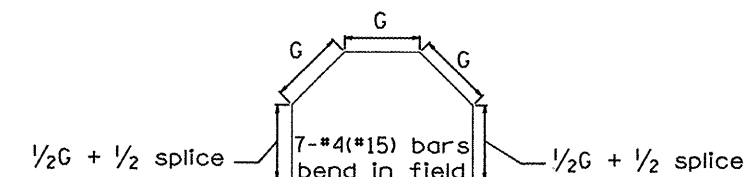


PLAN VIEW UP STREAM

NOTE:
Dimensions are shown in Plan View of Up Stream End while Reinforcement is shown in plan view of Down Stream End.



PLAN VIEW DOWN STREAM



GENERAL NOTES

- The collar shall be constructed entirely of CLASS SI CONCRETE and in accordance with the applicable portions of section 503 of the Standard Specifications. Reinforcement bars shall conform to section 508.
- Expansion bolts shall consist of approved expansion anchors, and 3/4 (M20) hook bolts which conform to section 1006.09. These bolts shall extend at least 8(200) into the new concrete.

QUANTITIES		
CALC. BY:	SEC	8/09
CHECKED BY:	CTW	DATE: 8/09
		DATE:

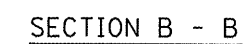
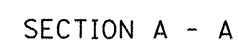
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION

EXISTING BOX									EACH COLLAR			
W	H	θ	A & B	C	D	E	t		CONCRETE	REINFORCEMENT BARS		EXPAN. BOLTS
									CU. YD. (m ³)	G	L	KG(LBS.) EACH
36"	36"	34°22'3"	18-3/4"	55-7/8"	42"	67"	4-1/2"		2.0 cy	29-5/8"	11'-2"	52 lb 8

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

ILLINOIS DEPARTMENT OF TRANSPORTATION		
DISTRICT CADD STANDARD		
SKEWED PIPE CULVERT		
EXTENSION COLLAR		
(WITH END SECTION)		
CADD STD. NO. 542011-04	DRAWN BY CADD	
SCALE: NOT DRAWN TO SCALE	CHECKED BY	

DATE	REVISIONS	BY
1-1-97	RENUM. J-11.03, NEW REVISION BOX, REVISED TITLE BOX, ADDED QUANTITY	T.P.
	CALCULATION BOX	
10-16-06	REVISED TO 2007 SPEC.	M.A.



GENERAL NOTES

1. MATERIAL - Cast Gray Iron
Weight 209 lbs (95 kg)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT CADD STANDARD

TYPE 37 GRATE

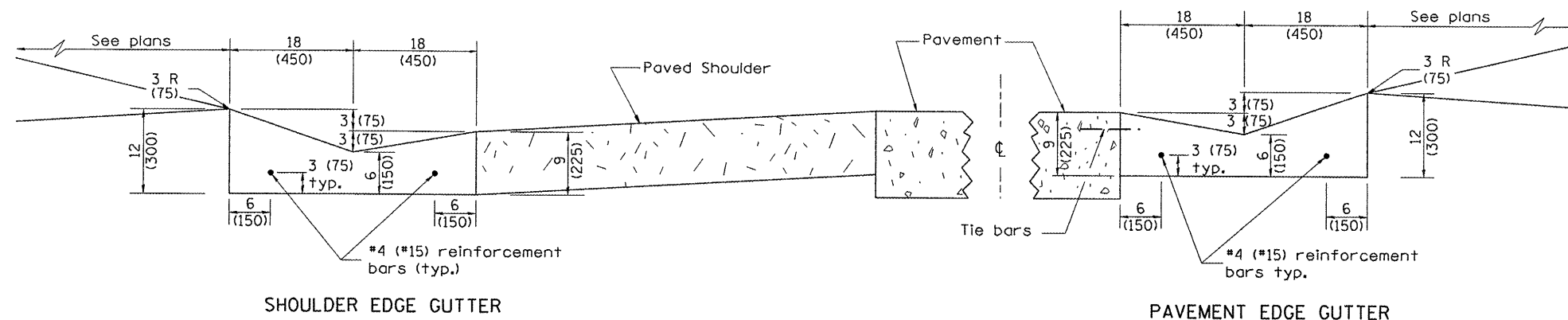
CADD STANDARD 604301-D4
SCALE NOT TO SCALE

DRAWN BY CADD
CHECKED BY

[illegible]

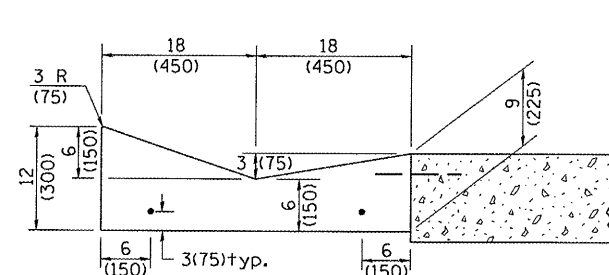
DESIGNER NOTE:
1. INCLUDE DISTRICT SPECIAL PROVISION.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	88
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

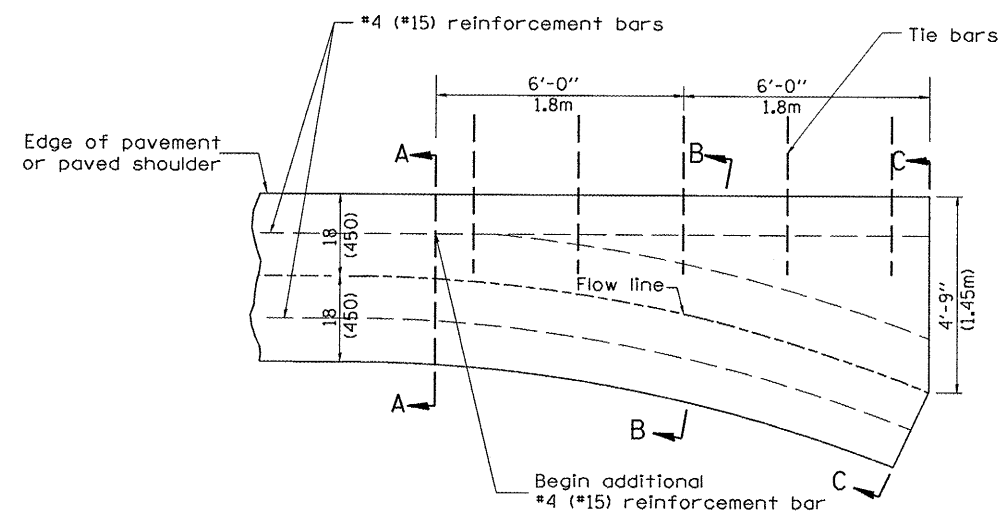


SHOULDER EDGE GUTTER

PAVEMENT EDGE GUTTER

TYPE A GUTTER (MODIFIED)

SECTION A-A

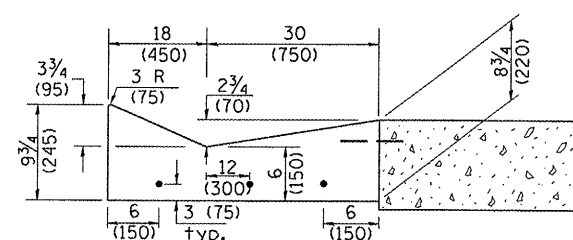


PLAN

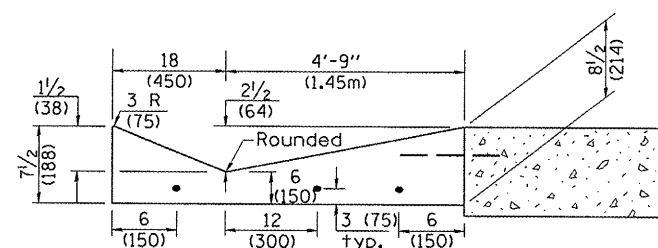
QUANTITY
Section C-C to A-A= 1.2 cu. yd.
(0.92 m³) concrete.

GENERAL NOTES:

1. TYPE A GUTTER (MODIFIED) shall conform to the applicable portions of Section 606.
2. Tie bars shall be No. 6 (No. 20) at 24" (600mm) centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 58 lbs/100 sq.ft. (2.83 kg/m²).



SECTION B-B



SECTION C-C

INLETQUANTITIES

CALC. BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____

QUANTITY CALCULATIONS ARE ON
FILE AT THE DISTRICT 4 OFFICE;
BUREAU OF PROJECT IMPLEMENTATION;
DOCUMENTATION SECTION

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

TYPE A GUTTER, (MODIFIED)
(INLET, OUTLET & ENTRANCE)

CADD STANDARD 606101-D4

SHEET 1 OF 3

SCALE: NOT DRAWN TO SCALE

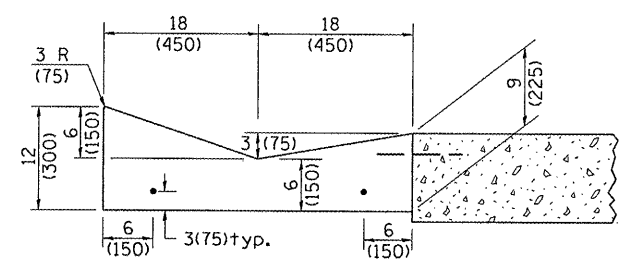
DRAWN BY CADD
CHECKED BY

DATE	REVISIONS	BY
1-1-97	RENUM. A-1.02, NEW REVISION	T.P.
	BOX, ELIMINATED EXPANSION	
	ANCHOR TIES	
2-28-02	ENTRANCE TYPICALS REVISED	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.
1-10-07	REVISED QUANTITY	M.A.

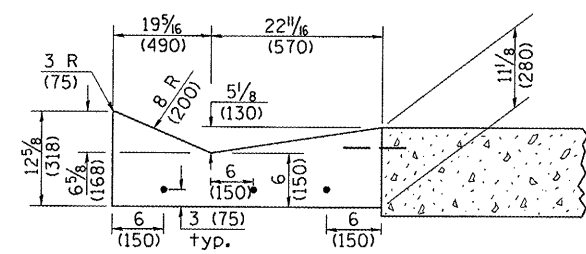
606101-D4 (1)

DESIGNER NOTE:
1. INCLUDE STATE STANDARD 420001.
2. INCLUDE DISTRICT SPECIAL PROVISION.

