

06-12-2020 LETTING ITEM 207

SURFACE TRANSPORTATION PROGRAM

PLANS FOR PROPOSED STRUCTURE REPLACEMENT

MOTEL ROAD OVER EAST
BRANCH OF KISHWAUKEE RIVER
SECTION 14-09110-01-BR

DEKALB COUNTY

SN 019-4410

PROJECT 74B2 (009)

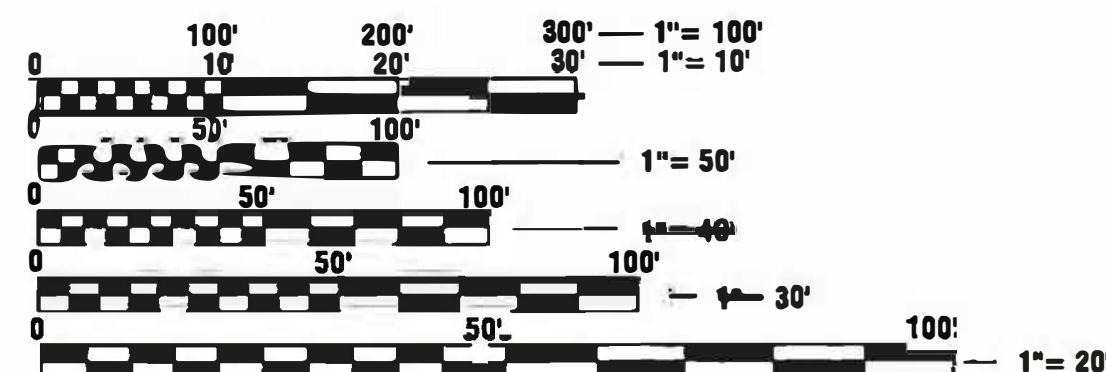
JOB NO. C-93-011-20

TWP. R1E	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
160	14-09110-01-BR	DEKALB	24	7
CONTRACT NO. 87723				
ILLINOIS				

INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
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STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-04	NAME PLATE FOR BRIDGES
542401-03	METAL END SECTION FOR PIPE CULVERTS
601001-05	PIPE UNDERDRAINS
601101-02	CONCRETE HEADWALL FOR PIPE UNDERDRAIN
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24' (600 MM) FROM PAVEMENT EDGE
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701206-05	LANE CLOSURE, 2L, 2W, NIGHT ONLY, FOR SPEEDS > 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701901-08	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
704001-08	TEMPORARY CONCRETE BARRIER



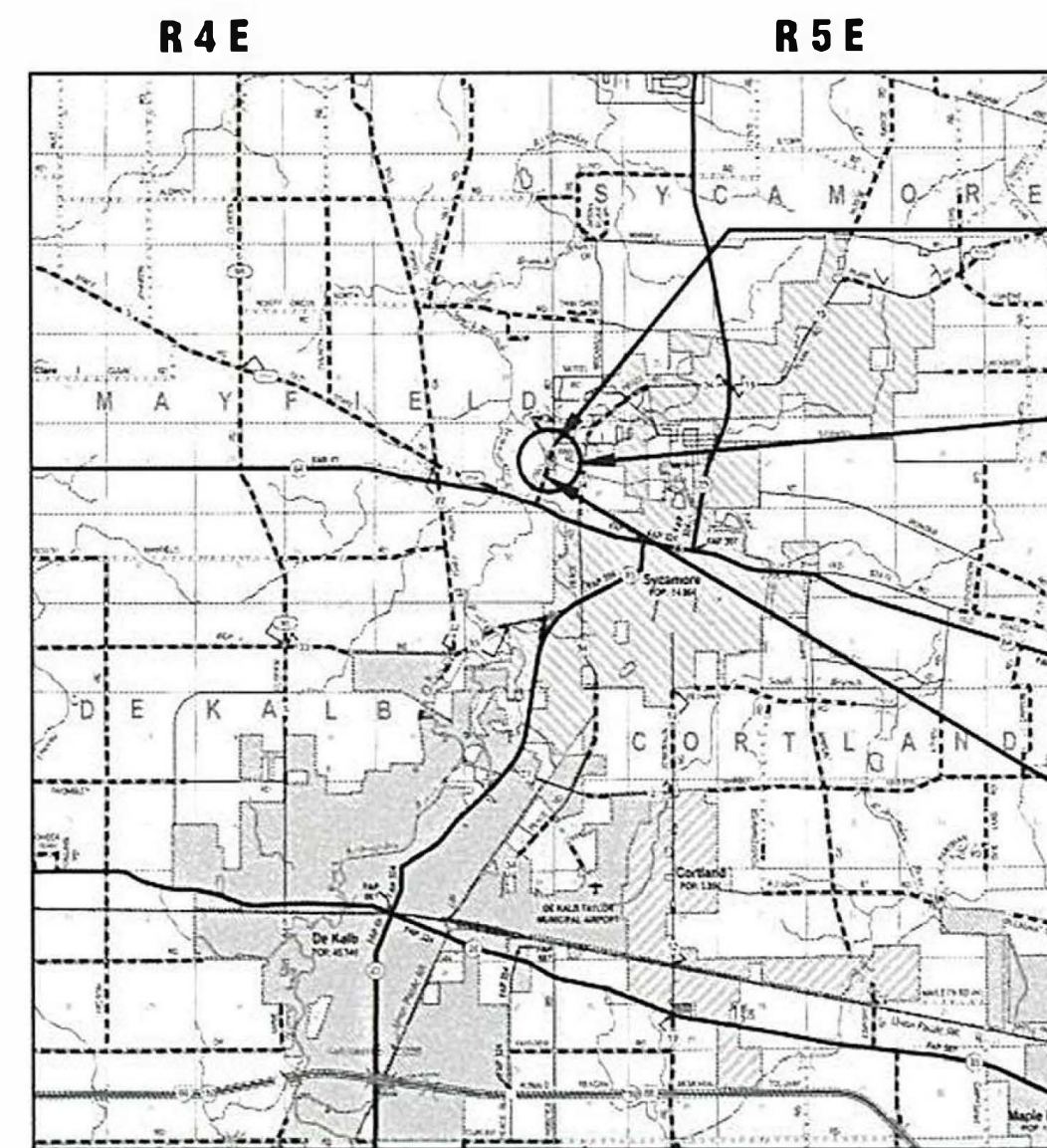
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

ROADWAY
TR 160 N.

DESIGN CRITERIA

DESIGN CLASSIFICATION	ADT	DESIGN SPEED
LOCAL ROAD	1006	50 mph



LOCATION MAP NOT TO SCALE

GROSS LENGTH OF SECTION = 655 FEET (0.12 MILE)
NET LENGTH OF SECTION = 655 FEET (0.12 MILE)

UTILITY CONTACT INFORMATION			
UTILITY	COMPANY	CONTACT	PHONE NUMBER
ELECTRIC	COMED	NA	630-576-7094
COMMUNICATIONS	FRONTIER	KALIN HINSHAW	815-895-1515
GAS	NICOR GAS	NA	630-388-2362
CABLE	COMCAST	MARTHA GIERAS	224-229-5862

END IMPROVEMENT
STA 18+75

SECTION 14-09110-01-BR
STATION 15+64
PROPOSED STRUCTURE SN 019-4410
THREE-SPAN STEEL GIRDER BRIDGE
15' SKEW

BEGIN IMPROVEMENTS
STA 12+20



CHAD T. CLAUSON
DIXON, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 062-071543
EXPIRES 11-30-2021
DATE 12/27/19



www.wendlergs.com ph: 815.288.2261

Illinois Professional Design Firm No. 184-000848



LOCATION OF SECTION INDICATED THUS: -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec 27 20 19

[Signature]
COUNTY ENGINEER

PASSED Dec 30 20 19

[Signature]
DISTRICT 3 ENGINEER OF LOCAL ROADS & STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW Dec 30 20 19

[Signature]
REGION 2 ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES:

1. THE FINAL TOP FOUR INCHES OF SOIL IN ANY RIGHT-OF-WAY AREA DISTURBED BY THE CONTRACTOR MUST BE CAPABLE OF SUPPORTING VEGETATION. THE SOIL MUST BE FROM THE A HORIZON (ZERO TO 2' DEEP) OF SOIL PROFILES OF LOCAL SOILS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICES BID AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

2. ENVIRONMENTAL REVIEWS PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:
 BDE FORM 2289 (CULTURAL AND NATURAL RESOURCES REVIEW OF BORROW AREAS)
 BDE FORM 2290 (WASTE/USE AREA REVIEW)
 A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
 COLOR PHOTOGRAPHS DEPICTING THE USE AREA
 BORROW AREA ENTRY AGREEMENT FORM - D4 PI0101

PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS. ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES. PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.

3. FERTILIZER NUTRIENTS SHALL BE APPLIED AT THE RATE SPECIFIED IN SECTIONS 250 AND 252 OF THE STANDARD SPECIFICATIONS. THIS SHALL BE INCLUDED IN THE COST OF THE SEEDING OR SODDING.

4. ALL EMBANKMENT CONSTRUCTED OF COHESIVE SOIL SHALL BE CONSTRUCTED WITH NOT MORE THAN 110% OF OPTIMUM MOISTURE CONTENT, DETERMINED BY THE STANDARD PROCTOR TEST. COHESIVE SOIL SHALL BE DEFINED AS ANY SOIL WHICH CONTAINS GREATER THAN 10% PARTICLES BY WEIGHT PASSING THE #200 SIEVE. THE 110% OF OPTIMUM MOISTURE LIMIT MAY BE WAIVED IN FREE-DRAINING GRANULAR MATERIAL WHEN APPROVED BY THE ENGINEER.

6. SAW CUTS SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM EARTH EXCAVATION (SPECIAL).

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. THE UTILITIES LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS ARE LISTED ON THE COVER SHEET.

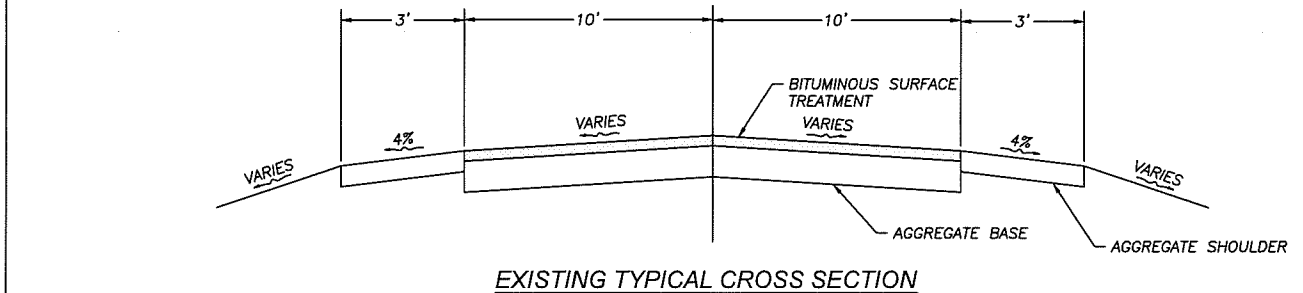
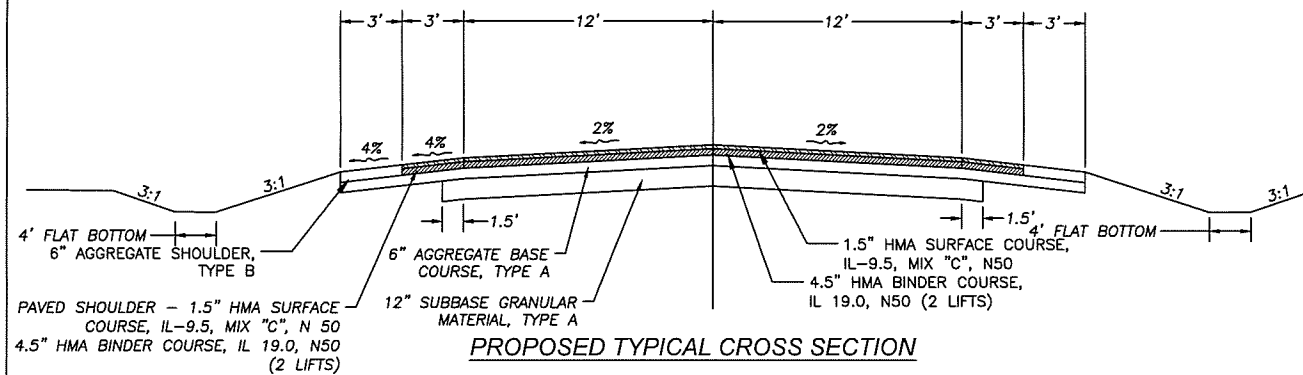
8. THE APPLICABLE PORTIONS OF ARTICLE 105.07 OF THE STANDARD SPECIFICATION SHALL APPLY EXCEPT FOR THE FOLLOWING: THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE VERTICAL DEPTHS OF THE UNDERGROUND UTILITIES WHICH MAY INTERFERE WITH CONSTRUCTION OPERATIONS. THIS WORK WILL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICE FOR THE ITEM OF CONSTRUCTION INVOLVED.

9. COST OF PAVEMENT AND CULVERT REMOVAL IS INCLUDED IN EARTH EXCAVATION (SPECIAL)

10. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT AND COORDINATE HIS ACTIVITIES WITH THE UTILITIES BY CONTACTING: JULIE - 800/892-0123.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

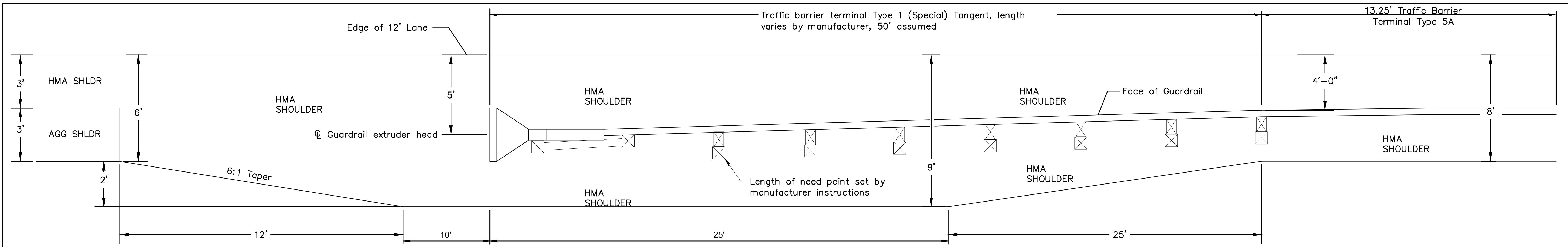
GRANULAR MATERIALS	2.05 TONS / CU YD
HOT MIX ASPHALT	112 LBS / SY-INCH
BITUMINOUS MATERIALS (PRIME COAT) (ON GRAVEL)	0.25 LBS / SF
BITUMINOUS MATERIALS (TACK COAT) (BETWEEN LIFTS)	0.025 LBS / SF
TEMPORARY EROSION CONTROL SEEDING	100 LBS / ACRE / APPLICATION



SUMMARY OF QUANTITIES
CONSTRUCTION TYPE CODE 0010

Item Number	Code	Item	Unit of Measure	Quantity
1	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	60
2	20300100	CHANNEL EXCAVATION	CU YD	1,693
3	20400800	FURNISHED EXCAVATION	CU YD	795
4	25100630	EROSION CONTROL BLANKET	SQ YD	5,275
5	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	218
6	28000305	TEMPORARY DITCH CHECKS	FOOT	10
7	28000400	PERIMETER EROSION BARRIER	FOOT	1,468
8	28000500	INLET AND PIPE PROTECTION	EACH	4
9	28100109	STONE RIPRAP, CLASS A5	SQ YD	1048
10	28200200	FILTER FABRIC	SQ YD	1048
11	30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	60
12	31100910	SUBBASE GRANULAR MATERIAL, TYPE A 12"	SQ YD	1,371
13	35100500	AGGREGATE BASE COURSE, TYPE A 6"	SQ YD	1,965
14	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	57
15	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	3,430
16	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	1,100
17	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	456
18	40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	152.2
19	48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	206
20	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
21	50200100	STRUCTURE EXCAVATION	CU YD	181
22	50200300	COFFERDAM EXCAVATION	CU YD	100
23	50201101	COFFERDAM (TYPE 1) (LOCATION - 1)	EACH	1
24	50201102	COFFERDAM (TYPE 1) (LOCATION - 2)	EACH	1
25	50300225	CONCRETE STRUCTURES	CU YD	112.4
26	50300255	CONCRETE SUPERSTRUCTURE	CU YD	174.9
27	50300260	BRIDGE DECK GROOVING	SQ YD	576
28	50300300	PROTECTIVE COAT	SQ YD	674
29	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	LSUM	1
30	50500505	STUD SHEAR CONNECTORS	EACH	4,896
31	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	61,970
32	50901050	STEEL RAILING, TYPE SM	FOOT	335
33	51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	1329
34	51202305	DRIVING PILES	FOOT	1329
35	51203200	TEST PILE METAL SHELLS	EACH	4
36	51204650	PILE SHOES	EACH	28
37	51500100	NAME PLATES	EACH	1
38	52100520	ANCHOR BOLTS, 1"	EACH	24
39	52100530	ANCHOR BOLTS, 1 1/4"	EACH	24
40	54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	2
41	54262718	METAL FLARED END SECTIONS 18"	EACH	2
42	542A0241	PIPE CULVERTS, CLASS A, TYPE 1 36"	FOOT	70
43	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	50
44	58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	160
45	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	82
Δ 46	63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
Δ 47	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
48	67100100	MOBILIZATION	LSUM	1
Δ 49	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
Δ 50	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	14
* 51	X2020410	EARTH EXCAVATION (SPECIAL)	CU YD	1,269
* 52	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.09
* 53	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1
* 54	20013798	CONSTRUCTION LAYOUT	LSUM	1
55	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	168

* - SEE SPECIAL PROVISIONS
 Δ - SPECIALTY ITEM



SHOULDER WIDENING TRANSITIONS DETAIL

Approach End Shown, Departure End Similar

28000400 - PERMANENT EROSION BARRIER

LOCATION	FOOT
RT. STA. 11+45 - RT. STA. 14+81	381
LT. STA. 11+45 - LT. STA. 15+03	401
RT. STA. 16+17 - RT. STA. 19+25	361
LT. STA. 16+37 - LT. STA. 19+25	325
TOTAL	1468 FOOT

28100109 - STONE RIPRAP, CLASS A5

LOCATION	SQ.YD.
STA. 11+45.00 - STA. 15+03.04	851
STA. 16+26.00 - STA. 16+47.00	197
TOTAL	1048 SQ.YD.

X2501000 - SEEDING, CLASS 2 SPECIAL

LOCATION	ACRE
RT. STA. 11+45 - RT. STA. 15+00	0.36
LT. STA. 11+45 - LT. STA. 15+22	0.25
RT. STA. 15+90 - RT. STA. 19+25	0.28
LT. STA. 16+35 - LT. STA. 19+25	0.20
TOTAL	1.09 ACRE

28000305 - TEMPORARY DITCH CHECK

LOCATION	EACH
LT. STA. 12+50	1
RT. STA. 12+53	1
LT. STA. 13+31	1
RT. STA. 13+51	1
RT. STA. 14+44	1
LT. STA. 14+60	1
RT. STA. 17+05	1
LT. STA. 17+06	1
RT. STA. 18+18	1
LT. STA. 18+18	1
TOTAL	10 EACH

28000500 - INLET & PIPE PROTECTION

LOCATION	EACH
LT. STA. 13+60	1
LT. STA. 16+65	1
RT. STA. 18+59	1
RT. STA. 19+44	1
TOTAL	4 EACH

40604050 - 1.5" HMA SURFACE COURSE, IL-9.5, MIX "C", N50

LOCATION	TONS
STA. 12+20 - STA. 14+81.24	57.8
RT. STA. 12+20 - RT. STA. 14+77	11.8
LT. STA. 12+20 - LT. STA. 14+86	11.1
STA. 14+81.24 - STA. 18+75	49.7
RT. STA. 16+43 - RT. STA. 18+75	10.9
LT. STA. 16+52 - LT. STA. 18+75	10.9
TOTAL	152.2 TONS

40603080 - 4.5" HMA BINDER COURSE, IL 19.0, N50 (2 LIFTS)

LOCATION	TONS
STA. 12+20 - STA. 14+81.24	173.2
RT. STA. 12+20 - RT. STA. 14+77	35.2
LT. STA. 12+20 - LT. STA. 14+86	33.3
STA. 14+81.24 - STA. 18+75	149.1
RT. STA. 16+43 - RT. STA. 18+75	32.5
LT. STA. 16+52 - LT. STA. 18+75	32.6
TOTAL	455.9 TONS

48101500 - AGGREGATE SHOULDER, TYPE B 6"

LOCATION	SQ.YD.
RT. STA. 12+20 - RT. STA. 13+85.70	60
LT. STA. 12+20 - LT. STA. 14+06	54
RT. STA. 17+34.12 - RT. STA. 18+75	47
LT. STA. 17+42.70 - LT. STA. 18+75	45
TOTAL	206 SQ.YD.

35100500 - AGGREGATE BASE COURSE, TYPE A 6"

LOCATION	SQ.YD.
STA. 12+20 - STA. 14+81.24	1047
STA. 14+81.24 - STA. 18+75	918
TOTAL	1965 SQ.YD.

31100910 - SUBBASE GRANULAR MATERIAL, TYPE A 12"

LOCATION	SQ.YD.
STA. 12+20 - STA. 14+81.24	756
STA. 14+81.24 - STA. 18+75	615
TOTAL	1371 SQ.YD.

63100075 - TRAFFIC BARRIER TERMINAL, TYPE 5A

LOCATION	EACH
RT. STA. 14+63.70 - 14+76.95	1.0
LT. STA. 14+72.27 - 14+85.52	1.0
RT. STA. 16+42.87 - 16+56.12	1.0
LT. STA. 16+52.49 - 16+65.74	1.0
TOTAL	4.0 EACH

63100167 - TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

LOCATION	EACH
LT. STA. 14+23.35 - 14+73.35	1.0
RT. STA. 14+13.70 - 14+63.70	1.0
LT. STA. 16+64.70 - 17+14.70	1.0
RT. STA. 16+56.04 - 17+06.04	1.0
TOTAL	4.0 EACH

HMA MIXTURE REQUIREMENT TABLE

	HMA Binder	HMA Surface
PG Grade	PG 64-22	PG 64-22
Design Air Voids	4.0% @ N50	4.0% @ N50
Mixture Composition	IL 19.0	IL 9.5
Friction Aggregate		Mixture C
Density Test Method	Cores	Cores
Mixture Weight	112#/Sq. Yd./In.	112#/Sq. Yd./In.
Quality Management Program	QC/QA	QC/QA
Sublot Size	N/A	N/A
Location(s)	Entire Project	Entire Project

EARTHWORK SCHEDULE

(EXCLUDING STA 14+81.24 TO STA 16+47.16)

LOCATION	X2020410 EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE / LOSS	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS
STA. 11+45.00 TO STA. 14+81.24	1027	770	977	-207
STA. 16+47.16 TO STA. 19+25.00	242	181	769	-588
TOTAL	1269	951	1746	-795

SHRINKAGE/LOSS FACTOR = 0.25

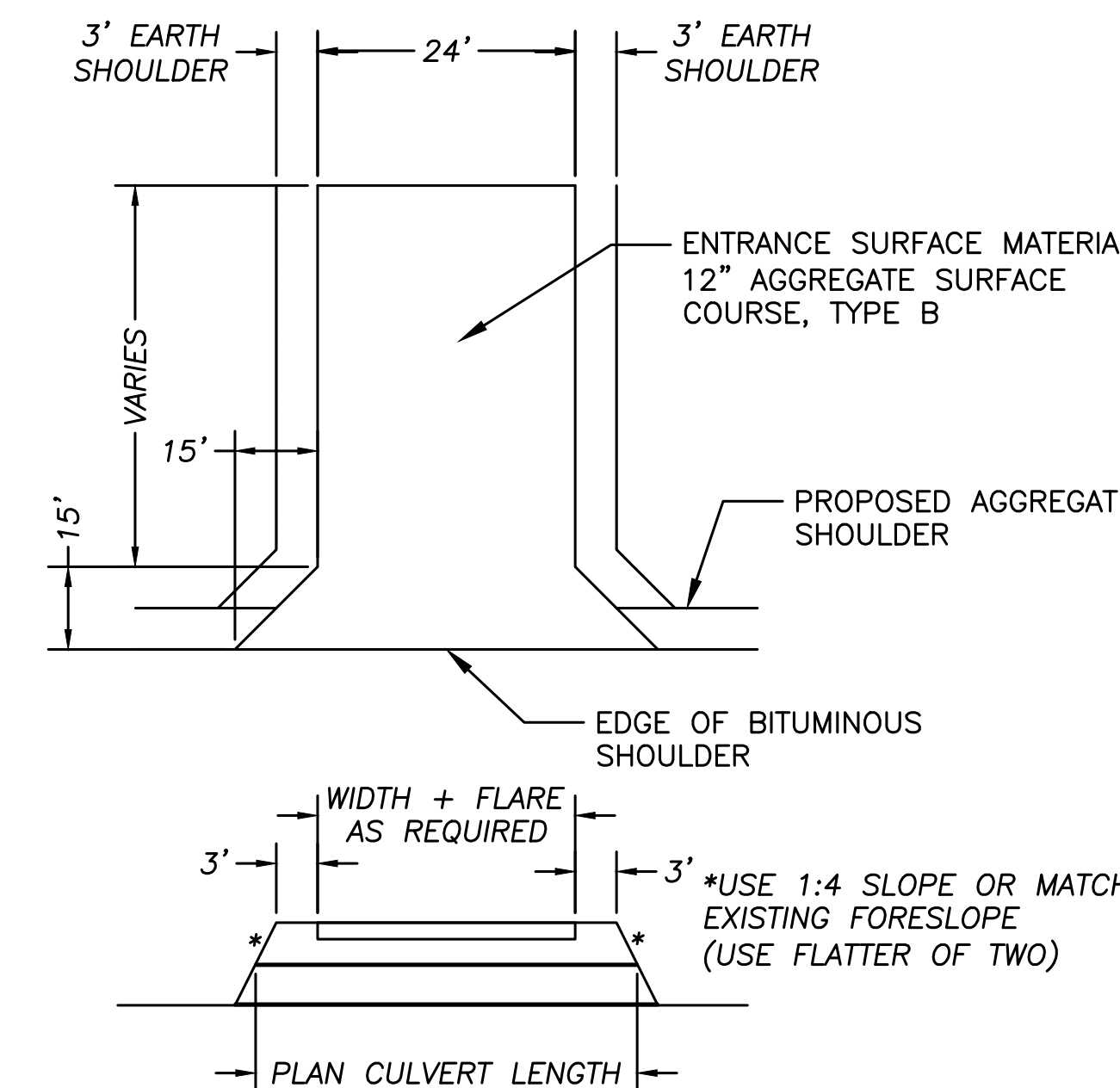
CHANNEL EXCAVATION SCHEDULE

LOCATION	20300100 CHANNEL EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE / LOSS	EMBANKMENT (FILL)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS
STA. 14+81.24 TO STA. 16+47.16	1693	1270	57	+1213

SHRINKAGE/LOSS FACTOR = 0.25

ENTRANCE SCHEDULE

LOCATION	40200800 - AGGREGATE SURFACE COURSE, TYPE B	542D0223 - PIPE CULVERTS, CLASS D, TYPE 1 18"	54262718 - METAL FLARED END SECTIONS 18"
STATION	TON	FOOT	EACH
13+85.25	57	50	2



FIELD ENTRANCE DETAIL

N.T.S



USER NAME = chad_clauson	DESIGNED = CC	REVISED =
PLOT SCALE =	DRAWN = CC	REVISED =
PLOT DATE = 4/30/20	CHECKED = DW	REVISED =
FILE NAME = survey ctc-2190055 alternate	DATE = 12/27/2019	REVISED =

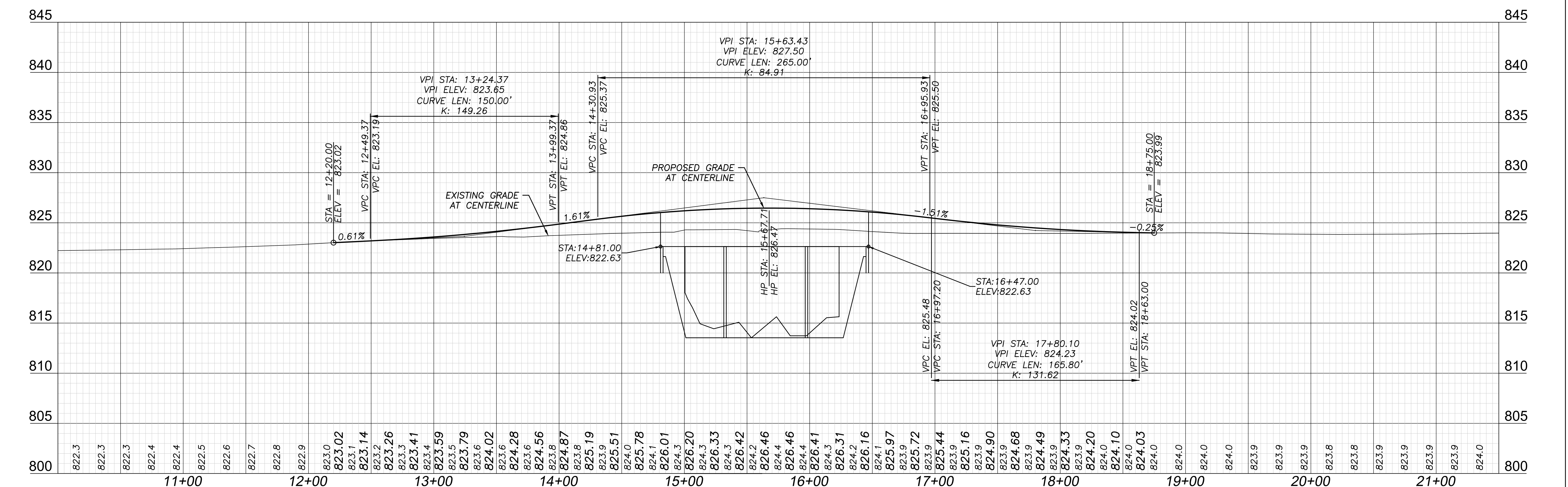
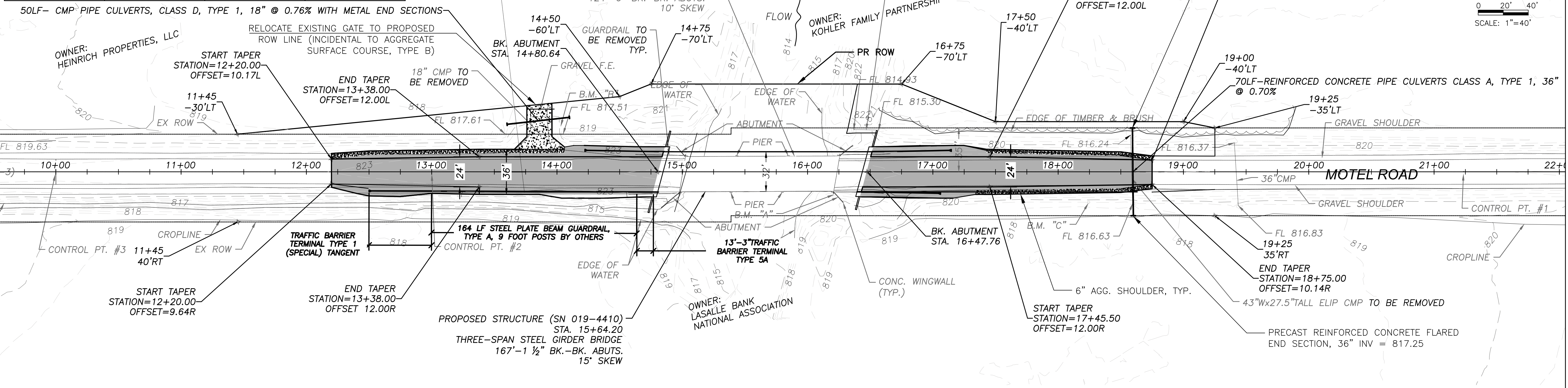
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

