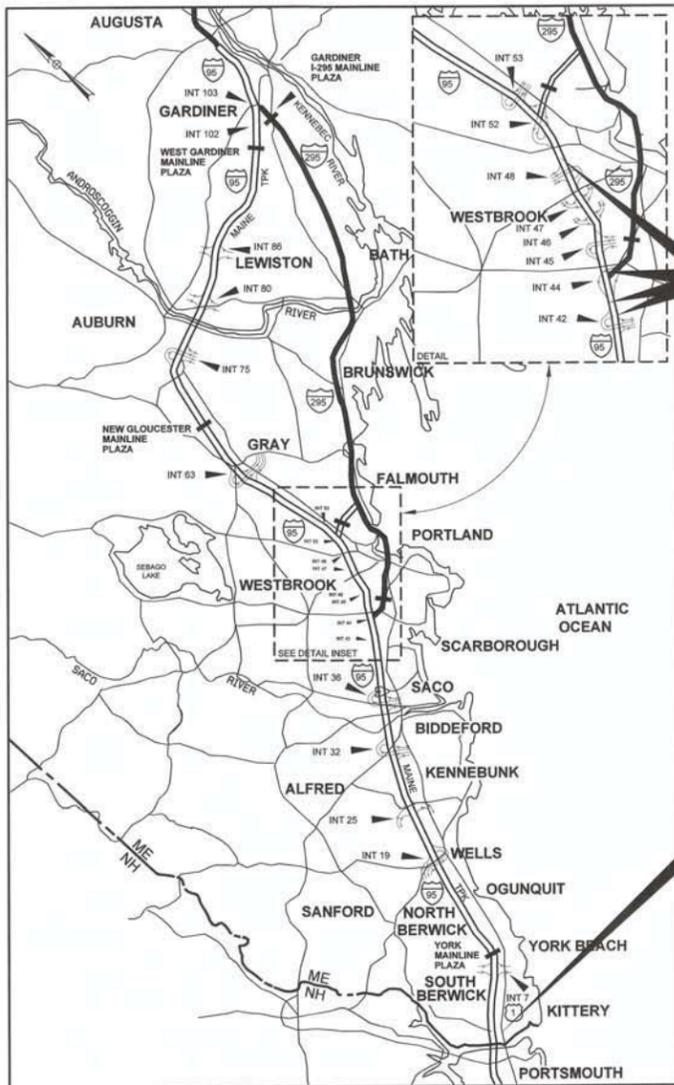


Date: 03/25/2016



LOCATION MAP



THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR
 ROBERT D. STONE, VICE CHAIR
 MICHAEL J. CIANCHETTE, MEMBER
 BRYAN P. CUTCHEN, MEMBER
 JOHN E. DORITY, MEMBER
 FREEMAN R. GOODRICH, MEMBER
 KAREN S. DOYLE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2016.05 BRIDGE REPAIRS

RAMP J OVER RTE. 1 SB & RAMP M (MM 1.59)
TWO ROD ROAD UNDERPASS (MM 42.0)
CUMMINGS ROAD UNDERPASS (MM 44.6)
EXIT 45 UNDERPASS (MM 44.9)
FOREST AVENUE OVERPASS NB & SB (MM 50.0)
SNOW FENCE INSTALLATIONS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES
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16-17	RAMP "J" REPAIR DETAILS
18-19	TWO ROD ROAD REPAIR DETAILS
20	CUMMINGS ROAD REPAIR DETAILS
21	EXIT 45 REPAIR DETAILS
22-30	FOREST AVENUE REPAIR DETAILS
31-34	SNOW FENCE INSTALLATION PLAN AND DETAILS
35	MISCELLANEOUS DETAILS

CONTRACT 2016.05

APPROVED:
MAINE TURNPIKE AUTHORITY

Stephen R. Tartre
 STEPHEN R. TARTRE, P.E., DIRECTOR OF ENGINEERING &
 BUILDING MAINTENANCE

3/29/16
DATE



Roland A. Lavallee
 ROLAND A. LAVALLEE P.E., PLS
 VICE PRESIDENT
 DIRECTOR OF OPERATIONS

3/23/16
DATE

HNTB

Filename: 001_MTATitle.dgn

Date: 3/30/2016

ITEM NO.	ITEM DESCRIPTION	UNIT	RAMP J	TWO ROD ROAD	CUMMINGS ROAD	EXIT 45	FOREST AVENUE	SNOW FENCE	TOTALS
202.191	Removing Existing Drain Troughs	LS					1		1
202.2021	Removing Pavement Surface - Bridge Deck	SY			34				34
403.210	Hof Mix Asphalt, 9.5 mm Nominal Maximum Size	TON			2				2
409.15	Bituminous Tack Coat, Applied	GAL			2				2
419.30	Sawing Bituminous Pavement	LF			230				230
502.219	Structural Concrete, Abutments and Retaining Walls (1 CY)	LS					1		1
507.095	Aluminum Bridge Railing - Splice Modification	EA						92	92
514.06	Curing Box for Concrete Cylinders	EA		1			1		2
515.201	Pigmented Protective Coating for Concrete Surfaces	SY					920		920
515.202	Clear Protective Coating for Concrete Surfaces	SY		330					330
518.39	Granite Curb Joint Mortar and Bedding Mortar Repair	LF	2	51					53
518.40	Epoxy Injection Crack Repair	LF		75			48		123
518.43	Parapet Joint Repair	LF		290					290
518.51	Repair of Upward Facing Surfaces - below Reinforcing Steel < 8 inches	SF					147		147
518.511	Partial Depth Concrete Deck Repairs	SF			100				100
518.512	Full Depth Concrete Deck Repairs	SF			90				90
518.52	Repair of Upward Facing Surfaces > 8 inches	CY	1						1
518.60	Repair of Vertical Surface < 8 inches	SF		20			339		359
518.611	Parapet Replacement	LS		1					1
518.70	Repair of Overhead Surfaces < 8 inches	SF					34		34
520.211	Expansion Device Pourable Seal	LS				1			1
520.221	Expansion Device Modification	EA	1						1
521.32	Fabric Trough for Finger Joint	EA	1						1
523.52	Bearing Installation	EA					24		24
523.5402	Laminated Elastomeric Bearings, Expansion	EA					24		24
603.91	Pressure Treated Wood Drain Trough	LF				200			200
607.431	Snow Fence - Ramp J over Route 1SB and Ramp M (2-Bar)	LF	208						208
607.431	Snow Fence - Saco Interchange Bridge (2-Bar)	LF						544	544
607.431	Snow Fence - Scarborough Interchange Bridge (2-Bar)	LF						324	324
607.431	Snow Fence - Gorham Road Bridge (2-Bar)	LF						348	348
607.431	Snow Fence - Exit 44 Bridge over I-95 (2-Bar)	LF						308	308
607.431	Snow Fence - Cummings Road Bridge (2-Bar)	LF			331				331
615.07	Loam	CY					5		5
618.14	Seeding Method Number 2	UNIT					0.5		0.5
619.1201	Mulch	UNIT					0.5		0.5
619.1202	Temporary Mulch	LS	0.1	0.1	0.1	0.1	0.6		1
619.1401	Erosion Control Mix	CY					40		40
629.05	Hand Labor, Straight Time	HR	20	20	20	20	20		100
631.10	Air Compressor (including operator)	HR	10	10	10	10	10		50
631.11	Air Tool (including operator)	HR	20	20	20	20	20		100
631.36	Foreman	HR	10	10	10	10	10		50
631.40	Welder (including operator)	HR	10						10
645.14	Special Work No.: Route 236 Underpass	LS						1	1
645.14	Special Work No.: Ramp H Underpass	LS						1	1
645.14	Special Work No.: Gorham Road Underpass	LS						1	1
645.14	Special Work No.: Cummings Road Underpass	LS			1				1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Ramp J and Ramp M	LS	1						1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Two Rod Road	LS		1					1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Cummings Road	LS			1				1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Exit 45	LS				1			1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Forest Avenue	LS					1		1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Exit 36	LS						1	1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Exit 42	LS						1	1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Gorham Road	LS						1	1
652.361	Traffic Control Devices and Maintenance of Traffic Control Devices - Exit 44	LS						1	1
652.38	Flaggers	HR		500					500
652.41	Portable-Changeable Message Sign	EA			4				4
652.45	Truck Mounted Attenuator	CD	12	10	9			32	63
656.50	Baled Hay, in place	EA	5	5	5		5		20
656.62	Temporary Slope Drains	LF					330		330
656.632	30 inch Temporary Silt Fence	LF					260		260
659.10	Mobilization	LS	0.1	0.1	0.2	0.1	0.3	0.2	1

NOTE

THIS PROJECT INCLUDES WORK AT THE FOLLOWING LOCATIONS:

BRIDGE REPAIRS: RAMP J OVER ROUTE 1 SOUTHBOUND AND RAMP M (MM 1.59), TWO ROD ROAD UNDERPASS (MM 42.0), CUMMINGS ROAD UNDERPASS (MM 44.6), EXIT 45 UNDERPASS (MM 44.9) AND FOREST AVENUE OVERPASS (MM 50.0)

SNOW FENCE INSTALLATIONS: RAMP J OVER ROUTE 1 SOUTHBOUND AND RAMP M (MM 1.59), SACO INTERCHANGE EXIT 36 (MM 35.7), SCARBOROUGH INTERCHANGE EXIT 42 (MM 42.5), I-295 SOUTHBOUND UNDERPASS EXIT 44 (MM 44.3), GORHAM ROAD UNDERPASS (MM 44.0), GORHAM ROAD OVER I-295 (MM 44.0) AND CUMMINGS ROAD UNDERPASS (MM 44.6).

BRIDGE MOUNTED SIGN CLIP INSTALLATION: ROUTE 236 UNDERPASS (MM 1.25), RAMP H UNDERPASS (MM 1.60), GORHAM ROAD UNDERPASS (MM 44.0) AND CUMMINGS ROAD UNDERPASS (MM 44.6).

GENERAL NOTES

1. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO START OF WORK.

2. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT CAN ARRANGE FOR MAINE TURNPIKE UNDERGROUND UTILITY LOCATION. ALL PROPOSED SIGN LOCATIONS AND EXCAVATION LOCATIONS SHALL BE MARKED AT THE NOTIFICATION TIME. EXCAVATION WILL NOT BE PERMITTED UNTIL THE AUTHORITY HAS LOCATED AND MARKED ITS UNDERGROUND UTILITIES, OR NOTIFIED THE RESIDENT THERE ARE NO UNDERGROUND UTILITIES IN THE MARKED AREAS.

THE AUTHORITY HAS PROGRAMMED TWO FIELD VISITS FOR MAINE TURNPIKE UTILITY COORDINATION ON THIS PROJECT. SHOULD THE CONTRACTOR NEED ADDITIONAL SIGN LOCATIONS AND/OR ADDITIONAL EXCAVATION LOCATIONS MARKED, OR SHOULD THE CONTRACTOR FAIL TO MAINTAIN THE AUTHORITY'S PREVIOUSLY ESTABLISHED DIG SAFE MARKS, THE AUTHORITY SHALL DEDUCT THE ADDED MARKING COSTS FROM THE CONTRACTOR'S PAYMENTS.

3. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P OF 29 CFR PART 1926.650-652 (CONSTRUCTION STANDARDS FOR EXCAVATIONS).

4. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD DETAILS HIGHWAY AND BRIDGES 2014 LATEST REVISIONS AND MDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION UNLESS OTHERWISE INCLUDED IN THESE PLANS.

5. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" UNLESS OTHERWISE NOTED.

6. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.

7. WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINEDOT PREQUALIFIED LIST OF CONCRETE ADHESIVE ANCHORING MATERIALS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED. WHERE MINIMUM EMBEDMENT DEPTHS HAVE NOT BEEN SPECIFIED BAR LENGTHS HAVE BEEN DEVELOPED BASED ON AN ASSUMED EMBEDMENT DEPTH OF 9" FOR #5 BARS AND 11" FOR #6 BARS. THE CONTRACTOR SHALL VERIFY THE REQUIRED DEPTH OF EMBEDMENT AND ADJUST THE REQUIRED BAR LENGTHS AS REQUIRED.

8. THERE ARE NO PERMANENT OR TEMPORARY EASEMENTS ASSOCIATED WITH THIS PROJECT. ALL WORK SHALL BE COMPLETED WITHIN THE EXISTING RIGHT OF WAY.

9. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) TO THE RESIDENT PRIOR TO STARTING WORK.

10. COPIES OF AS-BUILT PLANS ARE POSTED ON THE MAINE TURNPIKE AUTHORITY WEBSITE AT WWW.MAINE TURNPIKE.COM/PROJECT-AND-PLANNING/CONSTRUCTION CONTRACTS. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.

DRAINAGE NOTES

1. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT APPROVAL OF THE RESIDENT.

EROSION CONTROL

1. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT.

2. ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.

GUARDRAIL NOTES

1. AT THE END OF THE WORK DAY, EVERYDAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.

2. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS.

3. FOR ALL NEW GUARDRAIL TYPE 3d W-BEAM, OFFSET BLOCKS SHALL BE NON-WOOD CONFORMING TO NCHRP 350 TEST LEVEL.

4. ALL PROPOSED GUARDRAIL AND RESET GUARDRAIL SHALL BE INSTALLED IN A MANNER TO AVOID DRAINAGE STRUCTURES AND UTILITIES.

MATERIALS

CONCRETE

SUBSTRUCTURE CONCRETE REPAIRS SHALL BE PER SPECIAL PROVISION 518. ALL OTHER CONCRETE SHALL BE CLASS AAA.

REINFORCING STEEL

AASHTO M31, GRADE 60. ALL REINFORCING SHALL BE EPOXY-COATED.

ANCHOR RODS

SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 55 AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.

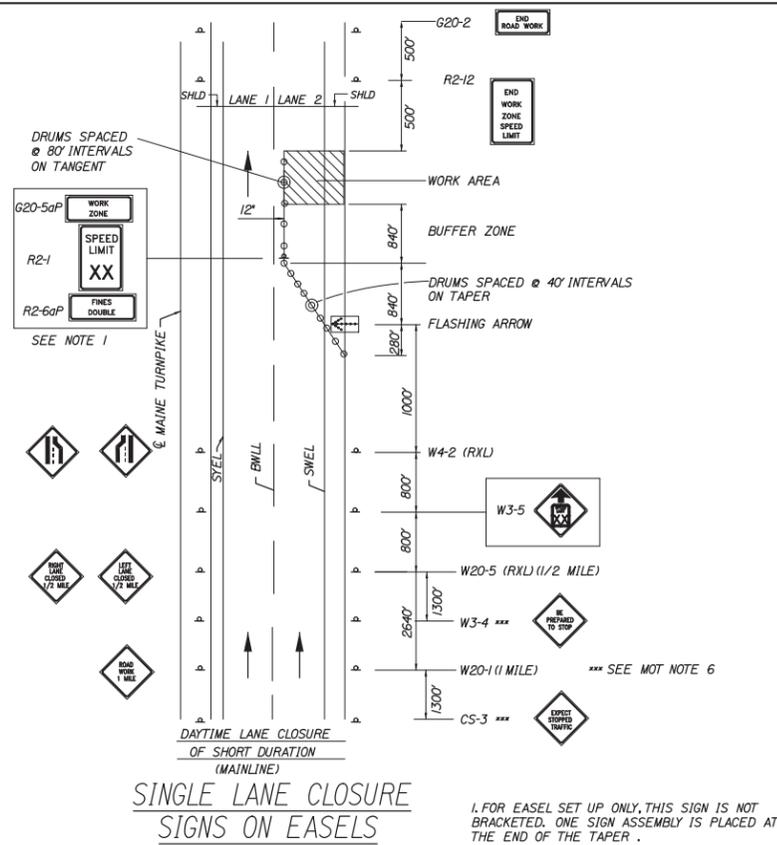
LIST OF ABBREVIATIONS

- ABUT. - ABUTMENT
- ADDL. - ADDITIONAL
- ALT. - ALTERNATE
- APPROX. - APPROXIMATELY
- BOT. - BOTTOM
- BRG. - BEARING
- CL. - CLEAR
- CL. - CENTERLINE
- CONC. - CONCRETE
- CONSTR. - CONSTRUCTION
- DEMO. - DEMOLITION
- DIA. - DIAMETER
- EA. - EACH
- EB - EASTBOUND
- E.F. - EACH FACE
- EL. - ELEVATION
- EQ. - EQUAL
- EXIST. - EXISTING
- EXP. - EXPANSION
- F.F. - FAR FACE
- JT. - JOINT
- MAX. - MAXIMUM
- MAINEDOT - MAINE DEPARTMENT OF TRANSPORTATION
- MIN. - MINIMUM
- MTA - MAINE TURNPIKE AUTHORITY
- NB - NORTHBOUND
- N.F. - NEAR FACE
- N.T.S. - NOT TO SCALE
- PED. - PEDESTAL
- PGL - PROFILE GRADE LINE
- PL. - PLATE
- PROP. - PROPOSED
- P.S.I. - POUNDS per SQUARE INCH
- RDWY. - ROADWAY
- SHLDR. - SHOULDER
- SB - SOUTHBOUND
- SP. - SPACES
- STA. - STATION
- T.&B. - TOP & BOTTOM
- TPKE. - TURNPIKE
- TYP. - TYPICAL
- U.O.N. - UNLESS OTHERWISE NOTED
- VERT. - VERTICAL
- WB - WESTBOUND
- W.P. - WORKING POINT

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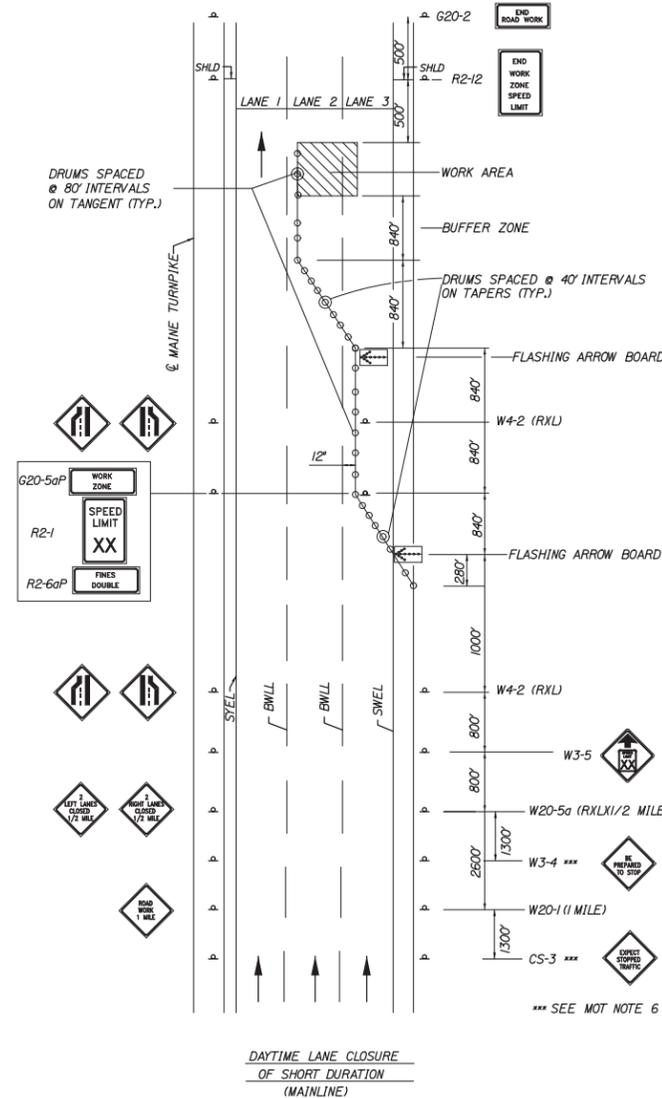
Scale:		Designed by:				HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909				THE GOLD STAR MEMORIAL HIGHWAY		BRIDGE REPAIRS ESTIMATED QUANTITIES AND GENERAL NOTES		SHEET NUMBER: ES-01	
No.	Revision	By	Date												
				By	Date	By	Date								
				Designed	BRG 03/16	Checked	AES 03/16								
				Drawn	PEB 03/16	In Charge of	RAL 03/16								
								MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.				CONTRACT: 2016.05			
												2 OF 35			

Date: 3/30/2016



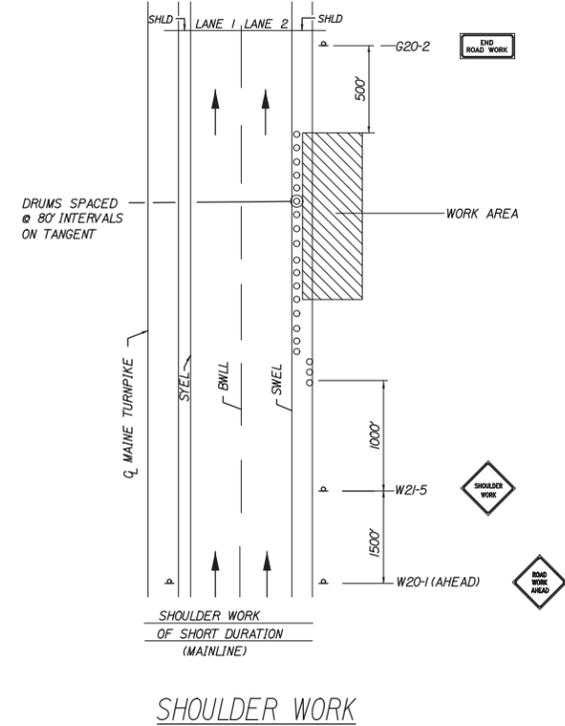
SINGLE LANE CLOSURE SIGNS ON EASELS

1. FOR EASEL SET UP ONLY, THIS SIGN IS NOT BRACKETED. ONE SIGN ASSEMBLY IS PLACED AT THE END OF THE TAPER.



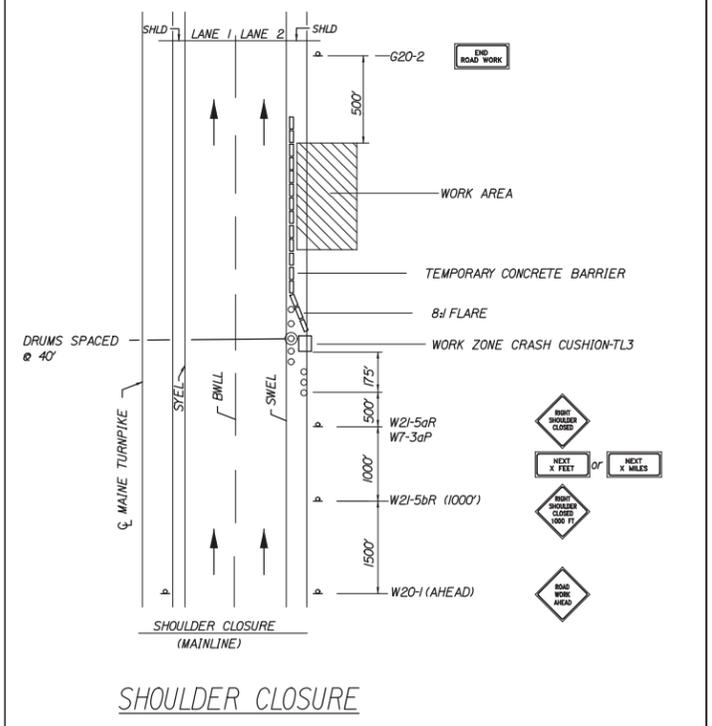
DOUBLE LANE CLOSURE

1. SEE SINGLE LANE CLOSURE NOTES FOR REDUCED SPEED SIGNS, TRAFFIC STOPPAGE SIGNS, SIGN SPACING AND OTHER PERTINENT INFORMATION.



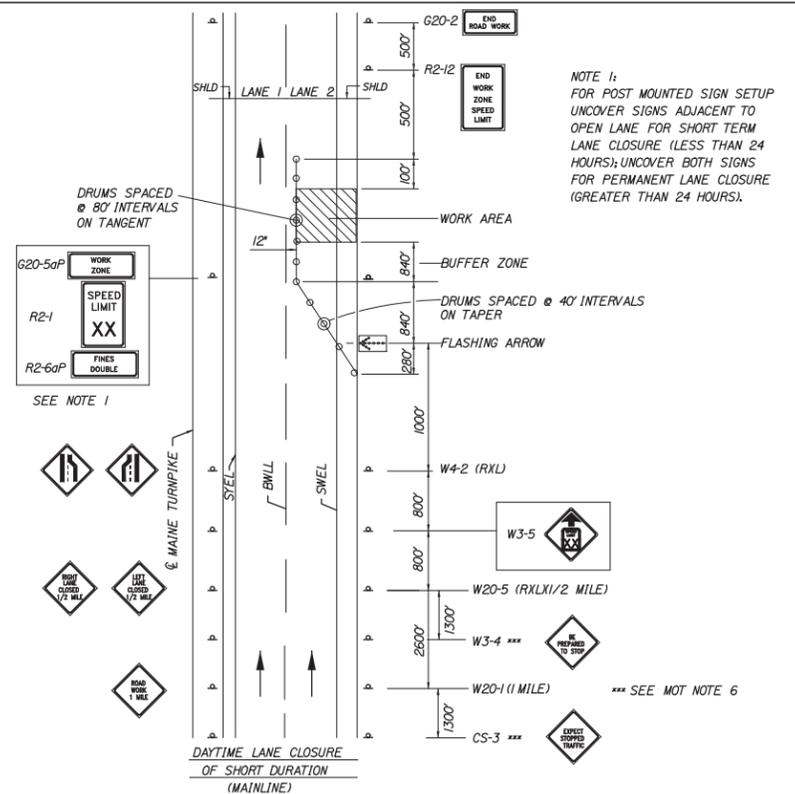
SHOULDER WORK

1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.



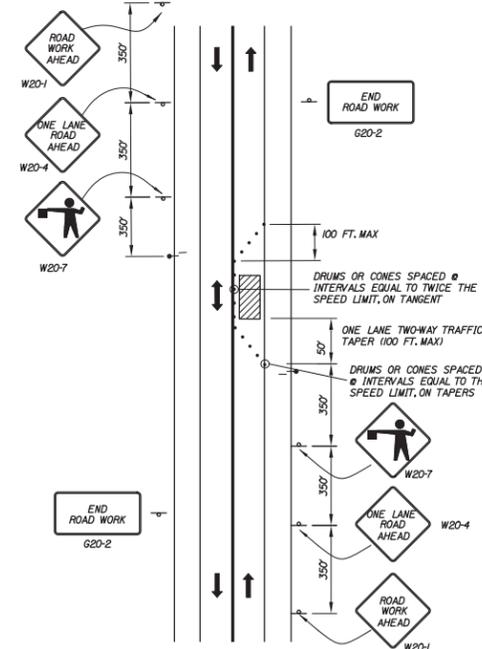
SHOULDER CLOSURE

1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.



SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP

NOTE 1: FOR POST MOUNTED SIGN SETUP UNCOVER SIGNS ADJACENT TO OPEN LANE FOR SHORT TERM LANE CLOSURE (LESS THAN 24 HOURS); UNCOVER BOTH SIGNS FOR PERMANENT LANE CLOSURE (GREATER THAN 24 HOURS).



LOCAL ROAD SINGLE LANE CLOSURE

NOTES:
1. ROAD WORK AHEAD & END ROAD WORK SIGNS MAY BE OMITTED FOR SHORT DURATION OPERATIONS (LESS THAN 1 HOUR).
2. FLAGGERS SHALL BE LOCATED SO THEY ARE CLEARLY VISIBLE TO APPROACHING DRIVERS.
3. SIGN SPACING ASSUMES LOCAL ROAD SPEED IS 40 MPH OR LESS.

- GENERAL MAINTENANCE OF TRAFFIC NOTES:**
1. ALL PAVEMENT STRIPING & SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", U.S.D.O.T., F.H.W.A., LATEST EDITION.
 2. THESE PLANS SHOW THE GENERAL CONDITION FOR TURNPIKE MAINLINE TRAFFIC CONTROL DURING CONSTRUCTION, SLIGHT MODIFICATIONS IN CONSTRUCTION PROCEDURE MAY OCCUR AND MAY REQUIRE SOME MINOR ADJUSTMENTS TO BE MADE IN THE FIELD, ALL PROCEDURES MUST BE APPROVED BY THE RESIDENT.
 3. THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS AND MUTCD. PAYMENT SHALL BE MADE UNDER ITEM 627.77 - REMOVING PAVEMENT MARKINGS.
 4. EXPOSED BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION. PAYMENT WILL BE UNDER ITEM 527.341 - WORK ZONE CRASH CUSHION - TL-3.
 5. GEOMETRIC INFORMATION FOR TRAFFIC PHASES SHOWN ON THE PLANS WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.
 6. ERECT CS-3 AND W3-4 SIGNS IMMEDIATELY PRIOR TO SCHEDULED STOPPAGES FOR EQUIPMENT MOVES AND REMOVE THE CS-3 AND W3-4 SIGNS IMMEDIATELY AFTER THE SCHEDULED STOPPAGES ARE COMPLETE.

