

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	99-24115-00-BR	SHELBY	15	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION PLANS FOR PROPOSED BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

**TOWNSHIP ROAD 352
SECTION 99-24115-00-BR
WINDSOR ROAD DISTRICT
SHELBY COUNTY
PROPOSED STRUCTURE No. 087-3513
PROJECT No. BROS-173 (128)
JOB No. C-95-322-04**

INDEX OF DRAWINGS

- 1 COVER SHEET
- 2 SUMMARY OF QUANTITIES, GENERAL NOTES, TYPICAL SECTIONS, AND ENTRANCE DETAILS
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- 5 PLAN & PROFILE
- 6-11 CROSS SECTIONS
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REQUIRED HIGHWAY STANDARDS

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-02 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-02 NAME PLATE FOR BRIDGES
- 702001-05 TRAFFIC CONTROL DEVICES
- BLR21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

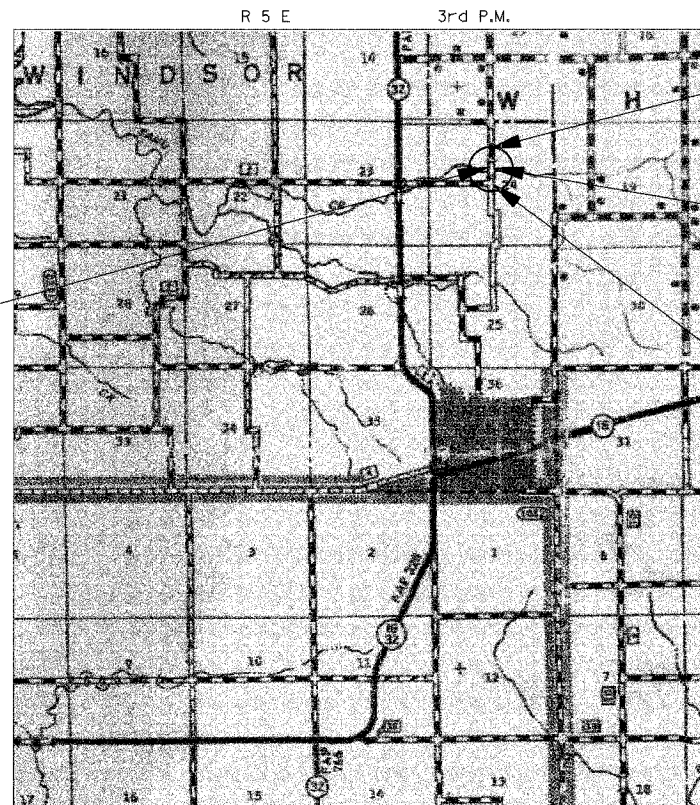
UTILITY COMPANIES

ILLINOIS CONSOLIDATED TELEPHONE CO.
121 SOUTH 17th. STREET
MATTOON, ILLINOIS 61938
1-(217) 235-3311

SHELBY ELECTRIC COOPERATIVE
MR. JIM MATLOCK
P.O. BOX 560
SHELBYVILLE, ILLINOIS 62565
(217) 774-3986



EXISTING STRUCTURE NO. 087-3308
SINGLE SPAN BRIDGE WITH STEEL GIRDERS, CORRUGATED STEEL DECK WITH ASPHALT OVERLAY. CLOSED TIMBER ABUTMENTS AND WINGWALLS. 36'-0" BK TO BK ABUTMENTS 23'-8" OUT TO OUT WIDTH.



PROJECT ENDS
STA. 14+00.00

STA. 10+00.00 SPECIAL BRIDGE DESIGN
SINGLE SPAN 33" P.C.C. DECK BEAM BRIDGE
68'-0" BK. TO BK. ABUTMENTS, 24'-0" CLEAR WIDTH
PILE BENT ABUTMENTS, 10° SKEW RT.
STRUCTURE No. 087-3513

PROJECT BEGINS
STA. 5+75.00

NO COMMITMENTS

The acceptance of this project is based on the minimum design criteria for a Federal-Aid Bridge Replacement and Rehabilitation Improvement.

SCALES

PLAN	1" = 50'	
PROFILE HORIZ.	1" = 50'	
PROFILE VERT.	1" = 5'	
CROSS SECTIONS HORIZ.	1" = 10'	
CROSS SECTIONS VERT.	1" = 5'	

PLANS PREPARED BY:

International Engineering Consultants, Inc.
6420 South Sixth Street Road
Springfield, Illinois 62707
Tel. (217) 529-8027
Tel. (217) 529-4543
Fax (217) 529-4543
e-mail: iespringfield@ie-consultants.com

188 W. Randolph St. Suite 1826
Chicago, Illinois 60601
Tel. (312) 920-9525
Tel. (312) 920-9570
e-Mail: iechicago@ie-consultants.com

LOCATION MAP

0 1 2 MILES

APPROXIMATE SCALE: 1 INCH = 1 MILE
NET LENGTH OF SECTION = 825.00 FEET = 0.1563 MILES
FUNCTIONAL CLASSIFICATION: LOCAL ROAD
CURRENT ADT = 75
DESIGN ADT = 75
DESIGN YEAR = 2025



David Booher 5-26-05
David Booher, Illinois P.E. 062-043769 Date
Expires 11-30-2005

APPROVED	5/31 20 05 <i>Don Crooks</i> Highway Commissioner
PASSED	5/31 20 05 <i>David A. Spill</i> County Engineer
PASSED	6/3 20 05 <i>David A. Spill</i> District Engineer of Local Roads & Streets
Releasing For Bid Based on Limited Review	June 7 20 05 <i>John...</i> Regional Engineer
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

CALL **J.U.L.I.E.** (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS)
48 Hours (2 working days) Before You Dig.
TOLL FREE: 1 (800) 892-0123

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	99-24115-00-BR	SHELBY	15	2
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NO.	ITEM	LNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	JNIT	103
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	JNIT	246
* 20200100	EARTH EXCAVATION	CY	1989
20300100	CHANNEL EXCAVATION	CY	318
20400800	FURNISHED EXCAVATION	CY	1057
* 25000200	SEEDING, CLASS 2	ACRE	1.1
25000400	NITROGEN FERTILIZER NUTRIENTS	FOUND	99
25000500	PHOSPHOURS FERTILIZER NUTRIENTS	FOUND	99
25000600	POTASSIUM FERTILIZER NUTRIENTS	FOUND	99
* 25100115	MULCH METHOD 2	ACRE	2.2
28000250	TEMPORARY EROSION CONTROL SEEDINGS	FOUND	300
28000300	TEMPORARY DITCH CHECKS	EACH	8
28000400	PERIMETER EROSION BARRIER	FOOT	390
28000500	INLET AND PIPE PROTECTION	EACH	5
* 28100707	STONE DUMPED RIPRAP, CLASS A4	TON	412
28102600	STONE RIPRAP DITCH	TON	108
28200200	FILTER FABRIC	SQ YD	614
* 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	819
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CY	43
50300225	CONCRETE STRUCTURES	CY	22.1
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	1584
50800105	REINFORCEMENT BARS	FOUND	2570
50900205	STEEL RAILING, TYPE S1	FOOT	134
51201000	FURNISHING METAL PILE SHELLS 12"	FOOT	282
51202600	DRIVING AND FILLING SHELLS	FOOT	282
51203200	TEST PILE METAL SHELLS	EACH	2
51204315	CONCRETE ENCASEMENT	CY	2.2
51500100	NAME PLATES	EACH	1
54200640	PIPE CULVERTS, TYPE 1, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 15"	FOOT	192
54201270	PIPE CULVERTS, TYPE 2, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 15"	FOOT	60
* 67100100	MOBILE ZATION SEE SPECIAL PROVISIONS	L. sum.	1

EARTHWORK SUMMARY

EARTH EXCAVATION = 1,989 CU YD
 CHANNEL EXCAVATION = 318 CU YD
 STRUCTURE EXCAVATION = 43 CU YD
 TOTAL FILL REQ'D. = 2,740 CU YD (IN PLACE)

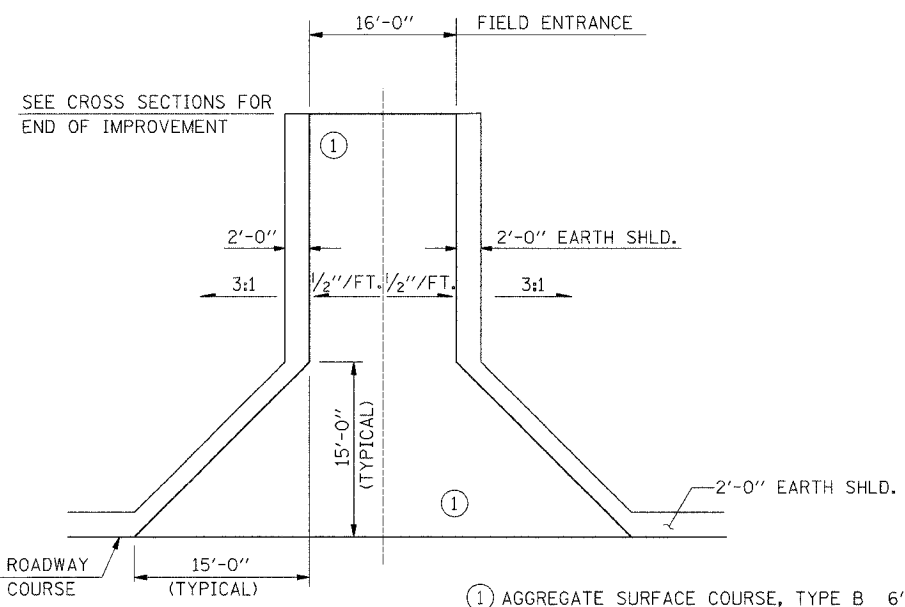
** ESTIMATE OF FILL FROM EARTH EXCAVATION = 1492 CU YD
 *** ESTIMATE OF FILL FROM CHANNEL EXCAVATION = 159 CU YD
 ** ESTIMATE OF FILL FROM STRUCTURE EXCAVATION = 32 CU YD
 FURNISHED EXCAVATION REQUIRED = 1057 CU YD

** 25% SHRINKAGE FACTOR APPLIED
 *** 50% SHRINKAGE FACTOR APPLIED

ESTIMATED QUANTITIES

ITEM	RATE OF APPLICATION	QUANTITIES
SEEDING CLASS 2	PER ART. 250.07	= 1.1 ACRES
NITROGEN FERTILIZER NUTRIENTS	= 90 LBS./ACRE	= 99 POUNDS
PHOSPHORUS FERTILIZER NUTRIENTS	= 90 LBS./ACRE	= 99 POUNDS
POTASSIUM FERTINIZER NUTRIENTS	= 90 LBS./ACRE	= 99 POUNDS
MULCH METHOD 2	= 2 TONS/ACRE	= 2.2 TONS

THE SEEDING MIXTURE SHALL CONFORM TO ROADSIDE MIXTURE TYPE 2, DURING THE PERIOD BETWEEN NOVEMBER 1, AND DECEMBER 31, THE CONTRACTOR SHALL SUBSTITUTE 10 POUNDS OF PERENNIAL RYE FOR 48 POUNDS OF OATS, SPRING.



FIELD ENTRANCE DETAIL

** TRANSITION EMBANKMENT TOP WIDTH:
 15' AT STA. 5+75 TO 24' AT STA. 6+25
 24' AT STA. 13+50 TO 15' AT STA. 14+00.

GENERAL NOTES

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE CONTRACTOR SHALL CONSULT WITH THE ENGINEER IN REGARD TO THE EXACT LENGTHS OF PIPE CULVERTS PRIOR TO ORDERING THESE ITEMS.

EXISTING CMP CULVERTS TO BE REMOVED SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING MATERIALS.

ALL DISTURBED EARTH SURFACES WITHIN THE LIMITS OF THE RIGHT-OF-WAY AND EASEMENTS SHALL BE SEEDDED AS DIRECTED BY THE ENGINEER.

ONLY TREES MARKED FOR REMOVAL BY THE ENGINEER SHALL BE REMOVED BY THE CONTRACTOR.

