04 11

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

Public Works
Government Services
Canada

Travaux publics
Services gouvernementaux
Canada

Architectural and
Engineering Services

Services d'architecture
et de génie

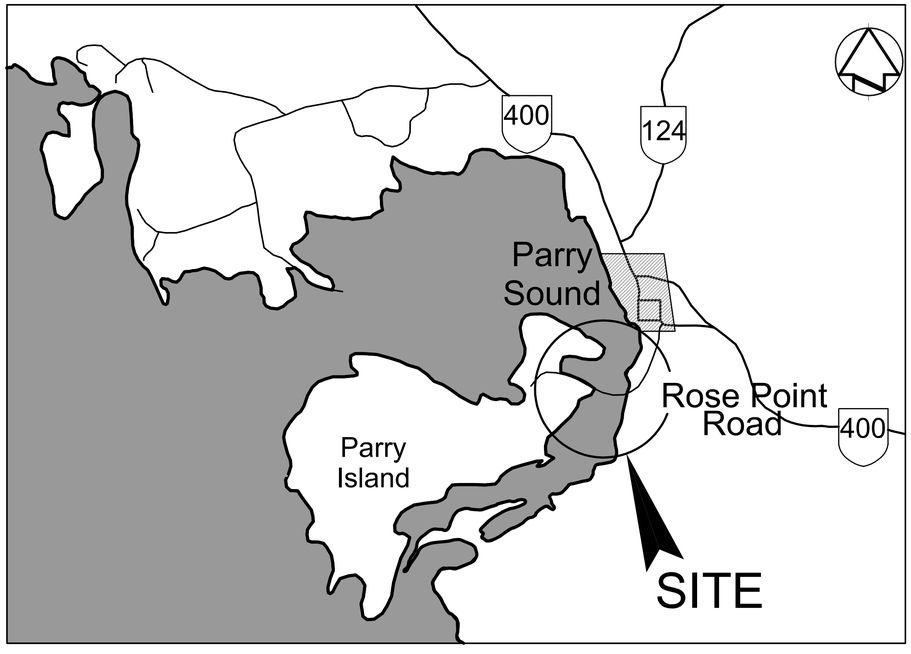
Ontario Region

Région de l'Ontario

PARRY ISLAND, Ontario.

Wasauksing Swing Bridge Rehabilitation

PWGSC Proj. No.: R.078886.002



SITE PLAN

Canada

LIST OF DRAWINGS

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER D. C. DIXON 2016/03/17 PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M. G. BOWSER 100140686 2016/03/17 PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

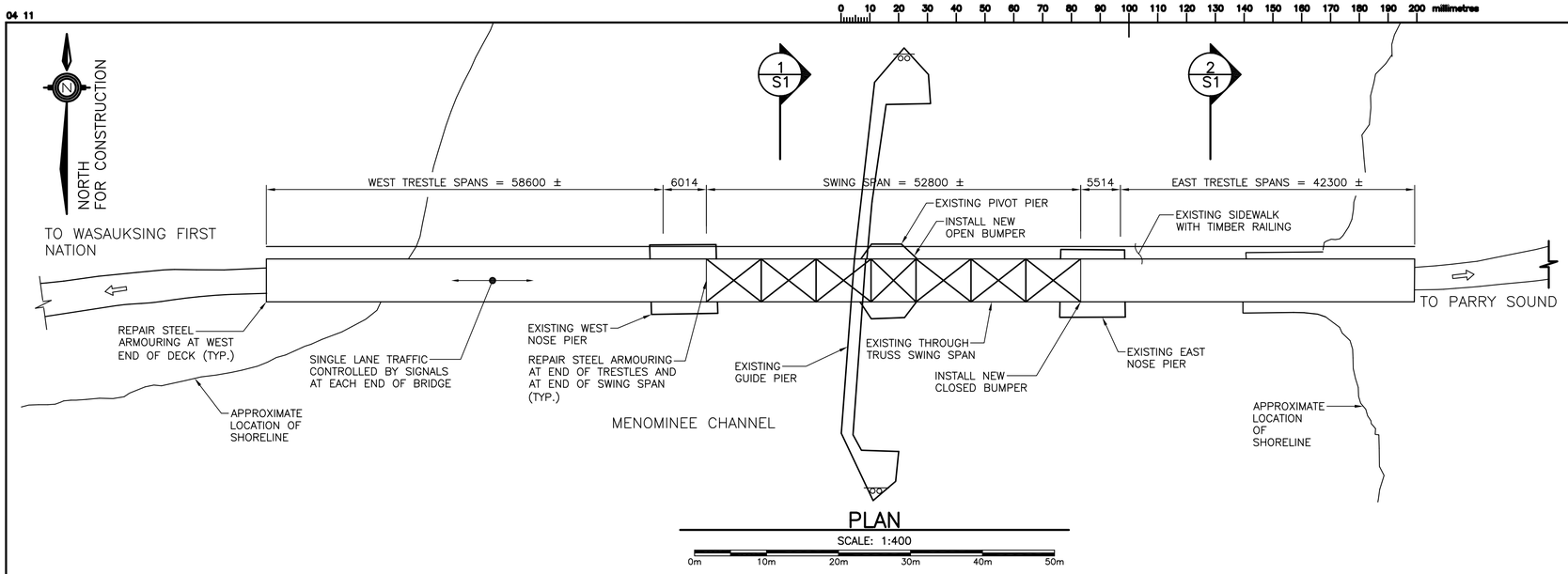
drawing title / titre du dessin
COVER SHEET

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S0

GSC-A1 DATE PLOTTED: 9 February 2016 PLOT SCALE: AS NOTED CAD FILE: S:\2015\32\3215082\310\S3215082-310-000CV.dwg

04 11

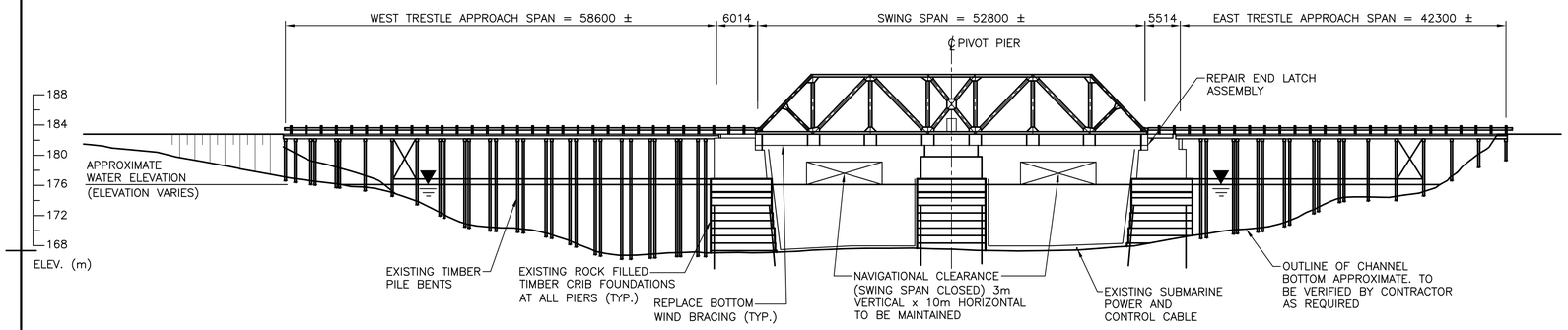
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



PLAN

SCALE: 1:400

0m 10m 20m 30m 40m 50m

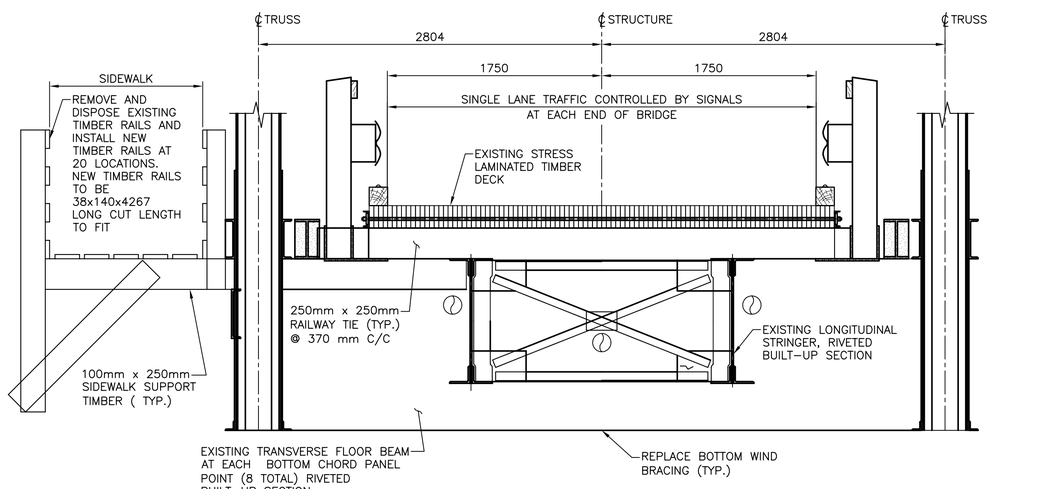


SOUTH ELEVATION

SCALE: 1:400

0m 10m 20m 30m 40m 50m

NORTH SOUTH

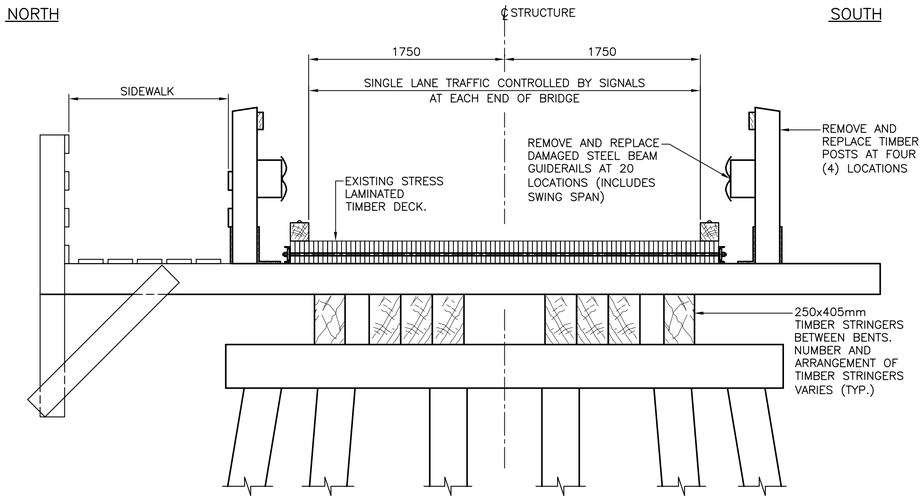


SECTION – SWING SPAN

N.T.S.

1 / S1

NORTH SOUTH



SECTION – TRESTLE SPAN

N.T.S.

(EAST TRESTLE SHOWN; WEST TRESTLE SIMILAR)

2 / S1

GENERAL NOTES:

CLASS OF CONCRETE AND GROUT

CONCRETE	32 MPa
GROUT	40 MPa

REINFORCING STEEL

ALL REINFORCING TO BE STAINLESS TYPE 316 LN OR DUPLEX 2205 AND HAVE A MINIMUM YIELD STRENGTH OF 500MPa

CLEAR COVER TO REINFORCING STEEL TO BE 70 mm

STRUCTURAL STEEL

ALL STRUCTURAL STEEL SHALL CONFORM TO CSA STANDARD CAN/CSA-G40.20-13/G40.21-13 GRADE 300W OR EQUIVALENT. ROLLED SECTIONS SHALL CONFORM TO CSA STANDARD CAN/CSA-G40.20/G40.21-13 OR ASTM A588/A588M-15. BOLTS SHALL BE A325M TYPE 1 M22 IN ACCORDANCE WITH ASTM A325M-14.

UNLESS OTHERWISE NOTED THE MINIMUM FILLET WELD SHALL BE 8mm

TIMBER

ALL TIMBER TO BE SPF NO. 1/2 OR BETTER

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF THE WORK AND ALL DETAILS ON SITE AND REPORT ANY DISCREPANCIES TO THE DEPARTMENTAL REPRESENTATIVE BEFORE PROCEEDING WITH THE REPAIR WORK. THE CONTRACTOR SHALL ADJUST DIMENSIONS OF THE WORK AS REQUIRED TO SUIT EXISTING CONDITIONS.
2. ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS ARE IN METERS UNLESS OTHERWISE SHOWN.
3. THE CONTRACTOR SHALL ENSURE THE STABILITY OF ALL COMPONENTS DURING HANDLING, TRANSPORTATION AND ERECTION AND UNTIL COMPONENTS ARE IN THEIR FINAL LOCATION WITH ALL PERMANENT BRACING, CONNECTIONS AND SUPPORTS IN PLACE.
4. REFER TO DRAWING M1 FOR MECHANICAL WORK.
5. REFER TO DRAWING E1 FOR ELECTRICAL WORK.

LEGEND:

DENOTES APPROXIMATE LOCATIONS OF EXISTING WEDGE BEARING AND END LATCH SHAFTS.

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — 2016/03/17 — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER — 100140686 — PROVINCE OF ONTARIO

revision		date
04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
GENERAL ARRANGEMENT

drawn by / dessiné par	X. ZHAO
designed by / conc par	M. BOWSER
approved by / approuvé par	D. DIXON
bid / offre	J. TO (project manager / administrateur de projets)
project date / date du projet	2016-03-17
project no. / no. du projet	R.078886.002
drawing no. / dessine no.	S1

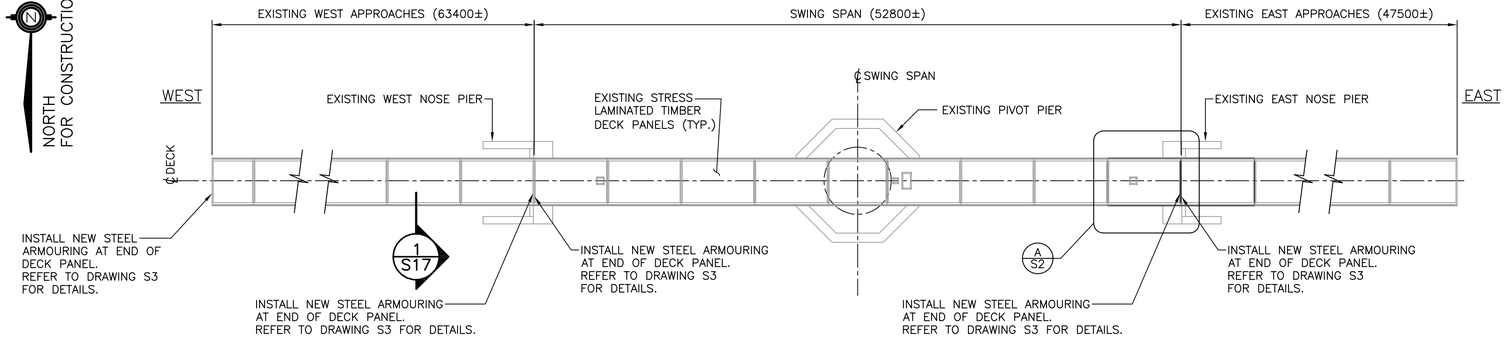
CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-001GA.dwg
MODIFIED: 3/13/2016 9:37:43 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:41:27 AM BY: ZHAOX

GSC-A1 DATE PLOTTED: 23 September 2015 PLOT SCALE: AS NOTED CAD FILE: S:\2015\32\3215082\310\S3215082-310-001GA.dwg

04 11

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH
FOR CONSTRUCTION



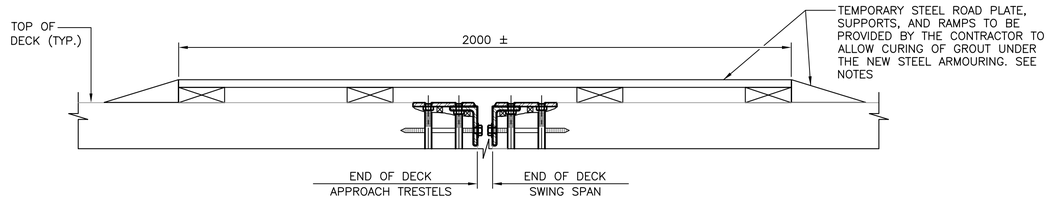
PLAN – EXISTING TIMBER DECK PANELS

SCALE: 1:250

0m 5m 10m 15m 20m 25m

NOTES:

1. WHENEVER TEMPORARY STEEL ROAD PLATES AND RAMPS ARE IN PLACE THE CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG THE ENTIRE LIMITS OF THE BRIDGE AND EXTENDING 20m BEYOND THE EAST AND WEST LIMITS OF THE BRIDGE.
2. RAMP TO REMAIN IN PLACE UNTIL GROUT REACHES A STRENGTH OF 20MPa.
3. REFER TO THE CONTRACT SPECIFICATIONS FOR ALLOWABLE ROAD CLOSURES AND OPERATIONAL RESTRAINTS ASSOCIATED WITH THE CONTRACTORS REQUIREMENTS TO AVOID CONFLICTS WITH CHANNEL NAVIGATION.

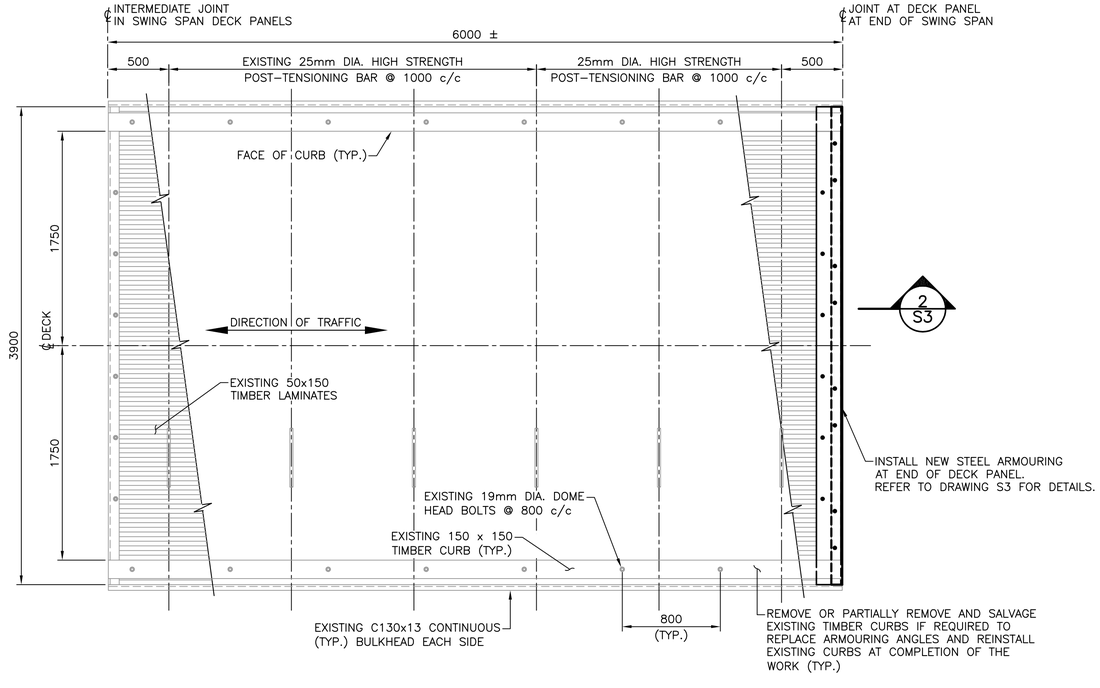


TEMPORARY RAMP DETAIL — 2 / S2

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

(RAMP REQUIRED AT THREE (3) LOCATIONS)
(END OF SWING SPAN SHOWN, WEST END OF BRIDGE SIMILAR)



DECK PANEL AT END OF SWING SPAN — A / S2

SCALE: 1:25

0mm 500mm 1000mm 1500mm 2000mm 2500mm

(OTHER DECK PANELS SIMILAR)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — M. G. DIXON — 2016/03/17 — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER — 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

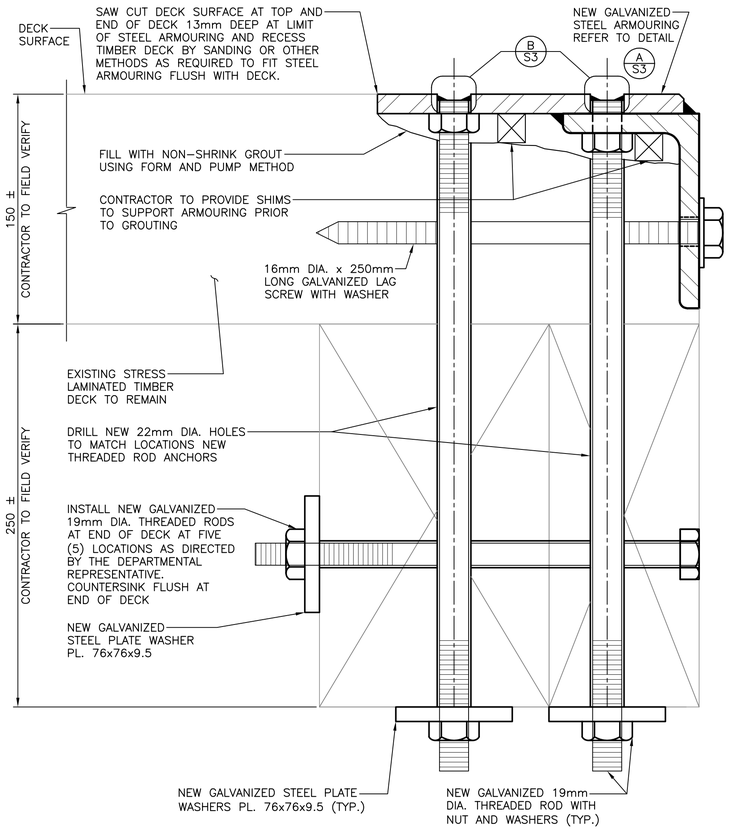
project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
DECK REPAIRS

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S2

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082–310–002DK.dwg
MODIFIED: 3/13/2016 9:37:29 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:41:32 AM BY: ZHAOX

GSC–A1 DATE PLOTTED: 9 February 2016 PLOT SCALE: AS NOTED CAD FILE: S:\2015\32\3215082\310\S3215082–310–002DK.dwg

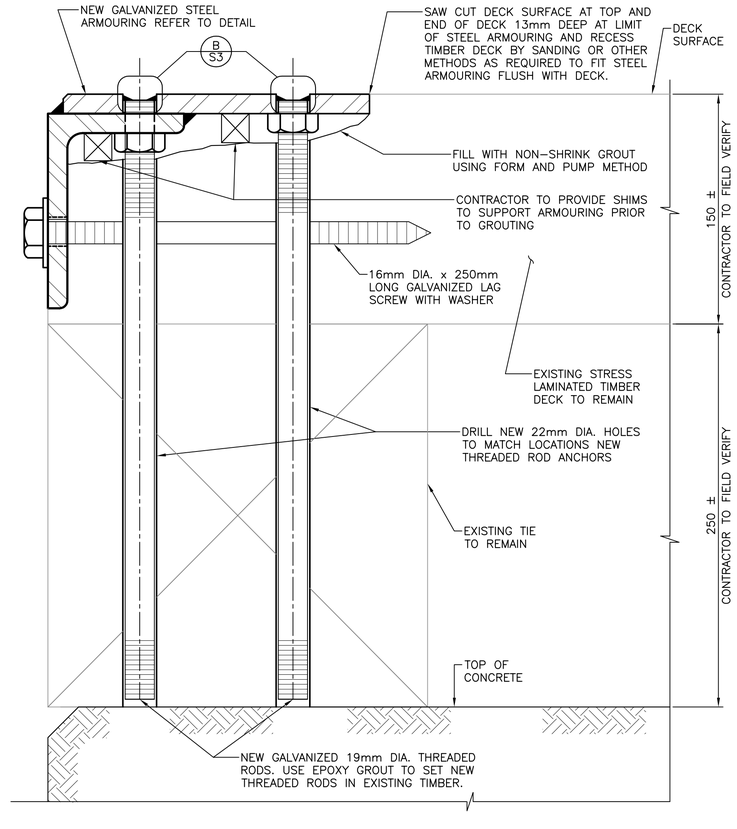


STEEL ARMOURING AT END OF SWING SPAN 2/S3

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

(STEEL ARMOURING AT WEST END OF TRESTLES SIMILAR)
(REQUIRED AT 3 LOCATIONS)



STEEL ARMOURING AT END OF TRESTLES 1/S3

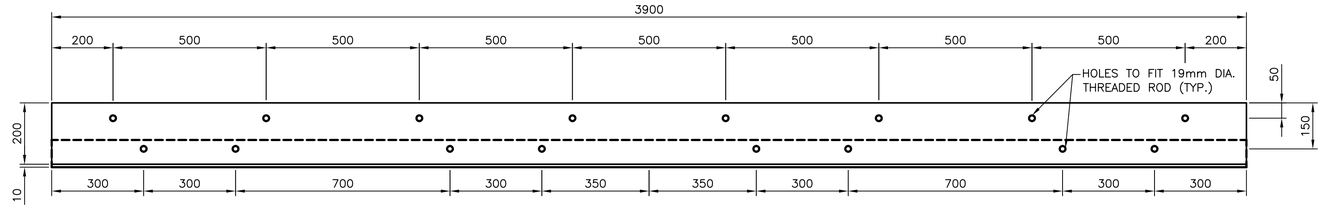
SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

(REQUIRED AT 2 LOCATIONS)

NOTES:

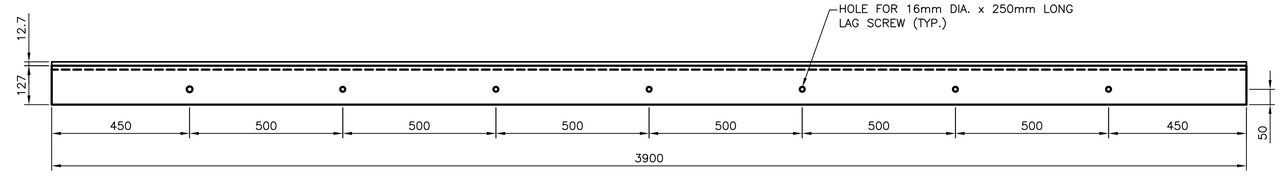
1. SPACING FOR 19mm DIA. THREADED RODS AND LAG SCREWS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO PREPARATION OF SHOP DRAWINGS. CONTRACTOR SHALL PROPOSE MODIFICATIONS TO THE SPACING SHOWN ON THIS DRAWING AS REQUIRED TO AVOID CONFLICTS BETWEEN THE THREADED RODS AND LONGITUDINAL STRINGERS OR ANY OTHER OBSTRUCTIONS.
2. CONTRACTOR TO REMOVE EXISTING SHAFTS OF PREVIOUSLY INSTALLED LAG SCREWS AT END OF DECK AS REQUIRED TO RECESS THE NEW STEEL ARMOURING.



