TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

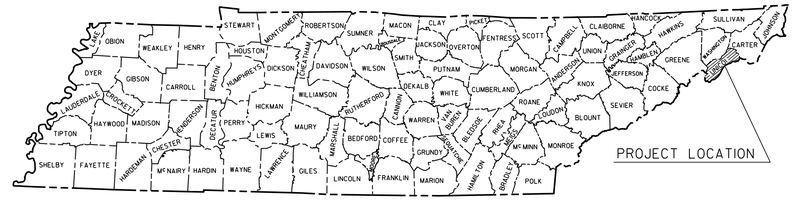
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

TENN.	YEAR	SHEET NO.
	2015	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	86004-4156-04	

UNICOI COUNTY

INTERSTATE 26 OVER NFA A369 (GARLAND ROAD)

BRIDGE REPAIR



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2A	ROADWAY GENERAL NOTES AND SPECIAL NOTES
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2C	EPOXY OVERLAY AND PAVEMENT TRANSITION DETAILS
3	TRAFFIC CONTROL PLAN
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STANDARD ROADWAY DRAWINGS

DRAWING NO.	CURRENT REVISION DATE	DESCRIPTION
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD-L-5	5-01-08	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL

SAFETY APPURTENANCES AND FENCE

S-GR31-1	W-BEAM GUARDRAIL
S-GRC-1	GUARDRAIL CONNECTION TO BRIDGE ENDS OR BARRIER WALL

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T-FAB-1	5-27-97	FLASHING YELLOW ARROW BOARD
T-M-5	4-23-13	MARKING DETAILS FOR EXPRESSWAYS AND FREEWAYS
T-M-15		ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR INTERSTATE AND ACCESS CONTROLLED ROUTES
T-PBR-1	6-30-09	INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-12	3-13-09	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-21	3-15-11	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3B	8-01-12	SILT FENCE
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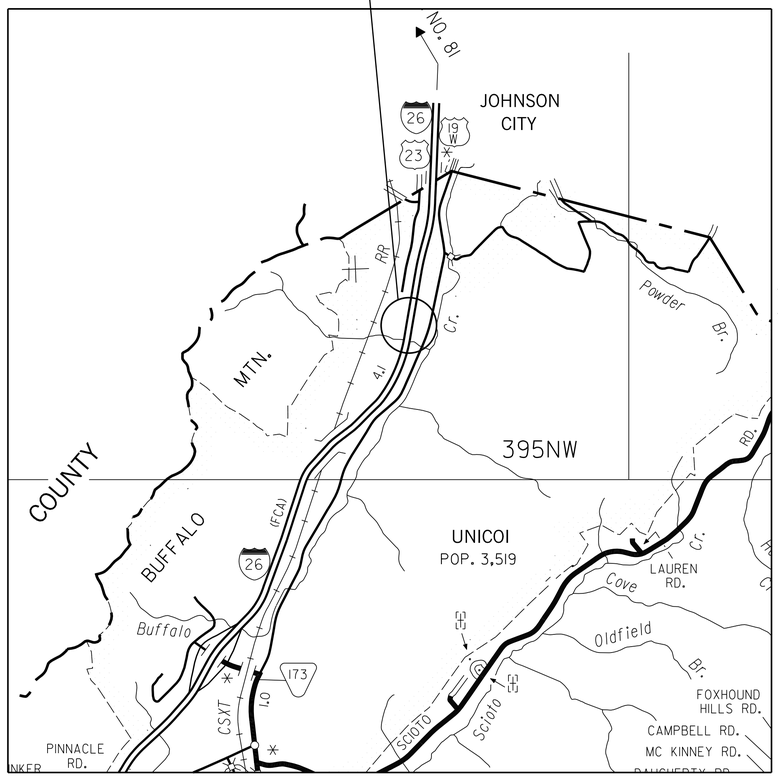
BRIDGE APPURTENANCES

STD-1-1	5-01-14	BRIDGE RAILING CONCRETE PARAPET

BRIDGE NO. 86-I0026-1.25 (RL & LL)



SCALE: 1" = 1 MILE

LIST OF DRAWINGS

DWG. NO.	LAST REV. DATE	DRAWING
BR-106-79		LAYOUT OF BRIDGE TO BE REPAIRED
BR-106-80		GENERAL NOTES AND ESTIMATED BRIDGE QUANTITIES
BR-106-81		SUPERSTRUCTURE
BR-106-82		SUPERSTRUCTURE DETAILS
BR-106-83		ABUTMENT REPAIR DETAILS
BR-106-84		BENT NOS. 1 & 2 REPAIR DETAILS (RL & LL)
BR-106-85		MISCELLANEOUS REPAIR DETAILS

* LIST OF REFERENCE DRAWINGS

M-104-92 THRU M-104-103	EXISITING BRIDGE PLANS
M-28-1	BRIDGE RAILING CONCRETE PARAPET
K-85-150	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
K-86-144	REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS

LIST OF SPECIAL PROVISIONS

NO.	LAST REV. DATE	REGARDING
SP604CR	**	REPAIR OF BRIDGE DECK CRACKS
SP604H	**	BRIDGE DECK PREPARATION USING HYDRODEMOLITION

* DENOTES: THESE DRAWINGS ARE TO BE PRINTED WITH PLANS.

** DENOTES: CURRENT REVISION DATE, AS PER CONTRACT DOCUMENTS.

TRAFFIC DATA

POSTED SPEED LIMIT (I-26) = 65 M.P.H.
ADT (I-26, 2015) = 21,000

SEALED BY

UNOFFICIAL SET

NOT FOR BIDDING

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

DATE

APPROVED:
JOHN SCHROER, COMMISSIONER

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 CIVIL ENGINEERING MANAGER 1: BRIAN K. EGLI, P.E.

DESIGNED BY BARGE, WAGGONER, SUMNER & CANNON, INC.

DESIGNER MARRIS T. JONES CHECKED BY LANDEL K. BILBREY, P.E.

P.E. NO. 86004-4154-04

PIN NO. 113431.01

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

4/28/2015
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ESTIMATED BRIDGE QUANTITIES

		ITEM NO.	DESCRIPTION	BR. NO. 86-I26-I.25 (R.L.)	BR. NO. 86-I26-I.25 (L.L.)	UNIT	TOTAL QUANTITY
(1)	*	604-03.01	CLASS A CONCRETE (BRIDGES)	2.5	2.5	C.Y.	5
(2)	*	604-03.06	BRIDGE DRAIN APRON	4	4	S.Y.	8
(3)		604-04.02	APPLIED TEXTURED FINISH (EXISTING STRUCTURES)	1,407	1,397	S.Y.	2,804
(4)		604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	890	893	S.Y.	1,783
(5)	*	604-10.05	CONCRETE	10	16	S.F.	26
		604-10.20	HYDRODEMOLITION	936	937	S.Y.	1,873
	*	604-10.54	CONCRETE REPAIRS	11	16	S.F.	26
	*	604-10.58	EPOXY INJECTION (INJECTION)	6	6	GAL.	24
	*	604-10.62	EPOXY INJECTION REPAIR (COMPLETE AND IN-PLACE)	120	122	L.F.	242
(6)		617-02	BRIDGE DECK CRACK SEALING	619	621	L.F.	1,240
(7)		617-05	SEALANT (HMWM)	4	4	GAL.	8
(8)		619-01	BRIDGE DECK OVERLAY (PMC)	936	937	S.Y.	1,873
		625-02.43	CONCRETE CORING	15	30	V.F.	45
(9)		709-05.05	MACHINED RIP-RAP (CLASS A-3)	30	30	TON	60

* DENOTES: ITEM CAN BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

FOOTNOTES:

(1) INCLUDES ALL COSTS FOR LABOR, MATERIALS, AND ANY OTHER MISCELLANEOUS ITEMS NECESSARY TO CONSTRUCT THE CONCRETE APRON AT ABUTMENTS, AND TO ENCASE THE EXPOSED PILES BENEATH WHERE SETTLEMENT HAS OCCURRED, AS SHOWN IN THE PLANS.

(2) INCLUDES ALL LABOR AND MATERIALS NECESSARY TO REMOVE A PORTION OF THE EXISTING FLUME DRAINS AS SHOWN AND PLACE NEW CEMENTITIOUS PATCHING MATERIAL AS SHOWN. SEE TDOT QUALIFIED PRODUCTS LIST 13 SECTION B.6 FOR APPROVED CEMENTITIOUS PATCHING MATERIALS.

(3) INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE APPLICATION OF ALL TEXTURE COATING FOR FULL LENGTH OF BRIDGE AS SHOWN IN TEXTURE COATING DETAIL ON THIS SHEET. ALSO INCLUDES SURFACE PREPARATION USING A HIGH PRESSURE WATER WASH TO REMOVE ALL LOOSE COATINGS, FLAKING AND OTHER FOREIGN SUBSTANCES TO THE FULL SATISFACTION OF THE ENGINEER.

(4) INCLUDES GROOVING OF BRIDGE DECK TO WITHIN ONE FOOT OF PARAPET. SEE BRIDGE DECK SURFACE FINISH NOTE ON THIS SHEET.

(5) INCLUDES ALL COSTS FOR LABOR, MATERIALS, AND ANY OTHER MISCELLANEOUS ITEMS NECESSARY TO MODIFY EXISTING FLUME DRAINS, WHERE SETTLEMENT HAS OCCURRED AT ENDS OF BRIDGE, AS SHOWN IN THE PLANS.

(6) INCLUDES ALL COST FOR INSTALLING THE BRIDGE DECK CRACK SEALER (HMWM) INCLUDING CRACK PREPARATION, CLEANING, LABOR AND ALL MISCELLANEOUS REQUIRED TO SEAL ALL CONSTRUCTION JOINTS ACCORDING TO SPECIAL PROVISION 604CR AND MANUFACTURER'S SPECIFICATIONS. THIS ITEM DOES NOT INCLUDE THE COST OF FURNISHING THE BRIDGE CRACK SEALANT ITSELF.

(7) INCLUDES ALL COSTS FOR FURNISHING THE SEALER MATERIAL (HMWM) FOR SEALING CRACKS. THE SEALER (HMWM) SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION 604CR.

(8) INCLUDES ALL LABOR AND MATERIALS NECESSARY TO PLACE PMC OVERLAY, SAW CUTTING, AND FILLING SAW CUT JOINTS WITH SILICONE SEALER, AS SHOWN IN THE PLANS. SEE TDOT STANDARD SPECIFICATIONS 619. PORTLAND CEMENT USED IN THE PMC OVERLAY SHALL BE TYPE III.

