

CONSTRUCTION SEQUENCE GENERAL NOTES:

ALL DEMOLITION WORK SHALL BE PAID FOR UNDER "REMOVAL OF EXISTING STRUCTURE AT STA. 35+30.22 -L-." PAYMENT FOR CONSTRUCTION OF THE STRUCTURE SHALL BE MADE IN ACCORDANCE WITH THE VARIOUS PAY ITEMS IN THE CONTRACT. NO SEPARATE PAYMENT SHALL BE MADE FOR THE ITEMS NOTED IN THIS SEQUENCE.

FOR TRAFFIC MANAGEMENT DETAILS, SEE TRAFFIC MANAGEMENT PLANS.

MEANS AND METHODS OF DEMOLITION AND CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR'S MEANS AND METHODS SHALL INCORPORATE THE INFORMATION SHOWN IN THIS SEQUENCE.

CONTRACTOR MAY NOT STORE OR STOCKPILE MATERIALS ON THE EXISTING BRIDGE AT ANY TIME DURING CONSTRUCTION.

IT HAS BEEN ASSUMED THAT THE CONTRACTOR SHALL USE A GANTRY CRANE ON THE EXISTING STRUCTURE OVERHANGS TO SET THE STRUCTURAL STEEL IN BAY 2. FOR GANTRY CRANE REQUIREMENTS, SEE SPECIAL PROVISIONS.

THIS DEMOLITION AND CONSTRUCTION SEQUENCE DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO SUBMIT A PLAN FOR PARTIAL REMOVAL OF THE BRIDGE IN ACCORDANCE WITH SECTION 402 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT A PLAN FOR PARTIAL REMOVAL OF THE BRIDGE THAT INCORPORATES THE INFORMATION SHOWN IN THESE CONTRACT DRAWINGS. THE PLAN FOR PARTIAL REMOVAL SHALL INCLUDE THE FOLLOWING: EQUIPMENT, RIGGING, GANTRY CRANE, SAW CUT LOCATIONS, PICK WEIGHTS, AND ALL INFORMATION REQUIRED TO SUCCESSFULLY REMOVE THE APPROPRIATE PORTIONS OF THE STRUCTURE.

EACH STEP IN THE CONSTRUCTION SEQUENCE MUST BE COMPLETED PRIOR TO COMMENCING THE NEXT STEP, UNLESS STATED OTHERWISE.

THE DEMOLITION AND CONSTRUCTION SEQUENCE INCLUDES AN ALLOWANCE FOR 50 PSF CONSTRUCTION LOADING IN ACCORDANCE WITH SECTION 420-3 (D) (1) (b) OF THE STANDARD SPECIFICATIONS. THIS LOADING HAS BEEN ASSUMED PRESENT WHERE LIVE LOAD LANES ARE NOT LOCATED ON THE BRIDGE DURING THE SEQUENCE. THE CONTRACTOR SHALL NOT PLACE ANY OTHER LOADING SUCH AS CRANES OR TRUCK EQUIPMENT ON THE BRIDGE UNLESS SPECIFICALLY AUTHORIZED.

THE CONTRACTOR SHALL USE CARE TO PRESERVE AND PROTECT THE STRUCTURE DURING DEMOLITION AND RECONSTRUCTION. ANY DAMAGE TO THE STRUCTURE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE CONTRACT.

THE CONTRACTOR SHALL MAINTAIN THE DECK DRAINS DURING THE DEMOLITION AND CONSTRUCTION SEQUENCE. ALL DECK DRAINS SHALL BE PRESERVED IN PLACE AND MAINTAINED FREE OF BLOCKAGE UNTIL THE DECK IS REMOVED. THE CONTRACTOR SHALL PREVENT STORMWATER THAT FALLS ONTO THE DECK FROM FALLING ONTO THE GIRDERS AT ALL TIMES DURING THE CONSTRUCTION SEQUENCE.

CONTRACTOR MAY DRILL HOLES IN THE EXISTING DECK TO FACILITATE DRAINAGE AND MINIMIZE SPREAD. CONTRACTOR SHALL SUBMIT HOLE LOCATIONS AND PLANS FOR DRILLING TO THE ENGINEER. DRILLING OF HOLES IN THE PROPOSED DECK SHALL NOT BE ALLOWED.

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE BRIDGE FROM THE DATE OF AVAILABILITY UNTIL THE COMPLETION OF THE CONTRACT.

