



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

May 13, 2024

Addendum No. 1

RE: Contract # C204411

WBS # 14SP.20441.1, 14SP.20441.2

STATE FUNDED

Haywood County

BRIDGE #430175 AND BRIDGE #430174 OVER BIG CREEK ON SR-1332
(WATERVILLE ROAD)

May 28, 2024 Letting

To Whom It May Concern:

Reference is made to the plans and proposal furnished to you on this project.

The following revisions have been made to the Transportation Management plans.

| Sheet No. | Revision |
|--------------------------|----------------------------|
| TMP-1B (14SP.20441.1) | General Note A was revised |
| TMP-1B (14SP.20441.2) | General Note A was revised |

Please void the above listed Sheets in your Plans and staple the revised Sheets thereto.

The following revisions have been made to the Structure plans.

| Sheet No. | Revision |
|-----------------|--|
| S1-7 and S1-12 | The dimension to the threaded inserts on the "Interior Slab Sidewalk Section Type II" were revised from 4" to 6" |
| S1-9 and S1-14 | The dimensions to the threaded inserts were revised from 4" to 6" in the plan view |
| S1-11 and S1-16 | A note for optional "Sleeve Inserts" was added to the notes |

Please void the above listed Sheets in your Plans and staple the revised Sheets thereto.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4127
Customer Service: 1-877-368-4968

Location:
1020 BIRCH RIDGE DR.
RALEIGH, NC 27610

Website: www.ncdot.gov

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

PROPOSAL

INCLUDES ADDENDUM No.1 DATED 05-13-2024

DATE AND TIME OF BID OPENING: **May 28, 2024 AT 02:00 PM**

CONTRACT ID C204411
WBS 14SP.20441.1, 14SP.20441.2

FEDERAL-AID NO. STATE FUNDED
COUNTY HAYWOOD
T.I.P NO.
MILES 0.175
ROUTE NO. SR-1332
LOCATION BRIDGE #430175 AND BRIDGE #430174 OVER BIG CREEK ON SR-1332
(WATERVILLE ROAD).

TYPE OF WORK GRADING, DRAINAGE, PAVING, AND STRUCTURES.

NOTICE:

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A ROADWAY & STRUCTURE PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 10-15-13)

108

SP1 G14 E

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for road closures and restoring traffic to the existing traffic pattern. The Contractor shall not close **SR 1332 (Waterville Road)** during the following time restrictions:

DAY AND TIME RESTRICTIONS**Monday thru Sunday, 4:00 pm to 9:00 am (the following morning)**

The maximum allowable time for **any operation other than blasting operations**, is **thirty (30) minutes for SR 1332**. The Contractor shall reopen the travel lanes to traffic until any resulting traffic queue is depleted.

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for the road closures according to the time restrictions stated herein.

The completion time for this intermediate contract time will be the time the Contractor is required to complete the removal of traffic control devices required for the road closures according to the time restrictions stated herein and restore traffic to the existing traffic pattern.

The liquidated damages are **One Hundred Twenty-Five Dollars (\$ 125.00)** per fifteen **(15)** minute time period.

INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 10-15-13)

108

SP1 G14 E

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for road closures and restoring traffic to the existing traffic pattern. The Contractor shall not close **SR 1332 (Waterville Road)** during the following time restrictions:

DAY AND TIME RESTRICTIONS**Monday thru Sunday, 4:00 pm to 9:00 am (the following morning)**

The maximum allowable time for **blasting operations** is **forty-five (45) minutes for SR 1332**. The Contractor shall reopen the travel lanes to traffic until any resulting traffic queue is depleted.

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for the road closures according to the time restrictions stated herein.

GENERAL NOTES / LOCAL NOTES

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| 14SP.20441.2 | TMP-1B |

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT STOP TRAFFIC AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS | DURATION AND OPERATION |
|--------------------------|---|------------------------|
| SR 1332 WATERVILLE RD | MON-SUN 9 A.M. TO 4 P.M. | <30 MINUTES |
| | MON-SUN 4 P.M. TO 9 A.M. (THE FOLLOWING MORNING) | DO NOT STOP |

NOTE: OPERATIONS CONSIST OF TIE-INS, PM PLACEMENT, DRAINAGE AND UTILITY (OPEN-CUT), RETAINING WALL CONSTRUCTION, AND TRAFFIC SHIFTS

| | | |
|--------------------------|---|------------------------------|
| SR 1332 WATERVILLE RD | MON-SUN 9 A.M. TO 4 P.M. | <45 MINUTES ROCK BLASTING |
| | MON-SUN 4 P.M. TO 9 A.M. (THE FOLLOWING MORNING) | DO NOT STOP |

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- G) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

- H) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- I) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- K) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC BARRIER

- L) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

- M) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

| POSTED SPEED LIMIT | MINIMUM OFFSET |
|--------------------|----------------|
| 40 OR LESS | 15 FT |
| 45 - 50 | 20 FT |
| 55 | 25 FT |
| 60 MPH OR HIGHER | 30 FT |

- LOCAL NOTES:
- 1) EMERGENCY VEHICLE ACCESS MUST BE MAINTAINED AT ALL TIMES.
 - 2) NOTIFY THE HAYWOOD COUNTY SCHOOL BOARD (828-456-2421) AND RIVER CONTROL OFFICER 30 DAYS BEFORE ANY LANE CLOSURES.
 - 3) PLACE "BRIDGE CONSTRUCTION AHEAD" (W21-81) WARNING SIGNS ALONG THE EDGE OF CREEK AND RIVER AS DIRECTED BY THE ENGINEER TO ALERT POSSIBLE RIVER USERS OF WORK BEING DONE.
 - 4) THE CONTRACTOR SHALL BE AWARE OF RIVER USERS, USING THE RIVER AND WILL HALT WORK IF SOMEONE IS SEEN APPROACHING THE BRIDGE AND SUSPEND ALL OVERHEAD WORK UNTIL RIVER USERS SAFELY LEAVE THE AREA.

