## GENERAL NOTES:

1. MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES [SECTION 14 (DIVISION I) AND SECTION 18 (DIVISION II)]; ANSI/AASHTO/AWS D1.5:~~2002~~ 2008 BRIDGE WELDING CODE AND THE STATE OF VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006.

2. PTFE SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE. GUIDE BAR PTFE SHALL BE PIGMENTED. THE PTFE RESIN SHALL CONFORM TO THE REQUIREMENTS OF ASTM D4894.

3. PTFE IS TO BE PURCHASED ETCHED ON ONE SIDE FOR BONDING INTO MACHINED RECESS. STEEL MATING SURFACES OF PTFE AND STEEL SHALL BE GRIT BLASTED AND DEGREASED PRIOR TO APPLICATION OF ADHESIVE. ADHESIVE SHALL BE APPLIED USING DIRECTIONS SUPPLIED BY THE ADHESIVE MANUFACTURER.

4. STAINLESS STEEL SHALL CONFORM TO ASTM A240 – TYPE 304 AND SHALL BE 11 GA. (0.120"). STAINLESS STEEL SLIDING SURFACES IN CONTACT WITH PTFE SHALL HAVE A NO. 8 MIRROR FINISH AND ALL OTHERS SHALL HAVE A 2B FINISH.

5. WELDING SHALL CONFORM TO AWS-D1.5:~~2002~~ 2008 BRIDGE WELDING CODE, AS WELL AS ANY STATE STANDARD OR PROJECT SPECIAL PROVISION.

6. THE TOP AND BOTTOM OF THE NEOPRENE DISC SHALL BE LUBRICATED WITH DOW CORNING #4 SILICONE COMPOUND.

7. ALL SHARP CORNERS OF STEEL MATERIALS SHALL BE REMOVED BY GRINDING OR SANDING.

8. THE BRASS SEALING RING ENDS SHALL BE CUT AT AN ANGLE OF 45° WITH A MAXIMUM GAP OF 0.050". THE RINGS SHALL BE STAGGERED 120° APART USING A QUANTITY OF THREE (3) RINGS.

9. EACH BEARING SHALL BE MARKED WITH THE MANUFACTURER'S NAME, THE BEARING TYPE OR MODEL NUMBER, THE BEARING NUMBER AND LOT NUMBER, AND THE INSTALLED LOCATION. THE MARKING SHALL BE PERMANENT AND IN A LOCATION THAT WILL BE VISIBLE AFTER ERECTION OF STRUCTURE.

10. EACH NON-FIXED BEARING SHALL HAVE MARKS PLACED ON THE SIDE OF THE MASONRY PLATE AND SOLE PLATE TO INDICATE THE LOCATION OF THE CENTERLINE. THIS MARK CAN BE USED IN THE FIELD TO DETERMINE THE INITIAL OFFSET LOCATION OF THE SLIDE PLATE, IF APPLICABLE. THE MARKS SHALL BE MADE IN INDELIBLE INK AND SHALL BE VISIBLE AFTER BEARING INSTALLATION.

11. BEARINGS ARE TO BE SHIPPED AS COMPLETE UNITS, STEEL BANDED, AND SHALL BE WRAPPED TO PROTECT FROM MOISTURE AND DIRT DURING TRANSIT AND STORAGE. BEARINGS SHALL BE STORED IN A CLEAN, DRY, LEVEL UPRIGHT POSITION WHILE AT JOBSITE. BEARINGS SHALL BE LIFTED FROM THEIR UNDERSIDES ONLY.

12. AT NO TIME MAY THE BEARINGS BE DISASSEMBLED WITHOUT AUTHORIZATION FROM D.S. BROWN OR WITHOUT THE PRESENCE OF A D.S. BROWN REPRESENTATIVE.

13. MARK THE THICKER EDGE OF THE SOLE PLATE AS SUCH FOR THE PURPOSE OF FIELD IDENTIFICATION. PLACE MARK ON THE EDGE OF THE SOLE PLATE SO THAT IT WILL BE VISIBLE AFTER BEARING INSTALLATION.

14. THE DS BROWN COMPANY MAY SUBSTITUTE A709 GR 50W (A588) FOR A709 GR50 (A572) DUE TO AVAILABILITY AT NO ADDITIONAL COST TO THE OWNER OR CONTRACTOR.

15. VERSIFLEX HLMR "POT" STYLE BEARING MANUFACTURING FACILITY AND REPRESENTATIVE FOR COORDINATING PRODUCTION:
THE D.S. BROWN COMPANY
300 EAST CHERRY STREET
NORTH BALTIMORE, OHIO 45872
CSR – JAMIE SCHROEDER (419) 257-3561

## CONTRACTOR NOTES:

1. THE EXPANSION BEARINGS WILL BE SHIPPED CENTERED, AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OFFSET THE SLIDE PLATES IN THE FIELD DURING INSTALLATION. REFER TO CONTRACT DRAWING SHEET 45 OF 108 FOR INITIAL OFFSETS.

2. WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE TEMPERATURE TO A MAXIMUM OF 250°F (121°C) FOR SURFACES IN CONTACT WITH THE ELASTOMER AND 300° (149°C) FOR SURFACES IN CONTACT WITH PTFE. TEMPERATURES SHALL BE DETERMINED BY TEMPERATURE INDICATING WAX PENCILS OR OTHER SUITABLE MEANS. DURING FIELD WELDING, NO WELDING CURRENT SHALL BE PERMITTED TO PASS BETWEEN POT AND PISTON COMPONENTS.

## SAMPLING AND TESTING NOTES:

ELASTOMERIC DISCS SHALL BE SUBJECTED TO RANDOM IN-HOUSE TESTING OF THE APPLICABLE PHYSICAL PROPERTIES PER AASHTO DIVISION 2, SECTION 18.

BEARINGS SHALL BE SUBJECTED TO THE TESTS DESCRIBED BELOW AND IN ACCORDANCE WITH THE APPLICABLE AASHTO SPECIFICATIONS.

1. SAMPLE TEST – ONE (1) BEARING PER "LOT" SHALL BE TESTED AND SHALL BE CHOSEN AT RANDOM. A "LOT" SHALL CONSIST OF ONE OF THE FOLLOWING:
(1) NO MORE THAN 10 FIXED BEARINGS OF ONE "LOAD CATEGORY"
(2) NO MORE THAN 10 EXPANSION BEARINGS OF ONE "LOAD CATEGORY"
ONE LOAD CATEGORY MAY CONSIST OF BEARINGS OF A DIFFERING VERTICAL LOAD CAPACITY BUT THE BEARINGS MAY NOT EXCEED A RANGE OF CAPACITY DIFFERING BY MORE THAN 300 KIPS.

2. PROCEDURE FOR TESTING EXPANSION BEARINGS–
   a.) LOAD THE BEARING WITH ITS DESIGN LOADING FOR AT LEAST 12 HOURS. MEASURE THE FORCE REQUIRED FOR THE FIRST MOVEMENT AND CALCULATE THE COEFFICIENT OF FRICTION. MEASURE THE FORCE REQUIRED FOR MOVEMENT UNDER DYNAMIC LOADING AND CALCULATE THE COEFFICIENT OF FRICTION.
   b.) LOAD THE BEARING AT 70% OF THE DESIGN LOAD BUT NOT LESS THAN 2000 PSI. MEASURE THE STATIC AND DYNAMIC COEFFICIENTS OF FRICTION [70% OF DESIGN LOAD = 282.1 KIPS = 2.44 KSI].
   c.) LOAD THE BEARING AT 150% OF THE DESIGN LOAD FOR 30 MINUTES, AT A 2% ROTATION, AND SUBJECT THE BEARING TO 100 CYCLES OF MOVEMENT, MEASURE THE STATIC AND DYNAMIC COEFFICIENTS OF FRICTION.
   d.) COEFFICIENTS OF FRICTION SHALL BE LESS THAN 4%.

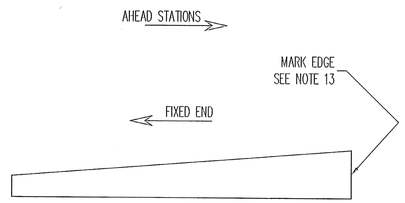
3. AFTER PERFORMING EACH TEST DESCRIBED IN (2) ABOVE, DISASSEMBLE THE BEARING AND INSPECT FOR:
   a.) ANY SIGN OF SEALING FAILURE.
   b.) ANY SIGN OF MATERIAL FAILURE.
   c.) ANY OTHER DEFECTS.

## TOLERANCES:

EXCEPT AS NOTED BELOW, THE DIMENSIONAL TOLERANCES AND SURFACE FINISHES OF THE BEARING SHALL SATISFY THE REQUIREMENTS OF AASHTO, DIVISION II, SECTION 18, TABLE 18.5.1.5-1.

1. DIMENSIONS (LENGTH, WIDTH, THICKNESS, HOLE LOCATIONS AND POSITION OF WELDED COMPONENTS). THE TOLERANCE SHALL BE ± 0.063".

