

RULE NO.: R161-16.02

NOTICE OF PROPOSED RULE

POSTING DATE: April 5, 2016

The Director of the Department of Austin Water Utility proposes to adopt the following rule after May 7, 2016.

Comments on the proposed rule are requested from the public. Comments should be submitted to Mr. Britt Jones; Austin Water Utility, 625 E. 10th Street, 3rd Floor Suite 300, Austin, Texas 78701, 512-972-0235, or via email at britt.jones@austintexas.gov . To be considered, comments must be submitted before May 7, 2016, the 32nd day after the date this notice is posted. A summary of the written comments received will be included in the notice of rule adoption that must be posted for the rule to become effective.

An affordability impact statement regarding the proposed rule has been obtained and is available for inspection or copying at the address noted in the preceding paragraph.

EFFECTIVE DATE OF PROPOSED RULE

A rule proposed in this notice may not become effective before the effective date established by a separate notice of rule adoption. A notice of rule adoption may not be posted before May 7, 2016 (the 32nd day after the date of this notice) or not after July 4, 2016 (the 90th day after the date of this notice).

If a proposed rule is not adopted on or before July 4, 2016, it is automatically withdrawn and cannot be adopted without first posting a new notice of a proposed rule.

TEXT OF PROPOSED RULE

A copy of the complete text of the proposed rule is available for public inspection and copying at the following locations. Copies may be purchased at the following locations at a cost of ten cents per page:

Austin Water Utility, located at 625 E. 10th Street, 3rd Floor Suite 300, Austin, Texas.
See Mr. Britt Jones and:

Office of the City Clerk, City Hall, located at 301 West 2nd Street, Austin, Texas.

2016-APR 5 PM 2 21

AUSTIN CITY CLERK
RECEIVED

BRIEF EXPLANATION OF PROPOSED RULE

R161-16.02: Proposed revision to the Standards Manual Section

- **520S-1** Water and Wastewater Service Connection 1.5 m × 1.5 m (5' × 5') Esmt - Delete
- **520S-1A** Modified Water Service & Wastewater Service Connection Detail- Delete
- **520S-1B** Wastewater Service Connection to PVC C900 Rated Gravity Wastewater Main- Delete
- **520S-3** Double Water/Wastewater Service Connection Detail- Delete
- **520S-3A** Single Wastewater Service Connection Detail- Delete
- **520S-3B** 6" Wastewater Connection to Existing PVC or Lined Main- Delete
- **520S-4** Wastewater Cleanout Adjustment to Grade in Driveways- Delete
- **520S-4A** Wastewater Cleanout Casting (Unpaved Location) - Delete
- **520S-6** Wastewater Deep Service Connection Detail- Delete
- **520S-9** Installation Detail For Two 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") Meters- Delete
- **520S-9A** Double Water Service For Duplex- Delete
- **520S-9B** Potable HDPE Double Service Installation & Two 16 mm, 19 mm, OR 25 mm (5/8", 3/4", or 1") Meters- Delete
- **520S-9R** Reclaimed Water Connection Installation For Two 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") Reclaimed Water Meters- Delete
- **520S-11** Installation for a 16 mm, 19 mm OR 25 MM (5/8", 3/4", or 1") Potable Meter- Delete
- **520S-11A** Double Water Service For Duplex With Irrigation Meter- Delete
- **520S-11B** Potable HDPE Service & 16 mm, 19 mm, and 25 mm (5/8", 3/4", or 1") Meter Installation- Delete
- **520S-11R** Reclaimed Water Connection Installation For a 16 mm, 19 mm or 25 mm (5/8", 3/4", or 1") Reclaimed Water Meter- Delete
- **520S-13** 35 mm & 50 mm (1 1/2" & 2") Meter Installation Showing Optional Bypass- Delete
- **520S-13B** Potable HDPE Service Installation for 35 mm (1 1/2") Meter- Delete
- **520S-13R** Reclaimed Water Connection Installation For a 38 mm, 50 mm (1 1/2" OR 2") Reclaimed Water Meter Showing Optional Bypass- Delete

- **520-AW-01** Water Service and Wastewater Service Connection Detail – New Detail and New Number
 - Combines 520S-01, 520S-1B, 520S-3, 520S-3A, 520S-3B, 520S-6
- **520-AW-02** Water Service and Meter Installation – 1” & Smaller Meters– New Detail and New Number
 - Combines 520S-9, 520S-9A, 520S-9B, 520S9R, 520S-11, 520S-11A, 520-11B, 520-11R.
- **520-AW-03** Wastewater Clean-out Frame and Lid – New Detail and New Number
 - Combines 520S-4, 520S-4A
- **520-AW-04** 1-1/2” and 2” Meter Installation Showing Optional Bypass– New Detail and New Number
 - Combines 520S-13, 520-13B, 520-13R

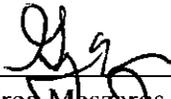
AUTHORITY FOR ADOPTION OF PROPOSED RULE

The authority and procedure for adoption of a rule to assist in the implementation, administration, or enforcement of a provision of the City Code is provided in Chapter 1-2 of the City Code. The authority to regulate construction requirements is established in Section 552.001 and Title 15 of the City Code.

CERTIFICATION BY CITY ATTORNEY

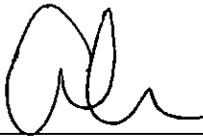
By signing this Notice of Proposed Rule R161-16.02, the City Attorney certifies the City Attorney has reviewed the rule and finds that adoption of the rule is a valid exercise of the Director's administrative authority.

REVIEWED AND APPROVED



Greg Meszaros, Director
Austin Water Utility

Date: 3/24/14



Anne L. Morgan
City Attorney

Date: 3/24/14

Summary of 520 Series Detail Drawings

- **520S-1** Water and Wastewater Service Connection 1.5 m × 1.5 m (5' × 5') Esmt - Delete
- **520S-1A** Modified Water Service & Wastewater Service Connection Detail- Delete
- **520S-1B** Wastewater Service Connection to PVC C900 Rated Gravity Wastewater Main- Delete
- **520S-3** Double Water/Wastewater Service Connection Detail- Delete
- **520S-3A** Single Wastewater Service Connection Detail- Delete
- **520S-3B** 6" Wastewater Connection to Existing PVC or Lined Main- Delete
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- **520S-9** Installation Detail For Two 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") Meters- Delete
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- **520S-11A** Double Water Service For Duplex With Irrigation Meter- Delete
- **520S-11B** Potable HDPE Service & 16 mm, 19 mm, and 25 mm (5/8", 3/4", or 1") Meter Installation- Delete
- **520S-11R** Reclaimed Water Connection Installation For a 16 mm, 19 mm or 25 mm (5/8", 3/4", or 1") Reclaimed Water Meter- Delete
- **520S-13** 35 mm & 50 mm (1 1/2" & 2") Meter Installation Showing Optional Bypass- Delete
- **520S-13B** Potable HDPE Service Installation for 35 mm (1 1/2") Meter- Delete
- **520S-13R** Reclaimed Water Connection Installation For a 38 mm, 50 mm (1 1/2" OR 2") Reclaimed Water Meter Showing Optional Bypass- Delete
- **520-AW-01** Water Service and Wastewater Service Connection Detail – New Detail and New Number
 - Combines 520S-01, 520S-1B, 520S-3, 520S-3A, 520S-3B, 520S-6

- **520-AW-02** Water Service and Meter Installation – 1” & Smaller Meters– New Detail and New Number
 - Combines 520S-9, 520S-9A, 520S-9B, 520S9R, 520S-11, 520S-11A, 520-11B, 520-11R.
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 - Combines 520S-4, 520S-4A
- **520-AW-04** 1-1/2” and 2” Meter Installation Showing Optional Bypass– New Detail and New Number
 - Combines 520S-13, 520-13B, 520-13R

EXCLUSIVE
1.52mx1.52m
(5'x5') WATER
AND WASTEWATER
EASEMENT
(EACH LOT)

METER
BOX

150mm (6")
THREADED ADAPTER
WITH THREADED CAP

APPROVED CLEAN-OUT
HOUSING

150mm x 100mm (6"x4")
GASKETED
REDUCER

100mm
(4") WW
LINE

SEE NOTE #3 IF EXIST
SERVICE IS 100mm (4")

NOTES:

- (A) THESE DIMENSIONS MAY BE INCREASED BY WIDTH OF WALK IF WALK IS LOCATED AT CURB.
- (B) TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.
- (C) BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT AND NOT BE LOCATED MORE THAN 24" (600mm) HORIZONTAL FROM METER BOX.

CITY OF AUSTIN
AUSTIN WATER UTILITY

WATER AND WASTEWATER SERVICE
CONNECTION 1.5mx1.5m (5'x5') ESMT.

