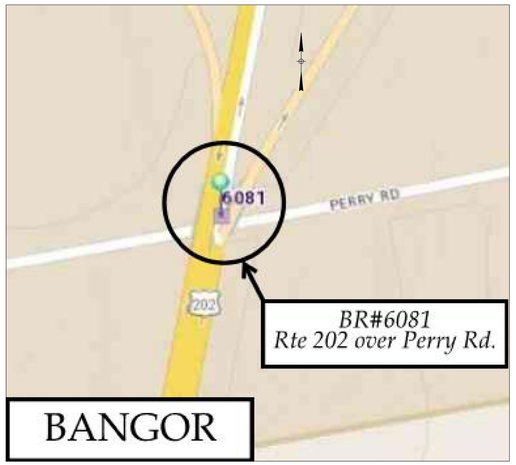
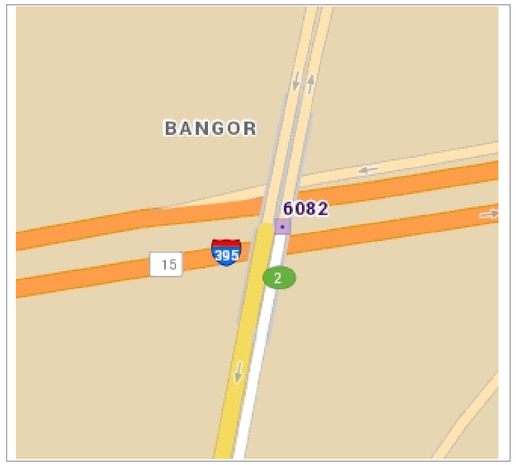
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BANGOR
PENOBSCOT COUNTY

US ROUTE 202 OVER THE PERRY ROAD
BRIDGE NO. 6081

US ROUTE 202 OVER I-395
BRIDGE NO. 6082





INDEX OF BRIDGE DRAWINGS

MATERIALS

Structural Steel: All Material ..... ASTM A500, Grade B
Anchor Bolts ..... F1554, GR 105

BASIC DESIGN STRESSES

Concrete ..... f'c = 4,000 psi
Reinforcing Steel ..... fy = 60,000 psi
Structural Steel ..... Fy = 36,000 psi
Galvinized Steel Threaded Studs ..... Fy = 105,000 psi

MAINTENANCE OF TRAFFIC

The maintenance of traffic shall be coordinated with the Region Traffic Engineer.

GENERAL CONSTRUCTION NOTES

1. Existing bridge plans may be obtained from the Maine DOT website. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

2. All dimensions based on or relating to the existing bridges shall be verified in the field, i.e., existing joint opening, joint location and existing post locations.

PROJECT LOCATION	US Route 202 in Bangor over The Perry Road & I-395 Lat./Long. 44°47'03" N 68°47'41" W & 44°47'12" N 68°47'38" W
PROGRAM AREA	Bridge and Structure Maintenance
OUTLINE OF WORK	Replace existing Bridge Rail with Steel Tube Retrofit (Jeff Rail).

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

WIN 24880.00
BRIDGE NO. 6081 & 6082

BRIDGE PLANS

STATE OF MAINE · JOEL R VELLEUX · 13280 · LICENSED PROFESSIONAL ENGINEER

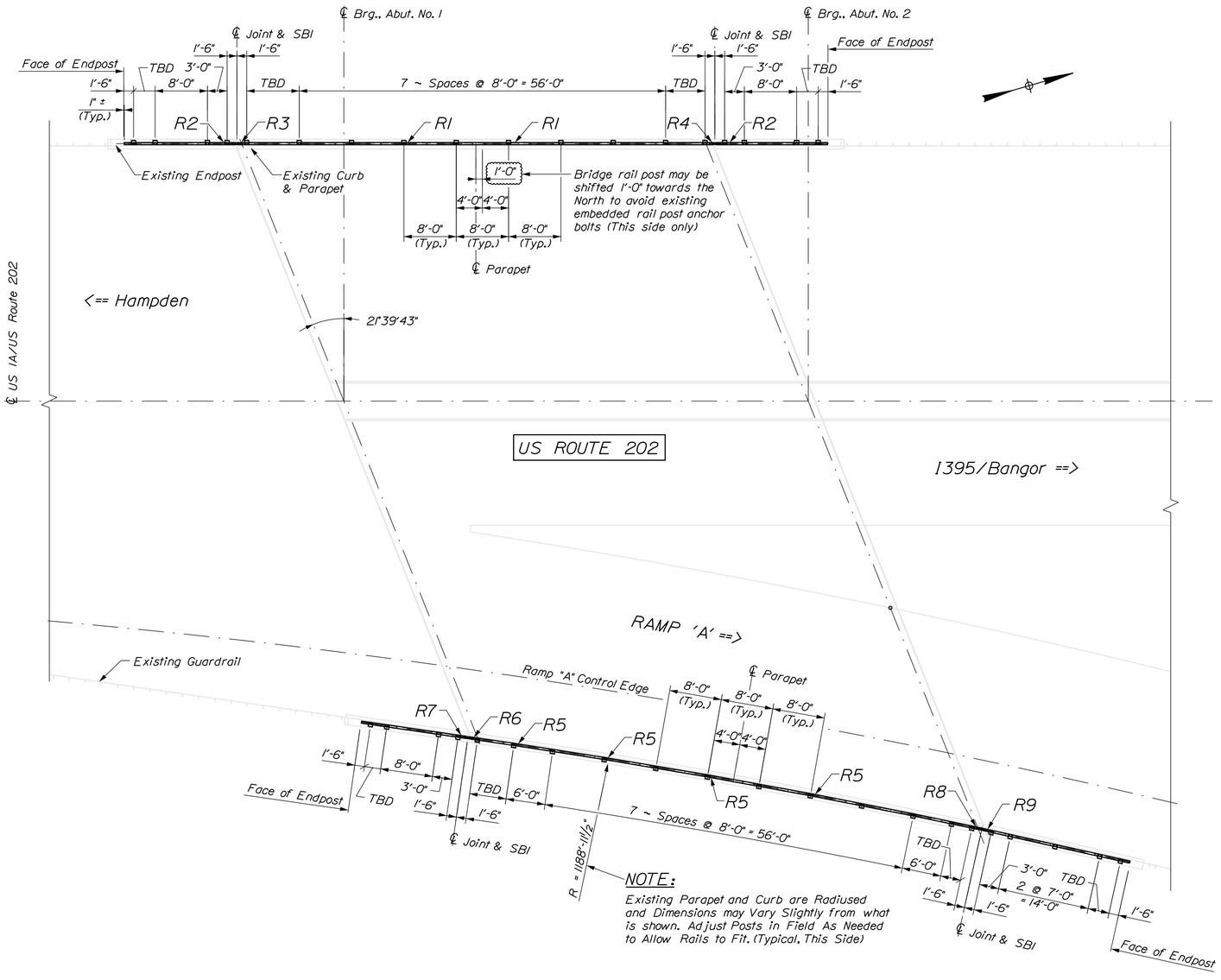
13280
P.E. NUMBER
7/27/2018
DATE

	BY	DATE
B. SNOWDEN	G. LIBBY	Mar. 2018
PROJ. MANAGER	J. VELLEUX	July 2018
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

US ROUTE 202 OVER PERRY ROAD
BANGOR PENOBSCOT

TITLE SHEET

SHEET NUMBER
1
OF 6



PLAN VIEW for RAIL AND POSTS PLACEMENT

NOTES:

1. All TS 8 x 8 x ¼" shall be Marked ~ PI (Typical)
2. Establish centerline of parapet between joints and set one post 4'-0" from point in each direction to establish 8'-0" posts spacing. See special note for Westerly Parpet.
3. Posts dimensions marked as "TBD" will be field located, drilled and attached to parapet and rail posts. This distance will be determined as "Run out" spacing from standard posts spacing or post location towards end post, and may vary from one location to another.
4. A TS 3" x 3" x 5/16" Mkd ~ SBI will be used as a splice bar at all existing bridge joints.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE NO. 6081 | WIN 24880.00 | BRIDGE PLANS

		BY	DATE
PROJ. MANAGER	B. SNOWDEN		
DESIGN-DETAILED	G. LIBBY	G. LIBBY	Apr. 2018
CHECKED-REVIEWED	G. LIBBY	J. VEILLEUX	July 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

