

76567

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

*62+1=63

D-98-113-96

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

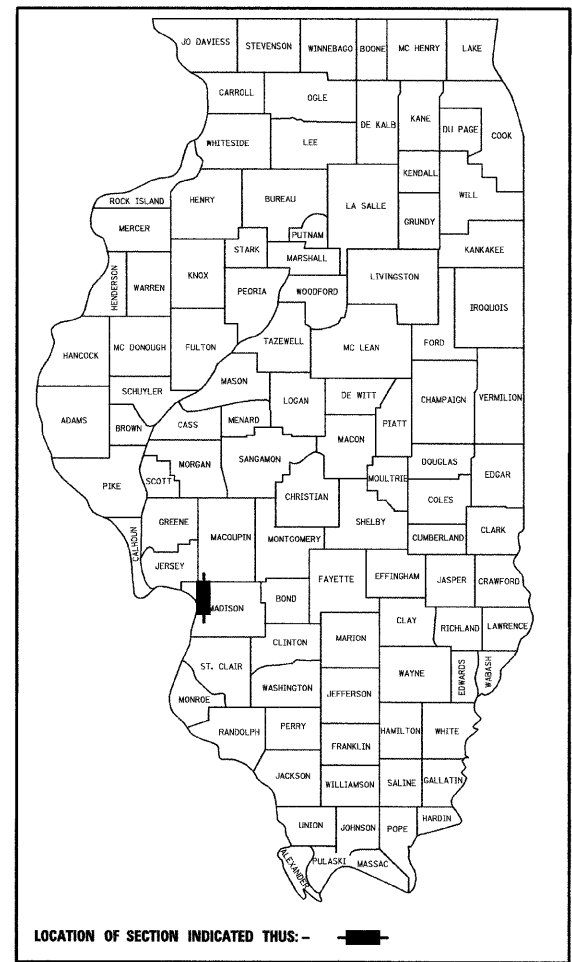
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

ROUTE FAP 310 (US 67)

SECTION 60-(16B, 16-1B)
PROJECT NO. ACHPP-HPP-1779(001)
MADISON COUNTY

C-98-092-03



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



INDEX OF SHEETS

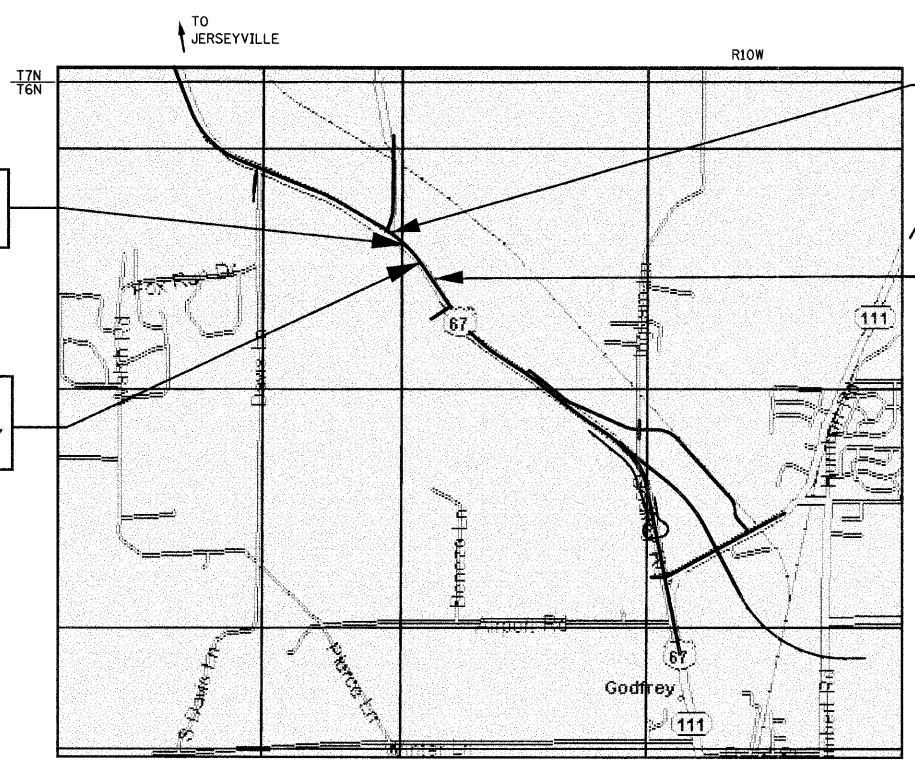
- 1 COVER SHEET
- 2 GENERAL NOTES
- 3 SUMMARY AND SCHEDULES OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 REFERENCE TIES AND BENCHMARKS
- 6-8 PLAN SHEETS
- 9 PROFILE SHEET
- 10-12 STORM WATER POLLUTION AND PREVENTION PLANS
- 13 RELOCATED CHANNEL DETAILS
- 14-15 RIGHT OF WAY PLAN SHEETS
- 16-19 APPROACH PAVEMENTS FOR 060-0329
- 20-44 BRIDGE SHEETS
- 45-62 CROSS SECTIONS STANDARDS

LIST OF STANDARDS

000001-05	609001-03
001001-01	701001-01
202001-01	701006-02
280001-04	701011-01
420401-06	701306-01
515001-02	701901
601101	

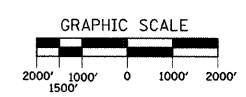
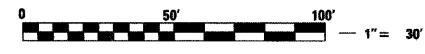
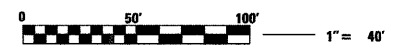
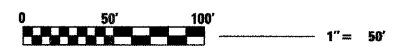
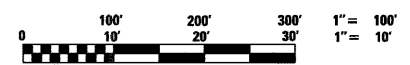
SECTION 60-16-1B INCLUDES W-BEAM BRIDGE OVER SOUTH BRANCH OF PIASA CREEK, 1 SPAN 73'-1" BK TO BK ABUT, INTEGRAL ABUTMENTS, SKEW 28° AT STATION 165+71.94.

SECTION 60-16B INCLUDES W-BEAM BRIDGE OVER TRIBUTARY TO THE SOUTH BRANCH OF PIASA CREEK, 1 SPAN 58'-9" BK TO BK ABUT., INTEGRAL ABUTMENTS SKEW 29° AT STATION 160+24.00.



END CONSTRUCTION
SECTION 60-(16B, 16-1B)
STATION 168+61.00

BEGIN CONSTRUCTION
SECTION 60-(16B, 16-1B)
STATION 155+50.00



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.

DESIGN DESIGNATION

FAP 310 - 3350 (24) RURAL MAJOR. 7.11 (FD-20)
ADT = 12,100 (2007)
ADT = 12,500 (2009)
ADT = 16,800 (2029)
PV = 95%
SU = 2.1%
MU = 2.9%

GROSS LENGTH OF PROJECT = 1,311.00 FEET = (0.248 MILES)
NET LENGTH OF PROJECT = 1,311.00 FEET = (0.248 MILES)

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

CONTRACT NO. 76567

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED June 27, 2008
Mary C. James
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 15, 2008
Eric E. Harsh
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

August 15, 2008
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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



Mark A. Reitz
MARK A. REITZ P.E. NO. 062-047531 DATE 6-11-08
LICENSURE EXPIRES NOVEMBER 30, 2009
HURST-ROSCHKE ENGINEERS, INC.

PROJECT ENGINEER: TOM MANNINO (618) 346-3159
SQUAD LEADER: WENDA SOUTHERLAND (618) 346-3192

Rev.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	2
STA. 155+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

GENERAL NOTES

1. TEMPORARY SEEDING AND MULCH SHALL BE COMPLETED ON A WEEKLY BASIS ON EXPOSED GROUND AND SHALL BE IN ACCORDANCE WITH SECTION 280 OF THE STANDARD SPECIFICATIONS EXCEPT THAT MULCH AND TEMPORARY SEEDING SHALL BE PAID FOR AS TEMPORARY EROSION CONTROL SEEDING AND NO OTHER PAYMENT WILL BE PERMITTED.
2. CLASS 4A SEEDING IS TO BE PLACED AS SOON AS EARTHWORK IS COMPLETED.
3. MULCH USED SHALL BE AS WEED SEED FREE AS POSSIBLE. NO EMULSIFIED ASPHALT WILL BE ALLOWED TO BE USED ON THE MULCH.
4. SEEDING SHALL BE PLACED ON ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS. NUTRIENTS AND MULCH, IF REQUIRED, SHALL BE APPLIED TO ALL SEEDED AREAS. THE SEEDING SHALL BE DONE ACCORDING TO ARTICLES 250 AND 251 OF THE STANDARD SPECIFICATION OR AS DIRECTED BY THE ENGINEER.
5. WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS OR OTHERWISE REFERENCE THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUB-SECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
6. PROTECTIVE COAT SHALL BE APPLIED TO THE SURFACES OF NEW CONCRETE ACCORDING TO ARTICLES 420.21 AND/OR 503.19 OF THE STANDARD SPECIFICATIONS.
7. ONLY THOSE TREES DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
8. EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH IDOT SPECIFICATIONS. PLACEMENT SHALL BE ACCORDING TO THE SWPPP OR AS DIRECTED BY THE ENGINEER.
9. EXISTING ROAD SIGNS WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED OR RELOCATED AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER AFTER THE CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER.
10. ALL ELEVATIONS REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.
11. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
12. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUB-NUMBER LISTED IN THE INDEX OF SHEETS.
13. CONTRACTOR WILL NOT BE ALLOWED TO USE STRAW BALES FOR TEMPORARY EROSION CONTROL SYSTEMS (STD. 280001)
14. EXCEPT WHERE DESIGNATED OTHERWISE, THE DEPTHS AND OFFSETS OF ALL UTILITIES SHOWN ON PLAN SHEETS HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE.
15. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:
 - AMEREN - UE (GAS & ELECTRIC)
 - AMERITECH (TELEPHONE)
 - ILLINOIS AMERICAN WATER CO. (JERSEY COUNTY RURAL WATER COMPANY INC.)
 - CHARTER COMMUNICATIONS (CABLE TV)
 - VILLAGE OF GODFREY (SAN. SEWER)

(MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.)
16. "SLIPPERY WHEN WET", "MUD ON PAVEMENT" AND "TRUCKS ENTERING AND LEAVING ROADWAY" SIGNS SHALL BE MADE AVAILABLE FOR USE AT THE DISCRETION OF THE ENGINEER FOR THE PROJECT. COST TO BE INCLUDED IN GRADING AND STRUCTURES AND WILL NOT BE PAID FOR SEPARATELY.
17. ALL WARNING SIGNS SHALL BE 48" FLUORESCENT ORANGE.

COMMITMENTS

1. TREE FELLING IS RESTRICTED BETWEEN SEPTEMBER 30 AND APRIL 1 DUE TO HABITAT FOR THE ENDANGERED INDIANA BAT.
2. IF ARCHAEOLOGICAL CLEARANCE HAS NOT BEEN OBTAINED FOR THE ENTIRE PROJECT, THE RESIDENT ENGINEER SHALL PROVIDE THE CONTRACTOR THOSE AREAS OF THE PROJECT WHICH HAVE BEEN CLEARED, AND IN WHICH THE CONTRACTOR MAY WORK. THE RESIDENT ENGINEER SHALL ALSO NOTIFY THE CONTRACTOR WHEN ADDITIONAL SITES BECOME AVAILABLE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: NO SCALE
DATE: 06-11-08

DRAWN BY: U.J.
CHECKED BY: M.A.R.

SUMMARY OF QUANTITIES

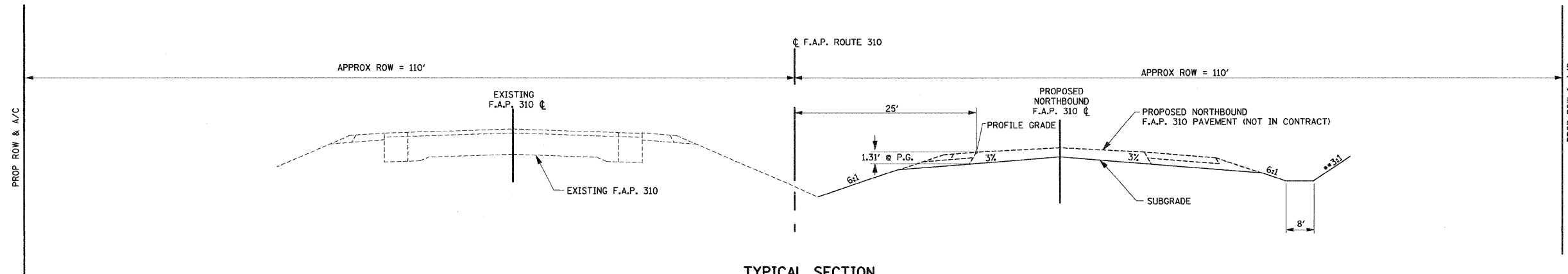
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B,16-16-1B)	MADISON	62	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	C000	X071-2A
20100500	TREE REMOVAL, ACRES	ACRE	1.9	1.9	
20200100	EARTH EXCAVATION	CU YD	6360	6360	
20300100	CHANNEL EXCAVATION	CU YD	1351	1351	
20400800	FURNISHED EXCAVATION	CU YD	11603	11603	
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	508		508
25000312	SEEDING, CLASS 4A	ACRE	3.4	3.4	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	6.8	6.8	
25100115	MULCH, METHOD 2	ACRE	3.4	3.4	
25100630	EROSION CONTROL BLANKET	SQ YD	853	853	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	1020	1020	
28000300	TEMPORARY DITCH CHECKS	EACH	5	5	
28000400	PERIMETER EROSION BARRIER	FOOT	450	450	
28100107	STONE RIPRAP, CLASS A4	SQ YD	2480	1123	1357
28200200	FILTER FABRIC	SQ YD	2480	1123	1357
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	279	279	
42001300	PROTECTIVE COAT	SQ YD	713	713	
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	434	434	
50105220	PIPE CULVERT REMOVAL	FOOT	1		1
50200100	STRUCTURE EXCAVATION	CU YD	107.5		107.5
50300100	FLOOR DRAINS	EACH	10		10
50300225	CONCRETE STRUCTURES	CU YD	119.4		119.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	286.7		286.7
50300260	BRIDGE DECK GROOVING	SQ YD	748		748
50300300	PROTECTIVE COAT	SQ YD	888		888
50500505	STUD SHEAR CONNECTORS	EACH	3786		3786
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	77160		77160
50800515	BAR SPLICERS	EACH	214		214
51201600	FURNISHING STEEL PILES HP12X53	FOOT	498		498
51201610	FURNISHING STEEL PILES HP12X63	FOOT	681		681
51202395	DRIVING PILES	FOOT	1179		1179
51203600	TEST PILE STEEL HP12X53	EACH	1		1
51203610	TEST PILE STEEL HP12X63	EACH	1		1
51204650	PILE SHOES	EACH	19		19
51500100	NAME PLATES	EACH	2		2
54200229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	25	25	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	222		222
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	330		330
67100100	MOBILIZATION	L SUM	1	0.5	0.5

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	C000	X071-2A
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
X0795800	COARSE AGGREGATE	TON	58	58	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1

PLOT DATE = 6/18/2008
 FILE NAME = c:\projects\adit1365\consult\summary of quantities.dgn
 PLOT BY = ADIT / JN
 REFERENCE = REF#

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	4
STA. 155+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				



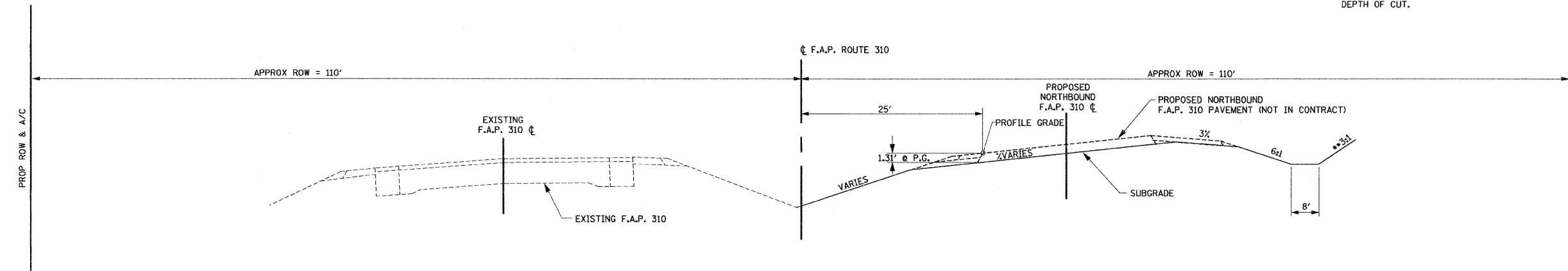
TYPICAL SECTION
F.A.P. ROUTE 310
 (STA 155+50.00 TO STA 155+86.00 - MEDIAN DITCH TRANSITION)
 (STA 155+86.00 TO STA 156+00.00 - GRADING TRANSITION)
 STA 156+00.00 TO STA 158+11.69

** FOR CUTS LESS THAN 10' USE 3:1 BACKSLOPE.
 FOR CUTS 10' TO 15' USE 2:1 BACKSLOPE.
 FOR CUTS 15' TO 30' USE 2:1 BACKSLOPE WITH A 13' BENCH AT A 10:1 SLOPE LOCATED 1/2 OF THE DEPTH OF CUT.
 FOR CUTS GREATER THAN 30' USE 2:1 BACKSLOPE WITH A 13' BENCH LOCATED 1/3 AND 2/3 OF THE DEPTH OF CUT.

STRUCTURAL DESIGN DATA
 F.A.P. ROUTE 310

STRUCTURAL DESIGN TRAFFIC:	YEAR	2014
PV= 15073	SU= 1040	MU= 1213
ROAD/STREET CLASSIFICATION:	CLASS	I
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:		
P= 32	S= 45	M= 45
TRAFFIC FACTOR:	ACTUAL TF=	6.52
MINIMUM TF=	AC TYPE=	20
SUBGRADE SUPPORT RATING:		
SSR= POOR	(STA 87+00.91 TO 228+25.00)	

USE: BITUMINOUS CONCRETE PAVEMENT,
 (FULL-DEPTH), SUPERPAVE, 15.75" } NOT IN CONTRACT
 LIME MODIFIED SOIL, 12"



SUPERELEVATED TYPICAL SECTION
F.A.P. ROUTE 310
 STA 158+11.69 TO STA 159+64.94
 (STA 159+64.94 TO STA 159+94.94 BRIDGE APPROACH PAVEMENT)
 (STA 159+94.94 TO STA 160+53.17 BRIDGE OMISSION)
 (STA 160+53.17 TO STA 160+83.17 BRIDGE APPROACH PAVEMENT)
 STA 160+83.17 TO STA 165+05.98
 (STA 165+05.98 TO STA 165+35.98 BRIDGE APPROACH PAVEMENT)
 (STA 165+35.98 TO STA 166+08.14 BRIDGE OMISSION)
 (STA 166+08.14 TO STA 166+38.14 BRIDGE APPROACH PAVEMENT (SPECIAL))
 STA 166+38.14 TO STA 167+55.00
 (STA 167+55.00 TO STA 167+65.00 - GRADING TRANSITION)
 (STA 167+65.00 TO STA 168+61.00 - MEDIAN DITCH TRANSITION)

* FOR SHOULDER SLOPES SEE STANDARD 482001
 WHEN THE SUPERELEVATION RATE OF THE PAVEMENT IS BETWEEN 0% AND 4%, THE SHOULDER SHALL BE SLOPED AT 4%.
 WHEN THE SUPERELEVATION RATE OF THE PAVEMENT EXCEEDS 4%, THE SHOULDER SHALL BE SLOPED SO THAT THE ALGEBRAIC DIFFERENCE BETWEEN THE PAVEMENT AND SHOULDER WILL NOT BE GREATER THAN 8%.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

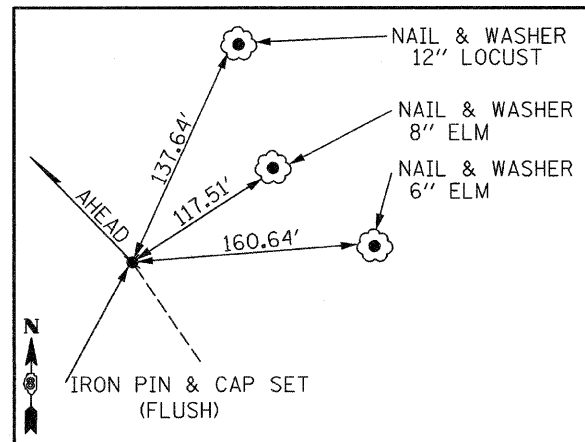
TYPICAL SECTIONS

SCALE: NO SCALE
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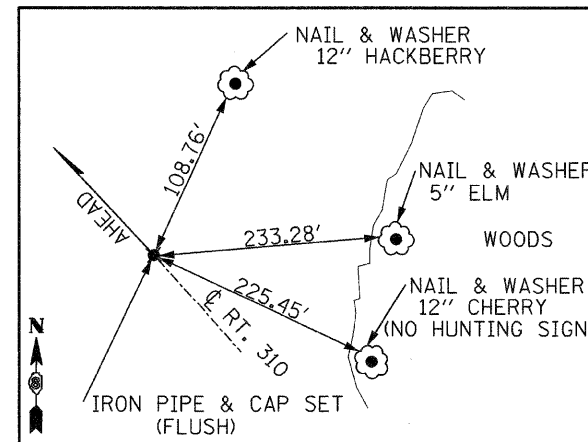
DRAWN BY: U.J.J.
 CHECKED BY: M.A.R.

REFERENCE TIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	5
STA. 155+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 76567				



PI STA. 160+96.28 F.A.P. RTE. 310
IRON PIN & CAP SET (FLUSH)



PCC STA. 163+79.84 F.A.P. RTE. 310
IRON PIN & CAP SET (FLUSH)

BENCHMARK

BM #101 STA 160+79.58, 14.23 LT. CUT SQUARE ON TOP OF N.E. WING WALL OF STRUCTURE 060-0250 EL 534.93	BM #102 STA 166+27.21, 14.46 LT. CUT SQUARE ON TOP OF N.E. WING WALL OF STRUCTURE 060-0251 EL 532.92
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SCHEDULES OF QUANTITIES

LOCATION	EACH
156+00.00 3' LT	1
160+12.00 3' LT	1
165+45.00 8' LT	1
165+90.00 95' RT	1
166+45.00 10' LT	1
TOTAL	5

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	FURNISH EXCAVATION
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
155+00 TO 168+00	6360	4770	16373	-11603	11603

STATION LOCATION	SEEDING, CLASS 4A (ACRE)	MULCH METHOD 1 (ACRE)
155+86.00 TO 167+11.59	3.4	3.4
TOTAL	3.4	3.4

LOCATION	FOOT
160+50.00 to 165+00.00 RT	450
TOTAL	450

LOCATION	SQ YD
STA 155+50 TO 156+00 LT	35
FIRST BEND 156+60 to 157+35 RT	400
SECOND BEND 159+36 to 160+06 RT	432
EXIST STR 060-0250 LT	78
EXIST STR 060-0251 LT	103
PROP STR 060-0328 L/R	580
PROP STR 060-0329 L/R	777
UPSTREAM FROM STR 060-0329 RT	75
TOTAL	2480

LOCATION	AREA (SF)	THICK (IN)	TON
WORK AREA ENTRANCE AT 157+35	1076	4	26.6
WORK AREA ENTRANCE AT 162+00	835	4	20.6
WORK AREA ENTRANCE AT 167+00	429	4	10.6
TOTAL			57.8

LOCATION	SQ YD
157+85.00 to 159+36.00 RT	235
165+80.00 to 168+61.90 LT/RT	618
TOTAL	853

LOCATION	EACH
166+00.00 RT	1
TOTAL	1

LOCATION	SQ YD
STRUCTURE 060-0329 (APPROACH)	210.7
STRUCTURE 060-0329 (DEPART)	222.8
TOTAL	433.5

LOCATION	AREA (SF)	ACRE
156+00.00 to 161+77.00 RT	65420	1.5
164+90.00 to 167+15.00 LT/RT	19140	0.4
TOTAL		1.9

LOCATION	SQ YD
STRUCTURE 060-0328 (APPROACH)	139.7
STRUCTURE 060-0328 (DEPART)	139.7
TOTAL	279.4

NAME	DATE

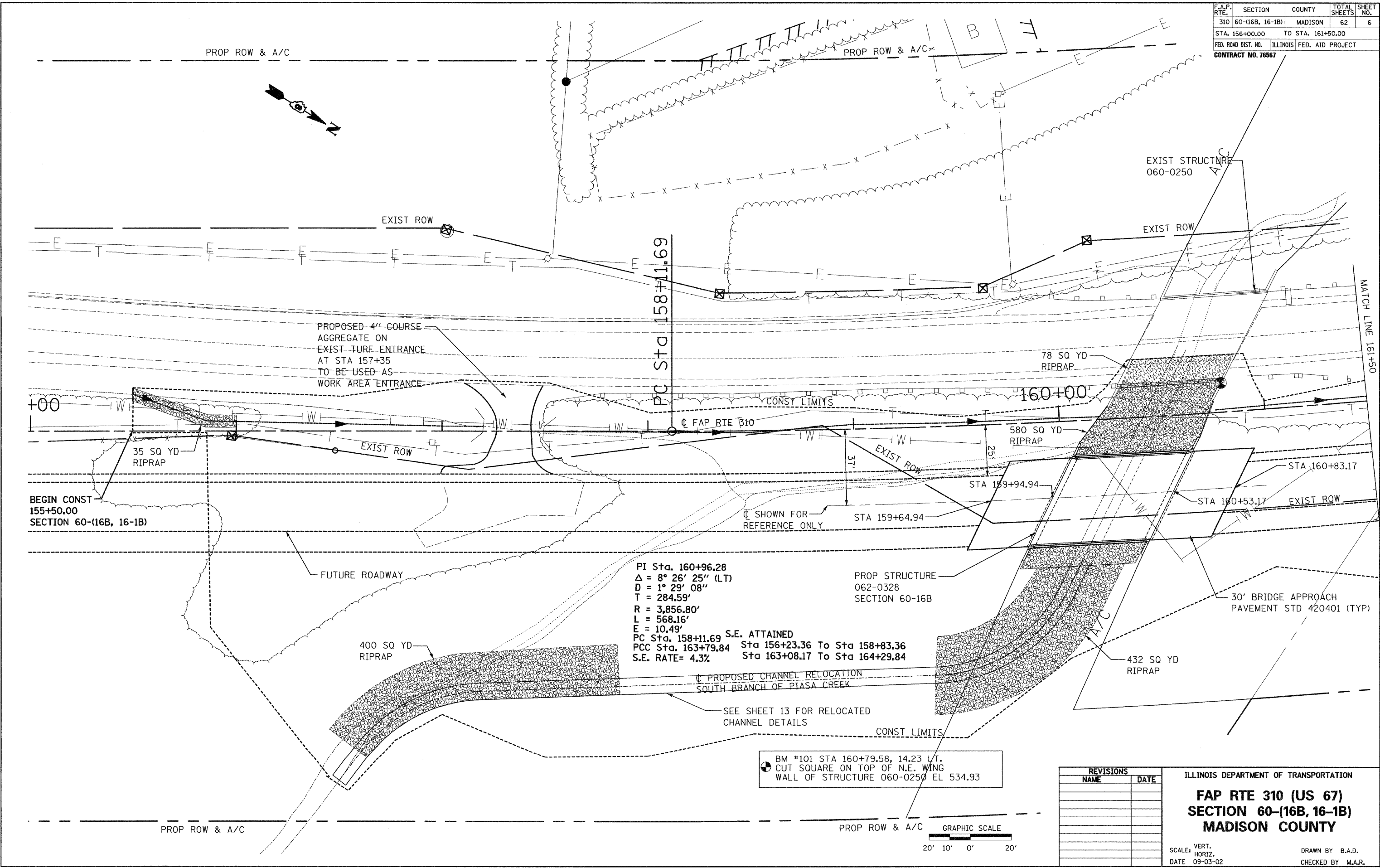
ILLINOIS DEPARTMENT OF TRANSPORTATION

REFERENCE TIES & BENCHMARKS

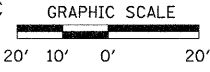
SCALE: NO SCALE
DATE: 06-11-08

DRAWN BY: U.J.
CHECKED BY: M.A.R.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	6
STA. 156+00.00		TO STA. 161+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76567				



BM #101 STA 160+79.58, 14.23 L.T.
 CUT SQUARE ON TOP OF N.E. WING
 WALL OF STRUCTURE 060-0250 EL 534.93



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP RTE 310 (US 67)
SECTION 60-(16B, 16-1B)
MADISON COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE 09-03-02

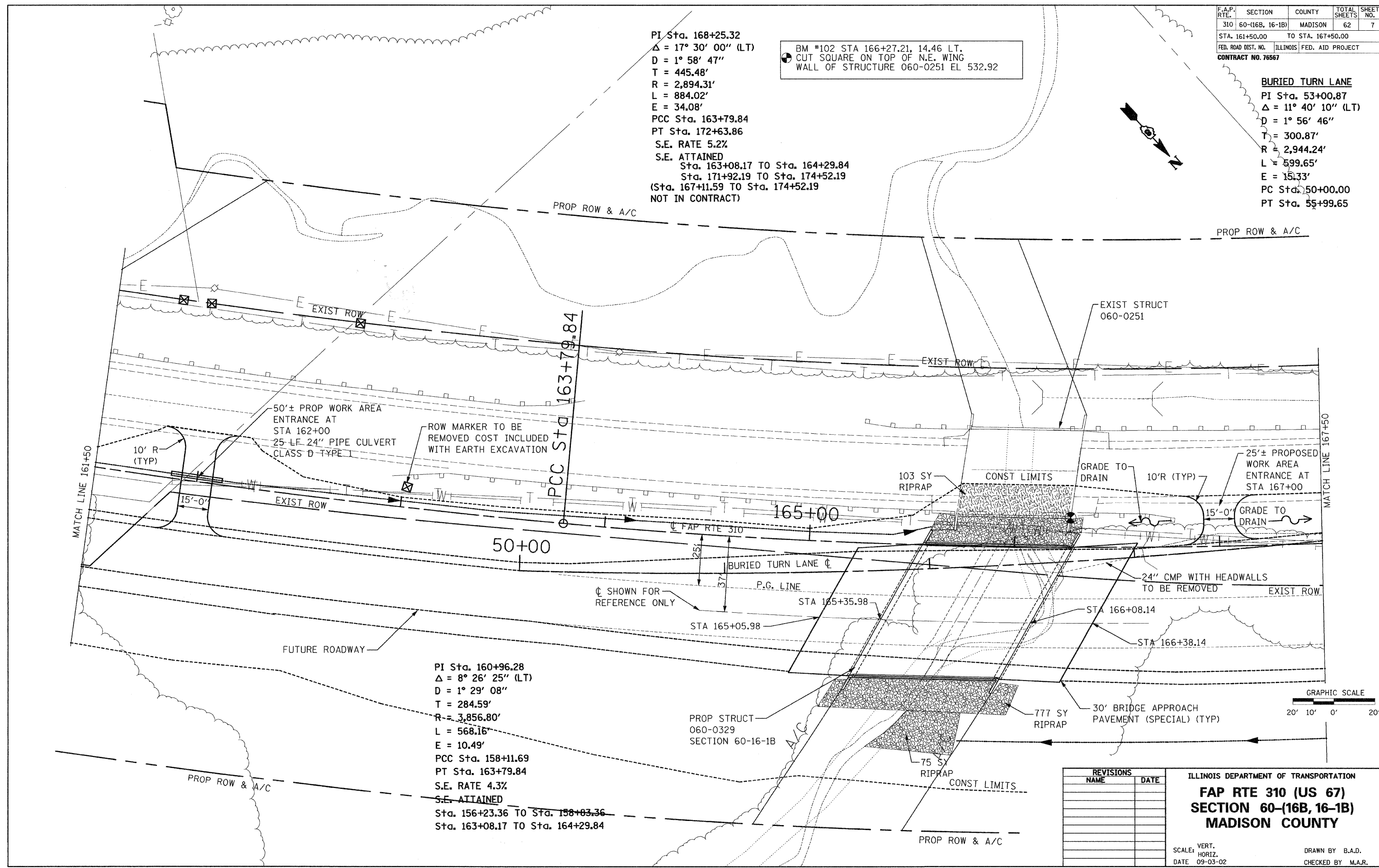
DRAWN BY B.A.D.
 CHECKED BY M.A.R.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	7
STA. 161+50.00		TO STA. 167+50.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 76567				

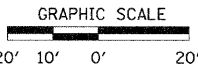
PI Sta. 168+25.32
 $\Delta = 17^\circ 30' 00''$ (LT)
 $D = 1^\circ 58' 47''$
 $T = 445.48'$
 $R = 2,894.31'$
 $L = 884.02'$
 $E = 34.08'$
PCC Sta. 163+79.84
PT Sta. 172+63.86
S.E. RATE 5.2%
S.E. ATTAINED
Sta. 163+08.17 TO Sta. 164+29.84
Sta. 171+92.19 TO Sta. 174+52.19
(Sta. 167+11.59 TO Sta. 174+52.19
NOT IN CONTRACT)

BM #102 STA 166+27.21, 14.46 LT.
CUT SQUARE ON TOP OF N.E. WING
WALL OF STRUCTURE 060-0251 EL 532.92

BURIED TURN LANE
PI Sta. 53+00.87
 $\Delta = 11^\circ 40' 10''$ (LT)
 $D = 1^\circ 56' 46''$
 $T = 300.87'$
 $R = 2,944.24'$
 $L = 599.65'$
 $E = 15.33'$
PC Sta. 50+00.00
PT Sta. 55+99.65



PI Sta. 160+96.28
 $\Delta = 8^\circ 26' 25''$ (LT)
 $D = 1^\circ 29' 08''$
 $T = 284.59'$
 $R = 3,856.80'$
 $L = 568.16'$
 $E = 10.49'$
PCC Sta. 158+11.69
PT Sta. 163+79.84
S.E. RATE 4.3%
S.E. ATTAINED
Sta. 156+23.36 TO Sta. 158+03.36
Sta. 163+08.17 TO Sta. 164+29.84



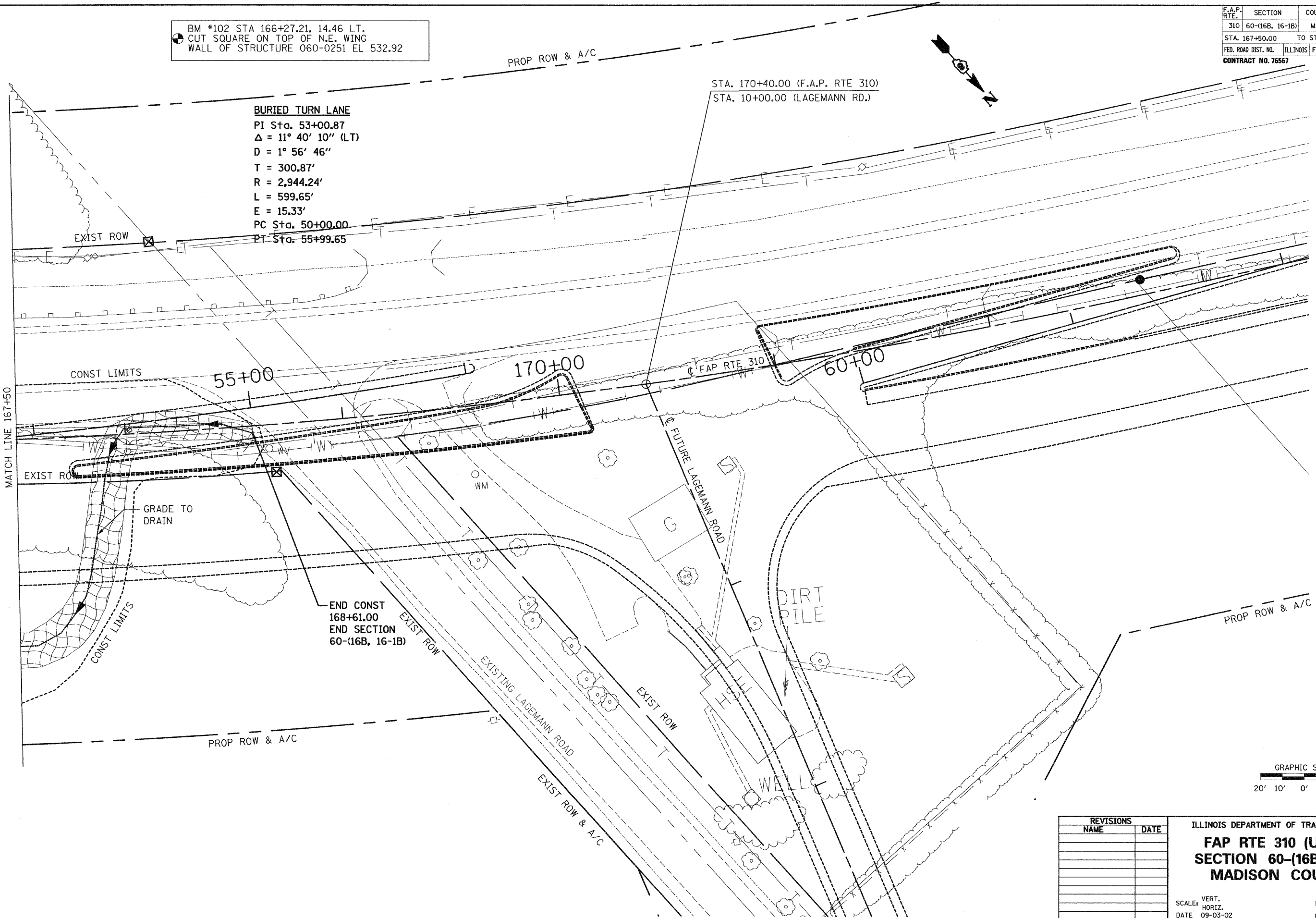
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP RTE 310 (US 67)
SECTION 60-(16B, 16-1B)
MADISON COUNTY

SCALE: VERT. _____
HORIZ. _____
DATE 09-03-02
DRAWN BY B.A.D.
CHECKED BY M.A.R.

BM #102 STA 166+27.21, 14.46 LT.
 CUT SQUARE ON TOP OF N.E. WING
 WALL OF STRUCTURE 060-0251 EL 532.92

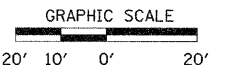
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	8
STA. 167+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76567				



BURIED TURN LANE
 PI Sta. 53+00.87
 $\Delta = 11^\circ 40' 10''$ (LT)
 $D = 1^\circ 56' 46''$
 $T = 300.87'$
 $R = 2,944.24'$
 $L = 599.65'$
 $E = 15.33'$
 PC Sta. 50+00.00
 PT Sta. 55+99.65

STA. 170+40.00 (F.A.P. RTE 310)
 STA. 10+00.00 (LAGEMANN RD.)

END CONST
 168+61.00
 END SECTION
 60-(16B, 16-1B)



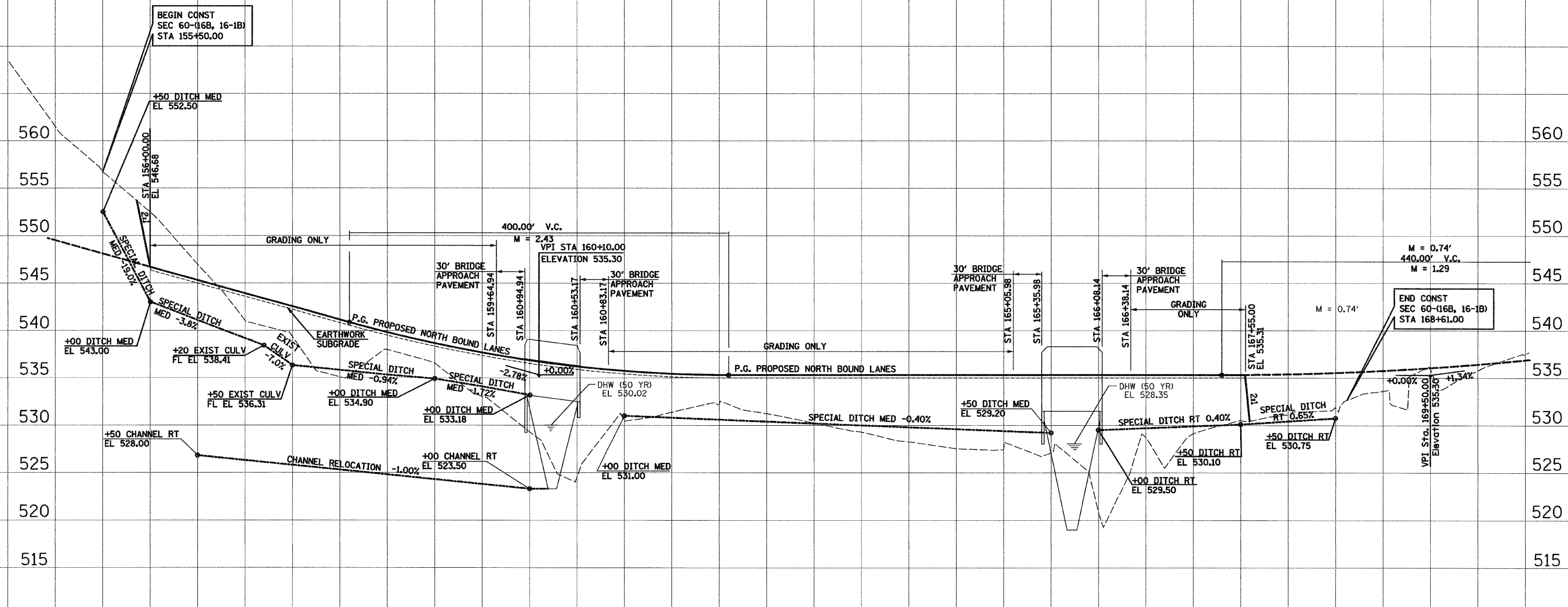
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FAP RTE 310 (US 67)
SECTION 60-(16B, 16-1B)
MADISON COUNTY

SCALE: VERT. _____
 HORIZ. _____
 DATE 09-03-02

DRAWN BY B.A.D.
 CHECKED BY M.A.R.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	9
STA. 155+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO. ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 76567				



NOTE: PROPOSED ELEVATIONS SHOWN ARE FOR THE FINISHED ROADWAY GRADE. 1.31' SHOULD BE SUBTRACTED FROM PROPOSED ELEVATION TO DETERMINE FINISHED SUBGRADE ELEVATION IN THE AREAS OF GRADING ONLY.

PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____
 NO.: _____

PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____
 NO.: _____

561.51	556.70	552.49	546.95	541.01	539.30	535.08	537.96	536.54	533.03	529.32	524.55	530.46	531.38	532.24	531.25	529.29	528.23	527.51	527.54	527.03	520.88	528.73	529.12	530.49	531.14	531.84	533.60	536.02	535.78	537.43
155+00	156+00		157+00		158+00		159+00		160+00		161+00		162+00		163+00		164+00		165+00		166+00		167+00		168+00		169+00		170+00	

FAP RTE 310
SECTION SEC 60-(16B, 16-1B)
MADISON COUNTY

CONTRACT NO. 76567

THIS PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF THE NPDES PERMIT NUMBER ILR10, ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY ON MAY 30, 2003 FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES. THIS PLAN HAS ALSO BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF NPDES PERMIT NUMBER ILR40 FOR DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS IF CHECKED BELOW.

NPDES PERMITS ASSOCIATED WITH THIS PROJECT:

- ILR10
- ILR40 PERMIT NO. 0493

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

MARY C. LAMIE
PRINT NAME

DEPUTY DIRECTOR OF HIGHWAYS
REGION FIVE ENGINEER
TITLE

Mary C. Lamie

SIGNATURE
6/27/08

DATE

IL DEPT. OF TRANSPORTATION
AGENCY

I. SITE DESCRIPTION:

A. THE FOLLOWING IS A DESCRIPTION OF THE PROJECT LOCATION:

1. THE PROJECT IS LOCATED IN THE WESTERN PORTION OF SECTION 10, TOWNSHIP 6 NORTH, RANGE 10 WEST OF THE 3RD PRINCIPAL MERIDIAN.

B. THE FOLLOWING IS A DESCRIPTION OF THE CONSTRUCTION ACTIVITY WHICH IS THE SUBJECT OF THIS PLAN:

1. THE PROPOSED PROJECT CONSISTS OF CONSTRUCTING TWO BRIDGES, A CHANNEL RELOCATION AND ADJOINING ROADWAY EMBANKMENT TOTALING 0.248 MILES FOR FAP ROUTE 310. CONSTRUCTION CONSISTS OF EARTHWORK, DITCHES, RIPRAP PLACEMENT AND OTHER MISCELLANEOUS WORK TO COMPLETE THE PROPOSED ROADWAY.

C. THE FOLLOWING IS A DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE, SUCH AS GRUBBING, EXCAVATION AND GRADING:

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. APPROXIMATELY 2.1 ACRES OF TREE REMOVAL WILL BE COMPLETED.
2. EXCAVATION AND EMBANKMENT WILL BE COMPLETED ALONG THE ENTIRE LENGTH OF THE JOB TO GRADE FOR PROPOSED ROADWAY DITCHES AND CHANNEL RELOCATION.
3. CHANNEL EXCAVATION WILL BE COMPLETED TO PROVIDE FOR REALIGNED FLOW TO THE BRIDGES.
4. COMPLETE PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEANUP OF TEMPORARY EROSION CONTROL.
5. COMPLETE PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS RIPRAP, EROSION CONTROL BLANKET, SEEDING, ETC.
6. FINAL GRADING AND OTHER MISCELLANEOUS ITEMS.

D. THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 4.2 ACRES. THE TOTAL AREA OF THE SITE THAT IS ESTIMATED WILL BE DISTURBED BY EXCAVATION, GRADING OR OTHER ACTIVITIES IS 3.2 ACRES.

E. THE FOLLOWING IS A WEIGHTED AVERAGE OF THE RUNOFF COEFFICIENT FOR THIS PROJECT AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED:

1. WEIGHTED RUNOFF COEFFICIENT: 0.35

F. THE FOLLOWING IS A DESCRIPTION OF THE SOIL TYPES FOUND AT THE PROJECT SITE FOLLOWED BY INFORMATION REGARDING THEIR EROSION:

1. FAYETTE-HICKORY COMPLEX (SILT LOAM)
2. WAKELAND (SILT LOAM)
3. ROZETTA (SILTY CLAY LOAM)

G. THE FOLLOWING IS A DESCRIPTION OF POTENTIALLY EROSION AREAS ASSOCIATED WITH THIS PROJECT:

1. CHANNEL BOTTOMS
2. CHANNEL SLOPES

H. THE FOLLOWING IS A DESCRIPTION OF SOIL DISTURBING ACTIVITIES, THEIR LOCATIONS, AND THEIR EROSION FACTORS (E.G. STEEPNESS OF SLOPES, LENGTH OF SLOPES, ETC):

1. CHANNEL REALIGNMENT WILL DISTURB CHANNEL BOTTOMS AND SIDESLOPES, POSSIBLY CAUSING EROSION.

I. SEE THE EROSION CONTROL PLANS AND/OR DRAINAGE PLANS FOR THIS CONTRACT FOR INFORMATION REGARDING DRAINAGE PATTERNS, APPROXIMATE SLOPES ANTICIPATED BEFORE AND AFTER MAJOR GRADING ACTIVITIES. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AND CONTROLS TO PREVENT OFF SITE SEDIMENT TRACKING (TO BE ADDED AFTER CONTRACTOR IDENTIFIES LOCATIONS), AREAS OF SOIL DISTURBANCE, THE LOCATION OF MAJOR STRUCTURAL AND NON-STRUCTURAL CONTROLS IDENTIFIED IN THE PLAN, THE LOCATION OF AREAS WHERE STABILIZATION PRACTICES ARE EXPECTED TO OCCUR, SURFACE WATERS (INCLUDING WETLANDS) AND LOCATIONS WHERE STORM WATER IS DISCHARGED TO SURFACE WATER INCLUDING WETLANDS.

