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- 2 Summary of Quantities, General Notes, and Typical Sections
- 3 Plan and Profile
- 4 Horizontal Layout
- 5-9 Station Cross Sections
- 10 Stormwater Pollution Prevention & Erosion Control Plan
- 11-16 Bridge Plans

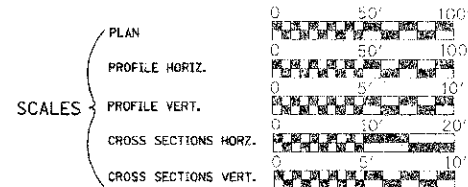
LIST OF STANDARDS

- Standard 000001-06 Standard symbols, abbreviations and patterns
- Standard 280001-06 Temporary erosion control systems
- Standard 515001-03 Name plate for bridges
- Standard 542401-01 Metal End Sections for Pipe Culverts
- Standard 601101-01 Concrete Headwall for Pipe Drain
- Standard 630301-05 Shoulder Widening for Type 1 (Special) Guardrail Terminals
- Standard 635006-03 Reflective and Terminal Marker Placement
- Standard 701011-02 Off-road moving operations, 2-l, 2-w, day only, for speeds > 45 mph
- Standard 701301-04 Lane closure, 2-l, 2-w, short time operations
- Standard 701901-02 Traffic control devices
- Standard BLR-21-9 Typical application of traffic control devices for Construction on Rural Local Highways
- Standard BLR-22-7 Typical application of traffic control devices 2-l, 2-w, rural, Road closed to Thru Traffic
- Standard BLR-27-1 Traffic Barrier Terminal Type 5A

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
**PLANS FOR PROPOSED  
LOCAL AGENCY IMPROVEMENT**

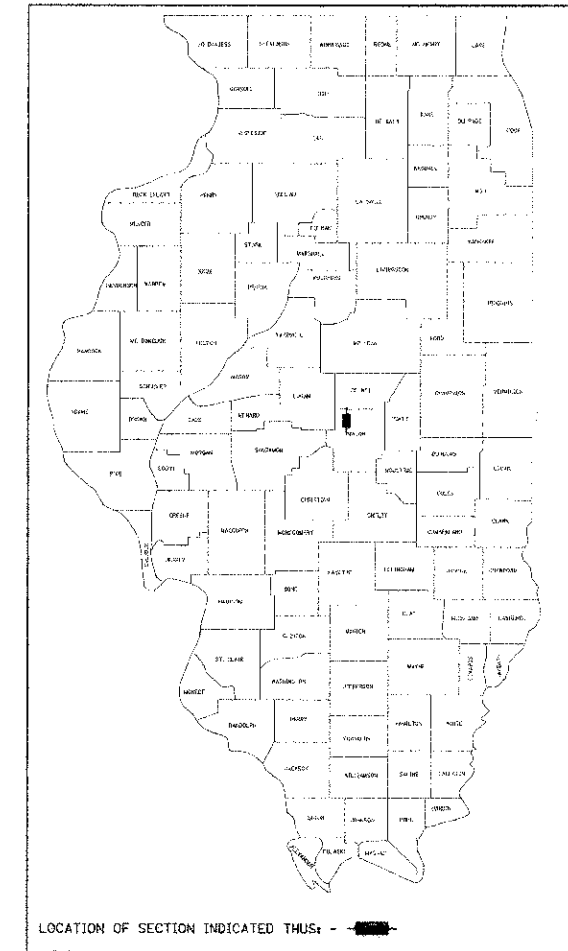
RTE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	15

CONTRACT NO. 95686



**HIGHWAY BRIDGE PROGRAM  
T.R. 56 (GLASGOW ROAD) OVER  
UNNAMED DRAINAGE DITCH  
SECTION 05-07161-00-BR  
MACON COUNTY  
PROJECT BROS-0115(068)**

C97-036-12



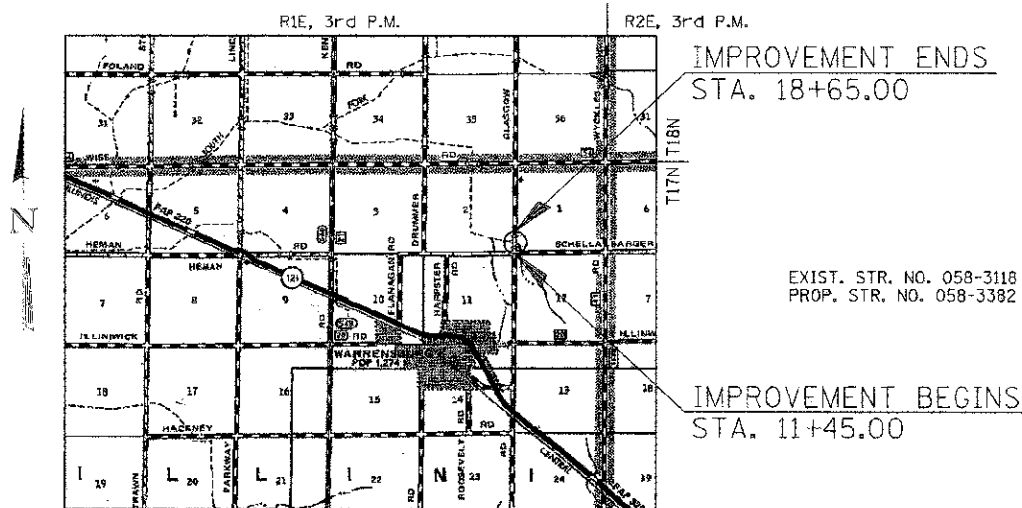
ROADWAY CLASSIFICATION: LOCAL ROAD, (NON-URBAN)  
2032 ADT = 150  
DESIGN SPEED: 30 MPH  
DESIGN GUIDELINES: RURAL  
VARIANCES GRANTED: NONE  
COMMITMENTS: NONE

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS  
J.U.L.I.E. Telephone No. Toll Free 1-800-892-0123

CONTRACT NO. : 95686



345 EAST ASH AVENUE, SUITE B  
DECATUR, ILLINOIS 62526  
PH. 217-875-4800



IMPROVEMENT CONSISTS OF THE REMOVAL OF A SINGLE SPAN CONCRETE SLAB BRIDGE ON CLOSED CONCRETE ABUTMENTS WITH CONCRETE WINGWALLS, 0-0 DECK = 26'-3". BK.-BK. ABUTMENTS = 27'-0" AND THE CONSTRUCTION OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON CONCRETE SPILL THRU ABUTMENTS. TOTAL LENGTH = 49'-10 1/8". WIDTH = 24'-0" O.-O. DECK AND NECESSARY APPROACH ROADWAY WORK.

LAYOUT

Approximate Scale:

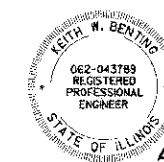
Total and Net Length of Improvement 720.00 Feet = 0.136 Miles

APPROVED: *Mason* 30 2012  
*Paul S.*

PASSED: *M. ...* 4-11 2012

RELEASING FOR BID BASED ON LIMITED REVIEW: *Rogel* 4-11 2012

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



Exp. 11/30/2013

*Keith W. Bentley*  
Illinois Professional No. 43789

4/4/2012  
Date

**SUMMARY OF QUANTITIES**

CONSTRUCTION TYPE CODE 0011

CODE NO.	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	549
20300100	CHANNEL EXCAVATION	CU YD	1589
25000200	SEEDING, CLASS 2	ACRE	1.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	113
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	113
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	113
25100115	MULCH, METHOD 2	ACRE	1.25
28000200	EARTH EXCAVATION FOR EROSION CONTROL	CU YD	9
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	125
28000315	AGGREGATE DITCH CHECKS	TON	6
28000400	PERIMETER EROSION BARRIER	FOOT	480
28000500	INLET AND PIPE PROTECTION	EACH	2
28100107	STONE RIPRAP, CLASS A4	SQ YD	979
28200200	FILTER FABRIC	SQ YD	979
35101400	AGGREGATE BASE COURSE, TYPE B	TON	45
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	686
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	17.0
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1192
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2240
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	100
51200956	FURNISHING METAL SHELL PILES 12" X 0.179"	FOOT	376
51202305	DRIVING PILES	FOOT	376
51203200	TEST PILE METAL SHELLS	EACH	2
51500100	NAME PLATES	EACH	1
54215550	METAL END SECTIONS 15"	EACH	4
54200220	PIPE CHAMBERS, CLASS D, TYPE 1 15"	FOOT	76
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	26.1
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	2
60100945	PIPE DRAINS 12"	FOOT	44
61133100	FIELD TILE JUNCTION VAULTS, 2' DIA.	EACH	2
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
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

Δ SPECIALTY ITEMS

**GENERAL NOTES**

THE AREA TO BE SEEDING SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT-OF-WAY AS DIRECTED BY THE ENGINEER.

EXCAVATION AND BEDDING FOR RIPRAP WILL NOT BE PAID FOR AS SEPARATE ITEMS BUT SHALL BE CONSIDERED AS INCLUDED IN THE COST OF STONE RIPRAP, CLASS A4.

LAYOUT OF EROSION CONTROL ITEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

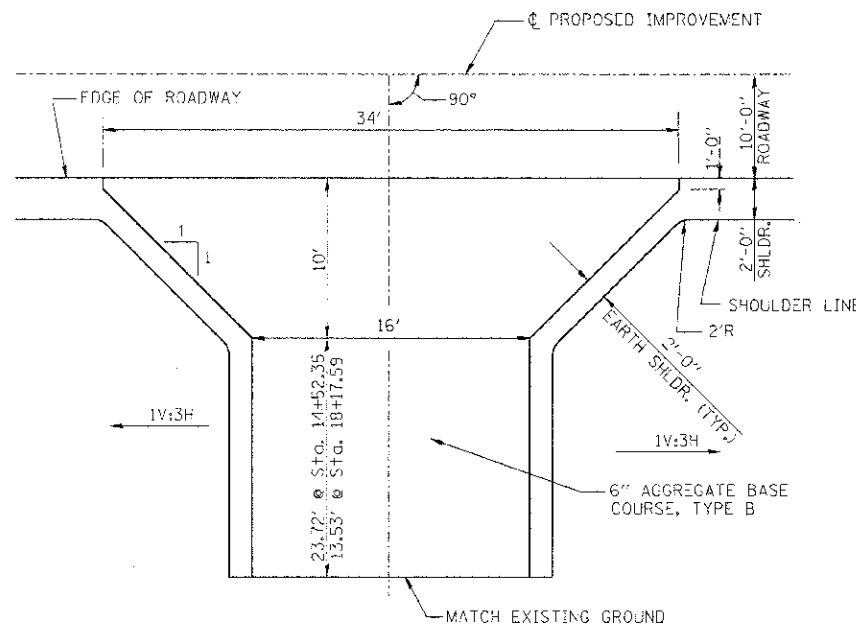
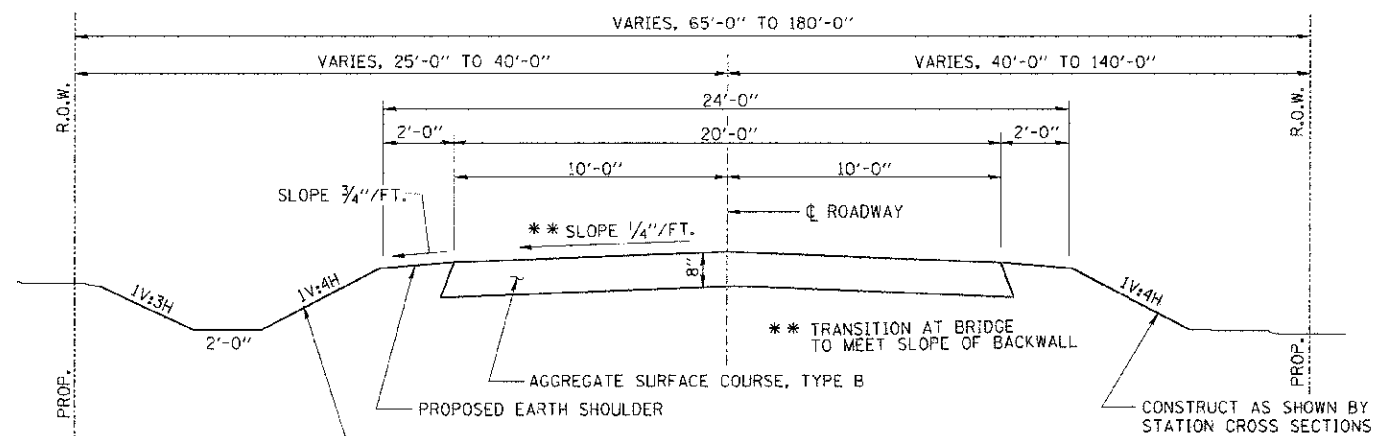
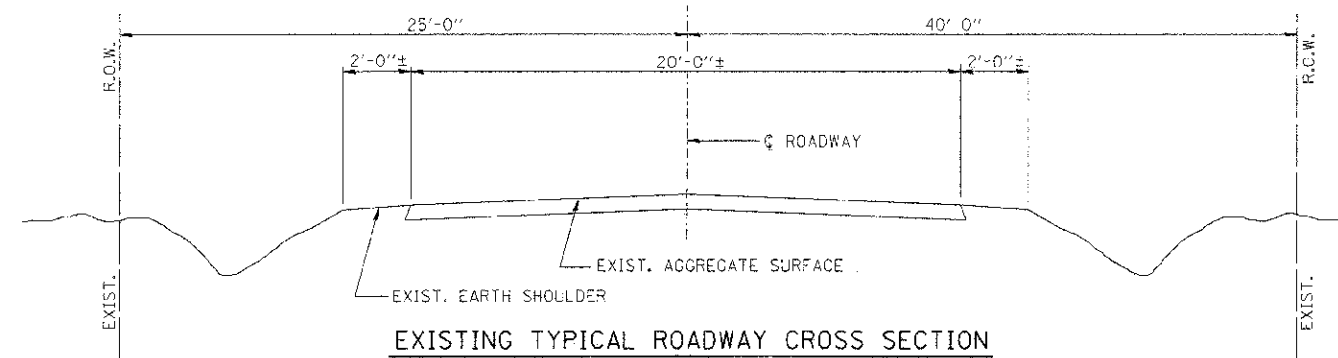
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITY FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR THEIR MARKING OF THE EXACT LOCATION.

