

# HOUSTON COUNTY PUBLIC WORKS



## Water System Standard Details For Construction and Design

October 2023

PREPARED BY



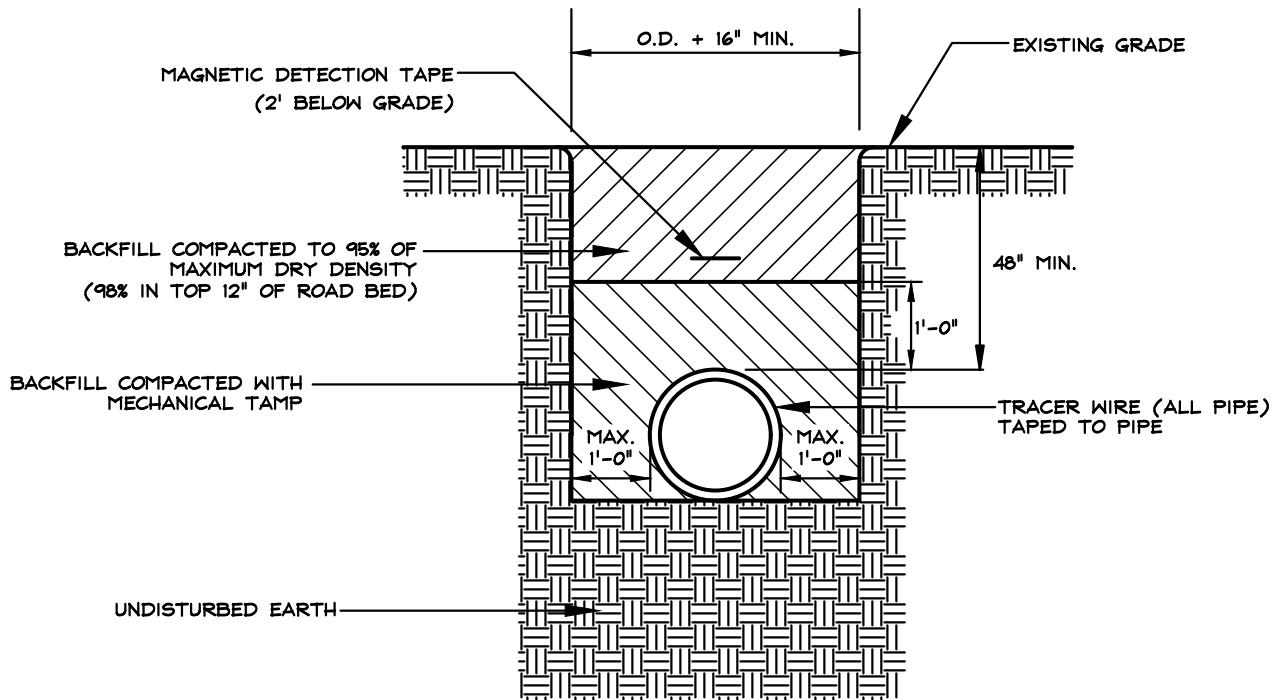
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NOTE: UNSUITABLE SOILS ENCOUNTERED IN BOTTOM OF EXCAVATED TRENCH SHALL BE EXCAVATED & REPLACED WITH SAND. UNSTABLE SOILS ENCOUNTERED IN BOTTOM OF EXCAVATED TRENCH SHALL BE EXCAVATED & REPLACED WITH NO. 57 STONE. FILTER FABRIC SHALL BE INSTALLED ABOVE & BELOW THE STONE. ONLY SUITABLE SOIL SHALL BE USED AS BACKFILL.

## BEDDING DETAIL

N.T.S.

NOTE: ALL PIPELINES ARE TO BE LAID PER PIPE MANUFACTURER'S SPECIFICATIONS. ALL PIPE TO BE LAID STRAIGHT OR ON TRUE CURVES. WHEN THE MANUFACTURER'S CURVE RADIUS CANNOT BE MET, THE APPROPRIATE PIPE FITTINGS MUST BE USED.

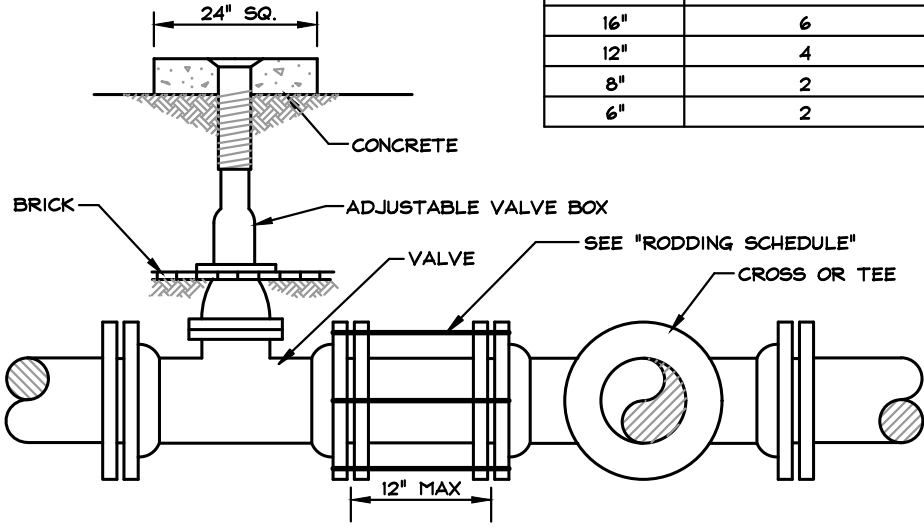
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STANDARD CONSTRUCTION DETAILS  
BEDDING DETAIL

RODDING SCHEDULE		
PIPE DIA.	NO. RODS REQ'D.	ROD DIA.
24"	8	3/4"
16"	6	3/4"
12"	4	3/4"
8"	2	3/4"
6"	2	3/4"



NOTE: ALL LINE VALVES SHALL HAVE "V" CUT INTO CURB.

## VALVE SETTING & BOX DETAIL

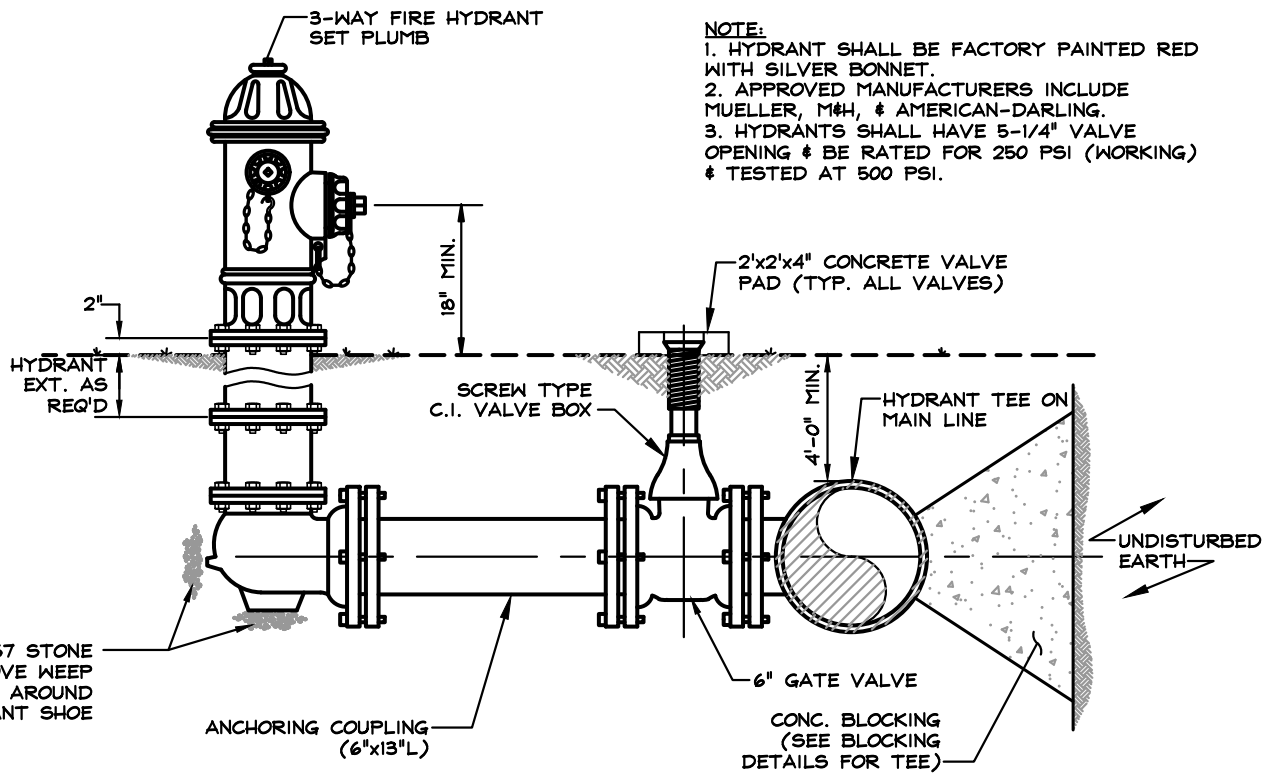
N.T.S.