CONTRACTOR SHALL WASH THE BRIDGE DECK, EXTERIOR FACE OF EXTERIOR GIRDERS, AND STRUCTURE MEMBERS NEAR EXPANSION JOINTS AFTER EACH TIME SALT IS PLACED ON THE DECK DUE TO INCLEMENT WEATHER. WASHING SHALL BE WITH POTABLE WATER AND SHALL OCCUR FOLLOWING THE WEATHER EVENT AND THE MELTING OF ICE OR SNOW.

CONTRACTOR SHALL INSTALL FLOORBEAMS IN SPANS A AND E PRIOR TO INSTALLING FLOORBEAMS IN SPANS B-D.

CONTRACTOR SHALL INSTALL "X" CROSSFRAMES AT CROSSFRAME POINTS 1, 12, 26, AND 37 PRIOR TO INSTALLING THE INTERMEDIATE FLOORBEAMS IN SPANS B-D, BAY 2.

CONTRACTOR SHALL INSTALL GIRDERS 2 AND 3 BOTTOM FLANGE COVER PLATES, SPLICE PLATES, AND WEB STIFFENERS PRIOR TO INSTALLING INTERMEDIATE FLOORBEAMS IN SPANS B-D.

CONTRACTOR SHALL INSTALL INTERMEDIATE FLOORBEAMS IN SPANS B-D PROGRESSING FROM LOCATIONS OF SMALLER LIVE LOAD DEFLECTION TO LOCATIONS OF LARGER LIVE LOAD DEFLECTION WITHIN EACH SPAN. THIS INSTALLATION SHALL PROCEED FROM THE BENTS TO THE MIDSPAN OF EACH SPAN.

ALL STRUCTURAL STEEL REHABILITATION AND STRENGTHENING WORK AT GIRDERS 2 AND 3 SHALL BE COMPLETED PRIOR TO INSTALLING DECK FORMWORK IN BAY 2. NO DECK FORMS SHALL BE PLACED UNTIL ALL BOTTOM FLANGE GIRDER PLATES, FLOORBEAMS, STIFFENERS, STEEL REPAIRS, AND BOTTOM FLANGE WEB GAP DETAILS ARE COMPLETE AND INSTALLED.

GIRDERS 4 AND 1 REHABILITATION AND STRENGTHENING SHALL BE COMPLETED DURING STAGES II AND III RESPECTIVELY, EXCEPT THAT WELD REPAIR #W3 SHALL BE COMPLETED PRIOR TO PLACING DECK FORMWORK IN BAY 2. FOR DETAILS, SEE WELD REPAIR #W3 DETAIL ON STRUCTURAL STEEL REPAIRS SHEETS.

SHEAR STUDS AND TOP FLANGE WEB GAP DETAILS AT GIRDERS 1-4 SHALL BE INSTALLED BETWEEN THE REMOVAL OF THE EXISTING DECK AND THE PLACEMENT OF THE PROPOSED DECK, AS NOTED IN THE SEQUENCE.

WHEN THE DECK IS CONSTRUCTED IN EACH BAY, THE CONTRACTOR SHALL PLACE ALL FORMWORK AND SET ALL REINFORCEMENT (EXCEPT CLOSURE POUR REINFORCEMENT) IN SPANS B-D PRIOR TO POURING ANY CONCRETE WITHIN THESE SPANS. LONGITUDINAL REINFORCEMENT IN THE CLOSURE POUR SHALL BE PLACED AFTER THE CONCRETE ON BOTH SIDES OF THE CLOSURE POUR HAS ACHIEVED A CONCRETE STRENGTH OF 3 KSI. TRANSVERSE REINFORCEMENT IN THE CLOSURE POUR PROJECTING FROM BAYS 1 AND 3 SHALL BE KEPT FREE OF CONTACT FROM BAY 2 REINFORCEMENT IN ORDER TO PREVENT LIVE LOAD VIBRATION TRANSFER FROM BAY 2 INTO THE BAY 1 OR BAY 3 REINFORCEMENT DURING BAYS 1 AND 3 CONCRETE PLACEMENT AND CURING. PRIOR TO PLACING THE CLOSURE POUR CONCRETE, THE TRANSVERSE REINFORCING STEEL IN THE CLOSURE POUR SHALL BE CONNECTED SECURELY TOGETHER AND CONNECTED SECURELY TO THE LONGITUDINAL REINFORCEMENT.

CONTRACTOR SHALL REMOVE EXISTING UTILITIES FROM THE BRIDGE.

FOR END BENT DEMOLITION AND CONSTRUCTION SEQUENCE, SEE END BENT SHEETS.

FOR BENT CAP POST-TENSIONING SYSTEM CONSTRUCTION SEQUENCE, SEE BENT CAP STRENGTHENING SHEETS. BENT CAP POST-TENSIONING SYSTEM SHALL BE COMPLETELY INSTALLED PRIOR TO PLACING DECK FORMWORK IN BAY 2.

