

Index Of Sheets

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	COMMITMENTS SHEET
2	ESTIMATED BRIDGE QUANTITIES
2A	GENERAL NOTES
2B	ESTIMATED ROADWAY QUANTITIES, GENERAL NOTES, & SPECIAL NOTES
2C	TRAFFIC CONTROL PLAN
2D	TRAFFIC CONTROL PLAN
2E	TRAFFIC CONTROL PLAN
2F	TRAFFIC CONTROL PLAN
2G	TRAFFIC CONTROL PLAN
2H	GUARDRAIL LAYOUT AND EROSION CONTROL PLAN

STANDARD ROADWAY DRAWINGS

NO.	CURRENT REV.	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND

ROADWAY DESIGN STANDARDS

RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND

TRAFFIC CONTROL APPURTENANCES

T-FAB-1	05-27-97	FLASHING YELLOW BOARD
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-PBR-1	06-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-PBR-2	11-01-11	DETAIL FOR VERTICAL PANELS AND FLEXIBLE DELINEATORS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-11	03-13-09	ONE LANE CLOSURE DETAIL ON DIVIDED HIGHWAYS
T-WZ-12	03-13-09	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-32	10-29-13	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	09-01-05	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	04-02-12	TRAFFIC CONTROL PLAN PAY ITEM AND DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-40	04-02-12	RIGHT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS
T-WZ-41	04-02-12	LEFT LANE CLOSURES AT NEAR SIDE OF INTERSECTIONS

SAFETY APPURTENANCES AND FENCE

S-PL-3		SAFETY PLAN: MINIMUM INSTALLATION AT BRIDGE ENDS
S-GR31-1		W-BEAM GUARDRAIL
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-37	06-10-14	SEDIEMENT TUBE
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STANDARD BRIDGE DRAWINGS

STD-1-15S	05-01-14	BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET
STD-2-1	03-28-08	SLIDER PLATES AND DECK DRAINS
STD-3-2	11-01-10	STRIP SEAL EXPANSION JOINT
STD-10-1	04-08-05	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
SBR-2-115	01-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "F"
SBR-2-116	01-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT TYPES "A" THRU "J"
SBR-2-119	05-30-96	STRIP SEAL EXPANSION JOINTS - REPLACEMENT CONSTRUCTION DETAILS TYPE "E" AND "F"

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2015 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT

TDOT TRANSPORTATION PROJECT SPECIALIST VALERIE NEWBERRY
 DESIGNED BY NEEL-SCHAFFER, INC.
 DESIGNER BRADLEY BIVENS CHECKED BY HENRY PATE
 P.E. NO. 33052-4248-04
 PIN NO. 121369.00

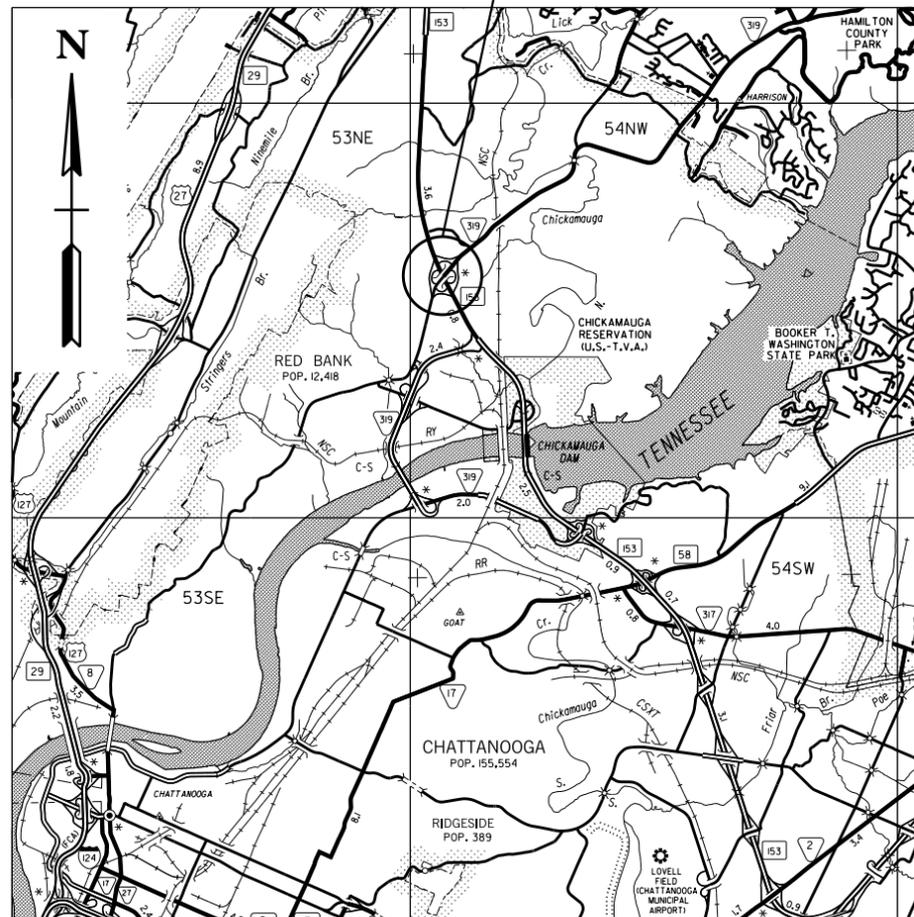
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION BUREAU OF ENGINEERING HAMILTON COUNTY

HIXSON PIKE OVER STATE ROUTE 153

BRIDGE REPAIR

HIXSON PIKE F.A.H.S. NO.

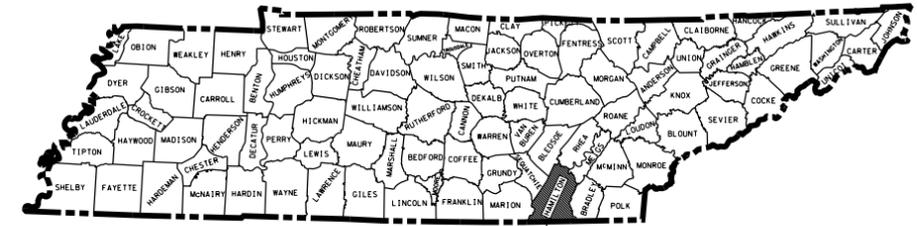
HIXSON PIKE OVER STATE ROUTE 153
BRIDGE NO. 33-3588-4.32 LT. AND RT.



SCALE: 1" = 1 MILE

ROUTE	ADT	YEAR	POSTED SPEED LIMIT
03588 HIXSON PIKE	38,947	2015	40
STATE ROUTE 153	47,621	2015	45

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	33052-4248-04	



HAMILTON COUNTY

LIST OF BRIDGE DRAWINGS

DWG NO.	LAST REV DATE	TITLE
BR-118-123		LAYOUT OF BRIDGE TO BE REPAIRED
BR-118-124		ESTIMATED BRIDGE QUANTITIES
BR-118-125		GENERAL NOTES
BR-118-126		PHASE CONSTRUCTION
BR-118-127		SUPERSTRUCTURE
BR-118-128		OVERLAY REINFORCEMENT
BR-118-129		SUPERSTRUCTURE REPAIR DETAILS (1 OF 2)
BR-118-130		SUPERSTRUCTURE REPAIR DETAILS (2 OF 2)
BR-118-131		ABUTMENT AND BENT REPAIR
BR-118-132		BRIDGE REPAIR DETAILS
BR-118-133		EXPANSION JOINT DETAIL
BR-118-134		BILL OF STEEL

LIST OF REFERENCE DRAWINGS (TO BE PRINTED WITH PLANS)

DWG NO.	DESCRIPTION
F-4-67 THRU 72	EXISTING AS BUILT BRIDGE DRAWINGS
E-12-105	STANDARD CONCRETE HANDRAIL

APPROVED: Paul D. Degges
PAUL D. DEGGES, CHIEF ENGINEER

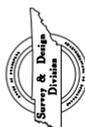
DATE: _____

APPROVED: John Schroer
JOHN SCHROER, COMMISSIONER

UNOFFICIAL SET
NOT FOR BIDDING

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE



TYPE	YEAR	PROJECT NO.	SHEET NO.
	2015	33052-4248-04	1A

PROJECT COMMITMENTS			
COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDHZOO3	Environmental Division, Hazardous Materials	An Asbestos Containing Material (ACM) survey was conducted on Bridge #: 33SR1530029, Hixson Pike RL over SR -153, LM 4.32. Asbestos was detected in the Transite pipes that are attached to the bottom of the deck. If the pipes are disturbed during repair activities, abatement of the ACM will be required. Abatement should be accomplished per SP202ACM Special Provision Regarding Removal of Asbestos-Containing Materials. State of Tennessee asbestos accreditation requirements (TCA 1200-01-20) mandate that ACM abatement work be performed by an accredited firm (contractor) using accredited abatement works and supervisors. The contractor shall be responsible for submitting a notice to the TDEC, Division of Air Pollution Control ten (10) days in advance of any abatement. No special accommodations for demolition and waste disposal are anticipated for the cantilevers and parapets and the material can be deposited in a C&D landfill.	Transite Pipes
EDHZOO4	Environmental Division, Hazardous Materials	No asbestos was detected on Bridge #: 33SR1530030, Hixson Pike LL over SR-153, LM 4.32. No special accommodations for demolition and waste disposal are anticipated for the cantilevers and parapets and the material can be deposited in a C&D landfill.	

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

**PROJECT
COMMITMENTS**

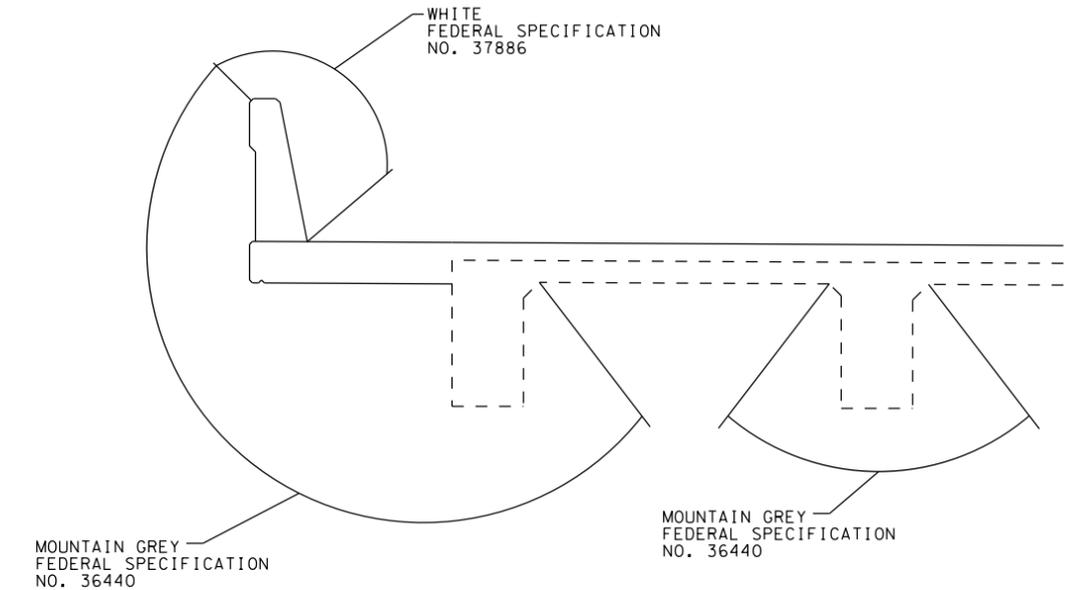
ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	BBRIDGE NO. 33-3588-4.32 LT.	BBRIDGE NO. 33-3588-4.32 RT.	TOTAL QUANTITY
⑩	202-01.03 REMOVAL OF TRASH AND DEBRIS	L.S.	0.5	0.5	1
②	202-04.01 REMOVAL OF STRUCTURES (BR. NO. 33-3588-4.32 LEFT AND RIGHT LANES)	L.S.	0.5	0.5	1
	204-02.01 DRY EXCAVATION (BRIDGES)	C.Y.	38	38	76
⑮	303-01.02 GRANULAR BACKFILL (BRIDGES)	TON	20	20	40
④	603-02.01 REPAINTING EXISTING STEEL STRUCTURES (BR. NO. 33-3588-4.32 LT. & RT. LANES)	L.S.	0.5	0.5	1
⑦	604-02.03 EPOXY COATED REINFORCING STEEL	LBS.	29,368	29,368	58,736
⑧	604-03.09 CLASS "D" CONCRETE (BRIDGE DECK)	C.Y.	125	125	250
	604-04.01 APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	487	487	974
	604-04.02 APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	1,193	1,193	2,386
①③	604-10.05 CONCRETE REPAIRS	S.F.	19	10	29
①	604-10.30 BRIDGE DECK REPAIRS (FULL DEPTH OF SLAB)	S.Y.	10	5	15
⑬	604-10.43 PENETRATING WATER REPELLANT CONCRETE SEAL	S.Y.	42	42	84
⑪⑫	604-10.45 EXPANSION JOINT REPAIRS (TYPE "F")	L.F.	38.5	38.5	77
①	604-10.50 BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	S.Y.	50	25	75
	604-10.51 SCARIFYING (EXISTING BRIDGE DECK)	S.Y.	532	532	1,064
①③	604-10.54 CONCRETE REPAIRS	S.F.	30	40	70
①⑤	604-10.58 EPOXY INJECTION (INJECTION)	GAL	6	3	9
①⑥	604-10.62 EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE)	L.F.	205	128	333
⑭	620-05.01 CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	368	368	736
⑨	710-09.01 6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	111	111	222
	710-09.02 6" PIPE UNDERDRAIN	L.F.	5	5	10

FOOTNOTES:

- ① ITEM MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.
- ② THE COST OF REMOVING THE EXISTING OVERHANG, BRIDGE RAIL, AND PORTIONS OF BENTS AND ABUTMENTS AS REQUIRED FOR FULL/PARTIAL DECK REPAIRS, BENT REPAIRS, ABUTMENT REPAIRS, AND OVERHANG REPLACEMENT.
- ③ INCLUDES ALL COSTS TO REPAIR SPALLED AND/OR DELAMINATED AREAS ON ABUTMENTS, BENTS, AND BEAMS USING QUICK SET PATCHING MATERIAL (ITEM NO. 604-10.05 AND 604-10.54). SEE DRAWINGS BR-118-130, BR-118-131, AND BR-118-132 FOR DETAILS AND NOTES.
- ④ INCLUDES ALL COST TO CLEAN AND PAINT ALL STRUCTURAL STEEL BEARING DEVICES FOR BENTS 1 THRU 3 (PLATES AND ROLLERS) WITH GREEN EPOXY MASTIC PAINT TO MATCH EXISTING BEARING DEVICE COLOR. (EST. QUANTITY 6,021 LBS.)
- ⑤ INCLUDES COST OF ADHESIVE MATERIAL ONLY.
- ⑥ INCLUDES ALL COSTS TO EPOXY INJECT CRACKS IN ABUTMENTS AND DOES NOT INCLUDE COST OF ADHESIVE MATERIAL. SEE DRAWINGS BR-118-130 AND BR-118-131 FOR DETAILS, SEE DRAWING BR-118-132 FOR NOTES.
- ⑦ THE PRICE BID FOR EPOXY COATED REINFORCING SHALL INCLUDE THE COST OF 423 MECHANICAL BAR COUPLERS & COUPLER BARS (216 FOR EACH LANE) IN ITEM 604-02.03.
- ⑧ ITEM INCLUDES ALL COSTS NECESSARY TO REMOVE EXISTING JOINT MATERIAL AND SEAL TRANSVERSE JOINTS AS SHOWN ON DRAWING BR-118-129.
- ⑨ COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT BID PRICE FOR PERFORATED PIPE. SEE DRAWING BR-118-131 AND STANDARD DRAWING STD-10-1 FOR NOTES AND DETAILS.
- ⑩ INCLUDES ALL COST TO REMOVE AND DISPOSE OF VEGETATION AND DEBRIS FROM ABUTMENTS, BENTS, CONCRETE SLOPE, AND CRASH WALLS.
- ⑪ THE PRICE BID FOR ROADWAY EXPANSION DEVICES AT BENT 2 SHALL INCLUDE THE COST OF REMOVING EXISTING CONCRETE IN DECK; THE COST OF NEW EARLY STRENGTH CONCRETE; AND ALL OTHER MISCELLANEOUS MATERIALS AND LABOR NECESSARY TO INSTALL THE NEW STRIP SEAL EXPANSION SYSTEM. SEE DRAWING NO. BR-118-132, STANDARD DRAWINGS SBR-2-115, SBR-2-116, AND SBR-2-119 FOR DETAILS OF EXPANSION DEVICES.
- ⑫ THE EXPANSION JOINTS SHALL BE IN ACCORDANCE WITH SECTION 623.02 OF THE STANDARD SPECIFICATIONS. THE TOTAL REQUIRED MOVEMENT IS 4". SHOP DRAWINGS SHALL BE SUBMITTED TO THE HEADQUARTERS BRIDGE REPAIR OFFICE.
- ⑬ SEE GENERAL NOTES SHEET BR-118-125 FOR LIMITS OF APPLICATION.
- ⑭ COST OF 12 DECK DRAINS TO BE INCLUDED IN THE UNIT PRICE FOR THE SINGLE SLOPE PARAPET.
- ⑮ GRANULAR BACKFILL SHALL BE CLASS "A" GRADING "D" MATERIAL SEE STANDARD DRAWINGS STD-10-1 FOR MORE DETAILS.

PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015	2	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



APPLIED TEXTURE FINISH DETAIL

NOTES:

ALL COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM 604-04.01 AND 604-04.02 AND SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL USE CONTAINMENT SCREENS OR OTHER MEASURES AS NECESSARY TO PREVENT ANY TEXTURE COATING FROM ENTERING THE ENVIRONMENT. CONTAINMENT MEASURES SHALL BE APPROVED BY THE ENGINEER AND COST SHALL BE INCLUDED IN ITEMS BID ON.

BEFORE APPLYING ANY TEXTURE FINISH, ALL SURFACES SHALL BE COMPLETELY CLEANED OF ALL DEBRIS AND FOREIGN MATERIALS.

IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISHED DETAIL SKETCH, ALL EXPOSED SURFACES OF THE WINGWALL, ABUTMENT BEAMS, EXTERIOR PORTIONS OF ENDWALLS, BENTS, AND CRASHWALLS ARE TO RECEIVE APPLIED TEXTURE FINISH (MOUNTAIN GREY, FED. SPEC. NO. 36440).

