



THE GOLD STAR
MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

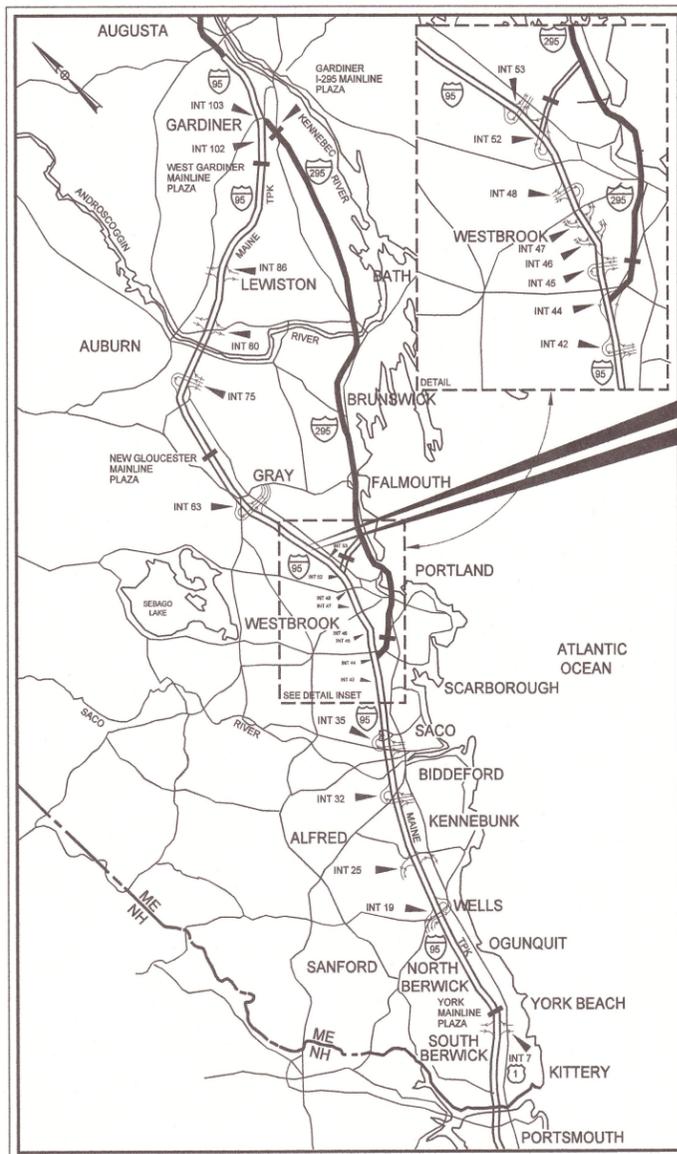
DANIEL E. WATHEN, CHAIR
JAMES F. CLOUTIER, VICE CHAIR
GERARD P. CONLEY, SR., MEMBER
JOHN E. DORITY, MEMBER
FREEMAN R. GOODRICH, MEMBER
ROBERT D. STONE, MEMBER
BRUCE A. VAN NOTE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

CONTRACT 2014.13

BRIDGE REHABILITATION PISCATAQUA RIVER OVERPASS BRIDGE 28 - MILE MARKER 55.5

BRIDGE REHABILITATION PISCATAQUA RIVER OVERPASS BRIDGE 31 - MILE MARKER 56.6



LOCATION MAP

BRIDGE REHABILITATION
PISCATAQUA RIVER
OVERPASSES

INDEX OF SHEETS

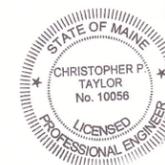
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3	GENERAL NOTES
4	TYPICAL SECTIONS
5	TRAFFIC CONTROL MISCELLANEOUS DETAILS
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2014.13

APPROVED: MAINE TURNPIKE AUTHORITY

Peter S. Merfeld
PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER
DATE: 06/17/14

Stephen R. Tartre
STEPHEN R. TARTRE, P.E. - DIRECTOR OF ENGINEERING &
BUILDING MAINTENANCE
DATE: 6/17/14



TYLIN INTERNATIONAL

Christopher P. Taylor
CHRIS TAYLOR, P.E. - PROJECT MANAGER
DATE: 6/16/14

Date: 6/19/2014

ITEM NO.	ITEM DESCRIPTION	UNIT	BRIDGE 28 QUANTITY	BRIDGE 31 QUANTITY	TOTAL QUANTITY
202.10	REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF CONTRACTOR	LS	0.6	0.4	1
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	CY	52	35	87
202.202	PAVEMENT BUTT JOINT	SY	660	560	1220
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY	CY	310	280	590
403.208	HOT MIX ASPHALT - 12.5 mm NOMINAL MAXIMUM SIZE, SURFACE	TON	187	161	348
403.213	HOT MIX ASPHALT - 12.5 mm NOMINAL MAXIMUM SIZE, BASE	TON	23	20	43
409.15	BITUMINOUS TACK COAT, APPLIED	GAL	53	46	99
419.30	SAWING BITUMINOUS PAVEMENT	LF	230	230	460
470.08	BERM DROP OFF CORRECTION - GRINDINGS	TON	30	37	67
502.210	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	CY	70	50	120
502.264	STRUCTURAL CONCRETE, PARAPETS	LS	0.6	0.4	1
502.445	STRUCTURAL CONC WEARING SURFACE ON BRIDGES - SYNTHETIC FIBER REINF	CY	44	31	75
502.45	STRUCTURAL CONCRETE APPROACH SLAB	CY	150	145	295
502.64	BRIDGE TRENCH DRAIN	EA	1	1	2
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	LB	17100	16500	33600
503.13	REINFORCING STEEL, PLACING	LB	17100	16500	33600
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB	9500	7900	17400
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB	9500	7900	17400
503.17	MECHANICAL/WELDED SPLICE	EA	88	88	176
507.0911	ALUMINUM BRIDGE RAILING, 1 BAR (BRIDGE 28)	LS	1	0	1
507.0912	ALUMINUM BRIDGE RAILING, 1 BAR (BRIDGE 31)	LS	0	1	1
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	LS	0.5	0.5	1
511.091	TEMPORARY EARTH SUPPORT SYSTEMS	LS	0.5	0.5	1
514.06	CURING BOX FOR CONCRETE CYLINDER	EA	1	1	2
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	SY	550	670	1220
518.10	ABUTMENT REPAIRS	SF	55	113	168
518.41	EPOXY INJECTION CRACK REPAIR - ABOVE WATERLINE	LF	0	8	8
523.521	BEARING REMOVAL	EA	24	24	48
524.40	PROTECTIVE SHIELDING - STEEL GIRDERS	SY	500	400	900
526.306	TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY	LS	0.5	0.5	1
526.312	PERMANENT CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY	LF	30	20	50
526.342	PERMANENT CONCRETE BARRIER, TYPE I TRANSITION	EA	2	2	4
527.341	WORK ZONE CRASH CUSHIONS - TL-3	UNIT	2	2	4
535.601	PRESTRESSED STRUCTURAL CONCRETE SLAB (BRIDGE 28)	LS	1	0	1
535.602	PRESTRESSED STRUCTURAL CONCRETE SLAB (BRIDGE 31)	LS	0	1	1
606.1721	BRIDGE TRANSITION - TYPE I	EA	4	4	8
606.1729	BRIDGE TRANSITION - TYPE I (MODIFIED)	EA	2	2	4
606.178	GUARDRAIL BEAM	LF	75	75	150
606.2652	TERMINAL END - REMOVE AND STACK	EA	2	2	4
606.278	TERMINAL END - ANCHORED END	EA	2	4	6
606.35	GUARDRAIL DELINEATOR POST	EA	6	8	14
606.3605	GUARDRAIL - REMOVE, MODIFY, AND RESET - SINGLE RAIL	LF	75	50	125
606.3621	GUARDRAIL ADJUST, SINGLE RAIL	LF	650	750	1400
606.369	GUARDRAIL - REMOVE AND STACK	LF	110	80	190
606.471	SINGLE OFFSET BLOCK - W-BEAM	EA	11	9	20
606.48	SINGLE GALVANIZED STEEL POST	EA	11	9	20
606.64	GUARDRAIL THRIE BEAM - DOUBLE RAIL	LF	1850	1100	2950
606.65	GUARDRAIL THRIE BEAM - SINGLE RAIL	LF	0	300	300
606.66	TERMINAL END THRIE BEAM	EA	0	2	2
606.701	THRIE BEAM TRANSITION - DOUBLE RAIL - MODIFIED	EA	2	2	4
606.754	WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL	EA	2	2	4
606.80	GUARDRAIL 350 FLEAT TERMINAL	EA	2	2	4
609.15	SLOPED CURB TYPE 1	LF	110	88	198

ITEM NO.	ITEM DESCRIPTION	UNIT	BRIDGE 28 QUANTITY	BRIDGE 31 QUANTITY	TOTAL QUANTITY
615.07	LOAM	CY	7	7	14
618.1401	SEEDING METHOD NUMBER 2, PLAN QUANTITY	UNIT	1	1	2
619.1201	MULCH, PLAN QUANTITY	UNIT	1	1	2
627.681	TEMPORARY 6" PAVEMENT MARKING LINE, WHITE OR YELLOW	LF	16250	13250	29500
627.712	WHITE OR YELLOW PAVEMENT MARKING LINE	LF	7350	6250	13600
627.713	BROKEN WHITE PAVEMENT MARKING LINE	LF	3700	3150	6850
627.77	REMOVING EXISTING PAVEMENT MARKING	SF	10400	8850	19250
629.05	HAND LABOR, STRAIGHT TIME	HR	10	10	20
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	HR	10	10	20
631.17	TRUCK - LARGE (INCLUDING OPERATOR)	HR	10	10	20
644.10	GLARE SCREEN - SUPPLIED BY AUTHORITY	LF	1850	1450	3300
645.109	REMOVE AND RESET SIGN	EA	1	1	2
652.30	FLASHING ARROW BOARD	EA	1	1	2
652.33	DRUM	EA	70	70	140
652.333	DRUM - SUPPLIED BY AUTHORITY	EA	60	60	120
652.35	CONSTRUCTION SIGNS	SF	0	800	800
652.351	CONSTRUCTION SIGNS - SUPPLIED BY AUTHORITY	SF	450	450	900
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	LS	0.5	0.5	1
652.41	PORTABLE - CHANGEABLE MESSAGE SIGN	EA	1	1	2
652.45	TRUCK MOUNTED ATTENUATOR	CD	10	10	20
656.632	30 INCH TEMPORARY SILT FENCE	LF	220	220	440
659.10	MOBILIZATION	LS	0.5	0.5	1

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No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	CPT	06/2014	Checked	TJP	06/2014
Drawn	TJP	06/2014	In Charge of	CPT	06/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

QUANTITIES

SHEET NUMBER: C-1
2 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

Filename: ...MSTA\003_GeneralNotes.dgn

GENERAL

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION'S STANDARD DETAILS HIGHWAYS & BRIDGES LATEST EDITION UNLESS OTHERWISE NOTED OR INCLUDED IN THESE PLANS.
2. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.
3. TEMPORARY AND PERMANENT CONCRETE BARRIER WILL BE SUPPLIED BY THE MAINE TURNPIKE AUTHORITY.
4. THE CONTRACTOR SHALL SUBMIT THEIR PROPOSED STAGING AREA(S) TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK. THE MTA FIELD TRAILER, INCLUDING UTILITY CONNECTIONS, WILL BE SUPPLIED BY THE MAINE TURNPIKE AUTHORITY.
5. QUANTITIES INCLUDED FOR PAY ITEMS MEASURED AND PAID FOR BY LUMP SUM ARE ESTIMATED QUANTITIES AND ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. LUMP SUM PAY ITEMS WILL BE PAID FOR AT THE CONTRACT BID AMOUNT, WITH NO ADDITION OR REDUCTION IN PAYMENT TO THE CONTRACTOR IF THE ACTUAL FINAL QUANTITIES ARE DIFFERENT FROM THE PROVIDED ESTIMATED QUANTITIES, EXCEPT AS FOLLOWS:
 - A. IF A LUMP SUM PAY ITEM IS ELIMINATED, THE REQUIREMENTS OF STANDARD SPECIFICATIONS SECTION 109.2, ELIMINATION OF ITEMS, WILL TAKE PRECEDENCE.
 - B. IF OTHER CONTRACT DOCUMENTS SPECIFICALLY ALLOW A CHANGE IN PAYMENT FOR A LUMP SUM PAY ITEM, THOSE REQUIREMENTS WILL BE FOLLOWED.
 - C. IF A DESIGN CHANGE RESULTS IN CHANGES TO ESTIMATED QUANTITIES FOR LUMP SUM PAY ITEMS, PRICE ADJUSTMENTS WILL BE MADE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 109.7, EQUITABLE ADJUSTMENTS TO COMPENSATION.
6. THE HYDROLOGIC REPORT OF THE BRIDGE SITE MAY BE ACCESSED AT THE MAINE TURNPIKE AUTHORITY WEB ADDRESS. THE HYDROLOGIC REPORT IS BASED ON INTERPRETATION OF THE INFORMATION OBTAINED FOR THE SUBJECT SITE. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR THE CONCLUSIONS OF THE REPORT WILL BE REPRESENTATIVE OF ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION.
7. THE PROJECT GEOTECHNICAL REPORT TITLED "GEOTECHNICAL DESIGN REPORT, REHABILITATION OF PISCATAQUA RIVER BRIDGES, BRIDGE NO. 28 AND BRIDGE NO. 31, MAINE TURNPIKE MM 55.5 AND 56.6, FALMOUTH, MAINE", DATED JUNE 2013 BY GZA GEOTECHNICAL, INC., MAY BE ACCESSED AT THE MAINE TURNPIKE AUTHORITY WEB ADDRESS.
8. GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THIS PLAN SET IS FOR THE USE OF THE BIDDERS AND THE CONTRACTOR. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE CONSTRUCTION SITE. THE MAINE TURNPIKE AUTHORITY WILL NOT BE RESPONSIBLE FOR THE BIDDERS' OR CONTRACTOR'S INTERPRETATIONS OF, OR CONCLUSIONS DRAWN FROM, THE GEOTECHNICAL INFORMATION.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EXISTING TRAFFIC CONTROL DEVICES AND SIGNS UPON START OF CONTRACT.

EARTHWORK

1. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF THE PROJECT IN ACCORDANCE WITH CHAPTER 404, DEPARTMENT OF ENVIRONMENTAL PROTECTION SOLID WASTE MANAGEMENT RULES.
2. EXISTING INSLOPES STEEPER THAN 2:1 IN PROPOSED FILL AREAS SHALL BE BENCHED AS DIRECTED BY THE RESIDENT.
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 EXCAVATION).

PAVING

1. ALL JOINTS BETWEEN EXISTING AND PROPOSED HOT BITUMINOUS PAVEMENT SHALL BE BUTTED. PAYMENT SHALL BE INCIDENTAL TO THE RELATED PAVING ITEMS.
2. ANY NECESSARY CLEANING OF EXISTING PAVEMENT PRIOR TO PAVING SHALL BE INCIDENTAL TO THE RELATED PAVING ITEMS.
3. RECYCLED BITUMINOUS PAVEMENT (RAP) SHALL NOT BE PLACED ON ANY PORTION OF THE PROPOSED BRIDGE DECK.

EROSION CONTROL

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION'S BEST MANAGEMENT PRACTICES FOR EROSION CONTROL & SEDIMENT CONTROL LATEST EDITION UNLESS OTHERWISE NOTED OR INCLUDED IN THESE PLANS.
2. THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. 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.
3. FOUR (4) INCHES OF LOAM SHALL BE PLACED FOR ALL DISTURBED SLOPE AREAS UNLESS OTHERWISE NOTED ON THE PLANS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS NOTED ON THE PLANS OR DESIGNATED BY THE RESIDENT. PAYMENT SHALL BE MADE UNDER ITEM 606.754 - WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL.
4. UNLESS OTHERWISE NOTED SEEDING METHOD NO. 2 SHALL BE UTILIZED AT ALL LOCATIONS. PAYMENT SHALL BE MADE UNDER ITEM 606.754 - WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL.
5. NEWLY DISTURBED EARTH SHALL BE MULCHED BY THE END OF EACH WORK DAY. MULCH SHALL BE MAINTAINED ON A DAILY BASIS. PAYMENT SHALL BE MADE UNDER ITEM 606.754 - WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL.
6. TEMPORARY SEED SHALL BE APPLIED TO ALL DISTURBED AREAS THAT WILL NOT BE COMPLETED WITHIN 30 DAYS, AND WILL BE PAID UNDER ITEM 606.754 - WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL.

UTILITY

1. THE UTILITIES INVOLVED IN THIS CONTRACT ARE AS FOLLOWS:
 - UNITIL CORPORATION
 - BUCKEYE PARTNERS
 - AERIAL UTILITIES ON HURRICANE ROAD
2. IT IS ANTICIPATED THAT NO UTILITY ADJUSTMENTS WILL BE NECESSARY.
3. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS ALSO REQUIRED TO CALL DIG SAFE PRIOR TO THE START OF THE WORK.
4. 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. EXCAVATING 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.
5. 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 SMART MARKS, THE AUTHORITY SHALL DEDUCT THE ADDED MARKING COSTS FROM THE CONTRACTOR'S PAYMENTS.

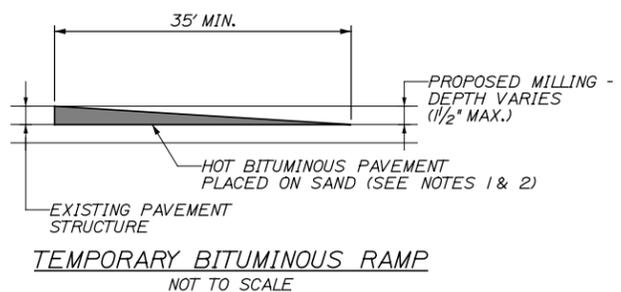
GUARDRAIL

1. GUARDRAIL END TREATMENTS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF EACH SECTION OF BEAM GUARDRAIL. AT THE END OF EACH WORK DAY THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.
2. ALL EXISTING GUARDRAIL TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVAL AND DISPOSAL SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL ITEMS. POST HOLES FROM RAIL REMOVED OR RESET SHALL BE FILLED AND COMPACTED WITH EXISTING MATERIAL WHEN THE HOLES ARE IN GRASS AND WITH TYPE D GRAVEL AND HOT MIX ASPHALT 9.5mm WHEN IN PAVEMENT (PAYMENT INCIDENTAL TO THE GUARDRAIL ITEMS). THIS INCLUDES ALL POST HOLES FROM THE REMOVAL AND DISPOSAL OF THE GUARDRAIL.
3. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS.
4. AS REQUIRED FOR ACCESS TO THE WORK SITE AND APPROVED BY THE RESIDENT, CONTRACTOR SHALL REMOVE AND RESET GUARDRAIL ALONG THE INTERSTATE. GUARDRAIL TO BE REMOVED, MODIFIED, AND RESET SHALL BE STOCKPILED UNTIL GUARDRAIL INSTALLATION HAS BEEN COMPLETED. STOCKPILING THE GUARDRAIL SHALL BE INCIDENTAL TO THE GUARDRAIL ITEMS.
5. FOR ALL NEW GUARDRAIL TYPES 3D W-BEAM AND THRIE-BEAM SINGLE RAIL-OFFSET BLOCKS SHALL BE NON-WOOD CONFORMING TO NCHRP 350 TEST LEVEL 3.
6. ALL PROPOSED GUARDRAIL AND RESET GUARDRAIL SHALL BE INSTALLED IN A MANNER TO AVOID DRAINAGE ITEMS.
7. GUARDRAIL SHALL BE INSTALLED PER THE MAINE DOT STANDARD DETAILS DATED 09/19/2012 OR LATER, UNLESS OTHERWISE NOTED IN THE PLANS.
8. THE CONTRACTOR SHALL REMOVE AND DISPOSE ALL CUT BOLTS AND DISCARDED PARTS WHEN COMPLETING THE RAIL INSTALLATION.
9. RAIL HEIGHT SHALL BE MEASURED FROM THE EDGE OF PAVEMENT WHEN THE RAIL IS WITHIN 5 FEET OF THE EDGE OF PAVEMENT. WHEN RAIL IS AT AN OFFSET GREATER THAN 5 FEET THE HEIGHT SHALL BE MEASURED FROM THE GROUND AT THAT OFFSET.
10. DAMAGE TO EXISTING PAVEMENT OR NEW PAVEMENT DUE TO THE INSTALLATION OF NEW OR RESET GUARDRAIL SHALL BE REPAIRED AND PAYMENT SHALL BE INCIDENTAL TO THE GUARDRAIL ITEMS.
11. COMPACTION AROUND ALL DISTURBED POSTS IS REQUIRED. FILL SHALL BE ADDED WHEN NECESSARY. PAYMENT SHALL BE INCIDENTAL TO THE GUARDRAIL ITEMS.
12. TWO GUARDRAIL DELINEATOR POSTS (ITEM 606.35) SHALL BE PLACED AT EACH FLEAT OR ATTENUATOR AND ONE AT EACH TRAILING END.
13. STATIONING FOR GUARDRAIL REMOVE, MODIFY, AND RESET ARE BASED ON RESET LOCATION. ALL USABLE EXISTING GUARDRAIL SHALL BE MODIFIED AND RESET PRIOR TO BEING PAID TO INSTALL NEW GUARDRAIL.
14. WOOD POSTS SHALL NOT BE USED FOR GUARDRAIL TYPE 3d.

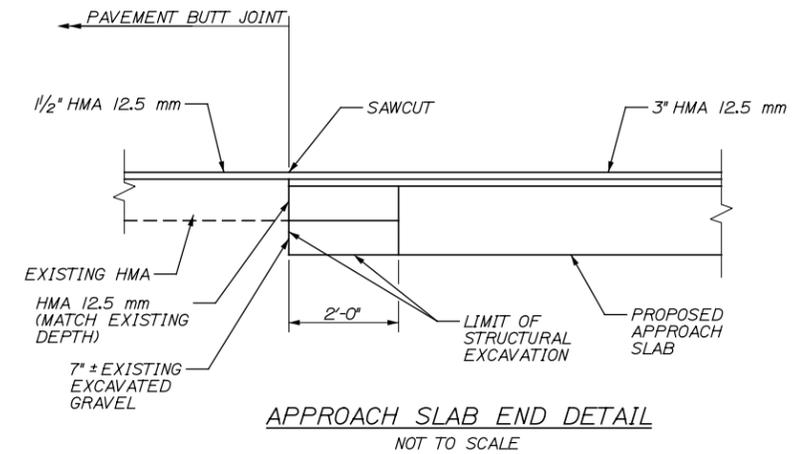
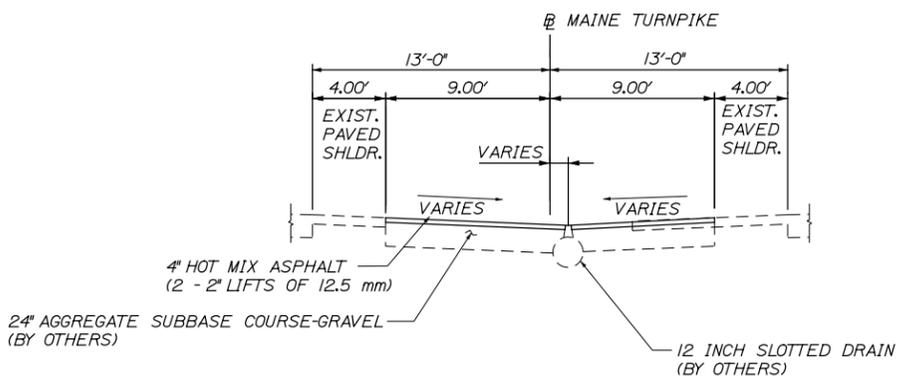
98% PROGRESS PLANS

Scale: NOT TO SCALE				Designed by: TYLIN INTERNATIONAL				T.Y. Lin International 12 Northbrook Drive Building A, Suite One Falmouth, Maine 04105 TEL: (207) 781-4721 FAX: (207) 781-4753				 THE GOLD STAR MEMORIAL HIGHWAY				BRIDGE REHABILITATION PISCATAQUA RIVER BRIDGES GENERAL NOTES																																					
<table border="1"> <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																	CONSULTANT PROJECT MANAGER: Chris Taylor				<table border="1"> <thead> <tr> <th> </th> <th>By</th> <th>Date</th> <th> </th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>JRH</td> <td>03/2014</td> <td>Checked</td> <td>KSD</td> <td>03/2014</td> </tr> <tr> <td>Drawn</td> <td>SBK</td> <td>03/2014</td> <td>In Charge of</td> <td>CPT</td> <td>03/2014</td> </tr> </tbody> </table>					By	Date		By	Date	Designed	JRH	03/2014	Checked	KSD	03/2014	Drawn	SBK	03/2014	In Charge of	CPT	03/2014	MTA PROJECT MANAGER: RALPH NORWOOD			
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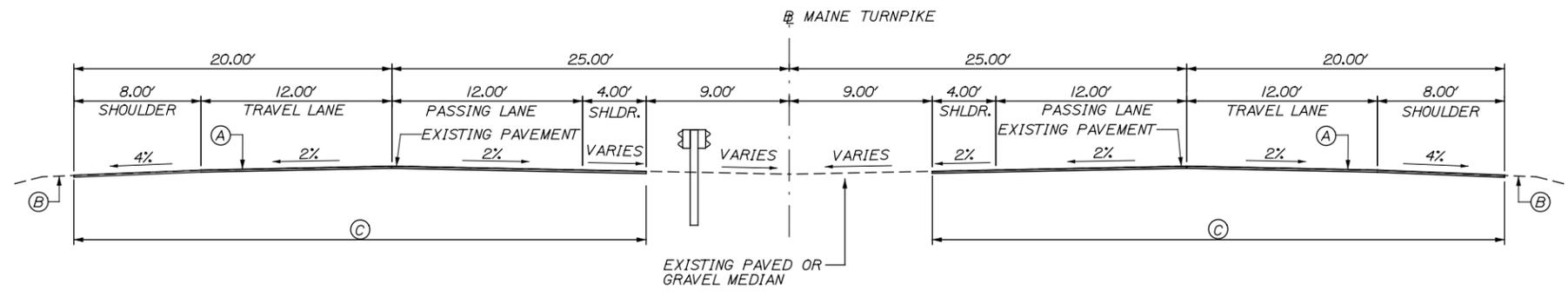
Date: 6/19/2014



- NOTES:**
- HOT MIX ASPHALT FOR TEMPORARY RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO ITEM 403.208.
 - REMOVAL OF TEMP. BITUMINOUS RAMPS WILL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE INCIDENTAL TO ITEMS 403.208.



- NOTE:**
- PAYMENT FOR PLACEMENT OF EXISTING EXCAVATED GRAVEL SHALL BE INCIDENTAL TO STRUCTURAL EXCAVATION.
 - EXISTING GRAVEL FOR APPROACH SLAB END DETAIL SHALL COME FROM SUITABLE STRUCTURAL EXCAVATION. PLACEMENT AND COMPACTION SHALL BE INCIDENTAL TO STRUCTURAL EXCAVATION.



- PAVEMENT LEGEND:**
- (A) = 1/2" HOT MIX ASPHALT, 12.5mm NOMINAL MAXIMUM SIZE.
 - (B) = BERM DROPOFF CORRECTION - GRINDINGS (SEE SHEET G-1).
 - (C) = LIMITS OF PAVEMENT BUTT JOINT AND OVERLAY.

- NOTES:**
- A COATING OF HOT RUBBERIZED ASPHALT (SS-S-1401C) SHALL BE APPLIED TO ALL TRANSVERSE BUTT JOINTS AND LONGTUDINAL JOINTS (INCIDENTAL TO PAVEMENT ITEMS).
 - BITUMINOUS TACK COAT IS REQUIRED BETWEEN EXISTING PAVEMENT AND HMA.

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Scale: NOT TO SCALE			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	PJB	03/2014	In Charge of	CPT	03/2014

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

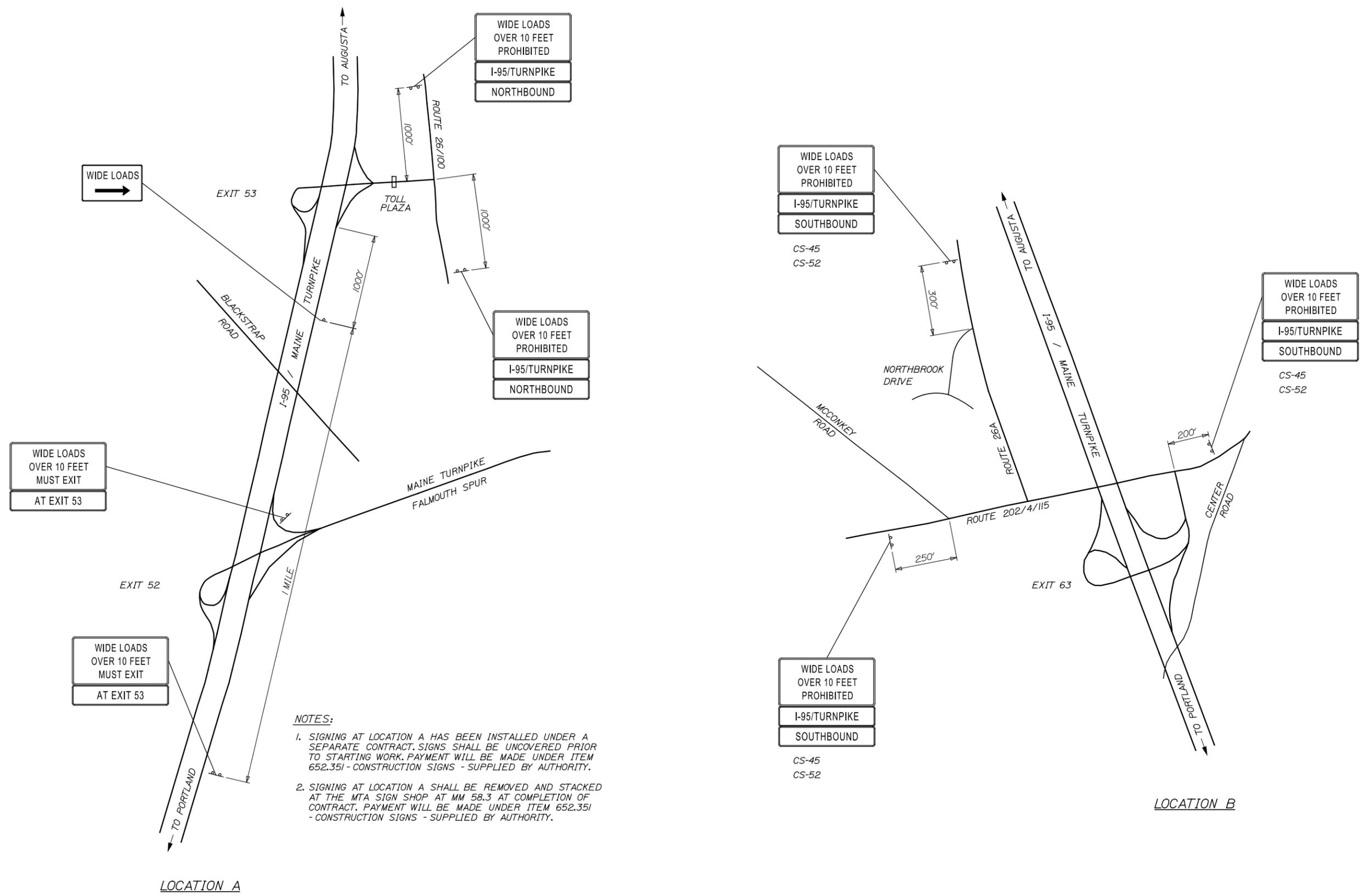
BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES

TYPICAL SECTIONS

SHEET NUMBER: C-3
CONTRACT: 2014.13
4 OF 86

Date: 6/19/2014

Filename: ...MSTA\XXX_MOTPlan_Mop.dgn



- NOTES:**
- SIGNING AT LOCATION A HAS BEEN INSTALLED UNDER A SEPARATE CONTRACT. SIGNS SHALL BE UNCOVERED PRIOR TO STARTING WORK. PAYMENT WILL BE MADE UNDER ITEM 652.351 - CONSTRUCTION SIGNS - SUPPLIED BY AUTHORITY.
 - SIGNING AT LOCATION A SHALL BE REMOVED AND STACKED AT THE MTA SIGN SHOP AT MM 58.3 AT COMPLETION OF CONTRACT. PAYMENT WILL BE MADE UNDER ITEM 652.351 - CONSTRUCTION SIGNS - SUPPLIED BY AUTHORITY.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	JRH	03/2014	Checked	JRH	03/2014
Drawn	PJB	03/2014	In Charge of	CPT	03/2014

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 FAX: (207) 781-4753

THE GOLD STAR MEMORIAL HIGHWAY

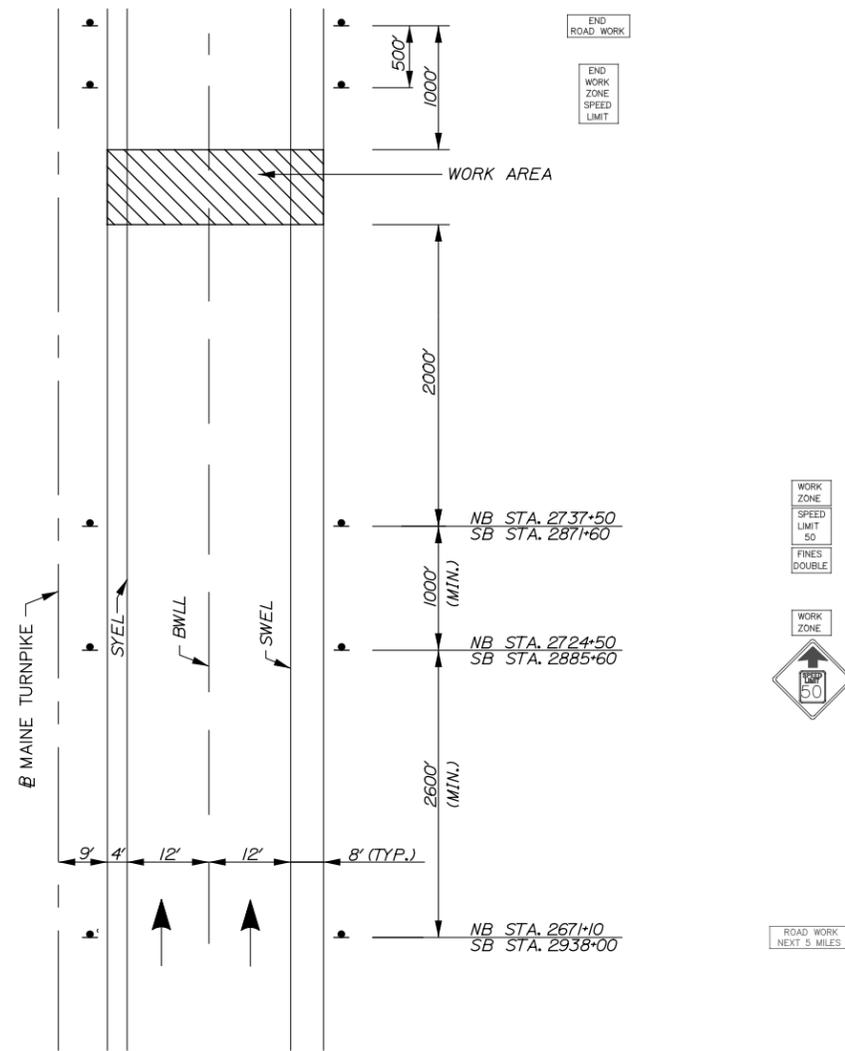
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**TRAFFIC CONTROL
 MISCELLANEOUS DETAILS**

SHEET NUMBER: T-1
 5 OF 86

CONTRACT: 2014.13



**MAINLINE
ADVANCED PROJECT SIGNING**
NOT TO SCALE

NOTES:

1. ADVANCED PROJECT SIGNING HAS BEEN INSTALLED UNDER A SEPARATE CONTRACT. SIGNS SHALL BE UNCOVERED PRIOR TO STARTING WORK. PAYMENT SHALL BE MADE UNDER ITEM 652.35I - CONSTRUCTION SIGNS - SUPPLIED BY AUTHORITY.
2. ADVANCED PROJECT SIGNING SHALL BE REMOVED AND STACKED AT THE MTA SIGN SHOP AT MM 58.3 AT COMPLETION OF CONTRACT. PAYMENT SHALL BE MADE UNDER ITEM 652.35I - CONSTRUCTION SIGNS - SUPPLIED BY AUTHORITY.
3. PORTABLE CHANGEABLE MESSAGE SIGNS ARE TO BE INSTALLED AS PART OF THIS CONTRACT AS PAY ITEM 652.4I. LOCATION SHALL BE 1 MILE OUTSIDE WORK AREA AND APPROVED BY THE RESIDENT.

LEGEND

EXISTING SIGN

Scale: NOT TO SCALE			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	JRH 03/2014	Checked	JRH 03/2014
Drawn	PJB 03/2014	In Charge of	CPT 03/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

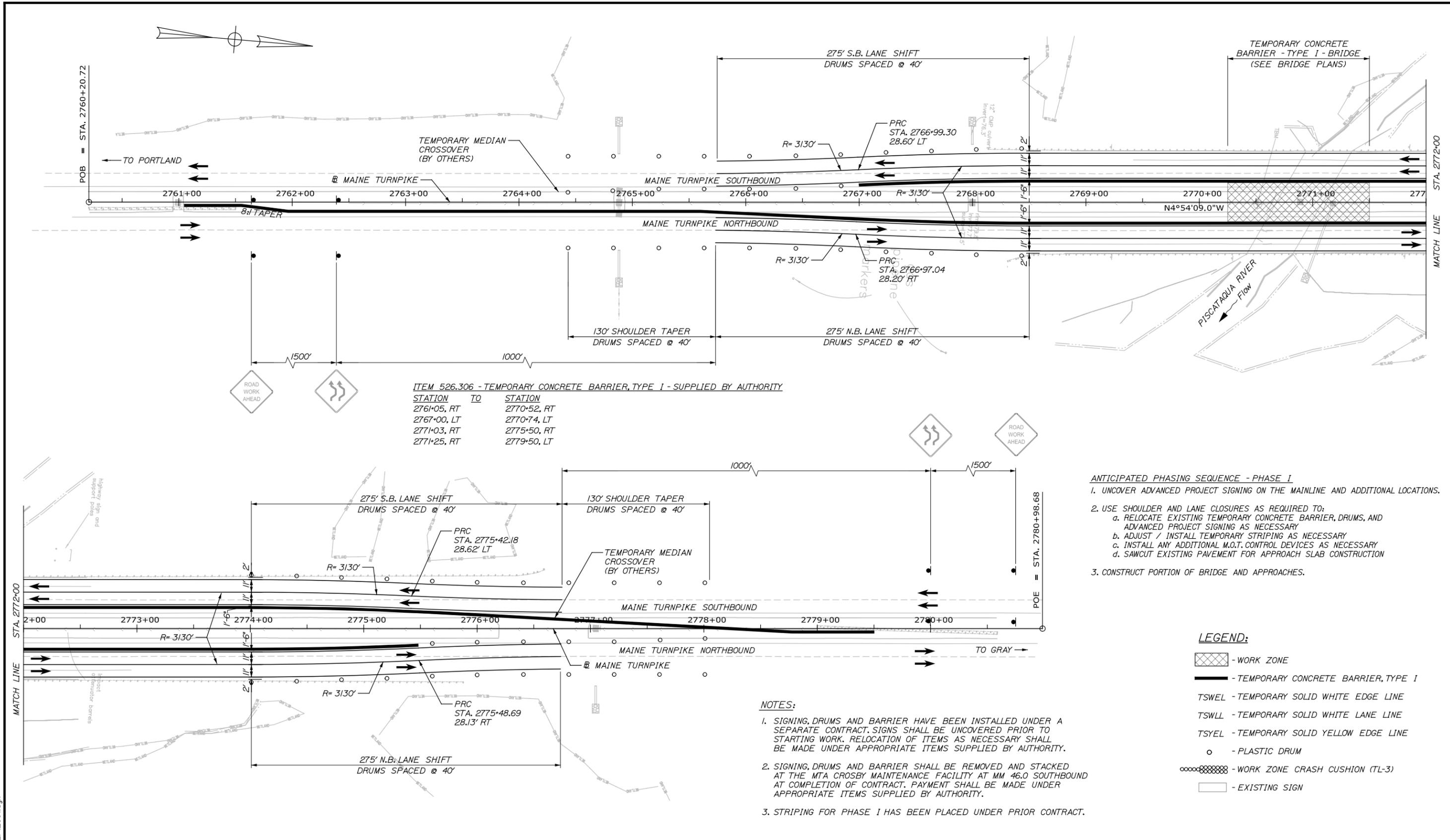
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**TRAFFIC CONTROL
ADVANCED SIGNING DETAILS**

SHEET NUMBER: T-2
CONTRACT: 2014.13
6 OF 86

Date: 6/19/2014

Filename: ...MSTA\MOTPlan_28_P1_001.dgn



ITEM 526.306 - TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY

STATION	TO	STATION
2761+05, RT		2770+52, RT
2767+00, LT		2770+74, LT
2771+03, RT		2775+50, RT
2771+25, RT		2779+50, LT

- ANTICIPATED PHASING SEQUENCE - PHASE I**
- UNCOVER ADVANCED PROJECT SIGNING ON THE MAINLINE AND ADDITIONAL LOCATIONS.
 - USE SHOULDER AND LANE CLOSURES AS REQUIRED TO:
 - RELOCATE EXISTING TEMPORARY CONCRETE BARRIER, DRUMS, AND ADVANCED PROJECT SIGNING AS NECESSARY
 - ADJUST / INSTALL TEMPORARY STRIPING AS NECESSARY
 - INSTALL ANY ADDITIONAL M.O.T. CONTROL DEVICES AS NECESSARY
 - SAWCUT EXISTING PAVEMENT FOR APPROACH SLAB CONSTRUCTION
 - CONSTRUCT PORTION OF BRIDGE AND APPROACHES.

LEGEND:

	- WORK ZONE
	- TEMPORARY CONCRETE BARRIER, TYPE I
	TSWEL - TEMPORARY SOLID WHITE EDGE LINE
	TSWLL - TEMPORARY SOLID WHITE LANE LINE
	TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
	- PLASTIC DRUM
	- WORK ZONE CRASH CUSHION (TL-3)
	- EXISTING SIGN

- NOTES:**
- SIGNING, DRUMS AND BARRIER HAVE BEEN INSTALLED UNDER A SEPARATE CONTRACT. SIGNS SHALL BE UNCOVERED PRIOR TO STARTING WORK. RELOCATION OF ITEMS AS NECESSARY SHALL BE MADE UNDER APPROPRIATE ITEMS SUPPLIED BY AUTHORITY.
 - SIGNING, DRUMS AND BARRIER SHALL BE REMOVED AND STACKED AT THE MTA CROSBY MAINTENANCE FACILITY AT MM 46.0 SOUTHBOUND AT COMPLETION OF CONTRACT. PAYMENT SHALL BE MADE UNDER APPROPRIATE ITEMS SUPPLIED BY AUTHORITY.
 - STRIPING FOR PHASE I HAS BEEN PLACED UNDER PRIOR CONTRACT.

Scale: 40 0 40 80

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	JRH 03/2014	Checked	KSD 03/2014
Drawn	PJB 05/2014	In Charge of	CPT 03/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

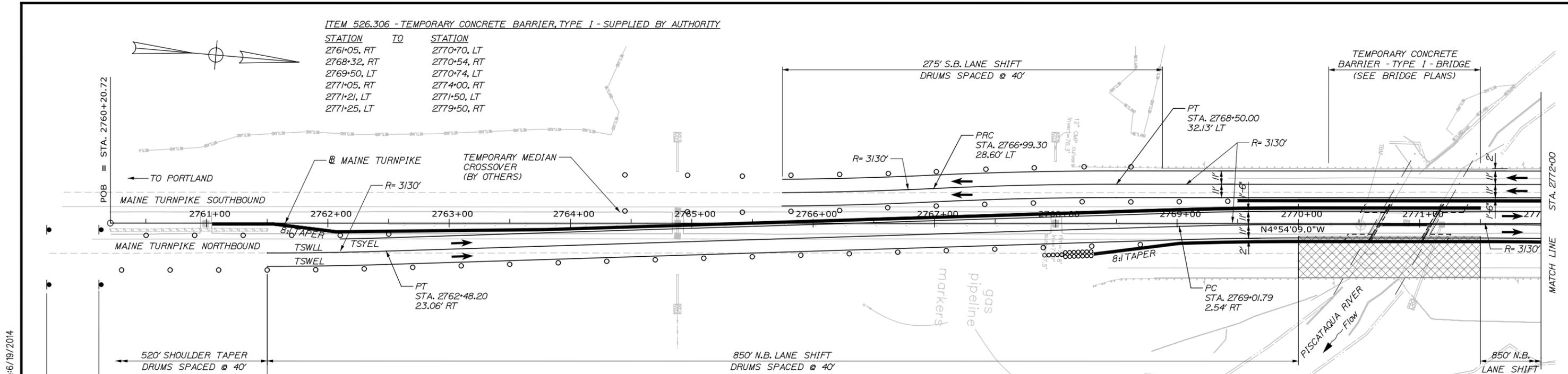
**MAINTENANCE OF TRAFFIC
 PHASE I PLAN - BRIDGE 28**

CONTRACT: 2014.13

SHEET NUMBER: T-3
 7 OF 86

ITEM 526.306 - TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY

STATION	TO	STATION
2761+05, RT		2770+70, LT
2768+32, RT		2770+54, RT
2769+50, LT		2770+74, LT
2771+05, RT		2774+00, RT
2771+21, LT		2771+50, LT
2771+25, LT		2779+50, RT



ITEM 627.681 - TEMPORARY 6" PAVEMENT MARKING LINE, WHITE OR YELLOW

STATION	TO	STATION	TYPE	LENGTH
2761+50, RT		2780+00, RT	TSWLL	185'
2761+50, RT		2780+00, RT	TSWEL	185'
2762+10, RT		2779+40, RT	TSYEL	1730'

ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS

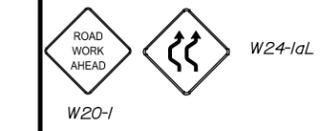
STATION	TO	STATION	TYPE	LENGTH
2761+50, RT		2765+75, RT	BWLL	110'
2762+10, RT		2779+40, RT	SYEL	1730'
2776+50, RT		2780+00, RT	BWLL	90'
2765+75, RT		2776+75, RT	SWEL	1100'
2765+75, RT		2776+75, RT	SWLL	1100'

ITEM 644.10 - GLARE SCREEN - SUPPLIED BY AUTHORITY

STATION	TO	STATION	LENGTH
2761+05		2771+50	1045'
2771+50		2779+50	800'

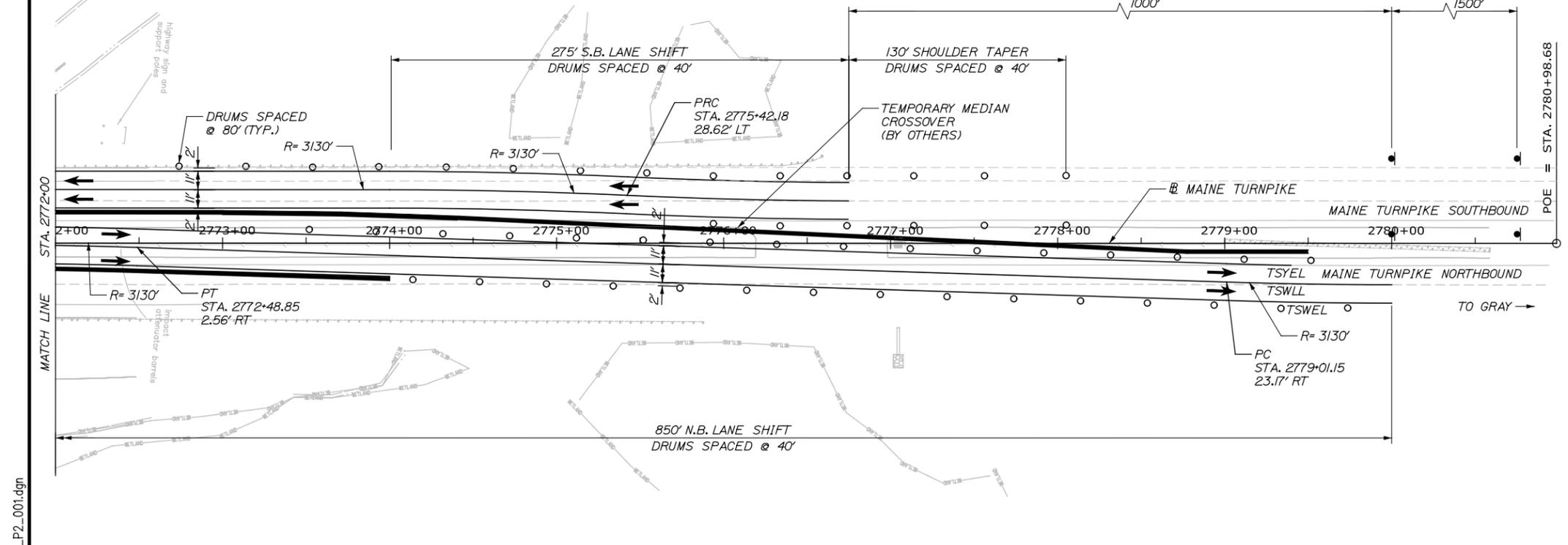
ITEM 527.341 - WORK ZONE CRASH CUSHION

STATION
2768+32, RT



ANTICIPATED PHASING SEQUENCE - PHASE II

- USE SHOULDER AND LANE CLOSURES AS REQUIRED TO RESET TEMPORARY M.O.T. CONTROL DEVICES INCLUDING CONCRETE BARRIER, SIGNING, WORK ZONE CRASH CUSHIONS, DRUMS, STRIPING, ETC. AS NECESSARY FOR PHASE II.
- CONSTRUCT PORTION OF BRIDGE AND APPROACHES.



LEGEND:

- WORK ZONE
- TEMPORARY CONCRETE BARRIER, TYPE 1
- TSWEL - TEMPORARY SOLID WHITE EDGE LINE
- TSWLL - TEMPORARY SOLID WHITE LANE LINE
- TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
- PLASTIC DRUM
- WORK ZONE CRASH CUSHION (TL-3)

Scale: 40 0 40 80

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	JRH 03/2014	Checked	KSD 03/2014
Drawn	JRH 03/2014	In Charge of	CPT 03/2014

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**MAINTENANCE OF TRAFFIC
 PHASE II PLAN - BRIDGE 28**

CONTRACT: 2014.13

SHEET NUMBER: T-4

8 OF 86

Date: 6/19/2014

Filename: ...MSTA\MOTPlan_28_P2_001.dgn

Date: 6/19/2014



ITEM 526.306 - TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY

STATION	TO	STATION
2761+05, RT		2779+50, RT
2768+00, LT		2770+71, LT
2771+22, LT		2773+12, LT

850' S.B. LANE SHIFT
DRUMS SPACED @ 40'

TEMPORARY CONCRETE BARRIER - TYPE I - BRIDGE
(SEE BRIDGE PLANS)

850' S.B. LANE SHIFT

PT STA. 2763+01.56
23.34' LT

PC STA. 2769+28.48
1.00' LT

TO PORTLAND

MAINE TURNPIKE SOUTHBOUND

MAINE TURNPIKE NORTHBOUND

TEMPORARY MEDIAN CROSSOVER
(BY OTHERS)

130' SHOULDER TAPER
DRUMS SPACED @ 40'

275' N.B. LANE SHIFT
DRUMS SPACED @ 40'

PISCATAQUA RIVER
Flow

ANTICIPATED PHASING SEQUENCE - PHASE III

1. USE SHOULDER AND LANE CLOSURES AS REQUIRED TO RESET TEMPORARY M.O.T. CONTROL DEVICES INCLUDING CONCRETE BARRIER, SIGNING, WORK ZONE CRASH CUSHIONS, DRUMS, STRIPING, ETC. AS NECESSARY FOR PHASE III.
2. CONSTRUCT PORTION OF BRIDGE AND APPROACHES.



ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS

STATION	TO	STATION	TYPE	LENGTH
2762+10, RT		2779+40, RT	TSYEL	1730'
2761+50, RT		2780+00, RT	TSWLL	1850'
2761+50, RT		2780+00, RT	TSWEL	1850'
2762+60, LT		2765+75, LT	SYEL	315'
2761+90, LT		2765+75, LT	BWLL	100'
2765+75, LT		2776+75, LT	TSWLL	1100'
2765+75, LT		2776+75, LT	TSYEL	1100'
2765+75, LT		2776+75, LT	TSWEL	1100'
2776+75, LT		2780+00, LT	BWLL	85'
2776+75, LT		2779+40, LT	SYEL	265'

ITEM 627.681 - TEMPORARY 6" PAVEMENT MARKING LINE, WHITE OR YELLOW

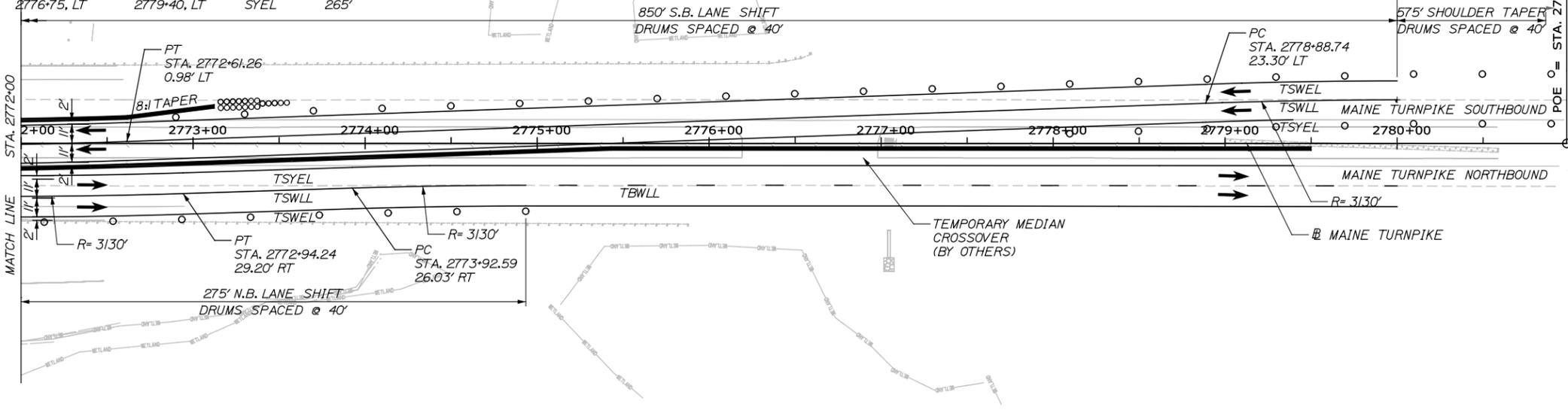
STATION	TO	STATION	TYPE	LENGTH
2761+50, RT		2779+40, RT	TSYEL	1790'
2761+50, RT		2767+18, RT	TBWWL	570'
2761+50, RT		2780+00, RT	TSWEL	1850'
2761+90, LT		2780+00, LT	TSWEL	1810'
2761+90, LT		2780+00, LT	TSWLL	1810'
2762+62, LT		2779+39, LT	TSYEL	1675'
2767+18, RT		2774+93, RT	TSWLL	775'
2774+93, RT		2780+00, RT	TBWWL	510'

ITEM 644.10 - GLARE SCREEN - SUPPLIED BY AUTHORITY

STATION	TO	STATION	LENGTH
2761+05		2779+50	1845'

ITEM 527.341 - WORK ZONE CRASH CUSHION

STATION
2773+12, LT



LEGEND:

- WORK ZONE
- TEMPORARY CONCRETE BARRIER, TYPE I
- TSWEL - TEMPORARY SOLID WHITE EDGE LINE
- TSWLL - TEMPORARY SOLID WHITE LANE LINE
- TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
- TBWWL - TEMPORARY BROKEN WHITE LANE LINE
- PLASTIC DRUM
- WORK ZONE CRASH CUSHION (TL-3)



Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date	By	Date	
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	JRH	03/2014	In Charge of	CPT	03/2014

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THE GOLD STAR
MEMORIAL HIGHWAY

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
MAINTENANCE OF TRAFFIC
PHASE III PLAN - BRIDGE 28

CONTRACT: 2014.13
SHEET NUMBER: T-5
9 OF 86

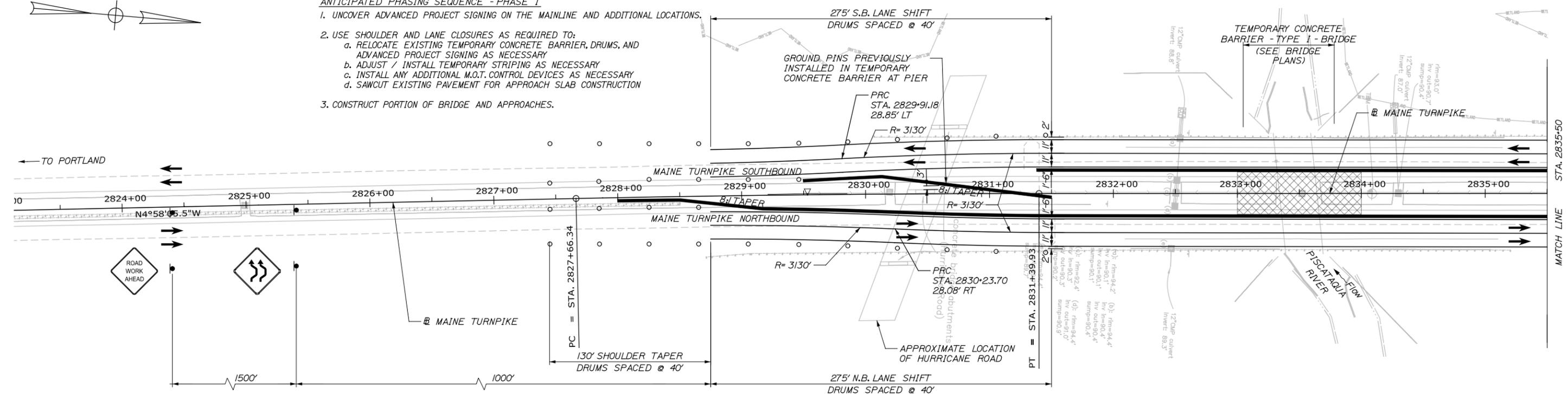
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Date: 6/19/2014

Filename: ...MSTA\MOTPlan_31_P1_001.dgn

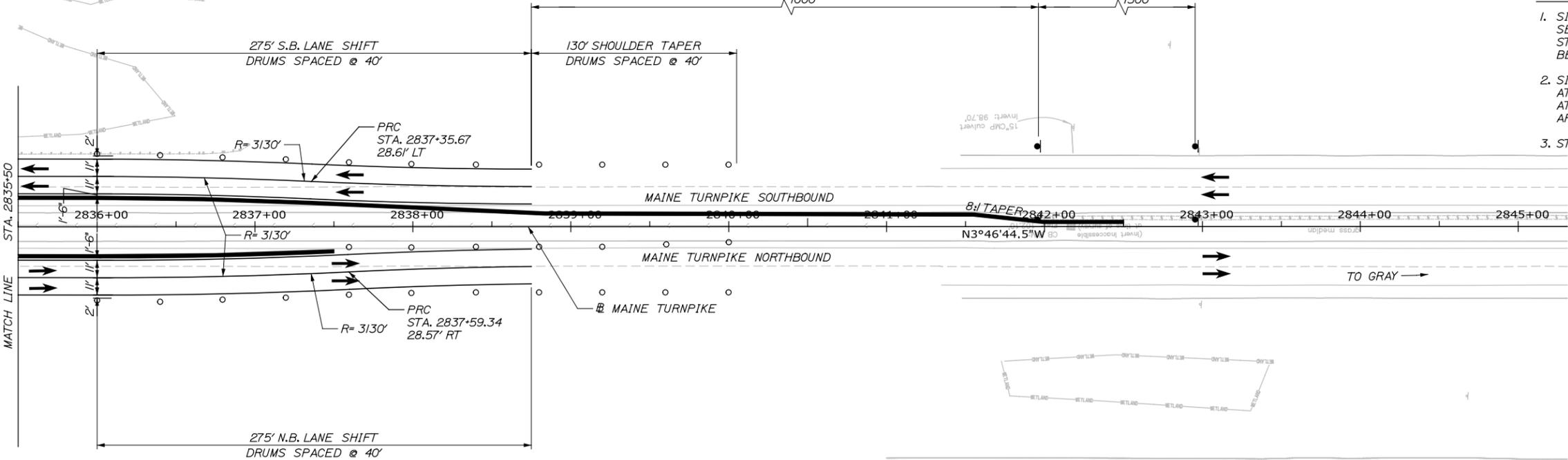


- ANTICIPATED PHASING SEQUENCE - PHASE I**
1. UNCOVER ADVANCED PROJECT SIGNING ON THE MAINLINE AND ADDITIONAL LOCATIONS.
 2. USE SHOULDER AND LANE CLOSURES AS REQUIRED TO:
 - a. RELOCATE EXISTING TEMPORARY CONCRETE BARRIER, DRUMS, AND ADVANCED PROJECT SIGNING AS NECESSARY
 - b. ADJUST / INSTALL TEMPORARY STRIPING AS NECESSARY
 - c. INSTALL ANY ADDITIONAL M.O.T. CONTROL DEVICES AS NECESSARY
 - d. SAWCUT EXISTING PAVEMENT FOR APPROACH SLAB CONSTRUCTION
 3. CONSTRUCT PORTION OF BRIDGE AND APPROACHES.



ITEM 526.306 - TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY

STATION	TO	STATION
2828+00, RT		2833+31, RT
2829+50, LT		2831+50, RT
2831+40, LT		2833+27, RT
2833+67, LT		2842+50, LT
2833+71, RT		2837+50, RT



- NOTES:**
1. SIGNING, DRUMS AND BARRIER HAVE BEEN INSTALLED UNDER A SEPARATE CONTRACT. SIGNS SHALL BE UNCOVERED PRIOR TO STARTING WORK. RELOCATION OF ITEMS AS NECESSARY SHALL BE MADE UNDER APPROPRIATE ITEMS SUPPLIED BY AUTHORITY.
 2. SIGNING, DRUMS AND BARRIER SHALL BE REMOVED AND STACKED AT THE MTA CROSBY MAINTENANCE FACILITY AT MM 46.0 SOUTHBOUND AT COMPLETION OF CONTRACT. PAYMENT SHALL BE MADE UNDER APPROPRIATE ITEMS SUPPLIED BY AUTHORITY.
 3. STRIPING FOR PHASE I HAS BEEN PLACED UNDER PRIOR CONTRACT.

LEGEND:

- WORK ZONE
- TEMPORARY CONCRETE BARRIER, TYPE I
- TSWEL - TEMPORARY SOLID WHITE EDGE LINE
- TSWLL - TEMPORARY SOLID WHITE LANE LINE
- TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
- PLASTIC DRUM
- WORK ZONE CRASH CUSHION (TL-3)
- EXISTING SIGN

Scale: 40 0 40 80

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	JRH	03/2014	In Charge of	CPT	03/2014

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**MAINTANENCE OF TRAFFIC
 PHASE I PLAN - BRIDGE 31**

SHEET NUMBER: T-6
 10 OF 86

CONTRACT: 2014.13



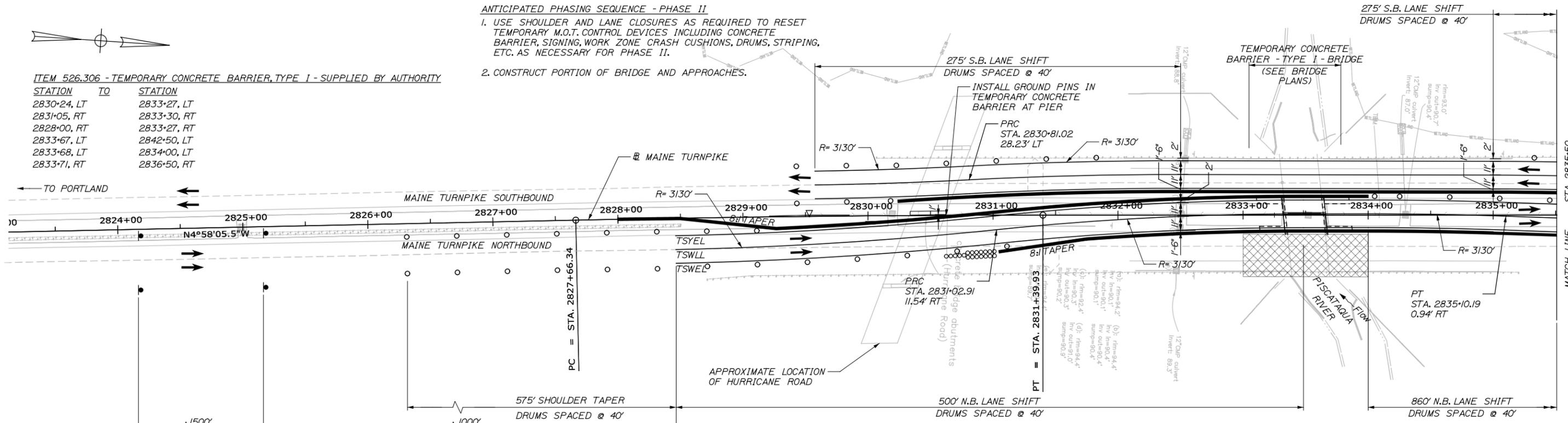
ANTICIPATED PHASING SEQUENCE - PHASE II

1. USE SHOULDER AND LANE CLOSURES AS REQUIRED TO RESET TEMPORARY M.O.T. CONTROL DEVICES INCLUDING CONCRETE BARRIER, SIGNING, WORK ZONE CRASH CUSHIONS, DRUMS, STRIPING, ETC. AS NECESSARY FOR PHASE II.

2. CONSTRUCT PORTION OF BRIDGE AND APPROACHES.

ITEM 526.306 - TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY

STATION	TO	STATION
2830+24, LT		2833+27, LT
2831+05, RT		2833+30, RT
2828+00, RT		2833+27, RT
2833+67, LT		2842+50, LT
2833+68, LT		2834+00, LT
2833+71, RT		2836+50, RT



ITEM 644.10 - GLARE SCREEN - SUPPLIED BY AUTHORITY

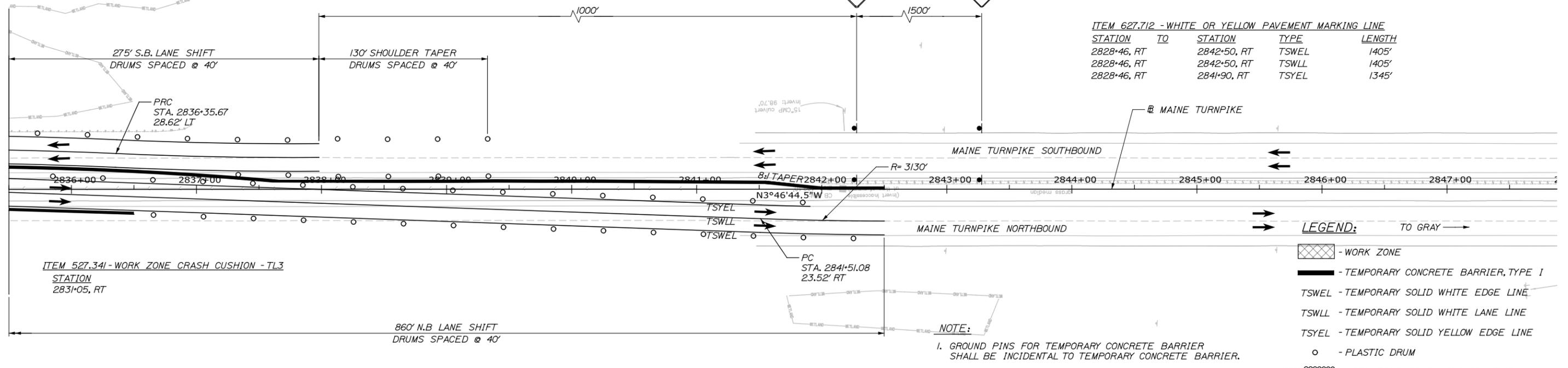
STATION	TO	STATION	LENGTH
2828+00		2834+00	600'
2834+00		2842+50	850'

ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS

STATION	TO	STATION	TYPE	LENGTH
2838+50, RT		2842+50, RT	BWLL	100'
2828+40, RT		2831+50, RT	BWLL	80'
2828+40, RT		2842+50, RT	SYEL	1410'

ITEM 627.712 - WHITE OR YELLOW PAVEMENT MARKING LINE

STATION	TO	STATION	TYPE	LENGTH
2828+46, RT		2842+50, RT	TSWEL	1405'
2828+46, RT		2842+50, RT	TSWLL	1405'
2828+46, RT		2841+90, RT	TSYEL	1345'



Date: 6/19/2014

STA. 2835+50

Filename: ...MSTA\MOTPlan_31_P2_001.dgn



No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	JRH	03/2014	In Charge of	CPT	03/2014

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**MAINTENANCE OF TRAFFIC
 PHASE II PLAN - BRIDGE 31**

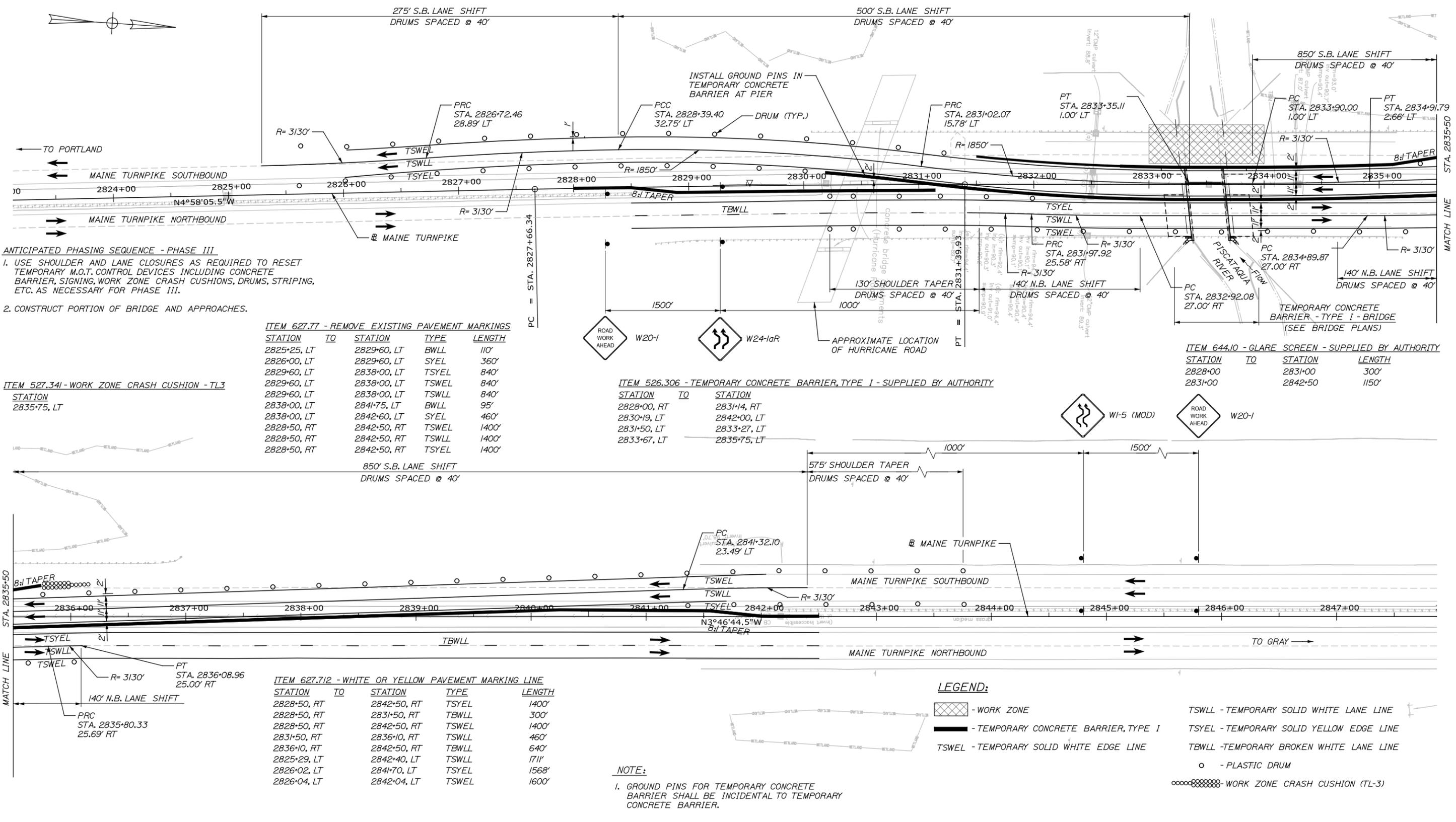
CONTRACT: 2014.13

SHEET NUMBER: T-7

11 OF 86

Date: 6/19/2014

Filename: ...MSTA\MOTPlan_31_P3_001.dgn



ANTICIPATED PHASING SEQUENCE - PHASE III
 1. USE SHOULDER AND LANE CLOSURES AS REQUIRED TO RESET TEMPORARY M.O.T. CONTROL DEVICES INCLUDING CONCRETE BARRIER, SIGNING, WORK ZONE CRASH CUSHIONS, DRUMS, STRIPING, ETC. AS NECESSARY FOR PHASE III.
 2. CONSTRUCT PORTION OF BRIDGE AND APPROACHES.

ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS

STATION TO	STATION	TYPE	LENGTH
2825+25, LT	2829+60, LT	BWLL	110'
2826+00, LT	2829+60, LT	SYEL	360'
2829+60, LT	2838+00, LT	TSYEL	840'
2829+60, LT	2838+00, LT	TSWEL	840'
2829+60, LT	2838+00, LT	TSWLL	840'
2838+00, LT	2841+75, LT	BWLL	95'
2838+00, LT	2842+60, LT	SYEL	460'
2828+50, RT	2842+50, RT	TSWEL	1400'
2828+50, RT	2842+50, RT	TSWLL	1400'
2828+50, RT	2842+50, RT	TSYEL	1400'

ITEM 527.34I - WORK ZONE CRASH CUSHION - TL3

STATION	LENGTH
2835+75, LT	

ITEM 526.306 - TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY

STATION TO	STATION
2828+00, RT	2831+14, RT
2830+19, LT	2842+00, LT
2831+50, LT	2833+27, LT
2833+67, LT	2835+75, LT

ITEM 644.10 - GLARE SCREEN - SUPPLIED BY AUTHORITY

STATION TO	STATION	LENGTH
2828+00	2831+00	300'
2831+00	2842+50	1150'

ITEM 627.712 - WHITE OR YELLOW PAVEMENT MARKING LINE

STATION TO	STATION	TYPE	LENGTH
2828+50, RT	2842+50, RT	TSYEL	1400'
2828+50, RT	2831+50, RT	TBWLL	300'
2828+50, RT	2842+50, RT	TSWEL	1400'
2831+50, RT	2836+10, RT	TSWLL	460'
2836+10, RT	2842+50, RT	TBWLL	640'
2825+29, LT	2842+40, LT	TSWLL	1711'
2826+02, LT	2841+70, LT	TSYEL	1568'
2826+04, LT	2842+04, LT	TSWEL	1600'

- LEGEND:**
- WORK ZONE
 - TEMPORARY CONCRETE BARRIER, TYPE I
 - TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 - TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
 - TBWLL - TEMPORARY BROKEN WHITE LANE LINE
 - PLASTIC DRUM
 - WORK ZONE CRASH CUSHION (TL-3)

NOTE:
 1. GROUND PINS FOR TEMPORARY CONCRETE BARRIER SHALL BE INCIDENTAL TO TEMPORARY CONCRETE BARRIER.