FOR FLOORBEAM CONNECTION RETROFIT SEQUENCE, SEE FLOORBEAM CONNECTION RETROFIT SHEETS.

FOR STRUCTURAL STEEL REPAIR SEQUENCES, SEE STRUCTURAL STEEL REPAIRS SHEETS.

INTERMEDIATE CROSSFRAMES ARE SHOWN IN THE DEMOLITION AND CONSTRUCTION SEQUENCE UNLESS OTHERWISE NOTED.

GIRDERS 2 AND 3 BEARING REPAIRS SHALL BE COMPLETED PRIOR TO POURING THE STAGE I DECK, GIRDER 4 BEARING REPAIRS SHALL BE COMPLETED PRIOR TO POURING THE STAGE II DECK, AND GIRDER 1 BEARING REPAIRS SHALL BE COMPLETED PRIOR TO POURING THE STAGE III DECK.

CONTRACTOR SHALL PROVIDE THE ENGINEER THE ACCESS AND OPPORTUNITY TO INSPECT THE TOP FLANGES OF GIRDERS 1 THROUGH 4 WHEN THE DECK HAS BEEN REMOVED ABOVE EACH GIRDER AND PRIOR TO PLACING FORMWORK, REINFORCEMENT, OR CONCRETE ABOVE THE GIRDER.

COMPLETE THE FLOORBEAM CONNECTION RETROFIT AT ALL FOUR GIRDERS PRIOR TO POURING THE STAGE I DECK.

IN SPANS B-D, DURING BAY 3 DECK REMOVAL IN STAGE IIA AND BAY 1 DECK REMOVAL IN STAGE IIIA, CONTRACTOR SHALL REMOVE THE DECK SYMMETRICALLY FROM THE MIDSPAN OF SPAN C TOWARD PIERS 1 AND 4.

GEOMETRIC CONTROL NOTES:

CONTRACTOR SHALL EXERCISE GEOMETRIC CONTROL OF THE STRUCTURE BY APPROPRIATELY EVALUATING AND MONITORING THE GEOMETRY THROUGHOUT THE DEMOLITION AND CONSTRUCTION SEQUENCE.

A TOTAL DEAD LOAD DEFLECTION OF 3/4" WAS OBSERVED AS A NOTE ON THE ORIGINAL CONSTRUCTION PLANS FOR SPANS A AND E WITH AN ADDITIONAL NOTE STATING, "NO CAMBER REQUIRED."

NO CAMBER INFORMATION HAS BEEN OBSERVED ON THE ORIGINAL PLANS FOR SPANS B-D, OTHER THAN A DIMENSION, 105/8", SHOWING THE DISTANCE FROM THE TOP OF THE DECK TO THE SOFFIT OF THE GIRDER FLANGE AT THE GIRDER CENTERLINE. IT HAS BEEN ASSUMED THAT THE ORIGINAL CAMBER OF THE GIRDERS WAS EQUIVALENT TO THE DEAD LOAD DEFLECTION OF THE ORIGINAL SUPERSTRUCTURE DURING THE 1968 CONSTRUCTION, IN ORDER TO MAINTAIN THIS DIMENSION SHOWN ON THE PLANS AS CONSTANT (IN THEORY) ALONG THE BRIDGE. IN PRACTICE, THE LASER SURVEY OF THE DECK INDICATES VARIATIONS IN THE DECK SURFACE UP TO 2" ± FROM THE THEORETICAL DECK PROFILE. IT HAS BEEN ASSUMED THAT THESE VARIATIONS ORIGINATED FROM INCONSISTENCIES IN THE ORIGINAL DECK BUILDUP THICKNESS, RATHER THAN VARIATIONS IN THE GIRDER PROFILE.

CONTRACTOR SHALL COMPLETE AN INITIAL LASER SURVEY OF GIRDERS 2 AND 3 PRIOR TO FABRICATING AND INSTALLING THE INTERMEDIATE DIAPHRAGM MEMBERS CONSISTING OF THE FOLLOWING:

THE SURVEY SHALL ENCOMPASS THE BAY 2 FACE OF EACH GIRDER FOR DETERMINING THE APPROPRIATE CONNECTION DIMENSIONS, DEFLECTIONS, AND MEMBER LENGTHS IN BAY 2. LOCATION, DIMENSIONS, AND ELEVATIONS OF FLANGES, WEBS, AND STIFFENERS SHALL BE RECORDED IN THE SURVEY. RECORD A 3D POINT CLOUD AND 2D LINWORK OF THE NORTH FACE OF GIRDER 2 AND THE SOUTH FACE OF GIRDER 3, INCLUDING THE FLANGES, WEBS, STIFFENERS, AND DECK FACE.