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STANDARD CONSTRUCTION DETAILS  
VALVE SETTING & BOX DETAIL



**NOTE:**

1. HYDRANT SHALL BE FACTORY PAINTED RED WITH SILVER BONNET.
2. APPROVED MANUFACTURERS INCLUDE MUELLER, M#H, & AMERICAN-DARLING.
3. HYDRANTS SHALL HAVE 5-1/4" VALVE OPENING & BE RATED FOR 250 PSI (WORKING) & TESTED AT 500 PSI.

**TYPICAL FIRE HYDRANT SETTING**

N.T.S.

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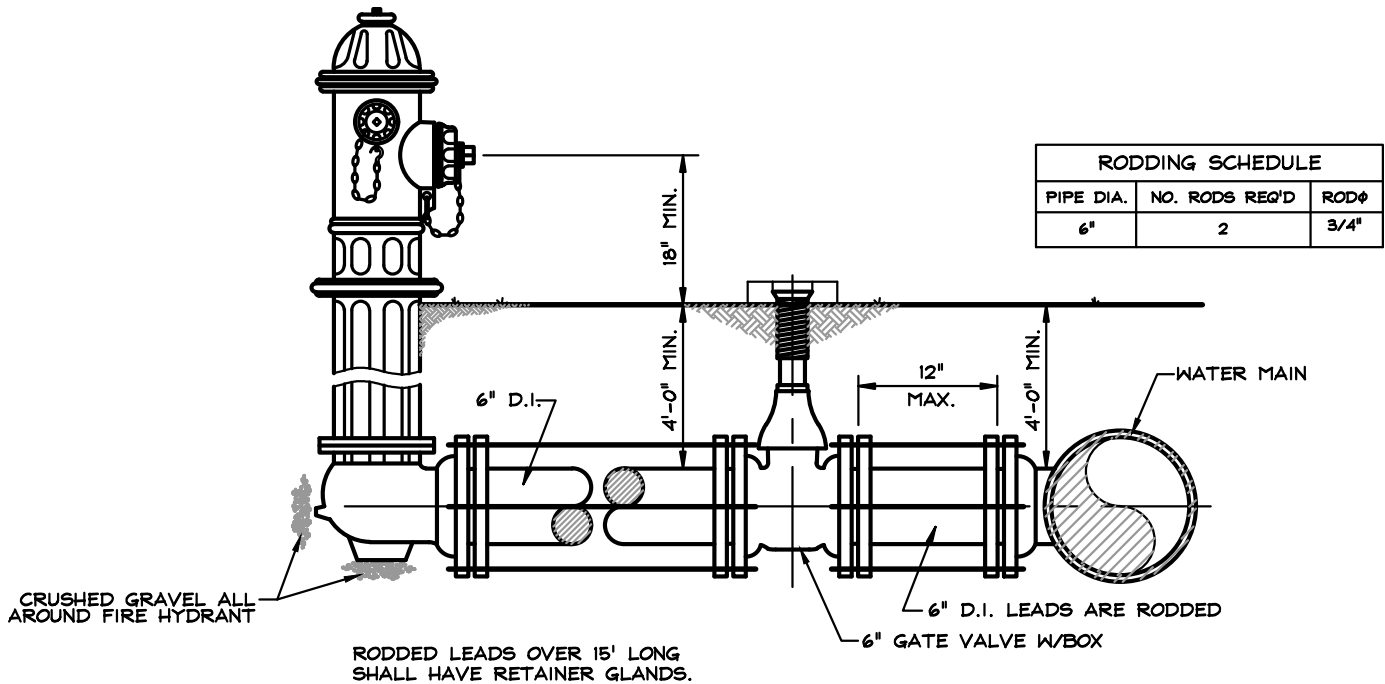


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STANDARD CONSTRUCTION DETAILS  
FIRE HYDRANT SETTING DETAIL

**NOTE:**

- 1. HYDRANT SHALL BE FACTORY PAINTED RED WITH SILVER BONNET.
- 2. APPROVED MANUFACTURERS INCLUDE MUELLER, M#H, & AMERICAN-DARLING.
- 3. HYDRANTS SHALL HAVE 5-1/4" VALVE OPENING & BE RATED FOR 250 PSI (WORKING) & TESTED AT 500 PSI.



## ALTERNATE FIRE HYDRANT SETTING

N.T.S.

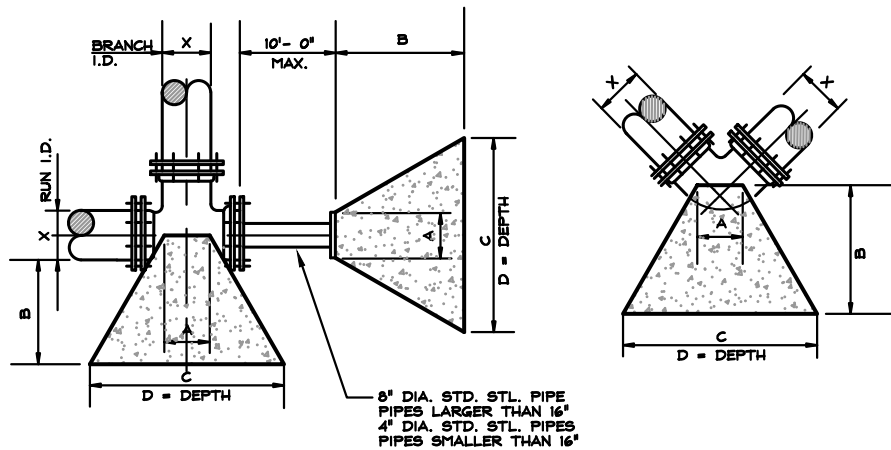
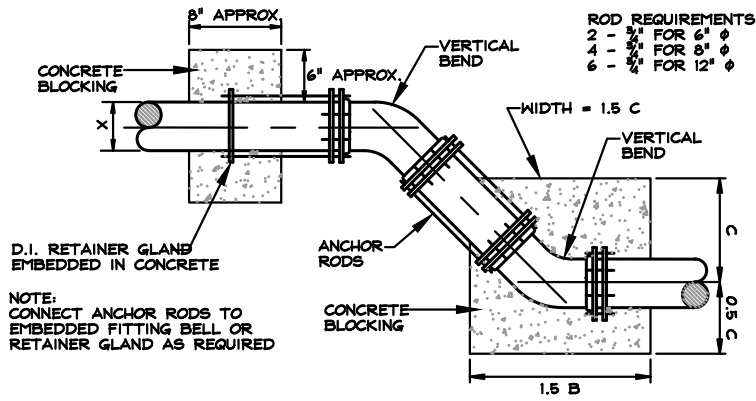
THE ALTERNATE FIRE HYDRANT ASSEMBLY SHOULD ONLY BE USED WHEN THE WATER MAIN IS INSTALLED NEAR THE EDGE OF PAVEMENT OR WHEN SPECIFICALLY DIRECTED BY THE ENGINEER.

