

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" OR LABELED CONTINGENCY UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT (AS SHOWN ON THE TYPICAL SECTIONS).

BASE LINE OF CONSTRUCTION

THE BASE LINE OF CONSTRUCTION ON TYLERSVILLE ROAD FROM STA. 11+77.49 TO STA. 16+79.04 SHALL BE LAID OUT PER THE SCHEMATIC PLAN ALL OTHER CONSTRUCTION BASE LINES LABELED ON THESE PLANS ARE AN ASSUMED CENTER LINE OF THE EXISTING ROADWAY. STATIONING IS ADDED TO AID IN CONSTRUCTION LAYOUT.

SURVEY PARAMETERS

USE THE FOLLOWING VERTICAL POSITIONING AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83(CORS96)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE
COMBINED SCALE FACTOR: 1.000036015

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

DUKE ENERGY - ELECTRIC BUTLER CO. ENGINEER'S OFFICE
2010 DANA AVENUE 1921 FAIRGROVE AVENUE
CINCINNATI, OHIO 45207 HAMILTON, OHIO 45011
AARON WRIGHT (513) 867-5744

CINCINNATI BELL TELEPHONE WARREN CO. ENGINEER'S OFFICE
221 EAST 4TH STREET 210 WEST MAIN STREET
BLDG. 121-900 LEBANON, OHIO 45036
CINCINNATI, OHIO 45201 NEIL TUNISON
ROADPROJECTS@CINBELL.COM (513) 695-3301

DUKE ENERGY - GAS
139 EAST 4TH STREET
ROOM 460A
CINCINNATI, OHIO 45202
OH/KYHOUSEBILL@
DUKE-ENERGY.COM

UNDERGROUND UTILITIES

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

THE UNDERGROUND UTILITIES HAVE BEEN LOCATED BY FILED CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THERE IS NO GUARANTEE TO THEIR ACCURACY OR COMPLETENESS.

ITEM 621, RAISED PAVEMENT MARKER REMOVED

THIS WORK SHALL CONSIST OF REMOVING RAISED PAVEMENT MARKERS PER ODOT CMS 621. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS WORK:

ITEM 621, RAISED PAVEMENT MARKER REMOVED 65 EA

ITEM 621, RPM

CONTRACTOR SHALL INSTALL RPMs PER SCD TC-65.10 AND TC-65.11

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 69 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAM BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235-2786
614-387-2358

TYPE MGS GUARDRAIL

TO AVOID UTILITY OR OTHER UNDERGROUND CONFLICTS THE CONTRACTOR MAY LEAVE OUT ONE GUARDRAIL POST AT A SPECIFIC LOCATION WITHIN A STANDARD RUN OF MGS GUARDRAIL. FIFTY FEET OF GUARDRAIL (WHICH MAY INCLUDE THE ANCHOR) SHOULD BE AVAILABLE BOTH UPSTREAM AND DOWNSTREAM OF THE OMITTED POST TO MAINTAIN TENSION AND STRENGTH IN THE SYSTEM.

INTERIM DATE REQUIREMENTS

THE PROJECT HAS AN INTERIM START DATE OF JULY 1, 2020. THE CONTRACTOR IS NOT PERMITTED TO BEGIN WORK UNTIL ON OR AFTER THE INTERIM START DATE DUE TO AN ADJACENT PROJECT ON TYLERSVILLE ROAD ADMINISTERED BY THE BUTLER COUNTY ENGINEER'S OFFICE.

THE PROJECT HAS AN INTERIM COMPLETION DATE OF OCTOBER 31, 2020. ON OR BEFORE THE INTERIM COMPLETION DATE, THE CONTRACTOR SHALL COMPLETE ALL PHASE 1 AND PHASE 2 WORK, THE ROADWAY SHALL BE PLACED IN THE FINAL CONDITION, ALL WORK ZONE PAVEMENT MARKINGS IN PLACE AND OPEN TO TRAFFIC.

THE CONTRACT WILL BE SUBJECT TO DAILY DISINCENTIVES FOR FAILURE TO COMPLETE ALL THE REQUIRED WORK, AND ASSOCIATED INCIDENTALS RELATED TO THE WORK, AS OUTLINED IN THE TABLE INCLUDED IN THIS NOTE. APPLICATION OF THE DISINCENTIVES WILL BE BASED ON THE OVERALL CONTRACT AMOUNT. DAILY DISINCENTIVES ARE APPLICABLE TO THE WORK REQUIRED TO THE INTERIM COMPLETION DATE ONLY. THE CONTRACT IS STILL SUBJECT TO LIQUIDATED DAMAGES AS OUTLINED IN CMS 108.07 FOR THE REMAINDER OF THE CONTRACT.