US ROUTE 202 OVER PERRY ROAD

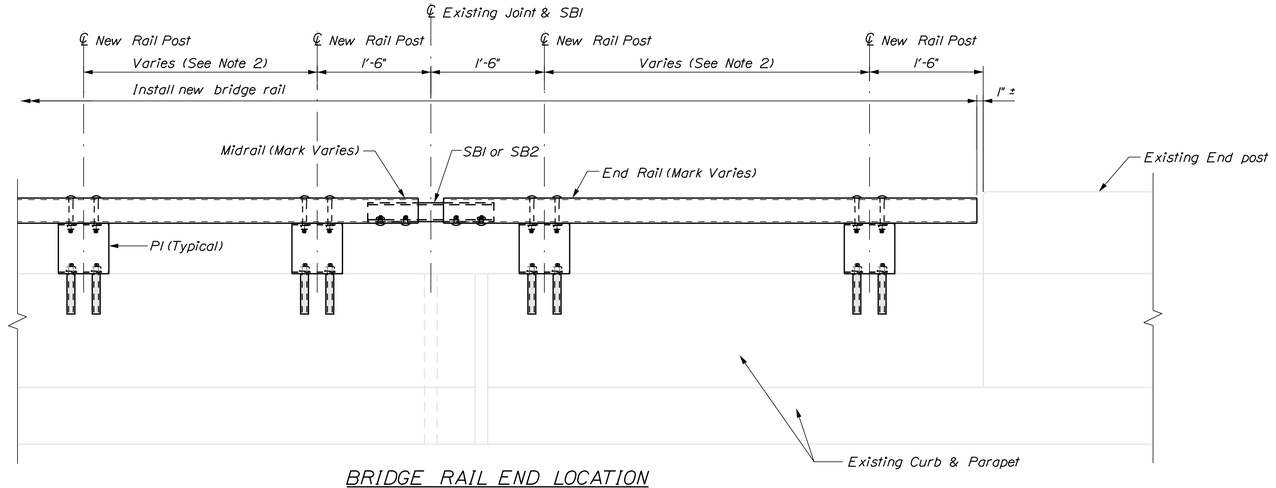
BANGOR PENOBSCOT

PLAN VIEW

SHEET NUMBER

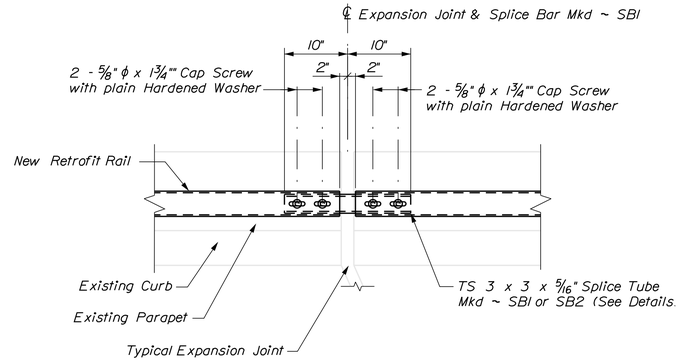
2

OF 6

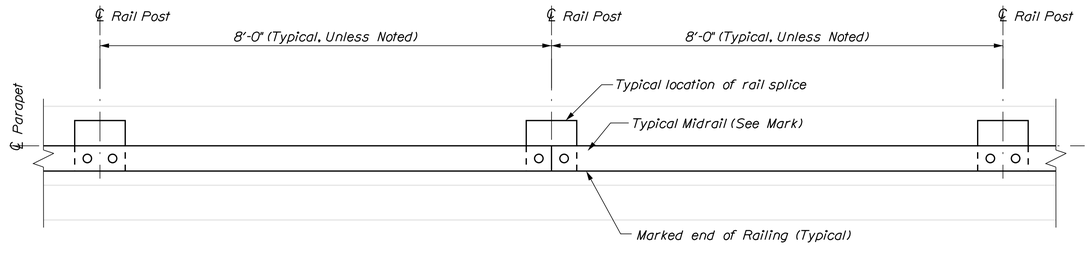


BRIDGE RAIL END LOCATION

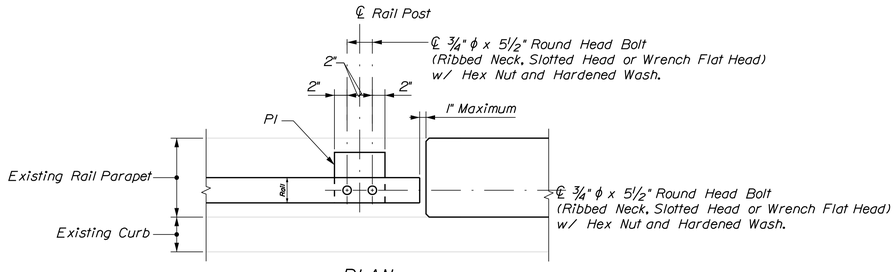
1. Typical at both ends of bridge and both sides of roadway.
2. The location of this post may vary from Posts Location Plan and is set to be the "Runout" for the spacing on all four sides.



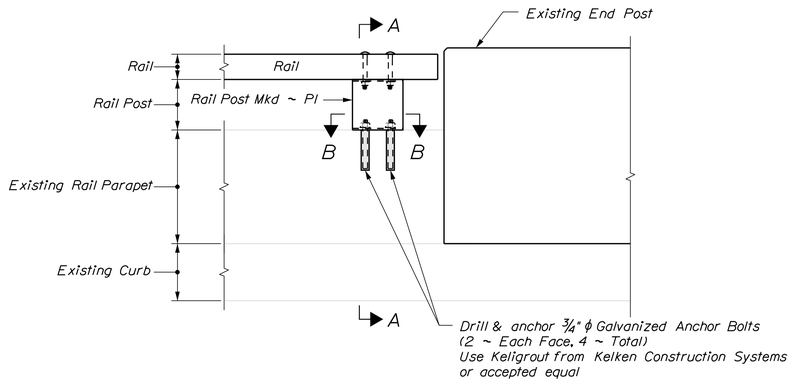
TYPICAL EXPANSION SPLICE DETAIL (PLAN VIEW)



RAIL SPLICE LOCATION



PLAN



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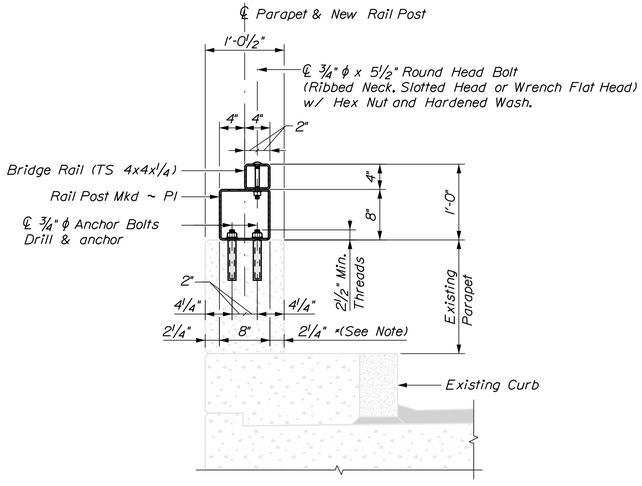
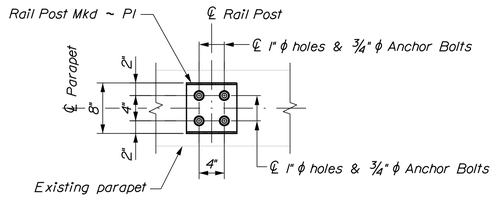


SECTION A-A



SECTION B-B

Showing anchor layout for rail post

BRIDGE RAIL NOTES

1. All materials shall be hot-dipped galvanized. Bolts shall be galvanized.
2. All existing rail shall be removed and become the property of MDOT Bridge Maintenance. Cut existing anchor bolts flush with existing concrete.
3. The bridge rail post bolt anchorage system shall be Galvanized Anchor bolts anchored with Keligrout from Kelken Construction Systems or an approved equal from MaineDOT's Qualified Products List. The bolt anchorages shall be installed in strict accordance with the selected manufacturer's recommendations. The anchor bolts shall have an ultimate tension capacity of 53 kips.
4. Locate existing curb reinforcing steel and adjust dowel and bridge rail post anchor stud locations to avoid cutting existing bars. Any adjustments from plan dimensions shall be approved by the Resident.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

WIN 24880.00
BRIDGE NO. 6081

BRIDGE PLANS

	BY	DATE
PROJ. MANAGER	B. SNOWDEN	
DESIGN-DETAILED	G. LIBBY	Apr. 2018
CHECKED-REVIEWED	J. VELLEUX	July 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

US ROUTE 202 OVER
PERRY ROAD
PENOBSCOT
BANGOR

FIELDWORK DETAILS

SHEET NUMBER
3
OF 6

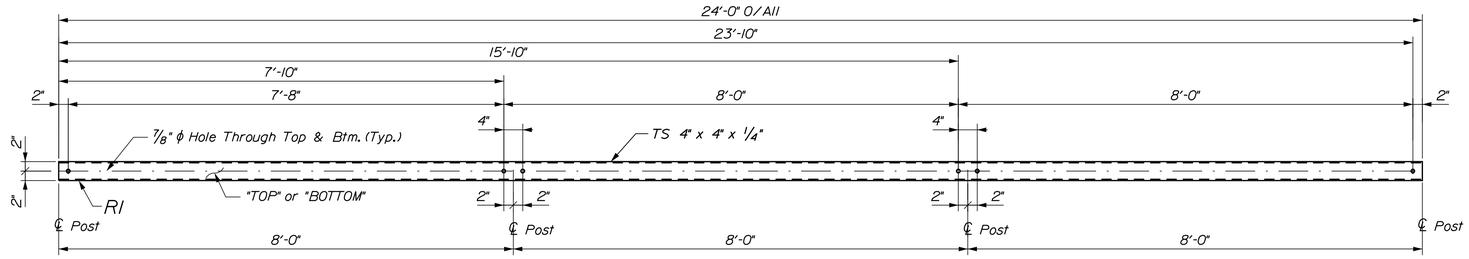
Filename: ...\003_Field work details.dgn Division: BRIDGE Username: gerald.libby Date:7/27/2018

RAIL PARTS SCHEDULE				
QUANTITY	MARK	DESCRIPTION	LENGTH	REMARKS
2	R1	TS 4 x 4 x 1/4"	24'-0"	Guard Rail - ASTM A500 GR B, Galvanized
2	R2	TS 4 x 4 x 1/4"	17'-0 1/2"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
1	R3	TS 4 x 4 x 1/4"	17'-4 1/4"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
1	R4	TS 4 x 4 x 1/4"	7'-4 1/2"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
4	R5	TS 4 x 4 x 1/4"	16'-0"	Guard Rail - ASTM A500 GR B, Galvanized
1	R6	TS 4 x 4 x 1/4"	6'-11 1/2"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
1	R7	TS 4 x 4 x 1/4"	16'-3"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
1	R8	TS 4 x 4 x 1/4"	10'-6 1/4"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
1	R9	TS 4 x 4 x 1/4"	23'-0"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
42	P1	TS 8 x 8 x 1/4"	0'-8"	Rail Posts - ASTM A500 GR B, Galvanized
4	SB1	TS 3 x 3 x 5/16"	1'-8"	Guard Rail Splice Bars - ASTM A500 GR B, Galvanized, with 2 - Welded 5/8" Lock Nuts

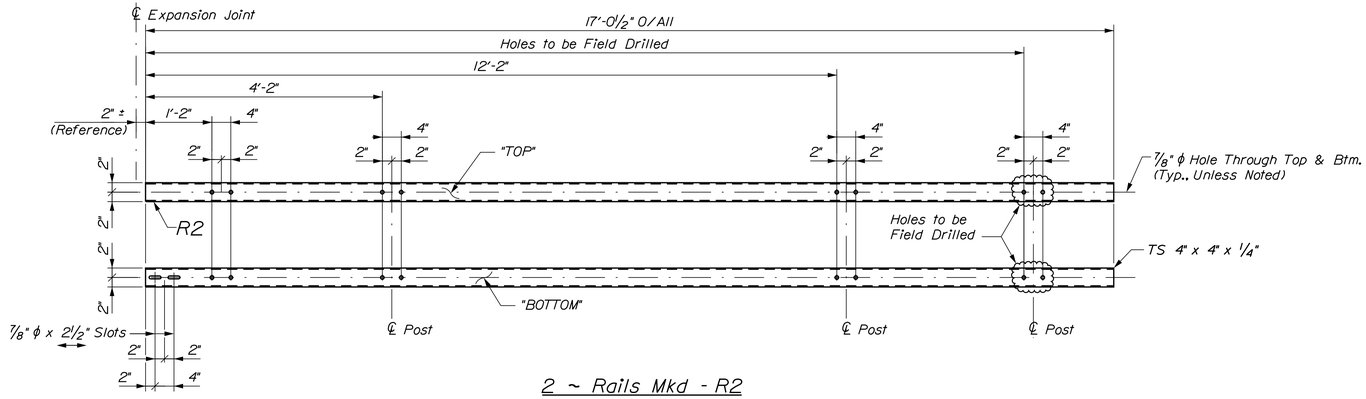
HARDWARE PARTS SCHEDULE			
QUANTITY	DESCRIPTION	LENGTH	REMARKS
168	3/4" ϕ Anchor Bolts	12"	F1554 / Full Threads, 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
84	3/4" ϕ Round Head Bolts	5 1/4"	(A325) / 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
20	5/8" ϕ Cap Screw	1 3/4"	(A325) / 1 - Lock Nut (A563) (8 - Total, See Note #2) and 1 - Hardened Washer (A436), Galvanized

Notes:
1) All hardware and materials shall be Galvanized to ASTM A153.