TREE REMOVAL

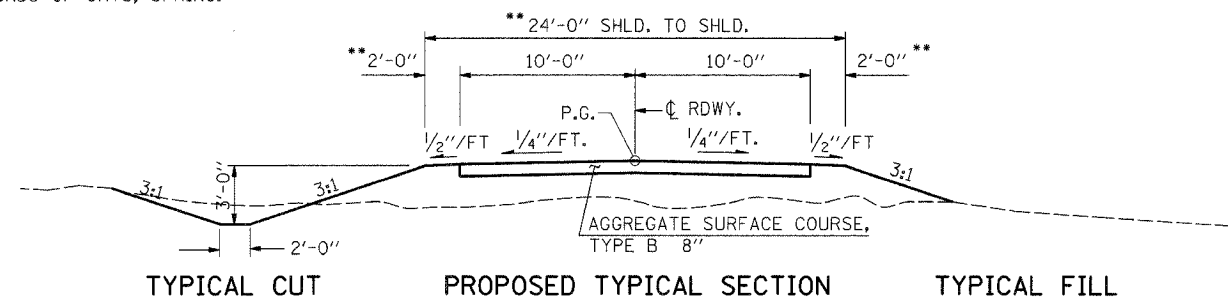
(6 TO 15 UNITS DIAMETER)

STATION	OFFSET	UNIT
STA. 9+13	24' RT	8
STA. 9+39	28' RT	8
STA. 9+59	26' RT	8
STA. 9+62	23' RT	12
STA. 9+63	26' RT	8
STA. 9+82	27' RT	15
STA. 12+75	15' RT	12
STA. 12+89	19' RT	6
STA. 12+97	17' RT	6
STA. 13+00	18' RT	6
STA. 13+02	18' RT	6
STA. 13+90	17' RT	8
TOTAL		= 103

TREE REMOVAL

(OVER 15 UNITS DIAMETER)

STATION	OFFSET	UNIT
STA. 9+00	25' RT	48
STA. 9+11	25' RT	30
STA. 9+14	26' RT	24
STA. 9+23	25' RT	30
STA. 9+33	26' RT	24
STA. 9+36	27' RT	24
STA. 9+41	26' RT	24
STA. 13+79	20' RT	24
STA. 13+90	19' RT	18
TOTAL		= 103



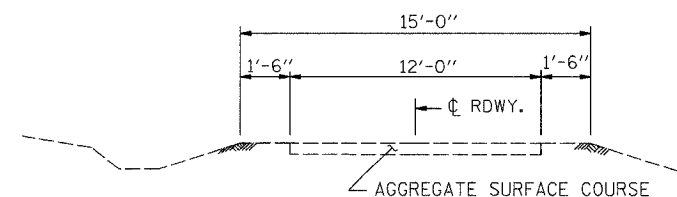
TYPICAL CUT

PROPOSED TYPICAL SECTION

TYPICAL FILL

T.R. 352 CURRENT ADT < 150

THE PROPOSED EARTHWORK SHALL BE CONSTRUCTED AND COMPACTED PRIOR TO BEING CORED OUT FOR CONSTRUCTION OF THE AGGREGATE SURFACE COURSE.



EXISTING TYPICAL SECTION

**T.R. 352 BRIDGE CONSTRUCTION PROJECT
WINDSOR ROAD DISTRICT
SHELBY COUNTY**

THIS PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISION OF THE NPDES PERMIT NUMBER ILR10 _____ ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES.

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 GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRE OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING 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.

[Signature]
(COUNTY OFFICIAL) 05-31-05
(DATE)

[Signature]
County Engineer
(TITLE)

THE FOLLOWING PLAN WAS ESTABLISHED AND INCLUDED IN THESE PLANS TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES. THE CONTRACTOR SHALL ABIDE TO ALL REQUIREMENTS WITHIN THIS PLAN AS PART OF THE CONTRACT.

THE PURPOSE OF THIS PLAN IS TO PREVENT / MINIMIZE SILTATION WITHIN THE CONSTRUCTION ZONE AND TO ELIMINATE SEDIMENTS FROM ENTERING AND LEAVING THE CONSTRUCTION ZONE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE TIME.

CERTAIN ITEMS, AS SHOWN IN THIS PLAN AND REFERENCED BY THE LEGEND, SHALL BE PLACED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION RESULTING FROM THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF THE YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL PLACE PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A REASONABLE AMOUNT OF TIME; THEREFORE, REDUCING THE AMOUNT OF AREA BEING OPEN TO THE POSSIBILITY OF EROSION AND REDUCING THE AMOUNT OF TEMPORARY EROSION CONTROL SYSTEMS AND TEMPORARY SEEDING. THE RESIDENT ENGINEER WILL DETERMINE IF TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED, THE SIZE OF THE PROPOSED DITCH CHECKS, THE PROPER METHOD OF INSTALLATION, AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS SHALL BE ADDED WHICH ARE NOT INCLUDED IN THIS PLAN. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN SPECIAL DETAILS AND IN STANDARD 280001 OF THE PLANS.

ALL DISTURBED AREAS HAVING HIGH POTENTIAL FOR EROSION, AS DETERMINED BY THE ENGINEER, SHALL BE PERMANENTLY SEEDDED AS SOON AS POSSIBLE.

LEGEND FOR STORM WATER POLLUTION PREVENTION PLAN

ITEM	SYMBOL
TEMPORARY DITCH CHECKS (HAY OR STRAW BALE DITCH CHECKS OR APPROVED SUBSTITUTION)	
PERIMETER EROSION BARRIER	
DIRECTION OF OVERLAND FLOW	
INLET AND PIPE PROTECTION	

NOTE: THE EROSION CONTROL PLAN SHALL BE IMPLEMENTED AS DESCRIBED ON THIS "SOIL EROSION AND SEDIMENT CONTROL PLAN" PER THE IDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, PER IDOT STANDARD 280001, AND AS DIRECTED BY THE ENGINEER.

SITE DESCRIPTION

DESCRIPTION OF CONSTRUCTION ACTIVITY:

1. THE PROPOSED PROJECT CONSISTS OF REMOVING THE EXISTING STRUCTURE, CONSTRUCTING A BRIDGE AND THE APPROACHES TO THE BRIDGE.
2. CONSTRUCTION CONSISTS OF PILING, CONCRETE STRUCTURE, PRECAST PRESTRESSED CONCRETE DECK BEAMS, PIPE CULVERTS, AGGREGATE ROAD SURFACE, DITCH GRADING AND SHAPING AND SEEDING.

DESCRIPTION OF INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB EARTH AND LEAD TO POSSIBLE EROSION FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

1. EXCAVATION AND FURNISHED EXCAVATION WILL BE COMPLETED AT LOCATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
2. DRAINAGE STRUCTURES WILL BE INSTALLED BEFORE AND/OR DURING THE CONSTRUCTION OF THE EXCAVATION AND FURNISHED EXCAVATION TO ALLOW PROPER DRAINAGE IN AREA OF THE PROPOSED ROADWAY FACILITY.
3. PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL, SUCH AS EROSION CONTROL FENCE, HAY OR STRAW BALE DITCH CHECKS, RIPRAP DITCH CHECKS, TEMPORARY SEEDING, ETC.
4. PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS RIPRAP DITCH LINING, FILTER FABRIC FOR USE WITH RIPRAP, SEEDING, ETC.
5. FINAL GRADING, AND OTHER MISCELLANEOUS ITEMS.

AREA OF DISTURBED GROUND:

THE TOTAL AREA DISTURBED BY CONSTRUCTION ACTIVITIES IS APPROXIMATELY 1.1 ACRES.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
TR 352	*	SHELBY	15	3

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-
* 99-24115-00-BR

CONTRACTOR CERTIFICATION STATEMENT

THIS CERTIFICATION STATEMENT IS PART OF THE STORM WATER POLLUTION PLAN FOR THE PROJECT DESCRIBED BELOW IN ACCORDANCE WITH NPDES PERMIT NO. ILR10 _____, ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY ON _____.

**T.R. 352 BRIDGE CONSTRUCTION PROJECT
WINDSOR ROAD DISTRICT
SHELBY COUNTY**

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE _____ DATE _____

TITLE _____

NAME OF FIRM _____

STREET ADDRESS _____

CITY, STATE, ZIP _____

PHONE NUMBER _____

NOTE: THE ABOVE BOXED IN AREA SHALL BE FILLED OUT BY THE CONTRACTOR AFTER THE AWARD OF THE CONTRACT TO OBTAIN THE REQUIRED NPDES PERMIT FROM IEPA. THIS IS A REQUIREMENT FOR THIS CONTRACT.

**SOIL EROSION &
SEDIMENT CONTROL PLAN
T.R. 352 OVER SAND CREEK
SEC. 99-24115-00-BR
SHELBY COUNTY
S.N. 087-3513
STA. 10+00.00**

ie INTERNATIONAL ENGINEERING CONSULTANTS, INC.
8420 SOUTH SIXTH STREET
SPRINGFIELD, ILLINOIS 62707
TEL (217) 529-8027
FAX (217) 529-4543
IESPRINGFIELD@IE-CONSULTANTS.COM
WWW.IE-CONSULTANTS.COM

DESIGNED BY: G.B.M.	CHECKED BY: D.R.B.	DRAWN BY: J.P.H.	DATE: 5/26/05
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ROUTE NO.	SECTION	COUNTY	STATION	POST
TR 352	*	SHELBY	15	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

*99-24115-00-BR

CONTROLS – EROSION CONTROLS AND SEDIMENT CONTROLS

DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION (WHERE APPLICABLE):

1. THE AREA BETWEEN THE EXISTING AND PROPOSED RIGHT-OF-WAY/TEMPORARY EASEMENT BOUNDARIES AND LIMITS OF THE PROJECT WILL BE IMPROVED AND MANAGED FOR THE PURPOSES OF CONTROLLING EROSION WITHIN THE AREA, REDUCING WATER FLOW BY TEMPORARY DIVERSION AND MINIMIZING SILTATION INTO THE CONSTRUCTION ZONE, AND ESTABLISHING VEGETATIVE COVER WHICH WILL BECOME PERMANENT VEGETATION AND ACT AS AN EROSION BARRIER. WORK AT THE BEGINNING OF CONSTRUCTION WILL CONSIST OF THE FOLLOWING:
 - (A) AREAS OF EXISTING VEGETATION (WOODS AND GRASSLANDS) OUTSIDE THE PROPOSED CONSTRUCTION SLOPE LIMITS SHALL BE IDENTIFIED FOR PRESERVING AND SHALL BE PROTECTED FROM MOWING, BRUSH CUTTING, TREE REMOVAL AND OTHER ACTIVITIES WHICH WOULD BE DETRIMENTAL TO THEIR MAINTENANCE AND DEVELOPMENT.
 - (B) DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, ALONG WITH REQUIRED TREE REMOVAL.
 - (C) AS SOON AS REASONABLE ACCESS IS AVAILABLE (SUCH AS TREES CLEARED) TO ALL LOCATIONS WHERE DITCH CHECKS, AND/OR EROSION CONTROL FENCE SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN AND DIRECTED BY THE ENGINEER.
 - (D) BARE AND SPARSELY VEGETATED GROUND IN HIGHLY ERODABLE AREAS AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED AT THE BEGINNING OF CONSTRUCTION WHERE NO CONSTRUCTION ACTIVITIES ARE IMMEDIATELY EXPECTED AS STATED IN THE SPECIAL PROVISION "TEMPORARY EROSION CONTROL SEEDING".
 - (E) IMMEDIATELY AFTER TREE REMOVAL IS COMPLETED IN CERTAIN AREAS WHICH ARE HIGHLY ERODABLE AREAS AS DETERMINED BY THE ENGINEER, THE AREAS SHALL BE TEMPORARILY SEEDED WHERE NO CONSTRUCTION ACTIVITIES ARE IMMEDIATELY EXPECTED AS STATED IN THE SPECIAL PROVISION "TEMPORARY EROSION CONTROL SEEDING".
 - (F) AT LOCATIONS WHERE A SIGNIFICANT AMOUNT OF WATER DRAINS INTO THE CONSTRUCTION ZONE, RIPRAP DITCH CHECKS WILL BE UTILIZED TO LOCALLY DIVERT WATER, REDUCE FLOW RATES, AND COLLECT OUTSIDE SILTATION INSIDE THE RIGHT-OF-WAY LINE. EROSION CONTROL ITEMS WILL NOT BE ALLOWED TO BE INSTALLED TO CAUSE FLOODING TO UPSTREAM PRIVATE PROPERTY WHICH COULD CAUSE CROP DAMAGES OR OTHER UNDESIRABLE CONDITIONS.
 - (G) AT LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, SEDIMENT BASINS, RIPRAP DITCH CHECKS, TEMPORARY EROSION CONTROL FENCE, OR TEMPORARY DITCH CHECKS SHALL BE USED.
2. 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 COMPLETE.
3. A THIRD BENEFIT OF THESE FILTER AREAS IS THAT THEY WILL BEGIN TO PROVIDE A SCREEN AND BUFFER. THEY WILL HELP PROTECT THE CONSTRUCTION SITE FROM WINDS AND EXCESS SUN AND MITIGATE CONSTRUCTION NOISE AND DUST.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION (WHERE APPLICABLE):

1. DURING ROADWAY CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION SLOPE LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED FROM DAMAGING EFFECTS OF CONSTRUCTION. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESIGNATED ON THE PLANS OR DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.
 - (A) WITHIN THE CONSTRUCTION ZONE, CRITICAL AREAS WHICH HAVE HIGH FLOWS OF WATER AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
 - (B) TOP SOIL AND EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
 - (C) AS THE CONTRACTOR CONSTRUCTS A PORTION OF ROADWAY IN A FILL SECTION, HE/SHE SHALL FOLLOW THE FOLLOWING STEPS AS DIRECTED BY THE ENGINEER:
 - I. PLACE TEMPORARY EROSION CONTROL SYSTEMS AT LOCATIONS WHERE WATER LEAVES AND ENTERS THE CONSTRUCTION ZONE
 - II. TEMPORARY SEED HIGHLY ERODABLE AREAS OUTSIDE THE CONSTRUCTION SLOPE LIMITS
 - III. CONSTRUCT ROADSIDE DITCHES AND PROVIDE TEMPORARY EROSION CONTROL SYSTEMS
 - IV. TEMPORARY DIVERT WATER AROUND PROPOSED CULVERT LOCATIONS
 - V. BUILD NECESSARY EMBANKMENT AT CULVERT LOCATIONS AND THEN EXCAVATE AND PLACE CULVERT
 - VI. CONTINUE BUILDING UP THE EMBANKMENT TO THE PROPOSED GRADE WHILE AT THE SAME TIME PLACING PERMANENT EROSION CONTROL SUCH AS RIPRAP DITCH LINING AND CONDUCT FINAL SHAPING TO THE SLOPES
 - (D) THE CONTRACTOR SHALL IMMEDIATELY FOLLOW MAJOR EARTH MOVING OPERATIONS WITH FINAL GRADING EQUIPMENT. AFTER THE MAJOR EARTH SPREAD OPERATION HAS MOVED TO A NEW LOCATION, FINAL GRADING SHALL BE COMPLETED WITHIN FOURTEEN DAYS. IF GRADING IS NOT COMPLETED WITHIN FOURTEEN DAYS, ALL MAJOR EARTH MOVING OPERATIONS WILL BE STOPPED, AS DIRECTED BY THE ENGINEER, UNTIL DISTURBED AREAS ARE FINAL GRADED AND SEEDED.
 - (E) EXCAVATED AREAS AND EMBANKMENTS SHALL BE PERMANENTLY SEEDED WHEN FINAL GRADED. IF NOT, THEY SHALL BE TEMPORARILY SEEDED AS STATED IN THE SPECIAL PROVISION "TEMPORARY EROSION CONTROL SEEDING".