IN PARALLEL WITH THE LASER SURVEY, GIRDER SOFFIT ELEVATIONS OF ALL FOUR GIRDERS SHALL BE SURVEYED AND RECORDED IN TABULAR FORM AT THE CROSSFRAME POINTS AND AT LOCATIONS SHOWN IN THE DEAD LOAD DEFLECTION TABLES SHEETS.

SUBMIT ALL SURVEY INFORMATION TO THE ENGINEER FOR REVIEW WITHIN 90 CALENDAR DAYS OF THE DATE OF AVAILABILITY OF THE CONTRACT.

CONTRACTOR SHALL SURVEY THE BRIDGE PRIOR TO PLACING TEMPORARY BARRIERS IN STAGE IA AND SHALL COMPLETE THE SURVEY WITHOUT UTILIZING CONCRETE BARRIERS FOR THE LANE CLOSURE. CONTRACTOR SHALL FABRICATE STRUCTURAL STEEL BASED ON THE SURVEYED BRIDGE GEOMETRY.

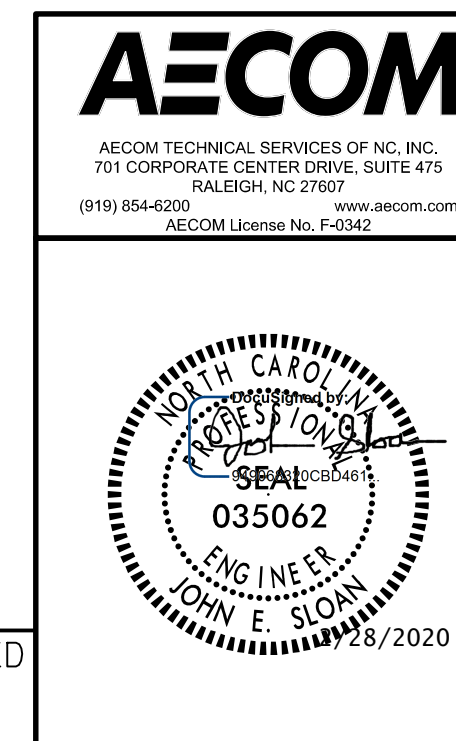
AFTER REMOVAL OF THE EXISTING DECK, CONTRACTOR SHALL LASER SURVEY THE TOP OF EACH GIRDER AND RECORD ELEVATIONS AT EACH CROSSFRAME POINT AND AT LOCATIONS SHOWN IN THE DEAD LOAD DEFLECTION TABLES SHEETS. SUBMIT SURVEY INFORMATION TO THE ENGINEER WITHIN 30 DAYS OF DECK REMOVAL IN STAGES II AND III.

SURVEY DATA REQUIRED TO BE SUBMITTED CONSTITUTES THE MINIMUM REQUIREMENT FOR THE EXERCISE OF GEOMETRIC CONTROL OF THE STRUCTURE. CONTRACTOR SHALL TAKE ADDITIONAL SURVEY DATA REQUIRED THROUGHOUT CONSTRUCTION, IF NECESSARY, TO PROPERLY CONSTRUCT THE STRUCTURE TO THE PROPOSED GEOMETRY.

BEFORE PURCHASING SHEAR STUDS AND BUILDUP REINFORCEMENT, CONTRACTOR SHALL EVALUATE THE CAMBER AND DEFLECTIONS OF THE GIRDERS UTILIZING THE AS-SURVEYED GIRDER GEOMETRY. CONTRACTOR SHALL RE-EVALUATE THE SHEAR STUD HEIGHT AND K9 BAR LENGTH BASED ON THE EXISTING GIRDER GEOMETRY, AND UPDATE THE GEOMETRY OF THESE ITEMS IF NECESSARY. AT GIRDERS 2 AND 3, CONTRACTOR SHALL MAINTAIN 2" CLEAR COVER FROM THE TOP OF THE #5K9 BAR TO THE TOP OF THE SLAB, AND THE #5K9 BAR SHALL OVERLAP THE STUD A MINIMUM OF 6". AT GIRDERS 1 AND 4, CONTRACTOR SHALL MAINTAIN 2" CLEAR COVER FROM THE TOP OF THE SHEAR STUD TO THE TOP OF THE SLAB.

PROJECT NO. 15BPR.20
HENDERSON COUNTY
 STATION: 35+30.22 -L-

SHEET 1 OF 12



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 &
 DEMOLITION
 &
 CONSTRUCTION
 SEQUENCE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-11
1			3			TOTAL SHEETS
2			4			129

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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