STEEL ARMOURING – PLAN 3/S3

SCALE : 1:10

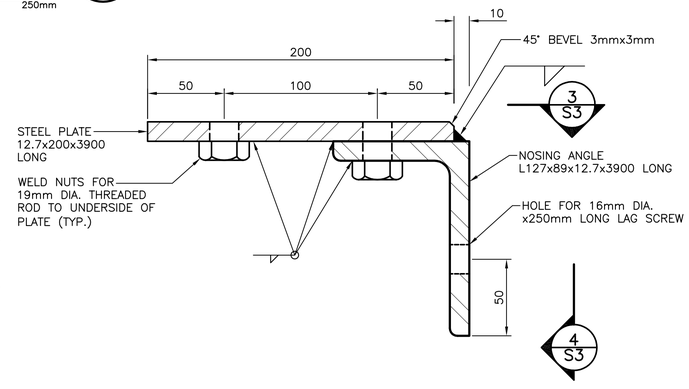
0mm 100 200 300 400 500 600 700 800 900 1000mm



STEEL ARMOURING – ELEVATION 4/S3

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

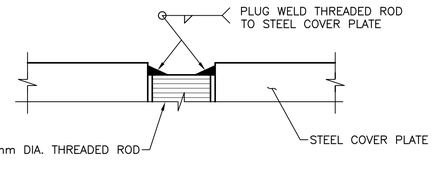


STEEL ARMOURING DETAIL A/S3

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

(NEW STEEL ARMOURING REQUIRED AT 5 LOCATIONS)



PLUG WELD DETAIL B/S3

SCALE : 1:1

0mm 10 20 30 40 50 60 70 80 90 100mm

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO
LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A/B/C
A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

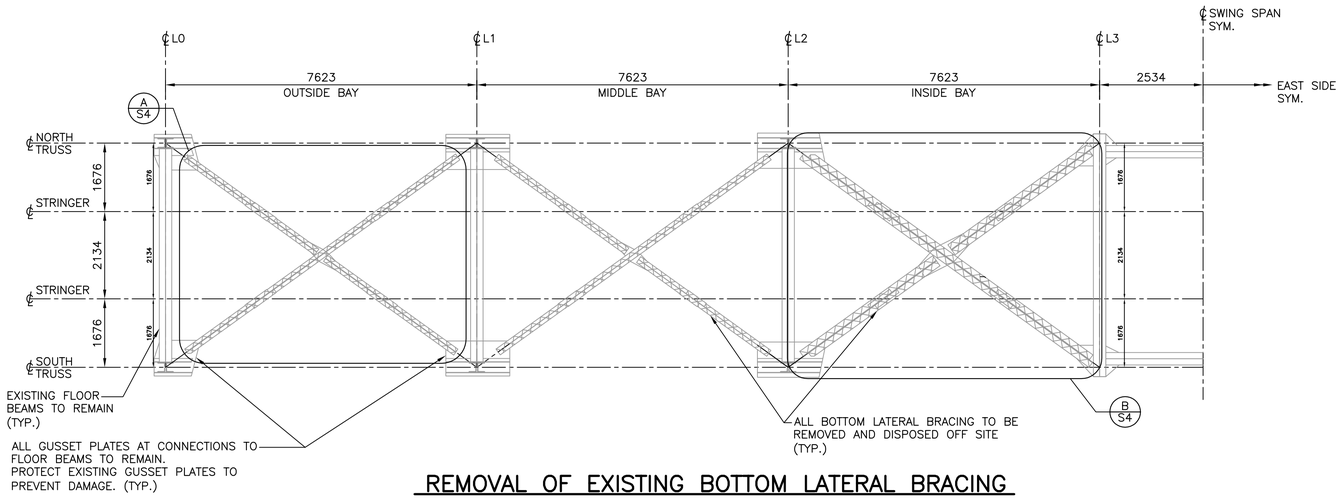
drawing title / titre du dessin
DECK PANEL ARMOURING ANGLES

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO — project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S3

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-003DP.dwg
MODIFIED: 2/13/2016 9:37:15 AM BY: ZHAOX
DATE PLOTTED: 2/13/2016 9:41:37 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH
FOR CONSTRUCTION



REMOVAL OF EXISTING BOTTOM LATERAL BRACING

SCALE : 1:75

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

(BRACING ON WEST SIDE OF SWING SPAN SHOWN, EAST SIDE SIMILAR)

NOTES:

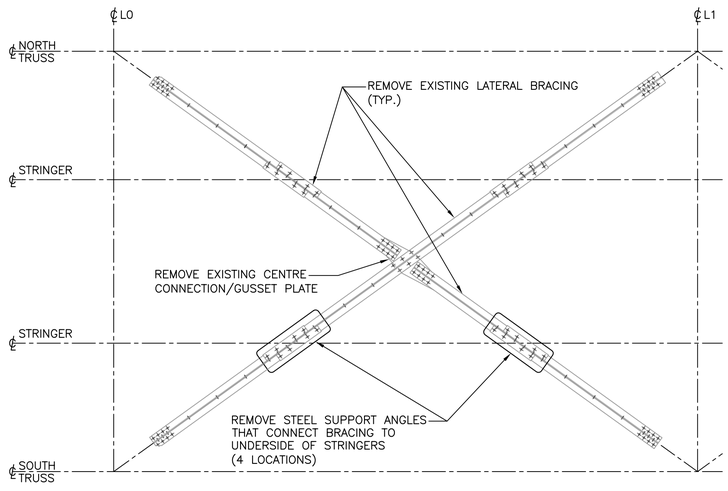
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWINGS S5 AND S6.
2. REFER TO SECTION 02 41 13, SELECTIVE SITE DEMOLITION, AND SECTION 05 12 33, STRUCTURAL STEEL FOR BRIDGES, OF THE CONTRACT DOCUMENTS FOR SPECIFICATIONS PERTAINING TO THE REMOVAL OF EXISTING BOTTOM LATERAL BRACING.
3. IF A SUSPENDED WORK PLATFORM IS UTILIZED, THE CONTRACTOR'S ENGINEER DOES NOT NEED TO PERFORM A STRUCTURAL EVALUATION OF THE BRIDGE AS LONG AS THE MAXIMUM DEMANDS APPLIED TO THE TRUSS DO NOT EXCEED THE LIMITS SHOWN IN TABLE 1. THE CONTRACTORS ENGINEER IS RESPONSIBLE TO CHECK LOCAL CAPACITY OF THE EXISTING STRUCTURE AT ALL CONNECTION POINTS FOR SUSPENDED WORK PLATFORMS.
4. THE CONTRACTOR SHALL COMPLETE REMOVALS AND INSTALLATION OF NEW BOTTOM LATERAL BRACING WITHIN A SINGLE BAY BEFORE STARTING REMOVALS FOR ANY OTHER BAY.
5. NEW BOTTOM LATERAL BRACING SHALL BE INSTALLED WITHIN 24 HOURS OF REMOVAL OF EXISTING BRACING AT EACH BAY.

LEGEND:

REMOVALS

TABLE 1: MAXIMUM UN-FACTORED DEMANDS PERMITTED AT EACH NODE

	L0	L1	L2	L3
℄ NORTH TRUSS	20kN DEAD LOAD	40kN DEAD LOAD	40kN DEAD LOAD	20kN DEAD LOAD
	55kN LIVE LOAD	110kN LIVE LOAD	110kN LIVE LOAD	55kN LIVE LOAD
℄ SOUTH TRUSS	20kN DEAD LOAD	40kN DEAD LOAD	40kN DEAD LOAD	20kN DEAD LOAD
	55kN LIVE LOAD	110kN LIVE LOAD	110kN LIVE LOAD	55kN LIVE LOAD

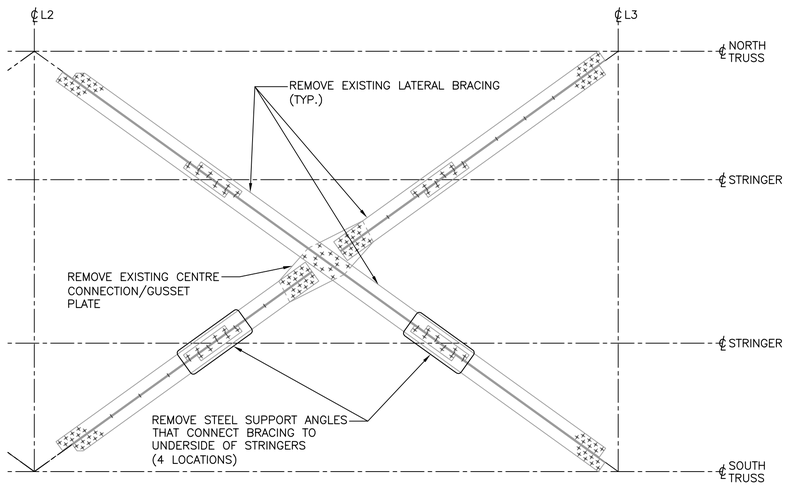


DETAIL – BOTTOM LATERAL BRACING REMOVALS A/S4

SCALE: 1:40

0mm 1mm 2mm 3mm 4mm 5mm

(REFER TO DRAWING S5 FOR EXISTING BOTTOM LATERAL BRACING DETAILS)
(4 LOCATIONS TOTAL: L0 – L1 SHOWN, L1 – L2 SIMILAR)



DETAIL – BOTTOM LATERAL BRACING REMOVALS B/S4

SCALE: 1:40

0mm 1mm 2mm 3mm 4mm 5mm

(REFER TO DRAWING S6 FOR EXISTING BOTTOM LATERAL BRACING DETAILS)
(2 LOCATIONS TOTAL)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER – D. DIXON – PROVINCE OF ONTARIO
LICENSED PROFESSIONAL ENGINEER – M. G. BOWSER 100140686 – PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A/BC
A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
REMOVAL OF EXISTING BOTTOM LATERAL BRACING

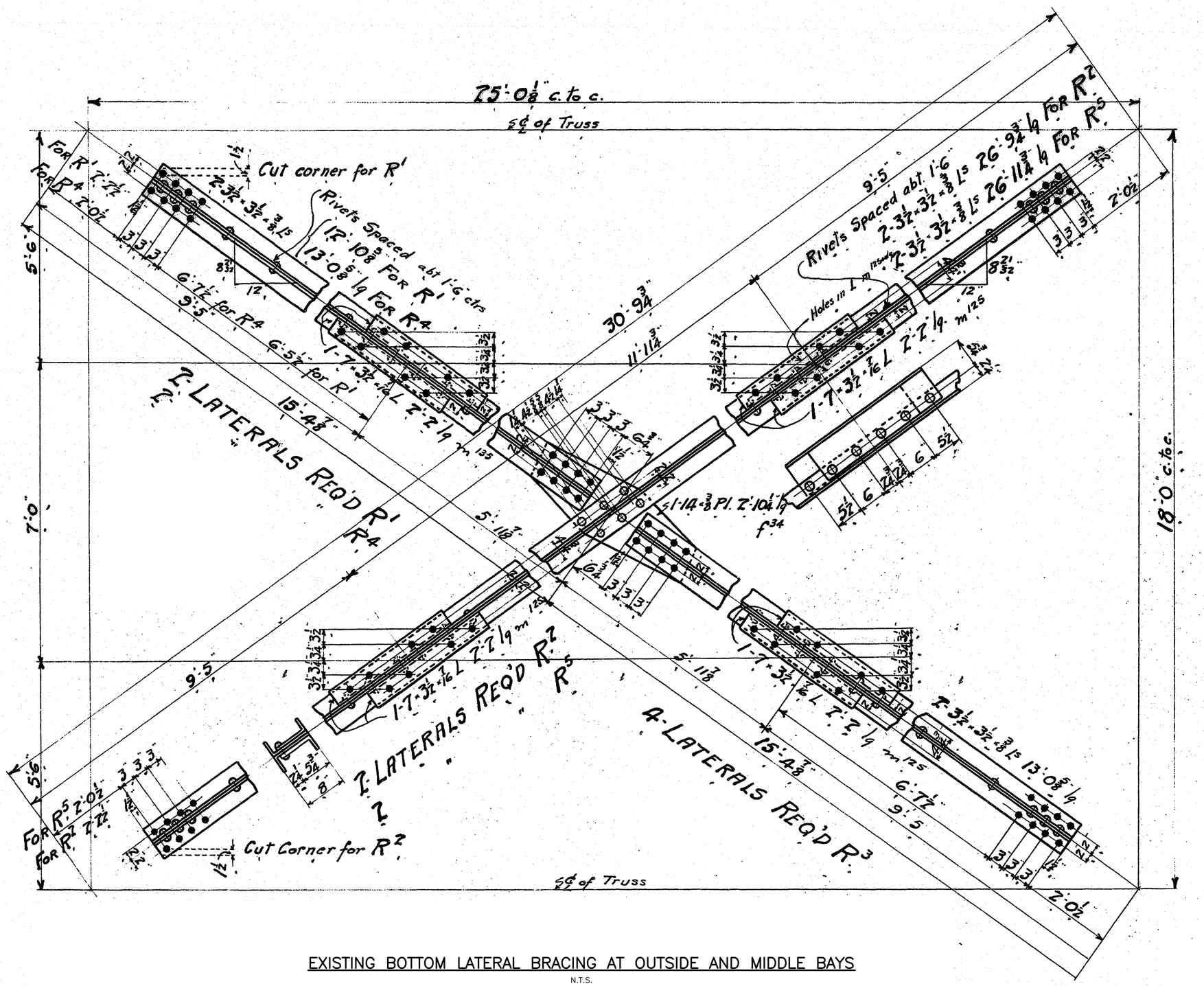
drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S4

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-004RM.dwg
MODIFIED: 3/13/2016 9:37:01 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:41:42 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NOTES:

1. THIS DRAWING IS PROVIDED FOR REFERENCE.
2. THE DETAILS SHOWN ON THIS DRAWING HAVE NOT BEEN VERIFIED AND NO REPRESENTATIONS ARE MADE WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THESE DETAILS.



EXISTING BOTTOM LATERAL BRACING AT OUTSIDE AND MIDDLE BAYS

N.T.S.

(4 LOCATIONS TOTAL)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — Mar 17/16 — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER — 100140686 — Mar 17/16 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
DETAILS FOR EXISTING BOTTOM LATERAL BRACING I

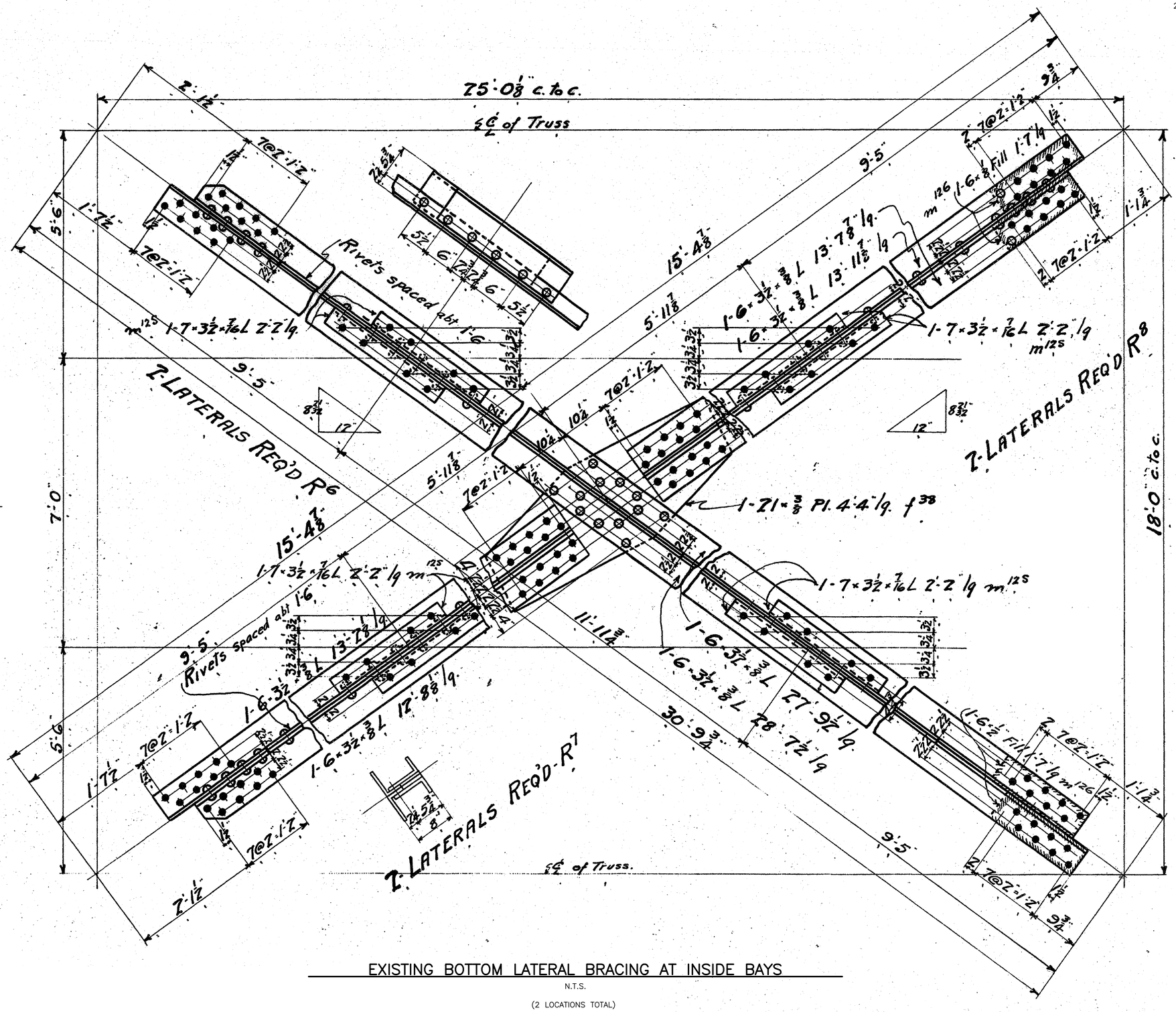
drawn by / dessiné par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuvé par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessin no.: S5

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-005EB.dwg
MODIFIED: 2/13/2016 9:36:46 AM BY: ZHAOX
DATE PLOTTED: 2/13/2016 9:41:53 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NOTES:

1. THIS DRAWING IS PROVIDED FOR REFERENCE.
2. THE DETAILS SHOWN ON THIS DRAWING HAVE NOT BEEN VERIFIED AND NO REPRESENTATIONS ARE MADE WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THESE DETAILS.



EXISTING BOTTOM LATERAL BRACING AT INSIDE BAYS

N.T.S.

