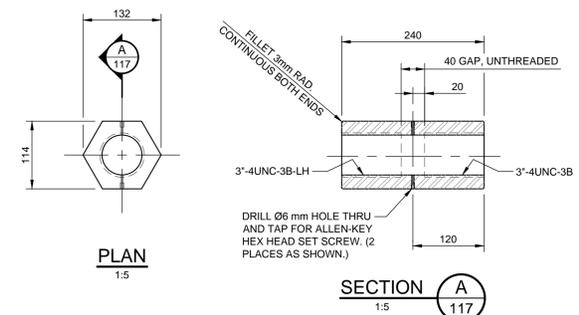


PLAN - CONNECTING LINK LAYOUT
1:5

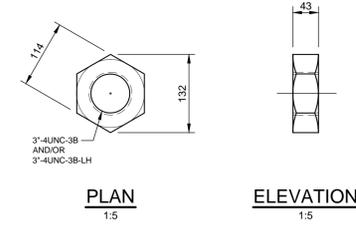
- ASSEMBLY NOTES:**
- 1) SHRINK-FIT BEARING TO GATE END EYELETS.
 - 2) ASSEMBLE WITH JAM NUTS AND TURNBUCKLE NUTS AS SHOWN BEFORE SHIPPING TO FIELD.
 - 3) GREASE THREADS BEFORE ASSEMBLY.
 - 4) SET LENGTH OF EACH LEG TO CUSTOM MEASUREMENTS TAKEN IN FIELD FOR EACH GATE. CENTER TURNBUCKLE NUT ON GAP BETWEEN ROD ENDS.
 - 5) FILL TURNBUCKLE NUT WITH GREASE AND INSTALL HEX HEAD SET SCREWS.
 - 6) SET JAM NUTS FINGER-TIGHT FOR SHIPPING.
 - 7) ALIGNMENT BORE BEARING IN FIELD TO DIAMETER AND TOLERANCE SHOWN ON DWG. 115.

- NOTES ON SHRINK-FITTING**
- 1) INSIDE OF EYELETS AND OUTSIDE OF BUSHINGS ARE SIZED FOR CLASS FN2 INTERFERENCE FIT TO ANSI B4.1 STANDARD FORCE AND SHRINK FITS.
 - 2) LAY OUT EYELET BARS TO CUSTOM DIMENSIONS TAKEN IN FIELD FOR EACH GATE. THESE DIMENSIONS WILL LIKELY BE DIFFERENT FOR EACH GATE. DO NOT ASSUME DIMENSIONS FOR EACH GATE WILL BE THE SAME.
 - 3) USE JIG TO SECURE IN PLACE. DO NOT TACK-WELD.
 - 4) IMMERS BEARINGS IN DRY ICE AND ALCOHOL UNTIL SUFFICIENTLY SHRUNK, THEN INSERT BEARINGS INTO THE EYELETS.
 - 5) ALLOW BEARING TO WARM UP NATURALLY. DO NOT APPLY A HEAT SOURCE.
 - 6) REMOVE JIG ONLY AFTER BEARING HAS WARMED UP TO ROOM TEMPERATURE.



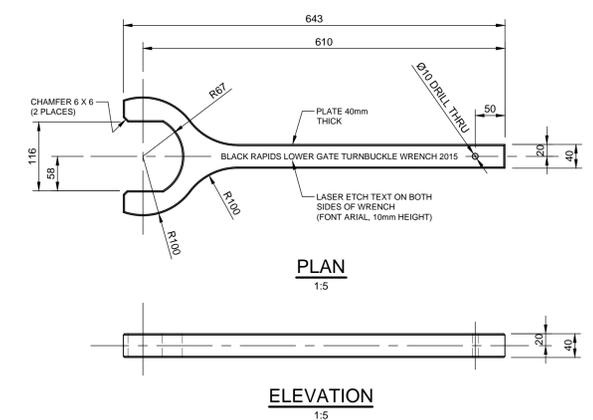
- NOTES**
- 1) MATERIAL - AISI 4340 ALLOY STEEL.
 - 2) PAINT, PRIMER + ALKYD - RED FOR END WITH RIGHT HAND THREAD AND GREEN FOR END WITH LEFT HAND THREAD.
 - 3) SUPPLY HEX HEAD SET SCREWS TO SUIT.
 - 4) QUANTITY OF TEN (10) REQUIRED.

TURNBUCKLE NUT



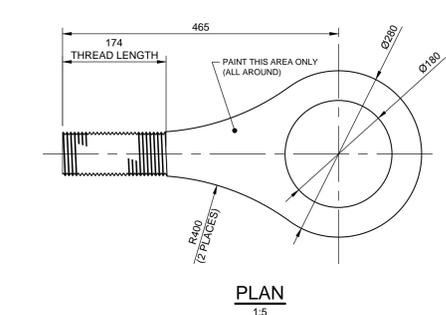
- NOTES**
- 1) MATERIAL - AISI 4340 ALLOY STEEL.
 - 2) PAINT, PRIMER + ALKYD (DO NOT PAINT INSIDE OF HOLES): RED FOR RIGHT HAND THREAD NUTS AND GREEN FOR LEFT HAND THREAD NUTS.
 - 3) QUANTITY OF TEN (10) LEFT HAND THREAD JAM NUTS REQUIRED
 - 4) QUANTITY OF TEN (10) RIGHT HAND JAM NUTS REQUIRED.