Scale: 40 0 40 80

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	JRH 03/2014	Checked	KSD 03/2014
Drawn	JRH 03/2014	In Charge of	CPT 03/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

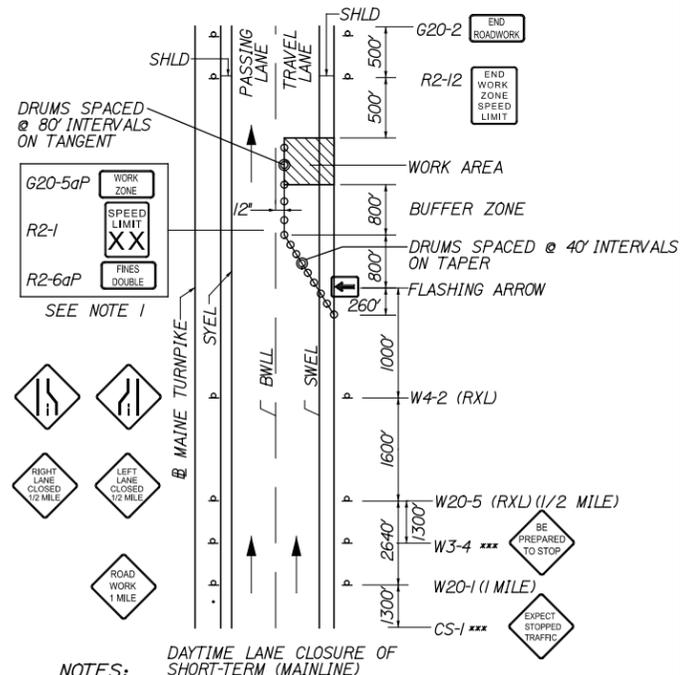
**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**MAINTANENCE OF TRAFFIC
 PHASE III PLAN - BRIDGE 31**

SHEET NUMBER: T-8
 12 OF 86

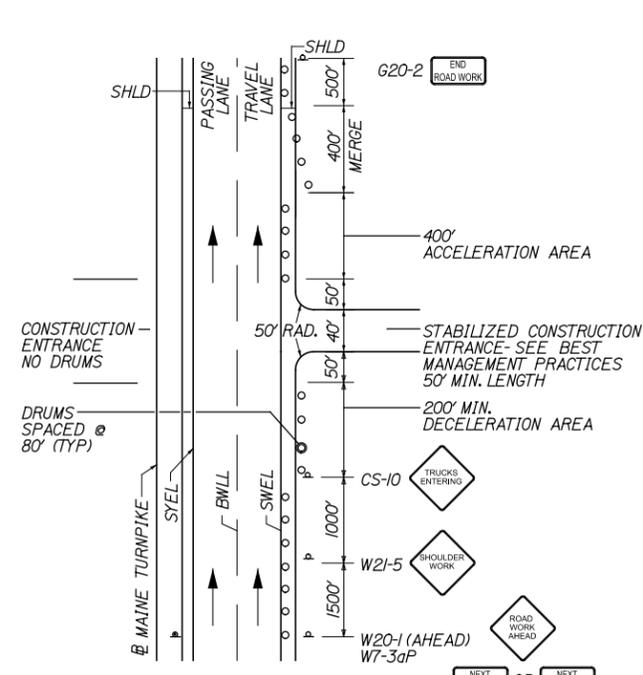
CONTRACT: 2014.13

Date: 6/19/2014



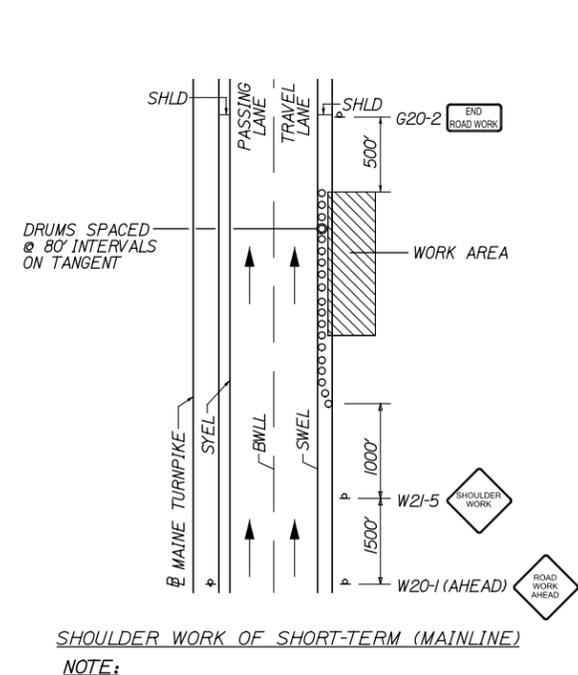
NOTES:
 1. FOR EASEL SET UP ONLY, THIS SIGN IS NOT BRACKETED. ONE SIGN ASSEMBLY IS PLACED AT THE END OF THE TAPER.
 2. SIGNS DESIGNATED WITH *** SHALL BE USED DURING STOPPAGES OF TRAFFIC.

SINGLE LANE CLOSURE-SIGNS ON EASELS



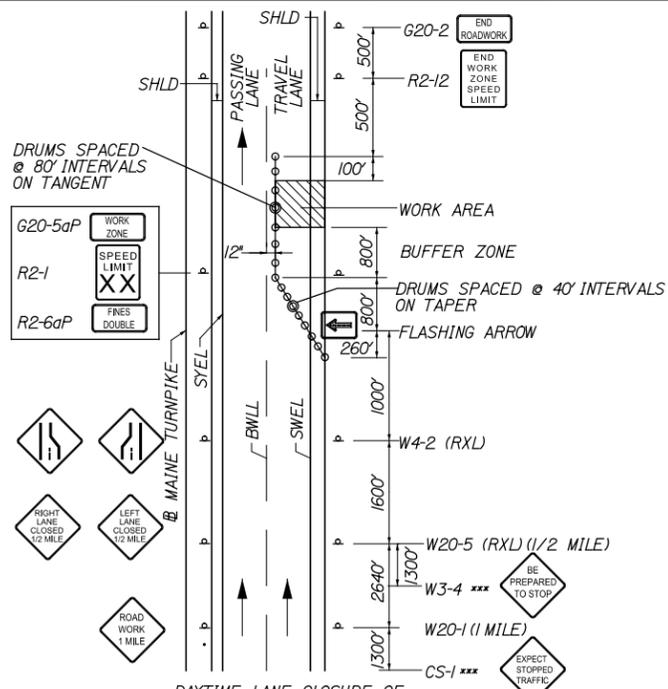
NOTES:
 1. SIGN G20-2 IS NOT REQUIRED IF ENTRANCE IS WITHIN THE WORK ZONE.
 2. "TRUCKS ENTERING" SIGN SHALL ALSO BE USED AT LOCATIONS WHERE TRUCKS ENTER THE WORK ZONE FROM THE TRAVEL LANE.

STABILIZED CONSTRUCTION ENTRANCE



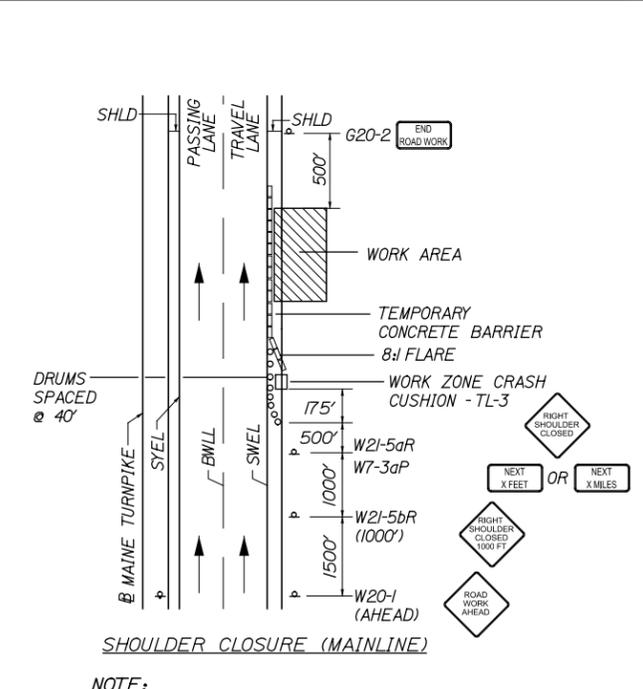
NOTE:
 THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.

SHOULDER WORK



NOTES:
 SIGNS DESIGNATED WITH *** SHALL BE USED DURING STOPPAGES OF TRAFFIC.
 FOR POST MOUNTED SIGN SETUP, UNCOVER SIGNS ADJACENT TO OPEN LANE FOR SHORT TERM LANE CLOSURE (LESS THAN 24 HRS); UNCOVER BOTH SIGNS FOR PERMANENT LANE CLOSURE (GREATER THAN 24 HRS)

SINGLE LANE CLOSURE-POST MOUNTED SIGN SETUP



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

SHOULDER CLOSURE

GENERAL MAINTENANCE OF TRAFFIC NOTES:

- 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. NOTE THERE IS A 2009 EDITION OF MUTCD.
- 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.
- 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.
- 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.
- ALL GEOMETRIC INFORMATION FOR ALL PHASES OF TRAFFIC CONTROL WILL BE SUPPLIED TO THE CONTRACTOR AFTER AWARD.

ABBREVIATIONS FOR ALL M.O.T. PLANS:

- BWLL = BROKEN WHITE LANE LINE
- SWEL = SOLID WHITE EDGE LINE
- SYEL = SOLID YELLOW EDGE LINE
- TBWLL = TEMPORARY BROKEN WHITE LANE LINE
- TSWEL = TEMPORARY SOLID WHITE EDGE LINE
- TSWLL = TEMPORARY SOLID WHITE LANE LINE
- TSYEL = TEMPORARY SOLID YELLOW EDGE LINE

Filename: ...MSTA\XXX_MOT_DET_01.dgn

Scale: NOT TO SCALE			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	JRH 03/2014	Checked	JRH 03/2014
Drawn	JJB 03/2014	In Charge of	CPT 03/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

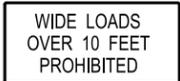
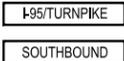
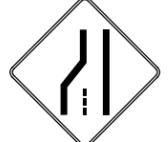
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**TRAFFIC CONTROL
 CLOSURE DETAILS**

SHEET NUMBER: T-9
 CONTRACT: 2014.13
 13 OF 86

Date: 6/19/2014

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER			
CS-1	48"	48"		6" 6" 6"	4" 4"		3	ORANGE	BLACK		16.00 (48)	
CS-45	96"	48"		8C 8C 8C	6" 6" 6"		3	ORANGE	BLACK		32.00 (96)	
CS-52	96"	18"		8C	5" 5"		3	ORANGE	BLACK		12.00 (36)	
							3				12.00 (36)	
W1-5 (MOD)	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2009			2	ORANGE	BLACK		16.00 (32)	
W3-4	48"	48"					4	ORANGE	BLACK		16.00 (64)	
W4-2 (LEFT)	48"	48"					4	ORANGE	BLACK		16.00 (64)	
	(RIGHT)	48"		48"	4	16.00 (64)						
W7-3aP	36"	30"					2	ORANGE	BLACK		7.50 (15)	
W20-1	48"	48"					4	ORANGE	BLACK		16.00 (64)	

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES	
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER				
W20-5 (LEFT)	48"	48"		TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2009			4	ORANGE	BLACK			16.00 (64)	
	(RIGHT)	48"		48"	4	16.00 (64)							
W21-5	48"	48"					1	ORANGE	BLACK		16.00 (16)		
W21-5a (RIGHT)	48"	48"					1	ORANGE	BLACK		16.00 (16)		
	(LEFT)	48"		48"	1	16.00 (16)							
W21-5b (RIGHT)	48"	48"					1	ORANGE	BLACK		16.00 (16)		
	(LEFT)	48"		48"	1	16.00 (16)							
W24-1a (RIGHT)	48"	48"					2	ORANGE	BLACK		16.00 (32)		
	(LEFT)	48"		48"	2	16.00 (32)							

NOTES:
 1. CONTRACTOR SHALL COORDINATE SIGNING WITH CONTRACT 2014.08 AND ADJUST ANY CONFLICTING SIGNS.

Filename: ...MSTA\xxx_MOT_Sign_Summary.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	JRH	03/2014	Checked	JRH	03/2014
Drawn	PJB	05/2014	In Charge of	CPT	03/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**MAINTENANCE OF TRAFFIC
SIGN SUMMARY**

CONTRACT: 2014.13

SHEET NUMBER: T-10

14 OF 86

Date: 6/19/2014

Filename: ...MSTA\xxx_MOT_Sign_Summary2.dgn

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR		BORDER RADIUS	AREA IN SQUARE FEET	NOTES
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND BORDER			
CS-45	96"	48"	WIDE LOADS OVER 10 FEET PROHIBITED	8C 8C 8C	6" 6" 6"		2	ORANGE	BLACK		32.00 (64)	1
CS-46	96"	48"	WIDE LOADS OVER 10 FEET MUST EXIT	8C 8C 8C	6" 6" 6"		2	ORANGE	BLACK		32.00 (64)	1
CS-48	60"	36"	WIDE LOADS 	8D		9" X 36" & 0"	1	ORANGE	BLACK		15.00 (15)	1
CS-52	96"	18"	I-95/TURNPIKE	8C	5"		2	ORANGE	BLACK		12.00 (24)	1
			NORTHBOUND				2				12.00 (24)	
			AT EXIT 53				2				12.00 (24)	
G20-1	48"	24"	ROADWORK NEXT 4 MILES	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2009			4	ORANGE	BLACK		8.00 (32)	
G20-2	48"	24"	END ROAD WORK				4	ORANGE	BLACK		8.00 (32)	
G20-5aP	36"	24"	WORK ZONE				12	ORANGE	BLACK		6.00 (72)	1
R2-1 (50) (65)	36"	48"	SPEED LIMIT 50				8	WHITE	BLACK		12.00 (96)	1
							2				12.00 (24)	
R2-6aP	36"	24"	FINES DOUBLE				8	WHITE	BLACK		6.00 (48)	1
R2-12	36"	54"	END WORK ZONE SPEED LIMIT				4	WHITE	BLACK		13.50 (54)	1
W24-1a (LEFT) (RIGHT)	48"	48"					4	ORANGE	BLACK		16.00 (64)	
	48"	48"		4	16.00 (64)							
W20-1 (AHEAD)	48"	48"	ROAD WORK AHEAD				8	ORANGE	BLACK		16.00 (128)	1
W3-5	48"	48"					4	ORANGE	BLACK		16.00 (64)	1

NOTES:

- SIGNS SHALL BE UNCOVERED PRIOR TO START OF PROJECT AND DELIVERED TO THE MTA SIGN SHOP AT MM 58.3 UPON COMPLETION OF PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ALL EXISTING SIGNS UPON START OF CONTRACT.
- CONTRACTOR SHALL COORDINATE SIGNING WITH CONTRACT 2014.08 AND ADJUST ANY CONFLICTING SIGNS.

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	JRH	03/2014	Checked	JRH	03/2014
Drawn	JJB	03/2014	In Charge of	DBT	03/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES

MAINTENANCE OF TRAFFIC
SIGN SUMMARY - SUPPLIED BY AUTHORITY

SHEET NUMBER: T-11
CONTRACT: 2014.13
15 OF 86

ITEM 606.754 - WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL

STATION
2768+68.98, RT
2776+21.57, LT

ITEM 606.701 - THRIE BEAM TRANSITION, DOUBLE RAIL - MODIFIED

STATION OFFSET TO STATION OFFSET
2761+50.00 5.61' RT 2761+56.25 5.55' RT
2780+89.05 5.15' RT 2780+95.30 5.15' RT

ITEM 606.1721 - BRIDGE TRANSITION - TYPE I

STATION OFFSET TO STATION OFFSET
2770+23.18 45.33' RT 2770+37.41 45.33' RT
2770+75.09 45.33' LT 2770+89.32 45.33' LT
2770+87.45 45.33' RT 2771+07.93 45.33' RT
2771+39.35 45.35' LT 2771+53.58 45.33' LT

ITEM 606.1729 - BRIDGE TRANSITION - TYPE I (MODIFIED)

STATION OFFSET TO STATION OFFSET
2770+35.68 4.00' RT 2770+60.66 4.00' RT
2771+11.49 4.00' RT 2771+36.46 4.00' RT

ITEM 606.2652 - TERMINAL END - REMOVE AND STACK
STATION
2768+26.5, LT
2775+75.1, RT

ITEM 606.278 - TERMINAL END - ANCHORED END
STATION
2768+26.54, LT
2775+75.09, RT

ITEM 606.64 - GUARDRAIL THRIE BEAM - DOUBLE RAIL

STATION	OFFSET	TO STATION	OFFSET	LENGTH
2761+56.25	5.55' RT	2762+00.00	5.06' RT	43.75'
2762+00.00	5.06' RT	2769+98.24	5.14' RT	798.24'
2769+98.24	5.14' RT	2770+35.68	4.00' RT	37.50'
2771+36.46	4.00' RT	2771+74.11	4.89' RT	37.50'
2771+74.11	4.89' RT	2780+89.05	5.15' RT	914.94'

STA. 2777+28.7
S.B. LIMIT OF OUTSIDE GUARDRAIL WORK
STA. 2780+95.3
LIMIT OF MEDIAN GUARDRAIL

ITEM 627.712 - WHITE OR YELLOW PAVEMENT MARKING LINE

STATION	TO STATION	TYPE	LENGTH
2761+50, RT	2780+00, RT	SYEL	1850'
2761+50, RT	2780+00, RT	SWEL	1850'
2761+90, LT	2780+00, LT	SYEL	1810'
2761+90, LT	2780+00, LT	SWEL	1810'

STA. 2775+87.6
N.B. LIMIT OF OUTSIDE GUARDRAIL WORK

ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS

STATION	TO STATION	TYPE	LENGTH
2761+90, LT	2780+00, LT	TSWEL	1810'
2761+90, LT	2780+00, LT	TSWLL	1810'
2762+60, LT	2779+40, LT	TSYEL	1680'
2767+50, RT	2774+75, RT	TSWLL	725'
2767+50, RT	2774+75, RT	TSWEL	725'
2767+80, RT	2771+40, RT	TSYEL	360'

ITEM 627.713 - BROKEN WHITE PAVEMENT MARKING LINE

STATION	TO STATION	LENGTH
2761+50, RT	2780+00, RT	1850'
2761+90, LT	2780+00, LT	1810'

LEGEND
PAVEMENT BUTT JOINT

NOTES:
1. FOR STRIPING DETAILS SEE SHEET D-1.

ITEM 606.80 - GUARDRAIL 350 FLEAT TERMINAL

STATION
2768+68.98, RT
2776+21.57, LT

STA. 2761+50
LIMIT OF MEDIAN GUARDRAIL

ITEM 656.632 - 30" TEMPORARY SILT FENCE

STATION	TO STATION	LENGTH
2767+62, RT	2768+69, RT	107.0'
2776+22, LT	2777+29, LT	107.0'

ITEM 606.3605 - REMOVE, MODIFY, AND RESET - SINGLE RAIL

STATION	OFFSET TO STATION	OFFSET	LENGTH
2770+04.3	45.3' RT	2770+16.93	45.33' RT
2770+16.93	45.33' RT	2770+23.18	45.33' RT
2770+56.4	45.1' LT	2770+68.84	45.33' LT
2770+68.84	45.33' LT	2770+75.09	45.33' LT
2771+01.68	45.33' RT	2771+07.93	45.33' RT
2771+07.93	45.33' RT	2771+20.4	45.0' RT
2771+53.58	45.33' LT	2771+59.83	45.33' LT
2771+59.83	45.33' LT	2771+72.3	45.0' LT

ITEM 606.369 - GUARDRAIL - REMOVED AND STACKED

STATION	TO STATION	LENGTH
2770+37.4, RT	2770+87.5, RT	50.1'
2770+89.3, LT	2771+39.4, LT	50.1'

ITEM 606.3621 - GUARDRAIL ADJUST - SINGLE RAIL

STATION	TO STATION	LENGTH
2768+26.5, LT	2770+56.4, LT	100'
2768+69.0, RT	2770+04.3, RT	100'
2771+20.4, RT	2775+75.1, RT	450'

ITEM 645.109 - REMOVE AND RESET SIGN

STATION
2770+52, RT

STA. 2770+00.00
BEGIN PROJECT 2014.13
N.B. LIMIT OF PROPOSED PAVEMENT BUTT JOINT
MATCH EXISTING PAVEMENT

Date: 6/19/2014

Filename: ... \00\HIGHWAY\WSTA\HDP\plan_001.dgn

Scale: 25 0 25 50

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	JRH 03/2014	Checked	KSD 03/2014
Drawn	JRH 03/2014	In Charge of	CPT 03/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES

GENERAL SITE PLAN
BRIDGE 28

SHEET NUMBER: P-1
CONTRACT: 2014.13
16 OF 86

ITEM 645.109 - REMOVE AND RESET SIGN

STATION
2833+15, LT



ITEM 606.1721 - BRIDGE TRANSITION - TYPE I

STATION	OFFSET	TO	STATION	OFFSET
2833+04.25	45.33'	LT	2833+24.73	45.33'
2833+13.76	45.33'	RT	2833+34.24	45.33'
2833+63.94	45.33'	LT	2833+84.42	45.33'
2833+73.45	45.33'	RT	2833+93.93	45.33'

ITEM 627.713 - BROKEN WHITE PAVEMENT MARKING LINE

STATION	TO	STATION	LENGTH
2825+25, LT		2842+40, LT	1715'
2828+50, RT		2842+50, RT	1400'

ITEM 627.712 - WHITE OR YELLOW PAVEMENT MARKING LINE

STATION	TO	STATION	TYPE	LENGTH
2825+25, LT		2842+40, LT	TSWEL	1715'
2825+25, LT		2842+40, LT	SYEL	1715'
2828+50, RT		2842+50, RT	TSWEL	1400'
2828+50, RT		2842+50, RT	SYEL	1400'

ITEM 627.77 - REMOVE EXISTING PAVEMENT MARKINGS

STATION	TO	STATION	TYPE	LENGTH
2825+25, LT		2842+40, LT	TSWLL	1685'
2828+25, LT		2841+75, LT	TSYEL	1650'
2828+00, LT		2842+40, LT	TSWEL	1440'
2828+50, RT		2842+50, RT	TSYEL	1400'
2828+50, RT		2842+50, RT	TSWEL	1400'
2828+50, RT		2831+00, RT	TBWLL	65'
2831+25, RT		2836+10, RT	TSWLL	485'
2836+10, RT		2842+50, RT	TBWLL	160'

ITEM 606.1729 - BRIDGE TRANSITION - TYPE I (MODIFIED)

STATION	OFFSET	TO	STATION	OFFSET
2833+03.38	4.00'	LT	2833+28.36	4.00'
2833+68.98	4.00'	LT	2833+93.96	4.00'

ITEM 606.2652 - TERMINAL END - REMOVE AND STACK

STATION
2830+19.80, LT
2835+07.64, LT

ITEM 606.66 - TERMINAL END - THRIE BEAM

STATION
2829+50.00
2831+28.39

OFFSET
4.49' RT
4.70' LT

ITEM 656.632 - 30° TEMPORARY SILT FENCE

STATION	TO	STATION	LENGTH
2828+15, RT		2829+08, RT	107'
2836+59, LT		2837+66, LT	107'

ITEM 606.369 - GUARDRAIL - REMOVED AND STACKED

STATION	TO	STATION	LENGTH
2833+24.7, LT		2833+63.9, LT	39.2'
2833+34.2, RT		2833+73.5, RT	39.3'

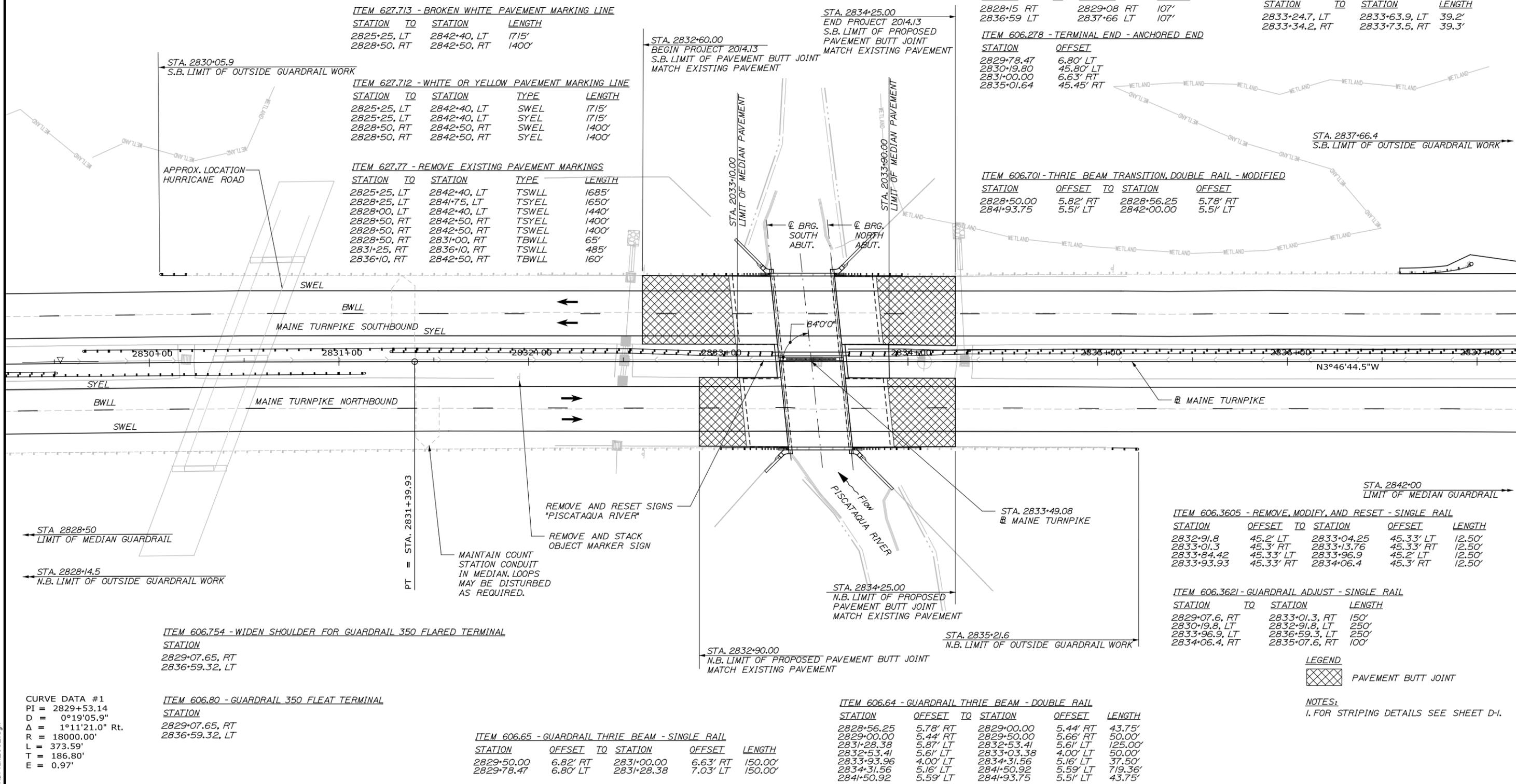
ITEM 606.278 - TERMINAL END - ANCHORED END

STATION	OFFSET
2829+78.47	6.80' LT
2830+19.80	45.80' LT
2831+00.00	6.63' RT
2835+01.64	45.45' RT

ITEM 606.701 - THRIE BEAM TRANSITION, DOUBLE RAIL - MODIFIED

STATION	OFFSET	TO	STATION	OFFSET
2828+50.00	5.82' RT		2828+56.25	5.78' RT
2841+93.75	5.51' LT		2842+00.00	5.51' LT

Date: 6/19/2014



ITEM 606.754 - WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL

STATION
2829+07.65, RT
2836+59.32, LT

ITEM 606.80 - GUARDRAIL 350 FLEAT TERMINAL

STATION
2829+07.65, RT
2836+59.32, LT

ITEM 606.65 - GUARDRAIL THRIE BEAM - SINGLE RAIL

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
2829+50.00	6.82' RT		2831+00.00	6.63' RT	150.00'
2829+78.47	6.80' LT		2831+28.38	7.03' LT	150.00'

ITEM 606.64 - GUARDRAIL THRIE BEAM - DOUBLE RAIL

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
2828+56.25	5.78' RT		2829+00.00	5.44' RT	43.75'
2829+00.00	5.44' RT		2829+50.00	5.66' RT	50.00'
2831+28.38	5.87' LT		2832+53.41	5.61' LT	125.00'
2832+53.41	5.61' LT		2833+03.38	4.00' LT	50.00'
2833+93.96	4.00' LT		2834+31.56	5.16' LT	37.50'
2834+31.56	5.16' LT		2841+50.92	5.59' LT	719.36'
2841+50.92	5.59' LT		2841+93.75	5.51' LT	43.75'

ITEM 606.3605 - REMOVE, MODIFY, AND RESET - SINGLE RAIL

STATION	OFFSET	TO	STATION	OFFSET	LENGTH
2832+91.8	45.2' LT		2833+04.25	45.33' LT	12.50'
2833+01.3	45.3' RT		2833+13.76	45.33' RT	12.50'
2833+84.42	45.33' LT		2833+96.9	45.2' LT	12.50'
2833+93.93	45.33' RT		2834+06.4	45.3' RT	12.50'

ITEM 606.3621 - GUARDRAIL ADJUST - SINGLE RAIL

STATION	TO	STATION	LENGTH
2829+07.6, RT		2833+01.3, RT	150'
2830+19.8, LT		2832+91.8, LT	250'
2833+96.9, LT		2836+59.3, LT	250'
2834+06.4, RT		2835+07.6, RT	100'

LEGEND



NOTES:

1. FOR STRIPING DETAILS SEE SHEET D-1.



No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	JRH	03/2014	In Charge of	CPT	03/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**GENERAL SITE PLAN
BRIDGE 31**

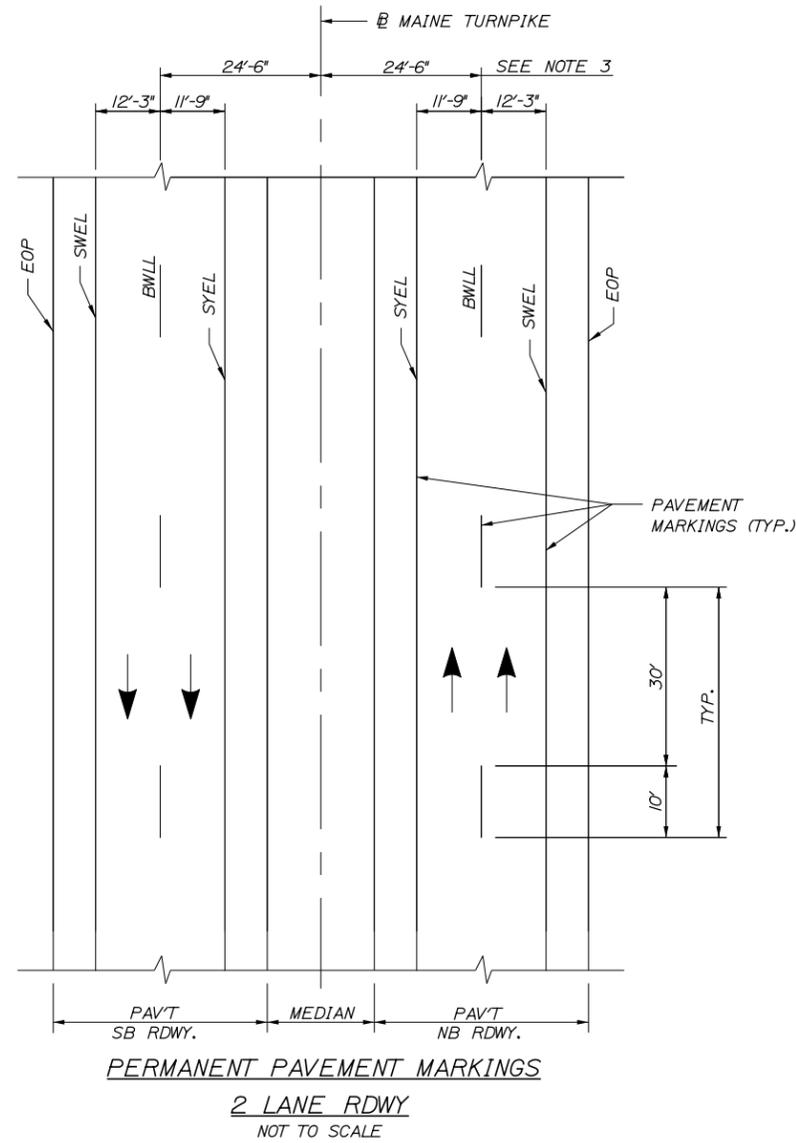
CONTRACT: 2014.13

SHEET NUMBER: P-2

17 OF 86

Filename: ...\\00\HIGHWAY\MSTA\HDP\plan_002.dgn

Date: 6/19/2014



NOTES:

1. PERMANENT PAVEMENT MARKINGS SHALL BE 6" WIDE LINES.
2. PERMANENT PAVEMENT MARKINGS SHALL BE INSTALLED ON BOTH ROADWAYS.
3. THE OFFSET DISTANCE SHOWN ARE MEASURED FROM THE CENTER OF THE 6" PAINT LINES.

LEGEND

- SYEL = SOLID YELLOW EDGE LINE (6" PAINT)
- SWEL = SOLID WHITE EDGE LINE (6" PAINT)
- BWLL = BROKEN WHITE LANE LINE (6" PAINT)
- EOP = EDGE OF PAVEMENT

Filename: ... \00\HIGHWAY\MSTA\xxx_P-4.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	SAM	03/2014	In Charge of	CPT	03/2014

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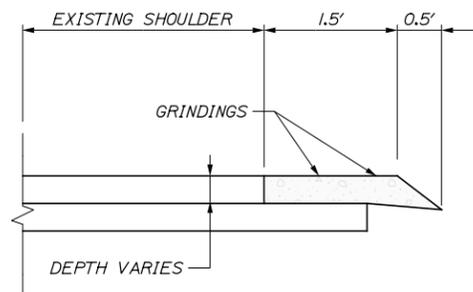


THE GOLD STAR
MEMORIAL HIGHWAY

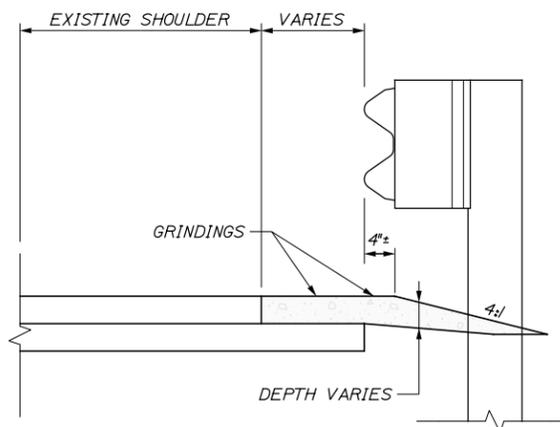
MTA PROJECT MANAGER: RALPH NORWOOD

<p>BRIDGE REHABILITATION PISCATAQUA RIVER BRIDGES STRIPING DETAILS</p>
<p>SHEET NUMBER: P-3 18 OF 86</p>
<p>CONTRACT: 2014.13</p>

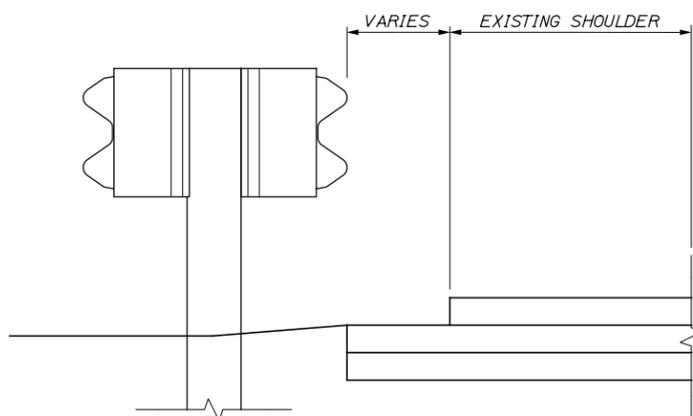
Date: 6/19/2014



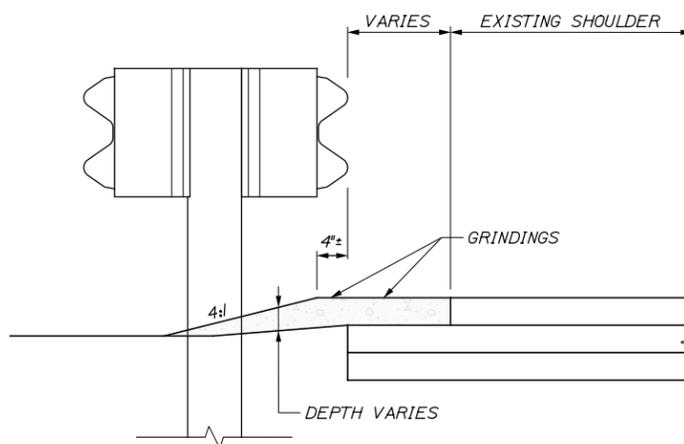
BERM DROPOFF CORRECTION WITHOUT GUARDRAIL
NOT TO SCALE



BERM DROPOFF CORRECTION WITH GUARDRAIL RIGHT OUTSIDE OF SHOULDER
NOT TO SCALE



EXISTING SECTION



PROPOSED SECTION

BERM DROPOFF CORRECTION WITH GUARDRAIL MEDIAN GUARDRAIL
NOT TO SCALE

BERM DROPOFF CORRECTIONS:

STA		SHOULDER	
BEGIN	END	LEFT	RIGHT
2772+50	2774+50	NB	X
2774+50	2776+50	SB	X
2832+50	2835+50	NB	X
2833+50	2835+50	SB	X

- NOTES:
- SEE BERM DROPOFF CORRECTION TABLE FOR LOCATIONS.
 - LEFT AND RIGHT ARE SPECIFIC TO WHETHER TRAVELING NB OR SB.

Filename: ...MSTA\XXX_berm_dropoff_corr.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
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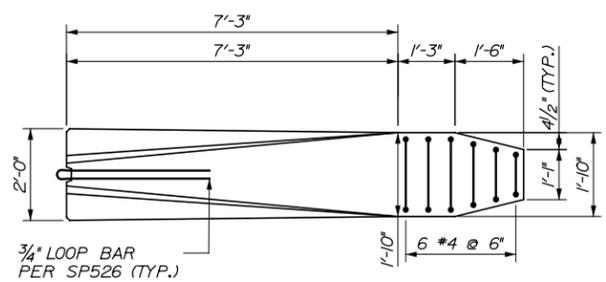
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

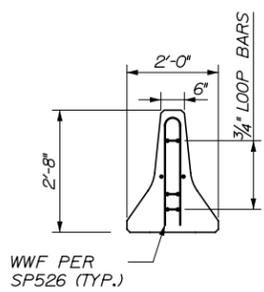
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
BERM DROPOFF CORRECTION DETAILS**

SHEET NUMBER: G-1
CONTRACT: 2014.13
19 OF 86

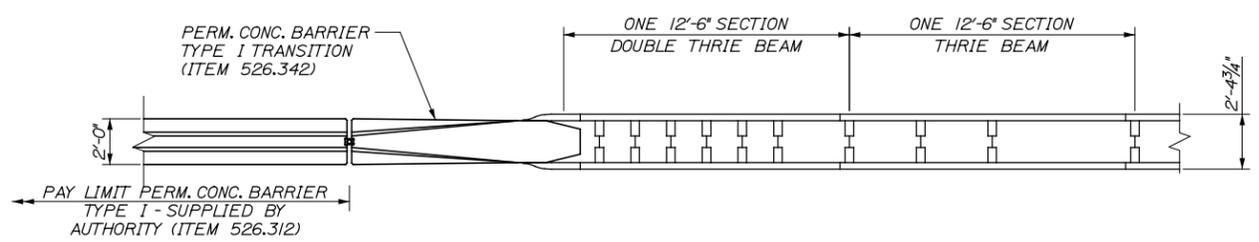
Date: 6/19/2014



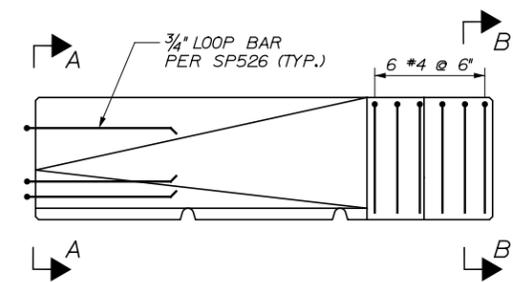
PLAN - MEDIAN BARRIER TRANSITION
NTS



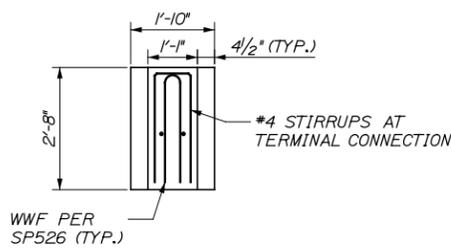
SECTION A-A
NTS



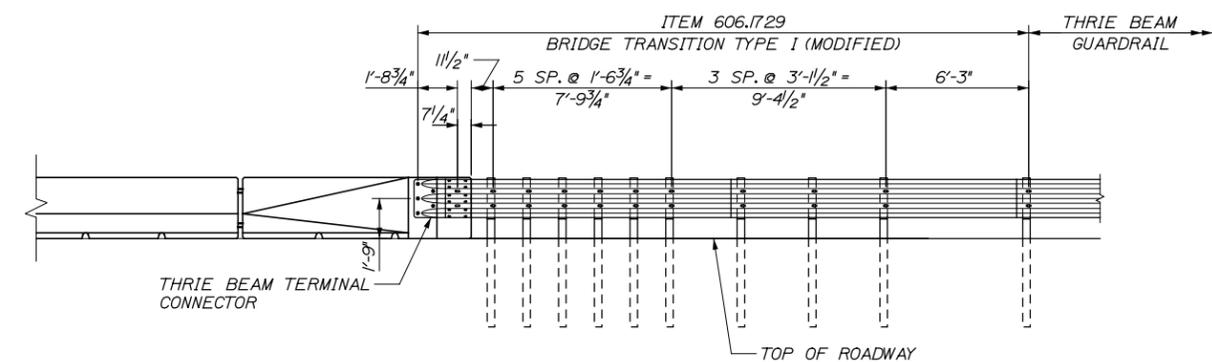
PLAN - MEDIAN BARRIER
NTS



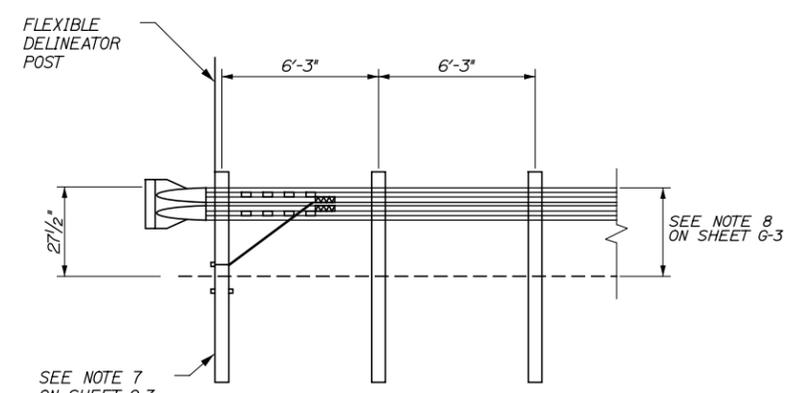
ELEVATION - MEDIAN BARRIER TRANSITION
NTS



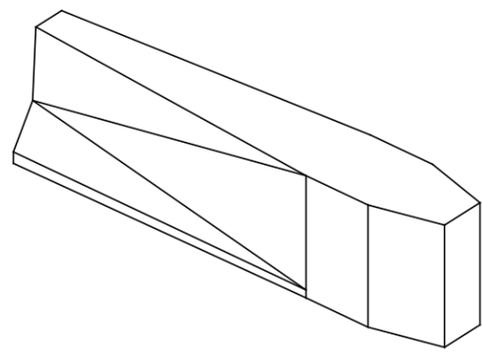
SECTION B-B
NTS



BRIDGE TRANSITION TYPE I (MODIFIED)
NTS



TERMINAL END - ANCHORED END
(ITEM 606.278)
NTS



MEDIAN BARRIER TRANSITION ISOMETRIC
NTS

MEDIAN TRANSITION NOTES

1. FOR ADDITIONAL BRIDGE TRANSITION DETAILS, SEE MAINEDOT STANDARD DETAIL 606(25-27).
2. FOR THRIE BEAM ANCHORAGE, SEE MAINEDOT STANDARD DETAIL 526(23).
3. FOR PERMANENT CONCRETE MEDIAN BARRIER, SEE SPECIAL PROVISION 526.
4. REINFORCEMENT IN THE CONCRETE TRANSITION SHALL BE INCIDENTAL.

Filename: ... \HIGHWAY \MSTA \Misc \Details.dgn

Scale: NOT TO SCALE			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	CPT 03/2014	Checked	JRH 03/2014
Drawn	PJB 03/2014	In Charge of	CPT 03/2014

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

GUARDRAIL DETAILS

SHEET NUMBER: G-2
CONTRACT: 2014.13
20 OF 86

GUARDRAIL EARTHWORK AND PAVEMENT NOTES

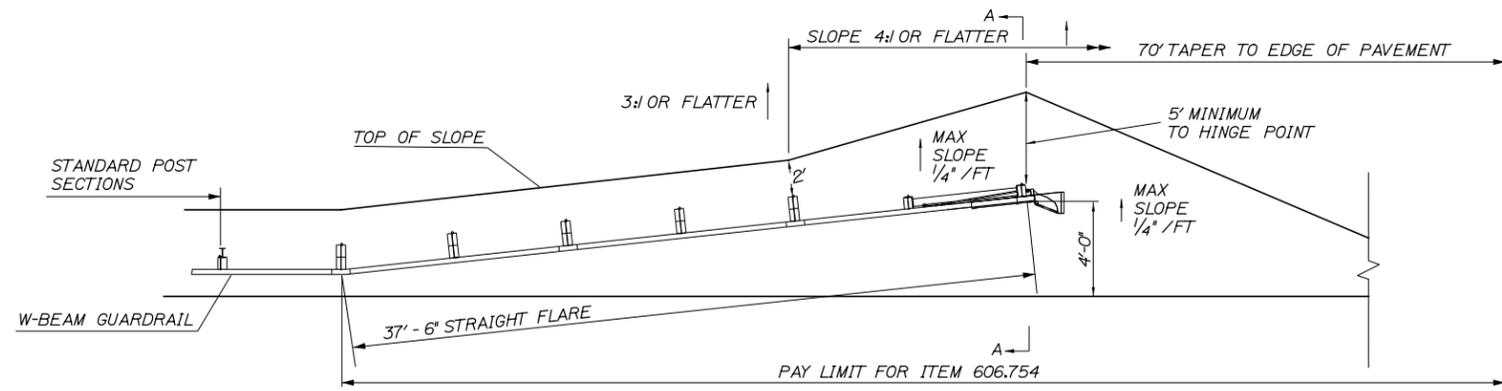
1. ALL EARTHWORK AND PAVEMENT ASSOCIATED WITH GUARDRAIL INSTALLATIONS AND/OR MODIFICATIONS FOR THIS CONTRACT SHALL BE INCIDENTAL TO THE GUARDRAIL ITEMS UNLESS OTHERWISE NOTED.
2. ALL DISTURBED AREAS DUE TO THE WORK PERFORMED UNDER THIS CONTRACT FOR GUARDRAIL REPAIRS, MODIFICATION AND/OR INSTALLATIONS SHALL BE REPAIRED AND RESTORED TO ORIGINAL CONDITION. GRASSED AREAS SHALL RECEIVE 4" OF LOAM, SEED, FERTILIZER AND MULCH. IN PAVED AREAS, SUBBASE GRAVEL SHALL BE REPLACED AND RECOMPACTED WITH MAINE DOT TYPE-D GRAVEL AND HOT MIX ASPHALT TO A THICKNESS TO MATCH SURROUNDING PAVEMENT.
3. COMPACTION OF EARTH AND/OR SUBBASE GRAVEL AROUND GUARDRAIL POSTS DISTURBED DURING THE WORK IS REQUIRED. ALL POSTS SHALL BE PLUMB AFTER COMPACTION.
4. EXCAVATION NECESSARY TO MAINTAIN DRAINAGE WAYS OUTSIDE OF THE FLEAT 350 WIDENING OR THE SHOULDER WIDENING WORK AREA SHALL BE PAID FOR UNDER ITEM 631.12 ALL PURPOSE EXCAVATOR AS APPROVED BY THE RESIDENT ENGINEER. EXCAVATED MATERIAL SHALL BE USED TO GRADE ANY PROPOSED SLOPE AREA OUTSIDE OF 1:1 SLOPE LIMIT OR USED TO FLATTEN SLOPES OUTSIDE THE WORK AREA AS APPROVED BY THE RESIDENT. PLACEMENT AND COMPACTION OF THE EXCAVATED MATERIAL WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.
5. SLOPES CONSTRUCTED FROM THE ABOVE NOTED EXCAVATED MATERIAL SHALL BE LOAMED, SEEDED AND MULCHED. LOAM, SEED AND MULCH WILL NOT BE MEASURED FOR PAYMENT AND SHALL BE INCIDENTAL TO ITEM 606.754.
6. IF LEDGE IS ENCOUNTERED DURING EXCAVATION AND IF APPROVED BY THE RESIDENT, AN 18" UNDERDRAIN - TYPE C WRAPPED IN GEOTEXTILE, MAY BE INSTALLED IN THE EXISTING DITCH LINE TO MAINTAIN DRAINAGE WITH RIPRAP OUTLETS. THE ENDS SHALL BE CUT AND THE SLOPE GRADED TO CREATE A 4:1 SLOPE AT BOTH THE ENTERING AND EXITING ENDS OF THE PIPE. ALL WORK AND ITEMS REQUIRED TO INSTALL THE PIPE SHALL BE INCIDENTAL TO ITEM 606.754.

GUARDRAIL INSTALLATION AND MODIFICATION NOTES

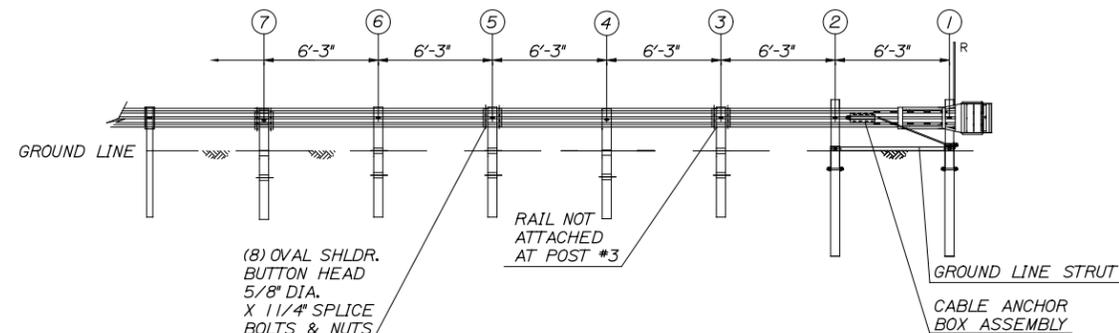
1. THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE INSTALLATION AND/OR MODIFICATION OF ANY AND ALL GUARDRAIL COMPONENTS TO BE INSTALLED UNDER THIS CONTRACT. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER IF THE CONTRACTOR DISCOVERS CONFLICTS OR IRREGULARITIES OF ANY SORT BETWEEN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THESE CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASH END TREATMENT ON ALL GUARDRAIL ENDS IN ALL WORK AREAS AT THE END OF EACH DAY. THE CONTRACTOR SHALL ENSURE THAT ENOUGH TIME EXISTS IN THE WORK DAY TO COMPLETE ALL MODIFICATIONS AND/OR INSTALLATIONS TO END TERMINALS. THE CONTRACTOR SHALL ENSURE THAT ALL PARTS AND MANPOWER ARE ON-SITE PRIOR TO UNDERTAKING ANY GUARDRAIL MODIFICATIONS.
3. W-BEAM GUARDRAIL HEIGHT SHALL BE INSTALLED OR ADJUSTED TO 30" ± 0", -1/2" HEIGHT. THRIE BEAM GUARDRAIL HEIGHT SHALL BE INSTALLED TO 32" ± 0", -1/2" HEIGHT. GUARDRAIL HEIGHT SHALL BE MEASURED FROM THE EDGE OF PAVEMENT WHEN WITHIN 2 FEET. IF GUARDRAIL IS OFFSET FROM EDGE OF PAVEMENT GREATER THAN 2 FEET, THEN HEIGHT OF RAIL SHALL BE MEASURED AT GROUND ELEVATION ADJACENT TO EACH POST BELOW THE RAIL TO THE TOP OF GUARDRAIL AND AFTER FINAL GRADING OF SHOULDER.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CUT BOLTS, DISCARDED PARTS, TRASH, PAVEMENT DEBRIS, ETC., AFTER COMPLETING GUARDRAIL MODIFICATIONS AND/OR INSTALLATIONS.
5. CONNECTIONS FOR PROPOSED RAIL TO EXISTING RAIL SHALL BE INCIDENTAL TO THE INSTALLATION OF PROPOSED GUARDRAIL.
6. FLEAT 350 TERMINALS INSTALLED UNDER THIS CONTRACT SHALL BE INSTALLED AT A HEIGHT OF 27.5' AT THE TERMINAL HEAD AND TRANSITIONING UP TO THE REQUIRED HEIGHT OF RAIL OF 30" ± 0", -1/2" OVER A 25 LINEAR FOOT LENGTH. HEIGHT OF FLEAT 350 RAIL SHALL BE MEASURED FROM THE GROUND ELEVATION UNDER THE FLEAT RAIL PANELS TO THE TOP OF THE RAIL.
7. SOIL ANCHOR TUBES INSTALLED AS PART OF FLEAT OR TRAILING TERMINAL ENDS SHALL NOT PROTRUDE FROM THE GROUND MORE THAN 3 1/2". ADDITIONAL SITE GRADING MAY BE REQUIRED TO ADJUST SOIL TUBE REVEAL AND IF REQUIRED SHALL NOT DIRECT STORMWATER SURFACE DRAINAGE TOWARDS THE SHOULDER OR TRAVEL WAY. ADDITIONAL SITE GRADING SHALL BE INCIDENTAL TO THE END TERMINAL INSTALLATION.
8. TRANSITION RAIL HEIGHT ON TERMINAL END-ANCHORED ENDS FROM 27 1/2" AT THE END OF THE RAIL TO 30" HEIGHT OVER A 25 LINEAR FOOT LENGTH.
9. ALL DAMAGE TO GUARDRAIL COMPONENTS RESULTING FROM ADJUSTMENTS MADE TO THE GUARDRAIL SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE AUTHORITY.

EROSION

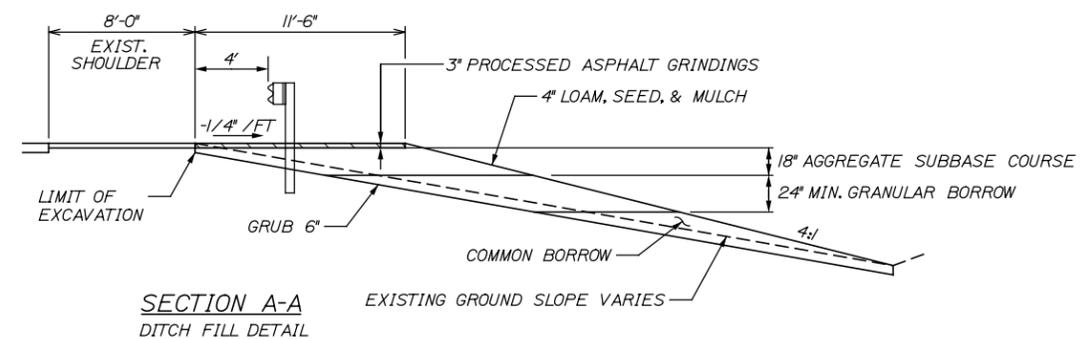
1. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL DISTURBED 2:1 SLOPES, IN THE FLOW LINE OF ALL DISTURBED DITCHES AFTER LOAM AND SEED HAVE BEEN INSTALLED, AND/OR AS DIRECTED BY THE RESIDENT AND SHALL BE INCIDENTAL TO ITEM 606.754.



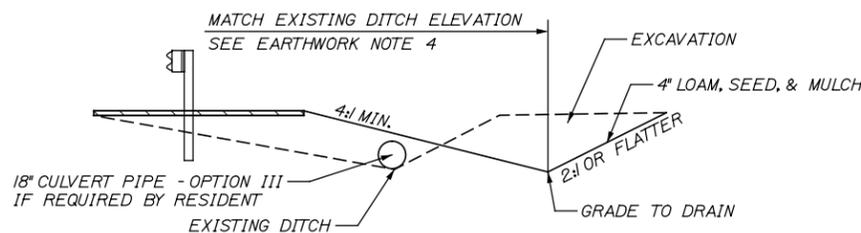
**WIDEN SHOULDER FOR GUARDRAIL 350 FLARED TERMINAL - ITEM 606.754
PLAN**



**ELEVATION
GUARDRAIL 350 FLEAT TERMINAL**



**SECTION A-A
DITCH FILL DETAIL**



**SECTION A-A
DITCH CUT DETAIL**

Date: 6/19/2014

Filename: ...\\00\HIGHWAY\WSTA\XXX\FLEAT.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	PJB	03/2014	In Charge of	CPT	03/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

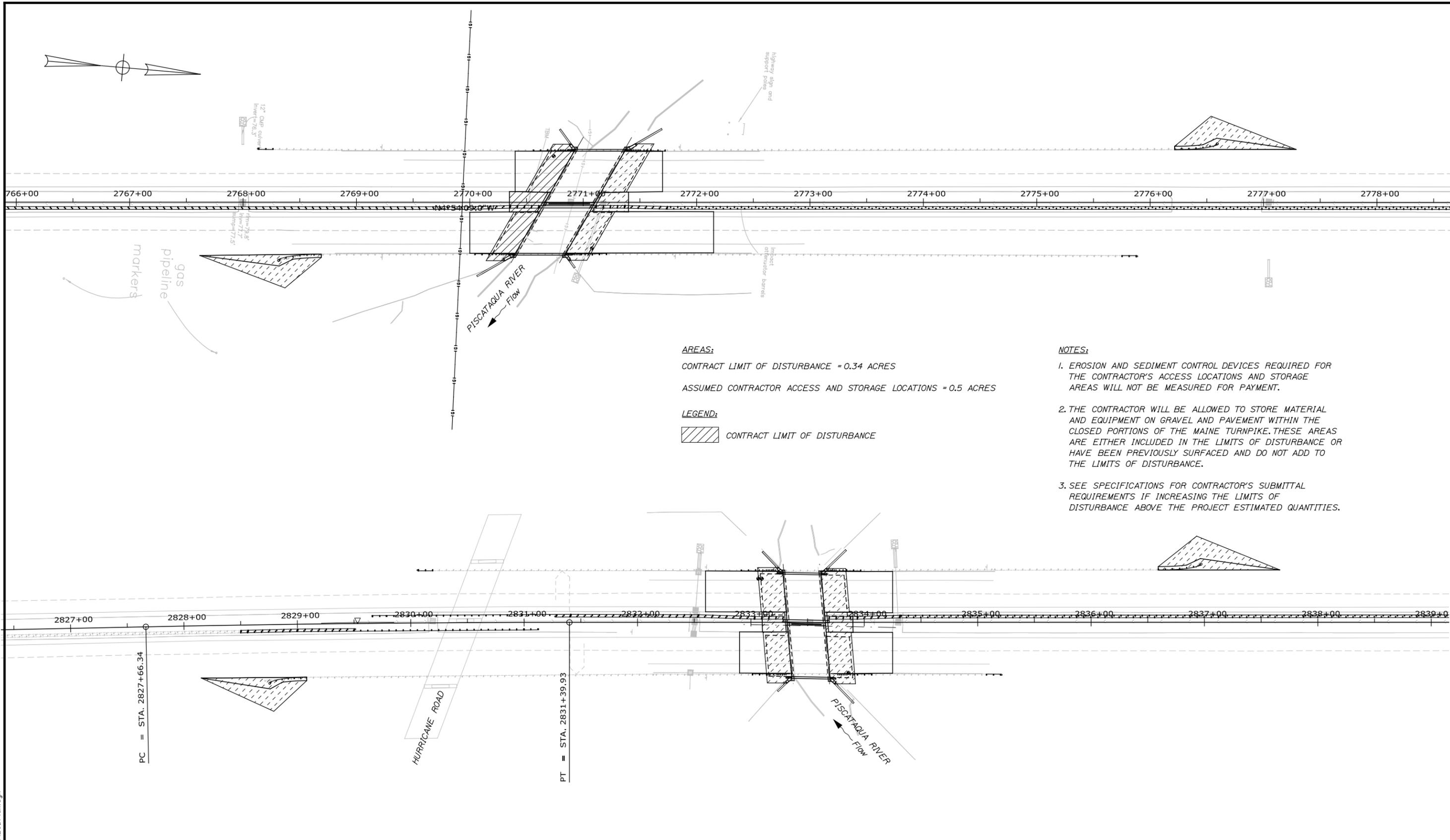
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
GUARDRAIL GENERAL NOTES AND
SHOULDER WIDENING DETAILS**

SHEET NUMBER: G-3
CONTRACT: 2014.13
21 OF 86

Date: 6/19/2014

Filename: ... \00\HIGHWAY\MSTA\LODPlan.dgn



AREAS:
 CONTRACT LIMIT OF DISTURBANCE = 0.34 ACRES
 ASSUMED CONTRACTOR ACCESS AND STORAGE LOCATIONS = 0.5 ACRES

LEGEND:
 CONTRACT LIMIT OF DISTURBANCE

- NOTES:**
1. EROSION AND SEDIMENT CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.
 2. THE CONTRACTOR WILL BE ALLOWED TO STORE MATERIAL AND EQUIPMENT ON GRAVEL AND PAVEMENT WITHIN THE CLOSED PORTIONS OF THE MAINE TURNPIKE. THESE AREAS ARE EITHER INCLUDED IN THE LIMITS OF DISTURBANCE OR HAVE BEEN PREVIOUSLY SURFACED AND DO NOT ADD TO THE LIMITS OF DISTURBANCE.
 3. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF INCREASING THE LIMITS OF DISTURBANCE ABOVE THE PROJECT ESTIMATED QUANTITIES.

Scale: 40 0 40 80

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	JRH	03/2014	Checked	KSD	03/2014
Drawn	PJB	04/2014	In Charge of	CPT	03/2014

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 LIMIT OF DISTURBANCE PLAN**

SHEET NUMBER: L-1
 CONTRACT: 2014.13
 22 OF 86

SPECIFICATIONS

DESIGN
 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
 6TH EDITION

CONSTRUCTION
 STATE OF MAINE DEPARTMENT OF TRANSPORTATION
 STANDARD DETAILS FOR HIGHWAYS AND BRIDGES,
 DECEMBER 2002 WITH LATEST REVISIONS

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS,
 THIRD EDITION WITH 2010 INTERIMS

DESIGN LOADING

LIVE LOAD
 HL-93

MATERIALS

CONCRETE
 PRECAST BEAMS SHALL BE CLASS P
 ALL OTHER CONCRETE SHALL BE CLASS AAA, U.O.N.

REINFORCING STEEL
 AASHTO M31, GRADE 60
 ALL REINFORCEMENT, EXCEPT IN APPROACH SLABS,
 SHALL BE EPOXY-COATED

PRESTRESSING STRANDS
 AASHTO M203 (ASTM A416), GRADE 270, LOW RELAXATION

BASIC DESIGN STRESSES

CONCRETE
 CLASS P, $f_{c1} = 4,000$ P.S.I.
 $f_c = 6,500$ P.S.I.
 CLASS AAA, $f_c = 4,500$ P.S.I.

REINFORCING STEEL
 $f_y = 60,000$ P.S.I.

PRESTRESSING STRANDS
 $f_{pu} = 270,000$ P.S.I.

NOTES

- THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.
- FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, DECEMBER 2002 WITH UPDATES.
- COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. A PORTION OF THESE PLANS IS INCLUDED IN THIS CONTRACT FOR THE CONTRACTOR'S CONVENIENCE. THE COMPLETENESS AND ACCURACY OF THESE PLANS ARE NOT GUARANTEED.
- REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" MIN., UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.
- ALL BRIDGE PARAPET AND END POST CONCRETE FACES, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES.
- WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINE DOT PREQUALIFIED LIST OF CHEMICAL 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 12" FOR #6 BARS. THE CONTRACTOR SHALL VERIFY THE REQUIRED DEPTH OF EMBEDMENT AND ADJUST THE BAR LENGTHS AS REQUIRED.
- PAYMENT FOR DRILLING AND ANCHORING OF REINFORCING STEEL IS INCIDENTAL TO ITEM 503.15, EPOXY-COATED REINFORCING STEEL, PLACING.
- THE EXISTING BRIDGE SUPERSTRUCTURE, PORTIONS OF CONCRETE ABUTMENT NECESSARY TO COMPLETE THE PROPOSED WORK, AND ANY OTHER STRUCTURE PORTIONS NOTED IN THE PLAN SET SHALL BE REMOVED BY, AND BECOME THE PROPERTY OF, THE CONTRACTOR. EXISTING HEAVY TIMBER SHORING SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR AND REMAIN THE PROPERTY OF THE AUTHORITY. CONCRETE ABUTMENTS AND WINGWALLS SHALL BE REMOVED TO THE LIMITS NOTED SHOWN IN THE PLANS. REMOVAL OF THE SUPERSTRUCTURE AS DESCRIBED, INCLUDING THE HEAVY TIMBER SHORING, SHALL BE INCIDENTAL TO ITEM 202.10 - REMOVING EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR. REMOVAL OF THE SUBSTRUCTURE CONCRETE AS DESCRIBED SHALL BE PAID UNDER ITEM 202.12 - REMOVING EXISTING STRUCTURAL CONCRETE.
- THE CONTRACTOR SHALL SUBMIT A BRIDGE DEMOLITION PLAN TO THE RESIDENT AT LEAST 10 BUSINESS DAYS PRIOR TO THE START OF DEMOLITION WORK. THE PLAN SHALL OUTLINE THE METHODS AND EQUIPMENT TO BE USED TO REMOVE AND DISPOSE OF ALL MATERIALS INCLUDED IN THE EXISTING BRIDGE. NO WORK RELATED TO THE REMOVAL OF THE BRIDGE SHALL BE UNDERTAKEN BY THE CONTRACTOR UNTIL THE RESIDENT HAS REVIEWED THE BRIDGE DEMOLITION PLAN FOR APPROPRIATENESS AND COMPLETENESS. PAYMENT FOR ALL WORK NECESSARY FOR DEVELOPING, SUBMITTING AND FINALIZING THE DEMOLITION PLAN WILL BE CONSIDERED INCIDENTAL TO ITEM 202.10 REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF CONTRACTOR.
- THE STEEL PORTIONS OF THE EXISTING BRIDGE ARE COATED WITH A LEAD-BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF DEMOLISHING THE BRIDGE. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS. ONCE THE EXISTING BRIDGE IS REMOVED, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CARE, CUSTODY, AND CONTROL OF THE COMPONENTS OF THE EXISTING BRIDGE AND ANY HAZARDOUS WASTE GENERATED AS A RESULT OF THE STORAGE, RECYCLING, OR DISPOSAL OF THE BRIDGE COMPONENTS, INCLUDING LEAD-COATED STEEL. THE CONTRACTOR SHALL RECYCLE OR REUSE THE STEEL IN ACCORDANCE WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S "MAINE HAZARDOUS WASTE MANAGEMENT REGULATIONS", CHAPTER 850. A COPY OF THIS REGULATION IS AVAILABLE AT MAINE DOT'S OFFICES ON CHILD STREET IN AUGUSTA. PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT AND OTHER COSTS REQUIRED TO REMOVE AND DISPOSE OF THE EXISTING BRIDGE WILL BE CONSIDERED INCIDENTAL TO ITEM 202.10 REMOVING EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR.
- CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
 - EXPOSED SURFACES OF THE PARAPETS AND PERMANENT CONCRETE BARRIER;
 - VERTICAL FACES OF THE FASCIA BEAMS EXTENDING BENEATH THE BEAMS TO THE DRIP NOTCH;
 - EXPOSED SURFACES OF THE EXISTING AND PROPOSED ABUTMENTS AND WINGWALLS, ABOVE THE WATERLINE.
- EXISTING STEEL ROCKER BEARINGS IN SATISFACTORY CONDITION SHALL BE SALVAGED AS DESCRIBED IN SP 523. BEARINGS NOT SALVAGED SHALL BE INCLUDED IN ITEM 202.10. REMOVE EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR. FOR ESTIMATE PURPOSES IT IS ASSUMED THAT BEARINGS UNDER INTERIOR BEAMS WILL BE SALVAGED AND THOSE UNDER FASCIA BEAMS WILL NOT.

LIST OF ABBREVIATIONS

ABUT.	ABUTMENT
ADDL.	ADDITIONAL
ALT.	ALTERNATE
APPROX.	APPROXIMATE
BOT.	BOTTOM
BRG.	BEARING
CL.	CLEAR
CL.	CENTERLINE
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
DEMO.	DEMOLITION
DIA.	DIAMETER
DIAPH.	DIAPHRAGM
EA.	EACH
EB.	EASTBOUND
E.F.	EACH FACE
EL.	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FAR FACE
JT.	JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
MTA	MAINE TURNPIKE AUTHORITY
NB.	NORTHBOUND
N.F.	NEAR FACE
N.T.S.	NOT TO SCALE
O.H.W.	ORDINARY HIGH WATER
PED.	PEDESTAL
PGL	PROFILE GRADE LINE
PL.	PLATE
PROP.	PROPOSED
RDWY.	ROADWAY
SHLD.	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

ESTIMATED QUANTITIES			
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY
202.10	REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF CONTRACTOR	LS	1
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	CY	52
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY	CY	310
403.208	HOT MIX ASPHALT, 12.5 MM NOMINAL SIZE, SURFACE	TON	120
409.15	BITUMINOUS TACK COAT, APPLIED	GAL	18
502.210	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	CY	70
502.264	STRUCTURAL CONCRETE, PARAPETS	LS	1
502.445	STRUCTURAL CONC WEARING SURFACE ON BRIDGES - SYNTHETIC FIBER REINF	CY	44
502.45	STRUCTURAL CONCRETE APPROACH SLAB	CY	150
502.64	BRIDGE TRENCH DRAIN	EA	1
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	LB	17100
503.13	REINFORCING STEEL, PLACING	LB	17100
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB	9500
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB	9500
503.17	MECHANICAL/WELDED SPLICE	EA	88
507.0911	ALUMINUM BRIDGE RAILING, 1 BAR (BRIDGE 28)	LS	1
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	LS	1
511.091	TEMPORARY EARTH SUPPORT SYSTEMS	LS	1
514.06	CURING BOX FOR CONCRETE CYLINDER	EA	1
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	SY	550
518.10	ABUTMENT REPAIRS	SF	55
523.521	BEARING REMOVAL	EA	24
524.40	PROTECTIVE SHIELDING - STEEL GIRDERS	SY	500
526.312	PERMANENT CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY	LF	30
526.342	PERMANENT CONCRETE BARRIER, TYPE I TRANSITION	EA	2
535.601	PRESTRESSED STRUCTURAL CONCRETE SLAB (BRIDGE 28)	LS	1
609.15	SLOPED CURB TYPE I	LF	110

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26	BORING LOGS II - BRIDGE 28	S28-04
27	BRIDGE PHASING I - BRIDGE 28	S28-05
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39	LEVELING SLAB PLAN - BRIDGE 28	S28-17
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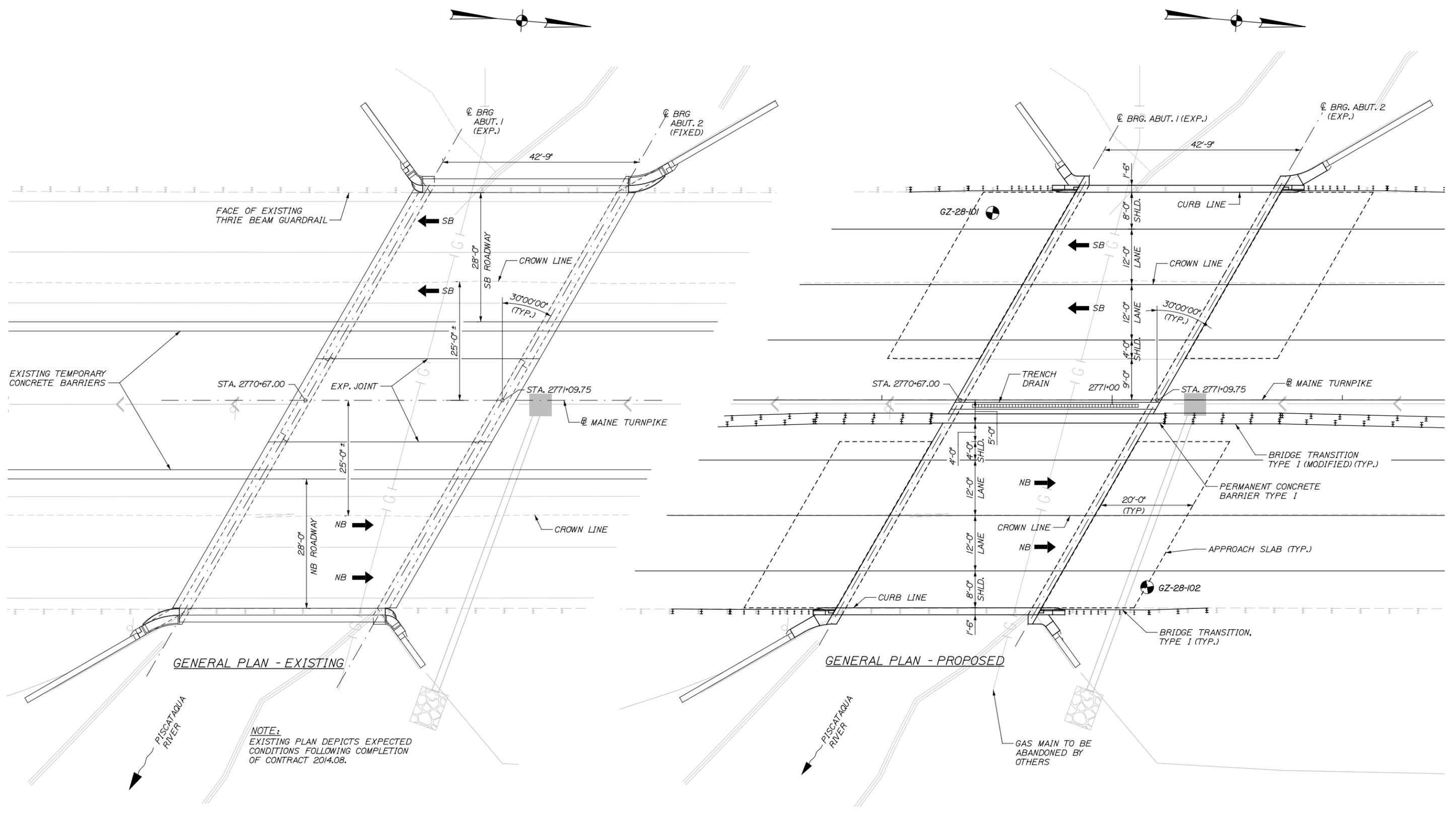
Date: 6/19/2014

Filename: ... \BRIDGE\MSTA\023_index_E28.dgn

Scale: <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													Designed by: <div style="text-align: center;">  </div> CONSULTANT PROJECT MANAGER: Chris Taylor <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>SBK 06/2014</td> <td>Checked</td> <td>CPT 06/2014</td> </tr> <tr> <td>Drawn</td> <td>BGC 06/2014</td> <td>In Charge of</td> <td>CPT 06/2014</td> </tr> </tbody> </table>	By	Date	By	Date	Designed	SBK 06/2014	Checked	CPT 06/2014	Drawn	BGC 06/2014	In Charge of	CPT 06/2014	T.Y. Lin International 12 Northbrook Drive Building A, Suite One Falmouth, Maine 04105 TEL: (207) 781-4721 FAX: (207) 781-4753		<div style="font-size: 24px; font-weight: bold; margin-bottom: 10px;">THE GOLD STAR</div> <div style="font-size: 24px; font-weight: bold;">MEMORIAL HIGHWAY</div>	BRIDGE REHABILITATION PISCATAQUA RIVER BRIDGES BRIDGE INDEX, QUANTITIES, AND NOTES - BRIDGE 28 SHEET NUMBER: S28-01 CONTRACT: 2014.13 23 OF 86
No.	Revision	By	Date																														
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Designed	SBK 06/2014	Checked	CPT 06/2014																														
Drawn	BGC 06/2014	In Charge of	CPT 06/2014																														

Date: 6/19/2014

Filename: ...MSTA\024_Gen Plan Elev_B28.dgn



NOTE:
EXISTING PLAN DEPICTS EXPECTED
CONDITIONS FOLLOWING COMPLETION
OF CONTRACT 2014.08.