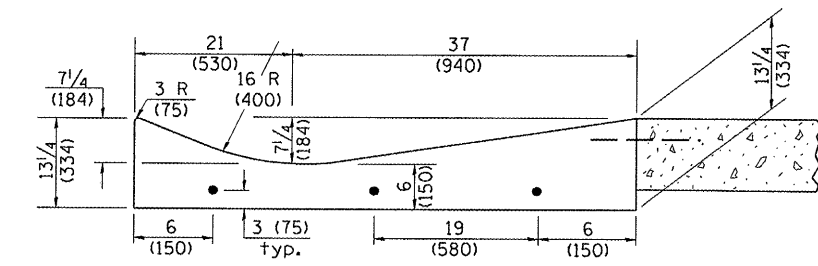
CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	89
STA. 557+20.00 TO STA. 589+00.00			ILLINOIS FED. AID PROJECT	



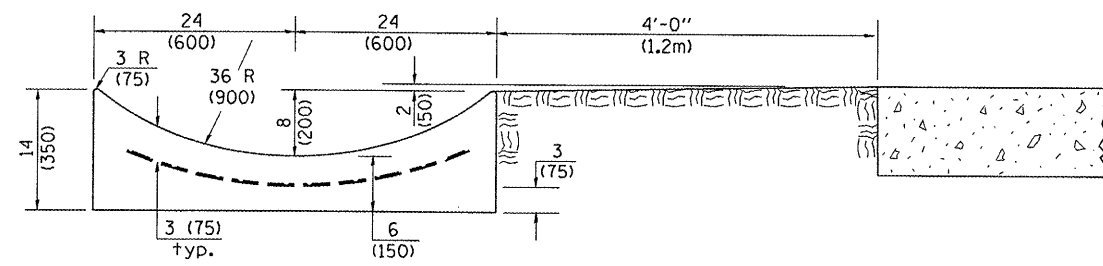
SECTION A-A



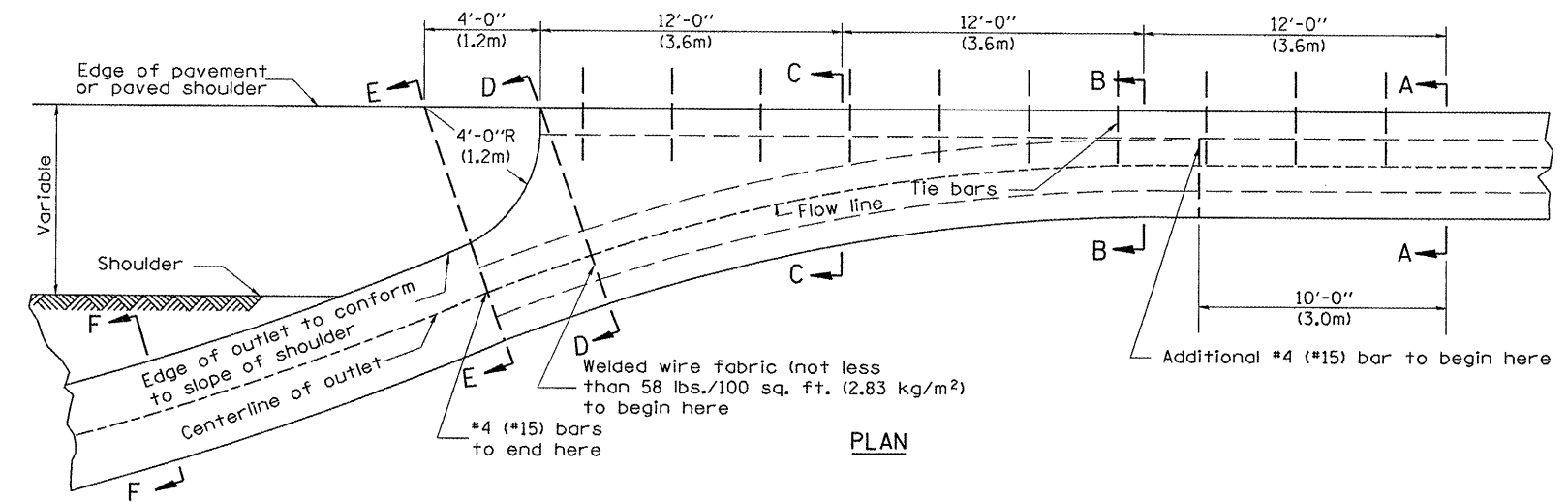
SECTION B-B



SECTION C-C



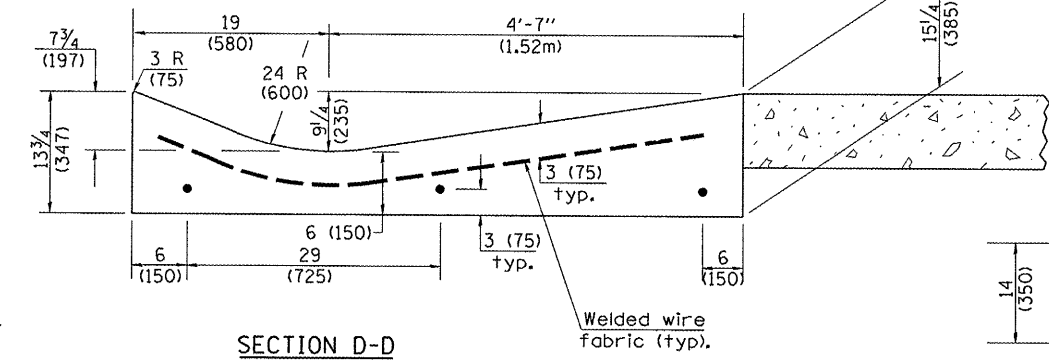
SECTION E-E



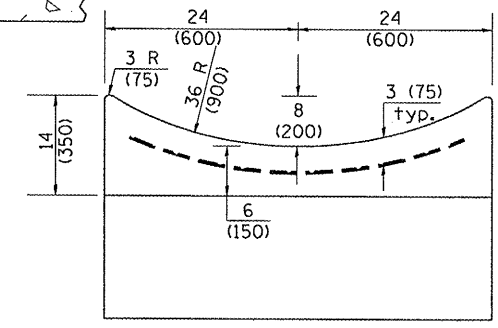
PLAN

QUANTITY
 Section A-A to E-E= 4.5 cu. yd. (3.36 m³) concrete.
 Section F-F= 0.10 cu. yd./ft. (0.26 m³/m) concrete.

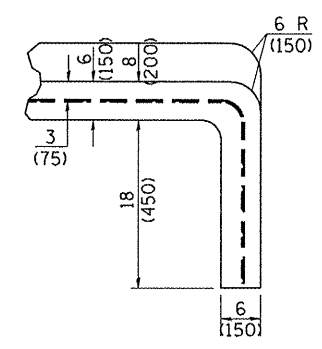
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 6 ft. (1.8 m) for each 1% increase in grade. A quantity adjustment is required.



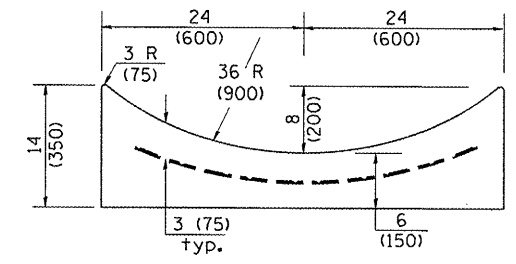
SECTION D-D



SECTIONS AT END OF OUTLET
(CURTAIN WALL)



QUANTITY
 Curtain Wall = 0.1 cu. yd. (0.08 m³) concrete.



SECTION F-F

OUTLET

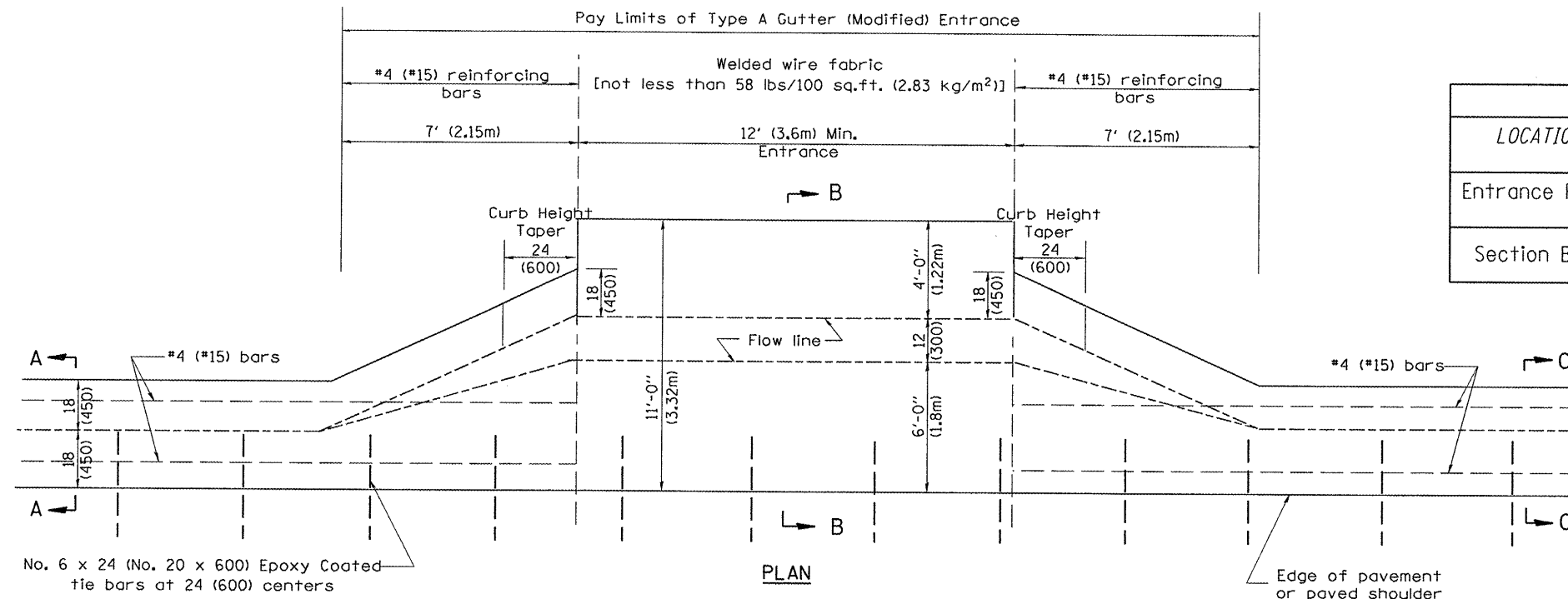
QUANTITIES	
CALC. BY:	DATE:
CHECKED BY:	DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION	