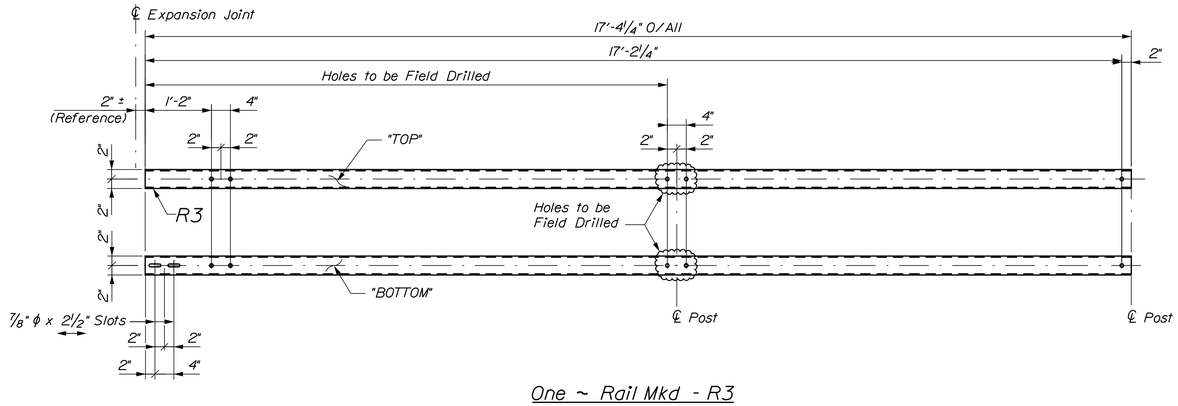
2) 2 - Hex Nuts per Splice Bar to be tack welded in bar.



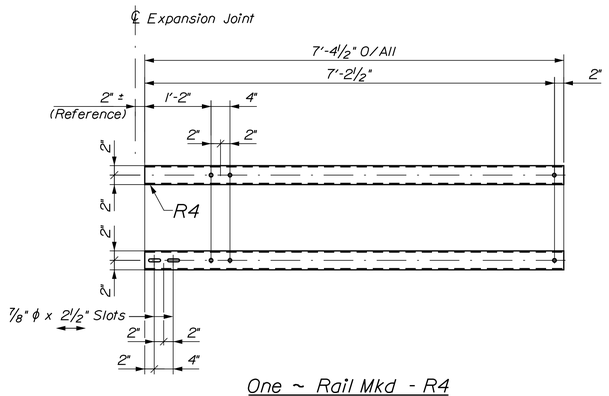
2 ~ Rails Mkd - R1



2 ~ Rails Mkd - R2



One ~ Rail Mkd - R3



One ~ Rail Mkd - R4

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE PLANS

WIN 24880.00

BRIDGE NO. 6081

	BY	DATE
PROJ. MANAGER	B. SNOWDEN	
DESIGN-DETAILED	G. LIBBY	Apr. 2018
CHECKED-REVIEWED	J. VELLEUX	July 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

US ROUTE 202 OVER
PERRY ROAD
PENOBSCOT
BANGOR

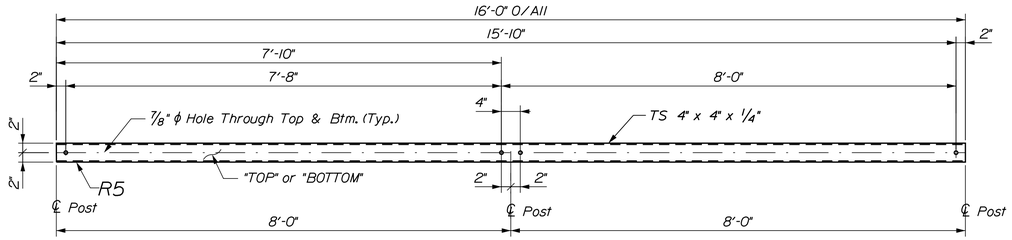
ESTIMATED QUANTITIES and STEEL DETAILS

SHEET NUMBER

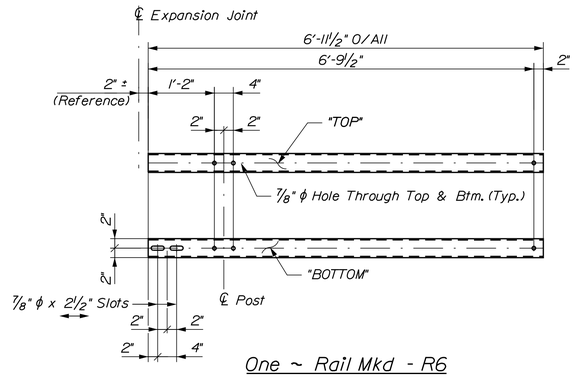
4

OF 6

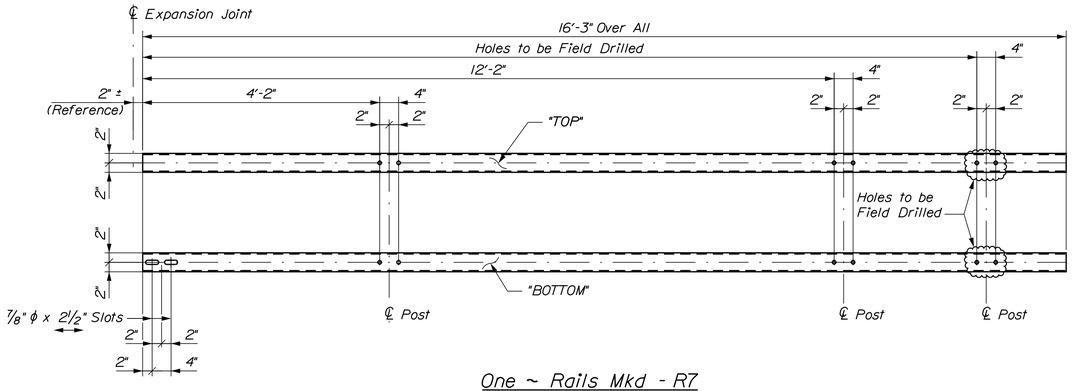
Filename: ...\004_SteelDetails.dgn Division: BRIDGE Username: gerold.libby Date:7/27/2018



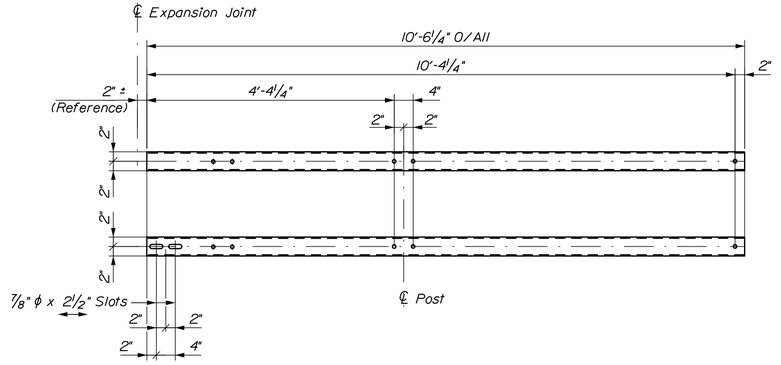
4 ~ Rails Mkd - R5



One ~ Rail Mkd - R6



One ~ Rails Mkd - R7



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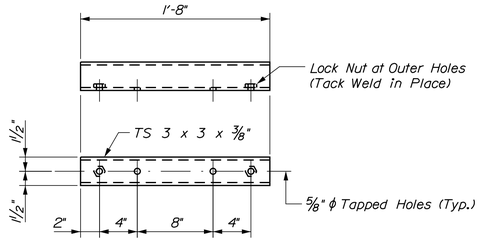
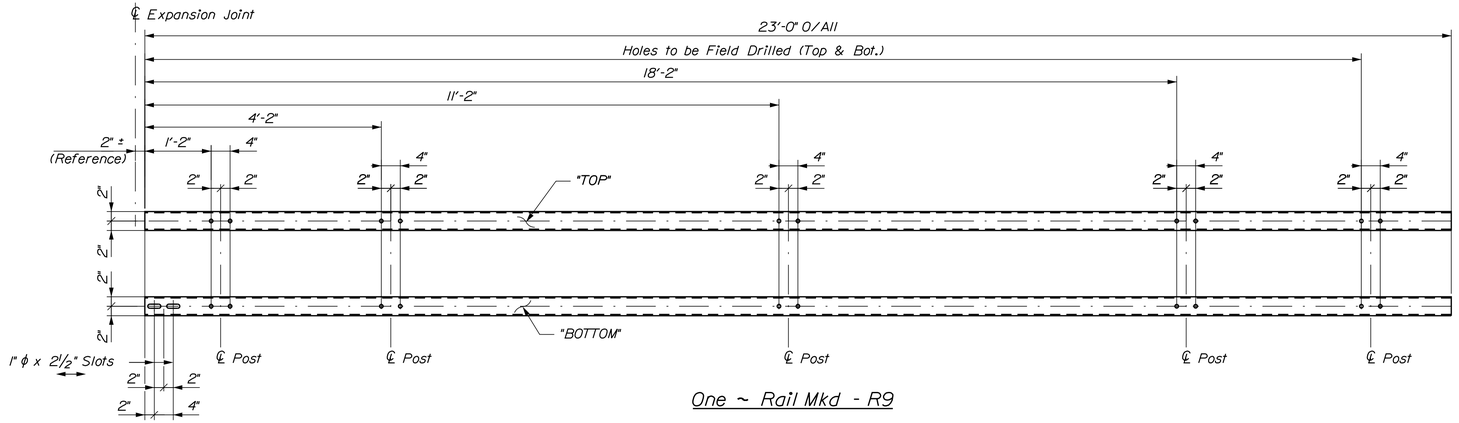