DISINCENTIVE CONTRACT TABLE

DESCRIPTION OR LOCATION OF CRITICAL WORK	INTERIM COMPLETION DATE	TIME PERIOD	DISINCENTIVE \$ PER TIME PERIOD
START OF CONTRACT WORK	7/01/2020	DAY	\$2,500
COMPLETE PHASES 1 & 2	10/31/2020	DAY	\$2,500

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GENERAL NOTES

BUT - IR75 - 5.35

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

EXJ-5-93	DATED	1/19/18
PCB-91	DATED	1/18/13
SBR-1-13	DATED	7/20/18
TVPF-1-18	DATED	7/20/18
VPF-1-90	DATED	7/20/18

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

848	DATED	1/20/17
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DESIGN SPECIFICATIONS

THE MODIFICATIONS TO THIS STRUCTURE CONFORM TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE ODOT BRIDGE DESIGN MANUAL, 2004

DESIGN DATA

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60 - MINIMUM YIELD STRENGTH 60,000 PSI

DECK PROTECTION METHOD

SUPERPLASTICIZED DENSE CONCRETE OVERLAY WITH MICRO-FIBERS

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

MAINTAINING EXISTING UTILITIES WITHIN PARAPETS

UTILITIES LOCATED WITHIN THE EXISTING BRIDGE PARAPETS SHALL BE PLACED IN NEW CONDUITS AND MAINTAINED DURING CONSTRUCTION. QUANTITIES ASSOCIATED WITH THIS WORK ARE INCLUDED IN THE ROADWAY PLANS FOR PAYMENT.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE PARAPETS, VANDAL PROTECTION FENCE AND STRIP SEAL EXPANSION JOINTS WITH EXISTING RETAINERS TO REMAIN.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 510 - DOWEL HOLES WITH NONSHRINK NONMETALLIC GROUT, AS PER PLAN

DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING EPOXY GROUT, 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS THE PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR.

ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE SEALER FROM THE DECK EDGES, BOX BEAM EDGES AND ABUTMENTS.

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN CMS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH -PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 519 - SPECIAL - PATCHING CONCRETE STRUCTURE (DECK EDGES)

DESCRIPTION: THIS WORK CONSISTS OF PATCHING SELECT AREAS OF THE DECK EDGES FOLLOWING THE REMOVAL OF THE EXISTING CONCRETE PARAPETS.

THE QUANTITY GIVEN IN THE ESTIMATED QUANTITY TABLE HAS BEEN ESTIMATED FROM INSPECTION AND THE ORIGINAL PLANS. THE ACTUAL AREA OF PATCHING SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PAYMENT SHALL BE MADE PER SQUARE FOOT AT THE BID PRICE FOR THE ACTUAL AREA PATCHED AND SHALL INCLUDE THE COST OF LABOR, MATERIALS, AND EQUIPMENT.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN CMS 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH -PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ITEM 511 - CLASS QC3 CONCRETE, MISC.: SUPERSTRUCTURE WITH QC/QA, AS PER PLAN

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC FIBERS AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE	499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
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FIBERS FOR CONCRETE	ASTM C 1116, TYPE III
CORROSION INHIBITOR	515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA: WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

THIS WORK CONSISTS OF REPLACING THE EXISTING STRIP SEAL GLAND AS SHOWN IN THE PLANS.

FURNISH PLATES TO BE FIELD WELDED TO THE EXISTING JOINT ARMOR, NEW EMBEDDED PLATES IN THE PROPOSED PARAPETS, A 4" STRIP SEAL GLAND, AND LOW PROFILE RETAINERS (1 1/2" HIGH). THE MATERIAL, TESTING, AND INSTALLATION OF THE GLAND SHALL CONFORM TO THE ODOT STANDARD BRIDGE DRAWING EXJ-5-93.

THE DEPARTMENT WILL MEASURE THIS ITEM IN FEET BY LENGTH OF STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL COMPLETED AND IN PLACE.

PAYMENT FOR THIS ITEM INCLUDES, BUT IS NOT LIMITED TO: THE LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION OF THE EXPANSION JOINT. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4" THICK)

ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (THICKNESS VARIES)

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

HYDRODEMOLITION SHALL BE USED TO REMOVE A UNIFORM DEPTH OF D = 3/4" FROM THE TOP OF THE EXISTING CONCRETE DECK.

THE OVERLAY MATERIAL SHALL MEET THE FOLLOWING CRITERIA: 2 LBS./C.Y. POLYPROPYLENE FIBERS 1 1/4" MIN. SHALL BE ADDED TO THE MIX.

THE FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2 1/4" THICK) (ACCELERATED CLOSURE)

ITEM 848 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (THICKNESS VARIES) (ACCELERATED CLOSURE)

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 848 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

A UNIFORM DEPTH OF D = 3/4" SHALL BE REMOVED FROM THE TOP OF THE EXISTING CONCRETE DECK.

THE OVERLAY MATERIAL SHALL MEET THE FOLLOWING CRITERIA: 2 LBS./C.Y. POLYPROPYLENE FIBERS 1 1/4" MIN. SHALL BE ADDED TO THE MIX.

THE FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO 3/4 OF ITS RATED CAPACITY OR 6 CUBIC YARDS (4.6 CUBIC METERS), WHICHEVER IS THE SMALLER, UNLESS A LARGER SIZE IS APPROVED BY THE ENGINEER.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

REVISIONS TO 848.15: AT THE OPTION OF THE ENGINEER, THE CONTRACTOR SHALL MAKE ONE OR MORE, ONE CUBIC YARD, TRIAL BATCHES OF OVERLAY MATERIAL AT LEAST 30 DAYS BEFORE THE OVERLAY IS TO BE PLACED. DEMONSTRATE THE ABILITY TO MEET 848.26 AND 848.31. DEVELOP BEAM BREAK MATURITY CURVES.

REVISIONS TO 848.20: MECHANICAL MEANS MAY BE USED TO REMOVE THE TOP 1/4 INCH OF THE ORIGINAL DECK. THE REMAINING 1/2 INCH OF ORIGINAL DECK SHALL BE REMOVED BY HYDRODEMOLITION.