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

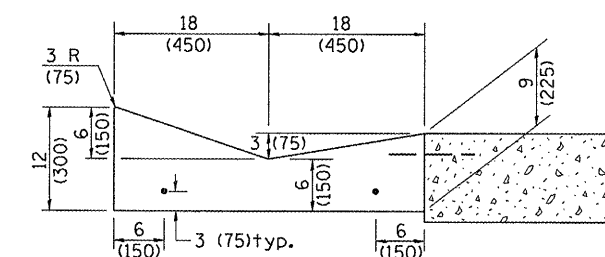
ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
TYPE A GUTTER, (MODIFIED) (INLET, OUTLET & ENTRANCE)	
CADD STANDARD 606101-D4	SHEET 2 OF 3
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
	CHECKED BY

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	90
STA. 557+20.00 TO STA. 589+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

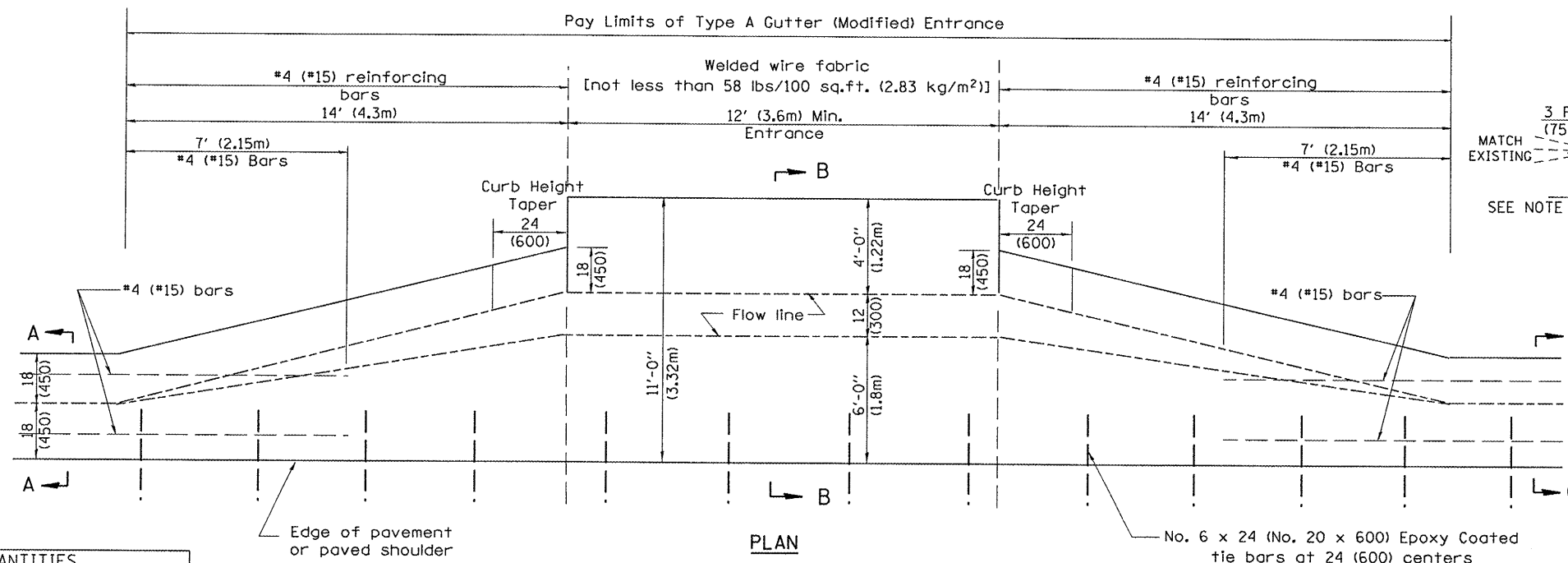
QUANTITY CALCULATION			
LOCATION	LENGTH	NON-COMMERCIAL 6 (150)	COMMERCIAL ENTRANCE 8 (200)
Entrance Flare	7 Ft (2.15 m) Urban 14 Ft (4.30 m) Rural	0.15 Cu Yd / Ft (0.37 Cu M / M)	0.18 Cu Yd / Ft (0.45 Cu M / M)
Section B-B	See Plans	0.23 Cu Yd / Ft (0.57 Cu M / M)	0.28 Cu Yd / Ft (0.70 Cu M / M)



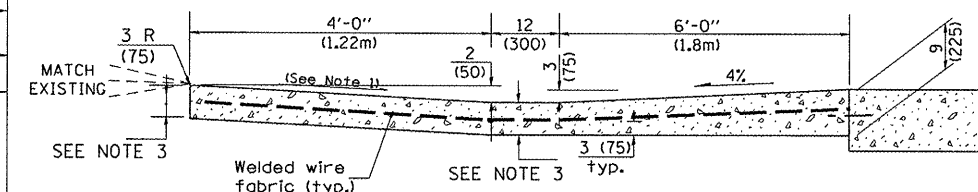
TYPICAL URBAN ENTRANCE



SECTION A-A & C-C



TYPICAL RURAL ENTRANCE



SECTION B-B

GENERAL NOTES

- Slope may be increased from 4% (min.) to 6% (max.) in order to match the existing.
- The cross-slope is to be constructed as given in the plans from back turnout to where driveway matches existing.
- For Non-Commercial Entrances the driveway thickness shall be 6 (150). For Commercial Entrances the driveway thickness shall be 8 (200).

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

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
TYPE A GUTTER, (MODIFIED)	
(INLET, OUTLET & ENTRANCE)	
CADD STANDARD 606101-D4	SHEET 3 OF 3
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
	CHECKED BY

606101-D4 (3)

QUANTITIES

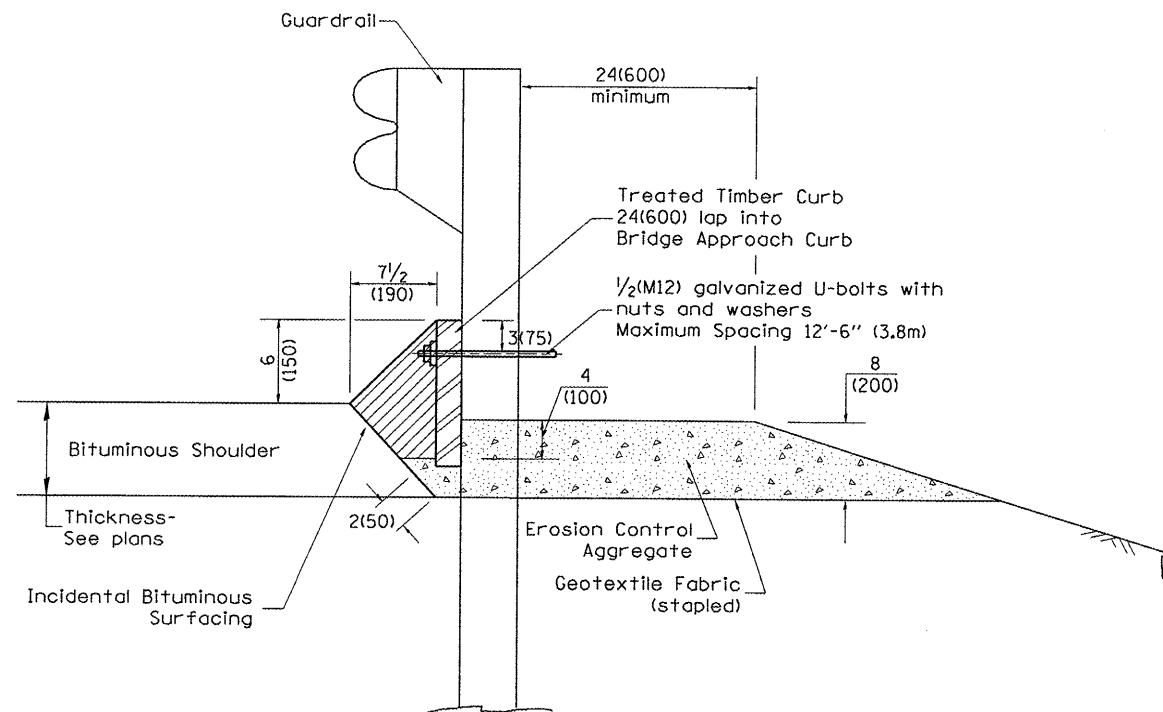
CALC. BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

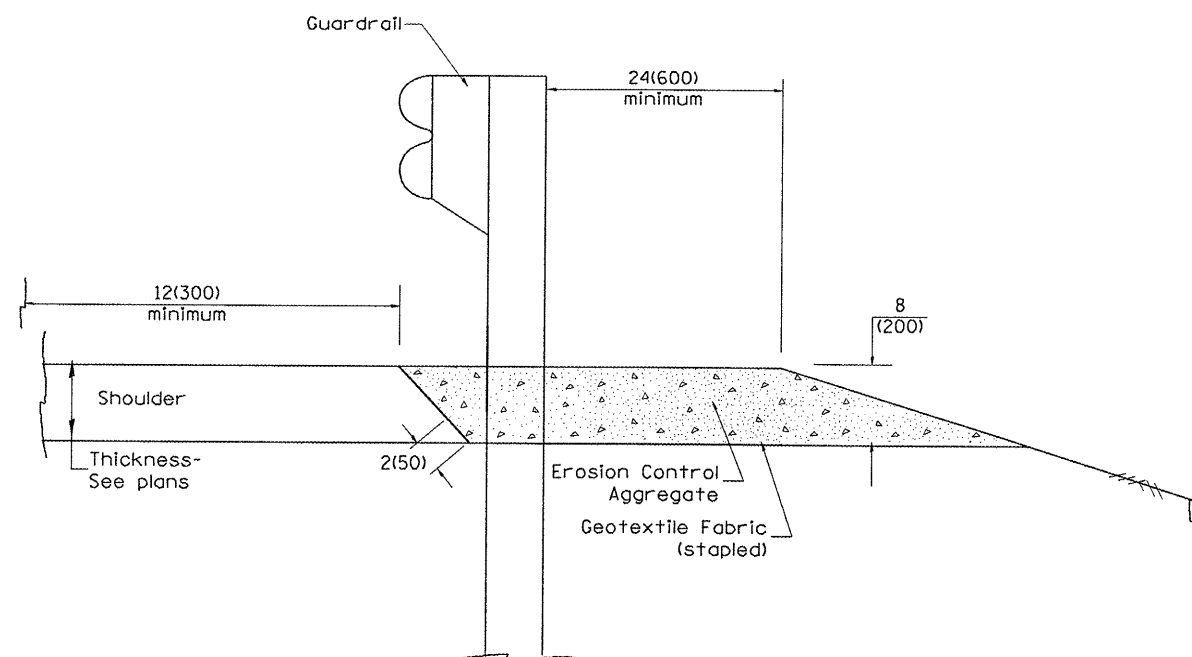
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE, BUREAU OF PROJECT IMPLEMENTATION, DOCUMENTATION SECTION

ENTRANCE

DESIGNER NOTE: 1. Use EROSION CONTROL CURB at guardrail installations where grades are equal to or greater than 1% and at inlets. [Include District Special Provision] 2. Use GUARDRAIL AGGREGATE EROSION CONTROL at guardrail installations where grades are less than 1%. [Include District Special Provision] 3. Include State Standards 609001, 609006 or 610001 if applicable. 4. Include the following District Cadd Standards as needed: Slope Drains for Exposed Pipes; Slope Drains for Buried Pipes; Seepage Collars for Buried Pipes; Seepage Collars for Exposed Pipes; Concrete Thrust Blocks and Pipe Elbow. 5. Include District Special Provision "Aggregate Quality" for projects located in the Western Area of the District - approx. dividing line is IL 97.