**APPLICATION RATES**

ITEM	AMOUNT	UNIT
GRANULAR MATERIALS	2.05	TONS/CL. YD.
NITROGEN FERTILIZER NUTRIENT	90	LBS./ACRE
PHOSPHORUS FERTILIZER NUTRIENT	90	LBS./ACRE
POTASSIUM FERTILIZER NUTRIENT	90	LBS./ACRE
MULCH METHOD 2	2	TONS/ACRE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	2
FED. ROAD DIST. NO.		ILLINOIS PROJECT: BR05-01151068		

CONTRACT NO. 95686



**GENERAL DATA**

Date	Designed MJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH SECTION 05-07161-00-BR MACON COUNTY STA. 15+05.80 PROP. STR. NO. 058-3382
Revisions	Drawn BKN	
	Checked KWB	
	Approved KWB	
Prepared by: <b>URS</b> 345 East Ash Avenue Decatur, IL 62526		URS Job No. 36431683

**BENCHMARK:**

R.R. SPIKE IN POWER POLE  
 STA. 21+21.10, 34.4' RT.  
 ELEV. 652.41

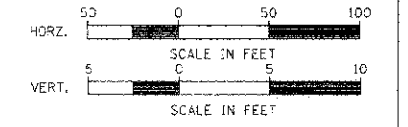
**EXISTING STRUCTURE NO. 058-3118**

SINGLE SPAN CONCRETE SLAB BRIDGE ON CLOSED CONCRETE ABUTMENTS WITH CONCRETE WINGWALLS AND CONCRETE SAFETY RAILING ±26'-0" BK.-BK. ABUTMENTS ±26'-3" C.-C. DECK

STA. 15+05.80 SPECIAL BRIDGE DESIGN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE, SINGLE SPAN AT 48'-6" 51'-4" BK.-BK. ABUTMENTS, 24'-0" F.-F. RAILING, NO SKEW.

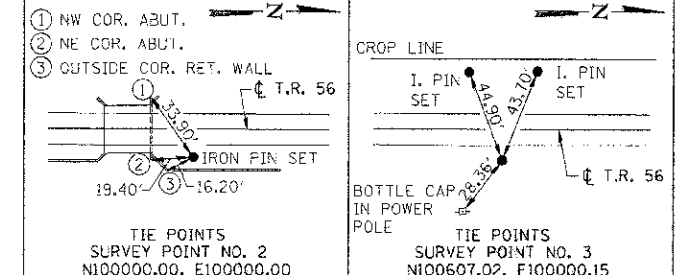
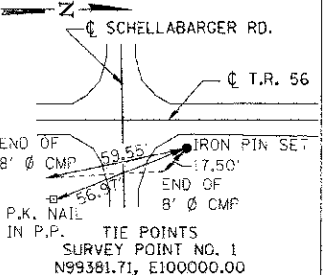
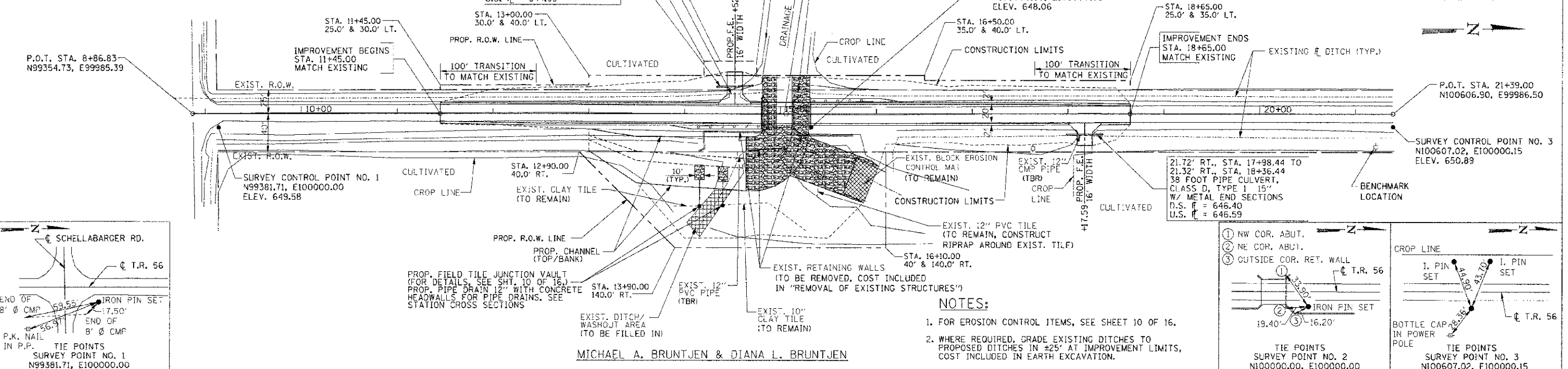
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07161-00-3R	MACON	16	3
STA. 8+86.53 TO STA. 21+39.00				
FED. ROAD DIST. NO. ILLINOIS PROJECT: BR05-01151668				

CONTRACT NO. 95686



WILLIAM E. PENHALLEGON, BARBARA L. MCKAY, AND G. PATTON PENHALLEGON

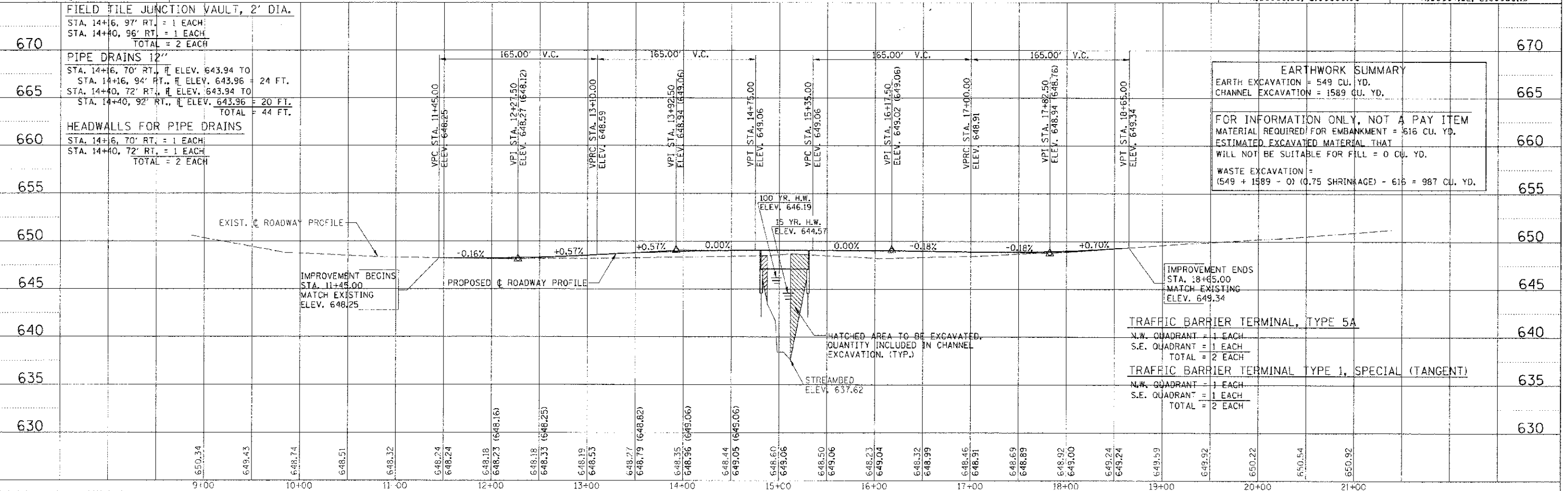
DATE	BY	REVISION



**NOTES:**

- FOR EROSION CONTROL ITEMS, SEE SHEET 10 OF 16.
- WHERE REQUIRED, GRADE EXISTING DITCHES TO PROPOSED DITCHES IN ±25' AT IMPROVEMENT LIMITS, COST INCLUDED IN EARTH EXCAVATION.

MICHAEL A. BRUNTJEN & DIANA L. BRUNTJEN

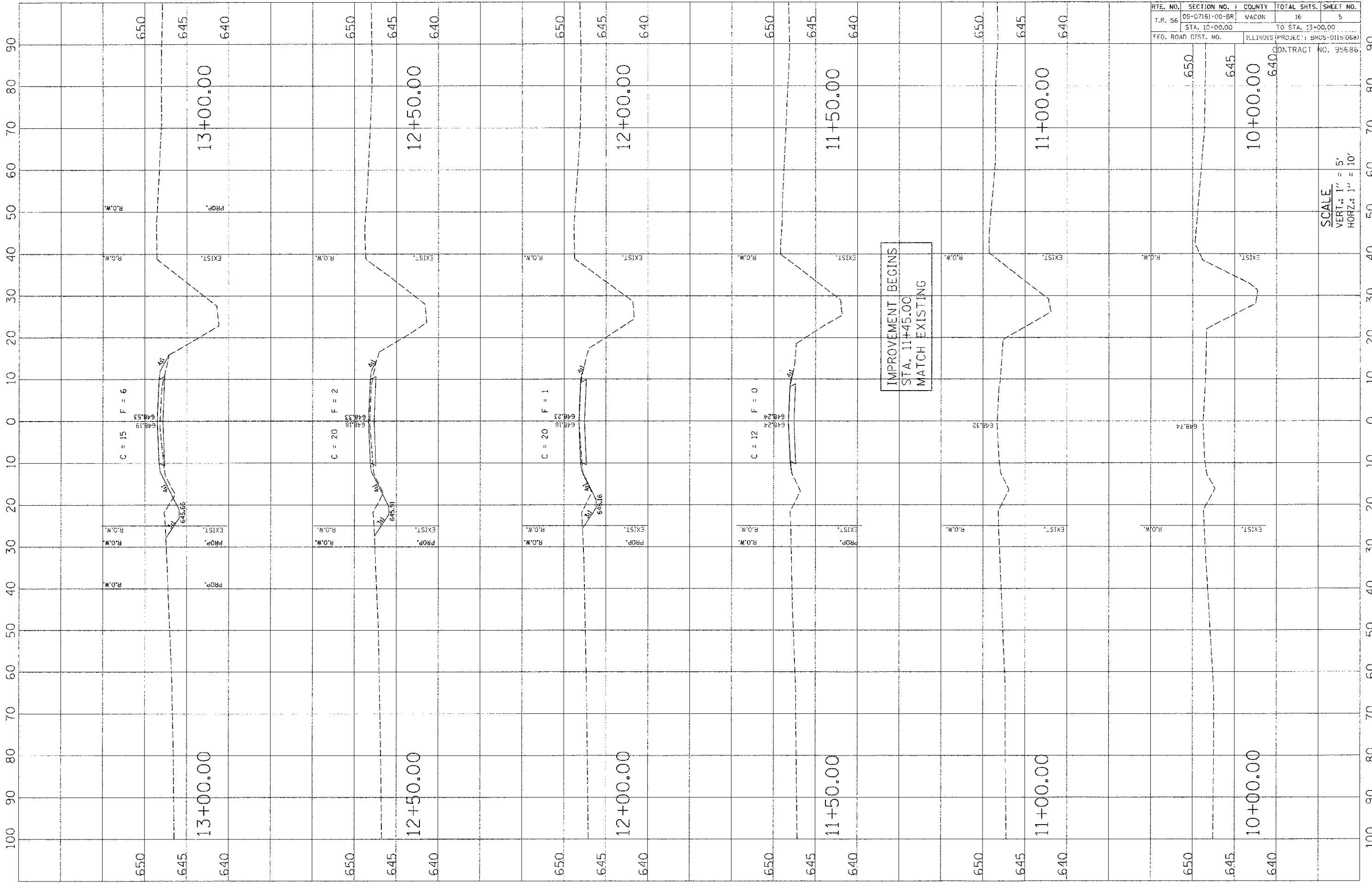


EARTHWORK SUMMARY	
EARTH EXCAVATION =	549 CU. YD.
CHANNEL EXCAVATION =	1589 CU. YD.
FOR INFORMATION ONLY, NOT A PAY ITEM	
MATERIAL REQUIRED FOR EMBANKMENT =	616 CU. YD.
ESTIMATED EXCAVATED MATERIAL THAT WILL NOT BE SUITABLE FOR FILL = 0 CU. YD.	
WASTE EXCAVATION =	(549 + 1589 - 0) (0.75 SHRINKAGE) - 616 = 987 CU. YD.