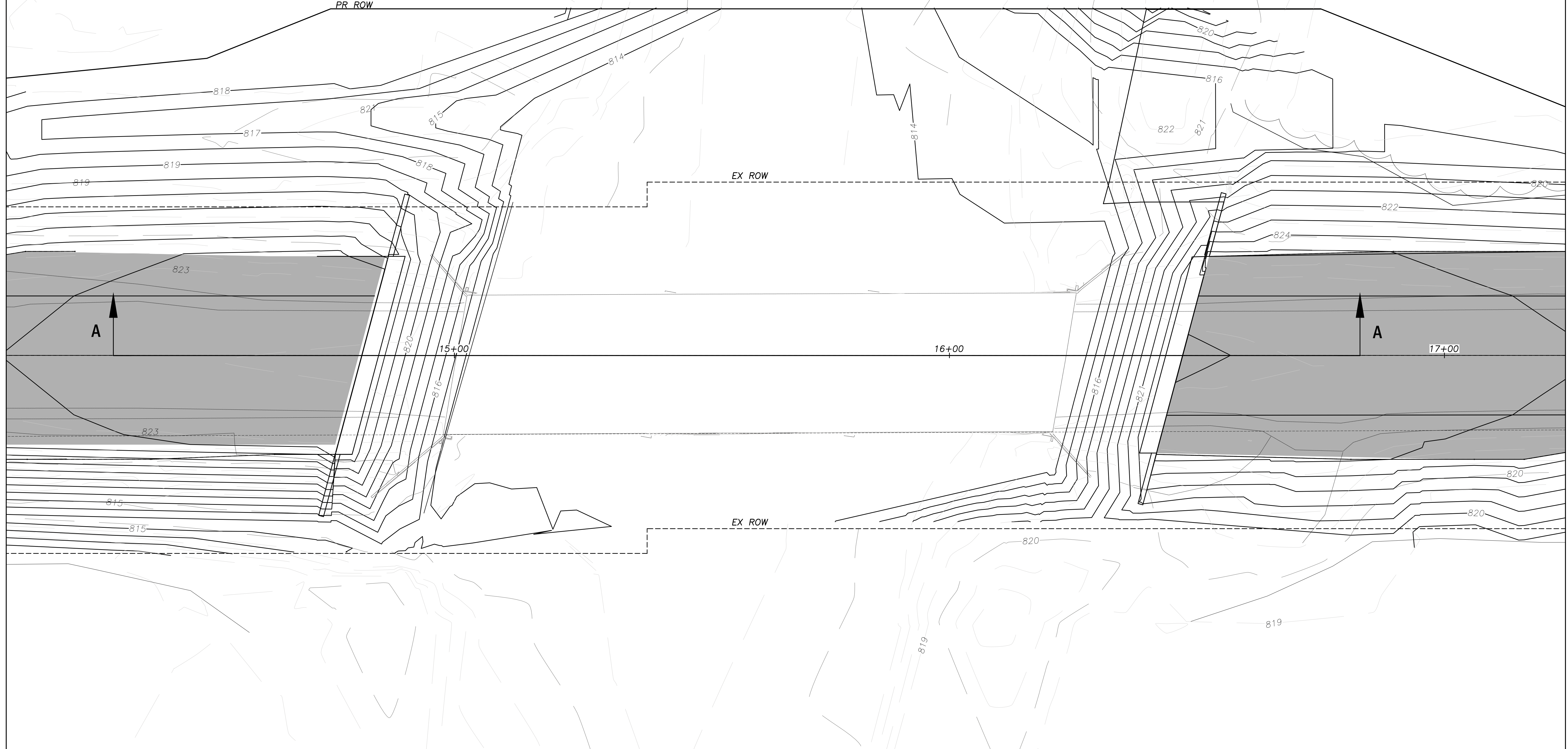
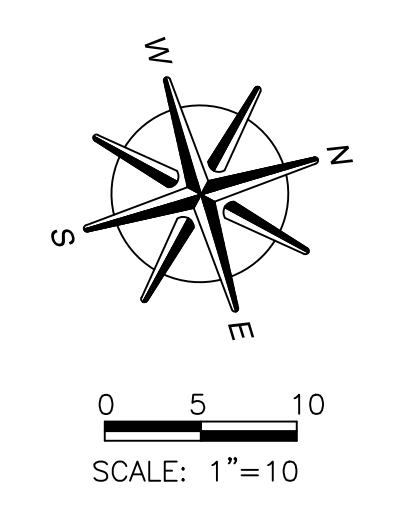
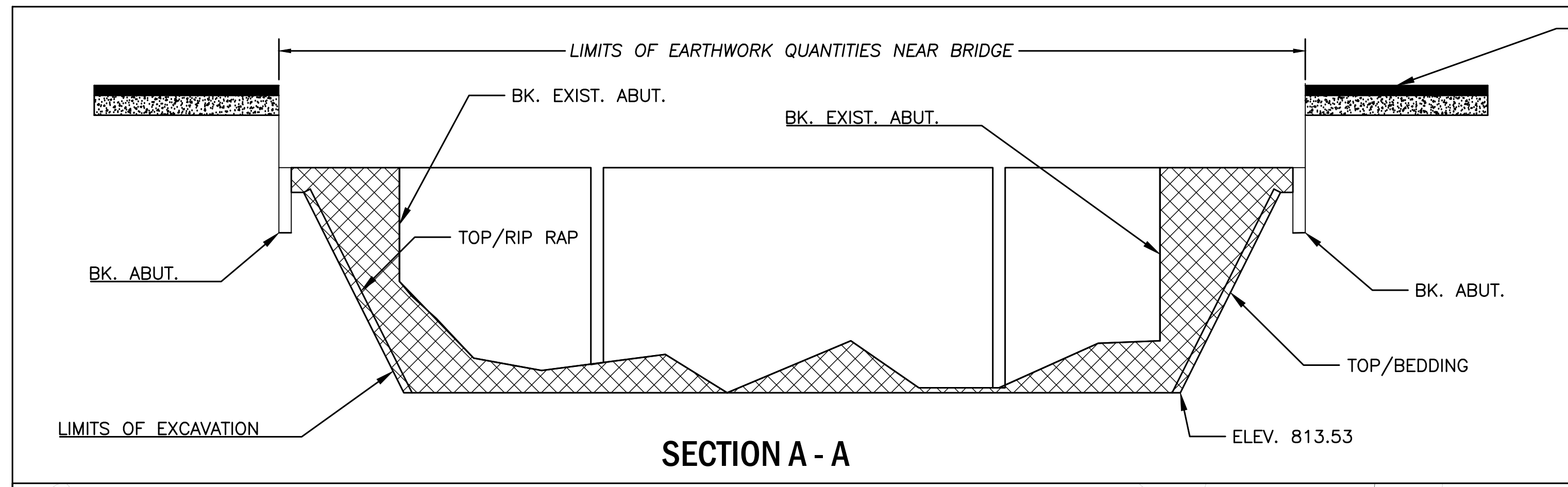
SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	3
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				

UTILITY CONTACT INFORMATION			
UTILITY	COMPANY	CONTACT	PHONE NUMBER
ELECTRIC	COMED	NA	630-576-7094
COMMUNICATIONS	FRONTIER	KALIN HINSHAW	815-895-1515
GAS	NICOR GAS	NA	630-388-2362
CABLE	COMCAST	MARTHA GIERAS	224-229-5862



	USER NAME = chad_clauson	DESIGNED = CC	REVISED =	DEKALB COUNTY HIGHWAY DEPARTMENT	MOTEL ROAD PLAN AND PROFILE EXHIBIT	TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 1"=40'	DRAWN = CC	REVISED =			160	14-09110-01-BR	DEKALB	24	4
	PLOT DATE = 5/1/20	CHECKED = DW	REVISED =			CONTRACT NO 87723				
	FILE NAME = survey ctc-2190055 alternate	DATE = 12/27/2019	REVISED =			ILLINOIS FED. AID PROJECT				



USER NAME = chad_clauson	DESIGNED - CC	REVISED -
PLOT SCALE = 1"=40'	DRAWN - CC	REVISED -
PLOT DATE = 4/30/20	CHECKED - DW	REVISED -
FILE NAME = survey ctc-2190055 alternate 1.dwg	DATE - 12/27/2019	REVISED -

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

GRADING PLAN NEAR BRIDGE

SCALE: 1"=40' SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	5
CONTRACT NO 87723			ILLINOIS FED. AID PROJECT -	

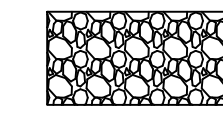
BENCHMARK INFORMATION:

B.M. "A" - SET CHISELED "□" ON TOP OF N.E. WINGWALL OF EXISTING BRIDGE.
 ELEV=824.05
 NORTHING=1944049.742
 EASTING=880380.523

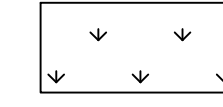
B.M. "B" - SET R.R. SPIKE IN NORTH SIDE OF NORTH WOOD GATE POST OF FIELD ENTRANCE LOCATED ±100' SOUTH OF SOUTH SIDE OF BRIDGE.
 ELEV=820.99
 NORTHING=1943855.160
 EASTING=880268.485

B.M. "C" - SET 5/8" STEEL PIN ±200' NORTH OF NORTH SIDE OF BRIDGE, ±13.5' EAST OF EAST EDGE OF PAVEMENT OF MOTEL ROAD.
 ELEV=819.04
 NORTHING=1944242.209
 EASTING=880268.485

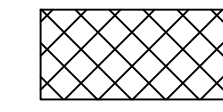
LEGEND



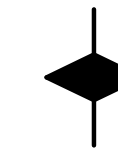
STONE RIP RAP, CLASS A5



SEEDING, CLASS 2 SPECIAL WITH EROSION CONTROL BLANKET



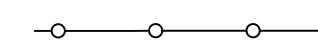
TREE REMOVAL TO BE PERFORMED BY OTHERS BETWEEN OCTOBER 1, AND MARCH 31 (STUMPS TO REMAIN)



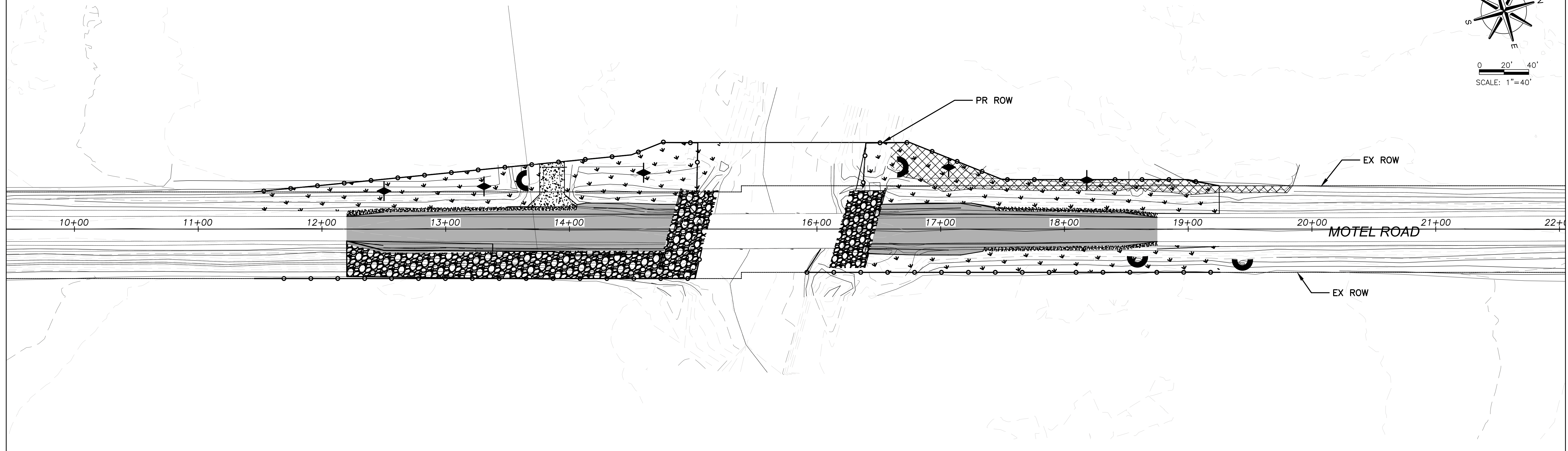
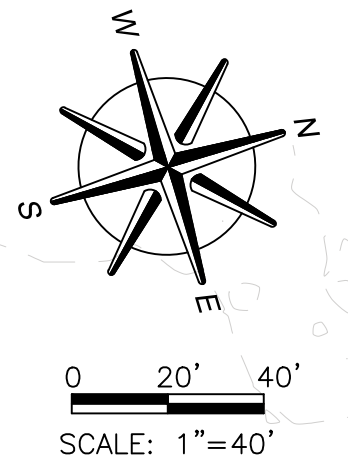
TEMPORARY DITCH CHECK



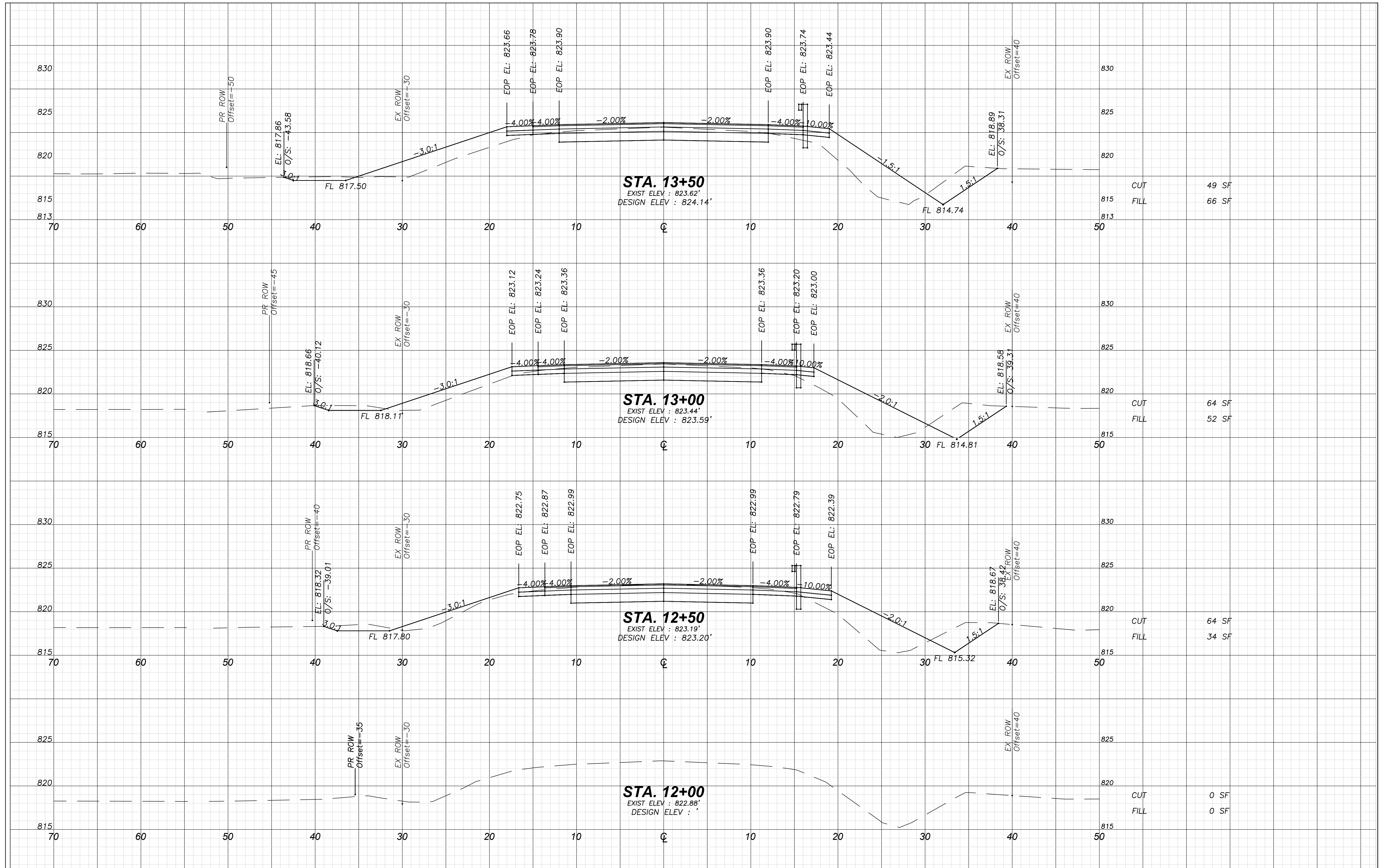
INLET AND PIPE PROTECTION



PERIMETER EROSION BARRIER



	USER NAME = chad_clauson	DESIGNED - CC	REVISED -	DEKALB COUNTY HIGHWAY DEPARTMENT	EROSION CONTROL PLAN	TR. RTE. 160	SECTION 14-09110-01-BR	COUNTY DEKALB	TOTAL SHEETS 24	SHEET NO. 6			
	PLOT SCALE = 1"=40'	DRAWN - CC	REVISED -			SCALE: 1"=40'	SHEET - OF - SHEETS	STA. - TO STA. -	CONTRACT NO 87723				
	PLOT DATE = 4/30/20	CHECKED - DW	REVISED -			ILLINOIS FED. AID PROJECT -							
	FILE NAME = survey ctc-2190055 alternate	DATE - 12/27/2019	REVISED -										



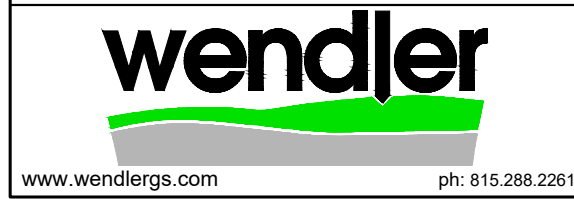
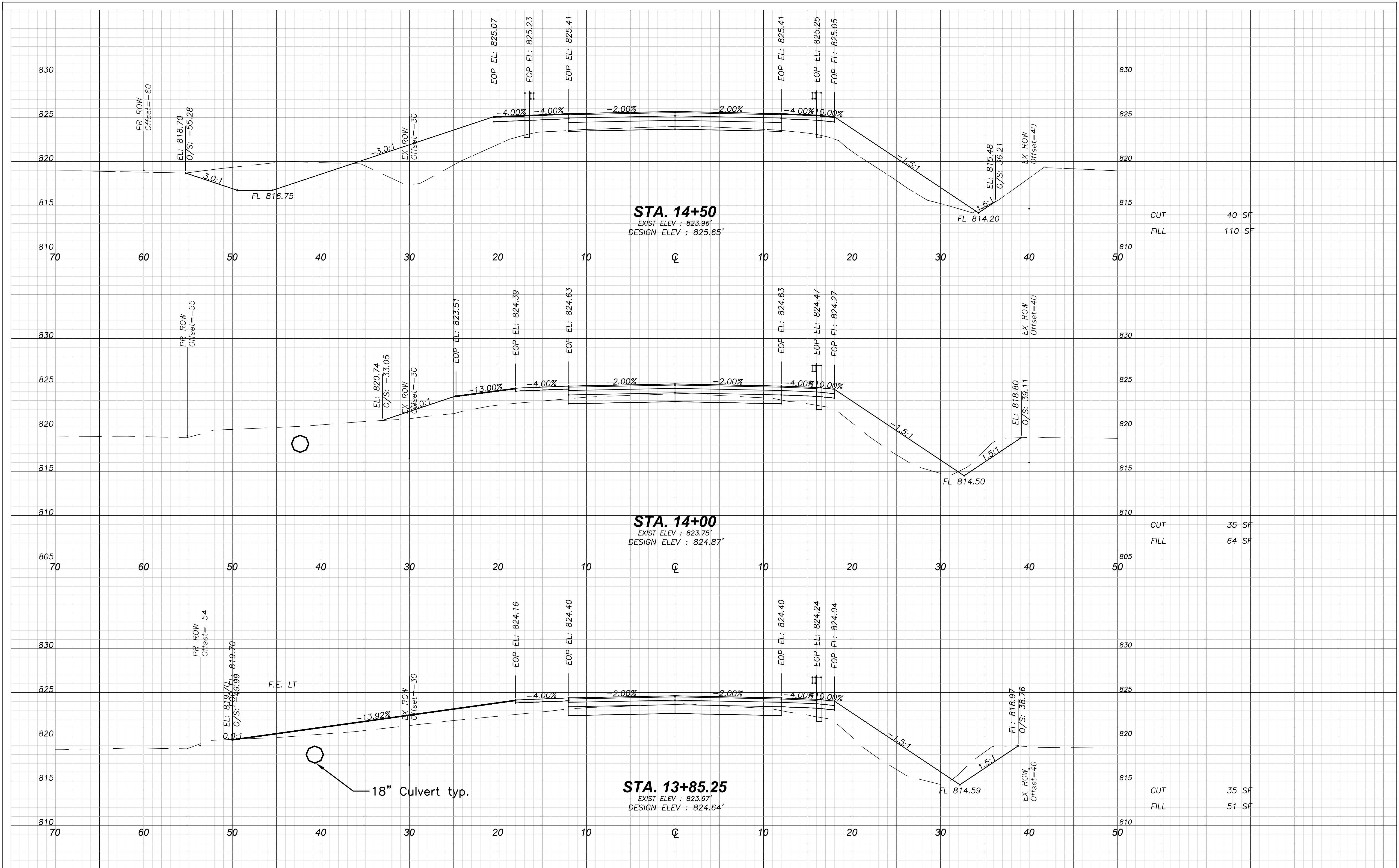
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PLOT DATE = 4/30/20	CHECKED = DW	REVISED =
FILE NAME = survey ctc-2190055 alternate	DATE = 12/27/2019	REVISED =

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

CROSS SECTION - 1

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	7
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				



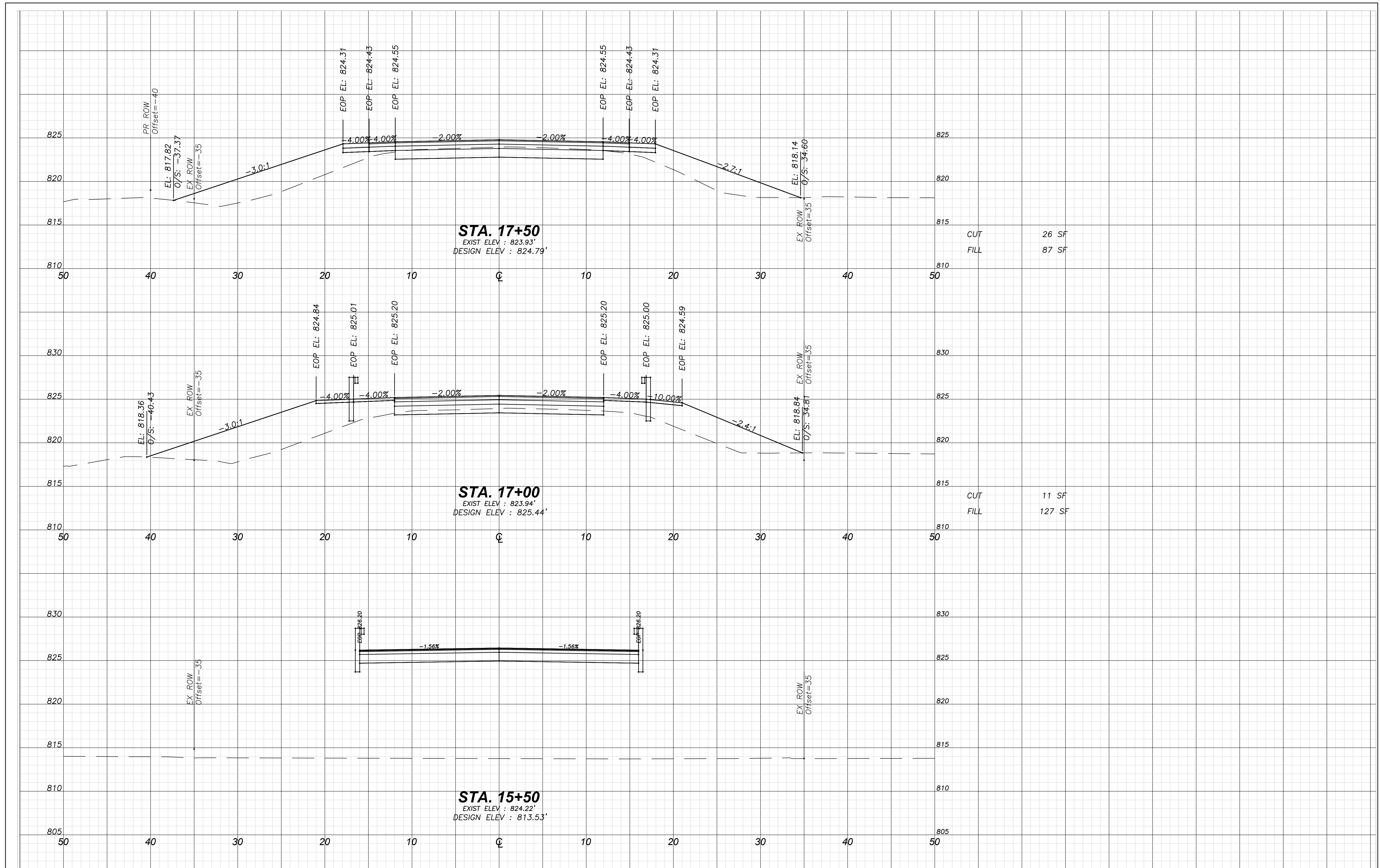
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PLOT DATE = 4/30/20	CHECKED - DW	REVISED -
FILE NAME = survey ctc-2190055 alternate	DATE = 12/27/2019	REVISED -

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

CROSS SECTION - 2

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	8
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				



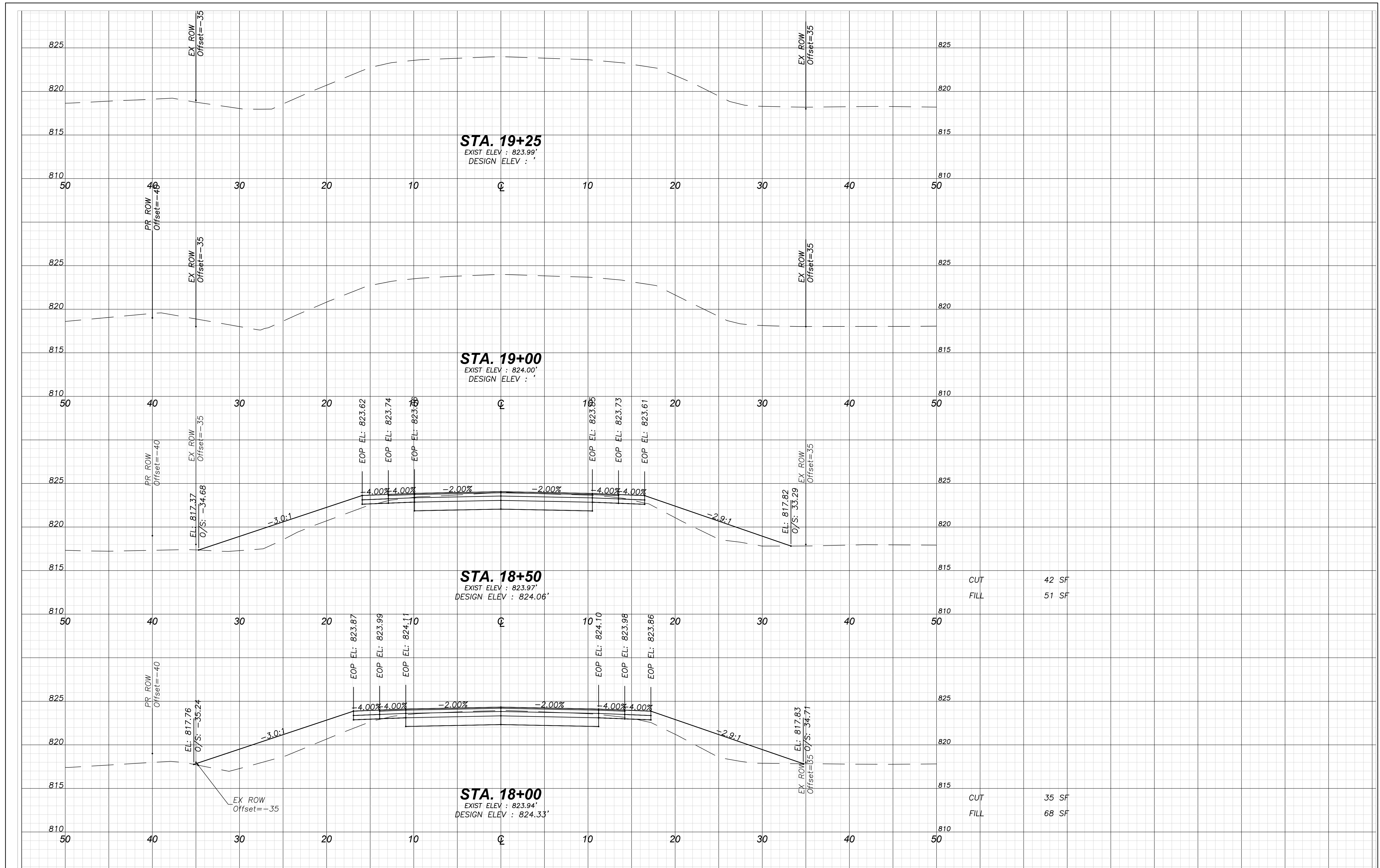
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PLOT DATE = 4/30/20	CHECKED = DW	REVISED =
FILE NAME = survey ctc-2190055 alternate 1.dwg	DATE = 12/27/2019	REVISED =

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

CROSS SECTION - 3

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	9
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				



CUT 42 SF
FILL 51 SF

CUT 35 SF
FILL 68 SF



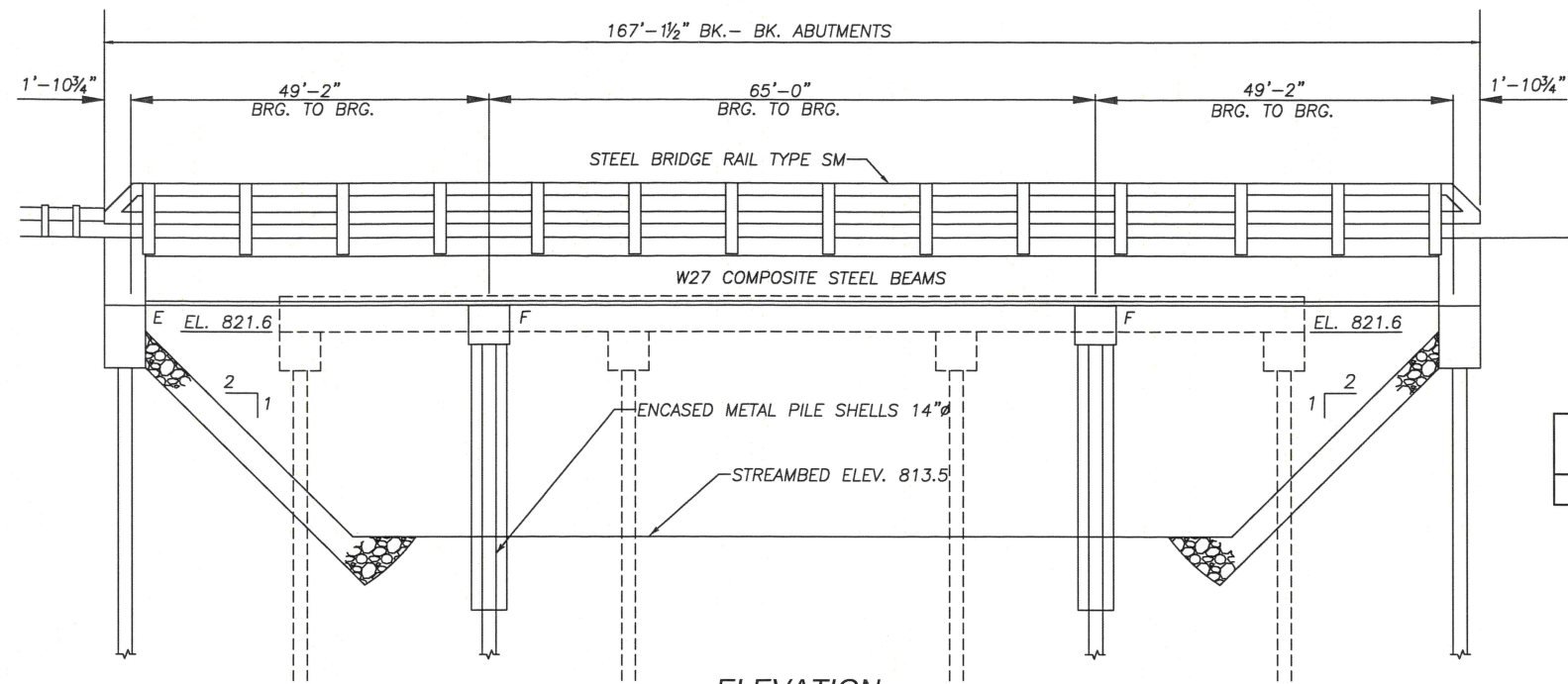
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PLOT DATE = 4/30/20	CHECKED - DW	REVISED -
FILE NAME = survey ctc-2190055 alternate 1.dwg	DATE = 12/27/2019	REVISED -

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

CROSS SECTION - 4

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	10
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				



ELEVATION

DESIGN SCOUR ELEVATION TABLE

EVENT/LIMIT STATE	DESIGN SCOUR ELEVATIONS (FT.)				ITEM 113
	N. ABUTMENT	N. PIER	S. PIER	S. ABUTMENT	
CHECK	818.69	810.11	810.11	818.62	8

EXISTING STRUCTURE

S/N 019-4407:
 3 SPAN PRECAST PRESTRESSED BOX BEAM BRIDGE SUPPORTED ON PILE BENT ABUTMENT & PIERS
 124'-6" BK.-BK. ABUTMENTS
 10' SKEW
 TO BE REMOVED

SALVAGE: NONE

EAST BRANCH OF SOUTH BRANCH OF KISHWAUKEE RIVER
 BUILT 2020 BY DEKALB COUNTY
 SEC. 14-09110-01-BR
 MOTEL ROAD (TR. 160) STA. 15+64
 STR. NO. 019-4410 LOADING HL-93

LETTERING FOR NAME PLATE
 See Std. 515001-03

DESIGN STRESSES

FIELD UNITS
 f'c = 5,000 psi (Superstructure)
 f'c = 3,500 psi (Substructure)
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.057g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.103g
 Soil Site Class = D

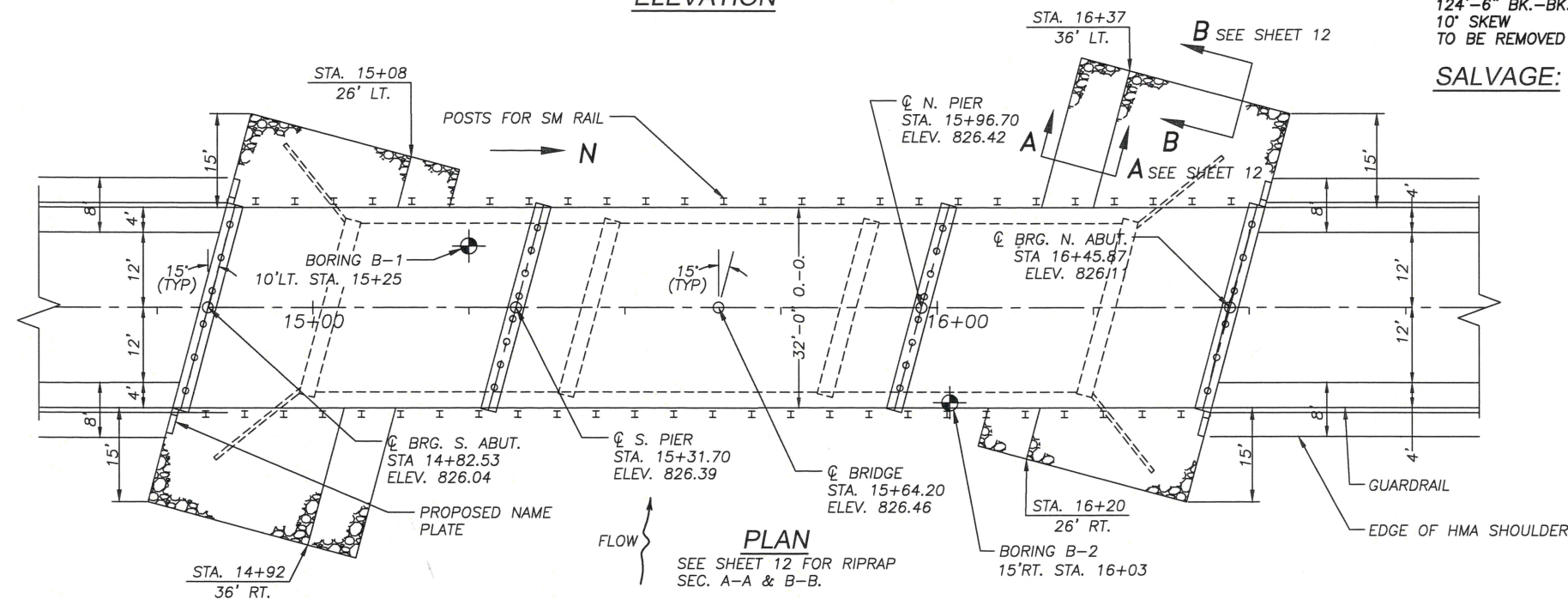
DESIGN SPECIFICATIONS

2017 AASHTO LRFD Bridge Design Specifications 8th Edition

LOADING HL-93

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

I CERTIFY THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THIS BRIDGE/BOX CULVERT 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 FOR HIGHWAY BRIDGES".