AT LEAST THIRTY DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A SCHEDULE OF OVERLAY WORK ITEMS TO BE COMPLETED. THE SCHEDULE SHALL INCLUDE A BREAKDOWN OF ALL MAJOR WORK ACTIVITIES ON AN HOURLY BASIS. OVERLAY WORK SHALL NOT BEGIN UNTIL THE SCHEDULE IS APPROVED BY THE ENGINEER.

CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN THE WHEEL LINE UNLESS SHOWN IN THE PLANS.

REVISIONS TO 848.21: THE FINAL SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY. HAND CHIPPING IS FOR THE PURPOSE OF CHIPPING AREAS WHERE THE HYDRODEMOLITION MACHINE DOES NOT HAVE ACCESS. IF THE DESIRED DEPTH IS ACHIEVED BY HYDRODEMOLITION, NO FURTHER REMOVAL IS NECESSARY.

REVISIONS TO 848.23: FULL DEPTH REPAIR WILL NOT BE REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

REVISIONS TO 848.26: LONGITUDINAL GROOVES SHALL BE SAWS IN THE CONCRETE SURFACE OF THE TRAVELLED LANES PER 511.20, AFTER THE WET CURE IS COMPLETE. AFTER THE TEXTURING THE CONCRETE SURFACE, CLEAN THE SURFACE AND SPRAY A UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE MUST BE DRY PRIOR TO PLACEMENT OF THE CURING MATERIAL. IF THE SAWING OF THE LONGITUDINAL GROOVES CANNOT BE DONE WITHIN THE SAME SHORT-TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL HAVE 24 HOURS FROM REMOVAL OF THE WET CURE TO SAW THE LONGITUDINAL GROOVES AND REAPPLY THE MEMBRANE-CURING COMPOUND.

REVISE 848.27, 848.28 AND 848.29. THE CONTRACTOR SHALL CONTINUE THE WET CURE FOR THE MAXIMUM NUMBER OF HOURS POSSIBLE DURING THE PERMITTED LANE CLOSURE. THE CLOCK STARTS FOR THE WET CURE WHEN THE OVERLAY PLACEMENT IS COMPLETE.

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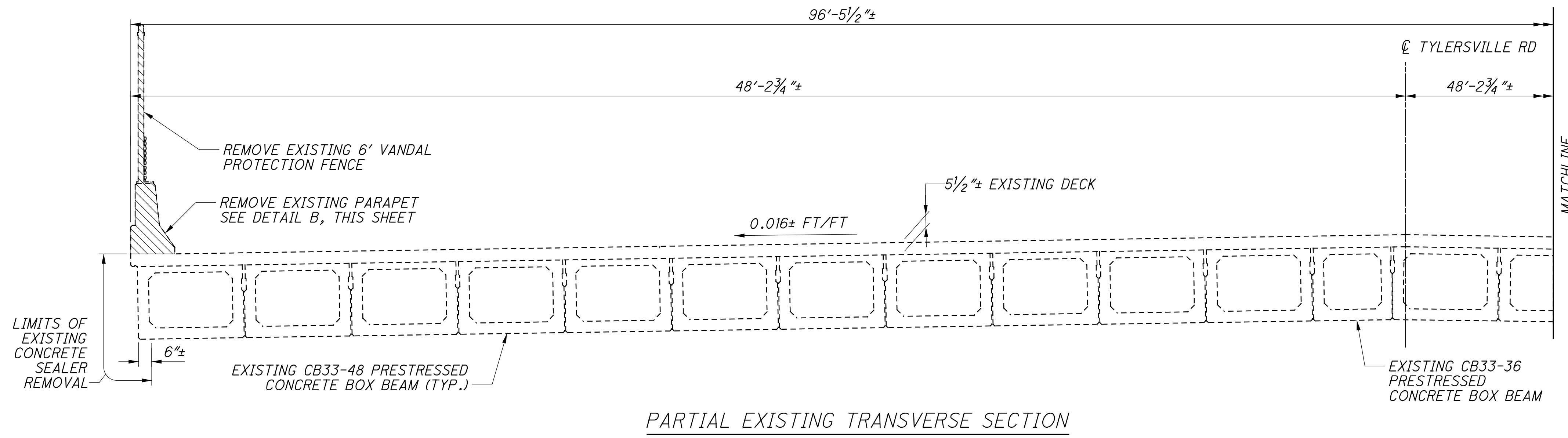