(2 LOCATIONS TOTAL)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

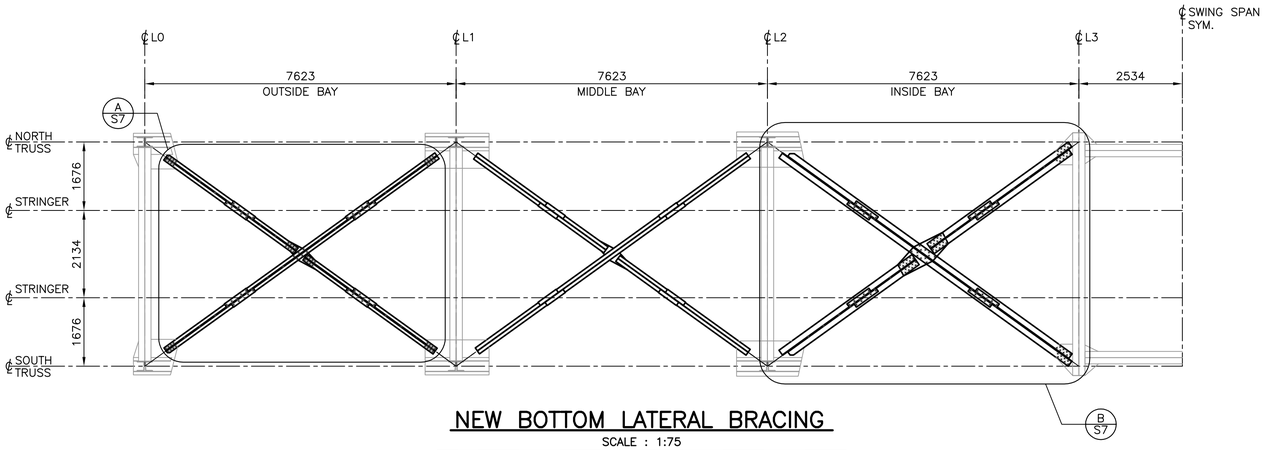
drawing title / titre du dessin
DETAILS FOR EXISTING BOTTOM LATERAL BRACING II

drawn by / dessiné par	X. ZHAO
designed by / conc par	M. BOWSER
approved by / approuvé par	D. DIXON
bid / offre	J. TO (project manager / administrateur de projets)
project date / date du projet	2016-03-17
project no. / no. du projet	R.078886.002
drawing no. / dessine no.	S6

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-006EB.dwg
MODIFIED: 4/13/2016 9:36:33 AM BY: ZHAOX
DATE PLOTTED: 4/13/2016 9:42:03 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH
FOR CONSTRUCTION



NEW BOTTOM LATERAL BRACING

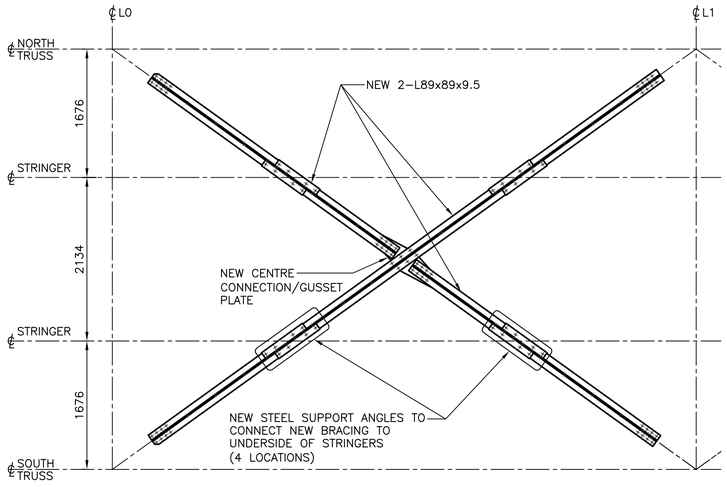
SCALE : 1:75

0m 1m 2m 3m 4m 5m 6m 7m 8m 9m 10m

(BRACING ON WEST SIDE OF SWING SPAN SHOWN, EAST SIDE SIMILAR)

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWINGS S8 AND S9.
2. REFER TO SECTION 05 12 33, STRUCTURAL STEEL FOR BRIDGES, OF THE CONTRACT DOCUMENTS FOR SPECIFICATIONS PERTAINING TO THE INSTALLATION OF NEW BOTTOM LATERAL BRACING.
3. ALL MEMBERS, COMPONENTS AND / OR REPAIR MATERIALS TO BE INSTALLED OR REPLACED MUST HAVE THE EXISTING CONDITION CONFIRMED IN THE FIELD THROUGH FIELD MEASUREMENTS. THESE MEASUREMENTS ARE TO BE OBTAINED BY THE CONTRACTOR. THESE MEASUREMENTS SHALL DETERMINE MEMBER/COMPONENT SIZE, OVERALL LENGTH, BOLT SPACING AND DIAMETER AND PLATE THICKNESS. THIS INFORMATION SHALL BE USED BY THE CONTRACTOR TO PREPARE SHOP DRAWINGS. SHOP DRAWINGS, SHALL BE SUBMITTED TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW AT LEAST TWO WEEKS PRIOR TO COMMENCING FABRICATION.
4. WHEN DIFFERENCES ARE NOTED BETWEEN THE EXISTING FIELD MEASURED CONDITIONS AND THE INFORMATION ON THE CONTRACT DRAWINGS THE CONTRACTOR SHALL:
   i) NOTIFY THE DEPARTMENTAL REPRESENTATIVE OF THE DIFFERENCES AND
   ii) PROCEED WITH THE PREPARATION OF SHOP DRAWINGS AND FABRICATION OF NEW COMPONENTS WHICH MATCH THE EXISTING FIELD MEASURED CONDITIONS UNLESS DIRECTED OTHERWISE.
5. HOLES TO BE MADE IN THE FIELD SHALL ONLY BE DRILLED OR REAMED, HOLES MUST BE EITHER DRILLED FULL SIZE WITH ALL THICKNESS OF MATERIAL ASSEMBLED IN THE PROPER POSITION OR SUB DRILLED AND REAMED.
6. FIELD WELDING SHALL NOT BE PERMITTED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS OR APPROVED BY THE DEPARTMENTAL REPRESENTATIVE.
7. ALL EXISTING BOLTS AND RIVETS REMOVED IN THE FIELD, SHALL HAVE EACH OF THE HOLES REAMED THROUGH ALL THE MATERIAL PLIES TO 24mm DIAMETER. THIS WILL REMOVE ALL BURRS, CORROSION AND IMPERFECTIONS IN THE HOLE DIAMETER AND ENSURE THE FIT OF THE NEW M22 BOLTS.

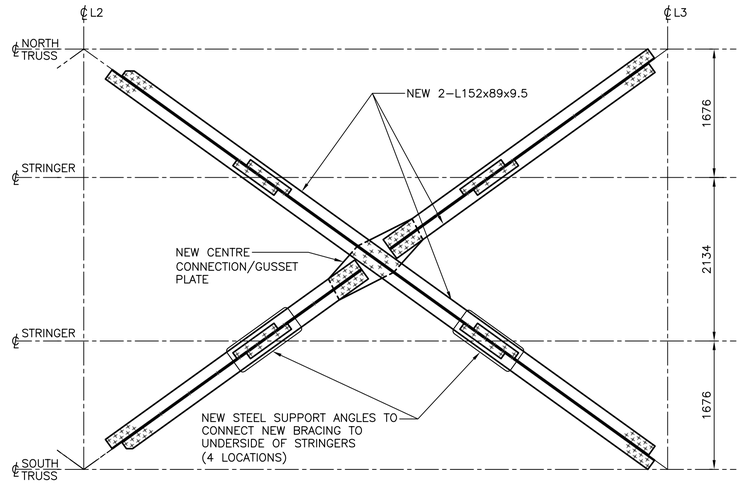


DETAIL – NEW BOTTOM LATERAL BRACING (A/S7)

SCALE: 1:40

0mm 1mm 2mm 3mm 4mm 5mm

(4 LOCATIONS TOTAL, L0 – L1 SHOWN, L1 – L2 SIMILAR)



DETAIL – NEW BOTTOM LATERAL BRACING (B/S7)

SCALE: 1:40

0mm 1mm 2mm 3mm 4mm 5mm

(2 LOCATIONS TOTAL)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A/B|C
A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

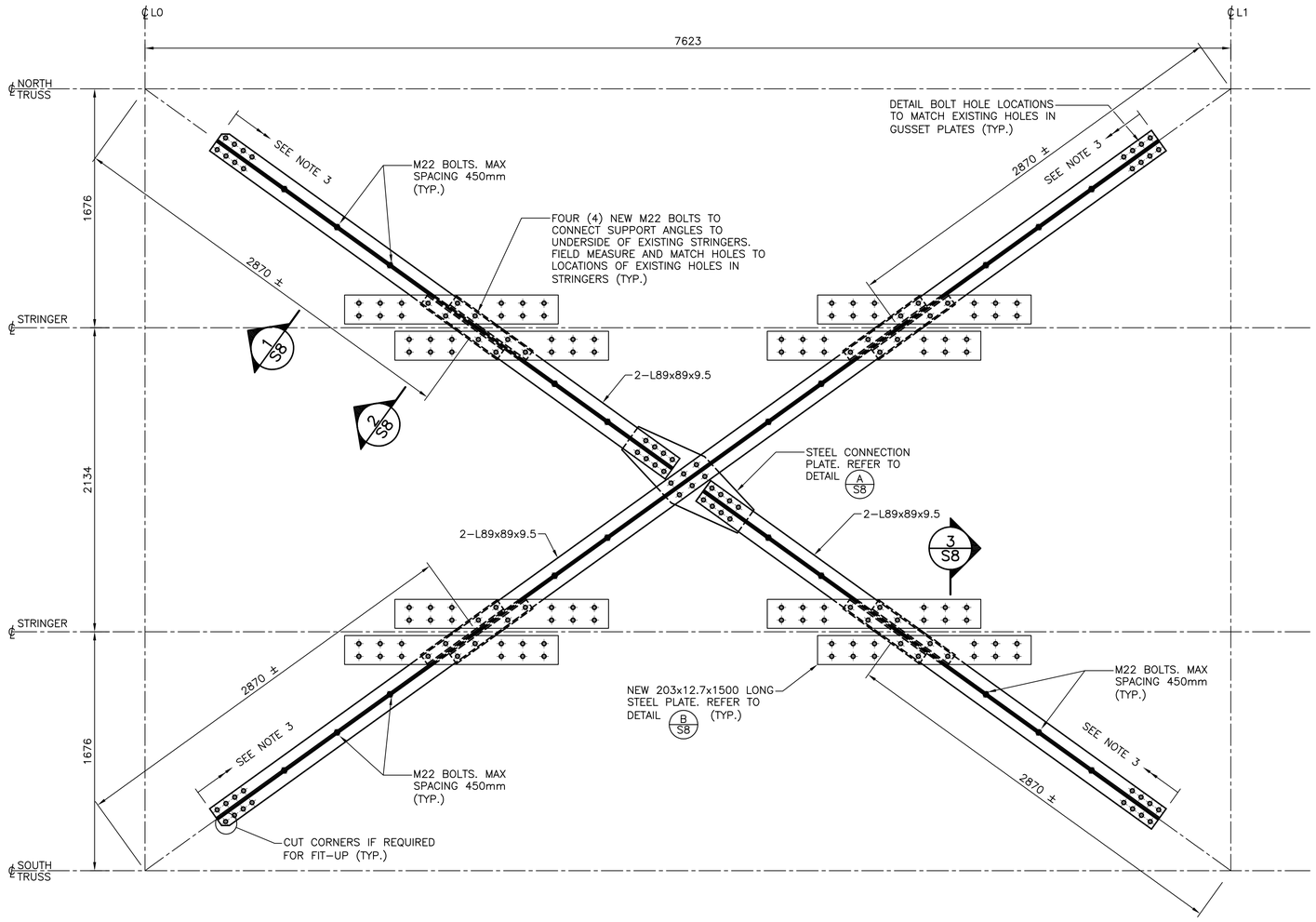
drawing title / titre du dessin
NEW BOTTOM LATERAL BRACING

drawn by / dessiné par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuvé par: D. DIXON
bid / offre: J. TO — project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessin no.: S7

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-007BC.dwg
MODIFIED: 3/13/2016 9:36:20 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:42:07 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH FOR CONSTRUCTION



NEW BOTTOM LATERAL BRACING AT OUTSIDE AND MIDDLE BAYS

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

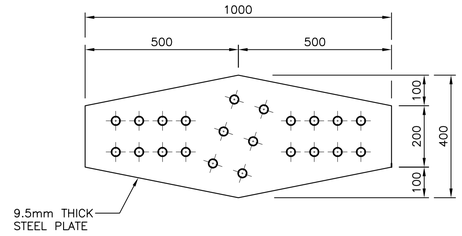
(4 LOCATIONS TOTAL, L0 – L1 SHOWN, L1 – L2 SIMILAR)

NOTES:

1. ALL HOLES IN NEW STRUCTURAL STEEL THAT FACILITATE CONNECTIONS TO EXISTING CONNECTION PLATES MUST BE FIELD MEASURED AND MATCH MARKED TO LINE UP WITH THE HOLES IN THE EXISTING CONNECTION PLATES AND/OR PARENT STEEL.
2. FIELD DRILLING HOLES IN NEW STRUCTURAL STEEL IS PERMITTED.
3. FIELD MEASURE AND PROVIDE CUSTOM LENGTHS FOR NEW STRUCTURAL STEEL TO FIT EXISTING STRUCTURE.
4. ALL BOLTS TO BE M22.

LEGEND:

⊕ DENOTES LOCATION FOR NEW BOLTS

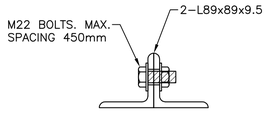


STEEL CONNECTION PLATE A S8

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

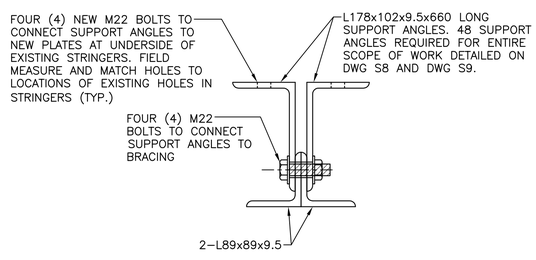
(REQUIRED AT 4 LOCATIONS)



2–L89X89X9.5 1 S8

SCALE: 1:5

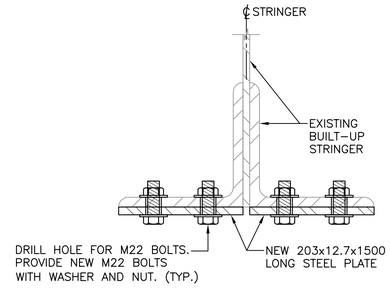
0mm 100mm 200mm 300mm 400mm 500mm



SUPPORT DETAIL 2 S8

SCALE: 1:5

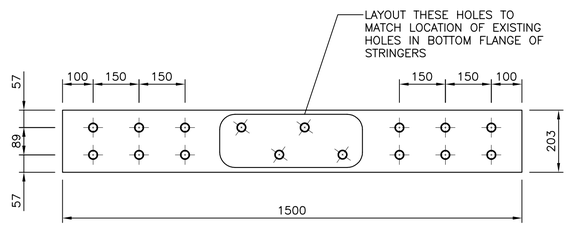
0mm 100mm 200mm 300mm 400mm 500mm



DETAIL 3 S8

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm



203x12.7x1500 STEEL PLATE B S8

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

(REQUIRED AT 48 LOCATIONS)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER D. G. DIXON PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M. G. BOWSER 100140686 PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

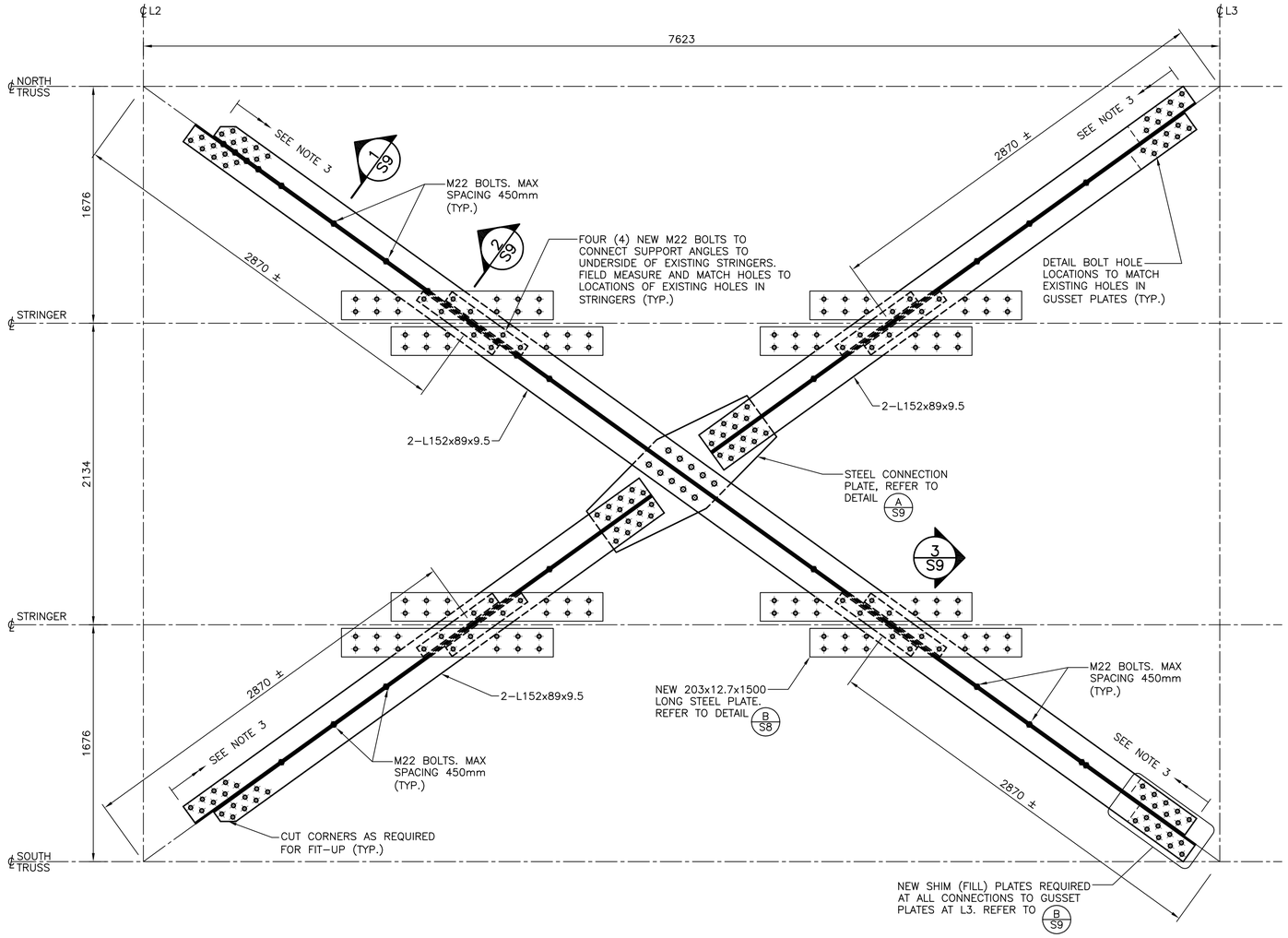
drawing title / titre du dessin
DETAILS FOR NEW BOTTOM LATERAL BRACING I

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO — project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S8

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082–310–008NB.dwg
MODIFIED: 4/13/2016 9:36:07 AM BY: ZHAOX
DATE PLOTTED: 4/13/2016 9:42:12 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH FOR CONSTRUCTION



NEW BOTTOM LATERAL BRACING AT INSIDE BAYS

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

(2 LOCATIONS TOTAL)

STEEL CONNECTION PLATE A S9

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

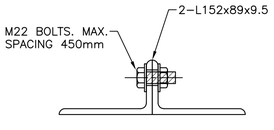
(REQUIRED AT 2 LOCATIONS)

NOTES:

1. ALL HOLES IN NEW STRUCTURAL STEEL THAT FACILITATE CONNECTIONS TO EXISTING CONNECTION PLATES MUST BE FIELD MEASURED AND MATCH MARKED TO LINE UP WITH THE HOLES IN THE EXISTING CONNECTION PLATES AND/OR PARENT STEEL.
2. FIELD DRILLING HOLES IN NEW STRUCTURAL STEEL IS PERMITTED.
3. FIELD MEASURE AND PROVIDE CUSTOM LENGTHS FOR NEW STRUCTURAL STEEL TO FIT EXISTING STRUCTURE.
4. ALL BOLTS TO BE M22.

LEGEND:

⊕ DENOTES LOCATION FOR NEW BOLTS

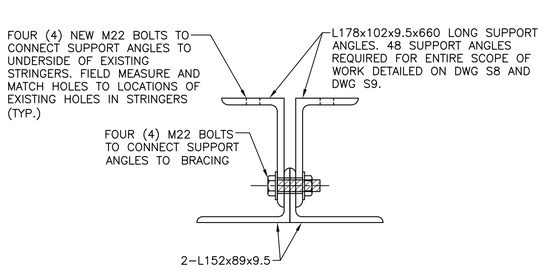


2–L152x89x9.5

1 S9

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

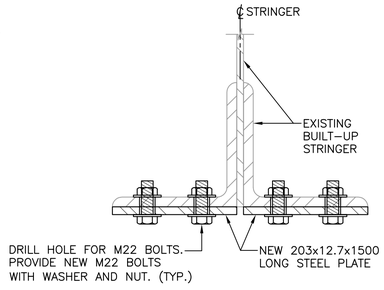


SUPPORT DETAIL

2 S9

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

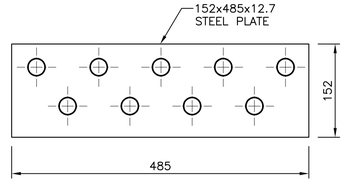


DETAIL

3 S9

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm



152x485x12.7 STEEL PLATE

B S9

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(REQUIRED AT 8 LOCATIONS)

Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER D. G. DIXON PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M. G. BOWSER 100140686 PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

project title / titre du projet

PARRY ISLAND Ontario

WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin

DETAILS FOR NEW BOTTOM LATERAL BRACING II

drawn by / dessine par: X. ZHAO

designed by / conc par: M. BOWSER

approved by / approuve par: D. DIXON

bid / offre: J. TO — project manager / administrateur de projets

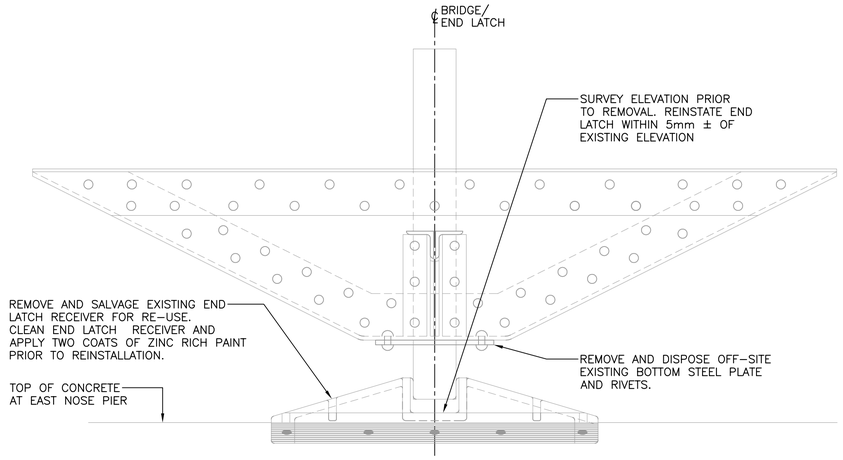
project date / date du projet: 2016–03–17

project no. / no. du projet: R.078886.002

drawing no. / dessine no.: S9

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082–310–009NB.dwg
MODIFIED: 9/13/2016 9:35:53 AM BY: ZHAOX
DATE PLOTTED: 9/13/2016 9:42:17 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



END LATCH ASSEMBLY REMOVALS AT EAST NOSE PIER – ELEVATION

(CONNECTIONS TO STRINGERS NOT SHOWN FOR CLARITY)

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

NOTES:

1. REFER TO SECTION 02 41 13, SELECTIVE SITE DEMOLITION OF THE CONTRACT DOCUMENTS FOR SPECIFICATIONS PERTAINING TO THE REMOVALS OF THE END LATCH.
2. END LATCH STEEL REMOVALS REQUIRED ONLY AT EAST NOSE PIER.
3. REMOVALS SHOWN ON THIS DRAWING SHALL NOT COMMENCE UNTIL AFTER THE WINTER NAVIGATIONAL SHUT DOWN PERIOD BEGINS AND ALL WORK SHOWN ON THIS DRAWING SHALL BE COMPLETED PRIOR TO THE SPRING RE–OPENING OF THE BRIDGE.
4. THE END LATCH RECEIVER SHALL BE REPAIRED AND REINSTATED WITHIN 48 HOURS FOLLOWING REMOVAL.