PLAN

SEE SHEET 12 FOR RIPRAP SEC. A-A & B-B.

WATERWAY INFORMATION TABLE

Existing Low Grade Elev. = 822.30 at Roadway Sta. 12+50		Proposed Low Grade Elev. = 822.30 at Roadway Sta. 12+50							
Drainage Area = 110 sq.mi.									
Frequency	Q	Opening Sq.Ft.	Natural Head-Ft.	Headwater Elev.					
		Existing	Proposed	H.W.E.					
Design	20	3723	918*	1330**	822.7	0.2	0.2	822.9	822.9
Base	100	5270	918*	1330**	824.1	0.2	0.2	824.4	824.3
Max Calc.	500	6820	918*	1330**	825.1	0.2	0.2	825.3	825.3

*219 SF, 859 SF, AND 4,881 SF OF OVER THE ROAD FLOW FOR THE 20, 100, AND 500 YEAR EXISTING STORM EVENTS RESPECTIVELY
 **213 SF, 739 SF, AND 4,468 SF OF OVER THE ROAD FLOW FOR THE 20, 100, AND 500 YEAR PROPOSED STORM EVENTS RESPECTIVELY

WENDLER ENGINEERING SERVICES, INC.
 Illinois Professional Design Firm No. 184-000848

SCOTT A. BROWN
 081-005981
 DATE 1/21/2020
 ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 081-005981 EXPIRES 11-30-2020



USER NAME = chod_claouon	DESIGNED = CC	REVISED =
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PLOT DATE = 1/21/20	CHECKED = SB	REVISED =
FILE NAME = survey ctc-2190055.dwg	DATE = 12/28/2019	REVISED =

DEKALB COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN AND ELEVATION

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	11
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				

GENERAL NOTES

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts (in painted areas and ASTM A325 Type 3 in unpainted areas). Bolts $\frac{7}{8}$ in. \varnothing , holes $\frac{15}{16}$ in. \varnothing , unless otherwise noted.

Structural Steel shall be according to the following:
 W-shapes.....AASHTO M 270 Grade 50W
 C-shapes, L-shapes & plates.....AASHTO M 270 Grade 50W

Calculated weights of Structural Steel:
 W-shapes..... 144,110 pounds
 C-shapes, Bolts and Plates..... 31,240 pounds

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.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.

All construction joints shall be bonded.

Cost for removal of existing bridge rail is included in cost for Removal of Existing Structures.

Excavation of earth necessary to perform removal of existing structures will not be measured for payment. Cost is included in Removal of Existing Structures.

Excavation for Granular Backfill for Structures shall not be paid separately but considered included in the unit price bid for GRANULAR BACKFILL FOR STRUCTURES.

Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 18 inches, except the 2 fascia beams shall be painted on the exterior fascia surfaces, all surfaces of the bottom flange & all surfaces of the bottom "k-area" radius. Painted areas shall be primed in the shop with a Department approved zinc rich primer. The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel. The entire system shall be shop applied, except masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat shall be Gray, Munsell No. 5B 7/1.

Granular Backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.

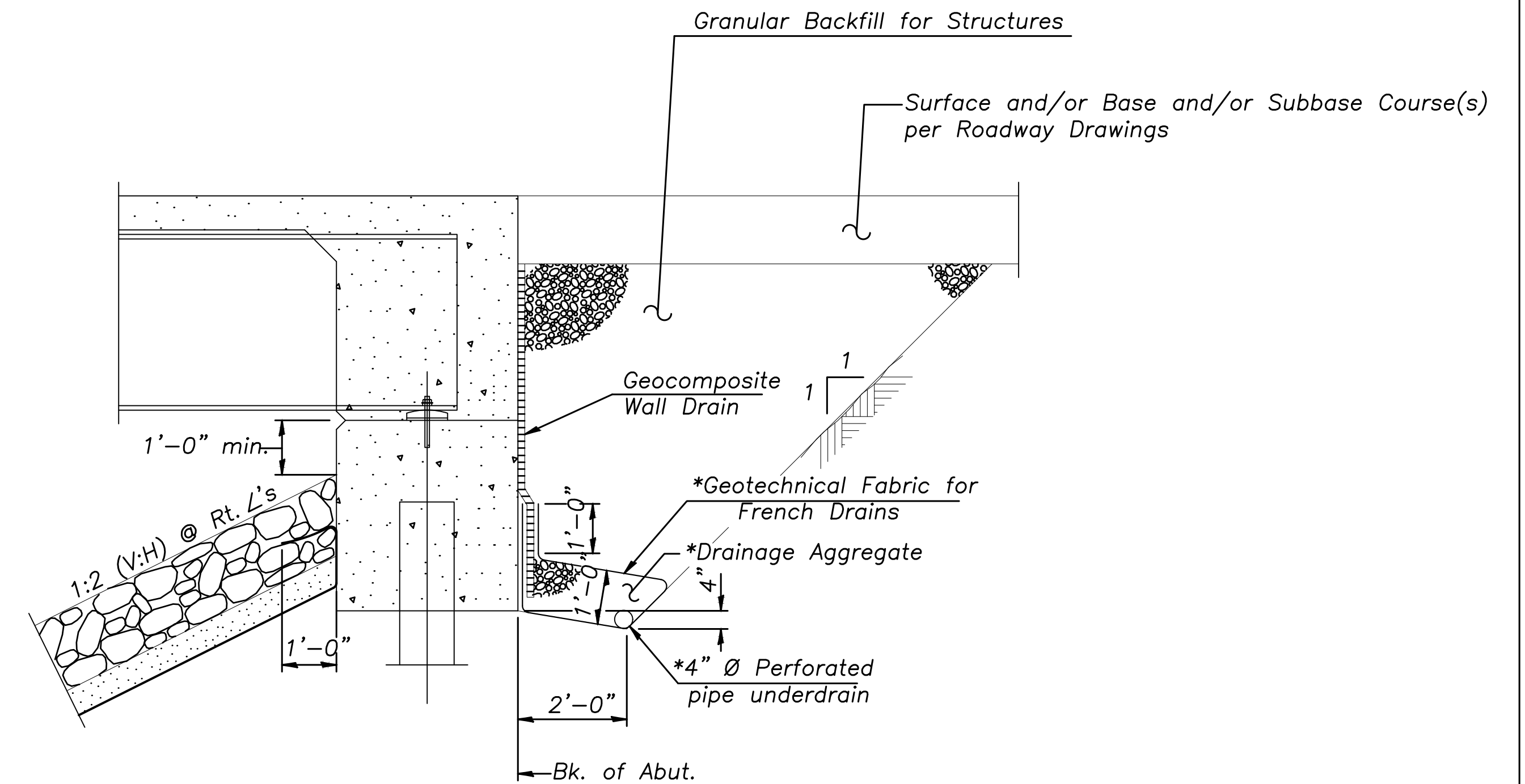
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except construction as shown in the plans. This shall include the placement of materials for run-arounds, causeways, ect. Any permit application by the Contractor shall refer to the IDNR Construction permit number DS2019109 allowing permanent construction as shown in the contract plans.

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.

Load carrying components designated "CVN" shall conform to the Charpy V-notch Testing Requirement, Zone 2.

The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection. Forms for deck slab shall be removed prior to placement of bridge approach slab.



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

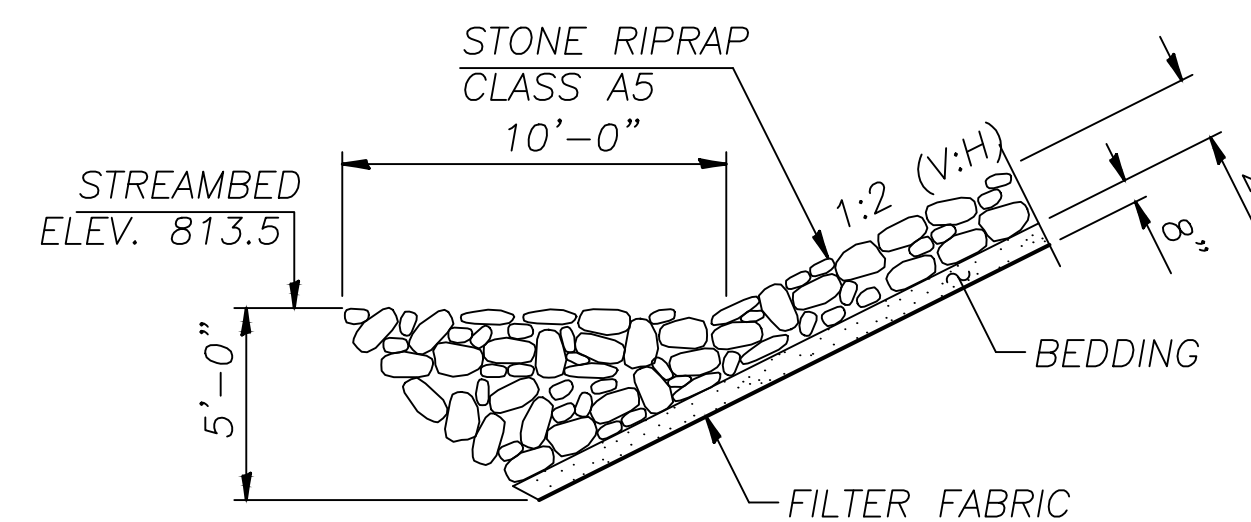
*Included in the cost of Pipe Underdrains for Structures.
 (See Special Provisions)

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 601101).

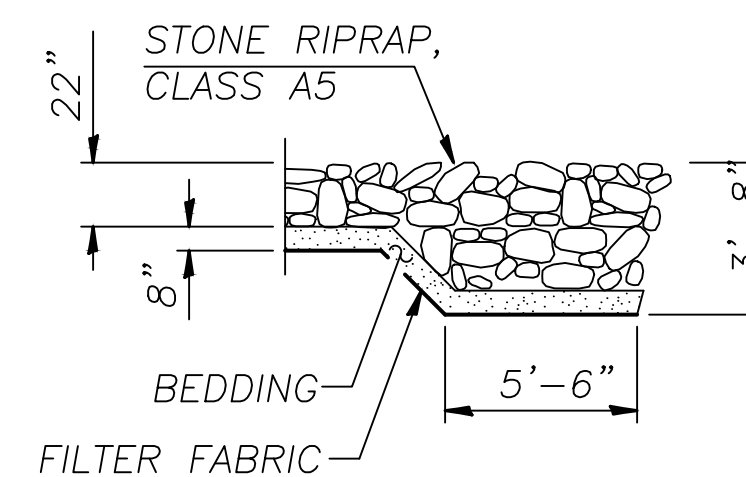
TOTAL BILL OF MATERIAL

CODE	ITEM	UNIT	SUPER	SUB	TOTAL
20300100	Channel Excavation	Cu Yd	-	1315	1315
28100109	Stone Riprap, Class A5	Sq Yd	-	444	444
28200200	Filter Fabric	Sq Yd	-	444	444
50100100	Removal Of Existing Structures	Each	0.5	0.5	1
50200100	Structure Excavation	Cu Yd	-	181	181
50200300	Cofferdam Excavation	Cu Yd	-	100	100
50300225	Concrete Structures	Cu Yd	-	112.4	112.4
50300255	Concrete Superstructure	Cu Yd	174.9	-	174.9
50300260	Bridge Deck Grooving	Sq Yd	576	-	576
50300300	Protective Coat	Sq Yd	674	-	674
50500105	Furnishing And Erecting Structural Steel	Lsum	1	-	1
50500505	Stud Shear Connectors	Each	4896	-	4896
50800205	Reinforcement Bars, Epoxy Coated	Pound	43570	18400	61970
50901050	Steel Railing, Type SM	Foot	335	-	335
51200958	Furnishing Metal Shell Piles 14" X 0.250"	Foot	-	1329	1329
51202305	Driving Piles	Foot	-	1329	1329
51203200	Test Pile Metal Shells	Each	-	4	4
51500100	Name Plates	Each	1	-	1
52100520	Anchor Bolts, 1"	Each	-	24	24
52100530	Anchor Bolts, 1 1/4"	Each	-	24	24
58600101	Granular Backfill For Structures	Cu Yd	-	160	160
59100100	Geocomposite Wall Drain	Sq Yd	-	82	82
Z0046304	Pipe Underdrains For Structures 4"	Foot	-	168	168

Notes:
 Protective Coat shall be applied to top & both sides of deck.



SECTION A-A



SECTION B-B



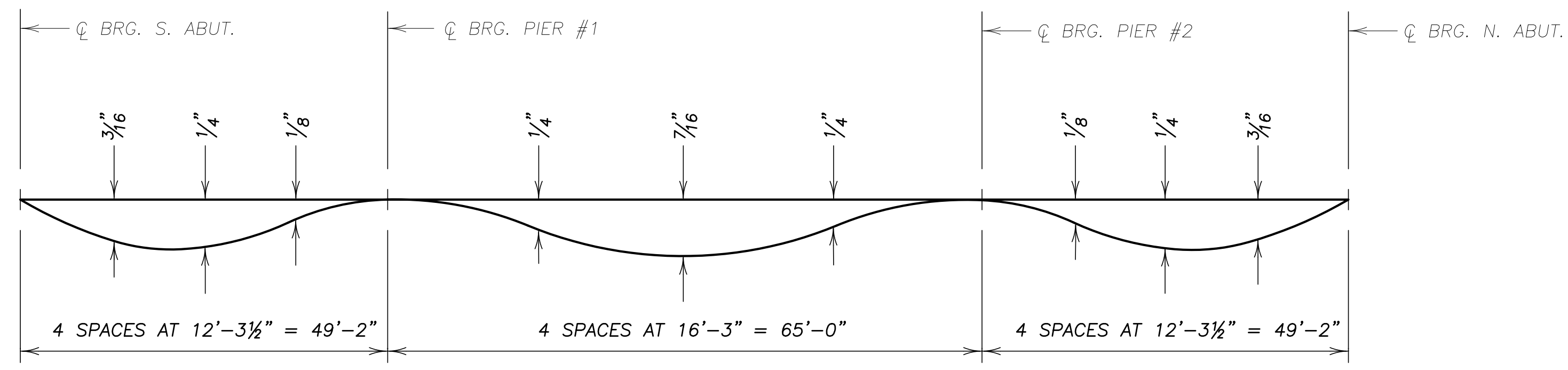
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PLOT DATE = 1/22/20	CHECKED = CC	REVISED =
FILE NAME = survey ctc-2190055.dwg	DATE = 12/30/2019	REVISED =

**DEKALB COUNTY
 HIGHWAY DEPARTMENT**

GENERAL BRIDGE DATA

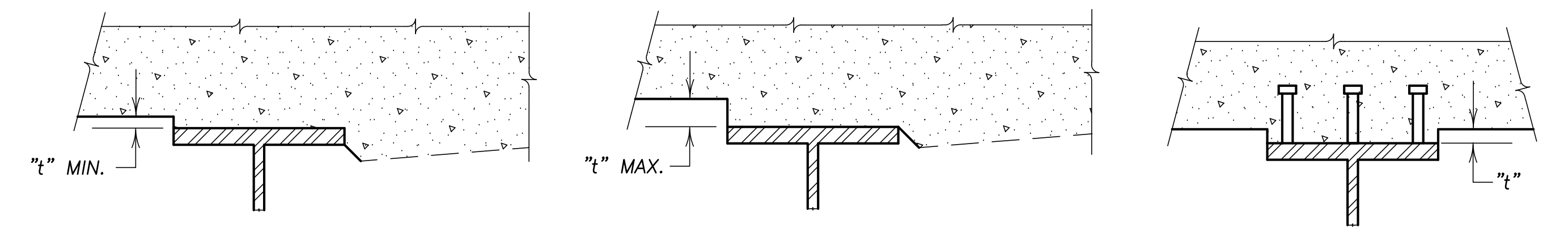
TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	12
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -



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 IN TABLES.



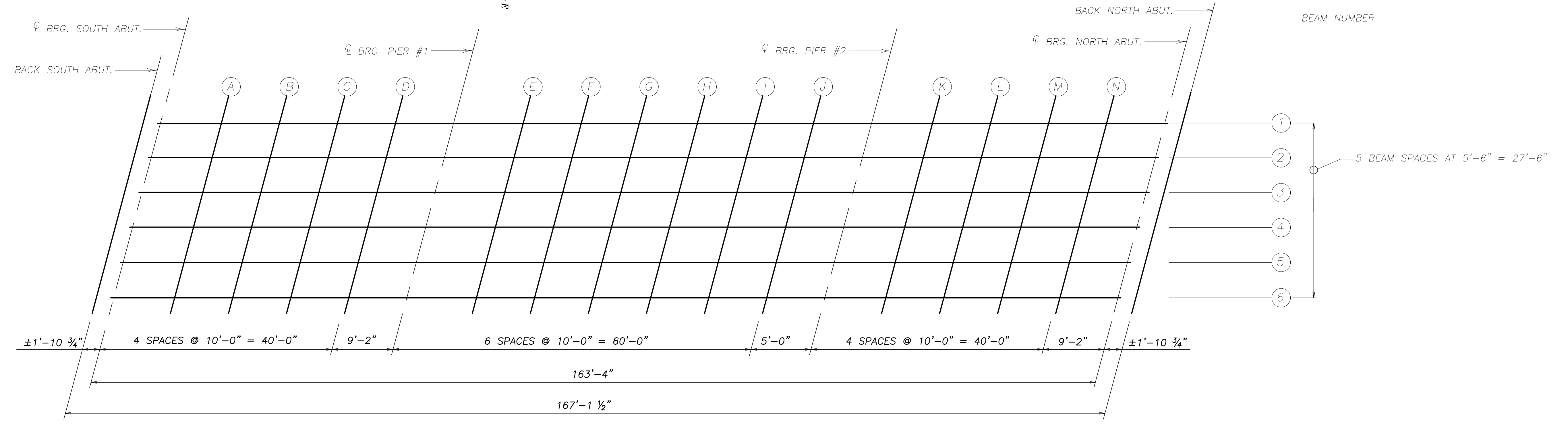
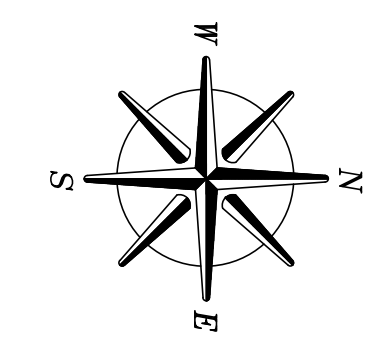
AT MINIMUM FILLET
EXTERIOR BEAM

AT MAXIMUM FILLET
EXTERIOR BEAM

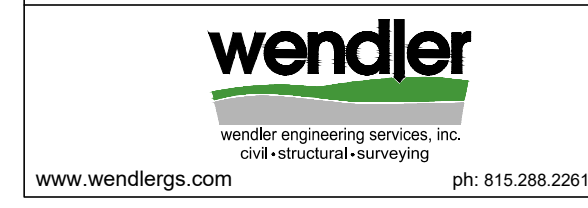
COMPOSITE
INTERIOR BEAM

NOTE: TO DETERMINE "t" - AFTER ALL STRUCTURAL STEEL HAS BEEN ERECTED, ELEVATIONS OF TOP FLANGES OF THE BEAMS SHALL BE TAKEN AT INTERVALS SHOWN BELOW. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATIONS ADJUSTED FOR DEAD LOAD DEFLECTIONS" SHOWN BELOW, MINUS SLAB THICKNESS, EQUALS THE FILLET HEIGHTS "t" ABOVE TOP FLANGE OF BEAMS.

FILLET HEIGHTS



PLAN



USER NAME = chad_clauson	DESIGNED - SAB	REVISED -
PLOT SCALE = -	DRAWN - DJV	REVISED -
PLOT DATE = 11/26/2019	CHECKED -	REVISED -
FILE NAME = dkel.dwg	DATE = 11/26/2019	REVISED -

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

**DECK ELEVATIONS LAYOUT
STRUCTURE NO. 019-4410**

SCALE: - SHEET - OF - SHEETS STA. 10+00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	13
CONTRACT NO. 87723			ILLINOIS FED. AID PROJECT	

BEAM #1

Location	Station	Offset	Theoretical Grade	Theoretical Grade Adjusted for Dead Load Deflection
Bk S Abut	14 + 84.37	13.933	825.84	825.84
CL Brg S. Abutment	14 + 86.27	13.933	825.86	825.86
A	14 + 96.27	13.933	825.95	825.96
B	15 + 6.27	13.933	826.03	826.05
C	15 + 16.27	13.933	826.09	826.11
D	15 + 26.27	13.933	826.15	826.15
CL Brg Pier No. 1	15 + 35.43	13.933	826.19	826.19
E	15 + 45.43	13.933	826.22	826.23
F	15 + 55.43	13.933	826.24	826.27
G	15 + 65.43	13.933	826.25	826.29
H	15 + 75.43	13.933	826.25	826.28
I	15 + 85.43	13.933	826.23	826.25
J	15 + 95.43	13.933	826.20	826.21
CL Brg Pier No. 2	16 + 0.43	13.933	826.19	826.19
K	16 + 10.43	13.933	826.14	826.15
L	16 + 20.43	13.933	826.09	826.10
M	16 + 30.43	13.933	826.02	826.04
N	16 + 40.43	13.933	825.94	825.95
CL Brg N. Abutment	16 + 49.60	13.933	825.85	825.85
Bk N Abut	16 + 51.50	13.933	825.84	825.84

BEAM #2

Location	Station	Offset	Theoretical Grade	Theoretical Grade Adjusted for Dead Load Deflection
Bk S Abut	14 + 82.87	8.360	825.91	825.91
CL Brg S. Abutment	14 + 84.77	8.360	825.93	825.93
A	14 + 94.77	8.360	826.02	826.04
B	15 + 4.77	8.360	826.10	826.12
C	15 + 14.77	8.360	826.17	826.19
D	15 + 24.77	8.360	826.23	826.23
CL Brg Pier No. 1	15 + 33.94	8.360	826.27	826.27
E	15 + 43.94	8.360	826.30	826.32
F	15 + 53.94	8.360	826.33	826.35
G	15 + 63.94	8.360	826.34	826.37
H	15 + 73.94	8.360	826.33	826.37
I	15 + 83.94	8.360	826.32	826.34
J	15 + 93.94	8.360	826.30	826.30
CL Brg Pier No. 2	15 + 98.94	8.360	826.28	826.28
K	16 + 8.94	8.360	826.24	826.24
L	16 + 18.94	8.360	826.18	826.20
M	16 + 28.94	8.360	826.12	826.13
N	16 + 38.94	8.360	826.04	826.05
CL Brg N. Abutment	16 + 48.11	8.360	825.96	825.96
Bk N Abut	16 + 50.00	8.360	825.94	825.94

BEAM #3

Location	Station	Offset	Theoretical Grade	Theoretical Grade Adjusted for Dead Load Deflection
Bk S Abut	14 + 81.38	2.787	825.99	825.99
CL Brg S. Abutment	14 + 83.28	2.787	826.00	826.00
A	14 + 93.28	2.787	826.10	826.11
B	15 + 3.28	2.787	826.18	826.20
C	15 + 13.28	2.787	826.25	826.26
D	15 + 23.28	2.787	826.31	826.31
CL Brg Pier No. 1	15 + 32.45	2.787	826.35	826.35
E	15 + 42.45	2.787	826.39	826.40
F	15 + 52.45	2.787	826.41	826.44
G	15 + 62.45	2.787	826.42	826.46
H	15 + 72.45	2.787	826.42	826.46
I	15 + 82.45	2.787	826.41	826.43
J	15 + 92.45	2.787	826.39	826.39
CL Brg Pier No. 2	15 + 97.45	2.787	826.37	826.37
K	16 + 7.45	2.787	826.33	826.34
L	16 + 17.45	2.787	826.28	826.29
M	16 + 27.45	2.787	826.21	826.23
N	16 + 37.45	2.787	826.14	826.15
CL Brg N. Abutment	16 + 46.61	2.787	826.06	826.06
Bk N Abut	16 + 48.51	2.787	826.04	826.04

BEAM #4

Location	Station	Offset	Theoretical Grade	Theoretical Grade Adjusted for Dead Load Deflection
Bk S Abut	14 + 79.89	2.787	825.97	825.97
CL Brg S. Abutment	14 + 81.79	2.787	825.99	825.99
A	14 + 91.79	2.787	826.08	826.10
B	15 + 1.79	2.787	826.17	826.19
C	15 + 11.79	2.787	826.24	826.25
D	15 + 21.79	2.787	826.30	826.30
CL Brg Pier No. 1	15 + 30.95	2.787	826.34	826.34
E	15 + 40.95	2.787	826.38	826.39
F	15 + 50.95	2.787	826.41	826.44
G	15 + 60.95	2.787	826.42	826.46
H	15 + 70.95	2.787	826.42	826.46
I	15 + 80.95	2.787	826.41	826.43
J	15 + 90.95	2.787	826.39	826.40
CL Brg Pier No. 2	15 + 95.95	2.787	826.38	826.38
K	16 + 5.95	2.787	826.34	826.34
L	16 + 15.95	2.787	826.29	826.30
M	16 + 25.95	2.787	826.22	826.24
N	16 + 35.95	2.787	826.15	826.16
CL Brg N. Abutment	16 + 45.12	2.787	826.07	826.07
Bk N Abut	16 + 47.02	2.787	826.05	826.05

BEAM #5

Location	Station	Offset	Theoretical Grade	Theoretical Grade Adjusted for Dead Load Deflection
Bk S Abut	14 + 78.63	8.360	825.87	825.87
CL Brg S. Abutment	14 + 80.29	8.360	825.89	825.89
A	14 + 90.29	8.360	825.98	825.99
B	15 + 0.29	8.360	826.07	826.07
C	15 + 10.29	8.360	826.14	826.15
D	15 + 20.29	8.360	826.20	826.21
CL Brg Pier No. 1	15 + 29.46	8.360	826.25	826.26
E	15 + 39.46	8.360	826.29	826.29
F	15 + 49.46	8.360	826.32	826.32
G	15 + 59.46	8.360	826.33	826.34
H	15 + 69.46	8.360	826.34	826.34
I	15 + 79.46	8.360	826.33	826.33
J	15 + 89.46	8.360	826.31	826.31
CL Brg Pier No. 2	15 + 94.46	8.360	826.29	826.30
K	16 + 4.46	8.360	826.26	826.26
L	16 + 14.46	8.360	826.21	826.21
M	16 + 24.46	8.360	826.15	826.15
N	16 + 34.46	8.360	826.07	826.08
CL Brg N. Abutment	16 + 43.63	8.360	826.00	826.00
Bk N Abut	16 + 45.29	8.360	825.98	825.99

BEAM #6

Location	Station	Offset	Theoretical Grade	Theoretical Grade Adjusted for Dead Load Deflection
Bk S Abut	14 + 76.90	13.933	825.76	825.76
CL Brg S. Abutment	14 + 78.80	13.933	825.78	825.78
A	14 + 88.80	13.933	825.88	825.90
B	14 + 98.80	13.933	825.97	825.99
C	15 + 8.80	13.933	826.05	826.06
D	15 + 18.80	13.933	826.11	826.11
CL Brg Pier No. 1	15 + 27.97	13.933	826.16	826.16
E	15 + 37.97	13.933	826.20	826.21
F	15 + 47.97	13.933	826.23	826.25
G	15 + 57.97	13.933	826.24	826.28
H	15 + 67.97	13.933	826.25	826.28
I	15 + 77.97	13.933	826.24	826.26
J	15 + 87.97	13.933	826.23	826.23
CL Brg Pier No. 2	15 + 92.97	13.933	826.21	826.21
K	16 + 2.97	13.933	826.18	826.18
L	16 + 12.97	13.933	826.13	826.14
M	16 + 22.97	13.933	826.07	826.09
N	16 + 32.97	13.933	826.00	826.01
CL Brg N. Abutment	16 + 42.13	13.933	825.92	825.92
Bk N Abut	16 + 44.03	13.933	825.91	825.91



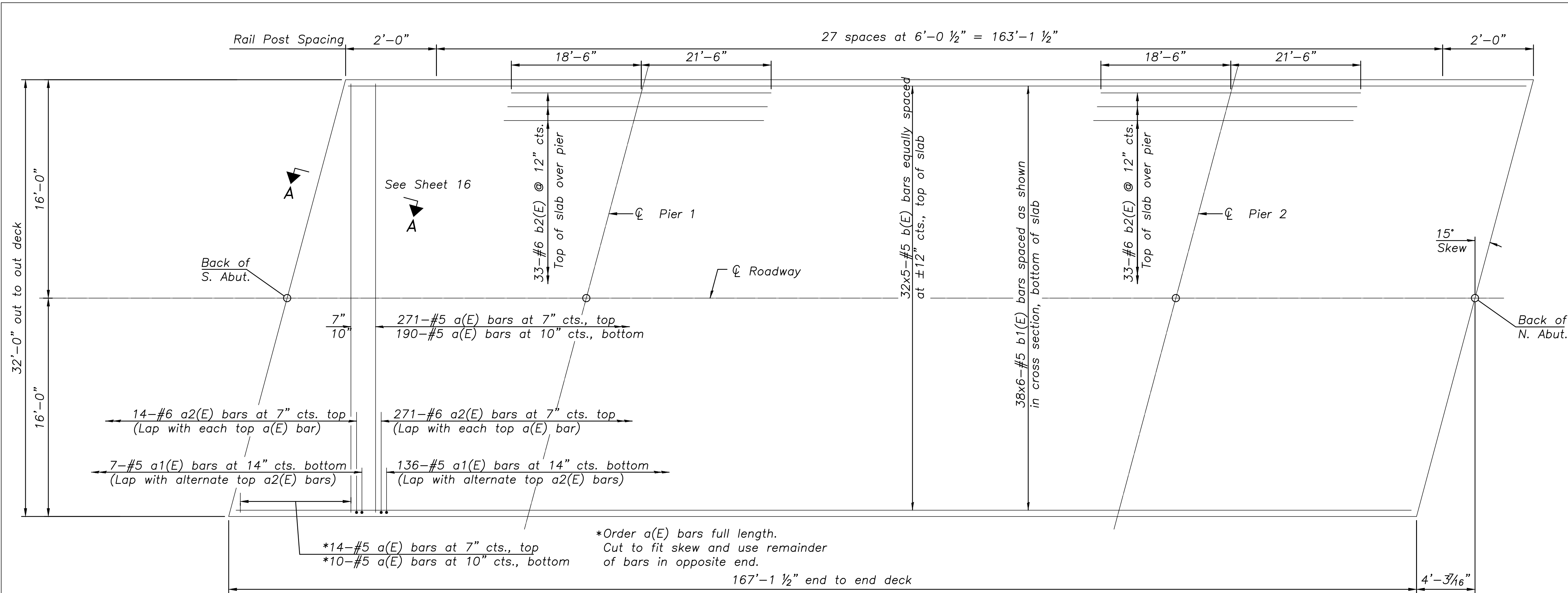
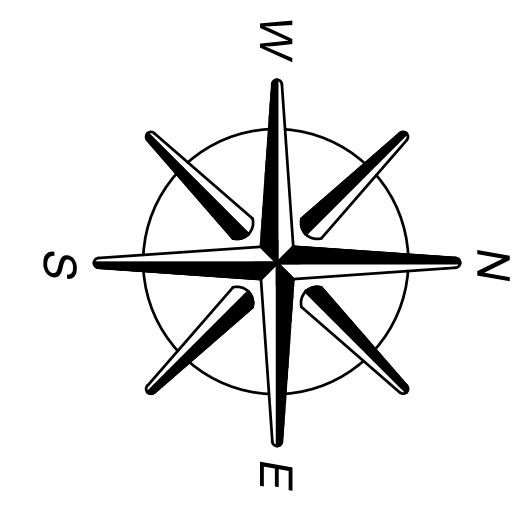
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PLOT DATE = 11/26/2019	CHECKED - -	REVISED -
FILE NAME = dkel.dwg	DATE = 01/24/2020	REVISED -