TRAFFIC CONTROL DEVICES

- N) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN 40 FEET FOR POSTED SPEED LIMITS LESS THAN 45 (MPH) AND NO GREATER THAN 80 FEET FOR POSTED SPEED LIMITS GREATER THAN OR EQUAL TO 45 (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

- O) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS

- P) INSTALL TEMPORARY PAVEMENT MARKINGS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

| ROAD NAME | MARKING | MARKER |
|------------------------------|---------|--------|
| SR 1332 (WATERVILLE ROAD) | PAINT | NONE |

- Q) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

- R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

- S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

- T) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 100 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

MANAGEMENT STRATEGIES

PHASE 1 DEPICTS TRAFFIC TO BE MAINTAINED ON THE EXISTING ROAD, BUT REDUCED TO ONE-LANE TWO-WAY PATTERN USING TEMPORARY PORTABLE SIGNALS AND PAVEMENT MARKINGS WHILE THE SB PROPOSED ROADWAY IS CONSTRUCTED, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

PHASE 2 DEPICTS TRAFFIC SHIFTED TO THE PARTIALLY CONSTRUCTED ROADWAY ON A ONE-LANE TWO-WAY PATTERN USING TEMPORARY PORTABLE SIGNALS AND PAVEMENT MARKINGS WHILE THE NB PROPOSED ROADWAY IS CONSTRUCTED, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. A FLAGGING OPERATION WILL BE USED TO CONSTRUCT THE NEW TIE-INS.

| | | | |
|---|---|---|---------------------------------------|
| APPROVED:  DATE: 5/9/2024 SEAL |  |  | TRANSPORTATION OPERATIONS PLAN |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |

GENERAL NOTES / LOCAL NOTES

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| 14SP.20441.1 | TMP-1B |

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT STOP TRAFFIC AS FOLLOWS:

| ROAD NAME | DAY AND TIME RESTRICTIONS | DURATION AND OPERATION |
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| SR 1332 WATERVILLE RD | MON-SUN 9 A.M. TO 4 P.M. MON-SUN 4 P.M. TO 9 A.M. (THE FOLLOWING MORNING) | ≤30 MINUTES DO NOT STOP |

NOTE: OPERATIONS CONSIST OF TIE-INS, PM PLACEMENT, DRAINAGE AND UTILITY (OPEN-CUT), RETAINING WALL CONSTRUCTION, AND TRAFFIC SHIFTS

| | | |
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|--------------------------|---|---|

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
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PAVEMENT EDGE DROP OFF REQUIREMENTS

G) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

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BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

H) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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SIGNING

J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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- LOCAL NOTES:
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 - 4) THE CONTRACTOR SHALL BE AWARE OF RIVER USERS, USING THE RIVER AND WILL HALT WORK IF SOMEONE IS SEEN APPROACHING THE BRIDGE AND SUSPEND ALL OVERHEAD WORK UNTIL RIVER USERS SAFELY LEAVE THE AREA.

TRAFFIC CONTROL DEVICES

N) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN 40 FEET FOR POSTED SPEED LIMITS LESS THAN 45 (MPH) AND NO GREATER THAN 80 FEET FOR POSTED SPEED LIMITS GREATER THAN OR EQUAL TO 45 (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

O) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS

P) INSTALL TEMPORARY PAVEMENT MARKINGS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

| ROAD NAME | MARKING | MARKER |
|------------------------------|---------|--------|
| SR 1332 (WATERVILLE ROAD) | PAINT | NONE |

Q) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

T) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 100 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

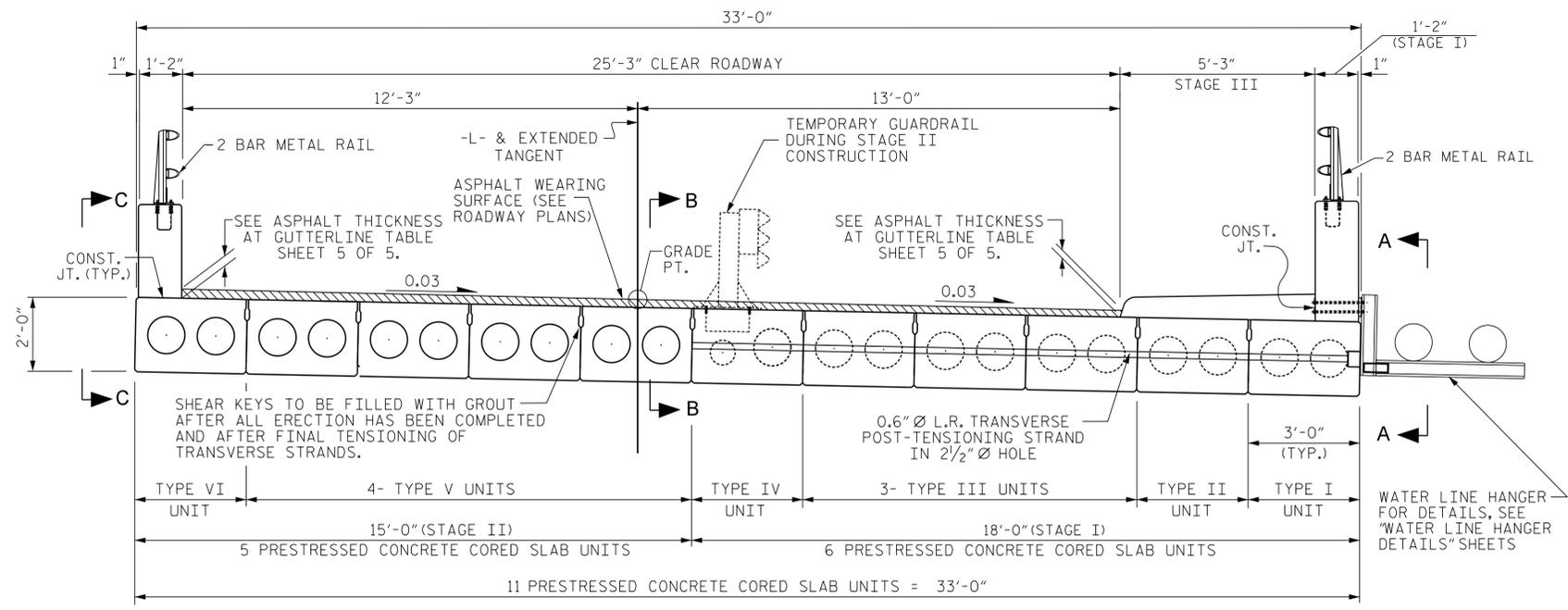
U) CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND OTHERS TO PROVIDE A PEDESTRIAN TRANSPORT SERVICE THROUGH AND/OR AROUND THE PROJECT AS NEEDED. AT MINIMUM, THE PEDESTRIAN TRANSPORT SERVICE SHALL BE ON CALL BETWEEN THE HOURS OF 7:00 AM TO 8:00 PM MONDAY THROUGH SUNDAY. (SEE SPECIAL PROVISIONS)

MANAGEMENT STRATEGIES

PHASE 1 DEPICTS TRAFFIC TO BE MAINTAINED ON THE EXISTING ROAD, BUT REDUCED TO ONE-LANE TWO-WAY PATTERN USING TEMPORARY PORTABLE SIGNALS AND PAVEMENT MARKINGS WHILE THE SB PROPOSED ROADWAY IS CONSTRUCTED, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

PHASE 2 DEPICTS TRAFFIC SHIFTED TO THE PARTIALLY CONSTRUCTED ROADWAY ON A ONE-LANE TWO-WAY PATTERN USING TEMPORARY PORTABLE SIGNALS AND PAVEMENT MARKINGS WHILE THE NB PROPOSED ROADWAY IS CONSTRUCTED, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. A FLAGGING OPERATION WILL BE USED TO CONSTRUCT THE NEW TIE-INS.