J. THE FOLLOWING IS A LIST OF RECEIVING WATER(S) AND THE ULTIMATE RECEIVING WATER(S), AND AERIAL EXTENT OF WETLAND ACREAGE AT THE SITE. THE LOCATION OF THE RECEIVING WATERS CAN BE FOUND ON THE EROSION AND SEDIMENT CONTROL PLANS:

1. SOUTH BRANCH OF PIASA CREEK.
2. TRIBUTARY TO THE SOUTH BRANCH OF PIASA CREEK.

K. THE FOLLOWING POLLUTANTS OF CONCERN WILL BE ASSOCIATED WITH THIS CONSTRUCTION PROJECT: (CHECK ALL THAT APPLY)

- | | |
|---|--|
| <input checked="" type="checkbox"/> SOIL SEDIMENT | <input checked="" type="checkbox"/> PETROLEUM (GAS, DIESEL, OIL, KEROSENE, HYDRAULIC OIL / FLUIDS) |
| <input checked="" type="checkbox"/> CONCRETE | <input checked="" type="checkbox"/> ANTIFREEZE / COOLANTS |
| <input checked="" type="checkbox"/> CONCRETE TRUCK WASTE | <input checked="" type="checkbox"/> WASTE WATER FROM CLEANING CONSTRUCTION EQUIPMENT |
| <input checked="" type="checkbox"/> CONCRETE CURING COMPOUNDS | <input type="checkbox"/> OTHER (SPECIFY): |
| <input checked="" type="checkbox"/> SOLID WASTE DEBRIS | |
| <input type="checkbox"/> PAINTS | |
| <input checked="" type="checkbox"/> SOLVENTS | |
| <input type="checkbox"/> FERTILIZERS / PESTICIDES | |

II. CONTROLS

THIS SECTION OF THE PLAN ADDRESSES THE CONTROLS THAT WILL BE IMPLEMENTED FOR EACH OF THE MAJOR CONSTRUCTION ACTIVITIES DESCRIBED IN I.C. ABOVE AND FOR ALL USE AREAS, BORROW SITES, AND WASTE SITES. FOR EACH MEASURE DISCUSSED, THE CONTRACTOR WILL BE RESPONSIBLE FOR ITS IMPLEMENTATION AS INDICATED. THE CONTRACTOR SHALL PROVIDE TO THE RESIDENT ENGINEER A PLAN FOR THE IMPLEMENTATION OF THE MEASURES INDICATED. THE CONTRACTOR, AND SUBCONTRACTORS, WILL NOTIFY THE RESIDENT ENGINEER OF ANY PROPOSED CHANGES, MAINTENANCE, OR MODIFICATIONS TO KEEP CONSTRUCTION ACTIVITIES COMPLIANT WITH THE PERMIT. EACH SUCH CONTRACTOR HAS SIGNED THE REQUIRED CERTIFICATION ON FORMS WHICH WILL BE PROVIDED AT THE PRE-CONSTRUCTION CONFERENCE, AND ARE A PART OF, THIS PLAN:

A. EROSION AND SEDIMENT CONTROL

1. STABILIZATION PRACTICES: PROVIDED BELOW IS A DESCRIPTION OF INTERIM AND PERMANENT STABILIZATION PRACTICES, INCLUDING SITE SPECIFIC SCHEDULING OF THE IMPLEMENTATION OF THE PRACTICES. SITE PLANS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES MAY INCLUDE BUT ARE NOT LIMITED TO TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SODDING, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION, AND OTHER APPROPRIATE MEASURES. EXCEPT AS PROVIDED BELOW IN II(A)(1)(G) AND II(A)(3), STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED ON ALL DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION WILL NOT OCCUR FOR A PERIOD OF 21 OR MORE CALENDAR DAYS.

2. WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE THEREAFTER.

THE FOLLOWING STABILIZATION PRACTICES WILL BE USED FOR THIS PROJECT: (CHECK ALL THAT APPLY)

- | | |
|---|--|
| <input type="checkbox"/> PRESERVATION OF MATURE VEGETATION | <input checked="" type="checkbox"/> EROSION CONTROL BLANKET / MULCHING |
| <input type="checkbox"/> VEGETATED BUFFER STRIPS | <input type="checkbox"/> SODDING |
| <input checked="" type="checkbox"/> PROTECTION OF TREES | <input checked="" type="checkbox"/> GEOTEXTILES |
| <input checked="" type="checkbox"/> TEMPORARY EROSION CONTROL SEEDING | <input type="checkbox"/> OTHER (SPECIFY): |
| <input type="checkbox"/> TEMPORARY TURF (SEEDING, CLASS 7) | |
| <input checked="" type="checkbox"/> TEMPORARY MULCHING | |
| <input checked="" type="checkbox"/> PERMANENT SEEDING | |

DESCRIBE HOW THE STABILIZATION PRACTICES LISTED ABOVE WILL BE UTILIZED:

AT THE BEGINNING OF CONSTRUCTION:

- AREAS OF EXISTING VEGETATION (WOOD AND GRASSLANDS) OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED BY THE ENGINEER FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.
- DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, ALONG WITH REQUIRED TREE REMOVAL.
- AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY DITCH CHECKS, INLET AND PIPE PROTECTION AND PERIMETER EROSION BARRIER SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN AND AS DIRECTED BY THE ENGINEER.
- BARE AND SPARSELY VEGETATED GROUND IN HIGH ERODABLE AREAS AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED AT THE BEGINNING OF CONSTRUCTION WHERE NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN DAYS.
- IMMEDIATELY AFTER TREE REMOVAL IS COMPLETED, AREAS WHICH ARE HIGHLY ERODABLE AS DETERMINED BY THE ENGINEER, SHALL BE TEMPORARILY SEEDED WHEN NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN DAYS.
- AT LOCATIONS WHERE A SIGNIFICANT AMOUNT OF WATER DRAINS INTO THE CONSTRUCTION ZONE FROM OUTSIDE AREAS (ADJACENT LANDOWNERS), TEMPORARY DITCH CHECKS WILL BE UTILIZED TO LOCALLY DIVERT WATER, REDUCE FLOW RATES, AND COLLECT OUTSIDE SILTATION INSIDE THE RIGHT-OF-WAY LINE.
- ESTABLISHMENT OF THESE TEMPORARY EROSION CONTROL MEASURES WILL HAVE ADDITIONAL BENEFITS TO THE PROJECT. DESIRABLE GRASS SEED WILL BECOME ESTABLISHED IN THESE AREAS AND WILL SPREAD SEEDS ONTO THE CONSTRUCTION SITE UNTIL PERMANENT SEEDING/MOWING AND OVERSEEDING CAN BE COMPLETED.

DURING CONSTRUCTION

- AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND AS DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.
- WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PERVENT UNNECESSARY SOIL EROSION.
- EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
- AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:
 - PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
 - TEMPORARILY SEED ERODABLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODABLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
 - CONSTRUCT ROADSIDE DITCHES AND PROVIDE TEMPORARY EROSION CONTROL SYSTEMS.
 - TEMPORARILY DIVERT WATER AROUND PROPOSED CULVERT LOCATIONS.
 - BUILD NECESSARY EMBANKMENT AT CULVERT LOCATIONS AND THEN EXCAVATE AND PLACE CULVERT.
 - CONTINUE BUILDING UP THE EMBANKMENT TO THE PROPOSED GRADE WHILE AT THE SAME TIME, PLACING PERMANENT CONTROL SUCH AS RIPRAP DITCH LINING AND CONDUCTING FINAL SHAPING TO THE SLOPES.

- EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN DAYS.
- CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
- THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 INCH OR GREATER OR EQUIVALENT SNOWFALL AND DURING THE WINTER SHUTDOWN PERIOD. THE PROJECT SHALL ADDITIONALLY BE INSPECTED BY THE CONSTRUCTION FIELD ENGINEER ON A BI-WEEKLY BASIS TO DETERMINE THAT EROSION CONTROL EFFORTS ARE IN PLACE AND EFFECTIVE AND IF OTHER EROSION CONTROL WORK IS NECESSARY.
- SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE TEMPORARY EROSION CONTROL SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STORM WATER POLLUTION
PREVENTION PLAN
FAP ROUTE 310
SECTION 60-(16B, 16-1B)
MADISON COUNTY

CONTRACT NO. 76567

2. STRUCTURAL PRACTICES: PROVIDED BELOW IS A DESCRIPTION OF STRUCTURAL PRACTICES THAT WILL BE IMPLEMENTED, TO THE DEGREE ATTAINABLE, TO DIVERT FLOWS FROM EXPOSED SOILS, STORE FLOWS OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SUCH PRACTICES MAY INCLUDE BUT ARE NOT LIMITED TO PERIMETER EROSION BARRIER, EARTH DIKES, DRAINAGE SWALES, SEDIMENT TRAPS, DITCH CHECKS, SUBSURFACE DRAINS, PIPE SLOPE DRAINS, LEVEL SPREADERS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS, GABIIONS, AND TEMPORARY OR PERMANENT SEDIMENT BASINS. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CLEAN WATER ACT.

THE FOLLOWING STRUCTURAL PRACTICES WILL BE USED FOR THIS PROJECT (CHECK ALL THAT APPLY):

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- STORM DRAIN INLET PROTECTION
- SEDIMENT TRAP
- TEMPORARY PIPE SLOPE DRAIN
- TEMPORARY SEDIMENT BASIN
- TEMPORARY STREAM CROSSING
- STABILIZED CONSTRUCTION EXITS
- TURF REINFORCEMENT MATS
- PERMANENT CHECK DAMS
- PERMANENT SEDIMENT BASIN
- AGGREGATE DITCH
- PAVED DITCH
- ROCK OUTLET PROTECTION
- RIPRAP
- GABIIONS
- SLOPE MATTRESS
- RETAINING WALLS
- SLOPE WALLS
- CONCRETE REVEEMENT MATS
- LEVEL SPREADERS
- OTHER (SPECIFY):

DESCRIBE HOW THE STRUCTURAL PRACTICES LISTED ABOVE WILL BE UTILIZED:

- a. TEMPORARY DITCH CHECKS SHALL BE LOCATED AT EVERY FT. FALL/RISE IN DITCH GRADE.
- b. TEMPORARY DITCH CHECKS, AGGREGATE USES GRADING NO. 3- REMOVE AT END OF CONSTRUCTION.
- c. TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT A RATE OF 100 LBS/ACRES.
- d. MULCH AS APPLIED TO TEMPORARY EROSION CONTROL SEEDING SHALL BE BY THE METHOD SPECIFIED IN THE CONTRACT AND AT THE DIRECTION OF THE ENGINEER. MULCH WILL BE PAID SEPARATELY AND SHALL CONFORM TO SECTION 251 OF THE STANDARD SPECIFICATIONS.
- e. CONSTRUCT PERIMETER EROSION CONTROL AT BEGINNING OF CONSTRUCTION. REMOVE AT END OF CONSTRUCTION.
- f. STRAW BALES, HAY BALES, PERIMETER EROSION BARRIER AND SILT FENCE WILL NOT BE PERMITTED FOR TEMPORARY OR PERMANENT DITCH CHECKS. DITCH CHECKS SHALL BE COMPOSED OF AGGREGATE (IF SPECIFIED), ENVIROBERM, TRIANGULAR SILT DIKES, GEORIDGE AND ROLLED EXCELSIOR.
- g. ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO THE APPROVAL AND USE OF THE PRODUCT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A NOTARIZED CERTIFICATION BY THE PRODUCER STATING THE INTENDED USE OF THE PRODUCT AND THAT THE PHYSICAL PROPERTIES REQUIRED FOR THIS APPLICATION ARE MET OR EXCEEDED. THE CONTRACTOR SHALL PROVIDE MANUFACTURER INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.

3. STORM WATER MANAGEMENT: PROVIDED BELOW IS A DESCRIPTION OF MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CLEAN WATER ACT.

- a. SUCH PRACTICES MAY INCLUDE BUT ARE NOT LIMITED TO STORM WATER DETENTION STRUCTURES (INCLUDING WET PONDS), STORM WATER RETENTION STRUCTURES, FLOW ATTENUATION BY USE OF OPEN VEGETATED SWALES AND NATURAL DEPRESSIONS, INFILTRATION OF RUNOFF ON SITE, AND SEQUENTIAL SYSTEMS (WHICH COMBINE SEVERAL PRACTICES). THE PRACTICES SELECTED FOR IMPLEMENTATION WERE DETERMINED ON THE BASIS OF THE TECHNICAL GUIDANCE IN SECTION 59-8 (EROSION AND SEDIMENT CONTROL) IN CHAPTER 59 (LANDSCAPE DESIGN AND EROSION CONTROL) OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION BUREAU OF DESIGN AND ENVIRONMENT MANUAL. IF PRACTICES OTHER THAN THOSE DISCUSSED IN SECTION 59-8 ARE SELECTED FOR IMPLEMENTATION OR IF PRACTICES ARE APPLIED TO SITUATIONS DIFFERENT FROM THOSE COVERED IN SECTION 59-8, THE TECHNICAL BASIS FOR SUCH DECISIONS WILL BE EXPLAINED BELOW.
- b. VELOCITY DISSIPATION DEVICES WILL BE PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL AS NECESSARY TO PROVIDE A NON-EROSIVE VELOCITY FLOW FROM THE STRUCTURE TO A WATER COURSE SO THAT THE NATURAL PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED (E.G. MAINTENANCE OF HYDROLOGIC CONDITIONS SUCH AS THE HYDROPERIOD AND HYDRODYNAMICS PRESENT PRIOR TO THE INITIATION OF CONSTRUCTION ACTIVITIES).

DESCRIPTION OF STORM WATER MANAGEMENT CONTROLS:

4. OTHER CONTROLS:

- a. VEHICLE ENTRANCES AND EXITS - STABILIZED CONSTRUCTION ENTRANCES AND EXITS MUST BE CONSTRUCTED TO PREVENT TRACKING OF SEDIMENTS ONTO ROADWAYS. THE CONTRACTOR WILL PROVIDE THE RESIDENT ENGINEER WITH A WRITTEN PLAN IDENTIFYING THE LOCATION OF STABILIZED ENTRANCES AND EXITS AND THE PROCEDURES (SHE WILL USE TO CONSTRUCT AND MAINTAIN THEM.
- b. MATERIAL DELIVERY, STORAGE, AND USE - THE FOLLOWING Bmps SHALL BE IMPLEMENTED TO HELP PREVENT DISCHARGES OF CONSTRUCTION MATERIALS DURING DELIVERY, STORAGE, AND USE:
 - ALL PRODUCTS DELIVERED TO THE PROJECT SITE MUST BE PROPERLY LABELED.
 - WATER TIGHT SHIPPING CONTAINERS AND/OR SEMI TRAILERS SHALL BE USED TO STORE HAND TOOLS, SMALL PARTS, AND MOST CONSTRUCTION MATERIALS THAT CAN BE CARRIED BY HAND, SUCH AS PAINT CANS, SOLVENTS, AND GREASE.
 - A STORAGE/CONTAINMENT FACILITY SHOULD BE CHOSEN FOR LARGER ITEMS SUCH AS DRUMS AND ITEMS SHIPPED OR STORED ON PALLETS. SUCH MATERIAL IS TO BE COVERED BY A TIN ROOF OR LARGE SHEETS OF PLASTIC TO PREVENT PRECIPITATION FROM COMING IN CONTACT WITH THE PRODUCTS BEING STORED.
 - LARGE ITEMS SUCH AS LIGHT STANDS, FRAMING MATERIALS AND LUMBER SHALL BE STORED IN THE OPEN IN A GENERAL STORAGE AREA. SUCH MATERIAL SHALL BE ELEVATED WITH WOOD BLOCKS TO MINIMIZE CONTACT WITH STORM WATER RUNOFF.
 - SPILL CLEAN-UP MATERIALS, MATERIAL SAFETY DATA SHEETS, AN INVENTORY OF MATERIALS, AND EMERGENCY CONTACT NUMBERS SHALL BE MAINTAINED AND STORED IN ONE DESIGNATED AREA AND EACH CONTRACTOR IS TO INFORM HIS/HER EMPLOYEES AND THE RESIDENT ENGINEER OF THIS LOCATION.
- c. STOCKPILE MANAGEMENT - Bmps SHALL BE IMPLEMENTED TO REDUCE OR ELIMINATE POLLUTION OF STORM WATER FROM STOCKPILES OF SOIL AND PAVING MATERIALS SUCH AS BUT NOT LIMITED TO PORTLAND CEMENT RUBBLE, ASPHALT CONCRETE, ASPHALT CONCRETE RUBBLE, AGGREGATE BASE, AGGREGATE SUB BASE, AND PRE-MIXED AGGREGATE. THE FOLLOWING Bmps MAY BE CONSIDERED:
 - PERIMETER EROSION BARRIER
 - TEMPORARY SEEDING
 - TEMPORARY MULCH
 - PLASTIC COVERS
 - SOIL BINDERS
 - PERIMETER EROSION BARRIER

THE CONTRACTOR WILL PROVIDE THE RESIDENT ENGINEER WITH A WRITTEN PLAN OF THE PROCEDURES (SHE WILL USE ON THE PROJECT AND HOW THEY WILL BE MAINTAINED.

- d. WASTE DISPOSAL. NO MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED INTO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- e. THE PROVISIONS OF THIS PLAN SHALL ENSURE AND DEMONSTRATE COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
- f. THE CONTRACTOR SHALL PROVIDE A WRITTEN AND GRAPHIC PLAN TO THE RESIDENT ENGINEER IDENTIFYING WHERE EACH OF THE ABOVE AREAS WILL BE LOCATED AND HOW THEY ARE TO BE MANAGED.

5. APPROVED STATE OR LOCAL LAWS:

THE MANAGEMENT PRACTICES, CONTROLS AND PROVISIONS CONTAINED IN THIS PLAN WILL BE IN ACCORDANCE WITH IDOT SPECIFICATIONS, WHICH ARE AT LEAST AS PROTECTIVE AS THE REQUIREMENTS CONTAINED IN THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S ILLINOIS URBAN MANUAL, 1995. PROCEDURES AND REQUIREMENTS SPECIFIED IN APPLICABLE SEDIMENT AND EROSION SITE PLANS OR STORM WATER MANAGEMENT PLANS APPROVED BY LOCAL OFFICIALS SHALL BE DESCRIBED OR INCORPORATED BY REFERENCE IN THE SPACE PROVIDED BELOW. REQUIREMENTS SPECIFIED IN SEDIMENT AND EROSION SITE PLANS, SITE PERMITS, STORM WATER MANAGEMENT SITE PLANS OR SITE PERMITS APPROVED BY LOCAL OFFICIALS THAT ARE APPLICABLE TO PROTECTING SURFACE WATER RESOURCES ARE, UPON SUBMITTAL OF AN NOI, TO BE AUTHORIZED TO DISCHARGE UNDER PERMIT ILR10 INCORPORATED BY REFERENCE AND ARE ENFORCEABLE UNDER THIS PERMIT EVEN IF THEY ARE NOT SPECIFICALLY INCLUDED IN THE PLAN. DESCRIPTION OF PROCEDURES AND REQUIREMENTS SPECIFIED IN APPLICABLE SEDIMENT AND EROSION SITE PLANS OR STORM WATER MANAGEMENT PLANS APPROVED BY LOCAL OFFICIALS:

III. MAINTENANCE:

THE FOLLOWING IS A DESCRIPTION OF PROCEDURES THAT WILL BE USED TO MAINTAIN, IN GOOD AND EFFECTIVE OPERATING CONDITIONS, THE VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE MEASURES IDENTIFIED IN THIS PLAN.

THE RESIDENT ENGINEER WILL PROVIDE MAINTENANCE GUIDES TO THE CONTRACTOR FOR THE PRACTICES ASSOCIATED WITH THIS PROJECT. MAINTENANCE WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND ACCEPTED BY IDOT AFTER FINAL INSPECTION.

IV. INSPECTIONS

QUALIFIED PERSONNEL SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE WHICH HAVE NOT YET BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES AND EQUIPMENT ENTER AND EXIT THE SITE. SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 1/2 INCH OR GREATER OR EQUIVALENT SNOWFALL.

- A. DISTURBED AREAS, USE AREAS (STORAGE OF MATERIALS, STOCKPILES, MACHINE MAINTENANCE, FUELING, ETC.), BORROW SITES, AND WASTE SITES SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. DISCHARGE LOCATIONS OR POINTS THAT ARE ACCESSIBLE, SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF SITE SEDIMENT TRACKING.
- B. BASED ON THE RESULTS OF THE INSPECTION, THE DESCRIPTION OF POTENTIAL POLLUTANT SOURCES IDENTIFIED IN SECTION I ABOVE AND POLLUTION PREVENTION MEASURES IDENTIFIED IN SECTION II ABOVE SHALL BE REVISED AS APPROPRIATE AS SOON AS PRACTICABLE AFTER SUCH INSPECTION. ANY CHANGES TO THIS PLAN RESULTING FROM THE REQUIRED INSPECTIONS SHALL BE IMPLEMENTED WITHIN 1/2 HOUR TO 1 WEEK BASED ON THE URGENCY OF THE SITUATION. THE RESIDENT ENGINEER WILL NOTIFY THE CONTRACTOR OF THE TIME REQUIRED TO IMPLEMENT SUCH ACTIONS THROUGH THE WEEKLY INSPECTION REPORT.
- C. A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH SECTION IV(B) SHALL BE MADE AND RETAINED AS PART OF THE PLAN FOR AT LEAST THREE (3) YEARS AFTER THE DATE OF THE INSPECTION. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART VI, G OF THE GENERAL PERMIT.
- D. IF ANY VIOLATION OF THE PROVISIONS OF THIS PLAN IS IDENTIFIED DURING THE CONDUCT OF THE CONSTRUCTION WORK COVERED BY THIS PLAN, THE RESIDENT ENGINEER SHALL COMPLETE AND FILE AN "INCIDENCE OF NONCOMPLIANCE" (ION) REPORT FOR THE IDENTIFIED VIOLATION. THE RESIDENT ENGINEER SHALL USE FORMS PROVIDED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AND SHALL INCLUDE SPECIFIC INFORMATION ON THE CAUSE OF NONCOMPLIANCE, ACTIONS WHICH WERE TAKEN TO PREVENT ANY FURTHER CAUSES OF NONCOMPLIANCE, AND A STATEMENT DETAILING ANY ENVIRONMENTAL IMPACT WHICH MAY HAVE RESULTED FROM THE NONCOMPLIANCE. ALL REPORTS OF NONCOMPLIANCE SHALL BE SIGNED BY A RESPONSIBLE AUTHORITY IN ACCORDANCE WITH PART VI, G OF THE GENERAL PERMIT. THE INCIDENCE OF NON-COMPLIANCE SHALL BE MAILED TO THE FOLLOWING ADDRESS:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTN: COMPLIANCE ASSURANCE SECTION
1021 NORTH GRAND EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

V. NON-STORM WATER DISCHARGES:

EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER THAT IS COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH THE INDUSTRIAL ACTIVITY ADDRESSED IN THIS PLAN MUST BE DESCRIBED BELOW. APPROPRIATE POLLUTION PREVENTION MEASURES, AS DESCRIBED BELOW, WILL BE IMPLEMENTED FOR THE NON-STORM WATER COMPONENT(S) OF THE DISCHARGE.

- A. SPILL PREVENTION AND CONTROL - Bmps SHALL BE IMPLEMENTED TO CONTAIN AND CLEAN-UP SPILLS AND PREVENT MATERIAL DISCHARGES TO THE STORM DRAIN SYSTEM. THE CONTRACTOR SHALL PRODUCE A WRITTEN PLAN STATING HOW HIS/HER COMPANY WILL PREVENT, REPORT, AND CLEAN UP SPILLS AND PROVIDE A COPY TO ALL OF HIS/HER EMPLOYEES AND THE RESIDENT ENGINEER. THE CONTRACTOR SHALL NOTIFY ALL OF HIS/HER EMPLOYEES ON THE PROPER PROTOCOL FOR REPORTING SPILLS. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY SPILLS IMMEDIATELY.
- B. CONCRETE RESIDUALS AND WASHOUT WASTES - THE FOLLOWING Bmps SHALL BE IMPLEMENTED TO CONTROL RESIDUAL CONCRETE, CONCRETE SEDIMENTS, AND RINSE WATER:
 1. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED FOR RINSING OUT CONCRETE TRUCKS. SIGNS SHALL BE INSTALLED DIRECTING CONCRETE TRUCK DRIVERS WHERE DESIGNATED WASHOUT FACILITIES ARE LOCATED.
 2. THE CONTRACTOR SHALL HAVE THE LOCATION OF TEMPORARY CONCRETE WASHOUT FACILITIES APPROVED BY THE RESIDENT ENGINEER.
 3. ALL TEMPORARY CONCRETE WASHOUT FACILITIES ARE TO BE INSPECTED BY THE CONTRACTOR AFTER EACH USE AND ALL SPILLS MUST BE REPORTED TO THE RESIDENT ENGINEER AND CLEANED UP IMMEDIATELY.
 4. CONCRETE WASTE SOLIDS/LIQUIDS SHALL BE DISPOSED OF PROPERLY.

C. LITTER MANAGEMENT - A PROPER NUMBER OF DUMPSTERS SHALL BE PROVIDED ON SITE TO HANDLE DEBRIS AND LITTER ASSOCIATED WITH THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING HIS/HER EMPLOYEES PLACE ALL LITTER INCLUDING MARKING PAINT CANS, SODA CANS, FOOD WRAPPERS, WOOD LATHE, MARKING RIBBON, CONSTRUCTION STRING, AND ALL OTHER CONSTRUCTION RELATED LITTER IN THE PROPER DUMPSTERS.

D. VEHICLE AND EQUIPMENT CLEANING - VEHICLES AND EQUIPMENT ARE TO BE CLEANED IN DESIGNATED AREAS ONLY, PREFERABLY OFF SITE.

E. VEHICLE AND EQUIPMENT FUELING - A VARIETY OF Bmps CAN BE IMPLEMENTED DURING FUELING OF VEHICLES AND EQUIPMENT TO PREVENT POLLUTION. THE CONTRACTOR SHALL INFORM THE RESIDENT ENGINEER AS TO WHICH Bmps WILL BE USED ON THE PROJECT. THE CONTRACTOR SHALL INFORM THE RESIDENT ENGINEER HOW (SHE WILL BE INFORMING HIS/HER EMPLOYEES OF THESE Bmps (I.E. SIGNS, TRAINING, ETC.). BELOW ARE A FEW EXAMPLES OF THESE Bmps:






1. CONTAINMENT
2. SPILL PREVENTION AND CONTROL
3. USE OF DRIP PANS AND ABSORBENTS
4. AUTOMATIC SHUT-OFF NOZZLES
5. TOPPING OFF RESTRICTIONS
6. LEAK INSPECTION AND REPAIR

F. VEHICLE AND EQUIPMENT MAINTENANCE - ON SITE MAINTENANCE MUST BE PERFORMED IN ACCORDANCE WITH ALL ENVIRONMENTAL LAWS SUCH AS PROPER STORAGE AND NO DUMPING OF OLD ENGINE OIL OR OTHER FLUIDS ON SITE.

VI. FAILURE TO COMPLY:

FAILURE TO COMPLY WITH ANY PROVISIONS OF THIS STORM WATER POLLUTION PREVENTION PLAN WILL RESULT IN THE IMPLEMENTATION OF AN EROSION AND SEDIMENT CONTROL DEFICIENCY DEDUCTION AGAINST THE CONTRACTOR AND/OR PENALTIES UNDER THE NPDES PERMIT WHICH COULD BE PASSED ONTO THE CONTRACTOR.

LEGEND

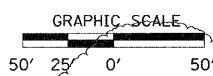
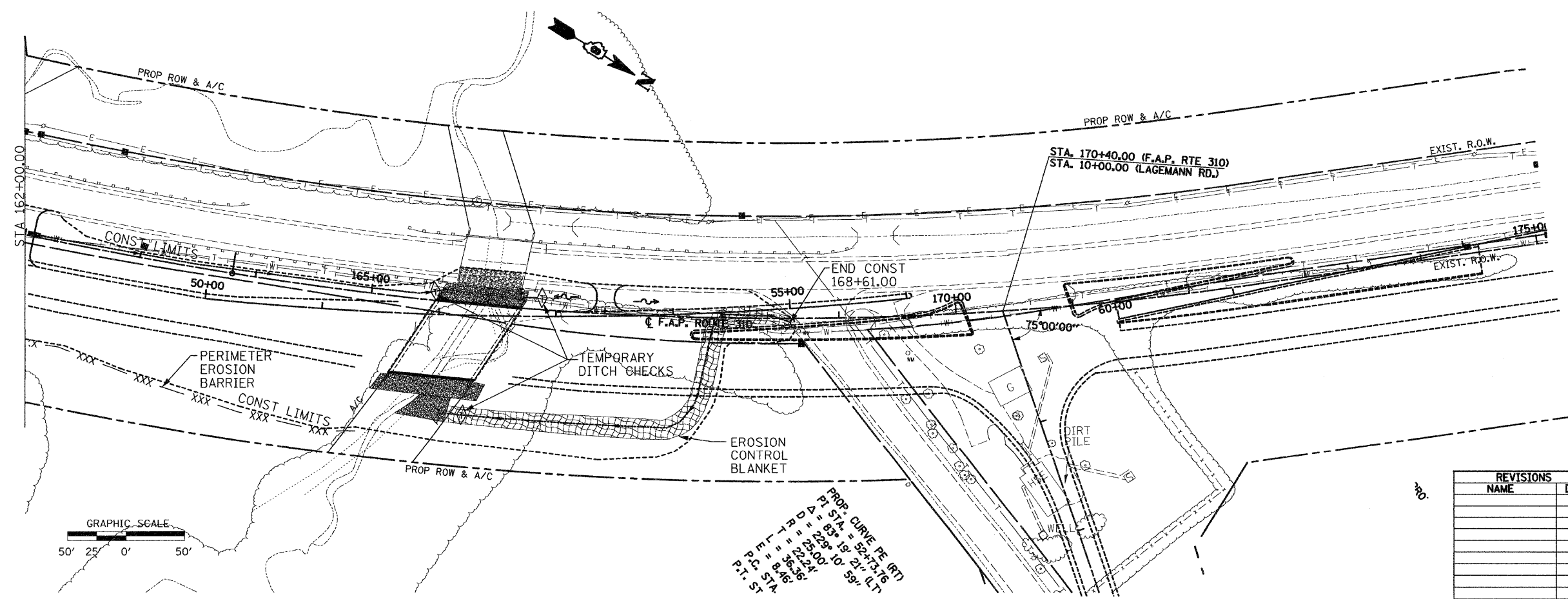
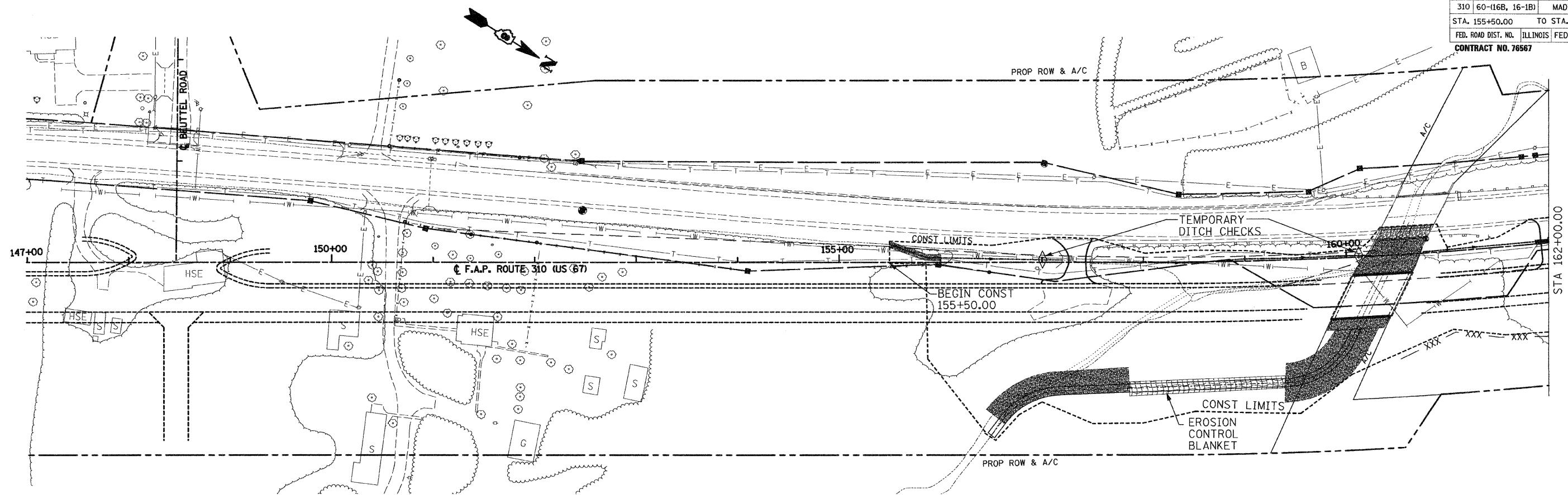
-  TEMPORARY DITCH CHECK- ROLLED EXCELSIOR, SILT WEDGES/PANELS
-  TEMPORARY DITCH CHECK- AGGREGATE
-  EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER- SILT FILTER FENCE OR OTHER AS APPROVED BY THE ENGINEER
-  INLET AND PIPE PROTECTION- STRAW BALES, FILTER FABRIC, AGGREGATES

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STORM WATER POLLUTION
PREVENTION PLAN
FAP ROUTE 310
SECTION 60-(16B, 16-1B)
MADISON COUNTY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	12
STA. 155+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76567

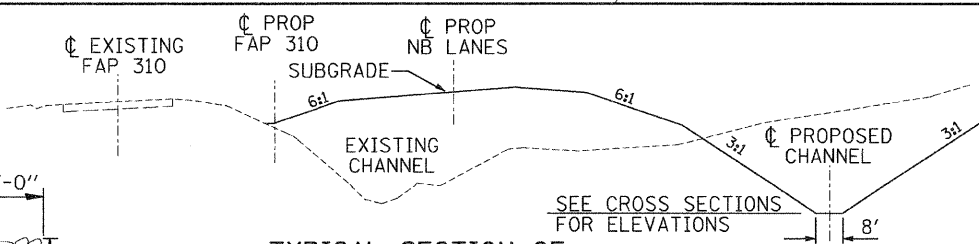
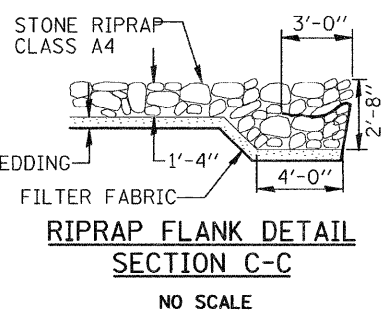
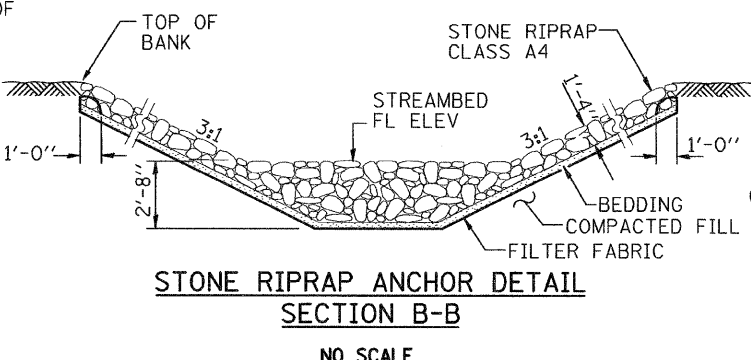
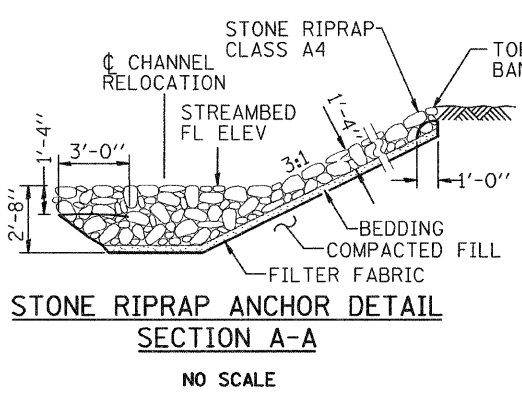
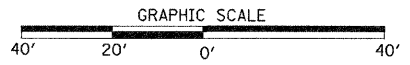
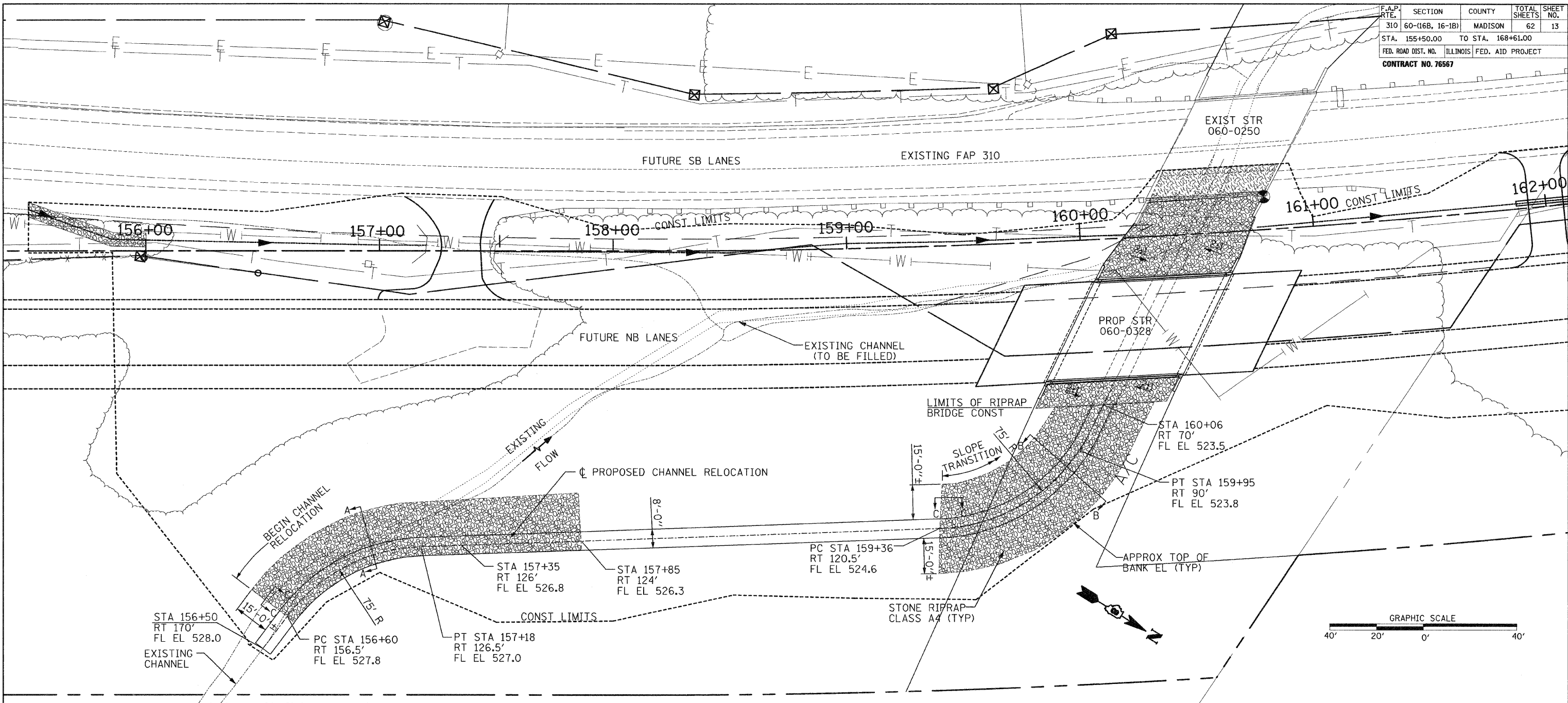


PROP. CURVE (E. RT)
 P.T. STA. 170+00.00
 P.C. STA. 168+61.00
 P.T. STA. 175+00.00
 RADIUS = 229.10' (LT)
 CHORD BEARS = 59'
 CHORD BEARS = 59'

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STORM WATER POLLUTION PREVENTION PLAN
 SCALE: VERT. DRAWN BY U.J.
 HORIZ. CHECKED BY M.A.R.
 DATE 09-03-02

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	13
STA. 155+50.00		TO STA. 168+61.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				



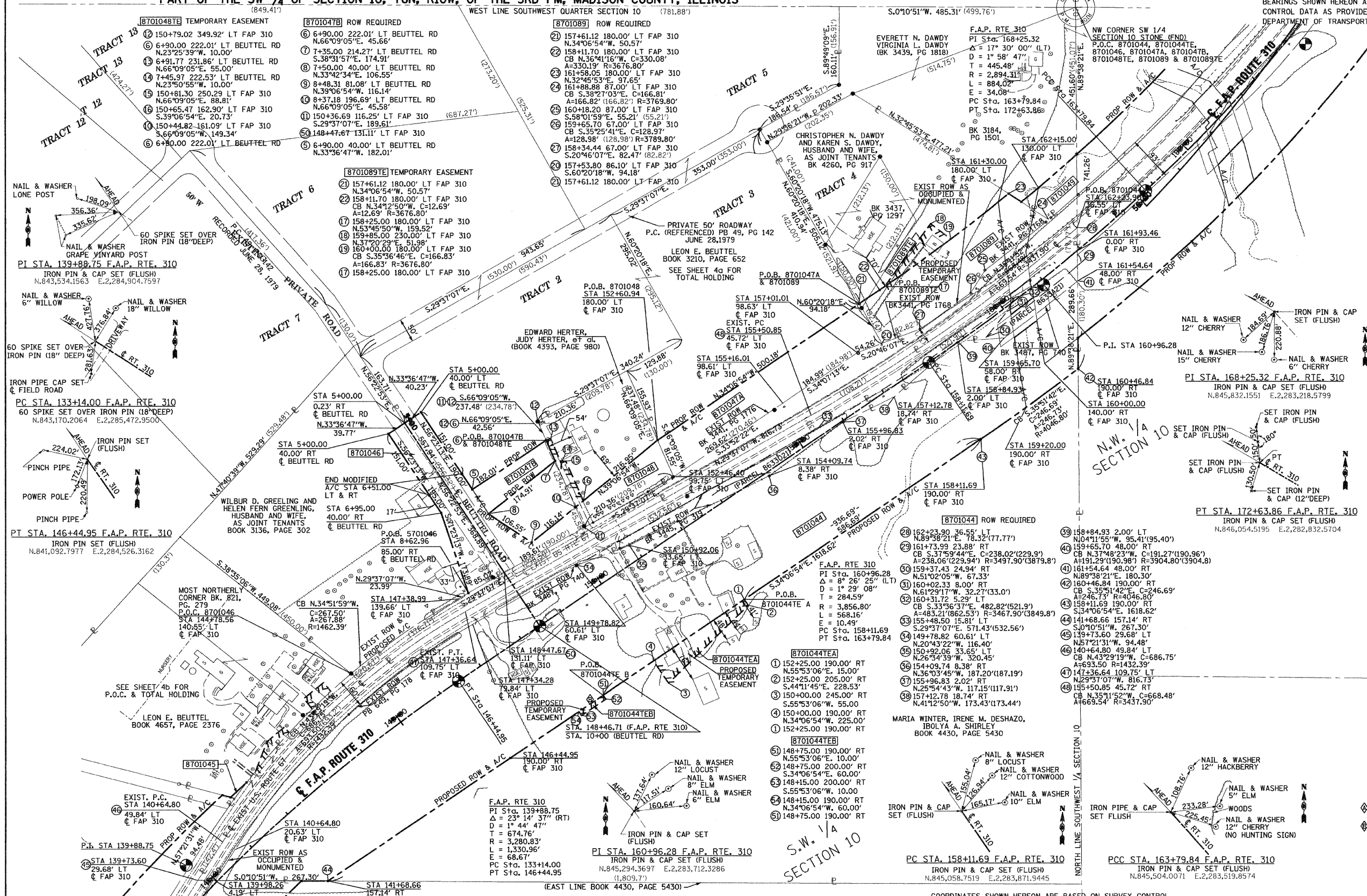
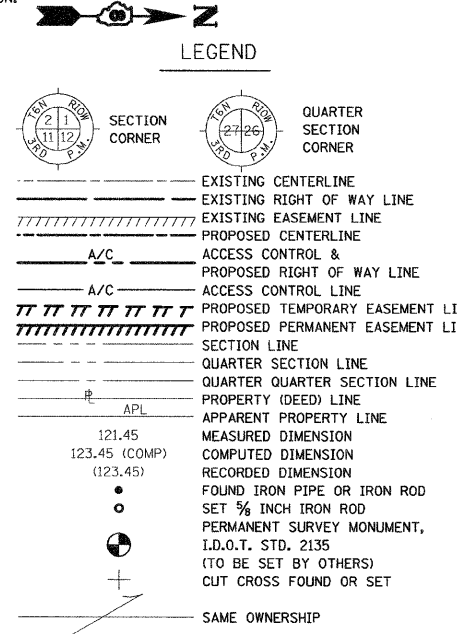
NOTE: 1. LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
RELOCATED CHANNEL DETAILS
SCALE: VERT. 1" = 20"
HORIZ. 1" = 20"
DATE 09-03-02
DRAWN BY B.A.D./J.L.G.
CHECKED BY M.A.R.

PART OF THE SW 1/4 OF SECTION 10, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION. CONTRACT NO. 76567



- STAKING OF PROPOSED RIGHT OF WAY. SET 3/8" METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN, IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 3/8" METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW SURFACE TO MONUMENT THE POSITION SHOWN, IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
COUNTY OF) SS

THIS IS TO CERTIFY THAT I, JEFFREY B. MEYER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAS SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 10, TOWNSHIP 6 NORTH, RANGE 10 WEST, OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED _____
JEFFREY B. MEYER, PLS No. 035-002977

PARCEL	POINT OF ACCESS	TYPE
8701044	RT. STA. 148+47 (FAP 310)	⊕

THE EXISTING EGRESS ACCESS ENTRANCE AT THE DESIGNATED STATION SHOWN HEREON SHALL REMAIN IN EFFECT AND OPERATOR SHALL MAINTAIN AS SAID ENTRANCE IS USED FOR FARMING PURPOSES OR FOR ONE SINGLE FAMILY RESIDENCE OR BOTH, AND SO LONG AS SAID ENTRANCE IS NOT USED FOR ACCESS TO A COMMERCIAL ENTERPRISE OTHER THAN FARMING.

HR
HURST-ROSCHKE ENGINEERS INC.
1400 E. TREMONT STREET
P.O. BOX 130
HILLSBORO, ILLINOIS 62409
PH: 217 532-9989
FAX: 217 532-9212

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (US 67)
SECTION 60-16
MADISON COUNTY
JOB NO. R-98-001-97

STATION 140+00 TO STATION 168+00

100' 0 100' 200'
SCALE 1" = 100'

SHEET 14 OF 62

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PARCEL NO.	OWNER/TITLE REPORT NO.	TOTAL HOLDING	R.O.W. REQUIRED	PREVIOUSLY DEDICATED	REMAINDER	EASEMENTS TEMP	EASEMENTS PERM	EASEMENT PURPOSE	PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
8701044	MARIA WINTER, IRENE M. DESHAZO, IBOLYA A. SHIRLEY 196 MA-1398 BK. 4430, PG. 5430	30,874.99 AC 1,344,909 SF	11,647.4 AC 507,360 SF (1987 ROW)	1,683.33 AC 73,323 SF	19,227.5 AC 837,549 SF	0.1946 AC 8,475 SF	N/A	ENTRANCE CONST AND BUILDING REMOVAL	24-1-01-10-00-000-012	
8701046	WILBUR D. GREELING AND HELEN FERN GREELING 196 MA-1403 BK. 3136, PG. 302	5,076.0 AC 221,111 SF	0.4241 AC 18,472 SF	N/A	4,651.9 AC 202,639 SF	N/A	N/A	N/A	24-1-01-10-00-000-015.002	
8701047	LEON E. BEUTTEL 196 MA-1400 BK. 3210, PG. 652	53,907.1 AC 2,348,194 SF	1,663.2 AC 72,451 SF	N/A	52,243.8 AC 2,275,743 SF	N/A	N/A	N/A	24-1-01-10-00-000-015	
8701048	EDWARD HERTER AND JUDY HERTER 196 MA-1401 BK. 4393, PG. 980	1,141.0 AC 49,702 SF	0.3054 AC 13,303 SF	N/A	0,8356 AC 3,399 SF	0.0547 AC 2,381 SF	N/A	N/A	24-1-01-10-00-000-015.001	
8701089	CHRISTOPHER N. DAWDY AND KAREN S. DAWDY 199 MA-2452 & MA-1405 BK. 4260, PG. 917 & BK. 3437, PG. 1297	3,413.0 AC 148,670 SF	0.9518 AC 41,459 SF	N/A	2,461.2 AC 107,211 SF	0.0976 AC 4,250 SF	N/A	BUILDING REMOVAL	24-1-01-10-00-000-015.005(PT.)	

