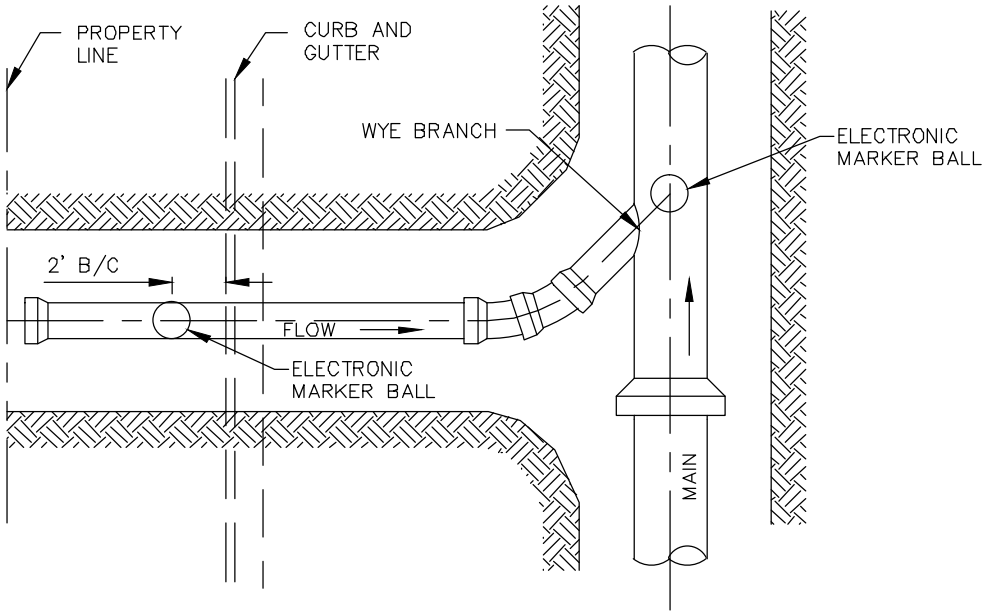
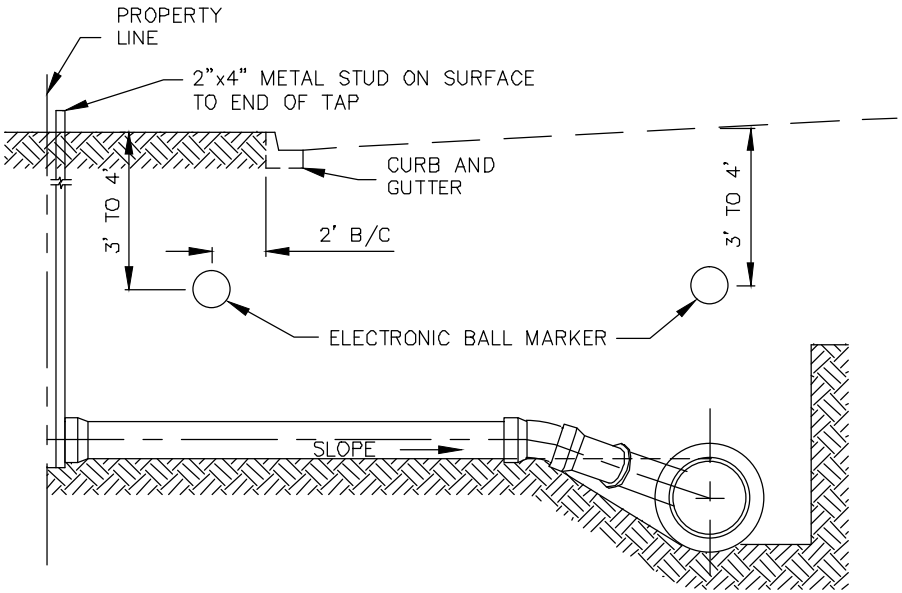



## NOTES:

1. APPROVED ELECTRONIC BALL MARKER MANUFACTURER'S CAN BE FOUND IN THE CITY'S APPROVED MATERIALS LIST.
2. MARKER BALLS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, 2' BEHIND THE BACK OF CURB ABOVE PIPE (OR 2' BEHIND WALK FOR ATTACHED SIDEWALK). AN ADDITIONAL MARKER BALL SHALL BE INSTALLED ABOVE THE WYE.
3. ELECTRONIC MARKER BALLS SHALL BE RESTORED BY CONTRACTOR IF DISTURBED WHEN PRIVATE SERVICE LINE CONNECTION IS INSTALLED.
4. MARKER BALLS SHALL BE USED IN ADDITION TO A 2"x4" METAL STUD.

| DETAIL NO. G-3429 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:12/12 | ELECTRONIC MARKER BALL PLACEMENT - SEWER | DETAIL NO. G-3429 |
|---|---|---|---|---|

NOTES:

1. CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS SERVICE CONNECTION. TAP EXTENDS 3' BEYOND P.U.E.

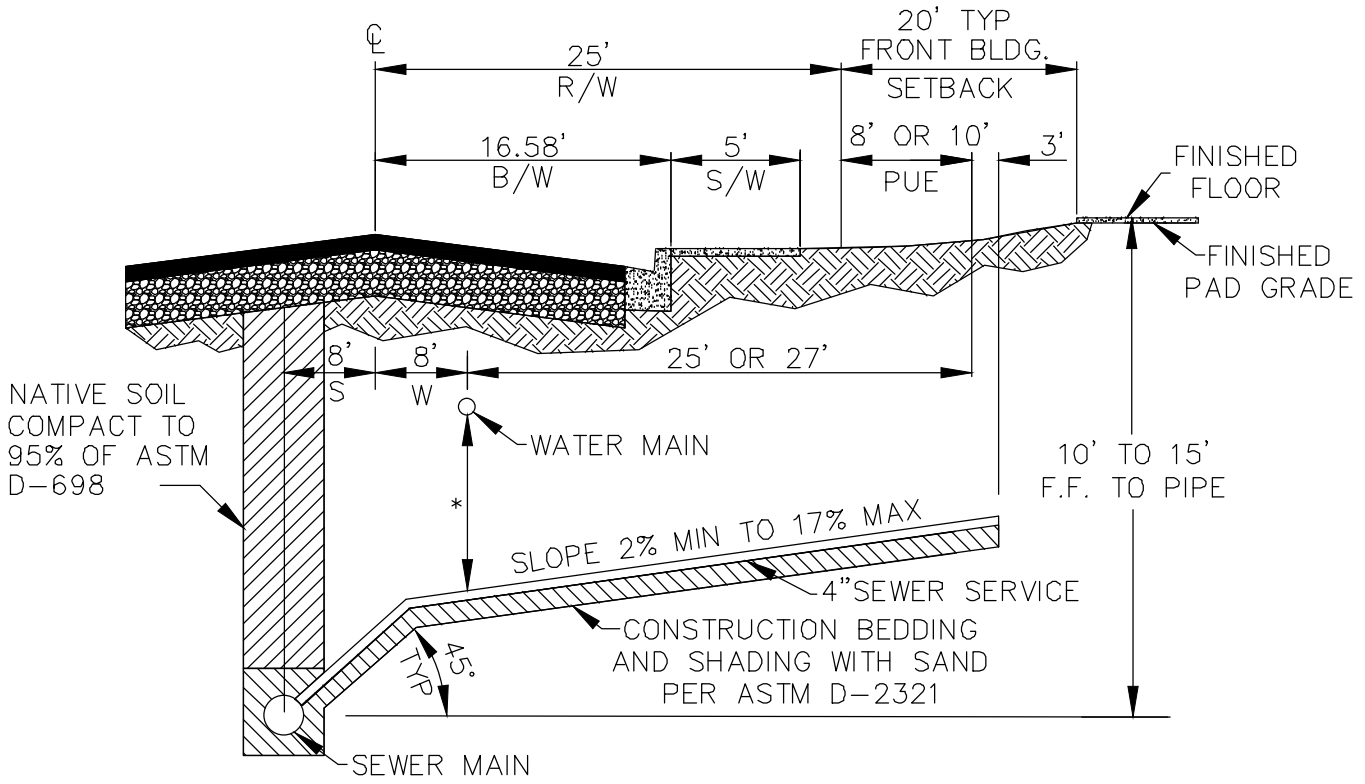
2. SIZE OF TAP SHALL BE DESIGNATED ON PLANS.

3. CONSTRUCT TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5' AT PROPERTY LINE.

4. ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES, AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DEFLECTION.