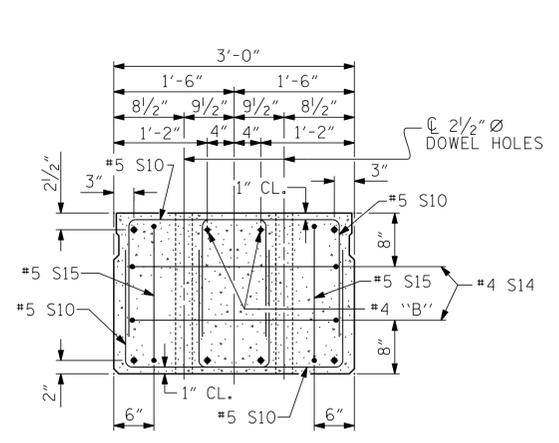
| | | | |
|---|--|--|--------------------------------|
| APPROVED: DATE: 5/9/2024 SEAL | | | TRANSPORTATION OPERATIONS PLAN |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |



HALF SECTION THROUGH VOIDS

TYPICAL SECTION

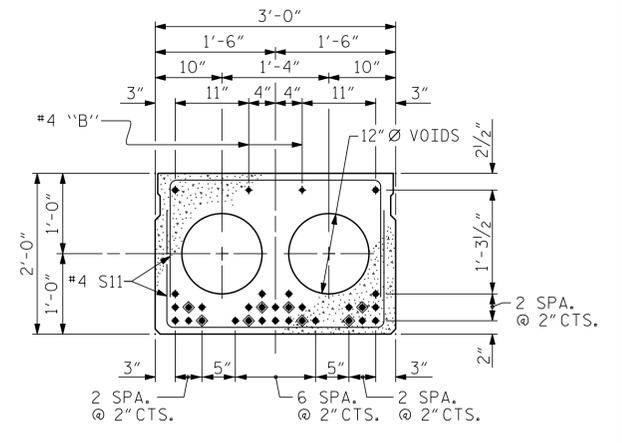
HALF SECTION AT INTERMEDIATE DIAPHRAGMS



END ELEVATION

SHOWING PLACEMENT OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES. (STRAND LAYOUT NOT SHOWN.)

INTERIOR SLAB UNIT SHOWN-EXTERIOR SLAB UNIT SIMILAR EXCEPT SHEAR KEY LOCATION.



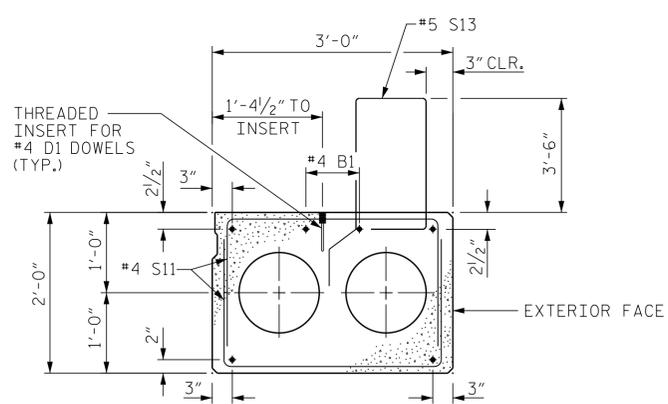
INTERIOR SLAB SECTION (75' UNIT)

TYPE III & V (30 STRANDS REQUIRED)

0.6" Ø LOW RELAXATION STRAND LAYOUT

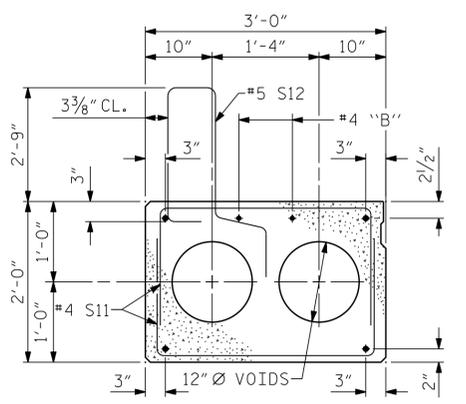
◆ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 12'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

DEBONDING LEGEND



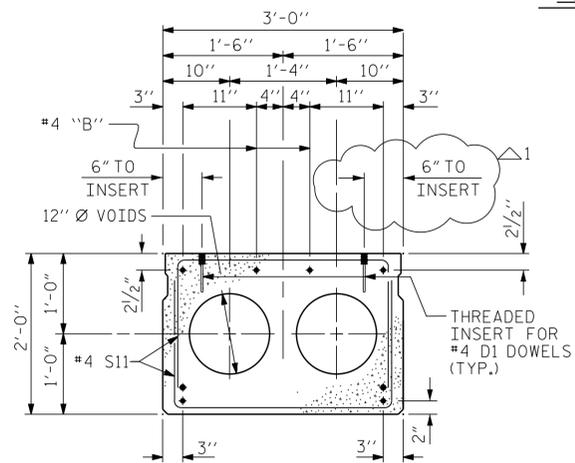
EXTERIOR SLAB SIDEWALK SECTION

TYPE I (FOR PRESTRESSED STRAND LAYOUT, SEE "INTERIOR SLAB SECTION")



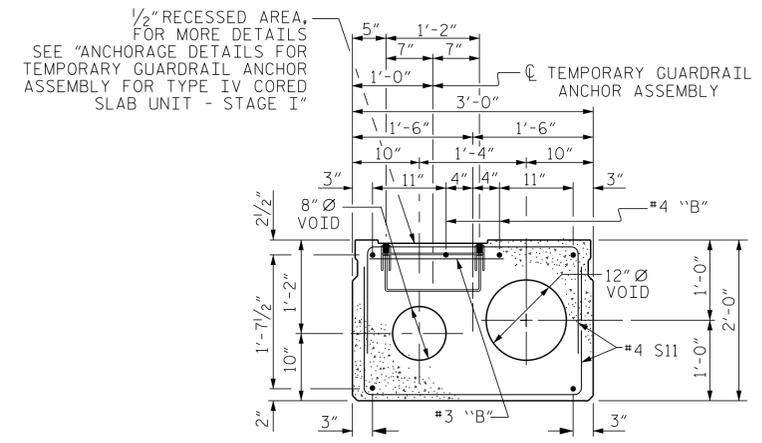
EXTERIOR SLAB SECTION

TYPE VI (FOR PRESTRESSED STRAND LAYOUT, SEE "INTERIOR SLAB SECTION.")



INTERIOR SLAB SIDEWALK SECTION

TYPE II (FOR PRESTRESSED STRAND LAYOUT, SEE "INTERIOR SLAB SECTION.")



INTERIOR SLAB SECTION

TYPE IV (FOR PRESTRESSED STRAND LAYOUT, SEE "INTERIOR SLAB SECTION")

FOR TEMPORARY GUARDRAIL ANCHOR ASSEMBLY LOCATION, SEE SECTION OF ANCHOR ASSEMBLY LOCATION ON "ANCHORAGE DETAILS FOR TEMPORARY GUARDRAIL ANCHOR ASSEMBLY FOR TYPE IV CORED SLAB UNIT" SHEET.