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ESTIMATED BRIDGE QUANTITIES

BRIDGE NO 33-3588-4.32
LT. & RT. LANES
HIXSON PIKE
OVER
SR-153
HAMILTON COUNTY
2015

DESIGNED BY JMT DATE 10/2014
DRAWN BY JMT DATE 10/2014
SUPERVISED BY BEB DATE 10/2014
CHECKED BY HP DATE 10/2014

GENERAL NOTES:

SPECIFICATIONS:

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

LOADING:

HL-93 LIVE LOADING; DEAD LOAD INCLUDES 35 LB/SQ.FT. FOR FUTURE WEARING SURFACE.

DESIGN SPECIFICATIONS:

AASHTO LRFD 7TH EDITION 2015 WITH INTERIMS OR CURRENT ADDITIONS.

CLASS "A" CONCRETE:

TO BE CLASS "A" (CAST IN PLACE), f'c=3000 PSI CONCRETE, EXCEPT AS NOTED OTHERWISE.

CLASS "D" CONCRETE:

CLASS "D" CONCRETE FOR BRIDGE DECK SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS.

BRIDGE DECK SURFACE FINISH:

TO BE IN ACCORDANCE WITH NOTE "C" IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.

REINFORCING STEEL:

SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE (EPOXY COAT ALL SLAB STEEL). SEE SECTION 604 & 907 OF THE STANDARD SPECIFICATIONS.

NOTE:

THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS INSTALLING DECKING ABOVE 15 FEET.

SHOP DRAWINGS:

SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED TO THE HEADQUARTERS BRIDGE INSPECTION AND REPAIR OFFICE IN LIEU OF THE DIVISION OF STRUCTURES.

VALUE ENGINEERING ALTERNATE BRIDGE DESIGN CRITERIA:

ALTERNATE BRIDGE DESIGNS MAY NOT DIMINISH THE FUNCTIONAL OR STRUCTURAL EQUIVALENCY OF THE BRIDGE AND MUST MEET OR EXCEED BOTH THE SERVICE LEVEL AND ULTIMATE CAPACITIES OF THE CONTRACT PLANS STRUCTURE.

FINISHING CONCRETE SURFACES:

CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE TENNESSEE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.01 AND 604-04.02.

BRIDGERAIL NOTE:

BUILD BRIDGE RAIL SYSTEM ACCORDING TO STD-1-1SS AND DETAILS ON SHEET BR-118-129. THE BRIDGE RAIL SHALL BE FORMED AND CAST PLUMB, NOT PERPENDICULAR TO THE SLAB. THE DIMENSIONS AT THE TRAFFIC FACE SHALL BE KEPT CONSTANT, WITH VARIATION FOR CROSS SLOPE ACCOMMODATED AT THE REAR FACE.

GROUTED BARS IN DRILLED HOLES:

HORIZONTALLY DRILLED HOLES AND VERTICALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT, AND THE BAR ROTATED (NOT DRIVEN) TO ITS SEAT. OTHER VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND THE BAR SHALL BE DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

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 FOR CONCRETE REMOVAL. PNEUMATIC HAMMERS MAY BE USED, AS SPECIFIED, TO REMOVE UNSOUND CONCRETE. 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. THE MAXIMUM ALLOWABLE HAMMER SIZE IS THE 60 POUND CLASS

REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION:

ONE 11'-0" MIN. TRAFFIC LANE ON EACH BRIDGE SHALL BE MAINTAINED AT ALL TIMES.

FALSEWORK OVER TRAFFIC:

SEE SECTION 604.06 OF THE STANDARD SPECIFICATIONS.

SPECIAL NOTES TO CONTRACTOR:



CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO ENSURE THAT NO MATERIALS, CHEMICALS, DEBRIS, ETC. IS DROPPED INTO THE ROADWAY. THIS SHALL BE ACCOMPLISHED BY THE USE OF BASKETS, NETTING, WRAPPING, WORK PLATFORM, OR OTHER SIMILARLY EFFECTIVE MEANS. A CONTAINMENT SYSTEM MUST BE IN PLACE BEFORE WORK COMMENCES ON THE BRIDGE DECK NEAR SENSITIVE AREAS. ANY DEBRIS WHICH IS ALLOWED TO DROP BELOW THE BRIDGE SHALL BE REMOVED AND DISPOSED OF OFF THE BRIDGE SITE BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN OTHER ITEMS BID ON.



THE CONTRACTOR IS RESPONSIBLE FOR AND SHOULD TAKE ALL PRECAUTIONS TO ENSURE STABILITY OF THE STRUCTURE DURING REPAIRS.



THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND QUANTITIES BEFORE ORDERING ANY MATERIALS.

CLEANING AND PAINTING OF REINFORCING STEEL AND STRUCTURAL STEEL:

UPON REMOVAL OF DETERIORATED CONCRETE, ALL EXPOSED REINFORCING STEEL SHALL BE CLEANED AND PAINTED IMMEDIATELY AFTER CLEANING TO PREVENT RE-RUSTING. AREAS SHALL BE RE-CLEANED IF RUSTING OCCURS BEFORE PAINTING. PAINT SHALL BE AN EPOXY MASTIC PAINT AND SHALL BE APPLIED IN A THIN LAYER TO MAINTAIN A GOOD BOND BETWEEN THE REINFORCING STEEL AND THE CONCRETE. ALL MATERIAL AND LABOR COSTS FOR CLEANING AND PAINTING OF EXISTING REINFORCING STEEL SHALL BE INCLUDED IN THE COST OF ITEM 604-10.54, CONCRETE REPAIRS.

ALL STEEL BEARINGS SHALL BE CLEANED AND PAINTED IMMEDIATELY AFTER CLEANING TO PREVENT RE-RUSTING. AREAS SHALL BE RE-CLEANED IF RUSTING OCCURS BEFORE PAINTING. PAINT SHALL BE A GRAY EPOXY MASTIC PAINT. COST TO BE INCLUDED IN COST OF ITEM NO. 603-02.01.

FORMS AND FALSEWORK:

CONCRETE FORM WORK, FALSEWORK, AND TEMPORARY SUPPORTS SHALL BE REMOVED FROM THE JOB SITE AFTER WORK IS COMPLETED. COST OF FORMS, FALSEWORK, AND TEMPORARY SUPPORT SHALL BE INCLUDED IN ITEMS BID ON. THIS WORK SHALL BE COMPLETED BEFORE FINAL PAYMENT IS APPROVED.

APPROVAL OF MATERIALS

NO FABRICATION SHALL BE STARTED UNTIL ALL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS WITH A COPY OF THE TEST REPORTS ALSO GOING TO THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF STRUCTURES, BRIDGE INSPECTION AND REPAIR OFFICE.

SPECIAL NOTE FOR UTILITIES:

CARE SHALL BE TAKEN WHILE REMOVING AND REPAIRING BRIDGE COMPONENTS SO AS NOT TO DISTURB OR DAMAGE UTILITIES.

QUICK SET PATCHING MATERIAL:

QUICK-SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13, SECTION B.6, FOR ACCEPTABLE PATCHING MATERIALS.

CONCRETE CURING:

ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

CONCRETE SEALER:

CONCRETE SEALER SHALL BE APPLIED TO SUBSTRUCTURES COINCIDING WITH EXPANSION JOINT LOCATIONS BEFORE APPLYING TEXTURE COATING. CONCRETE SEALER SHALL BE APPLIED TO THE TOP AND VERTICAL SURFACES OF THE CAP OF BENT 2. CONCRETE SHALL BE CLEAN AND DRY BEFORE APPLYING THE CONCRETE SEAL, AND THE THICKNESS OF THE SEAL SHALL BE AS RECOMMENDED BY THE SEALANT MANUFACTURER. ACCEPTABLE CONCRETE SEALERS ARE INCLUDED IN THE QUALIFIED PRODUCTS LIST FOR PENETRATING CONCRETE SEALS MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE SEALER SHALL BE CLEAR OR SIMILAR TO THE COLOR OF EXISTING CONCRETE SURFACES TO BE SEALED. THE COST OF THE SEALER, COMPLETE AND IN PLACE, SHALL BE BID UNDER ITEM NUMBER 604-10.43.

EXPANSION JOINTS:

THE EXPANSION JOINTS AT BENT 2 SHALL BE IN ACCORDANCE WITH SECTION 623.03 OF THE STANDARD SPECIFICATIONS. THE TOTAL REQUIRED JOINT OPENING IS 2 INCHES AT 60°F AT EACH JOINT LOCATION. SHOP DRAWINGS SHALL BE SUBMITTED TO THE HEADQUARTERS BRIDGE INSPECTION & REPAIR OFFICE.

MECHANICAL BAR COUPLERS:

MECHANICAL BAR SPLICERS MUST BE ON THE QUALIFIED PRODUCTS LIST 27 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 SECTION 907 OF THE STANDARD SPECIFICATIONS. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 604-02.03.

UTILITY NOTES:

THE LOCATION OF UTILITIES SHOWN WITHIN THE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES. THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING THE UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITY. PRIOR TO COMMENCING THE WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.

PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015	2A	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

**UNOFFICIAL
SET**

 NOT FOR
BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
GENERAL NOTES

BRIDGE NO 33-3588-4.32
LT. & RT. LANES
HIXSON PIKE
OVER
SR-153
HAMILTON COUNTY
2015

DESIGNED BY JMT DATE 5/2014
 DRAWN BY JMT DATE 5/2014
 SUPERVISED BY BEB DATE 5/2014
 CHECKED BY HP DATE 5/2014

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	33052-4248-04	2B

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
105-01	CONSTRUCTION STAKES, LINES AND GRADES	L.S.	1
⑥ 202-01	CLEARING AND GRUBBING	L.S.	1
307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	8
① 307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	45
402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	2
402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	6
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	1
411-01.10	ACS MIX (PG64-22) GRADING D	TON	85
415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	1,067
705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	108
705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	4
705-08.11	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	4
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	20
⑤ 712-01	TRAFFIC CONTROL	L.S.	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	440
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	125
712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	25
712-05.01	WARNING LIGHTS (TYPE A)	EACH	10
712-05.03	WARNING LIGHTS (TYPE C)	EACH	10
712-06	SIGNS (CONSTRUCTION)	S.F.	583
712-08.03	ARROW BOARD (TYPE C)	EACH	4
② 712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	11,150
③ 716-12.01	ENHANCED FLATLINE THERMO PVT MRKNG (4IN LINE)	L.M.	0.76
④ 716-12.02	ENHANCED FLATLINE THERMO PVT MRKNG (6IN LINE)	L.M.	0.61
717-01	MOBILIZATION	L.S.	1
725-03.84	PORTABLE ITS DYNAMIC MESSAGE SIGN	EACH	4
740-11.02	TEMPORARY SEDIMENT TUBE 12IN	L.F.	60

FOOTNOTES:

- ① ITEM MAY BE INCREASED OR DECREASED AS DIRECTED BY THE ENGINEER.
- ② INCLUDES 5025 L.F. OF 4" REMOVABLE SINGLE SOLID WHITE LINE AND 250 L.F. OF REMOVABLE DOTTED WHITE LINE FOR HIXSON PIKE AND 5300 L.F. OF 6" REMOVABLE SINGLE SOLID WHITE LINE AND 575 L.F. OF REMOVABLE DOTTED WHITE LINE FOR S.R. 153.
- ③ INCLUDES 725 L.F. OF 4" SINGLE SOLID WHITE LINE, 770 L.F. OF 4" SINGLE SOLID YELLOW LINE, 650 L.F. OF DOTTED WHITE LINE AND 1870 L.F. OF 4" SINGLE WHITE SKIP LINE (10-30).
- ④ INCLUDES 800 L.F. OF 6" SINGLE SOLID WHITE LINE AND 2400 L.F. OF 4" SINGLE WHITE SKIP LINE (10-30).
- ⑤ ITEM INCLUDES REMOVAL OF EXISTING PAVEMENT MARKINGS. CONTRACTOR SHALL COORDINATE WITH ENGINEER TO DETERMINE LIMITS OF PAVEMENT MARKING REMOVAL. ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHOULD BE OBLITERATED PER TDOT STANDARDS SO THAT IT IS NO LONGER VISIBLE TO DRIVER.
- ⑥ ITEM INCLUDES COST FOR CLEARING AND GRUBBING TREES AND BUSHES AT THE ENDS OF THE BRIDGES.

NOTE: SEE SECTION 617 AND 906.04 OF THE TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

GENERAL NOTES

GRADING

- 1. ANY AREA THAT IS DISTURBED OUTSIDE THE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- 2. THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

UTILITY NOTES:

- 2. THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.
- 3. UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR IT'S REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.
- 4. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE BID PRICE FOR OTHER ITEMS OF CONSTRUCTION.
- 5. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.
- 6. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106.

MISCELLANEOUS NOTE:

- 7. NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

PAVEMENT-RESURFACING NOTE:

- 8. THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

ROAD CLOSURE NOTE:

- 9. NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION; THESE PARTIES INCLUDE BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

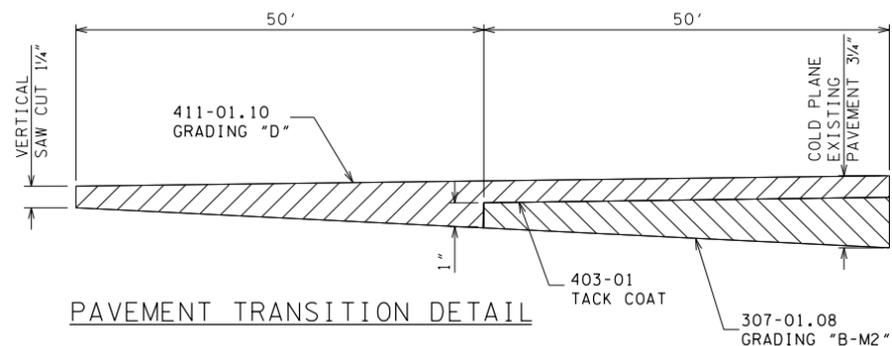
CONSTRUCTION WORK ZONE AND TRAFFIC CONTROL NOTES:

- 10. ADVANCE WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED IF THE SIGN FACE IS FULLY COVERED.
- 11. IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COST REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- 12. A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- 13. TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- 14. USE OF BARRICADES, PORTABLE BARRIER RAILS, VERTICAL PANELS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- 15. THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- 16. ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SPECIAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL

- 18. SEE SHEET 2H FOR EROSION PREVENTION AND SEDIMENT CONTROL DETAILS.

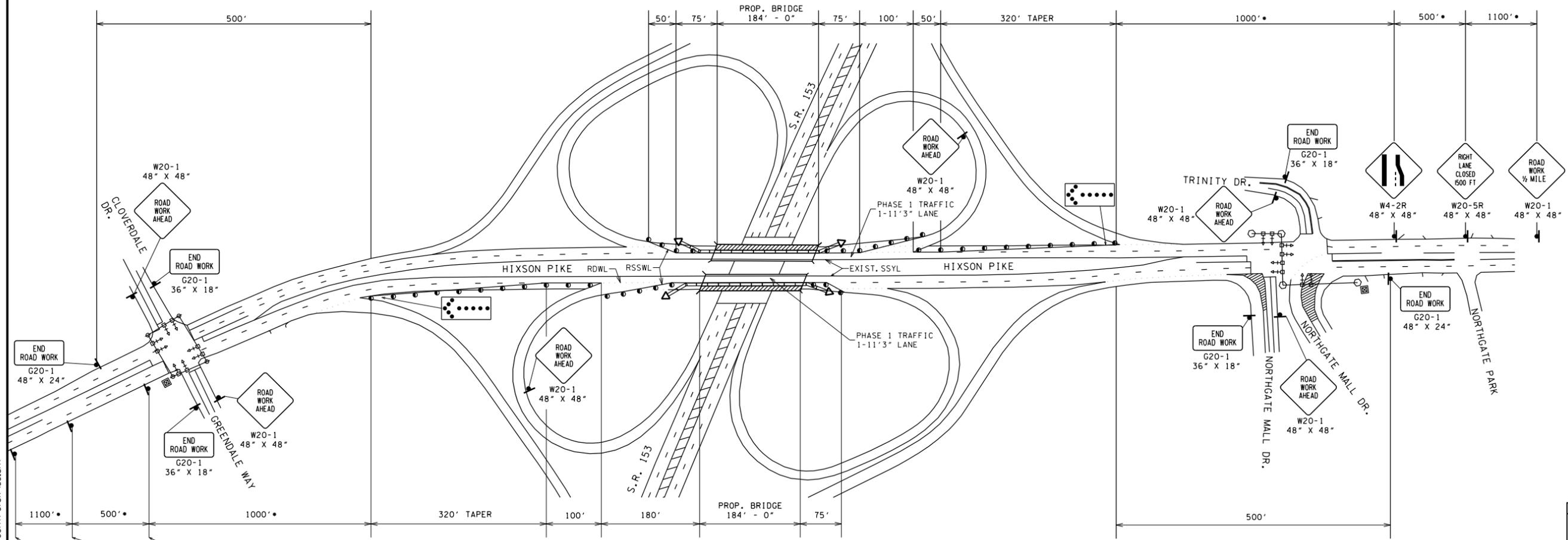
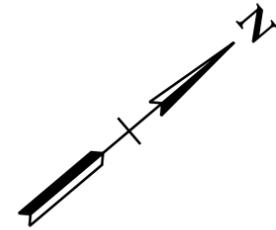


UNOFFICIAL SET

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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
ESTIMATED ROADWAY QUANTITIES, GENERAL NOTES, AND SPECIAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2015	33052-4248-04	2C



**SCHEMATIC OF PHASE I CONSTRUCTION
(HIXSON PIKE SIGNING ONLY)**

* DIMENSIONS ARE NOT TO SCALE. ACTUAL DIMENSIONS HAVE BEEN REDUCED SO THAT ALL SIGNS CAN BE DISPLAYED ON ONE SHEET.

UNOFFICIAL SET
NOT FOR BIDDING

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	TEMPORARY ATTENUATOR
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
	PORTABLE BARRIER RAIL
	DENOTES: WORK ZONE
	ARROW BOARD TYPE C (SINGLE ARROW)

* SEE SHEET 2G FOR ADDITIONAL TRAFFIC CONTROL NOTES AND DETAILS.

PHASE I NOTES:
1. PROVIDE TRAFFIC CONTROL PLAN TO MAINTAIN 1-11'3" LANE ON EACH BRIDGE AT ALL TIMES.