RECORD COPY SIGNED BY
KATHI L FLOWERS

06/01/10

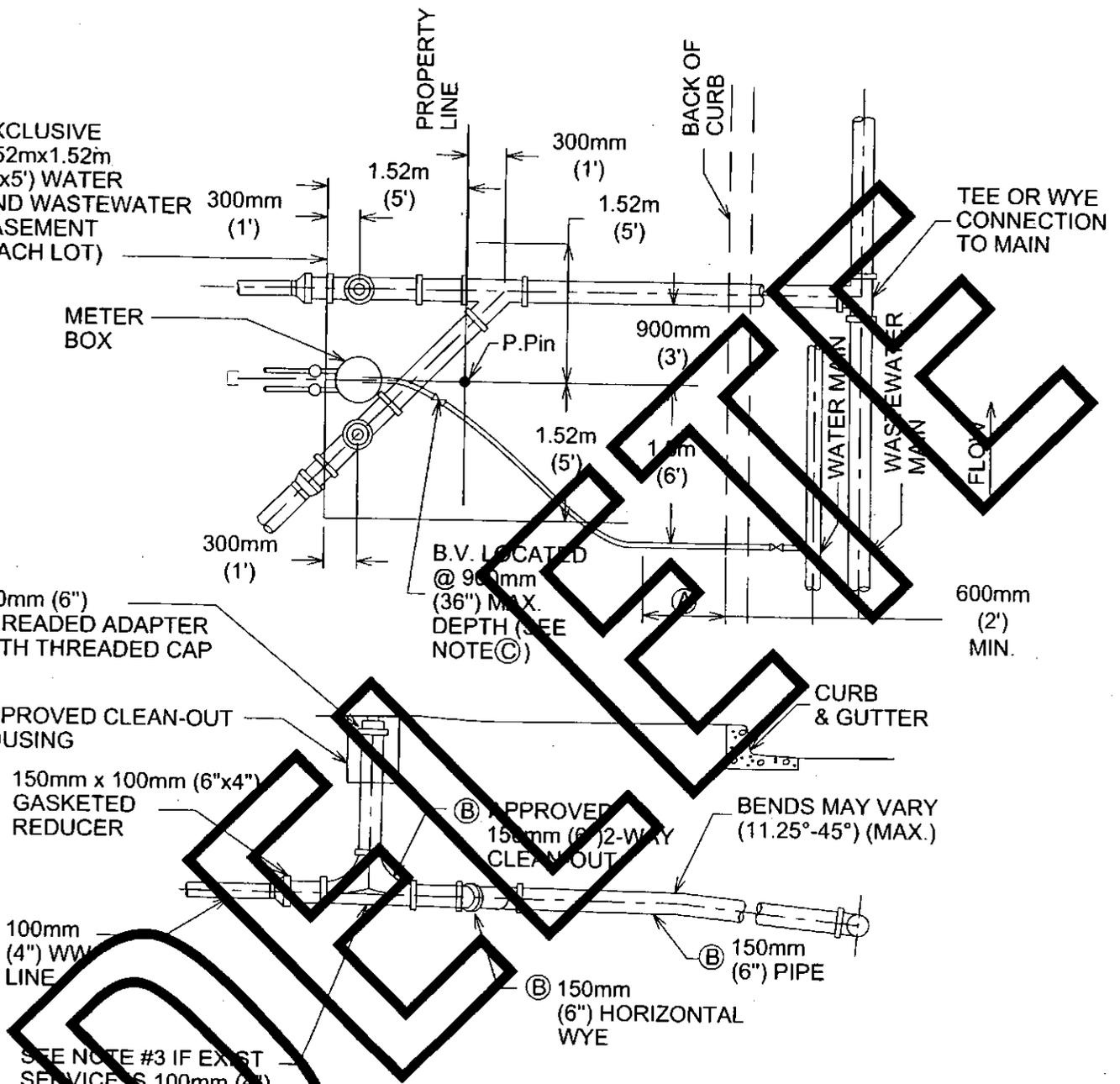
ADOPTED

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.

520S-1

1 OF 2

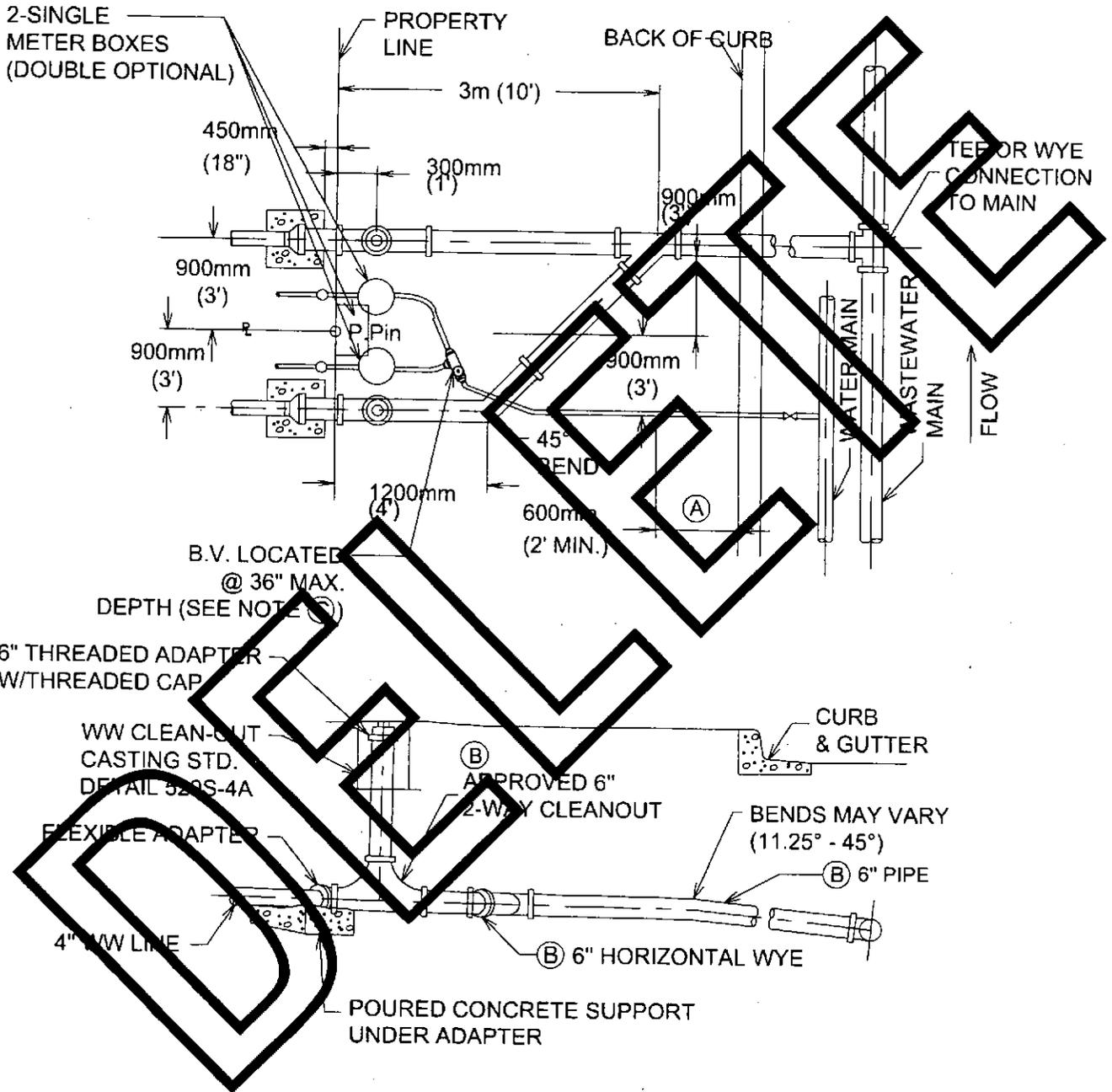


NOTES:

1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4'), OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-6. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT PROPERTY LINE, INSTALLS 150mm x 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCER (SPL WW-227-B). A BUSHING WILL NOT BE ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIMUM 450mm (18") LENGTH OF 150mm (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, EXTEND 100mm (4") PIPE 150mm (6") MINIMUM INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEXIBLE ADAPTER. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE CUSTOMER'S WASTEWATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING FITTINGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. A VENTED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FITTINGS.
3. IF EXISTING WASTEWATER SERVICE IS 100mm (4"), CUSTOMER SHALL INSTALL A 100mm (4") 2-WAY CLEAN-OUT. SEE SPL WW-227B.
4. IF EXISTING SERVICE IS NOT PVC, THE CUSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL HAVE MINIMUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF 150mm (6") BEYOND EITHER END OF THE ADAPTER.
5. CUSTOMER IS RESPONSIBLE FOR METER BOX AND PIPING SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT ALL VALVES AND STOP VALVES, METER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
6. CITY OF AUSTIN ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
7. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 1.07m (42") ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
8. NO METER BOX OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.
9. ALL WW JOINTS THAT ARE NOT PVC OR A COMBINATION OF NON-PVC WITH PVC SHALL BE ENCASED IN CONCRETE OR CLSM.

CITY OF AUSTIN AUSTIN WATER UTILITY		WATER AND WASTEWATER SERVICE CONNECTION 1.5mx1.5m (5'x5') ESMT.	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-1 2 OF 2

USE ON LOT WIDTHS RANGING
FROM 50 FEET TO 25 FEET



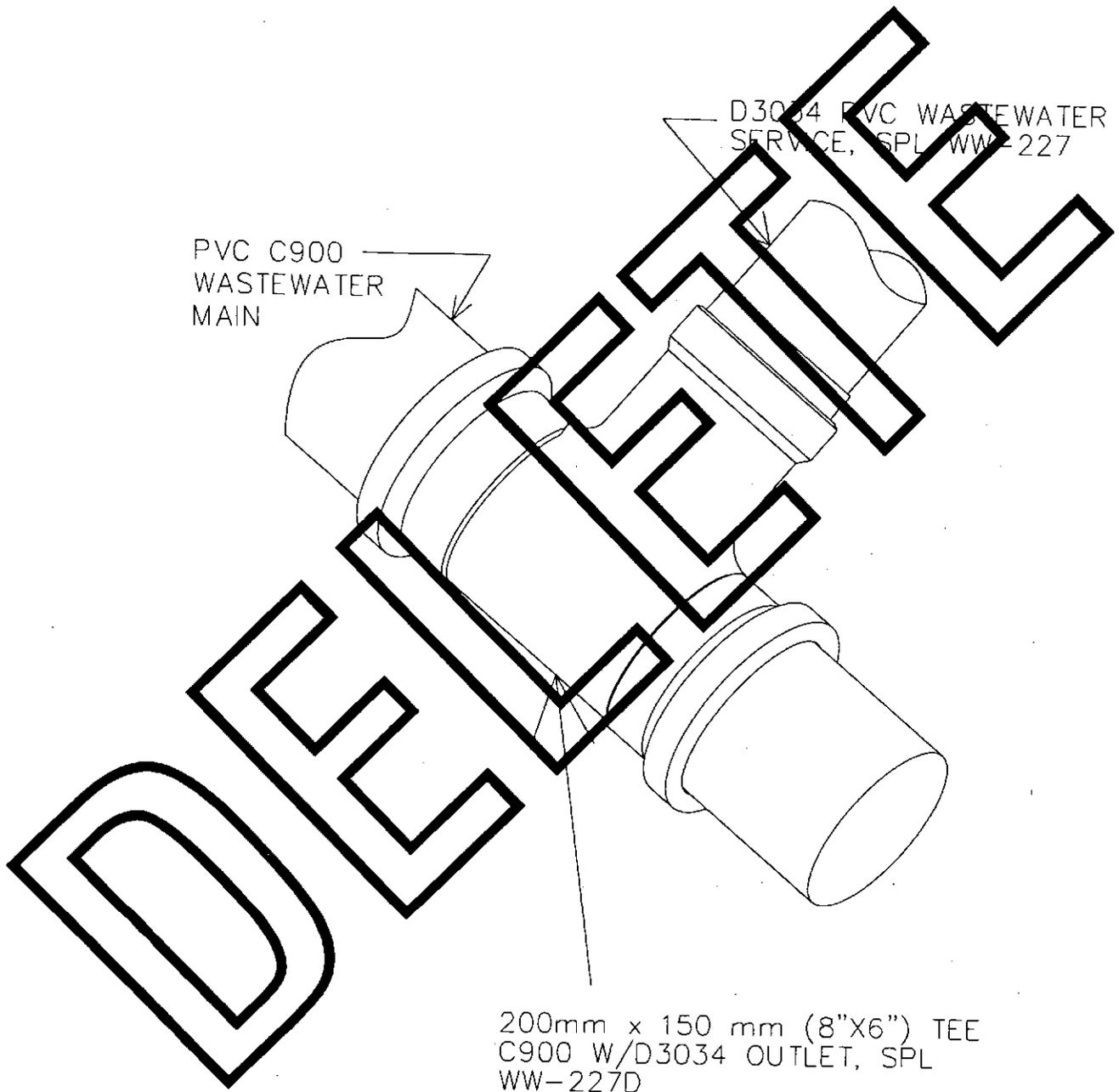
- (A) THESE DIMENSIONS MAY BE INCREASED BY WIDTH OF WALK IF WALK IS LOCATED AT CURB.
- (B) TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.
- (C) BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX.