ABBREVIATIONS FOR ALL M.O.T. PLANS

- BWLL = BROKEN WHITE LANE LINE
- SWLL = SOLID WHITE LANE LINE
- SYLL = SOLID YELLOW LANE LINE
- TBWLL = TEMPORARY BROKEN WHITE LANE LINE
- TSWLL = TEMPORARY SOLID WHITE LANE LINE
- TSYLL = TEMPORARY SOLID YELLOW LANE LINE

Filename: 003_MOT_Details.dgn

No.	Revision	By	Date

Scale: _____ Designed by: _____

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

HNTB CORPORATION
342 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

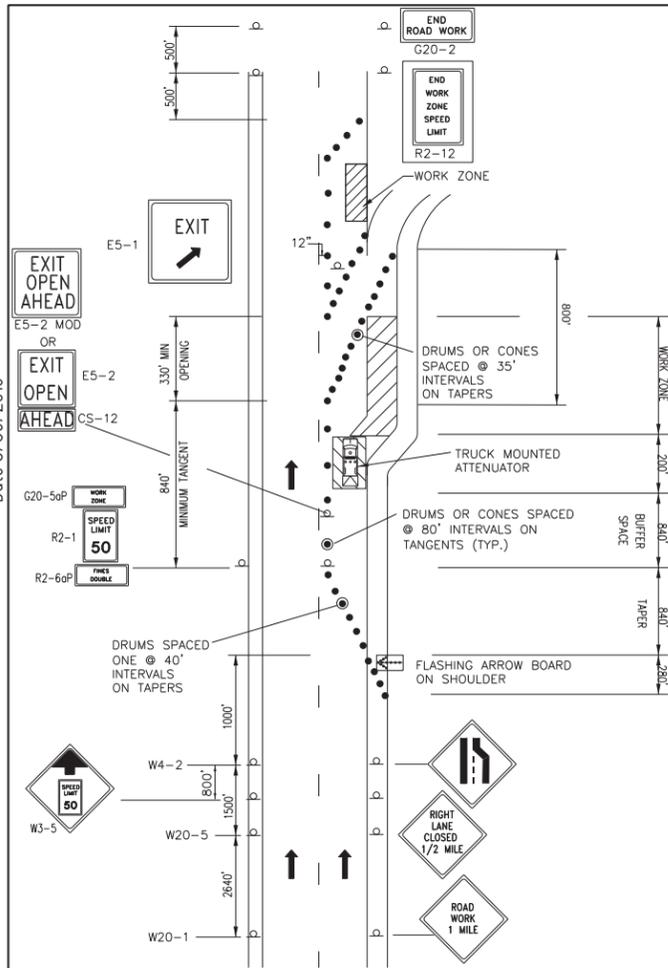
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

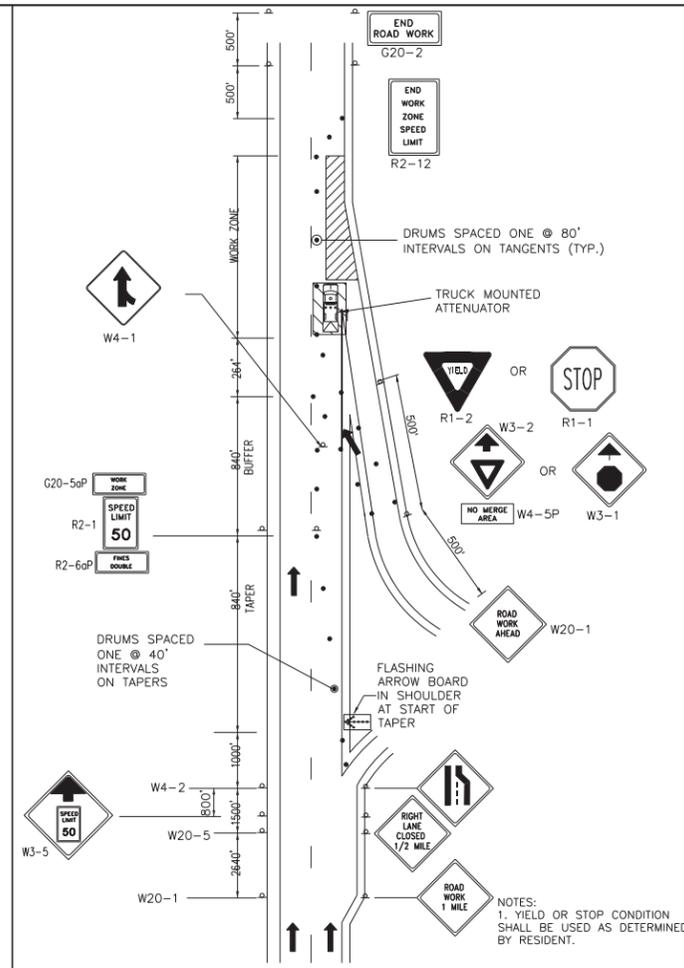
MAINTENANCE OF TRAFFIC DETAILS 1

SHEET NUMBER: MOT-01
CONTRACT: 2016.05
3 OF 35

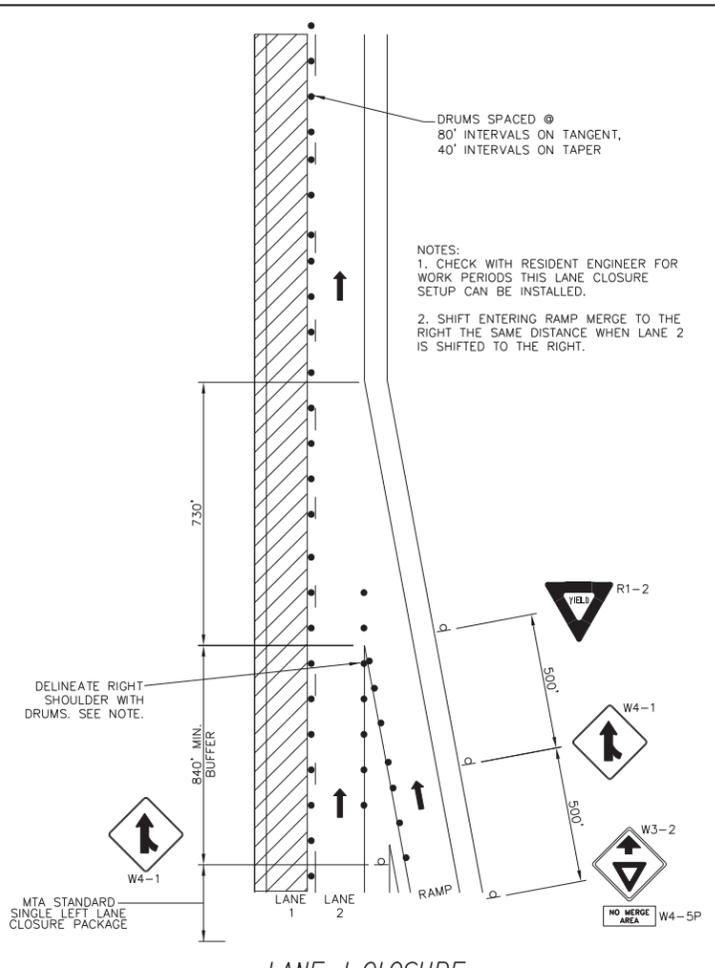
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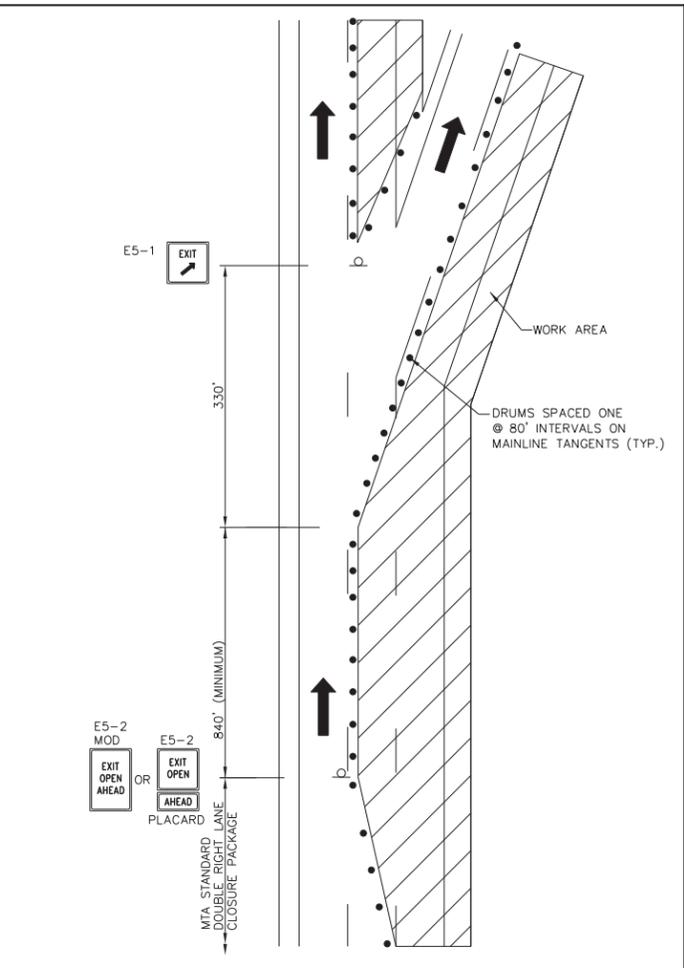
TRAVEL LANE CLOSURE AT AN EXIT RAMP



TRAVEL LANE CLOSURE AT AN ENTRANCE RAMP



LANE 1 CLOSURE WITH ENTERING RAMP OPEN



DOUBLE TRAVEL LANE CLOSURE AT INTERCHANGE 44 NB EXIT

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Scale:			
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CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

By	Date	By	Date
Designed	CAH 03/16	Checked	AES 03/16
Drawn	SLR 03/16	In Charge of	RAL 03/16

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

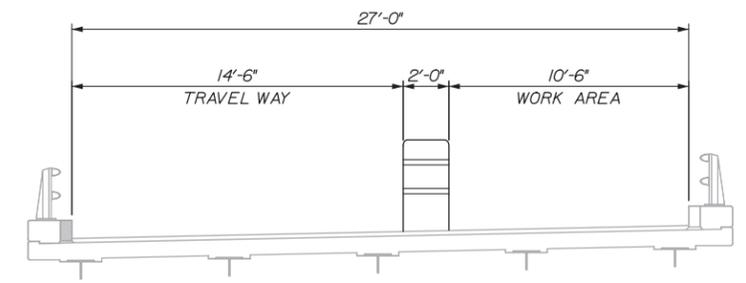
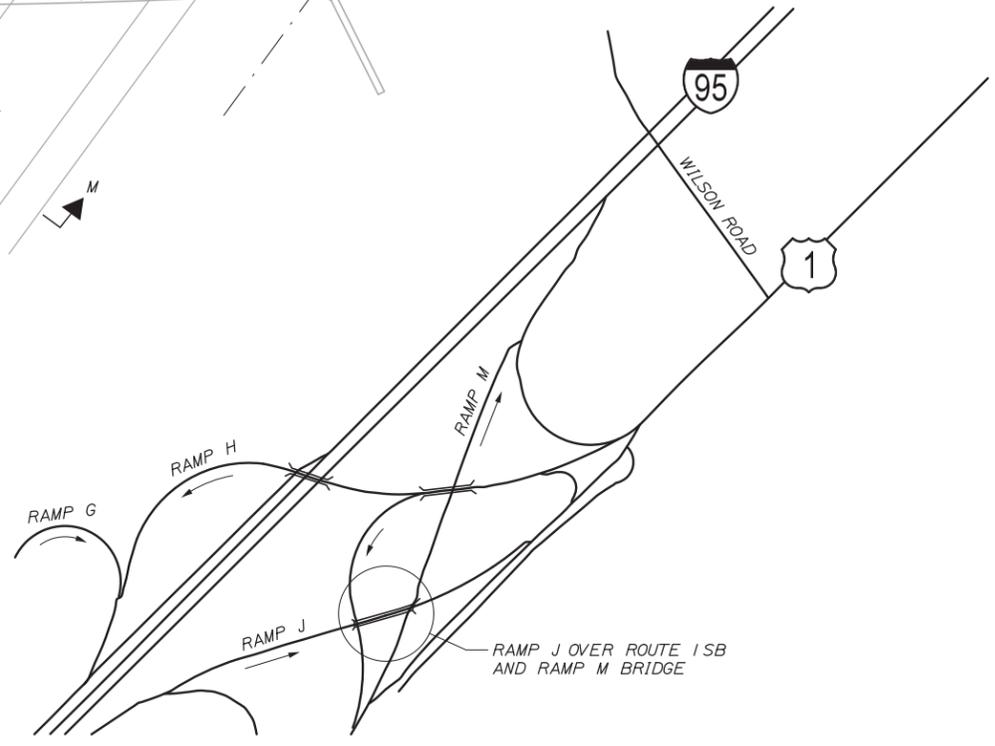
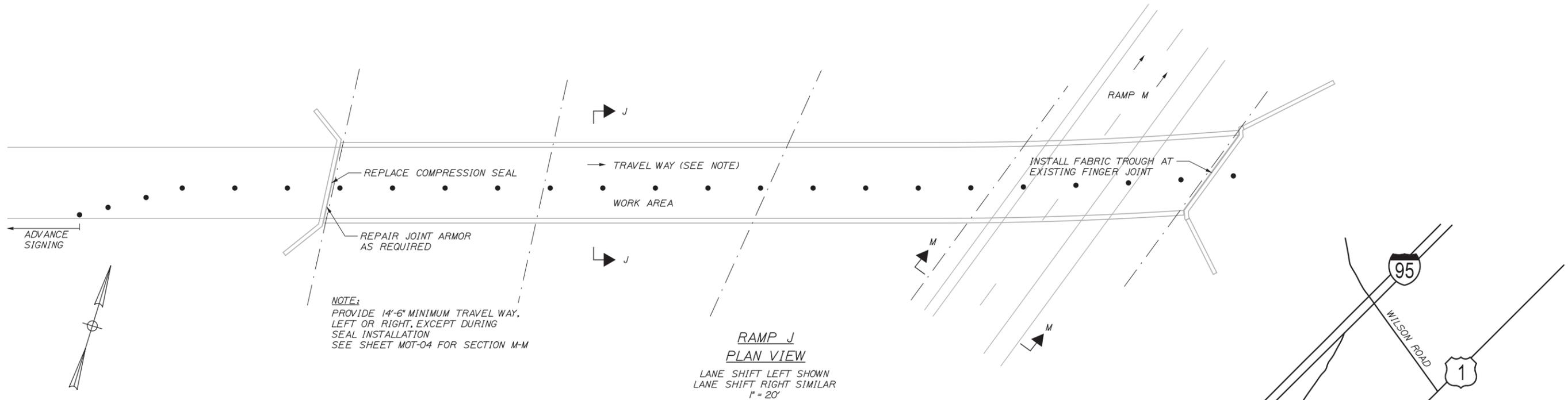
BRIDGE REPAIRS

MAINTENANCE OF TRAFFIC DETAILS 2

SHEET NUMBER: MOT-02
4 OF 35

CONTRACT: 2016.05

Date: 3/30/2016



RAMP J TRAFFIC CONTROL

RAMP TRAFFIC CONTROL SHALL CONSIST OF ADVANCE WARNING SIGNS, TEMPORARY SHIFTING OF THE RAMP TRAFFIC LEFT OR RIGHT WITH DRUMS DURING WORK HOURS TO UNDERTAKE THE WORK; AND SHORT TERM NIGHTTIME RAMP STOPPAGES WITH STATE TROOPERS TO INSTALL THE NEW COMPRESSION SEAL.

ALL WORK NOT ALLOWING A MINIMUM 14'-6" LANE (FOR WIDE LOADS) SHALL BE UNDERTAKEN BETWEEN SUN DOWN AND SUN UP. DURING NIGHT WORK THE MINIMUM LANE WIDTH SHALL BE 10'-0".

NO TURNPIKE MAINLINE TRAFFIC CONTROL, EXCEPT ADVANCE WARNING SIGNS, IS ANTICIPATED.

RAMP J BRIDGE KEY PLAN

- SIGNS REQUIRED:**
- W20-1 - ROAD WORK AHEAD
 - CS-3 - EXPECT STOPPED TRAFFIC
 - W3-4 - BE PREPARED TO STOP
 - W13-4P - ON RAMP
 - W5-4 (RAMP) - RAMP NARROWS
 - W24-IL - LANE SHIFT LEFT ICON
 - W24-IR - LANE SHIFT RIGHT ICON
 - G20-2 END ROAD WORK
- M-O-T DEVICES REQUIRED:**
- DRUMS
 - TRUCK MOUNTED ATTENUATOR
 - PORTABLE CHANGEABLE MESSAGE SIGNS

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E

BRIDGE REPAIRS

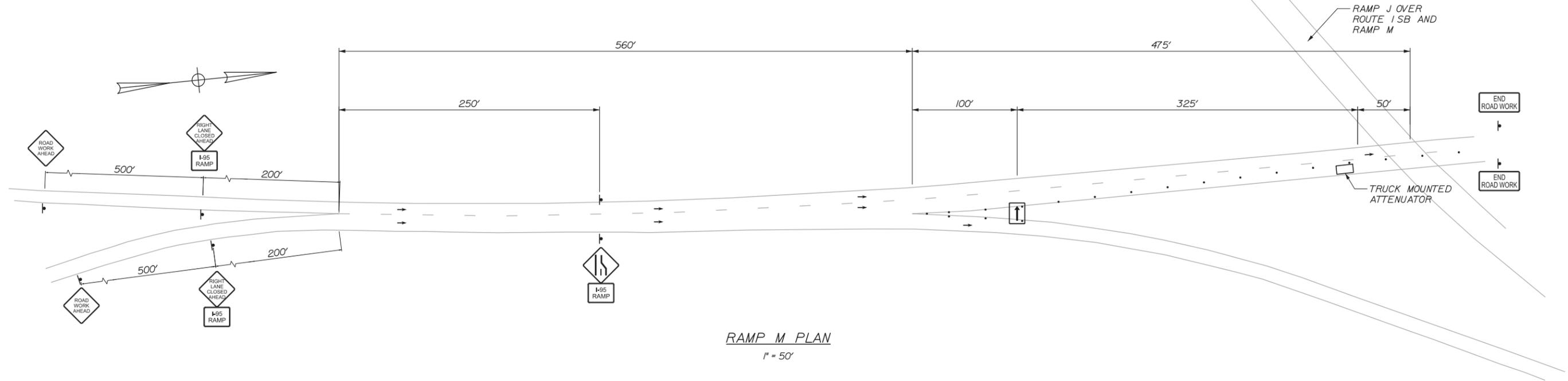
MAINTENANCE OF TRAFFIC
RAMP J OVER RTE. 1 SB & RAMP M

SHEET NUMBER: MOT-03
5 OF 35

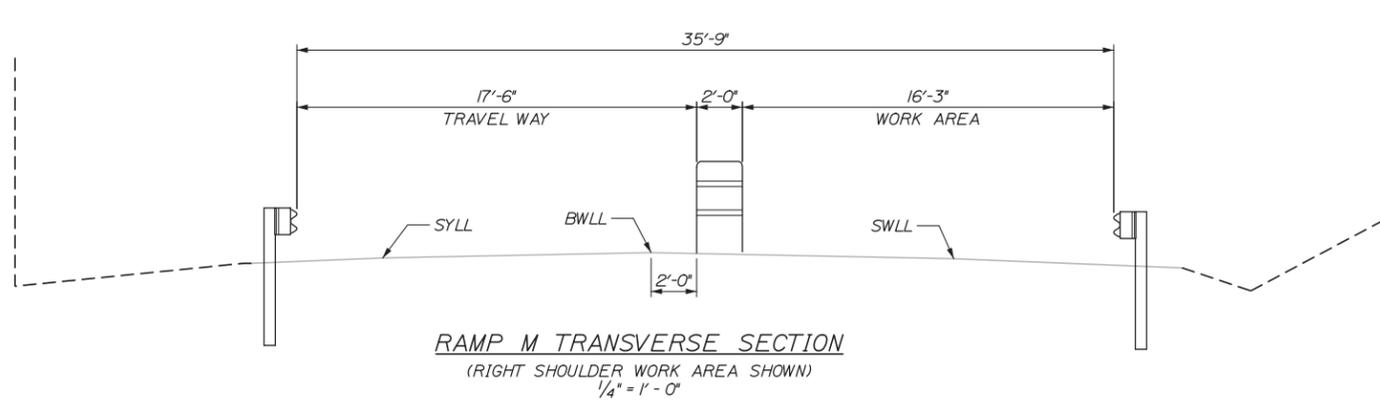
CONTRACT: 2016.05

Filename: 005_Ramp_J.dgn

Date: 3/30/2016



RAMP M PLAN
1" = 50'



RAMP M TRANSVERSE SECTION
(RIGHT SHOULDER WORK AREA SHOWN)
1/4" = 1' - 0"

RAMP M TRAFFIC CONTROL

RAMP M TRAFFIC CONTROL SHALL CONSIST OF ADVANCE WARNING SIGNS, A SINGLE LANE 2 CLOSURE WITH ARROW BOARD, DRUMS, AND TRUCK MOUNTED ATTENUATOR TO ALLOW A STAGING AREA TO INSTALL THE FINGER JOINT DRAIN TROUGH ON THE RAMP J BRIDGE STRUCTURE.

NO TURNPIKE MAINLINE TRAFFIC CONTROL IS REQUIRED. NO TRAFFIC STOPPAGES PERMITTED.

SIGNS REQUIRED:

- W20-1 - ROAD WORK AHEAD
- W20-5R - RIGHT LANE CLOSED AHEAD
- W4-2R - RIGHT LANE DROP ICON
- G20-2 END ROAD WORK
- CS-10 - I-95 RAMP

M-O-T DEVICES REQUIRED:

- ARROW BOARD
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

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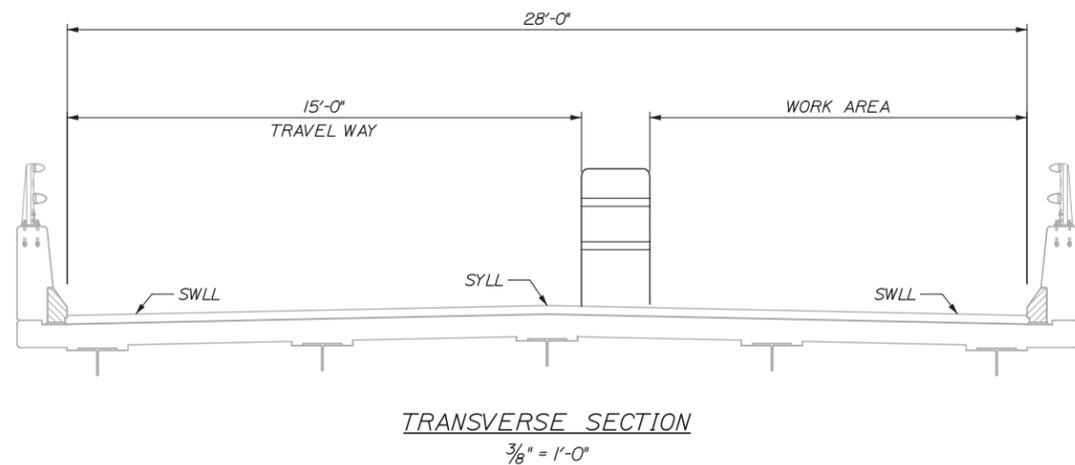
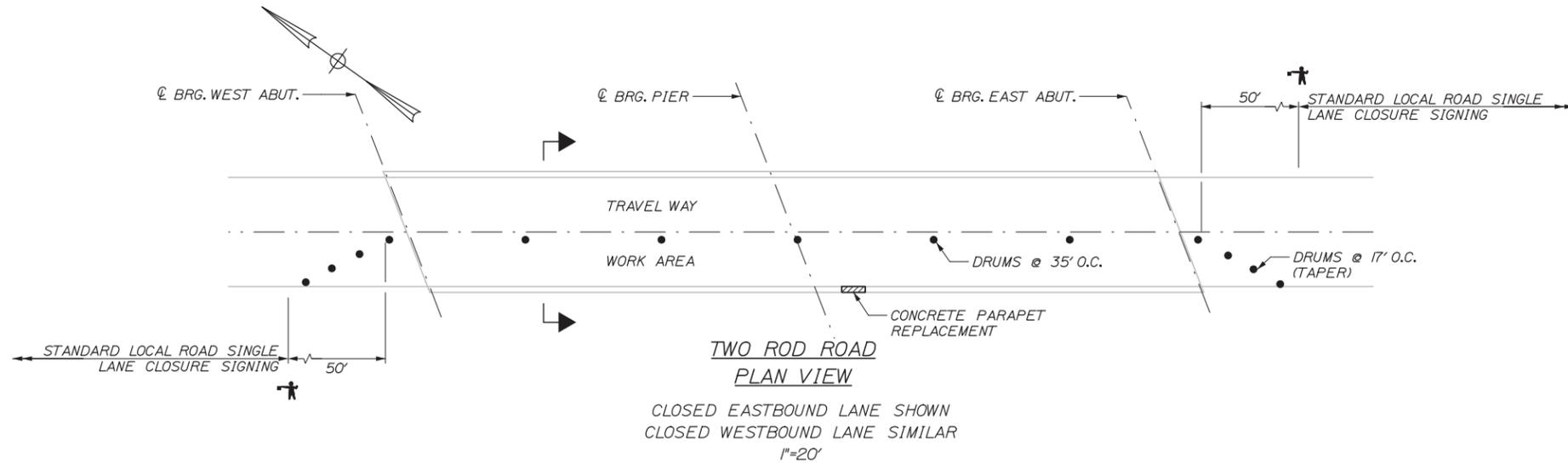
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E

BRIDGE REPAIRS
MAINTENANCE OF TRAFFIC
RAMP M

SHEET NUMBER: MOT-04
CONTRACT: 2016.05
6 OF 35

Date: 3/30/2016



TWO ROD ROAD TRAFFIC CONTROL

MAINLINE TRAFFIC CONTROL SHALL CONSIST OF SINGLE AND DOUBLE LANE CLOSURES USING THE STANDARD TURNPIKE MAINLINE TRAFFIC CONTROL DETAILS. ADVANCE SIGNING REQUIRED ON EXIT 42 SB ON RAMP. NO MAINLINE TRAFFIC STOPPAGES ARE ANTICIPATED.

SIGNS REQUIRED:

- ALL STANDARD TURNPIKE SINGLE AND DOUBLE MAINLINE LANE CLOSURE SIGNS
- W20-1 - ROAD WORK AHEAD
- W20-5R - RIGHT LANE CLOSED AHEAD
- W20-5L - LEFT LANE CLOSED AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- W24-1R - LANE SHIFT RIGHT ICON
- W3-2 - YIELD AHEAD
- W4-1 - LANE MERGE ICON
- W4-5P - NO MERGE AREA
- R1-2 - YIELD

M-O-T DEVICES REQUIRED:

- ARROW BOARDS
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

TWO ROD ROAD TRAFFIC CONTROL SHALL CONSIST OF SINGLE LANE TRAFFIC CONTROLLED BY FLAGGERS USING THE STANDARD TURNPIKE LOCAL ROAD SINGLE LANE CLOSURE DETAIL. TEMPORARY LOCAL ROAD TRAFFIC STOPPAGES ARE ANTICIPATED TO SWITCH TRAFFIC CONTROL DEVICES.

SIGNS REQUIRED:

- ALL STANDARD TURNPIKE LOCAL ROAD SINGLE LANE CLOSURE SIGNS

M-O-T DEVICES REQUIRED:

- DRUMS
- LIGHT TOWERS (FOR FLAGGERS IF NIGHT WORK ANTICIPATED OR REQUIRED)

Filename: 007_Two Rod Road.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C Norwood IV, P.E., P.T.O.E.

