

LEGEND  
 I.D. - NOMINAL PIPE SIZE  
 O.D. - OUTSIDE DIAMETER OF PIPE  
 H - COVER ABOVE TOP OF PIPE  
 A - EMBEDDED BELOW PIPE (SEE TABLE)

I.D.	A MIN. SOIL	A MIN. ROCK
27" & SMALLER	3"	6"

**GRANULAR BEDDING** SHALL BE CRUSHED ROCK OR FEA GRAVEL WITH NOT LESS THAN 95% PASSING 1/2" (95% PASSING 3/4" FOR 30" AND LARGER PIPE) AND NOT LESS THAN 95% RETAINED ON A #4; TO BE PLACED IN NOT MORE THAN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL OR VIBRATING.

**COMPACTED BACK FILL** SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, PLACED IN UNIFORM LAYERS NOT MORE THAN 6" THICK, COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY A.S.T.M. D698, OR GRADED AGGREGATE. GRANULAR BACK FILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF COMPACTED BACK FILL.

**TAMPED BACK FILL** SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, HAND PLACED IN UNIFORM LAYERS NOT MORE THAN 8" THICK AND TAMPED AROUND CONDUIT PIPE. GRANULAR BACK FILL MATERIAL MAY BE SUBSTITUTED FOR ALL OR PART OF TAMPED BACK FILL.

**TRENCH BACK FILL** SHALL BE AS REQUIRED IN THE "LAYING AND BACK FILL" SECTION OF THE DETAILED SPECIFICATIONS.

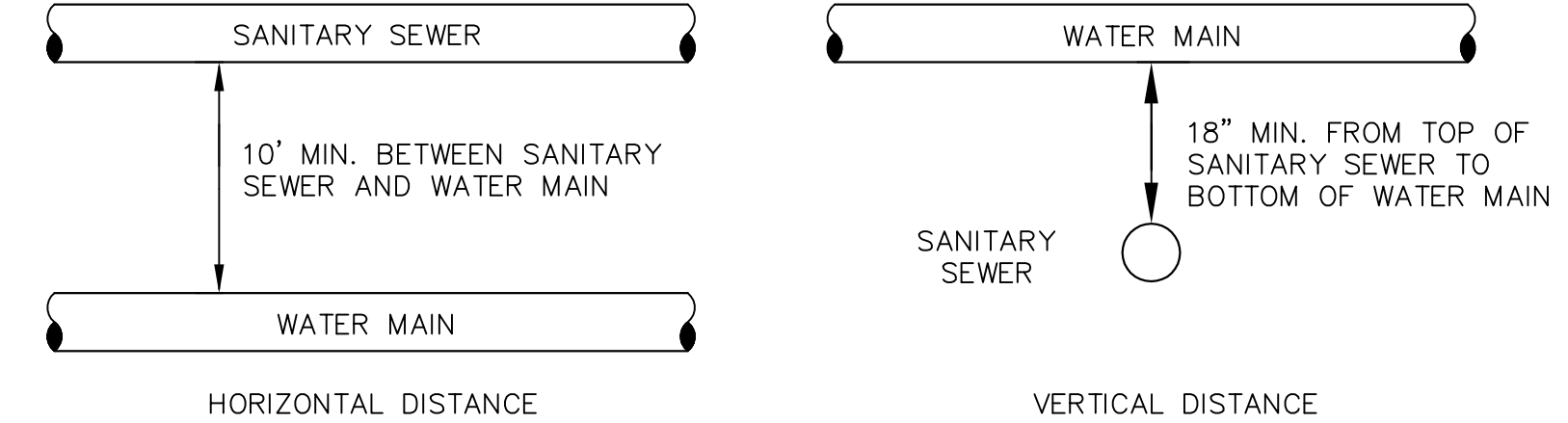
**EMBEDDED** THE TYPE OF EMBEDDED TO BE USED SHALL BE AS SPECIFIED IN THE PLANS AND SPECIFICATIONS.