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 019-4410**

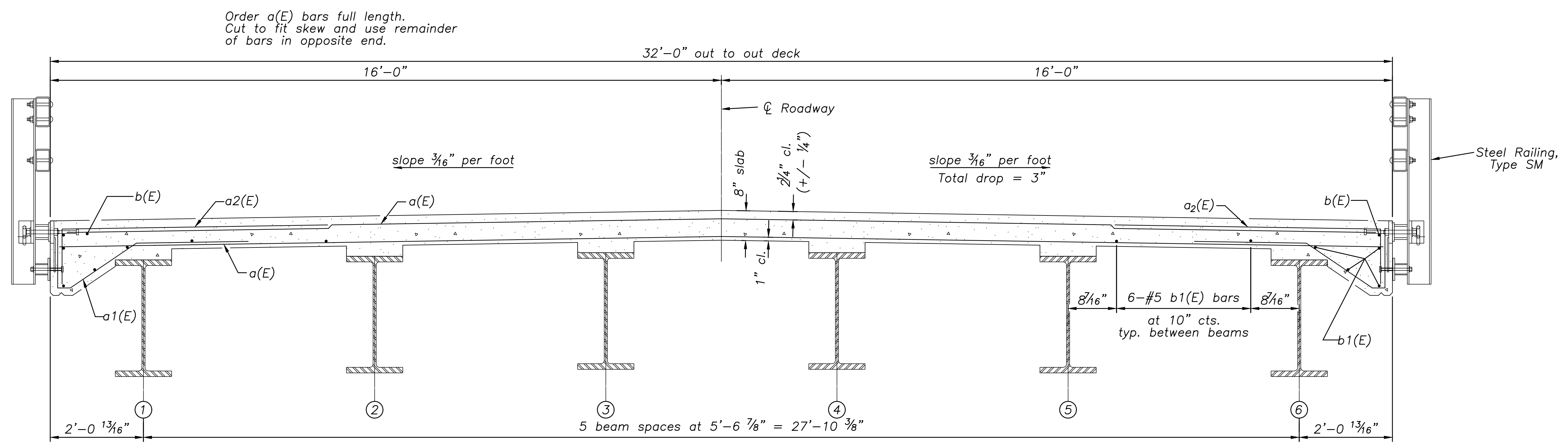
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T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	14
CONTRACT NO. 87723			ILLINOIS FED. AID PROJECT -	



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

PLAN



CROSS SECTION
(Looking Up Station)

SI-SB-1-L($\leq 30^\circ$) (modified) 8-11-2017



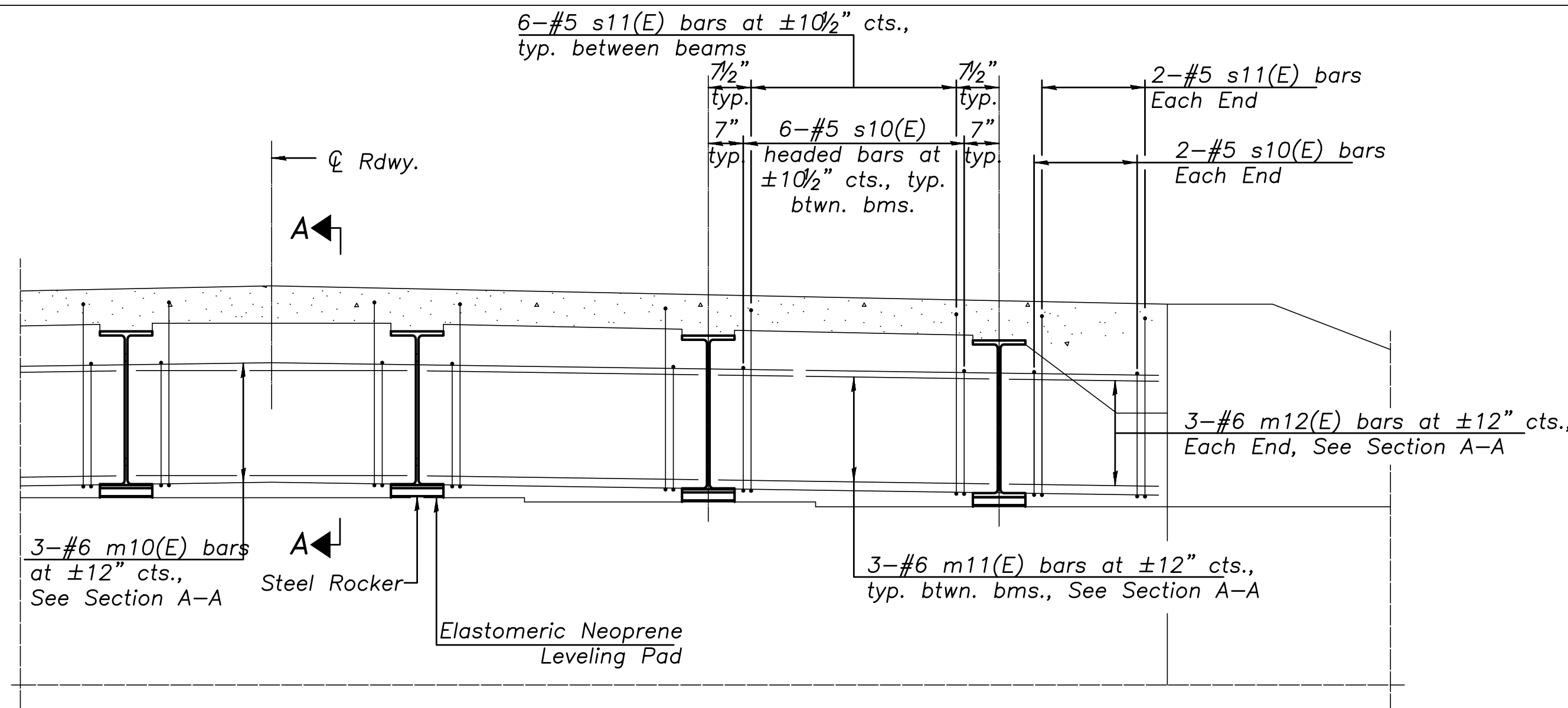
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FILE NAME = survey_ctc-2190055.dwg	DATE = 12/26/2019	REVISED =

**DEKALB COUNTY
HIGHWAY DEPARTMENT**

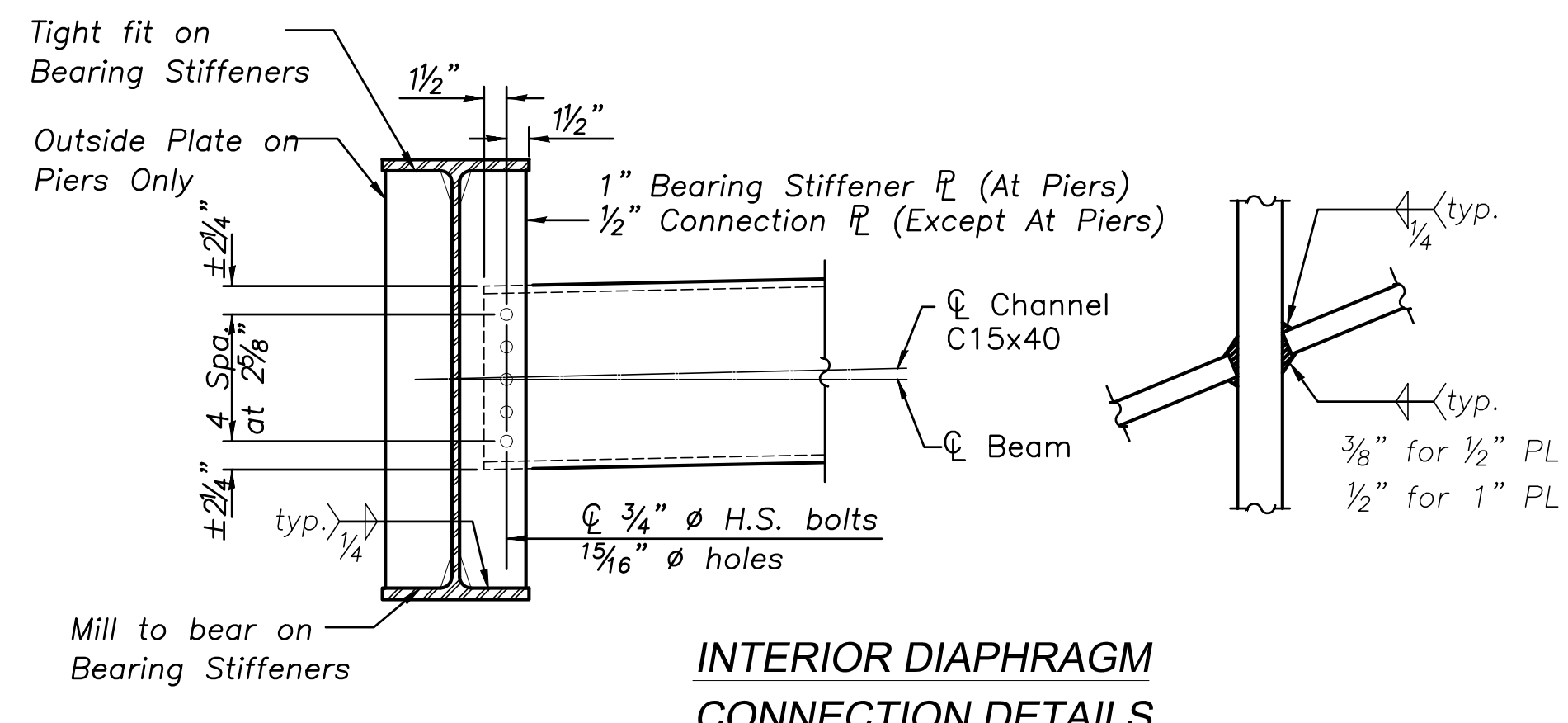
SUPERSTRUCTURE

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

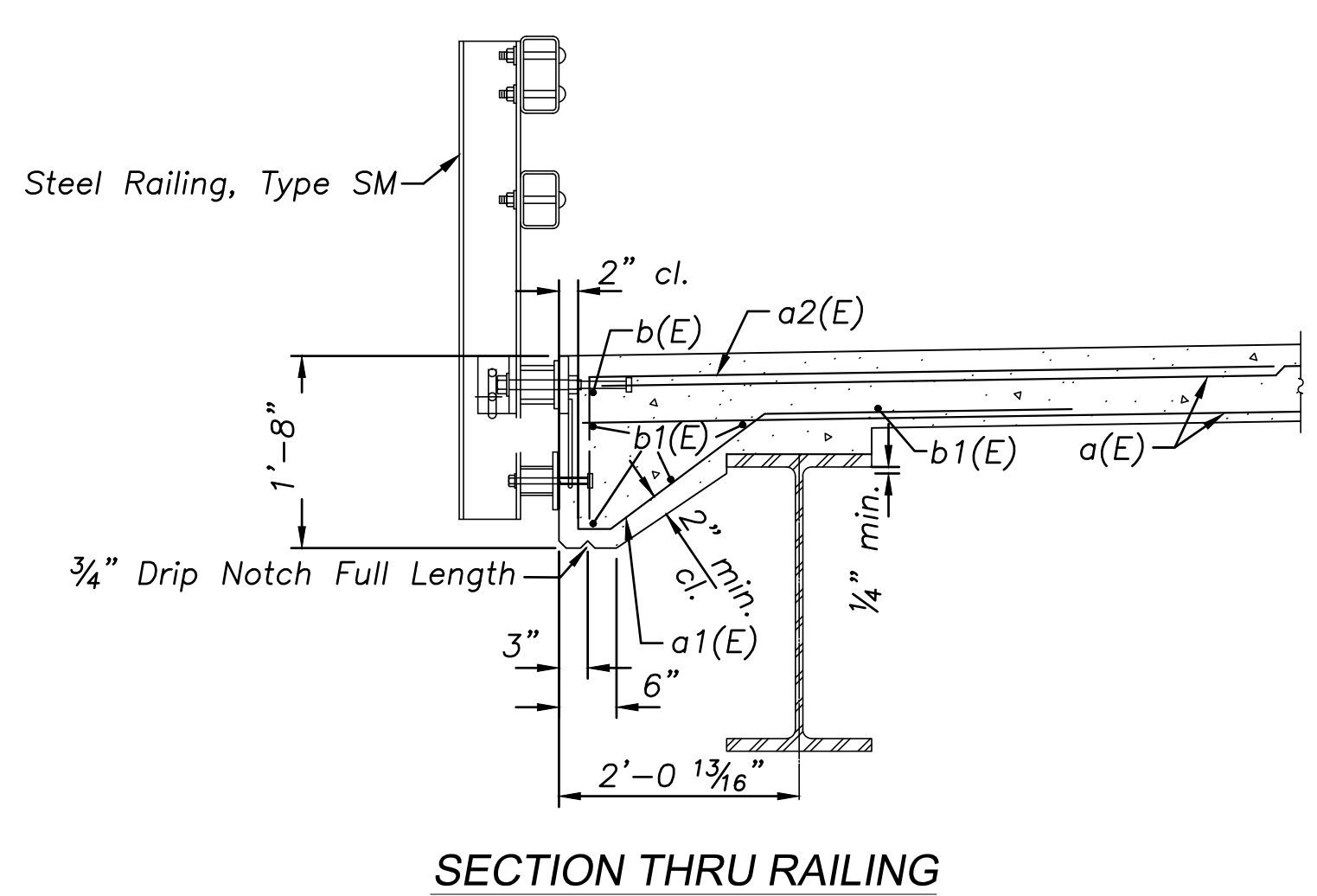
TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	15
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				



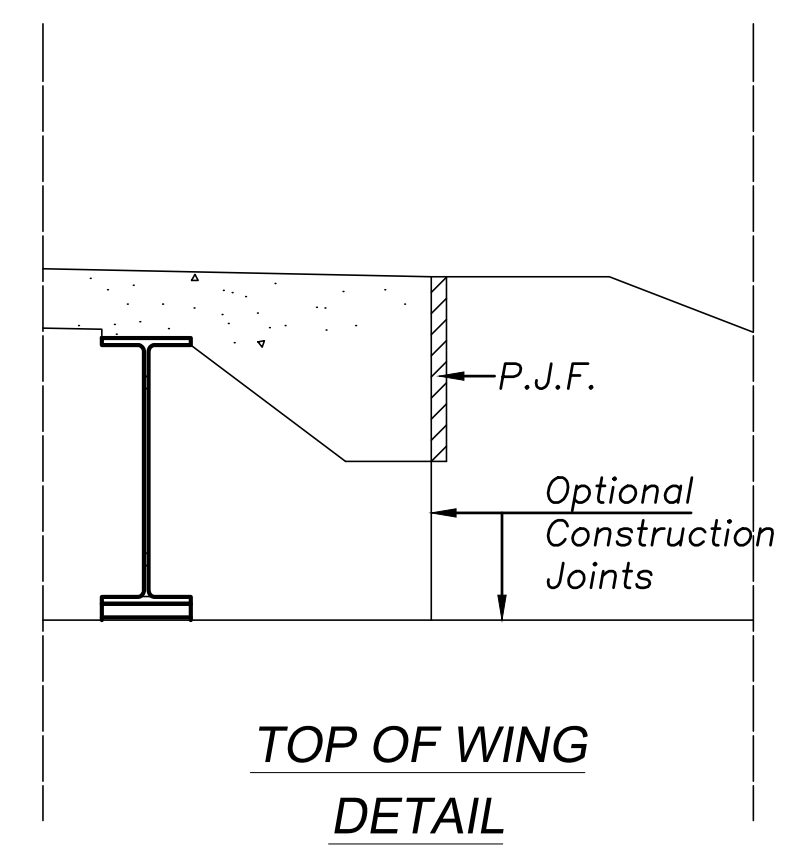
DIAPHRAGM AT ABUTMENT



INTERIOR DIAPHRAGM CONNECTION DETAILS



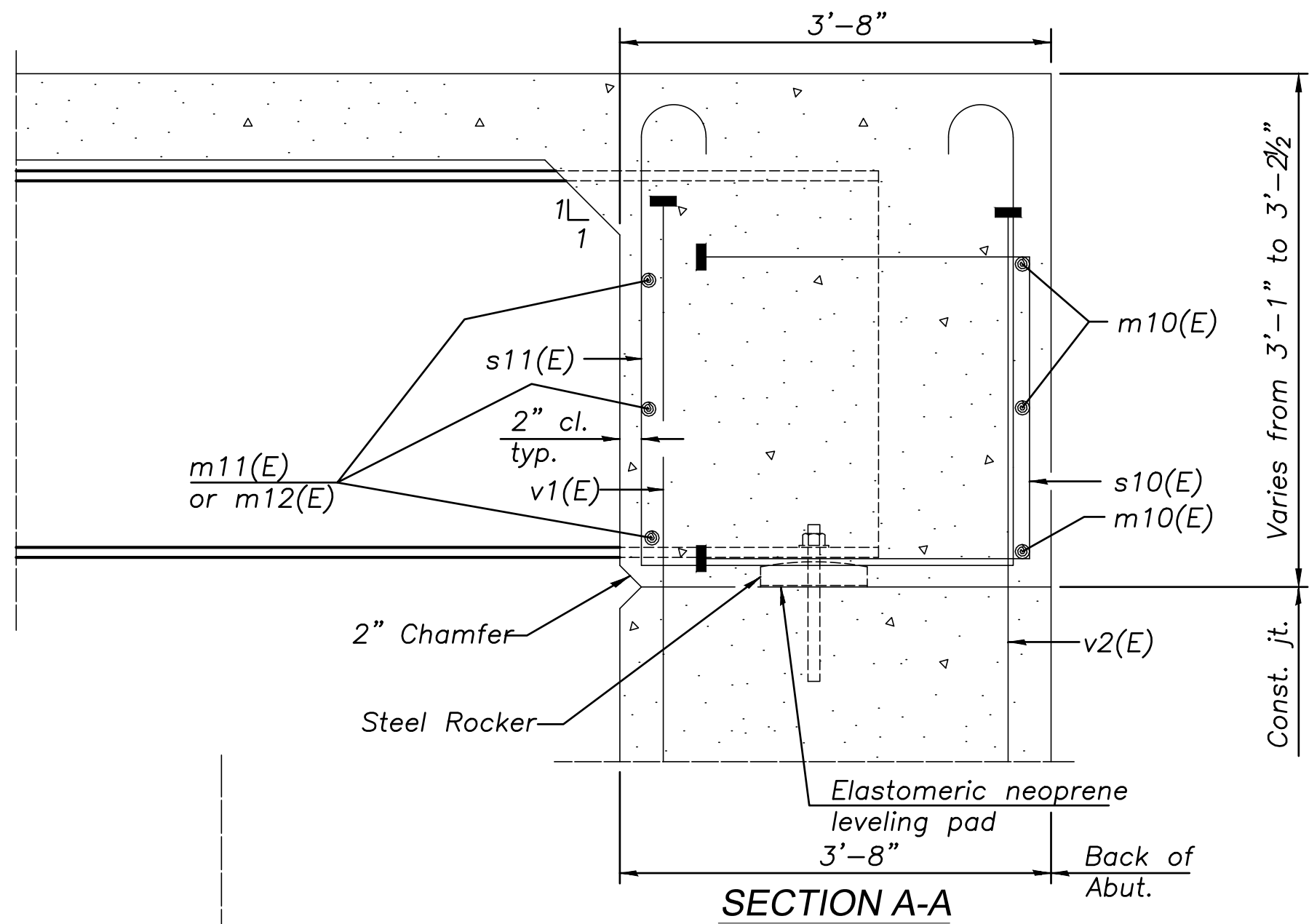
SECTION THRU RAILING



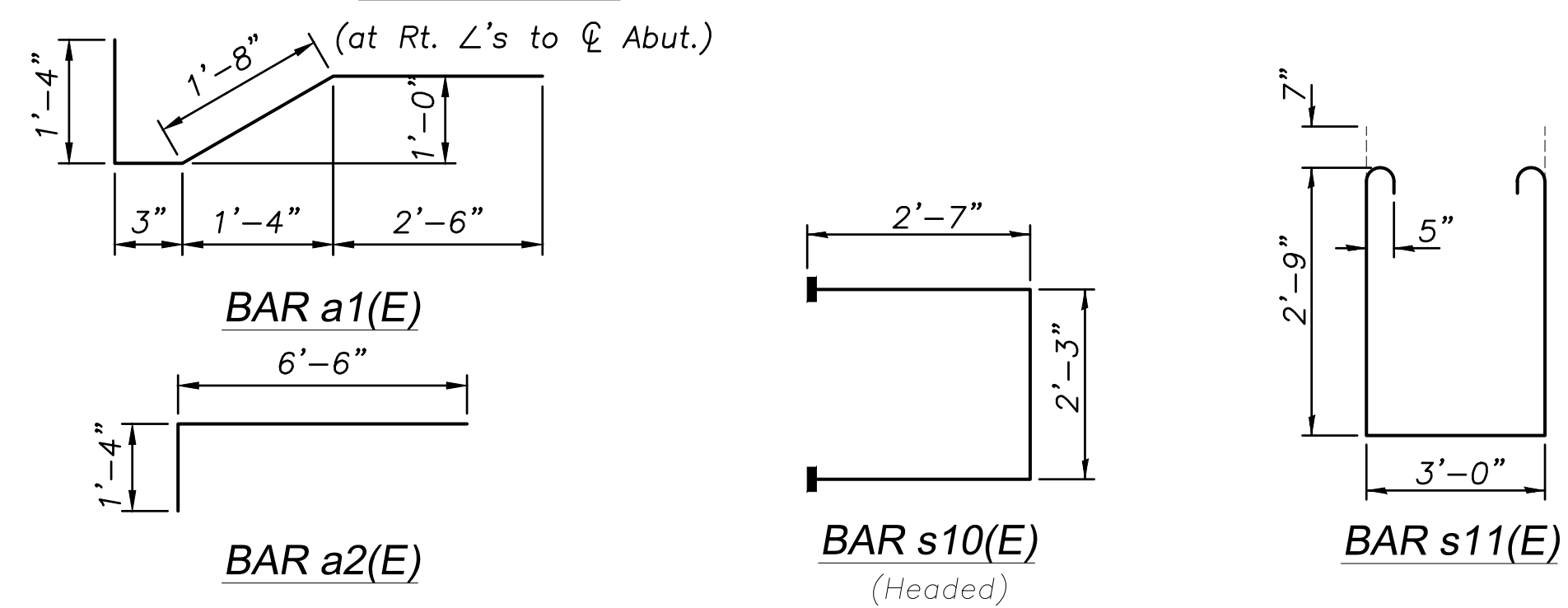
TOP OF WING DETAIL

INTERIOR GIRDER MOMENT TABLE		
0.4 Sp. 1 or 0.6 Sp. 2		
		Pier
I_s	(in ⁴)	5660
$I_c(n)$	(in ⁴)	15130
$I_c(3n)$	(in ⁴)	11040
$I_c(cr)$	(in ⁴)	7402.65
S_s	(in ³)	414
$S_c(n)$	(in ³)	1422.84
$S_c(3n)$	(in ³)	711.70
$S_c(cr)$	(in ³)	464.92
DC1	(k/')	0.836
M_{DC1}	(k)	139.22
DC2	(k/')	0.033
M_{DC2}	(k)	6.26
DW	(k/')	0.267
M_{DW}	(k)	52.5
M_{LL+IM}	(k)	445
M_u (Strength I)	(k)	1039
$\phi_r M_n$	(k)	3202
f_s DC1	(ksi)	4.04
f_s DC2	(ksi)	0.106
f_s DW	(ksi)	0.885
f_s (LL +IM)	(ksi)	3.75
f_s (Service II)	(ksi)	9.91
$0.95R_n F_y$	(ksi)	47.5
f_s (Total)(Strength I)	(ksi)	N/A
$\phi_r F_n$	(ksi)	39.57
V_f	(k)	110.2

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R_{DC1}	(k)	13.25
R_{DC2}	(k)	0.638
R_{DW}	(k)	5.34
R_{LL+IM}	(k)	48.6
R_{Total}	(k)	67.8



SECTION A-A



Notes:
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.

- 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 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.).
 $1.25(M_{DC1} + M_{DC2}) + 1.5M_{DW} + 1.75M_{LL+IM}$
- $\phi_r M_n$ 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_s DC1 + f_s DC2 + f_s DW + 1.3 f_s (LL+IM)
- $0.95R_n F_y$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi)
- f_s (Total): Sum of stresses as computed below on non-compact section (ksi).
 $1.25(f_s$ DC1 + f_s DC2) + 1.5 f_s DW + 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_f : Maximum factored shear range in span computed according to Article 6.10.10.

Note:
MLL and RLL include the effects of centrifugal force and superelevation.

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	485	#5	31'-8"	—
a1(E)	286	#5	5'-9"	┌
a2(E)	570	#6	7'-10"	┌
b(E)	160	#5	36'-3"	—
b1(E)	228	#5	30'-10"	—
b2(E)	66	#6	35'-0"	—
m10(E)	6	#6	32'-9"	—
m11(E)	30	#6	5'-3"	—
m12(E)	12	#6	1'-10"	—
s10(E)	68	#5	7'-5"	┌
s11(E)	68	#5	9'-8"	┌
Reinforcement Bars, Epoxy Coated		Lbs.	43,570	
Concrete Superstructure		Cu. Yds.	174.9	

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	16
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				

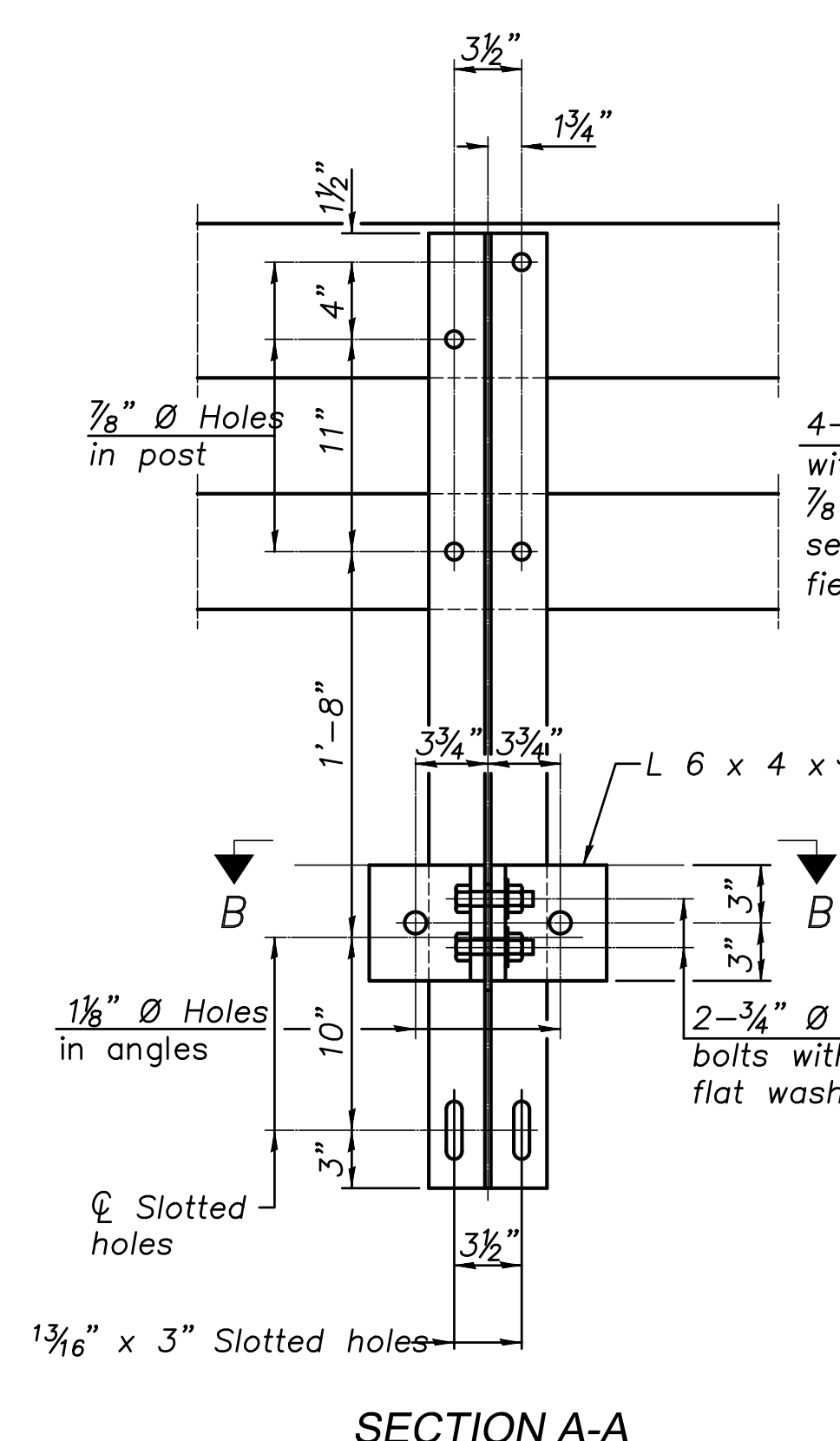


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PLOT DATE = 12/30/19	CHECKED = CC	REVISED =
FILE NAME = survey ctc-2190055.dwg	DATE = 12/26/2019	REVISED =

DEKALB COUNTY HIGHWAY DEPARTMENT

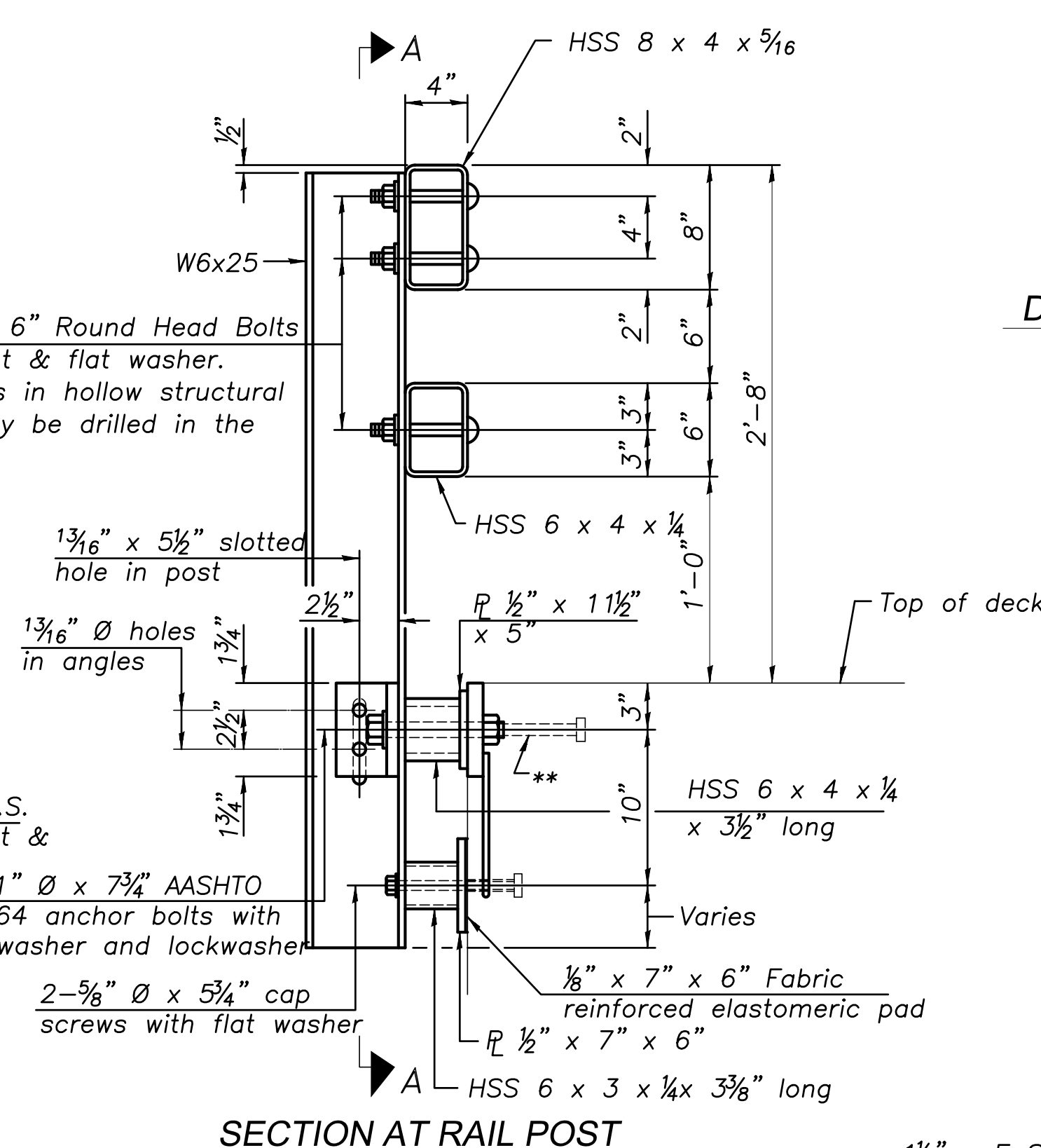
SUPERSTRUCTURE DETAILS

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

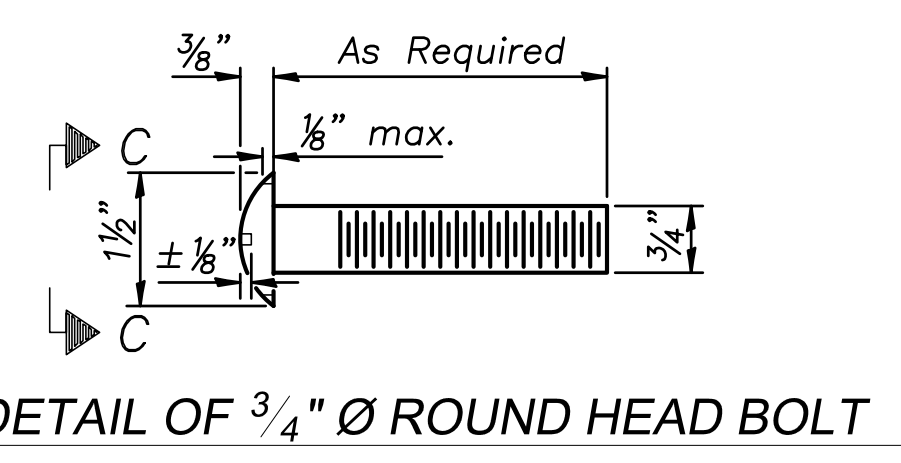


SECTION A-A

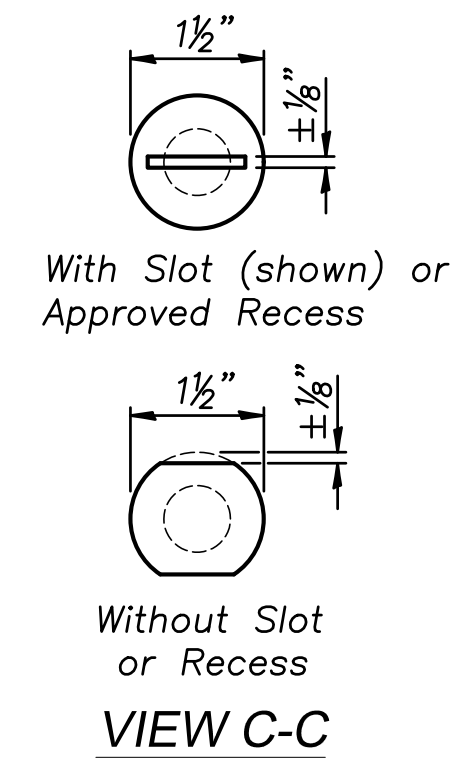
4-3/4" \varnothing x 6" Round Head Bolts with locknut & flat washer.
7/8" \varnothing holes in hollow structural section may be drilled in the field.