DATE	BY	REVISION

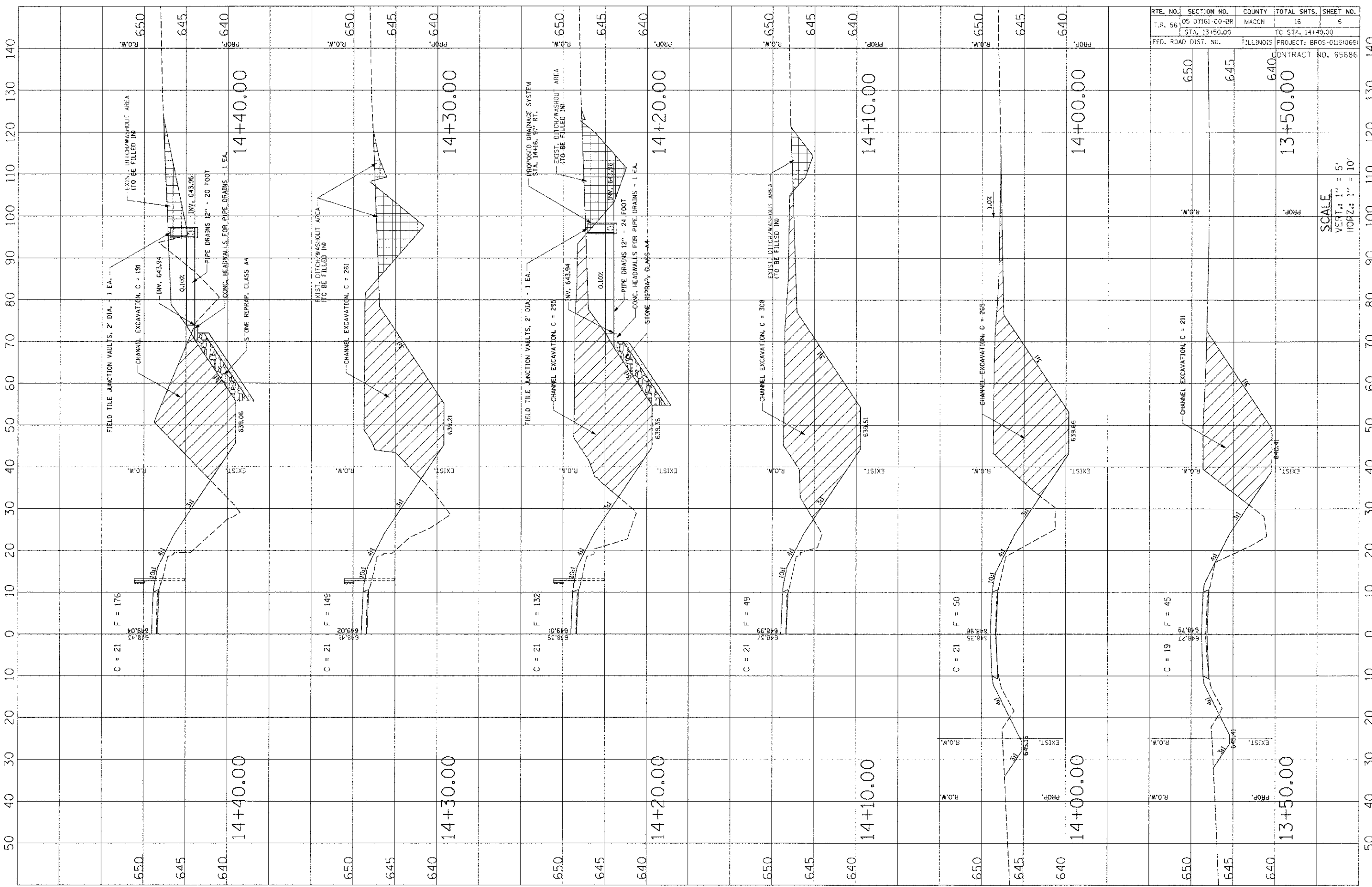
670	FIELD TILE JUNCTION VAULT, 2' DIA. STA. 14+16.97 RT. = 1 EACH STA. 14+40.96 RT. = 1 EACH TOTAL = 2 EACH	670
665	PIPE DRAINS 12" STA. 14+16.70' RT., ELEV. 643.94 TO STA. 14+16.94' RT., ELEV. 643.96 = 24 FT. STA. 14+40.72' RT., ELEV. 643.94 TO STA. 14+40.92' RT., ELEV. 643.96 = 20 FT. TOTAL = 44 FT.	665
660	HEADWALLS FOR PIPE DRAINS STA. 14+16.70' RT. = 1 EACH STA. 14+40.72' RT. = 1 EACH TOTAL = 2 EACH	660
655		655
650		650
645	IMPROVEMENT BEGINS STA. 11+45.00 MATCH EXISTING ELEV. 648.25	645
640		640
635		635
630		630





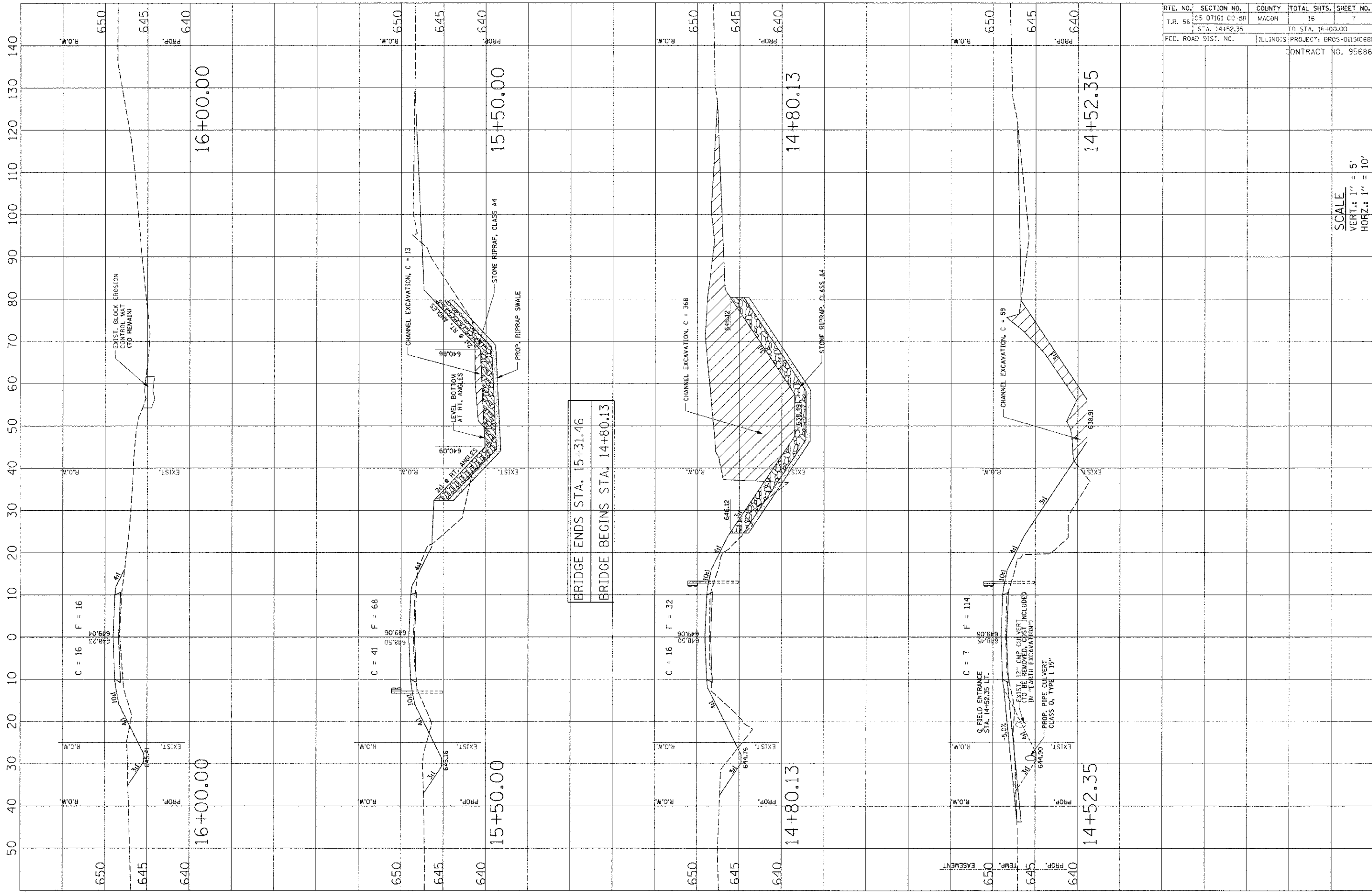
RTE. NO.	SECTION NO.	COUNTY	TOTAL SHTS.	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	5
STA. 10+00.00		TO STA. 13+00.00		
FED. ROAD DIST. NO.		ILLINOIS (PROJECT): BR05-0110(068)		
		CONTRACT NO. 95686		

SCALE  
 VERT.: 1" = 5'  
 HORIZ.: 1" = 10'



RTE. NO.	SECTION NO.	COUNTY	TOTAL SHTS.	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	6
	STA. 13+50.00		TO STA. 14+40.00	
FED. ROAD DIST. NO.	PROJECT:	BROS-01518068		
		CONTRACT NO. 95686		

SCALE:  
 VERT.: 1" = 5'  
 HORZ.: 1" = 10'



