06-10-2016 LETTING ITEM 217

INDEX OF SHEETS

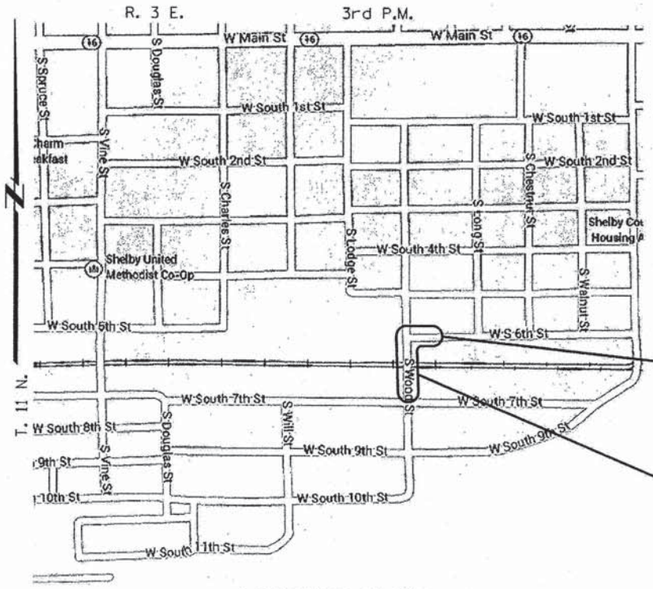
FOR STANDARDS SEE SHEET 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM

PROJECT NO. BRM-5086(006)
WOOD STREET (MS #7220A) OVER SIRS RAILROAD
CITY OF SHELBYVILLE
SECTION 12-00054-00-BR
SHELBY COUNTY
JOB NO. C-97-035-16

LOCATION OF SECTION INDICATED THUS:- ■



LOCATION PLAN

WOOD STREET LENGTH OF SECTION - 470.00 FEET = 0.089 MILES
6TH STREET LENGTH OF SECTION - 130.00 FEET = 0.025 MILES
NET LENGTH OF SECTION - 600.00 FEET = 0.114 MILES

0 1 2
SCALE: 1" = 1 MILE

SCALE IN FEET

0 50 100 = PROFILE - PLAN
0 50 100 = PROFILE - HORIZONTAL
0 5 10 = PROFILE - VERTICAL
0 5 10 = CROSS SECTIONS - HORIZONTAL
0 5 10 = CROSS SECTIONS - VERTICAL

FUNCTIONAL CLASSIFICATION: LOCAL ROAD
A.D.T. - 550 (2012)
A.D.T. - 650 (2032)
20 M.P.H. DESIGN SPEED

EXISTING STRUCTURE: TIMBER DECK ON CONCRETE ABUTMENTS WITH TIMBER CAPS. 14 TIMBER STRINGERS WITH STEEL ANGLES AT EVERY THIRD STINGER AT SPANS 1 & 6. SIX TIMBER PIERS WITH FOUR SUPPORTS AT 6'-6" SPACES, CROSS BRACING AND CONCRETE FOOTINGS AT EACH PIER. TIMBER CURBS AND RAILINGS. ±20'-3" WIDTH, ±136'-3" LENGTH, 0° SKEW.

PROPOSED STRUCTURE: SINGLE SPAN, PRECAST PRESTRESSED CONCRETE DECK BEAMS (21") 50'-3" BK. - BK. ABUTMENTS. 25'-0" CLEAR DECK WIDTH WITH CONCRETE CURB, TYPE 2399 STEEL RAILING. OPEN CONCRETE ABUTMENTS WITH MECHANICALLY STABILIZED EARTH ABUTMENT & APPROACH RETAINING WALLS, 0° SKEW.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED 04-11 .2016
MAYOR, CITY OF SHELBYVILLE

APPROVED 04-11 .2016
COUNTY ENGINEER, SHELBY COUNTY

PASSED 4-13 2016
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review 4/13 2016
REGION FOUR ENGINEER

CHRISTOPHER P. KOHLRUS
062-046558
LICENSED PROFESSIONAL ENGINEER OF
STATE OF ILLINOIS

Christopher P. Kohlrus 4/6/16
EXPIRATION: 11/30/2017

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

TOLL FREE
"JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS"
(J.U.L.I.E.) TELEPHONE NUMBER
1-800-892-0123

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IL. Design Firm No. 184-001939

TITLE SHEET

SHEET NO. 1 OF 49 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	1
STR. NO.		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

PROPERTY OWNER ACCESS REQUIREMENT

ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION PER ARTICLE 107.09 UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNERS WITH A COPY TO THE ENGINEER FOR SHORT-TERM CLOSURES.

GENERAL NOTES

1.) THE THICKNESS OF HOT-MIX ASPHALT MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

2.) EXCEPT AS NOTED IN THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

3.) 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 MARKERS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

4.) SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION. AREAS TO BE SEEDED SHALL BE DETERMINED BY THE ENGINEER AND SEEDED AS SOON AS POSSIBLE.

5.) ALL SAW CUTS, NECESSARY TO COMPLETE THE WORK DETAILED IN THESE PLANS, SHALL BE INCLUDED IN THE COST FOR THE VARIOUS PAY ITEMS INVOLVED. THE MINIMUM SAW CUT DEPTH IN THE PAVEMENT SHALL BE 1½" UNLESS UNLESS OTHERWISE SPECIFIED IN A DETAIL SHOWN IN THE PLANS.

6.) UNLESS DIRECTED BY THE ENGINEER, PAVEMENT MARKING LINES SHALL NOT BE LAID DIRECTLY OVER A LONGITUDINAL CRACK OR JOINT NOR OVER A TAR OR ASPHALT PAINTED LINE. THE EDGE OF A CENTERLINE OR LANE LINE SHALL BE OFFSET A MINIMUM DISTANCE OF 2" FROM A LONGITUDINAL CRACK OR JOINT. EDGE LINES SHALL BE APPROXIMATELY 2" FROM THE EDGE LINE OF PAVEMENT. SEE SECTION 780 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.

7.) ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

8.) ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED IN THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

9.) IN ADDITION TO THE FIELD SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

10.) THE 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 SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT, AND NO COMPENSATION WILL BE ALLOWED.

11.) THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY OTHERS AND IS INTENDED TO BE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBLITY TO COORDINATE HIS CONSTRUCTION ACTIVITIES WITH THE VARIOUS UTILITY OWNERS. ALL POTENTIAL CONFLICTS SHALL BE INVESTIGATED AND REMEDIAL ACTION TAKEN PRIOR TO INTERRUPTION OF THE CONTRACTOR'S PROGRESS.

12.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED.

13.) ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM. ALL STATION AND OFFSET REFERENCES ARE TO THE ROADWAY CENTERLINE UNLESS OTHERWISE NOTED. THE STATE PLANE COORDINATE SYSTEM HAS BEEN USED FOR THE HORIZONTAL CONTROL.

14.) THE CONTRACTOR SHALL DISPOSE OF SPOIL MATERIAL FROM PAVEMENT REMOVAL BY INCORPORATING IT INTO THE ROADWAY EMBANKMENT IN ACCORDANCE WITH SECTION 205 OF THE STANDARD SPECIFICATIONS. ANY SPOIL MATERIAL NOT MEETING THE REQUIREMENTS OF SECTION 205 SHALL BE DISPOSED OF BY THE CONTRACTOR OFF SITE AT NO ADDITIONAL COST TO THE CONTRACT.

15.) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16, THE CONTRACTOR SHALL PROTECT THE SURFACE OF THE BRIDGE DECK AND BRIDGE APPROACH PAVEMENT IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE.

16.) ONLY THOSE TREES LISTED FOR REMOVAL IN THE PLANS OR DESIGNATED BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL OTHER TREES, PLANTS OR WETLANDS FROM DAMAGE AT NO ADDITIONAL COST TO THE CONTRACT.

17.) THE CONTRACTOR SHALL MAINTAIN OR REPLACE (IF SPECIFIED BY THE ENGINEER) SEDIMENT CONTROL ITEMS.

a. THE TEMPORARY EROSION CONTROL SYSTEMS INSTALLED BY THE CONTRACTOR SHALL BE PROPERLY MAINTAINED AS DIRECTED BY THE ENGINEER TO CONTROL SILTATION AT ALL TIMES DURING THE LIFE OF THE CONTRACT. THIS WORK SHALL INCLUDE REPAIR OF THE VARIOUS SYSTEMS, REMOVAL OF TRAPPED SEDIMENT AND CLEANING OF ANY SILT FILTER FABRIC, DITCH CHECKS AND INLET AND PROTECTION DEVICES.

b. IF THE CONTRACTOR FAILS TO MAINTAIN THE TEMPORARY EROSION CONTROL SYSTEMS AS DIRECTED BY THE ENGINEER, THE ENGINEER MAY AT THE EXPIRATION OF A PERIOD OF 48 HOURS, AFTER HAVING GIVEN THE CONTRACTOR WRITTEN NOTICE, PROCEED TO MAINTAIN THE SYSTEMS AS DEEMED NECESSARY, AND THE COST THEREOF WILL BE DEDUCTED FROM ANY COMPENSATION DUE, OR WHICH MAY BECOME DUE TO THE CONTRACTOR UNDER HIS CONTRACT.

18. ACCESS TO ALL ENTRANCES SHALL BE MAINTAINED AT ALL TIMES. SPECIAL ATTENTION IS CALLED TO THE COMMERCIAL ENTRANCE AT STA. 9+07.5 LT. BEFORE THIS ENTRANCE CAN BE CLOSED COORDINATION WITH THE OWNER MUST OCCUR. AT NO TIME DURING CONSTRUCTION CAN THIS ENTRANCE BE CLOSED WITHOUT THE CONSENT OF P & H INCORPORATED PERSONNEL.

19. ALL TRENCHES WITHIN THE RIGHT-OF-WAY OF THE EXISTING OR PROPOSED STREETS SHALL BE BACKFILLED WITH TRENCH BACKFILL. THE AREA UNDERNEATH THE ROADWAY SHALL BE CAPPED WITH 12" OF CA-6. THE TRENCH BACKFILL AND CA-6 SHALL BE INCLUDED IN THE UNIT PRICE BID FOR TRENCH BACKFILL. TRENCH BACKFILL SHALL BE PLACED IN LAYERS NOT EXCEEDING SIX (6) INCHES IN DEPTH AND THEN COMPACTED TO THE SATISFACTION OF THE ENGINEER.

20. PIPE CRADLE AND SELECT GRANULAR BACKFILL SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR STORM SEWERS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

21. EROSION CONTROL DEVICES SHALL BE IN PLACE AND APPROVED BY THE ENGINEER AS TO PROPER PLACEMENT AND INSTALLATION PRIOR TO BEGINNING OTHER WORK.

22. THE ENGINEER WILL DETERMINE WHEN TEMPORARY EROSION CONTROL SYSTEMS SHOWN ON THE PLAN MAY BE MOVED TO A DIFFERENT LOCATION OR DELETED.

STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-08	PAVEMENT JOINTS
420601-06	24' JOINTED PCC PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
602301-04	INLET, TYPE A
602306-03	INLET, TYPE B
602401-03	MANHOLE, TYPE A
602601-04	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604036-03	GRATE, TYPE 8
606201-03	TYPE A GUTTER (INLET, OUTLET AND ENTRANCE)
630001-10	STEEL PLATE BEAM GUARDRAIL
630101-09	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635001-02	DELINEATORS
664001-02	CHAIN LINK FENCE
701901-05	TRAFFIC CONTROL DEVICES
725001	OBJECT AND TERMINAL MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
606001-06	CONCRETE CURB TYPE B

LIST OF UTILITIES

MR. JASON RHODES
CONSOLIDATED COMMUNICATIONS
121 SOUTH 17TH STREET
MATTOON, ILLINOIS 61938
217-273-9971

NEW WAVE COMMUNICATIONS
100 S. MAIN
SIKESTON, MO 63801

MR. CLINT FREDRICK
AMEREN CIPS
420 N 2400 EAST ROAD
PANA, ILLINOIS 62557
217-273-0906

MR. SCOTT KELLER
CITY OF SHELBYVILLE WATER DEPARTMENT
110 SOUTH MORGAN STREET
SHELBYVILLE, ILLINOIS 62565
217-774-5131

MR. KENDALL SNYDER
CITY OF SHELBYVILLE SEWER DEPARTMENT
110 SOUTH MORGAN STREET
SHELBYVILLE, ILLINOIS 62565
217-774-5131

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE THE PLAN QUANTITIES:

BITUMINOUS MATERIALS (COVER AND SEAL COAT)	0.35 GAL/SQ. YD. (ON PAVEMENT)
BITUMINOUS MATERIALS (PRIME COAT)	0.375 GAL/SQ. YD. (ON AGG.)
HOT MIX ASPHALT SURFACE / BINDER	112 LBS/SQ. YD. PER 1"
AGGREGATE BASE COURSE	2.0 TON/CU. YD.
RIPRAP	0.67 TON/CU. YD.
NITROGEN FERTILIZER NUTRIENT	90 LBS./ACRE
PHOSPHOROUS FERTILIZER NUTRIENT	90 LBS./ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS./ACRE
COVER AND SEAL COAT AGGREGATE	25 LBS./SQ. YD.

MIXTURE REQUIREMENTS

MIXTURE USE(S)	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N70
AC/PG	PG 64-22
DESIGN AIR VOIDS	4.0% @ N DESIGN = 70
MIXTURE COMPOSITION	IL 9.5
FRICTION AGGREGATE	MIX C

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GENERAL NOTES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	2
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.1
20200100	EARTH EXCAVATION	CU YD	139
20400800	FURNISHED EXCAVATION	CU YD	180
20700110	POROUS GRANULAR EMBANKMENT	TON	1352
20800150	TRENCH BACKFILL	CU YD	229
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	50
28000400	PERIMETER EROSION BARRIER	FOOT	472
28000500	INLET AND PIPE PROTECTION	EACH	8
35100100	AGGREGATE BASE COURSE, TYPE A	TON	864

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SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 5 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	3
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
40300200	BITUMINOUS MATERIALS (PRIME COAT)	TON	1.9
40300400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	3.8
40300500	COVER COAT AGGREGATE	TON	16
40300600	SEAL COAT AGGREGATE	TON	16
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	15
42000300	PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	125
42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	355
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	364
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	28
44000600	SIDEWALK REMOVAL	SQ FT	21
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	778
50300225	CONCRETE STRUCTURES	CU YD	38.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	14.2

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SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 2 OF 5 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	4
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
50300300	PROTECTIVE COAT	SQ YD	29
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1276
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	5200
△ 50900200	STEEL RAILING, TYPE 2399	FOOT	101
51201400	FURNISHING STEEL PILES HP10X42	FOOT	648
51202305	DRIVING PILES	FOOT	648
51203400	TEST PILE STEEL HP10X42	EACH	2
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	26
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	445
52200500	MECHANICALLY STABILIZED EARTH RETAINING WALL	SQ FT	6361
54011009	PRECAST CONCRETE BOX CULVERTS 10' X 9'	FOOT	41
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	1
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	1

△ SPECIALTY ITEMS

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PLOT DATE = $DATE$ | DATE - | REVISED -

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SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 3 OF 5 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	5
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
	550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	128
	550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	70
	550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	210
	550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	94
	58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	124
	58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	378
	58700300	CONCRETE SEALER	SQ FT	242
	60219000	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 8 GRATE	EACH	1
	60221700	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 8 GRATE	EACH	1
	60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	4
	60240301	INLETS, TYPE B, TYPE 8 GRATE	EACH	2
	60602800	CONCRETE GUTTER, TYPE B	FOOT	444
△	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	75
△	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4

△ SPECIALTY ITEMS

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SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 4 OF 5 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	6
		CONTRACT NO. 95772		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
△	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
△	66400305	CHAIN LINK FENCE, 6'	FOOT	328
△	66407600	CHAIN LINK GATES, 6' X 12' DOUBLE	EACH	1
△	66407900	CHAIN LINK GATES, 6' X 18' DOUBLE	EACH	1
△	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	89
△	66900450	SPECIAL WASTE PLAN AND REPORTS	L. SUM	1
△	66900530	SOIL DISPOSAL ANALYSIS	EACH	1
	67100100	MOBILIZATION	L SUM	1
△	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
△	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	8
	XX009106	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 4 INCH, SPECIAL	SQ YD	16
	X2830495	AGGREGATE DITCH (SPECIAL)	TON	49
	X6060097	CLASS SI CONCRETE (OUTLET), SPECIAL	CU YD	0.9
△	Z0022800	FENCE REMOVAL	FOOT	417
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

△ SPECIALTY ITEMS

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	SUMMARY OF QUANTITIES	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	7
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -						CONTRACT NO. 95772		
	PLOT DATE = $DATE$	DATE -	REVISED -			SCALE: NONE SHEET NO. 5 OF 5 SHEETS STA. _____ TO STA. _____	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

PERMANENT SEEDING & TEMPORARY EROSION CONTROL ITEMS

LOCATION	SEEDING CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH METHOD 2	TEMPORARY EROSION CONTROL SEEDING	PERIMETER EROSION BARRIER
	ACRE	POUND	POUND	POUND	ACRE	POUND	FOOT
STA. 5+40 TO STA. 7+11.17 LT.	0.09	8	8	8	0.09	11	
STA. 5+40 TO STA. 7+11.17 RT.	0.09	8	8	8	0.09	11	
STA. 7+61.42 TO STA. 10+10 LT.	0.09	8	8	8	0.09	11	
STA. 7+61.42 TO STA. 10+10 RT.	0.10	9	9	9	0.10	12	
STA. 30+30 TO STA. 31+40 (6TH ST.)	0.03	3	3	3	0.03	5	
STA. 5+50 30' LT. TO STA. 6+57 30' LT. TO 45' LT.							122
STA. 5+50 25' RT. TO STA. 6+65 25' RT. TO 50' RT.							140
STA. 8+00 30' LT. TO STA. 8+95 30' LT.							95
STA. 7+65 30' RT. TO STA. 8+80 30' RT.							115
TOTAL	0.40	36	36	36	0.40	50	472

AGGREGATE BASE COURSE, TYPE A

LOCATION	AGGREGATE BASE COURSE, TYPE A	BITUMINOUS MATERIALS (PRIME COAT)	COVER COAT	SEAL COAT	BITUMINOUS COVER AND SEAL COATS
	TON	TON	TON	TON	TON
STA. 5+40 TO STA. 7+11.11	290	0.6	5	5	1.3
STA. 7+61.42 TO STA. 9+38.8	285	0.6	5	5	1.3
STA. 30+10 TO STA. 31+40 (6TH ST)	265	0.6	5	5	1.1
STA. 9+95.1 TO STA. 10+10	24	0.1	1	1	0.1
TOTAL	864	1.9	16	16	3.8

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE ASSUME 25%	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 5+40 TO STA. 5+58.50	2	1	0	1
STA. 5+58.50 TO STA. 5+75	4	3	1	2
STA. 5+75 TO STA. 6+00	3	2	8	-6
STA. 6+00 TO STA. 6+25	2	1	15	-14
STA. 6+25 TO STA. 6+39	3	2	18	-16
STA. 6+39 TO STA. 6+50	1	1	9	-8
STA. 6+50 TO STA. 6+60	0	0	9	-9
STA. 6+60 TO STA. 6+75	0	0	14	-14
STA. 6+75 TO STA. 7+00	0	0	28	-28
STA. 7+00 TO STA. 7+11.17	0	0	12	-12
BRIDGE OMISSION - STA. 7+11.17 TO STA. 7+61.42				
STA. 7+61.41 TO STA. 7+75	0	0	19	-19
STA. 7+75 TO STA. 7+88.87	0	0	23	-23
STA. 7+88.87 TO STA. 8+00.20	75	56	7	49
STA. 8+00.20 TO STA. 8+25	8	6	24	-18
STA. 8+25 TO STA. 8+50	5	4	29	-25
STA. 8+50 TO STA. 8+75	1	1	32	-31
STA. 8+75 TO STA. 9+00	1	1	56	-55
STA. 9+00 TO STA. 9+25	1	1	74	-73
STA. 9+25 TO STA. 9+40	1	1	29	-28
STA. 9+40 TO STA. 9+50	0	0	10	-10
STA. 9+50 TO STA. 9+75	7	5	10	-5
STA. 9+75 TO STA. 10+00	12	9	1	8
STA. 10+00 TO STA. 10+10	5	4	0	4
6TH STREET				
STA. 30+12 TO STA. 30+25	0	0	27	-27
STA. 30+25 TO STA. 30+50	0	0	85	-85
STA. 30+50 TO STA. 31+00	6	4	70	-66
STA. 31+00 TO STA. 31+25	1	1	3	-2
STA. 31+25 TO STA. 31+40	1	1	1	0
TOTAL	139	104	614	180•

• QUANTITY HAS BEEN REDUCED BY 330 CU. YDS. OF SUITABLE STRUCTURE EXCAVATION (±50%)

STORM SEWERS

LOCATION	STORM SEWERS, CLASS A, TYPE 1 12"	STORM SEWERS, CLASS A, TYPE 2 12"	STORM SEWERS, CLASS A, TYPE 2 15"	STORM SEWERS, CLASS A, TYPE 2 18"	PRC FLARED END SECTION 15"	PRC FLARED END SECTION 18"
	FOOT		FOOT	FOOT	EACH	EACH
STA. 5+75 16.5' LT. TO STA. 5+75 27.3' RT.	36					
STA. 8+75 27.3' RT. TO STA. 9+00 26' LT.	56					
STA. 9+99.5 19' LT. TO STA. 9+99.5 18.6' RT.	36					
STA. 5+76 27.3' RT. TO STA. 6+66 27.3' RT.			90		1	
STA. 9+32 27.3' RT. TO STA. 9+99.5 18.6' RT.			66			
STA. 8+76 27.3' RT. TO STA. 9+32 27.3' RT.			54			
STA. 7+80 27.3' RT. TO STA. 8+74 27.3' RT.				94		1
STA. 9+32 27.3' RT. TO STA. 30+99 18.3' LT.		70				
TOTAL	128	70	210	94	1	1

MANHOLES & INLETS

LOCATION	MANHOLES, TYPE A, 5' DIAMETER, TYPE 8 GRATE	MANHOLES, TYPE A, 4' DIAMETER, TYPE 8 GRATE	INLETS, TYPE A, TYPE 8 GRATE	INLETS, TYPE B, TYPE 8 GRATE	INLETS AND PIPE PROTECTION
	EACH	EACH	EACH	EACH	EACH
STA. 8+75 27.3' RT.	1				1
STA. 5+75 16.5' LT.			1		1
STA. 9+00 26' LT.			1		1
STA. 9+99.5 19' LT.			1		1
STA. 5+75 21.3' RT.				1	1
STA. 30+27 18.3' LT. (6TH ST)			1		1
STA. 9+99.5 18.6' RT.				1	1
STA. 9+32 27.3' RT.		1			1
TOTAL	1	1	4	2	8

TRENCH BACKFILL

LOCATION	QUANTITY (CU. YD.)
STA. 5+75 16' LT. TO STA. 5+75 21' RT.	7
STA. 5+76 27' RT. TO STA. 6+60 27' RT.	32
STA. 7+78 27' RT. TO STA. 8+74 27' RT.	63
STA. 8+75 27' RT. TO STA. 9+00 26' LT.	54
STA. 8+76 27' RT. TO STA. 9+30 27' RT.	39
STA. 9+26 27' RT. TO STA. 10+10 19' RT.	19
STA. 10+10 18' RT. TO STA. 10+10 18' LT.	7
STA. 9+32 25' RT. TO STA. 30+99 18' LT.	8
TOTAL	229

NOTE: ALL STORM SEWER TO BE BACKFILLED WITH TRENCH BACKFILL

TREE REMOVAL

LOCATION	QUANTITY (ACRE)
STA. 6+61 TO STA. 6+96 48' RT.	0.06
STA. 6+56 TO STA. 6+98 44' LT.	0.02
STA. 7+62 TO STA. 7+72 35' LT.	0.02
TOTAL	0.1

AGGREGATE DITCH (SPECIAL)

LOCATION	AGGREGATE DITCH (SPECIAL)
	TON
STA. 6+36 19' RT. TO STA. 7+20 27' RT.	38
STA. 7+52 TO STA. 7+76 24' RT. TO 30' RT.	11
TOTAL	49

PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT

LOCATION	8" QUANTITY (SQ. YD.)	6" QUANTITY (SQ. YD.)
C.E. STA. 9+67 LT.	101	
C.E. STA. 9+67 RT.	107	
C.E. STA. 30+73 LT.	66	
C.E. STA. 30+87.5 RT.	63	
C.E. STA. 31+16.5 LT.	27	
PARKING LOT NE CORNER 6TH & WOOD ST		322
STA. 7+89 TO STA. 8+01 RT.		14
STA. 7+89 TO STA. 8+13 LT.		19
TOTAL	364	355

PORTLAND CEMENT CONCRETE PAVEMENT 8"

LOCATION	QUANTITY (SQ. YD.)
STA. 9+38.8 TO STA. 9+95.1	125
TOTAL	125

FILE NAME = $FILEL$
USER NAME = $USER$
PLOT SCALE = $SCALE$
PLOT DATE = $DATE$
DESIGNED -
DRAWN -
CHECKED -
DATE -
REVISED -
REVISED -
REVISED -
REVISED -

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IL. Design Firm No. 184-001939

QUANTITY SCHEDULES, TIES & BENCHMARKS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	8
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

GUARDRAIL				
LOCATION	STEEL PLATE BEAM GUARDRAIL, TYPE A 9' POSTS	TRAFFIC BARRIER TERMINAL, TYPE 6A	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TERMINAL MARKER - DIRECT APPLIED
	FOOT	EACH	EACH	EACH
STA. 6+29.9 TO STA. 6+67.4 12' LT.	37.5			
STA. 8+05.2 TO STA. 8+42.7 12' LT.	37.5			
STA. 6+67.4 TO STA. 7+11.11 12' LT. & RT.		2		
STA. 7+61.42 TO STA. 8+05.2 12' LT. & RT.		2		
STA. 5+79.9 TO STA. 6+29.9 12' LT.			1	1
STA. 6+17.4 TO STA. 6+67.4 12' RT.			1	1
STA. 8+05.2 TO STA. 8+55.2 12' RT.			1	1
STA. 8+42.7 TO STA. 8+92.7 12' LT.			1	1
TOTAL	75	4	4	4

CHAIN LINK GATES		
LOCATION	6' X 12' DOUBLE	6' X 18' DOUBLE
	EACH	EACH
STA. 30+87.5 LT.	1	
STA. 9+67 LT.		1
TOTAL	1	1

CHAIN LINK FENCE 6'	
LOCATION	QUANTITY (FOOT)
STA. 7+87 33' RT. TO STA. 7+87 17' RT.	16
STA. 7+85 29' LT. TO STA. 7+87 17' LT.	12
STA. 8+05 29' LT. TO STA. 8+17 29' LT.	15
STA. 8+17 29' LT. TO STA. 9+50 29' LT.	133
STA. 9+85 29' LT. TO STA. 10+17 29' LT.	32
STA. 8+00 21' RT. TO STA. 8+13 29' RT.	17
STA. 8+13 29' RT. TO STA. 8+78 30' RT.	65
STA. 8+78 30' RT. TO STA. 30+70 26' RT.	38
TOTAL	328

FENCE REMOVAL	
LOCATION	QUANTITY (FOOT)
STA. 7+87 33' RT. TO STA. 7+85 29' LT.	62
STA. 8+01 13' RT. TO STA. 31+05 26' RT. (6TH ST.)	161
STA. 8+01 10' LT. TO STA. 9+86 30' LT.	194
TOTAL	417

NON-SPECIAL WASTE DISPOSAL	
LOCATION	QUANTITY (CU. YD.)
STA. 7+53 32' RT. TO STA. 7+83 42' RT.	89
TOTAL	89 •

• ESTIMATED QUANTITY AND LOCATION

CLASS SI CONCRETE (OUTLET) SPECIAL	
LOCATION	QUANTITY (CU. YD.)
STA. 6+39 24.2' RT. TO STA. 6+45 19.5' RT.	0.2
STA. 8+94.1 19.5' LT. TO STA. 9+00 25' LT.	0.3
STA. 8+70 19.5' RT. TO STA. 8+75 27' RT.	0.4
TOTAL	0.9

CONCRETE GUTTER, TYPE B	
LOCATION	QUANTITY (FOOT)
STA. 5+75 16.5' LT. TO STA. 7+11.11 16.5' RT.	136
STA. 6+45 19' RT. TO STA. 7+11.11 19' RT.	66
STA. 7+61.42 18.5' LT. TO STA. 8+94.1 19' LT.	133
STA. 7+61.42 18.5' RT. TO STA. 8+70 18.5' RT.	109
TOTAL	444

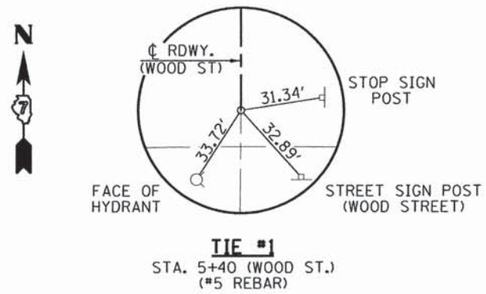
DRIVEWAY PAVEMENT REMOVAL	
LOCATION	QUANTITY (SQ YD)
STA. 30+99.3 TO STA. 31+31.5 LT.	28
TOTAL	28

