



EARTHWORK SUMMARY					
STATION TO STATION	EARTH EXCAVATION	CHANNEL EXCAVATION	STRUCTURE EXCAVATION	FILL	WASTE (SHORTAGE)
RDWY 16+00.00 - 19+53.00	208			567	(411)
RDWY 20+33.00 - 24+00.00	148			400	(289)
CHANNEL		640			
STRUCTURE			115		
TOTAL	356	640	115	967	(700)
USE	360	640	115	-	(700)

(@ 25% SHRINKAGE)

PAVEMENT SCHEDULE							
STATION TO STATION	WIDTH	LENGTH	AGGREGATE BASE CSE. TYPE A 140#/CF	BITUMINOUS MATERIALS (PRIME COAT) 0.25LBS/SQ FT	HOT-MIX ASPHALT BINDER CSE 112#/SQ YD/IN	BITUMINOUS MATERIALS (TACK COAT) 0.025LBS/SQ FT	HOT-MIX ASPHALT SURFACE CSE 112#/SQ YD/IN
			TON	POUND	TON	POUND	TON
16+38.00 - 16+50.00	27.71' AVG.	12.00'	23				
16+50.00 - 19+53.00	27.75'	303.00'	589				
20+33.00 - 23+50.00	27.75'	317.00'	616				
23+50.00 - 23+66.00	27.75' AVG.	16.00'	31				
16+38.00 - 16+50.00	24.71' AVG.	12.00'		74			
16+50.00 - 19+53.00	24.75'	303.00'		1,875			
20+33.00 - 23+50.00	24.75'	317.00'		1,961			
23+50.00 - 23+66.00	24.75' AVG.	16.00'		99			
16+38.00 - 16+50.00	24.50' AVG.	12.00'			5		
16+50.00 - 19+53.00	24.54'	303.00'			116		
20+33.00 - 23+50.00	24.54'	317.00'			121		
23+50.00 - 23+66.00	24.54' AVG.	16.00'			6		
16+00.00 - 16+38.00	24.44'	38.00'				23	
16+38.00 - 16+50.00	24.38' AVG.	12.00'				7	
16+50.00 - 19+53.00	24.33'	303.00'				184	
BRIDGE DECK	30.00'	80.00'				60	
20+33.00 - 23+50.00	24.33'	317.00'				193	
23+50.00 - 23+66.00	24.00' AVG.	16.00'				10	
23+66.00 - 24+00.00	23.05' AVG.	34.00'				20	
16+00.00 - 16+38.00	24.33' AVG.	38.00'					12
16+38.00 - 16+50.00	24.25' AVG.	12.00'				4	
16+50.00 - 19+53.00	24.17'	303.00'				91	
BRIDGE DECK	30.00'	80.00'				46	
20+33.00 - 23+50.00	24.17'	317.00'				95	
23+50.00 - 23+66.00	23.86' AVG.	16.00'				5	
23+66.00 - 24+00.00	22.88' AVG.	34.00'				10	
TOTAL			1,259	4,009	248	497	263

PERIMETER EROSION BARRIER			
STATION TO STATION	SIDE	FOOT	
16+00	16+25	RIGHT	35
16+00	19+34	LEFT	360
20+52	24+00	RIGHT	380
20+14	24+00	LEFT	410
TOTAL			1,185

TEMPORARY DITCH CHECKS		
STATION	SIDE	FOOT
16+98	RIGHT	12
17+73	RIGHT	12
18+48	RIGHT	12
19+48	RIGHT	12
19+75	RIGHT	12
TOTAL		60

