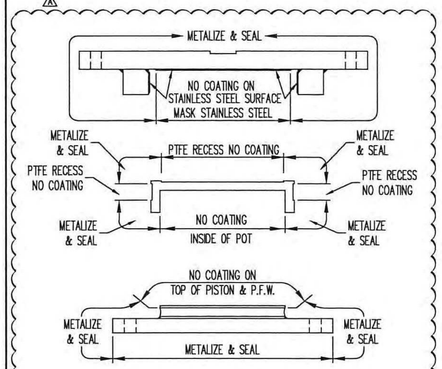

UNI–DIRECTIONAL BEARING COATING LIMITS

PROTECTIVE COATING NOTES:

1. ALL MILL SCALE SHALL BE REMOVED FROM BEARINGS BY BLASTING (SSPC–SP5) 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. 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 MANUFACTURER'S RECOMMENDATIONS.
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 0.063" RADIUS.

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 BRIDGE WELDING CODE AND THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2006.

2. PTFE FOR THE MAIN SLIDING SURFACE SHALL BE VIRGIN, UNFILLED POLYTETRAFLUOROETHYLENE. PTFE FOR THE GUIDE BARS SHALL BE FILLED AND PIGMENTED POLYTETRAFLUOROETHYLENE. PTFE FILLER CONTENT SHALL NOT EXCEED 15% FOR GLASS FIBERS AND 25% FOR CARBON FIBERS. THE PTFE RESIN SHALL CONFORM TO THE REQUIREMENTS OF ASTM D4894. PTFE CORNERS WILL BE ROUNDED TO ACCOMMODATE THE RADIUS OF THE MACHINED RECESS.

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 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 0.05". 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, UPSTATION MARK, AND THE INSTALLED LOCATION. THE MARKING SHALL BE PERMANENT AND IN A LOCATION THAT WILL BE VISIBLE AFTER ERECTION OF THE STRUCTURE.

10. EACH NON–FIXED BEARING SHALL HAVE MARKS PLACED ON THE TOP OF THE MASONRY PLATE AND SIDE OF THE SOLE PLATES/GUIDE BARS 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. DS BROWN MAY SUBSTITUTE A709 GR. 50W FOR A709 GR. 50 DUE TO AVAILABILITY AT NO ADDITIONAL COST TO THE OWNER OR CONTRACTOR.

△ 14. 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 – KARI SYBERT (419) 257–3561

△ 15. IN ACCORDANCE WITH AISC STEEL BRIDGE COMPONENT CERTIFICATION REQUIREMENTS, CALCULATIONS AND DRAWINGS HAVE BEEN REVIEWED BY PHILIP GASE P.E.

SAMPLING AND TESTING NOTES:

ELASTOMERIC DISCS SHALL BE SUBJECTED TO RANDOM IN–HOUSE TESTING OF THE APPLICABLE PHYSICAL PROPERTIES PER AASHTO DIVISION II, 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 EXPANSION BEARINGS OR 10 FIXED BEARINGS OF 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 50KIPS.

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 2000PSI. MEASURE THE STATIC AND DYNAMIC COEFFICIENTS OF FRICTION.
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. PROCEDURE FOR TESTING FIXED BEARINGS–
a.) LOAD BEARING AT 150% OF ITS DESIGN LOAD FOR 30 MINUTES, AT A 2% ROTATION.

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

☐ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

CHECKING IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. ANY ACTION SHOWN IS SUBJECT TO THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS WHICH SHALL BE CONFIRMED AND CORRELATED AT THE JOB SITE; FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION; COORDINATION OF HIS WORK WITH THAT OF ALL OTHER TRADES AND THE SATISFACTORY PERFORMANCE OF THE WORK.

DATE 4/12/12 BY CHA

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. IF REQUIRED, THE OFFSET WOULD BE PROVIDED TO THE CONTRACTOR BY THE BRIDGE DESIGNER.

2. WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE TEMPERATURE TO A MAXIMUM OF 200°F (93°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.

3. COATING AREAS DAMAGED DURING INSTALLATION OR FIELD WELDING SHALL BE REPAIRED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.

4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE PTFE & STAINLESS STEEL SLIDING SURFACES FROM SPLATTER DURING WELDING, GROUTING, OR PAINTING OPERATIONS, IF APPLICABLE.

AASHTO TOLERANCE TABLE 18.5.1.5–1

DESCRIPTION	THICKNESS TOLERANCE	DIMENSION TOLERANCE	FLATNESS TOLERANCE	SURFACE FINISH (MICRO–INCHES)
POT BEARING				
OVERALL DIMENSIONS	+1/4", –0"	+1/8", –0"	–	–
POT DEPTH (INSIDE)	–	+0.025", –0"	–	–
POT WALL: THICKNESS & AVE. I.D.	+1/8", –0"	±0.003"	±0.001"	32
POT BASE: TOP & BOTTOM SURFACES	+0.025", –0"	–	CLASS C	63
PISTON: RIM	+1/16", –0"	±0.003"	±0.001"	32
PISTON: TOP AND BOTTOM SURFACES	+0.025, –0"	–	CLASS C	63
ELASTOMERIC DISK (UNSTRESSED)	+1/8", –0"	+1/16", –0"	–	–
FLAT PTFE	+1/16", –0"	+1/32", –0"	CLASS A	–
FLAT STAINLESS STEEL	+1/16", –0"	+1/8", –0"	CLASS A	#8 MIRROR
LOAD PLATES OVERALL DIMENSIONS	±1/16"	±1/4"	** CLASS A	** 125
BEVEL SLOPE	±0.002 RADIANS	–	–	–
GUIDE CONTACT SURFACE	–	+1/8", –0"	CLASS A	32
DISTANCE BETWEEN GUIDES	–	+1/32", –0"	–	–
PARALLELISM OF GUIDES	–	±0.005 RADIANS	–	–
BRASS RINGS	–	–	–	63
ALL OTHER SURFACES	–	–	–	125

** ONLY FOR SURFACES IN CONTACT WITH THE BEARING. SURFACES IN CONTACT WITH CONCRETE ARE CLASS C & SURFACES IN CONTACT WITH STEEL ARE CLASS B.

FLATNESS TOLERANCE	
CLASS	X NOM. DIM.
A	0.001
B	0.002
C	0.005

TOLERANCES:

EXCEPT AS NOTED BELOW, THE DIMENSIONAL TOLERANCES AND SURFACE FINISHES OF THE BEARING SHALL SATISFY THE REQUIREMENTS OF AASHTO STANDARD, 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 0.01" 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.

REV.	DESCRIPTION	DATE	DET.	CKD.
△	REVISED COATING TO METALIZE & REMOVED CAULKING NOTE	2/15/12	–	ANK

D.S. BROWN
THE D.S. BROWN COMPANY
300 E. CHERRY STREET
NORTH BALTIMORE, OHIO 45872
419.257.3561
FAX: 419.257.0332
WWW.DSBROWN.COM

ITEM	QUANTITY
LOCATION — RICHMOND U.S. ROUTE 2	–
BRIDGE NO. — 24	–
PROJECT NO. — STP–RS 0284(11)	–
—	–
P.O. NO. — 1247	–
DESIGNER — CHA	–
CUSTOMER — HARRISON & BURROWES CONSTRUCTORS	–
	–

DESCRIPTION: GENERAL NOTES & COATING LIMITS
CHITTENDEN CO., VT

SCALE:	DRAWN BY:	CHECKED BY:	DATE:	
N.T.S.	ANO	ANK	10/17/11	–
PROJECT NUMBER	PRODUCT CODE	RELEASE	SHEET	
33716	1112	1	GN1	