4 ~ Rail Splice Bar Mkd - SBI



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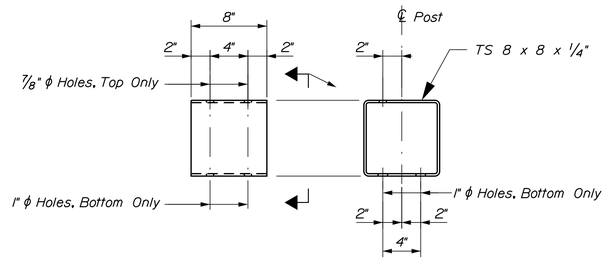

42 ~ Rail Posts Mkd - P1

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE NO. 6081 — WIN 24880.00 — BRIDGE PLANS

PROJ. MANAGER	B. SNOWDEN		
DESIGN-DETAILED	G. LIBBY	Apr. 2018	
CHECKED-REVIEWED	G. LIBBY	J. VELLEUX	July 2018
DESIGN2-DETAILED2			
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REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

US ROUTE 202 OVER
PERRY ROAD
PENOBSCOT
BANGOR

RAIL and POSTS STEEL DETAILS

SHEET NUMBER

5

OF 6

Username: geroldlibby Date:7/27/2018
Division: BRIDGE
Filename: ...\005_SteelDetails.dgn

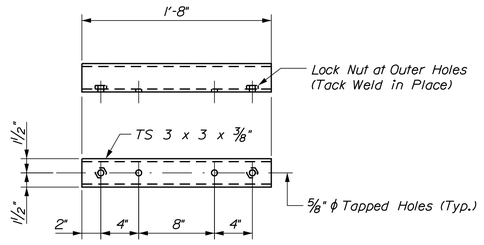
RAIL PARTS SCHEDULE				
QUANTITY	MARK	DESCRIPTION	LENGTH	REMARKS
25	Varies	TS 4 x 4 x 1/4"	24'-0"	Guard Rail - ASTM A500 GR B. No Holes. Galvanized
80	PI	TS 8 x 8 x 1/4"	0'-8"	Rail Posts - ASTM A500 GR B. Galvanized
4	SBI	TS 3 x 3 x 5/16"	1'-8"	Guard Rail Splice Bars - ASTM A500 GR B. Galvanized, with 2 - Welded 5/8" Lock Nuts

HARDWARE PARTS SCHEDULE			
QUANTITY	DESCRIPTION	LENGTH	REMARKS
320	3/4" ϕ Anchor Bolts	12"	F1554 / Full Threads, 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
160	3/4" ϕ Round Head Bolts	5 1/4"	(A325) / 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
20	5/8" ϕ Cap Screw	1 3/4"	(A325) / 1 - Lock Nut (A563) (8 - Total, See Note #2) and 1 - Hardened Washer (A436), Galvanized

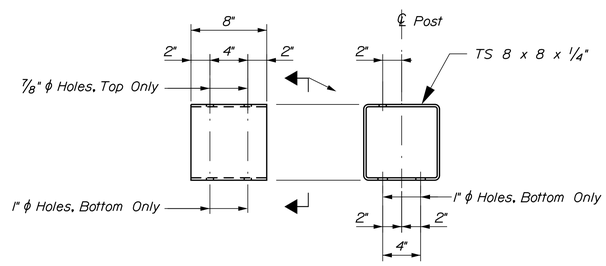
Notes:
1) All hardware and materials shall be Galvanized to ASTM A153.

2) 2 - Hex Nuts per Splice Bar to be tack welded in bar.

MATERIAL ESTIMATES FOR Bridge #6082 - BANGOR



4 ~ Rail Splice Bar Mkd - SBI



80 ~ Rail Posts Mkd - PI

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE NO. 6082 | WIN 24880.00 | BRIDGE PLANS

PROJ. MANAGER	B. SNOWDEN	BY
DESIGN-DETAILED	G. LIBBY	G. LIBBY
CHECKED-REVIEWED	G. LIBBY	J. VELLEUX
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

BY	DATE
G. LIBBY	Apr. 2018
J. VELLEUX	July 2018

SIGNATURE

P.E. NUMBER

DATE

US ROUTE 202 OVER I - 395

BANGOR PENOBSCOT

BRIDGE#6082
MATERIALS INFORMATION

SHEET NUMBER

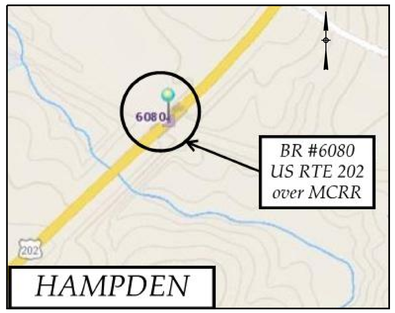
6

OF 6

Filename: ...\006_Steel Details.dgn Division: BRIDGE Username: gerald.libby Date:7/27/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

HAMPDEN
PENOBSCOT COUNTY
US ROUTE 202
OVER
MAINE CENTRAL RAILROAD
BRIDGE NO. 6080



PROJECT LOCATION	US Route 202 in Hampden over Maine Central Railroad Lat./Long. 44°46'38" N 68°47'57" W
PROGRAM AREA	Bridge and Structure Maintenance
OUTLINE OF WORK	Replace existing Bridge Rail with Steel Tube Retrofit (Jeff Rail).

INDEX OF BRIDGE DRAWINGS

MATERIALS

Structural Steel: All Material . . . . . ASTM A500, Grade B
Galvinzed Steel Anchor Bolts . . . . . ASTM F1554, GR 105

BASIC DESIGN STRESSES

Concrete . . . . . f'c = 4,000 psi
Reinforcing Steel . . . . . fy = 60,000 psi
Structural Steel . . . . . Fy = 36,000 psi
Galvinized Steel Threaded Studs . . . . . Fy = 150,000 psi

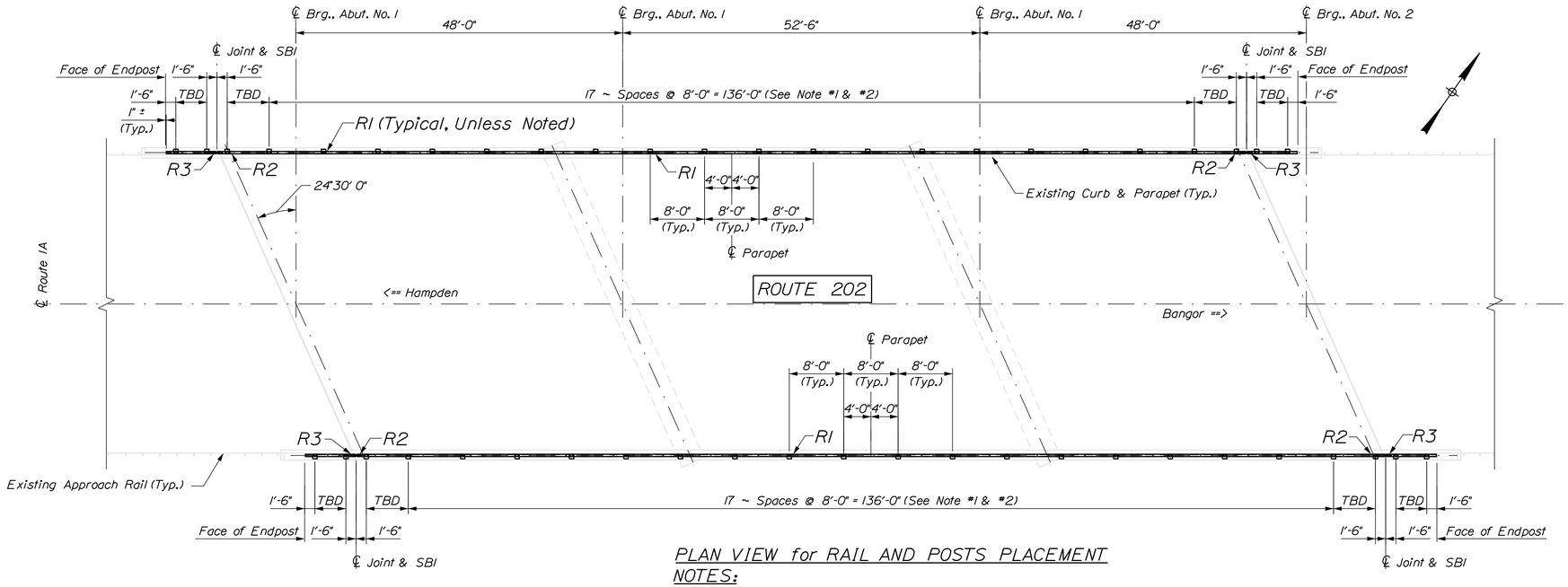
MAINTENANCE OF TRAFFIC

The maintenance of traffic shall be coordinated with the Region Traffic Engineer.

GENERAL CONSTRUCTION NOTES

1. Existing bridge plans may be obtained from the Maine DOT website. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

2. All dimensions based on or relating to the existing bridges shall be verified in the field, i.e., existing joint opening, joint location and existing post locations.



PLAN VIEW for RAIL AND POSTS PLACEMENT NOTES:

1. All TS 8 x 8 x 1/4" shall be Marked ~ P1 (Typical)

2. Establish centerline of parapet between joints and set one post 4'-0" from point in each direction to establish 8'-0" posts spacing.

3. Posts dimensions marked as "TBD" will be field located, drilled and attached to parapet and rail posts. This distance will be determined as "Run out" spacing from 8'-0" posts spacing or post location towards end post, and may vary from one location to another.