TRACER WIRE REQUIRED ON ALL WATER MAINS

**WATER MAIN EMBEDDED**  
 NOT TO SCALE

CITY OF O'FALLON  
 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

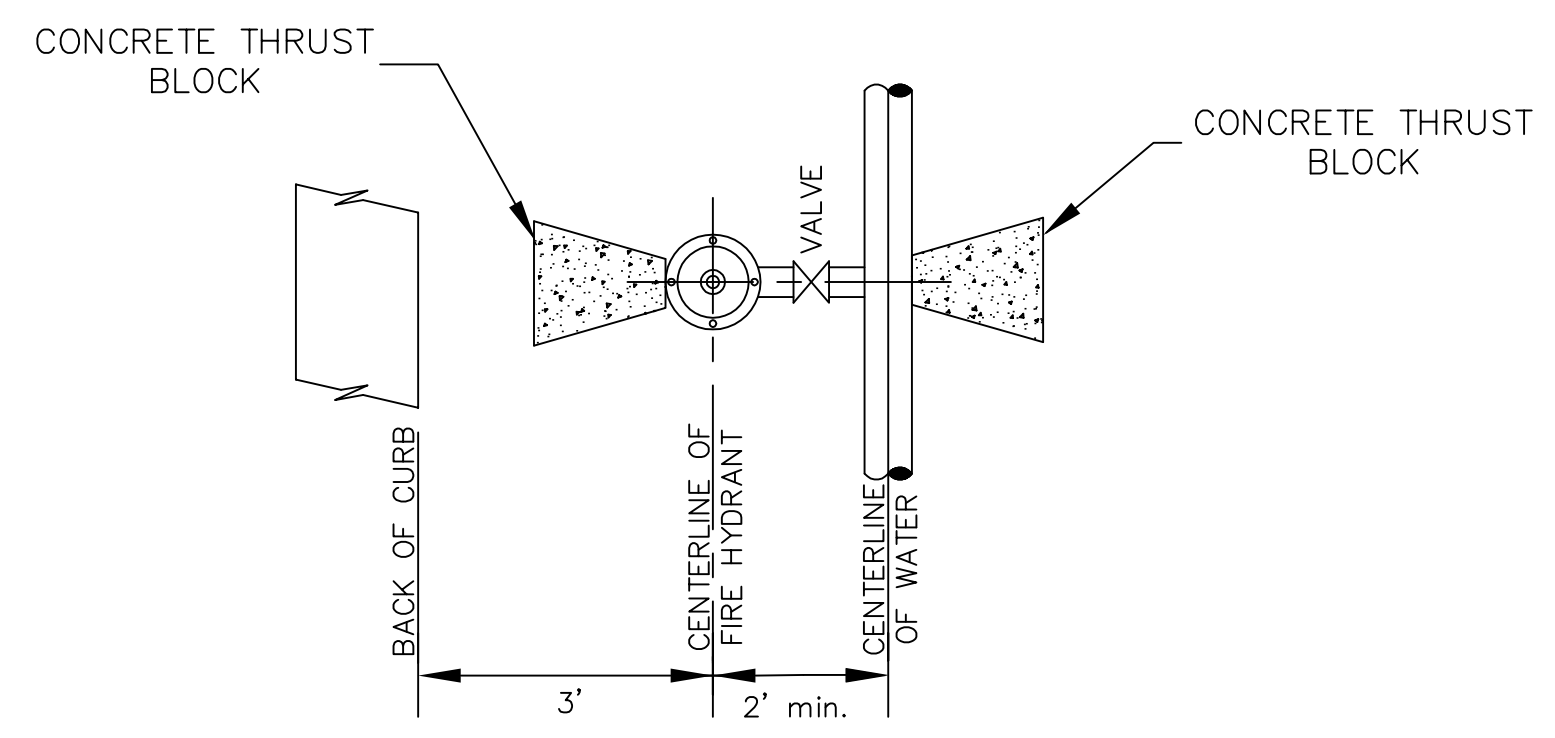
**WATER MAIN EMBEDDED**



**TYPICAL WATER AND SEWER SEPARATION**  
 NOT TO SCALE

