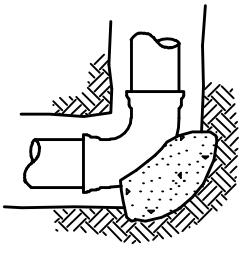
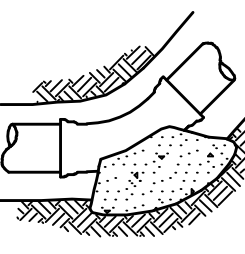
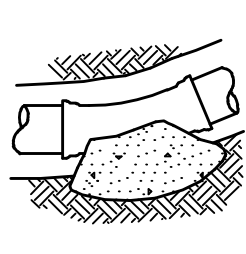
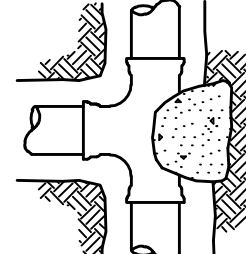
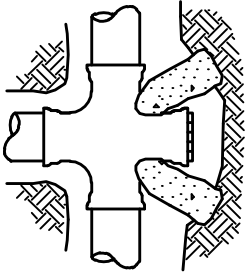
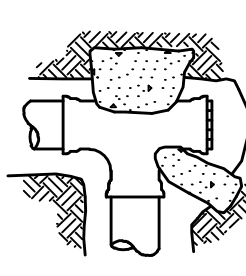


| TYPE OF FITTING      | 90° BEND  | 45° BEND  | 11-1/4° OR 22-1/2° BEND  | TEE OR DEAD END   |
|----------------------|---|---|--|---|
| TYPICAL INSTALLATION |  |  |  |  |

THRUST BLOCK BEARING AREA (SQ. FT.)

| TYPE OF FITTING | 90° BEND | 45° BEND | 11-1/4° OR 22-1/2° BEND | TEE OR DEAD END | TEE WITH PLUG | CROSS WITH PLUG |
|-----------------|----------|----------|-------------------------|-----------------|---------------|-----------------|
| SIZE OF PIPE    | 4"       | 2        | 1                       | 1               | 2             | 2               |
|                 | 6"       | 4        | 4                       | 2               | 4             | 4               |
|                 | 8"       | 7        | 4                       | 2               | 5             | 7               |
|                 | 10"      | 12       | 6                       | 3               | 8             | 12              |
|                 | 12"      | 16       | 10                      | 5               | 12            | 16              |
|                 | 14"      | 20       | 12                      | 6               | 14            | 20              |
|                 | 16"      | 27       | 15                      | 8               | 18            | 27              |
|                 | 18"      | 45       | 25                      | 13              | 32            | 45              |
|                 | 24"      | 65       | 35                      | 18              | 46            | 65              |

| TYPE OF FITTING      | CROSS WITH PLUG   | TEE WITH PLUG  |
|----------------------|---|--|
| TYPICAL INSTALLATION |  |  |

**NOTES:**

1. CONCRETE FOR THRUST BLOCKS SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI OR GREATER.
2. AREAS GIVEN ARE FOR CLASS 150 PIPE AT A TEST PRESSURE OF 150 PSI, WITH 2000 PSF BEARING CAPACITY. INSTALLATIONS USING DIFFERENT PIPE, TEST PROCEDURES, AND/OR SOIL TYPES SHOULD ADJUST AREAS ACCORDINGLY, SUBJECT TO THE APPROVAL OF THE ENGINEER.
3. THRUST BLOCKS ARE TO BE POURED AGAINST UNDISTURBED SOIL.
4. JOINTS AND FACES OF PLUGS TO BE KEPT CLEAR OF CONCRETE.
5. BOLT ON SADDLE TEES ARE EXEMPT FROM THRUST BLOCK REQUIREMENTS IF STATED IN MANUFACTURER'S TABULATED DATA.

|     |          |      |  |                      |
|-----|----------|------|--|----------------------|
| NO. | REVISION | DATE | STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION | SECTION UTILITIES    |
|     |          |      | THRUST BLOCK BEARING AREAS                     | DRAWING NO. U-3.1    |
|     |          |      | CITY OF ELKO, NEVADA                           | DATE 11/30/07 PAGE 1 |