

CONTRACT NO. 93895			
COUNTY	RD DIST	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	1
COVER SHEET			
TOTAL NO. SHEETS - 22			

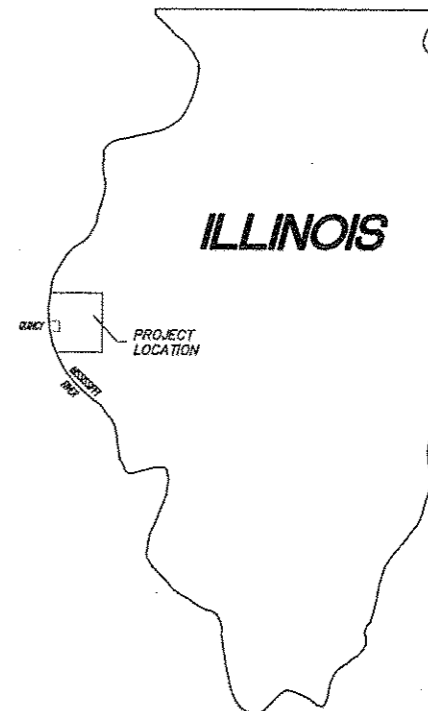
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**SURFACE TRANSPORTATION / BRIDGE PROGRAM FUNDS**  
**ADAMS COUNTY CONCORD ROAD DISTRICT**  
**SEC. 15-06114-00-BR**  
**PROJECT NO. BROS-0001(119)**  
**JOB NO. C-96-230-16**  
**EXISTING STR. NO. 001-3143**  
**PROPOSED STR. NO. 001-3432**  
**TR 265 (E 2903rd LANE)**

**INDEX OF SHEETS**

<u>SHEET NO.</u>	<u>SHEET</u>
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2	SUMMARY OF QUANTITIES
	GENERAL NOTES
3	TRAFFIC CONTROL AND PROTECTION
	TYPICAL SECTIONS - ROADWAY & FIELD ENTRANCE
	APPLICATION RATES HMA MIXTURE REQUIREMENTS
4	PLAN & PROFILE SHEET
5-8	CROSS SECTIONS (ROADWAY)
9	CHANNEL PROTECTION PLAN SHEET
10-12	CROSS SECTIONS (CHANNEL)
13-22	BRIDGE PLAN SHEETS

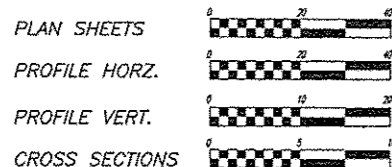
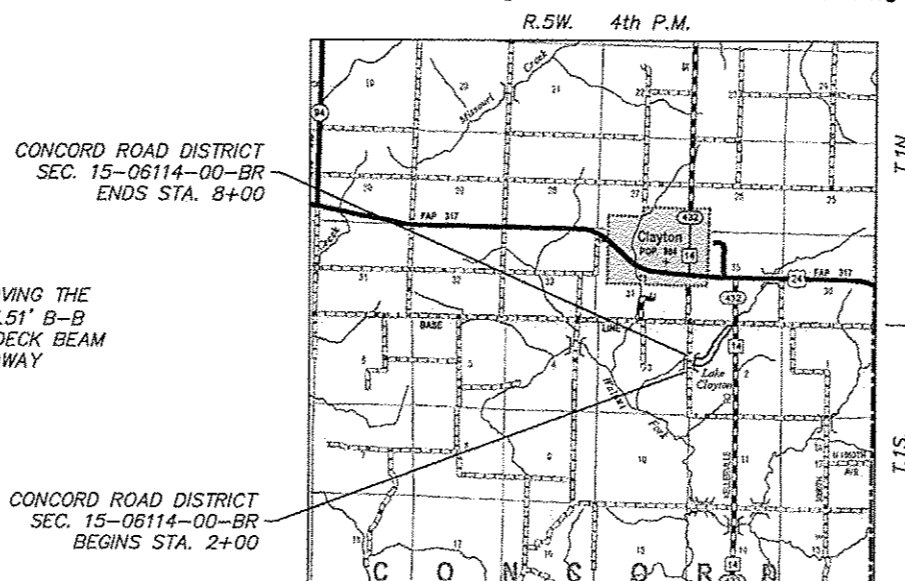
**STANDARDS**

STANDARD 280001-07  
 STANDARD 515001-03  
 STANDARD 630301-07  
 STANDARD 701901-06  
 STANDARD 725001-01  
 STANDARD BLR 21-9  
 STANDARD BLR 27-1



PROPOSED IMPROVEMENT MARKED THUS —

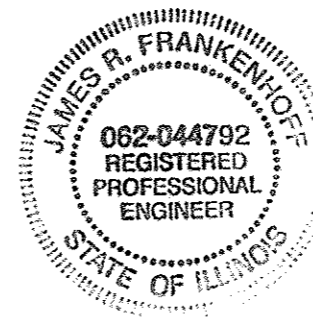
PROPOSED IMPROVEMENT TO CONSIST OF REMOVING THE EXISTING STRUCTURE AND CONSTRUCTING A 67.51' B-B ABUTMENT PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE WITH THE NECESSARY APPROACH ROADWAY ADJUSTMENTS.



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.

**UTILITIES**

J.U.L.I.E. ....	1-800-892-0123
ADAMS ELECTRIC CO-OPERATIVE.....	CAMP POINT, IL
FRONTIER .....	JACKSONVILLE, IL
ABS WATER .....	CLAYTON, IL



THESE PLANS WERE PREPARED BY ME OR A FULL TIME MEMBER OF MY STAFF WORKING UNDER MY PERSONAL SUPERVISION.

SUBMITTED BY: *James R. Frankenhoff* DATE 10/13/16  
 COUNTY ENGINEER  
 LICENSE NO. 062-044792  
 LIC. EXPIRES 11/30/2017

APPROVED 10/13/16  
*Stephen P. Bush*  
 ROAD COMMISSIONER

APPROVED 10/13/16  
*James R. Frankenhoff*  
 COUNTY ENGINEER

PASSED November 3, 2016  
*Ken Debenham*  
 DISTRICT ENGINEER OF CONSTRUCTION

PASSED 11/2/16  
*Jim Drake*  
 DISTRICT ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW 11/2/16  
*Jeffrey M. South*  
 REGION FOUR ENGINEER

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

PREPARED BY  
 ADAMS COUNTY HIGHWAY DEPARTMENT  
 101 NORTH 54th STREET, QUINCY, ILLINOIS

# SUMMARY OF QUANTITIES

COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	2
SUMMARY OF QUANTITIES GENERAL NOTES			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SPECIAL PROVISION
20100500	TREE REMOVAL, ACRES	ACRE	0.42	*
20200100	EARTH EXCAVATION	CU YD	673	*
20300100	CHANNEL EXCAVATION	CU YD	406	*
25000200	SEEDING, CLASS 2	ACRE	0.4	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	36	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	36	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	36	
25100115	MULCH, METHOD 2	ACRE	0.4	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40	
28100209	STONE RIPRAP, CLASS A5	TON	770	
28300400	AGGREGATE DITCH	TON	200	*
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	475	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX"C", N50	TON	23	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	*
50105220	PIPE CULVERT REMOVAL	FOOT	20	
50300225	CONCRETE STRUCTURES	CU YD	34.9	
50300280	CONCRETE ENCASEMENT	CU YD	3.40	
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1560	*
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4420	
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	134	
51201400	FURNISHING STEEL PILES HP10x42	FOOT	424	
51202305	DRIVING PILES	FOOT	424	
51203400	TEST PILE STEEL HP10x42	EACH	1	
51500100	NAME PLATES	EACH	1	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SPECIAL PROVISION
542D5473	PIPE CULVERTS, CLASS D, TYPE 1 EQUIVALENT ROUND-SIZE 18"	FOOT	28	*
Δ 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	2	
Δ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2	
67100100	Mobilization	L. Sum	1	
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	*
Δ 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	2	

## Δ SPECIALTY ITEMS

## GENERAL NOTES

- WHERE SECTION OR SUB-SECTION STONES, PROPERTY PINS, USGS BENCH MARK MONUMENTS, AND U.S. ARMY CORPS OF ENGINEERS SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH STONES AND MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS UNTIL AN OWNER, AN AUTHORIZED SURVEYOR OR THEIR REPRESENTATIVE HAS WITNESSED OR OTHERWISE REFERENCED THE PROPERTY MARKS LOCATION.
- ALL PRIVATELY OWNED UTILITIES, UNLESS OTHERWISE SPECIFIED, WILL BE MOVED BY THEIR RESPECTIVE OWNERS WHERE REQUIRED. THE FOLLOWING UTILITY COMPANIES MAY HAVE FACILITIES WITHIN THE LIMITS OF CONSTRUCTION:  

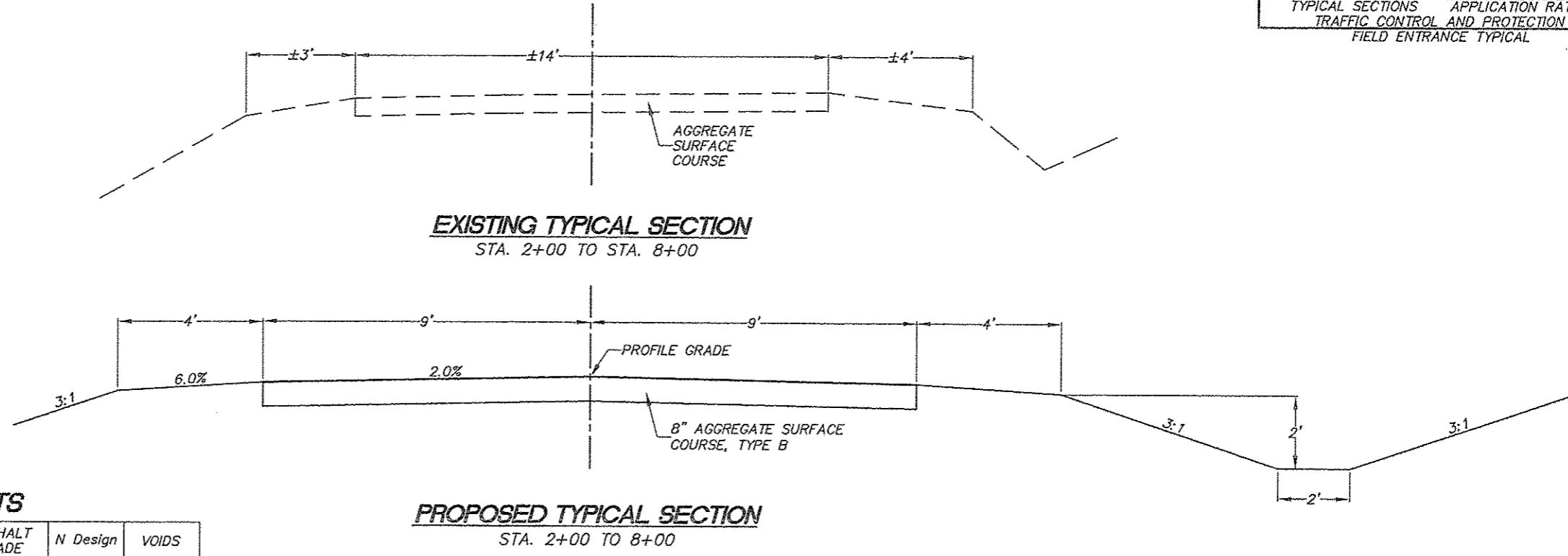
ADAMS ELECTRIC COOP                      FRONTIER (TELEPHONE)
- THE NOMINAL THICKNESS FOR AGGREGATE SURFACE COURSE IS SHOWN ON THE TYPICAL SECTION, STANDARDS, SCHEDULES OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESS OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90% OF THE NOMINAL THICKNESS AT ANY LOCATION.
- THE UTILITY LOCATIONS, IF MARKED ON THE PLANS, ARE FOR REFERENCE ONLY, AND ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND TO NOTIFY ALL UTILITY COMPANIES PRIOR TO THE BEGINNING OF CONSTRUCTION. THE REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVE GROUND UTILITIES REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THIS WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE SEEDED, FERTILIZED, AND MULCHED AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
- ANY EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	3
TYPICAL SECTIONS		APPLICATION RATES	
TRAFFIC CONTROL AND PROTECTION		FIELD ENTRANCE TYPICAL	

### APPLICATION RATES

FERTILIZER NUTRIENTS	10-10-10 @ 270#/ACRE
NITROGEN	90#/ACRE
PHOSPHORUS	90#/ACRE
POTASSIUM	90#/ACRE
AGRICULTURAL GROUND LIMESTONE	2 TON/ACRE
MULCH, METHOD 2	2 TON/ACRE
BITUMINOUS MATERIALS (PRIME COAT)	
ON EXISTING PAVEMENT	0.05 LB/SQ FT
BETWEEN HMA LIFTS	0.025 LB/SQ FT
ON AGGREGATE	0.25 #/SQ FT
AGGREGATE (SURFACE, SHOULDERS)	1.8 TON/CU YD

## TYPICAL SECTIONS

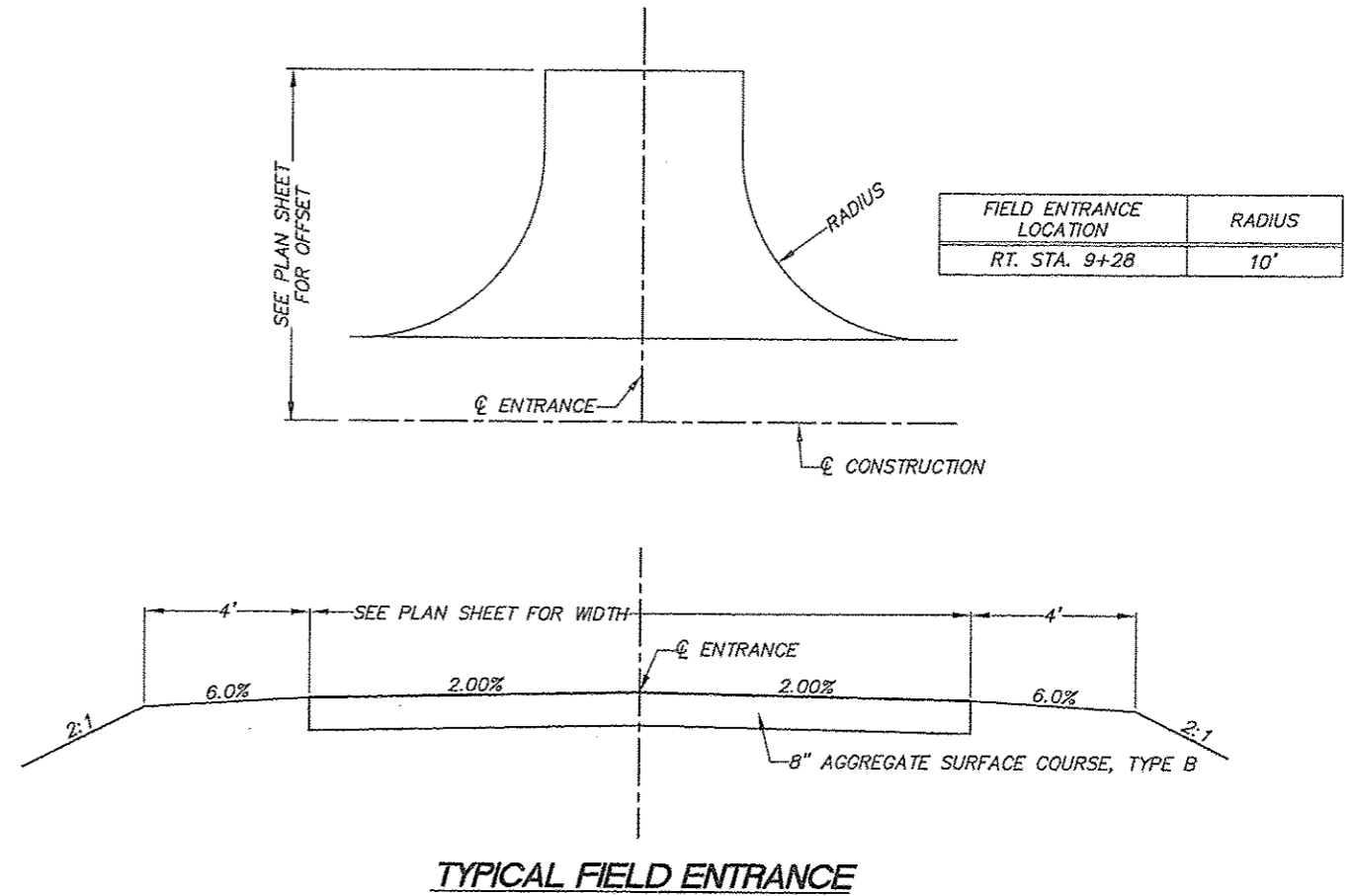
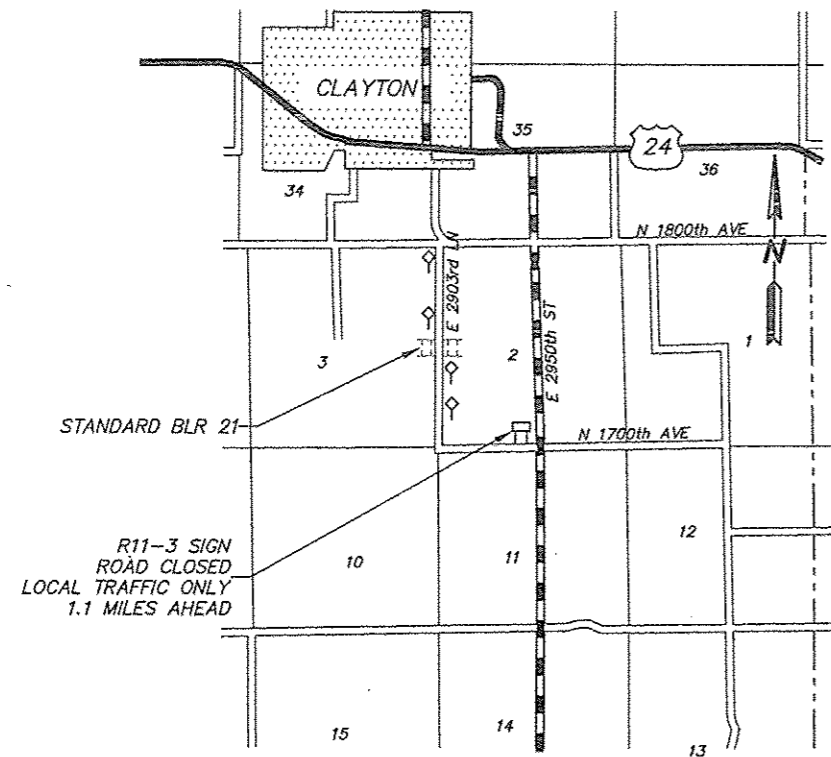


### HOT-MIX ASPHALT MIXTURE REQUIREMENTS

PAY ITEM	MIXTURE	ASPHALT GRADE	N Design	VOIDS
HOT-MIX ASPHALT SURFACE COURSE	"C"	PG 64-22	N50	4.0%

NOTE: HOT-MIX ASPHALT QUANTITIES CALCULATED @ 112 #/SQ. YD. / IN.