5/8/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 14SP.20441.1
 HAYWOOD COUNTY
 STATION: 13+33.99 -L-

SHEET 1 OF 5

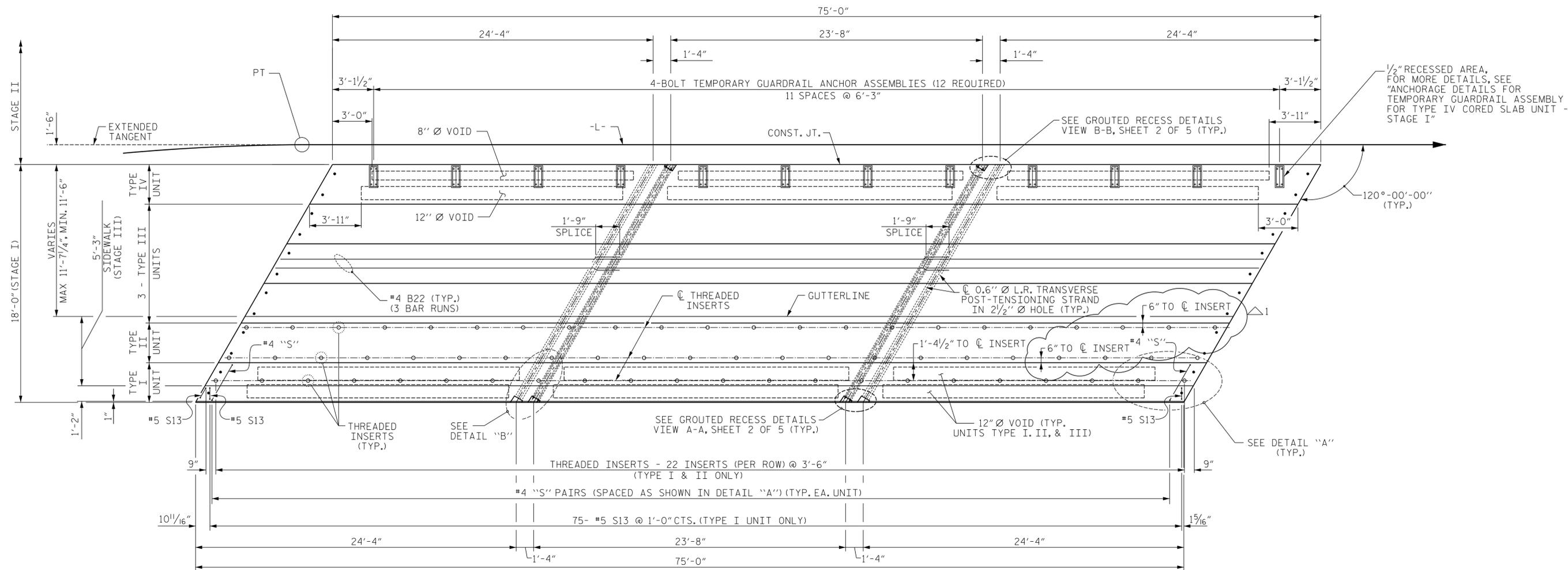
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

3'-0" X 2'-0"
 PRESTRESSED CONCRETE CORED SLAB UNIT
 120° SKEW SPAN 'A'

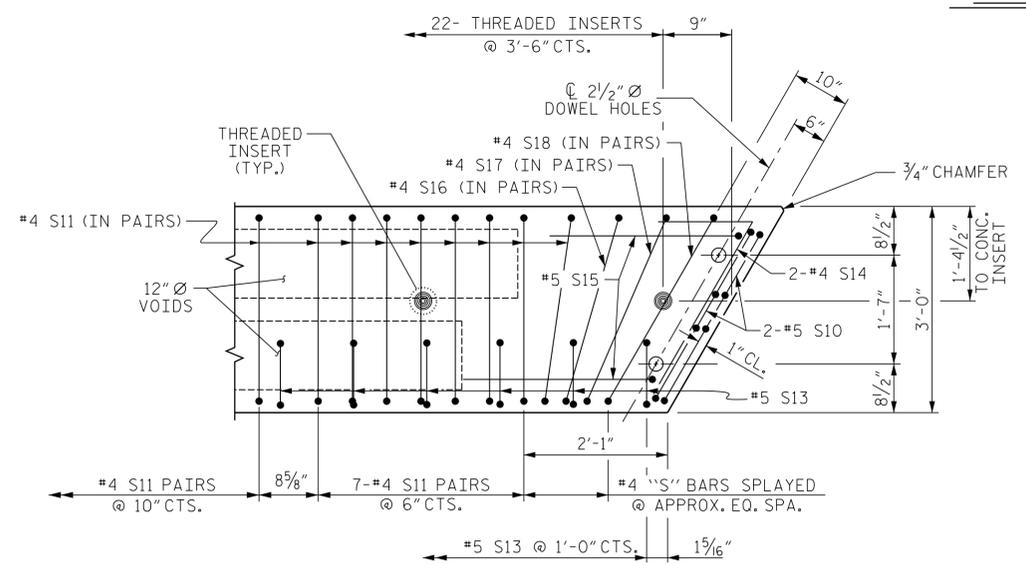
| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|----------|-----|-----|-------|-----------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-7 |
| 1 | SDR | 5/7/2024 | 3 | | | TOTAL SHEETS 40 |
| 2 | | | 4 | | | |

DES. EGR. OF RECORD: RTS DATE: 06/17
 ASSEMBLED BY: MAF DATE: 06/17
 CHECKED BY: HLW DATE: 06/17

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 Asheville, NC, 28806
 License No: C-3097



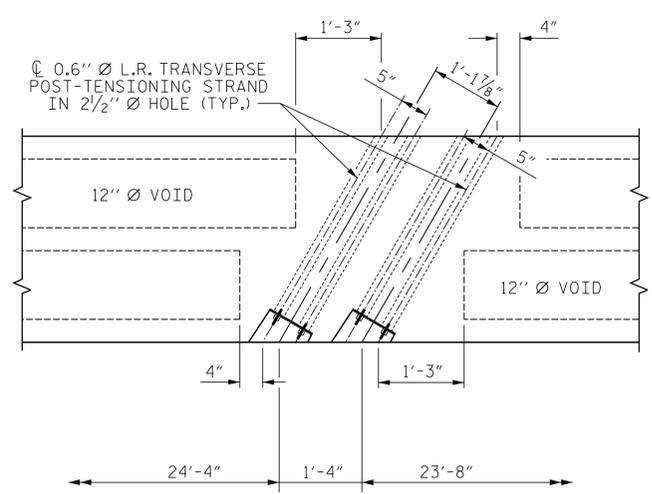
PLAN OF SPAN A
(STAGE I)



DETAIL "A"

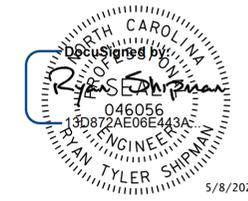
(SIMILAR EACH END OF UNIT)
TYPE I UNIT SHOWN- OTHER UNITS SIMILAR EXCEPT OMIT #5 S13 BARS FOR TYPE II THRU TYPE IV UNITS.