SIDEWALK REMOVAL	
LOCATION	QUANTITY (SQ FT)
STA. 30+77.8 TO STA. 30+84 LT.	21
TOTAL	21

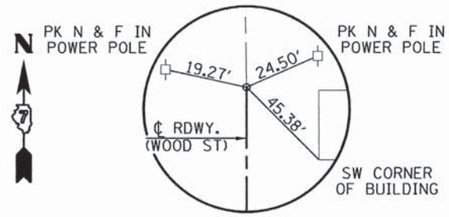
PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 4 INCH, SPECIAL	
LOCATION	QUANTITY (SQ YD)
STA. 7+89.70 TO STA. 7+99.70 (FLOOR OF BOX CULVERT)	16
TOTAL	16

POROUS GRANULAR EMBANKMENT	
LOCATION	QUANTITY (TON)
STA. 6+00 TO STA. 6+25	57
STA. 6+25 TO STA. 6+39	55
STA. 6+39 TO STA. 6+50	57
STA. 6+50 TO STA. 6+60	59
STA. 6+60 TO STA. 6+75	164
STA. 6+75 TO STA. 7+11.17	362
BRIDGE OMISSION - STA. 7+11.17 TO STA. 7+61.42	
STA. 7+61.42 TO STA. 7+92.9	241
STA. 7+92.9 TO STA. 8+00	35
STA. 8+00 TO STA. 8+25	113
STA. 8+25 TO STA. 8+50	106
STA. 8+50 TO STA. 8+75	103
TOTAL	1352

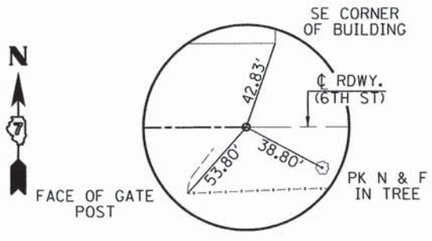
STRUCTURE ECAVATION	
LOCATION	QUANTITY (CU. YD.)
STA. 6+00 TO STA. 6+25	33
STA. 6+25 TO STA. 6+39	18
STA. 6+39 TO STA. 6+50	15
STA. 6+50 TO STA. 6+60	50
STA. 6+60 TO STA. 6+75	102
STA. 6+75 TO STA. 7+11.17	241
BRIDGE OMISSION - STA. 7+11.17 TO STA. 7+61.42	
STA. 7+61.42 TO STA. 7+92.9	126
STA. 7+92.9 TO STA. 8+00	0
STA. 8+00 TO STA. 8+25	92
STA. 8+25 TO STA. 8+50	73
STA. 8+50 TO STA. 8+75	28
TOTAL	778



TIE #1
STA. 5+40 (WOOD ST.)
(#5 REBAR)



TIE #2
STA. 10+10 (WOOD ST.)
(#5 REBAR)



TIE #3
STA. 31+40 (6TH ST.)
(#5 REBAR)

BENCHMARKS: BM#1 - R.R. SPIKE IN POWER POLE
25' RT. STA. 8+68 EL. 112.29

BM#2 - PAINTED "X" ON PIER #4 CAP
22' RT. STA. 7+51 EL. 121.34

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	QUANTITY SCHEDULES, TIES & BENCHMARKS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				T220A	12-00054-00-BR	SHELBY	49	9
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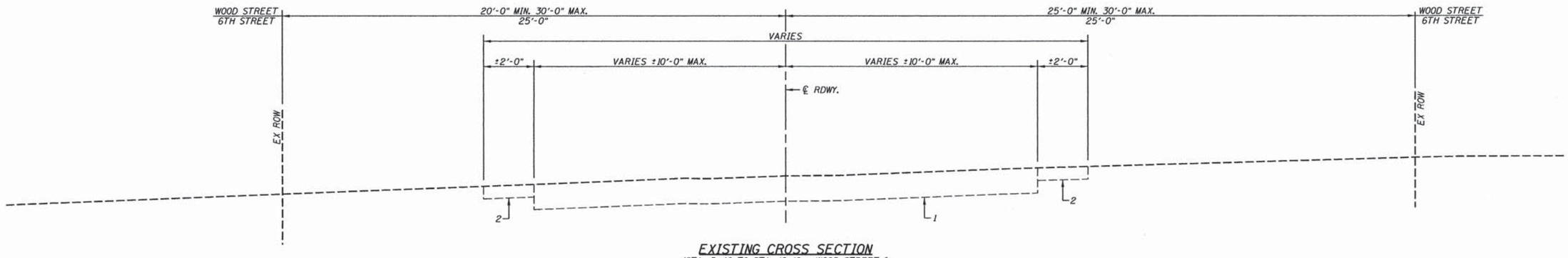
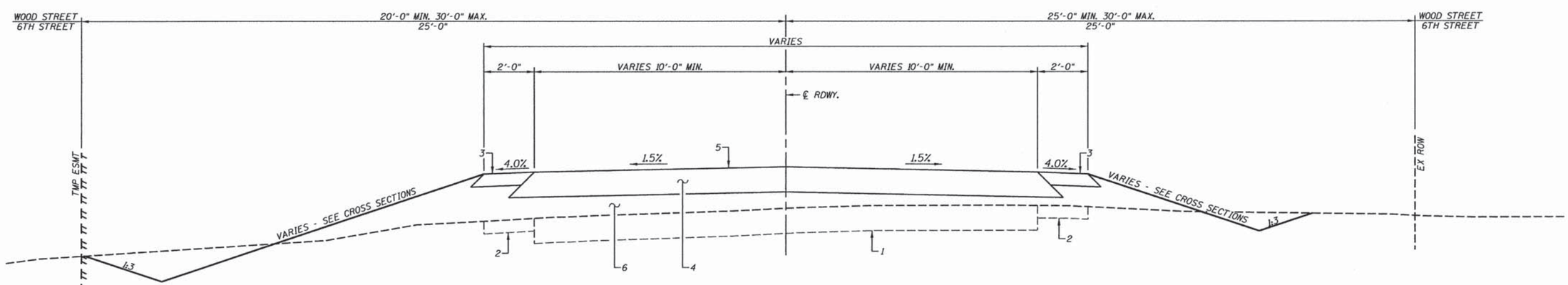
	PLOT DATE = $DATE$	DATE -	REVISED -			SCALE: NONE / SHEET NO. 2 OF 2 SHEETS / STA. ____ TO STA. ____	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



EXISTING CROSS SECTION

(STA. 5+40 TO STA. 10+10 - WOOD STREET &
STA. 30+12 TO STA. 31+40 - 6TH STREET)



PROPOSED CROSS SECTION #1

(STA. 5+40 TO STA. 6+17.42 & STA. 5+40 TO STA. 5+79.92 LT.
& STA. 8+55.17 TO STA. 9+38.8 RT.)
& STA. 8+92.67 TO STA. 9+38.8 LT. &
STA. 9+95.1 TO STA. 10+10 LT. & RT. - WOOD STREET &
STA. 30+12 TO STA. 31+40 - 6TH STREET)

LEGEND

1 - EX OIL & CHIP PAVEMENT
2 - EX AGGREGATE SHLDR
3 - PR AGGREGATE BASE COURSE, TYPE A 6"
4 - PR AGGREGATE BASE COURSE, TYPE A 12" MIN.
5 - PR BITUMINOUS SURFACE TREATMENT, CLASS A-2
6 - PR EMBANKMENT
7 - PR POROUS GRANULAR EMBANKMENT
8 - PR REINFORCED EARTH
9 - PR MSE WALL
10 - PR GUTTER, TYPE B
11 - PR PORTLAND CEMENT CONCRETE PAVEMENT 8"

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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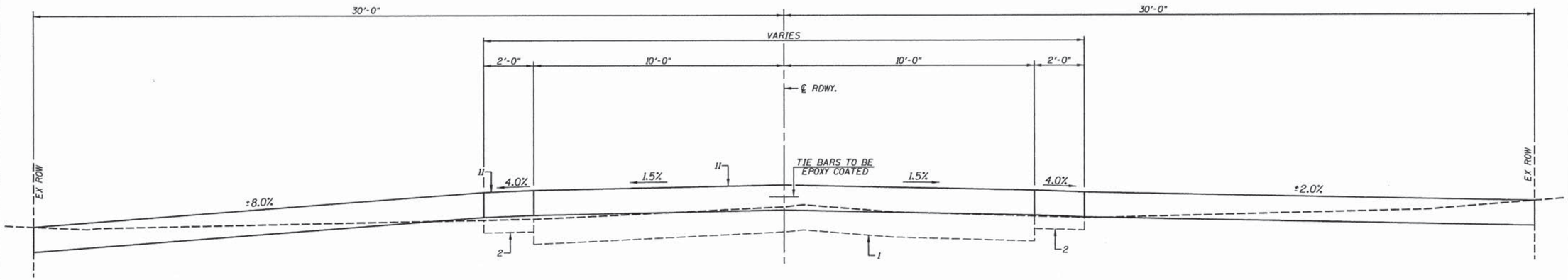
IL. Design Firm No. 184-001939

TYPICAL SECTIONS

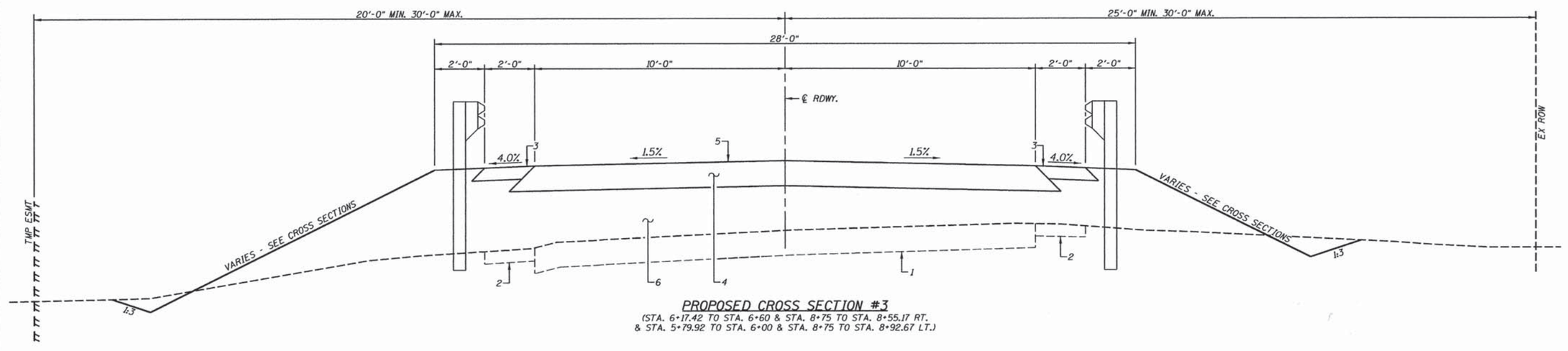
SCALE: _____ | SHEET NO. 1 OF 4 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	10
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



PROPOSED CROSS SECTION #2

(STA. 9+38.8 TO STA. 9+95.1 - WOOD STREET)
(CONSTRUCT PER STD. 420601)



PROPOSED CROSS SECTION #3

(STA. 6+17.42 TO STA. 6+60 & STA. 8+75 TO STA. 8+55.17 RT.
& STA. 5+79.92 TO STA. 6+00 & STA. 8+75 TO STA. 8+92.67 LT.)

LEGEND

1 - EX OIL & CHIP PAVEMENT
2 - EX AGGREGATE SHLDR
3 - PR AGGREGATE BASE COURSE, TYPE A 6"
4 - PR AGGREGATE BASE COURSE, TYPE A 12" MIN.
5 - PR BITUMINOUS SURFACE TREATMENT, CLASS A-2
6 - PR EMBANKMENT
7 - PR POROUS GRANULAR EMBANKMENT
8 - PR REINFORCED EARTH
9 - PR MSE WALL
10 - PR GUTTER, TYPE B
11 - PR PORTLAND CEMENT CONCRETE PAVEMENT 8"

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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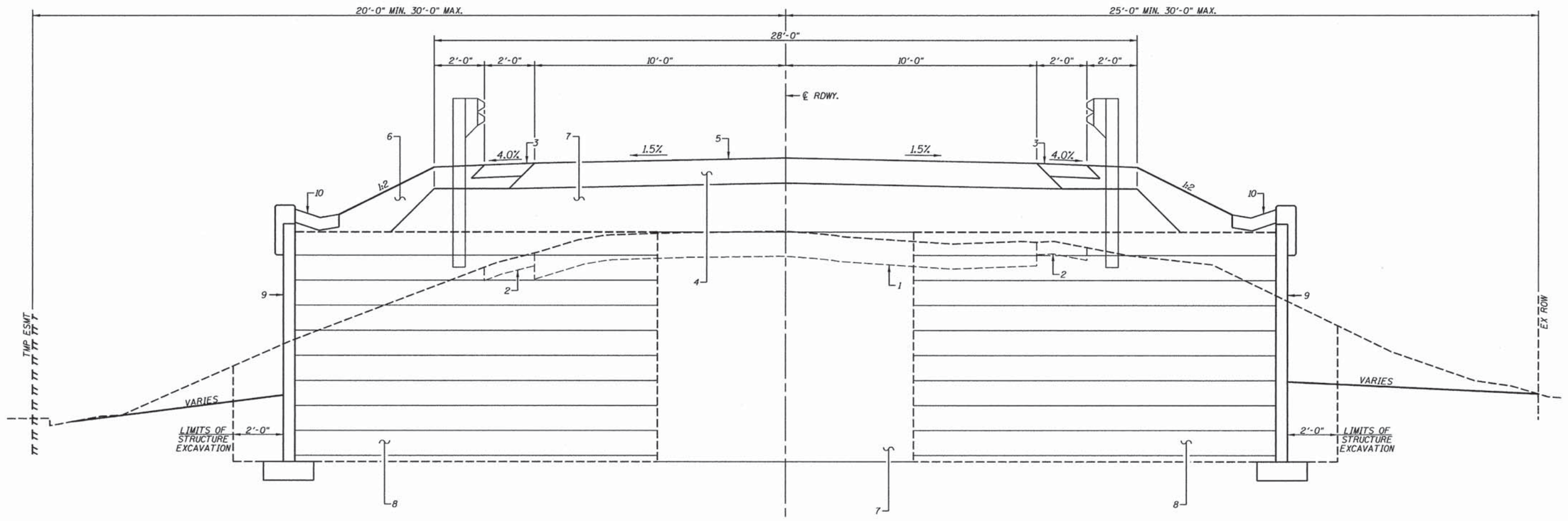
IL. Design Firm No. 184-001939

TYPICAL SECTIONS

SCALE: _____ | SHEET NO. 2 OF 4 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	11
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



PROPOSED CROSS SECTION #4

(STA. 6+60 TO STA. 7+11.17, STA. 7+61.42 TO STA. 8+50 RT.,
STA. 6+00 TO STA. 7+11.17 & STA. 7+61.42 TO STA. 8+75 LT.)

LEGEND

1 - EX OIL & CHIP PAVEMENT
2 - EX AGGREGATE SHLDR
3 - PR AGGREGATE BASE COURSE, TYPE A 6"
4 - PR AGGREGATE BASE COURSE, TYPE A 12" MIN.
5 - PR BITUMINOUS SURFACE TREATMENT, CLASS A-2
6 - PR EMBANKMENT
7 - PR POROUS GRANULAR EMBANKMENT
8 - PR REINFORCED EARTH
9 - PR MSE WALL
10 - PR GUTTER, TYPE B
11 - PR PORTLAND CEMENT CONCRETE PAVEMENT 8"

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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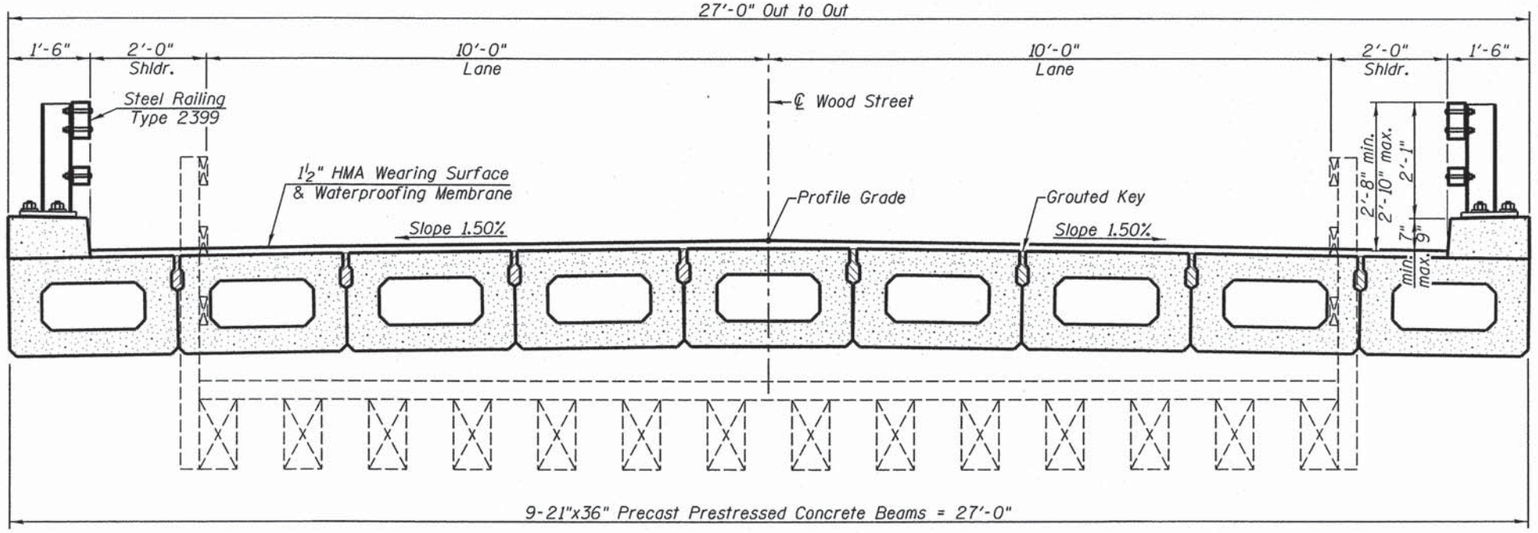
TYPICAL SECTIONS

SCALE: _____ | SHEET NO. 3 OF 4 SHEETS | STA. _____ TO STA. _____

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T220A	12-00054-00-BR	SHELBY	49	12

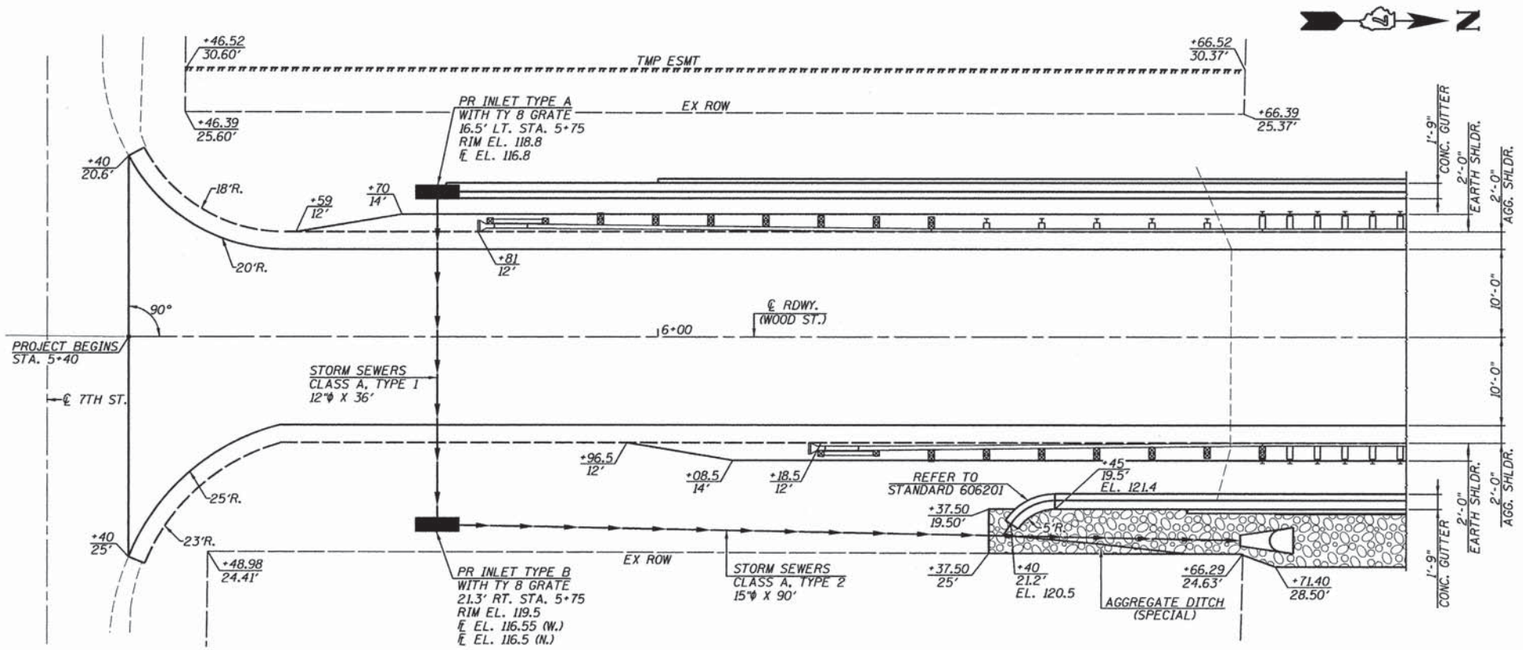
CONTRACT NO. 95792

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

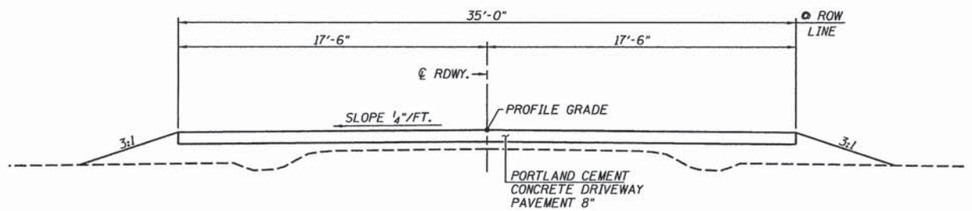


HALF CROSS SECTION
(Looking North = Upstation)

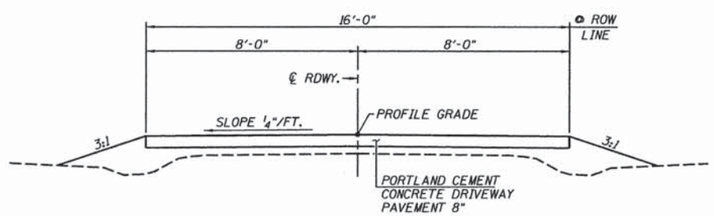
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	PROPOSED BRIDGE SECTION	RTE.	SECTION	COUNTY / TOTAL SHEETS / SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY / 49 / 13
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -						CONTRACT NO. 95792
	PLOT DATE = $DATE$	DATE -	REVISED -			SCALE: _____ SHEET NO. 4 OF 4 SHEETS STA. _____ TO STA. _____	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT



PLAN
(WOOD STREET)

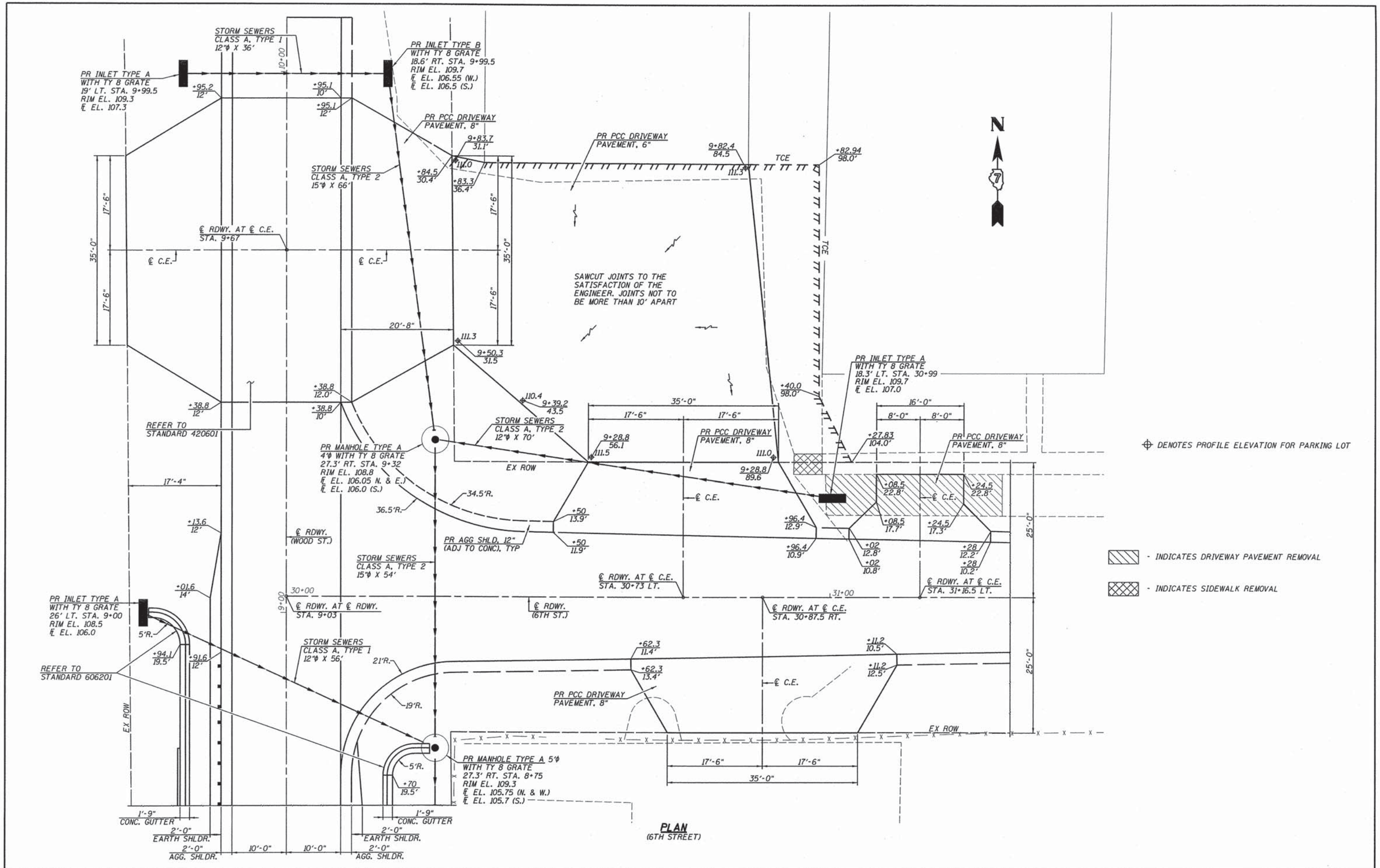


TYPICAL COMMERCIAL ENTRANCE
(STA. 9+67 LT. & RT.)
STA. 30+73 LT. & STA. 30+87.5 RT. (6TH ST.)



TYPICAL COMMERCIAL ENTRANCE
STA. 31+16.5 LT. (6TH ST.)

