

| ESTIMATED QUANTITIES (ONE SLAB) | | | | |
|--|-----|-------------|--------------|----------------------------|
| BAR NO. | NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION |
| 601 | 2 | 9'-7" | 19'-2" | LONGIT. BOT. OF SLAB |
| 602 | 48 | 9'-6" | 456'-0" | LONGIT. BOT. OF SLAB |
| 603 | 2 | 34'-6" | 69'-0" | TRANSV. BOT. OF SLAB |
| 604 | 18 | 34'-10" | 628'-0" | TRANSV. BOT. OF SLAB |
| TOTAL NO. 6 BARS = 1171'-2" = 1,759 LBS. | | | | |
| 401 | 4 | 9'-7" | 38'-4" | LONGIT. TOP OF SLAB & CURB |
| 402 | 24 | 9'-6" | 228'-0" | LONGIT. TOP OF SLAB |
| 403 | 2 | 34'-6" | 69'-0" | TRANSV. TOP OF SLAB |
| 404 | 9 | 34'-10" | 313'-6" | TRANSV. TOP OF SLAB |
| 405 | 14 | 2'-0" | 28'-0" | DOWELS IN CURB |
| TOTAL NO. 4 BARS = 676'-10" = 452 LBS. | | | | |
| ○ TOTAL DEFORMED REINFORCING STEEL = 2,211 LBS. | | | | |
| ○ CONCRETE APPROACH SLAB = 27.78 SQ. YDS. | | | | |
| ○ SUPERPAVE ASPHALTIC CONCRETE = 2.5 TONS | | | | |
| ○ SAW CUT & SEAL = 33 LIN. FT. | | | | |

○ TO BE PAID FOR UNDER ITEM CONCRETE APPROACH SLABS.
 ○ REQUIRED WHEN APPROACH SLAB IS ADJACENT TO SUPERPAVE ASPHALTIC CONCRETE PAVEMENT.

APPROACH SLAB 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.

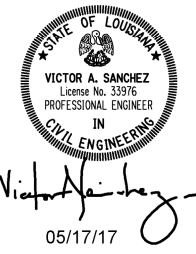
STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A $\frac{3}{4}''$ CHAMFER, UNLESS OTHERWISE NOTED.

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, UNLESS OTHERWISE NOTED.

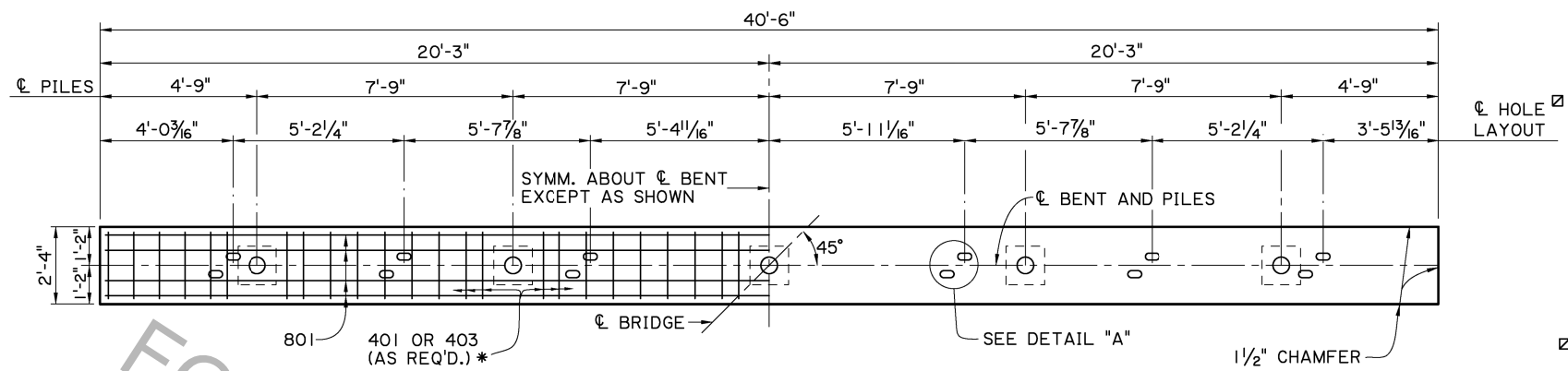
BEDDING MATERIAL: FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS, SEE STANDARD DETAIL BD.2.10.1.0.07.

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.

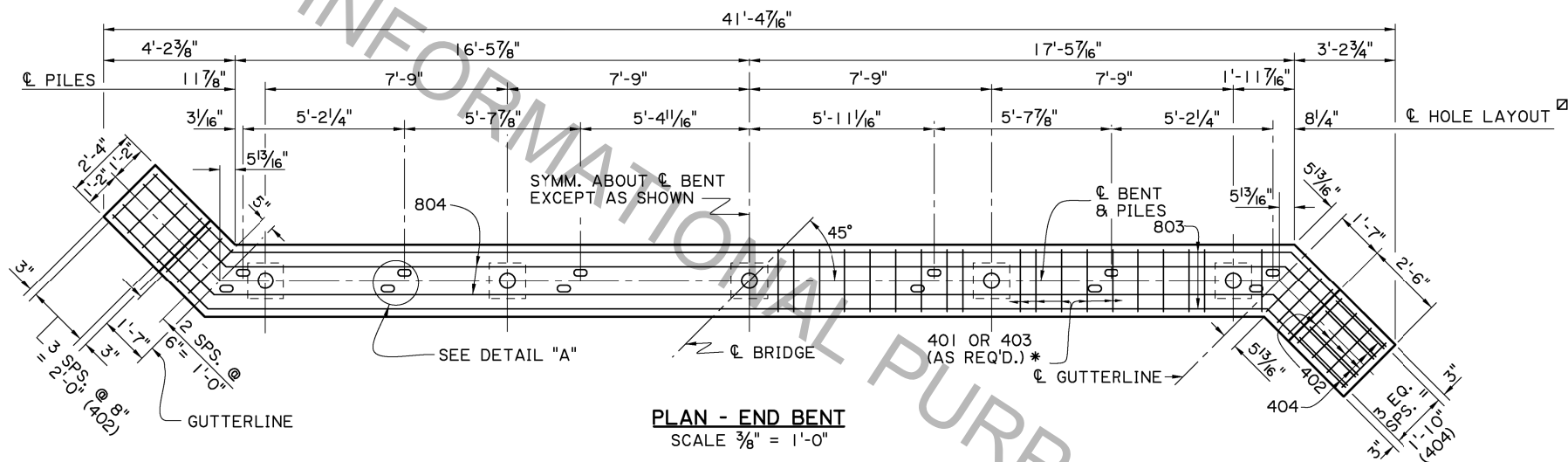
BASIS OF PAYMENT: ALL MATERIAL SHALL BE PAID FOR UNDER 'CONCRETE APPROACH SLABS' ACCORDING TO THE SPECIFICATIONS.



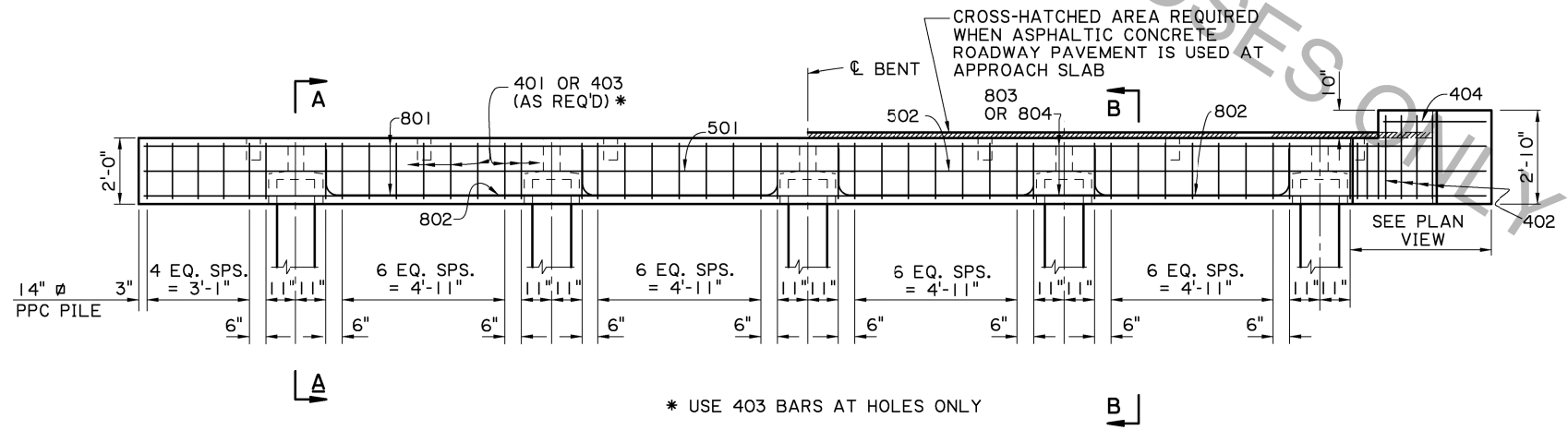
| | | | | |
|---|--------------------------------------|---------------------------|-----------|------------------|
| SHEET NUMBER | PARISH | CONTROL SECTION | STATE | PROJECT |
| DESIGNED BY: J. NAKHLEH | PARISH: LA | CONTROL SECTION: 05/17/17 | STATE: LA | PROJECT: 4 OF 13 |
| CHECKED BY: B. DELATTE | DESIGNED BY: J. NAKHLEH | CONTROL SECTION: 05/17/17 | STATE: LA | PROJECT: 4 OF 13 |
| DATE: 05/17/17 | REVISION OR CHANGE ORDER DESCRIPTION | NO. | DATE | BY |
| | | | | |
| APPROACH SLAB 10'-0" CONCRETE APPROACH SLAB 24'-0" CLEAR ROADWAY 45° CROSSING TWO WAY TANGENT | | | | |
| | | | | |



PLAN - INTERMEDIATE BENT
SCALE 3/8" = 1'-0"



PLAN - END BENT
SCALE 3/8" = 1'-0"



HALF ELEVATION - INTERMEDIATE BENT
SCALE 3/8" = 1'-0"

HALF ELEVATION - END BENT
SCALE 3/8" = 1'-0"



Victor A. Sanchez
05/17/17

| | |
|---|------------|
| SHEET NUMBER | |
| DESIGNED | J. NAKHLEH |
| CHECKED | H. THOMAS |
| CONTROL SECTION | D. HYMEL |
| STATE PROJECT | J. NAKHLEH |
| REVIEWED | 05/17/17 |
| SERIES # | 5 OF 13 |
| REVISION OR CHANGE ORDER DESCRIPTION | |
| NO. | DATE |
| BY | |
| | |
| ALTERNATE BENTS (1 OF 2) PRECAST CONCRETE BENTS 24'-0" CLEAR ROADWAY 45° CROSSING TWO WAY TANGENT | |
| STANDARD DETAIL PSS-45-24-20SL | |
| | |

ALTERNATE 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-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).
STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS P1. STEEL SIDE FORMS AND STEEL OR CONCRETE BOTTOM FORMS SHALL BE USED FOR 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. ALL EXPOSED FACES OF WINGWALLS AND ENDS OF CAPS SHALL RECEIVE A CLASS 3 SPECIAL SURFACE FINISH.