Scale: 1" = 10'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**GENERAL PLAN
 BRIDGE 28**

CONTRACT: 2014.13

SHEET NUMBER: S28-02
 24 OF 86

Date: 6/19/2014

Filename: ...MSTA\025_Boring_Logs_1_BZ8.dgn

TEST BORING LOG														
GZA GeoEnvironmental, Inc. Engineers and Scientists		Maine Turnpike Authority Piscataqua River Bridges MM 55.5 Falmouth, Maine			EXPLORATION NO.: GZ-28-101 SHEET: 1 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Bub Thompson		Type of Rig: CME 550 X Rig Model: ATV Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 83.1 Final Boring Depth (ft.): 79 Date Start - Finish: 2/15/2013 - 2/19/2013		H. Datum: NAVD88	
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing		Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX		Date		Time		Water Depth		Stab. Time				
Date		Time		Water Depth		Stab. Time								
2/19/13		0930		8.4'		3.5 days								
2/19/13		1400		14.7'		0.5 hrs.								
Depth (ft)	Casing Core Rate	Sample				Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Description	Depth (ft)	Elev. (ft)	
		No.	Depth (ft)	Pen. (in)	Rec. (in)									
1.0-3.0	S1	24	17	30	20	42	S1: Dense, brown-tan, fine to coarse SAND, little Gravel, trace Silt, dry.				1.2	PAVEMENT	81.9	
5.0-7.0	S2	24	16	3	3	6	S2: Loose, brown-tan, fine to medium SAND, trace Silt, dry.							
10.0-12.0	S3	24	17	5	6	10	S3: Loose, brown, fine to coarse SAND, some Gravel, trace Silt, moist.				1	FILL		
15.0-17.0	S4	24	6	1	1	2	S4: Very loose, brown, fine to coarse SAND, little Gravel, wet. (Silty clay in tip.)							
20.0-22.0	S5	24	11	3	4	8	S5: Top 7": Medium stiff, gray, Silty CLAY, wet. Bottom 4": Loose, gray, fine SAND, little Silt, wet.					20.7	MARINE CLAY	62.4
25.0-27.0	S6	24	11	10	5	6	S6: Medium dense, gray, fine SAND, little Silt, wet.							
20												63.1		
REMARKS 1 - Boring advanced using HSA for first 10 feet bgs. Switched to Drive & Wash drilling techniques at 10 feet bgs.														
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.												Exploration No.: GZ-28-101		

TEST BORING LOG														
GZA GeoEnvironmental, Inc. Engineers and Scientists		Maine Turnpike Authority Piscataqua River Bridges MM 55.5 Falmouth, Maine			EXPLORATION NO.: GZ-28-101 SHEET: 2 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Bub Thompson		Type of Rig: CME 550 X Rig Model: ATV Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 83.1 Final Boring Depth (ft.): 79 Date Start - Finish: 2/15/2013 - 2/19/2013		H. Datum: NAVD88	
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing		Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX		Date		Time		Water Depth		Stab. Time				
Date		Time		Water Depth		Stab. Time								
2/19/13		0930		8.4'		3.5 days								
2/19/13		1400		14.7'		0.5 hrs.								
Depth (ft)	Casing Core Rate	Sample				Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Description	Depth (ft)	Elev. (ft)	
		No.	Depth (ft)	Pen. (in)	Rec. (in)									
30.0-32.0	S7	24	13	2	7	16	S7: Medium dense, brown, fine SAND, little Silt, wet.							
35.0-37.0	S8	24	5	5	7	15	S8: Medium dense, brown, fine to coarse SAND, little Silt, wet.							
40.0-42.0	S9	24	14	3	4	9	S9: Loose, gray, fine to coarse SAND, trace Silt, wet.							
45.0-47.0	S10	24	5	3	3	6	S10: Loose, gray, fine to coarse SAND, little Gravel, trace Silt, wet.					MARINE SAND		
50.0-52.0	S11	24	6	5	4	9	S11: Loose, brown, fine to coarse SAND and Gravel, trace Silt, wet.							
55.0-57.0	S12	24	8	3	2	6	S12: Loose, brown, fine to coarse SAND, some Gravel, trace Silt, wet.							
REMARKS 2 - Casing advanced to 68'. Advanced roller bit to 69' and began coring. 3 - Rock Quality Designation (ROD) is provided in percent, with total ROD length in inches shown in parentheses below.														
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.												Exploration No.: GZ-28-101		

TEST BORING LOG														
GZA GeoEnvironmental, Inc. Engineers and Scientists		Maine Turnpike Authority Piscataqua River Bridges MM 55.5 Falmouth, Maine			EXPLORATION NO.: GZ-28-101 SHEET: 3 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Bub Thompson		Type of Rig: CME 550 X Rig Model: ATV Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 83.1 Final Boring Depth (ft.): 79 Date Start - Finish: 2/15/2013 - 2/19/2013		H. Datum: NAVD88	
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		No.	Depth (ft)	Pen. (in)	Rec. (in)									
60.0-62.0	S13	24	16	7	12	31	S13: Top 6": Brown, fine to coarse SAND, little Gravel, trace Silt, wet. Bottom 10": Dense, brown, fine to coarse SAND, some Gravel, little Silt.							
65.0-67.0	S14	24	5	15	12	19	S14: Medium dense, brown, fine to coarse SAND, some Gravel, little Silt, wet.							
69.0-74.0	R1	60	60	ROD = 82 (49%)			R1: Hard, fresh, fine to medium grained, gray BIOTITE GRANITE. Joints are very close to moderately spaced, low angle, undulating, rough, fresh, partially open to open, occasional sand infilling. White-gray Pegmatite fingerings throughout (1/4" to 1" wide).							
74.0-79.0	R2	60	60	ROD = 92 (55%)			R2: Hard, fresh, fine to medium grained, gray-green BIOTITE GRANITE. Joints are close to moderately spaced, low angle, undulating, rough, fresh, partially open to open, White-gray Pegmatite fingerings throughout (typically 1/4" to 1" wide).							
79							End of exploration at 79 feet.						4.1	
REMARKS 2 - Casing advanced to 68'. Advanced roller bit to 69' and began coring. 3 - Rock Quality Designation (ROD) is provided in percent, with total ROD length in inches shown in parentheses below.														
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.												Exploration No.: GZ-28-101		

Scale: NOT TO SCALE			
No.	Revision	By	Date

Designed by: TYLIN INTERNATIONAL			
CONSULTANT PROJECT MANAGER: Chris Taylor			
By	Date	By	Date
Designed	SBK 06/2014	Checked	CPT 06/2014
Drawn	PJB 06/2014	In Charge of	CPT 06/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

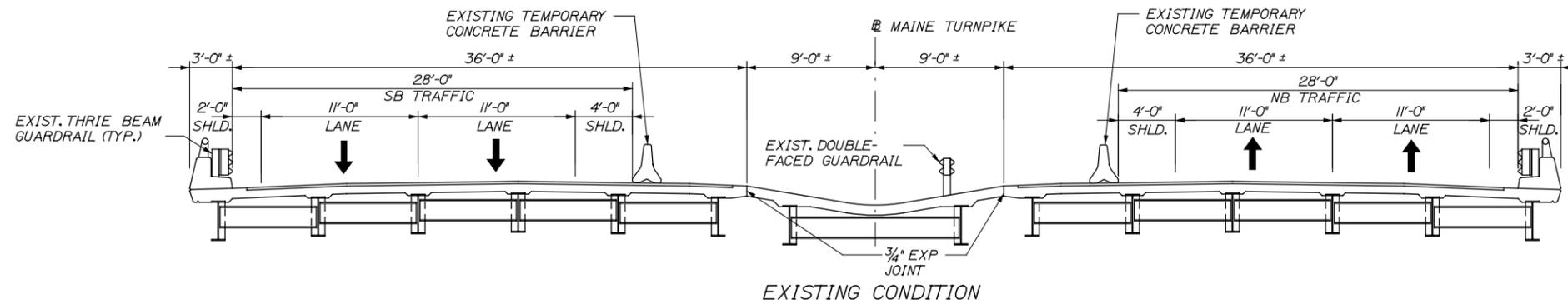
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

BORING LOGS I - BRIDGE 28

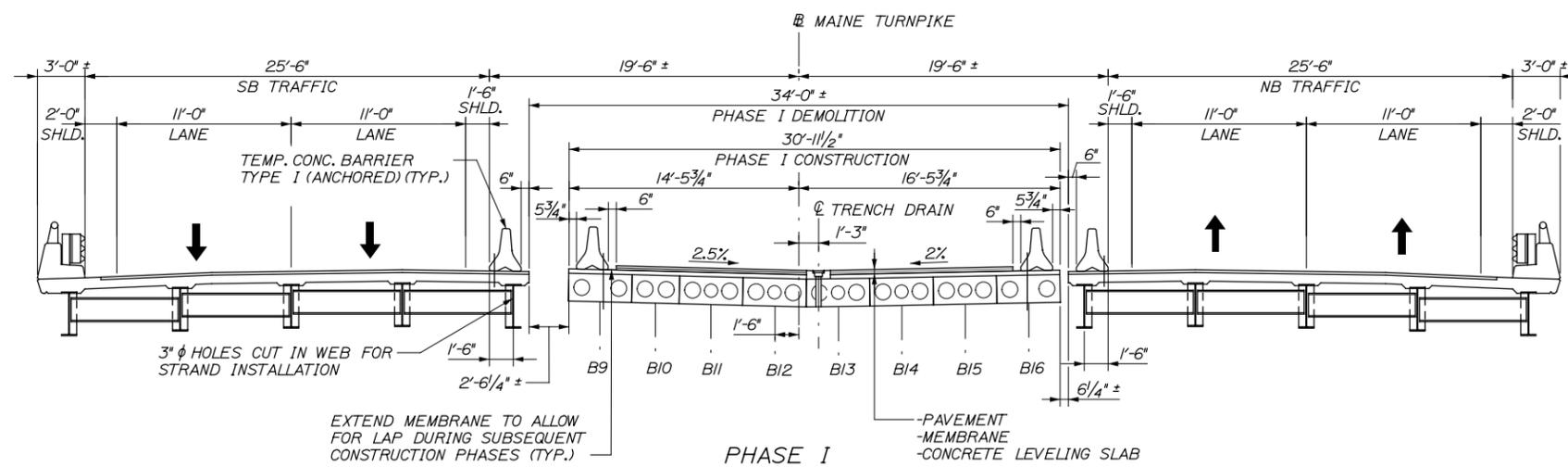
SHEET NUMBER: S28-03
25 OF 86

CONTRACT: 2014.13

Date: 6/19/2014



NOTE:
EXISTING CONDITION SECTION DEPICTS EXPECTED CONFIGURATION FOLLOWING COMPLETION OF CONTRACT 2014.08.



ANTICIPATED CONSTRUCTION SEQUENCE - PHASE I

- INSTALL ANCHORED TEMPORARY BARRIERS.
- SAW CUT AND REMOVE CENTER PORTIONS OF BRIDGE SUPERSTRUCTURE AND ABUTMENT BACKWALLS.
- CAST PROPOSED BRIDGE SEATS.
- CAST PORTION OF APPROACH SLABS.
- AFTER BRIDGE SEAT CONCRETE HAS REACHED 3,000 PSI, SET PRECAST BEAMS 9 THROUGH 16. (ANTICIPATE CRANE POSITIONED IN WORK ZONE AND BEAMS DELIVERED EITHER IN WORK ZONE OR IN A TRAVEL LANE DURING OFF-PEAK LANE CLOSURE AS DEFINED IN S.P. 652.)
- INSTALL TRANSVERSE POST-TENSIONING, GROUT SHEAR KEYS, AND COMPLETE POST-TENSIONING STRESSING.
- INSTALL TRENCH DRAIN, AND CAST LEVELING SLAB.
- INSTALL ANCHORED TEMPORARY CONCRETE BARRIERS ON NEW BRIDGE.
- PLACE MEMBRANE, AND PAVE BRIDGE AND APPROACHES.
- PLACE TEMPORARY STRIPING.

Filename: ...027_Bridge Phasing...1_B28.dgn

Scale: 3/16" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

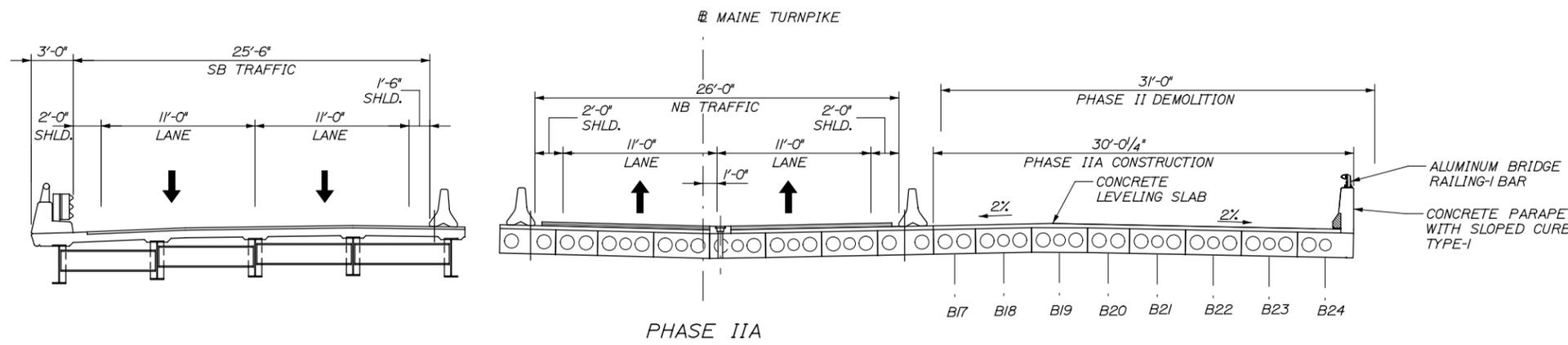
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**BRIDGE PHASING I
BRIDGE 28**

SHEET NUMBER: S28-05
27 OF 86

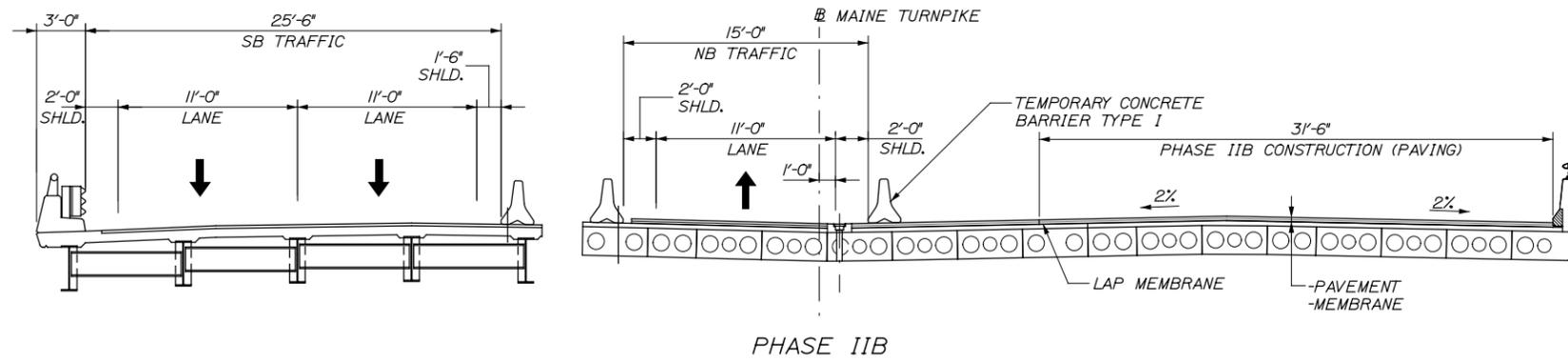
CONTRACT: 2014.13

Date: 6/19/2014



ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIA

- SHIFT NB TRAFFIC ONTO THE NEW MEDIAN PORTION OF THE BRIDGE.
- SAW CUT AND REMOVE OUTER PORTIONS OF NB SUPERSTRUCTURE, ABUTMENT BACKWALLS, END POSTS, AND TOPS OF WINGWALLS.
- CAST PROPOSED BRIDGE SEATS, ENDPOSTS, AND TOPS OF WINGWALLS.
- CAST REMAINDER OF NB APPROACH SLABS.
- AFTER THE BRIDGE SEAT CONCRETE HAS REACHED 3,000 PSI, SET PRECAST BEAMS 17 THROUGH 24.
- INSTALL TRANSVERSE POST-TENSIONING, GROUT SHEAR KEYS, AND COMPLETE POST-TENSIONING STRESSING.
- CAST LEVELING SLAB, INSTALL CURB, CAST PERMANENT OUTSIDE BRIDGE PARAPET, AND INSTALL ALUMINUM BRIDGE RAIL, APPROACH GURDRAIL, AND TERMINALS.



ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIB

- DURING OFF PEAK HOURS, CLOSE ONE LANE AND SHIFT TEMPORARY CONCRETE BARRIER (NOT ANCHORED) TO ALLOW THE FOLLOWING (MULTIPLE SHIFTS MAY BE REQUIRED TO COMPLETE ALL WORK):
- PLACE MEMBRANE, AND PAVE BRIDGE AND APPROACHES.
- PLACE TEMPORARY STRIPING.

Filename: ... \028_Bridge Phasing_2_B28.dgn

Scale: 3/16" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

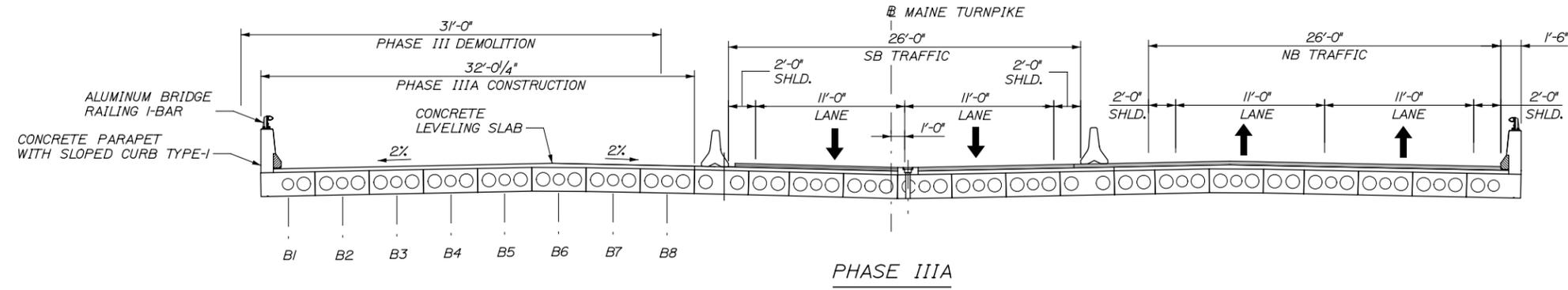
**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 BRIDGE PHASING II
 BRIDGE 28**

SHEET NUMBER: S28-06
 28 OF 86

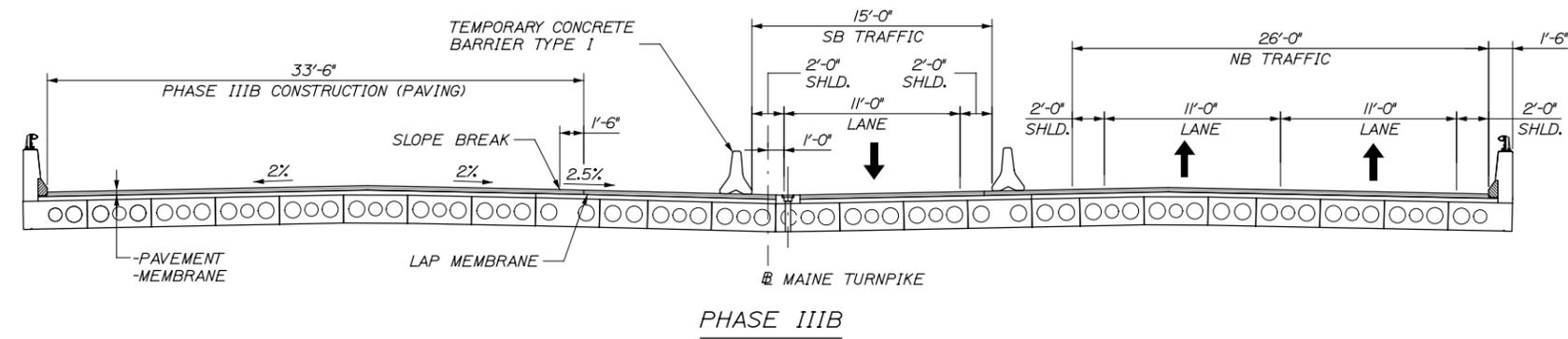
CONTRACT: 2014.13

Date: 6/19/2014

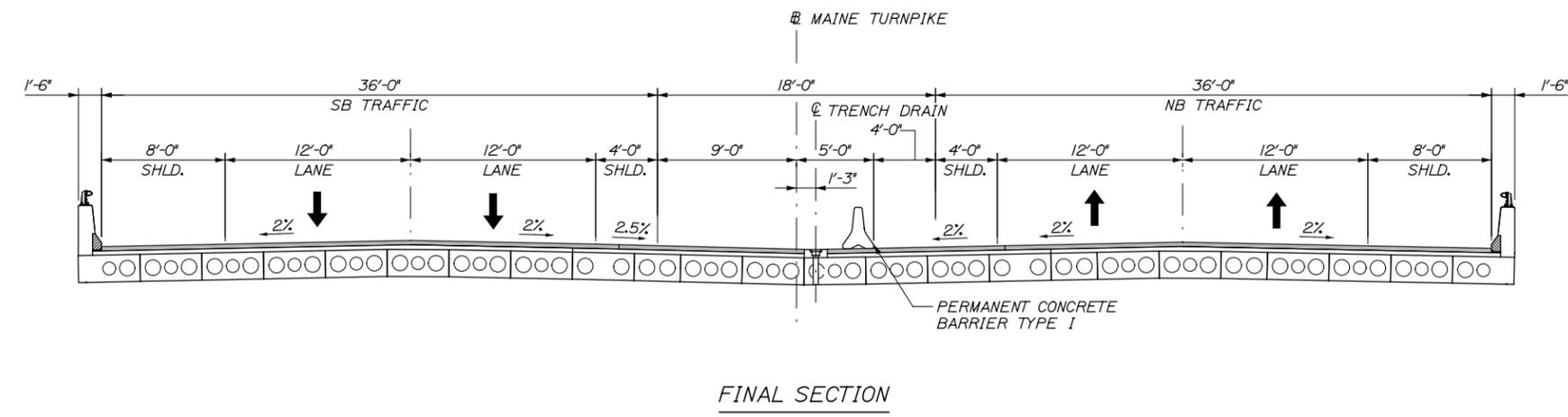
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- ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIIA**
- SHIFT NB TRAFFIC ONTO THE NEW OUTER PORTION OF THE BRIDGE AND SHIFT SB TRAFFIC ONTO THE MEDIAN PORTION OF THE BRIDGE.
 - SAW CUT AND REMOVE OUTER PORTIONS OF SB SUPERSTRUCTURE, ABUTMENT BACKWALLS, END POSTS, AND TOPS OF WINGWALLS.
 - CAST PROPOSED BRIDGE SEATS, ENDPOSTS, AND TOPS OF WINGWALLS.
 - CAST REMAINDER OF SB APPROACH SLABS.
 - AFTER BRIDGE SEAT CONCRETE HAS REACHED 3,000 PSI, SET PRECAST BEAMS 1 THROUGH 8.
 - INSTALL TRANSVERSE POST-TENSIONING, GROUT SHEAR KEYS, AND COMPLETE POST-TENSIONING STRESSING.
 - CAST LEVELING SLAB, INSTALL CURB, CAST PERMANENT OUTSIDE BRIDGE PARAPET, AND INSTALL ALUMINUM BRIDGE RAIL, APPROACH GUARDRAIL, AND TERMINALS.



- ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIIB**
- DURING OFF PEAK HOURS, CLOSE ONE LANE AND SHIFT TEMPORARY CONCRETE BARRIER (NOT ANCHORED) TO ALLOW THE FOLLOWING (MULTIPLE LANE SHIFTS MAY BE REQUIRED TO COMPLETE ALL WORK):
 - PLACE MEMBRANE AND PAVE BRIDGE APPROACHES.
 - PLACE PERMANENT SB STRIPING.
 - SHIFT SB TRAFFIC INTO FINAL LANES.
 - INSTALL PERMANENT CONCRETE BARRIER IN MEDIAN AND REMOVE TEMPORARY CONCRETE BARRIER. INSTALL APPROACH MEDIAN GUARDRAIL.
 - REMOVE TEMPORARY STRIPING AND PLACE PERMANENT STRIPING.
 - SHIFT NB TRAFFIC INTO FINAL LANES.



Scale: 3/16" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date	Checked	By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

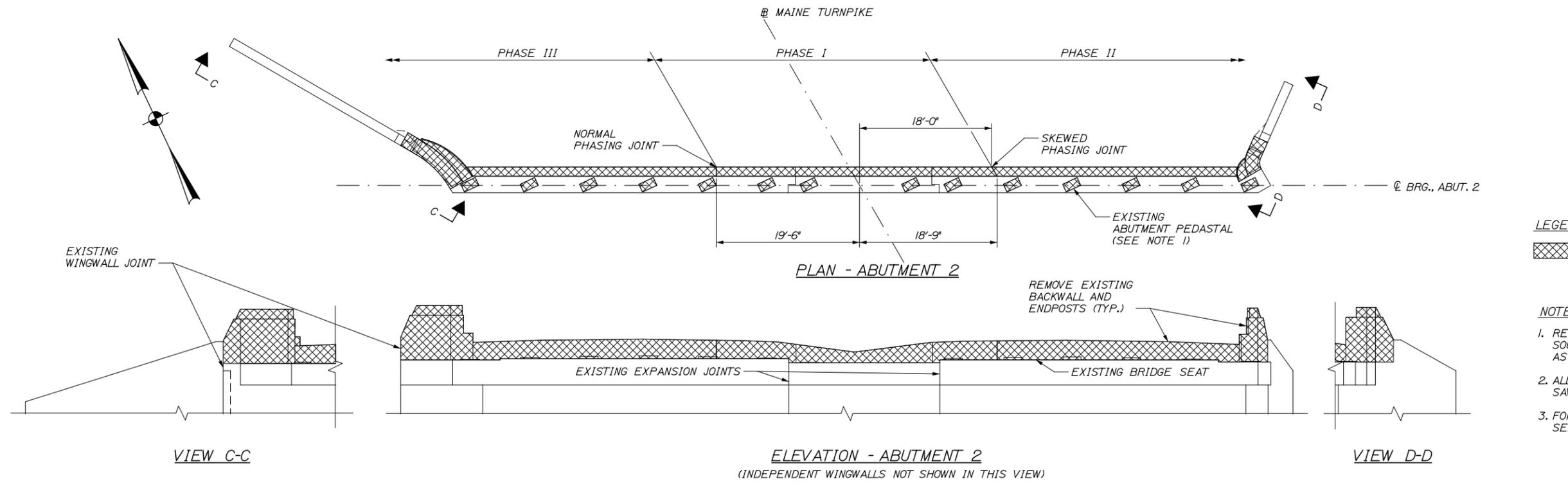
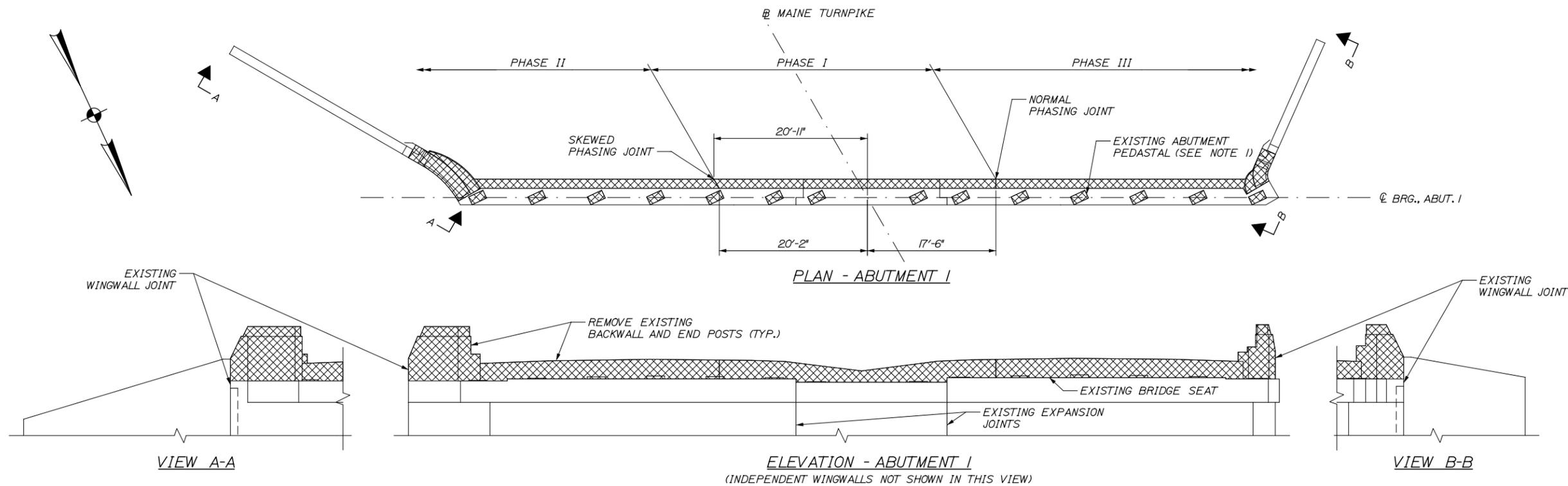
**BRIDGE PHASING III
 BRIDGE 28**

SHEET NUMBER: S28-07
 29 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

Filename: ...MSTA\030_Abutment_Demo_B28.dgn



LEGEND:
 - AREA OF CONCRETE REMOVAL

- NOTES:**
1. REMOVE ALL UNSOUND PEDESTAL CONCRETE. SOUND PEDESTAL CONCRETE MAY REMAIN AS APPROVED BY THE RESIDENT.
 2. ALL LIMITS OF DEMOLITION SHALL BE SAWCUT A MINIMUM OF 1" DEEP.
 3. FOR SECTION VIEW OF EXISTING ABUTMENTS, SEE 'SUPERSTRUCTURE DETAILS III' SHEET.

Scale: 1/8" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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THE GOLD STAR MEMORIAL HIGHWAY

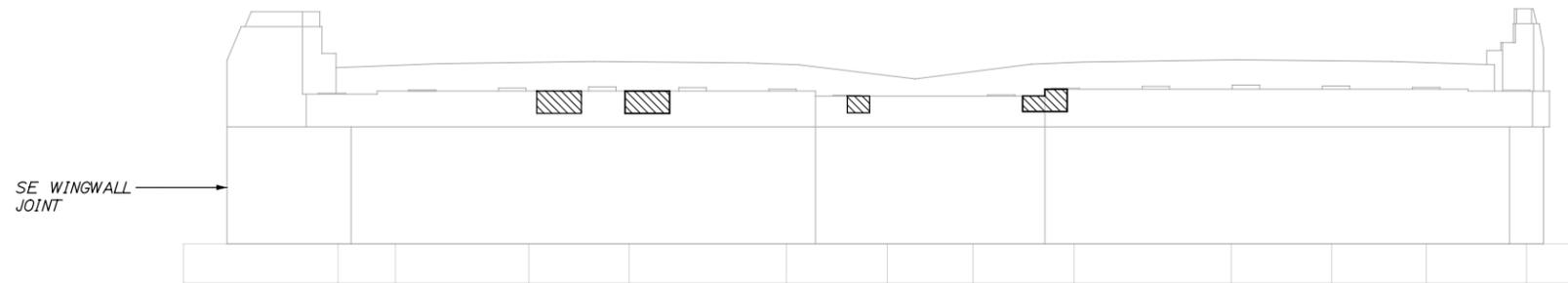
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 ABUTMENT DEMOLITION LIMITS
 BRIDGE 28**

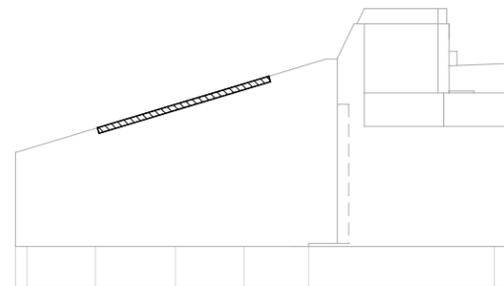
CONTRACT: 2014.13

SHEET NUMBER: S28-08
 30 OF 86

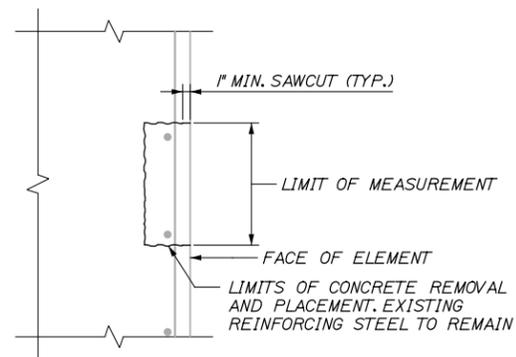
Date: 6/19/2014



ELEVATION - ABUTMENT 1
1/8" = 1'-0"



ELEVATION - SE WINGWALL
1/8" = 1'-0"



CONCRETE REPAIR DETAIL
1" = 1'-0"

NOTES:

1. ABUTMENT CONCRETE REPAIRS, INCLUDING THE ASSOCIATED REMOVALS, BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER ITEM 518.10.
2. CONTRACTOR MAY PERFORM REPAIRS AS PART OF THE ASSOCIATED DEMOLITION PHASE. REPAIRS SHALL NOT BE PERFORMED WHEN TRAFFIC LANES ARE PRESENT ON THE ROADWAY ABOVE UNLESS AUTHORIZED BY THE RESIDENT.

REMOVAL PROCEDURE:

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 THE REMOVALS.
2. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO DEPTH REQUIRED PER MAINE DOT STANDARD 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).

GENERAL FINISHING:

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

ESTIMATED QUANTITY OF REPAIRS (BOTH ABUTS.)			
	ABUTMENT 1	ABUTMENT 2	TOTAL
SURFACE PATCH/REPAIR	35 S.F.	6 S.F.	55 S.F.*

* INCLUDES 33% ADDITIONAL REPAIR QUANTITY IN UNDETERMINED LOCATIONS.

LEGEND:

- LIMIT OF CONCRETE REPAIR
- EXISTING CONCRETE

Filename: ... \031_Substructure Repairs_1_B28.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	JKO	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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THE GOLD STAR
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

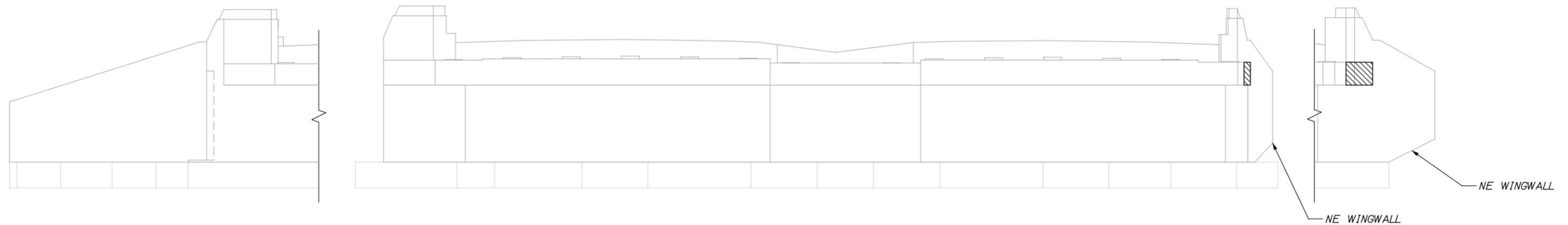
BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES

SUBSTRUCTURE REPAIRS - ABUTMENT 1
BRIDGE 28

CONTRACT: 2014.13

SHEET NUMBER: S28-09
31 OF 86

Date: 6/19/2014



ELEVATION - ABUTMENT 2
1/8" = 1'-0"

LEGEND:

-  LIMIT OF CONCRETE REPAIR
-  EXISTING CONCRETE

Filename: ... \032_Substructure Repairs_2_B28.dgn

Scale:			
No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Chris Taylor					
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Designed	JKO	06/2014	Checked	CPT	06/2014
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES

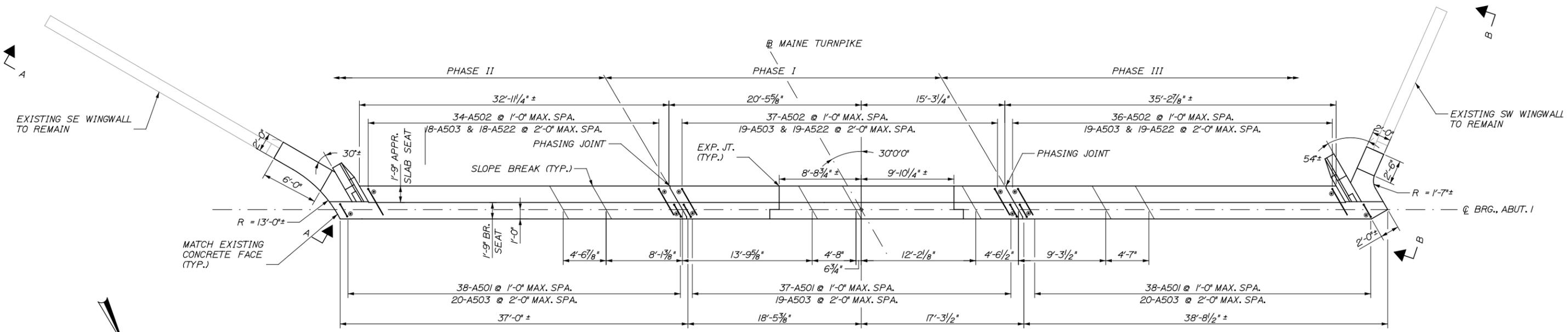
SUBSTRUCTURE REPAIRS - ABUTMENT 2
BRIDGE 28

SHEET NUMBER: S28-10
32 OF 86

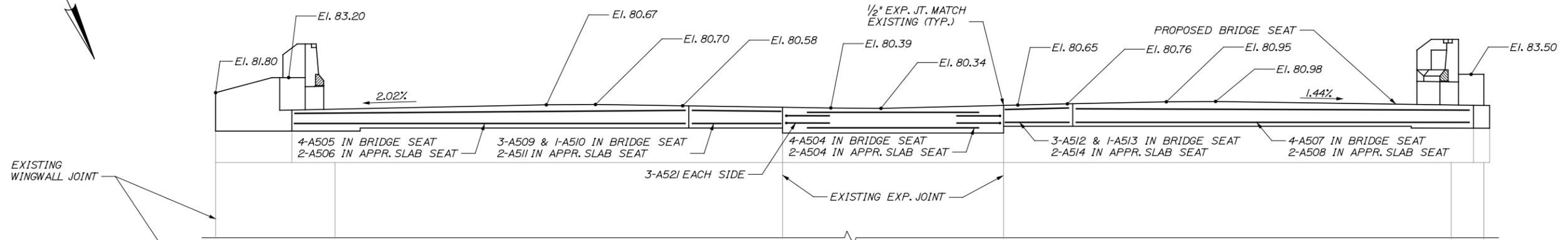
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Date: 6/19/2014

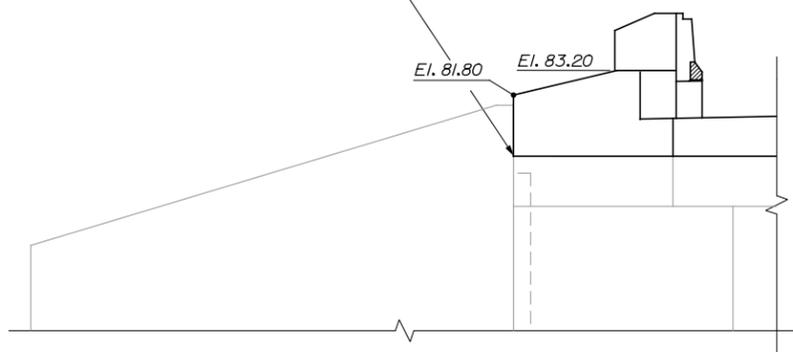
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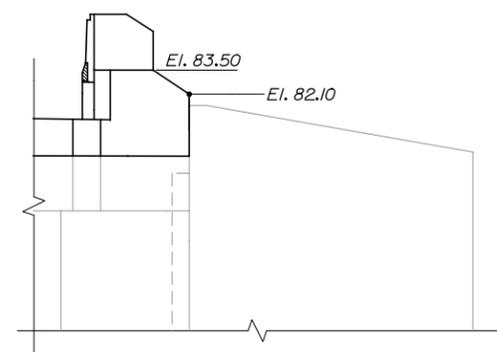
PLAN - ABUTMENT I
3/16" = 1'-0"



ELEVATION - ABUTMENT I
3/16" = 1'-0"



VIEW A-A
3/16" = 1'-0"



VIEW B-B
3/16" = 1'-0"

- NOTES:
- SEE 'SUPERSTRUCTURE DETAILS III' SHEET FOR SECTION THROUGH ABUTMENT.
 - SEE 'ABUTMENT REINFORCEMENT' SHEET FOR DETAILS IN THE ABUTMENT CORNERS AND WINGWALLS.

Scale: 3/16" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

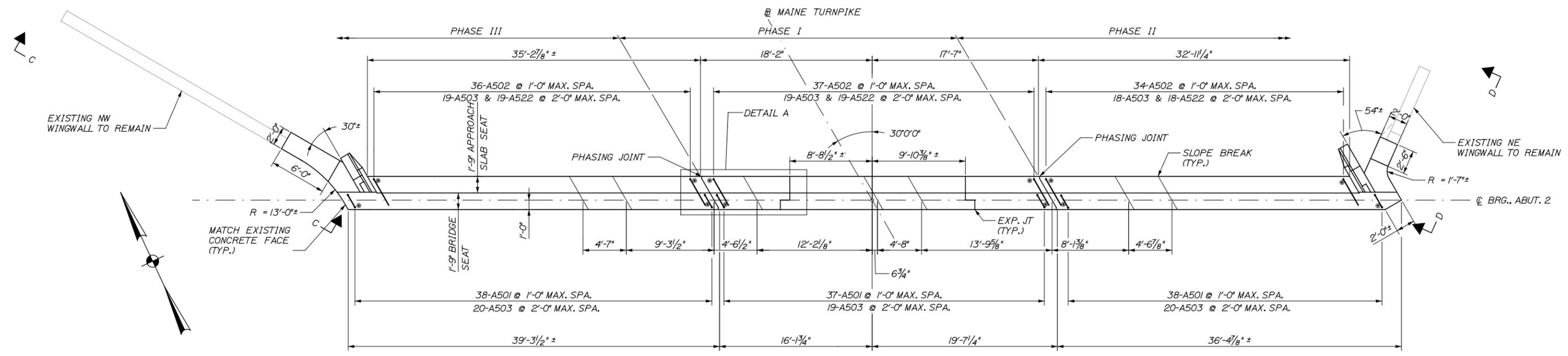
MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
ABUTMENT 1 - PLAN AND ELEVATION
BRIDGE 28

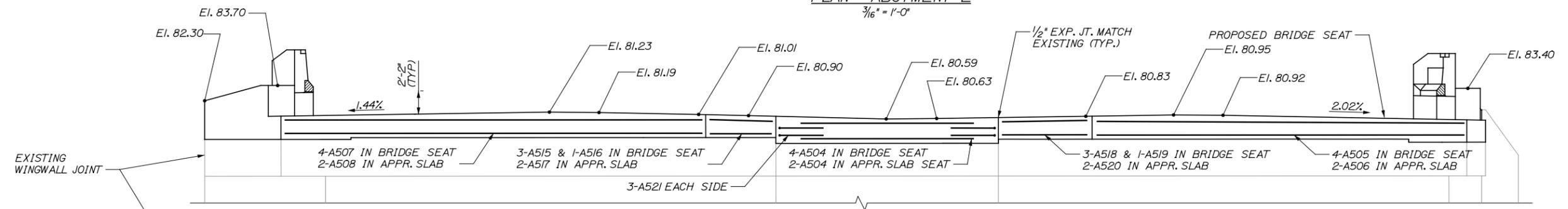
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CONTRACT: 2014.13
33 OF 86

Date: 6/19/2014

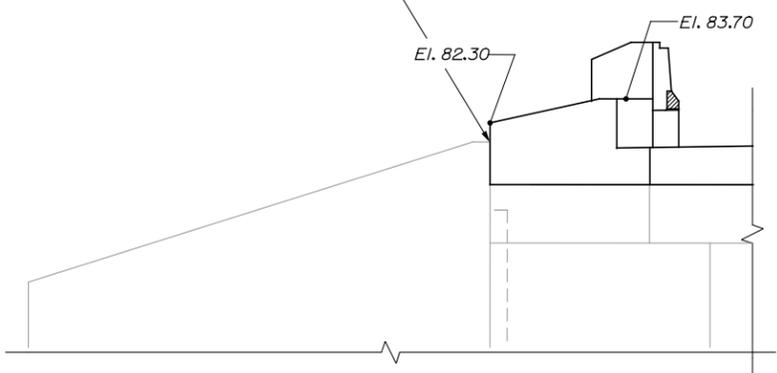
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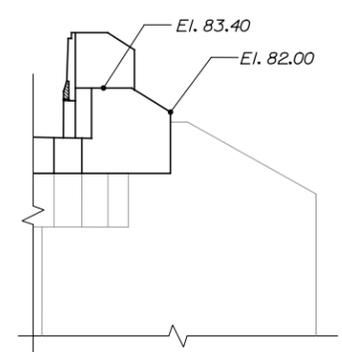
PLAN - ABUTMENT 2
3/16" = 1'-0"



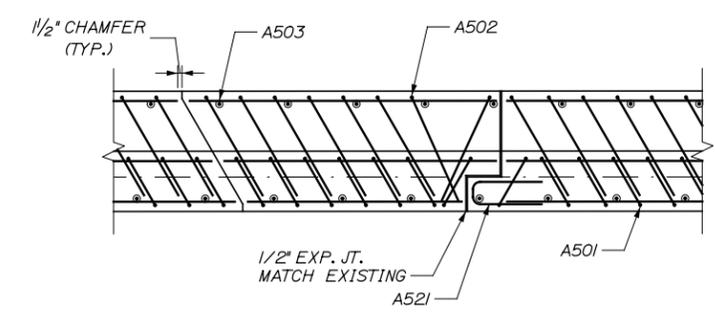
ELEVATION - ABUTMENT 2
3/16" = 1'-0"



VIEW C-C
3/16" = 1'-0"



VIEW D-D
3/16" = 1'-0"



DETAIL A
3/8" = 1'-0"

- NOTES:
- SEE 'SUPERSTRUCTURE DETAILS III' SHEET FOR SECTION THROUGH ABUTMENT.
 - SEE 'ABUTMENT REINFORCEMENT' SHEET FOR DETAILS IN THE ABUTMENT CORNERS AND WINGWALLS.

Scale:

No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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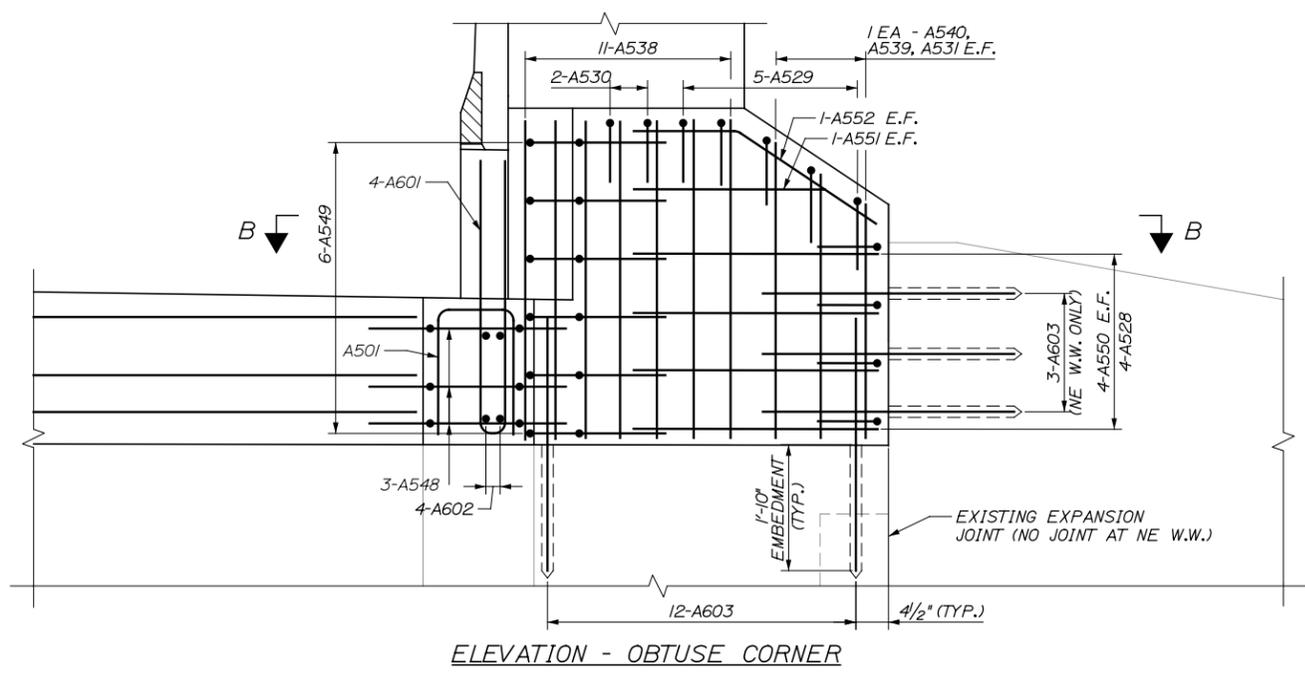
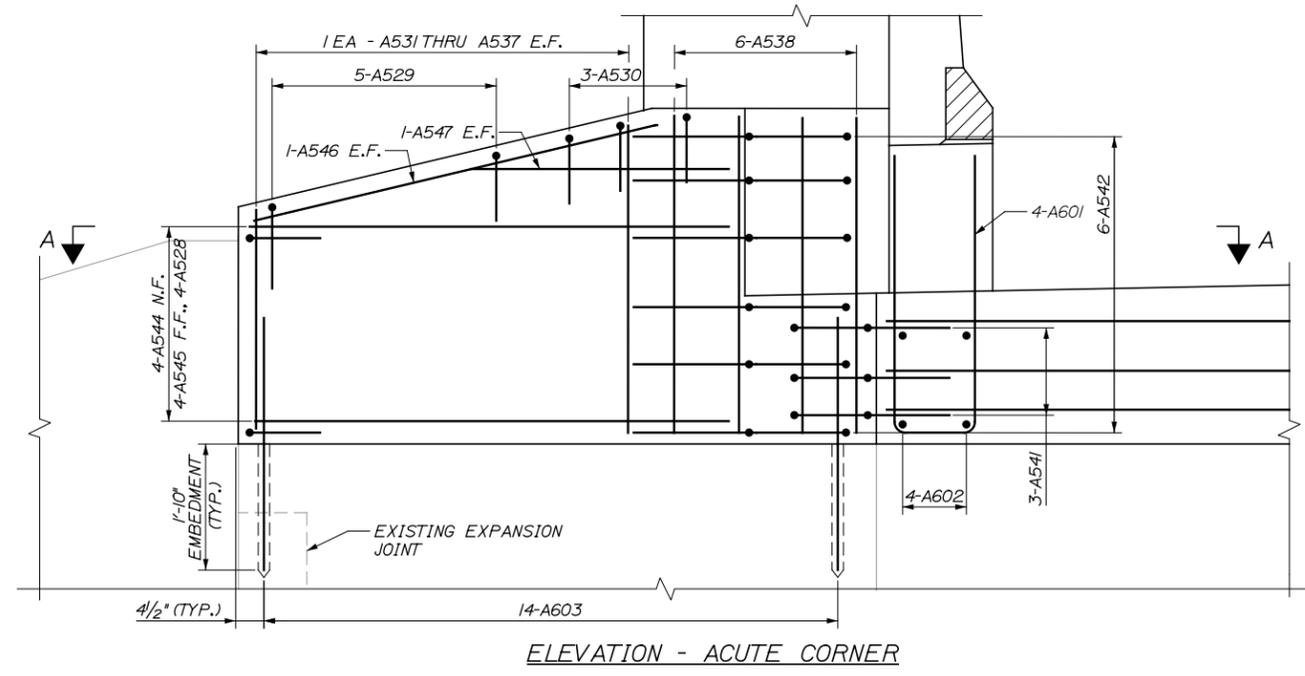
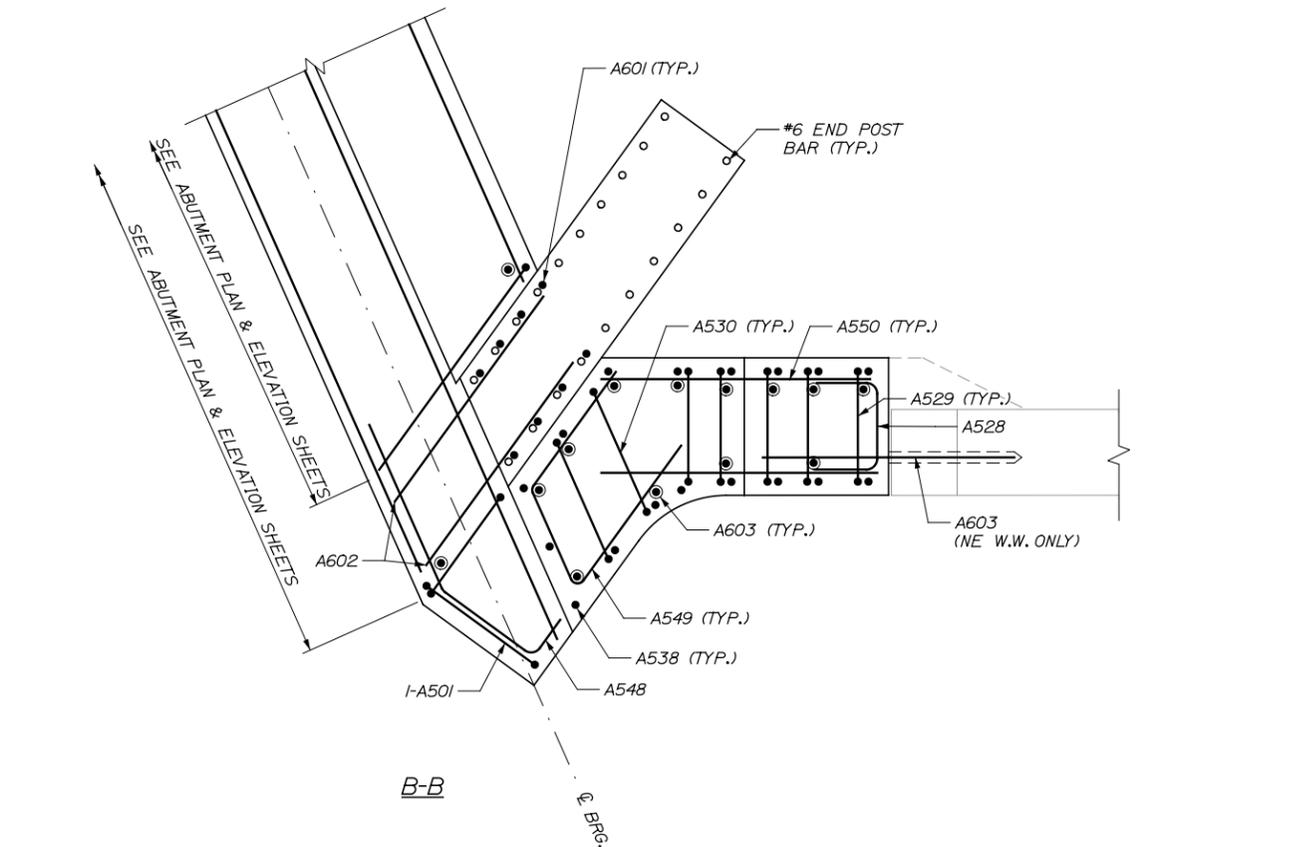
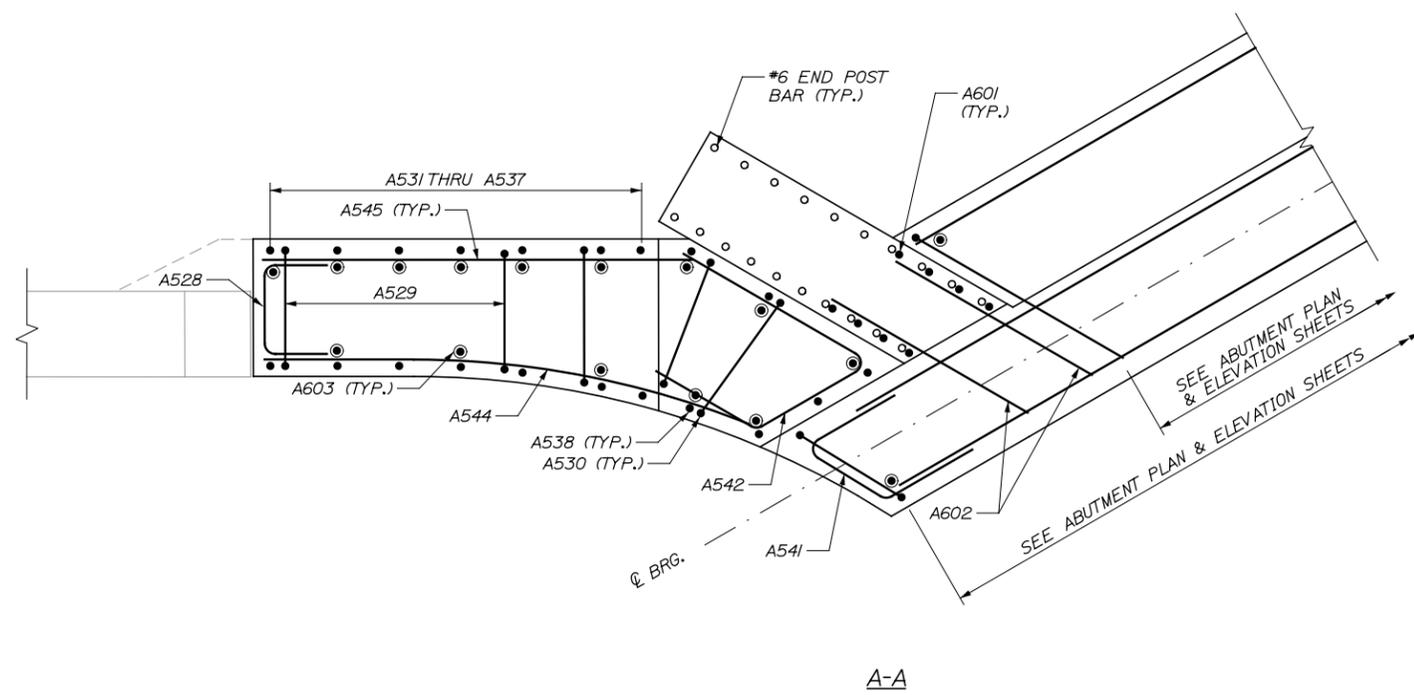
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
ABUTMENT 2 - PLAN AND ELEVATION
BRIDGE 28

SHEET NUMBER: S28-12
CONTRACT: 2014.13
34 OF 86

Date: 6/19/2014



Filename: ... \035_Abut_Reinforcement_E28.dgn

Scale: 3/4" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

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Designed	SBK	06/2014	Checked	CPT	06/2014
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

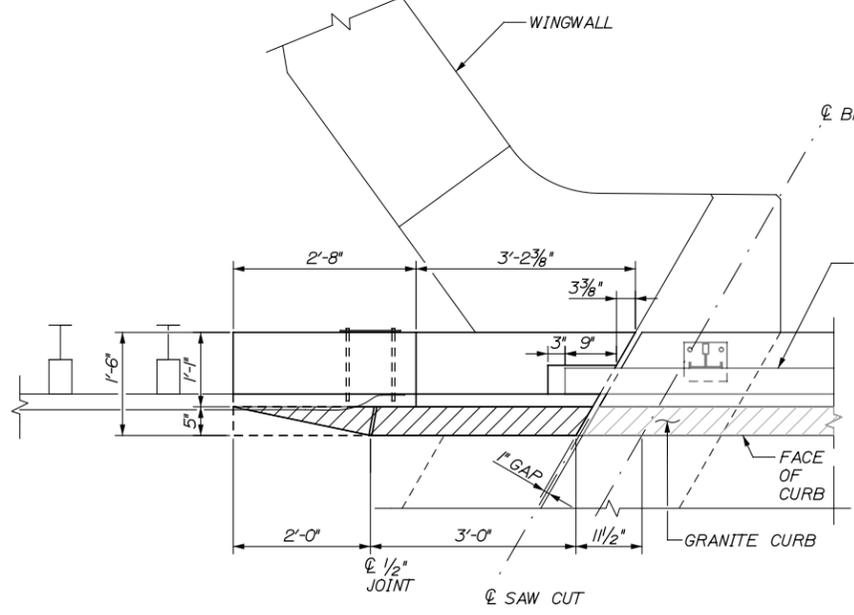
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 ABUTMENT REINFORCEMENT
 BRIDGE 28**

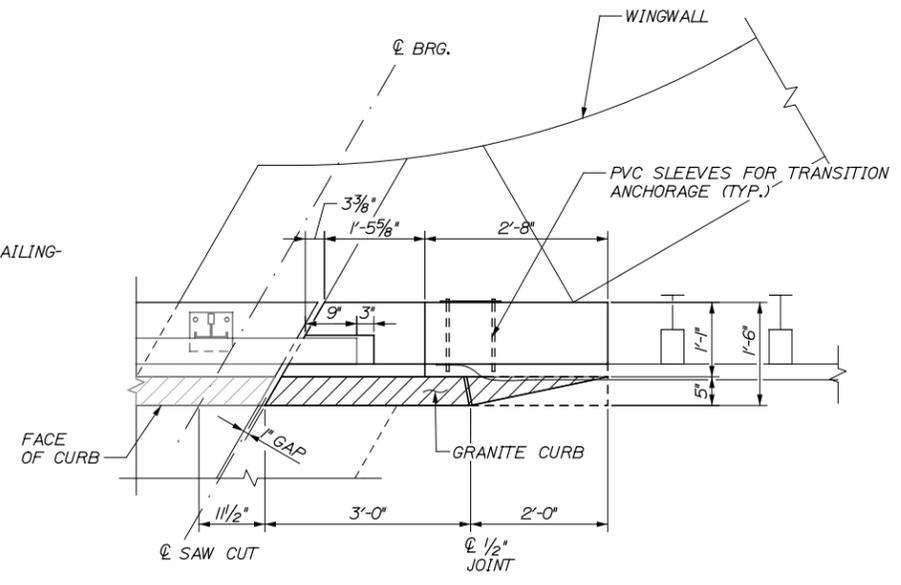
SHEET NUMBER: S28-13
 35 OF 86

CONTRACT: 2014.13

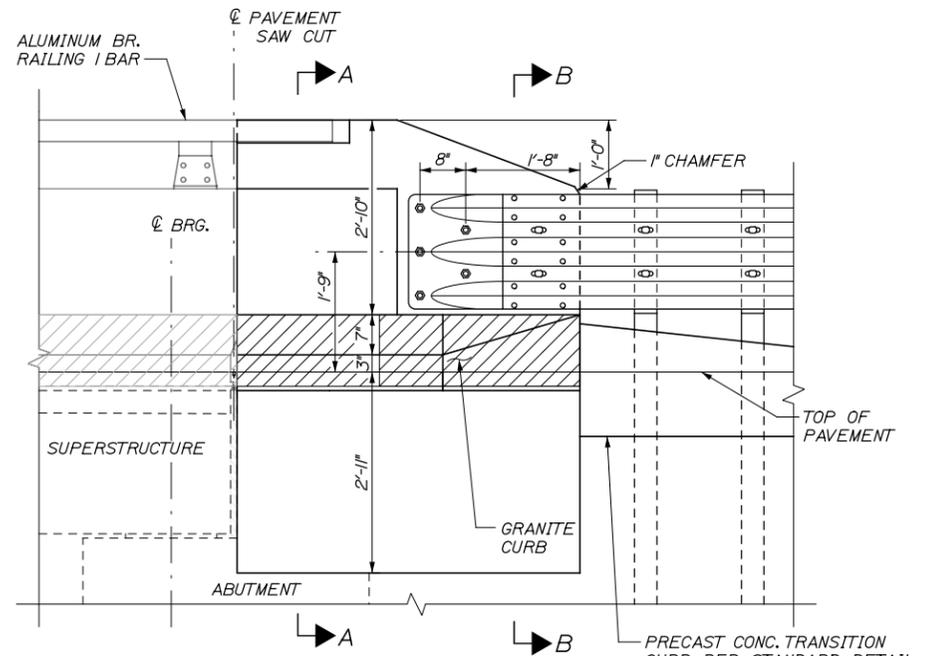
Date: 6/19/2014



PLAN - OBTUSE CORNERS

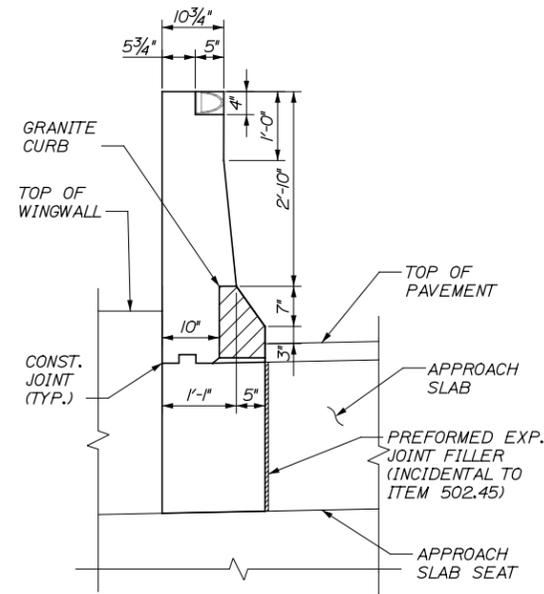


PLAN - ACUTE CORNERS

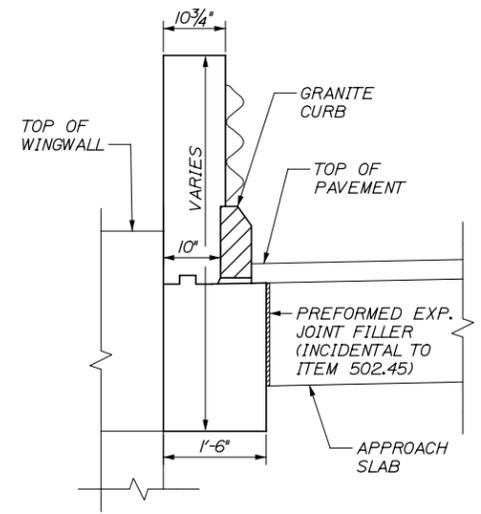


ELEVATION

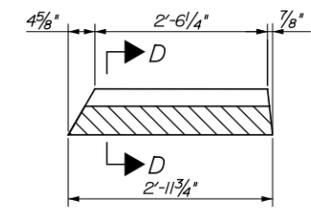
PRECAST CONC. TRANSITION CURB PER STANDARD DETAIL 526(22) (INCIDENTAL TO ITEM 502.264)



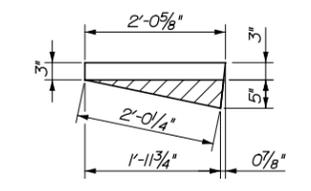
SECTION A-A



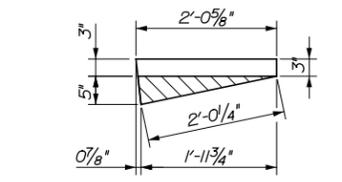
SECTION B-B



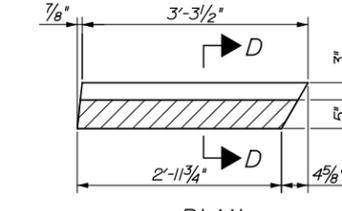
PLAN (ACUTE CORNERS)



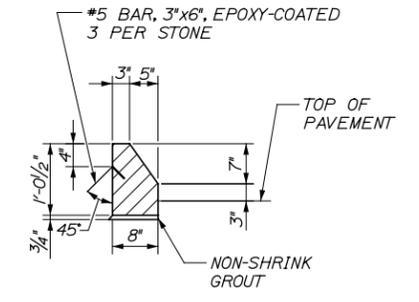
PLAN AT END OF END POST (OBTUSE CORNERS)



PLAN AT END OF END POST (ACUTE CORNERS)



PLAN (OBTUSE CORNERS)



SECTION D-D

GRANITE CURB DETAILS

Filename: ...MSTAN036_End_Posts_1_B28.dgn

Scale: 3/4" = 1'-0"			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

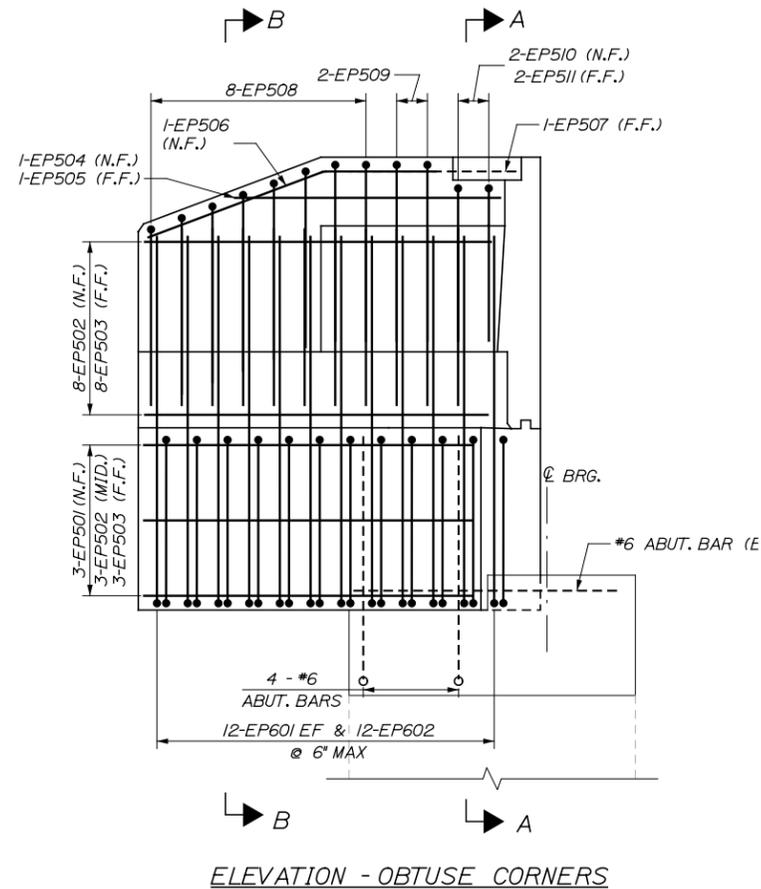
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BRIDGE 28**

SHEET NUMBER: S28-14
36 OF 86

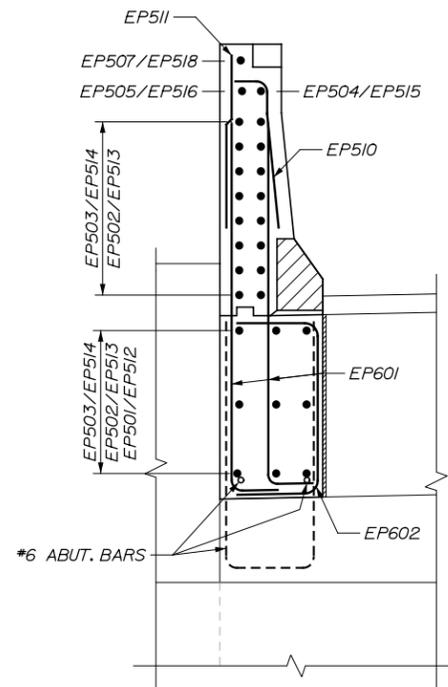
CONTRACT: 2014.13

Date: 6/19/2014

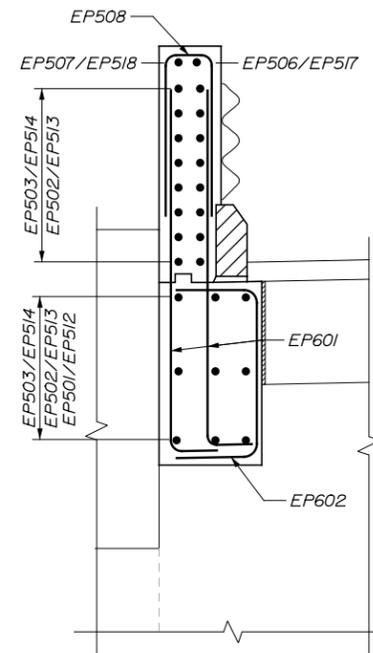
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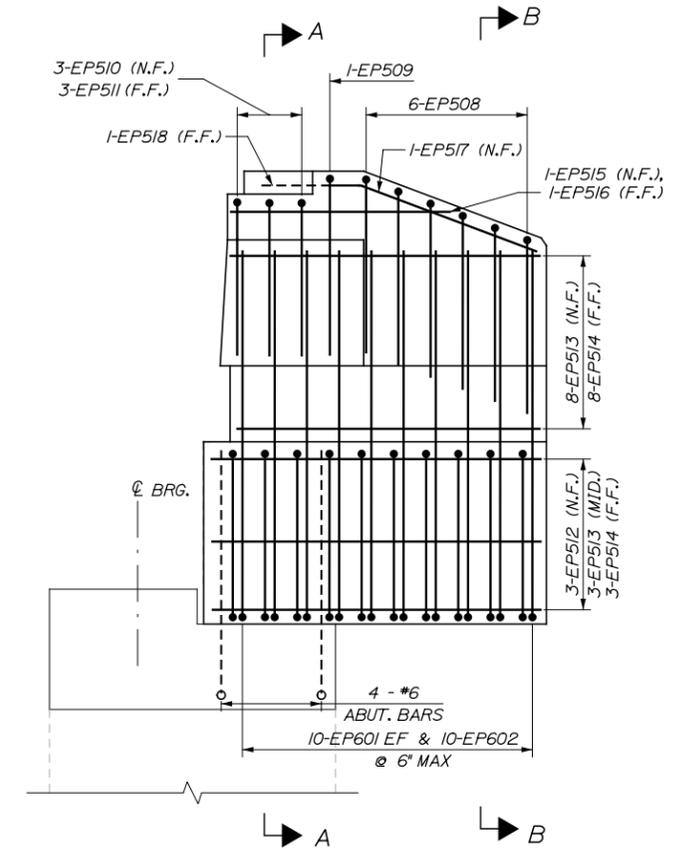
ELEVATION - OBTUSE CORNERS



SECTION A-A



SECTION B-B



ELEVATION - ACUTE CORNER

Scale: 3/4" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date	Checked	By	Date
Designed	SBK	06/2014		CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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**THE GOLD STAR
 MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

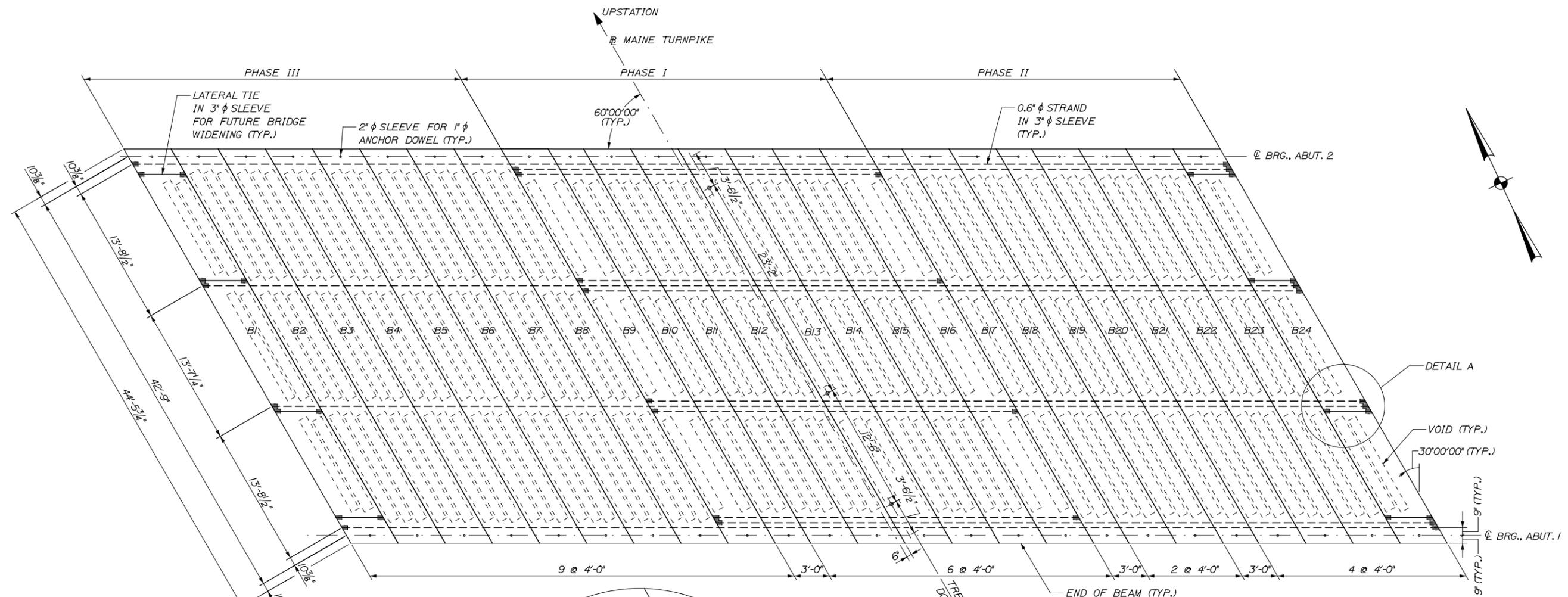
**END POST DETAILS II
 BRIDGE 28**

SHEET NUMBER: S28-15
 37 OF 86

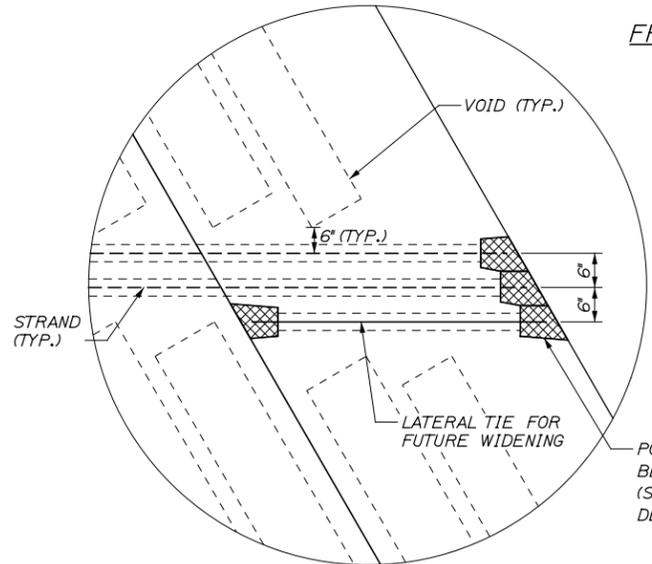
CONTRACT: 2014.13

Date: 6/19/2014

Filename: ...MSTA\038_Framing_Plan_E28.dgn



FRAMING PLAN
SCALE: 3/16" = 1'-0"



- NOTES:**
- FOR TRENCH DRAIN DOWNSPOUT DETAIL SEE "LEVELING SLAB PLAN" SHEET.
 - TRANSVERSE POST-TENSIONING TENDONS MAY BE POSITIONED PRIOR TO GROUTING THE SHEAR KEYS. SHEAR KEY GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI PRIOR TO COMMENCING STRESSING OPERATIONS.
 - NO TRAFFIC OR HEAVY EQUIPMENT SHALL BE PERMITTED ON THE BEAMS UNTIL ALL TRANSVERSE POST-TENSIONING HAS BEEN PROPERLY INSTALLED.
 - TENSION EACH POST-TENSIONING TENDON TO 44 KIPS EACH.
 - POST-TENSIONING TENDONS SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH WITH CORROSION INHIBITING GREASE BETWEEN THE TENDON AND SHEATH FOR THE LENGTH OF THE STRAND, EXCEPT AT THE ANCHOR LOCATIONS.
 - BEAMS 9 AND 16 REQUIRE ATTACHMENT FOR TEMPORARY BARRIERS. THROUGH BOLTS IN 2" DIAMETER PVC SLEEVES SHALL BE USED AS SHOWN IN SPECIAL PROVISION 526. DRILLING INTO BEAMS WILL NOT BE ALLOWED. COSTS FOR ANCHORAGE SHALL BE INCIDENTAL TO THE BEAMS AND TEMPORARY BARRIERS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALIGNMENT BETWEEN CAST-IN SLEEVES AND TEMPORARY CONCRETE BARRIER ELEMENTS TO BE USED.

