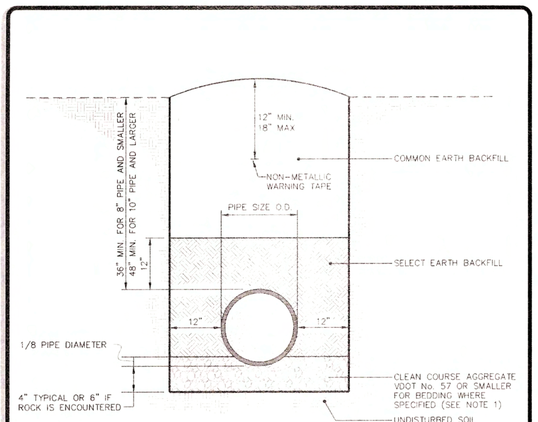


NOTES:

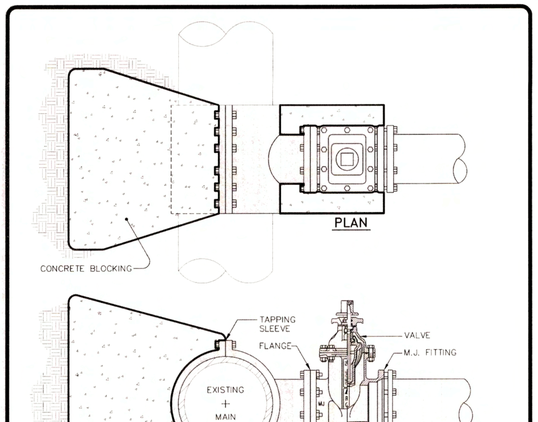
1. BEDDING SHALL BE REQUIRED FOR WATER LINES 16" IN DIAMETER AND LARGER OR IF ROCK IS ENCOUNTERED.
2. EXTRA DEPTH EXCAVATION SHALL BE PAID FOR AS ANYTHING BEYOND 4" OF COVER TO TOP OF PIPE.
3. ANY EXCAVATION BEYOND TRENCH LIMITS SHOWN ON DETAIL SHALL BE AT THE CONTRACTOR'S EXPENSE.

THE CITY OF LYNCHBURG

WATER LINE TRENCH DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.01
REVISION DATE	SHEET #
12-14-2013	1 OF 1



NOTES

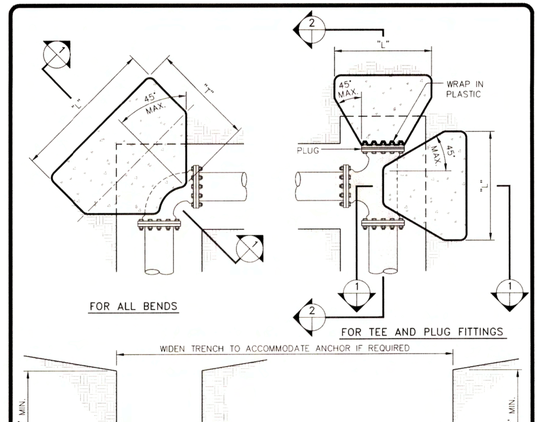
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS. (WRAP IN PLASTIC)
2. SEE TYPE "F" (HORIZONTAL) ANCHOR BLOCK DETAIL 26.02 FOR AREA OF CONCRETE REQUIRED.
3. TAPPING SLEEVE SHALL BE A MINIMUM OF 4' FROM NEAREST PIPE JOINT.

THE CITY OF LYNCHBURG

TAPPING SLEEVE & VALVE DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.06
REVISION DATE	SHEET #
12-14-2013	1 OF 1



THE CITY OF LYNCHBURG

TYPE "F" HORIZONTAL ANCHOR BLOCKING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.02
REVISION DATE	SHEET #
12-14-2013	1 OF 3