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	DETAILS & TYPICAL SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	14
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -							CONTRACT NO. 95792	
	PLOT DATE = $DATE$	DATE -	REVISED -			SCALE: VARIES / SHEET NO. 1 OF 2 SHEETS / STA. 9+50.00 TO STA. 14+50.00	FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



PLAN
(6TH STREET)

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		DRAWN -	REVISED -
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	PLOT DATE = $DATE$	DATE -	REVISED -

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IL. Design Firm No. 184-001939

DETAILS & TYPICAL SECTIONS

SCALE: VARIES | SHEET NO. 2 OF 2 SHEETS | STA. 9+50.00 TO STA. 14+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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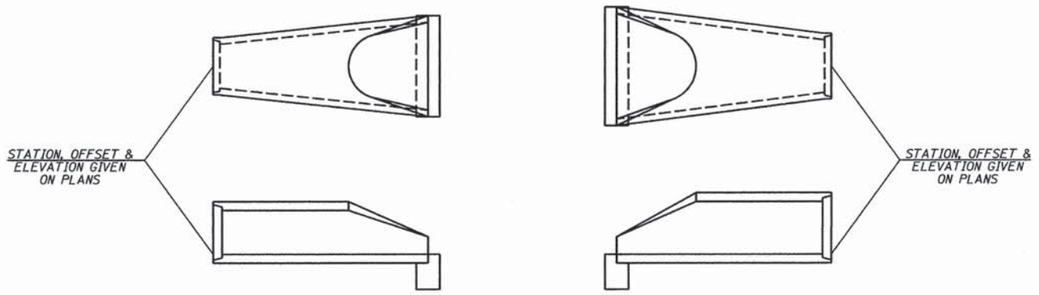
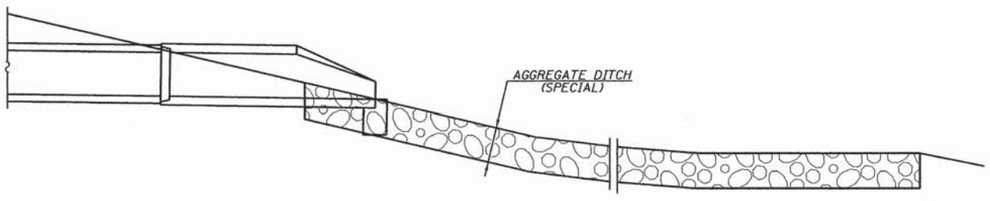
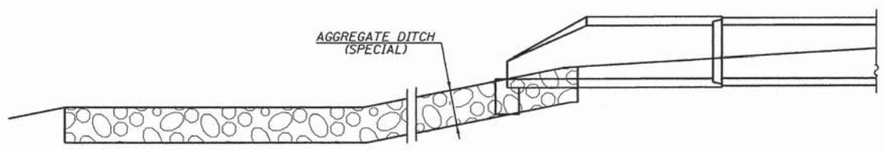
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



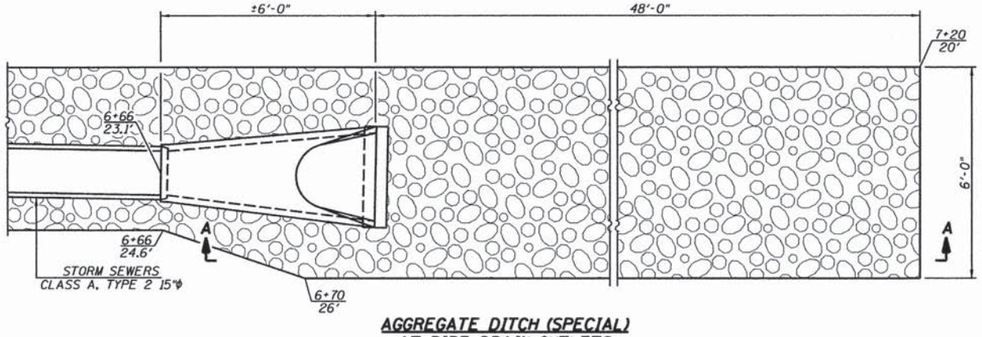
END SECTION OFFSETS



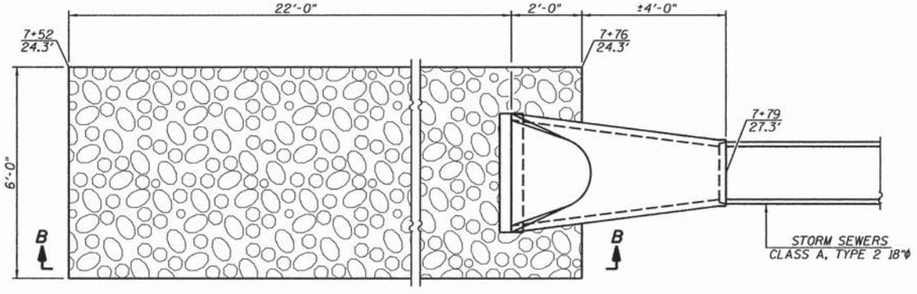
SECTION A-A



SECTION B-B



AGGREGATE DITCH (SPECIAL)
AT PIPE DRAIN OUTLETS



AGGREGATE DITCH (SPECIAL)
AT PIPE DRAIN OUTLETS

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	DRAINAGE DETAILS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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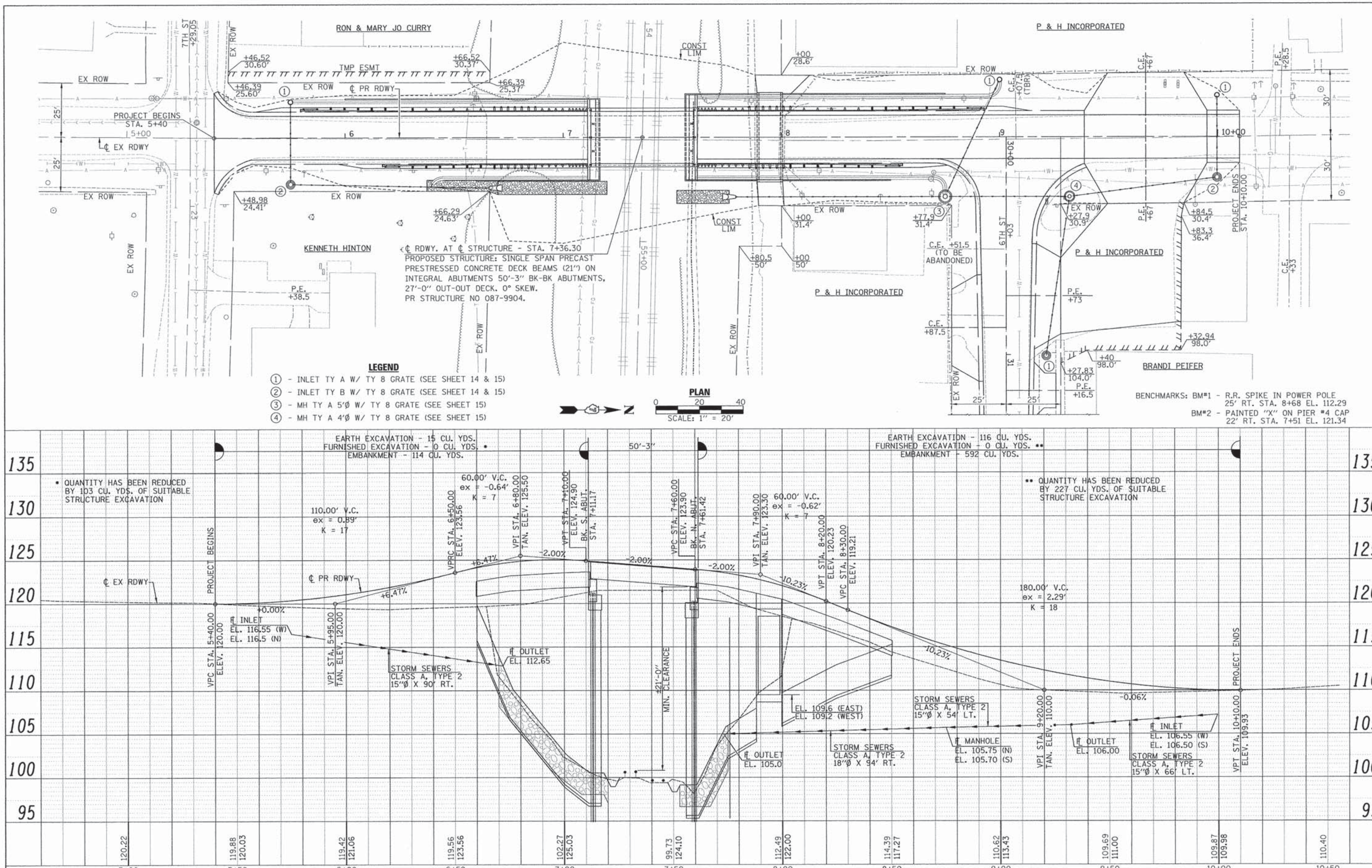
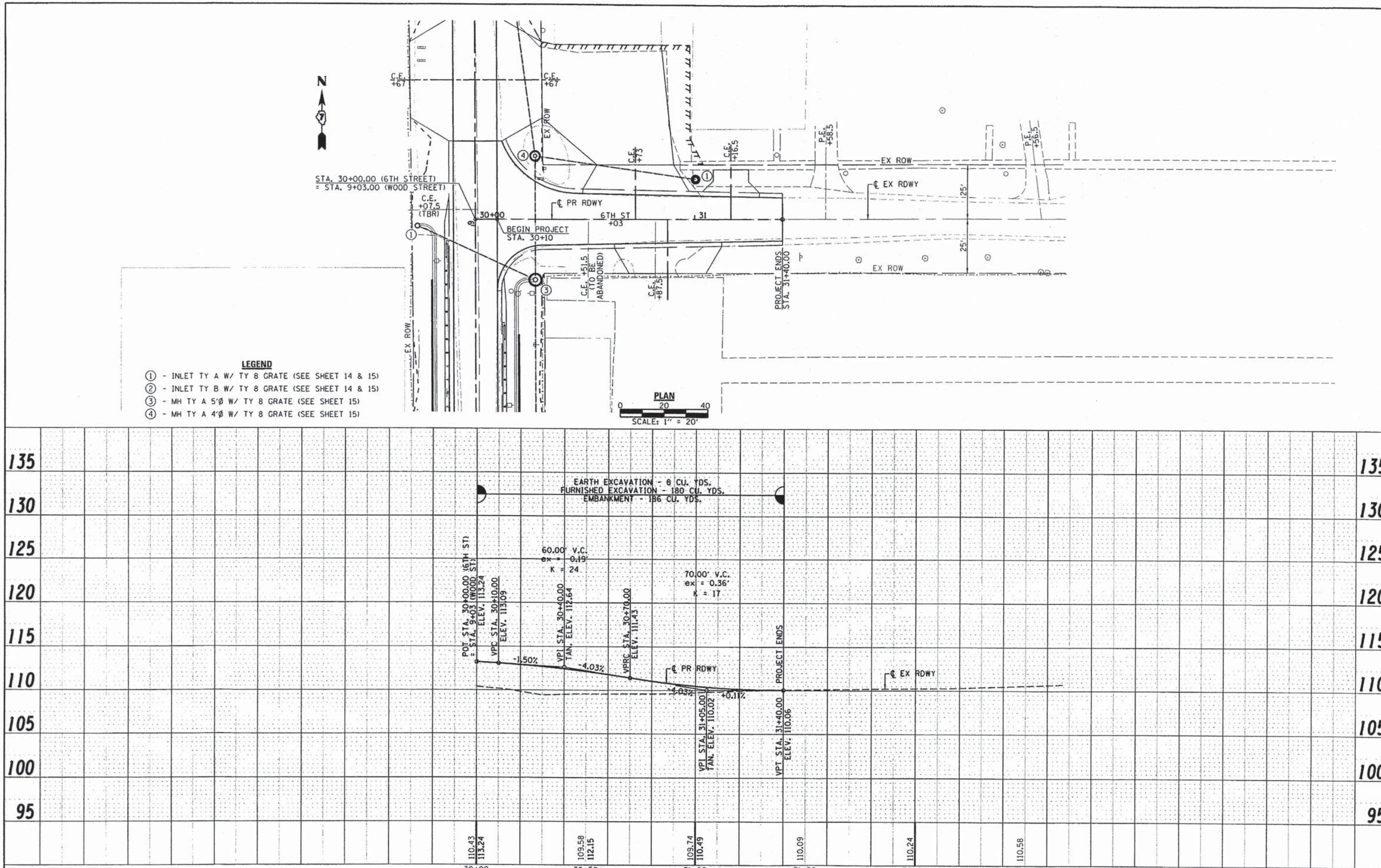
	PLOT DATE = #DATE#	DATE -	REVISED -			SCALE: VARIES / SHEET NO. 1 OF 1 SHEETS / STA. 9+50.00 TO STA. 14+50.00	FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		


RON & MARY JO CURRY
P & H INCORPORATED
KENNETH HINTON
BRANDI PEIFER
TMP ESMT
EX ROW
℄ PR RDWY
℄ EX RDWY
PROJECT BEGINS STA. 5+40
PROJECT ENDS STA. 10+10.00
CONST LIM
7TH ST +29.05
6TH ST +03
C.E. +51.5 (TO BE ABANDONED)
℄ RDWY. AT ℄ STRUCTURE - STA. 7+36.30
PROPOSED STRUCTURE: SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAMS (21") ON INTEGRAL ABUTMENTS 50'-3" BK-BK ABUTMENTS, 27'-0" OUT-OUT DECK. 0° SKEW.
PR STRUCTURE NO 087-9904.
LEGEND
① - INLET TY A W/ TY 8 GRATE (SEE SHEET 14 & 15)
② - INLET TY B W/ TY 8 GRATE (SEE SHEET 14 & 15)
③ - MH TY A 5'Ø W/ TY 8 GRATE (SEE SHEET 15)
④ - MH TY A 4'Ø W/ TY 8 GRATE (SEE SHEET 15)
PLAN
SCALE: 1" = 20'
BENCHMARKS: BM#1 - R.R. SPIKE IN POWER POLE 25' RT. STA. 8+68 EL. 112.29
BM#2 - PAINTED "X" ON PIER #4 CAP 22' RT. STA. 7+51 EL. 121.34
EARTH EXCAVATION - 15 CU. YDS.
FURNISHED EXCAVATION - 0 CU. YDS. *
EMBANKMENT - 114 CU. YDS.
EARTH EXCAVATION - 116 CU. YDS.
FURNISHED EXCAVATION - 0 CU. YDS. **
EMBANKMENT - 592 CU. YDS.
* QUANTITY HAS BEEN REDUCED BY 103 CU. YDS. OF SUITABLE STRUCTURE EXCAVATION
** QUANTITY HAS BEEN REDUCED BY 227 CU. YDS. OF SUITABLE STRUCTURE EXCAVATION
110.00' V.C. ex = 0.89' K = 17
60.00' V.C. ex = -0.64' K = 7
60.00' V.C. ex = -0.62' K = 7
180.00' V.C. ex = 2.29' K = 18
50'-3"
21'-0" MIN. CLEARANCE
STORM SEWERS CLASS A, TYPE 2 15"Ø X 90' RT.
STORM SEWERS CLASS A, TYPE 2 18"Ø X 94' RT.
STORM SEWERS CLASS A, TYPE 2 15"Ø X 54' LT.
STORM SEWERS CLASS A, TYPE 2 15"Ø X 66' LT.

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	PLAN & PROFILE (WOOD STREET)
		CHECKED -	REVISED -		
	PLOT SCALE = $SCALE$	DRAWN -	REVISED -		
	PLOT DATE = $DATE$	CHECKED -	REVISED -		SCALE: 1" = 20' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	17
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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		CHECKED -	REVISED -
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	PLOT DATE = $DATE$	CHECKED -	REVISED -

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IL. Design Firm No. 184-001939

PLAN & PROFILE
(6TH STREET)

SCALE: 1" = 20' | SHEET NO. 2 OF 2 SHEETS | STA. | TO STA.

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	18

CONTRACT NO. 95792

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

Benchmarks: BM#1 - Railroad Spike in Power Pole
25' Rt. Sta. 8+68 El. 112.29
BM#2 - Painted "X" on Pier #4 Cap
22' Rt. Sta. 7+51 El. 121.34

Existing Structure: Timber deck on concrete abutments with timber caps. 14 timber stringers with steel angles at every third stringer at spans 1 & 6. Six timber piers with four supports at 6'-6" spaces. Cross bracing and concrete footings at each pier. Timber curbs and railings. Telephone line along North Abutment under deck. ±20'-3" width. ±136'-3" length. 0° Skew. Existing Structure No. 087-9902.

The structure is to be removed and replaced with a Single Span P.P.C. Deck Beam Bridge.

The roadway is to be closed and traffic detoured during construction.

No Salvage.

Note: No freefall deck drains will be permitted in the span over the tracks or within 10 ft. of a cross arms of a railroad pole line.

STA. 7+36.30
BUILT 20 BY
SHELBY COUNTY
SECTION 12-00054-00-BR
STR. NO. 087-9904 LOADING HL-93

NAME PLATE
(Standard 515001)

INDEX OF SHEETS

LOADING HL-93

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

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition.

DESIGN STRESSES

FIELD UNITS

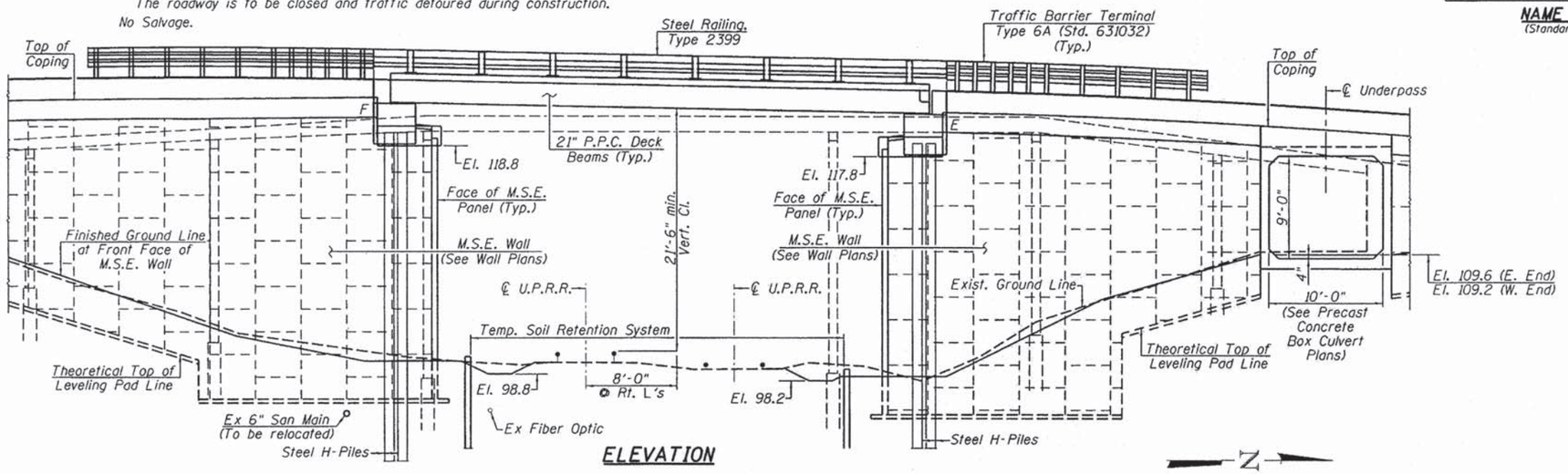
f'c = 3,500 psi
f'c = 4,000 psi (Superstructure Concrete)
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

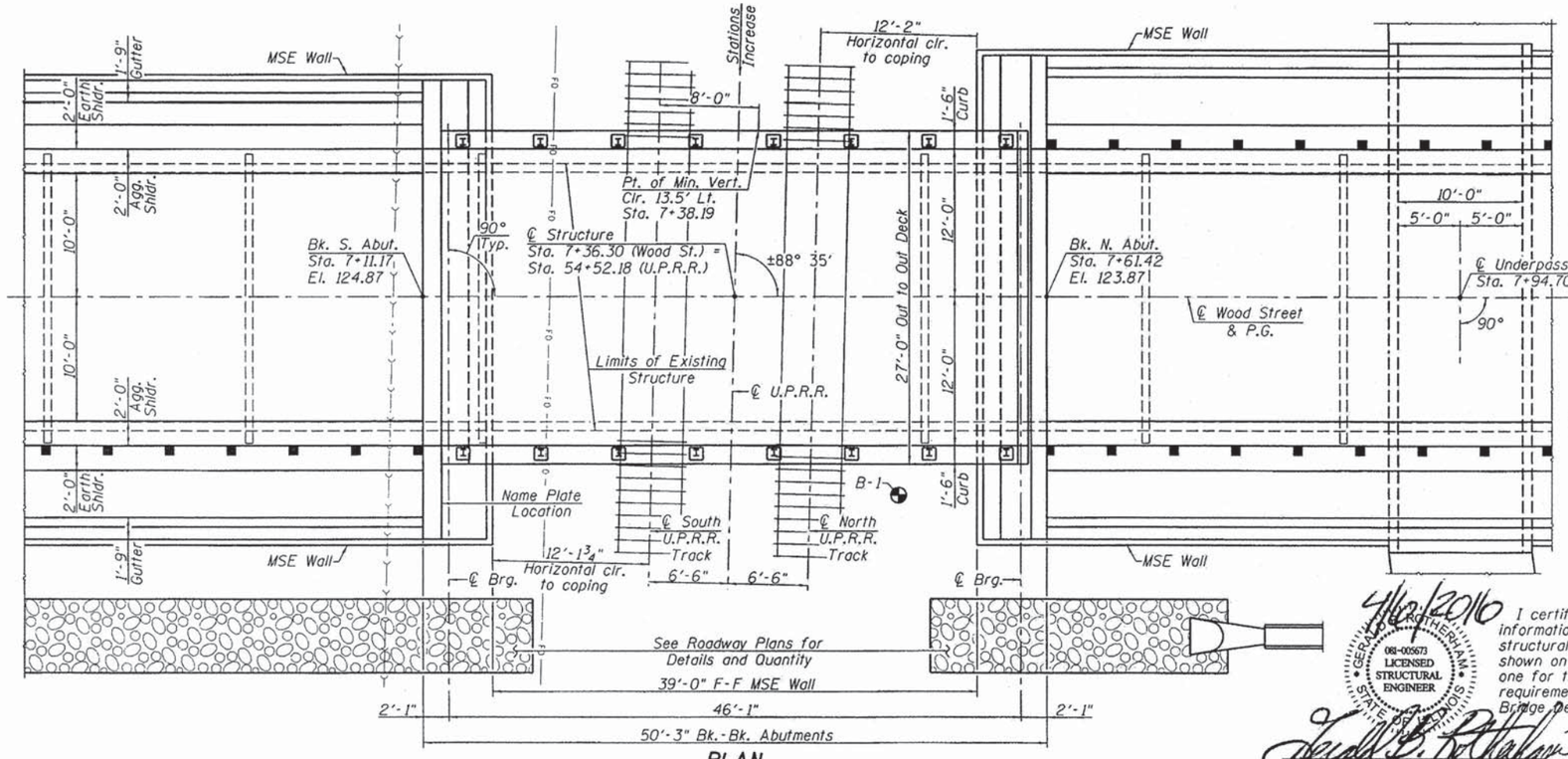
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi ($\frac{1}{2}$" ϕ low lax strands)
fpbt = 201,960 psi ($\frac{1}{2}$" ϕ low lax strands)

SEISMIC DATA

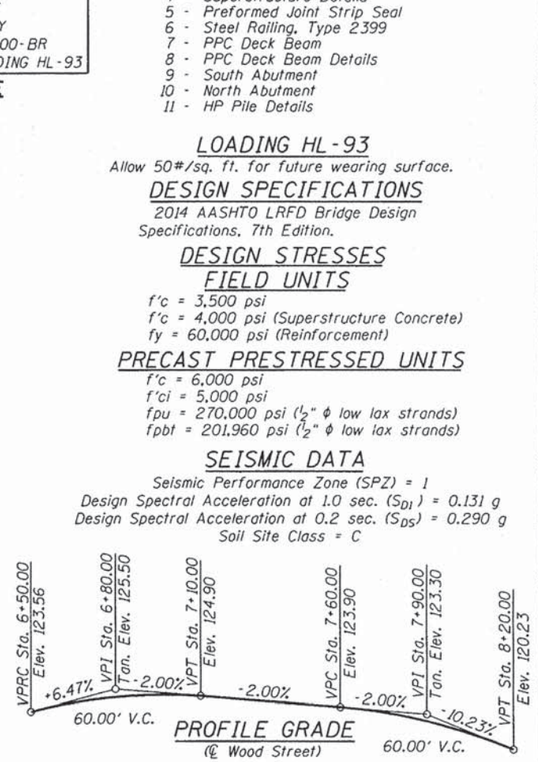
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.131 g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.290 g
Soil Site Class = C



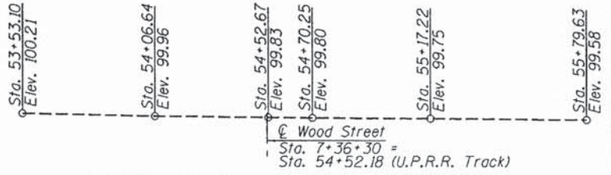
ELEVATION



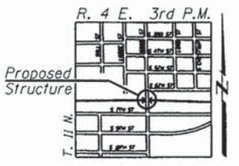
PLAN



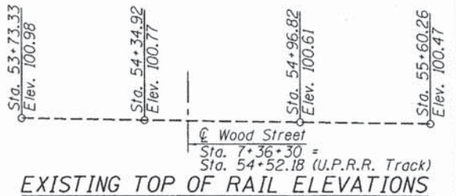
PROFILE GRADE
(℄ Wood Street)



EXISTING TOP OF RAIL ELEVATIONS
(North U.P.R.R. Track)



LOCATION PLAN



EXISTING TOP OF RAIL ELEVATIONS
(South U.P.R.R. Track)

4/6/2016

GERALD R. ROTHERHAM
081-005673
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

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 "A.A.S.H.T.O. LRFD Bridge Design Specifications".

Gerald R. Rotherham
Expiration 11/30/2016

GENERAL PLAN & ELEVATION
WOOD STREET OVER
UNION PACIFIC (SIRS) RAILROAD
MS 7220A - SECTION 12-00054-00-BR
SHELBY COUNTY
STA. 7+36.30
S.N. 087-9904

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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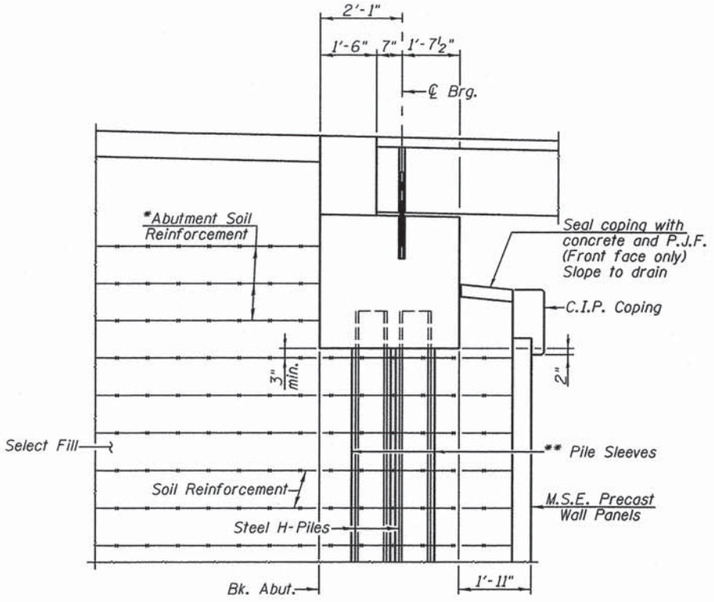
IL. Design Firm No. 184-001939

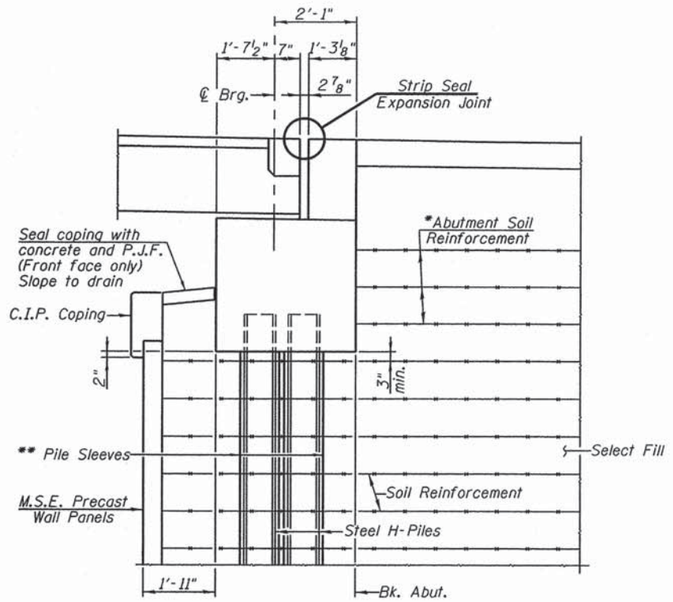
GENERAL PLAN & ELEVATION
STRUCTURE NO. 087-9904
SHEET NO. 1 OF 11 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	19
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



SECTION THRU PILE SUPPORTED
STUB ABUTMENT - SOUTH ABUTMENT

* The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal service force of 1.53 kips/ft. of abutment. The cost of furnishing and installing abutment soil reinforcement is included with Mechanically Stabilized Earth Retaining Wall.