SECTION AT RAIL POST

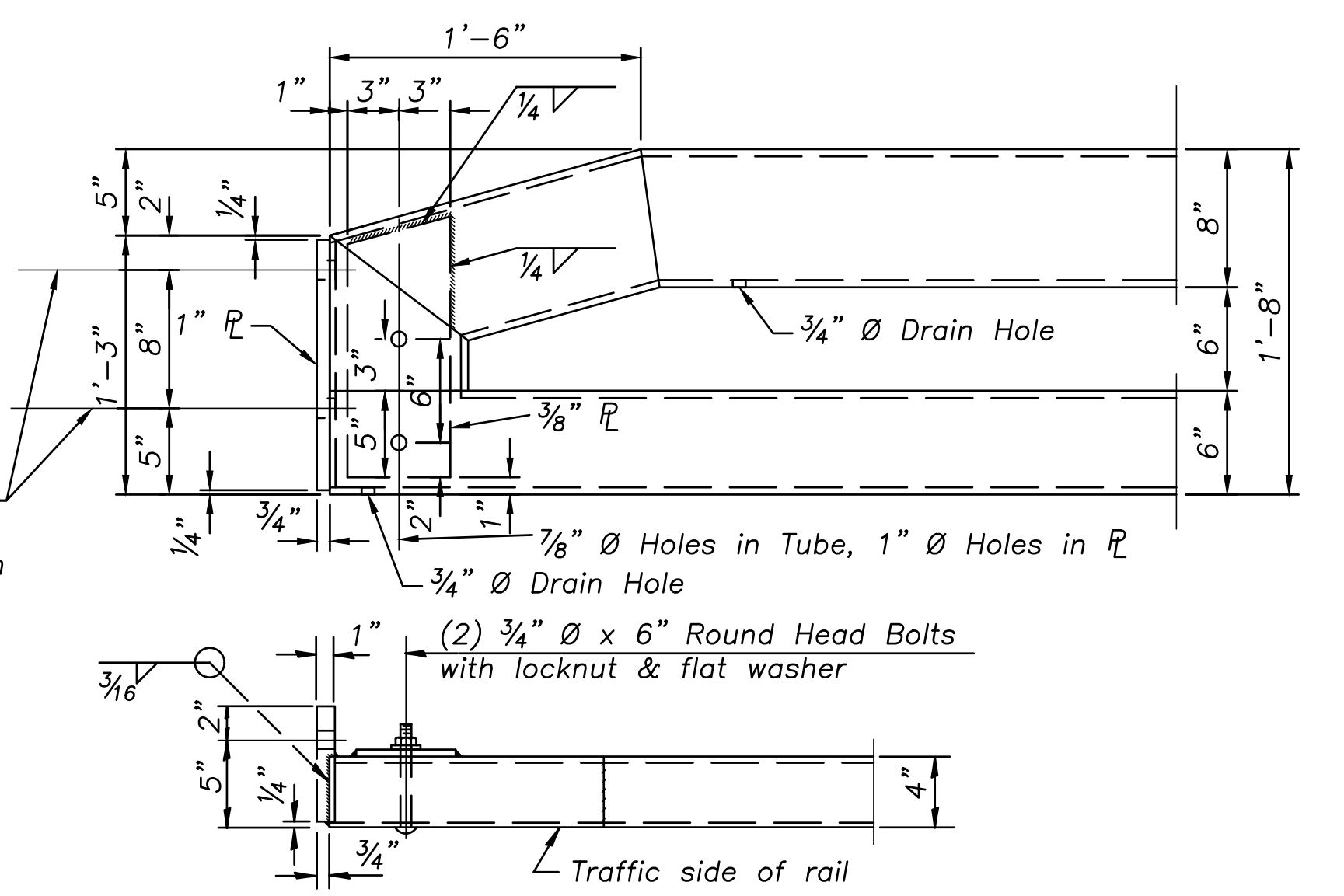


DETAIL OF 3/4" \varnothing ROUND HEAD BOLT

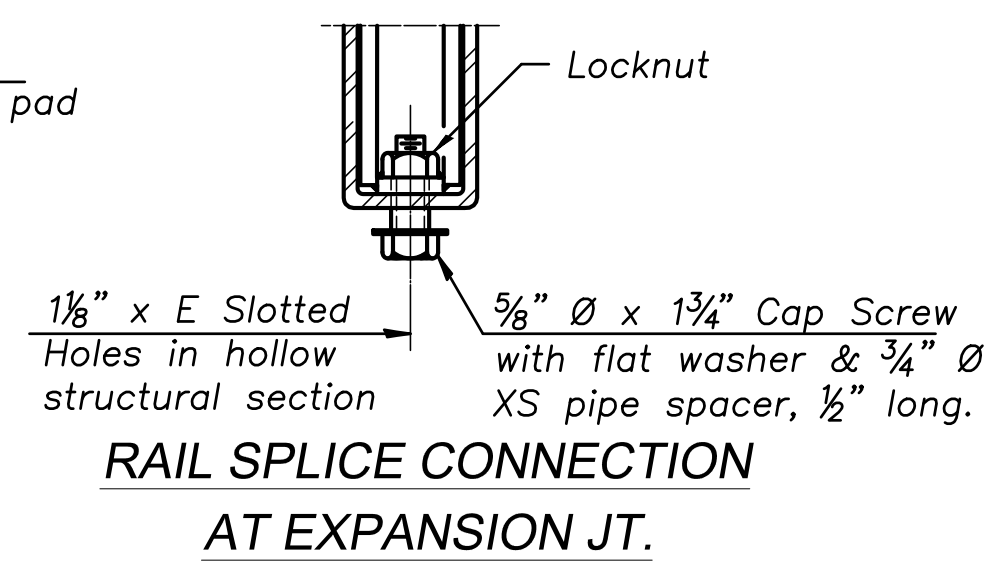


VIEW C-C

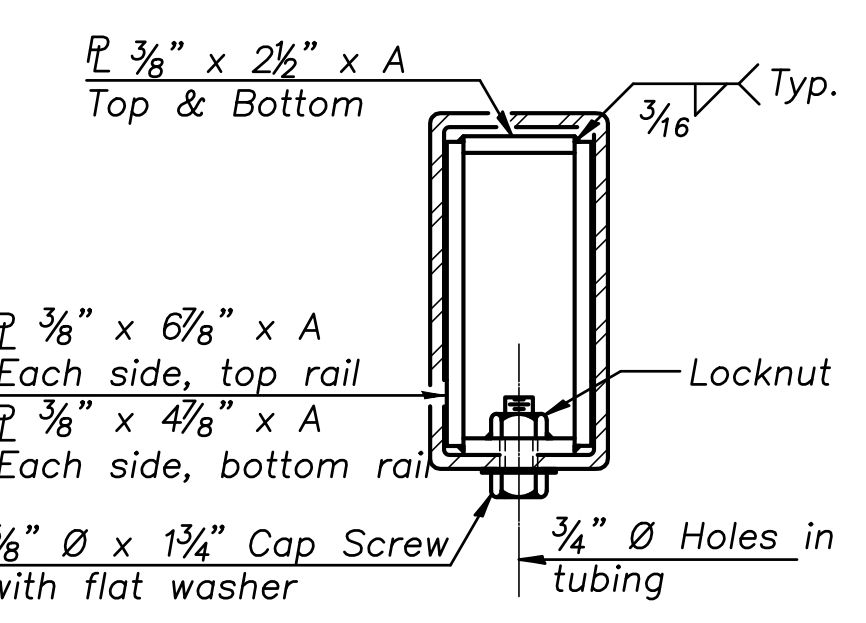
1 1/8" \varnothing Holes for 1" \varnothing x 4" Round Head Bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy. Std. 631026 or BLR 27-1.



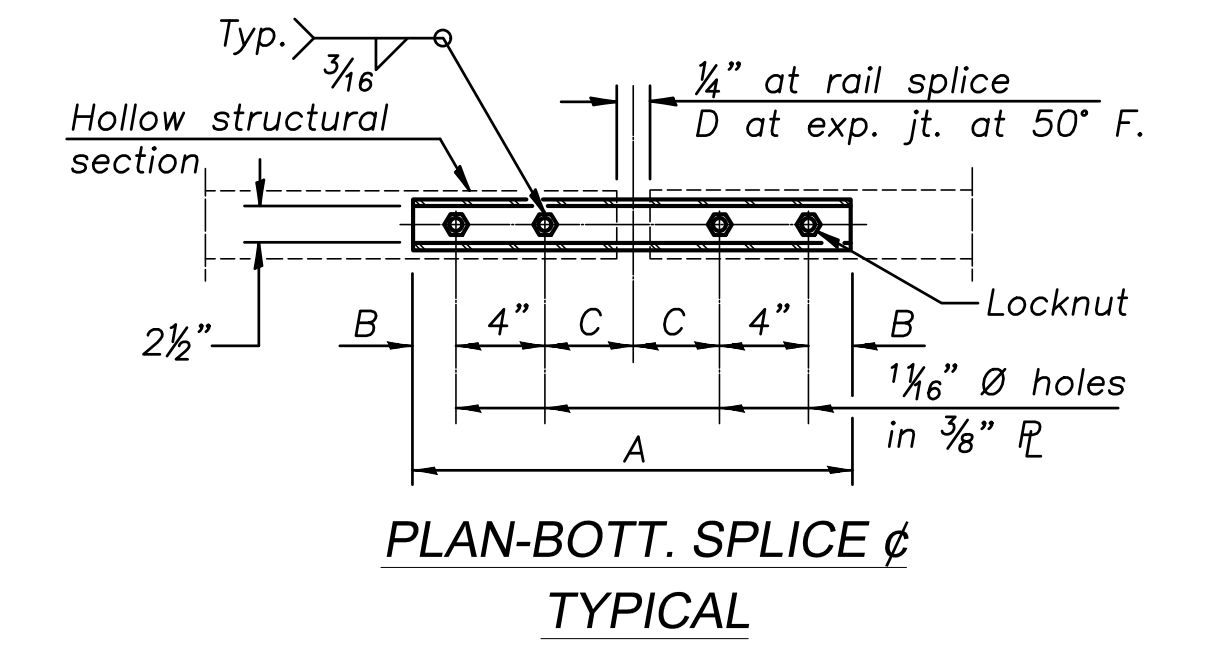
END OF RAIL DETAILS



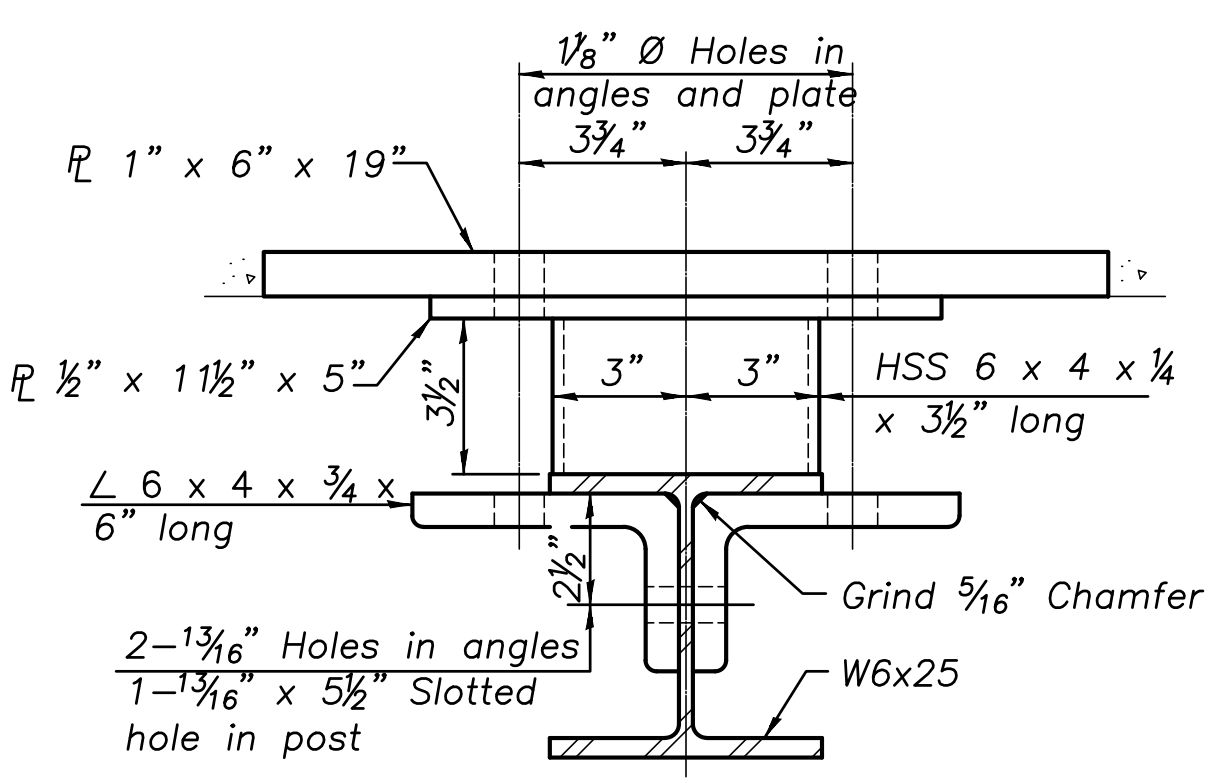
RAIL SPLICE CONNECTION AT EXPANSION JT.



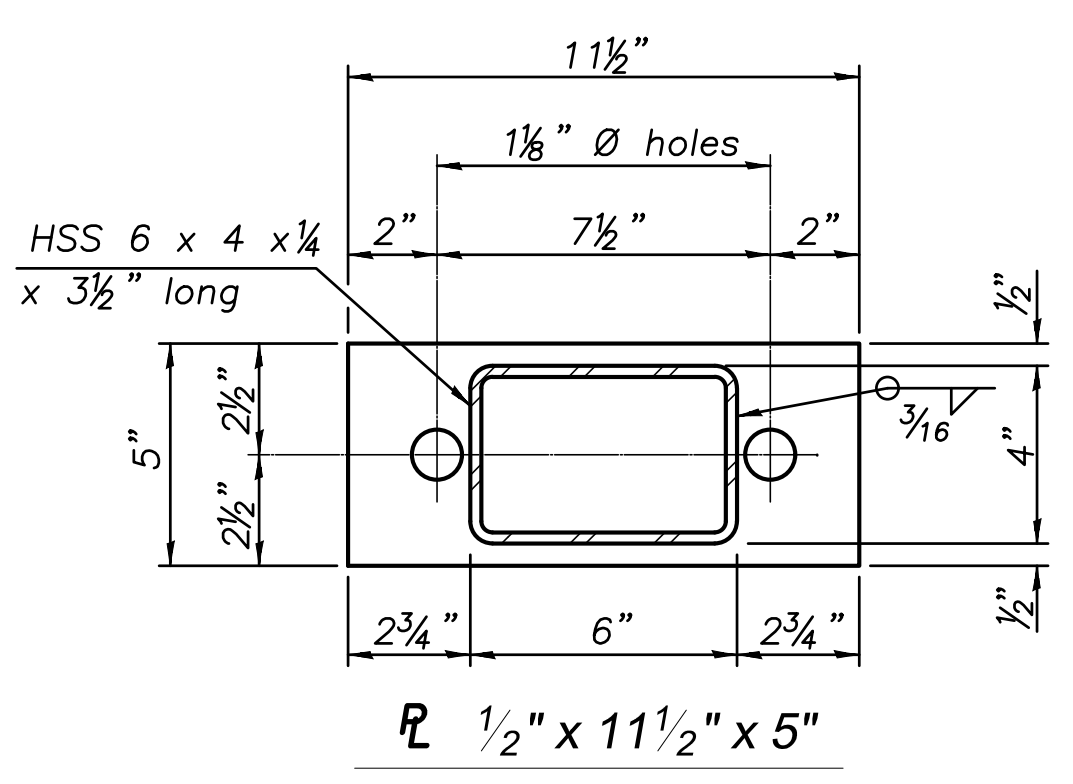
SECTION AT RAIL SPLICE



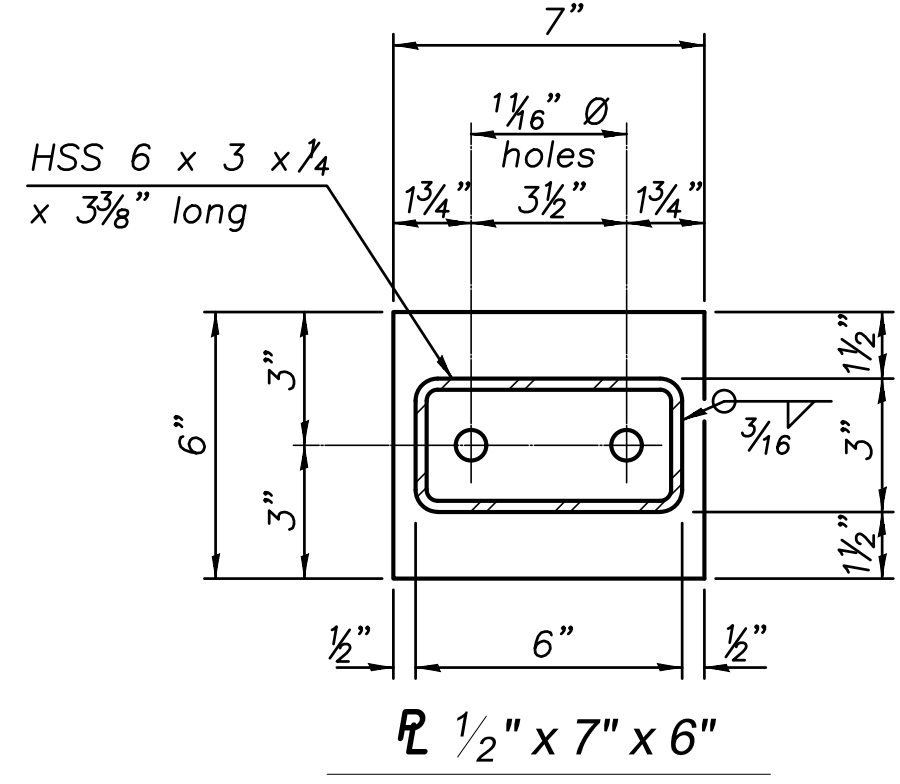
PLAN-BOTT. SPLICE & TYPICAL



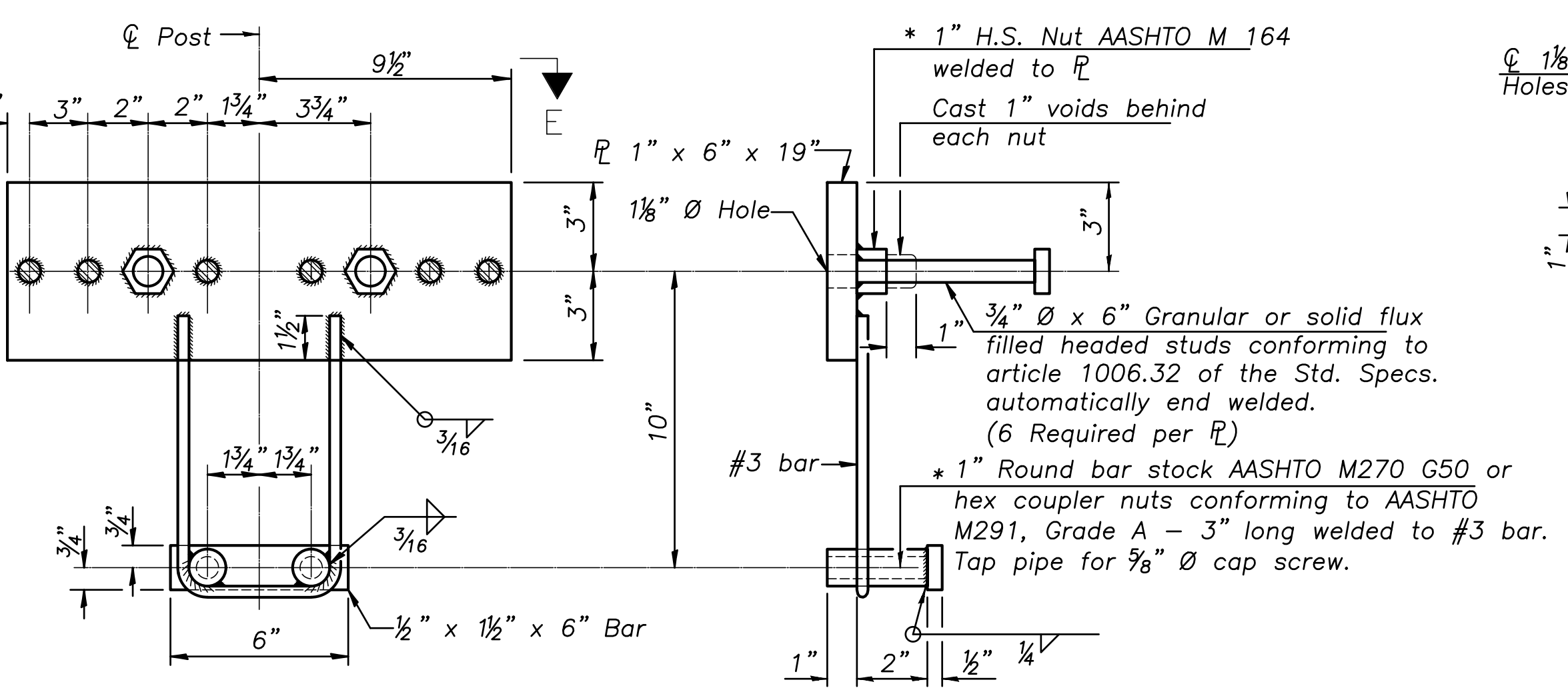
SECTION B-B



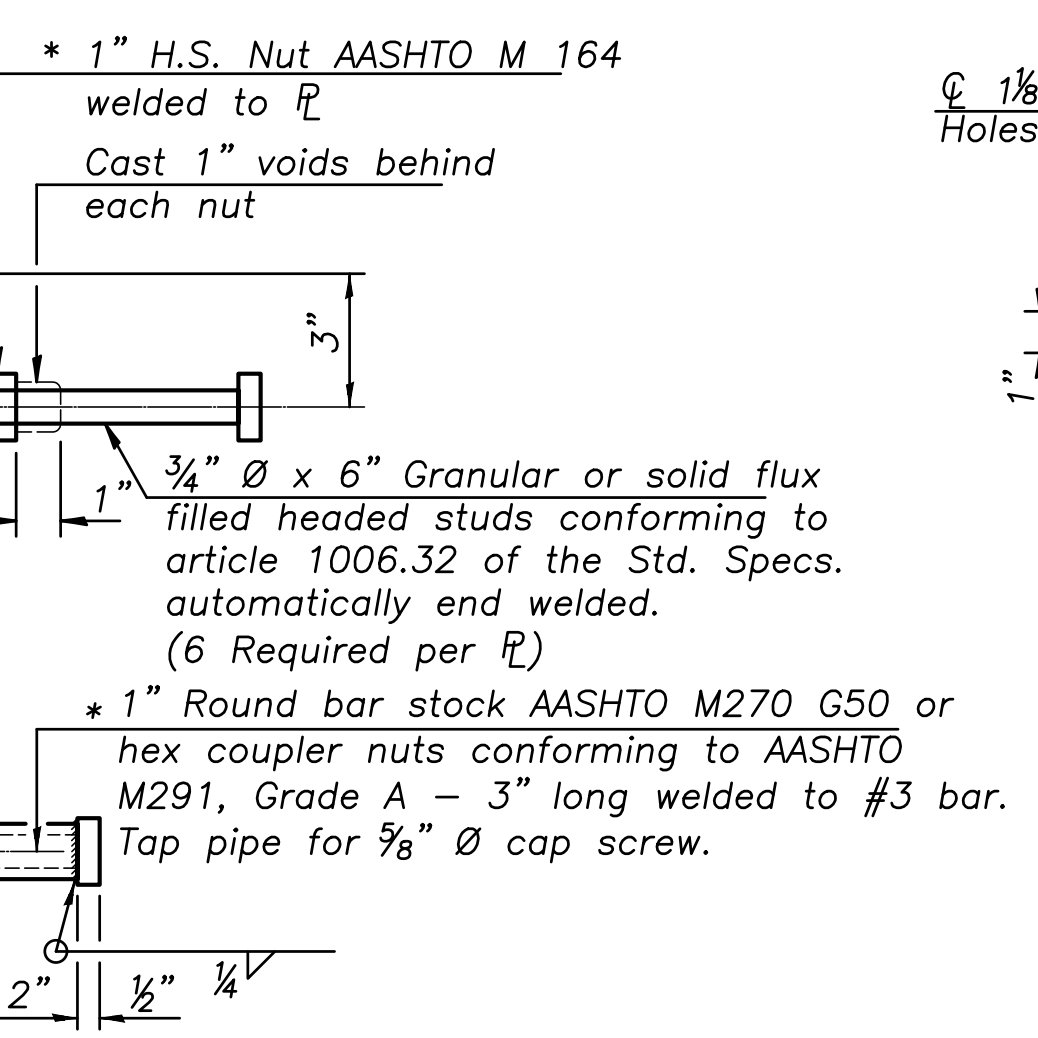
1/2" x 11 1/2" x 5"



1/2" x 7" x 6"



ANCHOR DEVICE

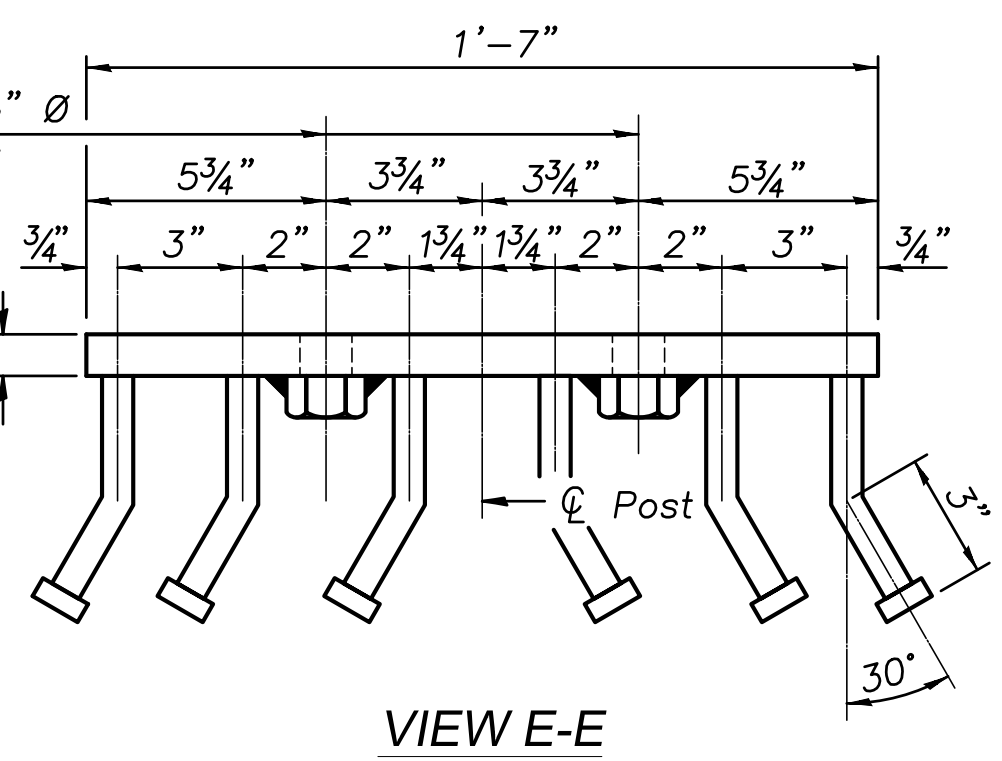


SPLICE DIMENSIONS

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

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.