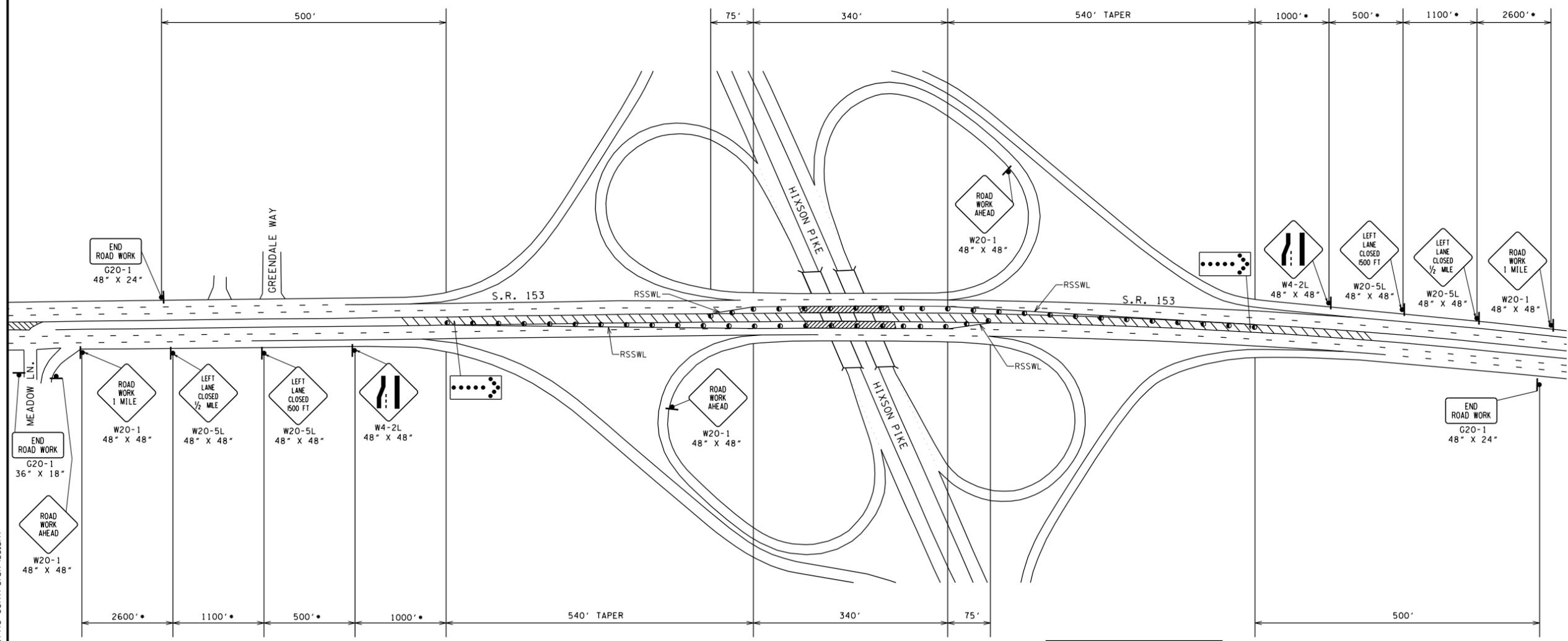
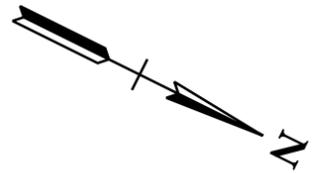
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

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TYPE	YEAR	PROJECT NO.	SHEET NO.
	2015	33052-4248-04	2D



SCHEMATIC OF PHASE I CONSTRUCTION
(S.R. 153 SIGNING ONLY)

* DIMENSIONS ARE NOT TO SCALE. ACTUAL DIMENSIONS HAVE BEEN
REDUCED SO THAT ALL SIGNS CAN BE DISPLAYED ON ONE SHEET.

UNOFFICIAL SET
NOT FOR BIDDING

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	TEMPORARY ATTENUATOR
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
	PORTABLE BARRIER RAIL
	DENOTES: WORK ZONE
	ARROW BOARD TYPE C (SINGLE ARROW)

* SEE SHEET 2G FOR ADDITIONAL TRAFFIC CONTROL NOTES AND DETAILS.

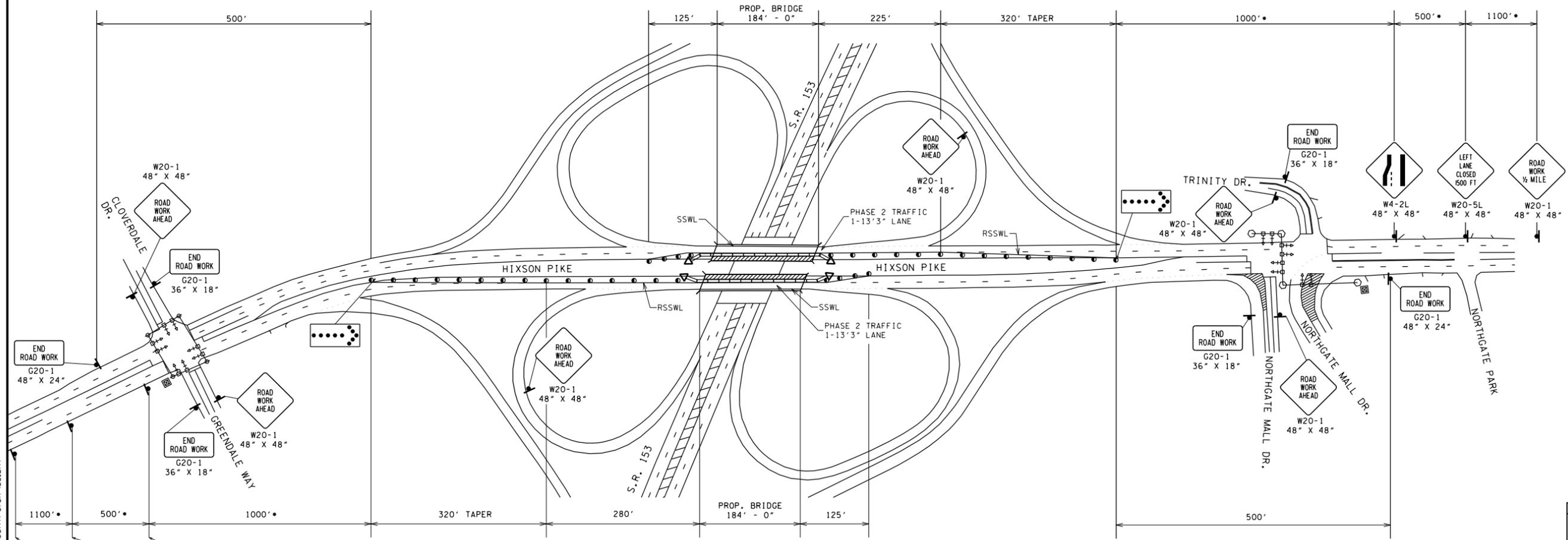
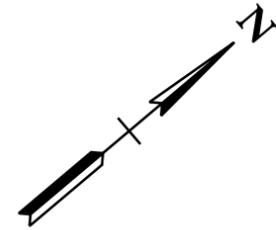
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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

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TYPE	YEAR	PROJECT NO.	SHEET NO.
	2015	33052-4248-04	2E



**SCHEMATIC OF PHASE II CONSTRUCTION
(HIXSON PIKE SIGNING ONLY)**

* DIMENSIONS ARE NOT TO SCALE. ACTUAL DIMENSIONS HAVE BEEN REDUCED SO THAT ALL SIGNS CAN BE DISPLAYED ON ONE SHEET.

UNOFFICIAL SET
NOT FOR BIDDING

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	TEMPORARY ATTENUATOR
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
	PORTABLE BARRIER RAIL
	DENOTES: WORK ZONE
	ARROW BOARD TYPE C (SINGLE ARROW)

* SEE SHEET 2G FOR ADDITIONAL TRAFFIC CONTROL NOTES AND DETAILS.

PHASE II NOTES:
1. PROVIDE TRAFFIC CONTROL PLAN TO MAINTAIN 1-13'3" LANE ON EACH BRIDGE AT ALL TIMES.

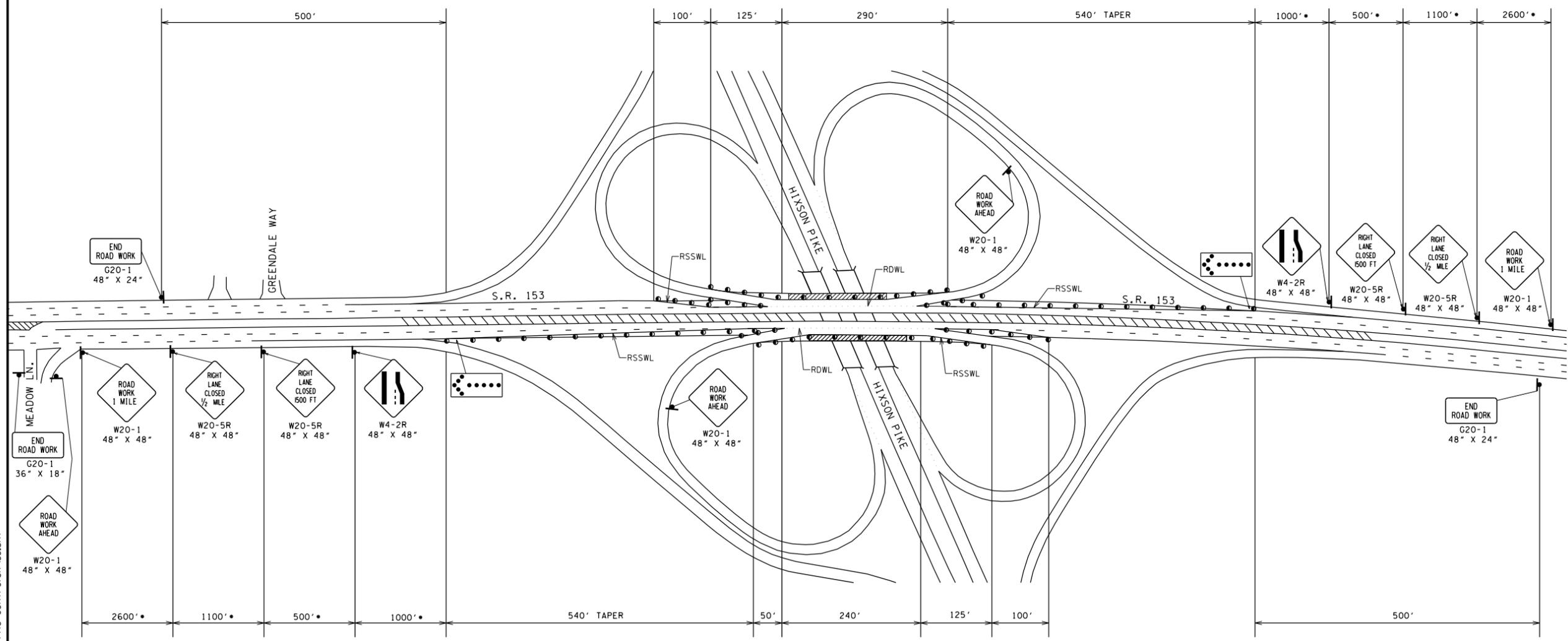
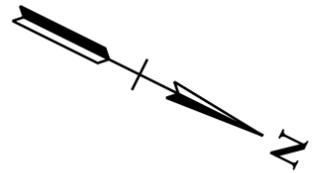
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DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2015	33052-4248-04	2F



**SCHEMATIC OF PHASE II CONSTRUCTION
(S.R. 153 SIGNING ONLY)**

* DIMENSIONS ARE NOT TO SCALE. ACTUAL DIMENSIONS HAVE BEEN REDUCED SO THAT ALL SIGNS CAN BE DISPLAYED ON ONE SHEET.

UNOFFICIAL SET

NOT FOR BIDDING

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	TEMPORARY ATTENUATOR
	SIGN (CONSTRUCTION)
	FLEXIBLE DRUMS (CHANNELIZING)
	PORTABLE BARRIER RAIL
	DENOTES: WORK ZONE
	ARROW BOARD TYPE C (SINGLE ARROW)

* SEE SHEET 2G FOR ADDITIONAL TRAFFIC CONTROL NOTES AND DETAILS.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	33052-4248-04	26

TRAFFIC CONTROL SIGNS					
CODE	SIZE	DESCRIPTION	TOTAL	QUANTITY	UNIT
G20-2	36" x 18"	END ROAD WORK	5	22.5	SQ. FT.
G20-2	48" x 24"	END ROAD WORK	4	32.0	SQ. FT.
W20-1	48" x 48"	ROAD WORK AHEAD	9	144.0	SQ. FT.
W20-1	48" x 48"	ROAD WORK 1/2 MILE	2	32.0	SQ. FT.
W20-1	48" x 48"	ROAD WORK 1 MILE	2	32.0	SQ. FT.
W20-5L	48" x 48"	LEFT LANE CLOSED 1500 FT.	4	64.0	SQ. FT.
W20-5L	48" x 48"	LEFT LANE CLOSED 1/2 MILE	2	32.0	SQ. FT.
W4-2L	48" x 48"	LEFT LANE MERGE SYMBOL	4	64.0	SQ. FT.
W20-5R	48" x 48"	RIGHT LANE CLOSED 1500 FT.	4	64.0	SQ. FT.
W20-5R	48" x 48"	RIGHT LANE CLOSED 1/2 MILE	2	32.0	SQ. FT.
W4-2R	48" x 48"	RIGHT LANE MERGE SYMBOL	4	64.0	SQ. FT.
TOTAL 712-06 SIGNS (CONSTRUCTION)				583	SQ. FT.

TRAFFIC CONTROL NOTES:

- ITEM 712-06, SIGNS (CONSTRUCTION), INCLUDES SIGNS SHOWN AND IS CONSIDERED A MINIMUM. ADDITIONAL SIGNS MAY BE REQUIRED BY THE ENGINEER AND WILL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM 712-06.
- CONSTRUCTION SIGNING AND TRAFFIC CONTROL SHALL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 712 OF THE TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- THE CONTRACTOR IS NOT RELIEVED ON ANY RESPONSIBILITY TO PROVIDE ADEQUATE AND SAFE TRAFFIC CONTROL MEASURES BY THE ABOVE
- CONTRACTOR SHALL FOLLOW TDOT STANDARD DRAWINGS TO ESTABLISH TRAFFIC CONTROL PLAN: (REFER TO: T-WZ-11, T-WZ-12, T-WZ-40 AND T-WZ-41).
- UNLESS OTHERWISE NOTED, REFER TO TDOT STD. TRAFFIC CONTROL DRAWINGS TO DETERMINE TYPICAL FLEXIBLE DRUM SPACING AND PORTABLE BARRIER WALL TAPER LENGTH.
- CONTRACTOR SHALL REMOVE EXISTING PAVEMENT MARKINGS AS REQUIRED TO IMPLEMENT TRAFFIC CONTROL PLAN. CONTRACTOR SHALL COORDINATE WITH ENGINEER TO DETERMINE LIMITS OF PAVEMENT MARKING REMOVAL. ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHOULD BE OBLITERATED PER TDOT STANDARDS SO THAT IT IS NO LONGER VISIBLE TO DRIVER, PAID UNDER PAY ITEM 712-01 (TRAFFIC CONTROL).

ESTIMATED ROADWAY QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	
4	712-01	TRAFFIC CONTROL	LS	1
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	125
	712-06	SIGNS (CONSTRUCTION)	S.F.	583
1	712-09.01	REMOVABLE PAVEMENT MARKING LINE	L.F.	11,150
2	716-12.01	ENHANCED FLATLINE THERMO PVMT MRKNG (4IN LINE)	L.M.	0.76
3	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	0.61
	717-01	MOBILIZATION	LS	1
	712-08.03	ARROW BOARD (TYPE C)	EACH	4

- INCLUDES 5025 L.F. OF 4" REMOVABLE SINGLE SOLID WHITE LINE AND 250 L.F. OF REMOVABLE DOTTED WHITE LINE FOR HIXSON PIKE AND 5300 L.F. OF 6" REMOVABLE SINGLE SOLID WHITE LINE AND 575 L.F. OF REMOVABLE DOTTED WHITE LINE FOR S.R. 153.
- INCLUDES 725 L.F. OF 4" SINGLE SOLID WHITE LINE, 770 L.F. OF 4" SINGLE SOLID YELLOW LINE, 650 L.F. OF DOTTED WHITE LINE AND 1870 L.F. OF 4" SINGLE WHITE SKIP LINE (10-30).
- INCLUDES 800 L.F. OF 6" SINGLE SOLID WHITE LINE AND 2400 L.F. OF 4" SINGLE WHITE SKIP LINE (10-30).
- ITEM INCLUDES REMOVAL OF EXISTING PAVEMENT MARKINGS. CONTRACTOR SHALL COORDINATE WITH ENGINEER TO DETERMINE LIMITS OF PAVEMENT MARKING REMOVAL. ALL REMOVAL OF EXISTING PAVEMENT MARKINGS SHOULD BE OBLITERATED PER TDOT STANDARDS SO THAT IT IS NO LONGER VISIBLE TO DRIVER.