<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>MODIFIED WATER SERVICE & WASTEWATER SERVICE CONNECTION DETAIL</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520S-1A 1 OF 2</p>

NOTES:

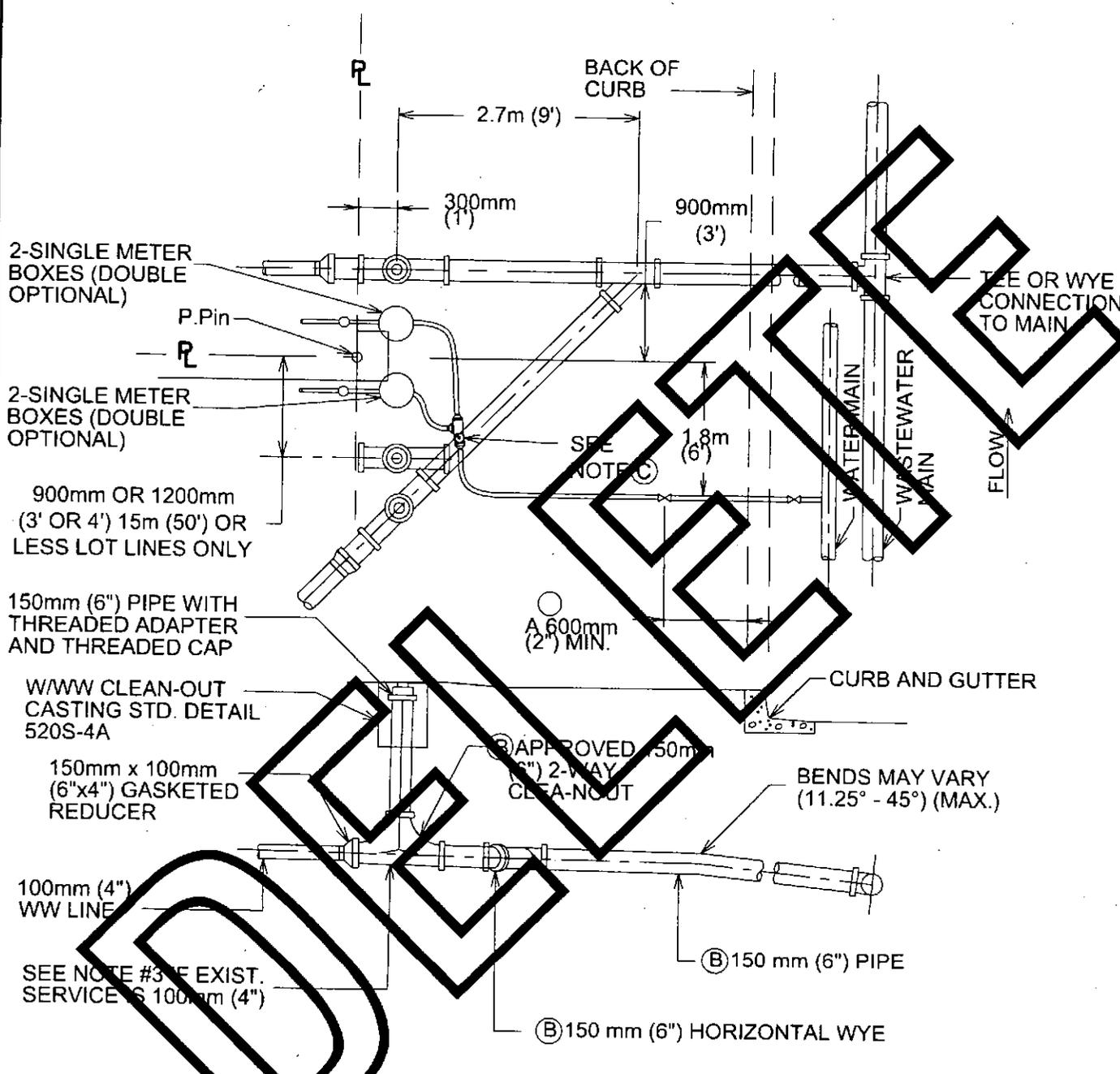
1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4'), OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-6. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT PROPERTY LINE, INSTALLS 150mm x 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCER (SPL WW-227-B). BUSHING WILL NOT BE ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIMUM 450mm (18") LENGTH OF 150mm (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, EXTEND 100mm (4") PIPE 150mm (6") MINIMUM INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEXIBLE ADAPTER. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE CUSTOMER'S WASTEWATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING FITTINGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. A VENTED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FITTINGS.
3. IF EXISTING WASTEWATER SERVICE IS 100mm (4"), CUSTOMER SHALL INSTALL A 100mm (4") 2-WAY-CLEAN-OUT, SEE SPL WW-227B.
4. IF EXISTING SERVICE IS NOT PVC, THE CUSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL HAVE MINIMUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF 150mm (6") BEYOND EITHER END OF THE ADAPTER.
5. CUSTOMER IS RESPONSIBLE FOR METER BOX AND PIPING SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT ALL VALVES AND STOPS, METER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
6. CITY OF AUSTIN ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
7. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 1.07m (42"). ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
8. NO METER BOX OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.
9. ALL WW JOINTS THAT ARE NOT PVC OR A COMBINATION OF NON-PVC WITH PVC SHALL BE ENCASED IN CONCRETE OR CLSM.

CITY OF AUSTIN AUSTIN WATER UTILITY		MODIFIED WATER SERVICE & WASTEWATER SERVICE CONNECTION DETAIL	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-1A
			2 OF 2



1. THIS DETAIL APPLIES ONLY TO INSTALLATIONS THAT MUST COMPLY WITH TCEQ RULE 217.53 (d) (A) (i).

CITY OF AUSTIN AUSTIN WATER UTILITY		WASTEWATER SERVICE CONNECTION TO PVC C900 RATED GRAVITY WASTEWATER MAIN	
RECORD COPY SIGNED BY KATHI L FLOWERS	06/01/10	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-1B
	ADOPTED		



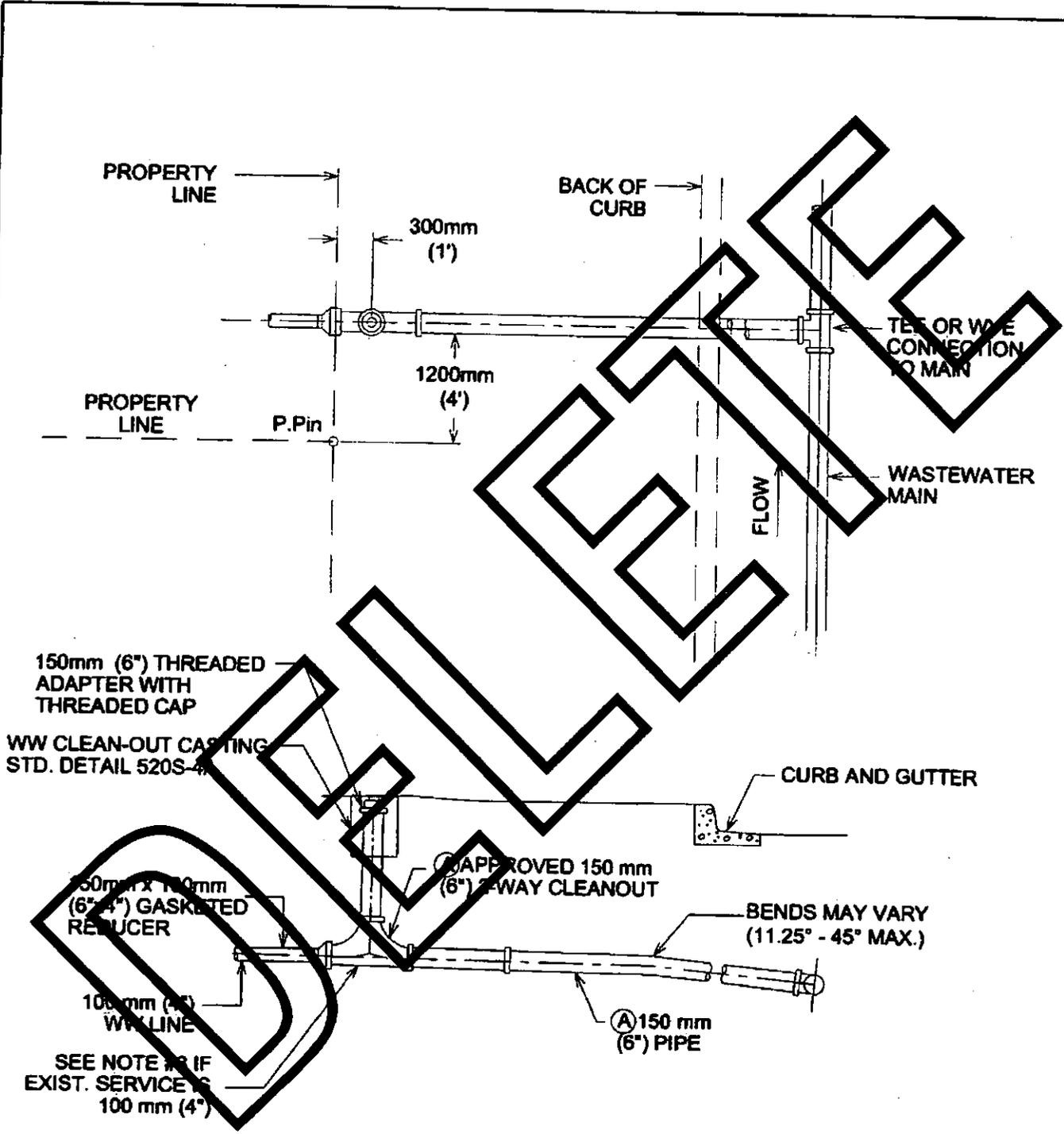
- (A) THESE DIMENSIONS MAY BE INCREASED BY WIDTH OF WALK IF WALK IS LOCATED AT CURB.
- (B) TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.
- (C) BALL VALVE SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX.