(9) INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE PLACEMENT OF CLASS A-3 RIP-RAP AT ABUTMENTS AS SHOWN IN THE PLANS. NEW RIP-RAP TO TIE IN WITH EXISTING AND TO BE PLACED BY HAND OR AS DIRECTED BY THE ENGINEER.

GENERAL NOTES

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

DESIGN SPECIFICATIONS: AASHTO 2002 EDITION WITH ADDENDA.

CONCRETE TO BE CLASS "A", F'c = 3,000 P.S.I. EXCEPT AS NOTED OTHERWISE.

CONCRETE OR PATCHING MATERIAL: NO CONCRETE OR PATCHING MATERIALS SHALL BE PLACED BY PNEUMATIC METHODS.

CONCRETE FINISH: SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. ONLY SURFACES DESIGNATED ON PLANS SHALL RECEIVE AN APPLIED TEXTURED FINISH.

CONCRETE CURING: ALL CONCRETE SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS UNLESS SPECIFIED OTHERWISE.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS.

BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH NOTE "C" IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.

RIDEABILITY OF THE BRIDGE DECK AND APPROACHES TO BE IN ACCORDANCE WITH ARTICLE 604.27 OF THE STANDARD SPECIFICATIONS EXCEPT THAT THE RIDEABILITY REQUIREMENTS AND SMOOTHNESS TESTS SHALL BE LIMITED TO THE BRIDGE AND PAVEMENT AT BRIDGE ENDS.

GENERAL NOTES, (CONT'D)

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 TO REMOVE UNSOUND CONCRETE. FOR PARTIAL DEPTH REPAIR AREAS, FULL DEPTH REPAIR AREAS AND ALL DECK REPAIR AREAS OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE SO LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES: THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR, OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES. ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDIDATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

PATCHING MATERIAL: MATERIAL SHALL BE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL ON VERTICAL OR OVERHEAD SURFACES. SEE T.D.O.T. QUALIFIED PRODUCTS LIST 13, SECTION B.6, FOR ACCEPTABLE PATCHING MATERIALS.

ANY AREA THAT IS DISTURBED OUTSIDE THE LIMITS OF THE CONSTRUCTION DURING THE LIFE OF THE PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS., THE WATER CEMENT RATIO SHALL BE A MAXIMUM OF 0.40, NO FLY ASH REPLACEMENT WILL BE PERMITTED, AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 P.S.I. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 P.S.I. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF EIGHTEEN (18) HOURS.

SPECIAL NOTE TO CONTRACTOR: CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO INSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. THIS SHALL BE ACCOMPLISHED BY THE USE OF BASKETS, NETTING, WRAPPING, WORK PLATFORM, OR OTHER SIMILARLY EFFECTIVE MEANS. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

SPECIAL NOTE FOR UTILITIES: CARE SHALL BE TAKEN WHILE REMOVING AND REPAIRING BRIDGE COMPONENTS SO AS TO NOT TO DISTURB OR DAMAGE ANY UTILITIES.

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

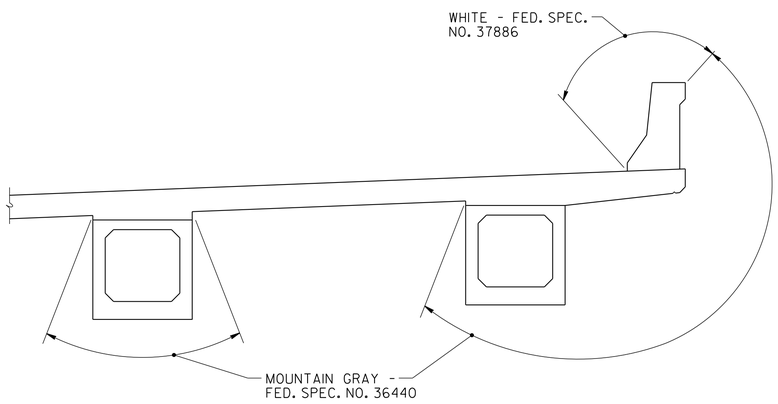
APPROVAL OF MATERIALS; NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS WITH A COPY OF THE TEST REPORTS ALSO GOING TO THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF STURCTURES, BRIDGE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

SEASONAL LIMITATIONS NOTE: THE SWALLOW NESTS CANNOT BE DISTURBED WHILE EGGS OR YOUNG ARE PRESENT IN THE NEST. THE APPROXIMATE DATE FOR NESTING ACTIVITIES BEGINNING IS MAY 1 AND THE FLEDGLING FOR THE CLIFF SWALLOW IS JULY 15. NOTE THAT THESE ARE APPROXIMATE DATES, AND NESTING COULD OCCUR EARLIER AND LAST UNTIL LATER. THE DATES ARE FOR GUIDANCE ONLY AND THE EMPHASIS IS ON THE PRESENCE OR ABSENCE OF EGGS OR YOUNG, NOT THE DATES. THE CONTRACTOR CANNOT DISTURB THE SWALLOWS OR NESTS AS LONG AS EGGS AND/OR YOUNG ARE PRESENT. THE USFWS HAS GIVEN US THE DATE OF JULY 15TH AS THE TYPICAL TIME WHEN YOUNG SHOULD BE LEAVING THE NEST. HOWEVER, THIS DATE COULD BE UP TO A MONTH OR MORE LATER DEPENDING ON WHEN THE SWALLOWS ACTUALLY LAY THEIR EGGS. IF THE BIRDS ARE PRESENT AND EGGS OR YOUNG ARE IN THE NEST, THEY ARE NOT TO BE DISTURBED UNTIL THE YOUNG LEAVE THE NESTS. IF THE WORK BEGINS PRIOR TO THE BIRDS NESTING, THE CONTRACTOR CAN REMOVE THE NESTS AND TAKE MEASURES TO PREVENT THE SWALLOWS FROM BUILDING NESTS AND WORK THROUGHOUT THE NESTING SEASON. THIS COULD BE INSTALLATION OF NETTING, TARPS, OR JUST HAVING SOMEBODY AVAILABLE TO REMOVE THE NESTS BEFORE THE BIRDS CAN LAY EGGS IN THEM.

PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



APPLIED TEXTURE FINISH AND CONCRETE SEAL

ONLY RIGHT SIDE SHOWN, BUT SKETCH IS SYMMETRIC ABOUT ℄ BRIDGE

TEXTURE FINISH NOTES

IN ADDITION TO SURFACES SHOWN, ALL EXPOSED CONCRETE SURFACES ON THE BENTS AND ABUMENTS ARE TO RECEIVE AN APPLIED TEXTURE FINISH, MOUNTAIN GREY, (FED. SPEC. NO. 36440).

ALL COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 604-04.02.

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.

THE EXISTING SURFACES THAT ARE TO RECEIVE A TEXTURE FINISH SHALL BE FREE OF ALL FLAKING TEXTURE COATING, RUST, DIRT, OIL, AND OTHER FOREIGN SUBSTANCES PRIOR TO THE APPLICATION OF THE TEXTURE FINISH. THE SURFACE SHALL BE CLEANED TO THE COMPLETE SATISFACTION OF THE ENGINEER USING A HIGH PRESSURE WASH. COST TO BE INCLUDED IN ITEM NO. 604-04.02.

THE WASH WATER IS TO BE FILTERED AND PAINT CHIPS AND DEBRIS COLLECTED PRIOR TO RELEASE OF WATER.

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND ESTIMATED BRIDGE QUANTITIES INTERSTATE 26 OVER NFA A369 (GARLAND ROAD) BRIDGE NO. 86-I26-I.25 (RL & LL) UNICOI COUNTY 2015

DESIGNED BY M. JONES DATE 09/14
DRAWN BY M. JONES DATE 09/14
SUPERVISED BY L. BILBREY DATE 09/14
CHECKED BY L. BILBREY DATE 09/14

4/28/2015
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BR-106-80

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	86004-4156-04	2B

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	BR. NO. 86-I26-1.25 (R.L.)	BR. NO. 86-I26-1.25 (L.L.)	UNIT	TOTAL QUANTITY
(1)	202-03.01	REMOVAL OF ASPHALT PAVEMENT	120	-	S.Y.	120
(2)	204-06.01	FLOWABLE FILL (GENERAL)	20	40	C.Y.	60
(3)	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	125	125	L.F.	250
(4)	411-03.10	ACS MIX (PG76-22) GRADING D	130	125	TON	255
	411-12.01	SCORING SHOULDERS (CONTINUOUS) (16 IN WIDTH)	0.15	0.15	L.M.	0.3
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	1,867	1,867	S.Y.	3,734
	705-01.01	GUARDRAIL AT BRIDGE ENDS	27	-	L.F.	27
	705-02.02	SINGLE GUARDRAIL (TYPE 2)	173	-	L.F.	173
(5)	705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	1	1	EACH	2
	706-01	GUARDRAIL REMOVED	200	-	L.F.	200
	712-01	TRAFFIC CONTROL	0.5	0.5	LS	1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	540	540	L.F.	1080
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	155	155	EACH	310
(6)	712-04.50	PORTABLE BARRIER RAIL DELINEATOR	38	38	EACH	76
	712-06	SIGNS (CONSTRUCTION)	294	294	S.F.	588
	712-08.03	ARROW BOARD (TYPE C)	1	1	EACH	2
	712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	6,820	6,820	L.F.	13,640
	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	1	1	L.F.	2
	716-01.23	SNWPLWBLE PVMT MARKERS (BI-DIR) (2 COLOR)	4	4	EACH	8
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	0.3	0.3	L.M.	0.6
	717-01	MOBILIZATION	0.5	0.5	LS	1

FOOTNOTES

(1) INCLUDES ALL COST OF LABOR AND MATERIALS REQUIRED TO REMOVE AND DISPOSE OF THE EXISTING ASPHALT PAVEMENT ON THE P.A.B.E. AT ABUTMENT NO. 2 (RL). SURFACE VARIES FROM 1/8" TO 2"±.

(2) THIS ITEM CAN BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

(3) THIS ITEM CAN BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER. SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT (INCLUDES THE COST OF SEDIMENT REMOVAL).

(4) TOTAL INCLUDES COST OF 1.6 TONS OF BITUMINOUS MATERIAL FOR TACK COAT (T.C.) AT A RATE OF 0.10 GAL/S.Y.

