

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED MAJOR BRIDGE PROGRAM

C.H. 18 / HENTON ROAD
OVER ANGEL BRANCH
SECTION 12-00275-00-BR
PROJECT BROS-0173(189)
SHELBY COUNTY

PROPOSED STRUCTURE NO. 087-3586
JOB NO. C-97-034-16

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 18	12-00275-00-BR	SHELBY	35	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 95804	

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	SCHEDULE OF QUANTITIES
4.	TYPICAL CROSS SECTIONS
5-7.	PLAN AND PROFILE
8-20.	BRIDGE PLANS
21.	BORINGS
22-35.	STATION CROSS SECTIONS

HIGHWAY STANDARDS:

000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
630001-11	STEEL PLATE BEAM GUARDRAIL
630301-07	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631032-09	TRAFFIC BARRIER TERMINAL. TYP 6A
701901-06	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES; FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

EJ WATER COOPERATIVE
114 W. WASHINGTON STREET
PO BOX 897
EFFINGHAM, ILLINOIS 62401
217-347-7262

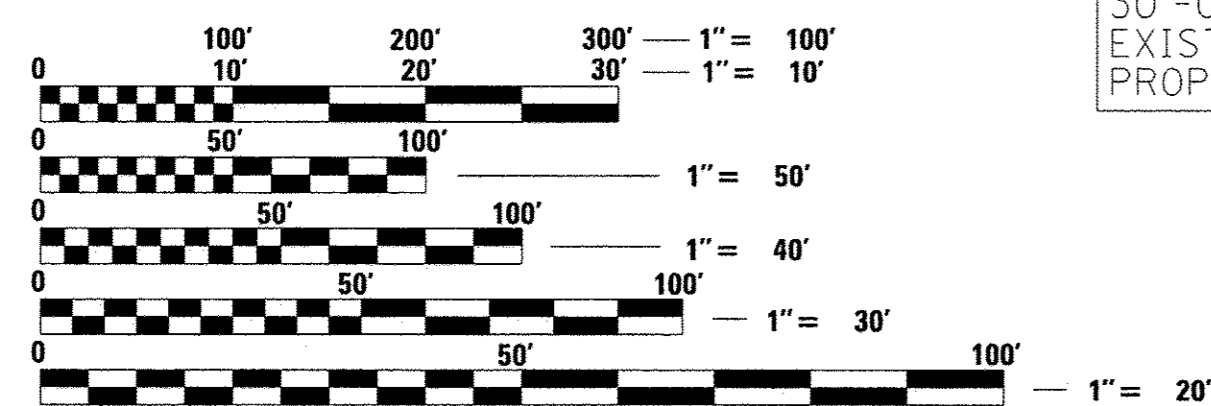
SHELBY ELECTRIC COOP
IL RTE 128 & N. 6TH
PO BOX 166
SHELBYVILLE, ILLINOIS 62565
217-774-3986

CONSOLIDATED COMMUNICATIONS
121 S. 17TH STREET
MATTOON, ILLINOIS 61938
217-235-3355

NEW WAVE COMMUNICATIONS
1209 N. STATE STREET
WESTVILLE, ILLINOIS 61883
217-287-7992 EXT.6



FUNCTIONAL CLASSIFICATION: MINOR COLLECTOR
DESIGN SPEED: 40 MPH
DESIGN TRAFFIC: 300 ADT



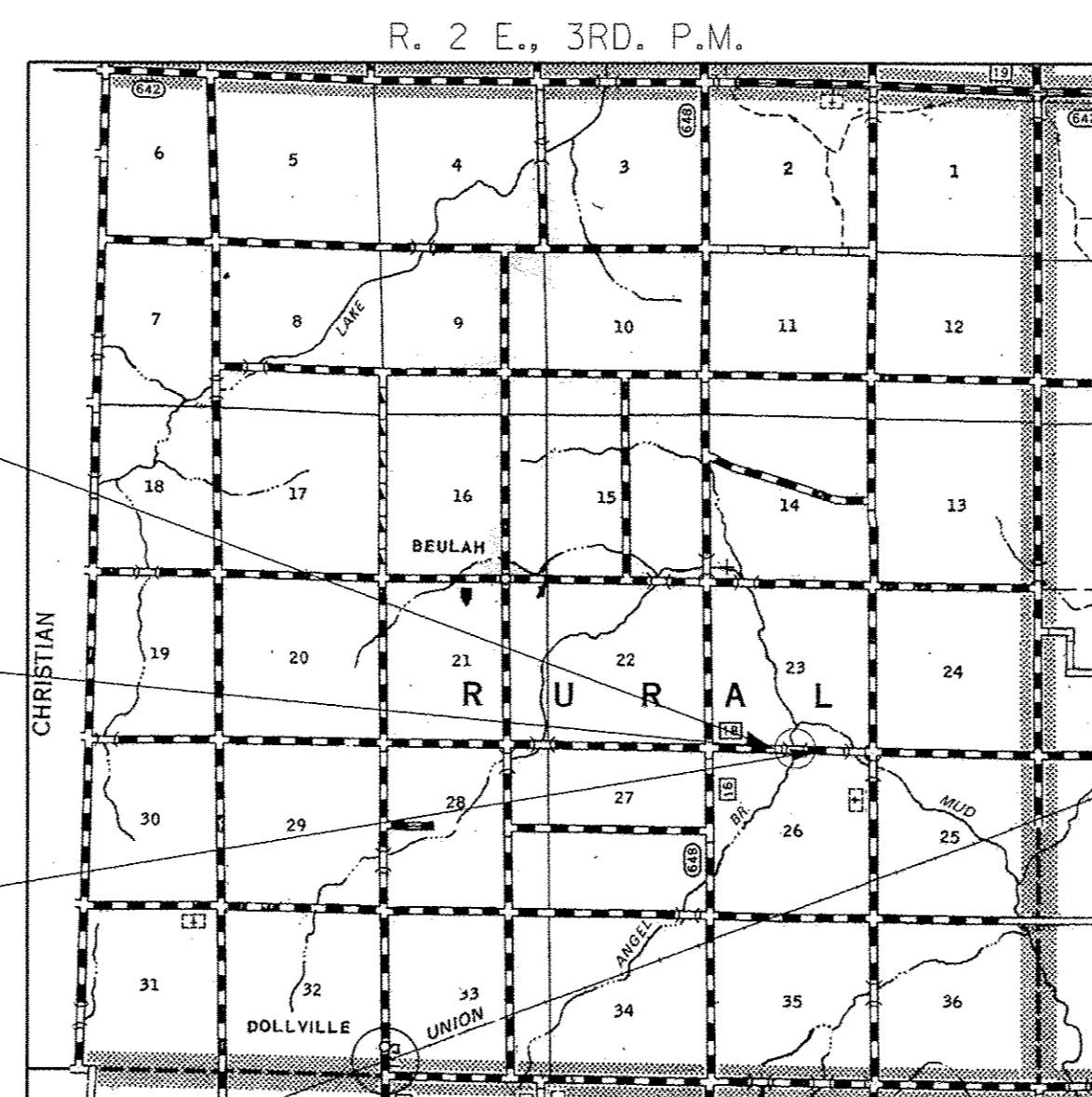
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

CONTRACT NO. 95804

STA. 27+17
STEEL PLATE GIRDER BRIDGE w/CAST IN PLACE DECK
SINGLE SPAN @ 98'-0"
30'-0" RDWY.; SKEW = 0°
EXISTING STRUCTURE NO. 087-3006
PROPOSED STRUCTURE NO. 087-3586

IMPROVEMENT BEGINS
STATION 23+00

IMPROVEMENT ENDS
STATION 33+00



LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE
NET LENGTH OF SECTION = 1000 FEET = 0.189 MILES

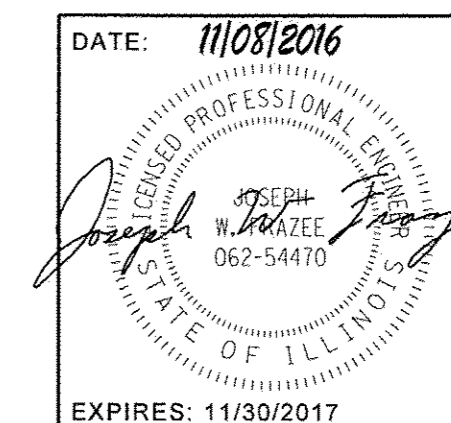


ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED: *[Signature]* 11/9/2016
COUNTY ENGINEER

PASSED: *[Signature]* 11/14/16
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review
[Signature] 11-14-16
REGIONAL ENGINEER OF TRANSPORTATION
REGION FOUR ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DATE: 11/08/2016

HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS
3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hirengineering.com

184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM L / PE / SE CORPORATION

EXPIRES: 11/30/2017

PROJECT NUMBER: 14.0041.130

DATE: 11/08/16

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE 0011 TOTAL
A 20100500	TREE REMOVAL, ACRES	ACRE	0.7
20200100	EARTH EXCAVATION	CU YD	2,012
20300100	CHANNEL EXCAVATION	CU YD	605
20400800	FURNISHED EXCAVATION	CU YD	1,225
20700220	POROUS GRANULAR EMBANKMENT	CU YD	136
A 25000200	SEEDING, CLASS 2	ACRE	0.9
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	81
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	81
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	81
A 25100115	MULCH, METHOD 2	ACRE	0.9
25100630	EROSION CONTROL BLANKET	SQ YD	3,520
A 28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	180
28000305	TEMPORARY DITCH CHECKS	FOOT	48
A 28100207	STONE RIPRAP, CLASS A4	TON	520
28200200	FILTER FABRIC	SQ YD	490
31000600	PROCESSING LIME STABILIZED SOIL MIXTURE 12"	SQ YD	2,352
31001500	LIME	TON	64
35100100	AGGREGATE BASE COURSE, TYPE A	TON	1,120
40300200	BITUMINOUS MATERIALS (PRIME COAT)	TON	4
40300400	BITUMINOUS MATERIALS (COVER AND SEAL COATS)	TON	9
40300500	COVER COAT AGGREGATE	TON	54
40300600	SEAL COAT AGGREGATE	TON	27
44004000	PAVED DITCH REMOVAL	FOOT	686
48101200	AGGREGATE SHOULDERS, TYPE B	TON	409
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	226
50200100	STRUCTURE EXCAVATION	CU YD	191
50300225	CONCRETE STRUCTURES	CU YD	37.8
50300255	CONCRETE SUPERSTRUCTURE	CU YD	117.2
50300260	BRIDGE DECK GROOVING	SQ YD	316

A SEE SPECIAL PROVISIONS

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODE 0011 TOTAL
50300300	PROTECTIVE COAT	SQ YD	419
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	1,065
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	32,070
* 50901050	STEEL RAILING, TYPE SM	FOOT	200
51201600	FURNISHING STEEL PILES HP12X53	FOOT	320
51202305	DRIVING PILES	FOOT	320
51203600	TEST PILE STEEL HP12X53	EACH	2
51500100	NAME PLATES	EACH	1
52100520	ANCHOR BOLTS, 1"	EACH	20
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	78
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	50
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
67100100	MOBILIZATION	L SUM	1
* 72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
A X2830495	AGGREGATE DITCH (SPECIAL)	TON	822
A Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	176

A SEE SPECIAL PROVISIONS

* SPECIALTY ITEMS

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED APRIL 1, 2016," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- THE REVISION NUMBERS OF THE STANDARDS LISTED IN THE PLANS ARE TO BE USED FOR CONSTRUCTING OF THIS SECTION.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL OF THE EXISTING PAVEMENT WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPER DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATIONS AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

AGGREGATE SURFACE COURSE	2.05 TON/CU YD
STONE RIPRAP	1.75 TON/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.35 GALLON/SQ YD
BITUMINOUS MATERIALS (COVER AND SEAL COAT)	0.35 GALLON/SQ YD
AGGREGATE COAT (COVER AND SEAL)	25 POUND/SQ YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER. THE AREA DESIGNATED FOR REMOVAL SHALL BE MARKED AND MEASURED FOR PAYMENT BY THE ENGINEER BEFORE REMOVAL. TREE REMOVAL IS NOT PERMITTED DURING THE PERIOD FROM APRIL 1 TO SEPTEMBER 30.
- COMMITMENTS - SEE SPECIAL PROVISIONS:
 - TREE REMOVAL RESTRICTIONS SEE NOTE 8.
 - BAT AND BIRD INSPECTION REQUIRED WITHIN 7 DAYS OF CONSTRUCTION.

ROADWAY SCHEDULE								
LOCATION	PROCESSING LIME STABILIZED SOIL MIXTURE	LIME	AGGREGATE BASE COURSE TYPE A	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (COVER AND SEAL COAT)	COVER COAT AGGREGATE	SEAL COAT AGGREGATE	AGGREGATE SHOULDERS TYPE B
	31000600	31001500	35100100	40300200	40300400	40300500	40300600	48101200
	SQ YD	TON	TON	TON	TON	TON	TON	TON
CL. STA 23+00 TO STA 26+66.34	955	26	435	1.4	3.8	22	11	176
CL. STA 27+67.67 TO STA 33+00	1397	38	637	2.1	5.6	32	16	233
CL. STA 23+00 TO STA 33+00								
ENTRANCES								
LT. STA 31+68			24					
RT. STA 32+11			24					
TOTAL	2352	64	1120	3.5	9.4	54	27	409
USE	2352	64	1120	4	9	54	27	409

EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	20200100	20300100					
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
STA23+00 TO STA26+66.34	572		25.00%	100.00%	429	2386	-1957
STA26+66.34 TO STA27+67.67	27	605	25.00%	70.00%	332		332
STA27+67.67 TO STA33+00	1413		25.00%	100.00%	1060	660	400
TOTAL	2012	605			1821	3046	-1225
USE	2012	605					1225

FURNISHED EXCAVATION 1225 CU YDS

GUARDRAIL TABULATION				
LOCATION	TRAFFIC BARRIER TERMINAL, TYPE 6A	STEEL PLATE BEAM GUARD RAIL, TYPE A 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TERMINAL MARKER DIRECT APPLIED
			63100167	78201000
	EACH	FOOT	EACH	EACH
LT. STA 25+70.08 TO LT. STA 26+66.96	1		1	1
RT. STA 25+45.08 TO RT. STA 26+66.96	1	25	1	1
LT. STA 27+67.04 TO LT. STA 28+88.92	1	25	1	1
RT. STA 27+67.04 TO RT. STA 28+63.92	1		1	1
TOTAL	4	50	4	4

PAVED DITCH REMOVAL	
LOCATION	FOOT
	44004000
LT. STA23+50 TO STA 24+71	121
RT. STA23+50 TO STA 24+60	110
LT. STA28+26 TO STA 30+28	202
RT. STA27+72 TO STA 30+25	253
TOTAL	686

PIPE CULVERT REMOVAL	
LOCATION	FOOT
	50105220
LT. STA26+00 TO STA 27+06	106
RT. STA26+60 TO STA 27+00	40
LT. STA27+37 TO STA 27+77	40
RT. STA27+33 TO STA 27+73	40
TOTAL	226

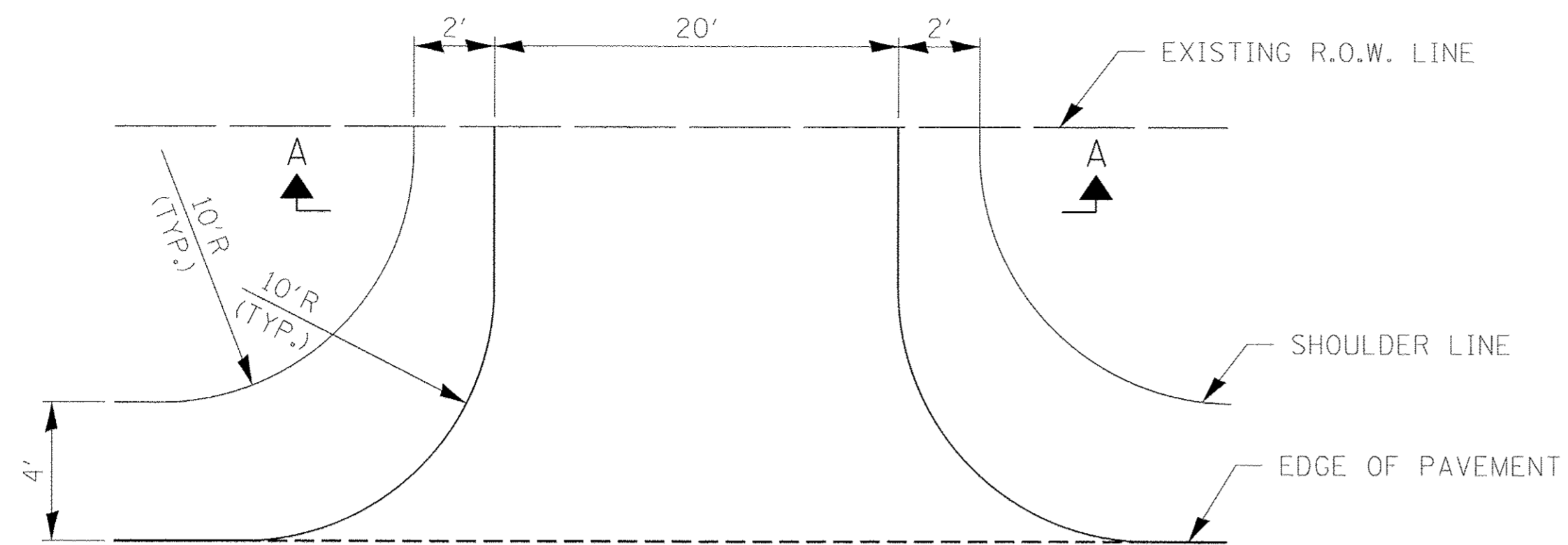
SEEDING TABLE							
LOCATION	SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT (90 LBS/ACRE)	PHOSPHORUS FERTILIZER NUTRIENT (90 LBS/ACRE)	POTASSIUM FERTILIZER NUTRIENT (90 LBS/ACRE)	MULCH, METHOD 2	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING *
	25000200	25000400	25000500	25000600	25100115	25100630	28000250
	ACRE	POUND	POUND	POUND	ACRE	SQ YD	POUND
STA23+00 TO STA27+18	0.5	45	45	45	0.5	2261	100
STA27+26 TO STA35+00	0.4	36	36	36	0.4	1259	80
TOTAL	0.9	81	81	81	0.9	3520	180
USE	0.9	81	81	81	0.9	3520	180

* 100 LB/ACRE FOR 2 APPLICATIONS

TEMPORARY DITCH CHECKS	
LOCATION	FOOT
	28000305
LT. STA26+10	12
LT. STA 26+80	12
RT. STA 26+10	12
RT STA 26+80	12
TOTAL	48

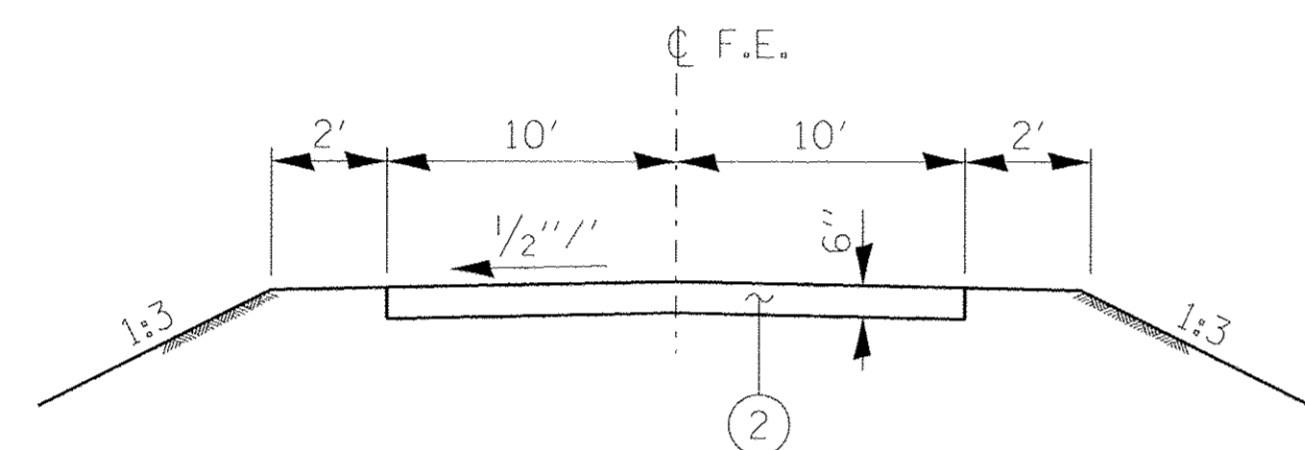
TREE REMOVAL ACRES	
LOCATION	ACRE
	20100500
LT. STA 23+00 TO STA 26+90	0.22
RT. STA 24+20 TO STA 26+80	0.20
LT. STA 27+45 TO STA 31+56	0.21
RT. STA 31+80 TO STA 33+00	0.03
TOTAL	0.66
USE	0.7

AGGREGATE DITCH (SPECIAL)	
LOCATION	TON
	X2830495
LT. STA 23+50 TO STA 25+50	168
RT. STA 23+50 TO STA 25+50	168
LT. STA 27+30 TO STA 30+50	227
RT. STA 27+30 TO STA 30+50	259
TOTAL	822

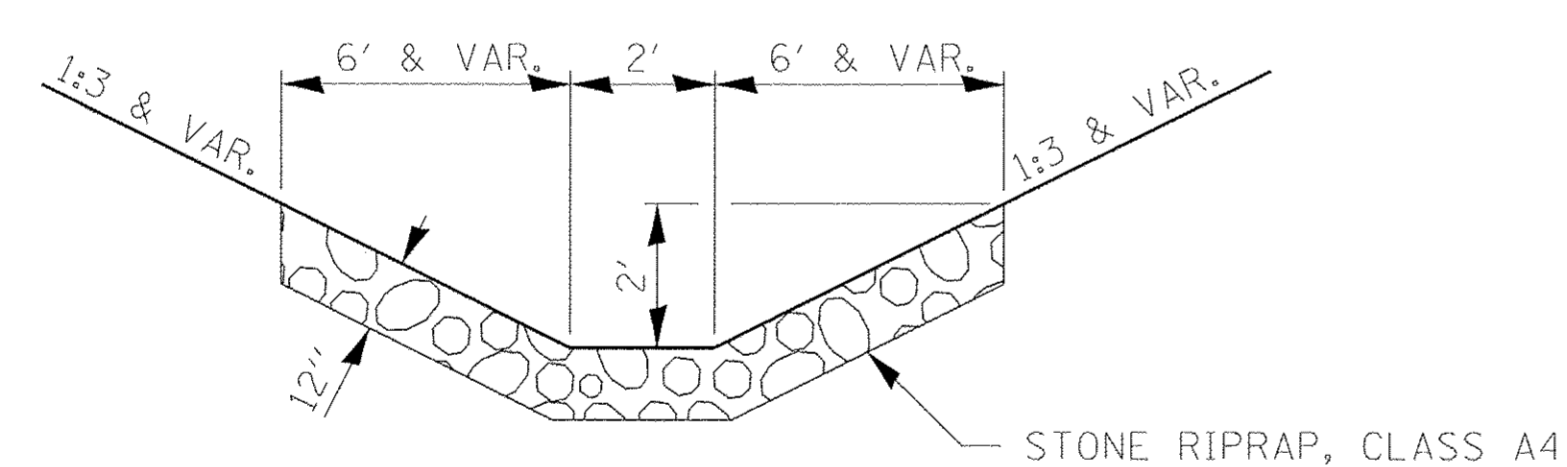


FIELD ENTRANCE DETAIL

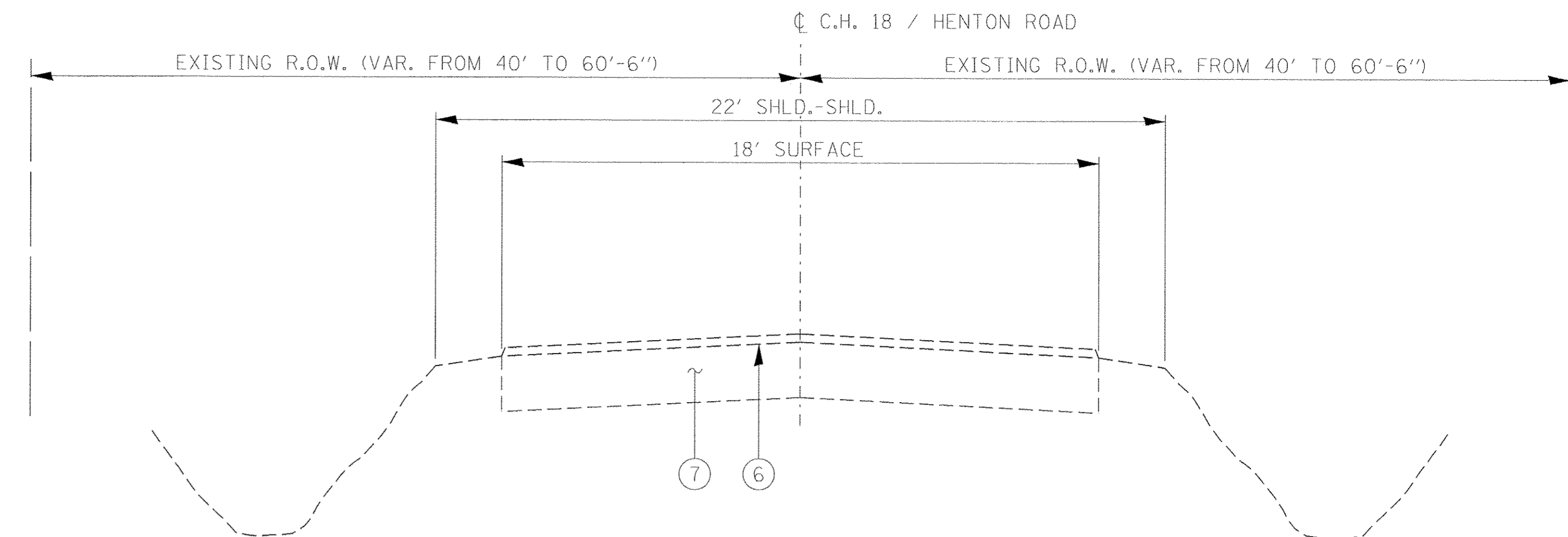
LT. STA. 31+68
RT. STA. 32+11



SECTION A-A

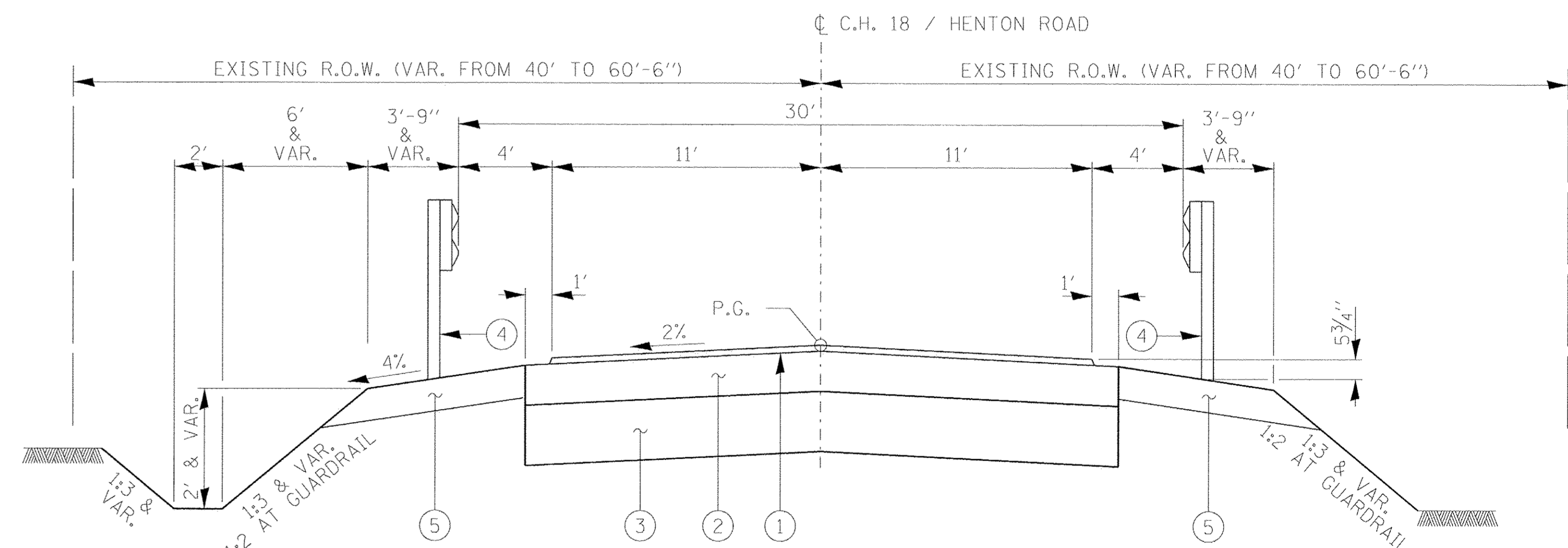


AGGREGATE DITCH SPECIAL



EXISTING TYPICAL CROSS SECTION

STA. 23+00 TO STA. 33+00



PROPOSED TYPICAL CROSS SECTION

STA. 23+00 TO STA. 26+66.34
STA. 27+67.67 TO STA. 33+00

SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

NOTE:
TRANSITION SURFACE AND SHOULDER TO EXISTING:
STA. 23+00 TO STA. 24+00
STA. 32+00 TO STA. 33+00

LEGEND

- ① A-3 SURFACE
- ② AGGREGATE BASE COURSE, TY A 8"
- ③ PROCESSED LIME STABILIZED SOIL MIXTURE 12"
- ④ TRAFFIC BARRIER TERMINALS AND STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS
- ⑤ AGGREGATE SHOULDERS TY B (6")
- ⑥ EXISTING A-3 SURFACE
- ⑦ EXISTING AGGREGATE BASE 8"±

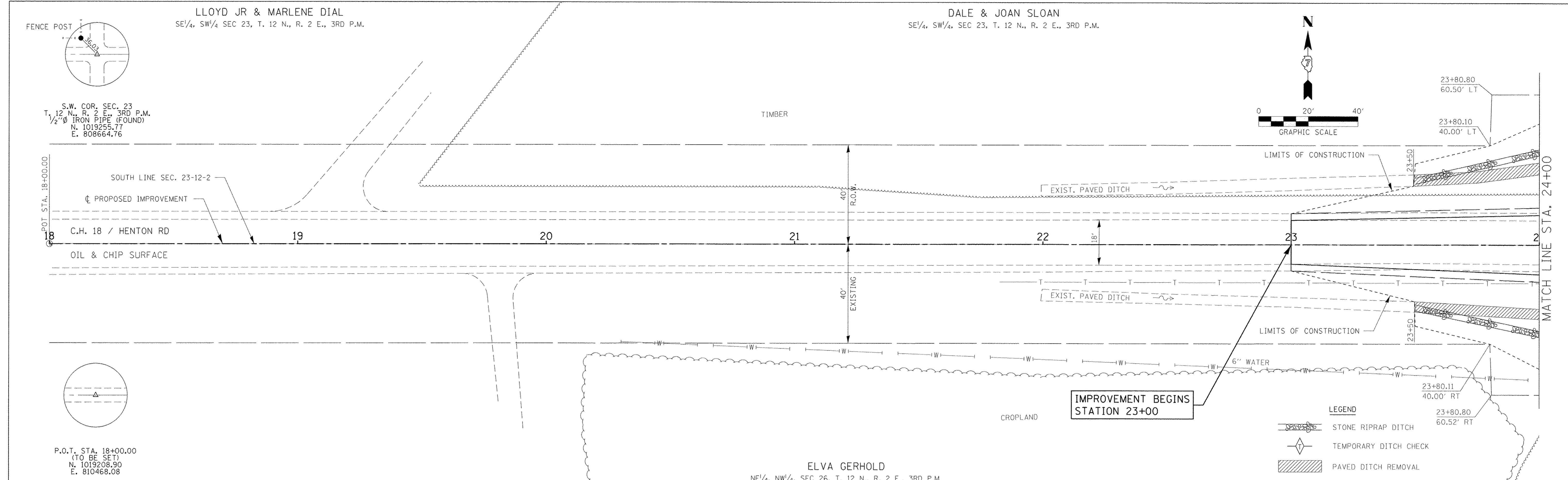
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HLR ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959	PLOT DATE = 11/8/2016	CHECKED - S.W.M.	REVISED -
		DATE - 11/08/16	REVISED -

**STATE OF ILLINOIS
SHELBY COUNTY HIGHWAY DEPARTMENT**

TYPICAL CROSS SECTIONS

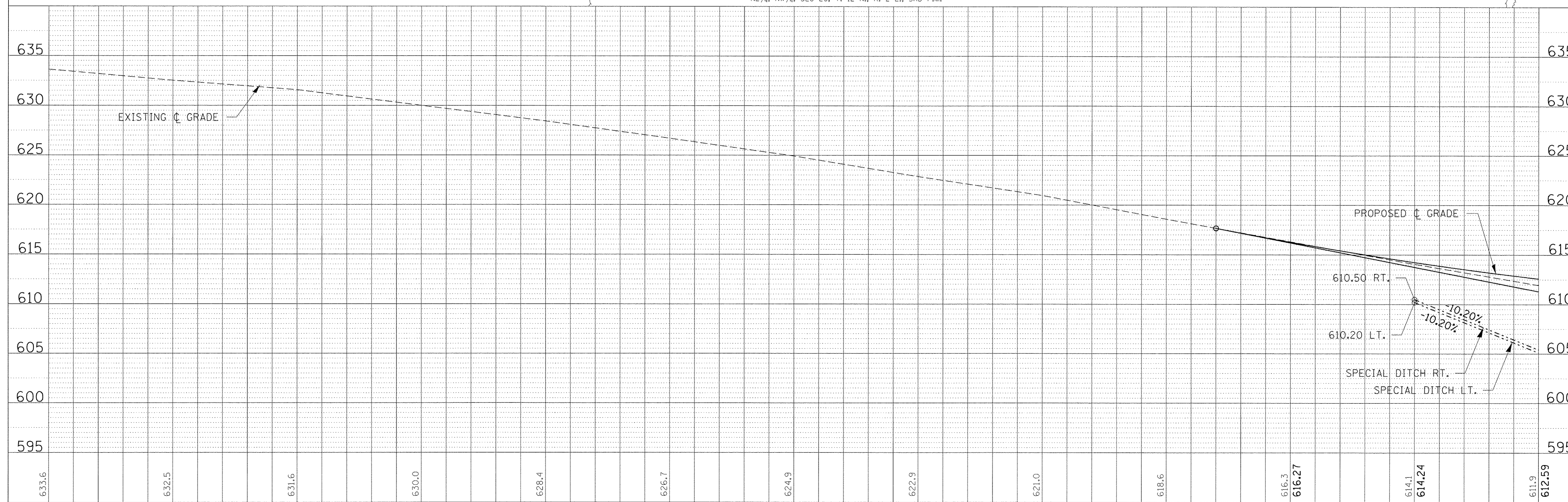
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C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	4
HENTON ROAD			CONTRACT NO. 95804	
[ILLINOIS] FED. AID PROJECT BROS-017311891				

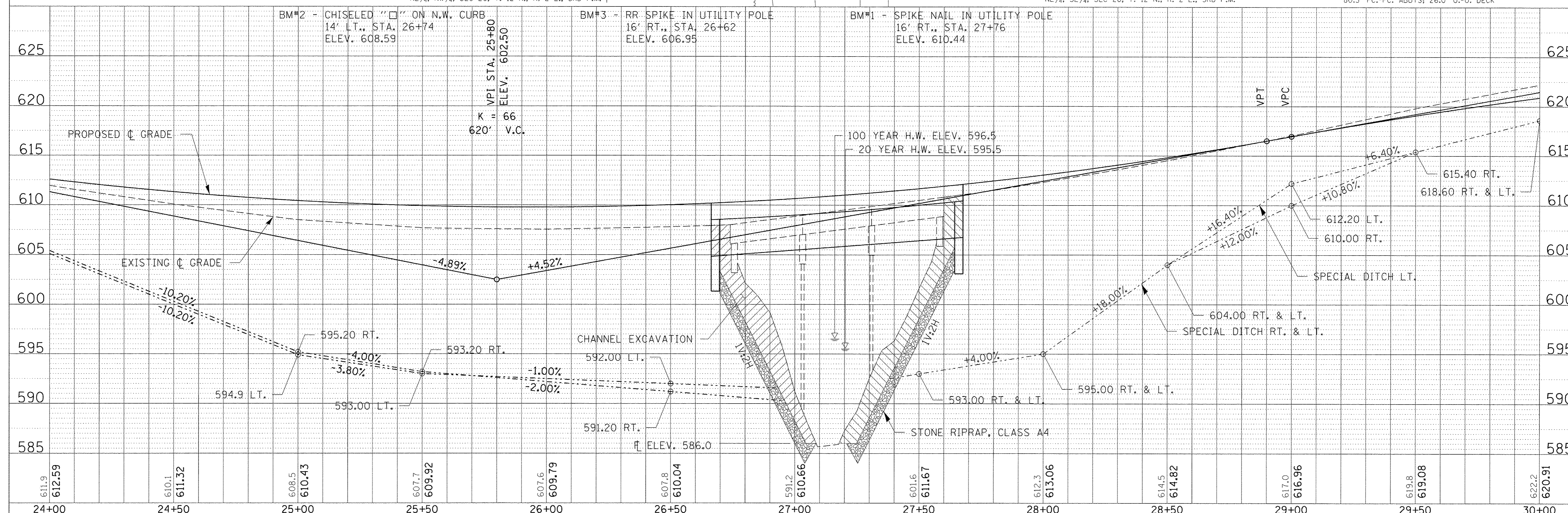
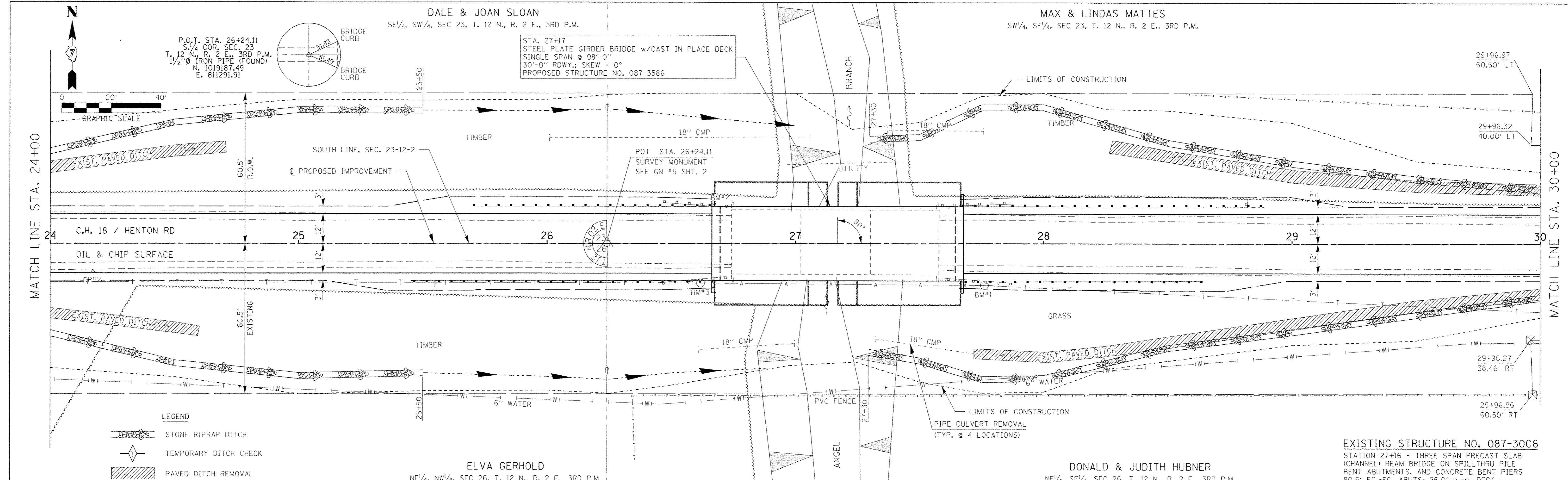


PLAN	SURVEYED	DATE
	NOTE BOOK	
	ALIGNMENT CHECKED	
	BY	
	NO.	