END LATCH RECEIVER REMOVALS

N.T.S.

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

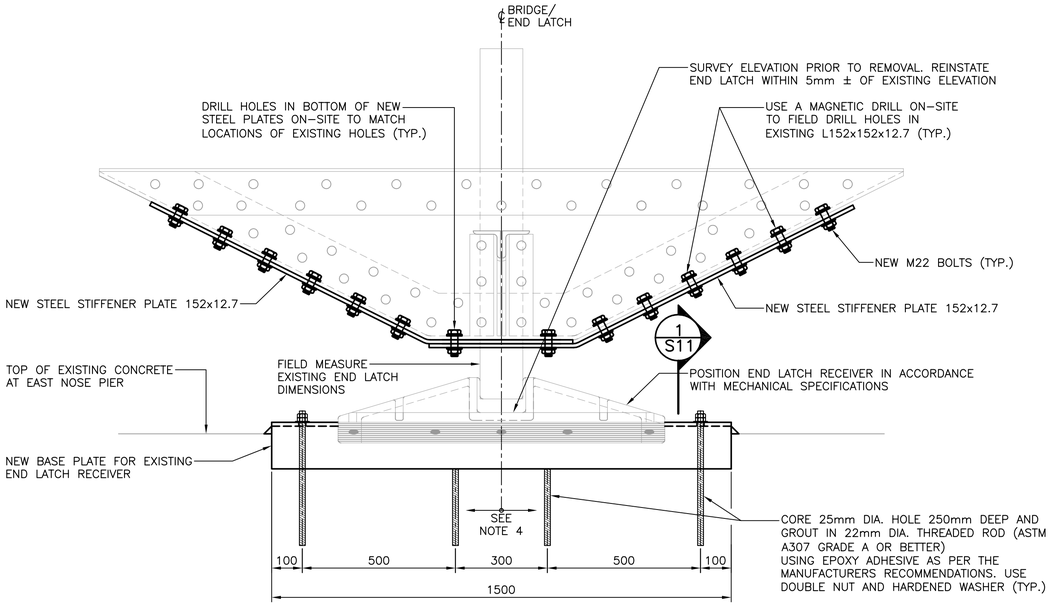
project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
EAST NOSE PIER
END LATCH REMOVALS

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S10

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082–310–010RP.dwg
MODIFIED: 3/13/2016 9:35:39 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:42:26 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



END LATCH MODIFICATIONS AT EAST NOSE PIER – ELEVATION

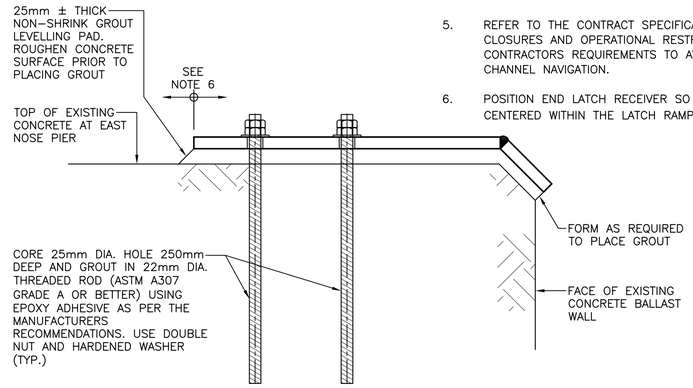
SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

(CONNECTIONS TO STRINGERS NOT SHOWN FOR CLARITY)

NOTES:

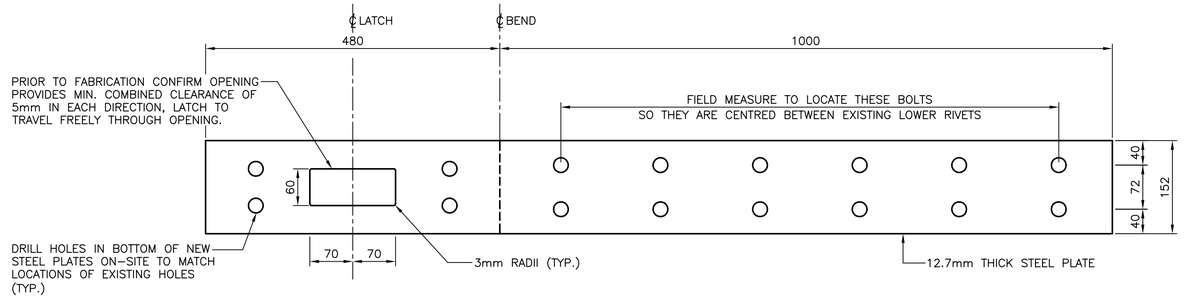
1. REFER TO SECTION 05 12 33, STRUCTURAL STEEL FOR BRIDGES, OF THE CONTRACT DOCUMENTS FOR SPECIFICATIONS PERTAINING TO THE MODIFICATIONS TO THE END LATCH.
2. END LATCH STEEL REPAIRS REQUIRED ONLY AT EAST NOSE PIER.
3. REPAIRS SHOWN ON THIS DRAWING SHALL NOT COMMENCE UNTIL AFTER THE WINTER NAVIGATIONAL SHUT DOWN PERIOD BEGINS AND ALL WORK SHOWN ON THIS DRAWING SHALL BE COMPLETED PRIOR TO THE SPRING RE–OPENING OF THE BRIDGE.
4. POSITION END LATCH RECEIVER IN ACCORDANCE WITH THE SPECIFICATION IN SECTION 29 05 00, MECHANICAL WORK, OF THE CONTRACT DOCUMENTS.
5. REFER TO THE CONTRACT SPECIFICATIONS FOR ALLOWABLE ROAD CLOSURES AND OPERATIONAL RESTRAINTS ASSOCIATED WITH THE CONTRACTORS REQUIREMENTS TO AVOID CONFLICTS WITH CHANNEL NAVIGATION.
6. POSITION END LATCH RECEIVER SO THAT END LATCH IS CENTERED WITHIN THE LATCH RAMP/SEAT.



NEW BASE PLATE – MOUNTING DETAILS 1/S11

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

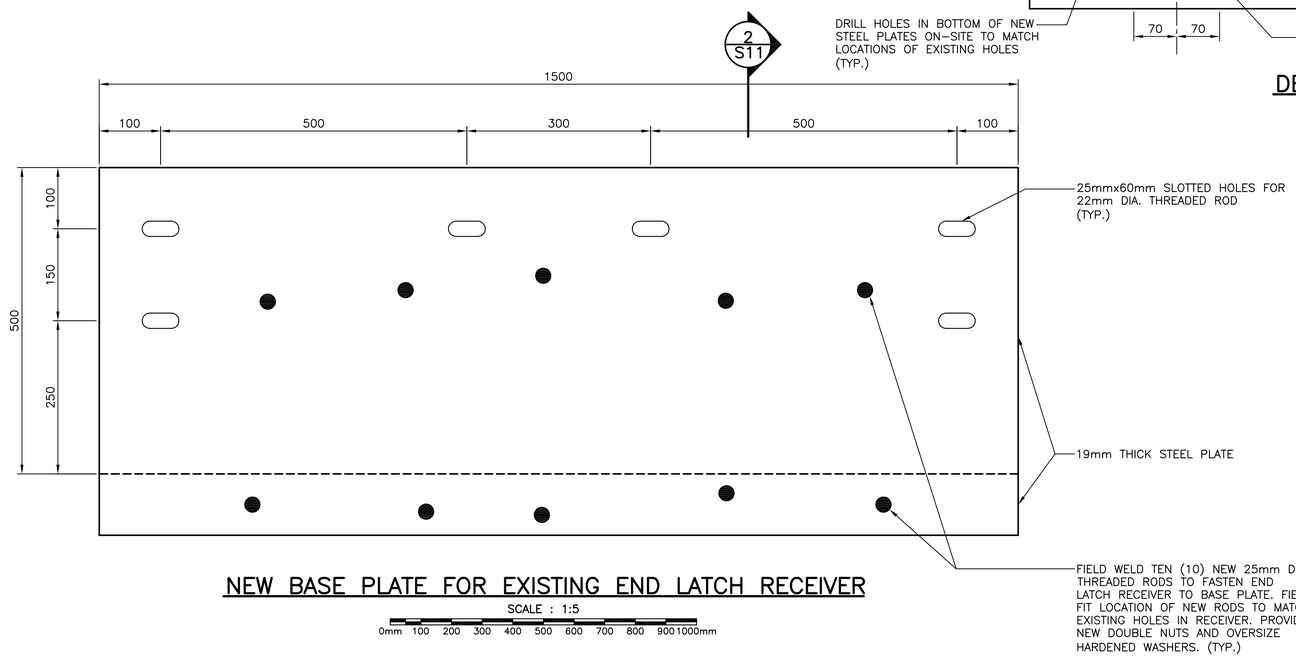


DETAIL – NEW STIFFENER PLATE

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

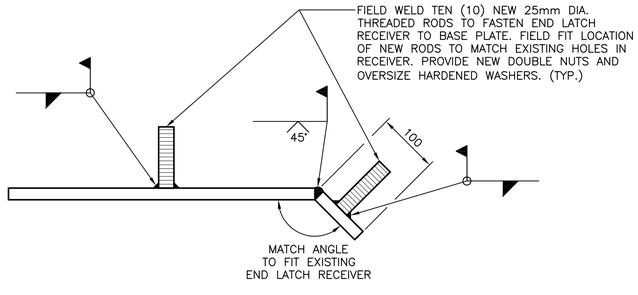
(2 REQUIRED)



NEW BASE PLATE FOR EXISTING END LATCH RECEIVER

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm



NEW BASE PLATE – STEEL DETAILS 2/S11

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A/B|C
A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
EAST NOSE PIER
END LATCH STEEL REPAIRS

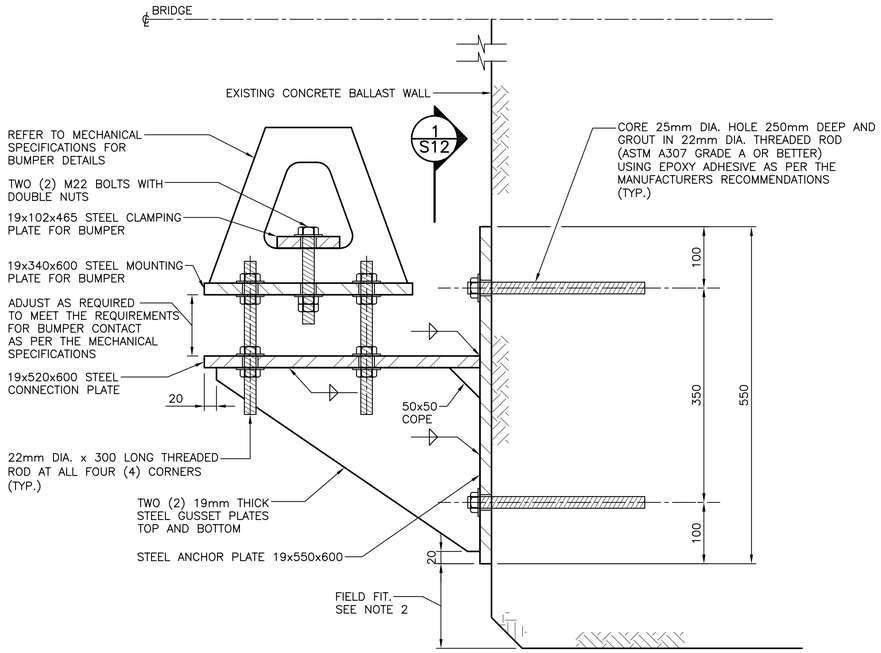
drawn by / dessiné par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuvé par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S11

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082–310–011RP.dwg
MODIFIED: 3/13/2016 9:35:27 AM BY: XHAO
DATE PLOTTED: 3/13/2016 9:42:33 AM BY: XHAO

04 11

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

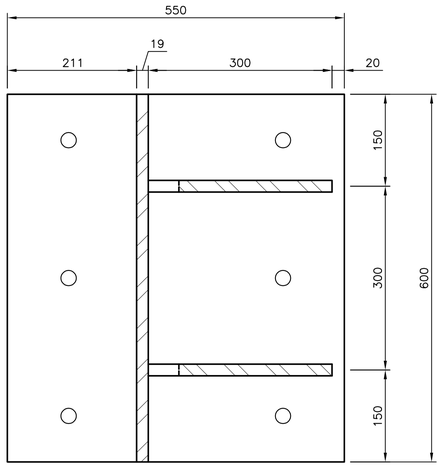
NORTH
FOR CONSTRUCTION



PLAN VIEW – SOUTHEAST CLOSED BUMPER

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm



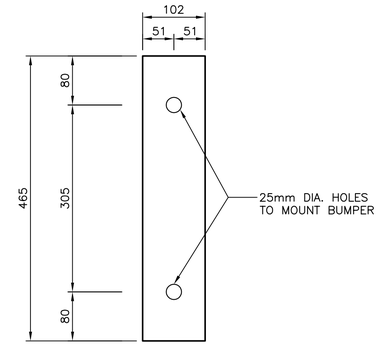
ELEVATION – SOUTHEAST CLOSED BUMPER (1 / S12)

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

NOTES:

1. CONTRACTOR TO SELECT VERTICAL POSITION OF BUMPER ASSEMBLY TO LINE UP WITH POSITION OF STRIKE PLATE.
2. CONTRACTOR TO SELECT HORIZONTAL POSITION OF BUMPER TO MAKE CONTACT WITH BUMPER IN ACCORDANCE WITH THE MECHANICAL SPECIFICATIONS.

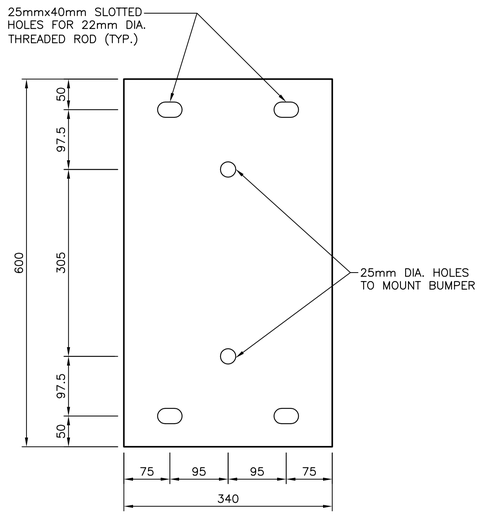


19x102x465 STEEL CLAMPING PLATE FOR BUMPER

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

(ONE REQUIRED)

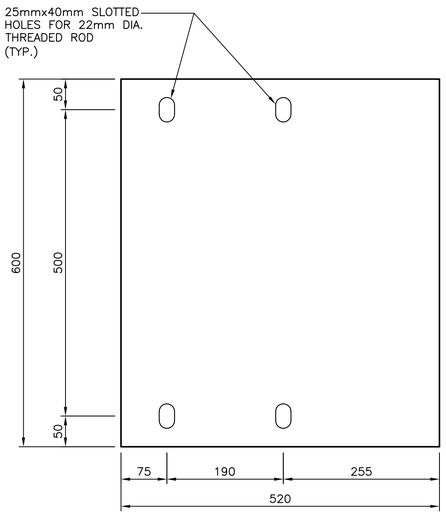


19x340x600 STEEL MOUNTING PLATE FOR BUMPER

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

(ONE REQUIRED)

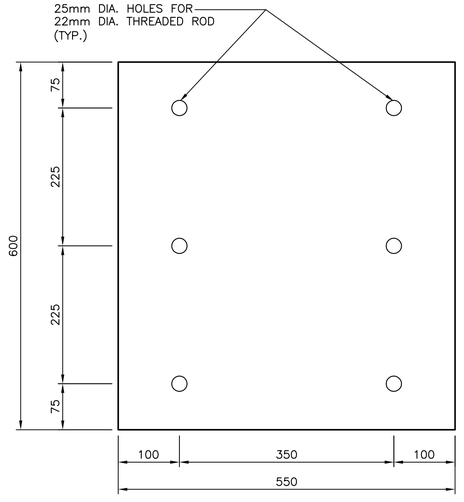


19x520x600 STEEL CONNECTION PLATE

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

(ONE REQUIRED)

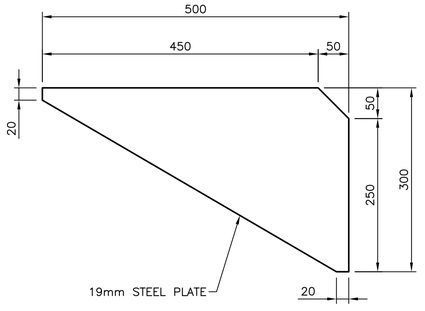


19x550x600 STEEL ANCHOR PLATE

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

(ONE REQUIRED)



GUSSET PLATES

SCALE : 1:5

0mm 100 200 300 400 500 600 700 800 900 1000mm

(TWO REQUIRED)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
CLOSED BUMPER

drawn by / dessine par: C. AWAD
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S12

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-012BD.dwg
MODIFIED: 4/13/2016 9:35:12 AM BY: ZHAOX
DATE PLOTTED: 4/13/2016 9:42:37 AM BY: ZHAOX

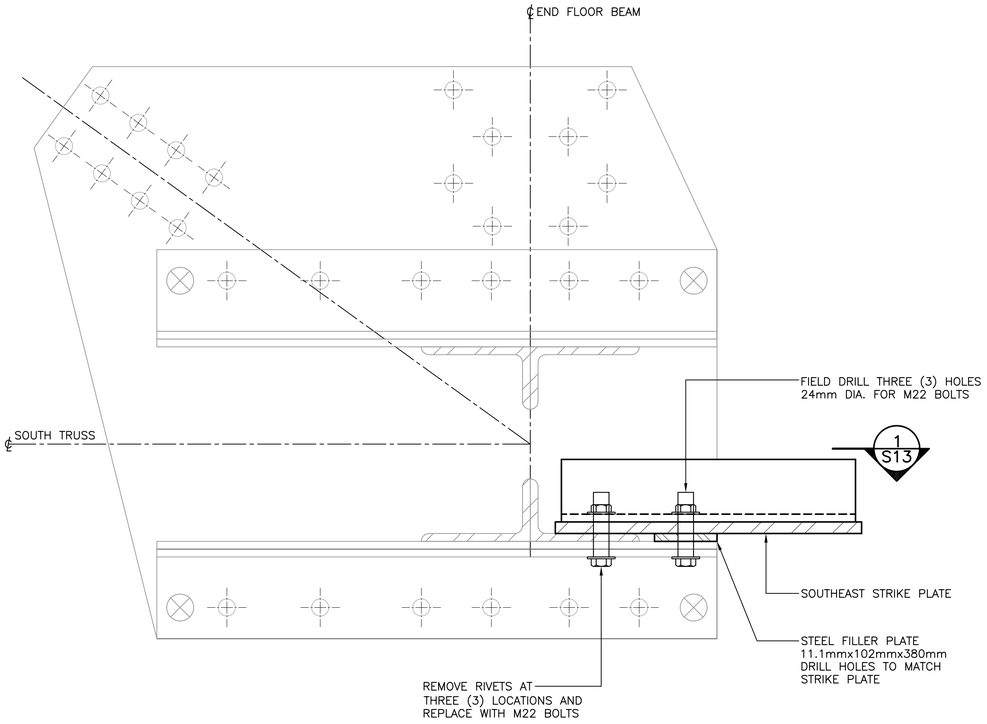
GSC-A1 DATE PLOTTED: 25 February 2016 PLOT SCALE: AS NOTED CAD FILE: S:\2015\32\3215082\310\S3215082-310-012BD.dwg

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH
FOR CONSTRUCTION

NOTES:

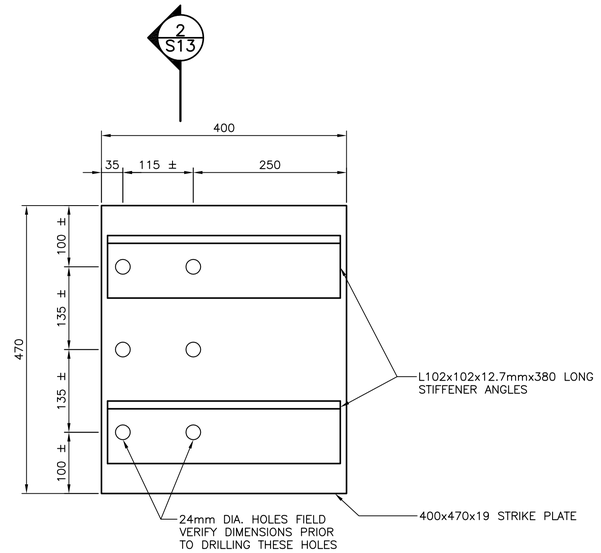
1. CONTRACTOR TO SELECT VERTICAL POSITION OF STRIKE PLATES TO LINE UP WITH POSITION OF BUMPER ASSEMBLY.