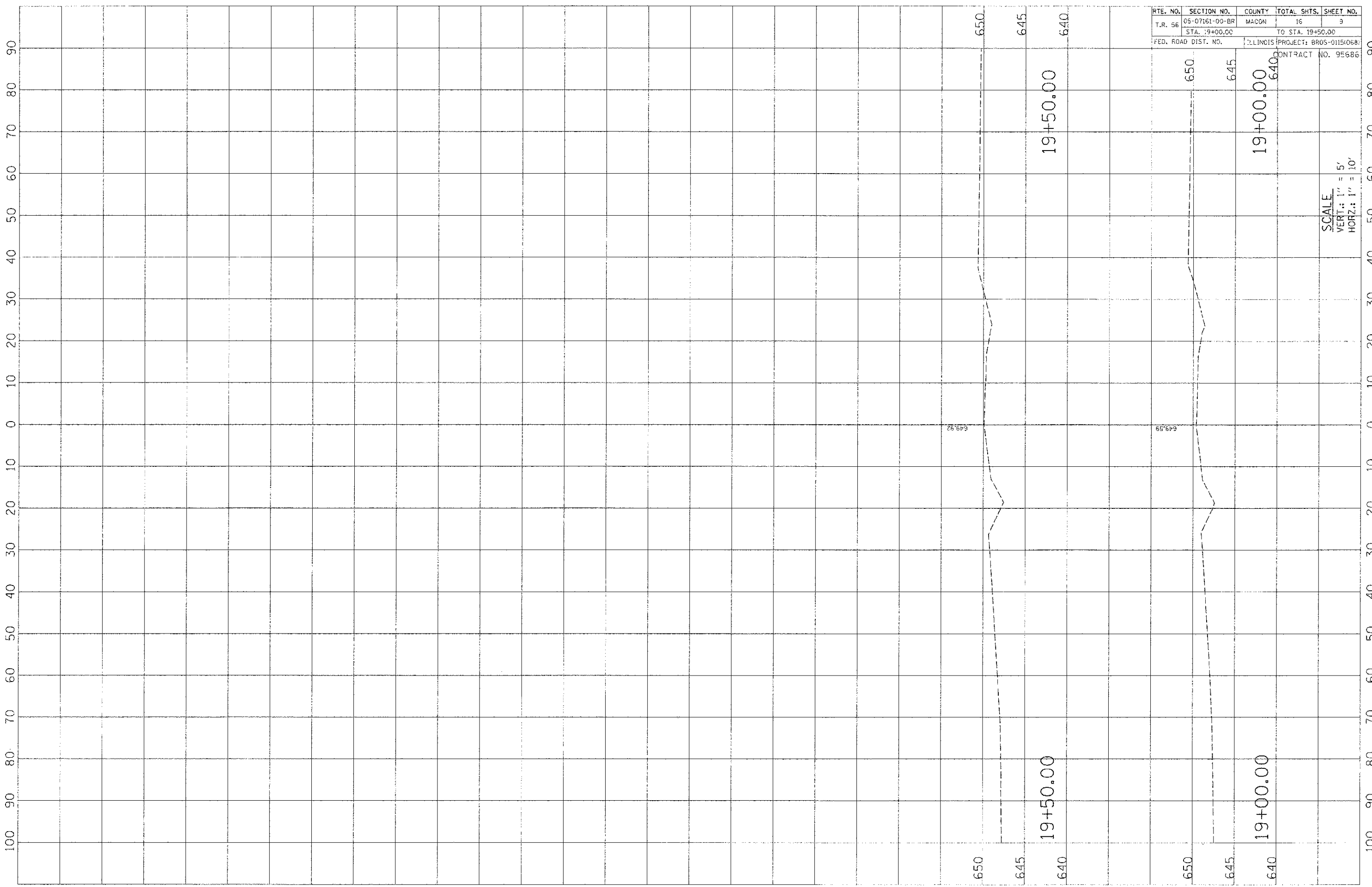
RTE. NO.	SECTION NO.	COUNTY	TOTAL SHTS.	SHEET NO.
T.R. 56	05-07161-CC-BR	MACON	16	7
FED. ROAD DIST. NO.		TITLE NO. S	PROJECT: BR05-01150088	CONTRACT NO. 95686

BRIDGE ENDS STA. 15+31.46  
 BRIDGE BEGINS STA. 14+80.13

SCALE  
 VERT.: 1" = 5'  
 HORZ.: 1" = 10'





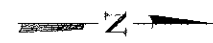
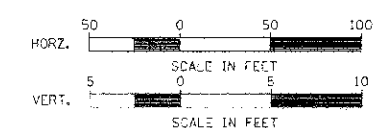


RTE. NO.	SECTION NO.	COUNTY	TOTAL SHTS.	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	9
	STA. 19+00.00		TO STA. 19+50.00	
FED. ROAD DIST. NO.		ILLINOIS	PROJECT: BR05-01151068	
			CONTRACT NO. 95686	

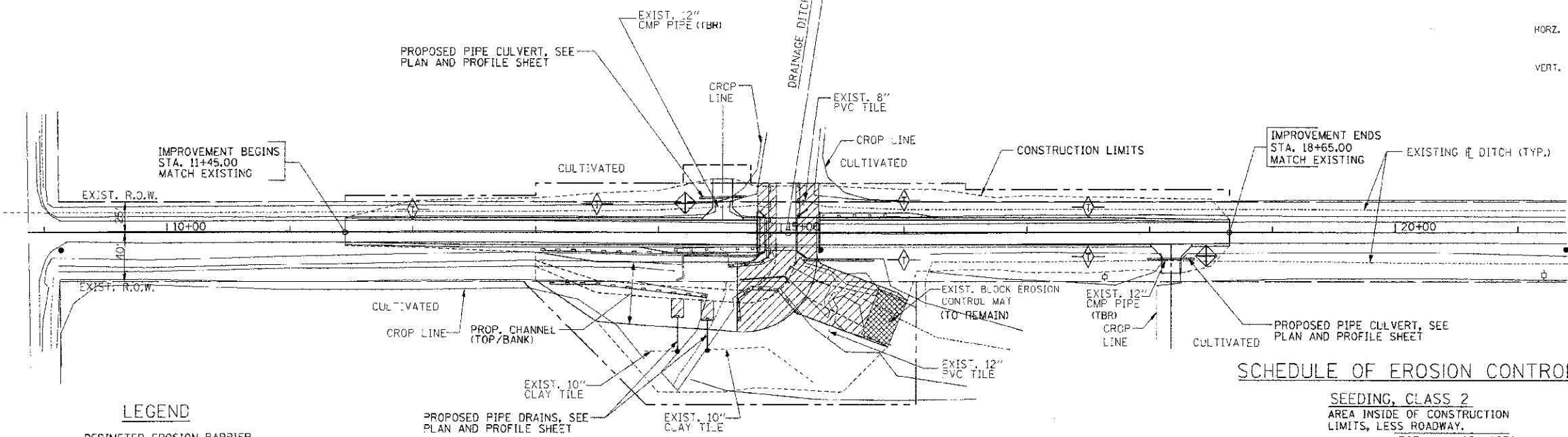
SCALE  
 VERT: 1" = 5'  
 HORIZ: 1" = 10'

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I.R. 55	05-07161-00-BR	MACCN	16	10
STA. 8+86.83 TO STA. 21+39.00				
FED. ROAD DIST. NO.	ILLINOIS PROJECT	BROS-OHSOBR		

CONTRACT NO. 95686



STA. 15+05.80 SPECIAL BRIDGE DESIGN  
 PRECAST PRESTRESSED CONCRETE DECK  
 BEAM BRIDGE, SINGLE SPAN AT 48'-6"  
 51'-4" BK.-BK. ABUTMENTS, 24'-0" F.-F.  
 RAILING, NO SKEW.



### STORM WATER POLLUTION PREVENTION PLAN

#### DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES:

1. REMOVAL OF EXISTING STRUCTURE.
2. EXCAVATION WILL BE COMPLETED ALONG THE ENTIRE LENGTH OF THE JOB TO REMOVE THE EXISTING ROADWAY AND GRADE THE PROPOSED DITCHES.
3. NECESSARY EMBANKMENT WILL BE PLACED ALONG THE ENTIRE LENGTH OF THE JOB FOR THE PROPOSED ROADWAY.
4. PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL ITEMS, SUCH AS PERIMETER EROSION BARRIER, AGGREGATE DITCH CHECKS, TEMPORARY SEEDING AND OTHER MISCELLANEOUS EROSION CONTROL MEASURES.
5. CONSTRUCT NEW BRIDGE SUBSTRUCTURE UNITS.
6. PLACEMENT OF PERMANENT EROSION CONTROL ITEMS, INCLUDING RIPRAP AND SEEDING.
7. CONSTRUCT NEW BRIDGE SUPERSTRUCTURE AND APPROACH ROADWAY.
8. FINAL GRADING AND OTHER MISCELLANEOUS ITEMS.

#### SCHEDULE OF EROSION CONTROL QUANTITIES

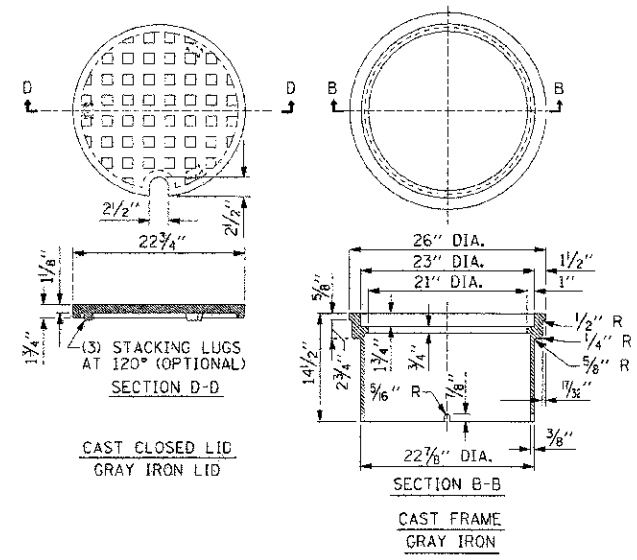
- SEEDING, CLASS 2**  
 AREA INSIDE OF CONSTRUCTION LIMITS, LESS ROADWAY.  
 TOTAL = 1.25 ACRES
- NITROGEN FERTILIZER NUTRIENT**  
 TOTAL = 113 POUNDS
- PHOSPHORUS FERTILIZER NUTRIENT**  
 TOTAL = 113 POUNDS
- POTASSIUM FERTILIZER NUTRIENT**  
 TOTAL = 113 POUNDS
- MULCH, METHOD 2**  
 TOTAL = 1.25 ACRES
- EARTH EXCAVATION FOR EROSION CONTROL**  
 TOTAL = 9.0 CU. YD.
- TEMPORARY EROSION CONTROL SEEDING**  
 100 LBS/ACRE X 1.25 ACRES = 125 POUNDS
- AGGREGATE DITCH CHECK (SEE NOTE, THIS SHEET)**  
 STA. 12+00, LT. = 1 TON  
 STA. 13+50, LT. = 1 TON  
 STA. 16+00, LT. & RT. = 2 TON  
 STA. 17+50, LT. & RT. = 2 TON  
 TOTAL = 6 TON
- PERIMETER EROSION BARRIER**  
 TO BE CONSTRUCTED AT LOCATIONS SHOWN ON PLANS. LAYOUT MAY VARY AS DIRECTED BY THE ENGINEER.  
 TOTAL = 480 FOOT
- INLET AND PIPE PROTECTION**  
 27.9' LT., STA. 14+31.50 = 1 EACH  
 21.3' RT., STA. 18+38.40 = 1 EACH  
 TOTAL = 2 EACH
- STONE RIPRAP, CLASS A4**  
 BRIDGE ABUT. SLOPES & DOWNSTREAM = 239 SQ YD  
 UPSTREAM CHANNEL BEND = 413 SQ YD  
 NEAR EXIST. BLOCK EROSION MAT = 293 SQ YD  
 STA. 14+16, 15' X 10', PIPE DRAIN OUTLET = 17 SQ YD  
 STA. 14+40, 15' X 10', PIPE DRAIN OUTLET = 17 SQ YD  
 TOTAL = 979 SQ YD
- FILTER FABRIC (SEE NOTE, THIS SHEET)**  
 TOTAL = 979 SQ YD

#### LEGEND

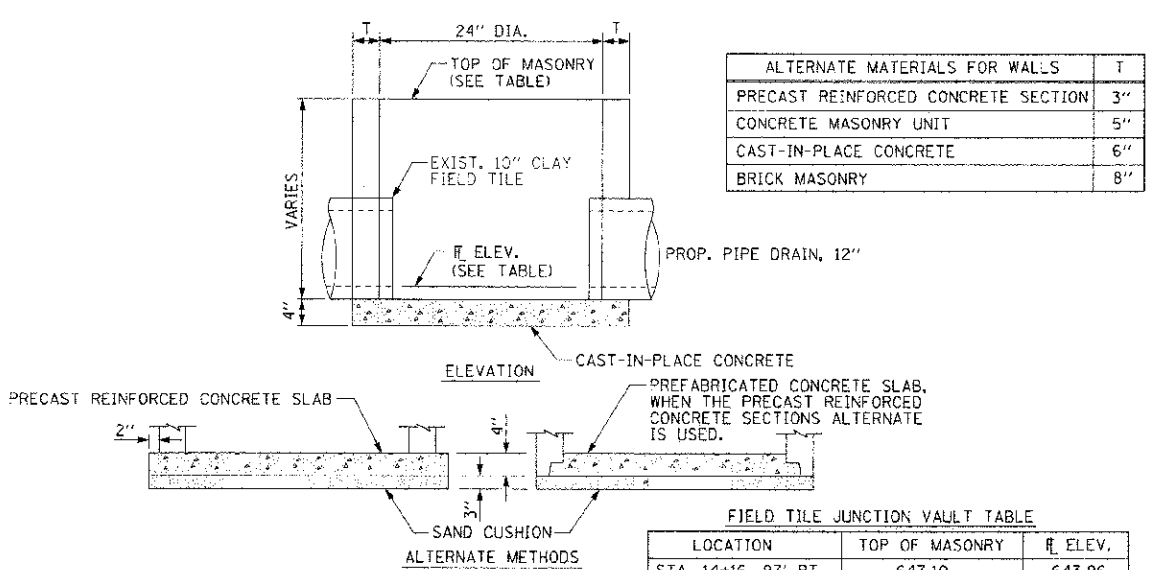
- PERIMETER EROSION BARRIER
- AGGREGATE DITCH CHECK (TYP.) (SEE STD. 280001)
- TEMPORARY PIPE PROTECTION
- LIMITS OF STONE RIPRAP, CLASS A4
- LIMITS OF EXISTING BLOCK EROSION CONTROL MAT

#### NOTE:

FILTER FABRIC REQUIRED FOR AGGREGATE DITCH CHECKS PER STANDARD 280001 SHALL BE INCLUDED IN THE COST OF AGGREGATE DITCH CHECKS.