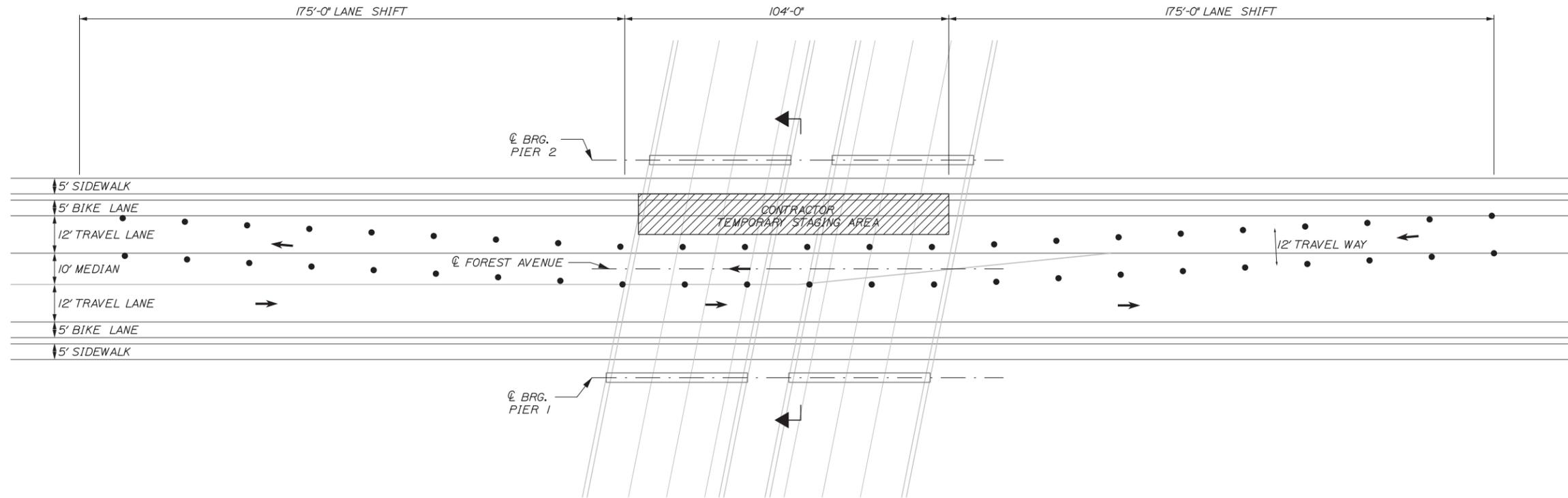
BRIDGE REPAIRS

MAINTENANCE OF TRAFFIC
TWO ROD ROAD

SHEET NUMBER: MOT-05
7 OF 35

CONTRACT: 2016.05

Date: 3/30/2016



**FOREST AVENUE PLAN VIEW
(UNDER MAINLINE BRIDGES)**

TRAFFIC CONTROL AND STAGING FOR NORTH PIERS / ABUTMENTS SHOWN
TRAFFIC CONTROL AND STAGING FOR SOUTH PIERS / ABUTMENTS SIMILAR
1" = 20'

I-95 OVER FOREST AVENUE TRAFFIC CONTROL

NO MAINLINE TRAFFIC CONTROL IS REQUIRED ON THIS PROJECT.
FOREST AVENUE TRAFFIC CONTROL SHALL CONSIST OF ADVANCE WARNING SIGNS AND TEMPORARY SHIFTING OF THE FOREST AVENUE TRAFFIC LEFT OR RIGHT WITH CONES DURING WORK HOURS TO ALLOW ONE LANE OF TRAFFIC IN EACH DIRECTION AND PROVIDE A DAILY MOBILIZATION AND STAGING AREA UNDER THE BRIDGES. THE TRAFFIC DETAIL IS SIMILAR TO MUTCD FIGURE 6H-31, EXCEPT FOREST AVENUE HAS ONE LANE IN EACH DIRECTION AND A CENTER TURNING LANE, NOT TWO LANES IN EACH DIRECTION. THE SIDEWALK ON THE SIDE THE CONTRACTOR STAGES UP ON FOR THE DAY WILL NEED TO BE CLOSED.

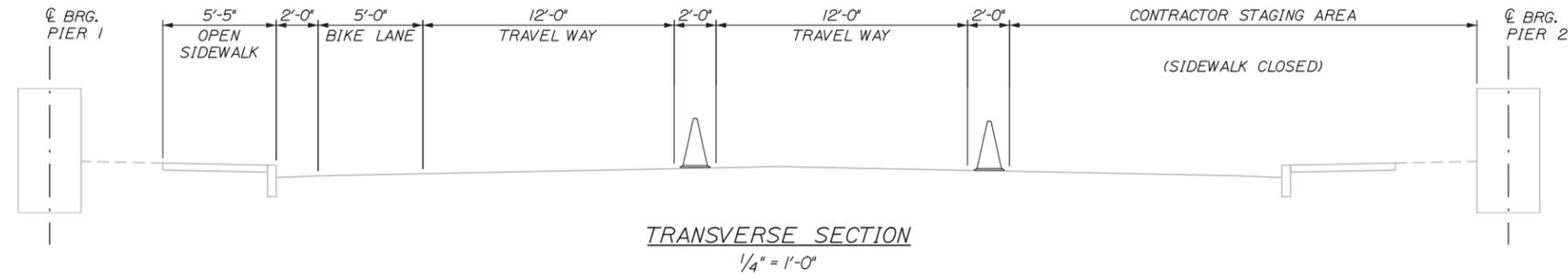
FOREST AVENUE TRAFFIC CONTROL SHALL BE SET UP AND REMOVED DAILY.

SIGNS REQUIRED:

- W20-1 (AHEAD) - ROAD WORK AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- G20-2 END ROAD WORK
- R9-9 SIDEWALK CLOSED
- R9-11 SIDEWALK CLOSED AHEAD - CROSS HERE (WITH ARROW)
- W11-B BICYCLE ICON
- W16-1P SHARE THE ROAD

M-O-T DEVICES REQUIRED:

CONES



TRANSVERSE SECTION
1/4" = 1'-0"

Filename: 008_Forest Avenue Plan.dgn

Scale:			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
	By	Date	
Designed	CAH	03/16	Checked AES 03/16
Drawn	SLR	03/16	In Charge of RAL 03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

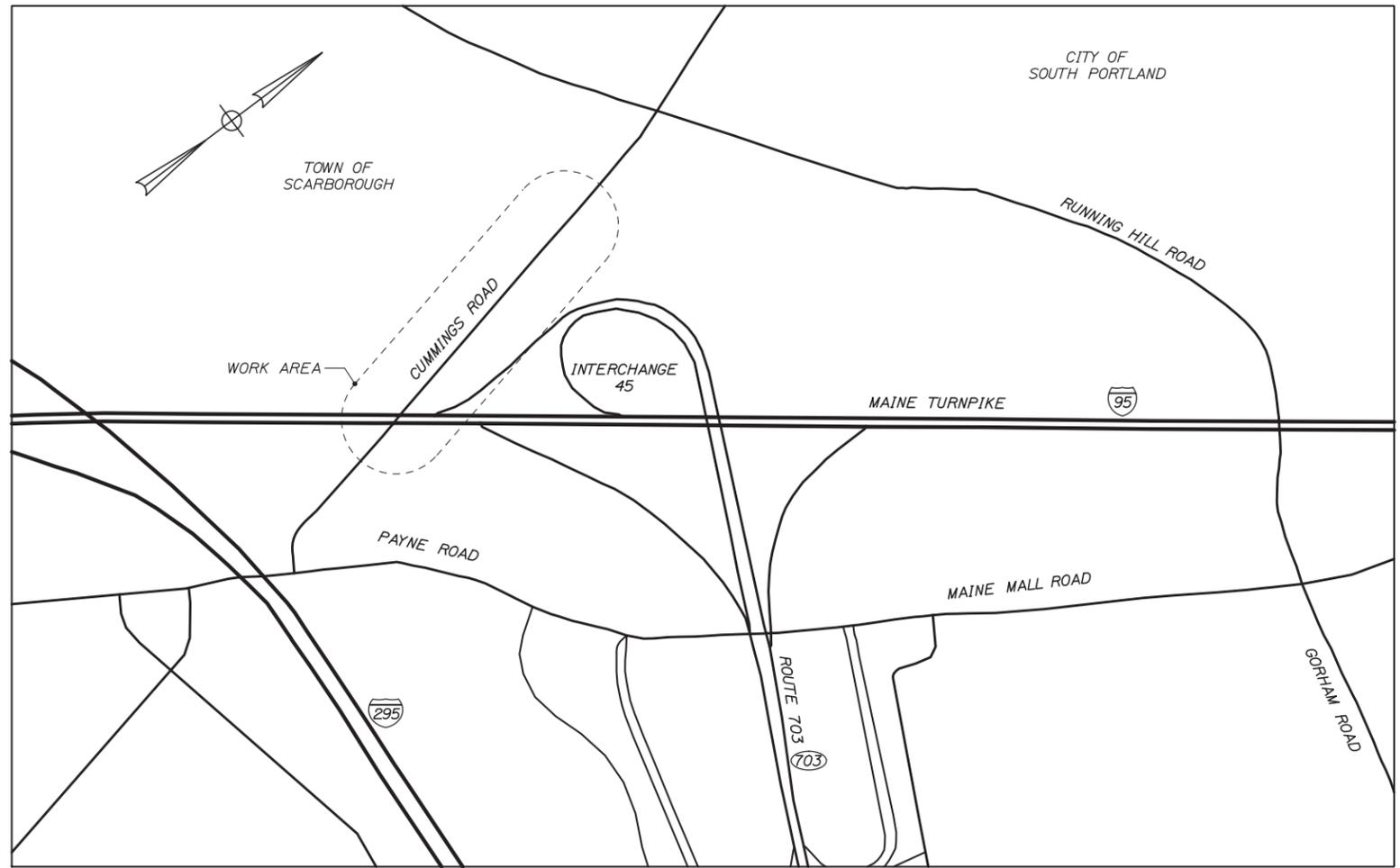
MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

BRIDGE REPAIRS

**MAINTENANCE OF TRAFFIC
FOREST AVENUE**

SHEET NUMBER: MOT-06
CONTRACT: 2016.05
8 OF 35

Date: 3/30/2016



CUMMINGS ROAD TRAFFIC CONTROL

MAINLINE TRAFFIC CONTROL SHALL CONSIST OF SINGLE LANE CLOSURES USING THE STANDARD TURNPIKE MAINLINE TRAFFIC CONTROL DETAILS. NO MAINLINE TRAFFIC STOPPAGES ARE ANTICIPATED. THE APPROACH TO THE EXIT 45 NB OFF RAMP SHALL BE SIGNED FOR EXIT OPEN, AND THE EXIT 45 SB ON RAMP SHALL BE SIGNED FOR ROAD WORK AHEAD, LEFT/RIGHT LANE CLOSED AND SPEED LIMIT 50 AHEAD.

SIGNS REQUIRED:

- ALL STANDARD TURNPIKE SINGLE AND DOUBLE MAINLINE LANE CLOSURE SIGNS
- W20-1 (AHEAD) - ROAD WORK AHEAD
- W20-5L (AHEAD) - LEFT LANE CLOSED AHEAD
- W20-5R (AHEAD) - RIGHT LANE CLOSED AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- W24-1R - LANE SHIFT RIGHT ICON
- E5-1 EXIT / ARROW ICON
- E5-2 EXIT OPEN

M-O-T DEVICES REQUIRED:

- ARROW BOARDS
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

CUMMINGS ROAD TRAFFIC CONTROL SHALL CONSIST OF A DETOUR ROUTING THE TRAFFIC OVER THE BRIDGE TO THE EAST ACROSS PAYNE ROAD, MAINE MALL ROAD AND RUNNING HILL ROAD. THIS TRAFFIC DETOUR WILL BE THE RESPONSIBILITY OF AN ADJACENT PAVING CONTRACT. THE CONTRACTOR SHALL COORDINATE WITH THE PAVING CONTRACTOR, SEE SPECIAL PROVISIONS.

Filename: 009_Cummings Road Detour.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

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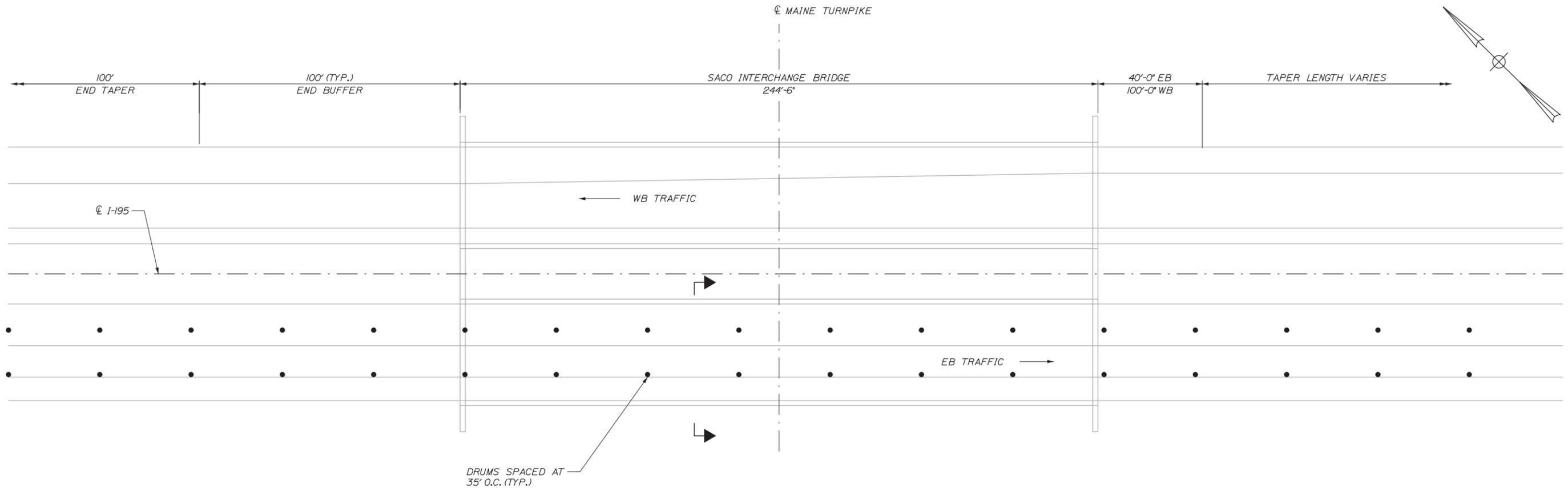
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E.

BRIDGE REPAIRS
 MAINTENANCE OF TRAFFIC
 CUMMINGS ROAD

SHEET NUMBER: MOT-07
 CONTRACT: 2016.05
 9 OF 35

Date: 3/30/2016



SACO INTERCHANGE BRIDGE
PLAN VIEW
 1" = 20'

EXIT 36 TRAFFIC CONTROL

MAINLINE TRAFFIC CONTROL SHALL CONSIST OF SINGLE AND DOUBLE LANE CLOSURES USING THE STANDARD TURNPIKE MAINLINE TRAFFIC CONTROL DETAILS. NO MAINLINE TRAFFIC STOPPAGES ARE ANTICIPATED. THE APPROACHES TO THE EXIT 36 NB OFF RAMP AND EXIT 36 SB OFF RAMP SHALL BE SIGNED FOR EXIT OPEN, AND THE EXIT 32 SB ON RAMP SHALL BE SIGNED FOR ROAD WORK AHEAD, LEFT/RIGHT LANE CLOSED AND SPEED LIMIT 50 AHEAD.

SIGNS REQUIRED:

- ALL STANDARD TURNPIKE SINGLE AND DOUBLE MAINLINE LANE CLOSURE SIGNS
- W20-1 (AHEAD) - ROAD WORK AHEAD
- W20-5L (AHEAD) - LEFT LANE CLOSED AHEAD
- W20-5R (AHEAD) - RIGHT LANE CLOSED AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- W24-1R - LANE SHIFT RIGHT ICON
- E5-1 EXIT / ARROW ICON
- E5-2 EXIT OPEN

M-O-T DEVICES REQUIRED:

- ARROW BOARDS
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

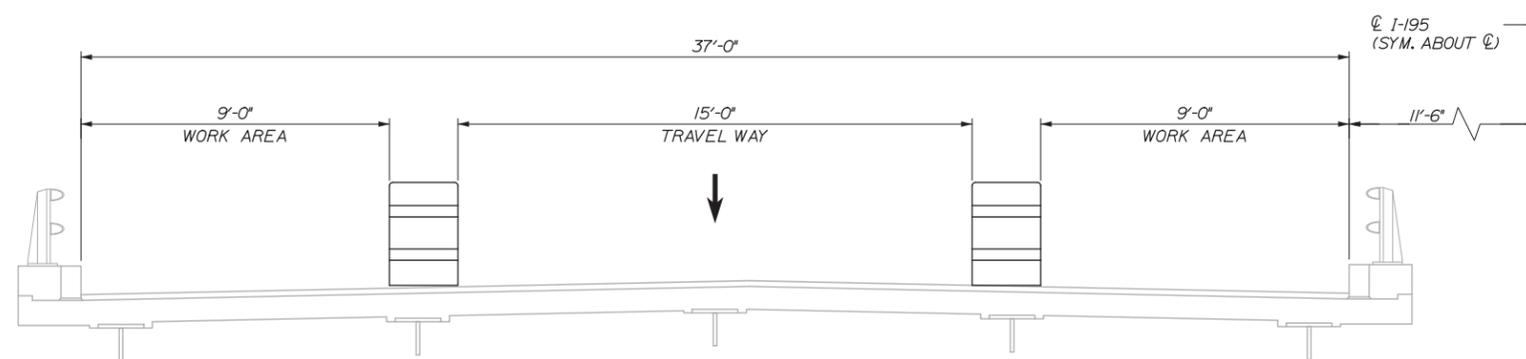
EXIT 36 RAMP TRAFFIC CONTROL SHALL CONSIST OF SINGLE LANE TRAFFIC ON EACH BRIDGE DELINEATED BY DRUMS PUSHING TRAFFIC TO THE CENTER OF THE TWO LANE BRIDGES PER THE ATTACHED SECTION. TEMPORARY RAMP TRAFFIC STOPPAGES ARE NOT ANTICIPATED.

SIGNS REQUIRED:

- W20-1 (AHEAD) - ROAD WORK AHEAD
- W20-4 - ONE LANE ROAD AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- W24-1R - LANE SHIFT RIGHT ICON
- G20-2 END ROAD WORK

M-O-T DEVICES REQUIRED:

- DRUMS



TRANSVERSE SECTION
 (EASTBOUND SHOWN, WESTBOUND SIMILAR)
 3/8" = 1'-0"

Filename: 010_Saco Interchange.dgn

Scale:			
No.	Revision	By	Date

Designed by:			
HNTB			
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
	By	Date	
Designed	CAH	03/16	Checked AES 03/16
Drawn	SLR	03/16	In Charge of RAL 03/16

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

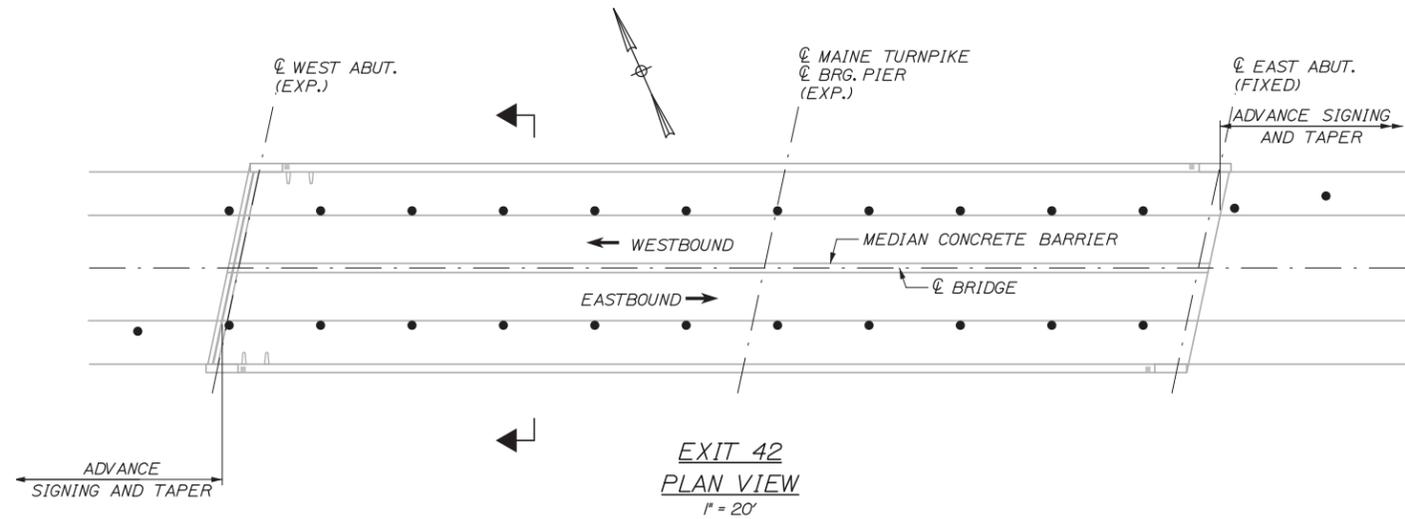
BRIDGE REPAIRS

MAINTENANCE OF TRAFFIC
 EXIT 36 SACO INTERCHANGE

SHEET NUMBER: MOT-08
 10 OF 35

CONTRACT: 2016.05

Date: 3/30/2016



EXIT 42 TRAFFIC CONTROL

MAINLINE TRAFFIC CONTROL SHALL CONSIST OF SINGLE AND DOUBLE LANE CLOSURES USING THE STANDARD TURNPIKE MAINLINE TRAFFIC CONTROL DETAILS. NO MAINLINE TRAFFIC STOPPAGES ARE ANTICIPATED. THE APPROACHES TO THE EXIT 42 NB OFF AND EXIT 42 SB OFF RAMP SHALL BE SIGNED FOR EXIT OPEN, AND THE EXIT 42 SB ON RAMP SHALL BE SIGNED FOR ROAD WORK AHEAD, LEFT/RIGHT LANE CLOSED AHEAD AND SPEED LIMIT 50 AHEAD.

SIGNS REQUIRED:

- ALL STANDARD TURNPIKE SINGLE AND DOUBLE MAINLINE LANE CLOSURE SIGNS
- W20-1 (AHEAD) - ROAD WORK AHEAD
- W20-5L (AHEAD) - LEFT LANE CLOSED AHEAD
- W20-5R (AHEAD) - RIGHT LANE CLOSED AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- W24-1R - LANE SHIFT RIGHT ICON
- E5-1 EXIT/ ARROW ICON
- E5-2 EXIT OPEN

M-O-T DEVICES REQUIRED:

- ARROW BOARDS
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

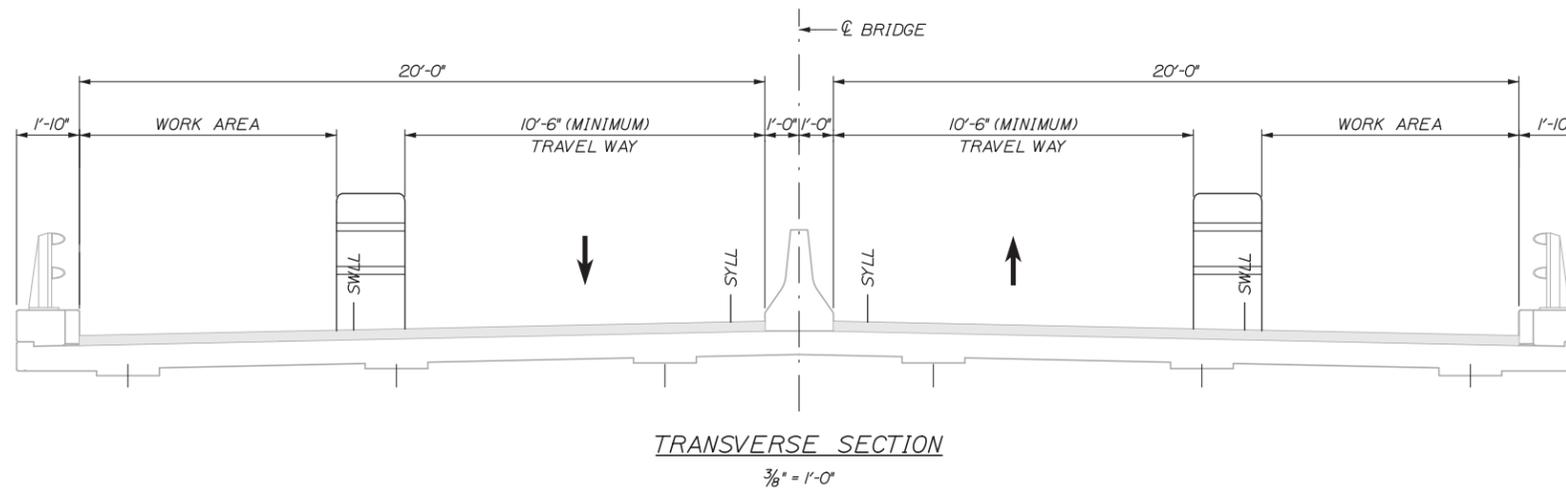
EXIT 42 RAMP TRAFFIC CONTROL SHALL CONSIST OF SINGLE LANE TRAFFIC IN EACH DIRECTION DELINEATED BY DRUMS PUSHING TRAFFIC TO THE CENTER OF THE SINGLE LANE BRIDGE (EACH DIRECTION) PER THE ATTACHED SECTION. TEMPORARY RAMP TRAFFIC STOPPAGES ARE NOT ANTICIPATED.

SIGNS REQUIRED:

- W20-1 (AHEAD) - ROAD WORK AHEAD
- W5-4 (RAMP) - RAMP NARROWS
- W24-1L - LANE SHIFT LEFT ICON
- W21-5a - RIGHT SHOULDER CLOSED
- G20-2 END ROAD WORK

M-O-T DEVICES REQUIRED:

- DRUMS



Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

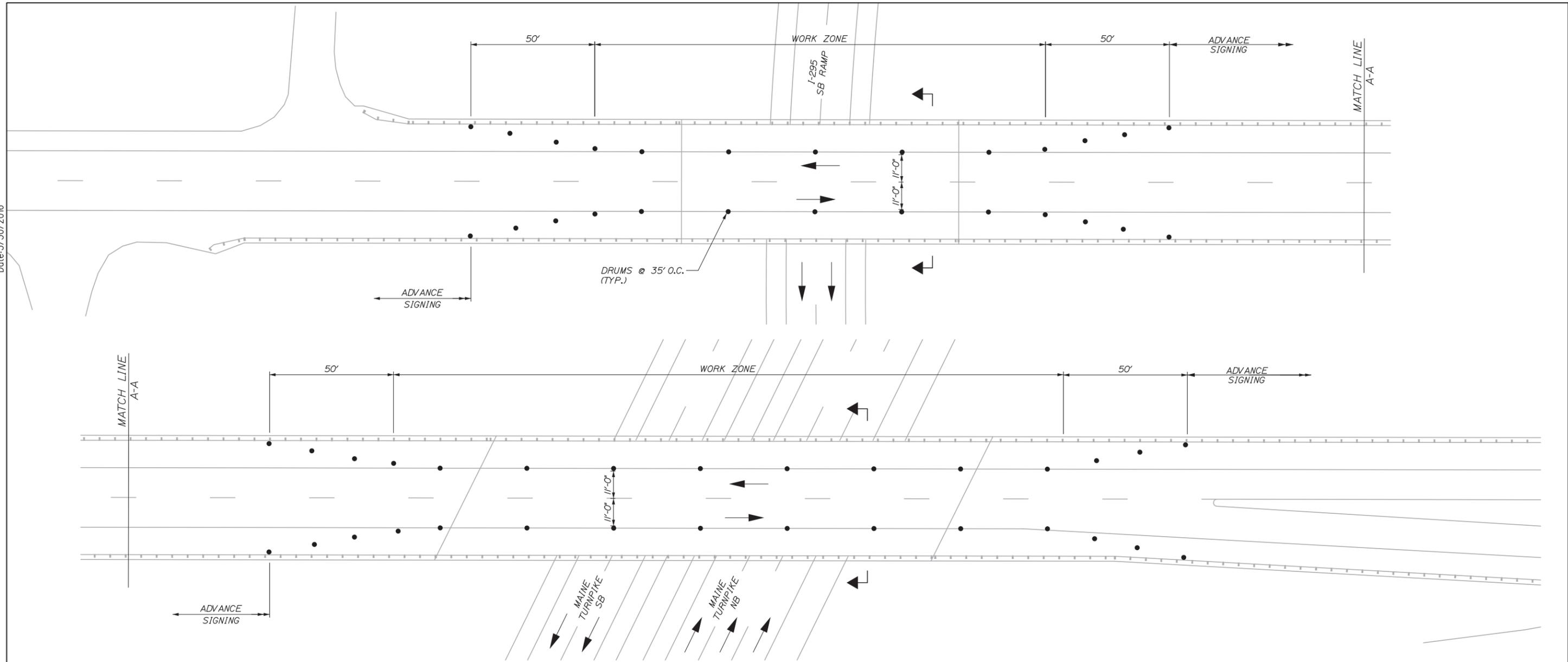
MAINTENANCE OF TRAFFIC
 EXIT 42 SCARBOROUGH INTERCHANGE

SHEET NUMBER: MOT-09
 CONTRACT: 2016.05
 11 OF 35

Filename: 011_Exit 42 Interchange.dgn

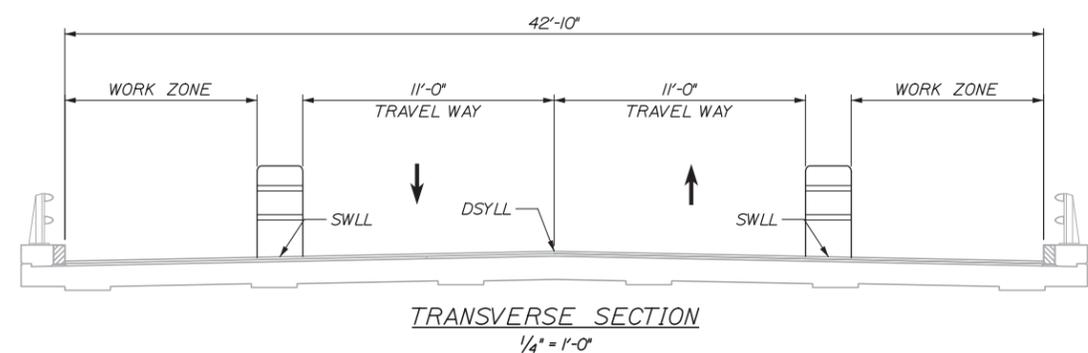
Date: 3/30/2016

Filename: 012_Gorham Road Plan.dgn



GORHAM ROAD PLAN VIEW
1" = 20'

GORHAM ROAD OVER I-95/ OVER I-295 SB ON RAMP TRAFFIC CONTROL



MAINLINE TRAFFIC CONTROL SHALL CONSIST OF SINGLE AND DOUBLE LANE CLOSURES NORTHBOUND AND SINGLE LANE CLOSURES SOUTHBOUND USING THE STANDARD TURNPIKE MAINLINE TRAFFIC CONTROL DETAILS. NO MAINLINE TRAFFIC STOPPAGES ARE ANTICIPATED. THE APPROACH TO THE EXIT 45 NB OFF RAMP SHALL BE SIGNED FOR EXIT OPEN, AND THE I-295 SB ON RAMP SHALL BE SIGNED FOR ROAD WORK AHEAD, LEFT/RIGHT LANE CLOSED AHEAD AND SPEED LIMIT 50 AHEAD.