4. A TS 3" x 3" x 5/16" Mkd ~ SBI will be used as a splice bar at each existing bridge joint. See details for more information.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
WIN 24880.00
BRIDGE NO. 6080
WIN 24880.00
BRIDGE PLANS

STATE OF MAINE · JOEL R VELLEUX · 13280 · LICENSED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER	B. SNOWDEN	
DESIGN-DETAILED	G. LIBBY	Mar. 2018
CHECKED-REVIEWED	J. VELLEUX	July 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

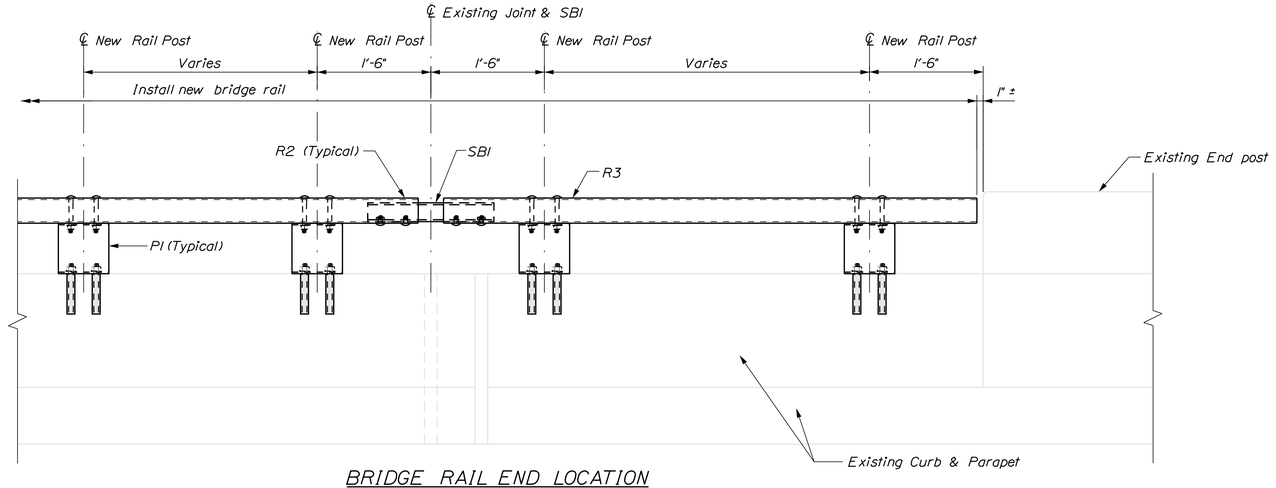
SIGNATURE
P.E. NUMBER 13280
DATE 7/27/2018

US ROUTE 202 OVER
MAINE CENTRAL RAILROAD
HAMPDEN PENOBSCOT

PLAN VIEW and GENERAL INFORMATION

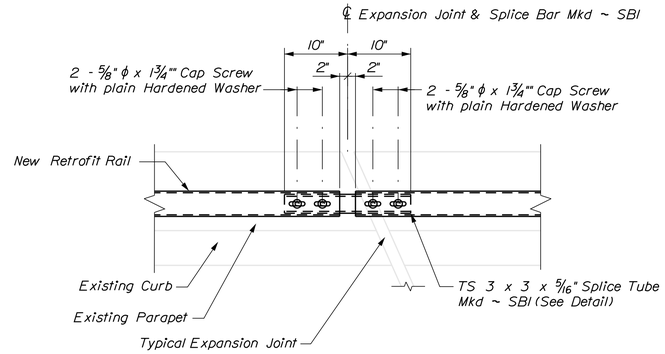
SHEET NUMBER
1
OF 3

Filename: ...\001_Cover Sheet.dgn Division: BRIDGE Username: geroldlibby Date:7/27/2018

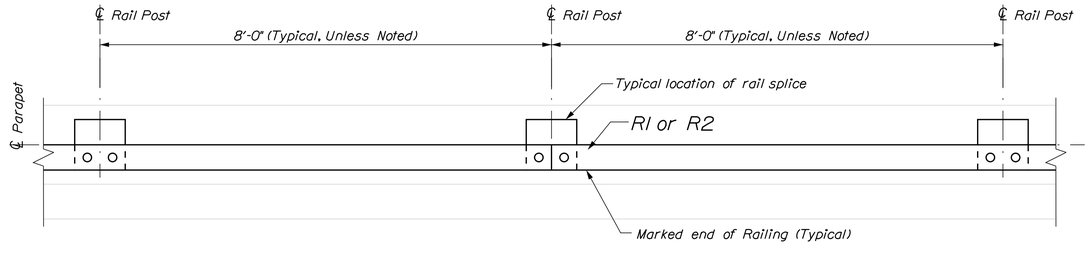


BRIDGE RAIL END LOCATION

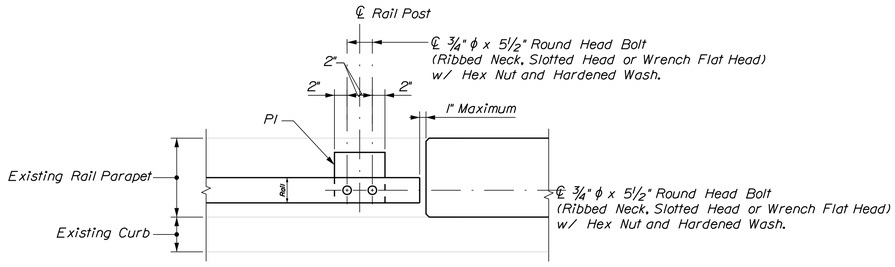
1. Typical at both ends of bridge and both sides of roadway.
2. The location of this post may vary from Posts Location Plan and is set to be the "Runout" for the spacing on all four sides.



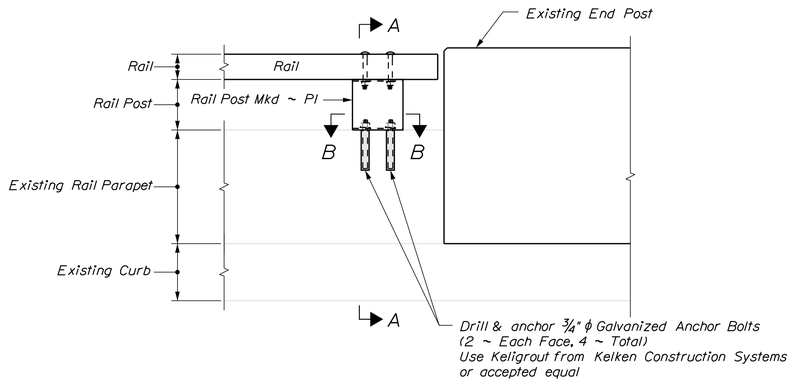
TYPICAL EXPANSION SPLICE DETAIL (PLAN VIEW)



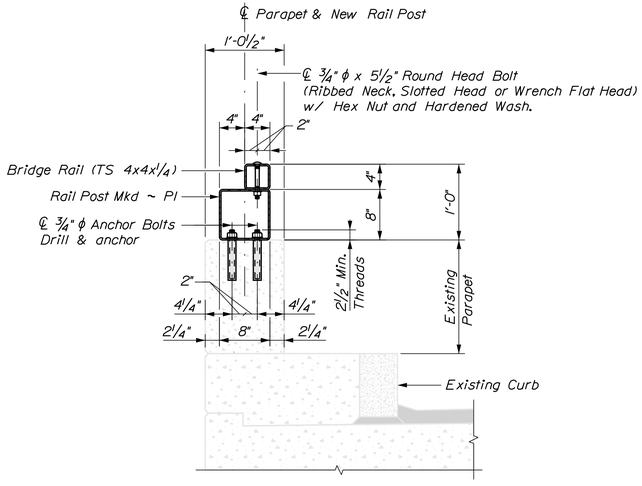
RAIL SPLICE LOCATION



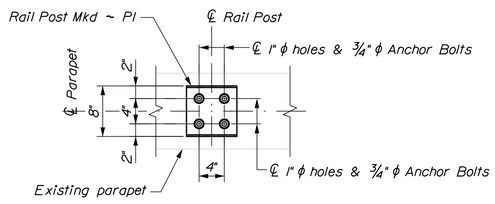
PLAN



ELAVATION



SECTION A-A



SECTION B-B

Showing anchor layout for rail post

BRIDGE RAIL NOTES

1. All materials shall be hot-dipped galvanized. Bolts shall be galvanized.
2. All existing rail shall be removed and become the property of MDOT Bridge Maintenance. Cut existing anchor bolts flush with existing concrete.
3. The bridge rail post bolt anchorage system shall be Galvanized Anchor bolts anchored with Keligrout from Kelken Construction Systems or an approved equal from MaineDOT's Qualified Products List. The bolt anchorages shall be installed in strict accordance with the selected manufacturer's recommendations. The anchor bolts shall have an ultimate tension capacity of 53 kips.
4. Locate existing curb reinforcing steel and adjust dowel and bridge rail post anchor stud locations to avoid cutting existing bars. Any adjustments from plan dimensions shall be approved by the Resident.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE PLANS
WIN 24880.00
BRIDGE NO. 6080

	BY	DATE
PROJ. MANAGER	B. SNOWDEN	
DESIGN-DETAILED	G. LIBBY	Mar. 2018
CHECKED-REVIEWED	J. VELLEUX	July 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

US ROUTE 202 OVER
MAINE CENTRAL RAILROAD
HAMPDEN PENOBSCOT

FIELDWORK DETAILS

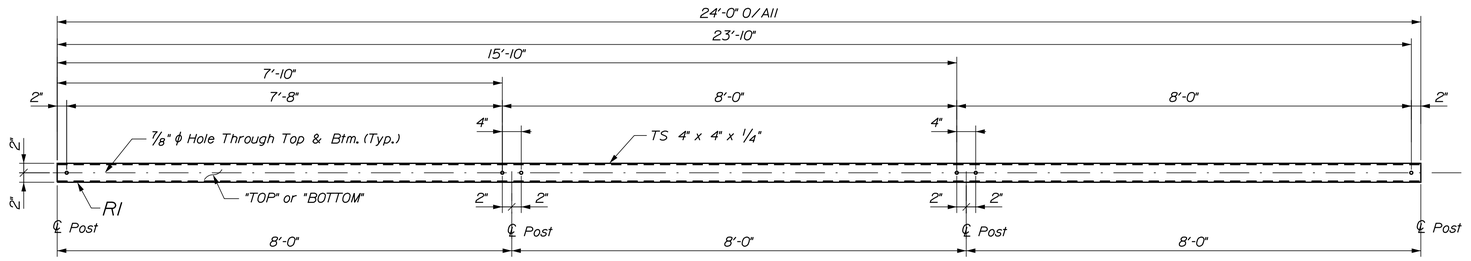
SHEET NUMBER
2
OF 3

RAIL PARTS SCHEDULE				
QUANTITY	MARK	DESCRIPTION	LENGTH	REMARKS
10	R1	TS 4 x 4 x 1/4"	24'-0"	Guard Rail - ASTM A500 GR B, Galvanized
4	R2	TS 4 x 4 x 1/4"	15'-6"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
4	R3	TS 4 x 4 x 1/4"	7'-3 1/2"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
50	P1	TS 8 x 8 x 1/4"	0'-8"	Rail Posts - ASTM A500 GR B, Galvanized
4	SB1	TS 3 x 3 x 5/16"	1'-8"	Guard Rail Splice Bars - ASTM A500 GR B, Galvanized, with 2 - Welded 5/8" Lock Nuts