1 ROW OF STRUCTURAL CONCRETE INSERTS FOR TYPE I ONLY.
2 ROWS OF STRUCTURAL CONCRETE INSERTS FOR TYPE II ONLY.



DETAIL "B"

#4 S11 BARS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO GROUDED RECESS AND 2 1/2" TRANSVERSE POST-TENSIONING STRAND HOLES.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 14SP.20441.1
HAYWOOD COUNTY
STATION: 13+33.99 -L-

SHEET 3 OF 5

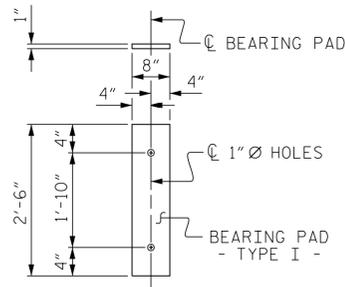
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF .75' UNIT
120° SKEW
(STAGE I) SPAN 'A'

DES. EGR. OF RECORD: RTS DATE: 02/18
ASSEMBLED BY: MAF DATE: 02/18
CHECKED BY: HLW DATE: 02/18

| REVISIONS | | | | | | SHEET NO. S1-9 |
|-----------|-----|----------|-----|-----|-------|--------------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | |
| 1 | SDR | 5/7/2024 | 3 | | | TOTAL SHEETS 40 |
| 2 | | | 4 | | | |

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Asheville, NC, 28806
License No: C-3097



FIXED END
(TYPE I - 44 REQ'D)

NOTE: QUANTITY INCLUDES SPAN 'A' AND SPAN 'B'.

ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS.

| GUTTERLINE ASPHALT THICKNESS | | |
|------------------------------|---------------------------|------------------|
| | ASPHALT OVERLAY THICKNESS | |
| | LEFT GUTTERLINE | RIGHT GUTTERLINE |
| CL BRG. @ END BENT #1 | 3/2" | 3 1/16" |
| MIDSPAN | 2 1/16" | 2 3/16" |
| CL BRG. @ BENT #1 | 3/2" | 3/2" |

| CORED SLABS REQUIRED (75' UNIT) | | | |
|------------------------------------|--------|--------|--------------|
| UNIT | NUMBER | LENGTH | TOTAL LENGTH |
| TYPE I | 1 | 75'-0" | 75'-0" |
| TYPE II | 1 | 75'-0" | 75'-0" |
| TYPE III | 3 | 75'-0" | 225'-0" |
| TYPE IV | 1 | 75'-0" | 75'-0" |
| TYPE V | 4 | 75'-0" | 300'-0" |
| TYPE VI | 1 | 75'-0" | 75'-0" |
| TOTAL | 11 | | 825'-0" |

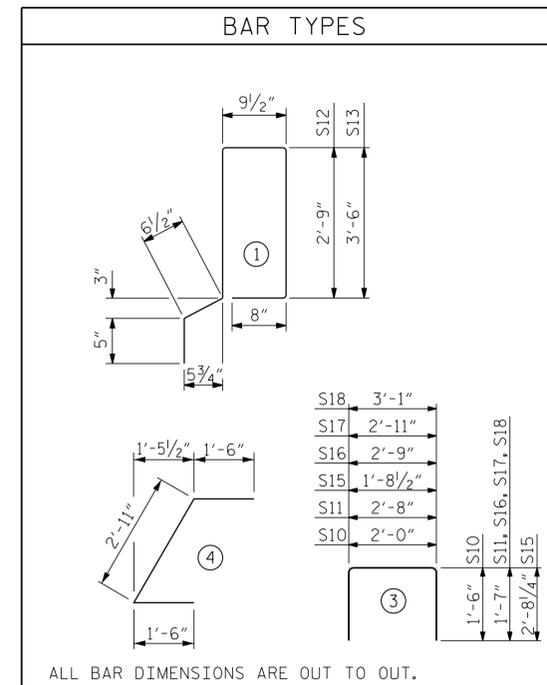
| DEAD LOAD DEFLECTION AND CAMBER | |
|--|--------------------|
| | 3'-0" x 2'-0" |
| 75' CORED SLAB UNIT | 0.6" Ø L.R. STRAND |
| CAMBER (SLAB ALONE IN PLACE) | 2 1/2" ↑ |
| DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD** | 1 1/16" ↓ |
| FINAL CAMBER | 1 7/16" ↑ |

** INCLUDES FUTURE WEARING SURFACE

| BILL OF MATERIAL FOR ONE 75' CORED SLAB UNIT | | | | | | | | | |
|---|--------|----------|------|-------------|--------|------------------|--------|--------------|--------|
| BAR | NUMBER | SIZE | TYPE | TYPE I UNIT | | TYPE II- V UNITS | | TYPE VI UNIT | |
| | | | | LENGTH | WEIGHT | LENGTH | WEIGHT | LENGTH | WEIGHT |
| B22 | 6 | #4 | STR | 26'-1" | 105 | 26'-1" | 105 | 26'-1" | 105 |
| S10 | 8 | #5 | 3 | 5'-0" | 42 | 5'-0" | 42 | 5'-0" | 42 |
| S11 | 182 | #4 | 3 | 5'-10" | 709 | 5'-10" | 709 | 5'-10" | 709 |
| *S12 | 76 | #5 | 1 | | | | | 7'-11" | 628 |
| *S13 | 76 | #5 | 1 | 9'-5" | 746 | | | | |
| S14 | 4 | #4 | 4 | 5'-11" | 16 | 5'-11" | 16 | 5'-11" | 16 |
| S15 | 4 | #5 | 3 | 7'-1" | 30 | 7'-1" | 30 | 7'-1" | 30 |
| S16 | 4 | #4 | 3 | 5'-11" | 16 | 5'-11" | 16 | 5'-11" | 16 |
| S17 | 4 | #4 | 3 | 6'-1" | 16 | 6'-1" | 16 | 6'-1" | 16 |
| S18 | 4 | #4 | 3 | 6'-3" | 17 | 6'-3" | 17 | 6'-3" | 17 |
| REINFORCING STEEL | | LBS. | | | 951 | | 951 | | 951 |
| *EPOXY COATED REINFORCING STEEL | | LBS. | | | 746 | | | | 628 |
| 9500 P.S.I. CONCRETE | | CU. YDS. | | | 12.7 | | 12.7 | | 13.8 |
| 0.6" Ø L.R. STRANDS | | No. | | | 30 | | 30 | | 30 |

| CONCRETE RELEASE STRENGTH | |
|---------------------------|------|
| UNIT | PSI |
| 75' UNITS | 6000 |

| GRADE 270 STRANDS | |
|-------------------------------------|-------------|
| | 0.6" Ø L.R. |
| AREA (SQUARE INCHES) | 0.217 |
| ULTIMATE STRENGTH (LBS. PER STRAND) | 58,600 |
| APPLIED PRESTRESS (LBS. PER STRAND) | 43,950 |



ALL BAR DIMENSIONS ARE OUT TO OUT.