(5) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. EXAMPLES WOULD BE A QUAD-GUARD, A REACT 350, OR A TRACC. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS SHOWN ON THE MANUFACTURER'S DRAWING.

(6) DELINEATORS SHALL BE 1/2 WHITE & 1/2 YELLOW.

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NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

I-26 OVER GARLAND ROAD
L.M. 1.25

4/29/2015
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	86004-4156-04	2A

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE 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 A 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 WATER SOURCE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY OTHER FEDERAL, STATE OR LOCAL AGENCY.

GUARDRAIL

(1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

(2) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST BE TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE A LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL.

UTILITY NOTES

(1) 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.

(2) UTILITY OWNERS

ELECTRICAL: JOHNSON CITY POWER BOARD
2600 BOONES CREEK ROAD
JOHNSON CITY, TN 37615
(423) 282-JCPB

TELEPHONE, FIBER OPTIC CABLE: A T & T
1-800-351-1111
OR
1-800-252-1133

WATER/GAS: JOHNSON CITY
WATER AND SEWER
601 E. MAIN ST.
JOHNSON CITY, TN 37601
(423) 434-6000

CABLE TV: COMCAST COMMUNICATIONS
(800) 266-2278

CHARTER CABLE
(877) 305-0051

(3) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS 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 STREAMBED 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 PRICE BID 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 UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE 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. ADVANCED 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 UTILITIES IN ACCORDANCE WITH TCA-65-31-106.

MISCELLANEOUS

(1) 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 MARKINGS

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6 IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

(2) BEFORE OPENING THE LANE SHIFTS TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.02, REMOVABLE PAVEMENT MARKING (8" BARRIER LINE), L.F. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

PAVEMENT

(1) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

(2) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF THE EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(3) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

CONSTRUCTION WORK ZONE AND TRAFFIC CONTROL NOTES

(1) ADVANCED 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.

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF 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.

(3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS FLAGGER SIGNS MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(5) 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. 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 ENGINEERS APPROVAL TO USE THEM.

(6) 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 BE PARKED 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 THE REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES

DISTURBED AREA

(1) CLEARING, GRUBBING, AND OTHER DISTRUBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

(2) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.

SEDIMENT CONTROL

(3) EPSC MEASURES SHALL BE INSTALLED CONCURRENTLY WITH CLEARING OPERATIONS, SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.

(4) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABLIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.

(5) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.

INSPECTION, MAINTENANCE, REPAIR

(6) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.

SWPPP, PERMITS, PLANS, RECORDS

(7) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE, AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.

(8) PROJECT INSPECTORS AND SUPERVISORS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCESSFULLY COMPLETE THE TDEC "LEVEL I- FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE OR EQUIVALENT COURSE. A COPY OF CERTIFICATION RECORDS FOR THIS COURSE SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.

SPECIAL NOTES

(9) CLEARING AND GRUBBING WILL BE LIMITED TO THE MINIMUM AMOUNT NECESSARY TO ACCOMMODATE THE PROPOSED BRIDGE REPAIR ACTIVITIES AND OPERATION OF EQUIPMENT. ALL DISTURBED AREAS WILL BE STABILIZED, SEEDED AND MULCHED, OR SODDED AS SOON AS PRACTICABLE TO REDUCE THE POTENTIAL FOR SOIL EROSION.

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NOT FOR BIDDING

4/29/2015

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY
GENERAL NOTES
AND
SPECIAL NOTES

I-26 OVER GARLAND ROAD
L.M. 1.25

4/29/2015
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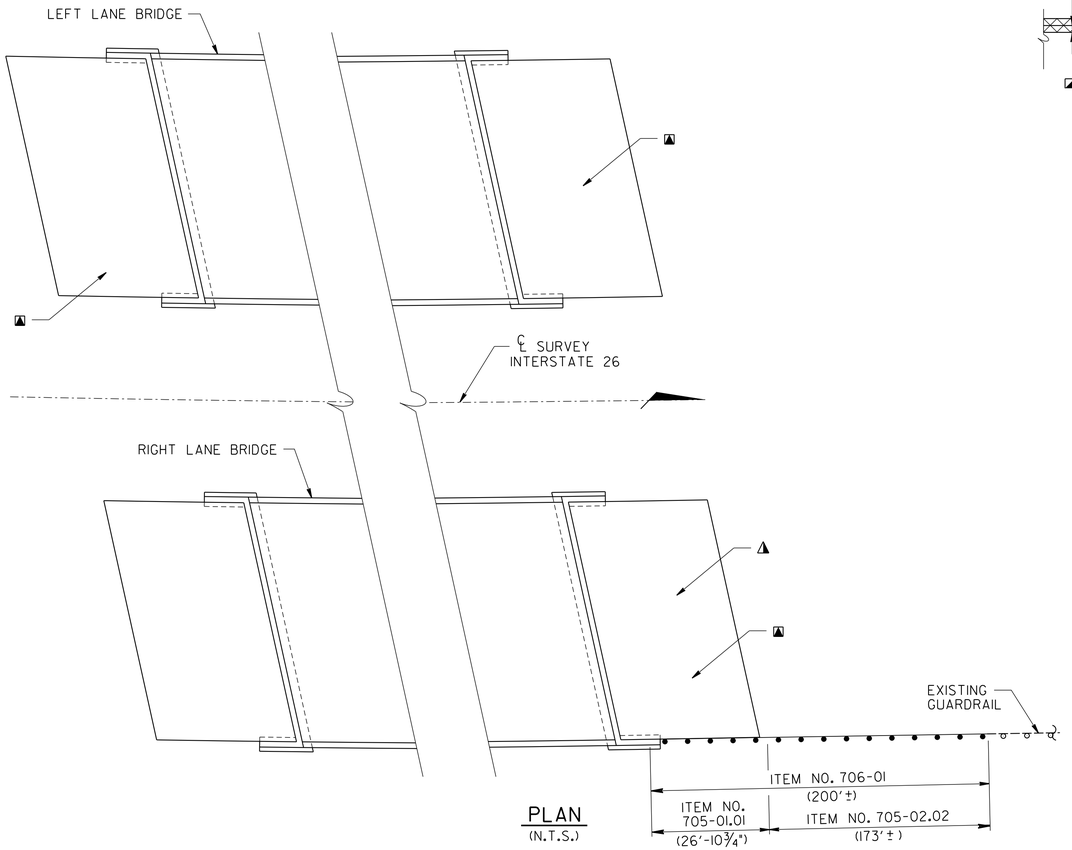
TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	86004-4156-04	2C

P.A.B.E. SETTLEMENT TABLE

LOCATION		MINIMUM (INCH)	MAXIMUM (INCH)
LEFT LANE	BEG. OF BRIDGE	0.24	0.36
	END OF BRIDGE	0.12	0.12
RIGHT LANE	BEG. OF BRIDGE	N/A	N/A
	END OF BRIDGE	0.12	1.92

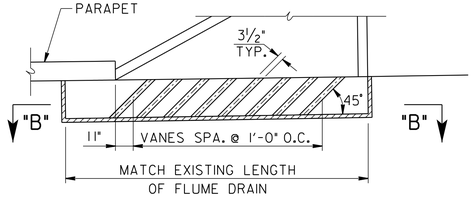


PLAN
(N.T.S.)

NOTE: TRANSITION NEW GUARDRAIL HEIGHT TO EXISTING FOR THE LIMITS SHOWN.

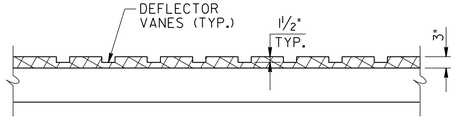
◭ DENOTES: SETTLEMENT AT P.A.B.E. VARIES PER LOCATION. CONTRACTOR TO ADJUST THICKNESS OF PMC OVERLAY TO COMPENSATE FOR SETTLEMENT DIFFERENCE OF P.A.B.E. AT BEGINNING OR END OF BRIDGE. SEE TABLE THIS SHEET.

◭ DENOTES: ASPHALT PAVEMENT ON P.A.B.E TO BE REMOVED BEFORE HYDRODEMOLITION AND APPLYING NEW POLYMER MODIFIED CONCRETE OVERLAY. ASPHALT THICKNESS VARIES FROM ⅛" TO 2"±. COST TO BE INCLUDED IN ITEM NO. 202-03.01, REMOVAL OF ASPHALT PAVEMENT, S.Y.

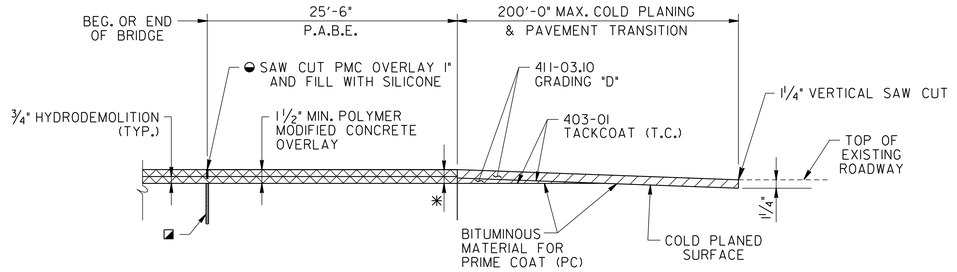


VANE DETAIL
(N.T.S.)

▨ DENOTES: FILL VOID AROUND PERIMETER OF FLUME DRAIN WITH AN APPROVED NON-SHRINK GROUT. COST TO BE INCLUDED IN BRIDGE FLUME DRAIN, 604-03.06, S.Y.



SECTION "B"-"B"
N.T.S.



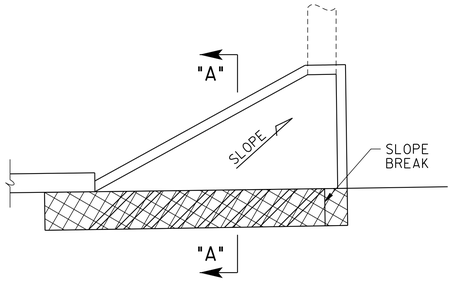
PAVEMENT TRANSITION DETAIL
N.T.S.

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

✳ DENOTES: PMC OVERLAY THICKNESS VARIES TRANSVERSELY ACROSS P.A.B.E. WIDTH AT BEG. AND/OR END OF BRIDGE. (TYP.) SEE TABLE THIS SHEET.

