PRECAST SUPERSTRUCTURE NOTES – CON'D

(42) MEMBERS THAT SUSTAIN DAMAGE OR SURFACE DEFECTS DURING FABRICATION, HANDLING, STORAGE, HAULING, OR ERECTION ARE SUBJECT TO REVIEW AND REJECTION. SUBMIT PROPOSED WRITTEN REPAIR PROCEDURES AND OBTAIN APPROVAL BEFORE PREFORMING REPAIRS. REPAIR WORK MUST REESTABLISH THE MEMBER'S STRUCTURAL INTEGRITY, DURABILITY, AND AESTHETICS TO SATISFACTION OF THE ENGINEER.

(43) THERE SHALL BE A MINIMUM OF 4 LIFTING DEVICES PER FULL DEPTH DECK PANEL UNIT.

(44) THE DESIGN OF THE LIFTING DEVICES WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR WILL SUBMIT PLANS AND HANDLING STRESS CALCULATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO THE CONSTRUCTION OF THE FULL DEPTH DECK PANEL UNITS.

(45) CONTRACTOR WILL BE RESPONSIBLE FOR THE HANDLING AND STORAGE OF THE PRECAST ELEMENTS IN SUCH A MANNER THAT DOES NOT CAUSE UNDUE STRESS ON THE ELEMENTS. CONTRACTOR WILL SUBMIT A HANDLING AND STORAGE PLAN TO THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

(46) ENGINEER WILL INSPECT PRECAST ELEMENTS AND COULD BE REJECTED DUE TO BUT NOT LIMITED TO THE FOLLOWING:
- FULL DEPTH CRACKING
- SIGNIFICANT DIMENSIONAL DEFORMITIES.

(47) USE QUICK-SETTING, CEMENTITIOUS PATCHING MATERIALS FOR SPALL REPAIRS ONLY.

(48) USE QUICK-SETTING RAPID STRENGTH GAIN STRUCTURAL CLOSURE POUR MATERIAL FOR CLOSURE POURS ON SUPERSTRUCTURE UNITS ONLY.

(49) STRUCTURAL CLOSURE POUR MATERIAL: F'c = 6,000 PSI (MIN.) (LEAN) AND 3,000 PSI (MIN.) (EXTENDED) IN < 8 HOURS.

(50) EXTEND STRUCTURAL CLOSURE POUR MATERIAL PER MANUFACTURER'S RECOMMENDATIONS.

(51) ALL CLOSURE POUR GROUT AND MORTAR WILL HAVE A CORROSION INHIBITOR ADMIXTURE. CONTRACTOR SHALL FOLLOW MANUFACTURER'S RECOMMENDATION FOR DOSAGE OF CORROSION INHIBITOR ADMIXTURE.

(52) MIX, PLACE AND CURE STRUCTURAL CLOSURE POUR MATERIAL JUST PRIOR TO USE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

(53) CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR ADVICE ON HOW TO REDUCE HEAT SUCH AS WET CURING OR ADDING RETARDING ADMIXTURE IF THE HEAT OF HYDRATION IS EXCESSIVE.

(54) FINISH GROUT FLUSH WITH ADJACENT FULL DEPTH DECK PANELS.

(55) SUBMIT A CERTIFICATE OF COMPLIANCE FOR STRUCTURAL CLOSURE POUR MATERIAL TO ENGINEER FOR APPROVAL.

(56) USE STRUCTURAL CLOSURE POUR MATERIAL GRAY IN COLOR AND CONTAINING NO CALCIUM CHLORIDE OR ADMIXTURE CONTAINING CALCIUM CHLORIDE OR OTHER INGREDIENT IN SUFFICIENT QUANTITY TO CAUSE CORROSION TO STEEL REINFORCEMENT.

(57) REPAIR AT THE DEPARTMENT'S OPTION ANY BONDING FAILURES THAT OCCUR AT THE CONTRACTOR'S EXPENSE.

