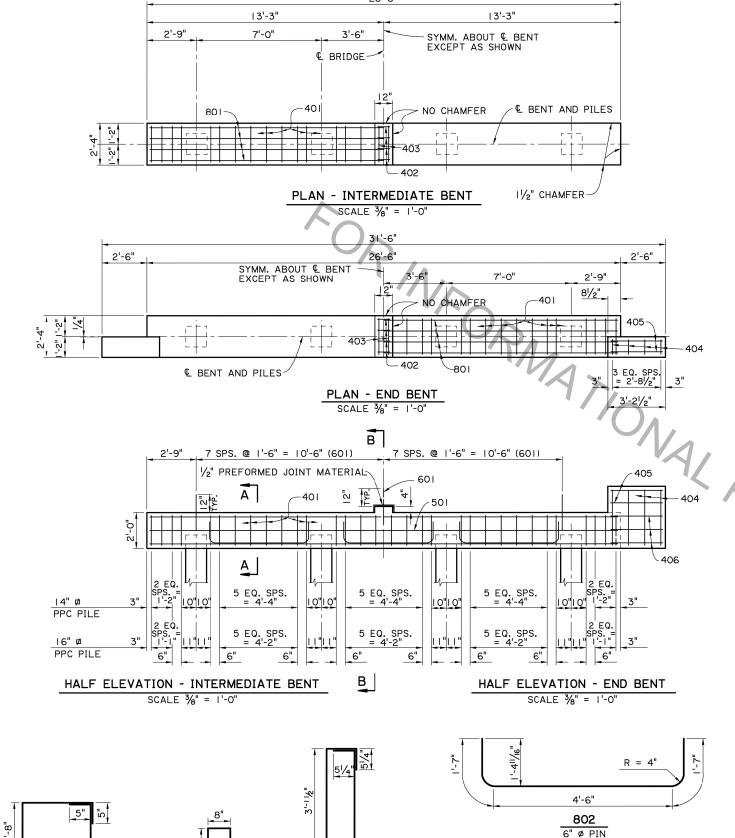
2'-0"

401

2" Ø PIN



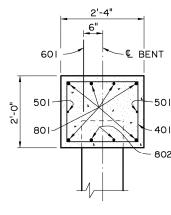
9¾"

404

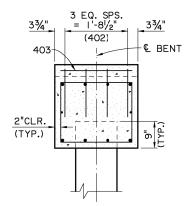
2" Ø PIN

402

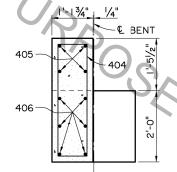
2" Ø PIN



SECTION A-A SCALE: 3/4" = 1'-0'



SECTION B-B SCALE: 3/4" = 1'-0"



**END ELEVATION** SCALE 3/4" = 1'-0"

05/17/17

6" Ø PIN

AS-DESIGNED RATING

**NOTES** 

1.379 MAGNIFICATION FACTOR = 1.3

RATING

**FACTOR** 

1.793

2.324

VEHICLE

HL-93 (INV)

HL-93 (OPR)

LADV-II (INV)

BENT NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS
FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION
WITH 2008 & 2009 INTERIMS.
DESIGN LOAD: LIVE LOAD IS HL-93, AND LADV-II (LOUISIANA DESIGN VEHICLE
LIVE LOAD 2011).

PPC PILES ARE USED.)

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS AI. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A SURFACE FINISH AS PER SUB-SECTION 805.08 OF THE STANDARD SPECIFICATIONS, EXCEPT WHEN SPECIFIED ELSEWHERE IN THE PLANS.

1/2" PREFORMED JOINT MATERIAL AND ASPHALT SATURATED FELT SHALL BE INCLUDED IN THE PRICE BID FOR CLASS AT CONCRETE.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS UNLESS
OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED. DOWELS (601 BARS) SHALL BE PROVIDED AT ALL FIXED BEARINGS AND APPROACH SLAB BEARINGS (SEE GENERAL PLAN). ALL EXPOSED ENDS OF DOWELS SHALL BE WRAPPED WITH TWO LAYERS OF 15 LB. ASPHALT SATURATED FELT. CLOSE FITTING TUBES OF COMPRESSIBLE MATERIAL NOT LESS THAN 3/6" THICK MAY BE SUBSTITUTED.

PRECAST CONCRETE PILES: FOR DETAILS SEE STANDARD DETAIL BD.2.5.1.0.01 (CS-216). EXTERIOR PILES ARE TO BE BATTERED OUTWARD AT 1/2 ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN. PREFORMED JOINT MATERIAL: PREFORMED JOINT MATERIAL SHALL BE IN ACCORDANCE WITH SECTION 815.04 OF THE STANDARD SPECIFICATIONS.

ES	TIMA	TED QU	ANTITIE	S (ONE INTER. BENT)		
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION		
801	6	26'-2"	157'-0"	LONGIT. IN CAP		
802	6	7'-8"	46'-0"	LONGIT. IN CAP BTW. PILES		
TOTA	AL NO	. 8 BAR	s = 203'	-0" = 542 LBS.		
601	15	2'-0"	30'-0"	DOWELS		
TOTA	AL NO	. 6 BAR	S = 30'-0	)" = 45 LBS.		
501	2	26'-2"	52'-4"	LONGIT. IN CAP		
TOTA	AL NO	. 5 BAR	S = 52'-4	1" = 55 LBS.		
401	32	8'-2"	261'-4"	STIRRUPS IN CAP		
402	4	3'-4"	13'-4"	STIRRUPS IN RISER		
403	2	2'-0"	4'-0"	LONGIT. IN RISER		
TOTA	TOTAL NO. 4 BARS = 278'-8" = 186 LBS.					

DEFORMED REINFORCING STEEL = 828 LBS. CLASS AI CONCRETE = 4.41 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD = 21 TONS SERVICE LIVE LOAD = 34 TONS

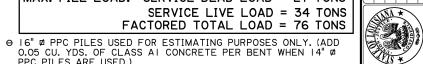
FACTORED TOTAL LOAD = 76 TONS

\* ADD 45 LBS. OF REINFORCING STEEL (15-601 DOWELS) WHEN TWO FIXED ENDS OCCUR ON THE SAME BENT.

TWO TIRED ENDS COCOR ON THE SAME BENT:							
ESTIMATED QUANTITIES (ONE END BENT)							
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION			
801	6	26'-2"	157'-0"	LONGIT. IN CAP			
802	6	7'-8"	46'-0"	LONGIT. IN CAP BTW. PILES			
TOTA	AL NO	. 8 BAR	S = 203'	-0" = 542 LBS.			
601	15	2'-0"	30'-0"	DOWELS			
TOTA	AL NO	. 6 BAR	s = 30'-0	O" = 45 LBS.			
501	2	26'-2"	52'-4"	LONGIT. IN CAP			
TOTA	AL NO	. 5 BAR	S = 52'-4	4" = 55 LBS.			
401	32	8'-2"	261'-4"	STIRRUPS IN CAP			
402	4	3'-4"	13'-4"	STIRRUPS IN RISER			
403	2	2'-0"	4'-0"	LONGIT. IN RISER			
404	8	8'-9"	70'-0"	STIRRUPS IN WINGWALL			
405	8	2'-10"	22'-8"	LONGIT. IN WINGWALL			
406	12	4'-0"	48'-0"	LONGIT. IN WINGWALL			
TOTA	AL NO	. 4 BAR	S = 419'	-4" = 280 LBS.			