Scale: VARIES			
No.	Revision	By	Date

Designed by: TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

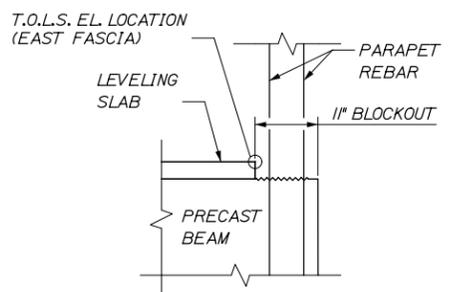
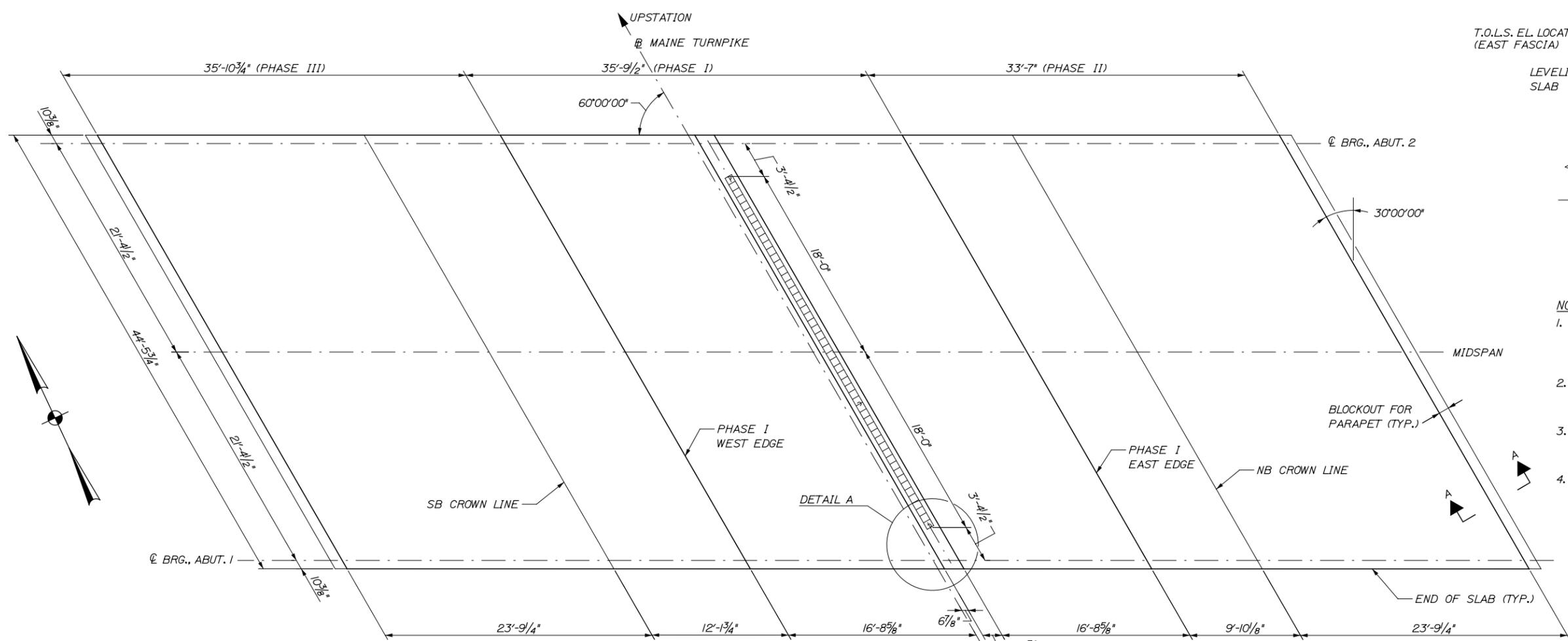
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**FRAMING PLAN
BRIDGE 28**

SHEET NUMBER: S28-16
CONTRACT: 2014.13
38 OF 86

Date: 6/19/2014

Filename: ... \039_Levelling_Slab_Plan_B28.dgn

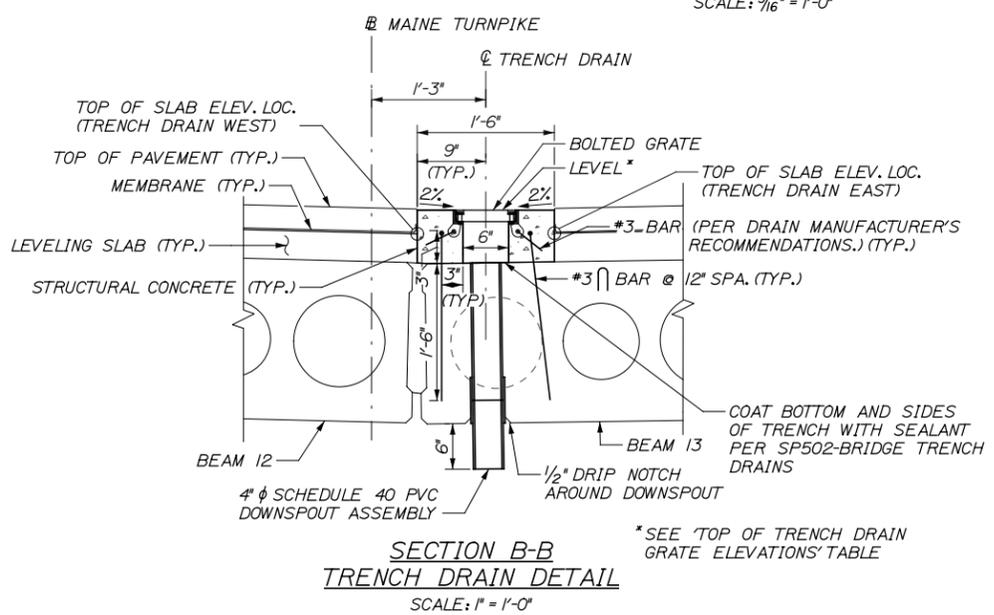
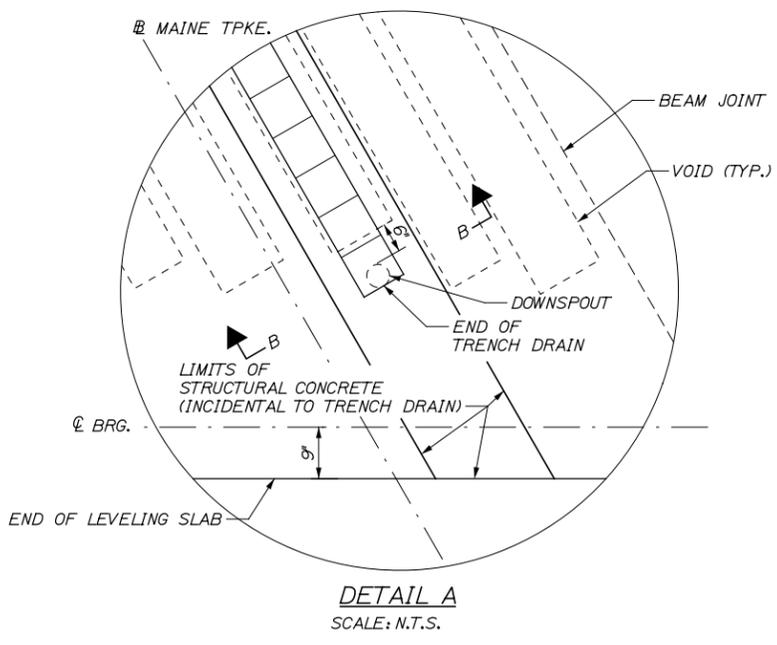


SECTION A-A
SCALE: 3/4" = 1'-0"

- NOTES:**
1. THIS TABLE INDICATES THE ANTICIPATED THICKNESS OF THE DECK SLAB BASED UPON ESTIMATED BEAM CAMBERS OF 1 INCH AT ERECTION.
 2. THIS TABLE IS PROVIDED TO ASSIST IN ESTIMATING THE REQUIRED CONCRETE VOLUME.
 3. THE ACTUAL DECK THICKNESS SHALL BE AS REQUIRED TO MEET THE TOP OF LEVELING SLAB ELEVATIONS.
 4. CONTRACTOR SHALL SURVEY TOPS OF BEAMS AT MIDSPAN, ELEVATIONS AND PROPOSED BLOCKING HEIGHTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO POURING LEVELING SLAB OR TRENCH DRAIN.

ANTICIPATED LEVELING SLAB THICKNESS (INCHES)

CL BRG., ABUT. 1	MIDSPAN	CL BRG., ABUT. 2
4.0	3.0	4.0



LEVELING SLAB SCREED ELEVATIONS (FT)

TRANSVERSE LOCATION	LONGTUDINAL LOCATION				
	NAME	OFFSET	CL BRG., ABUT 1	MIDSPAN	CL BRG., ABUT 2
WEST FASCIA	45'-7" LT.		82.81	82.95	83.05
SB CROWN LINE	25'-0" LT.		83.15	83.29	83.40
PH. I WEST EDGE	14'-5 3/4" LT.		82.90	83.04	83.15
TRENCH DRAIN WEST	0'-6" RT.		82.49	82.63	82.73
TRENCH DRAIN EAST	2'-0" RT.		82.49	82.63	82.74
PH. I EAST EDGE	16'-5 3/4" RT.		82.73	82.87	82.98
NB CROWN LINE	25'-0" RT.		82.87	83.01	83.12
EAST FASCIA	45'-7" RT.		82.39	82.53	82.64

TOP OF TRENCH DRAIN GRATE ELEVATIONS (FT)

SOUTH END	MIDSPAN	NORTH END
82.76	82.89	82.98

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	SBK 06/2014	Checked	CPT 06/2014
Drawn	PJB 06/2014	In Charge of	CPT 06/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

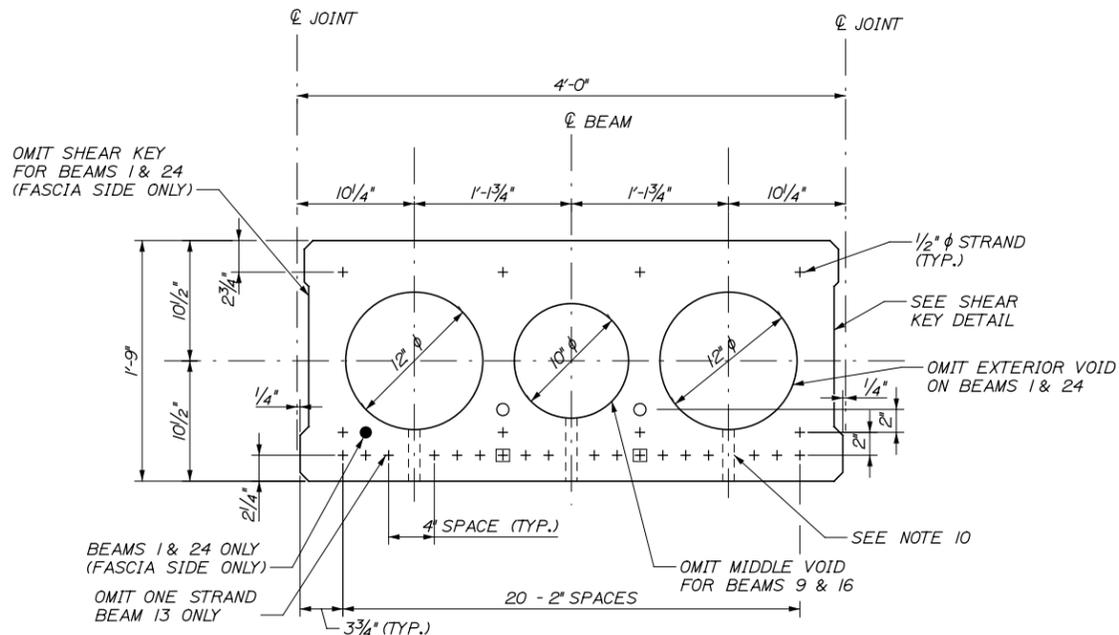
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
LEVELING SLAB PLAN
BRIDGE 28**

CONTRACT: 2014.13

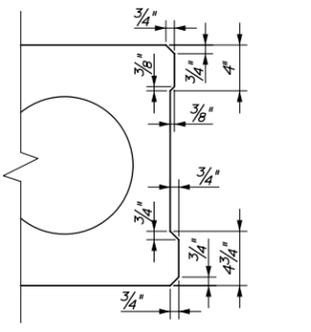
SHEET NUMBER: S28-17
39 OF 86

Date: 6/19/2014

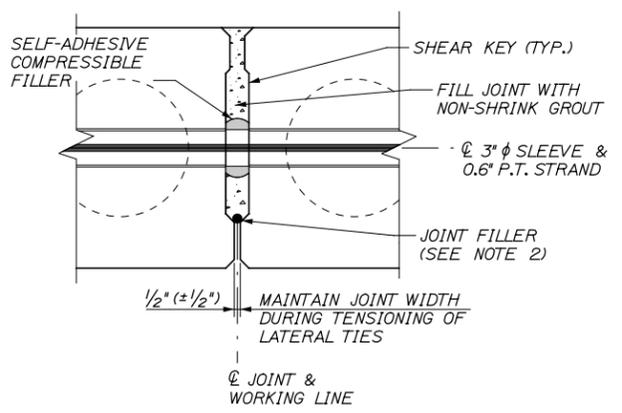
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SIV - 48 BEAM SECTION



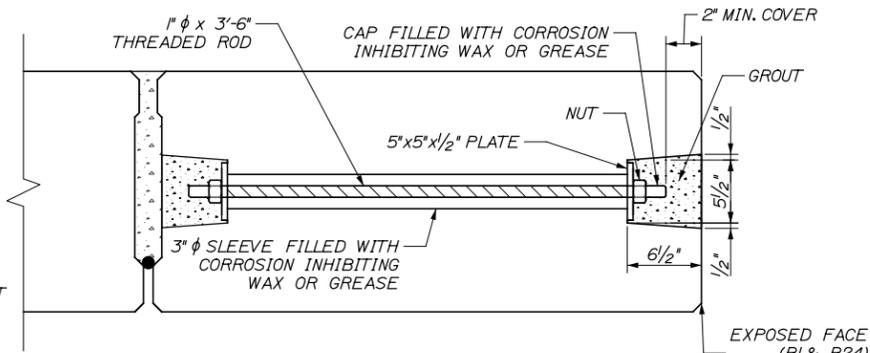
**SHEAR KEY DETAIL
INTERIOR JOINTS ONLY**



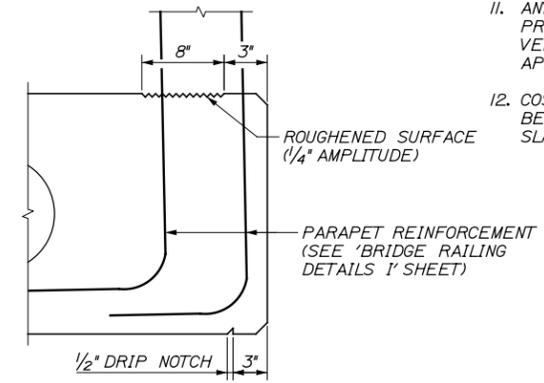
JOINT DETAIL

NOTES:

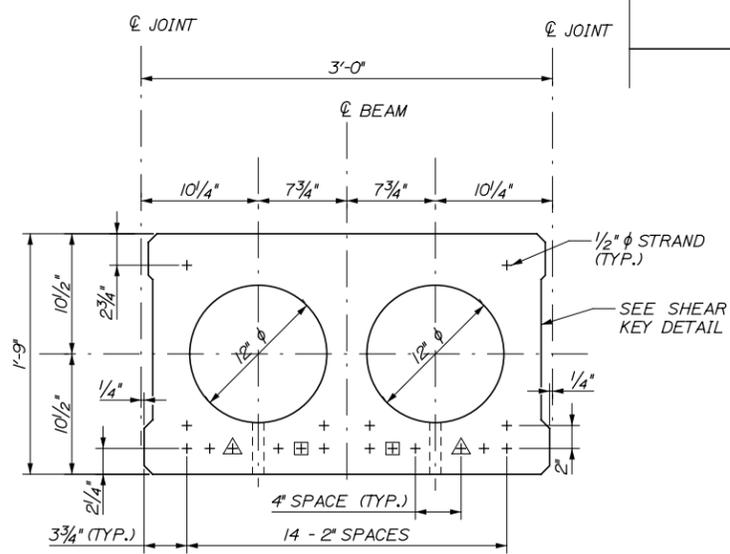
1. OTHER TRANSVERSE POST-TENSIONING ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATERTIGHT AND CORROSION PROOF.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A JOINT FILLER SYSTEM ADEQUATE TO CONTAIN THE SHEAR KEY GROUT DURING PLACEMENT. NO EXTRA PAYMENT WILL BE MADE FOR SUCH SYSTEM OR FOR NECESSARY REPAIRS OR EXTRA WORK IF THE JOINT FILLER SYSTEM FAILS.
3. LONGITUDINAL SHEAR KEYS SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT IN ACCORDANCE WITH STANDARD DETAILS 535(03) AND 535(17) AND STANDARD SPECIFICATION SECTION 535.25.
4. SHEAR KEYS SHALL BE COVERED AND PROTECTED AFTER BEAM PLACEMENT AND PRIOR TO NON-SHRINK GROUT PLACEMENT TO PREVENT DEBRIS FROM ENTERING THE OPENING.
5. TRANSVERSE POST-TENSIONING BLOCKOUTS IN THE FASCIA BEAMS SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT. THE NON-SHRINK GROUT SHALL BE THE SAME COLOR AND TEXTURE OF THE PRECAST BEAMS.
6. TRANSVERSE POST-TENSIONING STRANDS SHALL BE 0.6" DIAMETER, UNCOATED 7 WIRE STRANDS. ALL TRANSVERSE STRANDS SHALL BE TENSIONED TO 44 KIPS EACH.
7. LONGITUDINAL PRESTRESSING STRANDS SHALL BE 0.5" DIAMETER, UNCOATED 7 WIRE STRANDS. ALL LONGITUDINAL STRANDS SHALL BE TENSIONED TO 31 KIPS EACH.
8. THE DRILLING OF HOLES IN THE PRESTRESSED BEAMS AND THE USE OF POWER ACTUATED TOOLS ON THE BEAMS WILL NOT BE PERMITTED.
9. SHEAR KEY FACES SHALL BE SAND BLASTED AT THE PRECAST FACILITY TO IMPROVE GROUT BOND. IF VISUAL INSPECTION REVEALS LAITANCE OR DEBRIS WITHIN THE SHEAR KEYS UPON ARRIVAL TO THE JOB SITE, THEN THE SHEAR KEY FACES SHALL BE CLEANED BY POWER-WASHING OR OTHER METHOD APPROVED BY THE RESIDENT.
10. INSTALL A 1" DIAMETER, NON-METALLIC VOID DRAIN IN THE BOTTOM OF EACH VOID AT EACH END.
11. ANY CONSTRUCTION DEVICES EMBEDDED OR ATTACHED TO THE PRESTRESSED CONCRETE SLAB BEAMS SHALL BE DESIGNED BY THE VENDOR AND INDICATED IN THE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.
12. COST OF THE REINFORCING BARS PROJECTING OUT OF THE BEAMS SHALL BE INCIDENTAL TO ITEM 535.601 - PRESTRESSED STRUCTURAL CONCRETE SLAB (BRIDGE 28).



**LATERAL TIE DETAIL
FOR FUTURE BRIDGE WIDENING**



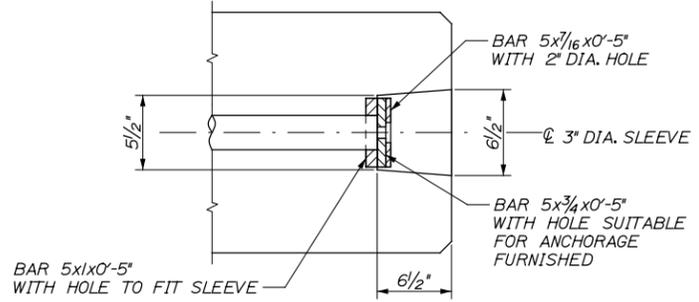
FASCIA BEAM TREATMENT



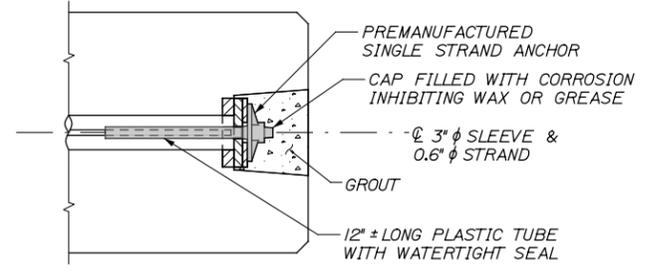
**SIV - 36 BEAM SECTION
(BEAMS 10, 17, & 20)**

STRAND LEGEND

- + - FULLY BONDED STRAND
- ⊕ - DEBONDED 6FT
- ⊔ - DEBONDED 4FT
- - FULLY BONDED STRAND (BEAMS, 1, 9, 16, 24 ONLY)
- - FULLY BONDED STRAND (FASCIA BEAMS ONLY)



POST-TENSIONING BLOCK-OUT DETAIL



POST-TENSIONING ANCHORAGE DETAIL

Scale: 1 1/2" = 1'-0"			
No.	Revision	By	Date

Designed by: TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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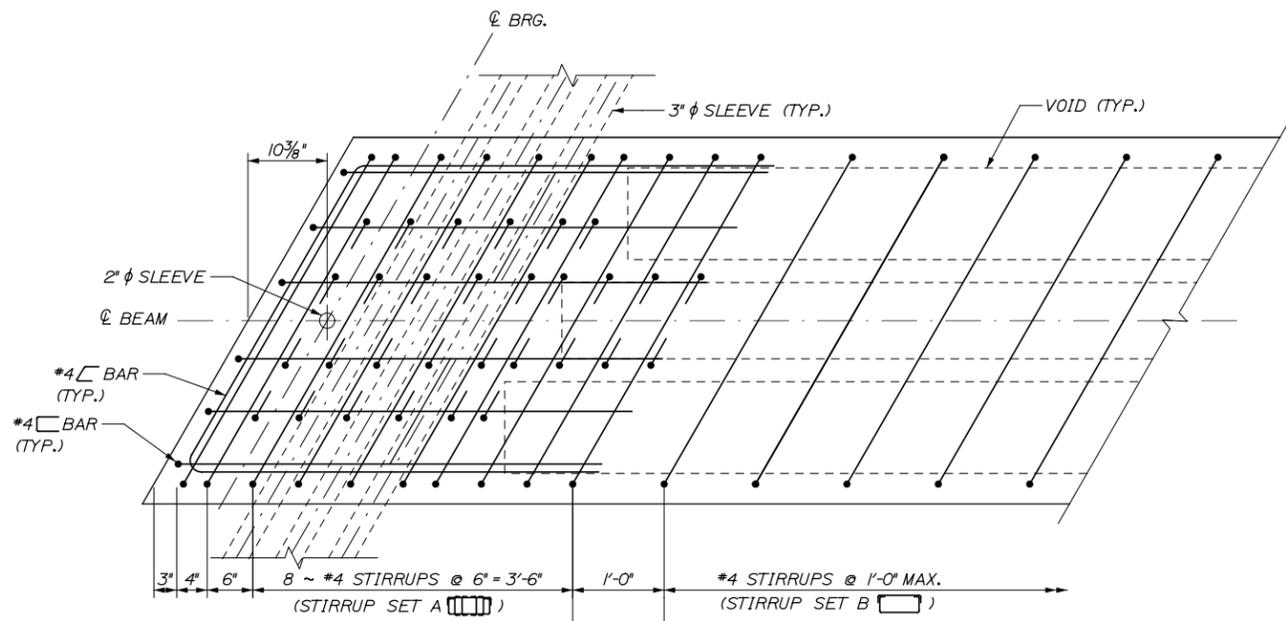
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
SUPERSTRUCTURE DETAILS I
BRIDGE 28**

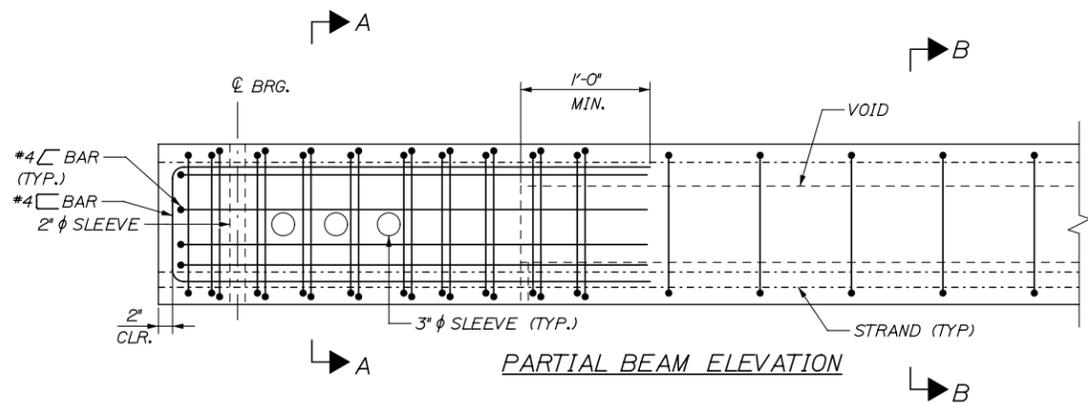
SHEET NUMBER: S28-18
CONTRACT: 2014.13
40 OF 86

Date: 6/19/2014

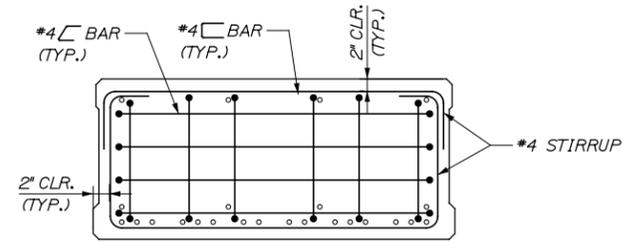


PARTIAL BEAM PLAN - TYPICAL 4FT BEAM

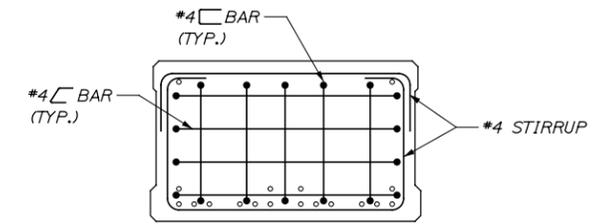
NOTES: PARAPET AND TRENCH DRAIN DOWELS NOT SHOWN
3FT BEAMS SIMILAR



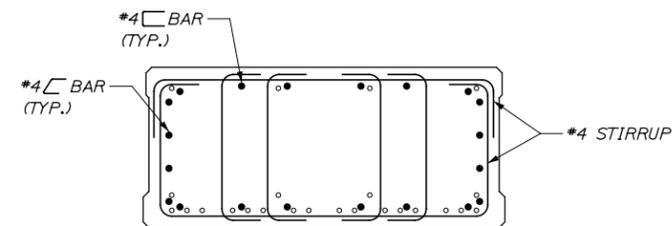
PARTIAL BEAM ELEVATION



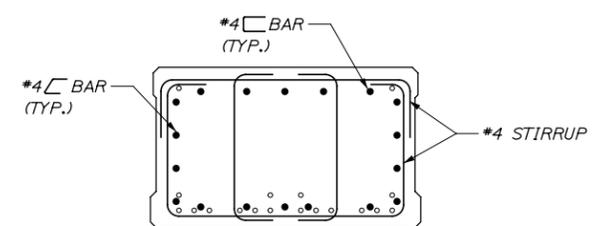
END SECTION - 4FT BEAM



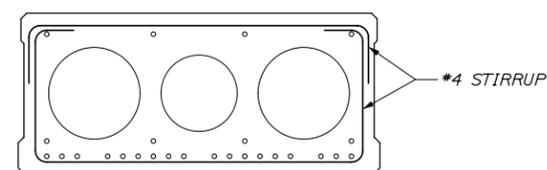
END SECTION - 3FT BEAM



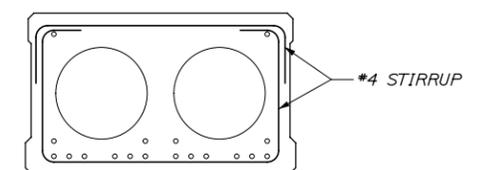
**SECTION A-A - 4FT BEAM
(STIRRUP SET A)**



SECTION A-A - 3FT BEAM



**SECTION B-B - 4FT BEAM
(STIRRUP SET B)**



SECTION B-B - 3FT BEAM

Filename: ...\\041_Super_Details_2_B28.dgn

Scale:			
1" = 1'-0"			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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THE GOLD STAR
MEMORIAL HIGHWAY

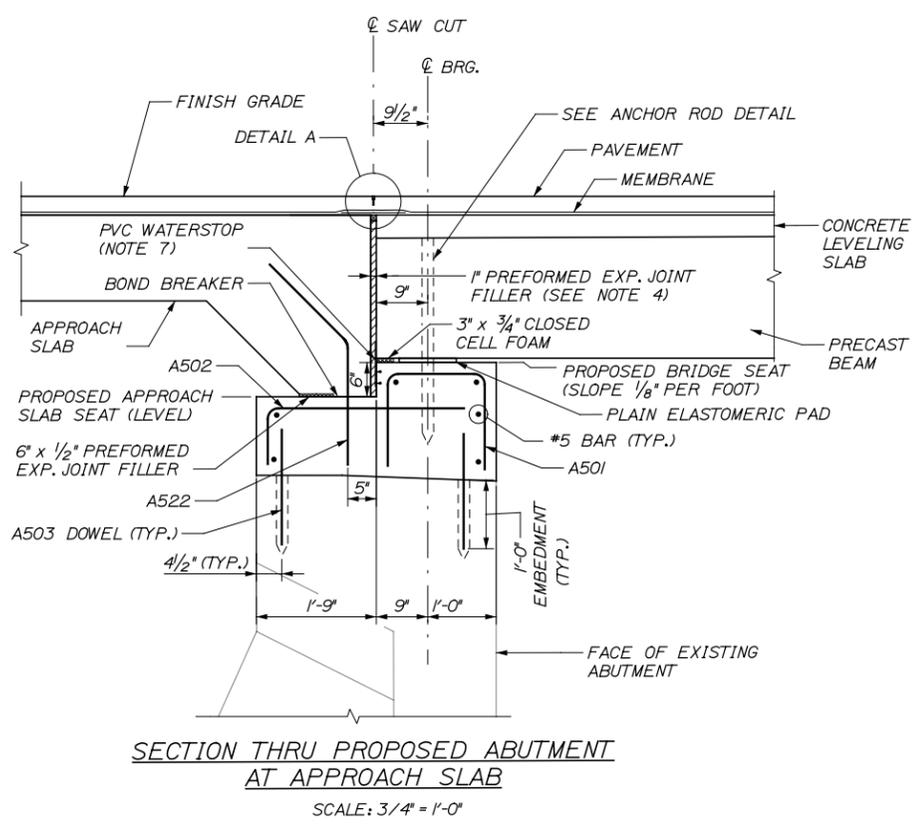
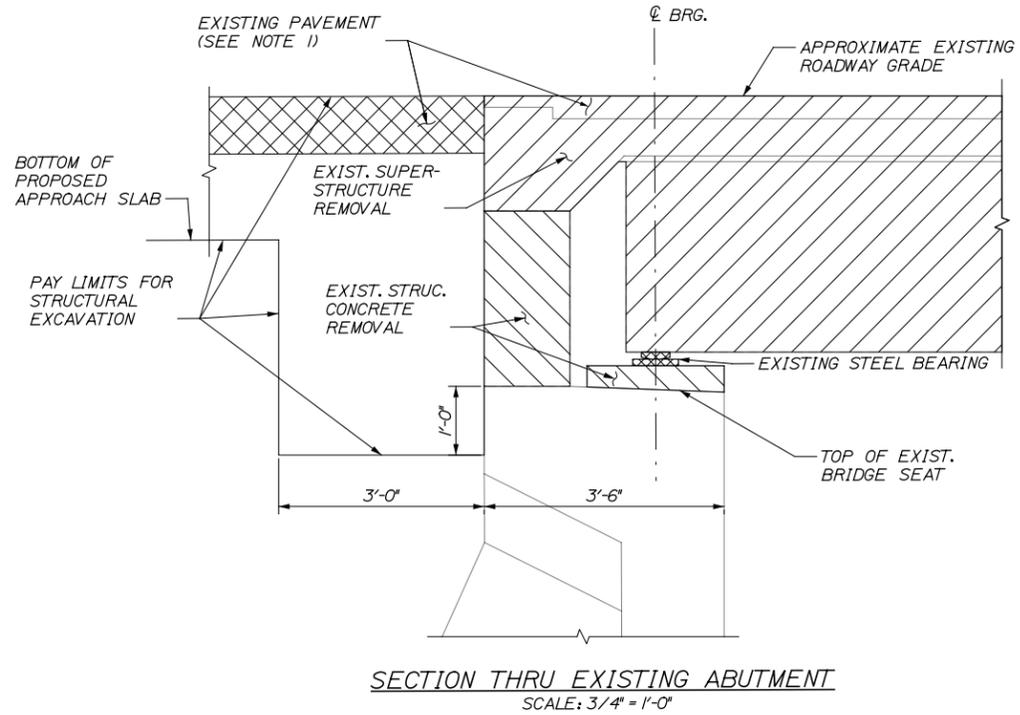
MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
SUPERSTRUCTURE DETAILS II
BRIDGE 28

SHEET NUMBER: S28-19
41 OF 86

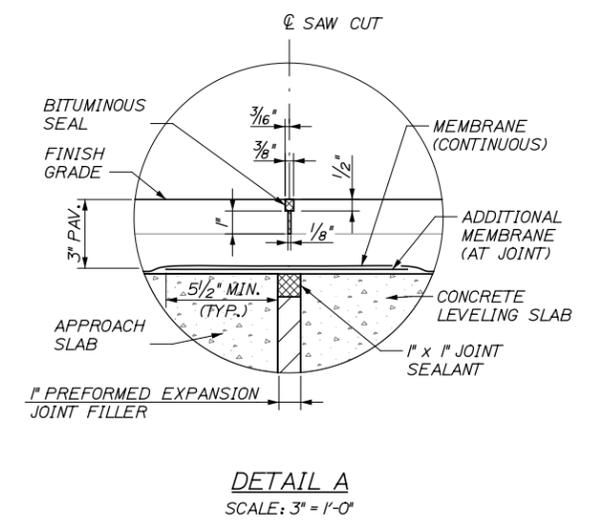
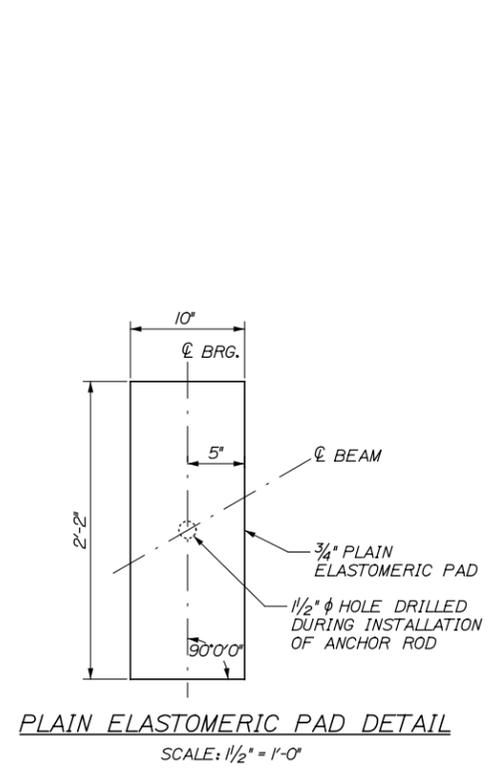
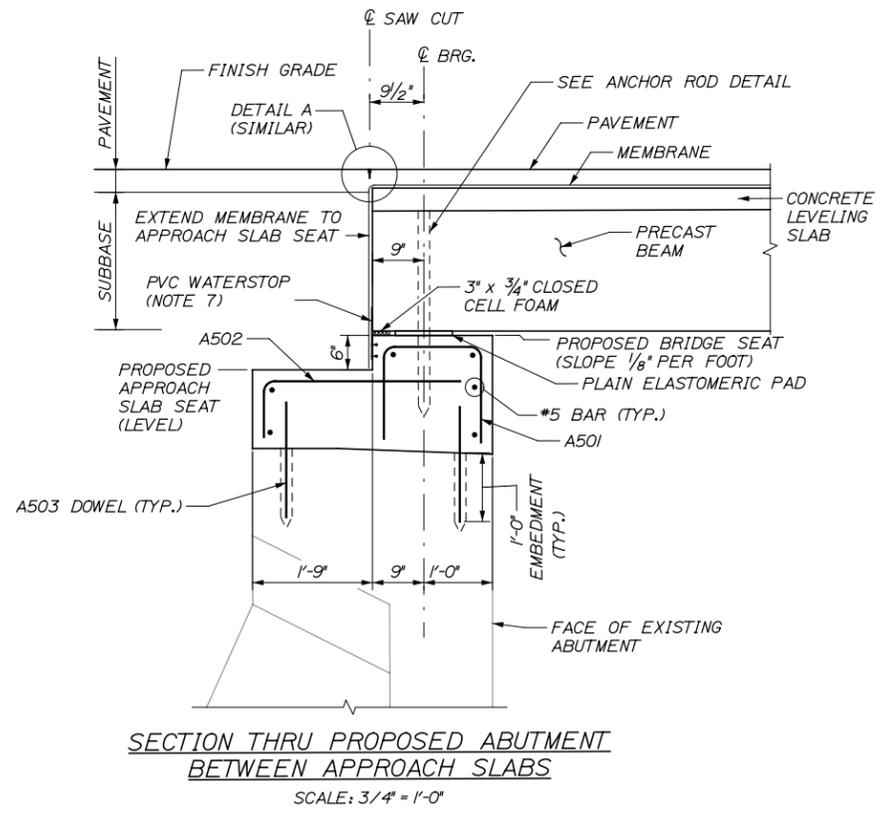
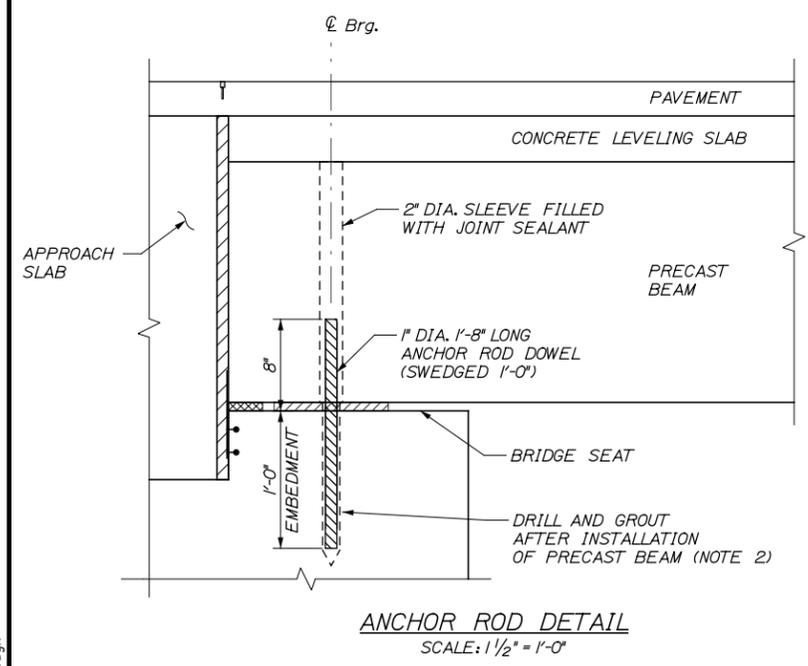
CONTRACT: 2014.13

Date: 6/19/2014



NOTES:

- EXISTING PAVEMENT THICKNESS MAY VARY. NO SEPARATE PAYMENT FOR REMOVAL OF EXISTING BRIDGE PAVEMENT SHALL BE MADE. PAYMENT SHALL BE INCIDENTAL TO ITEM 202.10. REMOVAL OF APPROACH PAVEMENT FOR APPROACH SLAB CONSTRUCTION SHALL BE PAID UNDER ITEM 206.082.
- DRILL 1/2" ϕ HOLES FOR 1" ϕ ANCHOR DOWELS IN ABUTMENTS AFTER SLABS ARE PLACED AND LATERALLY POST-TENSIONED, THEN GROUT DOWELS INTO PLACE. COST FOR DRILLING HOLES, ANCHOR DOWELS, AND GROUT, SHALL BE INCIDENTAL TO ITEM 535.601.
- ELASTOMERIC BEARING PADS SHALL BE POLYCHLOROPRENE OF 60 \pm 5 SHORE A DUROMETER HARDNESS AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 18.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS. PAYMENT FOR ELASTOMERIC BEARING PADS SHALL BE INCIDENTAL TO ITEM 535.601.
- PREFORMED EXPANSION JOINT FILLER BETWEEN PRESTRESSED BEAMS AND ABUTMENT BACKWALL SHALL CONFORM TO AASHTO M 213 (ASTM D 1751).
- PAYMENT FOR PREFORMED EXPANSION JOINT FILLER, JOINT SEALANT ON JOINT FILLER, AND BOND BREAKER SHALL BE INCIDENTAL TO ITEM 502.21.
- THE VOID BETWEEN THE ANCHOR ROD AND 2" DIAMETER SLEEVE IN THE PRECAST BEAMS AT THE ABUTMENTS SHALL BE FILLED WITH AN APPROVED JOINT SEALANT. PAYMENT FOR THE ANCHOR ROD, SLEEVE, AND JOINT SEALANT SHALL BE INCIDENTAL TO ITEM 535.601.
- THE TOP LEGS OF THE WATERSTOPS SHALL BE CLIPPED FOR THE PRECAST BEAM AND ATTACHED TO THE BEAM WITH AN APPROVED ADHESIVE.
- PAYMENT FOR THE PAVEMENT SAWCUTS AND BITUMINOUS SEALS AT THE SAWCUTS SHALL BE INCIDENTAL TO ITEM 403.208.



Filename: ... \042_Super_Details_3_B28.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	Checked	By	Date
SBK	06/2014	CPT	CPT	06/2014
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MAINE TURNPIKE

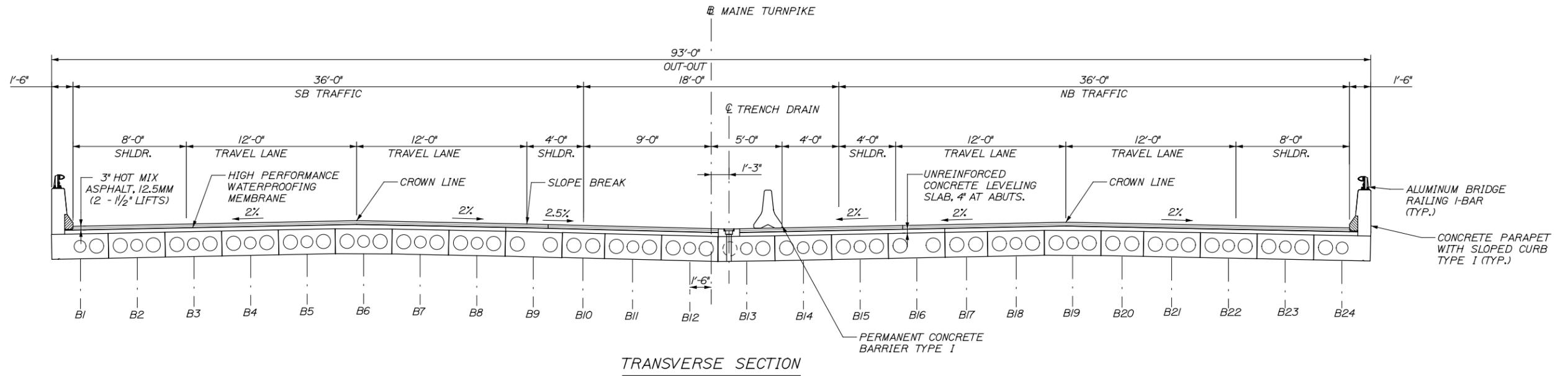
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
SUPERSTRUCTURE DETAILS III
BRIDGE 28**

SHEET NUMBER: S28-20
CONTRACT: 2014.13
42 OF 86

Date: 6/19/2014



TRANSVERSE SECTION

Filename: ...MSTA\043_Typ_Sect_B28.dgn

Scale: 1/4" = 1'-0"

No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date	Checked	By	Date
Designed	SBK	06/2014	CPT	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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THE GOLD STAR MEMORIAL HIGHWAY

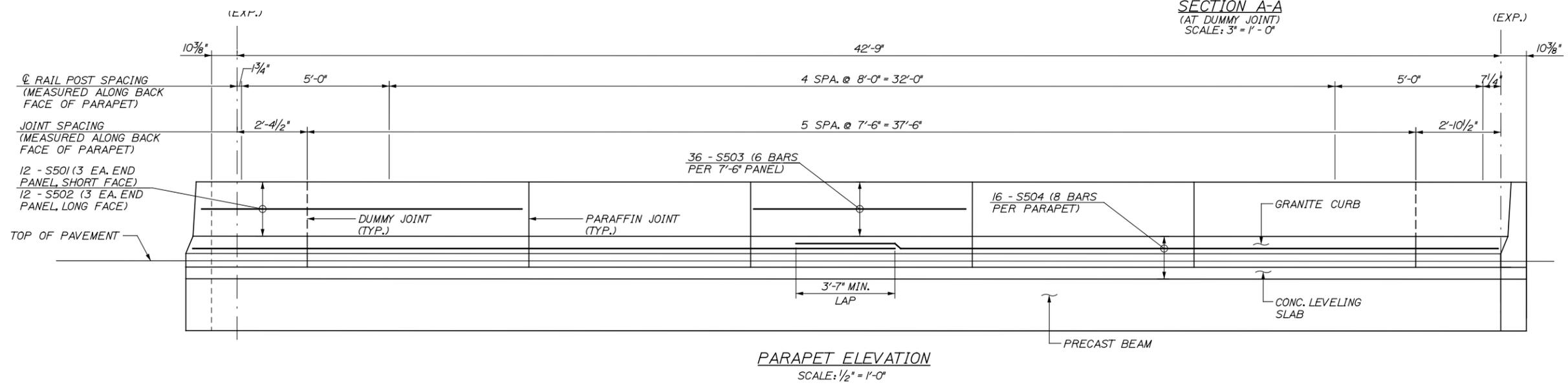
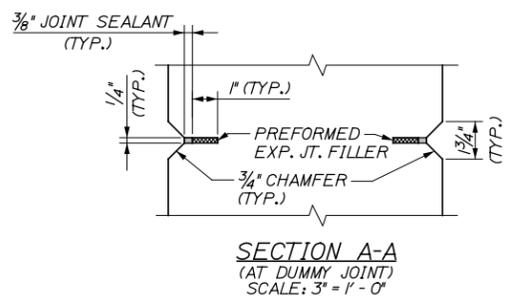
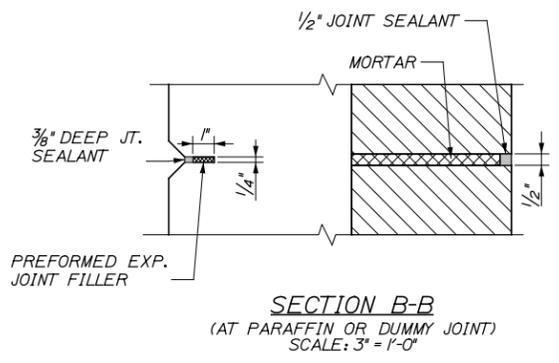
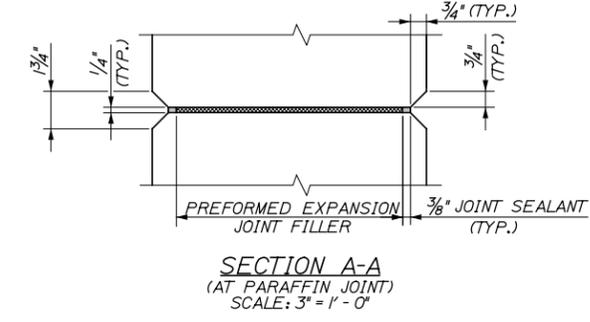
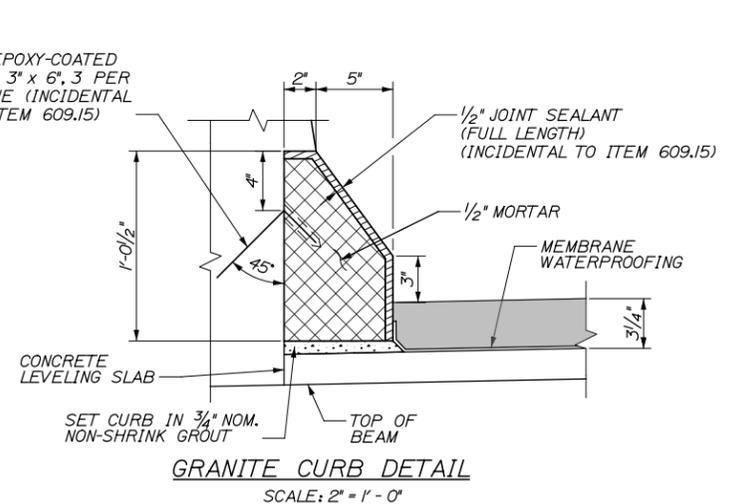
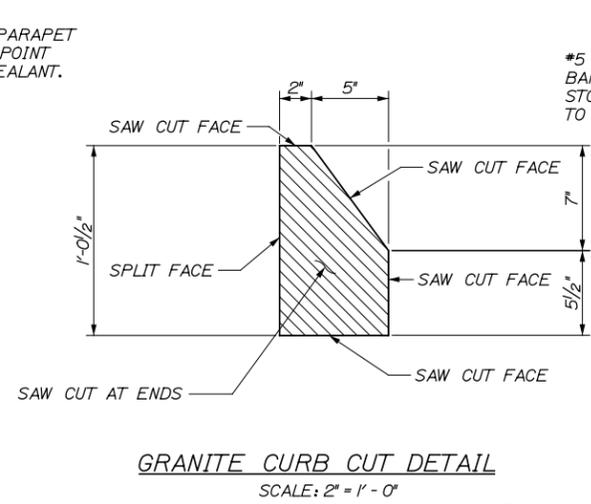
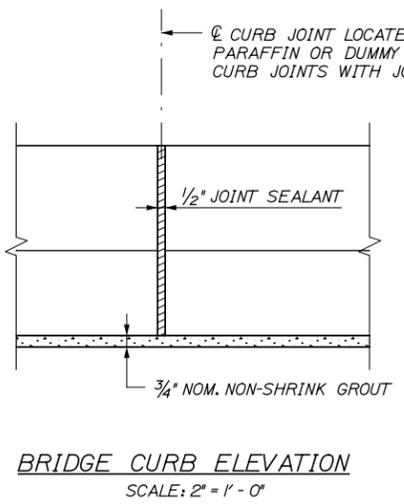
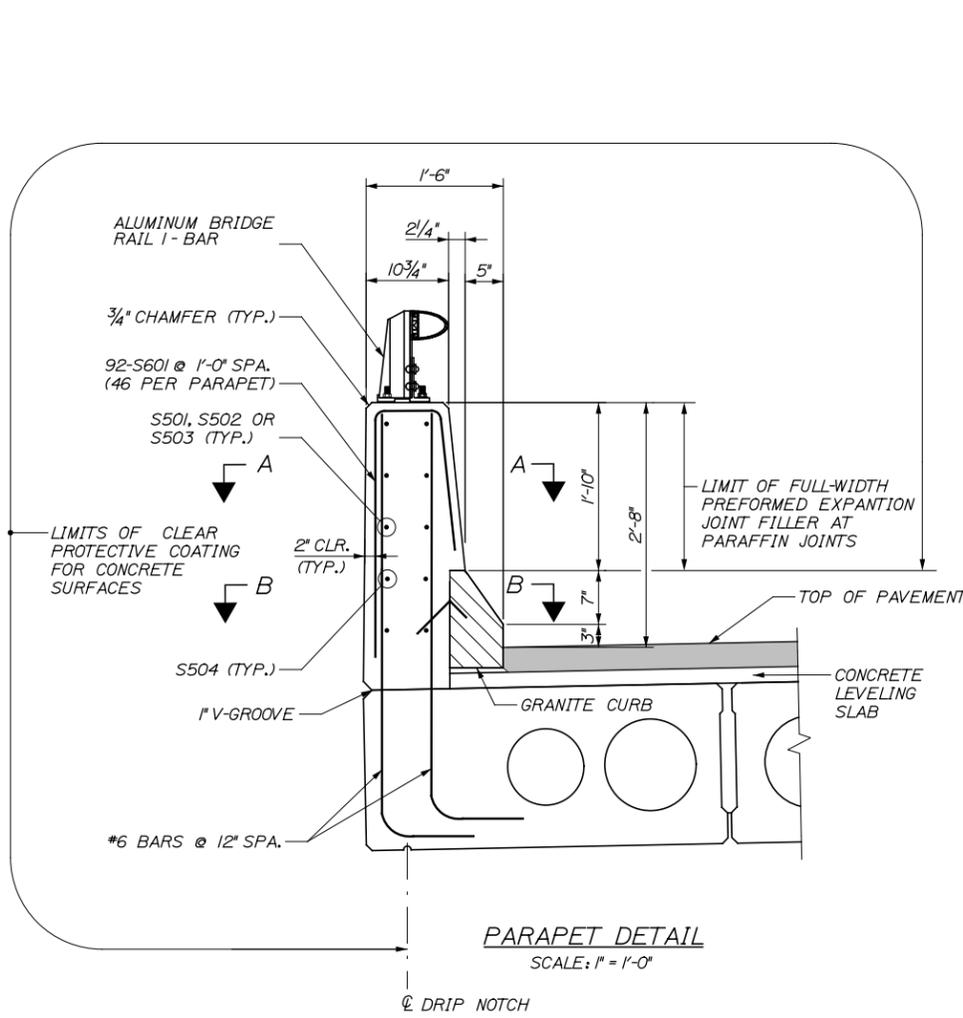
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 TYPICAL SECTION - BRIDGE 28**

SHEET NUMBER: S28-21
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CONTRACT: 2014.13

Date: 6/19/2014



- NOTES:**
- HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN PARAPETS.
 - CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE PARAFFIN JOINTS. THE JOINTS SHALL REMAIN PLUMB AND STRAIGHT DURING PLACEMENT.
 - PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO AASHTO M 213 (ASTM D 1751).
 - JOINT SEALANT SHALL BE SIKA FLEX IA OR AN APPROVED EQUAL.
 - PAYMENT FOR PREFORMED EXPANSION JOINT FILLER AND JOINT SEALANT SHALL BE INCIDENTAL TO ITEM 502.264.

Filename: ... \044_Rail_Details_L_B28.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	SBK 06/2014	Checked	CPT 06/2014
Drawn	BGC 06/2014	In Charge of	CPT 06/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

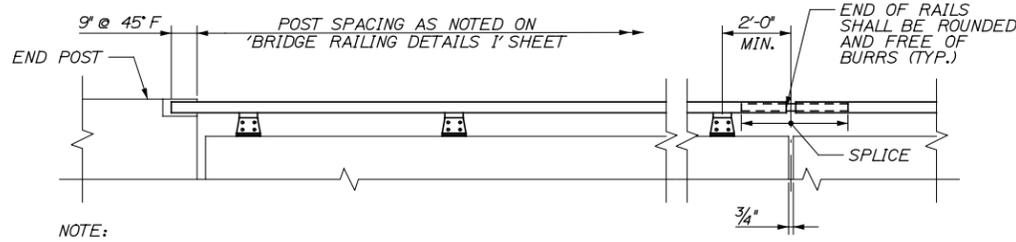
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**BRIDGE RAILING DETAILS I
BRIDGE 28**

SHEET NUMBER: S28-22
CONTRACT: 2014.13
44 OF 86

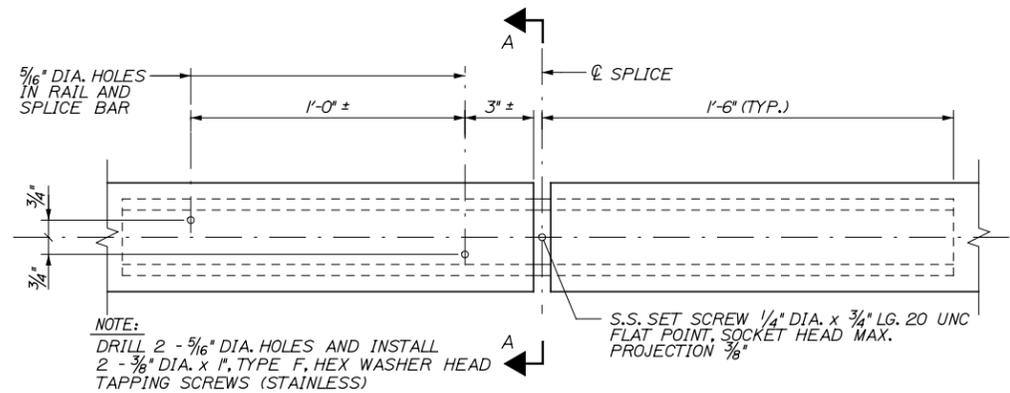
Date: 6/19/2014

Filename: ... \045_Rail_Details_2_B28.dgn



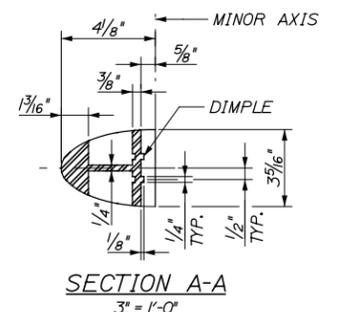
NOTE:
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POSTS WHENEVER POSSIBLE AND, IN ANY CASE, NEVER LESS THAN TWO (2). RAIL POSTS ARE TO BE SET NORMAL TO GRADE, UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

RAILING - ELEVATION
3/8" = 1'-0"

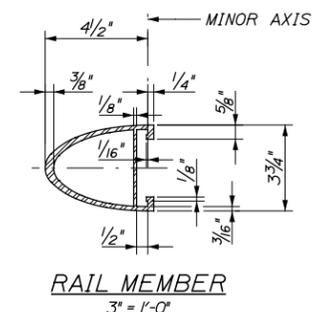


NOTE:
DRILL 2 - 5/16" DIA. HOLES AND INSTALL 2 - 3/8" DIA. x 1" TYPE F, HEX WASHER HEAD TAPPING SCREWS (STAINLESS)

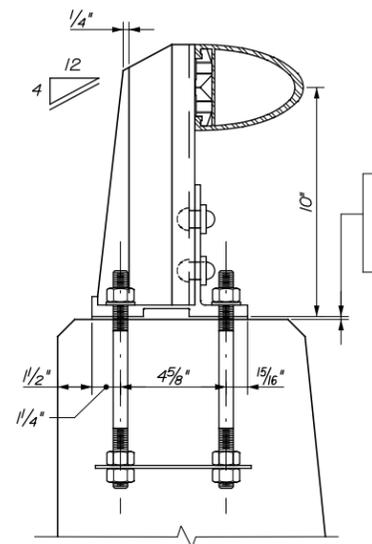
SPLICE DETAIL
3" = 1'-0"



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

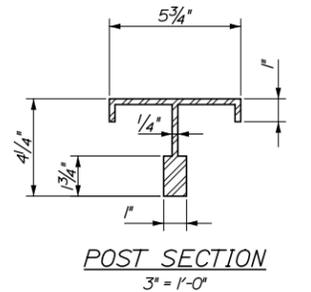


RAIL MEMBER
3" = 1'-0"

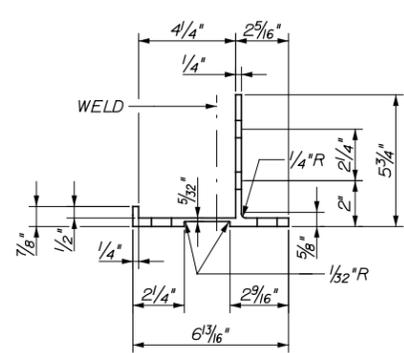


PREFORMED PAD 1/8" DIA. THICK AFTER COMPRESSION (TYP.) AT LEAST ONE PAD SHALL BE PLACED UNDER EACH POST

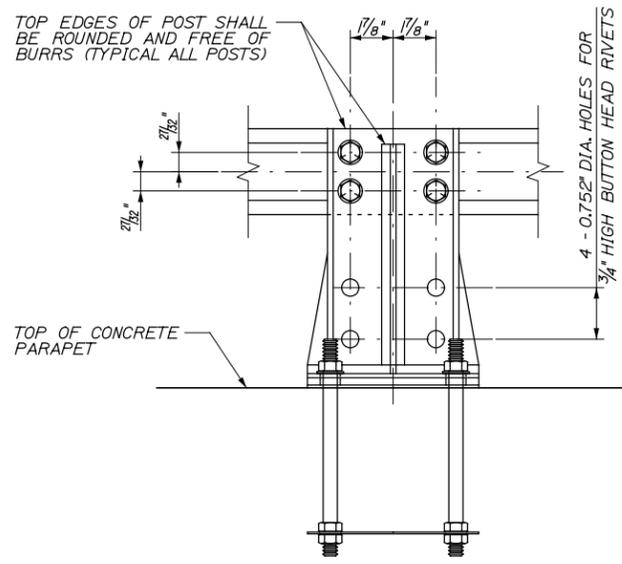
BRIDGE RAILING ASSEMBLY
3" = 1'-0"



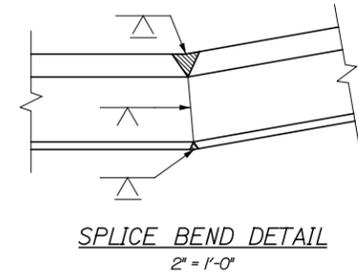
POST SECTION
3" = 1'-0"



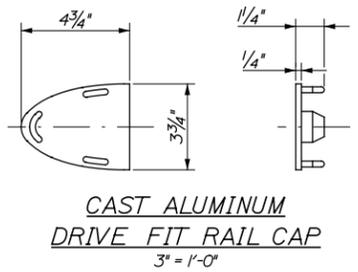
POST BASE SECTION
3" = 1'-0"



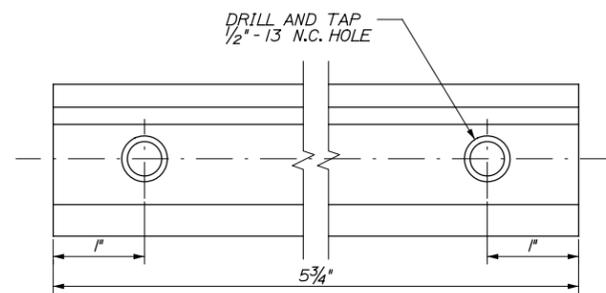
OUTSIDE ELEVATION OF POST
3" = 1'-0"



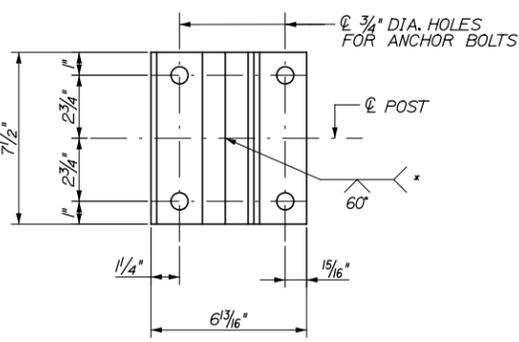
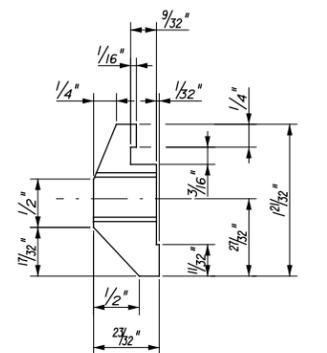
SPLICE BEND DETAIL
2" = 1'-0"



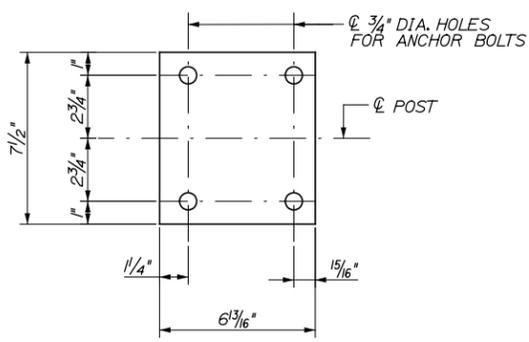
CAST ALUMINUM DRIVE FIT RAIL CAP
3" = 1'-0"



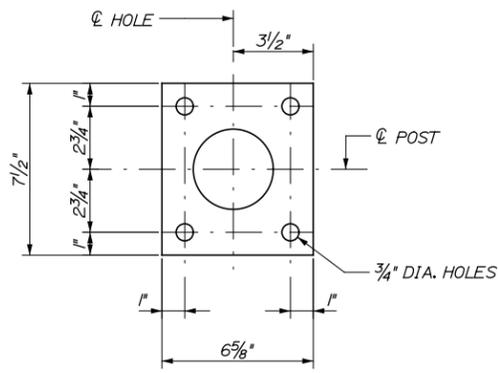
CLAMP BAR DETAILS
FULL SIZE



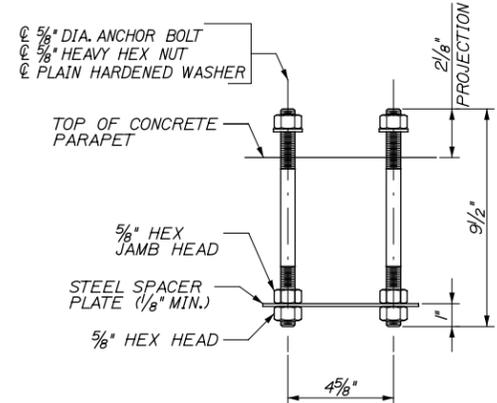
POST BASE (BOTTOM VIEW)
3" = 1'-0"



PREFORMED PAD
3" = 1'-0"

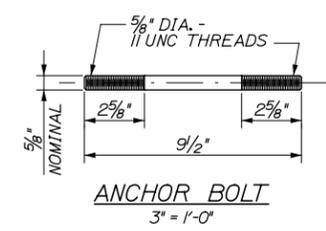


STEEL SPACER PLATE (FOR ANCHORAGE)
3" = 1'-0"



RAIL POST ANCHORAGE (ASSEMBLY)
3" = 1'-0"

NOTE:
* ONE PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM ONE PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE.



ANCHOR BOLT
3" = 1'-0"

NOTE:
IF CUT THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.