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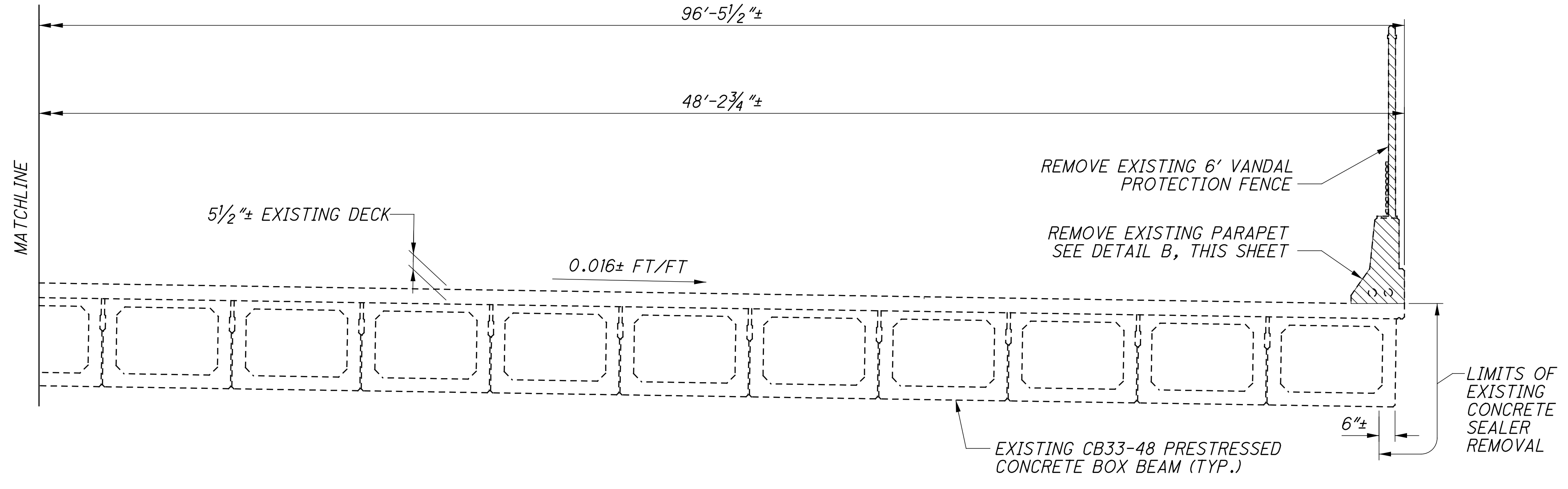
GENERAL NOTES
BRIDGE NO. BUT-75-0535
TYLERSVILLE ROAD OVER IR-75

BUT-IR75-5.35
PID No. 100801
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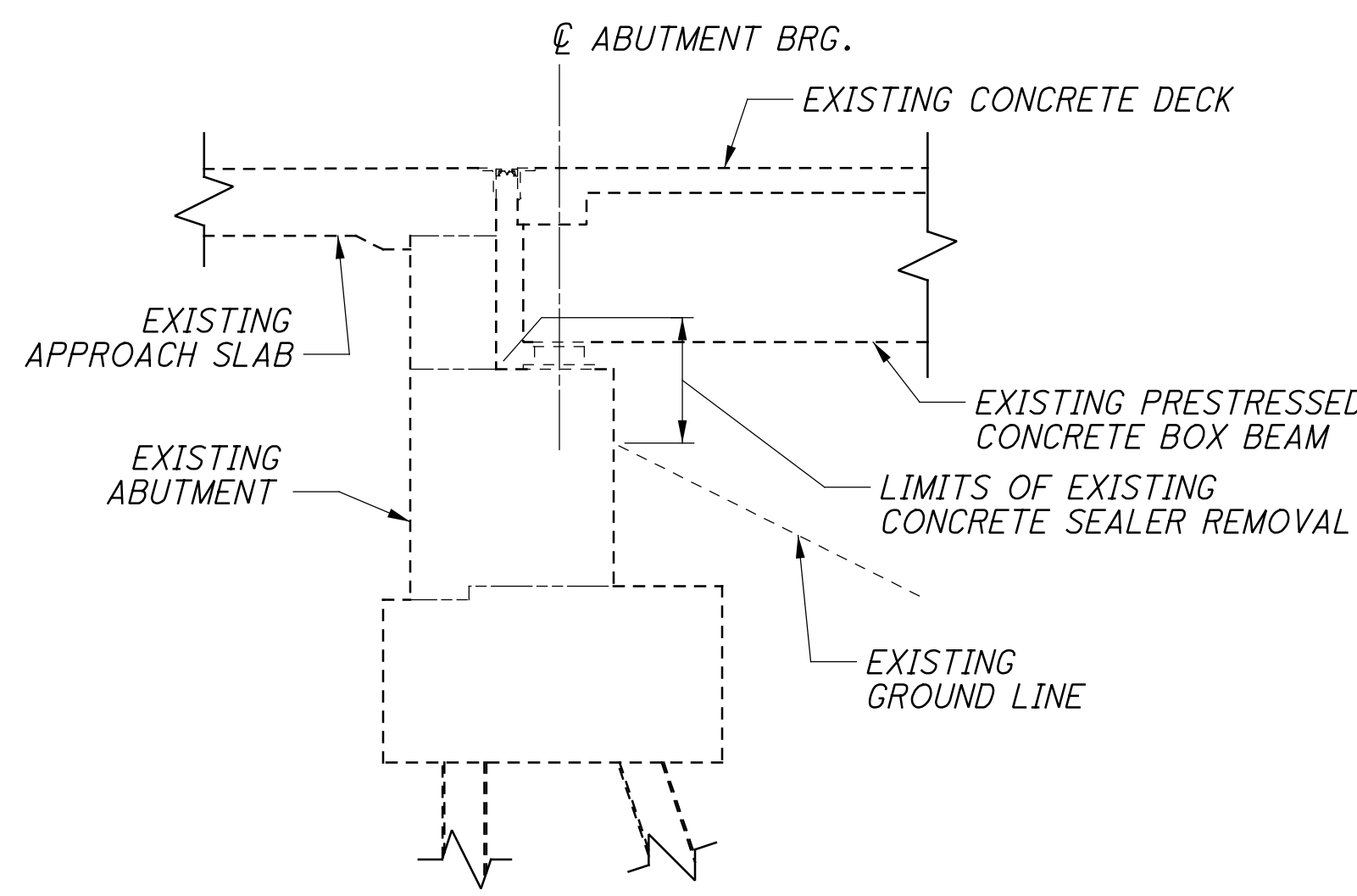
PARTIAL EXISTING TRANSVERSE SECTION