SOUTHEAST STRIKE PLATE – PLAN VIEW

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

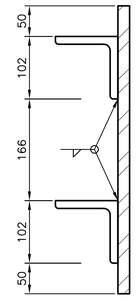


SOUTHEAST STRIKE PLATE 1/S13

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(EXISTING STEEL NOT SHOWN FOR CLARITY)



STRIKE PLATE 2/S13

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER
D. G. DIXON
PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER
M. G. BOWSER
100140686
PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

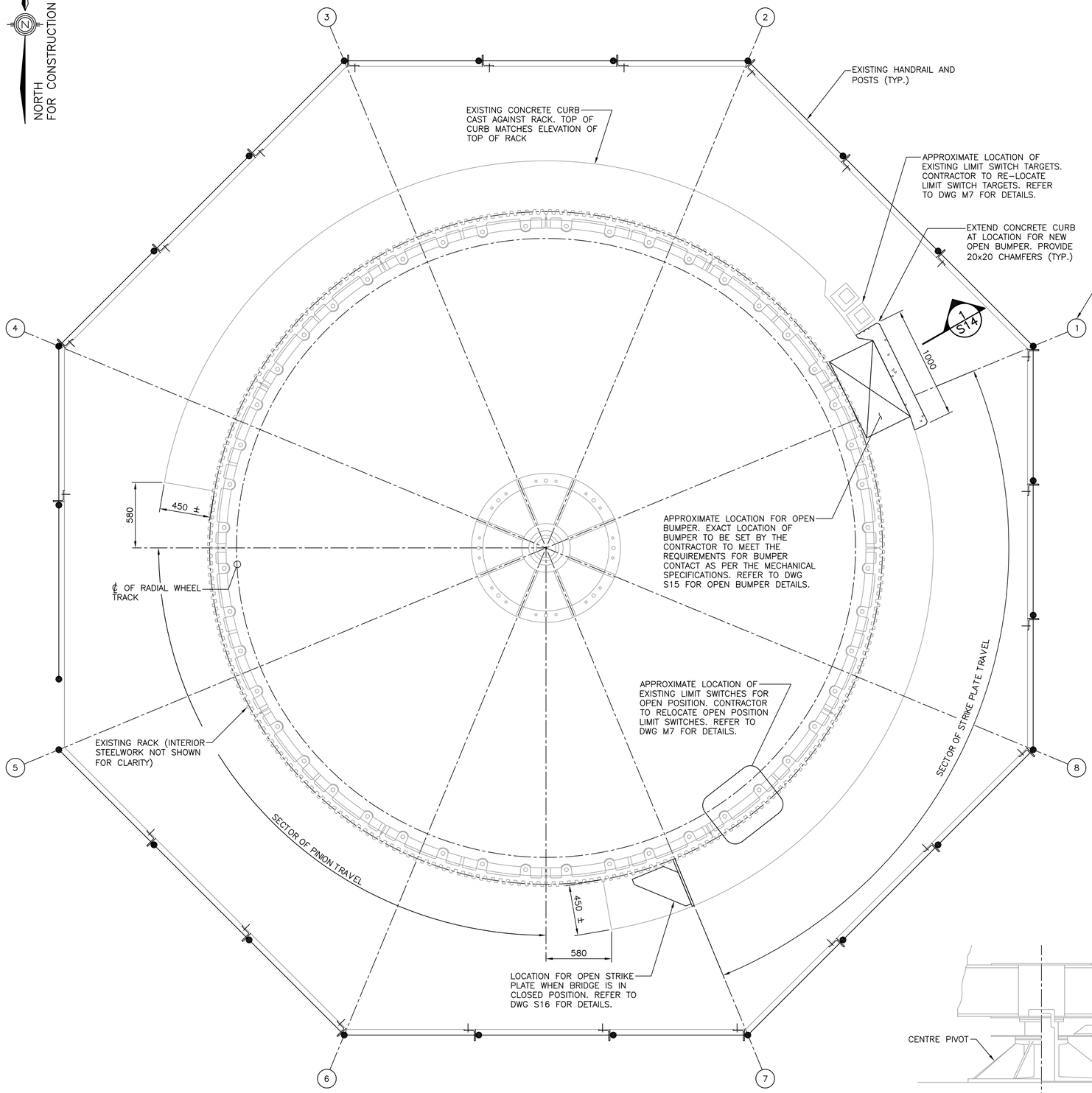
drawing title / titre du dessin
CLOSED STRIKE PLATE

drawn by / dessine par: C. AWAD
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S13

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-013SP.dwg
MODIFIED: 3/13/2016 9:34:59 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:42:42 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH
FOR CONSTRUCTION



PLAN OF EXISTING CENTRE PIVOT

SCALE : 1:20

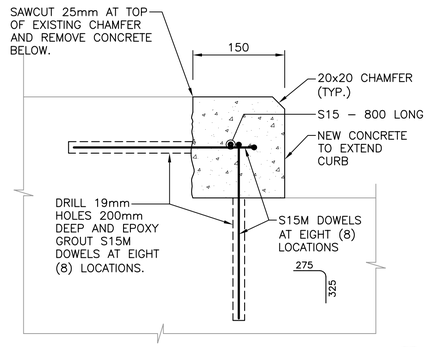
0mm 500mm 1000mm 1500mm 2000mm 2500mm

NOTES:

1. BRIDGE OPENS IN A COUNTER CLOCKWISE DIRECTION.

LEGEND:

NEW CONCRETE

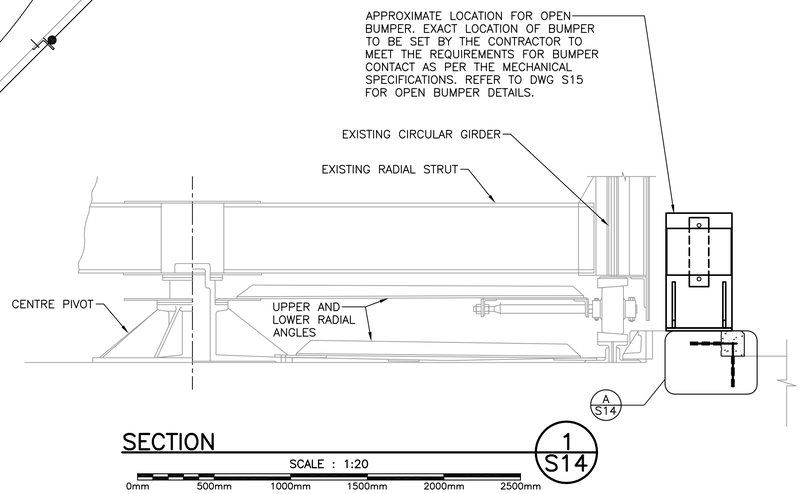


CURB EXTENSION

A S14

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm



SECTION

1 S14

SCALE : 1:20

0mm 500mm 1000mm 1500mm 2000mm 2500mm

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER — D. G. DIXON — PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER — M. G. BOWSER 100140686 — PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
OPEN BUMPER LAYOUT

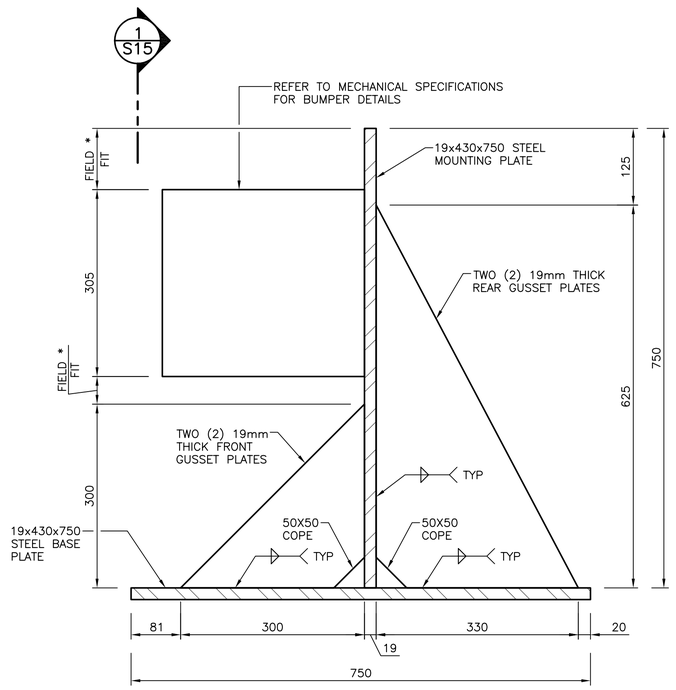
drawn by / dessine par	X. ZHAO
designed by / conc par	M. BOWSER
approved by / approuve par	D. DIXON
bid / offre	J. TO (project manager / administrateur de projets)
project date / date du projet	2016-03-17
project no. / no. du projet	R.078886.002
drawing no. / dessine no.	S14

CAD FILE LOCATION AND NAME: g:\2015\32\3215082\310\S3215082-310-014PR.dwg
MODIFIED: 2016/3/13 9:34:46 AM BY: ZHAOX
DATE PLOTTED: 2016/3/13 9:42:47 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NOTES:

1. CONTRACTOR TO SELECT VERTICAL POSITION OF BUMPER SO THAT THE BUMPER IS CENTRED AT MIDDLE OF STRIKE PLATE.



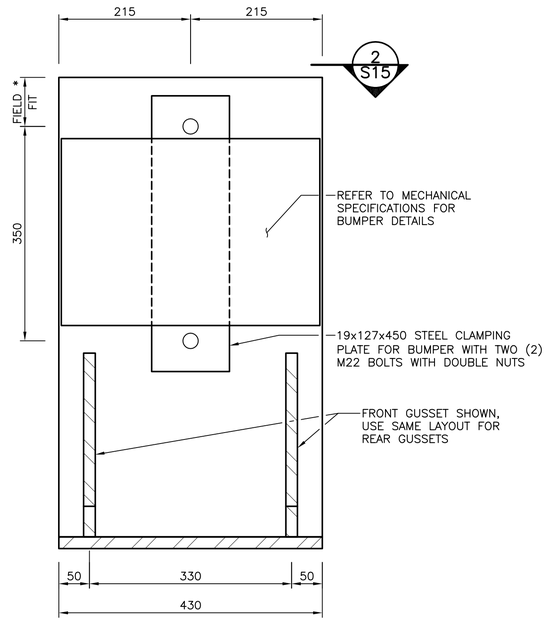
ELEVATION – OPEN BUMPER

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(CONCRETE ANCHOR BOLTS AND STEEL CLAMPING PLATE NOT SHOWN FOR CLARITY)

* SEE NOTE 1

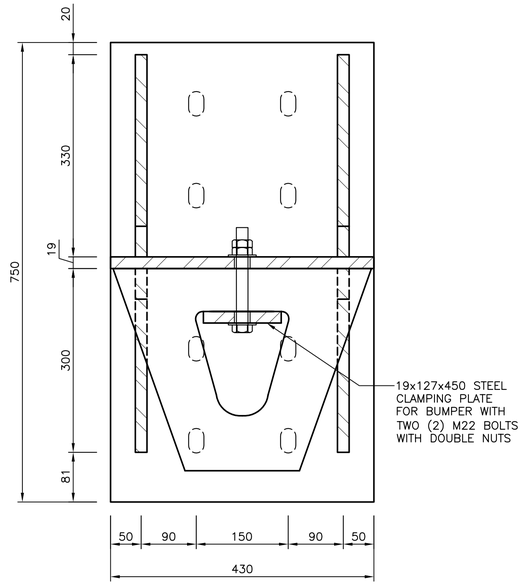


SECTION – OPEN BUMPER (1 / S15)

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

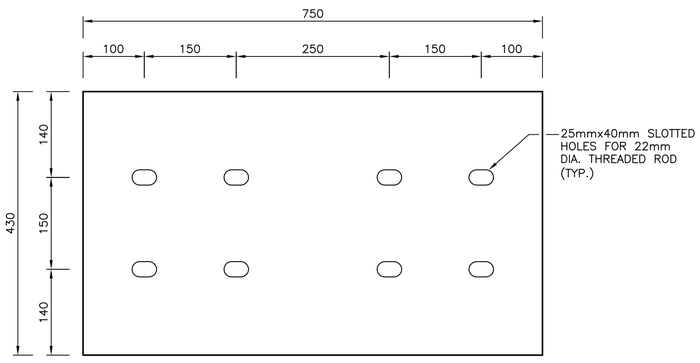
* SEE NOTE 1



PLAN VIEW – OPEN BUMPER (2 / S15)

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

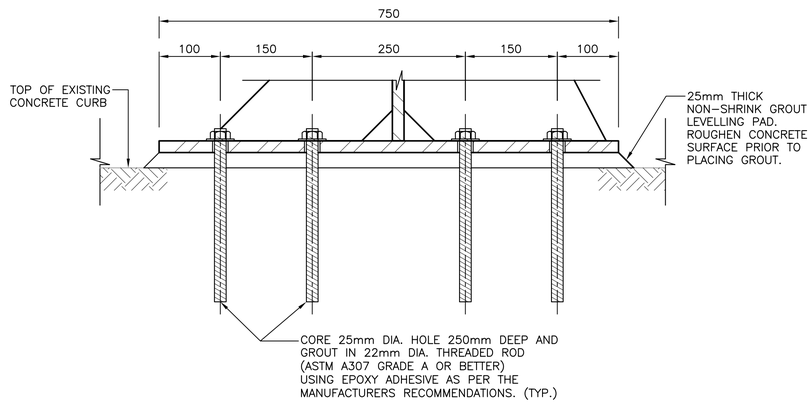


19x430x750 STEEL BASE PLATE

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(ONE REQUIRED)

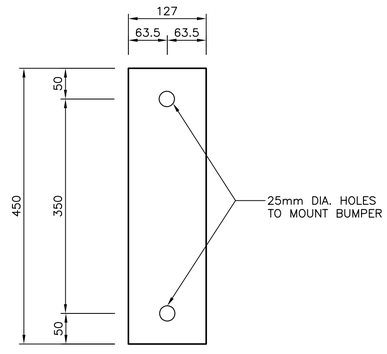


BASE PLATE ANCHOR DETAILS

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(CONCRETE ANCHOR BOLTS NOT SHOWN FOR CLARITY)



19X127X450 STEEL CLAMPING PLATE FOR BUMPER

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(ONE REQUIRED)

Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER D. G. DIXON PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M. G. BOWSER 100140686 PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet

PARRY ISLAND Ontario

WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin

OPEN BUMPER DETAILS

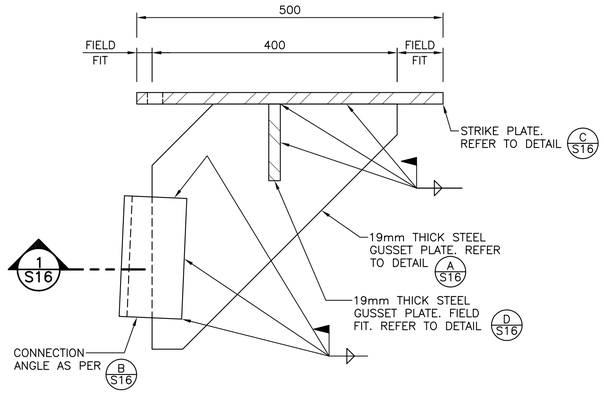
drawn by / dessiné par	X. ZHAO
designed by / conc par	M. BOWSER
approved by / approuvé par	D. DIXON
bid / offre	J. TO
project manager / administrateur de projets	
project date / date du projet	2016-03-17
project no. / no. du projet	R.078886.002
drawing no. / dessine no.	S15

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-015BD.dwg
MODIFIED: 2/13/2016 9:34:32 AM BY: ZHAOX
DATE PLOTTED: 2/13/2016 9:42:52 AM BY: ZHAOX

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NOTES:

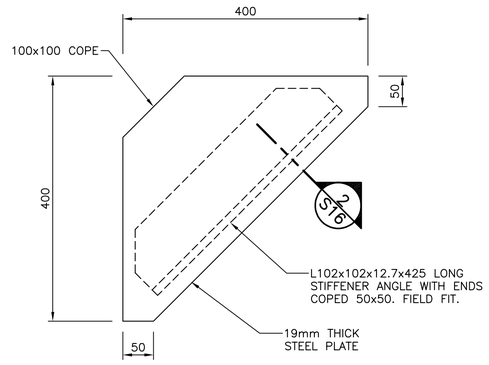
1. BOLT LAYOUT SHOWN IN THIS DRAWING IS APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION.



PLAN VIEW – OPEN STRIKE PLATE

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

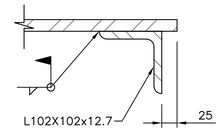


LARGE GUSSET PLATE DETAIL A S16

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(ONE REQUIRED)

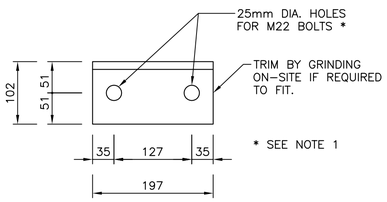


STIFFENER ANGLE DETAIL 2 S16

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(ONE REQUIRED)

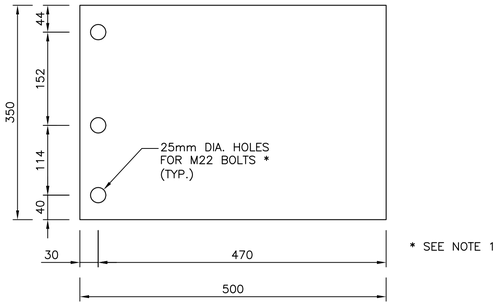


L102x102X12.7 CONNECTION ANGLE B S16

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(ONE REQUIRED)

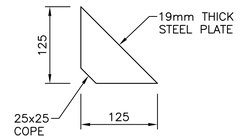


19x500X350 STRIKE PLATE C S16

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

(ONE REQUIRED)

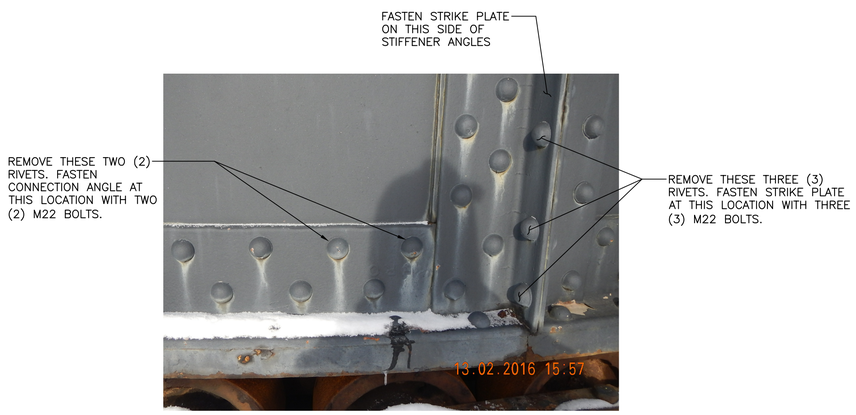


SMALL GUSSET PLATE DETAIL D S16

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

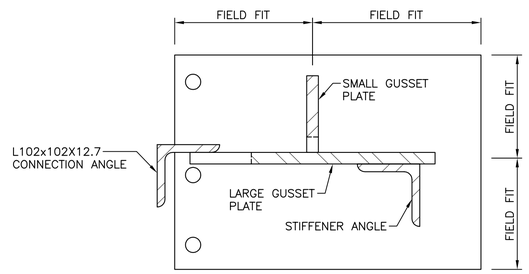
(ONE REQUIRED)



CONNECTION DETAIL

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm



ELEVATION – STRIKE PLATE DETAIL 1 S16

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

Public Works and Government Services Canada

Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER D. DIXON PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M. G. BOWSER 100140686 PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

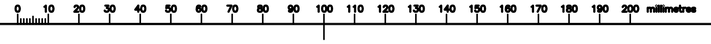
A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

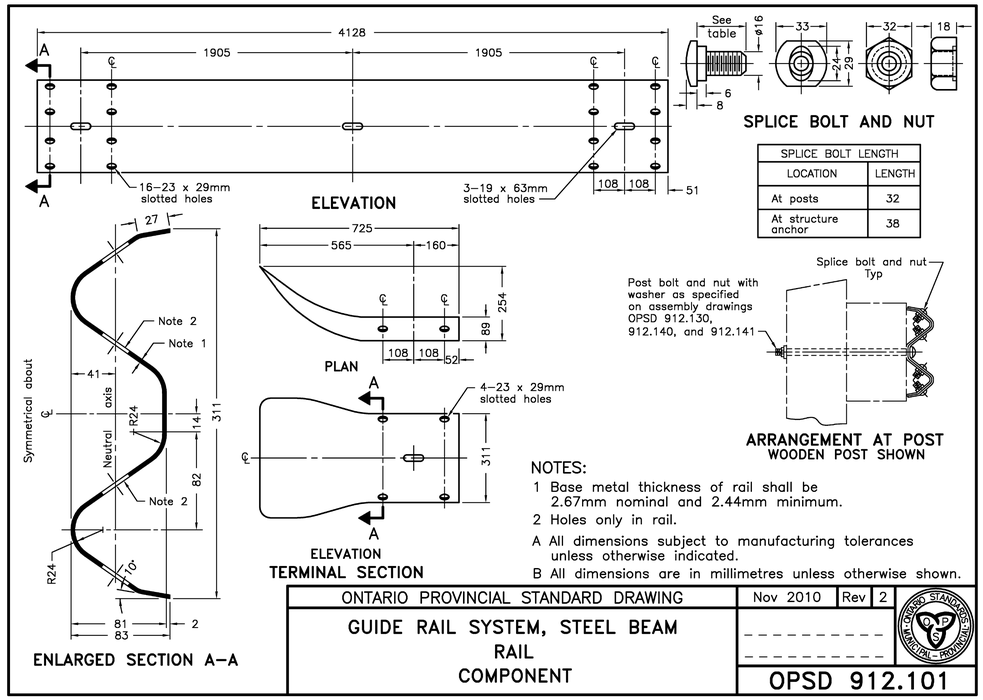
project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
OPEN STRIKE PLATE

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO — project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S16

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082-310-016OP.dwg
MODIFIED: 4/13/2016 9:34:16 AM BY: ZHAOX
DATE PLOTTED: 4/13/2016 9:42:57 AM BY: ZHAOX

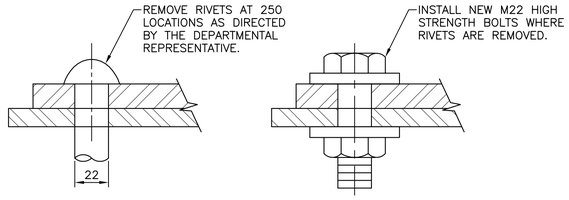




SPLICE BOLT LENGTH	
LOCATION	LENGTH
At posts	32
At structure anchor	38

NOTES:

1. LOCATIONS FOR TIMBER CURB REPLACEMENT TO BE IDENTIFIED ON–SITE BY THE DEPARTMENTAL REPRESENTATIVE.
2. LOCATIONS FOR STEEL BEAM GUIDE RAIL REPLACEMENT TO BE IDENTIFIED ON–SITE BY THE DEPARTMENTAL REPRESENTATIVE.
3. LOCATIONS FOR NEW STEEL BEAM GUIDE RAIL POSTS TO BE IDENTIFIED ON–SITE BY THE DEPARTMENTAL REPRESENTATIVE.
4. RIVETS REPLACED TO PERMIT STRUCTURAL STEEL REPAIRS CALLED FOR ON THE PLANS ARE IN ADDITION TO THE 250 RIVETS SPECIFIED FOR REPLACEMENT. RIVETS TO BE REMOVED FOR STEEL REPAIRS AND INSTALLATION OF BUMPERS AND STRIKE PLATES ARE NOT MEASURED FOR PAYMENT.
5. ALL HIGH STRENGTH BOLT CONNECTIONS SHALL BE ASSEMBLED WITH A HARDENED WASHER UNDER BOTH THE BOLT HEAD AND NUT.
6. IF REAMING IS REQUIRED TO DRESS UP THE RIVETS HOLES, THE COST OF THIS REAMING SHALL BE INCLUDED IN THE BID. IF AFTER REAMING THE HOLES EXCEED THE TOLERANCES SHOWN IN THE CANADIAN INSTITUTE OF STEEL CONSTRUCTION MANUAL THE CONTRACTOR SHALL INSTALL THE NEXT LARGER SIZE BOLT AT NO ADDITIONAL COST.
7. THE 250 RIVETS SPECIFIED FOR REPLACEMENT ARE ALL LOCATED UNDER THE DECK WITHIN THE SWINGSPAN.