◒ DENOTES: ALL COSTS OF MATERIALS AND LABOR FOR SAWCUTTING AND FILLING SAW CUTS WITH SILICONE SEALANT TO BE PAID FOR UNDER ITEM NO. 619-01 BRIDGE DECK OVERLAY (PMC), S.Y. SILICONE SEALANT SHALL BE AN APPROVED PRODUCT FROM THE TDOT QUALIFIED PRODUCTS LIST.

◪ DENOTES: FILL JOINT OPENING AT ABUT. NO. 2 (RL) WITH A NON-SHRINK GROUT PRIOR TO PLACEMENT OF NEW PMC OVERLAY. ALL COSTS OF MATERIALS AND LABOR FOR FILLING JOINT TO BE PAID FOR UNDER ITEM NO. 619-01 BRIDGE DECK OVERLAY (PMC), S.Y. NON-SHRINK GROUT SHALL BE AN APPROVED PRODUCT FROM THE TDOT QUALIFIED PRODUCTS LIST.



PLAN

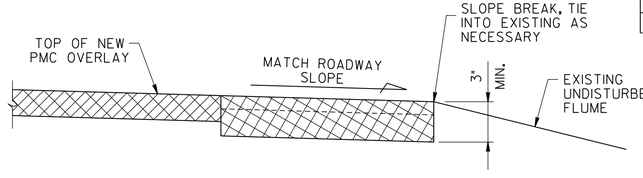
FLUME DRAIN REPAIR DETAILS
(TYP. BOTH LANES) (N.T.S.)

▨ DENOTES: SCARIFY & REMOVE CONCRETE 3" MINIMUM AND REPOUR FLUSH TO TOP OF NEW PMC OVERLAY INCLUDING VANES AS SHOWN IN DETAILS USING HIGH EARLY STRENGTH CONCRETE. ALL COSTS TO BE INCLUDED IN ITEM NO. 604-03.06, BRIDGE DRAIN FLUME, S.Y.

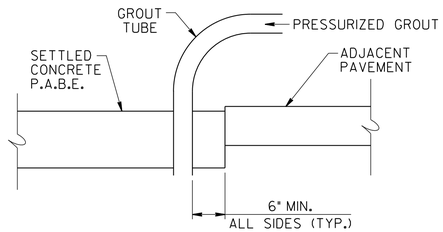
(LL) DENOTES: LEFT LANE

(RL) DENOTES: RIGHT LANE

NOTE: GUARDRAIL POSTS NOT SHOWN FOR CLARITY.



SECTION "A"-"A"
N.T.S.



P.A.B.E. STABILIZATION DETAIL
N.T.S.

NOTES:

(1) P.A.B.E. SLAB SHALL BE CORED ON A 10'-0" GRID AS DIRECTED BY THE ENGINEER. SLAB SHALL NOT BE CORED CLOSER THAN 6" FROM ANY EDGE AND SHALL BE PAID FOR UNDER ITEM. NO. 625-02.43, CONCRETE CORING, V.F.

(2) GROUT SHALL BE PUMPED UNDER SUFFICIENT PRESSURE TO FILL VOIDS UNDER SLAB SO AS NOT TO DAMAGE UNDERLYING BACKFILL, WITHOUT RAISING THE SETTLED SLAB. GROUT SHOULD EXIT ADJACENT CORE HOLES WHEN PUMPING. THE TOP 12" OF THE CORE HOLES SHALL BE FILLED WITH CONCRETE TO LEVEL WITH THE TOP OF SLAB AND BE GIVEN A CLASS I FINISH.

(3) GROUT SHALL BE TYPE II, NON-SHRINKING AND FAST-SETTING, AND SHALL CONFORM TO SECTION 918.21 OF THE STANDARD SPECIFICATIONS.

(4) CONCRETE SHALL BE f'c=3,500 PSI, 18-HOUR HIGH EARLY STRENGTH, CLASS "A" AND SHALL CONFORM TO SECTION 604 OF THE STANDARD SPECIFICATIONS.

(5) PUMPING SHALL CONFORM TO SECTION 604-16 OF THE STANDARD SPECIFICATIONS.

(6) ALL LABOR AND MATERIALS (EXCEPT CORING) TO STABILIZE SLABS SHALL BE PAID FOR UNDER ITEM NO. 204-08.01, BACKFILL MATERIAL (FLOWABLE FILL), C.Y.

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM NO. 604-03.06 APPROX. REPAIR AREAS (S.Y.)
FLUME DRAIN (LL)	4
FLUME DRAIN (RL)	4

ESTIMATED GUARDRAIL QUANTITIES

SINGLE GUARDRAIL (TYPE 2) (L.F.) 705-02.02	GUARDRAIL AT BRIDGE ENDS (L.F.) 705-01.01	GUARDRAIL REMOVED, (L.F.) 706-01
173	27	200

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPOXY OVERLAY AND PAVEMENT TRANSITION DETAILS

I-26 OVER GARLAND ROAD
L.M. 1.25

4/29/2015
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	86004-4156-04	3

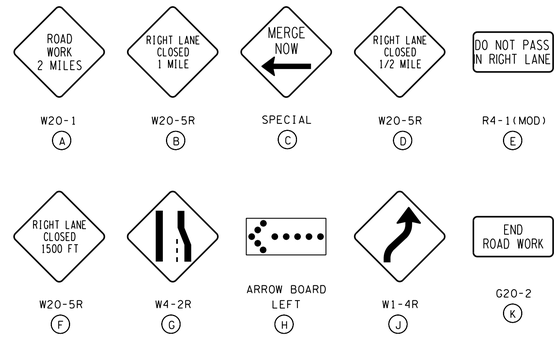
TRAFFIC CONTROL QUANTITIES

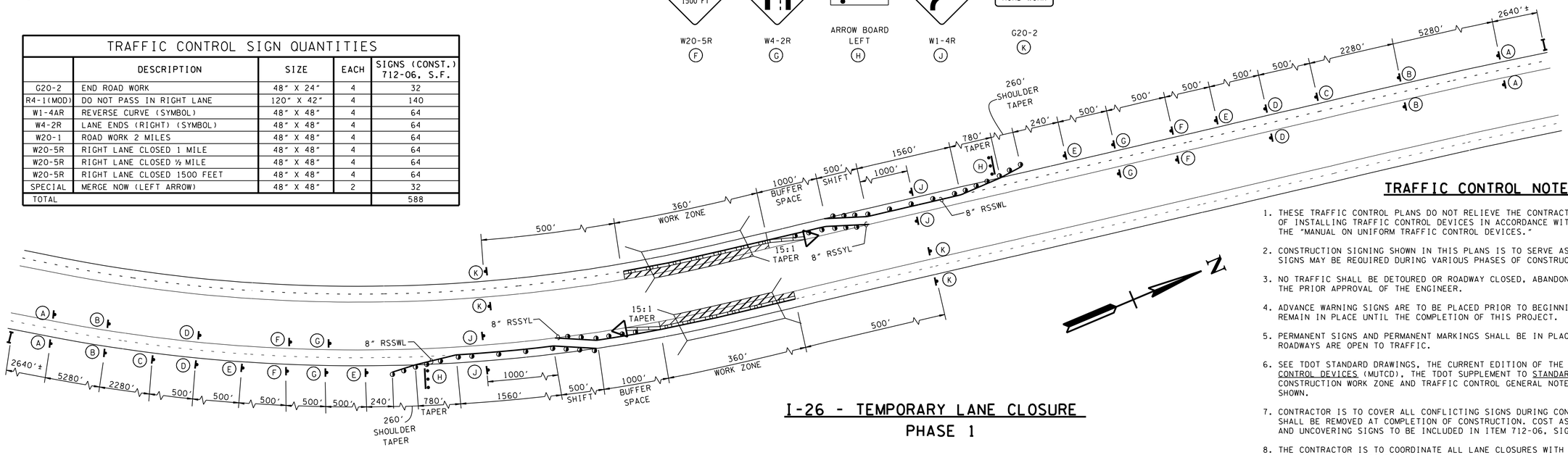
ITEM NO.	DESCRIPTION	UNIT	LT. LANE QUANTITY	RT. LANE QUANTITY	TOTAL QUANTITY
705-08.51	PORTABLE IMPACT ATTENUATOR NCHRP350 TL-3	EACH	1	1	2
712-01	TRAFFIC CONTROL	LS	0.5	0.5	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	540	540	1080
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	155	155	310
(1) 712-04.50	PORTABLE BARRIER RAIL DELINEATOR	EACH	38	38	76
712-06	SIGNS (CONSTRUCTION)	S.F.	294	294	588
712-08.03	ARROW BOARD (TYPE C)	EACH	1	1	2
712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F.	6,820	6,820	13,640
713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	1	1	2
716-12.02	ENHANCED FLATLINE THERMO PVMT MRKING (6IN LINE)	L.M.	0.3	0.3	0.6

(1) INCLUDES ½ WHITE AND ½ YELLOW

TRAFFIC CONTROL SIGN QUANTITIES

	DESCRIPTION	SIZE	EACH	SIGNS (CONST.) 712-06, S.F.
G20-2	END ROAD WORK	48" X 24"	4	32
R4-1(MOD)	DO NOT PASS IN RIGHT LANE	120" X 42"	4	140
W1-4AR	REVERSE CURVE (SYMBOL)	48" X 48"	4	64
W4-2R	LANE ENDS (RIGHT) (SYMBOL)	48" X 48"	4	64
W20-1	ROAD WORK 2 MILES	48" X 48"	4	64
W20-5R	RIGHT LANE CLOSED 1 MILE	48" X 48"	4	64
W20-5R	RIGHT LANE CLOSED ½ MILE	48" X 48"	4	64
W20-5R	RIGHT LANE CLOSED 1500 FEET	48" X 48"	4	64
SPECIAL	MERGE NOW (LEFT ARROW)	48" X 48"	2	32
TOTAL				588





