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- Diagram illustrating the trench installation for a pipe, showing the trench width, bedding, backfill, and soil conditions.
- Labels and Dimensions:**
- FINISHED GRADE
  - NORMAL SOIL CONDITIONS
  - 3" MIN.
  - PIPE SIZE & MATERIAL AS SHOWN ON PLAN
  - BACKFILL ONLY WITH APPROVED MATERIAL PER APPLICABLE LOCALITY OR VDOT STANDARDS
  - NOT-DETECTABLE WARNING TAPE, 3 TO 5 MILS IN THICKNESS, TO BE INSTALLED APPROX. 2" ABOVE PIPE AND AT A MINIMUM OF 6" BELOW GRADE (ALL PIPE)
  - (4" MIN. - 6" IN ROCK CONDITIONS)
  - FOR WATERLINES INSTALL BEDDING STONE TO SPRING LINE OF PIPE AT A MINIMUM, OR PER MANUFACTURER'S RECOMMENDATION
  - FOR SEWER LINES BEDDING SHALL BE MIN. 6" ABOVE PIPE
  - WIDTH OF TRENCH EXCAVATION PIPE DIA. + 6" EACH SIDE (MINIMUM)
  - LOCATION OF TRACER WIRE WITH NON-METALLIC PRESSURE PIPE. TRACER WIRE NOT REQUIRED FOR TYPICAL GRAVITY SANITARY SEWER SEE DETAIL 5-4 FOR ADDITIONAL REQUIREMENTS

### BEDDING AND BACKFILL OUTSIDE OF PAVED AREAS

**G-11**

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- EXISTING PAVEMENT SECTION
- LIMITS OF OPEN CUT
- SURFACE MIX ASPHALT  
BASE MIX ASPHALT  
SUBBASE
- SEE #8  
SEE #5
- BACKFILL ONLY WITH APPROVED MATERIAL PER APPLICABLE LOCALITY OR VDOT STANDARDS
- PIPE SIZE & MATERIAL AS SHOWN ON PLAN
- SEE BEDDING NOTE BELOW
- (6" IN ROCK CONDITIONS)
- 4"
- WIDTH OF TRENCH EXCAVATION  
PIPE DIA. + 6" EACH SIDE (MINIMUM)
- NON-DETECTABLE WARNING TAPE,  
3 TO 5 MILS IN THICKNESS, TO BE INSTALLED APPROX. 24" ABOVE PIPE AND AT A MINIMUM OF 6" BELOW GRADE (ALL PIPE)
- DEPTH VARIES
- LOCATION OF TRACER WIRE WITH NON-METALLIC PRESSURE PIPE.  
TRACER WIRE NOT REQUIRED FOR TYPICAL GRAVITY SANITARY SEWER  
SEE DETAIL G-4
- BEDDING: FOR WATERLINES, INSTALL BEDDING STONE TO SPRING LINE OF PIPE AT A MINIMUM, OR PER MANUFACTURER'S RECOMMENDATION. FOR SEWER LINES, BEDDING SHALL BE MINIMUM 6" ABOVE PIPE.

BEDDING AND BACKFILL  
UNDER PAVEMENT AND IN RIGHT-OF-WAY

08/01/15

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- The drawing consists of two parts: a plan view at the top and a cross-section view at the bottom.
- Plan View (Top):**
- Shows a horizontal line representing the "WATER MAIN".
  - A "SADDLE & STOP" is indicated on the left side of the main.
  - A "1" SERVICE" line branches off to the right.
  - A "LOCKABLE SHUTOFF" is located on the service line.
  - A circular detail shows a "METER NUT" and a "METER SETTER & BOX TO BE SET AT FINAL GRADE OF SITE".
  - Dimensions for the meter area: "18" DIA" and "12"-18"
  - A horizontal line above the main is labeled "VARIES" and "RIGHT-OF-WAY EASEMENT LINE".
  - A vertical line on the right is labeled "PRIVATE PROPERTY".
- Cross-Section View (Bottom):**
- Shows the "FINAL GRADE" at the top.
  - The "METER BY PARTICIPATING UTILITY" is shown in a trench.
  - A "6" STONE VDOT 57" layer is below the meter.
  - The "1" SERVICE" line is shown at the bottom left, entering the meter at a "30°-45°" angle.
  - The "METER SETTER & BOX" is shown with dimensions: "15" for the top section, "2'-0" for the middle section, and "15" for the bottom section.
  - A "CTS COMPRESSION CONNECTION" is shown on the right side of the meter.
  - A "TRACER WIRE SEE GENERAL DETAIL" is shown running along the service line.
  - The "EXISTING SERVICE LINE" is shown at the bottom right.
  - A note at the bottom left reads: "1" CORPORATION STOP WITH CTS COMPRESSION CONNECTION SEE NOTE #4".