## TRAFFIC CONTROL AND PROTECTION



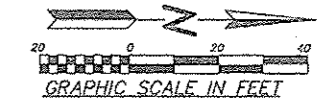
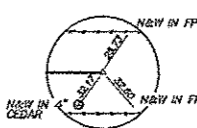
SECTION 3 - TOWNSHIP 1 SOUTH - RANGE 5 WEST OF THE 4TH P.M.

CONTRACT NO. 93695

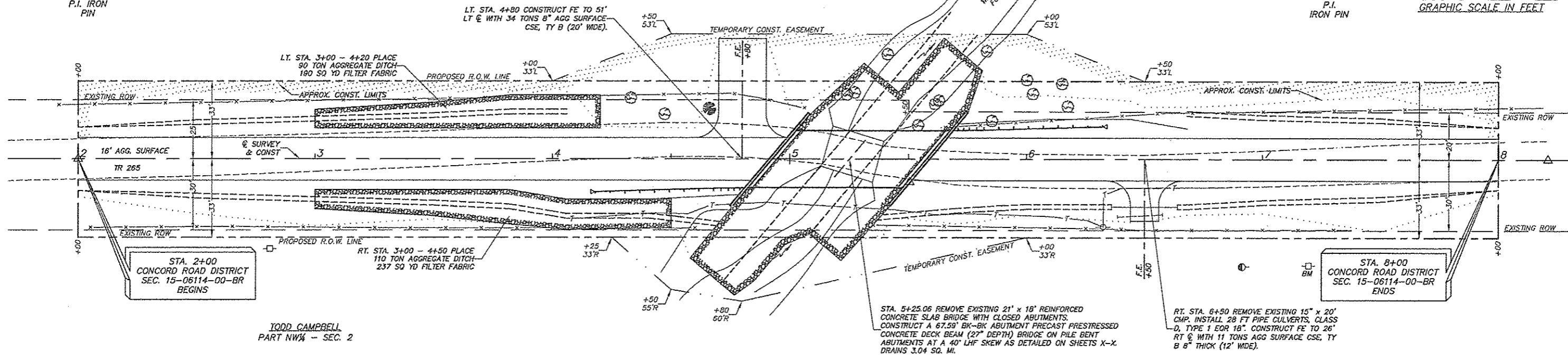
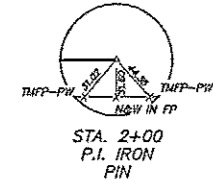
COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	4

STA. 2+00.00 - STA. 8+00.00

STA. - STA.	TREE REMOVAL ACRES	ACRE
2+00 - 8+00	9' LT. TO LT. PROPOSED ROW LINE OR TEMP CONST EASEMENT LINE	0.42



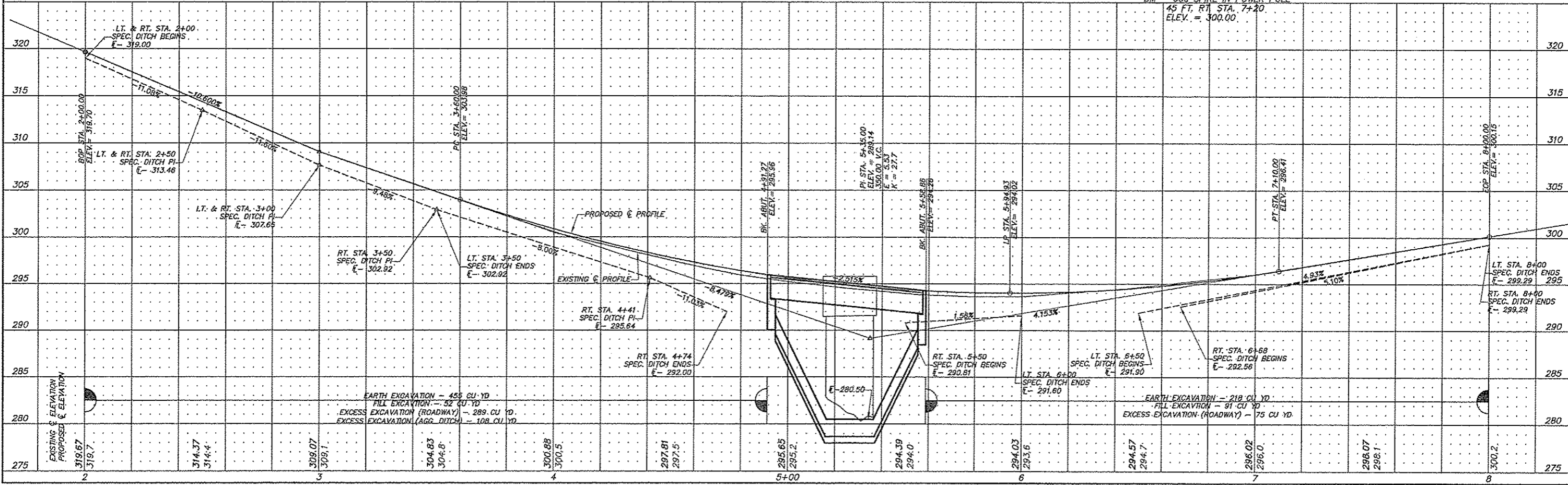
JAMES & KIMBERLY ANN ALFORD  
PART E½ - NE¼ - SEC. 3



TODD CAMPBELL  
PART NW¼ - SEC. 2

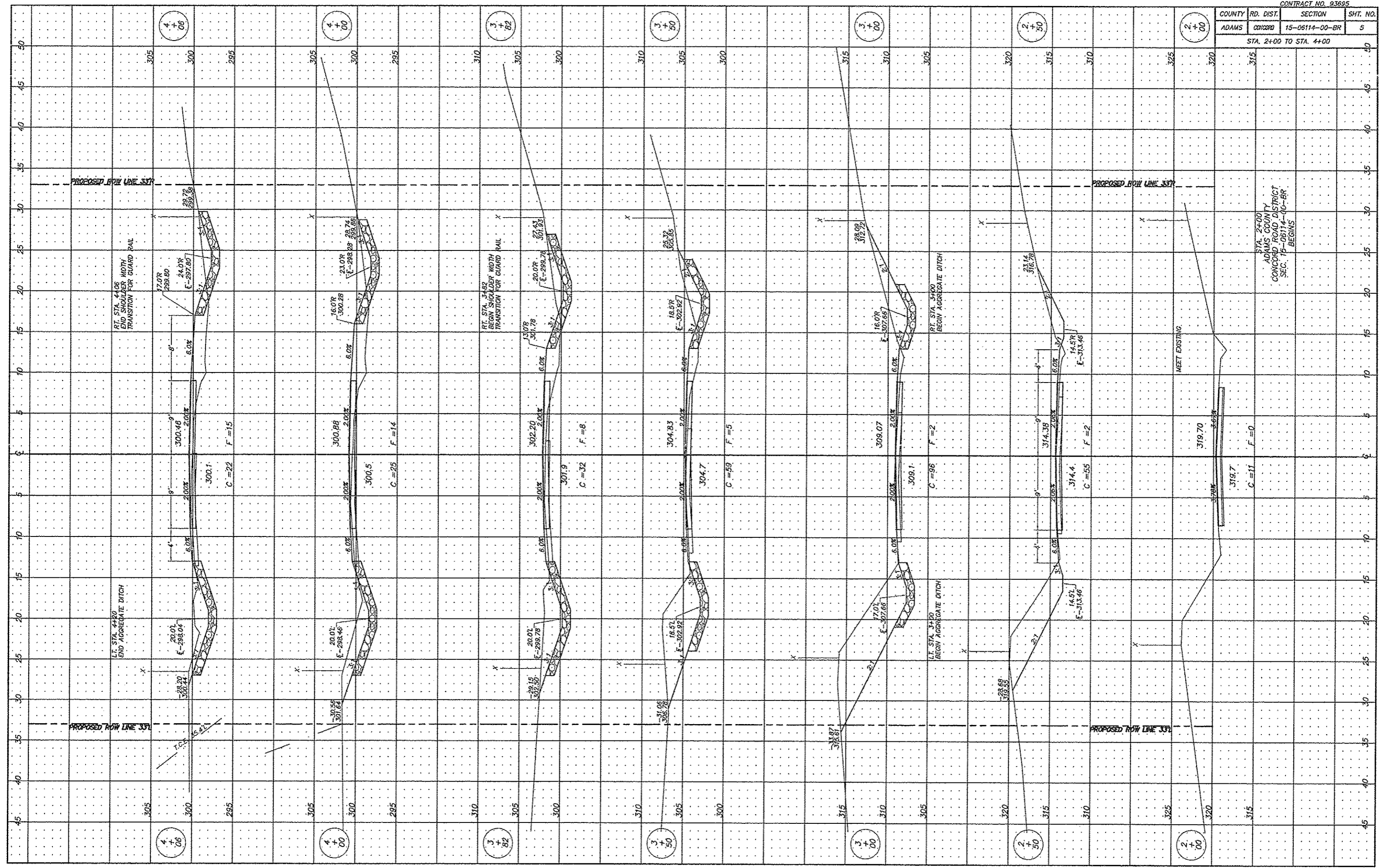
SECTION 2 - TOWNSHIP 1 SOUTH - RANGE 5 WEST OF THE 4TH P.M.

BM - 60d SPIKE IN POWER POLE  
45 FT. RT. STA. 7+20  
ELEV. = 300.00



COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	5

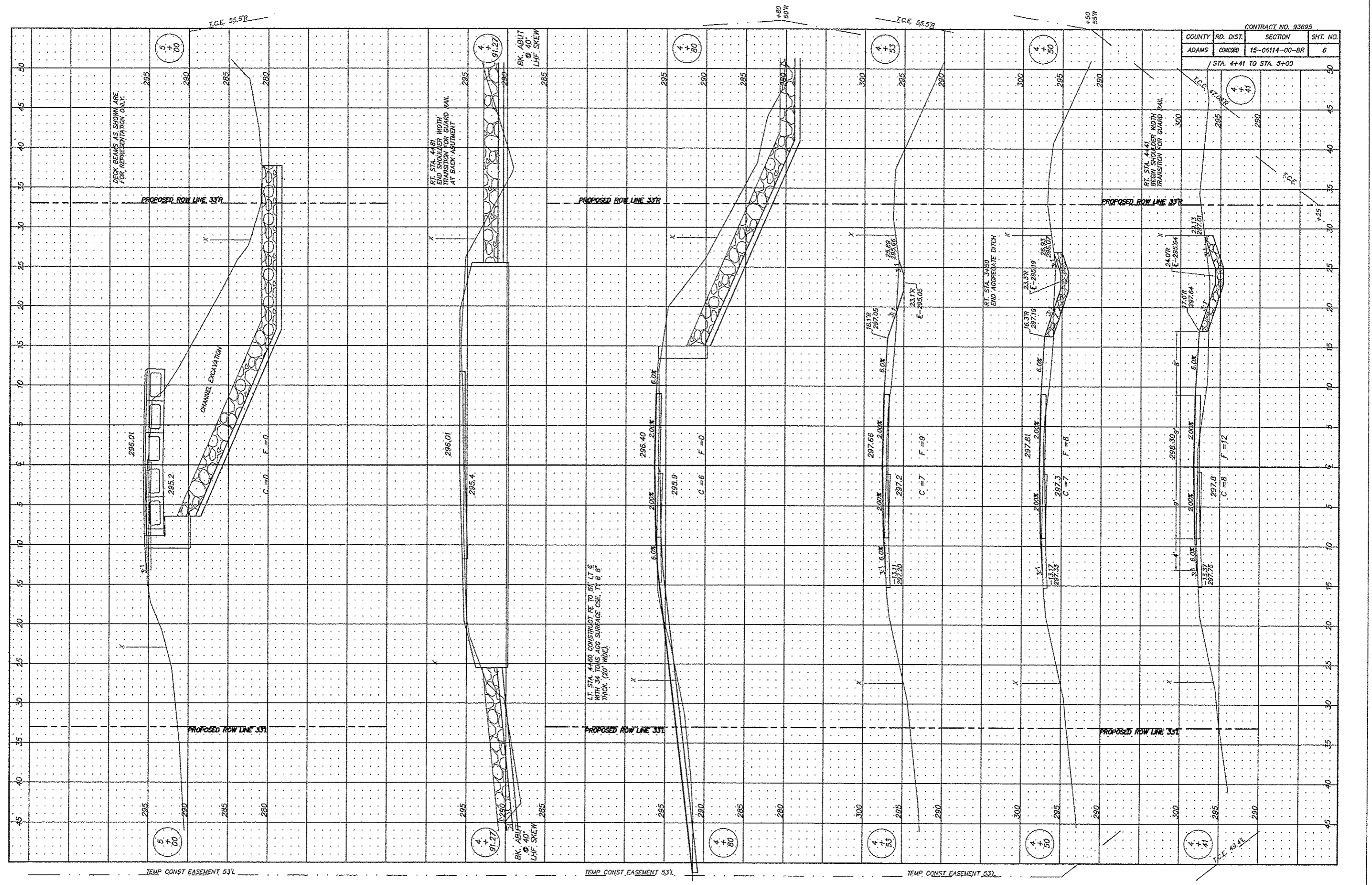
STA. 2+00 TO STA. 4+00





COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	8

STA. 4+41 TO STA. 5+00



DECK BEAMS AS SHOWN ARE FOR REPRESENTATION ONLY.

CHANNEL EXCAVATION

LT. STA. 4+80 CONSTRUCT FE TO ST. LT. C WITH 34 TONS. AGG. SURFACE CSE. 17' B 8" THICK (20' WIDE).

RT. STA. 3+80 END AGGREGATE DITCH

RT. STA. 4+41 BEGIN SHOULDER WIDTH TRANSITION FOR GUARD RAIL

TEMP CONST EASEMENT 53'L

TEMP CONST EASEMENT 53'L

TEMP CONST EASEMENT 53'L

5+00

4+91.27

4+80

4+53

4+50

4+41

295

295

295

295

295

295

295

295

295

295

295

295

295

295

295

295

295

295

296.01

295.2

C=0

F=0

296.01

295.4

C=6

F=0

296.40

295.9

C=7

F=9

297.66

297.2

C=7

F=8

297.81

297.3

C=8

F=12

298.30

297.8

C=8

F=12

PROPOSED ROW LINE 53'L

PROPOSED ROW LINE 53'L

PROPOSED ROW LINE 53'L

PROPOSED ROW LINE 53'R

PROPOSED ROW LINE 53'R

PROPOSED ROW LINE 53'R

I.C.E. 55.5'R

I.C.E. 55.5'R

I.C.E. 55.5'R

I.C.E. 47.00'R

I.C.E. 49.21'