PROFILE	SURVEYED	DATE
	GRADES CHECKED	
	BY	
	NO.	



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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-009959	PLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -			18	12-00275-00-BR	SHELBY	35	5	
	PLOT DATE = 11/8/2016	DATE - 11/08/16	REVISED -			HENTON ROAD CONTRACT NO. 95804					
						SCALE: 20H:5V SHEET NO. 1 OF 3 SHEETS STA. 18+00.00 TO STA. 24+00.00 [ILLINOIS] FED. AID PROJECT BROS-01731(189)					



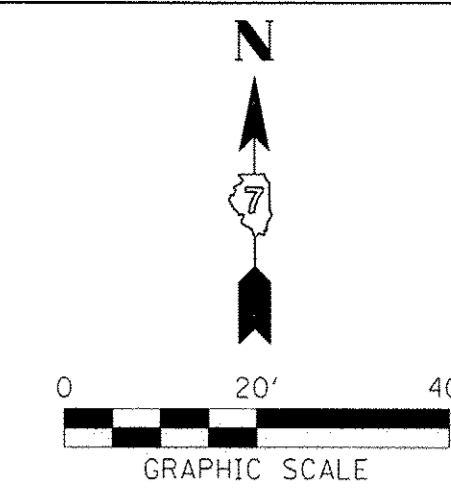
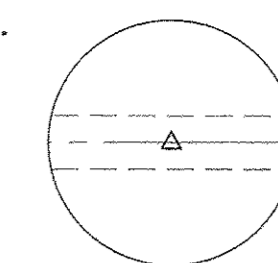
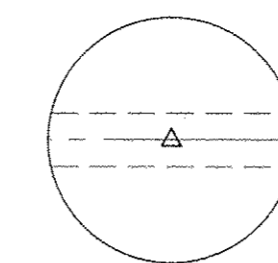
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BY	
SURVEYED	
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NO. OF W.A. CHECKED	
NOTE BOOK	
NO.	
FILE NAME	

PROFILE	DATE
BY	
SURVEYED	
GRADES CHECKED	
B.M. NOTED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK	
NO.	

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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 194-000959	PLOT SCALE = #SCALE#	DRAWN - L.G.C.	REVISED -			18	12-00275-00-BR	SHELBY	35	6	
PLOT DATE = 11/8/2016	DATE = 11/08/16	CHECKED - S.W.M.	REVISED -			HENTON ROAD CONTRACT NO. 95804					
		SCALE: 20H:5V				ILLINOIS FED. AID PROJECT BR05-01731691					

MAX & LINDAS MATTES
SW/4, SE/4, SEC 23, T. 12 N., R. 2 E., 3RD P.M.

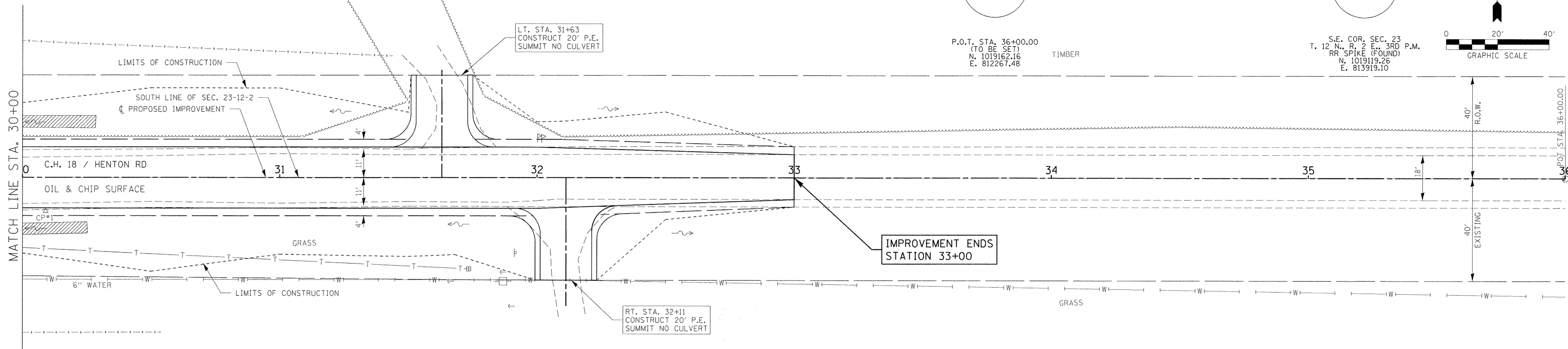
ROY F & KAREN L SMITH
SE/4, SW/4, SE/4, SEC 23, T. 12 N., R. 2 E., 3RD P.M.



P.O.T. STA. 36+00.00
(TO BE SET)
N. 1019162.16
E. 812267.48
TIMBER

S.E. COR, SEC. 23
T. 12 N., R. 2 E., 3RD P.M.
RR SPIKE (FOUND)
N. 1019119.28
E. 813919.10

DATE	
BY	
DESIGNED	
PLOTTED	
GRADES CHECKED	
SAFETY CHECKED	
PRODUCTION CHECKED	
NOTE BOOK NO.	



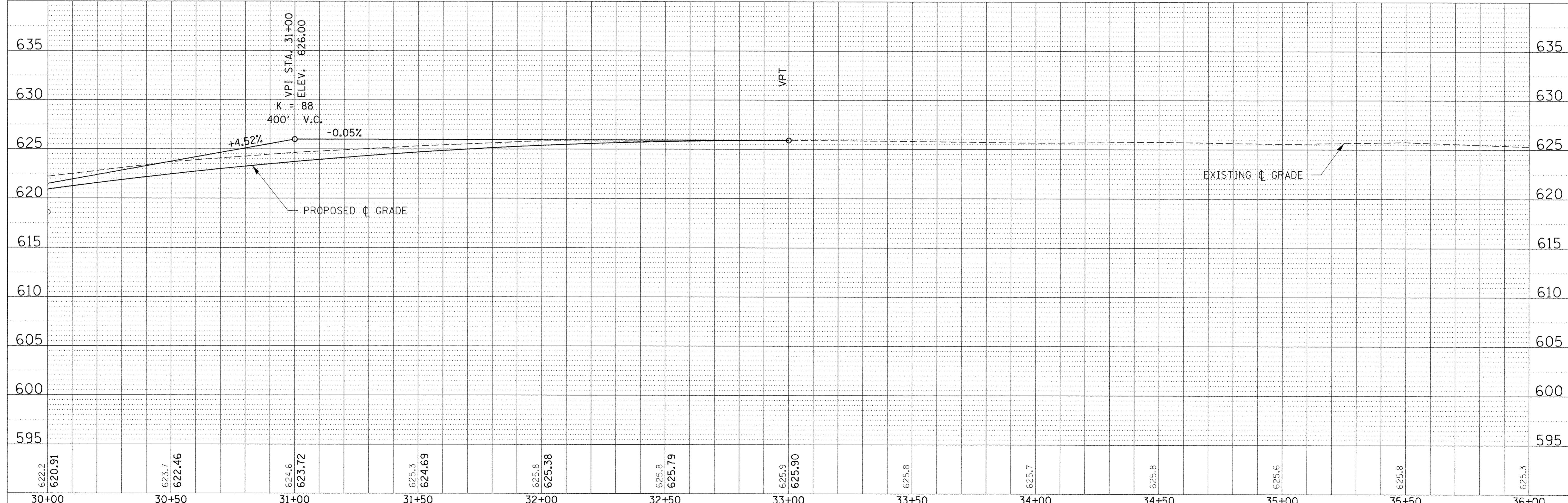
DONALD & JUDITH HUBNER
W/2, NE/4, SEC 26, T. 12 N., R. 2 E., 3RD P.M.

DENNIS LEE HUBNER
NE/4, NW/4, NE/4 SEC 26, T. 12 N., R. 2 E., 3RD P.M.

DONALD & JUDITH HUBNER
W/2, NE/4, SEC 26, T. 12 N., R. 2 E., 3RD P.M.

- LEGEND
- STONE RIPRAP DITCH
 - TEMPORARY DITCH CHECK
 - PAVED DITCH REMOVAL

DATE	
BY	
DESIGNED	
PLOTTED	
GRADES CHECKED	
SAFETY CHECKED	
PRODUCTION CHECKED	
NOTE BOOK NO.	



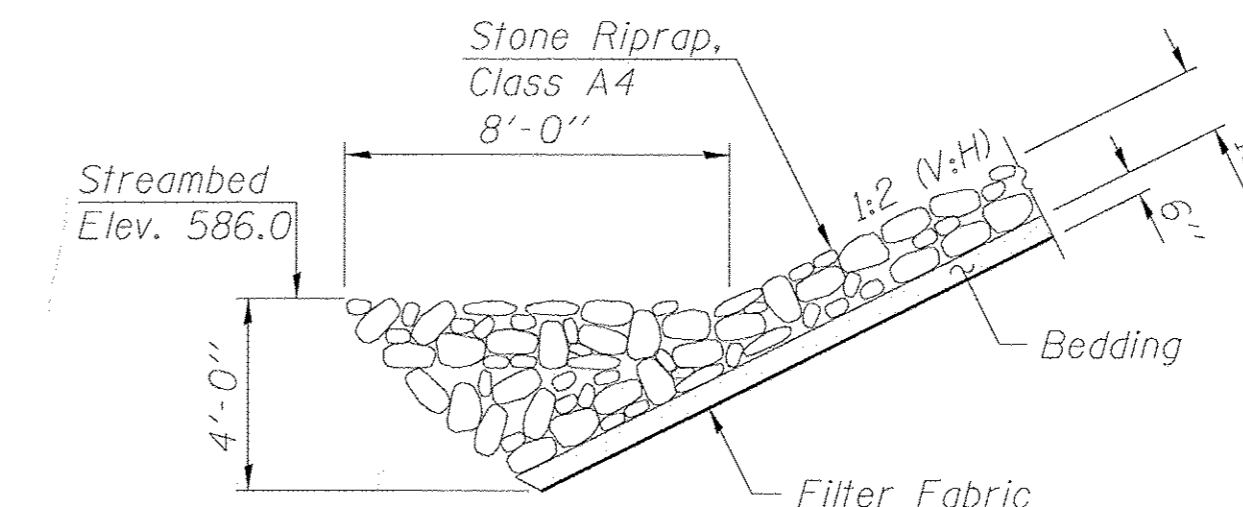
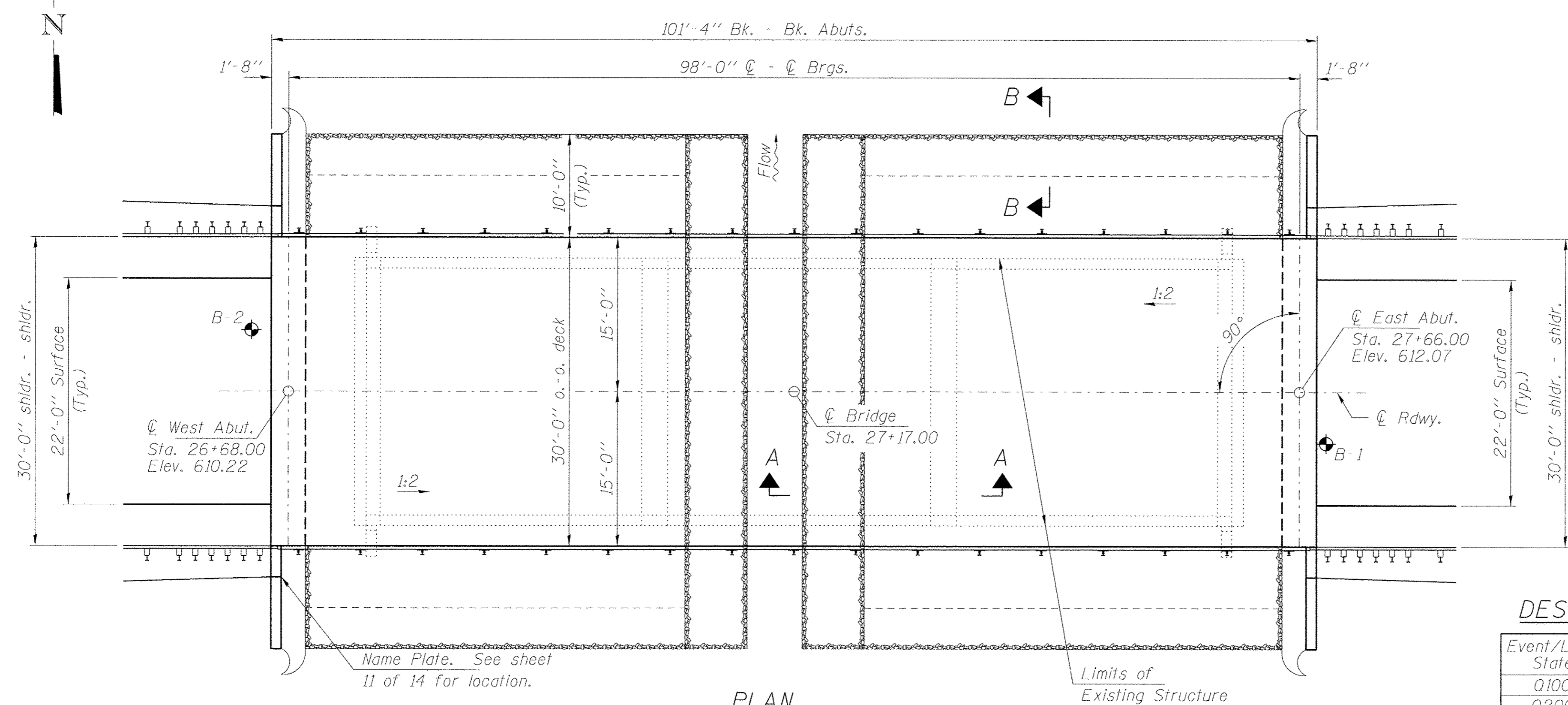
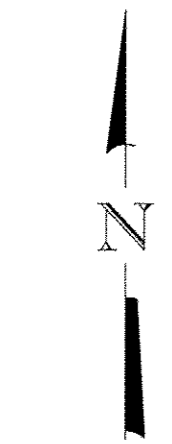
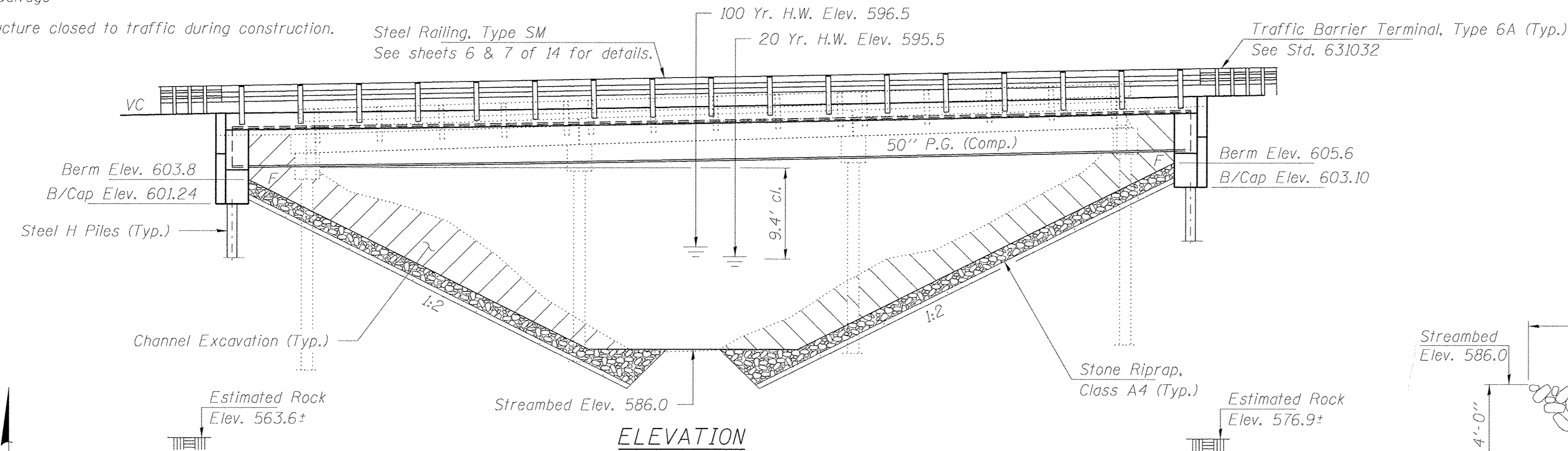
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HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. CORP. 184.000959	PLOT SCALE = #SCALE*	DRAWN - L.G.C.	REVISED -			18	12-00275-00-BR	SHELBY	35	7	
	PLOT DATE = 11/8/2016	CHECKED - S.W.M.	REVISED -			HENTON ROAD CONTRACT NO. 95804					
		DATE - 11/08/16	REVISED -			SCALE: 20H:5V SHEET NO. 3 OF 3 SHEETS STA. 30+00.00 TO STA. 36+00.00 [ILLINOIS] FED. AID PROJECT BROS-01731899					

BENCHMARK: Chiseled "□" on NW curb, 14' Lt., Sta. 26+74, Elev. 608.59

EXISTING STRUCTURE: S.N. 087-3006 - Three span precast concrete channel beam bridge on spill thru pile bent abutments, and concrete pile bent piers. 80.5' fc.-fc. abuts., 26.0' o.-o. deck.

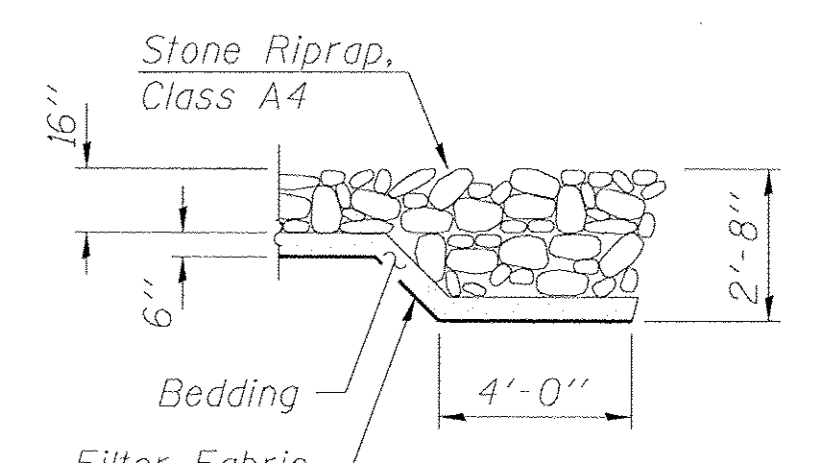
No Salvage

Structure closed to traffic during construction.



SECTION A-A

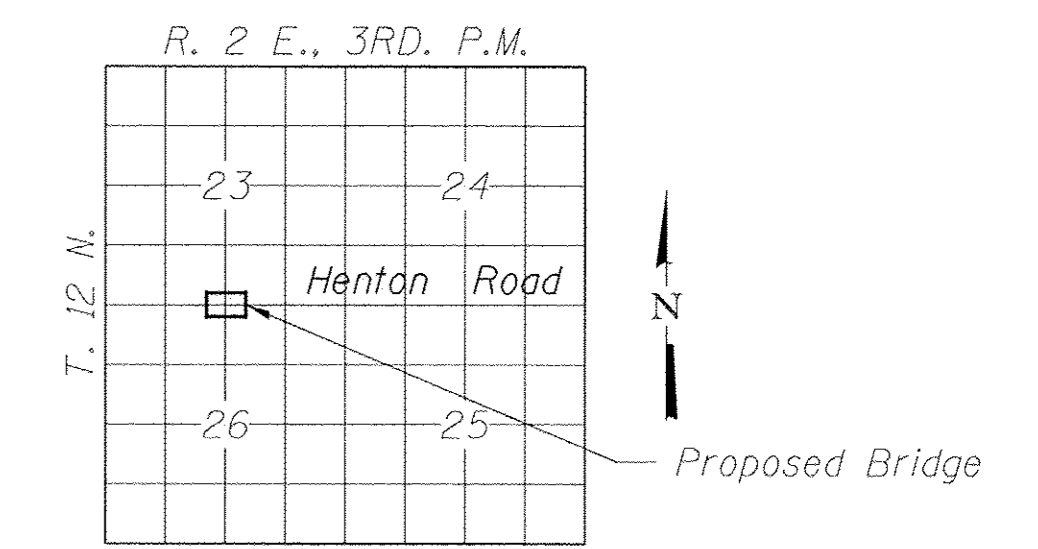
Note: See Special Provisions for Stone Riprap, Class A4.



SECTION B-B

ANGEL BRANCH
BUILT 201 BY
SHELBY COUNTY
C.H. 18 / HENTON ROAD
SEC. 12-00275-00-BR
STR. NO. 087-3586
LOADING HL-93

NAME PLATE
See Std. 515001



LOCATION SKETCH

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2016 Interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f'c = 5,000 psi (Superstructure)
f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Structural Steel) (M270 Gr. 50W)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.180g
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.367g
Soil Site Class = D

WATERWAY INFORMATION

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	10	1380	250	330	594.82	0.73	0.00	595.55	594.82
Base	20	1770	270	360	595.47	1.09	0.11	596.56	595.58
Max. Calc.	100	2740	320	420	596.49	2.17	0.55	598.66	597.04
	500	3820	360	480	597.36	3.38	0.99	600.74	598.35

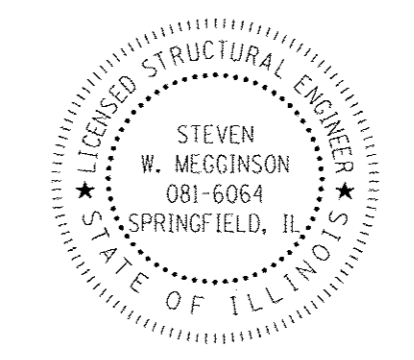
Existing Low Grade Elev. 607.6 @ Sta. 25+75
Proposed Low Grade Elev. 609.77 @ Sta. 26+00
Drainage Area = 3.4 Sq. Mi.

DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevations (ft.)		Item 113
	W. Abut.	E. Abut.	
Q100	601.24	603.10	8
Q200	601.24	603.10	
Design	601.24	603.10	
Check	601.24	603.10	

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

Steven W. Megginson 11/08/2016
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2018

GENERAL PLAN & ELEVATION

C.H. 18
SECTION 12-00275-00-BR
SHELBY COUNTY
STATION 27+17.00
STRUCTURE NO. 087-3586

FILE NAME = 140041-sht-br1.dgn
USER NAME = #USER#
DESIGNED - L.A.P.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.
REVISIONS:
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
SHELBY COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION
STRUCTURE NO. 087-3586
SHEET NO. 1 OF 14 SHEETS

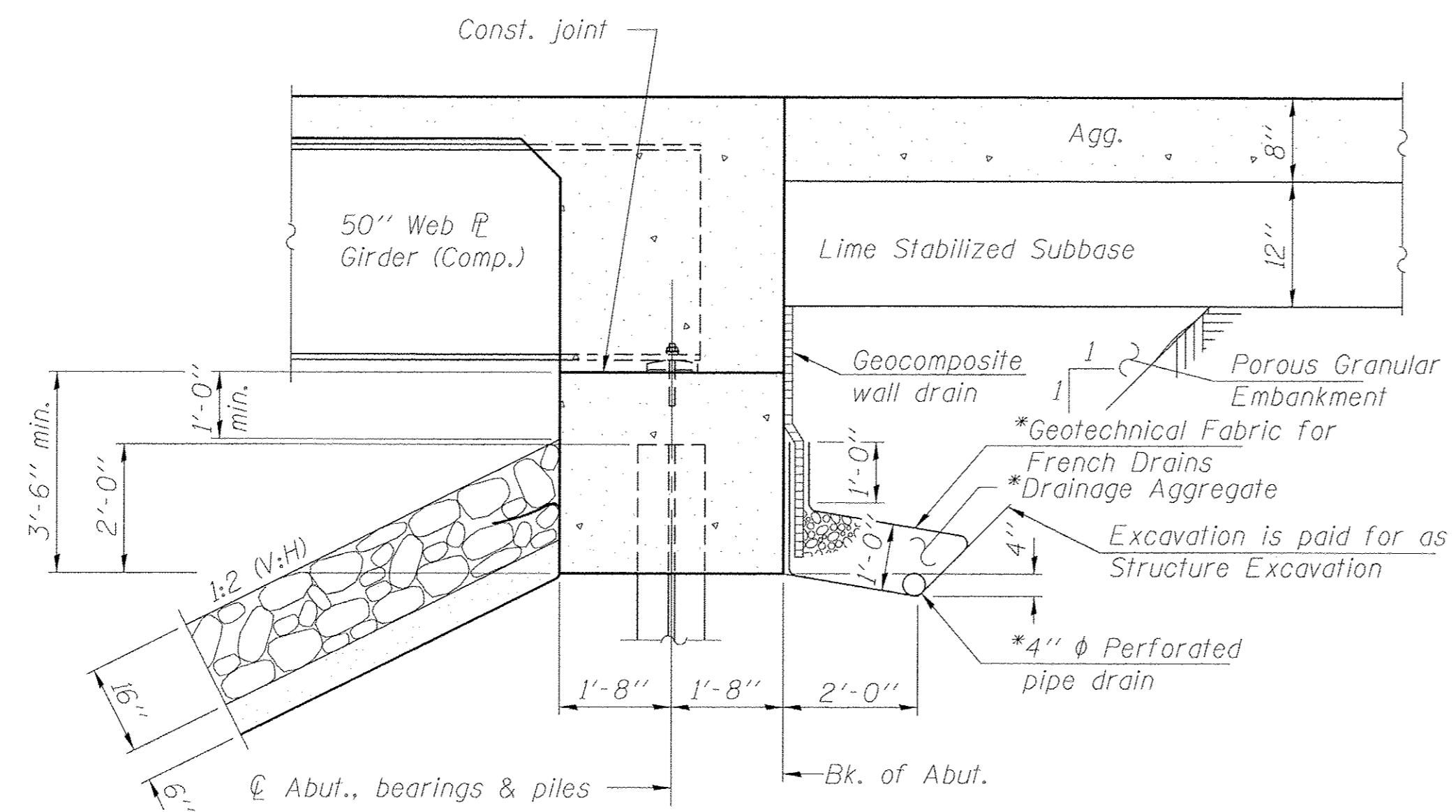
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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HENTON ROAD CONTRACT NO. 95804
[ILLINOIS] FED. AID PROJECT BR05-01731899

FILE NAME = 140041-sht-br1.dgn
USER NAME = #USER#
DESIGNED - L.A.P.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.
REVISIONS:
REVISED -
REVISED -
REVISED -
REVISED -

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts in painted areas and ASTM A325 Type 3 in unpainted areas. Bolts $\frac{3}{4}$ " ϕ , holes $\frac{15}{16}$ " ϕ , unless otherwise noted.
 Calculated weight of Structural Steel = 85,240 lbs.
 All structural steel shall be AASHTO M 270 Grade 50W.
 No field welding is permitted except as specified in the contract documents.
 Reinforcement bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 inches. Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
 All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

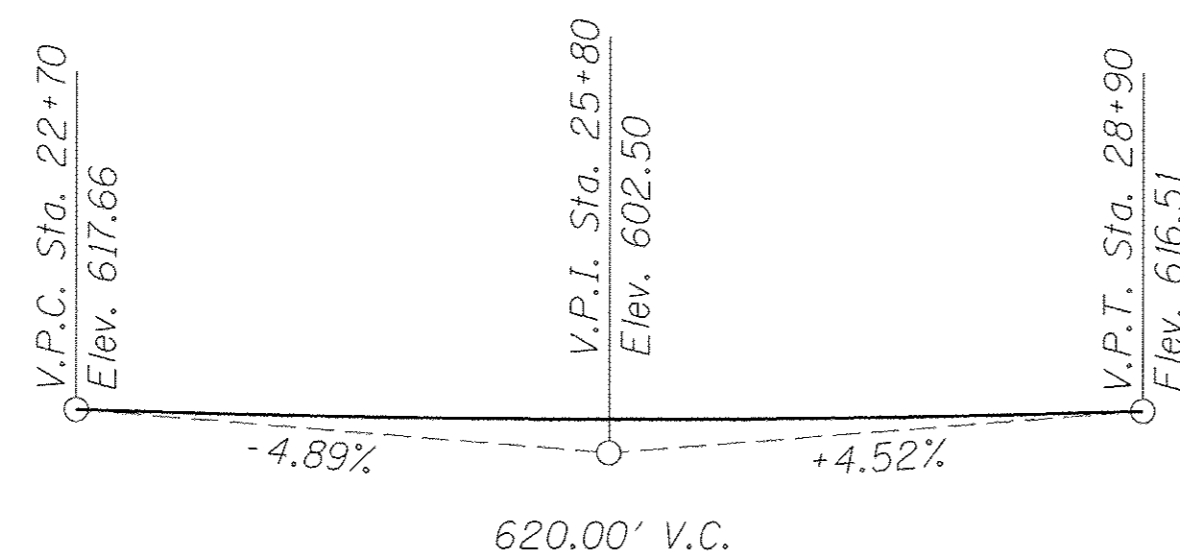


SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

Note:
 All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 60110). Concrete headwalls shall be included in the cost of Pipe Underdrains for Structures 4".

*Included in the cost of Pipe Underdrains for Structures. (See Special Provisions)

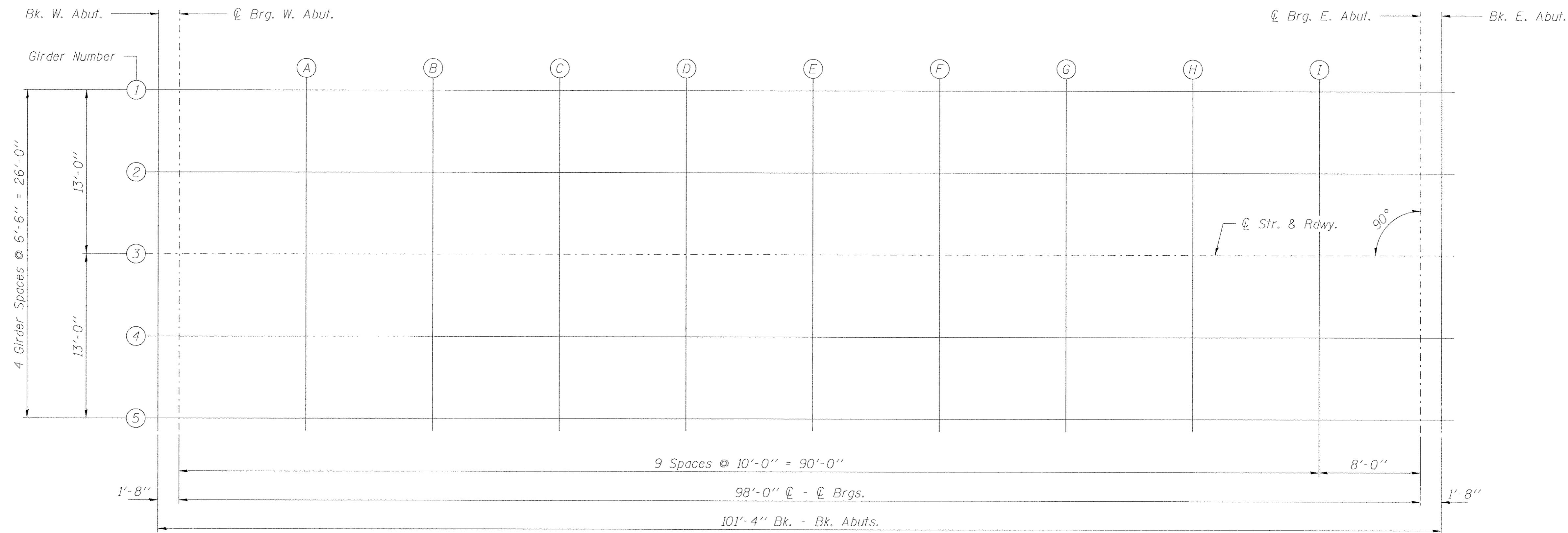
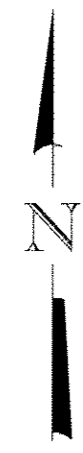
**Contractor shall compact item Porous Granular Embankment as per Article 206.04 of the Standard Specifications.