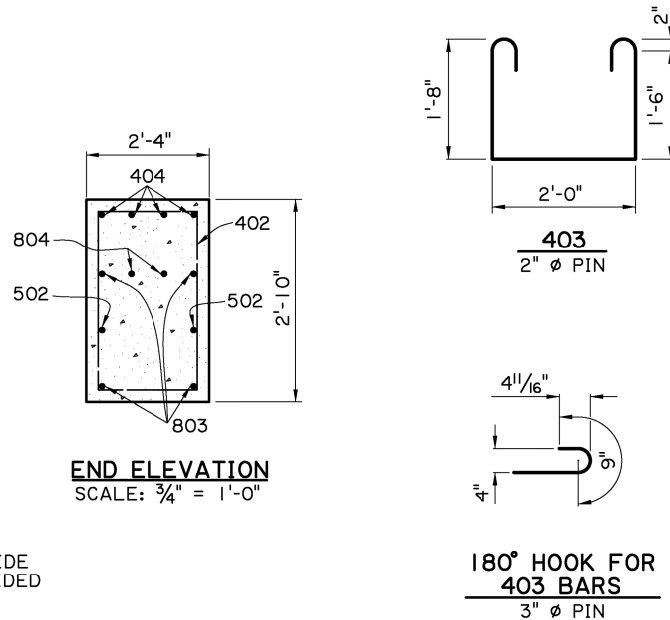
REINFORCING STEEL: ALL REINFORCING SHALL BE GRADE 60. DIMENSIONS RELATING TO FABRICATION ARE OUT TO OUT OF BARS, UNLESS OTHERWISE NOTED. DIMENSIONS RELATING TO SPACING ARE TO BAR CENTERS, UNLESS OTHERWISE NOTED.

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 PLASTIC CONCRETE. ALL UNITS SHALL BE HELD AT 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 1" 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 1" 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 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.

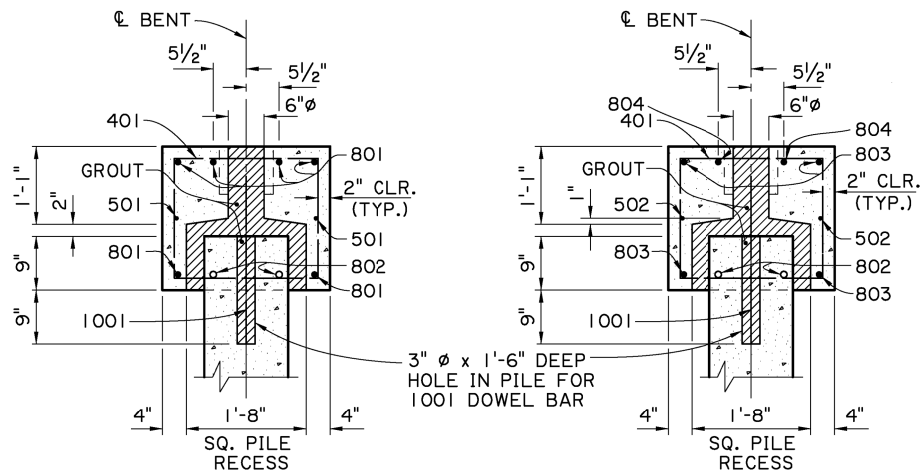
PRECAST CONCRETE PILES: PILES SHALL BE FABRICATED ACCORDING TO STANDARD DETAIL BD.2.5.1.0.01 (CS-216). THE CENTROID OF THE PILE AT CUTOFF ELEVATION SHALL NOT VARY FROM THE PLAN LOCATION BY MORE THAN 3" MEASURED EITHER PERPENDICULAR OR PARALLEL TO THE CENTERLINE OF BENT. IF THE CENTROID OF A PILE IS OUTSIDE 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 1/2 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.



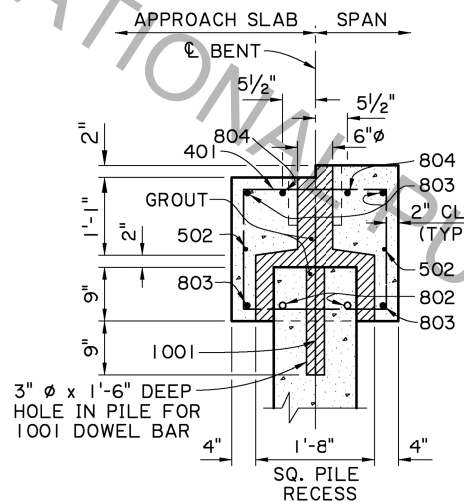
END ELEVATION
SCALE: 3/4" = 1'-0"

180° HOOK FOR 403 BARS
3" Ø PIN

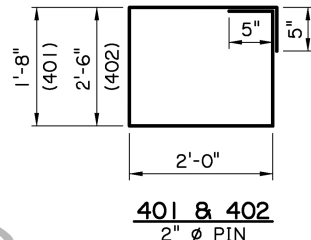


SECTION A-A
SCALE: 3/4" = 1'-0"

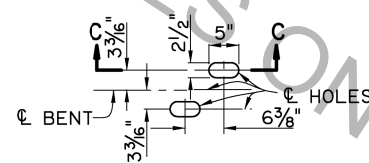
SECTION B-B
SCALE: 3/4" = 1'-0"
(WHEN PORTLAND CEMENT CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



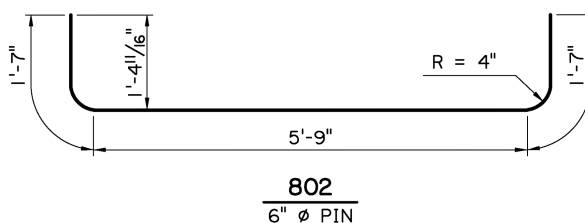
SECTION B-B
SCALE: 3/4" = 1'-0"
(WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



401 & 402
2" Ø PIN



DETAIL A
SCALE 3/4" = 1'-0"



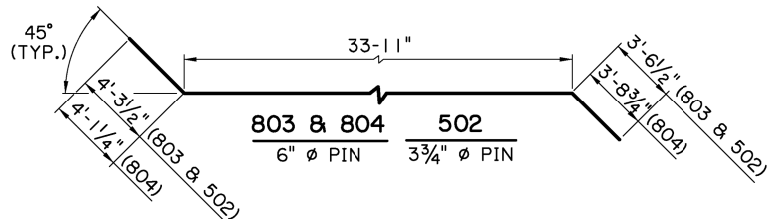
SECTION C-C
SCALE 3/4" = 1'-0"

| ESTIMATED QUANTITIES (ONE INTER. BENT) | | | | |
|--|-----|-------------|--------------|---------------------------|
| BAR NO. | NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION |
| 1001 | 5 | 2'-4" | 11'-8" | DOWELS IN PILES |
| TOTAL NO. 10 BARS = 11'-8" = 50 LBS. | | | | |
| 801 | 6 | 40'-2" | 241'-0" | LONGIT. IN CAP |
| 802 | 8 | 8'-11" | 71'-4" | LONGIT. IN CAP BTW. PILES |
| TOTAL NO. 8 BARS = 312'-4" = 834 LBS. | | | | |
| 501 | 2 | 40'-2" | 80'-4" | LONGIT. IN CAP |
| TOTAL NO. 5 BARS = 80'-4" = 84 LBS. | | | | |
| 401 | 44 | 8'-2" | 359'-4" | STIRRUPS IN CAP |
| 403 | 6 | 6'-6" | 39'-0" | STIRRUPS IN CAP |
| TOTAL NO. 4 BARS = 398'-4" = 266 LBS. | | | | |
| TOTAL DEFORMED REINFORCING STEEL = 1,234 LBS. | | | | |
| TOTAL CLASS P1 CONCRETE = 6.45 CU. YDS. | | | | |
| MAX. PILE LOAD: SERVICE DEAD LOAD = 20 TONS | | | | |
| SERVICE LIVE LOAD = 33 TONS | | | | |
| FACTORED TOTAL LOAD = 73 TONS | | | | |
| TOTAL GROUT FOR PILE RECESSES = 0.36 CU. YDS. | | | | |

| ESTIMATED QUANTITIES (ONE END BENT) | | | | |
|--|-----|-------------|--------------|---------------------------|
| BAR NO. | NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION |
| 1001 | 5 | 2'-4" | 11'-8" | DOWELS IN PILES |
| TOTAL NO. 10 BARS = 11'-8" = 50 LBS. | | | | |
| 802 | 8 | 8'-11" | 71'-4" | LONGIT. IN CAP BTW. PILES |
| 803 | 4 | 41'-9" | 167'-0" | LONGIT. IN CAP |
| 804 | 2 | 41'-9" | 83'-6" | LONGIT. IN CAP |
| TOTAL NO. 8 BARS = 321'-10" = 859 LBS. | | | | |
| 502 | 2 | 42'-1" | 84'-2" | LONGIT. IN CAP |
| TOTAL NO. 5 BARS = 84'-2" = 88 LBS. | | | | |
| 401 | 40 | 8'-2" | 326'-8" | STIRRUPS IN CAP |
| 402 | 8 | 9'-10" | 78'-8" | STIRRUPS IN WINGWALL |
| 403 | 6 | 6'-6" | 39'-0" | STIRRUPS IN CAP |
| 404 | 8 | 2'-2" | 17'-4" | LONGIT. IN WINGWALL |
| TOTAL NO. 4 BARS = 461'-8" = 308 LBS. | | | | |
| TOTAL DEFORMED REINFORCING STEEL = 1,305 LBS. | | | | |
| TOTAL CLASS P1 CONCRETE = 7.09 CU. YDS. | | | | |
| MAX. PILE LOAD: SERVICE DEAD LOAD = 20 TONS | | | | |
| SERVICE LIVE LOAD = 33 TONS | | | | |
| FACTORED TOTAL LOAD = 73 TONS | | | | |
| TOTAL GROUT FOR PILE RECESSES = 0.36 CU. YDS. | | | | |

⊗ ADD 0.27 CU. YDS. OF CLASS P1 CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

| AS-DESIGNED RATING | | |
|--------------------|---------------|----------------------------|
| VEHICLE | RATING FACTOR | NOTES |
| HL-93 (INV) | 1.715 | |
| HL-93 (OPR) | 2.224 | |
| LADV-11 (INV) | 1.320 | MAGNIFICATION FACTOR = 1.3 |

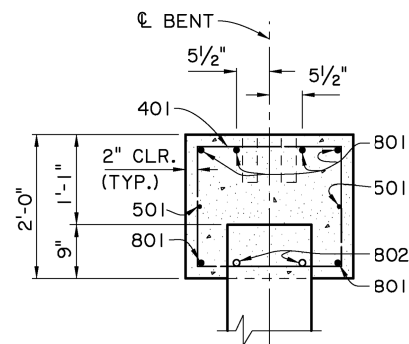


SECTION C-C
SCALE 3/4" = 1'-0"

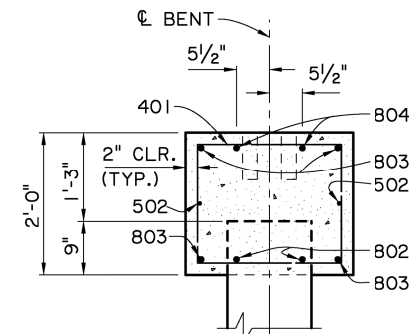


Victor A. Sanchez
05/17/17

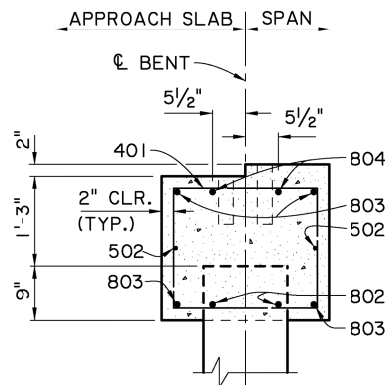
STATE OF LOUISIANA
 DOTD
 DOT BRIDGE DESIGN
 STANDARD DETAIL
 P55-45-24-20SL
 ALTERNATE BENTS (2 OF 2)
 PRECAST CONCRETE BENTS
 24'-0" CLEAR ROADWAY
 45° CROSSING TWO WAY TANGENT
 SHEET NUMBER
 DESIGNED: J. NAKHLEH
 CHECKED: H. THOMAS
 DETAILED: D. HYMEL
 CHECKED: J. NAKHLEH
 REVIEWED: OS/17/17
 SERIES #: 6 OF 13
 PROJECT
 STATE
 SECTION
 CONTROL
 PARISH
 NO.
 DATE
 REVISION OR CHANGE ORDER DESCRIPTION
 BY