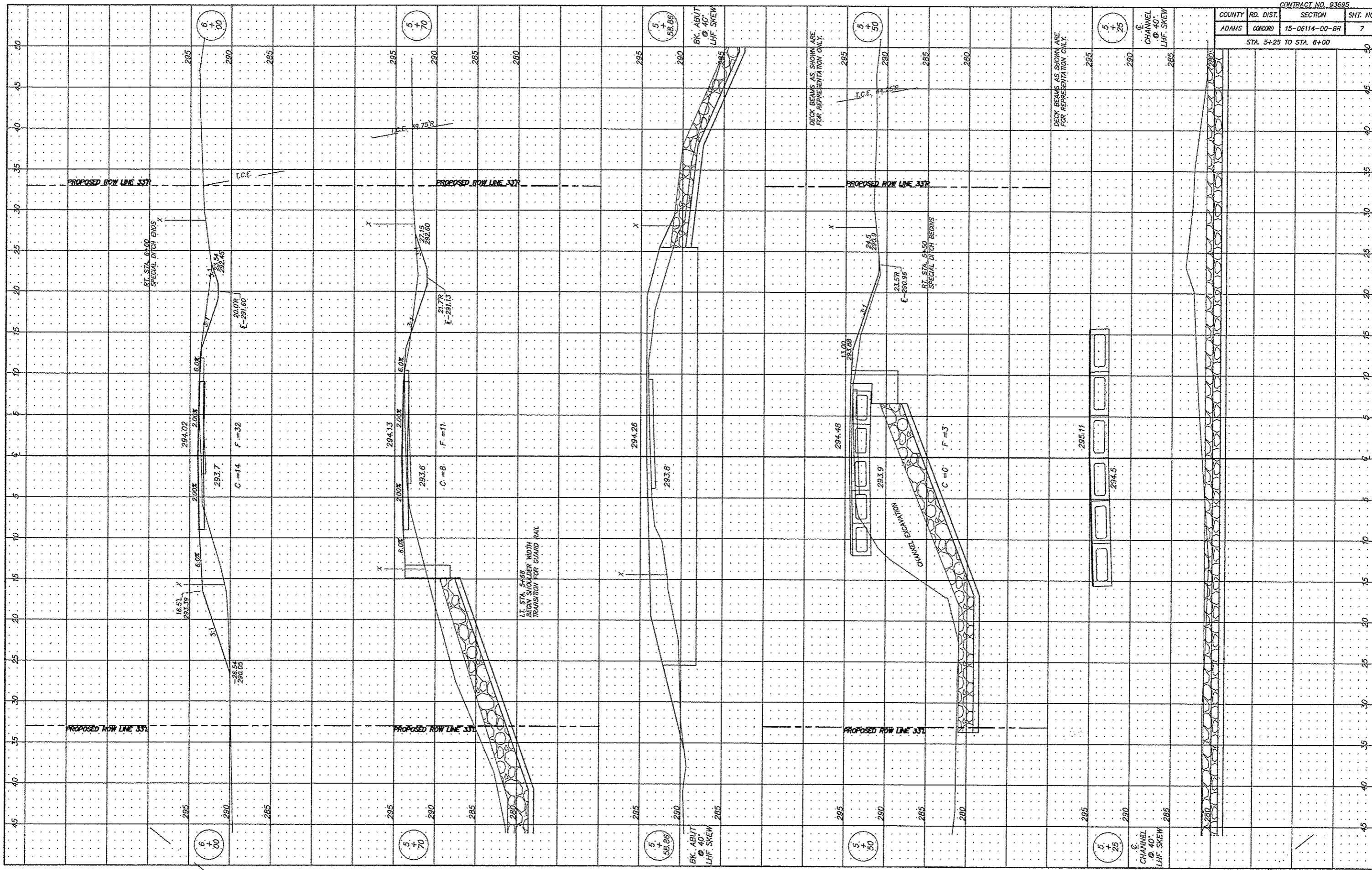
+80  
60'R

+25

+25

COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	00000	15-06114-00-BR	7

STA. 5+25 TO STA. 6+00



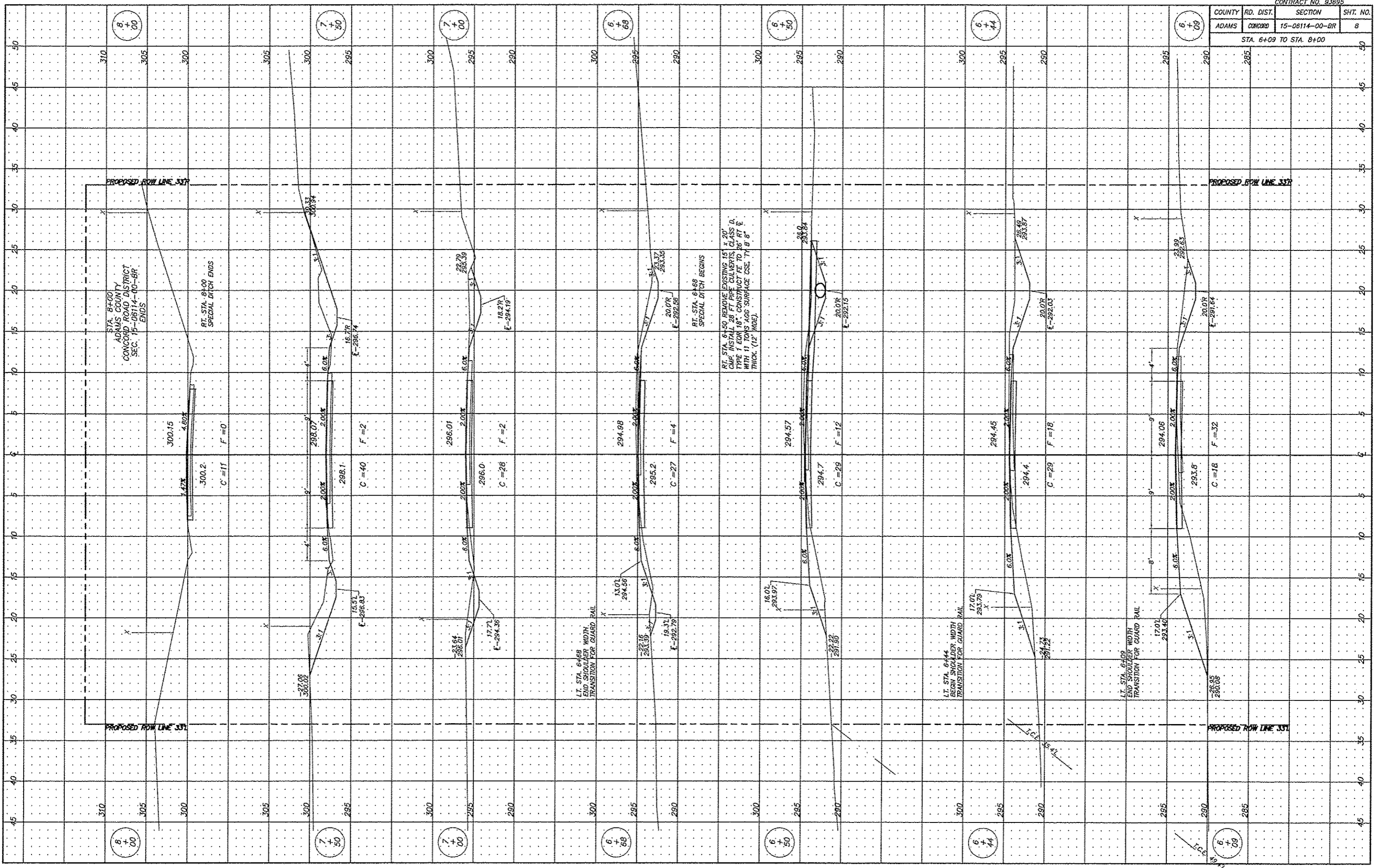
TEMP CONST EASEMENT 53'

TEMP CONST EASEMENT 53'

TEMP CONST EASEMENT 53'

COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-08114-00-BR	8

STA. 6+09 TO STA. 8+00



STA. 6+00  
ADAMS COUNTY  
CONCORD ROAD DISTRICT  
SEC. 15-08114-00-BR  
ENDS

RT. STA. 6+00  
SPECIAL DITCH ENDS

RT. STA. 6+50 REMOVE EXISTING 15" x 20" CULVERT, INSTALL 28" FT PIPE CULVERTS, CLASS D, TYPE 1 EOR 18", CONSTRUCT FE TO 26" RT & WITH 11 TONS AGG SURFACE USE, 11" B 8" THICK. (12' WIDE).

LT. STA. 6+68  
END SHOULDER WIDTH  
TRANSITION FOR GUARD RAIL

LT. STA. 6+44  
BEGIN SHOULDER WIDTH  
TRANSITION FOR GUARD RAIL

LT. STA. 6+09  
END SHOULDER WIDTH  
TRANSITION FOR GUARD RAIL

PROPOSED ROW LINE 337

PROPOSED ROW LINE 337

PROPOSED ROW LINE 337

PROPOSED ROW LINE 337

6+00

7+50

7+00

6+68

6+50

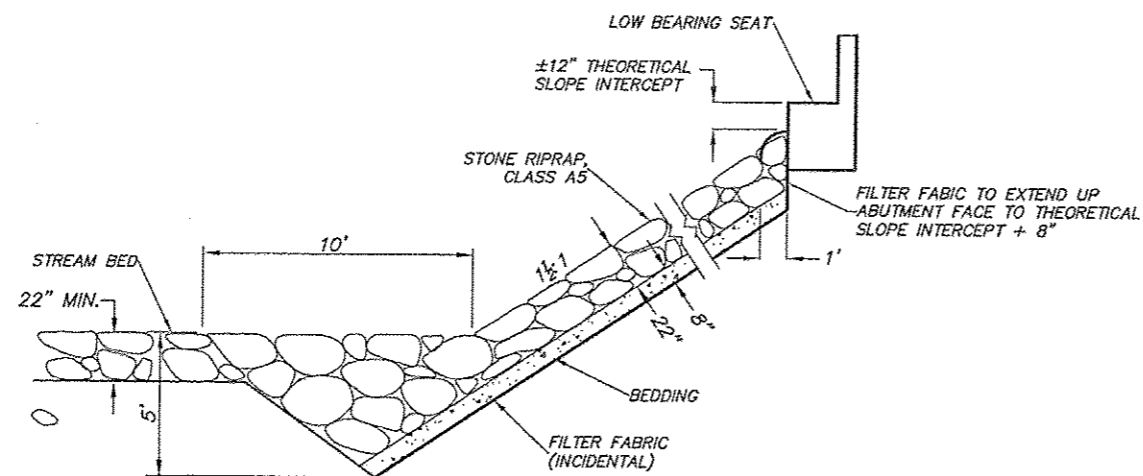
6+44

6+09

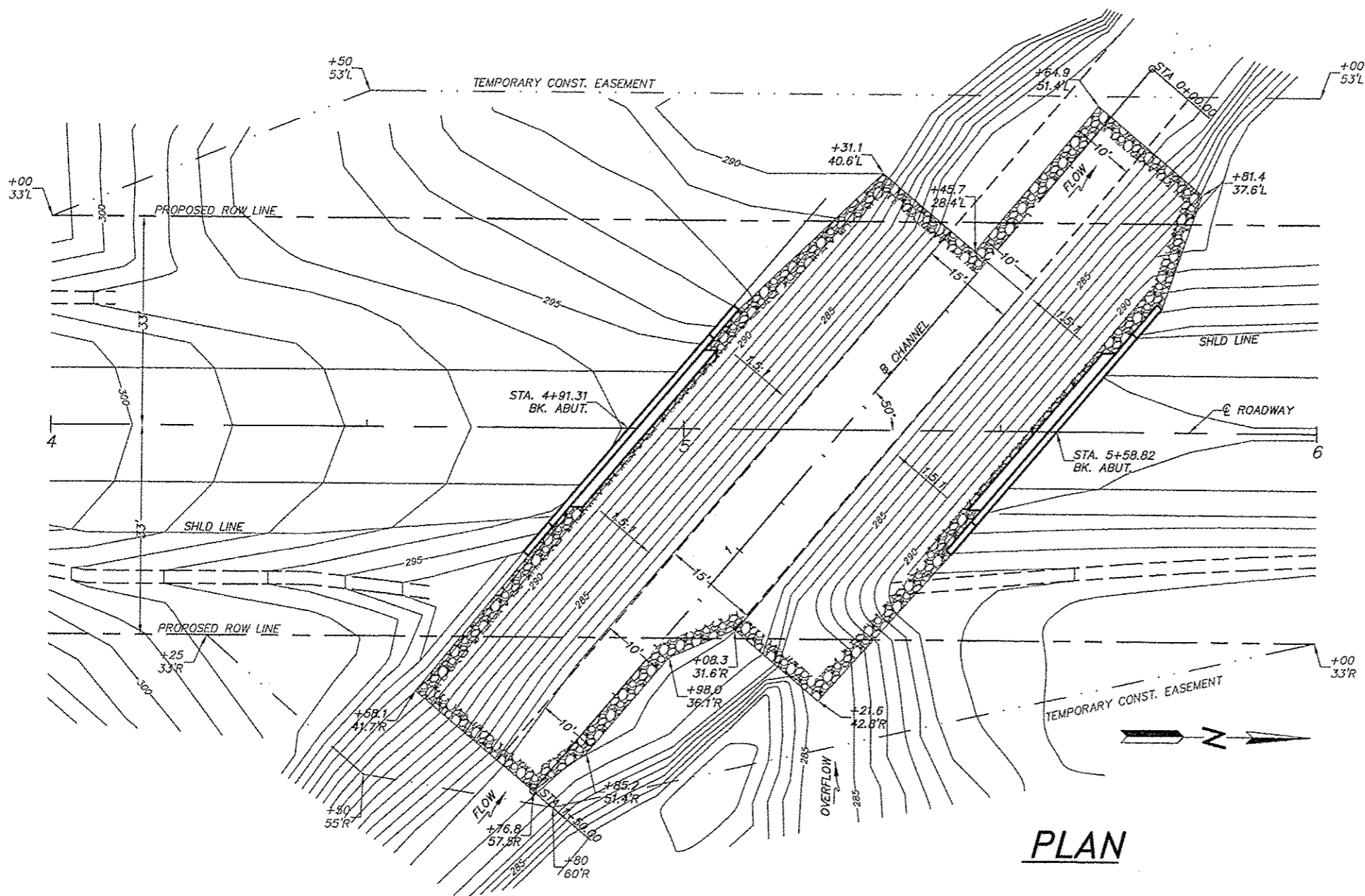


COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	9

RIPRAP PLAN & ELEVATION



**STONE RIPRAP PLACEMENT DETAIL (CHANNEL SLOPES)**



**PLAN**

**SUMMARY OF QUANTITIES**

ITEM	UNIT	BENT 1	BENT 2	TOTAL
CHANNEL EXCAVATION	CU YD	269	137	406
STONE RIPRAP, CLASS A5	TON	400	370	770
FILTER FABRIC FOR USE WITH RIPRAP*	SQ. YD.	279	289	568
BEDDING STONE*	TON	95	90	185

\* ESTIMATED QUANTITIES INCIDENTAL TO UNIT PRICE BID FOR STONE RIPRAP, CLASS A5.  
 ESTIMATED EXCAVATION FOR STONE RIPRAP, CLASS A5 PLACEMENT - 480 CU YD

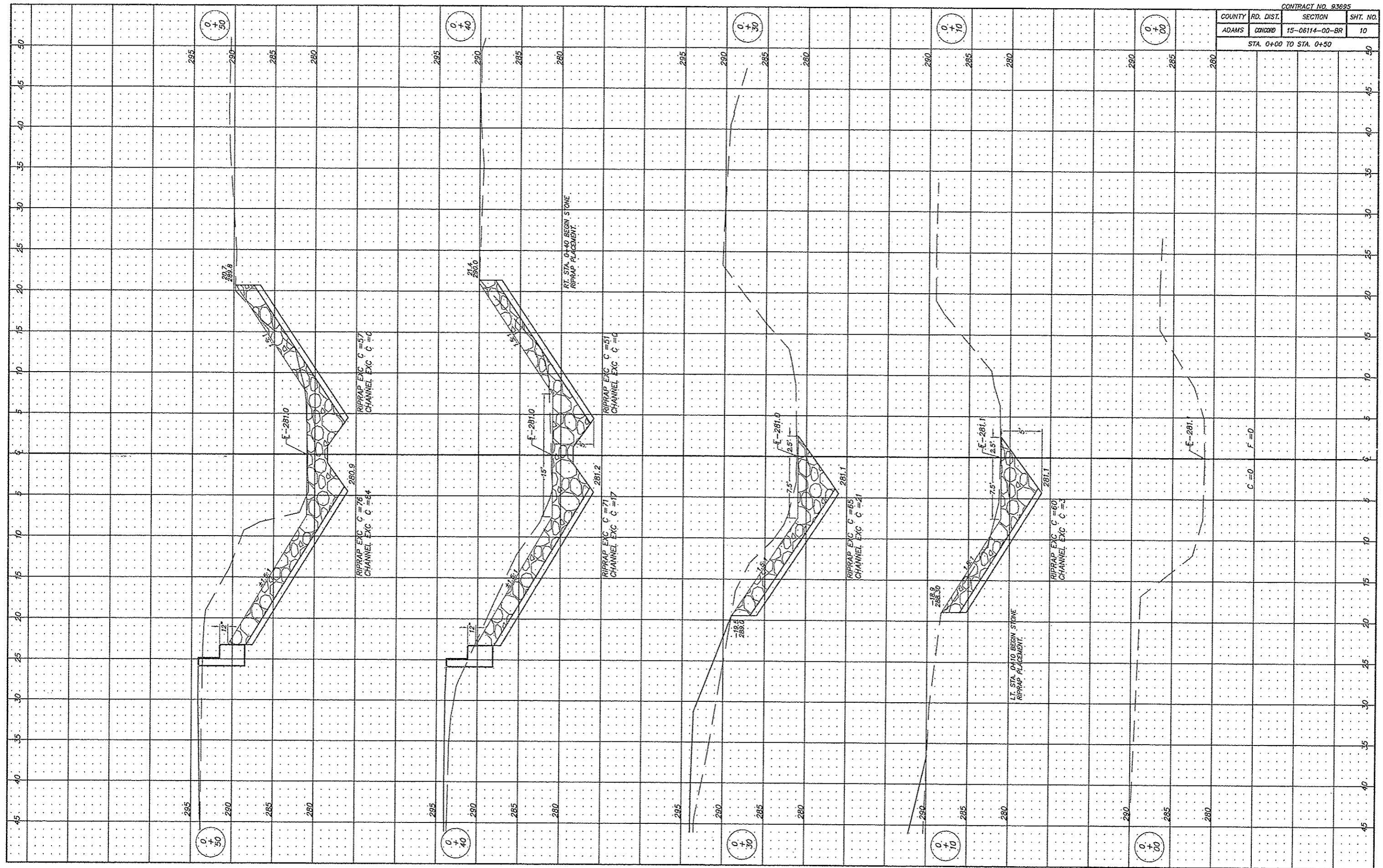
**GENERAL NOTES:**

- LAYOUT OF THE SLOPE PROTECTION SYSTEM MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD AS DIRECTED BY THE ENGINEER.
- 1.6 TON/CY USED FOR RIPRAP QUANTITY CALCULATION.
- 1.8 TON/CY USED FOR BEDDING QUANTITY CALCULATION.