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN THE REQUIRED STRENGTH SHOWN IN THE "CONCRETE RELEASE STRENGTH" TABLE.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE PARAPET AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN PARAPET EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF PARAPET SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

MAINTAIN A SYMMETRIC TENSION FORCE BETWEEN EACH PAIR OF TRANSVERSE POST TENSIONING STRANDS IN THE DIAPHRAGM.

THE #4 S11 STIRRUPS MAY BE SHIFTED AS NECESSARY TO MAINTAIN 1" CLEAR TO THE GROUTED RECESS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

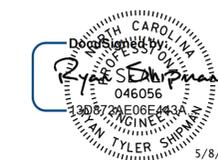
THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

THE CONTRACTOR MAY USE SLEEVE INSERTS IN LIEU OF THREADED INSERTS FOR THE #4 DOWELS IN THE TYPE I AND TYPE II PRECAST CORED SLABS. IF USED, THESE INSERTS SHALL HAVE 3/4" INSIDE DIAMETER, SEALED TO PREVENT CONCRETE FILLING DURING FABRICATION, AND SHALL BE 4" LONG. THE #4 DOWELS IN THE SIDEWALK ARE TO BE INSERTED INTO THESE SLEEVES DURING STAGE III. THE DOWELS SHALL BE GROUTED IN USING NON-SHRINK EPOXY GROUT. THE COST OF THE INSERTS AND GROUT ARE TO BE INCIDENTAL TO THE COST OF THE CORED SLABS.

PROJECT NO. 14SP.20441.1
HAYWOOD COUNTY
STATION: 13+33.99 -L-

SHEET 5 OF 5



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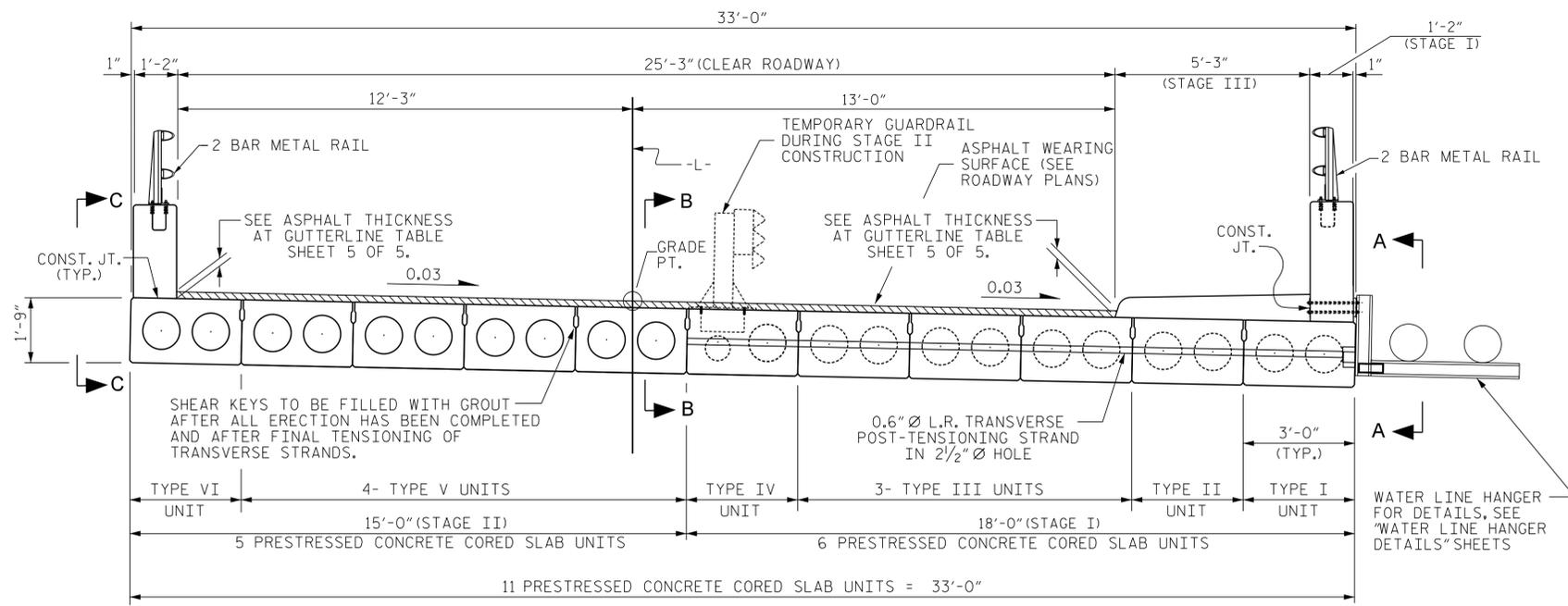
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
3'-0" X 2'-0"
PRESTRESSED CONCRETE
CORED SLAB UNIT
120° SKEW SPAN 'A'

| | |
|--------------------------|-------------|
| DES. EGR. OF RECORD: RTS | DATE: 02/18 |
| ASSEMBLED BY: MAF | DATE: 02/18 |
| CHECKED BY: HLW | DATE: 02/18 |
| DRAWN BY: MAA | 6/10 |
| CHECKED BY: MKT | 7/10 |
| REV. 5/18 | MAA/THC |

| NO. | REVISIONS | | | NO. | REVISIONS | | | SHEET NO. |
|-----|-----------|----------|-----|-----|-----------|-------|-----------------|-----------|
| | BY: | DATE: | NO. | | BY: | DATE: | SHEET NO. | |
| 1 | SDR | 5/7/2024 | 3 | | | | S1-11 | |
| 2 | | | 4 | | | | TOTAL SHEETS 40 | |

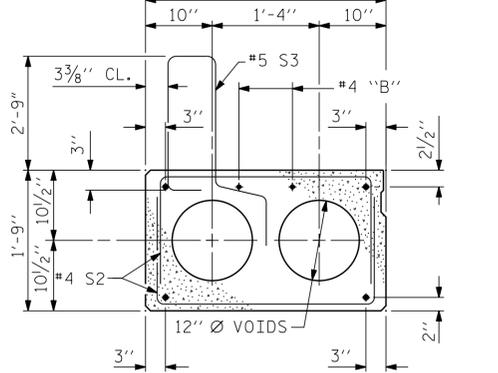
JMT Johnson, Mirmiran, & Thompson Inc.
1318-F Patton Ave.
Asheville, NC, 28806
License No: C-3097

