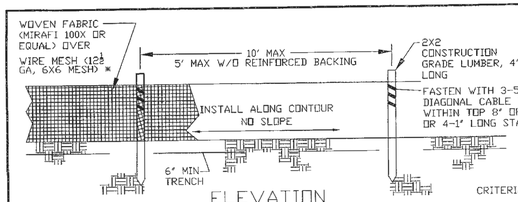
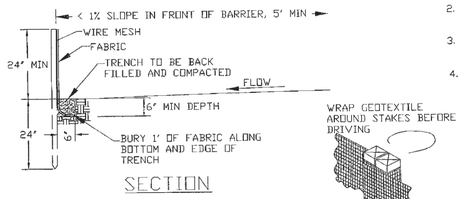
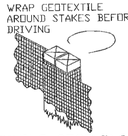


ELEVATION



SECTION



JOINING SECTIONS OF SILT FENCE

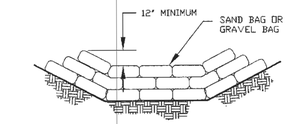
NOTE: IF FABRIC IS INSTALLED BY EQUIPMENT DESIGNED TO SLICE INTO THE GROUND, THE TRENCH IS NOT REQ'D.

CRITERIA

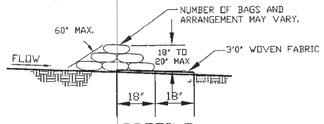
1. SILT FENCE SHALL BE 24 INCHES HIGH.
2. SILT FENCE SHALL NOT BE USED FOR CONCENTRATED FLOWS.
3. GEOSYNTHETIC REINFORCED SILT FENCE BACKING MAY BE USED IN LIEU OF WIRE MESH.
4. WIRE MESH WILL BE USED AT LOCATIONS SHOWN ON THE APPROVED SWPPP.

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

SILT FENCE INSTALLATION SHEET FLOW (ONLY)

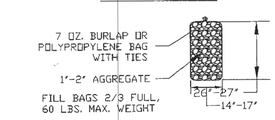


CROSS SECTION



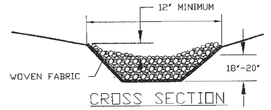
PROFILE

SAND BAG OR GRAVEL BAG CHECK DAM

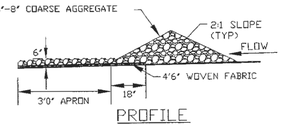


GRAVEL BAG

LEVEL CENTER SECTION, WITH 12" RISE ON BOTH SIDES TO CAUSE FLOW OVER, NOT AROUND, CHECK DAM



CROSS SECTION



PROFILE

ROCK CHECK DAM

NOTE:
1. CHECK DAMS MAY BE CONSTRUCTED OF SEVERAL ESC CHECK DAM PRODUCTS.
2. *SEE TABLE 60-12 AND ESC 1 FOR CHECK DAM SPACING.*

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CHECK DAMS

TYPICAL WATER AND SEWER SEPARATION

NOT TO SCALE

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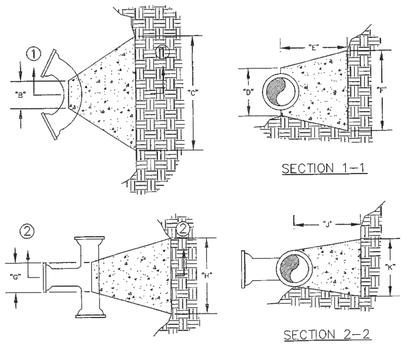
WATER AND SEWER SEPARATION DETAIL

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"	22"	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"	58"
20"–90°	TL	138"	24"	26"	60"
24"–11 1/4°	TL	40"	28"	28"	40"
24"–22 1/2°	TL	58"	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"	46"
30"–22 1/2°	TL	79"	34"	30"	60"
30"–45°	TL	154"	34"	30"	60"
30"–90°	TL	285"	34"	30"	60"

TEES	"G"	"H"	"J"	"K"
6"X6"X6"	12"	24"	24"	18"
8"X8"X6"	12"	24"	24"	18"
8"X8"X8"	12"	27"	24"	22"
12"X12"X6"	12"	24"	24"	18"
12"X12"X8"	12"	27"	27"	27"
12"X12"X12"	12"	36"	24"	35"
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.



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

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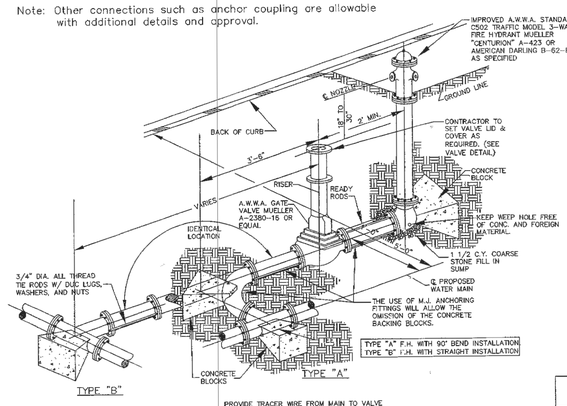
BACKING BLOCK DETAILS AND LOCATIONS

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



TYPE "A" F.H. WITH 90° BEND INSTALLATION
TYPE "B" F.H. WITH STRAIGHT INSTALLATION

PROVIDE TRACER WIRE FROM MAIN TO VALVE

FIRE HYDRANT DETAIL

NOT TO SCALE

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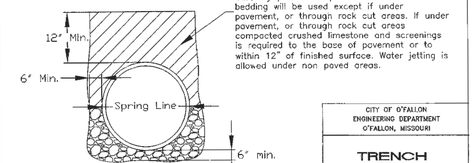
FIRE HYDRANT DETAILS



Carefully placed compacted selected earth bedding will be used except if under pavement, or through rock cut areas. If under pavement, or through rock cut areas compacted crushed limestone and screenings is required to the base of pavement or to within 12" of finished surface. Water jetting is allowed under non paved areas.

