GENERAL NOTES

(1) SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (JANUARY 2015 EDITION)

(2) DESIGN SPECIFICATIONS: 7TH EDITION AASHTO 2014 LRFD BRIDGE DESIGN SPECIFICATIONS WITH ADDENDA.

(3) LOADING: HL-93 (DEAD LOADS INCLUDES 35 PSF FOR ASPHALT OVERLAY)

(4) DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM) OR OTHER SIMILARLY HEAVY EQUIPMENT ON PORTIONS OF THE STRUCTURE **TO REMAIN IN SERVICE**. PNEUMATIC HAMMERS MAY BE USED TO REMOVE CONCRETE. FOR SLAB AND BEAM REMOVAL, THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

(5) ANY DAMAGE TO EXISTING STRUCTURES TO BE LEFT IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

(6) FORMS AND FALSEWORK: ALL CONCRETE FORM WORK AND FALSEWORK SHALL BE REMOVED AFTER REPAIRS ARE COMPLETED. COST OF FORMS, FALSEWORK, AND THIS WORK SHALL BE COMPLETED BEFORE FINAL PAYMENT IS APPROVED.

(7) NOTE: MAINTENANCE RECORDS INDICATE THE BRIDGE WAS ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMATES AND THE CONTRACTOR IS REQUIRED TO PROCEED ACCORDINGLY TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY STATE AND FEDERAL LAW FOR BOTH WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

(8) WHEN STRUCTURAL STEEL COATED WITH LEAD AND/OR CHROMATE PAINTS ARE TO BE SEVERED USING THERMAL CUTTING METHODS, THE AREAS TO BE CUT SHALL FIRST BE CLEANED TO BARE METAL BY ABRASION.

(9) BRIDGE RAIL SYSTEM: BUILD BRIDGE RAILINGS ACCORDING TO STANDARD DRAWING STD-1-1SS. THE RAILING SHALL BE FORMED AND CAST PLUMB, NOT PERPENDICULAR TO THE SLAB. THE DIMENSIONS AT THE TRAFFIC FACE SHALL BE KEPT CONSTANT, WITH VARIATION DUE TO CROSS SLOPE ACCOMMODATED AT THE REAR FACE.

(10) THE REINFORCED CONCRETE MEDIAN BARRIER RAIL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS SHOWN ON DRAWING STD-1-3SS AND SHALL BE GIVEN AN APPLIED TEXTURE FINISH. THE COLOR OF THE FINISH SHALL BE WHITE, COLOR NO. 37886, FEDERAL STANDARD 595B. THE COST OF THE FINISH SHALL BE INCLUDED IN THE LINEAR FOOT PRICE BID FOR THE MEDIAN RAIL.

(11) NOTE: THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS AS REQUIRED BY APPLICABLE REGULATIONS.

(12) GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED 1/2 " IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND THE BAR ROTATED INTO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED 1/4 " IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIALS SHALL BE APPROVED BY TDOT MATERIALS AND TESTS.

(13) TEXTURE COATING OF THE SUBSTRUCTURE SHOULD BE DELAYED UNTIL AFTER THE DECK IS COMPLETED. AFTER A SUBSTRUCTURE HAS RECEIVED ITS FINAL FINISH, THE TOP AND SIDES SHALL BE PROTECTED FROM STAINING BY WRAPPING WITH REINFORCED POLYETHYLENE. ANY CORRECTIVE TEXTURED COATING SHALL BE AT THE CONTRACTORS EXPENSE.

(14) NOTE: FOR REPAIR AREAS, THE CONTRACTOR SHALL SAW CUT ONE (1) INCH DEEP INTO THE EXISTING CONCRETE BEFORE REMOVING CONCRETE.

(15) BEAM AND FULL DEPTH DECK PANEL FABRICATION: THE CONTRACTOR SHALL CHECK THE LOCATION OF ALL EXISTING SUBSTRUCTURES AND VERIFY SPAN LENGTHS AND BEAM SPACING BEFORE FABRICATION BEGINS.

CONCRETE STRENGTH / CURE TIME

(16) FULL DEPTH DECK PANEL CONCRETE SHALL BE CLASS "P", F'c = 5,000 PSI.