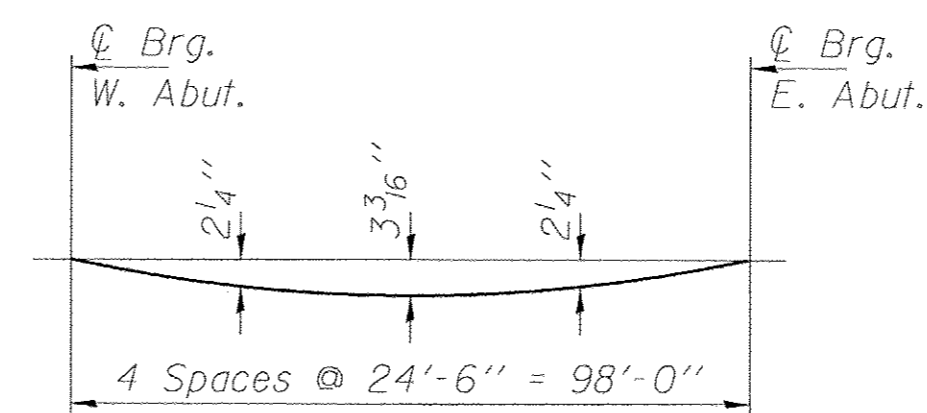
PROFILE GRADE
C.H. 18

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			605
Porous Granular Embankment	Cu. Yd.		136	136
Stone Riprap, Class A4	Ton			520
Filter Fabric	Sq. Yd.			490
Protective Coat	Sq. Yd.	381	38	419
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		191	191
Concrete Structures	Cu. Yd.		37.8	37.8
Concrete Superstructure	Cu. Yd.	117.2		117.2
Bridge Deck Grooving	Sq. Yd.	316		316
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1,065		1,065
Reinforcement Bars, Epoxy Coated	Pound	23,410	8,660	32,070
Steel Railing, Type SM	Foot	200		200
Furnishing Steel Piles HP12x53	Foot		320	320
Driving Piles	Foot		320	320
Test Pile Steel HP12x53	Each		2	2
Name Plates	Each		1	1
Anchor Bolts, 1"	Each		20	20
Geocomposite Wall Drain	Sq. Yd.		78	78
Pipe Underdrains for Structures 4"	Foot		176	176



PLAN

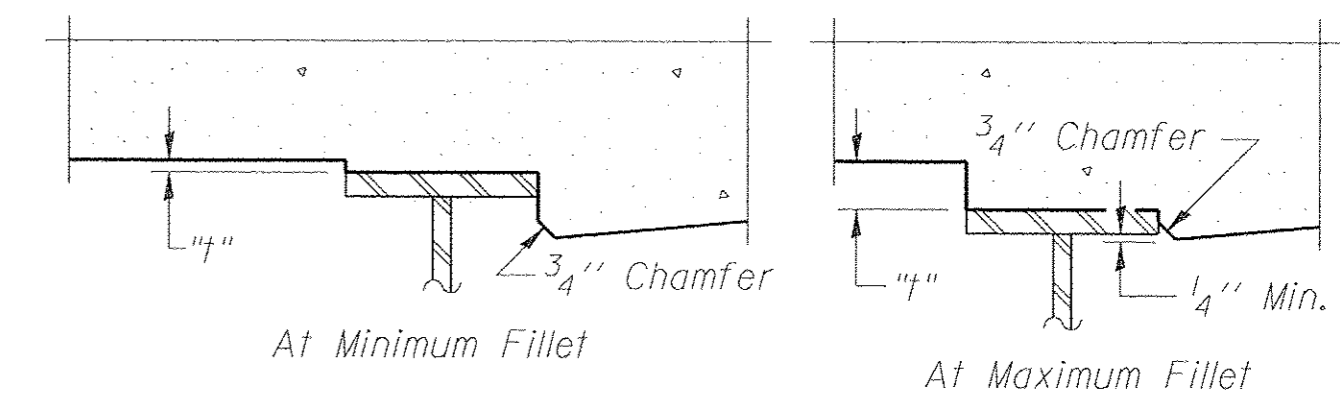


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 14.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 4 of 14, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

FILE NAME = 140041-sht-bridge.dgn	USER NAME = #USER#	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. <small>3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM 15 / P.E. / S.E. CORP. 194-000959</small>	PLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -
	PLOT DATE = 11/8/2016	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
SHELBY COUNTY HIGHWAY DEPARTMENT

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 087-3586

SHEET NO. 3 OF 14 SHEETS

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	10
HENTON ROAD			CONTRACT NO. 95804	
<small>[ILLINOIS] FED. AID PROJECT BR05-01731(89)</small>				

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	26+66.33	-13.00	609.93	609.93
☉ Brg. W. Abut.	26+68.00	-13.00	609.95	609.95
A	26+78.00	-13.00	610.07	610.15
B	26+88.00	-13.00	610.21	610.35
C	26+98.00	-13.00	610.36	610.55
D	27+08.00	-13.00	610.53	610.76
E	27+18.00	-13.00	610.71	610.95
F	27+28.00	-13.00	610.91	611.13
G	27+38.00	-13.00	611.12	611.31
H	27+48.00	-13.00	611.35	611.48
I	27+58.00	-13.00	611.60	611.66
☉ Brg. E. Abut.	27+66.00	-13.00	611.80	611.80
Bk. E. Abut.	27+67.67	-13.00	611.85	611.85

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	26+66.33	-6.50	610.06	610.06
☉ Brg. W. Abut.	26+68.00	-6.50	610.08	610.08
A	26+78.00	-6.50	610.20	610.28
B	26+88.00	-6.50	610.34	610.49
C	26+98.00	-6.50	610.50	610.69
D	27+08.00	-6.50	610.66	610.89
E	27+18.00	-6.50	610.85	611.08
F	27+28.00	-6.50	611.05	611.27
G	27+38.00	-6.50	611.26	611.45
H	27+48.00	-6.50	611.49	611.62
I	27+58.00	-6.50	611.73	611.79
☉ Brg. E. Abut.	27+66.00	-6.50	611.94	611.94
Bk. E. Abut.	27+67.67	-6.50	611.98	611.98

☉ STRUCTURE, RDWY., & BEAM 3

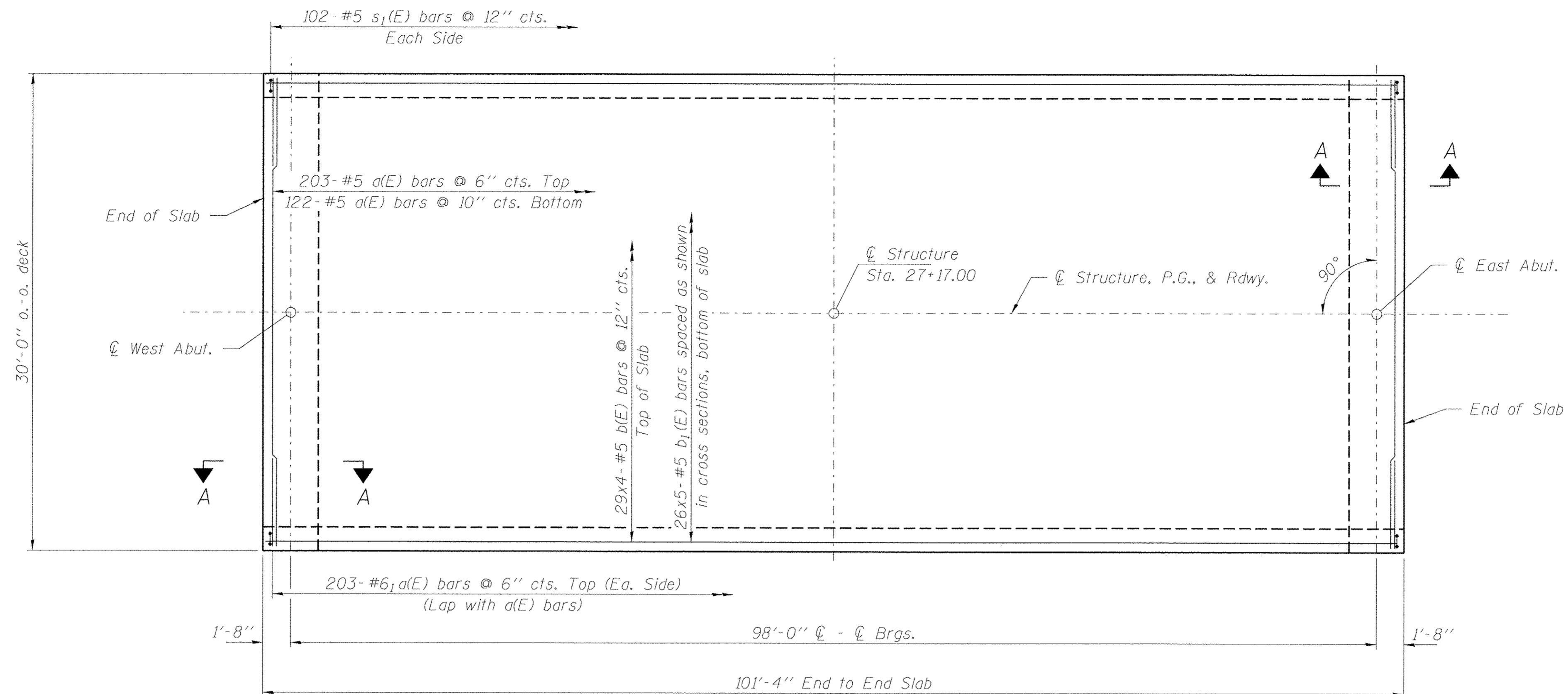
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	26+66.33	0.00	610.20	610.20
☉ Brg. W. Abut.	26+68.00	0.00	610.22	610.22
A	26+78.00	0.00	610.34	610.42
B	26+88.00	0.00	610.48	610.62
C	26+98.00	0.00	610.63	610.83
D	27+08.00	0.00	610.80	611.03
E	27+18.00	0.00	610.98	611.22
F	27+28.00	0.00	611.18	611.40
G	27+38.00	0.00	611.39	611.58
H	27+48.00	0.00	611.62	611.75
I	27+58.00	0.00	611.87	611.93
☉ Brg. E. Abut.	27+66.00	0.00	612.07	612.07
Bk. E. Abut.	27+67.67	0.00	612.12	612.12

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	26+66.33	6.50	610.06	610.06
☉ Brg. W. Abut.	26+68.00	6.50	610.08	610.08
A	26+78.00	6.50	610.20	610.28
B	26+88.00	6.50	610.34	610.49
C	26+98.00	6.50	610.50	610.69
D	27+08.00	6.50	610.66	610.89
E	27+18.00	6.50	610.85	611.08
F	27+28.00	6.50	611.05	611.27
G	27+38.00	6.50	611.26	611.45
H	27+48.00	6.50	611.49	611.62
I	27+58.00	6.50	611.73	611.79
☉ Brg. E. Abut.	27+66.00	6.50	611.94	611.94
Bk. E. Abut.	27+67.67	6.50	611.98	611.98

BEAM 5

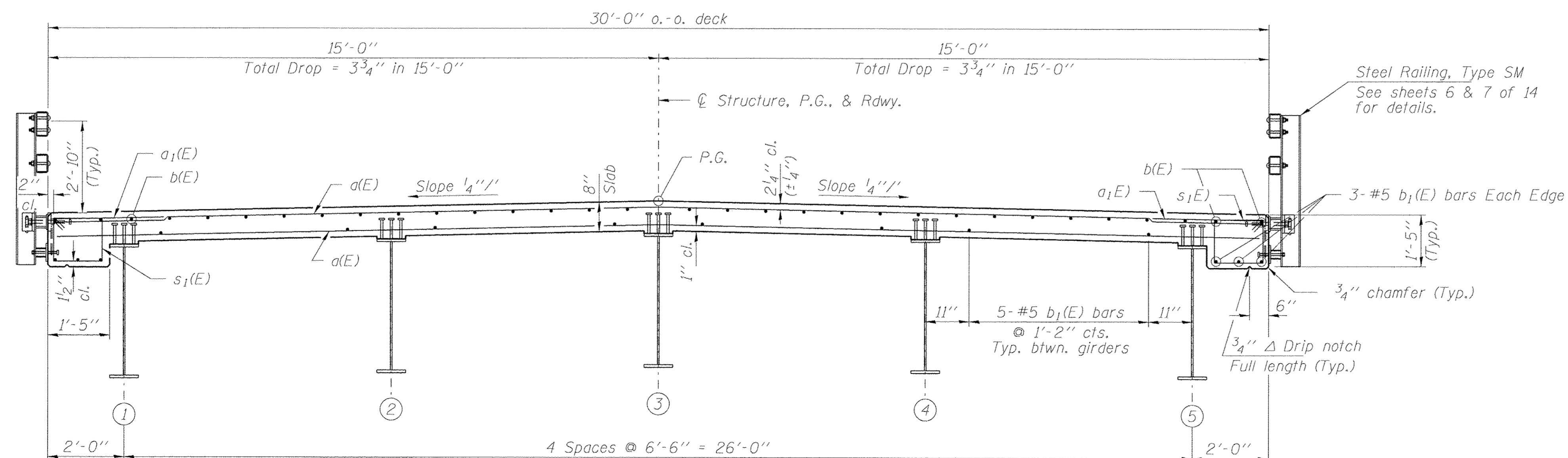
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	26+66.33	13.00	609.93	609.93
☉ Brg. W. Abut.	26+68.00	13.00	609.95	609.95
A	26+78.00	13.00	610.07	610.15
B	26+88.00	13.00	610.21	610.35
C	26+98.00	13.00	610.36	610.55
D	27+08.00	13.00	610.53	610.76
E	27+18.00	13.00	610.71	610.95
F	27+28.00	13.00	610.91	611.13
G	27+38.00	13.00	611.12	611.31
H	27+48.00	13.00	611.35	611.48
I	27+58.00	13.00	611.60	611.66
☉ Brg. E. Abut.	27+66.00	13.00	611.80	611.80
Bk. E. Abut.	27+67.67	13.00	611.85	611.85



PLAN

MIN. BAR LAP
#5 bars = 3'-6"

Notes:
See sheet 6 of 14 for Superstructure Details.
See sheet 6 of 14 for SECTION A-A.
Bars indicated thus 26x5-#5 etc. indicates
26 lines of bars with 5 lengths per line.



CROSS SECTION
(Looking East)

SUPERSTRUCTURE
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	325	#5	29'-8"	—
a1(E)	406	#6	6'-6"	—
b(E)	116	#5	27'-11"	—
b1(E)	130	#5	23'-0"	—
m(E)	8	#6	29'-8"	—
m1(E)	40	#6	4'-0"	—
m2(E)	32	#6	6'-1"	—
m3(E)	16	#6	1'-8"	—
s(E)	60	#5	13'-6"	□
s1(E)	204	#5	5'-3"	□
Concrete Superstructure		Cu. Yd.	117.2	
Bridge Deck Grooving		Sq. Yd.	316	
Protective Coat		Sq. Yd.	381	
Reinforcement Bars, Epoxy Coated		Pound	23,410	

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 CHECKED - S.W.M.
 DRAWN - D.A.B.
 CHECKED - S.W.M.
 PLOT SCALE = #SCALE#
 PLOT DATE = 11/8/2016

DESIGNED - L.A.P.
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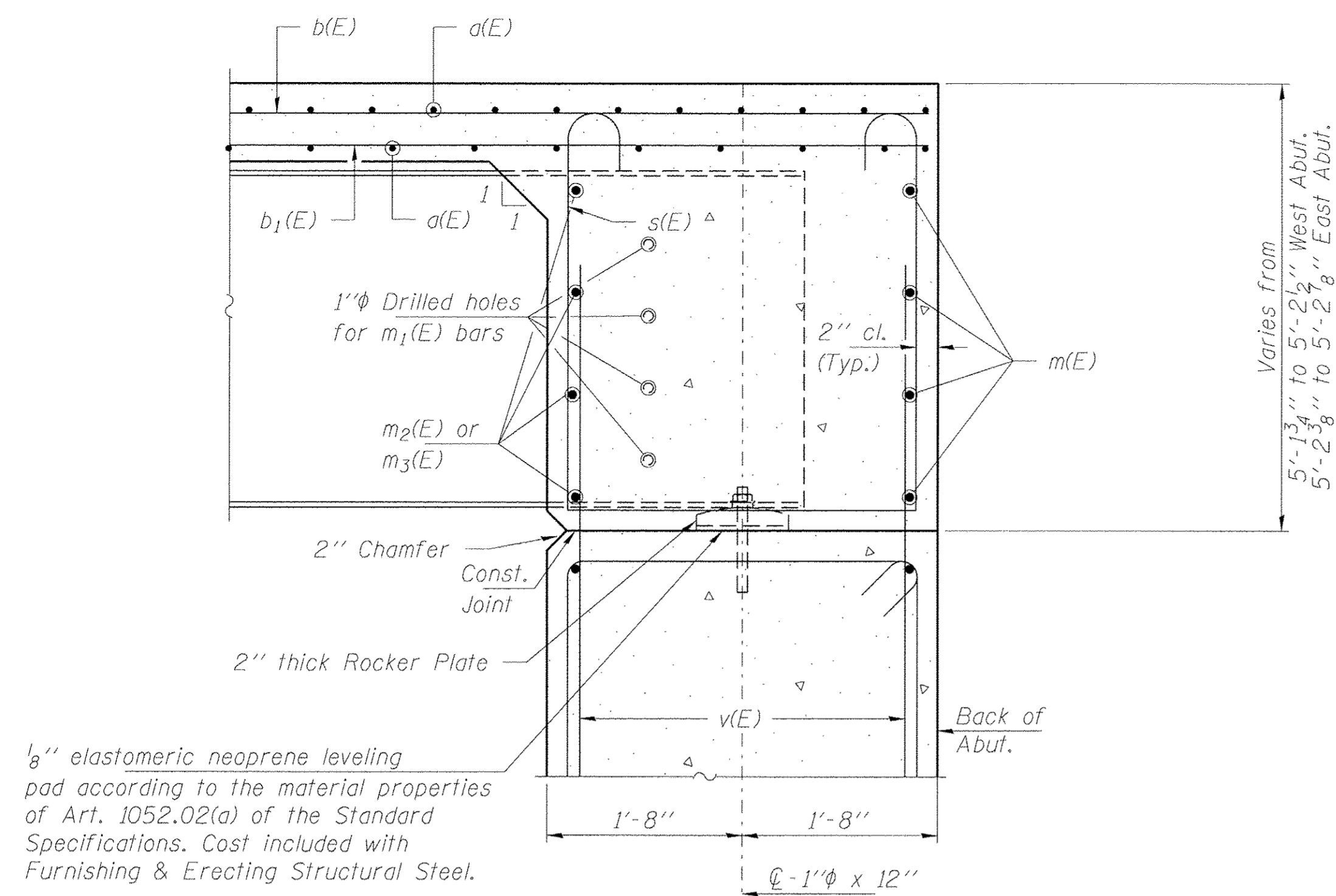
STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

SUPERSTRUCTURE
 STRUCTURE NO. 087-3586

SHEET NO. 5 OF 14 SHEETS

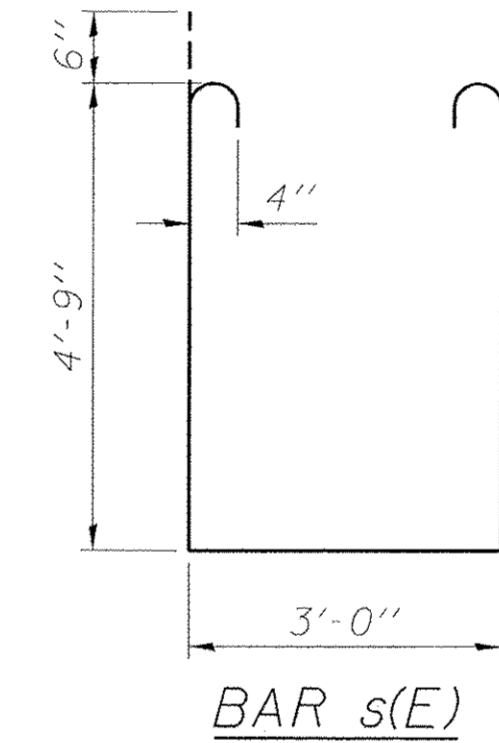
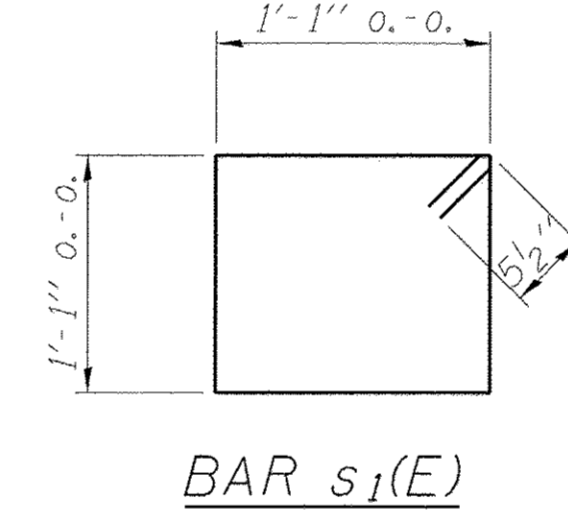
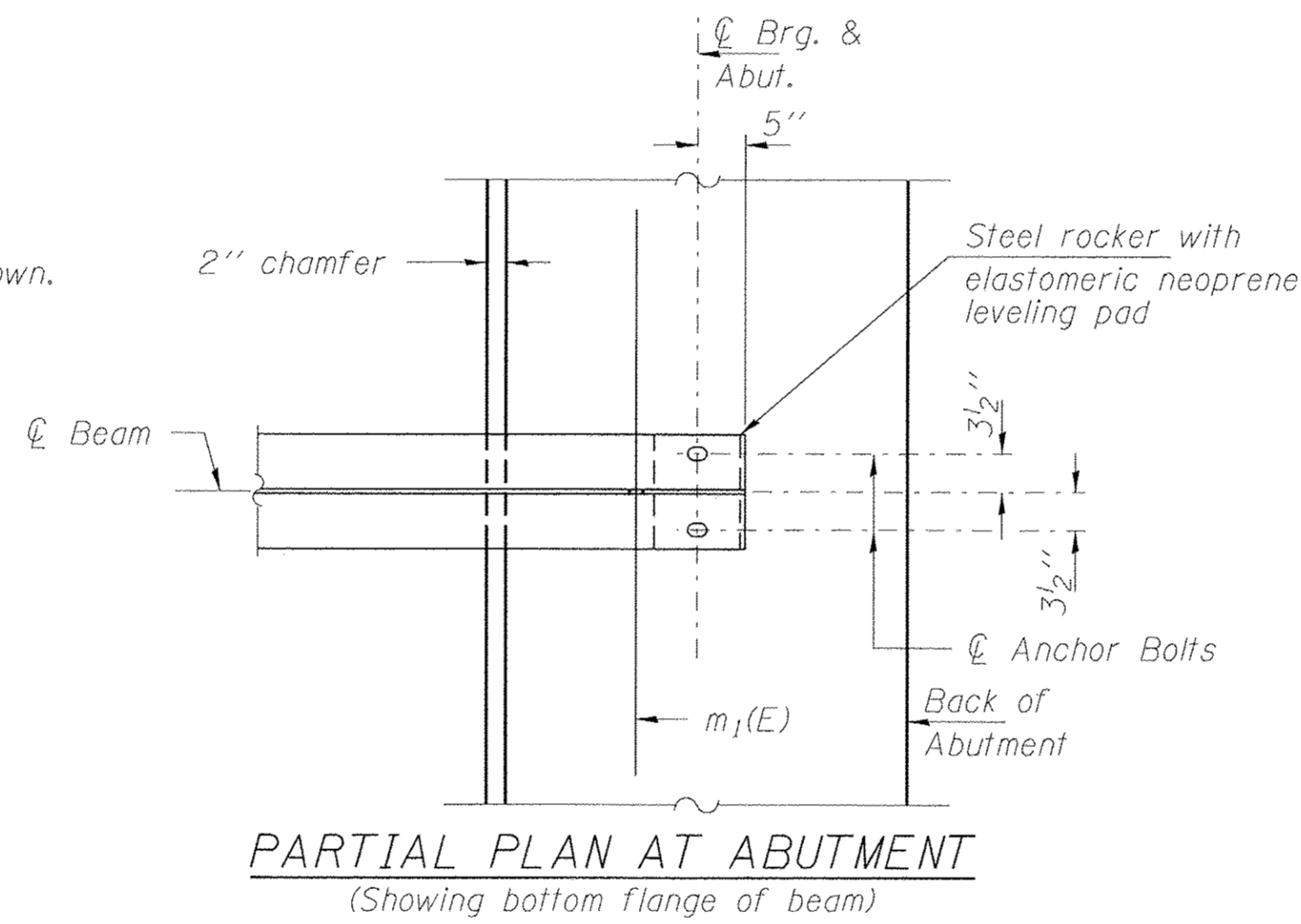
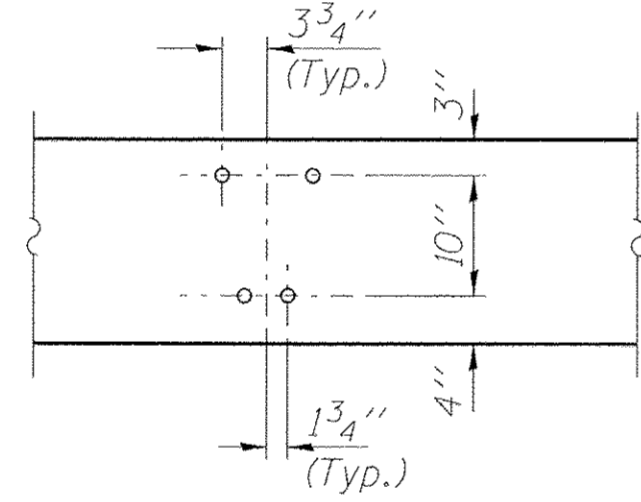
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HENTON ROAD			CONTRACT NO. 95804	

ILLINOIS FED. AID PROJECT BR05-0173189

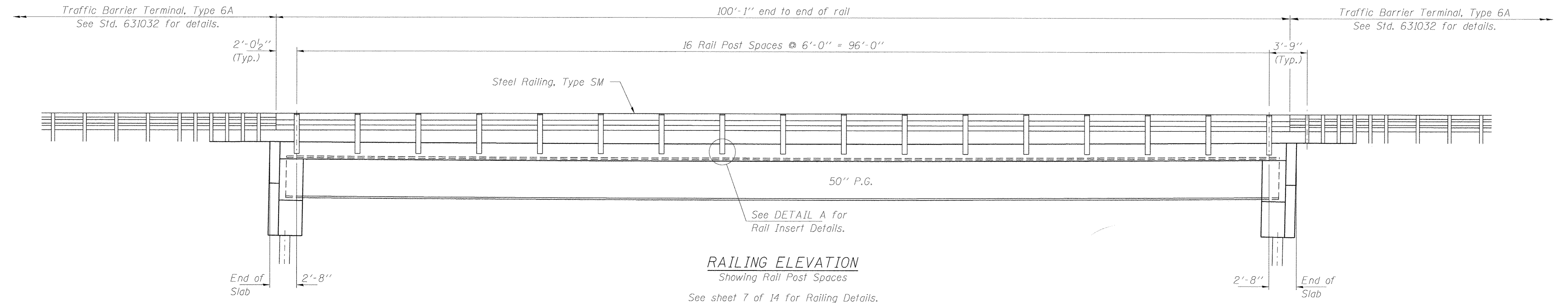
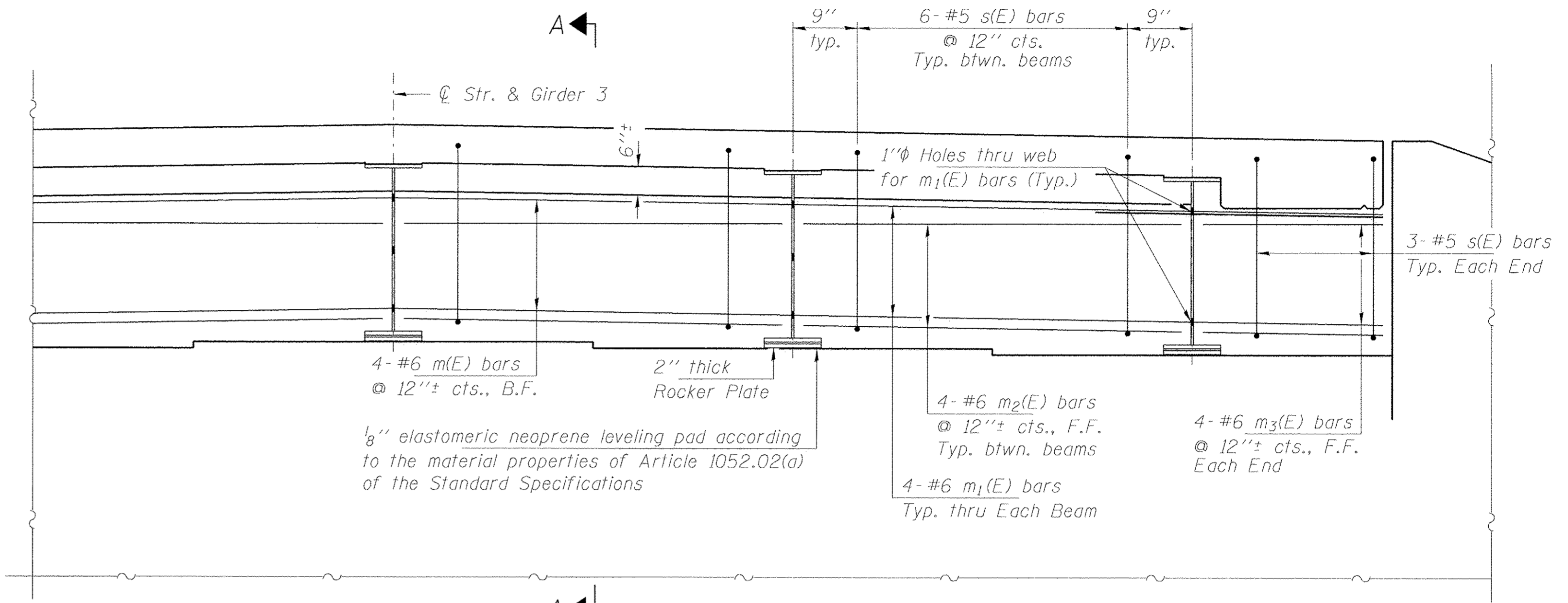


1/8" elastomeric neoprene leveling pad according to the material properties of Art. 1052.02(a) of the Standard Specifications. Cost included with Furnishing & Erecting Structural Steel.

SECTION A-A
Dimensions at right angles to abutment, except as shown.



Notes:
Reinforcement bars in diaphragm are billed with Superstructure on sheet 5 of 14.
Concrete in diaphragm is included with Concrete Superstructure on sheet 5 of 14.
The s(E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.



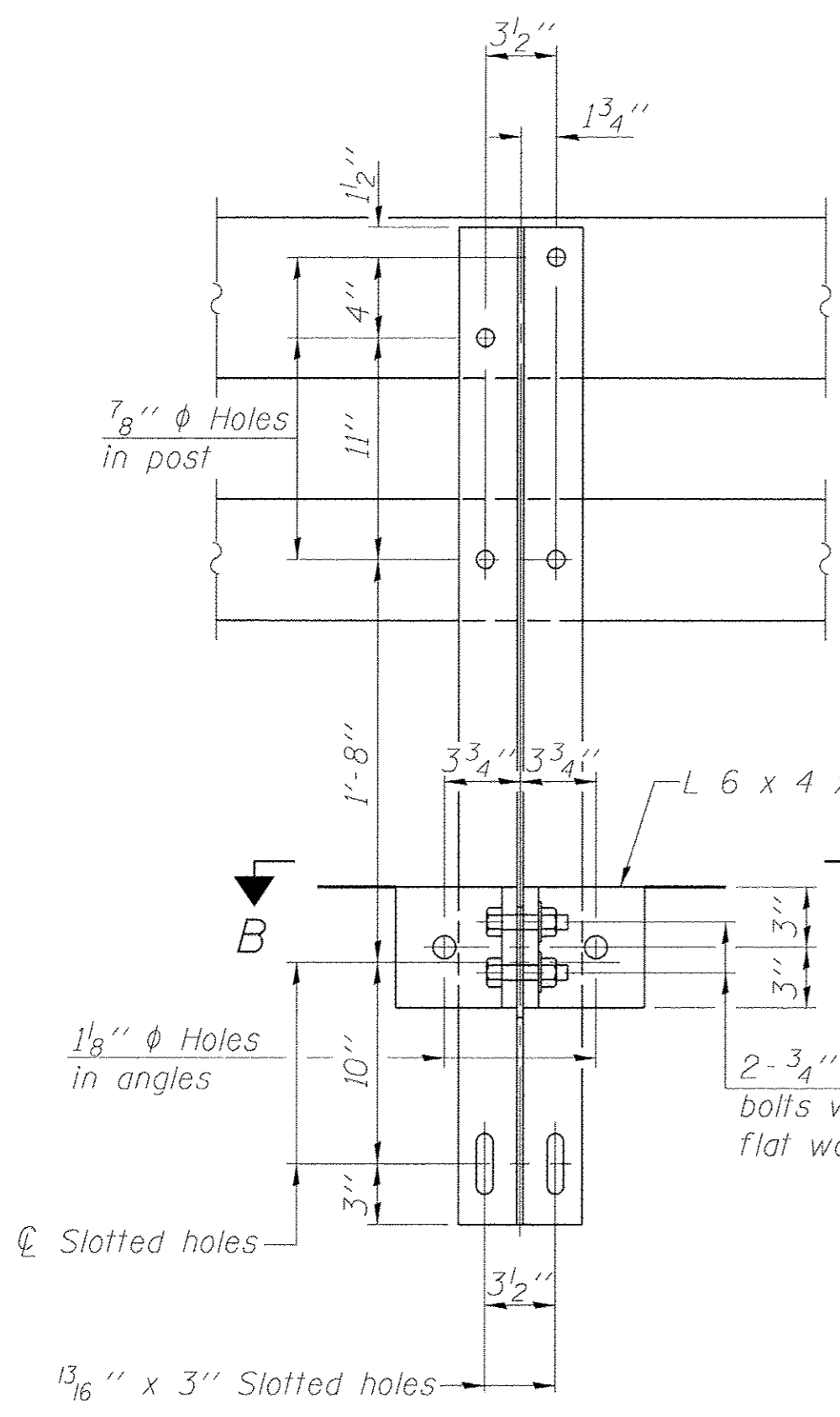
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	PLOT DATE = 11/8/2016	DRAWN - D.A.B.	REVISED -
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STATE OF ILLINOIS
SHELBY COUNTY HIGHWAY DEPARTMENT

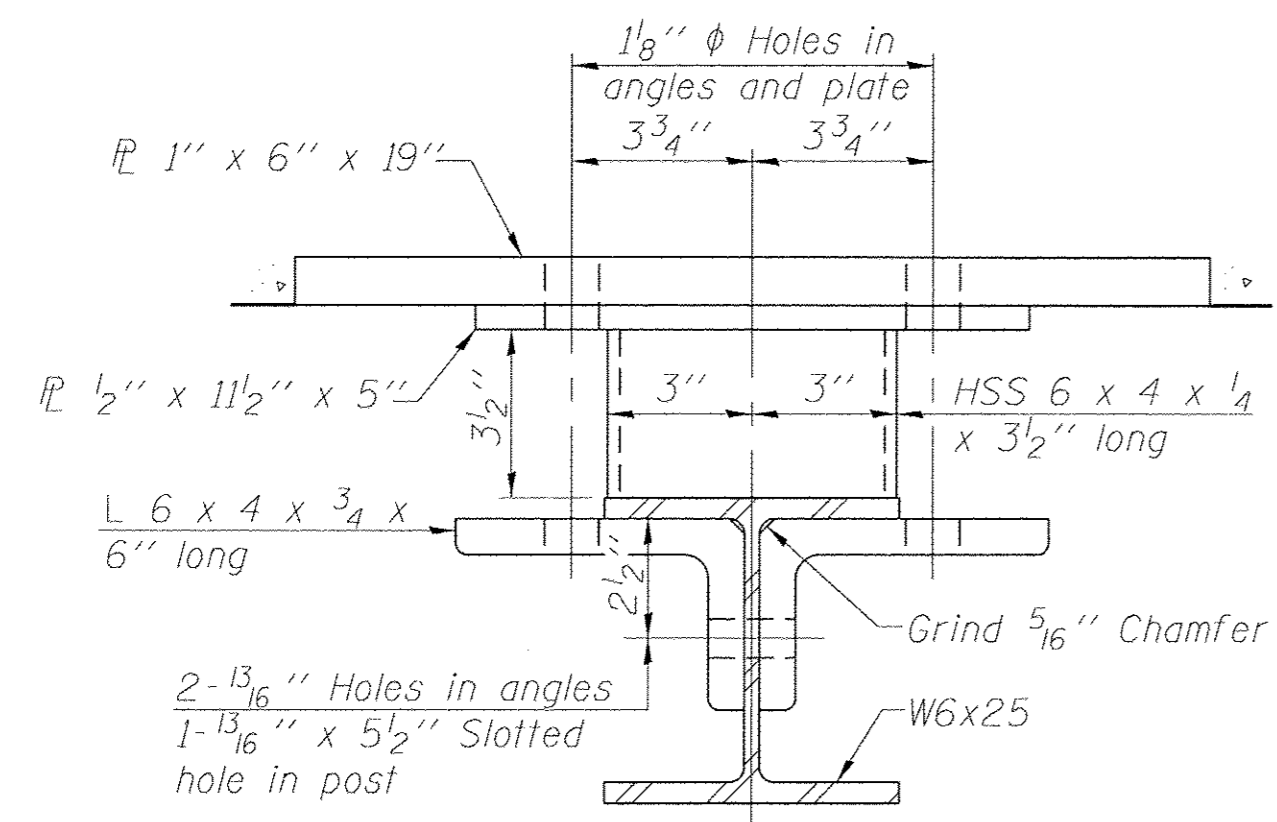
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 087-3586

SHEET NO. 6 OF 14 SHEETS

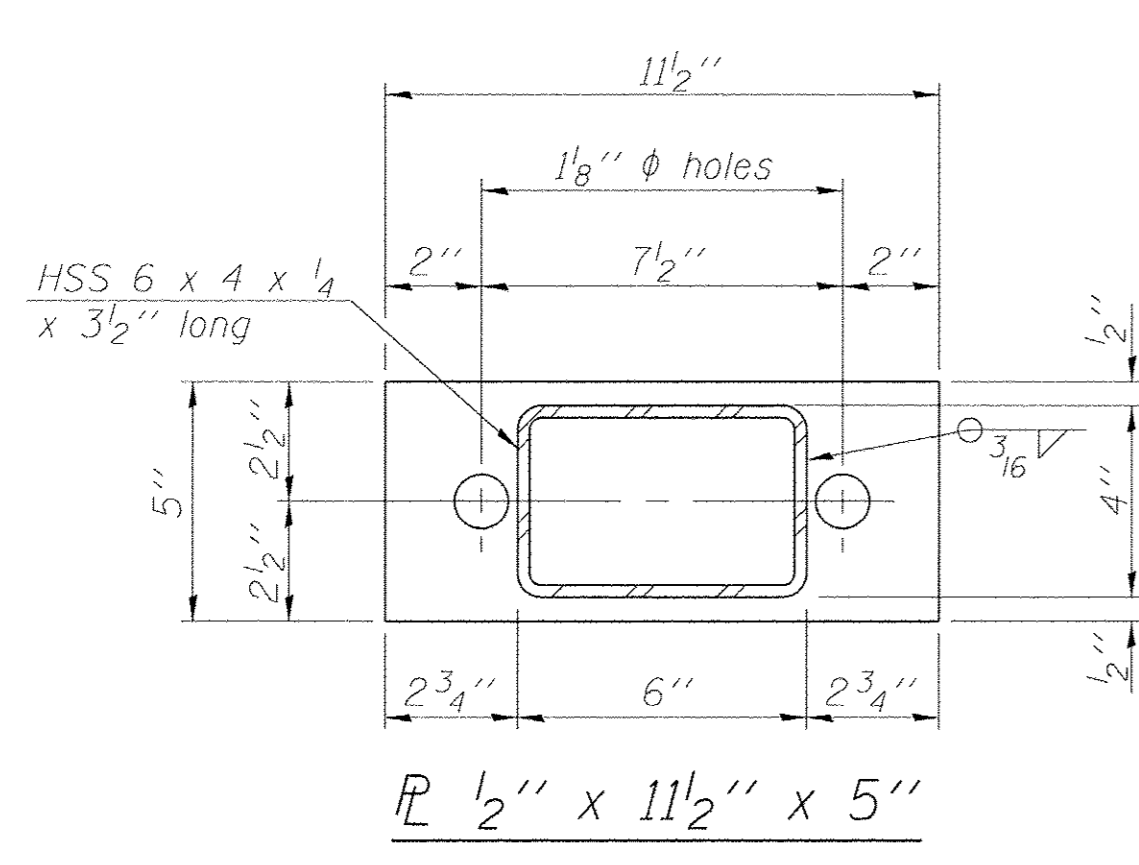
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HENTON ROAD			CONTRACT NO. 95804	
[ILLINOIS] FED. AID PROJECT BROS-0173189J				