<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>DOUBLE WATER/WASTEWATER SERVICE CONNECTION DETAIL</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520S-3 1 OF 2</p>

NOTES:

1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4'), OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-6. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT PROPERTY LINE, INSTALLS 150mm (6") x 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCER (SPL WW-287-B). A BUSHING WILL NOT BE ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIMUM 450mm (18") LENGTH OF 150mm (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, EXTEND 100mm (4") PIPE 150mm (6") MINIMUM INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEXIBLE ADAPTER. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE CUSTOMER'S WASTEWATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING FITTINGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. A VENTED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FITTINGS.
3. IF EXISTING WASTEWATER SERVICE IS 100mm (4"), CUSTOMER SHALL INSTALL A 100mm (4") 2-WAY CLEAN-OUT. SEE SPL WW-227-B.
4. IF EXISTING SERVICE IS NOT PVC, THE CUSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL HAVE MINIMUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF 150mm (6") BEYOND EITHER END OF THE ADAPTER.
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6. CITY OF AUSTIN ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
7. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 1.07m (42"). ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
8. NO METER BOX OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.
9. ALL WW JOINTS THAT ARE NOT PVC OR A COMBINATION OF NON-PVC WITH PVC SHALL BE ENCASED IN CONCRETE OR CLSM.

<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>DOUBLE WATER/WASTEWATER SERVICE CONNECTION DETAIL</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520S-3 2 OF 2</p>



NOTES:
 A. TO BE INSTALLED AND INSPECTED DURING SUBDIVISION CONSTRUCTION.

<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>SINGLE WASTEWATER SERVICE CONNECTION DETAIL</p>
<p><i>Kathie L. Flowers</i></p>	<p>9/23/10 ADOPTED</p>
<p>STANDARD NO. 520S-3A 1 OF 2</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>

NOTES:

1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 150mm (6") STUB WITH HORIZONTAL WYE FOR DOUBLE SERVICES, 150mm (6") SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER FOR CLEANOUT(S) (CAPPED), AND PLUG(S) FOR 2-WAY-CLEANOUT(S) AT PROPERTY LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% (.264mm (1/8") PER FOOT) MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 1.22m (4'). OTHERWISE THE INSTALLED DEPTH WILL TYPICALLY BE 1.22m (4') TO 1.8m (6'). IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 520-B UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE-REFER TO DETAIL 520S-9, 9A, 11 AND 11A FOR LOCATION OF STOP VALVES. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY CITY OF AUSTIN CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMER REMOVES PLUG FROM 2-WAY CLEAN-OUT AT PROPERTY LINE, INSTALLS 150mm x 100mm (6"x4") ELASTOMERIC GASKETED BELL REDUCER (SPL WW-227-B). A BUSHING WILL NOT BE ALLOWED. AS AN ALTERNATE, CUSTOMER MAY INSTALL MINIMUM 450mm (18") LENGTH OF 150mm (6") PIPE, INSTALL 100mm (4") WASTEWATER LINES, EXTEND 100mm (4") PIPE 150mm (6") MINIMUM INTO 150mm (6") PIPE AND JOINT BLOCK UNDER THE FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE FLEXIBLE ADAPTER. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF THE CUSTOMER'S WASTEWATER SYSTEM. CUSTOMER ALSO INSTALLS WATER LINES INCLUDING FITTINGS AND VALVES ON BOTH SIDES OF METER, AND INSTALLS METER BOXES AND COVERS. A VENTED SPACER MAY BE USED TO ASSURE PROPER SPACING AND ALIGNMENT OF METER FITTINGS.
3. IF EXISTING WASTEWATER SERVICE IS 100mm (4"), CUSTOMER SHALL INSTALL A 100mm (4") 2-WAY-CLEAN-OUT, SEE SPL WW-227B.
4. IF EXISTING SERVICE IS NOT PVC, THE CUSTOMER SHALL INSTALL A FLEXIBLE ADAPTER (SPL WW-354) AND CAST IN PLACE CONCRETE SUPPORT BLOCK UNDER THE ADAPTER TO TRANSITION TO PVC. THE SUPPORT BLOCK SHALL HAVE MINIMUM DIMENSIONS OF 150mm (6") THICK AND 450mm (18") WIDE AND EXTEND A MINIMUM OF 150mm (6") BEYOND EITHER END OF THE ADAPTER.
5. CUSTOMER IS RESPONSIBLE FOR METER BOX AND PIPING SYSTEM UNTIL METER IS INSTALLED AND WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE, THAT ALL VALVES AND STOPS, METER BOX AND 2-WAY-CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
6. CITY OF AUSTIN ACTIVITY IS LIMITED TO INSTALLATION OF THE WATER METER AND INSPECTION OF CONNECTIONS TO THE CITY'S RESPONSIBILITY ENDS AT THE CUSTOMER'S WATER CUT-OFF VALVE AND AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEAN-OUT.
7. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(a) AND (3)(b); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 1.07m (42"). ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY THE ENGINEER.
8. NO METER BOX OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA WITHOUT WRITTEN APPROVAL FROM AUSTIN WATER UTILITY.

CITY OF AUSTIN
AUSTIN WATER UTILITY

**SINGLE WASTEWATER
SERVICE CONNECTION DETAIL**

Kathleen Powers

9/23/10
ADOPTED

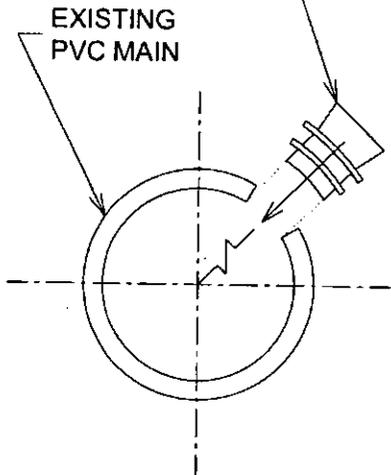
THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.

520S-3A

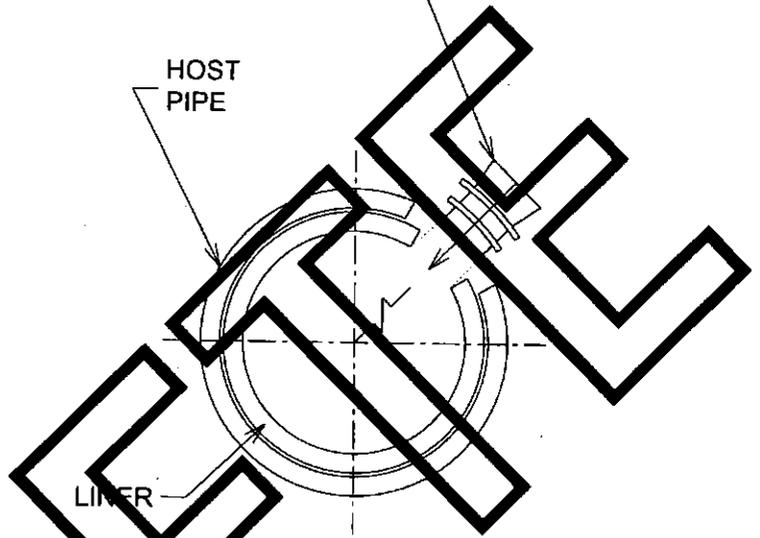
2 OF 2

SERVICE ADAPTOR CONSISTING OF SINGLE-BODY GASKETED BELL HAVING SDR 26 PVC HUB, RUBBER SLEEVE AND STAINLESS STEEL BAND. SEE SPL WW-227D & DETAIL A



EXISTING PVC MAIN

HOST PIPE



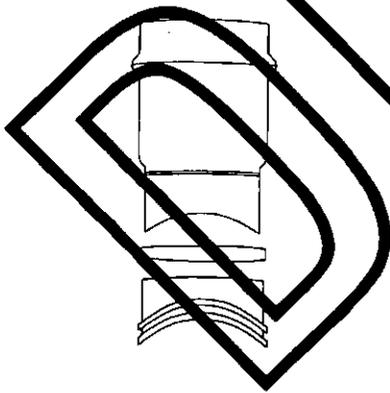
LINER

INSTALLATION IN PVC PIPE

1. MARK LOCATION OF TAP.
2. CORE HOLE THROUGH PVC USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
3. INSTALL SERVICE ADAPTOR.

INSTALLATION IN LINED PIPE

1. MARK LOCATION OF TAP.
2. BREAK & REMOVE HOST PIPE SO THAT OPENING IS AT LEAST 2" WIDER THAN DIAMETER OF THE SERVICE ADAPTOR.
3. DO NOT DAMAGE LINER.
4. CORE HOLE THROUGH LINER USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
5. INSTALL SERVICE ADAPTOR.
6. HOLES CUT IN HOST PIPE SHALL BE PATCHED WITH NON-SHRINK GROUT (ASTM C1107 GRADE)