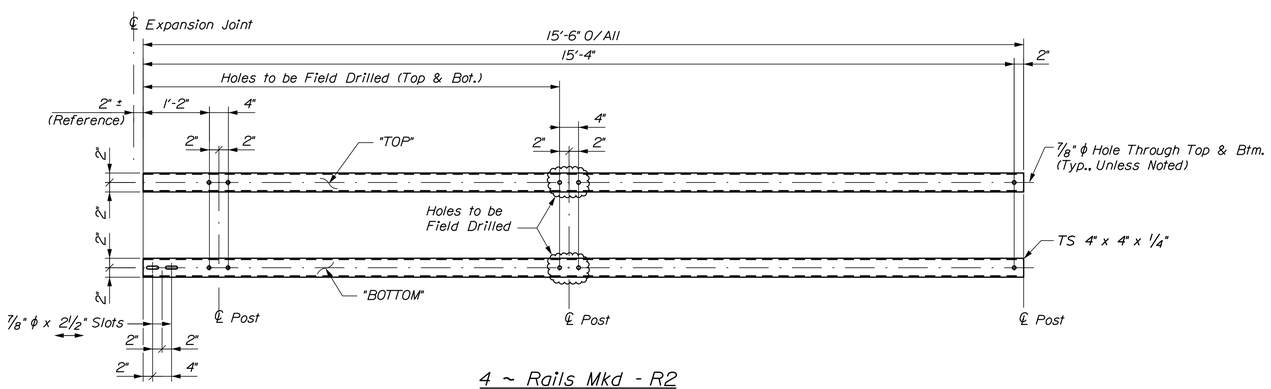
HARDWARE PARTS SCHEDULE			
QUANTITY	DESCRIPTION	LENGTH	REMARKS
210	3/4" ϕ Anchor Bolts	12"	(F1554) / Full Threads, 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
100	3/4" ϕ Round Head Bolts	5 1/4"	(A325) / 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
20	5/8" ϕ Cap Screw	1 3/4"	(A325) / 1 - Lock Nut (A563) (8 - Total, See Note #2) and 1 - Hardened Washer (A436), Galvanized

Notes:
1) All hardware and materials shall be Galvanized to ASTM A153.

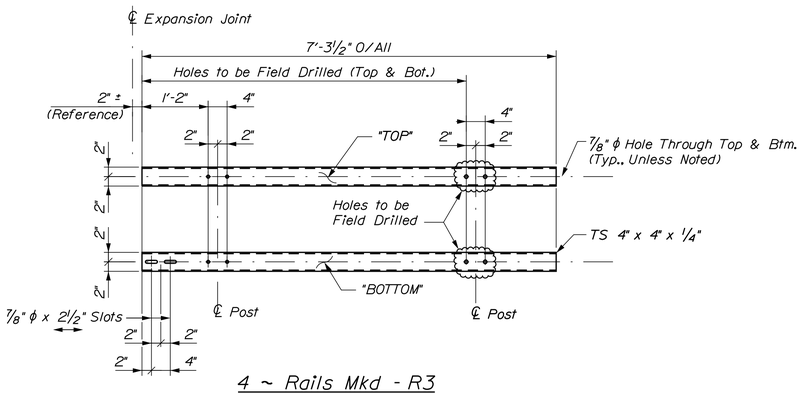
2) 2 - Hex Nuts per Splice Bar to be tack welded in bar.



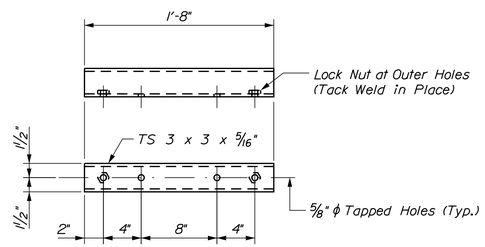
10 ~ Rails Mkd - R1



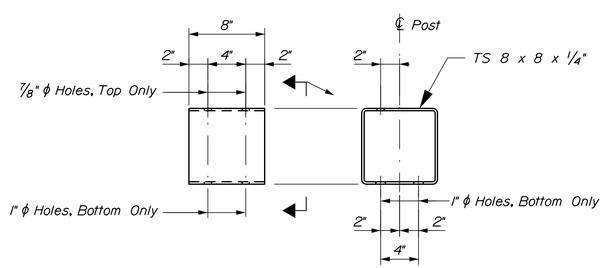
4 ~ Rails Mkd - R2



4 ~ Rails Mkd - R3



4 ~ Rail Splice Bar Mkd - SB1



50 ~ Rail Posts Mkd - P1

Filename: ...\003_SteelDetails.dgn Division: BRIDGE Username: gerold.libby Date:7/27/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE NO. 6080

WIN 24880.00 BRIDGE PLANS

PROJ. MANAGER	B. SNOWDEN
DESIGN-DETAILED	G. LIBBY
CHECKED-REVIEWED	G. LIBBY
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1	G. LIBBY	Mar. 2018
REVISIONS 2	J. VELLEUX	July 2018
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

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DATE

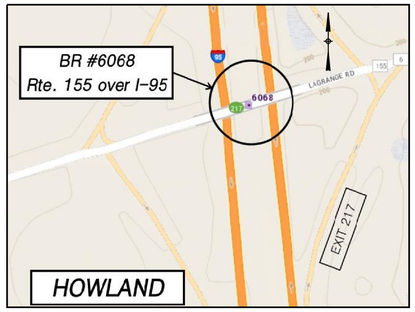
US ROUTE 202 OVER
MAINE CENTRAL RAILROAD
HAMPDEN PENOBSCOT

ESTIMATED QUANTITIES and STEEL DETAILS

SHEET NUMBER
3
OF 3

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

HOWLAND
PENOBSCOT COUNTY
ROUTE 155
OVER
I 95 - NORTHBOUND AND SOUTHBOUND
BRIDGE NO. 6068



PROJECT LOCATION	Route 155 over I 95 in Howland Lat./Long. 45°14'10" N 68°40'38" W
PROGRAM AREA	Bridge and Structure Maintenance
OUTLINE OF WORK	Replace existing Bridge Rail with Steel Tube Retrofit (Jeff Rail).

INDEX OF BRIDGE DRAWINGS

MATERIALS

Structural Steel: All Material. . . . . ASTM A500, Grade B
Galvinzed Anchor Bolts. . . . . F1554 Grade 105

BASIC DESIGN STRESSES

Concrete . . . . . f'c = 4,000 psi
Reinforcing Steel . . . . . fy = 60,000 psi
Structural Steel . . . . . Fy = 36,000 psi
Galvinized Steel Threaded Studs . . . . . Fy = 105,000 psi

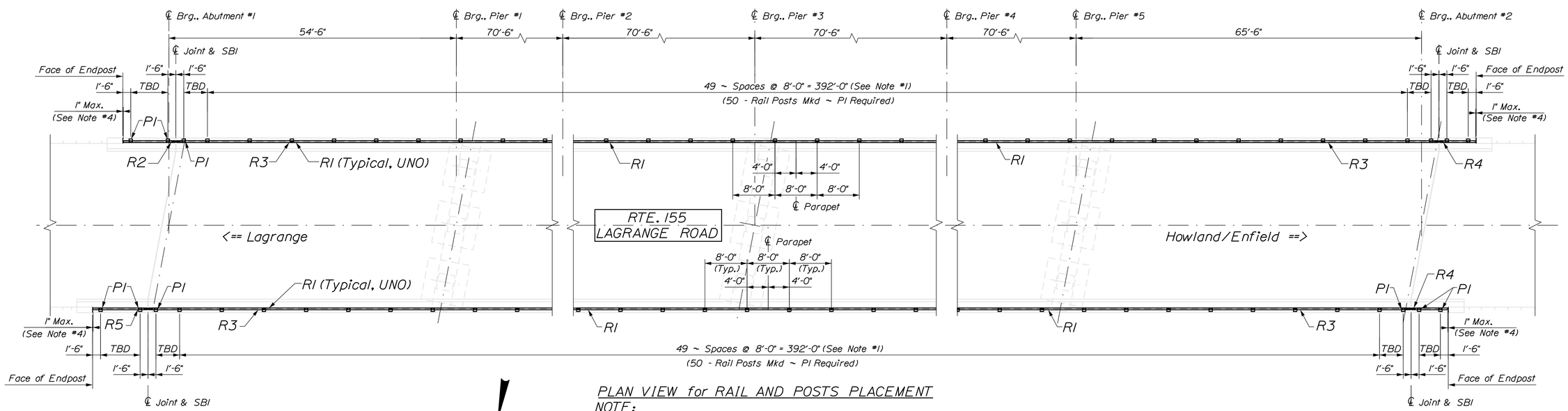
MAINTENANCE OF TRAFFIC

The maintenance of traffic shall be coordinated with the Region Traffic Engineer.

GENERAL CONSTRUCTION NOTES

1. Existing bridge plans may be obtained from the Maine DOT website. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.

2. All dimensions based on or relating to the existing bridges shall be verified in the field, i.e., existing joint opening, joint location and existing post locations.



PLAN VIEW for RAIL AND POSTS PLACEMENT NOTE:

1. Establish centerline of parapet between joints and set one post 4'-0" from point in each direction to establish 8'-0" posts spacing.

2. Posts dimensions marked as "TBD" will be field located, drilled and attached to parapet and rail posts. This distance will be determined as "Run out" spacing from 8'-0" posts spacing or post location towards end post, and may vary from one location to another.