SECTION THRU PILE SUPPORTED
STUB ABUTMENT - NORTH ABUTMENT

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
Protective coat shall be applied to the inside face & top of the curbs, the top of the concrete block & the top of the backwalls. Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
Concrete Sealer shall be applied to the exposed top of the pile cap and the front face of the pile cap of the North Abutment.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Hot-mix Asphalt Surface Course, Mix "C", N70	Ton	15		15
Removal of Existing Structures	Each			1
Concrete Structures	Cu. Yd.		38.7	38.7
Concrete Superstructure	Cu. Yd.	14.2		14.2
Protective Coat	Sq. Yd.	29		29
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1276		1276
Reinforcement Bars, Epoxy Coated	Pound	500	4700	5200
Steel Railing, Type 2399	Foot	101		101
Furnishing Steel Piles HP10X42	Foot		648	648
Driving Piles	Foot		648	648
Test Pile Steel HP10X42	Each		2	2
Name Plates	Each		1	1
Preformed Joint Strip Seal	Foot	26		26
Waterproofing Membrane System	Sq. Yd.	124		124
Portland Cement Mortar Fairing Course	Foot	378		378
Concrete Sealer	Sq. Ft.		242	242

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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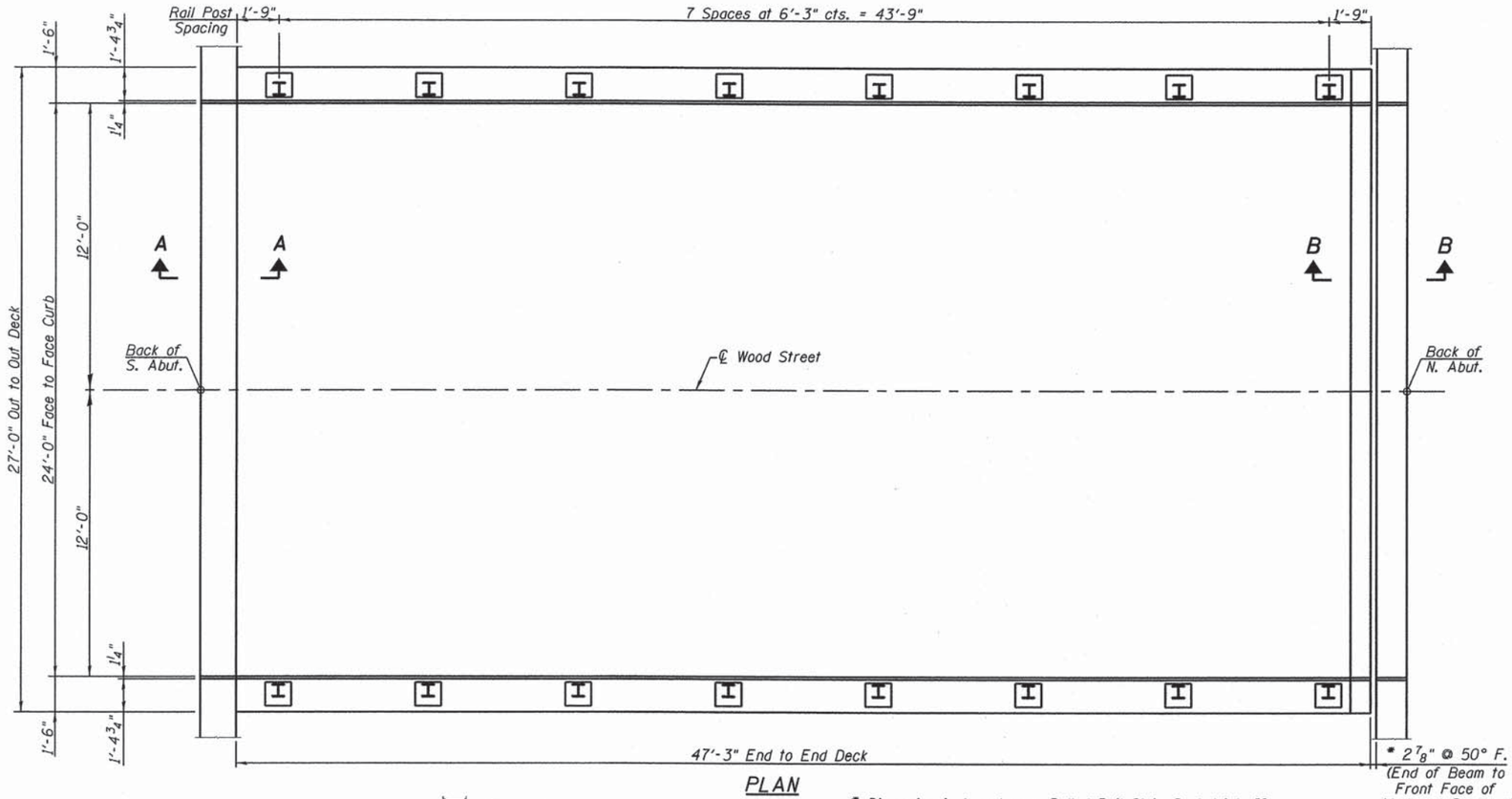
IL. Design Firm No. 184-001939

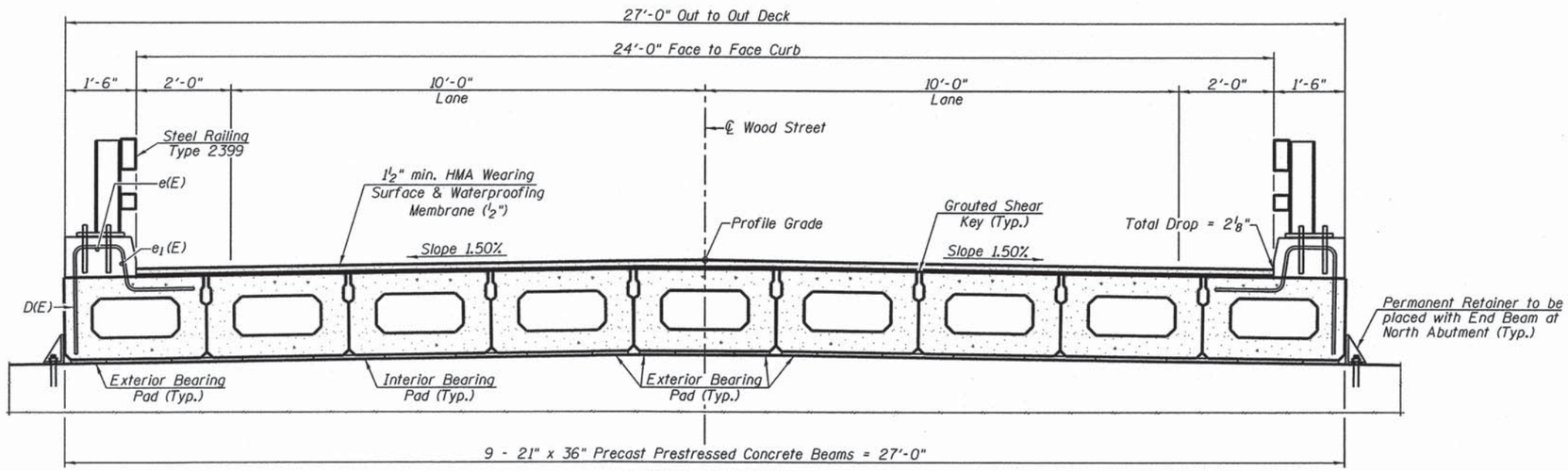
GENERAL DATA
STRUCTURE NO. 087-9904
SHEET NO. 2 OF 11 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	20
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

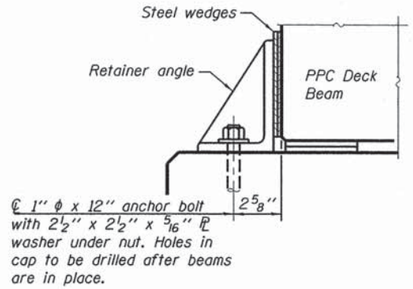


PLAN

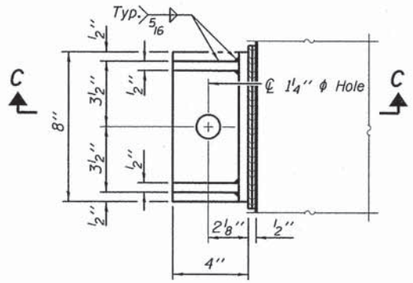
* Dimension is based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet 6 of 11.



CROSS SECTION
(Looking North)



SECTION C-C



REATAINER ANGLE PLAN

Notes:

See sheet 4 of 11 for Section A-A, Section B-B, Superstructure Details and Bill of Material.

Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

The side retainers shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM 385.

Anchor bolts and plate washers shall be galvanized according to AASHTO M 232.

After the notch or concrete overlay are poured and cured, the steel wedges shall be removed.

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	SUPERSTRUCTURE STRUCTURE NO. 087-9904 SHEET NO. 3 OF 11 SHEETS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	21
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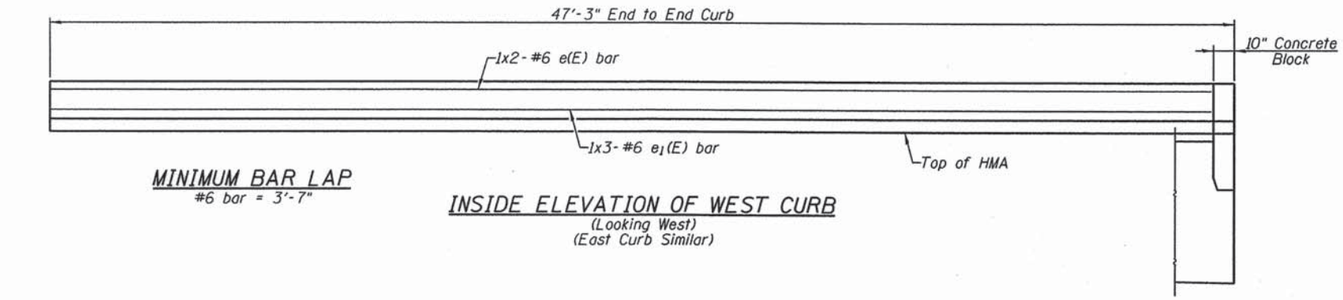
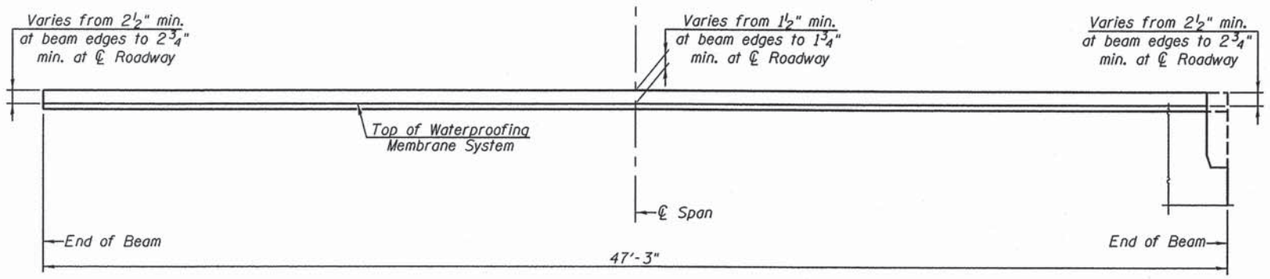
	PLOT DATE = $DATE$	DATE -	REVISED -				FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

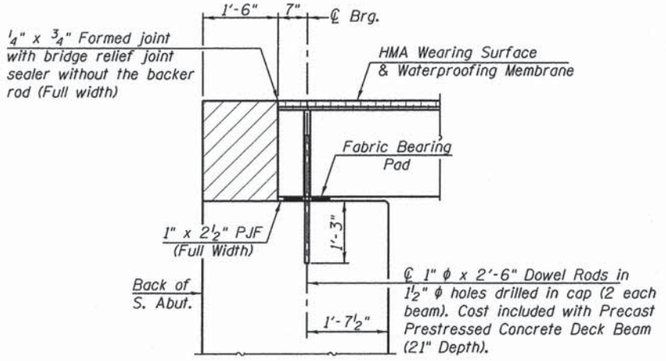


MINIMUM BAR LAP
#6 bar = 3'-7"

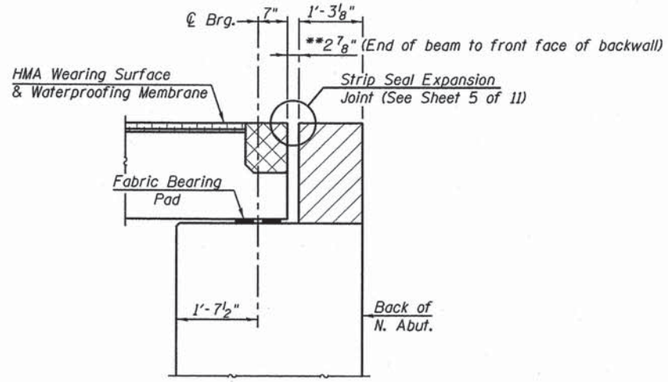
INSIDE ELEVATION OF WEST CURB
(Looking West)
(East Curb Similar)



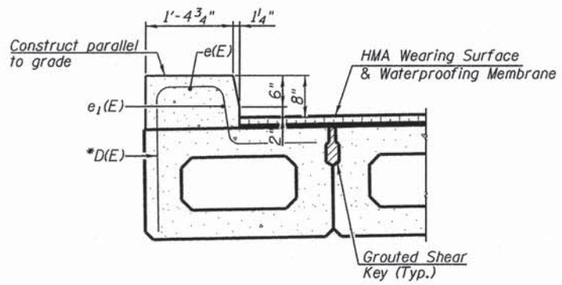
ANTICIPATED HMA WEARING SURFACE PROFILE
(For Information Only)



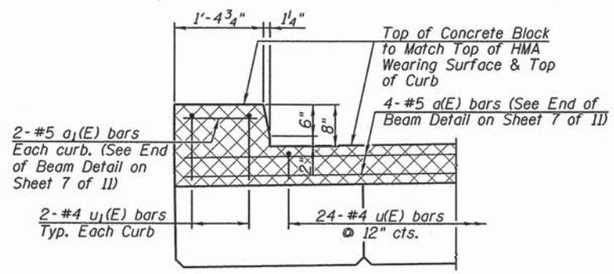
SECTION A-A



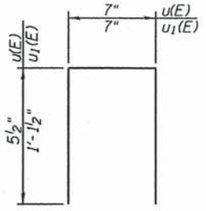
SECTION B-B



SECTION THRU CURB
(Curbs shall be poured in the field)
(Steel railing and anchor rods in curb not shown for clarity)



SECTION THRU CURB AT BEAM NOTCH (CONCRETE BLOCK) LOCATION
(Coil Loop Inserts in Concrete Block not shown for clarity)



BAR u(E) & u1(E)

Notes: After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hours prior to grouting the shear keys.

Cross-hatched areas to be poured after beams have been erected, dowel holes filled and joints grouted. Ends of beams shall be aligned at the expansion joints. Any lineal variation in the beam lengths shall be placed at the fixed joint. Quantity of concrete included with Concrete Superstructure.

Hatched areas to be poured after concrete block (cross-hatched area) is in place. Quantity of concrete included with Concrete Superstructure.

See Sheet 7 of 11 for End of Beam Details.
See sheet 8 of 11 for fabric bearing pad details.

* Place #5 D(E) bars of 12" cts. in fascia beam for railing curb. Omit D(E) bars in beam notch location. D(E) bar included in cost of beam.

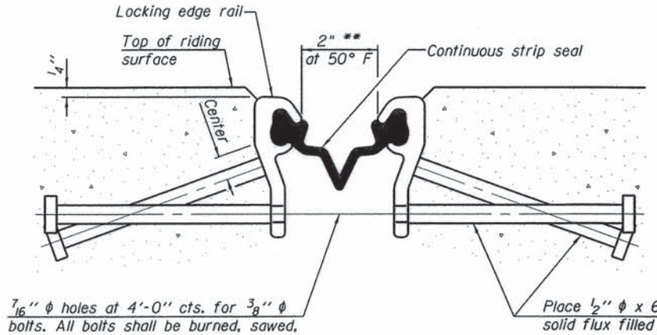
** Dimension is based on Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet 5 of 11.

SUPERSTRUCTURE BILL OF MATERIAL

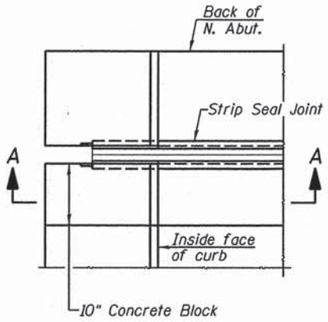
Bar	No.	Size	Length	Shape
a(E)	4	#5	26'-8"	——
a1(E)	4	#5	1'-1"	——
e(E)	4	#6	24'-10"	——
e1(E)	6	#6	17'-9"	——
u(E)	24	#4	1'-6"	□
u1(E)	4	#4	2'-10"	□
Reinforcement Bars, Epoxy Coated			Pound	500
Concrete Superstructure			Cu. Yd.	14.2
Hot-mix Asphalt Surface Course, Mix "C", N70			Ton	15
Waterproofing Membrane System			Sq. Yd.	124
Portland Cement Mortar Fairing Course			Foot	378

Bars indicated thus 1 x 2 - #6 etc. indicates 1 line of bars with 2 lengths per line.

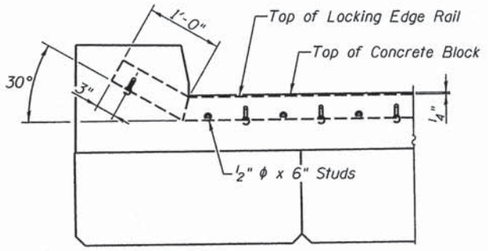
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	SUPERSTRUCTURE DETAILS STRUCTURE NO. 087-9904	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	22
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -							CONTRACT NO. 95792	
	PLOT DATE = $DATE$	DATE -	REVISED -			SHEET NO. 4 OF 11 SHEETS	FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



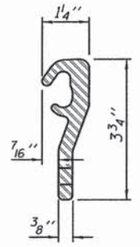
SECTION THRU STRIP SEAL JOINT



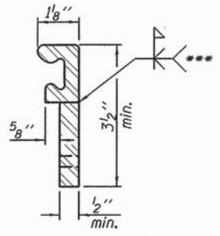
PLAN



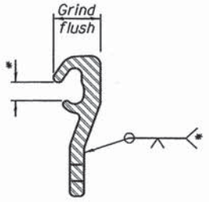
SECTION A-A



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

Rolled rail shown, welded rail similar.

LOCKING EDGE RAIL

* Omit weld at seal opening.
** The minimum dimension shall be 1 1/2" for installation purposes.
*** Back gouge not required if complete joint penetration is verified by mock-up.

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Preformed Joint Strip Seal	Foot	26

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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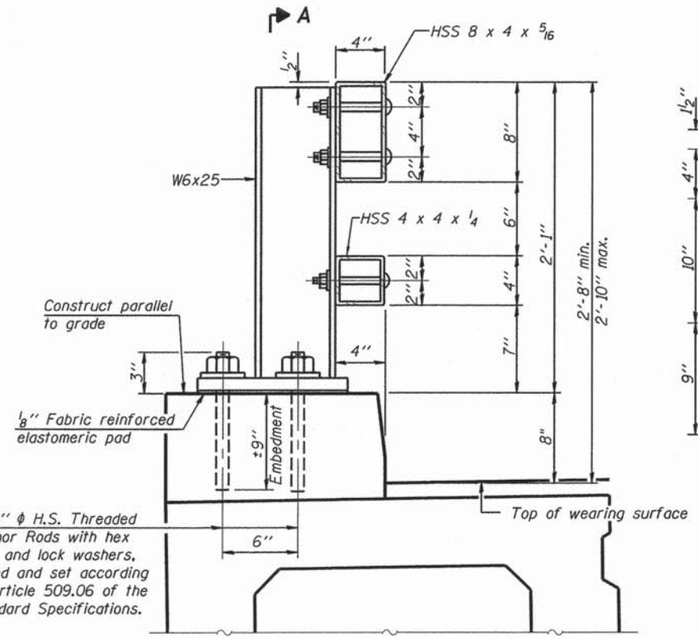
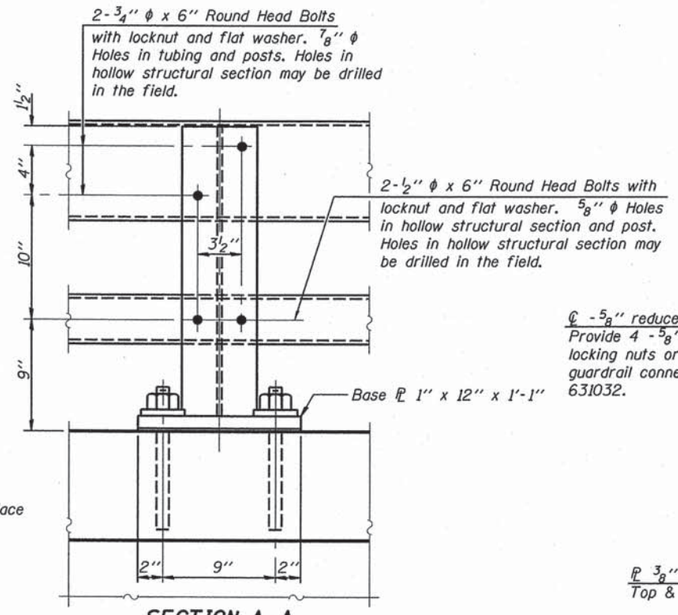
IL. Design Firm No. 184-001939

PREFORMED JOINT STRIP SEAL
STRUCTURE NO. 087-9904
SHEET NO. 5 OF 11 SHEETS

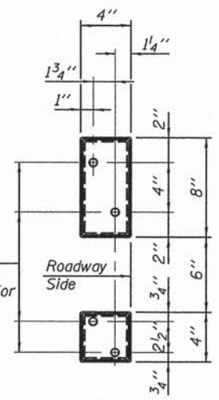
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	23
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



SECTION AT RAIL POST

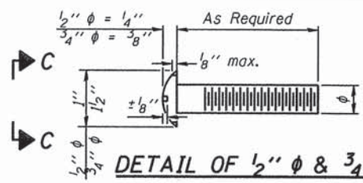


SECTION A-A



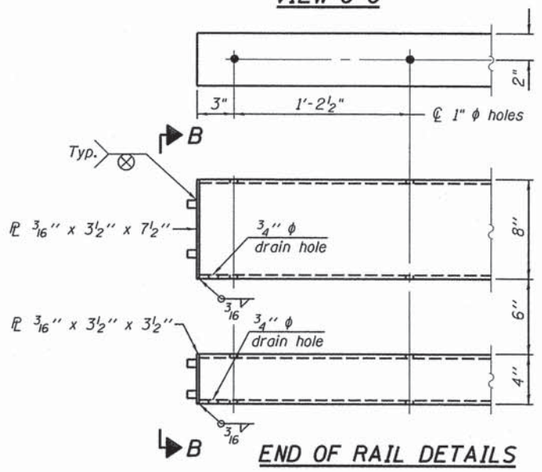
℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.

VIEW B-B

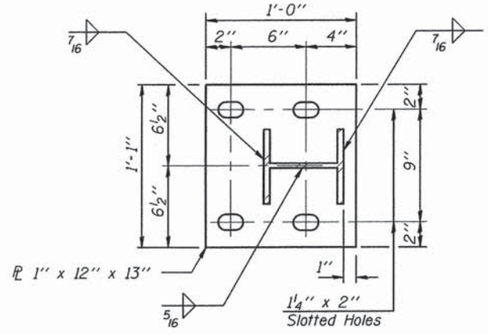


DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS

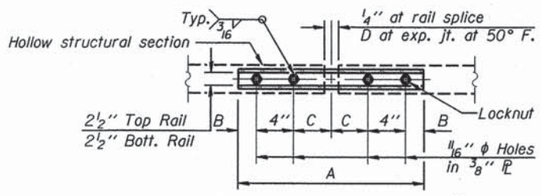
VIEW C-C



END OF RAIL DETAILS



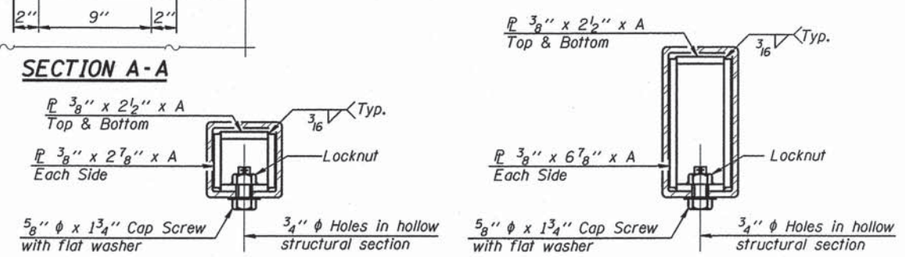
BASE PLATE DETAIL

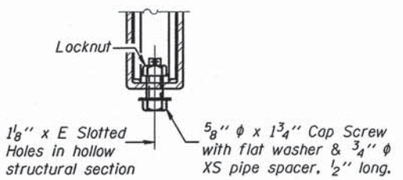


PLAN-BOTT. SPLICE PL TYPICAL

(6'-3" Maximum Post Spacing)

SECTIONS AT RAIL SPLICE





RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

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	1/4"	1'-8"	2"	4"	—

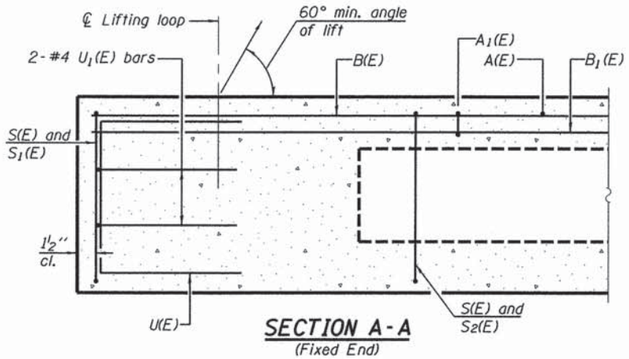
T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

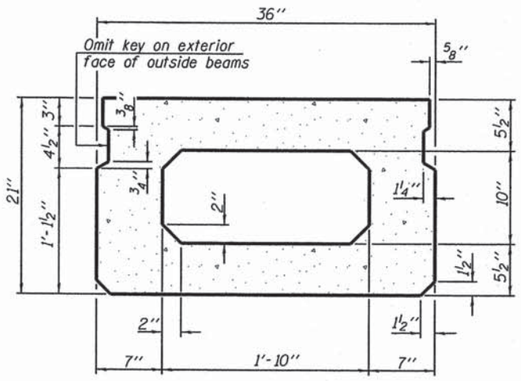
Item	Unit	Quantity
Steel Railing, Type 2399	Foot	101

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED -	REVISED -	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	STEEL RAILING, TYPE 2399 STRUCTURE NO. 087-9904 SHEET NO. 6 OF 11 SHEETS
		DRAWN -	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -		
	PLOT DATE = $DATE$	DATE -	REVISED -		

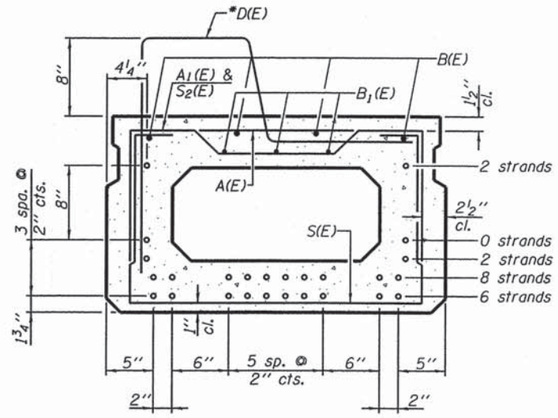
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	24
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



SECTION A-A
(Fixed End)

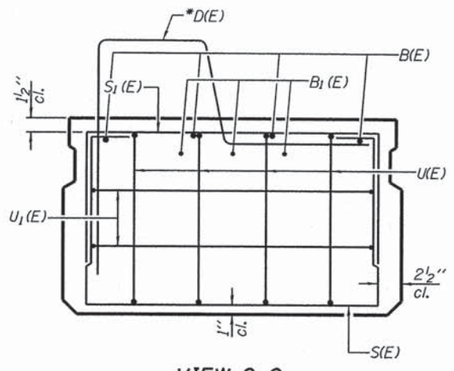


SECTION B-B
(Showing dimensions)



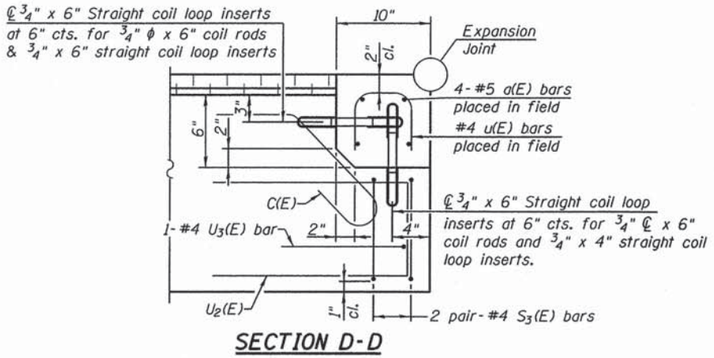
SECTION B-B
(Showing reinforcement and permissible strand locations)

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



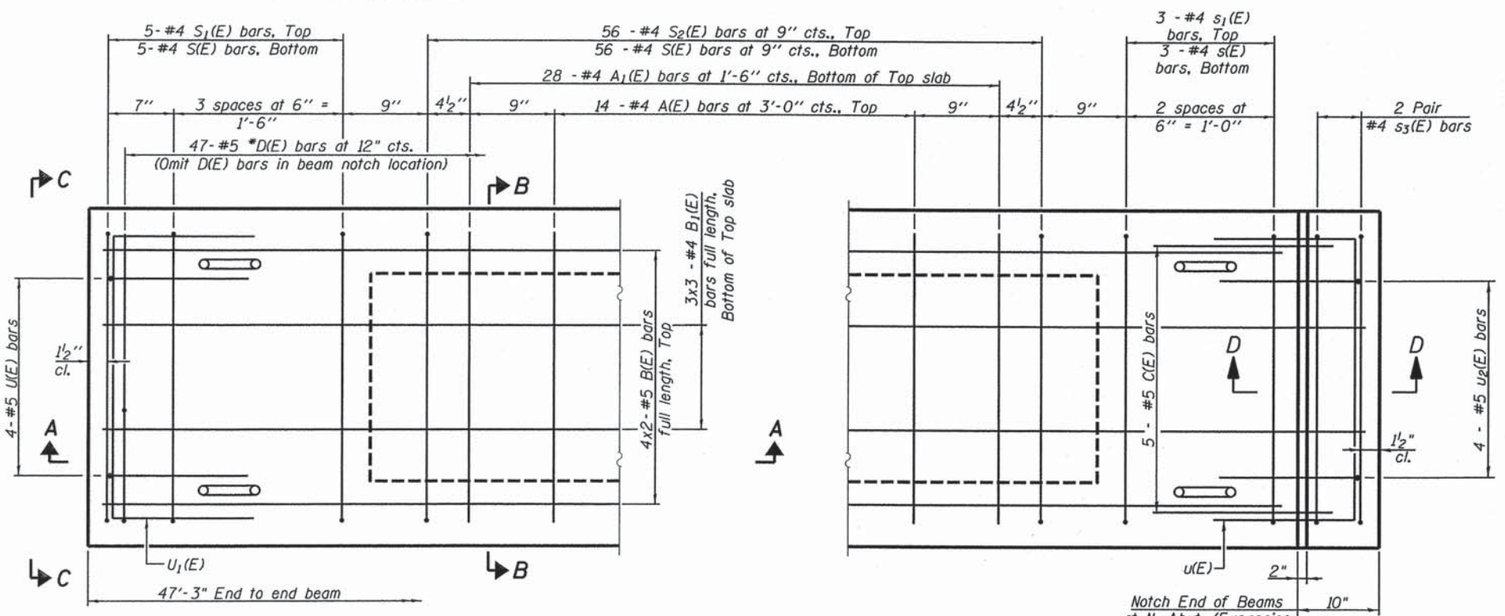
VIEW C-C

* Place in fascia beams only.