DETAIL A

NOTES

1. USE ONLY TO TAP EXISTING PVC OR LINED PIPE.
2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.

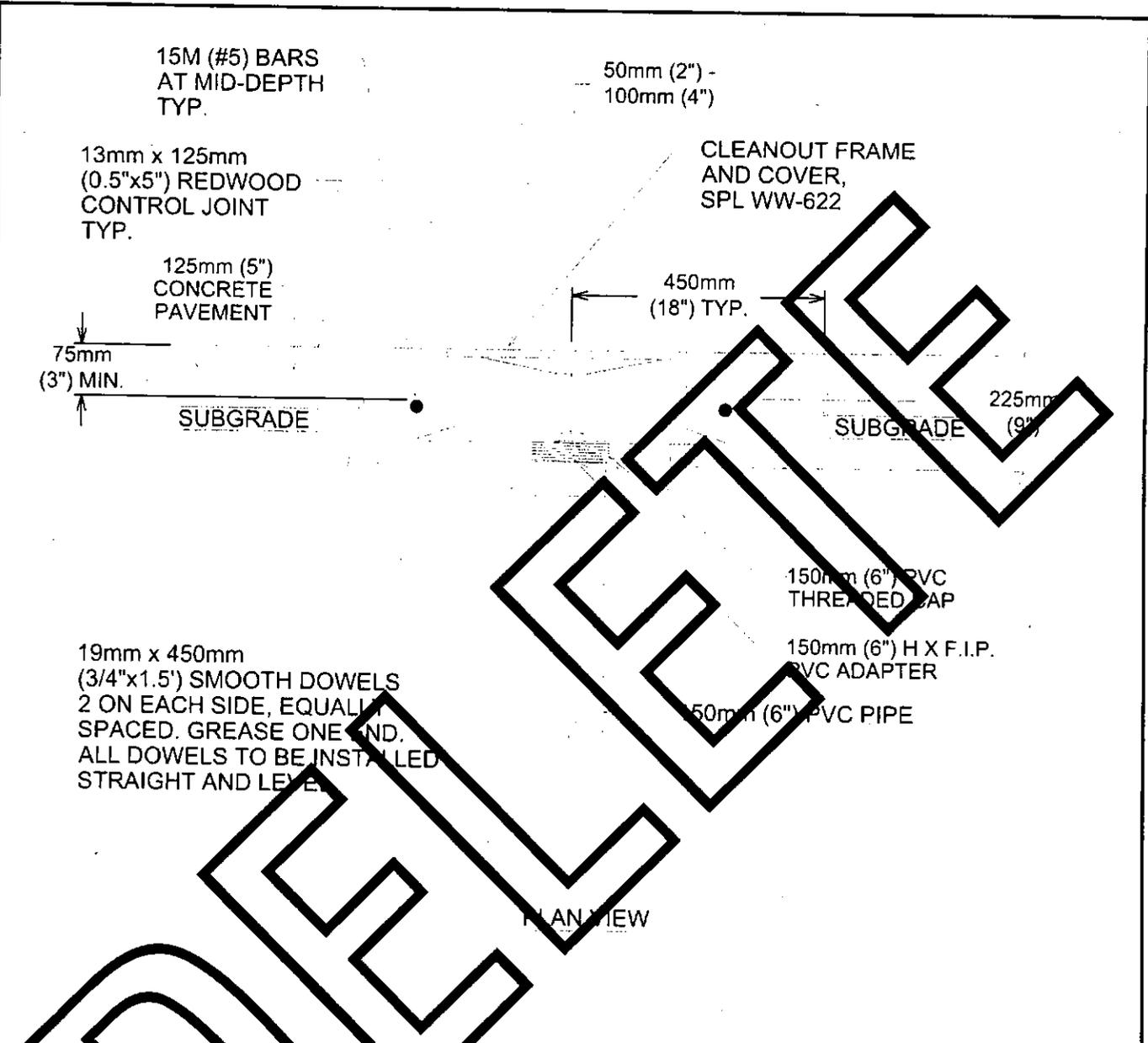
CITY OF AUSTIN
AUSTIN WATER UTILITY

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

6" WASTEWATER CONNECTION
TO EXISTING PVC OR LINED MAIN

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

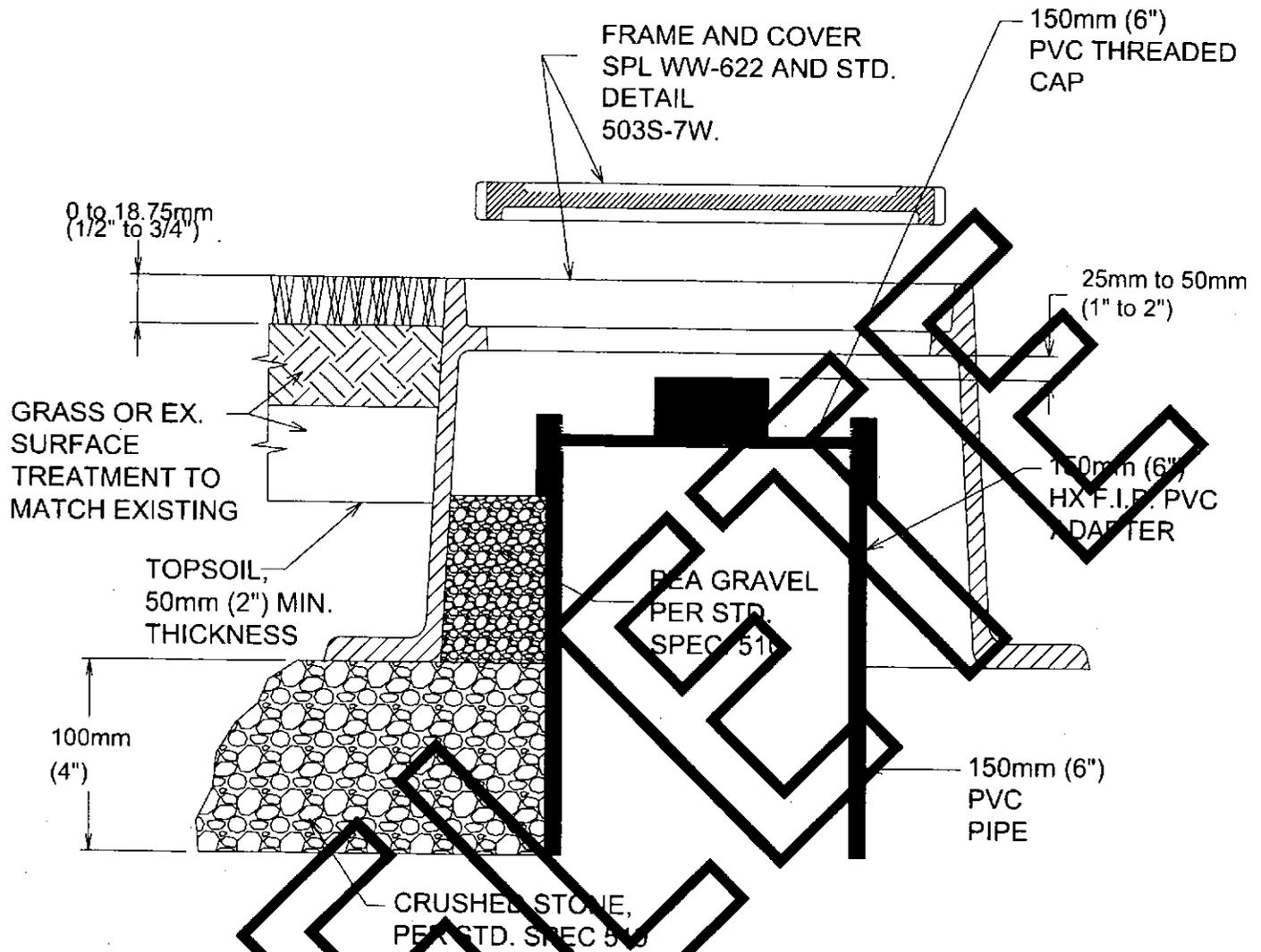
STANDARD NO.
520S-3B



NOTES:

1. SERVICES SHALL BE DESIGNED TO AVOID CLEAN-OUT LOCATION WITHIN DRIVEWAYS.
2. THIS STANDARD DETAIL IS ONLY FOR EXISTING CLEANOUTS THAT ARE LOCATED WITHIN EXISTING DRIVEWAYS.
3. SUB-GRADE SHALL BE COMPACTED AS PER STD. SPEC. 201S, SUB-GRADE PREPARATION.
4. REINFORCING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
5. PC CONCRETE SHALL MEET ITEM 403S CLASS "A".
6. TRAFFIC BEARING FRAME AND COVER ONLY, HEAVY DUTY.
7. PLACE CASTING IN CONCRETE, FINISH CONCRETE SMOOTH.
8. LOCATE CASTING SO WATER WILL NOT ACCUMULATE AT CASTING.
9. PVC PIPE SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-35. CLEANOUTS INSTALLED ON SDR-26 SERVICES SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26.

<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>WASTEWATER CLEAN-OUT ADJUSTMENT TO GRADE IN DRIVEWAYS</p>
<p>RECORD COPY SIGNED BY KATHI L FLOWERS</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>
<p>06/01/10 ADOPTED</p>	<p>STANDARD NO. 520S-4</p>



SECTION VIEW

NOTES:

1. THIS ASSEMBLY IS NOT FOR ANY LOCATION THAT WILL HAVE TRAFFIC LOADS.
2. FOR CLEANOUTS LOCATED IN SIDEWALKS, DRIVEWAYS, ASPHALT, AND OTHER PAVED AREAS, INSTALL CLEAN-OUT CASTING PER 520S-4.
3. LOCATE CASTING OR SET AT APPROPRIATE HEIGHT SO WATER WILL NOT ACCUMULATE AT CASTING.
4. PVC PIPE SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-35. CLEANOUTS INSTALLED ON SDR-26 SERVICES SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26.

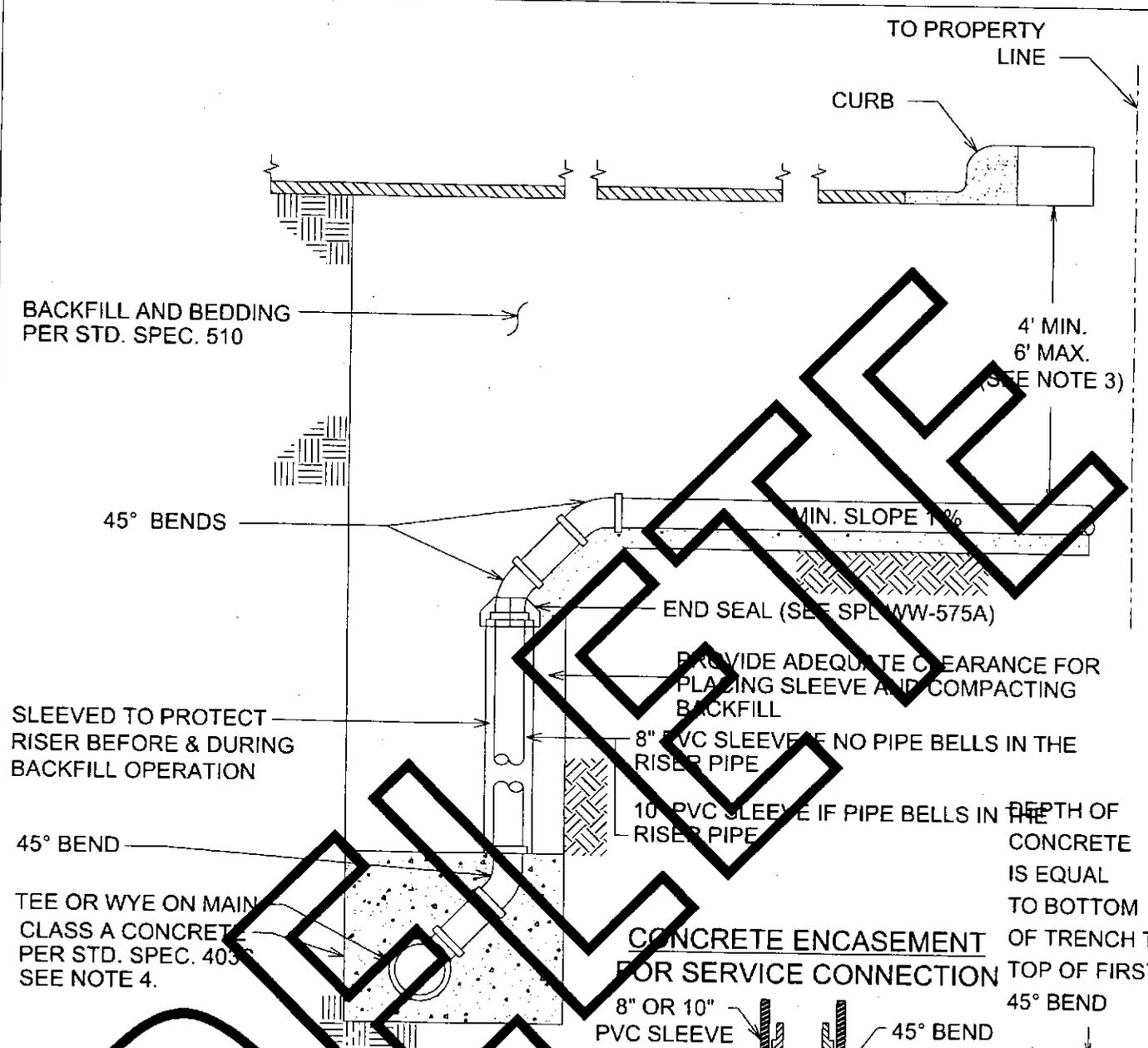
CITY OF AUSTIN
AUSTIN WATER UTILITY

WASTEWATER CLEANOUT CASTING
(UNPAVED LOCATION)