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION (WHERE APPLICABLE): (CONT'D.)

- (F) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTION RUN-OFF IN COMPLIANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
- (G) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING ACTIVITIES AND WEEKLY OR AFTER LARGE RAINS 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 CONTROL WORK IS NECESSARY.
- (H) SEDIMENT COLLECTED DURING CONSTRUCTION BY 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 WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- (I) THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COSTS OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE TEMPORARY EROSION CONTROL SYSTEM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING (WHERE APPLICABLE):

1. TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED WITH A PROPER STAND.
2. ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RESEDED. TEMPORARY RIPRAP DITCH CHECKS WILL BE ALLOWED TO REMAIN IN PLACE WHERE APPROVED BY THE ENGINEER.

MAINTENANCE AFTER CONSTRUCTION (WHERE APPLICABLE):

1. CONSTRUCTION IS COMPLETE AFTER ACCEPTANCE IS RECEIVED AT THE FINAL INSPECTION.
2. AREAS WILL BE INSPECTED ON A REGULAR BASIS BY THE SHELBY COUNTY HIGHWAY DEPARTMENT.
3. MAINTENANCE CREWS WILL PERFORM REGULAR MOWINGS TO AID IN KEEPING WEEDS DOWN AND ESTABLISHING A GOOD ROADSIDE SEED STAND.
4. MAINTENANCE CREWS WILL ALSO AID IN ANY DITCH LINING MAINTENANCE OR IN ANY DRAINAGE PROBLEMS.
5. ALL MAINTENANCE WILL BE CONDUCTED AT TIMES WHEN WEATHER CONDITIONS WILL NOT CAUSE SITE DAMAGE.

DOCUMENTATION

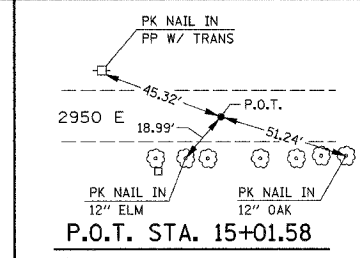
1. A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THIS STORM WATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH SECTION 4.B. SHALL BE MADE AND RETAINED AS PART OF THE PLAN FOR AT LEAST THREE YEARS AFTER THE DATE OF INSPECTION. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART VI.G OF THE GENERAL PERMIT.
2. 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 OR RESIDENT TECHNICIAN SHALL COMPLETE AND FILE AN "INCIDENT OF NONCOMPLIANCE (ION)" REPORT FOR THE IDENTIFIED VIOLATION. THE RESIDENT ENGINEER OR RESIDENT TECHNICIAN SHALL USE FORMS PROVIDED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AND SHALL INCLUDE SPECIFIC INFORMATION ON THE 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 REPORT OF NONCOMPLIANCE SHALL BE MAILED TO THE FOLLOWING ADDRESS:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
 DIVISION OF WATER POLLUTION CONTROL
 COMPLIANCE ASSURANCE SECTION #19
 POST OFFICE BOX 19276
 SPRINGFIELD, IL 62794-9276

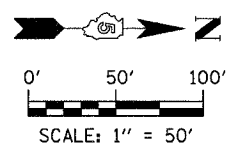
**SOIL EROSION &
 SEDIMENT CONTROL PLAN
 T.R. 352 OVER SAND CREEK
 SEC. 99-24115-00-BR
 SHELBY COUNTY
 S.N. 087-3513
 STA. 10+00.00**

INTERNATIONAL ENGINEERING CONSULTANTS, INC. 6420 SOUTH SIXTH STREET SPRINGFIELD, ILLINOIS 62707 TEL. (217) 529-8027 FAX (217) 529-4543 IESPRINGFIELD@IE-CONSULTANTS.COM WWW.IE-CONSULTANTS.COM			
DESIGNED BY:	CHECKED BY:	DRAWN BY:	DATE:
G.B.M.	D.R.B.	J.P.H.	5/26/05

S.E. 1/4, N.W. 1/4, SEC. 24, T. 12 N., R. 5 E., 3rd P.M.

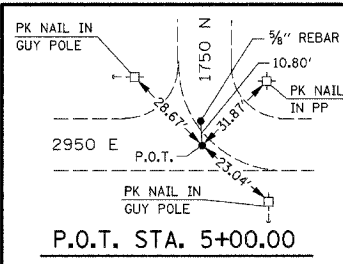


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
15	99-24115-00-BR	SHELBY	15	5
STA. 5+00 TO STA. 15+00				
ILLINOIS FED. AID PROJECT				



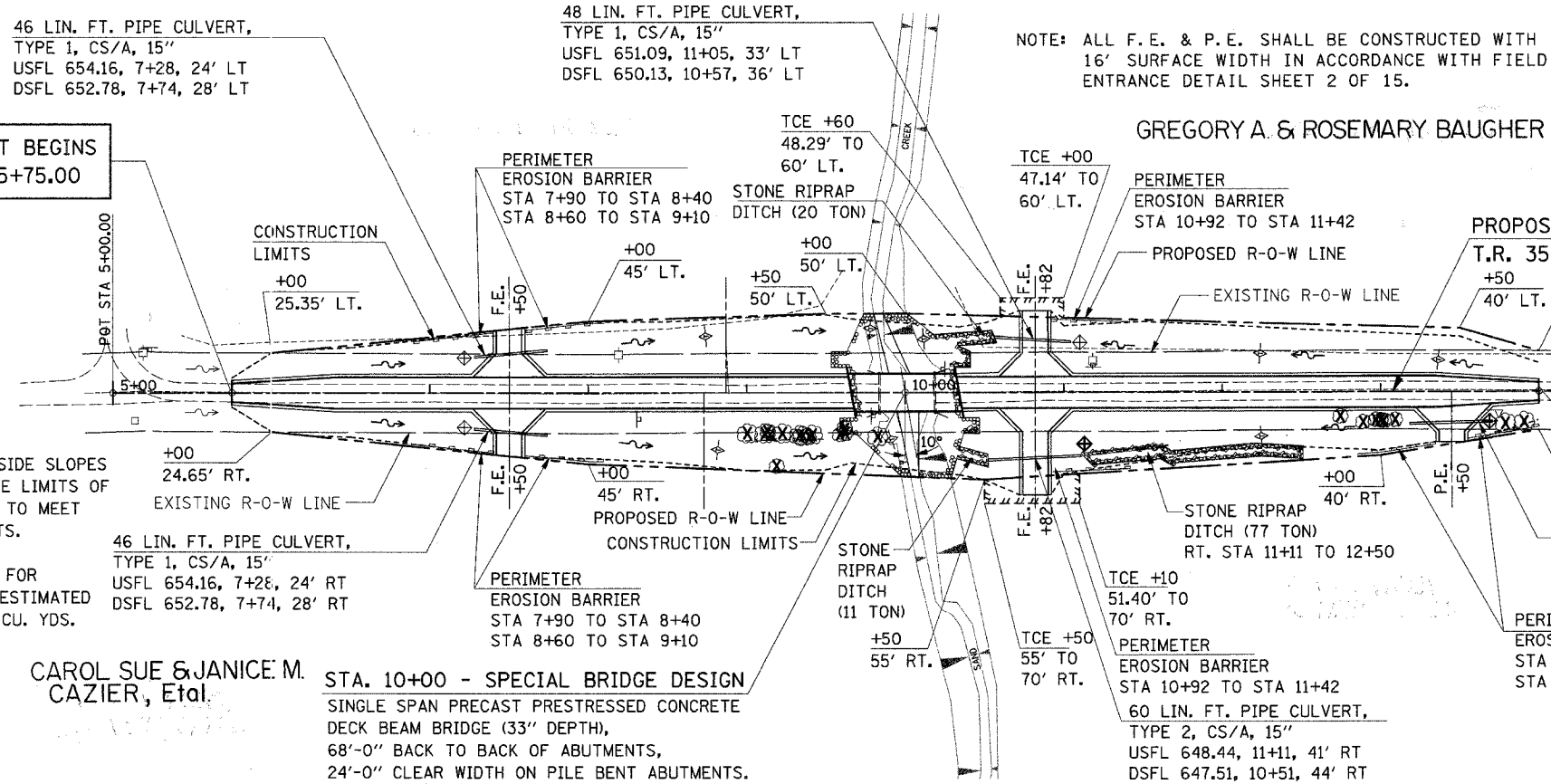
LEGEND

- ⊕ INLET AND PIPE PROTECTION
- ⊕ TEMPORARY DITCH CHECK
- PERIMETER EROSION BARRIER
- ⊗ TREE TO BE REMOVED



PROJECT BEGINS STA. 5+75.00

PROJECT ENDS STA. 14+00.00



CHANNEL EXCAVATION
 THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AT RIGHT ANGLES TO THE CHANNEL WITHIN THE LIMITS OF THE PROPOSED STRUCTURE AND TRANSITIONED TO MEET THE EXISTING CHANNEL AT THE "R-O-W" LIMITS. ESTIMATED QUANTITY = 318 CU. YDS. SUITABLE EXCAVATED MATERIAL MAY BE USED FOR EMBANKMENT AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY AVAILABLE FOR EMBANKMENT = 159 CU. YDS.

CAROL SUE & JANICE M. CAZIER, Etal.
STA. 10+00 - SPECIAL BRIDGE DESIGN
 SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE (33" DEPTH), 68'-0" BACK TO BACK OF ABUTMENTS, 24'-0" CLEAR WIDTH ON PILE BENT ABUTMENTS. SKEW = 10° RT. FWD.

TRANSITION FROM EXISTING ROADWAY SECTION AT STA. 5+75 TO PROPOSED ROADWAY SECTION AT STA. 6+42

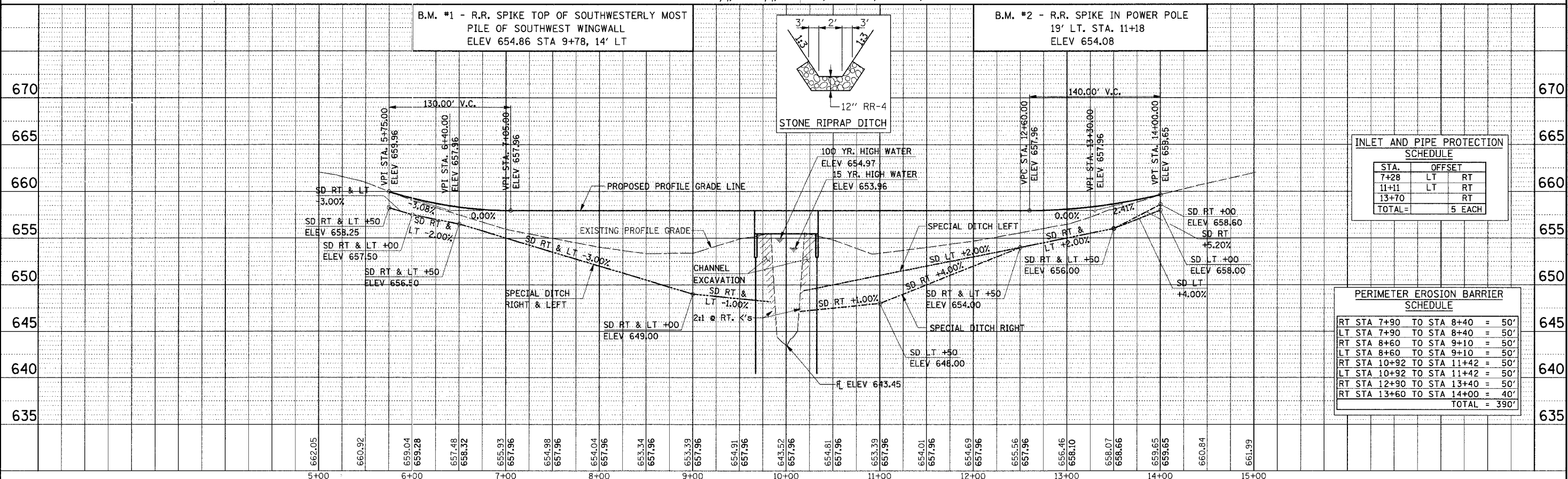
TRANSITION FROM PROPOSED ROADWAY SECTION AT STA. 13+34 TO EXISTING ROADWAY SECTION AT STA. 14+00

TEMPORARY DITCH CHECK SCHEDULE

STA.	OFFSET
8+75	LT RT
9+75	LT RT
10+90	RT
10+11	LT RT
12+25	LT RT
13+40	LT RT
TOTAL=	8 EACH

S.W. 1/4, N.E. 1/4, SEC. 24, T. 12 N., R. 5 E., 3rd P.M.