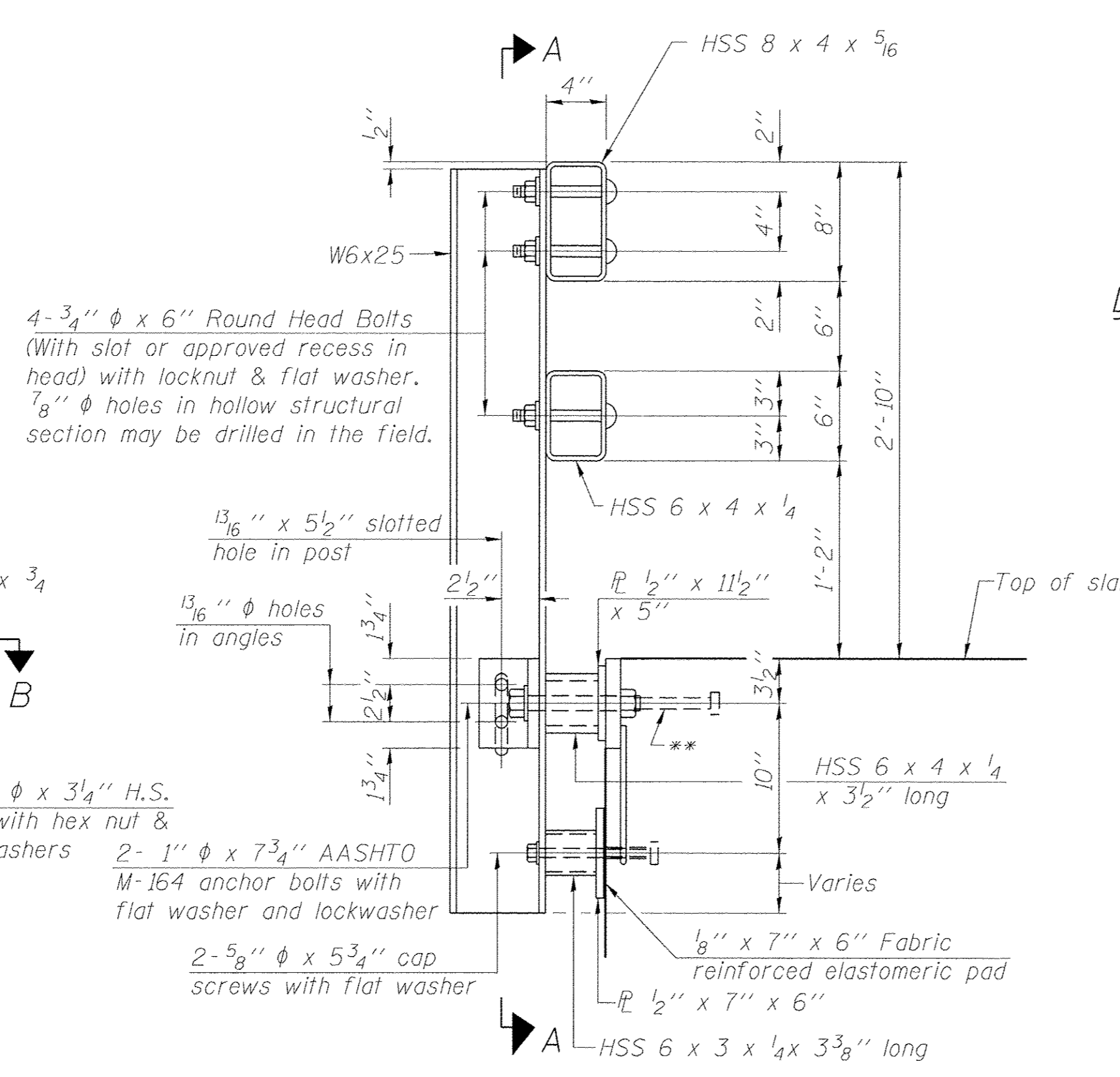
SECTION A-A



SECTION B-B

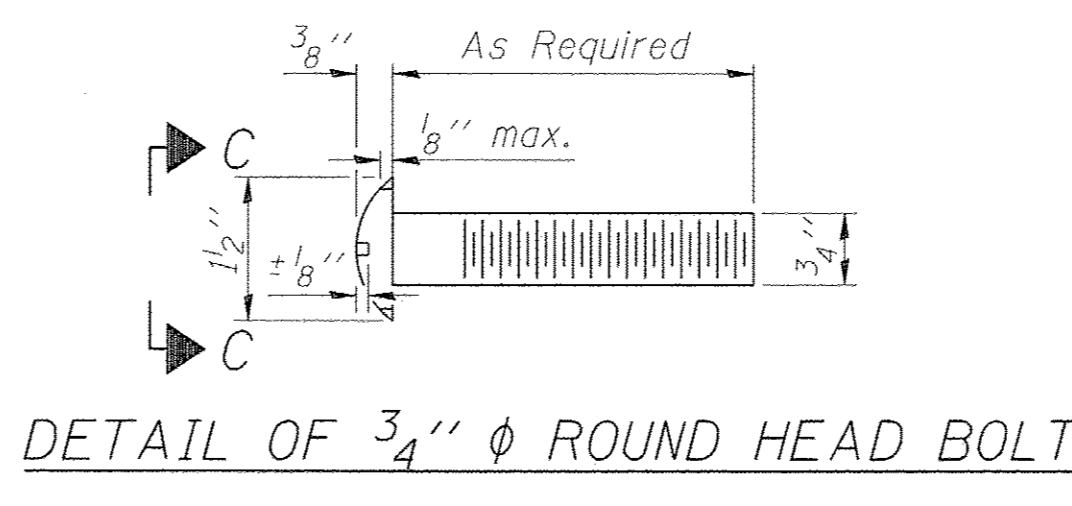
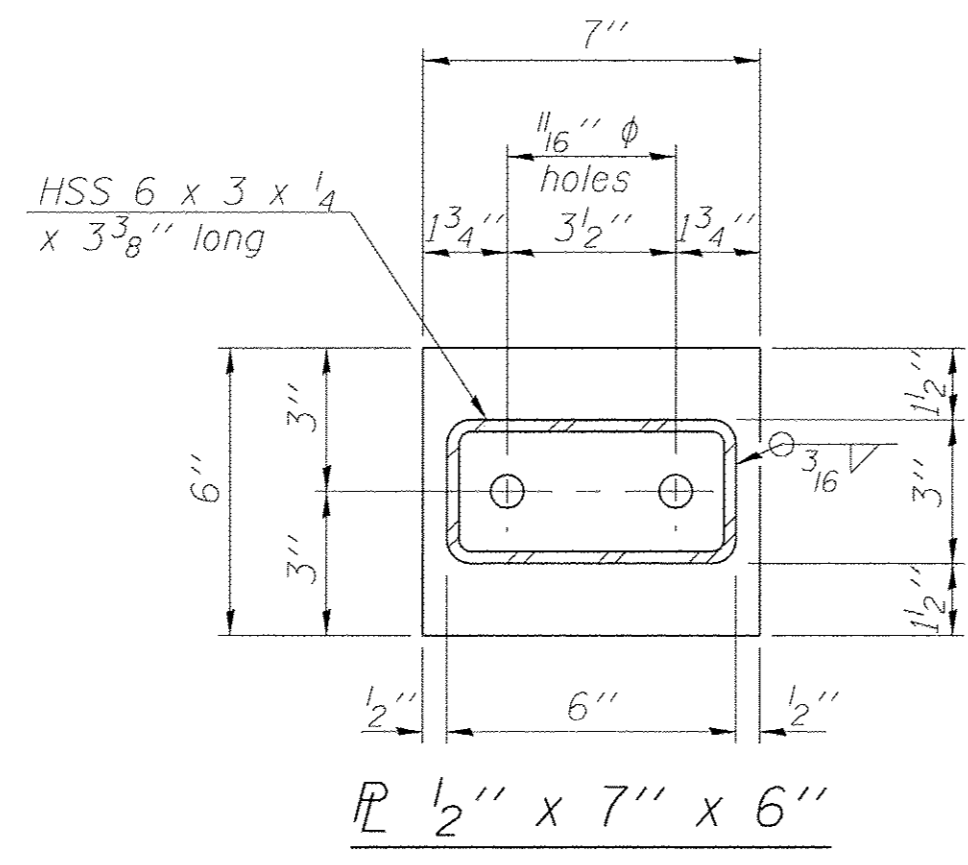


SECTION C-C

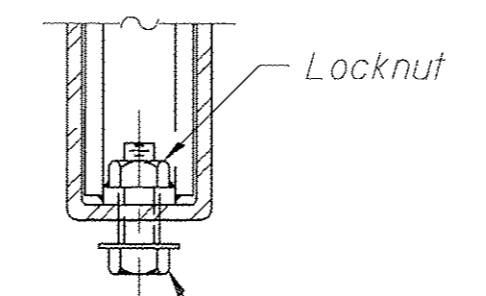


SECTION AT RAIL POST

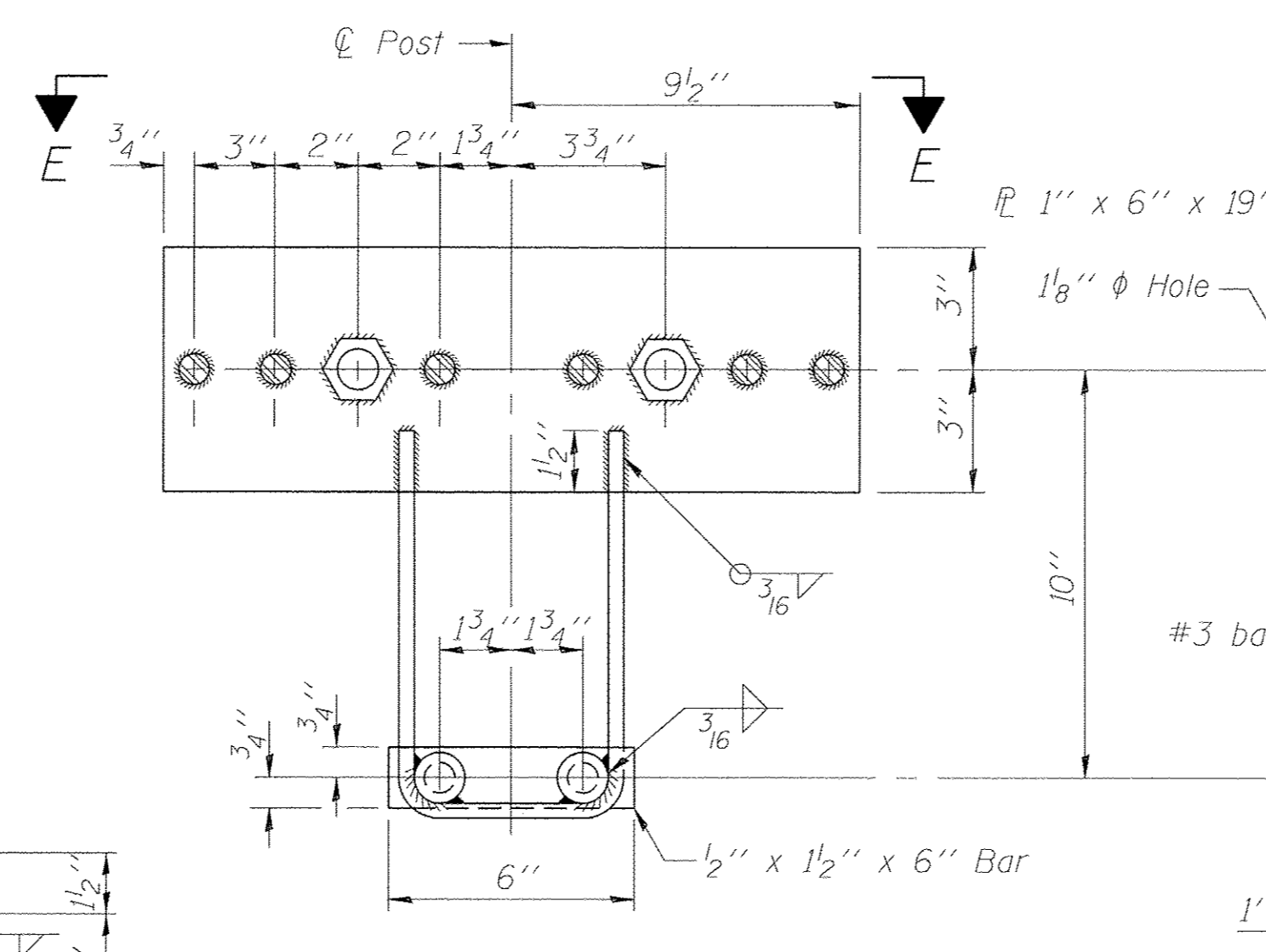
Reinforcement bars in the top of the slab may be placed with a 1/2" minimum clearance in the area of the rail post anchor devices. The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



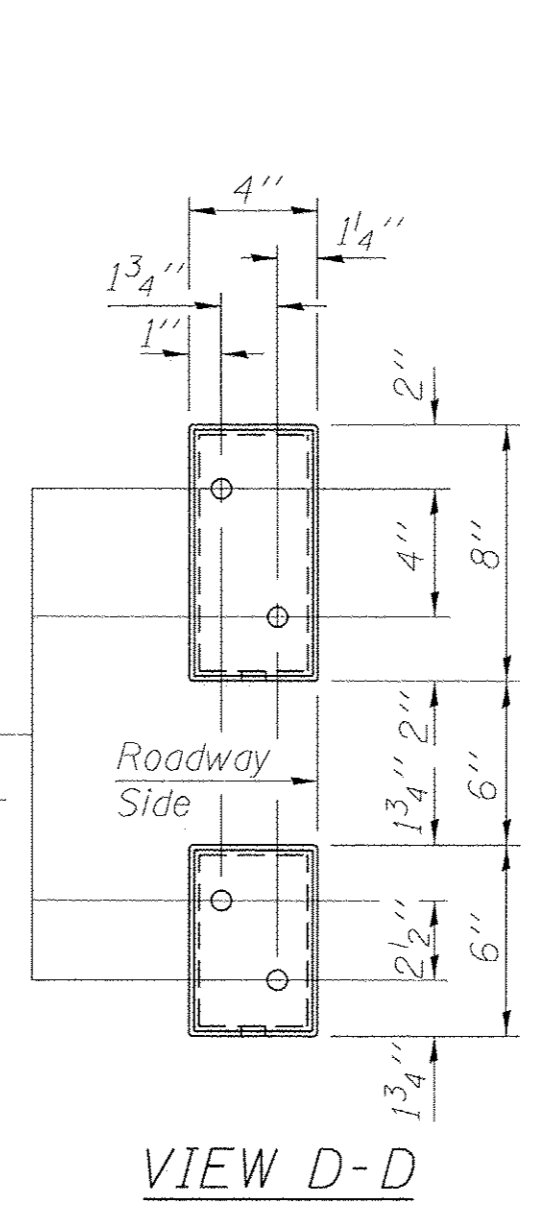
VIEW C-C



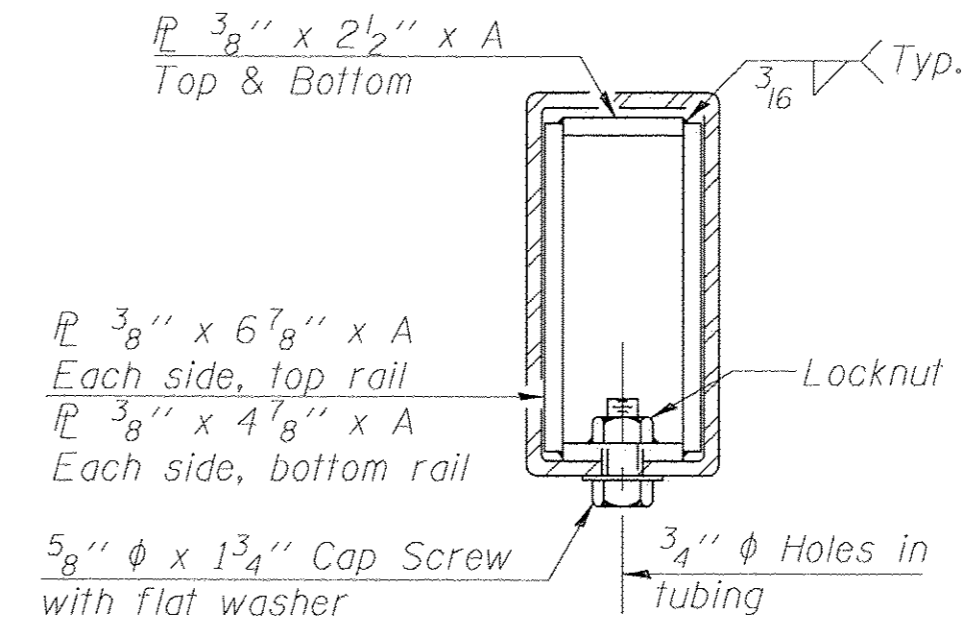
RAIL SPLICE CONNECTION AT EXPANSION JT.



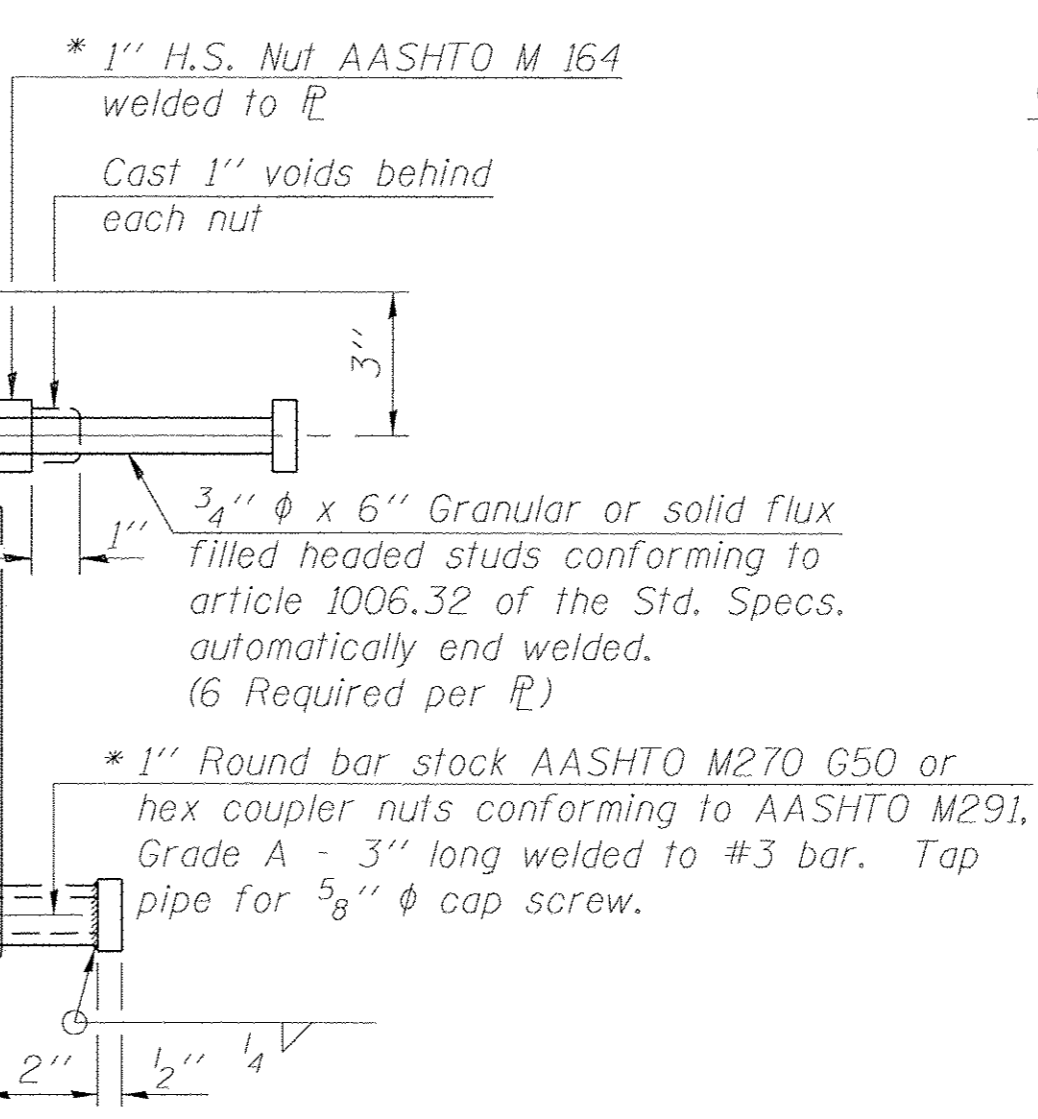
ANCHOR DEVICE



VIEW D-D

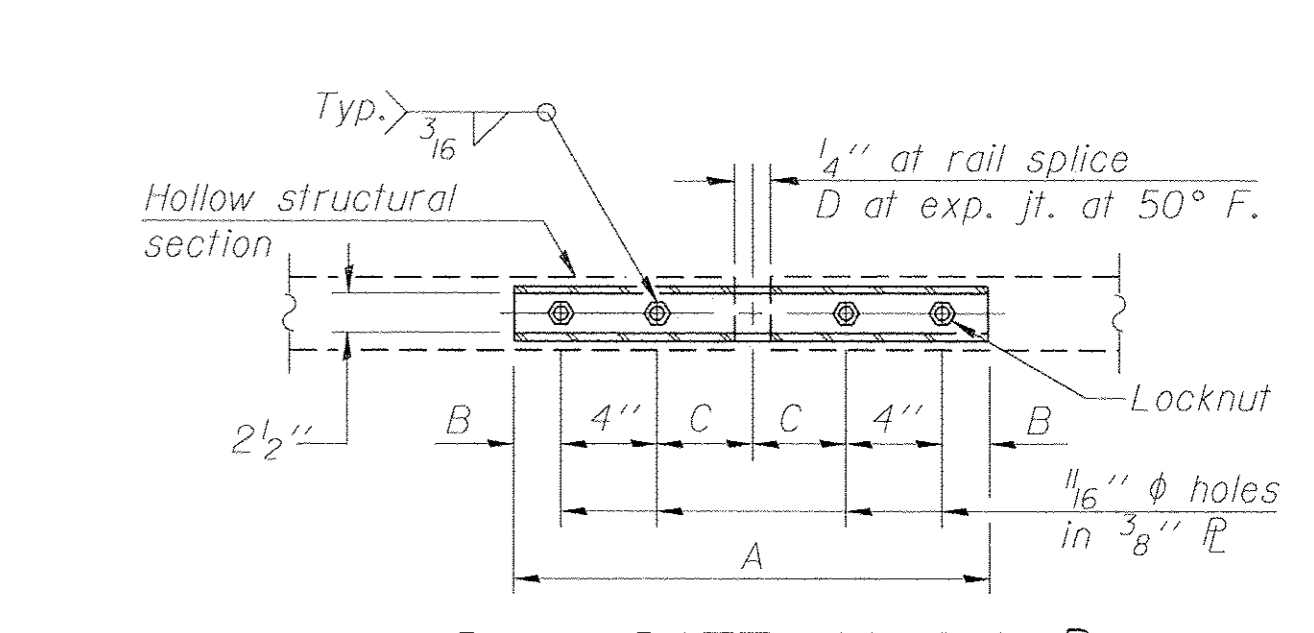
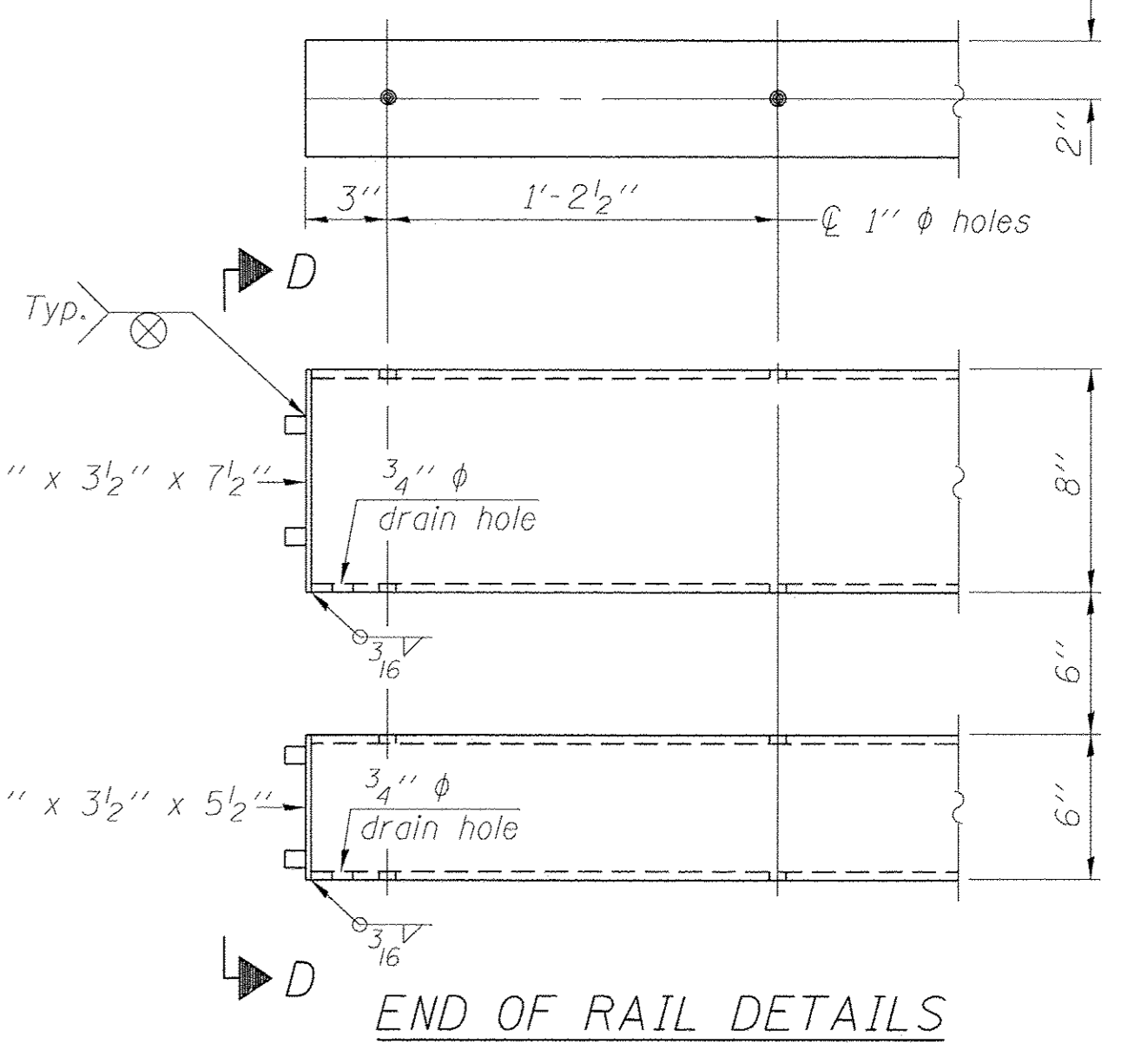


SECTION AT RAIL SPLICE

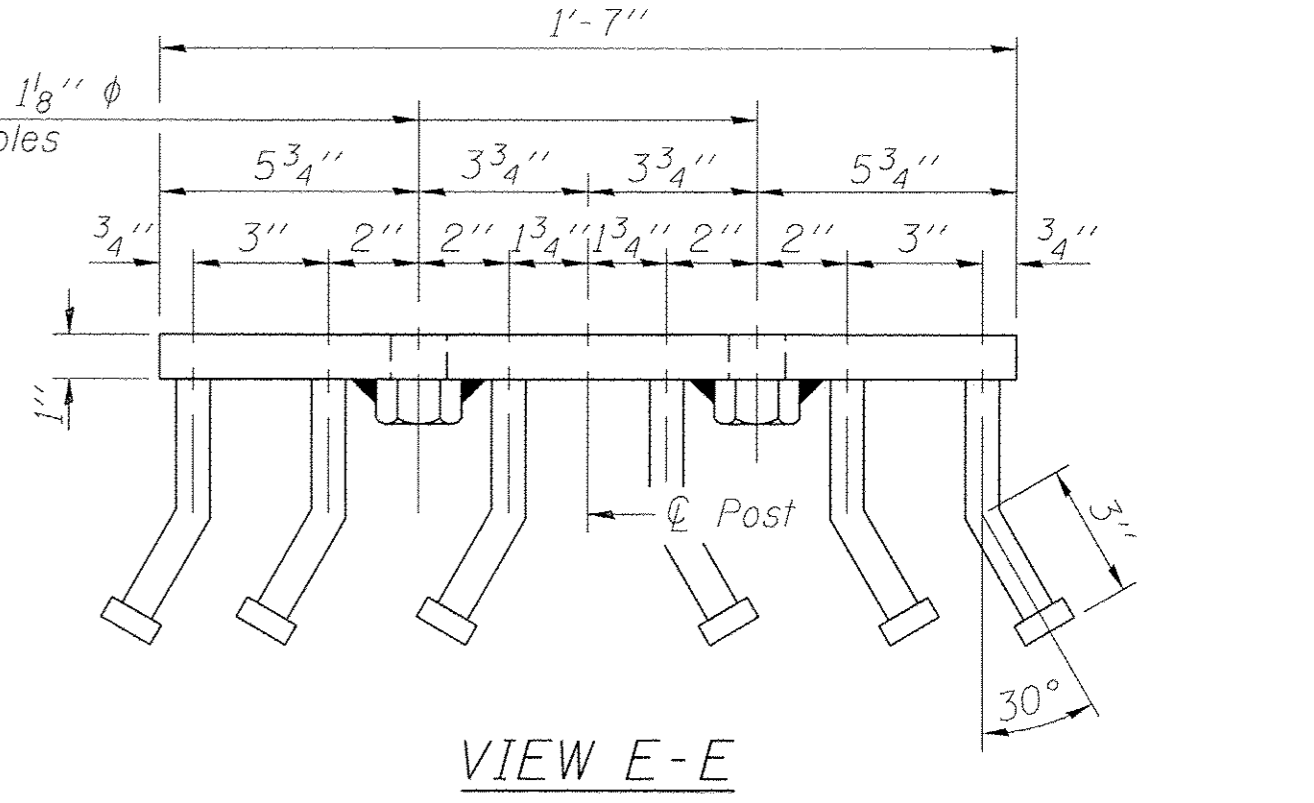


SPLICE DIMENSIONS

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



PLAN-BOTT. SPLICE R TYPICAL

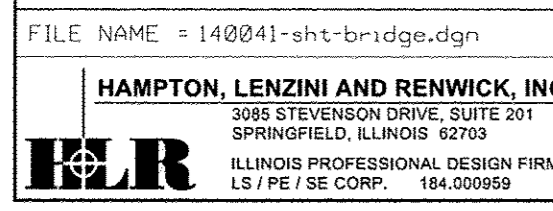


Notes:
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
 All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.
 ** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	200

R-34HMAWS 1-12-15 (6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum HMA thickness)



USER NAME = #USER#
 DESIGNED - L.A.P.
 CHECKED - S.W.M.
 DRAWN - D.A.B.
 CHECKED - S.W.M.