2. FLATNESS
   a.) SOLE PLATE – BEARING SURFACES SHALL BE FLAT WITH MAXIMUM PERMISSIBLE VARIATION OF 0.01" FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATES.
   b.) MASONRY PLATE – BEARING SURFACES SHALL BE FLAT WITH MAXIMUM PERMISSIBLE VARIATION OF 0.04" FROM A PLANE DETERMINED BY ANY THREE CORNERS OF THE PLATE.
   c.) SLIDING SURFACES – FOR STAINLESS STEEL MATING WITH PTFE BONDED TO STEEL, THE TOLERANCE SHALL BE THE "NOMINAL DIMENSION" IN INCHES TIMES 0.0005. THE "NOMINAL DIMENSION" SHALL BE THE DISTANCE BETWEEN ANY DIAGONAL CORNERS OR OPPOSITE EDGES OF THE BEARING SURFACE. THE TOLERANCE IS APPLICABLE TO BOTH SURFACES.




SOLE PLATE EDGE DETAIL

## PROTECTIVE COATING NOTES:

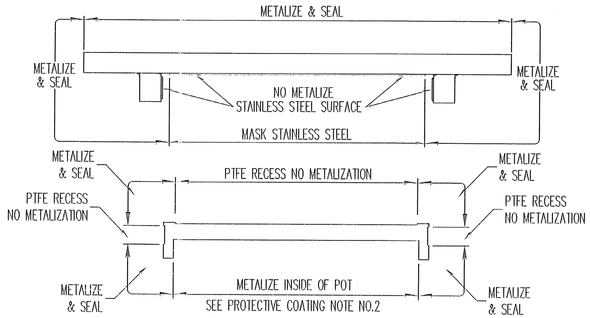
1. ALL MILL SCALE SHALL BE REMOVED FROM BEARINGS BY BLASTING (SSPC-SP10) PRIOR TO APPLYING PROTECTIVE COATING.

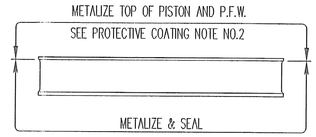
2. METALIZATION SHALL BE IN ACCORDANCE WITH ANSI/AWS C2.18-93. EXTERNAL STEEL SURFACES SHALL BE METALIZED TO A MINIMUM THICKNESS OF 6 MILS. THE INSIDE OF THE POT, TOP OF PISTON, AND THE P.F.W. SHALL BE METALIZED TO A MINIMUM COATING THICKNESS OF 2 MILS AND BE POLISHED TO 125 MICROINCHES AFTER METALIZING. PROVIDE WIRE MATERIAL FOR THE METALIZED PRIMER CONSISTING OF PURE ZINC (99.9% PURITY).

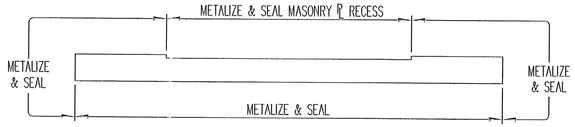
3. WITHIN 8 HOURS AFTER METALIZATION, THE EXTERNAL STEEL SURFACES SHALL RECEIVE A SEAL COAT IN ACCORDANCE WITH THE MAUFACTURER'S RECOMENDATIONS.
SEAL COAT = CARBOLINE RUSTBOND, D.F.T. = 2 MILS MIN.

4. SEE COATING LIMIT DETAILS FOR COATING LOCATIONS.

5. PRIOR TO METALIZING ALL CORNERS AND EDGES OF THE STEEL PLATES, SHAPES, ETC., SHALL BE GROUND TO 1/16" RADIUS.




UNI-DIRECTIONAL VERSIFLEX HLMR COATING LIMITS

RECEIVED
CK'D BY WPK OK'D BY CWC
JUN 03 2008
RESUBMIT ____ APPROVED AS NOTED
BY RKW DATE 6-9-08

| REV. | DESCRIPTION | DATE | DET. | CK'D. |
|---|---|---|---|---|
| | | | | |


D.S. BROWN
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FAX: 419.257.0332
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| | ITEM | QUANTITY |
|---|---|---|
| LOCATION — TH 24 OVER HOOSIC RIVER | – | – |
| BRIDGE — 41 | – | – |
| PROJECT — POWNAL, BRZ 1441(19) C/2 | – | – |
| — | – | – |
| P.O. NO. — 84934 | – | – |
| DESIGNER — VERMONT AGENCY OF TRANSPORTATION | – | – |
| CUSTOMER — FRANK W. WHITCOMB CONSTRUCTION CORP. | – | – |
| | – | – |

| DESCRIPTION | SCALE | DRAWN BY | CHECKED BY | DATE | – |
|---|---|---|---|---|---|
| GENERAL NOTES AND COATING LIMITS<br>BENNINGTON CO., VT | N.T.S. | SP | PMG | 5/08 | – |
| | PROJECT NUMBER | PRODUCT CODE | RELEASE | SHEET | |
| | 23215 | 1112 | 1 | GN1 | |