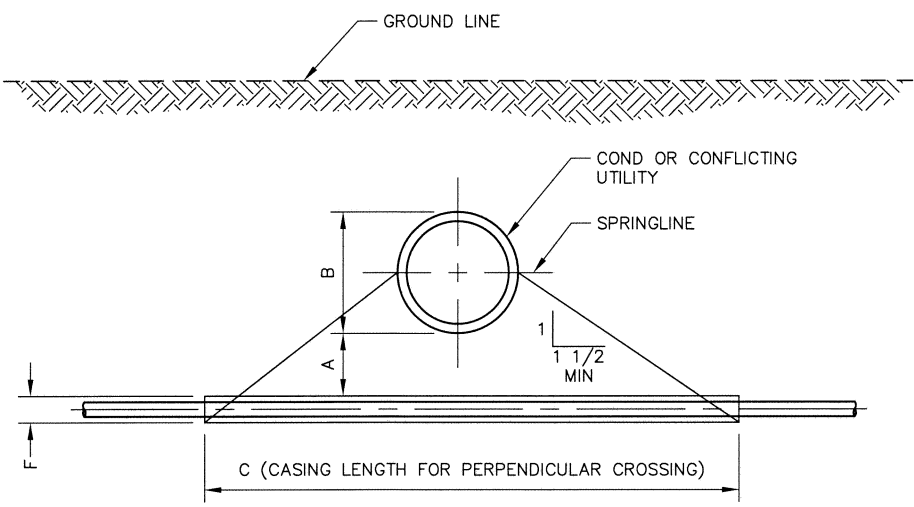


**PLAN**  
FOR PERPENDICULAR CROSSING

**PLAN**  
FOR ANGLE CROSSING



**PROFILE**

FORMULA FOR FINDING C:  $C = B + (2)(1.5) \left[ \frac{B}{2} + A + F \right]$

PERPENDICULAR CROSSING CASING LENGTH OD DW COND CONSTANT RATIO OF MIN SLOPE

CASING OD VERT DIST BTWN CASING & DW COND 1/2 OD DW COND

FORMULA FOR FINDING L:  $L = \frac{C}{\sin \theta}$

**NOTES:**

1. THE BORING AND CASING METHOD AND MATERIALS SHALL BE APPROVED IN WRITING BY DENVER WATER PRIOR TO CONSTRUCTION.
2. SOIL AT ENDS OF CASING SHALL BE STABLE AT ALL TIMES.
3. CATHODIC PROTECTION SHALL BE PROVIDED FOR STEEL CASING AS REQUIRED BY DENVER WATER.
4. CASING PIPE SHALL BE STRAIGHT, ROUND, AND OF NEW MATERIAL.

<b>D DENVER WATER</b>	
<b>BORED CROSSING</b>	
Scale: <u>  NONE  </u>	Date: <u>  May 2018  </u>
Drawn: <u>  RLB  </u>	Ck: <u>  K ROSS  </u>
Approved: <u>  Steph C. Row  </u>	Dr. <u>  127  </u> No. <u>  35  </u>