TYPE "F" HORIZONTAL ANCHOR BLOCK DATUM

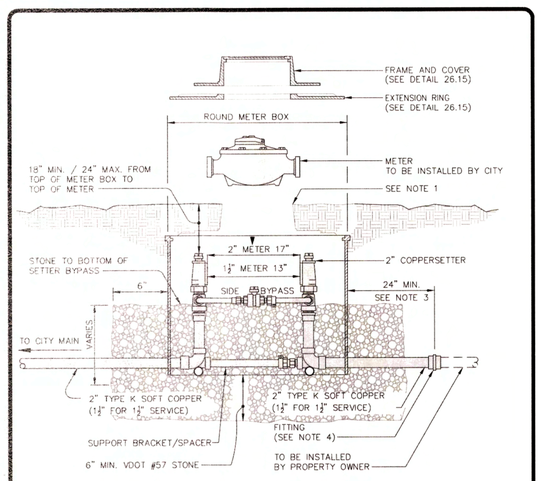
TYPE FITTING	PIPE SIZE INCHES	DIMENSIONS (Ft.) "L"	"H"	"T"	VOL. CONC. CU. YARDS
TEST PRESSURE = 150 P.S.I. & BELOW					
11 1/4°	6	1.5	2	2.5	0.19
22 1/2°	6	1.5	2	2.52	0.19
45°	6	2	2.25	2.6	0.26
90°	6	2.5	2.5	3.01	0.40
TEE	6	2	2.25	2.5	0.25
PLUG	6	2	2.25	2.5	0.25
11 1/4°	8	1.66	2.16	2.67	0.23
22 1/2°	8	1.66	2.16	2.69	0.23
45°	8	2.66	2.66	2.77	0.41
90°	8	3.66	3.16	3.21	0.75
TEE	8	3.16	2.91	2.66	0.50
PLUG	8	3.16	2.91	2.66	0.50
11 1/4°	12	2	2.5	3	0.33
22 1/2°	12	2.5	2.75	3.02	0.44
45°	12	4	3.5	3.12	0.87
90°	12	5.5	4.25	3.62	1.63
TEE	12	4.5	3.75	3	0.99
PLUG	12	4.5	3.75	3	0.99
TEST PRESSURE = 151 P.S.I. to 200 P.S.I.					
11 1/4°	6	1.5	2	2.5	0.19
22 1/2°	6	1.5	2	2.52	0.19
45°	6	2	2.25	2.6	0.29
90°	6	3	2.75	3.01	0.52
TEE	6	2.5	2.5	2.5	0.34
PLUG	6	2.5	2.5	2.5	0.34
11 1/4°	8	1.66	2.16	2.67	0.23
22 1/2°	8	2.16	2.41	2.69	0.31
45°	8	3.16	2.91	2.77	0.52
90°	8	4.16	3.41	3.21	0.90
TEE	8	3.66	3.16	2.66	0.62
PLUG	8	3.66	3.16	2.66	0.62
11 1/4°	12	2	2.5	3	0.33
22 1/2°	12	3	3	3.02	0.56
45°	12	4.5	3.75	3.12	1.03
90°	12	6.5	4.75	3.62	2.14
TEE	12	5.5	4.25	3	1.35
PLUG	12	5.5	4.25	3	1.35
TEST PRESSURE = 201 P.S.I. to 250 P.S.I.					
11 1/4°	6	1.5	2	2.5	0.19
22 1/2°	6	1.5	2	2.52	0.19
45°	6	2.5	2.5	2.6	0.35
90°	6	3.5	3	3.01	0.64
TEE	6	3	2.75	2.5	0.43
PLUG	6	3	2.75	2.5	0.43
11 1/4°	8	1.66	2.16	2.67	0.23
22 1/2°	8	2.16	2.41	2.69	0.31
45°	8	3.66	3.16	2.77	0.64
90°	8	4.66	3.66	3.21	1.07
TEE	8	4.16	3.41	2.66	0.75
PLUG	8	4.16	3.41	2.66	0.75
11 1/4°	12	2.5	2.75	3	0.44
22 1/2°	12	3.5	3.25	3.02	0.69
45°	12	5.5	4.25	3.12	1.41
90°	12	7.5	5.25	3.62	2.71
TEE	12	6	4.5	3	1.56
PLUG	12	6	4.5	3	1.56

THE CITY OF LYNCHBURG

TYPE "F" HORIZONTAL ANCHOR BLOCKING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.02
REVISION DATE	SHEET #
12-14-2013	2 OF 3



NOTES:

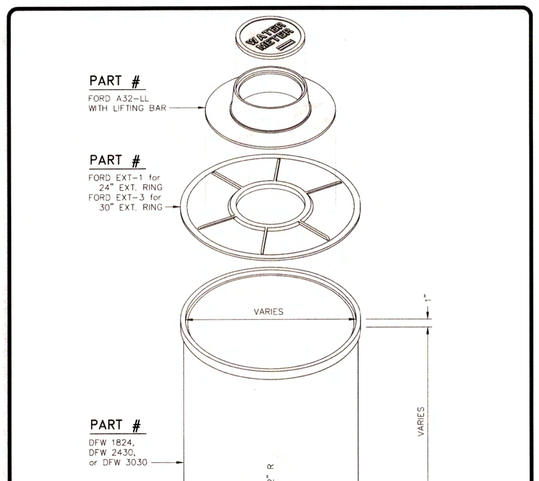
1. IN TRAFFIC LOAD SITUATIONS, COVER & BOX SHALL BE APPROVED BY CITY ENGINEER.
2. METER BOX TO BE LOCATED ON THE RIGHT-OF-WAY SIDE OF PROPERTY LINE
3. WHEN METER BOX IS SET IN SIDEWALK, PIGTAIL TO EXTEND 2 FEET BEYOND EDGE OF SIDEWALK.
4. FITTING TO BE USED WHEN CONNECTING TO EXISTING SERVICE, OTHERWISE CRIMP END OF SERVICE LINE.
5. FULLY ENCOMPASS CORPORATION STOP WITH STONE.

THE CITY OF LYNCHBURG

2-INCH WATER SERVICE (1½-INCH WATER SERVICE SIMILAR)

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.13
REVISION DATE	SHEET #
12-14-2013	1 OF 1



NOTES:

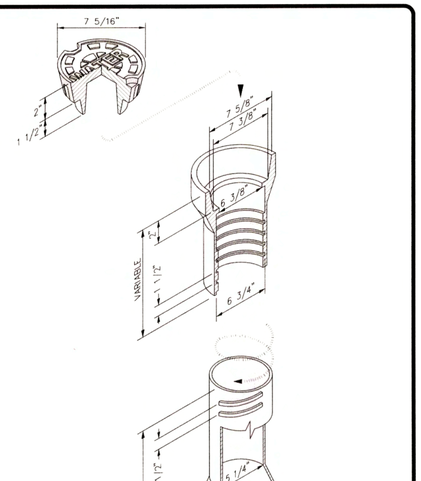
1. THIS BOX AND LID IS NON-TRAFFIC BEARING. WHEN A TRAFFIC BEARING BOX AND LID IS REQUIRED, DETAIL SHALL BE SUBMITTED TO CITY ENGINEER FOR APPROVAL.

THE CITY OF LYNCHBURG

STANDARD 18"x24", 24"x30", or 30"x30" – ROUND METER BOX

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.15
REVISION DATE	SHEET #
12-14-2013	1 OF 1



THE CITY OF LYNCHBURG

2 – PIECE ADJUSTABLE SCREW VALVE BOX DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE	DETAIL #
NOT TO SCALE	26.16
REVISION DATE	SHEET #
12-14-2013	1 OF 1

WATERLINE DETAILS

FOR

PARK AVENUE WATERLINE REPLACEMENT PROJECT

CITY OF LYNCHBURG, VIRGINIA

HURT & PROFFITT

2524 LANGHORNE ROAD
LYNCHBURG VA 24501
800.242.4906 TOLL FREE
434.847.7796 MAIN
434.847.0047 FAX

ENGINEERING • SURVEYING • LAND DEVELOPMENT • ENVIRONMENTAL
GEOTECHNICAL • CONSTRUCTION TESTING & INSPECTION • CULTURAL RESOURCES

