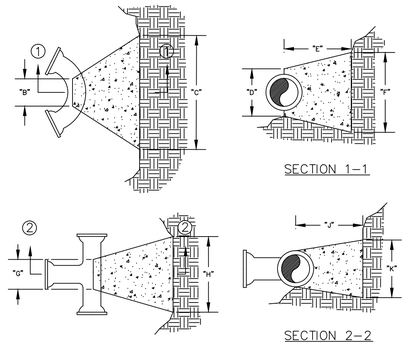
BENDS	"B"	"C"	"D"	"E"	"F"
6"–11 1/4°	8"	15"	12"	24"	10"
6"–22 1/2°	8"	19"	12"	24"	13"
6"–45°	8"	30"	12"	24"	15"
6"–90°	8"	30"	12"	24"	28"
8"–11 1/4°	8"	20"	12"	24"	10"
8"–22 1/2°	8"	23"	12"	24"	18"
8"–45°	8"	31"	12"	24"	24"
8"–90°	8"	38"	12"	24"	36"
12"–11 1/4°	8"	30"	12"	24"	15"
12"–22 1/2°	8"	35"	12"	24"	25"
12"–45°	8"	40"	12"	24"	40"
12"–90°	8"	60"	12"	24"	52"
16"–11 1/4°	TL	28"	20"	24"	28"
16"–22 1/2°	TL	39"	20"	24"	39"
16"–45°	TL	55"	20"	24"	55"
16"–90°	TL	91"	20"	24"	60"
20"–11 1/4°	TL	34"	24"	26"	28"
20"–22 1/2°	TL	48"	24"	26"	39"
20"–45°	TL	74"	24"	26"	55"
20"–90°	TL	136"	24"	26"	60"
24"–11 1/4°	TL	40"	28"	28"	40"
24"–22 1/2°	TL	56"	28"	28"	56"
24"–45°	TL	101"	28"	28"	60"
24"–90°	TL	186"	28"	28"	60"
30"–11 1/4°	TL	49"	34"	30"	49"
30"–22 1/2°	TL	79"	34"	30"	60"
30"–45°	TL	154"	34"	30"	60"
30"–90°	TL	285"	34"	30"	60"

TEES	"C"	"H"	"J"	"K"
6"X6"X6"	12"	24"	24"	18"
8"X8"X6"	12"	24"	24"	18"
8"X8"X8"	12"	27"	24"	27"
12"X12"X6"	12"	24"	24"	18"
12"X12"X8"	12"	27"	27"	27"
12"X12"X12"	12"	38"	24"	38"
24"X24"X16"	16"	53"	28"	53"

NOTES:
1. 2"& 4" FITTINGS EQUIVALENT TO 6" FITTINGS.
2. TAPPING SLEEVES TO HAVE BACKING BLOCKS SAME SIZE AS REQUIRED FOR TEES.
3. "TL" = TOTAL LENGTH OF FITTING MINUS CLEARANCE FOR BELLS.



SECTION 1–1

SECTION 2–2

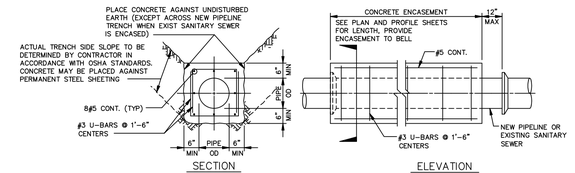
INTERNAL WATER PRESSURE 6" through 12"=200 psi
INTERNAL WATER PRESSURE 16" through 30"=210 psi
BEARING PRESSURE OF SOIL=2000 psi

BACKING BLOCKS

NOT TO SCALE

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

BACKING BLOCK
DETAILS AND LOCATIONS



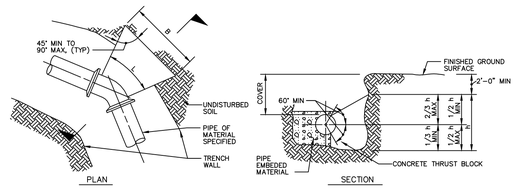
NOTES:
1. AT LOCATIONS WHERE THE TRANSMISSION MAIN CROSSES AN EXIST SANITARY SEWER, SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
2. WHEN THE PIPELINE IS PROTECTED WITH POLYETHYLENE TUBE ENCASEMENT, THE CONCRETE ENCASEMENT IS TO COVER THE POLYETHYLENE ENCASEMENT.

CONCRETE ENCASEMENT

NO SCALE

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

CONCRETE ENCASEMENT
DETAILS



NOTES:
1. AREA OF BLOCK, A = Bxh, BLOCK AREAS ARE SHOWN ON GENERAL LAYOUT OR TABLE.
2. B = h =√A", EXCEPT WHERE TOP OF BLOCK IS WITHIN 2 FEET FROM GROUND SURFACE, THEN B = A/h.
3. MINIMUM BLOCK DIMENSION (B & h) SHALL BE AT LEAST OD OF PIPE OR 1 FOOT FOR PIPE OD 12" OR LESS.
4. THE BOTTOM OF THE BLOCK SHALL EXTEND AT LEAST TO THE BOTTOM OF THE TRENCH IN ALL CASES.
5. L=FITTING LENGTH MINUS CLEARANCE FOR BELLS.
6. DETAIL IS SHOWN FOR CAST IRON PIPE; DETAIL IS SIMILAR FOR OTHER TYPES OF PIPE.
7. DIMENSIONS FOR THRUST BLOCKS FOR FIRE HYDRANT ASSEMBLY ARE SHOWN FIRE HYDRANT ASSEMBLY DETAIL.