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: EROSION CONTROL CURB

1. This work shall consist of grading as needed, installing hardware and treated timber boards, furnishing and placing mastic material and incidental bituminous surfacing in front of Steel Plate Beam Guardrail in accordance with Plan Details.
2. Timber shall be treated in accordance with Article 1007.12. All preservatives specified in the article will be allowed. Waterborne preservatives "asa" and "cca" shall have a minimum retention of 0.40 lbs./cu. ft. (6.4 kg/m³)

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
 - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	91
STA. 557+20.00 TO STA.589+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

GUARDRAIL EROSION
CONTROL TREATMENTS

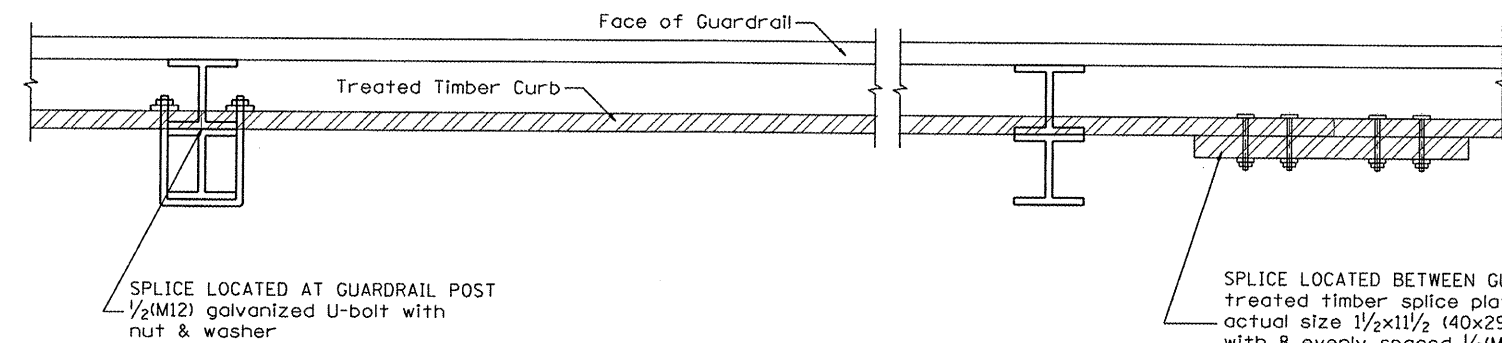
DATE	REVISIONS	BY
1-1-97	RENUM. C-22.01, NEW REVISION BOX	T.P.
3-1-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.
11-3-00	CORRECTION TO NOTES	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

CADD STD NO. 630101-D4(1)
SCALE: NOT DRAWN TO SCALE

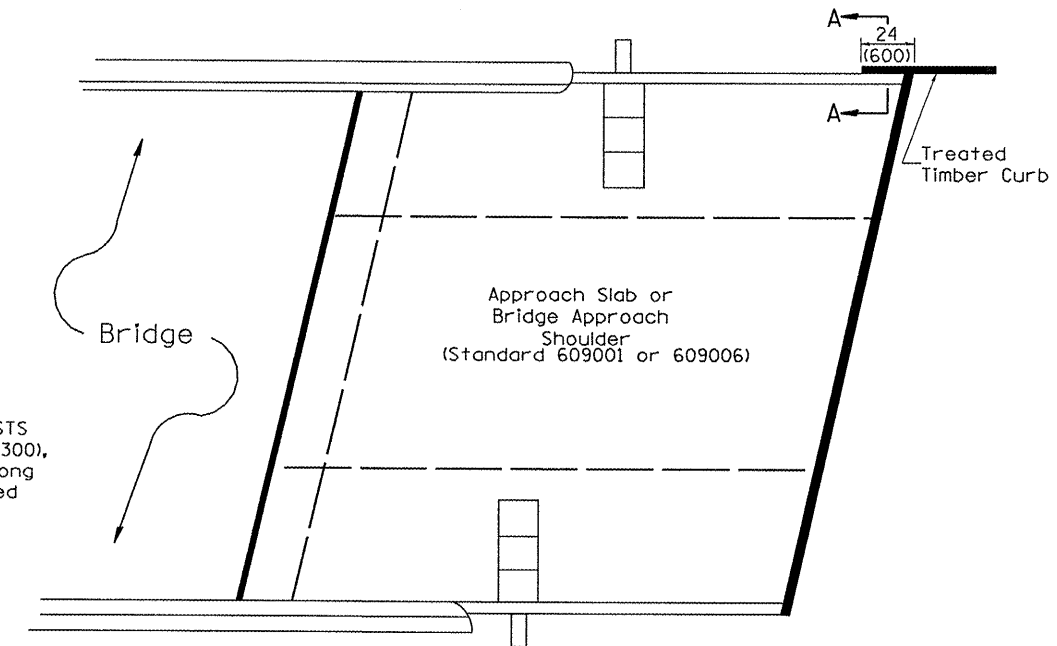
SHEET 1 OF 2
DRAWN BY CADD
CHECKED BY

630101-D4(1)

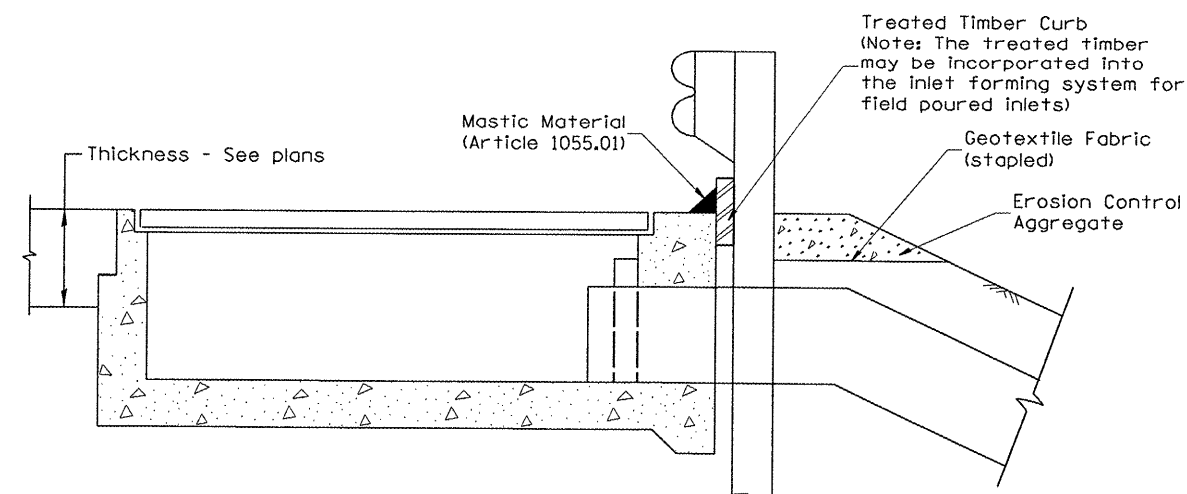
CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	92
STA. 557+20.00 TO STA. 589+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



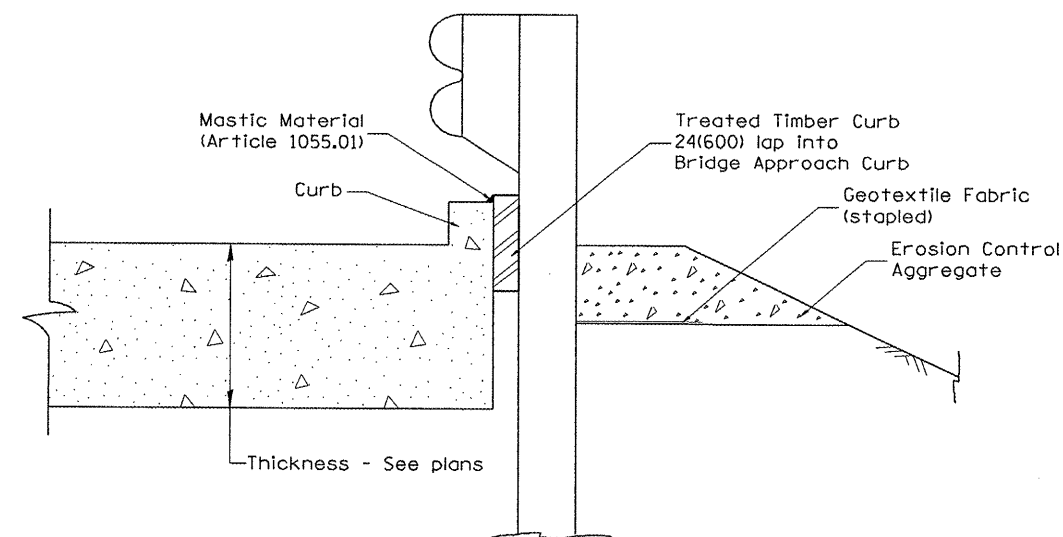
DETAIL A
(Typical Treated Timber Splices)



PLAN VIEW
APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION WITH EROSION CONTROL CURB
AT INLETS TYPE E & F (STANDARD 610001)