STD. NO. 24PCS3.33_60&120S



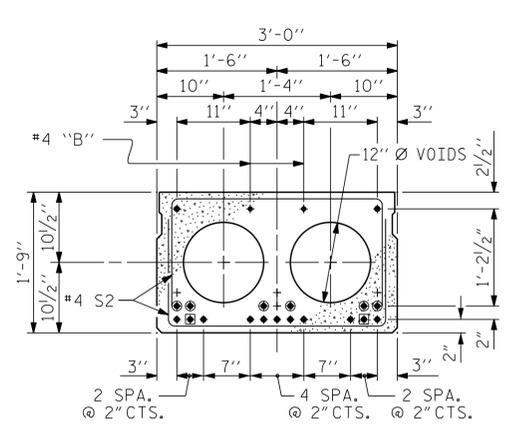
TYPICAL SECTION

0.6" Ø LOW RELAXATION STRAND LAYOUT



EXTERIOR SLAB SECTION

TYPE VI
(FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION.)

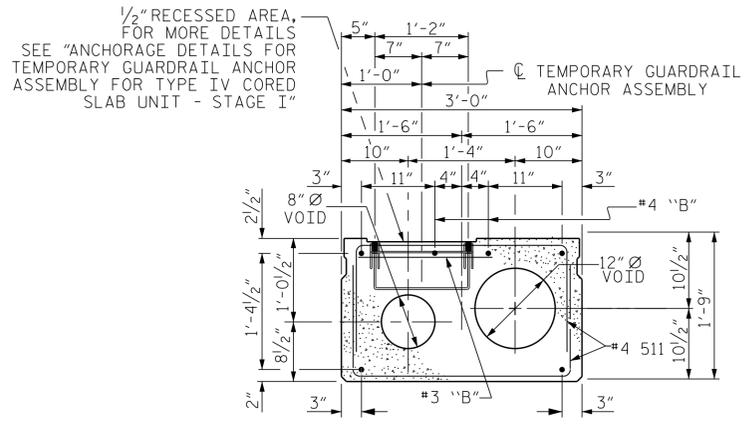


INTERIOR SLAB SECTION
(40' UNIT)

TYPE III & V (13 STRANDS REQUIRED)

- BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 2'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.
- OPTIONAL FULL LENGTH DEBONDED STRANDS. THESE STRANDS ARE NOT REQUIRED. IF THE FABRICATOR CHOOSES TO INCLUDE THESE STRANDS IN THE CORED SLAB UNIT, THE STRANDS SHALL BE DEBONDED FOR THE FULL LENGTH OF THE UNIT AT NO ADDITIONAL COST. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

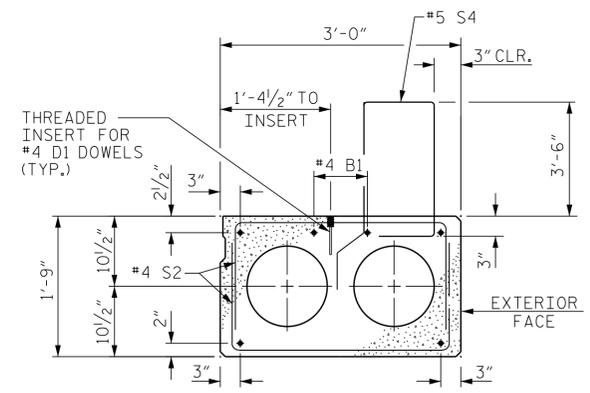
DEBONDING LEGEND



INTERIOR SLAB SECTION

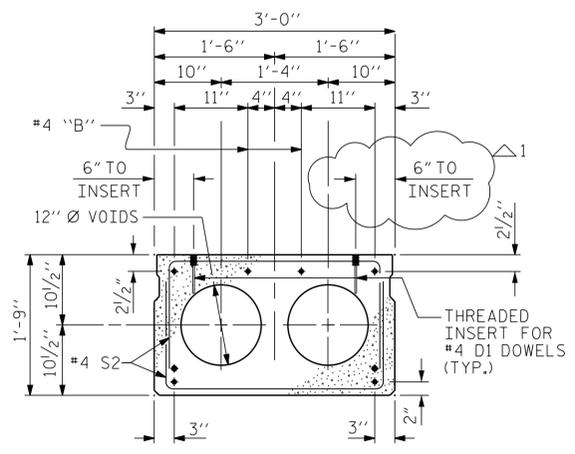
TYPE IV
(FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION)

FOR TEMPORARY GUARDRAIL ANCHOR ASSEMBLY LOCATION, SEE SECTION OF ANCHOR ASSEMBLY LOCATION ON "ANCHORAGE DETAILS FOR TEMPORARY GUARDRAIL ANCHOR ASSEMBLY FOR TYPE IV CORED SLAB UNIT" SHEET.



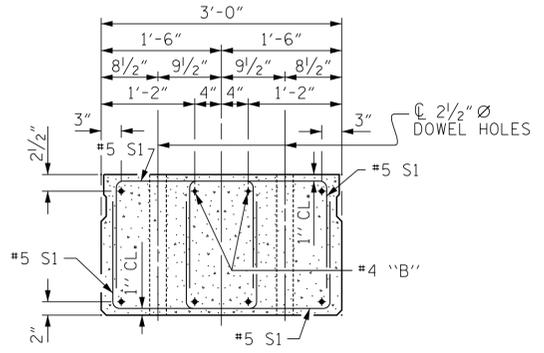
EXTERIOR SLAB SIDEWALK SECTION

TYPE I
(FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION.)



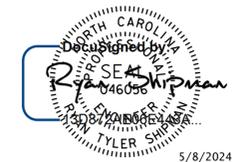
INTERIOR SLAB SIDEWALK SECTION

TYPE II
(FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION.)



END ELEVATION

SHOWING PLACEMENT OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES. (STRAND LAYOUT NOT SHOWN.) INTERIOR SLAB UNIT SHOWN-EXTERIOR SLAB UNIT SIMILAR EXCEPT SHEAR KEY LOCATION.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 14SP.20441.1
HAYWOOD COUNTY
STATION: 13+33.99 -L-

SHEET 1 OF 5

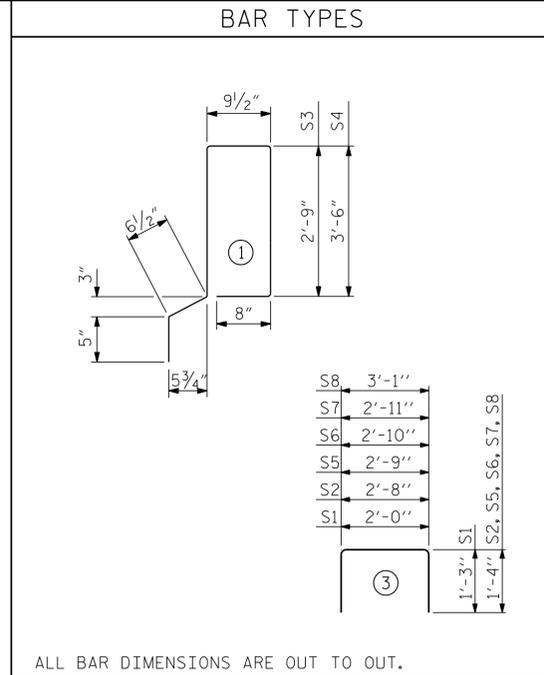
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
3'-0" X 1'-9"
PRESTRESSED CONCRETE
CORED SLAB UNIT
120° SKEW SPAN 'B'

