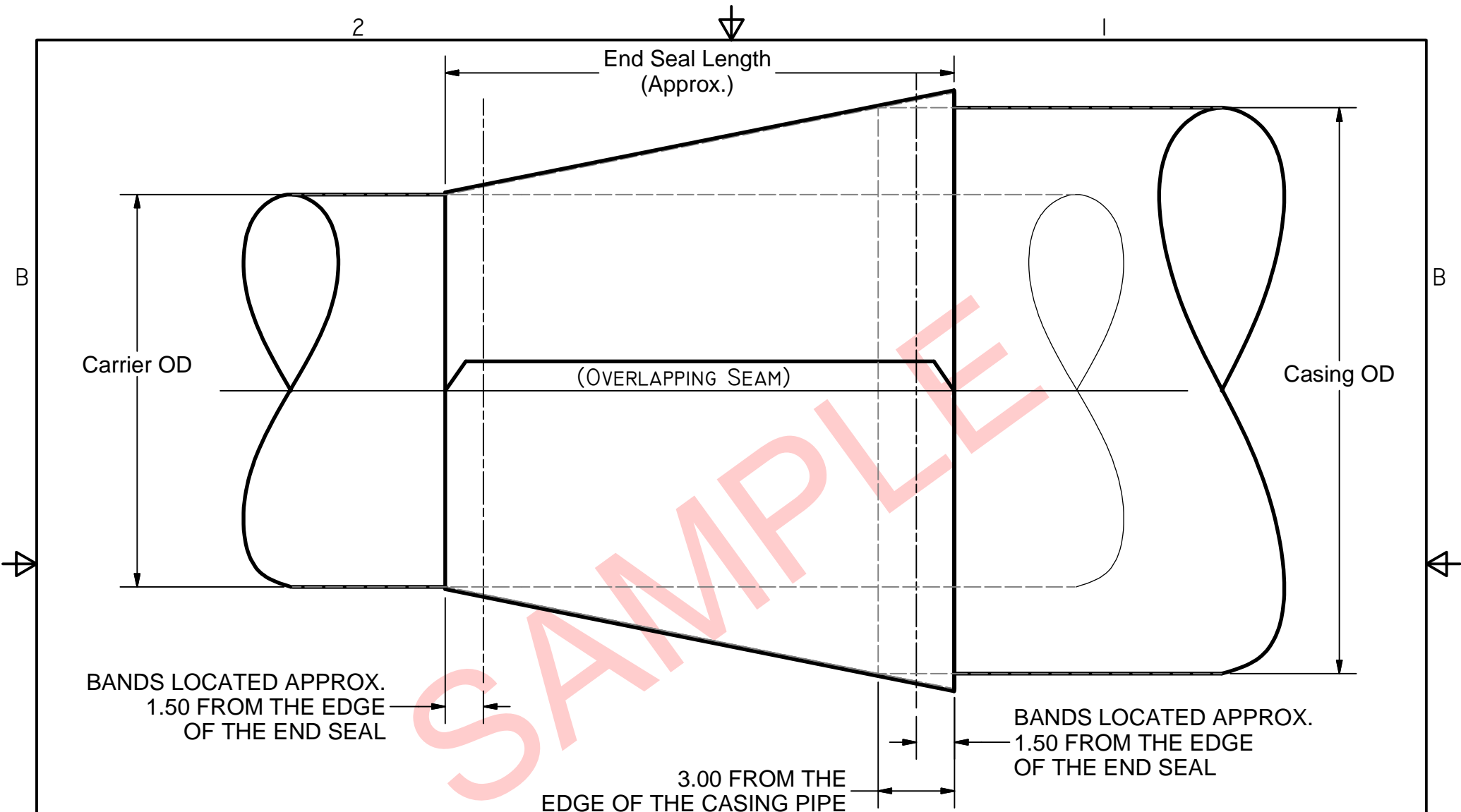




"THE STANDARD OF EXCELLENCE IN THE INDUSTRY"

### **CASING SPACERS END SEALS - STYLE – CCES**

Casing spacer end seals shall be a pull-over type construction and made from Neoprene with T-304 stainless steel bands for securing the ends of the end seal to the casing pipe and carrier pipe. Casing spacer end seals shall be Model CCES as manufactured by Cascade Waterworks Mfg. Co. of Yorkville, IL or approved equal.



**CASCADE MODEL CCES END SEALS**

PULL OVER THE CASING AND CARRIER PIPES AFTER INSTALLATION TO PROVIDE A BARRIER TO BACKFILL DEBRIS AND SEEPAGE.

(NOT FOR PRESURE APPLICATIONS.)

20.00"	38.30"	48.00"
END SEAL LENGTH	CARRIER OD	CASING OD

**MATERIAL SPECIFICATIONS:**  
 SEAL - NEOPRENE  
 OTHER MATERIALS AVAILABLE  
 BANDS - T-304 STAINLESS STEEL

- NOTES:
1. FINISH = XXXX
  2. 2 PLACE DECIMALS ± .03
  3. 3 PLACE DECIMALS ± .010
  4. ANGULAR DECIMALS ± 1/2 DEGREE.
  5. CHAMFER ALL MACHINED SURFACES .005-.010 x 45° AND REMOVE ALL BURRS.
  6. ALL PARTS MUST BE FREE FROM SCALE.
  7. NO TOLERANCE NEEDED ON REFERENCE DIMENSIONS.
  8. ALL BOLT CIRCLE TOLERANCES PER ANSI B16.5 PARA. 7.7
  9. CONCENTRICITY TO CENTERLINE .005
- STANDARD TOLERANCES UNLESS OTHERWISE SPECIFIED

<b>End Seal Installation Guide</b>			
Push in Carrier side before tightening End Seal			
MATERIAL:	Neoprene (60 Duro.)	DRAWING NO:	End Seal
SCALE:	NTS	DRAWN BY:	M. Zimmerle
DATE:	11/19/2007	APP'D BY:	
		REVISED 1:	
		REVISED 2:	
		<b>Cascade Waterworks, Mfg.</b> 1213 BADGER STREET • YORKVILLE, ILLINOIS 60560	