TURNBUCKLE JAM NUT



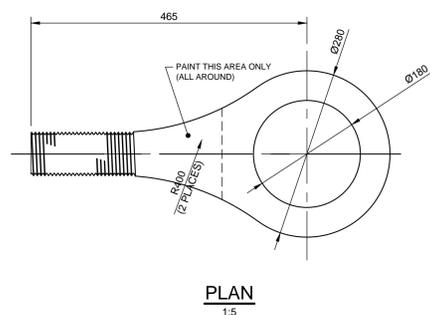
- NOTES**
- 1) MATERIAL - MILD STEEL.
 - 2) PAINT, PRIMER + ALKYD - BLACK.
 - 3) CHAMFER ALL EDGES 2 mm x 2 mm.
 - 4) SEE SHEET 4 FOR DATUM ORIENTATION
 - 5) QUANTITY OF ONE (1) ONLY REQUIRED.

TURNBUCKLE WRENCH



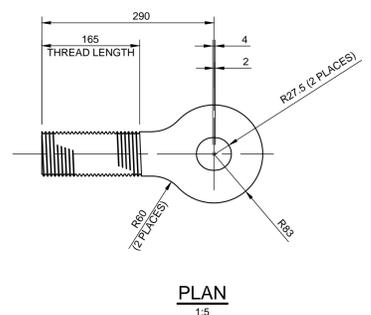
- NOTES**
- 1) MATERIAL - AISI 4340 ALLOY STEEL.
 - 2) PAINT, PRIMER + ALKYD - RED (DO NOT PAINT THREADS, INSIDE OF HOLE OR MACHINED SURFACE).
 - 3) ALL EDGES TO HAVE 3 mm RADIUS FILLET.
 - 4) QUANTITY OF FIVE (5) REQUIRED.

GATE END ROD - INSIDE EYELET



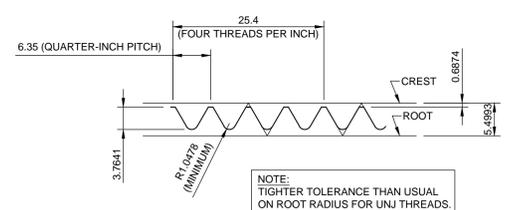
- NOTES**
- 1) MATERIAL - AISI 4340 ALLOY STEEL.
 - 2) PAINT, PRIMER + ALKYD - RED (DO NOT PAINT THREADS, INSIDE OF HOLE OR MACHINED SURFACE).
 - 3) ALL EDGES TO HAVE 3 mm RADIUS FILLET.
 - 4) QUANTITY OF FIVE (5) REQUIRED.

GATE END ROD - OUTSIDE EYELET



- NOTES**
- 1) MATERIAL - AISI 4340 ALLOY STEEL.
 - 2) PAINT, PRIMER + ALKYD - GREEN (DO NOT PAINT THREADS OR INSIDE HOLES)
 - 3) ALL EDGES TO HAVE 3 mm RADIUS FILLET.
 - 4) QUANTITY OF TEN (10) REQUIRED.

WALL END ROD



THREADFORM DETAIL
1:5
(METRIC EQUIVALENT DIMENSIONS OF UNJ THREADFORM)

- NOTES:**
- ALLOY STEEL AISI 4340 QUENCHED AND TEMPERED TO ACHIEVE THE FOLLOWING PROPERTIES:
1. MINIMUM YIELD: 689 MPa.
 2. TENSILE STRENGTH: 862 MPa TO 965 MPa.
 3. CHARPY IMPACT: AT -29 DEGREES CELCIUS. AVERAGE OF THREE TESTS, MINIMUM 27 JOULES WITH ALL INDIVIDUAL TESTS ABOVE 20 JOULES.
 4. FERRITIC GRAIN STRUCTURE.
 5. SUBMIT ALL DATA BEFORE PURCHASE.

No.	Description	Dwn By / Des.Par	Date
1	ISSUED FOR TENDER	DMR	JULY 2015

Revision / Révision	
A	Detail number / Numéro du détail
B	Location dwg. number / Numéro sur dessin

Project title / Titre du projet

**RIDEAU CANAL
BLACK RAPIDS LOCK 13
UPGRADES 2015**

Drawing title / Titre du dessin

LOWER GATE DETAILS V

Drawn by / Dessiné par DAVID ROWAN	Designed by / Conçu par LUC BÉRIault, P.Eng. CZESLAW CUDOWSKI, P.Eng.
Approved by / Approuvé par LUC BÉRIault, P.Eng.	Drawing Date / Date du dessin JUNE 2015