DES. EGR. OF RECORD: RTS DATE: 02/18
ASSEMBLED BY: MAF DATE: 02/18
CHECKED BY: HLW DATE: 02/18



| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|----------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-12 |
| 1 | SDR | 5/7/2024 | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 40 |

| CORED SLABS REQUIRED (40' UNIT) | | | |
|------------------------------------|--------|--------|--------------|
| UNIT | NUMBER | LENGTH | TOTAL LENGTH |
| TYPE I | 1 | 40'-0" | 40'-0" |
| TYPE II | 1 | 40'-0" | 40'-0" |
| TYPE III | 3 | 40'-0" | 120'-0" |
| TYPE IV | 1 | 40'-0" | 40'-0" |
| TYPE V | 4 | 40'-0" | 160'-0" |
| TYPE VI | 1 | 40'-0" | 40'-0" |
| TOTAL | 11 | | 440'-0" |



| DEAD LOAD DEFLECTION AND CAMBER | |
|--|--------------------|
| 40' CORED SLAB UNIT | 3'-0" x 1'-9" |
| | 0.6" Ø L.R. STRAND |
| CAMBER (SLAB ALONE IN PLACE) | 13/16" ↑ |
| DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD** | 3/8" ↓ |
| FINAL CAMBER | 5/8" ↑ |

** INCLUDES FUTURE WEARING SURFACE

| BILL OF MATERIAL FOR ONE 40' CORED SLAB UNIT | | | | | | | | | |
|---|--------|------|------|-----------------------|-----------------------|----------------------------|----------------------------|------------------------|------------------------|
| BAR | NUMBER | SIZE | TYPE | TYPE I UNIT LENGTH | TYPE I UNIT WEIGHT | TYPE II- V UNITS LENGTH | TYPE II- V UNITS WEIGHT | TYPE VI UNIT LENGTH | TYPE VI UNIT WEIGHT |
| B4 | 4 | #4 | STR | 20'-9" | 55 | 20'-9" | 55 | 20'-9" | 55 |
| S1 | 8 | #5 | 3 | 4'-6" | 38 | 4'-6" | 38 | 4'-6" | 38 |
| S2 | 82 | #4 | 3 | 5'-4" | 292 | 5'-4" | 292 | 5'-4" | 292 |
| *S3 | 41 | #5 | 1 | | | | | 7'-11" | 339 |
| *S4 | 41 | #5 | 1 | 9'-5" | 403 | | | | |
| S5 | 4 | #4 | 3 | 5'-5" | 14 | 5'-5" | 14 | 5'-5" | 14 |
| S6 | 4 | #4 | 3 | 5'-6" | 15 | 5'-6" | 15 | 5'-6" | 15 |
| S7 | 4 | #4 | 3 | 5'-7" | 15 | 5'-7" | 15 | 5'-7" | 15 |
| S8 | 4 | #4 | 3 | 5'-9" | 15 | 5'-9" | 15 | 5'-9" | 15 |
| REINFORCING STEEL | | | | LBS. | 444 | | 444 | | 444 |
| *EPOXY COATED REINFORCING STEEL | | | | LBS. | 403 | | | | 339 |
| 5000 P.S.I. CONCRETE | | | | CU. YDS. | 5.9 | | 5.9 | | 6.4 |
| 0.6" Ø L.R. STRANDS | | | | No. | 13 | | 13 | | 13 |

| GUTTERLINE ASPHALT THICKNESS | | |
|------------------------------|---------------------------|------------------|
| | ASPHALT OVERLAY THICKNESS | |
| | LEFT GUTTERLINE | RIGHT GUTTERLINE |
| CL BRG. @ BENT #1 | 3 1/2" | 3 1/2" |
| MIDSPAN | 2 7/8" | 2 7/8" |
| CL BRG. @ END BENT #2 | 3 1/2" | 3 1/2" |

| CONCRETE RELEASE STRENGTH | |
|---------------------------|------|
| UNIT | PSI |
| 40' UNITS | 4000 |

| GRADE 270 STRANDS | |
|---------------------------------------|-------------|
| | 0.6" Ø L.R. |
| AREA (SQUARE INCHES) | 0.217 |
| ULTIMATE STRENGTH (LBS. PER STRAND) | 58,600 |
| APPLIED PRESTRESS (LBS. PER STRAND) | 43,950 |

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER, SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE PARAPET AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN PARAPET EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF PARAPET SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN THE REQUIRED STRENGTH SHOWN IN THE "CONCRETE RELEASE STRENGTH" TABLE.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

THE CONTRACTOR MAY USE SLEEVE INSERTS IN LIEU OF THREADED INSERTS FOR THE #4 DOWELS IN THE TYPE I AND TYPE II PRECAST CORED SLABS. IF USED, THESE INSERTS SHALL HAVE 3/4" INSIDE DIAMETER, SEALED TO PREVENT CONCRETE FILLING DURING FABRICATION, AND SHALL BE 4" LONG. THE #4 DOWELS IN THE SIDEWALK ARE TO BE INSERTED INTO THESE SLEEVES DURING STAGE III. THE DOWELS SHALL BE GROUTED IN USING NON-SHRINK EPOXY GROUT. THE COST OF THE INSERTS AND GROUT ARE TO BE INCIDENTAL TO THE COST OF THE CORED SLABS.

PROJECT NO. 14SP.2044.1
HAYWOOD COUNTY
STATION: 13+33.99 -L-

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
3'-0" X 1'-9"
PRESTRESSED CONCRETE
CORED SLAB UNIT
120° SKEW SPAN 'B'



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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|--------------------------|-------------|
| DES. EGR. OF RECORD: RTS | DATE: 02/18 |
| ASSEMBLED BY: MAF | DATE: 02/18 |
| CHECKED BY: HLW | DATE: 02/18 |
| DRAWN BY: DGE 5/09 | REV. 5/18 |
| CHECKED BY: BCH 6/09 | MAA/THC |

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Asheville, NC, 28806
License No: C-3097

| REVISIONS | | | | | | SHEET NO. |
|-----------|-----|----------|-----|-----|-------|--------------|
| NO. | BY: | DATE: | NO. | BY: | DATE: | S1-16 |
| 1 | SDR | 5/7/2024 | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | 40 |