SECTION A-A
TYPICAL SECTION WITH EROSION CONTROL CURB
AT BRIDGE APPROACH CURB
(STANDARD 609001 OR 609006)

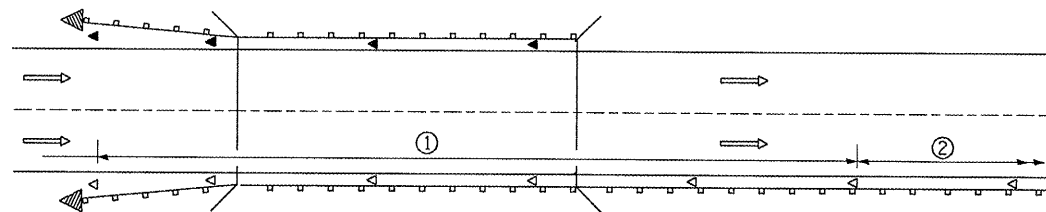
All dimensions are in inches (millimeters)
unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
GUARDRAIL EROSION CONTROL TREATMENTS	
CADD STD NO. 630101-D4(2)	SHEET 2 OF 2
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
	CHECKED BY

630101-D4(2)

DESIGNER NOTE:

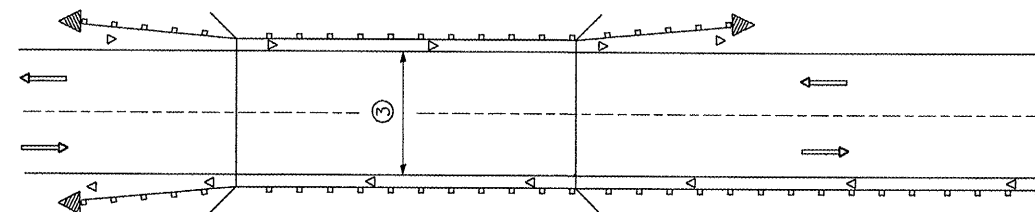
1. INCLUDE APPROPRIATE SPECIAL PROVISIONS FOR "GUARD RAIL DELINEATION POLICY; 1. TERMINAL MARKER, 2. TERMINAL MARK POST, AND 3. GUARDRAIL AND BARRIER WALL MARKERS."
2. IF POST MOUNT TERMINAL MARKER IS USED, INCLUDE STATE STD. 720011.



① Spacing 80 ft. (24 m) max. for first 400 ft. (122 m) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).

② After 400 ft. (122 m), transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC



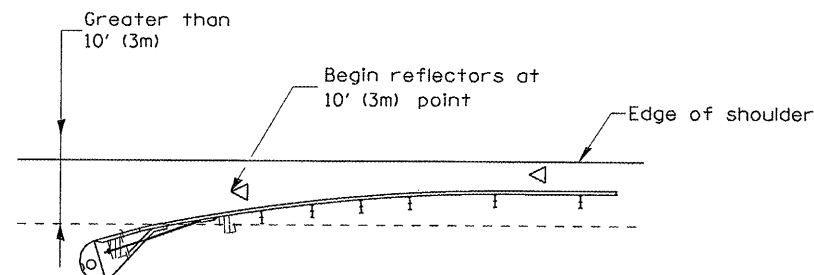
③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the bridge pavement is less than 24 (610) wider than the pavement approaching the bridge.

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS

LEGEND

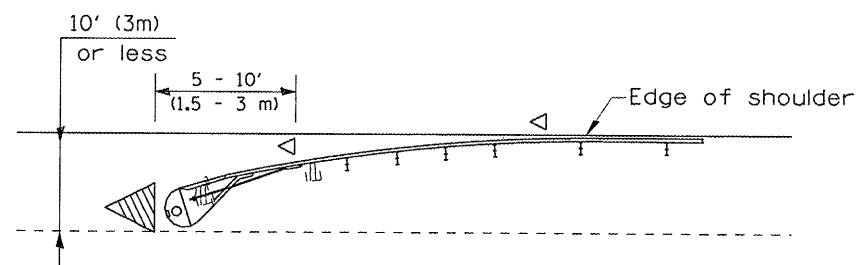
- ◁ Monodirectional silver
- ◄ Monodirectional amber
- ◄ Terminal Marker - Black/Yellow
Left or Right as appropriate



NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder, or when terminal buried in backslope.

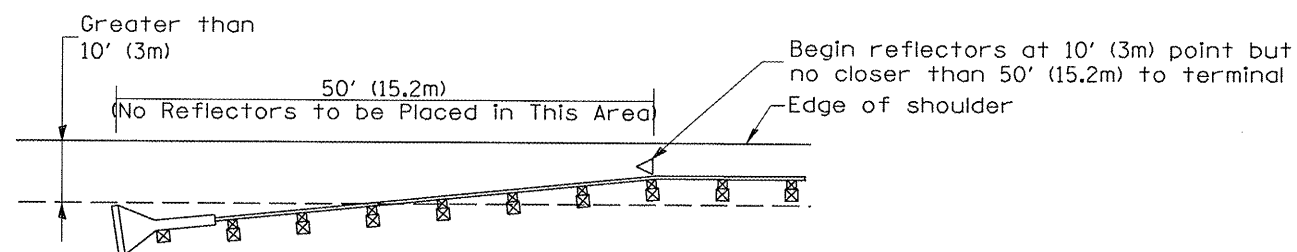
Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal

[Terminal over 10' (3m) from edge of shoulder]
•See Plans for Type



Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal

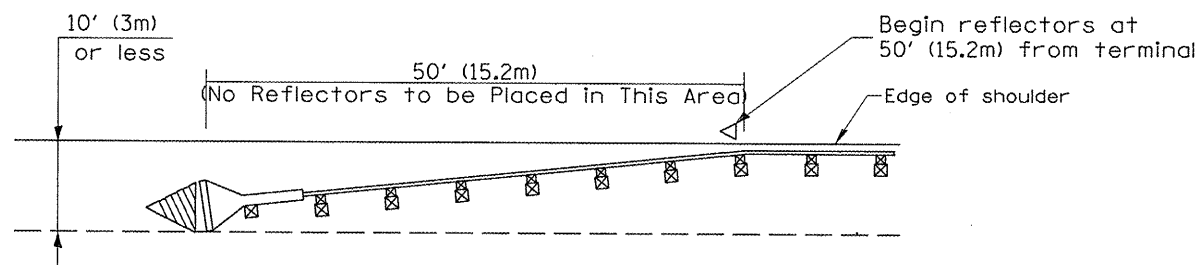
[Terminal over 10' (3m) or less from edge of shoulder]
•See Plans for Type



NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder.

Traffic Barrier Terminal Type 1 (Special)

[Terminal over 10' (3m) from edge of shoulder]



Traffic Barrier Terminal Type 1(Special)

[Terminal 10' (3m) or less from edge of shoulder]

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

ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT CADD STANDARD

GUARDRAIL AND BARRIER WALL DELINEATION

CADD STD. NO. 635101-D4
SCALE: NOT DRAWN TO SCALE
SHEET 1 OF 3
DRAWN BY CADD
CHECKED BY

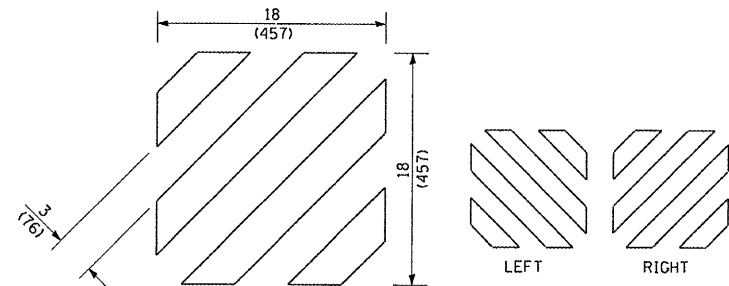
DATE	REVISIONS	BY
1-1-97	RENUM. E-10.02, NEW REVISION BOX	T.P.
3-1-97	CORRECT STD. SPEC. *	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

635101-D4 (1)

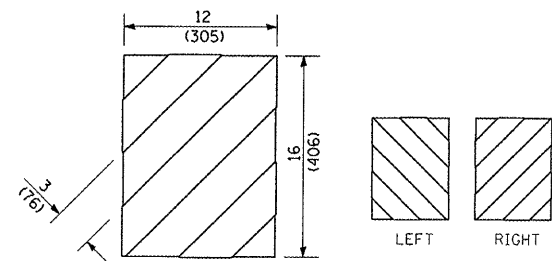
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH/ FULTON	138	93
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TERMINAL MARKER PLACEMENT

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	94
STA. 557+20.00 TO STA.589+00.00				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



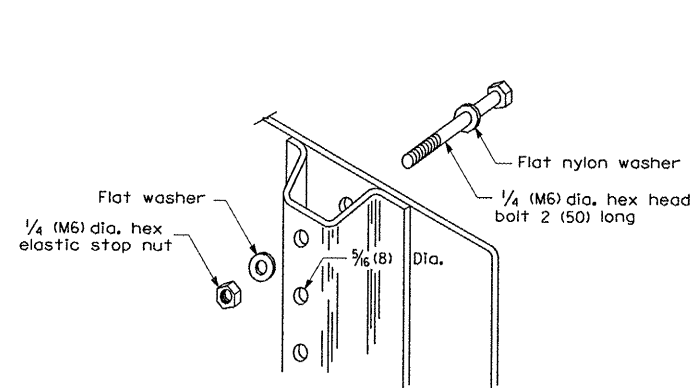
For Traffic Barrier Terminal Type 1 (Special)



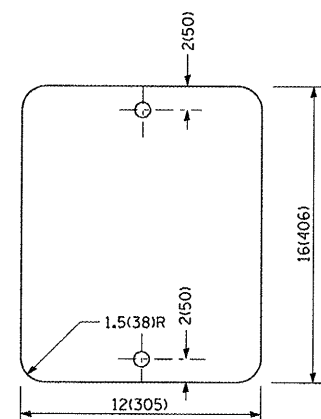
For Traffic Barrier Terminal Type (*)
and Post Mount
• See Plans for Type

TERMINAL MARKER DETAILS

- Color: Black / Yellow reflectorized
- OM - I100 (L or R) Direct applied reflective sheeting
- OM - I200 (L or R) Post mounted

