555 Oak Street East
North Bay, Ontario
P1B 8L3

555, rue Oak Est
North Bay (Ontario)
P1B 8L3

Tel: 1-800-363-7512
www.ontarionorthland.ca

September 15, 2025

Addendum No. 05

File Reference Number: RFP 2025 069

Title: ONTC Bridge Maintenance – Temagami and Ramore Subdivision

RE: Clarifications/Questions

Please refer to the following information/clarification:

QUESTIONS

Item 1: Will the shims be supplied by ONTC?

Answer: The size of shims is to be determined; pricing for the supply will be requested after size determination.

Item 2: Will ONTC supply the spikes?

Answer: ONTC will Supply spikes.

Item 3: Please provide deck plans for the following subdivisions.

Answer: Please refer to the following available drawings attached at the end of this Addendum.

Temagami 115.50	Basic
Temagami 138.00	None
Ramore 7.45	Basic except for Span 12 Detailed
Ramore 15.10	Basic
Ramore 25.80	Very Basic
Ramore 58.30	Very Basic
Ramore 69.60	None
Ramore 79.00	Detailed
Ramore 96.00	Basic
Ramore 103.30	Very Basic

Item 4: For shimming, would ONTC consider a Mark IV tamper solution?

Answer: Yes, ONTC will consider a Mark IV tamper solution.

…/2

Item 5: For Ramore 58.30, can you please confirm that it is the north approach that needs to be undercut? From the pictures, it appears that the south approach has elevation issues

Answer: For 58.3 Ramore, it is only the North Approach. And, for 7.45, a review of an old survey indicates that the south approach may require undercutting too. Previous survey files of 7.45 and 58.3 Ramore are included along with the survey from 119.10 Temagami as separate attachments with this Addendum. Please find below the list:

- 58.3 RAMORE INITIAL COMPLETE (Addendum No. 05)
- 1050105 RSD 7.45 UTM 17 NAD83 CSRS-2D (Addendum No. 05)
- 1050105 RSD 7.45 UTM 17 NAD83 CSRS-3D (Addendum No. 05)
- 1050120-TEMAGAMI 119.10 UTM17 NAD83 CSRS 2D (Addendum No. 05)
- 1050120-TEMAGAMI 119.10 UTM17 NAD83 CSRS 3D (Addendum No. 05)

Item 6: Can ONTC please grant an extension for this RFP?

Answer: Yes. The revised submission deadline is now **Friday, September 19, 2025 at 2:00 p.m.**

Item 7: Please be advised that ONTC has updated Schedule A – Schedule of Quantities and Price – Part 3. This revised Schedule A for the Optional Items has been revised to now include additional undercutting at the South end of 7.45 Ramore Subdivision.

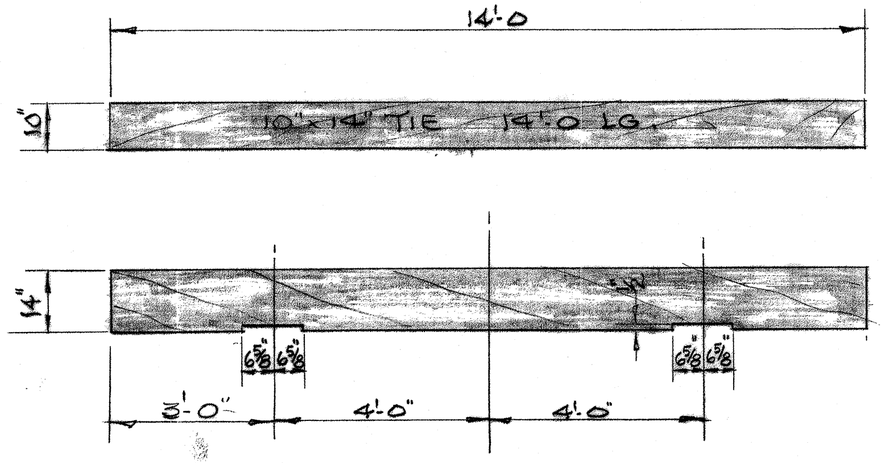
The RFP Documents have been revised and sections noted are affected below. The revised RFP sections supersede all previous RFP Documents versions for the said documents.

Delete Document:	Replace with Revised Document:
Schedule A – Schedule of Quantities and Prices – Part 3 – Optional Works	Schedule A – Schedule of Quantities and Prices – Part 3 – Optional Works – Rev.1

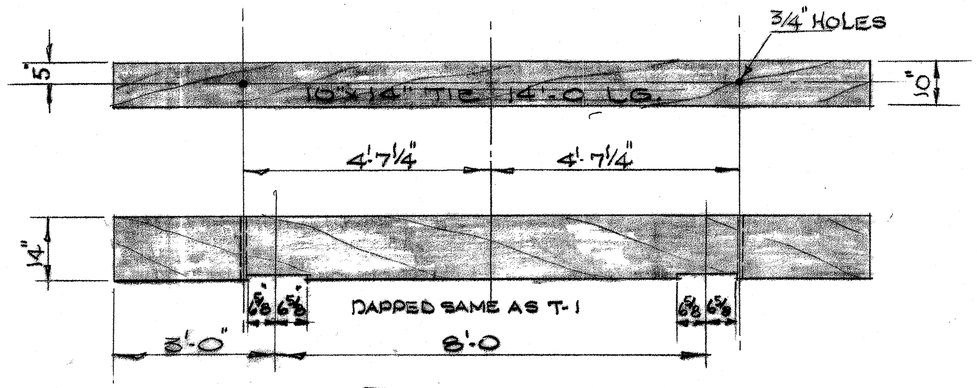
This Addendum hereby forms part of the RFP.

Regards,

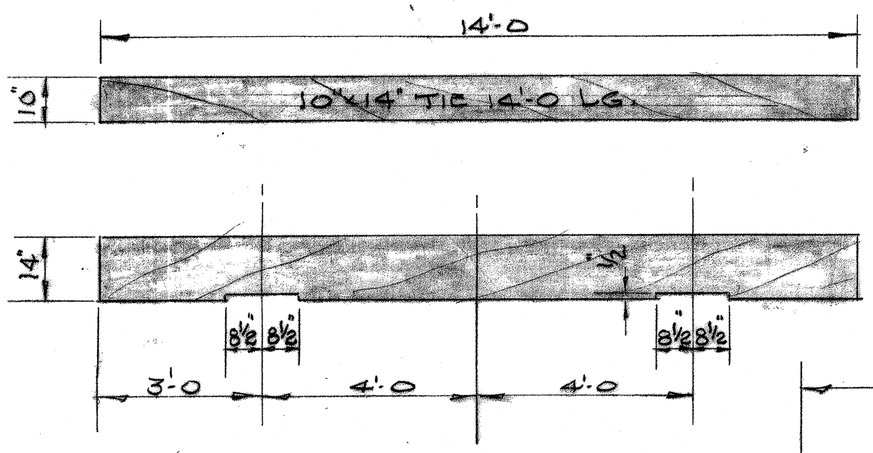
Brinda Ranpura
Procurement Contracts Specialist
brinda.ranpura@ontarionorthland.ca



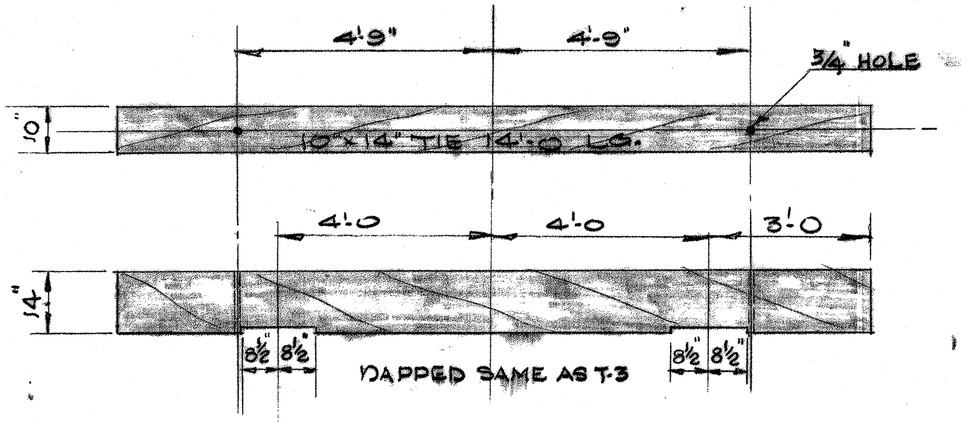
T-1 114 REQ'D.



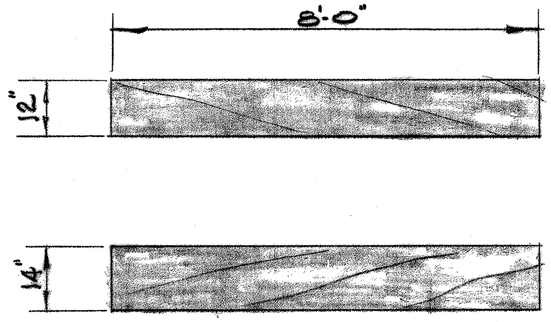
T-2 40 REQ'D.



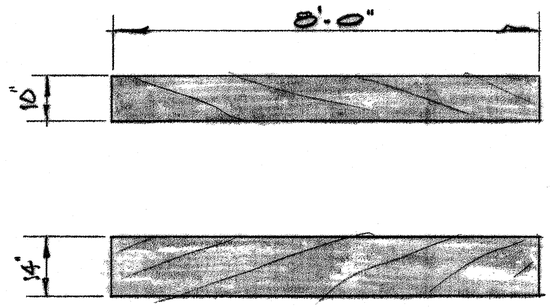
T-3 57 REQ'D.



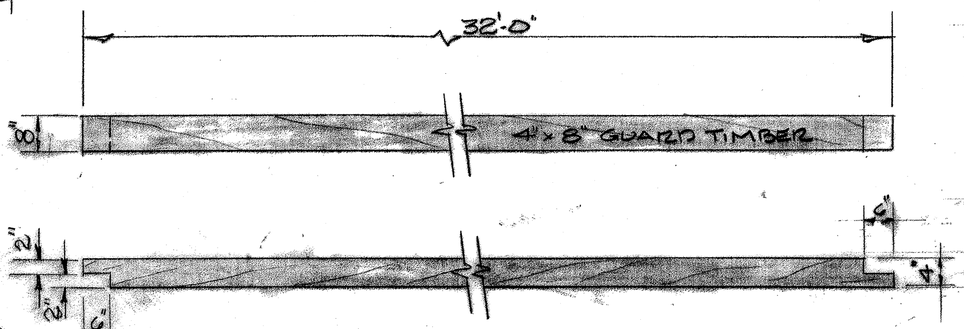
T-4 20 REQ'D.



T-5 1 REQ'D

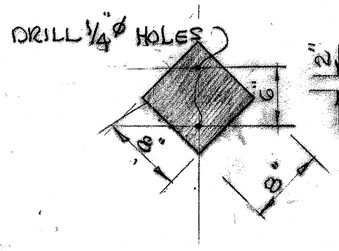


T-6 1 REQ'D



4"x8" GUARD TIMBER 18 REQ'D.

SPACER BLOCKS
4"x8"-8" lg. fir
pressure treated
475 REQ'D.



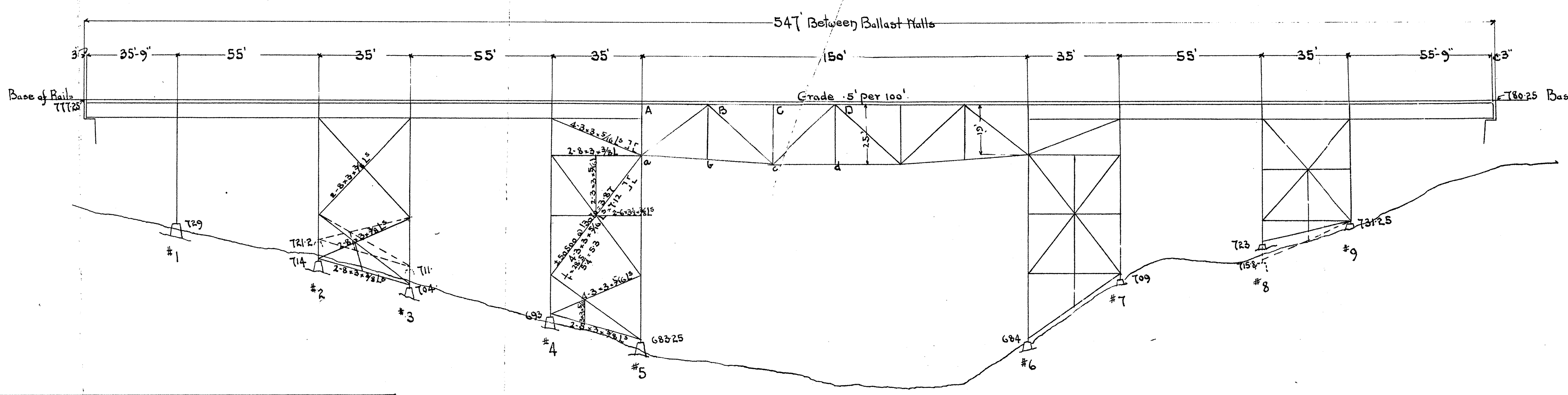
NOTE:
ALL DRILLING DAPPING AND CUTTING SHALL BE COMPLETED PRIOR TO PRESSURE TREATMENT.

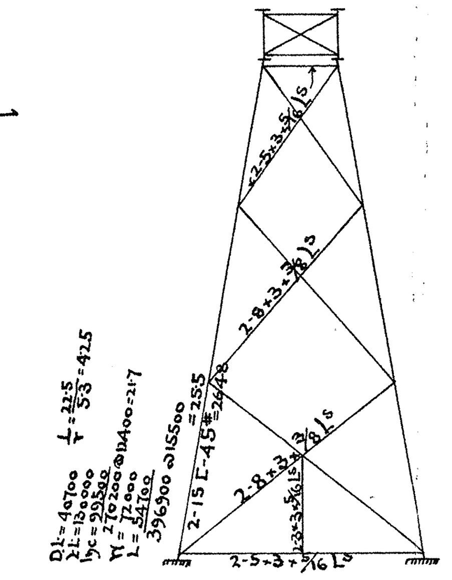
ONTARIO NORTHLAND RLWY.
ENGINEERING DEPT. NORTH BAY ONT.

DECK TIMBER DETAILS
SOUTH WABI BRIDGE MP 11547
TEMAGAMI SUBDIVISION

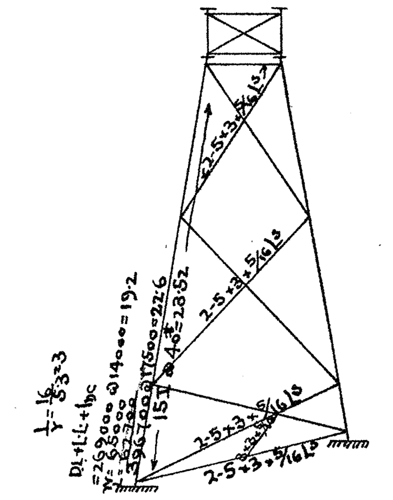
drn WDA	chk	
approved		Struct Supt.
		chief eng fac. mtce
scale as noted	date June 7/78	no B 1308