UNOFFICIAL SET

NOT FOR BIDDING

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

TYPE	YEAR	PROJECT NO.	SHEET NO.
	2015	33052-4248-04	2H

SAFETY APPURTENANCES AND FENCE

NO.	CURRENT REV.	DESCRIPTION
S-PL-3		SAFETY PLAN; MINIMUM INSTALLATION AT BRIDGE ENDS
S-GR31-1		W-BEAM GUARDRAIL
S-GRC-1		GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL
S-GRT-2	11-03-14	TYPE 38 GUARDRAIL TERMINAL

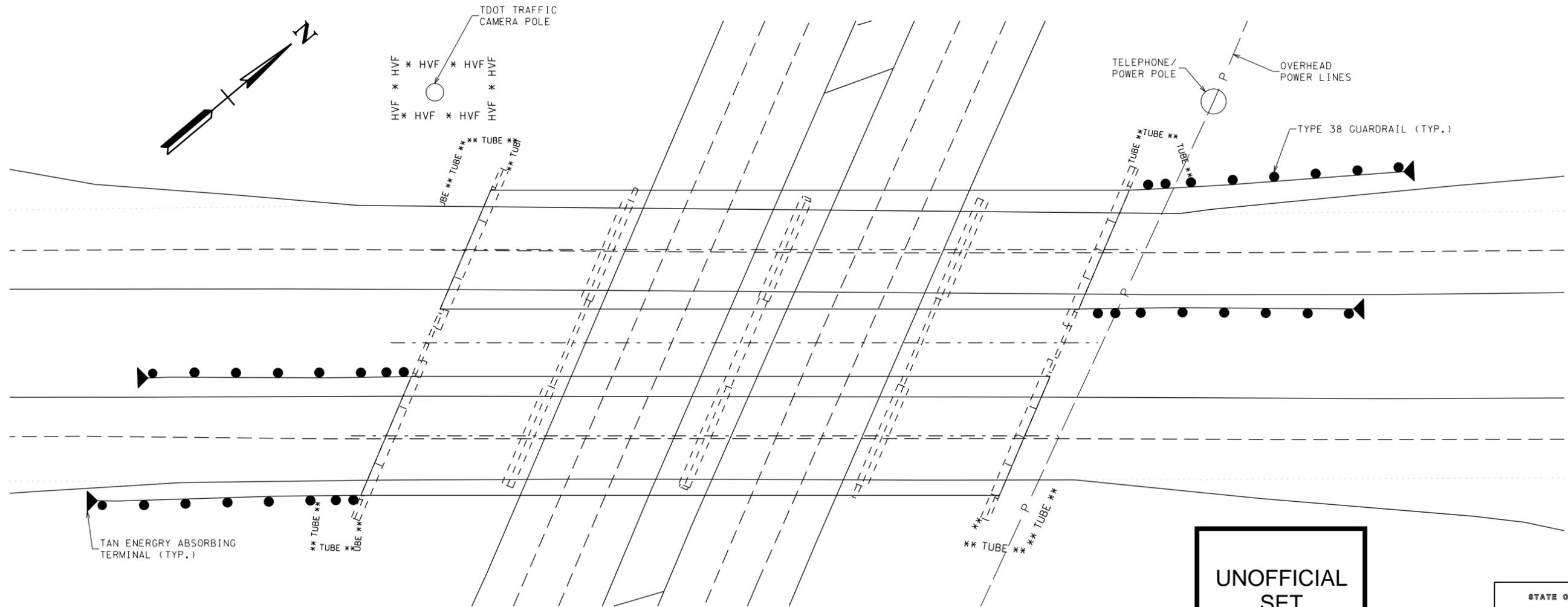
NOTE: SEE STANDARD DRAWINGS FOR DETAILS NOT SHOWN

SAFETY APPURTENANCE QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QTY
705-01.01	GUARDRAIL AT BRIDGE ENDS	L.F.	108
705-04.07	TAN ENERGY ABSORBING TERM (NCHRP 350, TL3)	EACH	4

LEGEND:

- ** TUBE ** TUBE ** TEMPORARY SILT FENCE (W/ BACKING)
- * HVF * HVF HIGH VISIBILITY FENCE
- P — OVERHEAD POWER LINES

EROSION PREVENTION & SEDIMENT CONTROL QUABTITIES			
ITEM NO.	DESCRIPTION	UNIT	QTY
707-08.11	HIGH VISIBILITY CONSTRUCTION FENCE	L.F.	20
740-11.02	TEMPORARY SEDIMENT TUBE 12IN	L.F.	60



PLAN VIEW
SHOWING GUARDRAIL LAYOUT
AND EROSION CONTROL PLAN
SCALE: 1/16" = 1'-0"

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
GUARDRAIL LAYOUT AND EROSION CONTROL PLAN

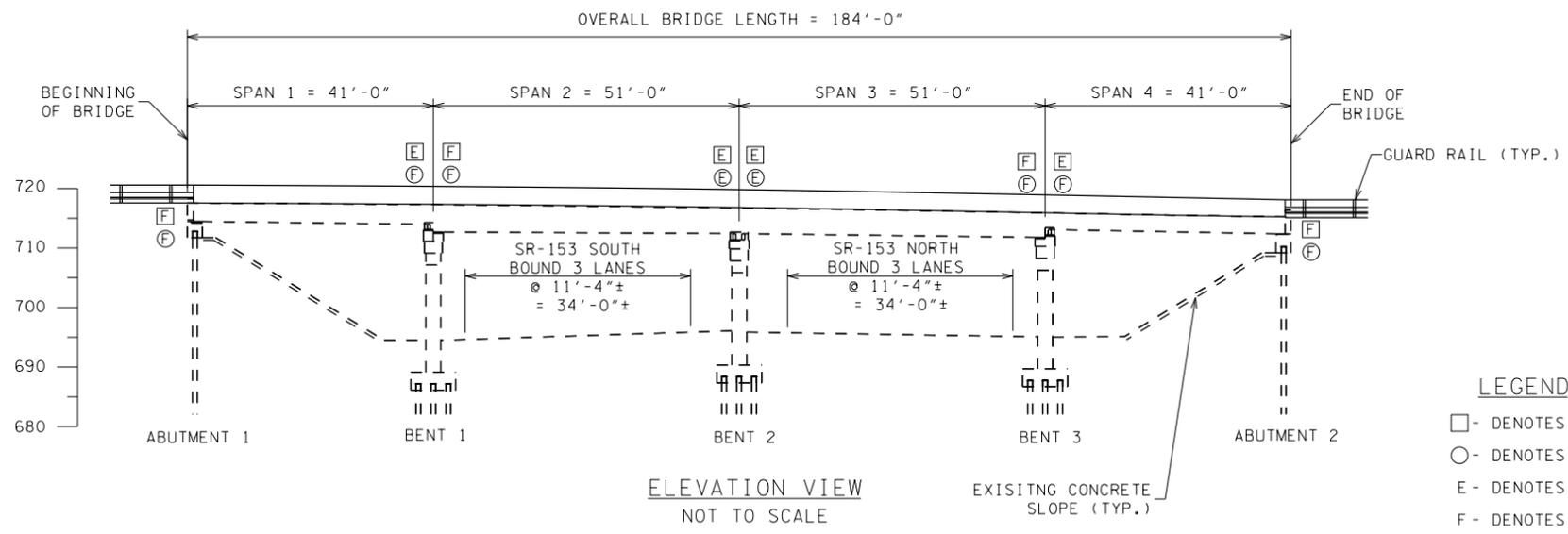
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PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

DWG NO.	DESCRIPTION
F-4-67 THRU 72	EXISTING AS BUILT BRIDGE DRAWINGS
E-12-105	STANDARD CONCRETE HANDRAIL



ELEVATION VIEW
NOT TO SCALE

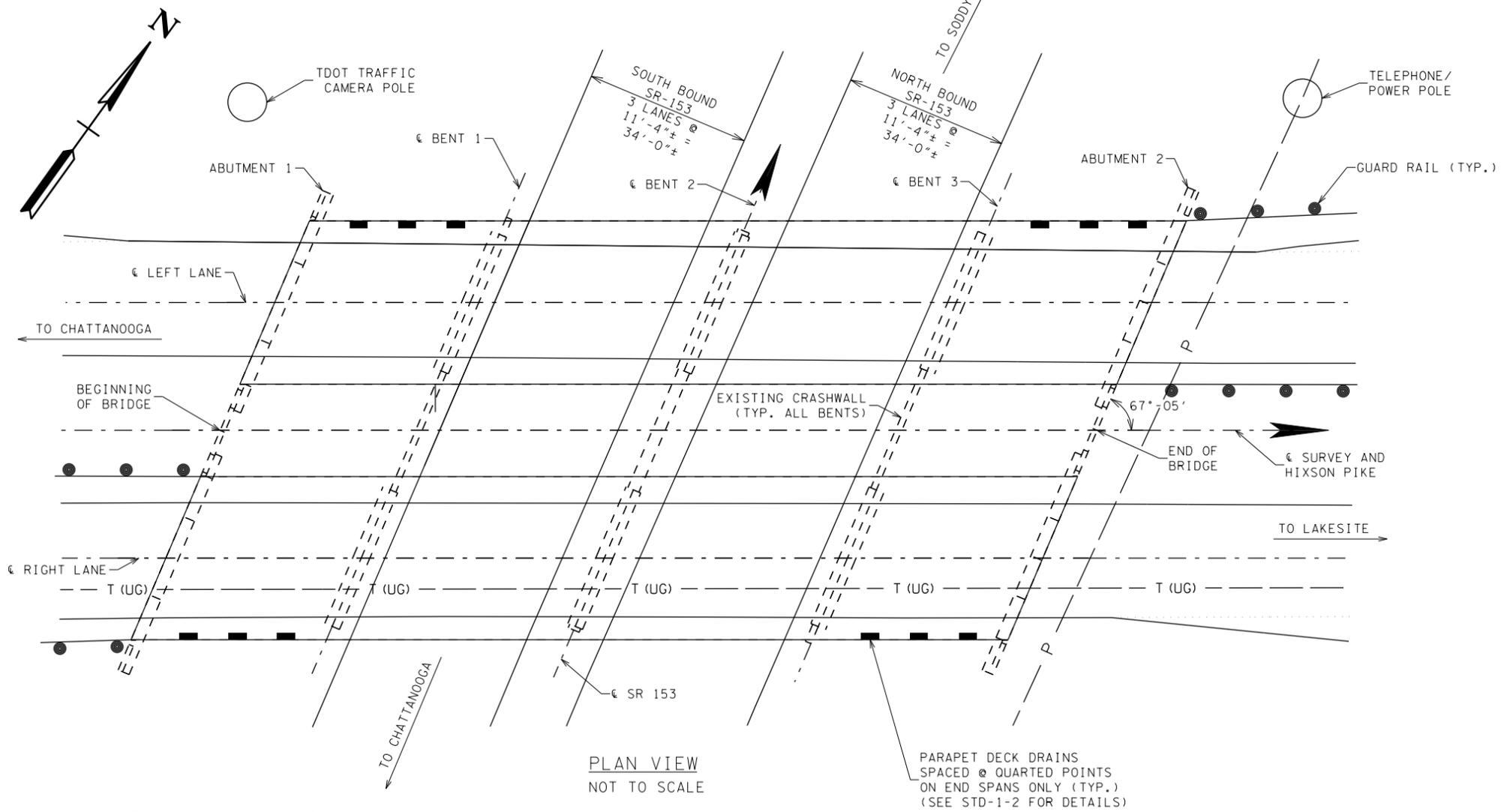
NOTE:
THIS BRIDGE IS SHOWN AND LABELED
ACCORDING TO THE EXISTING
AS-BUILT PLANS F-4-67.

LEGEND

- - DENOTES EXISTING CONNECTION
- - DENOTES PROPOSED CONNECTION
- E - DENOTES EXPANSION JOINT
- F - DENOTES FIXED CONNECTION
- P — OVER HEAD POWER LINE
- - T (UG) - - UNDER GROUND TELEPHONE

SCOPE OF WORK

1. PROVIDE TRAFFIC CONTROL PLAN TO MAINTAIN 1-WAY TRAFFIC ON EACH BRIDGE AND TO KEEP ADJACENT RAMP ACCESS OPEN AS REQUIRED DURING CONSTRUCTION.
2. PROVIDE TRAFFIC CONTROL PLAN FOR SR 153 LANE CLOSURES.
3. REMOVE ALL VEGETATION AROUND ABUTMENTS, BENTS, CRASHWALLS, AND CONCRETE SLOPES.
4. REPAIR SPALLED/DELAMINATED ABUTMENTS AND BENTS.
5. REPAIR ALL CONCRETE CRACKS WITH EPOXY.
6. REMOVE EXISTING CANTILEVERS AND RAILS AND REPLACE WITH NEW CANTILEVERS AND STD-1-1SS BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPETS.
7. SCARIFY EXISTING DECK AND ADD A NEW 4 1/2 INCH REINFORCED CONCRETE OVERLAY.
8. REMOVE EXPANSION JOINTS AT PIERS 1 AND 3 BY LOCKING UP EXISTING STEEL EXPANSION BEARINGS BY WELDING THE ROCKER TO BASE PLATE.
9. RESET, CLEAN AND REPAINT ALL STEEL BEARINGS ON THE STRUCTURES.
10. PROVIDE A STRIP SEAL EXPANSION JOINT AT PIER NO. 2 TO ACCOMMODATE ALL THE THERMAL MOVEMENT OF THE STRUCTURES.
11. INSTALL NEW PARAPET DECK DRAINS.
12. PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.
13. PROVIDE DRAINAGE BEHIND ALL EXISTING ABUTMENT END-WALLS RUNNING THE DRAINS BETWEEN THE BRIDGES.
14. REWORK APPROACHES TO PROVIDE A UNIFORM TRANSITION AT BRIDGE ENDS.
15. APPLY BRIDGE TEXTURE COATING TO ALL BEAMS, CANTILEVERS, BRIDGE PARAPETS, PIERS, ABUTMENTS AND WINGS. PROVIDE EROSION AND SEDIMENT CONTROL MEASURES AS REQUIRED.
16. INSTALL GUARDRAIL WITH REQUIRED END TREATMENT AND PROVIDE PROPER RADII FOR RAMP ACCESS.



PLAN VIEW
NOT TO SCALE

LIST OF BRIDGE DRAWINGS

DWG NO.	LAST REV DATE	TITLE
BR-118-123		LAYOUT OF BRIDGE TO BE REPAIRED
BR-118-124		ESTIMATED BRIDGE QUANTITIES
BR-118-125		GENERAL NOTES
BR-118-126		PHASE CONSTRUCTION
BR-118-127		SUPERSTRUCTURE
BR-118-128		OVERLAY REINFORCEMENT
BR-118-129		SUPERSTRUCTURE REPAIR DETAILS (1 OF 2)
BR-118-130		SUPERSTRUCTURE REPAIR DETAILS (2 OF 2)
BR-118-131		ABUTMENT AND BENT REPAIR
BR-118-132		BRIDGE REPAIR DETAILS
BR-118-133		EXPANSION JOINT DETAIL
BR-118-134		BILL OF STEEL

STANDARD BRIDGE DRAWINGS

STD	DATE	TITLE
STD-1-1SS	05-01-14	BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET
STD-3-2	11-01-10	STRIP SEAL EXPANSION JOINT
STD-10-1	04-08-05	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
SBR-2-115	01-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "F"
SBR-2-116	01-04-96	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT TYPES "A" THRU "J"
SBR-2-119	05-30-96	STRIP SEAL EXPANSION JOINTS - REPLACEMENT CONSTRUCTION DETAILS TYPE "E" AND "F"

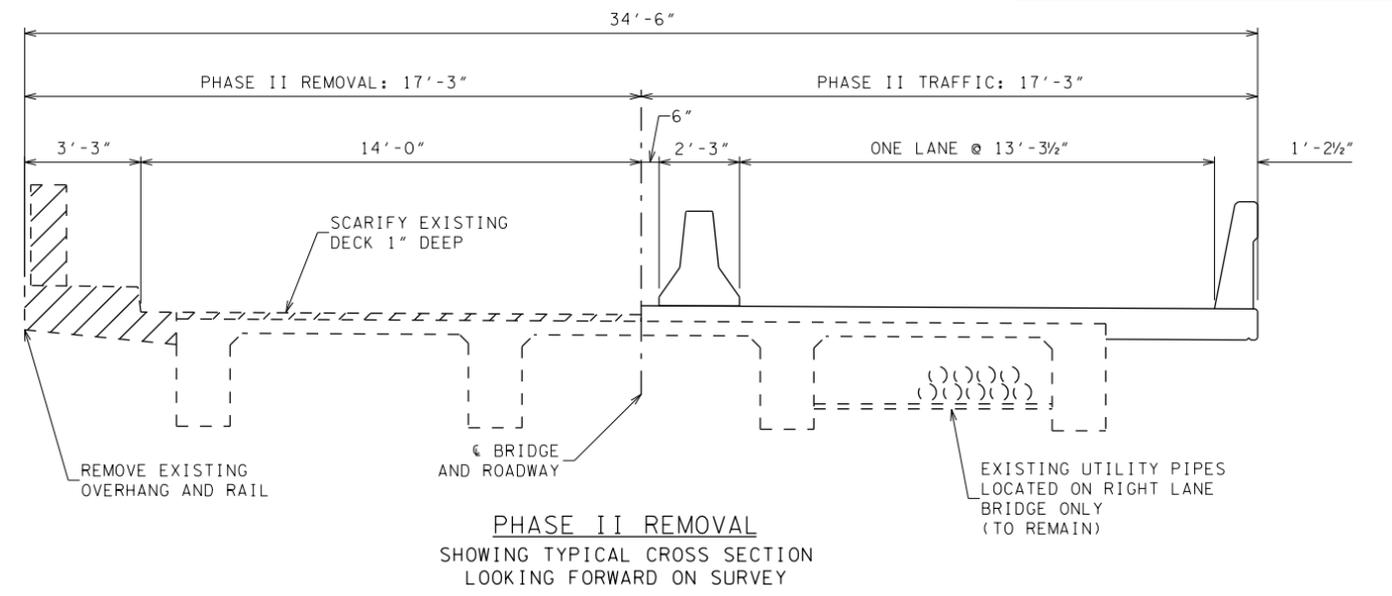
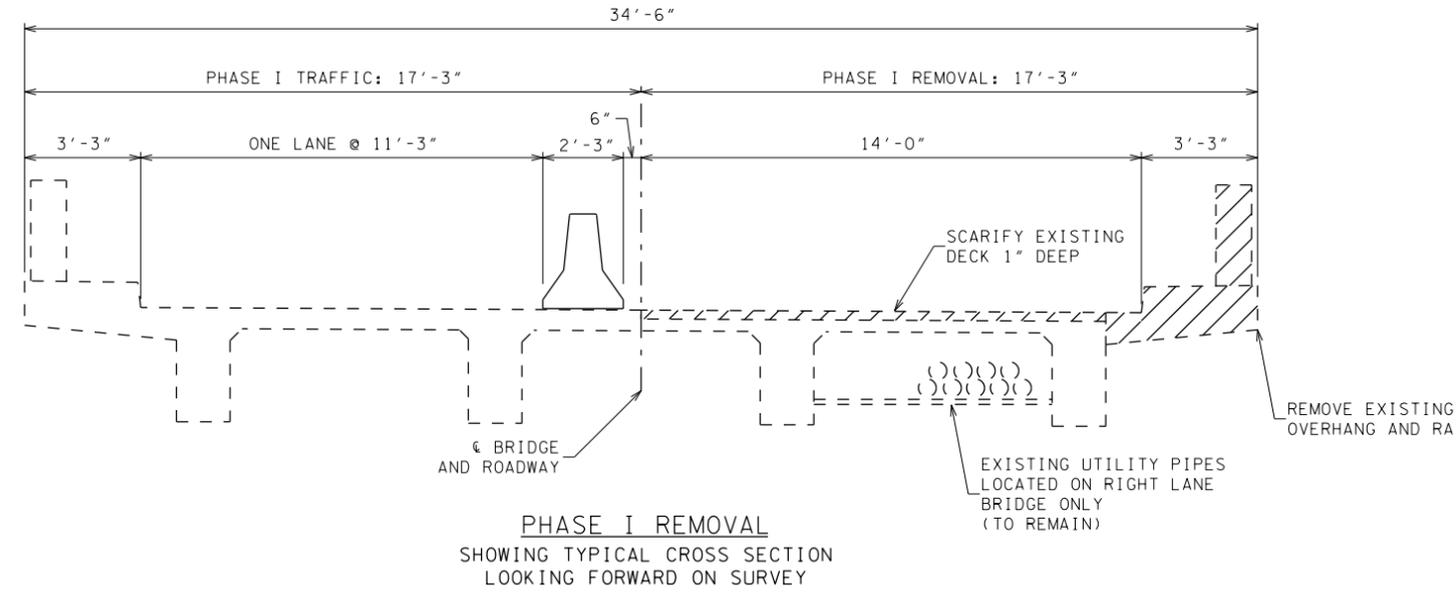
UNOFFICIAL SET
 NOT FOR BIDDING