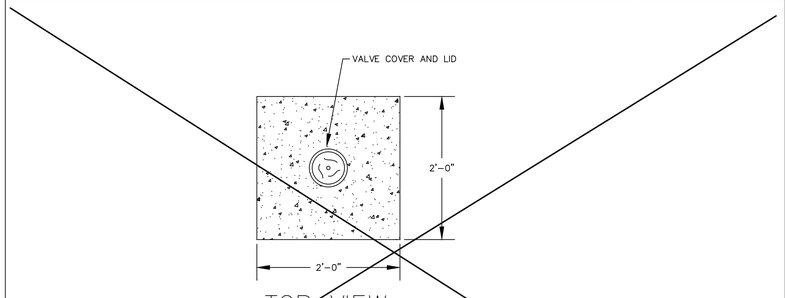
SIZE	BEND	THRUST AREA	B	H
16"	11 1/2° 22 1/2°	4 SF	2'	2'
16"	45°	8 SF	2.8'	2.8'

CONCRETE THRUST BLOCKING

NOT TO SCALE

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

CONCRETE THRUST
BLOCKING DETAILS



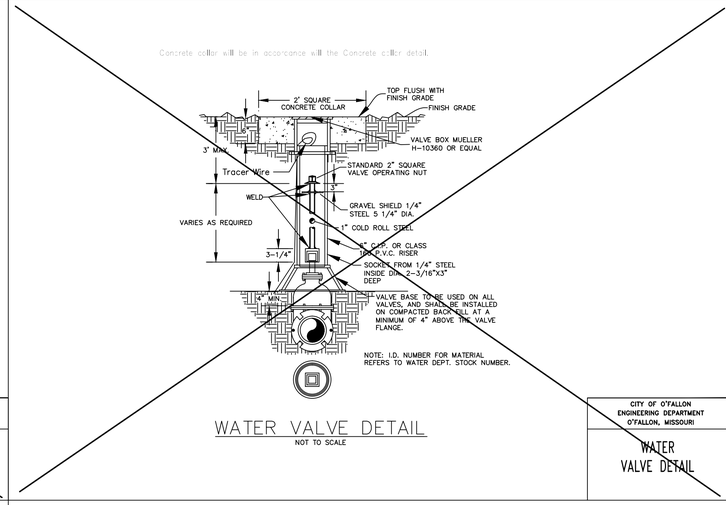
TOP VIEW CONCRETE COLLAR

NOT TO SCALE

Note : 1. Concrete collar joint pateren is required in paved areas such as roadways, driveways, sidewalks or other areas of paved surfaces.
2. Concrete collars are optional in other non–paved areas.