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.
520S-4A



BACKFILL AND BEDDING PER STD. SPEC. 510

45° BENDS

SLEEVED TO PROTECT RISER BEFORE & DURING BACKFILL OPERATION

45° BEND

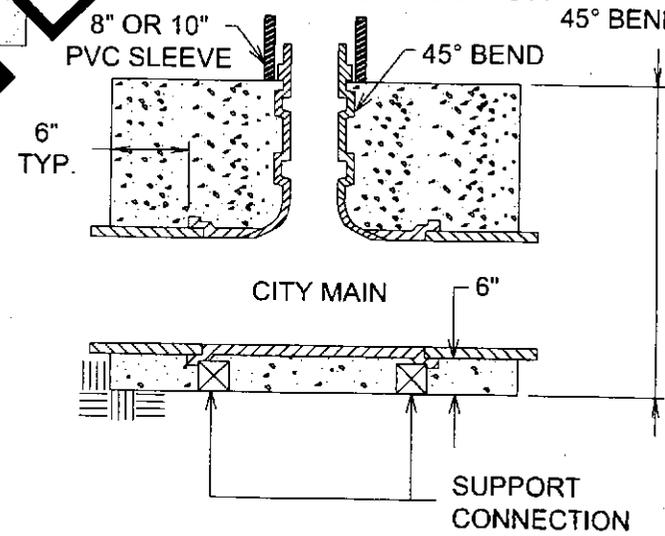
TEE OR WYE ON MAIN CLASS A CONCRETE PER STD. SPEC. 403 SEE NOTE 4.

CONCRETE ENCASEMENT FOR SERVICE CONNECTION

DEPTH OF CONCRETE IS EQUAL TO BOTTOM OF TRENCH TO TOP OF FIRST 45° BEND

NOTES

1. FOR DETAILS AT PROPERTY LINE, SEE STD. DETAILS 520-6-1, FIG. 3 & 3A
2. BACKFILL AND BEDDING ACCORDING TO ITEM STD. SPEC. 510
3. VERIFY DEPTH TO ENSURE ADEQUATE SLOPE (1% MIN.) FOR CUSTOMER AND MAINTAIN 4'-6" DEPTH.
4. CONCRETE AT SERVICE CONNECTION SHALL COMPLETELY FILL TRENCH WIDTH TO DEPTH INDICATED ON DETAIL AND EXTEND 6" EACH WAY BEYOND TEE OR WYE JOINTS.



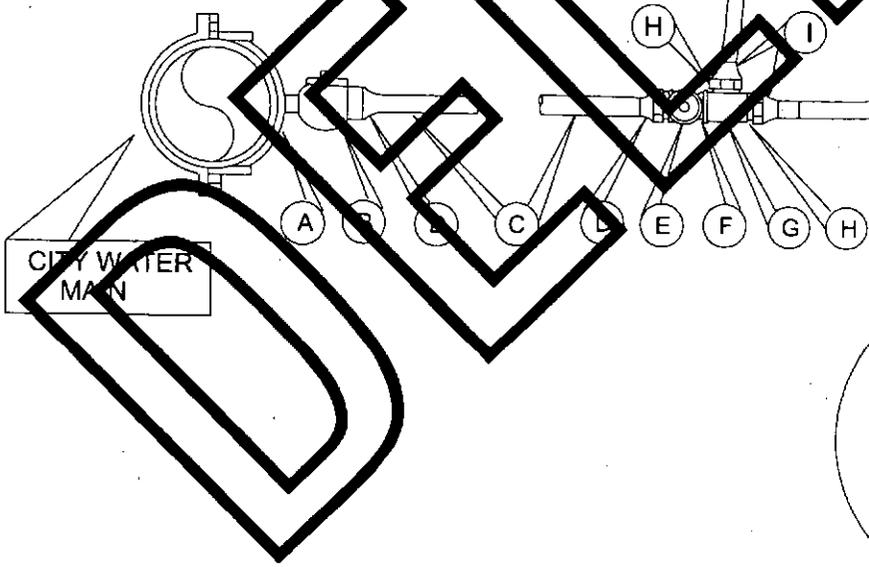
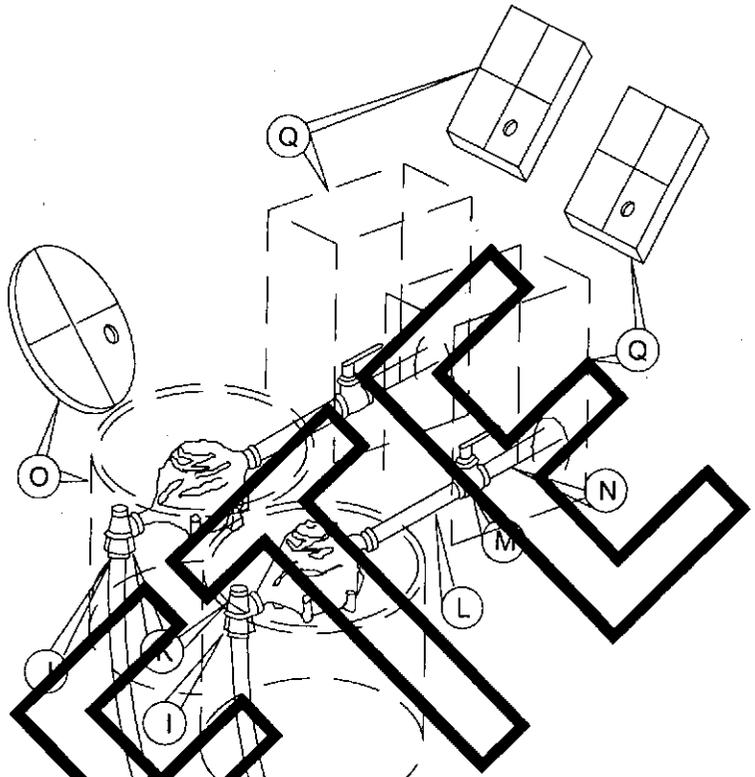
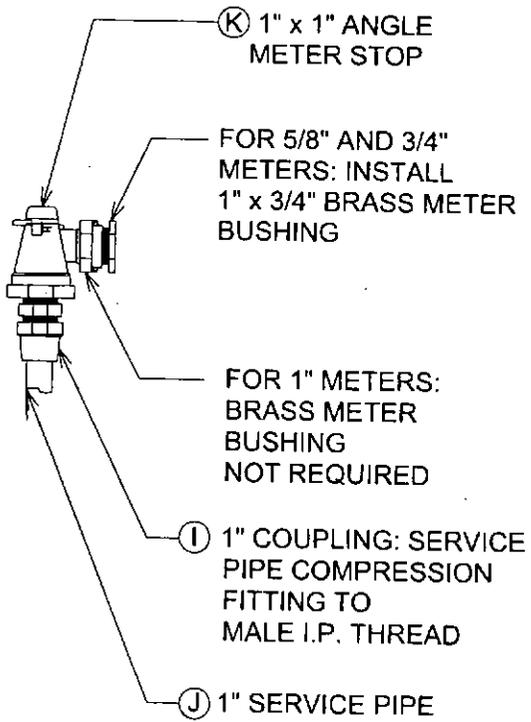
CITY OF AUSTIN
AUSTIN WATER UTILITY

WASTEWATER DEEP SERVICE CONNECTION DETAIL

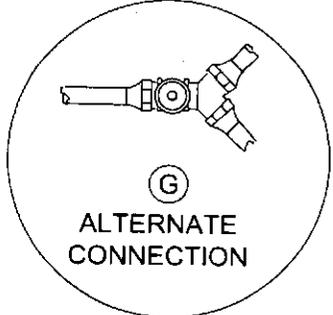
RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO.
520-6



CITY WATER MAIN



CITY RESPONSIBILITY ENDS ON THE CUSTOMER SIDE OF THE METER BOX

CITY OF AUSTIN AUSTIN WATER UTILITY	INSTALLATION DETAIL FOR TWO 16mm (5/8"), 19mm (3/4") & 25mm (1") METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-9 1 OF 2