NOTE:
FOUR (4) BOLT, NUT AND WASHER SETS ARE REQUIRED PER ASSEMBLY, ALL HARDWARE SHALL BE GALVANIZED.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by: TYLIN INTERNATIONAL			
CONSULTANT PROJECT MANAGER: Chris Taylor			
	By	Date	
	SBK	06/2014	
	By	Date	
	CPT	06/2014	
	By	Date	
	BGC	06/2014	
	By	Date	
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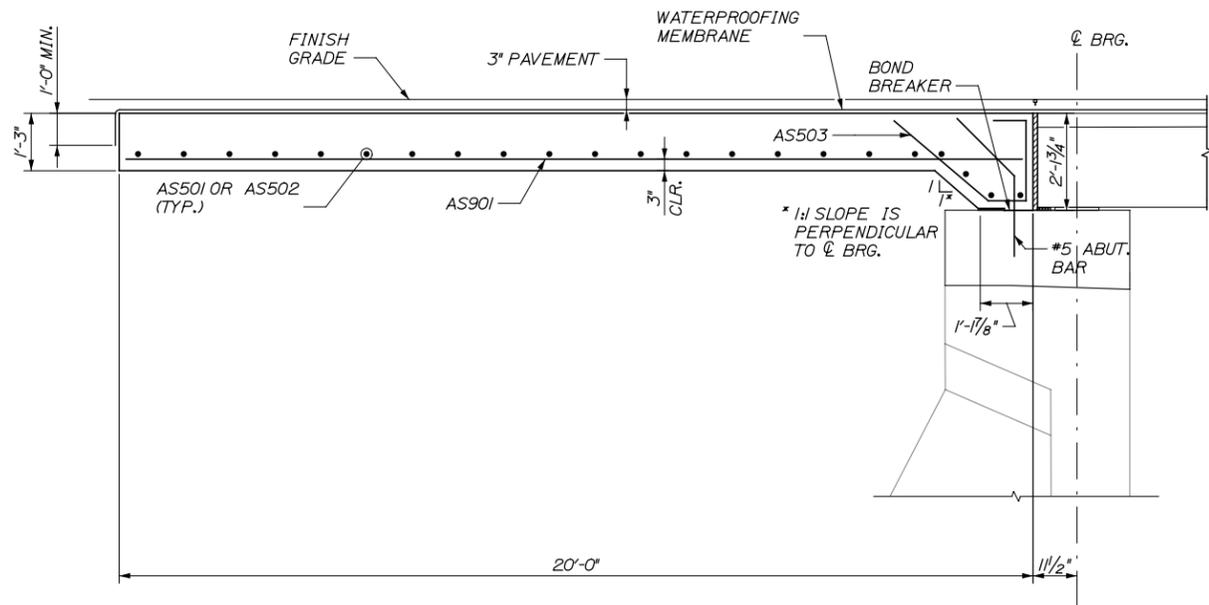
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
BRIDGE RAILING DETAILS II
BRIDGE 28

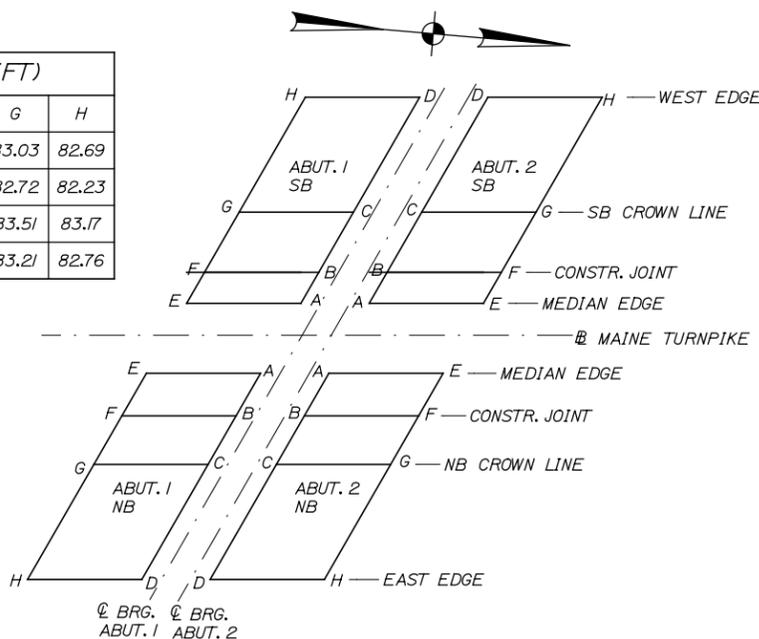
SHEET NUMBER: S28-23
CONTRACT: 2014.13
45 OF 86

Date: 6/19/2014

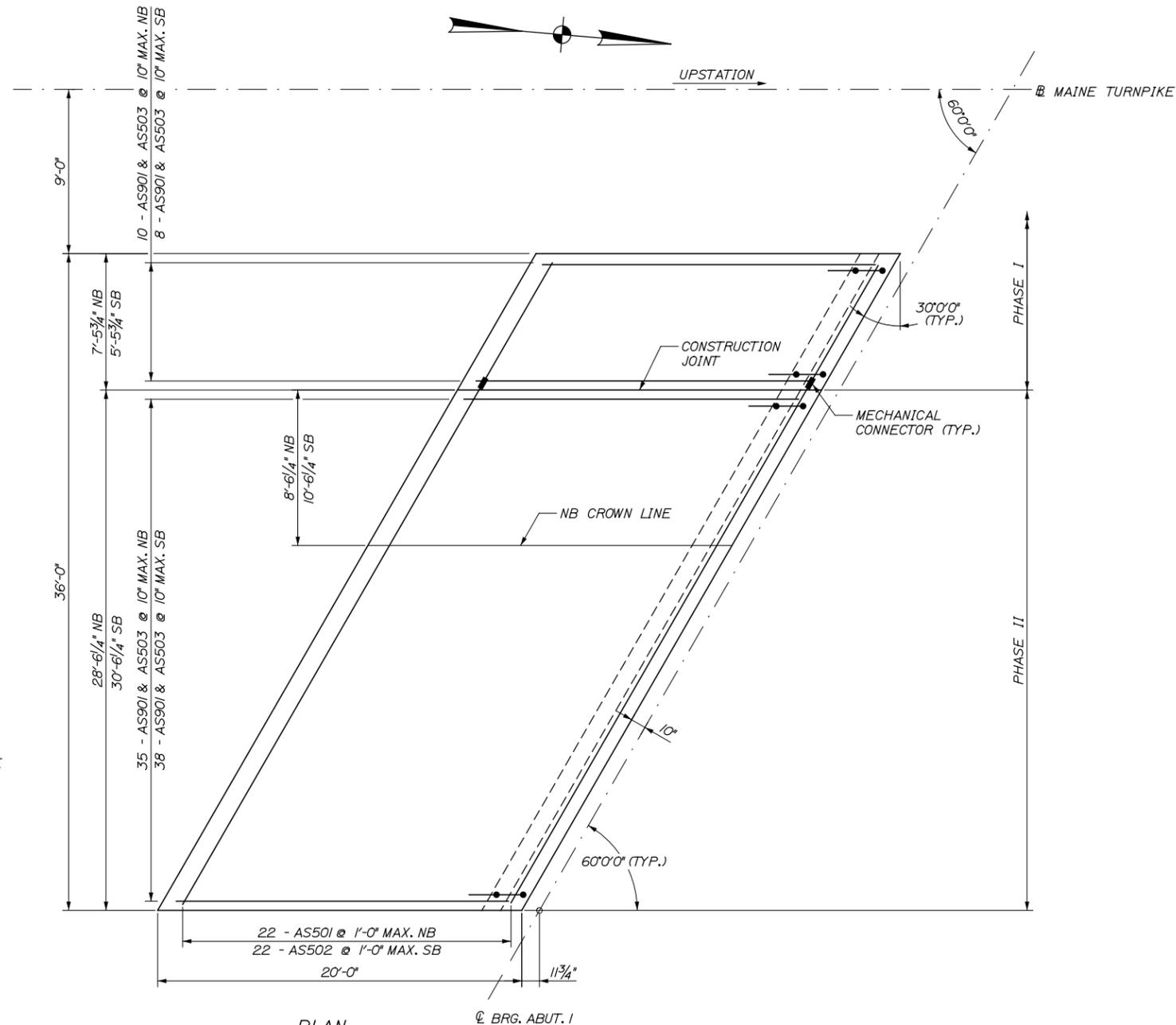


SECTION PARALLEL TO B
SCALE: 1/2" = 1'-0"

TOP OF APPROACH SLAB ELEVATIONS (FT)								
APPROACH SLAB	A	B	C	D	E	F	G	H
ABUT. 1, SB	82.75	82.90	83.14	82.81	82.63	82.78	83.03	82.69
ABUT. 1, NB	82.60	82.72	82.87	82.40	82.45	82.58	82.72	82.23
ABUT. 2, SB	83.01	83.16	83.40	83.07	83.12	83.27	83.51	83.17
ABUT. 2, NB	82.86	82.98	83.13	82.66	82.91	83.06	83.21	82.76



TOP OF APPROACH SLAB ELEVATION LOCATION PLAN
SCALE: N.T.S.



PLAN
SCALE: 1/4" = 1'-0"
(ABUTMENT NO. 1, NB SIDE SHOWN. OTHER CORNERS SIMILAR.)

Filename: ...MSTA\046_App_Slab_B28.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by: TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	BGC	06/2014	In Charge of	CPT	06/2014

T.Y. Lin International
12 Northbrook Drive
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FAX: (207) 781-4753



**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**APPROACH SLABS
BRIDGE 28**

CONTRACT: 2014.13

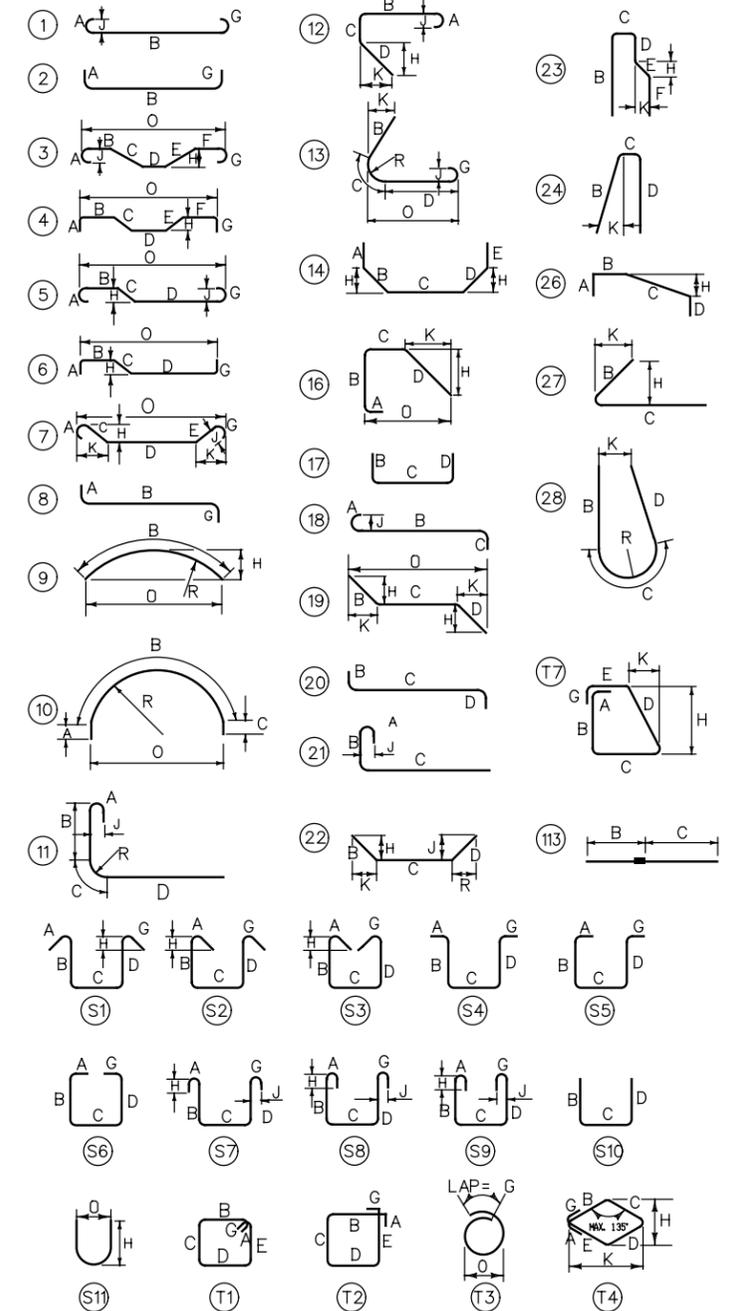
SHEET NUMBER: S28-24

46 OF 86

Date: 6/19/2014

PARAPETS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
S501	5	12	10'-6"	STR												BARRIER LONGITUDINAL ENDS - SHORT FACE
S502	5	12	10'-8"	STR												BARRIER LONGITUDINAL ENDS - LONG FACE
S503	5	36	7'-2"	STR												BARRIER LONGITUDINAL IN PANELS
S504	5	16	23'-11"	STR												BARRIER LONGITUDINAL BELOW TOP CJRB
S601	6	92	4'-9 3/4"	24		1'-6"	0'-6 3/4"	2'-9"					0'-1 3/4"			BARRIER STIRRUP
ABUTMENTS & WINGWALLS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
A501	5	228	4'-9"	17		1'-7"	1'-7"	1'-7"								BRIDGE SEAT STIRRUP
A502	5	214	4'-8"	17		1'-1"	3'-7"	0'-0"								APPROACH SLAB SEAT STIRRUP
A503	5	230	2'-1"	STR												ABUTMENT SEAT DOWELS (DRILL & GROUT)
A504	5	12	18'-2"	STR												BRIDGE & APPROACH SLAB SEAT HORIZONTAL
A505	5	8	36'-8"	STR												BRIDGE SEAT HORIZONTAL
A506	5	4	32'-7"	STR												APPROACH SLAB SEAT HORIZONTAL
A507	5	8	36'-7"	STR												BRIDGE SEAT HORIZONTAL
A508	5	4	34'-10"	STR												APPROACH SLAB SEAT HORIZONTAL
A509	5	3	8'-6"	STR												BRIDGE SEAT HORIZONTAL
A510	5	1	10'-3"	STR												BRIDGE SEAT HORIZONTAL
A511	5	2	11'-3"	STR												APPROACH SLAB SEAT HORIZONTAL
A512	5	3	5'-11"	STR												BRIDGE SEAT HORIZONTAL
A513	5	1	6'-2"	STR												BRIDGE SEAT HORIZONTAL
A514	5	2	5'-2"	STR												APPROACH SLAB SEAT HORIZONTAL
A515	5	3	6'-2"	STR												BRIDGE SEAT HORIZONTAL
A516	5	1	7'-11"	STR												BRIDGE SEAT HORIZONTAL
A517	5	2	8'-11"	STR												APPROACH SLAB SEAT HORIZONTAL
A518	5	3	8'-3"	STR												BRIDGE SEAT HORIZONTAL
A519	5	1	8'-6"	STR												BRIDGE SEAT HORIZONTAL
A520	5	2	7'-6"	STR												APPROACH SLAB SEAT HORIZONTAL
A521	5	12	4'-8"	S10		2'-0"	0'-8"	2'-0"								APPROACH SLAB SEAT EXP. JT.
A522	5	112	3'-6"	16	0'-0"	0'-0"	1'-9"	1'-9"				1'-3"	1'-3"	3'-0"		APPROACH SLAB DOWELS
A528	5	16	3'-2"	2	0'-10"	1'-6"					0'-10"					END OF WINGWALLS
A529	5	20	3'-4"	2	0'-10"	1'-8"					0'-10"					TOP OF WINGWALLS
A530	5	10	3'-7"	2	0'-10"	1'-11"					0'-10"					TOP OF WINGWALLS
A531	5	8	3'-5"	STR												WINGWALL VERTICAL
THRU	5	4	2-1/4" INCR	STR												WINGWALL VERTICAL
A537	5	4	4'-6"	STR												WINGWALL VERTICAL
A538	5	34	4'-9"	STR												WINGWALL VERTICAL
A539	5	4	3'-8"	STR												WINGWALL VERTICAL
A540	5	4	4'-1"	STR												WINGWALL VERTICAL
A541	5	6	6'-7"	T7	0'-0"	0'-0"	2'-7"	1'-5"	2'-7"		0'-0"	1'-3 1/2"	0'-9"			SEAT END BAR
A542	5	12	6'-8"	T7	0'-0"	0'-0"	3'-1"	1'-11"	1'-8"		0'-0"	1'-8"	0'-11 1/2"			WINGWALL END BAR
A544	5	8	7'-1"	28		2'-1"	5'-0"	0'-0"							13'-1"	WINGWALL FRONT FACE
A545	5	8	6'-2"	STR												WINGWALL BACK FACE
A546	5	4	6'-3"	STR												WINGWALL TOP FACE
A547	5	4	3'-1"	STR												WINGWALL TOP HORIZONTAL BAR
A548	5	6	4'-0"	24		1'-6"	1'-10"	0'-8"							1'-3 1/2"	SEAT END BAR
A549	5	12	5'-10"	T7	0'-0"	0'-0"	2'-3"	1'-10"	1'-9"		0'-0"	1'-7"	0'-11"			WINGWALL END BAR
A550	5	16	3'-11"	STR												WINGWALL HORIZONTAL
A551	5	4	2'-8"	STR												WINGWALL TOP HORIZONTAL
A552	5	4	4'-3"	24		2'-10"	1'-5"	0'-0"							2'-6"	WINGWALL TOP BAR
A601	6	16	9'-2"	17		3'-11"	1'-4"	3'-11"								VERTICAL DOWELS INTO ENDPOST
A602	6	16	3'-6"	STR												HORIZONTAL DOWELS INTO ENDPOST
A603	6	55	3'-8"	STR												H & V DOWELS INTO EXISTING (DRILL & GROUT)
ENDPOSTS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
EP501	5	6	4'-9"	STR												HORIZONTAL BASE
EP502	5	22	5'-0"	STR												HORIZONTAL ROADSIDE
EP503	5	22	5'-4"	STR												HORIZONTAL OUTSIDE
EP504	5	2	3'-8"	STR												HORIZONTAL ROADSIDE AT TAPER
EP505	5	2	4'-0"	STR												HORIZONTAL OUTSIDE AT TAPER
EP506	5	2	4'-5"	24		2'-8"	1'-9"	0'-0"					2'-6"			TOP HORIZONTAL ROADSIDE
EP507	5	2	5'-6"	24		2'-8"	2'-10"	0'-0"					2'-6"			TOP HORIZONTAL OUTSIDE
EP508	5	28	5'-6 3/4"	S10		2'-6"	0'-6 3/4"	2'-6"								TOP VERTICAL U-BAR
EP509	5	6	5'-6 3/4"	23		2'-6"	0'-6 3/4"	0'-10"	1'-8"	0'-0"		1'-8"	0'-1/2"			TOP VERTICAL
EP510	5	10	2'-8 3/4"	23		0'-0"	0'-6 3/4"	0'-6"	1'-8"	0'-0"		1'-8"	0'-1"			TOP VERTICAL ROADSIDE
EP511	5	10	2'-6"	STR												TOP VERTICAL OUTSIDE
EP512	5	6	4'-6"	STR												HORIZONTAL BASE
EP513	5	22	4'-3"	STR												HORIZONTAL ROADSIDE
EP514	5	22	3'-11"	STR												HORIZONTAL OUTSIDE
EP515	5	2	2'-11"	STR												HORIZONTAL ROADSIDE AT TAPER
EP516	5	2	2'-7"	STR												HORIZONTAL OUTSIDE AT TAPER
EP517	5	2	3'-3"	24		2'-8"	0'-7"	0'-0"					2'-6"			TOP HORIZONTAL ROADSIDE
EP518	5	2	4'-1"	24		2'-8"	1'-5"	0'-0"					2'-6"			TOP HORIZONTAL OUTSIDE
EP601	6	88	5'-11"	S10		0'-8"	5'-3"	0'-0"								BOTTOM VERTICAL
EP602	6	44	4'-7"	S10		1'-2"	2'-3"	1'-2"								BOTTOM STIRRUP
APPROACH SLABS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
AS501	5	44	41'-1"	113		8'-5"	32'-8"									NB APPROACH SLAB TRANSVERSE BARS
AS502	5	44	41'-1"	113		6'-1"	35'-0"									SB APPROACH SLAB TRANSVERSE BARS
AS503	5	182	6'-1"	16	0'-10"	1'-9"	0'-11"	2'-7"				1'-9"	2'-0"			APPROACH SLAB END STIRRUP
AS901	9	182	19'-8"	STR												APPROACH SLAB LONGITUDINAL BAR

STANDARD BAR BEND TYPES



REINFORCEMENT GENERAL NOTES

- ALL DIMENSIONS ARE OUT-TO-OUT OF BAR.
- BENDING DETAILS AND HOOKS SHALL CONFORM TO THE RECOMMENDATIONS OF THE CURRENT REVISION OF ACI STANDARD 315 AND ACI STANDARD 318.
- THE FIRST DIGIT FOLLOWING THE LETTER(S) OF THE MARK INDICATES THE SIZE OF THE BAR.
- ALL REINFORCEMENT SHALL BE EPOXY COATED, EXCEPT FOR BARS ENTIRELY IN THE APPROACH SLAB. APPROACH SLAB REINFORCEMENT SHALL BE BLACK STEEL.

Filename: ... \047_Reinf_Schedule_B28.dgn

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

Designed	TJP	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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MAINE TURNPIKE

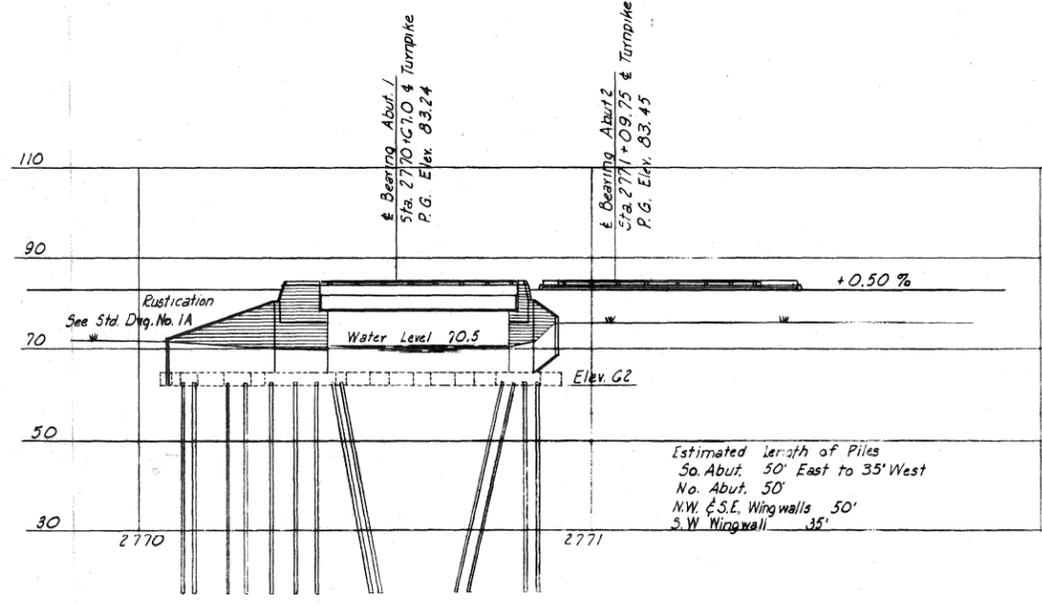
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 REINFORCEMENT SCHEDULE
 BRIDGE 28

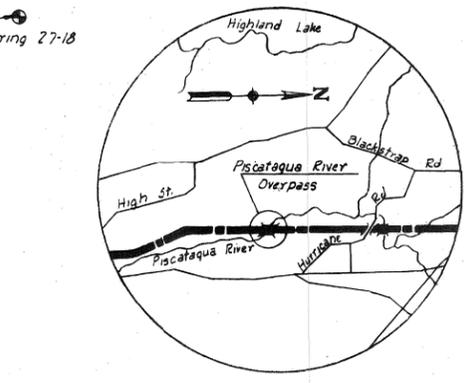
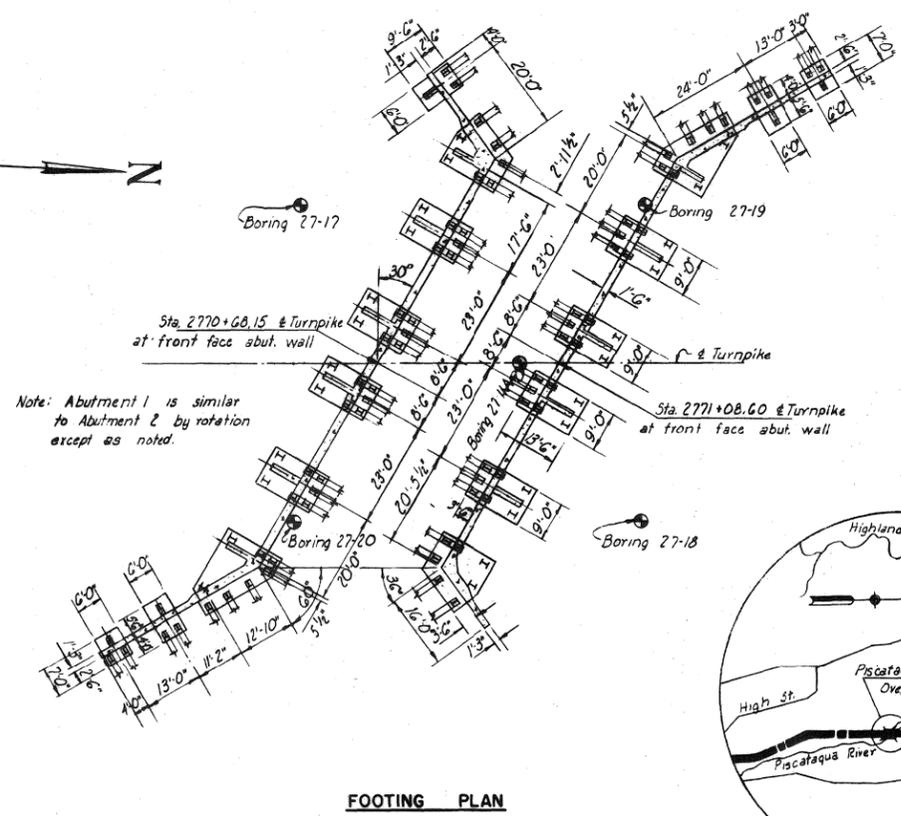
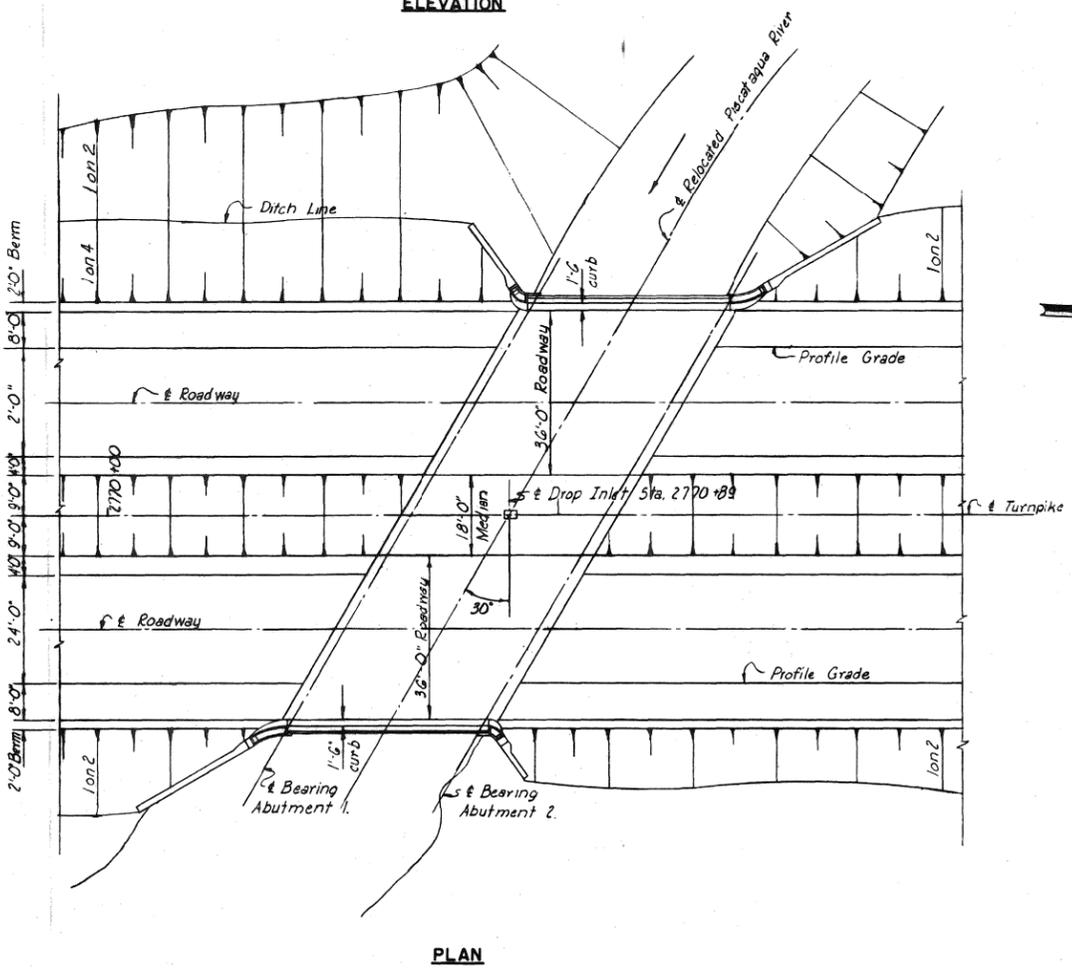
SHEET NUMBER: S28-25
 47 OF 86

CONTRACT: 2014.13



BORING DATA

83.2	Ground line	69.2	Ground line	70.3	Ground line	73.6	Ground line	72.9	Ground line	
70.2	Gray, moist, clayey silt	66.2	Wet sandy clay	59.3	Wet loose sand	63.6	Moist loose sand	58.6	Wet loose sand	
51.7	Wet loose silty sand	54.2	Wet loose silty sand	Boring 27-11A Sta. 2771+00 &	48.6	Wet dense sand	56.3	Wet loose silty sand	48.9	Wet sand
36.7	Wet silty sand gravel	39.2	Wet loose sand							
31.7	Hard micaceous quartzite	29.2	Wet sand gravel							
Boring 27-17 Sta. 2770+52 - 35' L		16.2	Wet sand gravel							
		14.2	Hard micaceous quartzite							
		Boring 27-20 Sta. 2770+49 - 35' R								
						16.1	Wet sand and gravel		22.9	Wet loose sand
						11.1	Hard micaceous quartzite		11.9	Wet loose sand gravel
						Boring 27-19 Sta. 2771+29 - 35' L		6.9	Hard micaceous quartzite	
						Boring 27-18 Sta. 2771+26 - 35' R				



GENERAL NOTES

Design Specifications A.A.S.H.O. (1959) with minor modifications
 Design Live Load: H 20-51G
 Maximum Pile Load:
 Abutments 46.5 T/pile
 N.W. & S.E. Wingwalls 23.3 T/pile
 S.W. Wingwall 23.3 T/pile

REFERENCES

Dwg No.	Title	Substructure	Steel Reinforced	Steel	Embank	Floor	Conch
S.D-4	Standard Pile Detail	✓					
S.D-5	Standard Handrail, Bearing Device and Misc. Details	✓	✓	✓	✓	✓	✓
S.D-6	Standard Diaphragm Details	✓	✓	✓	✓	✓	✓
S.D-19	Standard Bridge Floor and Median Cross Section and Floor Drain	✓	✓	✓	✓	✓	✓
S.D-1A	Standard Abutment Details	✓	✓	✓	✓	✓	✓

DRAWING 28.01.07

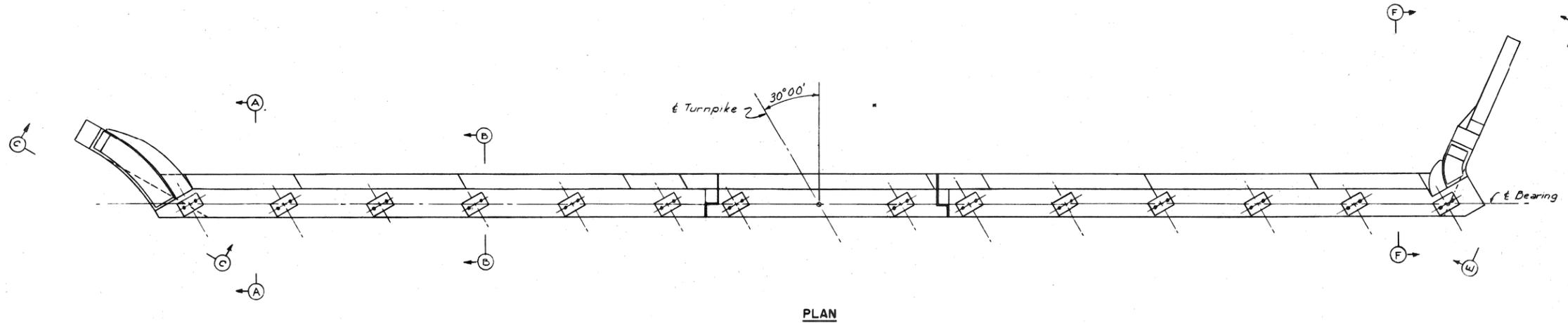
BY	DATE	REVISION	BY	DATE
MADE	B.K. 3-4-54			
TRACED		2 As-Built	HBH	11/23/56
CHECKED	R.F.S. 3-13-54	1 Revised PG. 100	CVA	7/1/56
IN CHARGE OF	I.D.S.H.	No.		

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2 - PORTLAND TO AUGUSTA

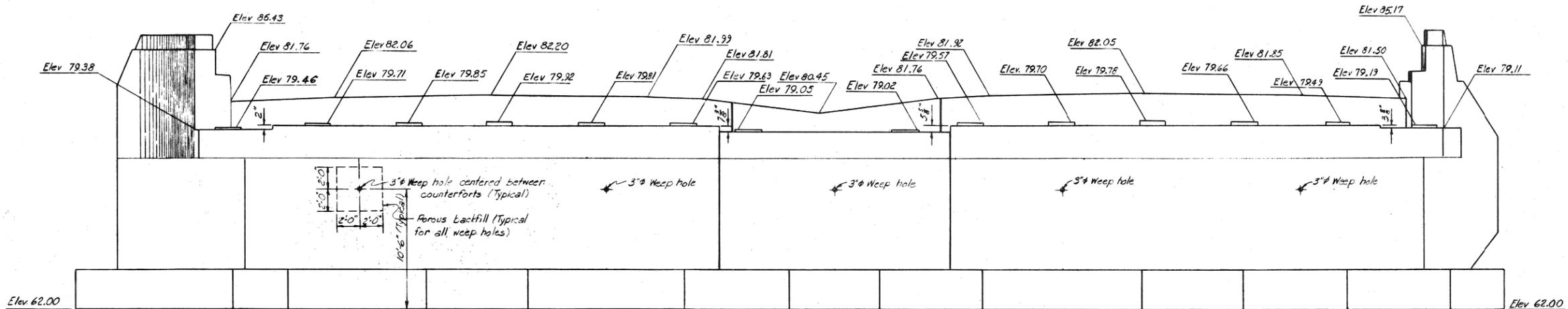
STRUCTURE NO. 28 TURNPIKE OVER
PISCATAQUA RIVER
 STA. 2770 + 67
GENERAL PLAN AND ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY

SCALE: 1"=20'
 CONTRACT NO. _____
 SHEET NO. 38 OF 382



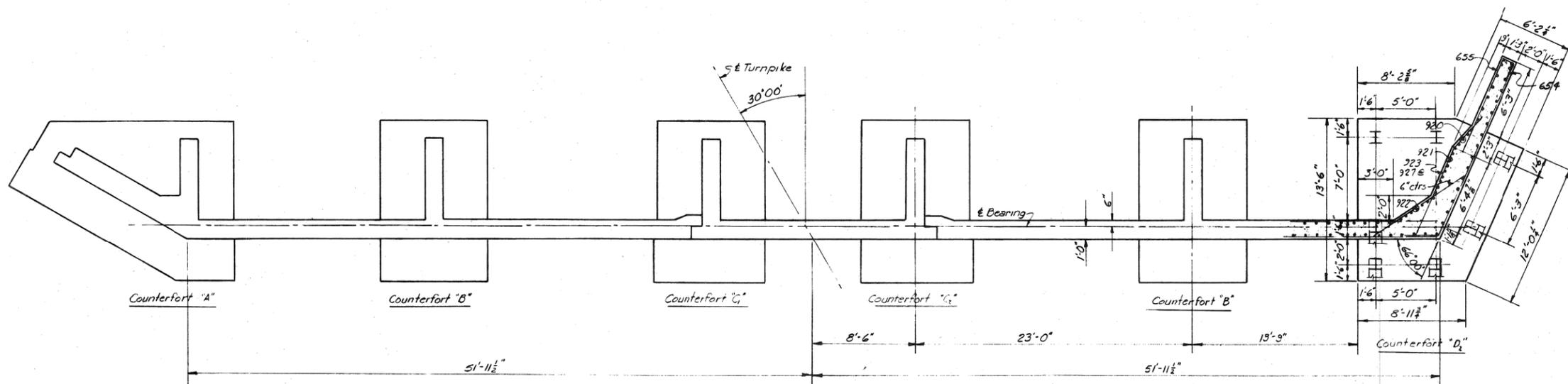
PLAN



FRONT ELEVATION

Note: Porous backfill shall consist of crushed rock or coarse aggregate. Payment included in Structural Excavation - Earth. Dimensions: 4'-0" x 4'-0" x 2'-0"

BAR LEGEND
Last 2 digits = Bar number
First digit = Bar size
Example: 605 = #6 Bar, number 5 in abutment.



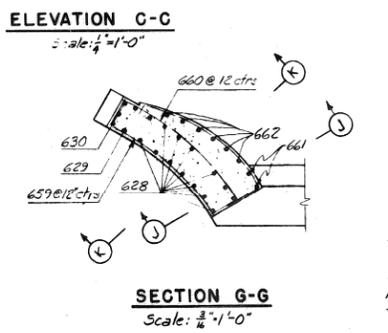
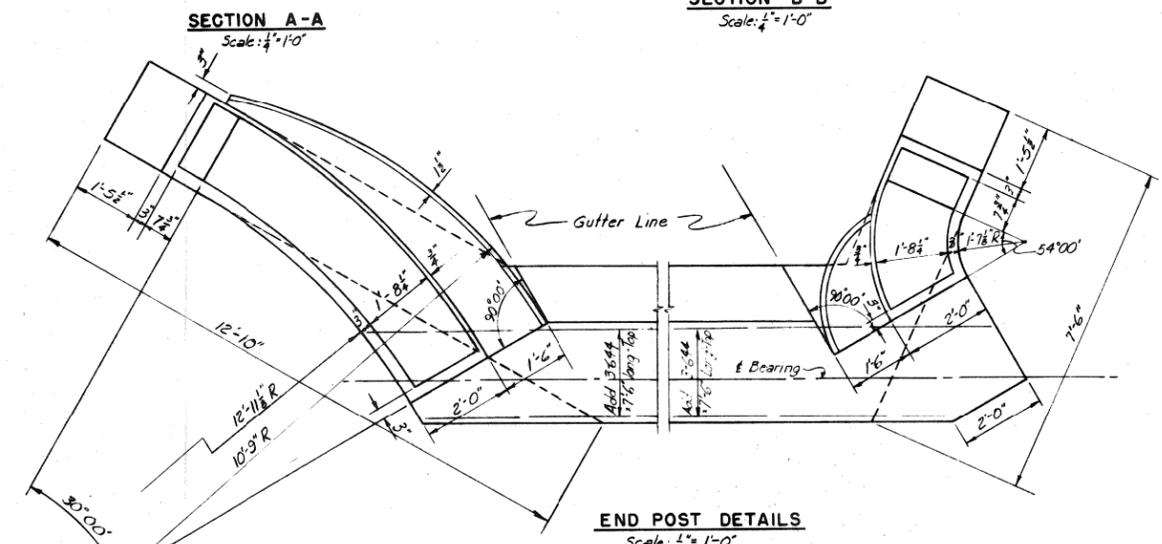
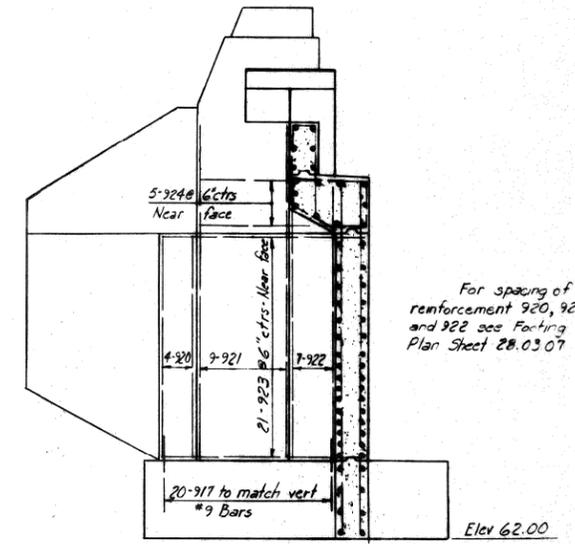
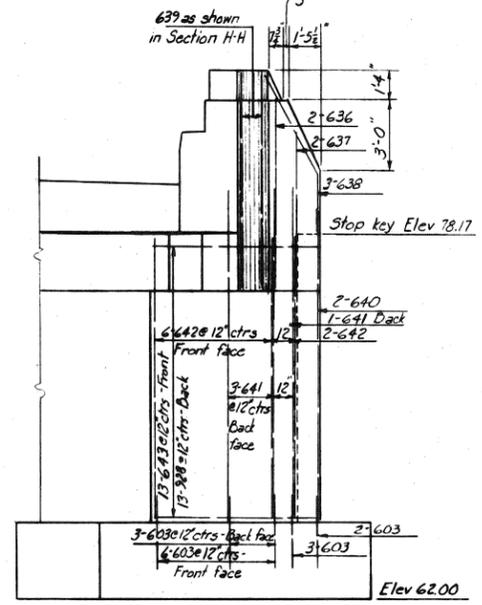
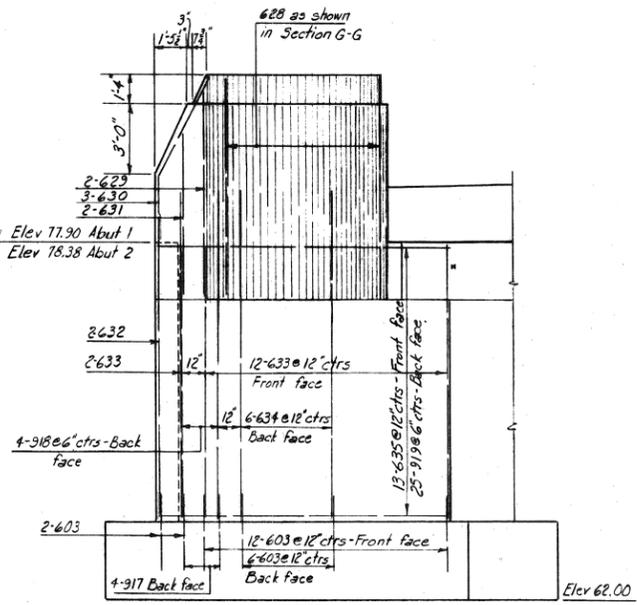
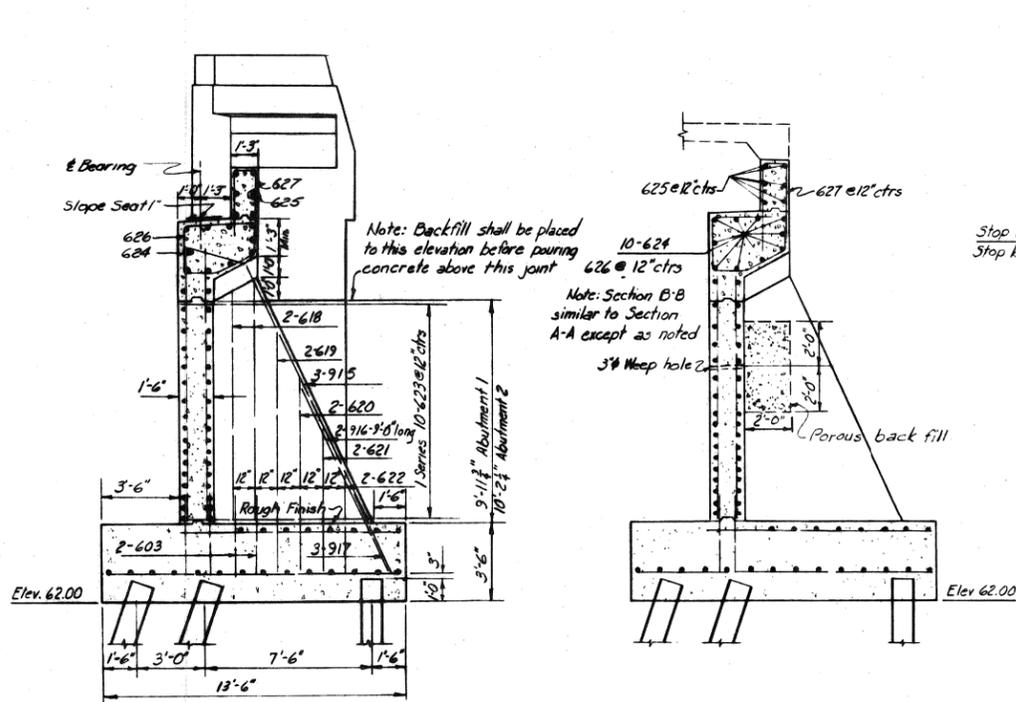
FOOTING PLAN

Notes: Abutment 2 similar to Abutment 1 except as noted.
All reinforcement shall be N#6 bars @ 12" c/s unless otherwise noted.
All keys at construction joints shall be 6"x2" continuous.
All piles shall be 12 BP 53.
Batter piles shown battered 4" per ft.

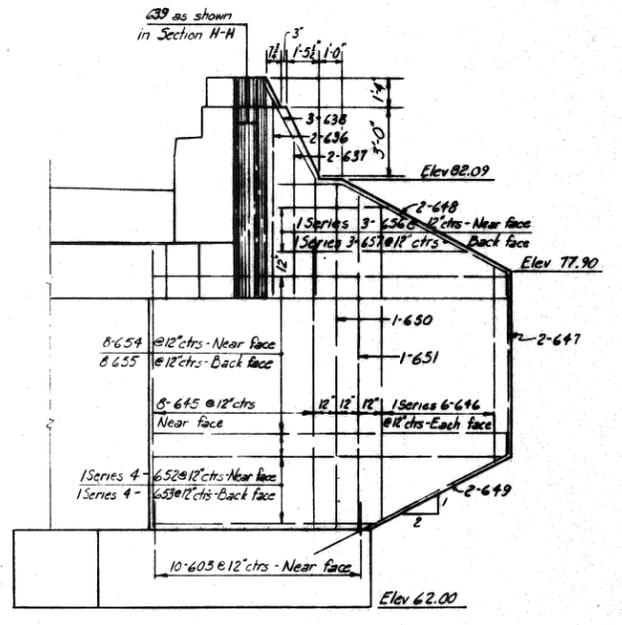
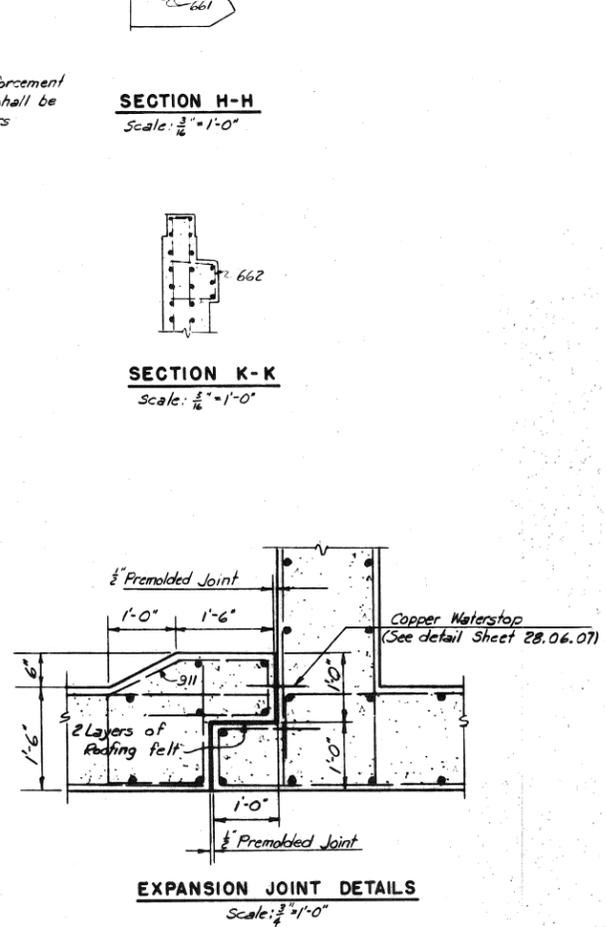
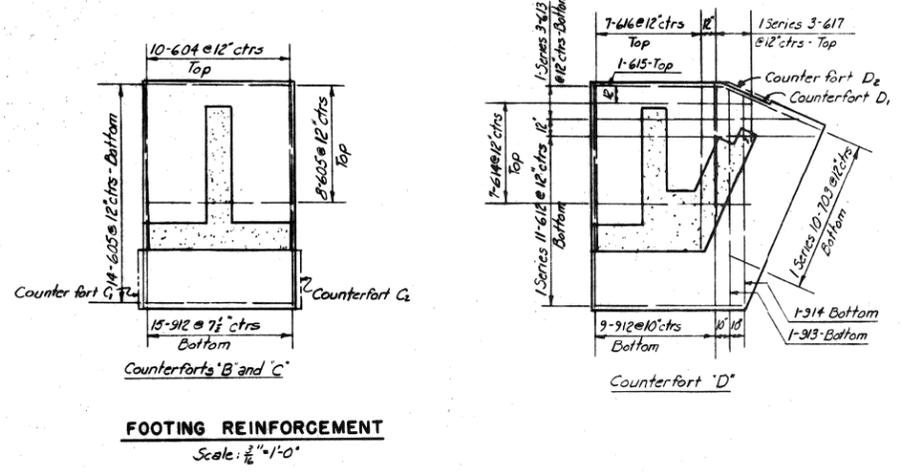
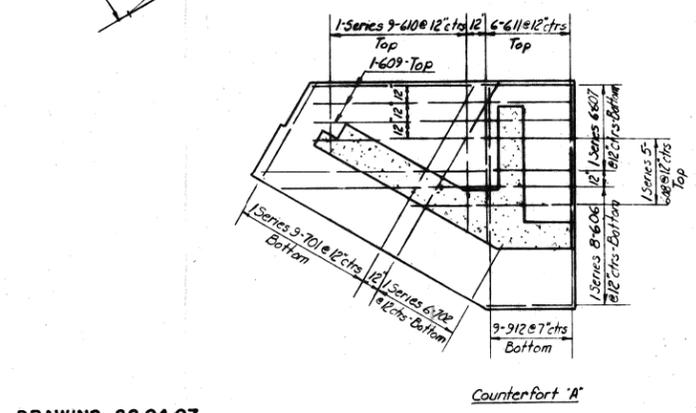
DRAWING 28.03.07

MADE	BY	DATE			
WCM	3-6-54				
TRACED	2	As-Built	HBH	1/9/56	
CHECKED	R.F.C.	3-13-54	1	Raised Grade 1.00'	CVA 7/1/55
IN CHARGE OF	I.D.S.K.	No.	REVISION	BY	DATE

MAINE TURNPIKE AUTHORITY
SECTION 2 - PORTLAND TO AUGUSTA
STRUCTURE NO. 28 TURNPIKE OVER
PISCATAQUA RIVER
STA 2770+67
ABUTMENT 2
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY
SCALE:
CONTRACT NO.
SHEET NO. 140 OF 382



BAR LEGEND
Last 2 digits - Bar number
First digit - Bar size
Example: 605 - #6 Bar, number 5 in abutment.

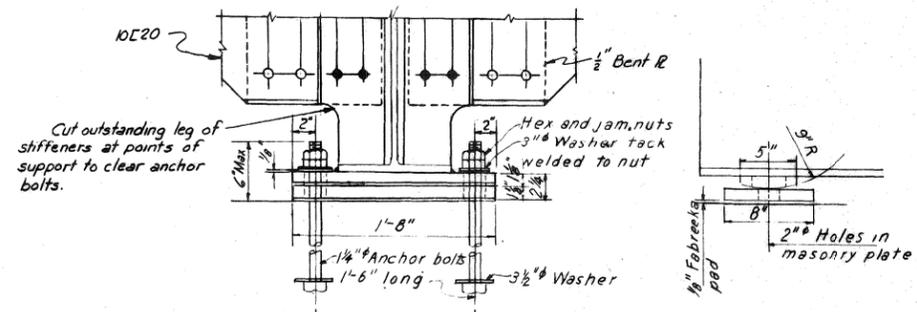
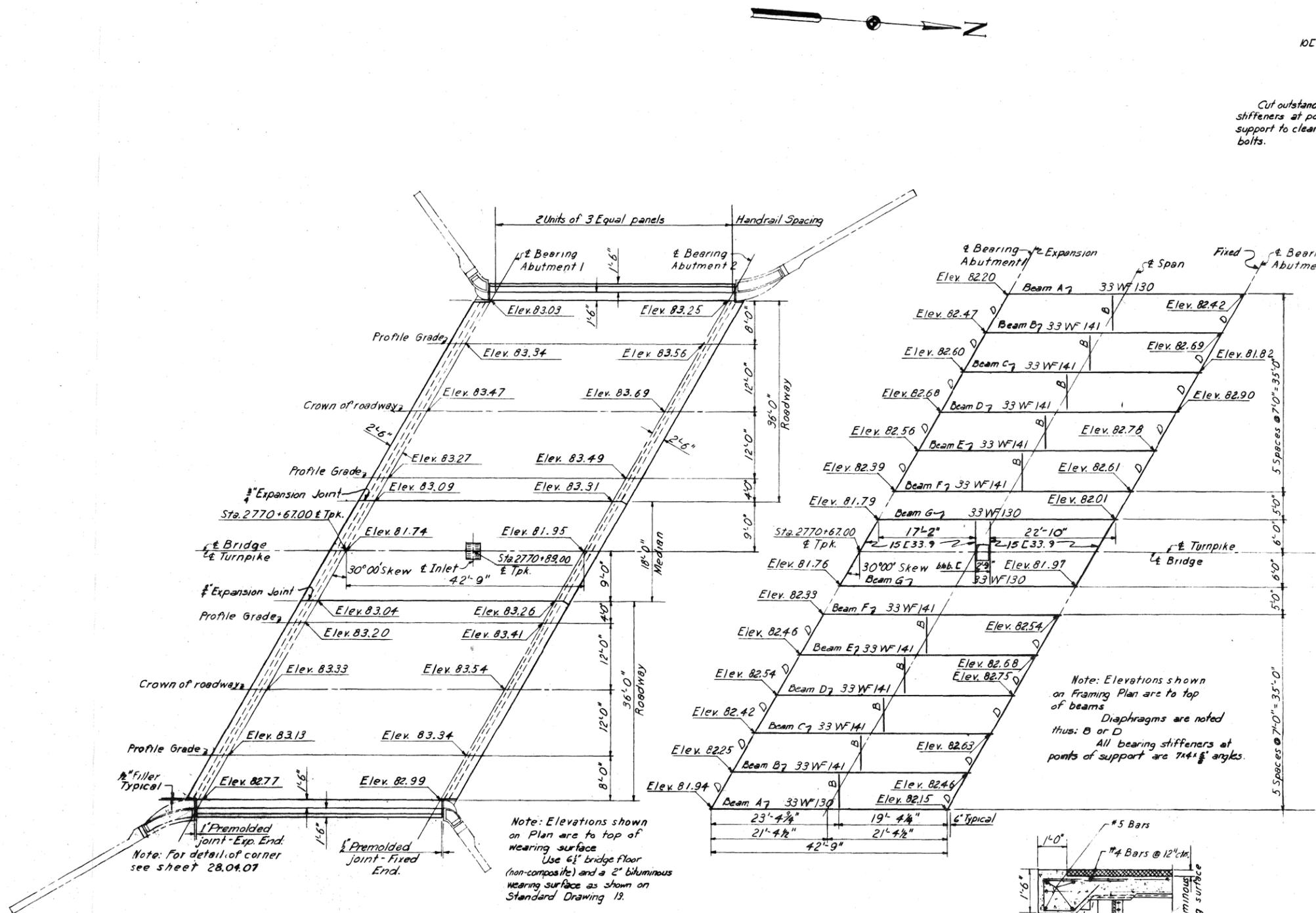


DRAWING 28.04.07

MADE	BY	DATE			
TRACED	WCM	3-11-54			
CHECKED	R.F.S.	3-13-54	2	As-Built	NBH 1/19/66
			1	Raised Grade 1'-0"	CVA 7/12/55
IN CHARGE OF I.D.S.K.	No.	REVISION	BY	DATE	

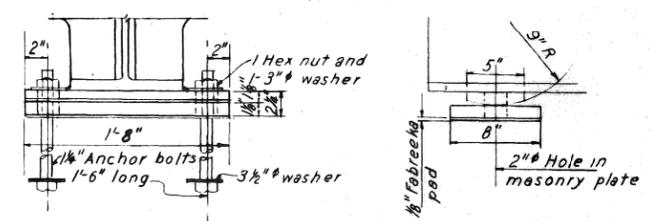
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 SECTION 2 - PORTLAND TO AUGUSTA
 STRUCTURE NO. 28 TURNPIKE OVER
PISCATAQUA RIVER
 STA 2770+67
ABUTMENTS
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS
 NEW YORK KANSAS CITY
 SCALE: As Noted
 CONTRACT NO. _____
 SHEET NO. 141 OF 322

Note: Type "D" diaphragms shall be modified to use a 10E20 knee brace to provide clearance for anchor bolts. All other details same as shown on Standard Drawing No. 6.



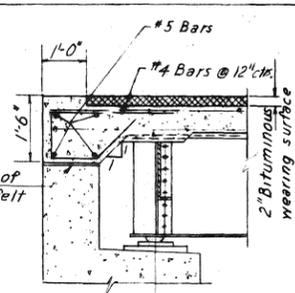
EXPANSION BEARING DEVICE
Scale: 1/2"=1'-0"

Note: Modify type "D" diaphragms and stiffeners as shown for expansion bearing device.

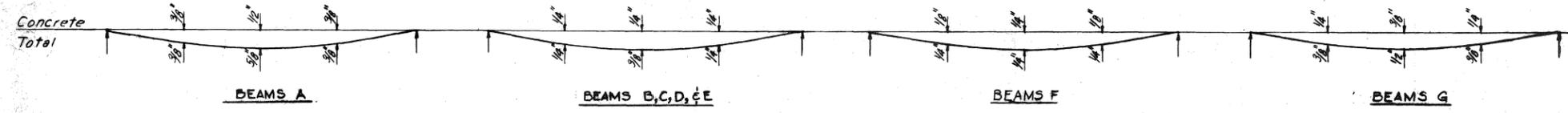


FIXED BEARING DEVICE
Scale: 1/2"=1'-0"

Note: Section at median identical to section at abutment except for bituminous wearing surface.



SECTION AT ABUTMENTS
Scale: 1/2"=1'-0"



DEAD LOAD DEFLECTIONS
No Scale
Note: Deflections shown are at 1/4 points

NO.	REVISION	BY	DATE
6	As-Built	NBN	1-19-56
5	Revised Grade 140'	CVA	7-19-55
4	Curb & Parapet Joint	DHL	6-3-54
3	Draw Support & Rabbeting	CDP	4-1-54
2	Draw Support E Spacing	WCM	5-17-54
1	Type "D" Diaphragm	WCM	4-21-54

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 SECTION 2 - PORTLAND TO AUGUSTA
 STRUCTURE NO. 28 TURNPIKE OVER
 PISCATAQUA RIVER
 STA. 2770+67
 SUPERSTRUCTURE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY

SCALE: As shown
 CONTRACT NO. _____
 SHEET NO. 144 OF 302

SPECIFICATIONS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
6TH EDITION

CONSTRUCTION

STATE OF MAINE DEPARTMENT OF TRANSPORTATION
STANDARD DETAILS FOR HIGHWAYS AND BRIDGES,
DECEMBER 2002 WITH LATEST REVISIONS

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS,
THIRD EDITION WITH 2010 INTERIMS

DESIGN LOADING

LIVE LOAD

HL-93

MATERIALS

CONCRETE

PRECAST BEAMS SHALL BE CLASS P
ALL OTHER CONCRETE SHALL BE CLASS AAA, U.O.N.

REINFORCING STEEL

AASHTO M31, GRADE 60
ALL REINFORCEMENT, EXCEPT IN APPROACH SLABS,
SHALL BE EPOXY-COATED

PRESTRESSING STRANDS

AASHTO M203 (ASTM A416), GRADE 270, LOW RELAXATION

BASIC DESIGN STRESSES

CONCRETE

CLASS P, $f'_c = 4,000$ P.S.I.
 $f'_c = 6,500$ P.S.I.
CLASS AAA, $f'_c = 4,500$ P.S.I.

REINFORCING STEEL

$f_y = 60,000$ P.S.I.

PRESTRESSING STRANDS

$f_{pu} = 270,000$ P.S.I.

NOTES

- THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. THE AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.
- FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, DECEMBER 2002 WITH UPDATES.
- COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. A PORTION OF THESE PLANS IS INCLUDED IN THIS CONTRACT FOR THE CONTRACTOR'S CONVENIENCE. THE COMPLETENESS AND ACCURACY OF THESE PLANS ARE NOT GUARANTEED.
- REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2" MIN., UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CONCRETE EDGES $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.
- ALL BRIDGE PARAPET AND END POST CONCRETE FACES, SHALL HAVE A RUBBED FINISH PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES.
- WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINE DOT PREQUALIFIED LIST OF CHEMICAL 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 12" FOR #6 BARS. THE CONTRACTOR SHALL VERIFY THE REQUIRED DEPTH OF EMBEDMENT AND ADJUST THE BAR LENGTHS AS REQUIRED.
- PAYMENT FOR DRILLING AND ANCHORING OF REINFORCING STEEL IS INCIDENTAL TO ITEM 503.15, EPOXY-COATED REINFORCING STEEL, PLACING.
- THE EXISTING BRIDGE SUPERSTRUCTURE, PORTIONS OF CONCRETE ABUTMENT NECESSARY TO COMPLETE THE PROPOSED WORK, AND ANY OTHER STRUCTURE PORTIONS NOTED IN THE PLAN SET SHALL BE REMOVED BY, AND BECOME THE PROPERTY OF, THE CONTRACTOR. EXISTING HEAVY TIMBER SHORING SHALL BE REMOVED AND DELIVERED BY THE CONTRACTOR AND REMAIN THE PROPERTY OF THE AUTHORITY. CONCRETE ABUTMENTS AND WINGWALLS SHALL BE REMOVED TO THE LIMITS NOTED SHOWN IN THE PLANS. REMOVAL OF THE SUPERSTRUCTURE AS DESCRIBED, INCLUDING THE HEAVY TIMBER SHORING, SHALL BE INCIDENTAL TO ITEM 202.10 - REMOVING EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR. REMOVAL OF THE SUBSTRUCTURE CONCRETE AS DESCRIBED SHALL BE PAID UNDER ITEM 202.12 - REMOVING EXISTING STRUCTURAL CONCRETE.
- THE CONTRACTOR SHALL SUBMIT A BRIDGE DEMOLITION PLAN TO THE RESIDENT AT LEAST 10 BUSINESS DAYS PRIOR TO THE START OF DEMOLITION WORK. THE PLAN SHALL OUTLINE THE METHODS AND EQUIPMENT TO BE USED TO REMOVE AND DISPOSE OF ALL MATERIALS INCLUDED IN THE EXISTING BRIDGE. NO WORK RELATED TO THE REMOVAL OF THE BRIDGE SHALL BE UNDERTAKEN BY THE CONTRACTOR UNTIL THE RESIDENT HAS REVIEWED THE BRIDGE DEMOLITION PLAN FOR APPROPRIATENESS AND COMPLETENESS. PAYMENT FOR ALL WORK NECESSARY FOR DEVELOPING, SUBMITTING AND FINALIZING THE DEMOLITION PLAN WILL BE CONSIDERED INCIDENTAL TO ITEM 202.10 REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF CONTRACTOR.
- THE STEEL PORTIONS OF THE EXISTING BRIDGE ARE COATED WITH A LEAD-BASED PAINT SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTAINMENT, PROPER MANAGEMENT, AND DISPOSAL OF ALL LEAD-CONTAMINATED HAZARDOUS WASTE GENERATED BY THE PROCESS OF DEMOLISHING THE BRIDGE. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING APPROPRIATE OSHA MANDATED PERSONAL PROTECTION STANDARDS RELATED TO THIS PROCESS. ONCE THE EXISTING BRIDGE IS REMOVED, THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE CARE, CUSTODY, AND CONTROL OF THE COMPONENTS OF THE EXISTING BRIDGE AND ANY HAZARDOUS WASTE GENERATED AS A RESULT OF THE STORAGE, RECYCLING, OR DISPOSAL OF THE BRIDGE COMPONENTS, INCLUDING LEAD-COATED STEEL. THE CONTRACTOR SHALL RECYCLE OR REUSE THE STEEL IN ACCORDANCE WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S "MAINE HAZARDOUS WASTE MANAGEMENT REGULATIONS", CHAPTER 850. A COPY OF THIS REGULATION IS AVAILABLE AT MAINE DOT'S OFFICES ON CHILD STREET IN AUGUSTA. PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT AND OTHER COSTS REQUIRED TO REMOVE AND DISPOSE OF THE EXISTING BRIDGE WILL BE CONSIDERED INCIDENTAL TO ITEM 202.10 REMOVING EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR.
- CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:
 - EXPOSED SURFACES OF THE PARAPETS AND PERMANENT CONCRETE BARRIER;
 - VERTICAL FACES OF THE FASCIA BEAMS EXTENDING BENEATH THE BEAMS TO THE DRIP NOTCH;
 - EXPOSED SURFACES OF THE EXISTING AND PROPOSED ABUTMENTS AND WINGWALLS, ABOVE THE WATERLINE.
- EXISTING STEEL ROCKER BEARINGS IN SATISFACTORY CONDITION SHALL BE SALVAGED AS DESCRIBED IN SP 523. BEARINGS NOT SALVAGED SHALL BE INCLUDED IN ITEM 202.10, REMOVE EXISTING SUPERSTRUCTURE PROPERTY OF CONTRACTOR. FOR ESTIMATE PURPOSES IT IS ASSUMED THAT BEARINGS UNDER INTERIOR BEAMS WILL BE SALVAGED AND THOSE UNDER FASCIA BEAMS WILL NOT.

LIST OF ABBREVIATIONS

ABUT.	ABUTMENT
ADDL.	ADDITIONAL
ALT.	ALTERNATE
APPROX.	APPROXIMATE
BOT.	BOTTOM
BRG.	BEARING
CL	CLEAR
CL	CENTERLINE
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
DEMO.	DEMOLITION
DIA.	DIAMETER
DIAPH.	DIAPHRAGM
EA.	EACH
EB	EASTBOUND
E.F.	EACH FACE
EL	ELEVATION
EQ.	EQUAL
EXIST.	EXISTING
EXP.	EXPANSION
F.F.	FAR FACE
JT.	JOINT
MAX.	MAXIMUM
MIN.	MINIMUM
MTA	MAINE TURNPIKE AUTHORITY
NB	NORTHBOUND
N.F.	NEAR FACE
N.T.S.	NOT TO SCALE
O.H.W.	ORDINARY HIGH WATER
PED.	PEDESTAL
PGL	PROFILE GRADE LINE
PL	PLATE
PROP.	PROPOSED
RDWY.	ROADWAY
SHLD.	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

ESTIMATED QUANTITIES			
ITEM No.	ITEM DESCRIPTION	UNIT	QUANTITY
202.10	REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF CONTRACTOR	LS	1
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	CY	35
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY	CY	280
403.208	HOT MIX ASPHALT, 12.5 MM NOMINAL SIZE, SURFACE	TON	105
409.15	BITUMINOUS TACK COAT, APPLIED	GAL	16
502.210	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	CY	50
502.264	STRUCTURAL CONCRETE, PARAPETS	LS	1
502.445	STRUCTURAL CONC WEARING SURFACE ON BRIDGES - SYNTHETIC FIBER REINF	CY	31
502.45	STRUCTURAL CONCRETE APPROACH SLAB	CY	145
502.64	BRIDGE TRENCH DRAIN	EA	1
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	LB	16500
503.13	REINFORCING STEEL, PLACING	LB	16500
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB	7900
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB	7900
503.17	MECHANICAL/WELDED SPLICE	EA	88
507.0912	ALUMINUM BRIDGE RAILING, 1 BAR (BRIDGE 31)	LS	1
508.14	HIGH PERFORMANCE WATERPROOFING MEMBRANE	LS	1
511.091	TEMPORARY EARTH SUPPORT SYSTEMS	LS	1
514.06	CURING BOX FOR CONCRETE CYLINDER	EA	1
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES	SY	670
518.10	ABUTMENT REPAIRS	SF	113
518.41	EPOXY INJECTION CRACK REPAIR - ABOVE WATERLINE	LF	8
523.521	BEARING REMOVAL	EA	24
524.40	PROTECTIVE SHIELDING - STEEL GIRDERS	SY	400
526.312	PERMANENT CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY	LF	20
526.342	PERMANENT CONCRETE BARRIER, TYPE I TRANSITION	EA	2
535.602	PRESTRESSED STRUCTURAL CONCRETE SLAB (BRIDGE 31)	LS	1
609.15	SLOPED CURB TYPE I	LF	88

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Date: 6/19/2014

Filename: ... \BRIDGE\MSTA\055_index_B31.dgn

Scale:			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	SBK	06/2014	In Charge of	CPT	06/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

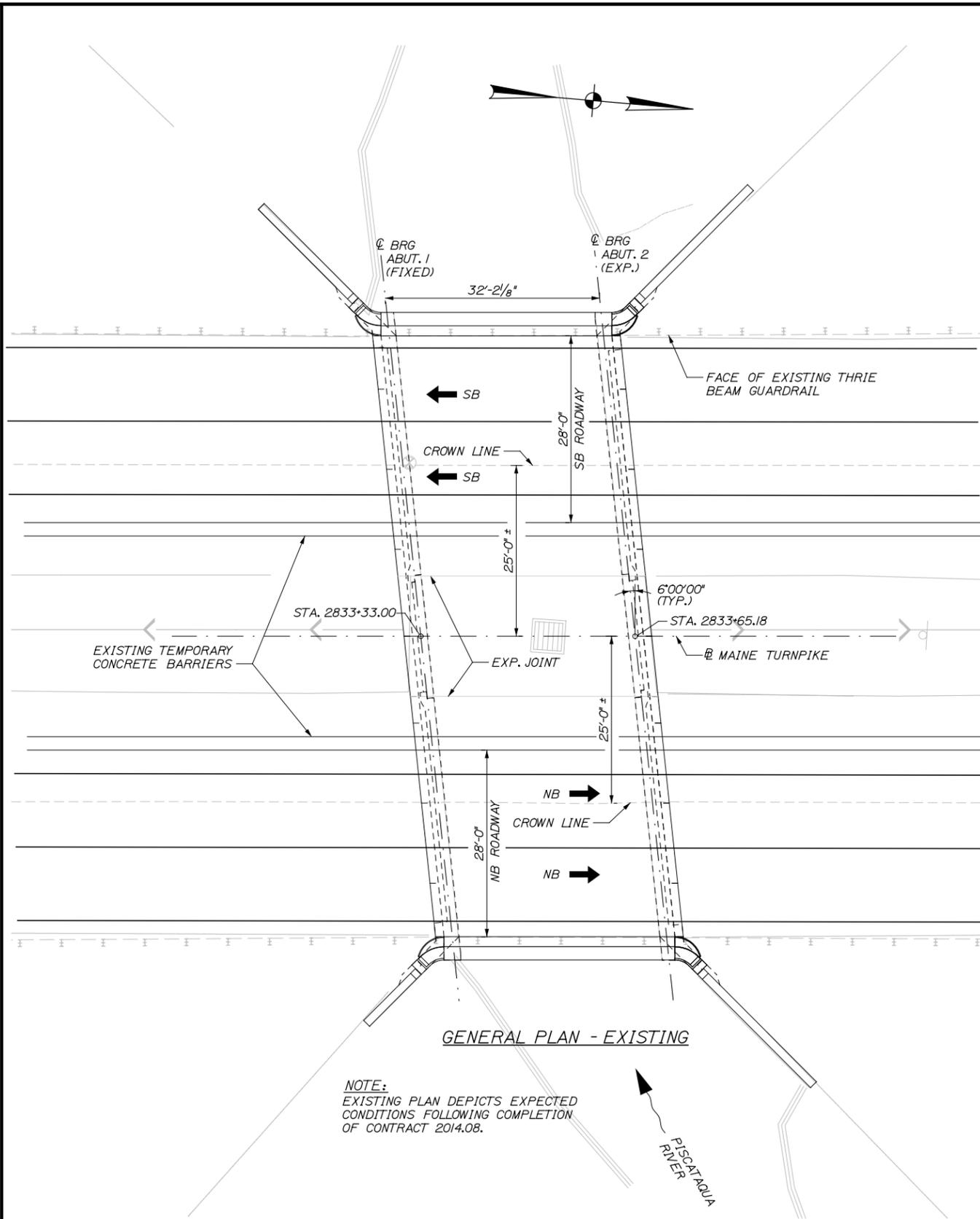
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
BRIDGE INDEX, QUANTITIES,
AND NOTES - BRIDGE 31**

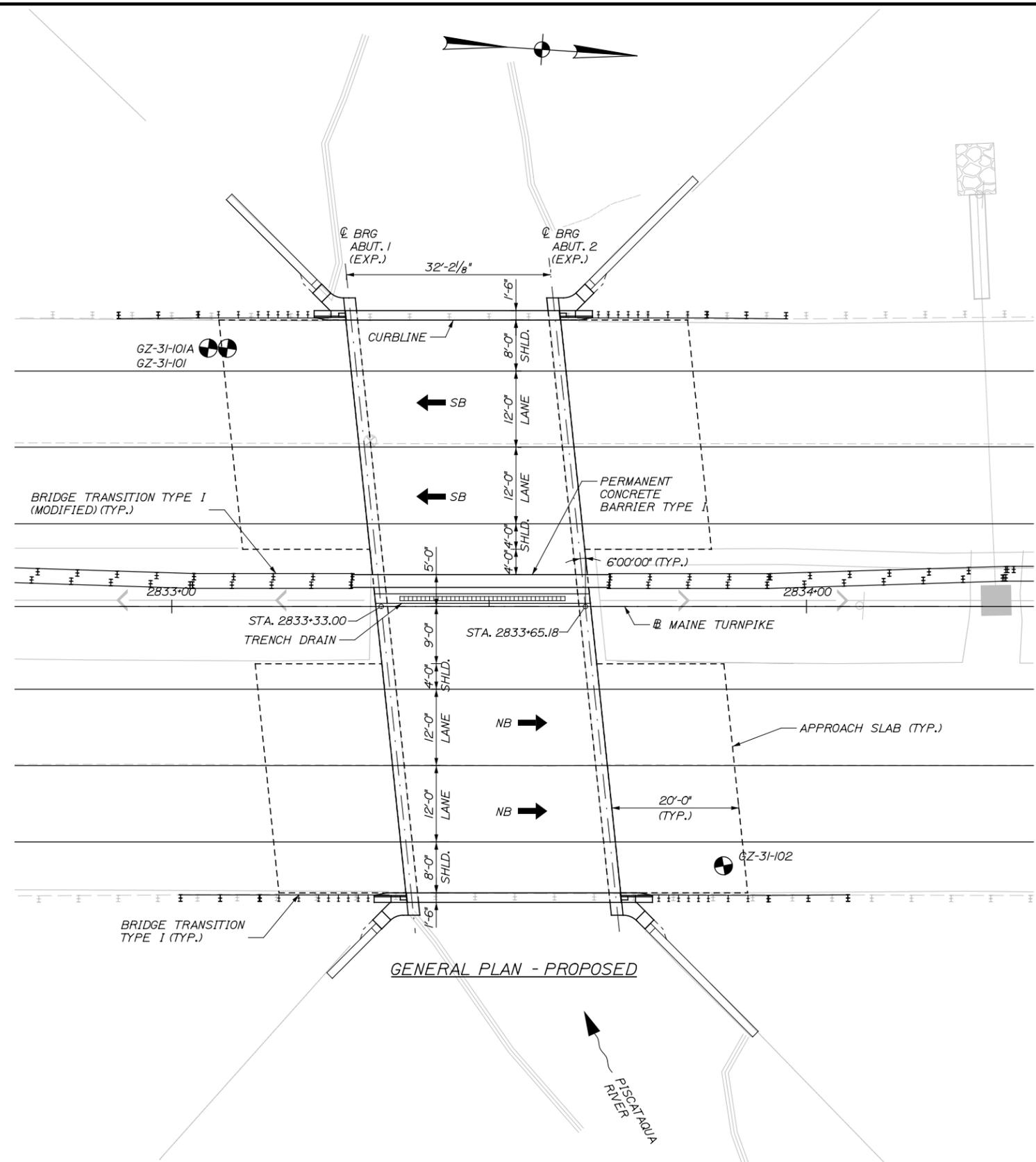
SHEET NUMBER: S31-01
CONTRACT: 2014.13
55 OF 86

Date: 6/19/2014

Filename: ...MSTA\056_Gen Plan Elev_B31.dgn



NOTE:
EXISTING PLAN DEPICTS EXPECTED
CONDITIONS FOLLOWING COMPLETION
OF CONTRACT 2014.08.



Scale: 1" = 10'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**GENERAL PLAN
BRIDGE 31**

SHEET NUMBER: S31-02
56 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

Filename: ...MSTA\057_Boring_Logs_1_B31.dgn

TEST BORING LOG																				
GZA GeoEnvironmental, Inc.			Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine			EXPLORATION NO.: GZ-31-101 SHEET: 1 of 2 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB			Type of Rig: CME 550 X Rig Model: HSA/Drive Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 44 Date Start - Finish: 2/13/2013 - 2/13/2013 H. Datum: NAVD88			Logged By: E. Baron Drilling Co.: New Hampshire Boring Foreman: Bub Thompson								
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing			Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX			Groundwater Depth (ft.)			Date			Time			Water Depth			Stab. Time		
Depth (ft)	Casing Blow Rate	Sample No.	Depth (ft)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Field Test Data	Stratum Description	Elev. (ft.)	Depth (ft)	Time	Water Depth	Stab. Time					
0.9								PAVEMENT			93.6									
1.0-3.0	24	24	35	34	22	13	56	S1: Very dense, brown, fine to coarse SAND, trace Gravel, moist.												
5.0-7.0	24	14	12	16	15	15	31	S2: Dense, brown, fine to coarse SAND, trace Gravel, moist.												
10.0-12.0	24	16	5	7	10	12	17	S3: Medium dense, brown, medium to coarse SAND, little Gravel, moist. (Large piece of gravel in tip.)												
14.0-16.0	24	0	4	2	1	WOH	3	S4: No recovery.												
16.0-18.0	24	0	WOH/24"					S5: No recovery.												
19.0-21.0	24	22	Push thru vane					S6: Medium stiff, gray Silty CLAY, little fine Sand, fine Sand lenses spaced approx. 8", wet. V1: Field Vane. Traw = 430 / 100 in-lb. (Su = 1,110 / 260 psf) V2: Field Vane. Traw = 310 / 80 in-lb. (Su = 800 / 205 psf)												
24.0-26.0	24	26	WOR/18" WOH					S7: Medium stiff, gray, Silty CLAY, trace fine Sand, trace Gravel, wet.												
29.0-	24	24	WOH/18"					S8: Top 18": Medium stiff, gray, Silty CLAY, some fine												

REMARKS: 1 - Boring advanced using HSA for first 10 feet bgs. Switched to Drive & Wash drilling techniques at 10 feet bgs. 2 - Attempted to recover S4 sample two times, no recovery either time. 3 - Pushed spoon through V1-V2 vane intervals for S6 after vanes were completed. 4 - Tapered vane with 2.5" diameter, 4.5" height and 45 degree taper was used for field vane tests. Traw = measured torque, Su = correlated undrained shear strength.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: GZ-31-101

TEST BORING LOG																				
GZA GeoEnvironmental, Inc.			Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine			EXPLORATION NO.: GZ-31-101 SHEET: 2 of 2 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB			Type of Rig: CME 550 X Rig Model: HSA/Drive Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 44 Date Start - Finish: 2/13/2013 - 2/13/2013 H. Datum: NAVD88			Logged By: E. Baron Drilling Co.: New Hampshire Boring Foreman: Bub Thompson								
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing			Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX			Groundwater Depth (ft.)			Date			Time			Water Depth			Stab. Time		
31.0								Sand, sand content increased with depth. Bottom 6": Brown, fine to medium SAND, trace Silt, wet. V3: Field Vane. Traw = 600 / 50 in-lb. (Su = 1,550/140 psf) V4: Field Vane. Traw = 600+ in-lb. (Su = 1,550+ psf)												
29.6-30.0								MARINE SAND												
30.6-31.0																				
34.0-36.0	24	16	3	2	5	27	7	S9: Top 10": Gray, fine to medium SAND, trace Silt, wet. Bottom 4": Gray, fine to coarse SAND, some Gravel, trace Silt, wet.												
39.0-41.0	24	14	76	24	16	10	40	S10: Dense, gray-brown, fine to coarse SAND, some Gravel, little Silt, wet. Oxidation staining on structure.												
44								End of exploration at 44 feet.												