FOR TREE REMOVAL SCHEDULES, SEE SHEET 2 OF 15.



INLET AND PIPE PROTECTION SCHEDULE

STA.	OFFSET
7+28	LT RT
11+11	LT RT
13+70	RT
TOTAL=	5 EACH

PERIMETER EROSION BARRIER SCHEDULE

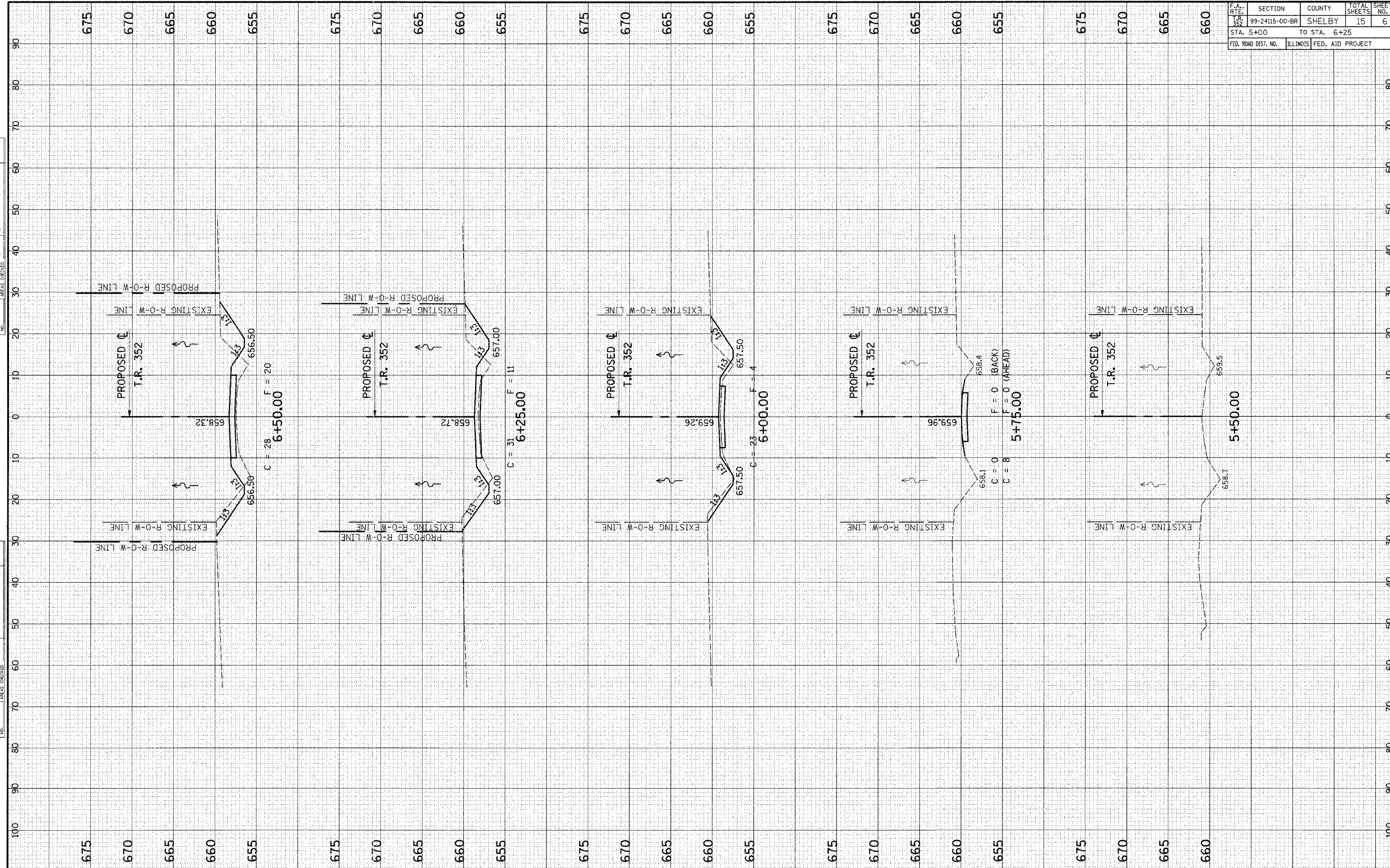
RT STA 7+90 TO STA 8+40	= 50'
LT STA 7+90 TO STA 8+40	= 50'
RT STA 8+60 TO STA 9+10	= 50'
LT STA 8+60 TO STA 9+10	= 50'
RT STA 10+92 TO STA 11+42	= 50'
LT STA 10+92 TO STA 11+42	= 50'
RT STA 12+90 TO STA 13+40	= 50'
RT STA 13+60 TO STA 14+00	= 40'
TOTAL	= 390'

PLAN & PROFILE T.R. 352 - STA. 5+00 TO STA. 15+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
352	99-24115-00-BR	SHELBY	15	6
STA. 5+00		TO STA. 6+25		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY NO. _____
 SIGNED _____
 PLOTTED _____
 TEMPLATE _____
 AREAS CHECKED _____

ORIGINAL SURVEY NO. _____
 SIGNED _____
 PLOTTED _____
 TEMPLATE _____
 AREAS CHECKED _____

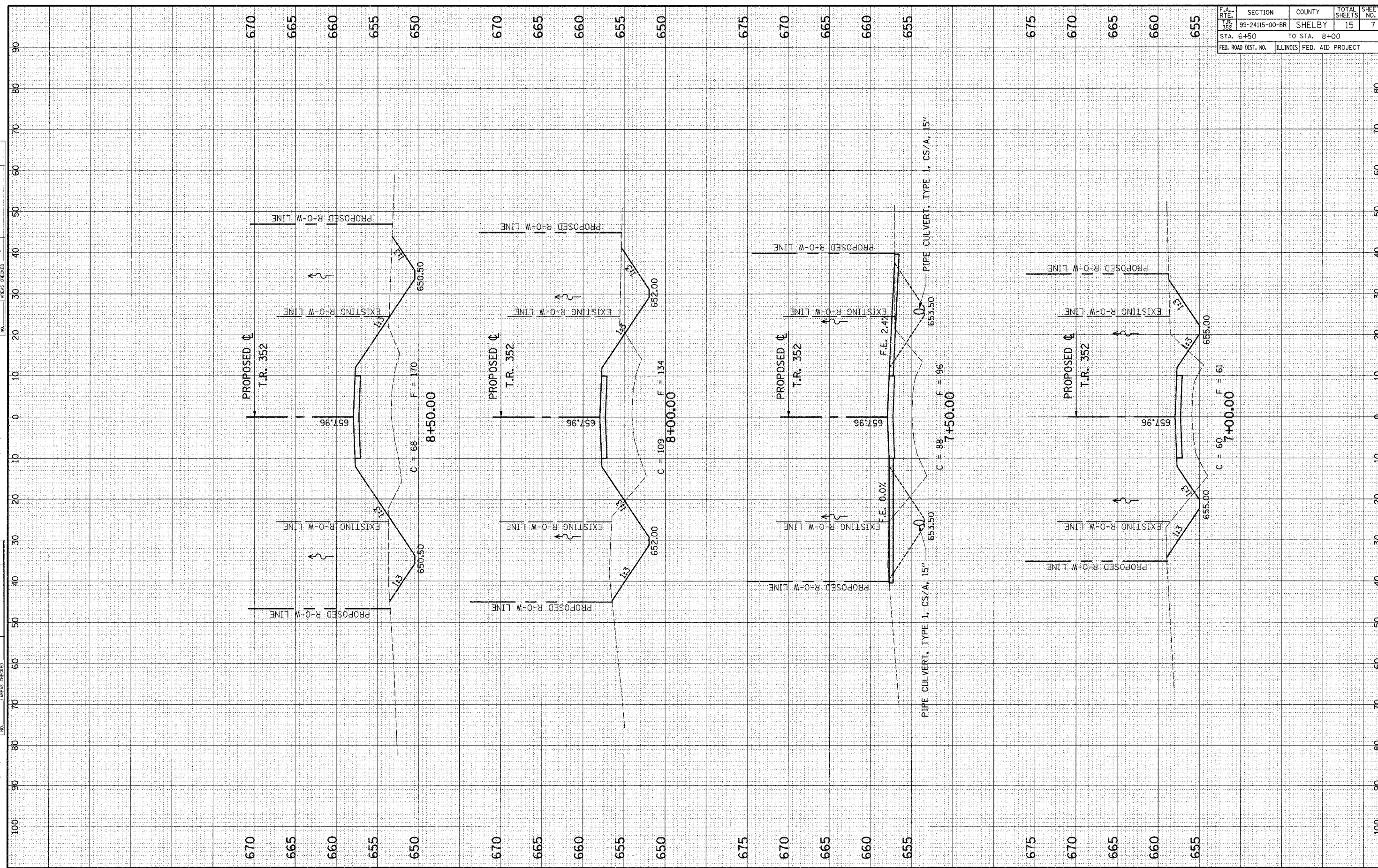


CROSS SECTIONS - STA. 5+00 TO STA. 6+25

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 352	99-24115-00-BR	SHELBY	15	7
STA. 6+50		TO STA. 8+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

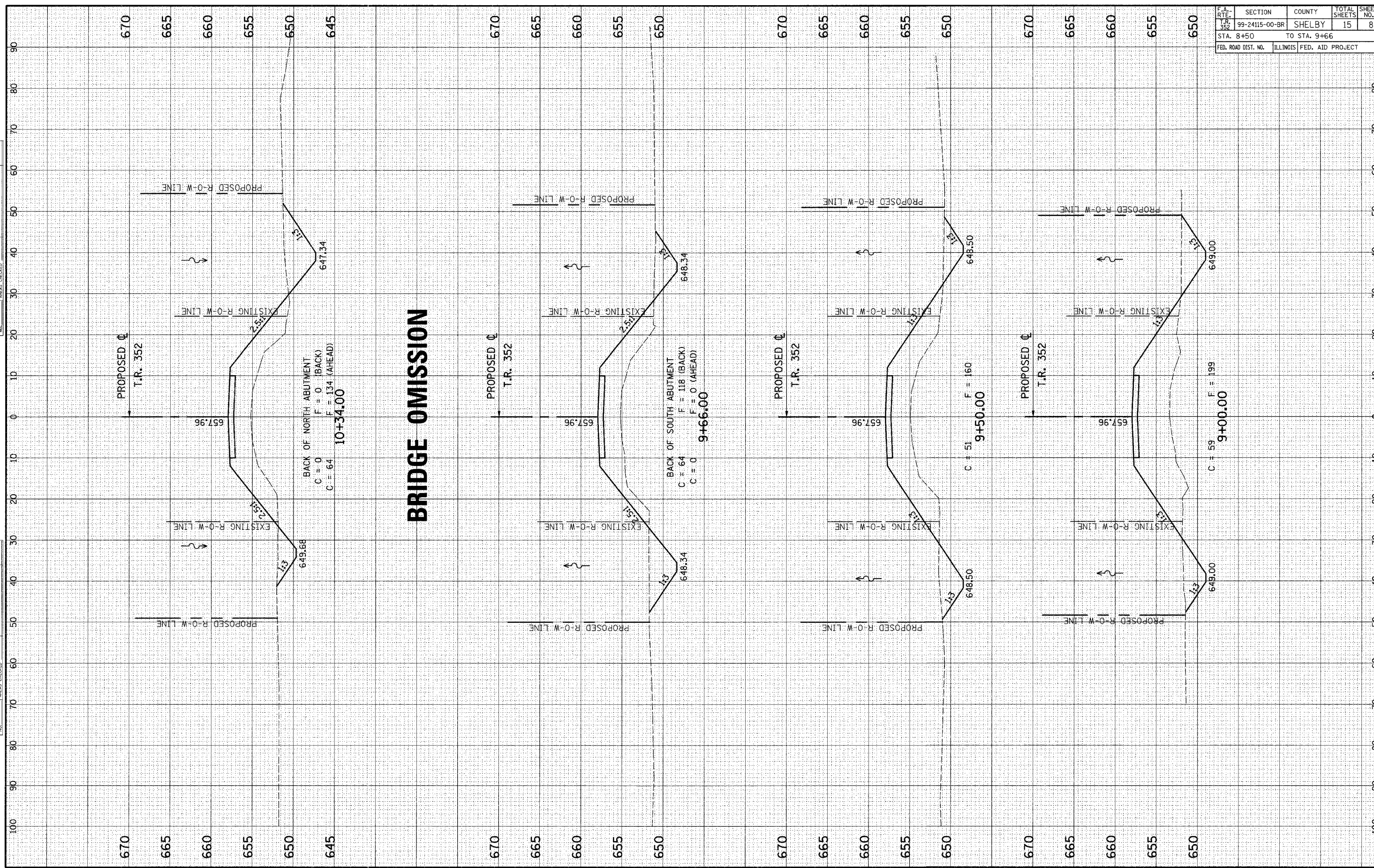


CROSS SECTIONS - STA. 6+50 TO STA. 8+00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 352	99-24115-00-BR	SHELBY	15	8
STA. 8+50		TO STA. 9+66		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