B-1308



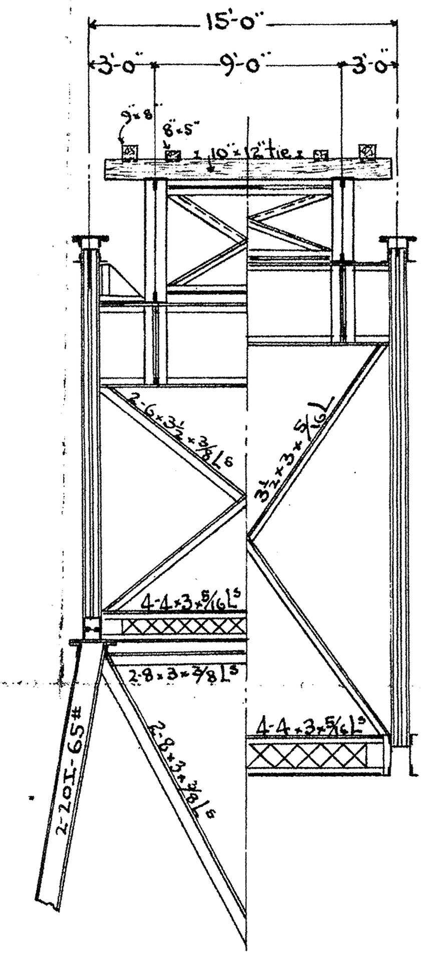


Bent 7
Same as 3 top panels of bent 4

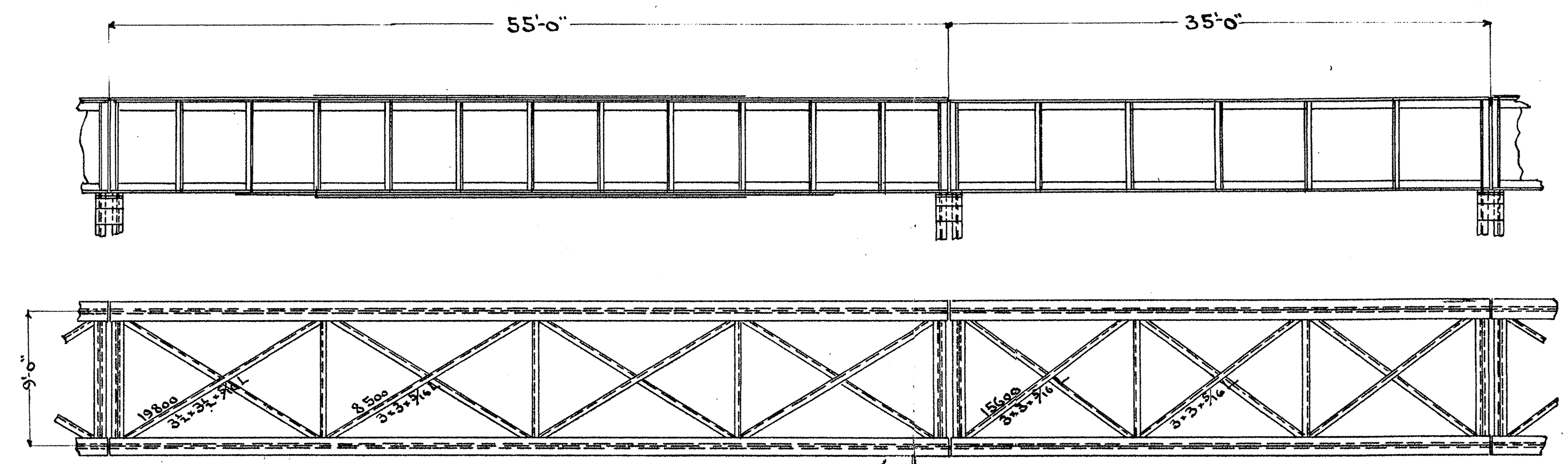


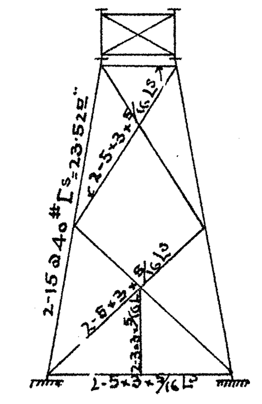
Bent 8

member	Dead Load	Live Load	Total	Increment	Total	Unit Stress	Area Req'd	Material Used	Area	L/r
AB								4-3½×3×3/8 Ls = 9.2 1-22×3/8 plate = 8.25	17.45	
BCD	120000	272000	392000	189000	581000	13860	42.0	2-15 @ 50# [s = 29.42 1-22×9/16 plate = 12.38	41.8	25/5.7
abc	84000	202000	286000	142000	428000	16000	26.8	4-6×4×3/4 Ls = 21.76 1-12×½ plate = 5.00	26.76	net
cd	135000	311000	446000	217000	663000	"	41.6	2-24×½ plates = 20.0 4-6×4×11/16 Ls = 22.88	42.88	"
aB	107000	251000	358000	176000	534000	14600	36.6	2-24×7/16 plates = 21.00 4-6×4×7/16 Ls = 16.72	37.72	31.0/8.5
Bc	50000	141000	191000	104000	295000	16000	18.4	1-12×7/16 plate = 4.37 4-6×3½×½ Ls = 14.00	18.37	
cD	+21500	+98600 -47000	120100	145600	265700	11960	22.2	2-15 @ 40# [s	23.52	35.35/5.43
Aa	27000	97000	124000	76000	200000	11000	18.18	4-6×3½×3/8 Ls = 13.68 1-12×3/8 plate = 4.50	18.18	19./2.5
Bb, Dd								4-3½×3×3/8 Ls	9.2	
Cc	20000	85700	105700	69700	175400	10140	17.3	4-6×3½×½ Ls = 18 12×3/8 pl. (Area not counted)	18.0	25./3.

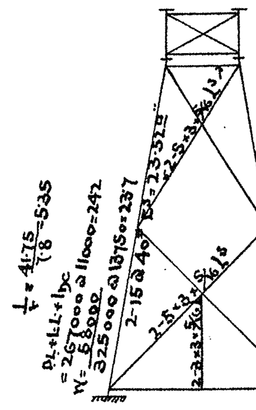


End Elevation Cross Section

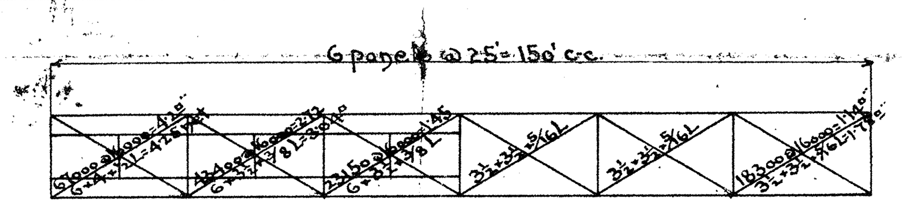




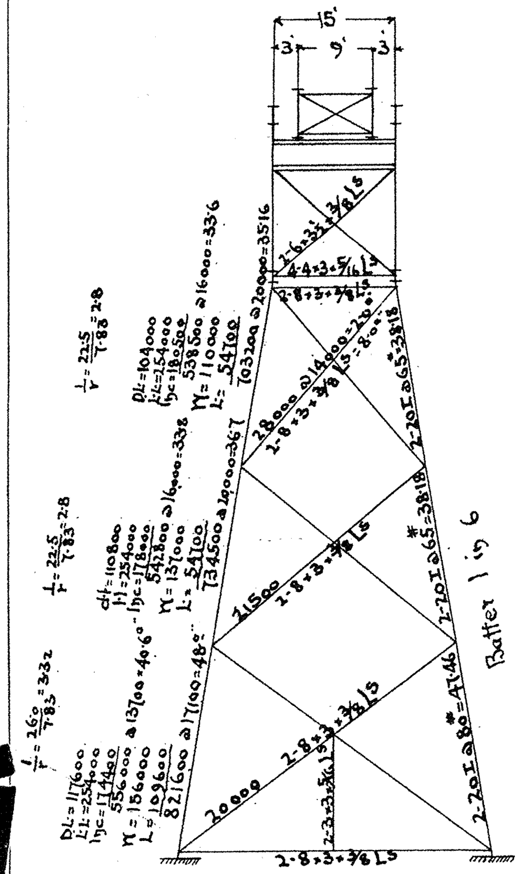
Bent 9



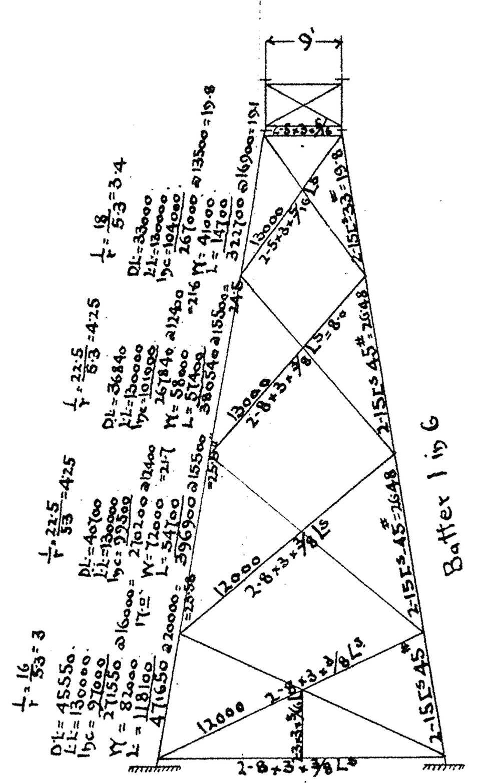
Bent 1



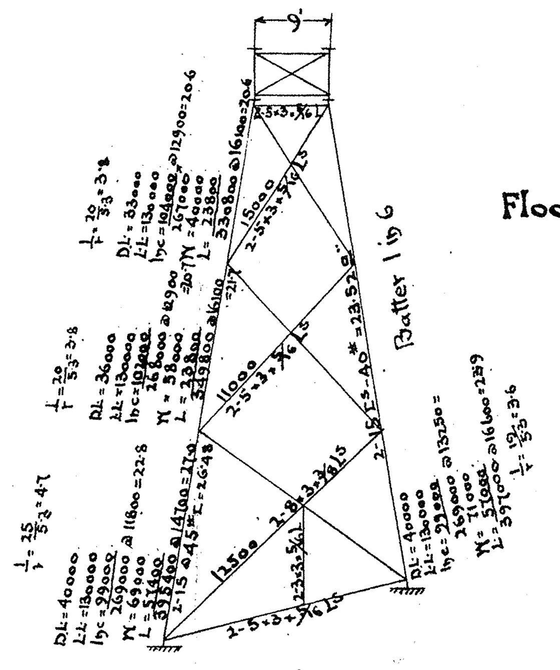
Top Laterals Bottom Laterals



Bents 5 & 6



Bent 4



Bent 3

55' Span

Moment d.l. = 238,000
" l.l. = 1,258,000
1,496,000
Inc. = 1,057,000
2,553,000 ÷ 6' = 425,500 @ 16000 = 26.6□"

1/8 of Web = 3.375
2-6×6×5/8 Ls = 11.720
2-13×9/16 pls = 12.360
27.455□" net

Shear d.l. = 17300
" l.l. = 102650
119950
Inc. = 88000
207950 @ 10,000 = 20.79□"

72×3/8 Web Pl. = 27.0□"

35' Span

Moment d.l. = 84000
" l.l. = 599000
683000
Inc. = 525000
1,208,000 ÷ 5.86' = 206,000 @ 16000 = 12.88□"

1/8 of Web = 3.375
2-6×4×9/16 Ls = 9.490
12.865□" net

Shear d.l. = 9620
" l.l. = 79000
88620
Inc. = 70400
159020 @ 10,000 = 15.9□"

72×3/8 Web Pl. = 27.0□"

Floorbeam

Moment d.l. = 38450
" " = 256980
295430
Inc. = 223000
518430 ÷ 3.75' = 138000 @ 16000 = 8.63□"

1/8 of Web = 2.25
2-6×4×3/8 Ls = 6.47
8.72□" net

Shear d.l. = 12450
" l.l. = 85660
98110
Inc. = 74700
172810 @ 10,000 = 17.28□"

48×3/8 Web = 18.0□"

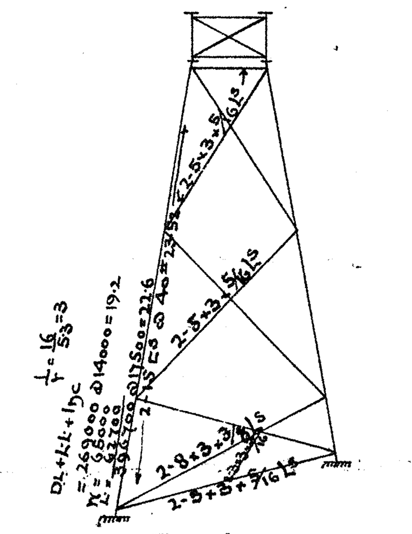
End Floorbeam

Moment d.l. = 65620
" l.l. = 291000
356620
Inc. = 238000
594620 ÷ 4.16' = 142500 @ 16000 = 8.9

1/8 of Web = 2.54
2-6×4×3/8 Ls = 6.47
9.01□" net

Shear d.l. = 21500
" l.l. = 97000
118500
Inc. = 79200
197700 @ 10000 = 19.77□"

54×3/8 Web = 20.3□"



Bent 2

Stringer

Moment d.l. = 35200
" l.l. = 350750
385950
Inc. = 319000
704950 ÷ 3.83' = 184000 @ 16000 = 11.5□"

1/8 of Web = 2.25
2-6×4×9/16 L = 9.49
11.74□" net

Shear d.l. = 5620
" l.l. = 65400
71020
Inc. = 60100
131,120 @ 10,000 = 13.11□"

48×3/8 Web = 18.00"

Data

Dead Load - 2400# per lin. ft 150' Span
" " - 1260# " " " 55' "
" " - 1100 " " " 35' "
Live " - Class I Dom. Gov't Specns 1901
Unit Stresses & Wind Loads " " "

Hatch Mott MacDonald
Received by G. J.
Date Sept 20, 06
Project #
Distr. Date
File #

E 46-6

Temiskaming & Northern Ont. Ry.
Trestle
North Crossing Blache River
Strain Sheet

Scales {30' = 1"; 16' = 1"}

Drawing "A"

Dom. Bridge Co. Ltd
Lachine P.Q.

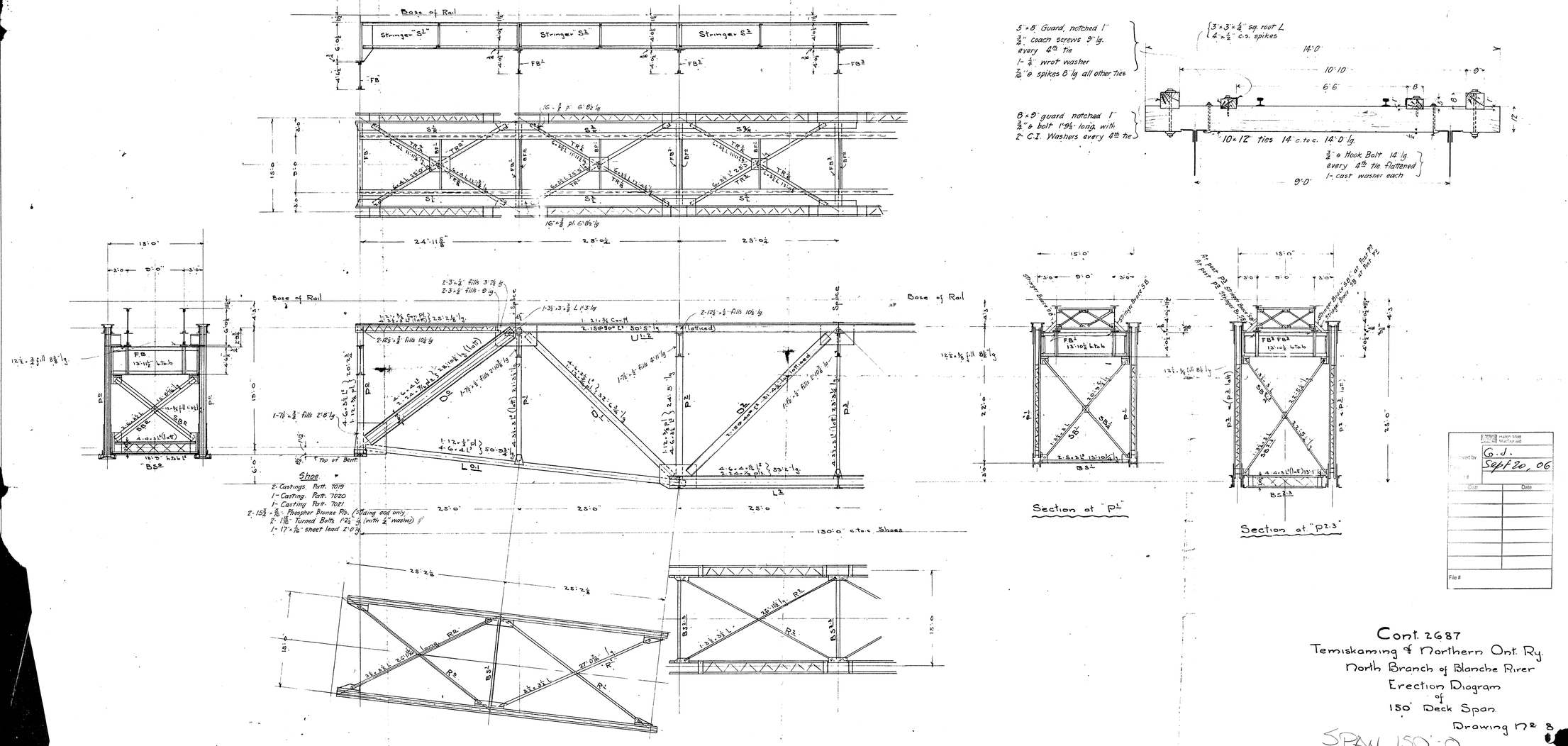
I = 377 + 1.1 = 48.8

1.9

× + 1.5 = 46.8 × 19

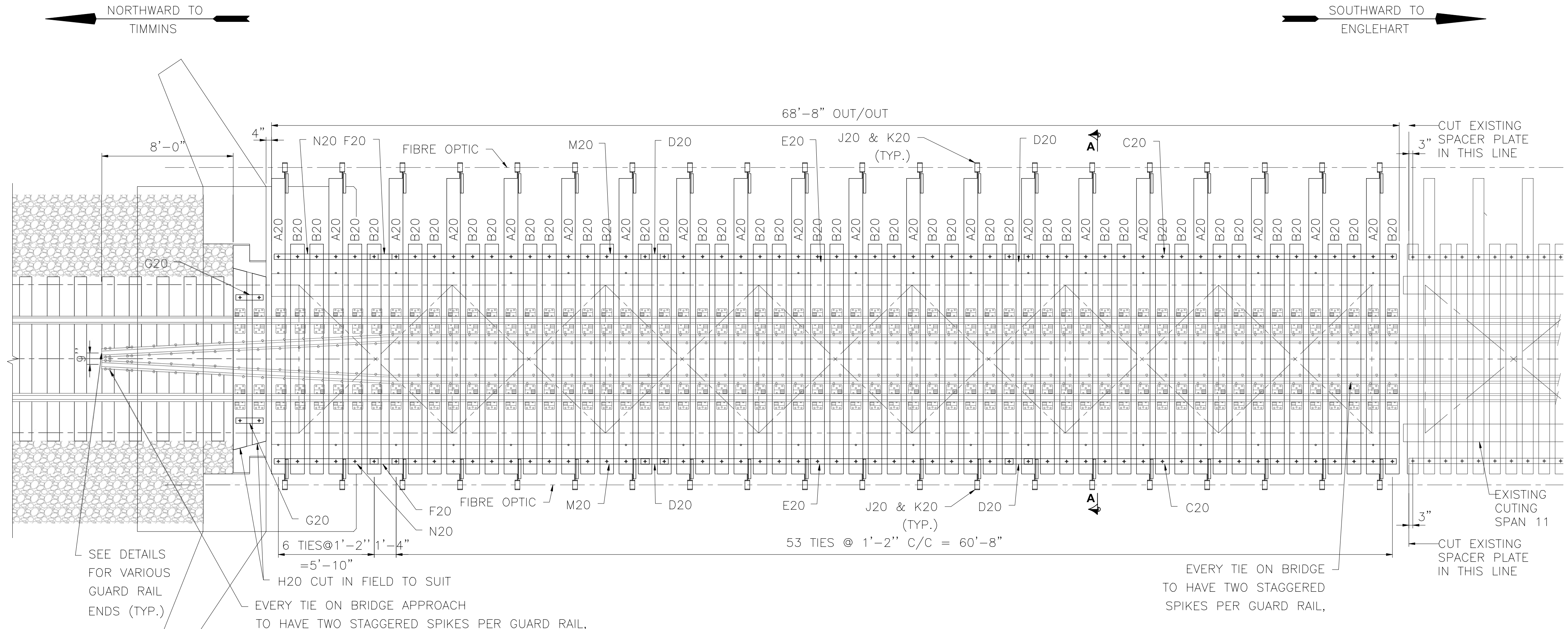
≈ E60

957



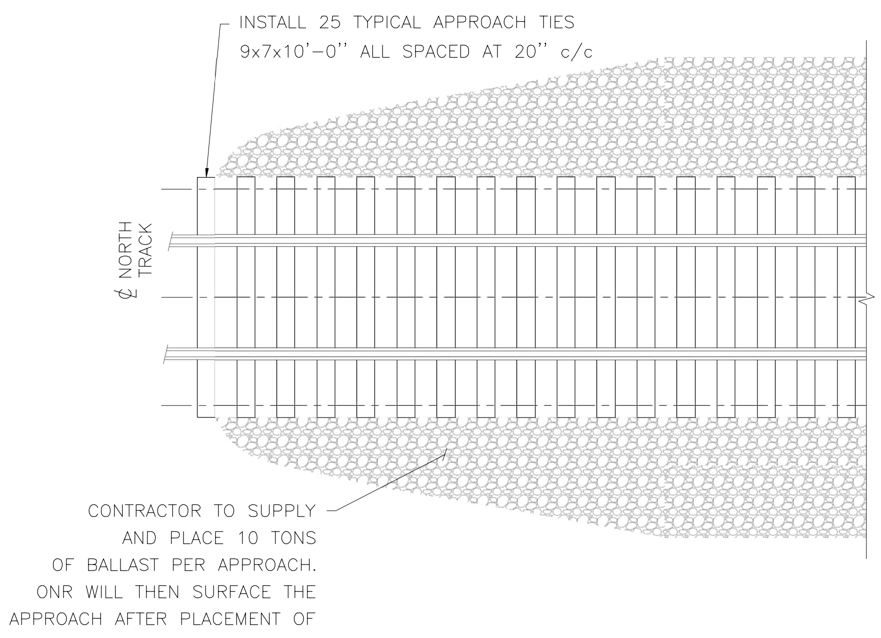
Cont. 2687
Temiskaming & Northern Ont. Ry.
North Branch of Blanche River
Erection Diagram
of
150' Deck Span
Drawing No 8