REMARKS: 5 - Washed out to 44', casing filling in with sand and could not be cleaned out. Pulled casing, broke-off bottom 5 feet of casing in the ground, moved over and re-drilled GZ-31-101A.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: GZ-31-101

TEST BORING LOG																				
GZA GeoEnvironmental, Inc.			Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine			EXPLORATION NO.: GZ-31-101A SHEET: 1 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB			Type of Rig: CME 550 X Rig Model: HSA/Drive Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 69 Date Start - Finish: 2/14/2013 - 2/15/2013 H. Datum: NAVD88			Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Bub Thompson								
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing			Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX			Groundwater Depth (ft.)			Date			Time			Water Depth			Stab. Time		
24.0-26.0	24	24	Push thru vane					S1: Medium stiff, gray, Silty CLAY, wet. V1: Field Vane. Traw = 280 / 50 in-lb. (Su = 720/130 psf)												

REMARKS: 1 - Stratification in upper 44' assumed the same as boring GZ-31-101. 2 - Pushed spoon through V1 vane interval for S1 after vane was completed. 3 - Tapered vane with 2.5" diameter, 4.5" height, and 45 degree taper was used for field vane tests. Traw = measured torque, Su = correlated undrained shear strength.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: GZ-31-101A

TEST BORING LOG																				
GZA GeoEnvironmental, Inc.			Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine			EXPLORATION NO.: GZ-31-101A SHEET: 2 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB			Type of Rig: CME 550 X Rig Model: HSA/Drive Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 69 Date Start - Finish: 2/14/2013 - 2/15/2013 H. Datum: NAVD88			Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Bub Thompson								
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing			Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX			Groundwater Depth (ft.)			Date			Time			Water Depth			Stab. Time		
44.0-46.0	24	14	7	14	8	15	22	S2: Medium dense, brown, GRAVEL and fine to coarse Sand, trace Silt, wet.												
49.0-51.0	24	17	13	17	17	19	34	S3: Dense, gray, fine SAND, trace Silt, trace Gravel, wet.												
54.0-56.0	24	19	32	50	47	53	97	S4: Very dense, gray, fine SAND, some Gravel, trace Silt, wet (some angular rock pieces).												
59.0-60	60	55	RQD = 48					R1: Top 19": Hard, fresh, fine to medium grained, dark												

REMARKS: 4 - Roller bit bouncing 46' to 48.5'. 5 - Roller bit bouncing at 57'. Advanced casing to 57'. Advanced roller bit to 59' and began coring. 6 - Rock Quality Designation (RQD) is provided in percent, with total RQD length in inches shown in parentheses below.

See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: GZ-31-101A

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	SBK 06/2014	Checked	CPT 06/2014
Drawn	PJB 06/2014	In Charge of	CPT 06/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES

BORING LOGS I - BRIDGE 31

SHEET NUMBER: S31-03
 57 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

TEST BORING LOG											
GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-101A SHEET: 3 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-101A SHEET: 1 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB	
Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Eub Thompson		Type of Rig: CME 550 X Rig Model: CME 550 X Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 69 Date Start - Finish: 2/14/2013 - 2/15/2013		H. Datum: NAVD88		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash	
Hammer Type: Automatic Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing		Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX		Date		Time		Water Depth		Stab. Time	
2/15/13		1115		13.4'		0.5 hr					
Depth (ft)	Casing Blow/ Core Rate	Depth (ft)	Pen (in)	Rec (in)	Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Field Test Data	Stratum Description	Elev. (ft.)	Remarks
6.0		64.0			(29')		gray GRANOFELS. Joints are extremely close to closely spaced, low angle, undulating, rough, fresh, partially open to open.				
6.0							Middle 26": Very hard, fresh, fine to coarse grained, white-gray PEGMATITE. Joints are close to moderately spaced, low angle, undulating, rough, fresh, open.				
6.0							Bottom 10": Hard, fresh, fine to medium grained, dark gray GRANOFELS.				
65	R2	64.0-69.0	60	60	RQD = 57 (34')		R2: Top 34": Hard, fresh, fine to medium grained, dark gray GRANOFELS. Joints are extremely close to closely spaced, low angle, undulating, rough, fresh, partially open to open.		BEDROCK		
70							Bottom 26": Very hard, fresh, fine to coarse grained, white-gray PEGMATITE. Joints are close to moderately spaced, low angle, undulating, rough, fresh, open.				
70							End of exploration at 69 feet.				
75											
80											
85											
90											
REMARKS: 7 - Lost water 63.7' to 64' and 66' to 69'											
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											
Exploration No.: GZ-31-101A											

TEST BORING LOG											
GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-102 SHEET: 1 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-102 SHEET: 1 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB	
Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 69 Date Start - Finish: 2/6/2013 - 2/12/2013		H. Datum: NAVD88		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash	
Hammer Type: Safety Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing		Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX		Date		Time		Water Depth		Stab. Time	
2/12/13		0910		12.8'		5.5 days					
Depth (ft)	Casing Blow/ Core Rate	Depth (ft)	Pen (in)	Rec (in)	Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Field Test Data	Stratum Description	Elev. (ft.)	Remarks
0.7							V1: Field Vane. Traw = 300 / 215 in-lbs. (Su = 775/555 psf)		PAVEMENT	93.8	
5	S1	1.0-3.0	24	20	56 40 26 14	66	S1: Very dense, tan, fine to medium SAND, trace Gravel, trace Silt, dry.				
5	S2	5.0-7.0	24	21	5 8 7 8	15	S2: Medium dense, tan-brown, fine to medium SAND, trace Gravel, trace Silt, moist.				
10	S3	10.0-12.0	24	22	9 13 14 15	27	S3: Loose, tan, fine to coarse SAND, little Gravel, trace Silt, moist.		FILL		
15	S4	14.0-16.0	24	10	11 15 16 12	31	S4: Dense, tan, fine to coarse SAND, some Gravel, trace Silt, moist.				
20	S5	19.0-21.0	24	11	6 6 9 7	15	S5: Medium dense, gray, fine to coarse SAND, little Gravel, trace Silt, wet.				
25	S6	24.0-26.0	24	24	WOR/24'		S6: Soft to medium stiff, gray, Silty CLAY, wet.		MARINE CLAY		
25	S7	27.0-28.0	24	22	WOR 2 1 23	3	S7: Top 19": Medium stiff, gray, Silty CLAY. Bottom 3": Gray, fine to coarse SAND, little Gravel, little Silt, wet.				
25	V1	29.0-27.6-28.0							MARINE SAND		
30									MARINE SAND		
REMARKS: 1 - Boring advanced using HSA for first 10'. Switched to 4" casing and drive & wash drilling techniques at 14'. 2 - Tapered vane with 2.5" diameter, 4.5" height, and 45 degree taper was used for field vane tests. Traw = measured torque, Su = Correlated undrained shear strength.											
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											
Exploration No.: GZ-31-102											

TEST BORING LOG											
GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-102 SHEET: 2 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-102 SHEET: 2 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB	
Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 69 Date Start - Finish: 2/6/2013 - 2/12/2013		H. Datum: NAVD88		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash	
Hammer Type: Safety Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing		Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX		Date		Time		Water Depth		Stab. Time	
2/12/13		0910		12.8'		5.5 days					
Depth (ft)	Casing Blow/ Core Rate	Depth (ft)	Pen (in)	Rec (in)	Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Field Test Data	Stratum Description	Elev. (ft.)	Remarks
3							V1: Field Vane. Traw = 300 / 215 in-lbs. (Su = 775/555 psf)				
35	S8	34.0-36.0	24	6	8 11 7 5	18	S8: Medium dense, gray, fine to coarse SAND, some Gravel, little Silt, wet.		MARINE SAND		
40	S9	39.0-41.0	24	10	28 13 13 13	26	S9: Medium dense, gray, fine to coarse SAND, some Gravel, little Silt, wet.				
45	S10	44.0-46.0	24	11	16 25 60 17	85	S10: Very dense, gray, fine to coarse SAND, some Gravel, little Silt, wet. (Piece of gravel in tip)				
50	S11	49.0-51.0	24	13	19 15 17 14	32	S11: Dense, gray, fine to coarse SAND, some Gravel, little Silt, wet.		GLACIAL TILL		
55	S12	54.0-54.8	9	8	71 60/3'	R	S12: Very dense, gray, fine SAND, some Silt, trace Gravel, moist.				
60	R1	59.0-60	60	60	RQD = 75		R1: Very hard, fresh, fine to medium grained, gray-green		WEATHERED ROCK		
60									BEDROCK		
REMARKS: 3 - Roller bit bouncing 31.5' to 34' 4 - Roller bit bouncing 38' to 40' 5 - Roller bit bouncing 42.3' to 44' 6 - Boring was resumed at 55' on 2/12/13 using a CME 650X ATV rig with an automatic hammer. 7 - Roller bit bouncing at 55', broke through, bouncing at 58' and 59'.											
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											
Exploration No.: GZ-31-102											

TEST BORING LOG											
GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-102 SHEET: 3 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB		GZA GeoEnvironmental, Inc.		Maine Turnpike Authority Piscataqua River Bridges MM 56.5 Falmouth, Maine		EXPLORATION NO.: GZ-31-102 SHEET: 3 of 3 PROJECT NO: 09.0025770.00 REVIEWED BY: JRB/ARB	
Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash		Boring Location: See Plan Ground Surface Elev. (ft.): 94.5 Final Boring Depth (ft.): 69 Date Start - Finish: 2/6/2013 - 2/12/2013		H. Datum: NAVD88		Logged By: E. Lonstein Drilling Co.: New Hampshire Boring Foreman: Mike Misiaszek/Bub Thompson		Type of Rig: CME 750 Rig Model: ATV Drilling Method: HSA/Drive & Wash	
Hammer Type: Safety Hammer Hammer Weight (lb.): 140 Hammer Fall (in.): 30 Auger or Casing O.D./I.D Dia (in.): 4.0" casing		Sampler Type: SS Sampler O.D. (in.): 2.0 Sampler Length (in.): 24 Rock Core Size: NX		Date		Time		Water Depth		Stab. Time	
2/12/13		0910		12.8'		5.5 days					
Depth (ft)	Casing Blow/ Core Rate	Depth (ft)	Pen (in)	Rec (in)	Blows (per 6 in.)	SPT Value	Sample Description and Identification (Modified Burmister Procedure)	Field Test Data	Stratum Description	Elev. (ft.)	Remarks
5.5		64.0			(45')		GRANOFELS. Joints are very close to moderately spaced, low angle, planar, rough, fresh, partially open to open, some silt in infilling. Occasional white-gray Pegmatite fingerings (typically 1/4" to 1" wide).				
6.0											
6.5											
65	R2	64.0-69.0	60	60	RQD = 67 (40')		R2: Very hard, fresh, fine to medium grained, gray-green GRANOFELS. Joints are very close to moderately spaced, low angle, planar, rough, fresh, partially open to open, some silt in infilling. Occasional white-gray Pegmatite fingerings (typically 1/4" to 1" wide).		BEDROCK		
70							End of exploration at 69 feet.				
75											
80											
85											
90											
REMARKS: 69											
See Log Key for explanation of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.											
Exploration No.: GZ-31-102											

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
By	Date	By	Date	By	Date
Designed	SBK 06/2014	Checked	CPT 06/2014		
Drawn	PJB 06/2014	In Charge of	CPT 06/2014		

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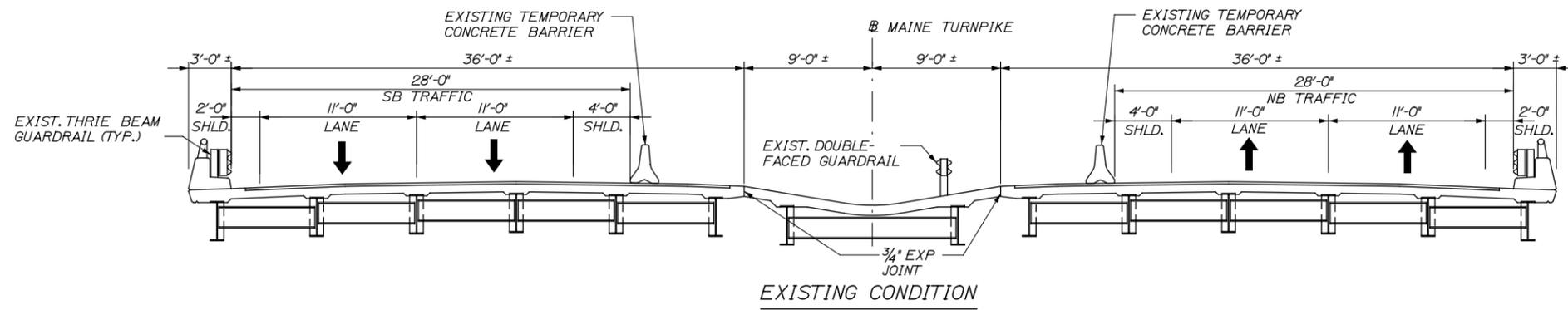
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
BORING LOGS II - BRIDGE 31**

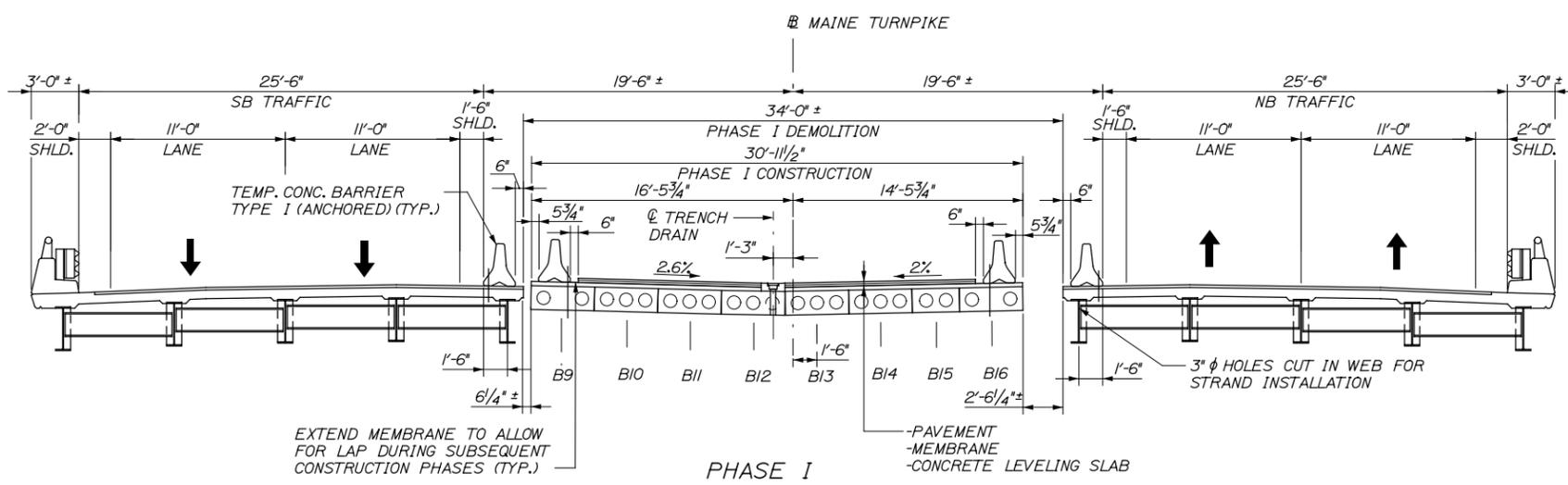
SHEET NUMBER: S31-04
CONTRACT: 2014.13
58 OF 86

Date: 6/19/2014

Filename: ...059_Bridge Phasing_1_B31.dgn



NOTE:
EXISTING CONDITION SECTION DEPICTS EXPECTED CONFIGURATION FOLLOWING COMPLETION OF CONTRACT 2014.08.



- ANTICIPATED CONSTRUCTION SEQUENCE - PHASE I**
- INSTALL ANCHORED TEMPORARY BARRIERS.
 - SAW CUT AND REMOVE CENTER PORTIONS OF BRIDGE SUPERSTRUCTURE AND ABUTMENT BACKWALLS.
 - CAST PROPOSED BRIDGE SEATS.
 - CAST PORTION OF APPROACH SLABS.
 - AFTER BRIDGE SEAT CONCRETE HAS REACHED 3,000 PSI, SET PRECAST BEAMS 9 THROUGH 16. (ANTICIPATE CRANE POSITIONED IN WORK ZONE AND BEAMS DELIVERED EITHER IN WORK ZONE OR IN A TRAVEL LANE DURING OFF-PEAK LANE CLOSURE AS DEFINED IN S.P. 652.)
 - INSTALL TRANSVERSE POST-TENSIONING, GROUT SHEAR KEYS, AND COMPLETE POST-TENSIONING STRESSING.
 - INSTALL TRENCH DRAIN, AND CAST LEVELING SLAB.
 - INSTALL ANCHORED TEMPORARY CONCRETE BARRIERS ON NEW BRIDGE.
 - PLACE MEMBRANE, AND PAVE BRIDGE AND APPROACHES.
 - PLACE TEMPORARY STRIPING.

Scale: 3/16" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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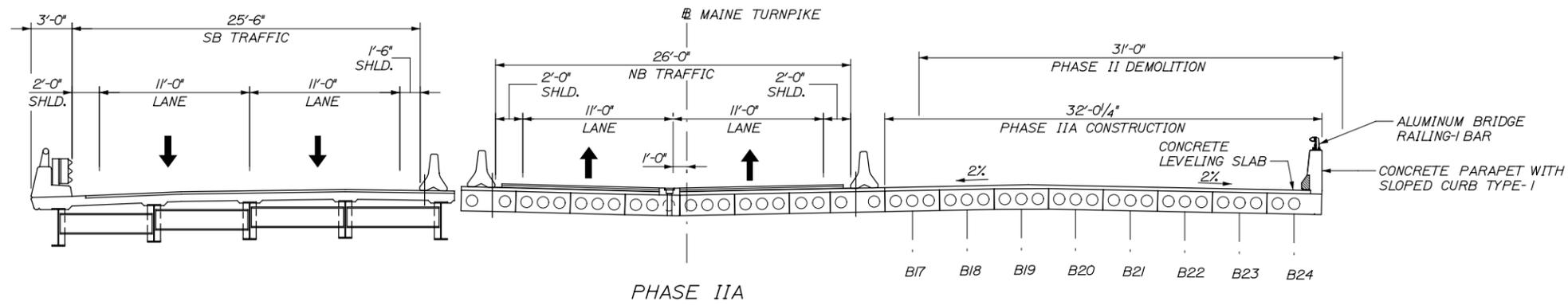
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**BRIDGE PHASING I
BRIDGE 31**

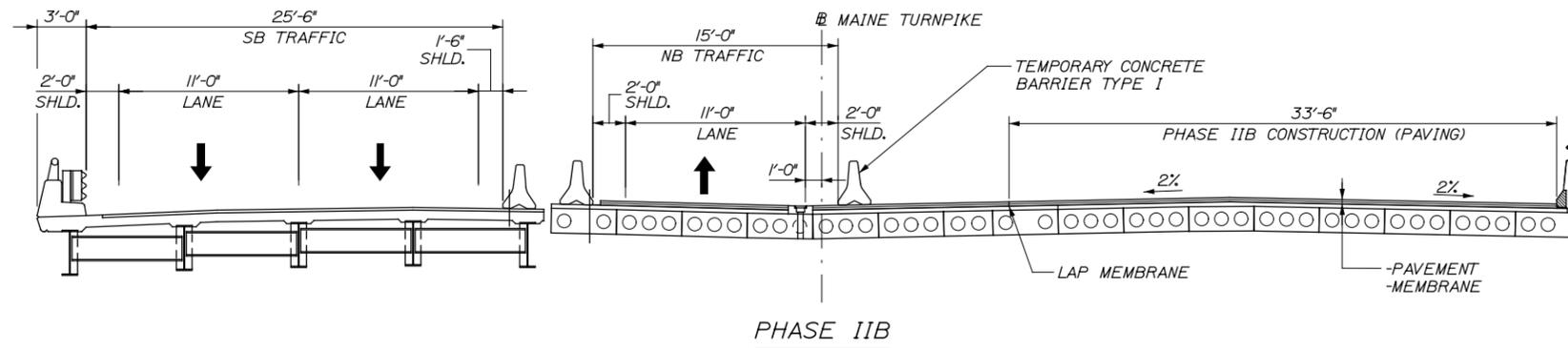
SHEET NUMBER: S31-05
CONTRACT: 2014.13
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Date: 6/19/2014



ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIA

- SHIFT NB TRAFFIC ONTO THE NEW MEDIAN PORTION OF THE BRIDGE.
- SAW CUT AND REMOVE OUTER PORTIONS OF NB SUPERSTRUCTURE, ABUTMENT BACKWALLS, END POSTS, AND TOPS OF WINGWALLS.
- CAST PROPOSED BRIDGE SEATS, ENDPOSTS, AND TOP OF WINGWALLS.
- CAST REMAINDER OF NB APPROACH SLABS.
- AFTER THE BRIDGE SEAT CONCRETE HAS REACHED 3,000 PSI, SET PRECAST BEAMS 17 THROUGH 24.
- INSTALL TRANSVERSE POST-TENSIONING, GROUT SHEAR KEYS, AND COMPLETE POST-TENSIONING STRESSING.
- CAST LEVELING SLAB, INSTALL CURB, CAST PERMANENT OUTSIDE BRIDGE PARAPET, AND INSTALL ALUMINUM BRIDGE RAIL, APPROACH GURDRAIL, AND TERMINALS.



ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIB

- DURING OFF PEAK HOURS, CLOSE ONE LANE AND SHIFT TEMPORARY CONCRETE BARRIER (NOT ANCHORED) TO ALLOW THE FOLLOWING (MULTIPLE SHIFTS MAY BE REQUIRED TO COMPLETE ALL WORK):
- PLACE MEMBRANE, AND PAVE BRIDGE AND APPROACHES.
- PLACE TEMPORARY STRIPING.

98% PROGRESS PLANS

Filename: ...\\060_Bridge Phasing_2_B31.dgn

Scale:			
3/16" = 1'-0"			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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MAINE TURNPIKE

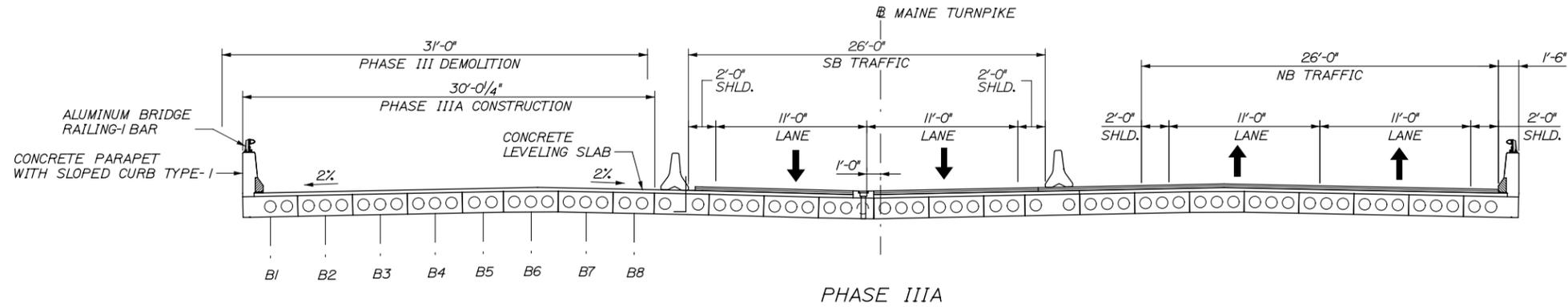
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

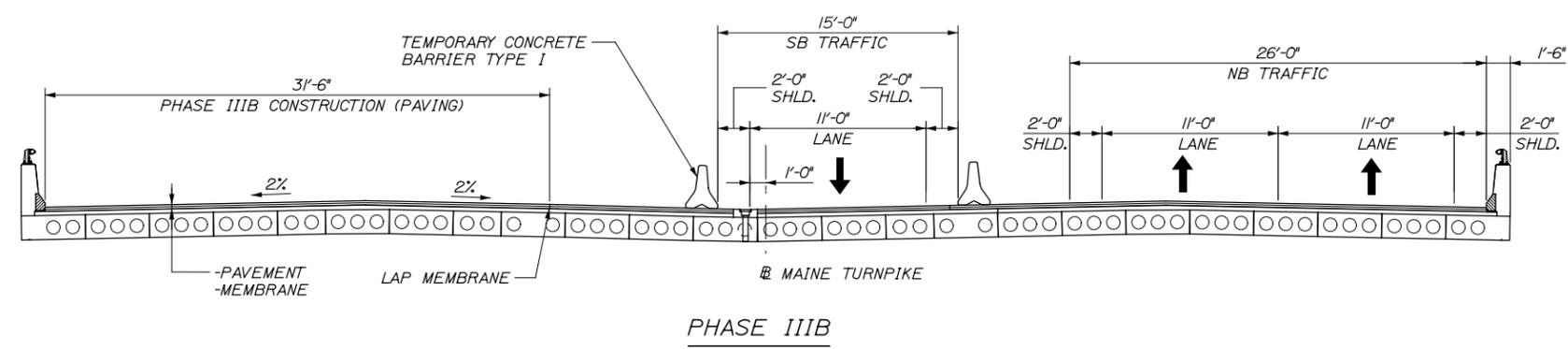
BRIDGE REHABILITATION PISCATAQUA RIVER BRIDGES BRIDGE PHASING II BRIDGE 31
SHEET NUMBER: S31-06 CONTRACT: 2014.13

Date: 6/19/2014

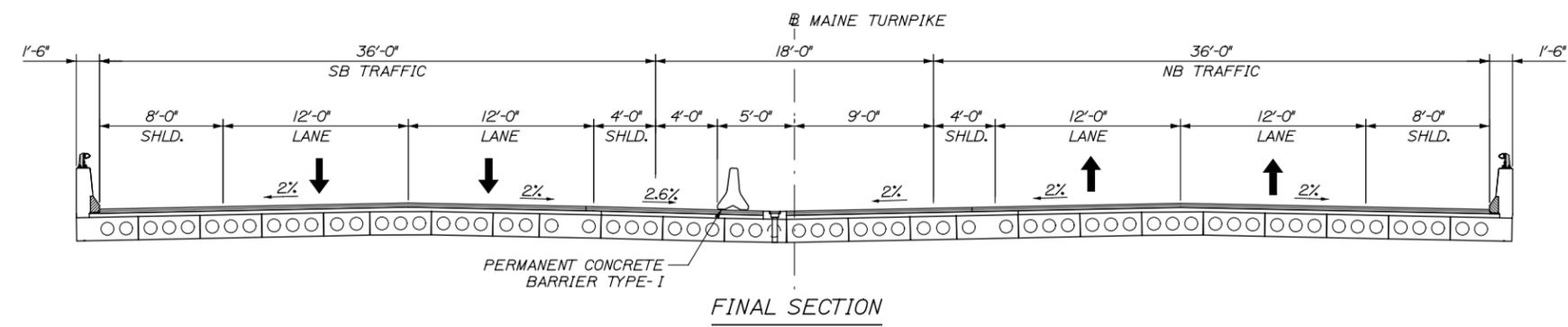
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- ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIIA**
- SHIFT NB TRAFFIC ONTO THE NEW OUTER PORTION OF THE BRIDGE AND SHIFT SB TRAFFIC ONTO THE MEDIAN PORTION OF THE BRIDGE.
 - SAW CUT AND REMOVE OUTER PORTIONS OF SB SUPERSTRUCTURE, ABUTMENT BACKWALLS, END POSTS, AND TOPS OF WINGWALLS.
 - CAST PROPOSED BRIDGE SEATS, ENDPOSTS, AND TOP OF WINGWALLS.
 - CAST REMAINDER OF SB APPROACH SLABS.
 - AFTER BRIDGE SEAT CONCRETE HAS REACHED 3,000 PSI, SET PRECAST BEAMS 1 THROUGH 8.
 - INSTALL TRANSVERSE POST-TENSIONING, GROUT SHEAR KEYS, AND COMPLETE POST-TENSIONING STRESSING.
 - CAST LEVELING SLAB, INSTALL CURB, CAST PERMANENT OUTSIDE BRIDGE PARAPET, AND INSTALL ALUMINUM BRIDGE RAIL, APPROACH GUARDRAIL, AND TERMINALS.



- ANTICIPATED CONSTRUCTION SEQUENCE - PHASE IIIB**
- DURING OFF PEAK HOURS, CLOSE ONE LANE AND SHIFT TEMPORARY CONCRETE BARRIER (NOT ANCHORED) TO ALLOW THE FOLLOWING (MULTIPLE LANE SHIFTS MAY BE REQUIRED TO COMPLETE ALL WORK):
 - PLACE MEMBRANE AND PAVE BRIDGE APPROACHES.
 - PLACE PERMANENT SB STRIPING.
 - SHIFT SB TRAFFIC INTO FINAL LANES.
 - INSTALL PERMANENT CONCRETE BARRIER IN MEDIAN AND REMOVE TEMPORARY CONCRETE BARRIER. INSTALL APPROACH MEDIAN GUARDRAIL.
 - REMOVE TEMPORARY STRIPING AND PLACE PERMANENT STRIPING.
 - SHIFT NB TRAFFIC INTO FINAL LANES.



Scale: 3/16" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

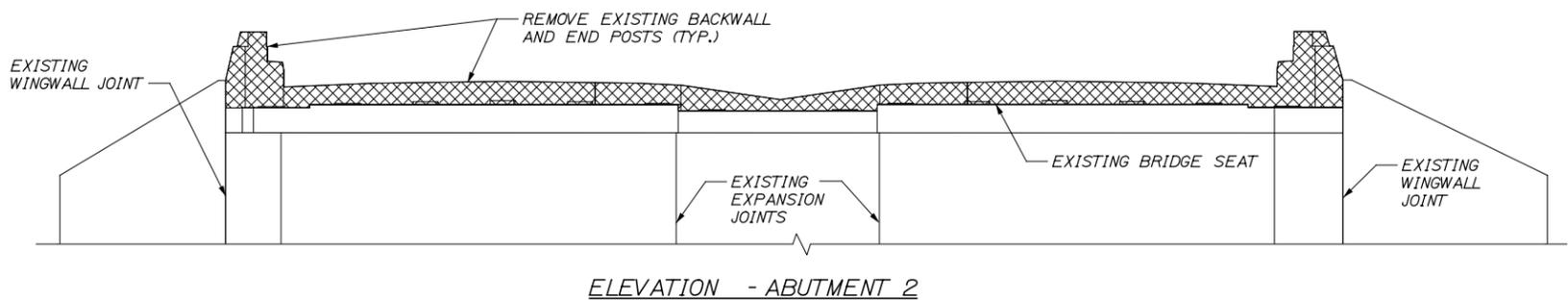
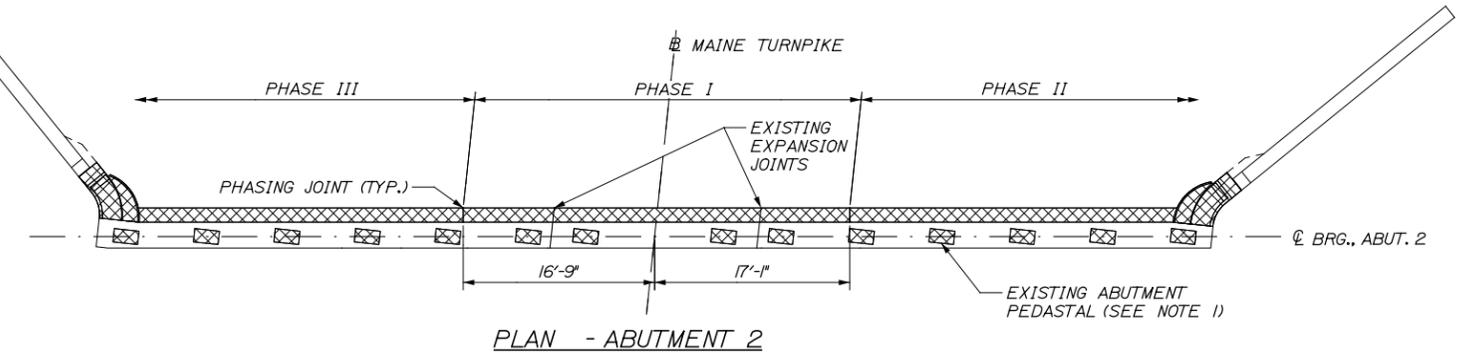
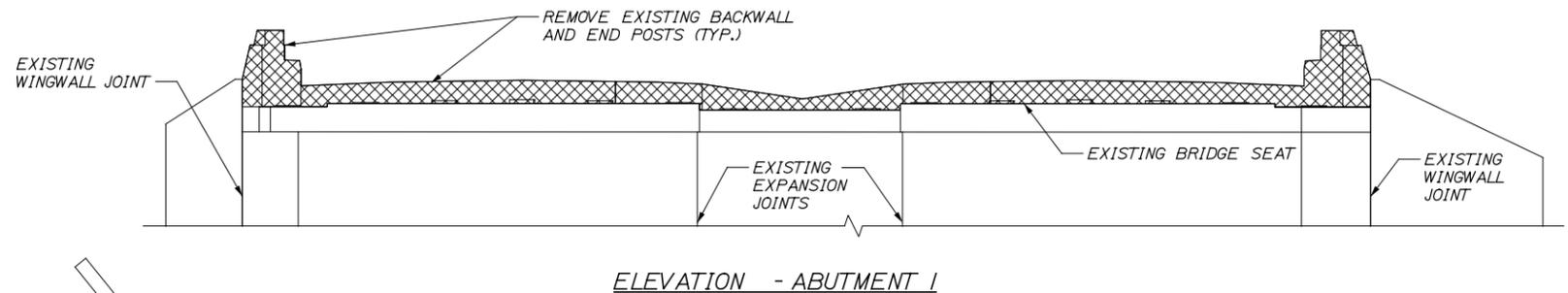
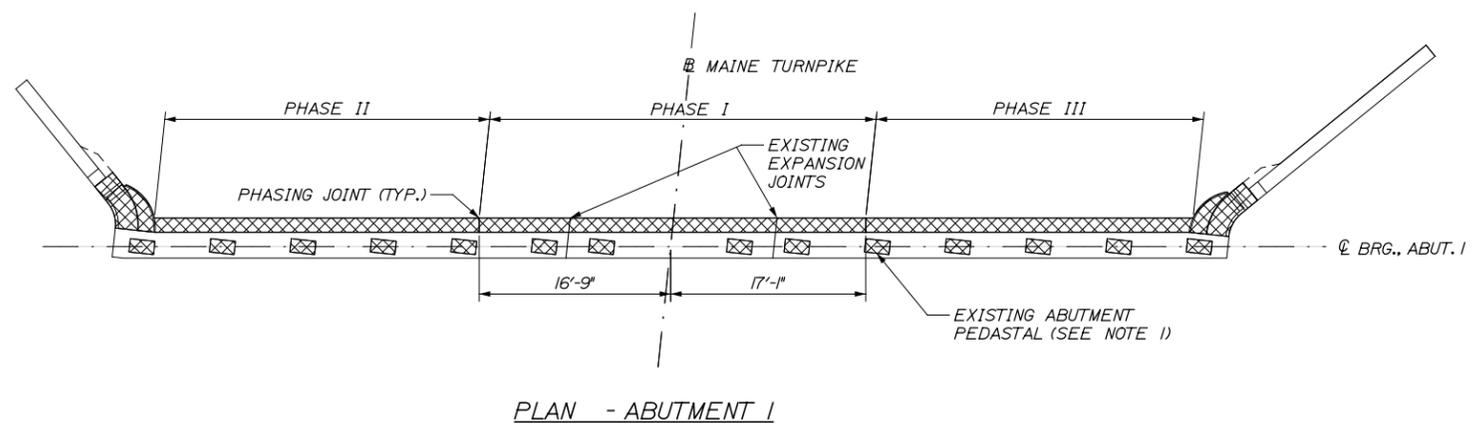
**BRIDGE PHASING III
 BRIDGE 31**

SHEET NUMBER: S31-07
 61 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

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LEGEND:
 - AREA OF CONCRETE REMOVAL

- NOTES:**
1. REMOVE ALL UNSOUND PEDESTAL CONCRETE. SOUND PEDESTAL CONCRETE MAY REMAIN AS APPROVED BY THE RESIDENT.
 2. ALL LIMITS OF DEMOLITION SHALL BE SAWCUT 1" DEEP.
 3. FOR SECTION VIEW OF EXISTING ABUTMENTS, SEE 'SUPERSTRUCTURE DETAILS III' SHEET.

Scale: 1/8" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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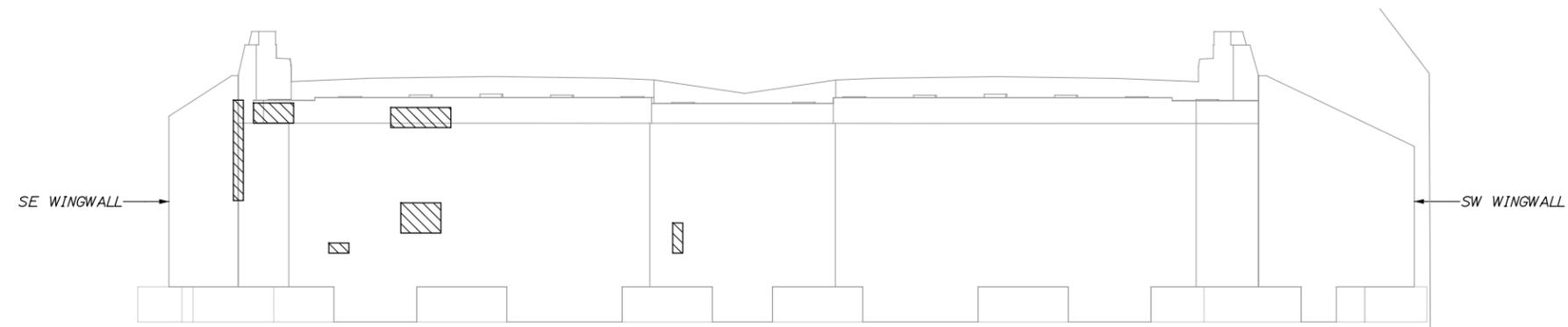
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 ABUTMENT DEMOLITION LIMITS
 BRIDGE 31**

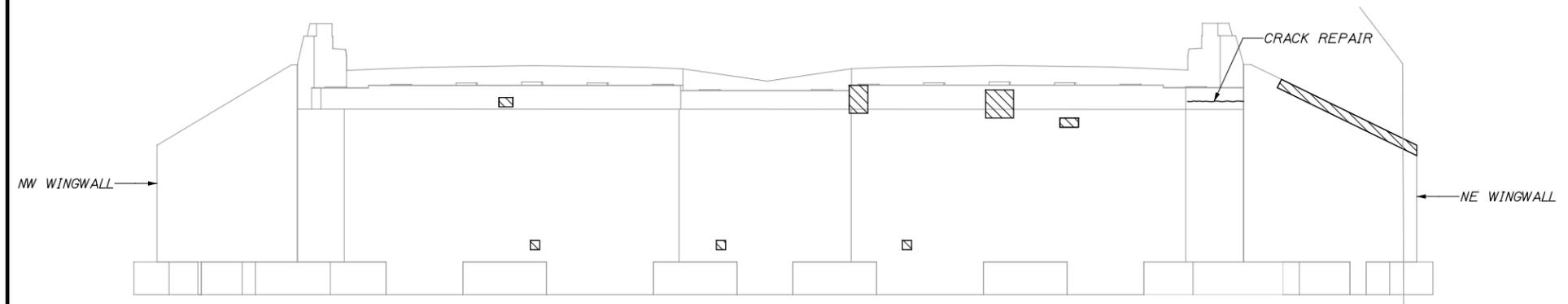
SHEET NUMBER: S31-08
 CONTRACT: 2014.13
 62 OF 86

Date: 6/19/2014

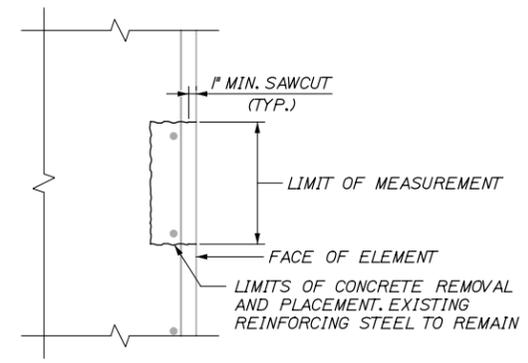
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ELEVATION - ABUTMENT 1
1/8" = 1'-0"



ELEVATION - ABUTMENT 2
1/8" = 1'-0"



CONCRETE REPAIR DETAIL
1" = 1'-0"

NOTES:

1. ABUTMENT CONCRETE REPAIRS, INCLUDING THE ASSOCIATED REMOVALS, BEYOND THE FULL DEMOLITION LIMITS WILL BE PAID UNDER ITEM 518.10.
2. CONTRACTOR MAY PERFORM REPAIRS AS PART OF THE ASSOCIATED DEMOLITION PHASE. REPAIRS SHALL NOT BE PERFORMED WHEN TRAFFIC LANES ARE PRESENT ON THE ROADWAY ABOVE UNLESS AUTHORIZED BY THE RESIDENT.

REMOVAL PROCEDURE:

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 THE REMOVALS.
2. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO DEPTH REQUIRED PER MAINE DOT STANDARD 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 EPOXY ADHESIVE. ONCE SET, SEAL PORTS AND CRACK WITH SAME EPOXY ADHESIVE.
3. WHEN THE EPOXY ADHESIVE SEAL HAS CURED, INJECT A HIGH-MODULUS, LOW-VISCOSITY EPOXY SUCH AS SIKADUR 35, SIKADUR 55, OR APPROVED EQUAL.

GENERAL FINISHING:

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

ALL ABUTMENTS - QUANTITY OF REPAIRS			
	ABUTMENT 1	ABUTMENT 2	TOTAL
SURFACE PATCH/REPAIR	47 S.F.	38 S.F.	113 S.F.*
CRACK REPAIR	0 L.F.	6 L.F.	8 L.F.*

* INCLUDES 33% ADDITIONAL REPAIR QUANTITY IN UNDETERMINED LOCATIONS.

LEGEND:

- LIMIT OF CONCRETE REPAIR
- LIMIT OF CRACK REPAIR
- EXISTING CONCRETE

Scale:

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date	By	Date	
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Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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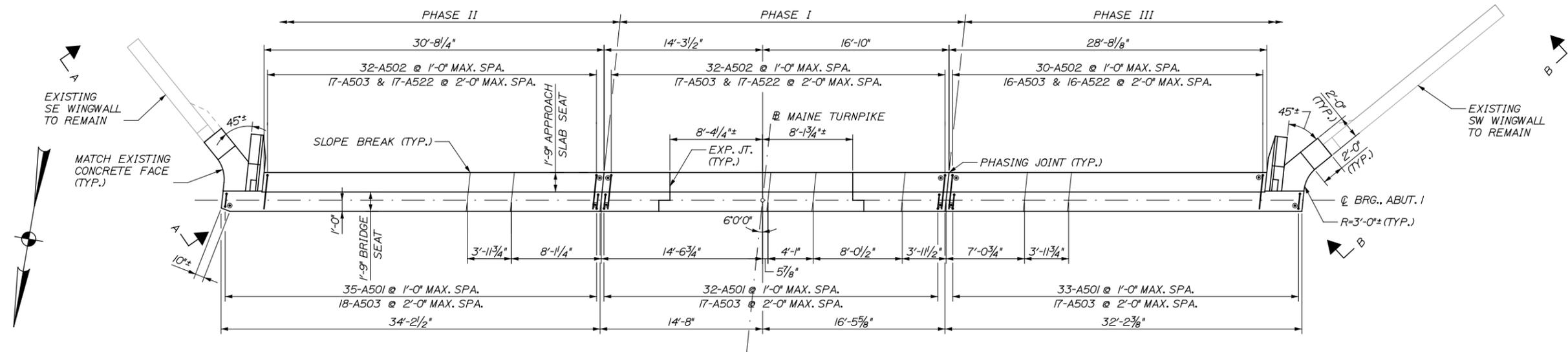
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

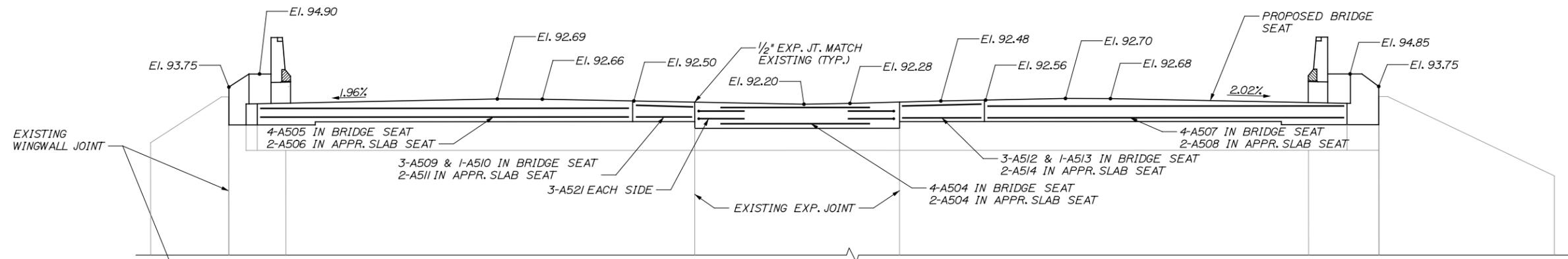
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
SUBSTRUCTURE REPAIRS
BRIDGE 31**

SHEET NUMBER: S31-09
CONTRACT: 2014.13
63 OF 86

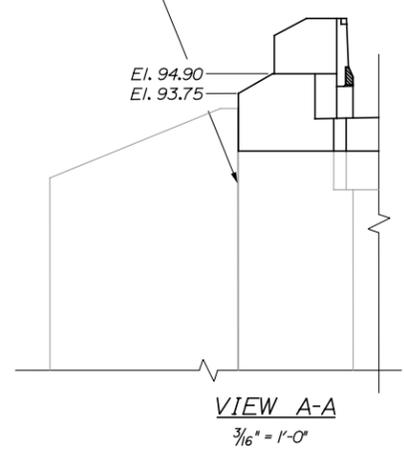
Date: 6/19/2014



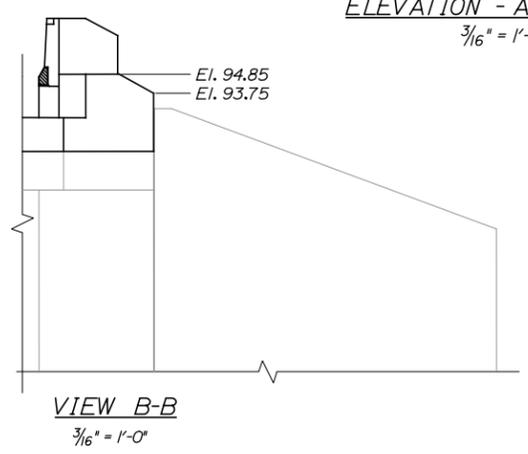
PLAN - ABUTMENT I
3/16" = 1'-0"



ELEVATION - ABUTMENT I
3/16" = 1'-0"



VIEW A-A
3/16" = 1'-0"



VIEW B-B
3/16" = 1'-0"

- NOTES:
- SEE 'SUPERSTRUCTURE DETAILS III' SHEET FOR SECTION THROUGH ABUTMENT.
 - SEE 'ABUTMENT REINFORCEMENT' SHEET FOR DETAILS IN THE ABUTMENT CORNERS AND WINGWALLS.

Filename: ...064_Abut 1 Plan Elev_B31.dgn

Scale: 3/16" = 1'-0"			
No.	Revision	By	Date

Designed by:

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CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

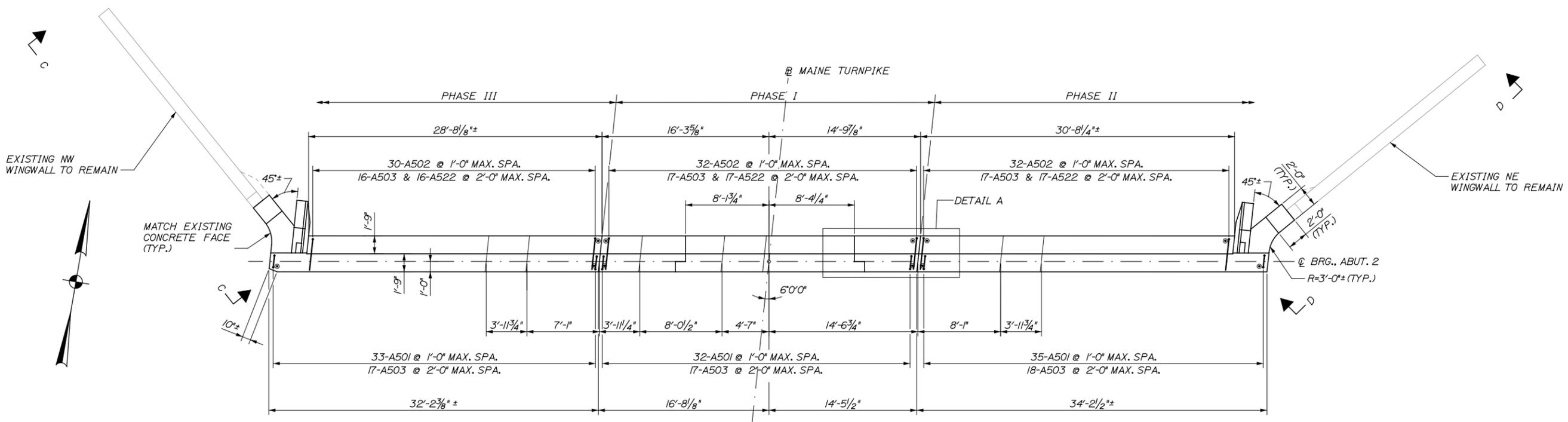
MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
ABUTMENT 1 - PLAN AND ELEVATION
BRIDGE 31

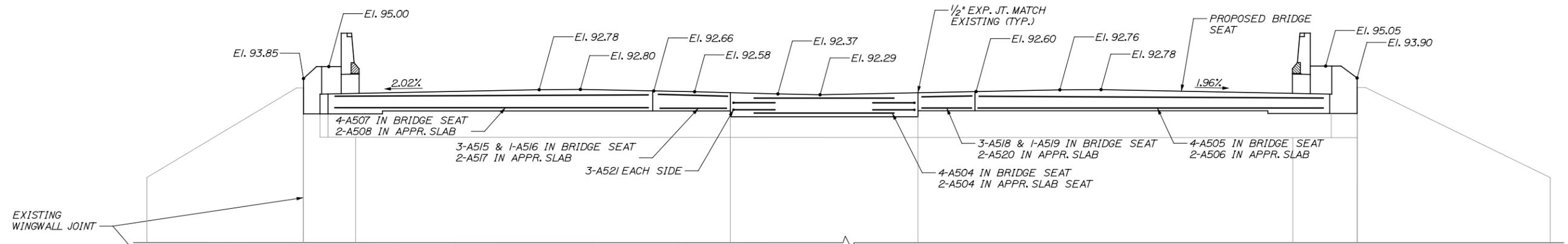
SHEET NUMBER: S31-10
CONTRACT: 2014.13
64 OF 86

Date: 6/19/2014

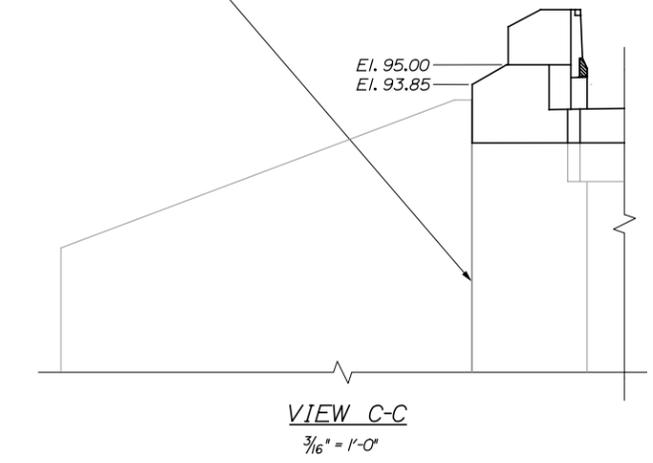
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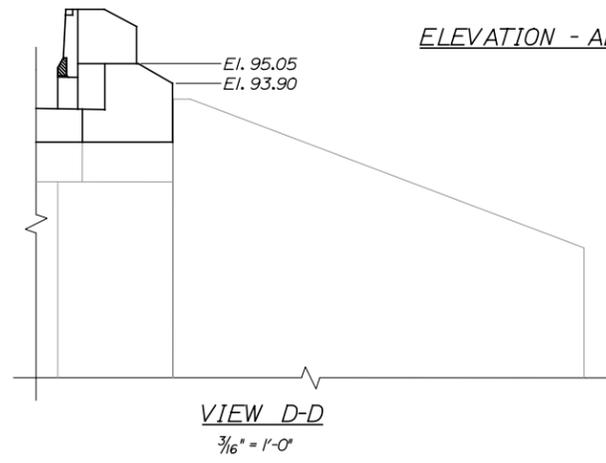
PLAN - ABUTMENT 2



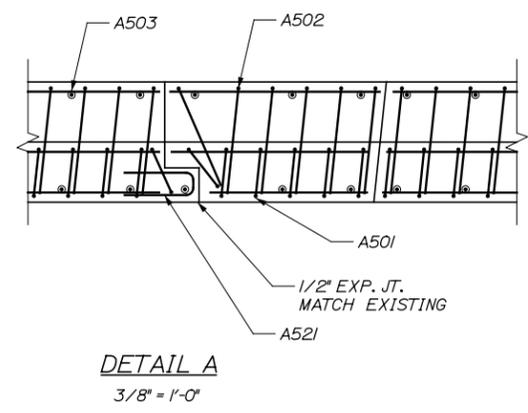
ELEVATION - ABUTMENT 2



VIEW C-C
3/16" = 1'-0"



VIEW D-D
3/16" = 1'-0"



DETAIL A
3/8" = 1'-0"

- NOTES:**
- SEE 'SUPERSTRUCTURE DETAILS III' SHEET FOR SECTION THROUGH ABUTMENT.
 - SEE 'ABUTMENT REINFORCEMENT' SHEET FOR DETAILS IN THE ABUTMENT CORNERS AND WINGWALLS.

Scale:			
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CONSULTANT PROJECT MANAGER: Chris Taylor					
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**THE GOLD STAR
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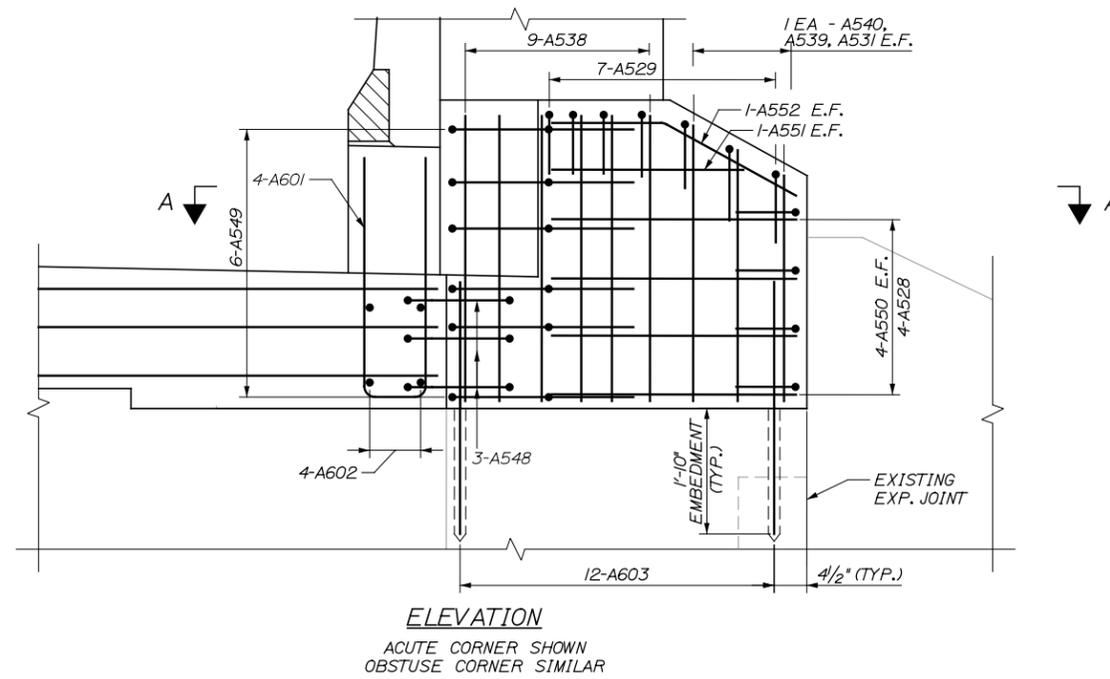
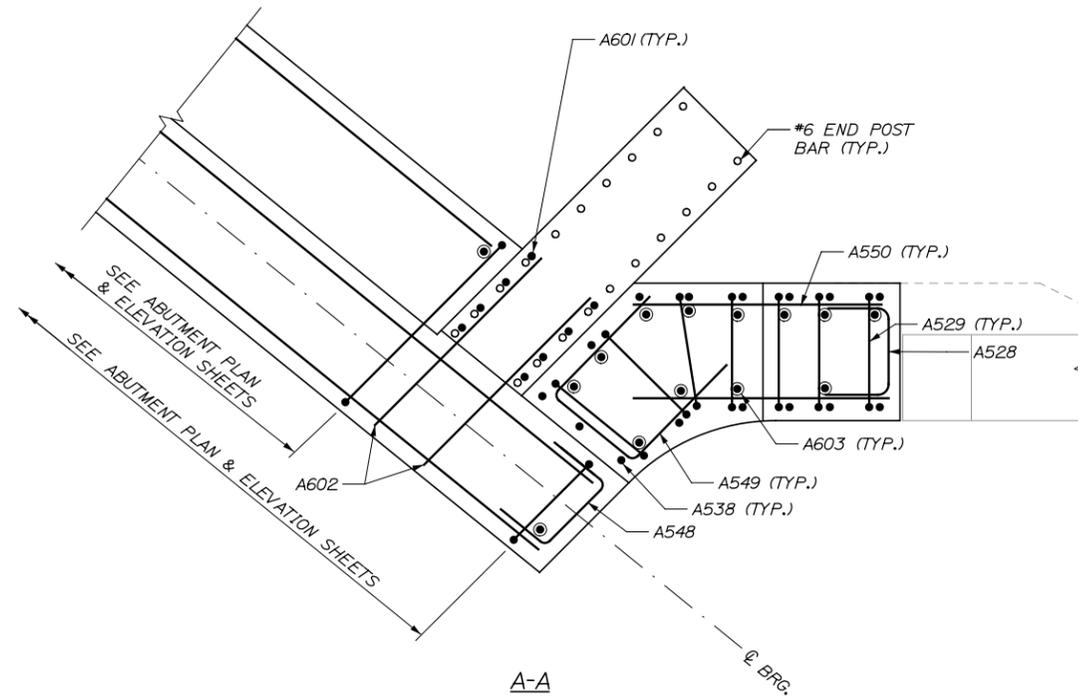
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
ABUTMENT 2 - PLAN AND ELEVATION
BRIDGE 31**

SHEET NUMBER: S31-11
CONTRACT: 2014.13
65 OF 86

Date: 6/19/2014

Filename: ... \066_Abut_Reinforcement_E31.dgn



Scale: 3/4" = 1'-0"

No.	Revision	By	Date

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CONSULTANT PROJECT MANAGER: Chris Taylor

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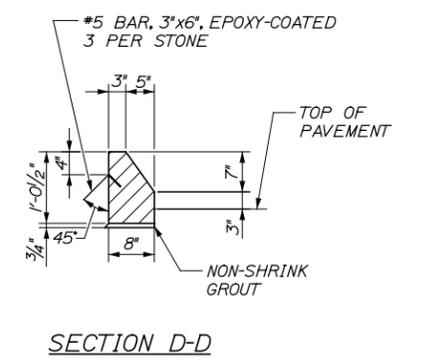
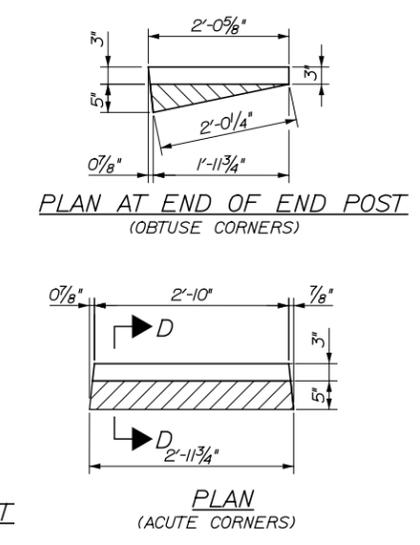
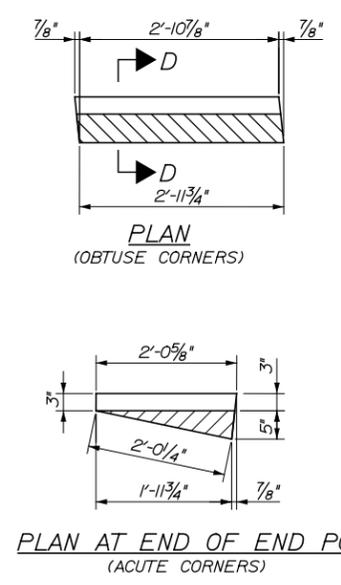
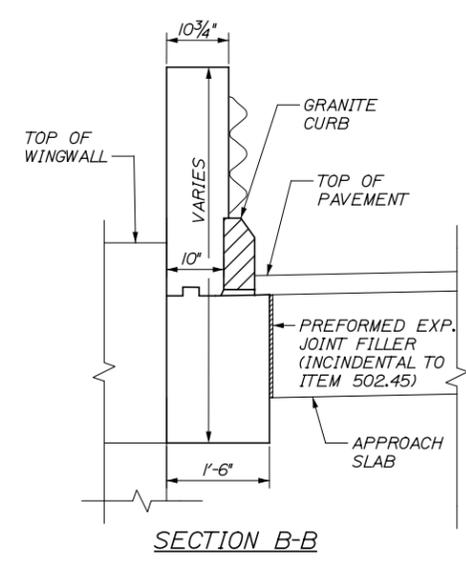
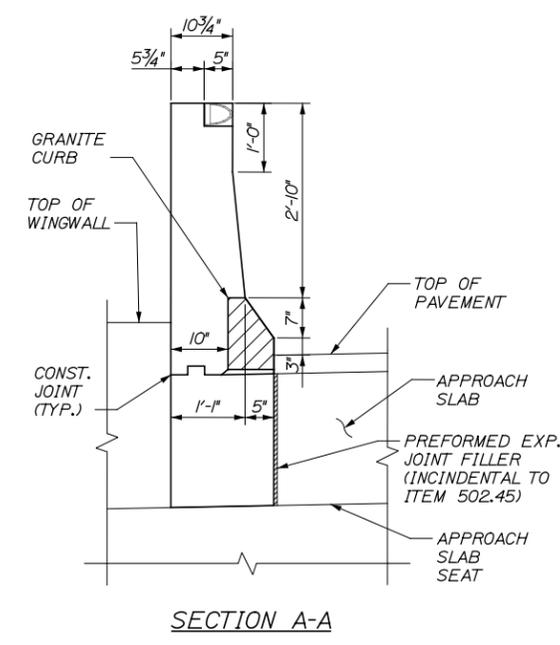
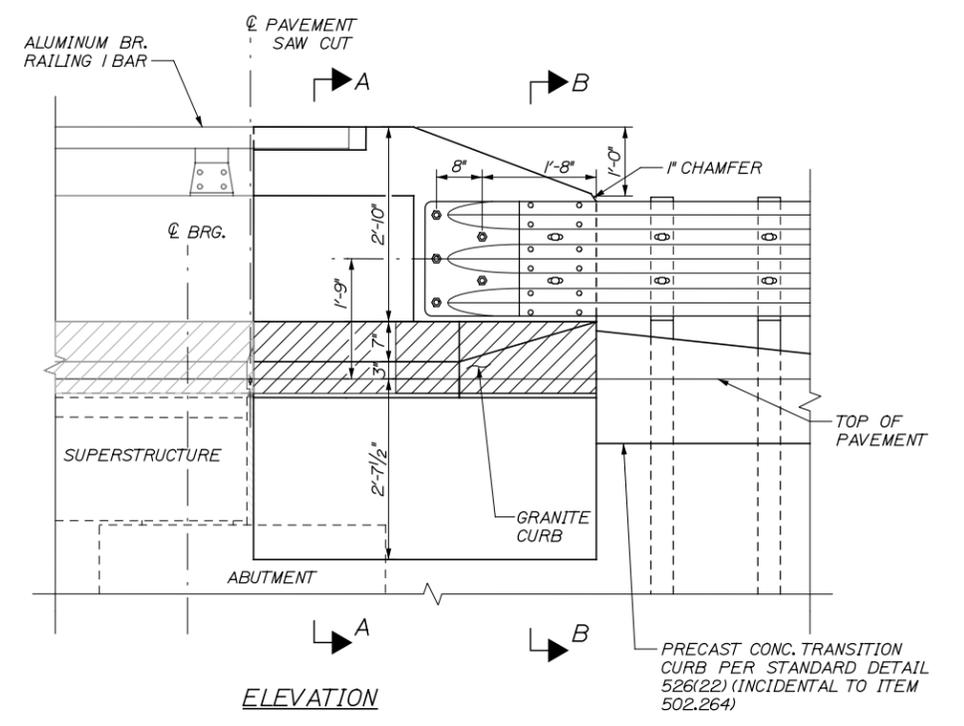
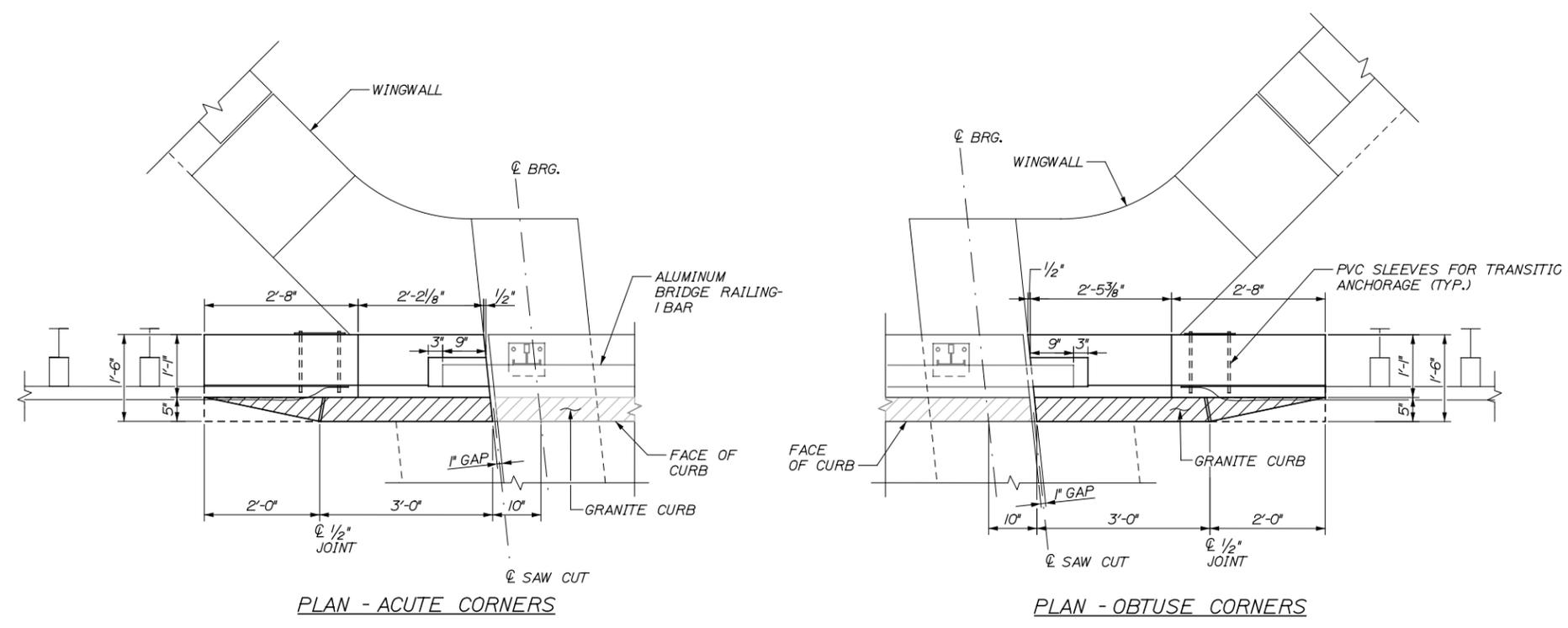
THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 ABUTMENT REINFORCEMENT
 BRIDGE 31**

SHEET NUMBER: S31-12
 CONTRACT: 2014.13
 66 OF 86

Date: 6/19/2014



GRANITE CURB DETAILS

Filename: ...MSTA\067_End_Posts_1_B31.dgn

Scale: 3/4" = 1'-0"

No.	Revision	By	Date

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

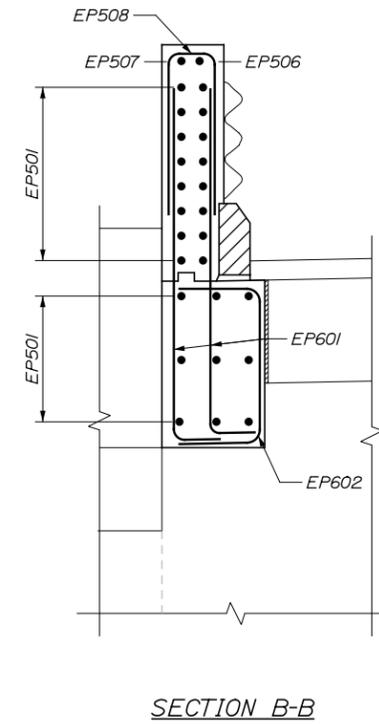
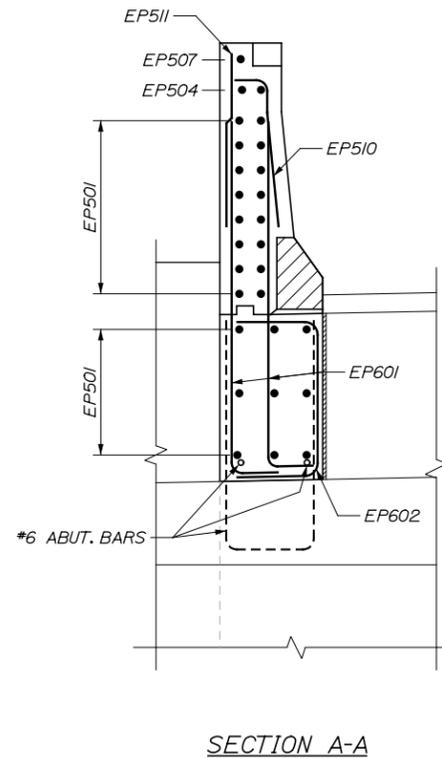
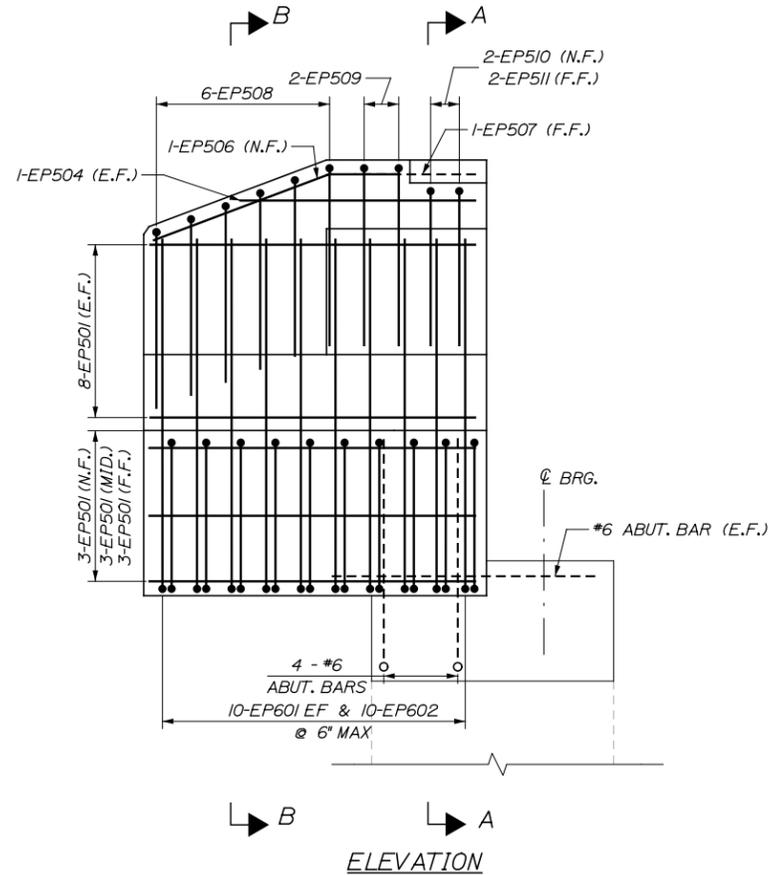
**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES**

**END POST DETAILS I
 BRIDGE 31**

SHEET NUMBER: S31-13
 67 OF 86

CONTRACT: 2014.13

Date: 6/19/2014



Filename: ...MSTA\068_End_Posts_2_B31.dgn

Scale: 3/4" = 1'-0"

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

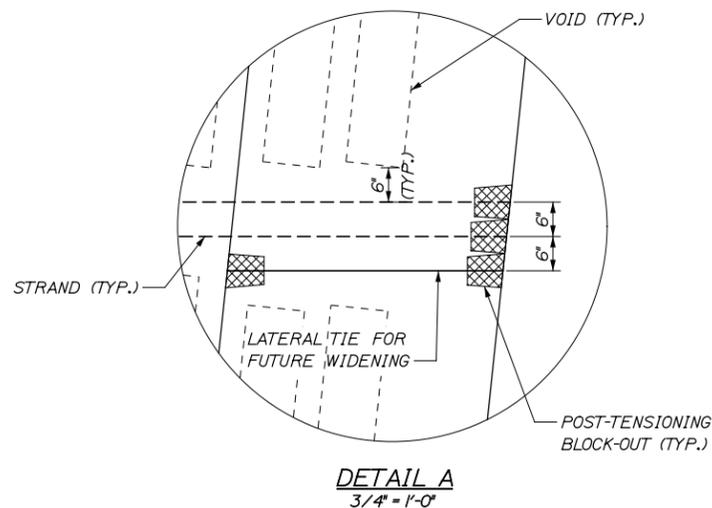
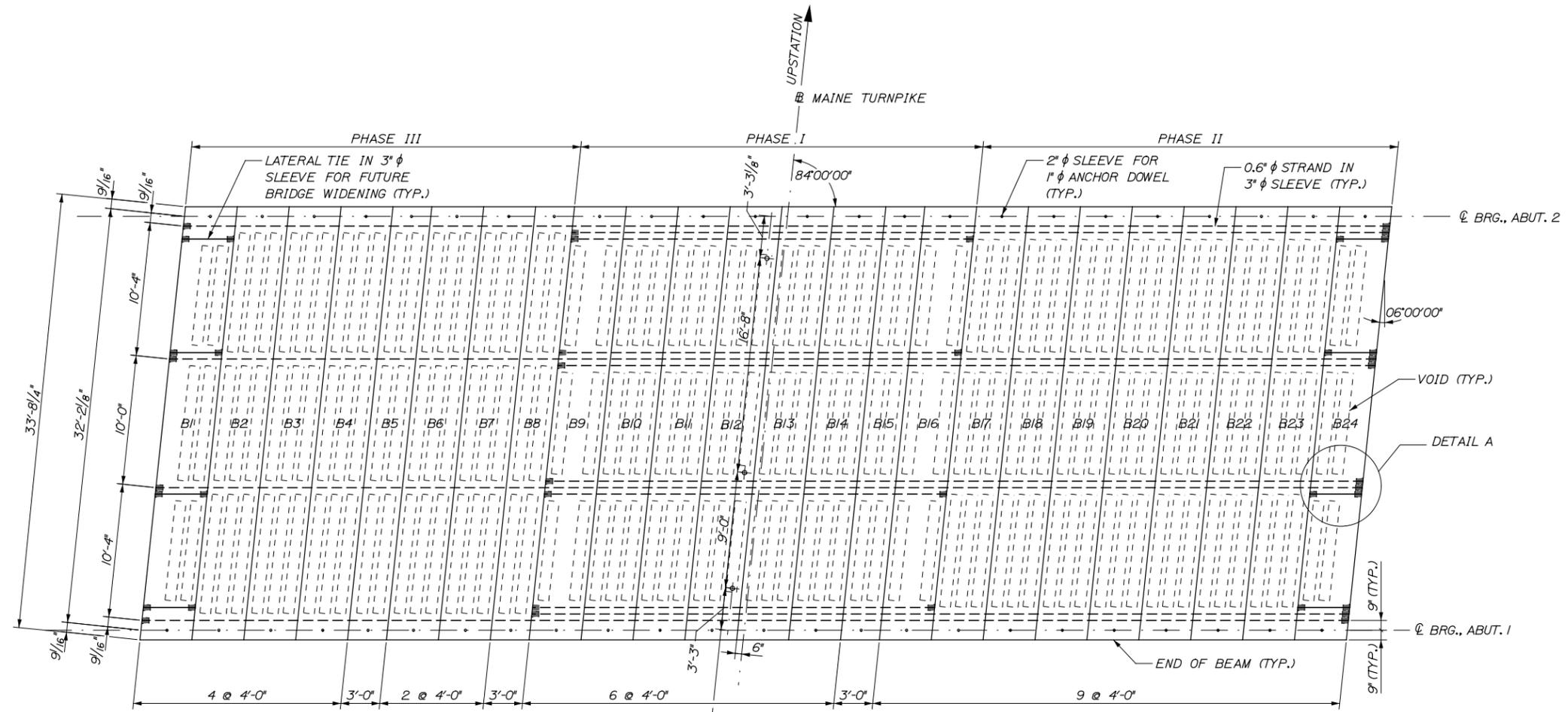
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**END POST DETAILS II
BRIDGE 31**

SHEET NUMBER: S31-14
 CONTRACT: 2014.13
 68 OF 86

Date: 6/19/2014

Filename: ...MSTA\069_Framing_Plan_B31.dgn



FRAMING PLAN
3/16" = 1'-0"

NOTES:

- FOR TRENCH DRAIN DOWNSPOUT DETAIL SEE "LEVELING SLAB PLAN" SHEET.
- TRANSVERSE POST-TENSIONING TENDONS MAY BE POSITIONED PRIOR TO GROUTING THE SHEAR KEYS. SHEAR KEY GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1,500 PSI PRIOR TO COMMENCING STRESSING OPERATIONS.
- NO TRAFFIC OR HEAVY EQUIPMENT SHALL BE PERMITTED ON THE BEAMS UNTIL ALL TRANSVERSE POST-TENSIONING HAS BEEN PROPERLY INSTALLED.
- TENSION EACH POST-TENSIONING TENDON TO 44 KIPS EACH.
- POST-TENSIONING TENDONS SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH WITH CORROSION INHIBITING GREASE BETWEEN THE TENDON AND SHEATH FOR THE LENGTH OF THE STRAND, EXCEPT AT THE ANCHOR LOCATIONS.
- BEAMS 9 AND 16 REQUIRE ATTACHMENT FOR TEMPORARY BARRIERS. THROUGH BOLTS IN 2" DIAMETER PVC SLEEVES SHALL BE USED AS SHOWN IN SPECIAL PROVISION 526. DRILLING INTO BEAMS WILL NOT BE ALLOWED. COSTS FOR ANCHORAGE SHALL BE INCIDENTAL TO THE BEAMS AND TEMPORARY BARRIERS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALIGNMENT BETWEEN CAST-IN SLEEVES AND TEMPORARY CONCRETE BARRIER ELEMENTS TO BE USED.