TOTAL NO. 4 BARS = 419'-4" =	280 LBS.		
DEFORMED REINFORCING STEEL	=	922	LBS
CLASS AT CONCRETE	= 5.23	CU.	YDS

MAX. PILE LOAD: SERVICE DEAD LOAD = 21 TONS SERVICE LIVE LOAD = 34 TONS FACTORED TOTAL LOAD = 76 TONS

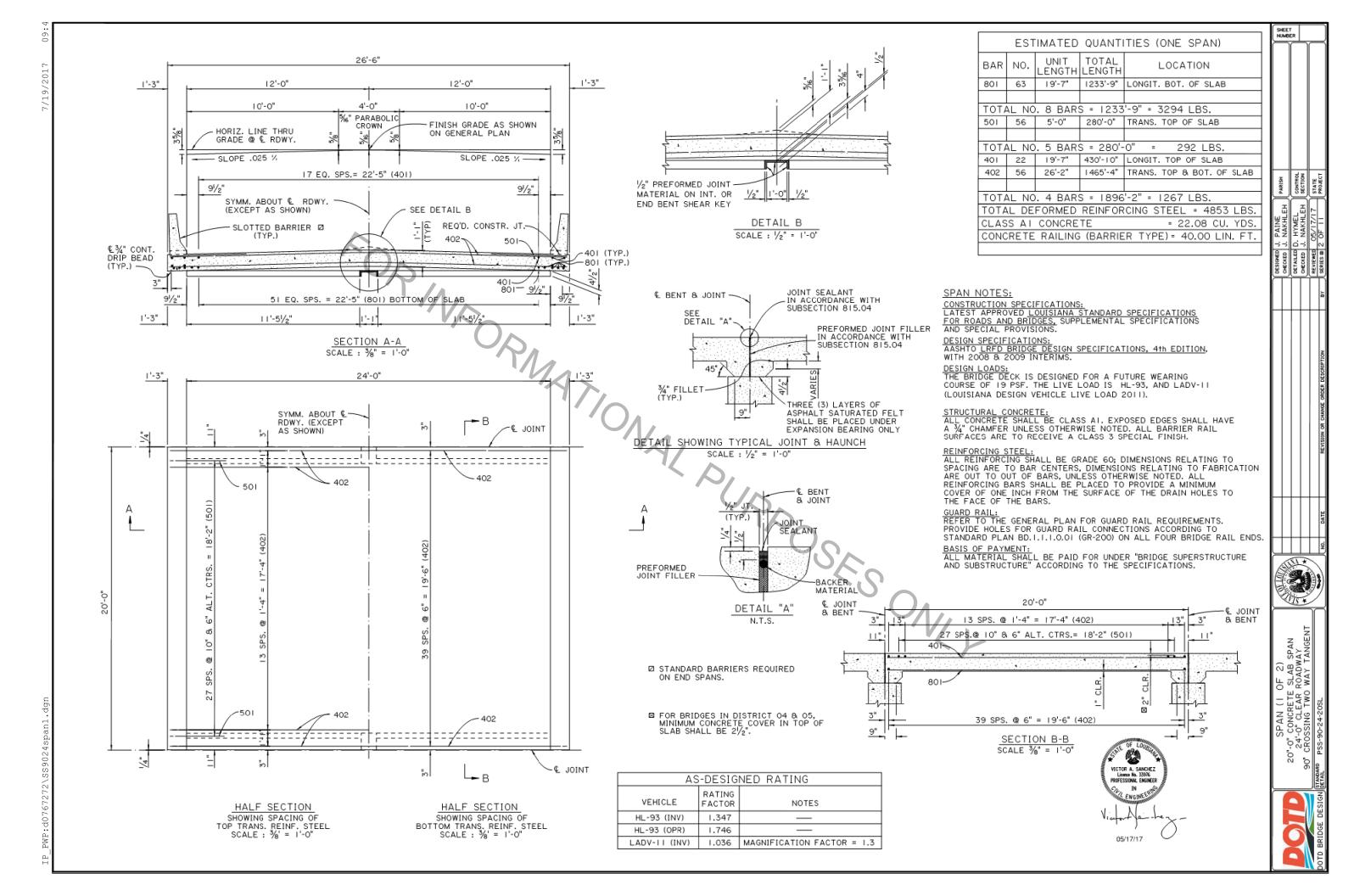


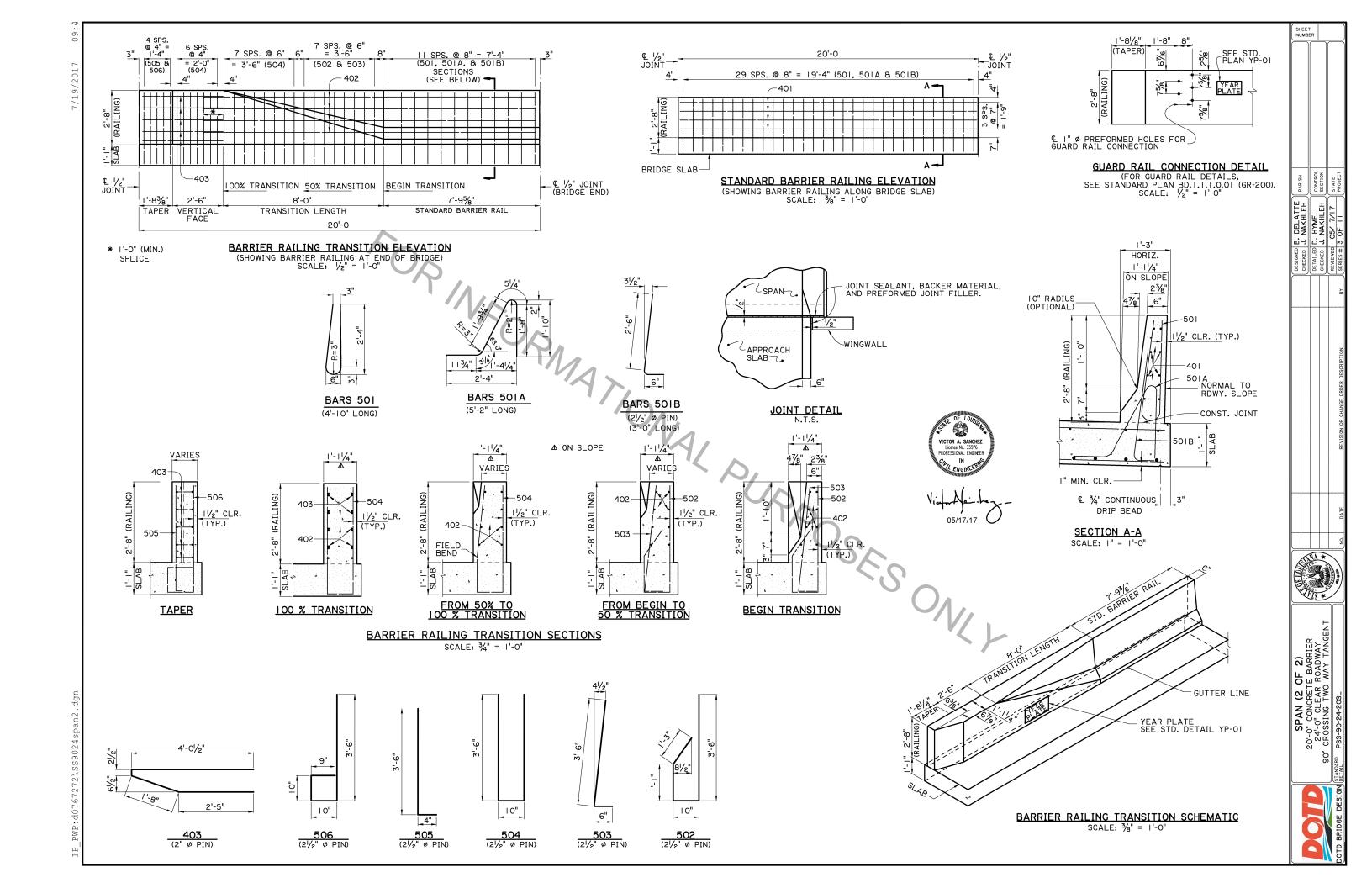


BENTS
NFORCED CONCRETE PILE BENTS
24-0" CLEAR ROADWAY
' CROSSING TWO WAY TANGENT

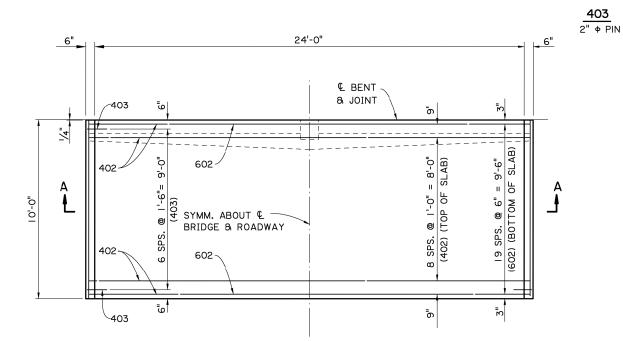
REINF 90° C



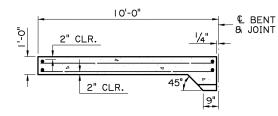




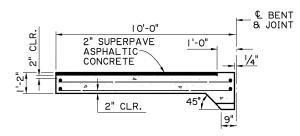
SECTION A-A SCALE: 3/8" = 1'-0"



PLAN SCALE: 3/8" = 1'-0"



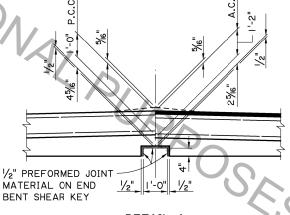
(FOR PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT)



(FOR SUPERPAVE ASPHALTIC CONCRETE ROADWAY PAVEMENT)

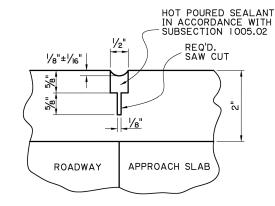
# SECTION ALONG & ROADWAY

SCALE:  $\frac{3}{8}$ " = 1'-0"



1'-1"

DETAIL A SCALE : 1/2" = 1'-0"



SAWING & SEALING JOINT DETAIL

### APPROACH SLAB NOTES:

BAR

601

602

401

402

403

NO.