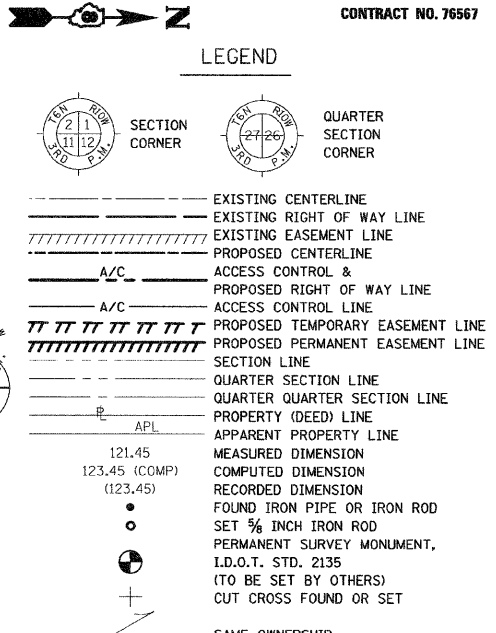
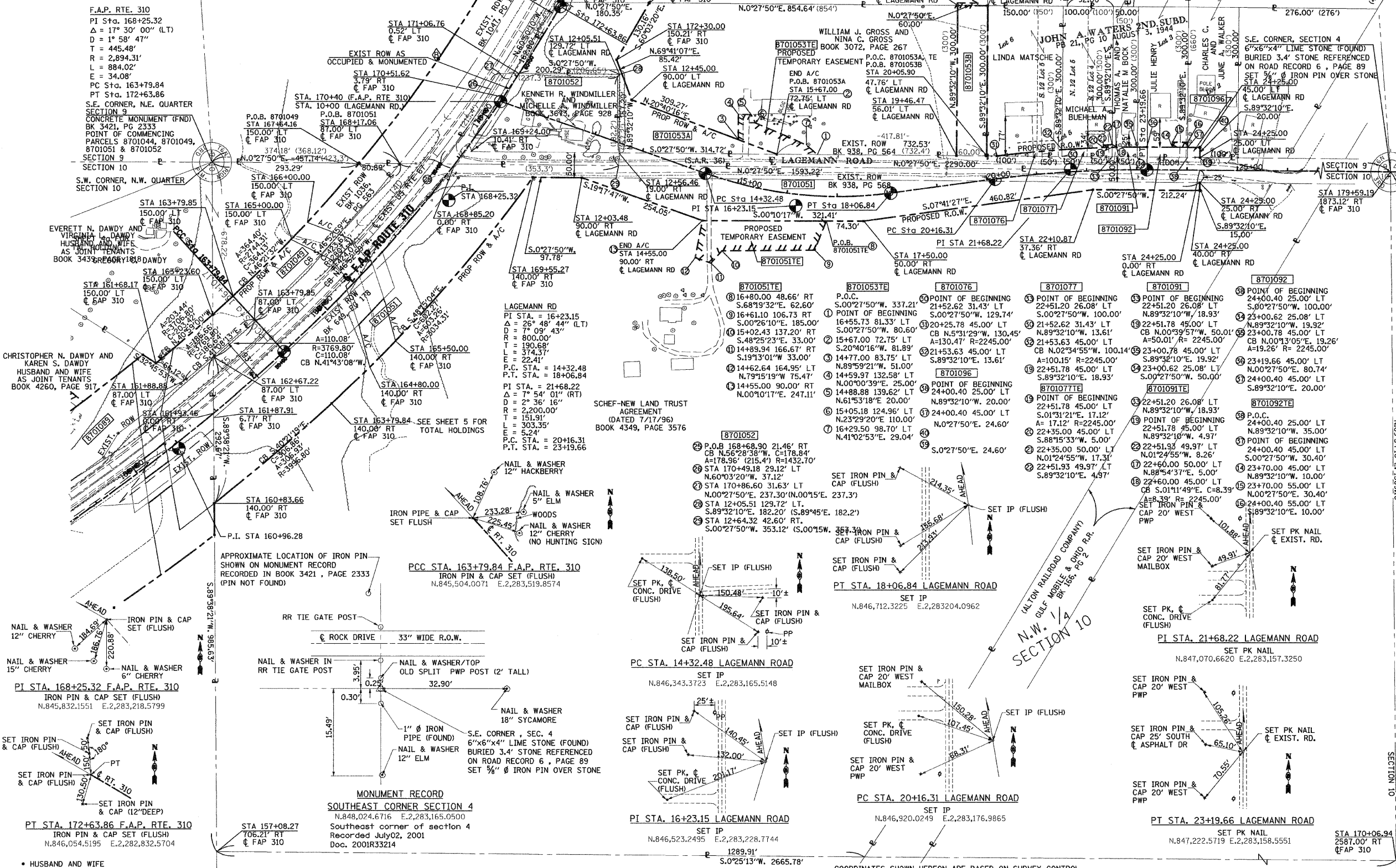
COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

STATION	OFFSET	NORTH	EAST	STATION	OFFSET	NORTH	EAST
141+68.66	157.14' RT	843,825.2384	2,284,937.0630	7+50.00	40.00' LT	844,154.7507	2,284,182.8176
146+44.95	160.00' RT	844,199.3571	2,284,683.6220	8+49.31	81.08' LT	844,243.3872	2,284,241.9520
158+11.69	190.00' RT	845,165.3156	2,284,029.2470	8+37.18	196.69' LT	844,333.4984	2,284,168.6810
160+46.84	190.00' RT	845,365.2431	2,283,884.7270	157+61.12	180.00' LT	844,915.9291	2,283,751.2830
162+23.90	36.55' LT	845,363.4190	2,283,595.0720	158+11.70	180.00' LT	844,957.7975	2,283,722.9200
8+62.96	85.00' RT	844,113.1813	2,284,346.0940	161+58.05	180.00' LT	845,222.4925	2,283,525.7100
6+95.00	40.00' RT	844,057.6802	2,284,181.3000	146+44.95	⊕	841,092.7977	2,284,526.3162
5+00.00	40.00' RT	843,949.7317	2,284,018.9050	148+46.71	⊕	844,259.8344	2,284,413.1596
5+00.00	0.23' RT	843,982.8515	2,283,996.8900	158+11.69	⊕	845,058.7519	2,283,871.9445
5+00.00	40.00' LT	844,016.3553	2,283,974.6190	161+93.46	⊕	845,363.7179	2,283,642.5461
6+90.00	40.00' LT	839,673.9391	2,290,763.4105	139+88.75	PI	843,534.1563	2,284,904.7547
6+90.00	222.01' LT	844,273.1161	2,284,032.0904	152+60.94	180.00' LT	845,501.8219	2,284,031.8144
7+35.00	214.27' LT	844,291.5781	2,284,073.8531	147+38.99	139.66' LT	844,092.3219	2,284,357.9530

PART OF THE NW & SW 1/4 OF SECTION 10, PART OF THE NE 1/4 SECTION 9, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

CONTRACT NO. 76567



STAKING OF PROPOSED RIGHT OF WAY. SET 3/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN, IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 3/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN, IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
COUNTY OF)

THIS IS TO CERTIFY THAT I, JEFFREY B. MEYER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAS SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 9 & 10, TOWNSHIP 6 NORTH, RANGE 10 WEST, OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED _____
JEFFREY B. MEYER, PLS No. 035-002977

PARCEL	POINT OF ACCESS	STATION	TYPE
8701050	LT. STA. 170+40 (FAP 310)		

THE EXISTING EGRESS ACCESS ENTRANCE AT THE DESIGNATED STATION SHOWN HEREON SHALL REMAIN IN EFFECT AND OPERATIONAL UNLESS AS SAID ENTRANCE IS USED FOR FARMING PURPOSES OR FOR ONE SINGLE FAMILY RESIDENCE OR BOTH, AND SO LONG AS SAID ENTRANCE IS NOT USED FOR ACCESS TO A COMMERCIAL ENTERPRISE OTHER THAN FARMING.

A DIRECT EGRESS ENTRANCE SHALL BE PROVIDED AT THE DESIGNATED STATION SHOWN HEREON, SAID ENTRANCE SHALL REMAIN IN EFFECT AND OPERATIONAL UNLESS AS SAID ENTRANCE IS USED FOR FARMING PURPOSES OR FOR ONE SINGLE FAMILY RESIDENCE OR BOTH, AND SO LONG AS SAID ENTRANCE IS NOT USED FOR ACCESS TO A COMMERCIAL ENTERPRISE OTHER THAN FARMING.

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (US 67)
SECTION 60-16
MADISON COUNTY
JOB NO. R-98-001-97

STATION 159+00 TO STATION 173+00

SCALE: 1" = 100'

SHEET 15 OF 62

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

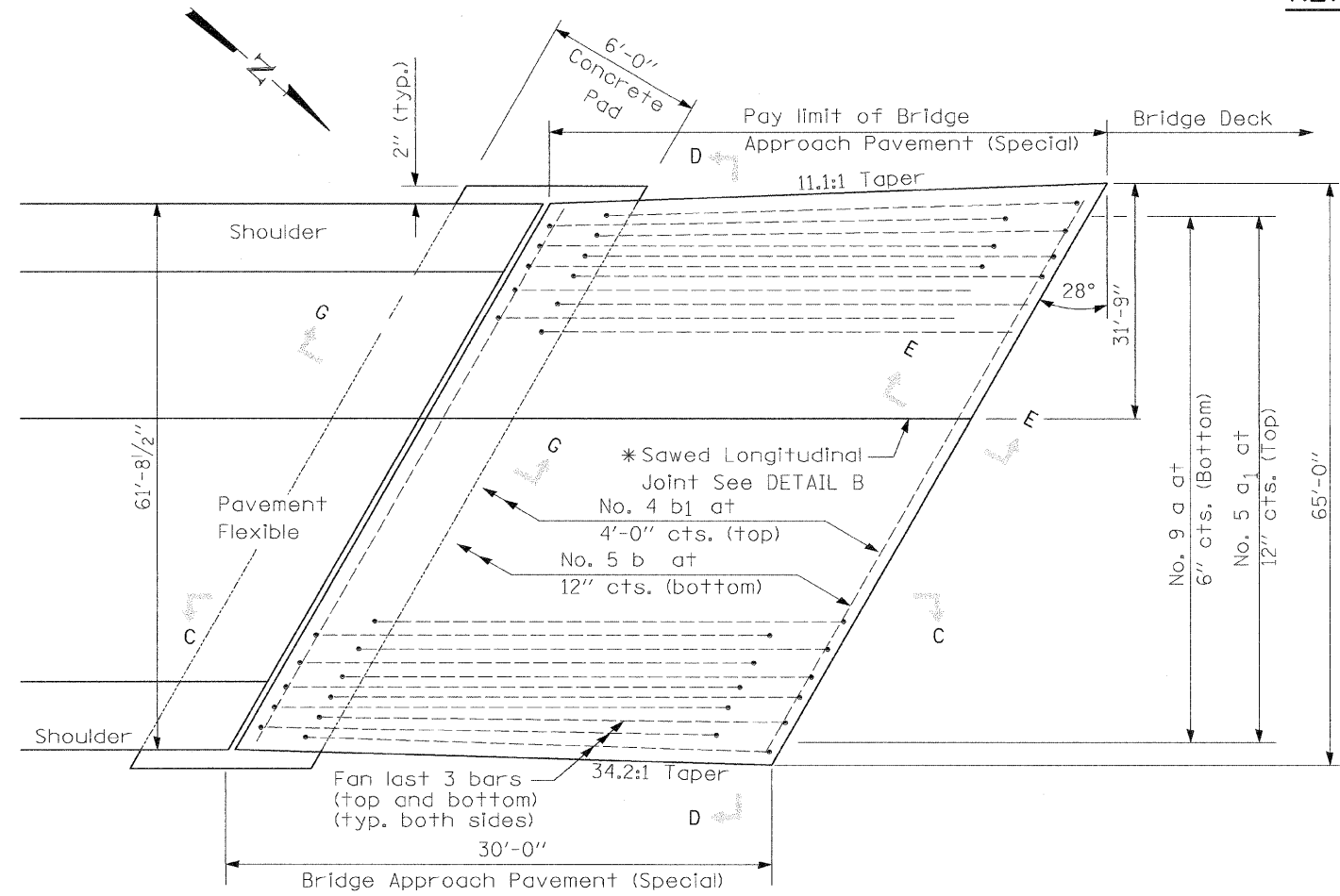
PARCEL NO.	OWNER/TITLE REPORT NO.	TOTAL HOLDING	R.O.W. REQUIRED	PREVIOUSLY DEDICATED	REMAINDER	EASEMENTS TEMP	EASEMENTS PERM	EASEMENT PURPOSE	PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
8701049	EVERETT N. DAWDY AND VIRGINIA L. DAWDY MA-1404	5,366.00 AC	0.8523 AC	233,741 SF	N/A	4,5137 AC	196,613 SF	N/A	N/A	N/A
8701051	SCHAF-NEW LAND TRUST AGREEMENT (DATED 7/17/96) MA-1399	51,484.00 AC	6,004.44 AC	2,242,644 SF	2,053.38 AC	45,479.6 AC	1,981,033 SF	0.3484 AC	24-1-01-10-00-000-001	ENTRANCE CONST
8701052	KENNETH R. WINDMILLER AND MICHELLE A. WINDMILLER MA-1406	5,247.00 AC	0.0000 AC	1,224 SF	0.0000 AC	5,247 SF	0 SF	N/A	N/A	N/A
8701053	WILLIAM J. GROSS AND NINA C. GROSS MA-1407	5,573.4 AC	0.0222 AC	242,778 SF	N/A	4,130.05 AC	179,924 SF	0.1343 AC	24-1-01-09-02-201-001	ENTRANCE CONST
8701076	LINDA M. MATSCHE MA-2850	1,033.1 AC	0.0222 AC	965 SF	N/A	1,010.9 AC	44,035 SF	N/A	24-2-01-09-02-201-023	001
8701077	JOHN O. BUEHLMAN AND ESTHER P. BUEHLMAN MA-2851	30,000 SF	0.0382 AC	1,664 SF	N/A	6,505.0 AC	283,336 SF	0.0020 AC	24-2-01-09-02-201-022	ENTRANCE CONST
8701091	THOMAS A. BOCK AND NATALIE M. BOCK MA-2852	58,560 SF	0.0224 AC	976 SF	N/A	1,322.0 AC	57,584 SF	0.0010 AC	24-2-01-09-02-201-021	ENTRANCE CONST
8701092	RONALD LEE JONES AND MARILYN JEAN JONES MA-2853	1,588.7 AC	0.0460 AC	1,999 SF	N/A	1,642.7 AC	71,561 SF	0.0070 AC	24-1-01-09-02-201-014	ENTRANCE CONST
8701096	CHARLES C. WALKER AND JUNE A. WALKER MA-3199	4,695.3 AC	0.0113 AC	492 SF	N/A	4,684.0 AC	204,035 SF	N/A	24-2-01-09-02-201-019	ENTRANCE CONST

COORDINATE TABLE

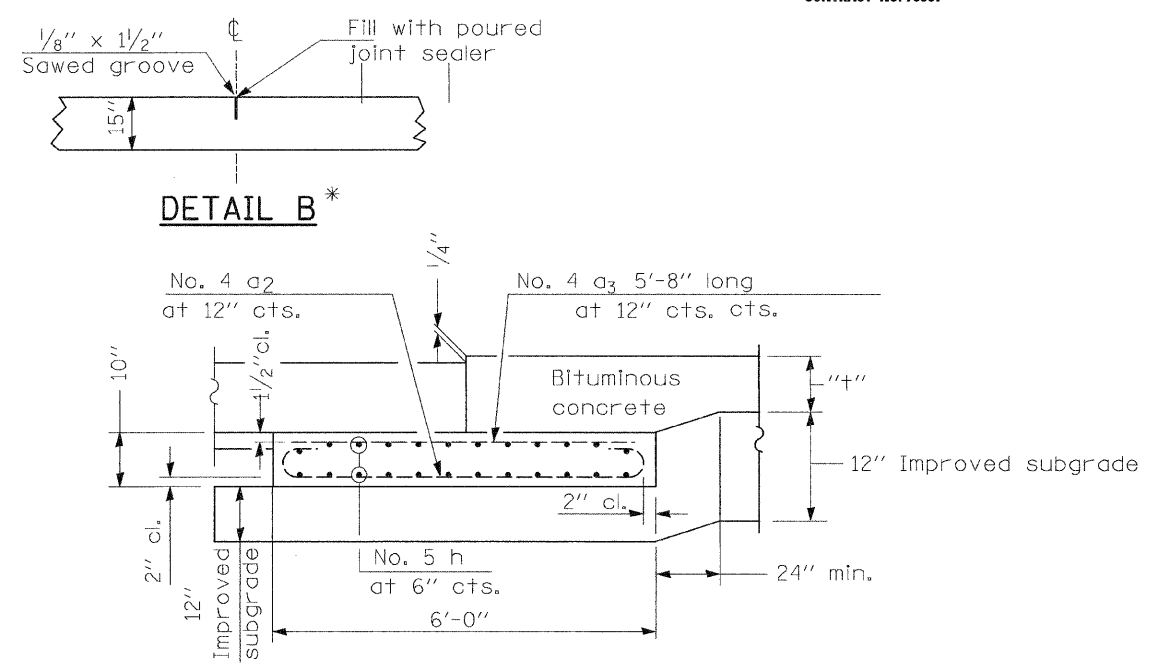
STATION	OFFSET	NORTH	EAST	STATION	OFFSET	NORTH	EAST
167+64.16	150.00' LT	845,653.8602	2,283,145.8530	172+30.00	150.00' RT	846,166.7173	2,282,938.3070
163+79.85	87.00' LT	845,445.1686	2,283,455.7710	12+45.00	90.21' RT	846,196.3732	2,283,018.4145
161+68.17	150.00' LT	845,249.0026	2,283,542.7720	17+67.00	72.75' LT	846,485.7330	2,283,127.5878
163+79.85	150.00' LT	845,402.5615	2,283,409.3640	19+46.47	56.01' LT	846,843.5281	2,283,130.4850
24+25.00	25.00' RT	847,327.7092	2,283,184.4073	19+87.71	343.10' LT	846,845.9572	2,282,830.4949
24+25.00	40.00' RT	847,327.5877	2,283,199.4067	15+67.00	35.10' LT	846,905.9553	2,282,830.9807
17+50.00	50.00' RT	846,658.6772	2,283,259.3591	20+16.31	PC	846,920.0249	2,283,130.9709
14+55.00	90.00' RT	846,347.8818	2,283,361.7246	16+23.15	PT	847,222.5719	2,283,158.5551
12-03.48	90.00' RT	846,097.4896	2,283,174.4457	16+23.15	PI	847,523.2495	2,283,228.7744
169+55.27	140.00' RT	845,999.7178	2,283,173.6540	24+25.00	0'	847,327.9116	2,283,159.4081
163+79.84	140.00' RT	845,598.6861	2,283,622.9880	24+25.00	0'	847,070.6620	2,283,157.3250
160+83.66	140.00' RT	845,364.8461	2,283,821.6880	24+00.40	25.00' LT	847,303.5130	2,283,134.2097
163+23.60	150.00' LT	845,362.4778	2,283,445.6304	24+00.40	45.00' LT	847,303.6750	2,283,114.2103
163+79.84	0.00' LT	845,504.0071	2,283,519.8574				

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	16
STA. 165+05.98 TO STA. 165+35.98				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76567				

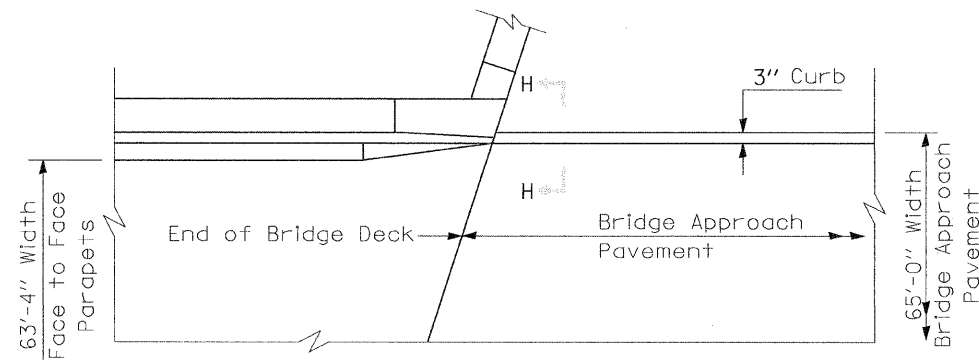
NEW CONSTRUCTION



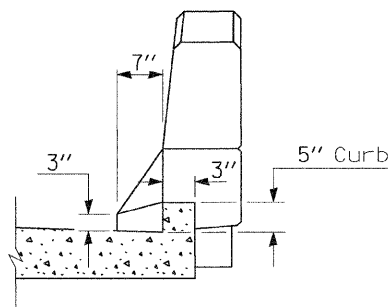
PLAN - WITH SKEW



SECTION G-G - FLEXIBLE PAVEMENT
(Showing reinforcement)



PARAPET TO CURB TRANSITION INTEGRAL ABUTMENT



SECTION H - H

GENERAL NOTES

THICKNESS-“+”=Thickness of Pavement.
See Standard 421001 for reinforcement details not shown.
See Standard 420001 for details of joints not shown.

(Sheet 1 of 2)

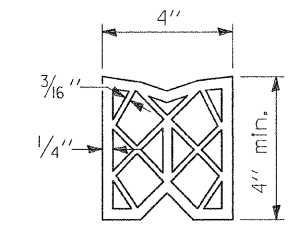
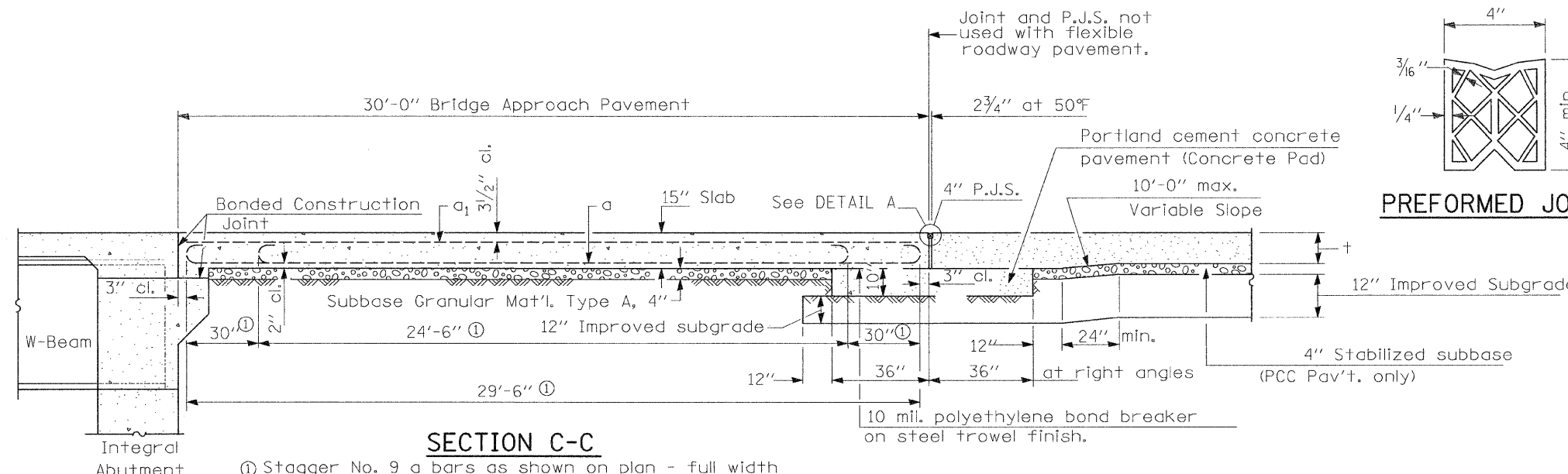
DESIGNED	J.L.G.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

* Saw ϕ or lane edge if poured two or more lane widths at a time.
** Omit Reinforcement, tie bars and sawed Long. Jt. for Flexible Pavement.

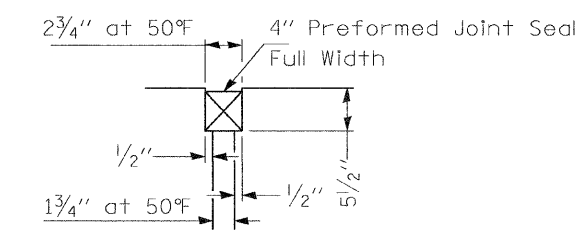
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SOUTH BRIDGE APPROACH PAVEMENT
S.N. 060-0329
SCALE: NO SCALE
DATE: 08-13-02
DRAWN BY: JLG
CHECKED BY: GEP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-116B, 16-1B	MADISON	62	17
STA. 165+05.98 TO STA. 165+35.98				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76567				

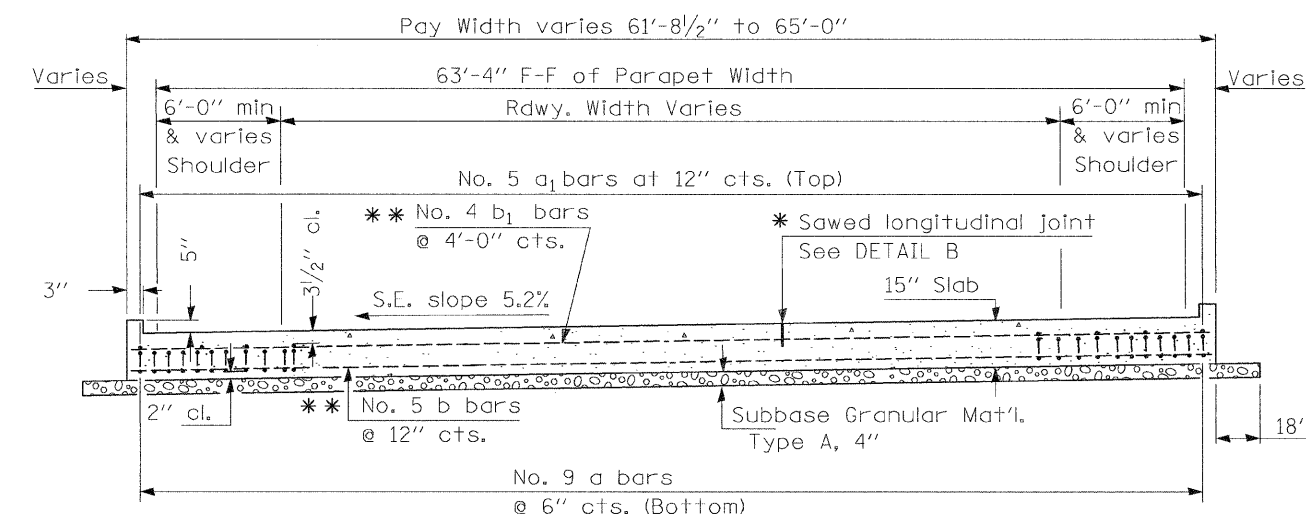


PREFORMED JOINT SEAL



DETAIL A

SECTION C-C
 ① Stagger No. 9 a bars as shown on plan - full width

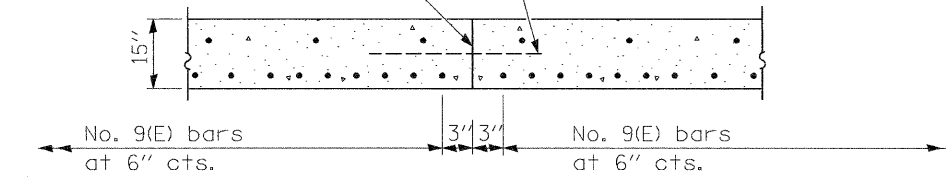


SECTION D-D

(See Plan for Dimensions not shown)
 All reinforcement bars shall be epoxy coated.

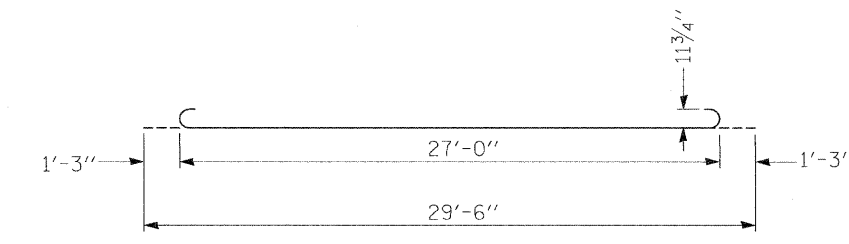
** Lap bar with 1'-1" min lap for No. 4 bars and 1'-4" min lap for No. 5 bars.

Longitudinal Construction Joint in accordance with details shown on Standard 420001.

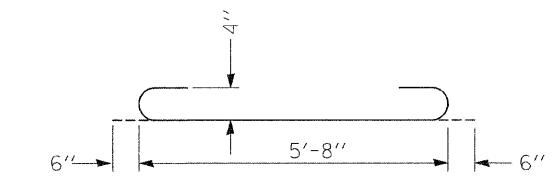


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

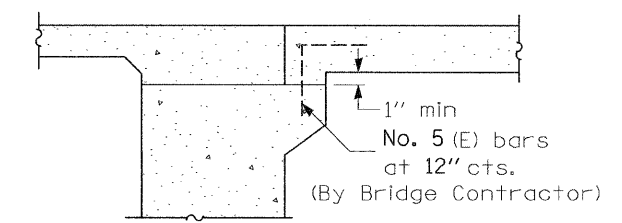
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



BAR a



BAR a2



SECTION E-E
 (Integral Abutments)

DESIGNED	J.L.G.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

DESIGN STRESSES
 $f_y = 60,000$ p.s.i.
 $f'_c = 3,500$ p.s.i.
 $n = 8.5$

REVISIONS	
NAME	DATE

(Sheet 2 of 2)

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOUTH BRIDGE

APPROACH PAVEMENT

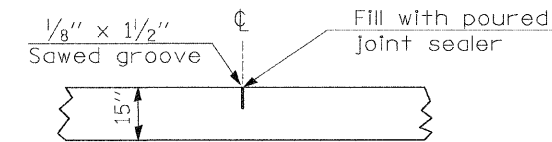
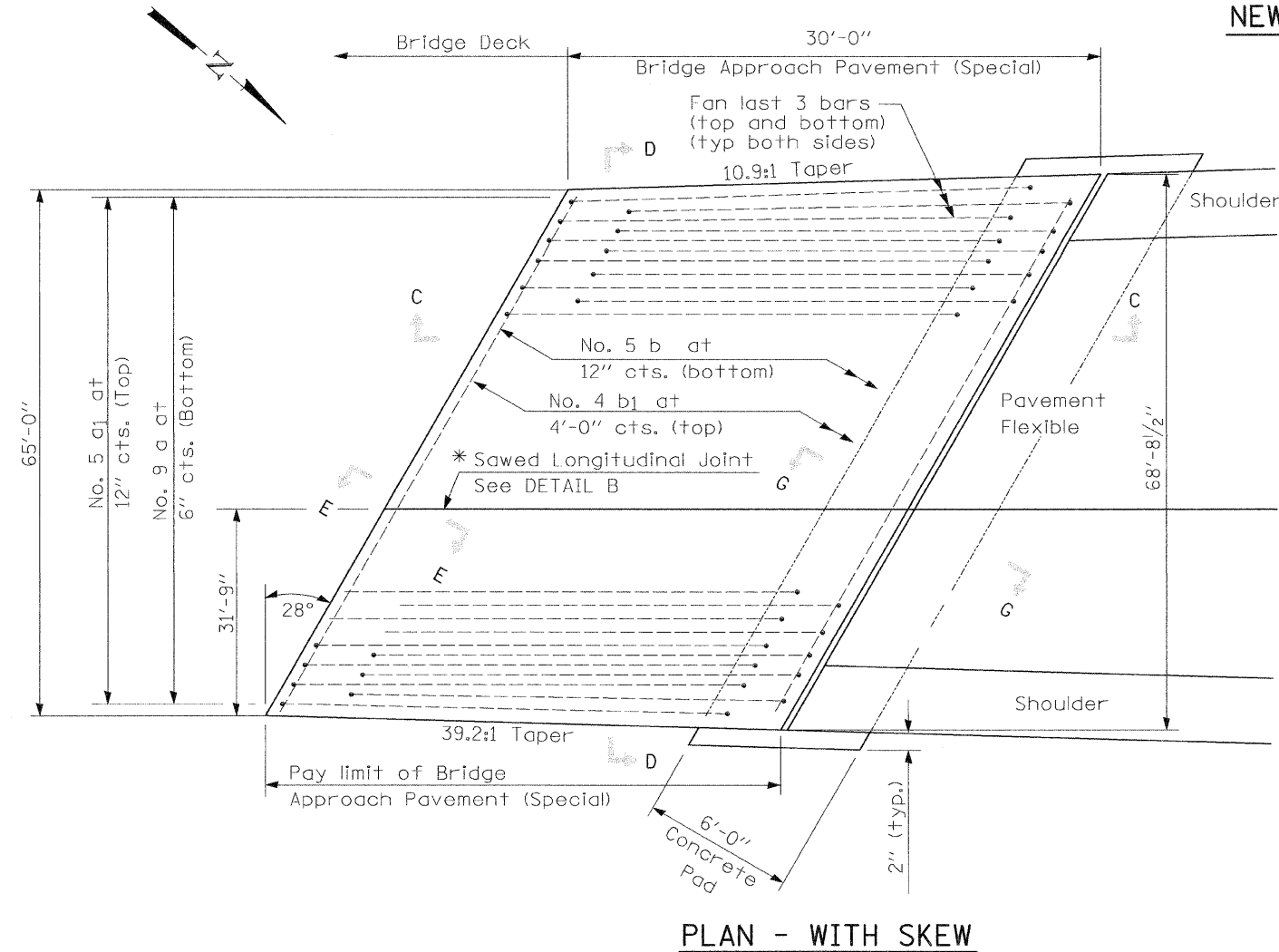
S.N. 060-0329

SCALE: NO SCALE
 DATE: 08-13-02

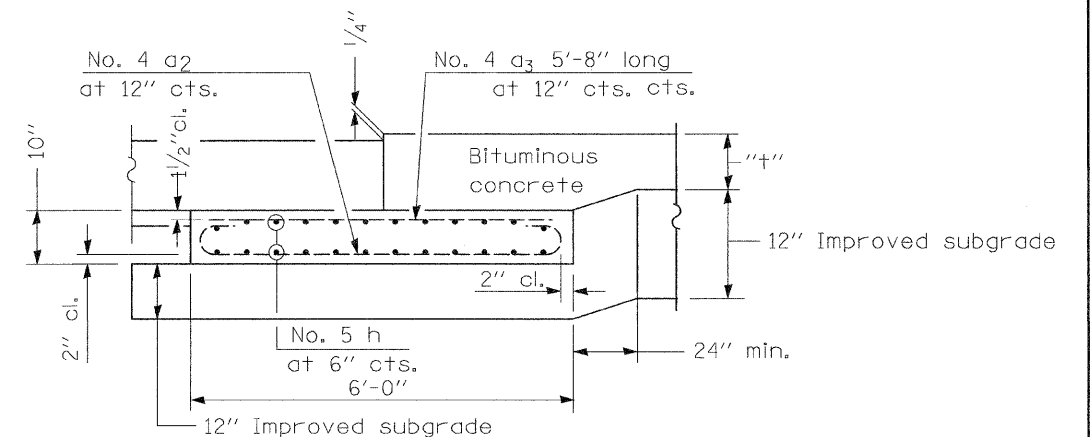
DRAWN BY: JLG
 CHECKED BY: GEP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	18
STA.	160+53.17	TO STA.	160+83.17	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76567				

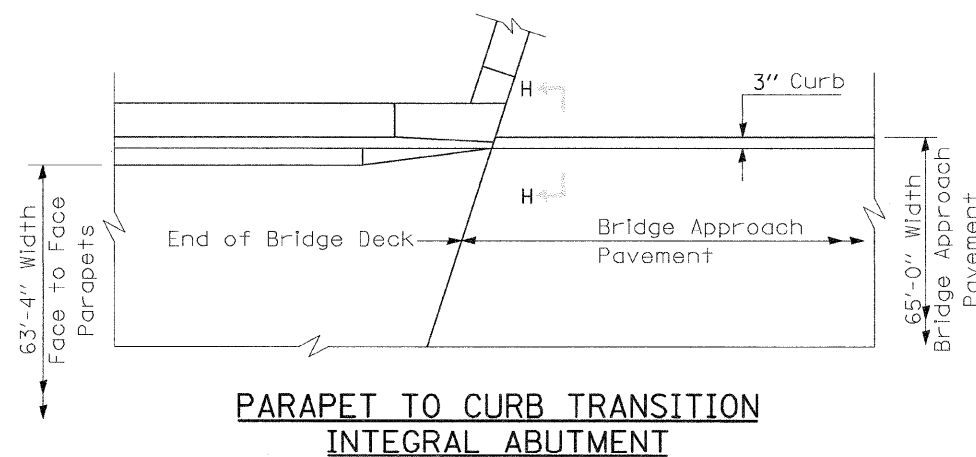
NEW CONSTRUCTION



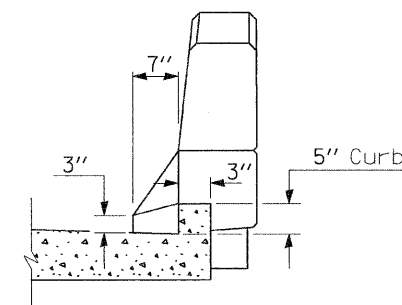
DETAIL B*



SECTION G-G - FLEXIBLE PAVEMENT
(Showing reinforcement)



PARAPET TO CURB TRANSITION INTEGRAL ABUTMENT



SECTION H - H

GENERAL NOTES

THICKNESS-"+"=Thickness of Pavement.
See Standard 421001 for reinforcement details not shown.
See Standard 420001 for details of joints not shown.

(Sheet 1 of 2)

DESIGNED	J.L.G.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

* Saw ϕ or lane edge if poured two or more lane widths at a time.
** Omit Reinforcement, tie bars and sawed Long. Jt. for Flexible Pavement.

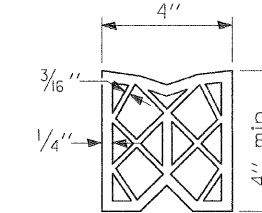
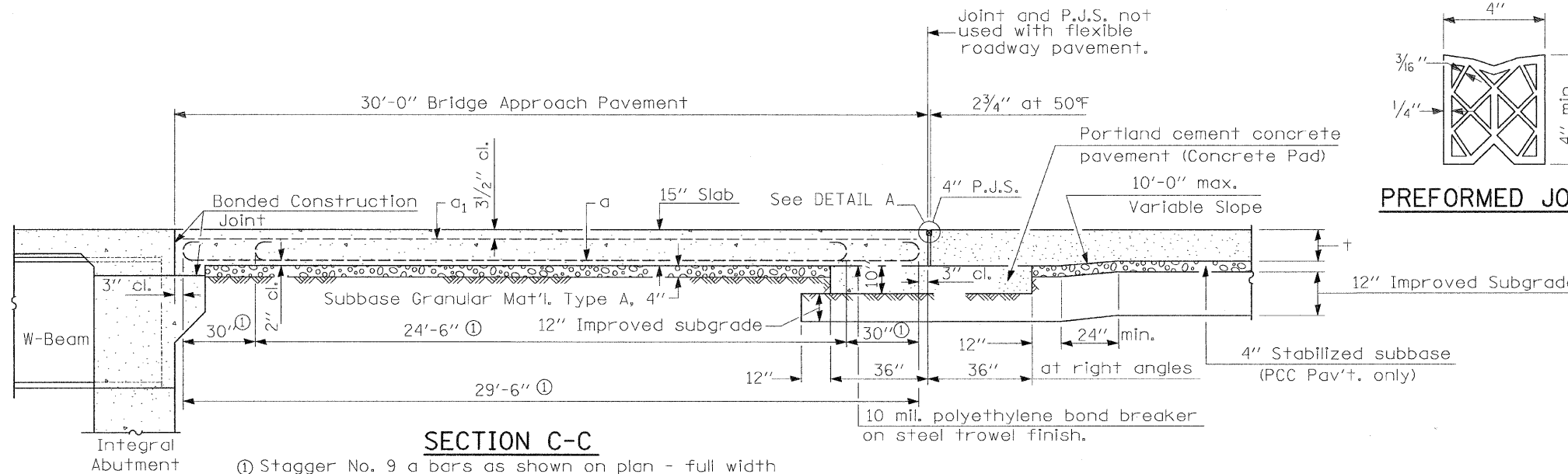
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
NORTH BRIDGE
APPROACH PAVEMENT
S.N. 060-0329

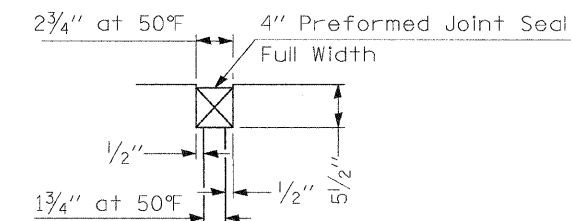
SCALE: NO SCALE
DATE: 08-13-02

DRAWN BY: JLG
CHECKED BY: GEP

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-116B, 16-1B)	MADISON	62	19
STA. 160+53.17 TO STA. 160+83.17				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76567				

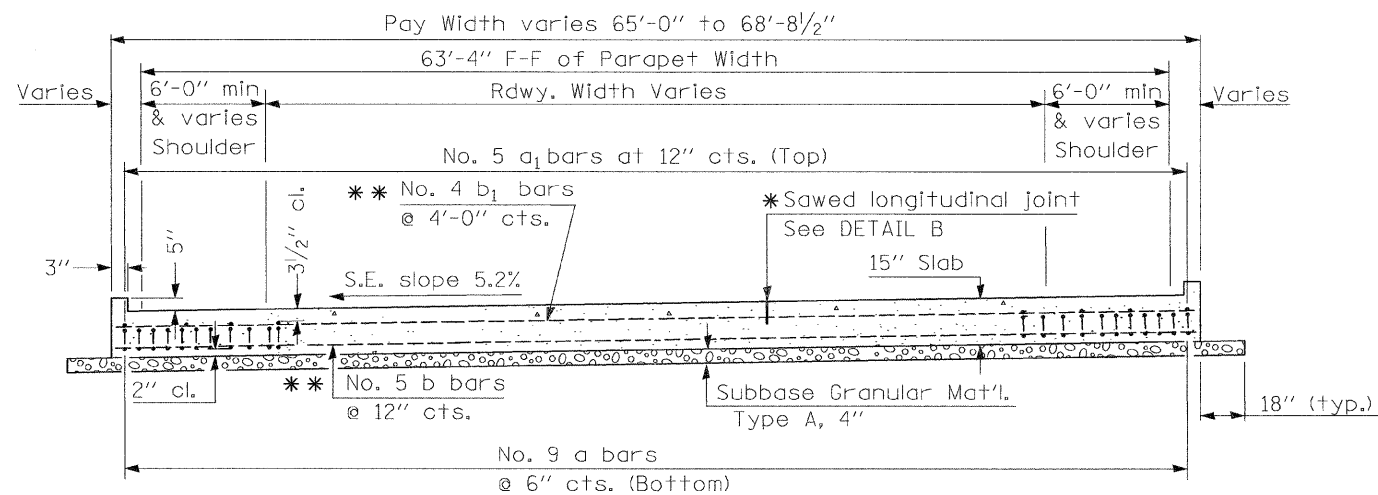


PREFORMED JOINT SEAL



DETAIL A

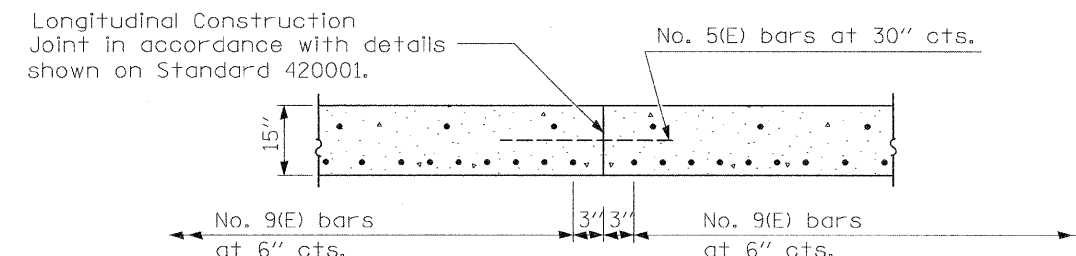
SECTION C-C
 ① Stagger No. 9 a bars as shown on plan - full width



SECTION D-D

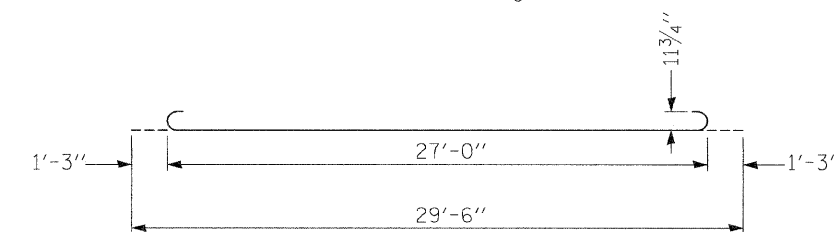
(See Plan for Dimensions not shown)
 All reinforcement bars shall be epoxy coated.

** Lap bar with 1'-1" min lap for No. 4 bars and 1'-4" min lap for No. 5 bars.

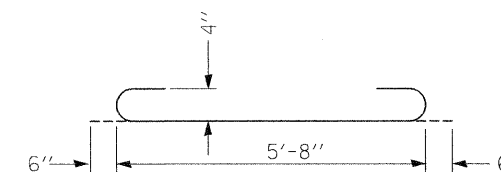


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

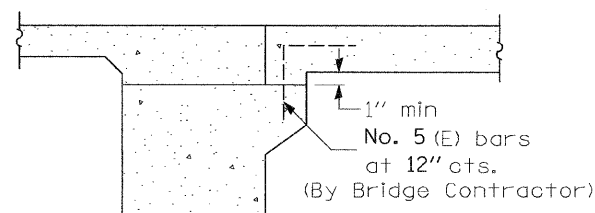
As approved by the Engineer, the Contractor may elect to reduce the widths of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at the edge of a traffic lane.



BAR a



BAR a2



SECTION E-E
 (Integral Abutments)

DESIGNED	J.L.G.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

DESIGN STRESSES

$f_y = 60,000$ p.s.i.
 $f'_c = 3,500$ p.s.i.
 $n = 8.5$

REVISIONS	
NAME	DATE

(Sheet 2 of 2)

ILLINOIS DEPARTMENT OF TRANSPORTATION

NORTH BRIDGE

APPROACH PAVEMENT

S.N. 060-0329

SCALE: NO SCALE
 DATE: 08-13-02

DRAWN BY: J.L.G.
 CHECKED BY: G.E.P.