INLET AND PIPE PROTECTION		
STATION	SIDE	EACH
16+23	RIGHT	1
TOTAL		1

PIPE CULVERTS, CLASS D, TYPE 1 18"		
STATION	SIDE	FOOT
16+39	RIGHT	32
TOTAL		32

PIPE CULVERT REMOVAL			
STATION	SIZE	SIDE	FOOT
16+39	18"	RT	31
TOTAL			31

AGGREGATE SHOULDERS, TYPE B 140#/CF				
STATION TO STATION	SIDE	WIDTH	LENGTH	TON
16+00.00 - 16+18.00	RT	5.57' AVG.	18.00'	2
16+00.00 - 16+50.00	LT	3.91' AVG.	50.00'	5
16+50.00 - 19+30.28	LT	4.00'	280.28'	26
16+61.00 - 18+52.50	RT	4.00'	191.50'	18
19+30.28 - 19+39.00	LT	3.78' AVG.	280.28'	1
18+52.50 - 18+70.50	RT	5.50' AVG.	18.00'	2
18+70.50 - 19+05.50	RT	7.00'	35.00'	6
19+05.50 - 19+54.30	RT	6.88' AVG.	48.80'	8
19+54.30 - 19+67.13	RT	4.88' AVG.	12.83'	1
20+18.87 - 20+31.68	LT	4.48' AVG.	12.81'	1
20+31.68 - 20+80.50	LT	6.68' AVG.	48.82'	8
20+80.50 - 21+15.50	LT	7.00'	35.00'	6
21+15.50 - 21+33.50	LT	5.50' AVG.	18.00'	2
20+46.75 - 20+55.72	RT	3.78' AVG.	8.97'	1
20+55.72 - 23+50.00	RT	4.00'	294.28'	27
21+33.50 - 23+50.00	LT	4.00'	216.50'	20
23+50.00 - 24+00.00	RT	4.00'	50.00'	5
23+50.00 - 24+00.00	LT	4.00'	50.00'	5
TOTAL				144

AGGREGATE SURFACE COURSE, TYPE B 140#/CF				
STATION	SIDE	WIDTH	LENGTH	TON
ENTR. - 16+39.00	RT	20' & VAR.	21.50'	22
TOTAL				22

HOT-MIX ASPHALT REMOVAL, VARIABLE DEPTH			
STATION TO STATION	WIDTH	LENGTH	SQ YD
16+00.00 - 16+38.00	24'	38.00'	101
23+66.00 - 24+00.00	24'	34.00'	91
TOTAL			192

PAINT PAVEMENT MARKING - LINE 4"			
STATION TO STATION	SIDE	DESCRIPTION	FOOT
16+00.00 - 24+00.00	LEFT	SOLID WHITE	800
16+00.00 - 18+50.00	CL	LT YELLOW SOLID	250
16+00.00 - 18+50.00	CL	RT YELLOW SKIP-DASH	63
18+50.00 - 24+00.00	CL	YELLOW SKIP-DASH	138
16+00.00 - 24+00.00	RIGHT	SOLID WHITE	800
TOTAL			2,051

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT			
STATION TO STATION	SIDE	EACH	
18+81.42 - 19+31.42	RT	1	
20+54.58 - 21+04.58	LT	1	
TOTAL		2	

TRAFFIC BARRIER TERMINAL, TYPE 6A			
STATION TO STATION	SIDE	EACH	
19+30.50 - 19+68.00	RT	1	
20+18.00 - 20+55.50	LT	1	
TOTAL		2	

18+81.42 19+31.42  
20+54.58 21+04.58

19+31.42 19+68.92  
20+17.08 20+54.42

**HENRY COUNTY  
COUNTY HIGHWAY 19 (F.A.S. 240A)  
OVER HILLERY CREEK**

**SUMMARY OF QUANTITIES,  
SCHEDULES OF QUANTITIES**

USER NAME = JSavage	DESIGNED - CRN	REVISED - 2/26/2024 JPS
DRAWN - CRN	CHECKED - JPS/BAN	REVISED -
PLOT SCALE = 100,0000' / in.	DATE - 11/28/2023	REVISED -
PLOT DATE = 2/26/2024		