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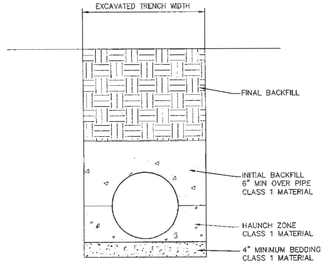
TRENCH DETAIL



1. The use of High Density Polyethylene Corrugated pipe A.D.S. N12 or Equal will be permitted as an acceptable alternative to reinforced concrete pipe. Pipe shall meet A.S.T.M. D-2321 and AASHTO M-294-92I. Concrete flared end sections and inlet structures shall be required. Pipe must have smooth interior wall and is not to be used inside the Public Right-of-Way.

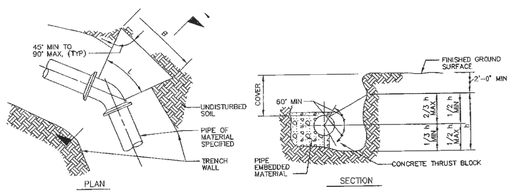
All concrete pipe or HDPE pipe shall be installed with o-ring rubber type gaskets per M.S.D. Standard Construction Specifications or Manufacturer.

2. In typical conditions the minimum trench width is determined by the size of the pipe and the ability to get compaction equipment between the pipe and the trench walls. The minimum trench width should not be less than the outside diameter plus 16 inches or the pipe outside diameter times 1.25 plus 12 inches, whichever is greater. High speed trenchers may enable satisfactory installation of pipe in narrower trenches. Poor insitu soil conditions such as peat, muck, running sands, or expansive clays will require substantially wider backfill as well as deeper foundation and bedding. Trench width and foundation depth should be based on a thorough site investigation.

3. Backfill in the area up to the springline should be carefully placed and compacted to achieve a minimum E value of 1,000 psi as detailed in ASTM D2321. A minimum of 12" of backfill should be placed and compacted above the crown of the pipe. It is typical for trenches to be backfilled entirely with Type I or Type II materials when under pavement.

4. Flexible pipe should never be installed in a concrete cradle, as done for rigid pipe in a Class A installation. This type of installation could create concentrated forces at the ends of the cradle when the pipe has deformed.

H.D.P.E. PIPE DETAIL



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

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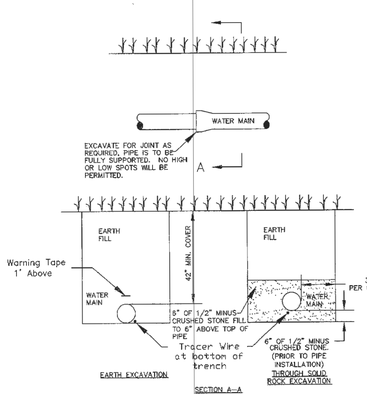
CONCRETE THRUST BLOCKING DETAILS

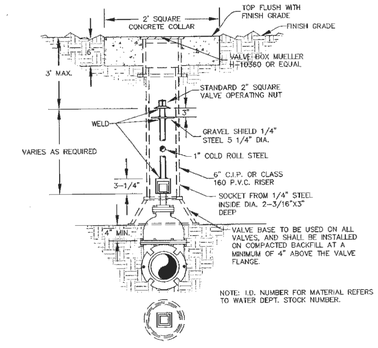


TYPICAL WATER MAIN INSTALLATION DETAILS

NOT TO SCALE

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

WATER MAIN INSTALLATION DETAIL



NOTE: I.D. NUMBER FOR MATERIAL REFERS TO WATER DEPT. STOCK NUMBER.

WATER VALVE DETAIL

NOT TO SCALE

ENGINEER'S SEAL DOES NOT APPLY TO DETAILS ON THIS SHEET.

PROJECT TITLE:
MIKE CLEMENS CENTER FOR ADAPTIVE LEARNING

Bax Project #98-1000T/Issue Date: 06/06/2014

ENGINEERING PLANNING SURVEYING
221 Point West Blvd.
St. Charles, MO 63301
636-928-5552
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Clifford L. Heitmann
Civil Engineer
E29817

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REVISIONS

10-16-14	CITY REVIEW
10-23-14	CITY REVIEW

Developer / Owner:
FORT ZUMWALT SCHOOL DISTRICT
555 EAST TERRA LANE
O'FALLON, MO 63366

DETAILS

P+Z No.
#99125.03.01
APPROVED 6-5-14

City No.
#14-400

Page No.
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