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 LAYOUT OF BRIDGE TO BE REPAIRED

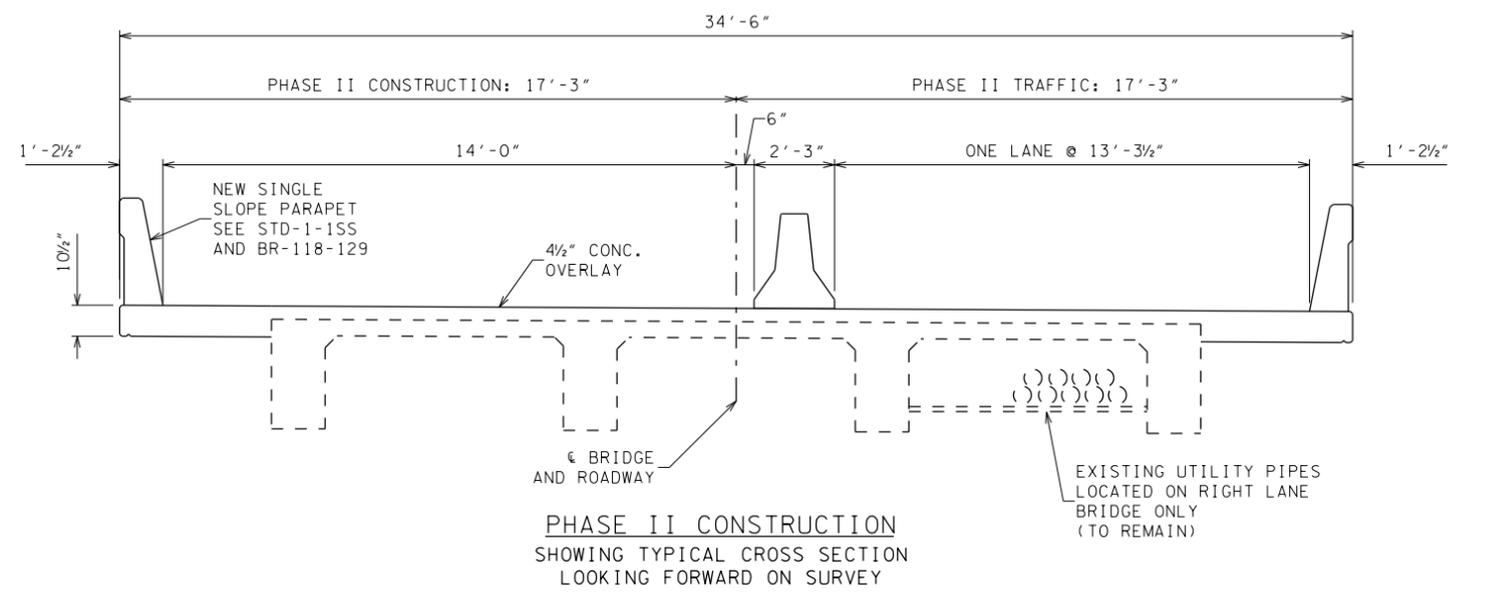
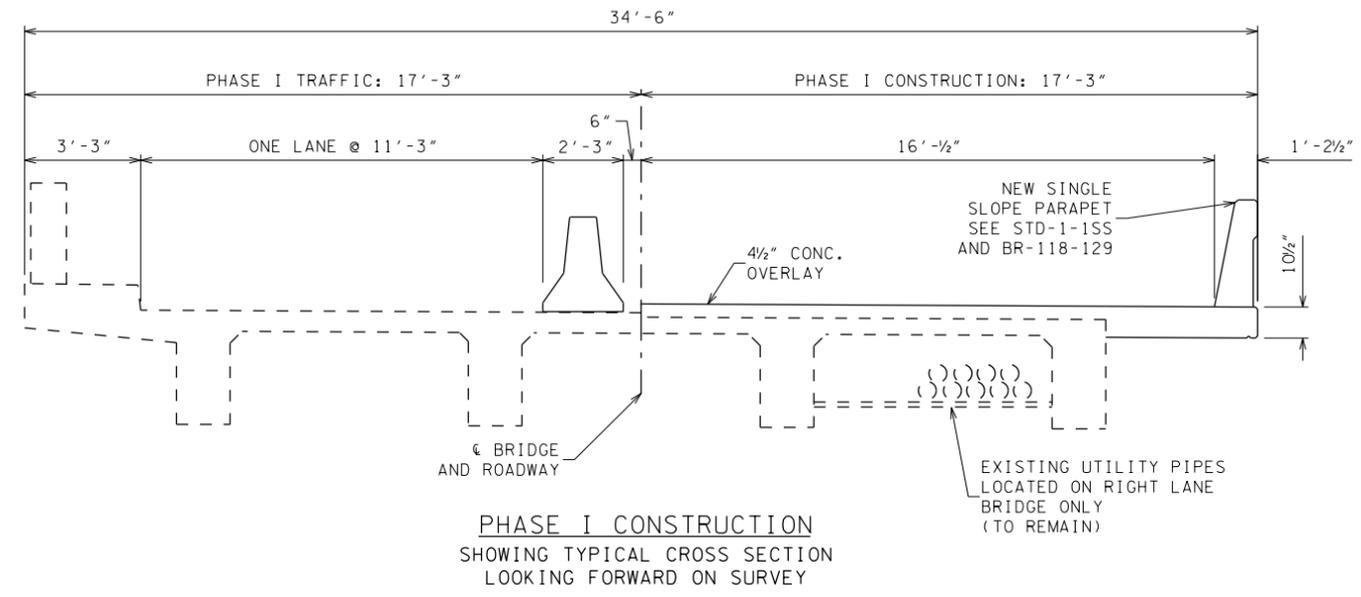
 BRIDGE NO 33-3588-4.32
 LT. & RT. LANES
 HIXSON PIKE
 OVER
 SR-153
 HAMILTON COUNTY
 2015

DESIGNED BY: JMT DATE: 10/2014
 DRAWN BY: JMT DATE: 10/2014
 SUPERVISED BY: BEB DATE: 10/2014
 CHECKED BY: HP DATE: 10/2014

PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



NOTE: CROSS SECTIONS AND PHASE CONSTRUCTION PLAN ARE TYPICAL FOR BOTH LEFT AND RIGHT BRIDGES.



NOTE: CONTRACTOR MAY WORK ON BOTH BRIDGES AT THE SAME TIME UTILIZING THE SAME TRAFFIC CONTROL PLAN FOR SR 153.

UNOFFICIAL SET

NOT FOR BIDDING

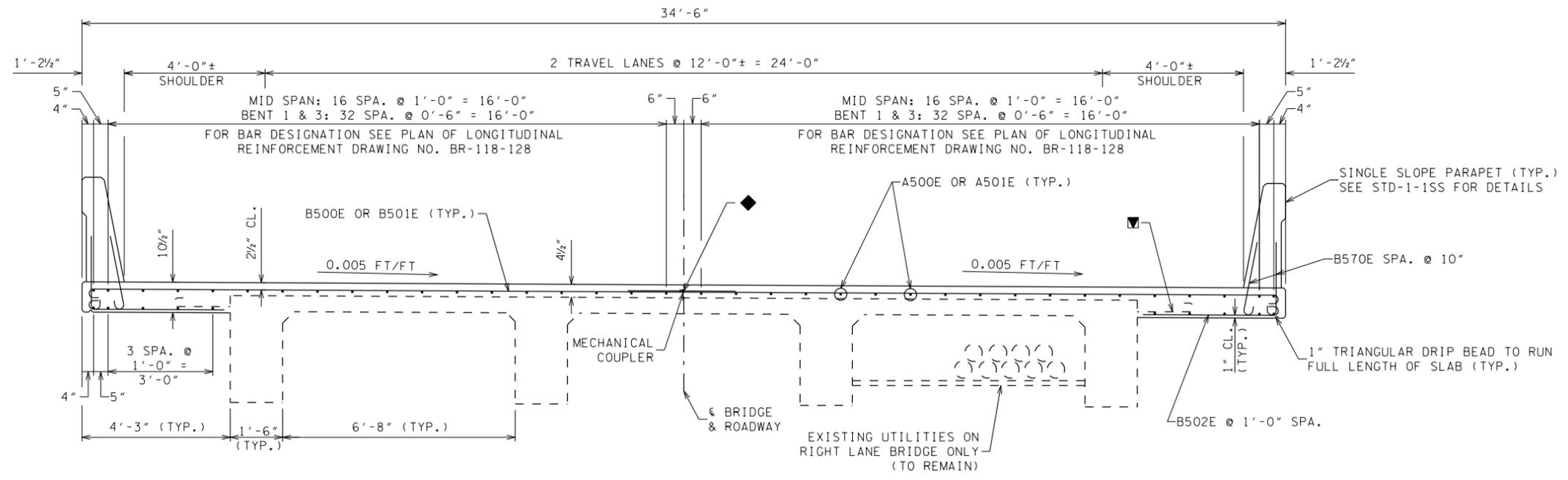
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
PHASE CONSTRUCTION

BRIDGE NO 33-3588-4.32
LT. & RT. LANES
HIXSON PIKE
OVER
SR-153
HAMILTON COUNTY
2015

DESIGNED BY: JMT DATE: 10/2014
DRAWN BY: JMT DATE: 10/2014
SUPERVISED BY: BEB DATE: 10/2014
CHECKED BY: HP DATE: 10/2014

PROJECT NO.	YEAR	SHEET NO.
33052-4248-04	2015	

REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL CROSS SECTION THROUGH SPANS 1 & 4
LOOKING FORWARD ON SURVEY

****SPECIAL NOTE REGARDING ELEVATIONS****

THE ENGINEER MAY ADJUST THE PLANS ELEVATIONS SO THAT THE CONCRETE OVERLAY IS AT A MINIMUM THICKNESS OF 4 1/2 INCHES.

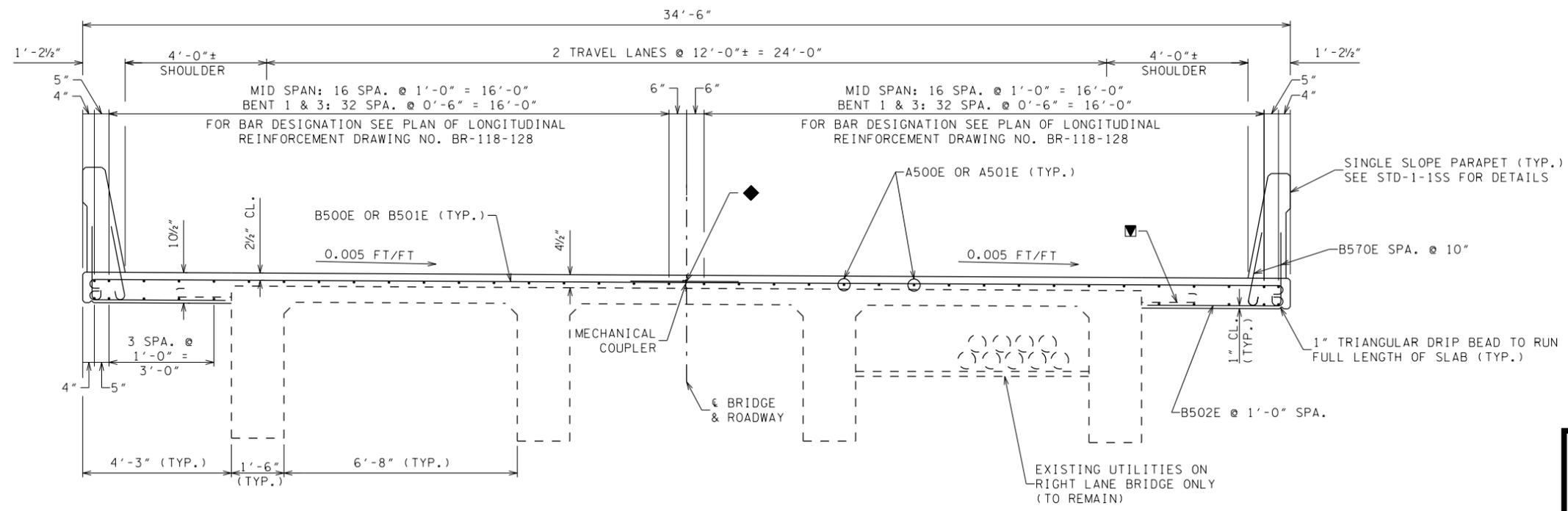
- ▼ EXISTING STEEL SHALL BE CLEANED, STRAIGHTENED, PAINTED, AND INCORPORATED INTO NEW CONSTRUCTION. IF THE CONTRACTOR ELECTS TO SAW THE EXISTING CANTILEVER OFF, THE EXISTING STEEL CAN BE REPLACED BY B503E SPACED @ 1'-6" DRILLED AND GROUTED (1'-4" PROJECTION & 1'-0" EMBEDMENT). THIS SHALL BE DONE AT NO EXTRA COST TO THE PROJECT. (TYP.)
- ◆ CONTRACTOR SHALL MOVE BAR A501E OFF OF € PHASE CONSTRUCTION LINE AND INTO PHASE I OR II CONSTRUCTION.

NOTES:

1. ALL COST TO FURNISH AND INSTALL SLAB STEEL INCLUDING COUPLERS SHALL BE PAID FOR UNDER ITEM NO. 604-02.03, EPOXY COATED REINFORCING STEEL, LBS.
2. ALL COST TO FURNISH AND INSTALL 4 1/2" CONCRETE OVERLAY AND 10 1/2" OVERHANGS SHALL BE PAID FOR UNDER ITEM NO. 604-03.09, CLASS "D" CONCRETE (BRIDGE DECK), C.Y.
3. ALL COST TO CLEAN, STRAIGHTEN, PAINT, AND INCORPORATE EXISTING REINFORCING STEEL INTO NEW SLAB POUR SHALL BE INCORPORATED IN ITEM NO. 604-02.03, EPOXY COATED REINFORCING STEEL.

ESTIMATED QUANTITIES

	604-02.03 EPOXY COATED REINFORCING STEEL LBS.	604-03.09 CLASS "D" CONCRETE (BRIDGE DECK) C.Y.
LT. LANE	27,486	120
RT. LANE	27,486	120



TYPICAL CROSS SECTION THROUGH SPANS 2 & 3
LOOKING FORWARD ON SURVEY

**UNOFFICIAL
SET**

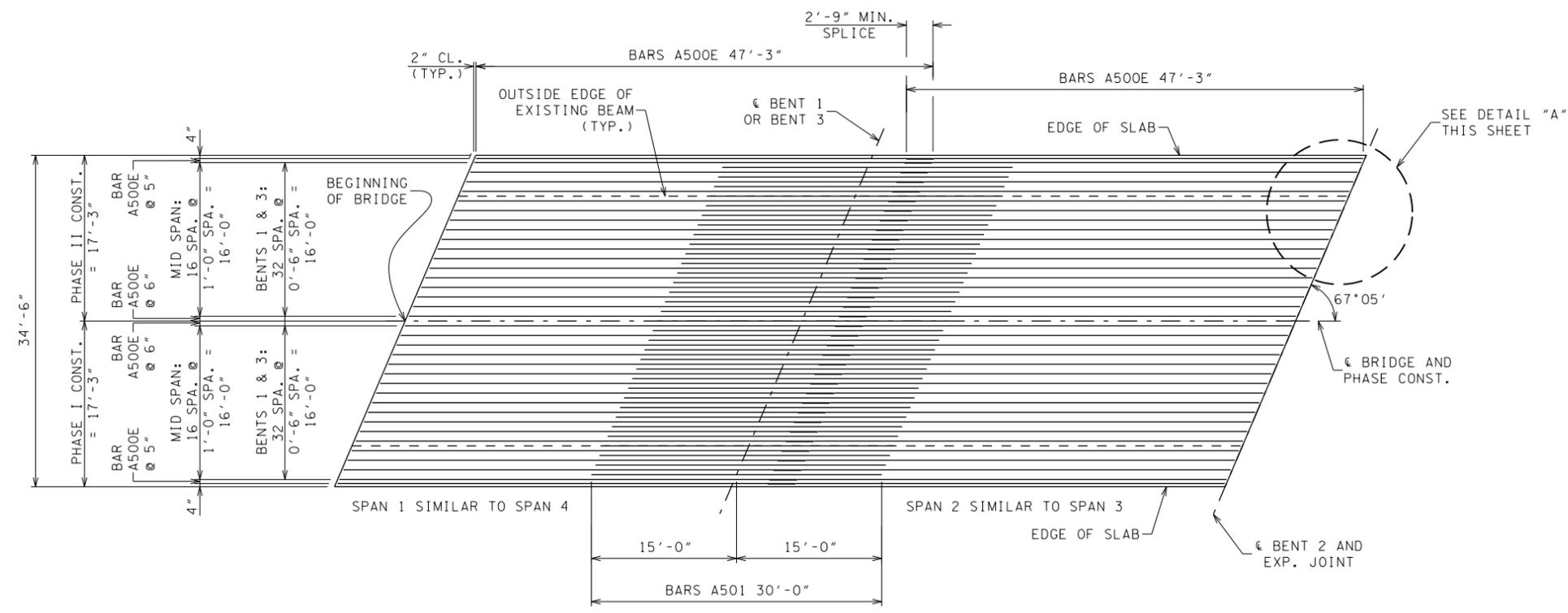
NOT FOR
BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE

BRIDGE NO 33-3588-4.32
LT. & RT. LANES
HIXSON PIKE
OVER
SR-153
HAMILTON COUNTY
2015

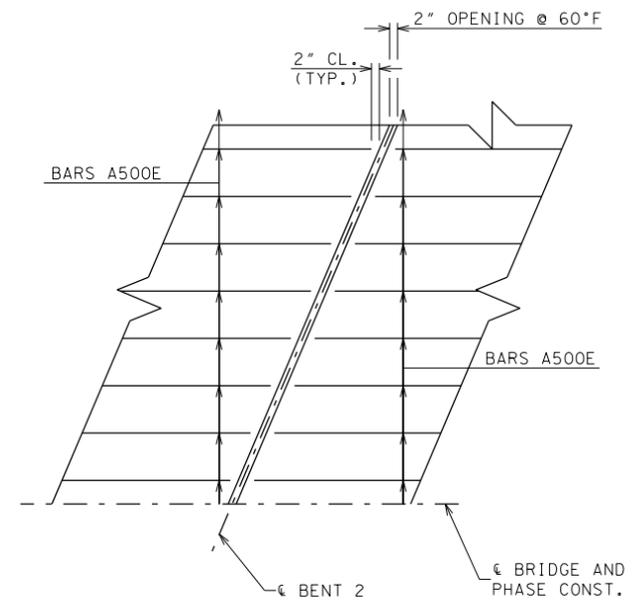
DESIGNED BY: JMT DATE: 10/2014
DRAWN BY: JMT DATE: 10/2014
SUPERVISED BY: BEB DATE: 10/2014
CHECKED BY: HP DATE: 10/2014

PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



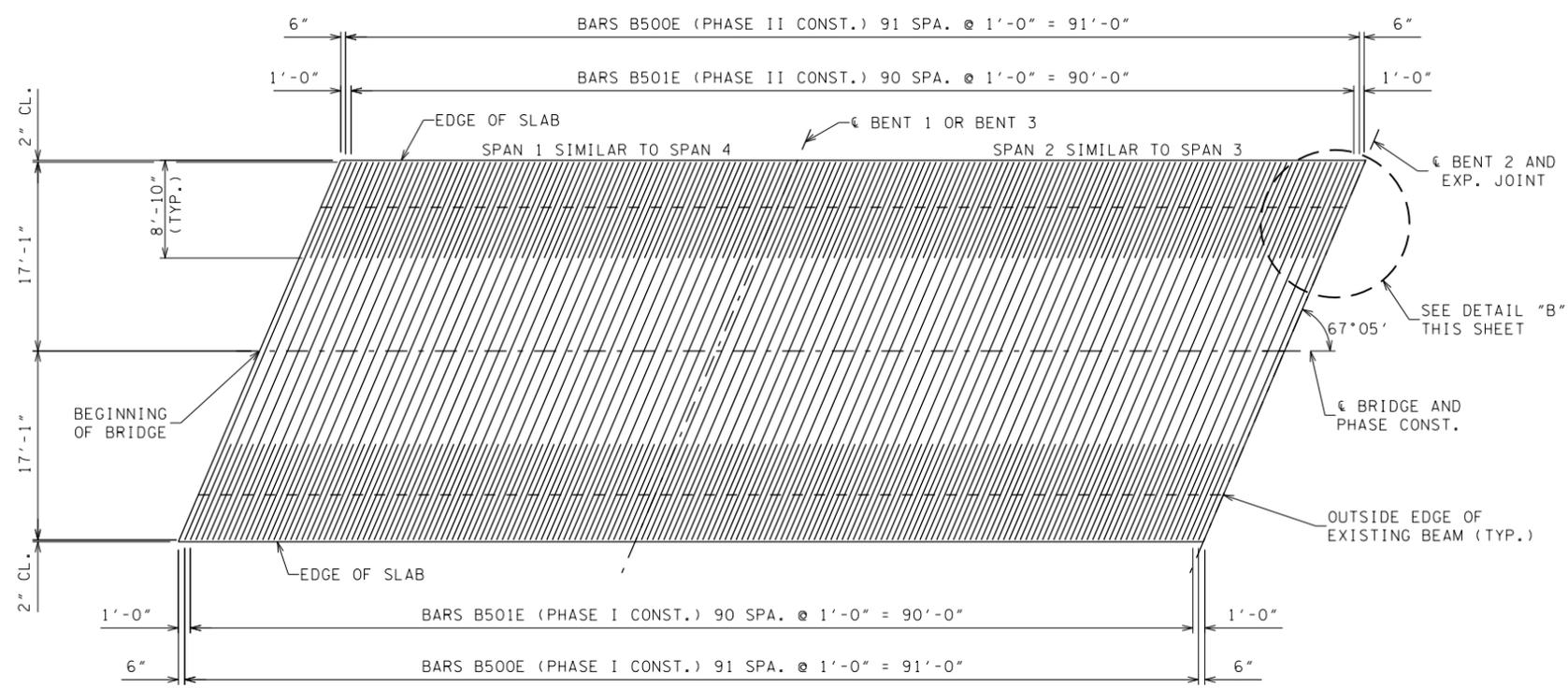
LONGITUDINAL DECK REINFORCEMENT
SHOWING TYPICAL PLAN VIEW OF SPANS 1 AND 2

NOTE: REINFORCING BARS ARE SYMMETRICAL ABOUT € BENT 2.

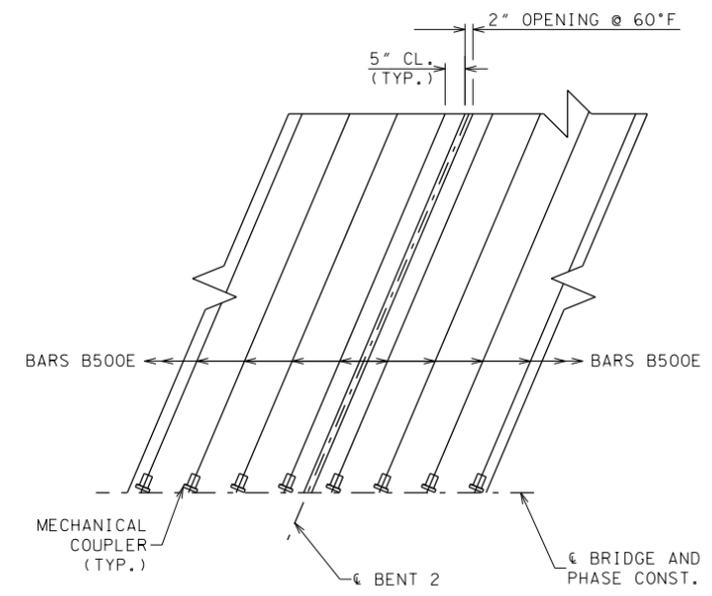


DETAIL "A"
NO SCALE

NOTE: DETAIL "A" AND DETAIL "B" ARE SYMMETRICAL ABOUT € BRIDGE AND PHASE CONSTRUCTION LINE.



TRANSVERSE DECK REINFORCEMENT
SHOWING TYPICAL PLAN VIEW OF SPANS 1 AND 2



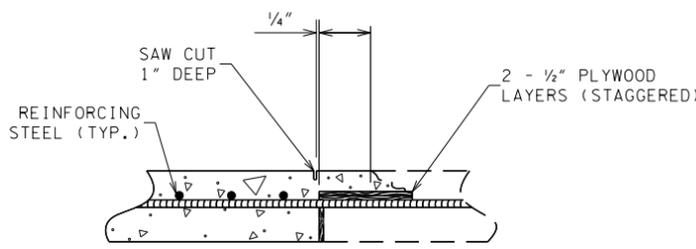
DETAIL "B"
NO SCALE

UNOFFICIAL SET
NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
OVERLAY REINFORCEMENT
BRIDGE NO 33-3588-4.32
LT. & RT. LANES
HIXSON PIKE
OVER
SR-153
HAMILTON COUNTY
2015

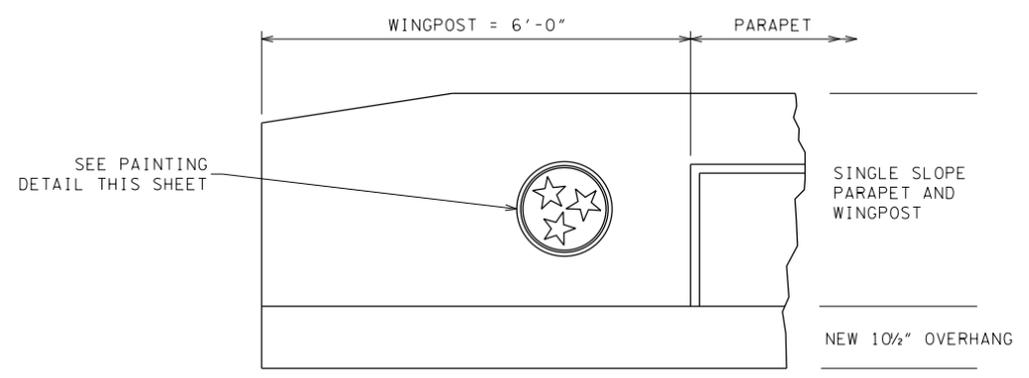
DESIGNED BY: JMT DATE: 10/2014
DRAWN BY: JMT DATE: 10/2014
SUPERVISED BY: BEB DATE: 10/2014
CHECKED BY: HP DATE: 10/2014

PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION



SLAB CONSTRUCTION JOINT DETAIL

NOTE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION EXCEPT NO JOINT MAY BE LOCATED CLOSER THAN 1/5 SPAN LENGTH FROM AN INTERIOR SUPPORT. THE CONTRACTOR SHALL MAKE ADEQUATE PROVISIONS DURING PLACEMENT OF SLAB TO PREVENT THE EXTERIOR BEAM FROM TWISTING. NO EQUIPMENT SHALL BE PERMITTED ON THE BRIDGE UNTIL ALL POURS ARE MADE AND THE CONCRETE IS PROPERLY CURED. ALL SLAB CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE SLAB CONSTRUCTION JOINT DETAIL SHOWN ABOVE.



TENNESSEE SEAL DETAIL

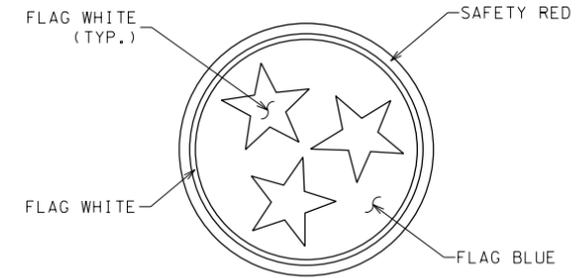
SHOWING TENNESSEE SEAL ON WINGPOST

NOTES:

TENNESSEE STATE SEAL TO BE "EMBOSS" INTO THE CONCRETE.
 TENNESSEE STATE SEAL SHALL BE PAINTED.

PAINTING STATE SEAL:

THE TENNESSEE STATE SEAL SHALL BE PAINTED WITH THE FOLLOWING PAINTS OR APPROVED EQUAL. IF THE CONTRACTOR ELECTS USE OF AN APPROVED EQUAL PAINT FROM A DIFFERENT COMPANY, IT SHALL BE A MARINE ACRYLIC GLOSS PAINT WITH A SIMILAR COLOR AND PAINT PROPERTIES. A COLOR SAMPLE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE COST OF THE PREPARATION OF SURFACES, PAINT, SEALER, SEALING THE PAINTING SURFACES, AND ALL LABOR REQUIRED FOR PAINTING THE STATE SEAL SHALL BE INCLUDED IN OTHER ITEMS.



PAINTING DETAIL

SHOWING LOCATION OF COLORS

RED:

SHERWIN WILLIAMS SHER-CRYL HPA HIGH PERFORMANCE ACRYLIC GLOSS "SAFETY RED" PRODUCT NO.: B66 R300; SALES NO.: 6403-31922

WHITE:

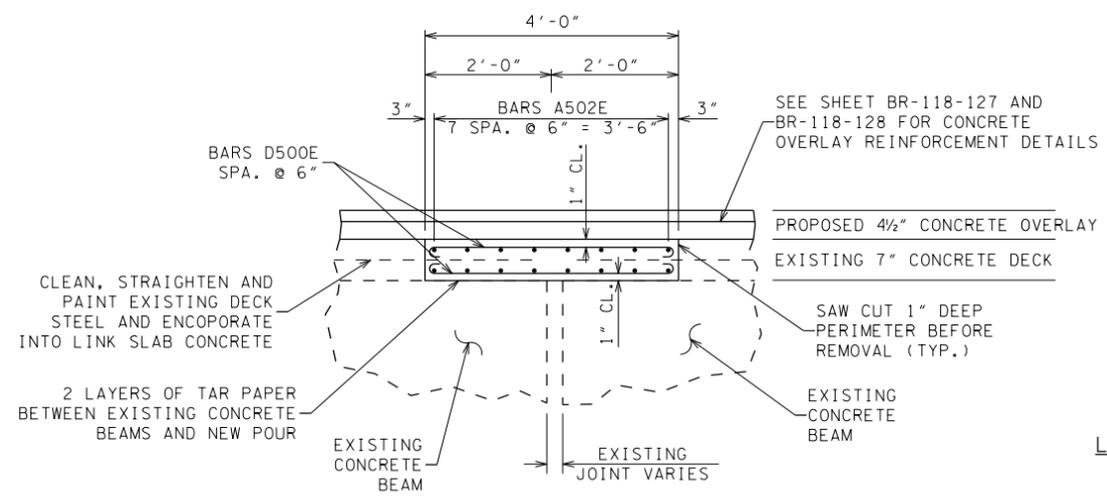
SHERWIN WILLIAMS SHER-CRYL HPA HIGH PERFORMANCE ACRYLIC GLOSS "FLAG WHITE" PRODUCT NO.: B66 T304; SALES NO.: 6401-74215

BLUE:

SHERWIN WILLIAMS SHER-CRYL HPA HIGH PERFORMANCE ACRYLIC GLOSS "FLAG BLUE" PRODUCT NO.: B66 T304; SALES NO.: 6401-74215

CLEAR COAT:

WATERBORNE ACRYLIC CLEAR COAT CLEAR GLOSS PRODUCT NO.: B66 C375; SALES NO.: 6403-60111

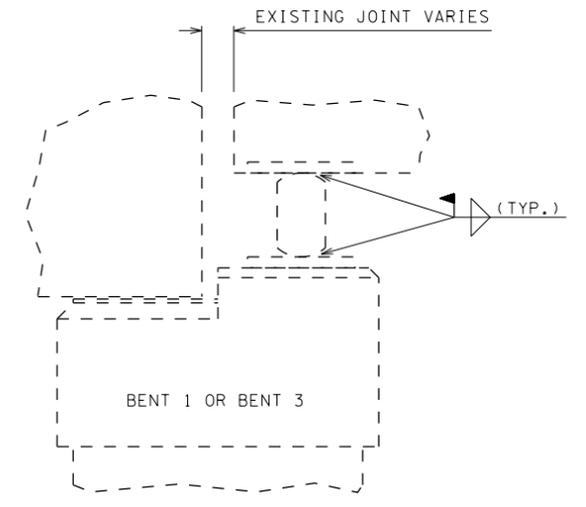


EXISTING EXPANSION JOINT LINK SLAB DETAIL

SHOWING EXPANSION JOINT AT BENT 1 AND 3

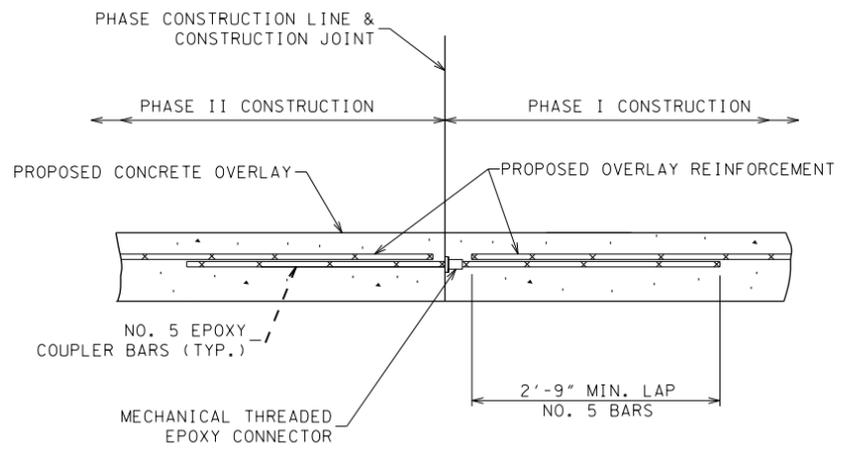
LINK SLAB ESTIMATED QUANTITIES (EACH)

604-02.03 EPOXY COATED REINFORCING STEEL LBS.	604-03.09 CLASS "D" CONCRETE (BRIDGE DECK) C.Y.
941	2.5



WELDING DETAIL

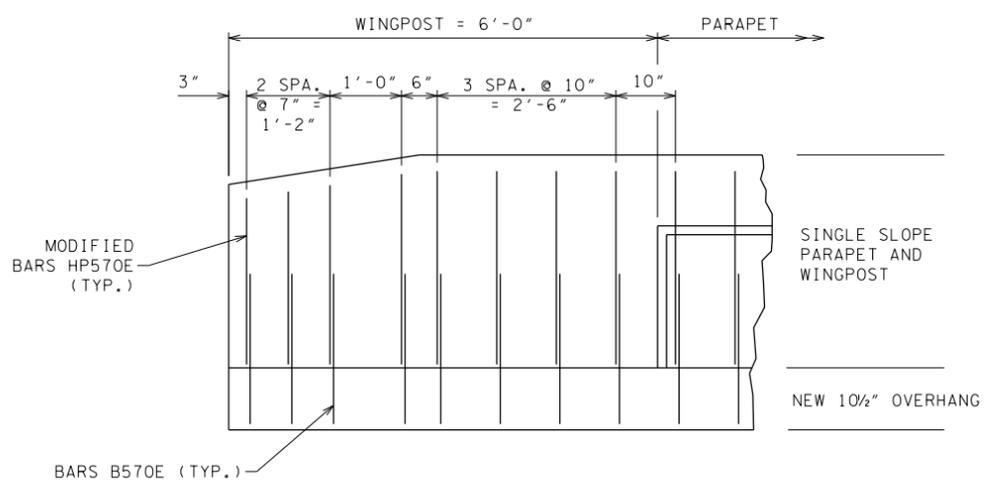
SHOWING EXPANSION BEARINGS AT BENTS 1 AND 3
 ALL COST TO WELD ALL STRUCTURAL STEEL BEARING DEVICES SHALL BE INCLUDED IN ITEMS BID ON.



COUPLER BAR DETAIL

SHOWING TRANSVERSE REINFORCING STEEL SPLICING WITH MECHANICAL THREADED CONNECTORS

NOTE: COST OF MECHANICAL THREADED CONNECTORS WITH COUPLER BARS TO BE INCLUDED UNDER ITEM NO. 604-02.03, EPOXY COATED REINFORCING STEEL, LBS.



WING POST ELEVATION VIEW

SHOWING REINFORCEMENT MODIFICATIONS

UNOFFICIAL SET
 NOT FOR BIDDING

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 SUPERSTRUCTURE REPAIR
 DETAILS (1 OF 2)
 BRIDGE NO 33-3588-4.32
 LT. & RT. LANES
 HIXSON PIKE
 OVER
 SR-153
 HAMILTON COUNTY
 2015

DESIGNED BY	JMT	DATE	10/2014
DRAWN BY	JMT	DATE	10/2014
SUPERVISED BY	BEB	DATE	10/2014
CHECKED BY	HP	DATE	10/2014

PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

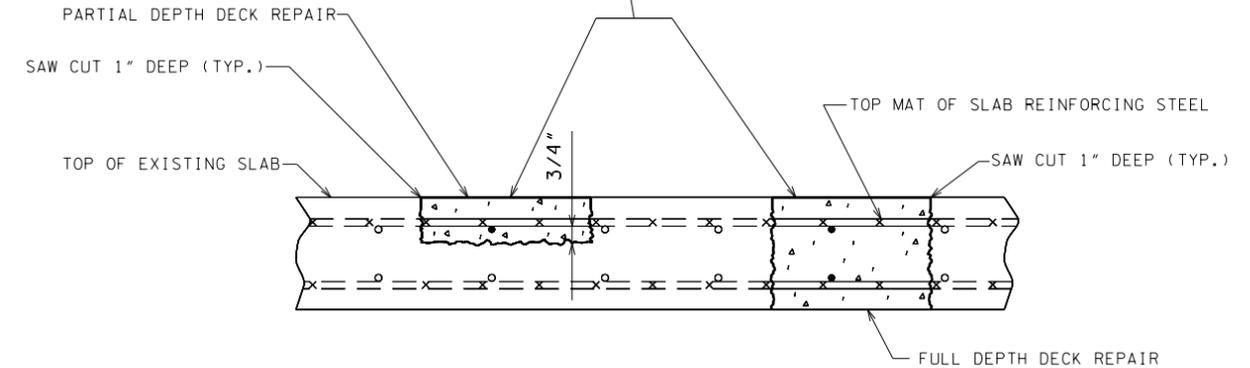
1. REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF 3/4" BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE COMPLETELY CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE HEADQUARTERS, BRIDGE INSPECTION AND REPAIR OFFICE. INSPECTIONS TO DETERMINE AREAS OF DECK REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE.