50

20

11

OZ SAW CUT & SEAL

14

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND

ESTIMATED QUANTITIES (ONE SLAB)

LOCATION

479'-2" LONGIT. BOT. OF SLAB

493'-4" TRANSV. BOT. OF SLAB

271'-4" TRANSV. TOP OF SLAB

28'-0" DOWELS IN CURB

268'-4" LONGIT. TOP OF SLAB & CURB

27.78 SQ. YDS.

= 2.5 TONS

= 23 LIN. FT.

TOTAL

TOTAL NO. 6 BARS = 972'-6" = 1,461 LBS.

TOTAL NO. 4 BARS = 567'-8" = 379 LBS.

O TO BE PAID FOR UNDER ITEM CONCRETE APPROACH SLABS.

☑ REQUIRED WHEN APPROACH SLAB IS ADJACENT TO SUPERPAVE

○ TOTAL DEFORMED REINFORCING STEEL = 1,840 LBS

LENGTH LENGTH

9'-7"

24'-8"

9'-7"

24'-8"

2'-0"

CONCRETE APPROACH SLAB

ASPHALTIC CONCRETE PAVEMENT.

○□ SUPERPAVE ASPHALTIC CONCRETE

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
4th EDITION, WITH 2008 & 2009 INTERIMS.

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS AI. EXPOSED EDGES

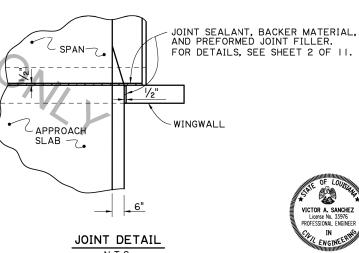
SHALL HAVE A 34" CHAMFER, UNLESS OTHERWISE NOTED.

SUPERPAVE ASPHALTIC CONCRETE: TO BE THE SAME TYPE AS THE SUPERPAVE ASPHALTIC CONCRETE USED FOR THE APPROACH ROADWAY PAVEMENT OR OVERLAY. REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO THE FABRICATION ARE OUT-TO-OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS.

BEDDING MATERIAL: FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS SEE STANDARD DETAIL BD.2.10.1.0.07.

SAWING & SEALING: THE SUPERPAVE ASPHALTIC CONCRETE SHALL BE SAW CUT AT THE END OF THE CONCRETE APPROACH SLAB THE ENTIRE ROADWAY WIDTH AND SEALED. COST TO BE INCLUDED WITH CONCRETE APPROACH SLABS. BASIS OF PAYMENT: ALL MATERIAL SHALL BE PAID FOR UNDER

CONCRETE APPROACH SLABS' ACCORDING TO THE SPECIFICATIONS, EXCEPT WHERE NOTED ON THIS SHEET.

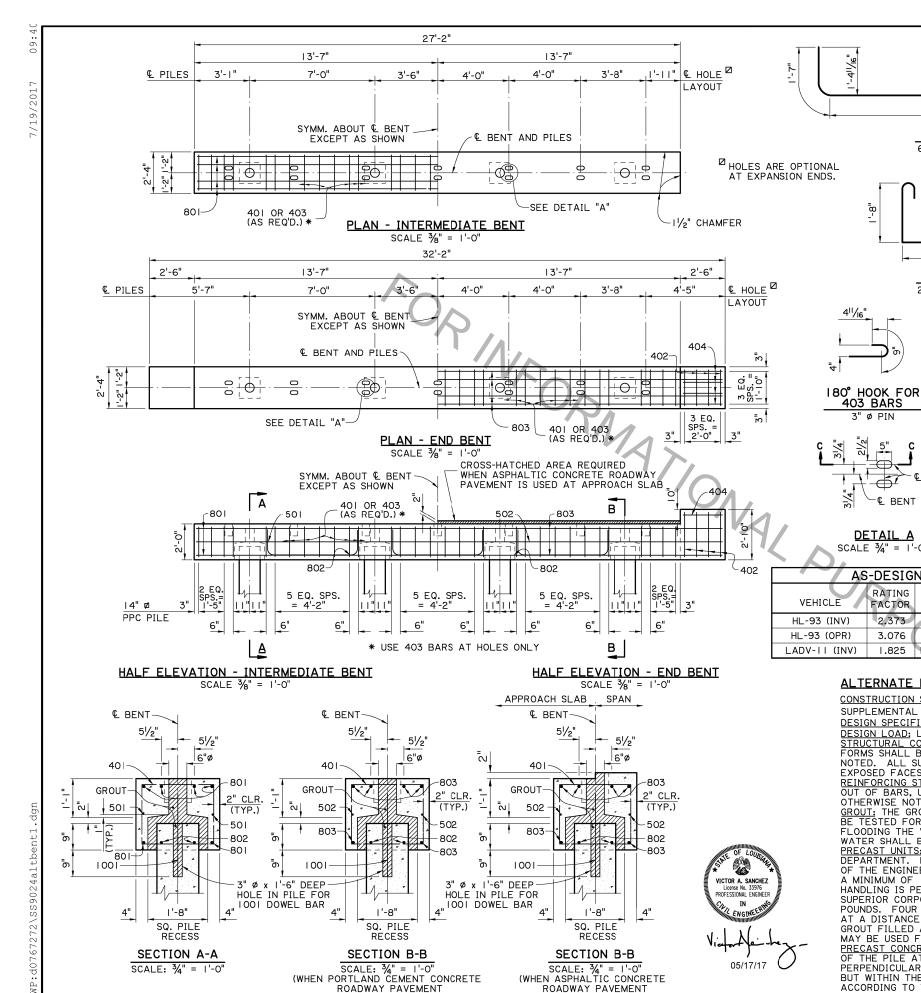




SLAB

ō 90,





IS USED AT APPROACH SLAB)

IS USED AT APPROACH SLAB)

5" 5 401 & 402 2" Ø PIN **SECTION C-C** SCALE 3/4" = 1'-0"

2'-0"

ESTIMATED QUANTITIES (ONE INTER. BENT) LINIT TOTAL BAR NO. LOCATION LENGTH|LENGTH 2'-4" 9'-4" DOWELS IN PILES TOTAL NO. 10 BARS = 9'-4"40 LBS. LONGIT. IN CAP 26'-10" 161'-0" 7'-8" 46'-0" LONGIT, IN CAP BTW. PILES TOTAL NO. 8 BARS = 207'-0" 2 | 26'-10" | 53'-8" | LONGIT. IN CAP TOTAL NO. 5 BARS = 53'-8" 56 LBS. 26 8'-2" 2|2'-4" | STIRRUPS IN CAP 6'-6" 39'-0" STIRRUPS IN CAP 6 TOTAL NO. 4 BARS = 251'-4" 168 LBS. TOTAL DEFORMED REINFORCING STEEL = 817 LBS. TOTAL CLASS PI CONCRETE = 4.38 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD = 17 TONS SERVICE LIVE LOAD = 34 TONS FACTORED TOTAL LOAD = 71 TONS TOTAL GROUT FOR PILE RECESSES = 0.28 CU. YDS. ESTIMATED QUANTITIES (ONE END BENT)

ESTIMATED QUANTITIES (ONE END BENT)						
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LO	CATION	
1001	4	2'-4"	9'-4"	DOWELS IN	PILES	
TOTA	AL NO	). IO BA	RS = 9'-	·4" =	40 LB	S.
802	6	7'-8"	46'-0"	LONGIT. IN	CAP BTW.	PILES
803	6	31'-10"	191'-0"	LONGIT. IN	CAP	
TOTA	AL NC	. 8 BAR	S = 237	'-O" =	633	LBS.
502	2	31'-10"	63'-8"	LONGIT. IN	CAP	
TOTA	AL NO	). 5 BA	RS = 63	3'-8" =	66	LBS.
401	26	8'-2"	2   2'-4"	STIRRUPS I	N CAP	
402	8	9'-10"	78'-8"	STIRRUPS I	N WINGWAL	.L
403	6	6'-6"	39'-0"	STIRRUPS I	N CAP	
404	8	2'-2"	17'-4"	LONGIT. IN	WINGWALL	
TOTA	AL NC	). 4 BA	NRS = 34	47'-4" =	= 232	LBS.

TOTAL DEFORMED REINFORCING STEEL = 971 LBS. TOTAL CLASS PI CONCRETE = 5.60 CU. YDS. MAX. PILE LOAD: SERVICE DEAD LOAD = 17 TONS SERVICE LIVE LOAD = 34 TONS

FACTORED TOTAL LOAD = 71 TONS TOTAL GROUT FOR PILE RECESSES = 0.28 CU. YDS.