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STANDARD CONSTRUCTION DETAILS  
ALTERNATE FIRE HYDRANT SETTING



### BLOCKING DIMENSIONS

	BENDS					BEND	BENDS					TEES & DEAD ENDS				
	X	A	B	C	D		X	A	B	C	D	X	A	B	C	D
90° BEND	30"	2'-0"	1'-6"	15'-3"	6'-0"	11-1/4° BEND	30"	1'-0"	2'-10"	4'-3"	3'-0"	30"	3'-0"	8'-9"	13'-0"	5'-0"
	24"	2'-0"	7'-9"	10'-9"	5'-6"		24"	1'-0"	2'-6"	3'-8"	2'-6"	24"	2'-6"	7'-3"	10'-8"	3'-9"
	20"	1'-9"	6'-0"	8'-6"	5'-0"		20"	10"	2'-0"	3'-0"	2'-0"	20"	2'-0"	5'-3"	8'-0"	3'-6"
	16"	1'-3"	4'-0"	6'-0"	4'-6"		16"	8"	1'-8"	2'-6"	1'-6"	16"	1'-0"	4'-8"	6'-4"	3'-0"
	12"	10"	2'-9"	4'-0"	4'-0"		12"	8"	1'-0"	1'-6"	1'-6"	12"	10"	2'-9"	4'-6"	2'-6"
	10"	10"	2'-6"	3'-9"	3'-0"		10"	10"	1'-0"	1'-6"	1'-0"	10"	10"	2'-0"	3'-3"	2'-6"
	8"	8"	1'-6"	2'-6"	2'-6"		8"	8"	1'-0"	1'-6"	1'-0"	8"	8"	1'-9"	2'-6"	2'-0"
	6"	6"	1'-3"	2'-0"	2'-0"		6"	6"	1'-0"	1'-0"	1'-0"	6"	6"	1'-3"	2'-0"	1'-6"
4"	4"	1'-0"	1'-6"	1'-6"	4"	4"	1'-0"	1'-0"	9"	4"	4"	1'-0"	1'-0"	1'-0"	1'-0"	
45° BEND	30"	1'-6"	7'-6"	10'-0"	5'-0"	22-1/2° BEND	30"	1'-0"	4'-8"	6'-4"	4'-0"	30"	1'-0"	3'-0"	5'-0"	3'-6"
	24"	1'-3"	5'-9"	8'-0"	4'-0"		24"	1'-0"	3'-0"	5'-0"	3'-6"	24"	1'-0"	2'-6"	4'-4"	3'-0"
	20"	1'-0"	4'-9"	6'-8"	3'-6"		20"	1'-0"	2'-6"	4'-4"	3'-0"	20"	1'-0"	2'-6"	4'-4"	3'-0"
	16"	1'-3"	3'-3"	5'-0"	3'-3"		16"	1'-0"	1'-9"	3'-0"	2'-6"	16"	1'-0"	1'-9"	3'-0"	2'-6"
	12"	10"	1'-9"	3'-0"	2'-9"		12"	10"	1'-3"	2'-3"	2'-0"	12"	10"	1'-9"	2'-3"	2'-0"
	10"	10"	1'-9"	3'-0"	2'-0"		10"	10"	1'-0"	2'-0"	1'-6"	10"	10"	1'-0"	2'-0"	1'-6"
	8"	8"	1'-6"	2'-0"	2'-0"		8"	8"	1'-0"	1'-9"	1'-9"	8"	8"	1'-0"	1'-9"	1'-9"
	6"	6"	1'-3"	1'-6"	1'-6"		6"	6"	1'-0"	1'-6"	1'-6"	6"	6"	1'-0"	1'-6"	1'-6"
4"	4"	1'-0"	1'-0"	1'-0"	4"	4"	1'-0"	1'-3"	1'-3"	4"	4"	1'-0"	1'-3"	1'-3"		

- NOTE:**
- 200 P.S.I. TEST PRESSURE
  - SOIL BEARING OF 2500 P.S.F.
  - 3000 P.S.I. CONCRETE
  - PIPE LESS THAN 4" IN DIAMETER SHALL HAVE THE SAME REQUIREMENTS AS 4" DIAMETER PIPE.
  - COUNTY STAFF TO VISUALLY INSPECT ALL FITTINGS PRIOR TO BURIAL.

## THRUST BLOCK

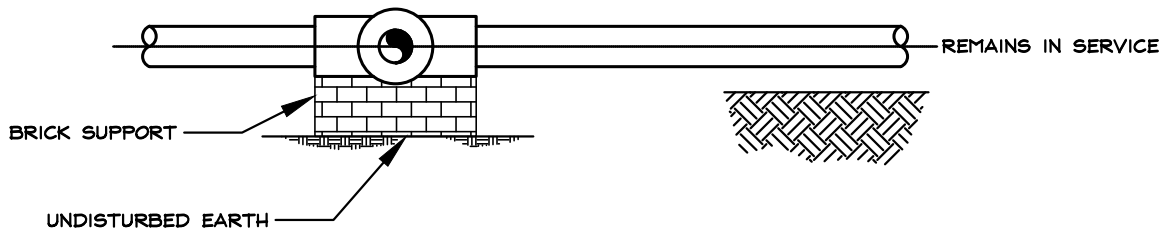
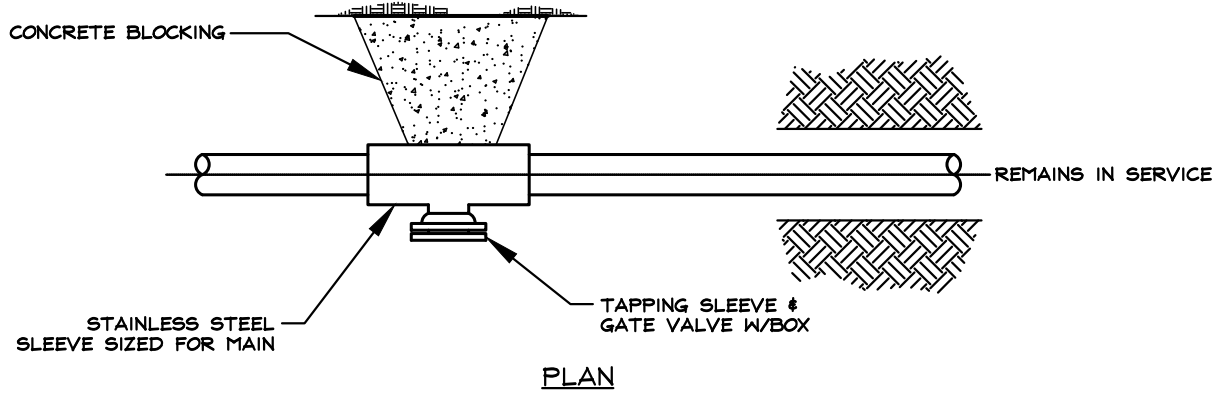
N.T.S.

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PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
THRUST BLOCK DETAIL



NOTE: HOUSTON COUNTY MUST BE ONSITE FOR TESTING OF SLEEVE & WITNESSING OF TAP.

## TAPPING SLEEVE DETAIL

N.T.S.

