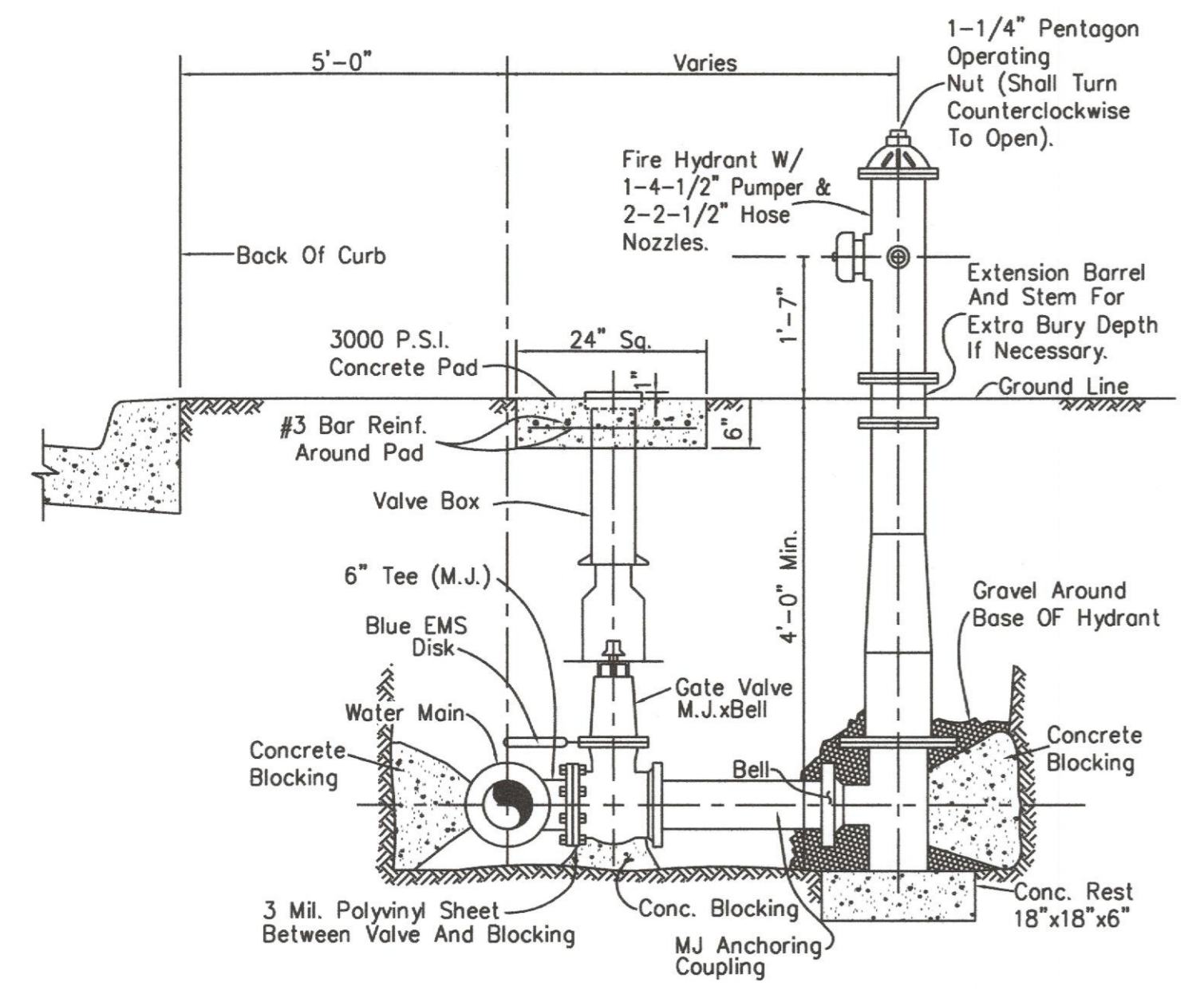
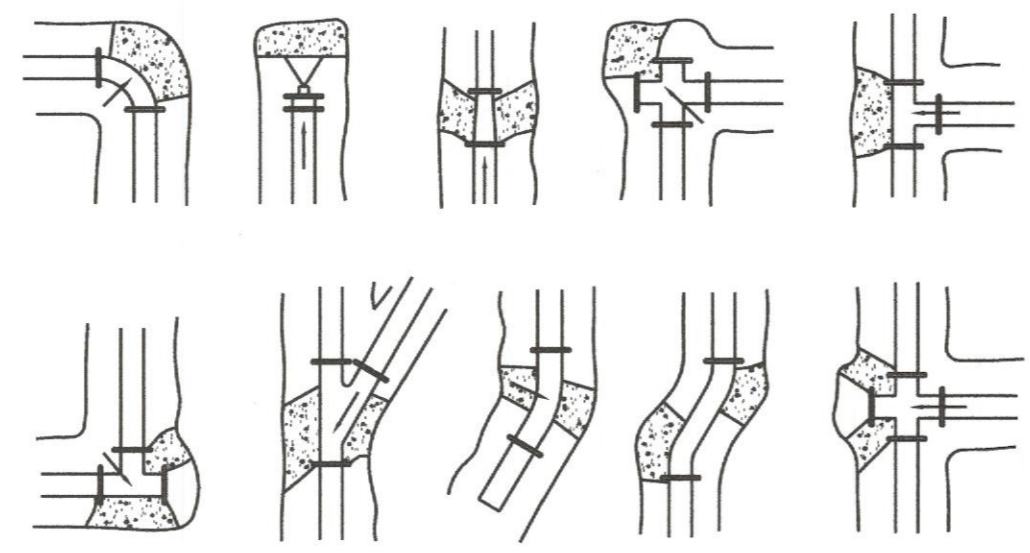