⊗ ADD 0.20 CU. YDS. OF CLASS PI CONCRETE PER BENT WHEN MAGNIFICATION FACTOR = 1.3 ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

ALTERNATE BENT NOTES:

AS-DESIGNED RATING

NOTES

21/2

DETAIL A

SCALE  $\frac{3}{4}$ " = 1'-0"

RATING

**FACTOR** 

2.373

3.076

1.825

-€ BENT

4'-6"

802

6" Ø PIN

2'-0"

L HOLES

|-8 (401)

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4th EDITION, WITH 2008 & 2009 INTERIMS.

DESIGN LOAD; LIVE LOAD IS HI.-93, AND LADV-II (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE; ALL CONCRETE SHALL BE CLASS PI. STEEL SIDE FORMS AND STEEL OR CONCRETE BOTTOM FORMS SHALL BE USED FOR PRECAST COMPONENTS. EXPOSED EDGES SHALL HAVE A 3/" CHAMFER UNLESS OTHERWISE NOTED. ALL SURFACES SHALL RECEIVE A CLASS I ORDINARY SURFACE FINISH UPON REMOVAL OF THE FORMS. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A CLASS 3 SPECIAL FINISH.

REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT TO OUT TO PAGE AND STEEL TO PAGE TO PAGE TO PAGE TO THE PROPERTY OF THE PAGE TO PAGE T

OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED.

GROUT: THE GROUT SHALL BE AN APPROVED FLOWABLE NON-SHRINK GROUT LISTED ON AML. THE GROUT SHALL BE TESTED FOR ACCEPTANCE PRIOR TO USAGE. SURFACES SHALL BE THOROUGHLY SATURATED WITH WATER BY FLOODING THE VOID FOR APPROXIMATELY 5 MINUTES IMMEDIATELY BEFORE THE GROUT IS PLACED. ONLY POTABLE

WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.

PRECAST UNITS: THE PLANS FOR AN ONGOING OPERATION OF FABRICATING FACILITIES SHALL BE APPROVED BY THE DEPARTMENT. EACH UNIT SHALL HAVE THE FABRICATOR'S MARK AND UNIQUE NUMBER, MEETING THE APPROVAL OF THE ENGINEER, STAMPED OR SCRIBED IN THE PLANT FOR A MINIMUM OF 10 DAYS AFTER CASTING. THE CONCRETE SHALL REACH A MINIMUM STRENGTH OF 3,000 PSI BEFORE HANDLING IS PERMITTED. THE LIFTING INSERTS SHALL BE I" TYPE S INSERTS AS MANUFACTURED BY DAYTON-SUPERIOR CORPORATION OR AN APPROVED EQUAL. EACH INSERT SHALL HAVE A MINIMUM LOAD CAPACITY OF 10,000 POUNDS. FOUR INSERTS WITH I" Ø x 5" LONG COIL BOLTS SHALL BE PLACED IN THE TOP OF THE UNITS AND LOCATED AT A DISTANCE 21% OF ITS LENGTH (+/- 6") FROM EACH END AND 6" FROM THE EDGES. INSERT HOLES SHALL BE

AT A DISTANCE 21% OF ITS LENGTH (+/- 6") FROM EACH END AND 6" FROM THE EDGES. INSERT HOLES SHALL BE GROUT FILLED AFTER PLACEMENT OF THE UNIT. AT THE CONTRACTOR'S OPTION, A SLING OF SUFFICIENT CAPACITY MAY BE USED FOR LIFTING, PROVIDED THE SAME PICKUP LOCATIONS FROM THE ENDS ARE USED. PRECAST CONCRETE PILES: PILES SHALL BE FABRICATED ACCORDING TO STANDARD DETAIL BD.2.5.1.0.01(CS-216).CENTROID OF THE PILE AT CUTOFF ELEVATION SHALL NOT VARY FROM THE PLAN LOCATION BY MORE THAN 3" MEASURED EITHER PERPENDICULAR OR PARALLEL TO THE CENTERLINE OF BENT. IF THE CENTROID OF A PILE IS OUTSIDE THESE LIMITS BUT WITHIN THE ACCURACY OF DRIVING REQUIRED BY THE SPECIFICATIONS, A BENT CAP SHALL BE PROVIDED ACCORDING TO THE CAST-IN-PLACE ALTERNATE. EXTERIOR PILES ARE TO BE BATTERED OUTWARD A 1½ ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.

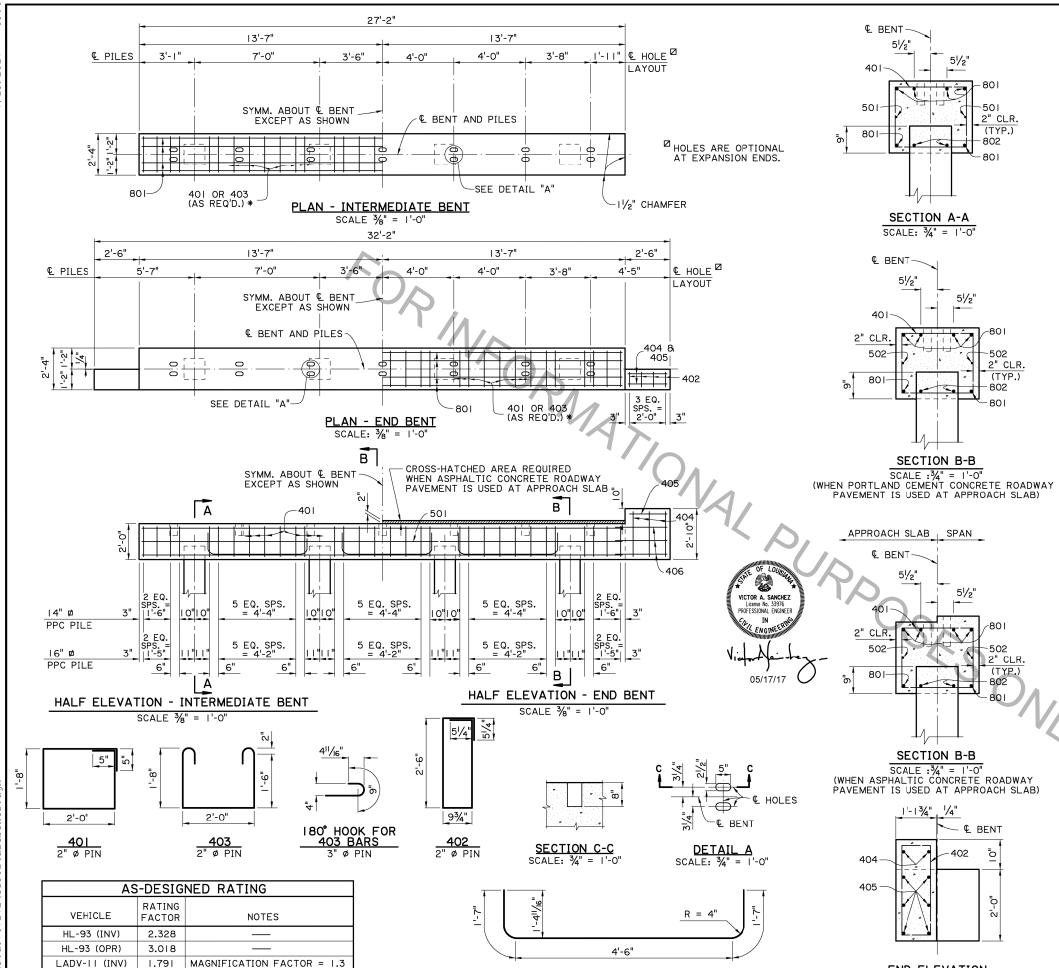
BASIS OF PAYMENT; ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

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LTERNATE BENTS CAST CONCRETE BENT '-O" CLEAR ROADWAY SSSING TWO WAY TANGENT





802

6" Ø PIN

	ES	TIMA	TED QU	ANTITIE	S (ONE	INTER.	BENT)
	BAR	NO.	UNIT LENGTH	TOTAL LENGTH			I
	801	6	26'-10"	161'-0"	LONGIT.	IN CAP	
	802	6	7'-8"	46'-0"	LONGIT.	IN CAP BT	W. PILES
	TOTAL NO. 8 BARS = 207'-0" = 553 LB						553 LBS.
	501	2	26'-10"	53'-8"	LONGIT.	IN CAP	
TOTAL NO. 5 BARS = $53'-8''$ = $56 L$					56 LBS.		
	401	26	8'-2"	212'-4"	STIRRUPS	IN CAP	
	403	6	6'-6"	39'-0"	STIRRUPS	IN CAP	
	TOTA	AL NO	. 4 BAR	S = 25	1'-4"	=	168 LBS.
	TOTA	L DE	FORMED	REINFOF	RCING S	TEEL =	777 LBS.
⊠	TOTA	L CL	ASS AI	CONCRET	E =	4.50	CU. YDS.
	MAX.	PILE	LOAD:	SERVICE	DEAD	LOAD =	17 TONS
			;	SERVICE	LIVE L	OAD =	34 TONS
			FAC	TORED T	OTAL L	OAD =	71 TONS

⊠ 16" Ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.05 CU. YDS. OF CLASS AI CONCRETE PER BENT WHEN 14" Ø PPC PILES ARE USED.)