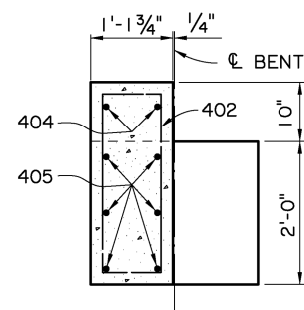
SECTION A-A
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"
(WHEN PORTLAND CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



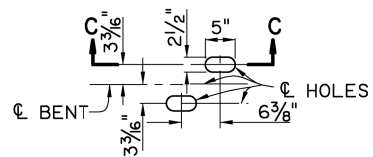
SECTION B-B
SCALE: 3/4" = 1'-0"
(WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB)



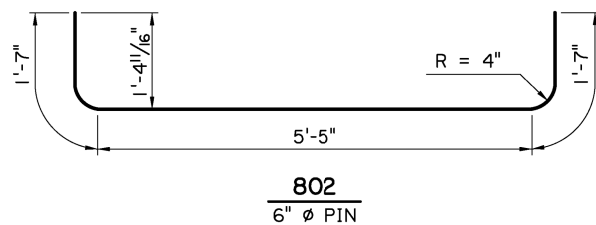
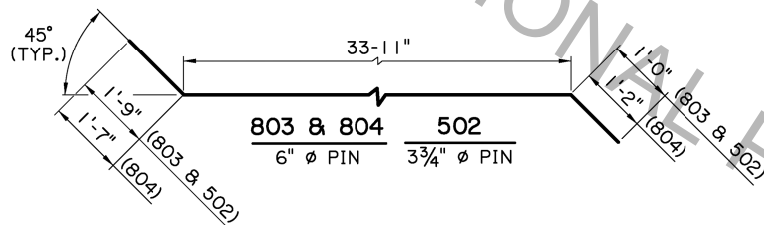
END ELEVATION
SCALE: 3/4" = 1'-0"



SECTION C-C
SCALE 3/4" = 1'-0"

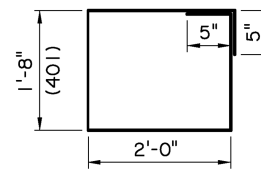


DETAIL A
SCALE 3/4" = 1'-0"

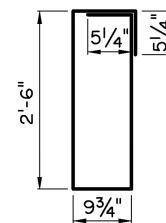


802
6" Ø PIN

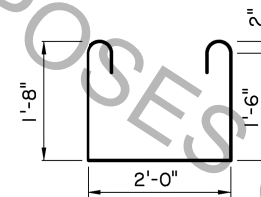
| AS-DESIGNED RATING | | |
|--------------------|---------------|----------------------------|
| VEHICLE | RATING FACTOR | NOTES |
| HL-93 (INV) | 1.436 | |
| HL-93 (OPR) | 1.864 | |
| LADV-11 (INV) | 1.106 | MAGNIFICATION FACTOR = 1.3 |



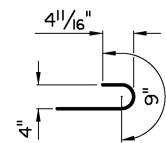
401
2" Ø PIN



402
2" Ø PIN



403
2" Ø PIN



180° HOOK FOR 403 BARS
3" Ø PIN

ALTERNATE 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-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. 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-216). EXTERIOR PILES ARE TO BATTERED OUTWARD AT 1/2 ON 12 IN THE LONGITUDINAL DIRECTION OF THE BENT, WHEN NOTED ON THE GENERAL PLAN.

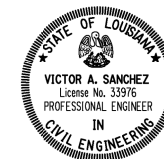
BASIS OF PAYMENT: ALL MATERIALS SHALL BE PAID FOR UNDER "BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE" ACCORDING TO THE SPECIFICATIONS.

| ESTIMATED QUANTITIES (ONE INTER. BENT) | | | | |
|---|-------------|--------------|----------|---------------------------|
| BAR NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION | |
| 801 | 6 | 40'-2" | 241'-0" | LONGIT. IN CAP |
| 802 | 8 | 8'-7" | 68'-8" | LONGIT. IN CAP BTW. PILES |
| TOTAL NO. 8 BARS = 309'-8" = 827 LBS. | | | | |
| 501 | 2 | 40'-2" | 80'-4" | LONGIT. IN CAP |
| TOTAL NO. 5 BARS = 80'-4" = 84 LBS. | | | | |
| 401 | 40 | 8'-2" | 326'-8" | STIRRUPS IN CAP |
| 403 | 8 | 6'-6" | 52'-0" | STIRRUPS IN CAP |
| TOTAL NO. 4 BARS = 378'-8" = 253 LBS. | | | | |
| TOTAL DEFORMED REINFORCING STEEL = 1164 LBS. | | | | |
| TOTAL CLASS A1 CONCRETE = 6.73 CU. YDS. | | | | |
| MAX. PILE LOAD: SERVICE DEAD LOAD = 21 TONS | | | | |
| SERVICE LIVE LOAD = 33 TONS | | | | |
| FACTORED TOTAL LOAD = 74 TONS | | | | |

16" Ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.06 CU. YDS. OF CLASS A1 CONCRETE WHEN 14" Ø PPC PILES ARE USED).

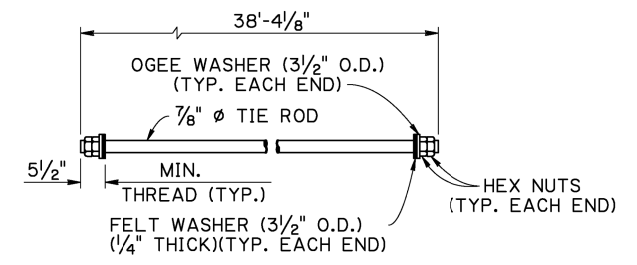
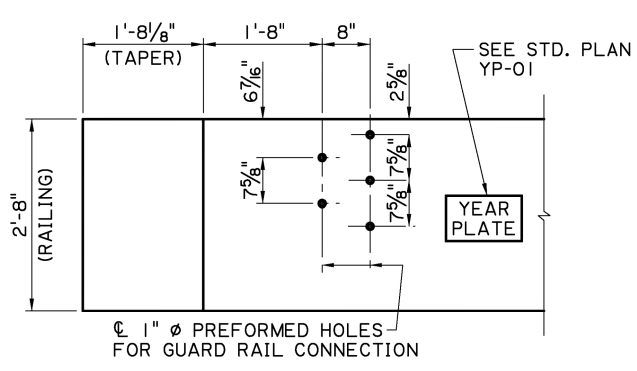
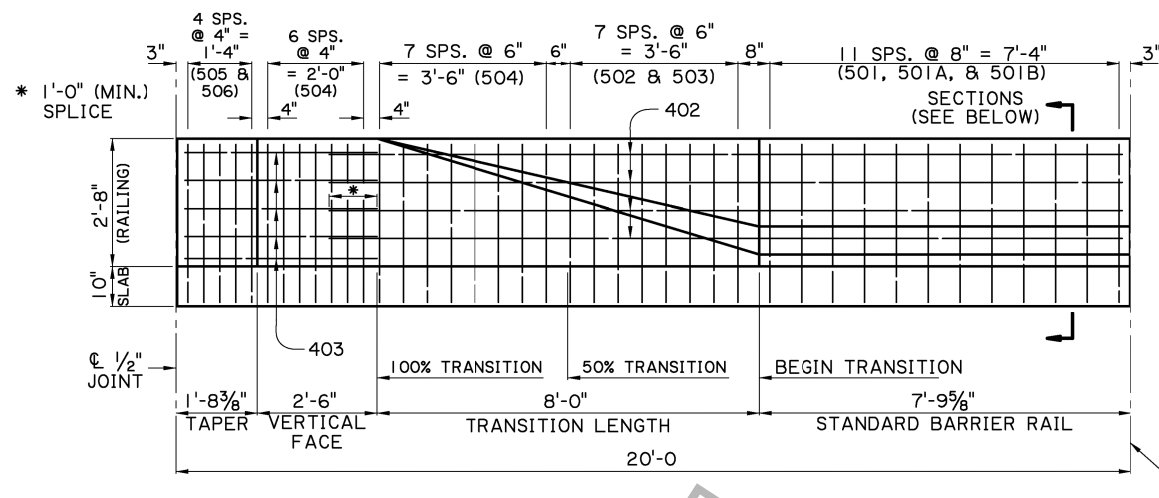
| ESTIMATED QUANTITIES (ONE END BENT) | | | | |
|---|-------------|--------------|----------|---------------------------|
| BAR NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION | |
| 802 | 8 | 8'-7" | 68'-8" | LONGIT. IN CAP BTW. PILES |
| 803 | 4 | 36'-8" | 146'-8" | LONGIT. IN CAP |
| 804 | 2 | 36'-8" | 73'-4" | LONGIT. IN CAP |
| TOTAL NO. 8 BARS = 288'-8" = 771 LBS. | | | | |
| 502 | 2 | 36'-8" | 73'-4" | LONGIT. IN CAP |
| TOTAL NO. 5 BARS = 73'-4" = 76 LBS. | | | | |
| 401 | 36 | 8'-2" | 294'-0" | STIRRUPS IN CAP |
| 402 | 8 | 9'-10" | 78'-8" | STIRRUPS IN WINGWALL |
| 403 | 8 | 6'-6" | 52'-0" | STIRRUPS IN CAP |
| 404 | 4 | 2'-2" | 8'-8" | LONGIT. IN WINGWALL |
| 405 | 12 | 3'-11" | 47'-0" | LONGIT. IN WINGWALL |
| TOTAL NO. 4 BARS = 480'-4" = 321 LBS. | | | | |
| TOTAL DEFORMED REINFORCING STEEL = 1168 LBS. | | | | |
| TOTAL CLASS A1 CONCRETE = 6.74 CU. YDS. | | | | |
| MAX. PILE LOAD: SERVICE DEAD LOAD = 21 TONS | | | | |
| SERVICE LIVE LOAD = 33 TONS | | | | |
| FACTORED TOTAL LOAD = 74 TONS | | | | |

16" Ø PPC PILES USED FOR ESTIMATING PURPOSES ONLY. (ADD 0.06 CU. YDS. OF CLASS A1 CONCRETE WHEN 14" Ø PPC PILES ARE USED). ADD 0.27 CU. YDS. OF CLASS A1 CONCRETE PER BENT WHEN ASPHALTIC CONCRETE ROADWAY PAVEMENT IS USED AT APPROACH SLAB.

