

**Section 8**  
**Pipe Embedment,**  
**Backfill and Excavation**

**GENERAL EMBEDMENT AND BACKFILL NOTES:**

1. SAND (FOR PIPE EMBEDMENT) SHALL BE SAND, BLOW SAND OR SIMILAR MATERIAL. NO CRUSHER FINES SHALL BE ALLOWED. NO CLODS, ROCKS OR OTHER OBJECTIONABLE MATERIAL WILL BE PERMISSIBLE.
2. CRUSHED STONE (FOR PIPE EMBEDMENT) SHALL BE CRUSHED STONE CONFORMING TO ASTM DESIGNATION 57 FOR CRUSHED AGGREGATE AND HAVING THE FOLLOWING SIEVE ANALYSIS:

SIEVE SIZE	% RETAINED
1-1/2"	0
1"	0 - 5
1/2"	40 - 75
#4	90 - 100
#8	95 - 100

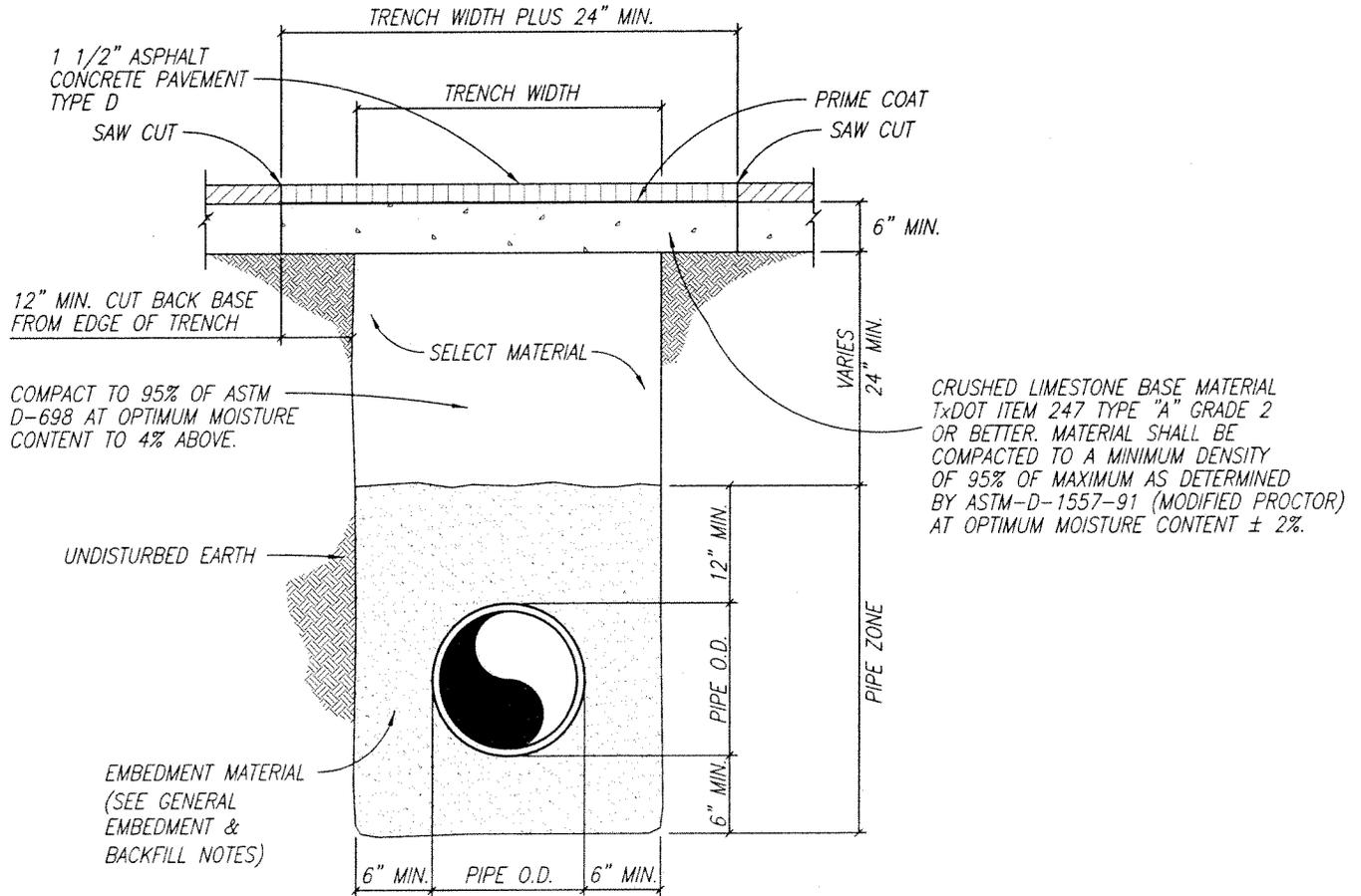
3. PEA GRAVEL (FOR PIPE EMBEDMENT) SHALL CONSIST OF DURABLE PARTICLES AND MEETING THE FOLLOWING SIEVE ANALYSIS:

SIEVE SIZE	% PASSED
1/2"	100
3/8"	80 - 100
#4	15 - 70
#10	LESS THAN 2

3. SELECT MATERIAL (AS APPROVED BY THE OWNER) - MATERIAL WHICH IS FREE OF ROCKS, LUMPS, CLODS, ORGANIC MATTER OR DEBRIS. SELECT MATERIAL BENEATH ASPHALT SHALL HAVE A P.I. OF 12 TO 22 AND SHALL BE COMPACTED TO 95% DENSITY ASTM D-698 AT OPTIMUM MOISTURE. ALL OTHER SELECT MATERIAL SHALL BE COMPACTED TO 85% DENSITY ASTM D-698.
4. CONCRETE (FOR ENCASEMENT, FILL OR BLOCKING) - SHALL CONFORM TO ASTM C94. THE COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE AT LEAST 3000 PSI.
5. GRAVEL (FOR MANHOLE FOUNDATION) - SHALL BE WASHED GRAVEL OR WASHED CRUSHED LIMESTONE, GRADATION DEPENDS ON SITE CONDITIONS.
6. WHERE WATER AND SEWER LINES PARALLEL WITH LESS THAN 10 FEET HORIZONTAL CLEAR DISTANCE, NO ENCASEMENT IS REQUIRED IF BOTH LINES ARE 150 PSI PRESSURE RATED.
7. WHERE MINIMUM COVER, 30" IS NOT AVAILABLE, CONCRETE ENCASEMENT WILL BE REQUIRED.
8. ALL CONCRETE ENCASEMENTS MUST BE FORMED AND INSPECTED BY THE CITY OF BELTON PRIOR TO PLACING CONCRETE AND BACKFILLING.
9. TRENCH SPOILS MAY BE USED FOR BACKFILL IN TRENCHES NOT IN OR ADJACENT TO ROADWAYS ONLY WITH THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.

## TYPICAL BACKFILL FOR PAVED AREAS

FOR TRENCHES WITHIN 4' FROM THE CENTER LINE  
OF TRENCH TO BACK OF CURB FOR EXISTING  
OR PROPOSED SHEETS.  
NOT TO SCALE



### TRENCH WIDTHS:

#### PIPE LESS THAN 30 INCH DIAMETER

MAX. 1'-6" + PIPE O.D.

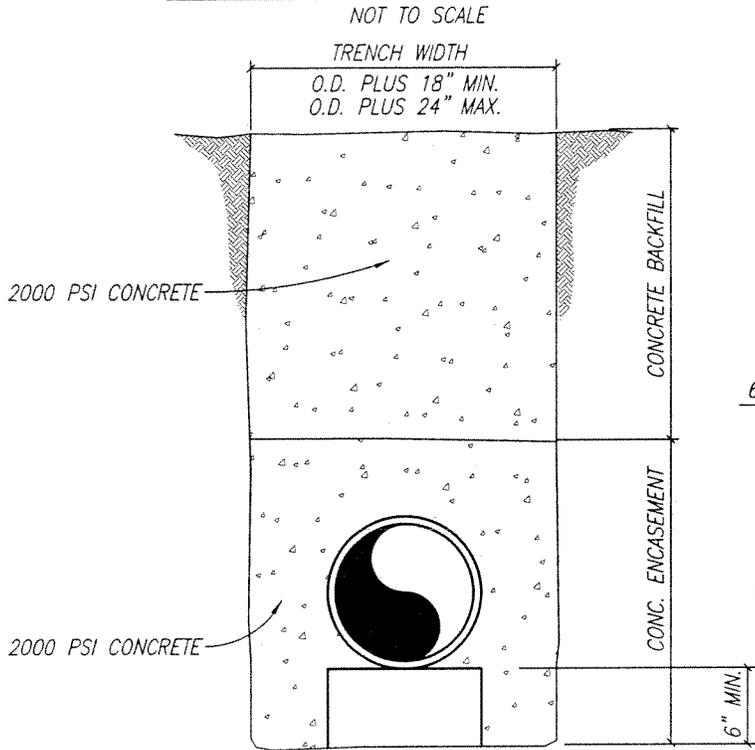
MIN. 1'-0" + PIPE O.D.