5. END OF TAP TO BE SEALED AND MARKED AS NOTED.

6. SEE CITY STD. DET. G-3428 & G-3305 FOR ELECTRONIC BALL MARKER LOCATIONS.

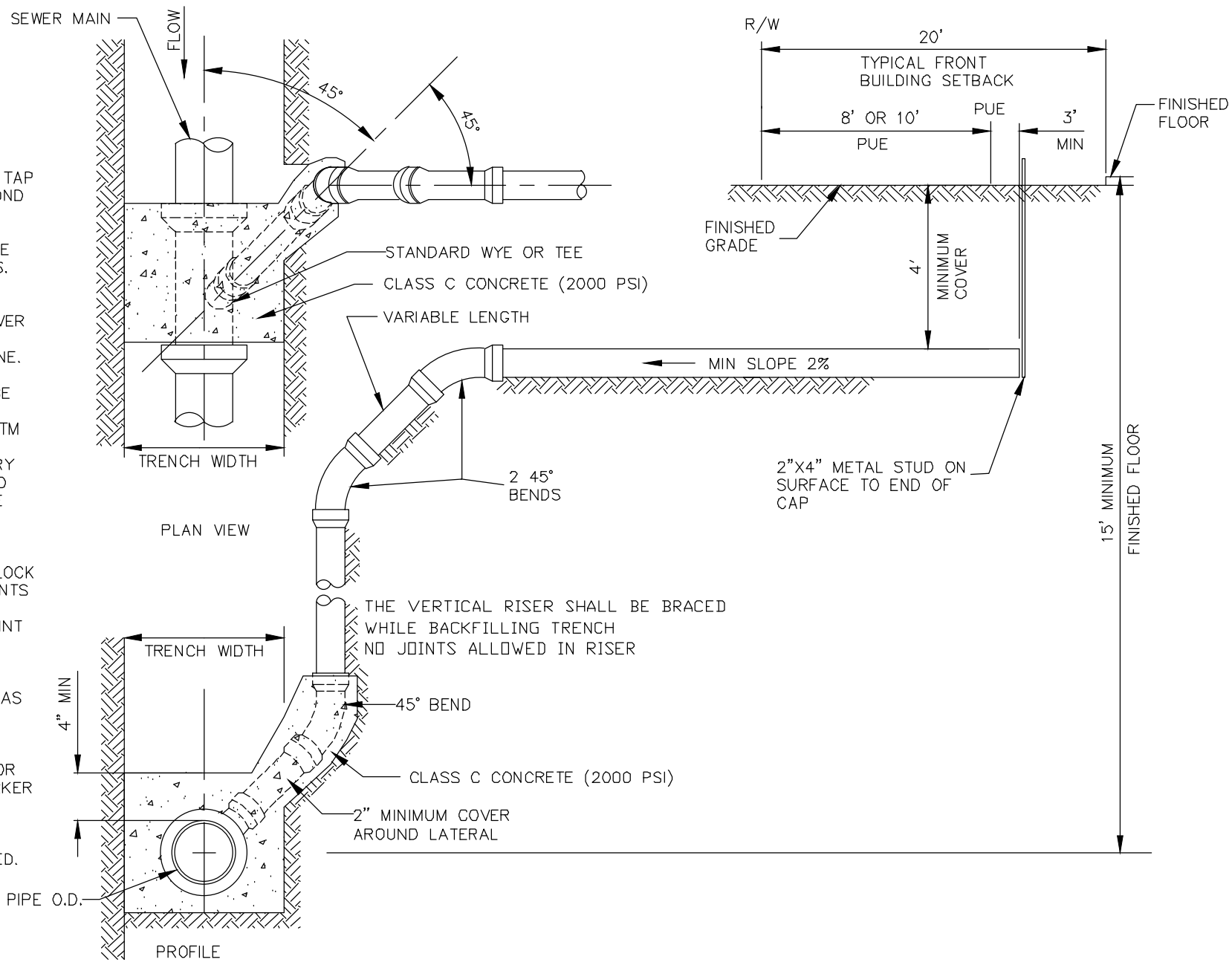



*PROVIDE A MINIMUM SEPARATION BETWEEN WATER LINE AND SEWER SERVICE PER MAG STD. DET. 404-1

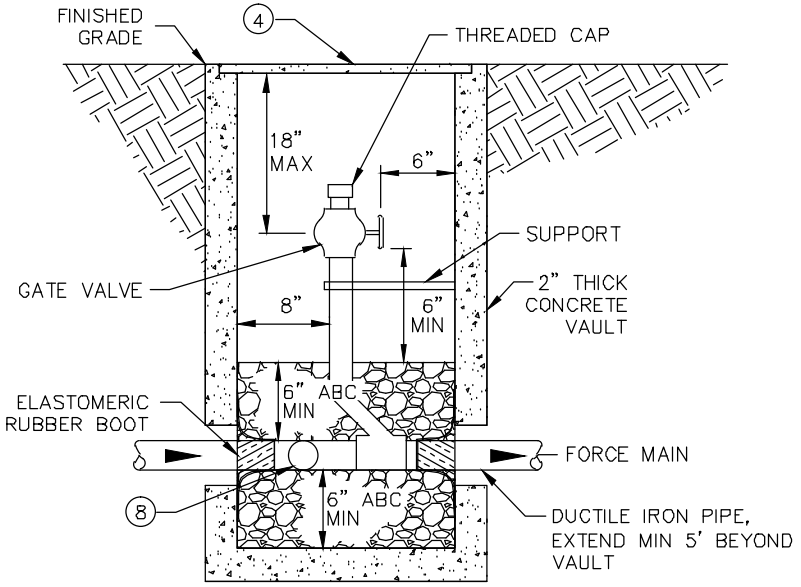
| DETAIL NO. G-3430 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:12/12 | TYPICAL SEWER SERVICE FOR SEWER MAINS > 10' - 15' DEEP | DETAIL NO. G-3430 |
|---|---|---|---|---|