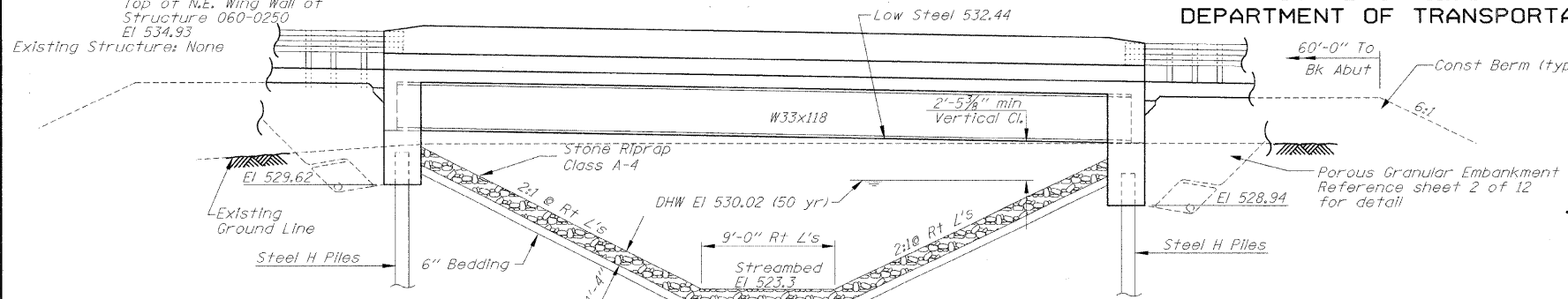
Bench Mark: #101 Cut Square on Top of N.E. Wing Wall of Structure 060-0250 El 534.93
Existing Structure: None

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-16B, 16-1B	MADISON	62	20
STA. 160+24.00				
FED. ROAD DIST. NO. 8 ILLINOIS FED. AID PROJECT				

Sheet No. 1
12 Sheets

CONTRACT 76311



ELEVATION

**HORIZONTAL CURVE DATA
@ SURVEY (@ MEDIAN)
FAP 310 (US 67)**

P.I. STA. 160+96.28
 $\Delta = 08^{\circ}26'25''$ Lt
 $R = 3856.80'$
 $D = 1^{\circ}29'08''$
 $T = 284.59'$
 $L = 568.16'$
 $E = 10.49'$
 $S.E. = 0.043'/ft$
 S.A. STA. 156+23.36 to STA. 158+83.36
 P.C. STA. 158+11.69
 P.T. STA. 163+79.84

STA 160+24.00
BUILT BY
STATE OF ILLINOIS
F.A. RT. 310 SEC. 60-16B

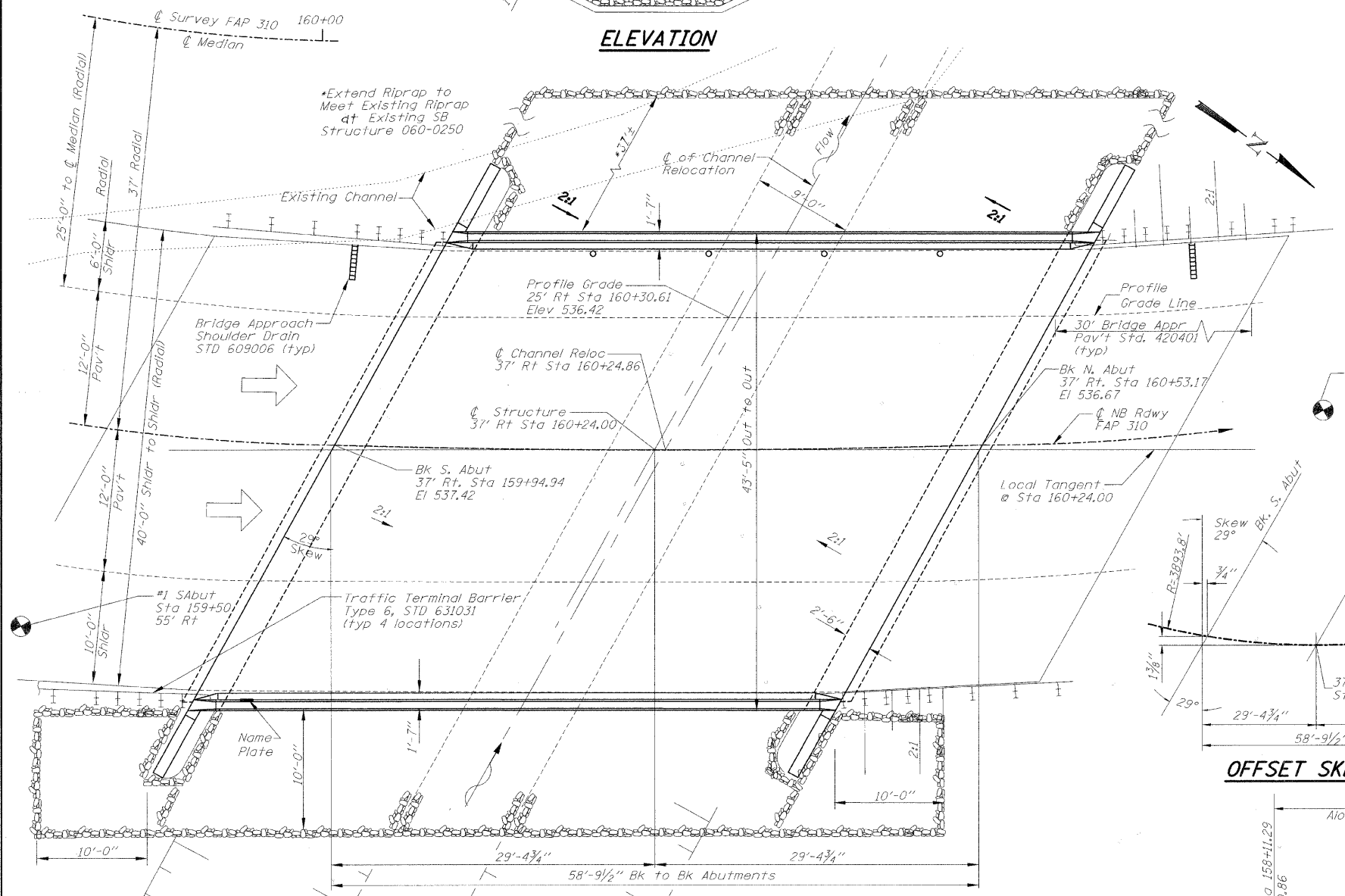
LOADING HS-20
STR. NO. 060-0328

NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIALS

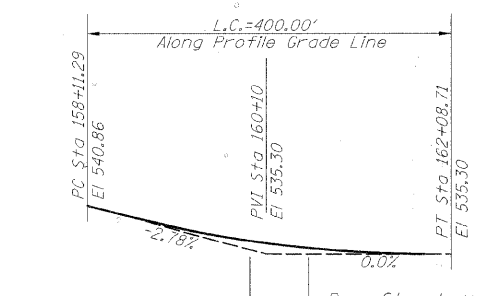
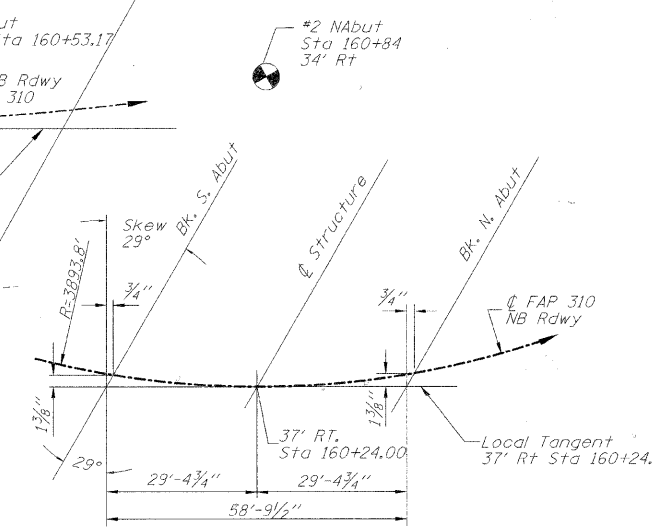
ITEM	UNIT	SUB.	SUPER.	TOTAL
Structure Excavation	CU YD	45.4		45.4
Floor Drains	EACH		4	4
Concrete Structures	CU YD	50.2		50.2
Protective Coat	SQ YD		311	311
Concrete Superstructure	CU YD		103.1	103.1
Furnishing and Erecting Structural Steel	L SUM		0.32	0.32
* Reinforcement Bars, Epoxy Coated	LB.	6,170	21,150	27,320
Furnishing Steel Piles HP 12X53	FOOT	498		498
Driving Piles	FOOT	498		498
Test Pile Steel HP 12X53	EACH	1		1
Name Plates	EACH		1	1
Stone Riprap, Class A4	SQ YD	580		580
Filter Fabric	SQ YD	580		580
Bridge Deck Grooving	SQ YD		250	250
Stud Shear Connectors	EACH		1170	1170
Bar Splacers	EACH		84	84
Porous Granular Embankment (Special)	CU YD	202		202
Pipe Underdrains for Structures 4"	FOOT		140	140

* See Special Provisions



PLAN

OFFSET SKETCH



PROFILE GRADE FOR NB RDWY

WATERWAY INFORMATION

Drainage Area = 0.41 mi² Low Grade El 535.30 @ Sta 162+10

Flood	Freq Yr	0 ft/s	Opening sq ft	Head - ft	Headwater El
			* Exist Prop	* Exist Prop	* Exist Prop
Design	50	646	NA	149.6	530.02
Base	100	756	NA	165.8	530.45
Overtopping	NA	NA	NA	NA	NA
Max Calc	500	1028	NA	201.3	531.33

* Downstream Bridge Constructed 1988. S.N. 060-0250

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 and 1998 Interlms

LOADING HS 20-44

Allow 50 lb/sf for Future Wearing Surface.

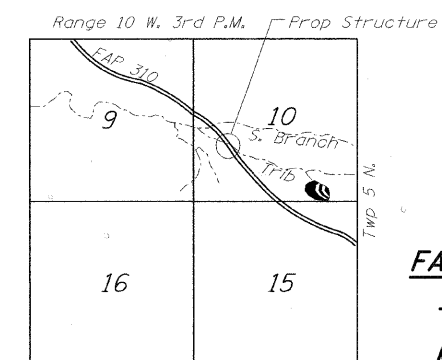
DESIGN STRESSES

FIELD UNITS

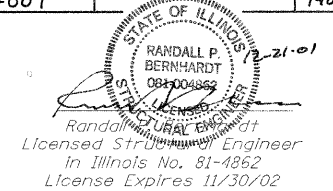
$f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf)
 $f_y = 50,000$ psi (M 270, Grade 50, W-Beams)
 $f_y = 36,000$ psi (M 270, Grade 36, Diaph.)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Acceleration Coefficient (A) = 0.075
 Site Coefficient (S) = 1.0

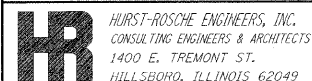


LOCATION SKETCH



APPROVED
FOR STRUCTURAL ADEQUACY ONLY

GENERAL PLAN & ELEVATION
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328



DESIGNED: J.L.G. CHECKED: G.E.P.
 DRAWN: J.L.G. CHECKED: G.E.P.

Rev. 12/21/00

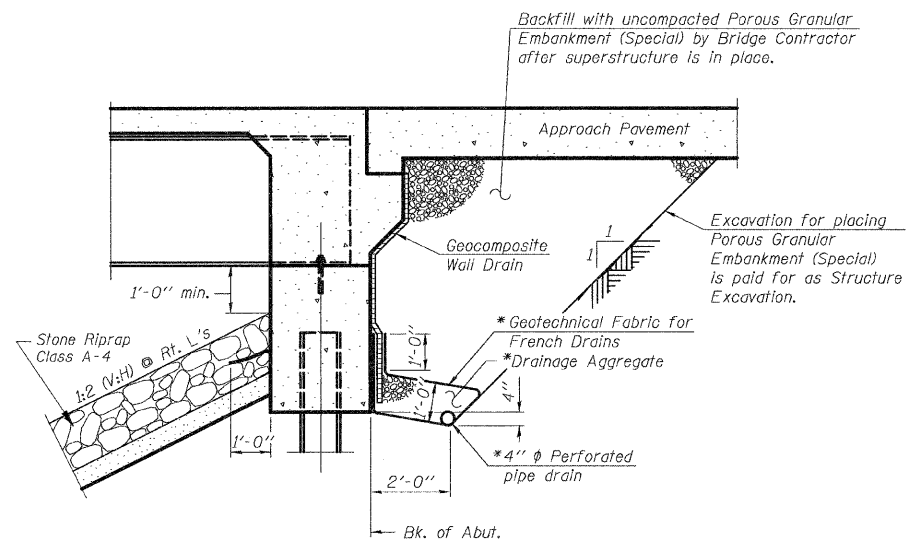
GENERAL NOTES

- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4 in. Ø, holes 1/2 in. Ø, unless otherwise noted.
- Calculated weight of Structural Steel = 40,670 lbs. (M 270, grade 50)
= 9,270 lbs. (M 270, grade 36)
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions
- Reinforcement bars designated (E) shall be epoxy coated.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".
- 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.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	21
STA. 160+24.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

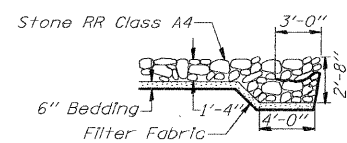
Sheet No. 2
12 Sheets



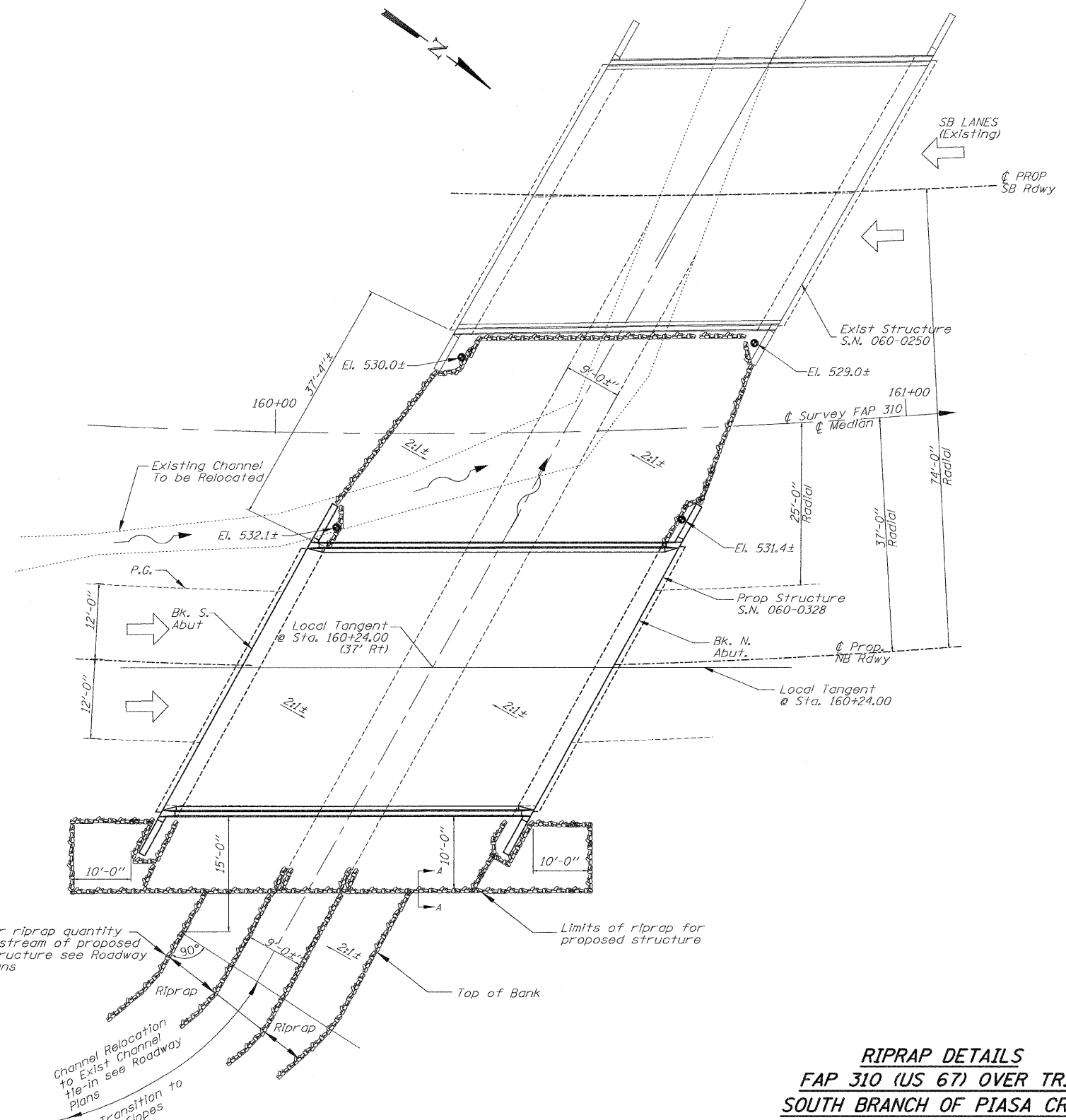
SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

* 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 60L05 of the Standard Specifications and Highway Standard 60110).



SECTION A-A



CHANNEL RELOCATION SKETCH

Reference Roadway Plans
for relocated channel length

RIPRAP DETAILS
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

HR HURST-ROSCHKE ENGINEERS, INC.
CONSULTING ENGINEERS & ARCHITECTS
1400 E. TREMONT ST.
HILLSBORO, ILLINOIS 62049

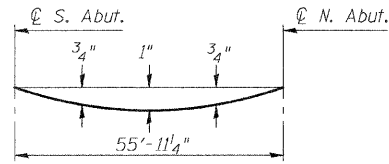
DESIGNED: J.L.G. CHECKED: G.E.P.
DRAWN: J.L.G. CHECKED: G.E.P.

Rev. 12/21/00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	22
STA. 160+24.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 3
12 Sheets



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

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

BEAM LINE 1

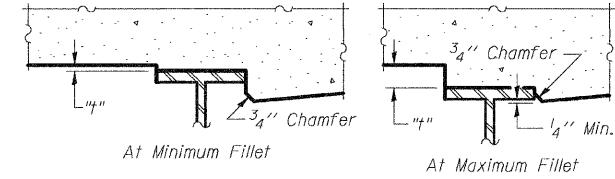
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16003.915	-4.562	536.577	536.577
☉ S. Abut.	16005.336	-4.570	536.556	536.556
A	16015.283	-4.605	536.417	536.462
B	16025.231	-4.614	536.286	536.361
C	16035.178	-4.598	536.162	536.244
D	16045.125	-4.556	536.047	536.112
E	16055.072	-4.488	535.940	535.968
☉ N. Abut.	16060.970	-1.436	535.880	535.880
Bk. N. Abut.	16062.391	-4.422	535.866	535.866

PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16001.434	0.000	536.809	536.809
☉ S. Abut.	16002.850	0.000	536.788	536.788
A	16012.762	0.000	536.649	536.694
B	16022.689	0.000	536.517	536.592
C	16032.630	0.000	536.391	536.473
D	16042.585	0.000	536.272	536.337
E	16052.554	0.000	536.160	536.188
☉ N. Abut.	16058.473	0.000	536.096	536.096
Bk. N. Abut.	16059.899	0.000	536.082	536.082

BEAM LINE 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	15999.874	2.877	536.955	536.955
☉ S. Abut.	16001.294	2.877	536.935	536.935
A	16011.221	2.823	536.792	536.837
B	16021.149	2.803	536.658	536.733
C	16031.077	2.809	536.531	536.613
D	16041.006	2.840	536.413	536.478
E	16050.934	2.897	536.302	536.330
☉ N. Abut.	16056.820	2.943	536.240	536.240
Bk. N. Abut.	16058.238	2.956	536.226	536.226



To determine "h": After all structural steel has 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 Deflection" shown below, minus slab thickness, equals the fillet heights "h" above top flange of beams.

FILLET HEIGHTS

BEAM LINE 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	15995.848	10.321	537.335	537.335
☉ S. Abut.	15997.264	10.311	537.313	537.313
A	16007.173	10.255	537.168	537.213
B	16017.083	10.224	537.031	537.106
C	16026.992	10.219	536.901	536.983
D	16036.902	10.240	536.780	536.845
E	16046.811	10.286	536.666	536.694
☉ N. Abut.	16052.686	10.326	536.602	536.602
Bk. N. Abut.	16054.102	10.337	536.588	536.588

LOCAL TANGENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	15994.883	12.111	537.426	537.426
☉ S. Abut.	15996.298	12.101	537.404	537.404
A	16006.203	12.042	537.258	537.303
B	16016.108	12.009	537.120	537.195
C	16026.013	12.000	536.990	537.072
D	16035.918	12.019	536.868	536.933
E	16045.822	12.063	536.754	536.782
☉ N. Abut.	16051.690	12.101	536.685	536.685
Bk. N. Abut.	16053.109	12.111	536.669	536.669

BEAM LINE 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	15991.838	17.770	537.715	537.715
☉ S. Abut.	15993.251	17.759	537.693	537.693
A	16003.141	17.692	537.545	537.590
B	16013.032	17.651	537.405	537.480
C	16022.922	17.635	537.272	537.354
D	16032.813	17.645	537.148	537.213
E	16042.704	17.681	537.031	537.059
☉ N. Abut.	16048.568	17.715	536.966	536.966
Bk. N. Abut.	16049.981	17.724	536.950	536.950

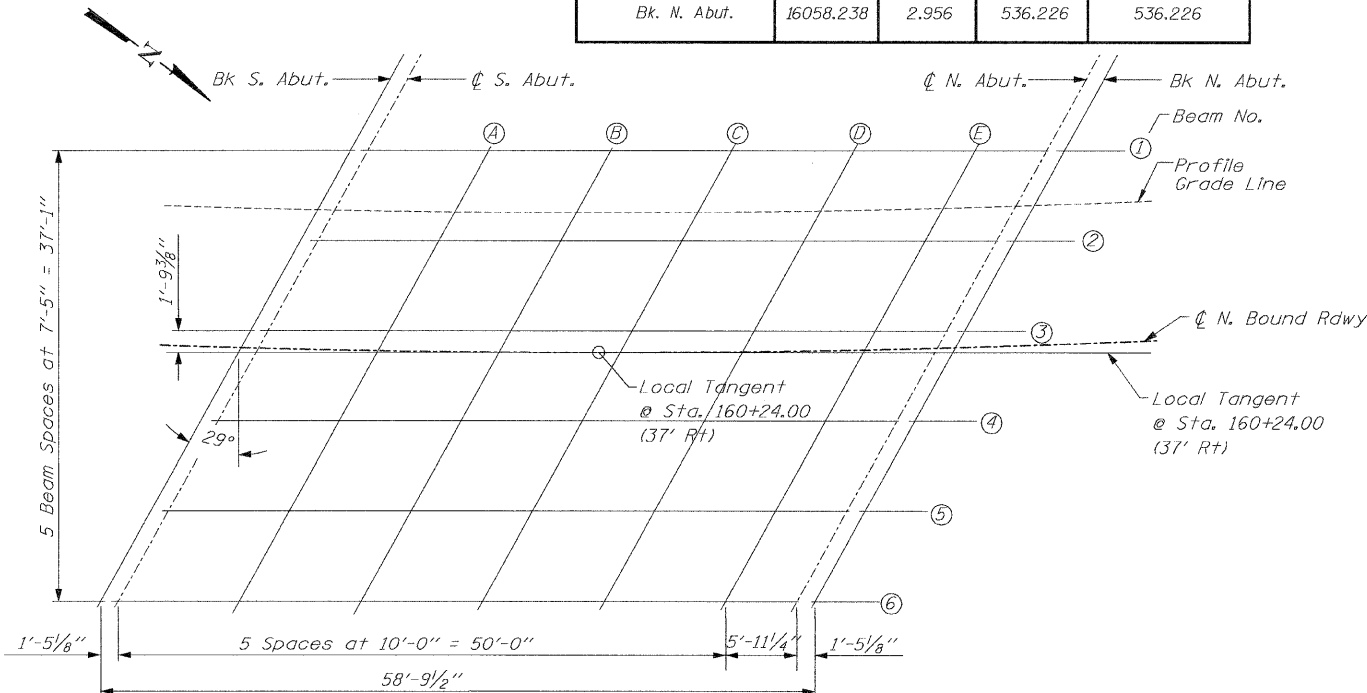
BEAM LINE 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	15987.843	25.223	538.097	538.097
☉ S. Abut.	15989.253	25.210	538.074	538.074
A	15999.125	25.133	537.923	537.968
B	16008.996	25.082	537.780	537.855
C	16018.868	25.056	537.645	537.727
D	16028.740	25.056	537.517	537.582
E	16038.611	25.081	537.397	537.425
☉ N. Abut.	16044.464	25.108	537.330	537.330
Bk. N. Abut.	16045.875	25.116	537.314	537.314

BEAM LINE 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	15983.863	32.680	538.479	538.479
☉ S. Abut.	15985.271	32.665	538.456	538.456
A	15995.123	32.578	538.302	538.347
B	16004.976	32.516	538.156	538.231
C	16014.829	32.479	538.018	538.100
D	16024.682	32.469	537.887	537.952
E	16034.536	32.483	537.765	537.793
☉ N. Abut.	16040.377	32.504	537.696	537.696
Bk. N. Abut.	16041.785	32.510	537.679	537.679

Note: Offsets referenced to Profile Grade Line



PLAN

DESIGNED	R.P.B.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

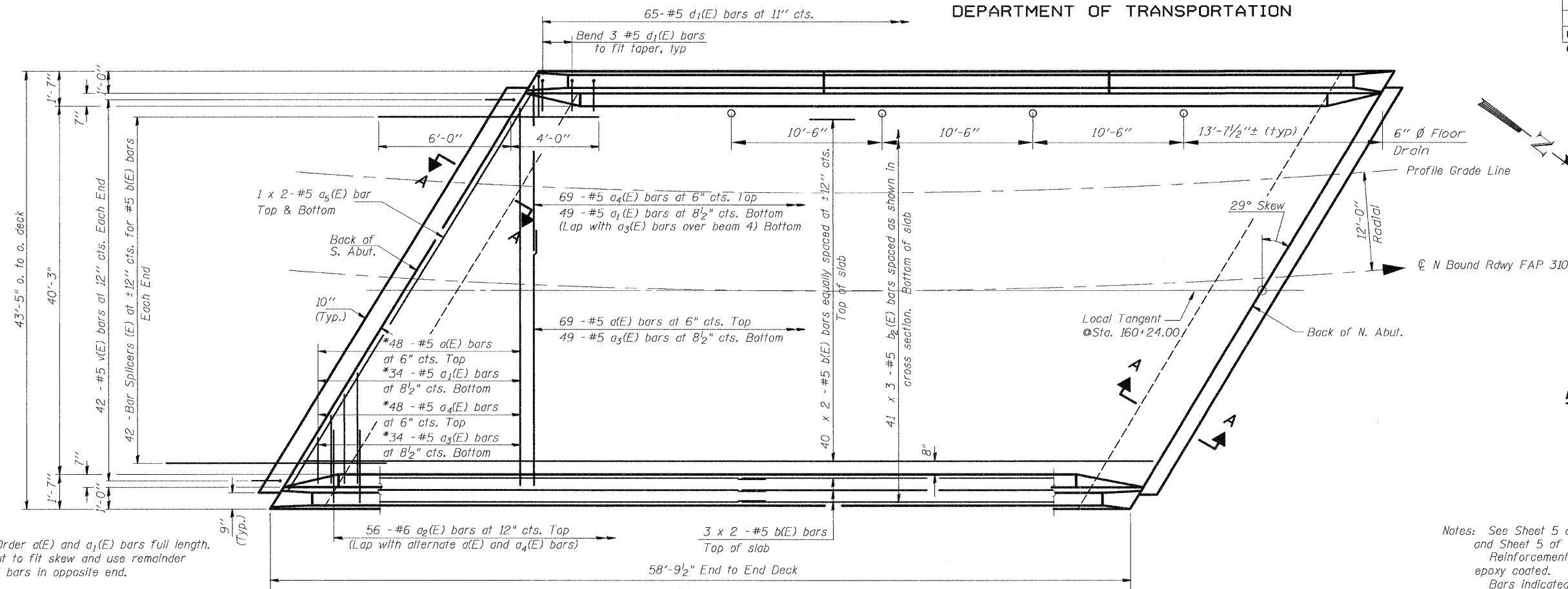
E-S 12-21-00

TOP OF SLAB ELEVATIONS
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	23
STA. 160+24.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 4
12 Sheets



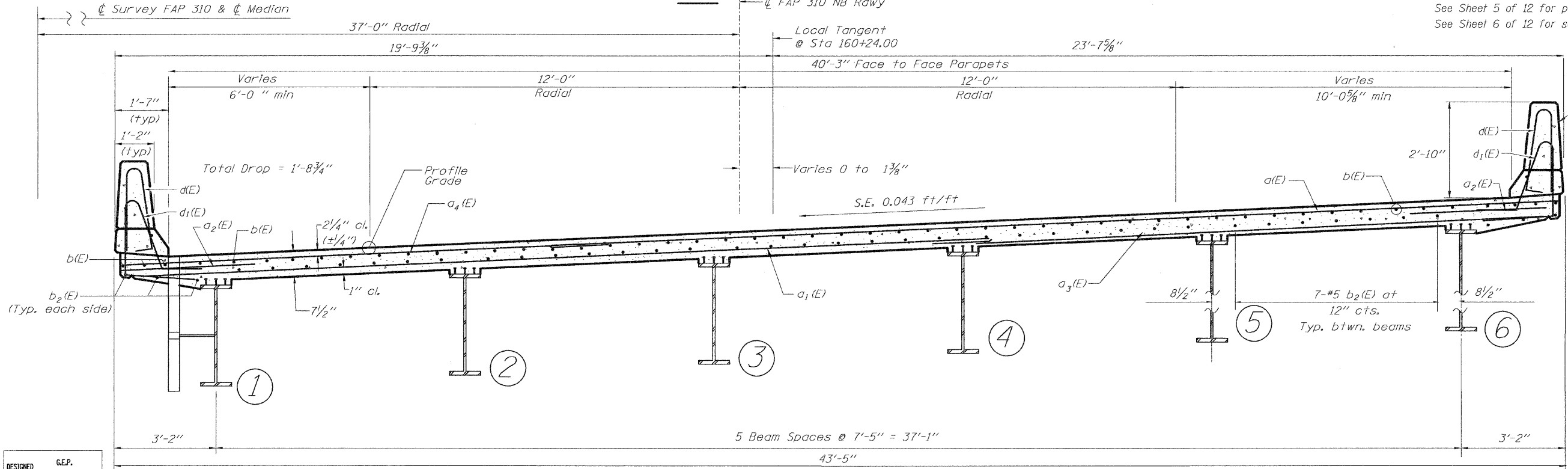
MIN. BAR LAP

- #4 bar = 1'-4"
- #5 bar = 1'-8"
- #6 bar = 2'-0"
- #8 bar = 3'-5"

Notes: See Sheet 5 and 6 of 12 for superstructure details and Sheet 5 of 12 for Bill of Material.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 40 x 2-#5 etc. indicates 40 lines of bars with 2 lengths per line.
See Sheet 5 of 12 for parapet reinforcement.
See Sheet 6 of 12 for section A-A

* Order $a(E)$ and $a_1(E)$ bars full length. Cut to fit skew and use remainder of bars in opposite end.

PLAN



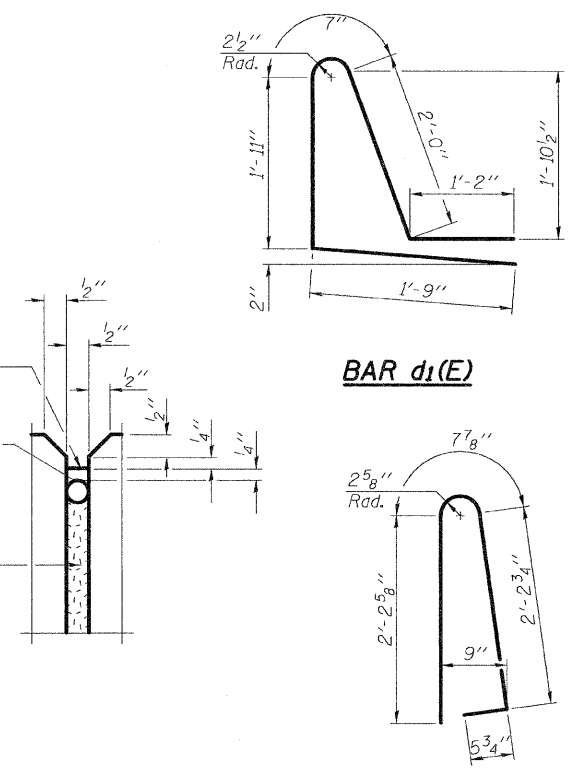
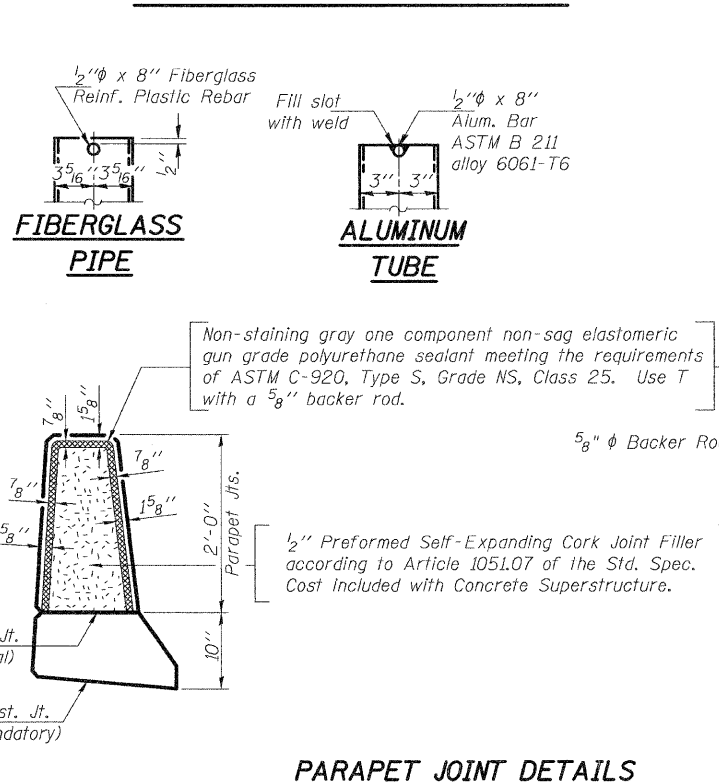
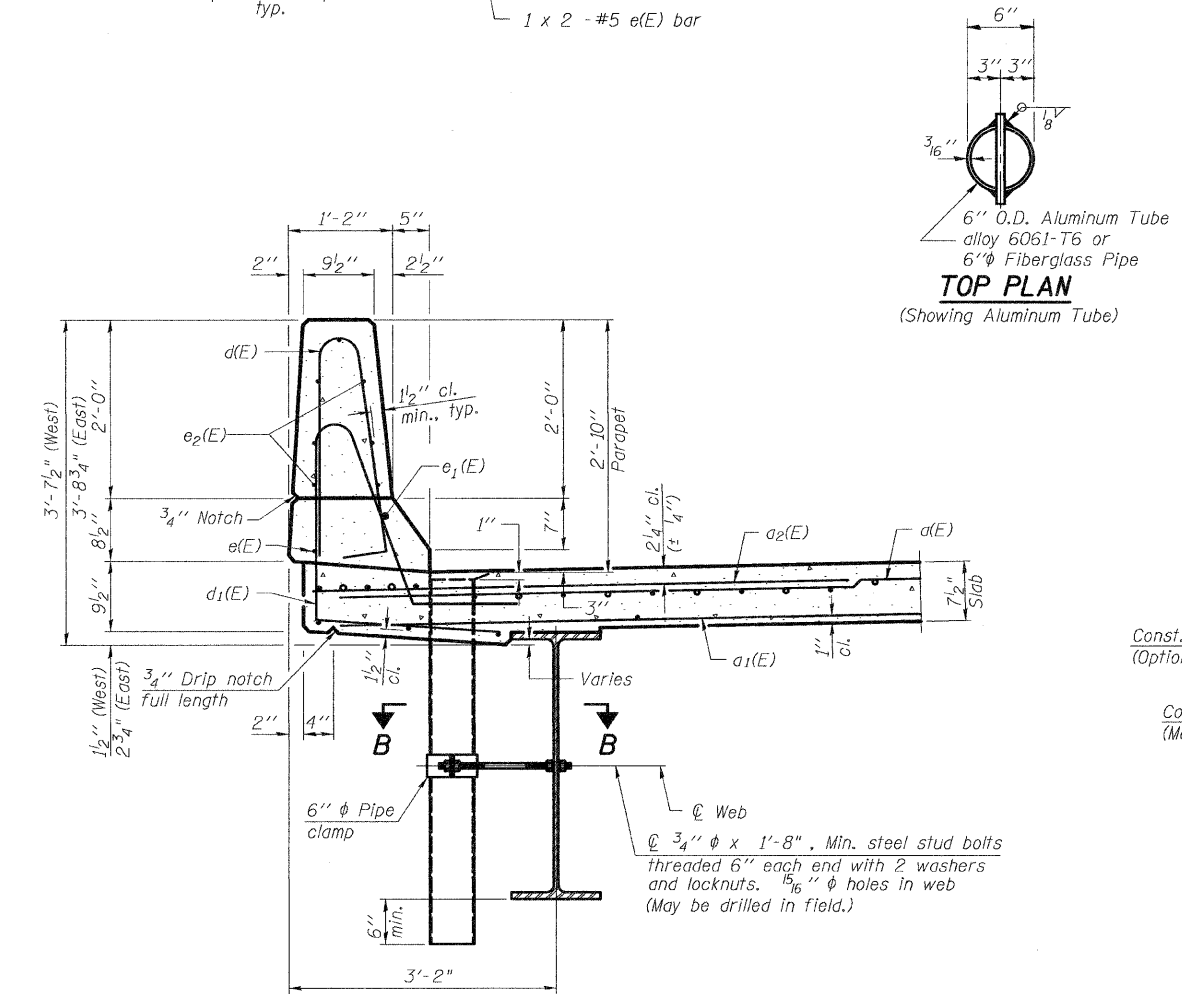
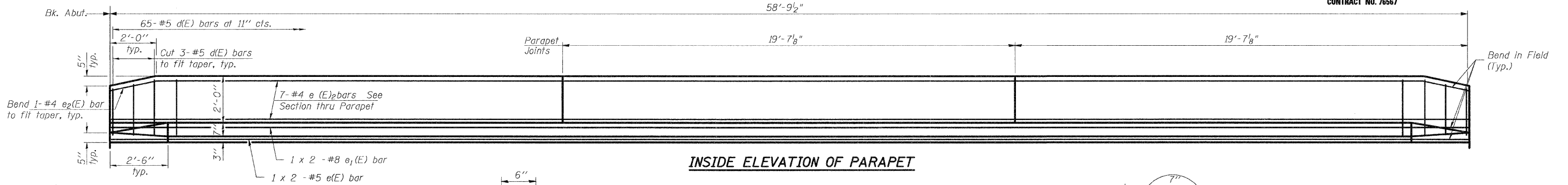
CROSS SECTION

(Looking Ahead)

DESIGNED	G.E.P.
CHECKED	J.L.G.
DRAWN	B.A.D.
CHECKED	J.L.G.

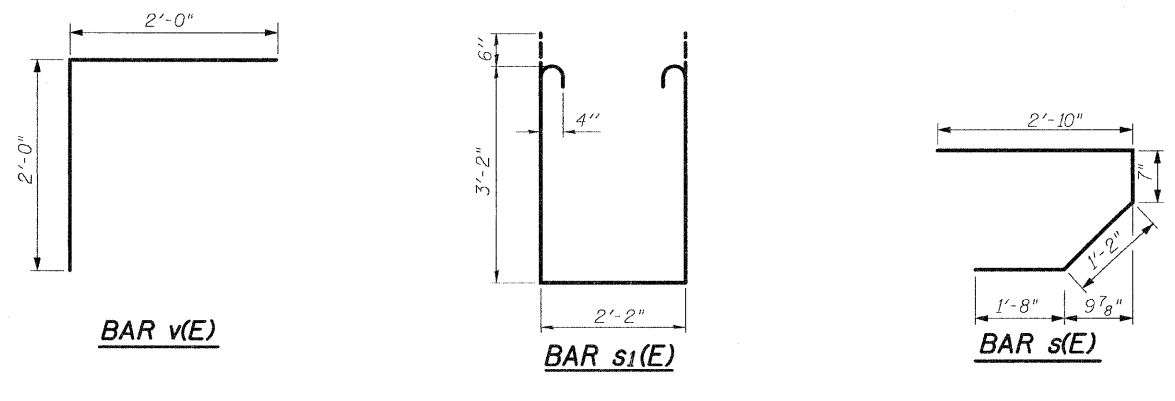
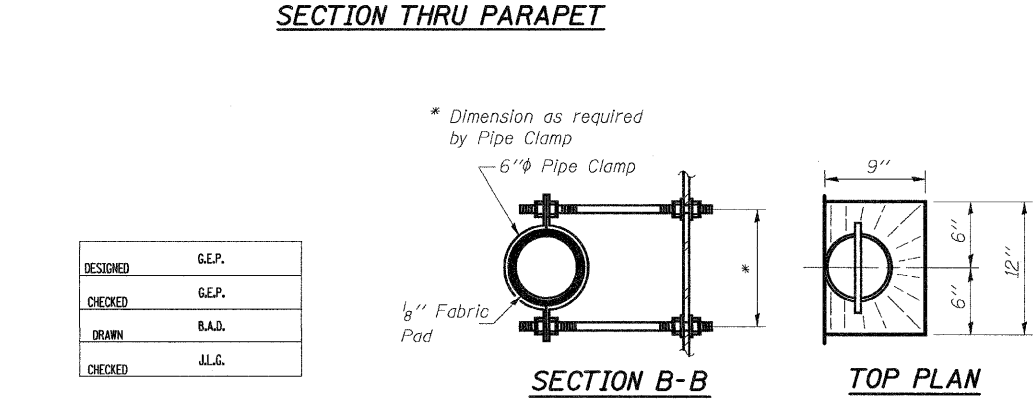
SI-2-L 12-21-00

SUPERSTRUCTURE DETAILS
FAP 310 (US 67)
OVER TRIB SOUTH BRANCH
OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY
STA 160+24.00
SN 060-0328



**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a ₁ (E)	117	#5	29'-10"	—
a ₂ (E)	83	#5	26'-1"	—
a ₃ (E)	112	#6	4'-0"	—
a ₄ (E)	83	#5	18'-8"	—
a ₅ (E)	117	#5	14'-1"	—
a ₅ (E)	8	#5	25'-6"	—
b(E)	92	#5	30'-1"	—
b ₂ (E)	123	#5	20'-7"	—
d(E)	130	#5	5'-7"	⌋
d ₁ (E)	130	#5	7'-9"	⌋
e(E)	4	#5	30'-1"	—
e ₁ (E)	4	#8	31'-0"	—
e ₂ (E)	42	#4	19'-3"	—
v(E)	84	#5	4'-0"	⌋
m(E)	8	#6	24'-9"	—
m ₁ (E)	12	#6	26'-6"	—
m ₂ (E)	24	#6	10'-6"	—
m ₃ (E)	10	#6	8'-1"	—
m ₄ (E)	4	#6	3'-1"	—
s(E)	82	#5	6'-3"	⌋
s ₁ (E)	82	#4	9'-6"	⌋
Reinforcement Bars, Epoxy Coated		Pound	21,150	
Concrete Superstructure		Cu. Yds.	103.1	
Protective Coat		Sq. Yds.	311	
Floor Drains		Each	4	
Bar Splicers		Each	84	
Bridge Deck Grooving		Sq. Yds.	250	



**SUPERSTRUCTURE DETAILS
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328**

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

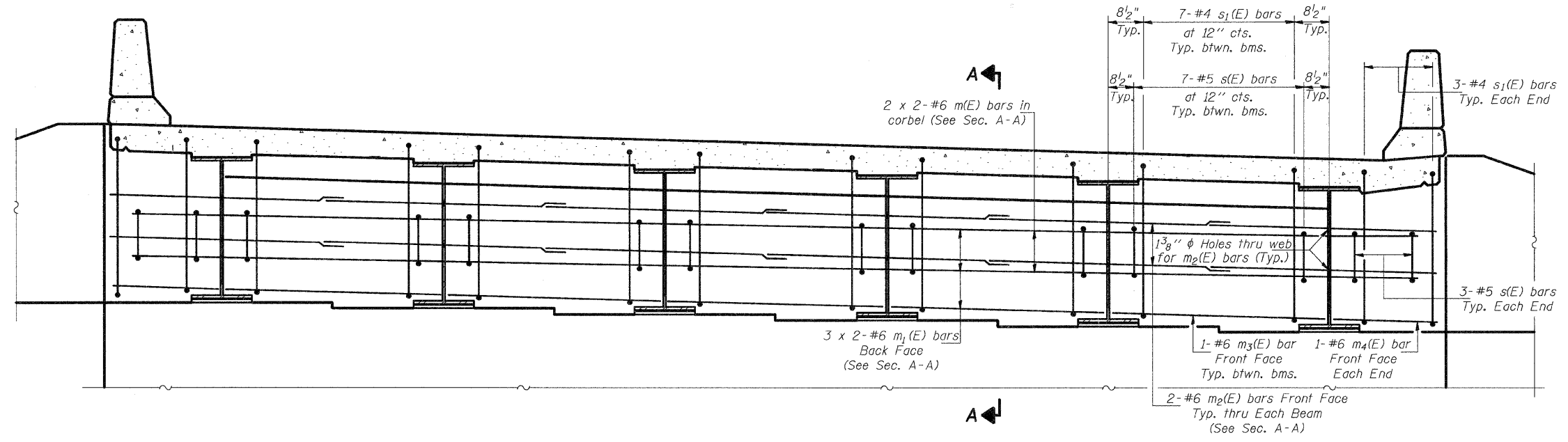
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

DESIGNED	G.E.P.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	25
STA. 160+24.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76567				

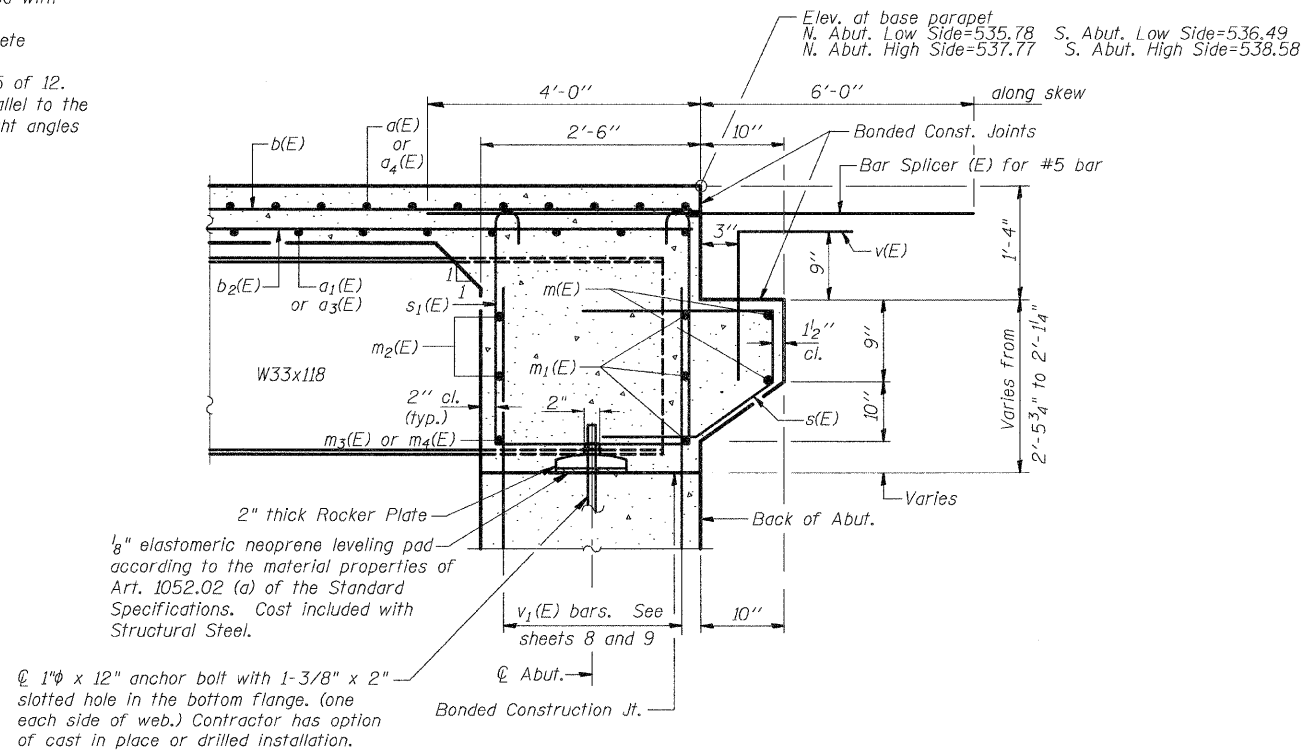
Sheet No. 6
12 Sheets



DIAPHRAGM ELEVATION AT ABUTMENT

(S. Abut. Shown Looking South - N. Abut. similar)

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 5 of 12.
Concrete in diaphragm is included with Concrete Superstructure on sheet 5 of 12.
For details of bars s(E) & s₁(E) see sheet 5 of 12.
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.
For anchor bolt details see sheet 10 of 12.



SECTION A-A

Dimensions at right angles to abutment, except as shown.
* Cost included with Concrete Structures.