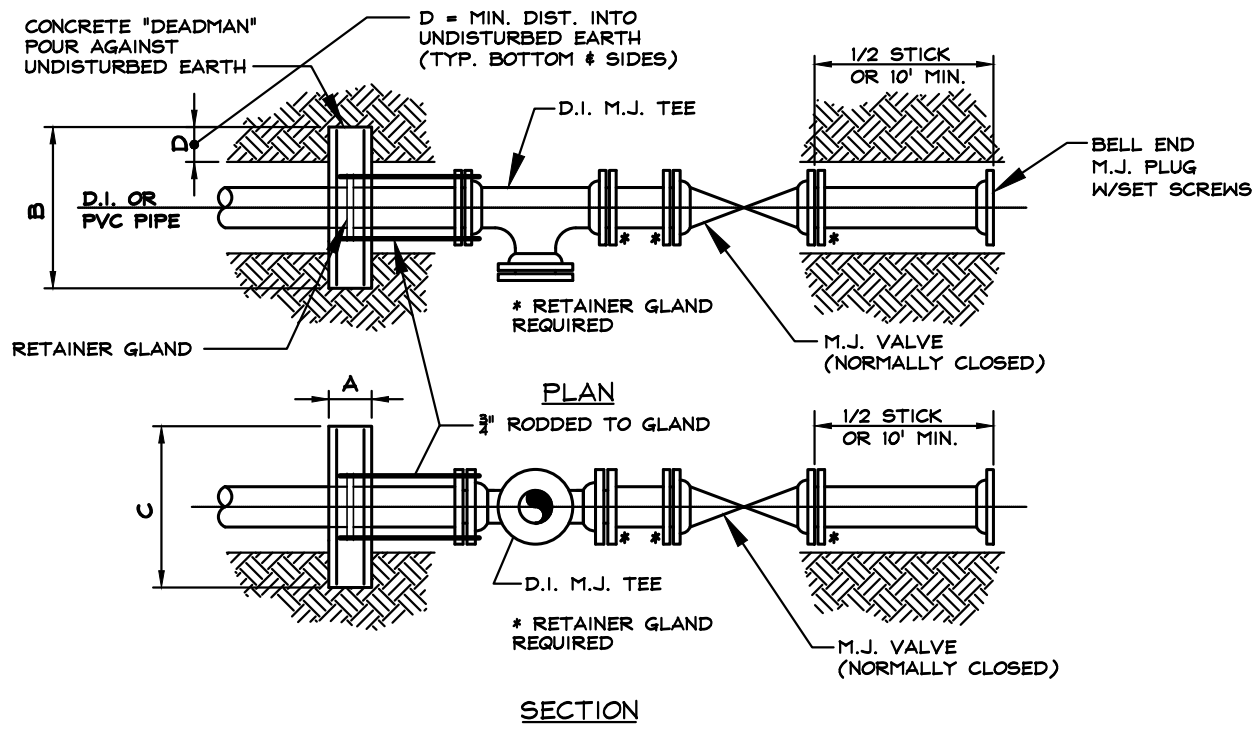
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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
TAPPING SLEEVE DETAIL





MAIN DIA	CONCRETE COLLAR DIM.			
	A	B	C	D
24"	1'-6"	8'-0"	8'-0"	2'-0"
16"	1'-3"	6'-6"	6'-6"	1'-6"
12"	1'-2"	5'-3"	5'-3"	1'-0"
6" or 8"	1'-0"	4'-0"	4'-0"	0'-8"

NOTE: CONCRETE THRUST BLOCKING REQUIRED ON ALL FITTINGS AS SPECIFIED IN THE THRUST BLOCK DETAIL.

TEST PRESSURE: 150 P.S.I.  
 SOIL BEARING PRESSURE: 3000 P.S.F.

## WATER MAIN TERMINATION

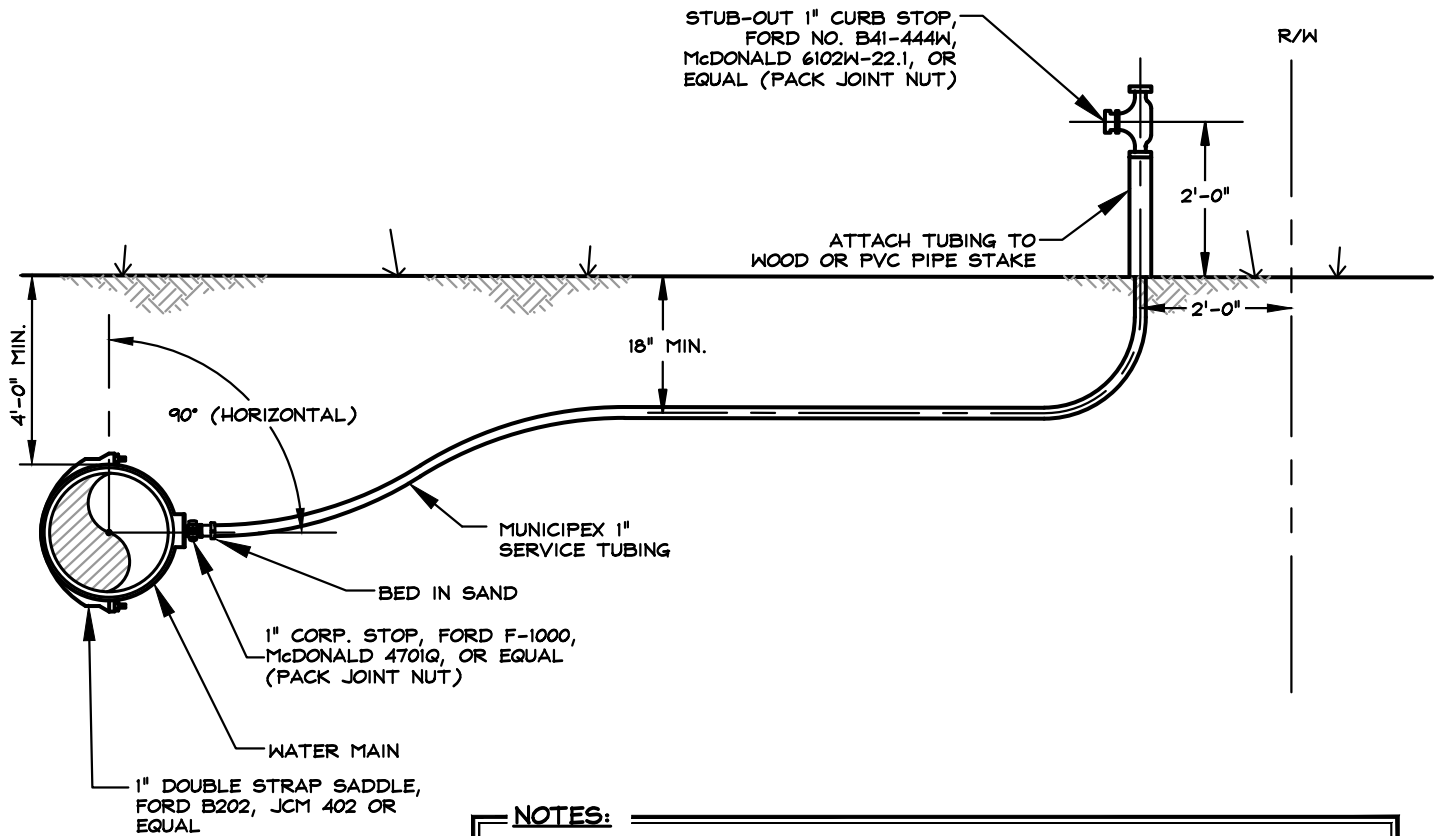
N.T.S.