2. DECK REPAIR WILL BE PAID FOR UNDER ITEM NO. 604-10.50, BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), S.Y. AND ITEM NO. 604-10.30, BRIDGE DECK REPAIR (FULL DEPTH OF SLAB), S.Y. DURING PARTIAL DEPTH REPAIRS, SHOULD DETERIORATED CONCRETE BE ENCOUNTERED WHICH APPEARS TO RUN FULL DEPTH IN THE SLAB, THE ENGINEER MAY DESIGNATE THESE AREAS TO BE REPAIRED UNDER ITEM NO. 604-10.30.

3. POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL AND FULL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: 1) PARTIAL DEPTH REPAIRS; PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 LBS CLASS SHALL NOT BE USED. 2) FULL DEPTH REPAIRS; PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 90 LBS CLASS SHALL NOT BE USED. ALSO ALL DECK REPAIR OVER BEAMS WILL BE RESTRICTED TO 60 LBS PNEUMATIC HAMMERS. 3) CHIPPING HAMMERS OF THE 15 LB CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

4. CARE SHALL BE TAKEN WHEN REMOVING ANY AREAS OF SLAB NEAR THE 1" SAW CUT LINE. A 1" MIN. VERTICAL DEPTH SAW CUT LINE IS REQUIRED AROUND THE FULL PERIMETER OF PATCH PRIOR TO PLACEMENT OF CONCRETE.

CONCRETE FOR DECK REPAIR SHALL BE HIGH EARLY STRENGTH CONCRETE, f'c = 3500 p.s.i. @ 28 DAY STRENGTH. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3000 p.s.i. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS.



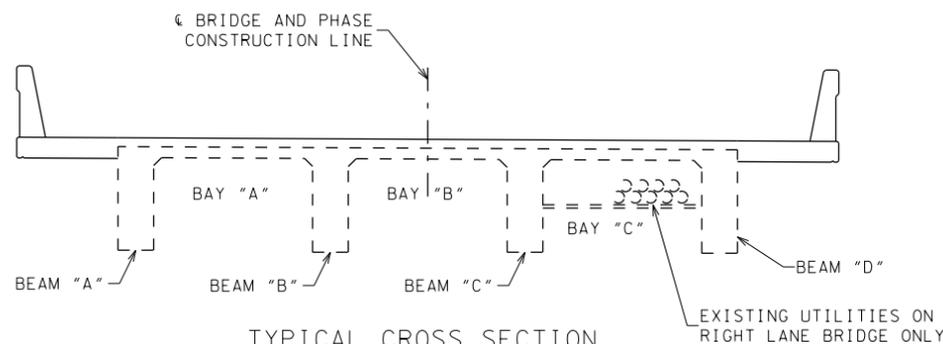
DETAIL SHOWING FULL AND PARTIAL DECK REPAIR

ESTIMATED CONCRETE DECK REPAIRS

	SPAN	BAY	604-10.54 CONCRETE REPAIR S.F.	604-10.62 EPOXY INJECTION L.F.
LEFT LANE	1	A	—	14
	1	B	—	3
	1	C	—	17
	2	A	—	7
	2	C	—	13
	3	A	—	14
	3	B	2	—
	3	C	—	12
	4	A	—	25
	4	B	—	7
	4	C	—	8
	RIGHT LANE	1	A	—
1		B	—	6
1		C	—	17
3		A	—	3
3		C	—	6
4		A	—	6
4	C	—	6	
TOTAL			2	181

ESTIMATED CONCRETE BEAM REPAIRS

	SPAN	BEAM	604-10.05 CONCRETE REPAIR S.F.	604-10.54 CONCRETE REPAIR S.F.	604-10.62 EPOXY INJECTION L.F.
LEFT LANE	1	A	—	1	9
	2	A	2	—	12
	2	B	—	1	—
	3	B	—	1	—
RIGHT LANE	3	D	—	2	—
	4	C	—	1	—
	3	A	—	—	10
	3	D	—	—	10
4	D	—	3	—	
TOTAL			2	9	41



TYPICAL CROSS SECTION
LOOKING FORWARD ON SURVEY
SHOWING BEAM AND BAY DESIGNATIONS

UNOFFICIAL SET

 NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
 SUPERSTRUCTURE REPAIR
 DETAILS (2 OF 2)

BRIDGE NO 33-3588-4.32
 LT. & RT. LANES
 HIXSON PIKE
 OVER
 SR-153
 HAMILTON COUNTY
 2015

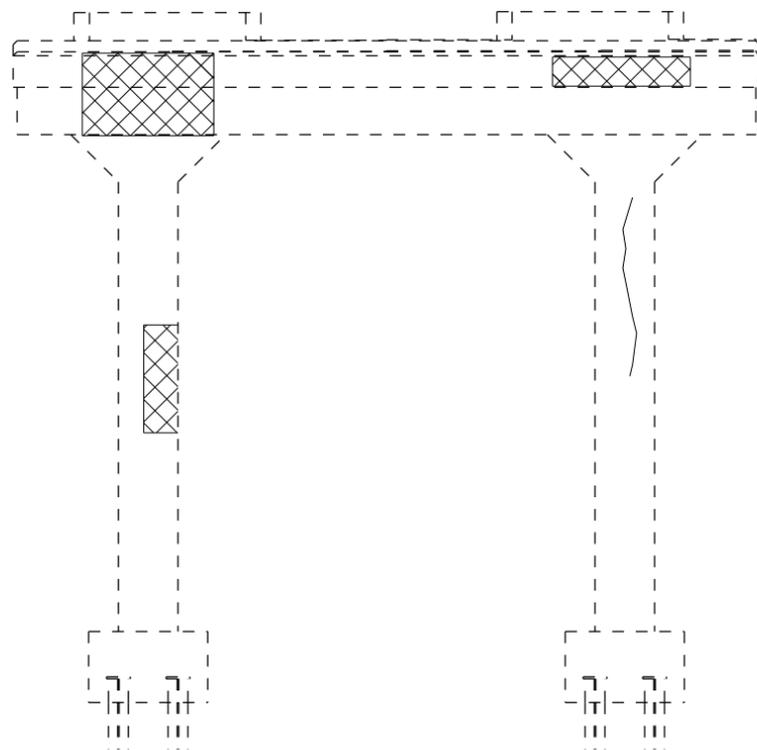
DESIGNED BY JMT DATE 10/2014
 DRAWN BY JMT DATE 10/2014
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PROJECT NO.	YEAR	SHEET NO.
33052-4248-04	2015	

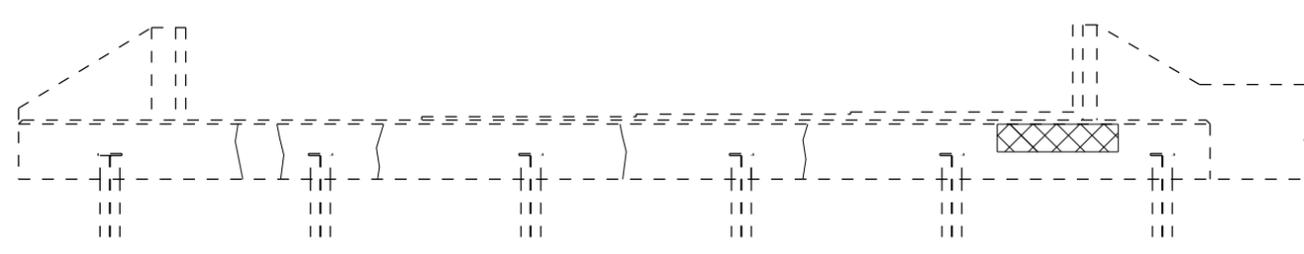
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

LEGEND

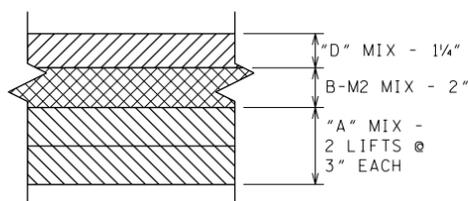
-  AREAS OF CONCRETE REPAIR TO RECEIVE QUICK SET PATCHING MATERIAL AND/OR HIGH EARLY STRENGTH CONCRETE
-  TYPICAL CRACK TO RECEIVE EPOXY INJECTION



TYPICAL BENT
NO SCALE

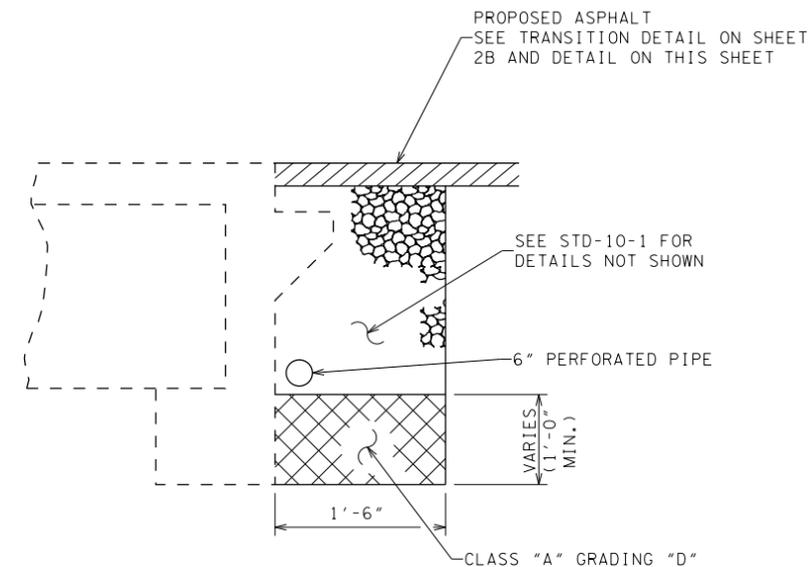


TYPICAL ABUTMENT
NO SCALE



NOTE: THIS DETAIL SHALL BE USED TO REPLACE THE REMOVED ASPHALT OVER THE ABUTMENT END DRAINS.

TYPICAL SECTION OF PROPOSED ASPHALT
NO SCALE



ABUTMENT DRAINAGE DETAILS
NO SCALE

NOTE: THE COST FOR ALL SHORING, MAINTAINING TRAFFIC, MATERIAL, AND LABOR FOR COMPLETE INSTALLATION OF ABUTMENT DRAIN SHALL BE INCLUDED IN ITEM NO. 710-09.01, 6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM.

PROCEDURE FOR CONCRETE REPAIRS DEEPER THAN 3 INCHES:

- SAW CUT RECTANGULAR AREA (ONE INCH DEEP) FOR LENGTH (HORIZONTALLY AND VERTICALLY) AS NEEDED TO OBTAIN MINIMUM SPLICE LENGTH SHOWN IN NOTE 3.
- CLEAN & PAINT EXISTING REINFORCING STEEL WITH EPOXY MASTIC PAINT PRIOR TO PERFORMING SPLICE REPAIRS..
- SPLICE NEW IN-KIND REINFORCING STEEL AS DIRECTED BY ENGINEER.
- IF A PORTION OF EXISTING BAR HAS EXCESSIVE LOSS OF SECTION, A NEW BAR SHALL BE SPLICED TO THE EXISTING BAR WITH THE FOLLOWING DIMENSIONS:
FOR #9 BAR, MINIMUM SPLICE LENGTH OF 44 INCHES IN BOTH DIRECTIONS.
FOR #5 BAR, MINIMUM SPLICE LENGTH OF 15 INCHES IN BOTH DIRECTIONS.
- POUR BACK TO ORIGINAL LINES WITH HIGH EARLY STRENGTH CONCRETE ACCORDING TO DETAILS ON SHEET BR-118-132 AND MANUFACTURER'S SPECIFICATIONS.

GENERAL CONCRETE REPAIR NOTES:

- CONCRETE REPAIR AREAS SHALL BE LOCATED BY THE ENGINEER.
- REPAIR AREAS OF SPALLED OR DELAMINATED CONCRETE ON PIERS AND ABUTMENTS WITH QUICK SET PATCHING MATERIAL AND/OR HIGH EARLY STRENGTH CONCRETE.
- THE AREAS TO BE REPAIRED SHALL BE SUFFICIENTLY LARGER THAN THE SPALLED AREAS TO ENSURE THAT PATCHES EXTEND INTO SOUND CONCRETE.
- UN SOUND CONCRETE SHALL BE REMOVED TO A DEPTH OF 3/4" BEHIND EXISTING REINFORCEMENT.
- COST OF REMOVING ALL UNSOUND AND DETERIORATED CONCRETE, PLACING OF NEW CONCRETE, AND ALL LABOR AND MATERIALS NECESSARY FOR COMPLETING THE WORK SHALL BE PAID FOR UNDER ITEM NO. 604-10.54, CONCRETE REPAIR, S.F.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS, INCLUDING TEMPORARY SHORING WHEN FULL BOTTOM OF CAP IS REQUIRED TO BE REPAIRED. COST OF SHORING TO BE INCLUDED IN OTHER ITEMS BID ON.
- SEE DRAWING BR-118-132 FOR MORE DETAILS OF SPALLED CONCRETE REPAIR.
- SEE DRAWING BR-118-132 FOR EPOXY INJECTION NOTES.

ESTIMATED QUANTITIES

	SUBSTRUCTURE ELEMENT	604-10.05 CONCRETE REPAIR S.F.	604-10.54 CONCRETE REPAIR S.F.	604-10.62 EPOXY INJECTION L.F.
LEFT LANE	ABUTMENT 1	—	4	9
	BENT 1	3	8	22
	BENT 2	10	10	15
	BENT 3	4	—	—
	ABUTMENT 2	—	—	18
RIGHT LANE	ABUTMENT 2	—	1	3
	BENT 1	—	15	—
	BENT 2	6	—	—
	BENT 3	4	23	20
	ABUTMENT 2	—	—	24
	TOTAL	27	61	111

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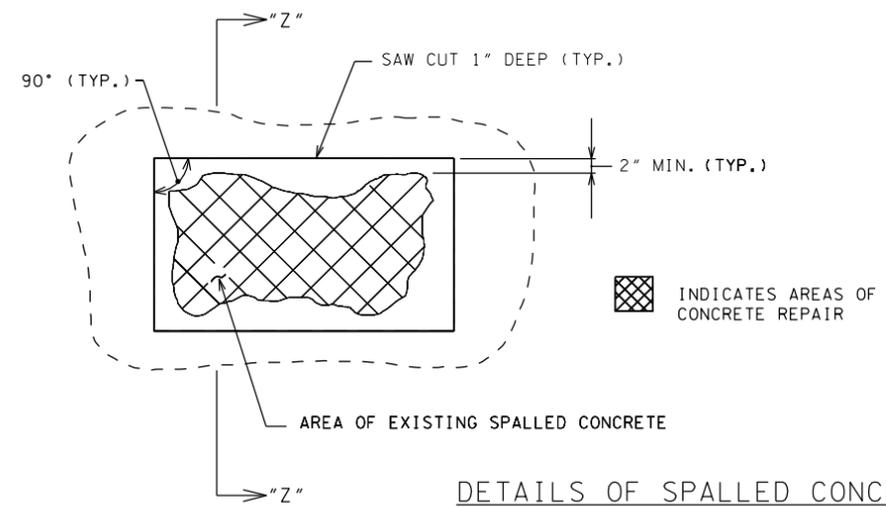
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ABUTMENT AND BENT REPAIR

BRIDGE NO 33-3588-4.32
LT. & RT. LANES
HIXSON PIKE
OVER
SR-153
HAMILTON COUNTY
2015

DESIGNED BY JMT DATE 10/2014
DRAWN BY JMT DATE 10/2014
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33052-4248-04	2015		
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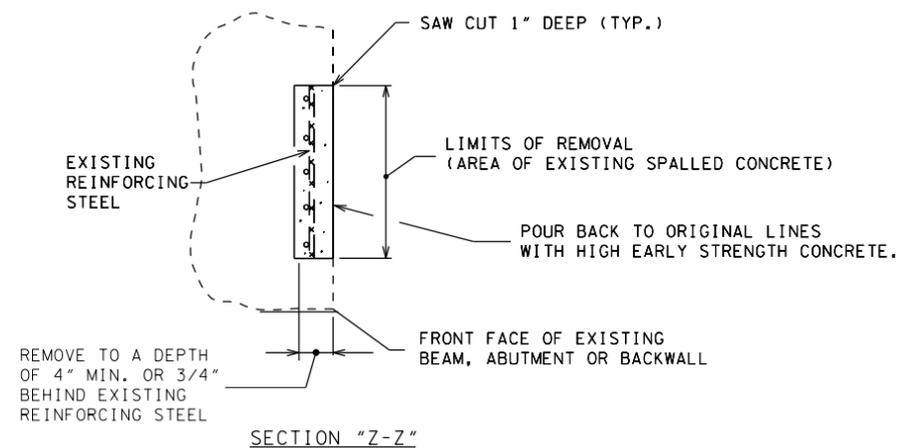


DETAILS OF SPALLED CONCRETE SURFACE AND REPAIR

NOTES:
 EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE DETERIORATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE ENGINEER BEFORE REPOURING.
 FOR CONCRETE NOTE, SEE GENERAL NOTES ON DRAWING BR-118-125.
 LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER. ALL UNSOUND CONCRETE IN THESE AREAS SHALL BE REMOVED AND REPOURED WITH PATCHING MATERIAL. THE MINIMUM DEPTH OF REPAIR SHALL BE 4 INCHES. DEPTH MAY BE INCREASED TO EXTEND INTO SOUND CONCRETE AS DIRECTED BY THE ENGINEER. EDGES OF THE REPAIR AREAS SHALL HAVE A MINIMUM 1 INCH SAW CUT PERPENDICULAR TO THE FACE OF THE CONCRETE.