(58) REFER TO STRUCTURAL CLOSURE POUR MATERIAL PERFORMANCE CRITERIA TABLE ON THIS SHEET FOR GROUT AND MORTAR REQUIREMENTS.

RAILROAD NOTES

(59) THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD'S TRACKS AND PROPERTY FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY CSXT ON THIS PROJECT SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAIN TRAFFIC IN ANY MANNER.

(60) THE CONTRACTOR OR HIS SUBCONTRACTORS SHALL BE REQUIRED TO SUBMIT A DETAILED AND COMPREHENSIVE PLAN AND PROCEDURE FOR REVIEW AND APPROVAL BY THE CSXT DIRECTOR OF CONSTRUCTION ENGINEERING OR HIS ENGINEERING CONSULTANT FOR:

A) BRIDGE PIER FOUNDATION EXCAVATION AND CONSTRUCTION THAT MAY REQUIRE SHEETING OR SHORING OF RAILROAD TRACKS;
B) DETAILED TRACK MONITORING PROGRAM TO DETECT TRACK ROADBED SETTLEMENT DURING THE INSTALLATION OF FOUNDATIONS;
C) CONTROLLED DEMOLITION / REMOVAL OF SUPERSTRUCTURE COMPONENTS IN A MANNER THAT PREVENTS ANY PORTIONS FROM FALLING ONTO CSXT EMPLOYEES, EQUIPMENT, OR PROPERTY AND/OR CAUSING A HAZARD TO TRAIN MOVEMENTS.
D) BEAM ERECTION AND STABILIZATION OVER RAILROAD RIGHT OF WAY OR ADJACENT SPAN.
E) TEXTURE COATING PREPARATION OR APPLICATION OF CONCRETE IN THE RAILROAD SPAN.

(61) FOR CONCRETE DECK OPERATIONS OVER THE RAILROAD, THE CONTRACTOR SHALL USE EXTREME CARE AND TAKE ALL MEASURES NECESSARY TO PREVENT DEBRIS FROM FALLING ON TO THE RAILROAD'S RIGHT OF WAY. BE ADVISED THAT RAILROAD WILL NOT ALLOW TRACK OR TRACKS TO BE OBSTRUCTED WITH AT GRADE CRANE MAT PROTECTION. COST OF REMOVING AND DISPOSING OF DEBRIS, COMPLETE AND FULL PROTECTION OF THE CONTRACTOR WORK AREA FOR DEMOLITION SHALL BE INCLUDED ON ITEMS BID ON.

(62) NO TEMPORARY FALSEWORK IF APPLICABLE WILL BE ALLOWED THAT INFRINGES ON A TEMPORARY HORIZONTAL CONSTRUCTION CLEARANCE OF 13'-0" FOR TANGENT TRACKS OR 14'-0" FOR CURVED TRACK OR A TEMPORARY VERTICAL CONSTRUCTION CLEARANCE OF 22'-0".

(63) SEE RAILROAD AGREEMENT / CONTRACT SPECIAL PROVISIONS TO SET UP FLAGGING SERVICES AND SUBMIT FOR INSURANCE REQUIRED FOR WORK ON THE HIGHWAY BRIDGE OVER THE RAILROAD.

(64) ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING BUT NOT LIMITED TO WASHING AND CLEANING SOLVENTS, BLASTING, SCRAPING, BRUSHING AND PAINTING OPERATIONS, SHALL BE THE RESPONSIBILITY OF THE STATE OR ITS CONTRACTOR AND SHALL BE CONTAINED, COLLECTED AND PROPERLY DISPOSED OF BY THE STATE OR ITS CONTRACTOR. THE STATE AND ITS CONTRACTOR AGREE TO FULLY COMPLY WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL LAWS, REGULATIONS, STATUTES AND ORDINANCES AT ALL TIMES.

(65) TEMPORARY CONSTRUCTION CLEARANCES PROVIDED SHALL BE SUBJECT TO THE APPROVAL BY CSXT ENGINEERING. TYPICALLY, REDUCTIONS IN CLEARANCE FOR CONSTRUCTION ARE NOT PERMITTED.