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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
WATER MAIN TERMINATION



**NOTES:**

1. NEW METERED SERVICES SHALL CONSIST OF TAPPING THE NEW MAIN, INSTALLATION OF CORPORATION COCK, INSTALLATION OF NEW SERVICE PIPE TO THE METER LOCATION, INSTALLATION OF THE CURB STOP.
2. METER, BACKFLOW PREVENTER, & METER BOX TO BE PROVIDED & INSTALLED BY COUNTY WHEN CUSTOMER SIGNS UP FOR SERVICE.
3. WATER SERVICE TO BE INSTALLED NEAR CENTER OF LOT.
4. CORP CUT-OFF TO BE INSTALLED ON TOP
5. CORP STOP ANGLE NEVER EXCEEDS 45°
6. A "W" SHALL BE SAW-CUT INTO CURB AT EACH SERVICE LOCATION.
7. ALL 2-INCH SERVICES SHALL HAVE VALVES WITH 2-INCH OPERATING NUTS IN PLACE OF CORP. STOP AND CURB STOP. VALVE BOXES SHALL BE INSTALLED AT CORP. STOP

**TYPICAL SHORTSIDE SERVICE CONNECTION**

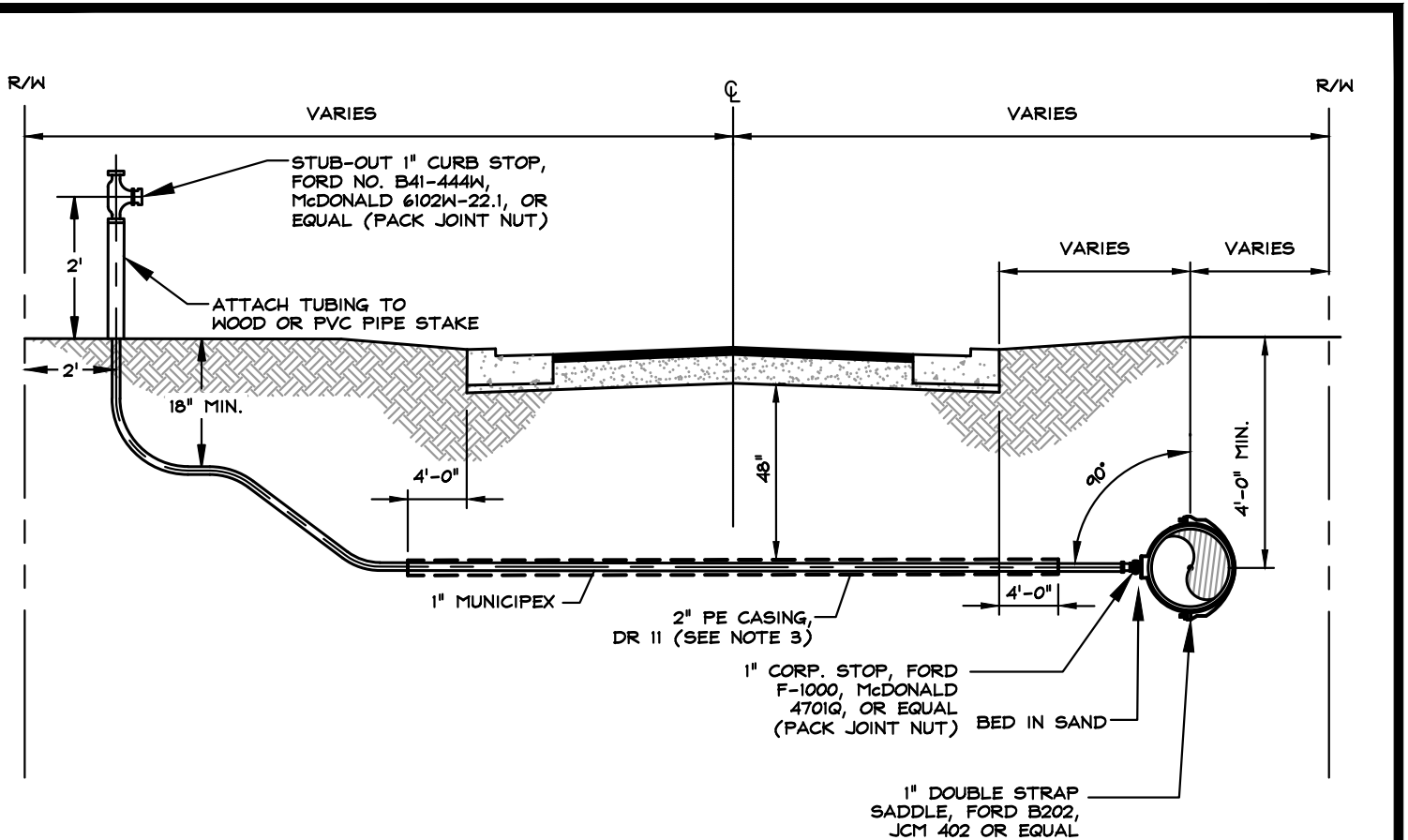
N.T.S.

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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
TYPICAL SHORTSIDE SERVICE CONNECTION



- NOTES:**
1. METHOD OF INSTALLATION FOR CASING SHALL BE BY DIRECTIONAL BORE.
  2. METERS ARE TO BE SET DIRECTLY OPPOSITE TAP ON MAIN. THE METER SHALL NOT BE OFFSET Laterally FROM TAP ON WATER MAIN.
  3. CASING NOT REQUIRED FOR 2-LANE ROAD. ONLY REQUIRED FOR THREE LANE OR MORE.
  4. NEW METERED SERVICES SHALL CONSIST OF TAPPING THE NEW MAIN, INSTALLATION OF CORPORATION COCK, INSTALLATION OF NEW SERVICE PIPE TO THE METER LOCATION, INSTALLATION OF THE CURB STOP.
  5. METER, BACKFLOW PREVENTER, & METER BOX TO BE PROVIDED & INSTALLED BY COUNTY WHEN CUSTOMER SIGNS UP FOR SERVICE.
  6. WATER SERVICE TO BE INSTALLED NEAR CENTER OF LOT.
  7. CORP CUT-OFF TO BE INSTALLED ON TOP
  8. CORP STOP ANGLE NEVER EXCEEDS 45°
  9. A "W" SHALL BE SAW-CUT INTO CURB AT EACH SERVICE LOCATION.
  10. ALL 2-INCH SERVICES SHALL HAVE VALVES WITH 2-INCH OPERATING NUTS IN PLACE OF CORP. STOP AND CURB STOP. VALVE BOXES SHALL BE INSTALLED AT CORP. STOP

## TYPICAL LONGSIDE SERVICE CONNECTION

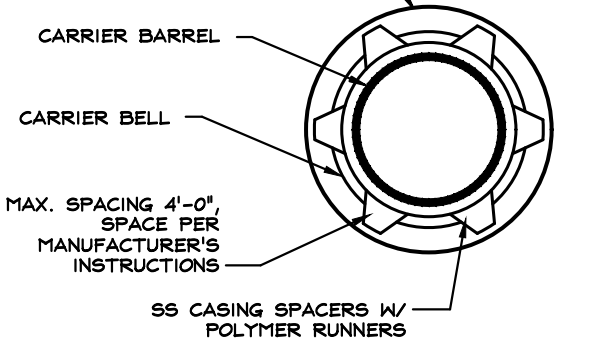
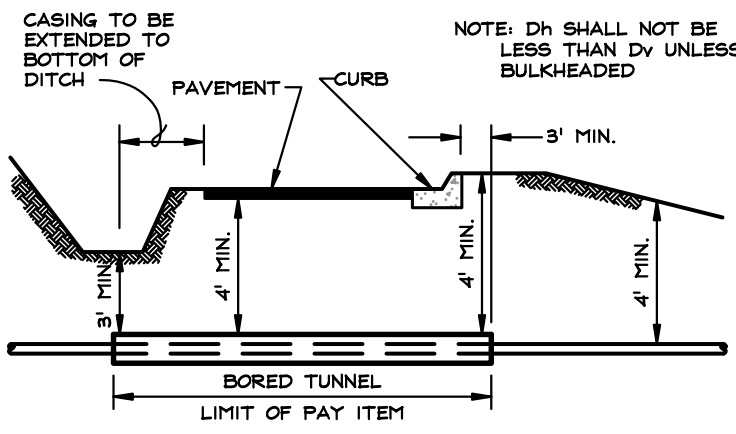
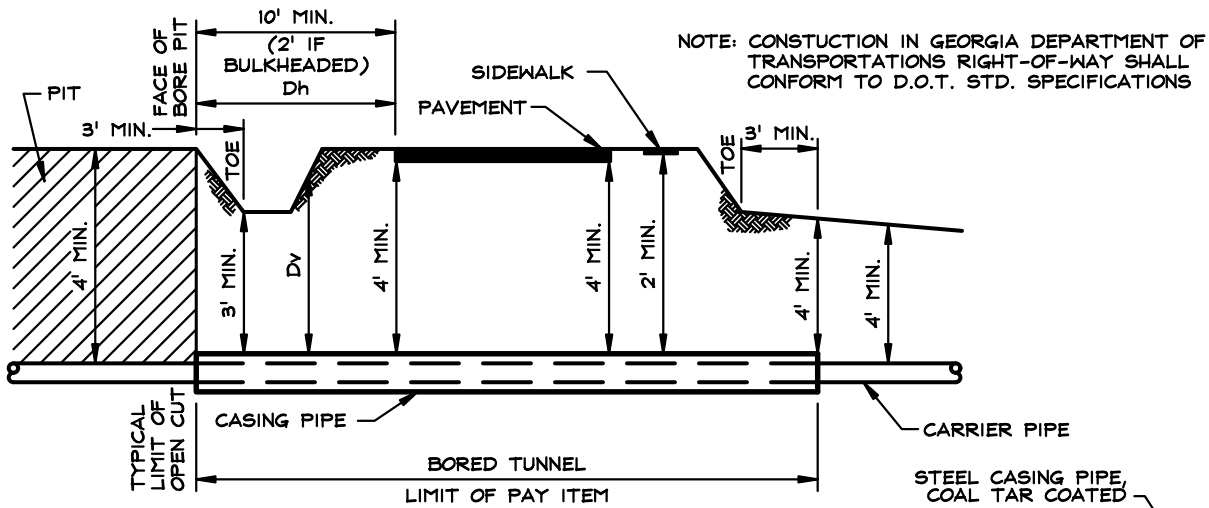
N.T.S.