SECTION D-D

Notes:
1½" cl. for reinforcement bars unless otherwise noted.
Typical reinforcement not shown for clarity.
Cost of Inserts and Coil Rods included with Precast Prestressed Concrete Deck Beams.



PLAN VIEW

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	28	#4	2'-10"	⌒
B(E)	8	#5	24'-4"	—
B1(E)	9	#4	16'-8"	—
C(E)	5	#5	3'-8"	⌐
* D(E)	47	#5	5'-7"	⌐
S(E)	64	#4	6'-5"	⌐
S1(E)	8	#4	4'-11"	⌐
S2(E)	56	#4	5'-2"	⌐
S3(E)	4	#4	6'-3"	⌐
U(E)	4	#5	4'-0"	⊔
U1(E)	3	#4	5'-0"	⊔
U2(E)	4	#5	5'-2"	⊔

Note: See sheet 8 of 11 for additional details and Bill of Material.

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

Note: Spacing of S(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.

FILE NAME = #FILEL#	USER NAME = #USER#	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

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A Division of Veenstra & Kimm, Inc.
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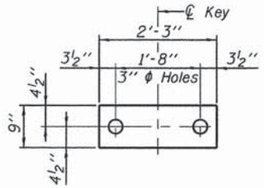
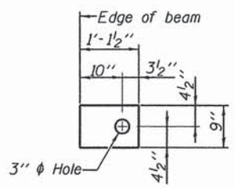
IL. Design Firm No. 184-001939

21" x 36" PPC DECK BEAM
STRUCTURE NO. 087-9904
SHEET NO. 7 OF 11 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	25
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

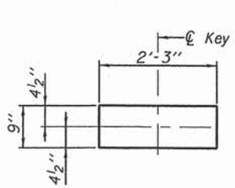


FABRIC BEARING PAD
(Interior)

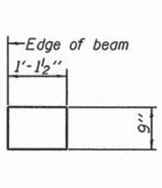


FABRIC BEARING PAD
(Exterior)

FIXED



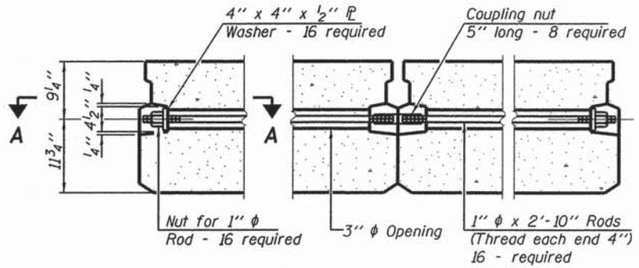
FABRIC BEARING PAD
(Interior)



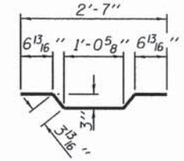
FABRIC BEARING PAD
(Exterior)

EXPANSION

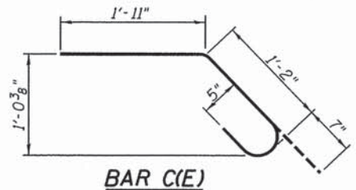
Notes:
All bearing pads shall be 1" thick.
Expansion bearing pad shall be bonded to the substructure.



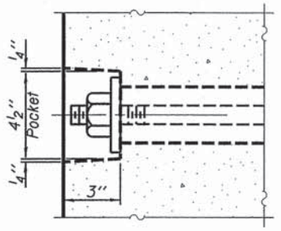
TYPICAL TRANSVERSE TIE ASSEMBLY



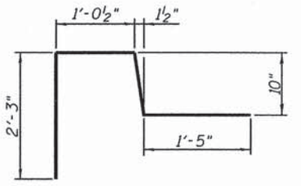
BAR A_1(E)



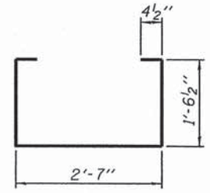
BAR C(E)



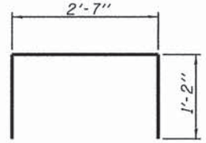
SECTION A-A



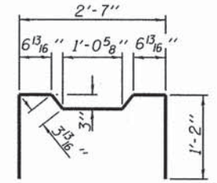
BAR D(E)



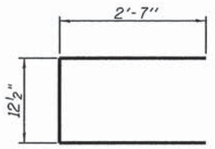
BAR S(E)



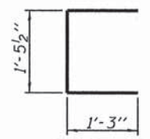
BAR S_1(E)



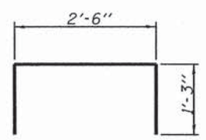
BAR S_2(E)



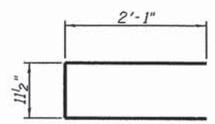
BAR S_3(E)



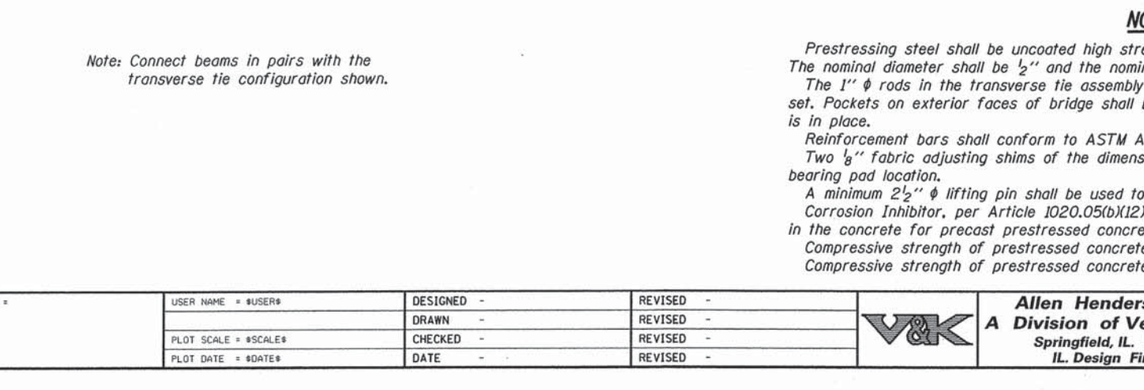
BAR U(E)



BAR U_1(E)

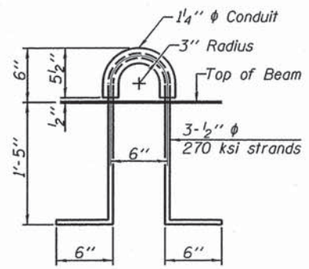


BAR U_2(E)



PLAN VIEW

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



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" ϕ 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.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 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.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	1276

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

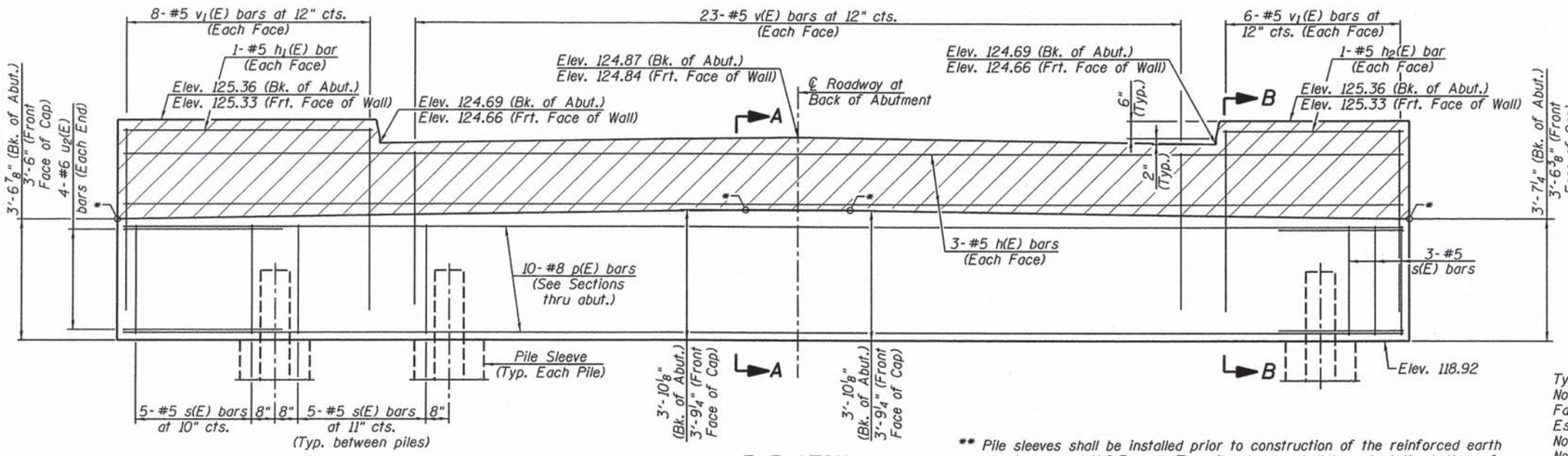
V&K

Allen Henderson & Associates
A Division of Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

21" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 087-9904

SHEET NO. 8 OF 11 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	26
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

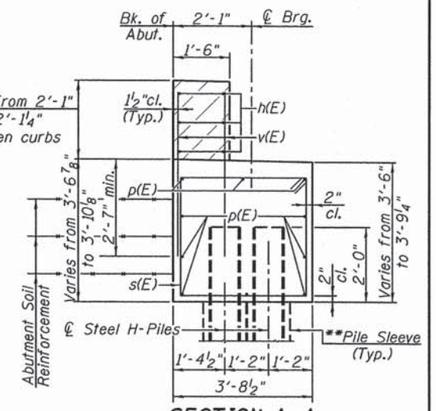


ELEVATION
(Looking South)

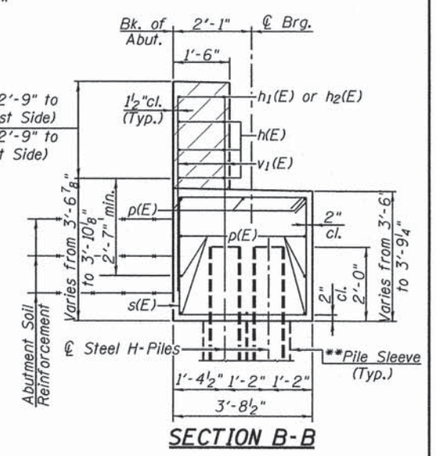
Notes: Hatched area to be poured after beams have been erected, dowel holes filled, joints grouted and concrete block at expansion end of beams is in place. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss dowel rods.
For details of piles, see Sheet 11 of 11.

** Pile sleeves shall be installed prior to construction of the reinforced earth embankment and M.S.E. wall. The pile sleeves shall be set at the bottom of the leveling pad elevation and terminate at the bottom of the abutment cap. After the piles have been driven, the entire annular space between the piles and the sleeve shall be filled with loose dry sand. Per Section 522.09(b)(1) of the Standard Specifications, the pile sleeve material shape and wall thickness shall be submitted to the Engineer for approval. The pile sleeve shall have adequate strength to withstand the select fill pressures without collapse. Cost included with Mechanically Stabilized Earth Retaining Wall.

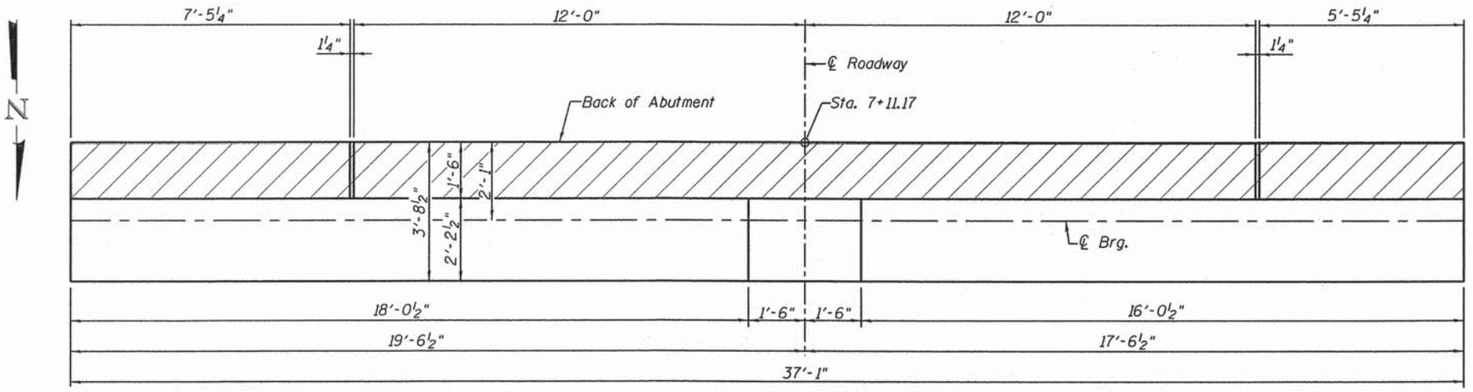
PILE DATA
Type: HP 10x42
Nominal Required Bearing: 335k
Factored Resistance Available: 184k
Est. Length: 54 ft.
No. Production Piles: 6
No. Test Piles: 1



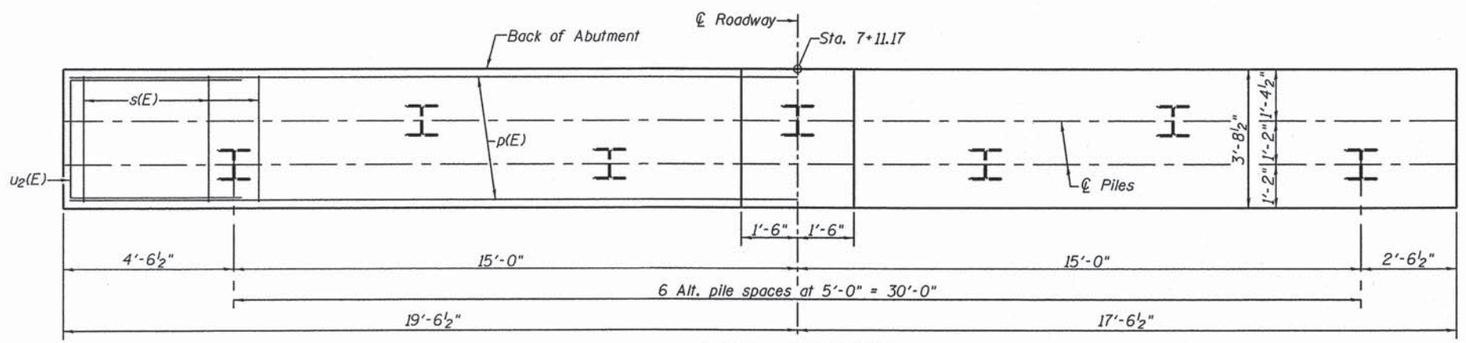
SECTION A-A



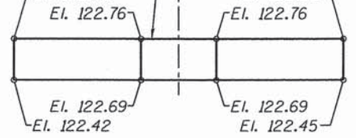
SECTION B-B



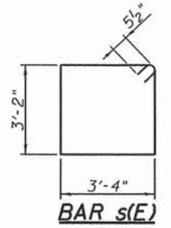
TOP VIEW



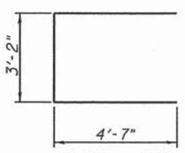
PLAN - PILE CAP



* BEARING SEAT ELEVATIONS



BAR s(E)



BAR u2(E)

SOUTH ABUTMENT BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	6	#5	36'-9"	——
h1(E)	2	#5	7'-2"	——
h2(E)	2	#5	5'-2"	——
p(E)	10	#8	36'-9"	——
s(E)	38	#5	13'-11"	□
u2(E)	8	#6	12'-4"	⊏
v(E)	46	#5	4'-5"	——
v1(E)	28	#5	5'-3"	——
Concrete Structures			Cu. Yd.	18.9
Reinforcment Bars, Epoxy Coated			Pound	2330
Furnishing Steel Piles HP 10x42			Foot	324
Driving Piles			Foot	324
Test Pile Steel HP 10x42			Each	1

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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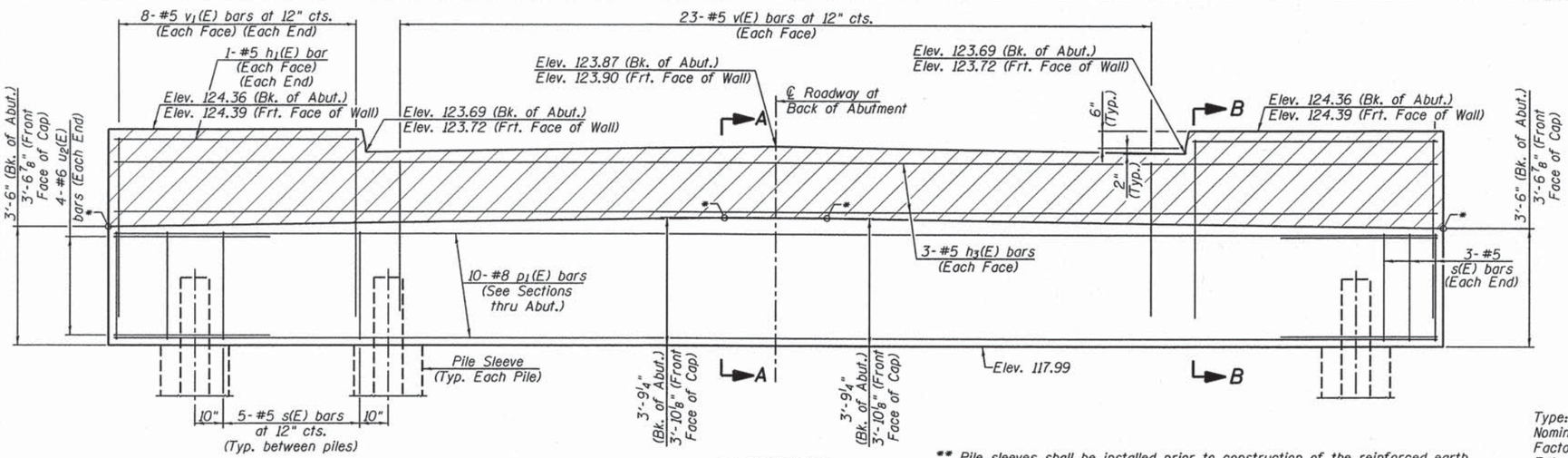
IL. Design Firm No. 184-001939

SOUTH ABUTMENT
STRUCTURE NO. 087-9904
SHEET NO. 9 OF 11 SHEETS

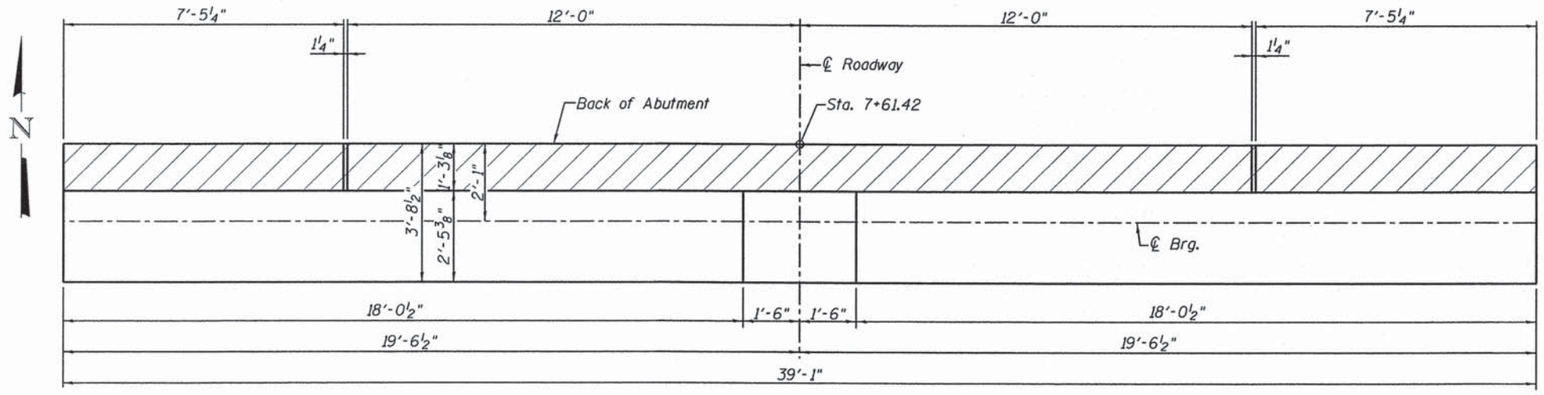
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	27
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



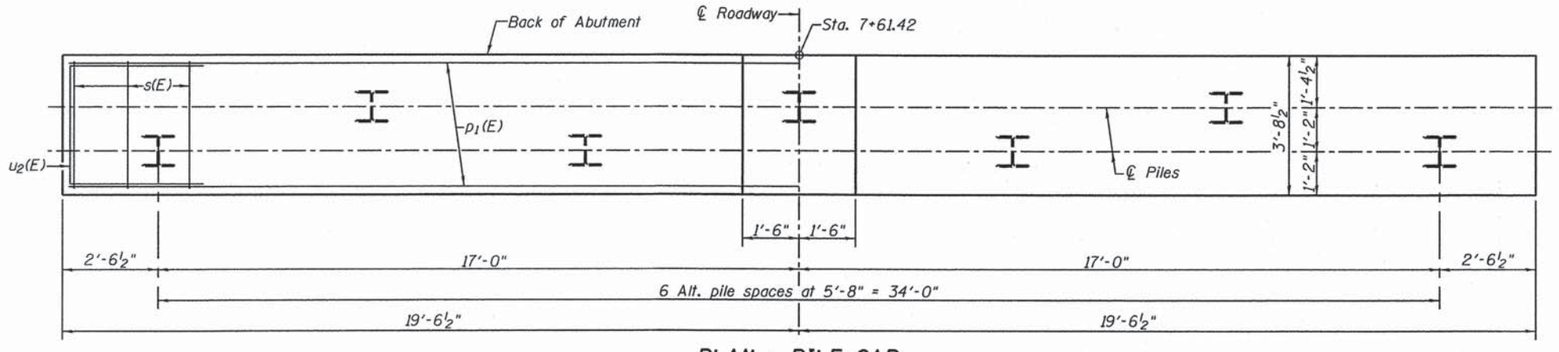
ELEVATION
(Looking North)

Notes: Hatched area to be poured after beams have been erected, dowel holes filled, joints grouted and concrete block at expansion end of beams is in place. Quantity of concrete included with Concrete Superstructure.
Space reinforcement in cap to miss dowel rods.
For details of piles, see Sheet 11 of 11.
Concrete Sealer shall be applied to the top of pile cap and the front face of the pile cap.

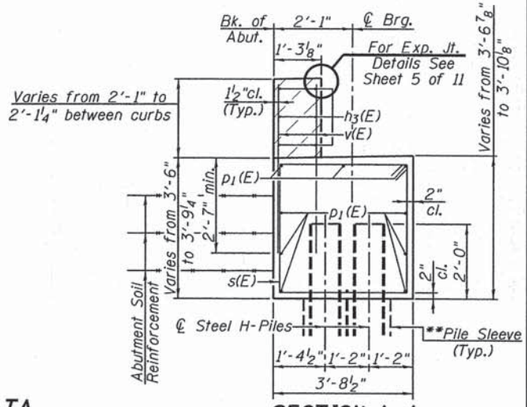
** Pile sleeves shall be installed prior to construction of the reinforced earth embankment and M.S.E. wall. The pile sleeves shall be set at the bottom of the leveling pad elevation and terminate at the bottom of the abutment cap. After the piles have been driven, the entire annular space between the piles and the sleeve shall be filled with loose dry sand. Per Section 522.09(b)(1) of the Standard Specifications, the pile sleeve material shape and wall thickness shall be submitted to the Engineer for approval. The pile sleeve shall have adequate strength to withstand the select fill pressures without collapse. Cost included with Mechanically Stabilized Earth Retaining Wall.



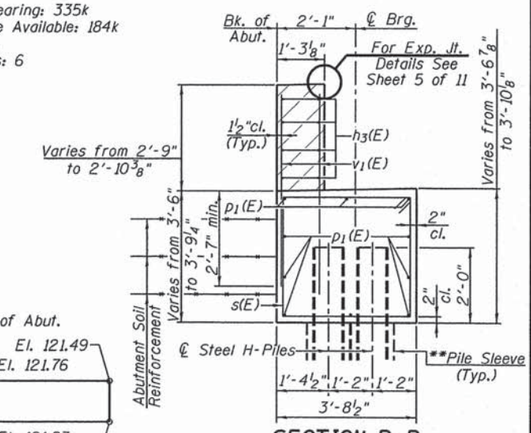
TOP VIEW



PLAN - PILE CAP



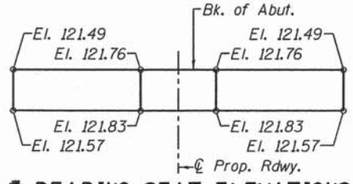
SECTION A-A



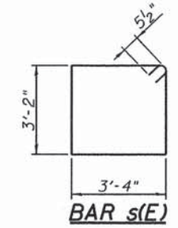
SECTION B-B

PILE DATA

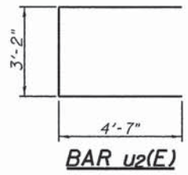
Type: HP 10x42
Nominal Required Bearing: 335k
Factored Resistance Available: 184k
Est. Length: 54 ft.
No. Production Piles: 6
No. Test Piles: 1



* BEARING SEAT ELEVATIONS



BAR s(E)



BAR u2(E)

NORTH ABUTMENT BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h1(E)	4	#5	7'-2"	——
h3(E)	6	#5	38'-9"	——
p(E)	10	#8	38'-9"	——
s(E)	36	#5	13'-11"	□
u2(E)	8	#6	12'-4"	⊏
v(E)	46	#5	4'-5"	——
v1(E)	32	#5	5'-3"	——

Concrete Structures	Cu. Yd.	19.8
Reinforcment Bars, Epoxy Coated	Pound	2370
Furnishing Steel Piles HP 10x42	Foot	324
Driving Piles	Foot	324
Test Pile Steel HP 10x42	Each	1
Concrete Sealer	Sq. Ft.	242

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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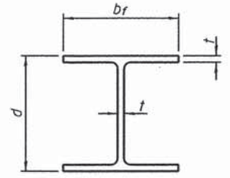
IL. Design Firm No. 184-001939

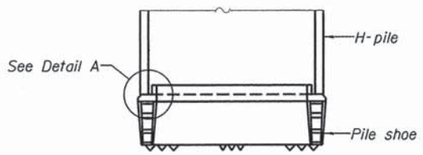
NORTH ABUTMENT
STRUCURE NO. 087-9904
SHEET NO. 10 OF 11 SHEETS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	28
		CONTRACT NO. 95792		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

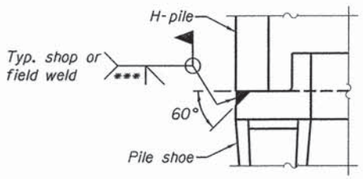


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	$14\frac{1}{4}''$	$14\frac{7}{8}''$	$\frac{13}{16}''$	30''
x102	14''	$14\frac{3}{4}''$	$\frac{11}{16}''$	30''
x89	$13\frac{7}{8}''$	$14\frac{3}{4}''$	$\frac{5}{8}''$	30''
x73	$13\frac{5}{8}''$	$14\frac{5}{8}''$	$\frac{1}{2}''$	30''
HP 12x84	$12\frac{1}{4}''$	$12\frac{1}{4}''$	$\frac{11}{16}''$	24''
x74	$12\frac{1}{8}''$	$12\frac{1}{4}''$	$\frac{5}{8}''$	24''
x63	12''	$12\frac{1}{8}''$	$\frac{1}{2}''$	24''
x53	$11\frac{3}{4}''$	12''	$\frac{7}{16}''$	24''
HP 10x57	10''	$10\frac{1}{4}''$	$\frac{9}{16}''$	24''
x42	$9\frac{3}{4}''$	$10\frac{1}{8}''$	$\frac{7}{16}''$	24''
HP 8x36	8''	$8\frac{1}{8}''$	$\frac{7}{16}''$	18''

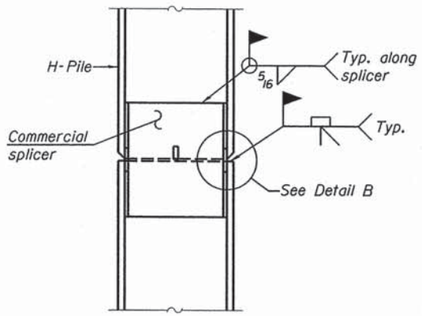


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



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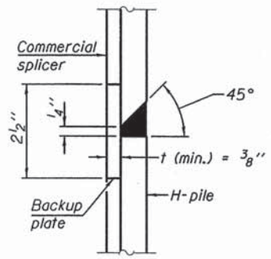
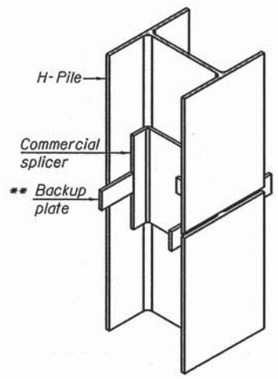
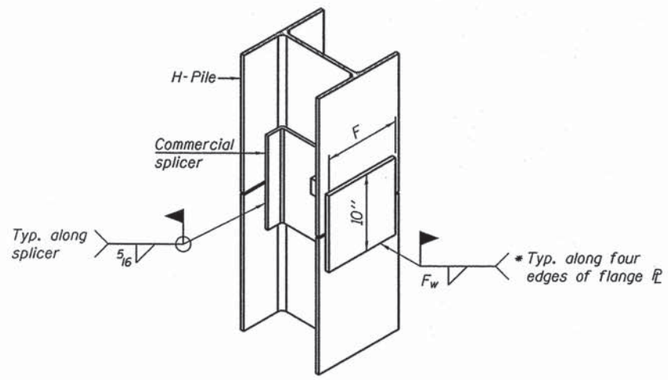


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



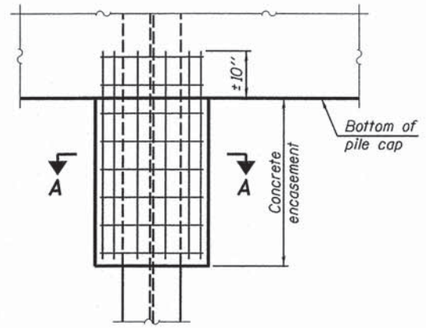
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

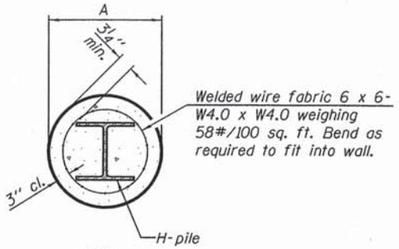
* Interrupt welds ¼'' from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer ($\frac{5}{16}''$ min.).