PROJECT NO.	20140638
LATITUDE:	37°24'16" N
LONGITUDE:	79°09'50" W
DATE:	7/16/14
DRAWN BY:	WCH
CHECKED BY:	BLC

COMMONWEALTH OF VIRGINIA
BRIAN L. COSSMAN
Lic. No. 039637
8/25/14
PROFESSIONAL ENGINEER

SHEET NO.
C2.0

2	8/25/14	CITY COMMENTS
1	7/18/14	CITY COMMENTS

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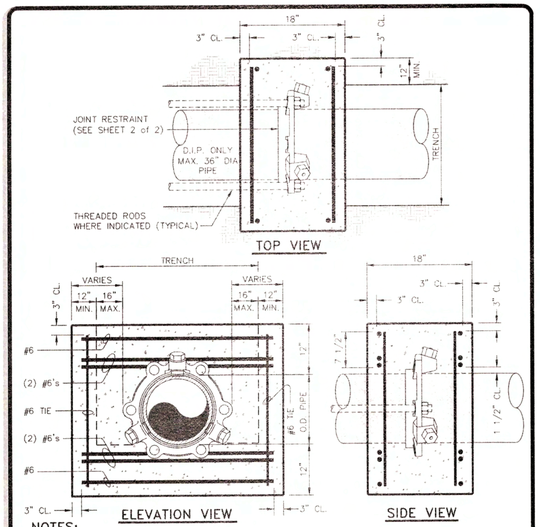


NOTES:

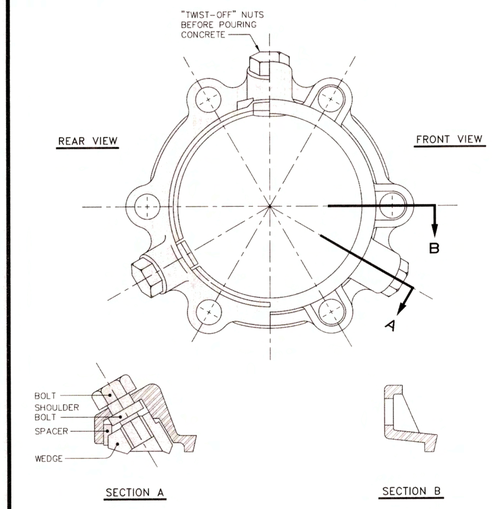
1. CONCRETE SHALL BE 3000 P.S.I.
2. REINFORCING BARS SHALL BE DEFORMED, AND TIED TOGETHER.
3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK(S) INSTALLATION SHALL BE THE MINIMUM WIDTH.
4. BACKFILL AND COMPACT IN 6" LAYERS.
5. PLACE THRUST COLLAR ON ONE FULL JOINT OF PIPE.
6. LAST JOINT OF PIPE WITH THRUST COLLAR TO BE MECHANICAL JOINT PIPE.
7. PLACE RESTRAINED JOINT THRUST RING 4' FROM PLUG END OF PIPE.

THE CITY OF LYNCHBURG

THRUST COLLAR & BLOCKING DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 26.04
REVISION DATE: 12-14-2013 | SHEET #: 1 OF 2

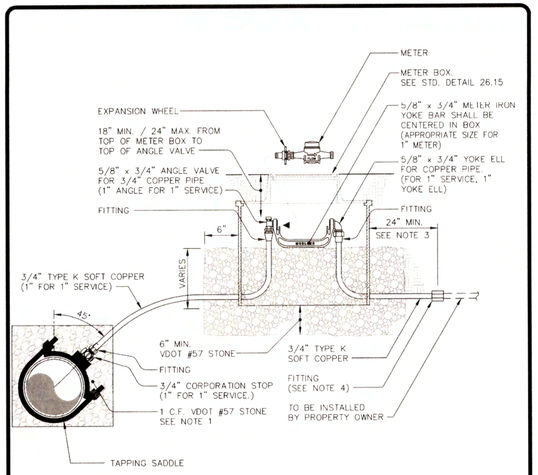


THE CITY OF LYNCHBURG

THRUST RING

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 26.04
REVISION DATE: 12-14-2013 | SHEET #: 2 OF 2



NOTES:

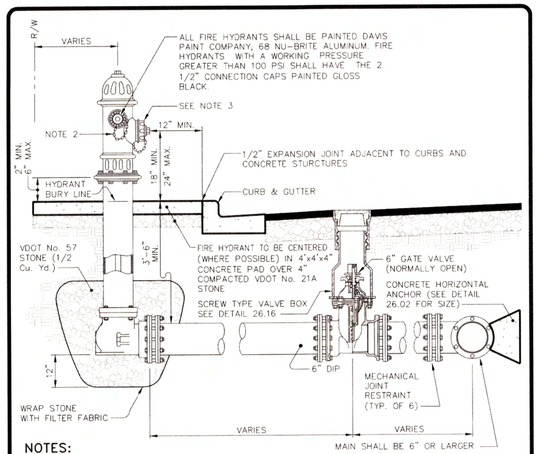
1. FULLY ENCOMPASS TAPPING SADDLE WITH STONE.
2. METER BOX TO BE LOCATED ON THE RIGHT-OF-WAY SIDE OF PROPERTY LINE.
3. WHEN METER BOX IS SET IN SIDEWALK, PIGTAIL TO EXTEND 2 FEET BEYOND EDGE OF SIDEWALK.
4. FITTING TO BE USED WHEN CONNECTING TO EXISTING SERVICE, OTHERWISE CRIMP END OF SERVICE LINE.
5. METER & EXPANSION WHEEL TO BE FURNISHED & INSTALLED BY CITY.
6. THIS DETAIL IS FOR EXISTING SERVICE REPLACEMENT PROJECTS ONLY.

THE CITY OF LYNCHBURG

3/4 INCH WATER SERVICE
(1 INCH WATER SERVICE SIMILAR)
(EXISTING CONNECTIONS ONLY)

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 26.12A
REVISION DATE: 12-14-2013 | SHEET #: 1 OF 1



NOTES:

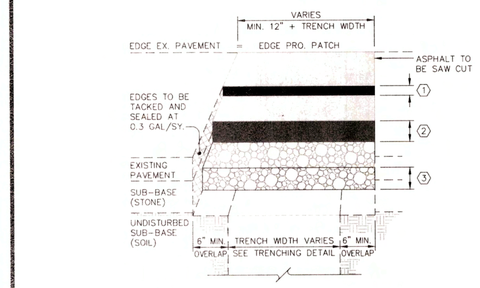
1. TWO MECHANICAL JOINT RESTRAINTS (RESTRAINED JOINT THRUST RINGS) SHALL BE INSTALLED ON THE MAIN LINE ON EACH SIDE OF THE TEE.
2. CHAINS ON FIRE HYDRANTS TO BE REMOVED.
3. HYDRANTS TO BE PLACED WITH PUMPER NOZZLE FACING THE STREET OR AS OTHERWISE DIRECTED.
4. WHEN VALVE BOX IS PLACED OUTSIDE OF PAVEMENT, PROVIDE PRECAST SHOULDER SLAB. (DETAIL 26.18)
5. WHEN FIRE HYDRANTS ARE INSTALLED WHERE ROADWAY HAS A DRAINAGE DITCH AND NO CURB & GUTTER, MINIMUM COVER SHALL BE 24" FROM THE BOTTOM OF DITCH.
6. WHERE HYDRANT IS SET BEHIND GUARDRAIL, CENTERLINE OF PUMPER NOZZLE TO BE A MINIMUM OF 12" AND A MAXIMUM OF 18" ABOVE TOP OF GUARDRAIL.
7. ALL JOINTS BETWEEN THE VALVE AND THE 90° BEND TO THE FIRE HYDRANT SHALL BE RESTRAINED
8. IN AREAS OF HIGH GROUNDWATER, THE WEEP HOLES SHALL BE PLUGGED AS DIRECTED BY THE ENGINEER.

THE CITY OF LYNCHBURG

TYPICAL FIRE HYDRANT CONNECTION DETAIL

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 26.09
REVISION DATE: 12-14-2013 | SHEET #: 1 OF 1



PATCH DESIGN FOR ASPHALT STREETS

TYPE STREET	ARTERIAL and INDUSTRIAL	COLLECTOR	RESIDENTIAL
TYPE PATCH	TYPE A	TYPE B	TYPE C
①	2" SM-12.5D	2" SM-12.5D	2" SM-12.5A
②	8" BM25	6" BM25	4" BM25
③	7" VDOT NO.21A	4" VDOT NO.21A	4" VDOT NO.21A
PATCH DEPTH	TOTAL = 17"	TOTAL = 12"	TOTAL = 10"

NOTES:

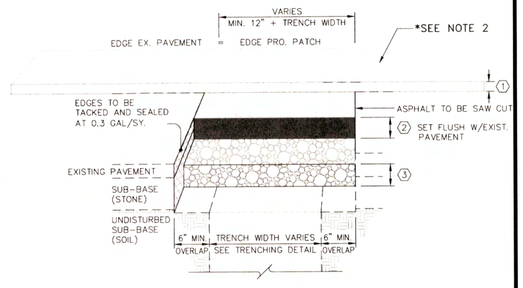
1. PAVEMENT SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

THE CITY OF LYNCHBURG

TRENCH PATCH
ASPHALT STREETS - TYPE A,B,& C

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 25.18
REVISION DATE: 12-14-2013 | SHEET #: 1 OF 1



PATCH DESIGN FOR ASPHALT STREETS

*SEE NOTE 2	TYPE STREET	ARTERIAL and INDUSTRIAL	COLLECTOR	RESIDENTIAL
	①	AS PER CITY ENGINEER	2" SM-12.5D	2" SM-12.5A
	②	AS PER CITY ENGINEER	6" BM25	4" BM25
	③	AS PER CITY ENGINEER	6" VDOT NO.21A	6" VDOT NO.21A
	PATCH DEPTH			

NOTES:

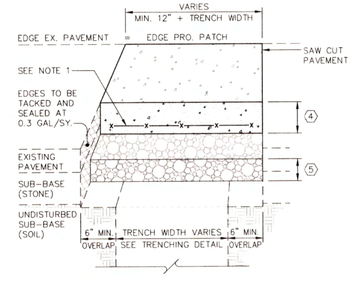
1. PAVEMENT SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
2. STREET OVERLAY IS NOT INCLUDED IN MEASUREMENT AND PAYMENT FOR TRENCH PATCH-TYPE J.

THE CITY OF LYNCHBURG

TRENCH PATCH W/OVERLAY
ASPHALT STREETS - TYPE J

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 25.18 A
REVISION DATE: 12-14-2013 | SHEET #: 1 OF 1



PATCH DESIGN FOR CONCRETE STREETS

TYPE STREET	ARTERIAL and INDUSTRIAL	COLLECTOR	RESIDENTIAL
TYPE PATCH	TYPE D	TYPE E	TYPE F
④	10" 3,000 PSI CONC.	8" 3,000 PSI CONC.	6" 3,000 PSI CONC.
⑤	4" VDOT NO.21A	4" VDOT NO.21A	4" VDOT NO.21A
PATCH DEPTH	14"	12"	10"

NOTES:

1. WHEN PIPE O.D. PLUS 2' OR EXCAVATED TRENCH WIDTH EXCEEDS 4 FEET, THEN WWF 6x6 W1.4 x W1.4 GAUGE IS REQUIRED SUSPENDED IN THE CONCRETE A MINIMUM OF 2 INCHES FROM BOTTOM OF CONCRETE PATCH. (NO. 4 REINFORCING BARS 12x12 IS AN ACCEPTABLE ALTERNATIVE FOR WWF.) THIS NOTE ONLY APPLIES TO PATCH D,E, & F.
2. PAVEMENT SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

THE CITY OF LYNCHBURG

TRENCH PATCH
CONCRETE STREETS - TYPE D,E,& F

USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY

SCALE: NOT TO SCALE | DETAIL #: 25.19
REVISION DATE: 12-14-2013 | SHEET #: 1 OF 1

2	8/25/14	CITY COMMENTS
1	7/18/14	CITY COMMENTS

HURT & PROFFITT
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LYNCHBURG VA 24501
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ENGINEERING • SURVEYING • LAND DEVELOPMENT • ENVIRONMENTAL
GEOTECHNICAL • CONSTRUCTION TESTING & INSPECTION • CULTURAL RESOURCES

WATERLINE DETAILS

FOR

PARK AVENUE WATERLINE REPLACEMENT PROJECT

CITY OF LYNCHBURG, VIRGINIA

PROJECT NO.	20140638
LATITUDE:	37°24'16" N
LONGITUDE:	79°09'50" W
DATE:	7/16/14
DRAWN BY:	WCH
CHECKED BY:	BLC

COMMONWEALTH OF VIRGINIA
BRIAN L. COSSMAN
Lic. No. 039637
8/25/14
PROFESSIONAL ENGINEER

SHEET NO.
C2.1

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