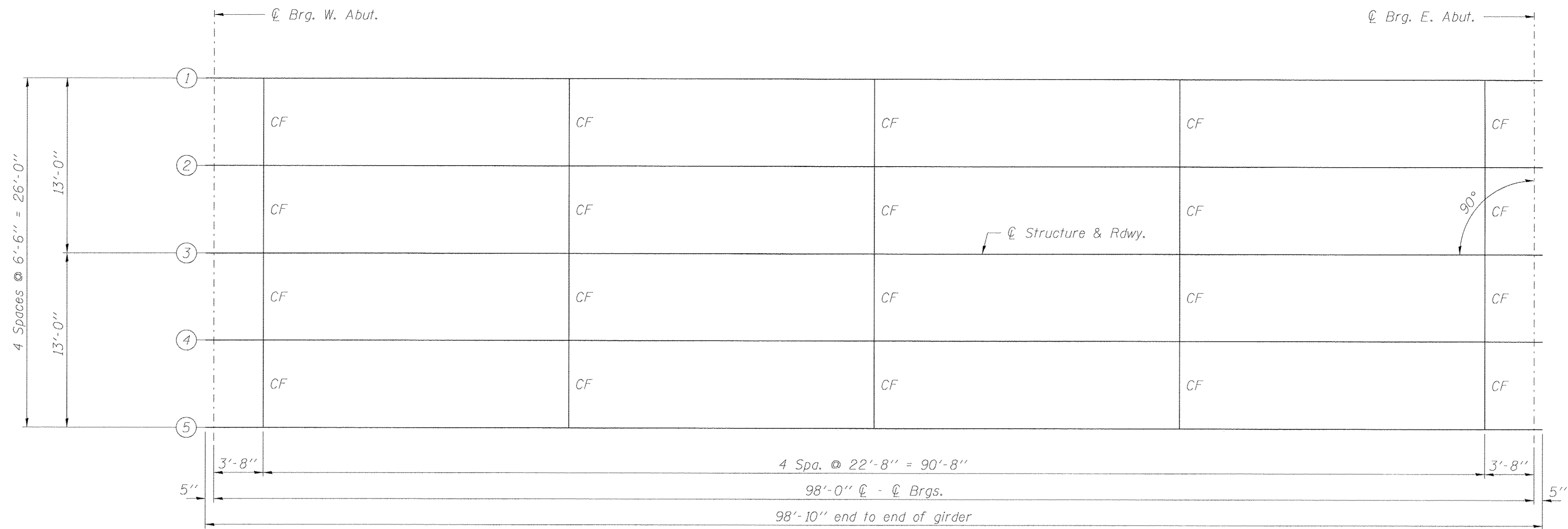
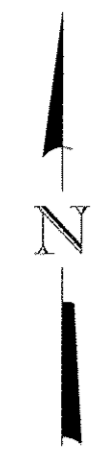
REVISER -
 REVISER -
 REVISER -
 REVISER -

STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

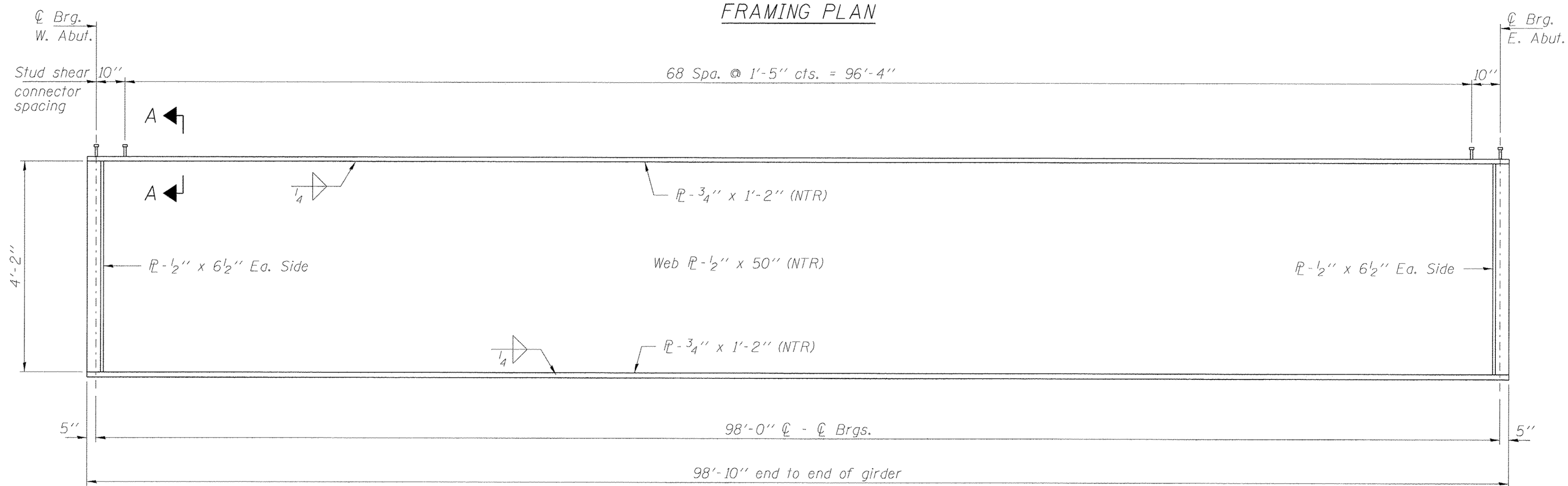
STEEL RAILING, TYPE SM
 STRUCTURE NO. 087-3586

SHEET NO. 7 OF 14 SHEETS

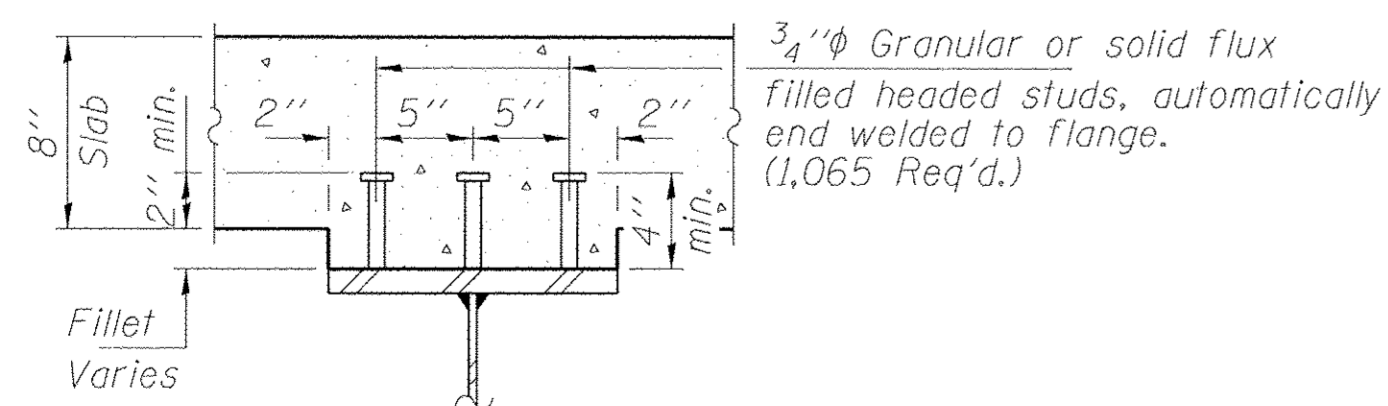
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	14
HENTON ROAD				CONTRACT NO. 95804
ILLINOIS FED. AID PROJECT BROS-01731891				



FRAMING PLAN



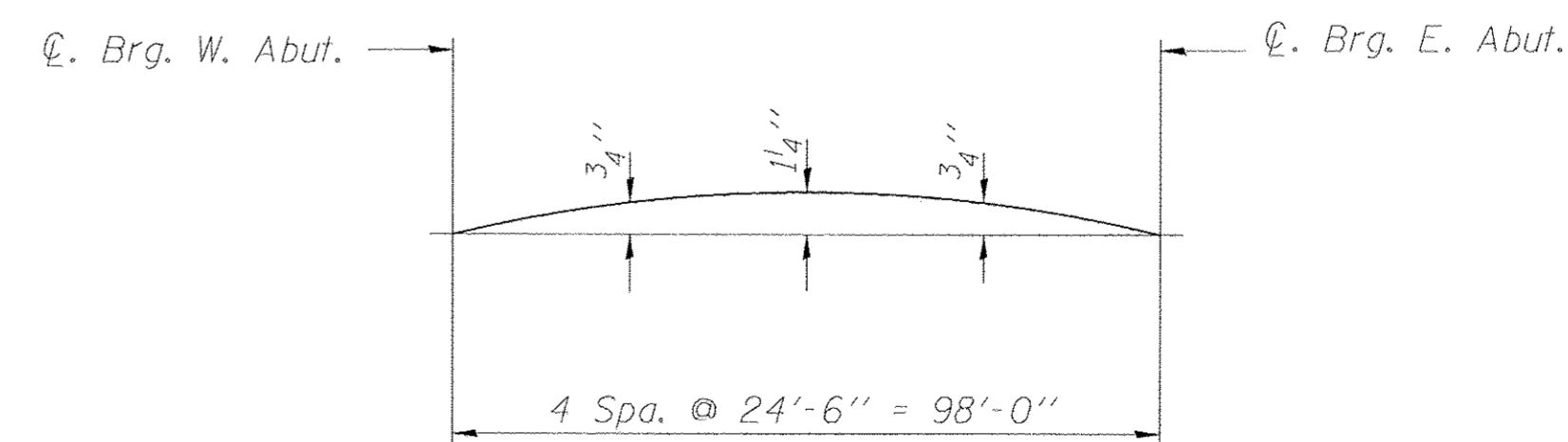
GIRDER ELEVATION



SECTION A-A

Notes:

- Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.
- All plates of the girders, including bearing stiffeners, shall be AASHTO M270 Grade 50W.
- For additional structural steel details see sheets 9 & 10 of 14.
- All cross frames and diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



CAMBER DIAGRAM

Location	☐ Brg. W. Abut.	☐ Brg. E. Abut.
BEAM 1	609.16	611.01
BEAM 2	609.29	611.15
BEAM 3	609.43	611.28
BEAM 4	609.29	611.15
BEAM 5	609.16	611.01

TOP OF WEB ELEVATIONS
(For fabrication only)
(Does not include Dead Load Deflections)

FILE NAME = 140241-sht-bridge.dgn	USER NAME = #USER#	DESIGNED - L.A.P.	REVISED -
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 154.000959	PLOT SCALE = #SCALE#	CHECKED - S.W.M.	REVISED -
HLR	PLOT DATE = 11/8/2016	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

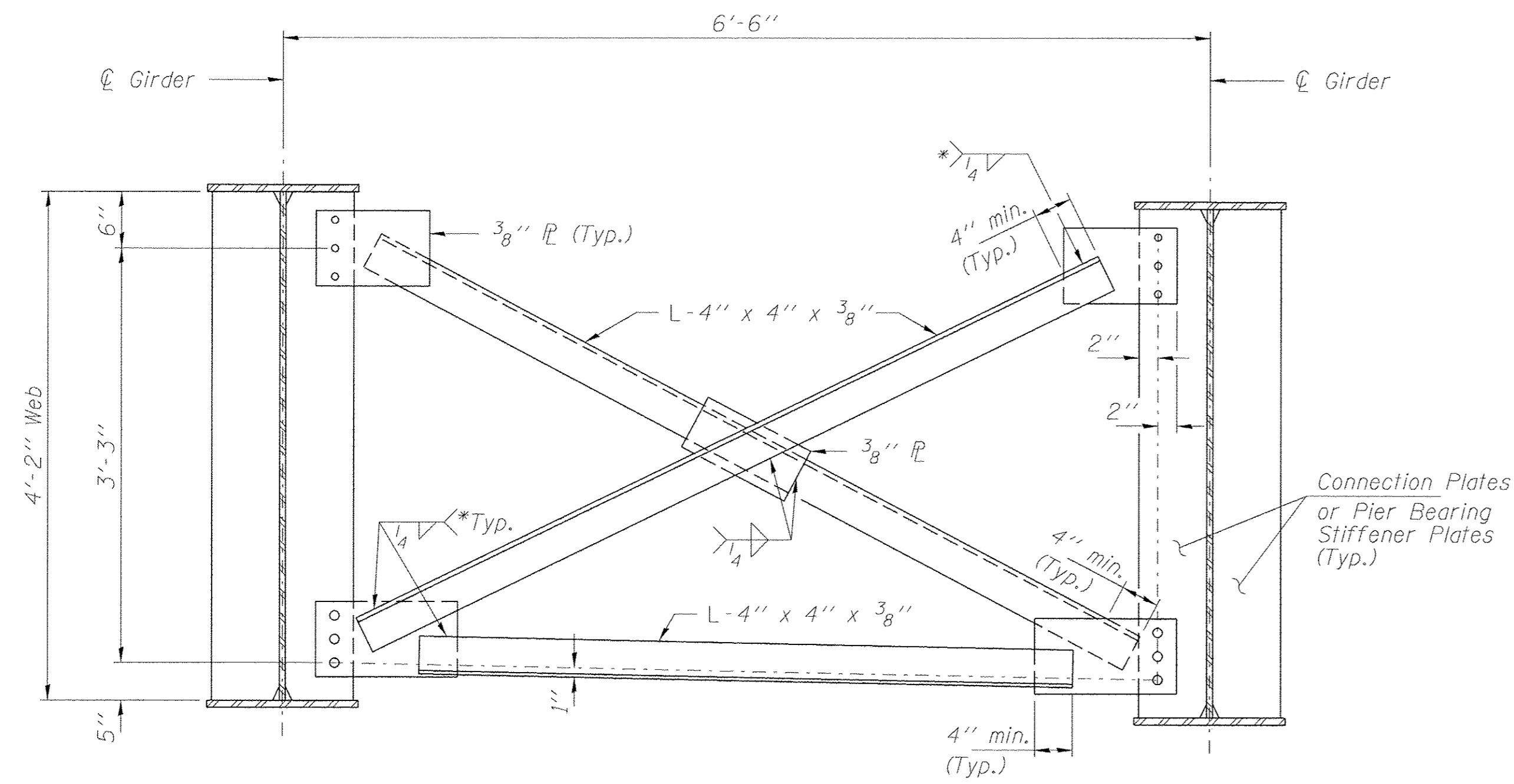
STATE OF ILLINOIS
SHELBY COUNTY HIGHWAY DEPARTMENT

STRUCTURAL STEEL
STRUCTURE NO. 087-3586

SHEET NO. 8 OF 14 SHEETS

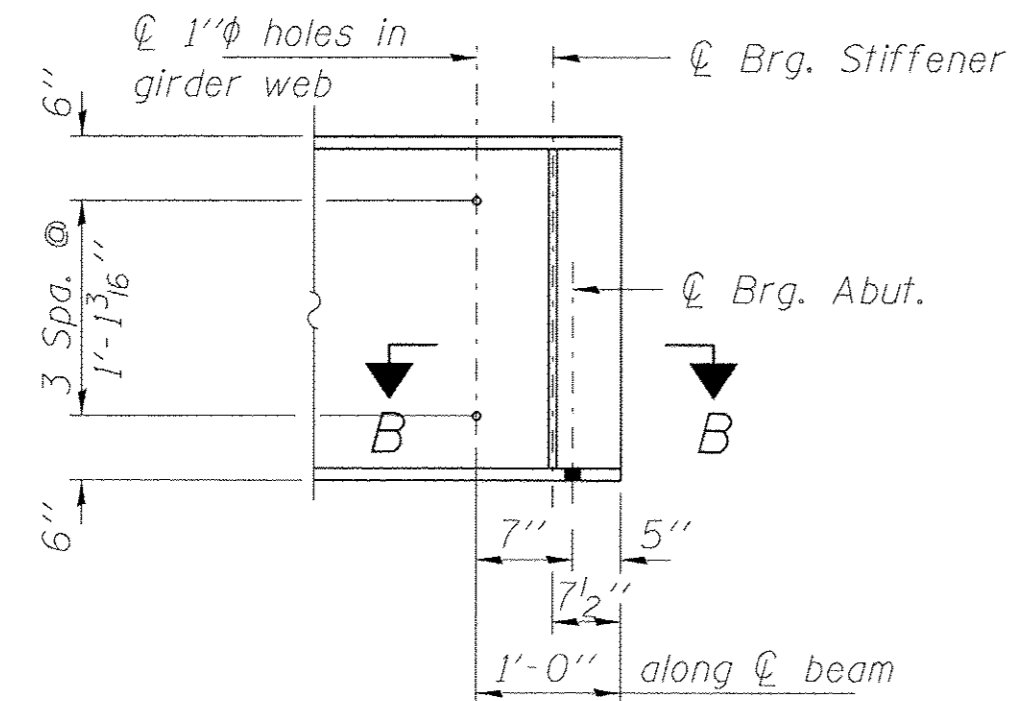
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	15
HENTON ROAD			CONTRACT NO. 95804	

[ILLINOIS] FED. AID PROJECT BROS-01731891

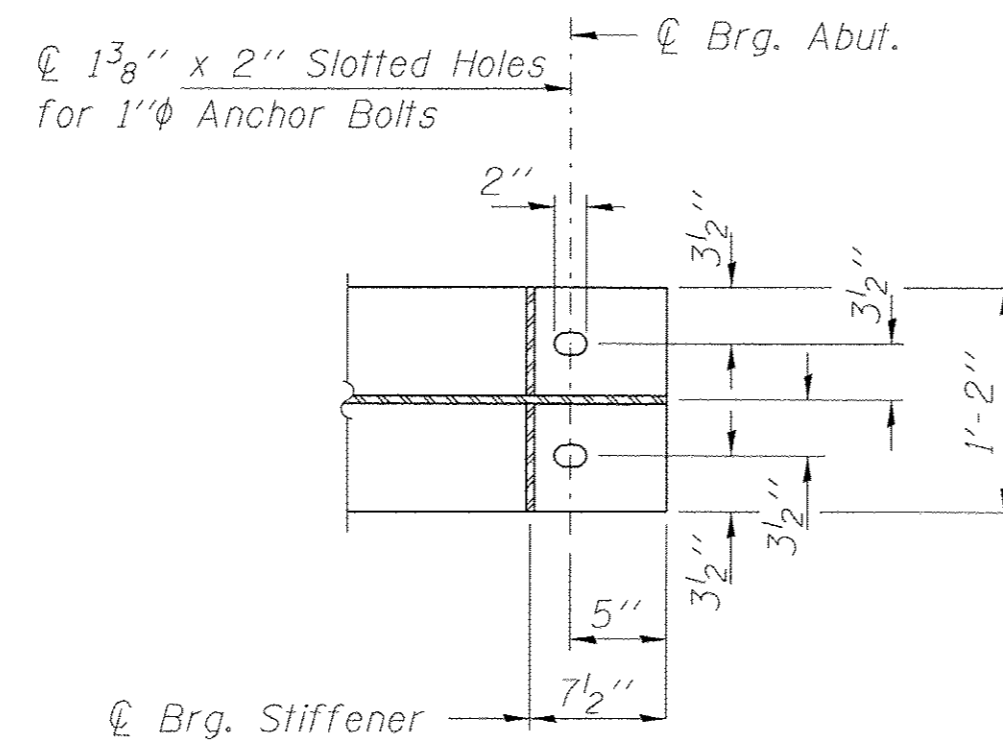


CROSS FRAME CF
(20-required)

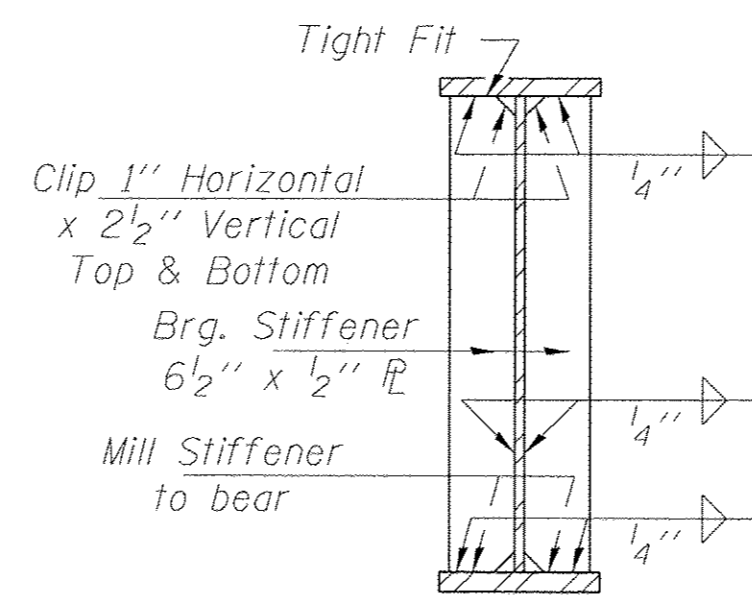
Notes:
 All structural steel for cross frames, connection plates and stiffeners shall be AASHTO M270 Grade 50W.
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
 Bolts for cross frame connections shall be 3/4"φ, holes 5/16"φ.
 Two hardened washers required for each set of oversized holes.



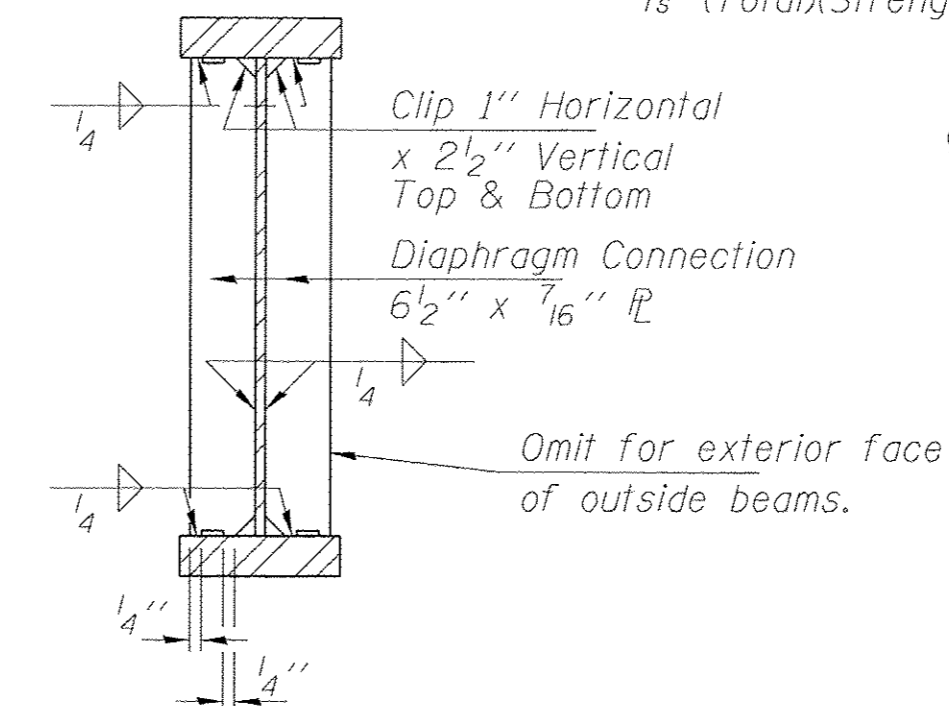
TYP. END OF GIRDER ELEVATION



SECTION B-B



SECTION AT ABUTMENT BEARING STIFFENER PL'S



CROSS FRAME CONNECTION PLATES
(40 Req'd.)

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1
I_s	(in ⁴)	18,731
$I_c(n)$	(in ⁴)	47,694
$I_c(3n)$	(in ⁴)	35,953
$I_c(cr)$	(in ⁴)	21,716
S_s	(in ³)	727
$S_c(n)$	(in ³)	1,035
$S_c(3n)$	(in ³)	948
$S_c(cr)$	(in ³)	746
DC1	(k/ft)	0.91
M _{DC1}	(k)	1,087
DC2	(k/ft)	0.03
M _{DC2}	(k)	37
DW	(k/ft)	0.33
M _{DW}	(k)	391
LLDF	(k)	0.547
M _{LL + IM}	(k)	1,501
M _u (Strength I)	(k)	4,618
$\phi_r M_n$	(k)	5,818
f_s DC1	(ksi)	17.9
f_s DC2	(ksi)	0.5
f_s DW	(ksi)	4.9
f_s (LL + IM)	(ksi)	17.4
f_s (Service II)	(ksi)	46.0
0.95R _h F _{yf}	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	-
$\phi_r F_n$	(ksi)	-
V _r	(k)	26.1

GIRDER REACTION TABLE		
	Interior	Exterior
LLDF (k)	0.707	0.707
OCF (k)	-	1.0
R _{DC1} (k)	44.4	38.2
R _{DC2} (k)	1.5	1.5
R _{DW} (k)	16.0	12.9
R _{LL + IM} (k)	69.0	69.0
R _{Total} (k)	15.2	15.2
R _{IM} (k)	146.1	136.8

I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).
 $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections due to short-term composite live loads (in⁴ and in³).
 $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) in uncracked sections, due to long-term composite (superimposed) dead loads (in⁴ and in³).
 $I_c(cr), S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite (superimposed) dead loads (in⁴ and in³).
 DC1: Un-factored non-composite dead load (kips/ft.).
 M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
 DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
 M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
 DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
 M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
 M_{LL + IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
 M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{LL + IM}$
 $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 or non-slender negative moment capacity according to Article A6.1.1 or A6.1.2 (kip-ft.).
 f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
 M_{DC1} / S_{nc}
 f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
 $M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.
 f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
 $M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.
 f_s (LL + IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live load plus impact loads as calculated below (ksi).
 $M_{LL + IM} / S_c(n)$ or $M_{DW} / S_c(cr)$ as applicable.
 f_s (Service II): Sum of stresses as computed below (ksi).
 $f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3 f_s (LL + IM)$
 0.95R_hF_{yf}: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).
 f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
 $1.25 (f_{sDC1} + f_{sDC2}) + 1.5 f_{sDW} + 1.75 f_s (LL + IM)$
 $\phi_r F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).
 V_r: Maximum factored shear range in span computed according to Article 6.10.10.

Notes:
 For additional structural steel details see sheets 8 & 10 of 14.
 All cross frames, connection plates and stiffeners shall be AASHTO M270, Grade 50W.

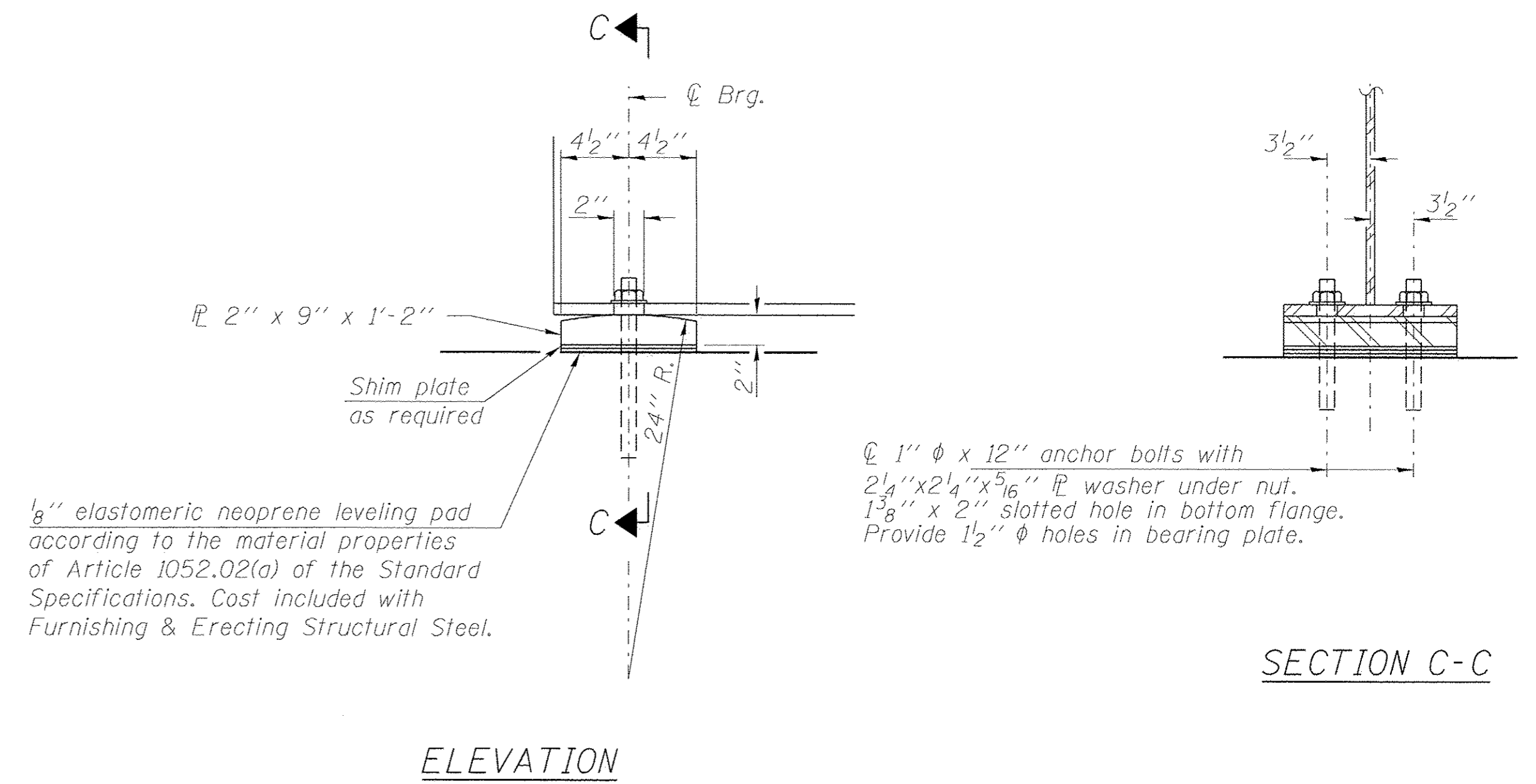
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HLR ILLINOIS PROFESSIONAL DESIGN FIRM L3 / P.E. / S.E. CORP. 184-000993	PLOT DATE = 11/8/2016	DRAWN - D.A.B.	REVISED -
		CHECKED - S.W.M.	REVISED -

STATE OF ILLINOIS
SHELBY COUNTY HIGHWAY DEPARTMENT

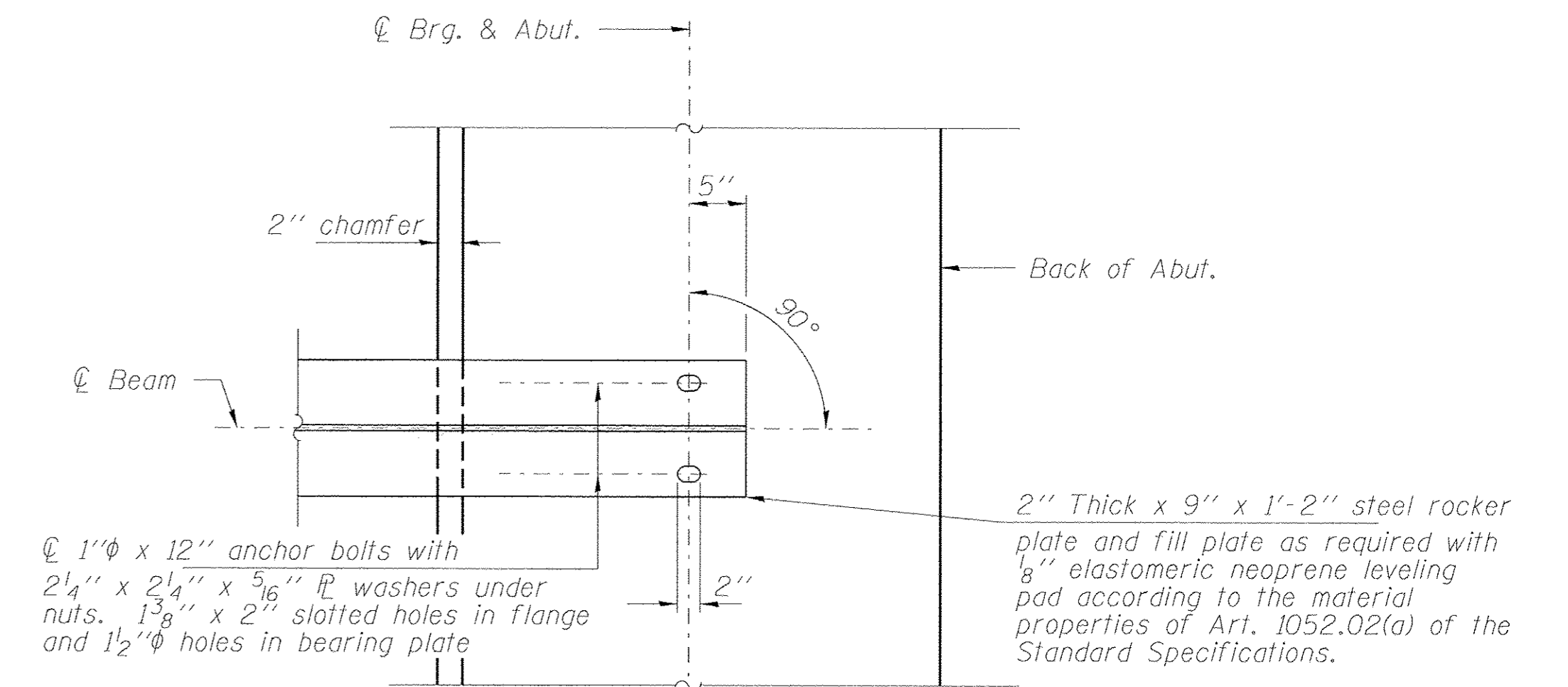
STRUCTURAL STEEL DETAILS
STRUCTURE NO. 087-3586

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	16
HENTON ROAD			CONTRACT NO. 95804	
ILLINOIS FED. AID PROJECT BROS-017310891				

SHEET NO. 9 OF 14 SHEETS



FIXED BEARING AT ABUTMENT
(10 required)

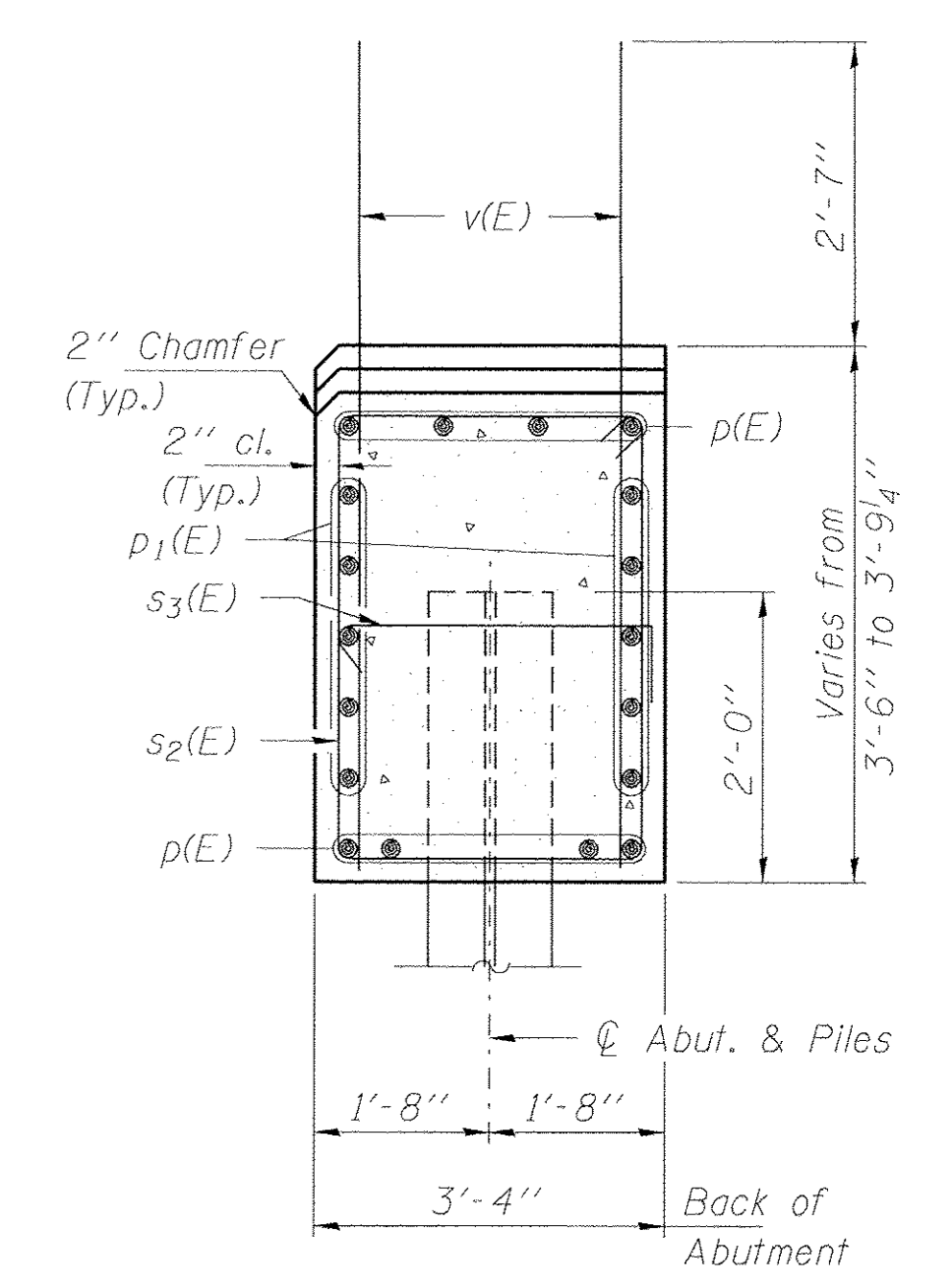
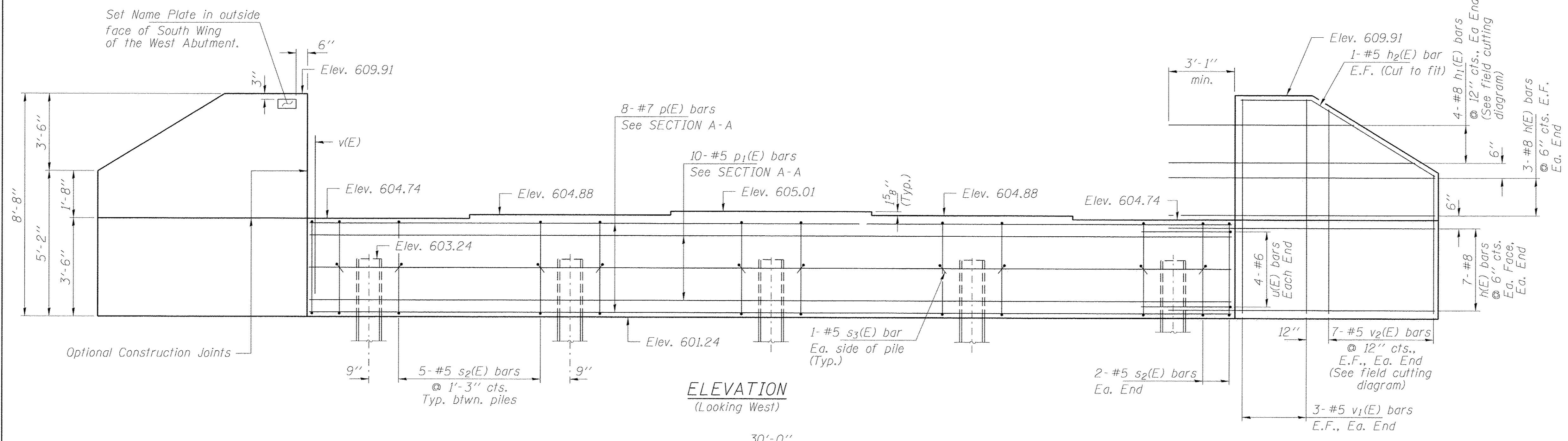


Notes:

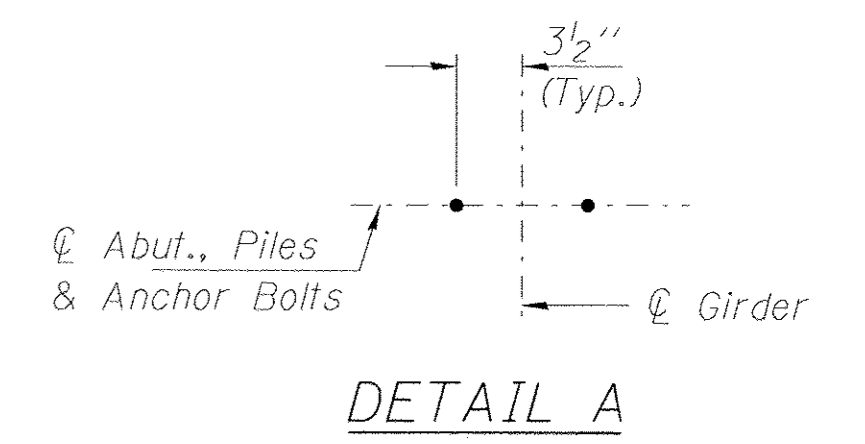
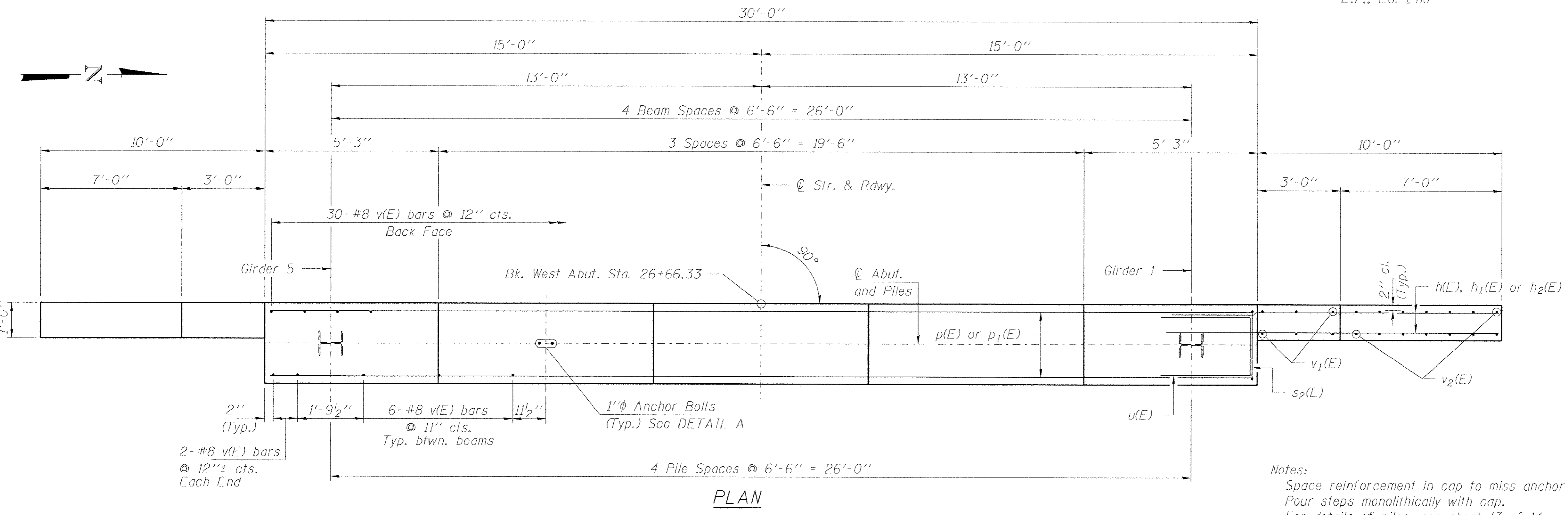
- Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
- Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
- Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
- All steel plates of the bearing assembly shall be M270 Grade 50W.