DESIGNED	G.E.P.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

SI-DSI 12/21/00

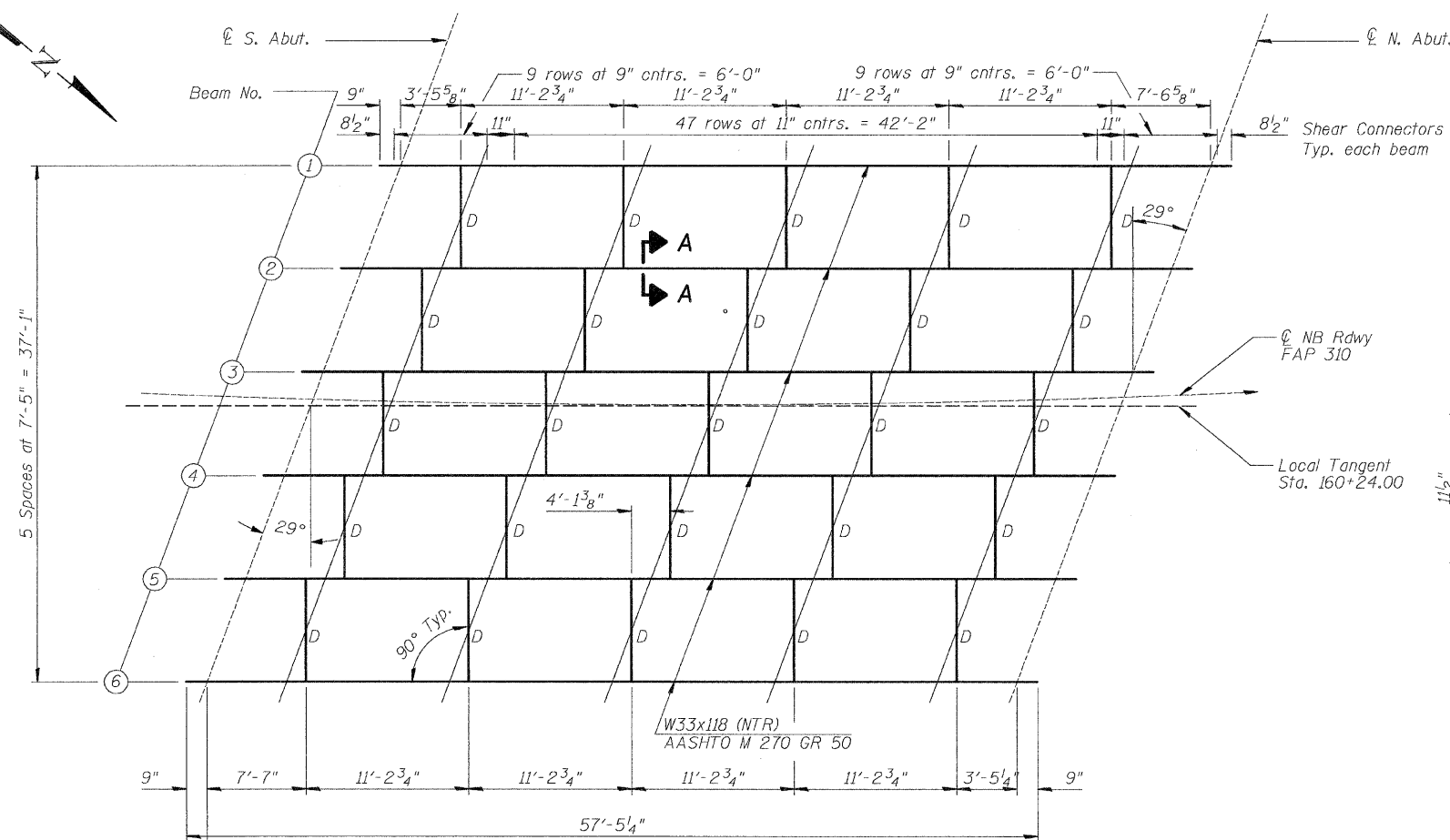
SUPERSTRUCTURE DETAILS
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

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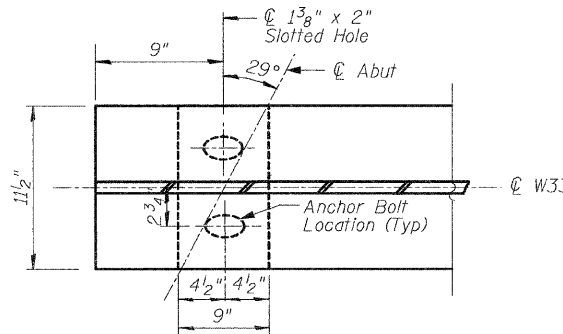
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	26
STA. 160+24.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 7
12 Sheets



FRAMING PLAN



PLAN

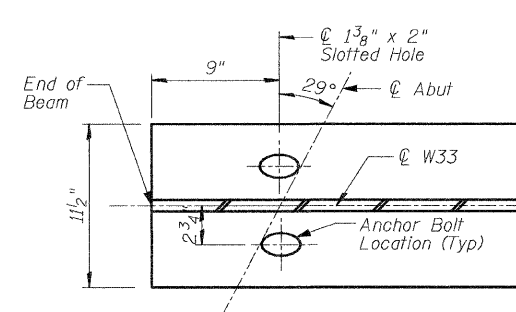
1/8" THICK ELASTOMERIC NEOPRENE LEVELING PAD AND ROCKER PLATE (12 REQUIRED)
(Cost included with structural steel)

INTERIOR BEAM MOMENTS		0.5 Span
Is	(in ⁴)	5900
Ic (n)	(in ⁴)	15875
Ic (3n)	(in ⁴)	11895
Ss (n)	(in ³)	359
Sc (n)	(in ³)	526
Sc (3n)	(in ³)	479
ϕ	(K/ft.)	0.840
Mϕ	(K)	331
sϕ	(K/ft.)	0.518
Msϕ	(K)	203
* Mϕ	(K)	517
M (Imp)	(K)	143
ϕ ₃ (Mϕ + I)	(K)	1100
Ma	(K)	2123
Mu	(K)	2758
fsϕ non-comp(k.s.i.)		11.1
fsϕ (comp)	(k.s.i.)	5.1
fsϕ ₃ (ϕ + I)	(k.s.i.)	25.1
fs (Overload)	(k.s.i.)	41.3
VR	(K)	53.9

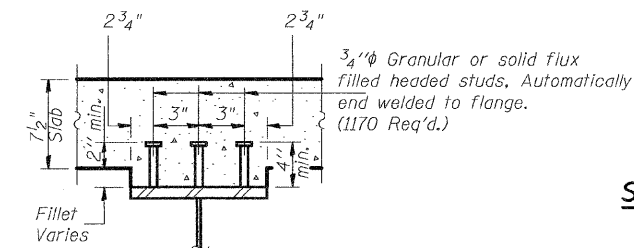
INTERIOR BEAM REACTIONS		Abut.
Rϕ	(K)	38.0
Rϕ	(K)	42.2
Imp.	(K)	11.7
R (Total)	(K)	91.8

* Includes centrifugal force and superelevation effects.
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Ma (Applied Moment) = 1.3[Mϕ + Msϕ + ϕ₃(Mϕ + I)].
Mu is the Full Plastic Moment Capacity for Compact, Braced section.
fs (Overload) is the sum of the stresses due to Mϕ + Msϕ + ϕ₃(Mϕ + I).

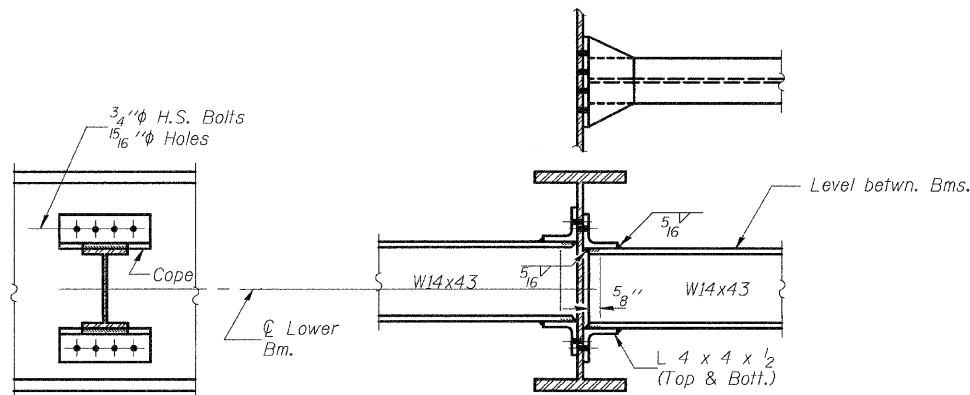
Notes:
"NTR" denotes items to which notch toughness requirements are applicable.
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



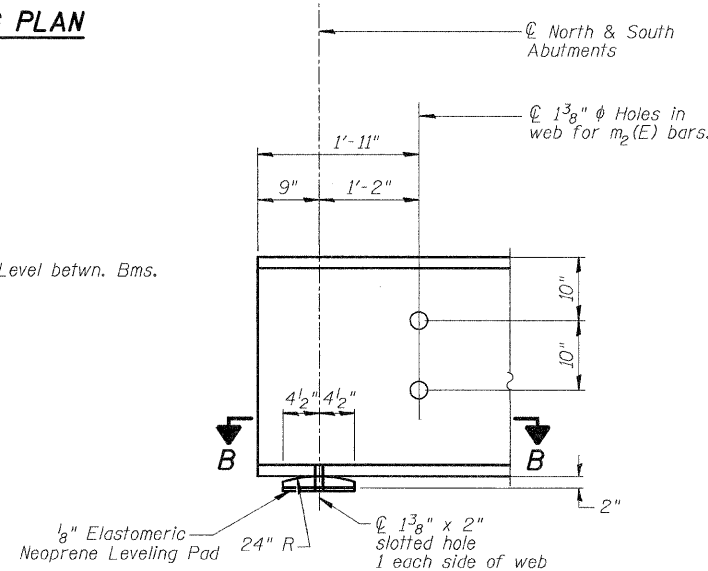
SECTION B-B



SECTION A-A



DIAPHRAGM D
25 Required



END OF BEAM ELEVATION

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
ϕ South Abut.	535.87	536.25	536.63	537.01	537.39	537.78
ϕ North Abut.	535.19	535.55	535.91	536.28	536.64	537.01

TOP OF BEAM ELEVATIONS
(For Fabrication Only)

DESIGNED	R.P.B.
CHECKED	M.R.E.
DRAWN	M.R.E.
CHECKED	R.P.B./G.E.P.

I-2-D 12/21/00

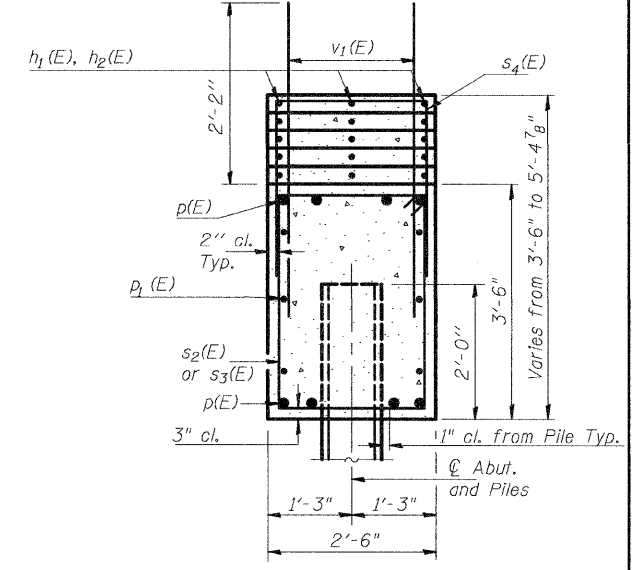
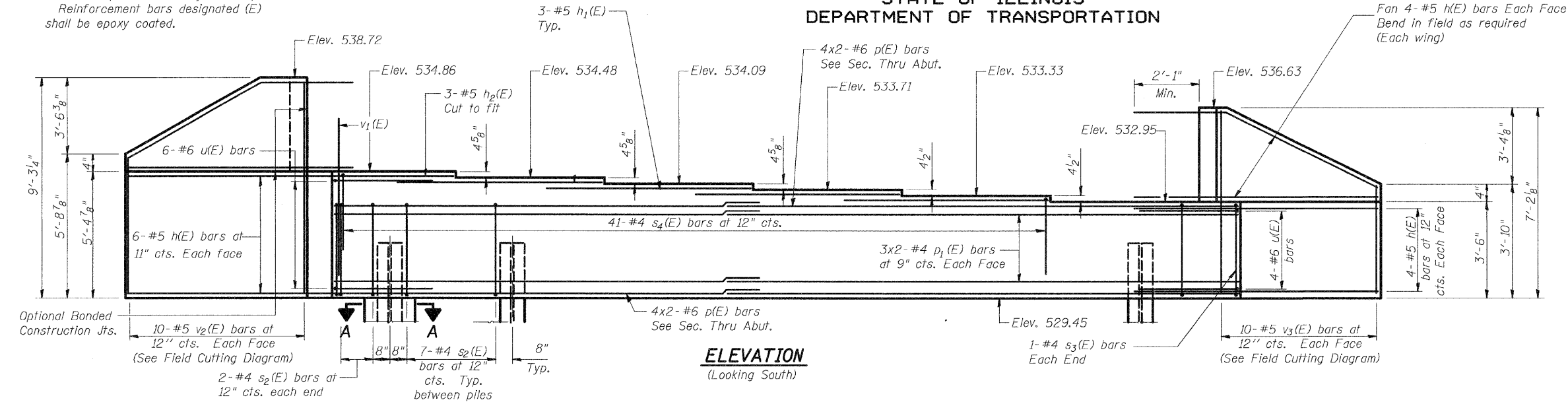
STRUCTURAL STEEL
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	27
STA. 160+24.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
CONTRACT NO. 76567				

Sheet No. 8
12 Sheets

Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E)
shall be epoxy coated.



MIN. BAR LAP
#4 BAR = 2'-5"
#6 BAR = 3'-7"

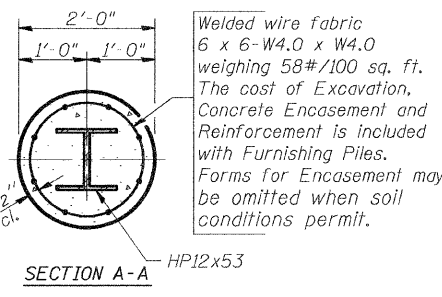
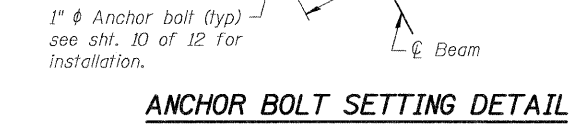
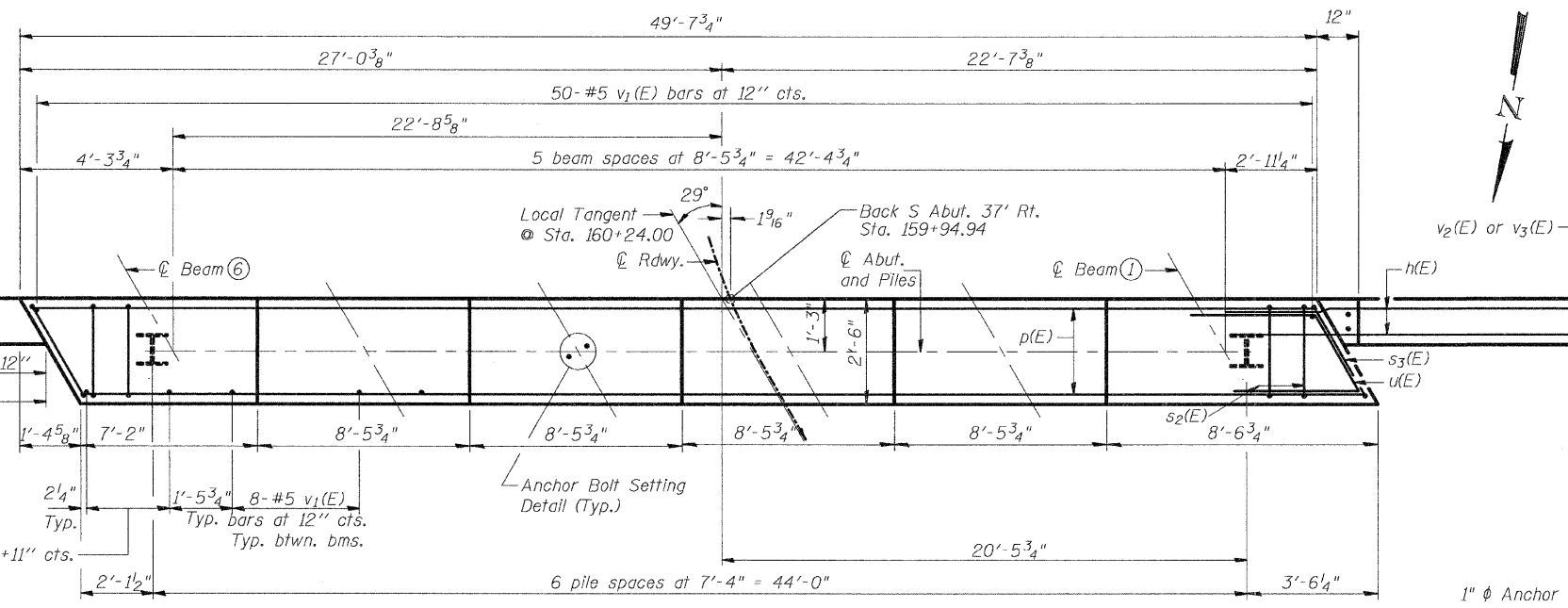
Notes: Bars indicated thus 3x2-#6 etc. indicates
3 lines of bars with 2 lengths per line.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#5	12'-11"	—
h1(E)	12	#5	10'-0"	—
h2(E)	3	#5	8'-2"	—
p(E)	16	#6	26'-8"	—
p1(E)	12	#4	25'-11"	—
s2(E)	46	#4	11'-3"	□
s3(E)	2	#4	11'-11"	□
s4(E)	41	#4	7'-10"	□
u(E)	10	#6	7'-10"	⌒
v1(E)	98	#5	4'-4"	—
v2(E)	10	#5	14'-3"	—
v3(E)	10	#5	10'-4"	—
Concrete Structures		Cu. Yd.	25.2	
Reinforcement Bars		Pound	3090	
Epoxy Coated				
Structure Excavation		Cu. Yd.	20.5	
Furnishing Steel				
Piles HP12x53		Foot	246	
Driving Piles		Foot	246	
Test Pile HP12x53		Each	1	

PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 41'
No. Required: 6 + 1 Test Pile
The Steel H-Piles shall be according to
AASHTO M270 Grade 50.
The test piles shall be driven to 110 percent
of the Nominal Required Bearing indicated
in the pile data information.



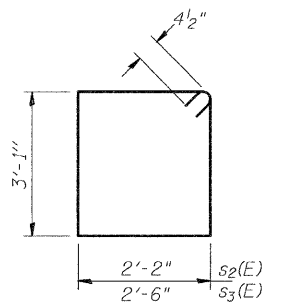
PILE ENCASEMENT DETAIL

Welded wire fabric
6 x 6-W4.0 x W4.0
weighing 58#/100 sq. ft.
The cost of Excavation,
Concrete Encasement and
Reinforcement is included
with Furnishing Piles.
Forms for Encasement may
be omitted when soil
conditions permit.

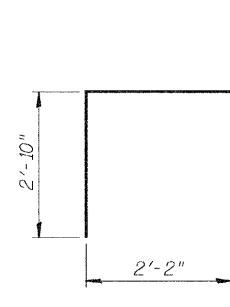
PLAN

FIELD CUTTING DIAGRAM

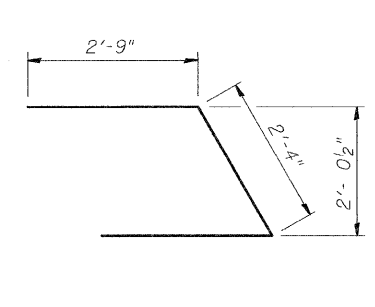
Order v2(E) & v3(E) full length. Cut as shown
and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR s4(E)



BAR u(E)

DESIGNED	R.P.B.
CHECKED	M.R.E.
DRAWN	M.R.E.
CHECKED	R.P.B.

AI-L 12/21/00

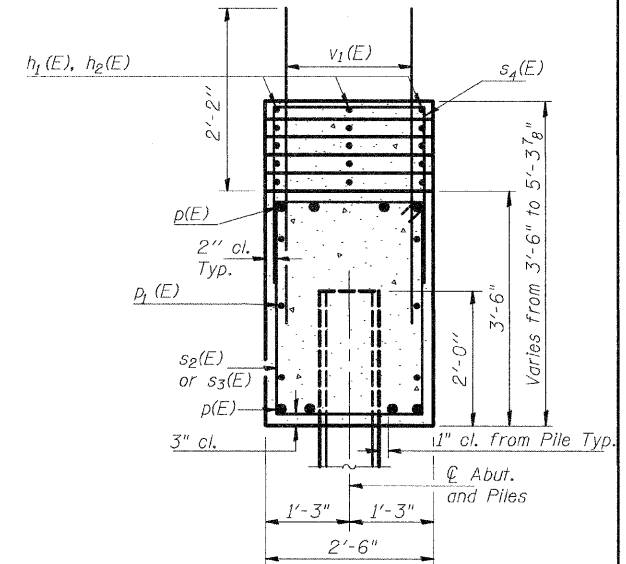
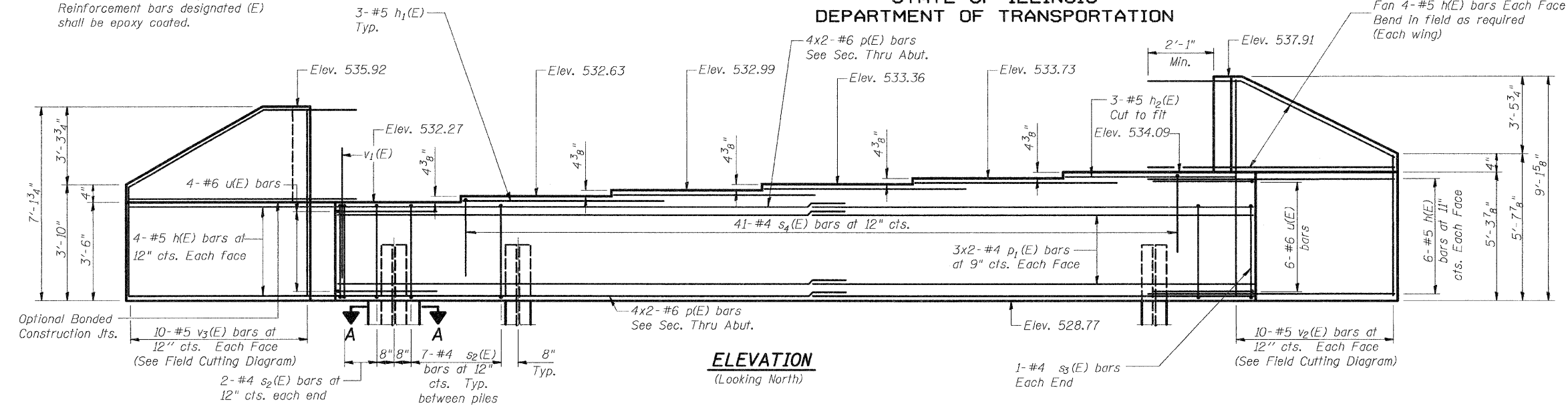
SOUTH ABUTMENT
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	28
STA. 160+24.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 9
12 Sheets

Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E)
shall be epoxy coated.



MIN. BAR LAP

#4 BAR = 2'-5"
#6 BAR = 3'-7"

Notes: Bars indicated thus 3x2-#6 etc. indicates
3 lines of bars with 2 lengths per line.

SEC. THRU ABUT.

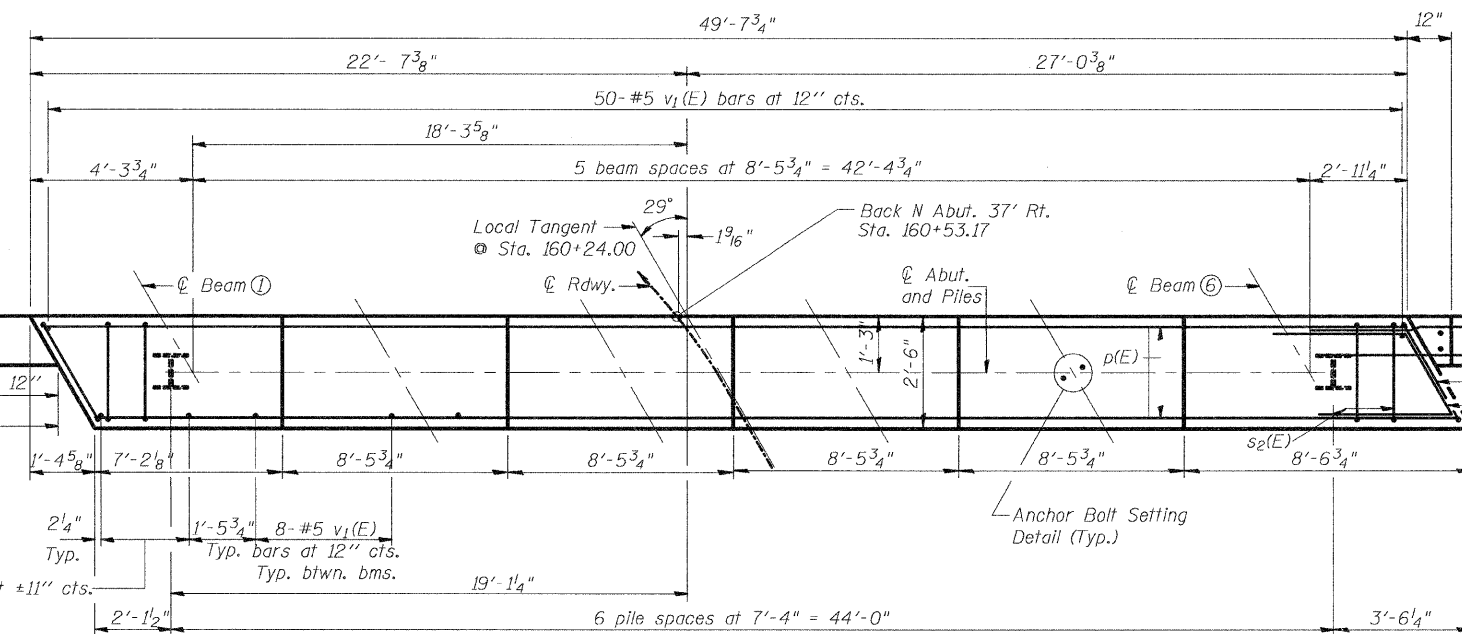
(Dimensions @ Right Angles)

PILE DATA

Type: HP12x53
Nominal Required Bearing: 418 kips
Allowable Resistance Available: 139 kips
Est. Length: 36'
No. Required: 7

The Steel H-Piles shall be according to
AASHTO M270 Grade 50.

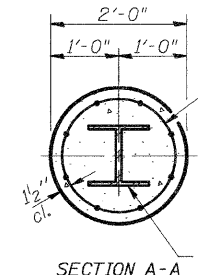
The test piles shall be driven to 110 percent of
the Nominal Required Bearing indicated
in the pile data information.



PLAN

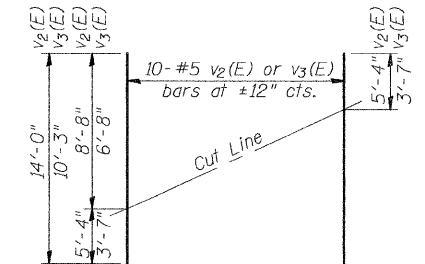
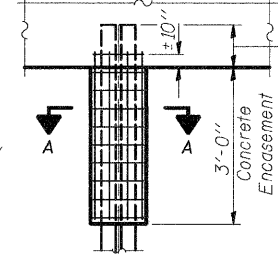
1" φ Anchor bolt (typ)
see sh. 10 of 12 for
installation.

ANCHOR BOLT SETTING DETAIL



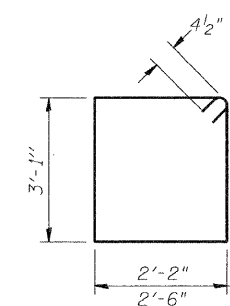
Welded wire fabric
6 x 6-W4.0 x W4.0
weighing 58#/100 sq. ft.
The cost of Excavation,
Concrete Encasement and
Reinforcement is included
with Furnishing Piles.
Forms for Encasement may
be omitted when soil
conditions permit.

PILE ENCASEMENT DETAIL

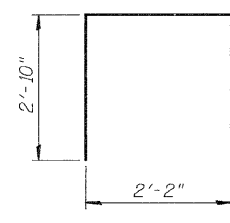


FIELD CUTTING DIAGRAM

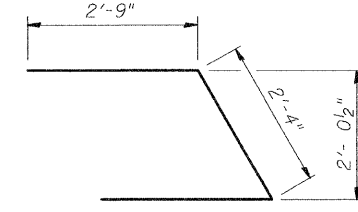
Order v2(E) & v3(E) full length. Cut as shown
and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR s4(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#5	12'-11"	—
h1(E)	12	#5	10'-0"	—
h2(E)	3	#5	8'-2"	—
p(E)	16	#6	26'-8"	—
p1(E)	12	#4	25'-11"	—
s2(E)	46	#4	11'-3"	□
s3(E)	2	#4	11'-11"	□
s4(E)	41	#4	7'-10"	□
u(E)	10	#6	7'-10"	—
v1(E)	98	#5	4'-4"	—
v2(E)	10	#5	14'-0"	—
v3(E)	10	#5	10'-3"	—
Concrete Structures		Cu. Yd.	25.0	
Reinforcement Bars		Pound	3080	
Epoxy Coated				
Structure Excavation		Cu. Yd.	24.9	
Furnishing Steel		Foot	252	
Piles HP12x53				
Driving Piles		Foot	252	

NORTH ABUTMENT
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

DESIGNED	R.P.B.
CHECKED	M.R.E.
DRAWN	M.R.E.
CHECKED	R.P.B.

AI-L 12/21/00

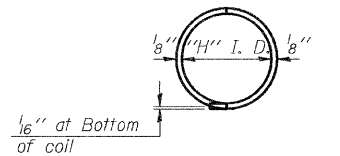
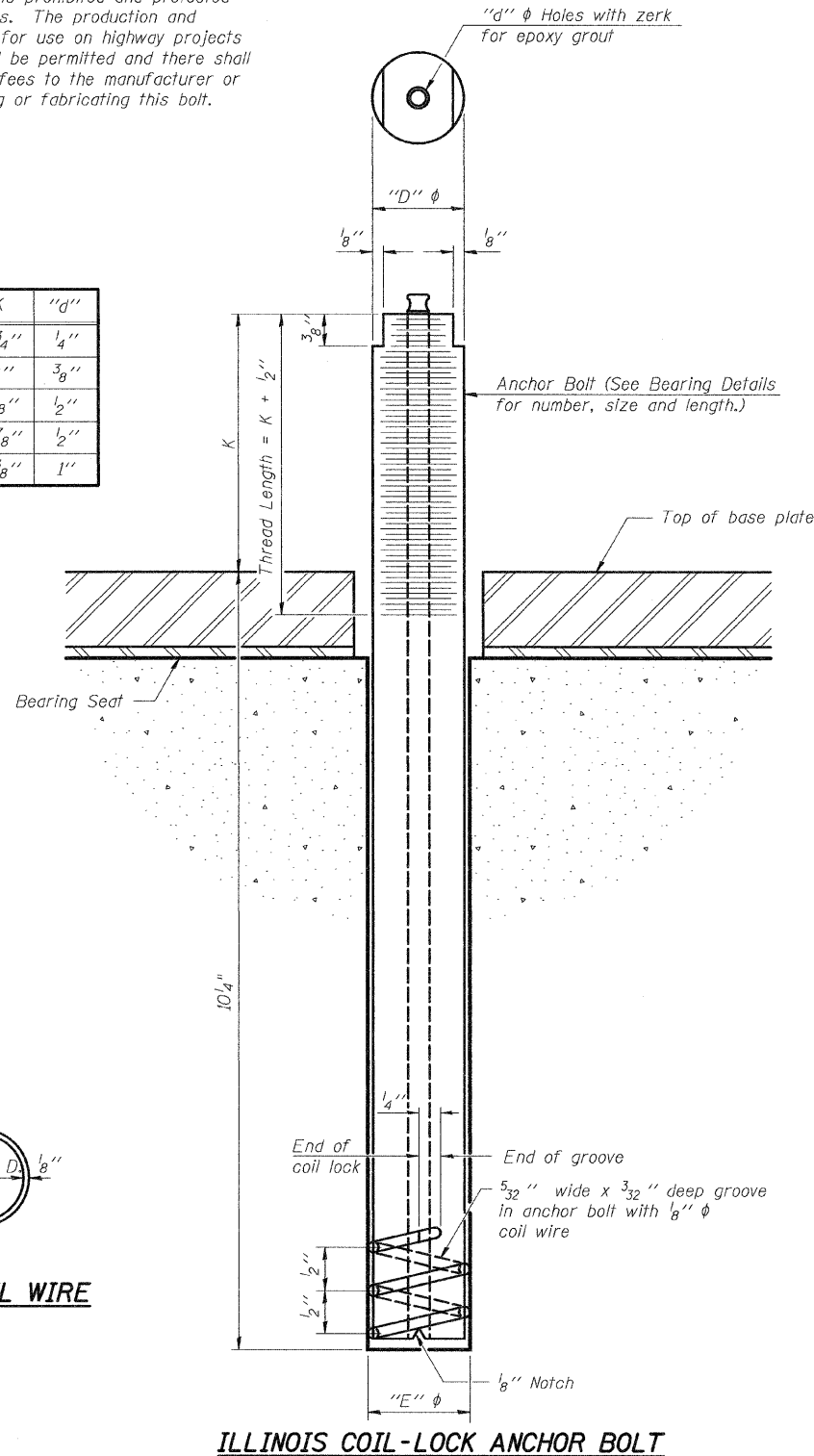
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	29
STA. 160+24.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 10
12 Sheets

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

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire. The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
S Abut	A307
N Abut	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted. Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming. The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

**ANCHOR BOLT DETAILS
FOR BEARINGS
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328**

DESIGNED	G.E.P.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

ABB-1 10/22/04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	30
STA. 159+94.94		TO STA. 160+53.17		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

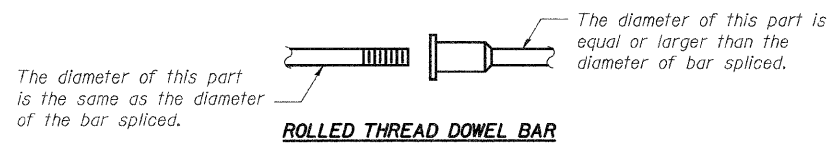
Sheet No. 11
12 Sheets

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 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'-0"	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



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

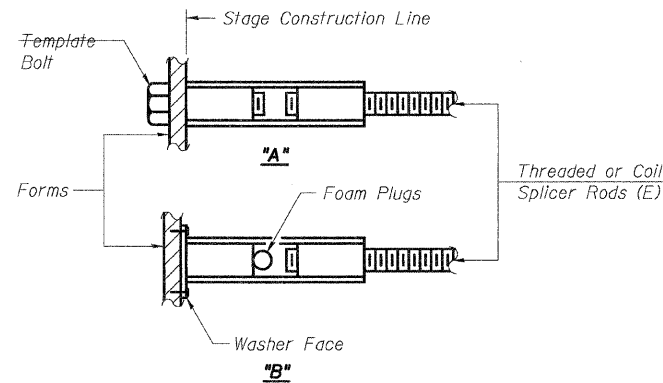
Wire Connector



WELDED SECTIONS

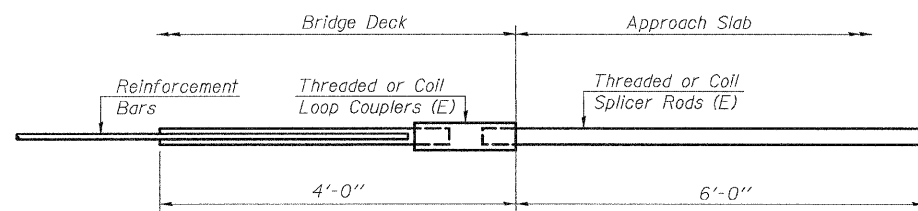
BAR SPLICER ASSEMBLY ALTERNATIVES

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



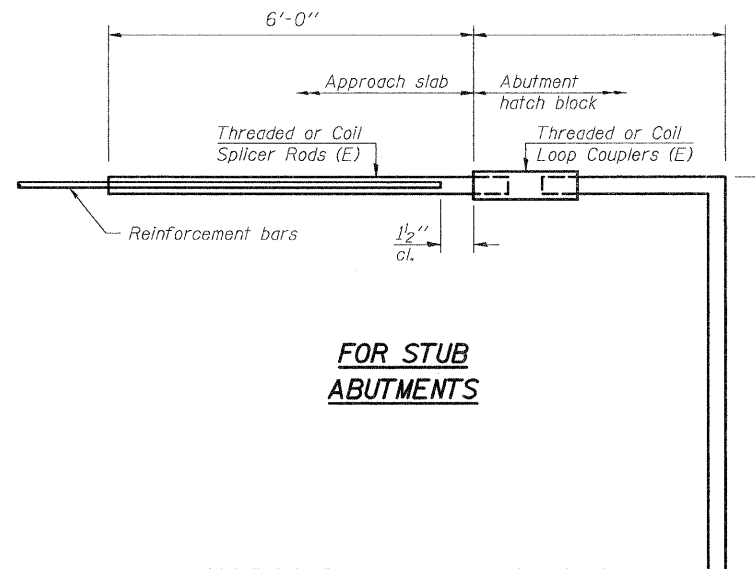
INSTALLATION AND SETTING METHODS

"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.



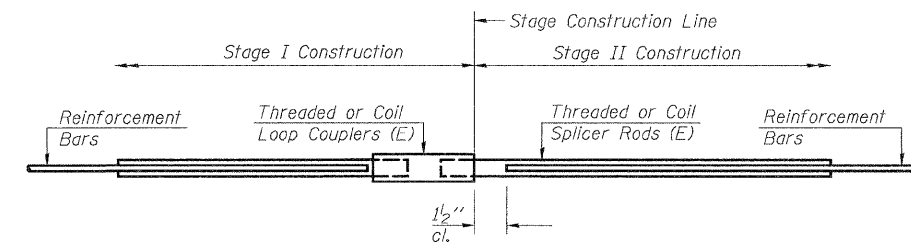
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	84



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

BAR SPLICER ASSEMBLY DETAILS
FAP 310 (US 67) OVER TRIB
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 160+24.00
SN 060-0328

DESIGNED	G.E.P.
CHECKED	G.E.P.
DRAWN	B.A.D.
CHECKED	J.L.G.

BSD-1 11-01-06

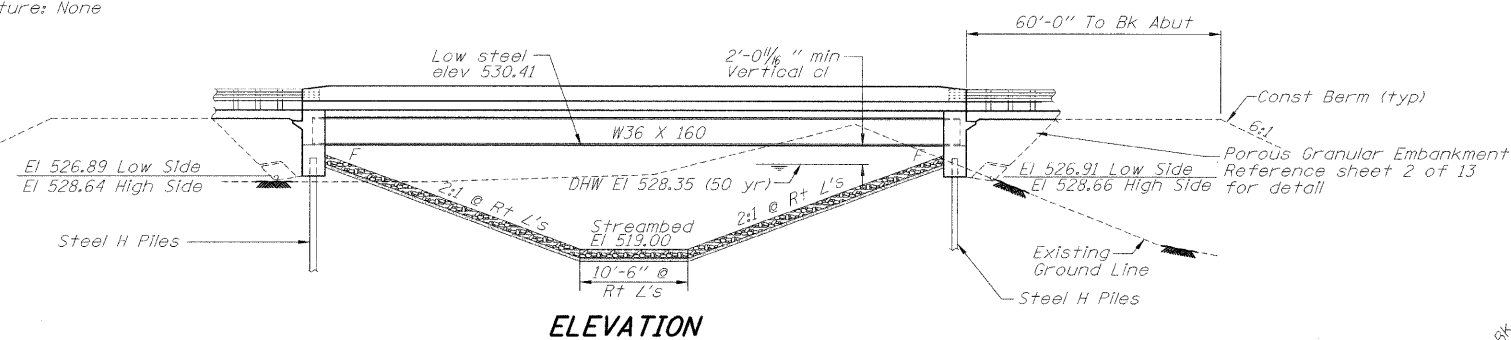
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	32
STA. 165+71.94				
ILLINOIS			US 67	

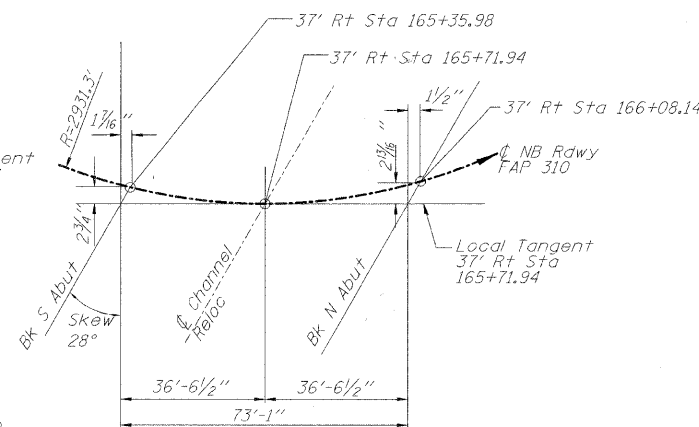
Sheet No. 1
13 Sheets

CONTRACT 76311

Bench Mark: #102 Cut Square on
Top of N.E. Wing Wall of
Structure 060-0251
El 532.92
Existing Structure: None



ELEVATION



OFFSET SKETCH

**HORIZONTAL CURVE DATA
@ SURVEY (@ MEDIAN)
FAP 310 (US 67)**

P.I. STA 168+25.32
Δ = 17°30'00" Lt
R = 2894.31'
D = 1°58'47"
T = 445.48'
L = 884.02'
E = 34.08'
S.E. = .052'/ft
P.C. STA. 163+79.84
P.T. STA. 172+63.86

**STA 165+71.94
BUILT BY
STATE OF ILLINOIS
F.A. RT. 310 SEC. 60-16-1B**

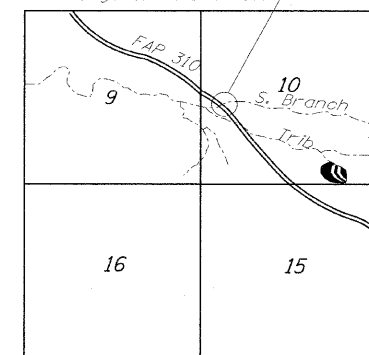
**LOADING HS-20
STR. NO. 060-0329
NAME PLATE
See Std. 515001**

TOTAL BILL OF MATERIALS

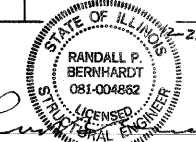
ITEM	UNIT	SUB.	SUPER.	TOTAL
Structure Excavation	CU YD	62.1		62.1
Floor Drains	EACH		6	6
Concrete Structures	CU YD	69.2		69.2
Protective Coat	SQ YD		577	577
Concrete Superstructure	CU YD		183.6	183.6
Furnishing and Erecting Structural Steel	L SUM		0.68	0.68
* Reinforcement Bars, Epoxy Coated	LB.	8,860	40,980	49,840
Furnishing Steel Piles HP 12X63	FOOT	681		681
Driving Piles	FOOT	681		681
Test Pile Steel HP 12X63	EACH	1		1
Name Plates	EACH		1	1
Stone Riprap, Class A4	SQ YD	777		777
Filter Fabric	SQ YD	777		777
Bridge Deck Grooving	SQ YD		498	498
Stud Shear Connectors	EACH		2616	2616
Bar Splicers	EACH		130	130
Porous Granular Embankment (Special)	CU YD	306		306
Pile Shoes	EACH	19		19
Pipe Underdrains for Structures 4"	FOOT			190

* See Special Provisions

Range 10 W. 3rd P.M. Prop Structure

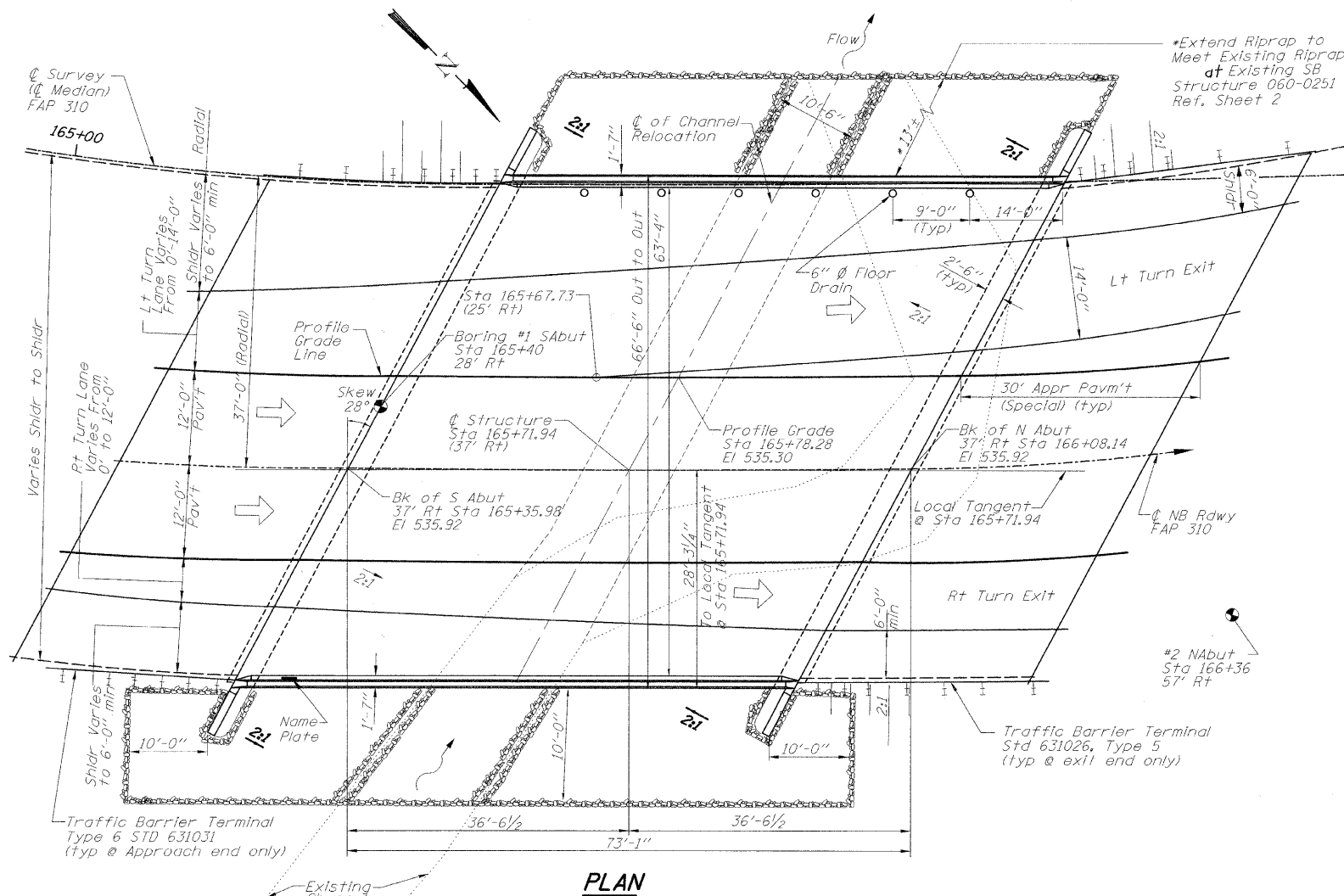


LOCATION SKETCH

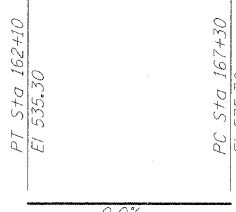


Randall P. Bernhardt
Licensed Structural Engineer
in Illinois No. 81-004862
License Expires 11/30/02

**GENERAL PLAN & ELEVATION
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASSA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329**



PLAN



PROFILE GRADE FOR NB RDWY

(Applies @ Left Edge of Pav't)
(25')

WATERWAY INFORMATION

Drainage Area = 1.32 sq mi		Low Grade El 535.30 @ Sta 162+22.5					
Flood	Freq. Yr	0 cfs	Opening sq ft	Nat HWE	Head - ft	Headwater El	
			* Exlst Prop	* Exlst Prop	* Exlst Prop	* Exlst Prop	
Design	50	1381	NA	273.0	528.35	NA	0.49
Base	100	1614	NA	295.5	528.81	NA	0.69
Overtopping	NA	NA	NA	NA	NA	NA	NA
Max Calc	500	2182	NA	344.5	529.76	NA	1.44

* Downstream Bridge Constructed 1988, S.N. 060-0251

DESIGN SPECIFICATIONS

1996 AASHTO with 1997, 1998, and 1999 Interims

LOADING HS 20-44

Allow 50 psf for Future Wearing Surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf)
 $f_y = 50,000$ psi (AASHTO M 270, Grade 50 - W Beams)
 $f_y = 36,000$ psi (AASHTO M 270, Grade 36, Dlap)

SEISMIC DA

Seismic Performance Category (SPC) = A
Acceleration Coefficient (A) = 0.075g
Site Coefficient (S) = 1.0

HR HURST-ROSCHKE ENGINEERS, INC.
CONSULTING ENGINEERS & ARCHITECTS
1400 E. TREMONT ST.
HILLSBORO, ILLINOIS 62049

DESIGNED: J.L.G. CHECKED: R.P.B.
DRAWN: J.L.G. CHECKED: R.P.B.