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HOUSTON COUNTY  
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STANDARD CONSTRUCTION DETAILS  
TYPICAL LONGSIDE SERVICE CONNECTION



**CROSS SECTION  
CARRIER IN CASING**

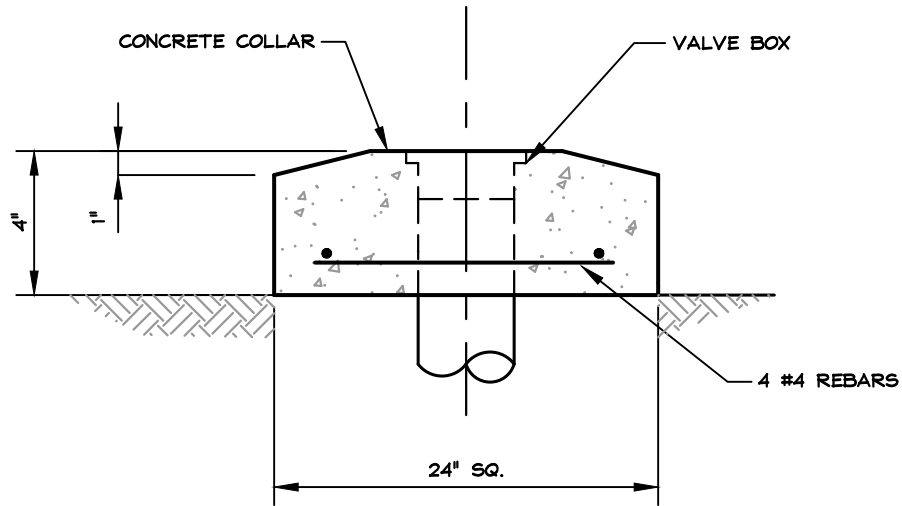
**HIGHWAY UTILITY CROSSING DETAIL**  
N.T.S.

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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
HIGHWAY UTILITY CROSSING DETAIL



## CONCRETE VALVE PAD DETAIL

N.T.S.

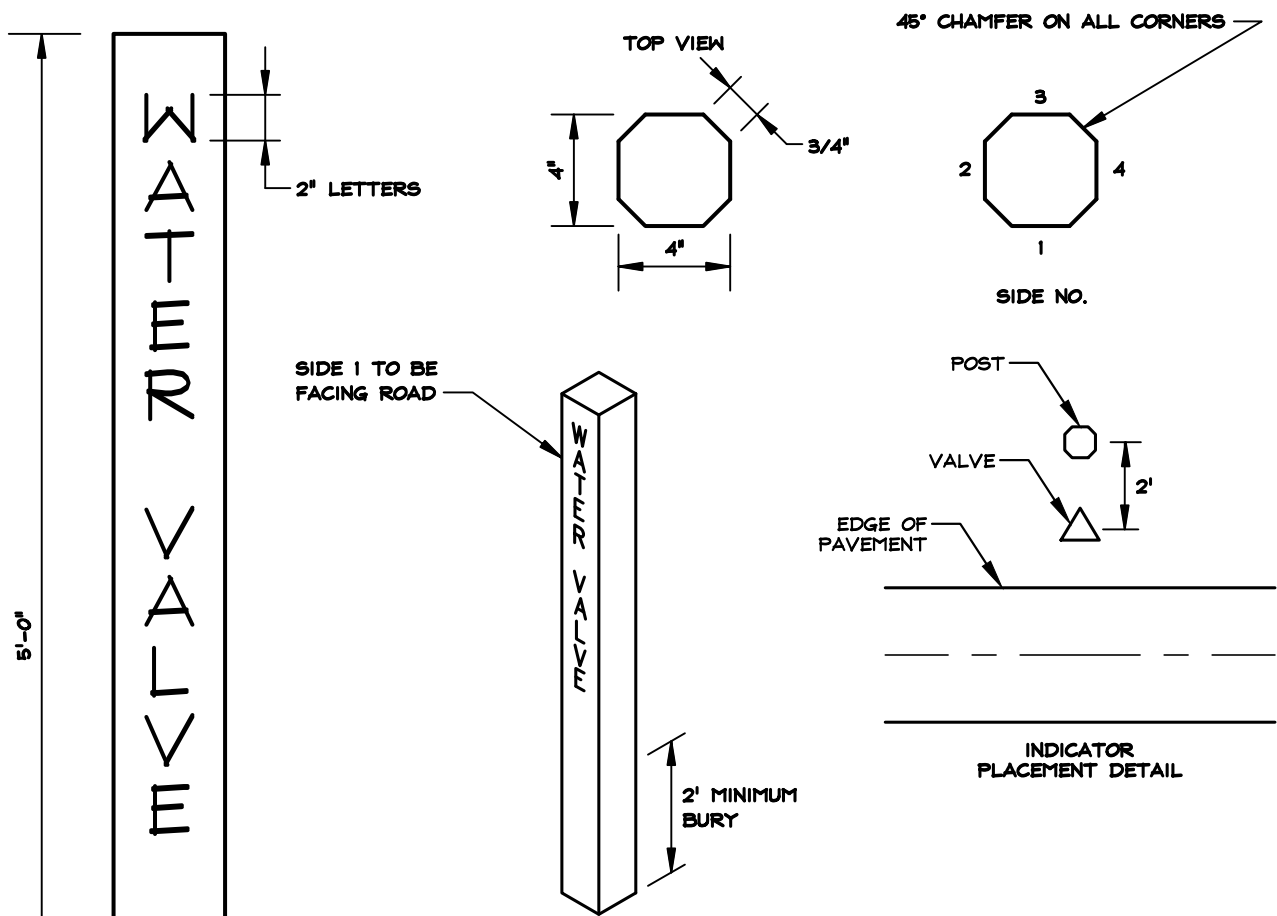
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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
CONCRETE VALVE PAD DETAIL

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**NOTES:**

1. CENTER OF CONCRETE POST SHALL BE REINFORCED WITH NO. 4 REBAR STEEL.
2. "WATER VALVE" SHALL BE ON ONE SIDE ONLY FACING ROAD.
3. WATER VALVE INDICATOR POST IS REQ'D AT EACH BURIED VALVE (NOT HYDRANT VALVES).