SPAN 150'-0



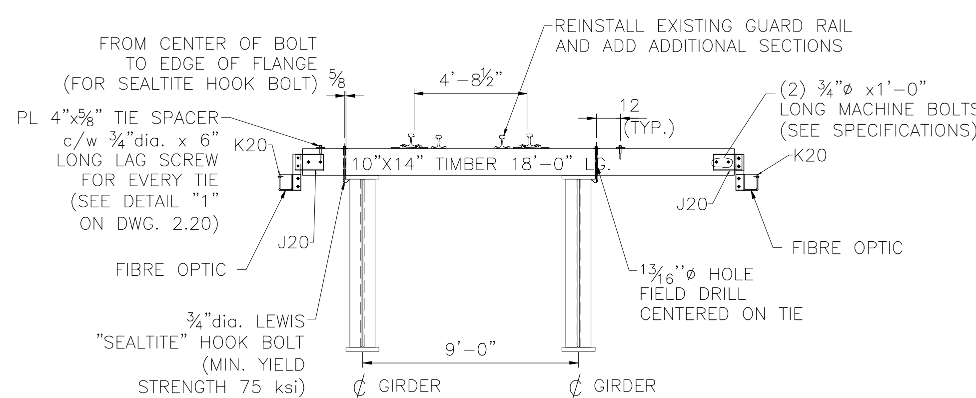
DECK ERECTION DIAGRAM

¼"=1'-0"



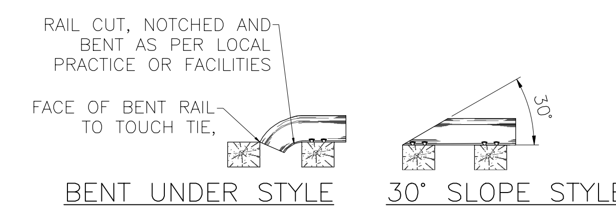
APPROCH

¼"=1'-0"



SECTION A–A

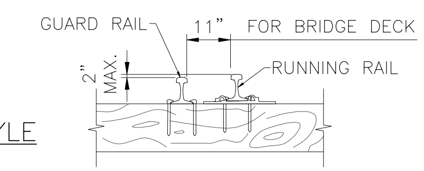
¼"=1'-0"



GUARD RAIL END DETAILS

SCALE: 1"=1'-0"

STYLE OF GUARD RAIL END SHALL BE DETERMINED IN THE FIELD



TYPICAL TIE SECTION

SCALE: ½"=1'-0"

NOTES:

- FOR GENERAL NOTES, REFER TO DWG.2.1;
- FOR DETAIL OF TIES, REFER TO DWG.2.20;
- ALL EXISTING RAIL PLATES AND SPIKES FROM EXISTING SPAN 11, ARE TO BE RE-USED. NEW TIE PLATES AND SPIKES SHALL BE PROVIDED BY CLIENT.

SPECIFICATIONS:

- DESIGN AND WORKMANSHIP: AREMA (LATEST EDITION) CHAPTER 15;
- STRUCTURAL STEEL: CSA-G40.21-13 GRADE 350W OR EQUAL;
- HOLES: 13⁄16"dia. UNLESS NOTED (HOLES MAY BE PUNCHED FULL SIZE);
- ERECTION MARKS AND ORIENTATION SHALL BE CLEARLY INDICATED ON ALL PIECES;
- ¾"dia x 6" LONG LAG-SCREWS FOR SPACER BARS 4"x⅝";
- STYLE "A" HOOK BOLTS: ¾"dia. LEWIS "SEALTITE" HOOK BOLTS C/W LOCK NUT AND WASHER;
- GALVANIZING: ASTM A123-13.
- TIES SHALL BE DOUGLAS FIR NLGA No.1 STRUCTURAL;
- ALL TIES SHALL BE TREATED TIMBER. PRESERVATIVE TREATMENT OF THE TIES SHALL BE 8 LBS PER CUBIC FOOT OF CREOSOTE OR 10 LBS PER CUBIC FOOT OF 50⁄50 CREOSOTE/PETROLEUM AS PER CSA 080.2. RETENTION TO BE DETERMINED BY GAUGE READINGS;
- ALL FIELD HOLES & CUTS IN TREATED TIMBER SHALL BE TREATED WITH OSMOSE COP-R-PLATIC WOOD PRESERVING COMPOUND OR OTHER APPROVED PRESERVATION SYSTEM, DRILLING SHALL PREFERABLY BE DONE PRIOR TO TREATING;
- TREATED TIMBER SHALL BE STORED, HANDLED & FRAMED IN ACCORDANCE WITH CURRENT C.S.A. 080/AWPA M4 FOR THE HANDLING OF TREATED TIMBER. THE POINT OF PIKES, PEAVIES ETC. MUST NOT BE DRIVEN INTO THE SURFACES OF TREATED TIMBER;
- GUARD RAILS SHALL BE PLACED ON BRIDGES AS PER CN SPC 4500. GUARD RAILS SHALL BE ONE SIZE SMALLER THAN RUNNING RAIL AND SHALL NOT BE MORE THAN 2" LOWER THAN THE TOP OF RUNNING RAILS.

QUANTITIES:

- ¾"dia.x6" LAG SCREW ________ 116 EA.
- ¾"dia.x8" LAG SCREW FOR SPLICE ________ 12 EA.
- ¾"dia.x1'-5" LONG HOOK BOLT ________ 40 EA.
  (C/W HARDWARE)
- GUARD RAIL ________ 2-39 ft RAILS

NOTES:

LEGEND:

AS BUILT DOCUMENT

THE FOLLOWING AS-BUILT DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. HATCH Ltd. ("HATCH") HAS NOT INSPECTED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED

No.	DATE	REVISION	BY
1	24-11-21	AS BUILT	F.T.
0	14-04-21	ISSUED FOR CONSTRUCTION	F.T.

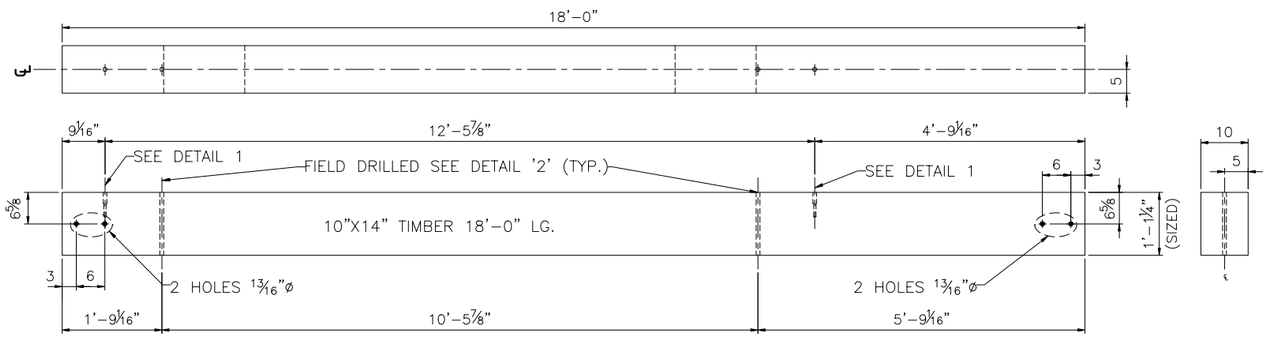
Ontario Northland

HATCH

HATCH PROJECT No. 363784

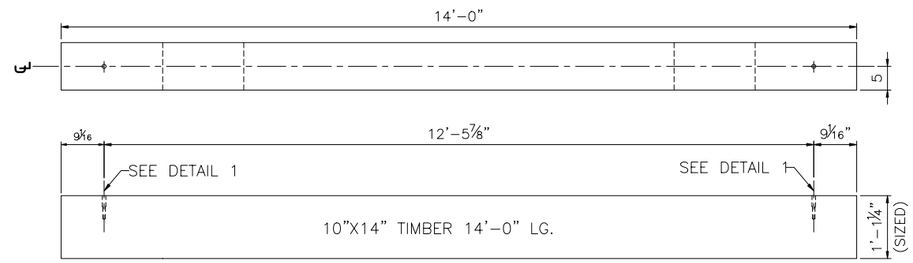
BRIDGE OVER NORTH BLANCHE RIVER
MILE 7.45 RAMORE SUBDIVISION
ABUTMENT REPLACEMENT
68'-8'' D.P.G. SPAN – TIMBER DECK

DWG. BY: F.T. CHK BY: R.A.	OFFICE FILE:
	SCALE: AS SHOWN
ENGINEER: R.A.	DATE: 03-02-2021
PROJECT MANAGER: A.M.	PLAN No. *RAM-7.45-2.19*



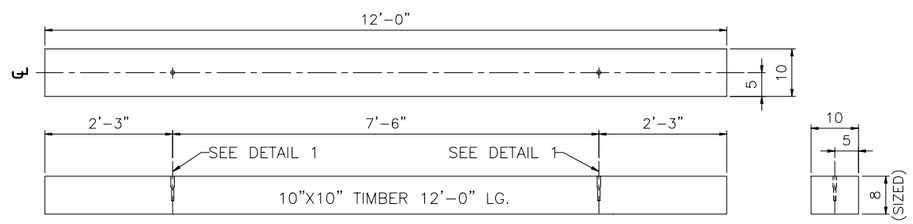
BRIDGE TIE WITH HOOK BOLTS "A20" (20 REQUIRED)

3/4"=1'-0"



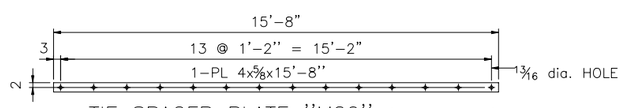
BRIDGE TIE WITHOUT HOOK BOLTS "B20" (39 REQUIRED)

3/4"=1'-0"



ABUTMENT TIE "H20" (2 REQUIRED)

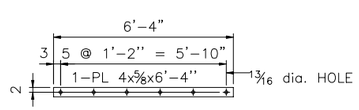
3/4"=1'-0"



TIE SPACER PLATE "M20" (2 REQUIRED)

UNIT WT: 126 LBS

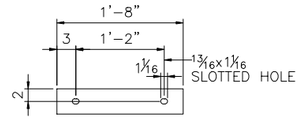
3/8"=1'-0"



TIE SPACER PLATE "N20" (2 REQUIRED)

UNIT WT: 57 LBS

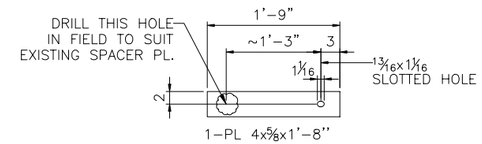
3/8"=1'-0"



TIE SPACER PLATE "D20" (4 REQUIRED)

UNIT WT: 14 LBS

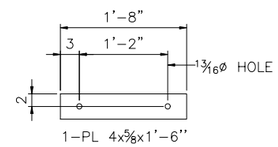
1"=1'-0"



TIE SPACER PLATE "F20" (2 REQUIRED)

UNIT WT: 15 LBS

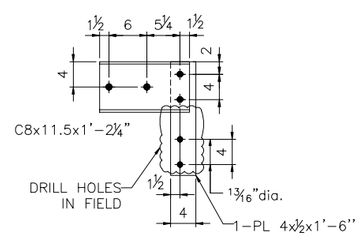
1"=1'-0"



TIE SPACER PLATE "G20" (2 REQUIRED)

UNIT WT: 14 LBS

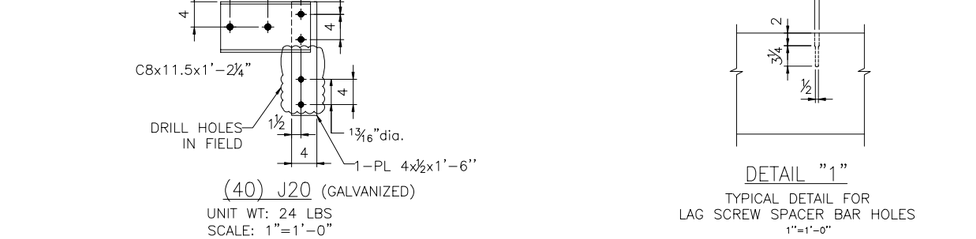
1"=1'-0"



(40) J20 (GALVANIZED)

UNIT WT: 24 LBS

SCALE: 1"=1'-0"



TIE SPACER PLATE "E20" (2 REQUIRED)

UNIT WT: 183 LBS

3/8"=1'-0"

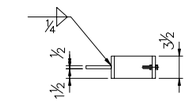
TIE SPACER PLATE "C20" (2 REQUIRED)

UNIT WT: 193 LBS

3/8"=1'-0"

NOTES:

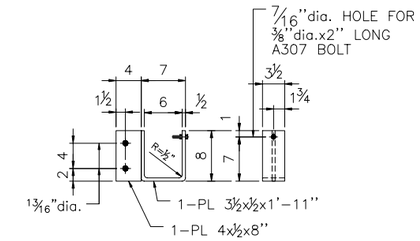
- FOR GENERAL NOTES AND SPECIFICATIONS, REFER TO DWG. 2.1 & 2.19;
- THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG.2.19.



DETAIL "1"

TYPICAL DETAIL FOR
LAG SCREW SPACER BAR HOLES

1"=1'-0"

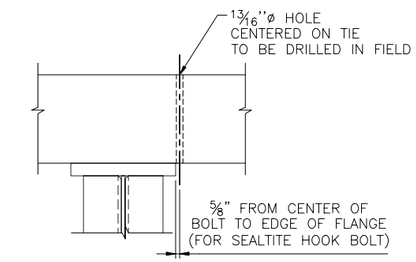


CONTRACTOR SHALL CONFIRM EXISTING CONDUIT WILL FIT IN "K20" PRIOR TO FABRICATION

(40) K20 (GALVANIZED)

UNIT WT: 15 LBS

SCALE: 1"=1'-0"



DETAIL "2"

TYPICAL HOOK BOLT
DETAIL TO BE
DRILLED IN FIELD

QUANTITIES: (ON THIS DRAWING)

- BRIDGE TIE 10x14x18'-0" (A20) _____ 20 EA.
- BRIDGE TIE 10x14x14'-0" (B20) _____ 39 EA.
- ABUTMENT TIE 10x10x12'-0" (H20) _____ 2 EA.
- NORTH APPROACH TIES 9"x7"x10'-0" _____ 25 EA.
- SPACER PLATES _____ 1252 LBS
- STRUCTURAL STEEL FOR BRACKETS _____ 1560 LBS

NOTES:

LEGEND:

AS BUILT DOCUMENT

THE FOLLOWING AS-BUILT DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION PROVIDED BY OTHERS. HATCH Ltd. ("HATCH") HAS NOT INSPECTED THE ACCURACY AND/OR COMPLETENESS OF THIS INFORMATION AND SHALL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH MAY BE INCORPORATED

No.	DATE	REVISION	BY
1	24-11-21	AS BUILT	F.T.
0	14-04-21	ISSUED FOR CONSTRUCTION	F.T.