Rev. 2/14/01

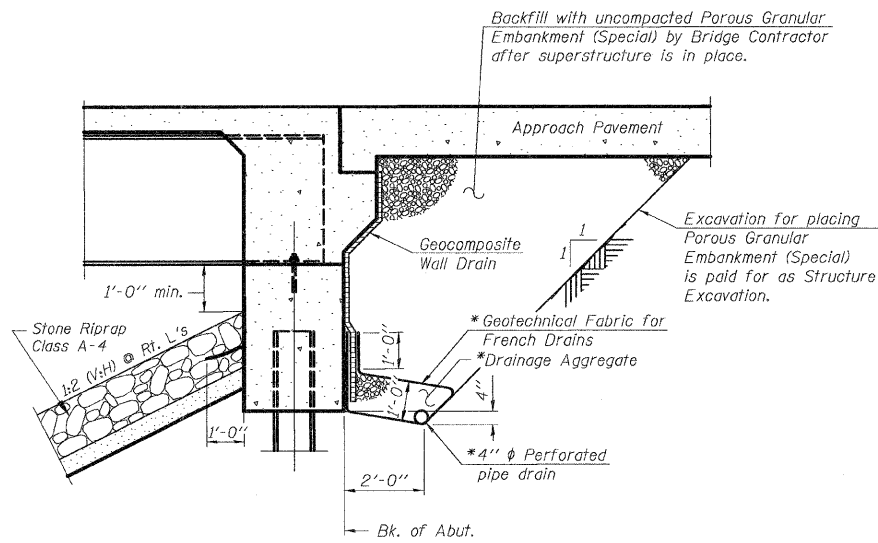
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	33
STA. 165+71.94				
FED. ROAD DIST. ILLINOIS			FED. AID PROJECT	
CONTRACT NO. 76567				

Sheet No. 2
13 Sheets

GENERAL NOTES

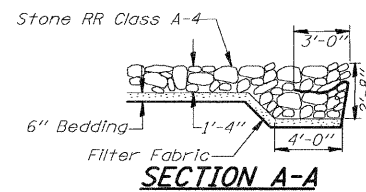
- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ in. \emptyset , holes $\frac{5}{8}$ in. \emptyset , unless otherwise noted.
- Calculated weight of Structural Steel = 91,840 lbs. (M 270, grade 50) = 14,690 lbs. (M 270, grade 36)
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions
- Reinforcement bars designated (E) shall be epoxy coated.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".
- 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.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.



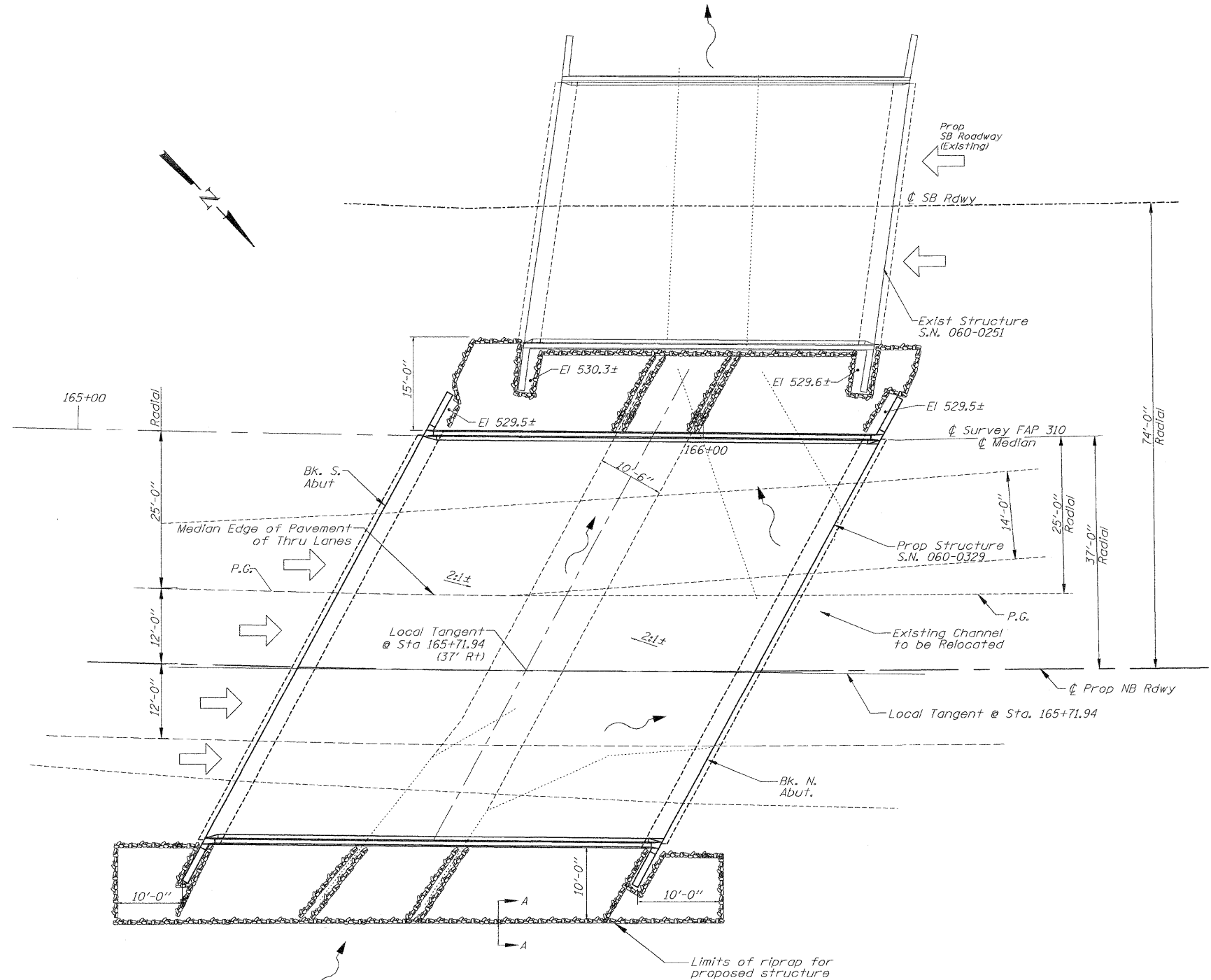
SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

* 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).



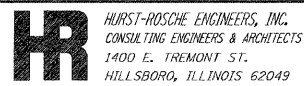
SECTION A-A



CHANNEL RELOCATION SKETCH

Reference Roadway Plans
for relocated channel length

RIPRAP DETAILS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329



HURST-ROSCHÉ ENGINEERS, INC.
CONSULTING ENGINEERS & ARCHITECTS
1400 E. TREMONT ST.
HILLSBORO, ILLINOIS 62049

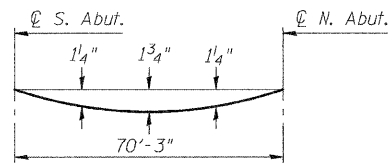
DESIGNED: J.L.G. CHECKED: R.P.B.
DRAWN: J.L.G. CHECKED: R.P.B.

Rev. 1/19/01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	34
STA. 165+71.94				
FED. ROAD DIST. ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 76567				

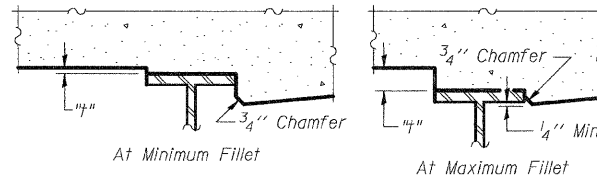
Sheet No. 3
13 Sheets



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below and on sheet 4 of 13.



FILLET HEIGHTS

To determine "t": After all structural steel has 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 Deflection" shown below and on sheet 4 of 13, minus slab thickness, equals the fillet heights "t" above top flange of beams.

BEAM LINE 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16554.127	-23.179	534.095	534.095
☉ S. Abut.	16555.542	-23.187	534.094	534.094
A	16565.535	-23.228	534.092	534.154
B	16575.528	-23.231	534.092	534.203
C	16585.522	-23.202	534.094	534.232
D	16595.515	-23.138	534.097	534.236
E	16605.507	-23.039	534.102	534.214
F	16615.499	-22.906	534.109	534.173
☉ N. Abut.	16625.757	-22.733	534.118	534.118
Bk. N. Abut.	16627.171	-22.706	534.119	534.119

BEAM LINE 2

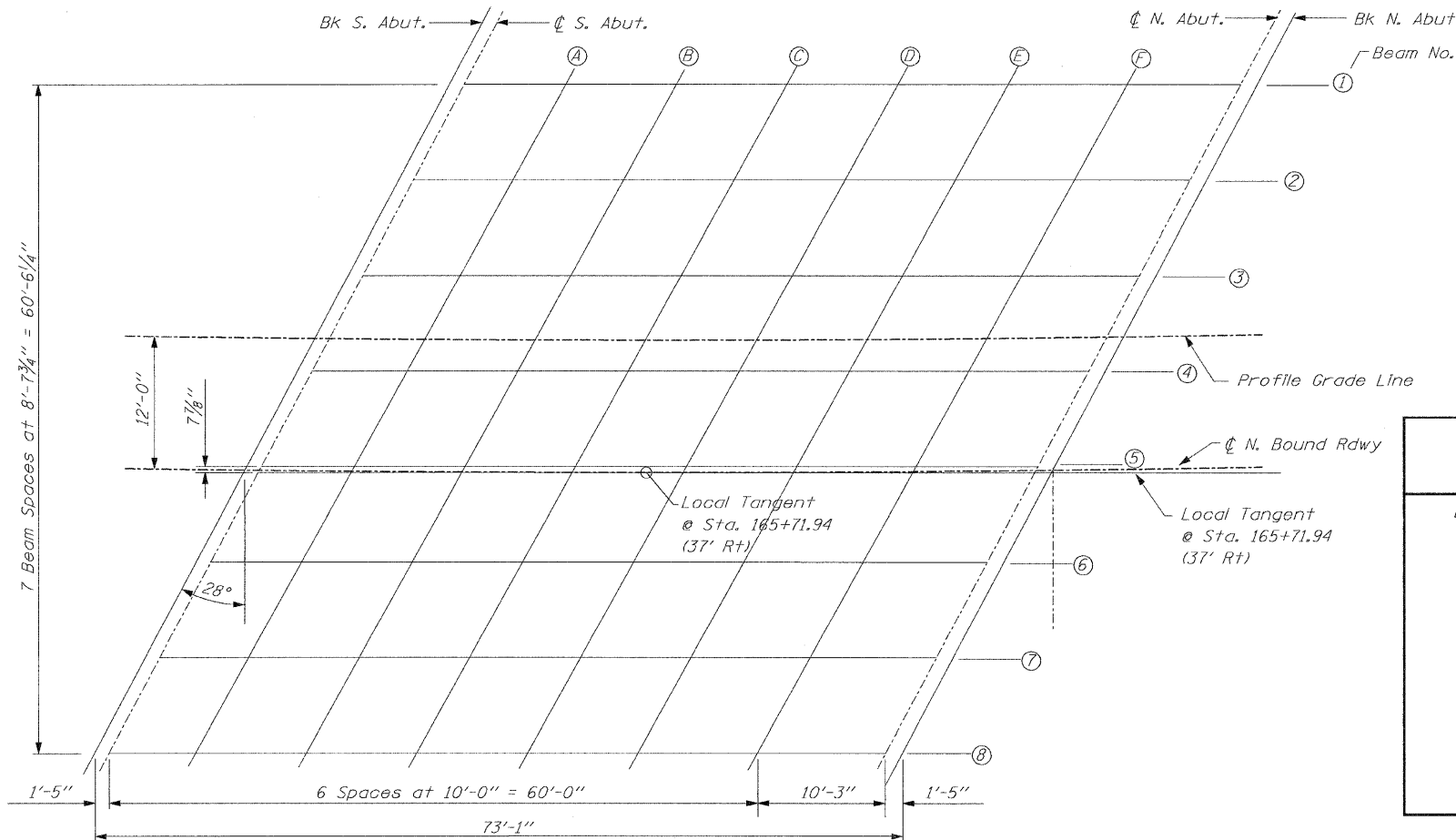
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16549.605	-14.501	534.546	534.546
☉ S. Abut.	16551.015	-14.512	534.545	534.545
A	16560.978	-14.567	534.543	534.605
B	16570.942	-14.588	534.541	534.652
C	16580.906	-14.574	534.542	534.680
D	16590.869	-14.526	534.545	534.684
E	16600.832	-14.443	534.549	534.661
F	16610.794	-14.326	534.555	534.619
☉ N. Abut.	16621.018	-14.170	534.563	534.563
Bk. N. Abut.	16622.428	-14.146	534.564	534.564

BEAM LINE 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16545.109	-5.817	534.998	534.998
☉ S. Abut.	16546.515	-5.830	534.997	534.997
A	16556.448	-5.900	534.993	535.055
B	16566.382	-5.937	534.991	535.102
C	16576.317	-5.939	534.991	535.129
D	16586.251	-5.906	534.993	535.132
E	16596.184	-5.840	534.996	535.108
F	16606.118	-5.739	535.002	535.066
☉ N. Abut.	16616.308	-5.600	535.009	535.009
Bk. N. Abut.	16617.714	-5.578	535.010	535.010

PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16542.112	0.000	535.300	535.300
☉ S. Abut.	16543.509	0.000	535.300	535.300
A	16553.408	0.000	535.300	535.362
B	16563.323	0.000	535.300	535.411
C	16573.237	0.000	535.300	535.438
D	16583.152	0.000	535.300	535.438
E	16593.067	0.000	535.300	535.412
F	16603.009	0.000	535.300	535.364
☉ N. Abut.	16613.246	0.000	535.300	535.300
Bk. N. Abut.	16614.661	0.000	535.300	535.300



PLAN

DESIGNED	J.L.G.
CHECKED	R.P.B.
DRAWN	B.A.D.
CHECKED	R.P.B.

E-S 2-14-01

Notes: Work this sheet with sheet 4 of 13
Offsets referenced to Profile Grade Line

**TOP OF SLAB ELEVATIONS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329**

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	35
STA. 165+71.94				
FED. ROAD DIST. ILLINOIS			FED. AID PROJECT	
CONTRACT NO. 76567				

Sheet No. 4
13 Sheets

BEAM LINE 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16540.640	2.875	535.449	535.449
☉ S. Abut.	16542.041	2.860	535.449	535.449
A	16551.945	2.774	535.444	535.506
B	16561.850	2.722	535.442	535.553
C	16571.750	2.704	535.441	535.579
D	16581.659	2.720	535.441	535.580
E	16591.564	2.771	535.444	535.556
F	16601.468	2.856	535.449	535.513
☉ N. Abut.	16611.625	2.979	535.455	535.455
Bk. N. Abut.	16613.027	2.998	535.456	535.456

BEAM LINE 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16536.197	11.573	535.902	535.902
☉ S. Abut.	16537.595	11.556	535.901	535.901
A	16547.469	11.454	535.896	535.958
B	16557.344	11.387	535.892	536.003
C	16567.220	11.354	535.890	536.028
D	16577.095	11.354	535.890	536.029
E	16586.971	11.389	535.892	536.004
F	16596.846	11.458	535.896	535.960
☉ N. Abut.	16606.969	11.564	535.901	535.901
Bk. N. Abut.	16608.367	11.582	535.902	535.902

LOCAL TANGENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16535.849	12.210	535.935	535.935
☉ S. Abut.	16537.260	12.210	535.935	535.935
A	16547.133	12.108	535.930	535.992
B	16557.006	12.039	535.926	536.037
C	16566.880	12.005	535.924	536.062
D	16576.754	12.004	535.924	536.063
E	16586.627	12.038	535.926	536.038
F	16596.500	12.106	535.930	535.993
☉ N. Abut.	16606.620	12.210	535.935	535.935
Bk. N. Abut.	16608.050	12.210	535.935	535.935

BEAM LINE 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16531.781	20.279	536.354	536.354
☉ S. Abut.	16533.170	20.259	536.353	536.353
A	16543.019	20.142	536.347	536.409
B	16552.865	20.059	536.343	536.454
C	16562.712	20.010	536.341	536.479
D	16572.558	19.996	536.340	536.479
E	16582.405	20.015	536.341	536.453
F	16592.251	20.068	536.344	536.408
☉ N. Abut.	16602.341	20.158	536.348	536.348
Bk. N. Abut.	16603.735	20.173	536.349	536.349

BEAM LINE 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16527.391	28.991	536.808	536.808
☉ S. Abut.	16528.780	28.969	536.806	536.806
A	16538.596	28.837	536.800	536.862
B	16548.413	28.739	536.794	536.905
C	16558.230	28.674	536.791	536.929
D	16568.047	28.644	536.789	536.928
E	16577.865	28.648	536.790	536.902
F	16587.683	28.685	536.792	536.856
☉ N. Abut.	16597.740	28.758	536.795	536.795
Bk. N. Abut.	16599.129	28.771	536.796	536.796

BEAM LINE 8

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	16523.027	37.709	537.261	537.261
☉ S. Abut.	16524.412	37.686	537.260	537.260
A	16534.198	37.539	537.252	537.314
B	16543.986	37.425	537.246	537.357
C	16553.774	37.345	537.242	537.380
D	16563.563	37.300	537.240	537.379
E	16573.352	37.288	537.239	537.351
F	16583.141	37.309	537.240	537.304
☉ N. Abut.	16593.165	37.367	537.243	537.243
Bk. N. Abut.	16594.551	37.377	537.244	537.244

Note: Work this sheet with sheet 3 of 13
Offsets referenced to Profile Grade Line

DESIGNED	J.L.G.
CHECKED	R.P.B.
DRAWN	B.A.D.
CHECKED	R.P.B.

E-S 2-14-01

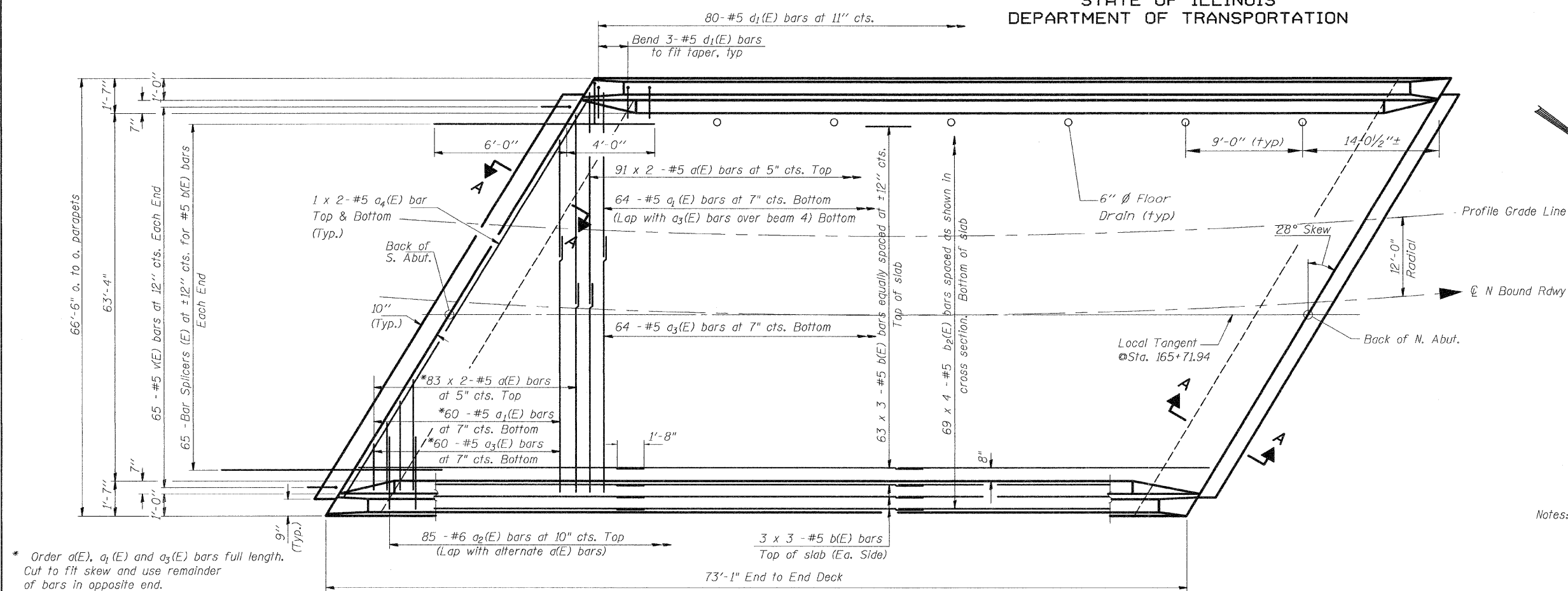
TOP OF SLAB ELEVATIONS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	36
STA. 165+71.94				
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

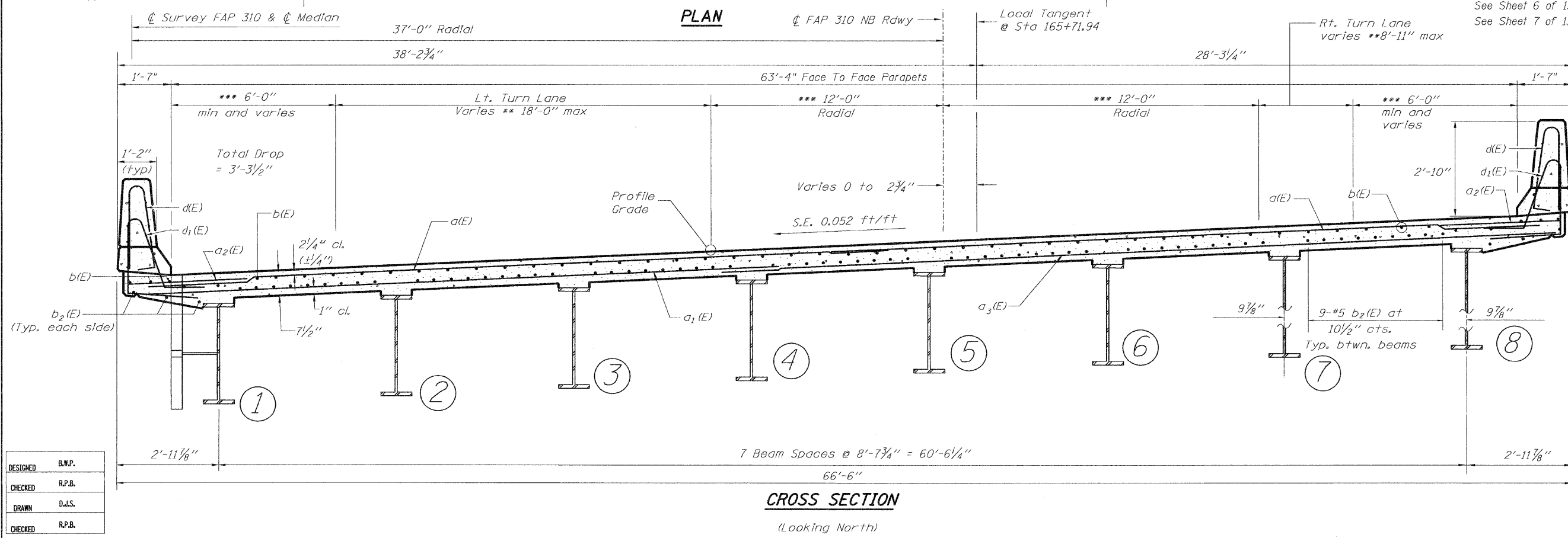
Sheet No. 5
13 Sheets



* Order a(E), a1(E) and a3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

MIN. BAR LAP
#5 a(E), a1(E), a3(E) bar = 2'-2"
#5 b(E), b2(E) bar = 1'-8"

Notes: See Sheet 6 and 7 of 13 for superstructure details and Sheet 6 of 13 for Bill of Material. Reinforcement bars designated (E) shall be epoxy coated. Bars indicated thus 63 x 3-#5 etc. indicates 63 lines of bars with 3 lengths per line. See Sheet 6 of 13 for parapet reinforcement. See Sheet 7 of 13 for section A-A

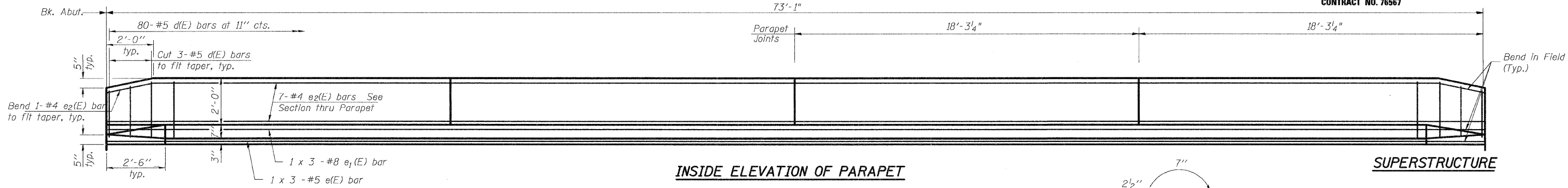


CROSS SECTION
(Looking North)

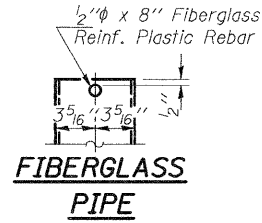
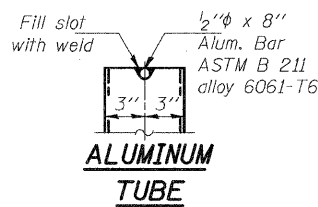
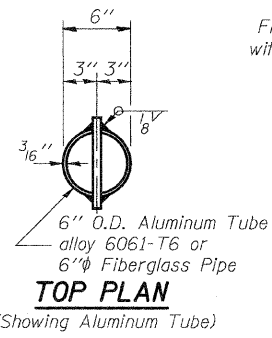
SUPERSTRUCTURE DETAILS
FAP 310 (US 67)
OVER SOUTH BRANCH
OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY
STA 165+71.94
SN 060-0329

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

SI-2-L 2-14-01

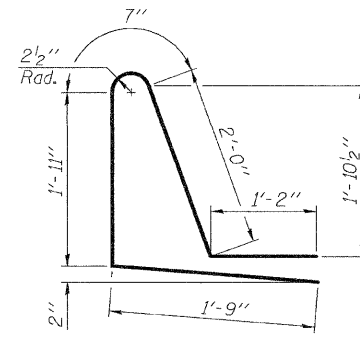


INSIDE ELEVATION OF PARAPET

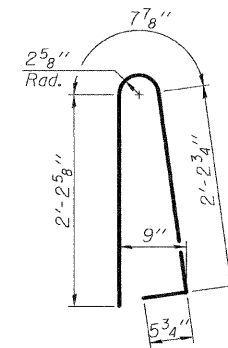


MIN. BAR LAP

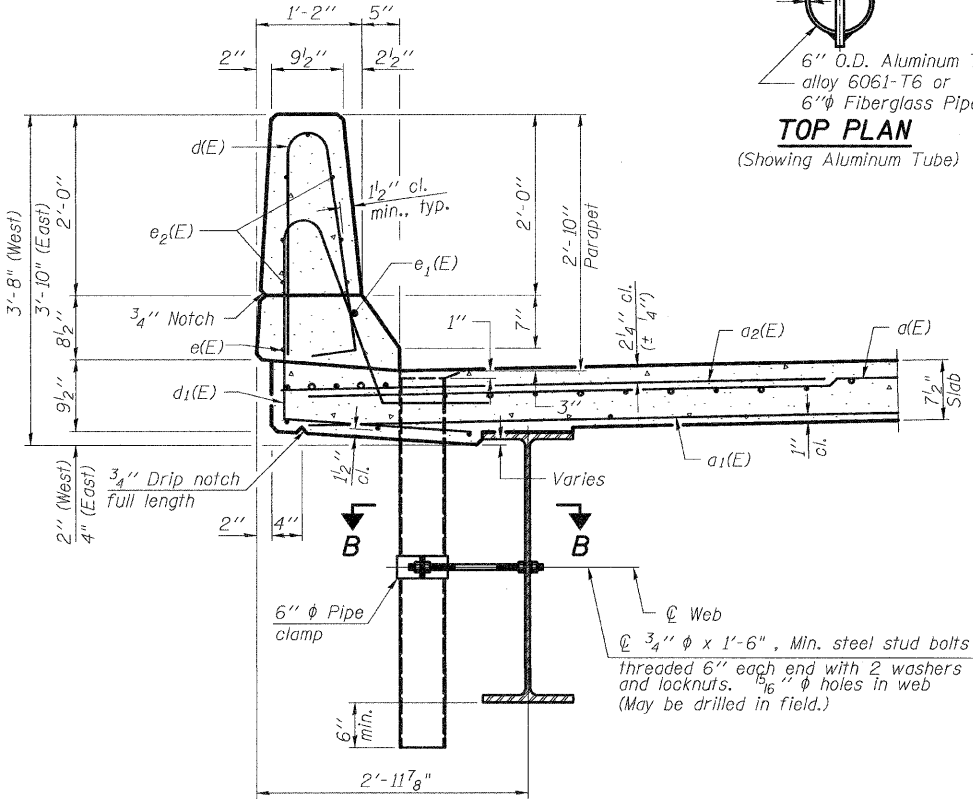
#4 Bars	1'-10"
#5 Bars	1'-8"
#8 Bars	3'-5"



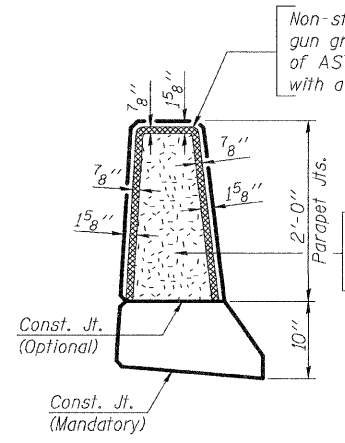
BAR d1(E)



BAR d(E)



SECTION THRU PARAPET



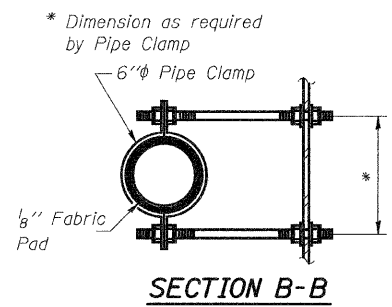
PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

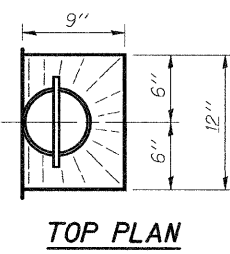
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	348	#5	33'-7"	—
a1(E)	124	#5	29'-3"	—
a2(E)	170	#6	4'-0"	—
a3(E)	124	#5	37'-11"	—
a4(E)	8	#5	38'-4"	—
b(E)	207	#5	25'-5"	—
b2(E)	276	#5	19'-6"	—
d(E)	160	#5	5'-7"	U
d1(E)	160	#5	7'-9"	L
e(E)	6	#5	25'-5"	—
e1(E)	6	#8	26'-7"	—
e2(E)	56	#4	17'-11"	—
v(E)	130	#5	4'-0"	—
m(E)	12	#6	26'-3"	—
m1(E)	18	#6	27'-5"	—
m2(E)	32	#6	11'-10"	—
m3(E)	14	#6	9'-5"	—
m4(E)	4	#6	3'-0"	—
s(E)	124	#5	6'-3"	Z
s1(E)	124	#4	10'-0"	Z
Reinforcement Bars, Epoxy Coated		Pound	40,980	
Concrete Superstructure		Cu. Yds.	183.6	
Protective Coat		Sq. Yds.	577	
Floor Drains		Each	6	
Bar Splicers		Each	130	
Bridge Deck Grooving		Sq. Yds.	498	

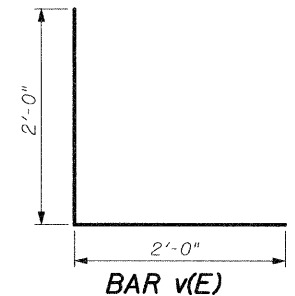
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 3 #5 etc. indicates 1 line of bars with 3 lengths per line.



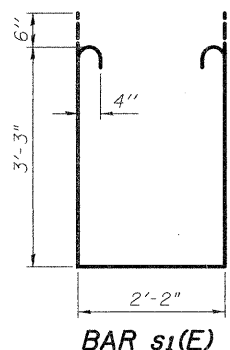
SECTION B-B



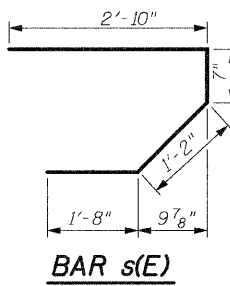
TOP PLAN



BAR v(E)



BAR s1(E)



BAR s(E)

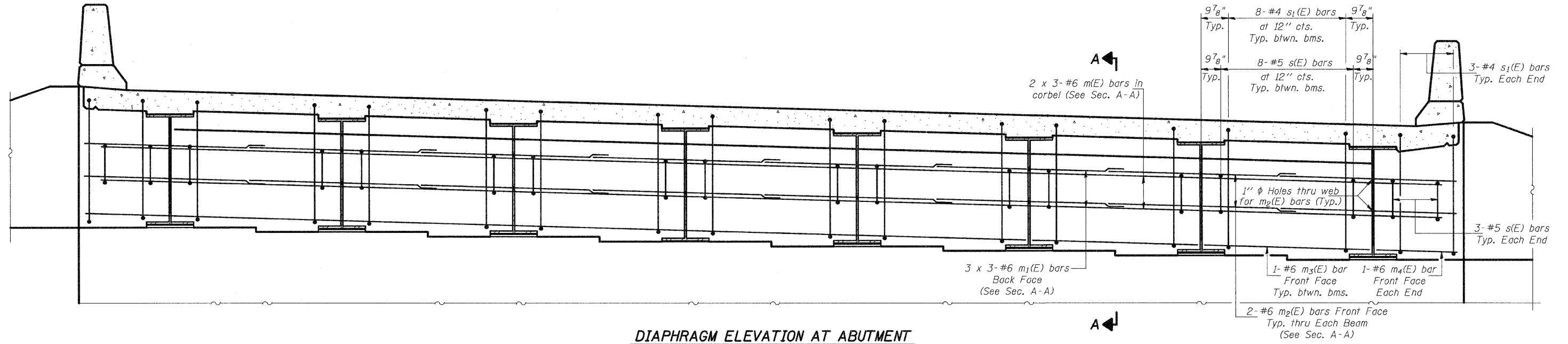
SUPERSTRUCTURE DETAILS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	38
STA. 165+75.19				
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 7
13 Sheets

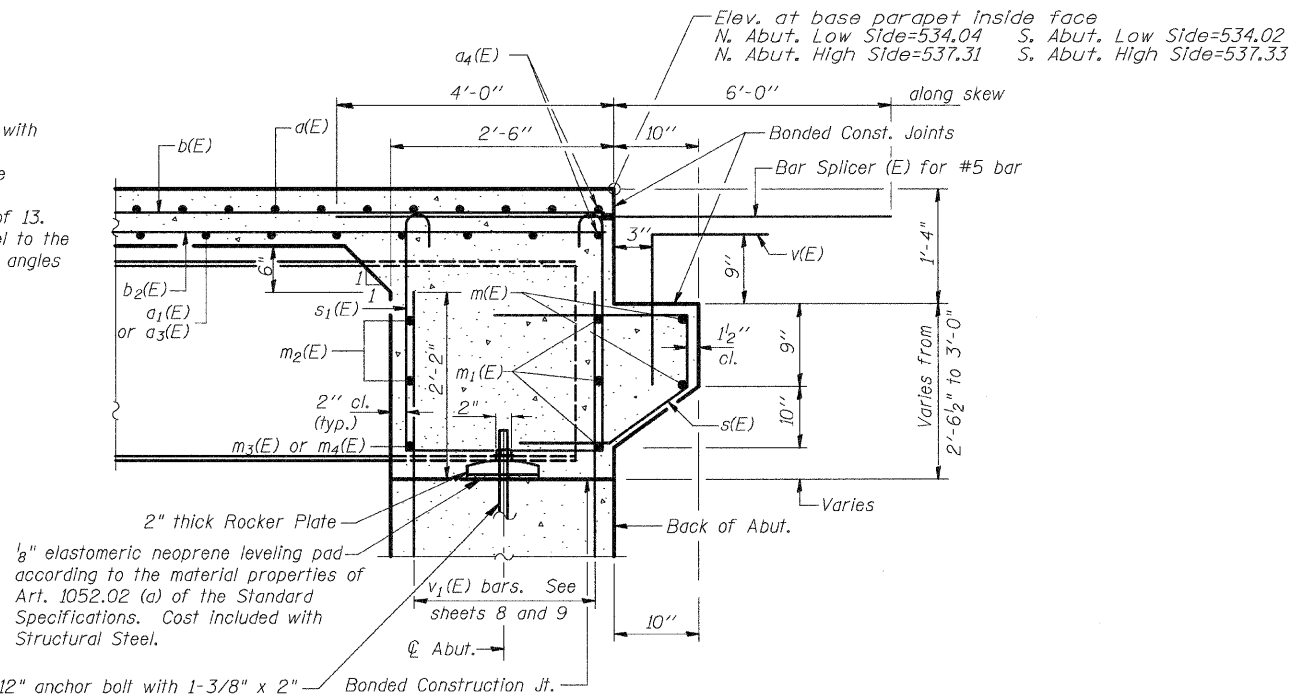


DIAPHRAGM ELEVATION AT ABUTMENT

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 6 of 13.
Concrete in diaphragm is included with Concrete Superstructure on sheet 6 of 13.
For details of bars s(E) & s₁(E) see sheet 6 of 13.
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.
For anchor bolt details see sheet 12 of 13.

MIN. BAR LAP

#6 bar = 2'-9" (Top Bar)
#6 bar = 2'-0"



SECTION A-A

Dimensions at right angles to abutment, except as shown.
* Cost included with Concrete Structures.

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

SI-DS1 2-14-01

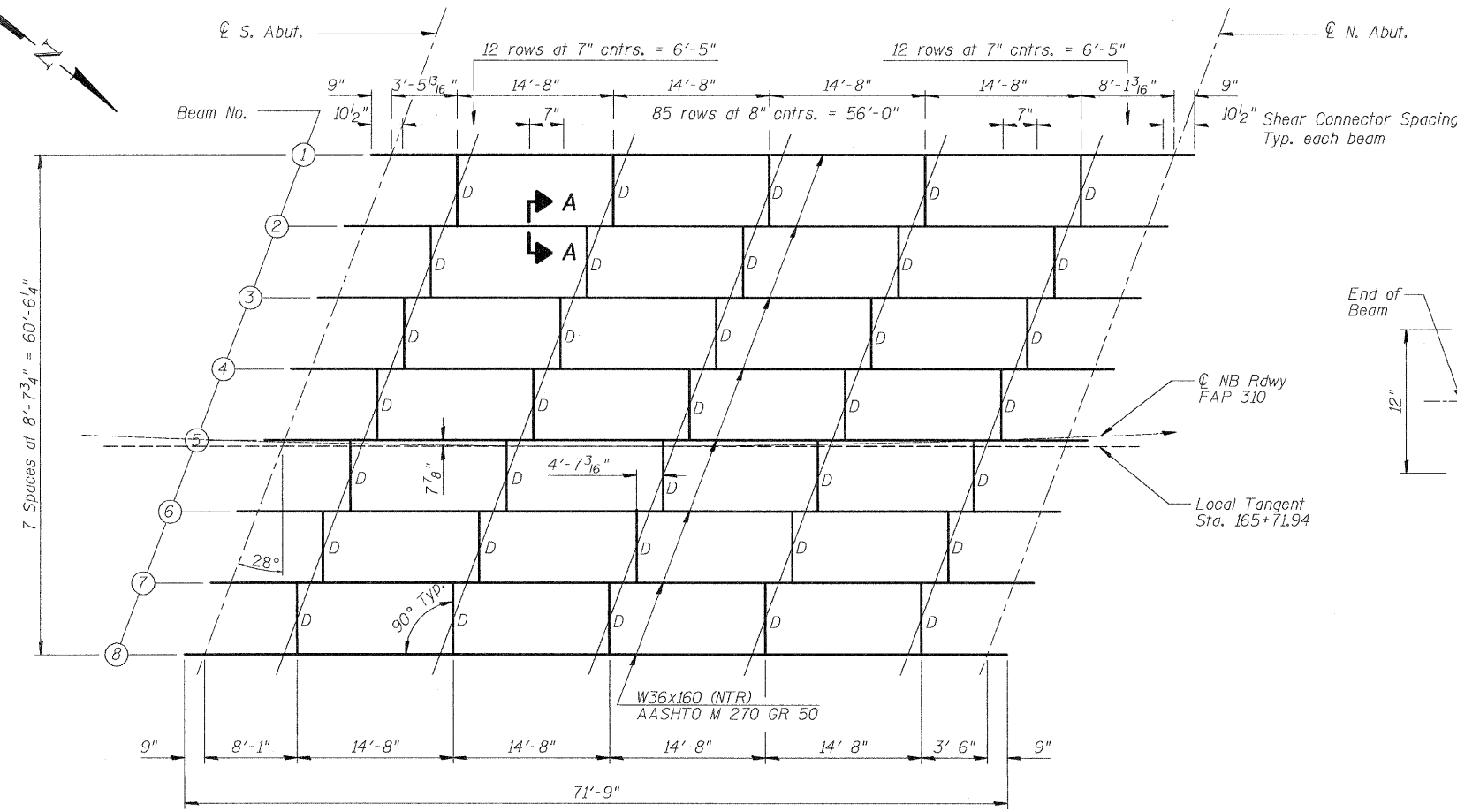
SUPERSTRUCTURE DETAILS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

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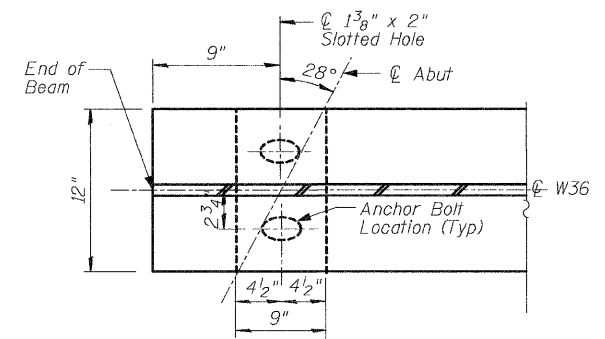
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	39
STA. 165+71.94				
FED. ROAD DIST. ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 8
13 Sheets



FRAMING PLAN



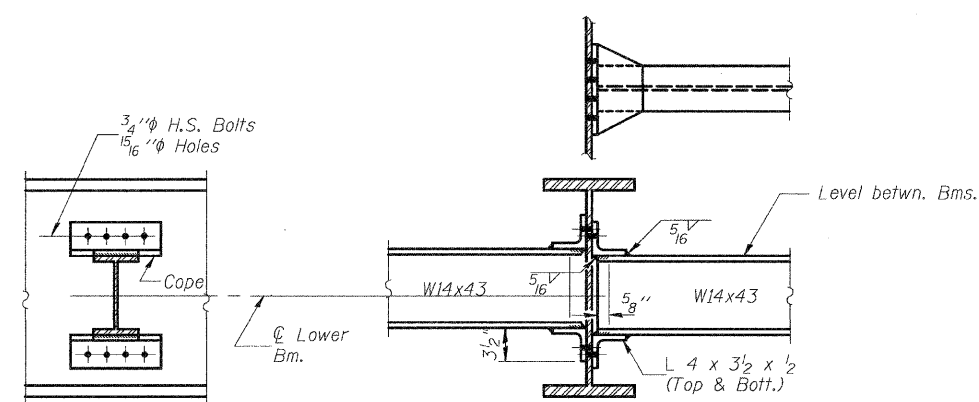
PLAN
**1/8" THICK ELASTOMERIC
NEOPRENE LEVELING PAD
AND ROCKER PLATE
(16 REQUIRED)**

INTERIOR BEAM MOMENTS		0.5 Span
I_s	(in ⁴)	9750
I_c (n)	(in ⁴)	23776
I_c (3n)	(in ⁴)	17591
S_s (n)	(in ³)	542
S_c (n)	(in ³)	758
S_c (3n)	(in ³)	688
ϕ	(K/ft.)	1.005
$M\phi$	(K)	620
$s\phi$	(K/ft.)	0.498
$Ms\phi$	(K)	307
$M\phi$	(K)	808
M (Imp)	(K)	207
$\phi_3(M\phi + I)$	(K)	1690
M_a	(K)	3402
M_u	(K)	3790
$fs\phi$ non-comp (k.s.i.)		13.7
$fs\phi$ (comp) (k.s.i.)		5.4
$fs\phi_3(4+I)$ (k.s.i.)		26.7
fs (Overload) (k.s.i.)		45.8
VR	(K)	63.9

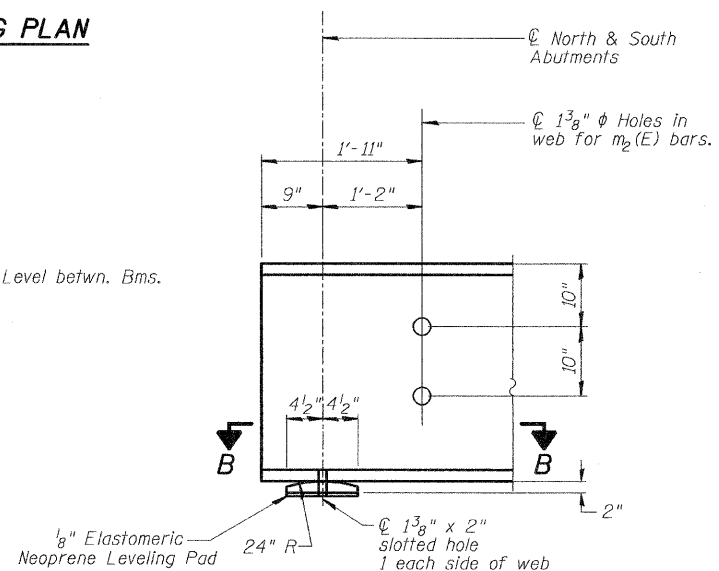
INTERIOR BEAM REACTIONS		Abut.
$R\phi$	(K)	52.8
$R\phi$	(K)	50.9
Imp.	(K)	13.0
R (Total)	(K)	116.7

* Includes centrifugal force and superelevation effects.
 I_s and S_s are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 I_c and S_c are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
 VR is the maximum Live Load + Impact shear range in span.
 M_a (Applied Moment) = $1.3[M\phi + Ms\phi + \phi_3(M\phi + I)]$.
 M_u is the Full Plastic Moment Capacity for Compact, Braced section.
 fs (Overload) is the sum of the stresses due to $M\phi + Ms\phi + \phi_3(M\phi + I)$.

Notes:
 "NTR" denotes items to which notch toughness requirements are applicable.
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



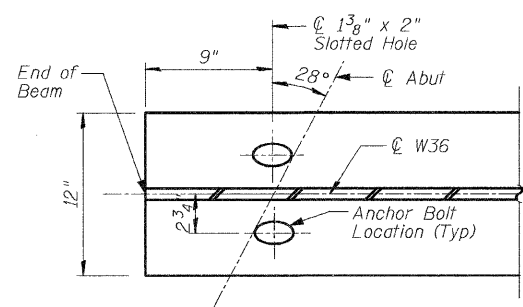
DIAPHRAGM D
35 Required



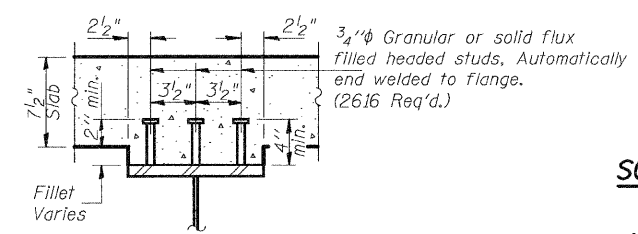
END OF BEAM ELEVATION

Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7	Beam 8
☉ South Abut.	533.40	533.85	534.30	534.75	535.20	535.66	536.11	536.56
☉ North Abut.	533.42	533.87	534.31	534.76	535.20	535.65	536.10	536.55

TOP OF BEAM ELEVATIONS
(For Fabrication Only)



SECTION B-B



SECTION A-A
(Typical)

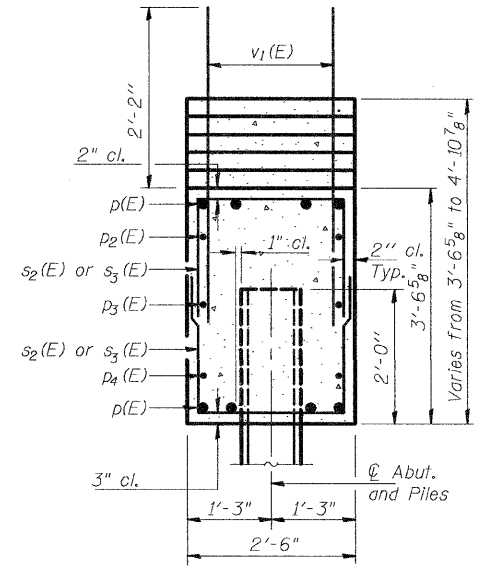
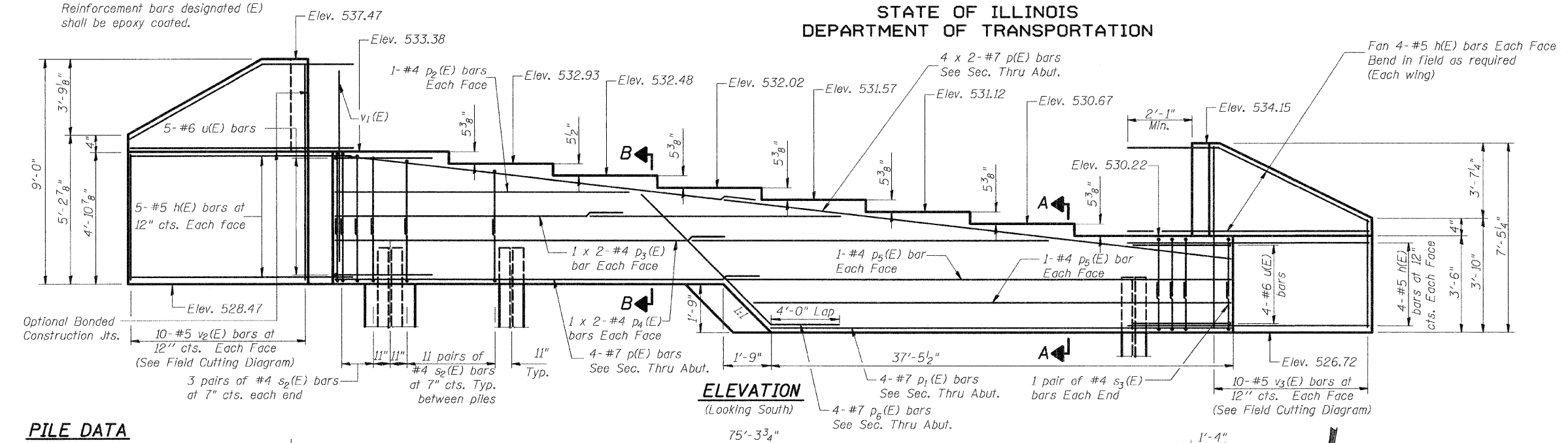
STRUCTURAL STEEL
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

DESIGNED	J.L.G.
CHECKED	R.P.B.
DRAWN	J.L.G.
CHECKED	R.P.B.