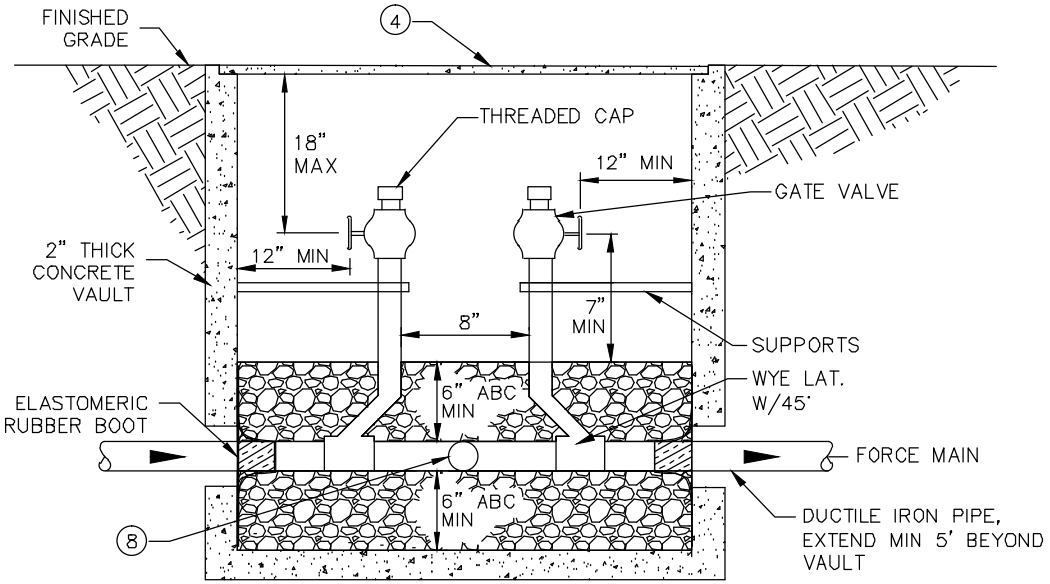
NOTES:

1. CONSTRUCTION DETAIL APPLIES WHERE CONTRACTOR BUILDS SERVICE CONNECTION. TAP EXTENDS 3 FEET BEYOND P.U.E.
2. SIZE OF TAP SHALL BE DESIGNATED ON PLANS.
3. CONSTRUCT TAP AT MINIMUM SLOPE IF COVER WILL BE LESS THAN 5 FEET AT PROPERTY LINE.
4. ALL FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321. THE CONTRACTOR MAY VARY FROM THE DRAWING TO USE THE APPROPRIATE WYES, TEE-WYES AND BENDS TO ENSURE NO MISALIGNMENT OF THE PIPE AND FITTINGS. BLOCK OR BRACE FITTING JOINTS TO ENSURE ZERO DEGREES ANGULAR JOINT DIRECTION.
5. END OF TAP TO BE SEALED AND MARKED AS NOTED.
6. SEE CITY STD. DET. G-3428 & G-3305 FOR ELECTRONIC BALL MARKER LOCATIONS.
7. SEWER PIPE SHALL BE SDR 26 IF PVC IS USED.




| DETAIL NO. G-3430-2 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:12/12 | DEEP SEWER SERVICE CONNECTION - 15' DEEP OR GREATER | DETAIL NO. G-3430-2 |
|---|---|---|---|---|