**WATER VALVE INDICATOR POST DETAIL**

N.T.S.

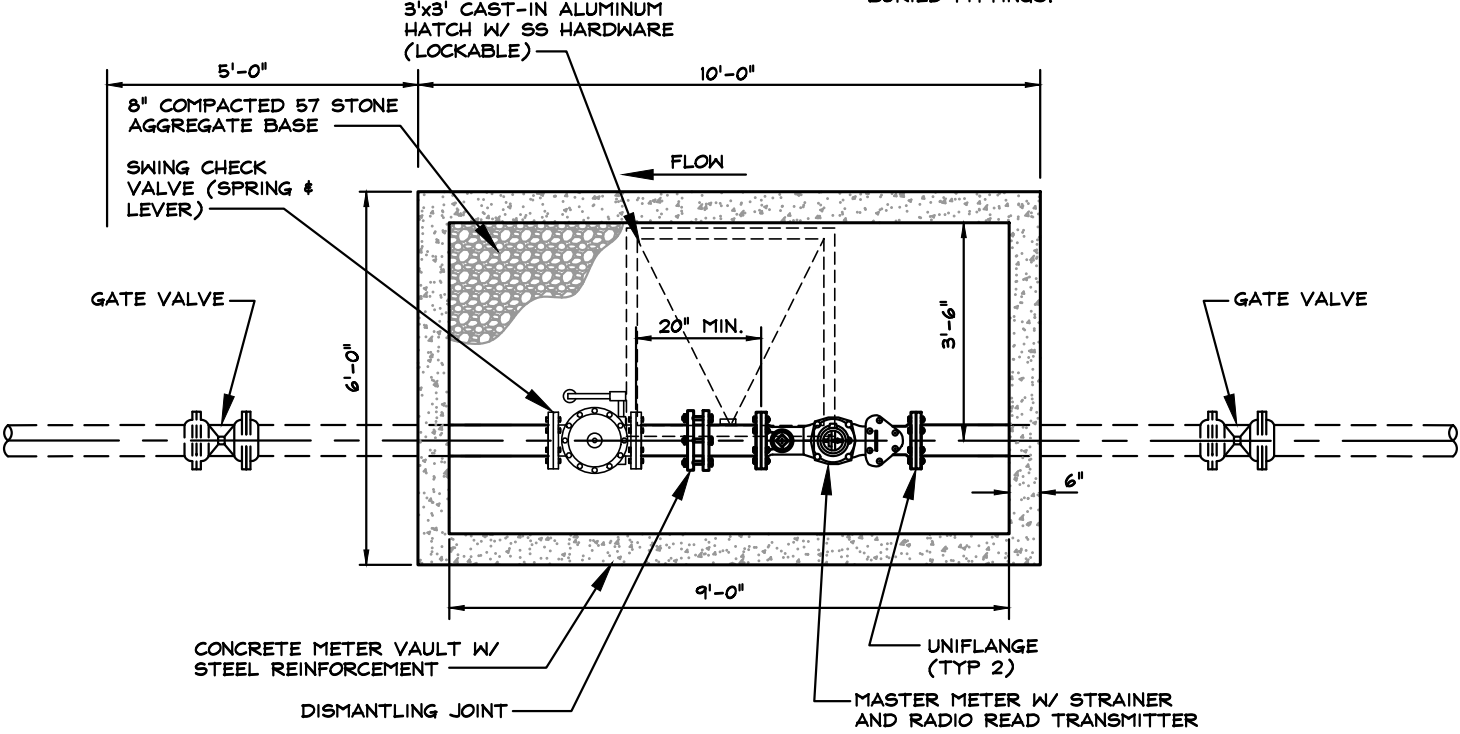
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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
WATER VALVE INDICATOR POST

NOTE: MEGALUG OR EQUAL ARE REQ'D ON ALL BURIED FITTINGS.



NOTE: METER & CHECK VALVE TO BE PER HOUSTON COUNTY STANDARD.

# MASTER METER DETAIL

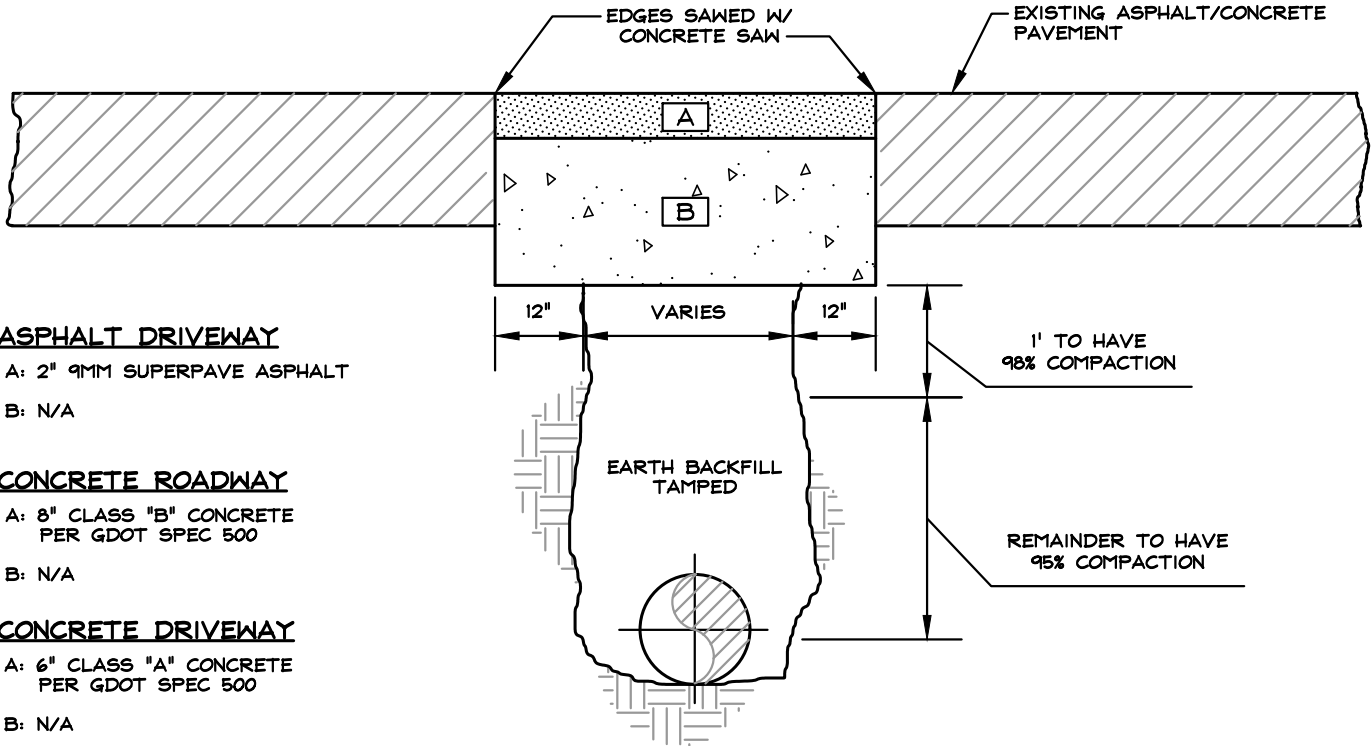
N.T.S.

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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
MASTER METER DETAIL



**ASPHALT DRIVEWAY**

- A: 2" 9MM SUPERPAVE ASPHALT
- B: N/A

**CONCRETE ROADWAY**

- A: 8" CLASS "B" CONCRETE PER GDOT SPEC 500
- B: N/A

**CONCRETE DRIVEWAY**

- A: 6" CLASS "A" CONCRETE PER GDOT SPEC 500
- B: N/A

**GRAVEL DRIVEWAY**

- A: 6" GRAVEL
- B: N/A

**ASPHALT ROADWAY**

- A: TOP 2" OF PATCH TO BE REPLACED WITH SAME MATERIAL AS EXISTING SURFACE. BITUMINOUS TACK COAT OR PRIME APPLIED BEFORE PLACEMENT OF ASPHALTIC TOP.
- B: 8" CLASS "A" PORTLAND CEMENT CONCRETE

**PAVEMENT REPLACEMENT DETAIL**

N.T.S.