Ontario Northland

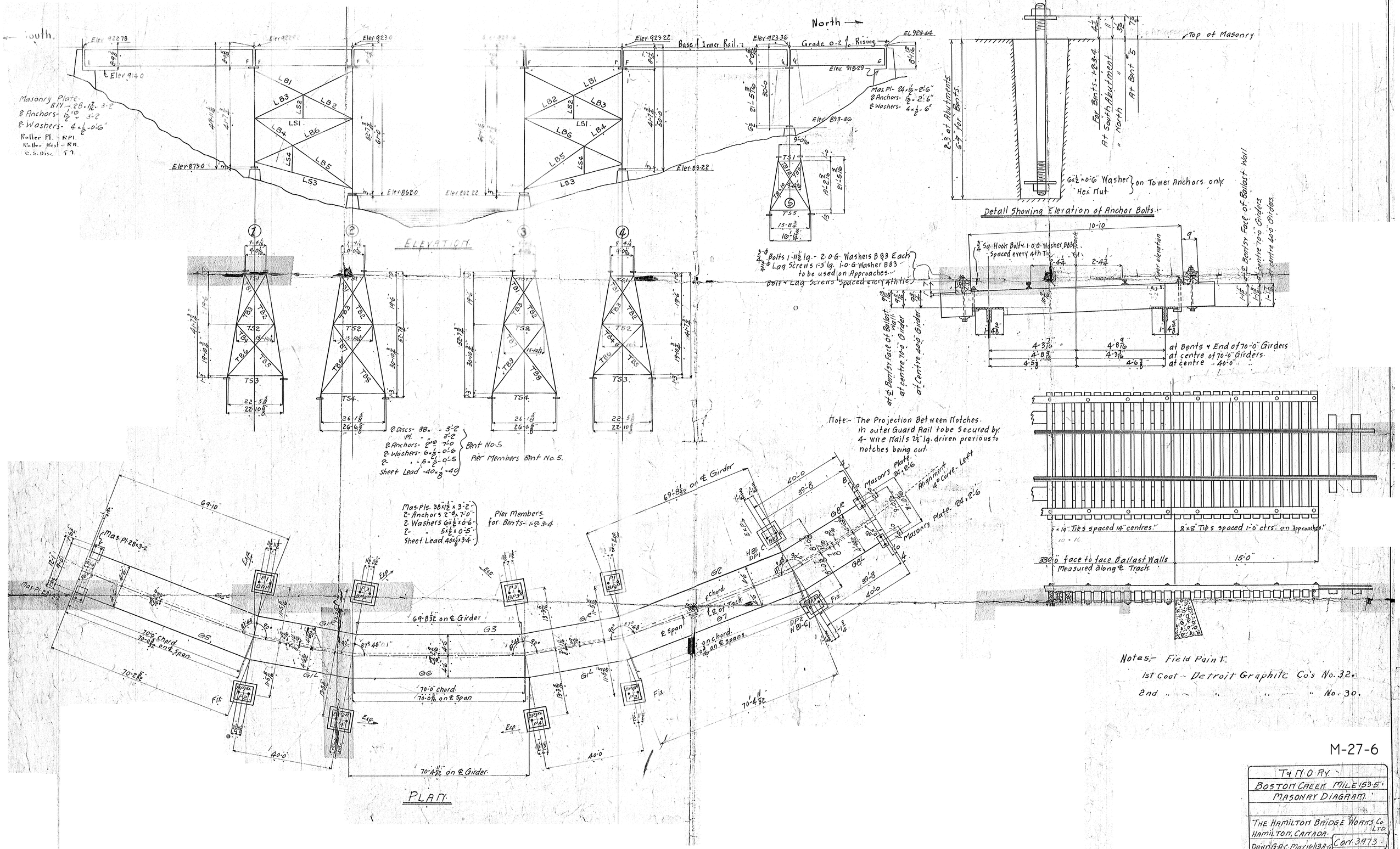
HATCH

HATCH PROJECT No. 363784

BRIDGE OVER NORTH BLANCHE RIVER
MILE 7.45 RAMORE SUBDIVISION
ABUTMENT REPLACEMENT
68'-8" D.P.G. SPAN-TIMBER DECK-DETAILS

DWG. BY: F.T. CHK BY: R.A.
ENGINEER: R.A.
PROJECT MANAGER: A.M.

OFFICE FILE:
SCALE: AS SHOWN
DATE: 03-02-2021
PLAN No. RAM-7.45-2.20



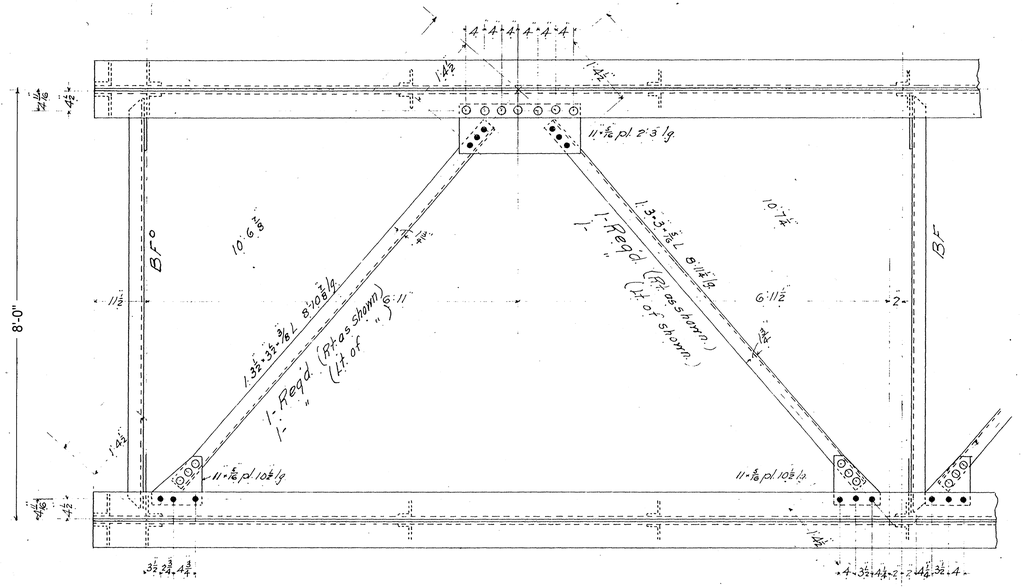
Notes:- Field Paint.

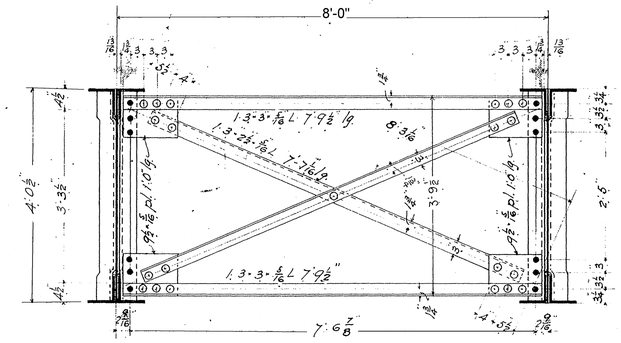
1st Coat - Detroit Graphite Co's No. 32.

2nd " " " " No. 30.

M-27-6

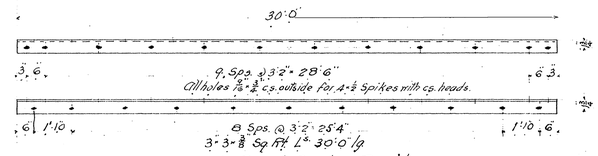
T & N.O. R.Y.
BOSTON CREEK MILE 153.5
MASONRY DIAGRAM.
THE HAMILTON BRIDGE WORKS Co. LTD. HAMILTON, CANADA.
Drawn G.A.C. May 16/13 & Corr. 3973
Chd. W.L.C. July 11/13 W.O.
Rev'd Aug 12/13 Dr. C.



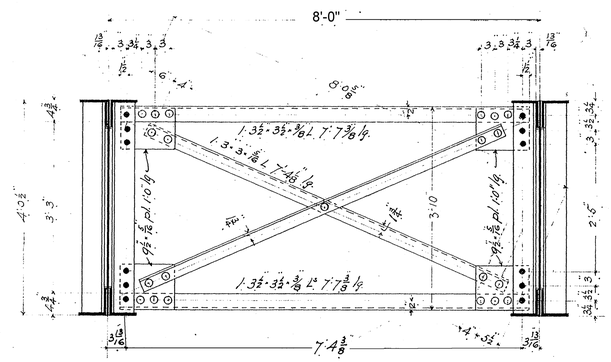


1. Int. Brace Frame Req'd.
Mark "BF"

Floor Iron
16-¾ φ bolts 2" Grip 1'-9½" lg.
16-¾ φ coach screws 9" lg.
32 C.I. washers for ¾ φ bolts.
16-Nut washers for coach screws.
56-7/16 φ Spikes 6" lg.
46-½ φ Spikes 4" lg. csk. heads.



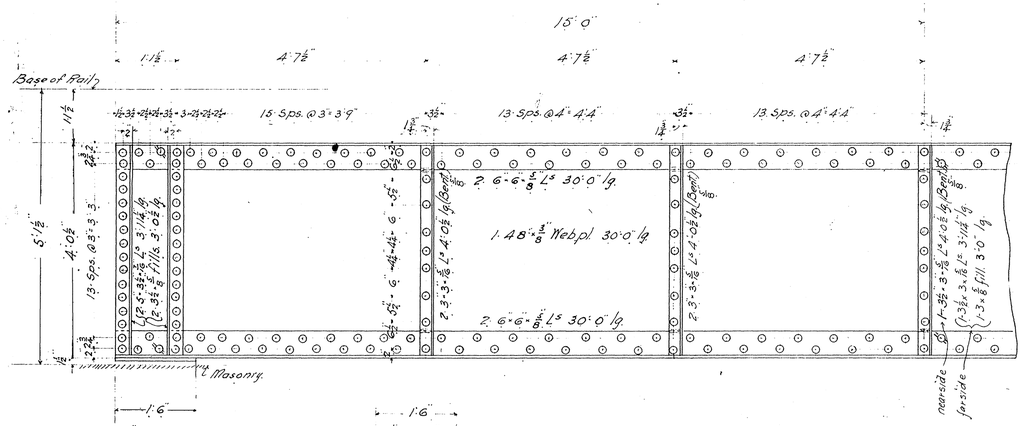
2. Guard Angles Req'd.

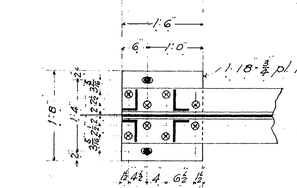


2. End Brace Frames Req'd.
Mark "BF°"

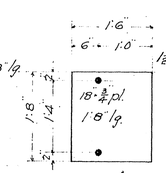
⅞" φ Rivets. Holes in bottom flanges punched 13/16" and reamed to 7/8".

Span shop rivetted up complete.

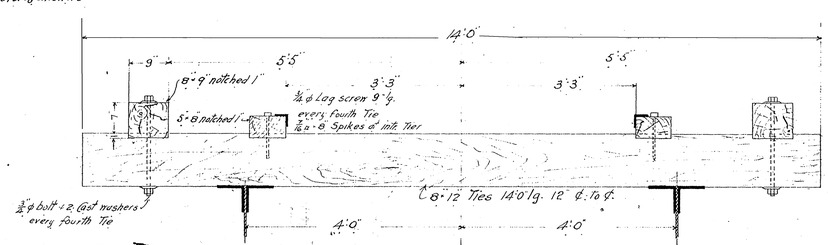


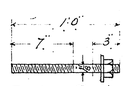


1½ φ Round holes this end
2½"-1½ Slots other end.



Bed Plate
4 Req'd.





Anchor Bolts.
8 Req'd.
4 with 1-4"-3"-¼ washer each

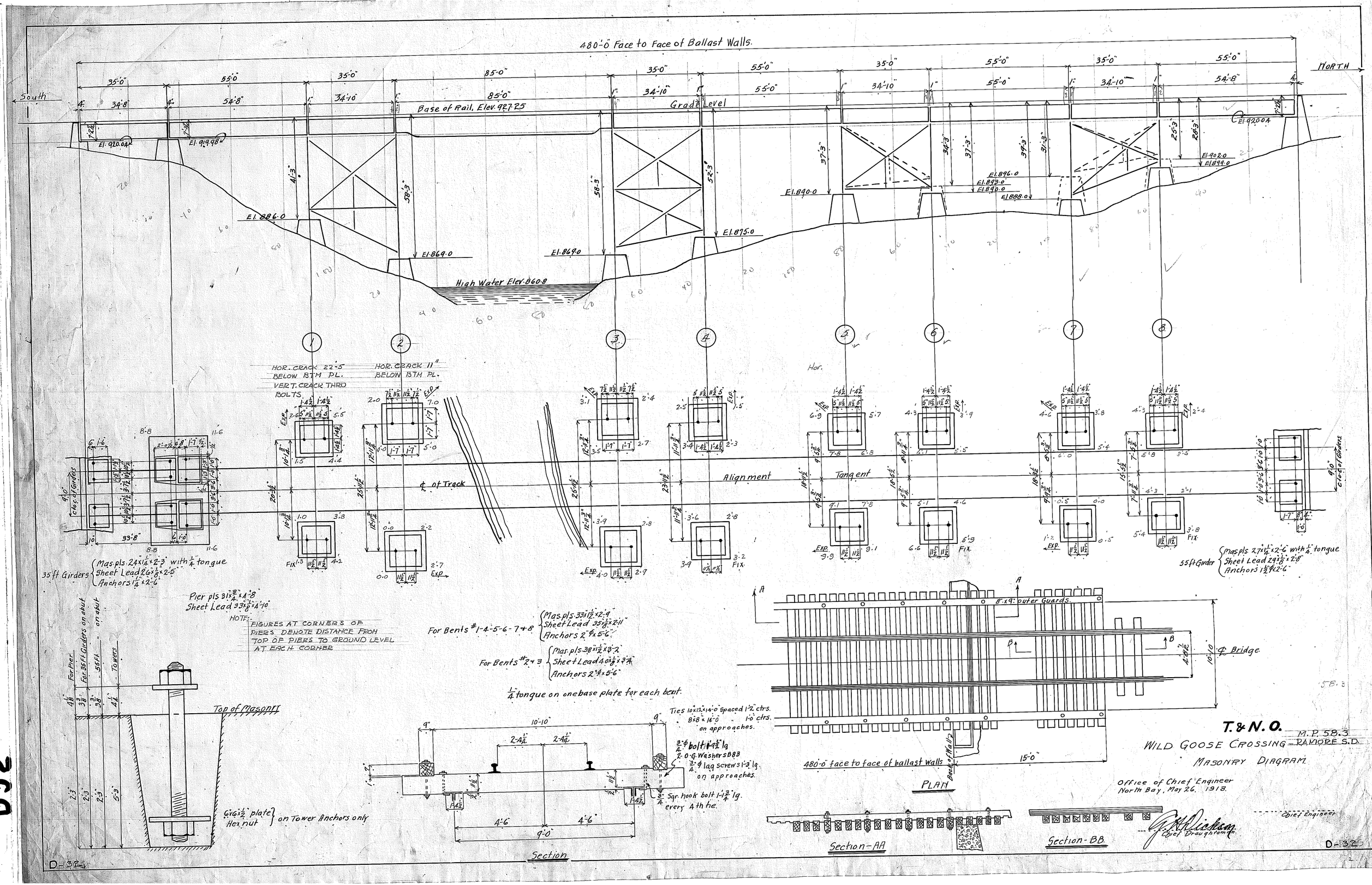
¼ φ Scale

Contract 2560
Temiskaming & Northern Ontario Railway Co.

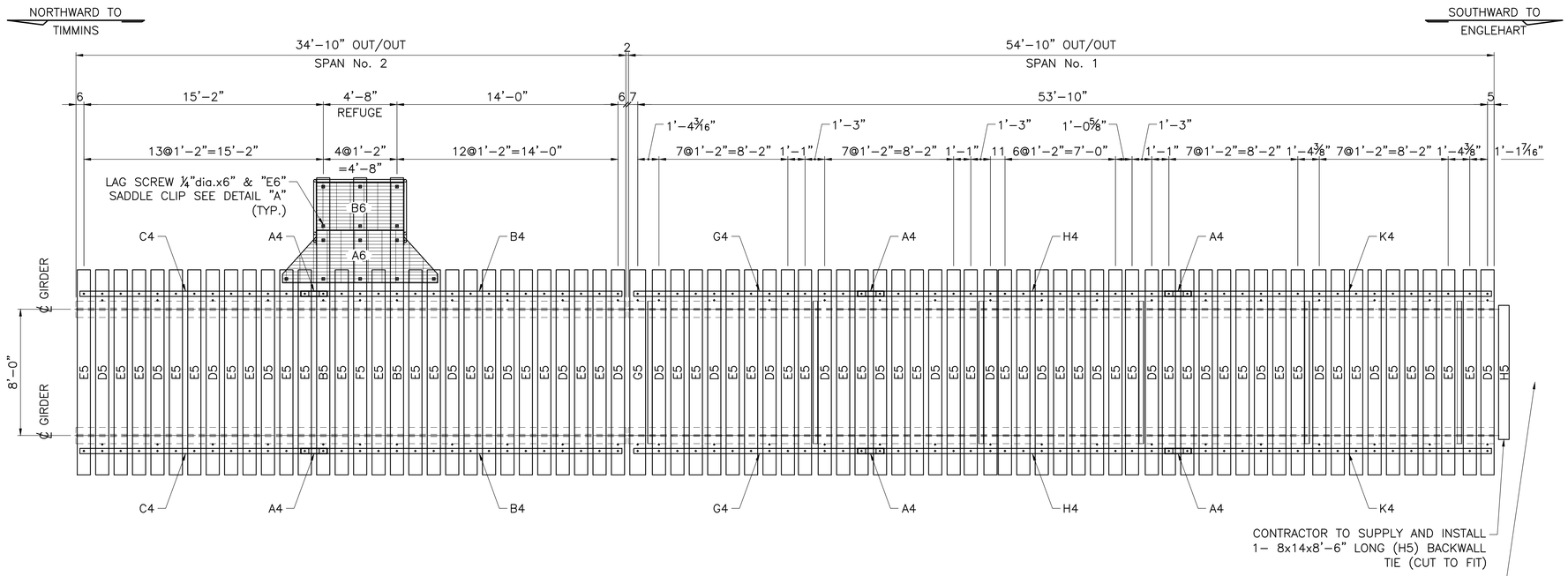
30'-0" Plate Girder Span at 31st Mile
Drawing No. 1

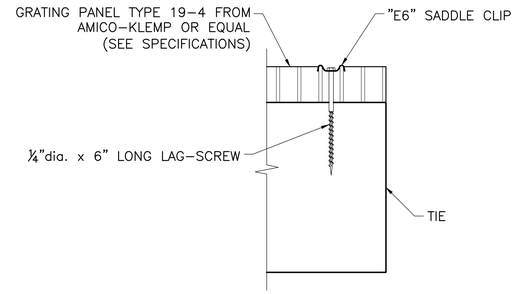
July 20. 04.
AL

July 18/04 R.S.