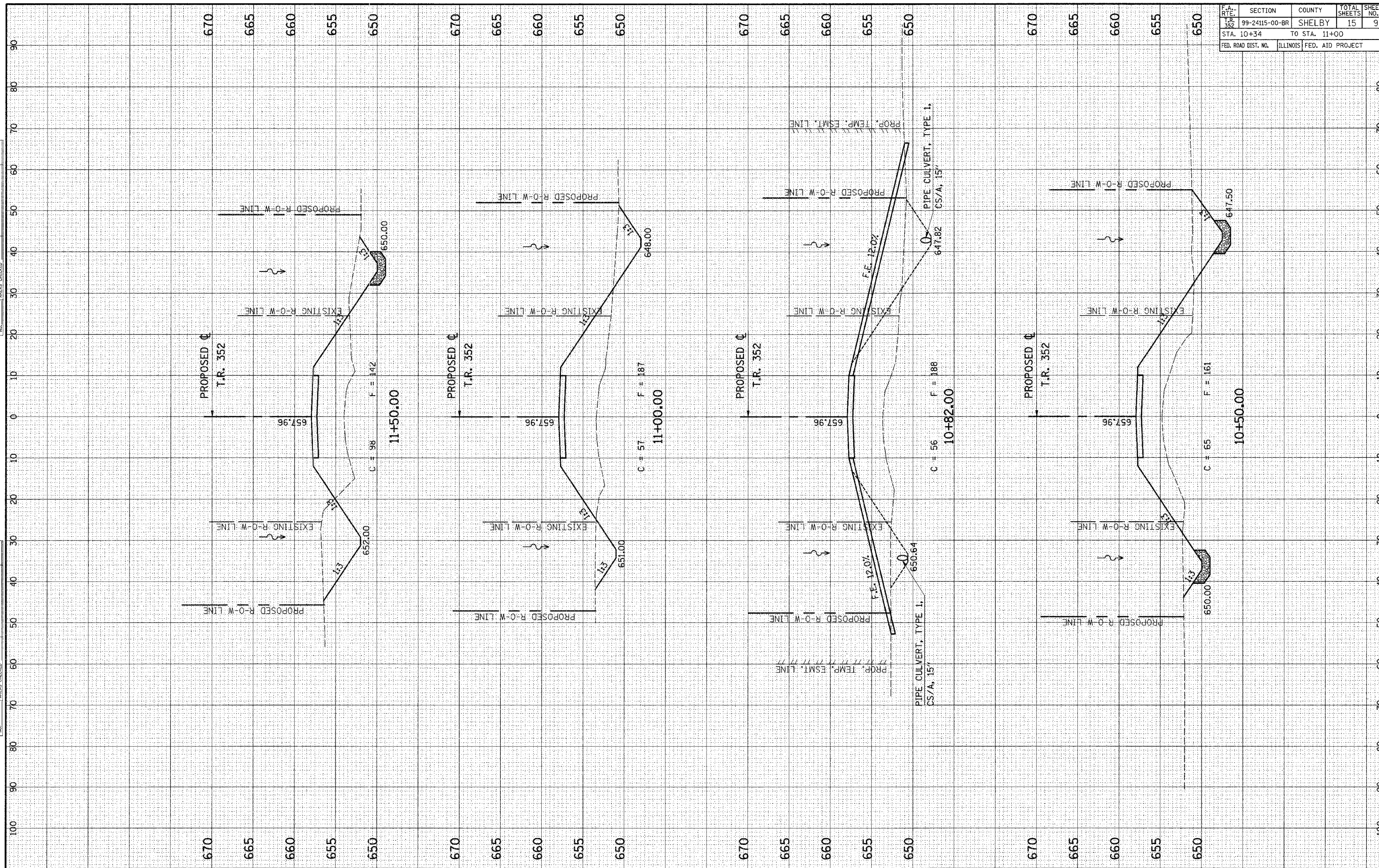
ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 352	99-24115-00-BR	SHELBY	15	9
STA. 10+34		TO STA. 11+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY NO.	SURVEY PLOTTED	DATE
NOTE BOOK NO.	TEMPLATE	
	AREAS CHECKED	

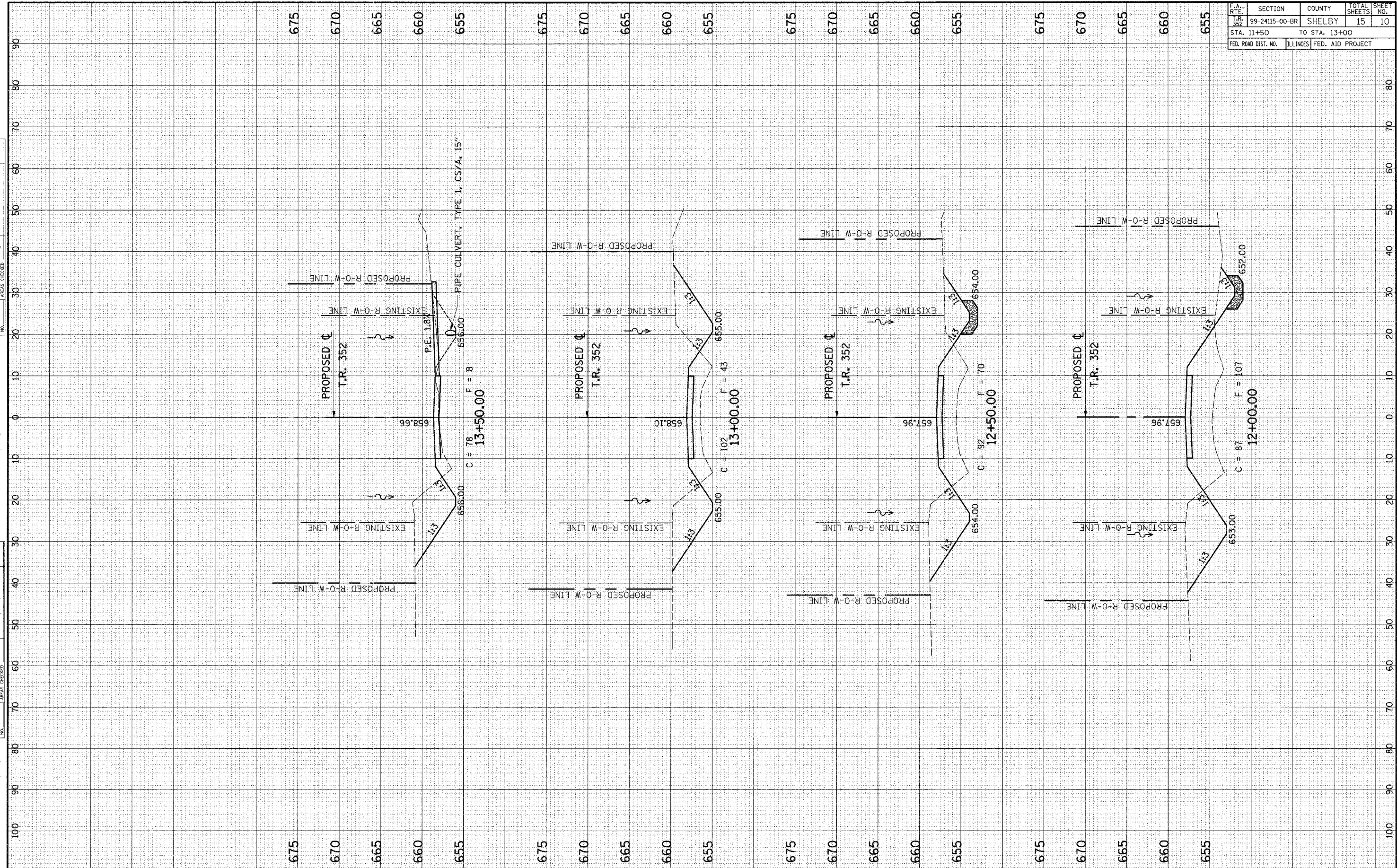


CROSS SECTIONS - STA. 10+34 TO STA. 11+00

F.A. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 352	99-24115-00-BR	SHELBY	15	10
STA. 11+50		TO STA. 13+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



CROSS SECTIONS - STA. 11+50 TO STA. 13+00

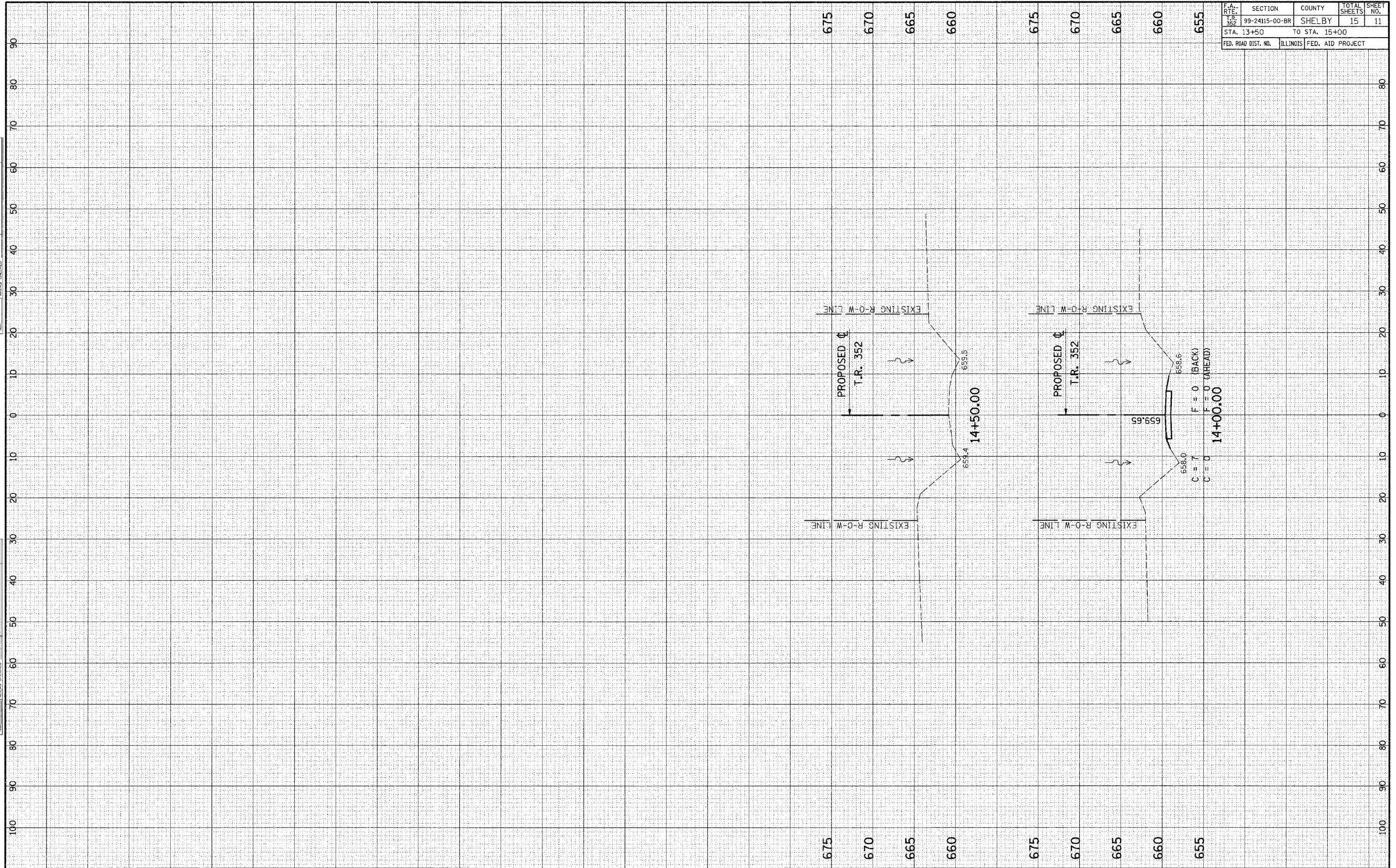
F.A. RTE. 352	SECTION 99-24115-00-BR	COUNTY SHELBY	TOTAL SHEETS 15	SHEET NO. 11
STA. 13+50		TO STA. 15+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY
NO. _____
DATE _____

SURVEYED _____
PLOTTED _____
AREAS CHECKED _____

ORIGINAL SURVEY
NO. _____
DATE _____

SURVEYED _____
PLOTTED _____
AREAS CHECKED _____

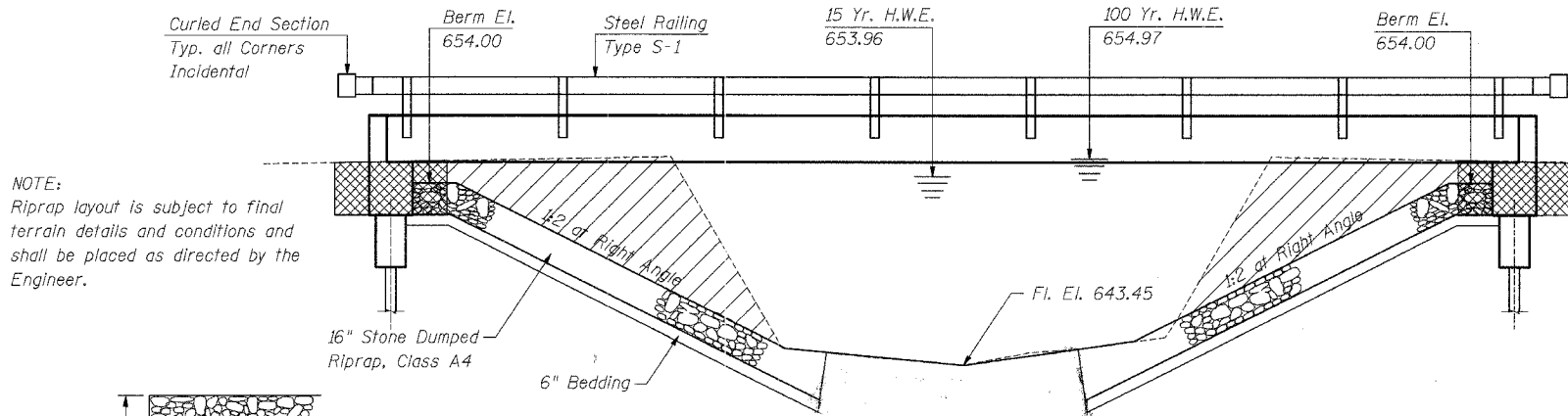


CROSS SECTIONS - STA. 13+50 TO STA. 15+00

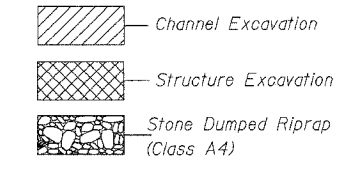
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR352	99-24115-00-BR	SHELBY	15	12
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT	SHEET 1 of 4	

B.M. #1 - R.R. Spike top of Southwesterly most Pile of Southwest Wingwall. Elev. 654.86, STA. 9+78, 14' Lt.