**STONE RIPRAP PLACEMENT DETAILS  
 STRUCTURE NO. 001-3432  
 BR. OF WALNUT FORK  
 ADAMS COUNTY  
 CONCORD ROAD DISTRICT  
 SEC. 15-06114-00-BR  
 STATION 5+25**

COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	10

STA. 0+00 TO STA. 0+50



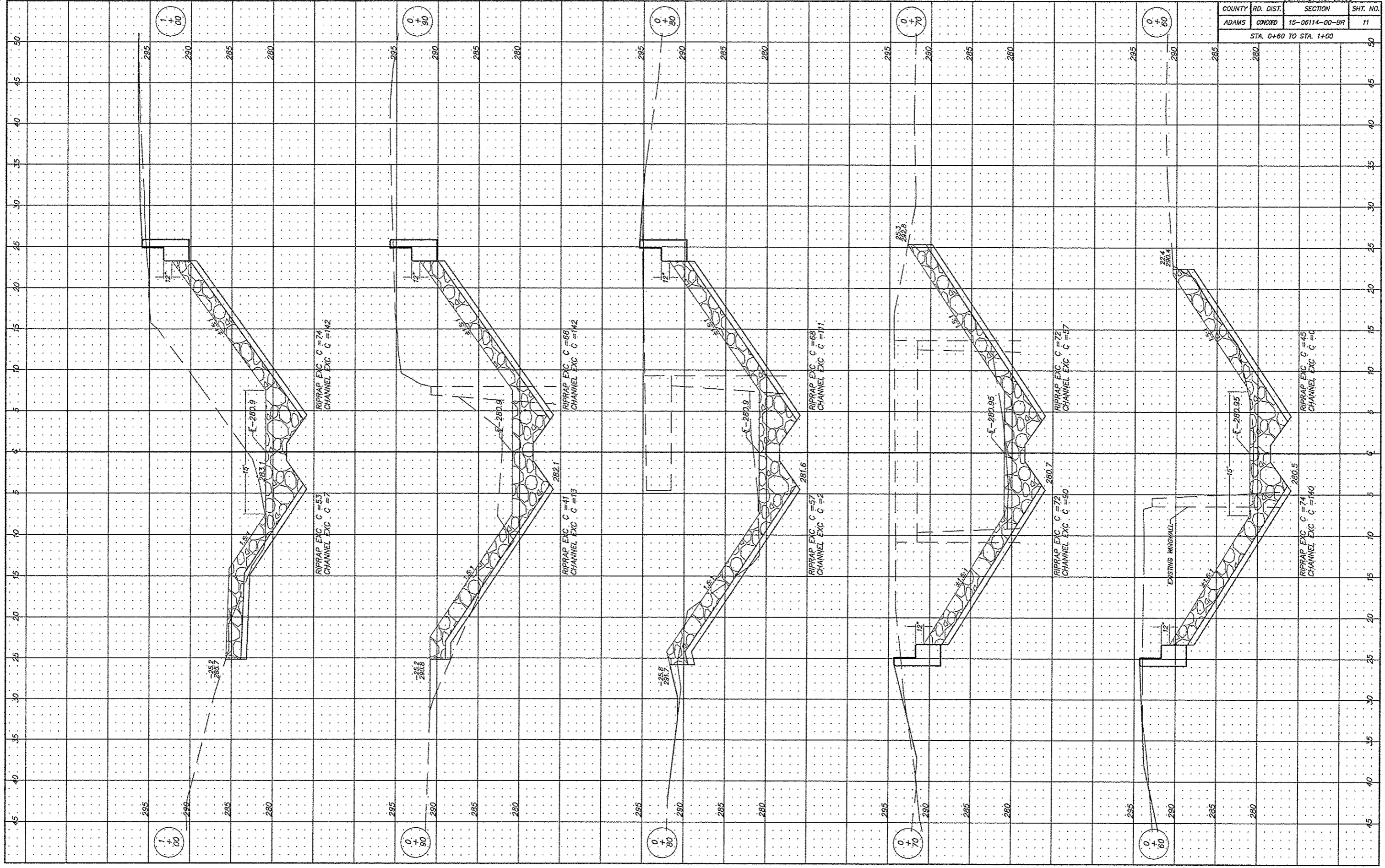
C=0 F=0

LT. STA. 0+10 BEGN. STONE RIPRAP PLACEMENT

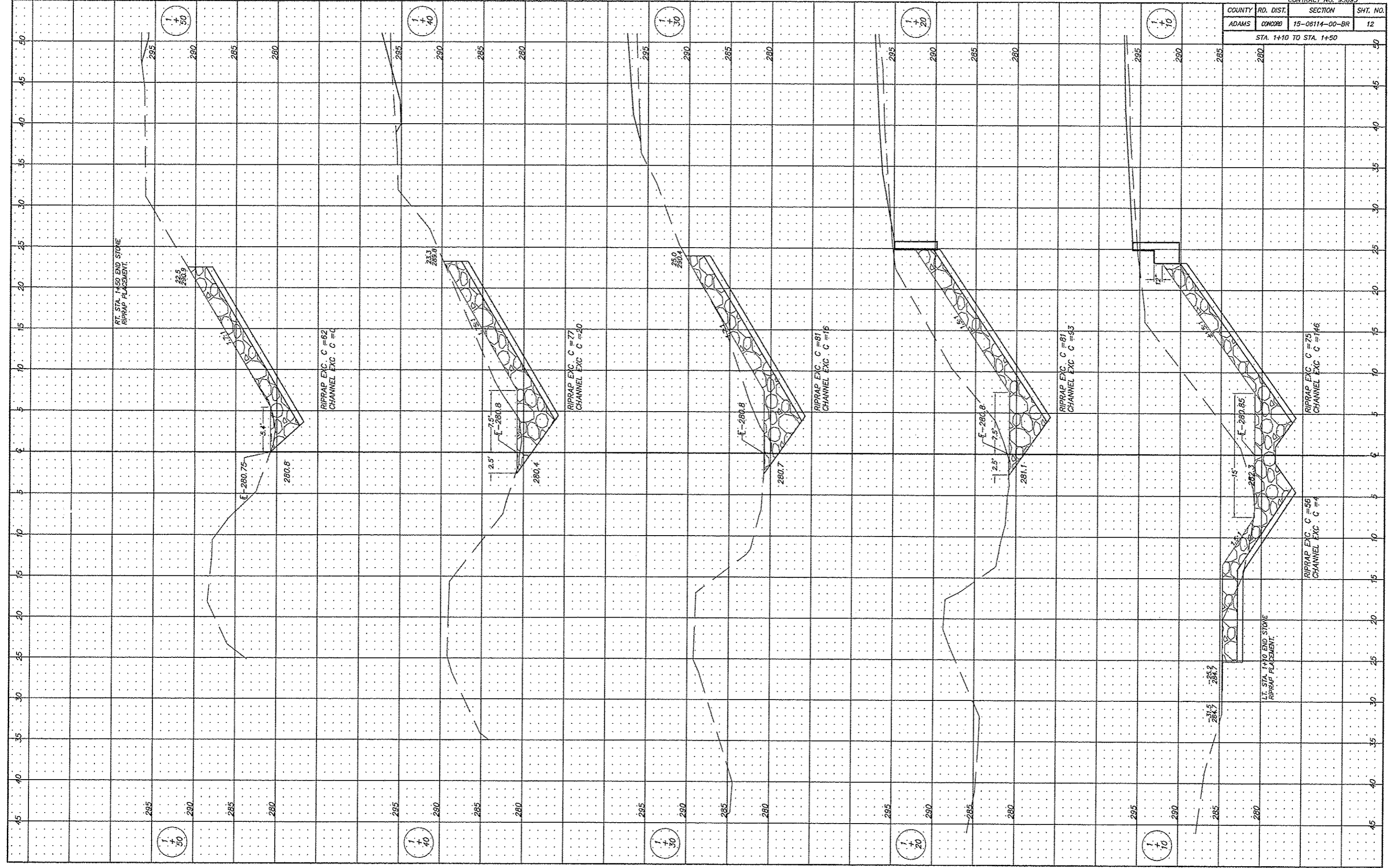
RT. STA. 0+40 BEGN. STONE RIPRAP PLACEMENT

COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-CO-BR	11

STA. 0+60 TO STA. 1+00



COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	12
STA. 1+10 TO STA. 1+50			



RT. STA. 1+50 END STONE  
RIPRAP PLACEMENT.

RIPRAP EXC. C #62  
CHANNEL EXC. C #62

RIPRAP EXC. C #71  
CHANNEL EXC. C #70

RIPRAP EXC. C #81  
CHANNEL EXC. C #76

RIPRAP EXC. C #81  
CHANNEL EXC. C #83

RIPRAP EXC. C #75  
CHANNEL EXC. C #146

RIPRAP EXC. C #56  
CHANNEL EXC. C #4

LT. STA. 1+10 END STONE  
RIPRAP PLACEMENT.



**INDEX OF SHEETS**

1. GENERAL PLAN AND ELEVATION
2. GENERAL NOTES AND DETAILS
3. P.P.C DECK BEAM SUPERSTRUCTURE
4. 27"x36" P.P.C. DECK BEAM DETAILS
5. 27"x36" P.P.C. DECK BEAM DETAILS
6. P.P.C. DECK BEAM PILE BENT ABUTMENT
7. P.P.C. DECK BEAM PILE BENT ABUTMENT
8. PILE BENT ABUTMENT MATERIALS
9. HP PILE DETAILS
10. STEEL RAILING, TYPE S-1

**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (reinforcement)

**PRECAST PRESTRESSED UNITS**  
 $f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f_{pu} = 270,000$  psi ( $\frac{1}{2}$ " $\phi$  low lax strands)  
 $f_{pbt} = 201,960$  psi ( $\frac{1}{2}$ " $\phi$  low lax strands)

**PILE DATA (2 ABUTMENTS)**

TYPE	HP10x42
NOMINAL REQUIRED BEARING	335 KIPS
ESTIMATED LENGTH	BENT #1- 48 FEET BENT #2- 46 FEET 1 TEST PILE IN BENT 2

**LOADING HL-93**

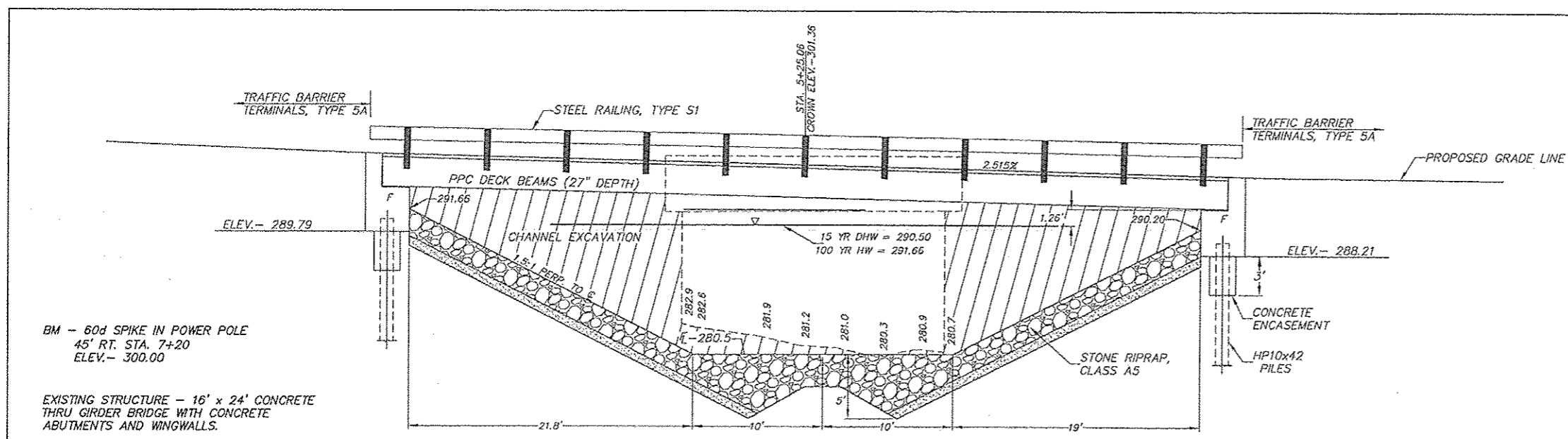
ALLOW 50#/SQ.FT. FOR FUTURE WEARING SURFACE

**SEISMIC DATA**

SEISMIC PERFORMANCE ZONE (SPZ) = 1  
DESIGN SPECTRAL ACCELERATION AT 1.0 SEC. (SD1) = 0.051g  
DESIGN SPECTRAL ACCELERATION AT 0.2 SEC. (SDS) = 0.120g  
SOIL SITE CLASS = B

**DESIGN SPECIFICATIONS**

2014 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS - 7th EDITION

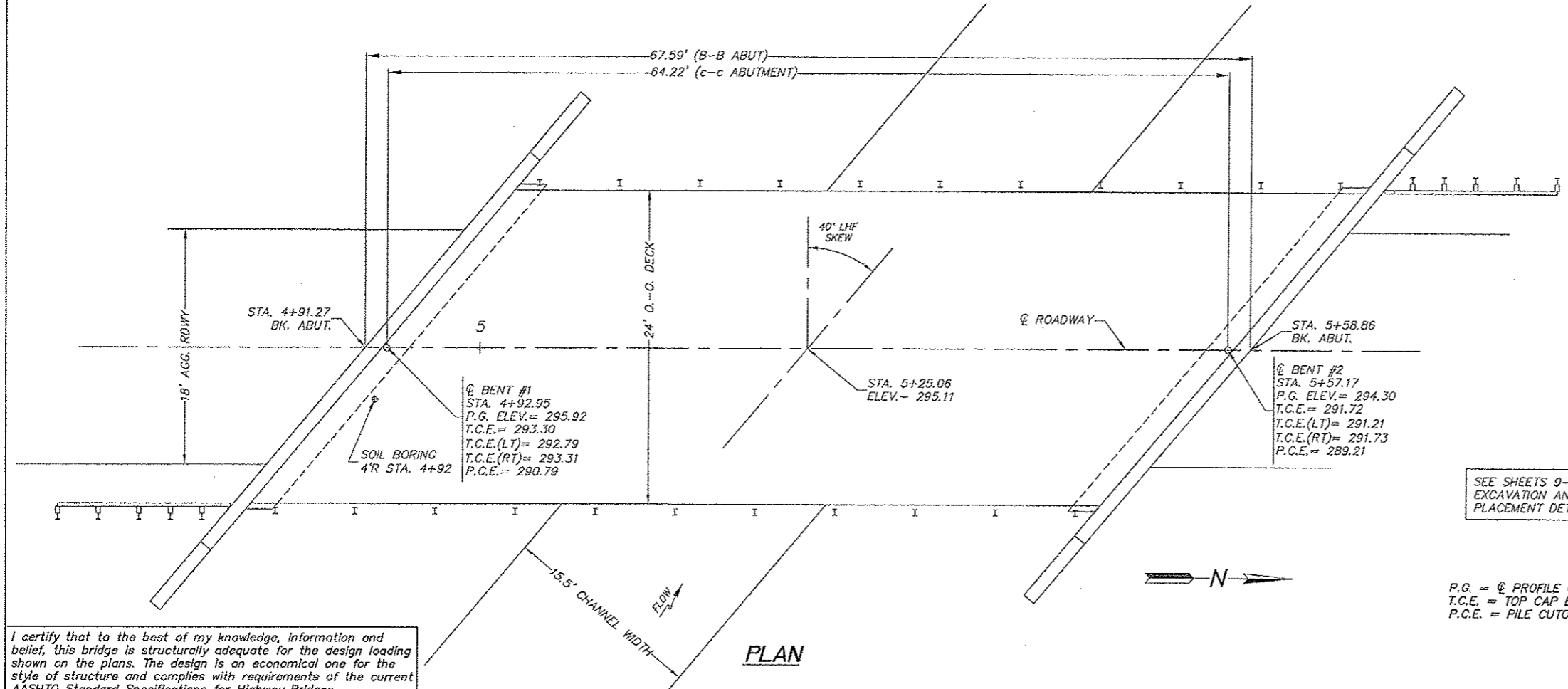


**ELEVATION**  
Shown Along  $\phi$  Roadway

BM - 60d SPIKE IN POWER POLE  
45' RT. STA. 7+20  
ELEV. - 300.00

EXISTING STRUCTURE - 16' x 24' CONCRETE THRU GIRDER BRIDGE WITH CONCRETE ABUTMENTS AND WINGWALLS.

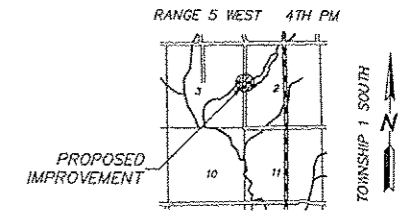
SALVAGE - SALVAGEABLE MATERIALS BECOME PROPERTY OF THE CONTRACTOR.



**PLAN**

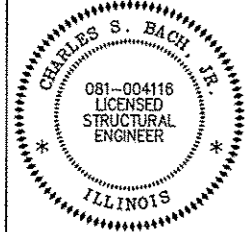
SEE SHEETS 9-12 FOR CHANNEL EXCAVATION AND STONE RIPRAP PLACEMENT DETAIL.

P.G. =  $\phi$  PROFILE GRADE ELEV.  
T.C.E. = TOP CAP ELEVATION  
P.C.E. = PILE CUTOFF ELEVATION



**LOCATION SKETCH**

I certify that to the best of my knowledge, information and belief, this bridge is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



*Charles S. Bach, Jr.*  
Charles S. Bach, Jr.  
Licensed Structural Engineer  
State of Illinois No. 81-04116  
expires 11/30/2016

**DESIGN SCOUR ELEVATION TABLE**

BENT 1	BENT 2
289.79	288.21

**WATERWAY INFORMATION**

DRAINAGE AREA - 3.04 SQ. MI			LOW GRADE ELEVATION = 294.02 AT STA. 5+94.9					
FLOOD FREQ. (YEAR)	FLOW VOL. (CFS)	OPENING SQ. FT.		NATURAL H.W.E.	HEAD - FT.		HEADWATER ELEV.	
		EXISTING	PROPOSED		EXISTING	PROPOSED	EXISTING	PROPOSED
DESIGN 15	840	174	302	290.38	0.10	0.00	290.64	290.60
BASE 100	1,430	122	199	291.60	1.00	0.00	292.70	291.84
OVERTOPPING MAX. CALC	500							

THE STRUCTURE HAS BEEN DESIGNED TO BE STABLE FOR SCOUR CONDITIONS IN ACCORDANCE WITH THE FHWA TECHNICAL ADVISORY T-5140.23 "EVALUATING SCOUR AT BRIDGES" AND HYDRAULIC ENGINEER CIRCULAR 18 - EVALUATING SCOUR AT BRIDGES.