- SIGNS REQUIRED:**
- ALL STANDARD TURNPIKE SINGLE AND DOUBLE MAINLINE LANE CLOSURE SIGNS
 - W20-1 (AHEAD) - ROAD WORK AHEAD
 - W20-5L (AHEAD) - LEFT LANE CLOSED AHEAD
 - W20-5R (AHEAD) - RIGHT LANE CLOSED AHEAD
 - W24-1L - LANE SHIFT LEFT ICON
 - W24-1R - LANE SHIFT RIGHT ICON
 - E5-1 EXIT/ ARROW ICON
 - E5-2 EXIT OPEN
- M-O-T DEVICES REQUIRED:**
- ARROW BOARDS
 - DRUMS
 - TRUCK MOUNTED ATTENUATOR
 - PORTABLE CHANGEABLE MESSAGE SIGNS

GORHAM ROAD OVER I-95/ OVER I-295 SB ON RAMP TRAFFIC CONTROL SHALL CONSIST OF SINGLE LANE TRAFFIC IN EACH DIRECTION DELINEATED BY DRUMS OR CONES PUSHING TRAFFIC TO THE CENTER OF THE TWO LANE BRIDGES (ONE LANE IN EACH DIRECTION) PER THE ATTACHED SECTION. TEMPORARY TRAFFIC STOPPAGES ARE NOT ANTICIPATED.

EXTEND DRUMS BETWEEN GORHAM ROAD OVER MAINE TURNPIKE AND GORHAM ROAD OVER I-295 SB IF UNDERTAKEN SIMULTANEOUSLY.

- SIGNS REQUIRED:**
- W20-1 ROAD WORK AHEAD
 - W21-5b RIGHT SHOULDER CLOSED 500 FT
 - W21-5a RIGHT SHOULDER CLOSED
 - W5-4 (LANE) LANE NARROWS
 - G20-2 END ROAD WORK
- M-O-T DEVICES REQUIRED:**
- DRUMS OR CONES

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

By	Date	By	Date
Designed	CAH 03/16	Checked	AES 03/16
Drawn	SLR 03/16	In Charge of	RAL 03/16

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

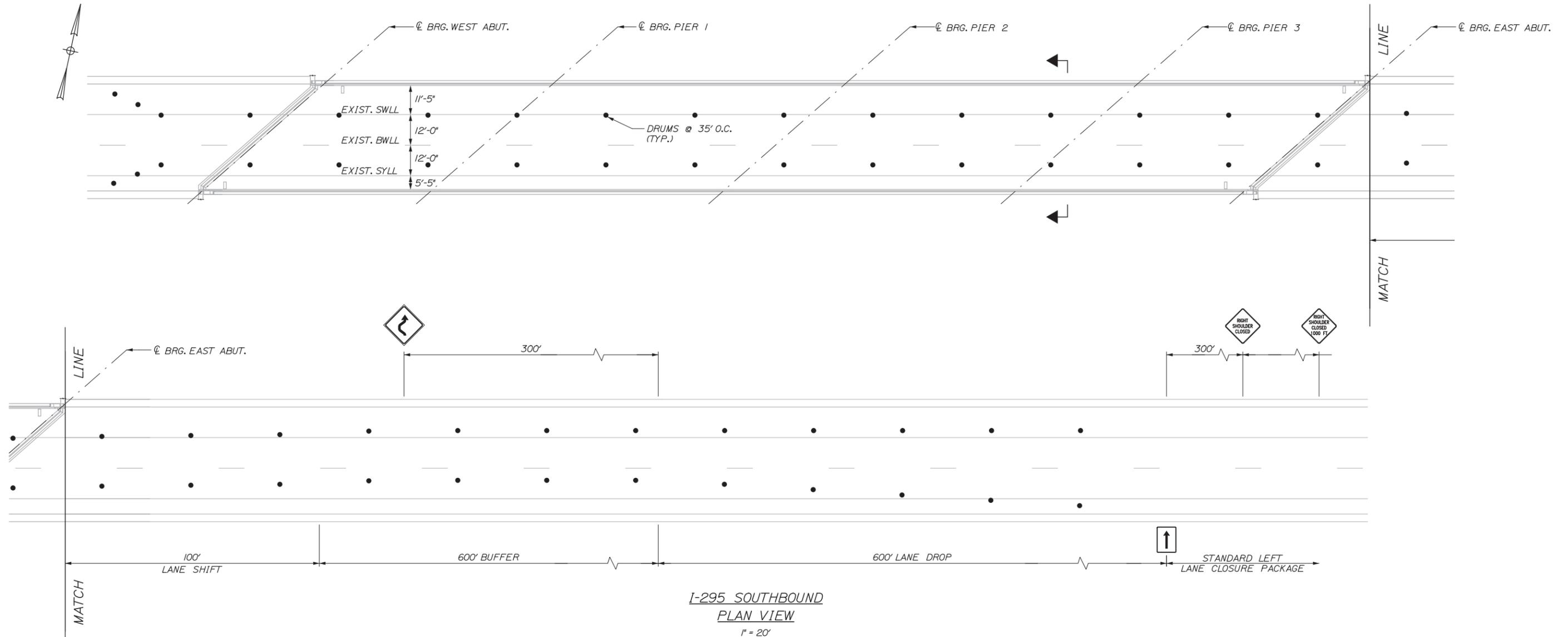
BRIDGE REPAIRS

MAINTENANCE OF TRAFFIC

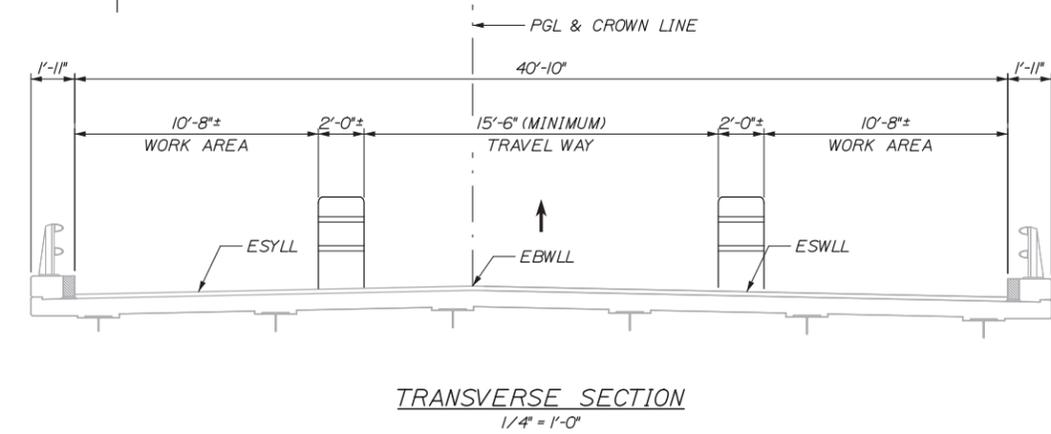
GORHAM ROAD

SHEET NUMBER: MOT-10
CONTRACT: 2016.05
12 OF 35

Date: 3/30/2016



**I-295 SOUTHBOUND
PLAN VIEW**
1" = 20'



TRANSVERSE SECTION
1/4" = 1'-0"

EXIT 44 TRAFFIC CONTROL

EXIT 44 RAMP TRAFFIC CONTROL SHALL CONSIST OF A SINGLE LANE OF TRAFFIC IN THE SOUTHBOUND DIRECTION DELINEATED BY DRUMS PUSHING TRAFFIC TO THE CENTER OF THE TWO LANE BRIDGE (EACH DIRECTION) PER THE ATTACHED SECTION. THE I-295 SB ON RAMP SHALL BE CLOSED TO ONE LANE PRIOR TO SHIFTING THE TRAFFIC TO THE CENTER OF THE TWO LANE BRIDGE. TEMPORARY RAMP TRAFFIC STOPPAGES ARE NOT ANTICIPATED.

SIGNS REQUIRED:

- W20-1 (AHEAD) - ROAD WORK AHEAD
- R2-1 (50) - SPEED LIMIT 50
- R2-6AP - FINES DOUBLED
- R2-12 END WORK ZONE SPEED LIMIT
- G20-5AP - WORK ZONE
- W20-5L (AHEAD) - LEFT LANE CLOSED AHEAD
- W4-2L - LEFT LANE DROP ICON
- W3-5 (50) - SPEED LIMIT 50 AHEAD ICON
- W21-5bR (500 FT) - RIGHT SHOULDER CLOSED 500 FT
- W21-5aR - RIGHT SHOULDER CLOSED
- W24-1L - LANE SHIFT LEFT ICON
- G20-2 END ROAD WORK

M-O-T DEVICES REQUIRED:

- ARROW BOARDS
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

MAINLINE TRAFFIC CONTROL SHALL CONSIST OF SINGLE AND DOUBLE LANE CLOSURES NORTHBOUND AND SINGLE LANE CLOSURES SOUTHBOUND USING THE STANDARD TURNPIKE MAINLINE TRAFFIC CONTROL DETAILS. NO MAINLINE TRAFFIC STOPPAGES ARE ANTICIPATED. THE APPROACH TO THE EXIT 44 NB OFF RAMP SHALL BE SIGNED FOR EXIT OPEN, AND THE EXIT 45 SB ON RAMP SHALL BE SIGNED FOR ROAD WORK AHEAD, LEFT/RIGHT LANE CLOSED AHEAD AND SPEED LIMIT 50 AHEAD.

SIGNS REQUIRED:

- ALL STANDARD TURNPIKE SINGLE AND DOUBLE MAINLINE LANE CLOSURE SIGNS
- W20-1 (AHEAD) - ROAD WORK AHEAD
- W20-5L (AHEAD) - LEFT LANE CLOSED AHEAD
- W20-5R (AHEAD) - RIGHT LANE CLOSED AHEAD
- W24-1L - LANE SHIFT LEFT ICON
- W24-1R - LANE SHIFT RIGHT ICON
- E5-1 EXIT / ARROW ICON
- E5-2 EXIT OPEN

M-O-T DEVICES REQUIRED:

- ARROW BOARDS
- DRUMS
- TRUCK MOUNTED ATTENUATOR
- PORTABLE CHANGEABLE MESSAGE SIGNS

Filename: 013_Exit 44_SB_Plan.dgn

No.	Revision	By	Date

Scale:				Designed by:			
				CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
Designed	CAH	03/16	Checked	AES	03/16		
Drawn	SLR	03/16	In Charge of	RAL	03/16		

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

MAINTENANCE OF TRAFFIC
EXIT 44 I-295 SOUTHBOUND INTERCHANGE

SHEET NUMBER: MOT-11
 CONTRACT: 2016.05
 13 OF 35

Date: 3/30/2016

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
G20-2	48"	24"		TEXT DIMENSIONS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			TBD BY CONTRACTOR	COLORS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			8.00 (XXX)
G20-5aP	48"	24"									8.00 (XXX)
R2-1 (50)	48"	60"									20.00 (XXX)
R2-6aP	48"	24"		6" 6"	4.5"						8.00 (XXX)
R1-1	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*				RED	WHITE		16.00 (XXX)
R1-2	60"	60"						WHITE	RED		12.50 (XXX)
R2-12	36"	54"		6" 6" 6"	4.5" 4.5"			WHITE	BLACK		13.50 (XXX)
E5-1	48"	36"		TEXT DIMENSIONS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*				GREEN	WHITE		12.00 (XXX)
E5-2	48"	36"						ORANGE	BLACK		12.00 (XXX)
E5-2a	48"	36"									12.00 (XXX)
PLACARD	48"	18"									6.00 (XXX)
W1-4L	48"	48"									16.00 (XXX)
W1-4R	48"	48"									16.00 (XXX)
W3-1	48"	48"									16.00 (XXX)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
W3-2a	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			TBD BY CONTRACTOR	ORANGE	BLACK		16.00 (XXX)
W3-4	48"	48"						COLORS SHALL CONFORM TO *2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT*			16.00 (XXX)
W3-5 (50)	48"	48"									16.00 (XXX)
W4-2L	48"	48"									16.00 (XXX)
W4-2R	48"	48"									16.00 (XXX)
W5-4 (LANE)	48"	48"									16.00 (XXX)
W5-4 (RAMP)	48"	48"									16.00 (XXX)
W13-4P	24"	24"									4.00 (XXX)
W20-1 (1 MILE) (AHEAD)	48"	48"									16.00 (XXX)
W20-4	48"	48"									16.00 (XXX)

Filename: 014_Sign Summary 1.dgn

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

By	Date	By	Date
Designed	CAH 03/16	Checked	AES 03/16
Drawn	SLR 03/16	In Charge of	RAL 03/16

HNTB CORPORATION
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

SIGN SUMMARY 1

SHEET NUMBER: MOT-12
14 OF 35

CONTRACT: 2016.05

Date: 3/30/2016

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
W20-5a(L) (1/2 MILE)	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			TBD BY CONTRACTOR	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			16.00 (XXX)
W20-5L (1/2 MILE) (AHEAD)	48"	48"									16.00 (XXX)
W20-5a(R) (1/2 MILE)	48"	48"									16.00 (XXX)
W20-5R (1/2 MILE) (AHEAD)	48"	48"									16.00 (XXX)
W20-7a	48"	48"									16.00 (XXX)
W21-5aR	48"	48"									16.00 (XXX)
W21-5aL	48"	48"									16.00 (XXX)
W24-1L	48"	48"									16.00 (XXX)
W24-1R	48"	48"									16.00 (XXX)
W11-1	30"	30"									6.25 (XXX)
W16-1	24"	30"									5.00 (XXX)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER		
W21-5bR (1000 FT)	48"	48"					TBD BY CONTRACTOR	COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			16.00 (XXX)
W21-5bL (1000 FT)	48"	48"									16.00 (XXX)
CS-3	48"	48"		6" 6" 6"	4" 4"			ORANGE	BLACK		16.00 (XXX)
CS-10	24"	24"						COLORS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS - 2012 SUPPLEMENT"			4.00 (XXX)
R9-9	30"	18"									3.75 (XXX)
R9-11 L R9-11 R	24"	12"									2.00 (XXX)

Filename: 015_Sign Summary 2.dgn

Scale:

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date	By	Date	
Designed	CAH	03/16	Checked	AES	03/16
Drawn	SLR	03/16	In Charge of	RAL	03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

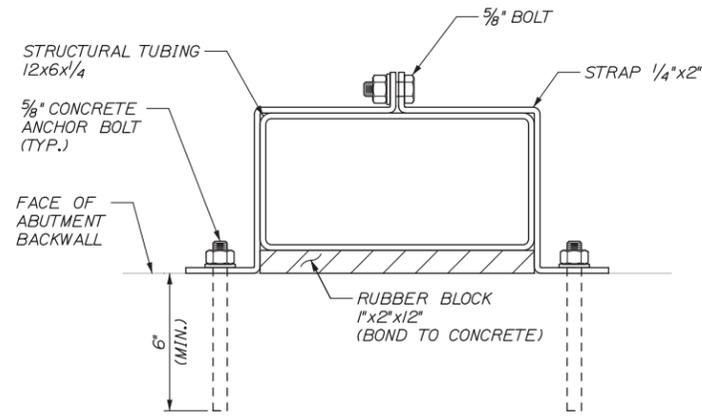
SIGN SUMMARY 2

SHEET NUMBER: MOT-13
15 OF 35

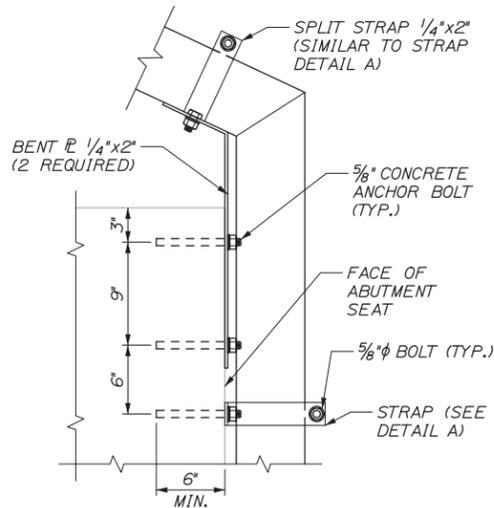
CONTRACT: 2016.05

Date: 3/30/2016

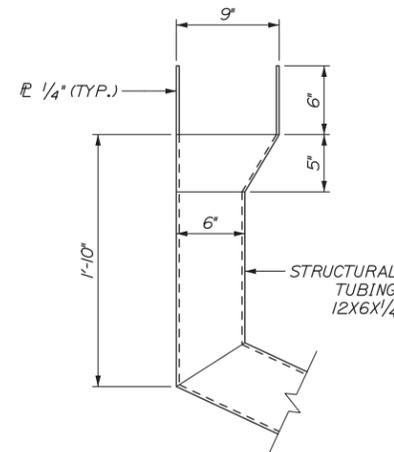
Filename: 017_Ramp J Trough Details.dgn



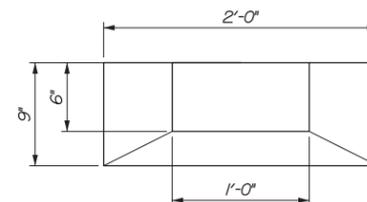
DETAIL A
3" = 1'-0"



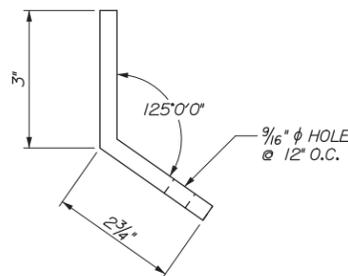
DETAIL C
1/2" = 1'-0"



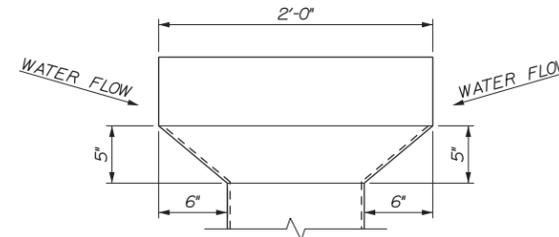
SIDE VIEW



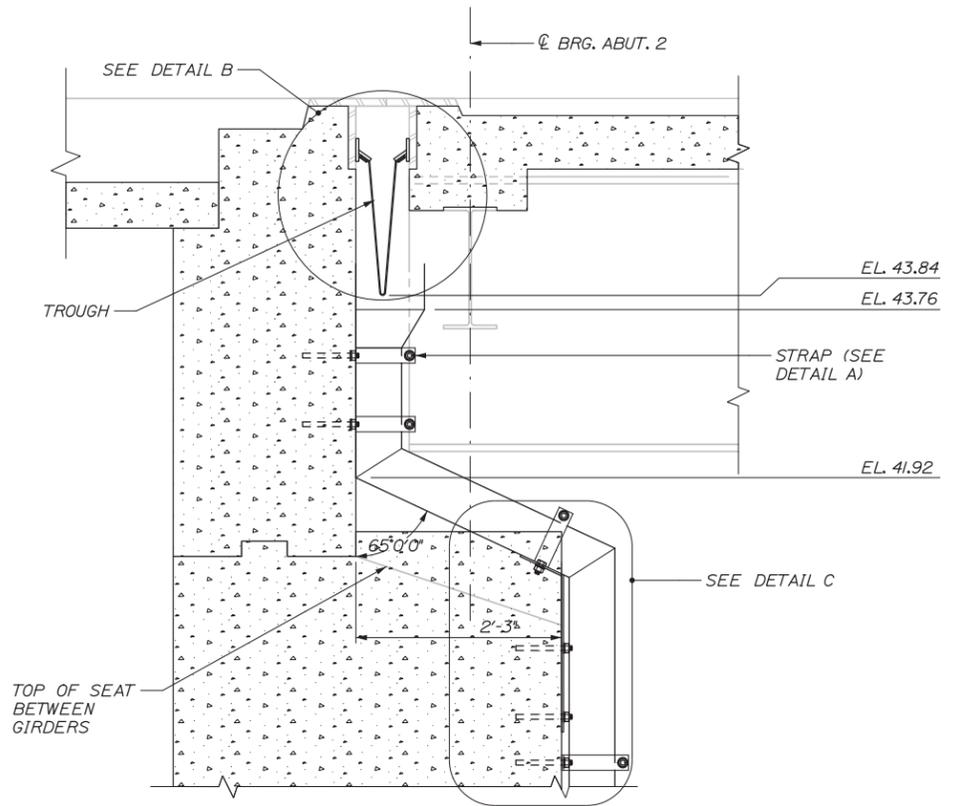
TOP VIEW



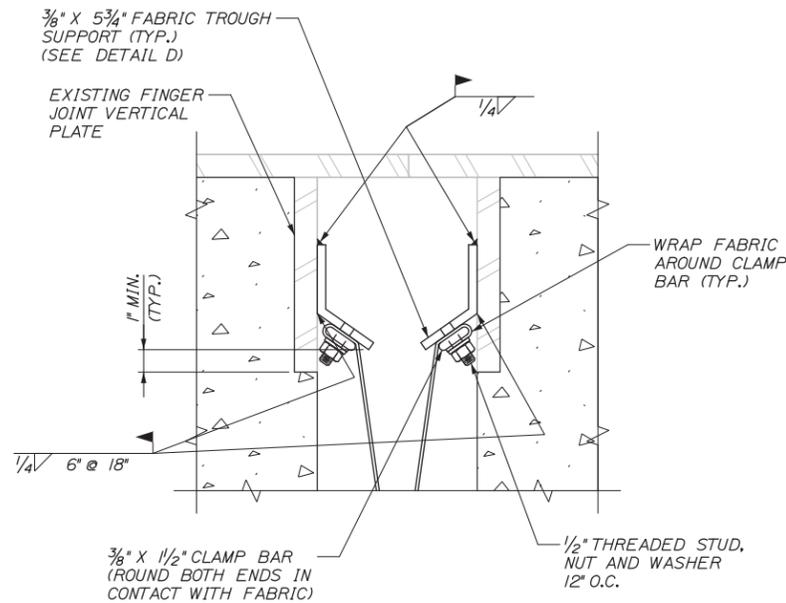
DETAIL D
6" = 1'-0"



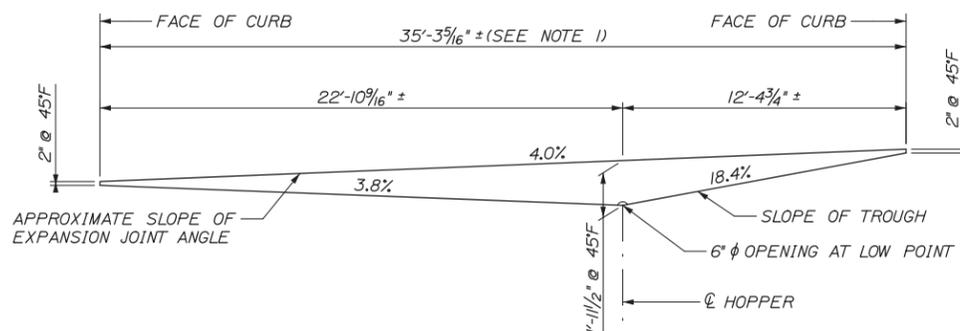
FRONT VIEW
HOPPER DETAILS
1/2" = 1'-0"



SECTION THROUGH HOPPER AT ABUTMENT
N.T.S.



DETAIL B
3" = 1'-0"



FABRIC TROUGH PROFILE AT ABUTMENT 2
1/4" = 1'-0"

TROUGH AND HOPPER NOTES:

1. CONTRACTOR SHALL CONFIRM DIMENSIONS AND ELEVATIONS ON SITE PRIOR TO FABRICATION OF TROUGH AND HOPPER.
2. ALL PLATES SHALL BE 1/4" THICK AND SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE NOTED.
3. ALL DRAIN OR HOPPER COMPONENTS SHALL BE BLAST CLEANED TO THE REQUIREMENT OF SSPC-CP6/NANCE 3 AND HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123 OR A153 AS APPLICABLE. ALL ASSOCIATED FASTENERS SHALL BE HOT-DIP GALVANIZED.
4. SHOP DRAWINGS FOR THE COMPLETE FABRIC TROUGH SYSTEM INCLUDING THE STEEL ATTACHMENT PLATES, FASTENERS, AND THE FABRIC TROUGHS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
5. THE CONTRACTOR SHALL COAT THE EXPOSED SURFACES OF THE EXISTING FINGER JOINT VERTICAL PLATES WITH COLD-APPLIED GALVANIZING AFTER TROUGH INSTALLATION.
6. COAT BOLTS, THREADED STUDS AND NUTS WITH NICKEL BASED ANTI-SEIZE LUBRICANT DURING INSTALLATION.
7. ALL COSTS FOR THE COMPLETE FABRIC TROUGH SYSTEM, INCLUDING PREPARING AND COATING FINGER JOINT VERTICAL PLATES, SHALL BE PAID UNDER PAY ITEM 521.32 FABRIC TROUGH FOR FINGER JOINT.

Scale:		Designed by:	
No.	Revision	By	Date

HNTB			
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
Designed	AES	03/16	Checked BRG 03/16
Drawn	PEB	03/16	In Charge of RAL 03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood IV, P.E., P.T.O.E

BRIDGE REPAIRS

RAMP J OVER RTE. 1 SB & RAMP M
FABRIC TROUGH DETAILS

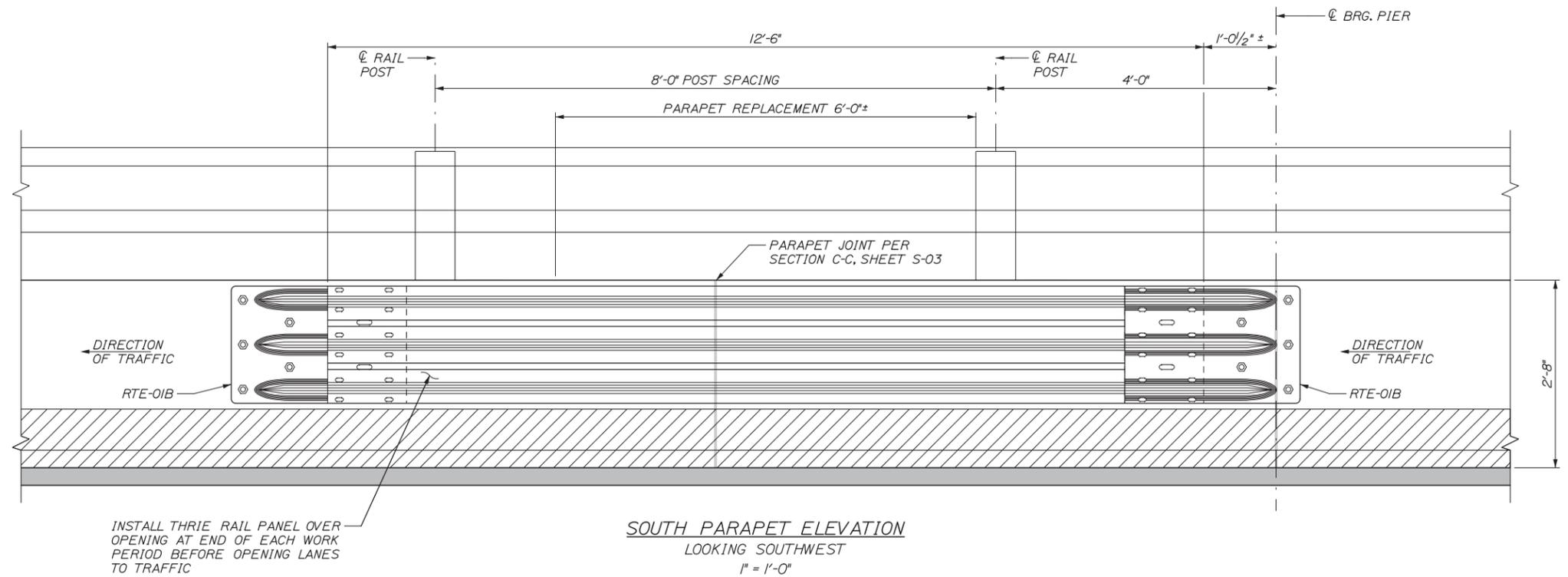
SHEET NUMBER: S-02
CONTRACT: 2016.05
17 OF 35

Date: 3/30/2016

Filename: 019_Two Rod Road Parapet Elevation.dgn

NOTES:

1. THE EXTENT OF DEMOLITION SHOWN SHALL BE VERIFIED BY THE RESIDENT.
2. THRIE RAIL SHALL BE INSTALLED DURING PARAPET REPLACEMENT PRIOR TO OPENING LANE TO TRAFFIC. SHIMMING OF THE THRIE RAIL IS PERMITTED TO ACCOMMODATE A CONCRETE FORMING SYSTEM.
3. THE THRIE RAIL SHALL BE DRILLED AND GROUTED TO THE PARAPET USING 7/8" THREADED ROD CONFORMING TO ASTM F1554, GRADE 55. THREADED ROD SHALL BE ANCHORED USING A MATERIAL LISTED ON THE MAINE DOT PREQUALIFIED LIST OF CONCRETE ADHESIVE ANCHORING MATERIALS OR THROUGH BOLTED. CORE DRILLING IS REQUIRED FOR ALL THROUGH BOLTS. THE INSTALLATION OF THRIE RAIL AND ASSOCIATED ANCHORING SHALL BE INCIDENTAL TO THE RELATED CONCRETE REPAIR ITEM.
4. AFTER THE PARAPET CONCRETE HAS CURED PER DESIGN SPECIFICATIONS THE THRIE RAIL SECTIONS AND RTE-OIB PARTS SHALL BE REMOVED. THE ANCHORS SHALL BE REMOVED AND THE HOLES SHALL BE FILLED WITH GROUT.
5. SHIELDING SHALL BE PROVIDED FOR ALL REPAIR LOCATIONS OVER MAINLINE TRAFFIC OR IN THE MEDIAN. SEE SPECIAL PROVISION 524 FOR SHIELDING LIMITS. SHIELDING SHALL BE INCIDENTAL TO THE REPAIR ITEM.