EXISTING STRUCTURE NO. 087-3308:
Single span bridge with steel girders, corrugated steel deck with asphalt overlay. Closed timber abutments and wingwalls. 36'-0" Bk to Bk Abutments 23'-8" out to out width.



NOTE:
Riprap layout is subject to final terrain details and conditions and shall be placed as directed by the Engineer.

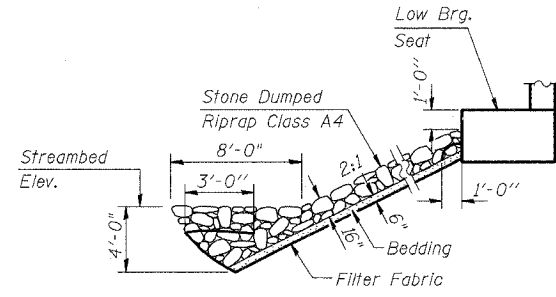


GENERAL NOTES

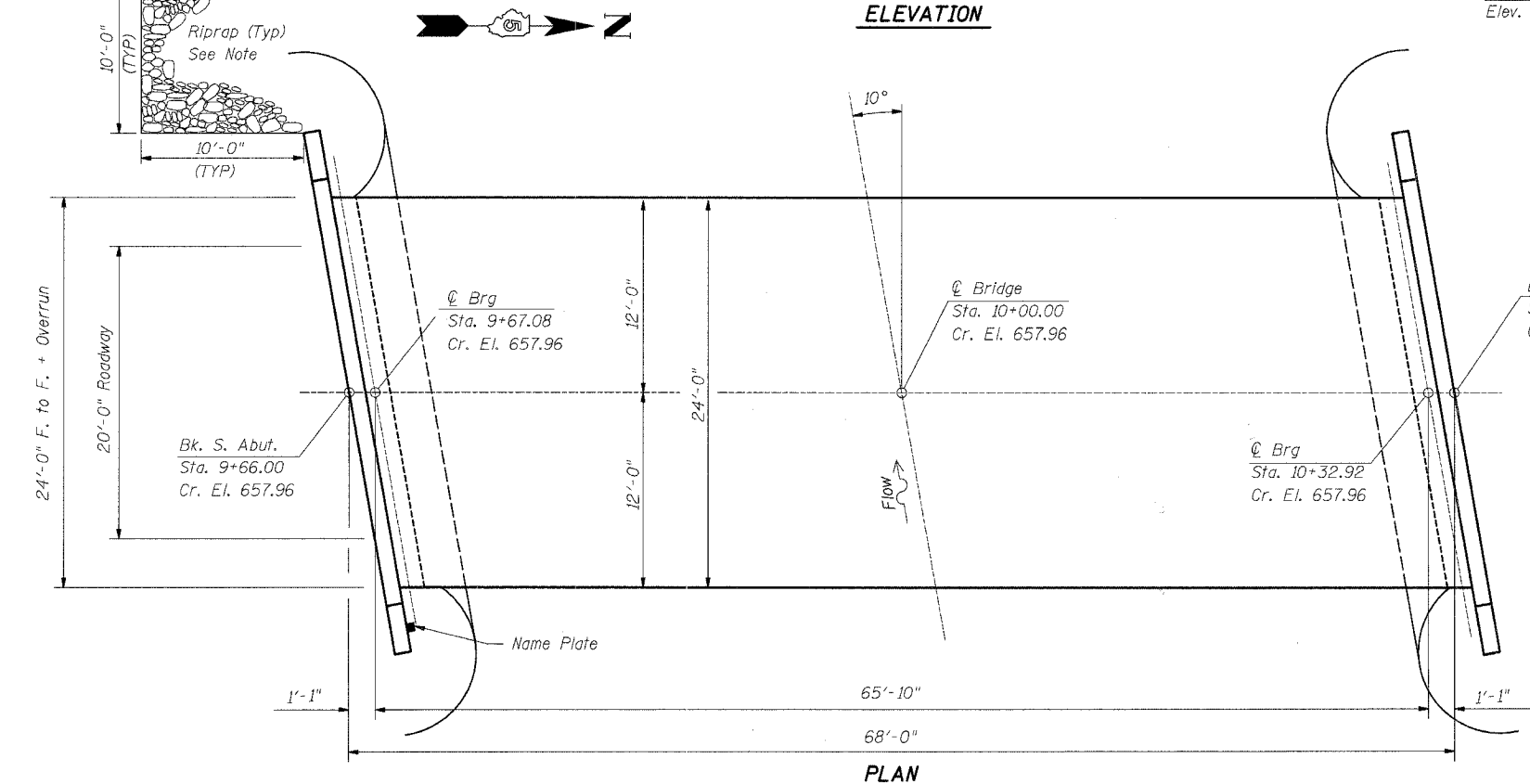
See Proposal for Boring Data
The Contractor shall drive one metal shell test pile at each abutment as directed by the Engineer before ordering the remainder of the piles.
Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

SAND CREEK
BUILT 200_ BY
SHELBY COUNTY
SEC. 99-24115-00-BR
T.R. 352 STA. 10+00.00
STR. NO. 087-3513 LOADING HS 20

NAME PLATE
(See Std. 515001)



STONE RIPRAP ANCHOR DETAIL



PLAN

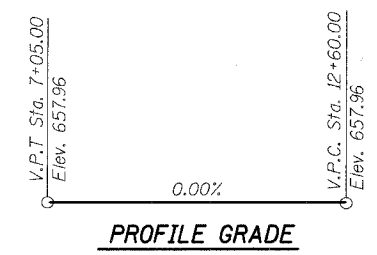
BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu. Yd.		43	43
Concrete Structures	Cu. Yd.		22.1	22.1
Reinforcement Bars	Pound		2570	2570
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Yd.	1584		1584
Steel Railing, Type S-1	Foot	134		134
Furnishing Metal Pile Shells	Foot		282	282
Driving and Filling Shells	Foot		282	282
Test Pile Metal Shells	Each		2	2
Concrete Encasement	Cu. Yd.		2.2	2.2
Name Plates	Each		1	1
Removal of Existing Structures	Each	1		1
Channel Excavation	Cu. Ft.		318	318
Stone Dumped Riprap, Class A4	Ton		412	412
Filter Fabric	Sq. Yd.		614	614

I 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.



David Booher 5-26-05
David Booher, Illinois S.E. 081-004775 Date
Expires 11-30-2006



PROFILE GRADE

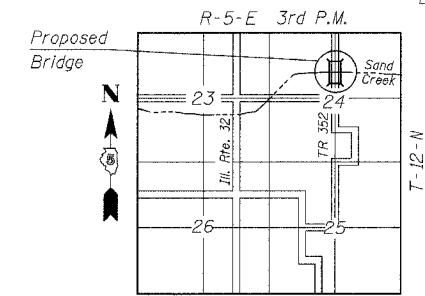
WATERWAY INFORMATION

Drainage Area	6.16	Sq. Mi.
Required Opening (15yr.)	365	Sq. Ft.
Provided Opening	365	Sq. Ft.
Present Opening	263	Sq. Ft.
15yr. Discharge	1549	cfs
100yr. Discharge	2512	cfs
Created Head (15yr.)	<0.5	Ft.
Created Head (100yr.)	<1.0	Ft.

DESIGN STRESSES

Precast Unit
f'c = 5,000 psi
f'ci = 4000 psi
f's = 270,000 psi
f'si = 189,000 psi
LOADING HS 20
DESIGN SPECIFICATION:
AASHTO 2002 Standard Specifications for Highway Bridges.
FUTURE WEARING SURFACE: 50 p.s.f.

Cast-in-Place Unit
f'c = 3500 psi
f's = 60,000 psi
n = 9

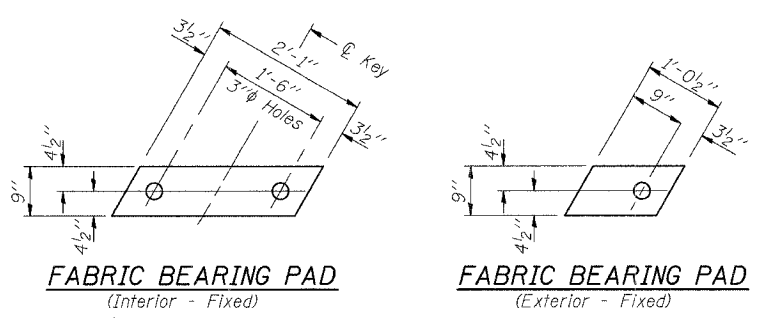


LOCATION MAP

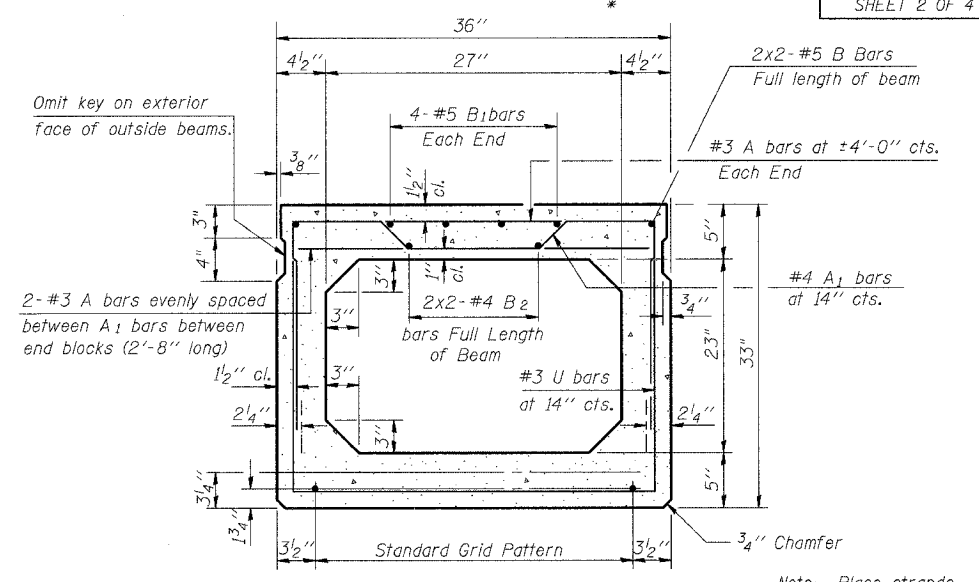
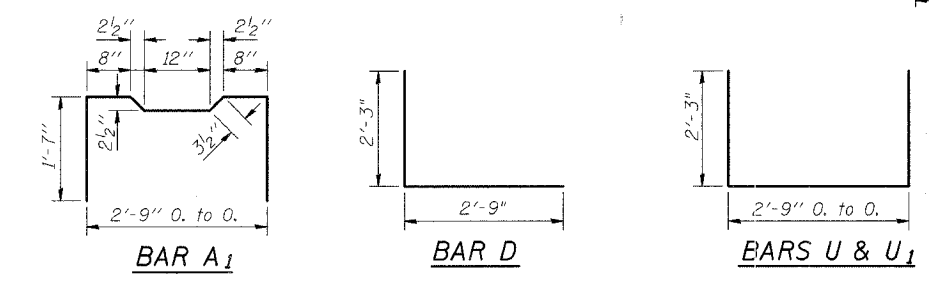
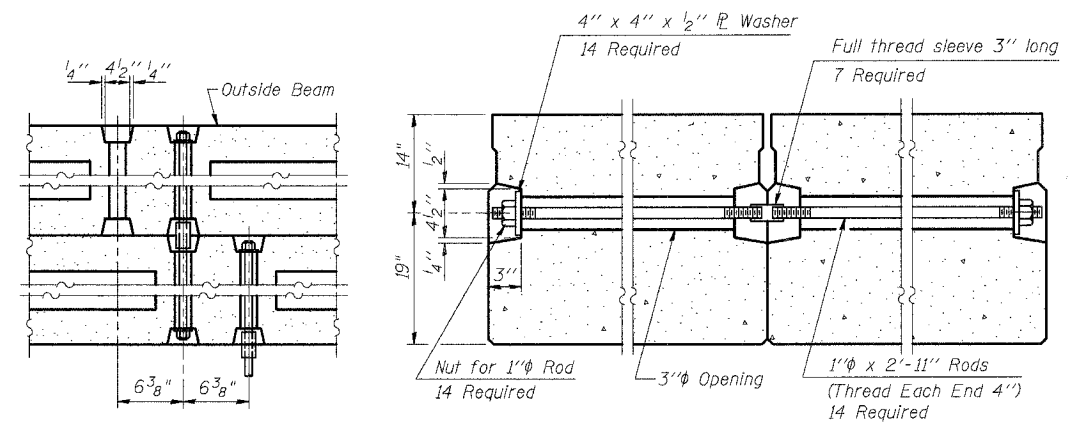
GENERAL PLAN & ELEVATION
T.R. 352 OVER SAND CREEK
SECTION 99-24115-00-BR
SHELBY COUNTY
S.N. 087-3513
STA. 10+00.00

ie consultants
DESIGNED: D.R.B. CHECKED: D.R.B.
DRAWN: T.H.W. DATE: 5/25/05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 352	99-24115-00-BR	SHELBY	15	13
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT	SHEET 2 OF 4	