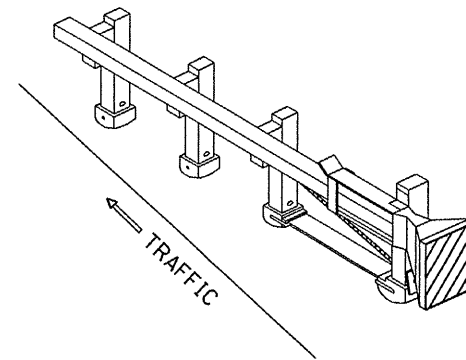


DETAIL OF MOUNTING TERMINAL MARKER TO POST

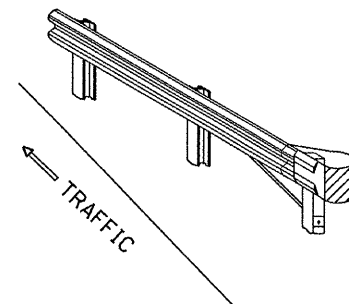


STANDARD TERMINAL MARKER

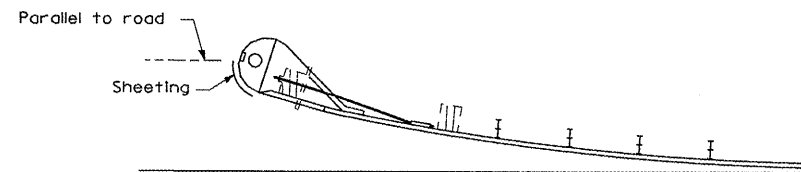
POST MOUNTED TERMINAL MARKER ASSEMBLY



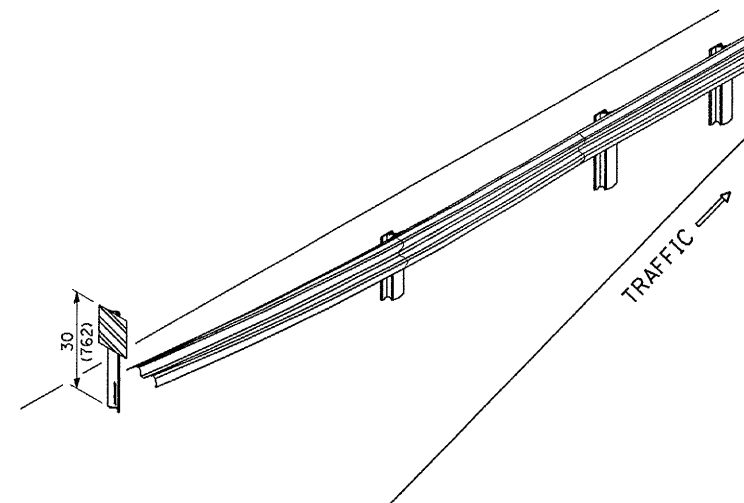
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type 1 (Special)



Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type (*)
• See Plans for Type



Sheeting Position for
Traffic Barrier Terminal Type (*)
• See Plans for Type



ALTERNATE TREATMENT - POST MOUNTED
(For turned-down terminal where sheeting
cannot be direct applied)

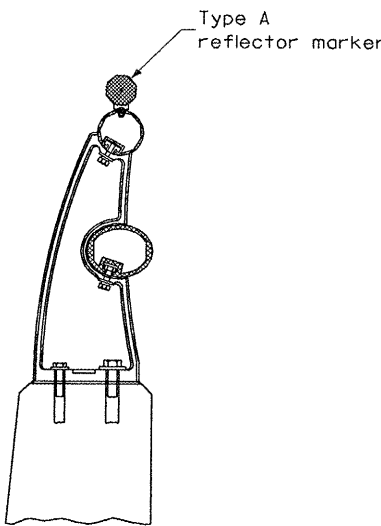
TERMINAL MARKER TREATMENTS

GENERAL NOTES

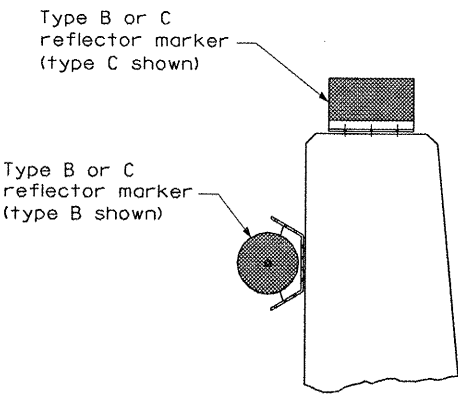
All dimensions are in inches (millimeters)
unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
GUARDRAIL AND BARRIER WALL DELINEATION	
CADD STD. NO. 635101-D4	SHEET 2 OF 3
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD CHECKED BY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/FULTON	138	95
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

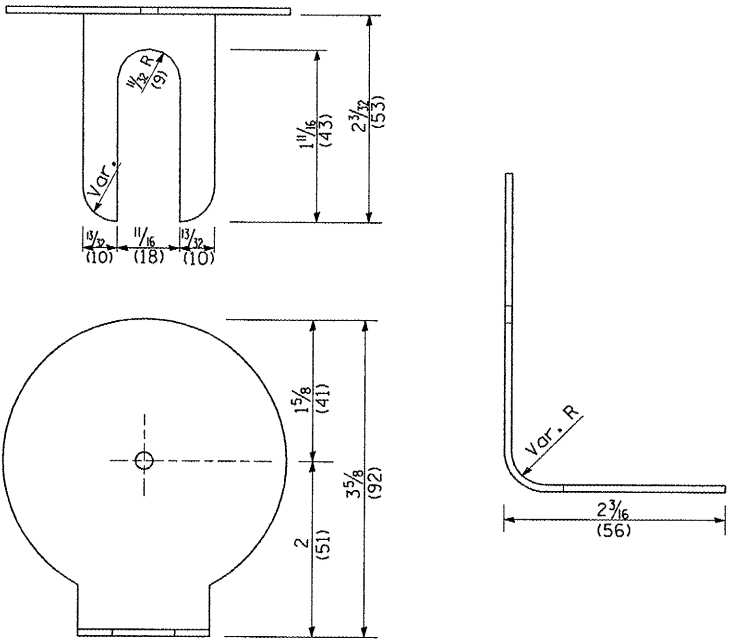


TYPICAL MOUNTING DETAIL
FOR BRIDGE RAIL REFLECTOR



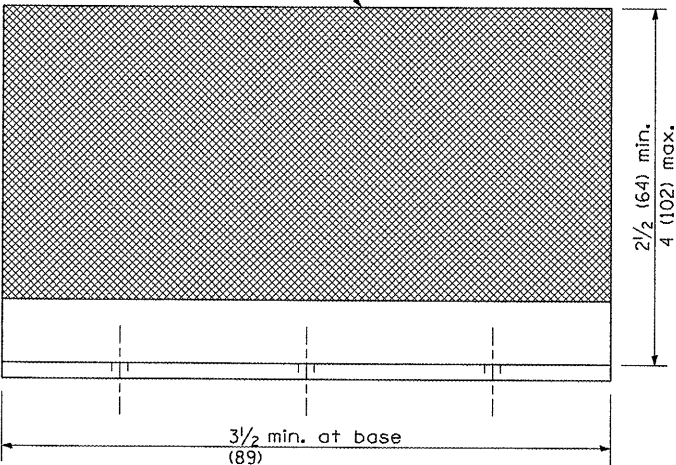
TYPICAL MOUNTING DETAIL
FOR BARRIER WALL REFLECTOR

REFLECTOR MOUNTING

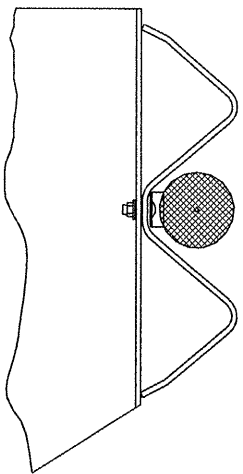


REFLECTOR MARKER TYPE A

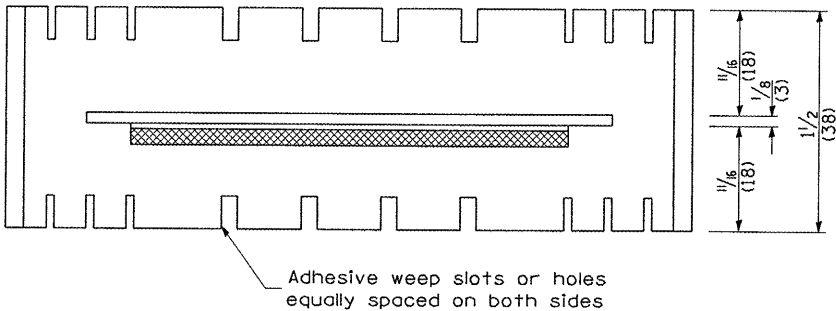
Min. reflective area 6 1/2 sq. in. (4,194 mm²)
each side. May be rectangular or slight
trapezoid.



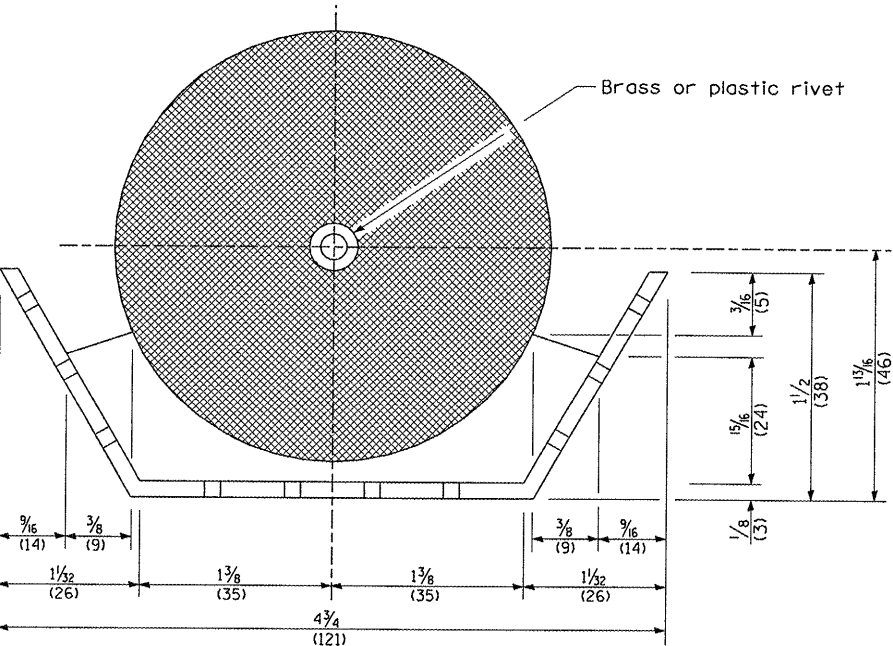
REFLECTOR MARKER TYPE C



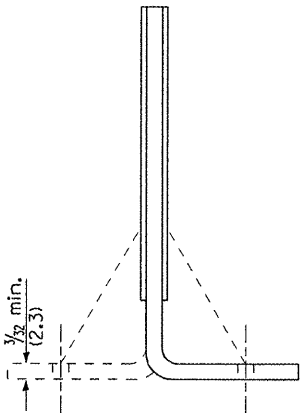
TYPICAL GUARDRAIL MOUNTING WITH
REFLECTOR MARKER TYPE A



Adhesive weep slots or holes
equally spaced on both sides



REFLECTOR MARKER TYPE B



Cross section may be "T"
or "L" shaped and may have
side supports at ends.