I-2-D 2/14/01

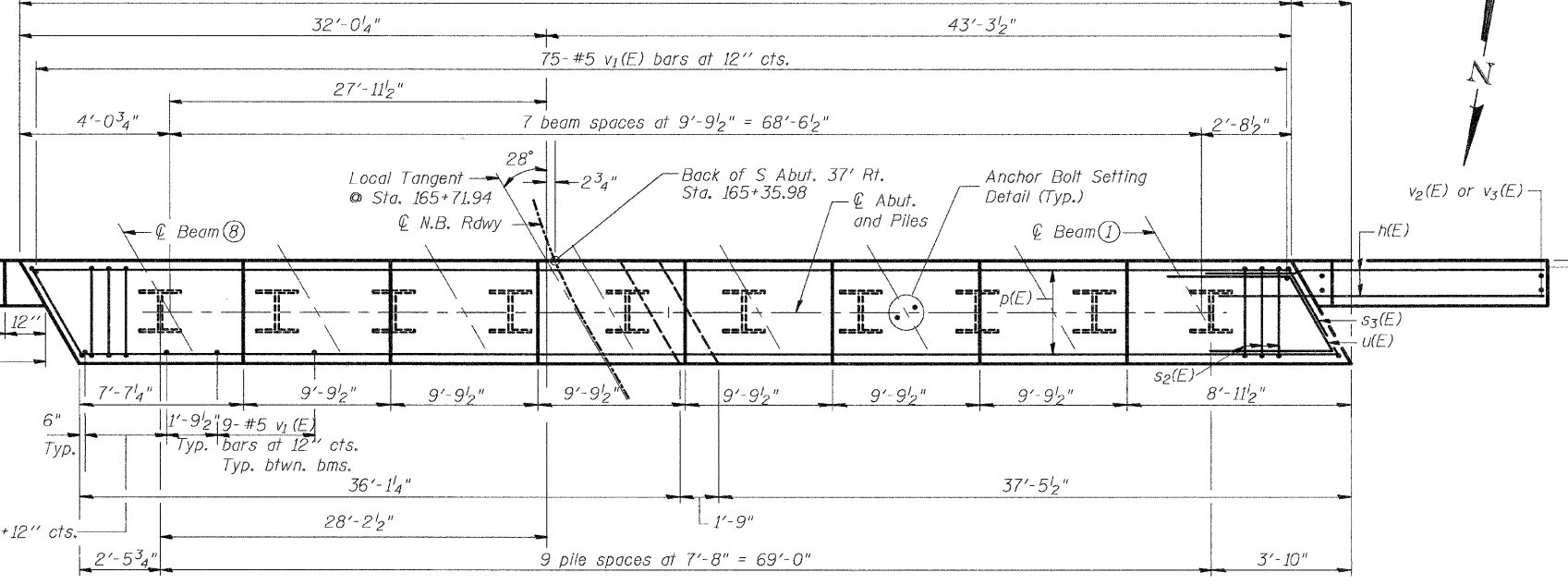
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E)
shall be epoxy coated.



PILE DATA

Type: HP12x63 With Pile Shoes
Nominal Required Bearing: 496 kips
Allowable Resistance Available: 165 kips
Est. Length: 33'
No. Required: 10
The Steel H-Piles shall be according to AASHTO M270 Grade 50.
The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

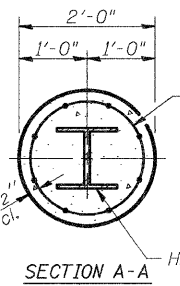


MIN. BAR LAP
#4 BAR = 2'-5"
#7 BAR = 4'-10"

BILL OF MATERIAL

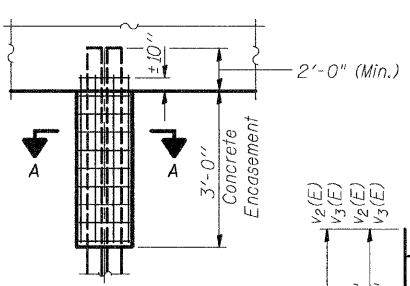
Bar	No.	Size	Length	Shape
h(E)	34	#5	12'-11"	—
p(E)	12	#7	39'-11"	—
p1(E)	4	#7	37'-0"	—
p2(E)	2	#4	21'-10"	—
p3(E)	4	#4	22'-8"	—
p4(E)	4	#4	33'-2"	—
p5(E)	4	#4	37'-10"	—
p6(E)	4	#7	10'-10"	—
s2(E)	210	#4	8'-4"	□
s3(E)	4	#4	8'-7"	□
u(E)	9	#6	7'-10"	└
v1(E)	144	#5	4'-4"	—
v2(E)	10	#5	13'-7"	—
v3(E)	10	#5	10'-7"	—
Concrete Structures			Cu. Yd.	34.7
Reinforcement Bars Epoxy Coated			Pound	4430
Structure Excavation			Cu. Yd.	31.5
Furnishing Steel				
Piles HP12x63			Foot	330
Driving Piles			Foot	330
Pile Shoes			Each	10

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



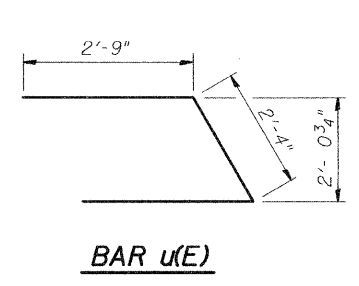
PILE ENCASEMENT DETAIL

Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Excavation, Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.



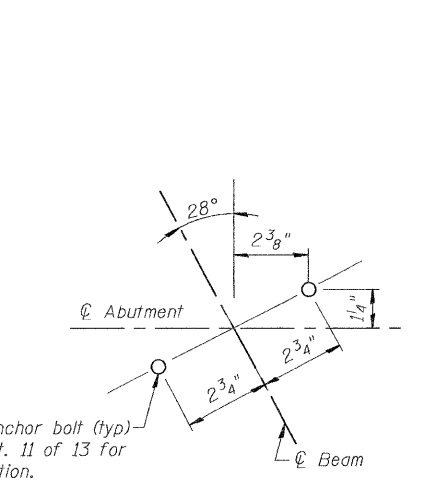
FIELD CUTTING DIAGRAM

Order v2(E) & v3(E) full length. Cut as shown and use remainder of bars in opposite face.

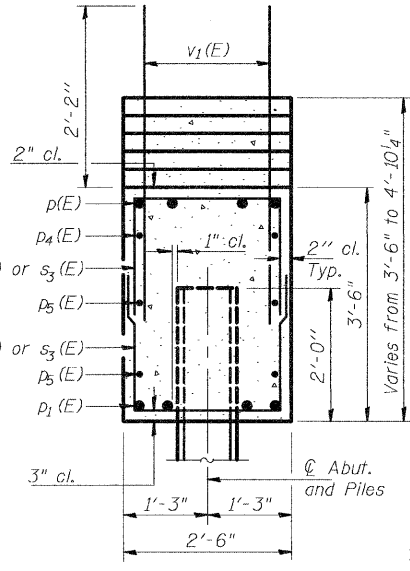


BARS s2(E) & s3(E)

1" φ Anchor bolt (typ) see sht. 11 of 13 for installation.



ANCHOR BOLT SETTING DETAIL



SECTION A-A

(Dimensions @ Right Angles)

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

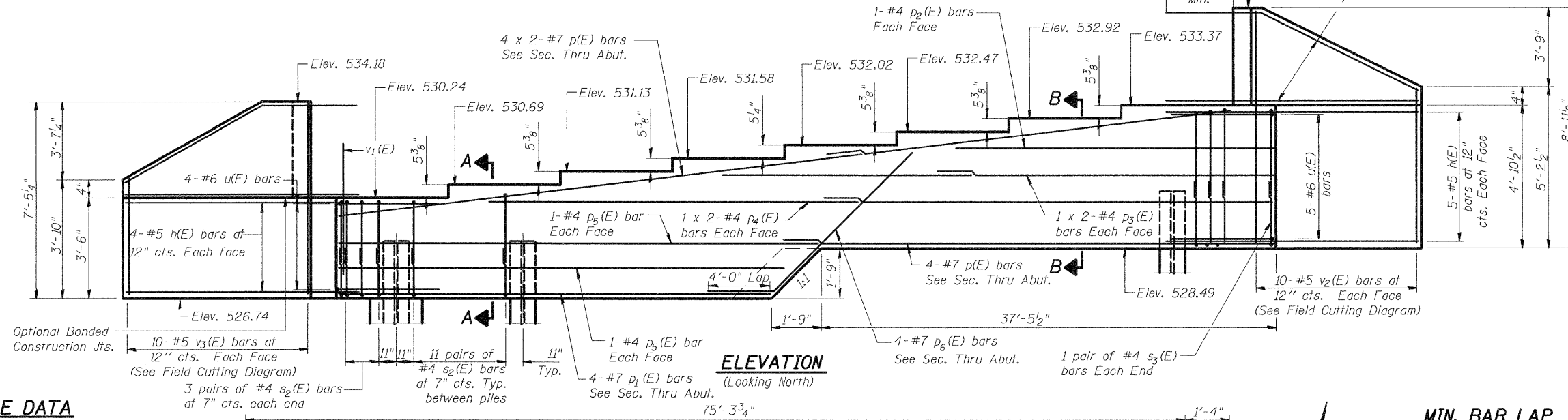
AI-L 2-14-01

**SOUTH ABUTMENT
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329**

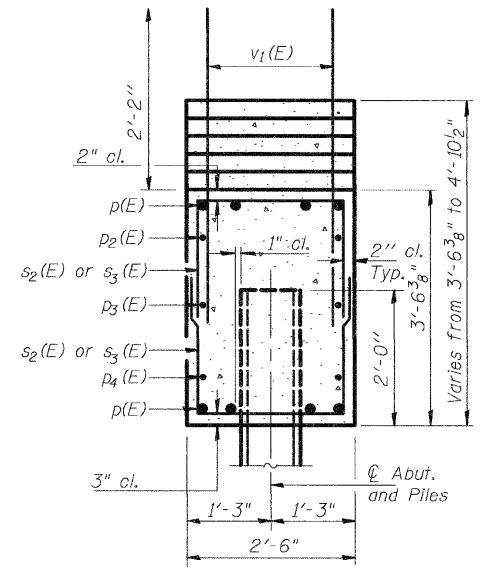
Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E)
shall be epoxy coated.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	Sheet No. 10 13 Sheets
310	60-(16B, 16-1B)	MADISON	62	41	
STA. 165+71.94					
FED. ROAD DIST. ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 76567					



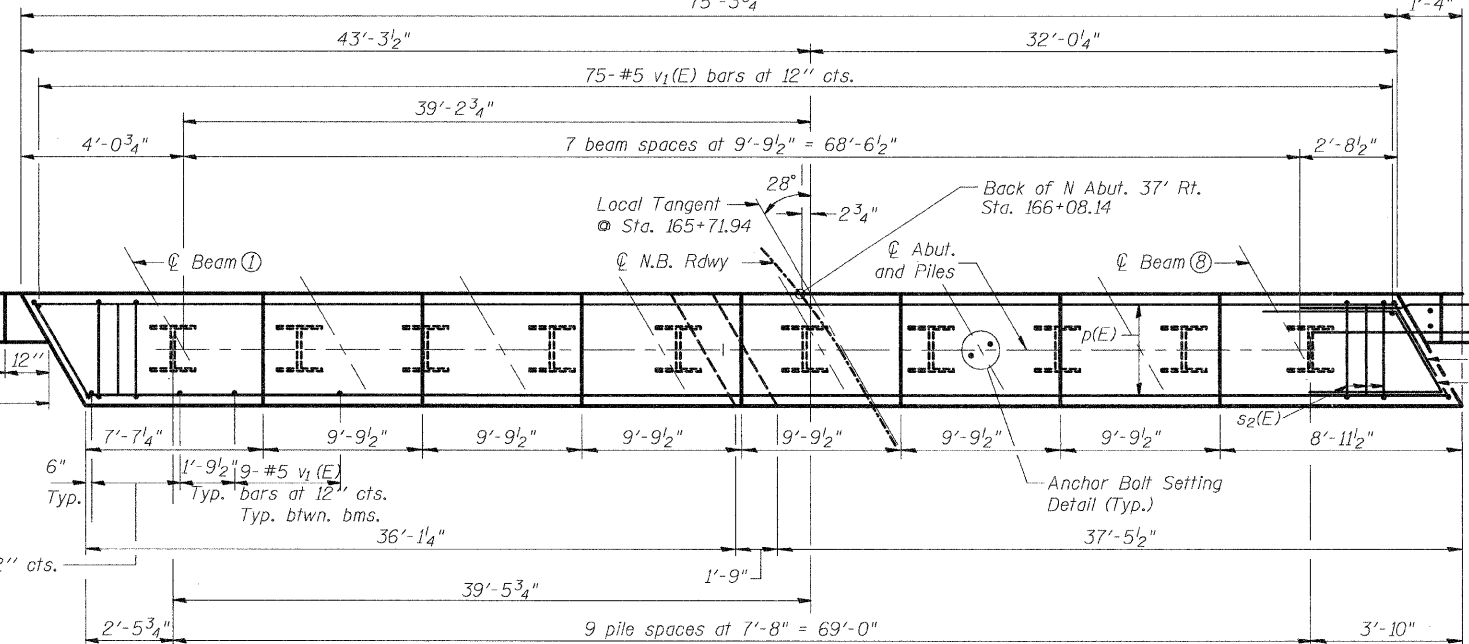
ELEVATION
(Looking North)



SECTION B-B
(Dimensions @ Right Angles)

PILE DATA

Type: HP12x63 With Pile Shoes
Nominal Required Bearing: 496 kips
Allowable Resistance Available: 165 kips
Est. Length: 39'
No. Required: 9 + 1 Test Pile
The Steel H-Piles shall be according to AASHTO M270 Grade 50.
The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.



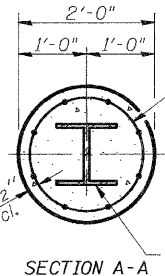
PLAN

MIN. BAR LAP
#4 BAR = 2'-5"
#7 BAR = 4'-10"

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	34	#5	12'-11"	—
p(E)	12	#7	39'-11"	—
p1(E)	4	#7	37'-0"	—
p2(E)	2	#4	21'-10"	—
p3(E)	4	#4	22'-8"	—
p4(E)	4	#4	33'-2"	—
p5(E)	4	#4	37'-10"	—
p6(E)	4	#7	10'-10"	—
s2(E)	210	#4	8'-4"	□
s3(E)	4	#4	8'-7"	□
u(E)	9	#6	7'-10"	—
v1(E)	144	#5	4'-4"	—
v2(E)	10	#5	13'-5"	—
v3(E)	10	#5	10'-7"	—
Concrete Structures		Cu. Yd.	34.5	
Reinforcement Bars Epoxy Coated		Pound	4430	
Structure Excavation		Cu. Yd.	30.6	
Furnishing Steel Piles HP12x63		Foot	351	
Driving Piles		Foot	351	
Test Piles HP 12x63		Each	1	
Pile Shoes		Each	9	

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



PILE ENCASEMENT DETAIL

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

AI-L 2-14-01

FIELD CUTTING DIAGRAM

Order v2(E) & v3(E) full length. Cut as shown and use remainder of bars in opposite face.

BARS s2(E) & s3(E)

ANCHOR BOLT SETTING DETAIL

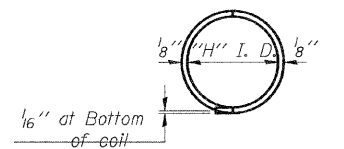
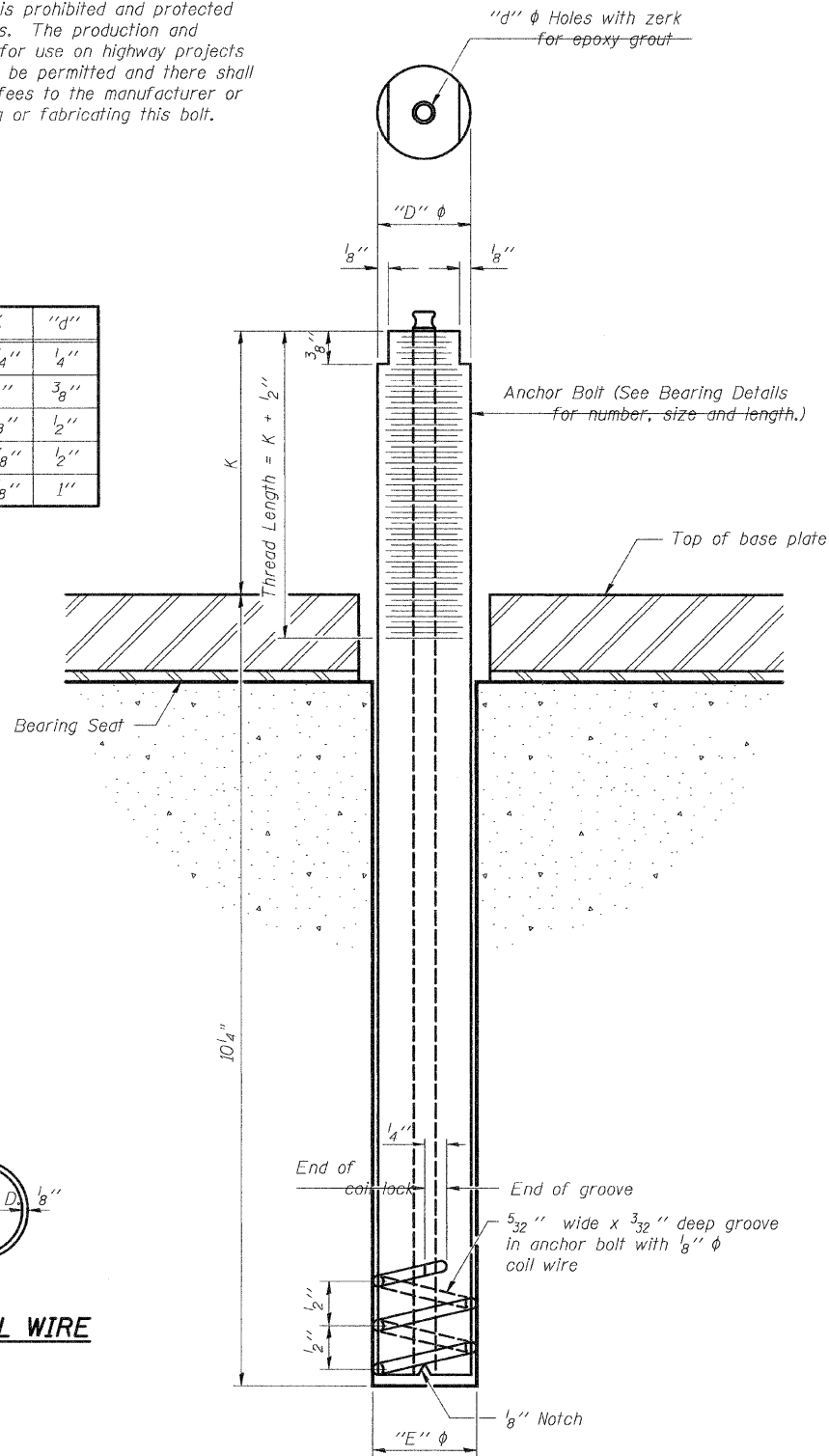
NORTH ABUTMENT
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	Sheet No. 11 13 Sheets
310	60-(16B, 16-1B)	MADISON	62	42	
STA. 165+71.94					
FED. ROAD DIST. ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 76567					

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

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



PLAN-COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

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

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

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

- The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
N Abut	A307
S Abut	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

ABB-1 10-22-04

GENERAL NOTES

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

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

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

**ANCHOR BOLT DETAILS
FOR BEARINGS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	43
STA. 165+71.94				
FED. ROAD DIST. ILLINOIS		FED. AID PROJECT		
CONTRACT NO. 76567				

Sheet No. 12
13 Sheets

NOTES

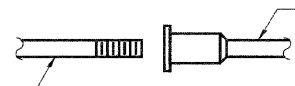
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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 = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- 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'-0"	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

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



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

ROLLED THREAD DOWEL BAR



**** ONE PIECE**

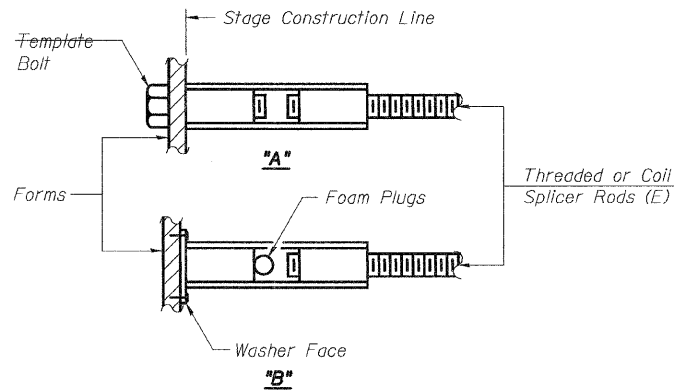
Wire Connector



WELDED SECTIONS

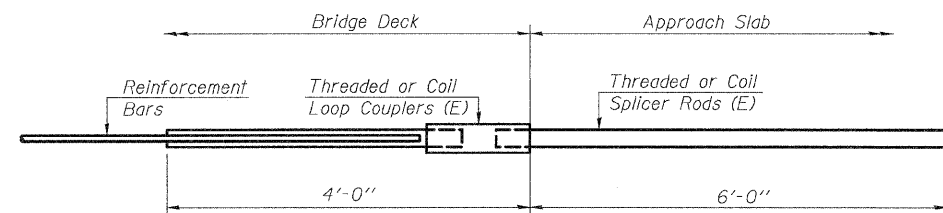
BAR SPLICER ASSEMBLY ALTERNATIVES

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



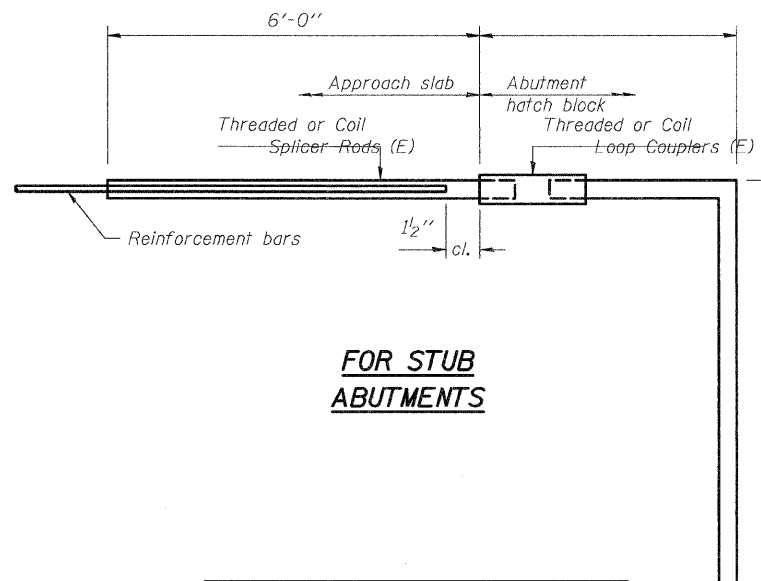
INSTALLATION AND SETTING METHODS

"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.



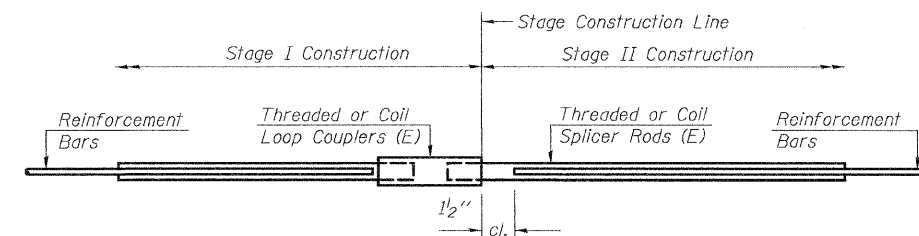
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	12.3 kips - tension
No. Required =	130



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

BAR SPLICER ASSEMBLY DETAILS
FAP 310 (US 67) OVER
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

DESIGNED	B.W.P.
CHECKED	R.P.B.
DRAWN	D.J.S.
CHECKED	R.P.B.

BSD-1 11-01-06

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ILLINOIS DEPARTMENT OF TRANSPORTATION
District Eight Materials
NW 1/4, SW 1/4, SEC10, T6N, R10W, 3RD P.M.

PROJECT D-98-113-96 BRIDGE PROPOSED US 67 OVER SOUTH BRANCH OF PIASA CREEK Date 06/15/99 Sh. 1 of 1

ROUTE FAP 310 Bored By LARRY FORD

SEC. 60-16 STA. _____ Checked By T. WECK

COUNTY Madison
EXIST S.N. _____
Boring No. #1SABUT
Sta 165+40
O/S 28' RT

E.I.	N	Qu t/sf	W %	Surf Wat El.		E.I.	N	Qu t/sf	W %
				At	Hrs				
Ground Surface	526.9	0							
						6		S/15	
						8		1.7	17
BROWN SAND									
	2								
	4	NC				25	4		
	5								
513.8						6		B	2.0
	8								20
	5								
	6	S/15							
	8	3.6	14						
BROWN AND GRAY CLAY LOAM									
	7								
	8	S/15							
	10	3.8	15						
	10								
	6	B							
	7	2.6	15						
	2								
	3								
	5	B							
	7	1.6	18						
	3								
	5	S/15							
	7	1.9	16						
	4								
	6	S/15							
	8	1.7	18						
	20								
	7	S/15							
	8	1.9	17						
	4								

436.3

TRICONE ROLLER
3 MIN
2 MIN GRAY LIMESTONE WITH HORIZONTAL AND VERTICAL WEATHERED SEAMS
2 MIN
2 MIN RECOVERED 83% ROD 66%
2 MIN
2 MIN
493.9 1 MIN
END OF BORING

N-Std Penr Test: 2" OD Sampler, 140# Hammer Falling 30" (Type Fall, B Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION
District Eight Materials
NW 1/4, SW 1/4, SEC10, T6N, R10W, 3RD P.M.

PROJECT D-98-113-96 BRIDGE US 67 PROPOSED OVER SOUTH BRANCH OF PIASA CREEK Date 06/21/99 Sh. 1 of 1

ROUTE FAP 310 Bored By LARRY FORD

SEC. 60-16 STA. _____ Checked By T. WECK

COUNTY Madison
EXIST S.N. _____
Boring No. #2NABUT
Sta 166+36
O/S 57' RT

E.I.	N	Qu t/sf	W %	Surf Wat El.		E.I.	N	Qu t/sf	W %
				At	Hrs				
Ground Surface	531.4	0							
						8		B	2.2
						10		2.2	17
GRAY SILTY CLAY LOAM									
	4								
	5	S/10				25	5		
	5	1.3	19						
527.4						8		B	2.0
	10								17
	2								
	3	S/15							
	5	1.4	21						
GRAY AND BROWN SILTY CLAY									
	5								
	8	S/15							
	9	1.7	18						
524.9									
	5								
	7	S/15				30	5		
	9	2.8	16						
BROWN AND GRAY CLAY LOAM									
	5								
	8	S/15							
	10	2.9	15						
	4								
	7	S/20							
	9	3.6	15						
	5								
	9	S/20							
	11	3.4	15						
	5								
	8	B							
	10	2.9	16						
	5								
	7	B							
	10	2.4	16						
	5								

494.9

LIMESTONE

492.9

GRAY SHALE WITH BROKEN WEATHERED LIMESTONE GRAVEL

489.4

LIMESTONE IN BROKEN WEATHERED SHELVES

487.9

END OF BORING

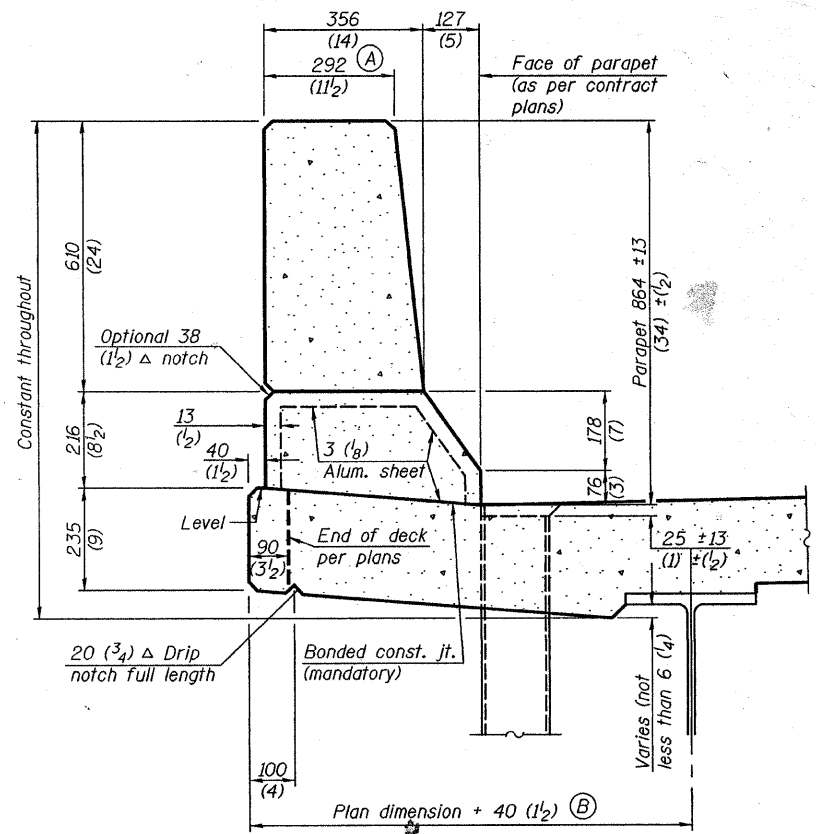
N-Std Penr Test: 2" OD Sampler, 140# Hammer Falling 30" (Type Fall, B Bulge S-Shear E-Estimated P-Penetrometer)

SOIL BORING LOGS
FAP 310 (US 67)
SOUTH BRANCH OF PIASA CREEK
SECTION 60-(16B, 16-1B)
MADISON COUNTY STA 165+71.94
SN 060-0329

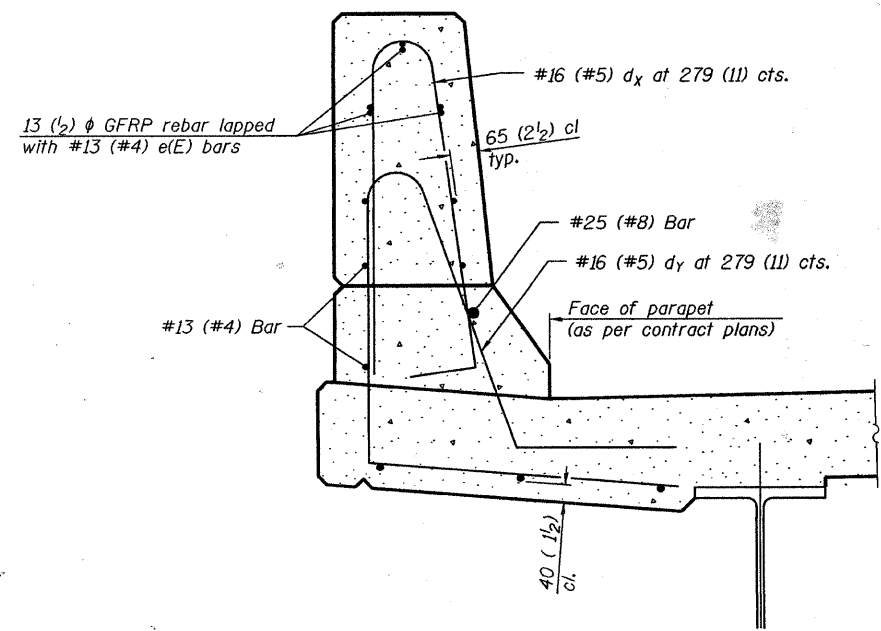
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAP ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
310	60- WB...	MADISON	62	44A,	
FED. ROAD DIST. NO. 7		BLINDS	FED. AID PROJECT		

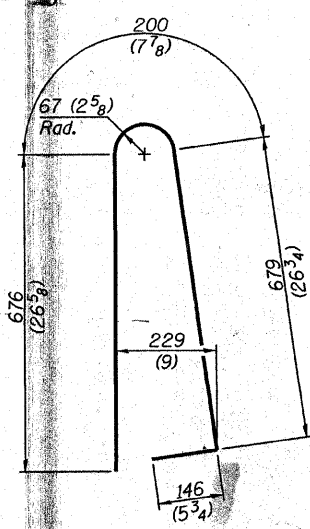
Contract #



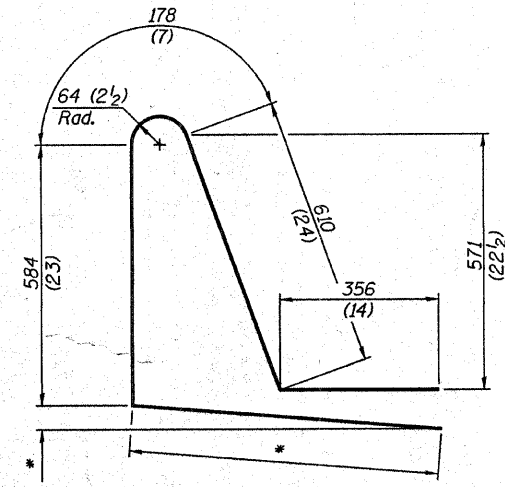
SECTION
(Showing dimensions)



SECTION
(Showing required reinforcement)

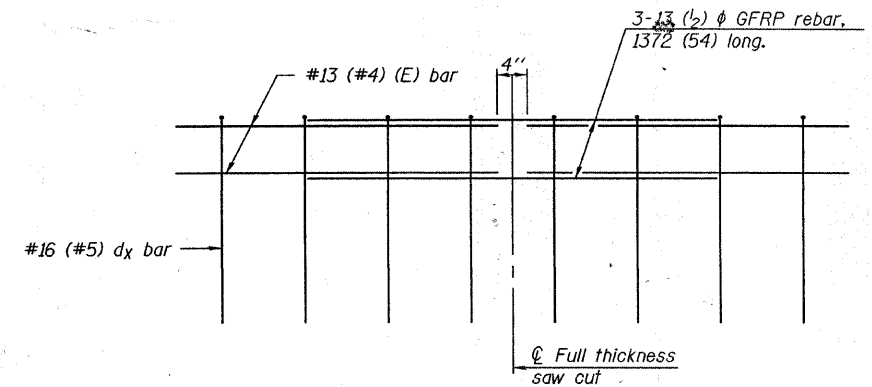


BAR dx(e)



BAR dy(e)
* Per contract plans

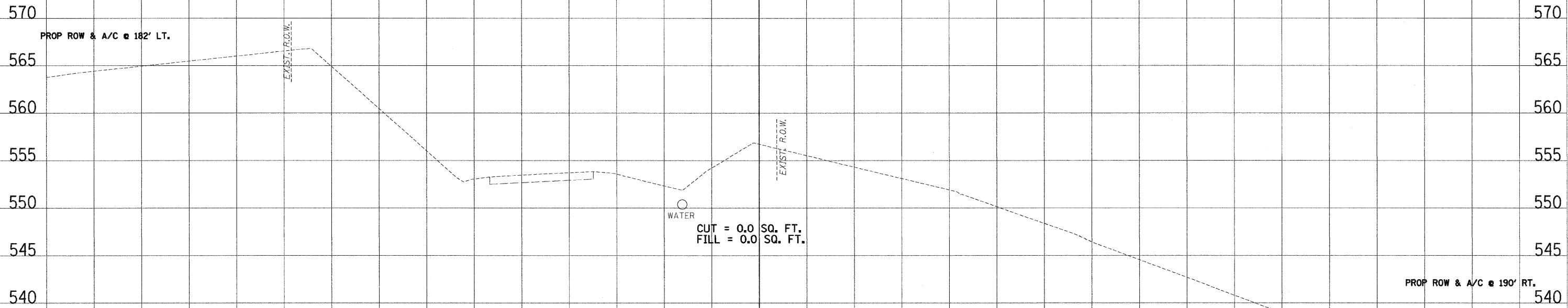
GENERAL NOTES
All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0422 m³/m (0.165 cu. yds./ft.) of parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all other locations. Adjust/add joint locations to maintain 3 to 6 meter (10 to 20 foot) spacing.



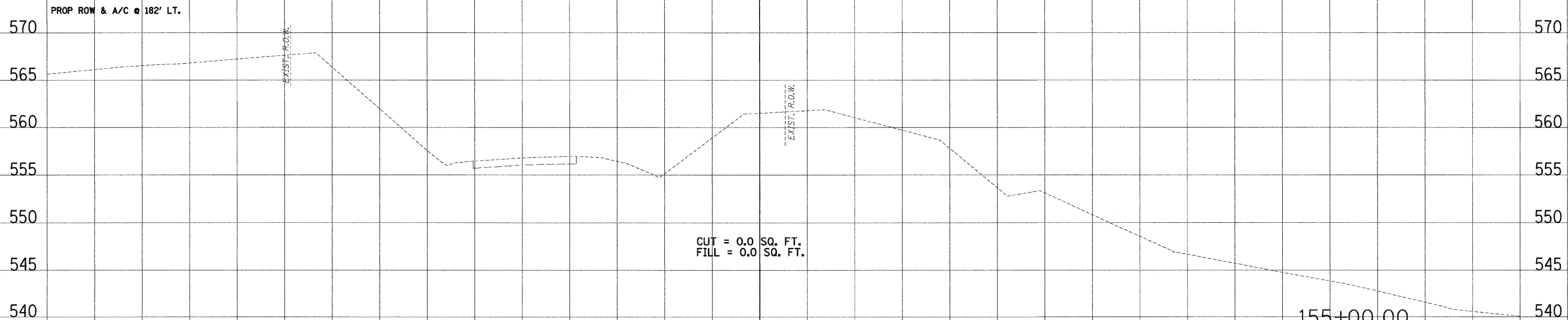
GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section)

**CONCRETE PARAPET
SLIPFORMING OPTION**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	45
STA. 155+00.00		TO STA. 155+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				



155+50.00
BEGIN PROJECT



155+00.00

SURVEY PLOTTED
 NOTE BOOK
 NO. AREAS CHECKED

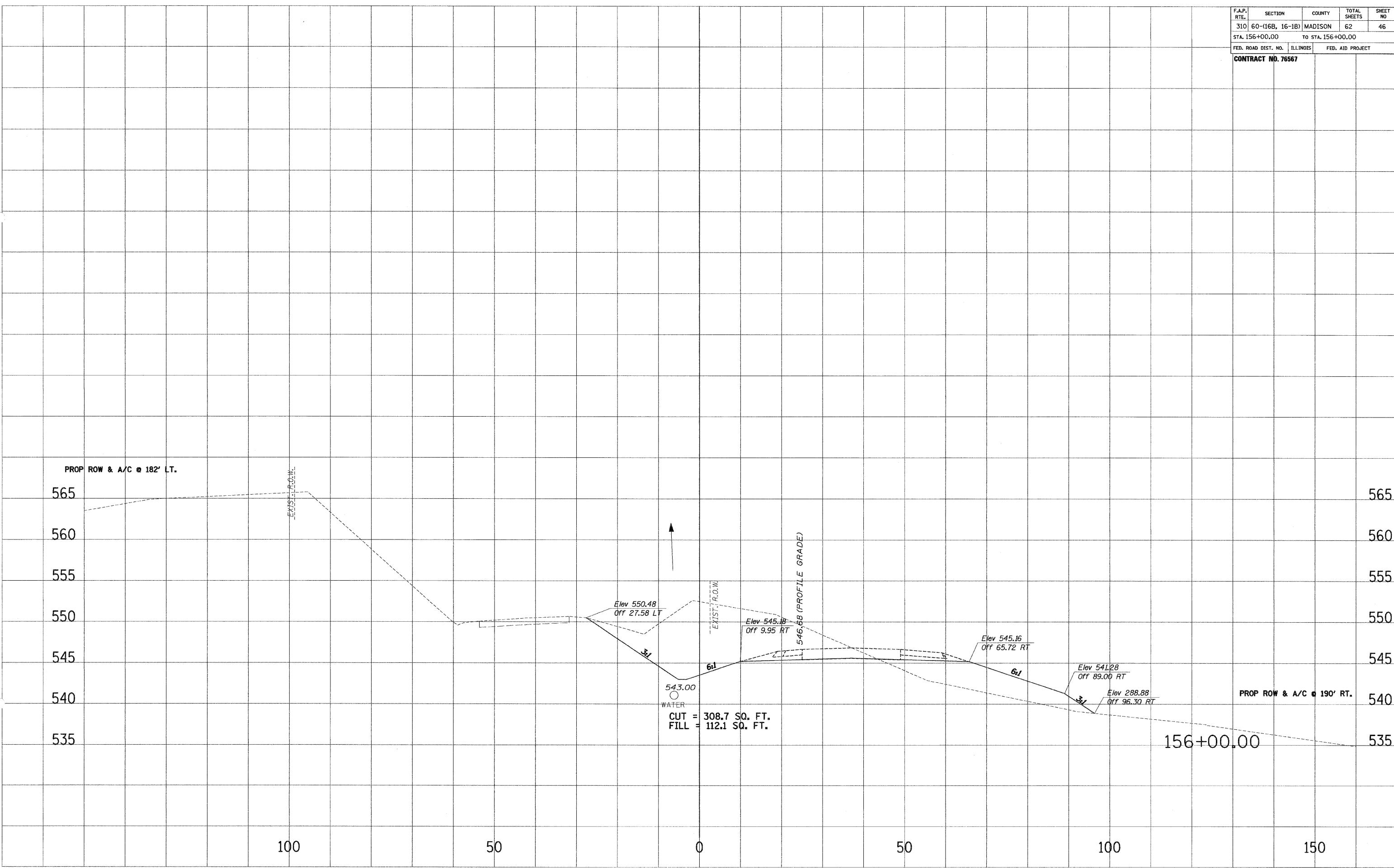
SURVEY PLOTTED
 NOTE BOOK
 NO. AREAS CHECKED

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	46
STA. 156+00.00		TO STA. 156+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

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 AREAS CHECKED



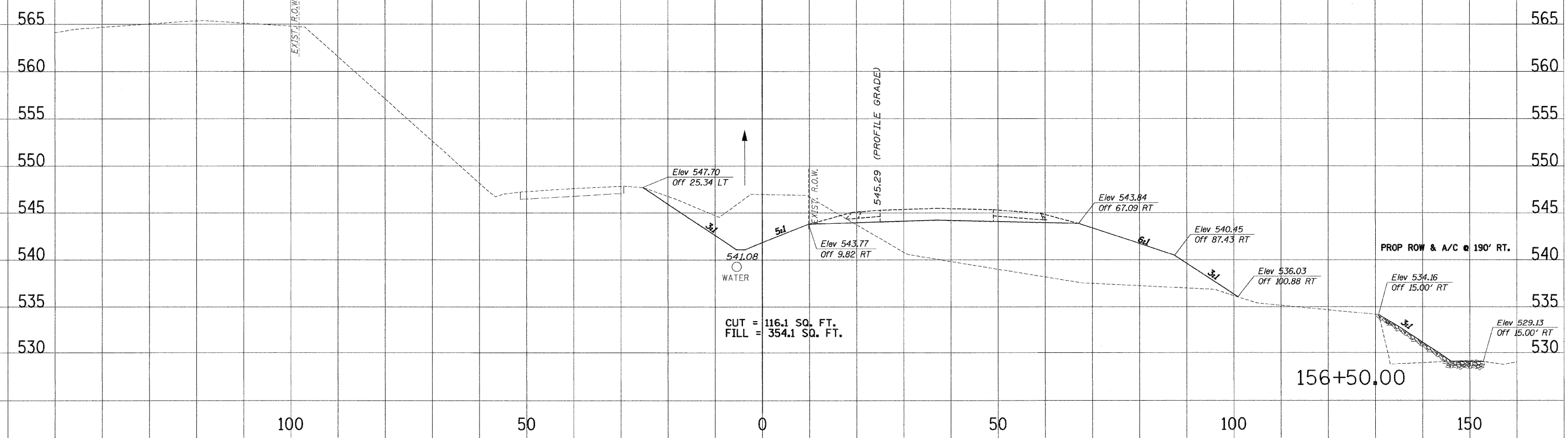
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	47
STA. 156+50.00		TO STA. 156+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

DATE: _____
 PLOTTED BY: _____
 NOTE BOOK NO.: _____
 AREAS CHECKED: _____

DATE: _____
 PLOTTED BY: _____
 NOTE BOOK NO.: _____
 AREAS CHECKED: _____

PROP ROW & A/C @ 182' LT.



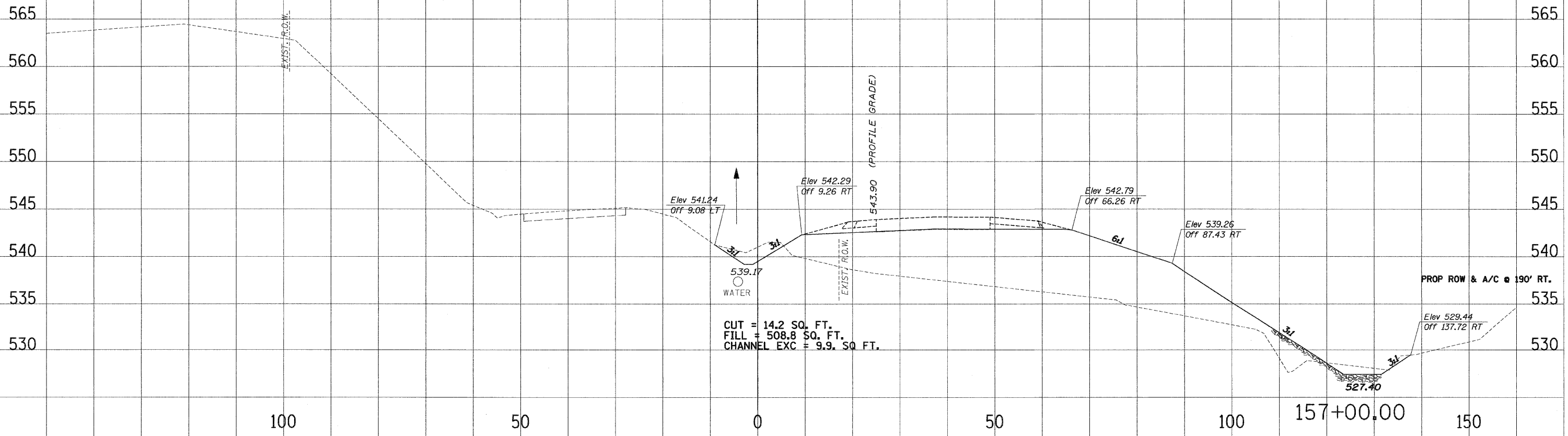
F.A.P. ROUTE 310

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	48
STA. 157+00.00		TO STA. 157+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

DATE: _____
 PLOTTED: _____
 NOTE BOOK NO.: _____
 AREAS CHECKED: _____

DATE: _____
 PLOTTED: _____
 NOTE BOOK NO.: _____
 AREAS CHECKED: _____

PROP ROW & A/C @ 182' LT.