BILL OF MATERIAL

Item	Unit	Quantity
Anchor Bolt, 1"	Each	20

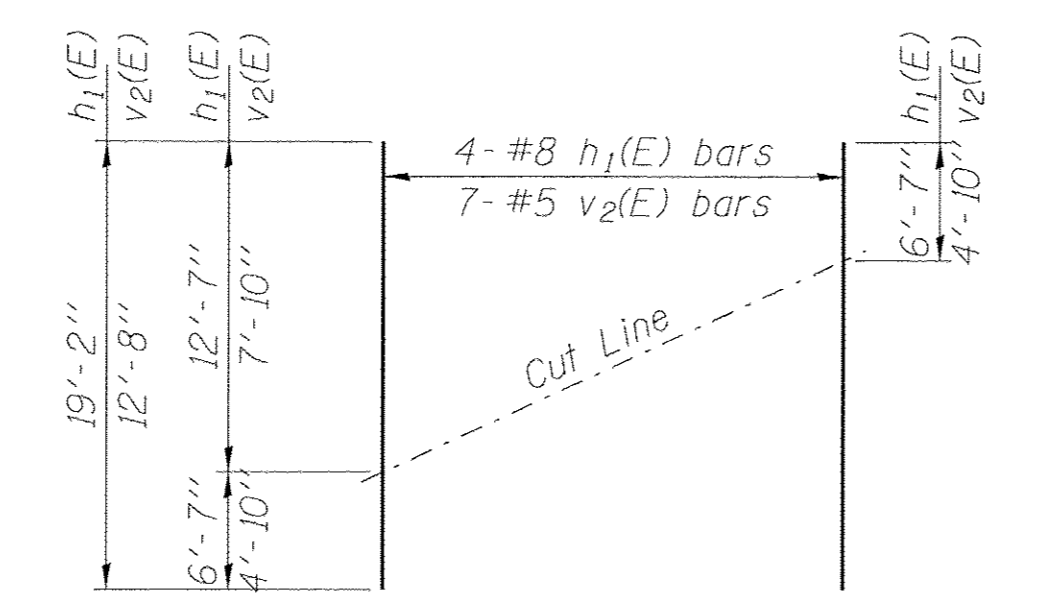


SECTION A-A
Dimensions at right angles to abutment.

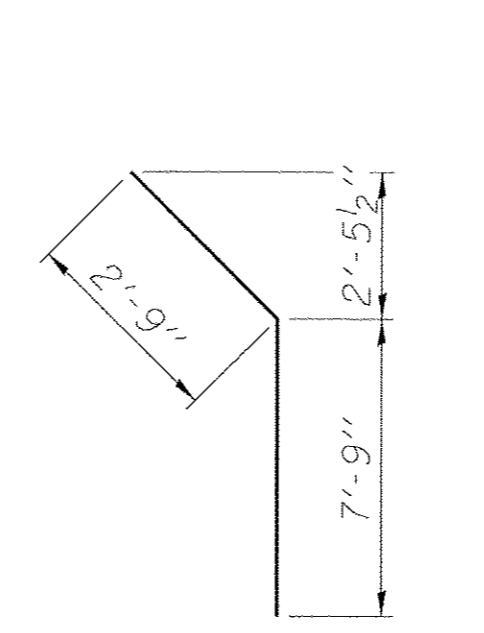


DETAIL A

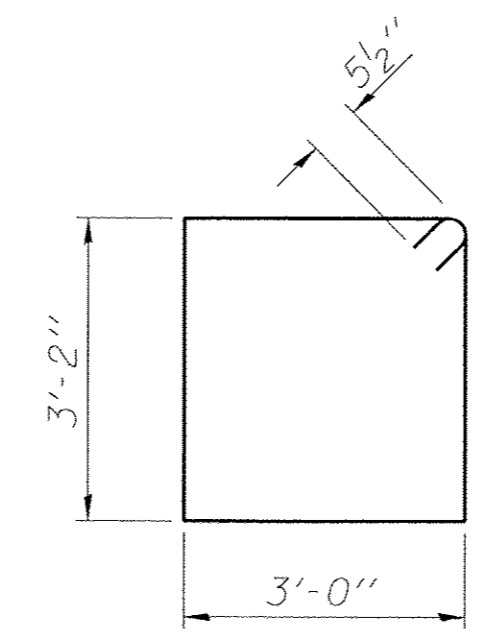
PILE DATA
Type: Steel HP12x53
Nominal Required Bearing: 419 Kips/pile
Factored Resistance Available: 230 Kips/pile
Est. Length: 45'
No. Production Piles: 4
No. Test Piles: 1



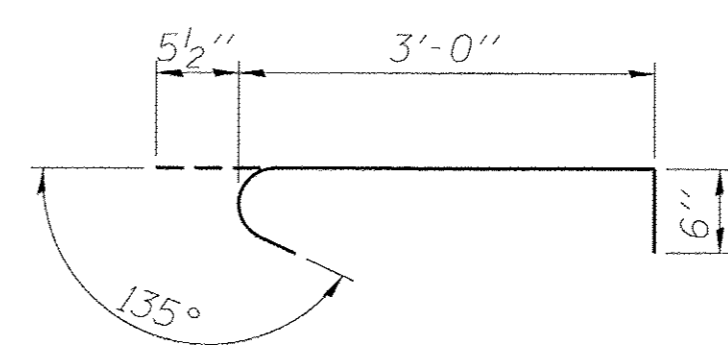
FIELD CUTTING DIAGRAM
Order h₁(E) and v₂(E) full length. Cut as shown and use remainder of bars in opposite face.



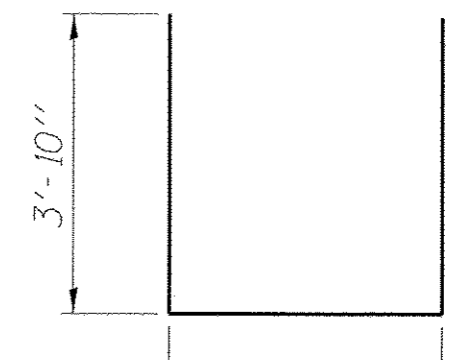
BAR h₂(E)



BAR s₂(E)



BAR s₃(E)

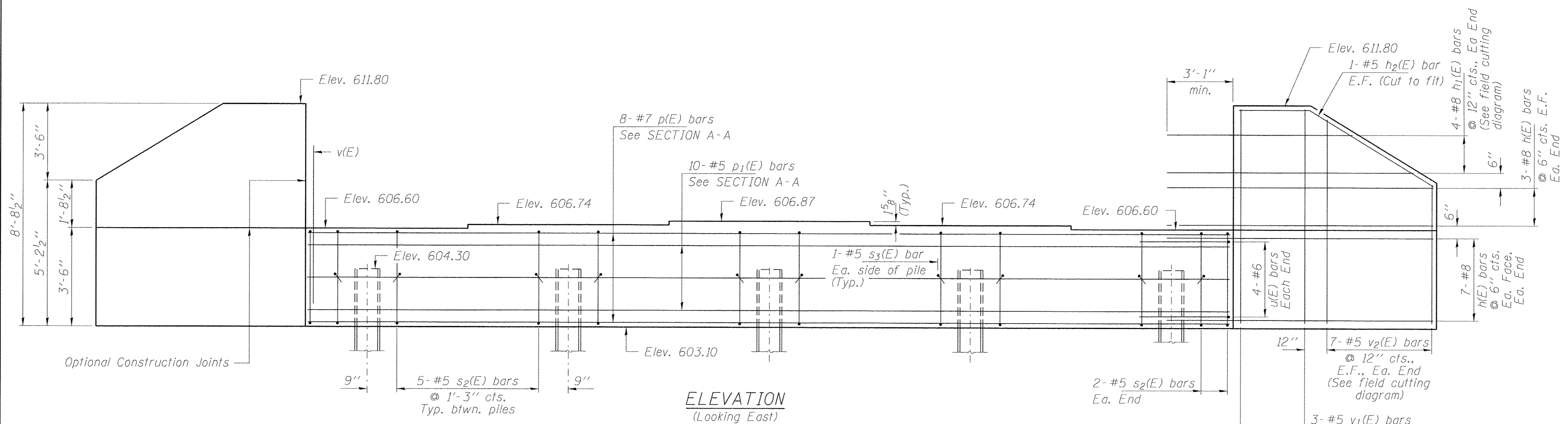


BAR u(E)

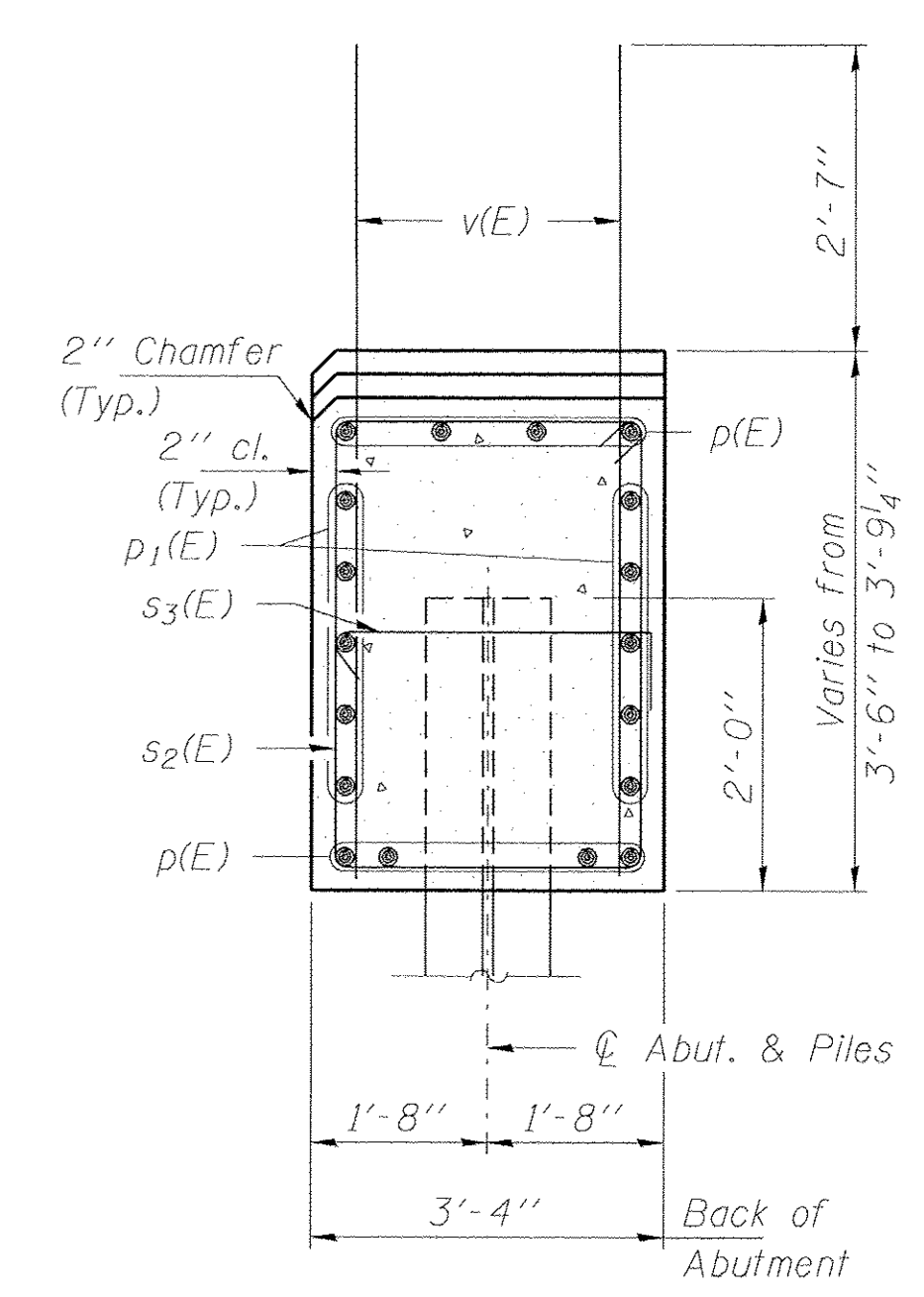
Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 13 of 14.

BILL OF MATERIAL - W. ABUT.

Bar	No.	Size	Length	Shape
h(E)	40	#8	12'-11"	—
h ₁ (E)	8	#8	19'-2"	—
h ₂ (E)	4	#5	10'-6"	—
p(E)	8	#7	29'-8"	—
p ₁ (E)	10	#5	29'-8"	—
s ₂ (E)	24	#5	13'-3"	□
s ₃ (E)	10	#5	4'-0"	└┘
u(E)	8	#6	10'-7"	□
v(E)	58	#8	5'-11"	—
v ₁ (E)	12	#5	8'-4"	—
v ₂ (E)	14	#5	12'-8"	—
Protective Coat		Sq. Yd.	19	
Concrete Structures		Cu. Yd.	18.9	
Reinforcement Bars, Epoxy Coated		Pound	4,330	
Furnishing Steel Piles, HP12x53		Foot	180	
Driving Piles		Foot	180	
Test Pile Steel HP12x53		Each	1	

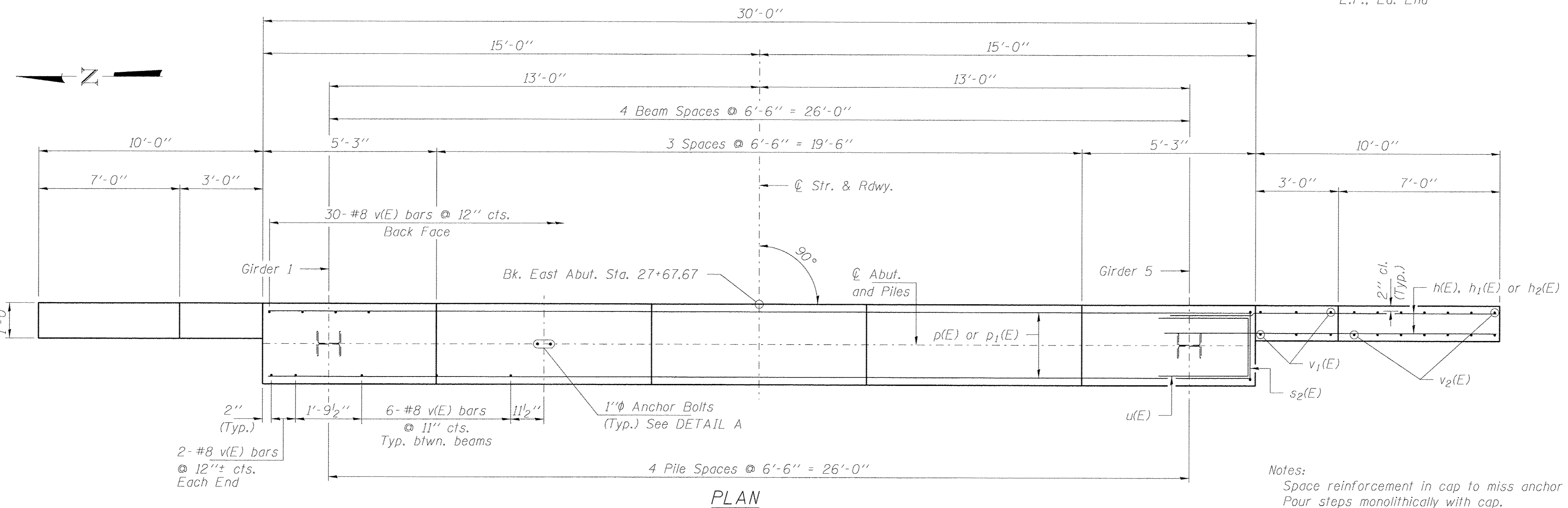


ELEVATION
(Looking East)

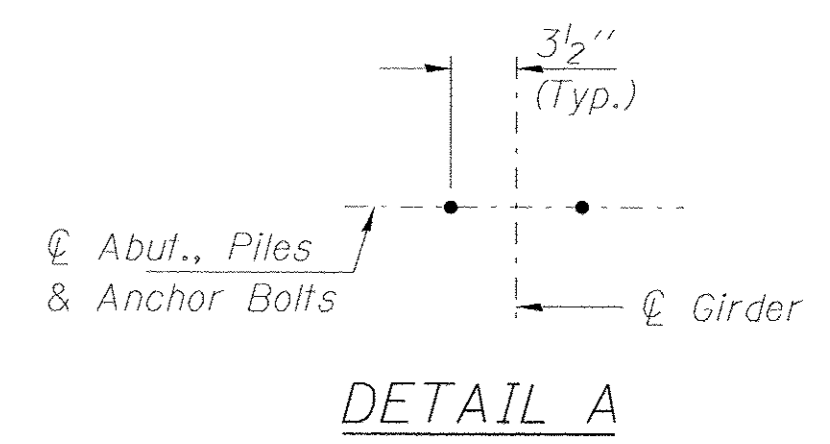


SECTION A-A

Dimensions at right angles to abutment.

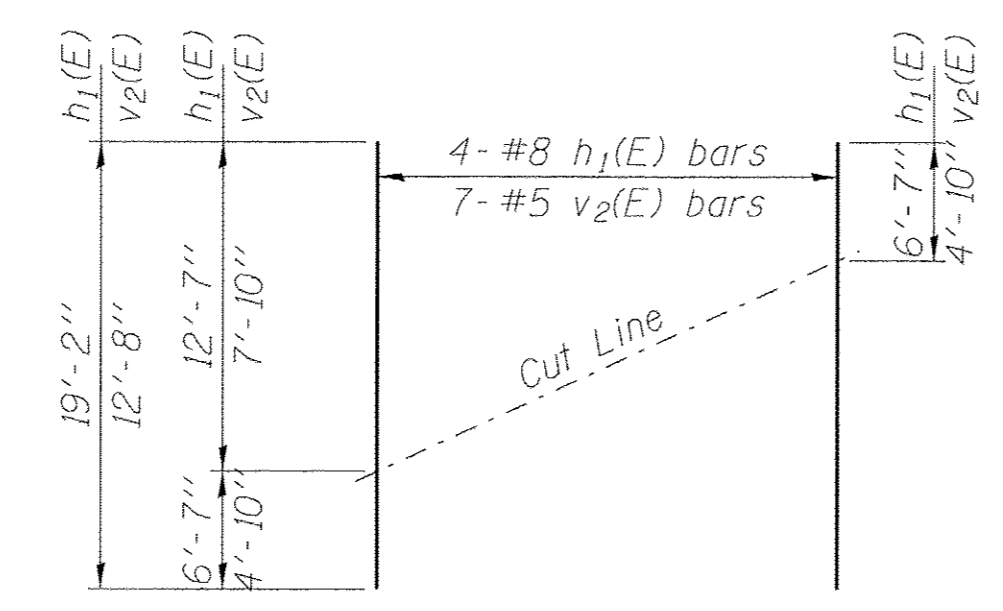


PLAN

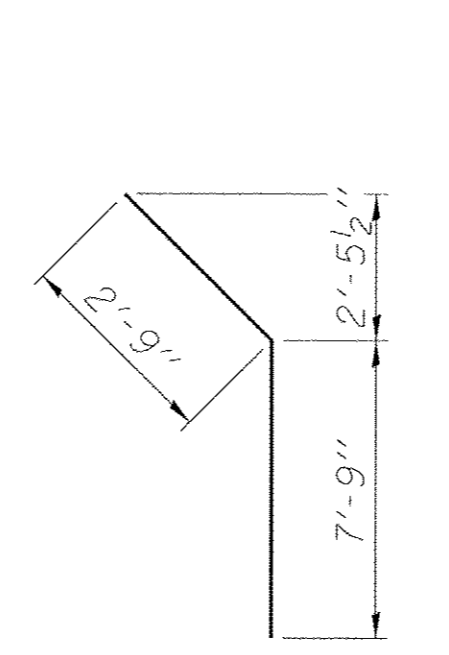


DETAIL A

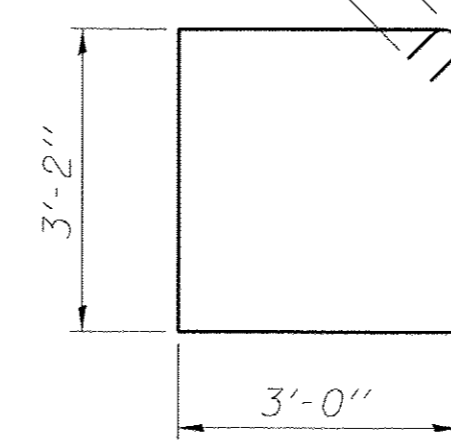
PILE DATA
Type: Steel HP12x53
Nominal Required Bearing: 419 Kips/pile
Factored Resistance Available: 230 Kips/pile
Est. Length: 35'
No. Production Piles: 4
No. Test Piles: 1



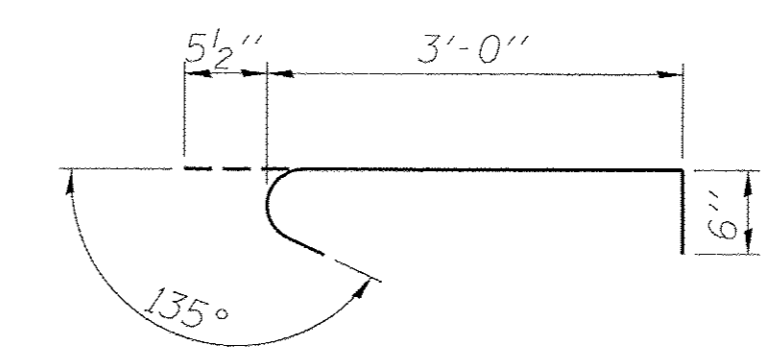
FIELD CUTTING DIAGRAM
Order h₁(E) and v₂(E) full length. Cut as shown and use remainder of bars in opposite face.



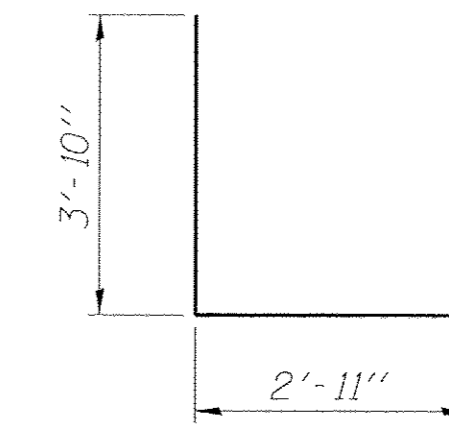
BAR h₂(E)



BAR s₂(E)



BAR s₃(E)

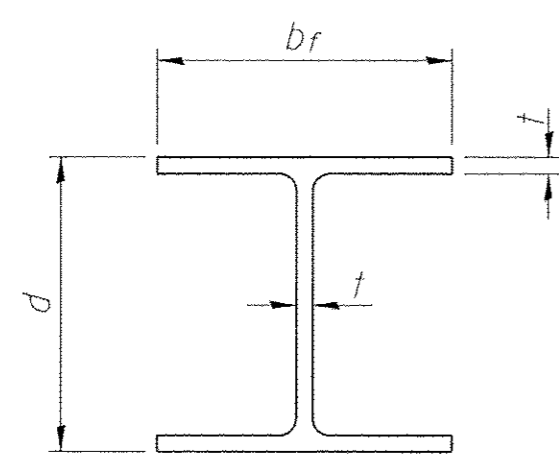


BAR u(E)

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 13 of 14.

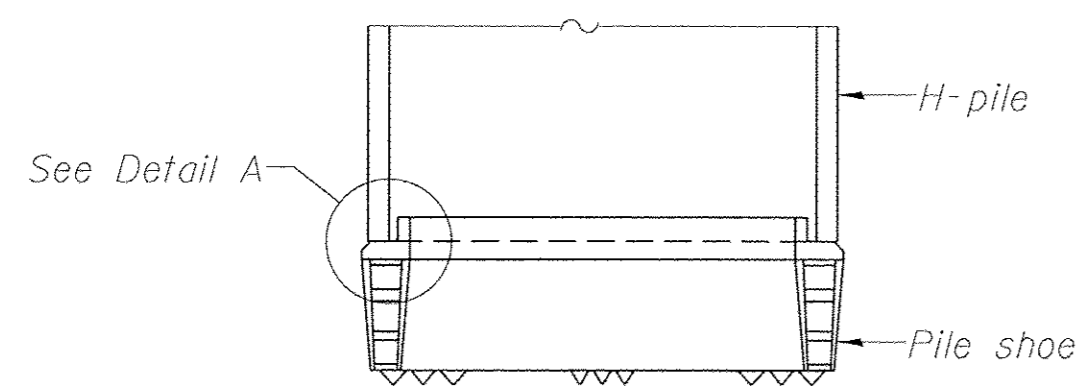
BILL OF MATERIAL - E. ABUT.

Bar	No.	Size	Length	Shape
h(E)	40	#8	12'-11"	—
h ₁ (E)	8	#8	19'-2"	—
h ₂ (E)	4	#5	10'-6"	—
p(E)	8	#7	29'-8"	—
p ₁ (E)	10	#5	29'-8"	—
s ₂ (E)	24	#5	13'-3"	□
s ₃ (E)	10	#5	4'-0"	┌┐
u(E)	8	#6	10'-7"	—
v(E)	58	#8	5'-11"	—
v ₁ (E)	12	#5	8'-4"	—
v ₂ (E)	14	#5	12'-8"	—
Protective Coat		Sq. Yd.	19	
Concrete Structures		Cu. Yd.	18.9	
Reinforcement Bars, Epoxy Coated		Pound	4,330	
Furnishing Steel Piles, HP12x53		Foot	140	
Driving Piles		Foot	140	
Test Pile Steel HP12x53		Each	1	

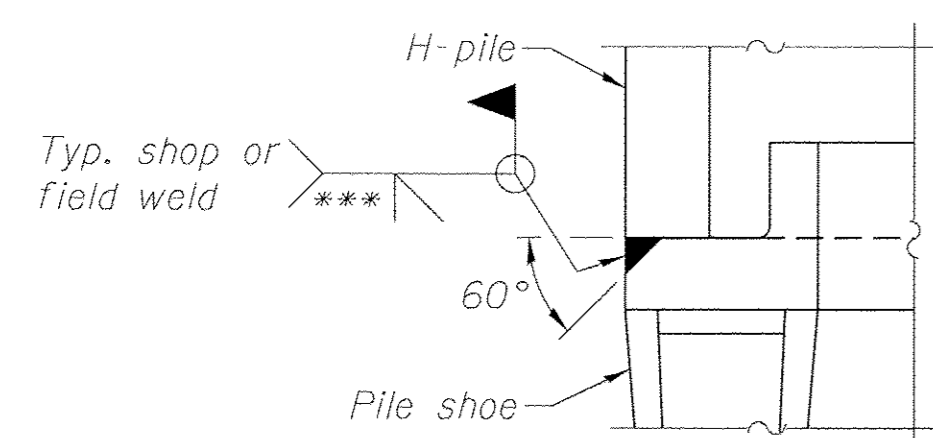


STEEL PILE TABLE

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

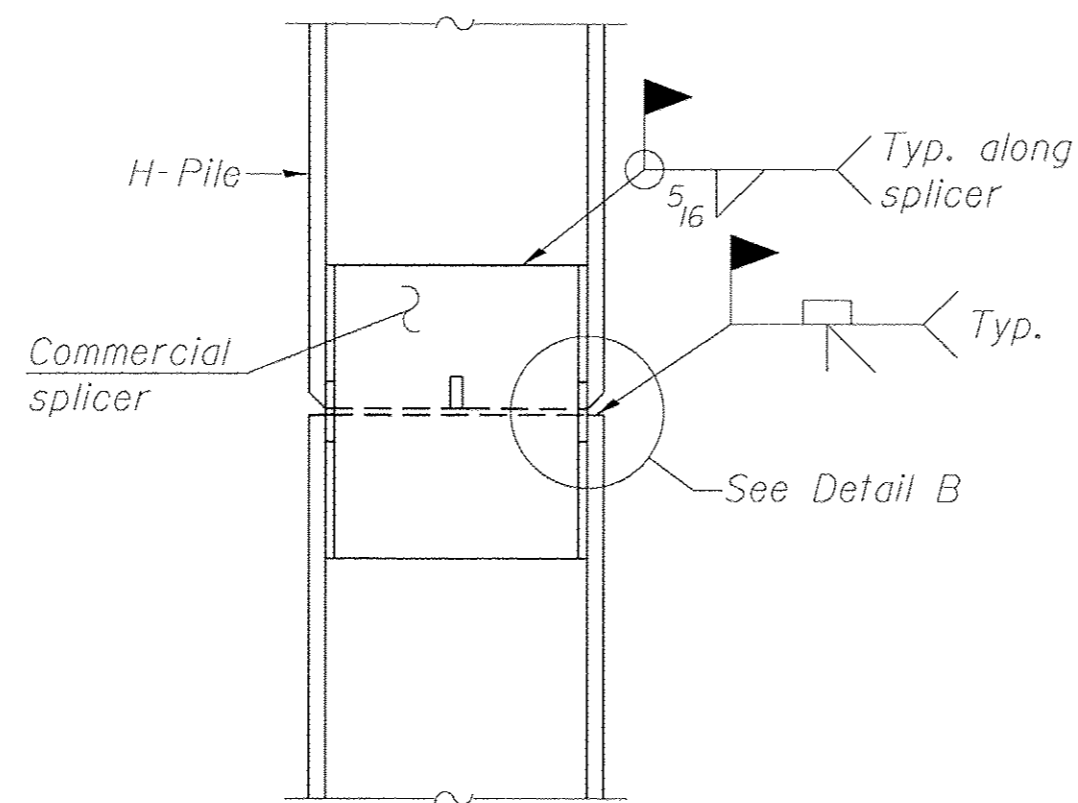


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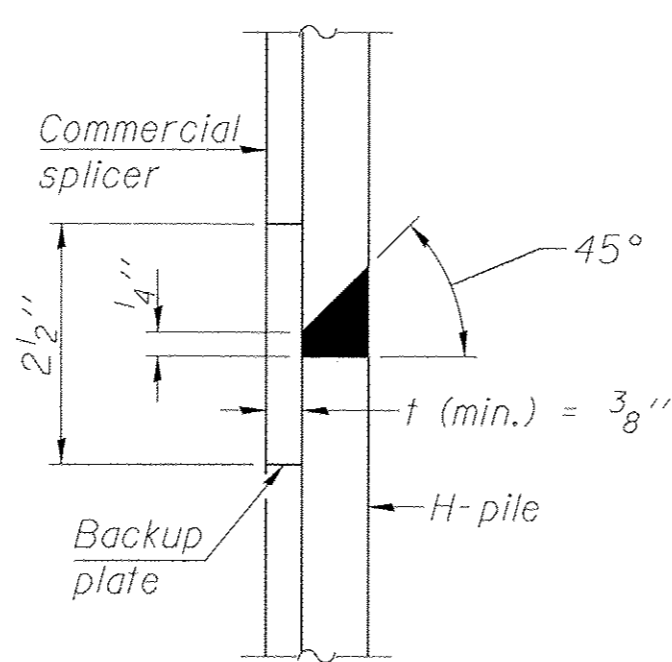


DETAIL A

H-PILE SHOE ATTACHMENT

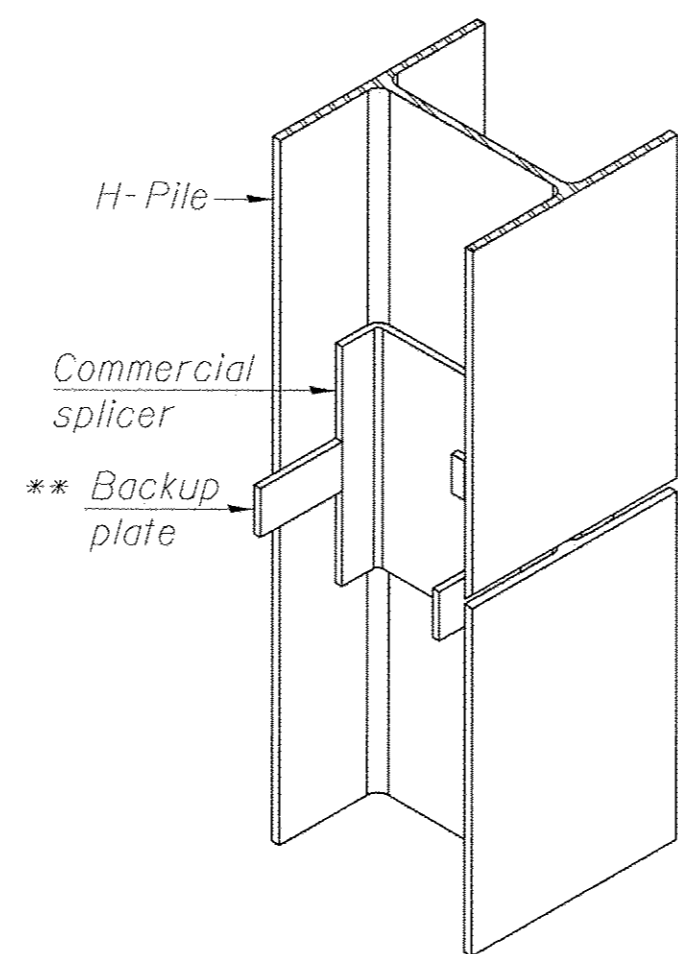


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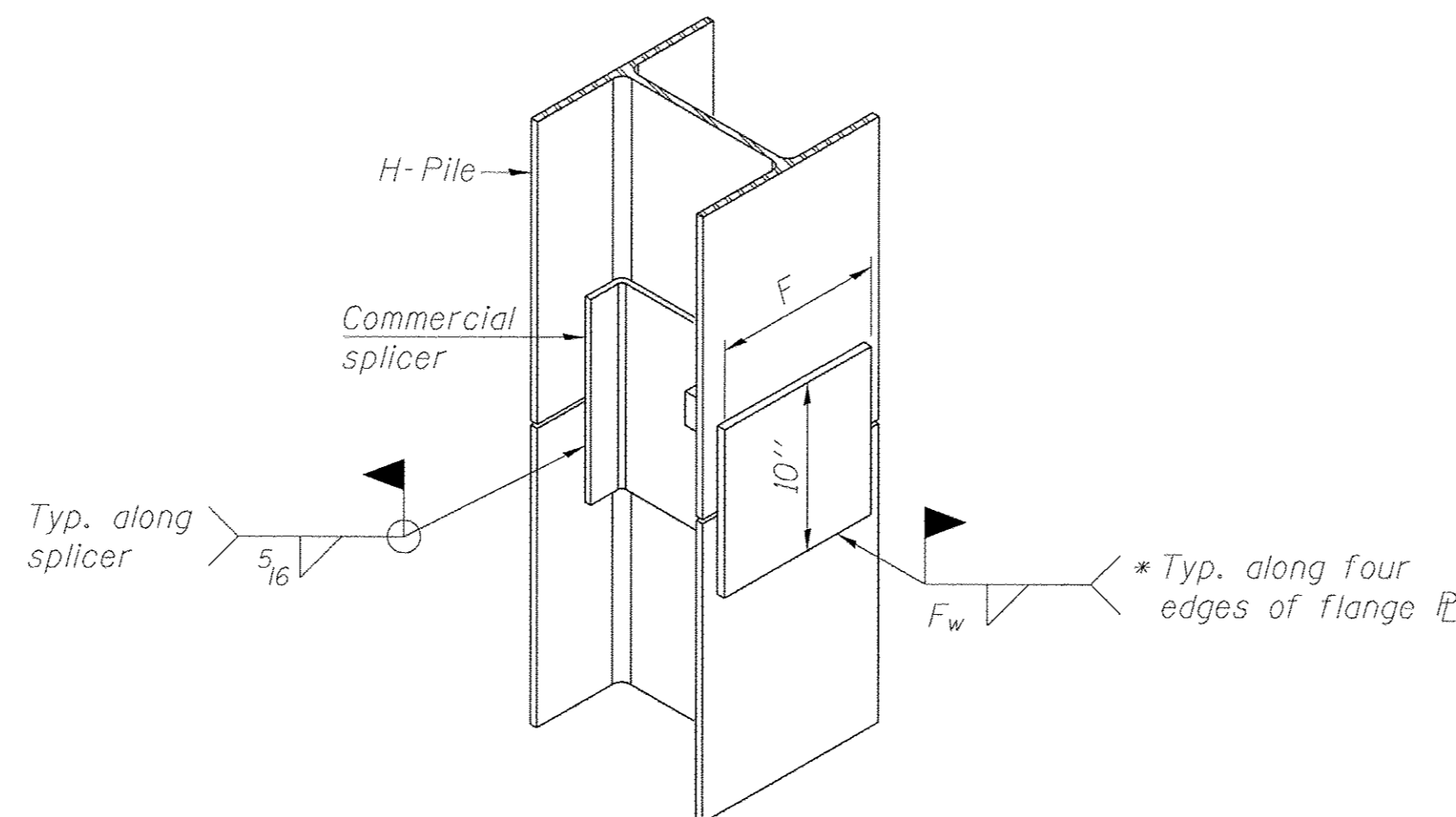