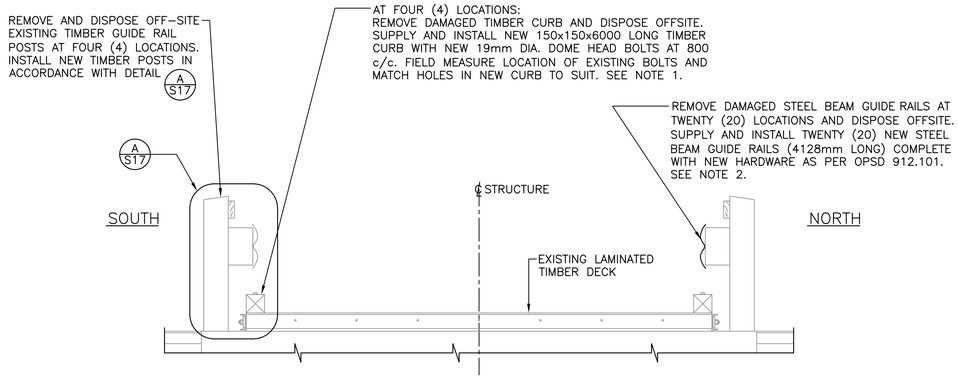


RIVET REPLACEMENT

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

(250 LOCATIONS, SEE NOTE 4)

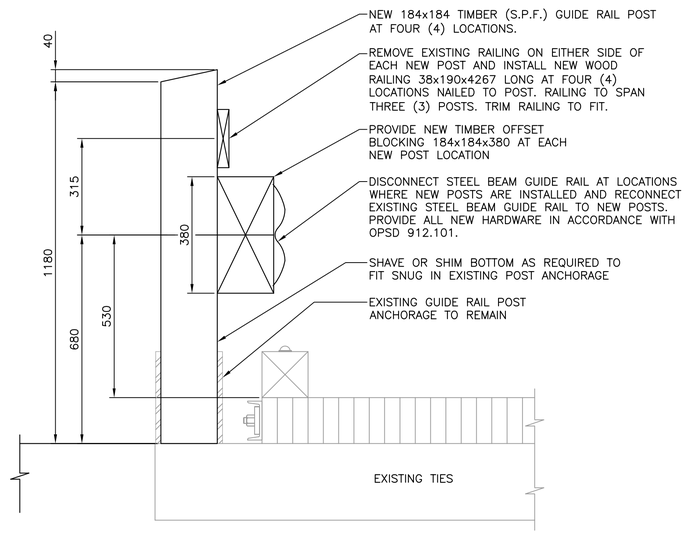


TYPICAL DECK SECTION

1 S17

SCALE: 1:25

0mm 500mm 1000mm 1500mm 2000mm 2500mm



NEW POST DETAIL

A S17

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

(4 LOCATIONS)

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER D. G. DIXON PROVINCE OF ONTARIO

LICENSED PROFESSIONAL ENGINEER M. G. BOWSER 100140686 PROVINCE OF ONTARIO

revision		date
04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A B|C
A Detail No. No. du détail
B drawing no. – where detail required dessin no. – où détail exigé
C drawing no. – where detailed dessin no. – où détaillé

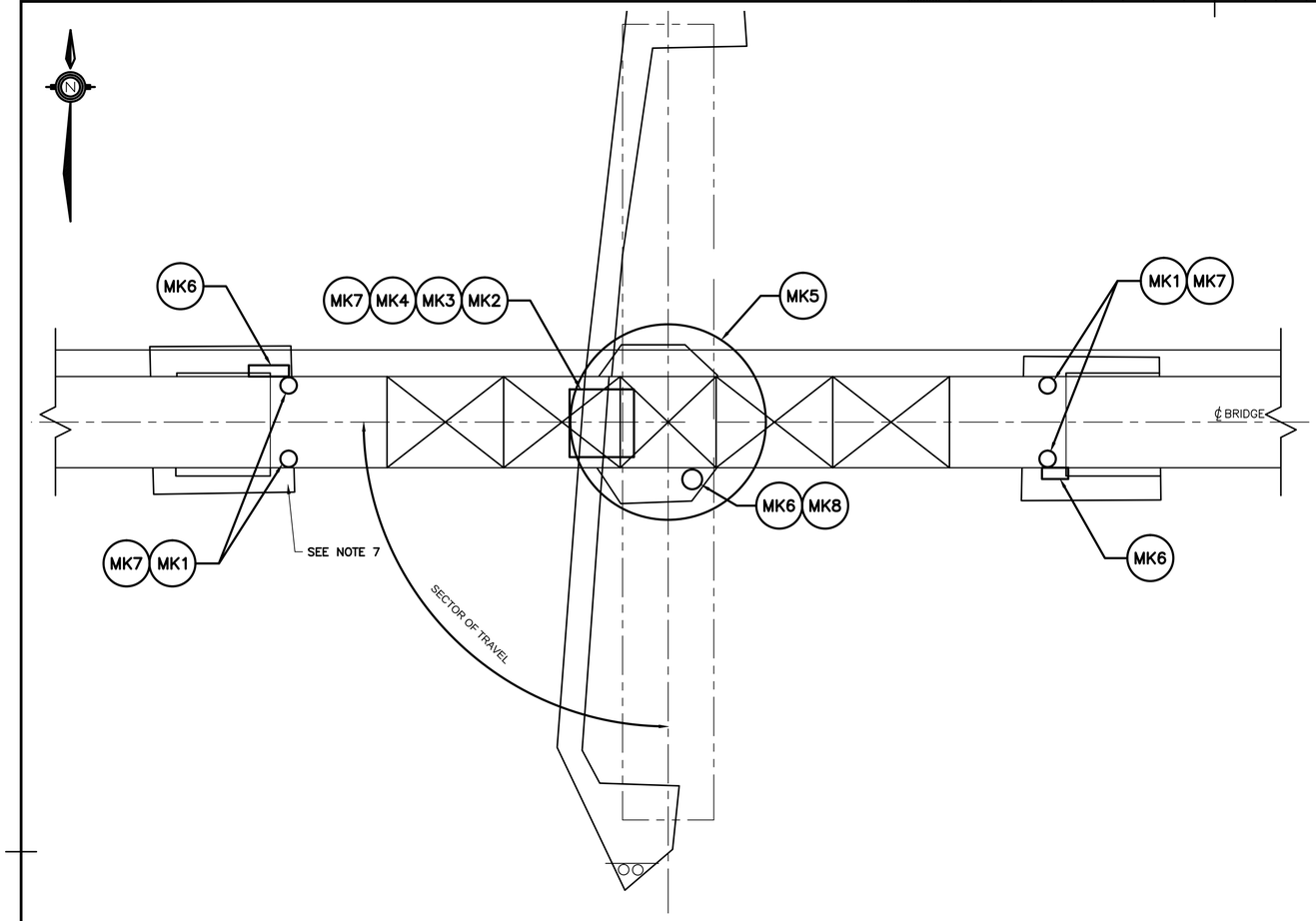
project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
MISCELLANEOUS DETAILS

drawn by / dessine par: X. ZHAO
designed by / conc par: M. BOWSER
approved by / approuve par: D. DIXON
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: S17

CAD FILE LOCATION AND NAME: S:\2015\32\3215082\310\S3215082–310–017SD.dwg
MODIFIED: 3/13/2016 9:34:02 AM BY: ZHAOX
DATE PLOTTED: 3/13/2016 9:43:02 AM BY: ZHAOX

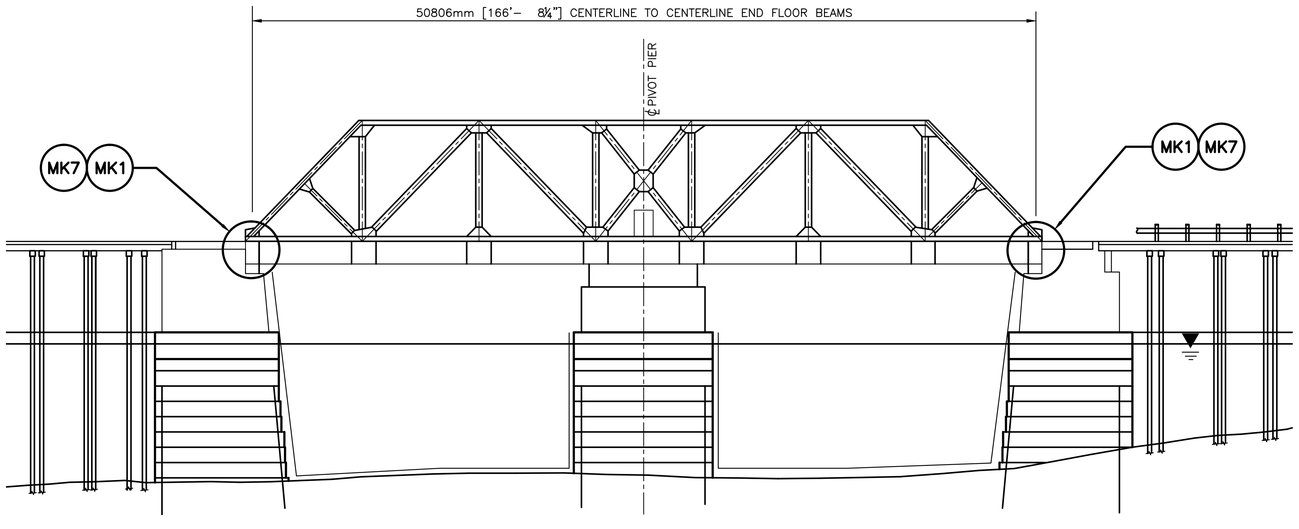
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres



PLAN

SCALE: 1:200

0m 10m 20m 30m 40m 50m



SOUTH ELEVATION

SCALE: 1:200

0m 10m 20m 30m 40m 50m

WORK IDENTIFICATION SCHEDULE			
MARK NO.	COMPONENT	DESCRIPTION OF WORK	REF. DWGS.
MK1	END WEDGE MACHINERY	REHABILITATE THE END WEDGE MACHINERY	M2, M3
MK2	RACK PINION SHAFT ASSEMBLY	REHABILITATE THE RACK PINION SHAFT ASSEMBLY	M4, M5
MK3	SPAN DRIVE REDUCER	REPLACE THE SPAN DRIVE REDUCER AND TAPER LOCK BUSHING	M4, M5
MK4	MACHINERY BRAKE	REHABILITATE BRAKE SYSTEM	M7
MK5	SPAN DRIVE HYDRAULIC SYSTEM	MODIFY THE SPAN DRIVE HYDRAULIC SYSTEM CIRCUIT	M6
MK6	FULL OPEN AND CLOSE BUMPERS	PROVIDE BUMPERS	SEE STRUCTURAL DRAWINGS FOR DETAILS
MK7	MACHINERY LUBRICATION	SEE SPECIFICATIONS FOR DETAILS	--
MK8	LIMIT SWITCH RELOCATION	RELOCATE NEARLY OPEN AND FULL OPEN LIMIT SWITCHES, LIMIT SWITCH SUPPORTS, TARGETS, AND TARGET SUPPORTS TO AVOID INTERFERENCE WITH THE FULL OPEN BUMPER	M7, S15

GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH CONTRACT DRAWINGS M1 THRU M7 AND THE SPECIFICATIONS. ALL DISCREPANCIES AND/OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW AND CLARIFICATION.
2. SEE THE SPECIFICATIONS FOR ADDITIONAL DETAILS, INFORMATION AND REQUIREMENTS RELATED TO THE WORK INDICATED ON THE CONTRACT DOCUMENTS.
3. REPLACE ALL HARDWARE (BOLTS, SCREWS, KEYS, PINS, ETC...) THAT IS REMOVED OR LOOSENED AS PART OF DISASSEMBLY OR REASSEMBLY WITH NEW HARDWARE EXCEPT FOR EXISTING TURNED BOLTS. CLEAN AND INSPECT TURNED BOLTS AND VERIFY THAT THEY ARE SUITABLE FOR RE-USE.
4. N.T.S. DENOTES NOT TO SCALE.
5. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AS REQUIRED TO ENSURE PROPER FIT-UP WITH EXISTING COMPONENTS.
6. THE CONTRACTOR SHALL ENSURE THAT NONE OF THE WORK SHOWN WILL RESULT IN A CONFLICT FOR THE FULL RANGE OF MOVEMENT OF THE SWING BRIDGE. AFTER THE WORK IS COMPLETED THE CONTRACTOR SHALL BE RESPONSIBLE TO OBSERVE THE AREAS OF WORK DURING THE FIRST OPERATION OF THE SWING SPAN AND BE PREPARED TO HALT OPERATION OF THE BRIDGE TO ENSURE THAT NO DAMAGE OCCURS IN THE EVENT THAT THERE ARE CONFLICTS PRESENT THAT ARE NOT IDENTIFIED THROUGH THE COURSE OF PLANNING AND PERFORMING THE WORK.
7. THERE ARE EXISTING END WEDGE LIMIT SWITCHES LOCATED AT THE SOUTHWEST END WEDGE. TEMPORARILY REMOVING AND/OR PROTECTING THE LIMIT SWITCHES WILL BE NECESSARY TO PERFORM THE REHABILITATION WORK ON THE END WEDGES AND IS CONSIDERED INCIDENTAL TO THE MECHANICAL WORK.

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SB ENGINEERING

LICENSED PROFESSIONAL ENGINEER J. R. WILLIAMS 100175197 PROVINCE OF ONTARIO 3-17-2016

revision		date
04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

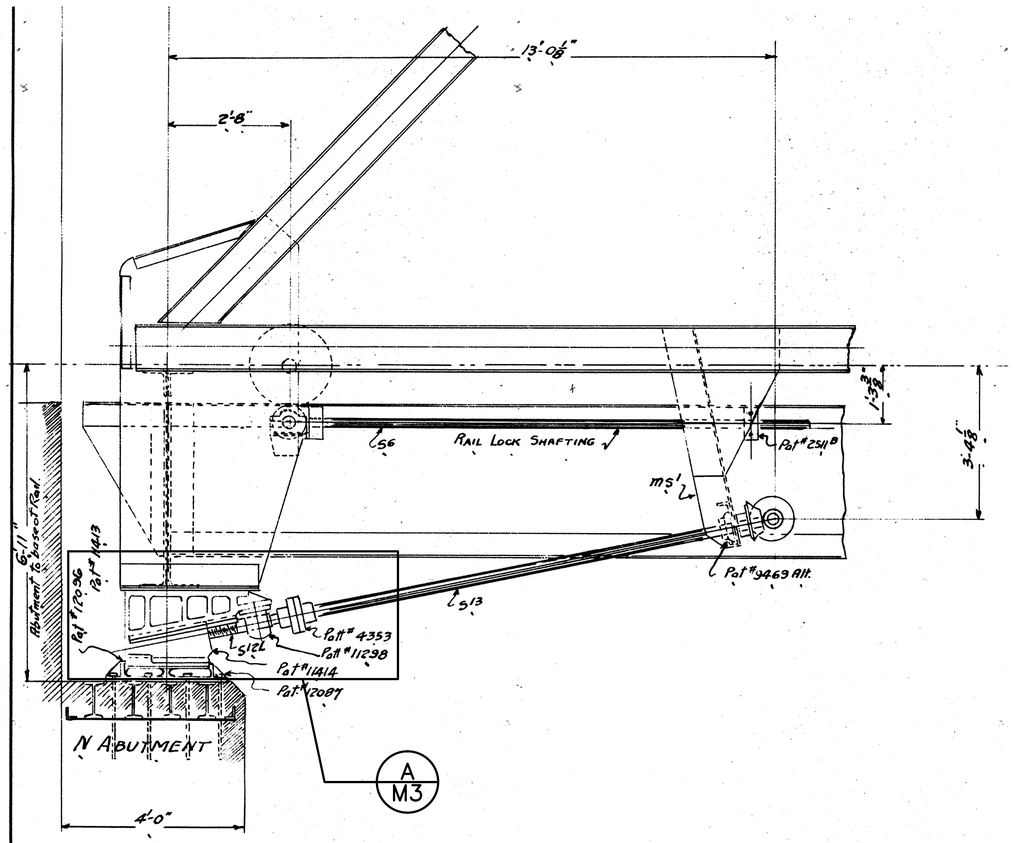
A B C
A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

drawing title / titre du dessin
MECHANICAL WORK IDENTIFICATION

drawn by / dessine par: K. MEHTA
designed by / conc par: R. GIERNACKY
approved by / approuve par: J. WILLIAMS
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: M1

CAD FILE LOCATION AND NAME: M:\SBE\SB740-\SB742B - Wasauksing Design\Contract 2\CAD\100% S&S Submittal\M-1.R4.RGG.dwg
MODIFIED: 3/16/2016 4:28:34 PM BY: GRISHNA
DATE PLOTTED: 3/17/2016 1:11:21 PM BY: GRISHNA



VIEW SHOWING END WEDGE

END WEDGE MACHINERY – ELEVATION

N.T.S

SUGGESTED REHABILITATION SEQUENCE FOR END WEDGES:

1. DESIGN, FURNISH AND INSTALL JACKS/BLOCKING.
2. PLACE JACKS AT ALL FOUR CORNERS OF THE BRIDGE AND EXTEND UNTIL THE JACK IS IN LIGHT CONTACT WITH THE BRIDGE. CONFIRM THAT THE VERTICAL ALIGNMENT OF THE SWING SPAN AND THE FIXED SPANS ARE ACCEPTABLE WITH THE DEPARTMENTAL REPRESENTATIVE.
3. BLOCK THE BRIDGE AT ALL FOUR CORNERS OF THE BRIDGE, OR SET LOCKING COLLARS ON HYDRAULIC JACKS AND RELEASE HYDRAULIC PRESSURE.
4. MEASURE THE GAP BETWEEN THE END WEDGE AND THE WEDGE BEARING PLATE AND THE SHIM THICKNESS AT ALL FOUR END WEDGES. ADD THESE NUMBERS TO DETERMINE THE INITIAL SHIM THICKNESS FOR EACH CORNER.
5. BEFORE DISASSEMBLING ANY COMPONENTS MATCH MARK ALL COMPONENTS TO ENSURE THAT EXISTING COMPONENTS ARE RETURNED TO THE ORIGINAL LOCATION IN THE SAME ORIENTATION AS PRIOR TO REMOVAL. TEMPORARILY REMOVE AND/OR PROTECT THE LIMIT SWITCHES AT THE SOUTHWEST END WEDGE AS NECESSARY TO PERFORM THE REHABILITATION WORK ON THE END WEDGES.
6. REPLACE THE BRONZE NUT (PATTERN NO. 11296).
   - A. TEMPORARILY SUPPORT S13 SHAFT.
   - B. UNBOLT COUPLING (PATTERN NO. 4353).
   - C. REMOVE THRUST BEARING (PATTERN NO. 11298) MOUNTING BOLTS.
   - D. REMOVE THE GUIDE PLATES.
   - E. NOTE THERE IS A PILOT IN THE COUPLING AND A NOTCH IN THE THRUST BEARING WHICH WILL REQUIRE EFFORT AND MANEUVERING TO DISCONNECT.
   - F. ONCE THE END WEDGE, S12 SHAFT, THRUST BEARING AND COUPLING HALF ASSEMBLY IS DISCONNECTED, SLIDE IT ONTO CRIBBING AND OFF OF THE WEDGE BEARING PLATES.
   - G. NOTE THE CURRENT POSITION OF THE S12 SHAFT.
   - H. REMOVE THE S12 SHAFT FROM THE END WEDGE. TRANSPORT TO THE SHOP FOR CLEANING, INSPECTION, AND ASSEMBLY TEST WITH NEW BRONZE NUT.
   - I. REPLACE THE BRONZE NUT (PATTERN NO. 11296). PACK THE BRONZE NUT WITH GREASE.
   - J. REINSTALL THE S12 SHAFT INTO THE END WEDGE TO THE POSITION NOTED ABOVE.
7. REPLACE THE END WEDGE ADJUSTMENT SHIMS.
   - A. UNBOLT THE WEDGE BEARING PLATE FROM THE WEDGE BED PLATE.
   - B. REMOVE EXISTING SHIMS AND MEASURE THE THICKNESS. COMPARE THIS NUMBER WITH SHIM THICKNESS MEASUREMENTS PERFORMED IN STEP 4. ADJUST THE INITIAL SHIM THICKNESS AS NECESSARY.
   - C. CLEAN THE SURFACE OF THE WEDGE BED PLATE TO SSPC–SP3.
   - D. CLEAN THE UNDERSIDE OF THE WEDGE BEARING PLATE TO SSPC–SP3.
   - E. PLACE NEW SHIMS EQUAL TO THE INITIAL SHIM THICKNESS CALCULATED ABOVE.
   - F. REPLACE WEDGE BED PLATE AND BOLT IT DOWN USING NEW HARDWARE.
8. INSTALL END WEDGE ASSEMBLY.
   - A. REPOSITION THE END WEDGE ASSEMBLY ON THE WEDGE BEARING PLATE.
   - B. REINSERT THE END WEDGE ASSEMBLY INTO THE THRUST BEARING AND COUPLING.
   - C. REPLACE THE THRUST BEARING BOLTS.
   - D. INSTALL NEW COUPLING BOLTS.
   - E. REPLACE THE GUIDE PLATE AND GUIDE PLATE BOLTS.
   - F. REMOVE THE JACKS, BLOCKING, AND TEMPORARY SUPPORT FOR S13 SHAFT.
9. CHECK FOR CLEARANCES WHEN THE WEDGES ARE DRIVEN AND RETRACTED. CHECK FOR INTERFERENCES AS THE BRIDGE IS OPERATED. RE–INSTALL AND ADJUST THE END WEDGE LIMIT SWITCHES AS NEEDED. REFER TO THE SPECIFICATIONS FOR ALIGNMENT REQUIREMENTS.
10. ADJUST THE SHIMS UNDER THE END WEDGE BEARING PLATE AS NECESSARY TO PROVIDE FIRM CONTACT WHEN THE WEDGES ARE DRIVEN. FIRM CONTACT IS CONFIRMED WHEN A 0.076mm [0.003"] THICKNESS GAUGE CANNOT BE INSERTED BETWEEN END WEDGE AND THE WEDGE BEARING PLATE MORE THAN 25mm [1"].

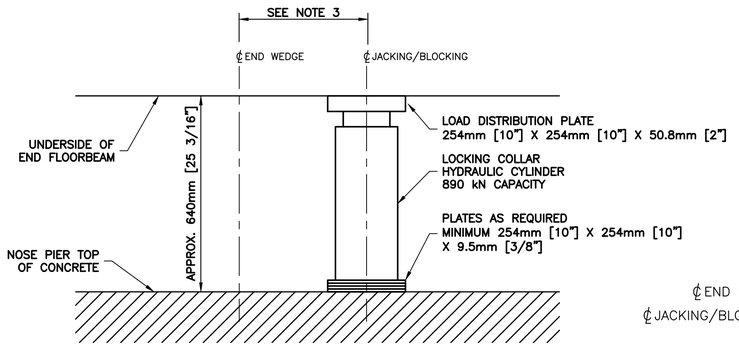
NOTES:

1. SEE SHEET M1 FOR GENERAL NOTES APPLICABLE TO THIS DRAWING.
2. THE JACKING AND BLOCKING SYSTEM SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO. THE JACKS SUPPLIED SHALL BE CAPABLE OF LIFTING 200% OF THE UNFACTORED DEAD LOAD AND THE BLOCKING SHALL BE DESIGNED IN ACCORDANCE WITH CSA S6–14 CHBDC FOR THE DEAD AND LIVE LOADS SPECIFIED IN TABLE 1. BLOCKING MAY BE DONE BY USING JACKS WITH LOCKING COLLARS WHICH ARE TO BE ENGAGED AND THE PRESSURE ON THE JACKS RELEASED PRIOR TO ALLOWING TRAFFIC ON THE SPAN. JACKING OF THE BRIDGE WITH LIVE LOAD IS NOT PERMITTED. MAXIMUM DURATION FOR ROAD CLOSURES DURING JACKING IS 15 MINUTES, AFTER WHICH THE QUEUED TRAFFIC MUST BE PERMITTED TO PASS BEFORE A SUBSEQUENT ROAD CLOSURE IS PERMITTED. THE PROFESSIONAL ENGINEER MUST ALSO REVIEW THE CAPACITY OF THE END FLOOR BEAMS AND THE CONNECTIONS OF THE END FLOOR BEAMS TO THE TRUSS AND PROVIDE A STAMPED LETTER INDICATING THAT THE END FLOOR BEAMS AND CONNECTIONS HAVE CAPACITY FOR THE JACKING AND BLOCKING LOADS BASED ON THE JACKING LOCATIONS CHOSEN BY THE CONTRACTOR.
3. LOCATION OF JACKS TO BE DETERMINED BY THE CONTRACTOR'S ENGINEER AND CONFIRMED ON–SITE BY THE DEPARTMENTAL REPRESENTATIVE.