MATERIAL LIST

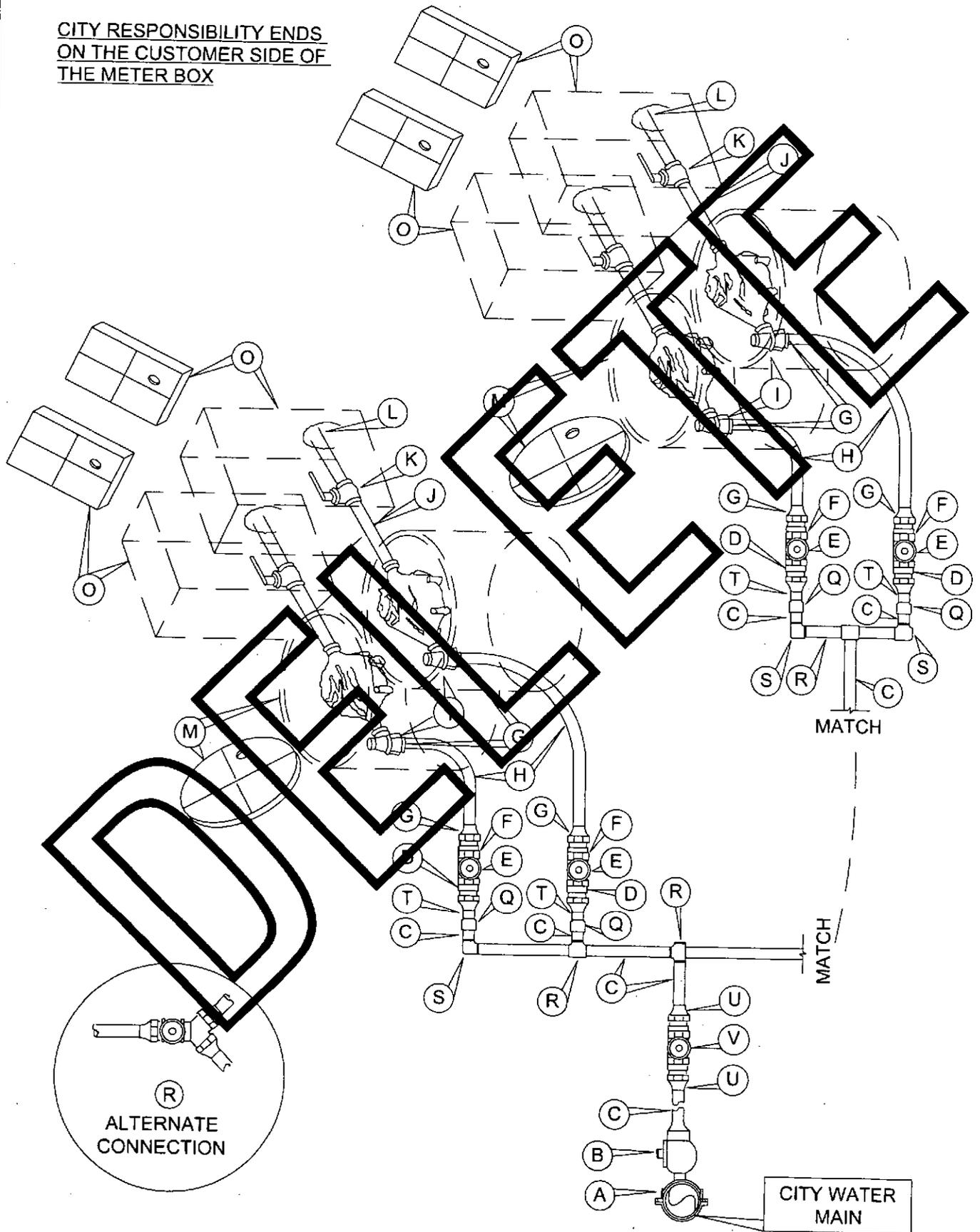
- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- (B) 38mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- (C) 38mm (1-1/2") SERVICE PIPE
- (D) 38mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (E) 38mm (1-1/2") BALL VALVE. SEE SPL WW -275; SEE NOTE 8
- (F) 38mm (1-1/2") CLOSE NIPPLE. BRONZE I.P. THREAD
- (G) 38mm (1-1/2") BRONZE TEE. SPL WW-68 OR 38mm (1-1/2") BRONZE WYE SPL WW-68
- (H) BRONZE BUSHING, 38mm x 25mm (1-1/2"x1"), I.P. THREADS
- (I) 25mm (1") COUPLING: SERVICE PIPE TO MALE I.P. THREAD, COMPRESSION FITTING
- (J) 25mm (1") SERVICE PIPE
- (K) 25mm (1") ANGLE METER STOP; SERVICE PIPE INLET x SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS 25mm x19mm (1"x3/4") BRASS METER BUSHING
 -FOR 25mm (1") METERS BRASS METER BUSHING NOT REQUIRED
 -FOR ALL, SEE SPL WW-68
- (L) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING NUT:
 -FOR 16mm (5/8") AND 19mm (3/4") METERS: 19mm x 213mm (3/4"x8-1/2") LONG
 -FOR 25mm (1") METERS: 25mm x 213mm (1"x8-1/2") LONG
- (M) 25mm (1") BALL VALVE. SEE SPL WW-276
- (N) 25mm (1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS
- (O) AMR/AMI READY METER BOX AND LID PER STANDARD PRODUCTS LIST: SPL WW-145 OR WW-145A
- (P) N/A
- (Q) PROPERTY OWNERS BALL VALVE BOX AND LID, RECTANGULAR PLASTIC BOX, DFW #D1200 OR EQUAL

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM.
3. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
4. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
6. BOX MUST BE BEHIND CURB, NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
7. BALL VALVE (E) SHALL NOT BE LOCATED MORE THAN 36" (914mm) BELOW METER OR MORE THAN 24" (610mm) HORIZONTALLY FROM METER. BALL VALVE (E) MAY NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
8. A METER BOX IS REQUIRED FOR EACH 25mm (1") METER.

CITY OF AUSTIN AUSTIN WATER UTILITY	INSTALLATION DETAIL FOR TWO 16mm (5/8"), 19mm (3/4") & 25mm (1") METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-9 2 OF 2

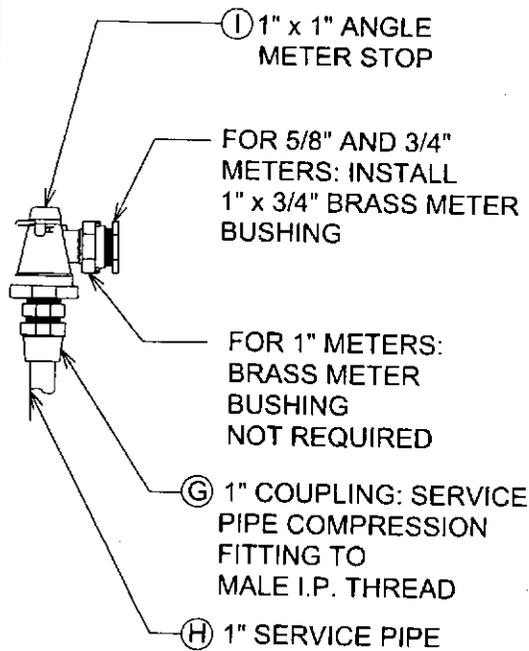
**CITY RESPONSIBILITY ENDS
ON THE CUSTOMER SIDE OF
THE METER BOX**



**CITY OF AUSTIN
AUSTIN WATER UTILITY**
RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

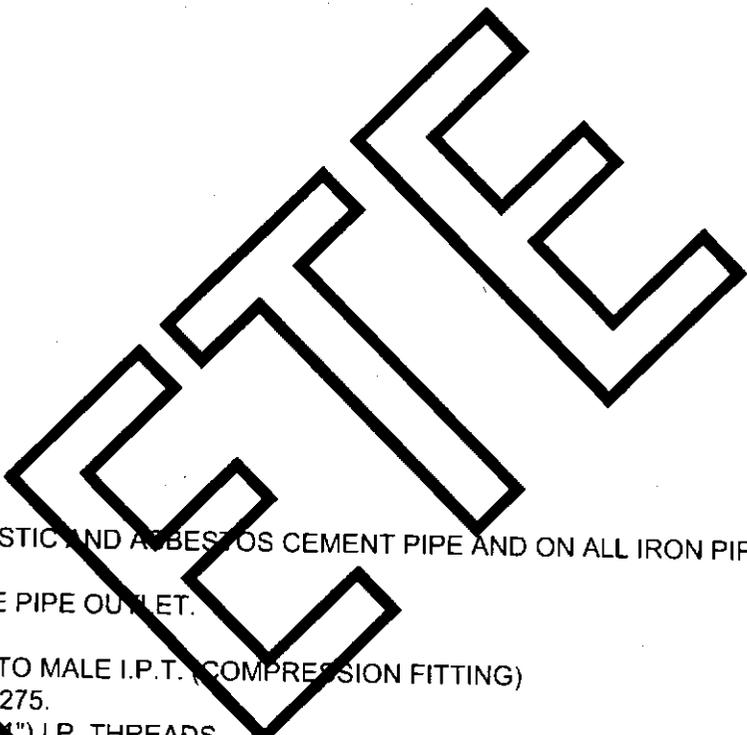
DOUBLE WATER SERVICE FOR DUPLEX
THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.
520S-9A
1 OF 3



MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- (B) 50mm (2") CORPORATION STOP SERVICE PIPE OUTLET.
- (C) 50mm (2") SERVICE PIPE.
- (D) 38mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (E) 38mm (1-1/2") BALL VALVE. SEE SPL WW-275.
- (F) BRONZE BUSHING, 38mm x 25mm (1-1/2" x 1") I.P. THREADS.
- (G) 25mm (1") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (H) 25mm (1") SERVICE PIPE.
- (I) ANGLE METER STOP, SERVICE INLET x SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 25mm x 19mm (1"x3/4") BRASS BUSHING
 -FOR 25mm (1") METERS: BRASS BUSHING NOT REQUIRED.
 -FOR ALL, SEE SPL WW-68
- (J) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING NUT:
 -FOR 16mm AND 25mm (5/8" AND 3/4") METERS: 19mm x 213mm (3/4"x8-1/2") LONG
 -FOR 25mm (1") METERS: 25mm x 213mm (1" x 8-1/2") LONG
- (K) BALL VALVE. SEE SPL WW-276. 19mm OR 25mm (3/4" OR 1") (PROPERTY OWNER'S BALL VALVE)
- (L) 19mm OR 25mm (3/4" OR 1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS.
- (M) AMI/AMR READY METER BOX AND LID PER SPL WW-145 OR WW-145A.
- (N) N/A
- (O) PROPERTY OWNER'S BALL VALVE BOX AND LID-RECTANGULAR PLASTIC BOX. DFW # D1200 OR EQUAL.
- (P) N/A
- (Q) 50mm x 38mm (2" x 1-1/2") REDUCER.
- (R) 50mm x 50mm x 50mm (2"x2"x2") TEE, OR WYE, SPL WW-68.
- (S) 50mm x 50mm (2"x2") ELBOW.
- (T) 38mm (1-1/2") SERVICE PIPE.
- (U) 50mm (2") COUPLING. SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (V) 50mm (2") BALL VALVE. SEE SPL WW-275.



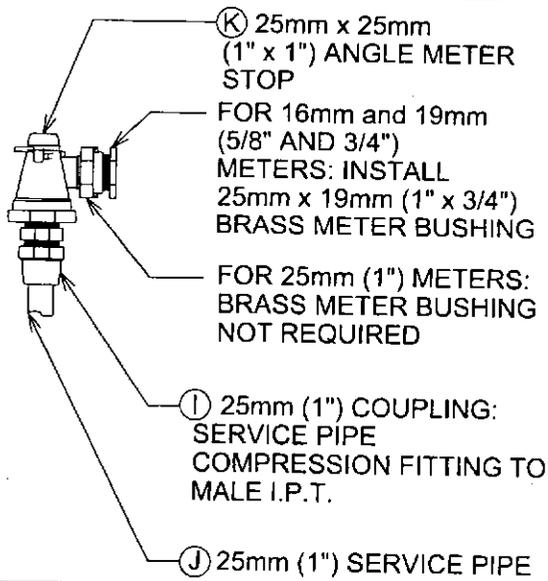
<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>DOUBLE WATER SERVICE FOR DUPLEX</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520S-9A 2 OF 3</p>

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS. OTHER THAN FITTINGS INCLUDED ON PAGE 2 OF 3.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM.
3. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
4. TOP OF BOXES SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
6. BOX SHALL BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
7. BALL VALVES (E) AND (V) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX AND 900mm (36") BELOW FINAL GRADE.
8. A METER BOX IS REQUIRED FOR EACH 25mm (1") METER.