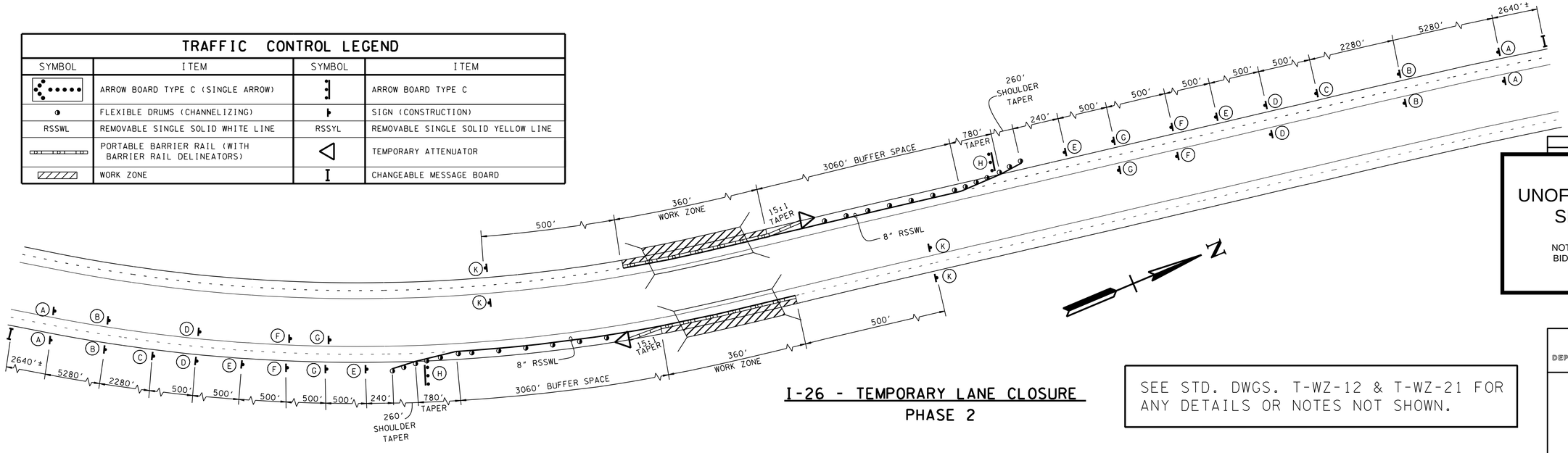
I-26 - TEMPORARY LANE CLOSURE
PHASE 1

TRAFFIC CONTROL NOTES

1. THESE TRAFFIC CONTROL PLANS DO NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
2. CONSTRUCTION SIGNING SHOWN IN THIS PLANS IS TO SERVE AS A GUIDE ONLY. OTHER SIGNS MAY BE REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION.
3. NO TRAFFIC SHALL BE DETOURED OR ROADWAY CLOSED, ABANDONED, OR REMOVED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
4. ADVANCE WARNING SIGNS ARE TO BE PLACED PRIOR TO BEGINNING OF CONSTRUCTION AND REMAIN IN PLACE UNTIL THE COMPLETION OF THIS PROJECT.
5. PERMANENT SIGNS AND PERMANENT MARKINGS SHALL BE IN PLACE BEFORE COMPLETED ROADWAYS ARE OPEN TO TRAFFIC.
6. SEE TDOT STANDARD DRAWINGS, THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE TDOT SUPPLEMENT TO STANDARD HIGHWAY SIGNS, AND THE CONSTRUCTION WORK ZONE AND TRAFFIC CONTROL GENERAL NOTES FOR TRAFFIC DETAILS NOT SHOWN.
7. CONTRACTOR IS TO COVER ALL CONFLICTING SIGNS DURING CONSTRUCTION. COVERINGS SHALL BE REMOVED AT COMPLETION OF CONSTRUCTION. COST ASSOCIATED WITH COVERING AND UNCOVERING SIGNS TO BE INCLUDED IN ITEM 712-06, SIGNS (CONSTRUCTION).
8. THE CONTRACTOR IS TO COORDINATE ALL LANE CLOSURES WITH THE TDOT REGIONAL OFFICE AND THE COUNTY ENGINEER.

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM	SYMBOL	ITEM
	ARROW BOARD TYPE C (SINGLE ARROW)		ARROW BOARD TYPE C
	FLEXIBLE DRUMS (CHANNELIZING)		SIGN (CONSTRUCTION)
RSSWL	REMOVABLE SINGLE SOLID WHITE LINE	RSSYL	REMOVABLE SINGLE SOLID YELLOW LINE
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)		TEMPORARY ATTENUATOR
	WORK ZONE		CHANGEABLE MESSAGE BOARD



I-26 - TEMPORARY LANE CLOSURE
PHASE 2

SEE STD. DWGS. T-WZ-12 & T-WZ-21 FOR ANY DETAILS OR NOTES NOT SHOWN.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
I-26 LANE CLOSURE DETAILS

4/29/2015
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TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2015	86004-4156-04	4

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA. / LOCATION
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	AN ASBESTOS CONTAINING MATERIAL (ACM) SURVEY WAS CONDUCTED ON BRIDGE NO. 86100260003 I-26 EB BRIDGE OVER GARLAND ROAD AND BRIDGE NO. 86100260004 I-26 WB BRIDGE OVER GARLAND ROAD IN UNICOI COUNTY, PIN 113431.01. NO ASBESTOS WAS DETECTED. NO SPECIAL ACCOMMODATIONS FOR DEMOLITION AND WASTE DISPOSAL ARE ANTICIPATED FOR THIS STRUCTURE AND THE MATERIAL CAN BE DEPOSITED IN A C&D LANDFILL. PRIOR TO THE DEMOLITION OF ANY STRUCTURE (BRIDGE OR BUILDING), THE CONTRACTOR IS REQUIRED TO SUBMIT THE NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS STANDARD 10-DAY NOTICE OF DEMOLITION TO THE TENNESSEE DIVISION OF AIR POLLUTION CONTROL (STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2015) SECTIONS 107.08 D AND 202.03).	BRIDGE NO. 83I00260003 I-26 EB OVER GARLAND ROAD AND BRIDGE NO. 83I00260004 I-26 WB OVER GARLAND ROAD

SEALED BY

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

I-26 OVER GARLAND ROAD
L.M. 1.25

4/28/2015
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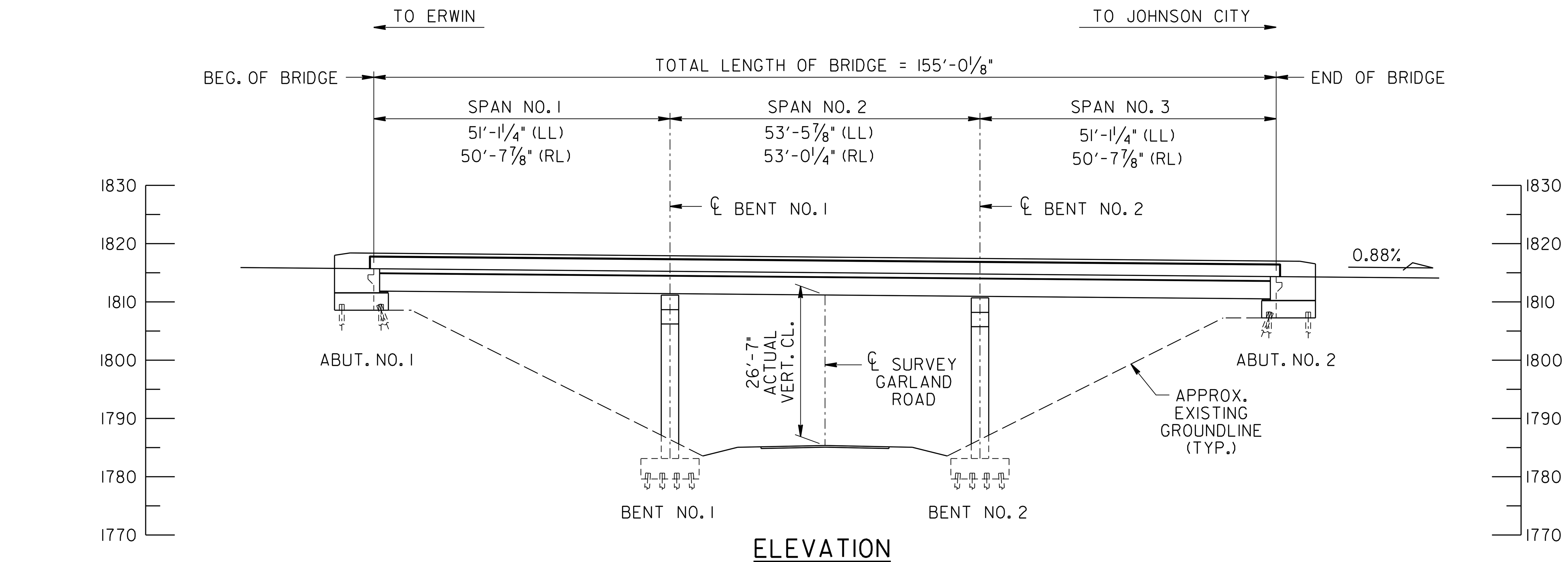
PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	·