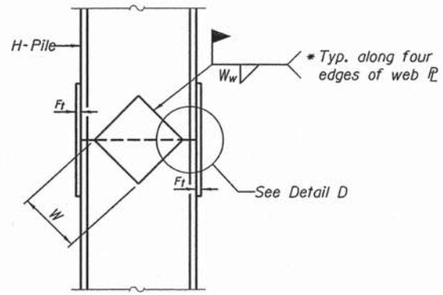
ELEVATION



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

SECTION A-A

PILE ENCASEMENT



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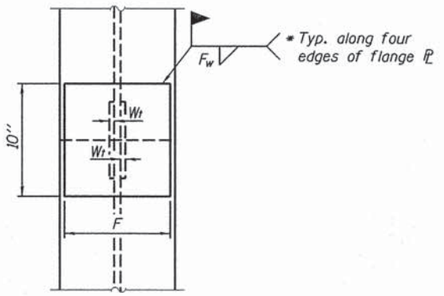
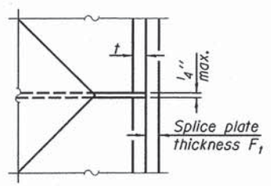


END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	$12\frac{1}{2}''$	1''	$\frac{7}{8}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x102	$12\frac{1}{2}''$	$\frac{7}{8}''$	$\frac{3}{4}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x89	$12\frac{1}{2}''$	$\frac{3}{4}''$	$\frac{11}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x73	$12\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{9}{16}''$	$7\frac{3}{4}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
HP 12x84	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x74	10''	$\frac{7}{8}''$	$\frac{11}{16}''$	$6\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{1}{2}''$
x63	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x53	10''	$\frac{5}{8}''$	$\frac{1}{2}''$	$6\frac{1}{2}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 10x57	8''	$\frac{3}{4}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
x42	8''	$\frac{5}{8}''$	$\frac{9}{16}''$	$5\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$
HP 8x36	7''	$\frac{5}{8}''$	$\frac{7}{16}''$	$4\frac{1}{4}''$	$\frac{1}{2}''$	$\frac{3}{8}''$

WELDED PLATE FIELD SPLICE

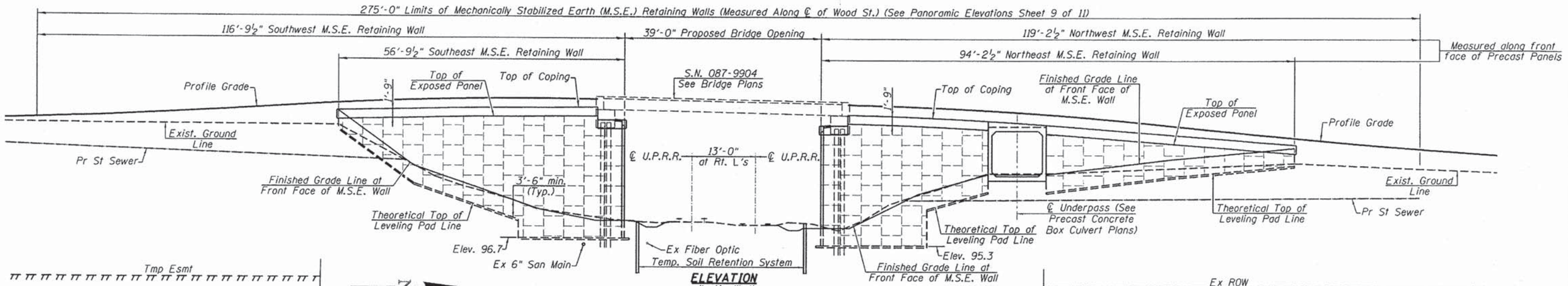
Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

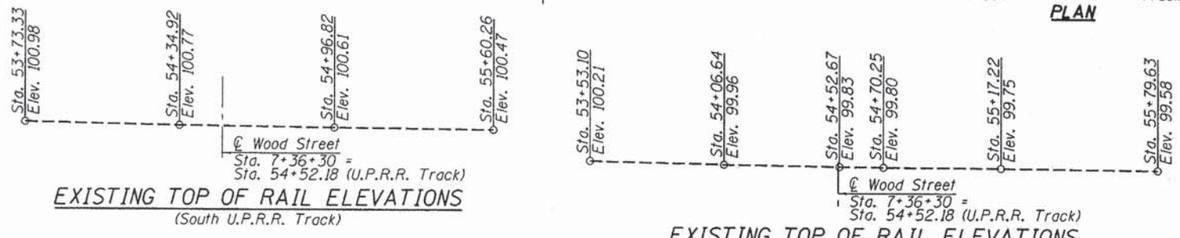
F-HP 1-27-12

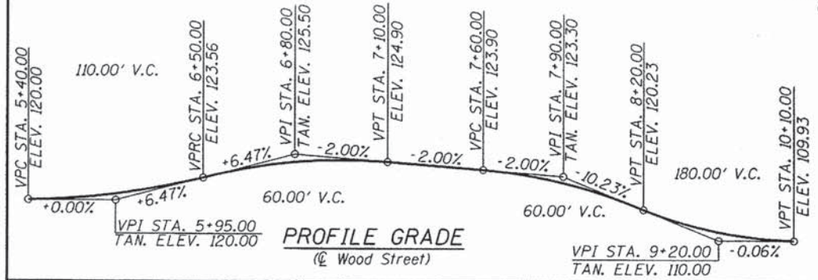
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	HP PILE DETAILS STRUCTURE NO. 087-9904 SHEET NO. 11 OF 11 SHEETS
		DRAWN -	REVISED -			
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -			
	PLOT DATE = $DATE$	DATE -	REVISED -			

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	29
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Benchmarks: BM#1 - Railroad Spike in Power Pole
25' Rt. Sta. 8+68 El. 112.29
BM#2 - Painted "X" on Pier #4 Cap
22' Rt. Sta. 7+51 El. 121.34







4/6/2010

GERALD B. ROTHERHAM
081-005673
LICENSED STRUCTURAL ENGINEER
STATE OF ILLINOIS

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 "A.A.S.H.T.O. LRFD Bridge Design Specifications."

Expiration Date 11/30/2016

INDEX OF SHEETS

M.S.E. ENDS & CORNERS

(All Data Listed Along Outside Face of Precast Panels)
(Offsets are measured from ℄ Wood St.))

Point	Station	Offset
E1	6+60	20' Rt.
E2	7+16.8	20' Rt.
E3	7+55.8	20' Lt.
E4	8+50	20' Rt.
W1	6+00	18' Lt.
W2	7+16.8	18' Lt.
W3	7+55.8	20' Lt.
W4	8+75	20' Lt.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Mechanically Stabilized Earth Retaining Wall	Sq Ft	6361
Structure Excavation	Cu Yd	690
Temporary Soil Retention System	Sq Ft	445

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.

DESIGN SPECIFICATIONS

M.S.E. WALLS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition.

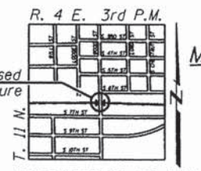
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 4,500 psi (Precast Panels)



LOCATION PLAN

M.S.E. WALLS - GENERAL PLAN & ELEVATION
WOOD STREET OVER
UNION PACIFIC (SIRS) RAILROAD
MS 7220A-SECTION 12-00054-00-BR
SHELBY COUNTY
STA. 7+36.30

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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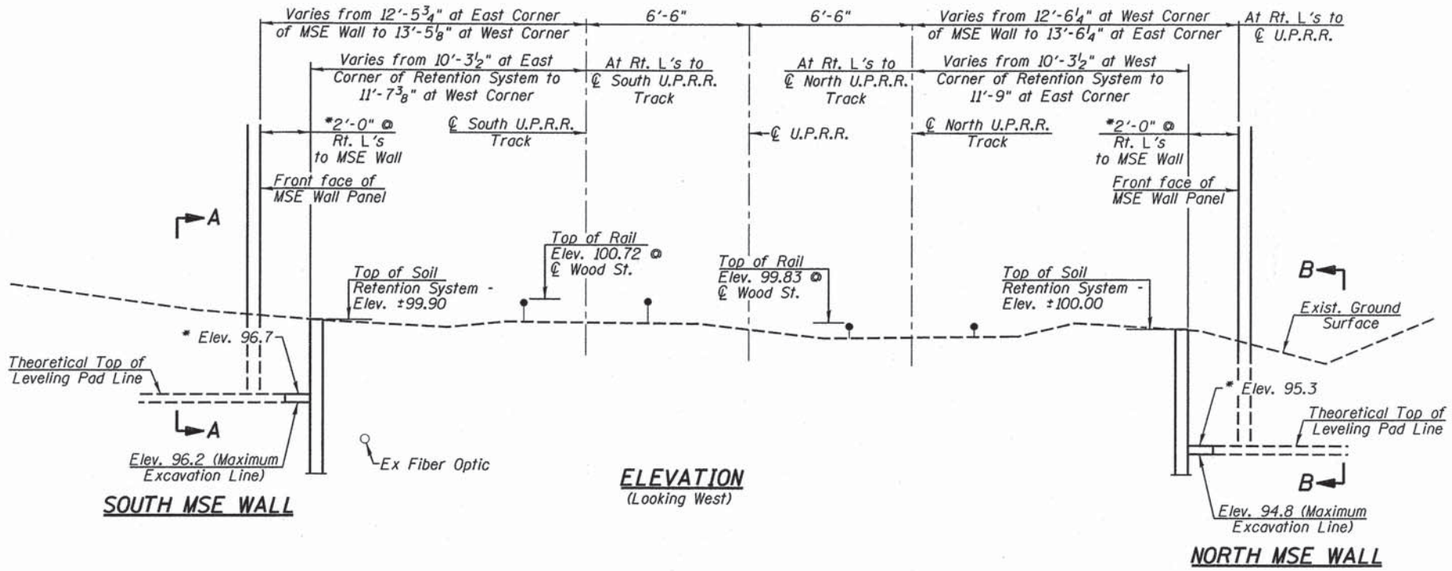
IL. Design Firm No. 184-001939

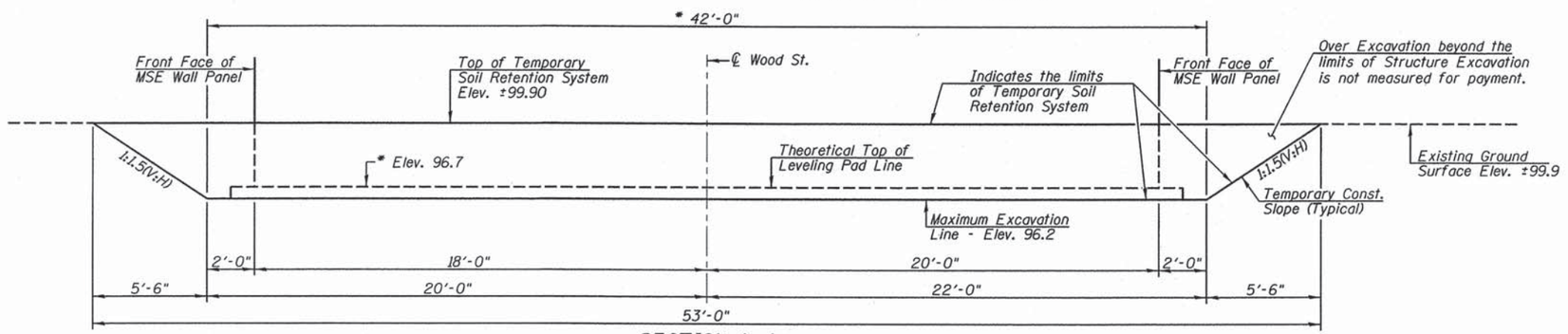
M.S.E. WALLS – GENERAL PLAN & ELEVATION

SHEET NO. 1 OF 4 SHEETS

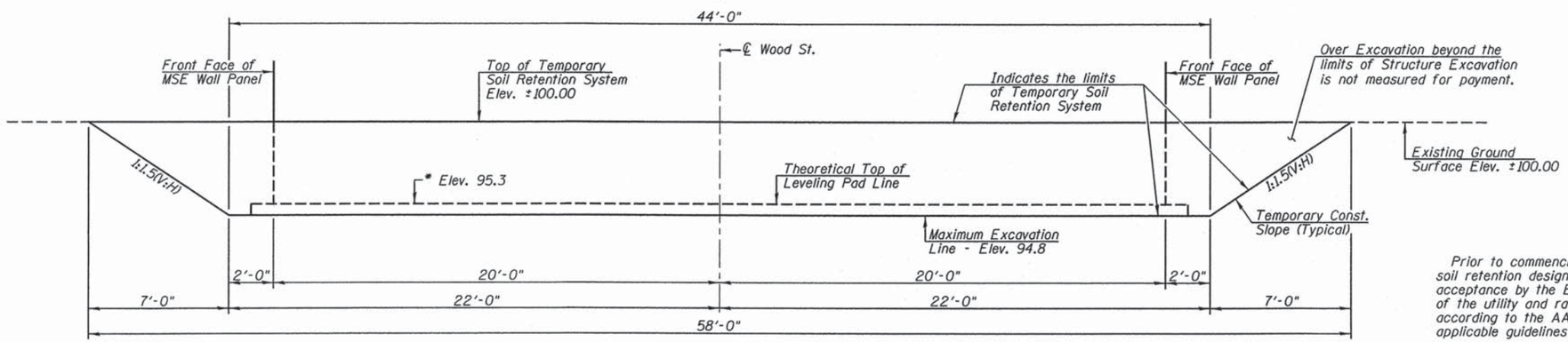
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	30
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



* Pay limits for Structure Excavation



SECTION A-A
(Looking North)



SECTION B-B
(Looking South)

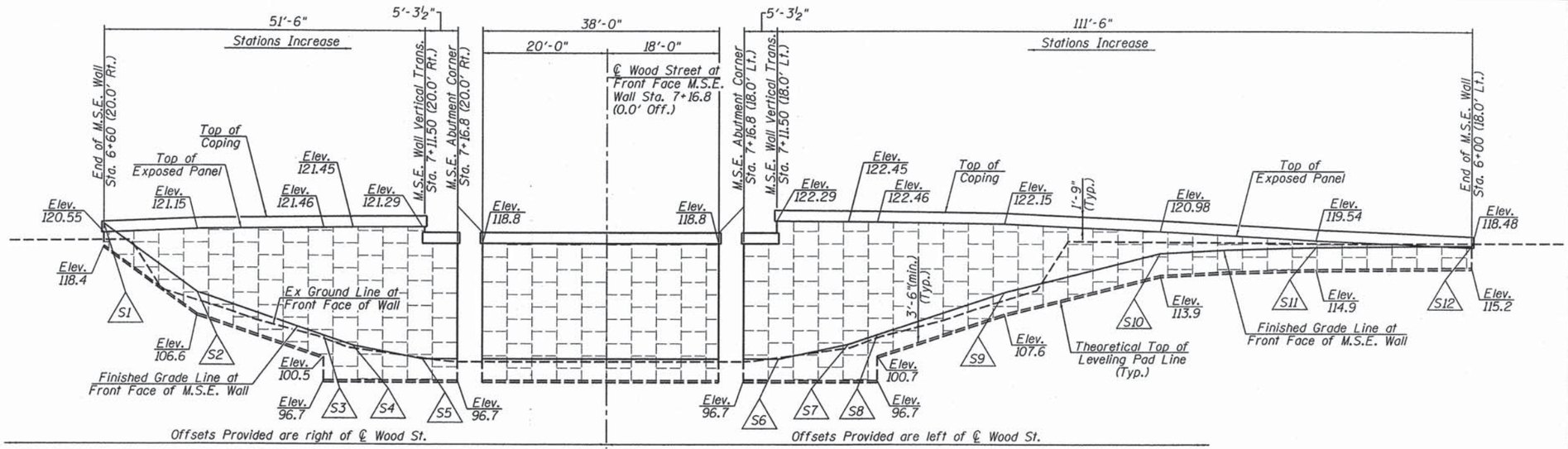
Prior to commencing any work, the Contractor shall submit a temporary soil retention design including plan details and calculations for review and acceptance by the Engineer. Approval shall be contingent upon acceptance of the utility and railroad companies involved. Shoring shall be designed according to the AASHTO design code specified on sheet 1 of 4 and applicable guidelines for temporary shoring required by the railroad company.

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	TEMPORARY SOIL RETENTION SYSTEM	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	31
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -						CONTRACT NO. 95792		
	PLOT DATE = $DATE$	DATE -	REVISED -			SHEET NO. 2 OF 4 SHEETS	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

FINISHED GRADE LINE
SOUTH M.S.E. RETAINMENT

(All Data Listed Along Front Face of Precast Panels)

Point	Station	Offset	Elevation
S1	6+60	20' Rt.	121.9
S2	6+75	20' Rt.	110.1
S3	6+95.3	20' Rt.	104.0
S4	7+00	20' Rt.	102.4
S5	7+11.2	20' Rt.	100.2
S6	7+11.2	18' Lt.	100.2
S7	7+00	18' Lt.	102.6
S8	6+95.3	18' Lt.	104.2
S9	6+75	18' Lt.	111.1
S10	6+50	18' Lt.	117.4
S11	6+25	18' Lt.	118.4
S12	6+00	18' Lt.	118.7



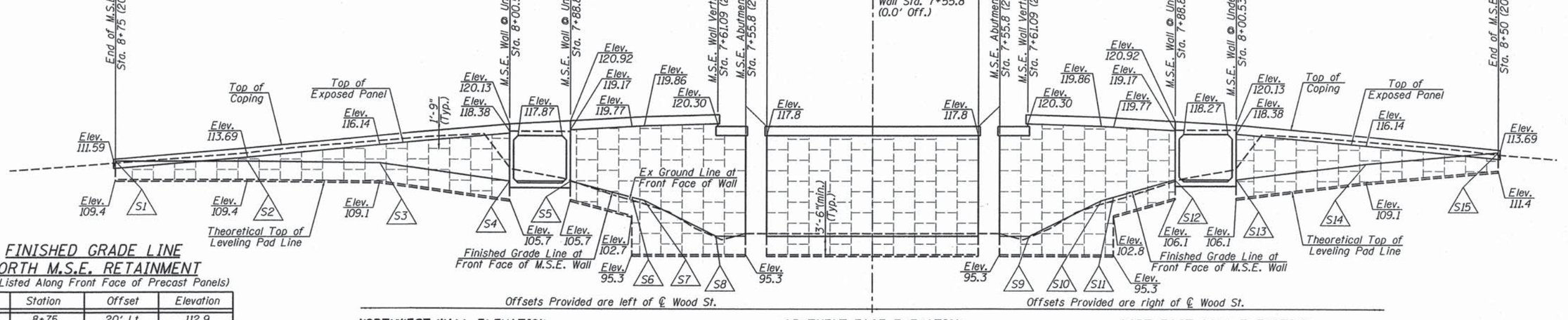
SOUTHEAST WALL ELEVATION **ABUTMENT FACE ELEVATION** **SOUTHWEST WALL ELEVATION**

PANORAMIC WALL ELEVATION - SOUTH M.S.E. RETAINMENT

FINISHED GRADE LINE
NORTH M.S.E. RETAINMENT

(All Data Listed Along Front Face of Precast Panels)

Point	Station	Offset	Elevation
S1	8+75	20' Lt.	112.9
S2	8+50	20' Lt.	112.9
S3	8+25	20' Lt.	112.6
S4	8+00.53	20' Lt.	109.2
S5	7+88.87	20' Lt.	109.2
S6	7+77.3	20' Lt.	106.2
S7	7+75	20' Lt.	105.6
S8	7+61.4	20' Lt.	98.8
S9	7+61.4	20' Rt.	98.8
S10	7+75	20' Rt.	105.6
S11	7+77.3	20' Rt.	106.3
S12	7+88.87	20' Rt.	109.6
S13	8+00.53	20' Rt.	109.6
S14	8+25	20' Rt.	112.6
S15	8+50	20' Rt.	114.9



NORTHWEST WALL ELEVATION **ABUTMENT FACE ELEVATION** **NORTHEAST WALL ELEVATION**

PANORAMIC WALL ELEVATION - NORTH M.S.E. RETAINMENT

Note:
Wall stations are located from the ℄ Wood Street to Front Face (F.F.) of Precast Panels.
Top of Wall Elevations are given at the Top of Exposed Panel Line.

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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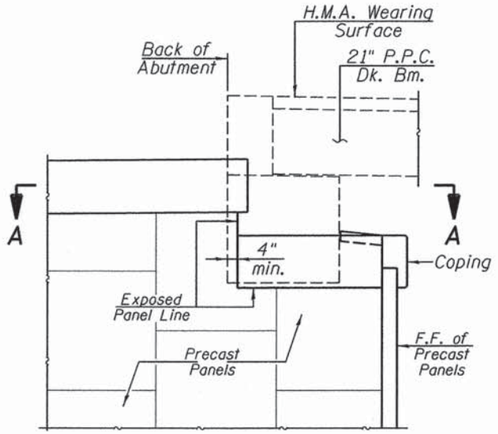
IL. Design Firm No. 184-001939

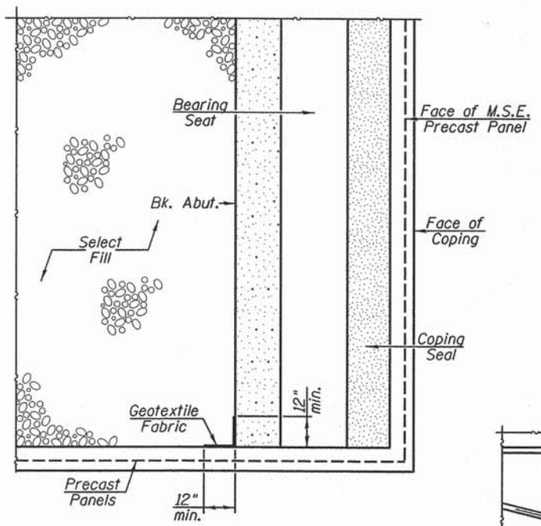
M.S.E. WALLS – PANORAMIC ELEVATIONS

SHEET NO. 3 OF 4 SHEETS

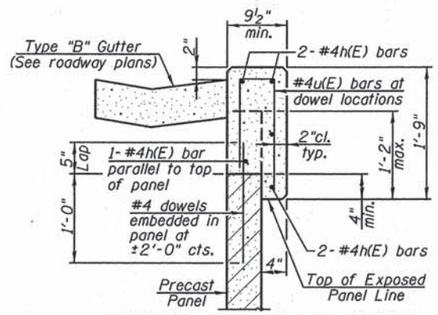
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	32
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



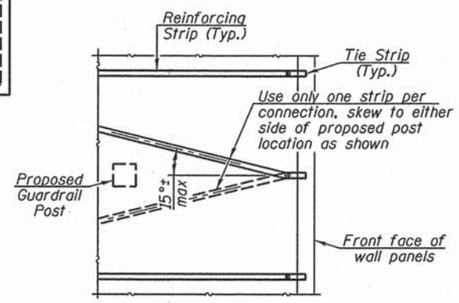
ABUTMENT END VIEW



SECTION A-A

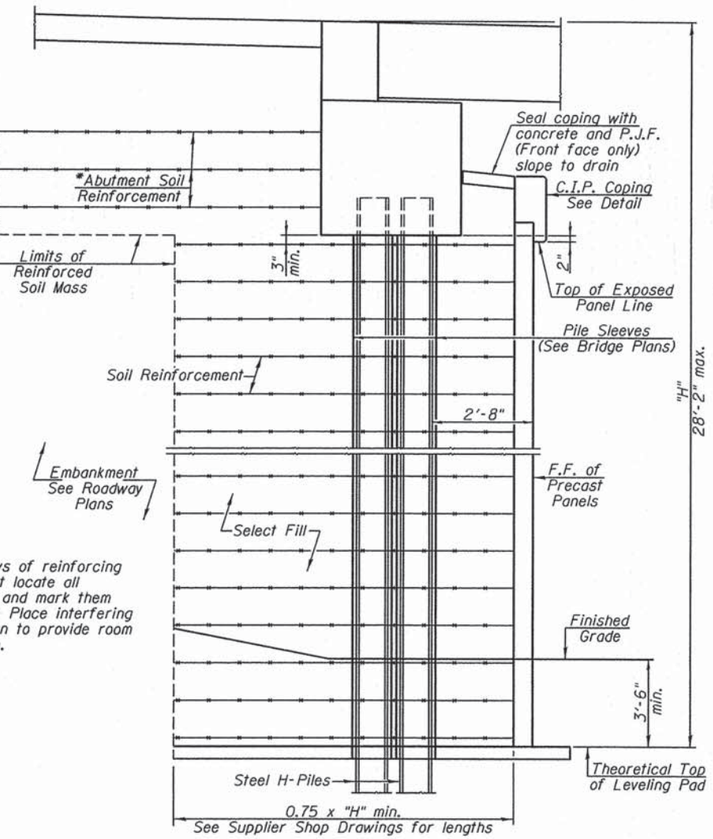


SECTION THRU C.I.P. COPING



SECTION B-B

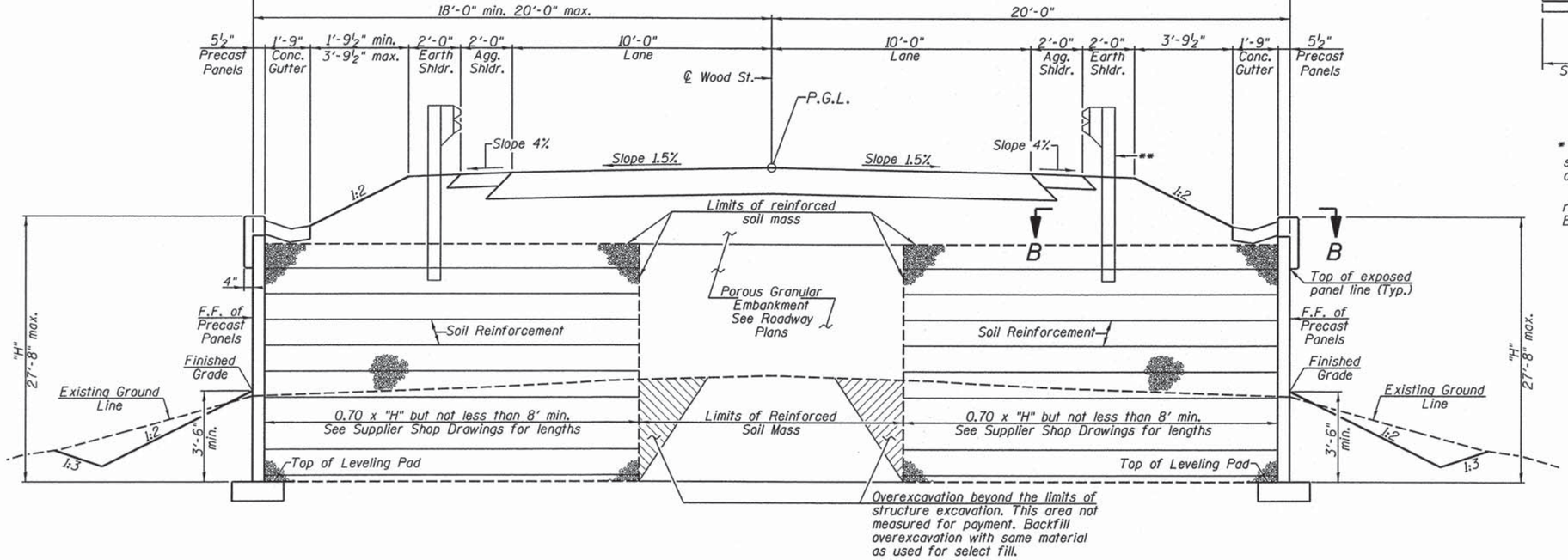
** Prior to placing top rows of reinforcing strips, the Contractor must locate all proposed guard rail posts and mark them on the back face of walls. Place interfering reinforcing strips as shown to provide room for future post installation.