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

CONCRETE
COLLAR DETAIL

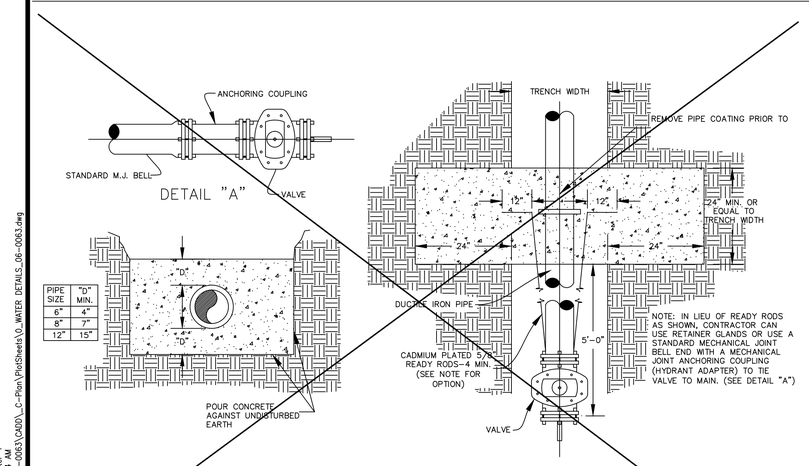


WATER VALVE DETAIL

NOT TO SCALE

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

WATER
VALVE DETAIL

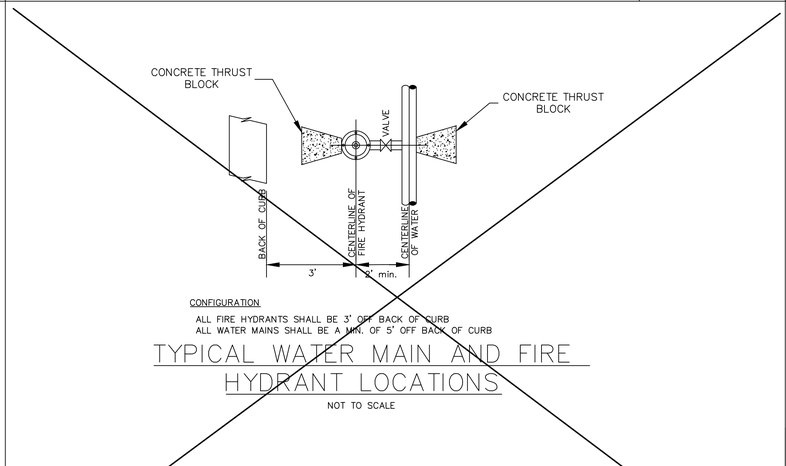


STRADDLE BLOCK DETAIL

NOT TO SCALE

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

STRADDLE BLOCK
DETAILS



CONFIGURATION

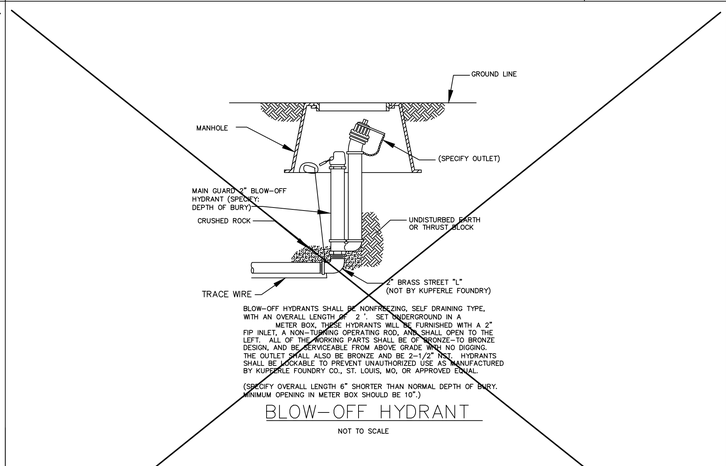
ALL FIRE HYDRANTS SHALL BE 3' OFF BACK OF CURB
ALL WATER MAINS SHALL BE A MIN. OF 5' OFF BACK OF CURB

TYPICAL WATER MAIN AND FIRE HYDRANT LOCATIONS

NOT TO SCALE

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

WATER MAIN
FIRE HYDRANT DETAIL



BLOW–OFF HYDRANTS SHALL BE NONFREEZING, SELF DRAINING TYPE, WITH AN OVERALL LENGTH OF 2'. SET UNDERGROUND IN A METER BOX, THESE HYDRANTS WILL BE FURNISHED WITH A 2" FIP INLET, A NON–TURNING OPERATING ROD, AND SHALL OPEN TO THE LEFT. ALL OF THE WORKING PARTS SHALL BE OF BRONZE–TO BRONZE DESIGN, AND BE SERVICEABLE FROM ABOVE GRADE WITH NO DIGGING. THE OUTLET SHALL ALSO BE BRONZE AND BE 2–1/2" INS. HYDRANTS SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE AS MANUFACTURED BY KUPFERLE FOUNDRY CO., ST. LOUIS, MO, OR APPROVED EQUAL.

(SPECIFY OVERALL LENGTH 6" SHORTER THAN NORMAL DEPTH OF BURY. MINIMUM OPENING IN METER BOX SHOULD BE 10".)

BLOW–OFF HYDRANT

NOT TO SCALE

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

BLOW–OFF
HYDRANT DETAIL

City of O'Fallon Standard Commercial Notes and Details – June 2010

DATE	NO	REVISION DESCRIPTION
07/19/2016	1	CITY COMMENTS

DEVELOPER/OWNER:
M PROPERTY SERVICES, LLC
1001 BOARDWALK SPRINGS PLACE, STE. 10
O'FALLON, MO 63368
636-561-9337

THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS RESPONSIBILITY FOR ANY MODIFICATIONS TO ANY OF THE ATTACHED PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDED TO BE PART OF, ANY WORK OR PROJECT TO WHICH THIS PAGE REFERS.

SEAL
STATE OF MISSOURI
BRIAN J. MOFFIT
NUMBER 2008038008
PROFESSIONAL ENGINEER
7/12/16

SHOPPES AT WINGHAVEN
THE PET DOCTOR/YUPPY PUPPY
TECHNOLOGY DRIVE
O'FALLON, MO 63368

WATER DETAILS

cole®
+ ST. LOUIS
401 S. 18th Street
Suite 200
St. Louis, MO 63103
314.984.9887 tel
www.colestl.com
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE
Cole & Associates, Inc. is a Missouri corporation d.b.a. Cole Design Group, Inc. in Arizona & Texas. Kansas registered as cai

DESIGN/CALC BY	BSJ
DRAWN BY	RJC
CHECKED BY	EM
DRAWING SCALE	NOT TO SCALE
DATE	06/02/2016
Job Number	16-0063
Sheet Number	C10.0

USER: Kevin Oberkirsch TAB: Water 1
DATE: July 19, 2016 – 10:47:34 AM
DRAWING: S:\JOBS\Jobs2016\16-0063\CADD_C-Plan\ProjSheets\D_WATER DETAILS_08-0063.dwg