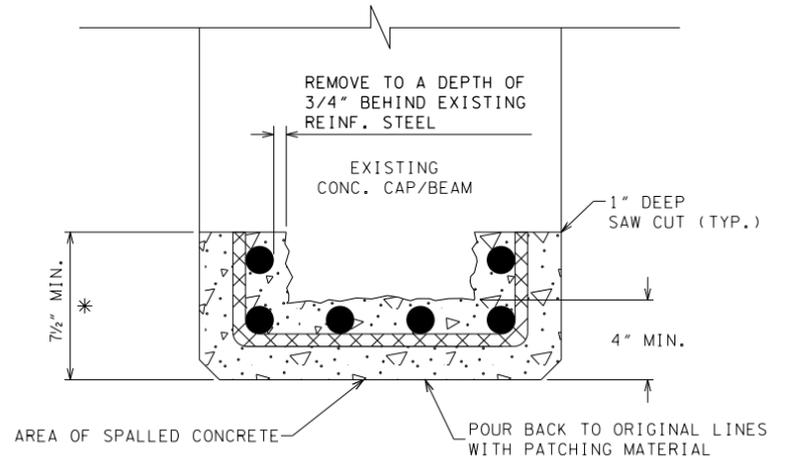
PATCHING MATERIAL FOR REPAIRS LESS THAN 3 INCHES DEEP SHALL BE POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST 13, SECTION B.6. PATCHING MATERIAL FOR REPAIRS DEEPER THAN 3 INCHES SHALL BE RAPID SET HIGH EARLY STRENGTH CEMENTITIOUS PATCHING MATERIAL. PATCHING MATERIALS SHALL BE FROM THE TENNESSEE DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST 13, SECTION B.1.

SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS.



NOTES:
 POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:
 1) PNEUMATIC HAMMERS HEAVIER THAN A 35 LB. CLASS SHALL NOT BE USED.
 2) CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND THE REINFORCING STEEL.
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS. DETAILS OF ANY TEMPORARY SUPPORT SYSTEM (IF REQUIRED) SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE REPAIRS HAVE BEGUN. COST TO BE INCLUDED IN ITEMS BID ON.

COST OF REMOVING DETERIORATED CONCRETE, CLEANING EXISTING REINFORCING STEEL, FORMING, PATCHING MATERIAL AND ALL ADDITIONAL MATERIALS AND LABOR NECESSARY TO COMPLETE REPAIRS SHOWN IN THIS DETAIL TO BE INCLUDED UNDER ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F. OR ITEM NO. 604-10.05, CONCRETE REPAIRS, S.F.



* DENOTES: LIMIT AND LOCATIONS OF REPAIR TO BE DESIGNATED BY THE ENGINEER.
 NOTE: TEMPORARY SHORING MAY BE REQUIRED WHEN FULL BOTTOM IS TO BE REPAIRED. COST OF SHORING TO BE INCLUDED IN OTHER ITEMS BID ON.

TYPICAL BEAM AND/OR BENT CAP REPAIR

NOTES FOR EPOXY INJECTION:

UNLESS OTHERWISE NOTED, THE INTENT OF THIS SPECIFICATION IS FOR DESIGNATED CRACKS TO BE INJECTED THEIR FULL LENGTH AND DEPTH.

DESIGNATED CRACKS SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE FILLING ALL VOIDS FOR THE CRACK DEPTH OR THICKNESS OF THE MEMBER. THE EPOXY RESIN ADHESIVE SHALL BE ON THE CURRENT QUALIFIED PRODUCTS LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TEST. ALL CRACKS SHALL BE INJECTED USING AN ADHESIVE SUITABLE FOR THE FIELD CONDITIONS (CRACK WIDTH, TEMPERATURE, HUMIDITY, ETC.) RECOMMENDED BY THE ADHESIVE MANUFACTURER AS SHOWN ON MATERIAL DATA SHEETS. FOLLOWING INJECTION, ALL INJECTION PORTS AND CAPPING MATERIAL SHALL BE REMOVED FROM EXPOSED SURFACES LEAVING THE SURFACE SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

THE CONTRACTOR SHALL HAVE SUFFICIENT EXPERIENCE AND TRAINING TO PERFORM THE EPOXY INJECTION IN ACCORDANCE WITH THESE PLANS. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A WRITTEN PROCEDURE FOR PERFORMING THE EPOXY INJECTION. THE PROCEDURE SHALL DESCRIBE IN DETAIL HOW THE WORK WILL BE PERFORMED. THE PROCEDURE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION.

- 1) DESCRIPTION OF EQUIPMENT
 - A. THE INJECTION EQUIPMENT SHALL BE OF THE TYPE THAT MIXES ADHESIVE COMPONENTS AT THE INJECTION HEAD.
 - B. THE INJECTION EQUIPMENT SHALL BE CAPABLE OF DISCHARGING MIXED ADHESIVE AT ANY PRESSURE UP TO 300 PSI. THE INJECTION EQUIPMENT SHALL BE EQUIPPED WITH GAUGES WHICH CAN MEASURE THE INJECTION PRESSURE AND VOLUME.
- 2) EQUIPMENT CALIBRATION PROCEDURES AND SCHEDULE.
- 3) MATERIALS TO BE USED (INCLUDING MANUFACTURER DATA SHEETS).
 - A. CAPPING MATERIAL
 - B. EPOXY ADHESIVE (TYPE TO BE APPROPRIATE FOR CRACK SIZES TO BE INJECTED).
- 4) PORT SPACING
 - A. PORT SPACING SHALL NOT BE LESS THAN THE THICKNESS OF THE CONCRETE IN THAT LOCATION.
- 5) INJECTION SEQUENCE
 - A. INJECTION SHALL PROCEED FROM LOWER END OF CRACK ALONG ADJACENT PARTS.
 - B. SKIPPING OF PORTS DURING INJECTION SHALL NOT BE ALLOWED.

THE CONTRACTOR SHALL HAVE THE MANUFACTURER'S INSTRUCTIONS FOR PROPORTIONING AND MIXING AVAILABLE AT THE JOB SITE AT ALL TIMES AND SHALL ENSURE THAT THE EQUIPMENT IS SUPPLYING THE MIXED ADHESIVE IN THE CORRECT PROPORTIONS.

TO ENSURE PROPER MIXING AND PROPORTIONING, SAMPLES SHALL BE TAKEN FROM THE INJECTOR HEAD. SAMPLES SHALL BE TAKEN AT THE START OF EACH WORKDAY AND EACH TIME THE ADHESIVE RESERVOIRS ARE REFILLED. THE SAMPLES SHALL BE IN A TEST CUP. THE SAMPLE SHALL BE MONITORED TO ENSURE THAT THE CURE TIME IS IN COMPLIANCE WITH THE MANUFACTURER'S DATA SHEET. IF THE SAMPLES DO NOT CURE IN THE SPECIFIED TIME THEN THE EQUIPMENT USED TO PRODUCE THE SAMPLE SHALL NOT BE USED UNTIL THE PROBLEM IS CORRECTED.

CORE SAMPLES SHALL BE TAKEN AS VERIFICATION OF THE QUALITY OF WORK. THE CONTRACTOR SHALL TAKE ONE (1) ONE (1) INCH DIAMETER (FULL DEPTH OF CONCRETE AT LOCATION CORED) CORE SAMPLE STARTING WITH THE FIRST REPAIR LOCATION THEN EVERY 3RD REPAIR LOCATION AFTERWARDS. WORK SHALL NOT PROCEED UNTIL THE CORE SAMPLE IS TAKEN AND ACCEPTED. ALL CORE SAMPLES AND HOLES SHALL BE INDEXED FOR FUTURE REFERENCE. THE ENGINEER SHALL DESIGNATE ALL LOCATIONS TO BE CORED. IF ANY CORES SHOW UNACCEPTABLE RESULTS, ALL WORK SHALL BE STOPPED UNTIL THE CONTRACTOR SUBMITS A PROPOSAL FOR CORRECTING UNACCEPTABLE WORK.

THE INITIAL CORE WILL ALSO SERVE TO QUALIFY THE FOREMAN OF THIS WORK. IF AT ANY TIME A NEW FOREMAN IS USED, HE SHALL BE QUALIFIED WITH A CORE SAMPLE.

THE CONTRACTOR, AT HIS EXPENSE, SHALL REPAIR ALL CORE HOLES WITH AN APPROVED CEMENTITIOUS PATCHING MATERIAL.

CORE SAMPLES SHALL BE VISUALLY INSPECTED TO CONFIRM THAT CRACKS ARE COMPLETELY FILLED WITH ADHESIVE. ANY CORE HAVING LESS THAN 95% OF THE CRACK FILLED WITH ADHESIVE SHALL BE CONSIDERED UNACCEPTABLE AND BE REJECTED.

CORE SAMPLES SHALL BE TESTED FOR BOND STRENGTH. SAMPLES MAY BE FRACTURED BY HAMMER BLOW TO CRACK AREA OR THROWN AT A HARD SURFACE. IF ADHESIVE FAILURE OCCURS BEFORE CONCRETE FAILURE, THE CORE SHALL BE CONSIDERED UNACCEPTABLE AND REJECTED.

PAYMENT FOR EPOXY INJECTION CRACK REPAIR SHALL BE MADE UNDER ITEM NUMBERS 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), LF AND 604-10.58, EPOXY INJECTION (INJECTION), GAL

PRICE BID FOR ITEM NUMBER 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), LF, SHALL INCLUDE COST OF ALL LABOR AND MATERIALS (EXCEPT ADHESIVE) FOR GRINDING AND FOR SURFACE PREPARATION, CRACK PREPARATION, CAPPING, INJECTION OF ADHESIVE, ALL SAMPLING AND TESTING, REMOVAL OF CAPPING MATERIAL AND PORTS, AND OTHER INCIDENTALS. CRACKS SHALL BE MEASURED FOR PAYMENT ALONG THE LENGTH OF THE VISIBLE SURFACE CRACK

PRICE BID FOR ITEM NUMBER 604-10.58, EPOXY INJECTION (INJECTION), GAL, SHALL INCLUDE COST FOR ADHESIVE MATERIAL INJECTED ONLY.

NO PAYMENT SHALL BE MADE FOR REWORK DEEMED NECESSARY BY FAILURE OF ADHESIVE SAMPLES OR CORE SAMPLES.

ALL WORK INCLUDING SAMPLING AND TESTING SHALL BE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE OR CONTRACT INSPECTORS. ANY WORK DONE WITHOUT INSPECTORS PRESENT SHALL NOT BE PAID FOR. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH WEEKLY SCHEDULES OF WORK TO BE PERFORMED. SCHEDULES SHALL BE SUBMITTED AT LEAST THREE (3) DAYS IN ADVANCE OF WORK TO BE DONE. THE ENGINEER SHALL BE NOTIFIED OF ANY CHANGE IN THE SCHEDULE A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE OF CHANGE.

SEE BR-118-130 AND BR-118-131 FOR TABLE OF ESTIMATED CRACKS TO RECEIVE EPOXY FOR ALL SUBSTRUCTURES.

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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BRIDGE REPAIR DETAILS
 BRIDGE NO 33-3588-4.32
 LT. & RT. LANES
 HIXSON PIKE
 OVER
 SR-153
 HAMILTON COUNTY
 2015

DESIGNED BY	JMT	DATE	10/2014
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PROJECT NO.	YEAR	SHEET NO.	
33052-4248-04	2015		
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NOTES:

ALL NEW EXPANSION JOINTS SHALL EXTEND 6" BEYOND THE EDGE OF THE DECK.

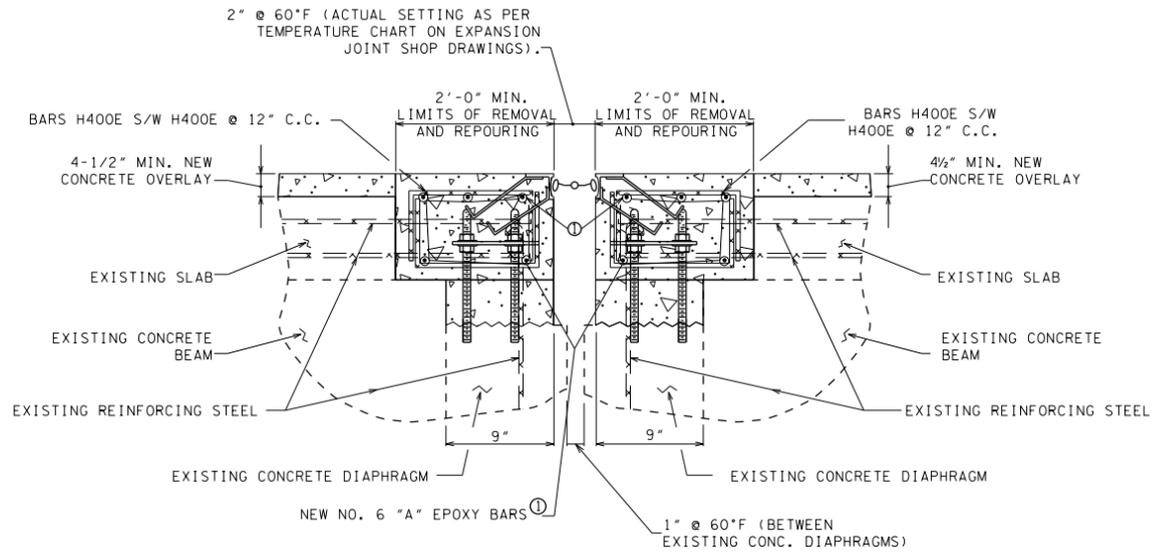
ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED BEHIND AND AROUND THE EXPANSION JOINT STEEL REPAIRS.

ALL EXISTING JOINT OPENINGS SHALL BE THOROUGHLY CLEANED OF FOREIGN MATERIAL AND EXISTING JOINT MATERIAL BEFORE PLACING THE NEW EXPANSION JOINTS.

COST OF EXISTING CONCRETE REMOVAL IN THE EXPANSION JOINT REPAIR AREAS, NEW HIGH EARLY STRENGTH CONCRETE, FORMING, AND ALL MISCELLANEOUS MATERIALS AND LABOR NECESSARY TO INSTALL THE NEW EXPANSION JOINT SYSTEM COMPLETE AND IN PLACE TO BE INCLUDED IN THE PRICE BID FOR EXPANSION JOINT. COST OF ALL REPAIRS & MATERIALS NEEDED FOR COMPLETE INSTALLATION ON EXPANSION JOINT SHALL BE INCLUDED IN ITEM NO. 604-10.45.

REFER TO STANDARD DRAWINGS SBR-2-115, SBR-2-116, SBR-2-119, AND STD-3-2 FOR MORE DETAILS OF EXPANSION JOINT REPAIR/REPLACEMENT AT BENT 2.

THE COST OF MODIFICATIONS OF THE EXISTING BRIDGE DETAILS NECESSARY TO PROPERLY INSTALL THE EXPANSION JOINT SHALL BE INCLUDED IN THE PRICE BID FOR THE JOINT. COST OF ALL REPAIRS AND MATERIALS NEEDED FOR COMPLETE INSTALLATION OF EXPANSION JOINT SHALL BE INCLUDED IN ITEM NO. 604-10.45.



EXPANSION JOINT REPLACEMENT DETAIL - TYPE "F" ② ③
 (BENT NO. 2)
 (NOT TO SCALE)

- ① NEW NO. 6 "A" EPOXY BARS TO BE CONTINUOUS. FIELD DRILL HOLES (1/4" LARGER THAN THE BARS) THROUGH STEEL PLATES. IF THE CONTRACTOR ELECTS TO SPLICE THE "A" NO. 6 BARS, TO FACILITATE INSTALLATION, A MINIMUM SPLICE OF 2'-3" SHALL BE PROVIDED.
- ② PENETRATING WATER REPELLANT CONCRETE SEALER SHALL BE APPLIED TO THE TOP AND VERTICAL SURFACES OF BENT 1 CAP. THE COST OF THE SEALER, COMPLETE AND IN PLACE, SHALL BE BID UNDER ITEM NUMBER 604-10.43. REFER TO GENERAL NOTES, DRAWING BR-118-125.
- ③ FOR MORE DETAILS, REFER TO TDOT STANDARD DRAWINGS SBR-2-115, SBR-2-116, SBR-2-119, & STD-3-2.

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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 EXPANSION JOINT DETAIL
 BRIDGE NO 33-3588-4.32
 LT. & RT. LANES
 HIXSON PIKE
 OVER
 SR-153
 HAMILTON COUNTY
 2015

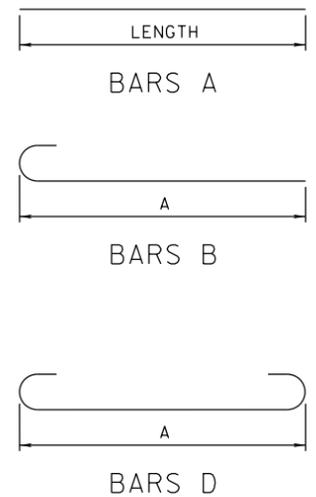
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PROJECT NO.	YEAR	SHEET NO.
33052-4248-04	2015	

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SUPERSTRUCTURE (EPOXY) (EACH)							
BAR	LOCATION	SIZE	NO. REQ'D	BENDING DIMENSIONS			LENGTH
				A	B	C	
A500E	DECK SLAB	5	144	47'-3"			47'-3"
A501E	DECK SLAB	5	66	30'-0"			30'-0"
A502E	DECK SLAB	5	64	14'-0"			14'-0"
B500E	DECK SLAB	5	368	18'-6"			19'-1"
B501E	DECK SLAB	5	364	9'-5"			10'-0"
B502E	DECK SLAB	5	370	3'-11"			4'-6"
★ B503E	DECK SLAB	5	—	2'-4"			2'-11"
B570E	DECK SLAB	5	884	2'-2"			2'-9"
D500E	DECK SLAB	5	228	3'-8"			4'-10"
. . . REQUIRED: 216 EPOXY COATED NO. 5 MECHANICAL COUPLERS WITH RELATED SPLICE BAR TO BE PAID FOR UNDER ITEM NO. 604-02.03, EPOXY COATED REINFORCING STEEL, LBS.							

★ BARS B503E MAY REPLACE EXISTING STEEL IN OVERHANG. SEE NOTE AND DETAILS ON BR-118-127. THIS SHALL BE DONE AT NO EXTRA COST TO THE PROJECT.



REINFORCING STEEL CODE

TYPE	SIZE	SERIES
A	5	06

NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE OUTSIDE TO OUTSIDE OF BAR. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY, EXCEPT AS NOTED.
 NOTE: THE SUFFIX E FOR BARS SO MARKED DENOTES EPOXY COATED REINFORCEMENT.

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STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BILL OF STEEL
 BRIDGE NO 33-3588-4.32
 LT. & RT. LANES
 HIXSON PIKE
 OVER
 SR-153
 HAMILTON COUNTY
 2015

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