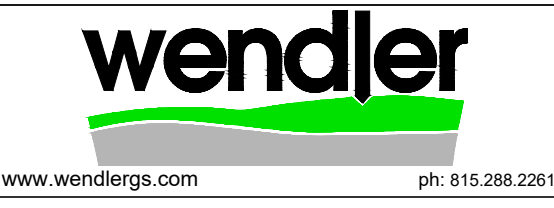
VIEW E-E

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. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	335

R-34HMAWS (modified) 8-11-2017 (6'-3" Maximum Post Spacing)



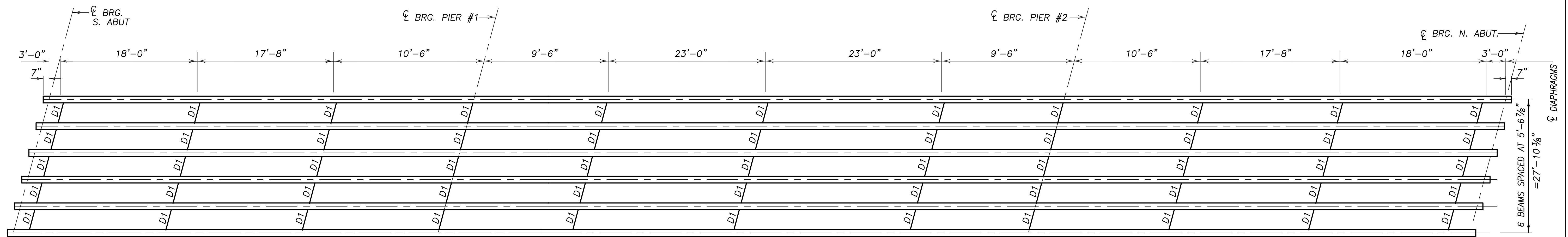
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DEKALB COUNTY
HIGHWAY DEPARTMENT

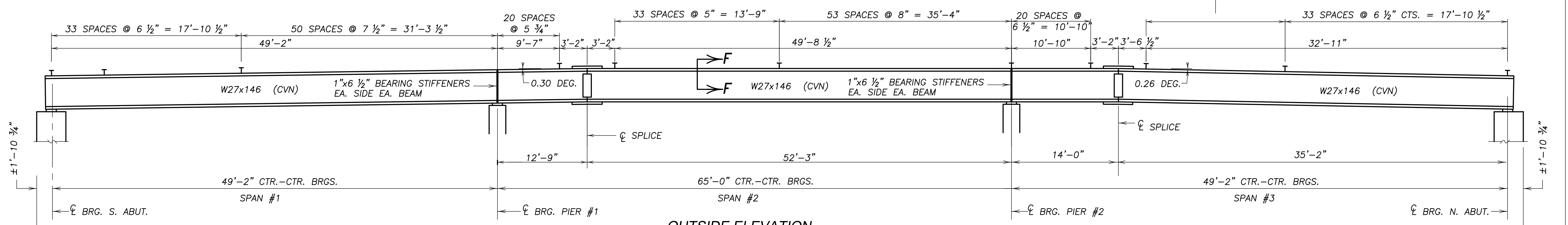
RAILING DETAILS

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	17
			CONTRACT NO	87723
			ILLINOIS	FED. AID PROJECT

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

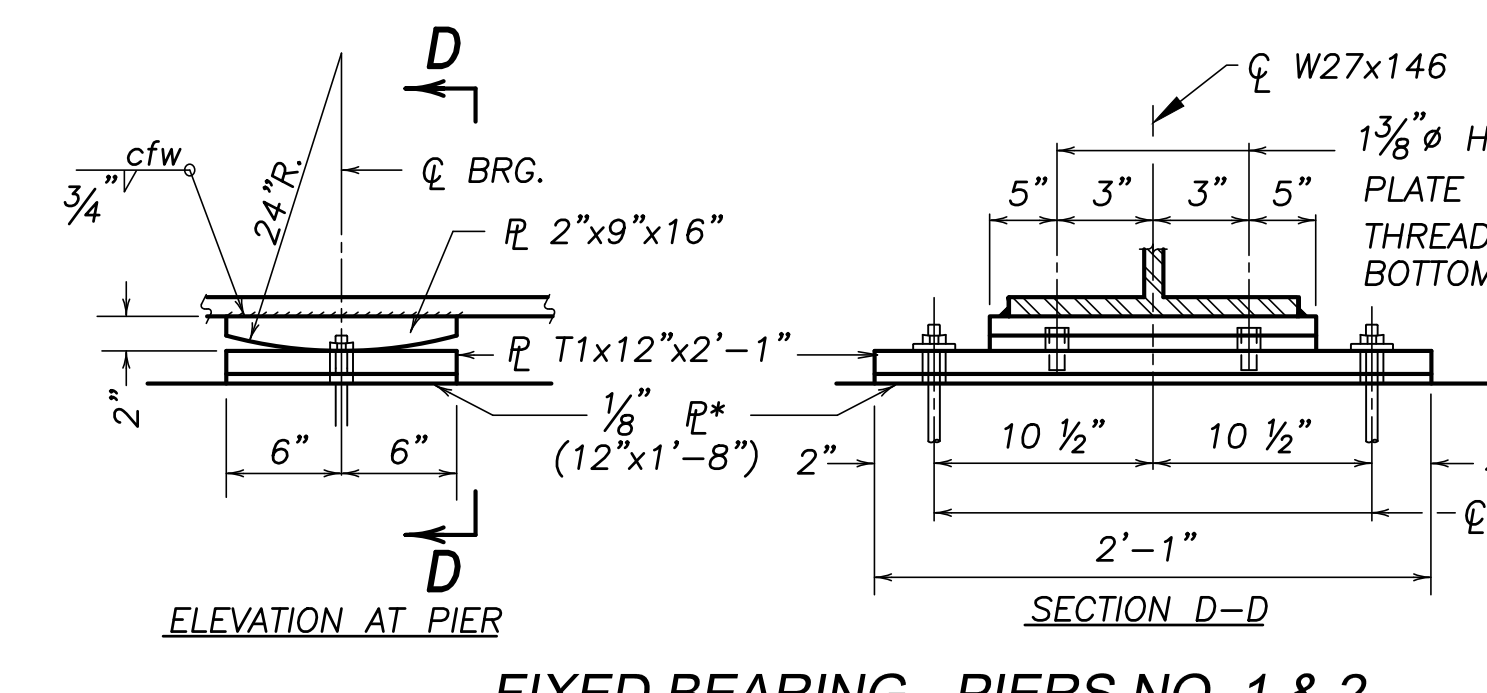


FRAMING PLAN
(SEE SHEET 16 FOR D1 DETAILS)

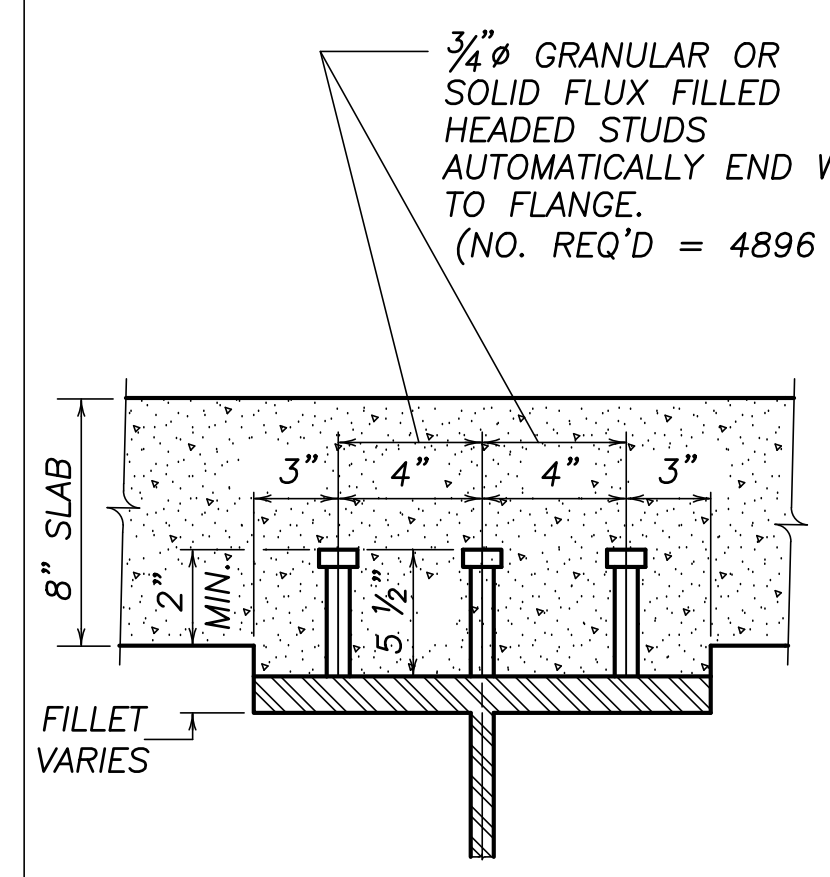
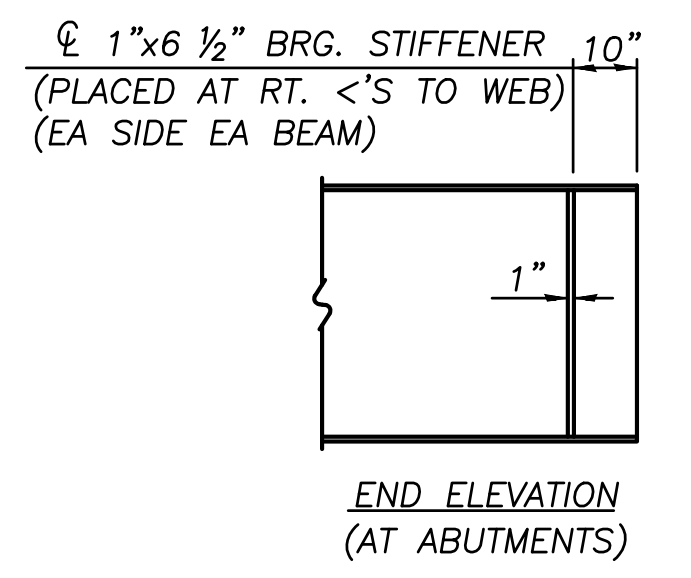


OUTSIDE ELEVATION

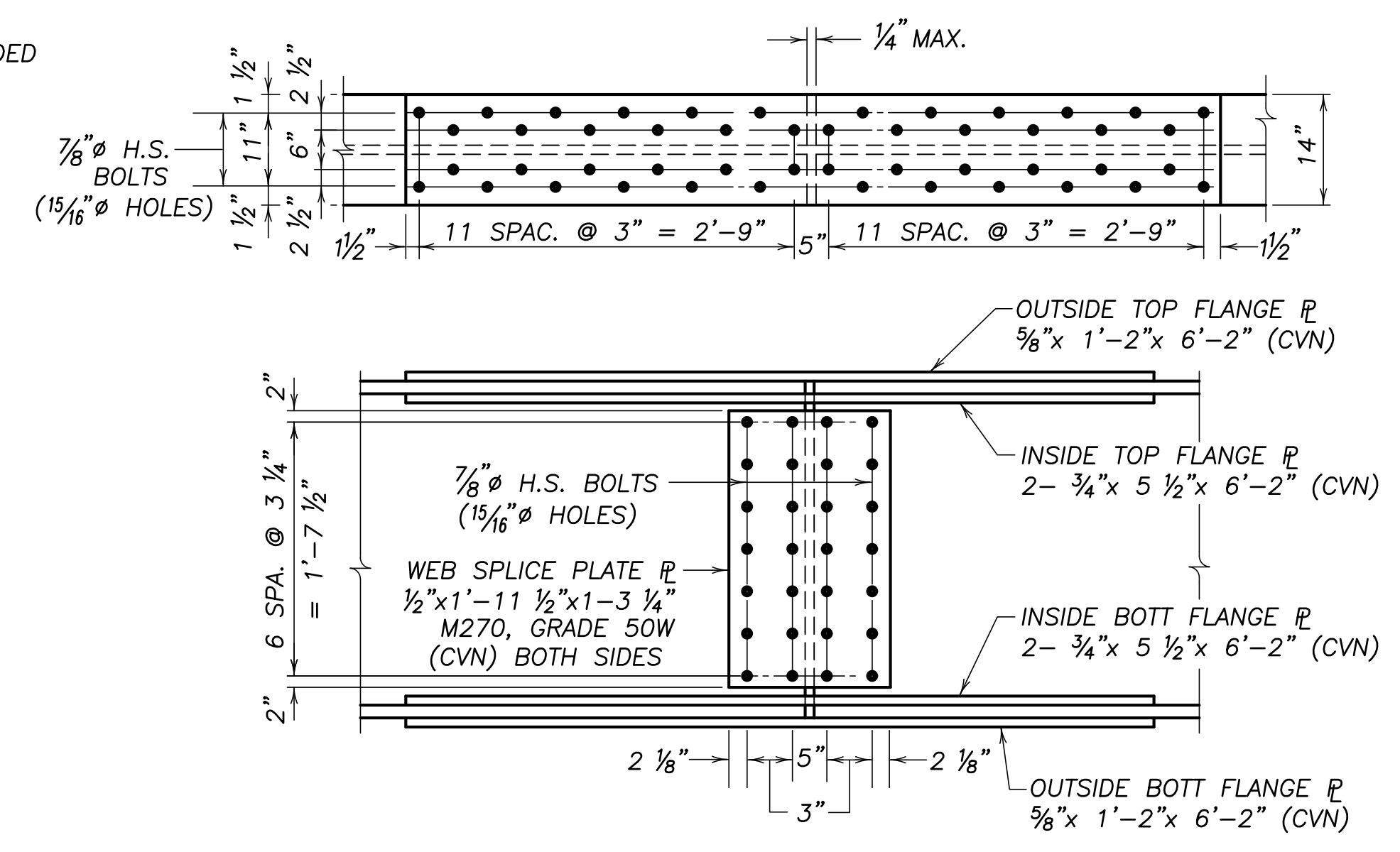
TOP OF BEAM ELEVATIONS		S. Abut.	S. Pier	S. Splice	N. Pier	N. Splice	N. Abut.
Beam	1	825.15	825.36	825.41	825.35	825.34	825.15
Beam	2	825.22	825.44	825.49	825.45	825.43	825.25
Beam	3	825.30	825.52	825.57	825.54	825.53	825.35
Beam	4	825.28	825.51	825.57	825.54	825.54	825.36
Beam	5	825.18	825.42	825.48	825.46	825.46	825.29
Beam	6	825.08	825.32	825.39	825.38	825.38	825.22



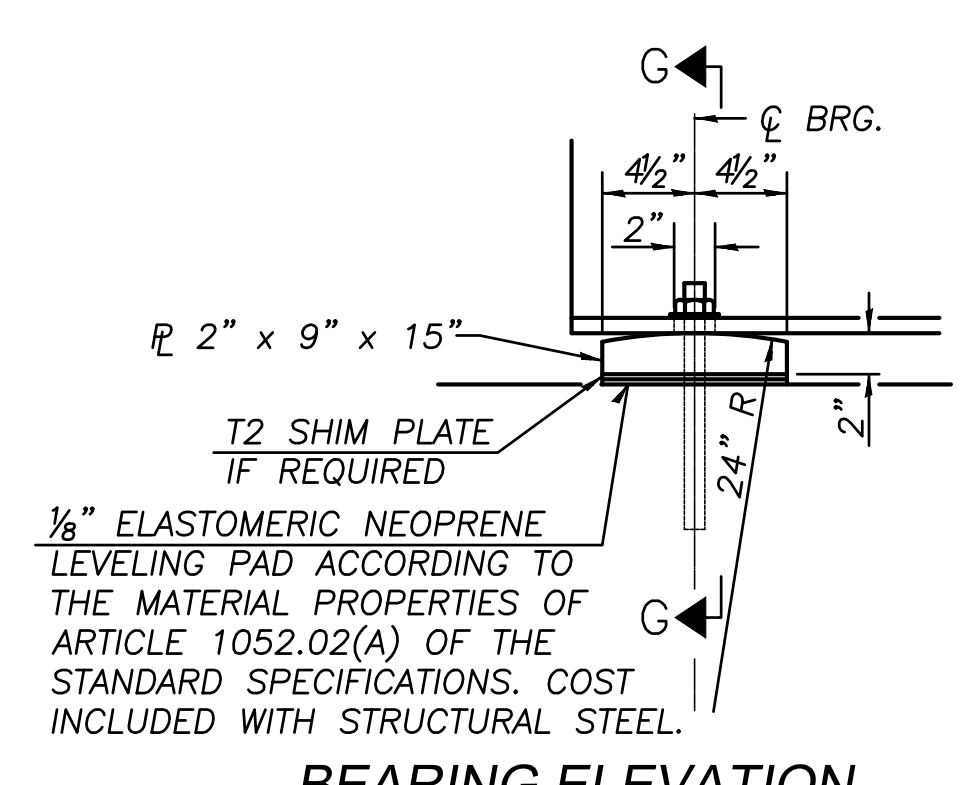
FIXED BEARING - PIERS NO. 1 & 2
(12 REQUIRED.)
* 1/8" REINFORCED ELASTOMERIC NEOPRENE MAT 12"x 2'-1"
T1 = 1 7/8" N. PIER BEAM 4 / 1 3/4" ALL OTHERS



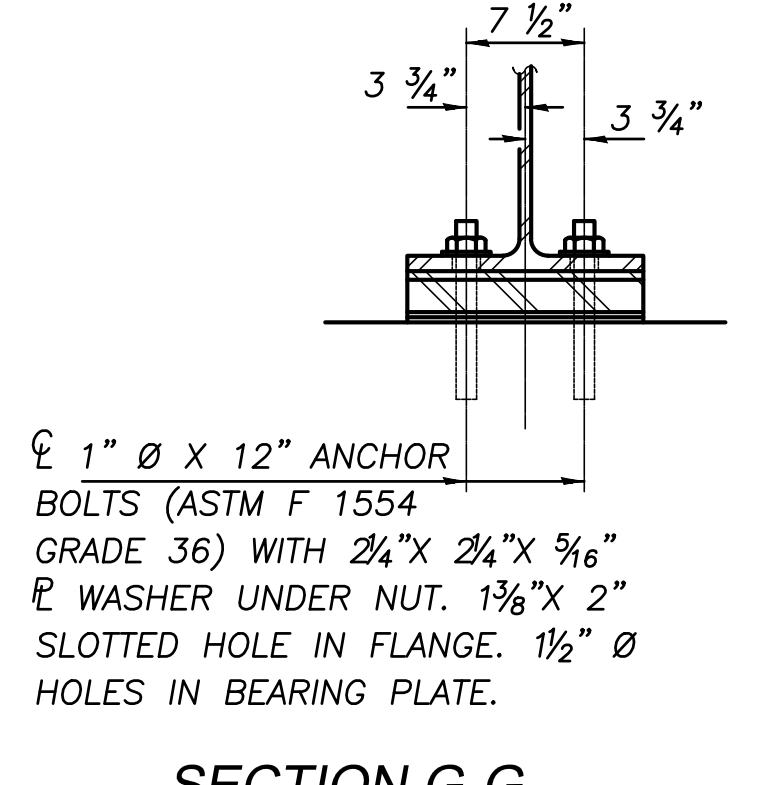
SECTION F-F



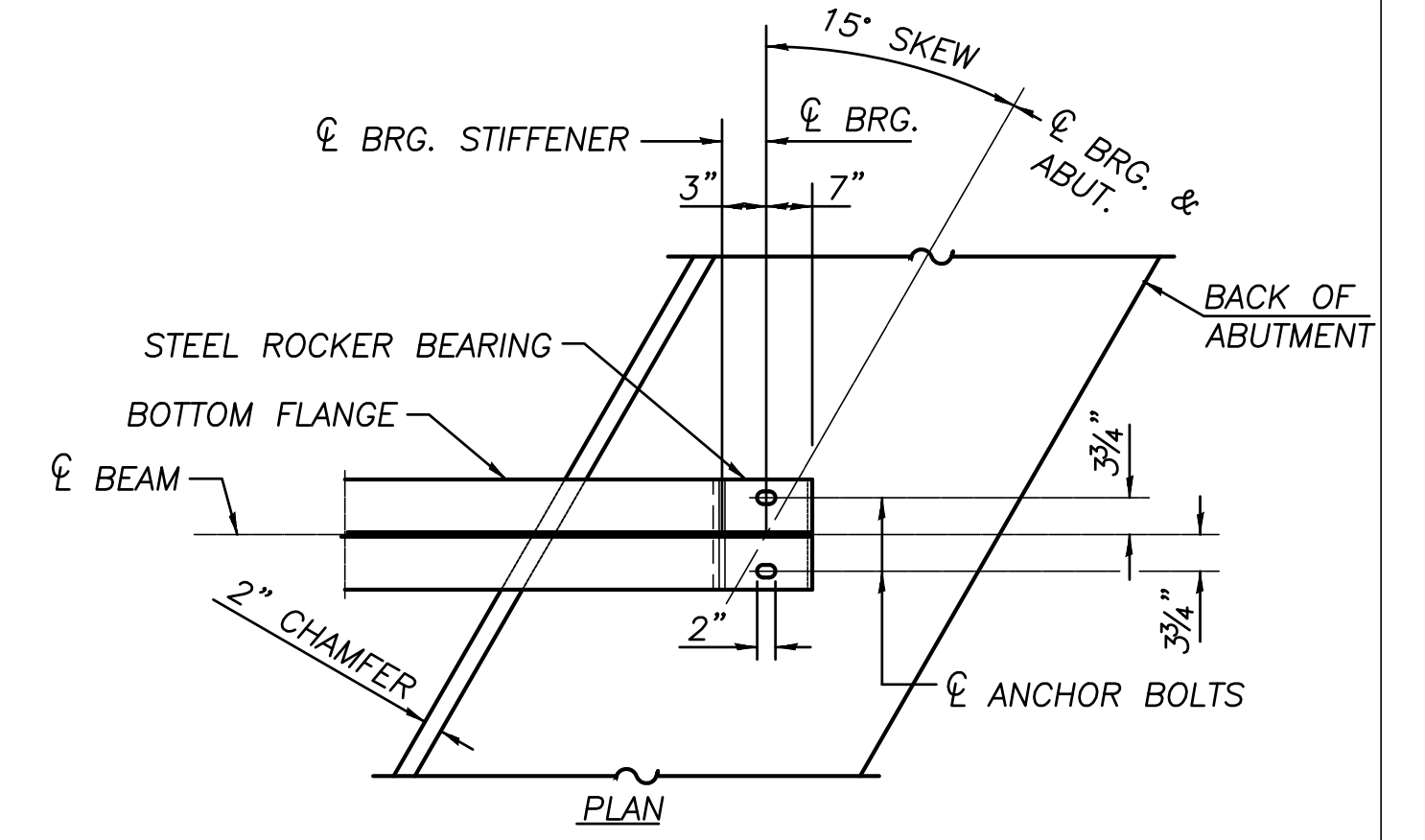
DETAIL OF SPLICE
(ALL SPLICE PLATES N.T.R.)



BEARING ELEVATION

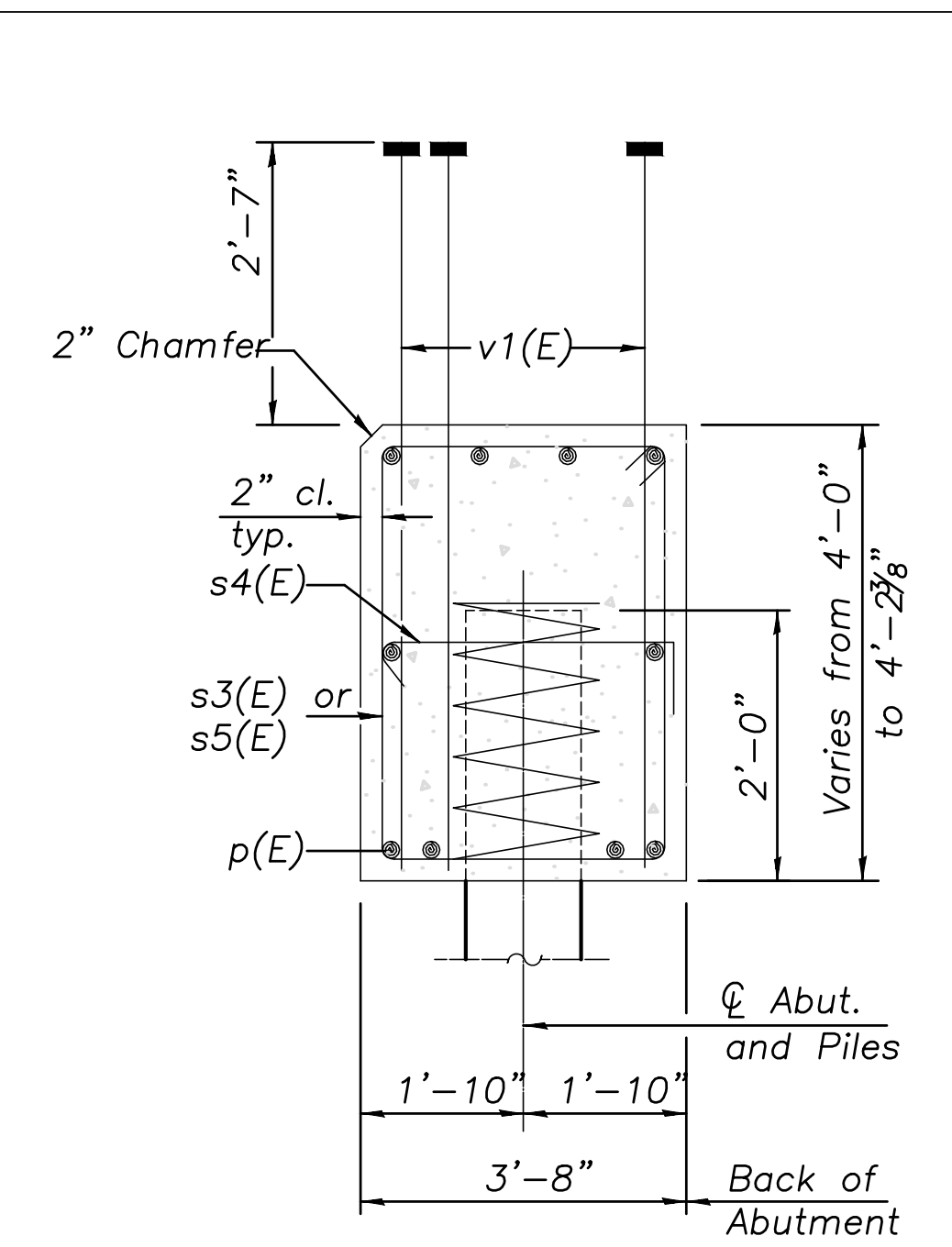
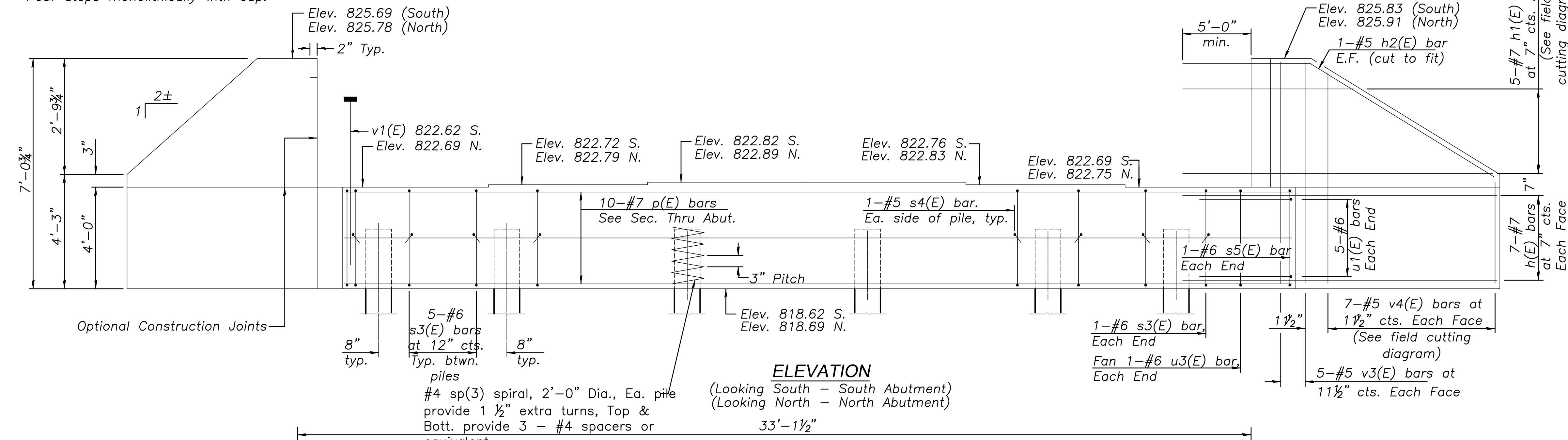


SECTION G-G



STEEL BEAM TO DIAPHRAGM CONNECTION
DETAIL FOR INTEGRAL ABUTMENTS

Notes:
Pour steps monolithically with cap.



SEC. THRU ABUT.
Dimensions at right angles to abutment.

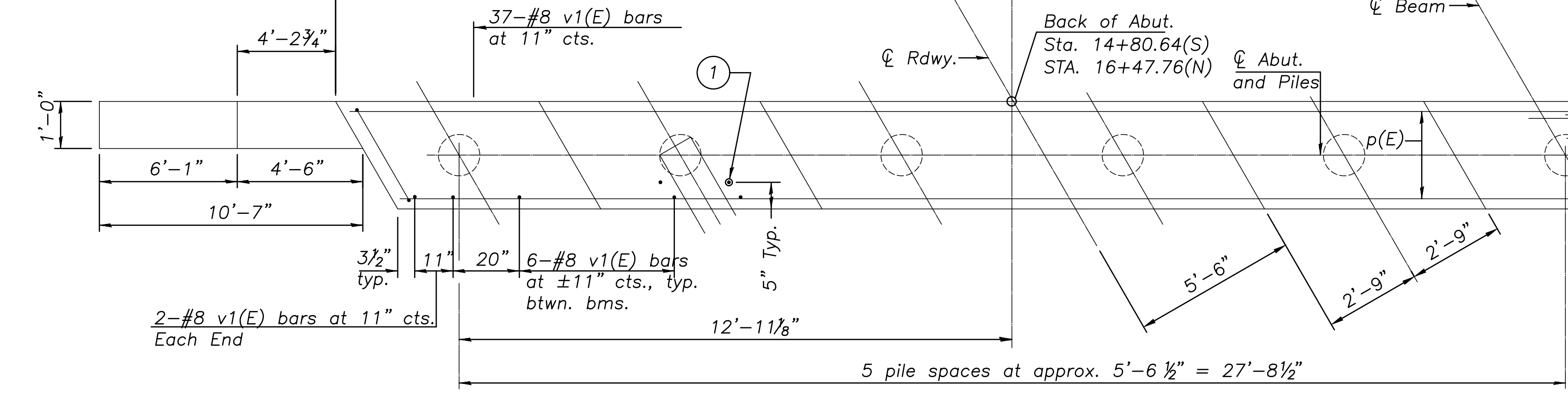
PILE DATA
Type: Metal Shell - 14 in. dia. x 0.250 in. walls
Nominal Required Bearing: 234 kips
Factored Resistance Available:
241 kips B-1 (South)
195 kips B-2 (North)
Est. Length: 46' South Abut. / 49' North Abut.
No. Production Piles: 10
No. Test Piles: 2

**BILL OF MATERIAL
FOR TWO ABUTMENTS**

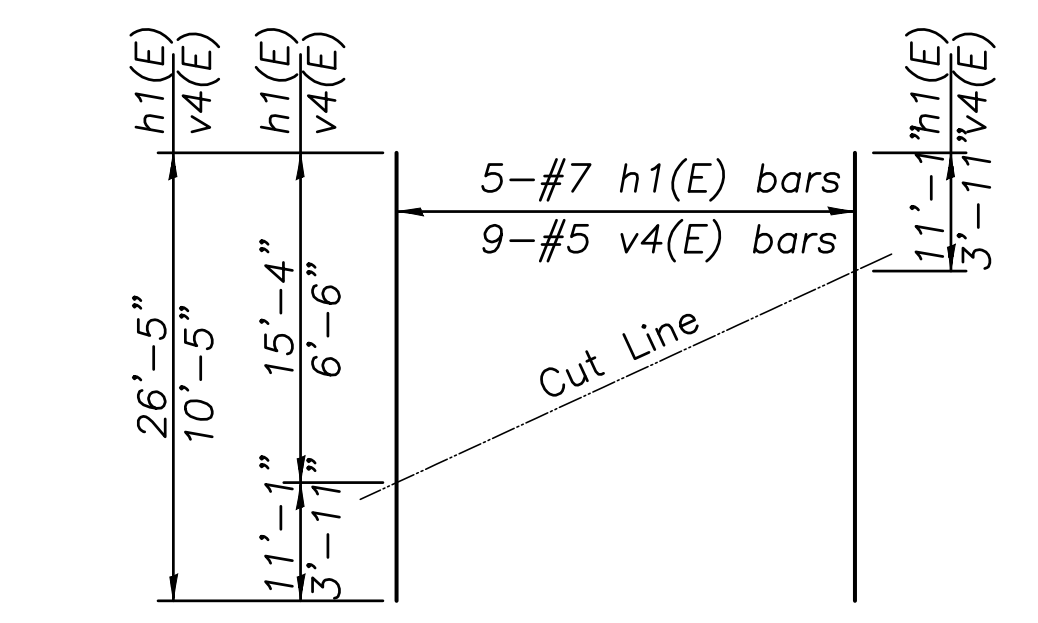
Bar	No.	Size	Length	Shape
h(E)	56	#7	15'-5"	—
h1(E)	20	#7	26'-5"	—
h2(E)	8	#5	16'-0"	—
p(E)	20	#9	32'-10"	—
s3(E)	54	#6	15'-0"	□
s4(E)	24	#5	4'-4"	□
s5(E)	4	#6	15'-2"	□
*sp(E)	12	#4	2'-0"	
u1(E)	20	#6	12'-0"	▽
u3(E)	4	#5	10'-4"	▽
v1(E)	166	#8	6'-8"	—
v3(E)	40	#5	6'-8"	—
v4(E)	56	#5	10'-5"	—
Concrete Structures		Cu. Yd.	46.8	
Reinforcement Bars, Epoxy Coated		Pound	10,880	
Furnishing Metal Shell Piles 14" X 0.250"		Foot	475	
Driving Piles		Foot	475	
Test Pile Metal Shells		Each	2	
Structure Excavation		Cu. Yd.	181	

Note:
Pour steps monolithically with cap.
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.
For details of piles see sheet 21 of 24.

① 1 - #8 v1(E) Headed Bar Each Side of Beam, Typ.

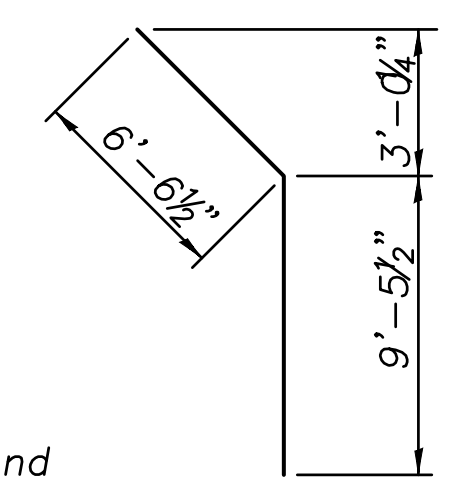


PLAN
Place reinforcement to avoid conflict with Anchor Bolts.

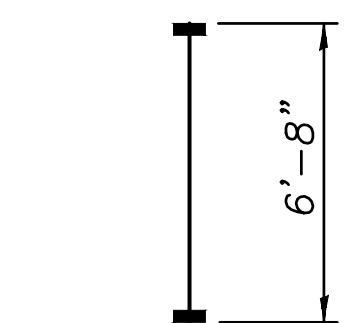


FIELD CUTTING DIAGRAM

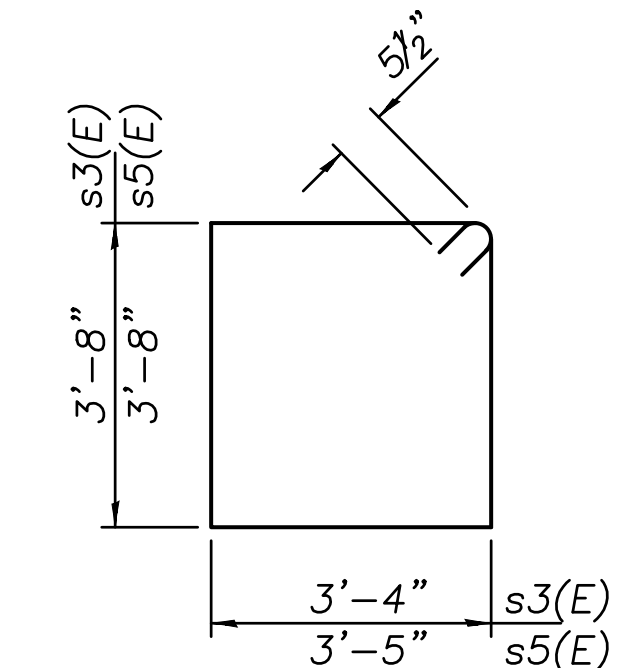
Order h1(E) and v4(E) full length. Cut as shown and use remainder of bars in opposite face.