DETAIL "B"

WELDED COMMERCIAL SPLICE



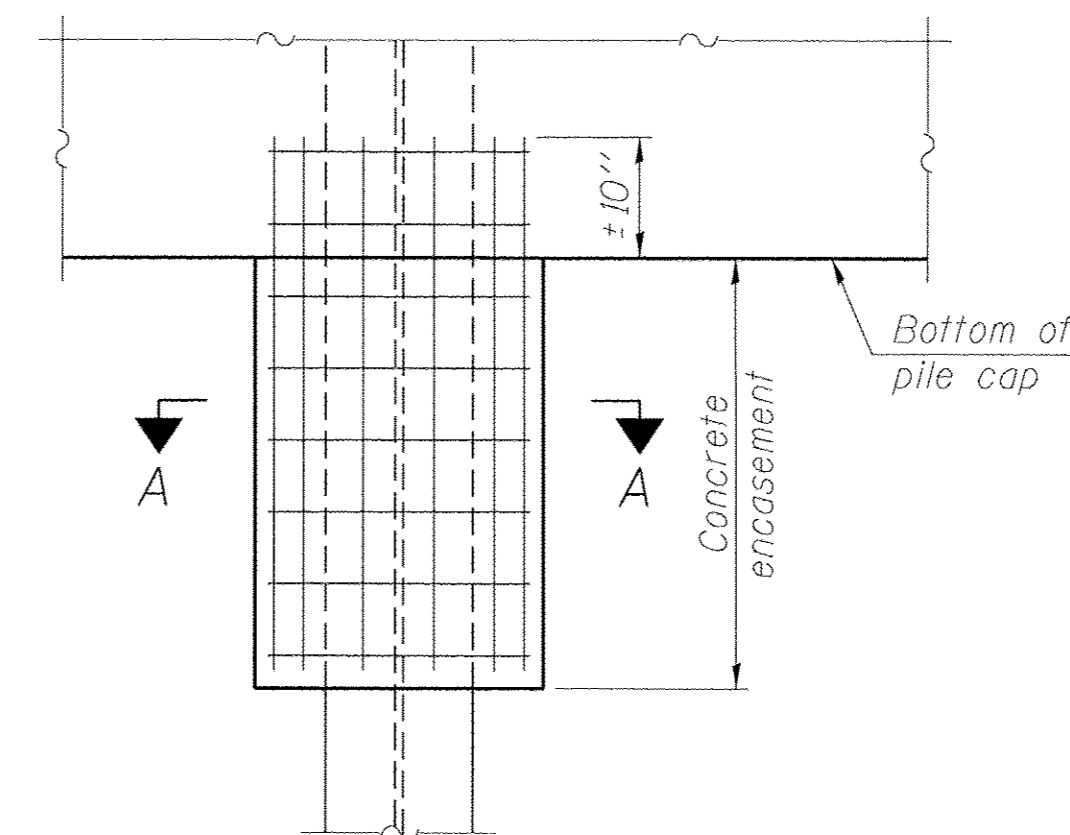
ISOMETRIC VIEW



ISOMETRIC VIEW

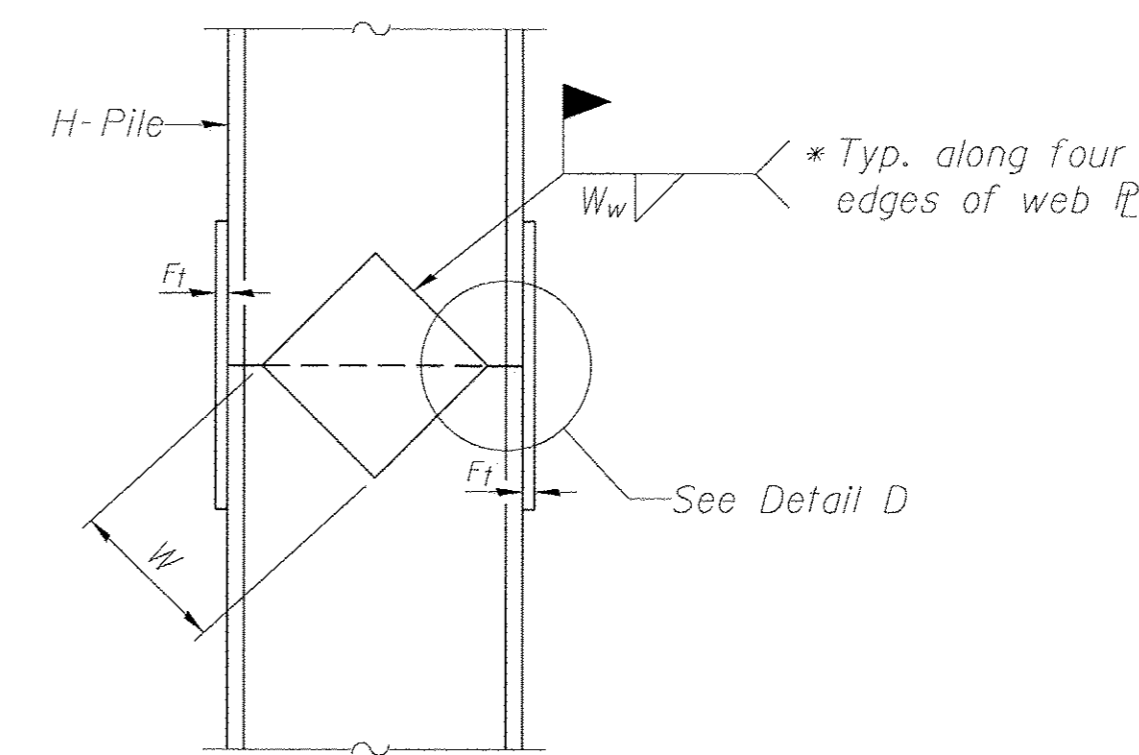
WELDED COMMERCIAL SPLICE ALTERNATE

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

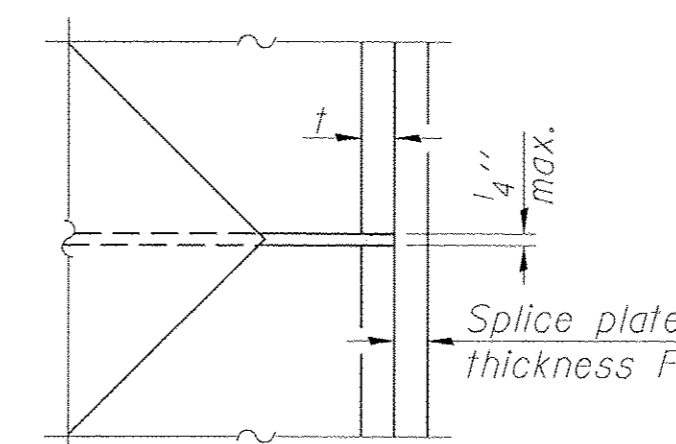


ELEVATION

PILE ENCASEMENT

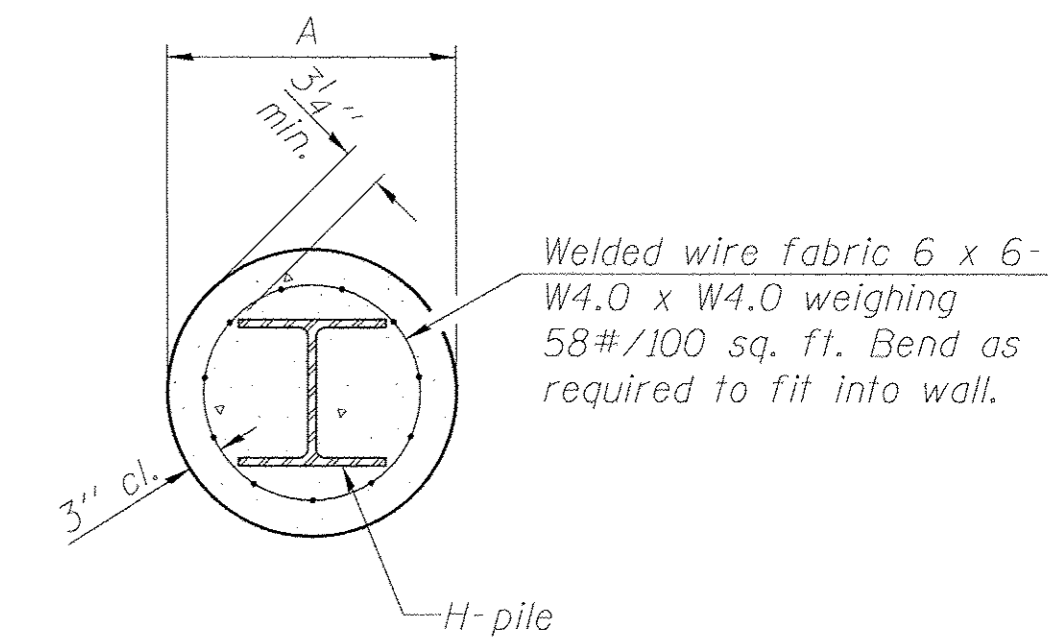


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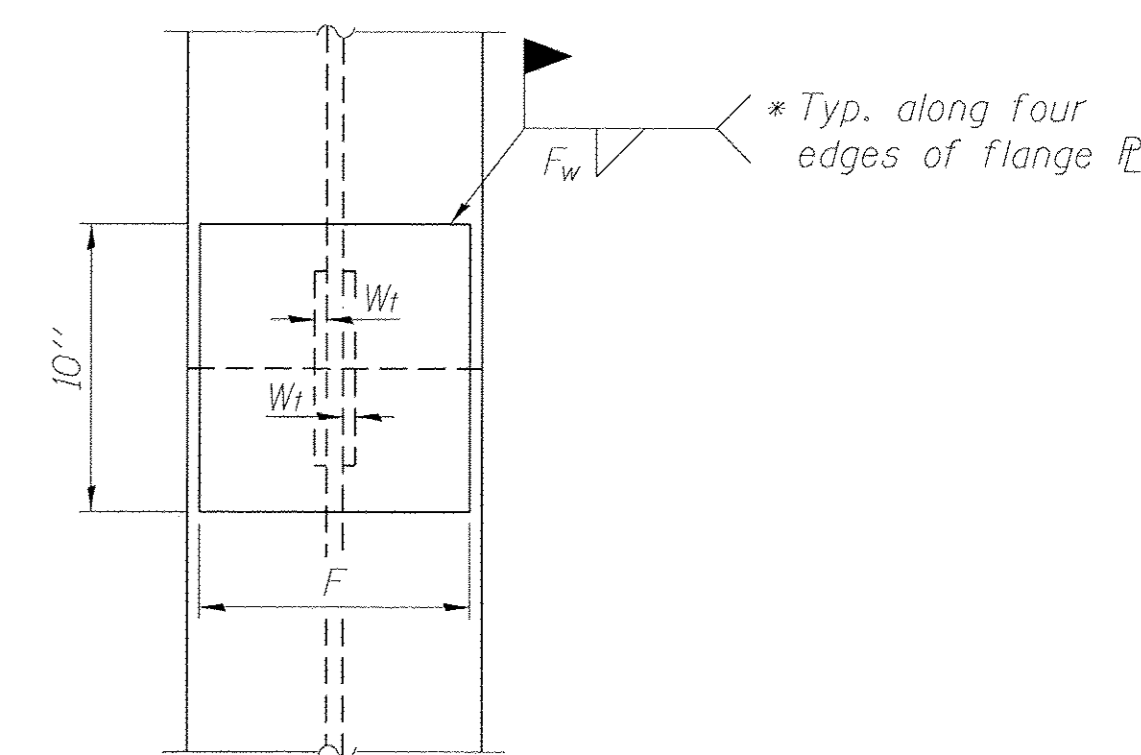
DETAIL D

WELDED PLATE FIELD SPLICE



SECTION A-A

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



END VIEW

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

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

F-HP 1-27-12

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax Page 1 of 1

Bridge Foundation Boring Log

Project: H-13092 Bridge Co Hwy 18 over Angel Br Date: 5/7/13
Section: Station Bored by: B. Schwartz
Structure: 087-3006 Checked by: I. Holcomb
County: Shelby

Boring No. 1	Station	Offset	Surface Water Elev.			Ground Water Elev.			Upon Completion				
			Elevation	N	Qu	tsf	Elevation	N	Qu	tsf	Elevation	N	Qu
Ground Surface (610.4)			101.8	0		clay to silt (continued)							
Brown Silty CLAY (A-6) with sand and pebbles													
				4	1.7B	18					3	1.0B	25
				4	1.6S	22					3	1.2B	24
				4	1.6S	22					3	1.2B	24
			(603.9)	95.3			(580.9)	72.3			18	2.9S	16
Gray Sandy CLAY (A-6)				6	0.6B	22	Gray Sandy SHALE						
				4	1.0B	18							
				3	1.0B	22	(576.9)	68.3			100	7/8"	10
				12	2.0S	11	Gray SHALE						
				3	0.7S	15	(571.4)	62.8			100	7/8"	8
Gray Silty CLAY to Clayey SILT (A-6 to A-4)				3	0.7B	28	End of Boring @ -39.0'						
			(589.4)	80.8									

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight - %
B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

BORING 1

HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax Page 1 of 2

Bridge Foundation Boring Log

Project: H-13092 Bridge Co Hwy 18 over Angel Br Date: 5/7/13
Section: Station Bored by: B. Schwartz
Structure: 087-3006 Checked by: I. Holcomb
County: Shelby

Boring No. 2	Station	Offset	Surface Water Elev.			Ground Water Elev.			Upon Completion				
			Elevation	N	Qu	tsf	Elevation	N	Qu	tsf	Elevation	N	Qu
Ground Surface (607.6)			99.0	0		clay (continued)							
Gray Sandy CLAY (A-6)													
				5	1.9B	22	(584.1)	75.5			7	2.3B	17
				3	1.4S	21	Brown Mottled Gray Sandy CLAY (A-6)						
				9							9		21
			(601.6)	93.0			(579.1)	70.5					
Gray Silty CLAY to CLAY (A-6) with sand				5	1.2S	24	Gray SAND (A-2-4) with pebbles						
				4	0.9S	26							
				6	1.4B	22							
				11	1.4S	18							
				5	1.4S	27					41		17
				6	2.1B	24							
				10	2.9S	20	(563.6)	55.0			100	1/8"	17
Gray-Brown SANDSTONE													

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight - %
B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer

BORING 2

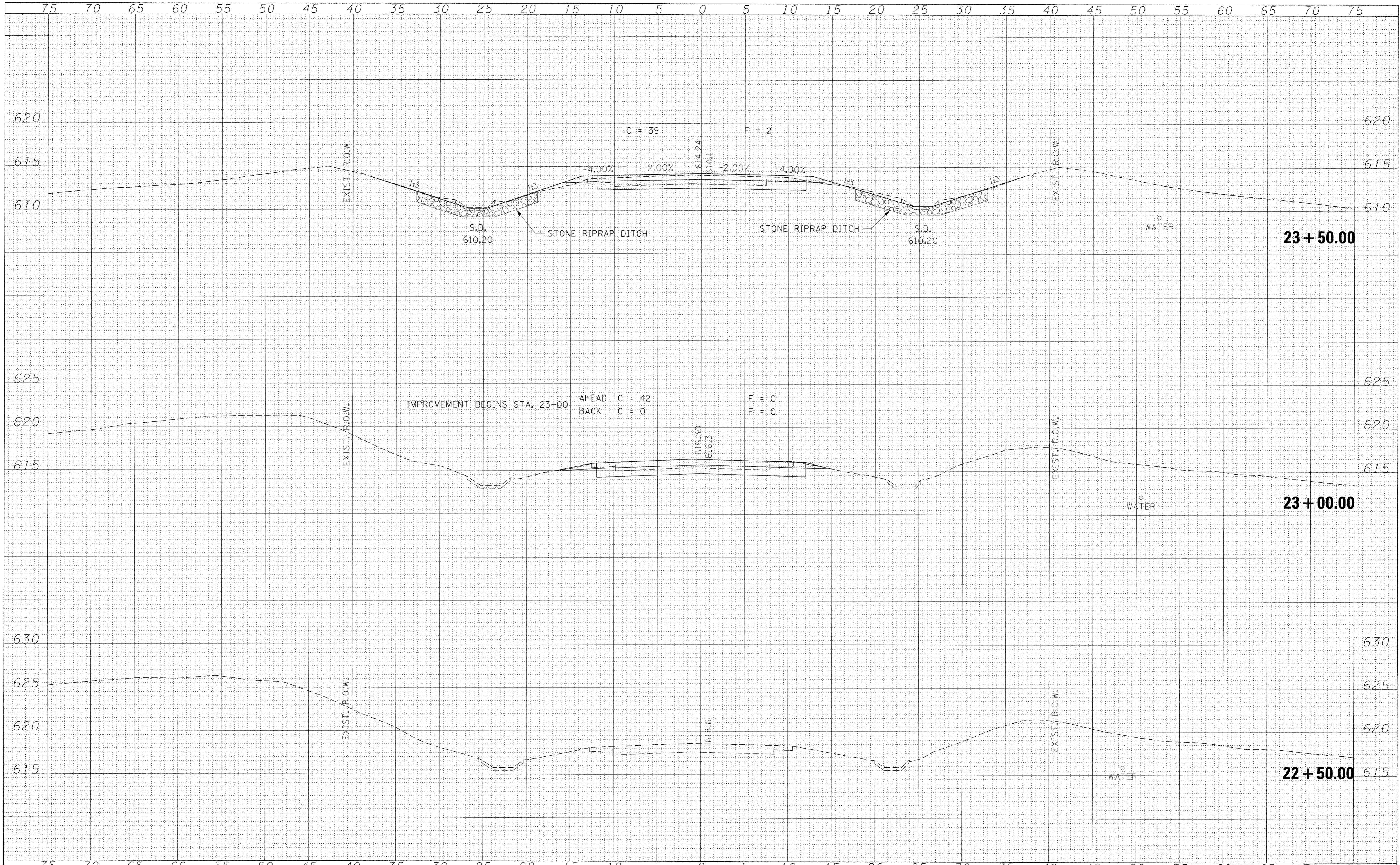
HOLCOMB FOUNDATION ENGINEERING INC.
P.O. Box 88 618-529-5262
Carbondale, Il. 62903 618-457-8991 fax Page 2 of 2

Bridge Foundation Boring Log

Project: H-13092 Bridge Co Hwy 18 over Angel Br Date: 5/7/13
Section: Station Bored by: B. Schwartz
Structure: 087-3006 Checked by: I. Holcomb
County: Shelby

Boring No. 2	Station	Offset	Surface Water Elev.			Ground Water Elev.			Upon Completion				
			Elevation	N	Qu	tsf	Elevation	N	Qu	tsf	Elevation	N	Qu
sandstone (continued)													
				7	2.3B	17							
				9									
				100	1/4"	14							
			(556.6)	48.0									
Gray SHALE				100	7/8"	4.0S	11						
				100	3/8"	4.5S	14						
			(553.1)	44.5									
End of Boring @ -54.5'													
				26							26		14
				41									
				6	2.1B	24							
				10	2.9S	20							

N = Standard Penetration Test Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with a 140 lbs. hammer falling 30"
Qu - Unconfined Compressive Strength in tons/sq.ft.
w - Water Content - percentage of oven dry weight - %
B = Bulge Failure
S = Shear Failure
E = Estimated Value
P = Penetrometer



DATE	
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FINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	
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ORIGINAL SURVEY	
NOTE BOOK	
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FILE NAME = 140041-sht-sxs-5v9h.dgn
HAMPTON, LENZINI AND RENWICK, INC.
 3060 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LB / PE / SE CORP. 184.009959

USER NAME = *USER*
 DESIGNED - J.W.F.
 DRAWN - T.W.K.
 CHECKED - S.W.M.
 DATE - 11/08/16
 PLOT SCALE = *SCALE*
 PLOT DATE = 11/08/2016

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**STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT**

**STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD**

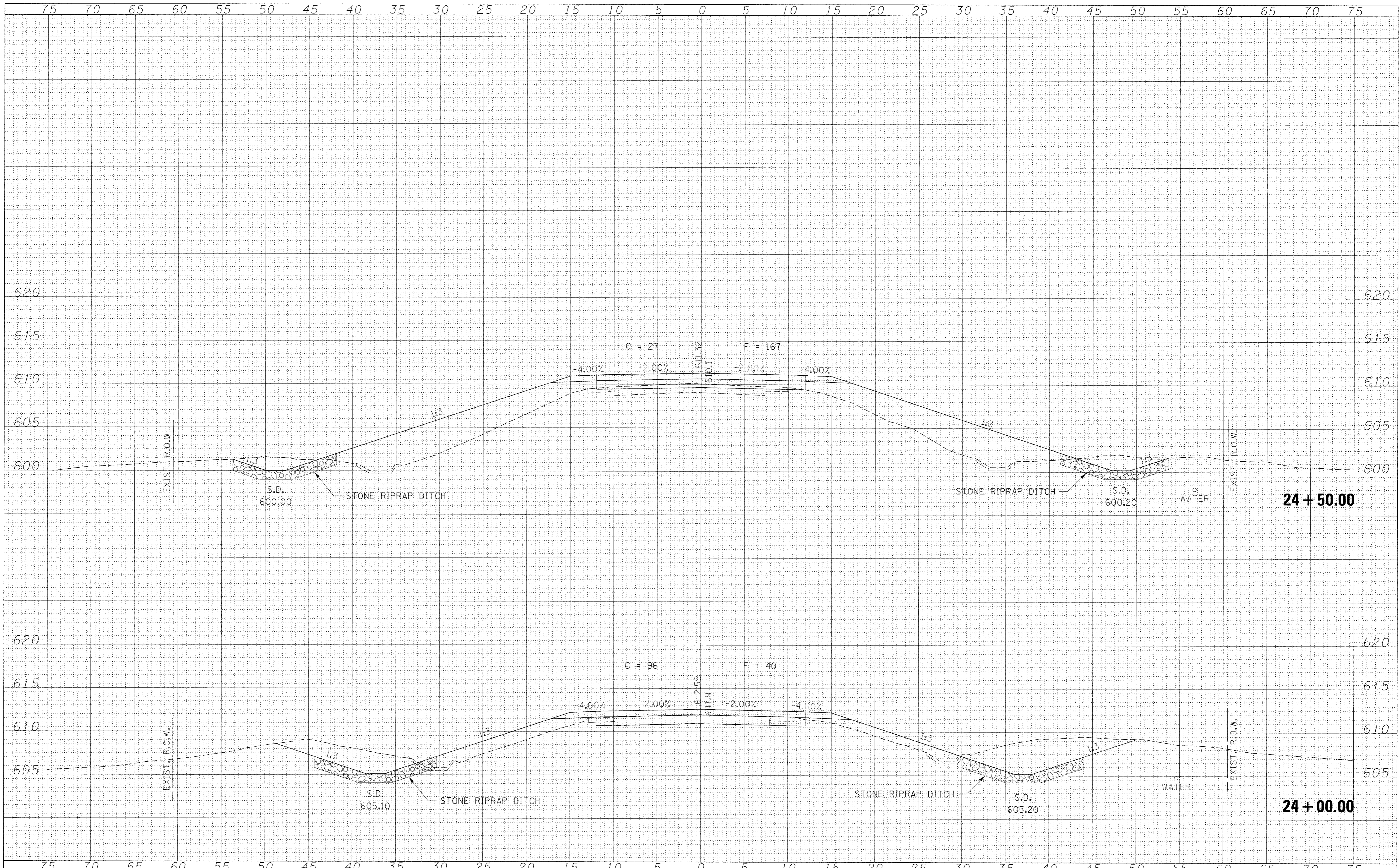
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CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	22
HENTON ROAD			CONTRACT NO. 95804	

ILLINOIS FED. AID PROJECT BR05-0173(189)

DATE	
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FINAL SURVEY	
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DATE	
BY	
ORIGINAL SURVEY	
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FILE NAME = 140041-shl-sxs-5v5h.dgn
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 3080 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.009959

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 CHECKED - S.W.M.
 DATE - 11/08/16
 PLOT SCALE = #SCALE#
 PLOT DATE = 11/8/2016

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 CHECKED - S.W.M.
 DATE - 11/08/16

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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

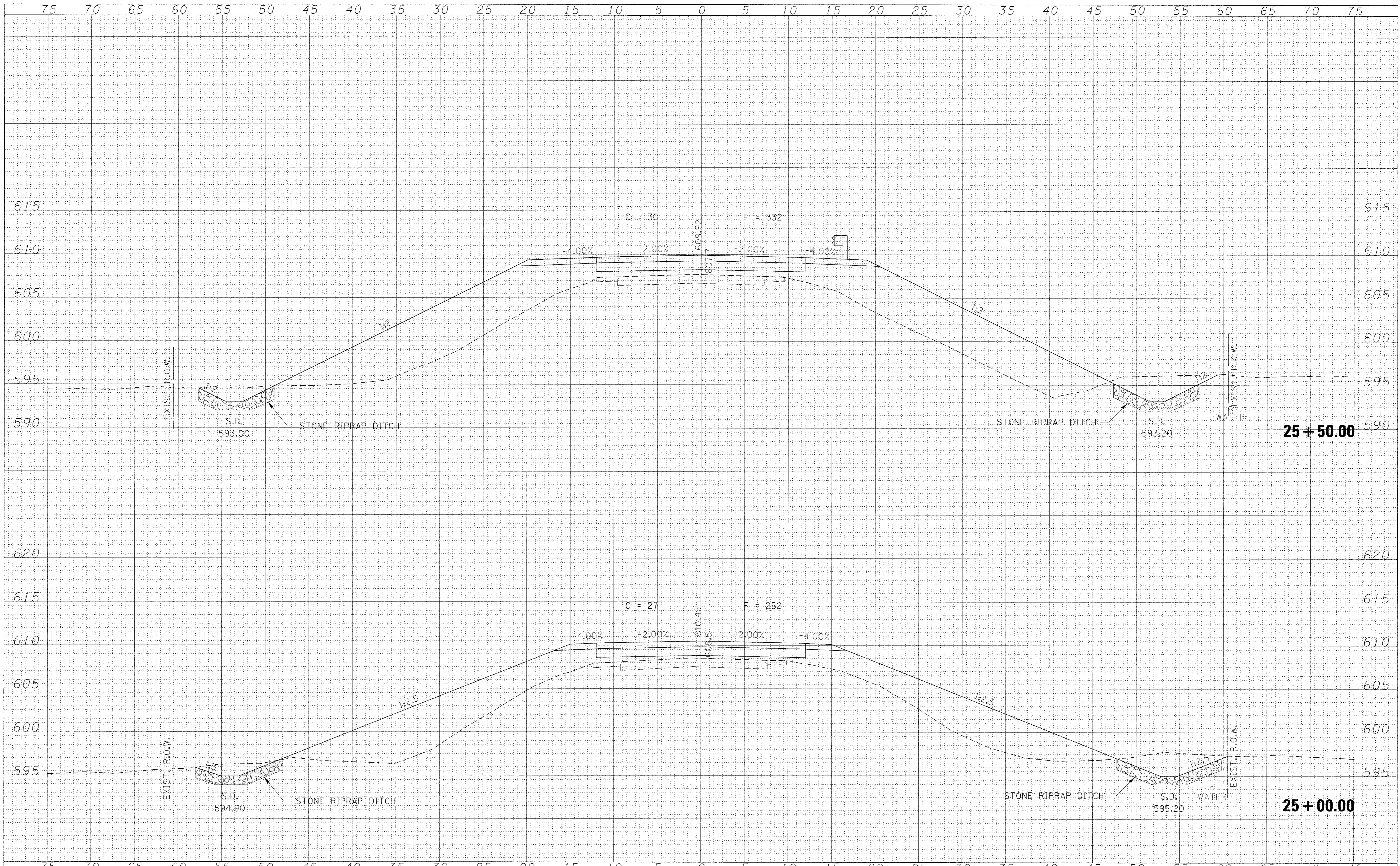
STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

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18	12-00275-00-BR	SHELBY	35	23
HENTON ROAD			CONTRACT NO. 95804	
ILLINOIS FED. AID PROJECT BR05-0173(189)				

DATE	
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ORIGINAL SURVEY	
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 3083 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000698

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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

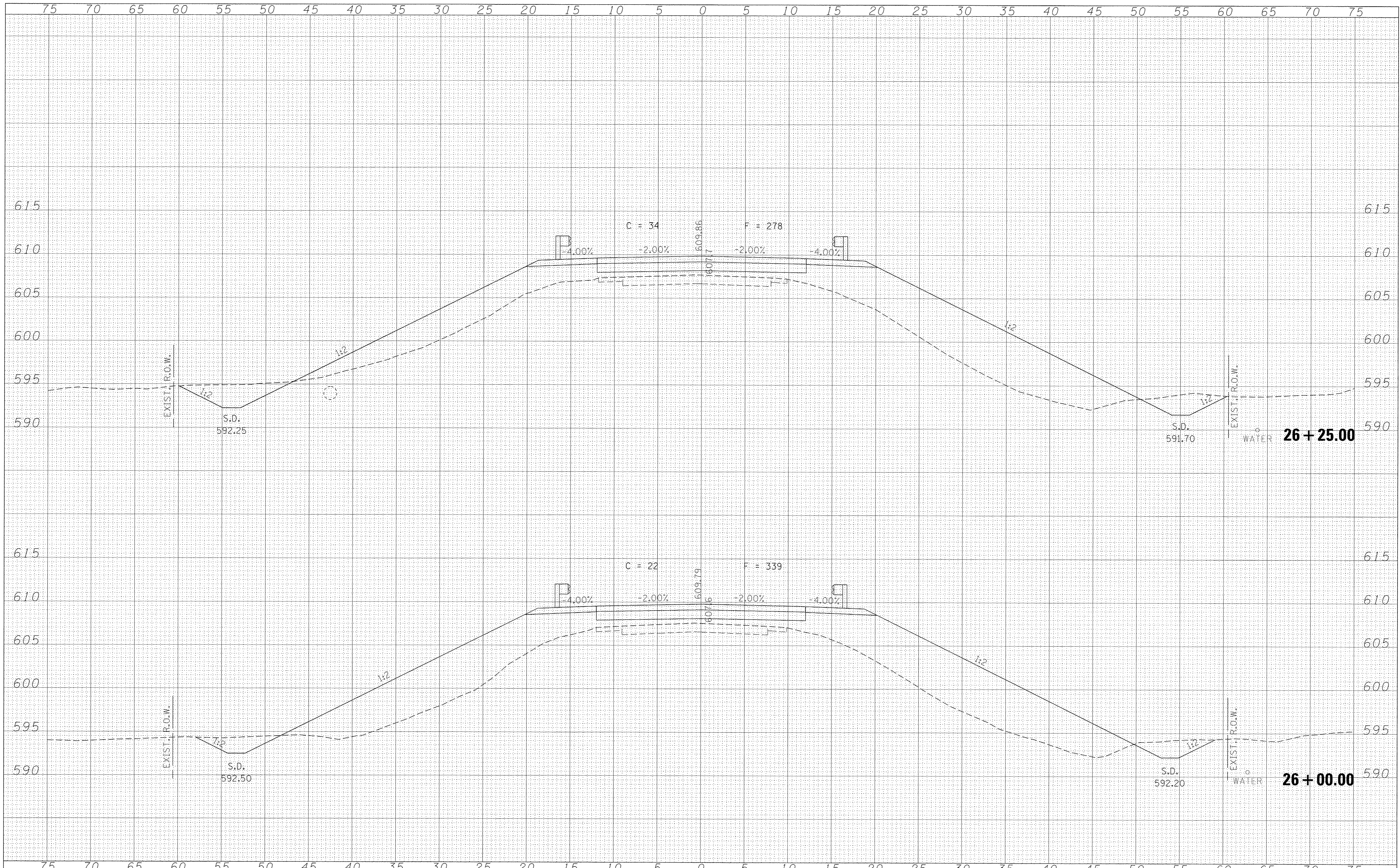
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CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	24
HENTON ROAD			CONTRACT NO. 95804	

ILLINOIS FED. AID PROJECT BRGS-0173(189)

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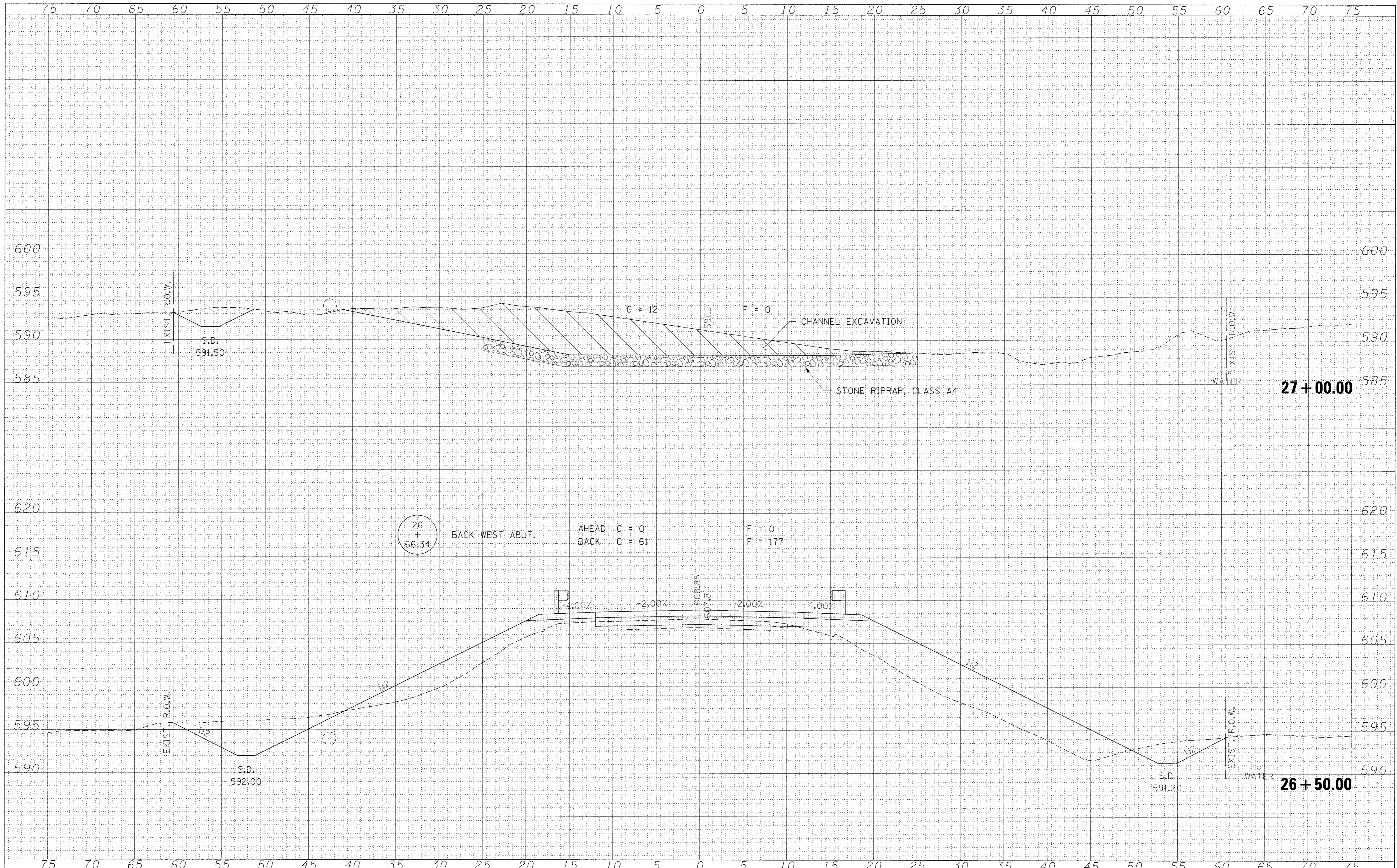
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HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORP. 184-00069	PLOT SCALE = #SCALE#	DRAWN - T.W.K.	REVISED -		CH 18	SECTION 12-00275-00-BR	COUNTY SHELBY	TOTAL SHEETS 35	SHEET NO. 25
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		DATE - 11/08/16	REVISED -		SCALE: 5H:2V				ILLINOIS FED. AID PROJECT BR05-01731891

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 HAMPTON, LENZINI AND RENWICK, INC.
 3065 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 I.S. / P.E. / S.E. COMP. 184-000089

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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