ESTIMATED QUANTITIES (ONE END BENT)

	ESTIMATES GOARTITIES (SILE END BEITT)						
	BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION		
	801	6	26'-10"	161'-0"	LONGIT. IN CAP		
	802	6	7'-8"	46'-0"	LONGIT. IN CAP BTW. PILES		
	TOTAL NO. 8 BARS = 207'-0" = 553 LB			7'-0" = 553 LBS.			
	501	2	26'-10"	53'-8"	LONGIT. IN CAP		
	TOTAL NO. 5 BARS = 53'-8" = 56 L				3'-8" = 56 LBS.		
	401	26	8'-2"	212'-4"	STIRRUPS IN CAP		
	402	8	7'-6"	60'-0"	STIRRUPS IN WINGWALL		
	403	6	6'-6"	39'-0"	STIRRUPS IN CAP		
	404	4	2'-2"	8'-8"	LONGIT. IN WINGWALL		
	405	12	4'-0"	48'-0"	LONGIT. IN WINGWALL		
	TOTA	AL NO	. 4 BA	RS = 3	68'-0" = 246 LBS.		
	TOTA	L DE	FORMED	REINFOF	RCING STEEL = 855 LBS.		
8	TOTA	AL CL	ASS AI	CONCRET	TE = 5.10 CU. YDS.		
	MAX.	PILE	LOAD:	SERVICE	E DEAD LOAD = 17 TONS		
			9	SERVICE	LIVE LOAD = 34 TONS		
			FAC	TORED T	OTAL LOAD = 71 TONS		

⊗ 16" Ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.05 CU. YDS. OF CLASS AI CONCRETE PER BENT WHEN 14" Ø PPC PILES ARE USED.) ADD 0.20 CU. YDS. OF CLASS AI CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

## **ALTERNATE BENT NOTES:**

**END ELEVATION** 

SCALE: 3/4" = 1'-0"

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 4th EDITION, WITH 2008 & 2009 INTERIMS.

<u>DESIGN LOAD:</u> LIVE LOAD IS HL-93. AND LADV-II (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS AI. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER UNLESS OTHERWISE NOTED. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A SURFACE FINISH AS PER SUBSECTION 805.08 OF THE STANDARD SPECIFICATIONS, EXCEPT WHEN SPECIFIED ELSEWHERE IN THE PLANS.

REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED.

PRECAST CONCRETE PILES: FOR DETAILS OF PILES SEE STANDARD DETAIL BD.2.5.1.0.01(CS-2.6). EXTERIOR PILES ARE TO BATTERED OUTWARD AT  $1\frac{1}{2}$  ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENTWHEN NOTED ON THE GENERAL PLAN.

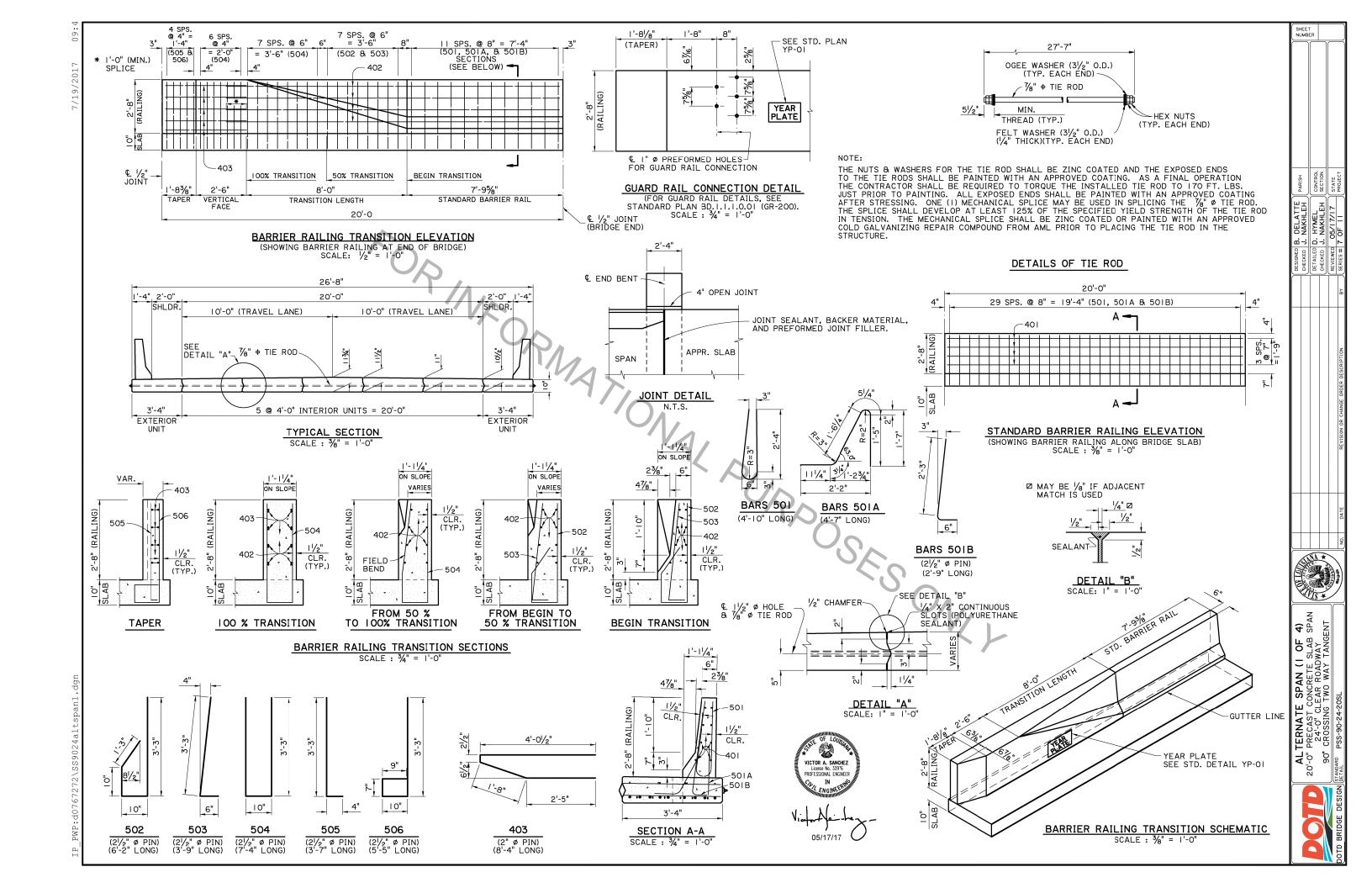
BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

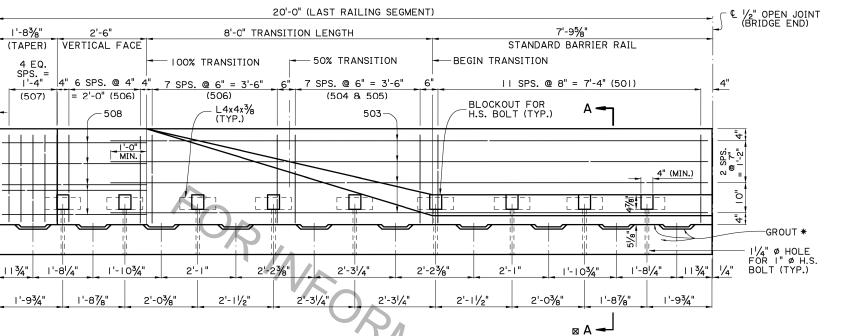


PAINE NAKHLEH HYMEL NAKHLEH O5/17/17

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DOTE BRIDGE DESIGN STAN





☑ FOR SECTION A-A & TRANSITION SECTIONS SEE ALTERNATE SPAN (3 OF4)

A <del>---</del>

© ½" OPEN. JOINT

€ BARRIER KEY &

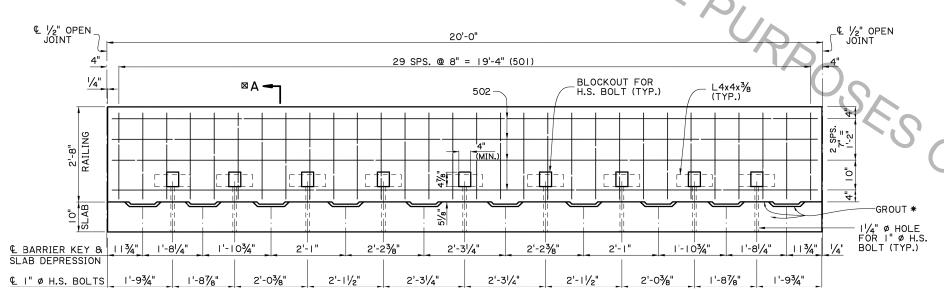
€ I" Ø H.S. BOLTS

SLAB DEPRESSION

1/4"

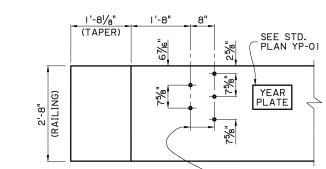
# PRECAST BARRIER RAILING TRANSITION ELEVATION (SHOWING BARRIER RAILING AT END OF BRIDGE) SCALE: 3/4" = 1'-0"

\* PLACE OR INJECT NON-SHRINK GROUT AS REQUIRED IN BETWEEN SLAB DEPRESSIONS TO FILL ALL VOIDS AND GAPS FOR FULL EVEN BEARING OF THE BARRIER ON THE SLAB. SEE NOTE 3, SHEET 9 OF 11.