SCALE: NONE SHEET 2 OF 2 SHEETS STA. 16+00.00 TO STA. 24+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
240A	22-00168-00-BR	HENRY	20	4
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 85753	
FED. AID PROJECT NO. KUXB(253)				

B.M.: Mag Spike in Southside of Power Pole Sta. 16+97, 38' LT. Elev. 720.76  
 Mag Spike in Southside of Power Pole Sta. 19+19, 39' LT. Elev. 719.11  
 Mag Spike in Southside of Power Pole Sta. 21+97, 40' LT. Elev. 720.93

**Existing Structure:**

Single span precast prestressed concrete deck beam superstructure on open concrete abutments. The structure is 58'-0" back to back of abutments, 28'-0" out to out of deck and is skewed 44° right ahead. The structure was constructed in 1959. Str. No. 037-3006

Salvage: None

Road to be closed to traffic during construction.

Traffic Barrier Terminal Type 6A, Std. 631032 (N.E. & S.W. Corners)

HILLERY CREEK  
 BUILT 202 BY  
 HENRY COUNTY  
 SEC. 22-00168-00-BR  
 F.A.S. RT. 240A STA. 19+93.00  
 F.A. PROJ. NO. KUXB(253)  
 STR. NO. 037-3385 LOADING HL-93

**NAME PLATE**

Locate Name Plate at S.W. Wingwall Corner of Bridge (See Std. 515001)

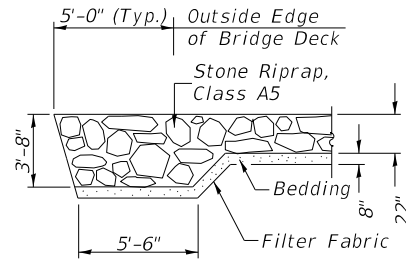
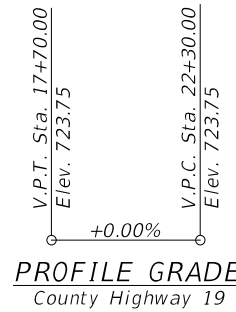
**GENERAL NOTES**

A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Articles 1020.05(b)(10) and 1021.07 of the Standard Specifications.  
 Reinforcement Bars designated (E) shall be epoxy coated.  
 Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.  
 The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

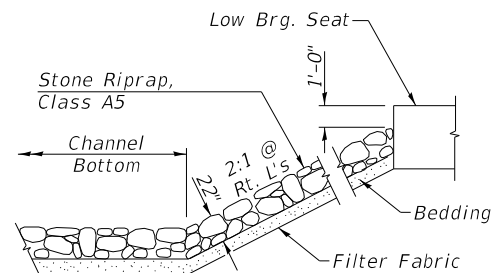
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	—	640	640
Stone Riprap, Class A5	TON	—	400	400
Filter Fabric	SQ YD	—	390	390
① Hot-Mix Asphalt Surface Course, IL-9.5, Mix "C", N50	TON	46	—	46
Bituminous Materials (Tack Coat)	POUND	60	—	60
① Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	115	115
Concrete Structures	CU YD	—	37.2	37.2
Concrete Encasement	CU YD	—	4.2	4.2
Precast Prestressed Concrete Deck Beams (33" Depth)	SQ FT	2,323	—	2,323
Reinforcement Bars	POUND	—	4,020	4,020
① Steel Railing, Type SM (Special)	FOOT	160	158	160
Furnishing Steel Piles HP10x42	FOOT	—	305	305
Driving Piles	FOOT	—	305	305
Test Pile Steel HP10x42	EACH	—	2	2
Name Plates	EACH	—	1	1
Terminal Marker - Direct Applied	EACH	2	—	2
① Waterproofing Membrane System	SQ YD	267	—	267
Portland Cement Mortar Fairing Course	FOOT	175	—	175
① Controlled Low-Strength Material	CU YD	—	27.7	27.7