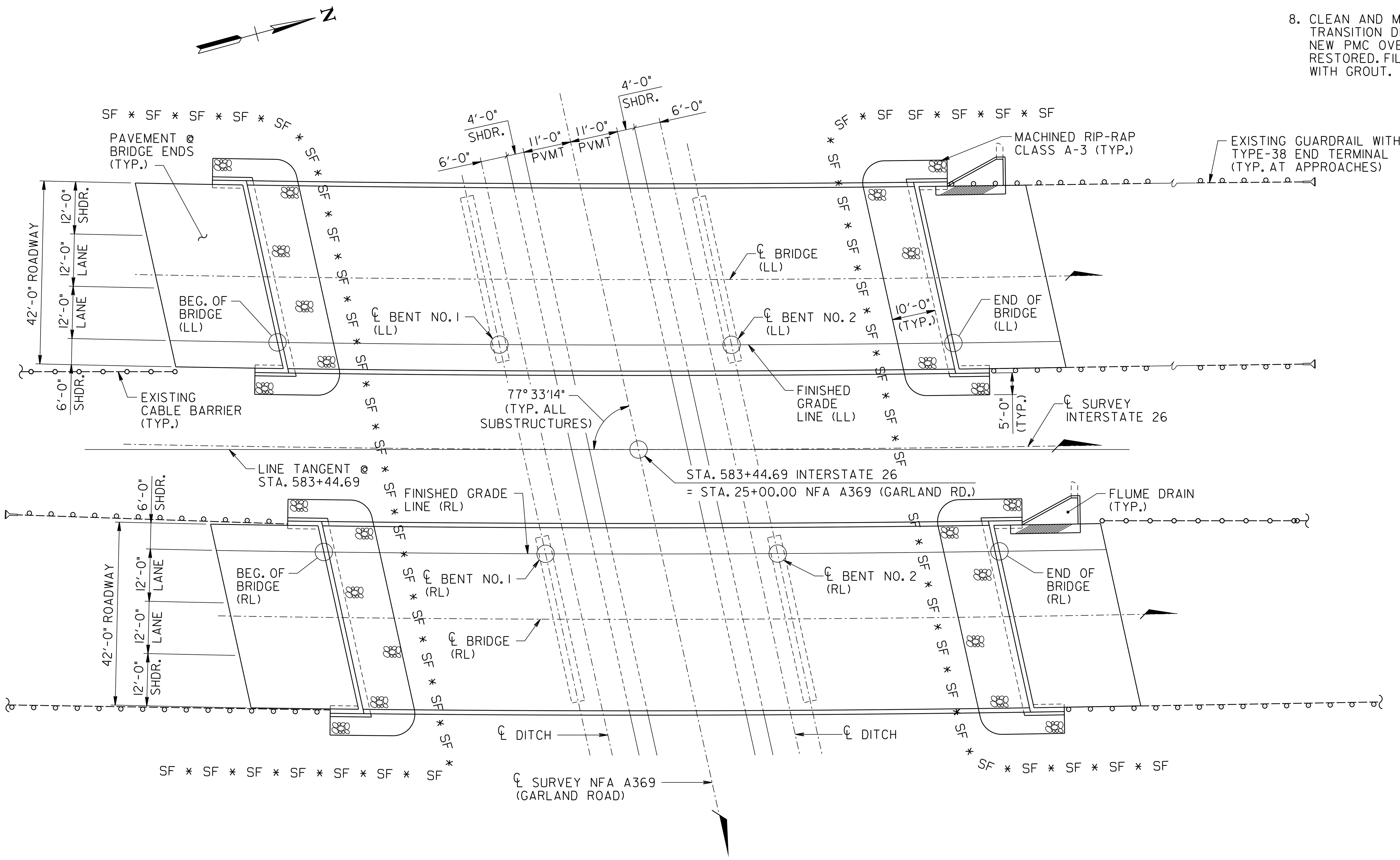
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION

(LL) DENOTES: LEFT LANE
(RL) DENOTES: RIGHT LANE



PLAN

GENERAL SCOPE OF WORK

1. PROVIDE REQUIRED TRAFFIC CONTROL TO MAINTAIN ONE LANE OF TRAFFIC (16'-0" MIN.) AT ALL TIMES ON THE EXISTING BRIDGE.
2. REMOVE AND REPAIR DETERIORATED AREAS OF CONCRETE AS SHOWN IN THE PLANS.
3. REMOVE ASPHALT ON P.A.B.E. AT ABUTMENT NO. 2, RIGHT LANE, PRIOR TO HYDRODEMOLITION.
4. PROVIDE 3/4" HYDRODEMOLITION TO TOP OF SLAB AND P.A.B.E.
5. PLACE GROUT IN OPEN JOINT AT ABUTMENT NO. 2, RIGHT LANE, PRIOR TO APPLYING POLYMER MODIFIED CONCRETE OVERLAY.
6. APPLY A 1 1/2" MINIMUM POLYMER MODIFIED CONCRETE OVERLAY TO THE TOP OF SLAB AFTER HYDRODEMOLITION TO MAINTAIN EXISTING TOP OF SLAB VERTICAL PROFILE. THE THICKNESS WILL INCREASE AT THE SETTLED PAVEMENT AT BRIDGE ENDS.
7. CORE APPROACH SLABS ON A 10'-0" GRID TO FILL WITH FLOWABLE FILL TO STABILIZE SETTLEMENT BENEATH APPROACH SLABS AT BOTH ENDS OF THE BRIDGE.
8. CLEAN AND MAINTAIN END OF BRIDGE DRAINS AND TRANSITION DRAIN FLUME TO COINCIDE WITH TOP EDGE OF NEW PMC OVERLAY ONCE VERTICAL PROFILE HAS BEEN RESTORED. FILL OPENING AROUND END OF BRIDGE DRAINS WITH GROUT.
9. SAW CUT COLD JOINTS 1" DEEP AFTER PMC OVERLAY HAS CURED AND INSTALL SILICONE IN JOINT CUTS AT BEGINNING AND END OF BRIDGE.
10. REPAIR UNDERMINING AT ABUTMENTS BY CONSTRUCTING A 1'-0" x 1'-0" CONCRETE APRON AT ABUTMENT TO GROUND INTERFACE. ENCASE STEEL PILES UNDER ABUTMENT WITH CONCRETE. REPLACE RIP-RAP BACK UP TO FACE OF APRON.
11. REMOVE AND DISPOSE OF ALL BRUSH, TREES, FOR A DISTANCE OF 10'-0" ALONG EACH SIDE OF THE BRIDGE AND REMOVE VEGETATIVE GROWTH ON BENTS, AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN OTHER ITEMS BID ON.
12. REMOVE AND REPLACE EXISTING ASPHALT OVERLAY FOR A MINIMUM TRANSITION LENGTH BEYOND EACH END OF THE BRIDGE.
13. UPGRADE GUARDRAIL AND ATTACHMENT AT BRIDGE END AT ABUTMENT NO. 2 RIGHT LANE AS SHOWN IN THE PLANS.
14. EPOXY INJECT CRACKED CONCRETE ON BEAMS AND ON PARAPETS AS DIRECTED BY THE ENGINEER.
15. INSTALL NEW DELINEATORS ON TOP OF PARAPETS. COST TO BE INCLUDED IN OTHER ITEMS BID ON.
16. HIGH PRESSURE WATER WASH AND TEXTURE COAT DESIGNATED CONCRETE SURFACES.
17. MECHANICALLY GROOVE BRIDGE DECK AND PAVEMENT AT BRIDGE ENDS.
18. APPLY CRACK SEALANT (HMWM) TO DECK AT GUTTERLINES AND LONGITUDINAL CONSTRUCTION JOINT.

LIST OF DRAWINGS

DWG NO.	LAST REV. DATE	DRAWING
BR-106-79		LAYOUT OF BRIDGE TO BE REPAIRED
BR-106-80		GENERAL NOTES AND ESTIMATED BRIDGE QUANTITIES
BR-106-81		SUPERSTRUCTURE
BR-106-82		SUPERSTRUCTURE DETAILS
BR-106-83		ABUTMENT REPAIR DETAILS
BR-106-84		BENT NOS. 1 & 2 REPAIR DETAILS (RL & LL)
BR-106-85		MISCELLANEOUS REPAIR DETAILS

* LIST OF REFERENCE DRAWINGS

M-104-92 THRU M-104-103	EXISITING BRIDGE PLANS
M-28-1	BRIDGE RAILING CONCRETE PARAPET
K-85-150	MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS
K-86-144	REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS

LIST OF SPECIAL PROVISIONS

NO.	LAST REV. DATE	REGARDING
SP604CR	**	REPAIR OF BRIDGE DECK CRACKS
SP604H	**	BRIDGE DECK PREPARATION USING HYDRODEMOLITION

* DENOTES: THESE DRAWINGS ARE TO BE PRINTED WITH PLANS.

** DENOTES: CURRENT REVISION DATE, AS PER CONTRACT DOCUMENTS.

UNOFFICIAL SET

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POSTED SPEED LIMIT (I-26) = 65 M.P.H.
ADT (I-26, 2015) = 21,000

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE TO BE REPAIRED
INTERSTATE 26 OVER
NFA A369 (GARLAND ROAD)
BRIDGE NO. 86-I26-1.25 (RL & LL)
UNICOI COUNTY
2015

DESIGNED BY	M. JONES	DATE	09/14
DRAWN BY	M. JONES	DATE	09/14
SUPERVISED BY	L. BILBREY	DATE	09/14
CHECKED BY	L. BILBREY	DATE	09/14

4/28/2015
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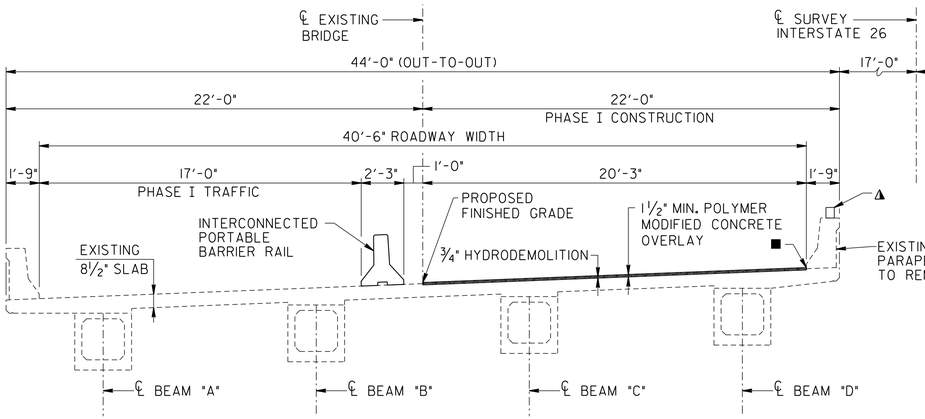
BR-106-79

TOTAL DISTURBED AREA = 6,200 S.F. (0.14 ACRES)

PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	·

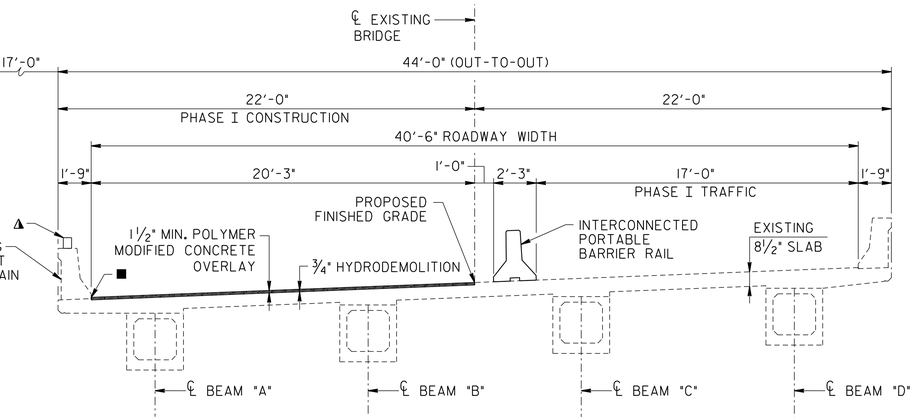
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



TYPICAL SECTION - PHASE I CONSTRUCTION

(LEFT LANE - LOOKING FORWARD ON SURVEY)



TYPICAL SECTION - PHASE I CONSTRUCTION

(RIGHT LANE - LOOKING FORWARD ON SURVEY)

TYPICAL SECTION - PHASE II CONSTRUCTION

(LEFT LANE - LOOKING FORWARD ON SURVEY)

TYPICAL SECTION - PHASE II CONSTRUCTION

(RIGHT LANE - LOOKING FORWARD ON SURVEY)

◮ DENOTES: NEW DELINEATORS. SEE STD-I-I FOR DETAILS. ALL COST ASSOCIATED WITH FURNISHING AND INSTALLING DELINEATORS SHALL BE INCLUDED IN OTHER ITEMS BID ON.