CITY OF O'FALLON  
 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

**WATER AND SEWER SEPARATION DETAIL**

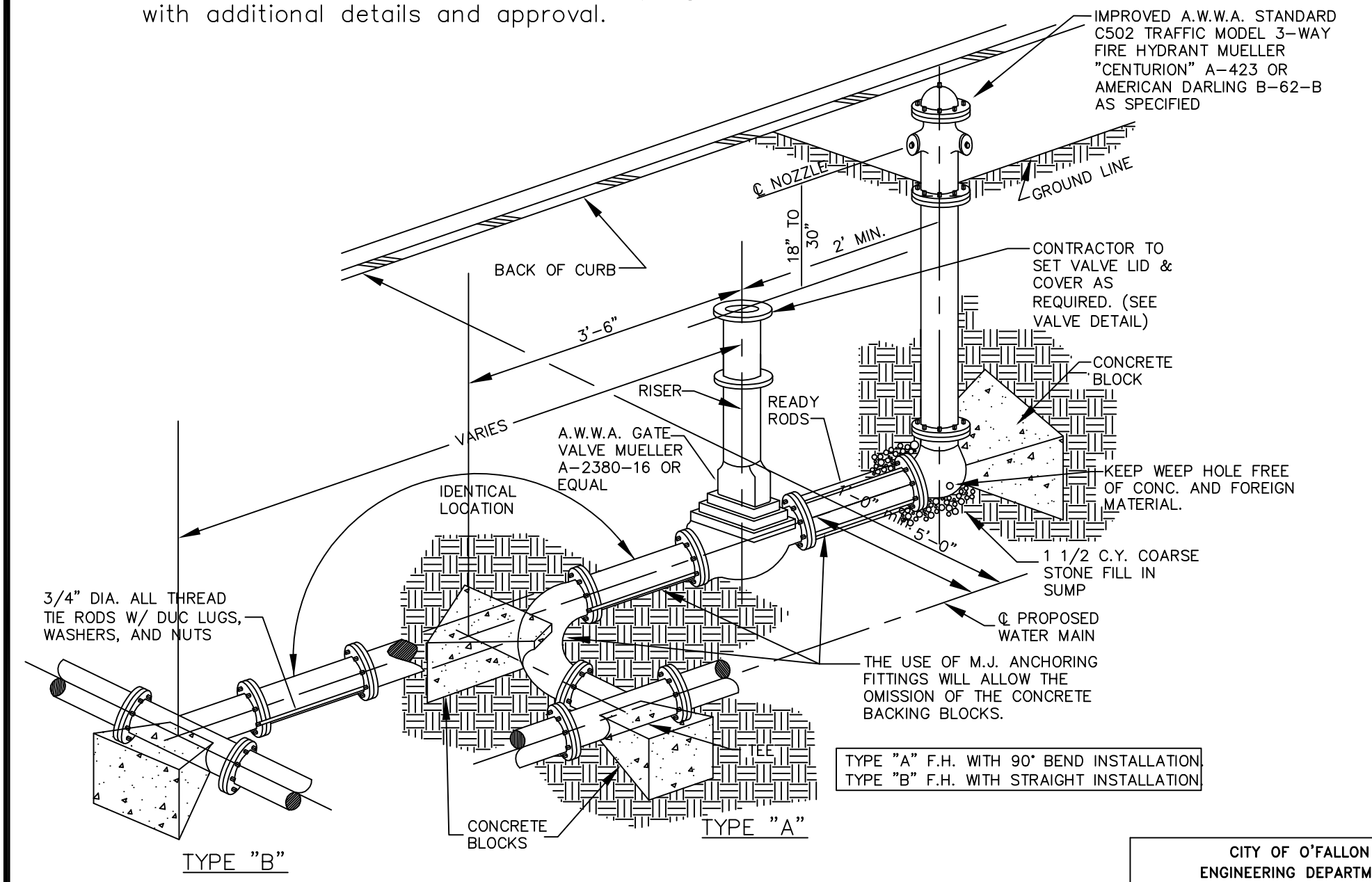


**TYPICAL WATER MAIN AND FIRE HYDRANT LOCATIONS**  
 NOT TO SCALE