TABLE 1

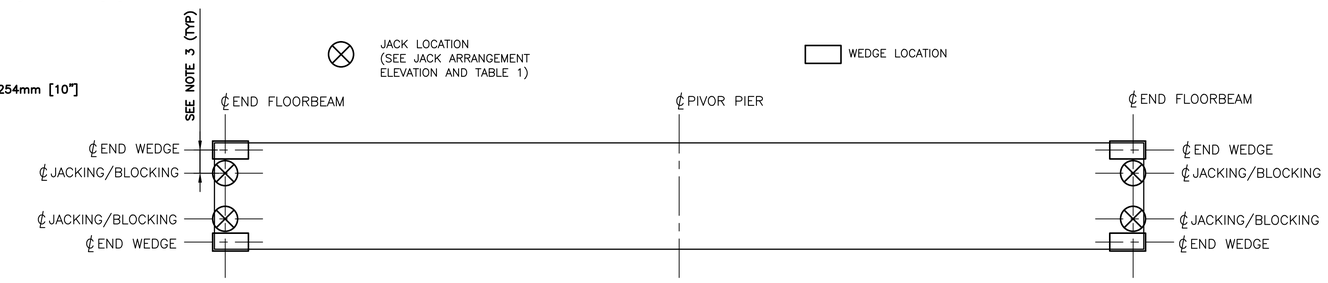
UNFACTORED JACKING/BLOCKING LOADS

⊗ JACK LOCATION	DEAD LOAD (kN)	DEAD + LIVE (kN)
WEST NOSE PIER, NORTH WEDGE	189	422
WEST NOSE PIER, SOUTH WEDGE	189	422
EAST NOSE PIER, NORTH WEDGE	189	422
EAST NOSE PIER, SOUTH WEDGE	189	422



JACK ARRANGEMENT ELEVATION

N.T.S



JACK ARRANGEMENT

N.T.S

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SNC ENGINEERING

LICENSED PROFESSIONAL ENGINEER
J. R. WILLIAMS
100175197
PROVINCE OF ONTARIO
3-17-2016

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

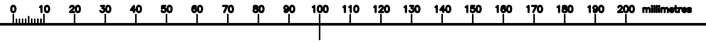
Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

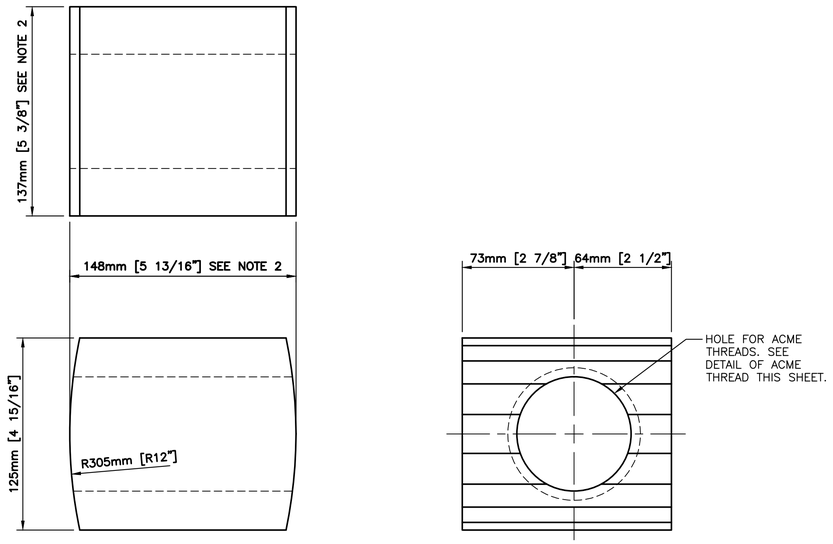
A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

drawing title / titre du dessin
END WEDGE MACHINERY REHABILITATION I

drawn by / dessine par: K. MEHTA
designed by / conc par: R. GIERNACKY
approved by / approuve par: J. WILLIAMS
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: M2



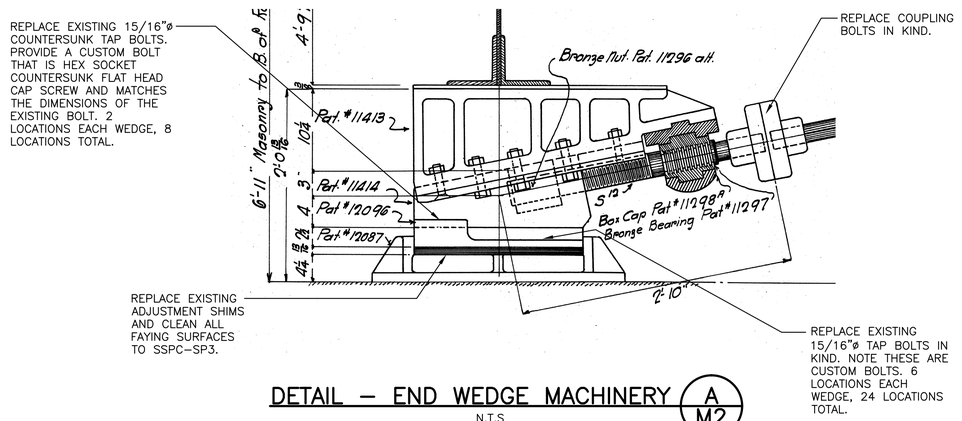


NEW BRONZE NUT

SCALE : 1:2

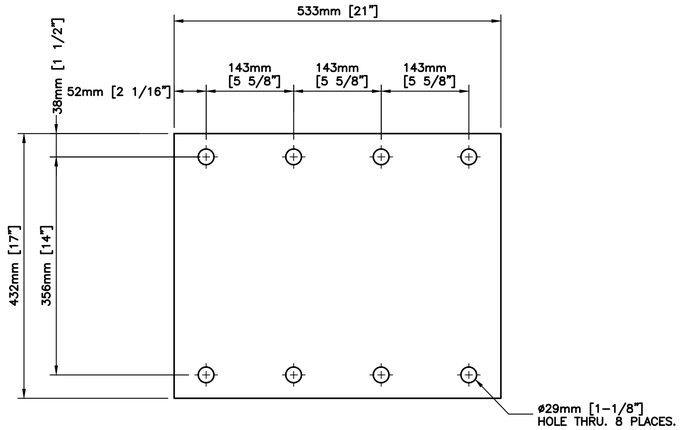
0mm 50mm 100mm 150mm 200mm 250mm

QUANTITY: 4 EACH
2 – REQUIRED WITH RIGHT HAND THREAD
2 – REQUIRED WITH LEFT HAND THREAD
MATERIAL: ASTM B22 ALLOY C90500
PROVIDE 1.6 MICROMETER FINISH UNLESS OTHERWISE NOTED.



DETAIL – END WEDGE MACHINERY (A / M2)

N.T.S

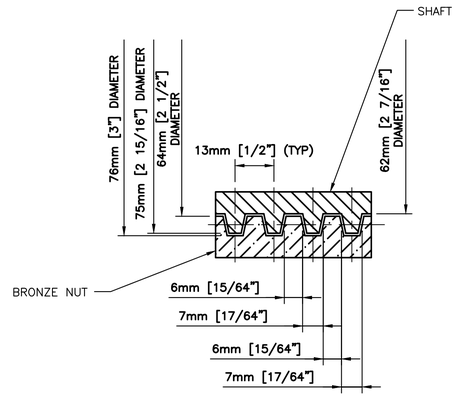


END WEDGE ADJUSTMENT SHIM SET – PLAN VIEW

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

QUANTITY: 4 SHIM SETS
EACH SHIM SET TO INCLUDE
1 QTY – 1/2" [12.7mm] THICK MATERIAL: CSA G40.21 44W
2 QTY – 1/4" [6.35mm] THICK MATERIAL: CSA G40.21 44W
4 QTY – 1/8" [3.175mm] THICK MATERIAL: BRASS OR STAINLESS STEEL
4 QTY – 1/16" [1.588MM] THICK MATERIAL: BRASS OR STAINLESS STEEL
PROVIDE 3.2 MICRON FINISH UNLESS NOTED OTHERWISE



DETAIL OF ACME THREAD

SCALE : 1:1

NOTES:

1. SEE SHEET M1 FOR GENERAL NOTES APPLICABLE TO THIS DRAWING.
2. FINISH MACHINE AFTER FIELD VERIFYING LENGTH OF SLOT IN END WEDGE TO PROVIDE 1.6mm [1/16"] CLEARANCE.

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SB ENGINEERING

LICENSED PROFESSIONAL ENGINEER J. R. WILLIAMS 100175197 PROVINCE OF ONTARIO 3-17-2016

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

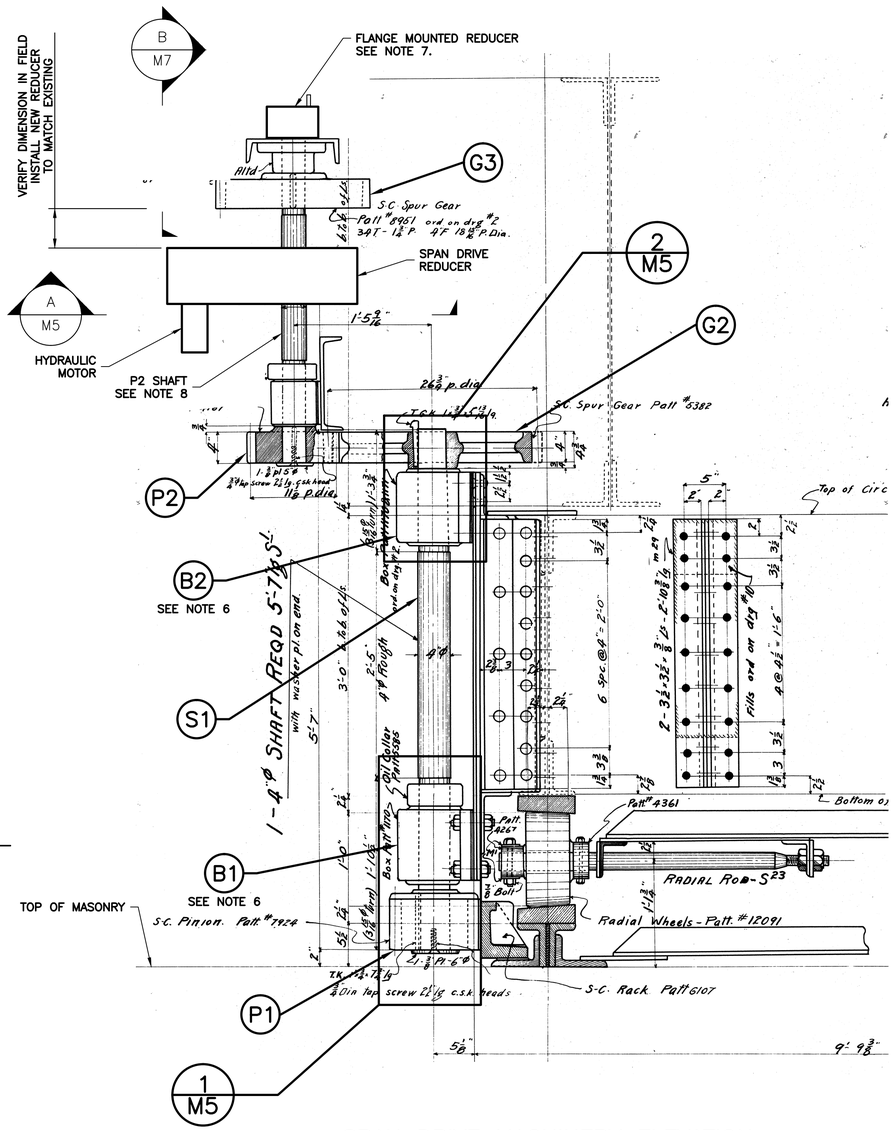
Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

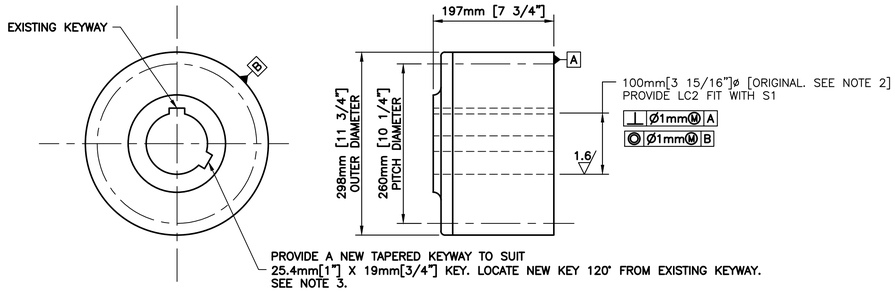
drawing title / titre du dessin
END WEDGE MACHINERY REHABILITATION II

drawn by / dessiné par: K. MEHTA
designed by / conc par: R. GIERNACKY
approved by / approuvé par: J. WILLIAMS
bid / offre: J. TO — project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessin no.: M3



SPAN DRIVE MACHINERY ELEVATION

N.T.S.

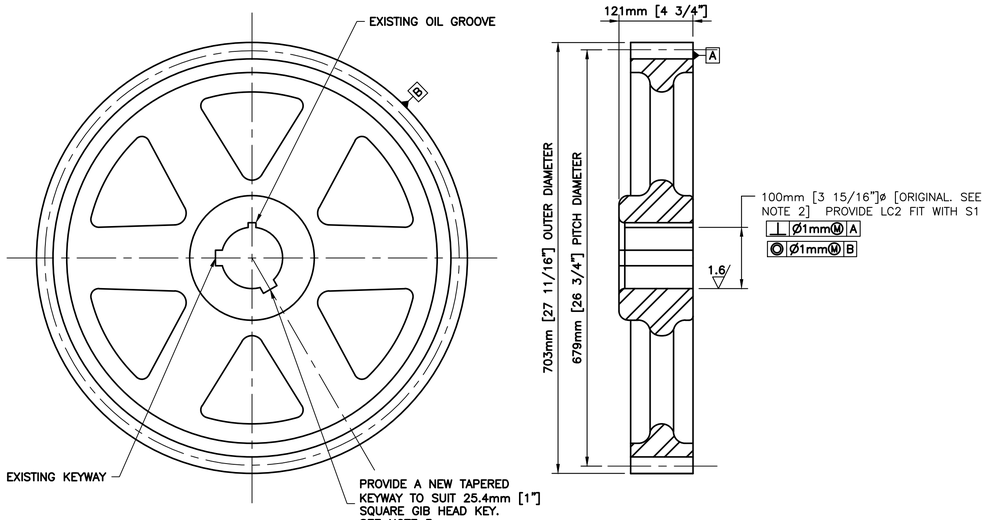


P1 – PINION GEAR

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

QUANTITY: 1 EACH
MATERIAL: EXISTING STEEL CASTING
12 TEETH, 68mm[2 1/16"] CIRCULAR PITCH,
165mm[6 ½"] FACE WIDTH, 15° INVOLUTE,
19mm[¾"] ADDENDUM AND 23mm[29/32"] DEDENDUM

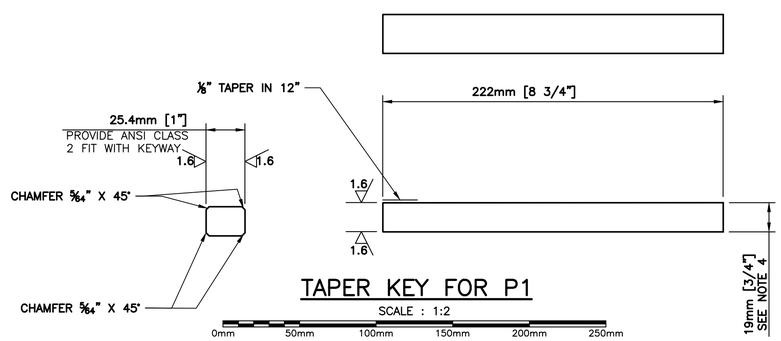


G2 – SPUR GEAR

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

QUANTITY: 1 EACH
MATERIAL: EXISTING STEEL CASTING
48 TEETH, 44.5mm[1¾"] CIRCULAR PITCH,
101.6mm[4"] FACE WIDTH, 15° INVOLUTE,
11.9mm[15/32"] ADDENDUM AND 15.1mm[19/32"] DEDENDUM

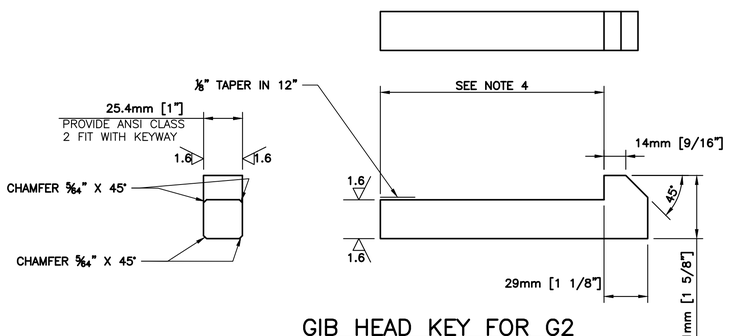


TAPER KEY FOR P1

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

QUANTITY: 1 EACH
MATERIAL: AISI 4140 STEEL
MINIMUM YIELD STRENGTH: 65,000 PSI
MINIMUM ELONGATION: 20%
PROVIDE 3.2 MICROMETER FINISH
UNLESS NOTED OTHERWISE



GIB HEAD KEY FOR G2

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

QUANTITY: 1 EACH
MATERIAL: AISI 4140 STEEL
MINIMUM YIELD STRENGTH: 65,000 PSI
MINIMUM ELONGATION: 20%
PROVIDE 3.2 MICROMETER FINISH UNLESS OTHERWISE NOTED.

NOTES:

1. SEE SHEET M1 FOR GENERAL NOTES APPLICABLE TO THIS DRAWING.
2. MACHINE BORE AS NECESSARY TO CLEAN UP AND PROVIDE THE FIT AND FINISH NOTED. DO NOT REMOVE MORE THAN 6mm [1/4"] IN DIAMETER WITHOUT APPROVAL FROM THE DEPARTMENTAL REPRESENTATIVE.
3. MACHINE KEYWAYS IN THE EXISTING GEARS WITH 1.6mm[1/16"] FILLET RADII. PROVIDE 1.6 MICROMETER SURFACE FINISH. PROVIDE CLASS 2 SIDE FITS PER ANSI/ASME B17.1 BETWEEN THE KEYS AND THE KEYWAYS.
4. COORDINATE LENGTH AND HEIGHT OF KEYS AND DEPTH OF KEYWAYS TO OBTAIN DIMENSIONS PROVIDED IN DETAILS 1 & 2 ON DRAWING M5 WHEN KEYS ARE FIRMLY SEATED.
5. SURFACE FINISH IS IN MICROMETERS.
6. DO NOT DISTURB EXISTING ALIGNMENT OF B1 AND B2 BEARINGS.
7. EXISTING FLANGE MOUNTED REDUCER TO BE REMOVED TO FACILITATE REMOVAL OF P2 SHAFT. REINSTALL REDUCER AFTER REINSTALLATION OF P2 SHAFT.
8. REMOVE P2 SHAFT TO FACILITATE REPLACEMENT OF SPAN DRIVE REDUCER. EXISTING P2 SHAFT TO BE REUSED.

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SB ENGINEERING

LICENSED PROFESSIONAL ENGINEER
J. R. WILLIAMS
100175197
PROVINCE OF ONTARIO
3-17-2016

revision		date
04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17

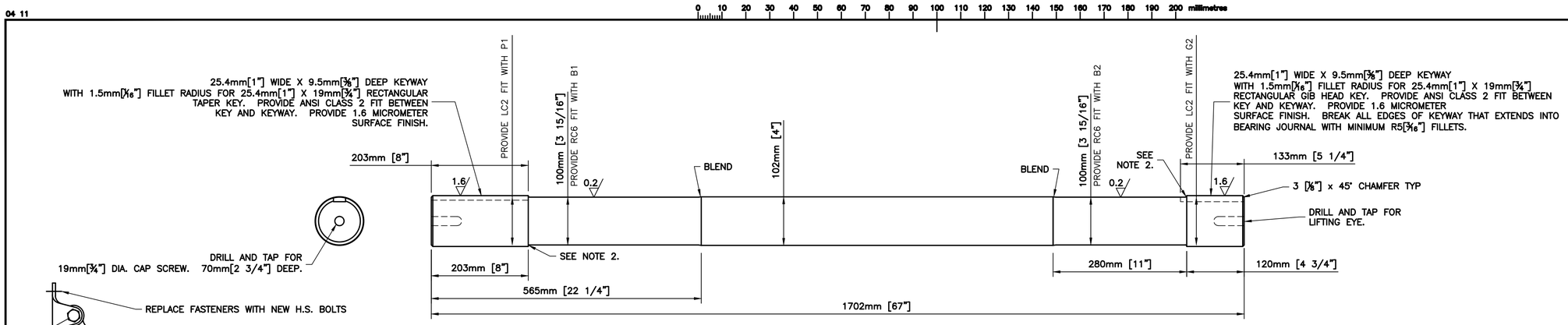
Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

drawing title / titre du dessin
RACK PINION SHAFT ASSEMBLY REHABILITATION I

drawn by / dessiné par: K. MEHTA
designed by / conc par: R. GIERNACKY
approved by / approuvé par: J. WILLIAMS
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016-03-17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: M4

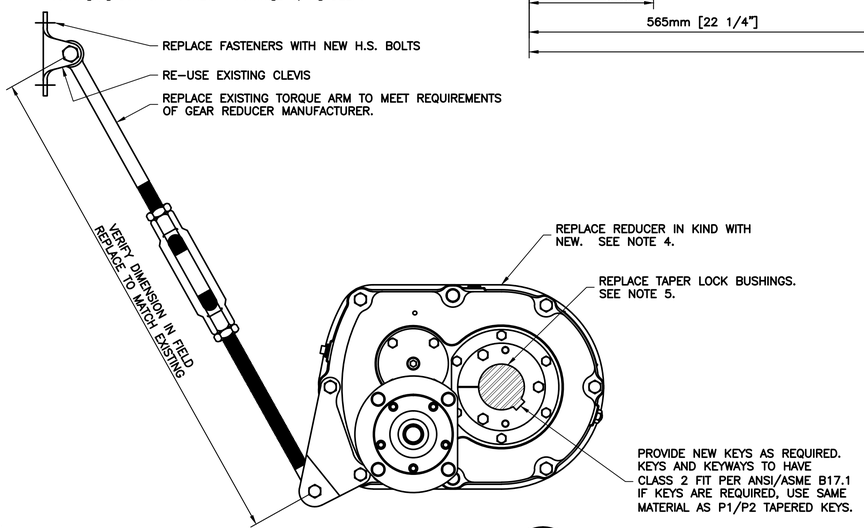


S1 – RACK PINION SHAFT

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

QUANTITY: 1 EACH
MATERIAL: AISI 4140 STEEL
MINIMUM YIELD STRENGTH: 65,000 PSI
MINIMUM ELONGATION: 20%
PROVIDE 3.2 MICROMETER FINISH UNLESS OTHERWISE NOTED.