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 001-3432  
WALNUT FORK CREEK  
ADAMS COUNTY  
CONCORD ROAD DISTRICT  
SEC. 15-06114-00-BR  
STATION 5+25.06

CONTRACT NO. 93695			
COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	14
GENERAL NOTES & DETAILS			
BRIDGE SHEET NO. 2 OF 10			

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPERSTRUCTURE	SUBSTRUCTURE	TOTAL
CHANNEL EXCAVATION	CU. YD.			
STONE RIPRAP, CLASS A5	TON			
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	23		23
REMOVAL OF EXISTING STRUCTURE	EACH	1		1
CONCRETE STRUCTURES	CU. YD.		34.9	34.9
PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ. FT.	1,560		1,560
REINFORCEMENT BARS, EPOXY COATED	POUND		4420	
STEEL RAILING, TYPE S-1	FOOT	134		134
FURNISHING STEEL PILES HP10x42	FOOT		424	424
DRIVING PILES	FOOT		424	424
TEST PILE STEEL HP10x42	EACH		1	1
CONCRETE ENCASEMENT	CU. YD.		3.4	3.4
NAME PLATES	EACH		1	1

**GENERAL NOTES**

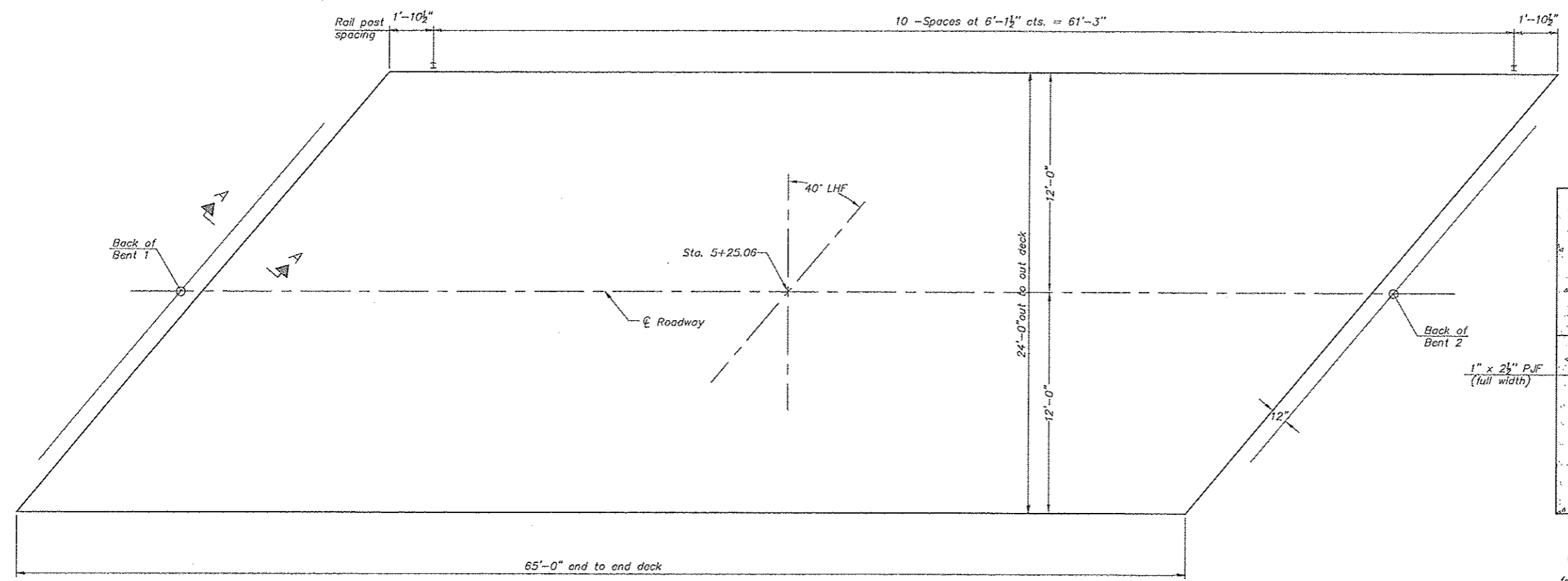
1. SEE SPECIAL PROVISIONS FOR BORING LOGS.
2. ALL GROUT ON THIS PROJECT SHALL BE NON-SHRINK.
3. STONE RIPRAP SHALL BE PLACED TO THE DIMENSIONS SHOWN OVER A GEOTECHNICAL FABRIC IN ACCORDANCE WITH THE RIPRAP PLACEMENT DETAIL AND APPLICABLE SPECIAL PROVISIONS.
4. THE ENGINEER RESERVES THE RIGHT TO ALTER THE RIPRAP PLACEMENT DETAIL AND/OR ADJUST QUANTITIES TO FIT FIELD CONDITIONS.
5. THE CONTRACTOR SHALL DRIVE A TEST PILE TO 110% OF THE NOMINAL REQUIRED BEARING SPECIFIED IN A PRODUCTION LOCATION IN BENT 2 BEFORE ORDERING THE REMAINDER OF PILES.

WALNUT FORK CREEK  
 BUILT 20\_\_\_\_ BY  
 ADAMS COUNTY  
 CONCORD ROAD DISTRICT  
 SEC. 15-06114-00-BR  
 STATION 5+25.06  
 STR. NO. 001-3432 LOADING HL-93

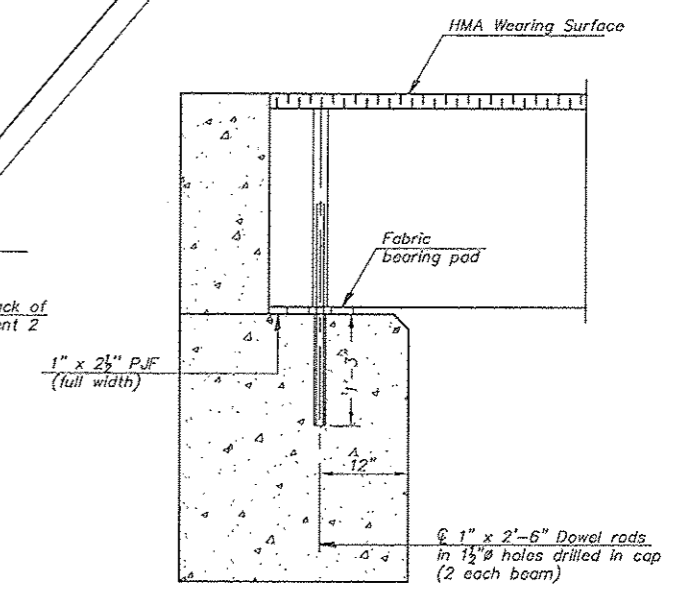
**LETTERING FOR NAME PLATE**  
 LOCATE NAME PLATE AT NORTHEAST CORNER OF  
 BRIDGE (SEE STD. 515001)

GENERAL NOTES AND DETAILS  
 STRUCTURE NO. 001-3432  
 WALNUT FORK CREEK  
 ADAMS COUNTY  
 CONCORD ROAD DISTRICT  
 SEC. 15-06114-00-BR  
 STATION 5+25.06

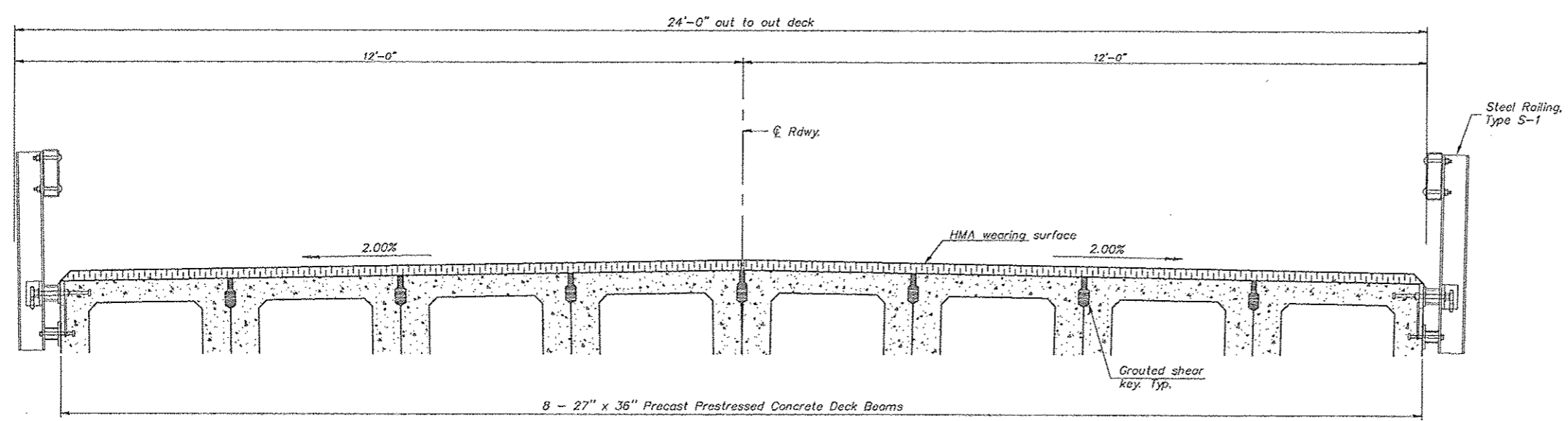
CONTRACT NO. 93695			
COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	15
SUPERSTRUCTURE			
BRIDGE SHEET NO. 3 OF 10			



PLAN



SECTION A-A  
(Dimensions at Rt. L's)  
See sheet 5 of 12 for fabric bearing pad details.

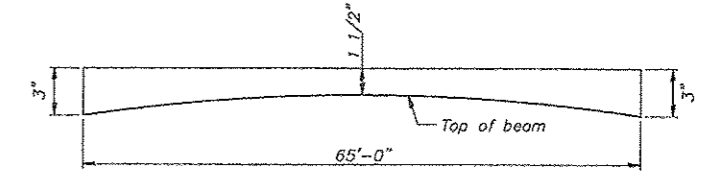


CROSS SECTION  
(Looking Northerly)

Notes:  
Dowel rods drilled in cap are to be included in the cost of Prestressed Precast Concrete Deck Beams (27" Depth).

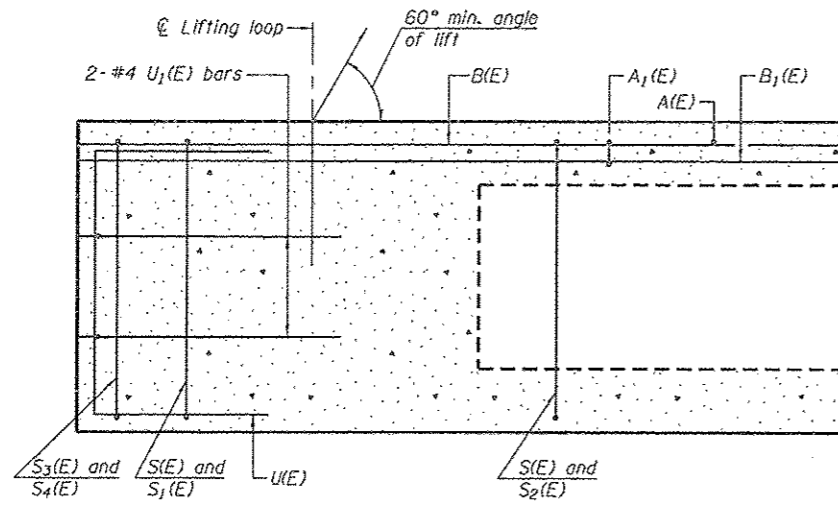
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
HMA Surface Course, Mix "C", N50	Tons	23

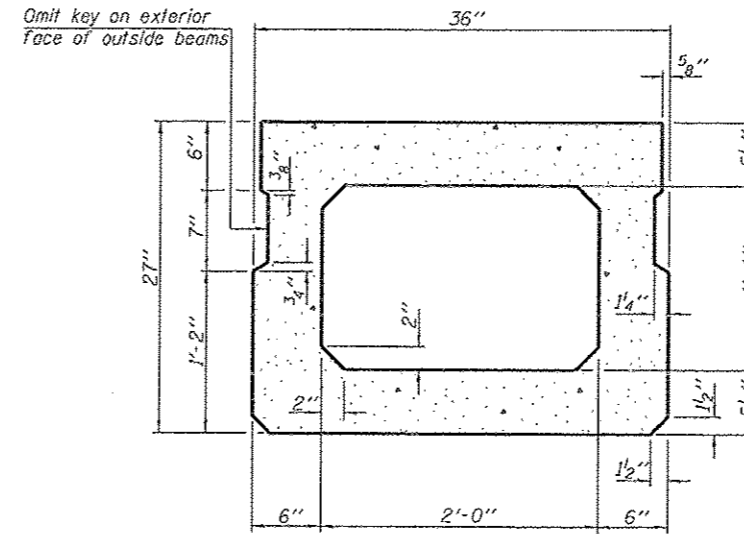


ANTICIPATED HMA WEARING SURFACE PROFILE  
(For information only)

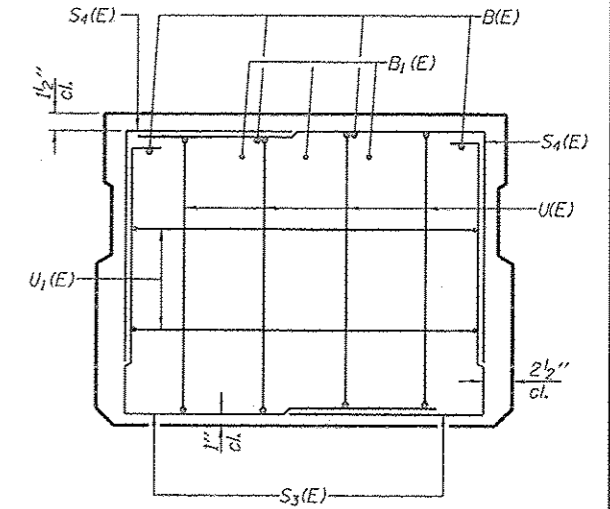
SUPERSTRUCTURE  
STRUCTURE NO. 001-3432  
WALNUT FORK CREEK  
ADAMS COUNTY  
CONCORD ROAD DISTRICT  
SEC. 15-06114-00-BR  
STATION 5+25.06



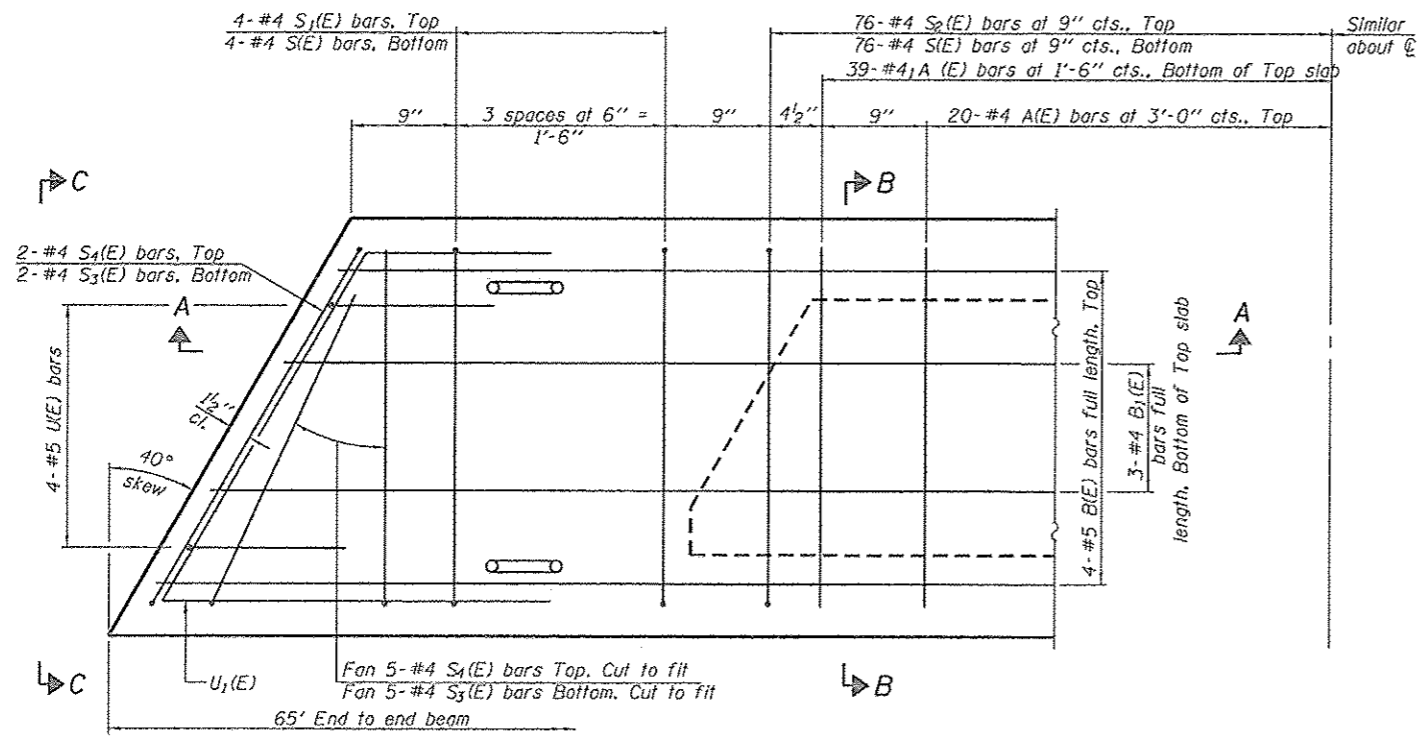
SECTION A-A



SECTION B-B  
(Showing dimensions)



VIEW C-C

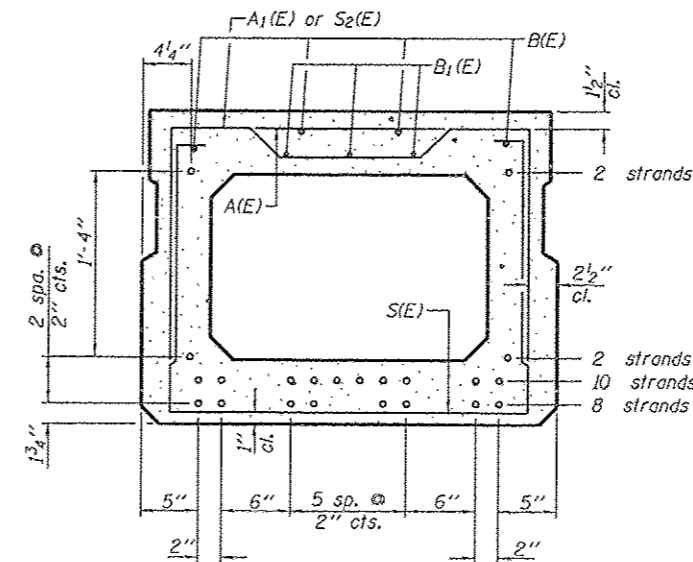


PLAN VIEW

Note: Spacing of S1(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

**MINIMUM BAR LAP**

#4 bar = 1'-11"  
#5 bar = 2'-6"



SECTION B-B

(Showing reinforcement and permissible strand locations)  
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

**BAR LIST**  
**ONE BEAM ONLY**  
(For information only)

Bar	No.	Size	Length	Shape
A(E)	20	#4	2'-7"	—
A1(E)	39	#4	2'-10"	—
B(E)	8	#5	33'-3"	—
B1(E)	6	#4	33'-4"	—
S1(E)	6	#4	7'-5"	┌
S2(E)	6	#4	6'-2"	┌
S3(E)	14	#4	5'-0"	┌
S4(E)	14	#4	3'-3"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	6	#4	7'-10"	┌

Note: See sheet 17 of 22 for additional details and Bill of Material.