#### PIPE 30 INCH DIAMETER AND LARGER

MAX. 2'-0" + PIPE O.D.

MIN. 1'-3" + PIPE O.D.

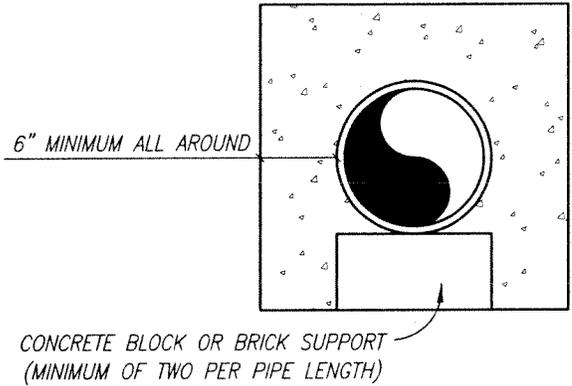
**CONCRETE BACKFILL  
AND CONCRETE ENCASEMENT**



**CONCRETE ENCASEMENT**

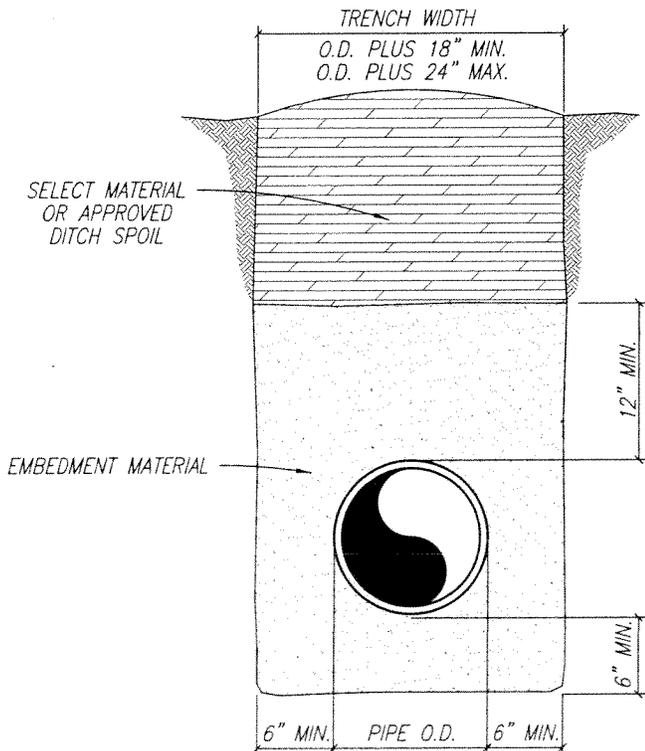
**DETAIL**

NOT TO SCALE



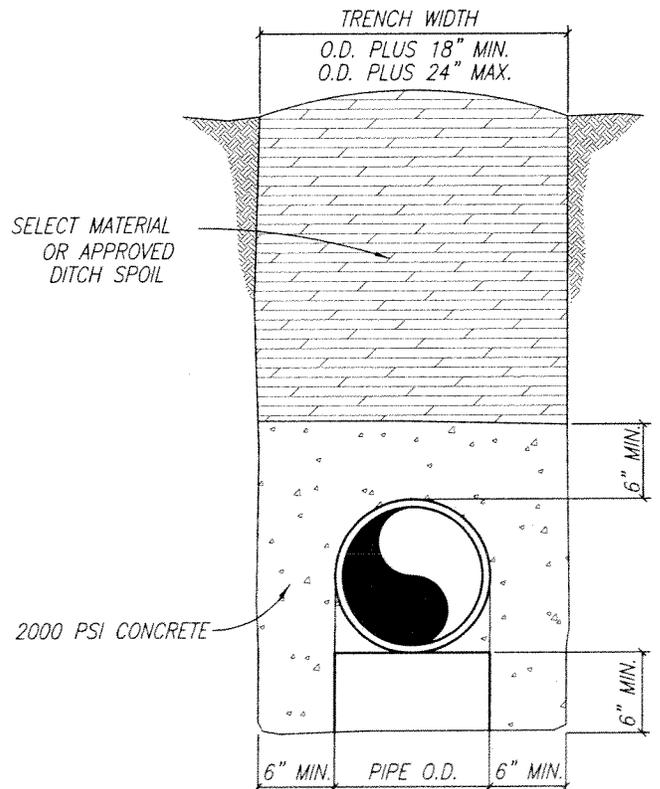
**PIPE EMBEDMENT**

NOT TO SCALE



**CONCRETE ENCASEMENT**

NOT TO SCALE



NOTE:

SEE GENERAL EMBEDMENT AND BACKFILL NOTES