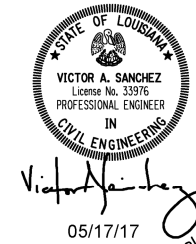
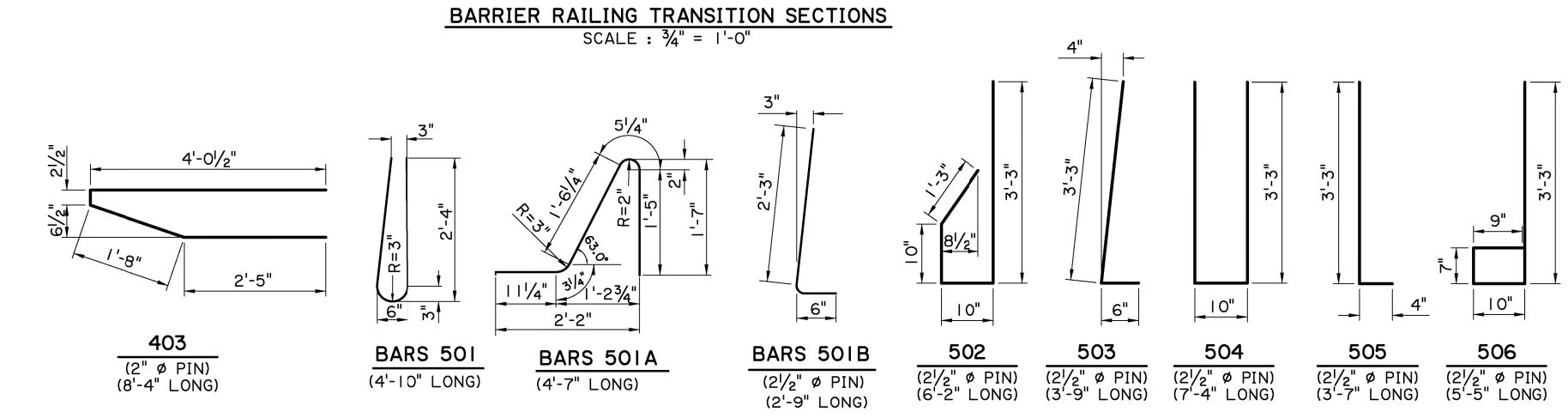
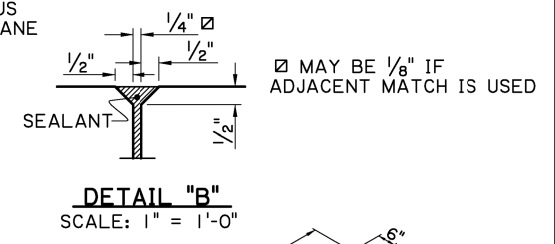
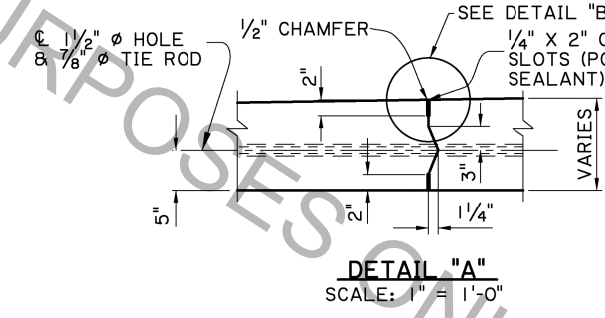
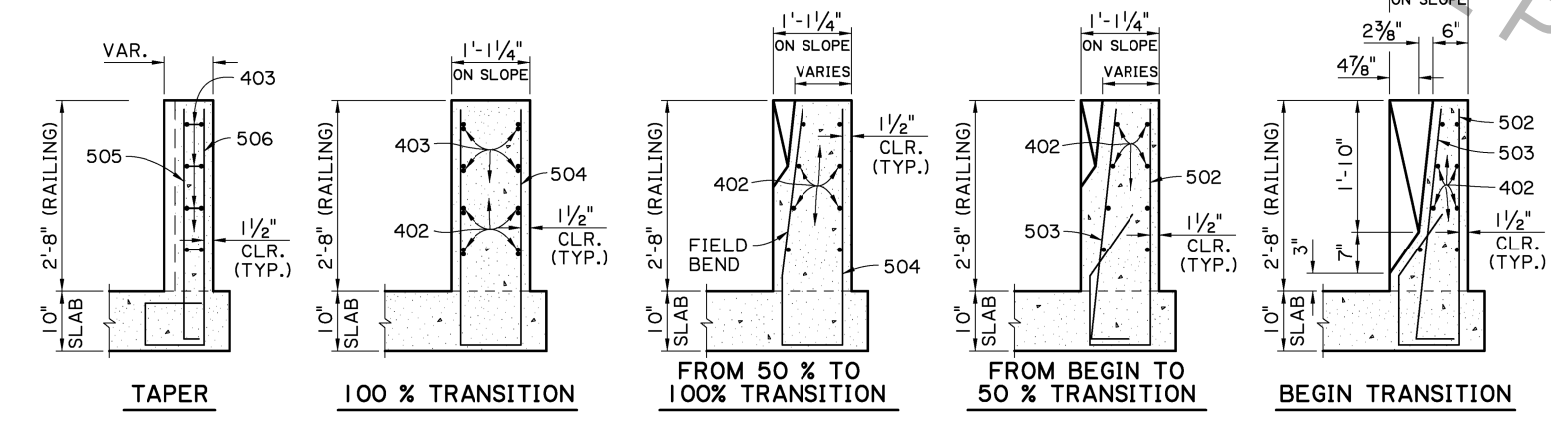
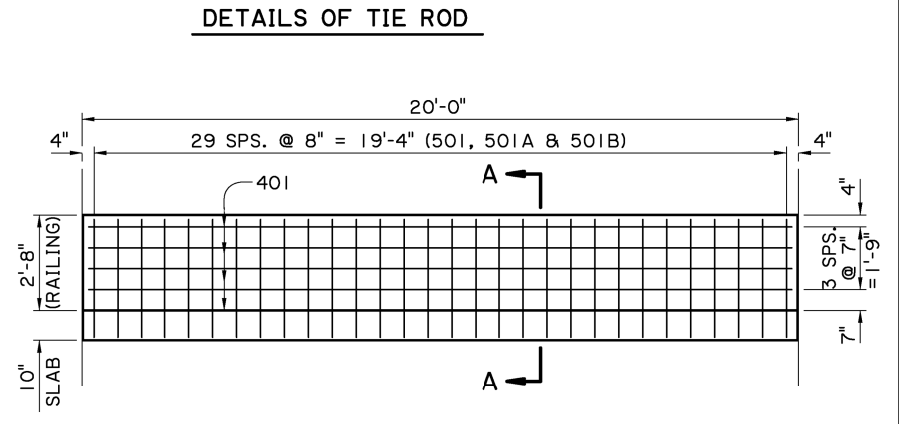
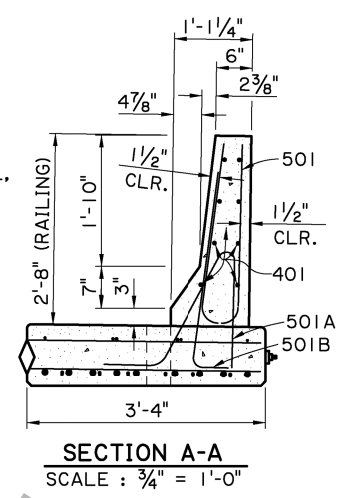
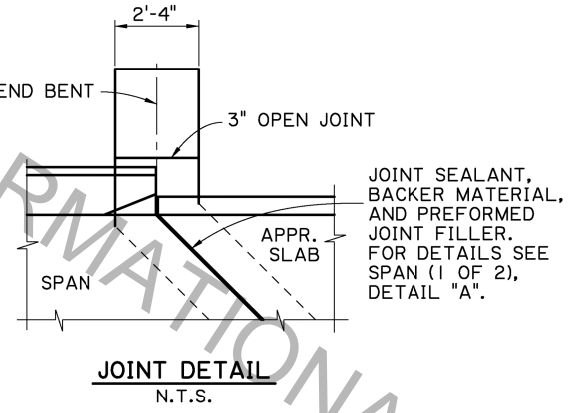
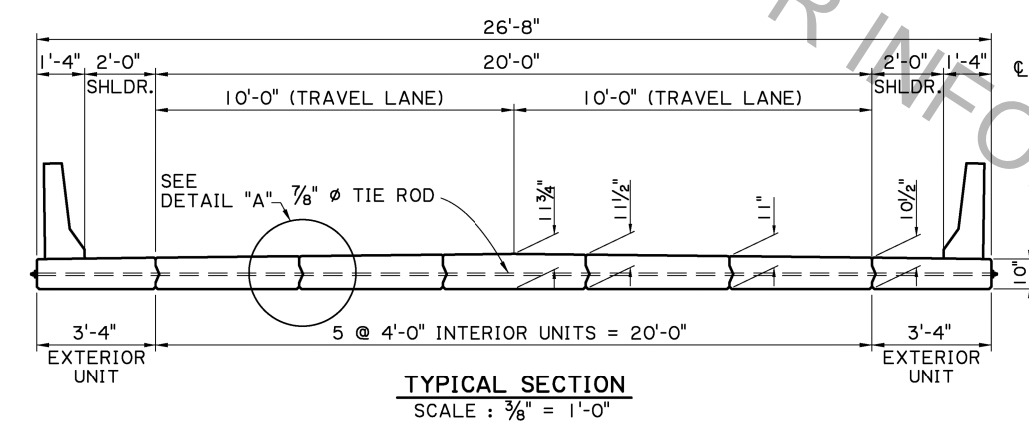


Victor A. Sanchez
05/17/17

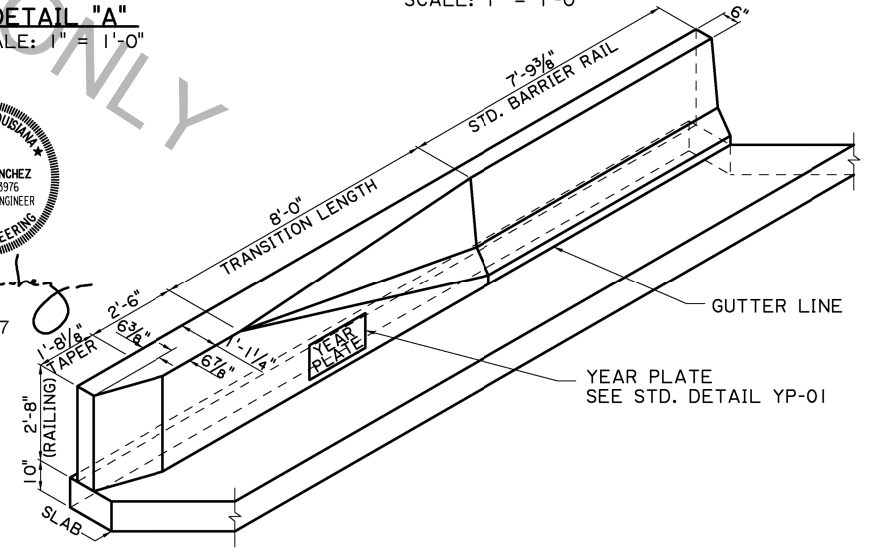
| | | | | | |
|---|------------|--------------------|-------------------|----------|----------|
| SHEET NUMBER | PARISH | DESIGNED | CONTROL SECTION | STATE | PROJECT |
| | J. NAKHLEH | J. NAKHLEH | D. HYMEL | OS/17/17 | 8 OF 13 |
| | CHECKED | CHECKED | CHECKED | REVIEWED | SERIES # |
| | H. THOMAS | J. NAKHLEH | J. NAKHLEH | 05/17/17 | B OF 13 |
| | BY | REVISION OR CHANGE | ORDER DESCRIPTION | NO. | DATE |
| | | | | | |
| | | | | | |
| ALTERNATE BENTS (2 OF 2) CAST-IN-PLACE CONCRETE BENTS 24'-0" CLEAR ROADWAY 45° CROSSING TWO WAY TANGENT | | | | | |
| STANDARD DETAIL PSS-45-24-20SL | | | | | |
| | | | | | |