■ DENOTES: ONCE PMC OVERLAY HAS REACHED AN APPROPRIATE CURE TIME, APPLY A HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) CRACK SEALER AT THE GUTTERLINES AND THE LONGITUDINAL CONSTRUCTION JOINT. APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ALSO, SEE SPECIAL PROVISION 604CR.

SPECIAL NOTE CONCERNING USE OF HYDRODEMOLITION FOR SCARIFYING DECK ¾", PARTIAL DEPTH CONCRETE REMOVAL AND NEW CONCRETE:

(THIS IS A GENERAL DESCRIPTION OF WORK REQUIRED AND PAYMENT FOR THAT WORK. SEE SPECIAL PROVISION 604H & TDOT STANDARD SPECIFICATIONS 619 FOR EXACT LIMITS OF WORK AND PAYMENT CONCERNING HYDRODEMOLITION AND NEW PMC OVERLAY).

THE DECK AREA ON THE BRIDGE, SHALL RECEIVE HYDRODEMOLITION AS DESCRIBED BELOW. THE AREA SHALL BE SCARIFIED ¾" MINIMUM AND HAVE PARTIAL DEPTH DETERIORATED CONCRETE REMOVED USING HYDRODEMOLITION. PARTIAL DEPTH AREAS WILL NOT BE MARKED ON THE DECK BUT WILL BE REMOVED AS THE HYDRODEMOLITION COMES IN CONTACT WITH PARTIAL DEPTH DETERIORATED CONCRETE WHILE SCARIFYING. THESE AREAS SHALL BE PAID FOR UNDER ITEM NO. 604-10.20, HYDRODEMOLITION, S.Y.

ALL COSTS ASSOCIATED WITH HYDRODEMOLITION, INCLUDING ALL MATERIAL AND LABOR NECESSARY TO REMOVE AND DISPOSE OF ALL CONCRETE AND OTHER DEBRIS TO A ¾" MINIMUM DEPTH, ROTOMILLING, VACUUMING, SHIELDING, CONTAINMENT, FILTRATION OF WASTEWATER, ADDITIONAL JACKHAMMERING, PROTECTIVE BARRIER, AND ALL OTHER ASPECTS OF WORK NECESSARY TO REMOVE THE TOP ¾" MINIMUM OF THE BRIDGE DECK BY HYDRODEMOLITION SHALL BE INCLUDED UNDER ITEM NO. 604-10.20, HYDRODEMOLITION, S.Y.

THE NEW PMC OVERLAY, WHICH INCLUDES THE PMC ABOVE ¾" BELOW THE ORIGINAL BRIDGE DECK ELEVATION, SHALL BE PAID FOR UNDER ITEM NO. 619-01, BRIDGE DECK OVERLAY (PMC), S.Y.

THE NEW POLYMER MODIFID CONCRETE PLACED IN AREAS OF PARTIAL DEPTH REMOVAL UP TO ¾" BELOW THE ORIGINAL BRIDGE DECK ELEVATION SHALL BE PAID FOR ACCORDING TO TDOT STANDARD SPECIFICATION 619 AND WILL BE PLACED AT THE SAME TIME AS THE NEW PMC OVERLAY.

DESIGNED BY M. JONES DATE 09/14
DRAWN BY M. JONES DATE 09/14
SUPERVISED BY L. BILBREY DATE 09/14
CHECKED BY L. BILBREY DATE 09/14

SPECIAL NOTE CONCERNING USE OF HYDRODEMOLITION FOR SCARIFYING DECK ¾", PARTIAL DEPTH CONCRETE REMOVAL AND NEW CONCRETE (CONT'D):

¼" ROTOMILLING OF THE CONCRETE DECK WILL BE ALLOWED PRIOR TO HYDRODEMOLITION. EXTREME CARE SHALL BE EXERCISED SO AS NOT TO CUT INTO EXISTING REINFORCING STEEL.

PRESSURE WASHING OF 10,000 P.S.I. MIN. AND VACUUMING OF THE HYDRODEMOLISHED SURFACES SHALL BE DONE PRIOR TO PLACEMENT OF THE NEW PMC OVERLAY TO ENSURE A DECK FREE OF ANY LOOSE MATERIAL. THE SURFACES SHALL MEET WITH THE APPROVAL OF THE ENGINEER BEFORE PLACEMENT OF THE PMC IS ALLOWED.

A REPRESENTATIVE FROM HEADQUARTERS OF THE BRIDGE INSPECTION AND REPAIR OFFICE SHALL BE PRESENT BEFORE AND DURING HYDRODEMOLITION ACTIVITIES.

SPECIAL NOTE CONCERNING PLACEMENT OF THE POLYMER MODIFIED CONCRETE (PMC) OVERLAY

THE POLYMER MODIFIED CONCRETE (PMC) OVERLAY SHALL BE PLACED ONLY DURING NIGHTTIME HOURS EXCEPT WHEN SPECIFICALLY AUTHORIZED BY THE ENGINEER OR GRANTED PERMISSION FOR DAYTIME PLACEMENT FROM TDOT BRIDGE REPAIR. NIGHTTIME HOURS SHALL BE DEFINED AS THE TIME BETWEEN SUNSET AND SUNRISE. STRICT ADHERENCE TO CURING THE PMC OVERLAY AS PER TENNESSEE DOT STANDARD SPECIFICATIONS SHALL BE MAINTAINED.

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
INTERSTATE 26 OVER
NFA A369 (GARLAND ROAD)
BRIDGE NO. 86-126-1.25 (RL & LL)
UNICOI COUNTY
2015

BR-106-81

4/28/2015
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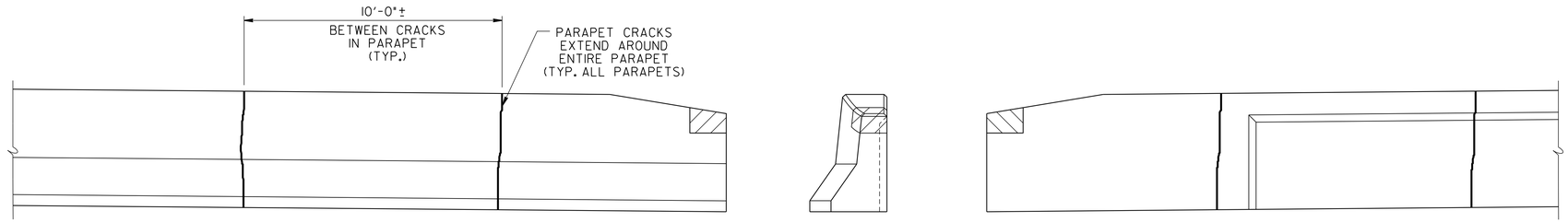
PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	·

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

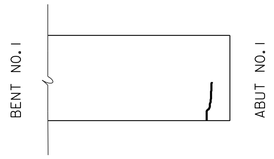


TRAFFIC SIDE ELEVATION

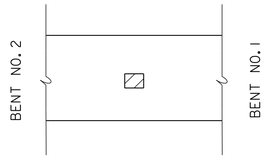
END ELEVATION

EXTERIOR ELEVATION

LEFT LANE PARAPET
(BEG. OF BRIDGE - RIGHT SIDE)



BEAM "C"- SPAN NO. 1
(LEFT LANE, WEST ELEVATION)



BEAM "A"- SPAN NO. 2
(LEFT LANE, BOTTOM, MID-SPAN)

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM NO. 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (S.F.)	ITEM 604-10.62 EXPOXY INJECTION (L.F.)
PARAPETS (RL)	-	120
PARAPETS (LL)	2	120
BEAM "A" (SPAN 2 - LL)	2	-
BEAM "C" (SPAN 1 - LL)	-	2

DENOTES: AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 AND/OR 604-10.54. SEE REPAIR DETAILS ON DWG. NO. BR-106-85.

DENOTES: CRACK TO BE EPOXY INJECTED. QUANTITIES AND LOCATIONS GIVEN ARE APPROXIMATE. ITEM CAN BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER. SEE EPOXY INJECTION NOTES ON DWG. NO. BR-106.85.