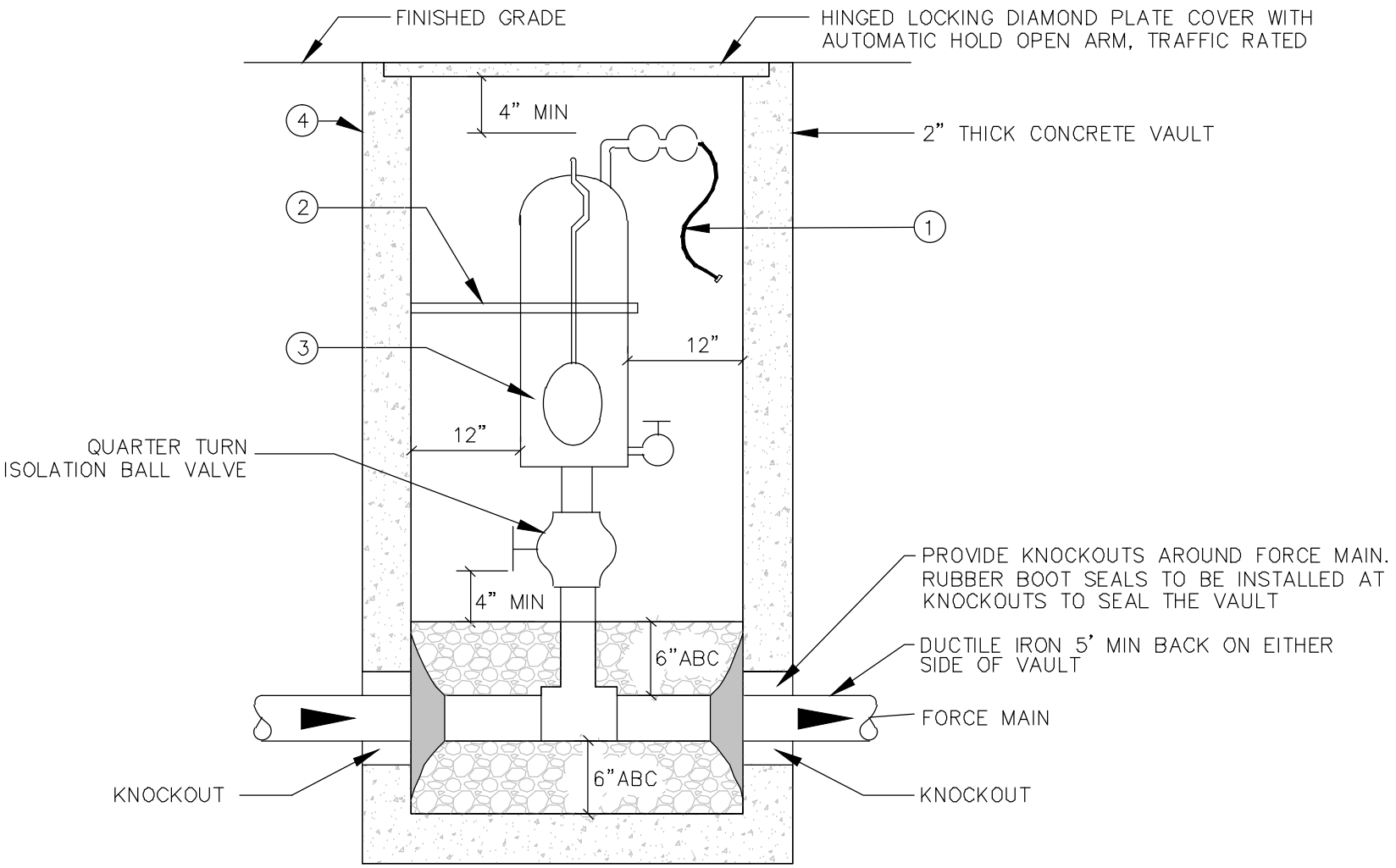



NOTES:

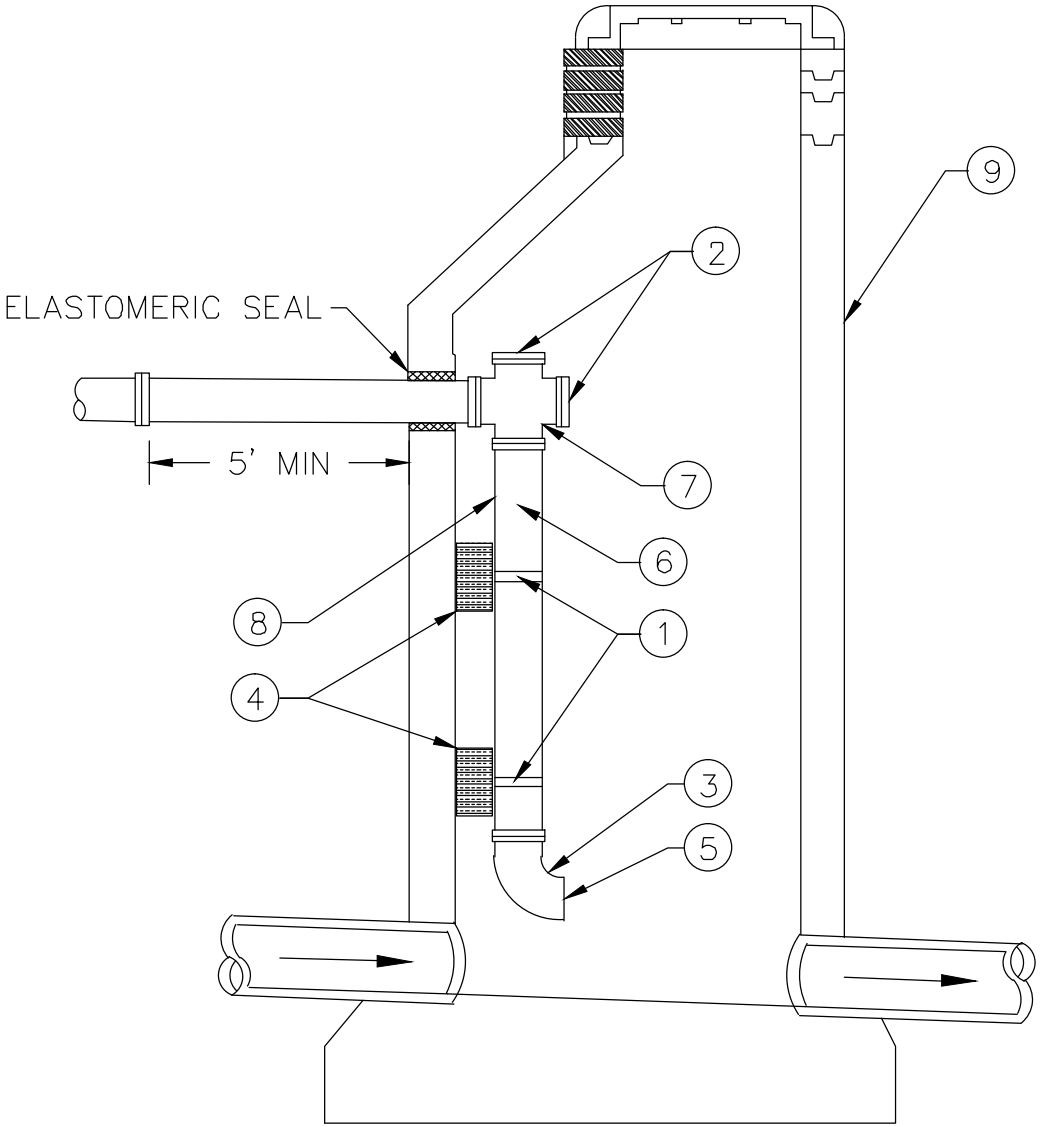
1. ONE-WAY CLEANOUTS SHALL BE INSTALLED ON MAXIMUM 400- FOOT CENTERS ALONG FORCE MAIN. ROTATE VAULT AS REQUIRED TO KEEP BEHIND BACK OF CURB.
2. TWO-WAY CLEANOUTS SHALL BE INSTALLED ON A MAXIMUM 800-FOOT CENTERS ALONG FORCE MAIN. ROTATE VAULT AS REQUIRED TO KEEP BEHIND BACK OF CURB.
3. AN AIR RELEASE VALVE SHALL BE INSTALLED ADJACENT TO ANY FORCE MAIN CLEANOUT.
4. LOCKING DIAMOND PLATE COVER WITH AUTOMATIC HOLD OPEN ARM, TRAFFIC-RATED.
5. RISER PIPES TO BE SAME DIAMETER AS FORCE MAIN (PLUG END WITH THREADED CAP).
6. PROVIDE KNOCKOUTS AROUND FORCE MAIN. RUBBER BOOT SEALS TO BE INSTALLED AT KNOCKOUTS TO SEAL THE VAULT.
7. PROVIDE 12" ABC MATERIAL AROUND FORCE MAIN.
8. PROVIDE GATE VALVE FOR FORCE MAINS WITH DIAMETERS OF 2" OR LESS.
9. A MINIMUM 12" OF CLEARANCE SHALL BE MAINTAINED BETWEEN THE VAULT WALLS AND THE CLEANOUT EQUIPMENT.