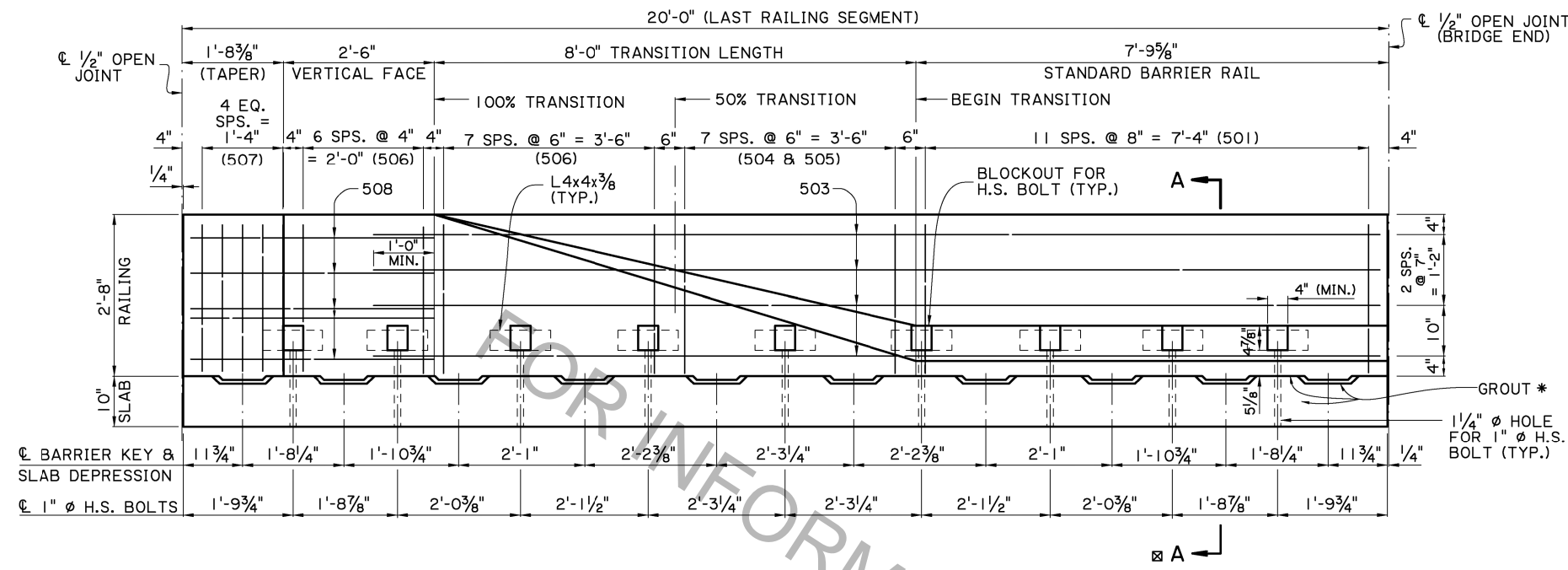
NOTE:
 THE NUTS & WASHERS FOR THE TIE ROD SHALL BE ZINC COATED AND THE EXPOSED ENDS TO THE TIE RODS SHALL BE PAINTED WITH AN APPROVED COATING. AS A FINAL OPERATION THE CONTRACTOR SHALL BE REQUIRED TO TORQUE THE INSTALLED TIE ROD TO 170 FT. LBS. JUST PRIOR TO PAINTING. ALL EXPOSED ENDS SHALL BE PAINTED WITH AN APPROVED COATING AFTER STRESSING. ONE (1) MECHANICAL SPLICE MAY BE USED IN SPLICING THE 7/8" Ø TIE ROD. THE SPLICE SHALL DEVELOP AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE TIE ROD IN TENSION. THE MECHANICAL SPLICE SHALL BE ZINC COATED OR PAINTED WITH AN APPROVED COLD GALVANIZING REPAIR COMPOUND FROM AML PRIOR TO PLACING THE TIE ROD IN THE STRUCTURE.



05/17/17



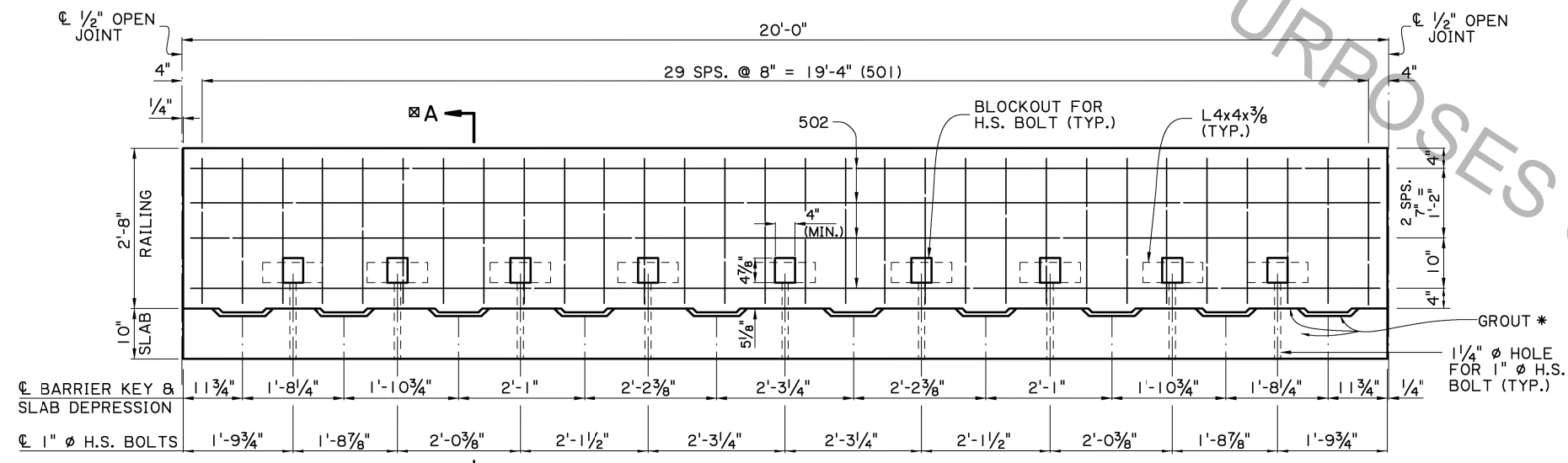
| | | | | |
|---|------------------------|-----------------|-------------------|---------|
| SHEET NUMBER | PARISH | CONTROL SECTION | STATE | PROJECT |
| DESIGNED BY: DELATTE | CHECKED BY: J. NAKHLEH | DATE: 05/17/17 | SERIES #: 9 OF 13 | |
| REVISION OR CHANGE ORDER DESCRIPTION | | | | |
| BY | | | | |
| DATE | | | | |
| NO. | | | | |
| | | | | |
| ALTERNATE SPAN (1 OF 4) 20'-0" PRECAST CONCRETE SLAB SPAN 24'-0" CLEAR ROADWAY 45° CROSSING TWO WAY TANGENT | | | | |
| | | | | |
| DOTD BRIDGE DESIGN STANDARD DETAIL P55-45-24-20SL | | | | |



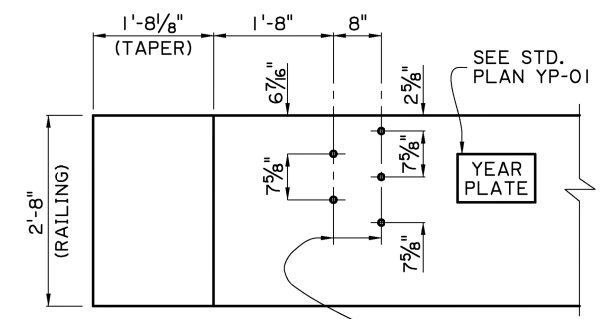
PRECAST BARRIER RAILING TRANSITION ELEVATION
 (SHOWING BARRIER RAILING AT END OF BRIDGE)
 SCALE: 3/4" = 1'-0"

FOR SECTION A-A & TRANSITION SECTIONS
 SEE ALTERNATE SPAN (3 OF 4)

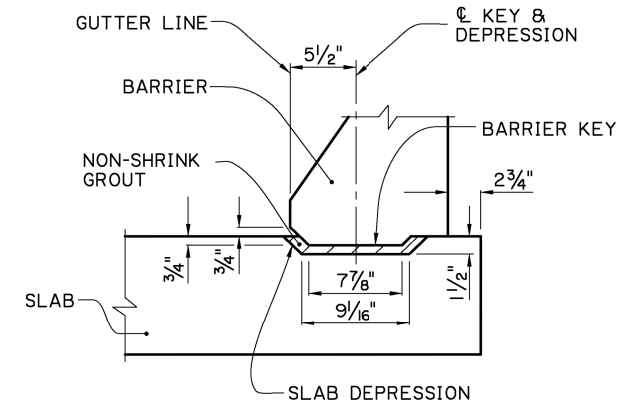
* PLACE OR INJECT NON-SHRINK GROUT AS REQUIRED IN BETWEEN SLAB DEPRESSIONS TO FILL ALL VOIDS AND GAPS FOR FULL EVEN BEARING OF THE BARRIER ON THE SLAB. SEE NOTE 3, SHEET 9 OF 11.



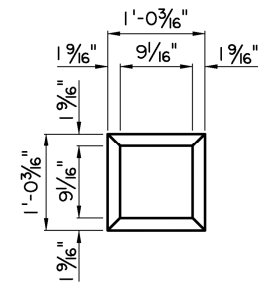
STANDARD PRECAST BARRIER RAILING ELEVATION
 (SHOWING BARRIER RAILING ALONG BRIDGE SLAB)
 SCALE: 3/4" = 1'-0"



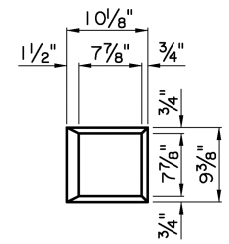
GUARD RAIL CONNECTION DETAIL
 (FOR GUARD RAIL DETAILS, SEE STANDARD PLAN B.D.I.I.1.O.01 (GR-200).)
 SCALE: 3/4" = 1'-0"



ELEVATION
 SCALE: 1 1/2" = 1'-0"

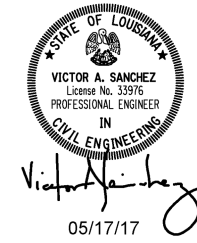


PLAN-DEPRESSION
 SCALE: 1" = 1'-0"



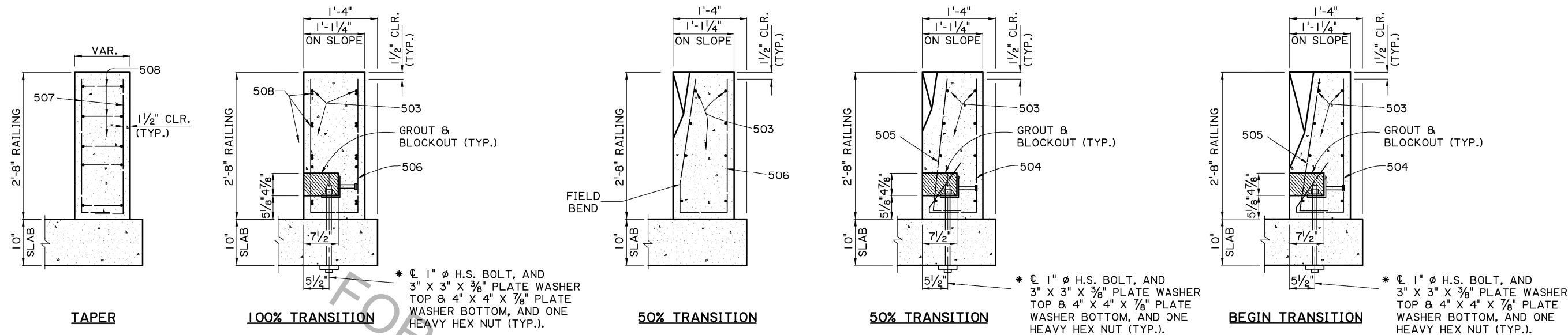
PLAN-KEY
 SCALE: 1" = 1'-0"