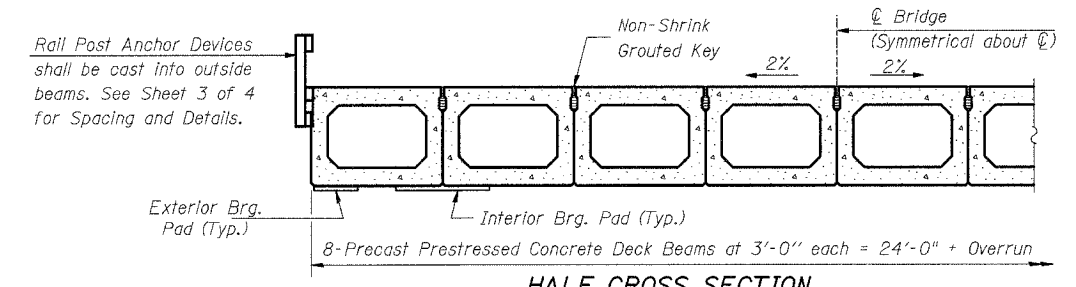
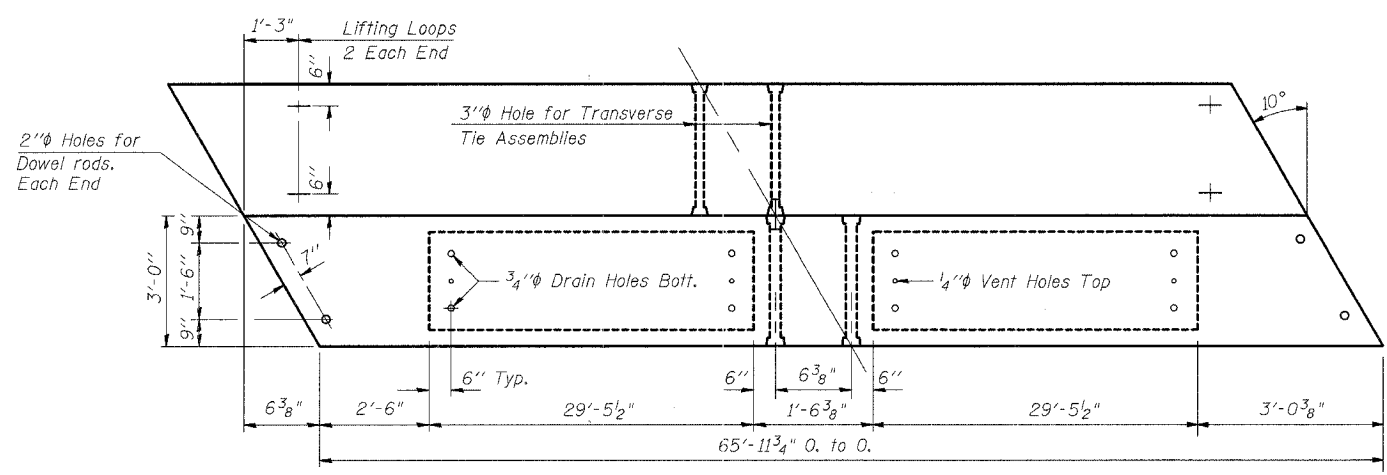


FIXED



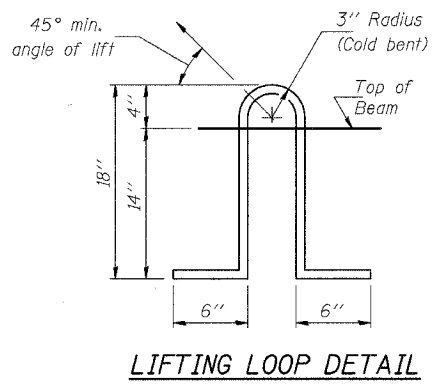
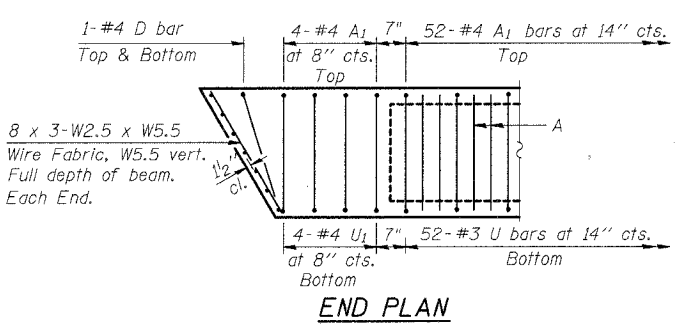
14-1/2" Strands, Each Strand Stressed to 28,900 Lbs.
10-Strands 1 3/4" up, 2-Strands 3/4" up, 2 Strands 6" up

Note: Place strands symmetrically about C of beam.



BILL OF MATERIAL
(Bar List for One Beam Only)

Bar	No.	Size	Length	Shape	
A	102	#3	2'-8"	—	
A ₁	60	#4	6'-1"	⌒	
B	4	#5	23'-5"	—	
B ₁	8	#5	12'-0"	—	
B ₂	4	#4	23'-2"	—	
D	4	#4	5'-2"	L	
U	52	#3	7'-3"	⌒	
U ₁	8	#4	7'-3"	⌒	
Precast Prestressed Conc. Deck Bms. (33")				Sq. Ft.	1584



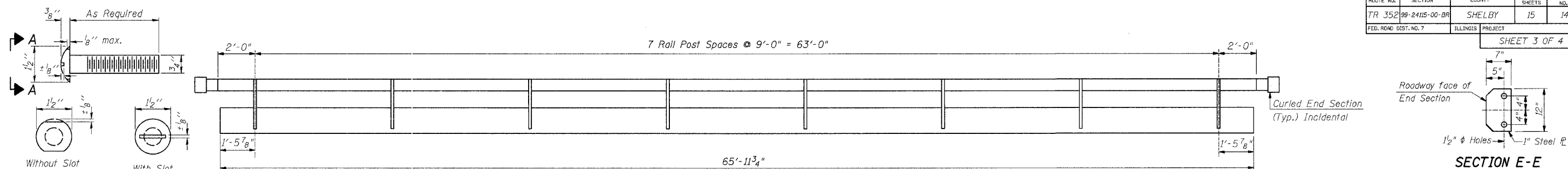
NOTES

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. Lifting loops shall be 3-1/2" 270 ksi strands, as shown. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non-prestressing Steel shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Required Release Strength, f'ci, shall be 4000 p.s.i. See Contract Special Provisions.

P.P.C. DECK BEAM DETAILS
T.R. 352 OVER SAND CREEK
SEC. 99-24115-00-BR
SHELBY COUNTY
S.N. 087-3513
STA. 10+00.00

ie consultants
DESIGNED: D.R.B. CHECKED: D.R.B.
DRAWN: T.H.W. DATE: 5/25/05

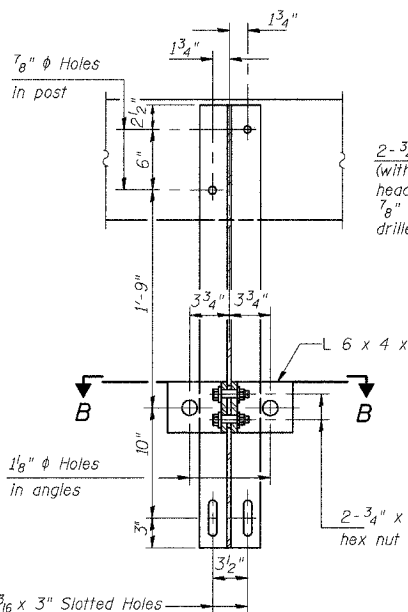
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 352	99-24115-00-BR	SHELBY	15	14
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT	SHEET 3 OF 4		