| DETAIL NO. G-3440 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:08/17 | FORCE MAIN CLEANOUTS | DETAIL NO. G-3440 |
|---|---|---|---|---|




NOTES:
1. SUPPORT FOR AIR RELEASE VALVE.
2. SEWAGE AIR RELEASE VALVE FROM THE APPROVED MATERIALS LIST.
3. ROTATE VAULT AS REQUIRED TO KEEP BEHIND BACK OF CURB.

| DETAIL NO. G-3441 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:08/17 | SEWAGE AIR RELEASE VALVE | DETAIL NO. G-3441 |
|---|---|---|---|---|

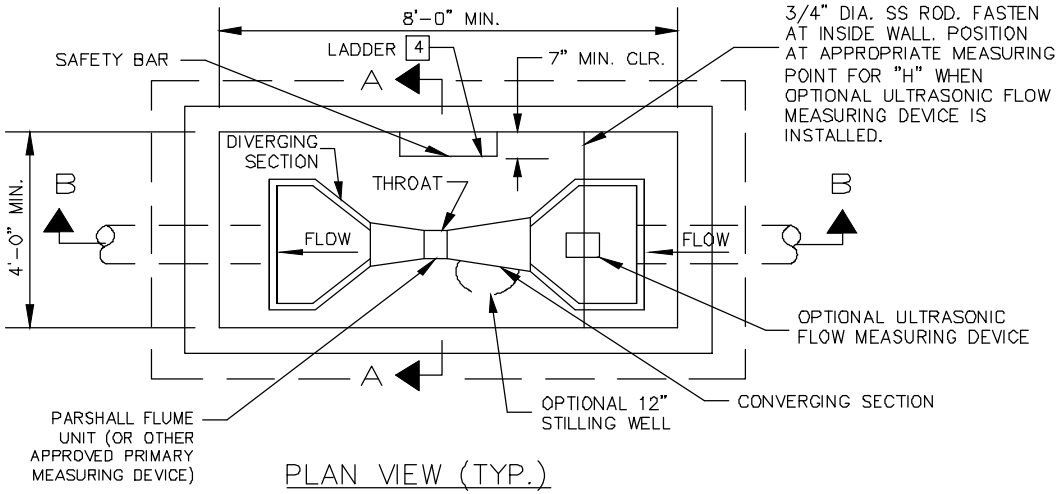



NOTE: DISCHARGE OUTLET SHALL NEVER BE BELOW CROWN OF DOWNSTREAM PIPE.