BARRIER KEY AND PANEL DEPRESSION DETAILS



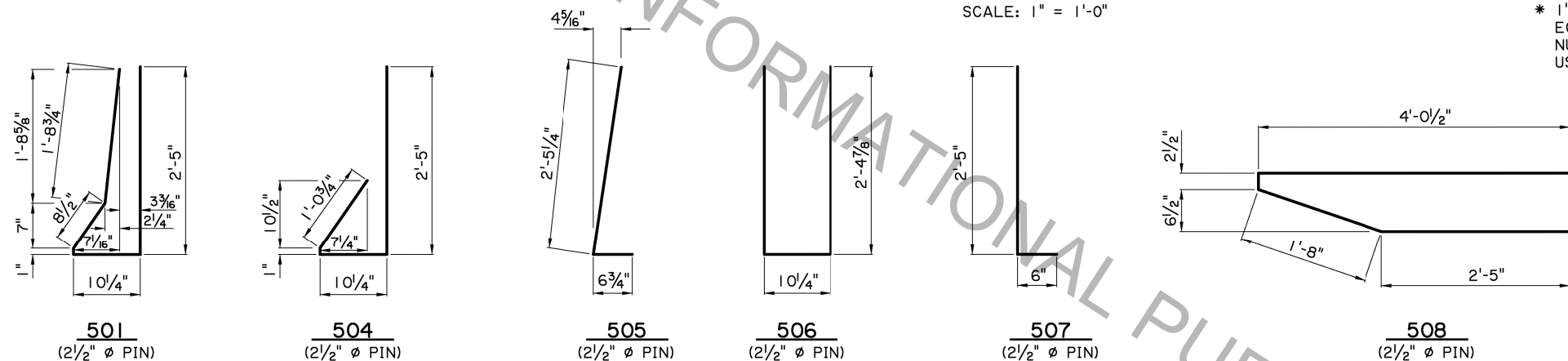
05/17/17

| | |
|--|----------------|
| SHEET NUMBER | |
| DESIGNED | B. DELATTE |
| CHECKED | J. NAKHLEH |
| CONTROL SECTION | |
| STATE | LOUISIANA |
| PROJECT | |
| REVIEWED | 05/17/17 |
| SERIES # | 10 OF 13 |
| BY | |
| REVISION OR CHANGE ORDER DESCRIPTION | |
| NO. | |
| DATE | |
| | |
| ALTERNATE SPAN (2 OF 4) 20'-0" PRECAST CONC. BARRIER 24'-0" CLEAR ROADWAY 45° CROSSING TWO WAY TANGENT | |
| STANDARD DETAIL | PSS-45-24-20SL |
| | |



BARRIER RAILING TRANSITION SECTIONS

SCALE: 1" = 1'-0"



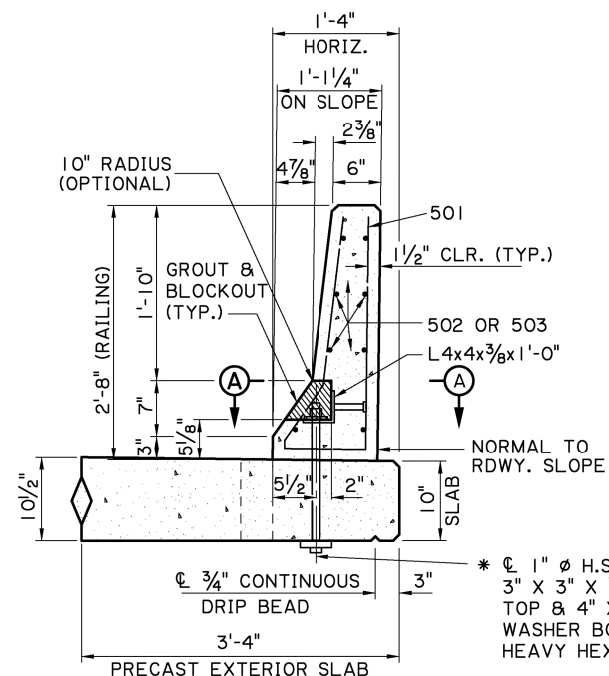
* 1" Ø THREADED STUD OF EQUAL STRENGTH, WITH 2 NUTS & 2 WASHERS, MAY BE USED IN LIEU OF H.S. BOLTS.



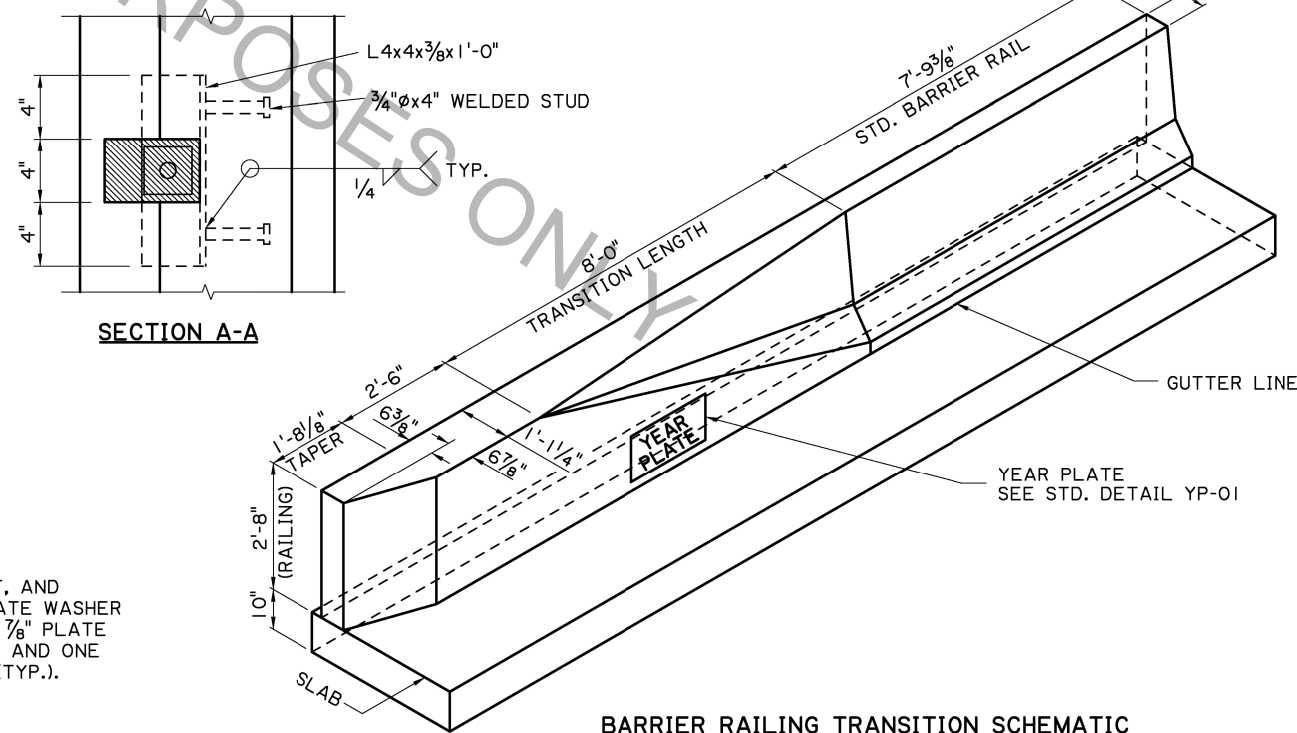
Victor A. Sanchez
 05/17/17

NOTES:

- 1) ALL BARRIER RAIL SURFACES ARE TO RECEIVE A CLASS 3 SPECIAL FINISH.
- 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 1" 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).

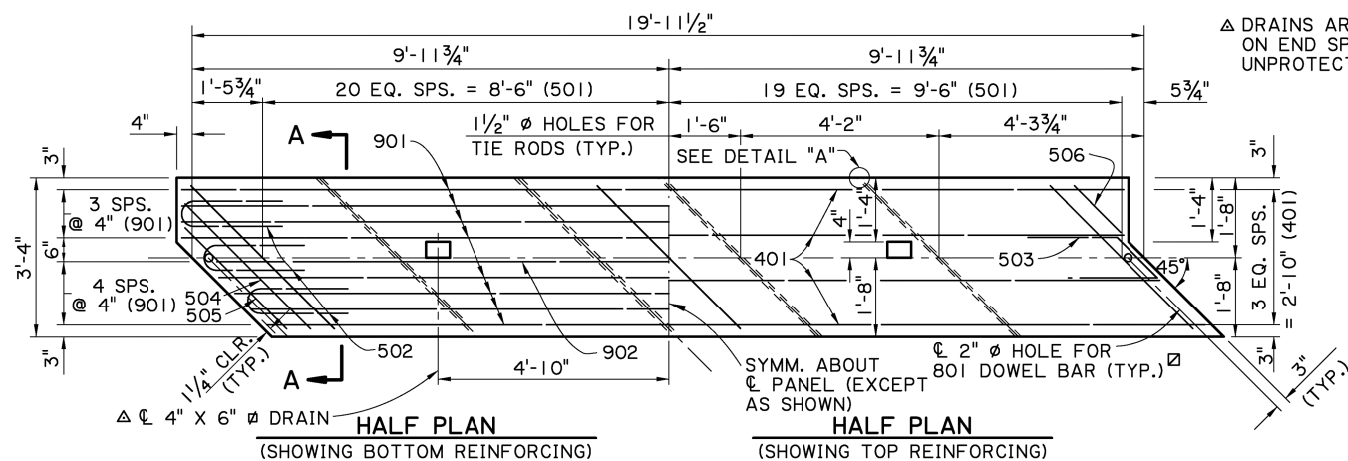


SECTION A-A
 SCALE: 1" = 1'-0"

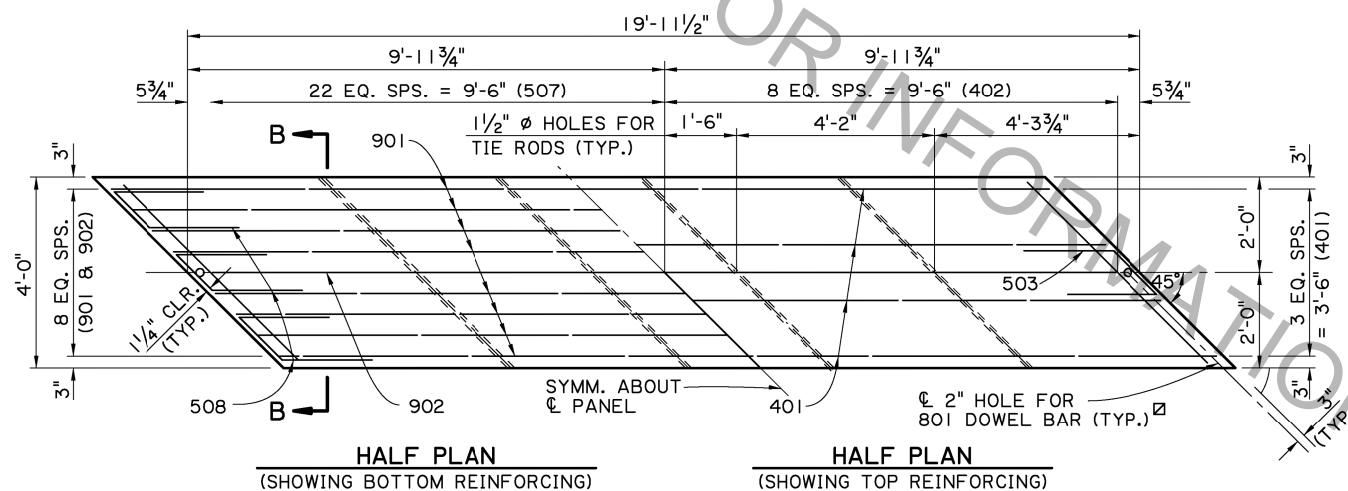


BARRIER RAILING TRANSITION SCHEMATIC
 SCALE: 1/2" = 1'-0"

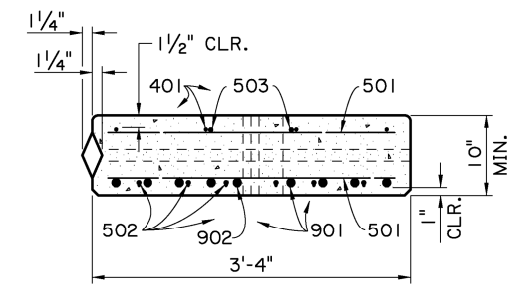
| | | | | | |
|---|--------------------------------------|------------|-----------------|-------|---------|
| SHEET NUMBER | PARISH | DESIGNED | CONTROL SECTION | STATE | PROJECT |
| | DELATTE | B. DELATTE | J. NAKHLEH | LA | |
| | CHECKED | D. HYMEL | J. NAKHLEH | | |
| | REVIEWED | J. NAKHLEH | | | |
| | SERIES # | 05/17/17 | | | |
| | NO. OF SHEETS | 11 | OF | 13 | |
| | DATE | | | | |
| | NO. | | | | |
| | REVISION OR CHANGE ORDER DESCRIPTION | | | | |
| | BY | | | | |
| | | | | | |
| ALTERNATE SPAN (3 OF 4) 20'-0" PRECAST CONC. BARRIER 24'-0" CLEAR ROADWAY 45° CROSSING TWO WAY TANGENT | | | | | |
| STANDARD DETAIL PSS-45-24-20SL | | | | | |
| DOTD DOTD BRIDGE DESIGN | | | | | |