FIELD TILE JUNCTION VAULT



ALTERNATE MATERIALS FOR WALLS	T
PRECAST REINFORCED CONCRETE SECTION	3"
CONCRETE MASONRY UNIT	5"
CAST-IN-PLACE CONCRETE	6"
BRICK MASONRY	8"

LOCATION	TOP OF MASONRY	R. ELEV.
STA. 14+16, 97' RT.	647.10	643.96
STA. 14+40, 96' RT.	646.85	643.96

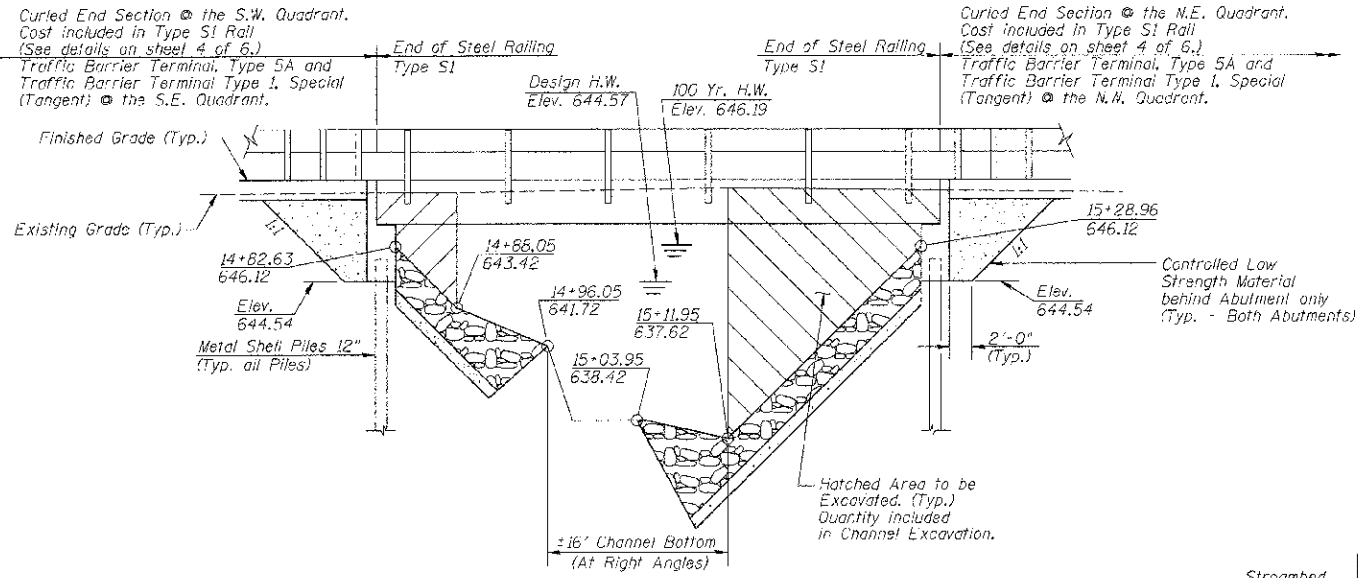
### STORM WATER POLLUTION PREVENTION AND EROSION CONTROL PLAN

**BENCHMARK:**  
RR Spike in Power Pole  
Sta. 21+21.10, 34.4' RT.  
Elevation = 652.41

**EXISTING STRUCTURE**  
(SN 058-3118)

Single Span Concrete Slab Bridge  
on Closed Concrete Abutments with  
Concrete Wingwalls and Concrete  
Safety Railing.  
26'-3" O.D. Deck.  
26' 0" Bk. Abutments.  
No Salvage.

Notes:  
Portions of Exist. S. Abut. Footing may  
require removal for pile placement.  
No plans available for Existing Structure.

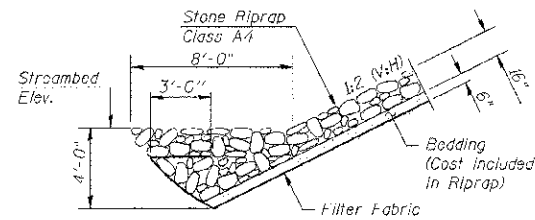


ELEVATION LOOKING DOWNSTREAM

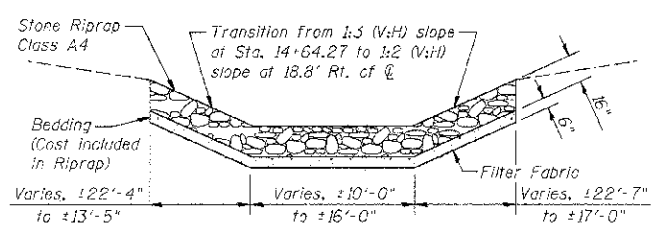
UNNAMED DRAINAGE DITCH  
BUILT 2012, BY MACON COUNTY  
PROJECT NO. BROS-015(068)  
SECTION 05-07161-00-BR  
T.R. 56 STA. 15+05.80  
STR. NO. 058-3382 LOADING HL-93  
ENGLAND BRIDGE

NAME PLATE  
(See Sta. 515001)

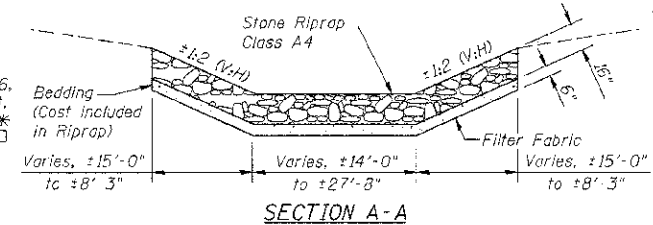
PROFILE T.R. 56



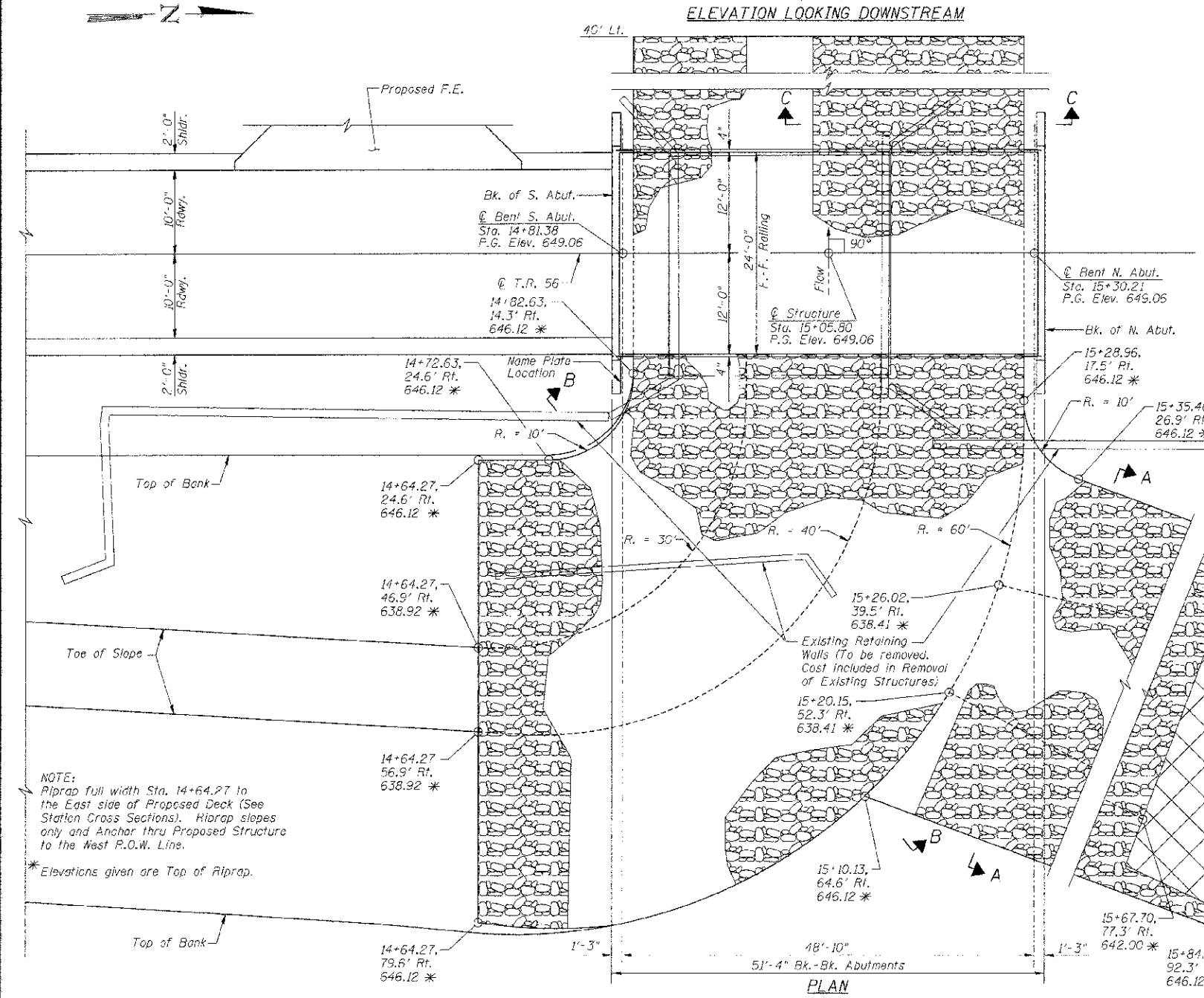
SECTION C-C



SECTION B-B



SECTION A-A



PLAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	11
FED. ROAD DIST. NO.		ILLINOIS PROJECT: BROS-0115(068)	CONTRACT NO. 95686	

**GENERAL NOTES**

Layout of Riprap Slopes may be varied in the field to suit ground conditions as directed by the Engineer.  
See Proposal for Boring Data.  
Reinforcement Bars shall conform to the requirements of ASTM A 706 Gr 60 (See Special Provisions).  
The Contractor shall drive one 12" x 0.179" Metal Shell Test Pile in a permanent location of the North & South Abutments as directed by the Engineer before ordering the remainder of piles.  
Excavation required for abutment construction shall be included in Concrete Structures. No additional compensation will be provided for Structure Excavation.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each			1
P.P.C Deck Beams (21" Depth)	Sq. Ft.	1192		1192
Concrete Structures	Cu. Yd.		17.0	17.0
Reinforcement Bars, Epoxy Coated	Pound		2240	2240
Furnishing Metal Shell Piles 12" x 0.179"	Foot		376	376
Driving Piles	Foot		376	376
Test Pile Metal Shells	Each		2	2
Channel Excavation	Cu. Yd.		1589	1589
Stone Riprap, Class A4	Sq. Yd.		979	979
Filter Fabric	Sq. Yd.		979	979
Name Plates	Each		1	1
Steel Railing, Type S1	Foot	100		100
Controlled Low Strength Material	Cu. Yd.		26.1	26.1

**DESIGN SPECIFICATIONS**  
2010 AASHTO LRFD - 5th Edition

**LOADING HL-93**

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

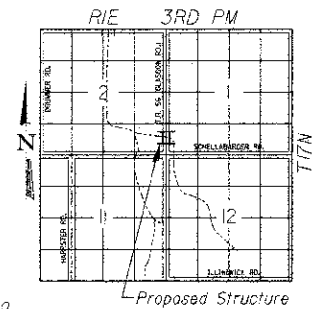
**DESIGN STRESSES**

FIELD UNITS  
f'c = 3,500 p.s.i.  
fy = 60,000 p.s.i.  
n = 9

PPC UNITS  
f'ci = 5,000 p.s.i.  
f'c = 6,000 p.s.i.  
f's = 270,000 p.s.i.  
f'si = 201,960 p.s.i.