PD-2736-L

06-01-16

FILE NAME \* PSH004 PPC DECK BEAM.dgn

USER NAME \* done  
PLOT SCALE \* 0.20000 1' = 1/2"  
PLOT DATE \* 10/11/2016

DESIGNED - CJB  
CHECKED -  
DRAWN -  
CHECKED -

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

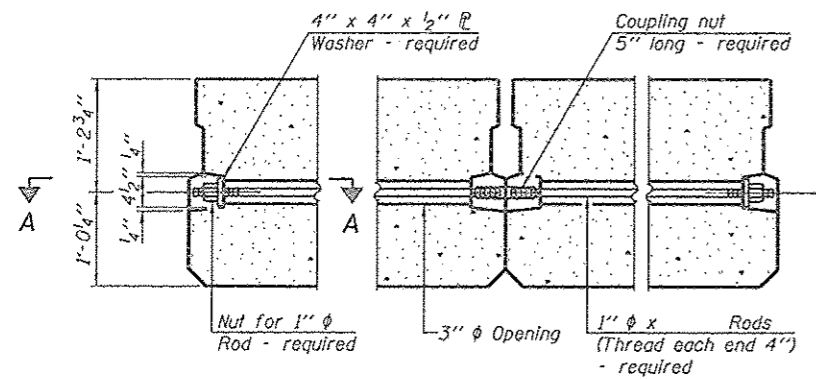
27" x 36" PPC DECK BEAM  
STRUCTURE NO. 001-3432

SCALE: NONE SHEET NO. 4 OF 10 SHEETS

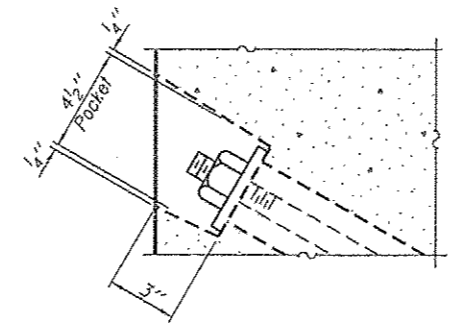
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	15-06114-00-BR	ADAMS	22	16
CONTRACT NO. 93695				

RD. DIST. CONCORD ILLINOIS FED. AID PROJECT

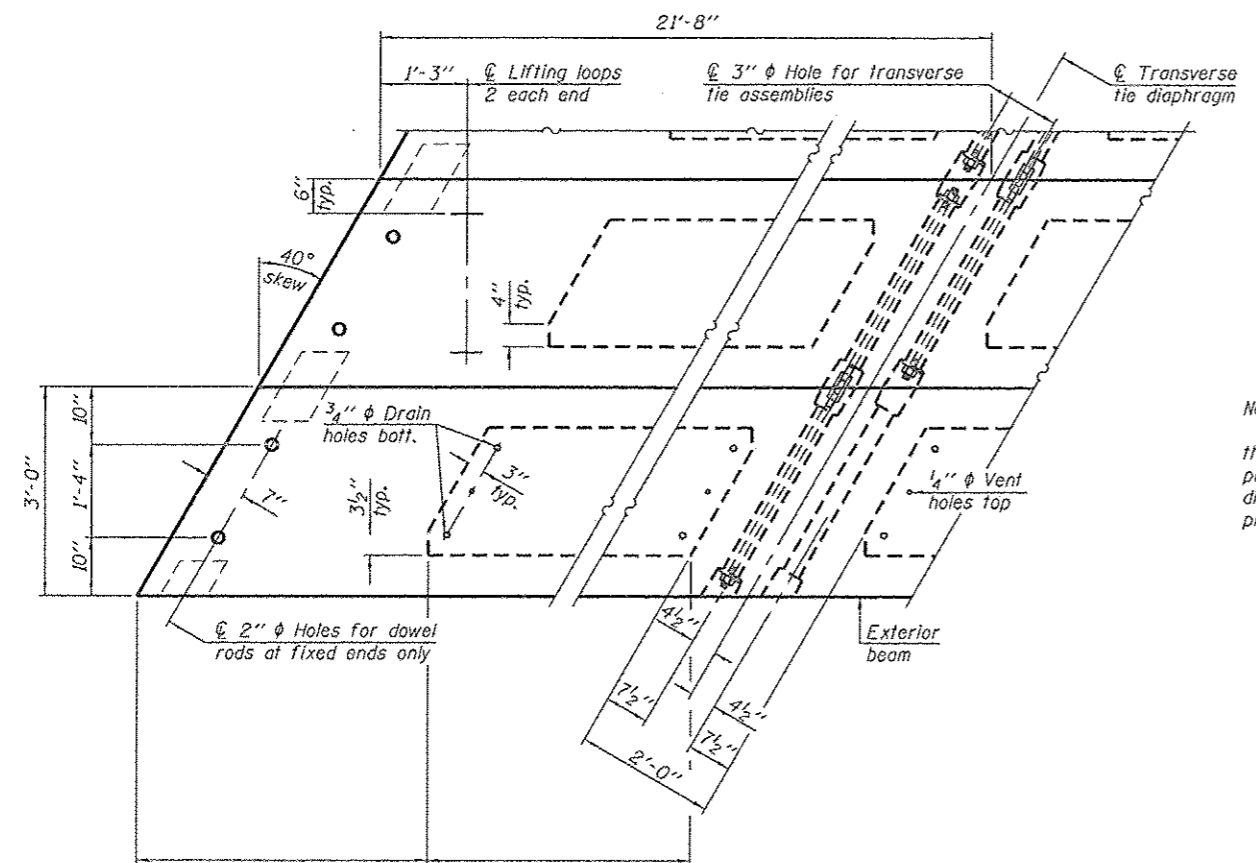




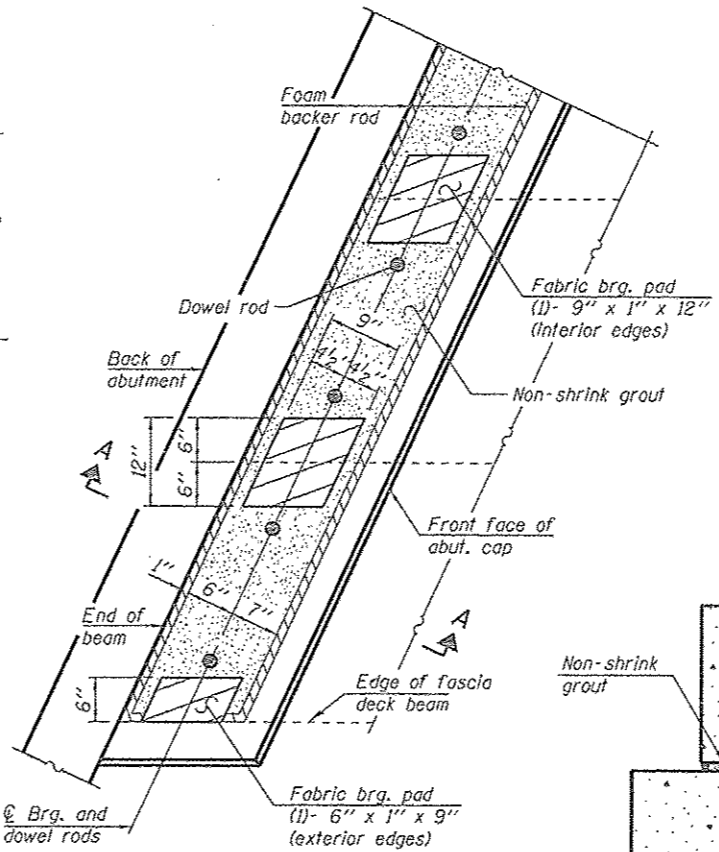
TYPICAL TRANSVERSE TIE ASSEMBLY



SECTION A-A

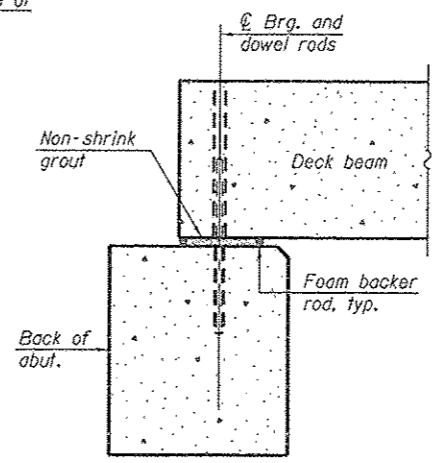


PLAN VIEW



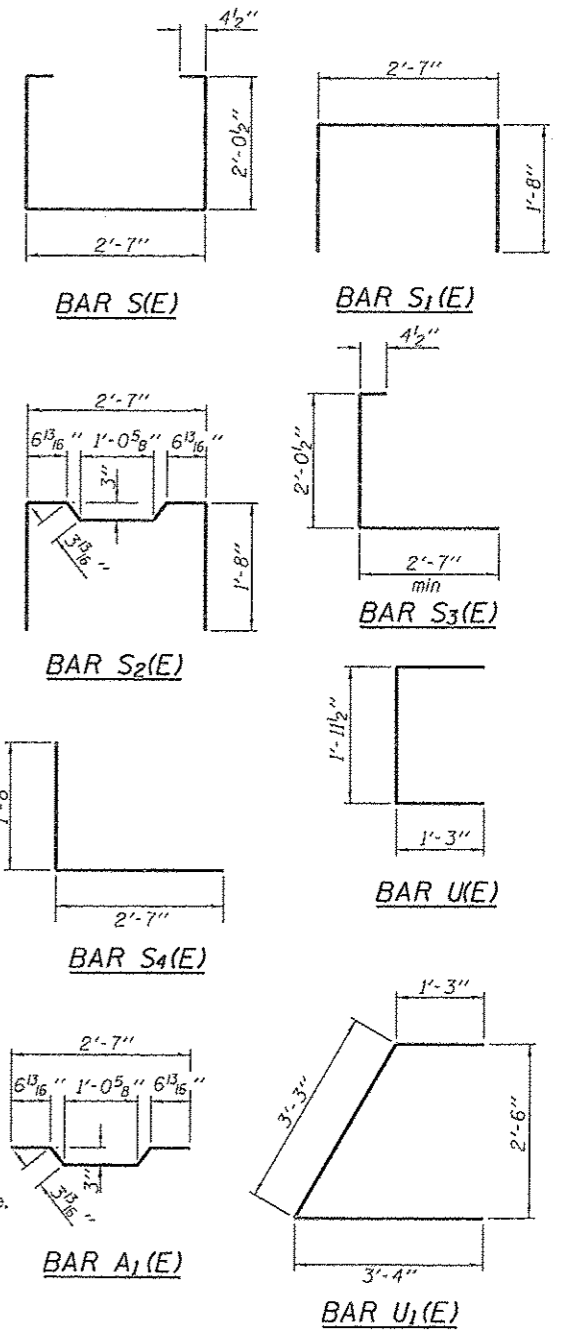
PLAN

Notes:  
The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8 inch fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.



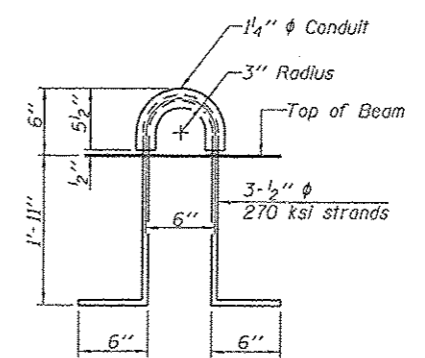
SECTION A-A

Notes:  
All bearing pads shall be 1 inch thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.



BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1560
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LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2 inch and the nominal cross-sectional area shall be 0.153 sq. in. The 1 inch diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
Two 1/8 inch fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2-1/2 inch diameter lifting pin shall be used to engage the lifting loops during handling.  
Corrosion inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

Note: Connect beams in pairs with the transverse tie configuration shown.

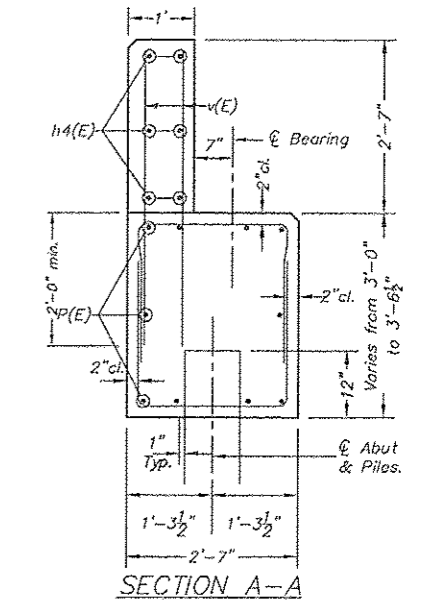
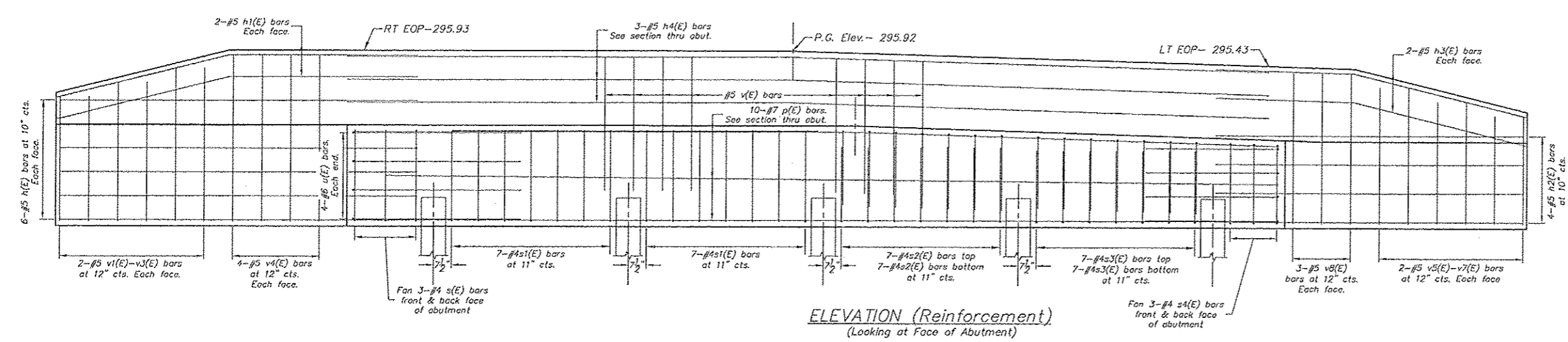
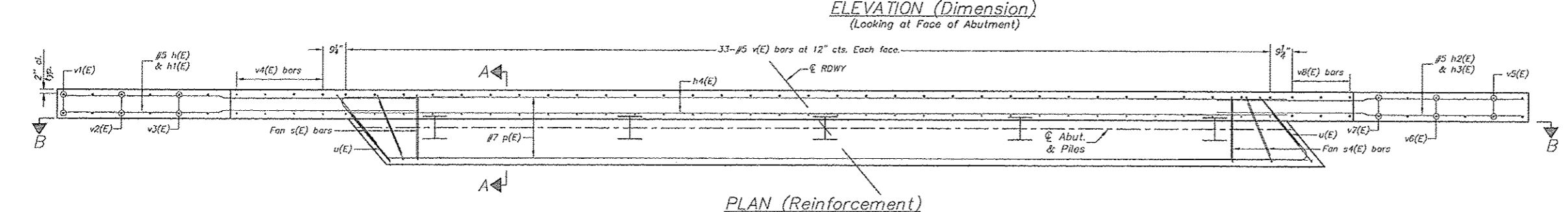
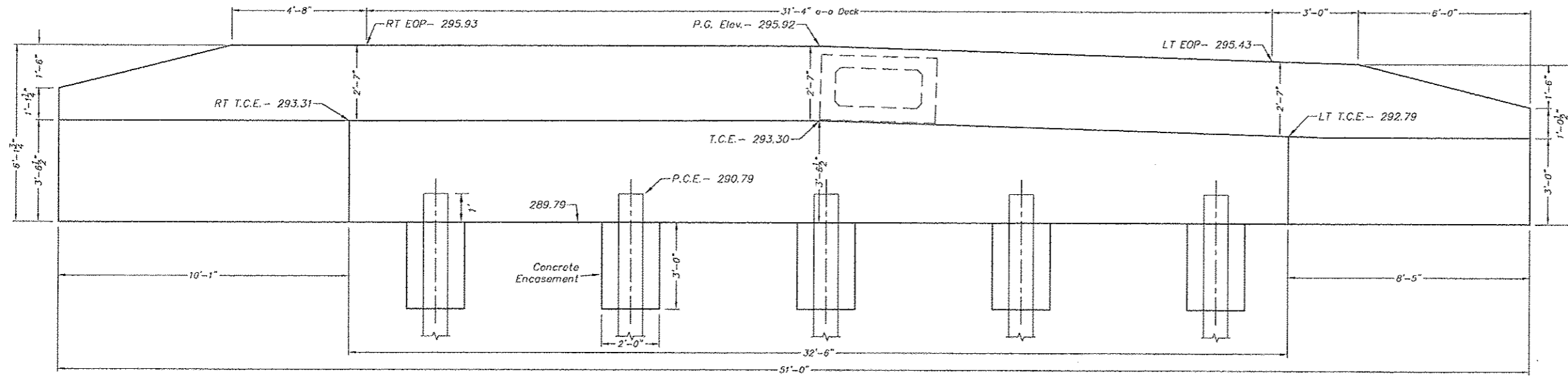
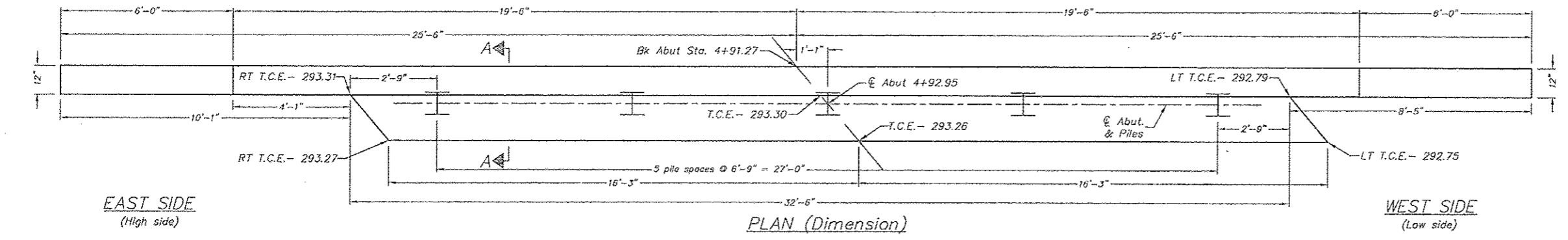
PD-2736-LD