Scale: VARIES			
No.	Revision	By	Date

Designed by:					
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CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
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**THE GOLD STAR
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MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

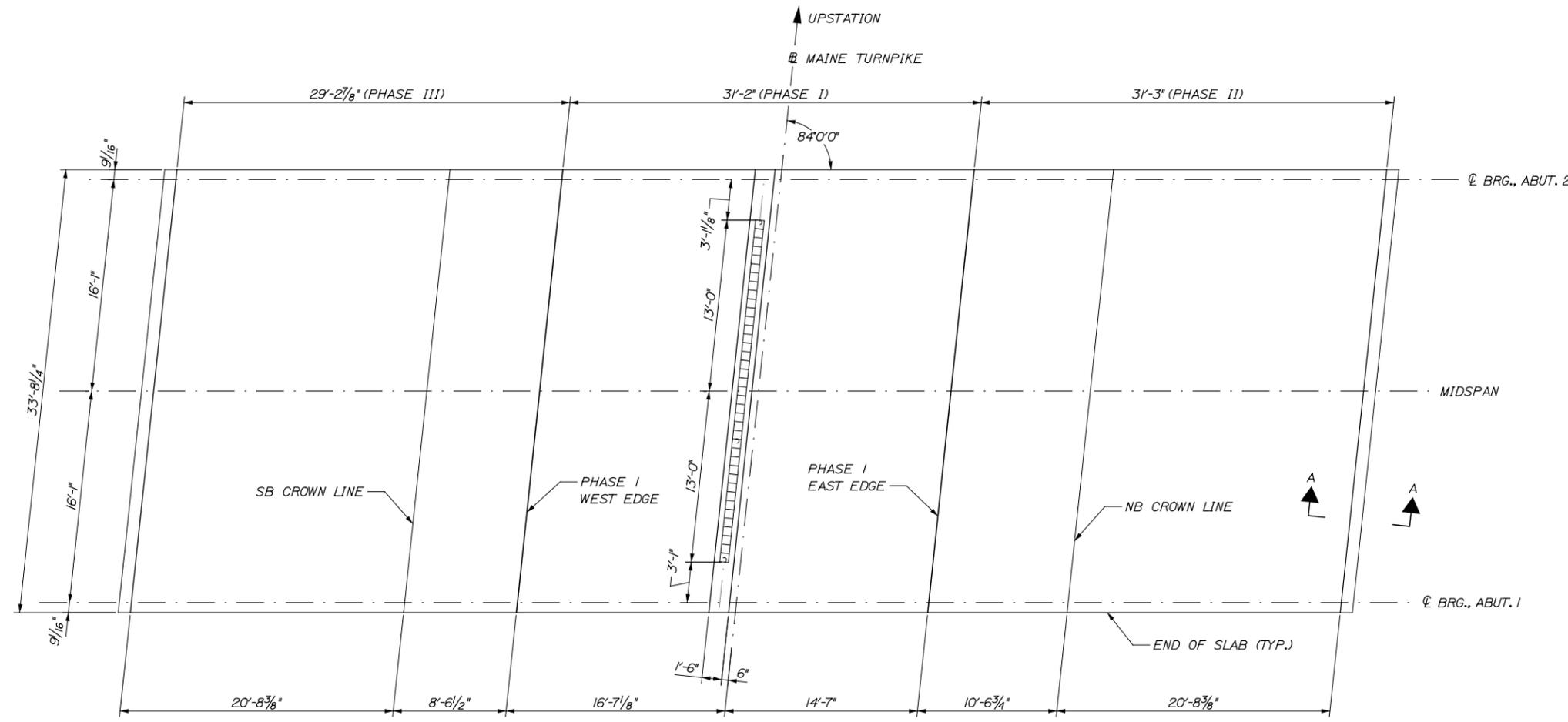
**FRAMING PLAN
BRIDGE 31**

CONTRACT: 2014.13

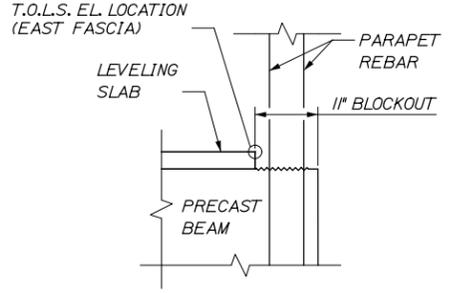
SHEET NUMBER: S31-15
69 OF 86

Date: 6/19/2014

Filename: ... \070_Levelling_Slab_Plan_B31.dgn



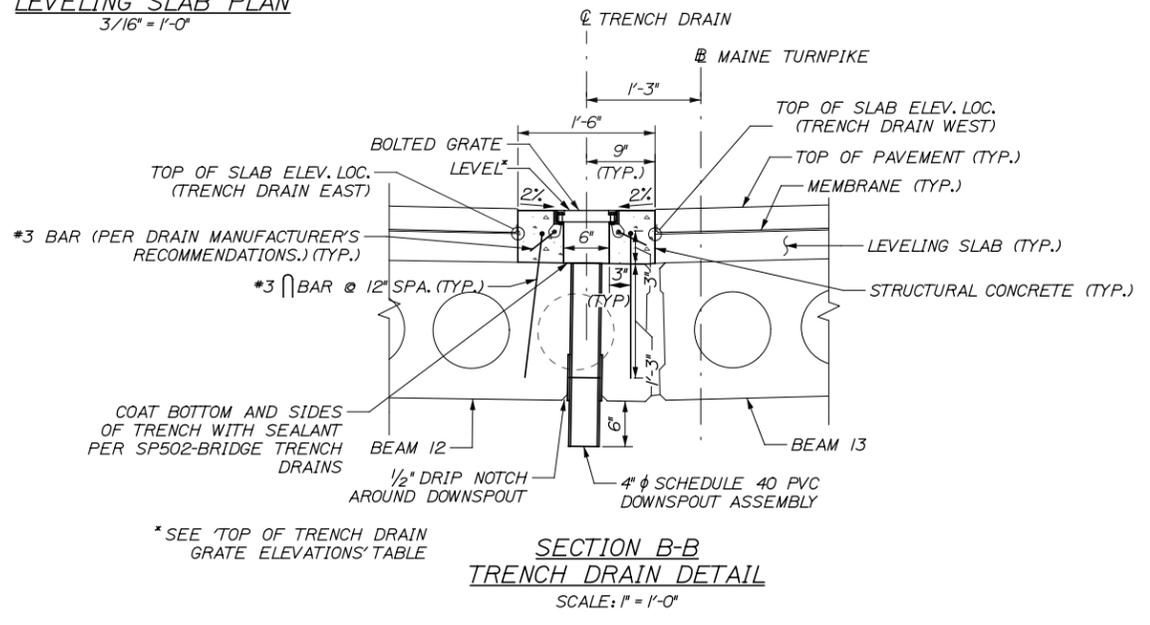
LEVELING SLAB PLAN
3/16" = 1'-0"



SECTION A-A
SCALE: 3/4" = 1'-0"

- NOTES:**
1. THIS TABLE INDICATES THE ANTICIPATED THICKNESS OF THE DECK SLAB IN BASED UPON ESTIMATED BEAM CAMBERS OF 1/2 INCH AT ERECTION.
 2. THIS TABLE IS PROVIDED TO ASSIST IN ESTIMATING THE REQUIRED CONCRETE VOLUME.
 3. THE ACTUAL DECK THICKNESS SHALL BE AS REQUIRED TO MEET THE TOP OF LEVELING SLAB ELEVATIONS.
 4. CONTRACTOR SHALL SURVEY TOPS OF BEAMS AT MIDSPAN. ELEVATIONS AND PROPOSED BLOCKING HEIGHTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO POURING LEVELING SLAB OR TRENCH DRAIN.

ANTICIPATED LEVELING SLAB THICKNESS (INCHES)		
CL BRG., ABUT. 1	MIDSPAN	CL BRG., ABUT. 2
3.5	3.0	3.5



SECTION B-B
TRENCH DRAIN DETAIL
SCALE: 1" = 1'-0"

LEVELING SLAB SCREED ELEVATIONS (FT)				
TRANSVERSE LOCATION		LONGITUDINAL LOCATION		
NAME	OFFSET	CL BRG., ABUT 1	MIDSPAN	CL BRG., ABUT 2
WEST FASCIA	45'-7" LT.	94.17	94.22	94.26
SB CROWN LINE	25'-0" LT.	94.59	94.64	94.68
PH. I WEST EDGE	16'-5 3/4" LT.	94.42	94.47	94.51
TRENCH DRAIN WEST	2'-0" LT.	94.07	94.12	94.16
TRENCH DRAIN EAST	0'-6" LT.	94.05	94.11	94.15
PH. I EAST EDGE	14'-5 3/4" RT.	94.36	94.41	94.45
NB CROWN LINE	25'-0" RT.	94.57	94.62	94.67
EAST FASCIA	45'-7" RT.	94.16	94.22	94.26

TOP OF TRENCH DRAIN GRATE ELEVATIONS (FT)		
SOUTH END	MIDSPAN	NORTH END
94.33	94.37	94.41

Scale: AS NOTED

No.	Revision	By	Date

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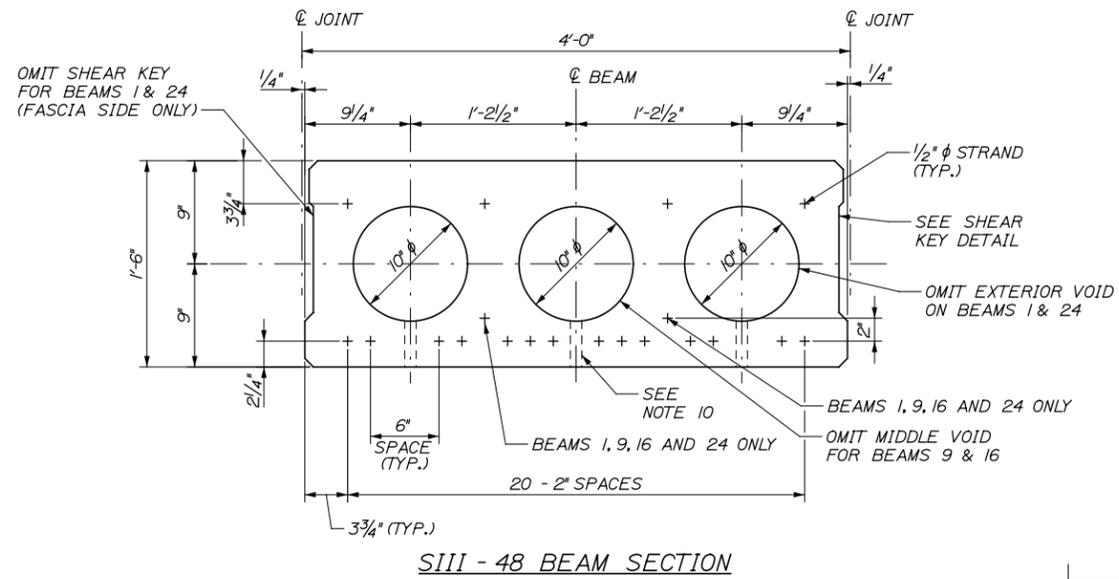
MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
LEVELING SLAB PLAN
BRIDGE 31

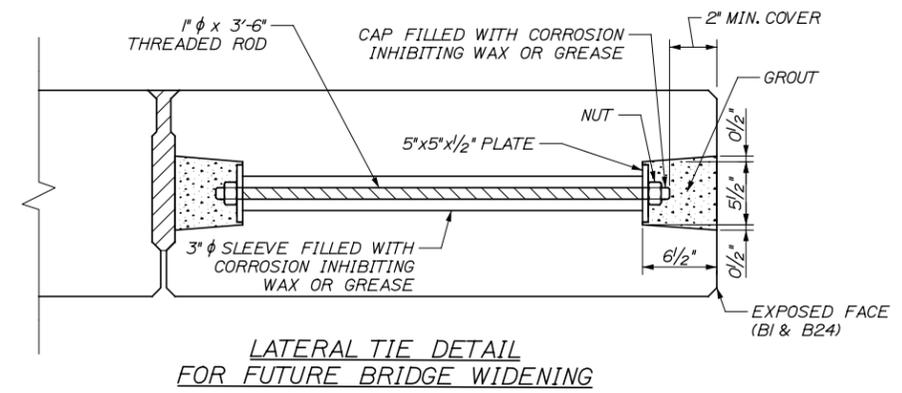
CONTRACT: 2014.13

SHEET NUMBER: S31-16
70 OF 86

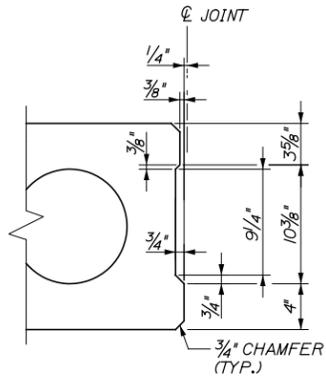
Date: 6/19/2014



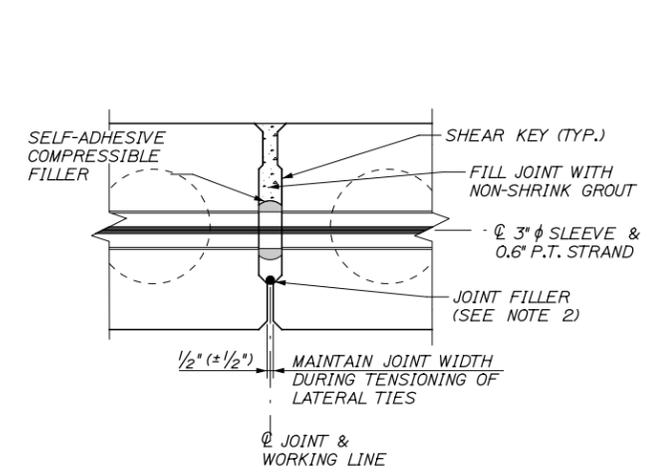
SIII - 48 BEAM SECTION



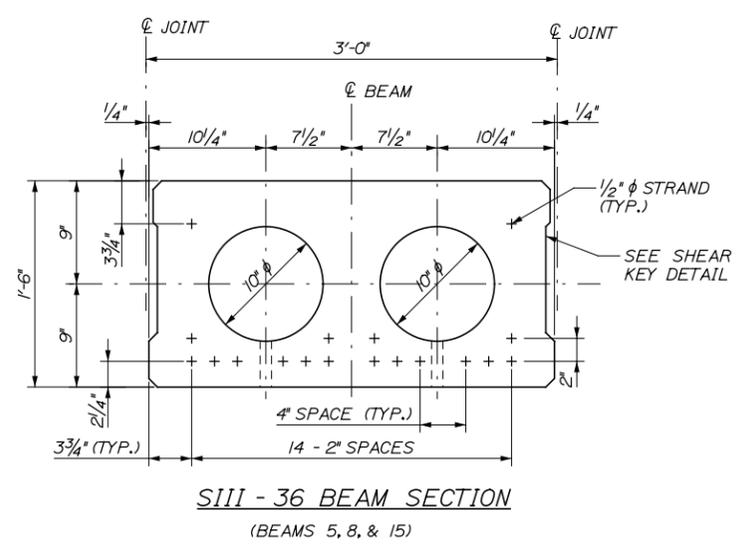
LATERAL TIE DETAIL FOR FUTURE BRIDGE WIDENING



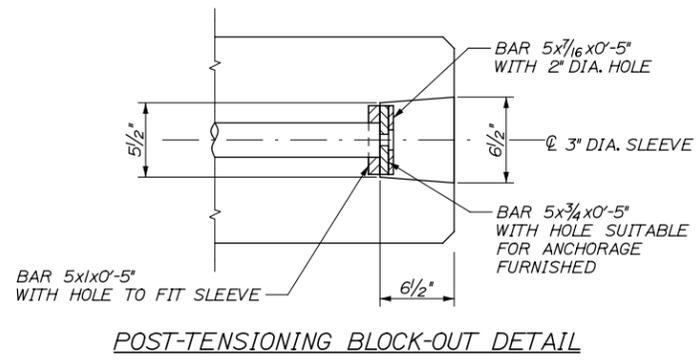
SHEAR KEY DETAIL INTERIOR JOINTS ONLY



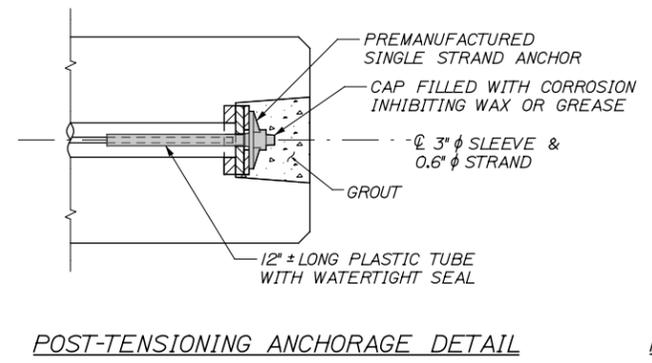
JOINT DETAIL



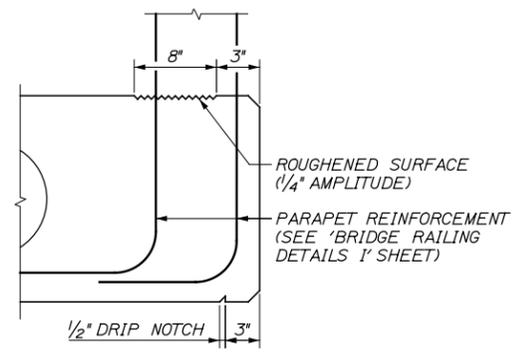
SIII - 36 BEAM SECTION (BEAMS 5, 8, & 15)



POST-TENSIONING BLOCK-OUT DETAIL



POST-TENSIONING ANCHORAGE DETAIL



FASCIA BEAM TREATMENT

NOTES:

1. OTHER TRANSVERSE POST-TENSIONING ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATERTIGHT AND CORROSION PROOF.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A JOINT FILLER SYSTEM ADEQUATE TO CONTAIN THE SHEAR KEY GROUT DURING PLACEMENT. NO EXTRA PAYMENT WILL BE MADE FOR SUCH SYSTEM OR FOR NECESSARY REPAIRS OR EXTRA WORK IF THE JOINT FILLER SYSTEM FAILS.
3. LONGITUDINAL SHEAR KEYS SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT IN ACCORDANCE WITH STANDARD DETAILS 535(03) AND 535(17) AND STANDARD SPECIFICATION SECTION 535.25.
4. SHEAR KEYS SHALL BE COVERED AND PROTECTED AFTER BEAM PLACEMENT AND PRIOR TO NON-SHRINK GROUT PLACEMENT TO PREVENT DEBRIS FROM ENTERING THE OPENING.
5. TRANSVERSE POST-TENSIONING BLOCKOUTS IN THE FASCIA SHALL BE FILLED WITH AN APPROVED NON-SHRINK GROUT. THE NON-SHRINK GROUT SHALL BE THE SAME COLOR AND TEXTURE OF THE PRECAST BEAMS.
6. TRANSVERSE POST-TENSIONING STRANDS SHALL BE 0.6" DIAMETER, UNCOATED 7 WIRE STRANDS. ALL TRANSVERSE STRANDS SHALL BE TENSIONED TO 44 KIPS EACH.
7. LONGITUDINAL PRESTRESSING STRANDS SHALL BE 0.5" DIAMETER, UNCOATED 7 WIRE STRANDS. ALL LONGITUDINAL STRANDS SHALL BE TENSIONED TO 31 KIPS EACH.
8. THE DRILLING OF HOLES IN THE PRESTRESSED BEAMS AND THE USE OF POWER ACTUATED TOOLS ON THE BEAMS WILL NOT BE PERMITTED.
9. SHEAR KEY FACES SHALL BE SAND BLASTED AT THE PRECAST FACILITY TO IMPROVE GROUT BOND. IF VISUAL INSPECTION REVEALS LAITANCE OR DEBRIS WITHIN THE SHEAR KEYS UPON ARRIVAL TO THE JOB SITE, THEN THE SHEAR KEY FACES SHALL BE CLEANED BY POWER-WASHING OR OTHER METHOD APPROVED BY THE RESIDENT.
10. INSTALL A 1" DIAMETER, NON-METALLIC VOID DRAIN IN THE BOTTOM OF EACH VOID AT EACH END.
11. ANY CONSTRUCTION DEVICES EMBEDDED OR ATTACHED TO THE PRESTRESSED CONCRETE SLAB BEAMS SHALL BE DESIGNED BY THE VENDOR AND INDICATED IN THE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.
12. COST OF THE REINFORCING BARS PROJECTING OUT OF THE BEAMS SHALL BE INCIDENTAL TO ITEM 535.602 - PRESTRESSED STRUCTURAL CONCRETE SLAB (BRIDGE 31).

Filename: ...071_Super_Details_1_LB31.dgn

Scale: 1 1/2" = 1'-0"			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	By	Date
Designed	SBK 06/2014	Checked	CPT 06/2014
Drawn	TSK 06/2014	In Charge of	CPT 06/2014

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THE GOLD STAR MEMORIAL HIGHWAY

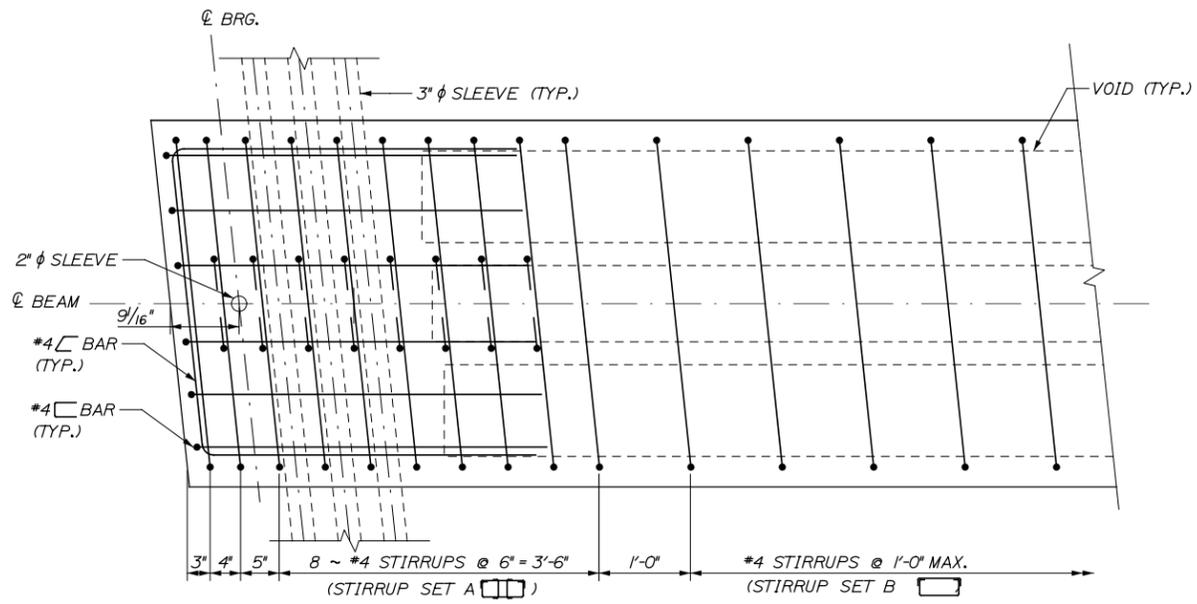
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 SUPERSTRUCTURE DETAILS I
 BRIDGE 31**

SHEET NUMBER: S31-17
 CONTRACT: 2014.13
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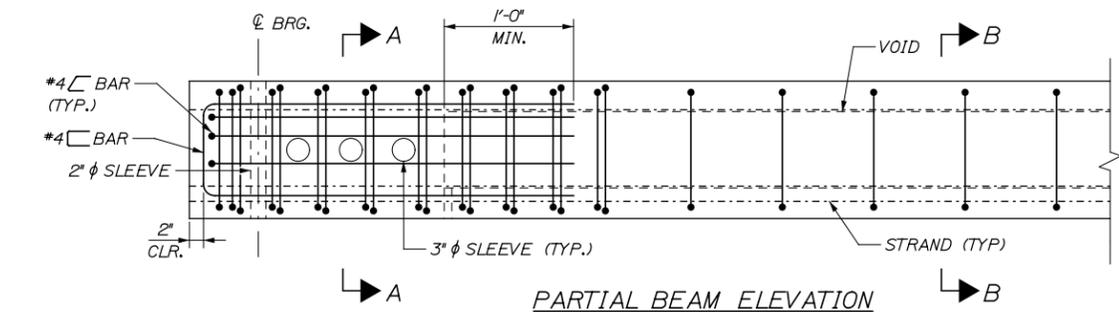
Date: 6/19/2014

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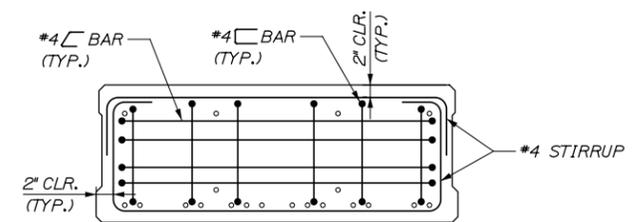


PARTIAL BEAM PLAN - TYPICAL 4FT BEAM

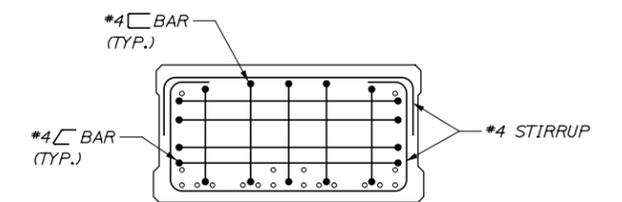
NOTES: PARAPET AND TRENCH DRAIN DOWELS NOT SHOWN
3FT BEAMS SIMILAR



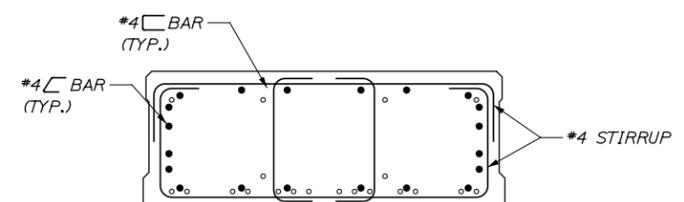
PARTIAL BEAM ELEVATION



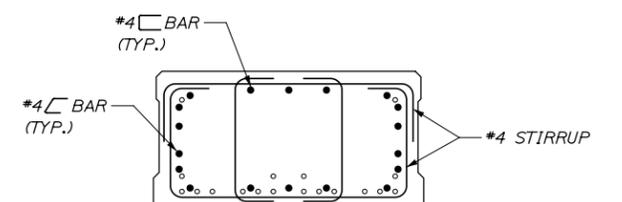
END SECTION - 4FT BEAM



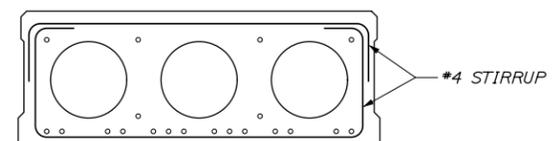
END SECTION - 3FT BEAM



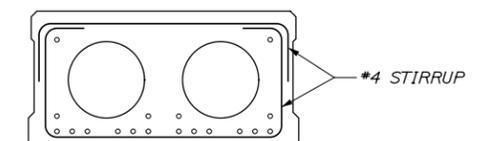
SECTION A-A - 4FT BEAM
(STIRRUP SET A)



SECTION A-A - 3FT BEAM



SECTION B-B - 4FT BEAM
(STIRRUP SET B)



SECTION B-B - 3FT BEAM

Scale: 1" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	TSK	06/2014	In Charge of	CPT	06/2014

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 FAX: (207) 781-4753

THE GOLD STAR MEMORIAL HIGHWAY

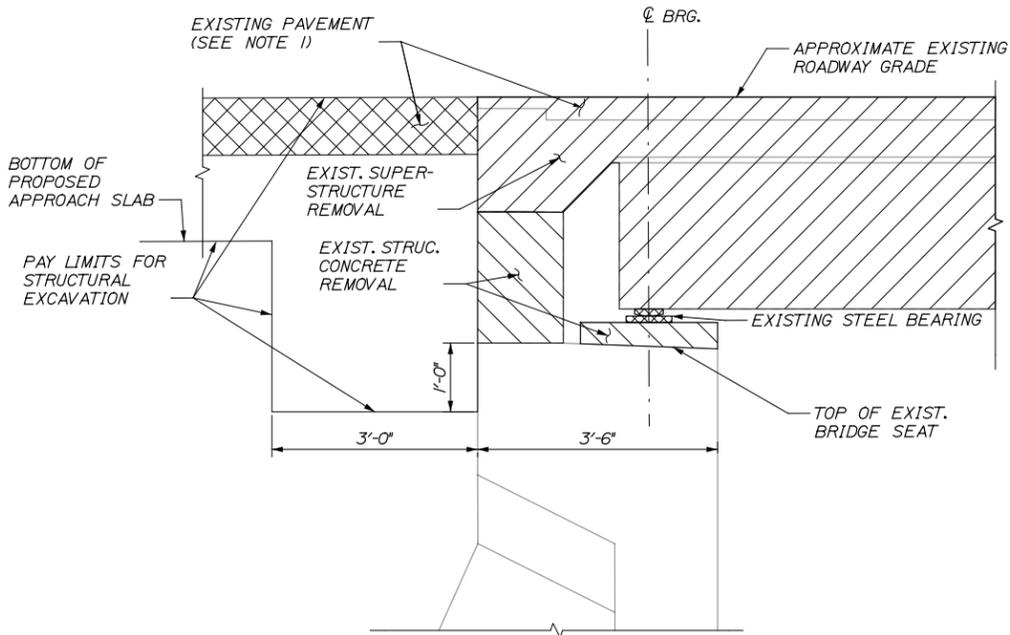
MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
 PISCATAQUA RIVER BRIDGES
 SUPERSTRUCTURE DETAILS II
 BRIDGE 31**

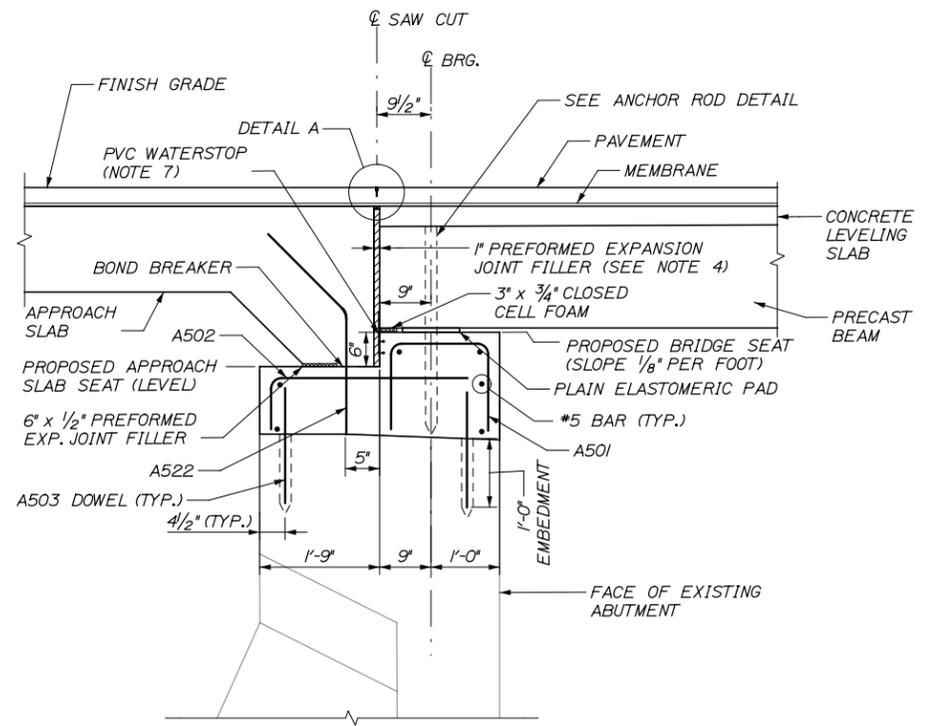
CONTRACT: 2014.13

SHEET NUMBER: S31-18
72 OF 86

Date: 6/19/2014



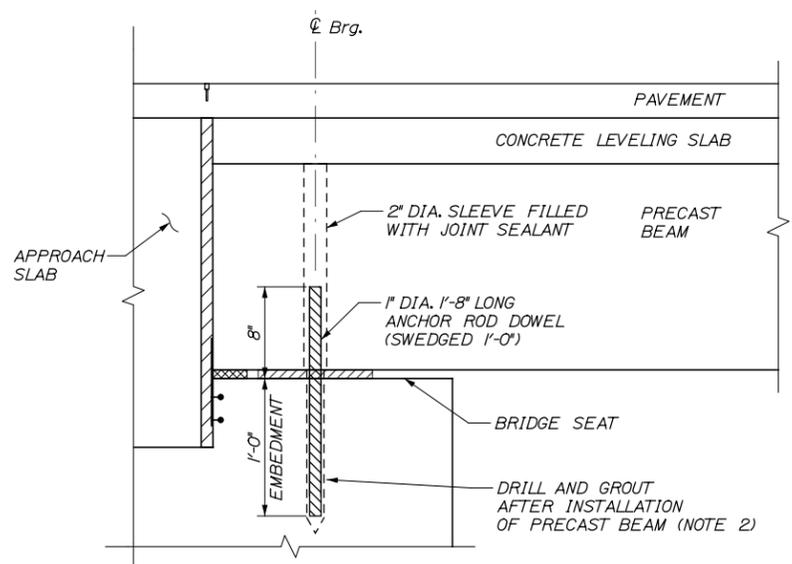
SECTION THRU EXISTING ABUTMENT
SCALE: 3/4" = 1'-0"



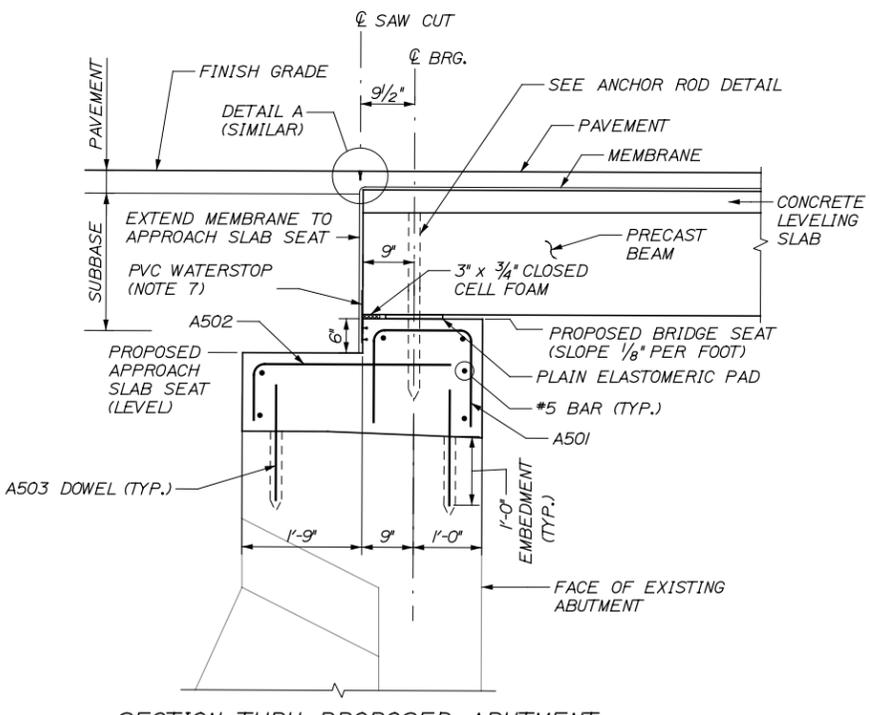
SECTION THRU PROPOSED ABUTMENT AT APPROACH SLAB
SCALE: 3/4" = 1'-0"

NOTES:

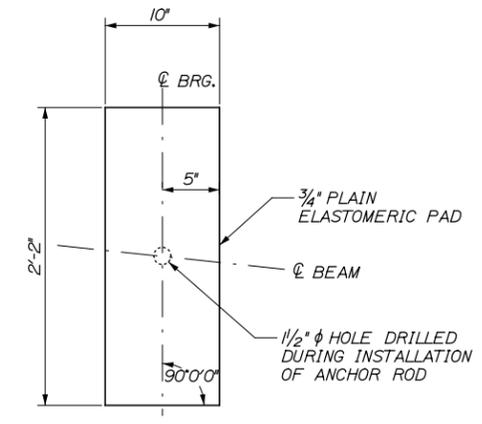
1. EXISTING PAVEMENT THICKNESS MAY VARY. NO SEPARATE PAYMENT FOR REMOVAL OF EXISTING BRIDGE PAVEMENT SHALL BE MADE. PAYMENT SHALL BE INCIDENTAL TO ITEM 202.10. REMOVAL OF APPROACH PAVEMENT FOR APPROACH SLAB CONSTRUCTION SHALL BE PAID UNDER ITEM 206.082.
2. DRILL 1/2" ϕ HOLES FOR 1" ϕ ANCHOR DOWELS IN ABUTMENTS AFTER SLABS ARE PLACED AND LATERALLY POST-TENSIONED, THEN GROUT DOWELS INTO PLACE. COST FOR DRILLING HOLES, ANCHOR DOWELS, AND GROUT, SHALL BE INCIDENTAL TO ITEM 535.602.
3. ELASTOMERIC BEARING PADS SHALL BE POLYCHLOROPRENE OF 60 \pm 5 SHORE A DUROMETER HARDNESS AND SHALL CONFORM TO THE REQUIREMENTS OF SECTION 18.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS. PAYMENT FOR ELASTOMERIC BEARING PADS SHALL BE INCIDENTAL TO ITEM 535.602.
4. PREFORMED EXPANSION JOINT FILLER BETWEEN PRESTRESSED BEAMS AND ABUTMENT BACKWALL SHALL CONFORM TO AASHTO M 213 (ASTM D 1751).
5. PAYMENT FOR PREFORMED EXPANSION JOINT FILLER, JOINT SEALANT ON JOINT FILLER, AND BOND BREAKER SHALL BE INCIDENTAL TO ITEM 502.21.
6. THE VOID BETWEEN THE ANCHOR ROD AND 2" DIAMETER SLEEVE IN THE PRECAST BEAMS AT THE ABUTMENTS SHALL BE FILLED WITH AN APPROVED JOINT SEALANT. PAYMENT FOR THE ANCHOR ROD, SLEEVE, AND JOINT SEALANT SHALL BE INCIDENTAL TO ITEM 535.602.
7. THE TOP LEGS OF THE WATERSTOPS SHALL BE CLIPPED FOR THE PRECAST BEAM AND ATTACHED TO THE BEAM WITH AN APPROVED ADHESIVE.
8. PAYMENT FOR THE PAVEMENT SAWCUTS AND BITUMINOUS SEALS AT THE SAWCUTS SHALL BE INCIDENTAL TO ITEM 403.208.



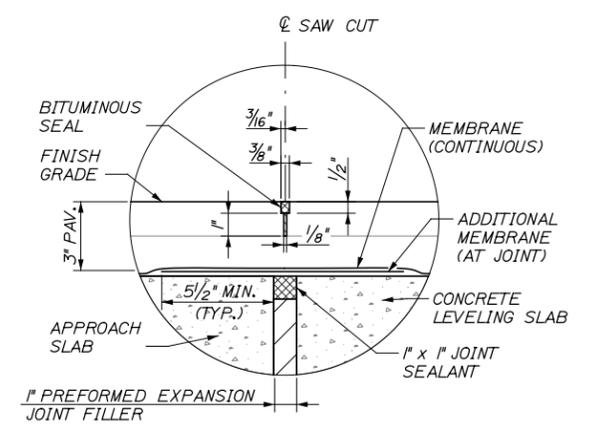
ANCHOR ROD DETAIL
SCALE: 1/2" = 1'-0"



SECTION THRU PROPOSED ABUTMENT BETWEEN APPROACH SLABS
SCALE: 3/4" = 1'-0"



PLAIN ELASTOMERIC PAD DETAIL
SCALE: 1/2" = 1'-0"



DETAIL A
SCALE: 3" = 1'-0"

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	Checked	By	Date
SBK	06/2014	CPT	CPT	06/2014
Drawn	PJB	In Charge of	CPT	06/2014

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FAX: (207) 781-4753



MTA PROJECT MANAGER: RALPH NORWOOD

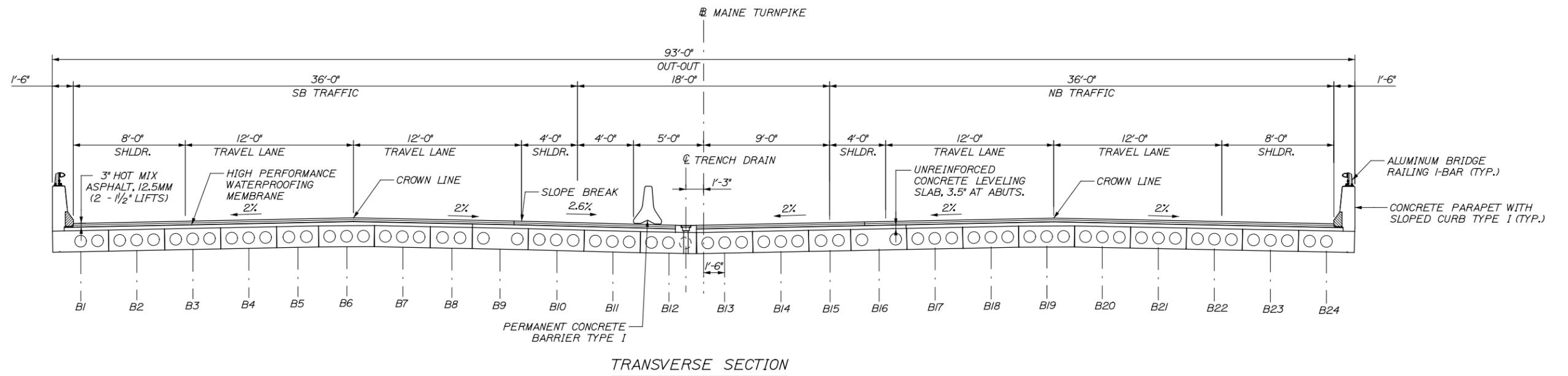
THE GOLD STAR MEMORIAL HIGHWAY

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
SUPERSTRUCTURE DETAILS III
BRIDGE 31**

SHEET NUMBER: S31-19
CONTRACT: 2014.13
73 OF 86

Filename: ...\\073_Super_Details_3_B31.dgn

Date: 6/19/2014



Filename: ...MSTA\074_Typ_Sect_B31.dgn

Scale: 1/4" = 1'-0"

No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

	By	Date	Checked	By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

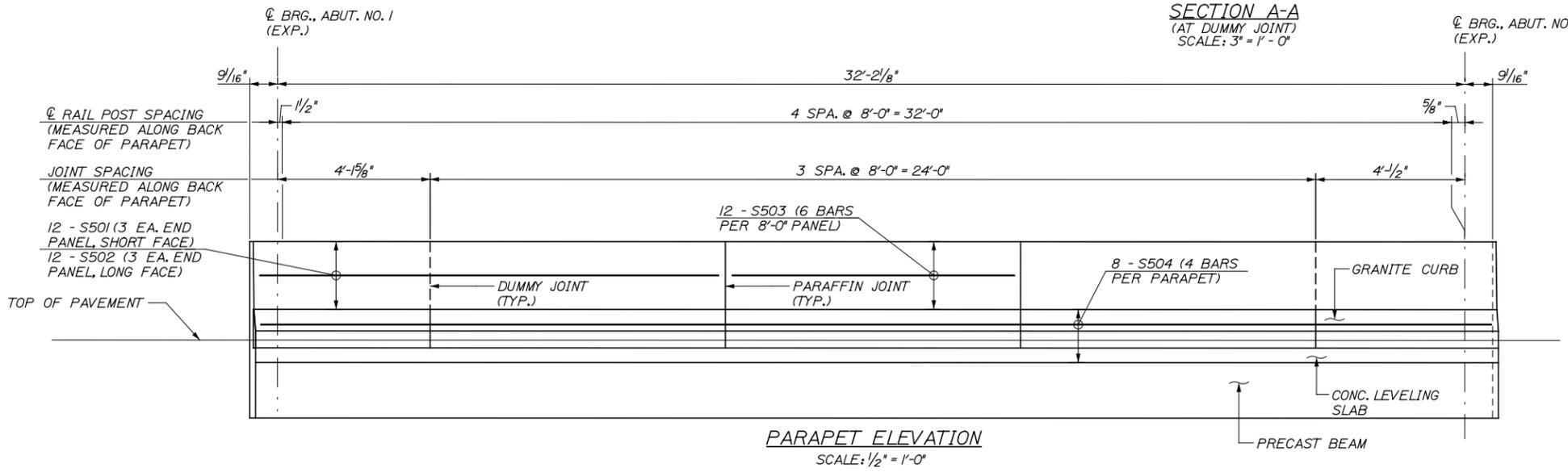
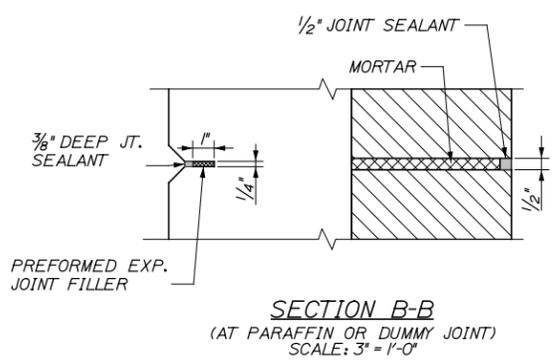
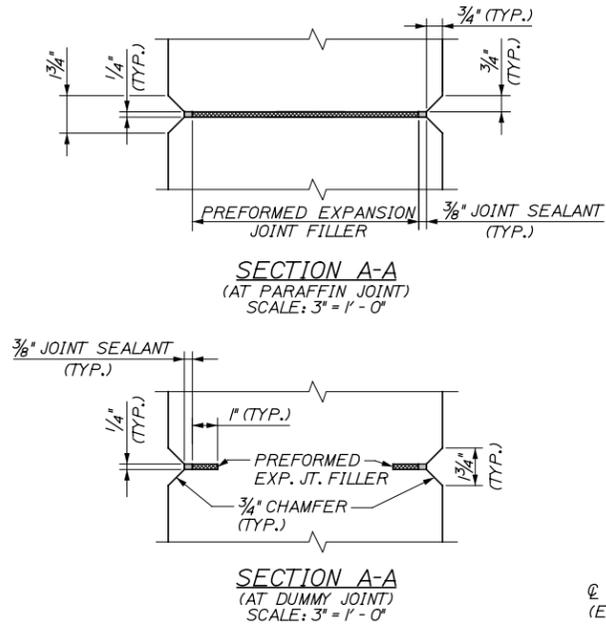
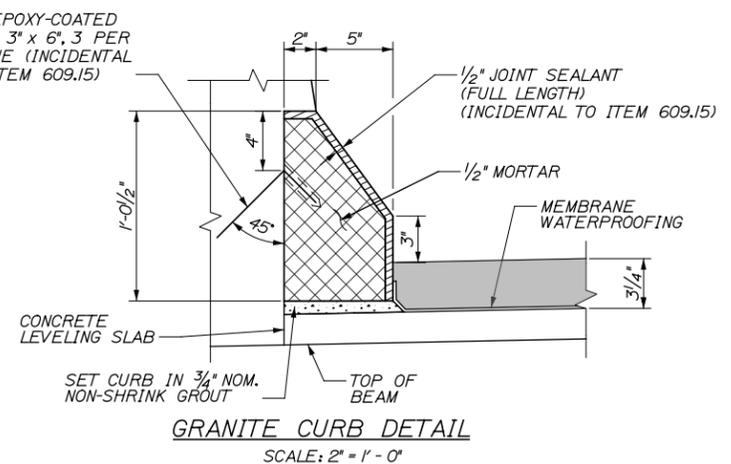
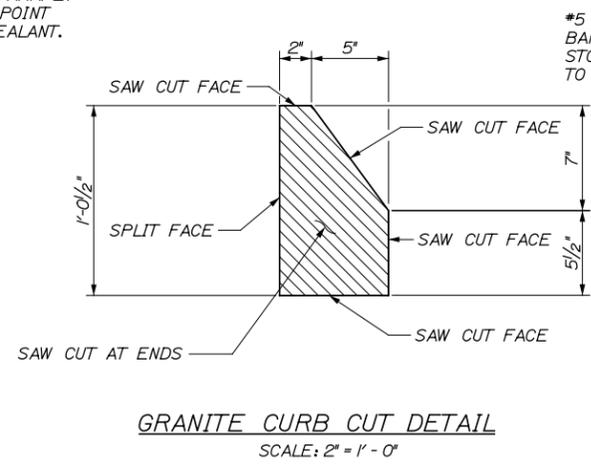
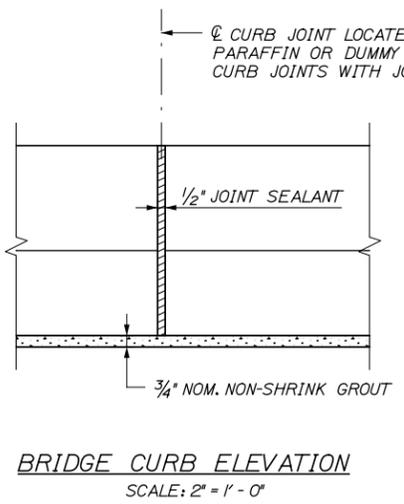
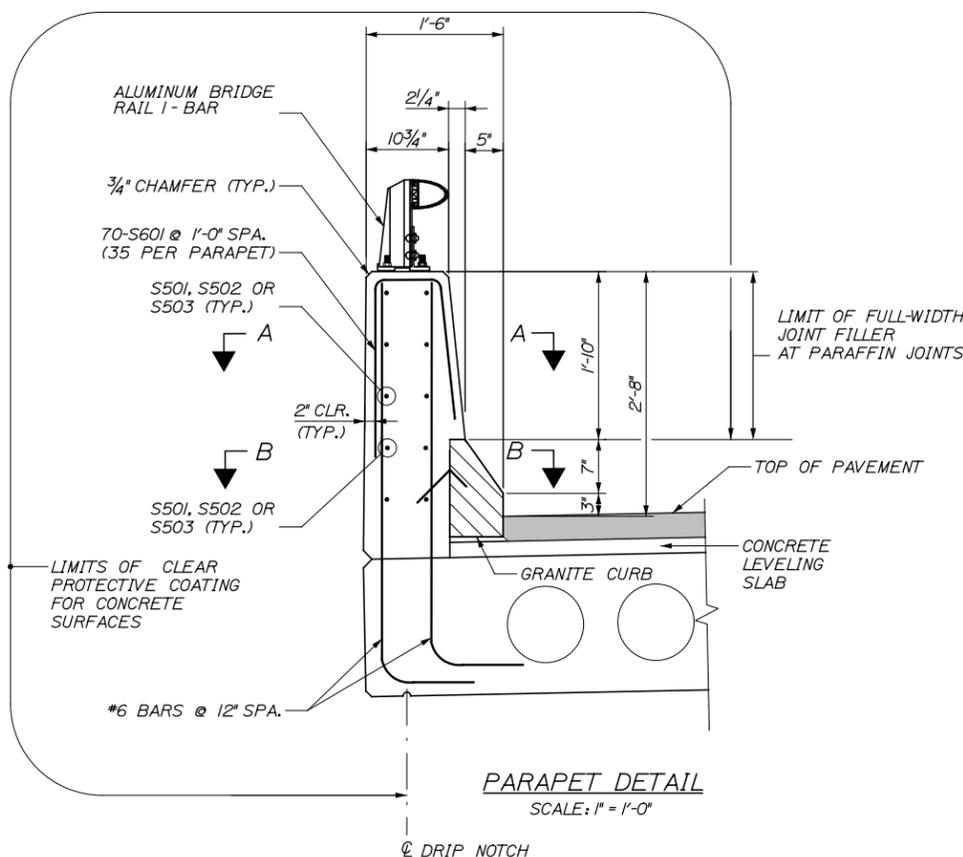
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
TYPICAL SECTION - BRIDGE 31**

SHEET NUMBER: S31-20
74 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

Filename: ... \075_Rail_Details_1_B31.dgn



- NOTES:**
- HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN PARAPETS.
 - CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE PARAFFIN JOINTS. THE JOINTS SHALL REMAIN PLUMB AND STRAIGHT DURING PLACEMENT.
 - PREFORMED EXPANSION JOINT FILLER SHALL CONFORM TO AASHTO M 213 (ASTM D 1751).
 - JOINT SEALANT SHALL BE SIKA FLEX IA OR AN APPROVED EQUAL.
 - PAYMENT FOR PREFORMED EXPANSION JOINT FILLER AND JOINT SEALANT SHALL BE INCIDENTAL TO ITEM 502.264.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

TYLIN INTERNATIONAL

CONSULTANT PROJECT MANAGER: Chris Taylor

By	Date	Checked	By	Date
SBK	06/2014	CPT	CPT	06/2014
Drawn	TJP	In Charge of	CPT	06/2014

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: RALPH NORWOOD

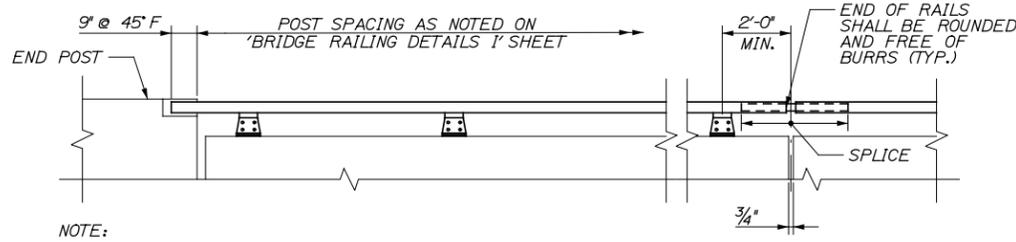
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**BRIDGE RAILING DETAILS I
BRIDGE 31**

SHEET NUMBER: S31-21
CONTRACT: 2014.13
75 OF 86

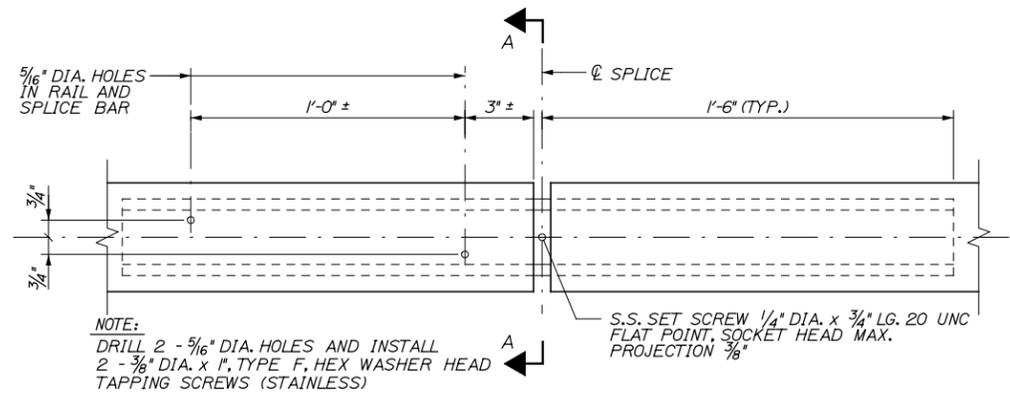
Date: 6/19/2014

Filename: ...076_Rail_Details_2_B31.dgn



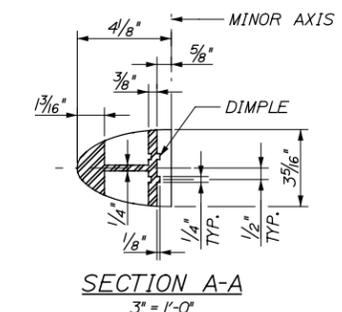
NOTE:
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POSTS WHENEVER POSSIBLE AND, IN ANY CASE, NEVER LESS THAN TWO (2). RAIL POSTS ARE TO BE SET NORMAL TO GRADE, UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

RAILING - ELEVATION
3/8" = 1'-0"

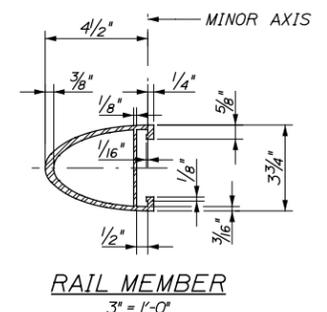


NOTE:
DRILL 2 - 5/16" DIA. HOLES AND INSTALL 2 - 3/8" DIA. x 1" TYPE F, HEX WASHER HEAD TAPPING SCREWS (STAINLESS)

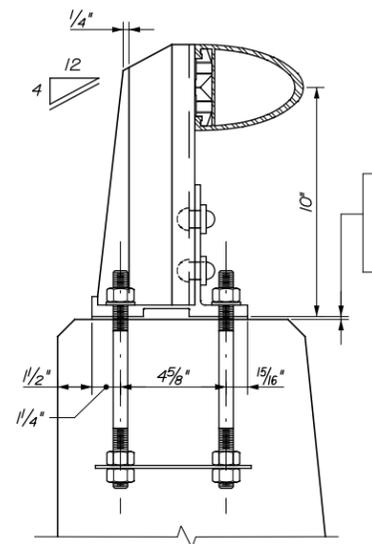
SPLICE DETAIL
3" = 1'-0"



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

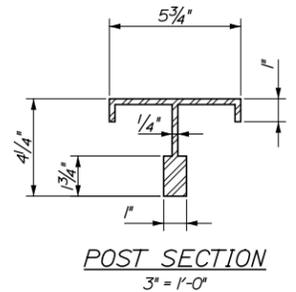


RAIL MEMBER
3" = 1'-0"

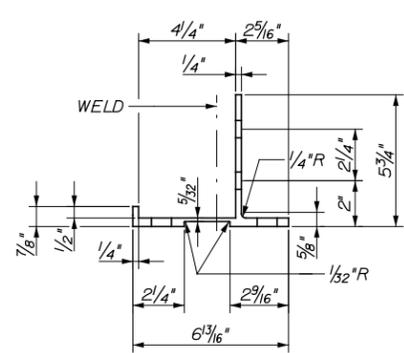


PREFORMED PAD 1/8" DIA. THICK AFTER COMPRESSION (TYP.) AT LEAST ONE PAD SHALL BE PLACED UNDER EACH POST

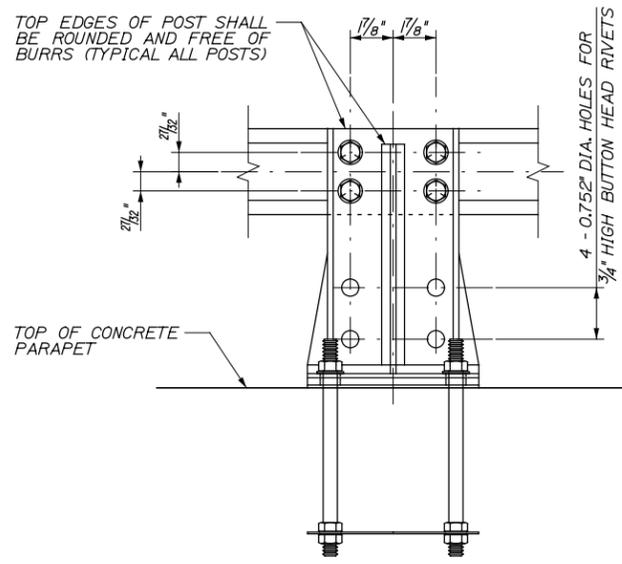
BRIDGE RAILING ASSEMBLY
3" = 1'-0"



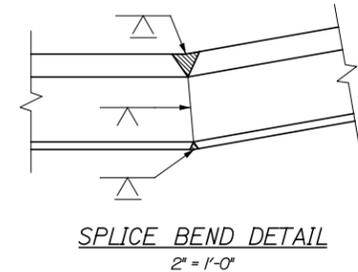
POST SECTION
3" = 1'-0"



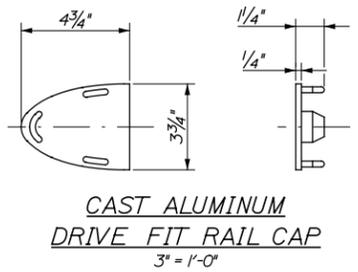
POST BASE SECTION
3" = 1'-0"



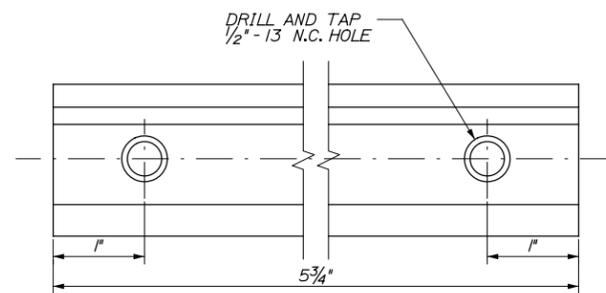
OUTSIDE ELEVATION OF POST
3" = 1'-0"



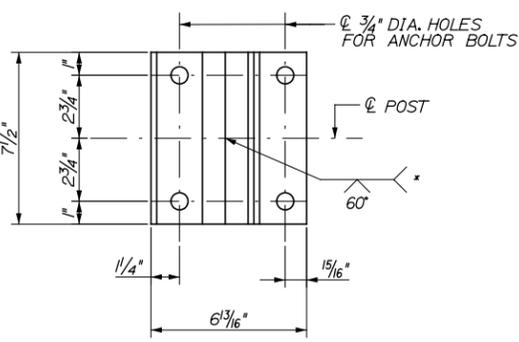
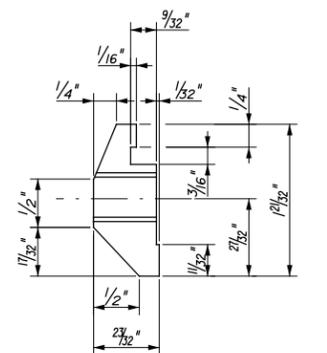
SPLICE BEND DETAIL
2" = 1'-0"



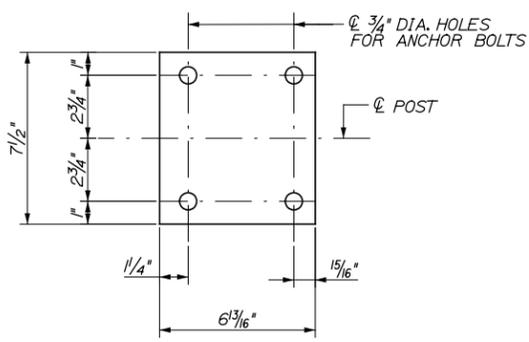
CAST ALUMINUM DRIVE FIT RAIL CAP
3" = 1'-0"



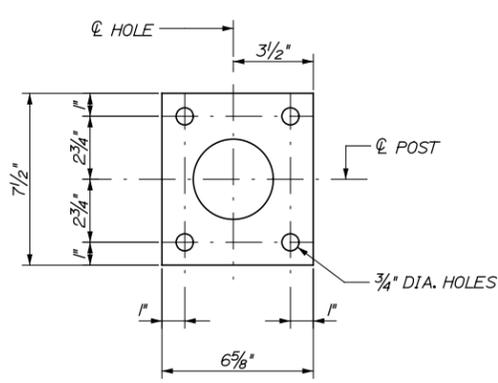
CLAMP BAR DETAILS
FULL SIZE



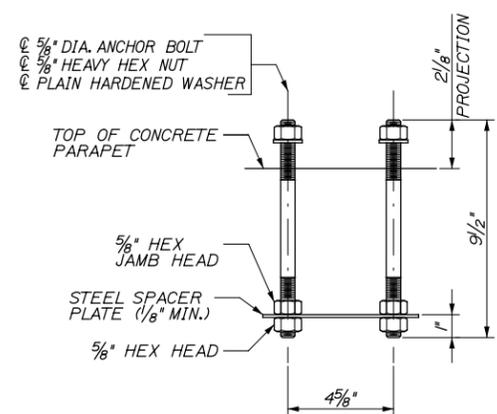
POST BASE (BOTTOM VIEW)
3" = 1'-0"



PREFORMED PAD
3" = 1'-0"

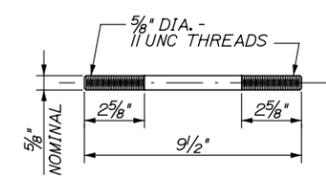


STEEL SPACER PLATE (FOR ANCHORAGE)
3" = 1'-0"



RAIL POST ANCHORAGE (ASSEMBLY)
3" = 1'-0"

NOTE:
* ONE PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM ONE PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE.



ANCHOR BOLT
3" = 1'-0"

NOTE:
IF CUT THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.

NOTE:
FOUR (4) BOLT, NUT AND WASHER SETS ARE REQUIRED PER ASSEMBLY, ALL HARDWARE SHALL BE GALVANIZED.

Scale: AS NOTED			
No.	Revision	By	Date

Designed by: TYLIN INTERNATIONAL			
CONSULTANT PROJECT MANAGER: Chris Taylor			
	By	Date	
	SBK	06/2014	
	By	Date	
	CPT	06/2014	
	By	Date	
	BGC	06/2014	

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THE GOLD STAR MEMORIAL HIGHWAY

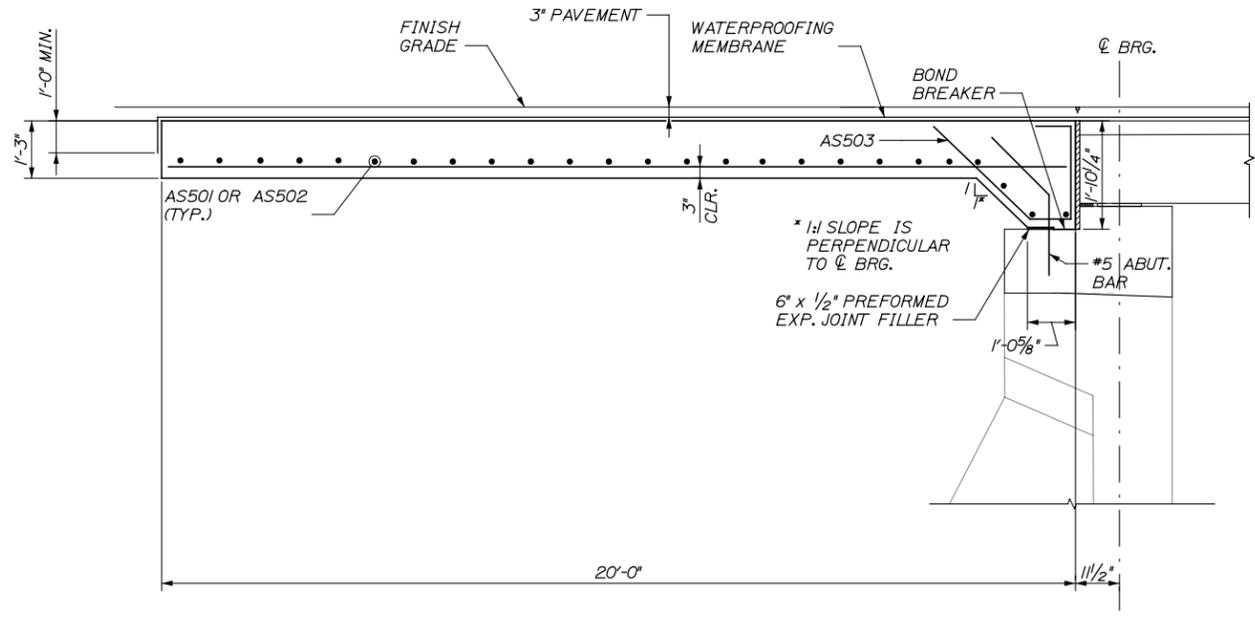
MTA PROJECT MANAGER: RALPH NORWOOD

BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES

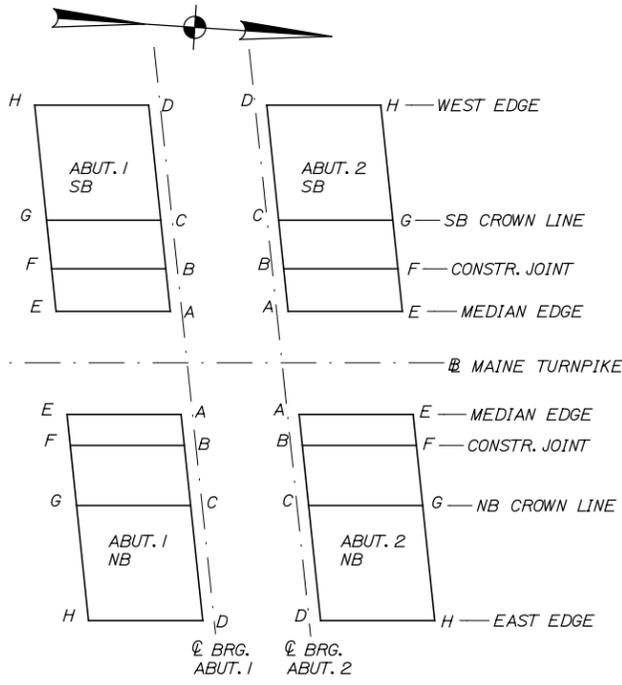
BRIDGE RAILING DETAILS II
BRIDGE 31

SHEET NUMBER: S31-22
CONTRACT: 2014.13
76 OF 86

Date: 6/19/2014

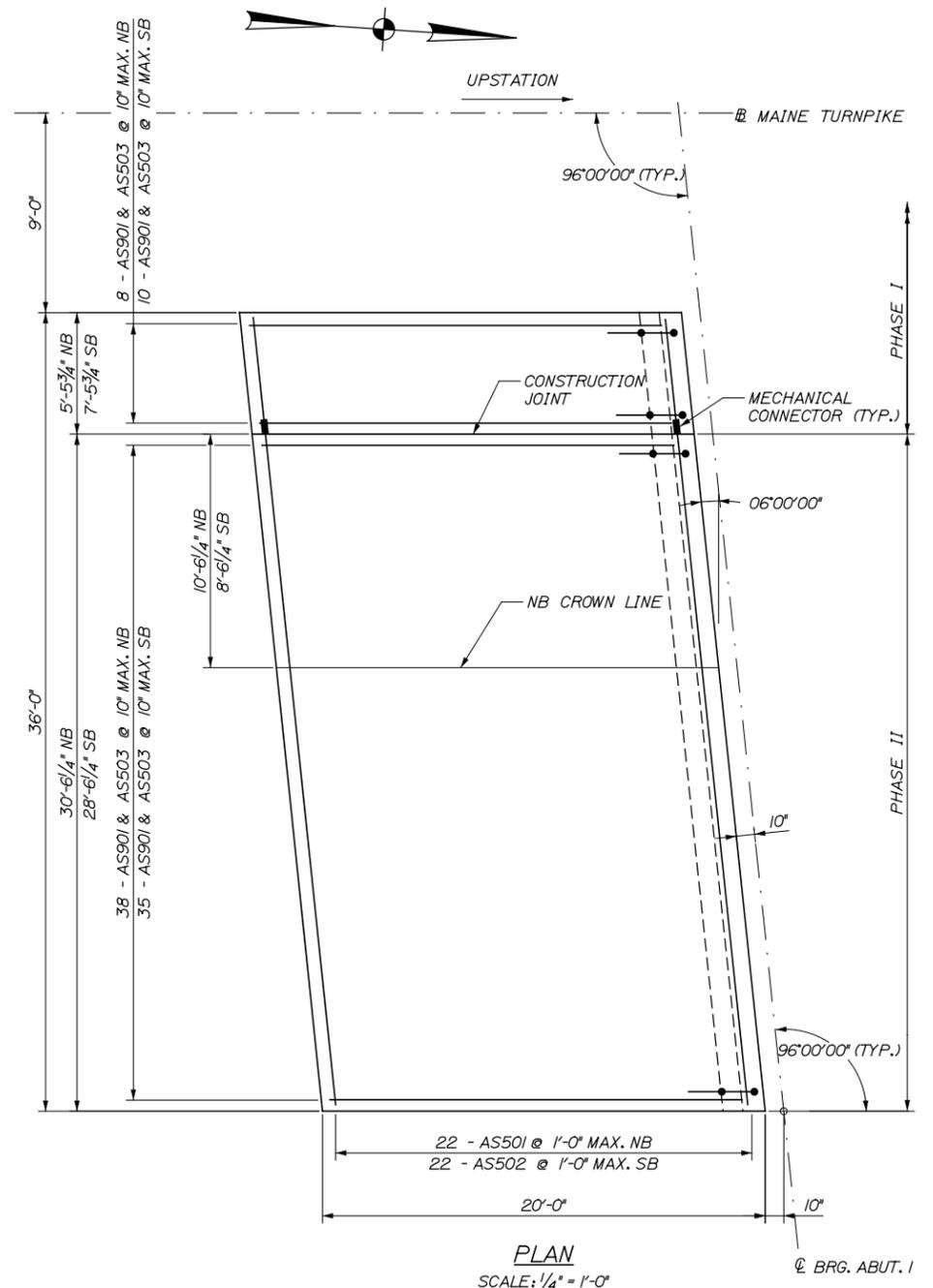


SECTION PARALLEL TO B
SCALE: 1/2" = 1'-0"



TOP OF APPROACH SLAB ELEVATION LOCATION PLAN
SCALE: N.T.S.