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (Sd1) = 0.147 g  
Design Spectral Acceleration at 0.2 sec. (Sd5) = 0.260 g  
Soil Site Class = D



LOCATION SKETCH

**WATERWAY INFORMATION**

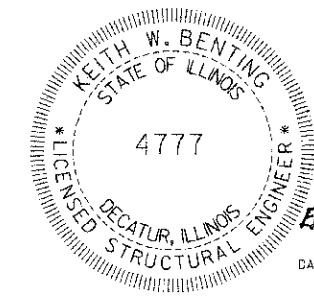
Drainage Area = 1.65 Sq. Mi. Existing Low Grade Elev. 648.18 @ Sta. 12+50.00  
Proposed Low Grade Elev. 648.23 @ Sta. 12+00.00

Flood Yr.	Q C.F.S.	Opening Sq. Ft.	No.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	15	682	112	161	644.57	0.00	644.51
Base	100	1237	148	225	646.19	0.00	646.03
Overtopping							
Max. Calc.	500	1739	174	---	647.14	0.00	647.14

Low Beam Elev. (Prop.) = 647.12

**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut.	E. Abut.
	644.54	644.54



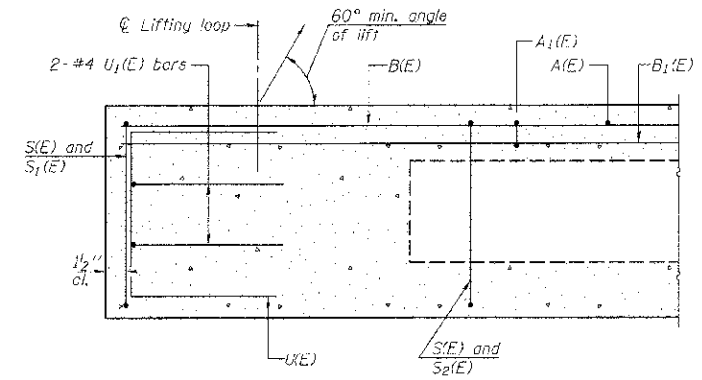
DATE: April 4, 2012  
Keith W. Benting  
ILL. STRUCTURAL NO. 4777

"CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE DESIGN 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."

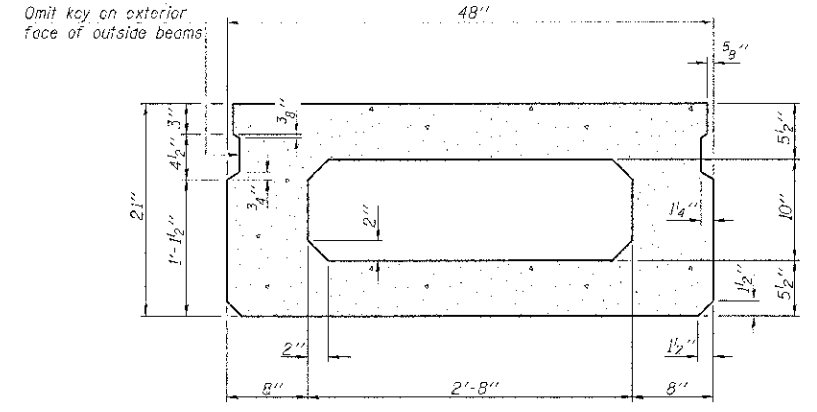
**GENERAL PLAN AND ELEVATION**

Date	Designed VJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH SECTION 05-07161-00-BR MACON COUNTY STA. 15+05.80 PROP. STR. NO. 058-3382	Sheet No.
Revisions	Drawn BKN		1
	Checked KWB		of 6
	Approved KWB		JRS Job No. 36431683
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		

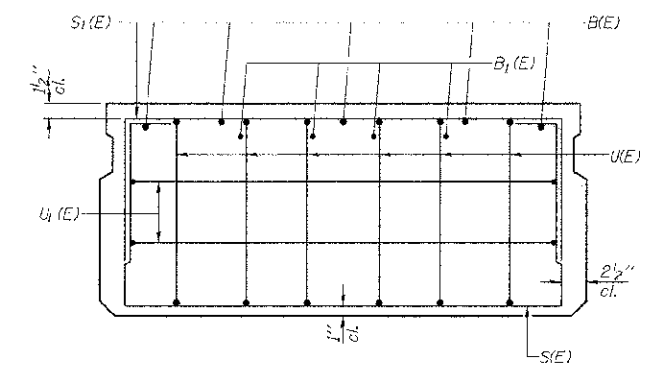
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07/61-00-BR	MACON	16	12
FED. ROAD DIST. NO.		ILLINOIS PROJECT: BROS-0115(068)	CONTRACT NO. 95686	



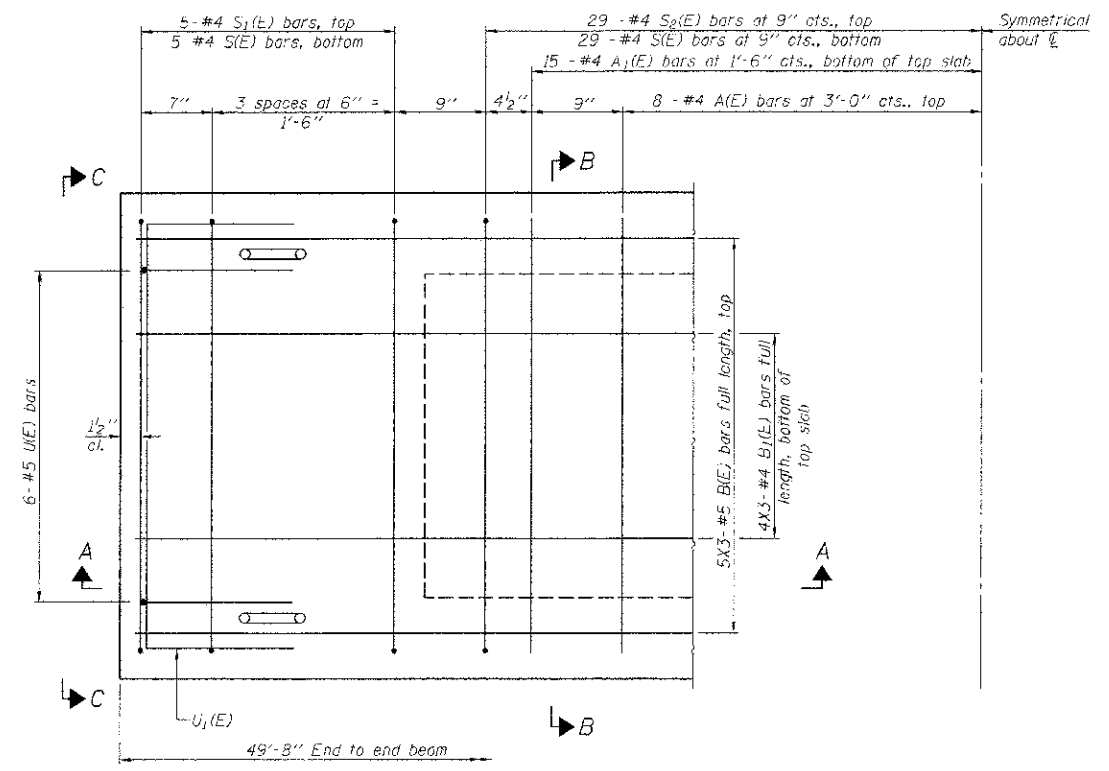
SECTION A-A



SECTION B-B  
(Showing dimensions)

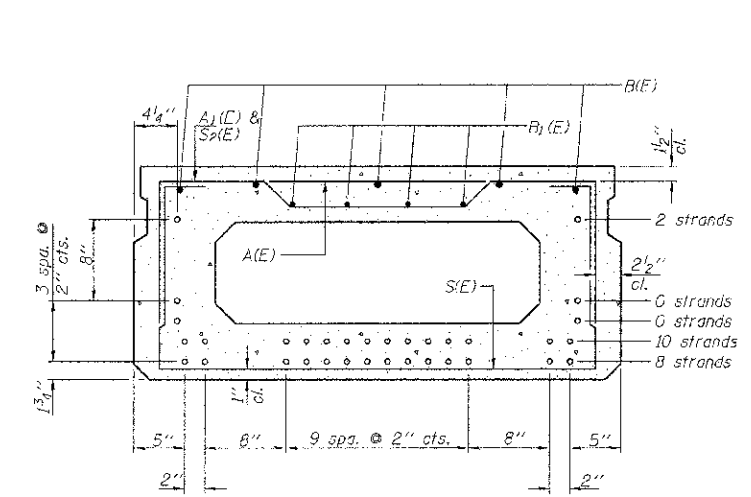


VIEW C-C



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.



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
A1(E)	15	#4	3'-7"	—
A1(E)	30	#4	3'-10"	—
B1(E)	15	#5	18'-2"	—
B1(E)	12	#4	17'-10"	—
S1(E)	69	#4	7'-5"	□
S1(E)	10	#4	5'-11"	□
S2(E)	59	#4	6'-2"	□
U1(E)	12	#5	4'-0"	□
U1(E)	4	#4	6'-0"	□

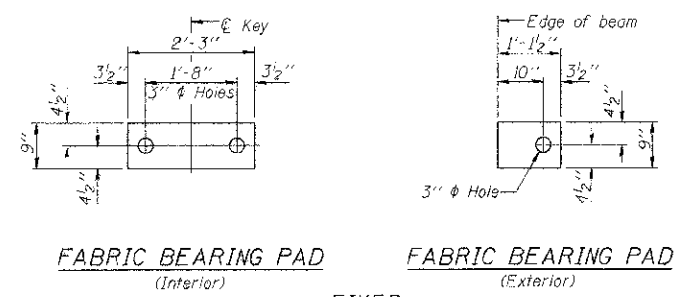
Note: See sheet 3 of 6 for additional details and Bill of Material.  
Bars indicated thus 4x3-#4 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

- #4 bar = 2'-0"
- #5 bar = 2'-6"

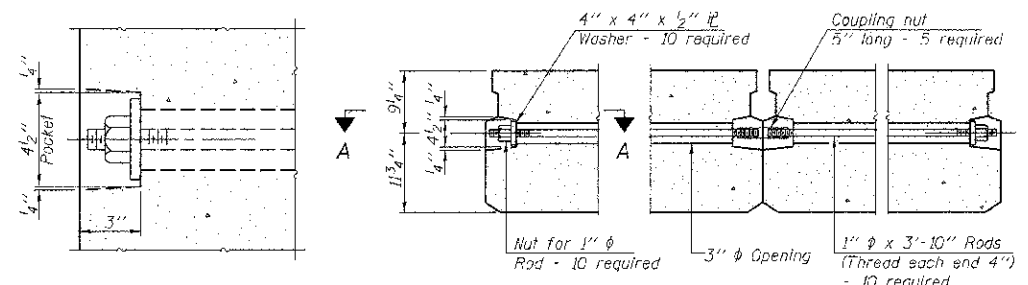
21" X 48" PPC DECK BEAM			
Date	Designed: MJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH SECTION 05-07/61-00-BR MACON COUNTY STA. 15+05.80 PROP. STR. NO. 058-3382	Sheet No.
Revisions	Drawn: BKN		2
	Checked: KW3		of 6
	Approved: KW3		URS Job No. 36431683
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-07161-00-BR	MACON	16	13
FED. ROAD DIST. NO.		ILLINOIS PROJECT: BR05-0115(068)	CONTRACT NO. 95686	

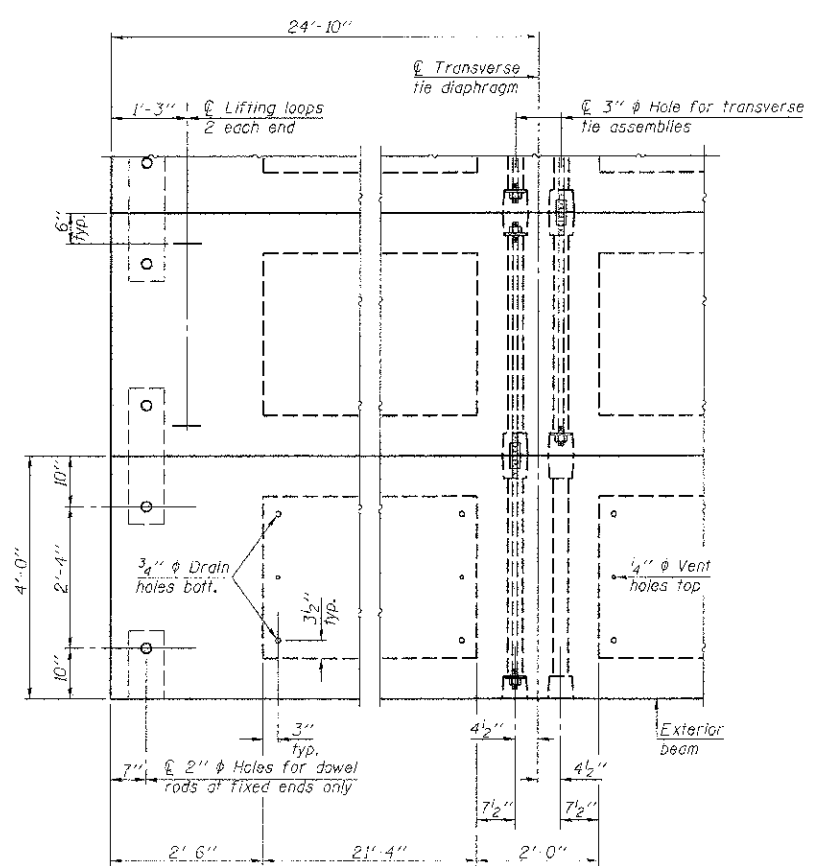


FABRIC BEARING PAD (Interior)      FABRIC BEARING PAD (Exterior)  
FIXED

Notes:  
All bearing pads shall be 1" thick.