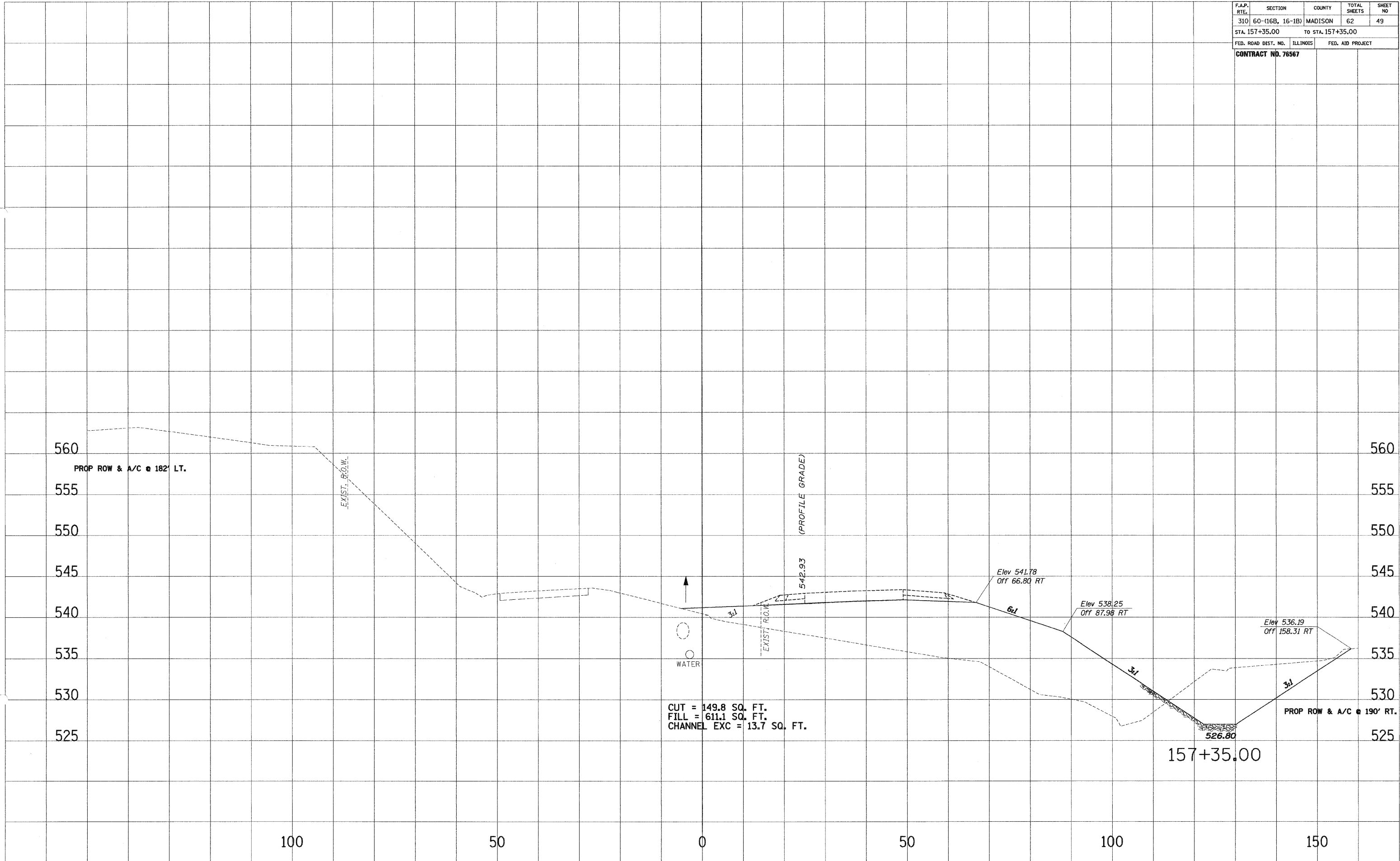


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	49
STA. 157+35.00		TO STA. 157+35.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____

SURVEY PLOTTED
 NOTE BOOK NO. _____
 AREAS CHECKED _____



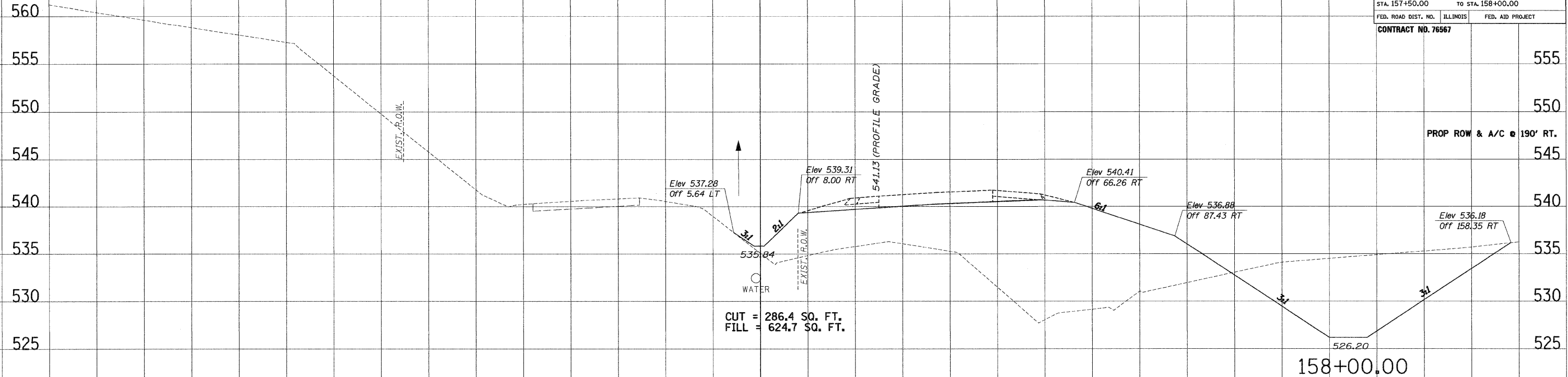
CUT = 149.8 SQ. FT.
 FILL = 611.1 SQ. FT.
 CHANNEL EXC = 13.7 SQ. FT.

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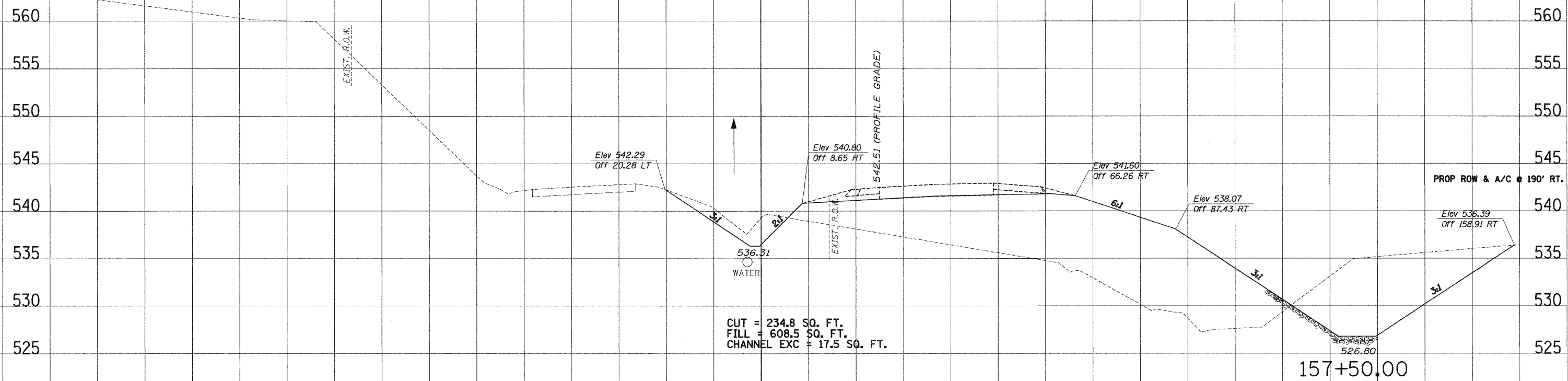
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	50
STA. 157+50.00		TO STA. 158+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76567

PROP ROW & A/C @ 182' LT.



PROP ROW & A/C @ 182' LT.



100

50

0

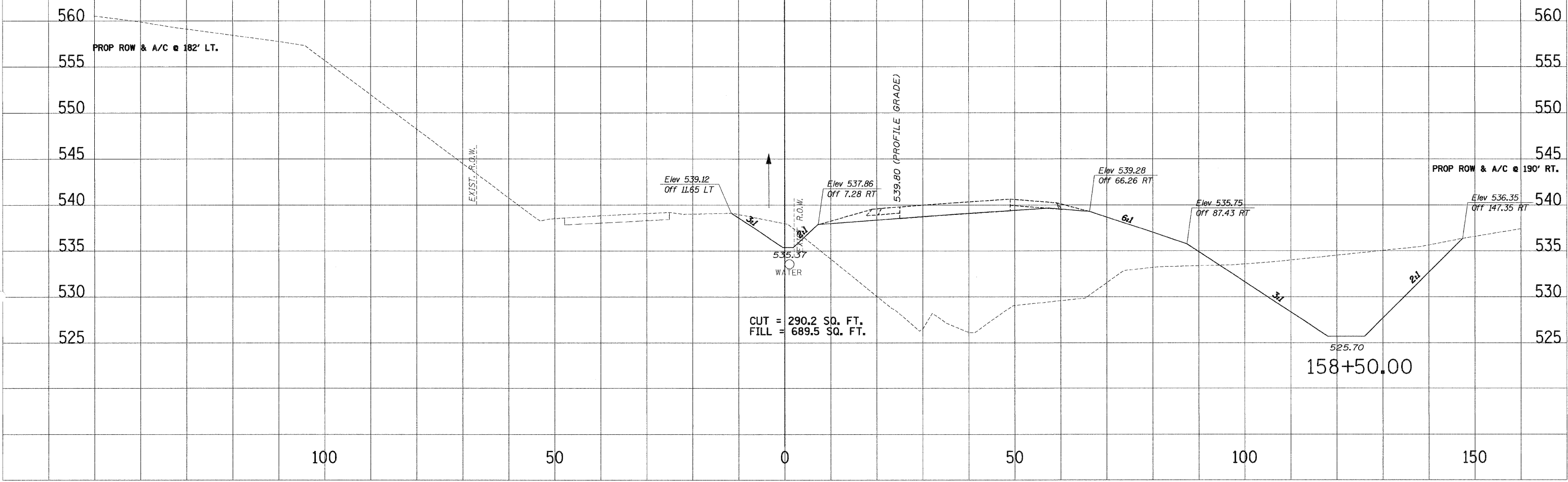
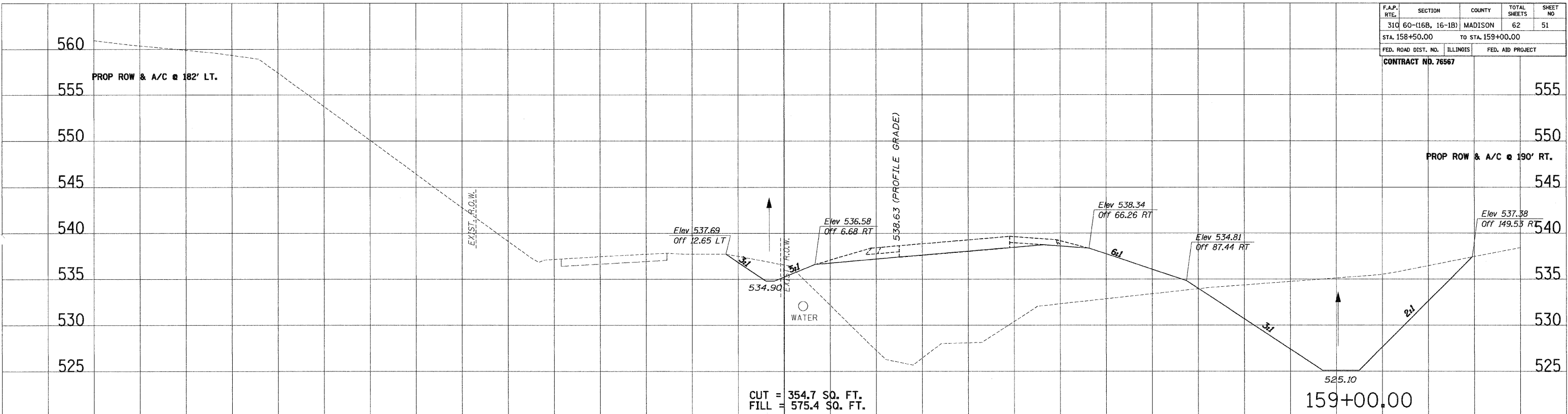
50

100

150

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310 60-(16B, 16-1B)	MADISON	62	51	
STA. 158+50.00		TO STA. 159+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				



SURVEY PLOTTED
 NOTE BOOK
 AREAS CHECKED

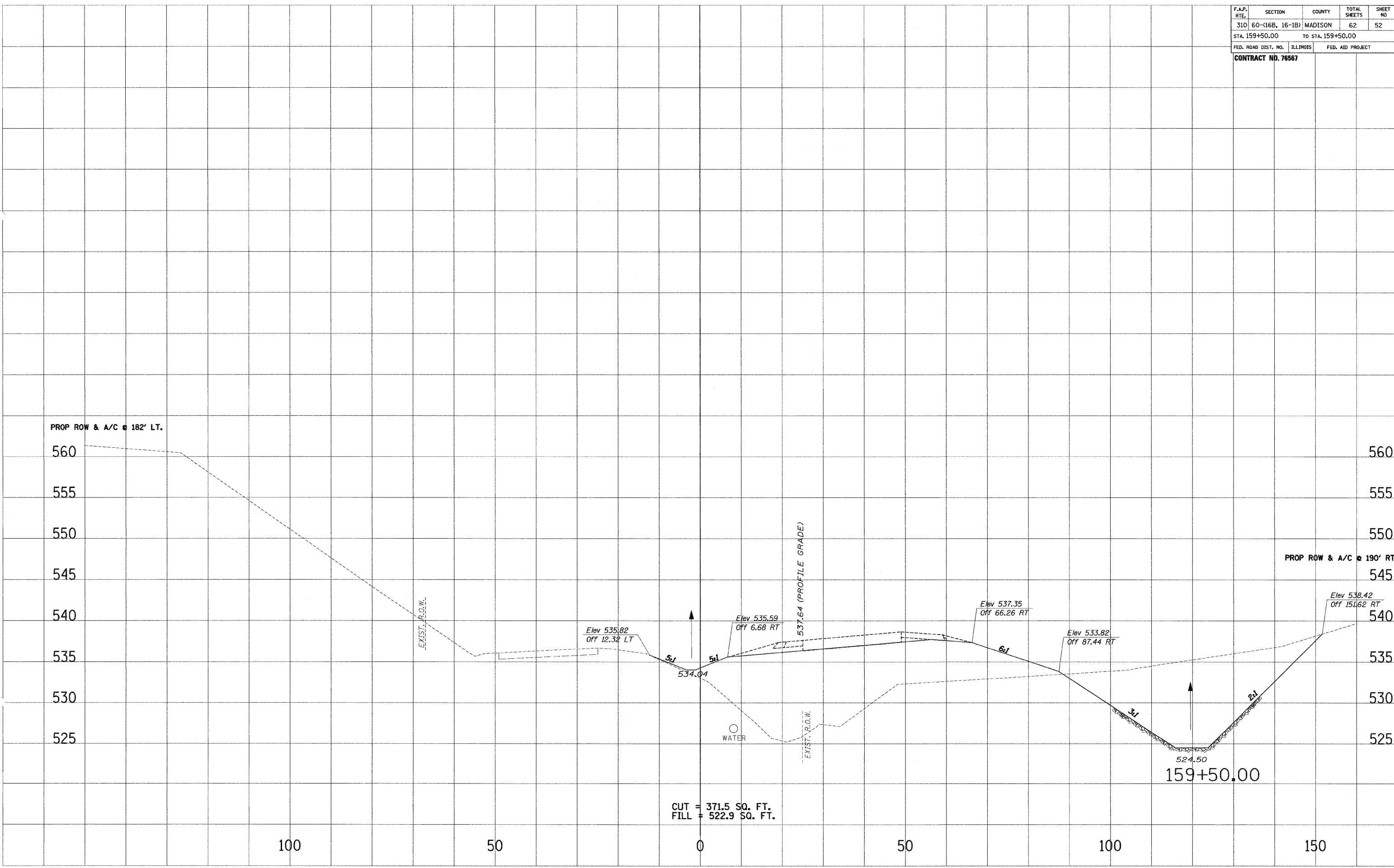
SURVEY PLOTTED
 NOTE BOOK
 AREAS CHECKED

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	52
STA. 159+50.00		TO STA. 159+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76567				

SURVEY PLOTTED
 NOTE BOOK NO. _____
 REVISIONS AREAS CHECKED

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 NOTE BOOK NO. _____
 REVISIONS AREAS CHECKED

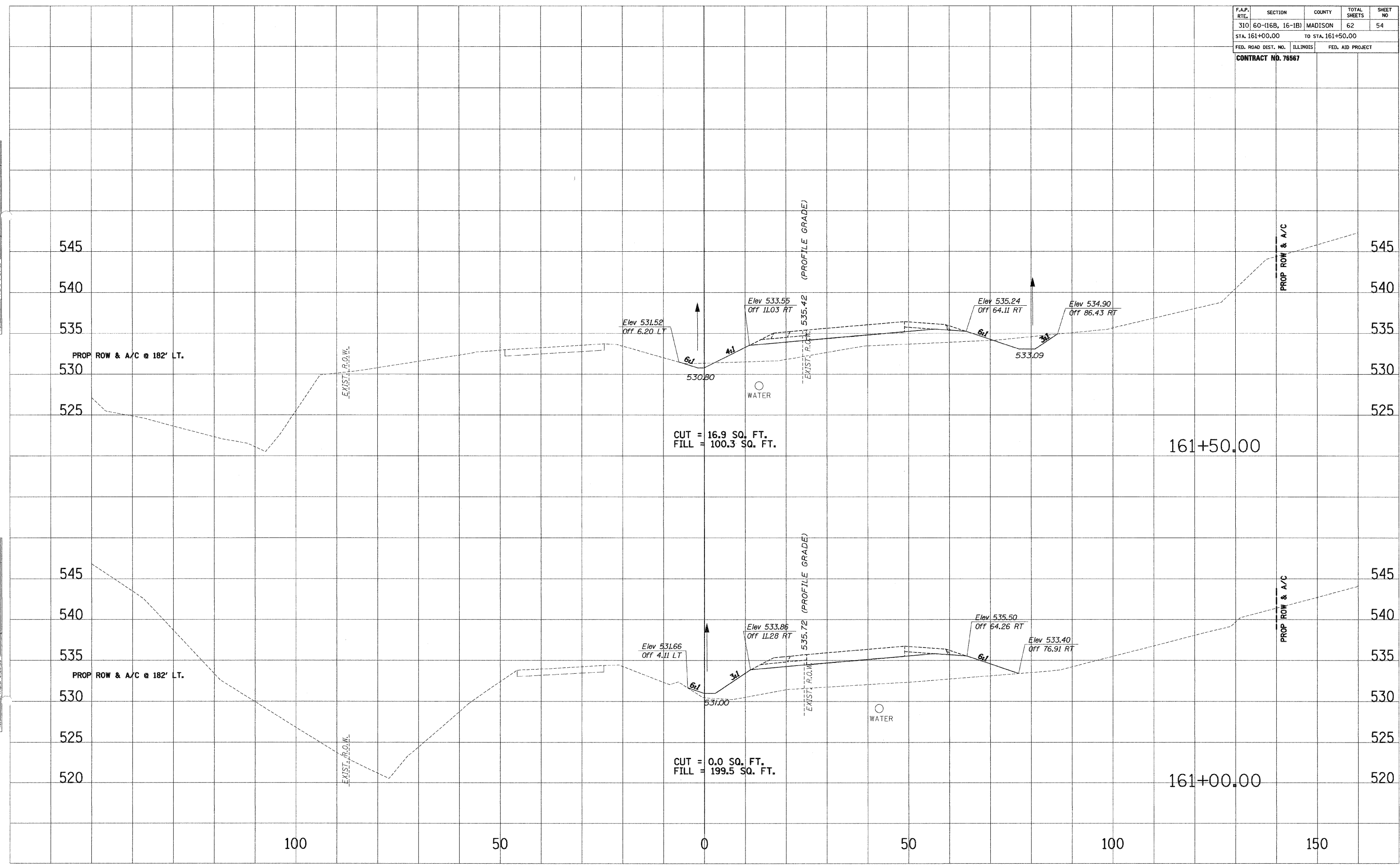


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	54
STA. 161+00.00		TO STA. 161+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

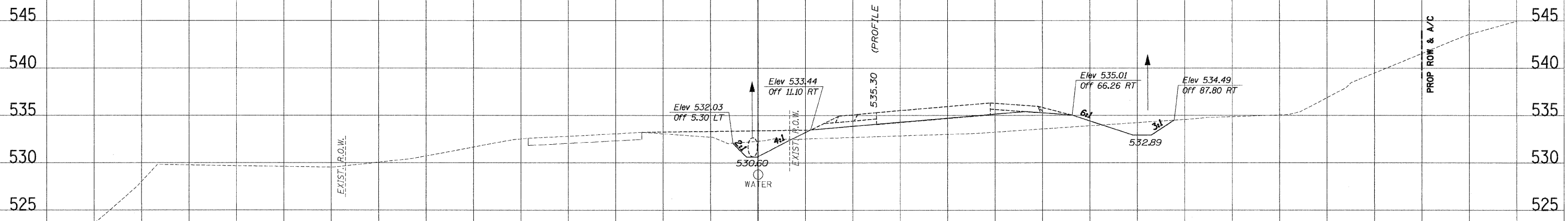
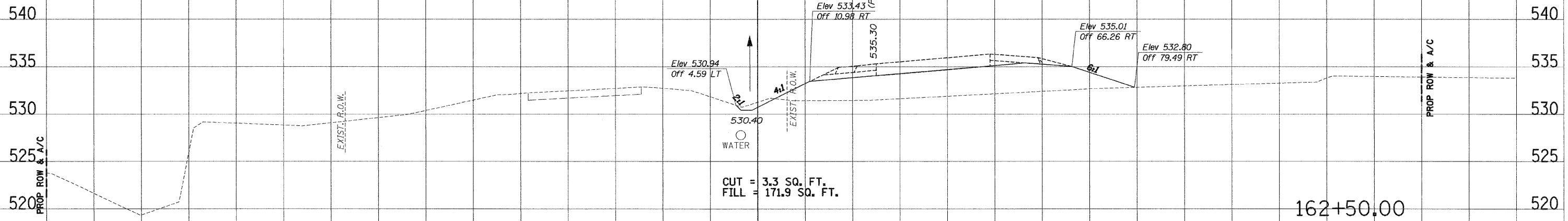
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 NOTE BOOK NO. _____
 AREAS CHECKED _____



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	55
STA. 162+00.00		TO STA. 162+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED AID PROJECT		
CONTRACT NO. 76567				



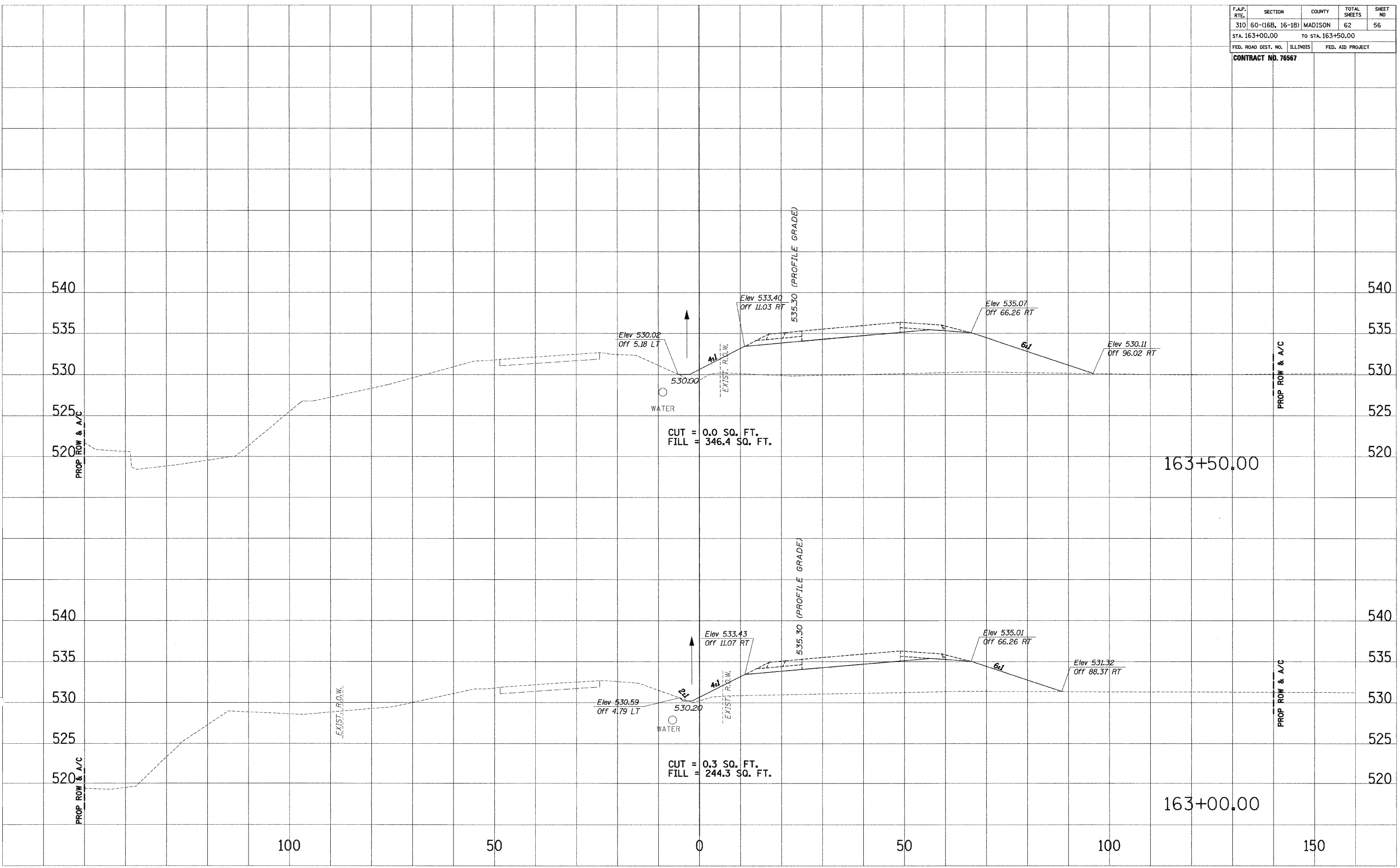
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DATE: PLOTTED: 12/27/2007 3:06:07 PM
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	56
STA. 163+00.00		TO STA. 163+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

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 AREAS CHECKED _____

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 AREAS CHECKED _____

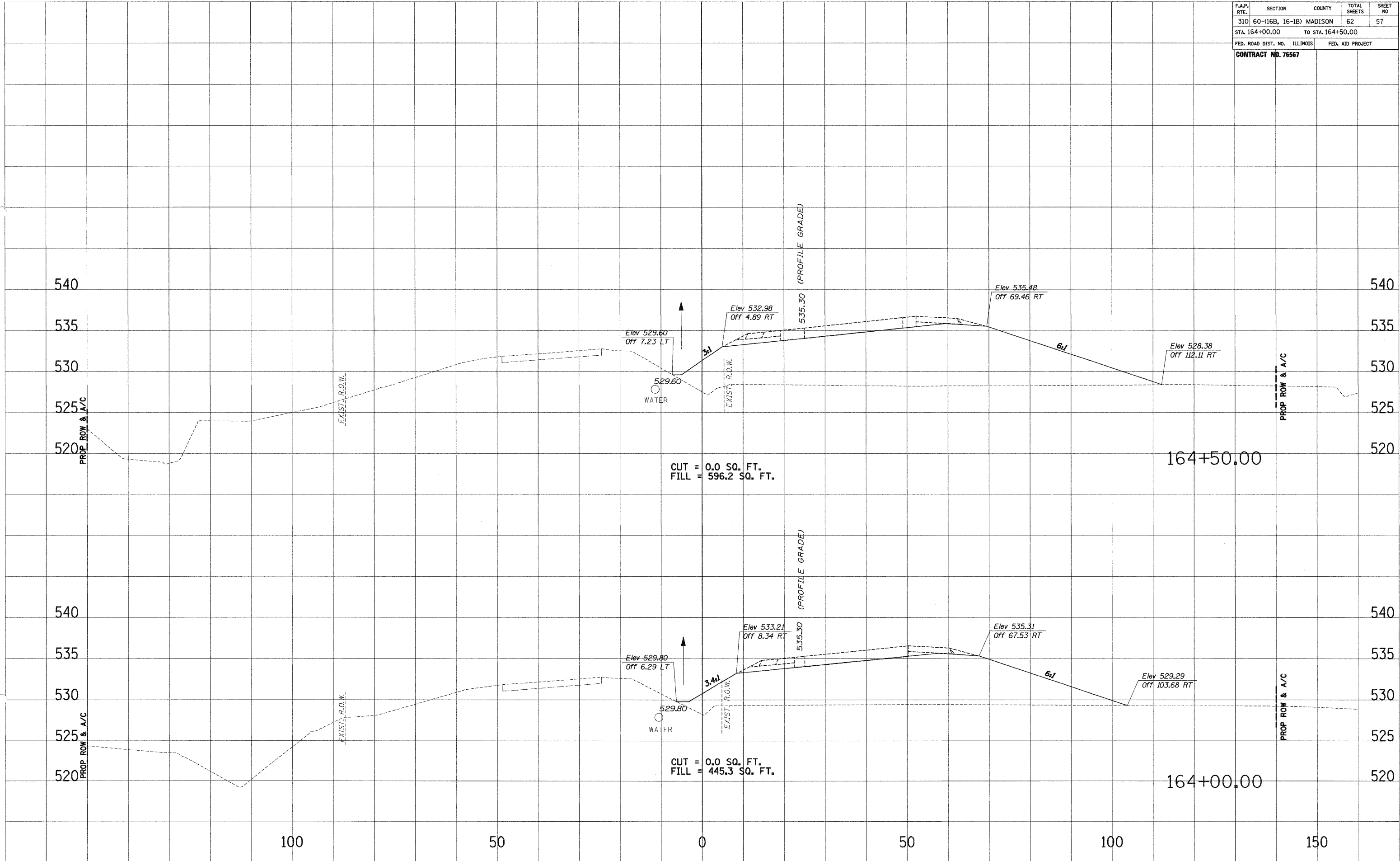


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	57
STA. 164+00.00		TO STA. 164+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

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 AREAS CHECKED _____

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 DATE _____
 AREAS CHECKED _____

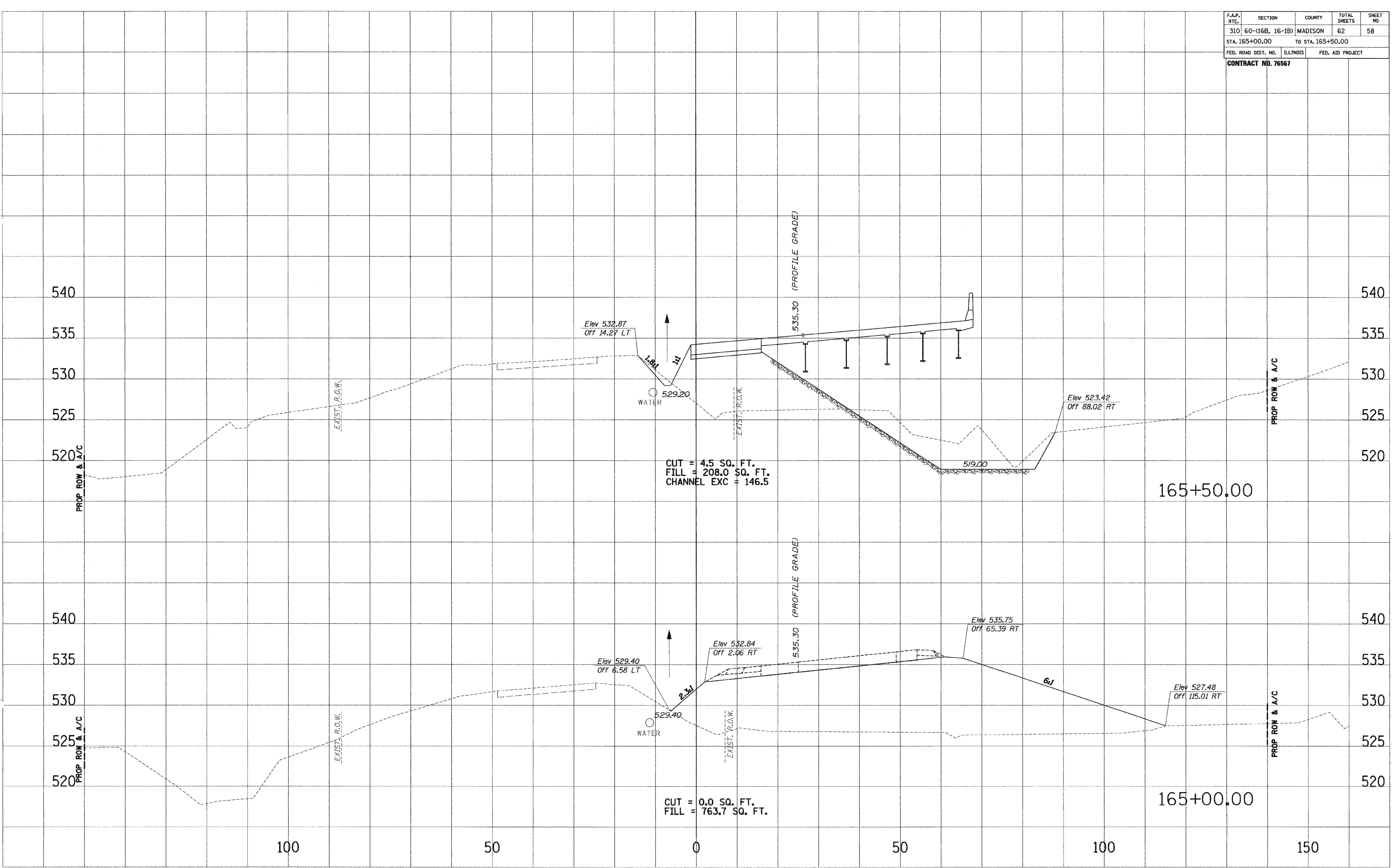


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	58
STA. 165+00.00		TO STA. 165+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

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 NOTE BOOK NO. _____
 TEMPLATE AREAS CHECKED _____
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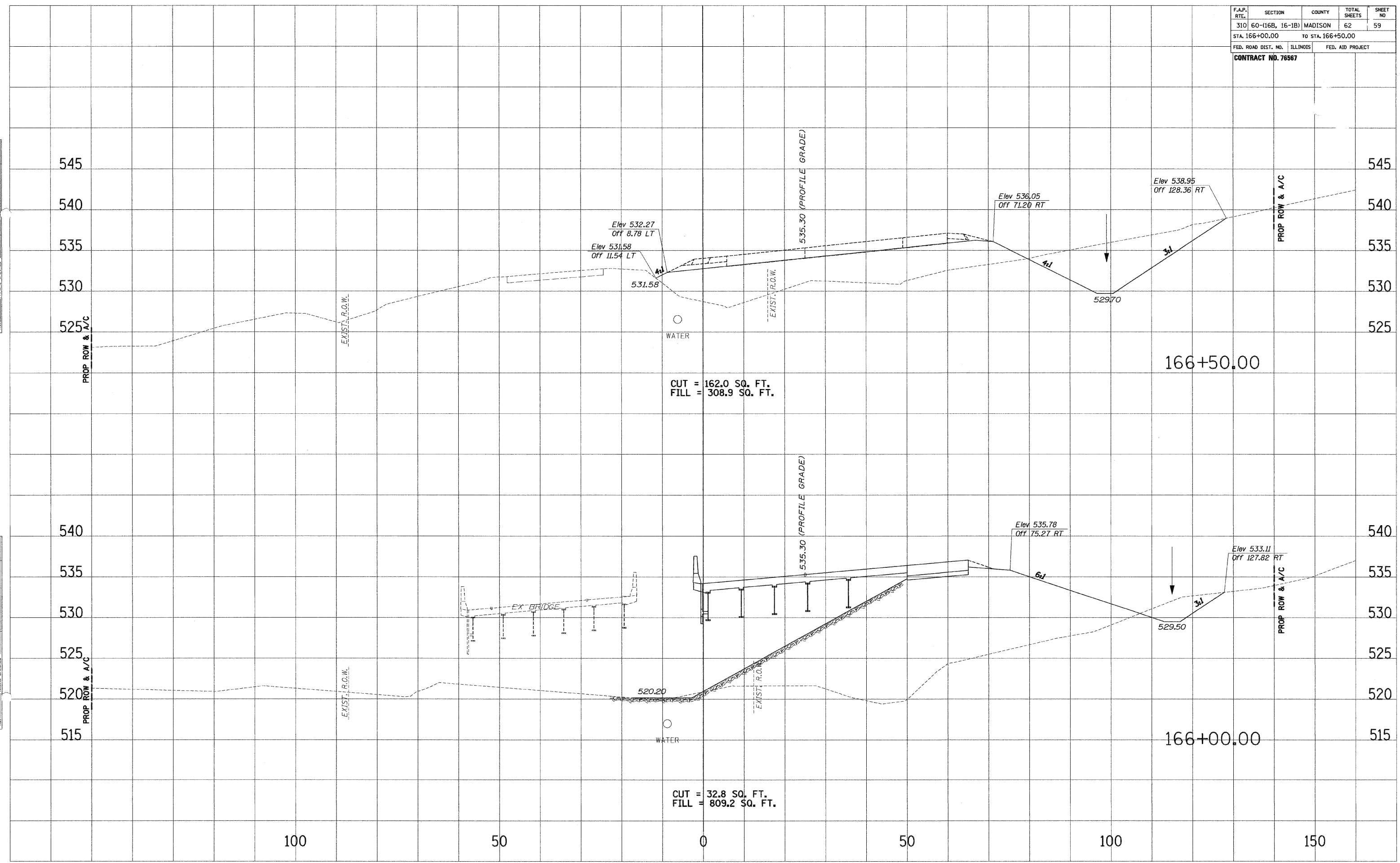


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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	59
STA. 166+00.00		TO STA. 166+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 76567				

DATE: _____
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 NOTE BOOK NO.: _____
 AREAS CHECKED: _____

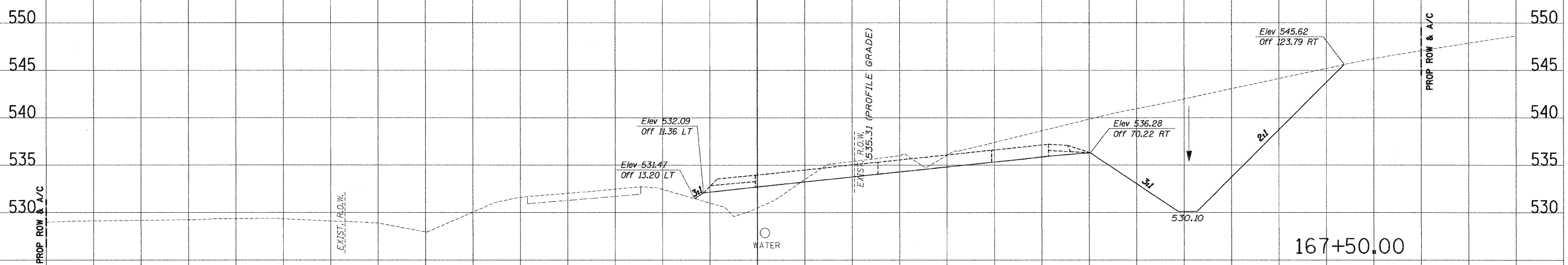
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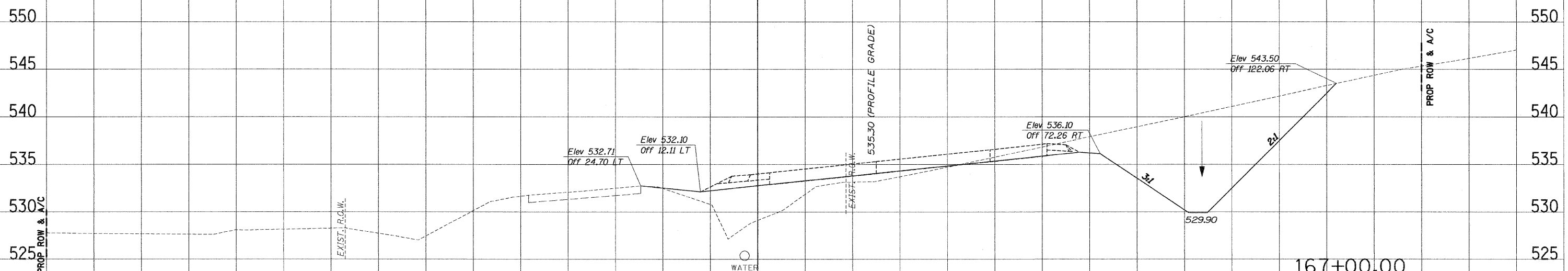
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	60
STA. 167+00.00		TO STA. 167+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

STA 167+55.00
BEGIN GRADING TRANSITION



CUT = 498.2 SQ. FT.
FILL = 34.7 SQ. FT.



CUT = 326.4 SQ. FT.
FILL = 87.8 SQ. FT.

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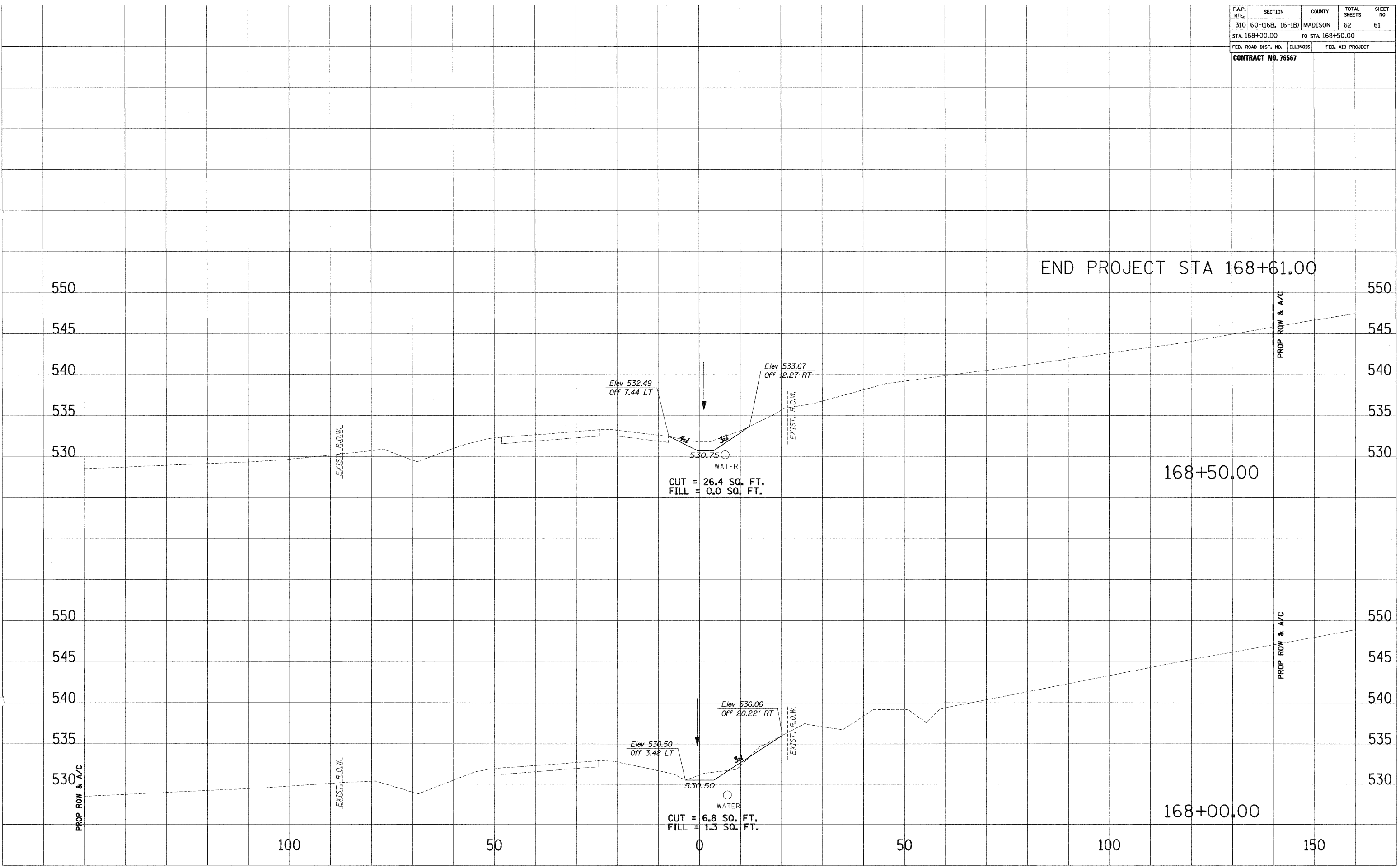
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AREAS CHECKED

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-(16B, 16-1B)	MADISON	62	61
STA. 168+00.00		TO STA. 168+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				

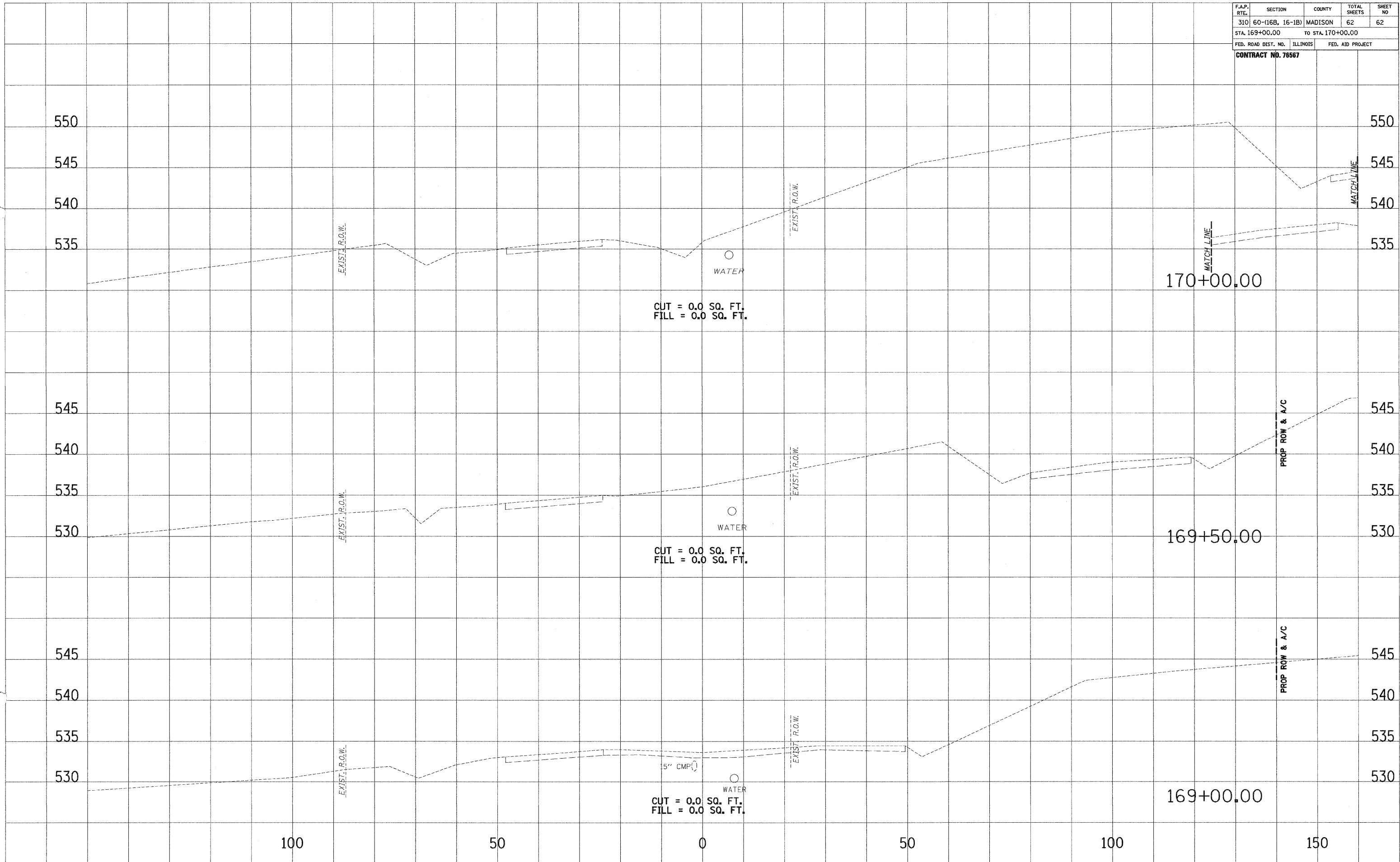
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 AREAS CHECKED _____



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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-(16B, 16-1B)	MADISON	62	62
STA. 169+00.00		TO STA. 170+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 76567				



SURVEY PLOTTED TEMPLATE AREAS CHECKED

SURVEY PLOTTED TEMPLATE AREAS CHECKED