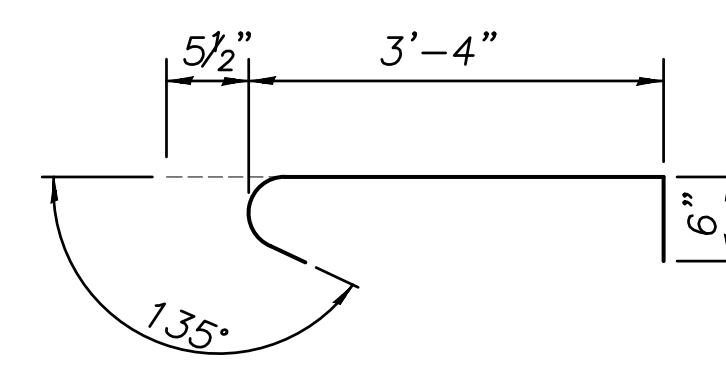
BAR h2(E)



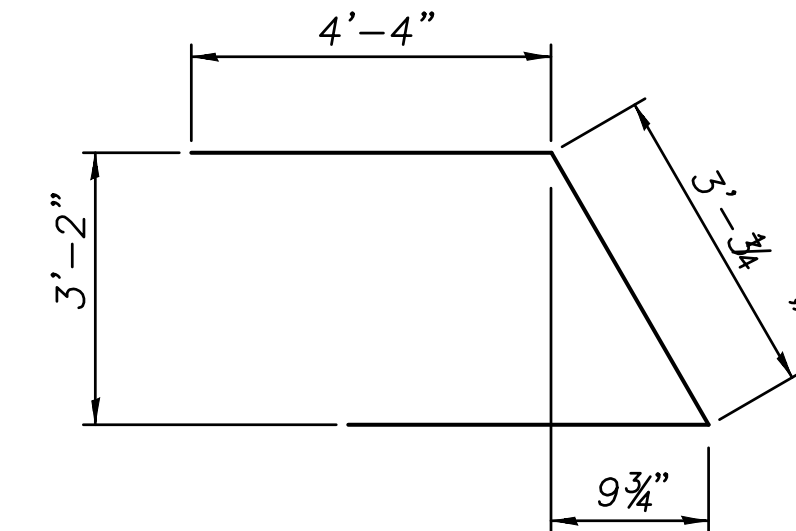
BAR v1(E) (Headed)



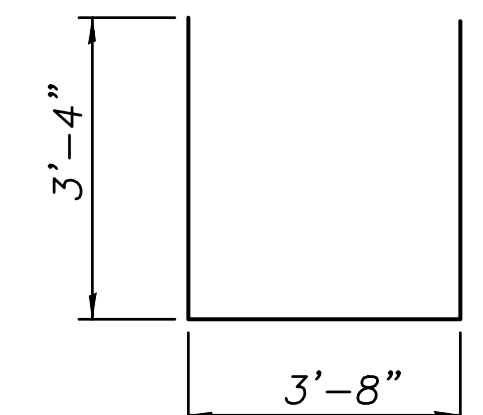
BAR s3(E) & s5(E)



BAR s4(E)



BAR u1(E)



BAR u3(E)

Notes:
Headed bars shall conform to ASTM A970 with threaded attachment; Class HA; and reinforcement bars conforming to ASTM A706. Cost included with Reinforcement Bars, Epoxy Coated.



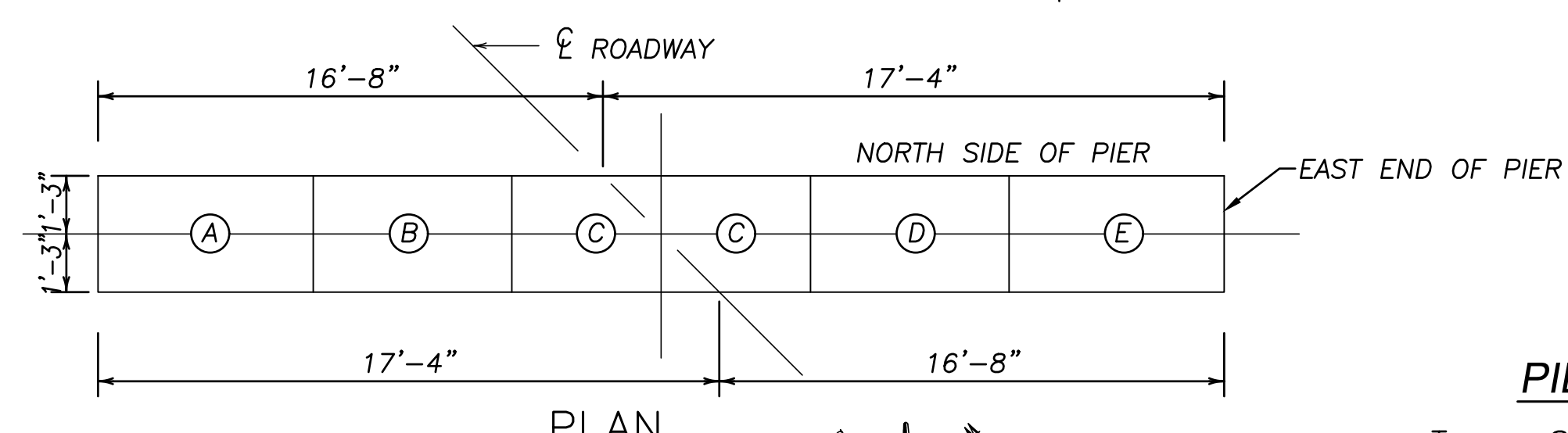
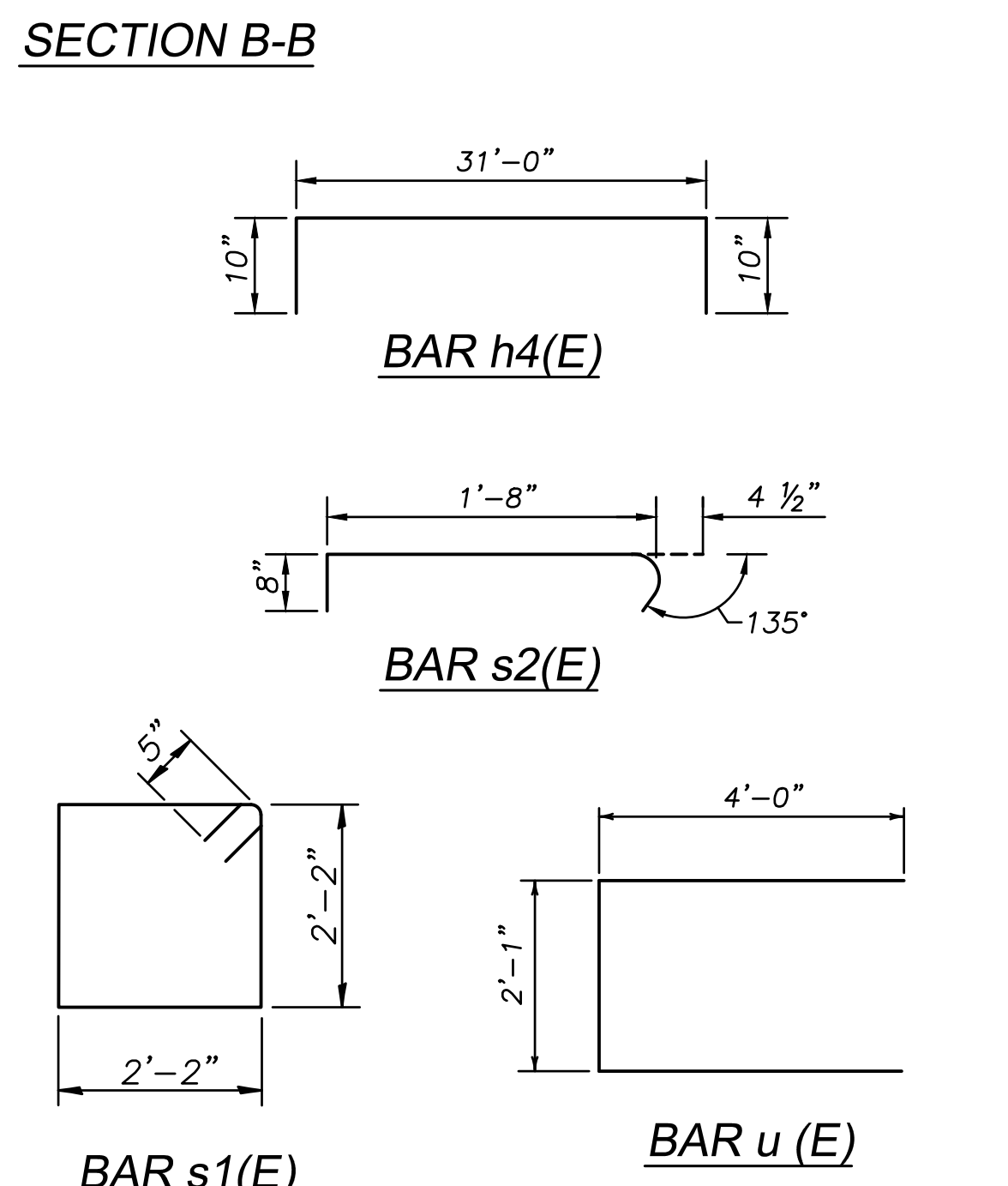
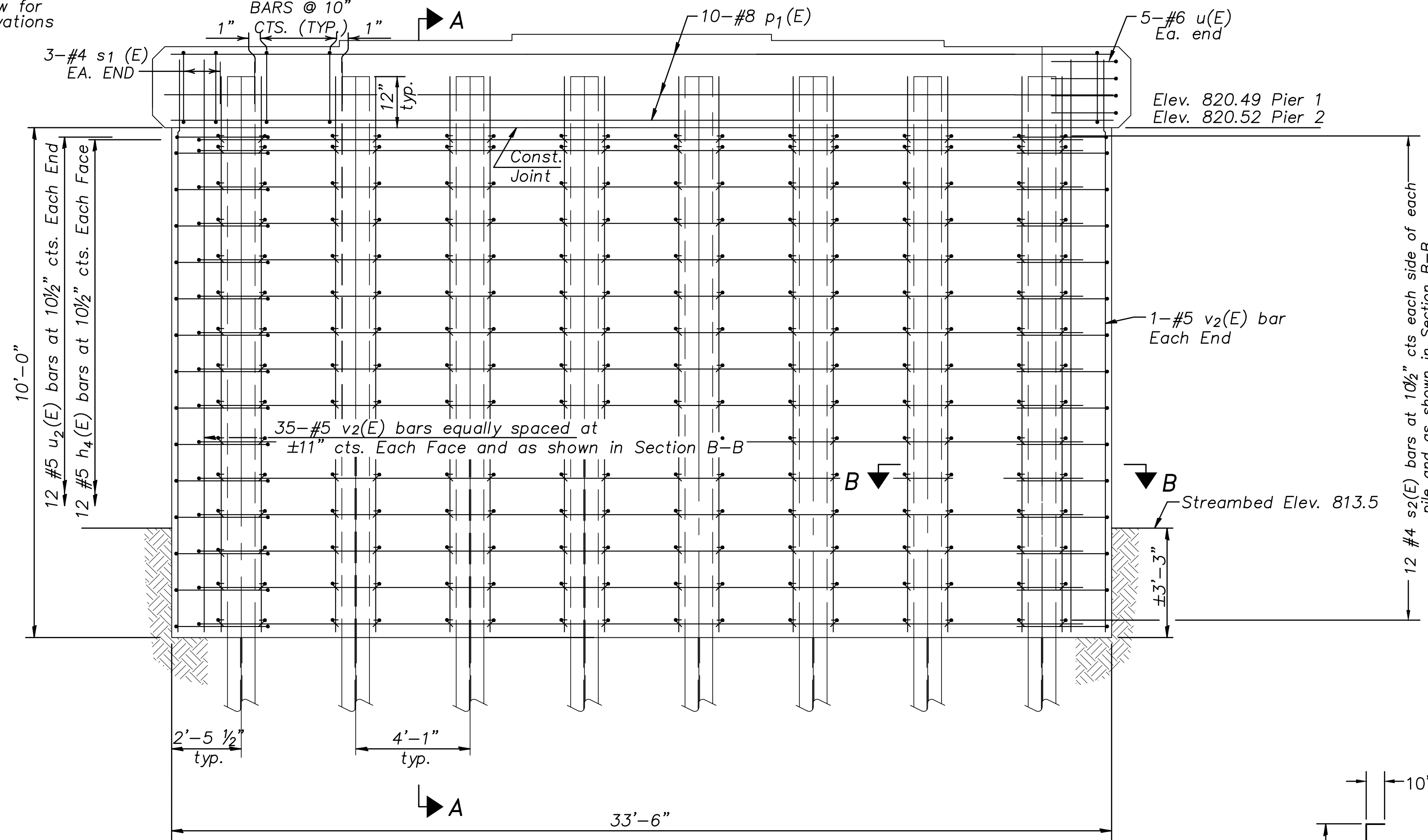
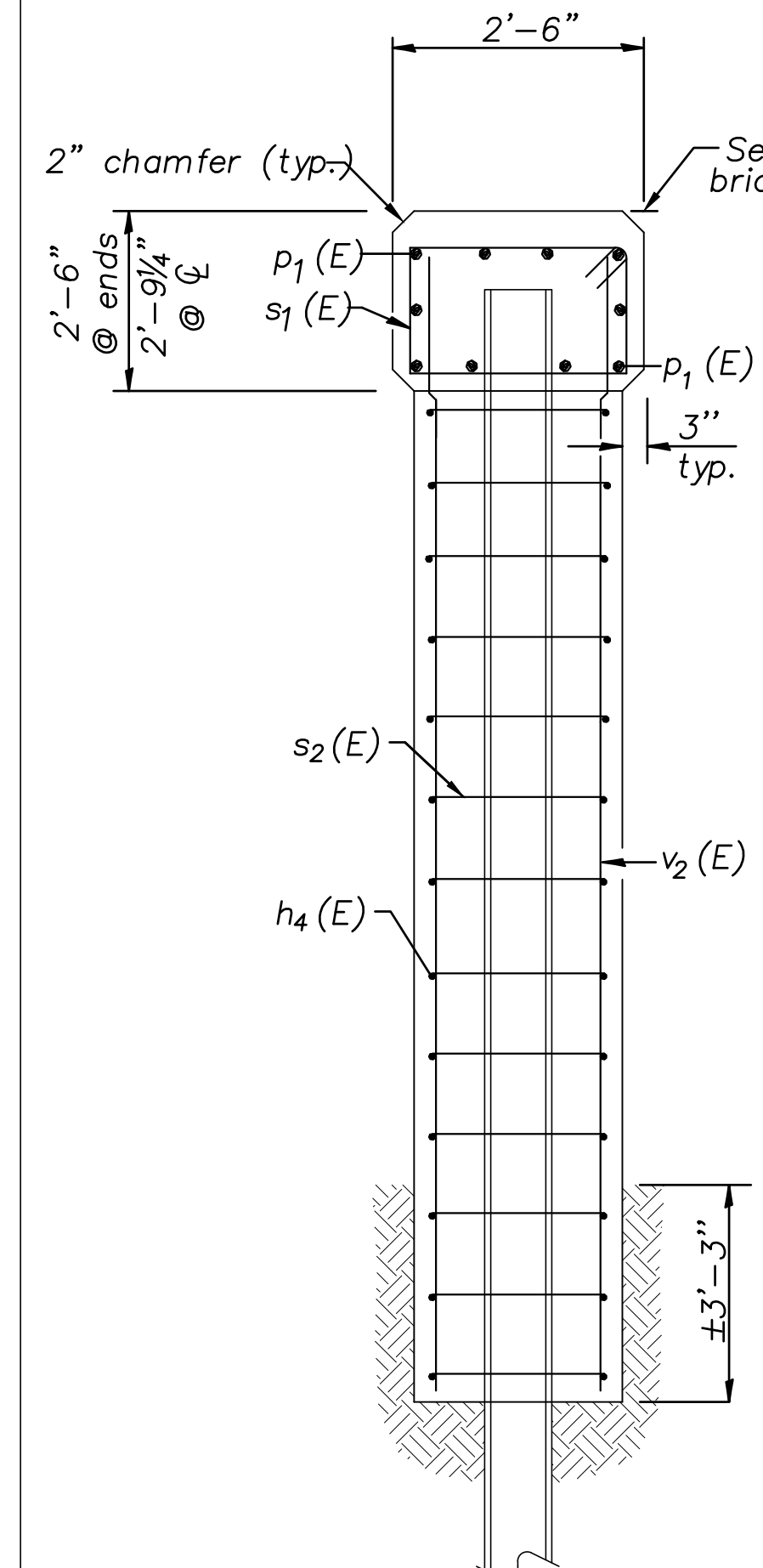
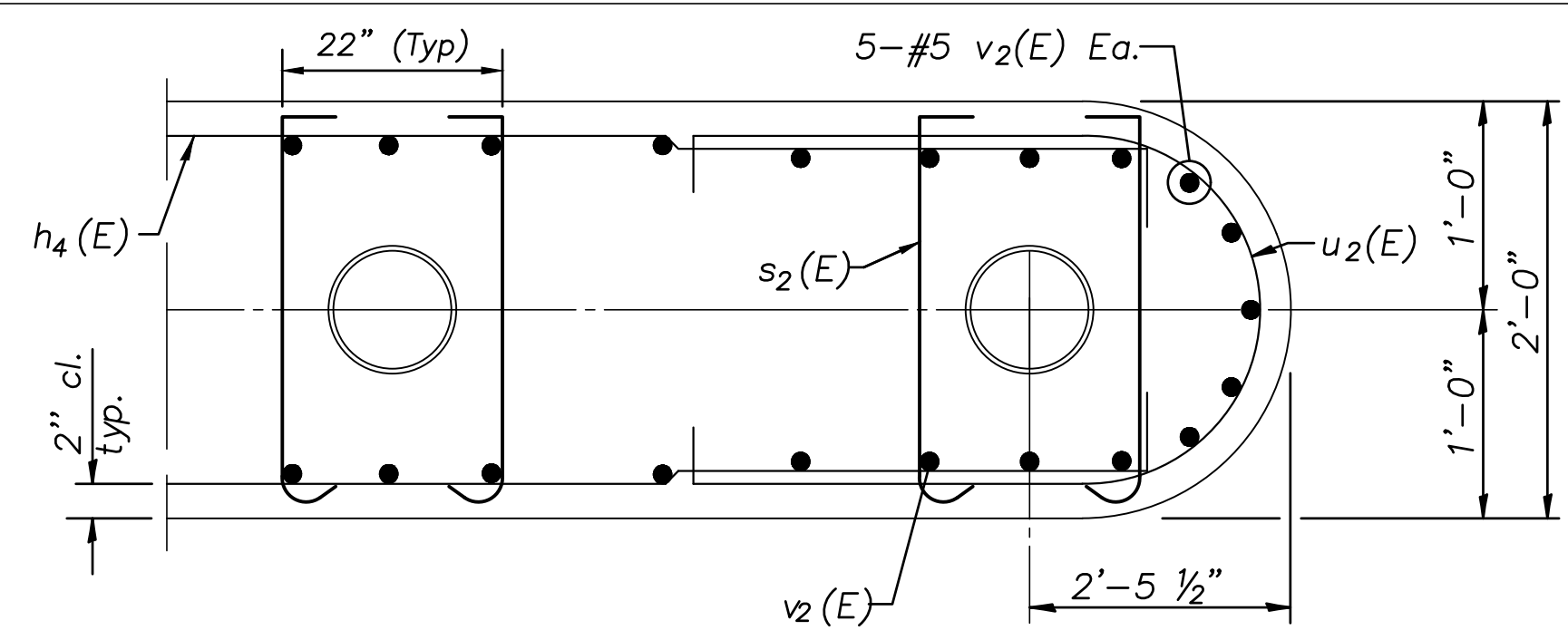
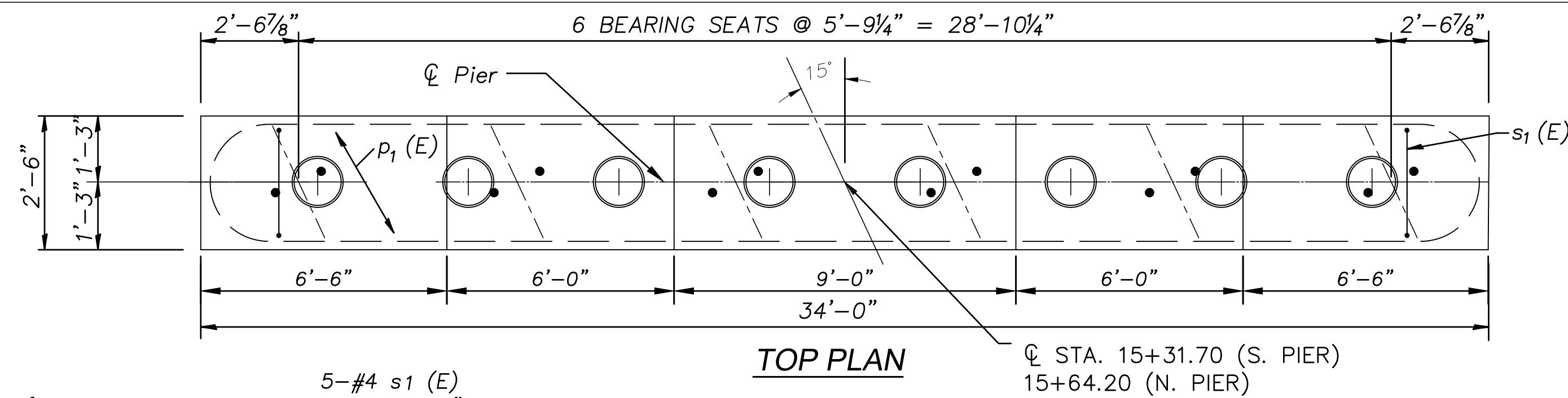
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**DEKALB COUNTY
HIGHWAY DEPARTMENT**

ABUTMENTS

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	19
CONTRACT NO. 87723				
ILLINOIS FED. AID PROJECT -				



LOCATION	ELEV.	A	B	C	D	E
PIER 1		822.75	822.83	822.91	822.91	822.81
PIER 2		822.75	822.84	822.93	822.86	822.77

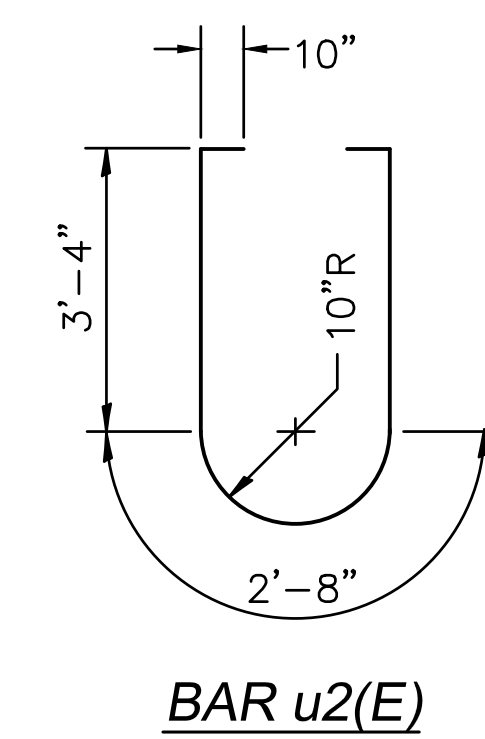
BRIDGE SEAT ELEVATIONS

PIER 1 PILE DATA

Type: Steel - Metal Pile Shells 14"x0.25"
 Nominal required bearing: 288 kips
 Factored resistance available: 241 kips in boring B-1
 Est. Length: 54'
 No. Production Piles : 7
 No. Test Piles : 1
 The test piles shall be driven to 110 percent of the nominal required bearing indicated in the pile data information.

PIER 2 PILE DATA

Type: Steel - Metal Pile Shells 14"x0.25"
 Nominal required bearing: 288 kips
 Factored resistance available: 195 kips in boring B-2
 Est. Length: 68'
 No. Production Piles : 7
 No. Test Piles : 1
 The test piles shall be driven to 110 percent of the nominal required bearing indicated in the pile data information.



Notes:
 If a portion of the concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water at the time of construction.
 All costs for piling concrete and reinforcing are included in the price bid per foot or each for the metal pile shells.

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h 4 (E)	48	# 5	32' - 8"	□
p 1 (E)	20	# 8	33' - 8"	—
s 1 (E)	82	# 4	9' - 6"	□
s 2 (E)	384	# 4	2' - 9"	□
u (E)	20	# 6	10' - 1"	—
u 2 (E)	48	# 5	11' - 0"	U
v 2 (E)	160	# 5	12' - 0"	—
ITEM	UNIT	QUANTITY		
Reinforcement Bars, Epoxy Coated	Pound	7,520		
Concrete Structures	Cu.Yd.	65.6		
Furnishing Metal Pile Shells 14"x0.25"	Foot	854		
Driving Piles	Foot	854		
Test Pile, Metal Shells	Each	2		
Cofferdam (Type 1) (Location -1)	Each	1		
Cofferdam (Type 1) (Location -2)	Each	1		
Cofferdam Excavation	Cu.Yd.	100		

Note: Cofferdam excavation quantity computed using vertical planes 4 feet from the pier face to the streambed elevation.

F:\2019\cdas\2190055\CIVIL\Piers.dwg

P-DSSW
 11-26-12

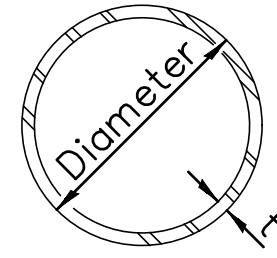
 www.wendlergs.com ph: 815.288.2261

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**DEKALB COUNTY
 HIGHWAY DEPARTMENT**

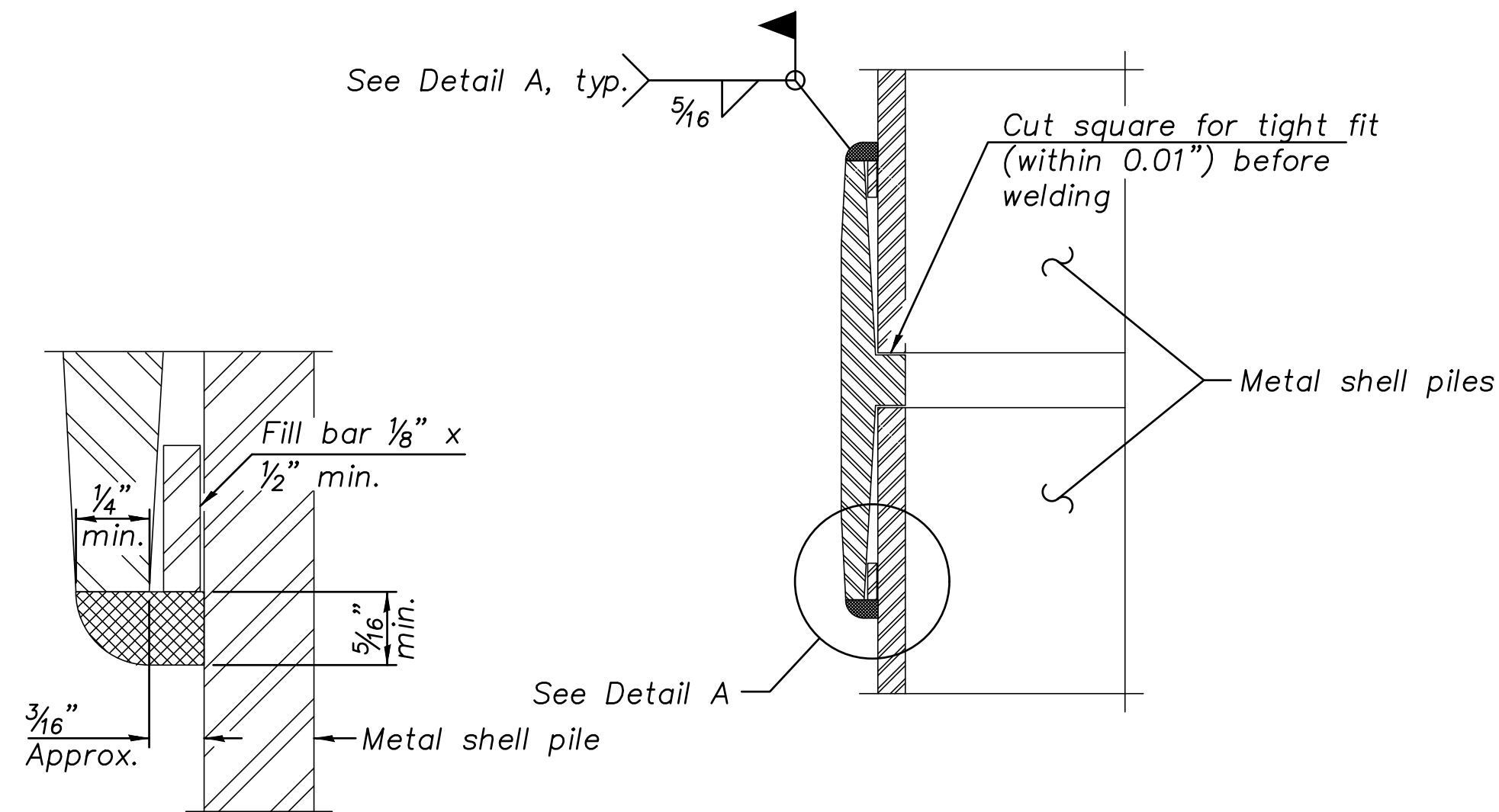
**PIERS
 S.N. 019-4410**
 SCALE: - SHEET - OF - SHEETS STA. 10+00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	20
CONTRACT NO. 87723				
ILLINOIS FED. AID PROJECT				