480'-0" Face to Face of Ballast Walls.
South
NORTH
Base of Rail, Elev. 927.25
Grade Level
El. 920.0A
El. 919.98
El. 886.0
El. 869.0
El. 869.0
High Water Elev. 860.8
El. 875.0
El. 890.0
El. 896.0
El. 893.0
El. 890.0
El. 888.0
El. 902.0
El. 899.0
HOR. CRACK 22'-5" BELOW BTM PL. VERT. CRACK THRU BOLTS.
HOR. CRACK 11" BELOW BTM PL.
℄ of Track
Alignment
Tangent
35 ft Girders { Mas. pls. 2.4"x1/4"x2'-3" with 1/4" tongue; Sheet Lead 26"x3/8"x2'-5"; Anchors 1 1/4"x2'-6"
Pier pls 31"x3/4"x4'-8"; Sheet Lead 33 3/8"x4'-10"
55 ft Girder { Mas. pls. 27"x1/4"x2'-6" with 1/4" tongue; Sheet Lead 29 1/8"x2'-8"; Anchors 1 1/2"x2'-6"
For Bents #1-4-5-6-7+8 { Mas. pls. 33"x1/2"x2'-9"; Sheet Lead 33 3/8"x2'-11"; Anchors 2"x5'-6"
For Bents #2+3 { Mas. pls. 38"x1/2"x3'-2"; Sheet Lead 40 3/8"x3'-4"; Anchors 2"x5'-6"
1/4" tongue on one base plate for each bent.
HOTE: FIGURES AT CORNERS OF PIERS DENOTE DISTANCE FROM TOP OF PIERS TO GROUND LEVEL AT EACH CORNER
Top of Masonry
For Pier
For 35 ft Girders on abut
55 ft " on abut
Towers
6"x6"x1/2" plate Hex nut } on Tower Anchors only
Ties 10"x12"x14'-0" spaced 1'-2" ctrs.
8"x8"x14'-0" " 1'-0" ctrs.
on approaches.
3/4"φ bolt 1'-4 1/2" lg
2-O.G. Washers B83
3/4"φ lag screws 1'-3" lg.
on approaches.
Sqr. hook bolt 1-3/4" lg. every 4th tie.
Section
8"x9" outer Guards
℄ Bridge
480'-0" face to face of ballast walls
Back of Wall
PLAN
Section-AA
Section-BB
T. & N. O.
M. P. 58.3
WILD GOOSE CROSSING — RAMORE S.D.
MASONRY DIAGRAM.
Office of Chief Engineer
North Bay, May 26. 1913.
Chief Draughtsman.
Chief Engineer.
D-32

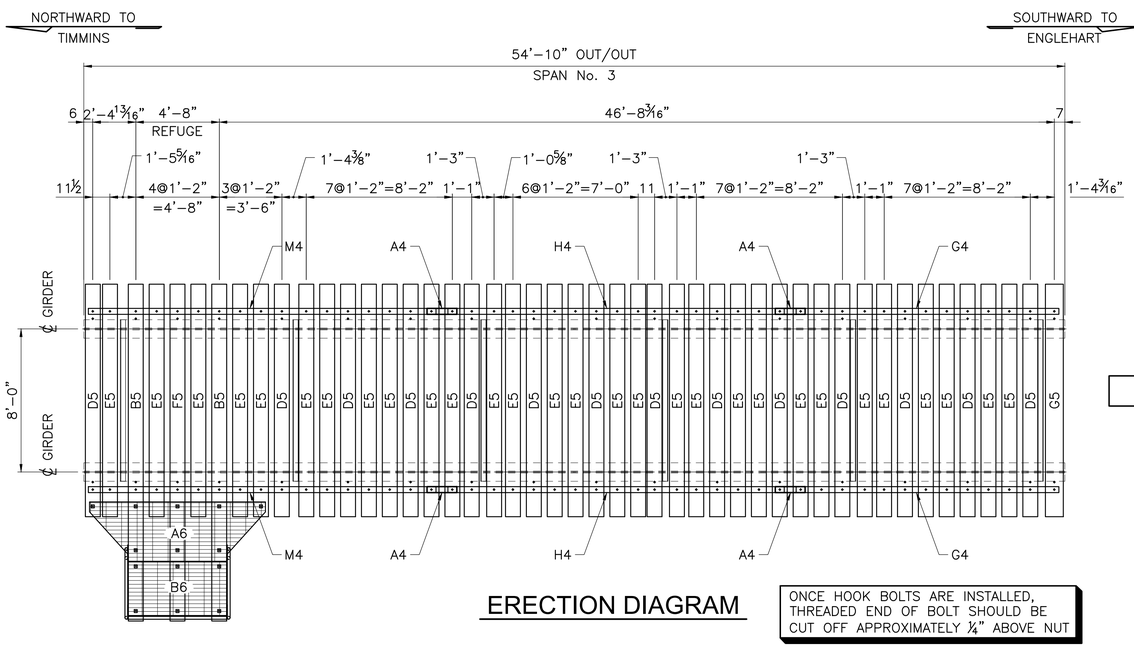
D32





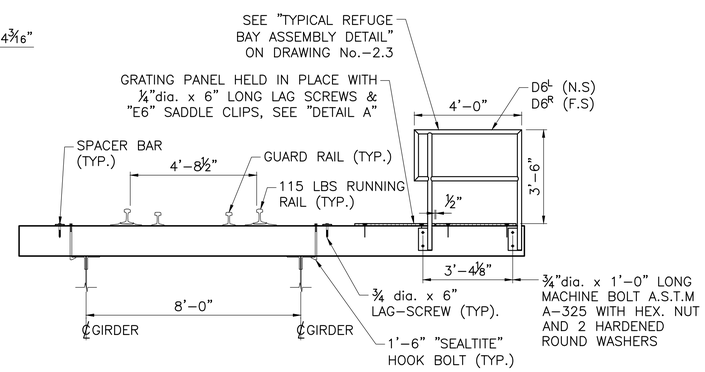
DETAIL "A"

SCALE: 3"=1'–0"



ERECTION DIAGRAM

ONCE HOOK BOLTS ARE INSTALLED, THREADED END OF BOLT SHOULD BE CUT OFF APPROXIMATELY ¼" ABOVE NUT



TYPICAL CROSS SECTION AT REFUGE BAY

NOTES:

- MARKS AND ORIENTATION SHALL BE CLEARLY INDICATED ON ALL PIECES;
- ALL GALVANIZED MATERIAL CUT OR WELDED IN FIELD SHALL BE PAINTED WITH "GALVICON";
- CONTRACTOR TO SUPPLY AND INSTALL APPROXIMATELY 10 TONS OF BALLAST AT EACH BRIDGE APPROACH;
- REFERENCES:
  - INSPECTION REPORT DATED: 27 JULY 2015
  - EXISTING DRAWINGS WITH CONTRACT No: 28096

SPECIFICATIONS:

- DESIGN AND WORKMANSHIP: AREMA CHAPTER 15 (LATEST EDITION);
- STRUCTURAL STEEL: C.S.A. CAN3–G40.21 GRADE 300W OR EQUAL (FOR SPACER BARS AND SPACER SPLICES);
- STRUCTURAL STEEL: CAN/CSA G40.21, GRADE 44W & 50W OR EQUAL (FOR ALL REFUGE BAY MATERIAL);
- 13/16"dia. HOLES UNLESS NOTED OTHERWISE (ALL HOLES FOR SPACER BARS CAN BE PUNCHED FULL SIZE);
- PAINT: NOT REQUIRED;
- ¾"dia.x6" LAG–SCREWS FOR SPACER BARS 4x⅝;
- ¾"dia.x8" LAG–SCREWS FOR SPLICE BARS 4x⅝;
- GALVANIZATION: A.S.T.M. A123;
- WELDING: C.S.A. W59 & AWS D1.5;
- ¾"dia. x 1'–6" LONG LEWIS "SEALTITE" HOOK BOLTS TYPE HK2H2. (MIN. YIELD STRENGTH 75 KSI) WITH 6" OF THREAD, WASHER AND HEAVY HEX. LOCK–NUT;

LEGEND:

- B.S. = BOTH SIDE.
- F.S. = FAR SIDE.
- M.T. = MECHANICAL TUBING.
- O.D. = OUTSIDE DIAMETER.

LIST OF DRAWINGS:

–ERECTION DIAGRAM SPANS 1, 2 & 3	DRAWING 2.1
–ERECTION DIAGRAM SPAN 4	DRAWING 2.2
–ERECTION DIAGRAM SPAN 5, 6, 7 & 8	DRAWING 2.3
–SPACER BAR DETAILS	DRAWING 2.4
–BRIDGE TIE DETAILS	DRAWING 2.5
–FIELD AND STEEL DETAILS	DRAWING 2.6
–BILL OF MATERIAL	DRAWING 2.7

INSTALLATION OF DECK:

- INSTALL NEW 115 LBS DOUBLE SHOULDER TIE PLATES WITH REQUIRED SPIKES. ONR TO CHECK STOCKPILES FOR AVAILABILITY.
- FOR ADDITIONAL TIE INSTALLATION DETAILS, SEE "TYPICAL CROSS SECTION AT REFUGE BAY"
- CONTRACTOR TO SUPPLY ALL REQUIRED TIE PADS

ESTIMATED QUANTITIES: (FOR DRAWINGS 2.1, 2.2 & 2.3)

–¾"dia. x 6" LAG–SCREWS	810 EA.
–¾"dia. x 8" LAG–SCREWS	80 EA.
–¾"dia. x 1'–6" HOOK BOLT	320 EA.
–¼"dia. x 6" LAG–SCREWS FOR "E6" SADDLE CLIP	65 EA.

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS–BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

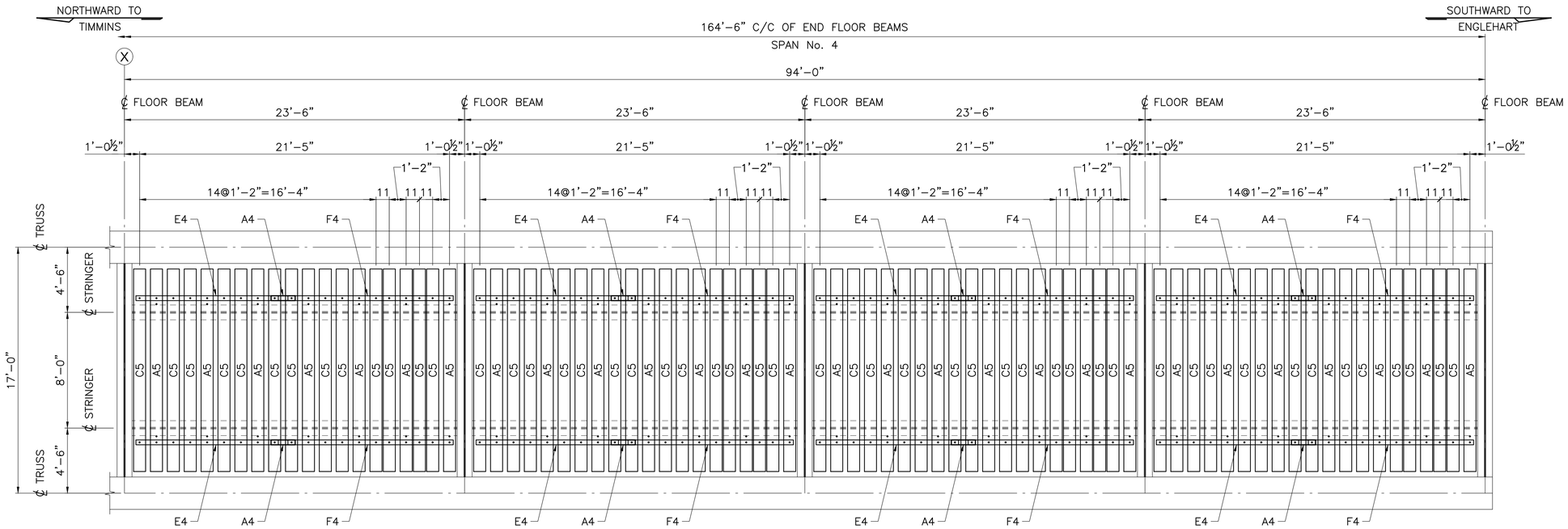
HATCH

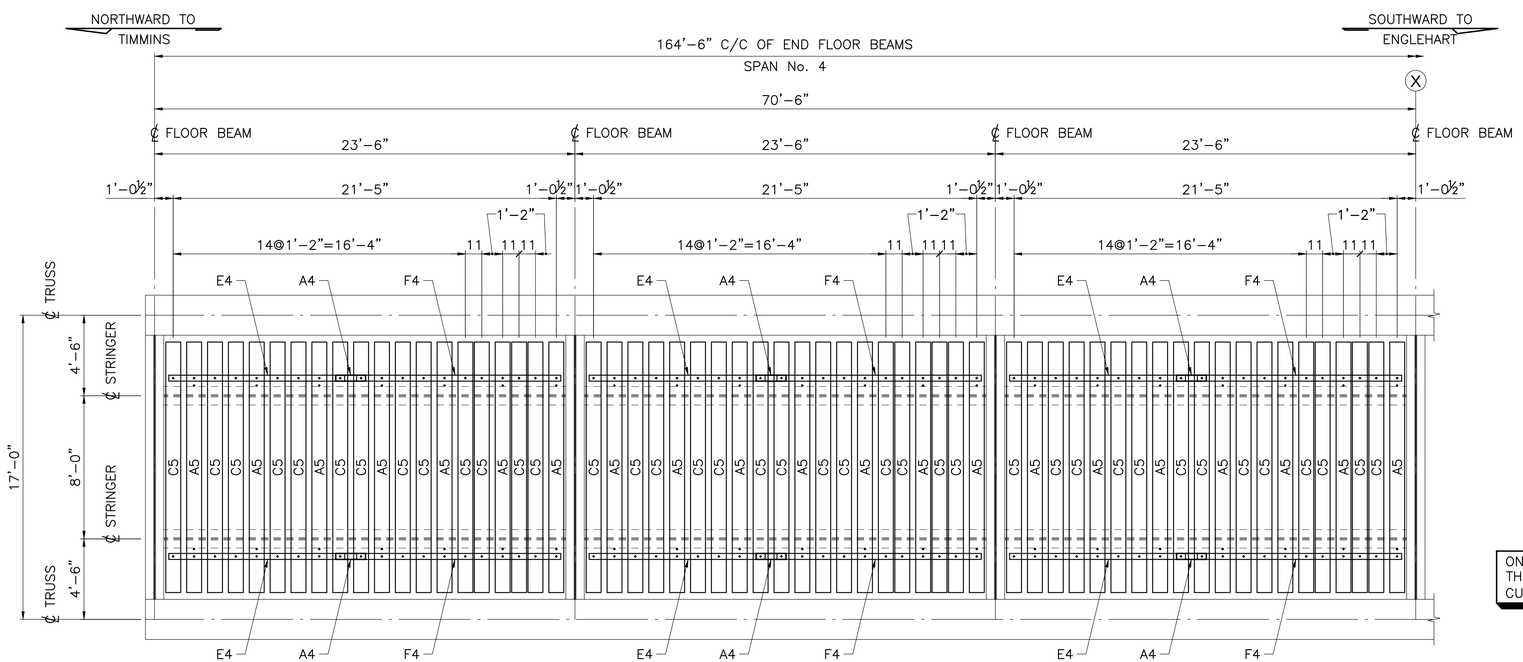
PROJECT No. H–351632

BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

DECK REPLACEMENT
ERECTION DIAGRAM SPANS 1, 2 & 3

DWG. BY: ED CHK BY: WW
OFFICE FILE:
SCALE: ¼"=1'–0"
ENGINEER:
DATE: MAY 2016
PROJECT MANAGER:
PLAN No. RMR–79.00–2.1





ONCE HOOK BOLTS ARE INSTALLED, THREADED END OF BOLT SHOULD BE CUT OFF APPROXIMATELY ¼" ABOVE NUT

ERECTION DIAGRAM

NOTES:

-FOR NOTES AND SPECIFICATIONS SEE DRAWING No.-2.1

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS-BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