3. A 3" x 3" x 5/16" tube will be used as a splice bar at each existing bridge joint. See details for more information.

4. End rails marked R2, R4 & R5 shall be trimmed in the field to fit at the endposts. A maximum gap of 1" shall be allowed.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
WIN 24880.00
BRIDGE PLANS
WIN 24880.00
BRIDGE NO. 6068

STATE OF MAINE · JOEL R VELLEUX 13280 · LICENSED PROFESSIONAL ENGINEER

SIGNATURE	
P.E. NUMBER	13280
DATE	7/27/2018

PROJ. MANAGER	B. SNOWDEN
DESIGN-DETAILED	G. LIBBY
CHECKED-REVIEWED	G. LIBBY
DESIGN2-DETAILED2	J. VELLEUX
DESIGN3-DETAILED3	

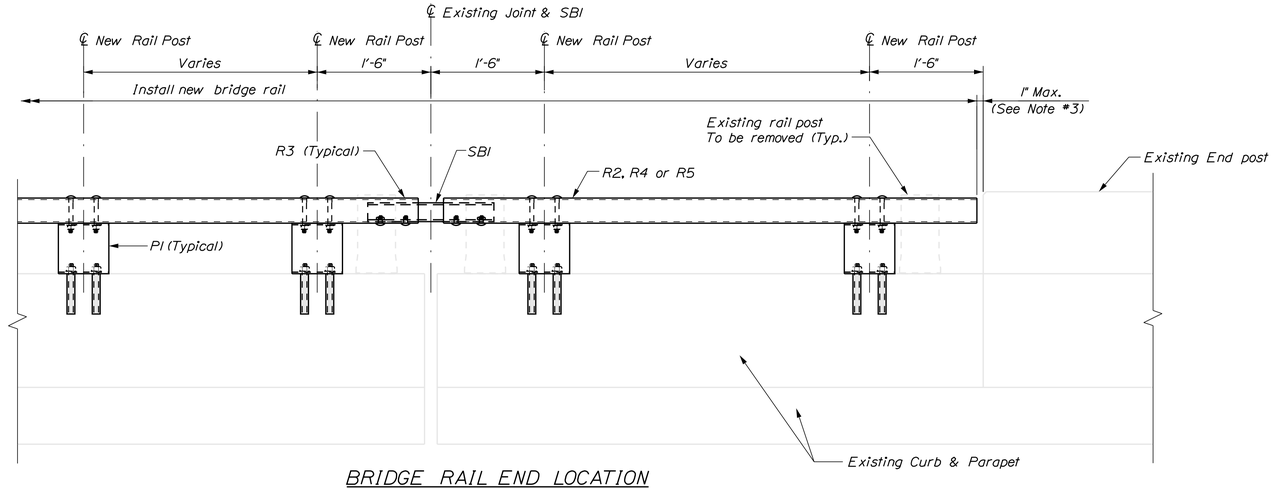
DATE	BY	
Mar. 2018	G. LIBBY	REVISIONS 1
July 2018	J. VELLEUX	REVISIONS 2
		REVISIONS 3
		REVISIONS 4
		FIELD CHANGES

ROUTE 155 OVER
I-95 NORTHBOUND & SOUTHBOUND
HOWLAND PENOBSCOT

PLAN VIEW and GENERAL INFORMATION

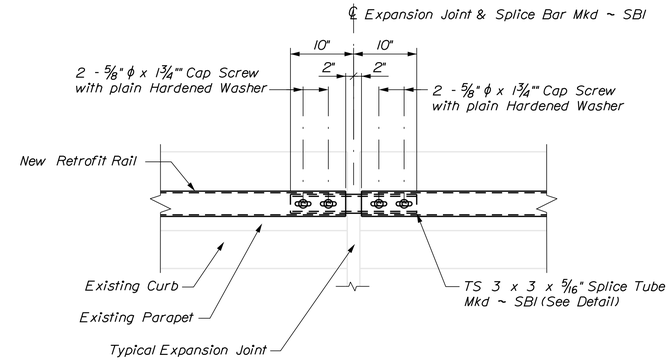
SHEET NUMBER
1
OF 4

Filename: ...\001_Cover Sheet.dgn Division: BRIDGE Username: gerald.libby Date:7/27/2018

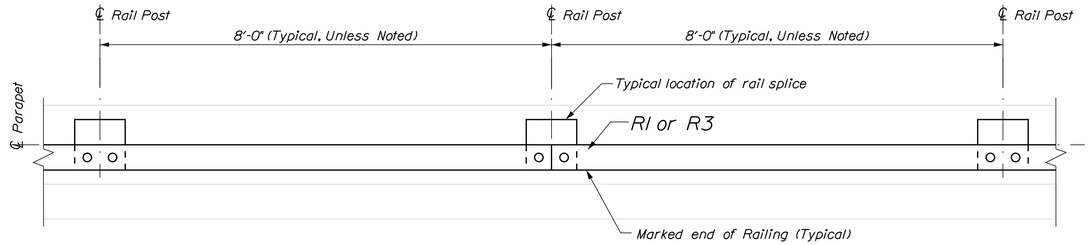


BRIDGE RAIL END LOCATION

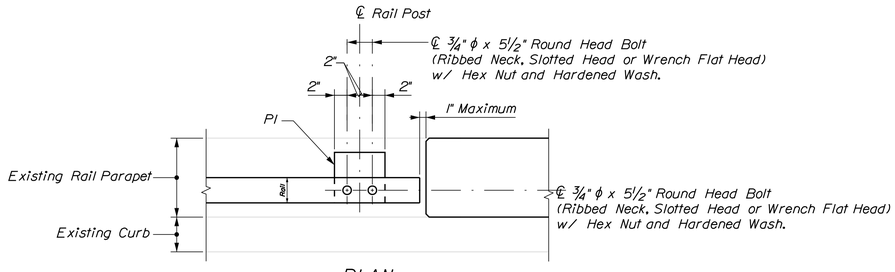
1. Typical at both ends of bridge and both sides of roadway.
2. The location of this post may vary from Posts Location Plan and is set to be the "Runout" for the spacing on all four sides.
3. End rails marked R2, R4 and R5 shall be trimmed in the field to fit at Endpost. The Gap between Bridgerail end and Face of Endpost should be 1" Maximum.



TYPICAL EXPANSION SPLICE DETAIL (PLAN VIEW)



RAIL SPLICE LOCATION



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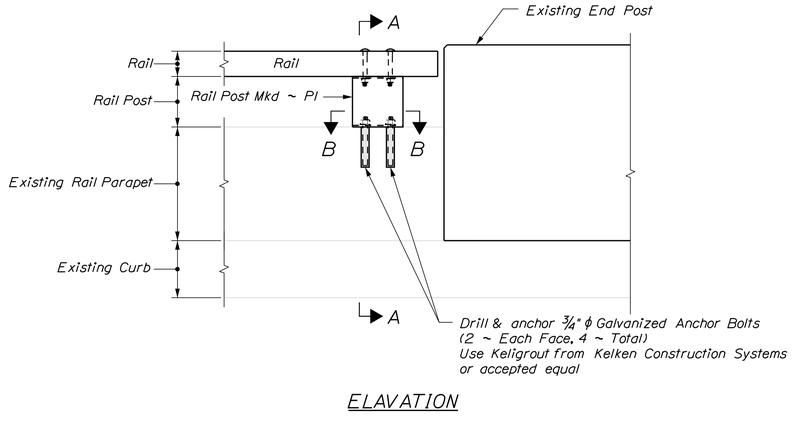
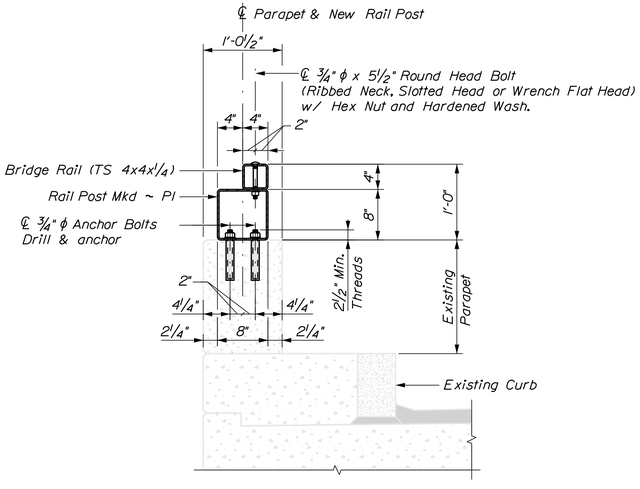
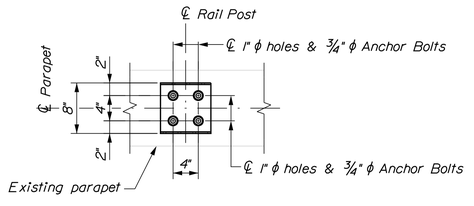


ELAVATION



SECTION A-A



SECTION B-B

Showing anchor layout for rail post

BRIDGE RAIL NOTES

1. All materials shall be hot-dipped galvanized. Bolts shall be galvanized.
2. All existing rail shall be removed and become the property of MDOT Bridge Maintenance. Cut existing anchor bolts flush with existing concrete.
3. The bridge rail post bolt anchorage system shall be Galvanized Anchor bolts anchored with Keligrout from Kelken Construction Systems or an approved equal from MaineDOT's Qualified Products List. The bolt anchorages shall be installed in strict accordance with the selected manufacturer's recommendations. The anchor bolts shall have an ultimate tension capacity of 53 kips.
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE PLANS
BRIDGE NO. 6068 24880.00

	BY	DATE
PROJ. MANAGER	B. SNOWDEN	
DESIGN-DETAILED	G. LIBBY	Mar. 2018
CHECKED-REVIEWED	J. VELLEUX	July 2018
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ROUTE 155 OVER
I-95 NORTHBOUND & SOUTHBOUND
HOWLAND PENOBSCOT