EXTERIOR UNIT
SCALE 1/2" = 1'-0"

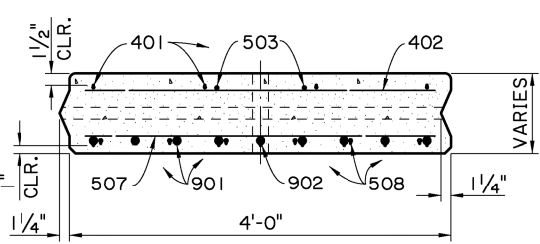


INTERIOR UNIT
SCALE 1/2" = 1'-0"

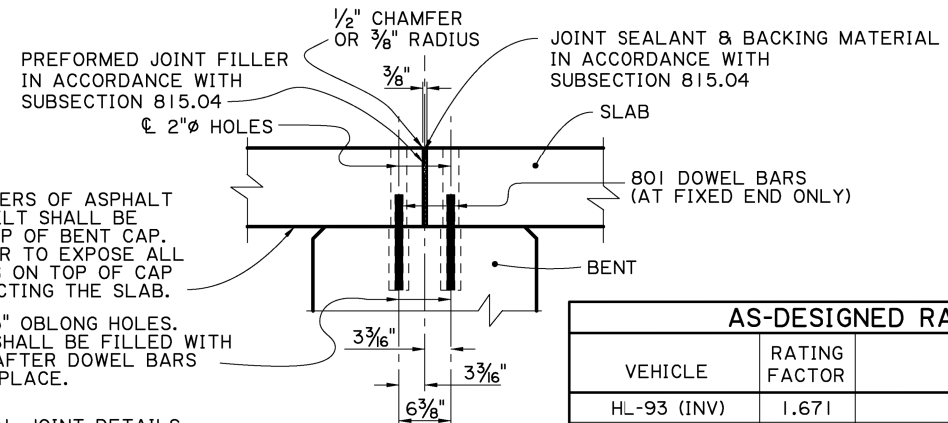


SECTION A-A
EXTERIOR UNIT
SCALE 1" = 1'-0"

NOTE:
FOR EACH SPAN, ONE EXTERIOR UNIT WILL HAVE A TONGUE AND ONE WILL HAVE A GROOVE.



SECTION B-B
INTERIOR UNIT
SCALE 1" = 1'-0"



TYPICAL JOINT DETAIL
SCALE: 1" = 1'-0"

| AS-DESIGNED RATING | | |
|--------------------|---------------|----------------------------|
| VEHICLE | RATING FACTOR | NOTES |
| HL-93 (INV) | 1.671 | |
| HL-93 (OPR) | 2.166 | |
| LADV-11 (INV) | 1.285 | MAGNIFICATION FACTOR = 1.3 |

△ DRAINS ARE NOT REQUIRED ON END SPANS OVER UNPROTECTED SLOPES.

ALTERNATE SPAN 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 : THE BRIDGE DECK IS DESIGNED FOR A FUTURE WEARING COURSE OF 19 PSF. THE LIVE LOAD IS HL-93, AND LADV-11 (LOUISIANA DESIGN VEHICLE LIVE LOAD 2011).

STRUCTURAL CONCRETE : ALL CONCRETE SHALL BE CLASS P1. THE BRIDGE RAIL CONCRETE SHALL BE CLASS A1 IF RAIL IS CAST IN PLACE. STEEL SIDE FORMS AND STEEL OR CONCRETE BOTTOM FORMS SHALL BE USED FOR 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 MINIMUM COVER OF 1" FROM THE DRAIN HOLES. REINFORCING STEEL MAY BE TACK WELDED FOR A DISTANCE OF NOT MORE THAN 4'-0" FROM EACH END OF UNIT. NO OTHER WELDING SHALL BE PERMITTED.

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 A-123.

GROUT : THE GROUT SHALL BE AN APPROVED FLOWABLE NON-SHRINK GROUT LISTED ON 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 PRESTRESSED CONCRETE PRODUCTS LISTED ON AML. SURFACE PREPARATION, MIXING AND PLACEMENT 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 AND LADV-11", 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 1/4" 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 1", 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(4) INSERTS WITH 1" 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 ± 3/16"
- 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 INSTALLATION.

GUARDRAIL : REFER TO GENERAL PLAN FOR GUARDRAIL REQUIREMENTS. PROVIDE HOLES FOR GUARDRAIL CONNECTIONS ACCORDING TO STANDARD PLAN BD.1.1.1.0.01 (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.

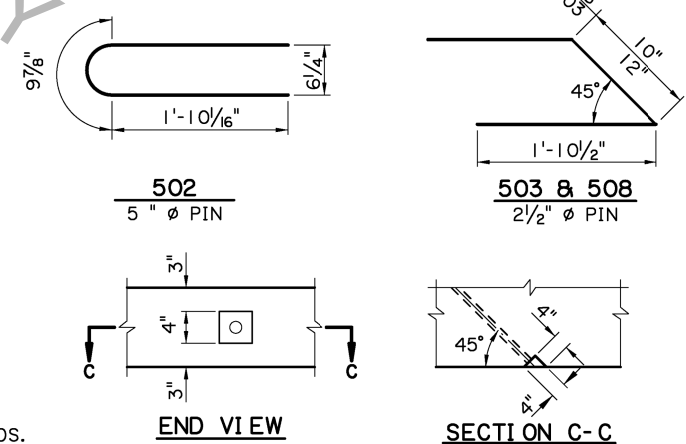
ESTIMATED QUANTITIES (ONE EXTERIOR UNIT)

| BAR NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION |
|---|-------------|--------------|---------------------------|
| 901 | 8 19'-7" | 156'-8" | LONGIT. BOT. OF SLAB |
| 902 | 1 18'-11" | 18'-11" | LONGIT. BOT. OF SLAB |
| TOTAL NO. 9 BARS = 175'-7" = 597 LBS. | | | |
| 801 | 1 1'-0" | 1'-0" | DOWELS |
| TOTAL NO. 8 BARS = 1'-0" = 3 LBS. | | | |
| 501 | 80 4'-2" | 333'-4" | TRANS. TOP & BOT. OF SLAB |
| 502 | 6 4'-6" | 27'-0" | TOP & BOT. END OF SLAB |
| 503 | 2 4'-9" | 9'-6" | TOP & BOT. END OF SLAB |
| 504 | 2 3'-9" | 7'-6" | TOP & BOT. END OF SLAB |
| 505 | 2 3'-0" | 6'-0" | TOP & BOT. END OF SLAB |
| 506 | 2 1'-4" | 2'-8" | TOP & BOT. END OF SLAB |
| TOTAL NO. 5 BARS = 386'-0" = 403 LBS. | | | |
| 401 | 4 19'-7" | 78'-4" | LONGIT. TOP OF SLAB |
| TOTAL NO. 4 BARS = 78'-4" = 52 LBS. | | | |
| DEFORMED REINFORCING STEEL = 1055 LBS. | | | |
| CLASS P1 CONCRETE = 2.05 CU. YDS. | | | |
| CONCRETE RAILING (PER SPAN) = 40.00 LIN. FT. | | | |

ESTIMATED QUANTITIES (ONE INTERIOR UNIT)

| BAR NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION |
|--|-------------|--------------|----------------------|
| 901 | 8 19'-7" | 156'-8" | LONGIT. BOT. OF SLAB |
| 902 | 1 18'-11" | 18'-11" | LONGIT. BOT. OF SLAB |
| TOTAL NO. 9 BARS = 175'-7" = 597 LBS. | | | |
| 801 | 1 1'-0" | 1'-0" | DOWELS |
| TOTAL NO. 8 BARS = 1'-0" = 3 LBS. | | | |
| 503 | 2 4'-9" | 9'-6" | TOP END OF SLAB |
| 507 | 45 5'-2" | 232'-6" | TRANS. BOT. OF SLAB |
| 508 | 6 4'-7" | 27'-6" | BOT. END OF SLAB |
| TOTAL NO. 5 BARS = 269'-6" = 282 LBS. | | | |
| 401 | 4 19'-7" | 78'-4" | LONGIT. TOP OF SLAB |
| 402 | 17 4'-2" | 70'-10" | TRANS. TOP OF SLAB |
| TOTAL NO. 4 BARS = 149'-2" = 100 LBS. | | | |
| DEFORMED REINFORCING STEEL = 982 LBS. | | | |
| CLASS P1 CONCRETE = 2.46 CU. YDS. | | | |

○ BASED ON A 10" SLAB THICKNESS



DETAIL "A"
TYP. EXTERIOR EDGE ONLY
SCALE 1" = 1'-0"