(LL) DENOTES: LEFT LANE

UNOFFICIAL SET

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
INTERSTATE 26 OVER
NFA A369 (GARLAND ROAD)
BRIDGE NO. 86-126-1.25 (RL & LL)
UNICOI COUNTY
2015

BR-106-82

DESIGNED BY M. JONES DATE 09/14
DRAWN BY M. JONES DATE 09/14
SUPERVISED BY L. BILBREY DATE 09/14
CHECKED BY L. BILBREY DATE 09/14

4/28/2015
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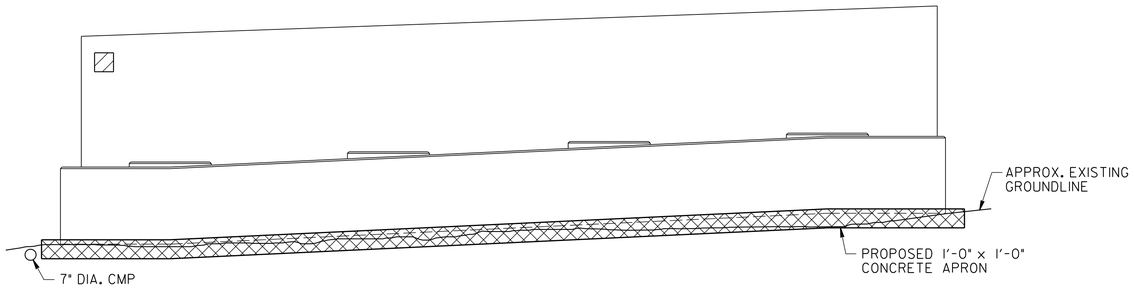
PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	·

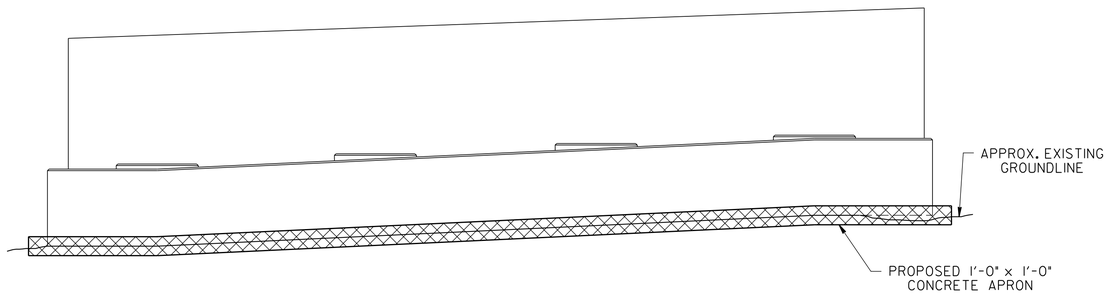
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



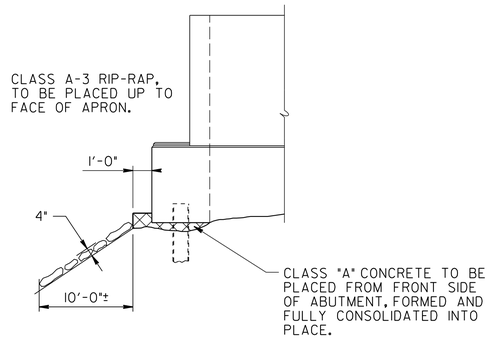
ABUTMENT NO. 2 (LL) - ELEVATION

(LOOKING FORWARD ON SURVEY)



ABUTMENT NO. 2 (RL) - ELEVATION

(LOOKING FORWARD ON SURVEY)



FILL SETTLEMENT DETAIL

(TYP.)

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM NO. 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (S.F.)	ITEM NO. 604-03.01 CLASS A CONCRETE C.Y.
ABUTMENT NO. 2 (LL)	1	2.5
ABUTMENT NO. 2 (RL)	-	2.5

▨ DENOTES: AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 AND/OR 604-10.54. SEE REPAIR DETAILS ON DWG. NO. BR-106-85.

▩ DENOTES: PROPOSED CONCRETE APRON TO BE PAID FOR UNDER ITEM NO. 604-03.01, CLASS A CONCRETE (BRIDGES), C.Y.

(LL) DENOTES: LEFT LANE

(RL) DENOTES: RIGHT LANE

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT REPAIR DETAILS INTERSTATE 26 OVER NFA A369 (GARLAND ROAD) BRIDGE NO. 86-126-1.25 (RL & LL) UNICOI COUNTY 2015

DESIGNED BY M. JONES DATE 09/14
DRAWN BY M. JONES DATE 09/14
SUPERVISED BY L. BILBREY DATE 09/14
CHECKED BY L. BILBREY DATE 09/14

4/28/2015
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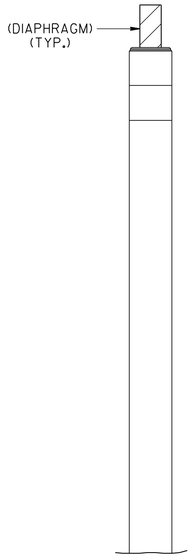
BR-106-83

PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	·

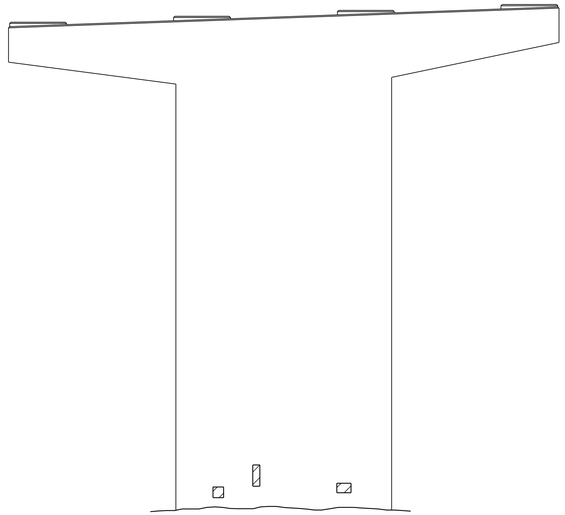
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

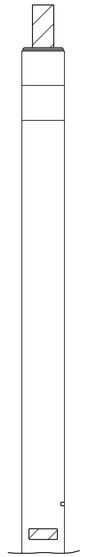


BENT NO. 1 (LL)
(EAST ELEVATION)

BENT NO. 1 (LL)
(WEST ELEVATION)



BENT NO. 2 (LL) - ELEVATION
(LOOKING FORWARD ON SURVEY)

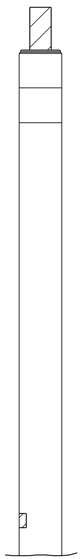


BENT NO. 2 (LL)
(EAST ELEVATION)

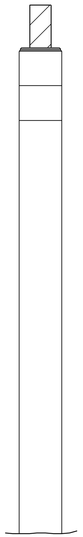
BENT NO. 2 (LL)
(WEST ELEVATION)

BENT NO. 1 (RL)
(EAST ELEVATION)

BENT NO. 1 (RL)
(WEST ELEVATION)



BENT NO. 2 (RL)
(EAST ELEVATION)



BENT NO. 2 (RL)
(WEST ELEVATION)

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM NO. 604-10.05 AND/OR 604-10.54 APPROX. REPAIR AREAS (S.F.)
BENT NO. 1 (LL)	12
BENT NO. 2 (LL)	15
BENT NO. 1 (RL)	10
BENT NO. 2 (RL)	11

▨ DENOTES: AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 AND/OR 604-10.54. SEE REPAIR DETAILS ON DWG. NO. BR-106-85.

(LL) DENOTES: LEFT LANE

(RL) DENOTES: RIGHT LANE

NOTE: THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS.

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT NOS. 1 & 2 REPAIR DETAILS (RL & LL) INTERSTATE 26 OVER NFA A369 (GARLAND ROAD) BRIDGE NO. 86-126-1.25 (RL & LL) UNICOI COUNTY 2015

DESIGNED BY	M. JONES	DATE	09/14
DRAWN BY	M. JONES	DATE	09/14
SUPERVISED BY	L. BILBREY	DATE	09/14
CHECKED BY	L. BILBREY	DATE	09/14

4/28/2015
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BR-106-84

SPECIAL 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 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 SHEETS. 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 THIRD 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 FOR 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), L.F. AND 604-10.58, EPOXY INJECTION (INJECTION), GAL.

PRICE BID FOR ITEM NUMBER 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F., SHALL INCLUDE COST OF ALL LABOR AND MATERIALS (EXCEPT ADHESIVE) FOR GRINDING 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.

DESIGNED BY	M. JONES	DATE	09/14
DRAWN BY	M. JONES	DATE	09/14
SUPERVISED BY	L. BILBREY	DATE	09/14
CHECKED BY	L. BILBREY	DATE	09/14

4/28/2015
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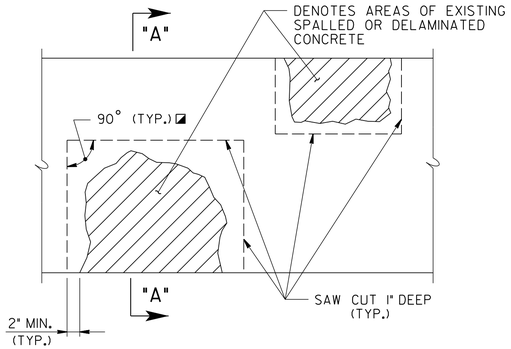
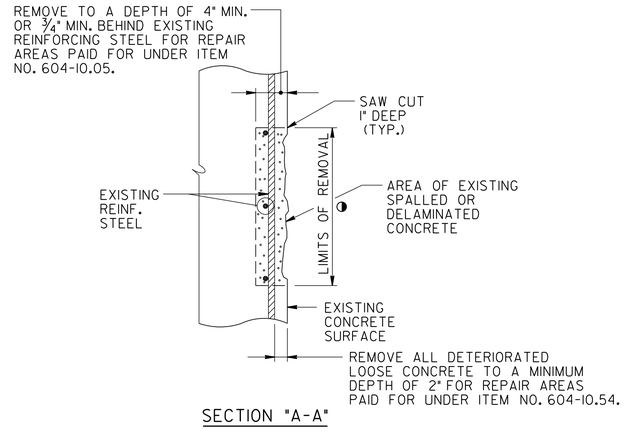
PROJECT NO.	YEAR	SHEET NO.
86004-4156-04	2015	-

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION





SECTION "A-A"

DETAIL SHOWING AREAS OF EXISTING SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

◒ DENOTES: LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.

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

NOTE: EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED OR DELAMINATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED EXISTING REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE AND INCORPORATED INTO THE NEW CONSTRUCTION. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALLED OR DELAMINATED AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 OR 604-10.54. PATCHING MATERIAL FOR ITEM NO. 604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR ITEM NO. 604-10.54 SHALL BE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL. SEE T.D.O.T. QUALIFIED PRODUCTS LIST 13, (F).

PNEUMATICALLY PLACED CONCRETE IS NOT ALLOWED.

COST OF SAW CUTTING, REMOVING SPALLED OR DELAMINATED CONCRETE, CLEANING, PATCHING MATERIAL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F. OR ITEM NO. 604-10.05, CONCRETE, S.F.

THE ENGINEER SHALL DESIGNATE ALL SPALLED OR DELAMINATED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. ITEM NO. 604-10.05 AND 604-10.54 CAN BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

POWER HAND DRIVEN TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:
1. PNEUMATIC HAMMERS HEAVIER THAN THE 35 LB. CLASS SHALL NOT BE USED.
2. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL.

UNOFFICIAL SET

NOT FOR BIDDING

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS REPAIR DETAILS
INTERSTATE 26 OVER
NFA A369 (GARLAND ROAD)
BRIDGE NO. 86-126-1.25 (RL & LL)
UNICOI COUNTY
2015

BR-106-85