NOTES:

1. GRADE 316 STAINLESS STEEL FASTENERS. INSTALL 1 PER SECTION OF MANHOLE (MINIMUM OF 2).
2. BLIND FLANGE W/STAINLESS STEEL BOLTS GRADE 316 3" AND ABOVE IPT CAP, 2" BELOW.
3. MJ X PLAIN END 90 DEGREE ELBOW RESTRAINED TO DIRECT FLOW DOWN STREAM.
4. ELASTROMERIC SPACER (1 PER FASTENER).
5. FORCE MAIN SHALL TRANSITION INTO A GRAVITY LINE WITHIN A MANHOLE IN A MANNER THAT MINIMIZES AGITATION OF SEWAGE. THE CROWN OF THE FORCE MAIN AND OUTLET GRAVITY LINE SHALL MATCH WHERE POSSIBLE, WITH BENCH GROUTING INSTALLED TO DIRECT FLOW INTO THE OUTLET WITH A MINIMAL CHANGE IN THE GRAVITY FLOW ANGLE.
6. THE FORCE MAIN LINES WITHIN THE MANHOLE SHALL HAVE 401 EPOXY COATING ON THE PIPE.
7. FLG CROSS W/401 EPOXY COATING ON THE OUTSIDE.
8. DIP PER APPROVED MATERIALS LIST.
9. MINIMUM 5' DIAMETER MANHOLE.

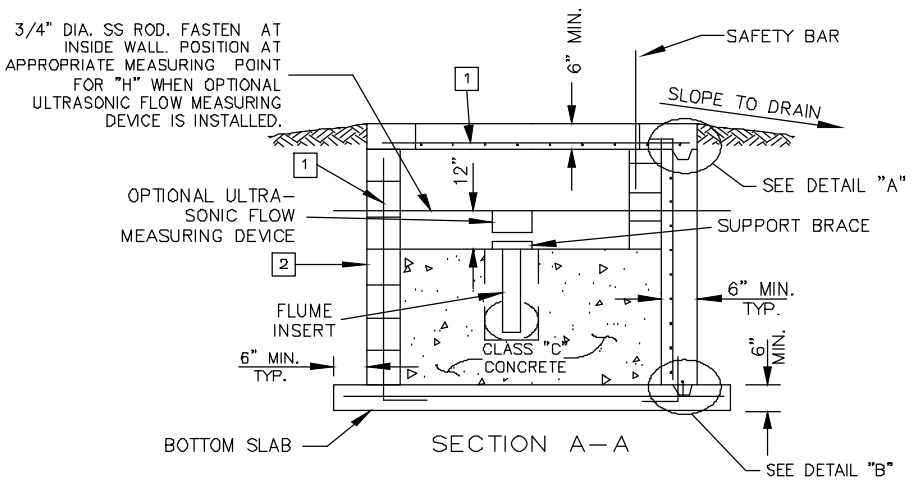
| DETAIL NO. G-3442 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:12/12 | FORCE MAIN - MANHOLE DISCHARGE | DETAIL NO. G-3442 |
|---|---|---|---|---|



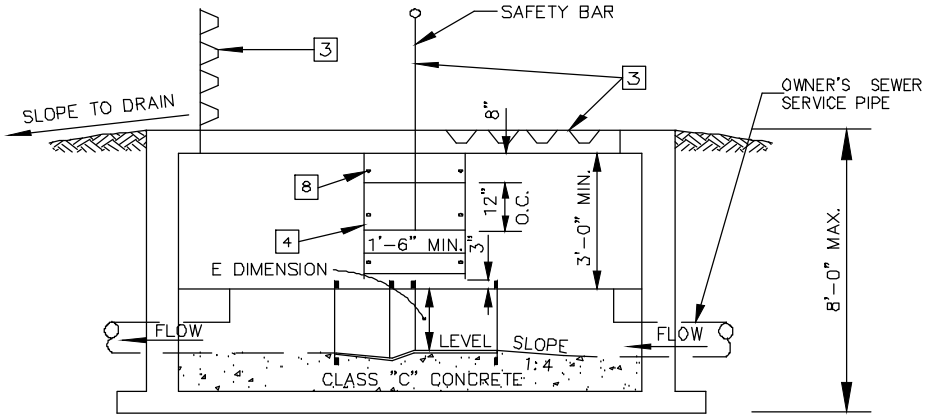

PLAN VIEW (TYP.)

CONSTRUCTION NOTES:

1. REINFORCED STEEL AND CLEARANCE AS APPROVED BY THE ENGINEER.
2. BLOCK MASONRY MAY BE USED IN LIEU OF CIP WALLS. 8" BLOCK MASONRY, GROUT EACH CELL TO FULL HEIGHT (GROUT PER MAG SECTION 776).
3. 2 TORSION SPRING-ASSISTED GALVANIZED DIAMOND PLATE ACCESS DOORS (TRAFFIC RATED) LOCKING WITH TYPE 304SS HARDWARE AND SAFETY BAR.
4. LADDER SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAIL AND SHALL MEET THE REQUIREMENTS OF OSHA FOR TYPE 1A (300lbs) FIXED LADDERS, SINGLE SECTION. DETAILS OF LADDER CONSTRUCTION, ALONG WITH A CERTIFICATION THAT THE LADDER MEETS OR EXCEEDS OSHA REQUIREMENTS FOOT TYPE IA (300lbs) SERVICE SHALL BE SUBMITTED FOR REVIEW PRIOR TO FURNISHING AND INSTALLING. MILL FINISHED ALUMINUM LADDER OR APPROVED CORROSION RESISTANT MATERIAL.
5. 2"x4" KEY, CENTER ON WALL. (INSTALL ROPE CAULK CONTINUOUSLY).
6. 1-5/8" x 2-1/2" x 3" KEY.
7. 4" PVC DUMBELL-TYPE CONTINUOUS WATERSTOP 3/8" MIN. THICKNESS. (WASH THOROUGHLY PRIOR TO INSTALLATION.
8. ANCHOR STRAPS (3 EACH SIDE) WITH 5/8" x 3-1/2" 316SS ANCHOR BOLTS WITH LOCK WASHER AND NUT.



