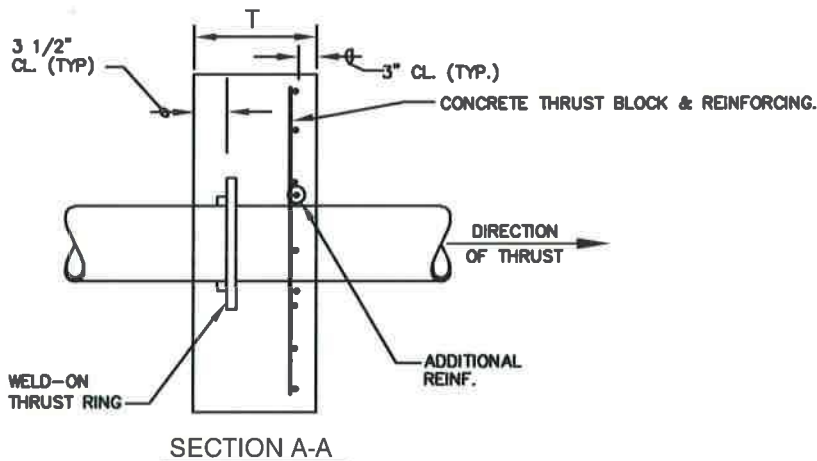


| PIPE DIAMETER INCH | THRUST BLOCK DIMENSIONS | | | THRUST BLOCK REINF. |
|--------------------|-------------------------|-------|--------|------------------------------------|
| | T | H | L | |
| 4 AND 6 | 1'-2" | 2'-6" | 3'-6" | #5 @ 12" c/c E.W.+4#5 ADD'L REINF. |
| 8 | 1'-2" | 3'-0" | 4'-0" | #5 @ 12" c/c E.W.+4#5 ADD'L REINF. |
| 10 | 1'-4" | 4'-0" | 4'-0" | #5 @ 12" c/c E.W.+4#5 ADD'L REINF. |
| 12 | 1'-4" | 5'-0" | 5'-0" | #5 @ 12" c/c E.W.+4#5 ADD'L REINF. |
| 14 | 1'-4" | 6'-0" | 6'-0" | #5 @ 10" c/c E.W.+4#5 ADD'L REINF. |
| 16 | 1'-6" | 6'-0" | 8'-0" | #5 @ 8" c/c E.W.+4#5 ADD'L REINF. |
| 18 | 1'-6" | 6'-0" | 11'-0" | #5 @ 6" c/c E.W.+4#5 ADD'L REINF. |



NOTES:

1. ALL CONCRETE SHALL BE $f'_c=4000$ PSI @ 28 DAYS. PIPELINE SHALL NOT BE PRESSURIZED UNTIL CONCRETE STRENGTH REACHES 4000 PSI. AND TRENCH HAS BEEN BACKFILLED.
2. ALL REBARS SHALL BE ASTM A615 GRADE 60.
3. DUCTILE IRON PIPE ONLY.
4. MAINTAIN 2" CLEAR BETWEEN ALL REBARS AND PIPE.
5. WELD-ON THRUST RINGS AND PIPE TO WHICH THEY ARE ATTACHED SHALL BE DESIGNED BY THE PIPE MANUFACTURER FOR THRUST EQUIVALENT TO THE WATER MAIN PRESSURE OF 250 PSI MIN. THE AREA OF THE RING SHALL BE PROPORTIONED SUCH THAT THE BEARING STRESS ON THE CONCRETE DOES NOT EXCEED 1000 PSI.
6. THRUST RING SHALL BE LOCATED 2'-6" MINIMUM FROM END OF PIPE.
7. A SPECIAL DESIGN IS REQUIRED AND SHOULD BE SUBMITTED TO TSG FOR REVIEW:
 - a. IN CASES WHEN THRUST FORCE CAN ACT IN EITHER DIRECTION. ONLY A WELD-ON THRUST RING DESIGNED FOR BI-DIRECTIONAL THRUST SHALL BE USED AND IT SHALL BE PLACED AT THE 1/2 'T' DIMENSION OF THE CONCRETE THRUST BLOCK.
 - b. IF WORKING PLUS SURGE PRESSURES ARE HIGHER THAN 250 PSI.
 - c. FOR MAINS LARGER THAN 18 INCH.
 - d. IF DEPTH FROM FINISHED GRADE TO TOP OF PIPE IS SHALLOWER THAN 4'-0".
 - e. IF GROUNDWATER IS ABOVE BOTTOM OF BLOCK.
 - f. IF SOFT OR ORGANIC SOIL CONDITIONS EXIST.
8. REPLACE ALL DISTURBED SOIL ON THE THRUST SIDE OF THE BLOCK WITH CRUSHED STONE COMPACTED AS STRUCTURAL FILL.

WASHINGTON
SUBURBAN
SANITARY
COMMISSION

APPROVED: 8/12/16

Chief Engineer

STANDARD DETAIL
CONCRETE THRUST BLOCK
WITH WELD-ON THRUST RING
ON DUCTILE IRON PIPE

B
3.3