REPAIR NOTES:

1. BRIDGE PARAPET CRACKS SHALL BE SEALED WITH EPOXY CRACK INJECTION. THE PLAN QUANTITY IS ESTIMATED AND SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT IN ACCORDANCE WITH SPECIAL PROVISION 518.
2. BRIDGE RAILING DOES NOT NEED TO BE REMOVED DURING CLEAR PROTECTIVE COATING APPLICATION.
3. EXISTING PARAPET JOINTS SHALL BE RE-CAULKED PER SPECIAL PROVISION 518 AND SECTION C-C ON SHEET S-03.
4. EXISTING CURB JOINTS SHALL BE REPAIRED PER SPECIAL PROVISION 518 AND SECTION D-D ON SHEET S-03.

REMOVAL PROCEDURES (REPAIR LOCATIONS):

1. THE RESIDENT SHALL SOUND THE PARAPET CONCRETE AND DELINEATE AREAS OF THE REPAIR SIMILAR TO WHAT IS SHOWN IN THE PLANS. AREAS DELINEATED REPRESENT OBVIOUS LOCATIONS OF REPAIR (I.E., EXPOSED REINFORCING OR SPALLS). THIS REPAIR PROJECT DOES NOT INTEND TO REPAIR SMALL AREAS OF DETERIORATION. RESIDENT TO FOCUS ON AREAS EXPOSED TO THE ELEMENTS, UNLESS EXTENSIVE DETERIORATION OR DELAMINATIONS ARE FOUND IN OTHER LOCATIONS.
2. SHOULD THE REMOVAL AREA LIMITS CHANGE DURING THE REPAIR PROCESS AFTER THE RESIDENT HAS DETERMINED THE LIMITS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE REMOVALS. WORK SHALL INCIDENTAL TO THE SPECIFIED REPAIR ITEM IN SPECIFICATION 518.
3. PREFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.
4. CHIP CONCRETE TO DEPTH SHOWN AND DESCRIBED IN SPECIFICATION 518.

REMOVAL PROCEDURES (REPLACEMENT LOCATION):

1. REMOVAL OF THE EXISTING CONCRETE SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO THE PORTION OF THE STRUCTURE THAT IS TO REMAIN.
2. THE AREA THAT REQUIRES PARAPET REPLACEMENT SHALL BE DELINEATED BY THE RESIDENT.
3. ALL REINFORCING STEEL THAT IS EXPOSED BY CONCRETE REMOVAL SHALL REMAIN AND BE CLEANED OF ALL DUST AND LOOSE RUST IN A MANNER APPROVED BY THE RESIDENT.
4. SUPPLEMENTARY REINFORCING SHALL BE ADDED IF DAMAGED REINFORCING IS EXPOSED AND SHALL BE INCIDENTAL TO THE ITEM 518.611, PARAPET REPLACEMENT.
5. THE REMOVAL PROCEDURE SHALL CONFORM TO SPECIFICATION 518.

CONCRETE SURFACE PATCH/REPAIR PROCEDURE (REPAIR LOCATIONS):

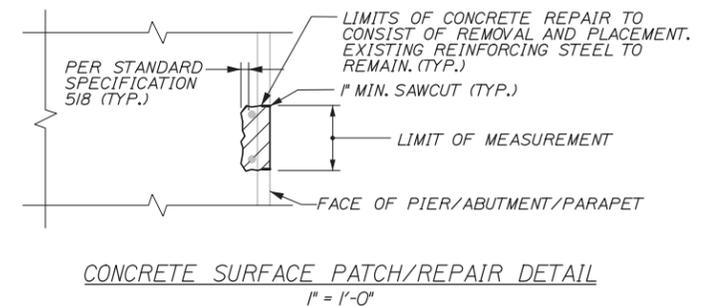
1. PREPARE AND PATCH REPAIR AREAS WITH CLASS AAA MODIFIED CONCRETE. SEE SPECIFICATIONS FOR MATERIAL PREPARATION, PLACEMENT, AND CURING REQUIREMENTS.
2. PERFORM GENERAL FINISHING (SEE BELOW).

CONCRETE REPAIR PROCEDURE (REPLACEMENT LOCATION):

1. REPLACE PARAPET IN LOCATION DELINEATED BY RESIDENT WITH CLASS AAA MODIFIED CONCRETE. THE ASSUMED LIMIT OF DEMOLITION IS SHOWN ON SHEET S-03. SEE SPECIFICATIONS FOR MATERIAL PREPARATION PLACEMENT AND CURING REQUIREMENTS.
2. THRIE RAIL SHALL BE INSTALLED DURING REPLACEMENT PRIOR TO OPENING LANE TO TRAFFIC.
3. PERFORM GENERAL FINISHING (SEE BELOW).

GENERAL FINISHING:

1. ALL EXPOSED PARAPET SURFACES SHALL BE COATED WITH A PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETED AND PATCH MATERIALS HAVE CURED. CLEAR PROTECTIVE COATING WILL EXTEND THE ENTIRE LENGTH OF THE BRIDGE. SEE SHEET S-03 FOR ADDITIONAL LIMITS OF CLEAR PROTECTIVE COATING.



Scale:		Designed by:			
No.	Revision	By	Date		
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.					
		By	Date	By	Date
		Designed	CAH 03/16	Checked	AES 03/16
		Drawn	PEB 03/16	In Charge of	RAL 03/16

HNTB

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

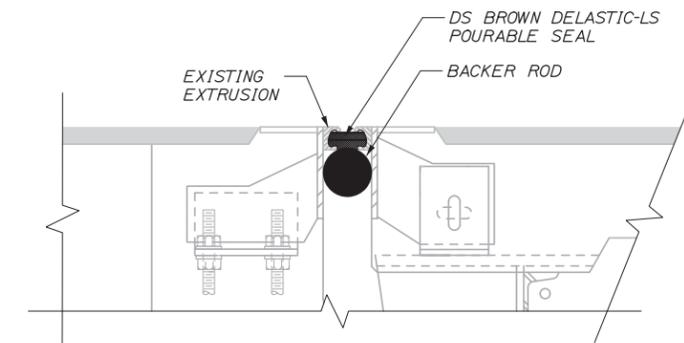
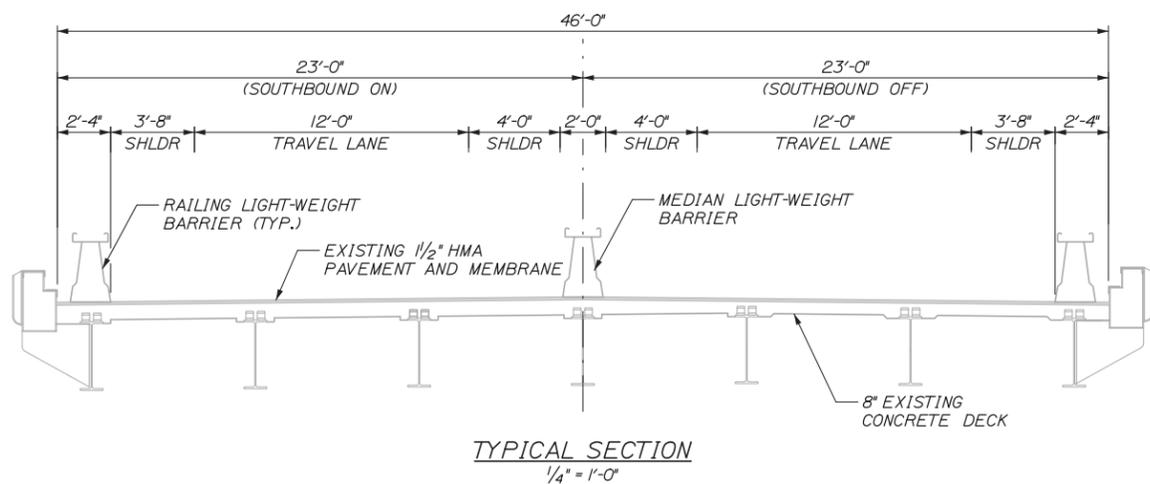
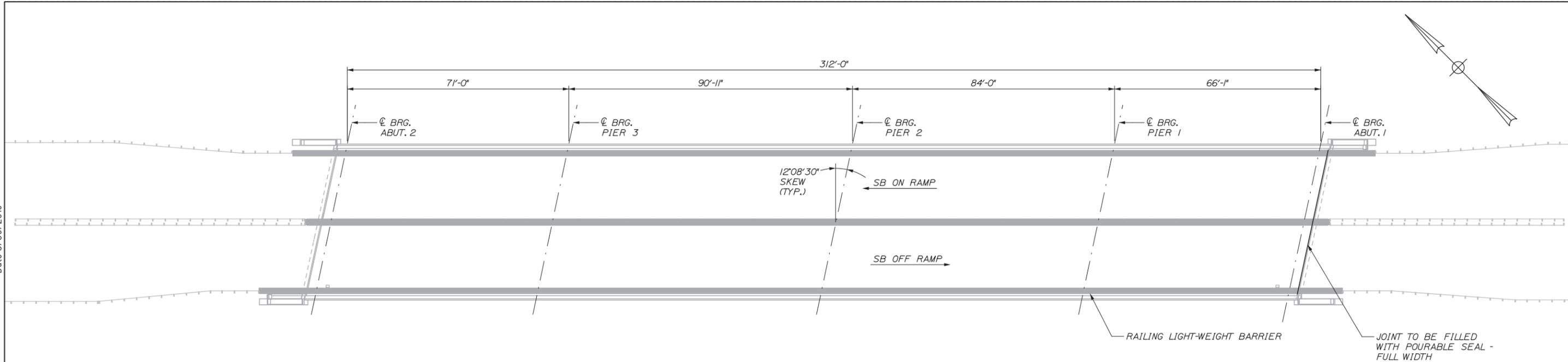
TWO ROD ROAD
PARAPET REPLACEMENT DETAILS

SHEET NUMBER: S-04

CONTRACT: 2016.05

19 OF 35

Date: 3/30/2016



- NOTES:**
1. THE POURABLE SEAL SHALL BE INSTALLED THE FULL WIDTH OF THE BRIDGE, RECESSED 1/2" BELOW THE EXISTING JOINT SURFACE.
 2. SEAL TERMINATION AT THE CURB TURN UP SHALL BE FORMED IN SUCH A WAY TO PREVENT WATER SPILL OVER ONTO THE ABUTMENT SEATS.
 3. THE POURABLE SEAL SHALL MEET THE MANUFACTURER'S REQUIREMENTS FOR PREPARATION AND INSTALLATION.
 4. MIXING AND INSTALLATION TEMPERATURES SHALL BE NOTED AND ANY EXCEPTIONS SHALL BE APPROVED BY THE MTA.
 5. CARE SHALL BE TAKEN TO ENSURE INTERIOR PORTIONS OF THE EXISTING EXTRUSION ARE PROPERLY CLEANED.
 6. BACKER ROD SHOWN CIRCULAR BUT CAN BE RECTANGULAR. BACKER ROD TO BE REVIEWED BY RESIDENT, AND SHALL REMAIN IN-PLACE AFTER POURABLE SEAL IS INSTALLED.
 7. PER MANUFACTURERS REQUIREMENTS A MAXIMUM THICKNESS OF 3/4" SHALL BE POURED AT ONE TIME. PROPOSED SEAL THICKNESS SHALL BE ACHIEVED WITH MULTIPLE LAYERS OF MATERIAL POURS ALLOWING EACH LAYER TO CURE.
 8. PERMANENT LIGHT-WEIGHT BARRIER SHALL REMAIN IN PLACE DURING BRIDGE JOINT SEAL INSTALLATION.
 9. SEAL INSTALLATION SHALL OCCUR AT NIGHT AND REQUIRES TEMPORARY RAMP CLOSURE. SEE SPECIAL PROVISION 652 FOR ALLOWABLE RAMP CLOSURE TIMES.

Filename: 021_Exit 45 Joint Repair.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date		By	Date
Designed	AES	03/16	Checked	BRG	03/16
Drawn	PEB	03/16	In Charge of	RAL	03/16

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

EXIT 45 UNDERPASS
JOINT REPAIR DETAIL

SHEET NUMBER: S-06

CONTRACT: 2016.05

21 OF 35

SUBSTRUCTURE REPAIR PROCEDURAL NOTES:

1. CONCRETE REPAIRS WILL BE PAID UNDER 518 ITEMS.

REMOVAL PROCEDURES:

1. PRIOR TO THE START OF THE CONCRETE REMOVALS, THE RESIDENT AND THE CONTRACTOR SHALL SOUND THE CONCRETE AND AGREE ON THE REMOVAL LIMITS. SHOULD THE REMOVAL AREA LIMITS APPEAR TO CHANGE DURING THE DEMOLITION PROCESS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING REMOVALS.
2. PREFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO DEPTH REQUIRED PER THE MAINEDOT SPECIFICATION 518.

CONCRETE SURFACE PATCH/REPAIR PROCEDURE:

1. PREPARE AND PATCH REPAIR AREAS WITH CLASS AAA MODIFIED CONCRETE. SEE SPECIFICATIONS FOR MATERIAL, PREPARATION, PLACEMENT, AND CURING REQUIREMENTS.

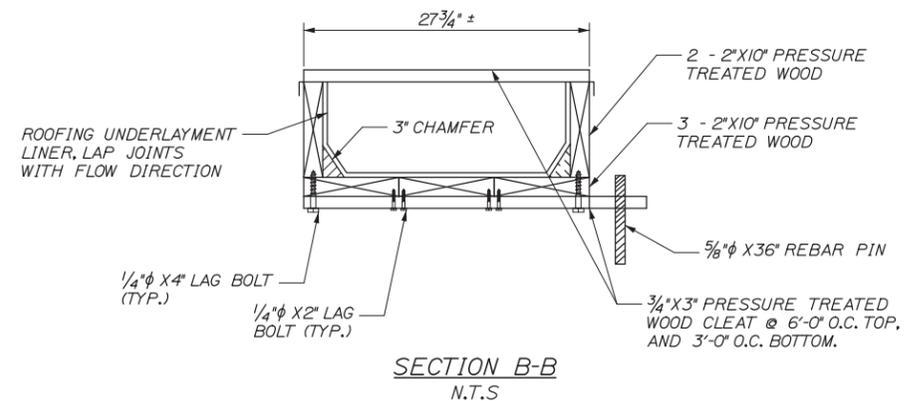
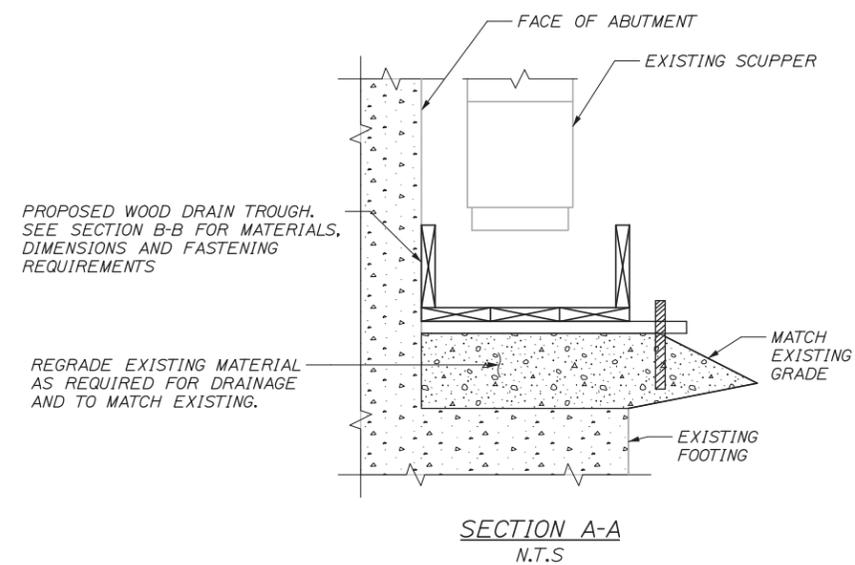
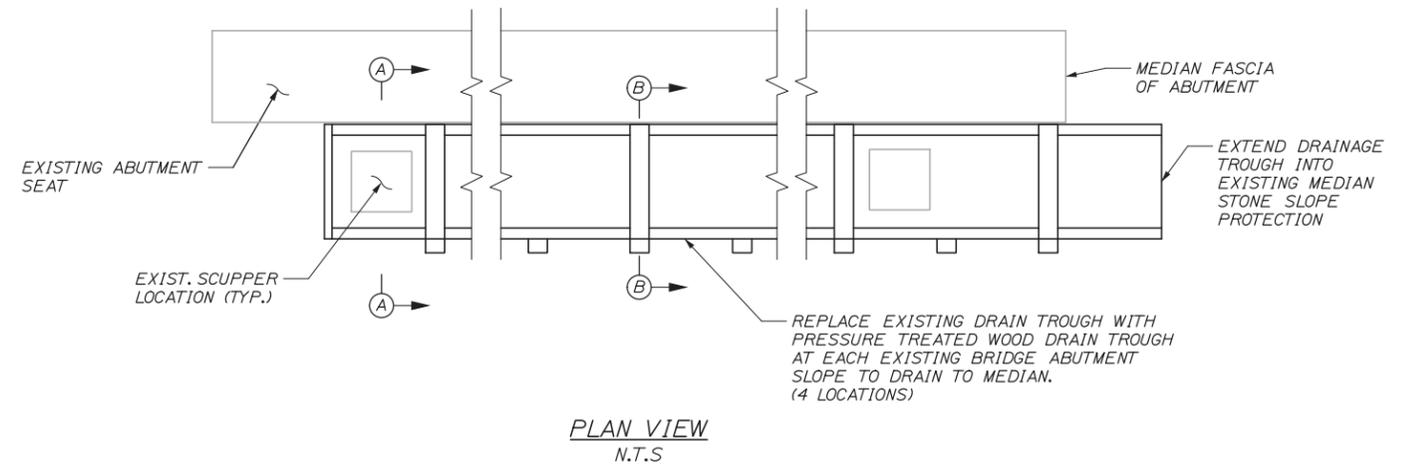
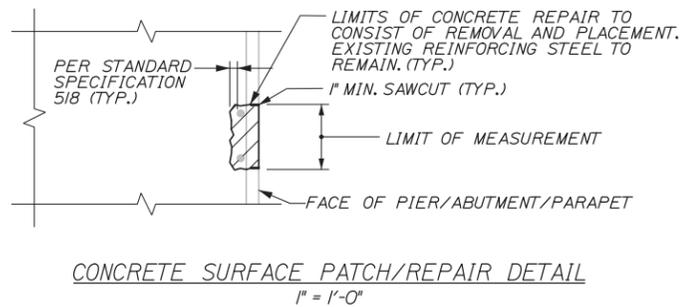
2. PERFORM GENERAL FINISHING (SEE BELOW).

EPOXY INJECTION CRACK REPAIR:

1. PREPARE CONCRETE SURFACE AND CRACK AREA BY CLEANING SUBSTRATE WITH WIRE BRUSH TO REMOVE LAITANCE AND CONTAMINANTS. BLAST CLEAN THE CRACK AND CONCRETE SURFACE; DO NOT USE WATER.
2. SET INJECTION PORTS ALONG THE LENGTH OF THE CRACK USING A HIGH-MODULUS, LOW VISCOSITY EPOXY SUCH AS SIKDUR 35, SIKADUR 55, OR APPROVED EQUAL. ONCE SET SEAL PORTS AND CRACK WITH THE SAME EPOXY ADHESIVE. EPOXY SEAL AROUND PORTS SHALL BE ALLOWED TO CURE PRIOR TO CRACK INJECTION.

GENERAL FINISHING:

1. CONTRACTOR SHALL REMOVE TECTYL COATING WHERE PRESENT PRIOR TO APPLYING PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED ITEM IN SPECIFICATION 518.
2. ALL EXPOSED SUBSTRUCTURE SURFACES SHALL BE COATED WITH A PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETE AND PATCH MATERIALS HAVE CURED.



WOOD DOWNSPOUT DETAILS

NOTES:

1. WOOD DRAIN TROUGH AND ROOFING UNDERLAYMENT LINER SHALL BE PAID UNDER ITEM 603.91, PRESSURE TREATED WOOD DRAIN TROUGH.
2. EXCAVATION, BACKFILL, AND REGRADING TO INSTALL PRESSURE TREATED WOOD DRAINAGE TROUGH SHALL BE INCIDENTAL TO ITEM 603.91.
3. MECHANICALLY ATTACH WOOD DOWNSPOUT TO ABUTMENT WITH 3/8" x 6" BOLTS INTO DROP IN ANCHORS @ 18" O.C.
4. BUTT SPLICE 2x10 PRESSURE TREATED WOOD MEMBERS AT CLEATS (PROVIDE 3/4" x 6" CLEATS AT BUTT SPLICES); OR USE 2x10x16" PRESSURE TREATED WOOD SPLICE BOARDS. SPIKE WITH 10 PENNY GALVANIZED NAILS OR SCREWS.
5. INSTALL ROOFING UNDERLAYMENT LINER AND SECURE WITH GALVANIZED ROOFING NAILS PRIOR TO INSTALLING THE TOP CLEATS.

Date: 3/30/2016

Filename: 022_Forest Avenue General Notes.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.					
	By	Date		By	Date
	BRG	03/16	Checked	AES	03/16
	Drawn	PEB	In Charge of	RAL	03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

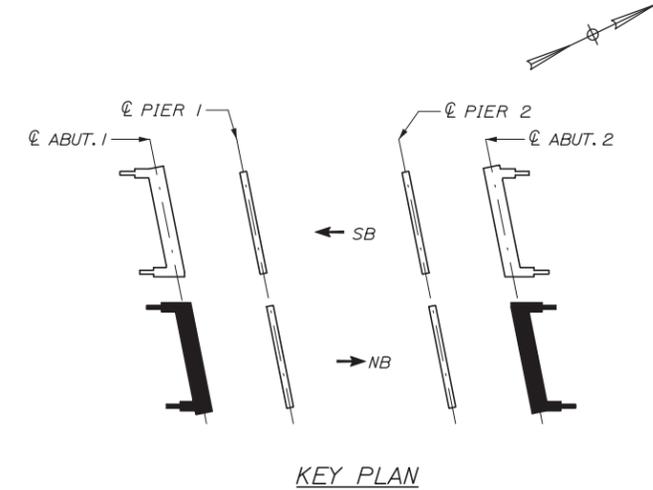
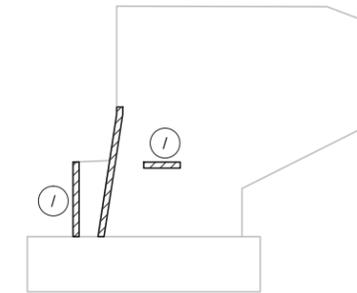
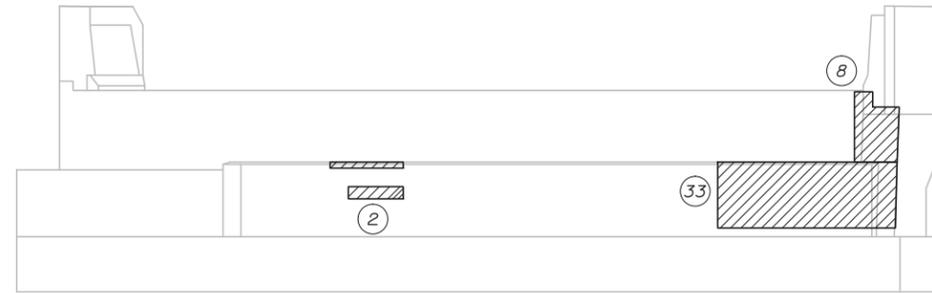
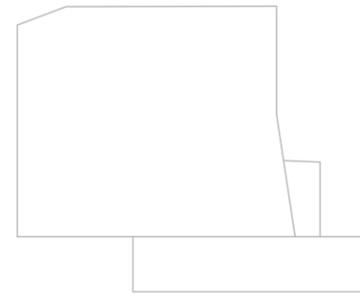
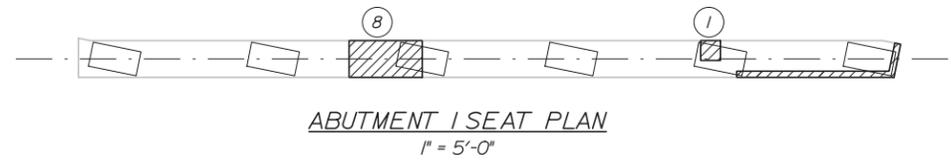
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 OVER FOREST AVENUE
 REPAIR NOTES AND TROUGH DETAILS

SHEET NUMBER: S-07
 CONTRACT: 2016.05
 22 OF 35

Date: 3/30/2016



REPAIR QUANTITIES

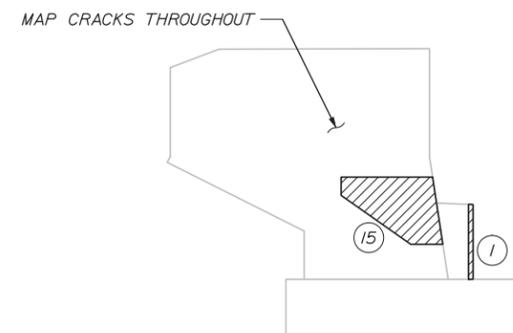
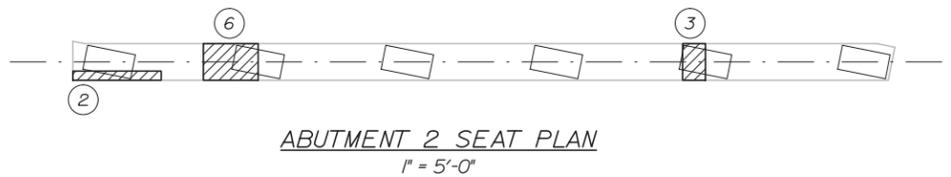
REPAIR OF VERTICAL SURFACES < 8 INCHES	94 S.F.*
REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES	30 S.F.*
EPOXY INJECTION CRACK REPAIR	12 L.F.**
* INCLUDES 10 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.	
** ASSUMES 12 L.F. OF CRACK REPAIR	

LEGEND

- LIMIT OF ABUTMENT SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-07.