06-01-16

FILE NAME * PS4805 PPC DECK BEAM DETAILS.dgn	USER NAME * dawn	DESIGNED - CJB	REVISIONS - -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	27" x 36" PPC DECK BEAM DETAILS STRUCTURE NO. 001-3432	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
PLOT SCALE * 0:2.0000 1" = 1'-0"	DRAWN - -	CHECKED - -	REVISIONS - -			SCALE: NONE	SHEET NO. 5 OF 10 SHEETS	15-06114-00-BR	ADAMS	22	17
PLOT DATE * 18/11/2016	CHECKED - -	REVISIONS - -	REVISIONS - -			CONTRACT NO. 93695					
						RD. DIST. CONCORD ILLINOIS FED. AID PROJECT					

CONTRACT NO. 93895			
COUNTY	RD. DIST.	SECTION	SHT. NO.
ADAMS	CONCORD	15-06114-00-BR	18

BENT 1 DETAILS  
BRIDGE SHEET NO. 6 OF 10



BAR LAP	
#4 bar	2'-0"
#5 bar	2'-7"
#6 bar	3'-8"
#7 bar	4'-3"

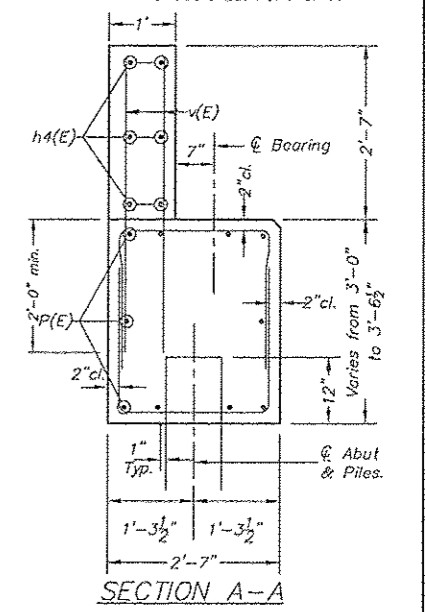
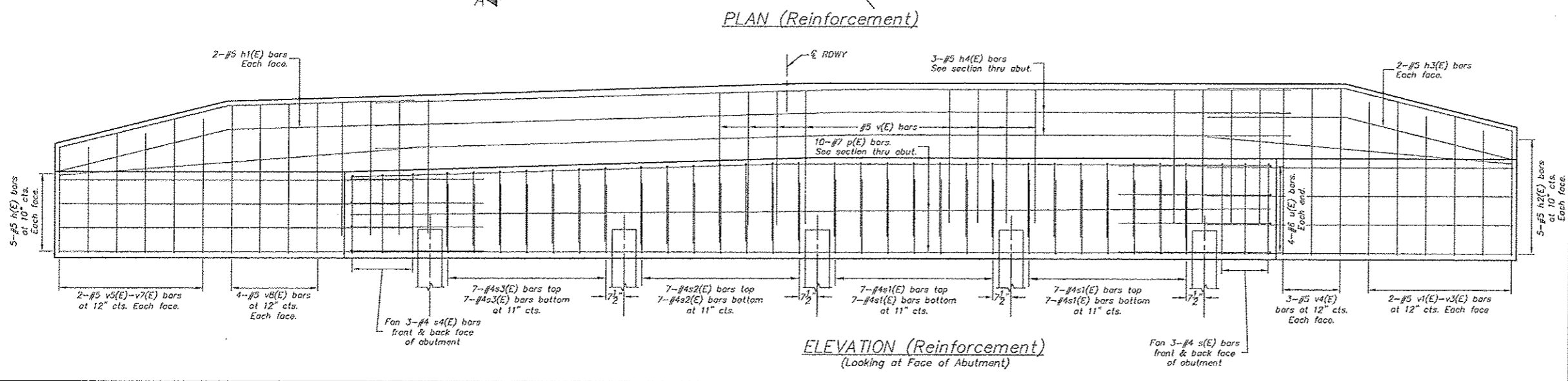
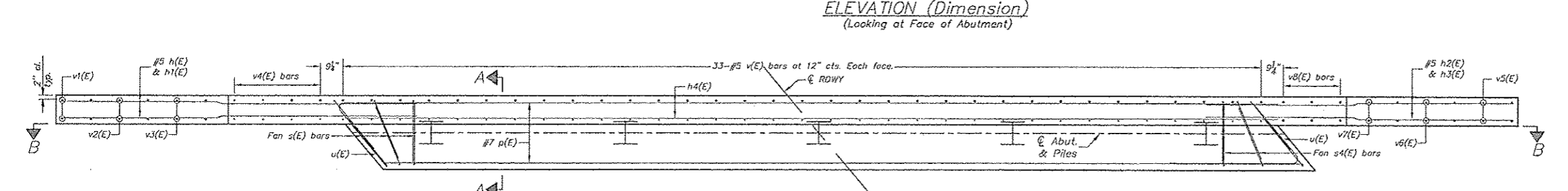
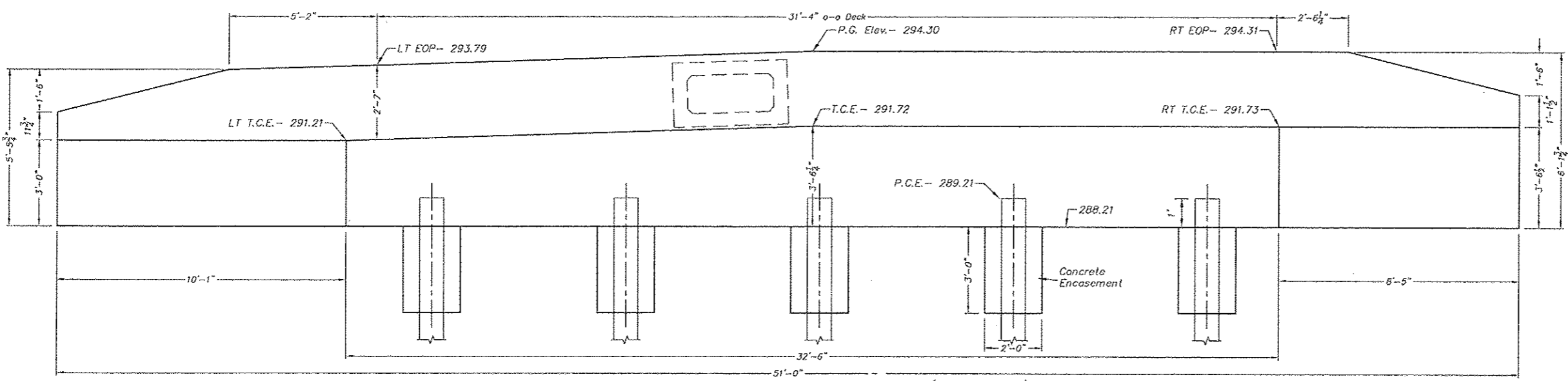
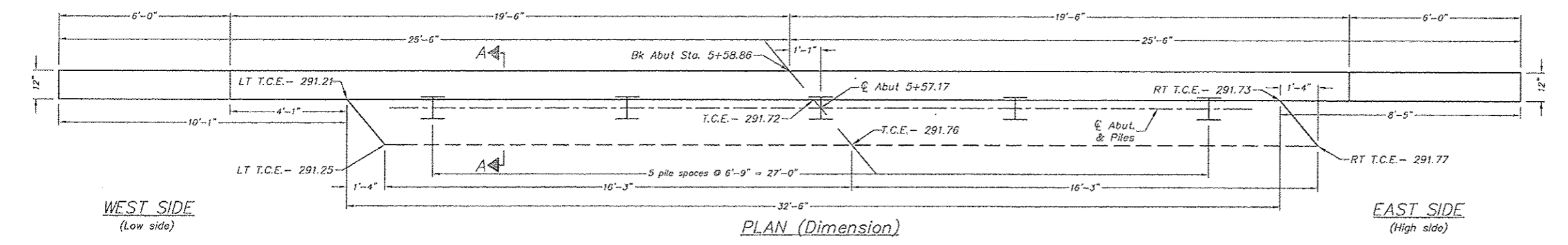
**PILE DATA**

Type: HP 10x42  
Nominal Required Bearing: Refusal  
Factored Resistance Available: 184k  
Est. Length: 48 ft.  
No. Production Piles: 5

Notes:  
For details of piles and Concrete Encasement, see sheet 12 of 12.  
Cast backwall after beams have been erected.

**BENT 1**  
**STRUCTURE NO. 001-3432**  
**BR. OF WALNUT FORK**  
**ADAMS COUNTY**  
**CONCORD ROAD DISTRICT**  
**SEC. 15-06114-00-BR**  
**STATION 5+25.06**

CONTRACT NO. 93695			
COUNTY	RD. DIST.	SECTION	SH. NO.
ADAMS	CONCORD	15-06114-00-BR	19
BENT 2 DETAILS			
BRIDGE SHEET NO. 7 OF 10			

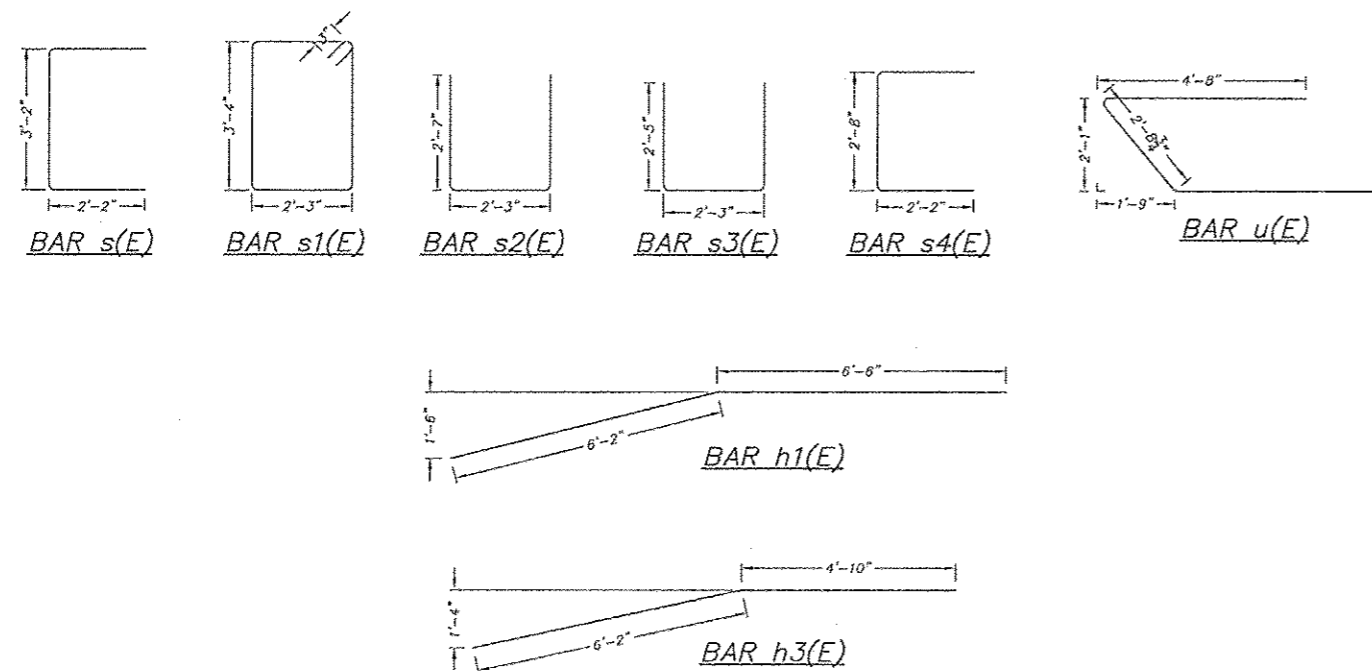


BAR LAP	
#4 bar	- 2'-0"
#5 bar	- 2'-7"
#6 bar	- 3'-8"
#7 bar	- 4'-3"

**PILE DATA**  
 Type: HP 10x42  
 Nominal Required Bearing: Refusal  
 Factor of Resistance Available: 184k  
 Est. Length: 46 ft.  
 No. Production Piles: 4  
 Test Piles: 1

Notes:  
 For details of piles and Concrete Encasement, see sheet 12 of 12.  
 Cast backwall after beams have been erected.

**BENT 2**  
**STRUCTURE NO. 001-3432**  
**BR. OF WALNUT FORK**  
**ADAMS COUNTY**  
**CONCORD ROAD DISTRICT**  
**SEC. 15-06114-00-BR**  
**STATION 5+25.06**



**BILL OF MATERIAL - BENT 1**

Bar	No.	Size	Length	Shape
h(E)	12	#5	12'-8"	—
h1(E)	4	#5	13'-0"	—
h2(E)	8	#5	11'-0"	—
h3(E)	4	#5	11'-4"	—
h4(E)	6	#5	32'-6"	—
p(E)	10	#7	32'-2"	—
s(E)	6	#4	7'-6"	□
s1(E)	14	#4	11'-8"	□
s2(E)	14	#4	7'-5"	□
s3(E)	14	#4	7'-1"	□
s4(E)	6	#4	7'-0"	□
u(E)	8	#6	12'-1"	□
v(E)	66	#5	5'-0"	—
v1(E)	4	#5	4'-4"	—
v2(E)	4	#5	4'-10"	—
v3(E)	4	#5	5'-4"	—
v4(E)	8	#5	5'-10"	—
v5(E)	4	#5	3'-9"	—
v6(E)	4	#5	4'-3"	—
v7(E)	4	#5	4'-9"	—
v8(E)	6	#5	5'-3"	—
Concrete Structures			17.5 Cu.Yd.	
Reinforcement Bars, Epoxy Coated			2210 pound	
Furnishing Steel Piles, HP10x42			240 foot	
Driving Piles			240 foot	
Concrete Encasement			1.7 Cu.Yd.	

**BILL OF MATERIAL - BENT 2**

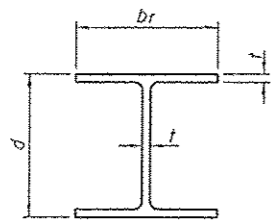
Bar	No.	Size	Length	Shape
h(E)	12	#5	12'-8"	—
h1(E)	4	#5	13'-0"	—
h2(E)	8	#5	11'-0"	—
h3(E)	4	#5	11'-4"	—
h4(E)	6	#5	32'-6"	—
p(E)	10	#7	32'-2"	—
s(E)	6	#4	7'-6"	□
s1(E)	14	#4	11'-8"	□
s2(E)	14	#4	7'-5"	□
s3(E)	14	#4	7'-1"	□
s4(E)	6	#4	7'-0"	□
u(E)	8	#6	12'-1"	□
v(E)	66	#5	5'-0"	—
v1(E)	4	#5	4'-4"	—
v2(E)	4	#5	4'-10"	—
v3(E)	4	#5	5'-4"	—
v4(E)	6	#5	5'-10"	—
v5(E)	4	#5	3'-9"	—
v6(E)	4	#5	4'-3"	—
v7(E)	4	#5	4'-9"	—
v8(E)	8	#5	5'-3"	—
Concrete Structures			17.4 Cu.Yd.	
Reinforcement Bars, Epoxy Coated			2210 pound	
Furnishing Steel Piles, HP10x42			184 foot	
Driving Piles			184 foot	
Test Pile			1 each	
Concrete Encasement			1.7 Cu.Yd.	

**GENERAL NOTES**

1. CLASS SI CONCRETE SHALL BE USED THROUGHOUT.
2. ABUTMENT CORNERS TO BE CHAMFERED  $\frac{1}{2}$ ". WINGWALL CORNERS TO BE CHAMFERED  $\frac{3}{4}$ ".
3. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
4. THE CONTRACTOR SHALL DRIVE A TEST PILE TO 110% OF THE NOMINAL REQUIRED BEARING SPECIFIED IN A PRODUCTION LOCATION IN BENT 2 BEFORE ORDERING THE REMAINDER OF PILES.
5. #6 BAR = 4  $\frac{1}{2}$ " RADIUS
6. #4 BAR = 3" RADIUS

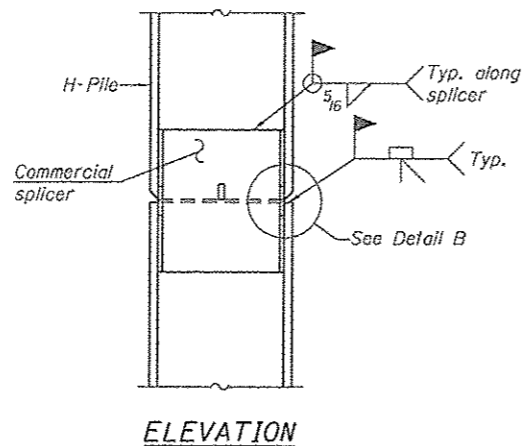
PILE BENT ABUTMENT MATERIALS  
STRUCTURE NO. 001-3432  
BR. OF WALNUT FORK  
ADAMS COUNTY  
CONCORD ROAD DISTRICT  
SEC. 15-06114-00-BR  
STATION 5+25.06



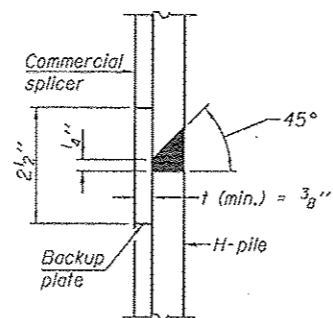


STEEL PILE TABLE

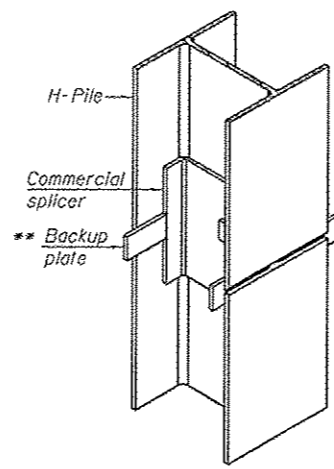
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/4"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/4"	24"
x74	12 1/2"	12 1/4"	5/8"	24"
x63	12"	12 1/2"	1/2"	24"
x53	11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