(17) ABUTMENT END-BLOCKS CONCRETE SHALL BE CLASS "A", F'c = 3,000 PSI

(18) CAST-IN-PLACE RETAINING WALL AND BEARING MODIFICATION CONCRETE SHALL BE CLASS "A", F'c = 3,000 PSI

(19) FOR STRENGTH, CURE TIMES AND PERFORMANCE CRITERIA FOR STRUCTURAL CLOSURE POUR MATERIAL, SEE INFORMATION UNDER PRECAST SUPERSTRUCTURE NOTES.

(20) BRIDGE DECK SURFACE FINISH: TO BE BROOM FINISHED AND CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

(21) BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CAST-IN-PLACE PORTIONS OF CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE REMAIN-IN-PLACE STEEL. FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL. SEE ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.

(22) FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.22 OF THE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. ANY DAMAGE TO THE FINAL APPEARANCE SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

(23) OTHER THAN TEMPORARY STRUCTURES OR ENGINEERED FILL FACING SURFACES, NO PNEUMATIC CONCRETE WILL BE ALLOWED ON THIS PROJECT.

(24) HIGH EARLY STRENGTH CONCRETE – TRAFFIC SHALL NOT BE PERMITTED ON ANY REPAIR AREA UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3000 P.S.I. AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF 18 HOURS. PARAPETS MAY BE CAST PRIOR TO PLACEMENT OF THE SUPERSTRUCTURE UNITS.

(25) NOTE TO CONTRACTOR REGARDING CONCRETE: CONCRETE FOR PARAPETS SHALL BE HIGH EARLY STRENGTH MIX AND MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS "A" EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS. THE WATER TO CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. NO FLY ASH REPLACEMENT WILL BE PERMITTED. THE CONTRACTOR SHALL PROVIDE PROOF PRIOR TO BEGINNING WORK THAT THE PROPOSED CONCRETE MIX WILL OBTAIN THE REQUIRED PROPERTIES. PROOF SHALL BE PROVIDED BY AN INDEPENDENT TESTING COMPANY AND SUBMITTED TO THE MATERIALS AND TEST DIVISION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION FOR APPROVAL.

PRECAST SUPERSTRUCTURE NOTES

(26) SUBMIT ERECTION PLAN INCLUDING, BUT NOT LIMITED TO THE FOLLOWING INFORMATION:
- LOCATION OF THE CRANES AND PICK LOCATIONS.
- CRANE CHARTS.
- SUPERSTRUCTURE ERECTION AND SEQUENCE.
- DESCRIBE CABLES AND LIFTING EQUIPMENT.

(27) ERECTION PLAN SUBMISSION WILL INCLUDE DETAILS SHOWING THE REMOVAL OF THE EXISTING SUPERSTRUCTURE AND THE ERECTION AND INSTALLATION OF THE PROPOSED SUPERSTRUCTURE UNITS IN ACCORDANCE WITH THE DESIGN PLANS.

(28) SUBMIT A METHOD OF FORMING CLOSURE POURS AT JOINTS BETWEEN PRECAST DECK PANELS.

(29) ALL STRUCTURAL CLOSURE POUR MATERIALS SHALL BE PLACED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. PARTICULAR EMPHASIS SHOULD BE GIVEN TO PROPER VIBRATION OF THE MATERIAL TO AVOID HONEYCOMBS AND VOIDS, ESPECIALLY AT CONSTRUCTION JOINTS. ALL JOINTS MUST BE MORTAR TIGHT. IMMEDIATELY PRIOR TO PLACING THE CLOSURE POUR, ADJACENT SURFACES OF THE DECK SLAB SHALL BE WETTED UNTIL FREE MOISTURE APPEARS AND REMAINS. IF THIS NOTE CONTRADICTS THE MANUFACTURER'S REQUIREMENTS, THE MANUFACTURER'S REQUIREMENTS SHALL TAKE PRECEDENCE.

(30) CLEAN AND REMOVE ALL DEBRIS FROM THE BLOCKOUTS PRIOR TO PLACEMENT OF CLOSURE POUR MATERIALS.