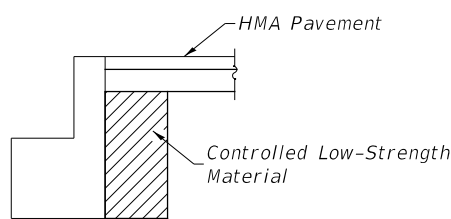
① See Special Provisions



**SECTION A-A**



**STONE RIPRAP DETAIL**

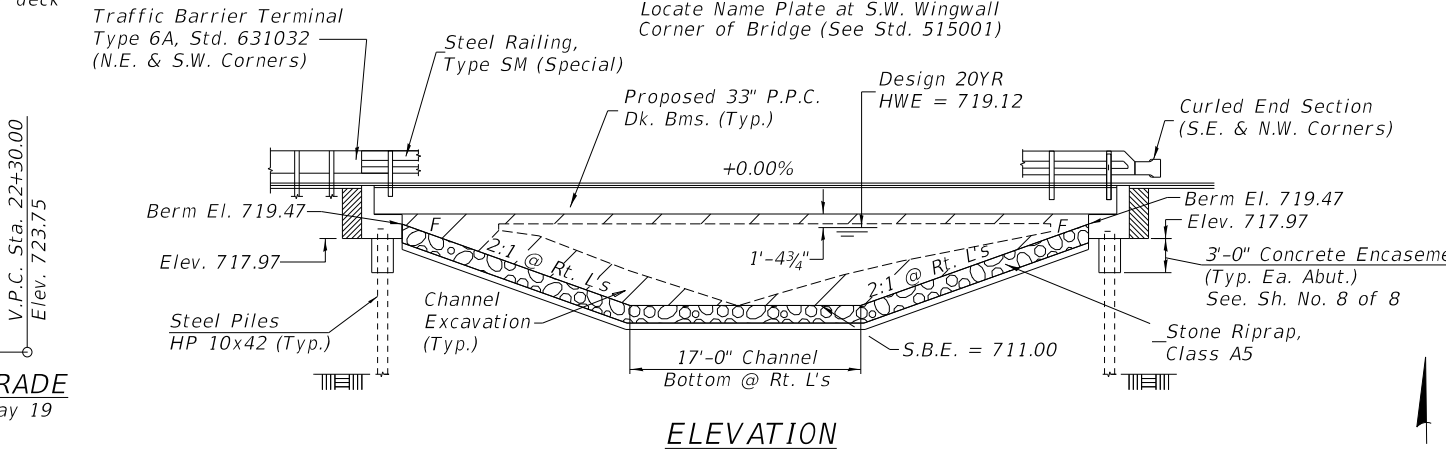


**SECTION B-B**

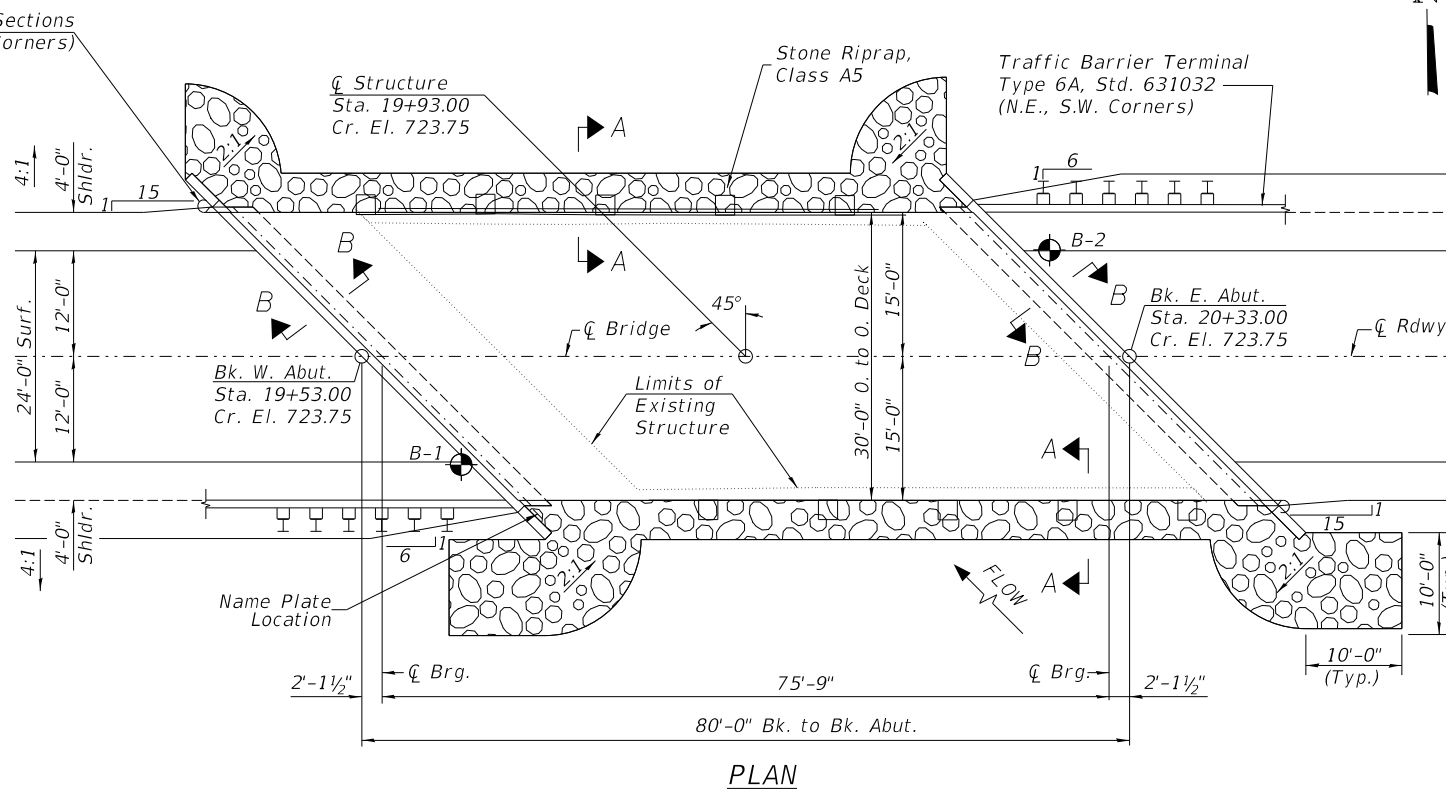
See Special Provisions for gradation requirements.

**WATERWAY INFORMATION**

Drainage Area = 3.48 Sq. Mi.		Low Grade Elev. = 722.92 @ Sta. 17+70.29							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	20	1,235	155	270	719.12	1.66	0.21	720.78	719.33
Base	100	1,820	175	303	719.77	2.81	0.54	722.58	720.31



**ELEVATION**



**PLAN**

**DESIGN SPECIFICATIONS**

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

**DESIGN STRESSES**

(FIELD UNITS)

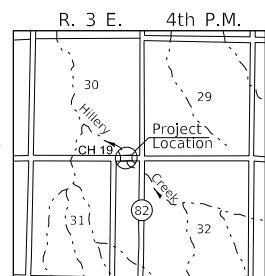
$f'_c = 3,500$  p.s.i.  
 $f_y = 60,000$  p.s.i. (Rein.)