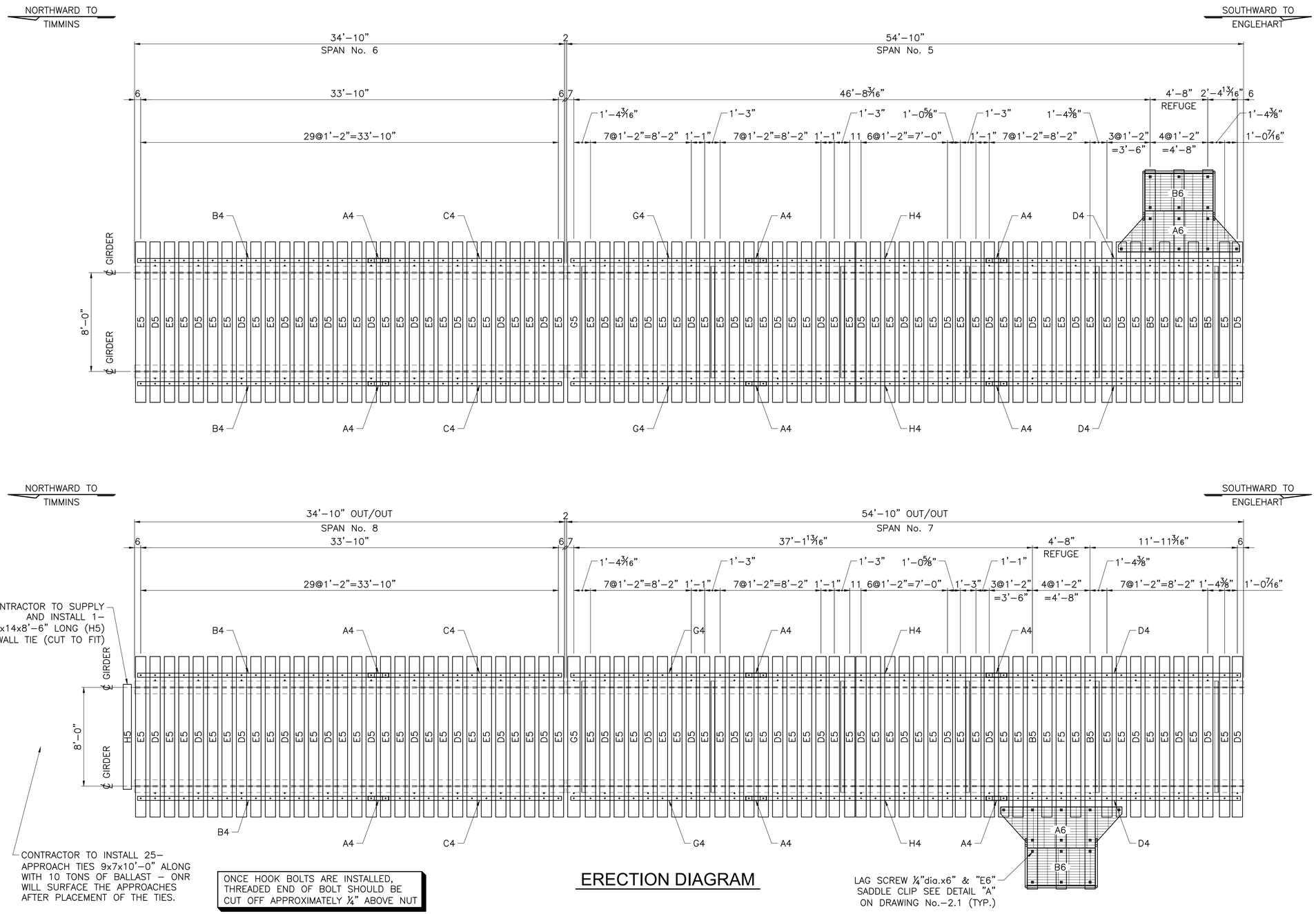
HATCH

PROJECT No. H-351632

BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

DECK REPLACEMENT
ERECTION DIAGRAM SPAN 4

DWG. BY: ED CHK BY: WW
OFFICE FILE:
SCALE: ¼"=1'-0"
ENGINEER:
DATE: MAY 2016
PROJECT MANAGER:
PLAN No. RMR-79.00-2.2



ONCE HOOK BOLTS ARE INSTALLED, THREADED END OF BOLT SHOULD BE CUT OFF APPROXIMATELY 1/4" ABOVE NUT

ERECTION DIAGRAM

NOTES:

-FOR NOTES AND SPECIFICATIONS SEE DRAWING No.-2.1

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS-BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

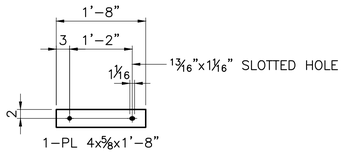
HATCH

PROJECT No. H-351632

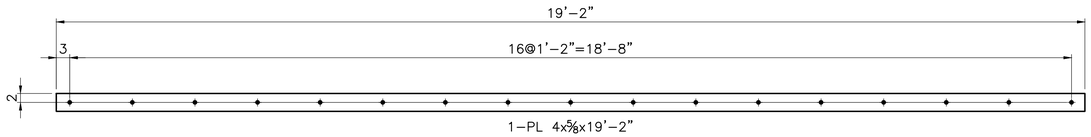
BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

DECK REPLACEMENT
ERECTION DIAGRAM SPANS 5, 6, 7 & 8

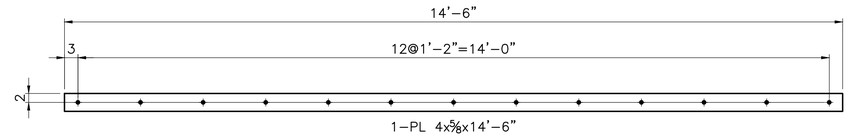
DWG. BY: ED CHK BY: WW
ENGINEER:
PROJECT MANAGER:
OFFICE FILE:
SCALE: 1/4"=1'-0"
DATE: MAY 2016
PLAN No. RMR-79.00-2.3



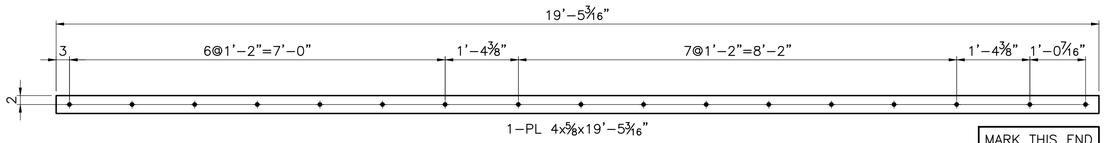
36 - A4
UNIT WT: 14 LBS



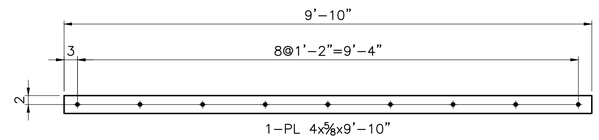
6 - B4
UNIT WT: 163 LBS



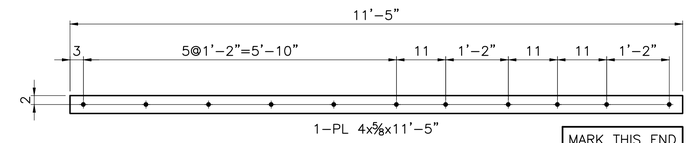
6 - C4
UNIT WT: 123 LBS



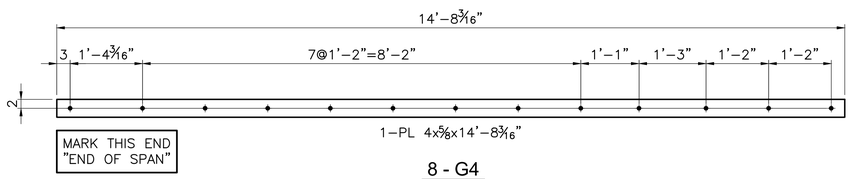
4 - D4
UNIT WT: 165 LBS



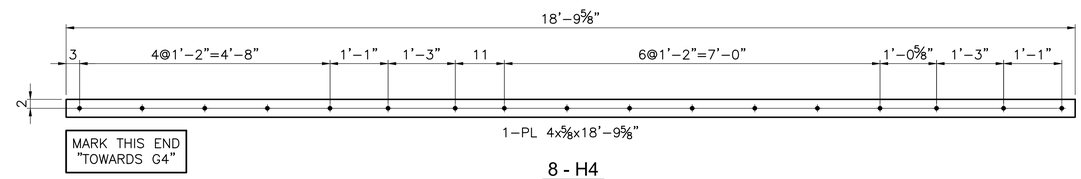
14 - E4
UNIT WT: 84 LBS



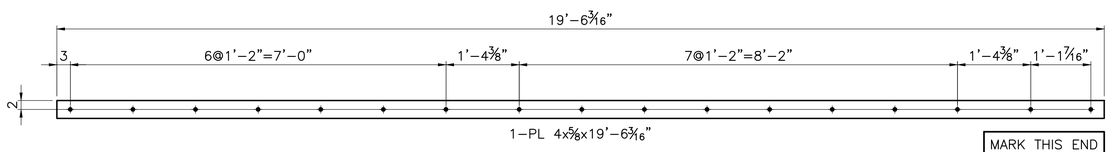
14 - F4
UNIT WT: 97 LBS



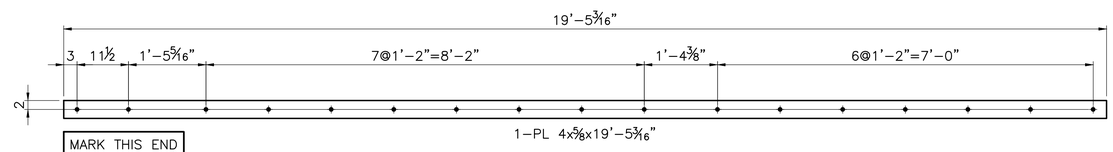
8 - G4
UNIT WT: 125 LBS



8 - H4
UNIT WT: 160 LBS



2 - K4
UNIT WT: 166 LBS



2 - M4
UNIT WT: 165 LBS

ESTIMATED QUANTITIES: (ON THIS DRAWING)

–STRUCTURAL STEEL ..... 8,356 LBS

NOTES:

–FOR NOTES AND SPECIFICATIONS SEE DRAWING No.–2.1

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS–BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

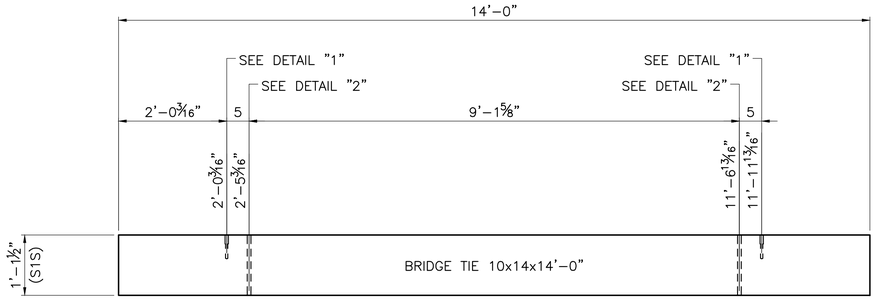
HATCH

PROJECT No. H–351632

BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

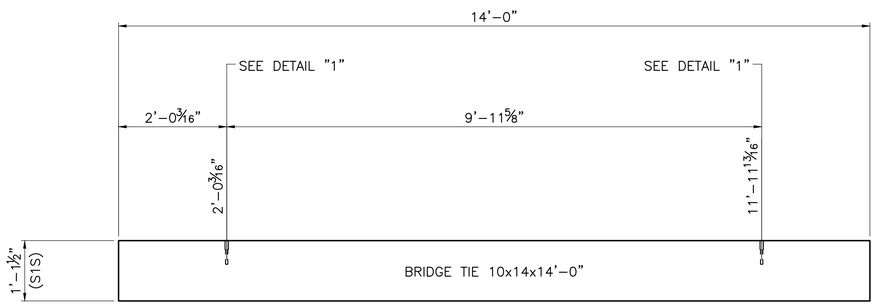
DECK REPLACEMENT
SPACER BAR DETAILS

DWG. BY: ED CHK BY: WW
OFFICE FILE:
SCALE: 3/4"=1'-0"
ENGINEER:
DATE: MAY 2016
PROJECT MANAGER:
PLAN No. RMR–79.00–2.4



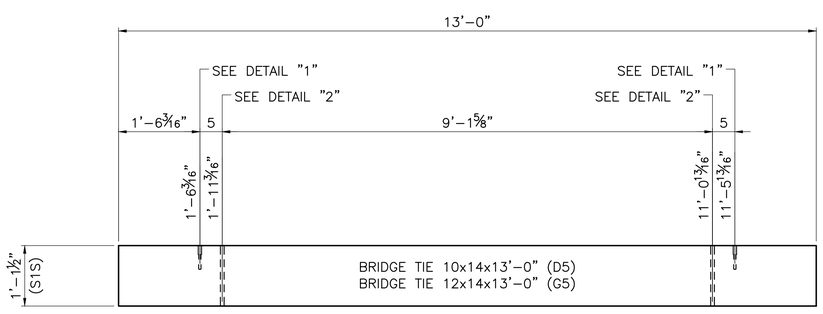
BRIDGE TIE WITH HOOK BOLTS "A5"

49–REQUIRED



BRIDGE TIE WITHOUT HOOK BOLTS "C5"

91–REQUIRED

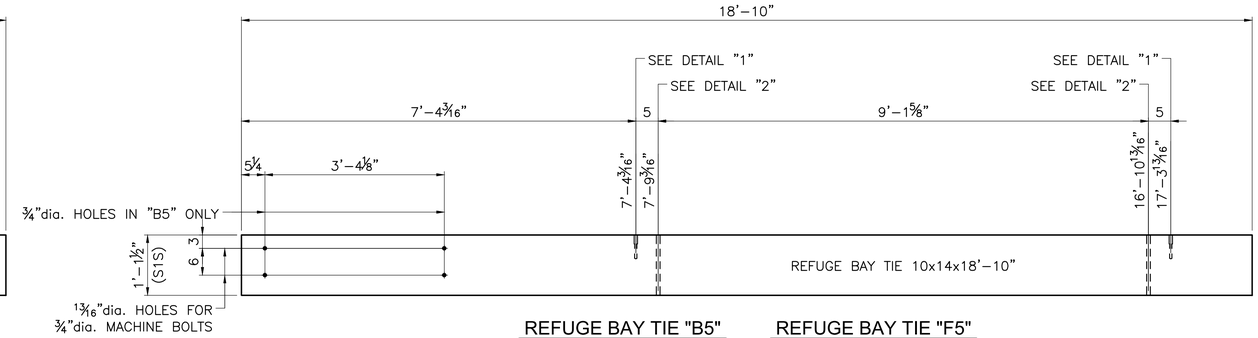


BRIDGE TIE WITH HOOK BOLTS "D5"

86–REQUIRED

BRIDGE TIE WITH HOOK BOLTS "G5"

4–REQUIRED

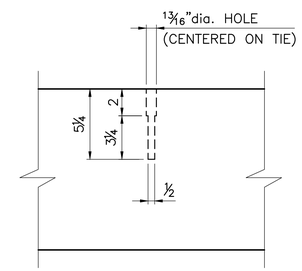


REFUGE BAY TIE "B5"

8–REQUIRED

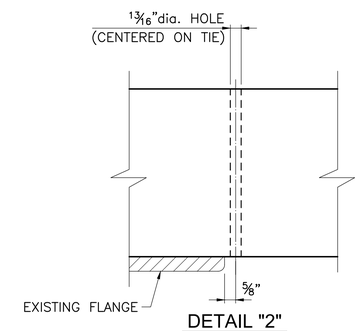
REFUGE BAY TIE "F5"

4–REQUIRED



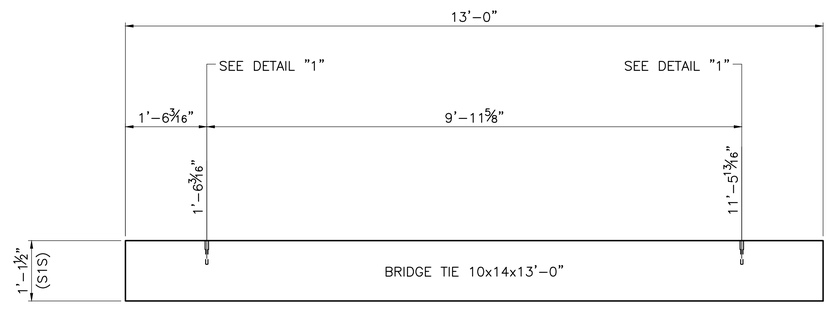
DETAIL "1"

TYPICAL DETAIL FOR
LAG SCREW HOLES
NOT TO SCALE



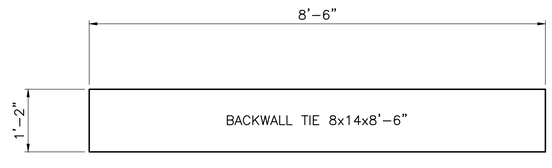
DETAIL "2"

TYPICAL DETAIL FOR HOOK BOLT HOLES
NOT TO SCALE



BRIDGE TIE WITHOUT HOOK BOLTS "E5"

176–REQUIRED



BACKWALL TIE "H5"

2–REQUIRED

SPECIFICATIONS:

–TIES TO BE CUT AND SIZED AS SHOWN
–TIES SHALL BE TREATED DOUGLAS FIR CLASS L–57B NLGA 130B
–ALL TIES SHALL COME WITH ANTI–SPLIT PLATES INSTALLED AT BOTH ENDS
–ALL TIES SHALL BE TREATED TIMBER. PRESERVATIVE TREATMENT OF THE TIES SHALL BE 8 LBS PER CUBIC FOOT OF CREOSOTE OR 10 LBS PER CUBIC FOOT OF 50/50 CREOSOTE / PETROLEUM AS PER CSA O80.2. RETENTIONS TO BE DETERMINED BY GAUGE READINGS.
–ALL FIELD HOLES & CUTS IN TREATED TIMBER SHALL BE TREATED WITH OSMOSE COP–R–PLASTIC WOOD PRESERVING COMPOUND OR OTHER APPROVED PRESERVATION SYSTEM, DRILLING SHALL PREFERABLY BE DONE PRIOR TO TREATING.
–TREATED TIMBER SHALL BE STORED, HANDLED & FRAMED IN ACCORDANCE WITH CURRENT C.S.A. 080/AWPA M4 FOR THE HANDLING OF TREATED TIMBER. THE POINT OF PIKES, PEAVIES ETC. MUST NOT BE DRIVEN INTO THE SURFACES OF TREATED TIMBER.

NOTES:

–FOR NOTES AND SPECIFICATIONS SEE DRAWING No.–1.9
–"S1S" DENOTES SIZED ONE SIDE
–ALL TIES SHALL BE CUT TO EXACT LENGTHS AS SHOWN;
–ALL TIES SHALL COME WITH ANTI–SPLIT PLATES INSTALLED AT BOTH ENDS;
–MARKS AND ORIENTATION SHALL BE CLEARLY INDICATED ON ALL PIECES;

ESTIMATED QUANTITIES: (ON THIS DRAWING)

–BRIDGE TIE 10x14x14'–0" (A5)	49 EA.
–REFUGE BAY TIE 10x14x18'–10" (B5)	8 EA.
–BRIDGE TIE 10x14x14'–0" (C5)	91 EA.
–BRIDGE TIE 10x14x13'–0" (D5)	86 EA.
–BRIDGE TIE 10x14x13'–0" (E5)	176 EA.
–REFUGE BAY TIE 10x14x18'–10" (F5)	4 EA.
–BRIDGE TIE 12x14x13'–0" (G5)	4 EA.
–BACKWALL TIE 8x14x8'–6" (H5)	2 EA.