STANDARD PRECAST BARRIER RAILING ELEVATION (SHOWING BARRIER RAILING ALONG BRIDGE SLAB)
SCALE:  $\frac{3}{4}$ " = 1'-0"

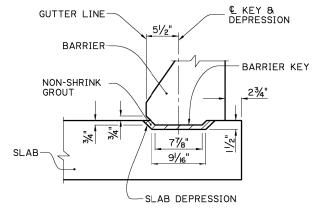




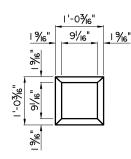
L I" Ø PREFORMED HOLES FOR GUARD RAIL CONNECTION

### **GUARD RAIL CONNECTION DETAIL**

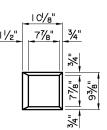
(FOR GUARD RAIL DETAILS, SEE STANDARD PLAN BD.1.1.1.0.01 (GR-200). SCALE:  $\frac{3}{4}$ " = 1'-0"



**ELEVATION** SCALE:  $1\frac{1}{2}$ " = 1'-0"



# **PLAN-DEPRESSION**

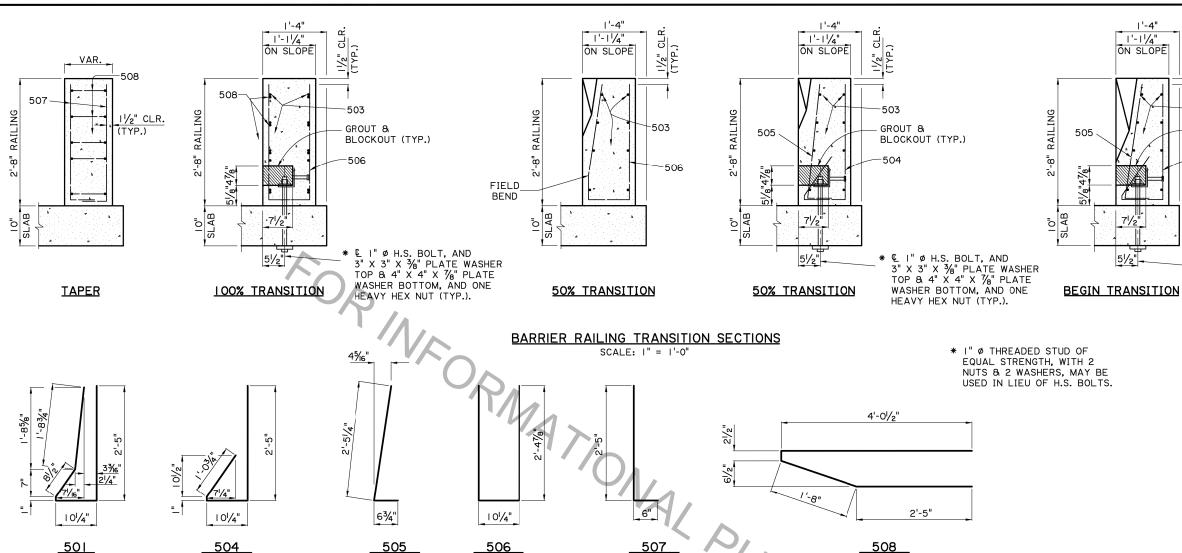


**PLAN-KEY** 

BARRIER KEY AND PANEL DEPRESSION DETAILS

DESIGNED B. DELATTE PARISH
OFFICED J. NAKHLEH CONTROL
OFFICED D. HYMEL CONTROL
OFFICED J. NAKHLEH SECTION
REVIEWED OS/J7/17 STATE
SERIES # 8 OF 1 |





SCALE: | " = | '-0"

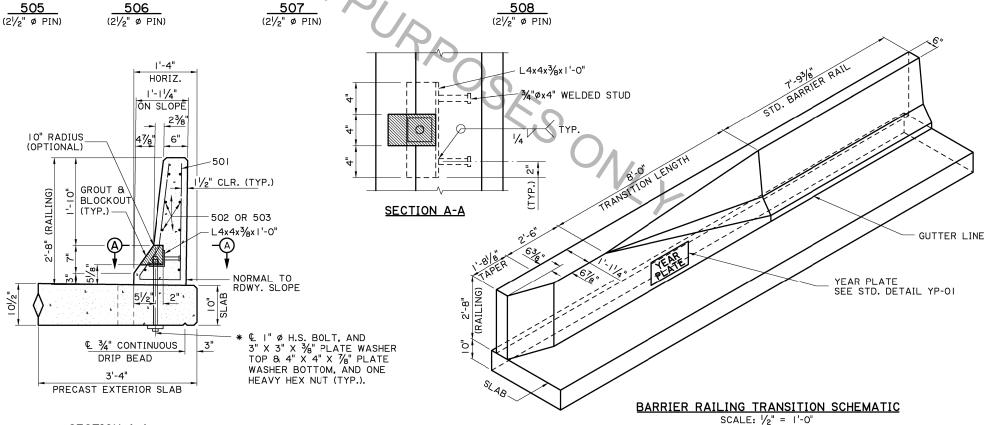
### NOTES:

I) ALL BARRIER RAIL SURFACES ARE TO RECEIVE A CLASS 3 SPECIAL FINISH.

 $(2\frac{1}{2}" \not o PIN)$ 

(21/2" Ø PIN)

- 2) ALL SURFACES OF THE BLOCKOUTS EXCEPT THE BOTTOM MAY BE TAPERED AND ALL CORNERS MAY BE ROUNDED TO A RADIUS TO ALLOW FOR EASY REMOVAL OF PLUGS OR FORMS. AFTER PLACING AND TIGHTENING THE ANCHOR BOLTS, THE BLOCKOUTS SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT FROM AML AND TROWELED TO THE REQUIRED FINISH AND TO THE SATISFACTION OF THE ENGINEER.
- 3) AFTER BARRIER IS PLACED AND ALIGNED, ALL GAPS UNDER BARRIER AND TOP OF SLAB SHALL BE FILLED WITH NON-SHRINK GROUT FROM AML AND ALLOWED TO SET PRIOR TO TIGHTENING OF BOLTS. IT IS IMPORTANT TO FILL ALL VOIDS AND GAPS UNDER THE BARRIER TO ENSURE EVEN BEARING ON DECK WHEN THE ANCHOR BOLTS ARE LOADED.
- 4) ALL I" Ø BOLTS SHALL BE HIGH STRENGTH
  A325 OR APPROVED EQUAL. BOLT, NUT & WASHER
  TO BE GALVANIZED AS PER ASTM A-153. BOLTS
  SHALL BE TENSIONED TO 36 KIPS, OR APPROXIMATELY
  540 FOOT-LB. OF TORQUE (LUBRICATED CONNECTION).