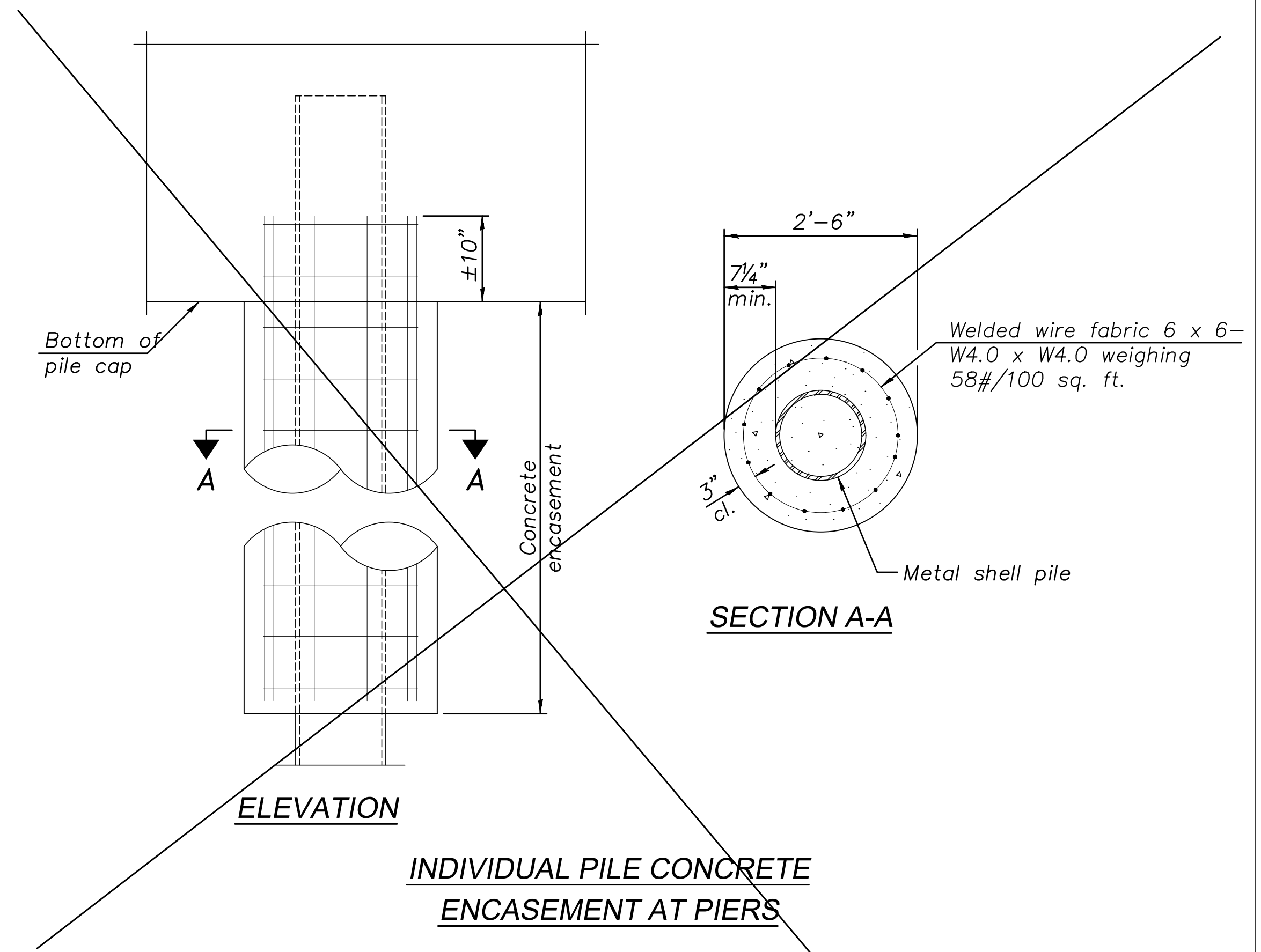


METAL SHELL PILE TABLE

Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



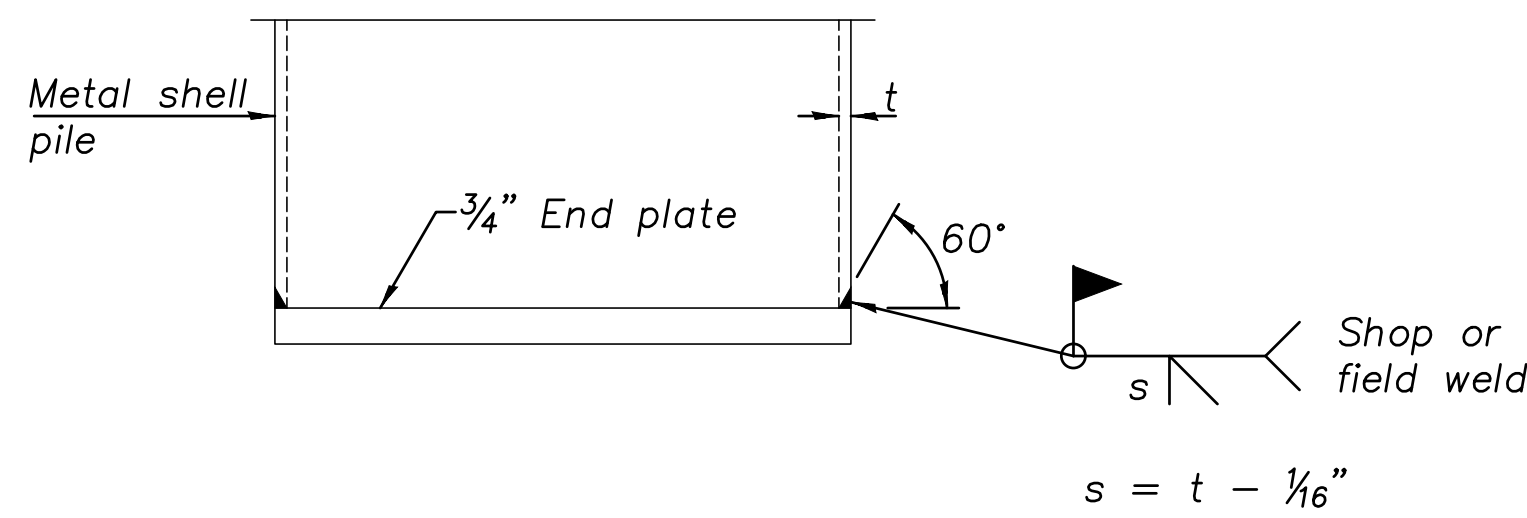
DETAIL A



ELEVATION

SECTION A-A

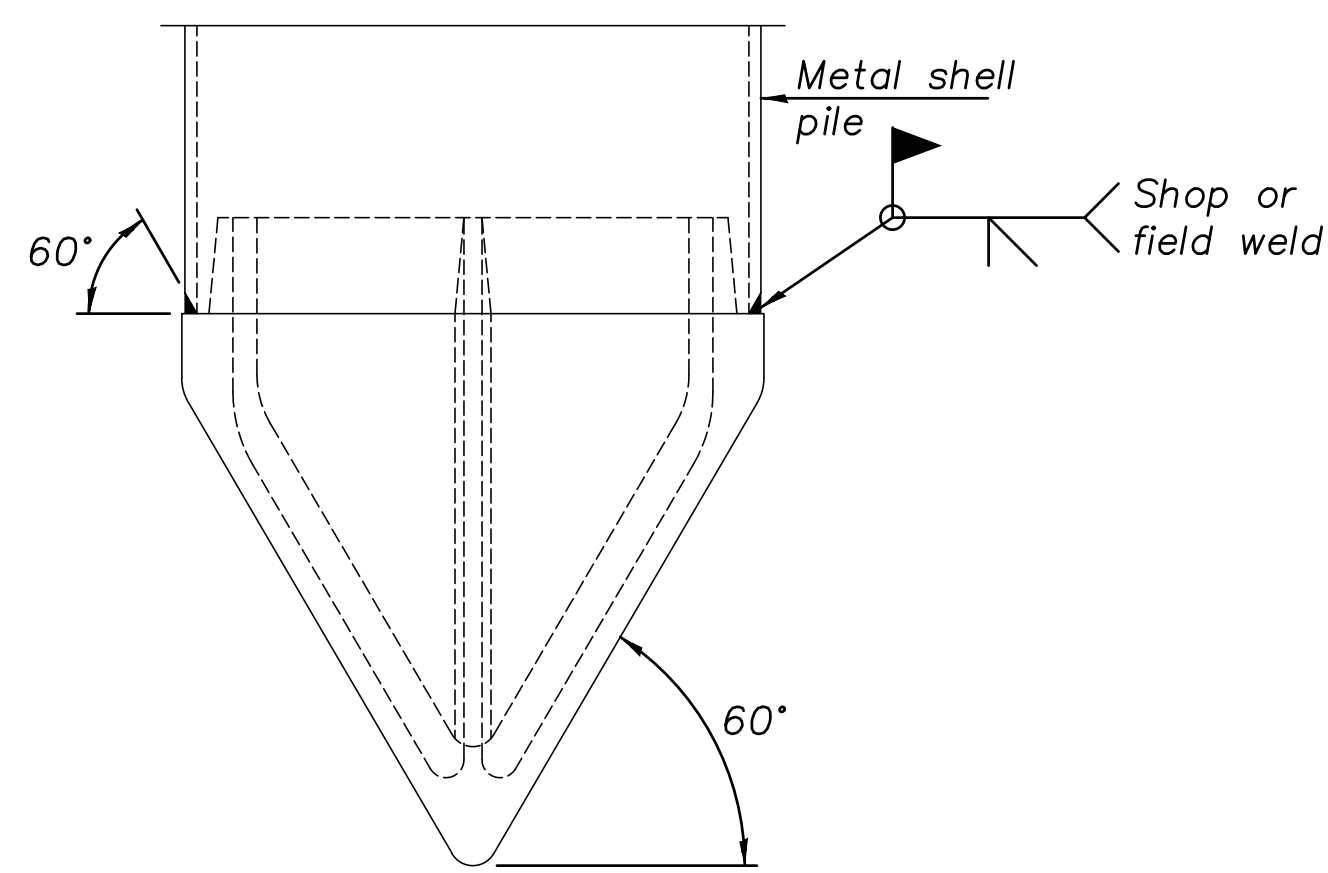
INDIVIDUAL PILE CONCRETE ENCASUREMENT AT PIERS



END PLATE ATTACHMENT

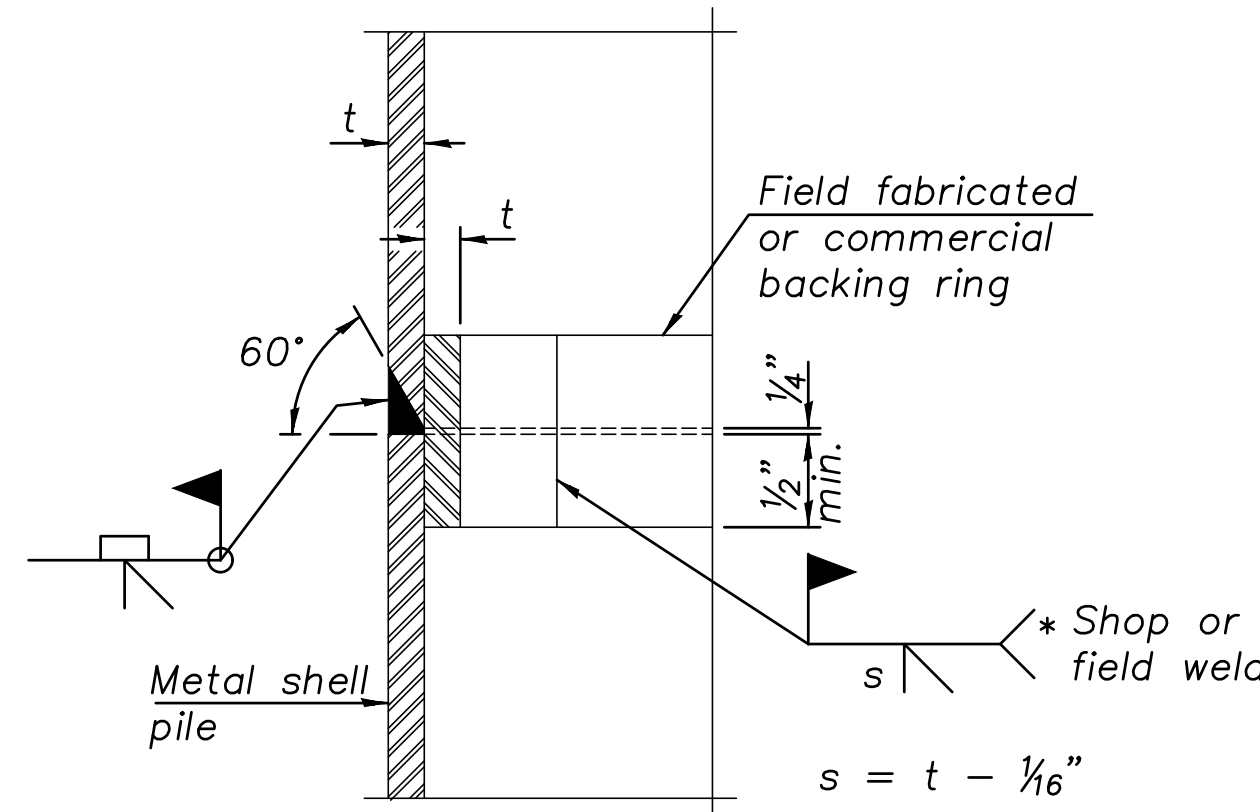
WELDED COMMERCIAL SPLICE

Notes:
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
 Pile segments shall be driven to solid contact with splicer before welding.



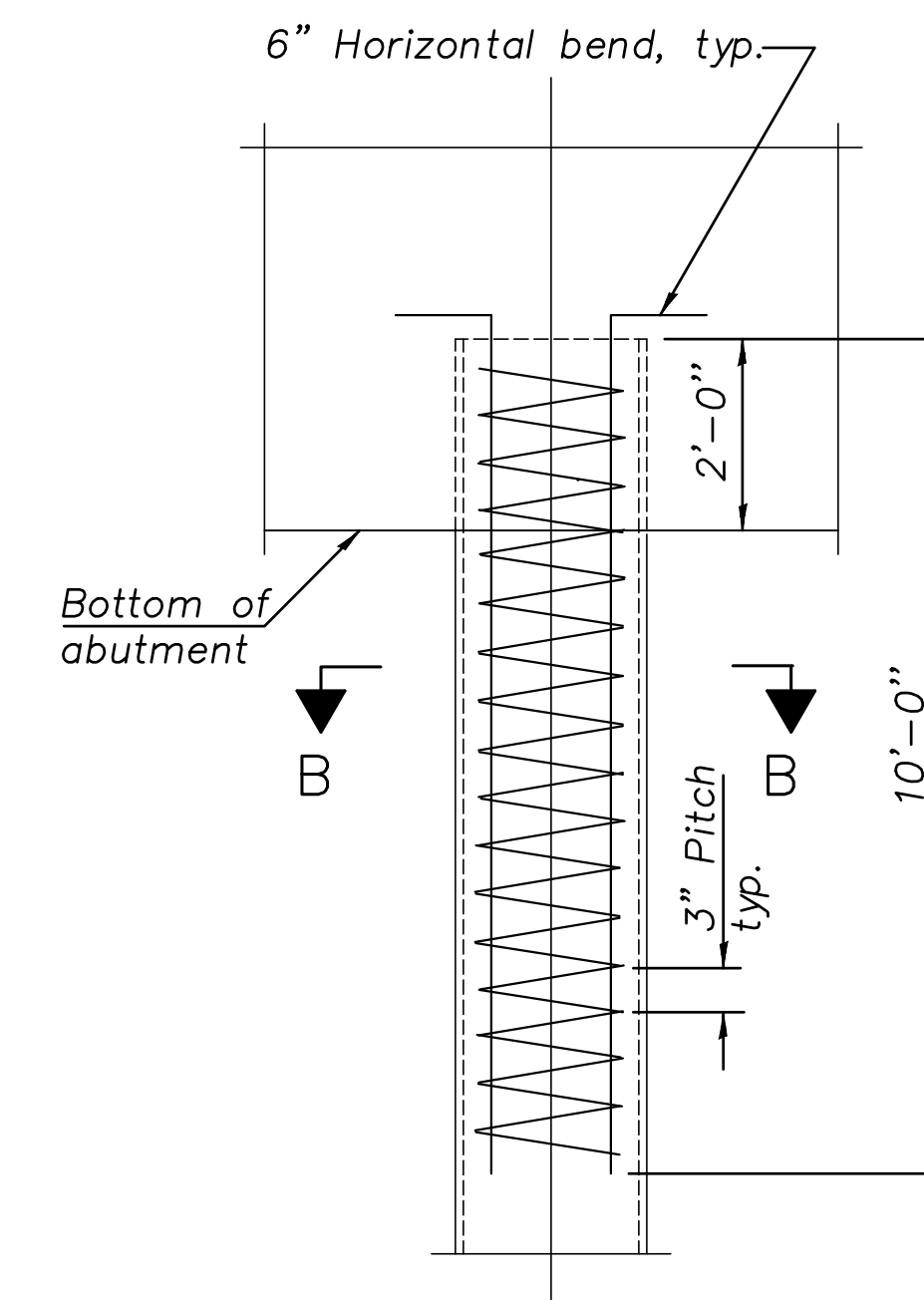
PILE SHOE ATTACHMENT

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



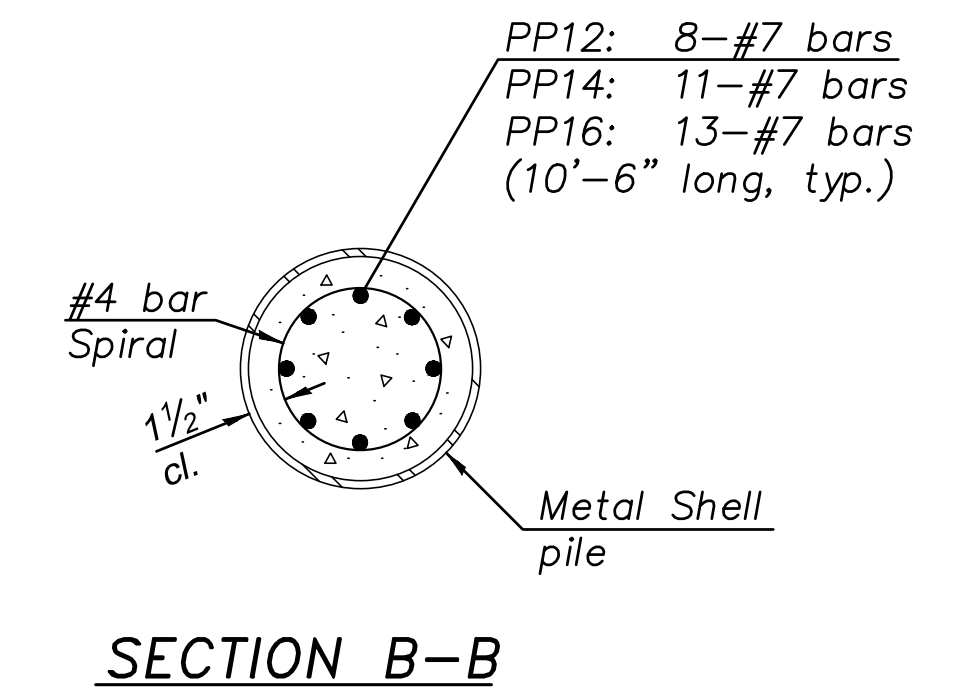
COMPLETE PENETRATION WELD SPLICE

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



ELEVATION

REINFORCEMENT AT ABUTMENTS



SECTION B-B

Note:
 The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.



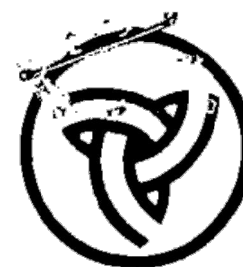
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DEKALB COUNTY HIGHWAY DEPARTMENT

PILE DETAILS

SCALE: - SHEET - OF - SHEETS STA. - TO STA. -

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	21
CONTRACT NO			87723	
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation

NE 1/4, Section 25, T 41 N, R 4 E, 3rd PM

Bridge Foundation Boring Log

Sh.1 of 2 Sh.

PROJECT Mayfield Twp. BRIDGE East branch of Date 4-12-79
 ROUTE Motel Road Kishwaukee River Bored By R. Burnell
 SEC. Br.No. 4404 STA. _____ Checked By R. Wildman

COUNTY Dekalb

Boring No. B-1
 Station 36'S. of bridge
 Offset 10'W. of road

Elevation	N	Qu t/sf.	w (%)	Surface Water El.	Elevation	N	Qu t/sf.	w (%)
Ground Surface .5'below deck	0	EL	823.1	Groundwater El. at Completion -7.5'				
Medium Brown Dirty Sand Loam	11			Hard Gray Sandy Clay Till	22	B	4.5	11
Loose Gray Sand Loam with Topsoil (Fill)	5			Very Stiff Gray Sandy Clay Till	18	B	2.6	12
Soft Dk. Brown Silt Loam	4	.4	27	Same As Above	17		2.5	11
Loose Wet Dirty Gray Sand & Gravel S.B.E. 813.5	3			Medium Brown Coarse Sand	16			
Same As Above	9			Very Stiff, Gray Sandy Clay Till	19	B	2.3	11
Medium Gray Sand & Gravel - Cemented	11			No Recovery	18			
Same As Above	26			Very Stiff Gray Sandy Clay Till	21	B	2.1	10
Dense Gray Coarse Sand & Fine Gravel	48			Medium Gray Fine Sand	20			
Same As Above	42			Same As Above	23			

N-Standard Penetration Test - Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".

Qu-Unconfined Compressive Strength - t/sf
 w - Water Content - percentage of oven dry weight-%.

Type failure:
 B - Bulge Failure
 S - Shear Failure
 E - Estimated Value
 P - Penetrometer

BD 137 (Rev. 4-78)

FORM NO. B. D. 137 REV. 9-68

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

Elevation	N	Qu t/sf.	w (%)	Elevation	N	Qu t/sf.	w (%)
Mayfield Township Motel Road Br.No. 4404 Dekalb County Boring B-1							
-45							
Medium Gray Fine Sand	11						
Loose Gray Sand	5						
-50							
Medium Gray Sand & Gravel	16						
Dense Gray Sand & Gravel	31						
-55							
Medium Fine Brown Sand	21						
Same As Above	27						
-60							
Same As Above	16						
Same As Above	15						
-65							
End of Boring							
-70							
-75							
-80							
-85							
-90							
-95							



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FILE NAME = soil borings.dwg	DATE = 12/26/2019	REVISED =

DEKALB COUNTY HIGHWAY DEPARTMENT

SOIL BORINGS STRUCTURE NO. 019-4410

SCALE: - SHEET - OF - SHEETS STA. 10+00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	22
CONTRACT NO. 87723			ILLINOIS FED. AID PROJECT	



Bridge Foundation Boring Log

Sh. 1 of 2 Sh.

PROJECT Mayfield Township BRIDGE East Branch of Date 4-13-79
 ROUTE Motel Road Kishwaukee River Bored By R. Burnell
 SEC. Br.No. 4404 STA. _____ Checked By R. Wildman

COUNTY <u>Dekalb</u>		Surface Water El. _____		Groundwater El. at Completion <u>-6.5'</u>		After _____ Hours	
Elevation	N	Qu t/s.f.	w (%)	Elevation	N	Qu t/s.f.	w (%)
Boring No. <u>B-2</u>							
Station <u>40' N. of bridge</u>							
Offset <u>15' E. of road</u>							
Ground Surface <u>-1.5' below deck</u>		EL. <u>822.3</u>					
<u>Medium Black Silt Loam</u>	6	.9		<u>Hard Gray Fine Sand with Large Stones</u>	66		
<u>Medium Brown Silt Loam</u>	7	.9		<u>Dense Gray Sand</u>	31		
<u>Medium Gray Sand & Gravel (wet & dirty)</u>	11			<u>Medium Gray Dirty Sand with Till Lenses</u>	20		
<u>Same As Above</u>	10			<u>No Recovery</u>	11		
<u>Same As Above</u>	26			<u>Loose Gray Dirty Sand</u>	4		
<u>Dense Gray Sand & Gravel</u>	41			<u>Medium Gray Sand</u>	12		
<u>Same As Above</u>	35			<u>Same As Above</u>	20		
<u>Same As Above</u>	31			<u>Same As Above</u>	25		
<u>Dense Fine Gray Sand</u>	39			<u>Same As Above</u>	28		

N-Standard Penetration Test-Blows per foot to drive 2"
 O.D. Split Spoon Sampler 12" with 140 No. hammer falling 30".
 Qu-Unconfined Compressive Strength - t/sf
 w - Water Content - percentage of oven dry weight-%
 Type failure:
 B - Bulge Failure
 S - Shear Failure
 E - Estimated Value
 P - Penetrometer

BD 137 (Rev. 4-78)

FORM NO. B. D. 137 REV. 9-66

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

Mayfield Twp. Motel Road Br. No. 4404 Dekalb County Boring B-2		Elevation	N	Qu t/s.f.	w (%)	Elevation	N	Qu t/s.f.	w (%)
		-45							
<u>Assume Fine Sand</u>		16							
<u>Medium Fine Brown Sand</u>		11				-75			
<u>Same As Above</u>		22				-50			
<u>Same As Above</u>		31							
<u>Same As Above</u>		22				-55			
<u>Same As Above</u>		25							
<u>Same As Above</u>		21				-60			
<u>Same As Above</u>		23							
<u>End of Boring</u>		-65				-90			
		-70				-95			



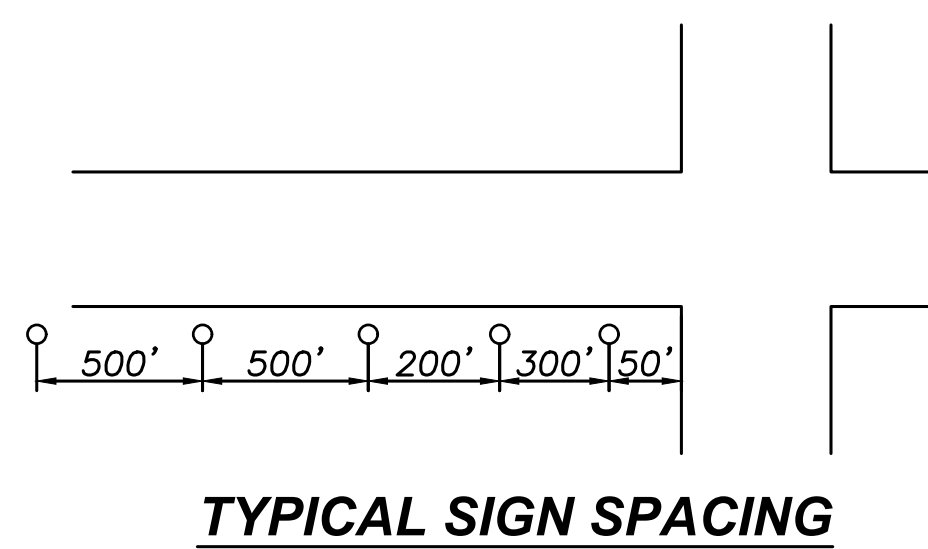
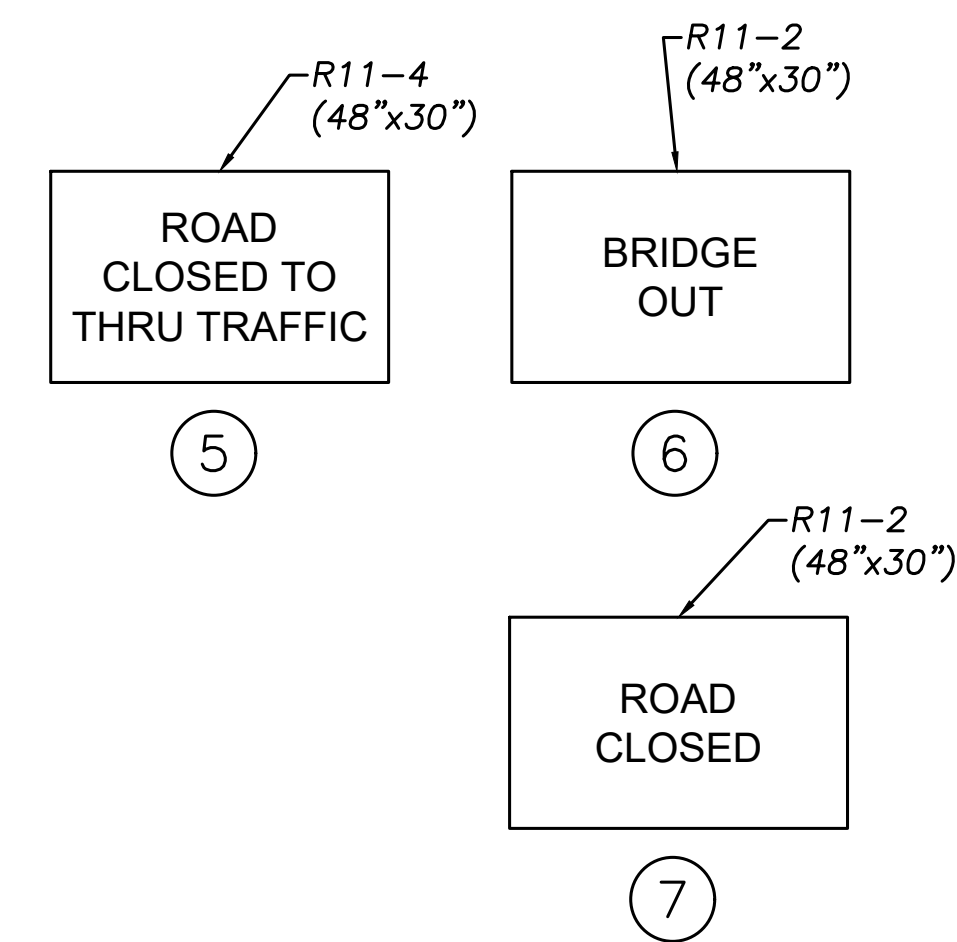
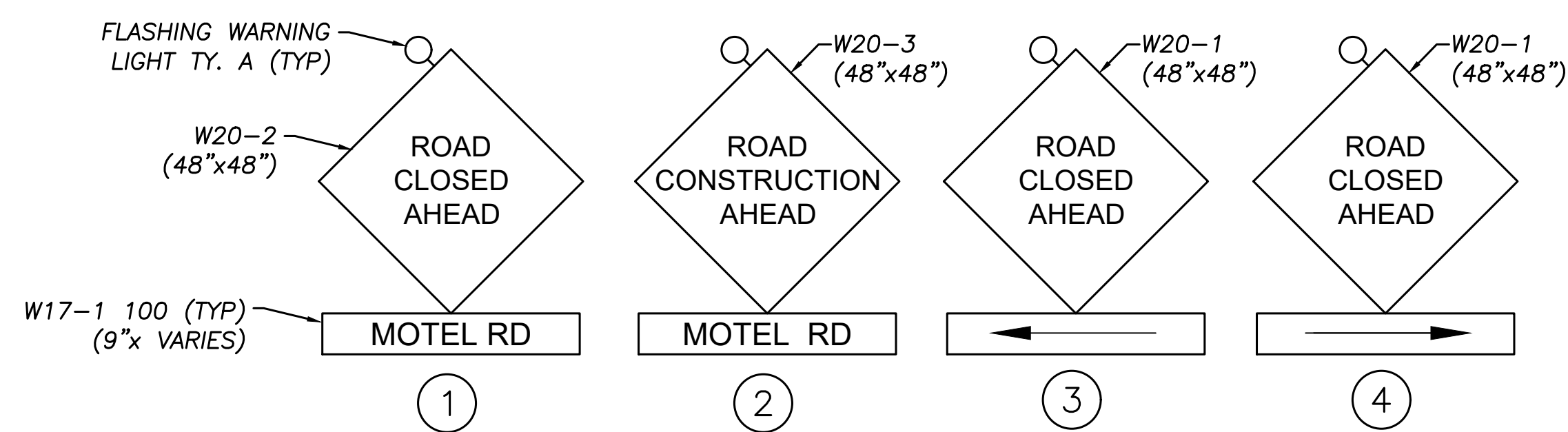
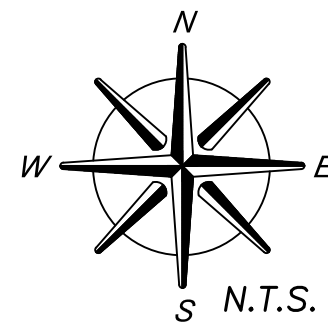
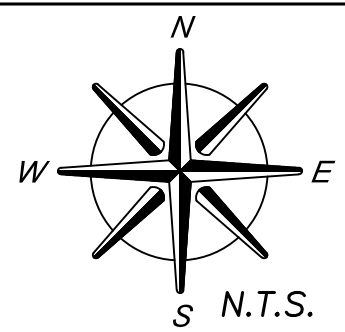
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DEKALB COUNTY HIGHWAY DEPARTMENT

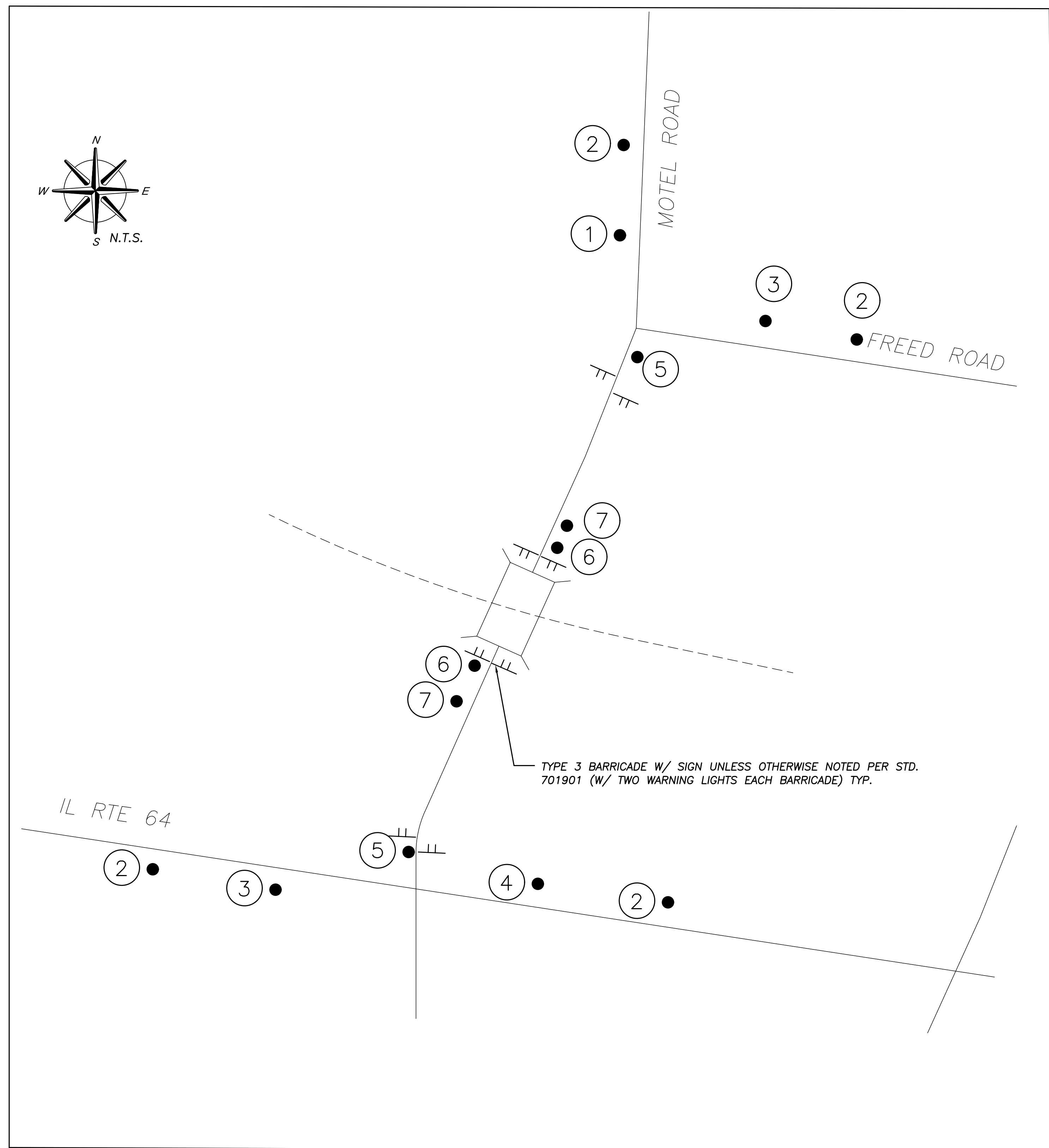
SOIL BORINGS STRUCTURE NO. 019-4410

SCALE: - SHEET - OF - SHEETS STA. 10+00

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-09110-01-BR	DEKALB	24	23
CONTRACT NO. 87723			ILLINOIS FED. AID PROJECT	



NOTE: W SERIES SIGNS SHALL BE BLACK ON FLORESCENT ORANGE SHEETING.



CLOSURE DETAIL

BLR 21-9 PRINCIPAL TRAFFIC CONTROL STANDARD



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CLOSURE PLAN	
SCALE: -	SHEET - OF - SHEETS STA. - TO STA. -

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
160	14-19110-01-BR	DEKALB	24	24
MOTEL ROAD		CONTRACT NO. 87723		
ILLINOIS		7482(009)		