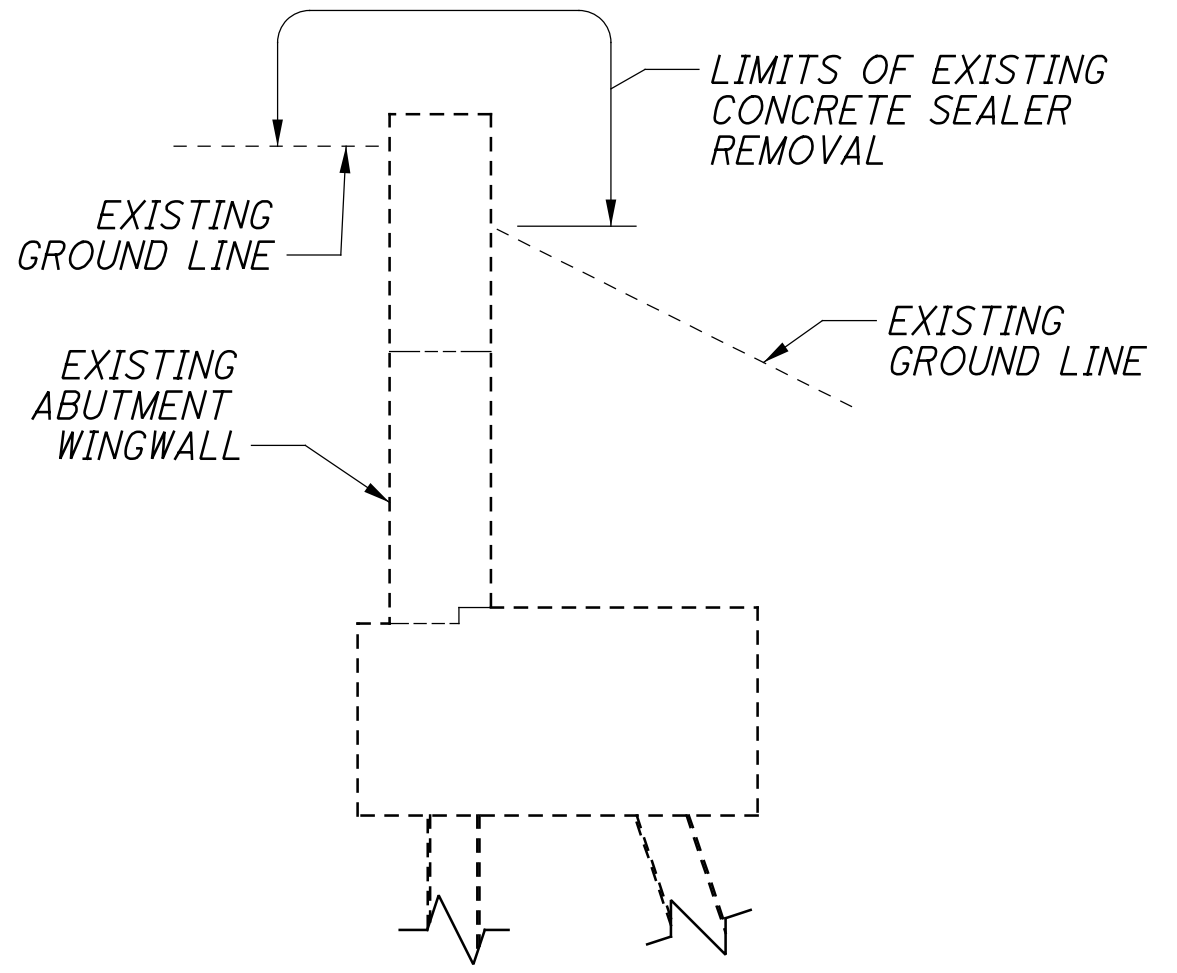
PARTIAL EXISTING TRANSVERSE SECTION

LEGEND:
 ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

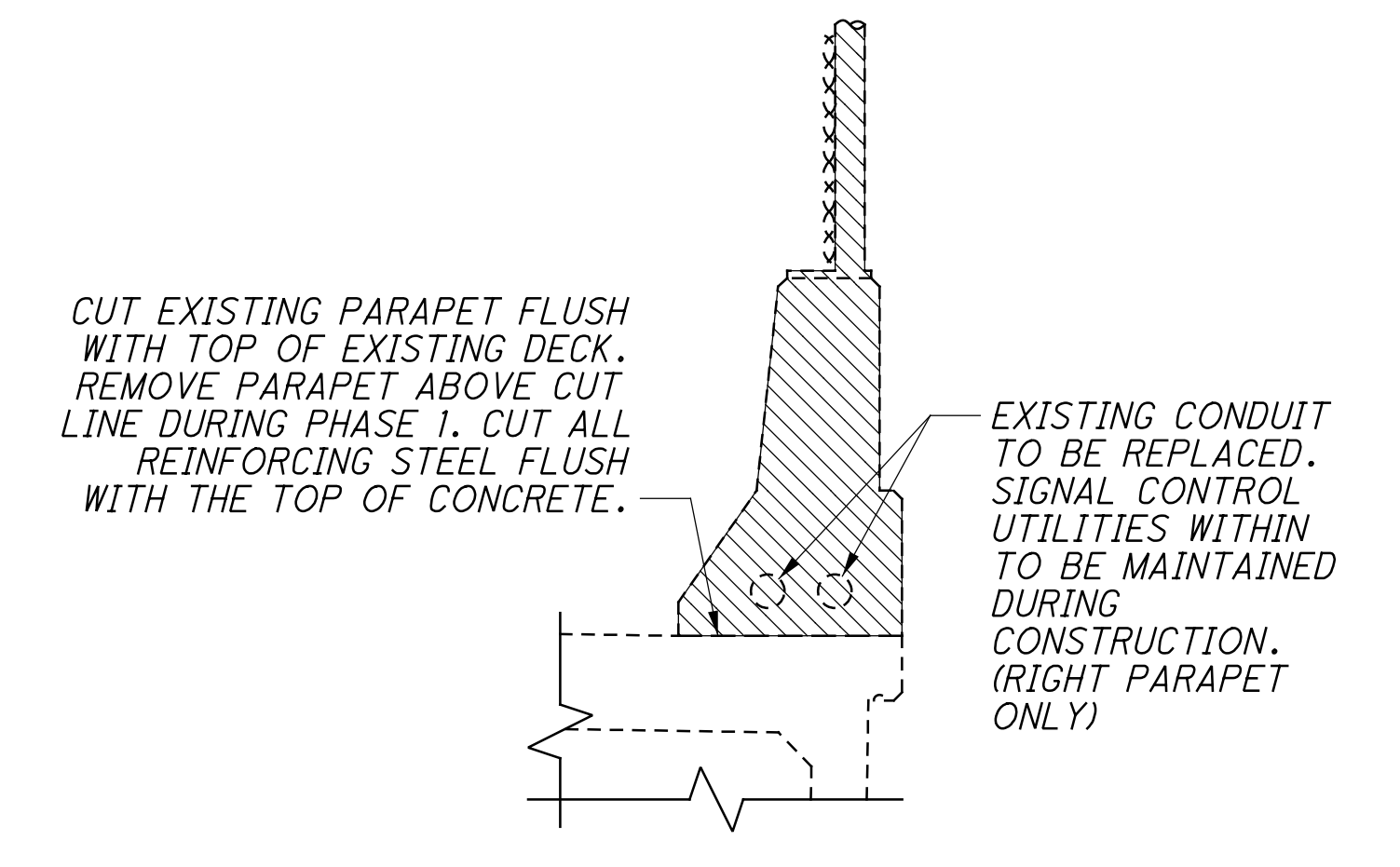
NOTE:
 1. IN ADDITION TO THE DETAILS SHOWN ON THIS SHEET, THE