CITY OF O'FALLON  
 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

**WATER MAIN FIRE HYDRANT DETAIL**

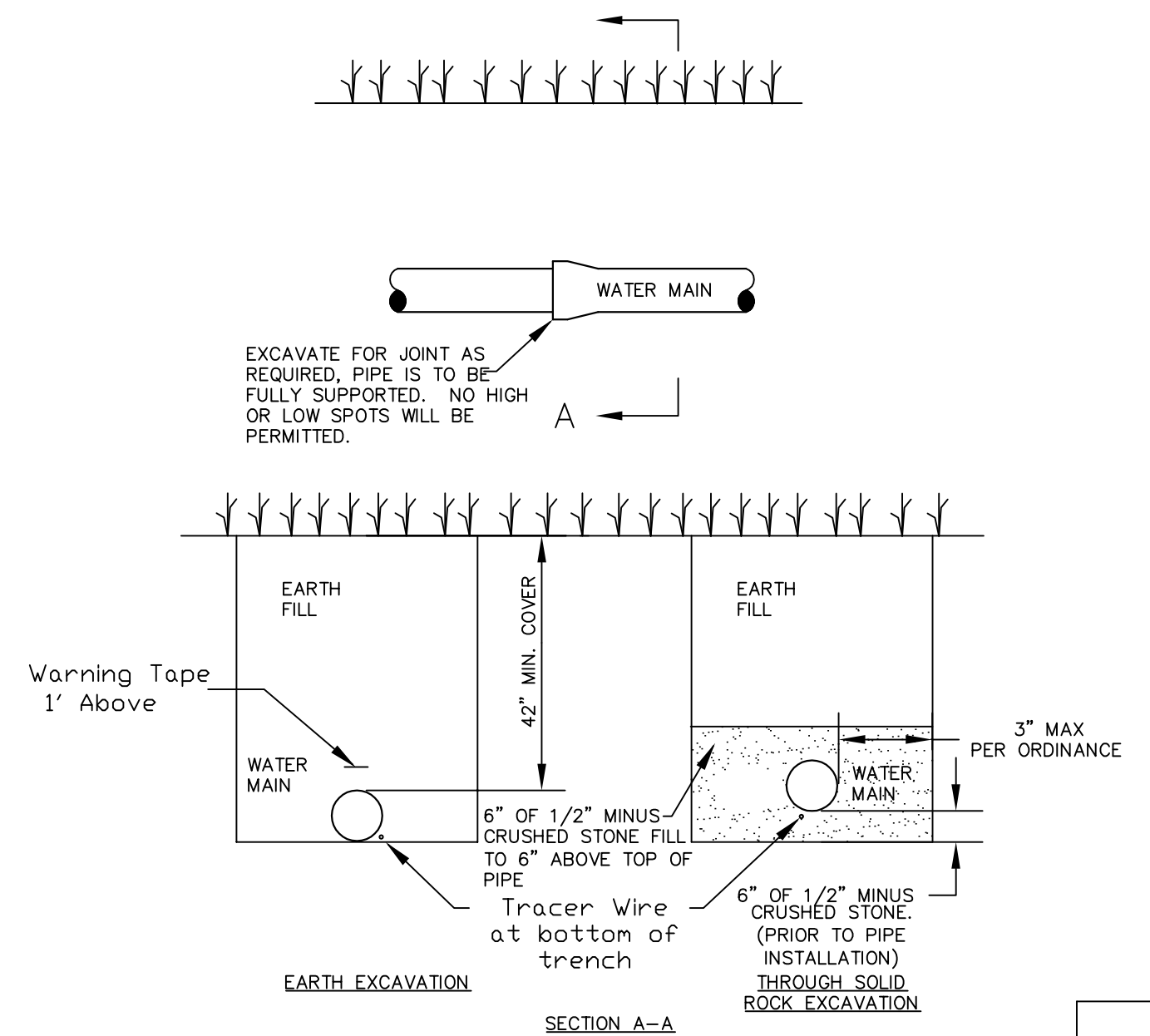
Note: Other connections such as anchor coupling are allowable with additional details and approval.