REFLECTORS

Minimum total area of
base 7.0 Sq. in. (4,516 mm²)

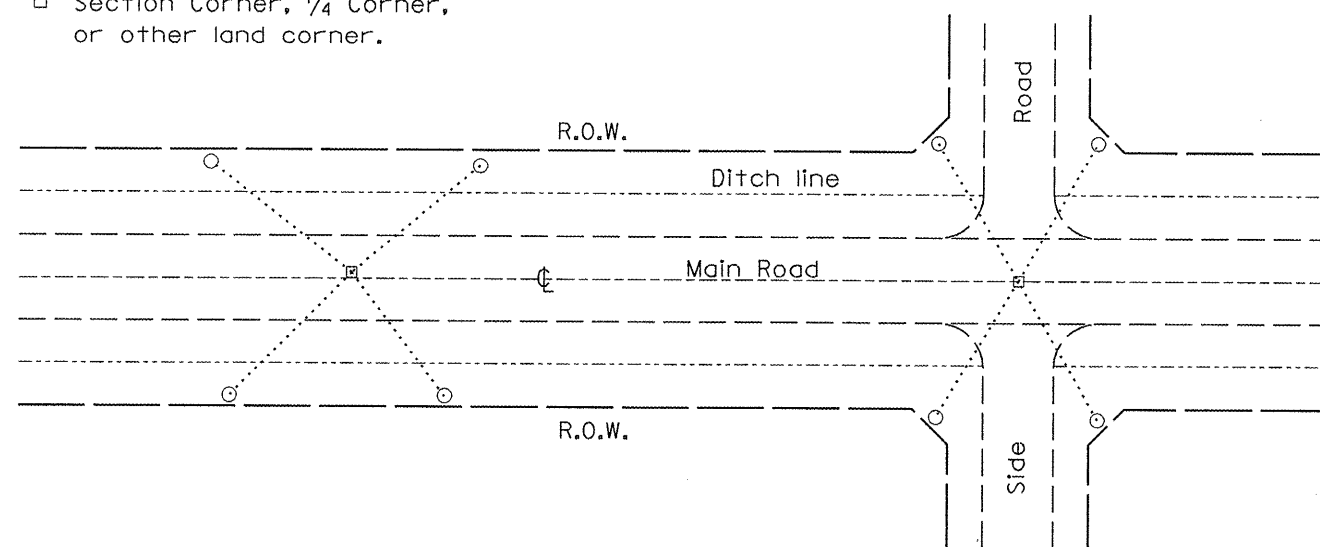
All dimensions are in inches (millimeters)
unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
GUARDRAIL AND BARRIER WALL DELINEATION	
CADD STD. NO. 635101-D4	SHEET 3 OF 3
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
	CHECKED BY

DESIGNER NOTE:
1. ADD DISTRICT SPECIAL PROVISION.
2. MODIFIES STATE STD 667101 TO CALL FOR "BRONZE" TABLET.

PERMANENT SURVEY TIES

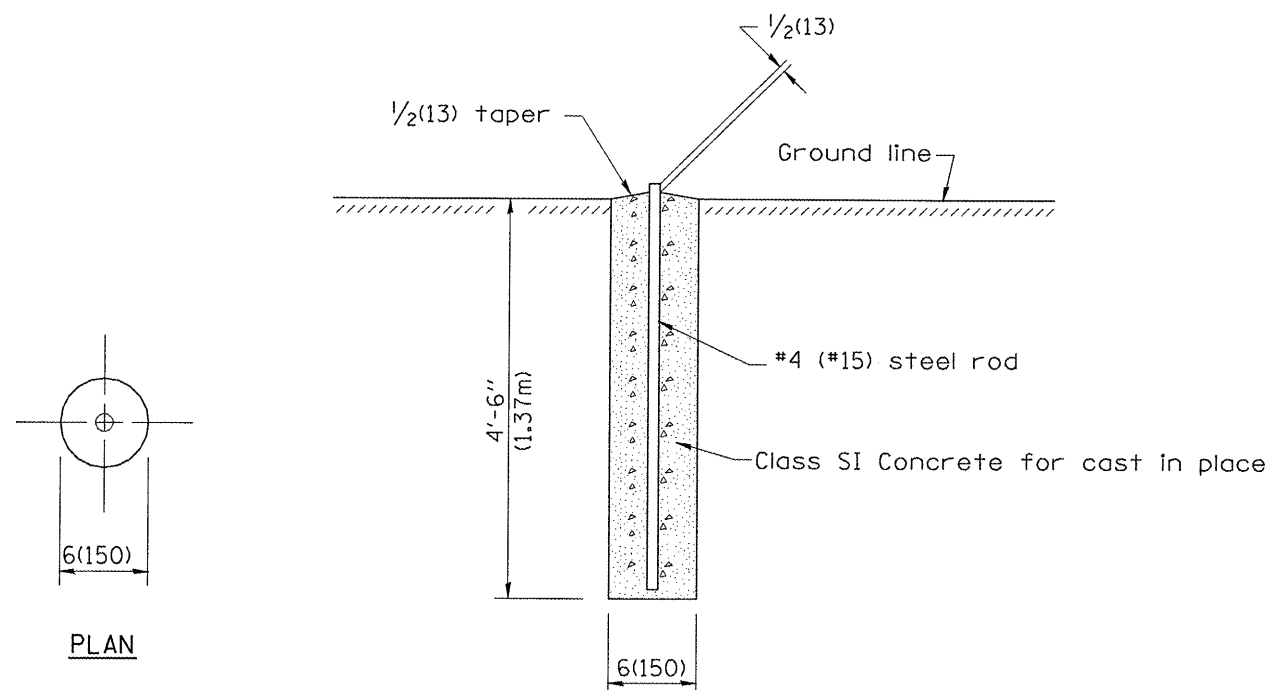
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



TYPICAL APPLICATION

GENERAL NOTES

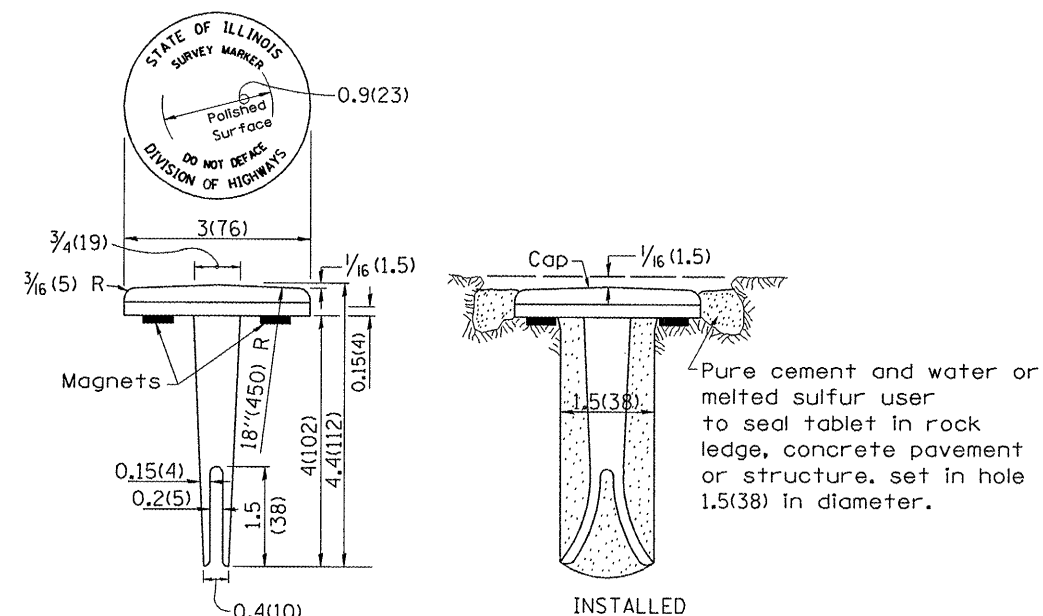
1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the IDOT Chief of Surveys.



SECTION

PLAN

PERMANENT SURVEY MARKERS



BRONZE TABLET - No Scale TYPE I

GENERAL NOTES

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s and P.C.'s of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.