EXISTING STRIP SEAL GLANDS, THE EXISTING APPROACH SLAB PARAPETS AND THE EXISTING 6" APPROACH SLAB CURBS SHALL ALSO BE REMOVED.



TYPICAL EXISTING ABUTMENT SECTION



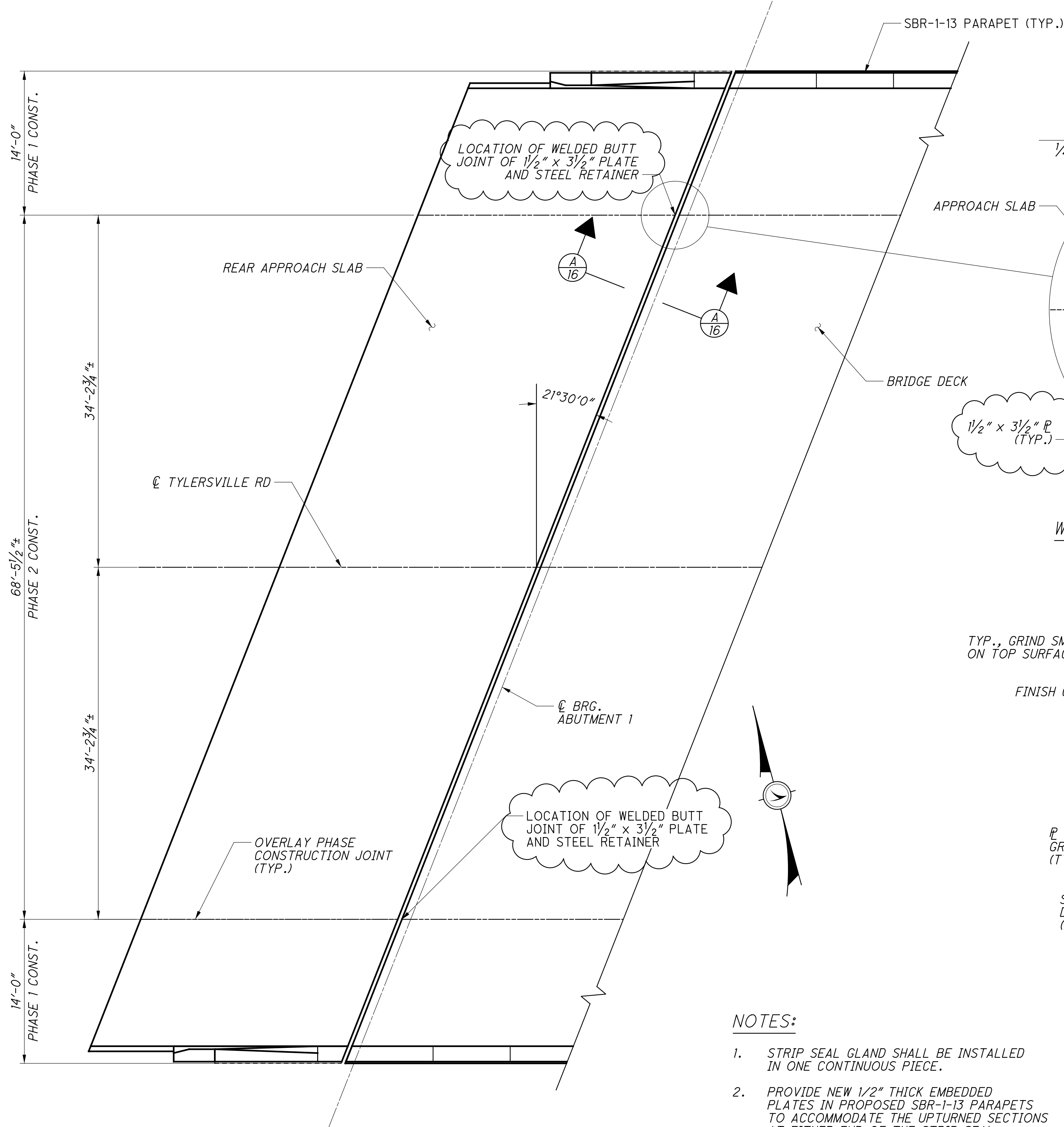
TYPICAL EXISTING ABUTMENT WINGWALL SECTION