SINGLE SERVICE CONNECTION
Not To Scale

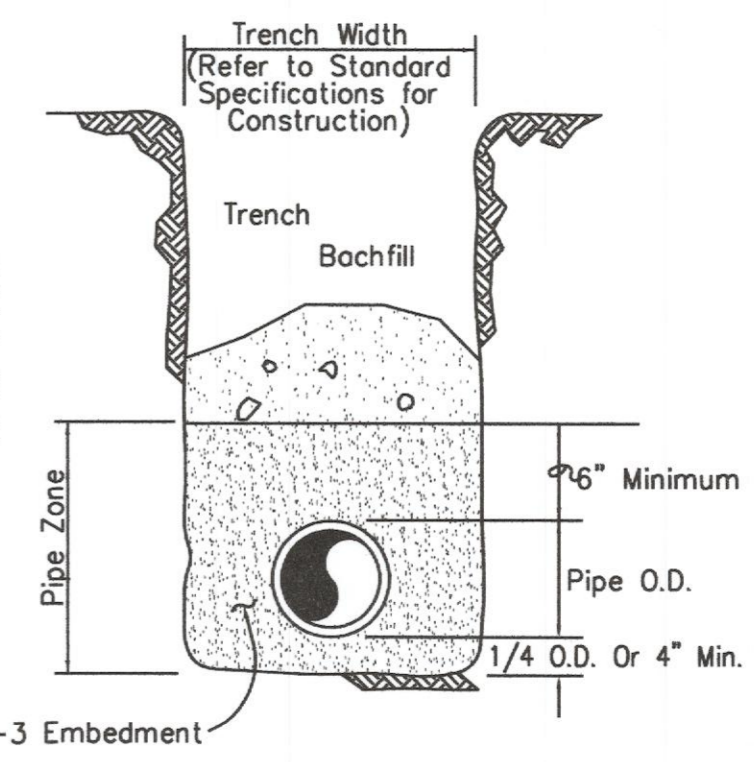


Note:
 *All fire hydrant joints restrained.
 *All change in direction—vertical or horizontal restrained.
 *All water: C-900, Class 200, DR14