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

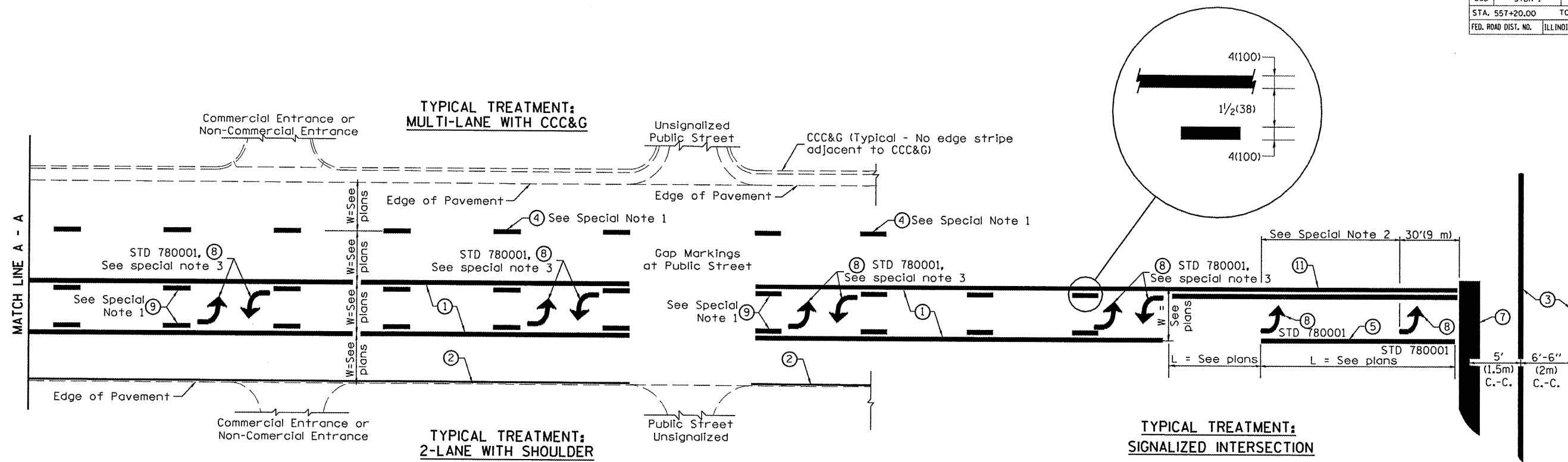
ILLINOIS DEPARTMENT OF TRANSPORTATION		
DISTRICT CADD STANDARD		
PERMANENT SURVEY TIE & PERMANENT SURVEY MARKERS TY.I - TY.II		
CADD STD. NO. 667101-D4		
SCALE: NOT DRAWN TO SCALE		
DRAWN BY CADD CHECKED BY		

DATE	REVISIONS	BY
1-1-97	RENUM. D-3.01, NEW REVISION BOX	T.P.
	ADD DESIGNER NOTE, REVISED TITLE BOX	
7-7-98	ADD DESIGNER NOTE	J.A.
5-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

667101-D4

DESIGNER NOTES:
1. Include State Standard 780001 (Typical Pavement Markings)

CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MC DONOUGH/ FULTON	138	97
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE
WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION**

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend.
Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A)
- ⑪ 4(100) Double Solid (Yellow)

SPECIAL NOTES

- Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
- The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
- The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between BI Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

- Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
- See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

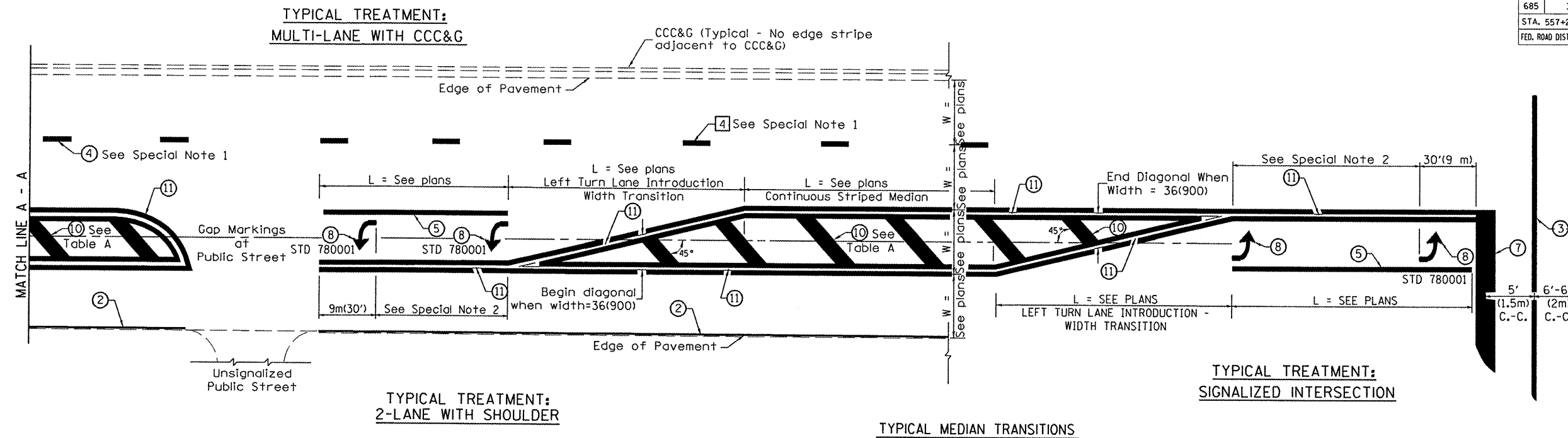
All dimensions are in inches
(millimeters) unless otherwise noted.

DATE	REVISIONS	BY
1-1-97	RENUM. F-8.03, NEW REVISION BOX	T.P.
2-7-97	ADD BI DIRECTIONAL DIMENSION	J.A.
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.
8-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
TYPICAL PAVEMENT MARKINGS	
CADD STANDARD 780001-D4	SHEET 1 OF 2
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD CHECKED BY

780001-D4 (1)

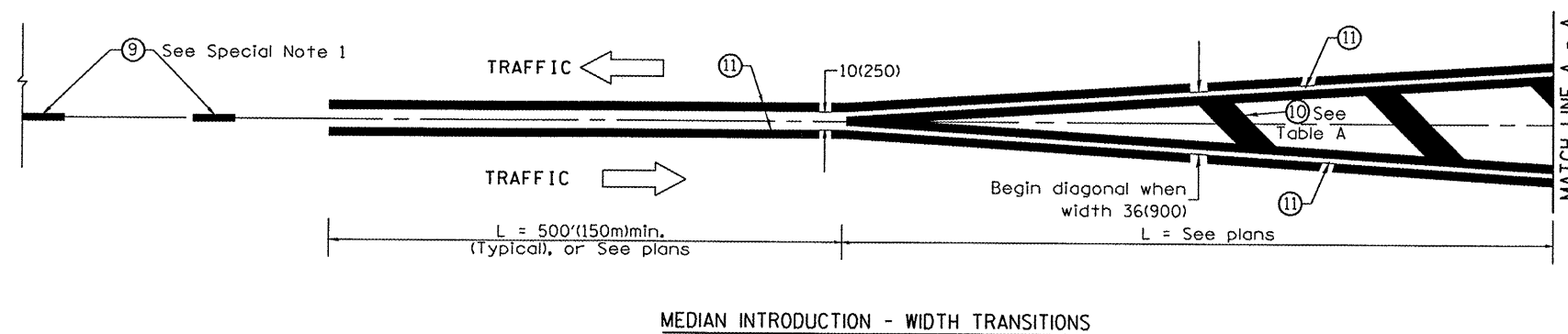
CONTRACT NO. 68352				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
685	37BR-1	MCDONOUGH/ FULTON	138	98
STA. 557+20.00		TO STA. 589+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION
		(Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)

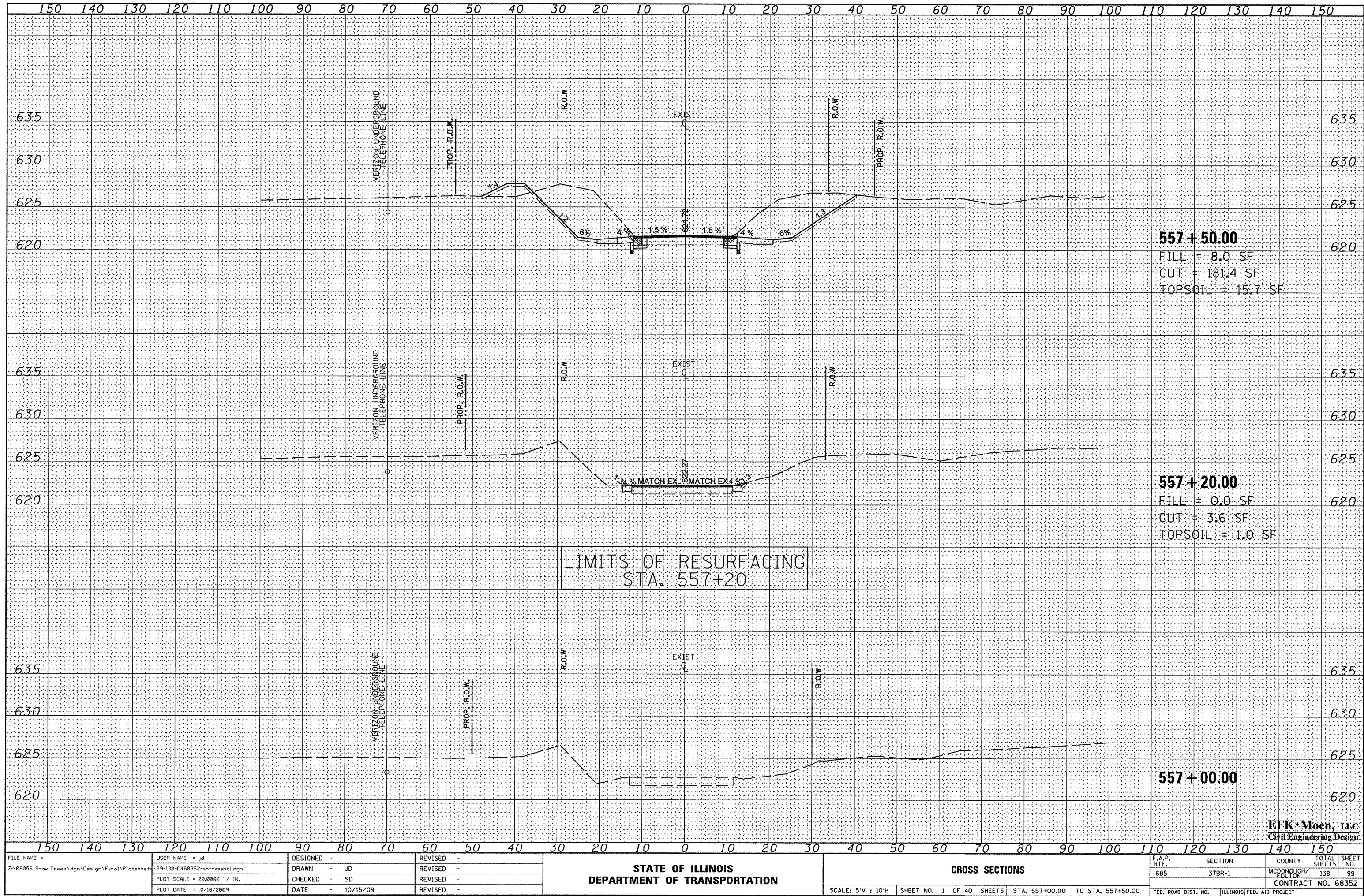


All dimensions are in inches (millimeters) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT CADD STANDARD	
TYPICAL PAVEMENT MARKINGS	
CADD STANDARD 780001-D4	SHEET 2 OF 2
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
	CHECKED BY

780001-D4 (2)

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



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