DETAIL B
 (RIGHT PARAPET SHOWN, LEFT PARAPET SIMILAR)

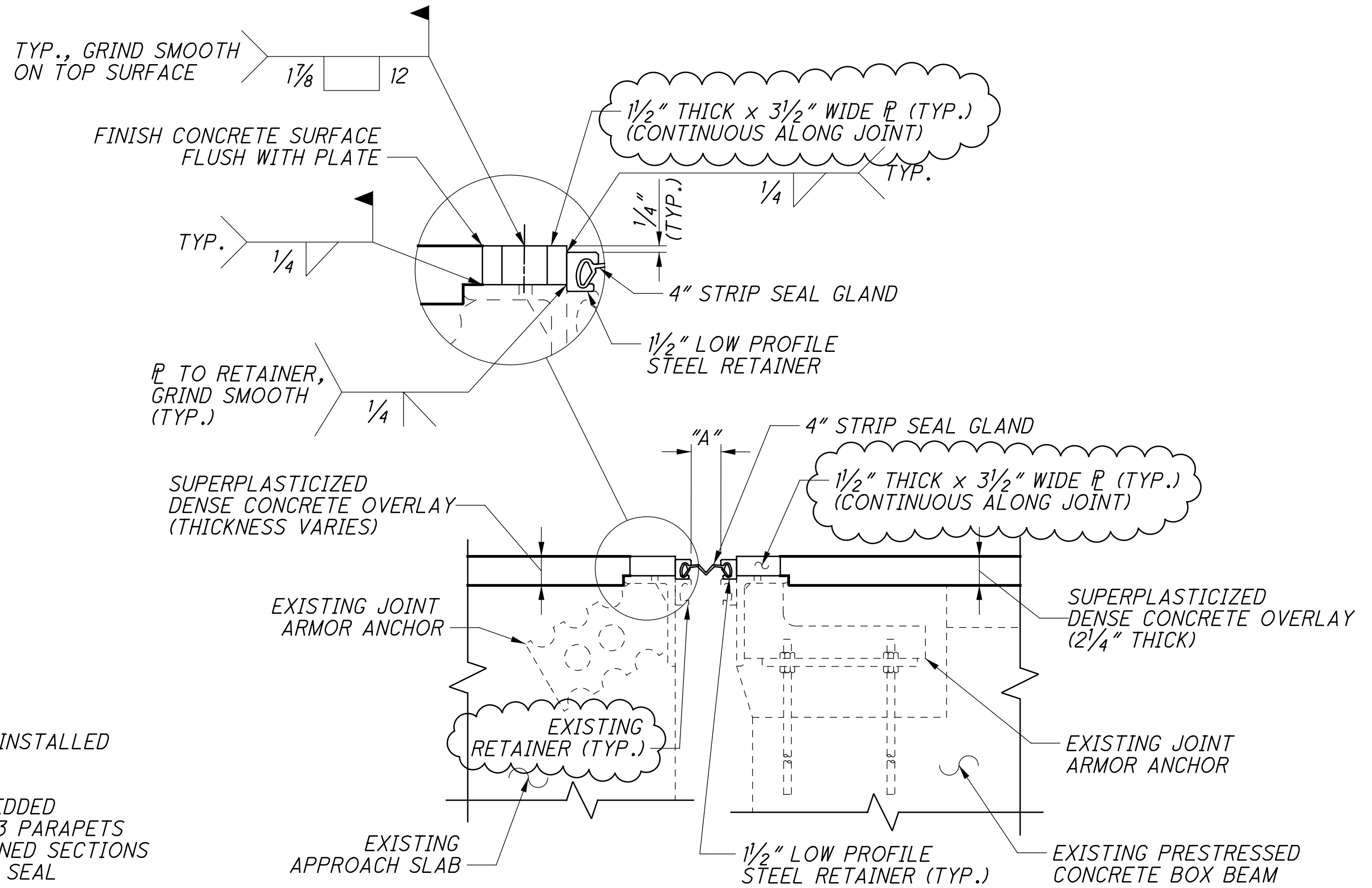
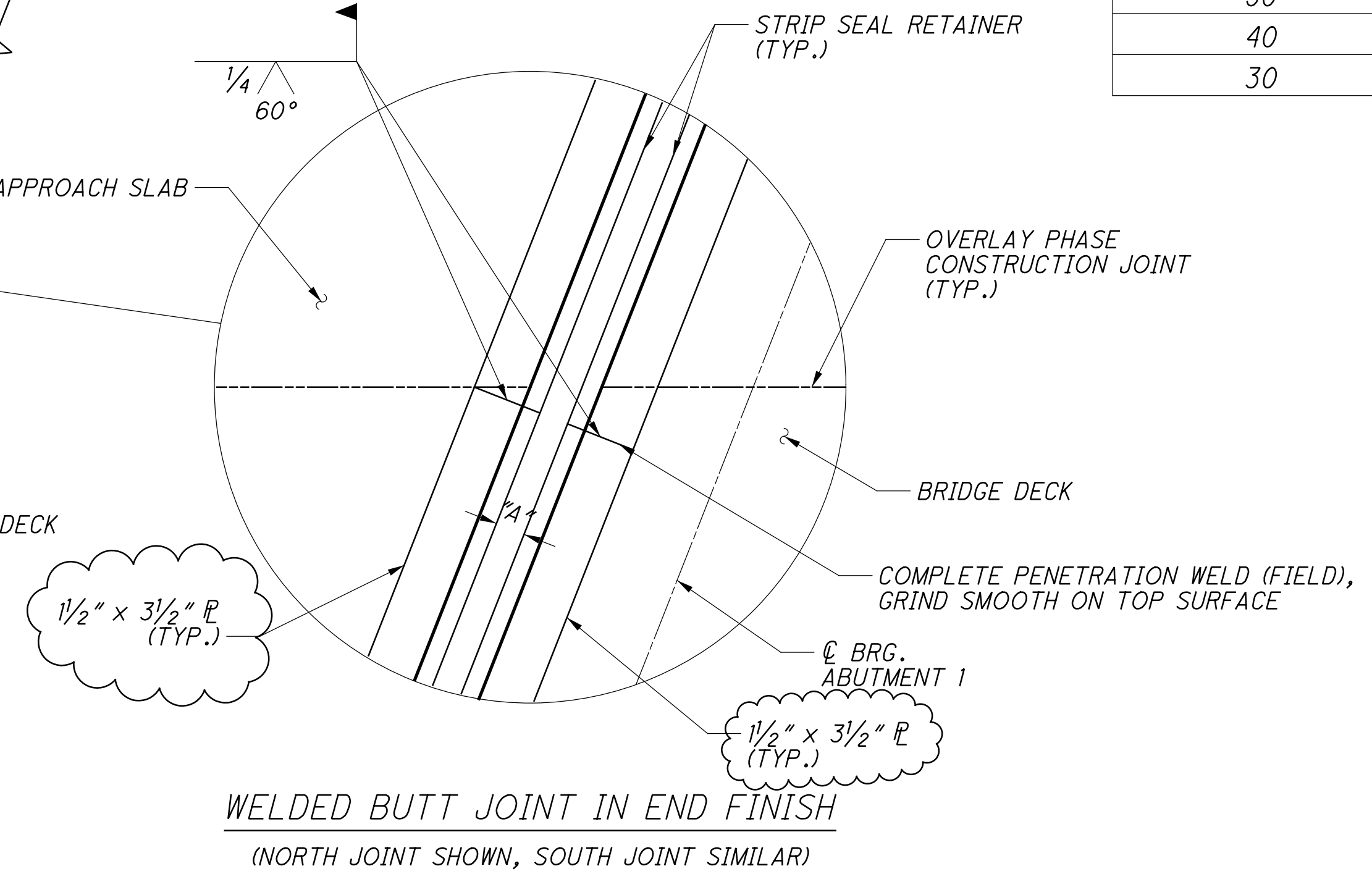
DESIGN AGENCY THE KLEINGERS GROUP	
DESIGNED JML	CHECKED SPB
DRAWN JML	REVISED
REVIEWED MEB	DATE 8/28/19
STRUCTURE FILE NUMBER 0901733	
REMOVAL DETAILS BRIDGE NO. BUT-75-0535 TYLERSVILLE ROAD OVER IR-75	
BUT-IR75-5.35 PID No. 100801	
6 / 25	
31 50	

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PLAN VIEW OF REPLACEMENT STRIP SEAL EXPANSION JOINT
(ABUTMENT 1 JOINT SHOWN, ABUTMENT 2 JOINT SIMILAR)

DIMENSION "A"	
PEAK AMBIENT TEMPERATURE °F	ABUTMENT 1 & 2
90	1 5/8"
80	1 3/4"
70	1 7/8"
60	2"
50	2 1/8"
40	2 1/4"
30	2 3/8"



- NOTES:
1. STRIP SEAL GLAND SHALL BE INSTALLED IN ONE CONTINUOUS PIECE.
 2. PROVIDE NEW 1/2" THICK EMBEDDED PLATES IN PROPOSED SBR-1-13 PARAPETS TO ACCOMMODATE THE UPTURNED SECTIONS AT EITHER END OF THE STRIP SEAL EXPANSION JOINTS.
 3. FOR ADDITIONAL NOTES AND DETAILS, SEE ODOT STD. DWG. EXJ-5-93.

A EXPANSION JOINT RETROFIT DETAIL