TYPICAL SECTION THRU ABUTMENT

* The M.S.E. wall supplier shall design the abutment soil reinforcement to resist a horizontal service force of 1.53 kips/ft. of abutment.

The cost of furnishing and installing abutment soil reinforcement is included with mechanically stabilized Earth Retaining Wall.



TYPICAL BACK TO BACK M.S.E. WALL SECTION

Notes:

The cost of coping seal, C.I.P. coping, reinforcement bars, dowel bars and geotextile fabric is included with Mechanically Stabilized Earth Retaining Wall.

Reinforcement bars in C.I.P. coping to be designed by MSE wall supplier. Cost is included with Mechanically Stabilized Earth Retaining Wall.

Contractor shall contact the MSE wall supplier to verify/coordinate that the added crane/pile driving equipment loading on top of the MSE wall is acceptable should the Contractor choose to drive piles from the top of the MSE walls.

M.S.E. WALL DETAILS
WOOD STREET OVER
UNION PACIFIC (SIRS) RAILROAD
MS 7220A-SECTION 12-00054-00-BR
SHELBY COUNTY
STA. 7+36.30

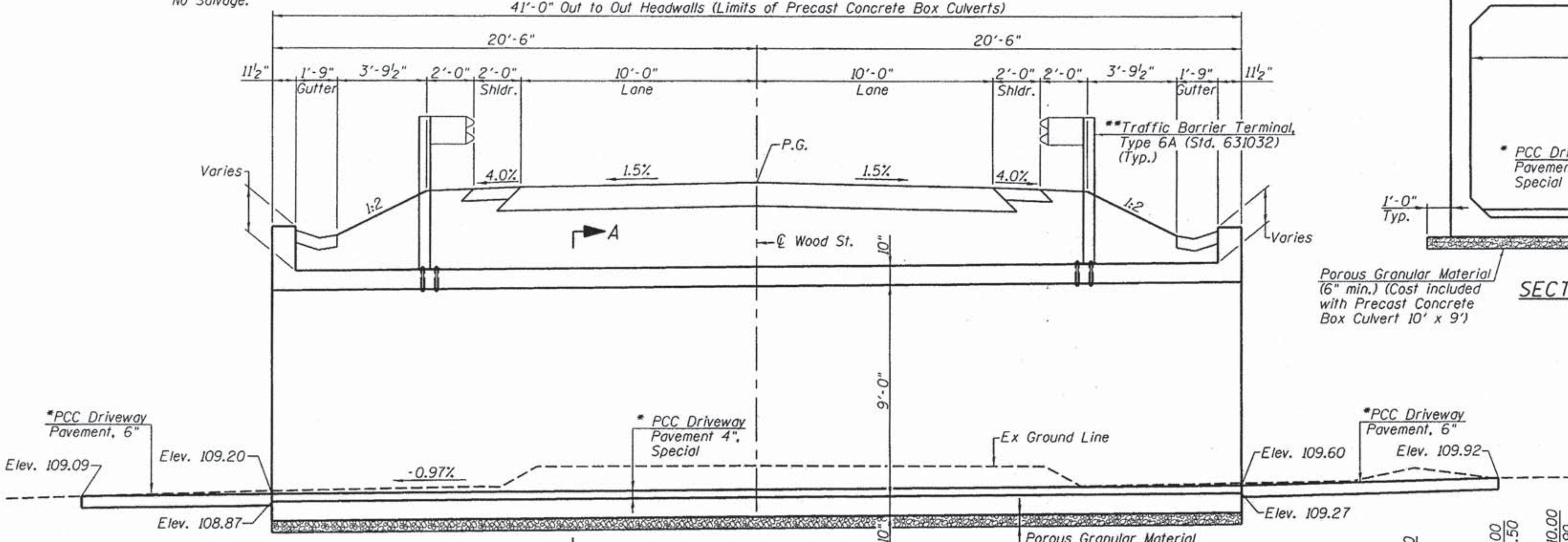
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	M.S.E. WALL DETAILS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	33
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -						CONTRACT NO. 95792		
	PLOT DATE = $DATE$	DATE -	REVISED -			SHEET NO. 4 OF 4 SHEETS	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Benchmarks: BM#1 - Railroad Spike in Power Pole
25' Rt. Sta. 8+68 El. 112.29
BM#2 - Painted "X" on Pier #4 Cap
22' Rt. Sta. 7+51 El. 121.34

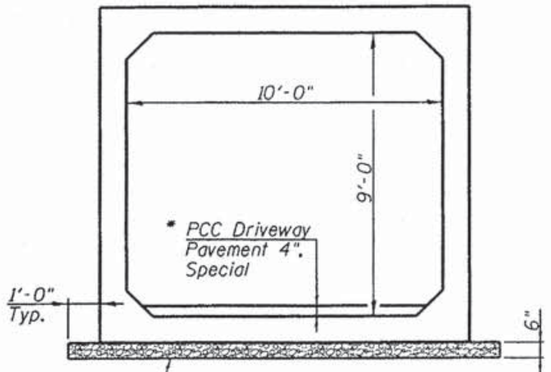
Existing Structure: None. Existing underpass is under Ex. S.N. 087-9902 Approach Span.

The roadway is to be closed and traffic detoured during construction.

No Salvage.



LONGITUDINAL SECTION
(Looking North)



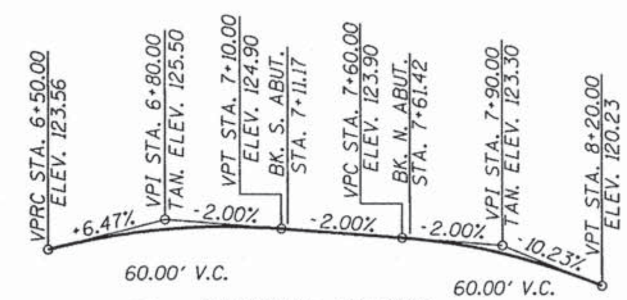
SECTION A-A

INDEX OF SHEETS

1 - General Plan
2 - Headwall Details

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Precast Concrete Box Culverts 10' x 9'	Foot	41



PROFILE GRADE
(℄ Wood Street)

LOADING HL-93

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

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition.
ASTM C 1577

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST UNITS

f'c = 5,000 psi
fy = 60,000 psi (Reinforcement)
fy = 65,000 psi (Welded Wire Fabric)

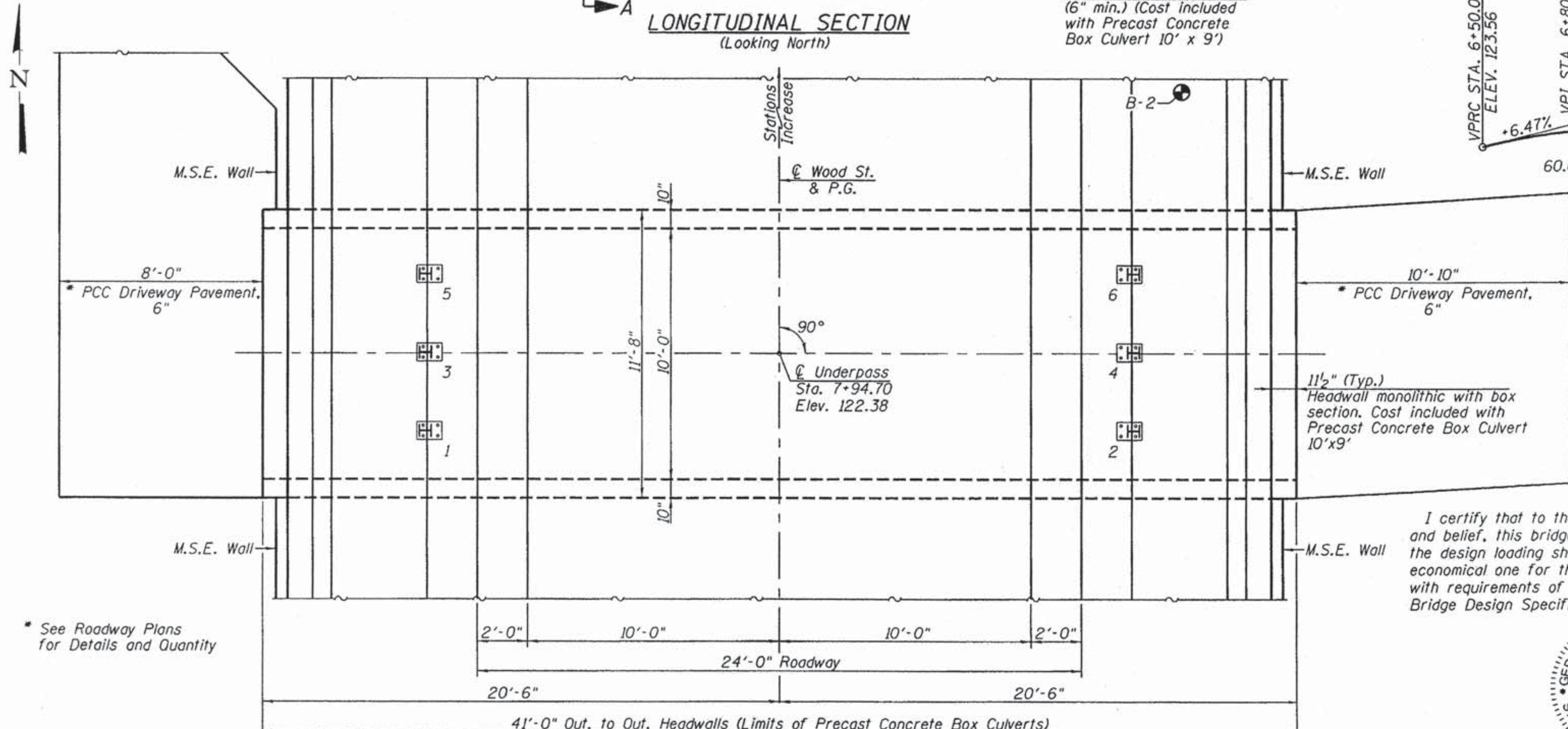
DESIGN FILL HEIGHT

Design earth cover = 3.48'

**RAIL POST INFORMATION

	℄ POST LOCATION	POST LENGTH
1	STA. 7+91.61, 14.07' LT.	5'-10½"
2	STA. 7+91.61, 14.07' RT.	5'-7⅛"
3	STA. 7+94.74, 14.07' LT.	5'-8⅛"
4	STA. 7+94.74, 14.07' RT.	5'-4¾"
5	STA. 7+97.86, 14.07' LT.	5'-5½"
6	STA. 7+97.86, 14.07' RT.	5'-2⅛"

(REFER TO STANDARD 630101 FOR RAIL POST CONNECTIONS)



PLAN

* See Roadway Plans for Details and Quantity

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 "A.A.S.H.T.O. LRFD Bridge Design Specifications".

4/14/2016

GERALD ... GRESHAM 081-005673 LICENSED STRUCTURAL ENGINEER STATE OF ILLINOIS

Expiration 11/30/2016

GENERAL PLAN
UNDERPASS
WOOD STREET OVER
UNION PACIFIC (SIRS) RAILROAD
MS 7220A-SECTION 12-00054-00-BR
SHELBY COUNTY
STA. 7+94.70

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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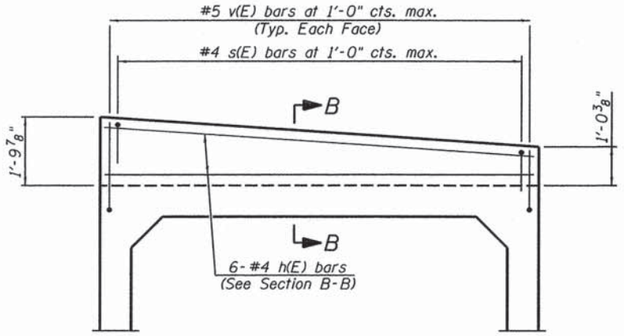
IL. Design Firm No. 184-001939

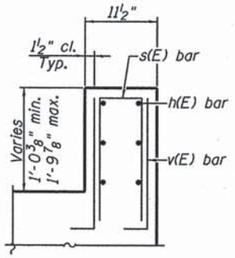
UNDERPASS - GENERAL PLAN

SHEET NO. 1 OF 2 SHEETS

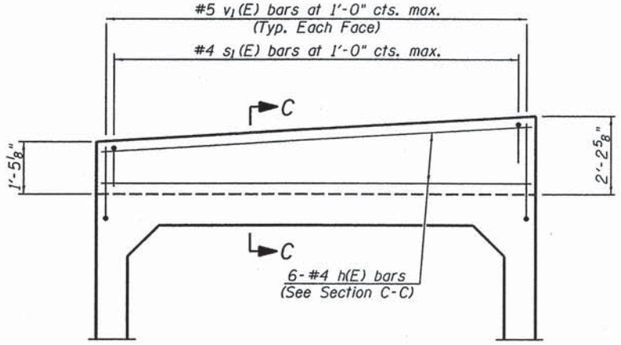
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	34
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



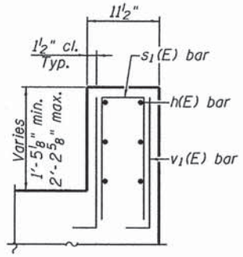
EAST HEADWALL ELEVATION
(Showing details for headwalls cast monolithic with box sections)
(Looking West)



SECTION B-B

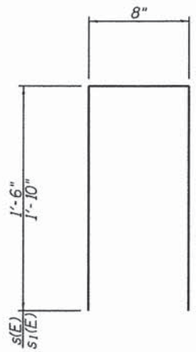


WEST HEADWALL ELEVATION
(Showing details for headwalls cast monolithic with box sections)
(Looking East)

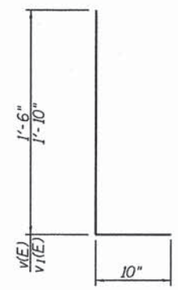


SECTION C-C

Note: Reinforcement bars designated (E) shall be epoxy coated.



BARS s(E) & s1(E)



BARS v(E) & v1(E)

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -	V&K	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	UNDERPASS – HEADWALL DETAILS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -				7220A	12-00054-00-BR	SHELBY	49	35
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	PLOT DATE = $DATE$	DATE -	REVISED -			SHEET NO. 2 OF 2 SHEETS	FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

120

EX. ROW

120.10

C - 7
F - 1

EX. ROW

5 + 58.50

120

120.03

120

5 + 50.00

120

PROJECT BEGINS – STA. 5 + 40

120

5 + 29.05

120

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
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	PLOT DATE = $DATE$	DATE -	REVISED -

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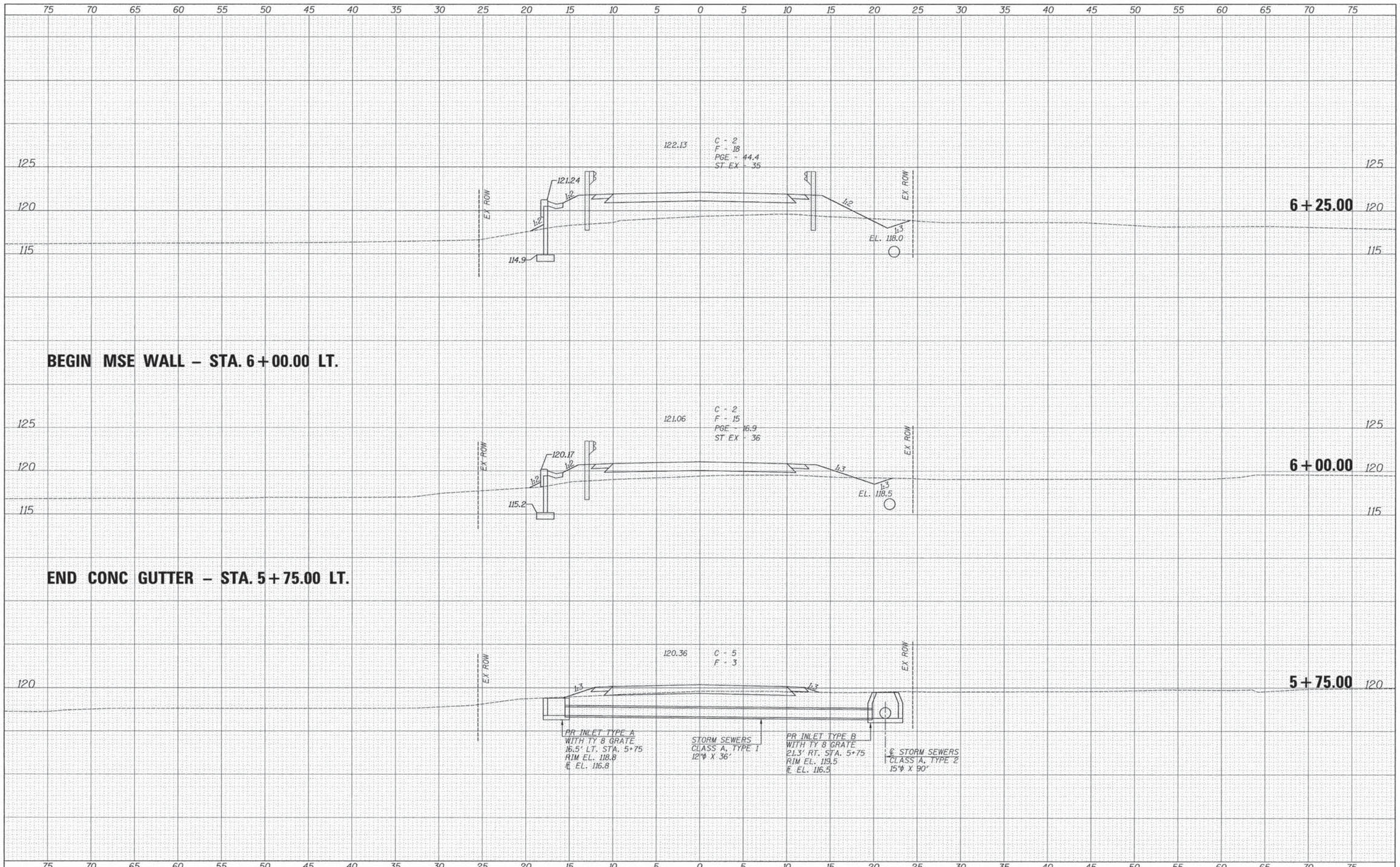
IL. Design Firm No. 184-001939

CROSS SECTIONS
(WOOD STREET)

SCALE: 1"=5' | SHEET NO. 1 OF 11 SHEETS | STA. 5+29.05 | TO STA. 5+58.50

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	36
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

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		DRAWN -	REVISED -
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	PLOT DATE = $DATE$	DATE -	REVISED -

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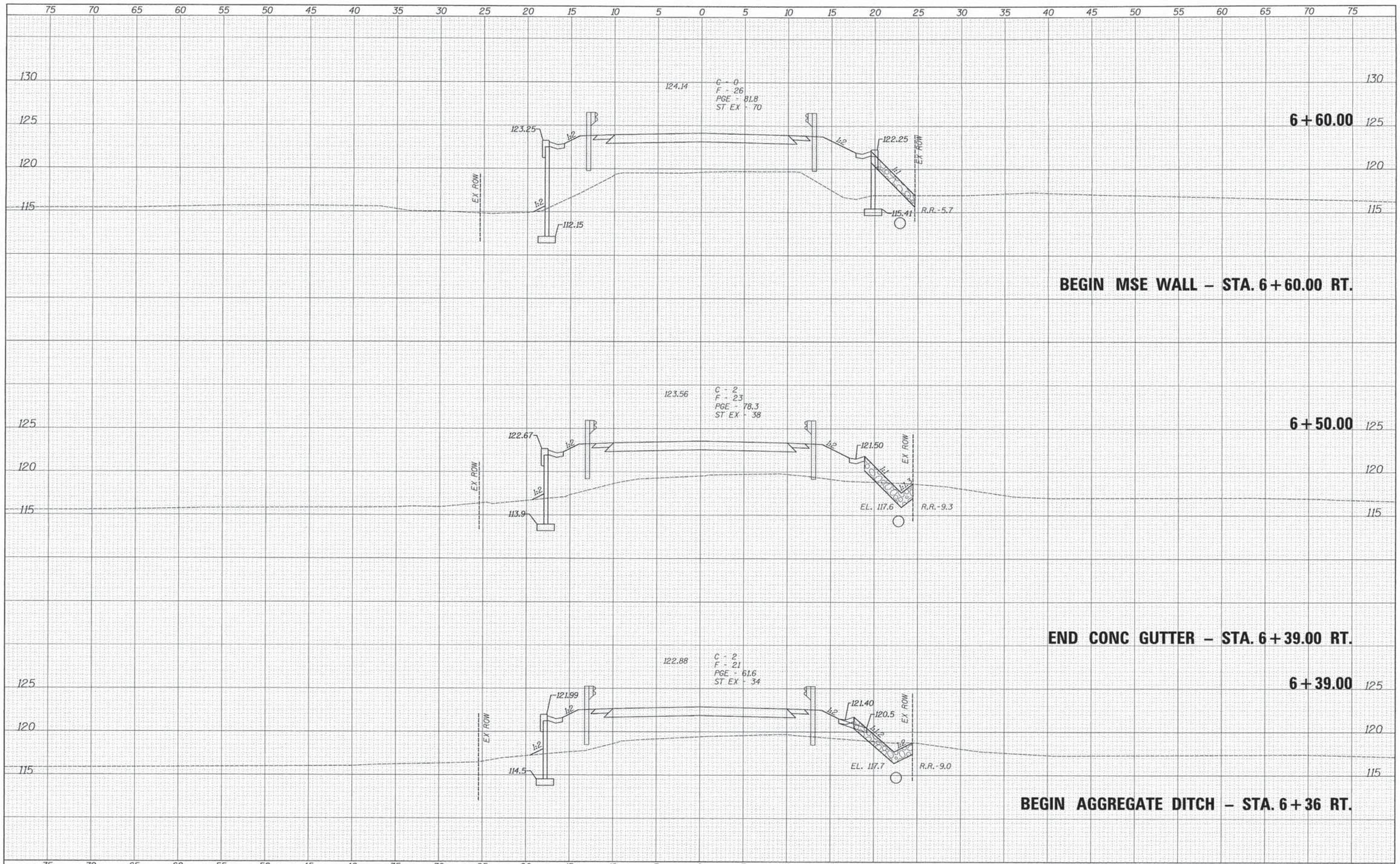
A Division of Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

CROSS SECTIONS (WOOD STREET)

SCALE: 1"=5' | SHEET NO. 2 OF 11 SHEETS | STA. 5+75.00 | TO STA. 6+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	37
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
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	PLOT DATE = $DATE$	DATE -	REVISED -

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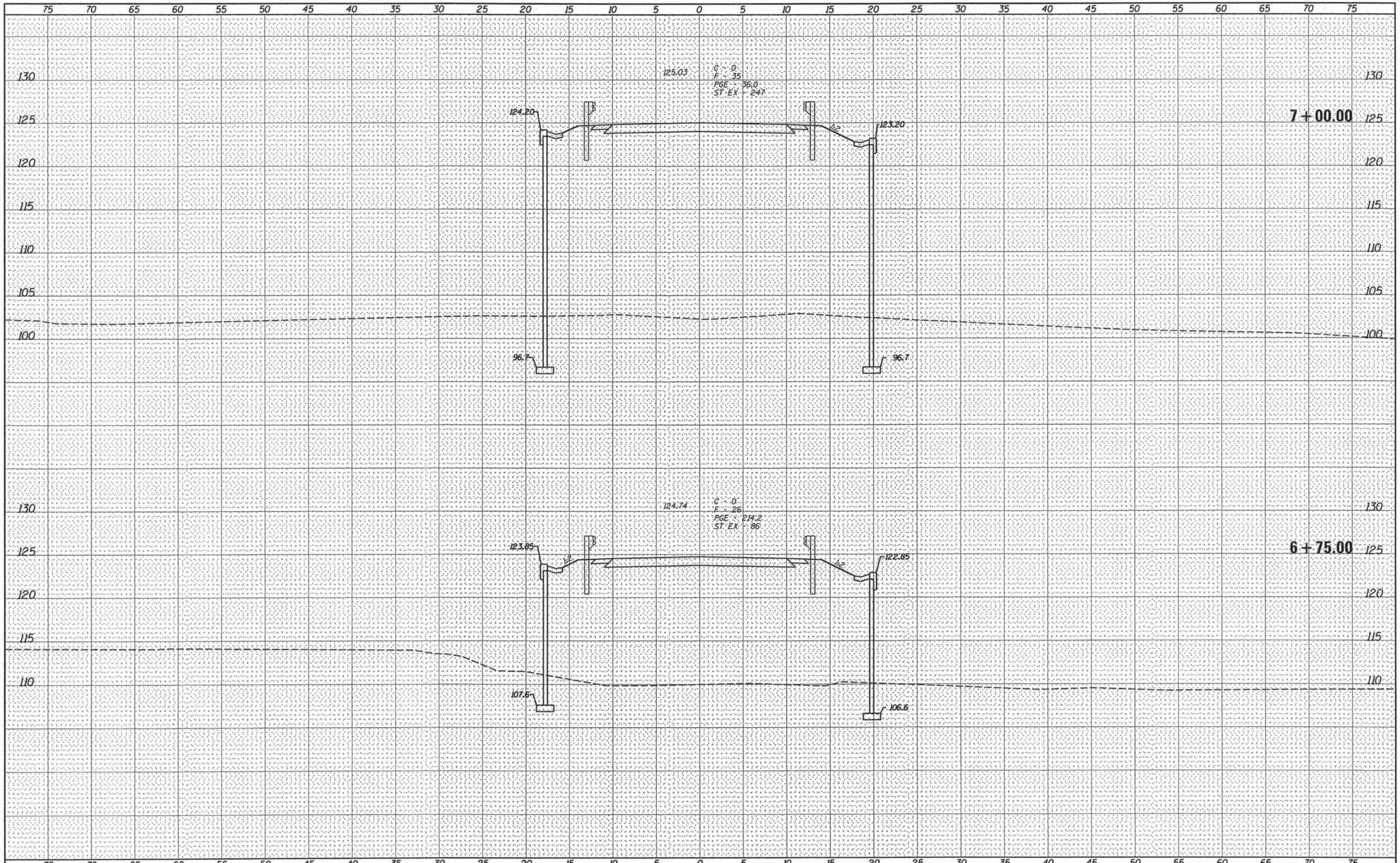
IL. Design Firm No. 184-001939

CROSS SECTIONS (WOOD STREET)

SCALE: 1"=5' | SHEET NO. 3 OF 11 SHEETS | STA. 6+39.00 | TO STA. 6+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	38
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



FINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
DRAWN		
TRACED		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	NOTE BOOK	NO.
SURVEYED		
DRAWN		
TRACED		
AREAS		
AREAS CHECKED		