SHEET NUMBER

DESIGNED BY: J. NAKHLEH
CHECKED BY: B. DELATTE
PARISH CONTROL SECTION

DATE: 05/17/17
SERIES #: 12 OF 13
PROJECT: 05/17/17

REVISION OR CHANGE ORDER DESCRIPTION

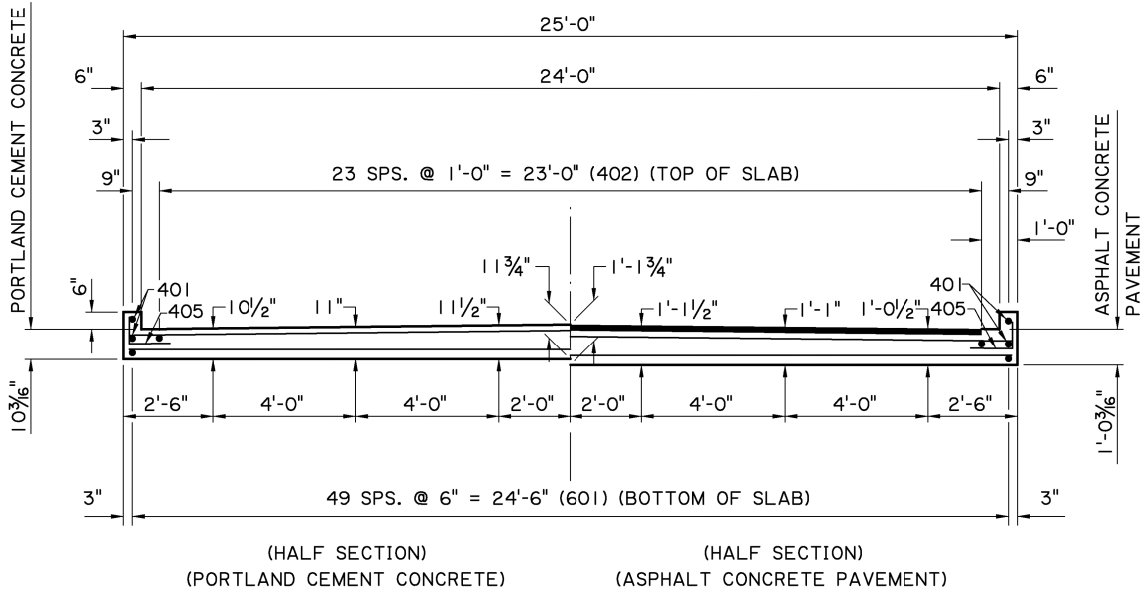
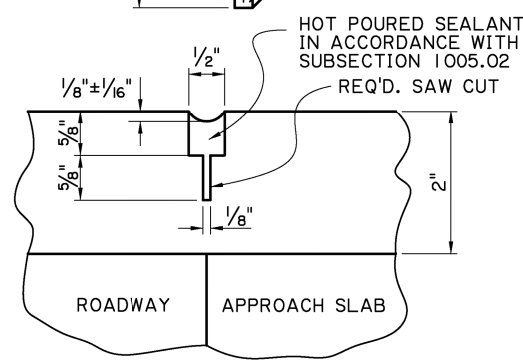
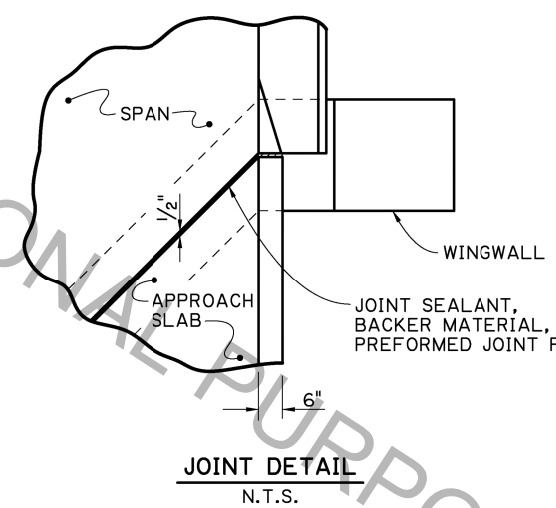
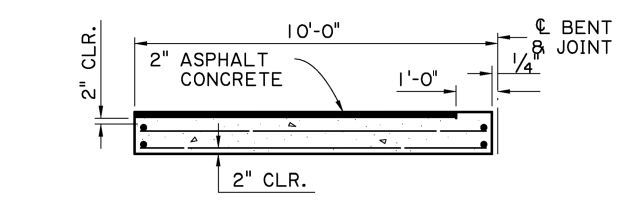
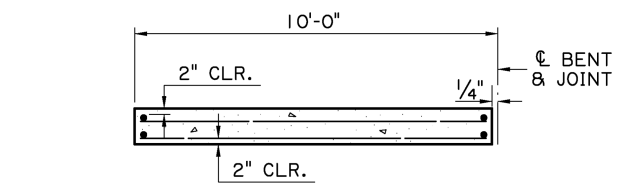
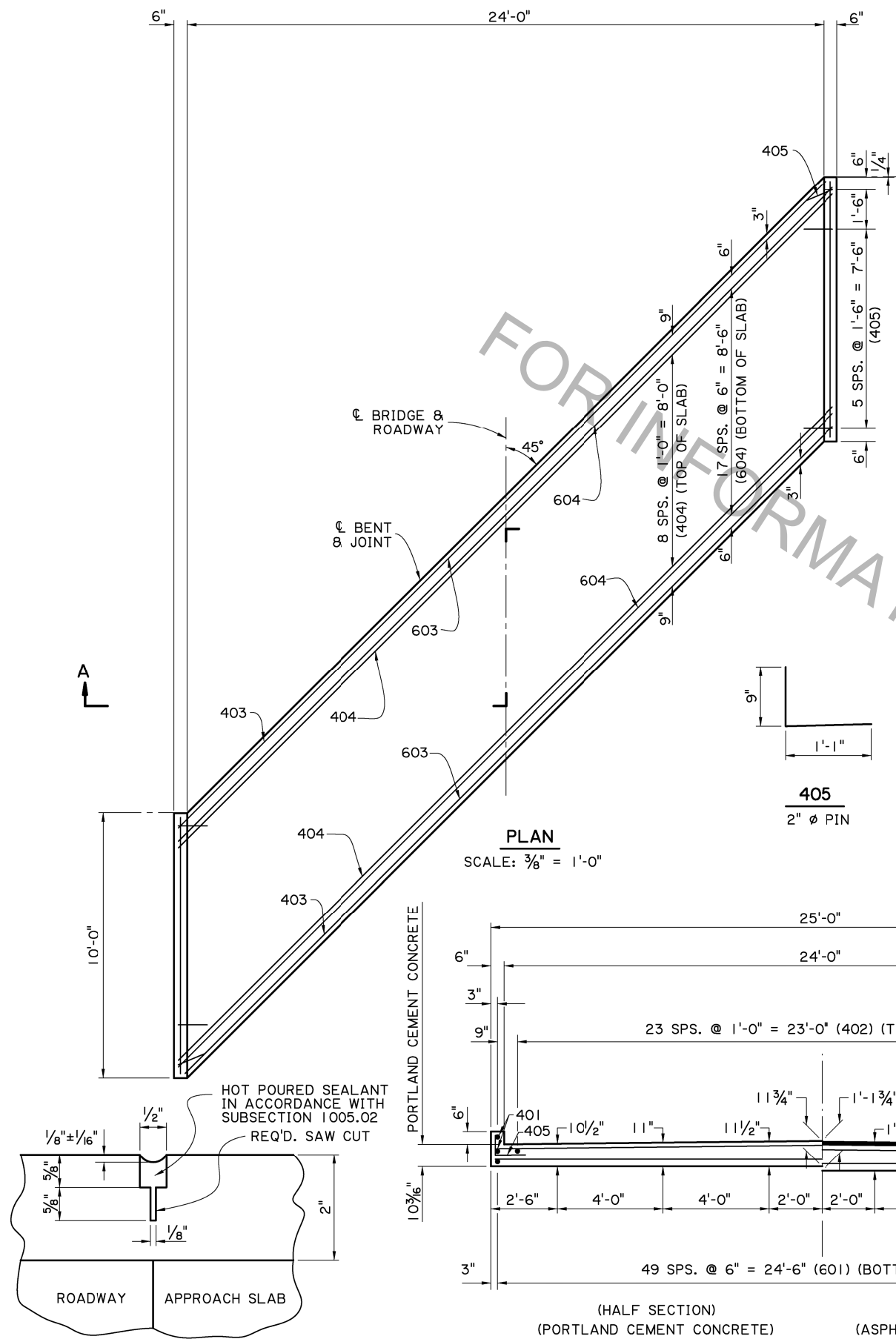
NO. DATE

STATE OF LOUISIANA
VICTOR A. SANCHEZ
License No. 33976
PROFESSIONAL ENGINEER
IN CIVIL ENGINEERING
05/17/17

ALTERNATE SPAN (4 OF 4)
20'-0" PRECAST CONCRETE SLAB UNIT
24'-0" CLEAR ROADWAY
45° CROSSING TWO WAY TANGENT

STANDARD
DOTD
DOTD BRIDGE DESIGN

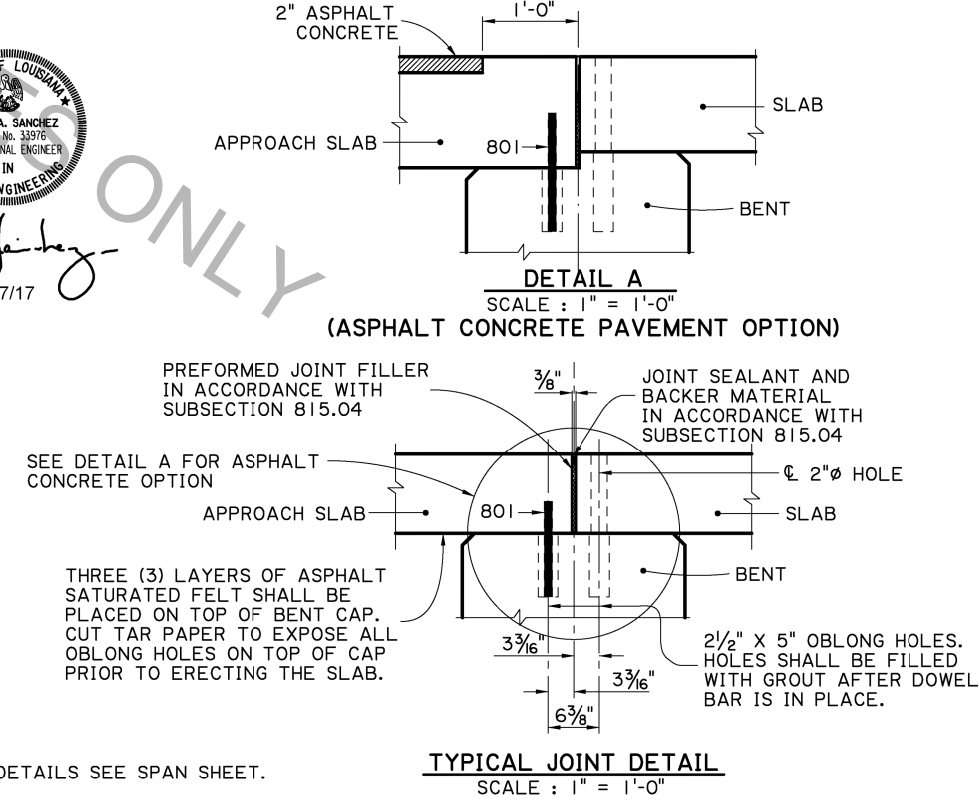
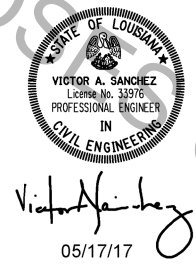
PSS-45-24-20SL



| ESTIMATED QUANTITIES (ONE SLAB) | | | | |
|--|-------------|--------------|----------|----------------------------|
| BAR NO. | UNIT LENGTH | TOTAL LENGTH | LOCATION | |
| 801 | 7 | 7'-0" | DOWELS | |
| TOTAL NO. 8 BARS = 7'-0" = 19 LBS. | | | | |
| 601 | 2 | 9'-7" | 19'-2" | LONGIT. BOT. OF SLAB |
| 602 | 48 | 9'-6" | 456'-0" | LONGIT. BOT. OF SLAB |
| 603 | 2 | 34'-6" | 69'-0" | TRANSV. BOT. OF SLAB |
| 604 | 18 | 34'-10" | 627'-0" | TRANSV. BOT. OF SLAB |
| TOTAL NO. 6 BARS = 1,171'-2" = 1,759 LBS. | | | | |
| 401 | 4 | 9'-7" | 38'-4" | LONGIT. TOP OF SLAB & CURB |
| 402 | 24 | 9'-6" | 228'-0" | LONGIT. TOP OF SLAB |
| 403 | 2 | 34'-6" | 69'-0" | TRANSV. TOP OF SLAB |
| 404 | 9 | 34'-10" | 313'-6" | TRANSV. TOP OF SLAB |
| 405 | 14 | 1'-10" | 25'-8" | DOWELS IN CURB |
| TOTAL NO. 4 BARS = 674'-6" = 451 LBS. | | | | |
| TOTAL DEFORMED REINFORCING STEEL = 2,229 LBS. | | | | |
| CONCRETE APPROACH SLAB = 27.78 SQ. YDS. | | | | |
| ASPHALT CONCRETE = 2.6 TONS | | | | |
| SAW CUT & SEAL = 33 LIN. FT. | | | | |

APPROACH SLAB 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.
 STRUCTURAL CONCRETE: ALL CONCRETE SHALL BE CLASS A1. EXPOSED EDGES SHALL HAVE A $\frac{3}{4}''$ CHAMFER, UNLESS OTHERWISE NOTED.
 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, UNLESS OTHERWISE NOTED.
 BEDDING MATERIAL: FOR DETAILS OF BEDDING MATERIAL AND UNDERDRAINS, SEE STANDARD DETAIL BD.2.10.1.0.07.
 BASIS OF PAYMENT: ALL MATERIAL SHALL BE PAID FOR UNDER 'CONCRETE APPROACH SLABS' ACCORDING TO THE SPECIFICATIONS.
 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.



NOTE: FOR ADDITIONAL JOINT DETAILS SEE SPAN SHEET.

| | | | |
|--------------|-----------------|---------------|--------------------------------------|
| SHEET NUMBER | NO. | DATE | REVISION OR CHANGE ORDER DESCRIPTION |
| DESIGNED BY | CONTROL SECTION | STATE PROJECT | |
| CHECKED BY | CONTROL SECTION | STATE PROJECT | |
| REVIEWED BY | CONTROL SECTION | STATE PROJECT | |
| SERIES # | 13 OF 13 | | |

ALTERNATE APPROACH SLAB
 10'-0" CAST-IN-PLACE APPROACH SLAB
 24'-0" CLEAR ROADWAY
 45° CROSSING TWO WAY TANGENT

STANDARD DETAIL
 PSS-45-24-20SL