(PRECAST PRESTRESSED UNITS)

$f'_c = 6,000$  p.s.i.  
 $f'_{ci} = 5,000$  p.s.i.  
 $f'_s = 270,000$  p.s.i. (1/2" Strands)  
 $f'_{si} = 201,960$  p.s.i. (1/2" Strands)

**LOADING HL-93**

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



**LOCATION SKETCH**

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specification for Highway Bridges. This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Illinois Structural No. 6527  
 Expires 11/30/2024

MODEL: ST00BELNAME  
 FILE NAME: 03112 - CH 19 over Hillery Creek, Henry18 - CADD3 - CADD Sheets112-001.dgn

USER NAME = JSavage	DESIGNED - CRN	REVISED - 2/26/2024	JPS
PLOT SCALE = 100,0000' / in.	CHECKED - JPS/BAN	REVISED -	
PLOT DATE = 2/26/2024	DATE - 10/17/2023	REVISED -	

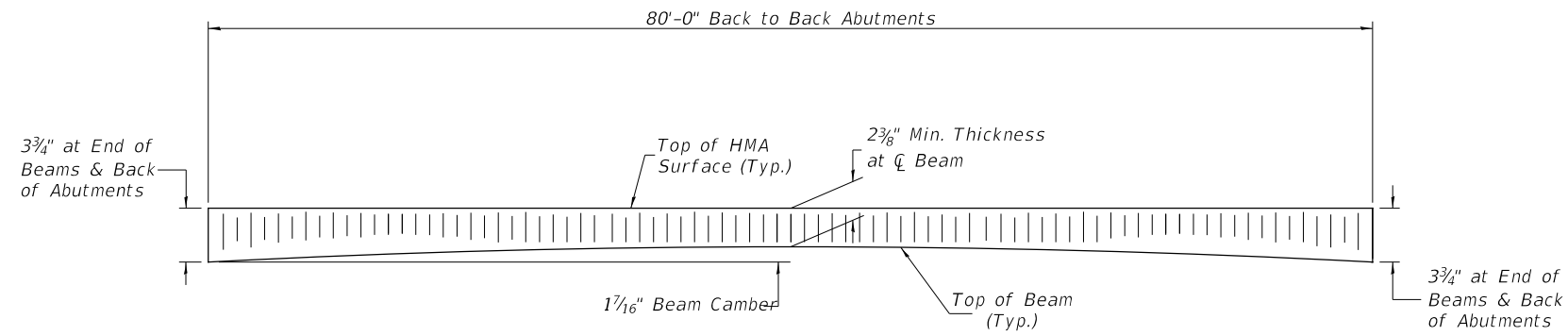
**HENRY COUNTY  
 COUNTY HIGHWAY 19 (F.A.S. 240A)  
 OVER HILLERY CREEK**

**GENERAL PLAN & ELEVATION**

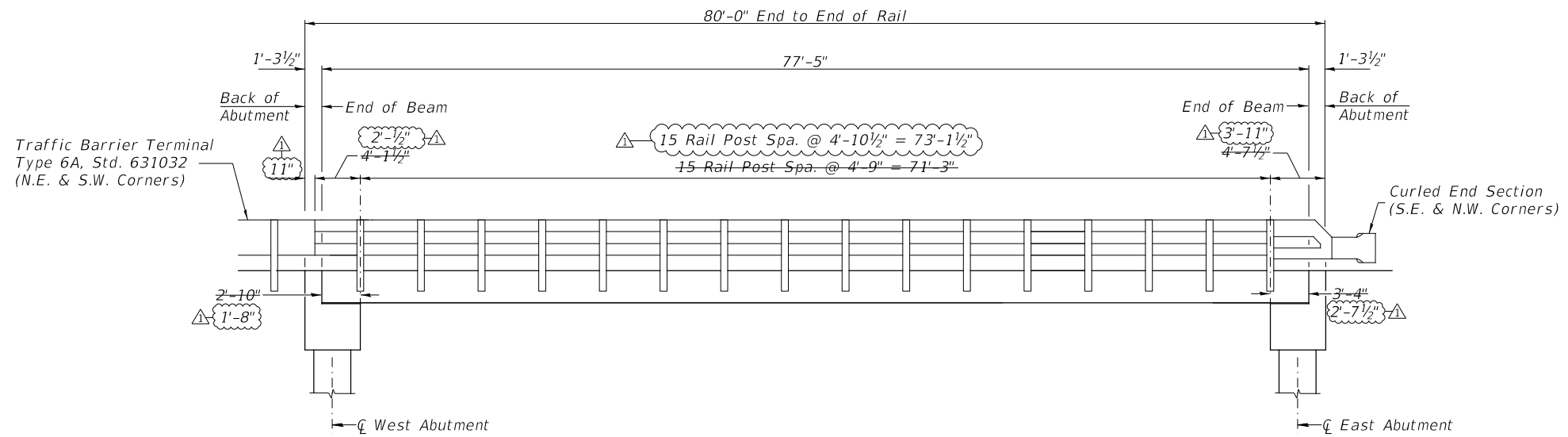
SCALE: NONE SHEET 1 OF 8 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
240A	22-00168-00-BR	HENRY	20	8
SN 037-3385		CONTRACT NO. 85753		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. KUXB(253)		