(66) CSXT SHALL BE FURNISHED AS-BUILT DRAWINGS SHOWING ACTUAL CLEARANCES AS CONSTRUCTED.

(67) A TEMPORARY CONSTRUCTION CROSSING AT GRADE WILL NOT BE CONSIDERED FOR THIS PROJECT LOCATION.

(68) **RAILROAD PROTECTIVE FENCING:** ALL HIGHWAY STRUCTURES SHALL HAVE A PROTECTIVE BARRIER FENCE TO EXTEND AT LEAST 8'-0" FROM THE DRIVING SURFACE. FENCE SHALL BE PLACED ON THE TOP OF THE BARRIER WALL. THE FENCE SHALL BE CAPABLE OF PREVENTING THE DROPPING OF DEBRIS ONTO CSXT'S RIGHT-OF-WAY, AND IN PARTICULAR, PASSING TRAINS. OPENINGS IN THE FENCE SHALL NOT EXCEED 2"X2". FENCING SHALL ALSO INCLUDE ANTI-CLIMB SHIELDS OR BE OF A CONFIGURATION TO MINIMIZE THE LIKELIHOOD OF CLIMBING ON THE OUTSIDE OF THE PROTECTIVE FENCING. A CHAIN LINK FENCE OPTION IS SHOWN.

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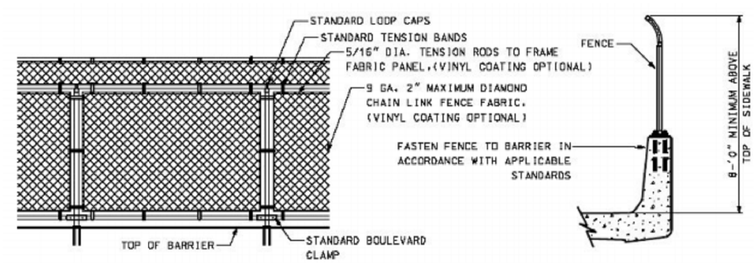

STRUCTURAL CLOSURE POUR PERFORMANCE CRITERIA TABLE

PERFORMANCE CHARACTERISTIC	TEST METHOD	PERFORMANCE CRITERIA		
COMPRESSIVE STRENGTH (CS) KSI	ASTM C39 (MODIFIED)	6.0 ≤ CS @ 8 HOURS (OVERNIGHT CURE) @ 7 DAYS (7 DAY CURE)		
SHRINKAGE (S) (CRACK AGE, DAYS)	AASHTO PP34 (MODIFIED)	20 < S		
BOND STRENGTH (BS), PSI	ASTM C882 (MODIFIED)	300 < BS		
CHLORIDE PENETRATION (ChP) (DEPTH FOR PERCENT CHLORIDE OF 0.2% BY MASS OF CEMENT AFTER 90 DAY PONDING), (IN)	ASTM C1543 (MODIFIED)	ChP < 1.5		
FREEZING AND THAWING DURIBILITY (F/T). (RELATIVE MODULUS AFTER 300 CYCLES)	ASTM C666 PROCEDURE A (MODIFIED)	GRADE 1	GRADE 2	GRADE 3
		70% ≤ F/T	80% ≤ F/T	90% ≤ F/T

CONST. NO. 19005-3161-44

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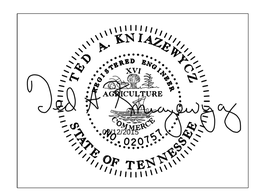
BH-I-40-4(86)	2015	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	2/12/15	GS&P	UPDATED DETAILS & NOTES



BRIDGE NO. 2
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
GENERAL NOTES
SHEET 2 OF 2
I-40
OVER
CSX RAILROAD
BR. NO. 19-I0040-16.75
DAVIDSON COUNTY
2015

BR-119-47

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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2/12/2015
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