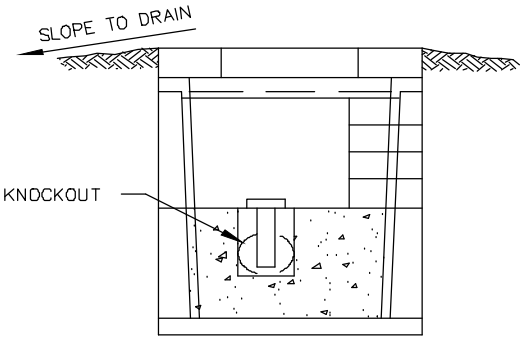

SECTION A-A




SECTION B-B

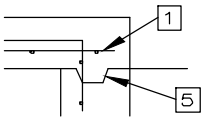
# CAST-IN-PLACE VAULT

| DETAIL NO. G-3450-1 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:12/12 | MONITORING/SAMPLING VAULT | DETAIL NO. G-3450-1 |
|---|---|---|---|---|



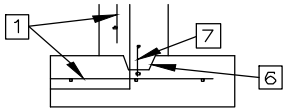

SECTION A–A

## PRE–CAST VAULT



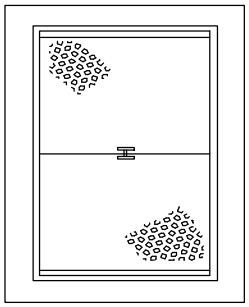

TOP KEY

DETAIL "A"




BOTTOM KEY

DETAIL "B"



## COVER WITH LID

CONSTRUCTION NOTES:

1. REINFORCED STEEL AND CLEARANCE AS APPROVED BY THE ENGINEER.
2. BLOCK MASONRY MAY BE USED IN LIEU OF CIP WALLS. 8" BLOCK MASONRY, GROUT EACH CELL TO FULL HEIGHT (GROUT PER MAG SECTION 776).
3. 2 TORSION SPRING–ASSISTED GALVANIZED DIAMOND PLATE ACCESS DOORS (DESIGN LOADING AASHO–H20), LOCKING WITH TYPE 304SS HARDWARE AND SAFETY BAR.
4. LADDER SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE DETAIL AND SHALL MEET THE REQUIREMENTS OF OSHA FOR TYPE 1A (300lbs) FIXED LADDERS, SINGLE SECTION. DETAILS OF LADDER CONSTRUCTION, ALONG WITH A CERTIFICATION THAT THE LADDER MEETS OR EXCEEDS OSHA REQUIREMENTS FOOT TYPE IA (300lbs) SERVICE SHALL BE SUBMITTED FOR REVIEW PRIOR TO FURNISHING AND INSTALLING. MILL FINISHED ALUMINUM LADDER OR APPROVED CORROSION–RESISTANT MATERIAL.
5. 2"x4" KEY, CENTER ON WALL (INSTALL ROPE CAULK CONTINUOUSLY).
6. 1–5/8" x 2–1/2" x 3" KEY.
7. 4" PVC DUMBELL–TYPE CONTINUOUS WATERSTOP 3/8" MIN. THICKNESS. (WASH THOROUGHLY PRIOR TO INSTALLATION.
8. ANCHOR STRAPS (3 EACH SIDE) WITH 5/8" x 3–1/2" 316SS ANCHOR BOLTS WITH LOCK WASHER AND NUT.

## EQUIPMENT DESCRIPTION

MOLDED FIBERGLASS REINFORCED POLYESTER PARSHALL FLUME (OR APPROVED EQUAL) SHALL BE INSTALLED. THE FLUME SHALL BE MOLDED IN ONE PIECE WITH AMPLE WALL THICKNESS AND REINFORCING RIBS TO PREVENT DISTORTION DURING SHIPMENT, INSTALLATION, AND OPERATION. THE FLUME SHALL BE SELF–SUPPORTING AND REQUIRE NO EXTERNAL SUPPORTING STRUCTURE. INTERIOR DIMENSIONS SHALL CONFORM TO THOSE IN THE LATEST REVISION OF WATER MEASUREMENT MANUAL PUBLISHED BY THE U.S. DEPARTMENT OF THE INTERIOR, WATER AND POWER RESOURCES SERVICES. THE THROAT WIDTH AND FLUME HEIGHT (*E DIMENSION) SHALL BE PER PLAN.

| DETAIL NO. G-3450-2 | CITY OF GOODYEAR STANDARD DETAIL | APPROVED:12/12 | MONITORING/SAMPLING VAULT | DETAIL NO. G-3450-2 |
|---|---|---|---|---|