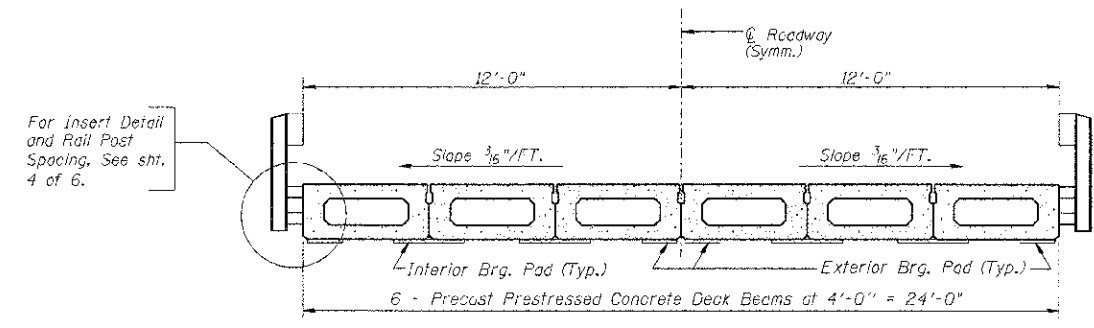


SECTION A-A      TYPICAL TRANSVERSE TIE ASSEMBLY

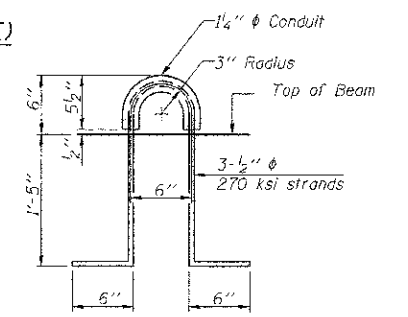
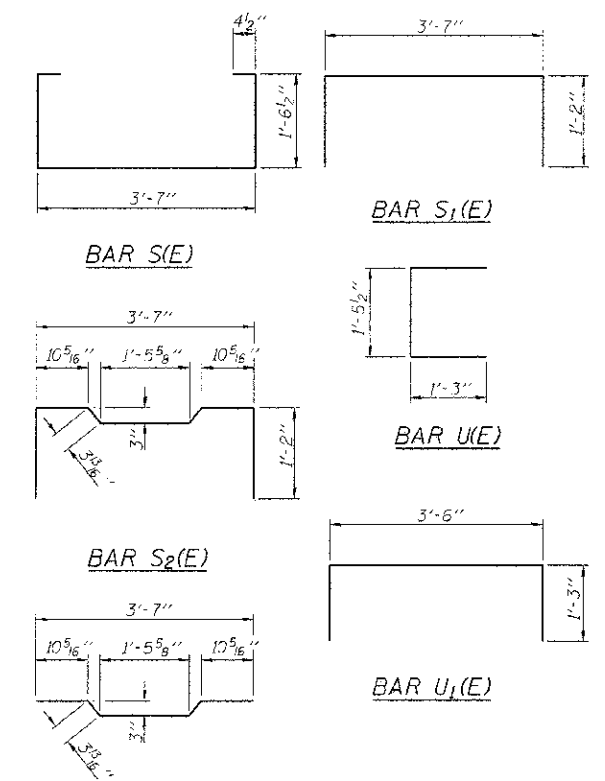


PLAN VIEW

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



CROSS SECTION



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1192
---	---------	------

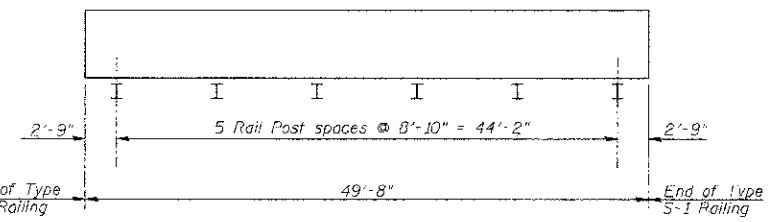
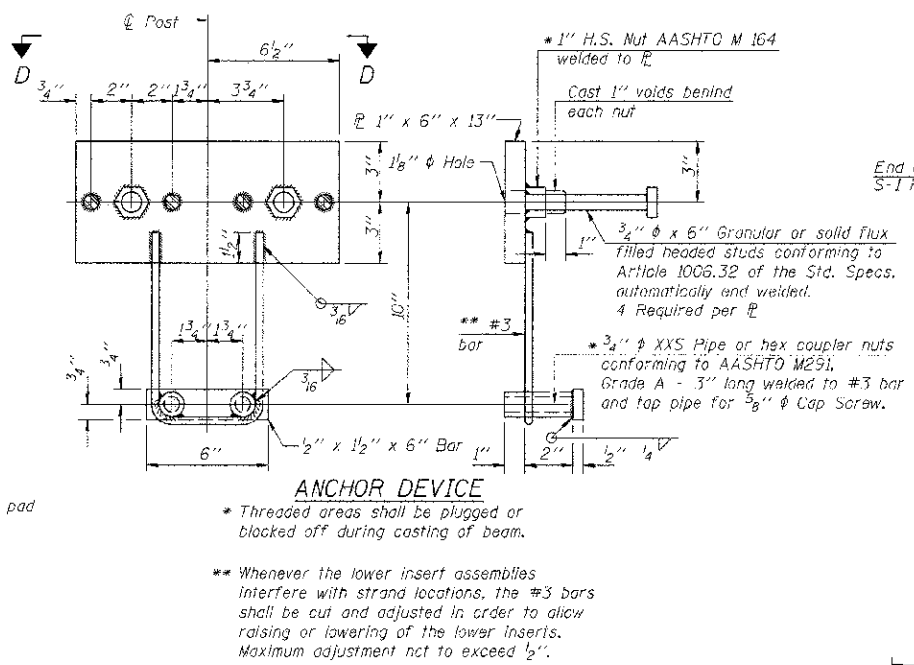
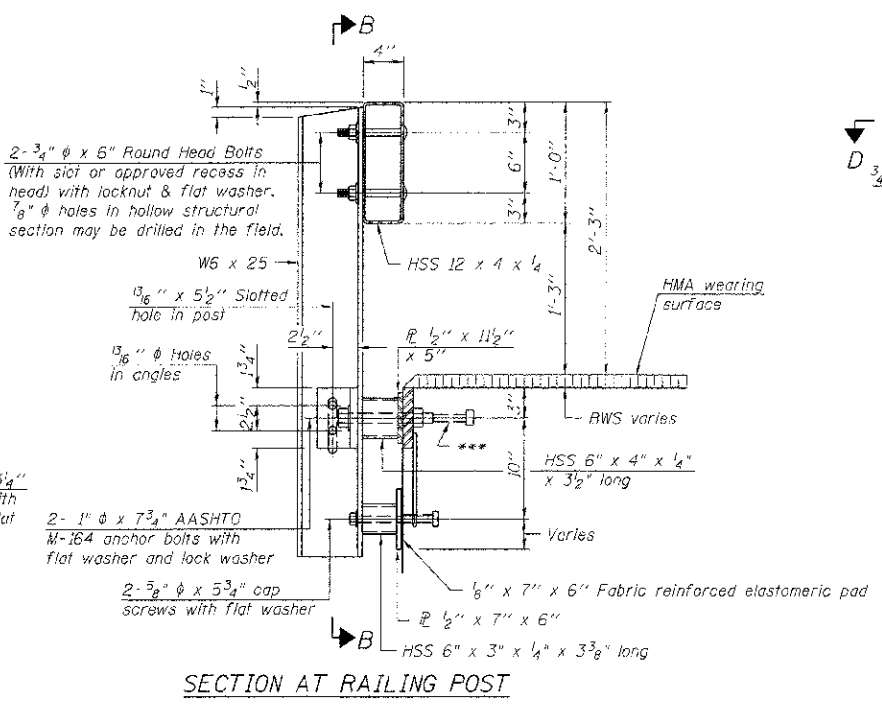
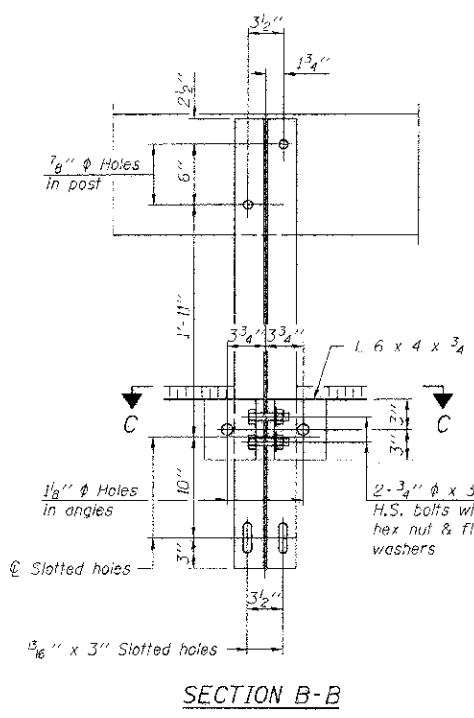
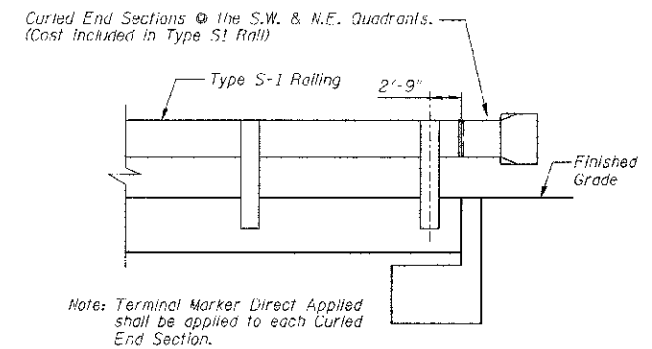
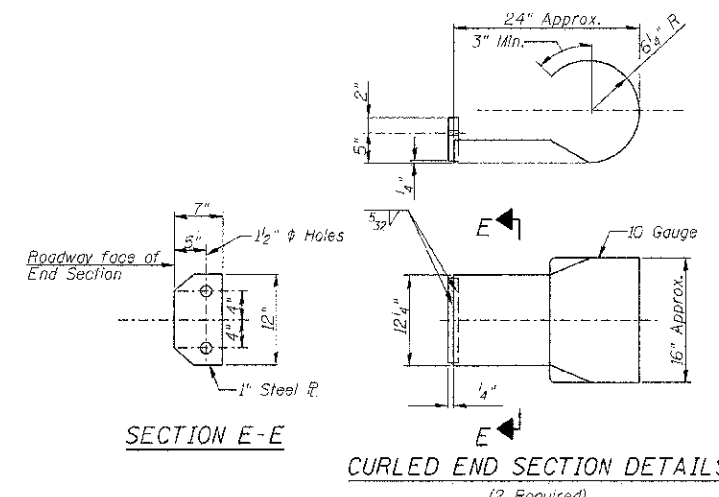
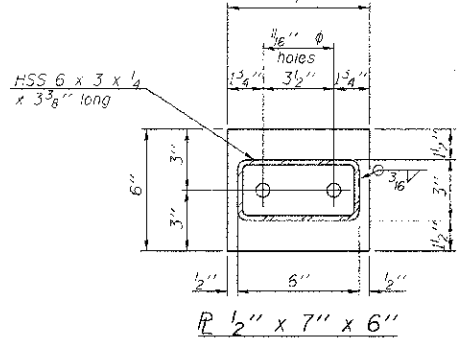
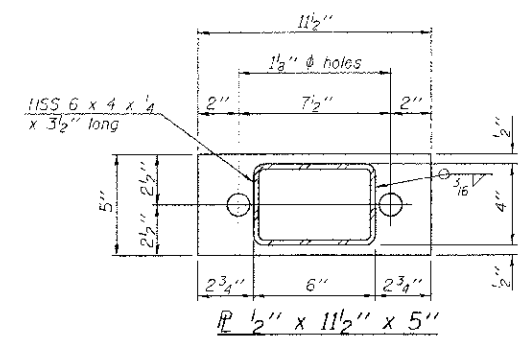
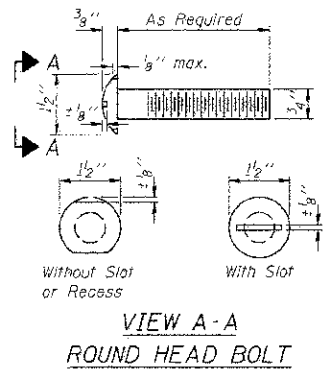
NOTES

- Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- The 1" 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.
- Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
- Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
- A minimum 2 1/2" lifting pin shall be used to engage the lifting loops during handling.
- Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.05 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'cr, shall be 5000 psi.