Filename: 023_Repair_Details_NB.dgn

Scale:			
No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date	Checked	By	Date
Designed	BRG	03/16	Checked	AES	03/16
Drawn	PEB	03/16	In Charge of	RAL	03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 NORTHBOUND OVER FOREST AVENUE
ABUTMENT REPAIRS

SHEET NUMBER: S-08
CONTRACT: 2016.05
23 OF 35

Date: 3/30/2016

REPAIR QUANTITIES

- REPAIR OF VERTICAL SURFACES < 8 INCHES 8 S.F.*
- REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 7 S.F.*
- REPAIR OF OVERHEAD SURFACES < 8 INCHES 0 S.F.
- EPOXY INJECTION CRACK REPAIR 6 L.F.**

* INCLUDES 2 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 6 L.F. OF CRACK REPAIR

LEGEND

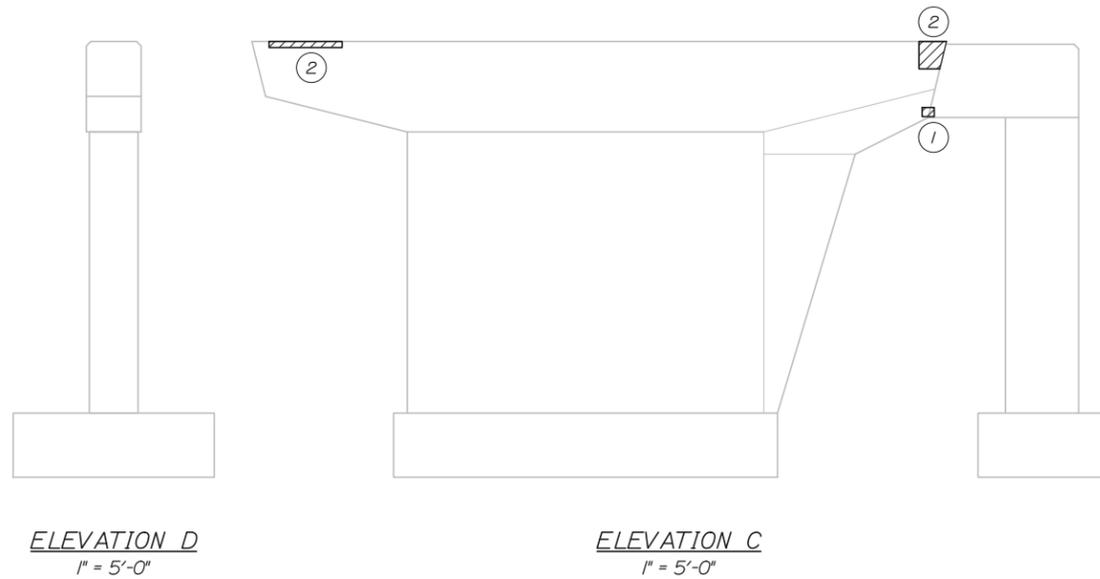
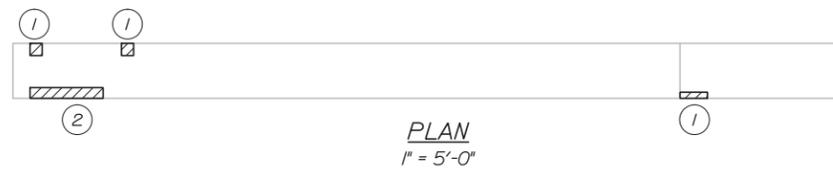
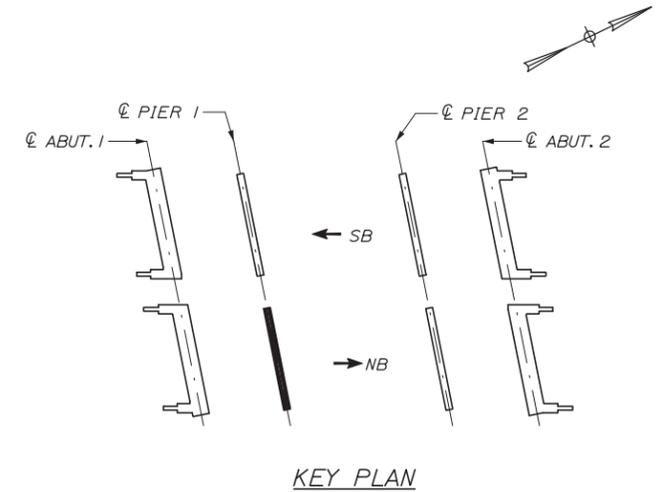
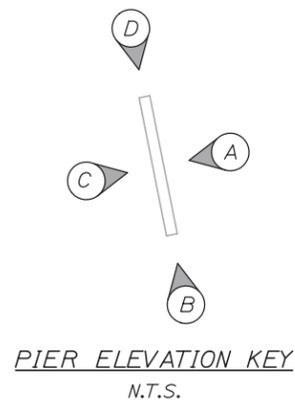
LIMIT OF PIER SURFACE PATCH REPAIR

SQUARE FOOT AREA OF REPAIR

EPOXY INJECTION CRACK REPAIR

NOTES:

1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-07.



No.		Revision		By	Date

Designed by:

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.					
	By	Date		By	Date
Designed	BRG	03/16	Checked	AES	03/16
Drawn	PEB	03/16	In Charge of	RAL	03/16

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 NORTHBOUND OVER FOREST AVENUE
PIER 1 REPAIRS

SHEET NUMBER: S-09
CONTRACT: 2016.05
24 OF 35

Filename: 024_NB Pier 1.dgn

Date: 3/30/2016

REPAIR QUANTITIES

- REPAIR OF VERTICAL SURFACES < 8 INCHES 26 S.F.*
- REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 10 S.F.*
- REPAIR OF OVERHEAD SURFACES < 8 INCHES 26 S.F.*
- EPOXY INJECTION CRACK REPAIR 6 L.F.**

* INCLUDES 2 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 6 L.F. OF CRACK REPAIR

LEGEND

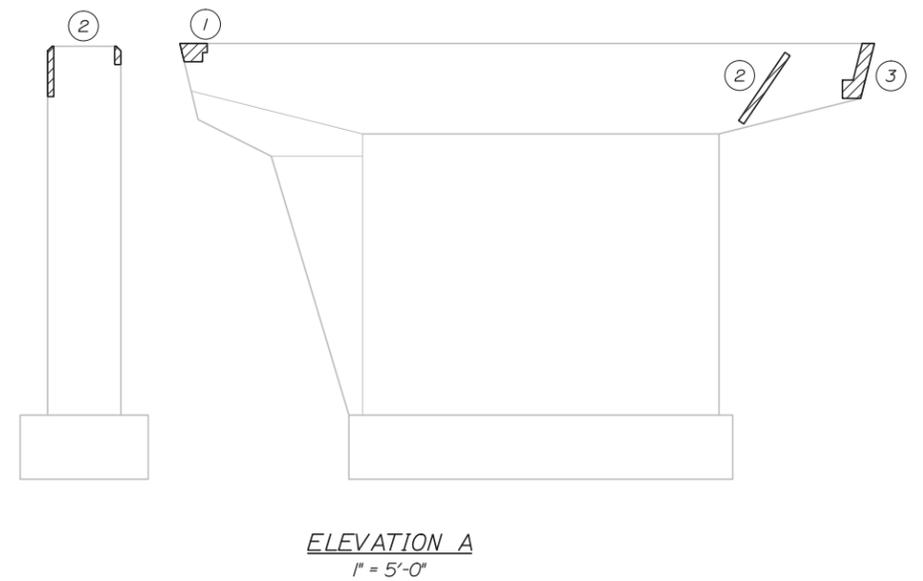
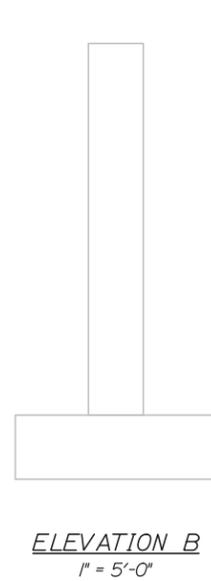
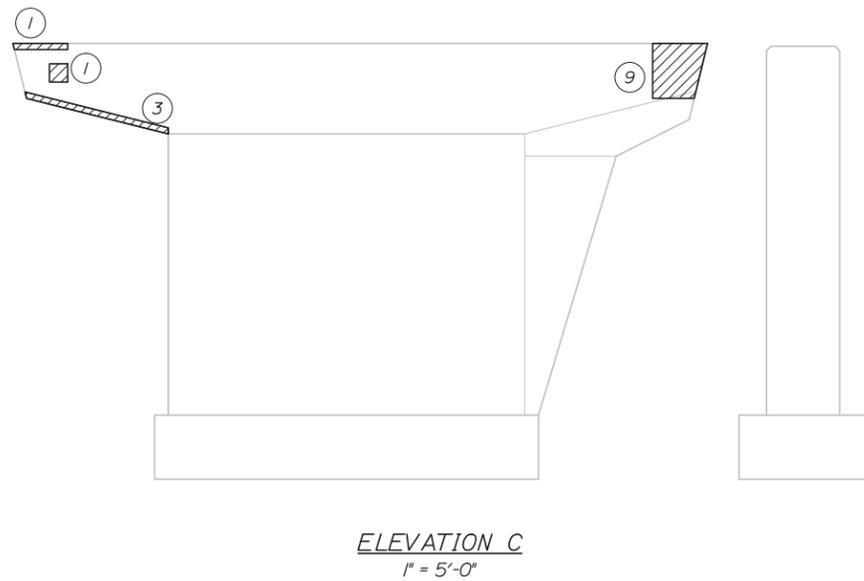
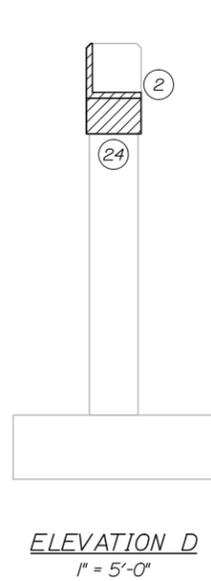
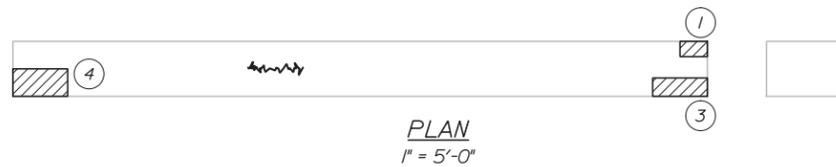
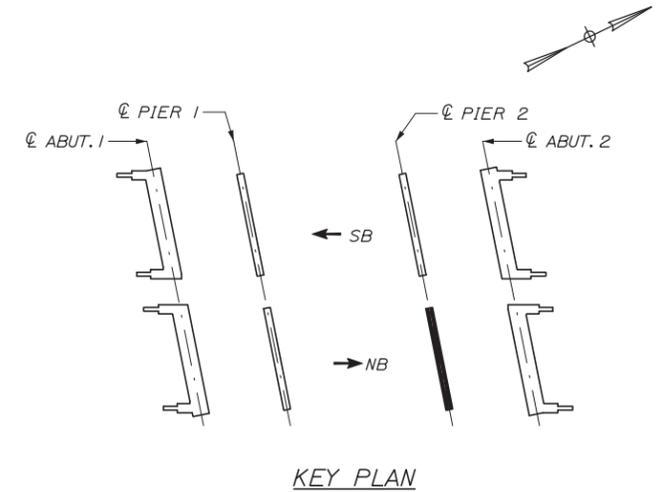
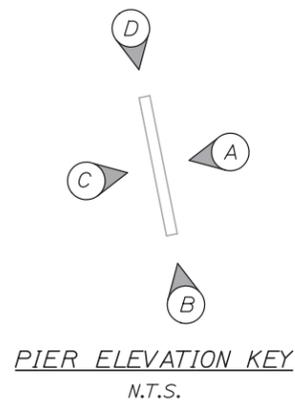
LIMIT OF PIER SURFACE PATCH REPAIR

SQUARE FOOT AREA OF REPAIR

EPOXY INJECTION CRACK REPAIR

NOTES:

1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-07.



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
By	Date	By	Date
Designed	BRG 03/16	Checked	AES 03/16
Drawn	PEB 03/16	In Charge of	RAL 03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

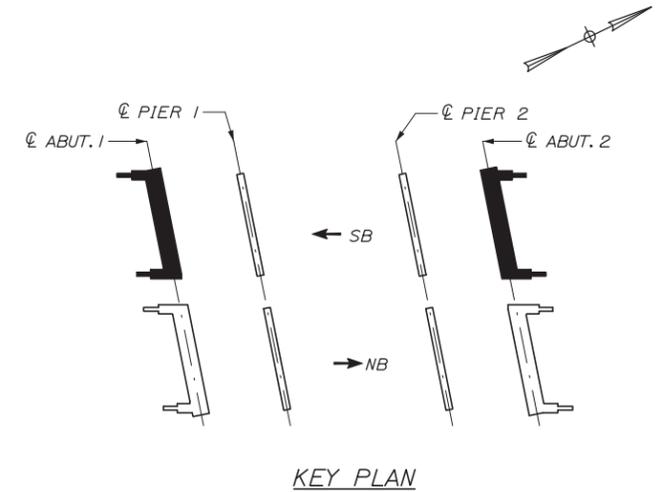
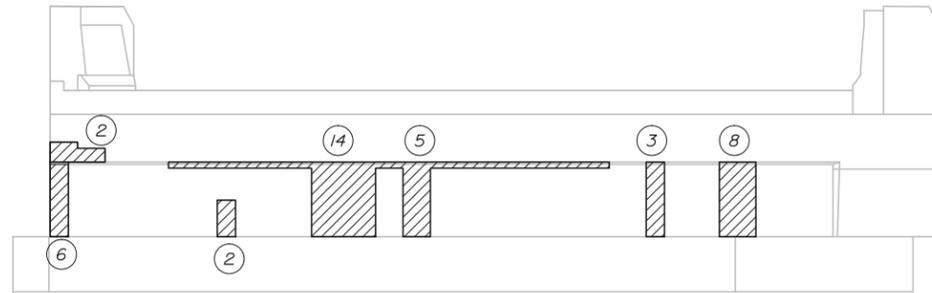
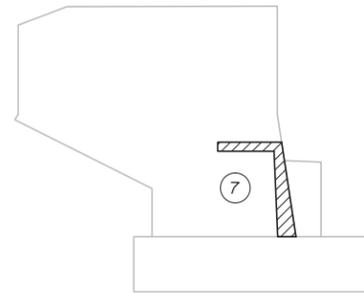
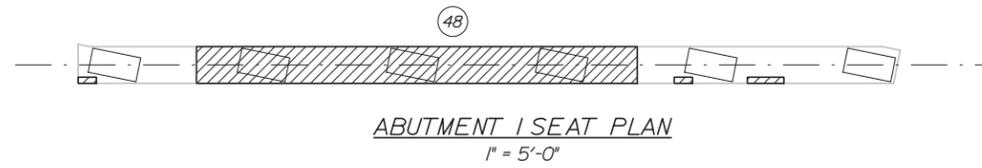
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 NORTHBOUND OVER FOREST AVENUE
PIER 2 REPAIRS

SHEET NUMBER: S-10
CONTRACT: 2016.05
25 OF 35

Date: 3/30/2016



REPAIR QUANTITIES

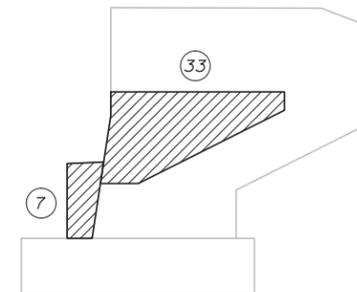
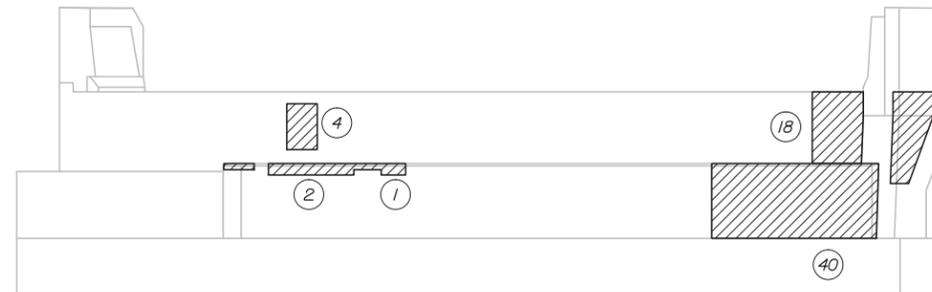
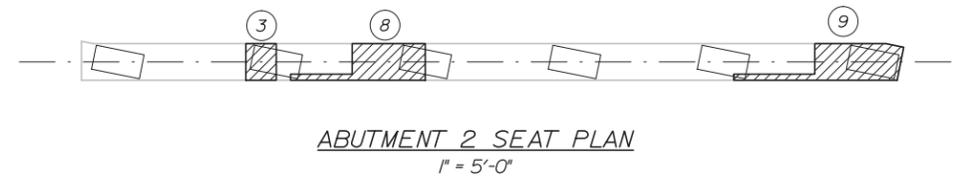
REPAIR OF VERTICAL SURFACES < 8 INCHES	162 S.F.*
REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES	78 S.F.*
EPOXY INJECTION CRACK REPAIR	12 L.F.**
* INCLUDES 10 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.	
** ASSUMES 12 L.F. OF CRACK REPAIR	

LEGEND

- LIMIT OF ABUTMENT SURFACE PATCH REPAIR
- SQUARE FOOT AREA OF REPAIR
- EPOXY INJECTION CRACK REPAIR

NOTES:

1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-07.



Filename: 026_Repair_Details_SB.dgn

Scale:		Designed by:	
No.	Revision	By	Date

HNTB			
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
	By	Date	
	BRG	03/16	
	Checked	AES	03/16
	By	Date	
	Drawn	PEB	03/16
	In Charge of	RAL	03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 SOUTHBOUND OVER FOREST AVENUE
ABUTMENT REPAIRS

SHEET NUMBER: S-11

CONTRACT: 2016.05 26 OF 35

Date: 3/30/2016

REPAIR QUANTITIES

- REPAIR OF VERTICAL SURFACES < 8 INCHES 34 S.F.*
- REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 5 S.F.*
- REPAIR OF OVERHEAD SURFACES < 8 INCHES 3 S.F.*
- EPOXY INJECTION CRACK REPAIR 6 L.F.**

* INCLUDES 2 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 6 L.F. OF CRACK REPAIR

LEGEND

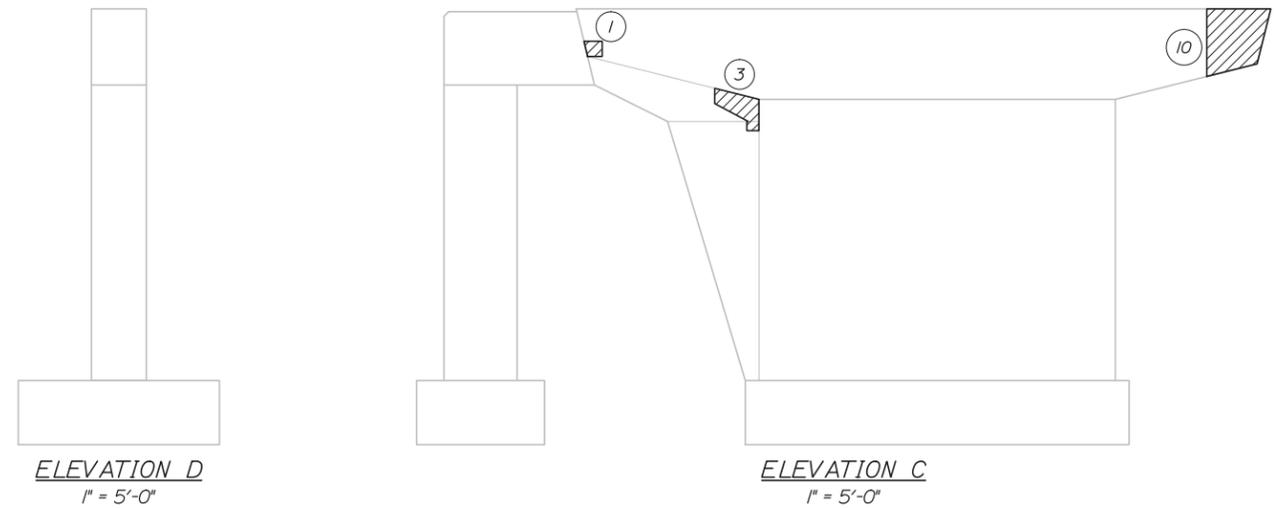
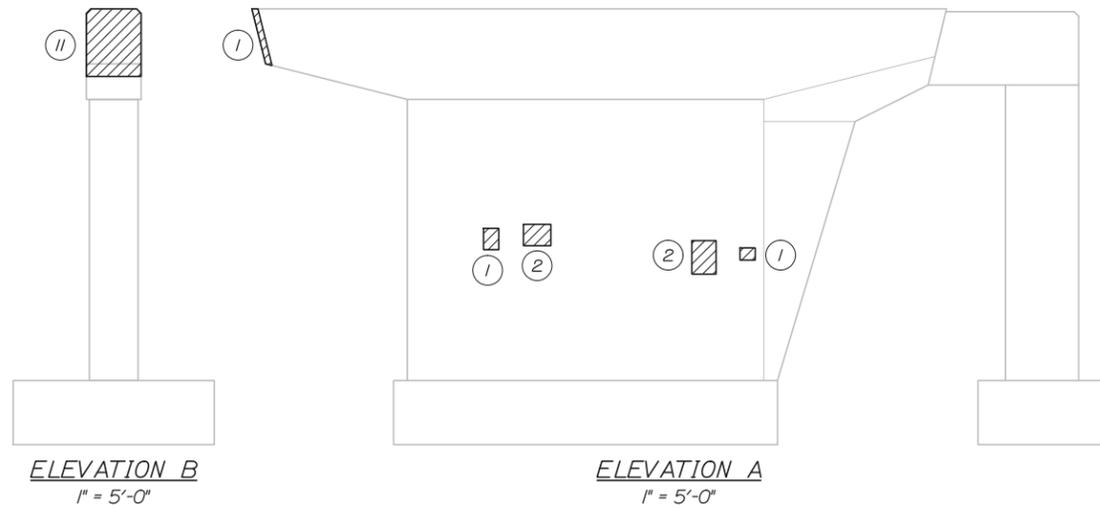
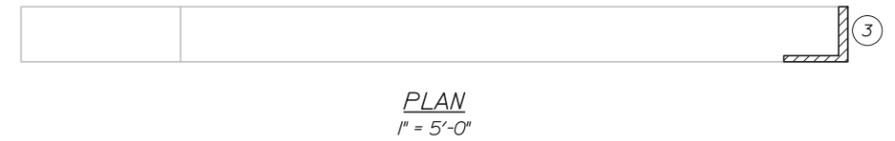
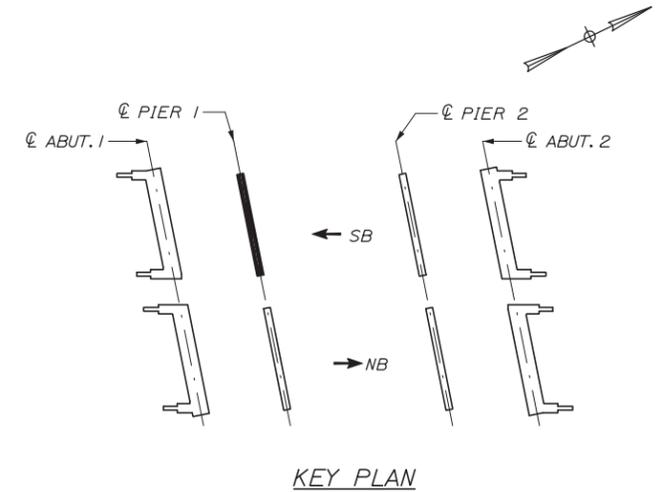
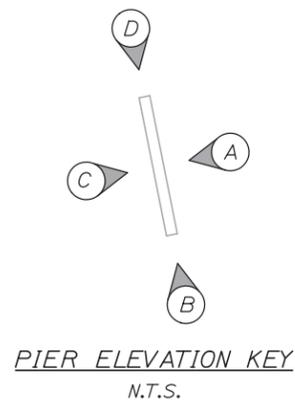
LIMIT OF PIER SURFACE PATCH REPAIR

SQUARE FOOT AREA OF REPAIR

EPOXY INJECTION CRACK REPAIR

NOTES:

1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-07.



Scale:			
No.	Revision	By	Date

Designed by:

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
By	Date	By	Date
Designed	BRG 03/16	Checked	AES 03/16
Drawn	PEB 03/16	In Charge of	RAL 03/16

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 SOUTHBOUND OVER FOREST AVENUE
PIER 1 REPAIRS

SHEET NUMBER: S-12
CONTRACT: 2016.05
27 OF 35

Date: 3/30/2016

REPAIR QUANTITIES

- REPAIR OF VERTICAL SURFACES < 8 INCHES 15 S.F.*
- REPAIR OF UPWARD FACING SURFACES - BELOW REINFORCING STEEL < 8 INCHES 17 S.F.*
- REPAIR OF OVERHEAD SURFACES < 8 INCHES 5 S.F.*
- EPOXY INJECTION CRACK REPAIR 6 L.F.**

* INCLUDES 2 S.F. ADDITIONAL REPAIR QUANTITY AS A CONTINGENCY.

** ASSUMES 6 L.F. OF CRACK REPAIR

LEGEND

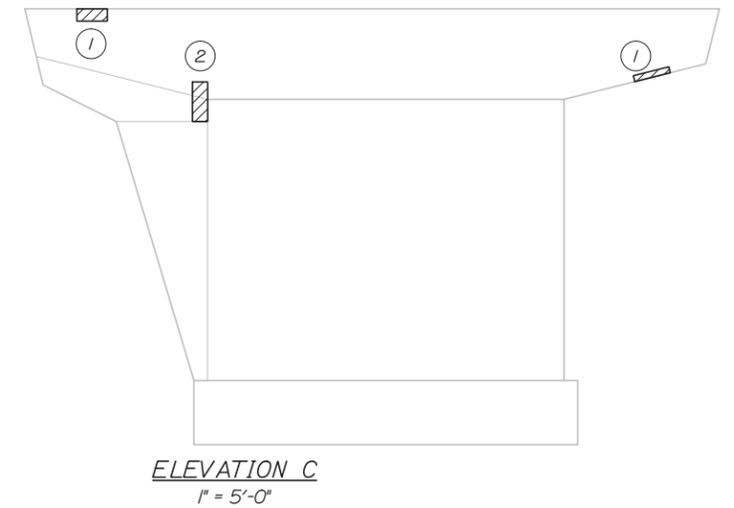
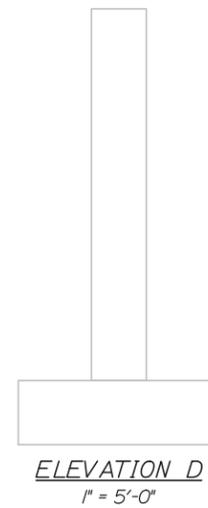
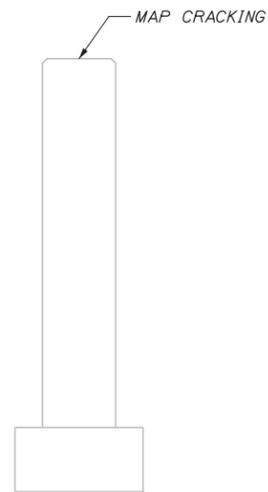
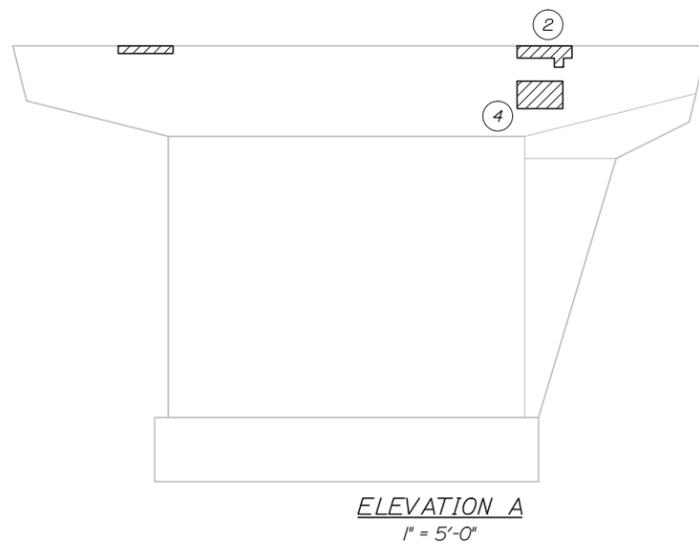
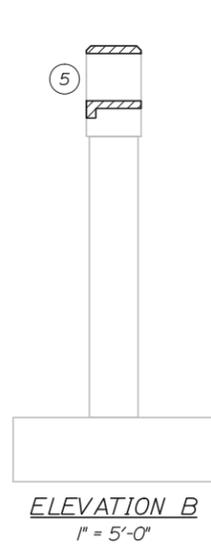
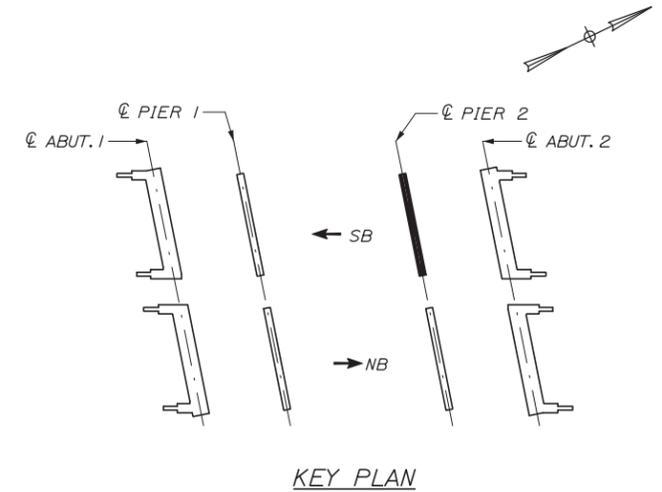
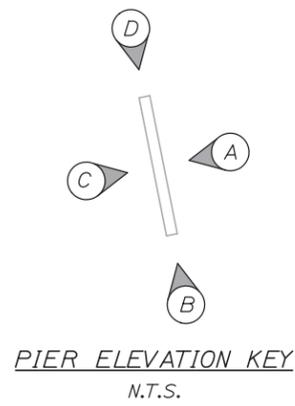
LIMIT OF PIER SURFACE PATCH REPAIR