**FIRE HYDRANT DETAIL**  
 NOT TO SCALE

CITY OF O'FALLON  
 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

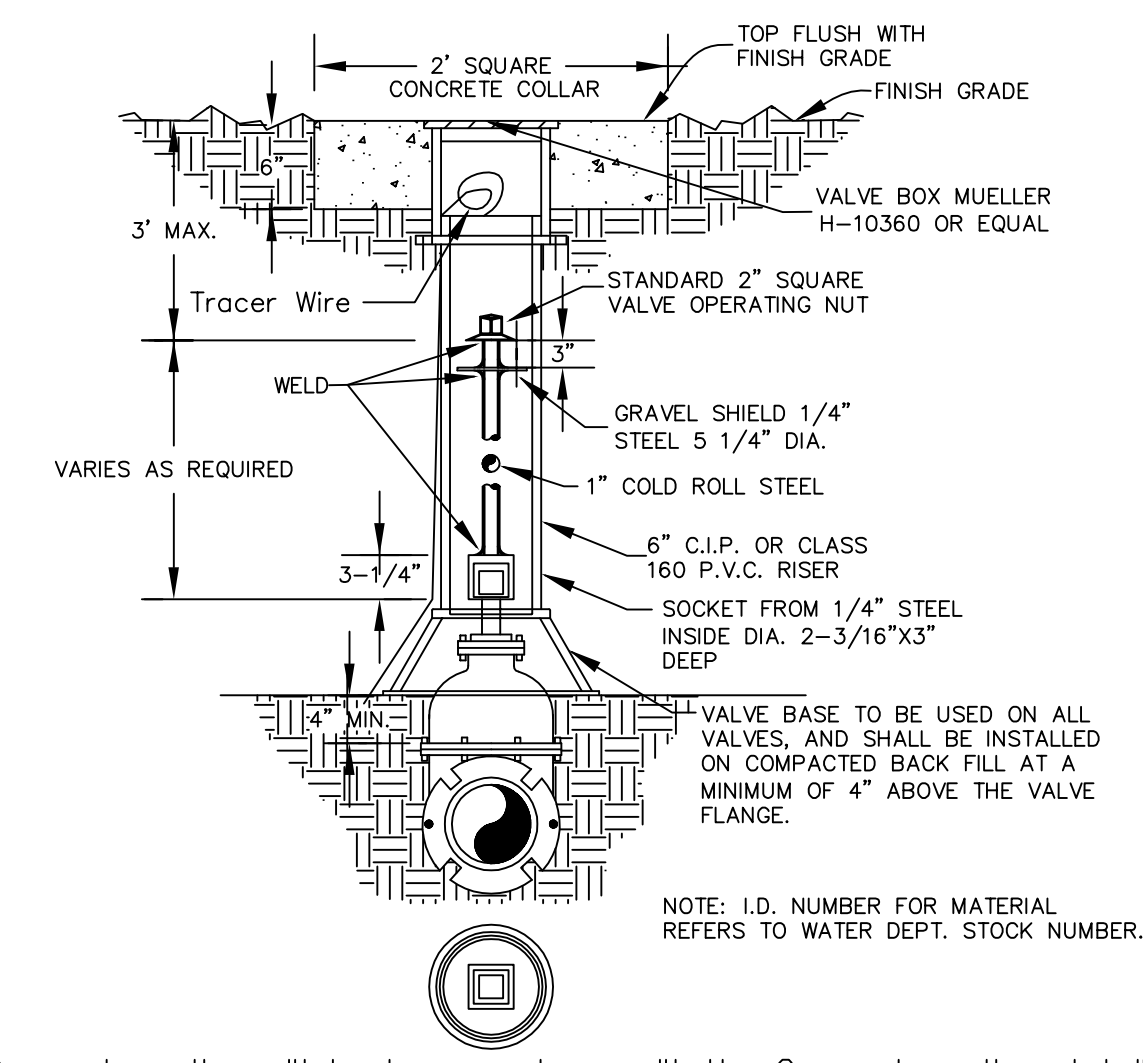
**FIRE HYDRANT DETAILS**



**TYPICAL WATER MAIN INSTALLATION DETAILS**  
 NOT TO SCALE

CITY OF O'FALLON  
 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

**WATER MAIN INSTALLATION DETAIL**



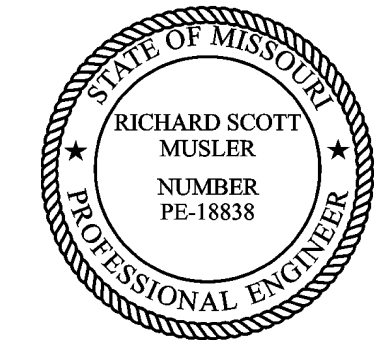
**WATER VALVE DETAIL**  
 NOT TO SCALE

CITY OF O'FALLON  
 ENGINEERING DEPARTMENT  
 O'FALLON, MISSOURI

**WATER VALVE DETAIL**



The Professional Engineer's and/or Professional Land Surveyor's responsibility is limited to plans and other documents displaying his/her signature and seal. Engineer and Surveyor hereby disclaim responsibility for:  
 \* Unauthorized use of plans and other documents prior to receipt of all review agency approvals  
 \* All previously issued versions of this sheet  
 \* This sheet whenever a revised sheet is issued  
 \* Individual use of any sheet that is part of a set of plans  
 This applies to all plans and other documents associated with this project, whether this statement appears on them or not.



Client  
**125 Joseph Trust**  
 1278 Jungermann Road, Suite F  
 St. Peters, MO 63376  
 636-262-4473  
 N/A  
 Mr. Paul James  
 paul@stcharlesrent.com

No.	Date	Revision/Issue
1	3-19-19	Rev. per City comments 02-26-19

**Joseph Street Townhomes Phase Two**  
 Details  
**MUSLER ENGINEERING COMPANY**  
 CIVIL ENGINEERING - PLANNING - LAND SURVEYING  
 32 PORTWEST COURT • SAINT CHARLES, MISSOURI 63303-5985  
 PHONE: 636-916-0444 • FAX: 636-916-3444

CITY OF O'FALLON  
 File #: 19-000810  
 Permit #: CSP19-000004  
 P & Z #: 18-012179  
 City Council #: 18-012331

City/County Job No:  
 Checked:  
 Proj Manager:  
 Original Issue Date  
 Nov., 2018  
 Project No.  
 18-1492  
 Sheet  
**6**

CERTIFICATE OF AUTHORITY: ENGINEERING: E-1230-D, LAND SURVING: LS-284-D