**SINGLE RESIDENTIAL  
WATER SERVICE**  
(REPLACEMENT OF EXISTING SERVICE)

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- Technical drawing showing the installation details of a gas meter. The drawing includes a side view (top) and a plan view (bottom).
- Labels and Dimensions:**
- Top View (Side View):**
    - VARIABLES:** Dimension line indicating variable spacing.
    - RIGHT-OF-WAY EASEMENT LINE:** Boundary line.
    - PRIVATE PROPERTY:** Area to the right of the easement line.
    - PROPERTY CORNER:** Corner of the property.
    - 18" DIA:** Diameter of the meter.
    - 12" x 18":** Dimensions of the meter setting area.
    - SADDLE & STOP:** Component for the service line.
    - U BRANCH:** Branching for the meter.
    - LOCKABLE SHUTOFF (TYP.):** Typical lockable shutoff.
    - DUAL CHECK VALVE:** Valves on the meter.
    - METER SETTER & BOX TO BE SET AT FINAL GRADE OF SITE:** Instruction for the meter setting.
  - Bottom View (Plan View):**
    - FINAL GRADE:** Ground level.
    - METER BY PARTICIPATING UTILITY:** Meter provided by the utility.
    - 6" STONE VDOT 57:** Stone bedding for the meter.
    - 30"-45°:** Angle of the service line.
    - 1" SERVICE:** Gas service line.
    - 3/4" Ø x 6" PIG TAIL TO BE CAPPED & MARKED OR STAKED:** Pig tail for the service line.
    - 15":** Vertical clearance dimensions.
    - 2'-0":** Horizontal distance from the meter to the pig tail.
    - TRACER WIRE SEE GENERAL DETAIL:** Tracer wire for the service line.
    - 1" CORPORATION STOP WITH CTS COMPRESSION CONNECTION SEE NOTE #5:** Stop for the corporation gas line.

**DOUBLE RESIDENTIAL  
WATER SERVICE**  
(LINE PRESSURE UNDER 120 PSI)

09/07/17

- CASE BY CASE BASIS**

**TRAFFIC BEARING LOCATION**

TRAFFIC BEARING VAULT AND H-20 RATED HATCH SHALL BE SIZED IN ACCORDANCE WITH DIMENSIONAL REQUIREMENTS SHOWN BELOW.

ANGLE DUAL CHECK VALVE

BRONZE DISK METER

LOCKABLE SHUTOFF

6" TYP.

3'-0"

2'-6"

SEE NOTE 5

HATCH SHALL BE BILCO MODEL J-3ALH20 (30"X26") OR APPROVED EQUAL

SEE NOTES 2 & 3

FINAL GRADE

MIN. 6" STONE VDOT 57

TRACER & GROUND WIRES SEE GENERAL DETAIL

MIN. 6" STONE VDOT 57

22" MIN.

3'-0"

6" MIN.

SEE NOTE 6

COMMERCIAL  
WATER SERVICE  
METER SIZES 5/8" - 2"

09/07/17

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- Diagram illustrating the cross-section of a Capitol Foundry MH 2001 Non-Watertight Frame & Cover Labeled "WATER".
- Key components and dimensions shown:
- PAVEMENT**: Top surface layer.
  - ADJUSTMENT RING**: Located at the top of the vault structure.
  - 12" MAX. VERTICAL ADJUSTMENT**: Dimension indicating the range of vertical movement.
  - GROUND BAR**: See GENERAL DETAIL.
  - PROPOSED VALVE**: Located inside the vault structure.
  - 6" MIN (TYP.)**: Dimension for the valve opening.
  - PRECAST WATER VALVE VAULT OR PRECAST MANHOLE SECTION(S) IF DEPTH EXCEEDS 5'**: The main vault structure.
  - TRACER & GROUND WIRES**: See GENERAL DETAIL.
  - FILTER FABRIC**: Located at the base of the vault structure.
  - 2" CLEARANCE FROM TOP OF PIPE TO BOTTOM OF VAULT CUT-OUT**: Dimension for the clearance.
  - WATER MAIN**: The pipe passing through the vault.
  - GROUND ROD**: See GENERAL DETAIL.
  - 46"**: Overall width of the vault structure at the base.
  - 32"**: Height of the vault structure.
  - 6" COMPACTED VDOT 57**: The base layer supporting the vault.

WATER LINE VALVE  
& VAULT

01/01/14



601 South Jefferson Street, Suite 300  
Roanoke, Virginia 24011

DES:	PJM
DRAWN:	JES
CHECK:	GWF
DATE:	7/23/19

SCALE:	N/A
HORIZ:	N/A
VERT:	N/A

HERSHBERGER ROAD  
(GARSTLAND DRIVE TO FAIRHOPE ROAD)  
WATER MAIN REPLACEMENT (WCIP-106)

## STANDARD DETAILS

REV	DATE	DESCRIPTION
	DRAWING	SHEET
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