SQUARE FOOT AREA OF REPAIR

EPOXY INJECTION CRACK REPAIR

NOTES:

1. FOR CONCRETE REPAIR DETAIL AND PROCEDURAL NOTES SEE SHEET S-07.



No.		Revision		By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.					
	By	Date		By	Date
Designed	BRG	03/16	Checked	AES	03/16
Drawn	PEB	03/16	In Charge of	RAL	03/16

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

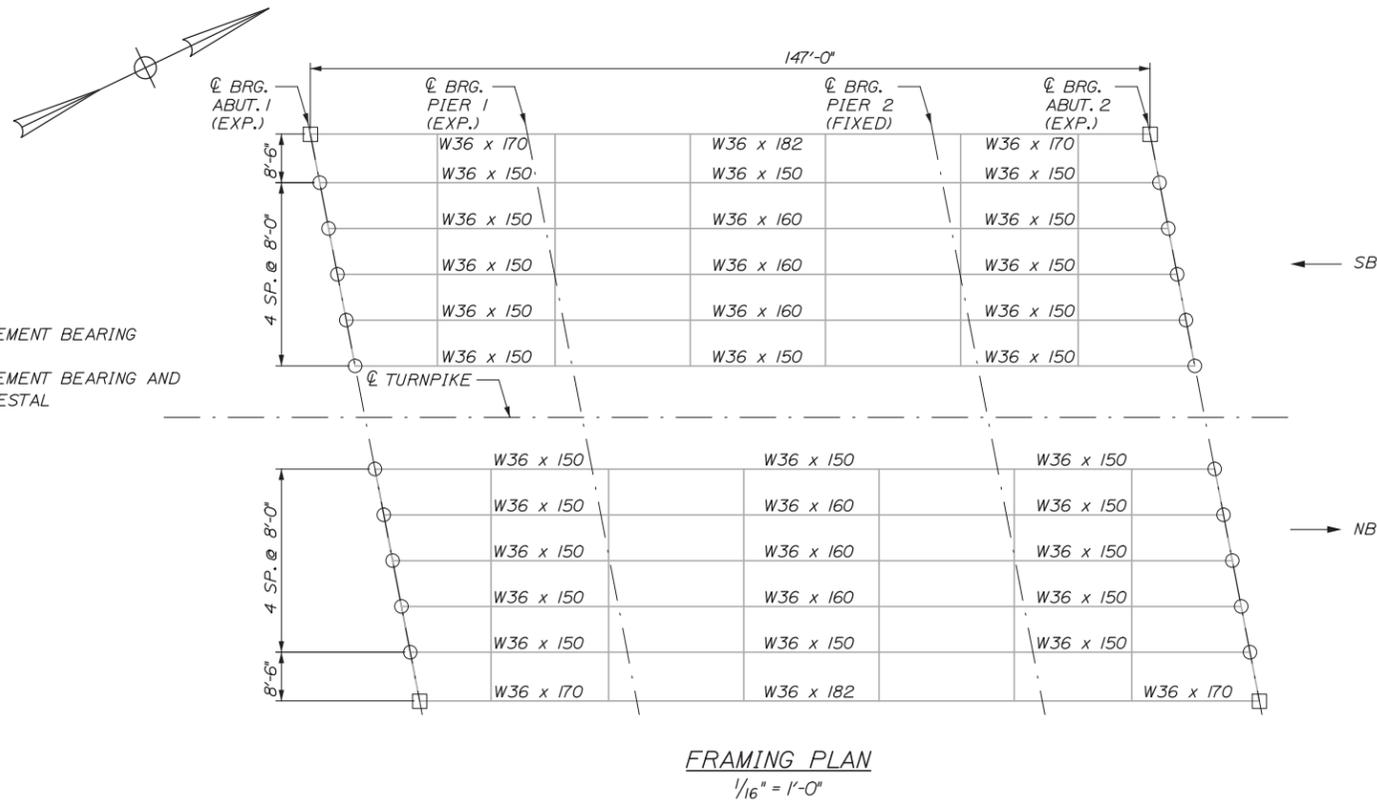
I-95 SOUTHBOUND OVER FOREST AVENUE
PIER 2 REPAIRS

SHEET NUMBER: S-13
CONTRACT: 2016.05
28 OF 35

Filename: 028_SB Pier 2.dgn

Date: 3/30/2016

Filename: 029_Bearing Replacement_Details 1.dgn



- LEGEND:**
- INSTALL NEW REPLACEMENT BEARING
 - INSTALL NEW REPLACEMENT BEARING AND MODIFY BEARING PEDESTAL

NOTES:

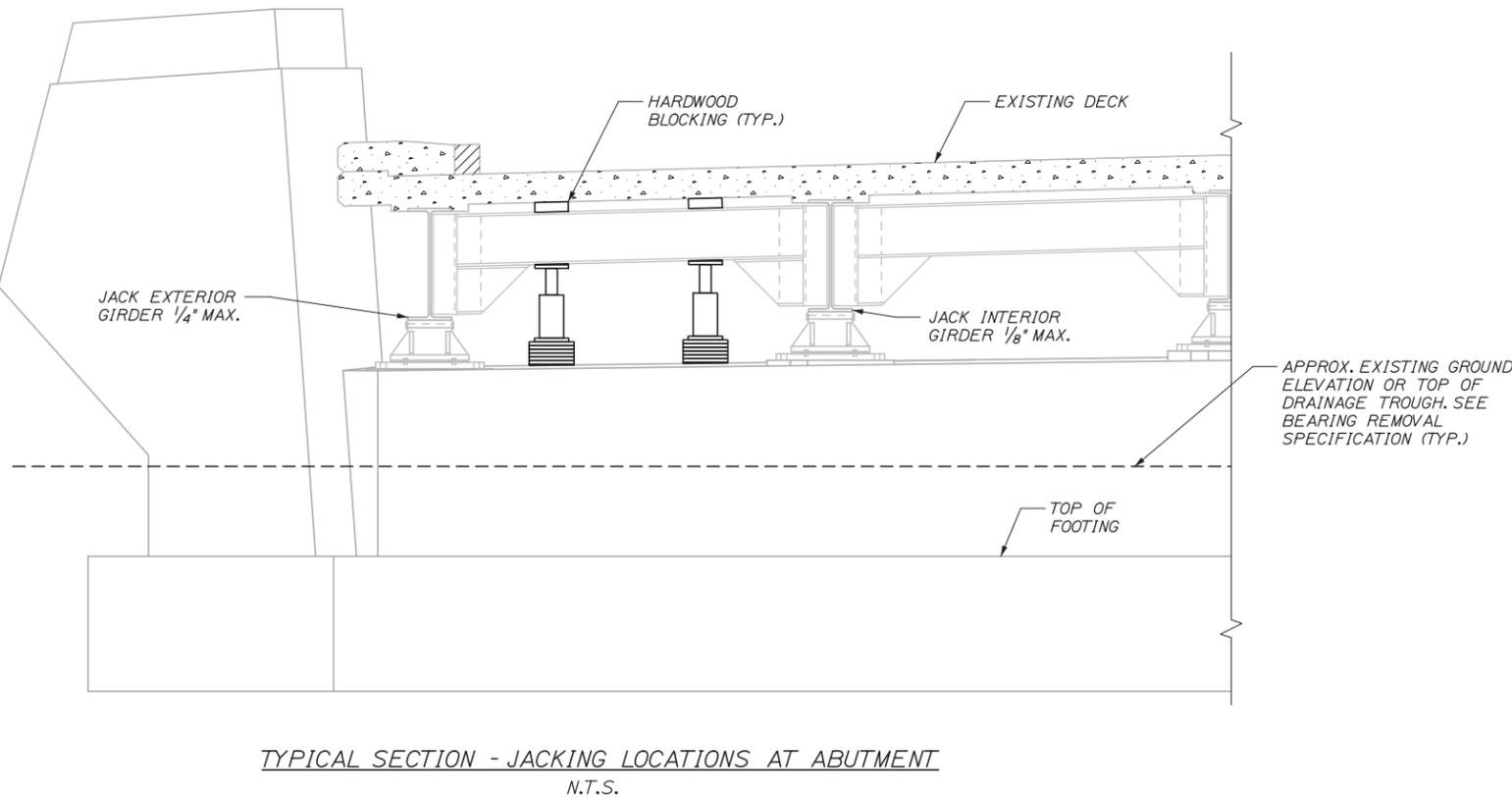
1. THIS WORK INCLUDES REPLACING EXISTING STEEL ROCKER BEARINGS WITH ELASTOMERIC BEARINGS AT BOTH ABUTMENTS AS SHOWN IN THE FRAMING PLAN AND MODIFYING BEARING PEDESTALS AS REQUIRED..
2. ALL EXISTING DIMENSIONS AND INFORMATION SHOWN ON THE PLANS ARE BASED ON AS-BUILT AND STANDARD DETAIL DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY ALL RELEVANT DIMENSIONS PRIOR TO SUBMISSION OF SHOP DRAWINGS.
3. SEE SHEET S-15 FOR BEARING DETAILS.
4. EXISTING STEEL ROCKER BEARING SOLE PLATES SHALL BE REMOVED BY GRINDING OR MECHANICAL CUTTING METHODS. WELDMENT AND PACK RUST BETWEEN THE EXISTING SOLE PLATE AND INTERFACE OF THE EXISTING STRINGER SHALL BE REMOVED BY MECHANICAL METHODS ONLY.
5. SEE SPECIFICATIONS FOR BEARING REPLACEMENT AND LEAD PAINT REMOVAL REQUIREMENTS.

TEMPORARY SUPPORT AND JACKING SYSTEM NOTE:

1. THE EXISTING BRIDGE SHALL BE RAISED TO ACCOMMODATE THE INSTALLATION OF THE NEW BEARINGS.
2. THE TEMPORARY SUPPORT AND JACKING SYSTEM SHALL BE DESIGNED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF DESIGN CALCULATIONS AND DRAWINGS FOR THE TEMPORARY SUPPORT, JACKING SYSTEM, AND BEARING REPLACEMENT PROCEDURE. THE CALCULATIONS AND DRAWINGS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN MAINE. SEE SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.
3. THE TEMPORARY SUPPORT AND JACKING SYSTEM ARRANGEMENTS SHOWN ARE SCHEMATIC AND SUGGESTED ONLY. THE CONTRACTOR'S DESIGN MAY INCLUDE ALTERNATIVE SUPPORT, JACKING LOCATIONS, AND DETAILS.
4. TEMPORARY SUPPORT AND JACKING LOADS SHALL BE BASED ON THE BEARING REACTIONS SHOWN IN THE TABLE.
5. THE CONTRACTOR SHALL MAKE PROVISIONS TO PREVENT THE LONGITUDINAL AND TRANSVERSE MOVEMENT OF THE SUPERSTRUCTURE AND TWISTING OF THE GIRDERS DURING JACKING AND WHILE THE DECK IS TEMPORARILY SUPPORTED.
6. THE CONTRACTOR MAY SUPPORT THE JACKING SYSTEM OFF OF THE TOP ABUTMENT SEATS, ABUTMENT FOOTINGS OR CONTRACTOR FURNISHED SYSTEMS.
7. RIGID VERTICAL SUPPORT OF SUPERSTRUCTURE IN THE JACKED POSITION SHALL BE PROVIDED BY LOCKING THE JACK RAMS OR BY FURNISHING AND INSTALLING AN INDEPENDENT SUPPORT SYSTEM. EXCEPT FOR DURING JACKING OPERATIONS, THE SUPERSTRUCTURE SHALL NOT BE HYDRAULICALLY SUPPORTED.

BEARING REMOVAL AND INSTALLATION AT ABUTMENTS:

1. FIELD MEASURE ALL PROPOSED BEARING LOCATIONS.
2. FURNISH AND INSTALL TEMPORARY SUPPORT AND JACKING SYSTEM. JACK BRIDGE IN ACCORDANCE WITH SPECIAL PROVISION UPWARD TO UNLOAD EXISTING ABUTMENT BEARINGS.
3. SUPPORT SUPERSTRUCTURE IN JACKED POSITION BY LOCKING THE JACK RAMS OR BY FURNISHING AND INSTALLING AN INDEPENDENT TEMPORARY SUPPORT SYSTEM.
4. REMOVE EXISTING ROCKER BEARING ASSEMBLIES. TRIM EXISTING ANCHOR RODS FLUSH WITH TOP OF CONCRETE SEAT. EXISTING STEEL ROCKER BEARINGS IN SATISFACTORY CONDITION SHALL BE SALVAGED AS DESCRIBED IN SPECIAL PROVISION 523. BEARINGS NOT SALVAGED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. DISPOSAL SHALL BE INCIDENTAL TO ITEM 523.52, BEARING INSTALLATION.
5. FURNISH AND INSTALL PROPOSED BEARINGS.
6. JACK (HYDRAULICALLY SUPPORT) BRIDGE AND REMOVE TEMPORARY VERTICAL SUPPORTS (BLOCKING OR RAM LOCKS) IN PREPARATION FOR SUPERSTRUCTURE LOWERING.
7. SLOWLY RELEASE JACKS AND LOWER SUPERSTRUCTURE ONTO NEW BEARINGS. WELD TOP PLATE OF BEARING ASSEMBLY TO BOTTOM FLANGE OF GIRDER.
8. REMOVE TEMPORARY SUPPORT SYSTEM.



UNFACTORED BEARING REACTION TABLE		
LOCATION	DEAD LOAD (kips)	LIVE LOAD (kips)
FOREST AVENUE INTERIOR GIRDER ABUTMENT 1 & 2 (NB & SB)	14.0	66.6
FOREST AVENUE EXTERIOR GIRDER ABUTMENT 1 & 2 (NB & SB)	12.8	55.2

Scale:			
No.	Revision	By	Date

Designed by:					
HNTB					
CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.					
	By	Date		By	Date
	BRG	03/16		AES	03/16
	Drawn	PEB	03/16	In Charge of	RAL
					03/16

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS

I-95 OVER FOREST AVENUE
BEARING REPLACEMENT DETAILS I

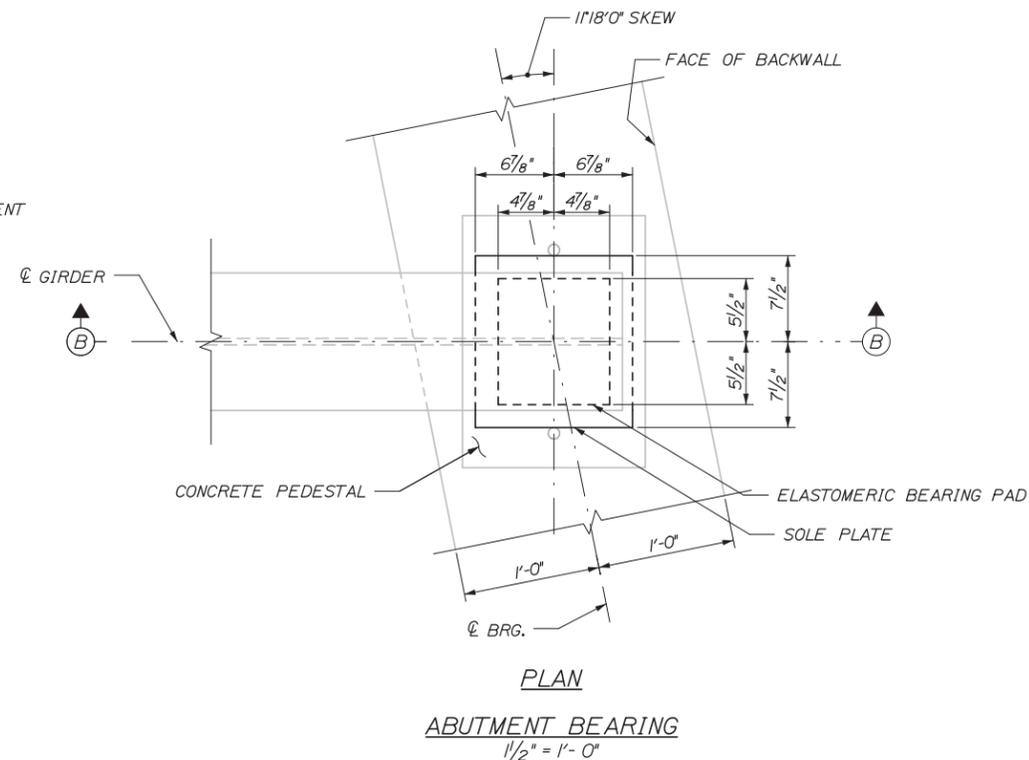
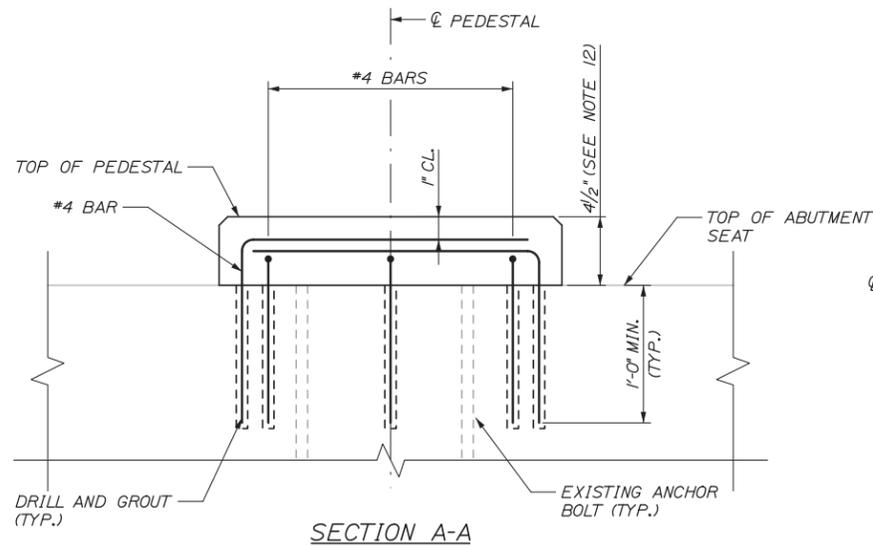
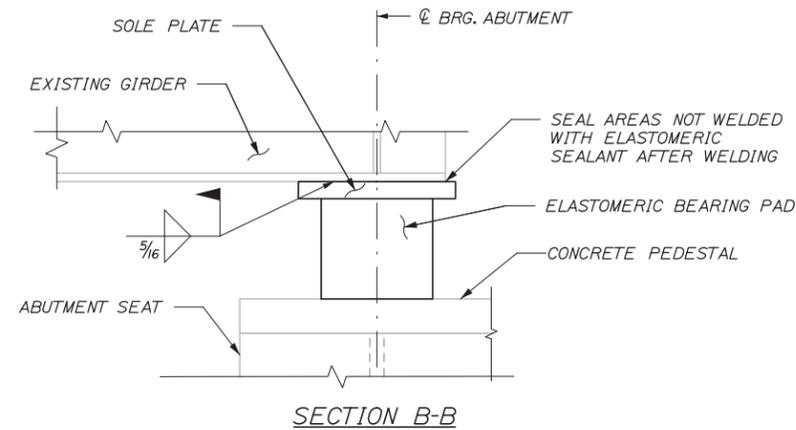
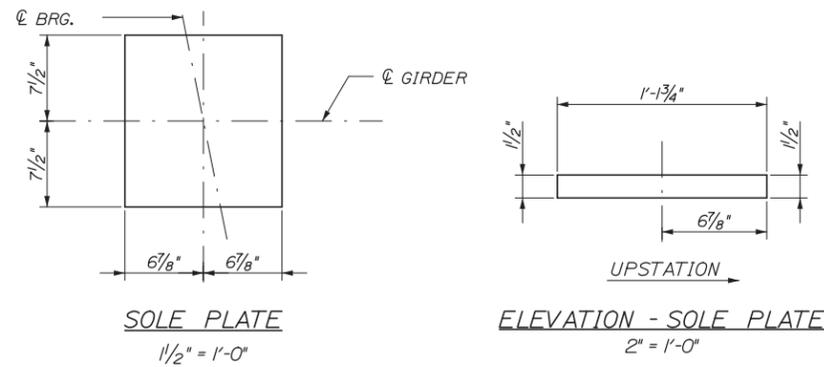
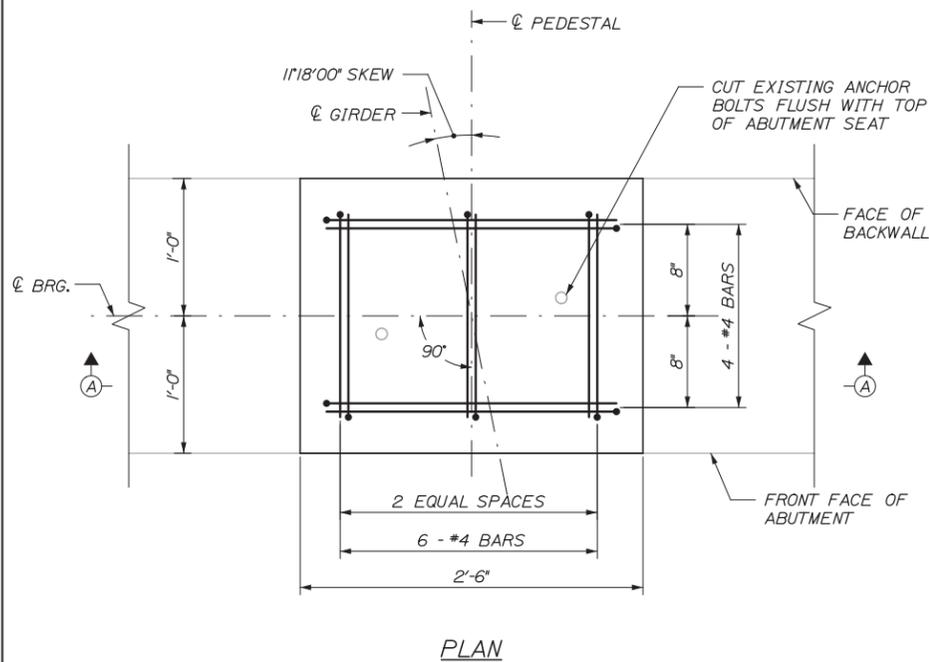
SHEET NUMBER: S-14

CONTRACT: 2016.05

29 OF 35

Date: 3/30/2016

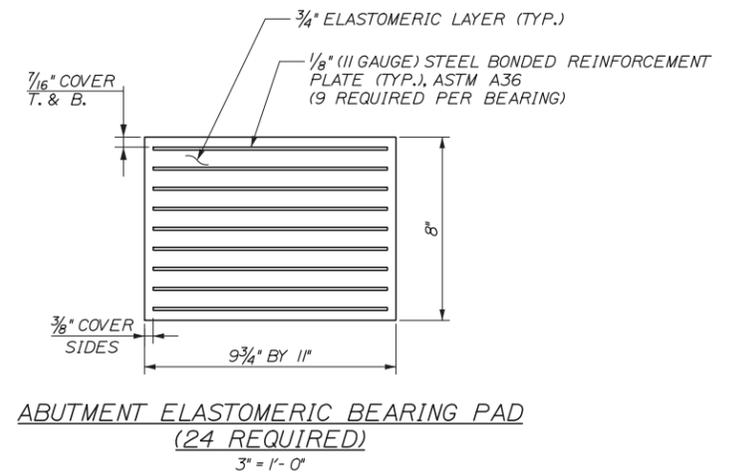
Filename: 030_Bearing Replacement Details 2.dgn



BEARING NOTES:

1. ELASTOMER SHALL BE 100% POLYCHLOROPRENE (NEOPRENE), GRADE 3, MEETING THE REQUIREMENTS OF AASHTO M251. THE ELASTOMER SHALL HAVE A SHEAR MODULUS OF 115 PSI.
2. VULCANIZING OF THE ELASTOMER TO THE SOLE PLATE SHALL BE DONE DURING THE PRIMARY MOLD PROCESS.
3. SOLE PLATES SHALL MEET THE REQUIREMENTS OF ASTM A 709, GRADE 50 OR 50W.
4. BEARINGS SHALL BE COVERED DURING TRANSIT.
5. ALL EXPOSED STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED AFTER STEEL FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A153 AS APPLICABLE.
6. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND SHALL BE VISIBLE AFTER THE BEARING IS INSTALLED.
7. ALL PRECAUTIONS NECESSARY SHALL BE TAKEN TO PROTECT BEARING COMPONENTS FROM FIELD WELD FLASH AND SPATTER. WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE OF STEEL ADJACENT TO THE ELASTOMER TO 200°F THROUGH USE OF TEMPERATURE INDICATING CRAYONS OR OTHER SUITABLE MEANS.
8. CONTRACTOR SHALL RE-FINISH GALVANIZING IN ACCORDANCE WITH ASTM A780 AFTER FIELD WELDING.
9. BEARING PADS WERE DESIGNED USING "METHOD B" FROM THE AASHTO LRFD SPECIFICATION AND SHALL BE SUBSEQUENTLY TESTED IN ACCORDANCE WITH THE SPECIFICATION.
10. ALL STEEL REINFORCEMENT PLATES SHALL MEET THE REQUIREMENTS OF ASTM A36 UNLESS OTHERWISE NOTED AND SHALL BE DEBURRED PRIOR TO MOLDING THE BEARING.
11. THE BEARINGS ARE DESIGNED SO THAT INSTALLATION MAY OCCUR WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 35°F AND 80°F.
12. BEARING PEDESTAL MODIFICATIONS ARE REQUIRED AT ONE LOCATION PER ABUTMENT AS NOTED ON THE FRAMING PLAN, SEE SHEET S-14. THE CONTRACTOR SHALL MEASURE THE EXISTING BEARING AND FIELD DETERMINE THE REQUIRED BEARING PEDESTAL HEIGHT. THE BEARING PEDESTAL HEIGHT SHALL BE ADJUSTED TO ACCOMMODATE THE PROPOSED BEARING HEIGHT. BEARING PEDESTAL MODIFICATIONS SHALL BE PAID FOR UNDER 502.219, STRUCTURAL CONCRETE ABUTMENTS AND RETAINING WALLS. REQUIRED REINFORCING SHALL BE INCIDENTAL TO 502.219, STRUCTURAL CONCRETE ABUTMENTS AND RETAINING WALLS.

BEARING DESIGN CRITERIA		
CRITERIA	ABUTMENT 1	ABUTMENT 2
UNFACTORED DEAD LOAD	14 KIPS	14 KIPS
UNFACTORED LIVE LOAD	52.4 KIPS	52.4 KIPS
MAX. LONGITUDINAL DISPL.	0.64 INCHES	0.22 INCHES
ROTATIONAL TOLERANCE	0.0050 RAD	0.0050 RAD
DEAD LOAD ROTATION	0.0046 RAD	0.0038 RAD
MAX. LIVE LOAD ROTATION	0.0005 RAD	0.0005 RAD



No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.