FIELDWORK DETAILS

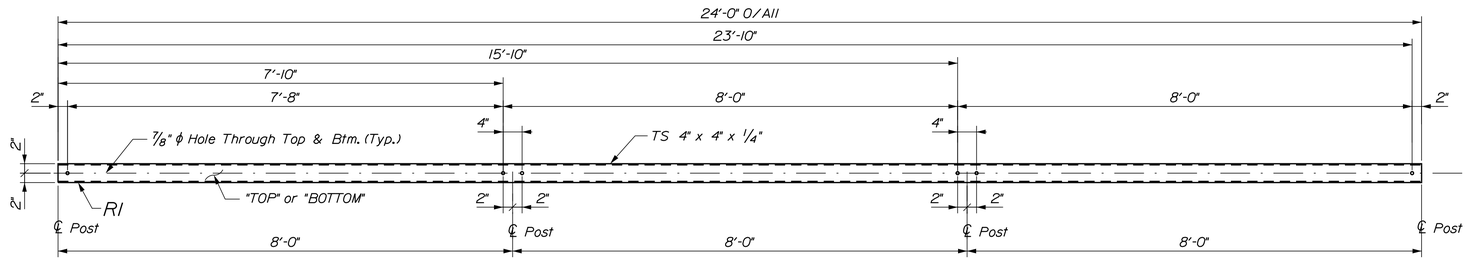
SHEET NUMBER
2
OF 4

RAIL PARTS SCHEDULE				
QUANTITY	MARK	DESCRIPTION	LENGTH	REMARKS
30	RI	TS 4 x 4 x 1/4"	24'-0"	Guard Rail - ASTM A500 GR B, Galvanized
1	R2	TS 4 x 4 x 1/4"	9'-10"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
4	R3	TS 4 x 4 x 1/4"	21'-10"	Guard Rail - ASTM A500 GR B, Galvanized
2	R4	TS 4 x 4 x 1/4"	6'-11"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
2	R5	TS 4 x 4 x 1/4"	13'-0"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
116	PI	TS 8 x 8 x 1/4"	0'-8"	Rail Posts - ASTM A500 GR B, Galvanized
4	SBI	TS 3 x 3 x 5/16"	1'-8"	Guard Rail Splice Bars - ASTM A500 GR B, Galvanized, with 2 - Welded 5/8" Lock Nuts

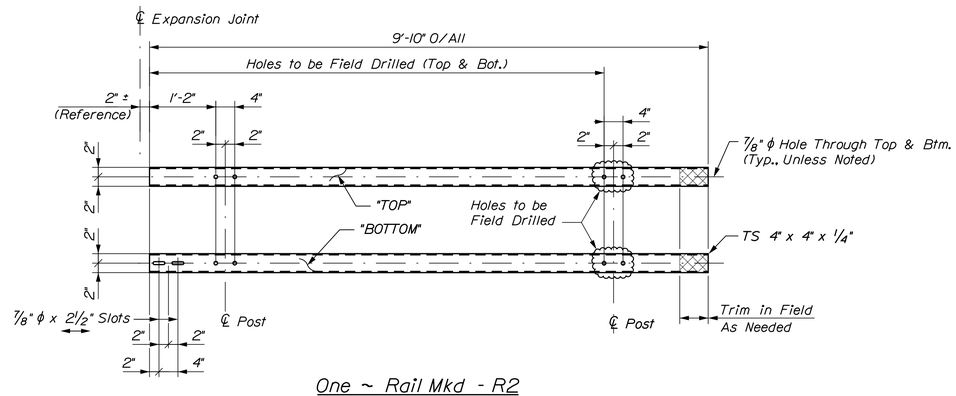
HARDWARE PARTS SCHEDULE			
QUANTITY	DESCRIPTION	LENGTH	REMARKS
470	3/4" ϕ Anchor Bolts	12"	(F1554) / Full Threads, 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
240	3/4" ϕ Round Head Bolts	5 1/4"	(A325) / 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
20	5/8" ϕ Cap Screw	1 3/4"	(A325) / 1 - Lock Nut (A563) (8 - Total, See Note *2) and 1 - Hardened Washer (A436), Galvanized

Notes:
1) All hardware and materials shall be Galvanized to ASTM A153.

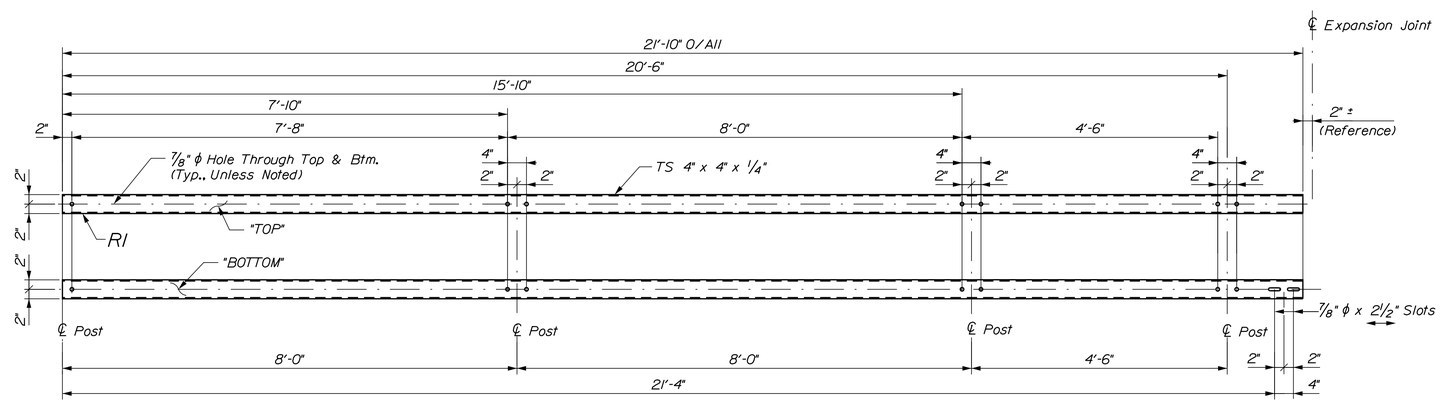
2) 2 - Hex Nuts per Splice Bar to be tack welded in bar.



30 ~ Rails Mkd - RI



One ~ Rail Mkd - R2



4 ~ Rails Mkd - R3

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE NO. 6068

WIN 24880.00

BRIDGE PLANS

	BY	DATE
B. SNOWDEN	G. LIBBY	Mar. 2018
G. LIBBY	J. VEILLEUX	July 2018

PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
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REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

ROUTE 155 OVER
I-95 NORTHBOUND & SOUTHBOUND
HOWLAND PENOBSCOT

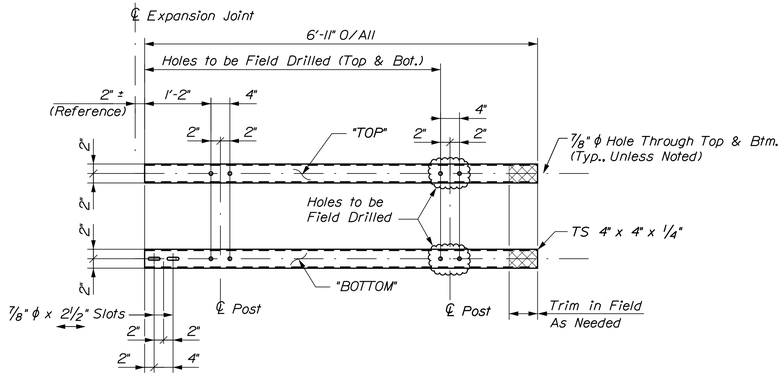
ESTIMATED QUANTITIES and STEEL DETAILS

SHEET NUMBER

3

OF 4

Filename: ...\003_SteelDetails.dgn Division: BRIDGE Username: gerald.libby Date:7/27/2018



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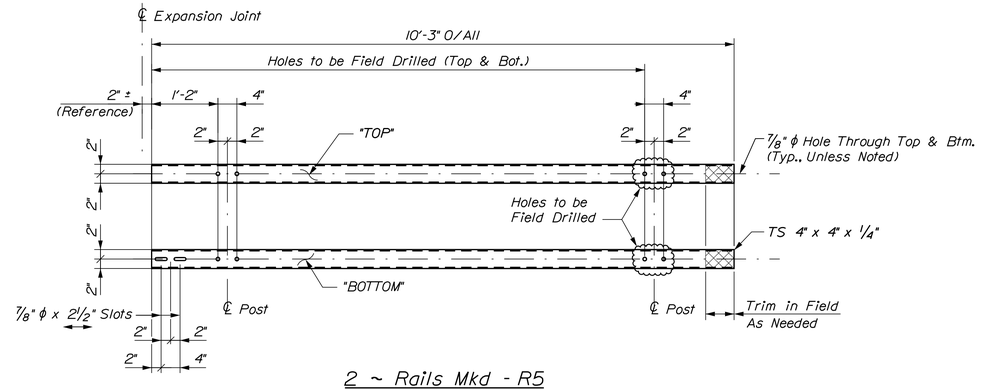

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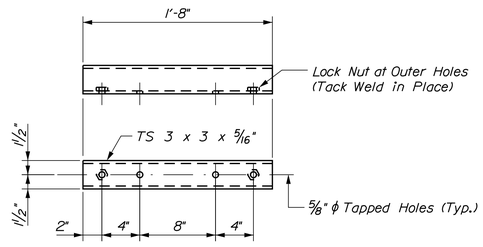
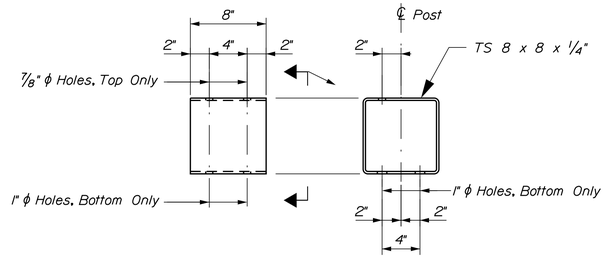


4 ~ Rail Splice Bar Mkd - SBl



116 ~ Rail Posts Mkd - Pl

Username: gerald.libby Date:7/27/2018

Division: BRIDGE

Filename: ...\004_SteelDetails.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WIN 24880.00

BRIDGE NO. 6068 | WIN 24880.00 | BRIDGE PLANS

PROJ. MANAGER	B. SNOWDEN		
DESIGN-DETAILED	G. LIBBY	G. LIBBY	Mar. 2018
CHECKED-REVIEWED		J. VEILLEUX	July 2018
DESIGN2-DETAILED2			
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ROUTE 155 OVER
I-95 NORTHBOUND & SOUTHBOUND
HOWLAND PENOBSCOT

STEEL DETAILS

SHEET NUMBER

4

OF 4