TOP OF APPROACH SLAB ELEVATIONS (FT)								
APPROACH SLAB	A	B	C	D	E	F	G	H
ABUT. 1, SB	94.24	94.42	94.58	94.18	94.22	94.39	94.56	94.16
ABUT. 1, NB	94.24	94.35	94.57	94.17	94.21	94.34	94.55	94.16
ABUT. 2, SB	94.35	94.52	94.68	94.28	94.35	94.52	94.69	94.29
ABUT. 2, NB	94.34	94.45	94.67	94.27	94.34	94.48	94.69	94.29



PLAN
SCALE: 1/4" = 1'-0"
(ABUTMENT NO. 1, NB SIDE SHOWN. OTHER CORNERS SIMILAR.)

Filename: ...MSTA\077_App_Slab_B31.dgn

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	SBK	06/2014	Checked	CPT	06/2014
Drawn	TJP	06/2014	In Charge of	CPT	06/2014

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**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES**

**APPROACH SLABS
BRIDGE 31**

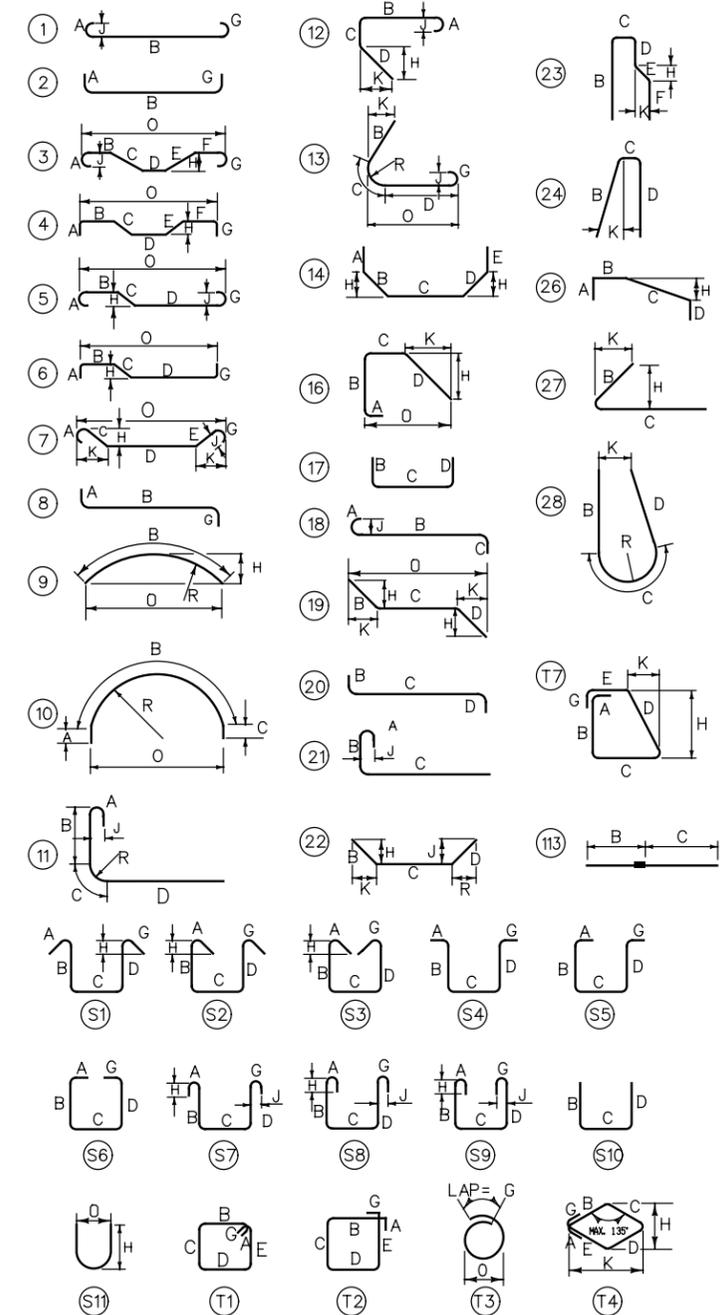
SHEET NUMBER: S31-23
77 OF 86

CONTRACT: 2014.13

Date: 6/19/2014

Filename: ... \078_Reinf_Schedule_B31.dgn

STANDARD BAR BEND TYPES



REINFORCEMENT GENERAL NOTES

1. ALL DIMENSIONS ARE OUT-TO-OUT OF BAR.
2. BENDING DETAILS AND HOOKS SHALL CONFORM TO THE RECOMMENDATIONS OF THE CURRENT REVISION OF ACI STANDARD 315 AND ACI STANDARD 318.
4. THE FIRST DIGIT FOLLOWING THE LETTER(S) OF THE MARK INDICATES THE SIZE OF THE BAR.
5. ALL REINFORCEMENT SHALL BE EPOXY COATED, EXCEPT FOR BARS ENTIRELY IN THE APPROACH SLAB. APPROACH SLAB REINFORCEMENT SHALL BE BLACK STEEL.

PARAPETS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
S501	5	12	12'-5"	STR												BARRIER LONGITUDINAL ENDS - SHORT FACE
S502	5	12	12'-6"	STR												BARRIER LONGITUDINAL ENDS - LONG FACE
S503	5	12	7'-8"	STR												BARRIER LONGITUDINAL IN PANELS
S504	5	8	33'-4"	STR												BARRIER LONGITUDINAL BELOW TOP CURB
S601	6	70	4'-9 3/4"	24		1'-6"	0'-6 3/4"	2'-9"						0'-1 3/4"		BARRIER STIRRUP
ABUTMENTS & WINGWALLS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
A501	5	202	4'-5"	17		1'-6"	1'-5"	1'-6"								BRIDGE SEAT STIRRUP
A502	5	188	4'-2"	17		1'-0"	3'-2"	0'-0"								APPROACH SLAB SEAT STIRRUP
A503	5	204	2'-0"	STR												ABUTMENT SEAT DOWELS (DRILL & GROUT)
A504	5	12	16'-2"	STR												BRIDGE & APPROACH SLAB SEAT HORIZONTAL
A505	5	8	33'-0"	STR												BRIDGE SEAT HORIZONTAL
A506	5	4	30'-4"	STR												APPROACH SLAB SEAT HORIZONTAL
A507	5	8	31'-10"	STR												BRIDGE SEAT HORIZONTAL
A508	5	4	28'-4"	STR												APPROACH SLAB SEAT HORIZONTAL
A509	5	3	4'-11"	STR												BRIDGE SEAT HORIZONTAL
A510	5	1	5'-9"	STR												BRIDGE SEAT HORIZONTAL
A511	5	2	5'-7"	STR												APPROACH SLAB SEAT HORIZONTAL
A512	5	3	7'-0"	STR												BRIDGE SEAT HORIZONTAL
A513	5	1	8'-1"	STR												BRIDGE SEAT HORIZONTAL
A514	5	2	8'-3"	STR												APPROACH SLAB SEAT HORIZONTAL
A515	5	3	7'-2"	STR												BRIDGE SEAT HORIZONTAL
A516	5	1	8'-0"	STR												BRIDGE SEAT HORIZONTAL
A517	5	2	7'-10"	STR												APPROACH SLAB SEAT HORIZONTAL
A518	5	3	4'-9"	STR												BRIDGE SEAT HORIZONTAL
A519	5	1	5'-11"	STR												BRIDGE SEAT HORIZONTAL
A520	5	2	6'-1"	STR												APPROACH SLAB SEAT HORIZONTAL
A521	5	12	4'-8"	S10		2'-0"	0'-8"	2'-0"								APPROACH SLAB SEAT EXP. JT.
A522	5	100	3'-4"	16	0'-0"	0'-0"	1'-8"	1'-8"				1'-2"	1'-2"	2'-10"		APPROACH SLAB DOWELS
A528	5	16	3'-2"	2	0'-10"	1'-6"					0'-10"					END OF WINGWALLS
A529	5	28	3'-4"	2	0'-10"	1'-8"					0'-10"					TOP OF WINGWALLS
A531	5	8	3'-2"	STR												WINGWALL VERTICAL
A538	5	36	4'-3"	STR												WINGWALL VERTICAL
A539	5	8	3'-6"	STR												WINGWALL VERTICAL
A540	5	8	3'-10"	STR												WINGWALL VERTICAL
A548	5	12	3'-0"	T7	0'-0"	0'-0"	0'-10"	1'-4"	0'-10"		0'-0"	1'-4"	0'-1 1/2"			SEAT END BAR
A549	5	24	5'-3"	T7	0'-0"	0'-0"	1'-10"	1'-7"	1'-10"		0'-0"	1'-7"	0'-2"			WINGWALL END BAR
A550	5	32	3'-7"	STR												WINGALL HORIZONTAL
A551	5	8	2'-7"	STR												WINGALL TOP HORIZONTAL
A552	5	8	3'-10"	24		2'-3"	1'-7"	0'-0"						2'-0"		WINGALL TOP BAR
A601	6	16	8'-4"	17		3'-7"	1'-2"	3'-7"								VERTICAL DOWELS INTO ENDPOST
A602	6	16	3'-2"	STR												HORIZONTAL DOWELS INTO ENDPOST
A603	6	48	3'-8"	STR												DOWELS INTO EXISTING (DRILL & GROUT)
ENDPOSTS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
EP501	5	100	4'-6"	STR												HORIZONTAL BASE
EP504	5	8	3'-2"	STR												HORIZONTAL AT TAPER
EP506	5	4	3'-8"	24		2'-8"	1'-0"	0'-0"						2'-6"		TOP HORIZONTAL ROADSIDE
EP507	5	4	4'-8"	24		2'-8"	2'-0"	0'-0"						2'-6"		TOP HORIZONTAL OUTSIDE
EP508	5	24	5'-6 3/4"	S10		2'-6"	0'-6 3/4"	2'-6"								TOP VERTICAL U-BAR
EP509	5	8	5'-6 3/4"	23		2'-6"	0'-6 3/4"	0'-10"	1'-8"	0'-0"		1'-8"	0'-1 1/2"			TOP VERTICAL
EP510	5	8	2'-8 3/4"	23		0'-0"	0'-6 3/4"	0'-6"	1'-8"	0'-0"		1'-8"	0'-1"			TOP VERTICAL ROADSIDE
EP511	5	8	2'-6"	STR												TOP VERTICAL OUTSIDE
EP601	6	80	5'-7"	S10		0'-8"	4'-11"	0'-0"								BOTTOM VERTICAL
EP602	6	40	4'-4"	S10		1'-2"	2'-0"	1'-2"								BOTTOM STIRRUP
APPROACH SLABS																
MARK	SIZE	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	K	O	R	REMARKS
AS501	5	44	35'-10"	113		5'-4"	30'-6"									NB APPROACH SLAB TRANSVERSE BARS
AS502	5	44	35'-10"	113		7'-4"	28'-6"									SB APPROACH SLAB TRANSVERSE BARS
AS503	5	182	5'-3"	16	0'-10"	1'-6"	0'-10"	2'-1"				1'-6"	1'-6"			APPROACH SLAB END STIRRUP
AS901	9	182	19'-8"	STR												APPROACH SLAB LONGITUDINAL BAR

Scale:			
NOT TO SCALE			
No.	Revision	By	Date

Designed by:					
TYLIN INTERNATIONAL					
CONSULTANT PROJECT MANAGER: Chris Taylor					
	By	Date		By	Date
Designed	TJP	06/2014	Checked	CPT	06/2014
Drawn	PJB	06/2014	In Charge of	CPT	06/2014

T.Y. Lin International
 12 Northbrook Drive
 Building A, Suite One
 Falmouth, Maine 04105
 TEL: (207) 781-4721
 FAX: (207) 781-4753



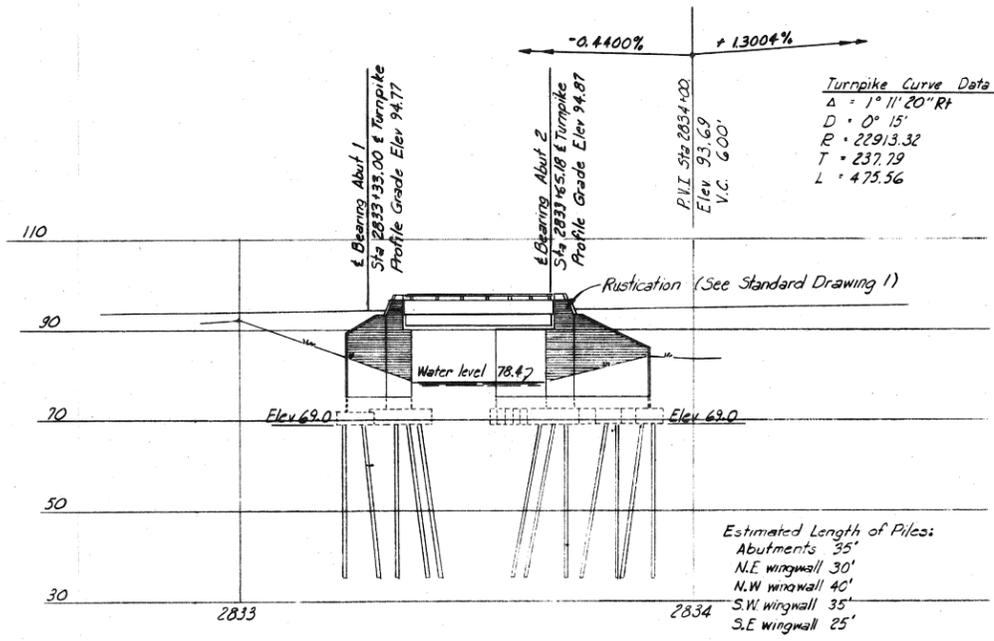
**THE GOLD STAR
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: RALPH NORWOOD

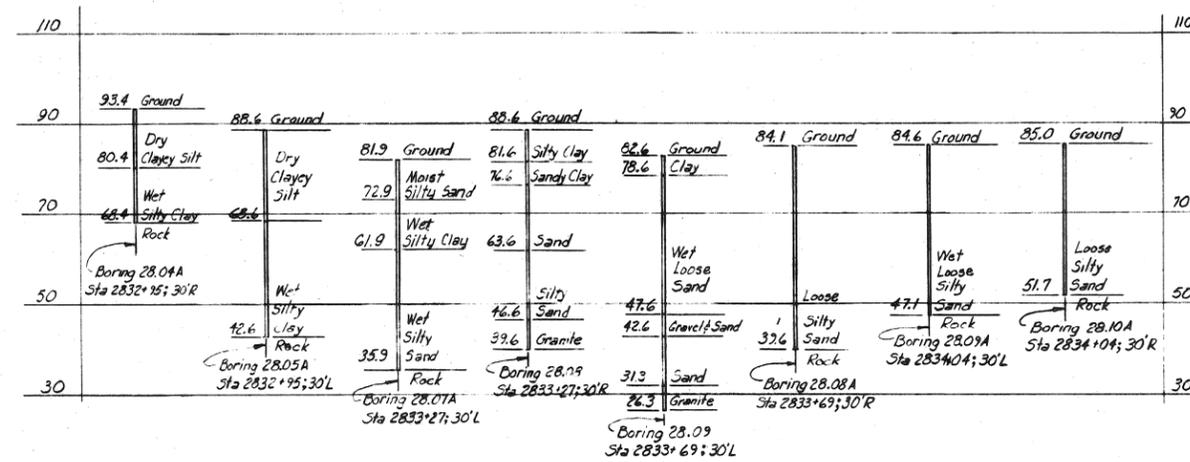
**BRIDGE REHABILITATION
PISCATAQUA RIVER BRIDGES
REINFORCEMENT SCHEDULE
BRIDGE 31**

SHEET NUMBER: S31-24
78 OF 86

CONTRACT: 2014.13



ELEVATION



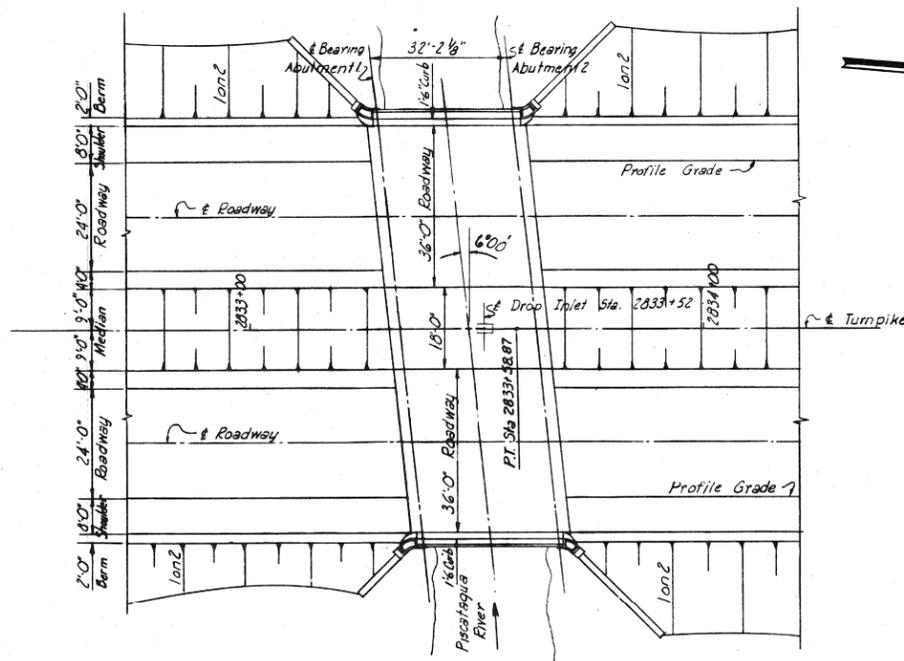
BORINGS

GENERAL NOTE

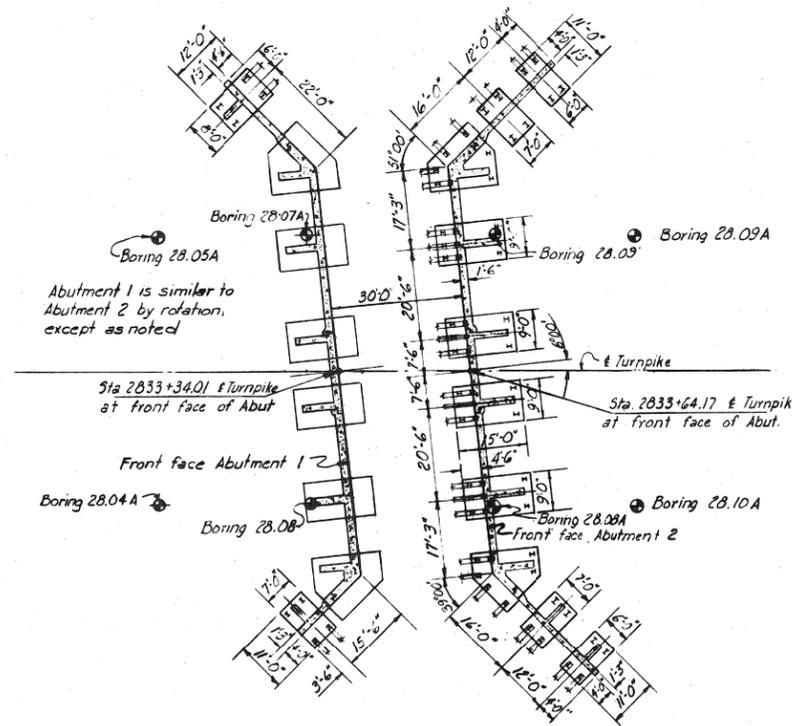
Design Specifications AA.S.H.O. (1953) with minor modifications
 Design Live Load: H 20 S 16
 Maximum Pile Load:
 Abutments 1 & 2 - 47.6 T/pile
 N.E. & N.W. Wingwalls - 42.6 T/pile
 S.E. Wingwall - 34.4 T/pile
 S.W. Wingwall - 48.8 T/pile

REFERENCES

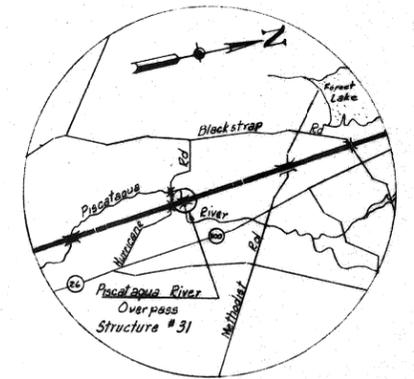
Dwg No.	Title	Superstructure			
		Substructure	Steel	Steel	Floor
S.D.1	Standard Abutment Details	✓			
S.D.4	Standard Pile Details	✓			
S.D.5	Standard Handrail, Bearing Device and Misc. Details	✓	✓	✓	✓
S.D.6	Standard Diaphragm Details		✓	✓	✓
S.D.19	Standard Bridge Floor and Median Cross Section and Floor Drain 2 - 36'-0" Roadways & 1-18'-0" Median	✓	✓	✓	✓



PLAN



FOOTING PLAN



VICINITY MAP
Scale: 1" = 1/2 Mile

DRAWING 31.01.06

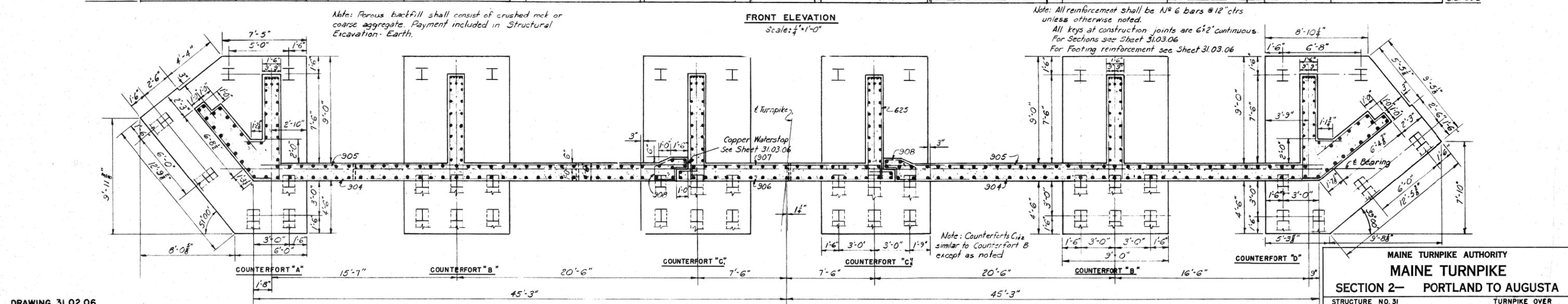
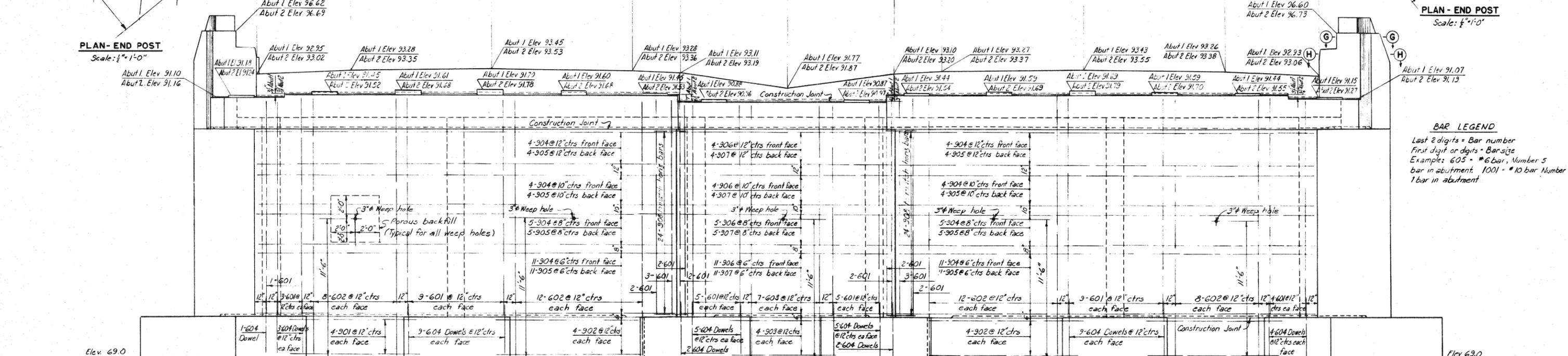
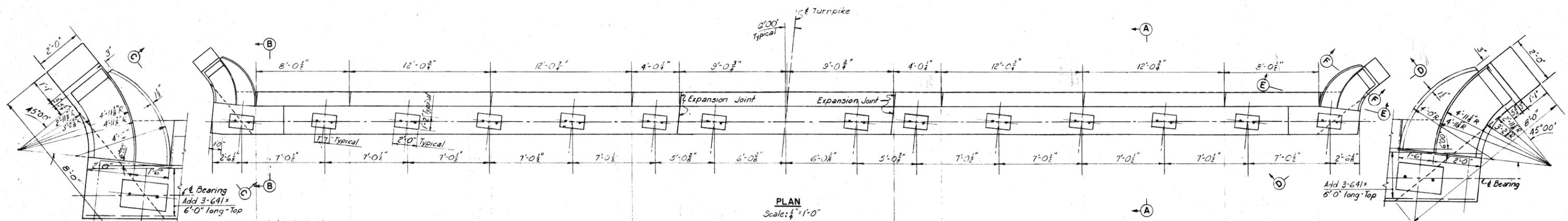
MADE	BY	DATE			
	B.K.	1-4-54			
TRACED					
CHECKED	R.F.S.	3-1-54	1	As-Built	NBH 1/19/56
IN CHARGE OF I.D.B.K.	No.	REVISION	BY	DATE	

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 SECTION 2- PORTLAND TO AUGUSTA

STRUCTURE NO. 31 TURNPIKE OVER RIVER
 STA. 2833 + 33
GENERAL PLAN AND ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS SCALE: 1" = 20'
 CONTRACT NO. _____ SHEET NO. 152 OF 382

NEW YORK KANSAS CITY



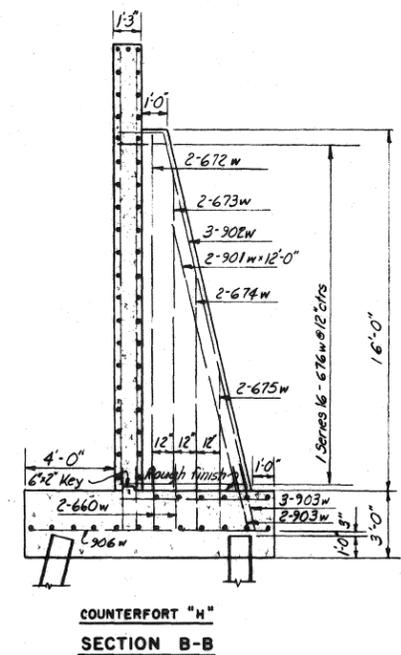
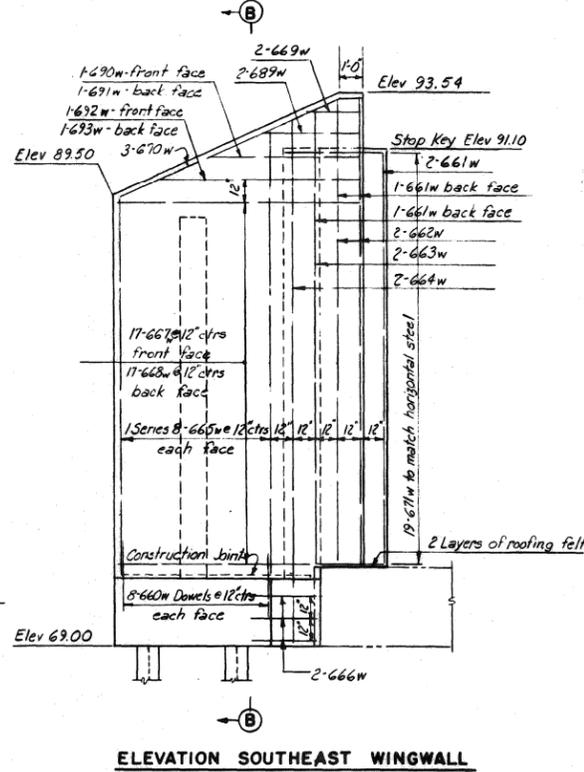
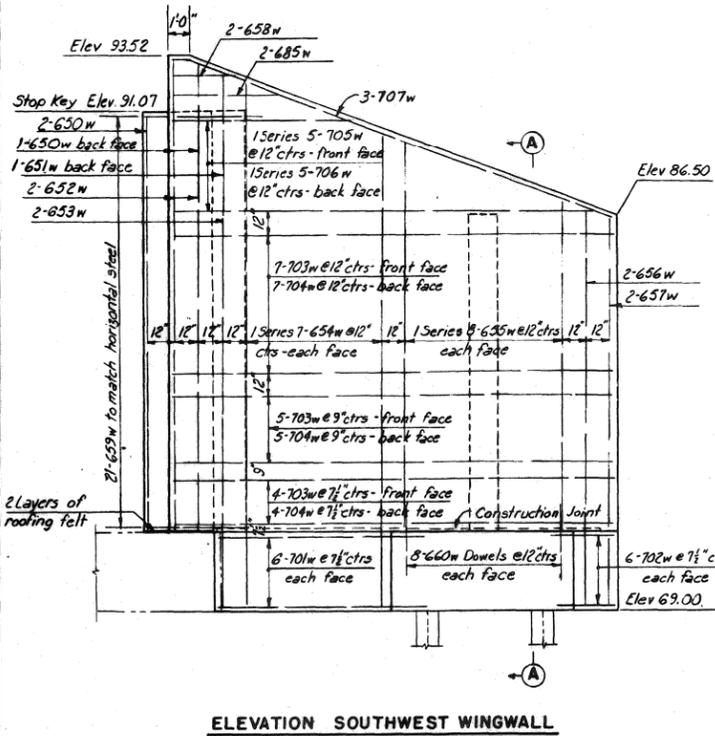
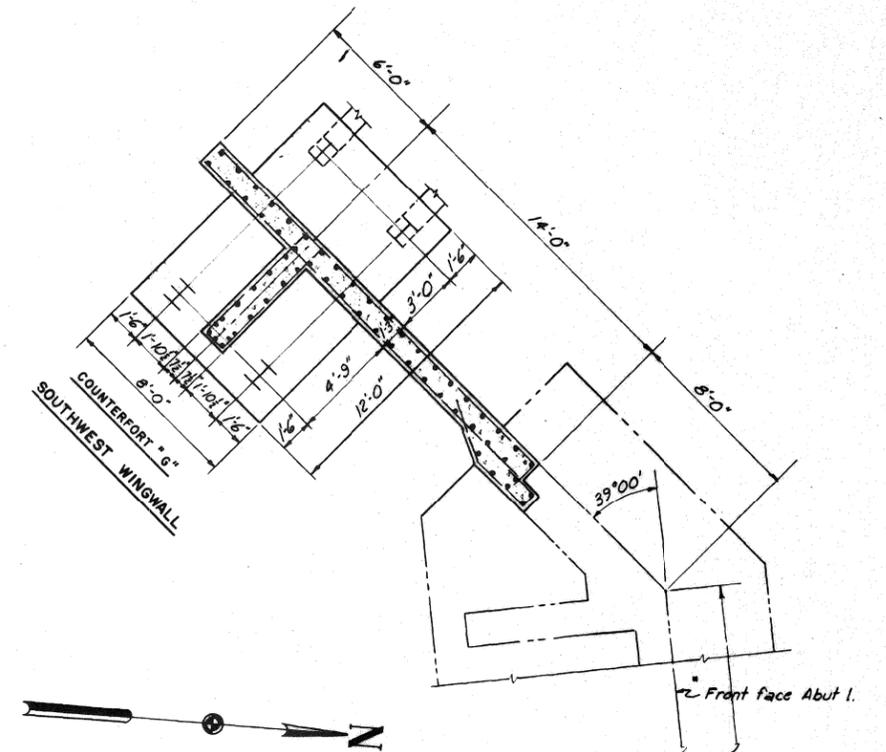
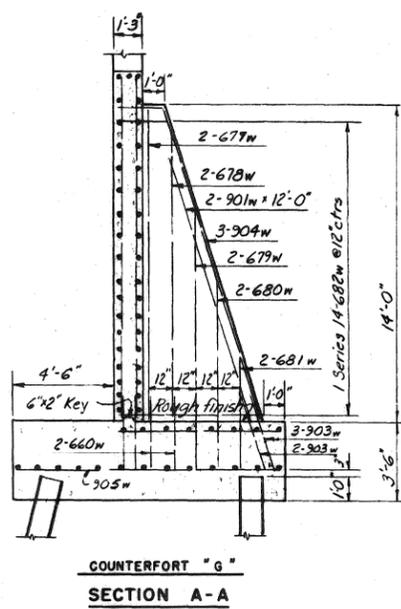
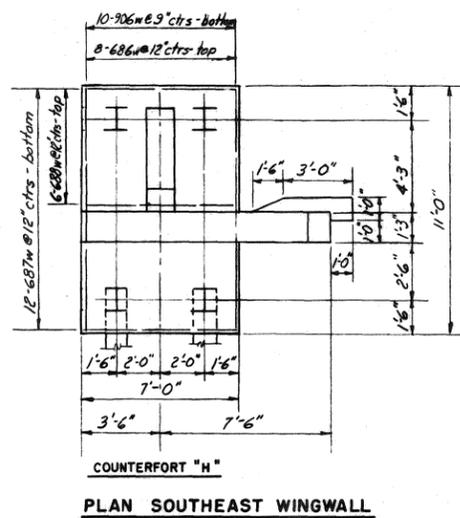
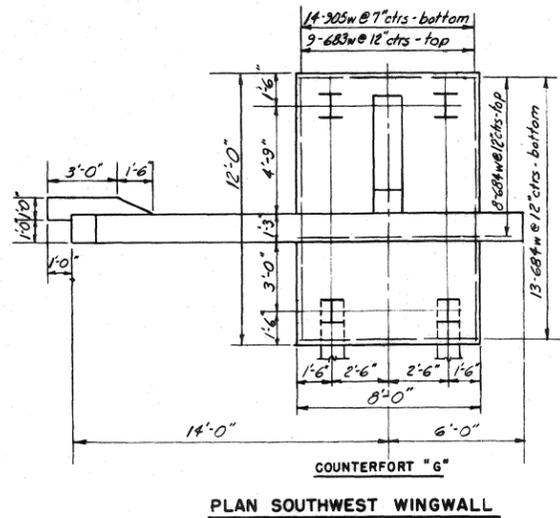
DRAWING 31.02.06

MADE	BY	DATE			
TRACED	WCM	1-13-54			
CHECKED	RFS	1-19-54	2	As-Built	HBH 1/19/56
IN CHARGE OF I.D.S.K.	No.	REVISION	BY	DATE	
		1. Weep holes	WCM	2-23-54	

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA
STRUCTURE NO. 31 TURNPIKE OVER
PISCATAQUA RIVER
STA 2833+33
ABUTMENTS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: As Noted
CONTRACT NO. _____
SHEET NO. 153 OF 382



Notes: All reinforcement shall be # 6 bars @ 12" ctrs unless otherwise noted.
 All piles shall be 12 BP 53. All piles shown battered shall be battered 3" per foot.

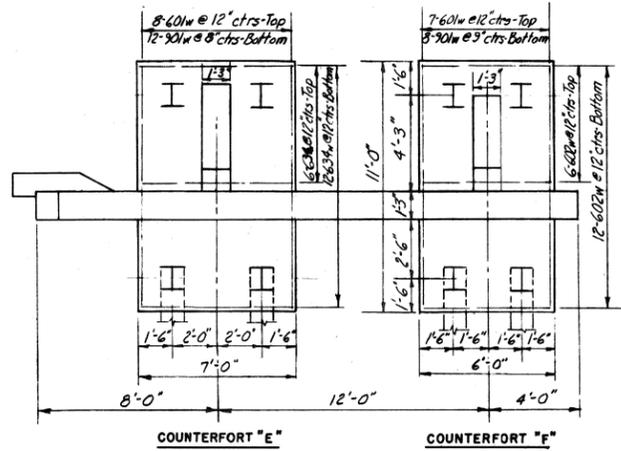
BAR LEGEND
 Last two digits - Bar number
 First digit - Bar size
 Letter W = Location - wingwalls
 Example: 667w - # 6 bar, number 67, wingwalls

DRAWING 31.04.06

BY	DATE			
MADE	WCM	1-21-54		
TRACED				
CHECKED	RFS	1-21-54	As-Built	HBM/RSB
IN CHARGE OF	L.D.S.K.	No.	REVISION	BY DATE

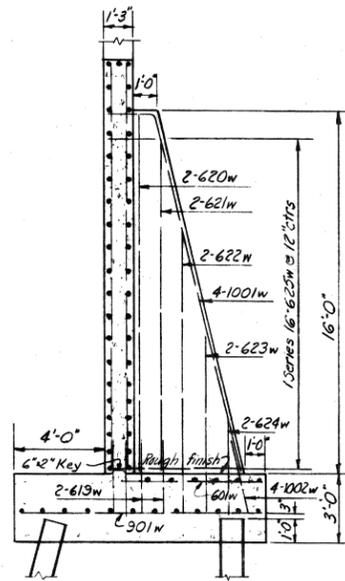
Front Face Abut. I.
 Turnpike
 For joint detail see Sheet 31.05.06

MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2- PORTLAND TO AUGUSTA
 STRUCTURE NO. 31 TURNPIKE OVER
 PISCATAQUA RIVER
 STA 2833 + 33
ABUTMENT I WINGWALLS
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF SCALE: 1/4" = 1'-0"
 CONSULTING ENGINEERS CONTRACT NO. _____
 NEW YORK KANSAS CITY SHEET NO. 155 OF 382



PLAN

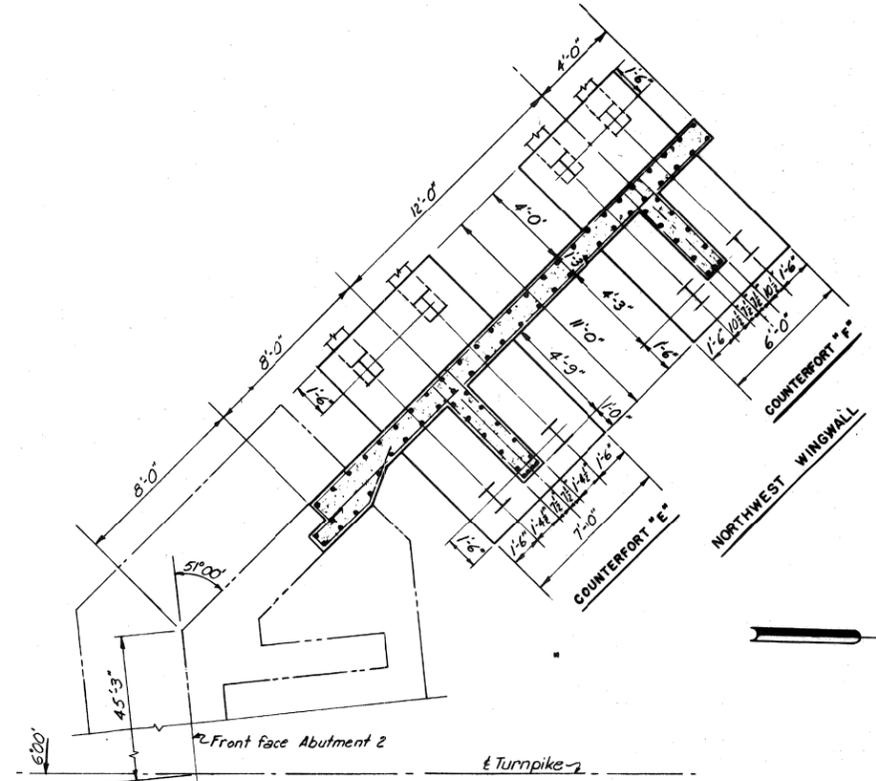
Scale: 1/4" = 1'-0"
 Northeast wingwall shown
 Northwest wingwall opposite hand



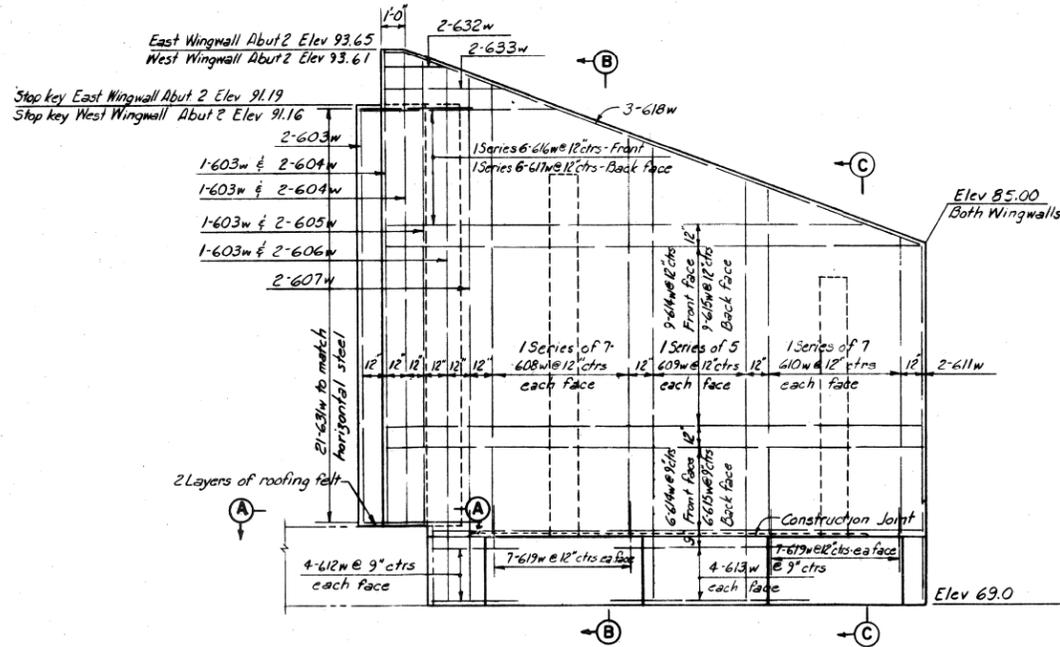
COUNTERFORT "E"

SECTION B-B

Scale: 1/4" = 1'-0"



FOOTING PLAN
 Scale: 1/4" = 1'-0"



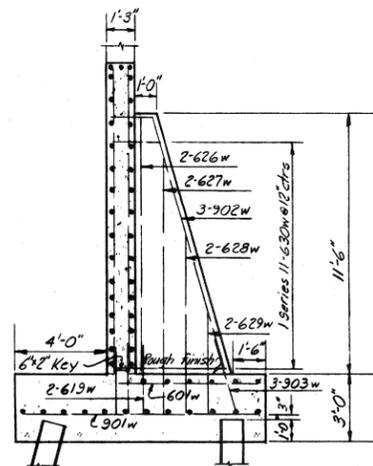
ELEVATION

Scale: 1/4" = 1'-0"

Notes: All reinforcement shall be #6 bars @ 12" ctrs unless otherwise noted.
 All piles shall be 12 BP53. All piles shown battered shall be battered 3" per foot.

BAR LEGEND

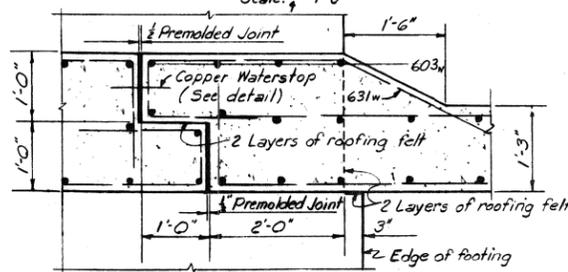
Last 2 digits = Bar number
 First digit or digits = Bar size
 Letter W = Location - wingwalls
 Example: 605W = #6 bar, number 5 in wingwall, 1003W = #10 bar, number 3 in wingwall.



COUNTERFORT "F"

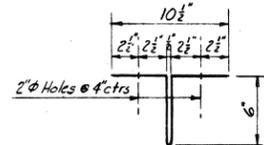
SECTION C-C

Scale: 1/4" = 1'-0"



SECTION A-A

Scale: 3/4" = 1'-0"



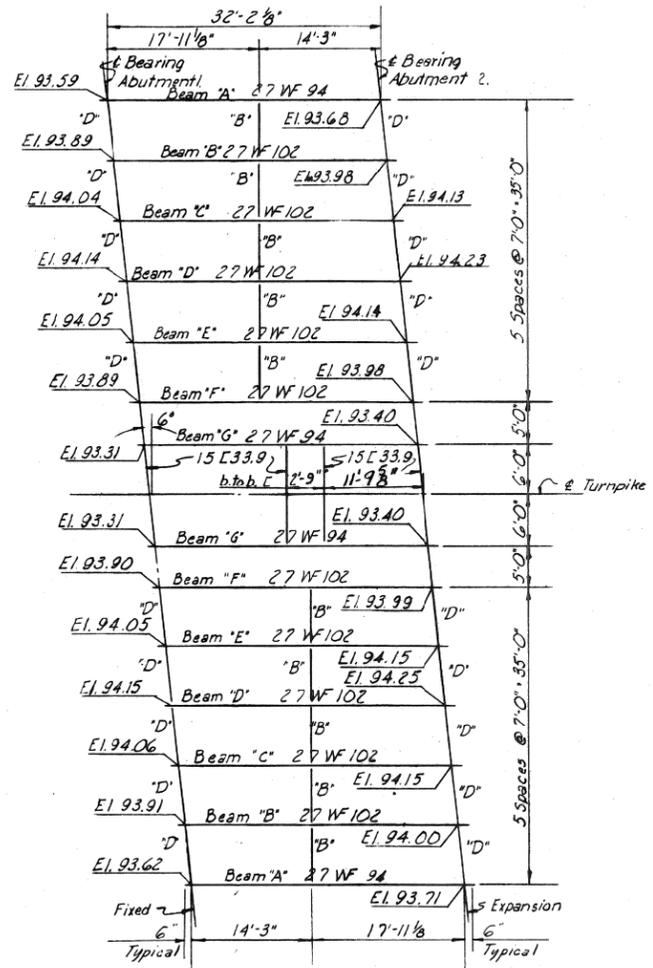
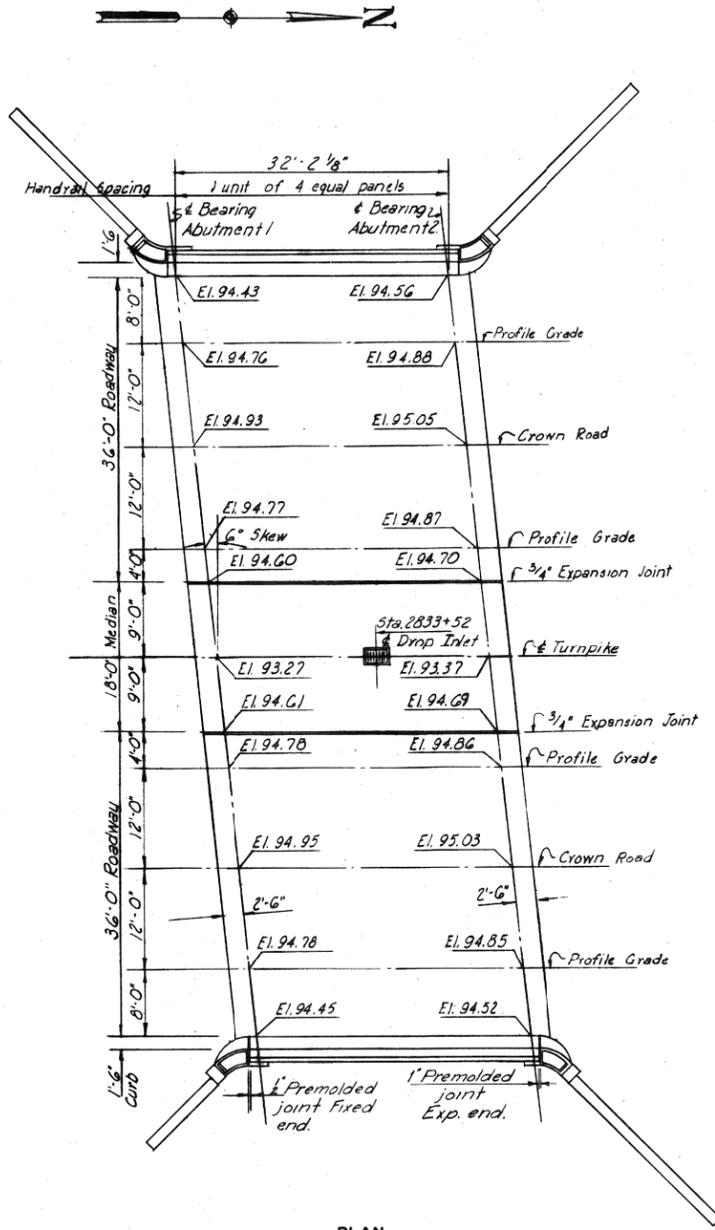
COPPER WATERSTOP

Scale: 1 1/2" = 1'-0"
 Material: 16 oz Copper

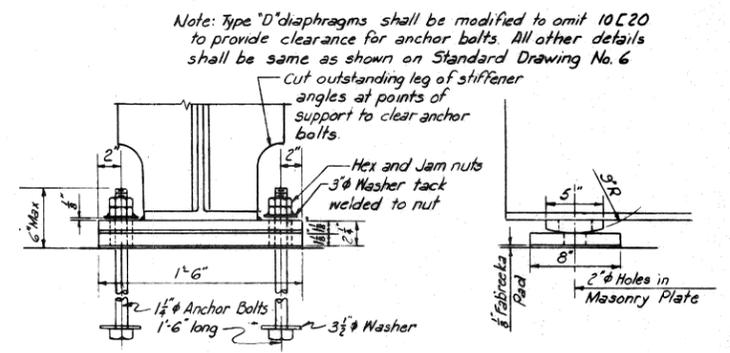
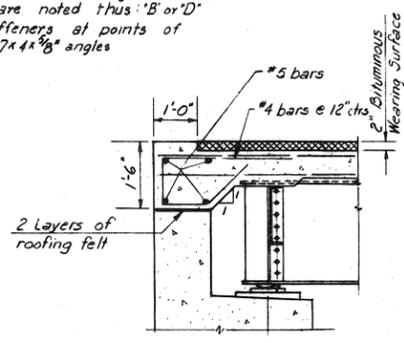
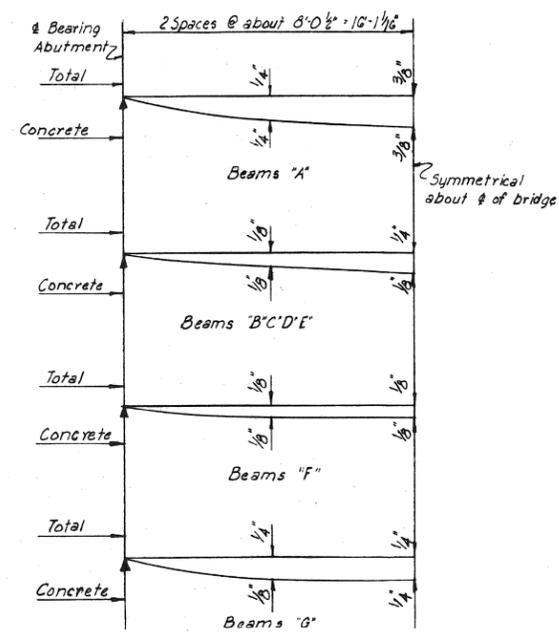
DRAWING 31.05.06

BY	DATE			
MADE	WCM	1-19-54		
TRACED				
CHECKED	RFS	1-21-54	As-Built	HBN VHS
IN CHARGE OF	I. D. S. K.	No.	REVISION	BY DATE

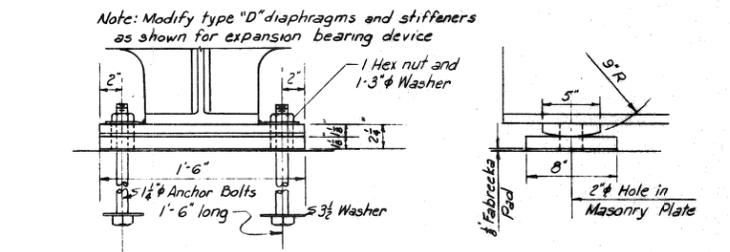
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
 SECTION 2- PORTLAND TO AUGUSTA
 STRUCTURE NO. 31 TURNPIKE OVER
 PISCATAQUA RIVER
 STA 2833 + 33
 ABUTMENT 2 WINGWALLS
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS SCALE: As Noted
 NEW YORK KANSAS CITY CONTRACT NO. SHEET NO. 156 OF 382



Note: Elevations shown on framing plan are to top of beam flanges. Diaphragms are noted thus 'B' or 'D'. All bearing stiffeners at points of support are 7x4 1/2" angles.



EXPANSION BEARING DEVICE
Scale 1/2" = 1'-0"



FIXED BEARING DEVICE
Scale 1/2" = 1'-0"

DRAWING 31.06.06

BY	DATE	4	Curb & Parapet joints	DHL 6-3-54
MADE	WCM	1-21-54	3 Drain Support E Spacing	C.G.P. 6-2-54
TRACED		2	2 Drain Support E Spacing	WCM 5-19-54
CHECKED	RFS	2-27-54	1 Type 'D' diaphragm	WCM 4-21-54

IN CHARGE OF I.D.S.K.	NO.	REVISION	BY	DATE	5	As-Built	NBH 1/19/56
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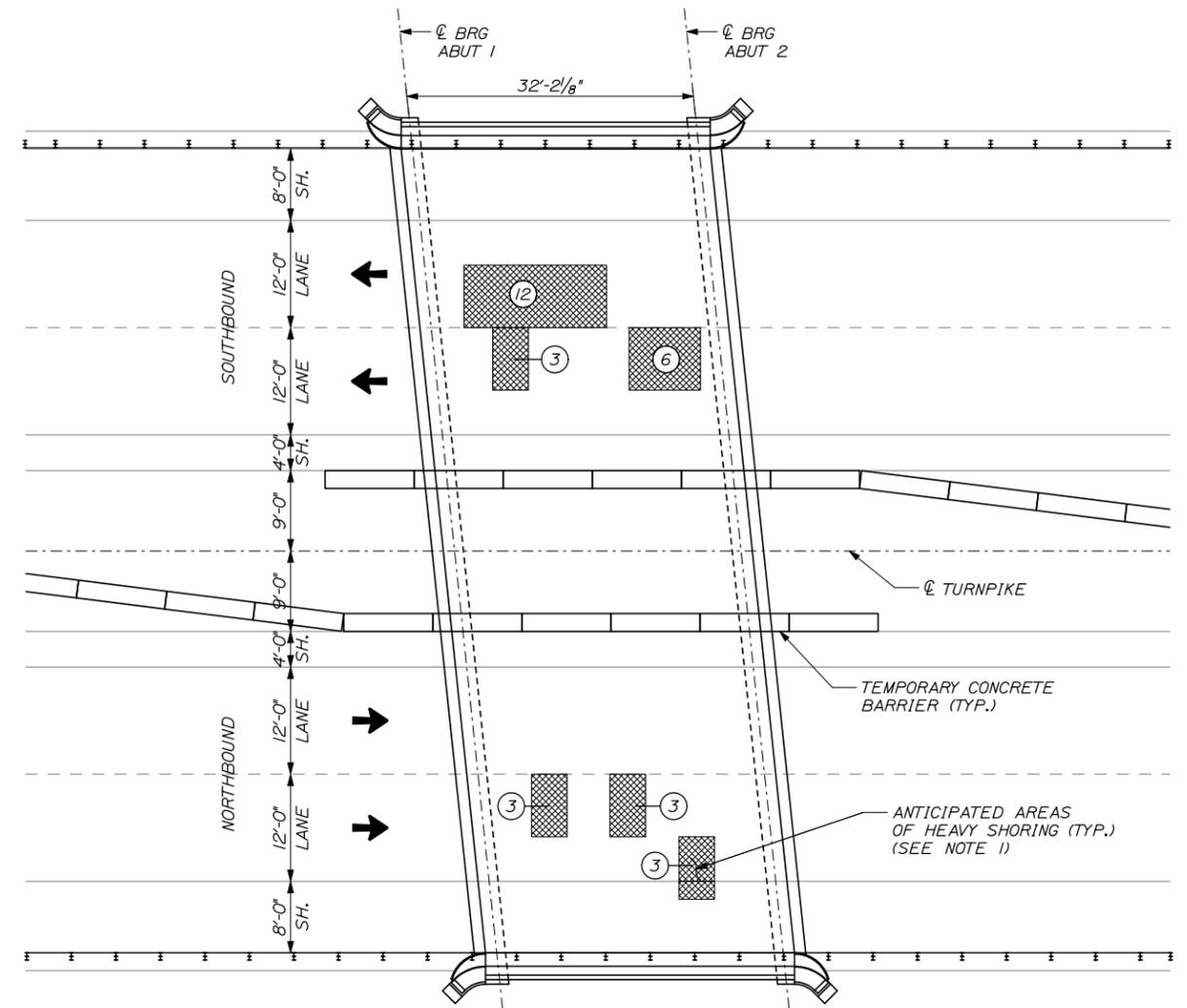
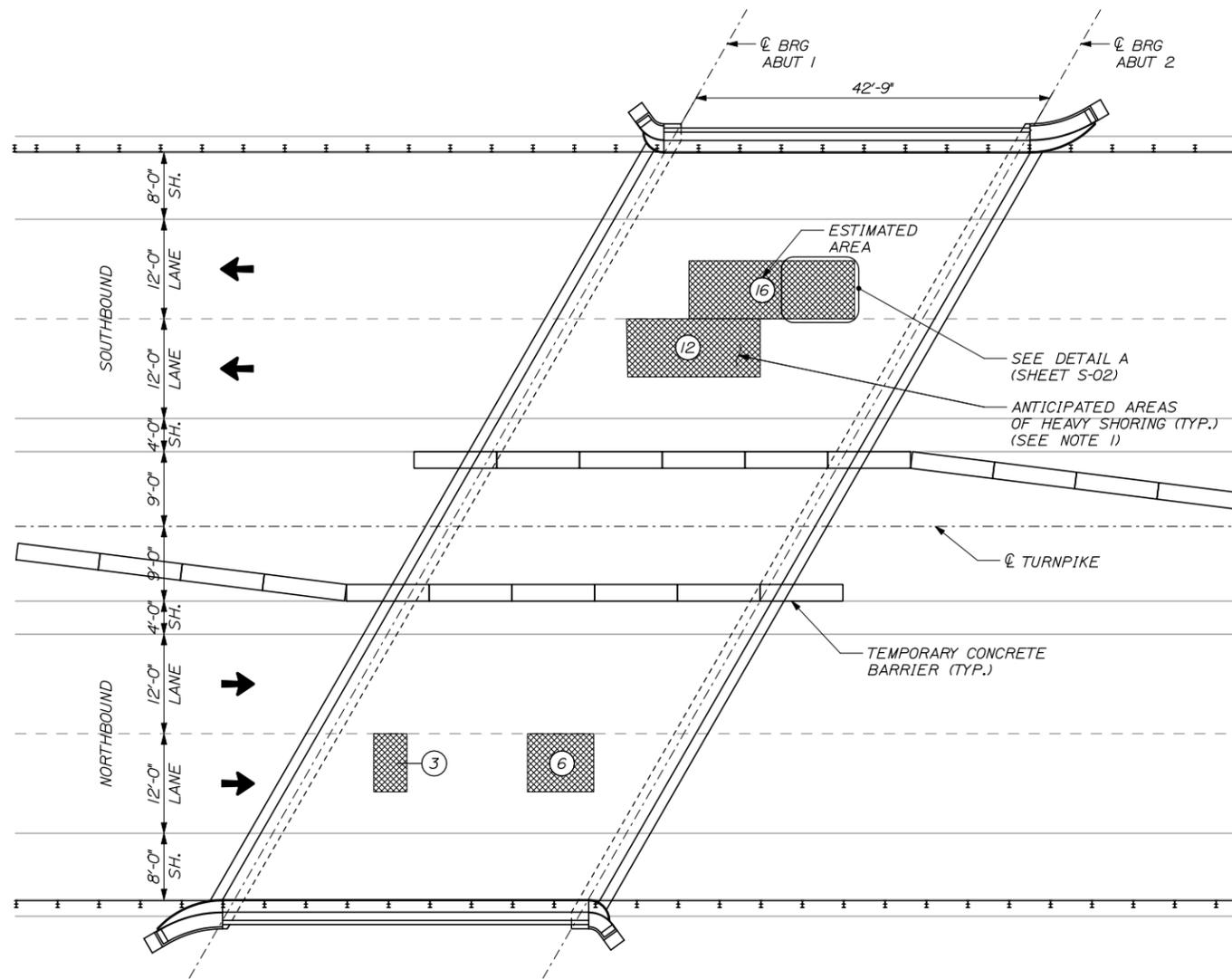
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE
SECTION 2— PORTLAND TO AUGUSTA

STRUCTURE NO. 31 TURNPIKE OVER
PISCATAQUA RIVER
STA. 2833 + 33
SUPERSTRUCTURE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

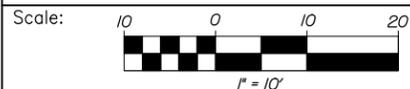
SCALE: As Shown
CONTRACT NO. _____
SHEET NO. 157 OF 382

Date: 10/12/2012



NOTES:

1. THE LOCATIONS AND QUANTITIES OF SHORING SHOWN ARE APPROXIMATE BASED ON A VISUAL INSPECTION. QUANTITIES AND LOCATIONS MAY VARY, ACTUAL SHORING AREAS WILL BE DETERMINED BY THE RESIDENT PRIOR TO SHORING INSTALLATION.
2. LOCATION AND EXTENT OF CONCRETE BARRIER AND GUARDRAIL SHOWN ARE APPROXIMATE.



Designed by:



HNTB CORPORATION
340 County Road, Suite 6-C
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410



THE GOLD STAR
MEMORIAL HIGHWAY

INSTALLATION OF BRIDGE DECK SHORING
PISCATAQUA RIVER BRIDGES, STR. 28 & 31
HEAVY SHORING LOCATIONS

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Tim Cote			
By	Date	By	Date
Designed	JDW 10/12	Checked	TRC 10/12
Drawn	JDW 10/12	In Charge of	RAL 10/12

MTA PROJECT MANAGER: Steve R. Tartre

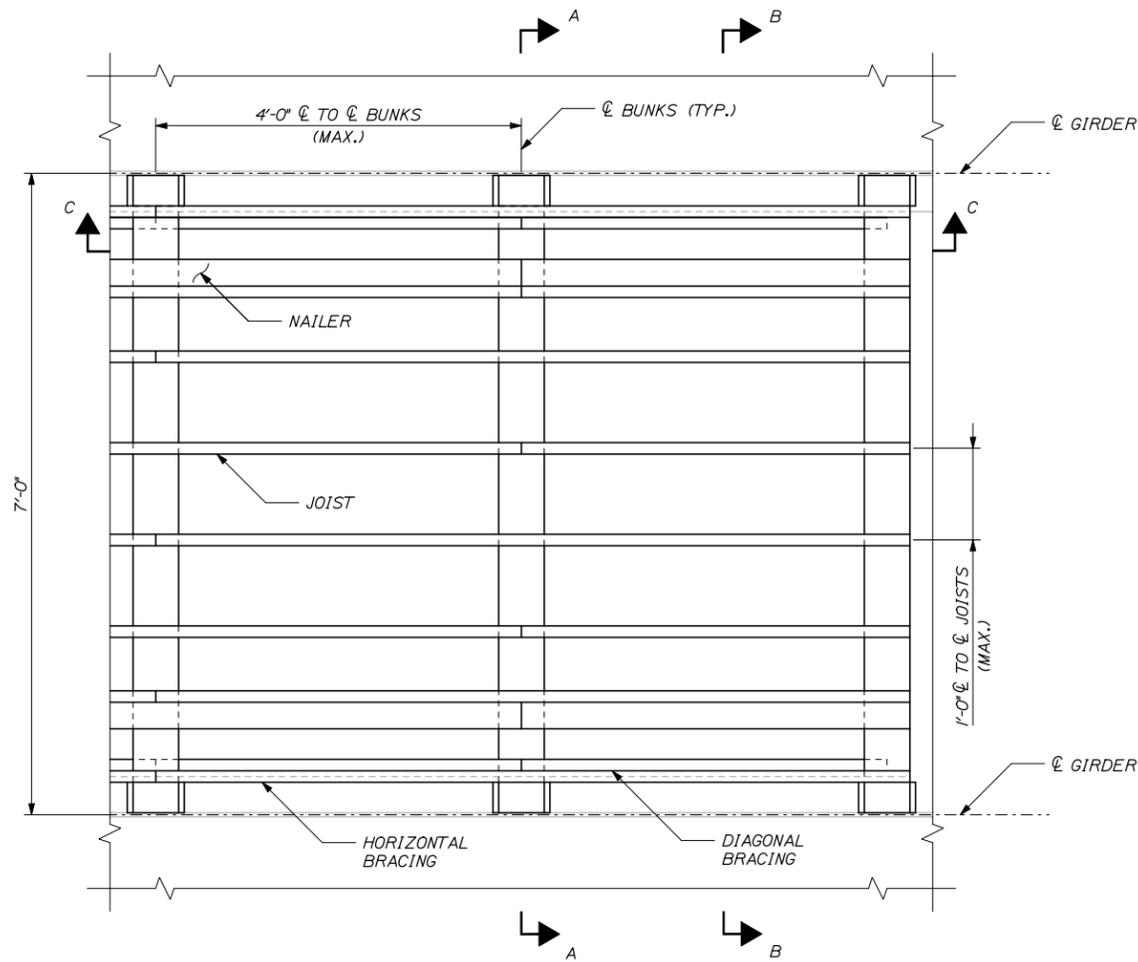
CONTRACT: S2012.55

SHEET NUMBER: S-01

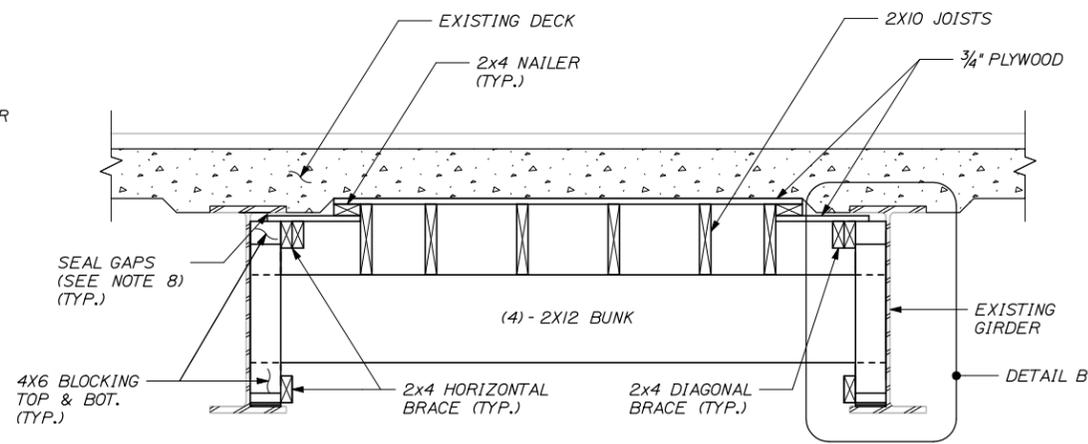
5 OF 11

Filename: 005_DeckPlan.DGN

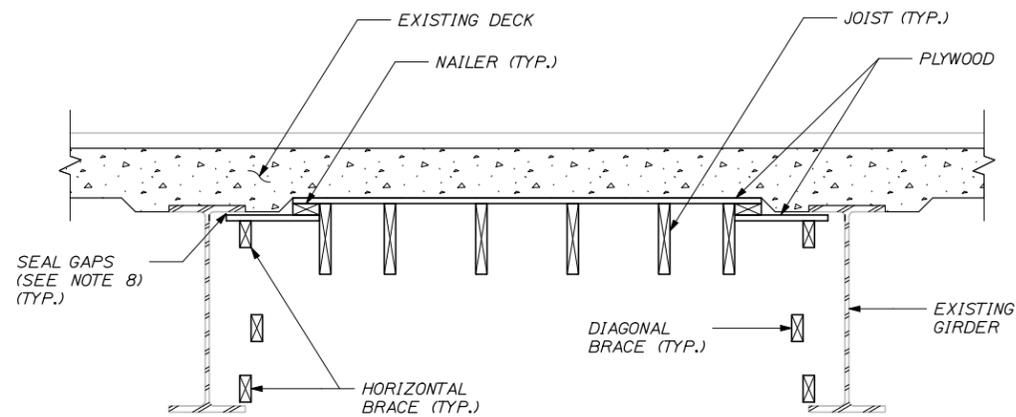
Date: 10/12/2012



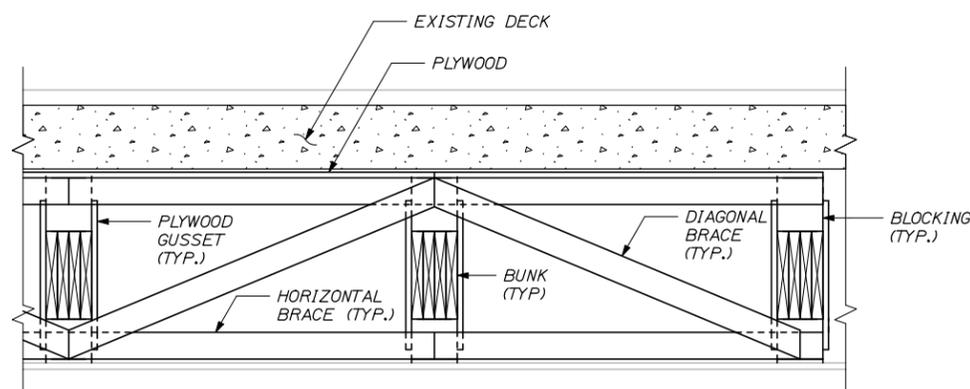
DETAIL A
(DECK, PLYWOOD, AND GIRDER FLANGES NOT SHOWN FOR CLAIRTY)
1" = 1'-0"



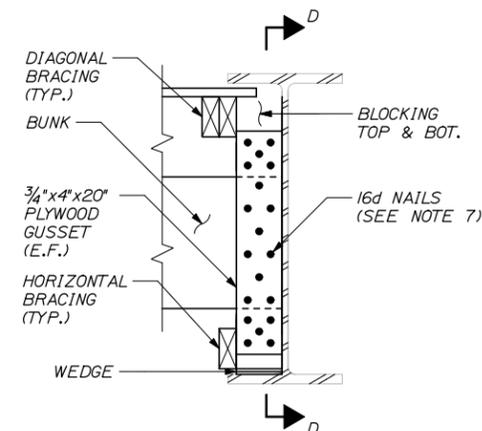
SECTION A-A
1" = 1'-0"



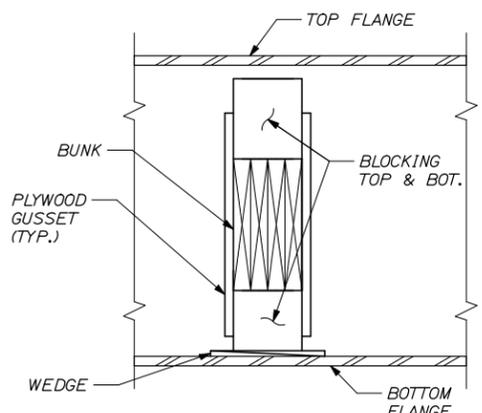
SECTION B-B
1" = 1'-0"



SECTION C-C
1" = 1'-0"



DETAIL B
1/2" = 1'



SECTION D-D
1/2" = 1'

NOTES:

1. ALL TIMBER DIMENSIONS ARE NOMINAL DIMENSIONS PRIOR TO SURFACING, UNLESS OTHERWISE NOTED.
2. ALL LUMBER SHALL BE SOUTHERN YELLOW PINE, NO. 2 OR BETTER, UNLESS OTHERWISE NOTED.
3. BLOCKING SHALL BE ROUGH SAWN 4"x6" HEMLOCK, NO. 2 OR BETTER.
4. 3/4" PLYWOOD SHALL BE "STRUCTURAL I RATED SHEATHING EXT". THE PLYWOOD SHALL BE PLACED WITH THE FACE GRAIN PERPENDICULAR TO THE JOISTS.
5. SHORING SHALL BE WEDGED TIGHT TO THE UNDERSIDE OF DECK USING HARDWOOD WEDGES. FULL CONTACT SHALL BE PROVIDED BETWEEN THE PLYWOOD AND THE CONCRETE DECK.
6. THE 4"x6" BLOCKING ABOVE BUNKS SHALL NOT BE INSTALLED PRIOR TO WEDGING THE SHORING TO THE DECK.
7. ALL MEMBERS SHALL BE FASTNED SECURELY TOGETHER WITH A MINIMUM OF 3-16d NAILS EXCEPT AS NOTED.

EACH PLYWOOD GUSSET SHALL BE SECURED TO THE BUNKS WITH A MINIMUM OF 9-16d NAILS AND TO THE TOP AND BOTTOM BLOCKING WITH 5-16d NAILS.

BUNK PLIES SHALL BE FASTENED TOGETHER WITH 3-8d NAILS AT 12" O.C.

PLYWOOD SHALL BE ATTACHED TO JOISTS WITH A MINIMUM OF 1-8d NAIL AT 12" O.C.

PLYWOOD SHALL BE ATTACHED TO NAILERS WITH A MINIMUM OF 1-6d NAIL AT 12" O.C.

8. GAPS BETWEEN THE PLYWOOD AND GIRDER TOP FLANGE SHALL BE SEALED AFTER SHORING INSTALLATION USING EXPANSIVE FOAM SEALANT.
9. THE CONTRACTOR SHALL TEMPORARILY BRACE THE BLOCKING AND BUNKS AS REQUIRED TO PREVENT LATERAL MOVEMENT DURING WEDGING.

Filename: 006_ShoringDtlis.DGN

Scale:				Designed by:					
AS NOTED									
No.	Revision	By	Date						
				CONSULTANT PROJECT MANAGER: Tim Cote					
				By	Date	By	Date		
				Designed	AET	10/12	Checked	TRC	10/12
				Drawn	JDW	10/12	In Charge of	RAL	10/12

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FAX (207) 772-7410			

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Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Steve R. Tartre

INSTALLATION OF BRIDGE DECK SHORING
PISCATAQUA RIVER BRIDGES, STR. 28 & 31

HEAVY SHORING DETAILS

SHEET NUMBER: S-02

CONTRACT: S2012.55

6 OF 11