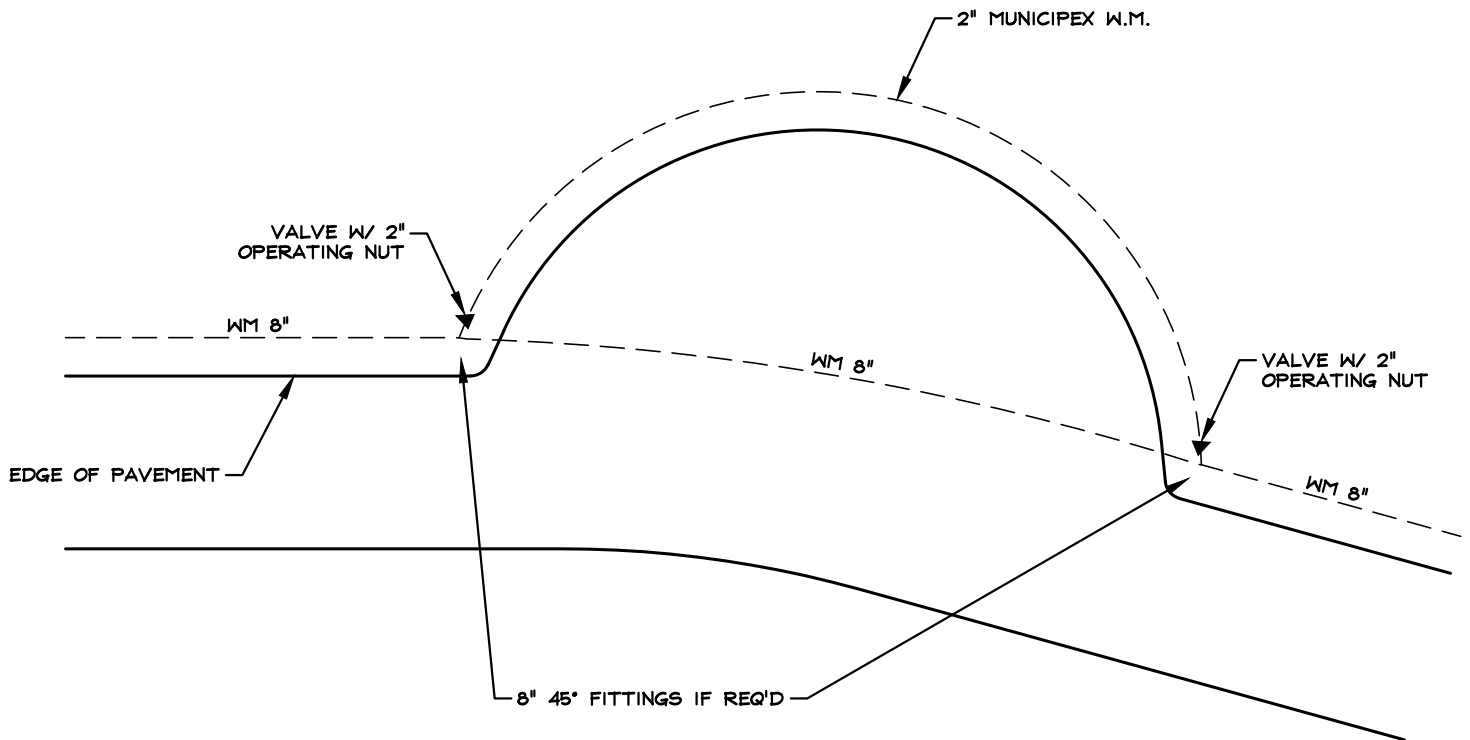
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HOUSTON COUNTY  
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
PAVEMENT REPLACEMENT





## "EYE BROW" LAYOUT DETAIL

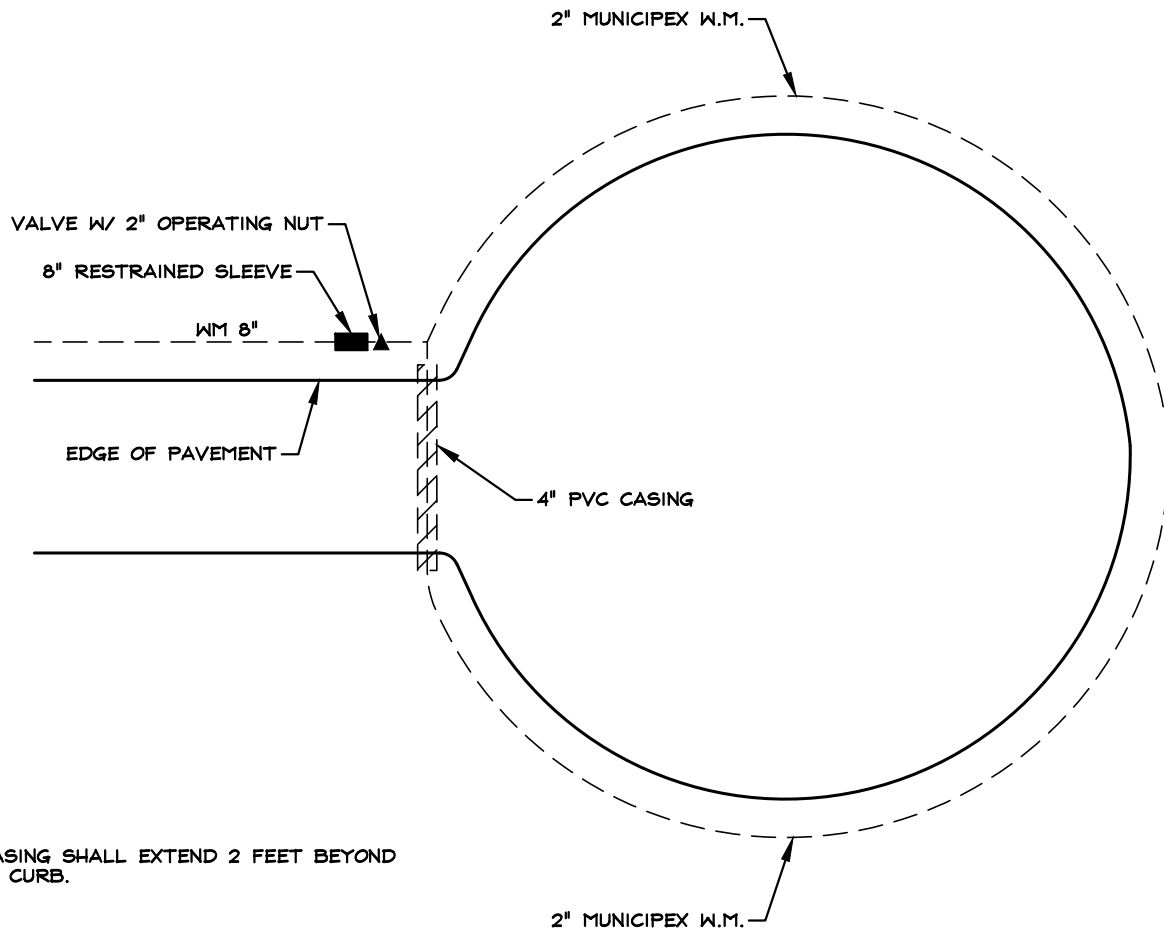
N.T.S.

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STANDARD CONSTRUCTION DETAILS  
EYE BROW LAYOUT DETAIL



**CUL-DE-SAC LAYOUT DETAIL**  
N.T.S.

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STANDARD CONSTRUCTION DETAILS  
CUL-DE-SAC LAYOUT DETAIL