ELEVATION

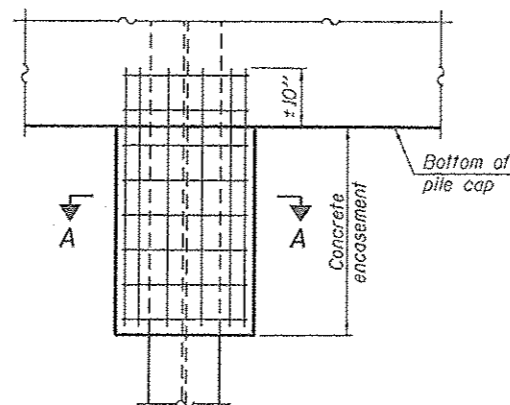


DETAIL "B"



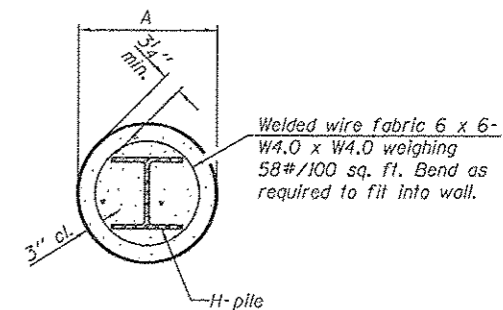
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



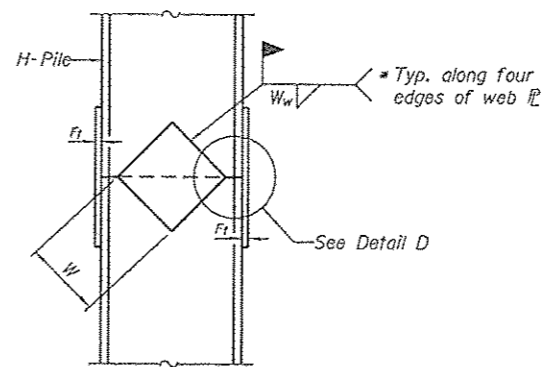
ELEVATION

PILE ENCASEMENT

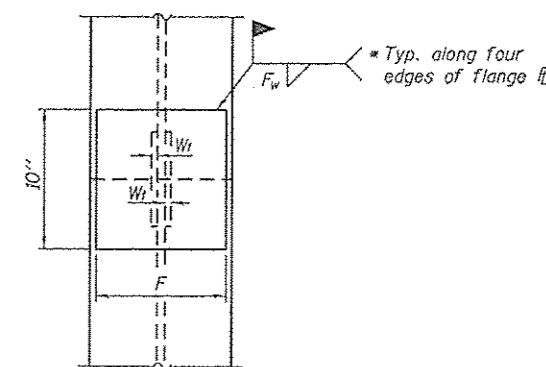


SECTION A-A

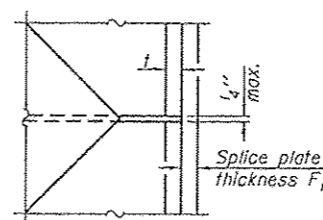
Note: Forms for encasement may be omitted when soil conditions permit.



ELEVATION



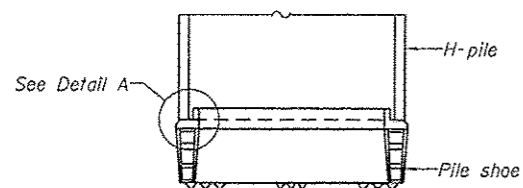
END VIEW



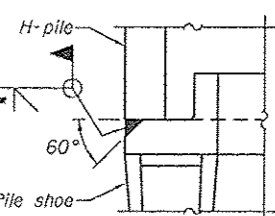
DETAIL D

WELDED PLATE FIELD SPLICE

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

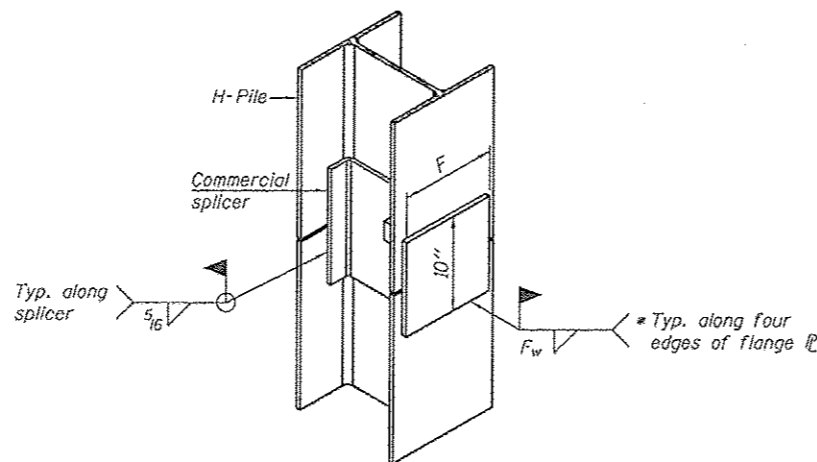


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

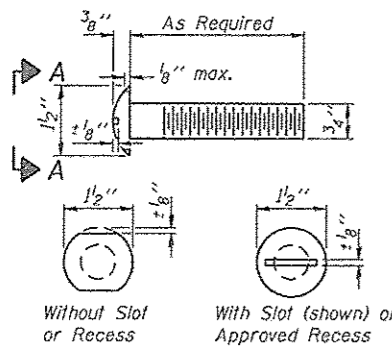
- \* Interrupt welds 1/4" from end of web and/or each flange.
- \*\* Remove portions of backup plates that extend outside the flanges.
- \*\*\* Weld size per pile shoe manufacturer (5/16" min.).

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

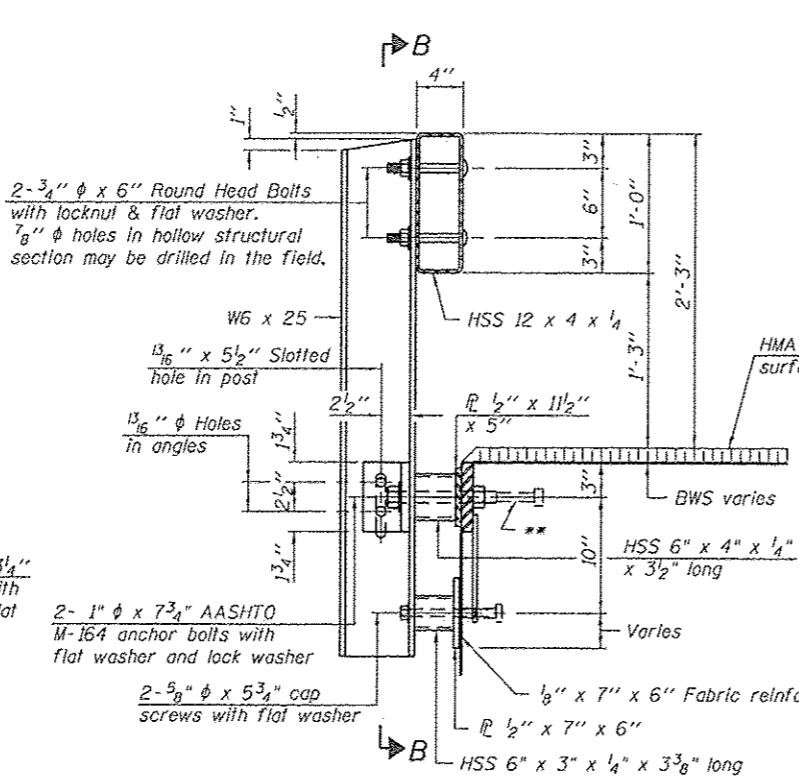
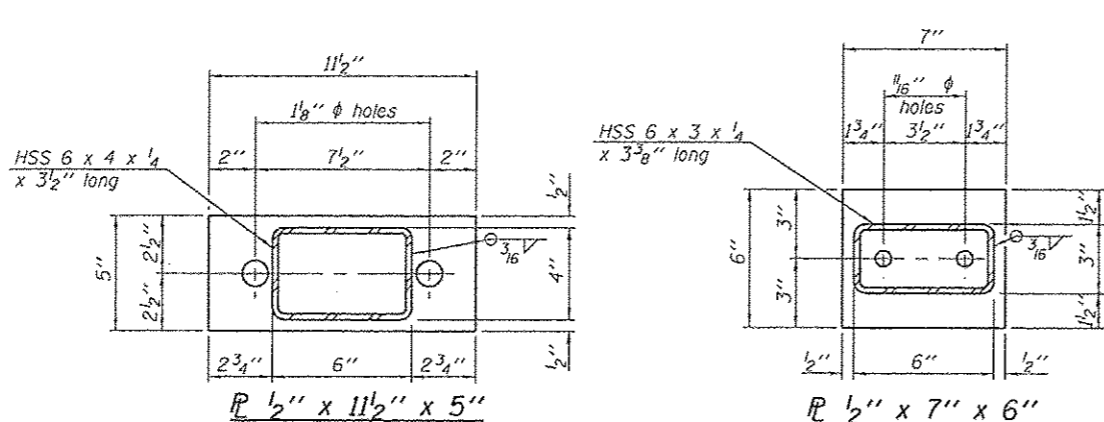
F-HP

1-27-12

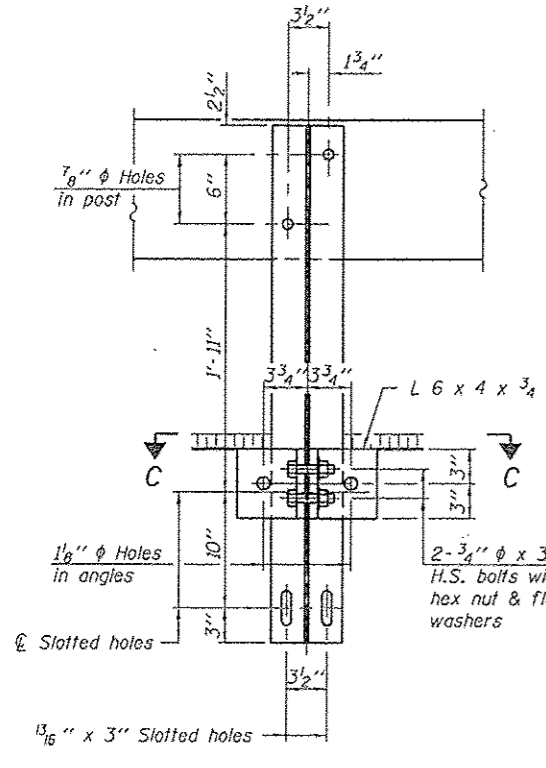
FILE NAME * PSH009 HP PILE DETAILS.dgn	USER NAME * donw	DESIGNED - CJB	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 001-3432		F.A. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE * 0:2.0000 1' = 1"	CHECKED -	REVISIONS -		SCALE: NONE	SHEET NO. 9 OF 10 SHEETS	15-06114-00-BR	ADAMS	22	21	
	PLOT DATE * 10/11/2016	DRAWN -	REVISIONS -				CONTRACT NO. 93695				
		CHECKED -	REVISIONS -				RD. DIST. CONCORD ILLINOIS FED. AID PROJECT				



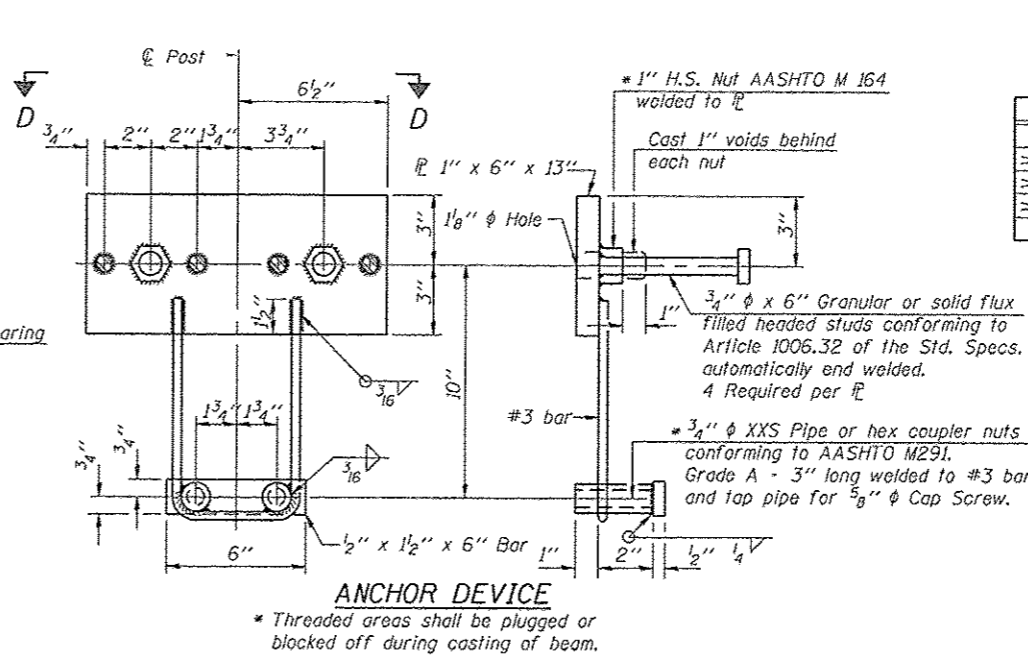
VIEW A-A  
ROUND HEAD BOLT



SECTION AT RAILING POST



SECTION B-B

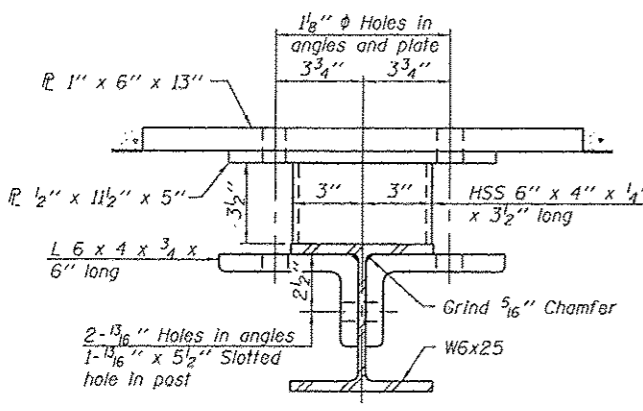


ANCHOR DEVICE

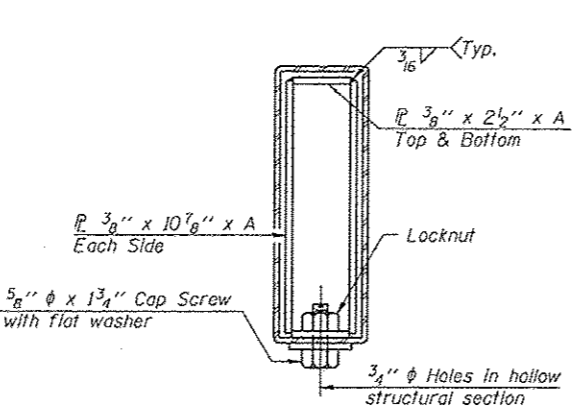
**SPLICE DIMENSIONS**

T	D	A	B	C	E
≤ 4"	2 1/2"	1'-8"	2"	4"	2 1/2"
> 4" ≤ 6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
> 6 1/2" ≤ 9"	5"	2'-4"	3 1/2"	6 1/2"	9"
> 9" ≤ 13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	4"	1'-8"	2"	4"	—

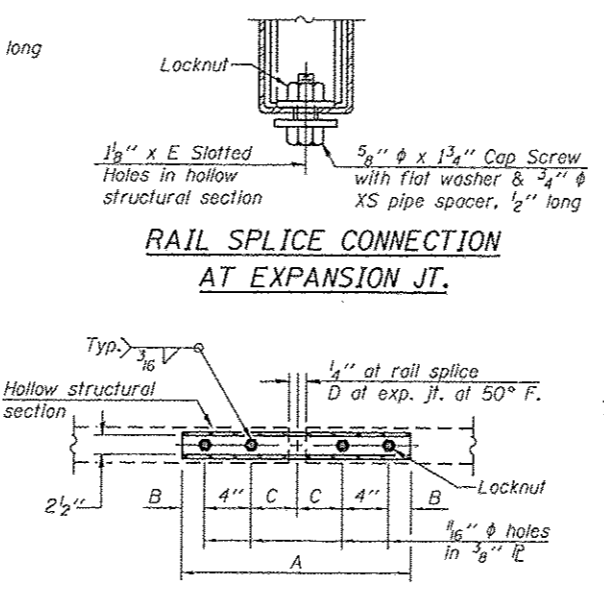
T = Total movement of expansion joint as shown on the design plans.



SECTION C-C

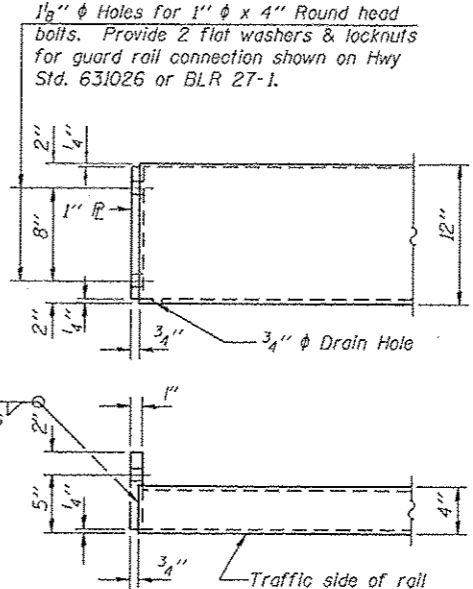


SECTIONS AT RAIL SPLICE

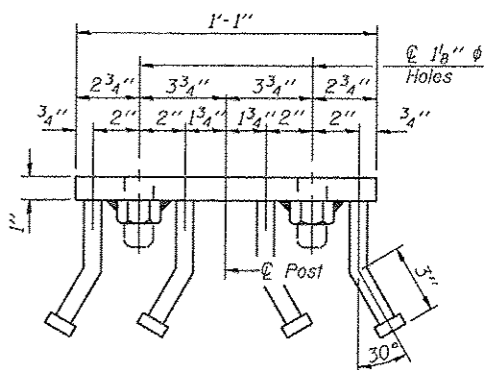


RAIL SPLICE CONNECTION AT EXPANSION JT.

PLAN-BOTT. SPLICE P TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	134

R-23A 1-12-15 (10'-9" Maximum Post Spacing)