	By	Date	Checked	By	Date
Designed	BRG	03/16	Checked	AES	03/16
Drawn	PEB	03/16	In Charge of	RAL	03/16

HNTB CORPORATION
 340 County Road, Suite 6-C
 Westbrook, ME 04092
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 FAX (207) 228-0909


**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

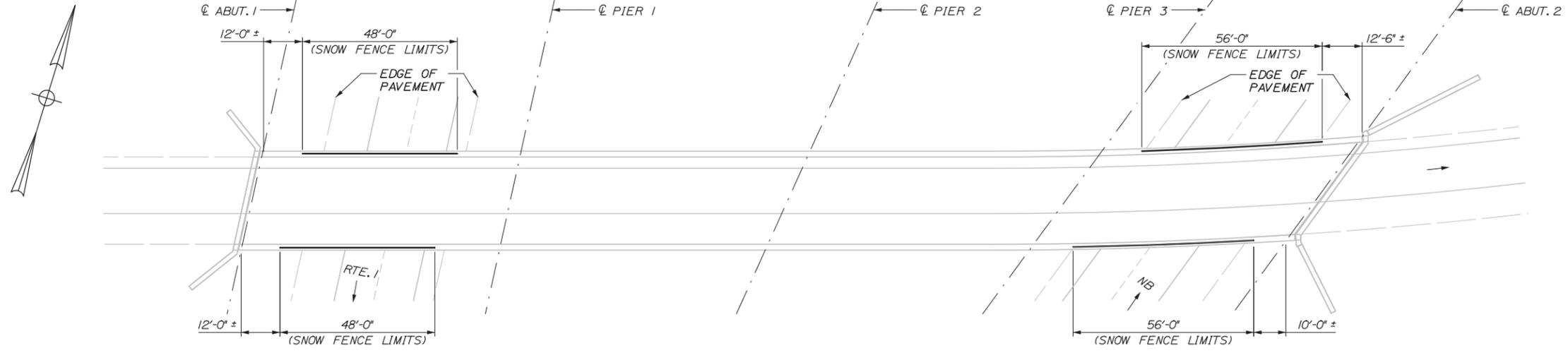
BRIDGE REPAIRS

I-95 OVER FOREST AVENUE
 BEARING REPLACEMENT DETAILS II

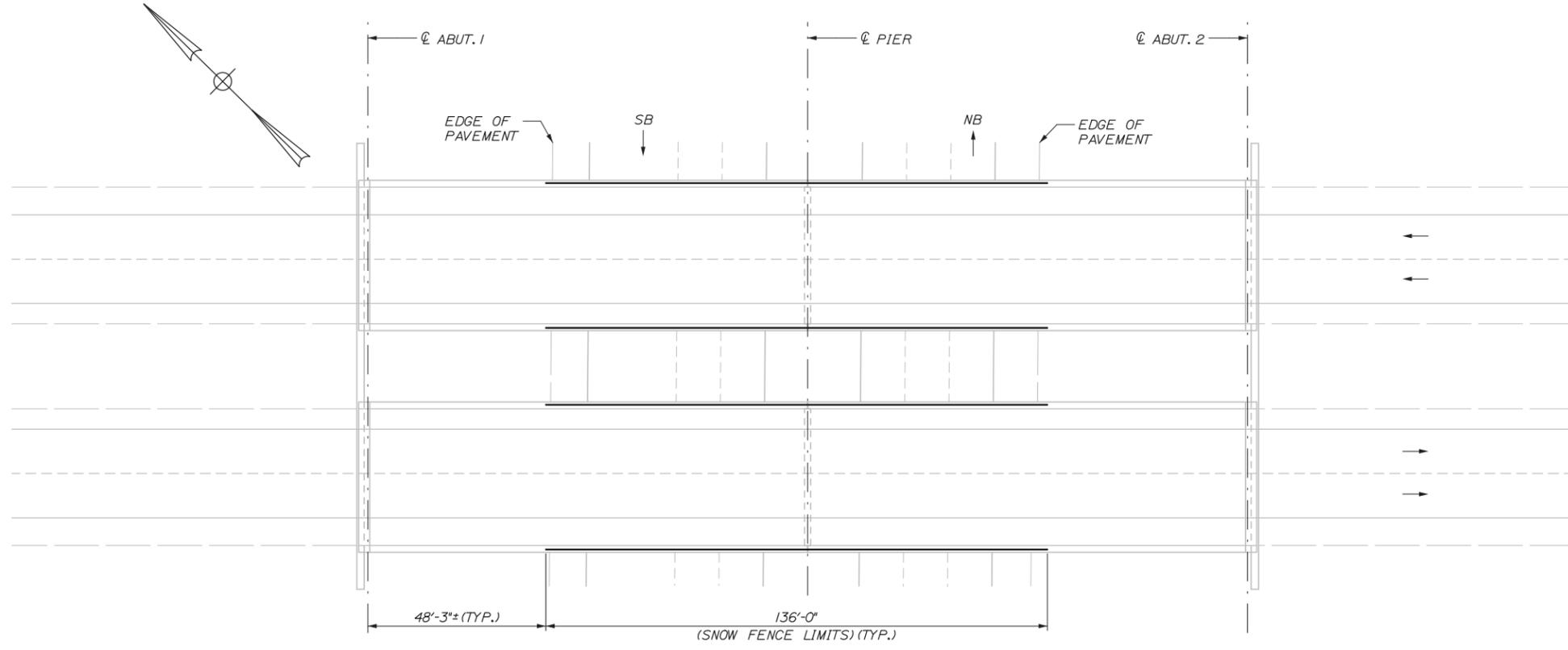
SHEET NUMBER: S-15

CONTRACT: 2016.05 30 OF 35

Date: 3/30/2016



RAMP J OVER ROUTE 1 SB & RAMP M (MM 1.59)
1" = 20'-0"



SACO INTERCHANGE EXIT 36 (MM 35.7)
1" = 20'-0"

NOTE:
SEE SHEETS S-19 TO S-20 FOR SNOW FENCE DETAILS AND NOTES.

Filename: 031_SnowFence Plans 1.dgn

Scale:			
No.	Revision	By	Date

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**MAINE
TURNPIKE**

**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E

BRIDGE REPAIRS

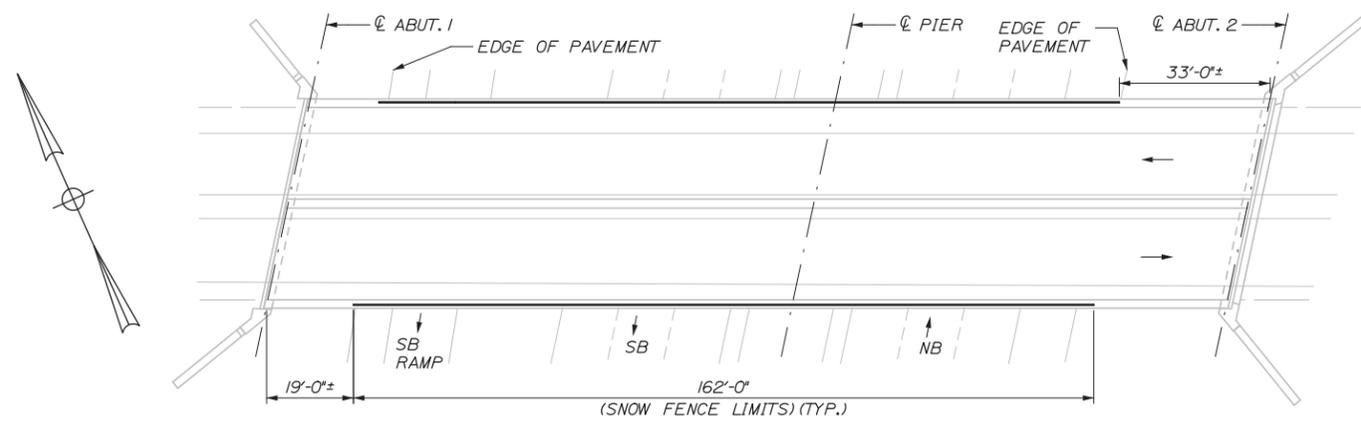
SNOW FENCE PLAN I

SHEET NUMBER: S-16

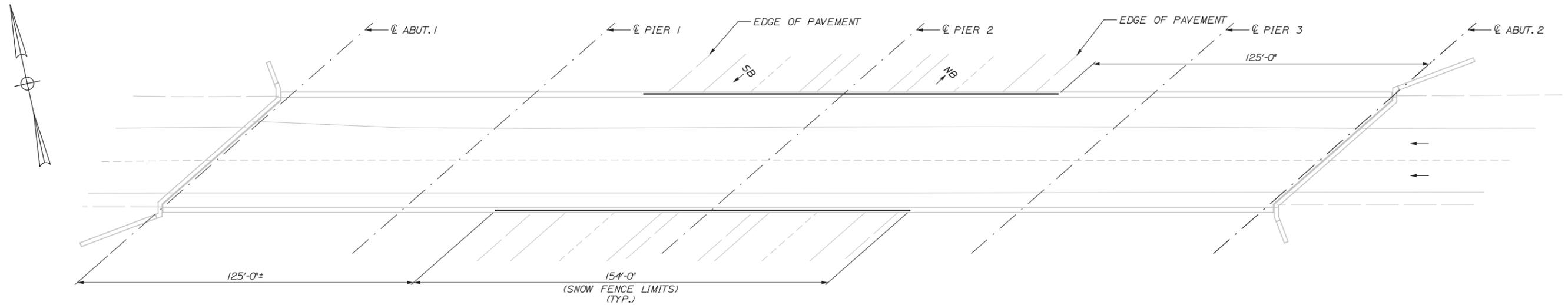
CONTRACT: 2016.09

31 OF 35

Date: 3/30/2016



SCARBOROUGH INTERCHANGE EXIT 42 (MM 42.5)
1" = 20'-0"



I-295 SOUTHBOUND UNDERPASS EXIT 44 (MM 44.3)
1" = 20'-0"

NOTE:
SEE SHEETS S-19 TO S-20 FOR SNOW FENCE DETAILS AND NOTES.

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E

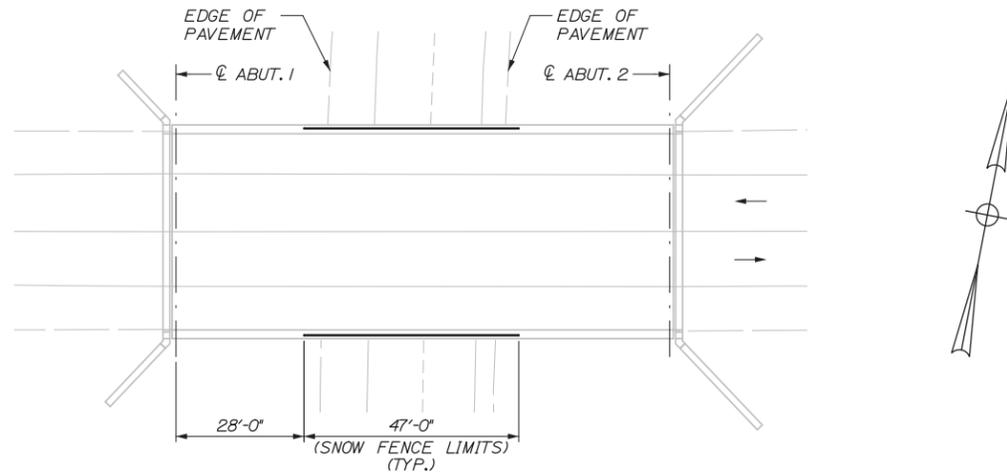
BRIDGE REPAIRS

SNOW FENCE PLAN II

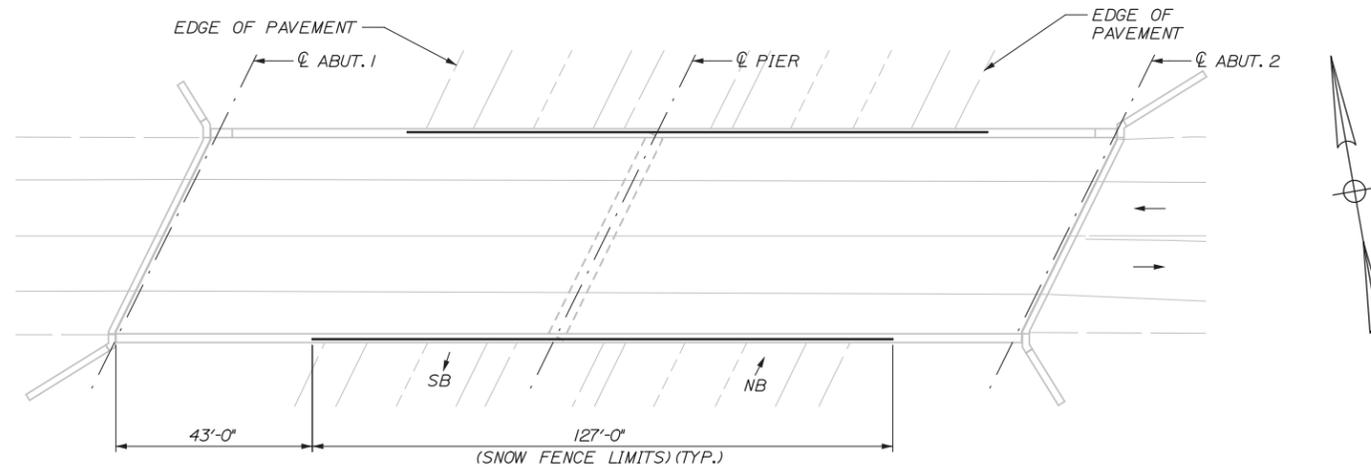
SHEET NUMBER: S-17
CONTRACT: 2016.09
32 OF 35

Filename: 032_SnowFence_Plans 2.dgn

Date: 3/30/2016



GORHAM ROAD OVER I-295 (MM 44.0)
1" = 20'-0"



GORHAM ROAD UNDERPASS (MM 44.0)
1" = 20'-0"

NOTE:
SEE SHEETS S-19 TO S-20 FOR SNOW FENCE DETAILS AND NOTES.

Filename: 0.33_SnowFence_Plans_3.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
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	By	Date		By	Date
Designed	BRG	03/16	Checked	AES	03/16
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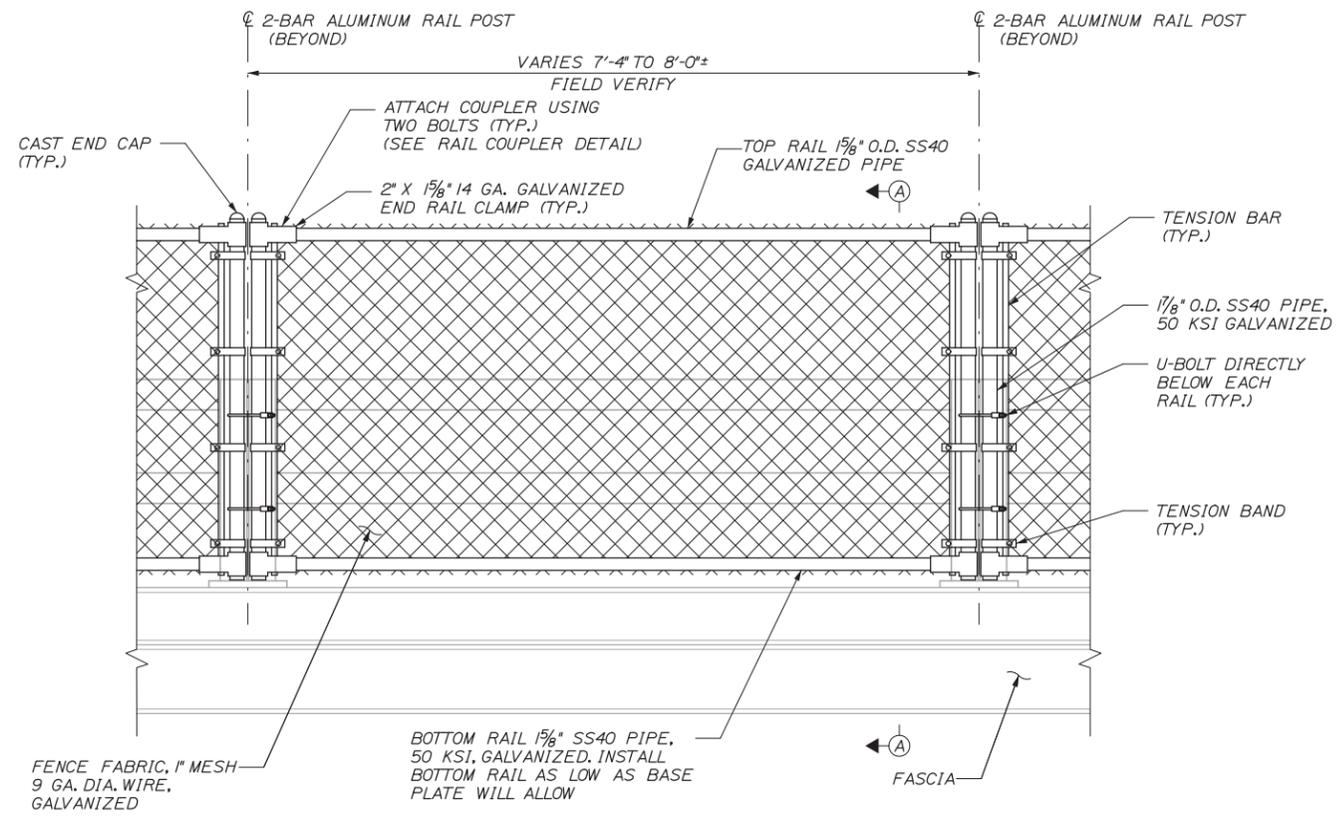
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E

BRIDGE REPAIRS
SNOW FENCE PLAN III

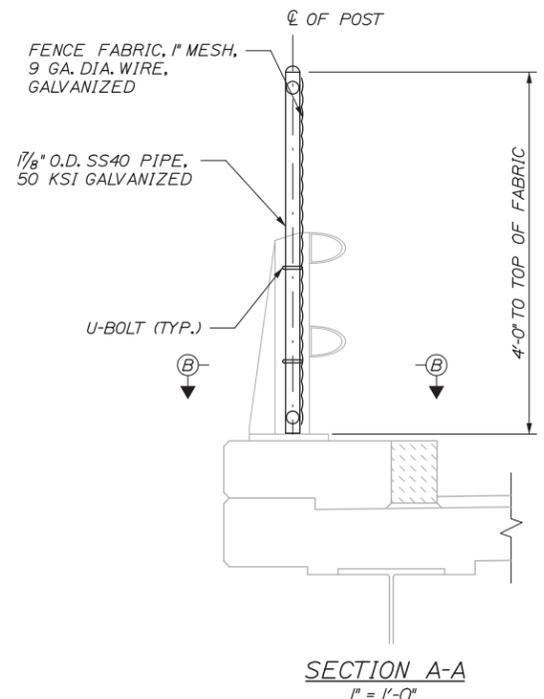
SHEET NUMBER: S-18
CONTRACT: 2016.09
33 OF 35

Date: 3/30/2016

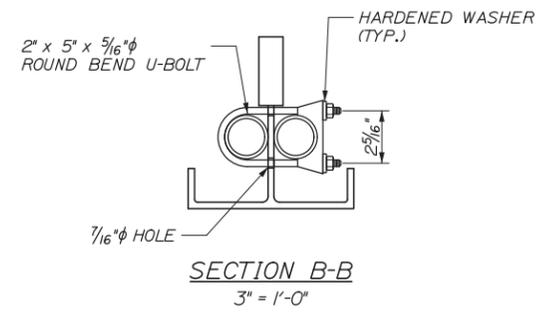


SNOW FENCE POST ATTACHMENT TO 2-BAR ALUMINUM RAIL
1" = 1'-0"

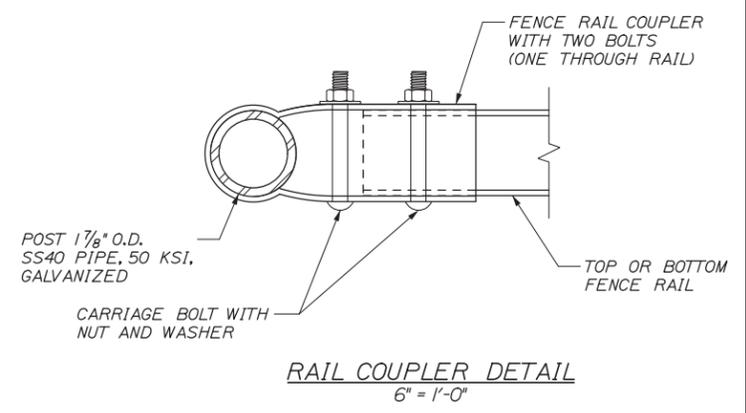
NOTE:
FENCE SHOWN FROM BACK OF BRIDGE RAIL.



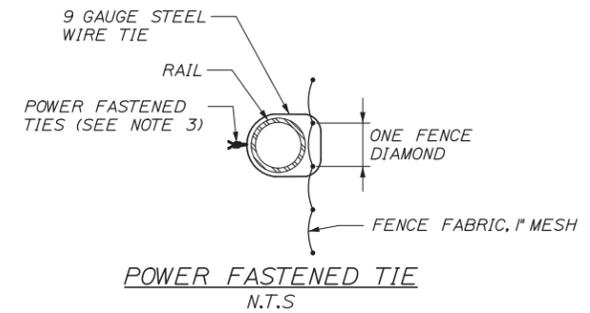
SECTION A-A
1" = 1'-0"



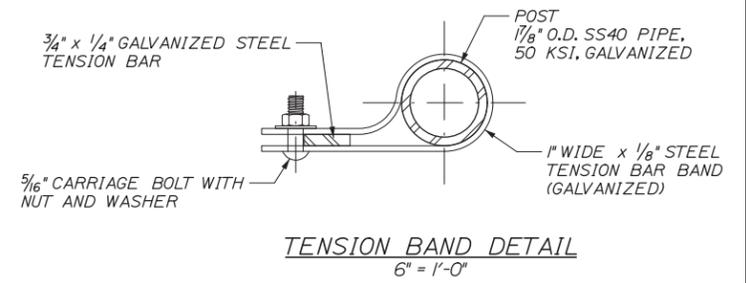
SECTION B-B
3" = 1'-0"



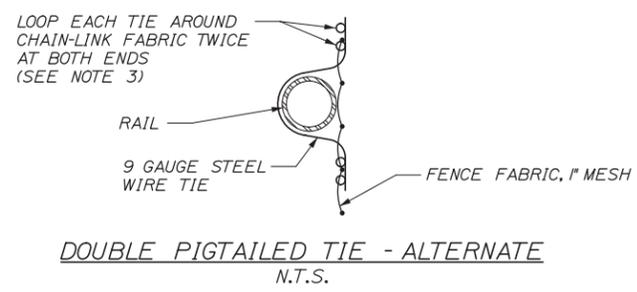
RAIL COUPLER DETAIL
6" = 1'-0"



POWER FASTENED TIE
N.T.S.



TENSION BAND DETAIL
6" = 1'-0"



DOUBLE PIGTAILED TIE - ALTERNATE
N.T.S.

NOTES:
1. SEE SHEET S-20 FOR NOTES.

Scale:			
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CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.			
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MAINE TURNPIKE

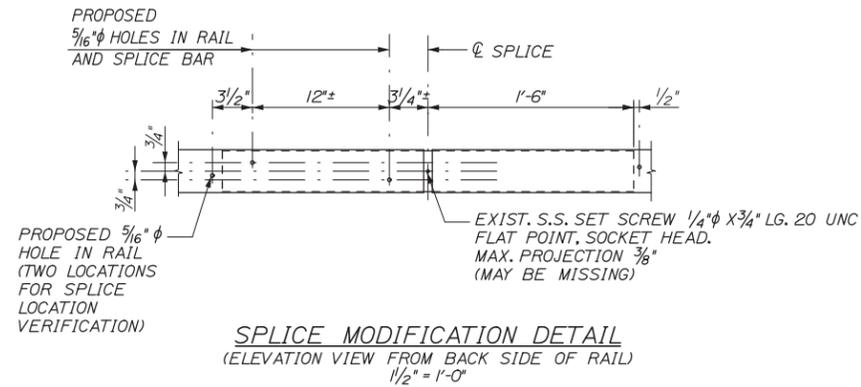
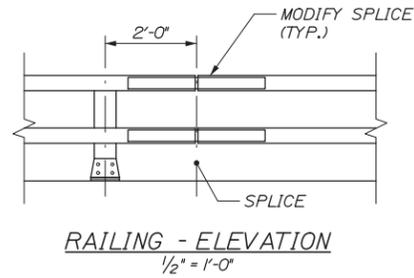
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

BRIDGE REPAIRS
SNOW FENCE DETAILS

SHEET NUMBER: S-19
CONTRACT: 2016.05
34 OF 35

Date: 3/30/2016



NOTE:
 RE-CENTER EXISTING SPLICE BAR AND DRILL TWO 5/16" φ HOLES AND INSTALL TWO 3/8" φ X 1", TYPE F, HEX. WASHER HEAD TAPPING SCREWS (STAINLESS). DRILL TWO ADDITIONAL 5/16" φ HOLES IN RAIL FOR SPLICE LOCATION VERIFICATION.

BRIDGE MOUNTED SIGN CLIPS NOTES:

- MISSING SIGN CLIPS AND ASSOCIATED HARDWARE SHALL BE INSTALLED ON EXISTING BRIDGE MOUNTED GUIDE SIGNS TO CONFORM TO MAINEDOT STANDARD DETAIL 645(02) AT THE FOLLOWING BRIDGES: ROUTE 236 UNDERPASS, RAMP H UNDERPASS, GORHAM ROAD UNDERPASS AND CUMMINGS ROAD UNDERPASS, SEE SPECIAL PROVISION 645. SEE BRIDGE MOUNTED SIGN CLIP TABLE FOR APPROXIMATE NUMBER OF SIGN CLIPS TO BE INSTALLED.
- SIGN CLIPS AND ASSOCIATED HARDWARE SHALL BE PROVIDED TO THE CONTRACTOR BY THE AUTHORITY. MAINLINE TRAFFIC CONTROL WILL BE PROVIDED TO THE CONTRACTOR AT ROUTE 236 UNDERPASS AND RAMP H UNDERPASS BY THE AUTHORITY. LOCAL ROAD MAINTENANCE OF TRAFFIC WILL BE PROVIDED BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO PAY ITEM 645.14. INSTALLATION OF SIGN CLIPS WILL BE PAID FOR UNDER ITEMS 645.14 SPECIAL WORK NO.: ROUTE 236 UNDERPASS, 645.14 SPECIAL WORK NO.: RAMP H UNDERPASS, 645.14 SPECIAL WORK NO.: GORHAM ROAD UNDERPASS, AND SPECIAL WORK NO.: CUMMINGS ROAD UNDERPASS.

BRIDGE MOUNTED SIGN CLIPS*			
BRIDGE NAME	SIGN 1	SIGN 2	TOTAL
ROUTE 236 UNDERPASS	7	33	40
RAMP H UNDERPASS	21	21	42
GORHAM ROAD UNDERPASS	16	12	28
CUMMINGS ROAD UNDERPASS	6	-	6

* QUANTITIES ARE ESTIMATED. THE EXACT NUMBER WILL BE DETERMINED BY THE RESIDENT ENGINEER.

SNOW FENCE NOTES:

- INSTALL FENCE FABRIC BETWEEN ALUMINUM BRIDGE RAILS AND SNOW FENCE FRAME.
- INSTALL CHAIN LINK FENCE FABRIC WITH TWISTED BARBS AT THE BOTTOM RAIL.
- ROUND WIRE TIES SHALL BE 9 GAUGE ZINC-COATED STEEL PREFORMED TO THE RADIUS OF THE POST AND POWER-FASTENED TO WRAP 360 DEGREES AROUND THE POST AND ONE COMPLETE DIAMOND OF THE CHAIN-LINK FENCE. THE TWO ENDS SHALL BE TWISTED TOGETHER IN A CLOSE HELIX OF 1/2 MACHINE TURNS (3 FULL TWISTS) TIGHTLY AROUND THE POST AND CHAIN-LINK FABRIC. SPACE TIES @ 6' O.C. TO BOTTOM RAIL AND @ 12' O.C. TO ALL POSTS AND OTHER RAILS. TWISTED ENDS SHALL BE BENT DOWN UPON COMPLETION. ALTERNATIVELY, WIRE TIES MAY BE STANDARD ROUND 9 GAUGE ZINC-COATED STEEL. ALL TIES SHALL BE WRAPPED AROUND CHAIN-LINK FABRIC TWICE (DOUBLE PIGTAILED) AT BOTH ENDS. SPACE TIES @ 6' O.C. TO BOTTOM RAIL AND @ 12' O.C. TO ALL POSTS AND OTHER RAILS.
- ALTERNATIVELY, WIRE TIES MAY BE STANDARD ROUND 9 GAUGE ZINC-COATED STEEL. ALL TIES SHALL BE WRAPPED AROUND CHAIN-LINK TWICE (DOUBLE PIGTAILED) AT BOTH ENDS. SPACE TIES @ 6' O.C. TO BOTTOM RAIL AND @ 12' O.C. TO ALL POSTS AND OTHER RAILS.
- ALL BOLTS AND NUTS SHALL BE STEEL CONFORMING TO ASTM A307 AND ASTM A563 GRADE A RESPECTIVELY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF ANSI B18.22. ALL HARDWARE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111 (ASTM A123) OR AASHTO M232 (ASTM A153) AS APPLICABLE.
- POST CAPS SHALL BE SECURELY ATTACHED TO POSTS.
- SEE SHEET S-05 AND S-16 TO S-18 FOR SNOW FENCE LIMITS.
- THE EXISTING RAILING SPLICES SHALL BE REPAIRED BASED ON THE SPLICE MODIFICATION DETAIL PRESENTED.

Filename: 0.35_MiscDets.dgn

Scale:	Designed by:	HNTB CORPORATION 340 County Road, Suite 6-C Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 228-0909		THE GOLD STAR MEMORIAL HIGHWAY	BRIDGE REPAIRS MISCELLANEOUS DETAILS																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision	By	Date													<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="4">CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.</td> </tr> <tr> <td>By</td> <td>Date</td> <td>By</td> <td>Date</td> </tr> <tr> <td>Designed</td> <td>BRG 03/16</td> <td>Checked</td> <td>AES 03/16</td> </tr> <tr> <td>Drawn</td> <td>PEB 03/16</td> <td>In Charge of</td> <td>RAL 03/16</td> </tr> </table>		CONSULTANT PROJECT MANAGER: Ashley E. Stephens, P.E.				By	Date	By	Date	Designed	BRG 03/16	Checked	AES 03/16	Drawn	PEB 03/16	In Charge of	RAL 03/16	SHEET NUMBER: S-20 CONTRACT: 2016.05	MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E. 35 OF 35
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