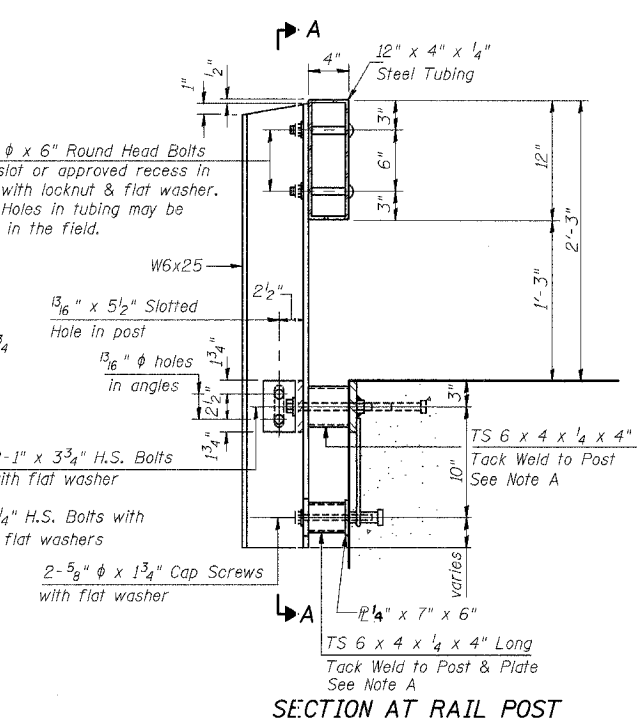
**VIEW A-A
ROUND HEAD BOLT**

OUTSIDE ELEVATION

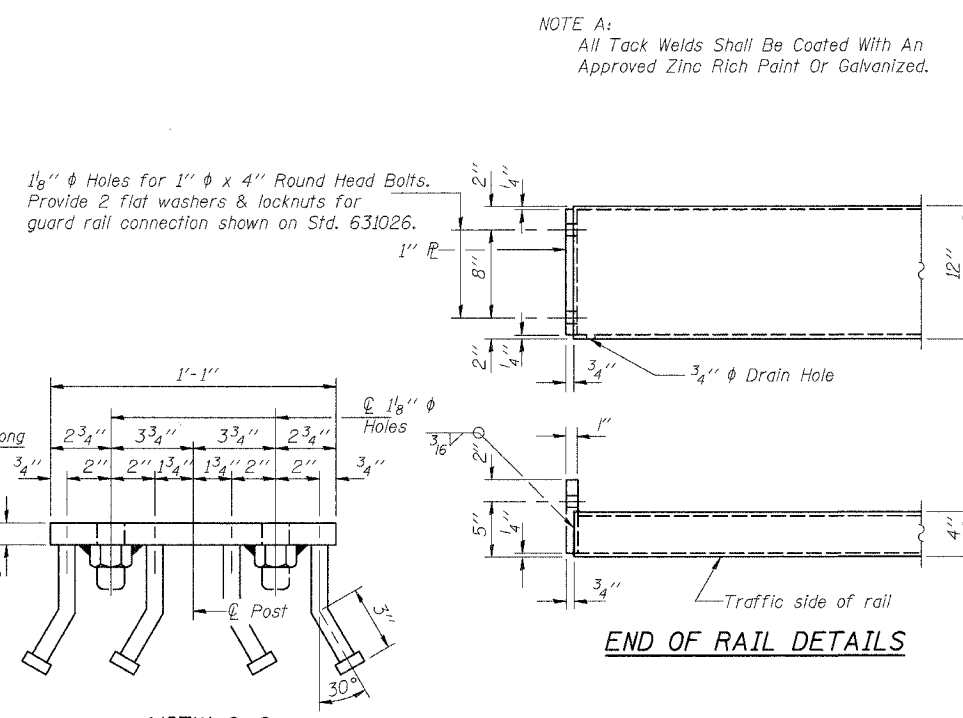
SECTION E-E



SECTION A-A



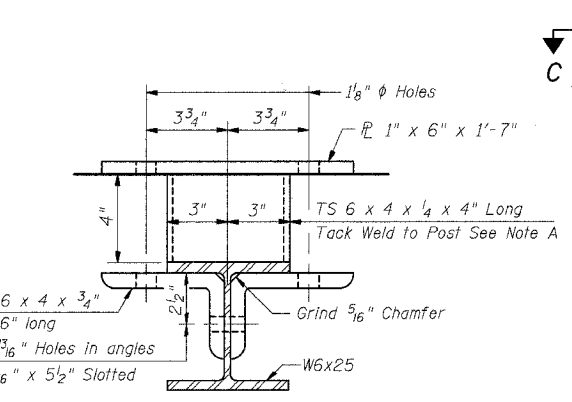
SECTION AT RAIL POST



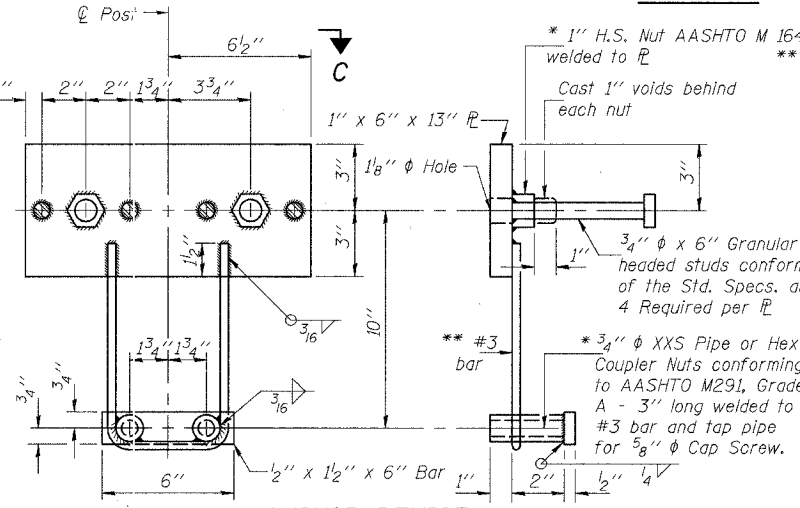
VIEW C-C

NOTE A:
All Tack Welds Shall Be Coated With An Approved Zinc Rich Paint Or Galvanized.

END OF RAIL DETAILS

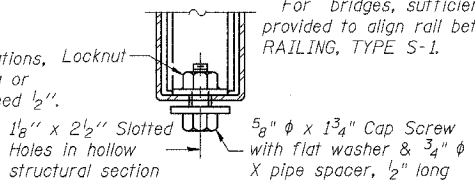


SECTION B-B

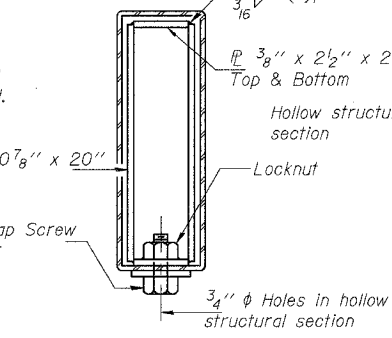


ANCHOR DEVICE

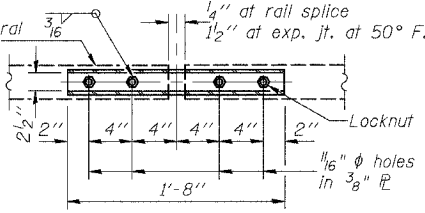
Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL

**CURLED END SECTION DETAILS
(COST INCIDENTAL TO TYPE S-1 RAIL)**

NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
 All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
 Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.
 All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
 All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
 Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL RAILING, TYPE S-1.
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pad between the post and concrete.
 The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(F)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.
 For bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with STEEL RAILING, TYPE S-1.

BILL OF MATERIAL

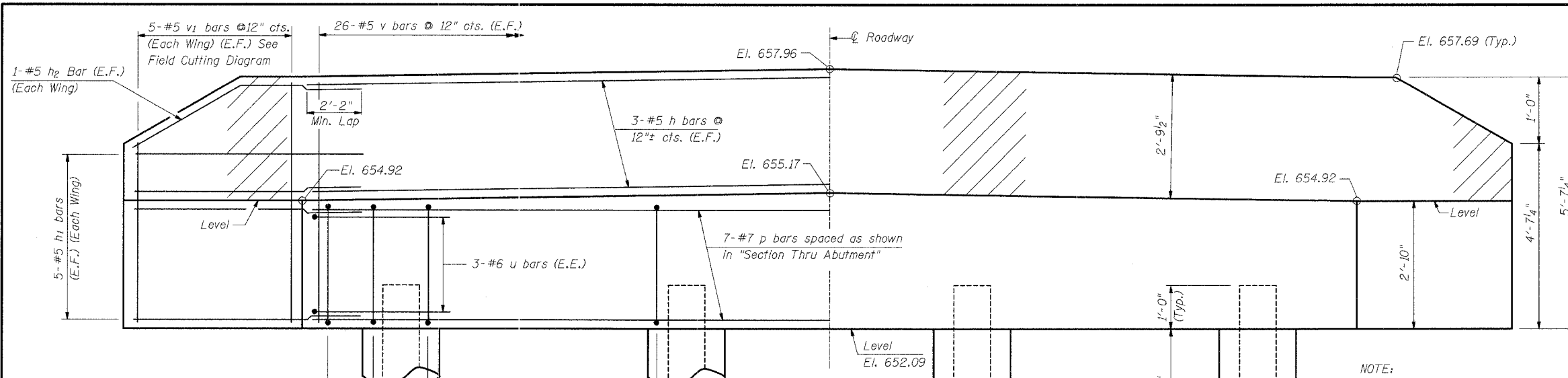
Item	Unit	Quantity
Steel Railing Type S-1	Foot	134

**STEEL RAILING TYPE S-1 DETAILS
T.R. 352 OVER SAND CREEK
SEC. 99-24115-00-BR
SHELBY COUNTY
S.N. 087-3513
STA. 10+00.00**

ie consultants
 DESIGNED: D.R.B. CHECKED: D.R.B.
 DRAWN: T.H.W. DATE: 5/25/05

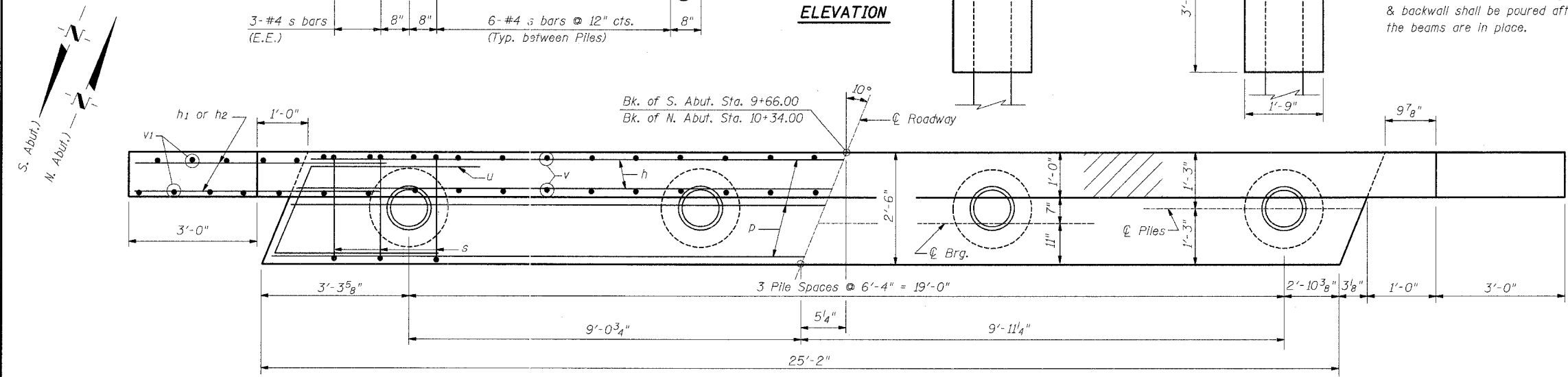
* Threaded areas shall be plugged or blocked off during casting of beam.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 352	99-24115-00-BR	SHELBY	15	15
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		

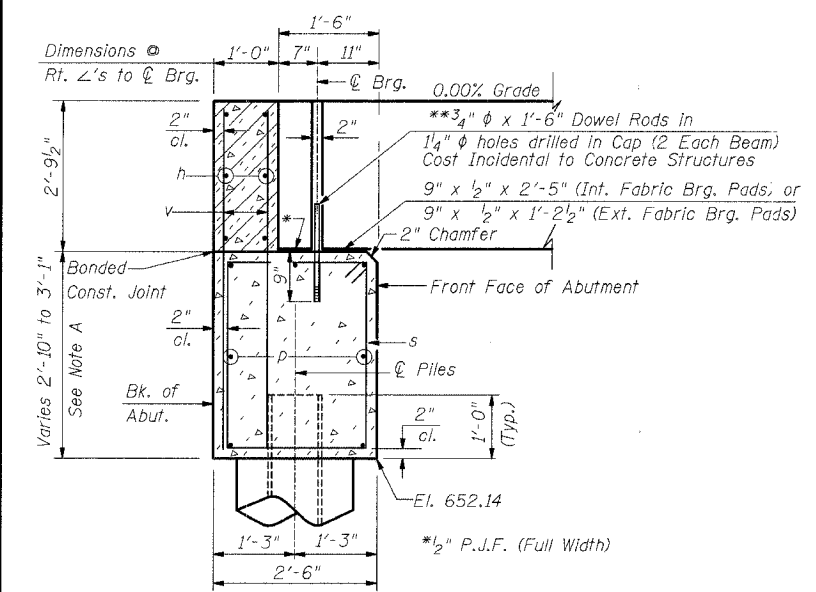


ELEVATION

NOTE:
The hatched area of the wingwalls & backwall shall be poured after the beams are in place.

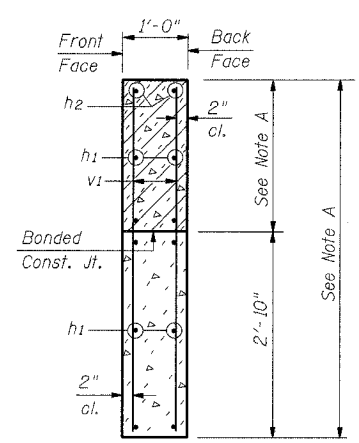


PLAN



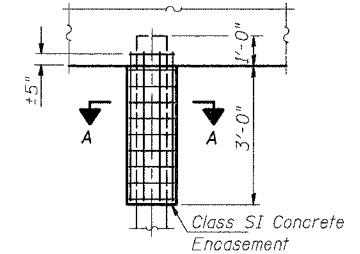
SECTION THRU ABUTMENT

** Dowel Rods to be grouted after beams are in place and prior to grouting the shear keys, using non-shrink grout.



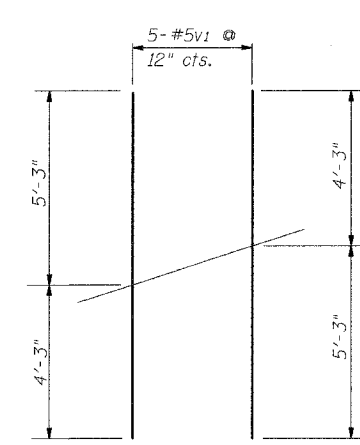
SECTION THRU WINGWALLS

NOTE A: See Elev. given on Elev. View



SECTION A-A

PILE ENCASEMENT DETAIL



FIELD CUTTING DIAGRAM

Order v1 bars full length, cut to fit in field and place remainder in opposite face of wall.

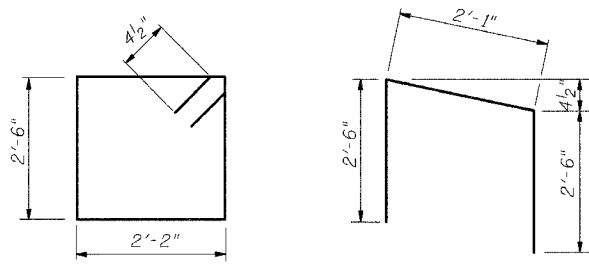
BILL OF MATERIAL
(2 Abutments)

Bar	No.	Size	Length	Shape
h	12	#5	24'-9"	—
h1	40	#5	6'-6"	—
h2	8	#5	6'-6"	—
p	14	#7	24'-9"	—
s	48	#4	10'-1"	□
u	12	#6	7'-1"	□
v	104	#5	5'-3"	—
v1	20	#5	9'-6"	—

ITEM	UNIT	QUANTITY
Reinforcement Bars	Pound	2570
Concrete Structures	Cu. Yd.	22.1
Furnishing Metal Pile Shells	Foot	282
Driving and Filling Shells	Foot	282
Test Pile Metal Shells	Each	2
Structure Excavation	Cu. Yd.	43
Concrete Encasement	Cu. Yd.	2.2

PILE DATA

- Type = 12" Dia Metal Shell Piles
- Capacity Required = 45 Ton
- Estimated Length = 39' (North Abut.), 55' (South Abut.)
- Number Req'd. = 8 (Including 1 Test Pile @ Each Abut.)



BAR s

BAR u

BAR h2

ABUTMENT DETAILS
T.R. 352 OVER SAND CREEK
SEC. 99-24115-00-BR
SHELBY COUNTY
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DESIGNED: D.R.B. CHECKED: D.R.B.
DRAWN: T.H.W. DATE: 5/25/05