OTD BRIDGE DESIGN STA

ALTERNATE SPAN (3 OF 4)
20'-0" PRECAST CONC. BARRIER
24'-0" CLEAR ROADWAY
90° CROSSING TWO WAY TANGENT

GROUT &

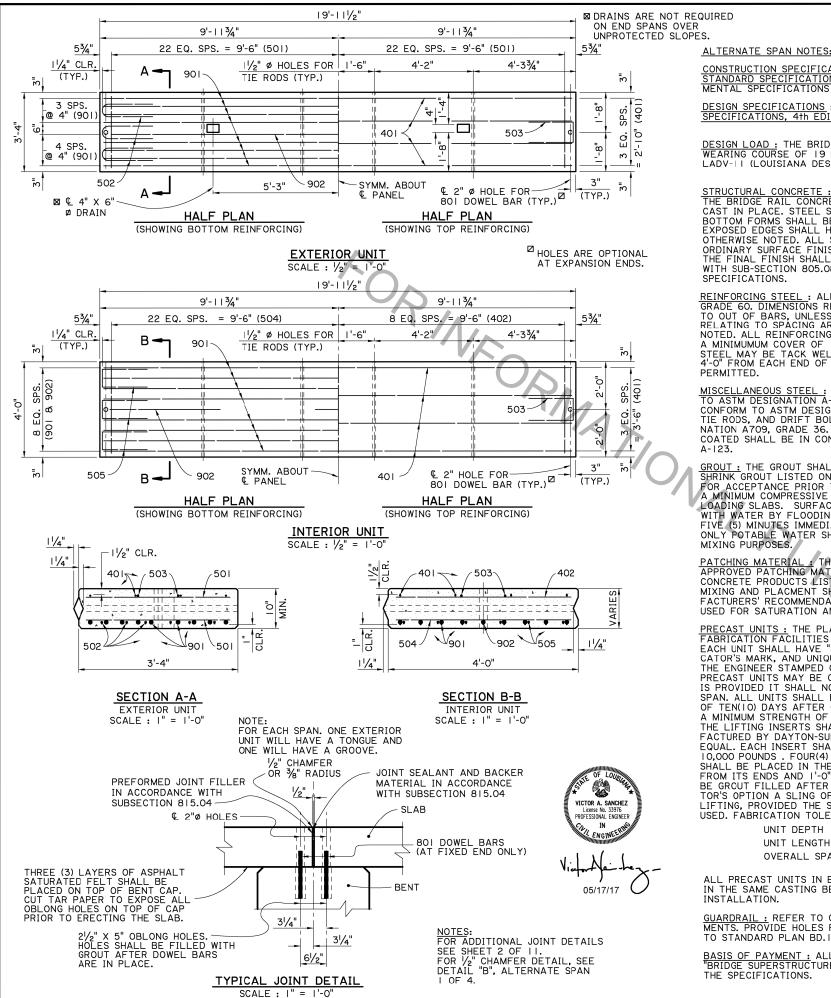
BLOCKOUT (TYP.)

\* € 1" Ø H.S. BOLT, AND 3" X 3" X 3%" PLATE WASHER TOP 8 4" X 4" X 7%" PLATE

WASHER BOTTOM, AND ONE

HEAVY HEX NUT (TYP.).

05/17/17



ALTERNATE STAIL NOTES:
CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES. SUPPLE-
MENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

<u>DESIGN SPECIFICATIONS</u>: AASHTO <u>LRFD BRIDGE DESIGN</u>
<u>SPECIFICATIONS</u>, 4th <u>EDITION</u>, WITH 2008 & 2009 INTERIMS.

<u>DESIGN LOAD</u>: THE BRIDGE DECK IS DESIGNED FOR A FUTURE WEARING COURSE OF 19 PSF. THE LIVE LOAD IS HL-93. AND LADV-II (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS PI.
THE BRIDGE RAIL CONCRETE SHALL BE CLASS AI IF RAIL IS
CAST IN PLACE. STEEL SIDE FORMS AND STEEL OR CONCRETE
BOTTOM FORMS SHALL BE USED FOOR PRECAST COMPONENTS.
EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER, UNLESS
OTHERWISE NOTED. ALL SURFACES SHALL RECEIVE A CLASS I
ORDINARY SURFACE FINISH UPON REMOVAL OF THE FORMS. THE FINAL FINISH SHALL BE A TINE FINISH IN ACCORDANCE WITH SUB-SECTION 805.08.5.3 OF THE LOUISIANA STANDARD SPECIFICATIONS.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED. ALL REINFORCING BARS SHALL BE PLACED TO PROVIDE A MINIMUMUM COVER OF I" FROM THE DRAIN HOLES. REINFORCING STEEL MAY BE TACK WELDED FOR A DISTANCE OF NOT MORE THAN 4'-O" FROM EACH END OF UNIT. NO OTHER WELDING SHALL BE

MISCELLANEOUS STEEL: HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM DESIGNATION A-325. PRESTRESSING STRANDS SHALL CONFORM TO ASTM DESIGNATION A-416, GRADE 270. PLATES TIE RODS, AND DRIFT BOLTS SHALL CONFORM TO ASTM DESIGNATION A709, GRADE 36. STEEL SPECIFIED TO BE ZINC COATED SHALL BE IN CONFORMANCE WITH ASTM DESIGNATION

GROUT: THE GROUT SHALL BE AN APPROVED FLOWABLE NON-SHRINK GROUT LISTED ON THE AML. THE GROUT SHALL BE TESTED FOR ACCEPTANCE PRIOR TO USAGE. THE GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI PRIOR TO LOADING SLABS. SURFACES SHALL BE THOROUGHLY SATURATED WITH WATER BY FLOODING THE HOLES FOR APPROXIMATELY FIVE (5) MINUTES IMMEDIATELY BEFORE THE GROUT IS PLACED. ONLY POTABLE WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.

PATCHING MATERIAL: THE PATCHING MATERIAL SHALL BE AN APPROVED PATCHING MATERIAL FOR PRECAST OR PRESTREESED CONCRETE PRODUCTS LISTED ON AML. SURFACE PREPARATION, MIXING AND PLACMENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS, ONLY POTABLE WATER SHALL BE USED FOR SATURATION AND MIXING PURPOSES.

PRECAST UNITS: THE PLANS FOR AN ONGOING OPERATION OF FABRICATION FACILITIES SHALL BE APPROVED BY THE DEPARTMENT. EACH UNIT SHALL HAVE "LIVE LOAD HL-93 & LADV-II", THE FABRICATOR'S MARK, AND UNIQUE NUMBER, MEETING THE APPROVAL OF THE ENGINEER STAMPED OR INSCRIBED IN THE PLASTIC CONCRETE. PRECAST UNITS MAY BE CAST WITH OR WITHOUT CAMBER. IF CAMBER IS PROVIDED IT SHALL NOT EXCEED 4 AT THE CENTERLINE OF SPAN. ALL UNITS SHALL BE HELD AT THE PLANT FOR A MINIMUM OF TEN(10) DAYS AFTER CASTING. THE CONCRETE SHALL REACH A MINIMUM STRENGTH OF 3,000 PSI BEFORE HANDLING IS PERMITTED. THE LIFTING INSERTS SHALL BE I", TYPE S INSERTS AS MANU-FACTURED BY DAYTON-SUPERIOR CORPORATION OR AN APPROVED EQUAL. EACH INSERT SHALL HAVE A MINIMUM LOAD CAPACITY OF 10,000 POUNDS . FOUR(4) INSERTS WITH I"  $\emptyset$  X 5" LONG COIL BOLTS SHALL BE PLACED IN THE TOP OF THE UNIT AND LOCATED 1'-3' FROM ITS ENDS AND 1'-0" FROM ITS EDGES. INSERT HOLES SHALL BE GROUT FILLED AFTER PLACEMENT OF UNIT. AT THE CONTRACTOR'S OPTION A SLING OF SUFFICIENT CAPACITY MAY BE USED FOR LIFTING, PROVIDED THE SAME PICKUP LOCATION FROM THE ENDS ARE USED. FABRICATION TOLERANCES SHALL BE AS FOLLOWS:

UNIT DEPTH ± ¾6" UNIT LENGTH + 1/8" AND -1/2" OVERALL SPAN WIDTH ± 2"

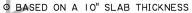
ALL PRECAST UNITS IN EACH BRIDGE SPAN SHALL BE MATCH CAST IN THE SAME CASTING BED TO ENSURE A PROPER FIT DURING

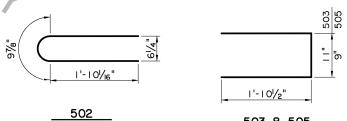
: REFER TO GENERAL PLAN FOR GUARDRAIL REQUIRE-MENTS. PROVIDE HOLES FOR GUARDRAIL CONNECTIONS ACCORDING TO STANDARD PLAN BD.I.I.I.O.OI (GR-200) ON ALL FOUR(4) BRIDGE ENDS.

BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

	ESTIMATED QUANTITIES (ONE EXTERIOR UNIT)					
	BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION	
	901	8	19'-9"	158'-0"	LONGIT. BOT. OF SLAB	
	902	1	19'-1"	19'-1"	LONGIT. BOT. OF SLAB	
	TOTA	AL NO	. 9 BAR	S = 177'·	-I" = 602 LBS.	
	801	1	1'-0"	1'-0"	DOWELS	
	TOTA	AL NO	. 8 BAR	S = 1'-0"	= 3 LBS.	
	501	90	3'-0"	270'-0"	TRANS, TOP & BOT, OF SLAB	
	502	6	4'-6"	27'-0"	BOT. END OF SLAB	
	503	2	4'-8"	9'-4"	TOP END OF SLAB	
	TOTA	AL NO	. 5 BAR	S = 306'	-4" = 320 LBS.	
	401	4	19'-9"	79'-0"	LONGIT. TOP OF SLAB	
	TOTA	AL NO	. 4 BAR	s = 79' - 0	o" = 53 LBS.	
	DEFO	RMED	REINFO	RCING S	TEEL = 977 LBS.	
0	CLAS	SPI	CONCRE	TE	= 2.05 CU. YDS.	
	CONC	RETE	RAILING	G (PER S	PAN) = 40.00 LIN. FT.	