(31) KEEP BONDING SURFACE FREE FROM LAITANCE, DIRT, DUST, PAINT, GREASE, OIL, RUST, OR ANY CONTAMINANT OTHER THAN WATER.

(32) PROTECTIVE MATTING SHALL BE UTILIZED ON DECK PANEL SURFACE ADJACENT TO CLOSURE POURS DURING CLOSURE POUR OPERATIONS. THE INTENT OF THE MATTING IS TO MINIMIZE THE AMOUNT OF GROUT/MORTAR SPLATTER. THE TYPE OF MATTING SHALL BE DETERMINED BY THE CONTRACTOR AND PAID FOR UNDER PRICE BID FOR OTHER ITEMS.

(33) ALL FULL DEPTH DECK PANEL REINFORCEMENT TO BE EPOXY COATED. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS. REINFORCEMENT SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. THIS DOES NOT APPLY TO THE PRESTRESSING STRANDS.

(34) MECHANICAL BAR SPLICERS: MUST BE ON THE APPROVED LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE BAR SPLICER SHALL MEET AASHTO STANDARD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO SPECIAL PROVISION 907A. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATIONS, SHALL BE INCLUDED IN THE UNIT PRICE FOR FULL DEPTH DECK PANELS.

(35) APPROVAL OF MATERIALS: NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.

(36) MATERIALS, CONSTRUCTION, AND WORKMANSHIP WILL BE IN ACCORDANCE WITH STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS (CURRENT EDITION).

(37) CHAMFER ALL EXPOSED CORNERS ONE (1) INCH. CORNERS OF FULL DEPTH DECK PANELS ADJACENT TO CLOSURE POURS ARE NOT CONSIDERED EXPOSED CORNERS.

(38) BEARING DEVICES SHALL BE IN ACCORDANCE WITH THE DETAILS AND DIMENSIONS SHOWN ON DRAWING BR-119-XX.

(39) SUBMIT SHOP DRAWING IN ACCORDANCE WITH TDOT SECTION 918.29 AND 15.02. IN ADDITION, SHOW ALL LIFTING HARDWARE OR DEVICES AND LOCATION ON THE SHOP DRAWINGS;

(40) SURFACES OF FULL DEPTH DECK PANELS THAT ABUT CLOSURE POURS SHALL BE PREPARED BY REMOVING ALL CONTAMINANTS THAT COULD INTERFERE WITH ADHESION AND TO DEVELOP A SURFACE ROUGHNESS TO PROMOTE MECHANICAL BOND BETWEEN STRUCTURAL CLOSURE POUR MATERIAL AND DECK PANEL CONCRETE. ROUGHENED SURFACE MAY BE DEVELOPED AT TIME OF CASTING BY CHEMICAL OR OTHER FORMING METHOD.

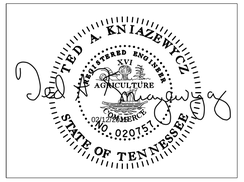
(41) SURFACES OF FULL DEPTH DECK PANELS AT SHEAR KEY CONNECTIONS SHALL BE PREPARED BY A SAND-BLAST FINISH TO REMOVE ALL CONTAMINANTS THAT COULD INTERFERE WITH ADHESION AND TO DEVELOP A SURFACE ROUGHNESS TO PROMOTE MECHANICAL BOND BETWEEN STRUCTURAL CLOSURE POUR MATERIAL AND DECK PANEL CONCRETE.

CONST. NO. 19005-3161-44

PROJECT NO.	YEAR	SHEET NO.
BH-I-40-4(86)	2015	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



BRIDGE NO. 4

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
GENERAL NOTES
SHEET 1 OF 2
I-40
OVER
JO JOHNSTON AVE.
BR. NO. 19-I0040-16.88
DAVIDSON COUNTY
2015

BR-119-127

DESIGNED BY GRESHAM SMITH & PARTNERS DATE 2/09/2015
DRAWN BY R. PALMER DATE 1/2015
SUPERVISED BY T. KNIAZEWYCZ DATE 1/2015
CHECKED BY T. KNIAZEWYCZ DATE 2/2015

GRESHAM SMITH AND PARTNERS

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2/13/2015
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