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS–BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

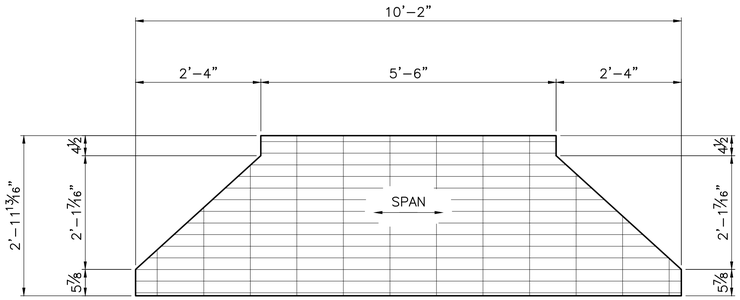
HATCH

PROJECT No. H–351632

BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

DECK REPLACEMENT
BRIDGE TIE DETAILS

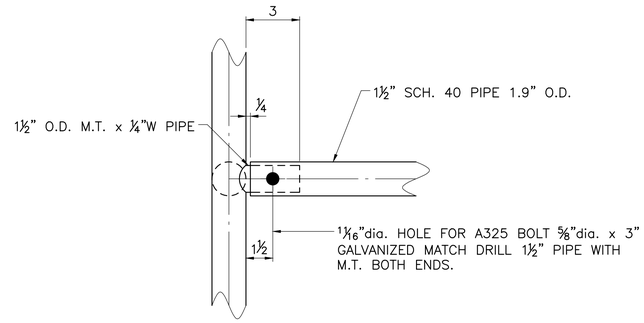
DWG. BY: ED CHK BY: WW
OFFICE FILE:
SCALE: 3/4"=1'–0" U.N.
ENGINEER:
DATE: MAY 2016
PROJECT MANAGER:
PLAN No. RMR–79.00–2.5



GALVANIZED GRATING PANEL, SEE SPECIFICATIONS

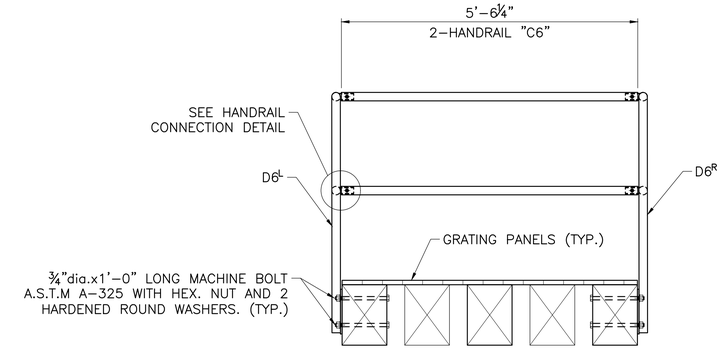
4 - A6

SCALE: ¾"=1'–0"



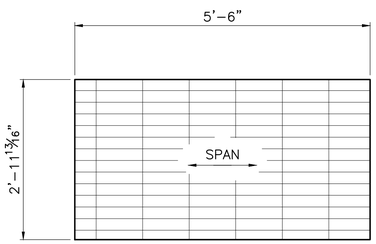
HANDRAIL CONNECTION DETAIL

SCALE: 3"=1'–0"



TYPICAL REFUGE BAY ASSEMBLY DETAIL

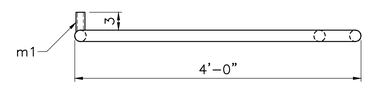
SCALE: ¾"=1'–0"



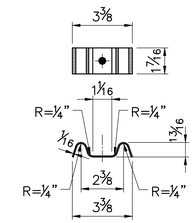
GALVANIZED GRATING PANEL, SEE SPECIFICATIONS

4 - B6

SCALE: ¾"=1'–0"



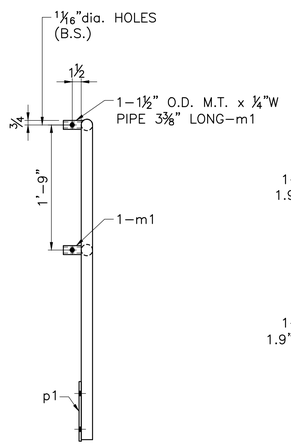
VIEW "A-A"



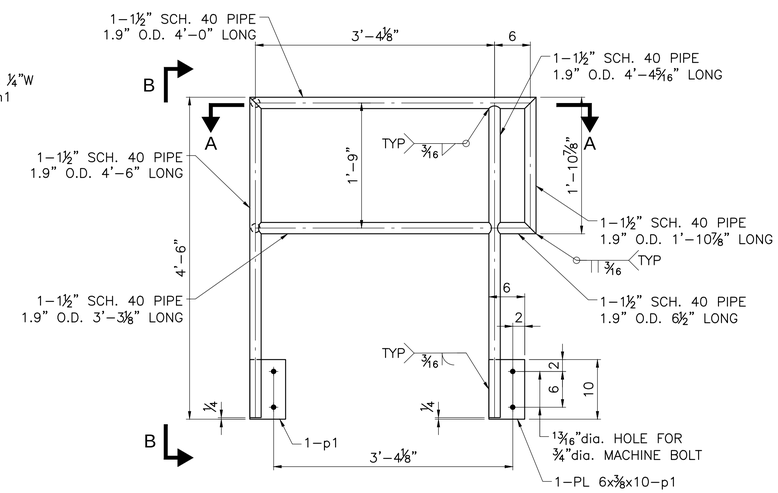
AMICO–KLEMP STANDARD TYPE H–3 SADDLE CLIP c/w ¼"dia. x 6" LAG SCREW (GALVANIZED)

65 - E6

SCALE: 3"=1'–0"



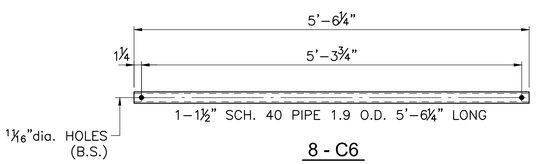
VIEW "B-B"



4 - D6R RIGHT (AS SHOWN)

4 - D6L LEFT (FROM SHOWN)

UNIT WT: 65 LBS



8 - C6

UNIT WT: 15 LBS

SPECIFICATIONS:

–GRATING SHALL BE TYPE 19–4 FROM AMICO–KLEMP WITH 1x3/16 BEARING BARS WELDED AT 1 3/16 C/C AND CROSS BARS AT 4" C/C. GRATING SHALL BE FULLY BANDED AND HOT–DIP GALVANIZED. GRATING PANELS SHALL BE SECURED USING ¼"dia. x 6" LAG–SCREWS AND "E6" GRATING CLIPS PER REFUGE BAY TIE. (APPROX. WT.= 7.23 LBS PER FT^2)

–HANDRAIL TO BE 1½" SCHEDULE 40 PIPE 1.9" OUTSIDE DIAMETER (UNLESS NOTED OTHERWISE);

ESTIMATED QUANTITIES: (ON THIS DRAWING)

–STRUCTURAL STEEL	640 LBS
–GRATING	161 FT^2
–¾"dia. x 1'–0" LONG MACHINE BOLT A.S.T.M A–325 WITH HEX. NUT AND 2 HARDENED ROUND WASHERS	40 EA.
–⅝"dia. x 3" A325 BOLT (FOR "C6")	20 EA.

NOTES:

–FOR NOTES, SPECIFICATIONS AND INSTALLATION OF REFUGE BAYS SEE STANDARD ONR DRAWING: A–6264;

–ALL MATERIAL ON THIS DRAWING SHALL BE HOT–DIP GALVANIZED;

–FOR OTHER NOTES AND SPECIFICATIONS, SEE DRAWING No.–2.1;

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS–BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

HATCH

PROJECT No. H–351632

BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

DECK REPLACEMENT
FIELD AND STEEL DETAILS

DWG. BY: ED CHK BY: WW	OFFICE FILE:
	SCALE: 1"=1'–0" U.N.
ENGINEER:	DATE: MAY 2016
PROJECT MANAGER:	PLAN No. RMR–79.00–2.6

BILL OF MATERIAL

ITEM	MARK	UNIT	QTY.
GRATING PANEL 10'–2"	A6	EACH	4
GRATING PANEL 5'–6"	B6	EACH	4
SPACER SPLICE PL 4x⅝x1'–8"	A4	EACH	36
SPACER BAR PL 4x⅝x19'–2"	B4	EACH	6
SPACER BAR PL 4x⅝x14'–6"	C4	EACH	6
SPACER BAR PL 4x⅝x19'–5 3/16"	D4	EACH	4
SPACER BAR PL 4x⅝x9'–10"	E4	EACH	14
SPACER BAR PL 4x⅝x11'–5"	F4	EACH	14
SPACER BAR PL 4x⅝x14'–8 3/16"	G4	EACH	8
SPACER BAR PL 4x⅝x18'–9⅝"	H4	EACH	8
SPACER BAR PL 4x⅝x19'–6 3/16"	K4	EACH	2
SPACER BAR PL 4x⅝x19'–5 3/16"	M4	EACH	2
BRIDGE TIE 10x14x14'–0"	A5	EACH	49
REFUGE BAY TIE 10x14x18'–10"	B5	EACH	8
BRIDGE TIE 10x14x14'–0"	C5	EACH	91
BRIDGE TIE 10x14x13'–0"	D5	EACH	86
BRIDGE TIE 10x14x13'–0"	E5	EACH	176
REFUGE BAY TIE 10x14x18'–10"	F5	EACH	4
BRIDGE TIE 12x14x13'–0"	G5	EACH	4
BACKWALL TIE 8x14x8'–6"	H5	EACH	2
APPROACH TIE 9x7x10'–0"	–	EACH	50
REFUGE BAY POST	$D6^{R}$	EACH	4
REFUGE BAY POST	$D6^{L}$	EACH	4
FREE HANDRAIL 1½" SCH. 40 PIPE 5'–6¼" LONG	C6	EACH	8
LEWIS HOOK BOLTS ¾" dia. x 1'–6" LONG "SEALTITE"	–	EACH	320*
LAG SCREWS ¾" dia. x 6" LONG (FOR SPACER BARS)	–	EACH	810*
LAG–SCREW ¾" dia. x 8" LONG (FOR SPACER SPLICES)	–	EACH	80*
LAG–SCREW ¼" dia. x 6" LONG AND "E6" SADDLE CLIP	–	EACH	65*
¾"dia. x 1'–0" LONG MACHINE BOLT A.S.T.M A–325 WITH HEX. NUT AND 2 HARDENED ROUND WASHERS	–	EACH	40*
A325 BOLT ⅝" dia. x 3" LONG (FOR "C6")	–	EACH	20*
115 LBS DOUBLE SHOULDER TIE PLATES c/w TIE PADS	–	EACH	836
RAIL SPIKES FOR 115 LBS TIE PLATES	–	EACH	1,760*
GUARD RAIL SPIKES	–	EACH	1,760*
BALLAST	–	TON	20

* =(THE QUANTITIES SHOWN WERE RAISED BY 5% + 5)

NOTES:

–FOR NOTES AND SPECIFICATIONS, SEE DRAWING No.–2.1;

NOTES:

LEGEND:

No.	DATE	REVISION	BY
	2018/06/18	AS–BUILT	AM
1	2016/09/22	ISSUED FOR CONSTRUCTION	LL
0	2016/05/19	ISSUED FOR TENDER	ED

O.N. Rail

HATCH

PROJECT No. H–351632

BRIDGE OVER DRIFTWOOD RIVER
Mile 79.00 RAMORE SUBDIVISION

DECK REPLACEMENT
BILL OF MATERIAL

DWG. BY: ED CHK BY: WW

OFFICE FILE:

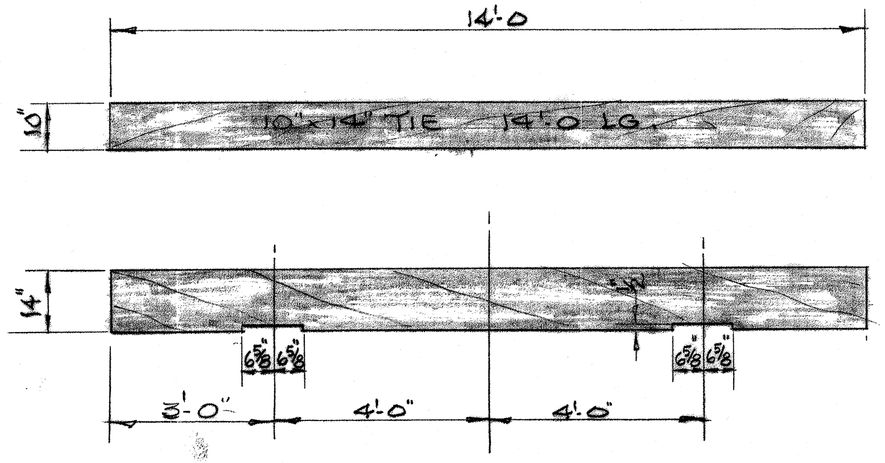
SCALE: NO SCALE

DATE: MAY 2016

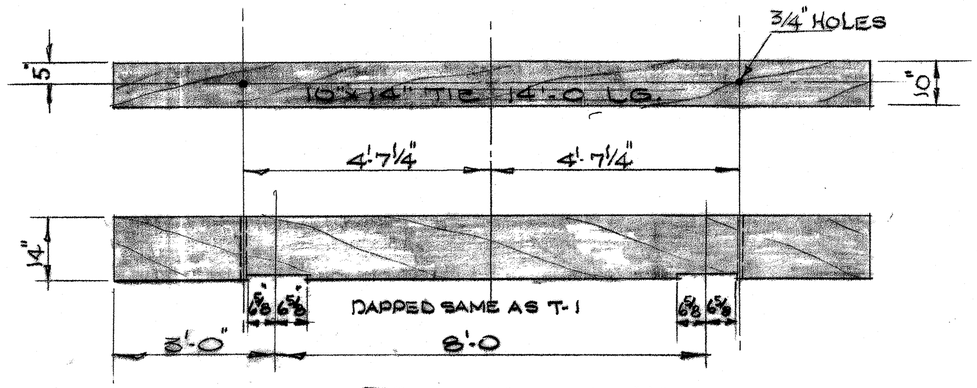
ENGINEER:

PROJECT MANAGER:

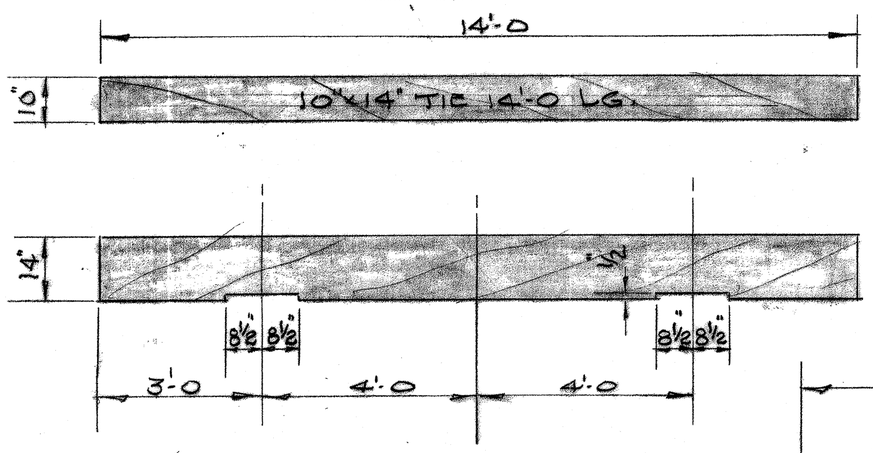
PLAN No. RMR–79.00–2.7



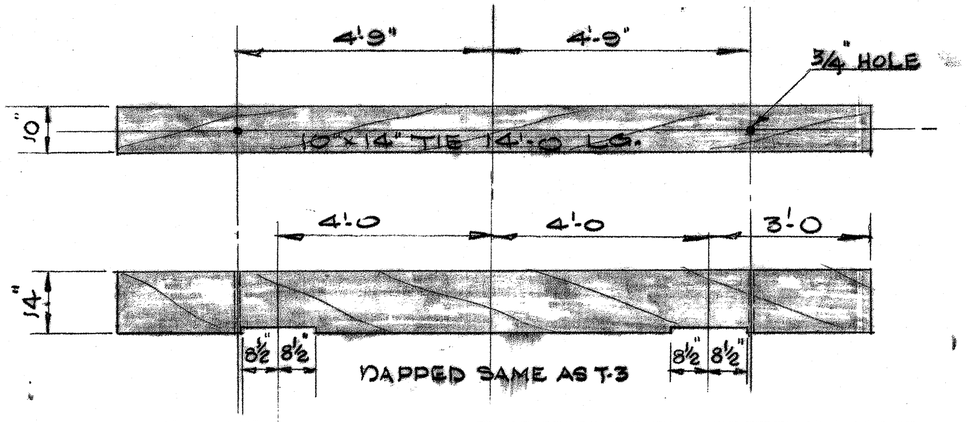
T-1 114 REQ'D.



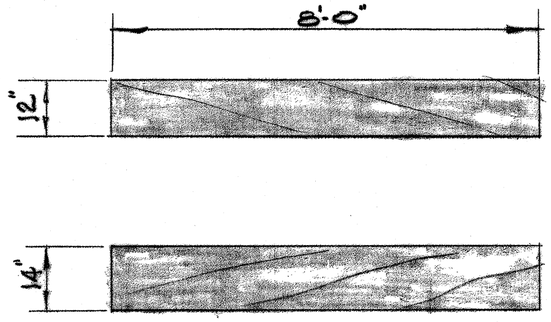
T-2 40 REQ'D.



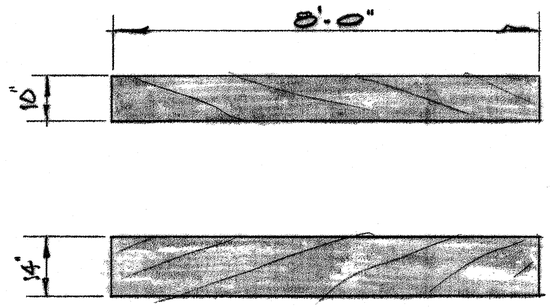
T-3 57 REQ'D.