21" X 48" PPC DECK BEAM DETAILS

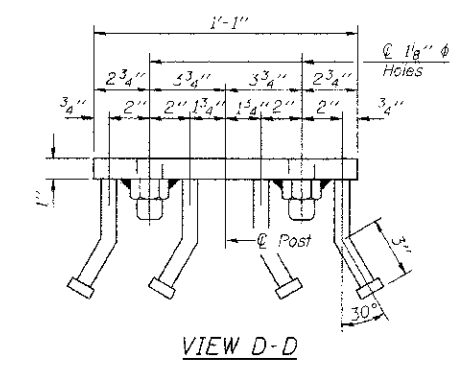
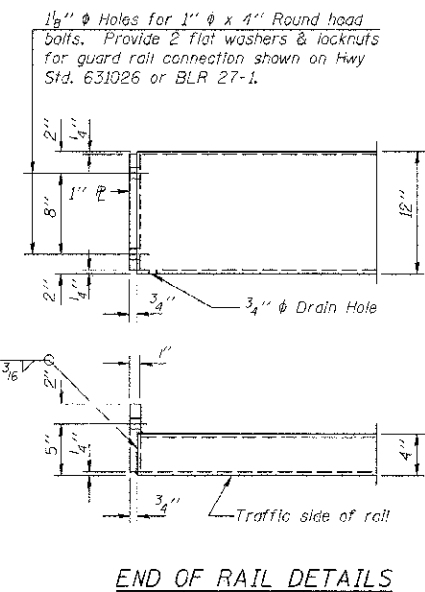
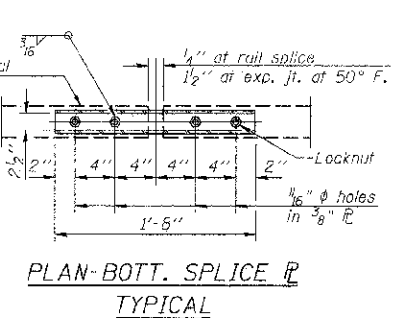
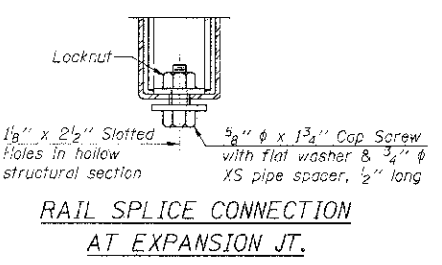
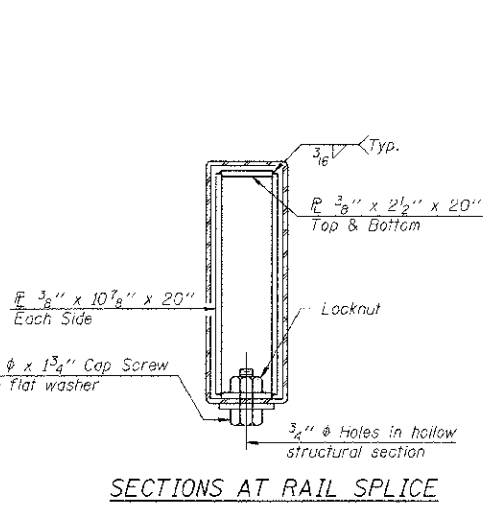
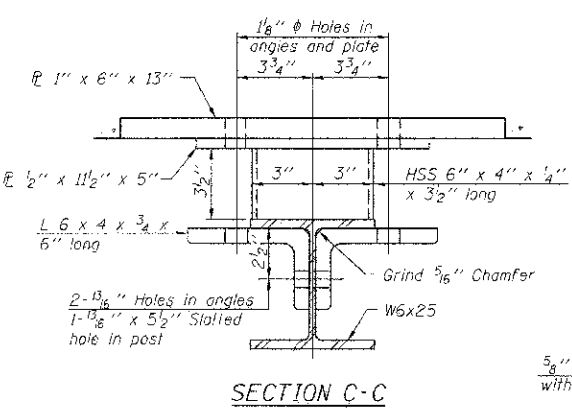
Date	Designed	MJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH	Sheet No.
Revisions	Drawn	BKN	SECTION 05-07161-00-BR	3
	Checked	KWB	MACON COUNTY	
	Approved	KWS	STA. 15+05.80	
Prepared by: URS			345 East Ash Avenue	of 6
			Decatur, IL 62526	URS Job No. 36431683

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 56	05-0761-00-BR	MACON	16	14
FED. ROAD DIST. NO.		ILLINOIS PROJECT: BR05-011506B3	CONTRACT NO. 95686	



PLAN VIEW - EXTERIOR BEAM  
(Showing Rail Post Spacing)

Notes:  
 All field drilled holes shall be coated with an approved zinc rich paint before erection.  
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1'-2 inch galvanized steel shims shall be provided to align rails between adjacent spans. Cost included with Steel Railing, Type S-1.  
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.  
 \*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	100

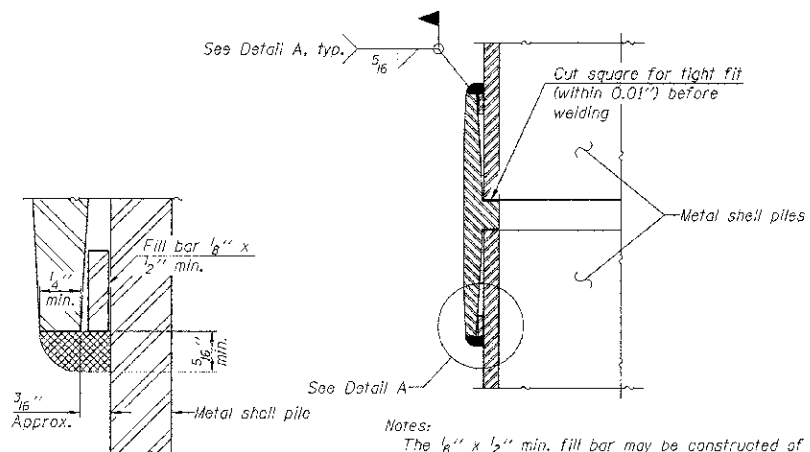
STEEL RAILING, TYPE S-1			
Date	Designed MJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH SECTION 05-0761-00-BR MACON COUNTY STA. 15+05.80 PROP. STR. NO. 058-3382	Sheet No.
Revisions	Drawn BKN		4
	Checked KWB		of 6
	Approved KWB		URS Job No. 36431683
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		





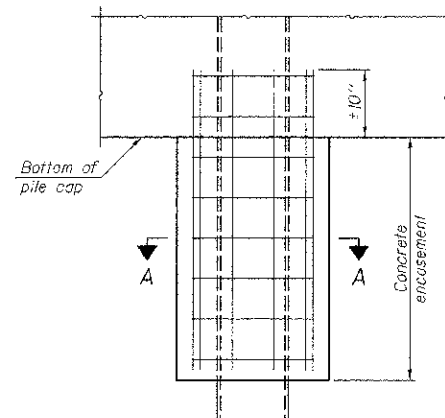
**METAL SHELL PILE TABLE**

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



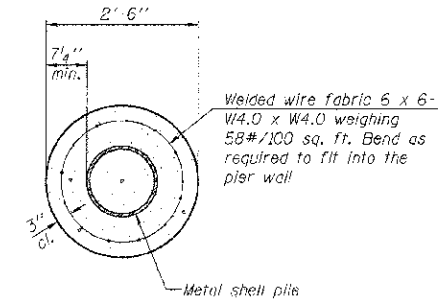
**DETAIL A**

**WELDED COMMERCIAL SPLICE**



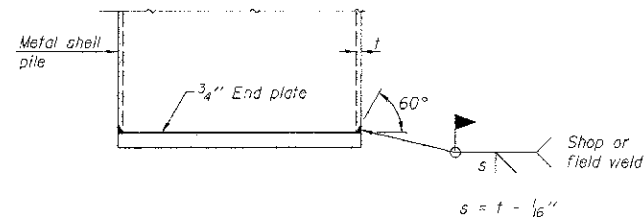
**ELEVATION**

**CONCRETE ENCASEMENT AT PIERS**

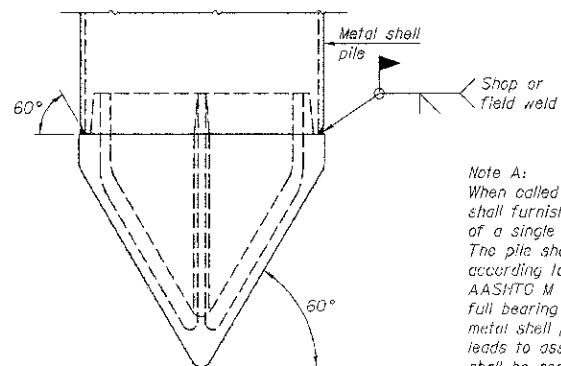


**SECTION A-A**

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



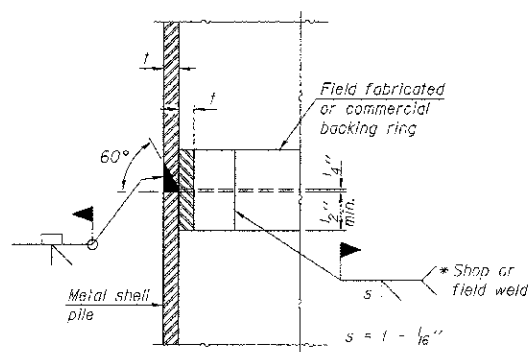
**END PLATE ATTACHMENT**



**METAL SHELL PILE SHOE ATTACHMENT**

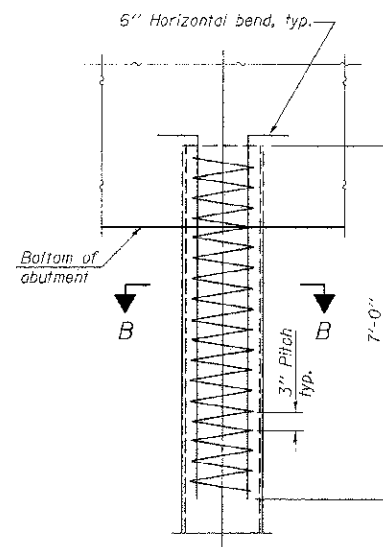
(See Note A)

Note A: When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



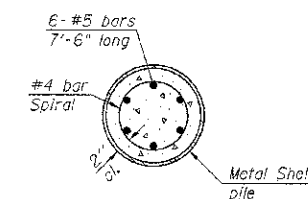
**COMPLETE PENETRATION WELD SPLICE**

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**



**SECTION B-B**

Note: The metal shell piles shall be according to ASTM A 252 Grade 3.

METAL SHELL PILE DETAILS			
Date	Designed MJP	T.R. 56 OVER UNNAMED DRAINAGE DITCH	Sheet No.
Revisions	Drawn BKN	SECTION 05-07161-00-BR	6
	Checked KWB	MACON COUNTY	
	Approved KWB	STA. 15+05.80	of 6
Prepared by:	URS 345 East Ash Avenue Decatur, IL 62526		URS Job No. 36431683