BY	DATE

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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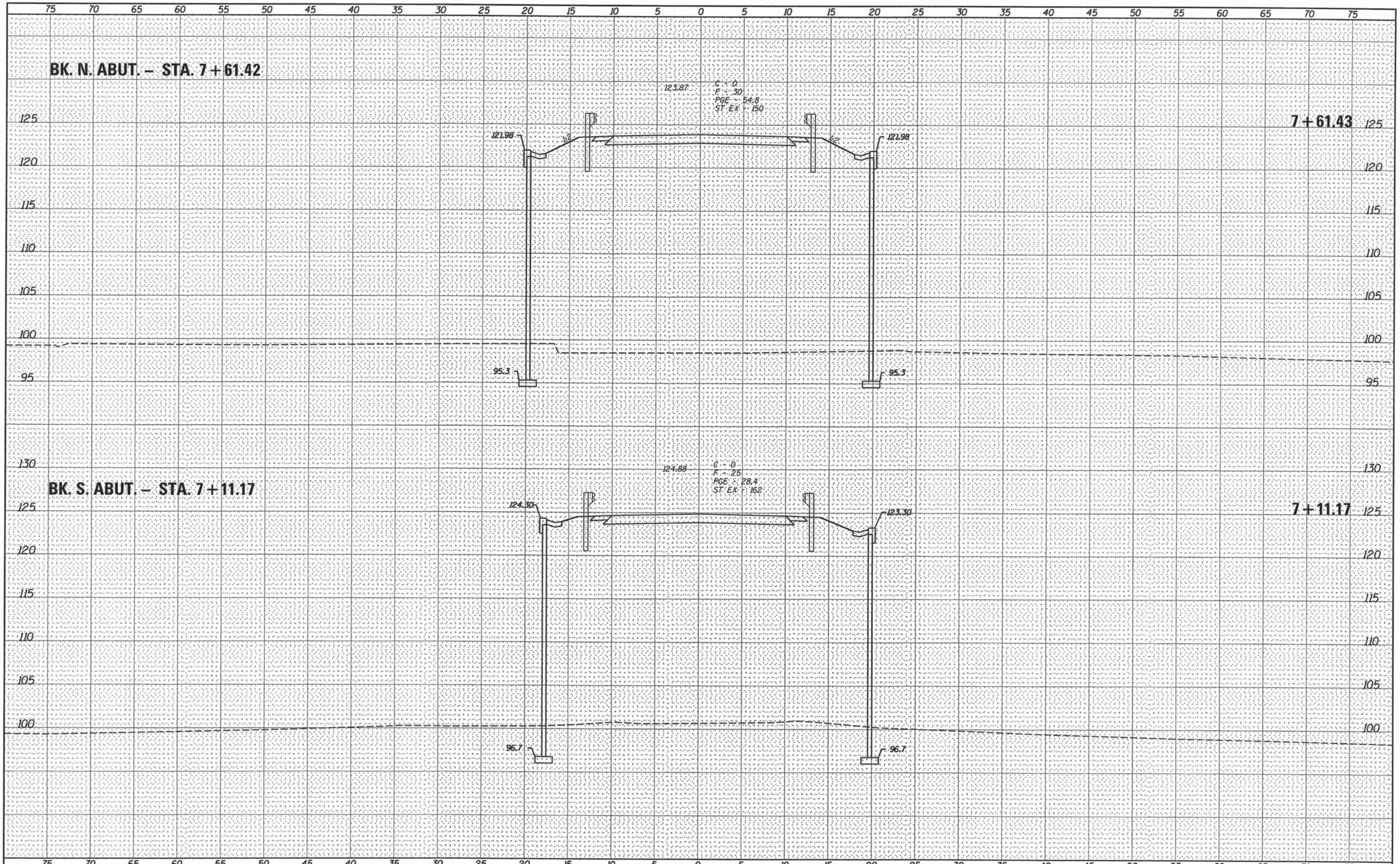
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

CROSS SECTIONS (WOOD STREET)

SCALE: 1"=5' | SHEET NO. 4 OF 11 SHEETS | STA. 6+60.00 | TO STA. 6+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	39
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BK. N. ABUT. – STA. 7 + 61.42



BK. S. ABUT. – STA. 7 + 11.17

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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IL. Design Firm No. 184-001939

CROSS SECTIONS
(WOOD STREET)

SCALE: 1"=5' | SHEET NO. 5 OF 11 SHEETS | STA. 7+11.17 | TO STA. 7+11.17

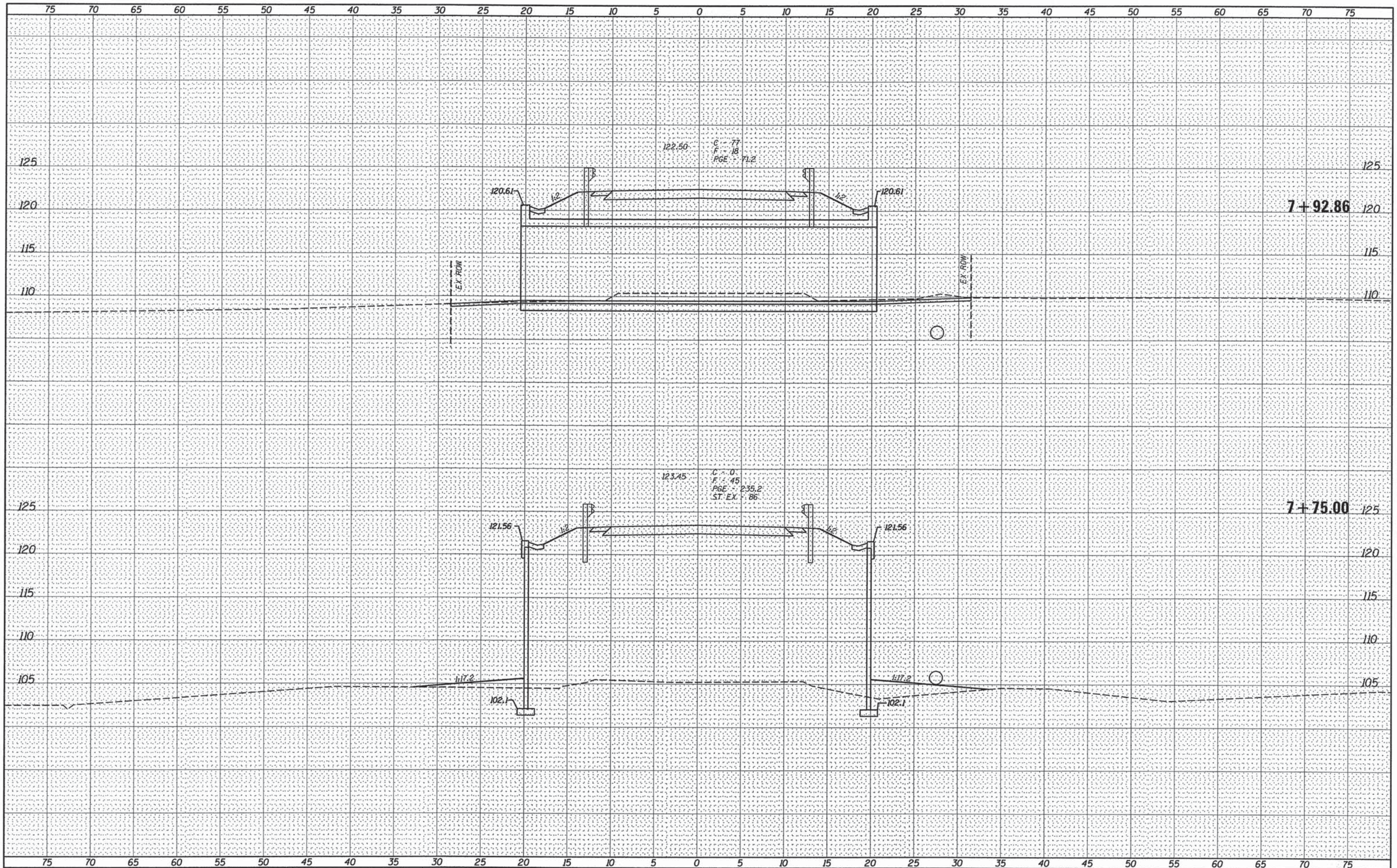
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	40

CONTRACT NO. 95792

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

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

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



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

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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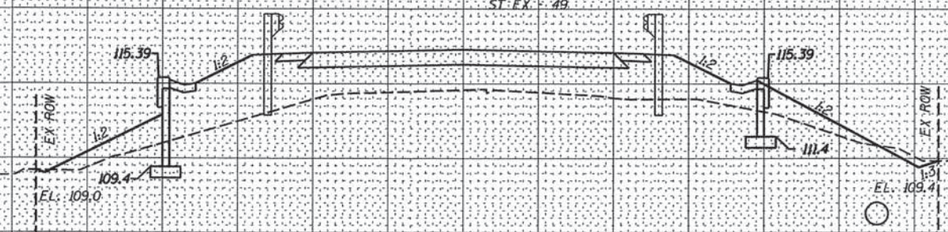
CROSS SECTIONS (WOOD STREET)

SCALE: 1"=5' | SHEET NO. 6 OF 11 SHEETS | STA. 7+75.00 | TO STA. 7+92.86

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	41
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

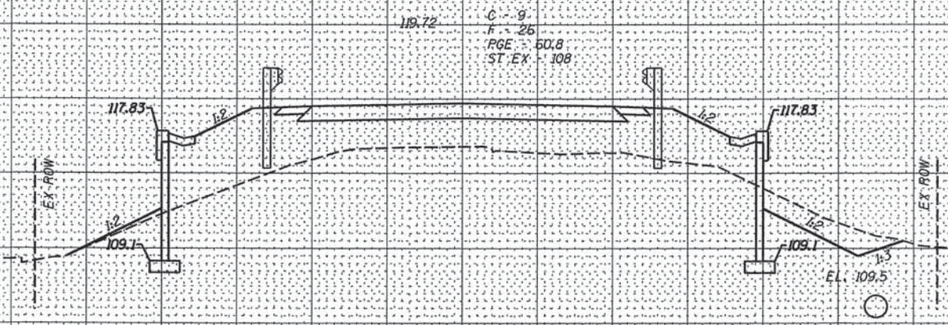
END MSE WALL – STA. 8+50.00 LT.



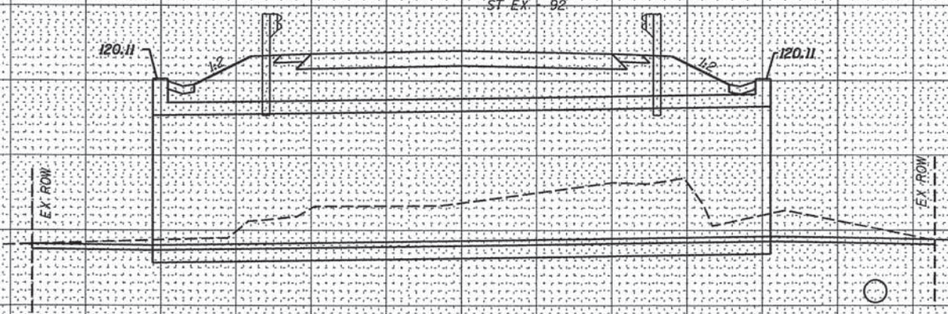
TRANSITION FROM 2:1 AT STA. 8+50 TO 3:1 AT STA. 8+75 RT.

8+50.00

END MSE WALL – STA. 8+25.00 RT.



8+25.00



8+00.00

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

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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CROSS SECTIONS (WOOD STREET)

SCALE: 1"=5' | SHEET NO. 7 OF 11 SHEETS | STA. 8+00.00 TO STA. 8+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	42
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

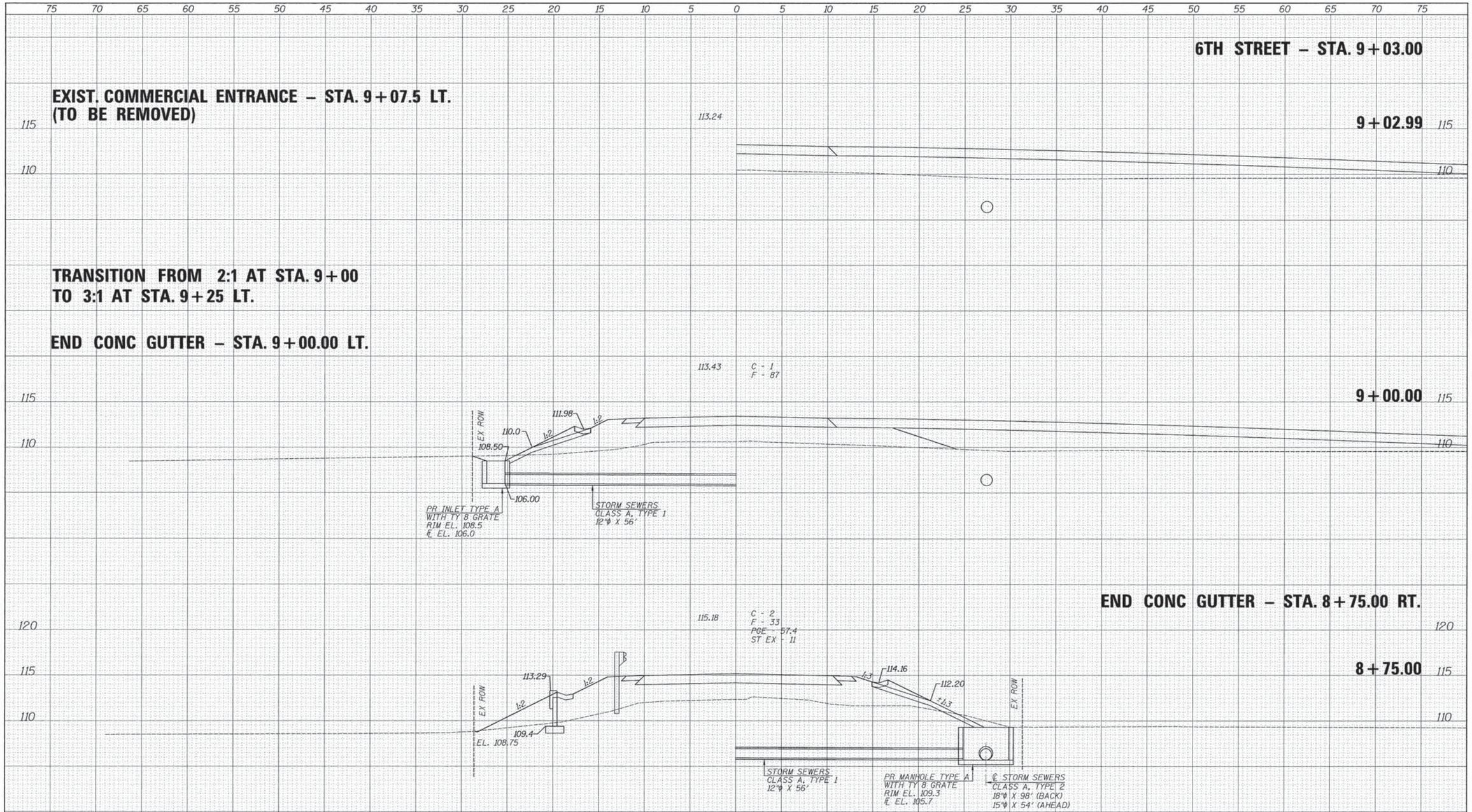
FINAL SURVEY	SURVEYED	DATE
	PLOTTED	BY
NOTE BOOK	TEMPLATE	
NO.	AREAS	
	AREAS CHECKED	

EXIST. COMMERCIAL ENTRANCE – STA. 9+07.5 LT.
(TO BE REMOVED)

TRANSITION FROM 2:1 AT STA. 9+00
TO 3:1 AT STA. 9+25 LT.

END CONC GUTTER – STA. 9+00.00 LT.

6TH STREET – STA. 9+03.00



END CONC GUTTER – STA. 8+75.00 RT.

8+75.00

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

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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IL. Design Firm No. 184-001939

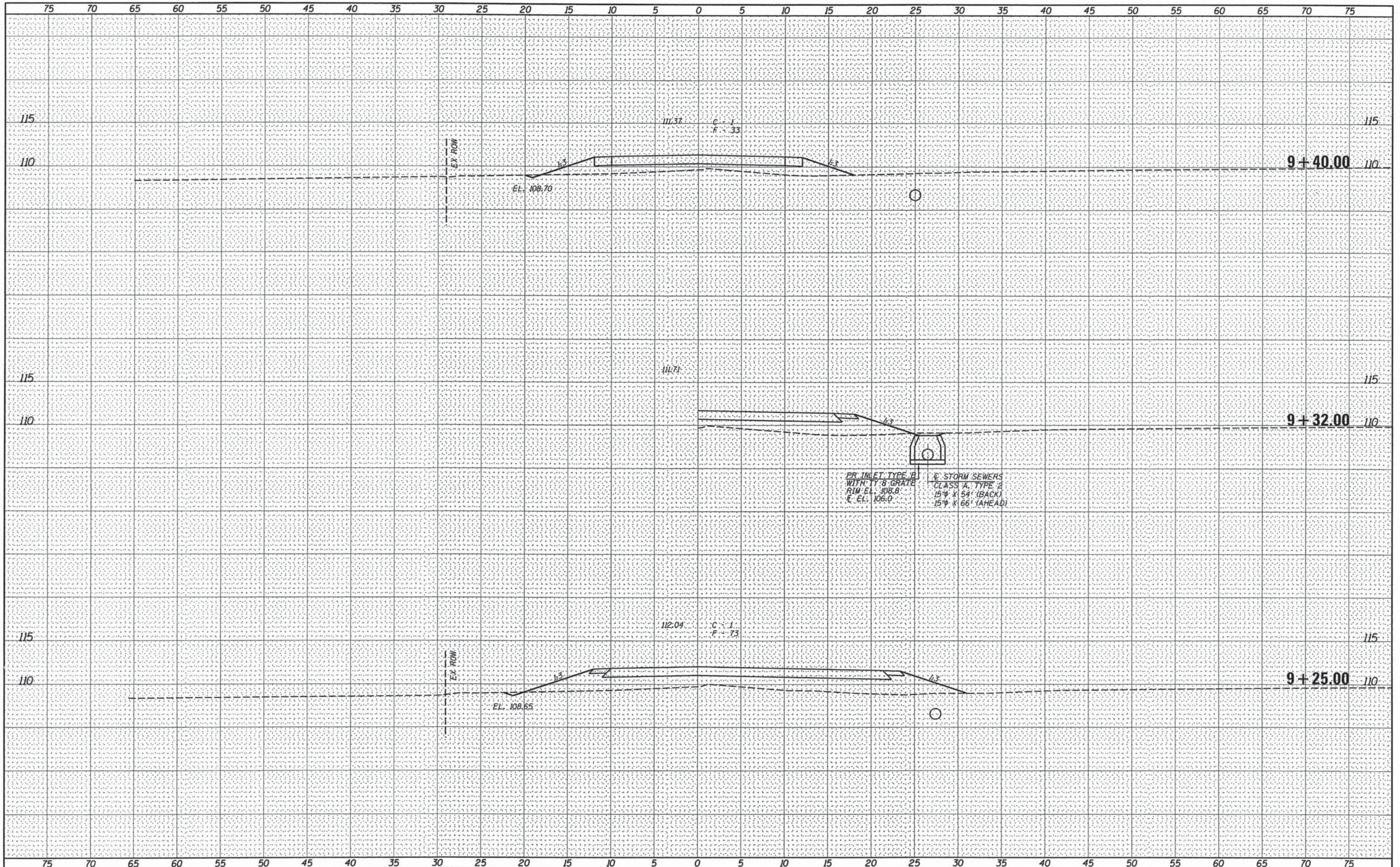
CROSS SECTIONS
(WOOD STREET)

SCALE: 1"=5' | SHEET NO. 8 OF 11 SHEETS | STA. 8+50.00 | TO STA. 8+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	43
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	Allen Henderson & Associates A Division of Veenstra & Kimm, Inc. Springfield, IL. Phone: (217)544-8033 IL. Design Firm No. 184-001939	CROSS SECTIONS (WOOD STREET)
		DRAWN -	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -		SCALE: 1"=5' | SHEET NO. 9 OF 11 SHEETS | STA. 9+32.00 TO STA. 9+40.00
	PLOT DATE = $DATE$	DATE -	REVISED -		

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	44
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

110

EX. ROW

110.31 C - 14 F - 1

EX. ROW

9 + 75.00

110

COMMERCIAL ENTRANCE – STA. 9 + 67

COMMERCIAL ENTRANCE – STA. 9 + 67

110

EX. ROW

110.49

-8.0%

-2.0%

EX. ROW

9 + 67.00

110

115

110

EX. ROW

111.00 C - 1 F - 20

3

4:3

EX. ROW

115

9 + 50.00

110

EL. 108.80

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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IL. Design Firm No. 184-001939

CROSS SECTIONS
(WOOD STREET)

SCALE: 1"=5' | SHEET NO. 10 OF 11 SHEETS | STA. 9+50.00 | TO STA. 9+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	45
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

110

10 + 32.67 110

110

10 + 25.00 110

PROJECT ENDS – STA. 10 + 10

EX. ROW

109.94 C - 14 F - 1

EX. ROW

10 + 09.00 110

110

EX. ROW

109.98 C - 12 F - 1

EX. ROW

10 + 00.00 110

PR. INLET TYPE A
WITH TY. 8 GRATE
RIM EL. 109.3
℄ EL. 107.3

STORM SEWERS
CLASS: A, TYPE 1
12"ø X 36'

PR. INLET TYPE B
WITH TY. 8 GRATE
RIM EL. 109.1
℄ EL. 106.5

℄ Storm Sewers
Class A, Type 2
15"ø X 66'

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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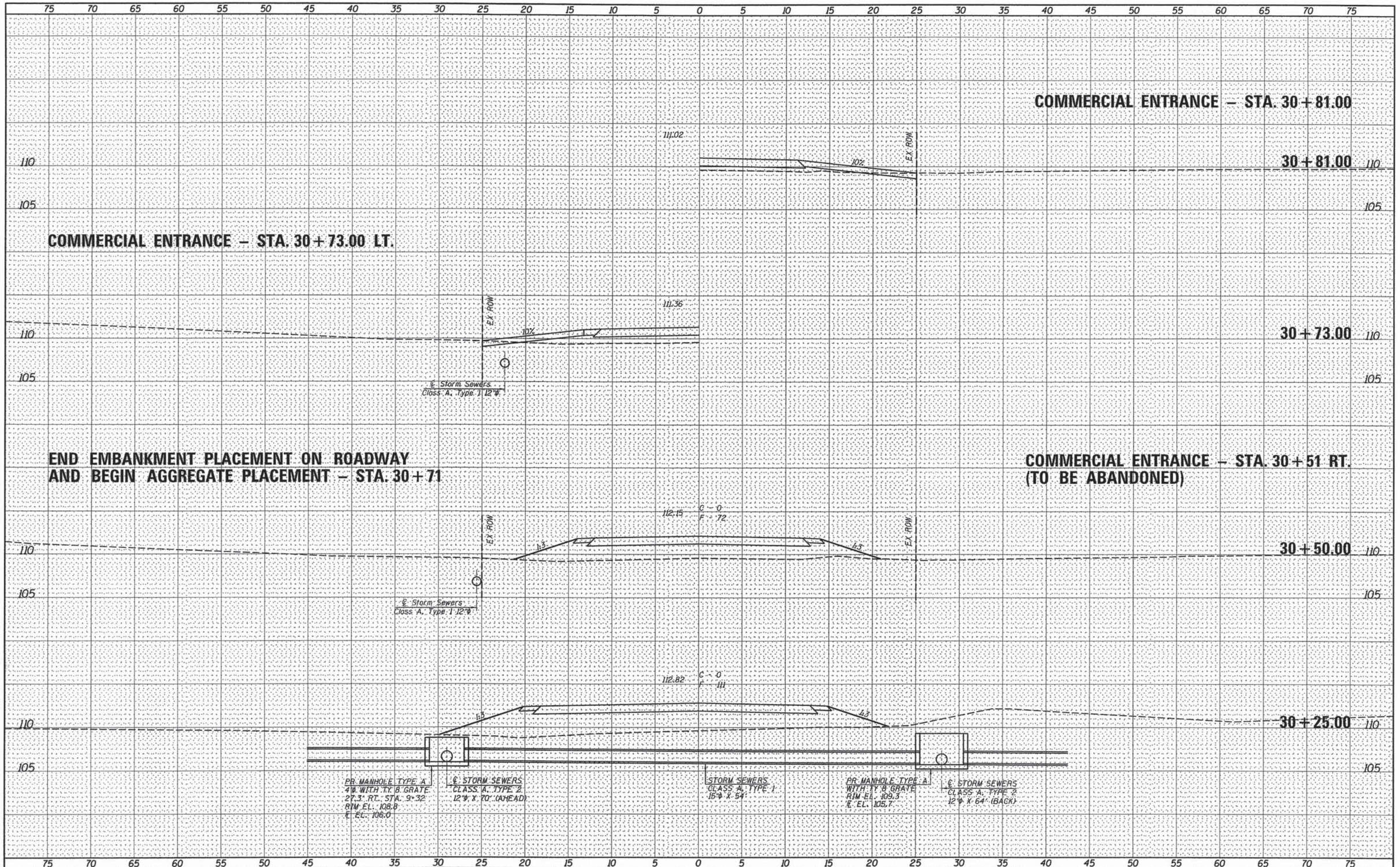
IL. Design Firm No. 184-001939

CROSS SECTIONS
(WOOD STREET)

SCALE: 1"=5' | SHEET NO. 11 OF 11 SHEETS | STA. 10+00.00 | TO STA. 10+32.67

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	46
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

V&K

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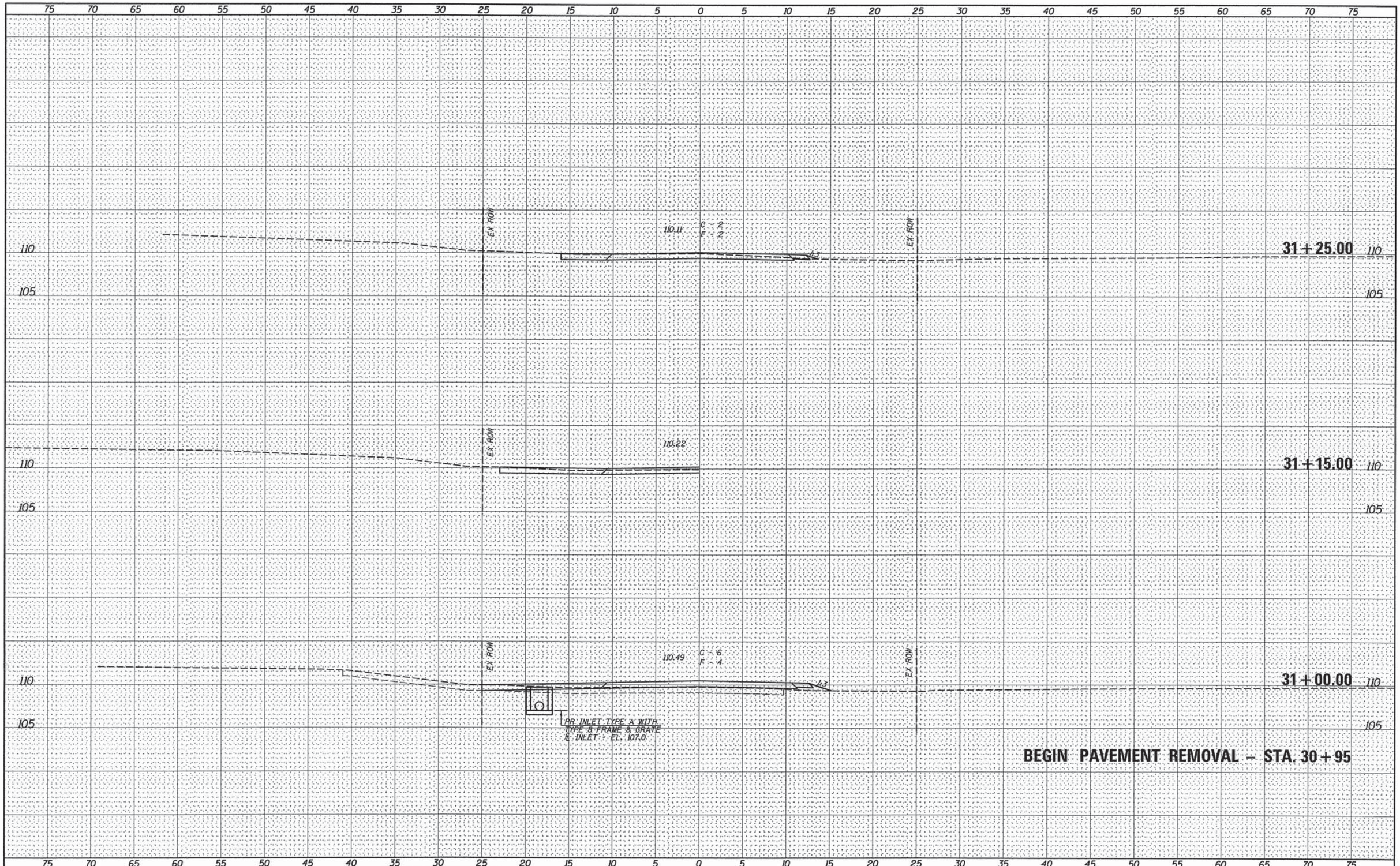
CROSS SECTIONS (6TH STREET)

SCALE: 1"=5' | SHEET NO. 1 OF 3 SHEETS | STA. 30+25.00 TO STA. 30+81.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	47
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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CROSS SECTIONS (6TH STREET)

SCALE: 1"=5' | SHEET NO. 2 OF 3 SHEETS | STA. 31+00.00 TO STA. 31+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	48

CONTRACT NO. 95792

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

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

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

110

105

31 + 75.00 110

105

110

105

31 + 50.00 110

105

PROJECT ENDS – STA. 31 + 40

EX ROW

110.06

EX ROW

110

105

31 + 38.00 110

105

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

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CROSS SECTIONS
(6TH STREET)

SCALE: 1"=5' | SHEET NO. 3 OF 3 SHEETS | STA. 31+38.00 TO STA. 31+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7220A	12-00054-00-BR	SHELBY	49	49
		CONTRACT NO. 95792		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		