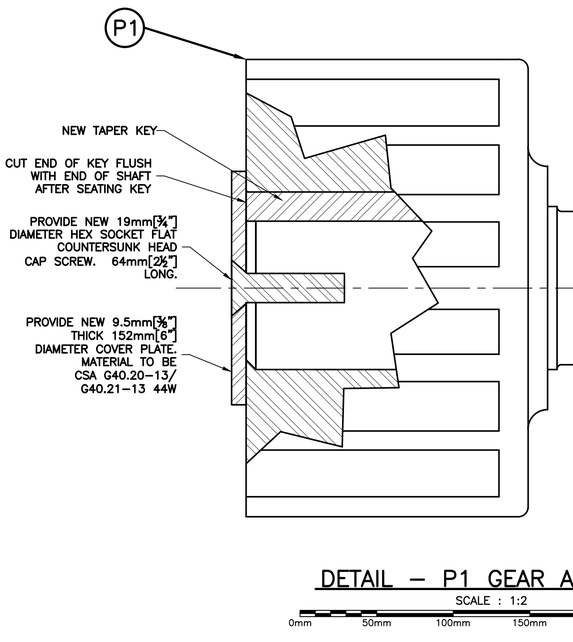
SECTION – SPAN DRIVE REDUCER (A / M4)

SCALE: 1:5

0mm 100mm 200mm 300mm 400mm 500mm

NOTES:

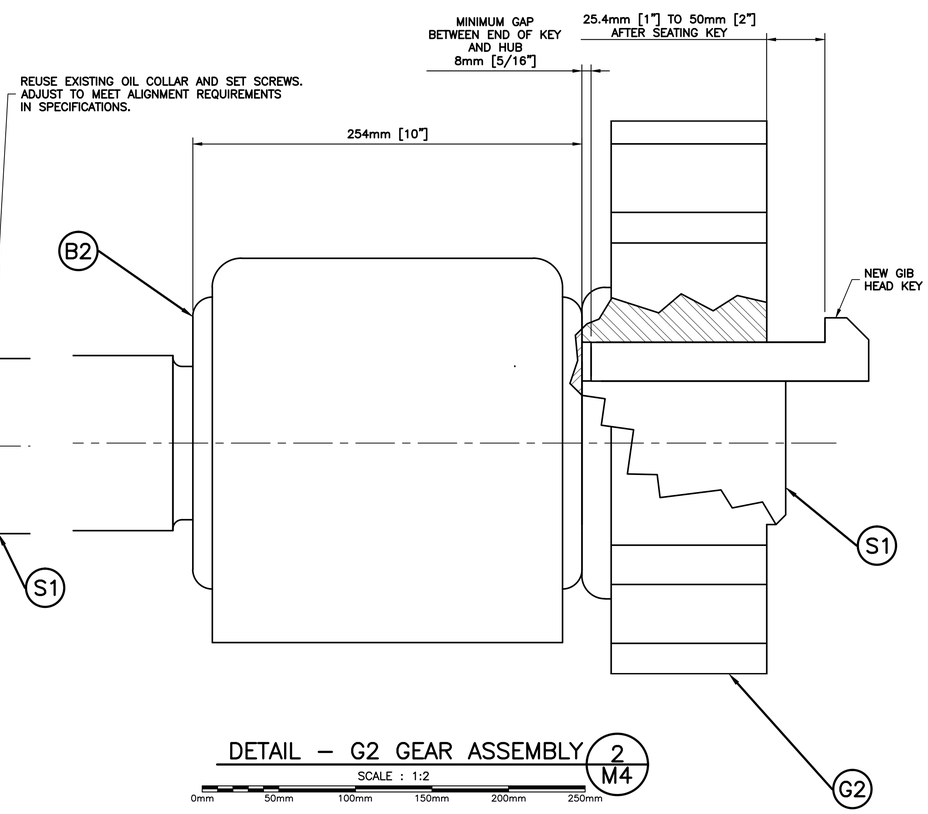
1. SEE SHEET M1 FOR GENERAL NOTES APPLICABLE TO THIS DRAWING.
2. PROVIDE THE LARGEST RADIUS THAT WILL FIT.
3. SURFACE FINISH IS IN MICROMETERS.
4. EXISTING SPAN DRIVE REDUCER IS A DODGE BALDOR MODEL HXT525CT, PART NUMBER 245558. REDUCER SHALL BE REPLACED IN KIND. NOTE REPLACEMENT OF REDUCER REQUIRES REMOVAL OF P2 SHAFT.
5. EXISTING TAPER LOCK BUSHINGS SHALL BE REPLACED AND SHALL BE MACHINED TO SUIT EXISTING SHAFT. VERIFY SHAFT DIMENSIONS AFTER REDUCER HAS BEEN REMOVED FROM SHAFT.



DETAIL – P1 GEAR ASSEMBLY (1 / M4)

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm



DETAIL – G2 GEAR ASSEMBLY (2 / M4)

SCALE : 1:2

0mm 50mm 100mm 150mm 200mm 250mm

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SB ENGINEERING

LICENSED PROFESSIONAL ENGINEER
J. R. WILLIAMS
100175197
PROVINCE OF ONTARIO
3-17-2016

revision		date
04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

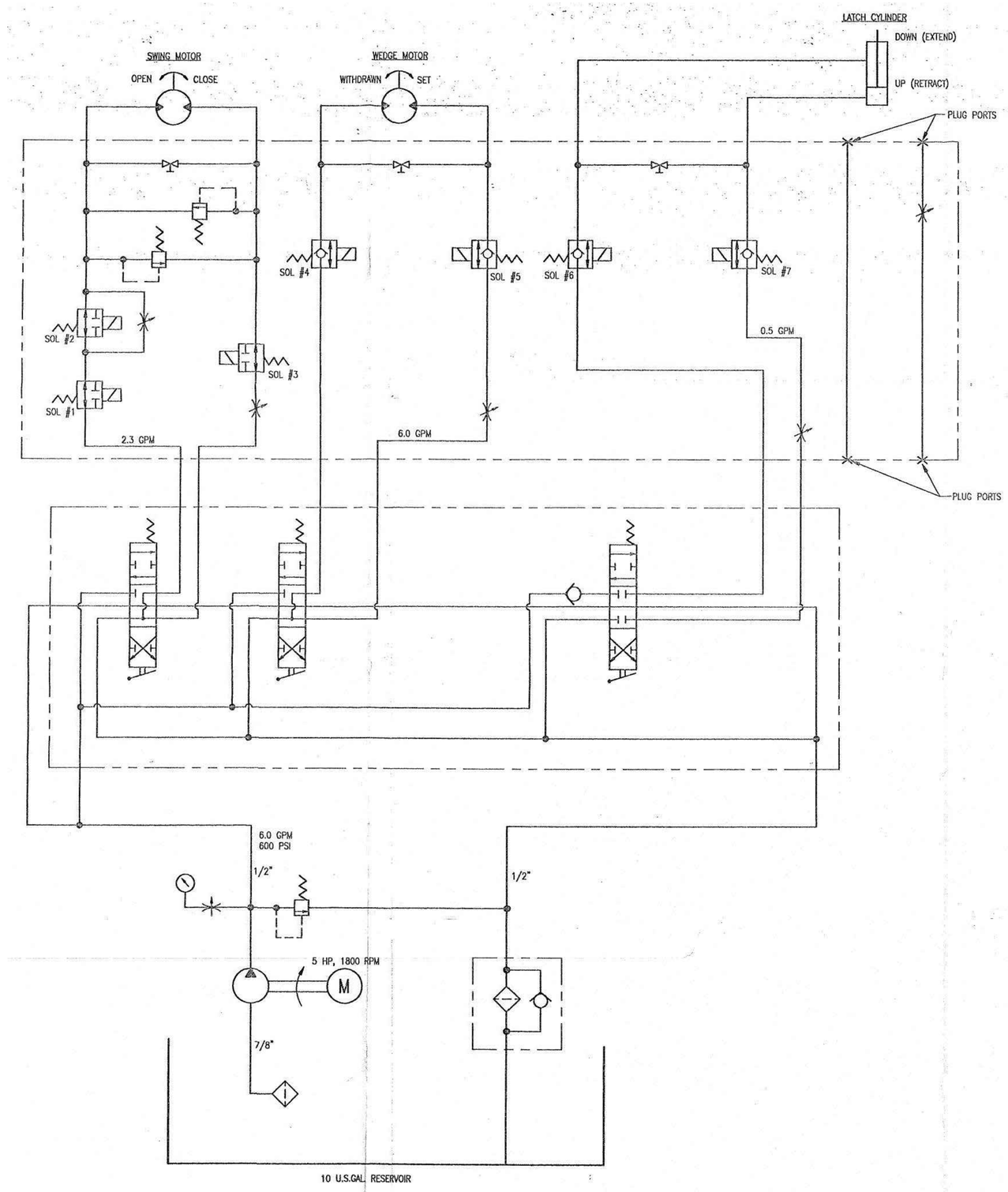
A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

drawing title / titre du dessin
RACK PINION SHAFT ASSEMBLY REHABILITATION II

drawn by / dessiné par: K. MEHTA
designed by / conc par: R. GIERNACKY
approved by / approuvé par: J. WILLIAMS
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessin no.: M5

CAD FILE LOCATION AND NAME: M:\SBE\SB740–\SB742B – Wasauksing Design\Contract 2\CAD\100% S&S Submittal\m–4–5–KHM.EMD.dwg
MODIFIED: 3/16/2016 4:29:30 PM BY: &RISHNA
DATE PLOTTED: 3/17/2016 1:14:27 PM BY: &RISHNA



EXISTING HYDRAULIC SCHEMATIC

NOTES:

1. SEE SHEET M1 FOR GENERAL NOTES APPLICABLE TO THIS DRAWING.
2. EXISTING HYDRAULIC CIRCUIT SCHEMATIC IS PROVIDED FOR INFORMATION ONLY. CONFIGURATION SHALL BE FIELD VERIFIED.
3. EXISTING HYDRAULIC MOTOR IS EATON CHAR–LYNN PRODUCT NUMBER 104–1216–006, MODEL NUMBER M02049AF07AA01000100000000AAAAF.
4. REFER TO HYDRAULIC SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PHOTOGRAPH – EXISTING OPERATOR CONTROLS
N.T.S.

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SB ENGINEERING

LICENSED PROFESSIONAL ENGINEER
J. R. WILLIAMS
100175197
PROVINCE OF ONTARIO
3-17-2016

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

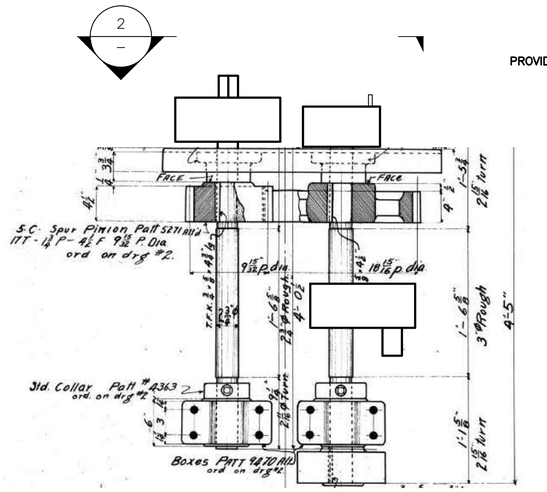
drawing title / titre du dessin
HYDRAULIC WORK IDENTIFICATION

drawn by / dessiné par: K. MEHTA
designed by / conc par: E. DIMMERLING
approved by / approuvé par: J. WILLIAMS
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessin no.: M6

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

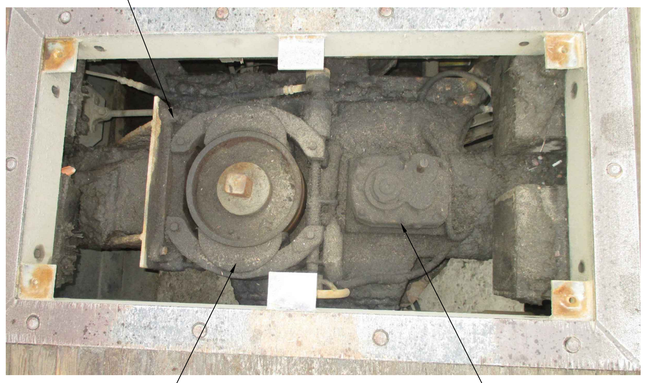
NOTES:

1. SEE SHEET M1 FOR GENERAL NOTES APPLICABLE TO THIS DRAWING.



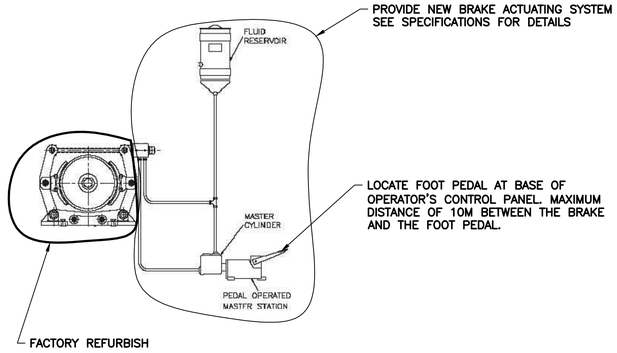
VIEW – MACHINERY BRAKE (B / M4)

N.T.S



VIEW (2 / –)

N.T.S



BRAKE SYSTEM DIAGRAM

N.T.S

RELOCATE FULL OPEN LIMIT SWITCHES, SEQUENCE OF WORK:

1. PRIOR TO THE END OF THE OPERATIONAL SEASON, OPEN THE SPAN TO THE FULL OPEN POSITION AND DOCUMENT THE ROTATIONAL POSITION OF THE SWING SPAN, THE FULL OPEN LIMIT SWITCHES' POSITIONS RELATIVE TO THEIR TARGETS AND THE GAPS BETWEEN THE LIMIT SWITCHES AND THEIR TARGETS.
2. **SUBMIT THE POSITIONS DOCUMENTED IN STEP 1 AND PROVIDE FULL DETAILS OF THE PROPOSED NEW LOCATIONS AND WELD DETAILS FOR THE SUPPORTS TO THE DEPARTMENTAL REPRESENTATIVE FOR REVIEW.**
3. REMOVE THE FULL OPEN LIMIT SWITCHES AND SUPPORTS.
4. INSTALL THE FULL OPEN BUMPER, SEE MECHANICAL WORK SPECIFICATION FOR ALIGNMENT DETAILS.
5. OPEN THE SPAN TO THE FULL OPEN POSITION DOCUMENTED IN STEP 1. ENSURE THAT THERE IS NO INTERFERENCE OF THE ROTATING STRUCTURE WITH THE FULL OPEN BUMPER.
6. WITH THE SPAN AT THE FULL OPEN POSITION DOCUMENTED IN STEP 1. LOCATE AND INSTALL THE FULL OPEN LIMIT SWITCHES' SUPPORT BRACKETS, LIMIT SWITCHES AND LIMIT SWITCHES' TARGETS. VERIFY THE GAPS BETWEEN THE LIMIT SWITCHES AND TARGETS ARE WITHIN 1.6MM [1/16"] OF THE GAPS DOCUMENTED IN STEP 1.
7. OPERATE THE SPAN AND VERIFY THAT THE FULL OPEN LIMIT SWITCHES AND SUPPORTS DO NOT INTERFERE WITH THE FULL OPEN BUMPER DURING OPERATION.
8. FIELD TOUCH UP COATING IN ACCORDANCE WITH SECTION 09 79 19 OF THE CONTRACT DOCUMENTS.

REMOVE AND SALVAGE FOR RE–USE EXISTING LIMIT SWITCH SUPPORT BRACKETS AT SIX (6) LOCATIONS AND LIMIT SWITCHES AT THREE (3) LOCATIONS. GRIND TO REMOVE EXISTING SUPPORT BRACKET WELDS AND HAND DRESS FLUSH. FIELD WELD SALVAGED SUPPORT BRACKETS AT NEW LOCATIONS CHOSEN BY THE CONTRACTOR TO AVOID CONFLICT WITH THE FULL OPEN BUMPER ASSEMBLY. REINSTALL EXISTING LIMIT SWITCHES AT THREE (3) LOCATIONS.

PROPOSED AREA TO RELOCATE MOUNTING BRACKETS

VIEW FROM THE SOUTH
FULL OPEN LIMIT SWITCHES

N.T.S

VIEW FROM THE EAST
FULL OPEN LIMIT SWITCHES

N.T.S

CLOSED POSITION LIMIT SWITCHES AND SUPPORT BRACKETS TO REMAIN AS–IS

VIEW OF THE EAST SIDE OF THE DRUM GIRDER SPAN SHOWN IN THE CLOSED POSITION
FULL OPEN LIMIT SWITCHES TARGETS

N.T.S

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

SNC ENGINEERING

LICENSED PROFESSIONAL ENGINEER J. R. WILLIAMS 100175197 PROVINCE OF ONTARIO 3-17-2016

04		
03		
02		
01	ISSUED FOR TENDER	2016–03–17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE TIMBER REPAIRS

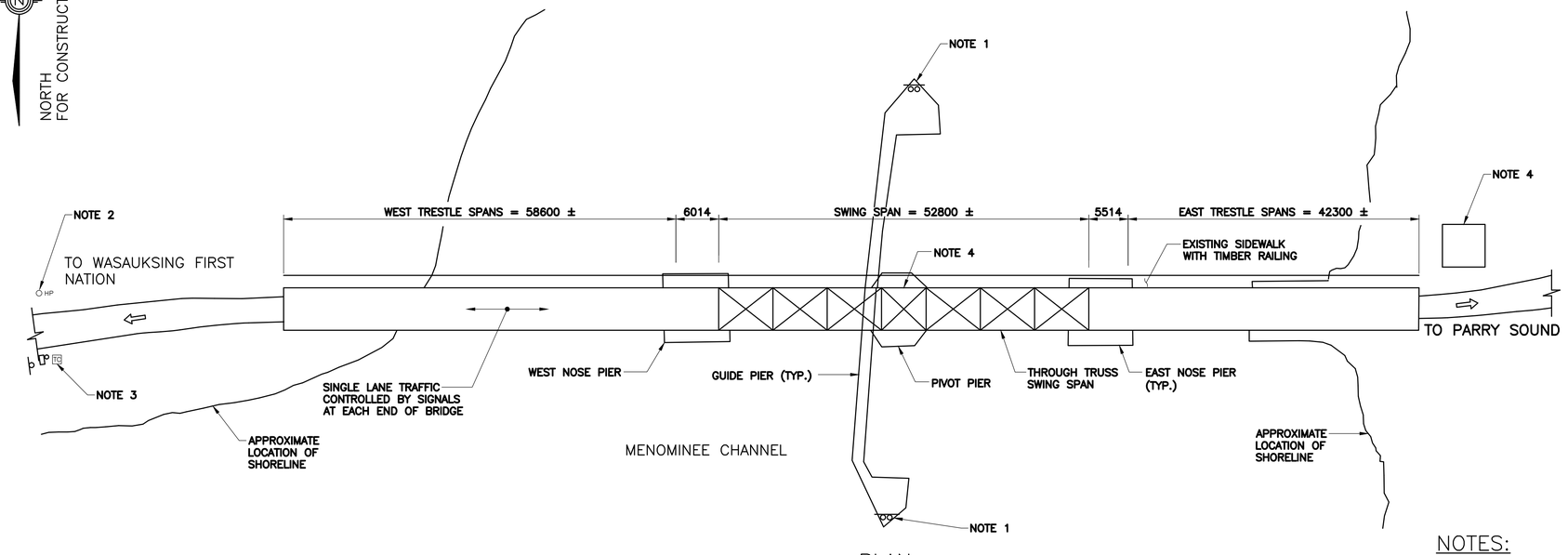
drawing title / titre du dessin
MACHINERY BRAKE AND LIMIT SWITCH RELOCATION

drawn by / dessine par: K. MEHTA
designed by / conc par: R. GIERNACKY
approved by / approuve par: J. WILLIAMS
bid / offre: J. TO
project manager / administrateur de projets
project date / date du projet: 2016–03–17
project no. / no. du projet: R.078886.002
drawing no. / dessine no.: M7

CAD FILE LOCATION AND NAME: M:\SBE\SB740–\SB742B – Wasauksing Design\Contract 2\CAD\100% S&S Submittal\M–7.R4.RGG.dwg
MODIFIED: 3/16/2016 4:30:48 PM BY: GRISHNA
DATE PLOTTED: 3/17/2016 1:17:26 PM BY: GRISHNA

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

NORTH
FOR CONSTRUCTION



PLAN
SCALE: 1:400
0m 10m 20m 30m 40m 50m

NOTES:

1. UPGRADE EXISTING INCANDESCENT LAMPS WITH LED LAMPS (REFER TO PHOTO No.1)
2. REPLACE EXISTING SERVICE EQUIPMENT. THE COMPLETED WORK TO INCLUDE A MANUAL TRANSFER SWITCH WHICH WILL ALLOW FOR A FUTURE GENERATOR TO BE TEMPORARILY CONNECTED DURING POWER FAILURE. (REFER TO PHOTO No.2)
3. REPLACE EXISTING VEHICLE DETECTOR UNIT. (REFER TO PHOTO No.3)
4. INSTALL NEW ANEMOMETER SENSOR ON STRUCTURE AT TOP OF SWING SPAN. SENSOR TO COMMUNICATE TO REMOTE RECEIVER LOCATED IN ADJACENT BRIDGE OPERATIONS BUILDING.

LEGEND:

HP EXISTING HYDRO SERVICE POLE

TC EXISTING TRAFFIC CONTROLLER CABINET

PHOTO No.1

PHOTO No.2

REPLACE EXISTING VEHICLE DETECTOR UNIT IN EXISTING TRAFFIC CONTROLLER CABINET.

PHOTO No.3

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER
D. F. MacLEAN
MAR. 17, 2016
PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
ELECTRICAL WORK

drawn by / dessine par

designed by / conc par: D. MACLEAN

approved by / approuve par: D. DIXON

bid / offre: J. TO — project manager / administrateur de projets

project date / date du projet: 2016-03-17

project no. / no. du projet: R.078886.002

drawing no. / dessine no.: E1

CAD FILE LOCATION AND NAME: S:\data\2015\3215082.200 - Parry Island\01-E3215082-N01.dwg
MODIFIED: 3/11/2016 2:48:04 PM BY: BATTISONG
DATE PLOTTED: 3/11/2016 2:49:16 PM BY: BATTISONG

04 11

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 millimetres

PHOTO No.4

PHOTO No.5

PHOTO No.6

PHOTO No.7

CAD FILE LOCATION AND NAME: S:\data\2015\3215082.200 - Parry Island\02-E3215082-N02.dwg
MODIFIED: 3/17/2016 1:57:18 PM BY: BAYRUG
DATE PLOTTED: 3/17/2016 1:57:52 PM BY: BAYRUG

GSC-A1 DATE PLOTTED: 23 September 2015 PLOT SCALE: AS NOTED CAD FILE: S:\data\2015\3215082.200 - Parry Island\02-E3215082-N02.dwg

Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada

MMM GROUP

REGISTERED PROFESSIONAL ENGINEER
D. F. MacLEAN
MAR. 17, 2016
PROVINCE OF ONTARIO

04		
03		
02		
01	ISSUED FOR TENDER	2016-03-17
revision		date

Do not scale drawings.
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A Detail No. / No. du détail
B drawing no. – where detail required / dessin no. – où détail exigé
C drawing no. – where detailed / dessin no. – où détaillé

project title / titre du projet
PARRY ISLAND Ontario
WASAUKSING SWING BRIDGE REHABILITATION

drawing title / titre du dessin
ELECTRICAL REFERENCE PHOTOS

drawn by / dessine par

designed by / conc par D. MACLEAN

approved by / approuve par D. DIXON

bid / offre

project manager / administrateur de projets J. TO

project date / date du projet 2016-03-17

project no. / no. du projet R.078886.002

drawing no. / dessine no. E2