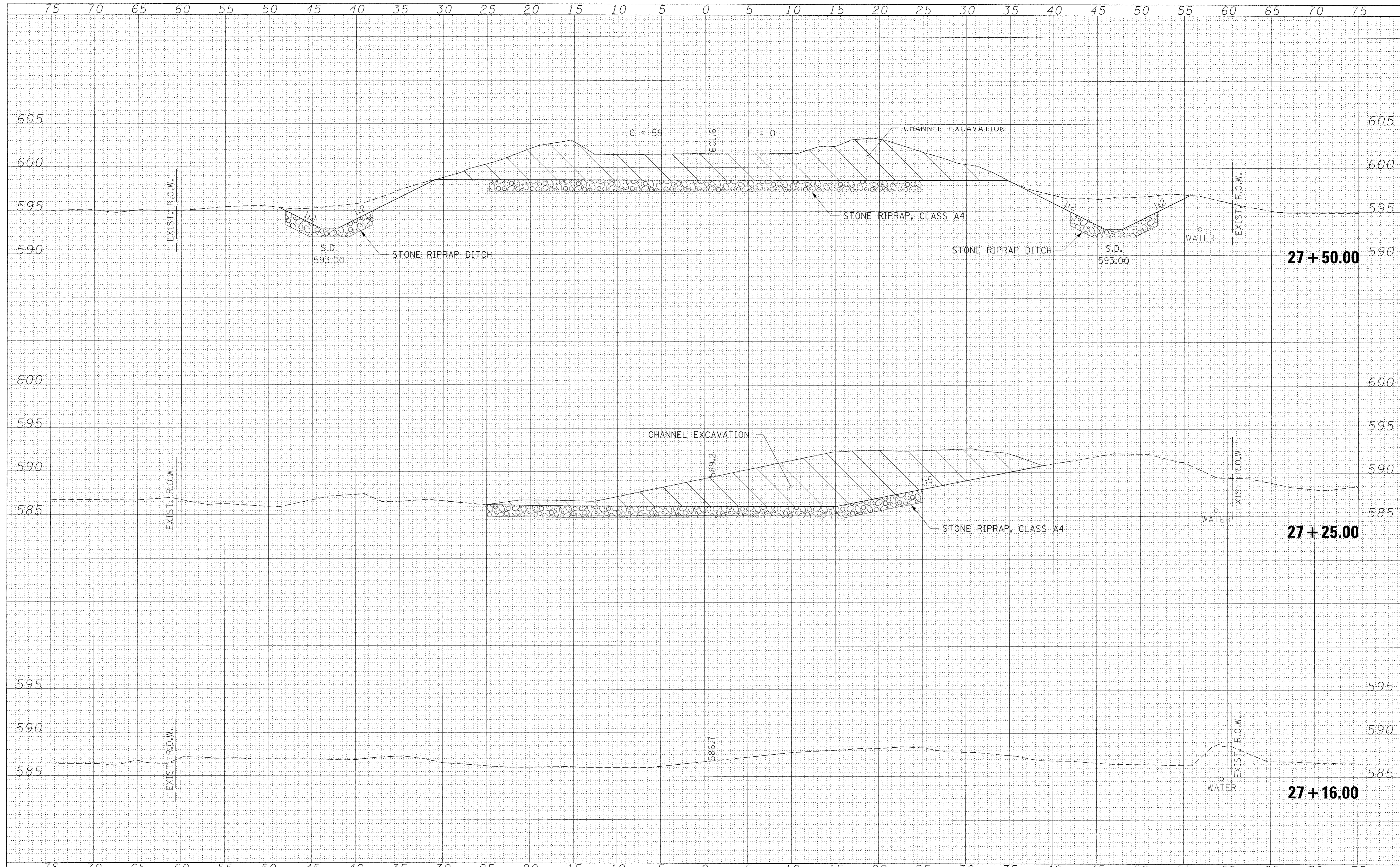
STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

SCALE: 5H:2V SHEET NO. 5 OF 14 SHEETS STA. 26+50.00 TO STA. 27+00.00

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	26
HENTON ROAD			CONTRACT NO. 95804	
ILLINOIS FED. AID PROJECT BROS-017310891				

DATE	
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FINAL SURVEY	
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ORIGINAL SURVEY	
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FILE NAME = 140241-shr-sxs-5v5h.dgn
 HAMPPTON, LENZINI AND RENWICK, INC.
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184.000959

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 CHECKED - S.W.M.
 DATE - 11/08/16
 PLOT SCALE = #SCALE*
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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

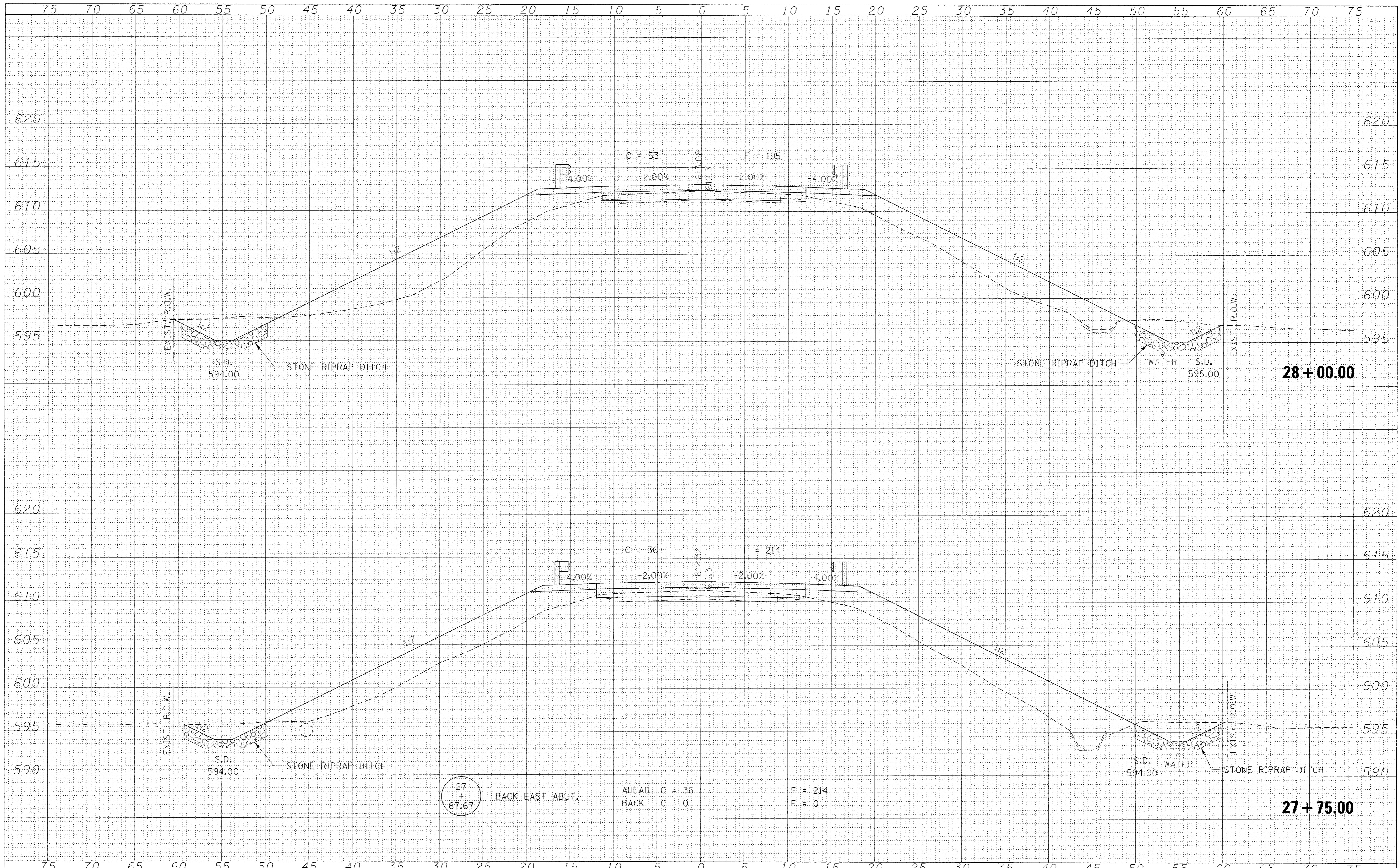
STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

SCALE: 5H:2V SHEET NO. 6 OF 14 SHEETS STA. 27+16.00 TO STA. 27+50.00

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	27
HENTON ROAD			CONTRACT NO. 95804	

DATE	
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FINAL SURVEY	
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FILE NAME = 1402041-shr-sxs-5v5h.dgn
 HAMPPTON, LENZINI AND RENWICK, INC.
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 184-000959

USER NAME = #USER#
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 DATE - 11/08/16
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 PLOT DATE = 11/8/2016

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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

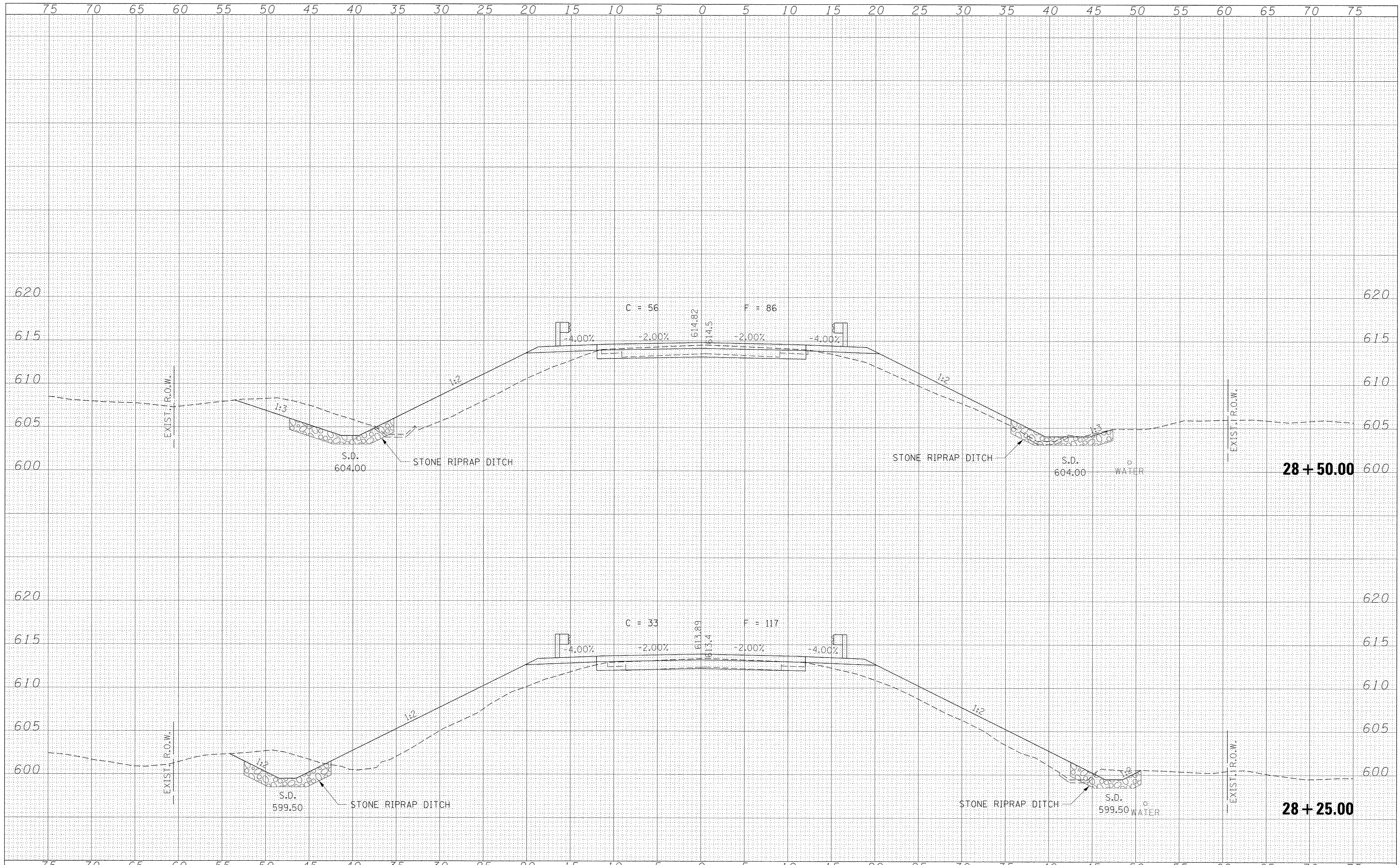
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CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	28
HENTON ROAD			CONTRACT NO. 95804	

ILLINOIS FED. AID PROJECT BRGS-01731891

DATE	
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FINAL SURVEY	
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FILE NAME = 140041-sht-sxs-5v5h.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3065 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

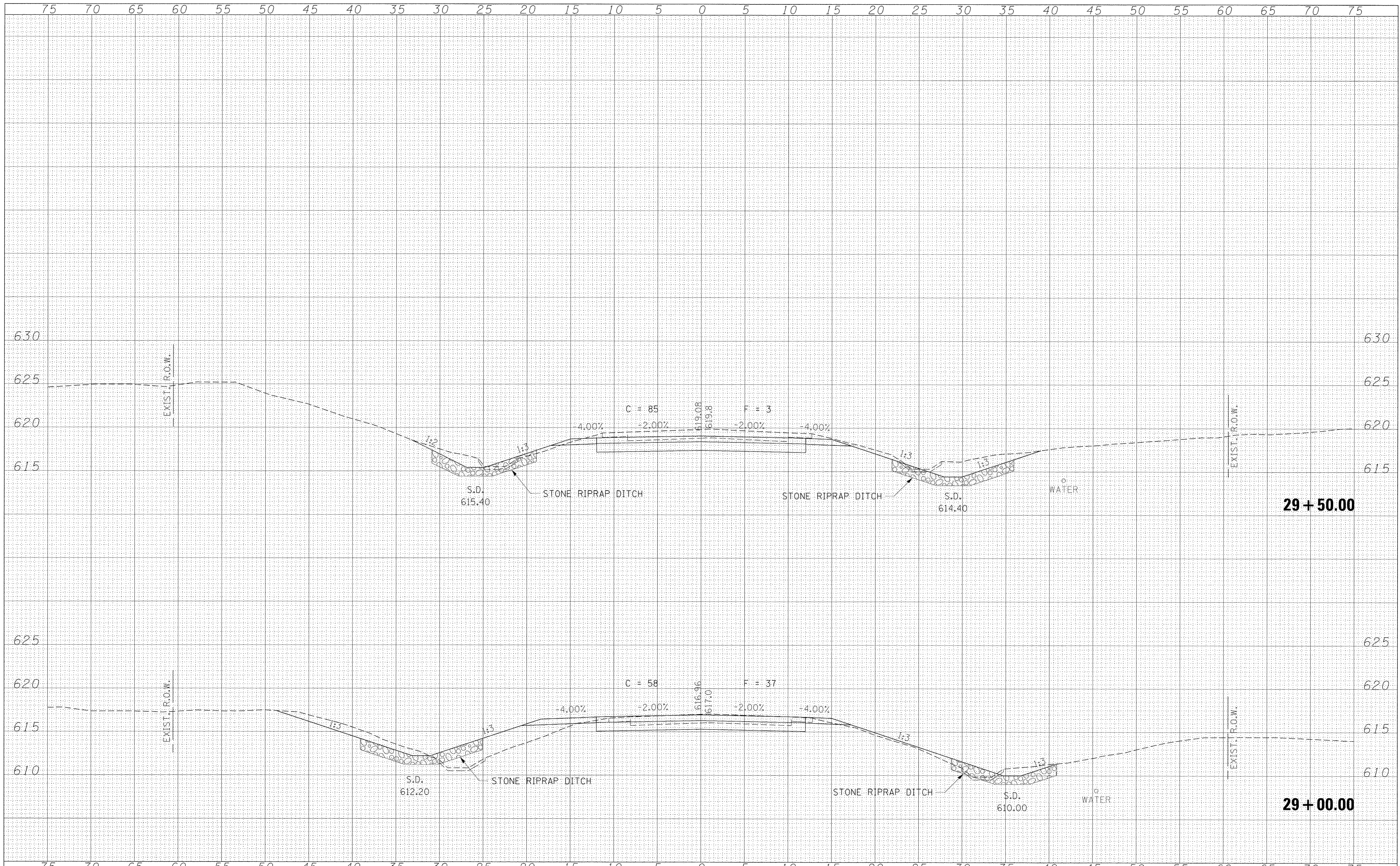
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CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	29
HENTON ROAD			CONTRACT NO. 95804	

ILLINOIS FED. AID PROJECT BROS-01731899

DATE	
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NOTE BOOK	
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SURVEY	
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FILE NAME = 140241-sht-sxs-5v5h.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3065 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. TEL 000555

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 DRAWN - T.W.K.
 CHECKED - S.W.M.
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 REVISION
 REVISION
 REVISION

STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

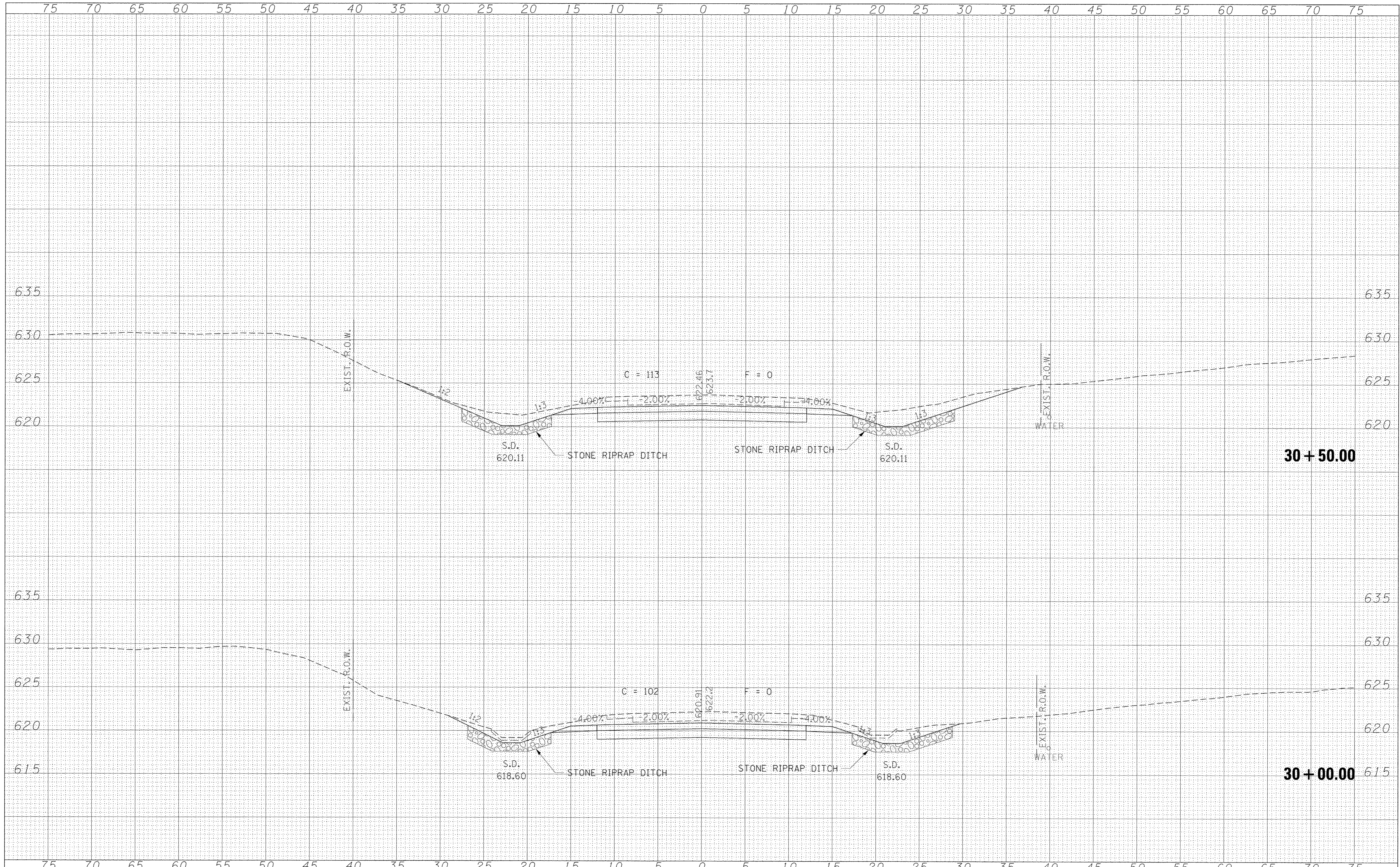
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STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	30
HENTON ROAD			CONTRACT NO. 95804	

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
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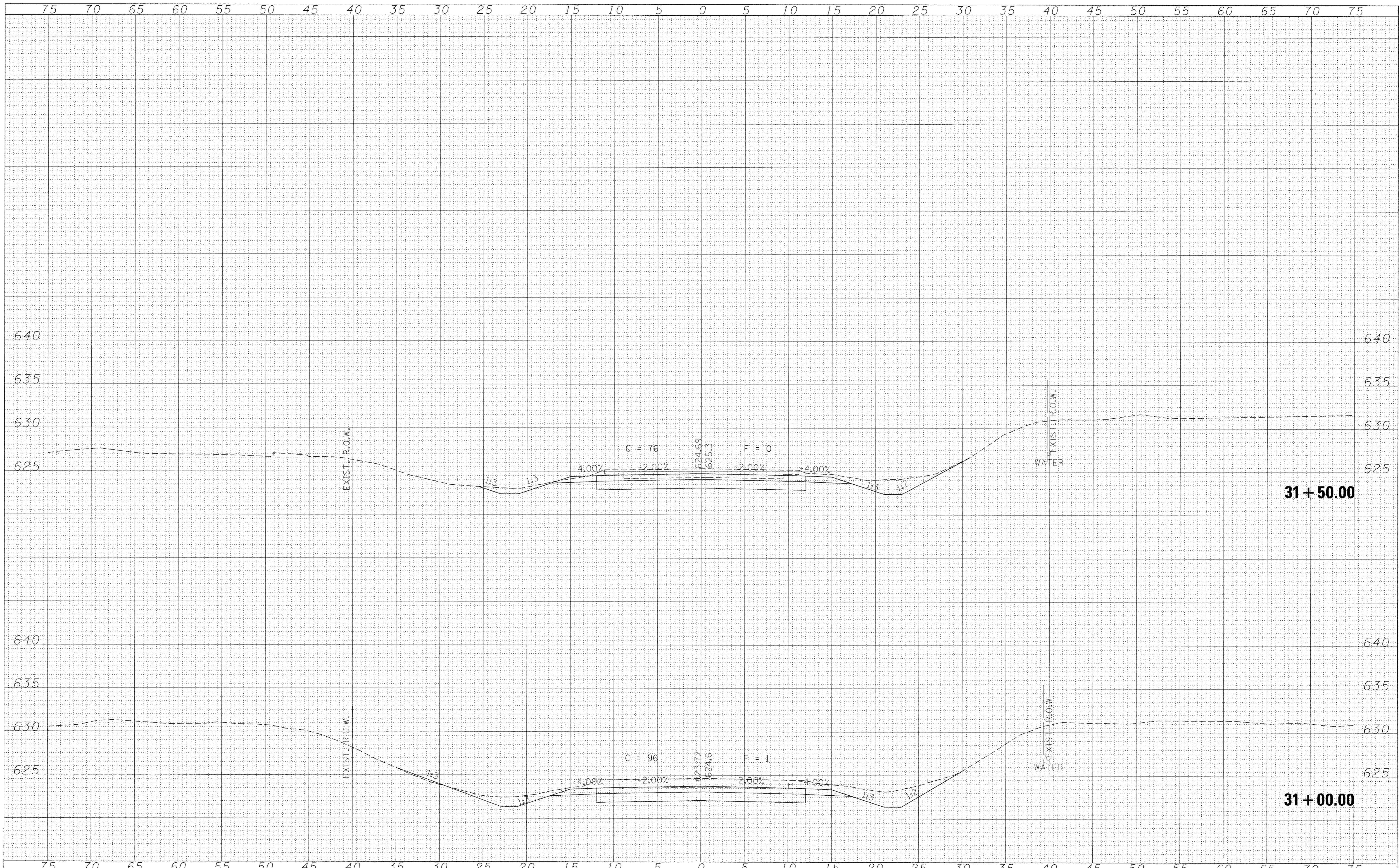
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HAMPTON, LENZINI AND RENWICK, INC. 3065 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S. / P.E. / S.E. COMP. 184-000099	PLLOT SCALE = #SCALE#	DRAWN - T.W.K.	REVISED -		18	12-00275-00-BR	SHELBY	35	31				
PLLOT DATE = 11/8/2016	DATE - 11/08/16	CHECKED - S.W.M.	REVISED -		HENTON ROAD				CONTRACT NO. 95804				
		DATE - 11/08/16	REVISED -		SCALE: 5H:2V				SHEET NO. 10 OF 14 SHEETS	STA. 30+00.00 TO STA. 30+50.00	[ILLINOIS] FED. AID PROJECT BRGS-0173(189)		

DATE	
BY	
SURVEYED	
PLANNED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
ORIGINAL	
SURVEY	
TEMPLATE	
AREAS	
CHECKED	
NO.	



FILE NAME = 140041-sht-sxs-5v5hdgn
HAMPTON, LENZINI AND RENWICK, INC.
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 L.S./P.E./S.E. CORP. 184-000669

USER NAME = #USER#
 DESIGNED - J.W.F.
 DRAWN - T.W.K.
 CHECKED - S.W.M.
 DATE - 11/08/16
 PLOT SCALE = #SCALE#
 PLOT DATE = 11/8/2016

REVISER -
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 REVISER -

**STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT**

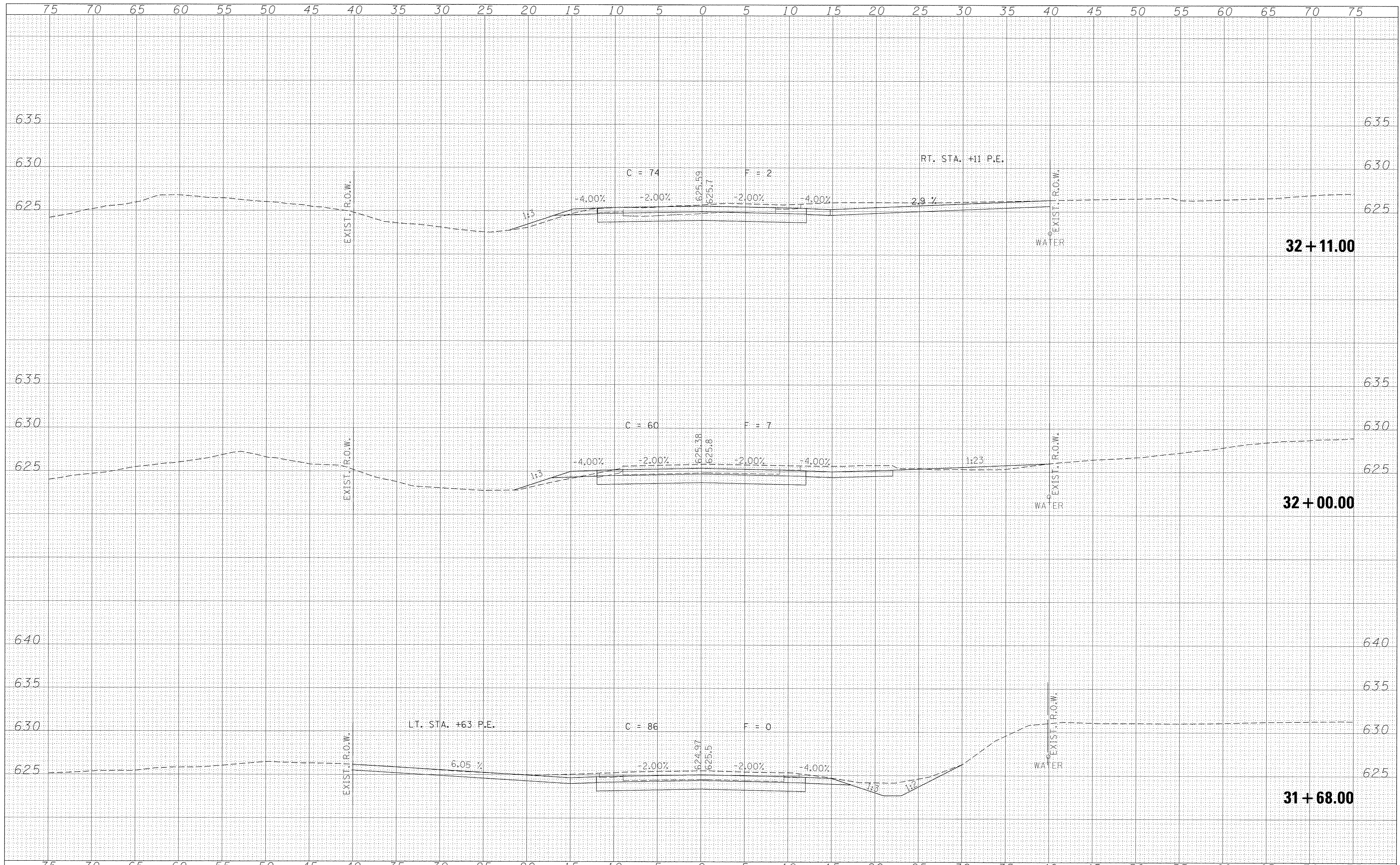
**STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD**

SCALE: 5H:2V SHEET NO. 11 OF 14 SHEETS STA. 31+00.00 TO STA. 31+50.00

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	32
HENTON ROAD			CONTRACT NO. 95804	
ILLINOIS FED. AID PROJECT BR05-01731891				

DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	

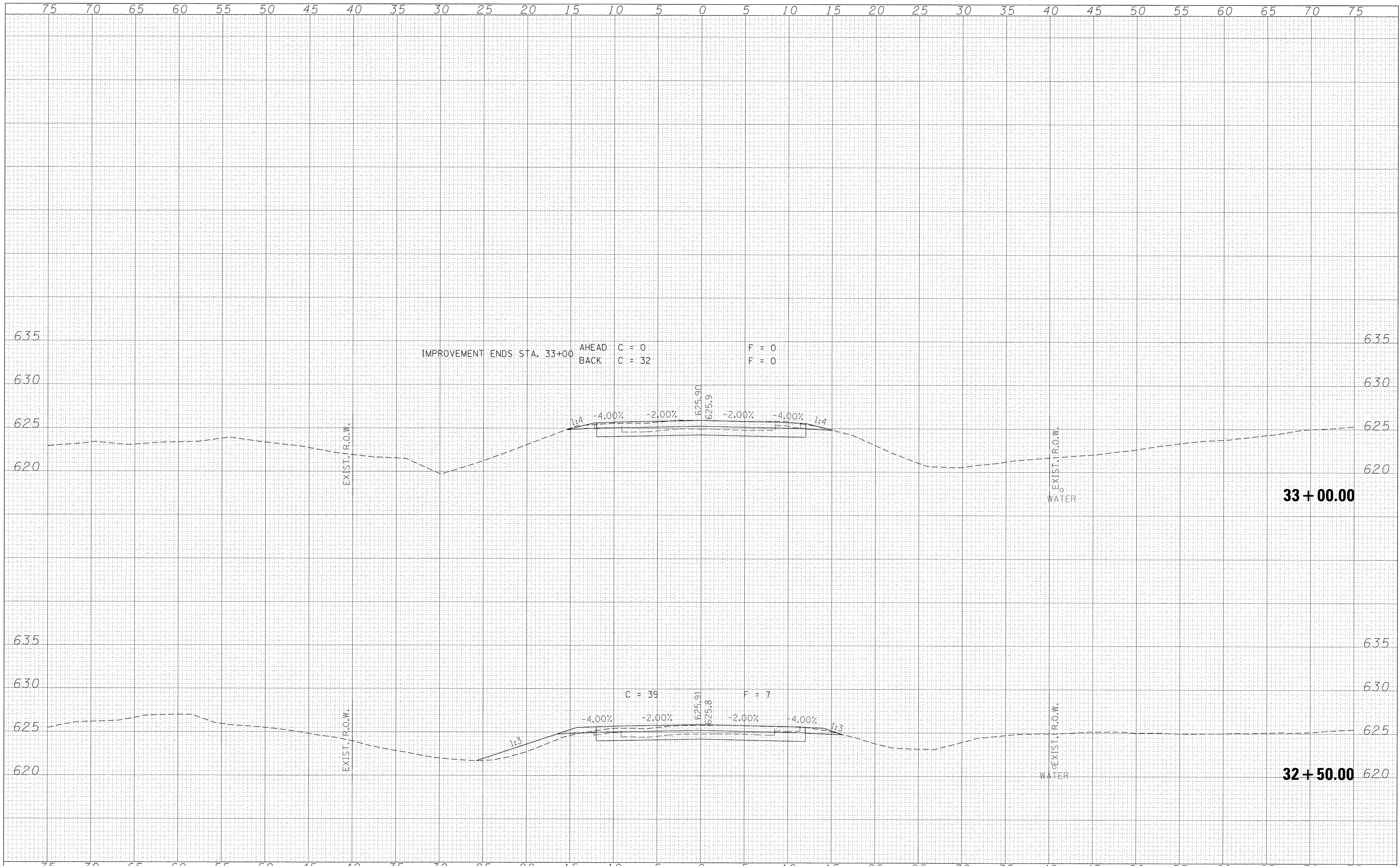
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BY	
ORIGINAL SURVEY	
NOTE BOOK	
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FILE NAME = 140041-aht-sxs-5v5h.dgn	USER NAME = *USER*	DESIGNED - J.W.F.	REVISED -	STATE OF ILLINOIS SHELBY COUNTY HIGHWAY DEPARTMENT	STATION CROSS SECTIONS C.H. 18 / HENTON ROAD		CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 301 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM L.S./P.E. IN COMP. 184.000699	PLOT SCALE = *SCALE*	DRAWN - T.W.K.	REVISED -		18	12-00275-00-BR	SHELBY	35	33		
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					SCALE: 5H:2V	SHEET NO. 12 OF 14 SHEETS	STA. 31+68.00	TO STA. 32+11.00			

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



FILE NAME = 140041-shl-sxs-5v5hdgn
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 DATE - 11/08/16

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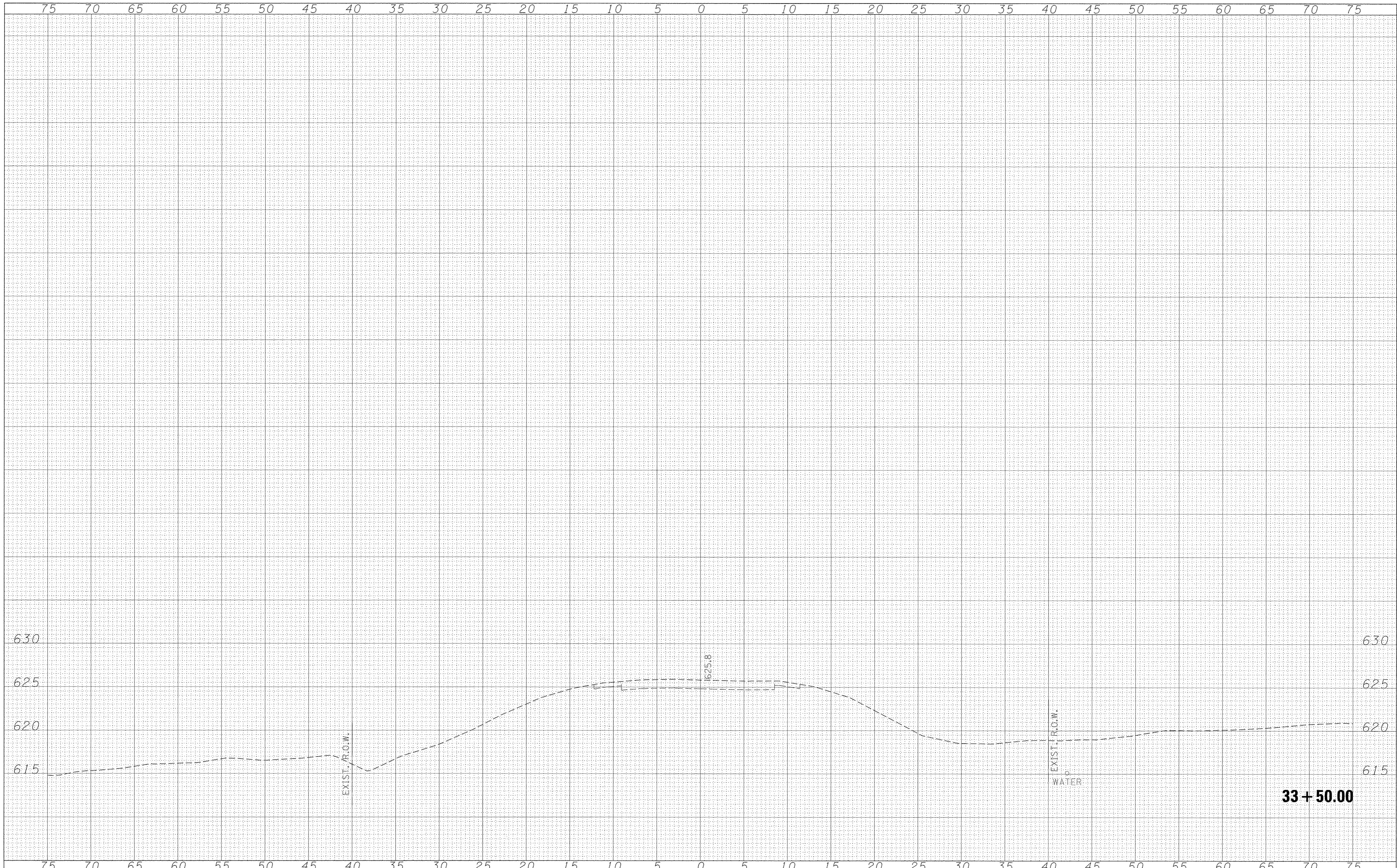
REVISIONS
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STATE OF ILLINOIS
 SHELBY COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS
 C.H. 18 / HENTON ROAD

SCALE: 5H:2V SHEET NO. 13 OF 14 SHEETS STA. 32+50.00 TO STA. 33+00.00

CH	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
18	12-00275-00-BR	SHELBY	35	34
HENTON ROAD			CONTRACT NO. 95804	
ILLINOIS FED. AID PROJECT BR05-0173(189)				



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

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