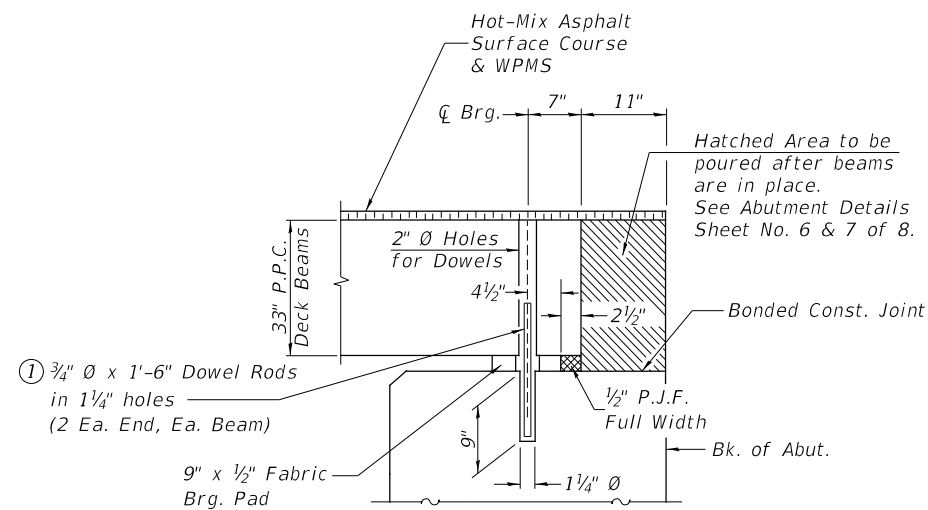


**ANTICIPATED HMA SURFACE PROFILE**  
Includes Waterproofing Membrane System ( $\pm 3/4$ )



**RAIL POST SPACING**

\*Contractor to move posts as necessary to avoid deck beam ties



**SECTION THRU ABUTMENT**  
(@ RT Angle)

① Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hr.) prior to grouting the shear keys.

MODEL: 140821.NAMES  
FILE NAME: 031117 - C1 19 over HILLERY Creek (Henry)18 - CADD 2 - CADD Sheets 5112-0006.dgn

USER NAME = JSavage	DESIGNED - CRN	REVISED - $\Delta$ 2/26/2024 JPS
	DRAWN - CRN	REVISED - _____
PLOT SCALE = 100,0000' / in.	CHECKED - JPS/BAN	REVISED - _____
PLOT DATE = 2/26/2024	DATE - 10/02/2023	REVISED - _____

**HENRY COUNTY  
COUNTY HIGHWAY 19 (F.A.S. 240A)  
OVER HILLERY CREEK**

**SUPERSTRUCTURE DETAILS**

SCALE: NONE SHEET 6 OF 8 SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
240A	22-00168-00-BR	HENRY	20	13
SN 037-3385		CONTRACT NO. 85753		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. KUXB(253)		