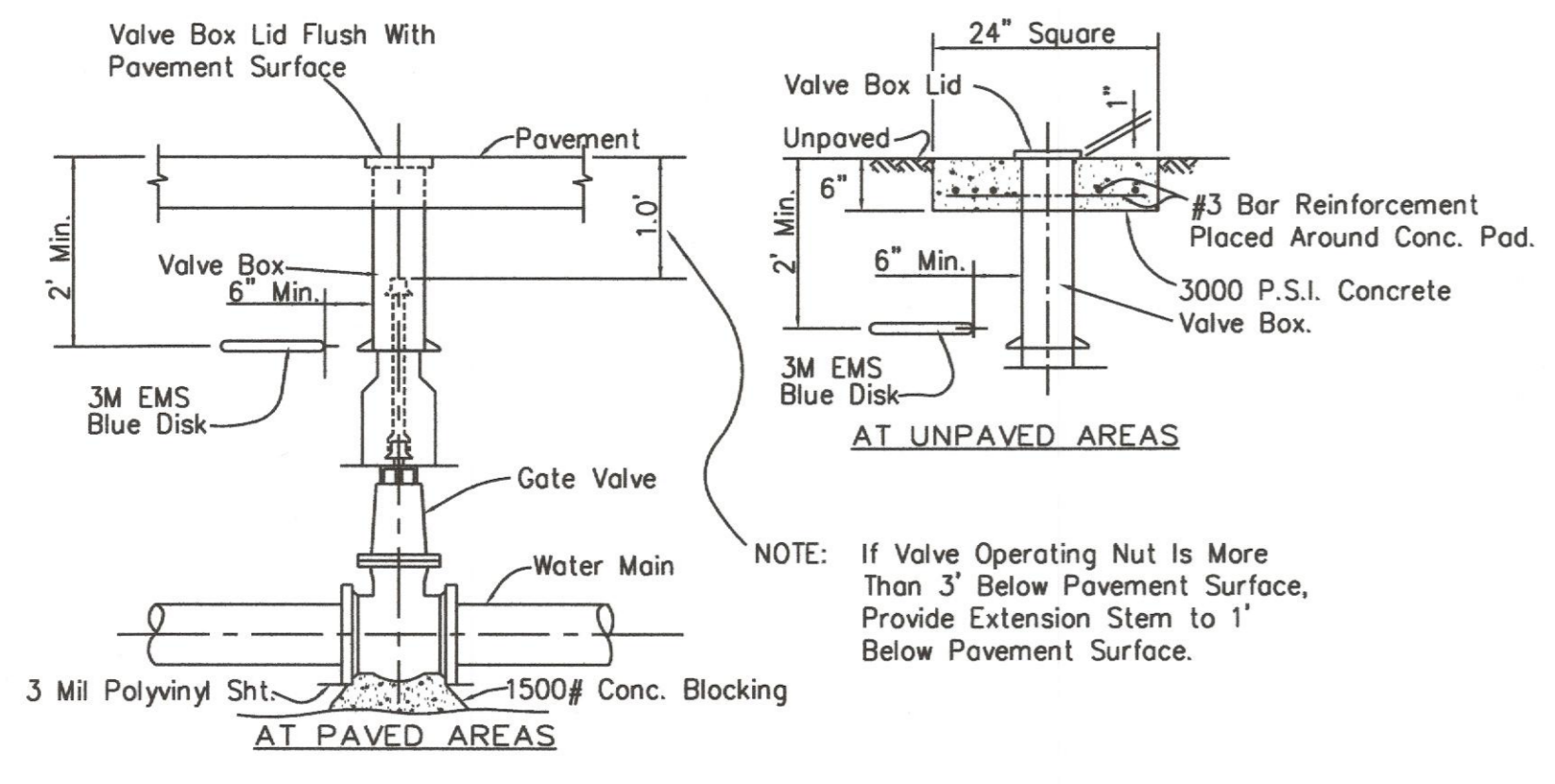


TYPICAL THRUST BLOCKING DETAILS

GRANULAR, TYPE 3, EMBEDMENT: Pit run granular embedment material shall be free flowing sand or mixed sand and pea gravel free from large stones, clay and organic material. The material may be an inferior grade of pit run or blow sand not normally considered satisfactory for concrete aggregate and may be used directly from pits without processing, provided it complies with the qualities described herein. The material shall be such that when wet it will not form a mud ball or tend to cling together. The material shall have 100% passing one inch (1") sieve, and the plasticity index of that part passing the 40 sieve is obtained from the City.



WATER PIPE EMBEDMENT DETAIL



TYPICAL GATE VALVE AND BOX
EXTENSION STEM DETAIL
Not To Scale

TYPICAL THRUST BLOCKING DETAILS

- NOTES:
- The earth bearing surface shall be undisturbed material. Keep all joints free from concrete. Thrust block to be constructed of 1,500 P.S.I. (20 day) concrete and placed as shown on "Typical Blocking Details" above.
 - It shall be the responsibility of the contractor to install adequate thrust blocking. The HORIZONTAL BLOCKING TABLE shows the minimum thrust blocking area required (in square feet) bearing against undisturbed trench wall.
 - All fittings shall be blocked regardless of the angle or direction, except as noted in the chart.
 - Soil bearing strength is assumed to be 2,000 P.S.F. site conditions may vary which will require modifications to the blocking calculations.
 - All fire hydrant assembly to be restrained by mega lugs or an approved equal (even with concrete blocking)

HORIZONTAL BLOCKING TABLE

PIPE SIZE (IN.)	THRUST (POUNDS) DEAD END AND TEE	BLOCKING (SQ. FEET)					
		DEAD END AND TEE	90° BEND	45° BEND	22-1/2° BEND	11-1/4° BEND	5° DEFLECT
4	2,450	1.23	1.73	0.94	0.50	0.50	0.50
6	5,513	2.76	3.90	2.11	1.08	0.54	0.50
8	9,802	4.90	6.93	3.75	1.91	0.96	0.50
10	15,315	7.66	10.83	5.86	2.99	1.50	0.67
12	22,054	11.03	15.59	8.43	4.30	2.16	0.96

BASED ON 2,000 P.S.F. SOIL BEARING CAPACITY AND 195 P.S.I. LINE PRESSURE (150 P.S.I. WORKING PRESSURE PLUS 30% FOR WATER HAMMER.)

NTS



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.L. DOUPHRATE II TEXAS P.E. NO. 60102 ON

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 ENGINEERING - PROJECT MANAGEMENT - SURVEYING
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 PHONE: (972)771-9004 FAX: (972)771-9005

WATER & SEWER DETAILS
 PROPOSED CARRIER DRIVE
 CITY OF ROCKWALL
 ROCKWALL COUNTY, TEXAS

CHECKED	W.L.D.
DRAWN	RCT
DATE	04/2010
DRAWING	0033DET4
PROJECT	10004
	22 OF 23