ESTIMATED QUANTITIES (ONE INTERIOR UNIT)							
BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LO	CATION		
901	8	19'-9"	158'-0"	LONGIT. B	OT. OF SLAB		
902	1	19'-1"	19'-1"	LONGIT. B	OT. OF SLAB		
TOTA	AL NO	. 9 BAR	S = 177'	- " =	602 LBS.		
801	ı	1'-0"	1'-0"	DOWELS			
TOTA	AL NO	. 8 BAR	S = 1'-0"	=	3 LBS.		
503	2	4'-8"	9'-4"	TOP END	OF SLAB		
504	44	3'-8"	161'-4"	TRANS. BO	OT. OF SLAB		
505	6	4'-6"	27'-0"	BOT. END	OF SLAB		
TOTA	AL NO	. 5 BAR	S = 197'	-8" =	206 LBS.		
401	4	19'-9"	79'-0"	LONGIT. T	OP OF SLAB		
402	17	3'-8"	62'-4"	TRANS. TO	OP OF SLAB		
TOTA	AL NO	. 4 BAR	S = 141'	-4" =	94 LBS.		
DEFC	RMED	REINFO	RCING S	TEEL	= 905 LBS.		
CLAS	CLASS PI CONCRETE = 2.46 CU. YDS.						





502
5 " Ø PIN

	<u> 505</u>	<u> </u>	303	
	21/2"	Ø	PIN	
Ŧ	TNIC			

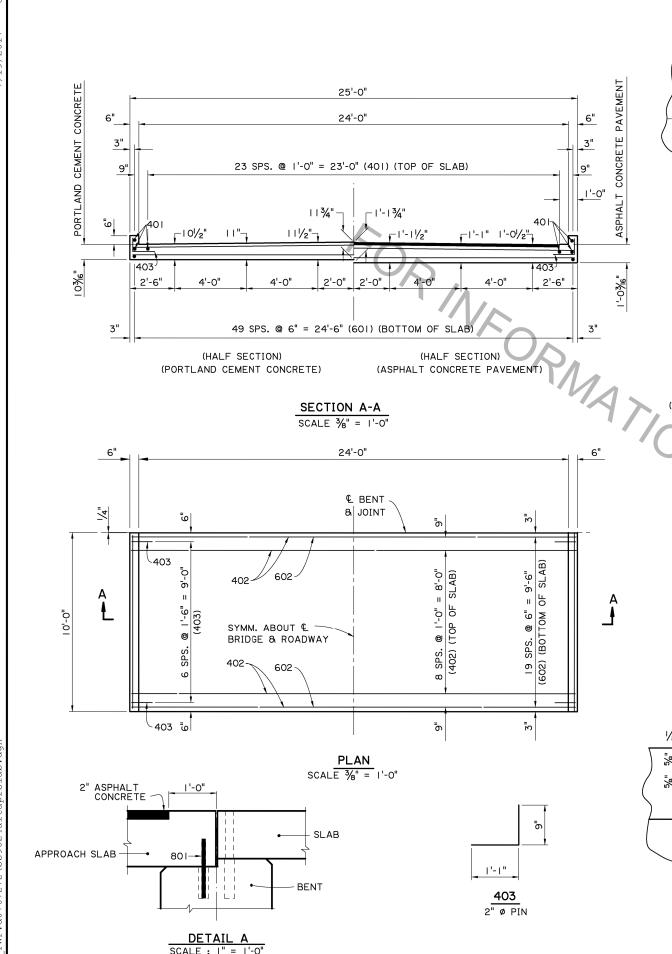
AS-DESIGNED RATING					
VEHICLE	RATING FACTOR	NOTES			
HL-93 (INV)	1.361				
HL-93 (OPR)	1.764				
LADV-II (INV)	1.047	MAGNIFICATION FACTOR = 1.3			



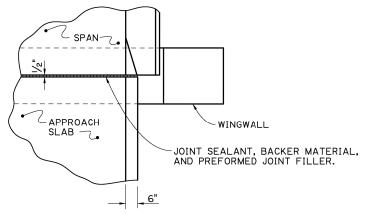
3. DELATTE
3. DELATTE
5. HYMEL
6. NAKHLEH
6. OS/17/17

|-:ei||ci-:||

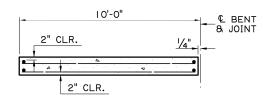
REV RET



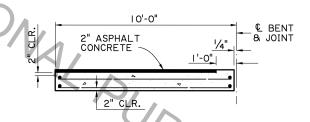
(ASPHALT CONCRETE PAVEMENT OPTION)



## JOINT DETAIL N.T.S.



(FOR PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT)



(FOR ASPHALT CONCRETE ROADWAY PAVEMENT)

### SECTION ALONG & ROADWAY SCALE : 1/4" = 1'-0"

	ESTIMATED QUANTITIES (ONE SLAB)						
	BAR	NO.	UNIT LENGTH	TOTAL LENGTH	LOCATION		
	801	6	1'-0"	6'-0"	DOWELS		
	TOTAL NO. 8 BARS = 6'-0" = 16 LBS.						
	601	50	9'-7"	479'-2"	LONGIT. BOT. OF SLAB		
	602	20	24'-8"	493'-4"	TRANSV. BOT. OF SLAB		
	TOTAL NO. 6 BARS = 972'-6" = 1,461 LBS.						
	401	28	9'-7"	268'-4"	LONGIT. TOP OF SLAB & CURB		
	402	11	24'-8"	271'-4"	TRANSV. TOP OF SLAB		
	403	14	1'-10"	25'-8"	DOWELS IN CURB		
	TOTAL NO. 4 BARS = 565'-4" = 378 LBS.						
0	TOTAL DEFORMED REINFORCING STEEL= 1,855 LBS.						
	CONCRETE APPROACH SLAB = 27.78 SQ. YDS.						
DØ	ASPHALT CONCRETE = 2.5 TONS						
o d	SAW CUT & SEAL = 23 LIN. FT.						

- O TO BE PAID FOR UNDER ITEM CONCRETE APPROACH SLABS.
- ☑ REQUIRED WHEN APPROACH SLAB IS ADJACENT TO ASPHALT CONCRETE PAVEMENT.

#### APPROACH SLAB NOTES:

CONSTRUCTION SPECIFICATIONS: LATEST APPROVED LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, SUPPLEMENTAL SPECIFICATIONS AND

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

4th EDITION, WITH 2008 & 2009 INTERIMS.

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS AI. EXPOSED EDGES

SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE NOTED.

ASPHALT CONCRETE: TO BE THE SAME TYPE AS THE ASPHALT CONCRETE USED FOR THE APPROACH ROADWAY PAVEMENT OR OVERLAY.

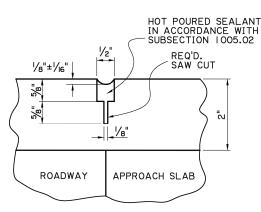
REINFORCING STEEL: ALL REINFORCING STEEL SHALL BE GRADE 60. DIMENSIONS RELATING TO THE FABRICATION ARE OUT-TO-OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS.

BEDDING MATERIAL: FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS.
SEE STANDARD DETAIL BD.2.10.1.0.07.
SAWING & SEALING: THE ASPHALT CONCRETE SHALL BE SAW CUT

AT THE END OF THE CONCRETE APPROACH SLAB THE ENTIRE ROADWAY WIDTH AND SEALED. COST TO BE INCLUDED WITH CONCRETE APPROACH SLABS.

BASIS OF PAYMENT: ALL MATERIAL SHALL BE PAID FOR UNDER

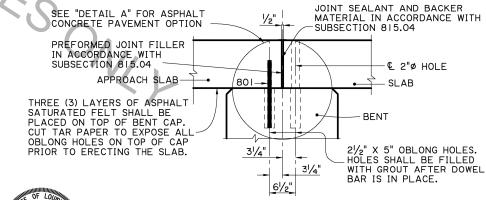
CONCRETE APPROACH SLABS' ACCORDING TO THE SPECIFICATIONS, EXCEPT WHERE NOTED ON THIS SHEET.



SAWING & SEALING

JOINT DETAIL

N.T.S.



TYPICAL JOINT DETAIL SCALE : I" = I'-0'

NOTE: FOR ADDITIONAL JOINT DETAILS SEE SHEET 2 OF 11



|mi-i||ci-i||`

I SLAB

ALTERNATE APPR 10'-0" CAST-IN-PLACE A 24'-0" CLEAR R 90° CROSSING TWO V ပ္မ