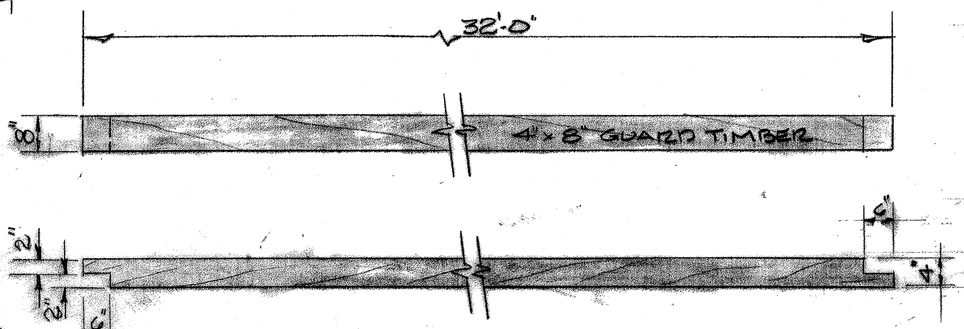
T-4 20 REQ'D.



T-5 1 REQ'D

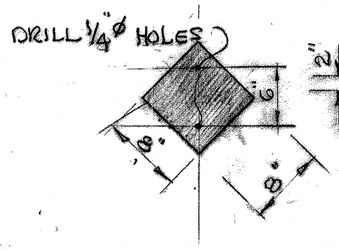


T-6 1 REQ'D



4"x8" GUARD TIMBER 18 REQ'D.

SPACER BLOCKS
4"x8"-8" lg. fir
pressure treated
475 REQ'D.



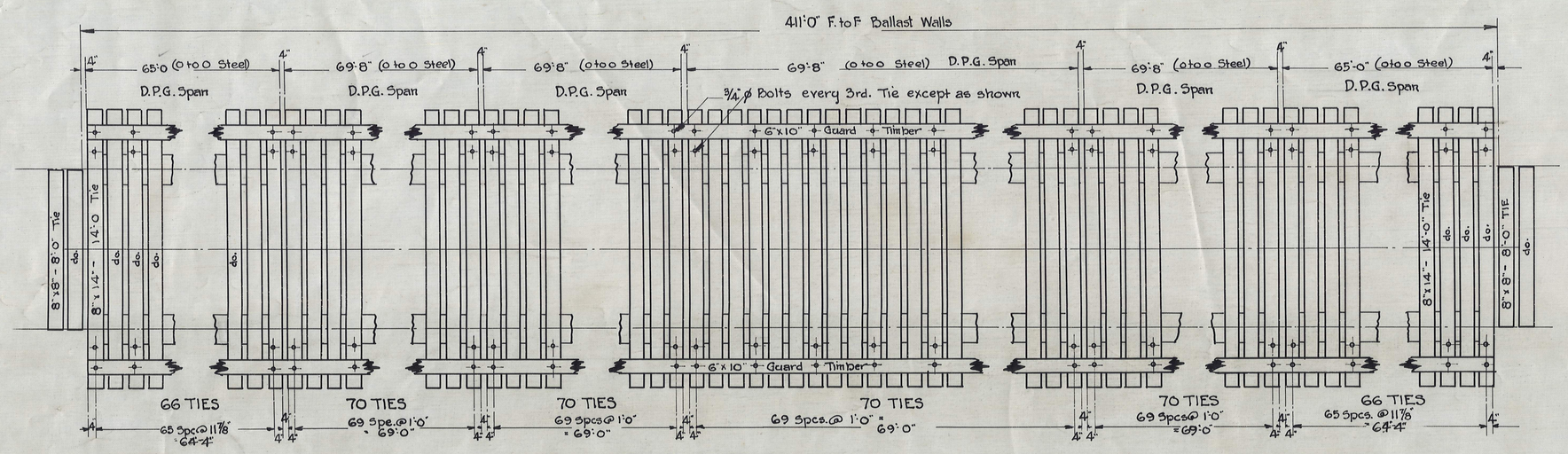
NOTE:
ALL DRILLING DAPPING AND CUTTING SHALL BE COMPLETED PRIOR TO PRESSURE TREATMENT.

ONTARIO NORTHLAND RLWY.
ENGINEERING DEPT. NORTH BAY ONT.

DECK TIMBER DETAILS
SOUTH WABI BRIDGE MP 11547
TEMAGAMI SUBDIVISION

drn WDA	chk	
approved		Struct Supt.
		chief eng fac. mtce
scale as noted	date June 7/78	no B 1308

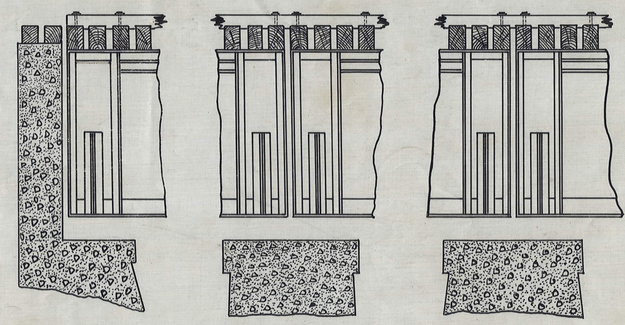
B-1308



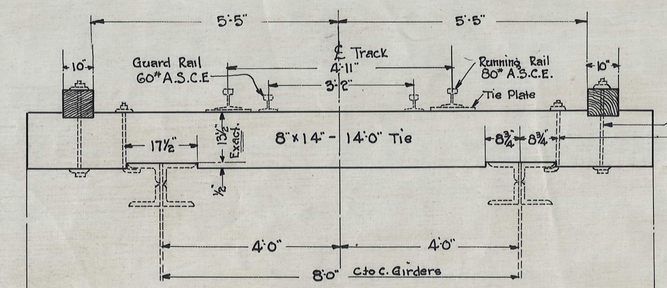
PLAN OF DECK

BILL OF MATERIAL IN DECK

412 - 8" x 14" - 14'-0" Ties
4 - 8" x 8" x 8'-0" "
2 - 6" x 10" - 41'-4" Guard Timbers (Spliced)
284 - 3/4" ø Bolts for Guard Timber.
284 - 3/4" ø Hook Bolts
852 - C.I. Washers
568 - Hex. Nuts.

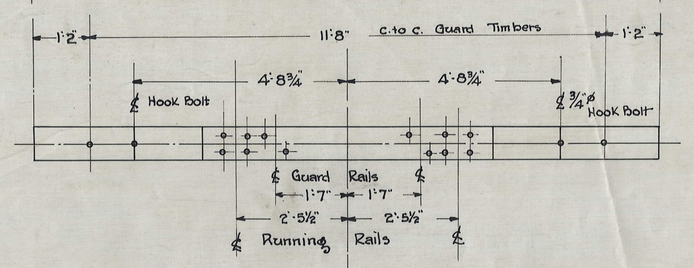


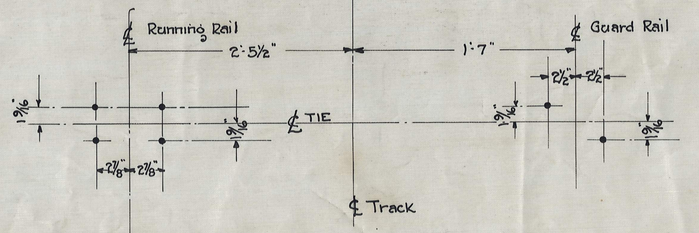
SECTION



3/4" ø Guard Rail Bolt
3/4" ø Hook Bolt
These bolts to be generally every 3rd. Tie except as shown on plan.

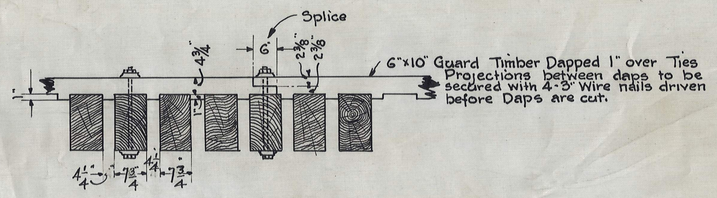
N.B. When dapping guard timbers note that on the two end 65' spans ties are spaced @ 11 7/8" c. to c. and on remaining spans @ 12" c. to c.



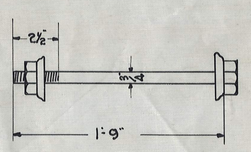


TEMPLET for boring for 5/8" ø Track Spikes

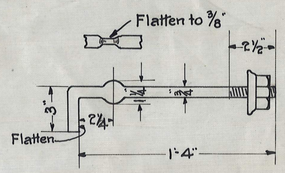
DETAIL OF 8" x 14" - 14'-0" TIE



DETAIL OF TIMBER GUARD



284 - 3/4" ø x 1'-9" bolts
568 - C.I. Washers
284 - Hex. Nuts



284 - 3/4" ø Hook Bolts
284 - Hex. Nuts
284 - C.I. Washers

TEMISKAMING & NORTHERN ONTARIO RY.

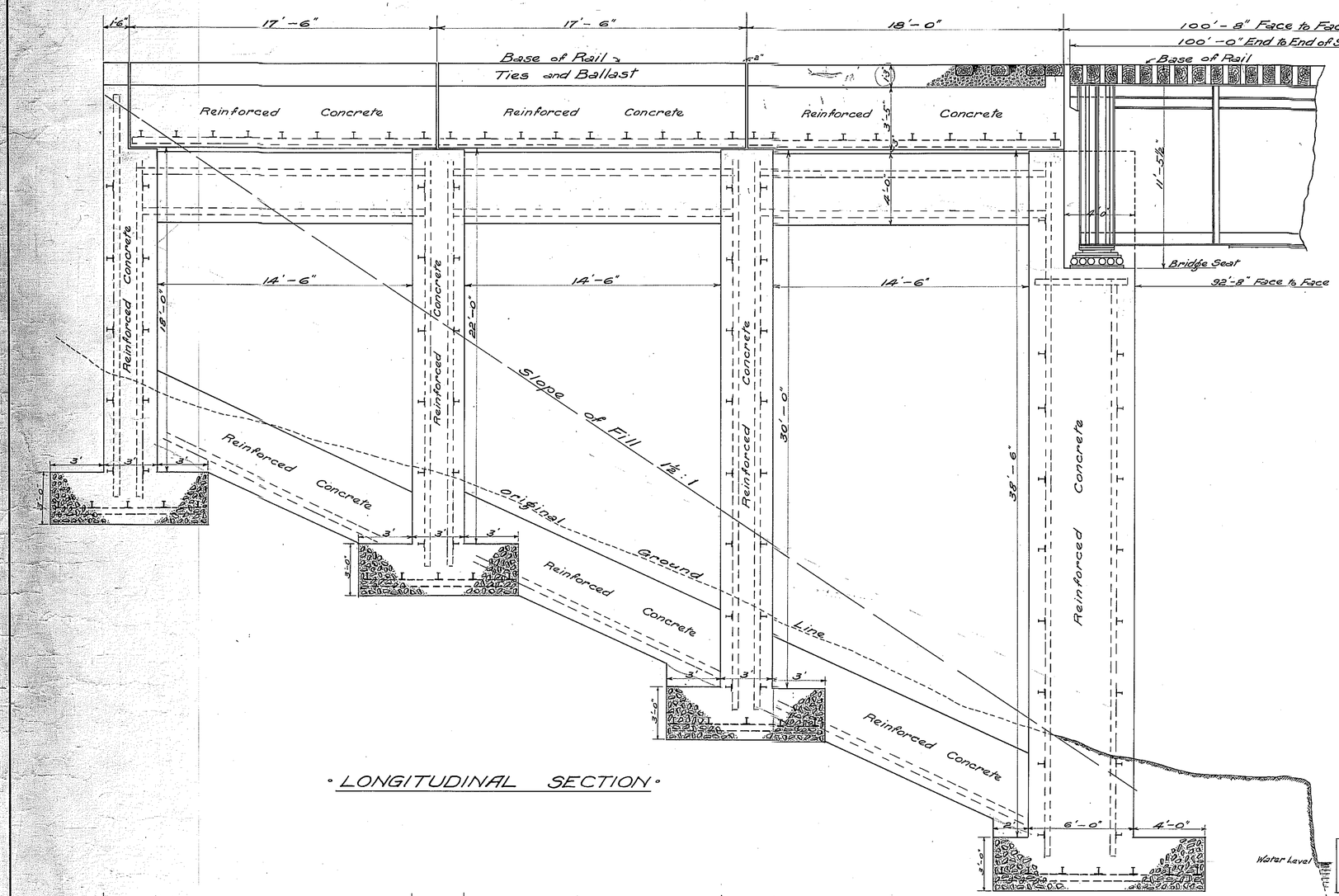
BRIDGE OVER THE FREDERICK HOUSE RIVER
MILE 10 - PORCUPINE BRANCH

DETAIL OF DECK

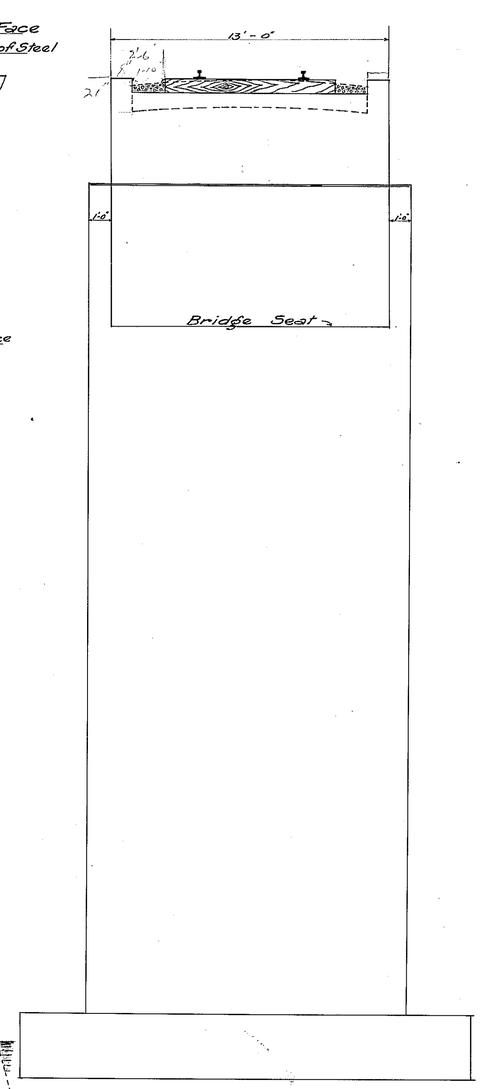
OFFICE OF CHIEF ENGINEER, NORTH BAY, ONT.
Appr:- Com:- Louis Roberts

C-218

Cut along this line



• LONGITUDINAL SECTION •



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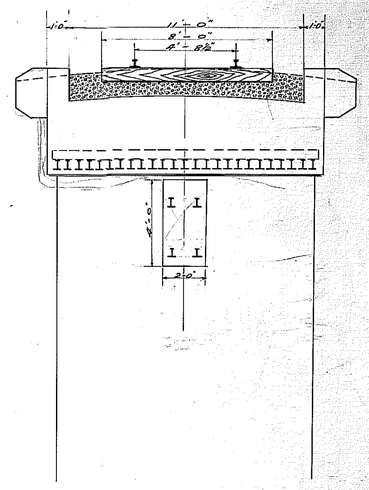
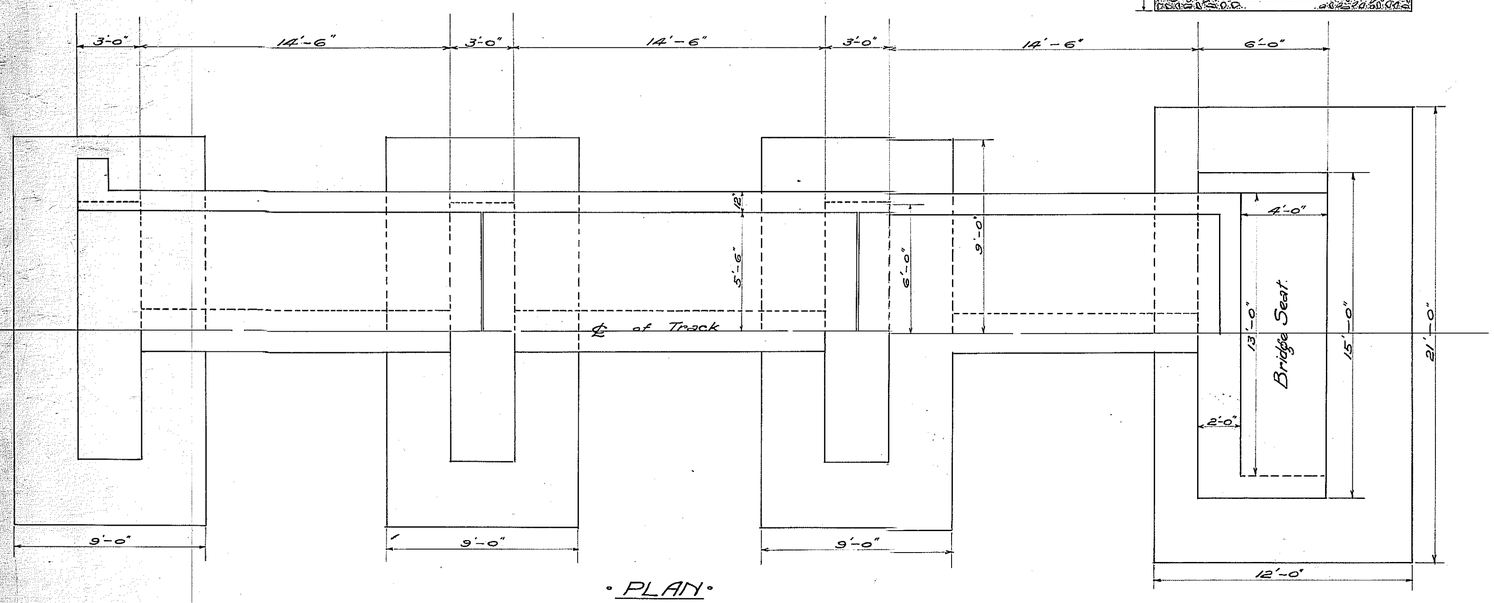


• CROSS SECTION •



• PLAN •

T. & N. O. R.

PLAN OF TRESTLE ABUTMENT FOR PORCUPINE RIVER CROSSING

MILEAGE 17·7

PORCUPINE BRANCH

Scale:- ¼ inch to one foot.

Chief Engineer's Office,
North Bay: April 18th 1912.

CHIEF ENGINEER.

B-7239
R.Y.A.

E-4-5

Traced by J.S.

Cut along this line