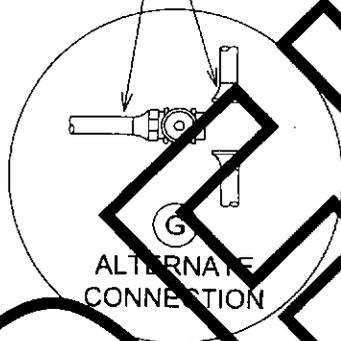
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CITY OF AUSTIN AUSTIN WATER UTILITY	DOUBLE WATER SERVICE FOR DUPLEX	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-9A 3 OF 3



CITY RESPONSIBILITY ENDS ON THE CUSTOMER SIDE OF THE METER BOX

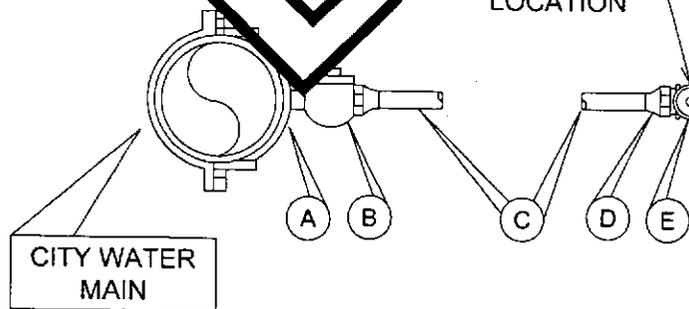
SEE NOTE 11
INSERT STIFFENER
(TYPICAL)
SPL WW-65B



SEE NOTE 10
FOR BALL VALVE
LOCATION

NOTE:
TWO METER BOXES ARE
REQUIRED ANYTIME A
25 mm (1") METER IS USED.

SEE NOTES 8 AND 9 FOR
ALLOWABLE BEND RADIUS.



CITY OF AUSTIN
AUSTIN WATER UTILITY

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

POTABLE HDPE DOUBLE SERVICE INSTALLATION
& TWO 16mm, 19mm, OR 25mm (5/8", 3/4", OR 1") METERS

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.

520S-9B

1 OF 3

MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300 mm (12") AND SMALLER.
- (B) 50mm (2") CORPORATION STOP-MALE THREAD INLET BY COMPRESSION OUTLET, SPL WW-68
- (C) 50mm (2") SERVICE TUBING PER SPL WW-65
- (D) COUPLING: 50mm (2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.
- (E) 38mm (1-1/2") BALL VALVE; SEE SPL WW-275 AND NOTE 10.
- (F) N/A
- (G) 38mm (1-1/2") x 25mm (1") BRONZE WYE. SPL WW-68 OR TEE (ALTERNATE CONNECTION)
- (H) N/A
- (I) 25mm (1") COUPLING: SERVICE TUBING TO MALE I.P.T. (COMPRESSION FITTING) W/STIFFENER PER SPL WW-65B
- (J) 25mm (1") SERVICE TUBING
- (K) 25mm (1") ANGLE METER STOP; SERVICE TUBING INLET x SWIVEL COUPLING UNIT OUTLET, AND 25mm x 19mm (1" x 3/4") BRASS BUSHING. A 25mm x 19mm (1" x 3/4") METER BUSHING IS REQUIRED AT THE ANGLE STOP TO BE INSTALLED BY PLUMBER FOR ALL 16mm (5/8") AND 19mm (3/4") METERS. SPL WW-68
- (L) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING UNIT:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm x 213mm (3/4"x8-1/2") LONG
 -FOR 25mm (1") METERS: 25mm x 213mm (1" x 8-1/2") LONG
- (M) CUSTOMER BALL VALVE 25mm (1") SEE SPL WW-275
- (N) 25mm (1") TUBING MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS
- (O) METER BOX PER SPL WW-145 OR WW-145A
- (P) AMR/AMI READY LID-FOR METER BOX FURNISHED WITH APPROVED BOX.
- (Q) RECTANGULAR BOX FOR CUSTOMER'S CUT-OFF VALVE AND PRV (WHEN REQ'D.) 300mm x 425mm x 300mm (12"x17"x12") OR EQUAL. SIZE MAY VARY WITH PRV AND SHOULD BE SIZED FOR OPERATION OF BALL VALVE. SEE SPL WW-145A.
- (R) RECTANGULAR PLASTIC BOX LID, 300mm x 425mm x 300mm (12" x 17" x 12") OR EQUAL. SEE SPL WW-145A.

DEFLECT

CITY OF AUSTIN AUSTIN WATER UTILITY	POTABLE HDPE DOUBLE SERVICE INSTALLATION & TWO 16mm, 19mm, OR 25mm (5/8", 3/4", OR 1") METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-9B 2 OF 3

NOTES:

1. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM.
2. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE AND/OR SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
6. INSTALL METALLIC WARNING TAPE MIN. 1' ABOVE P.E. TUBING FROM TAP CONNECTION TO METER.
7. TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.
8. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1.
9. IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.
10. B.V. (E) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 900mm (36") BELOW FINAL GRADE.
11. INSERT STIFFENERS FOR P.E. TUBING PER SML WWS 65B TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

TABLE 1 (SEE NOTE 8)

Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	0.9m (3')
38mm (1-1/2")	1.2m (4')
50mm (2")	1.5m (5')

TABLE 2 (SEE NOTE 9)

Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	3.66m (12')
38mm (1-1/2")	4.86m (16')
50mm (2")	6.06m (20')

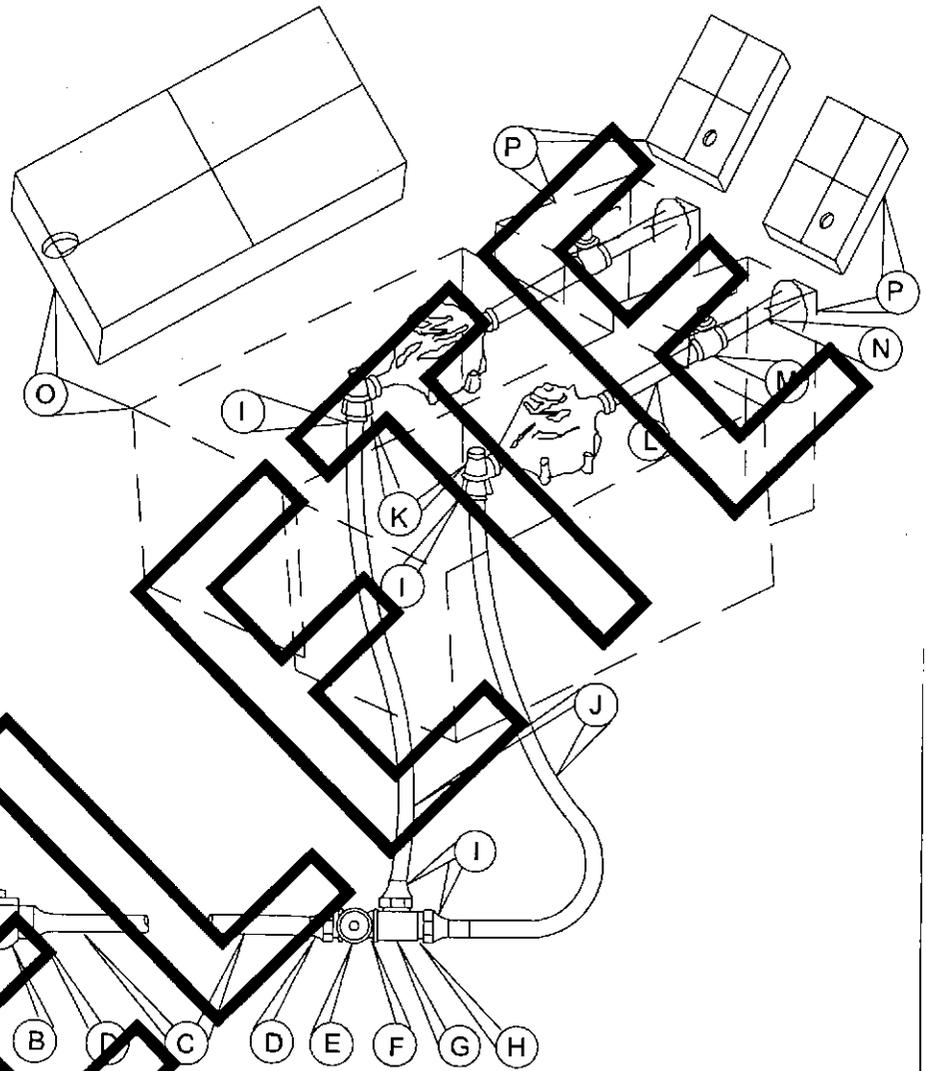
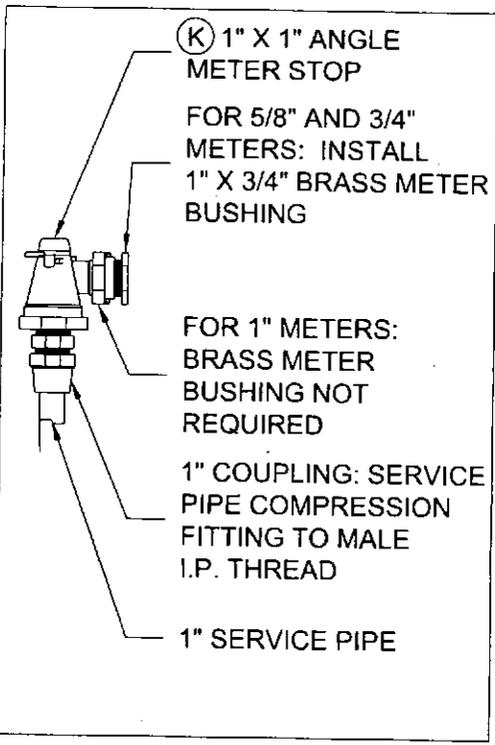
CITY OF AUSTIN
AUSTIN WATER UTILITY

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

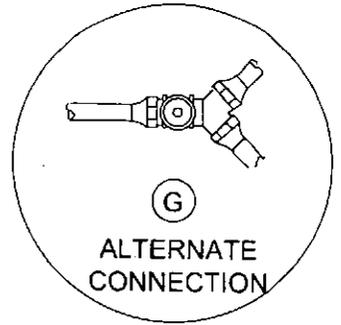
POTABLE HDPE DOUBLE SERVICE INSTALLATION
& TWO 16mm, 19mm, OR 25mm (5/8", 3/4", OR 1") METERS

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.
520S-9B



CITY RESPONSIBILITY ENDS ON THE CUSTOMER SIDE OF THE METER BOX



<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>RECLAIMED WATER CONNECTION INSTALLATION FOR TWO 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") RECLAIMED WATER METERS</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS</p>	<p>8/31/11</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 520S-9R SHEET 1 OF 2</p>

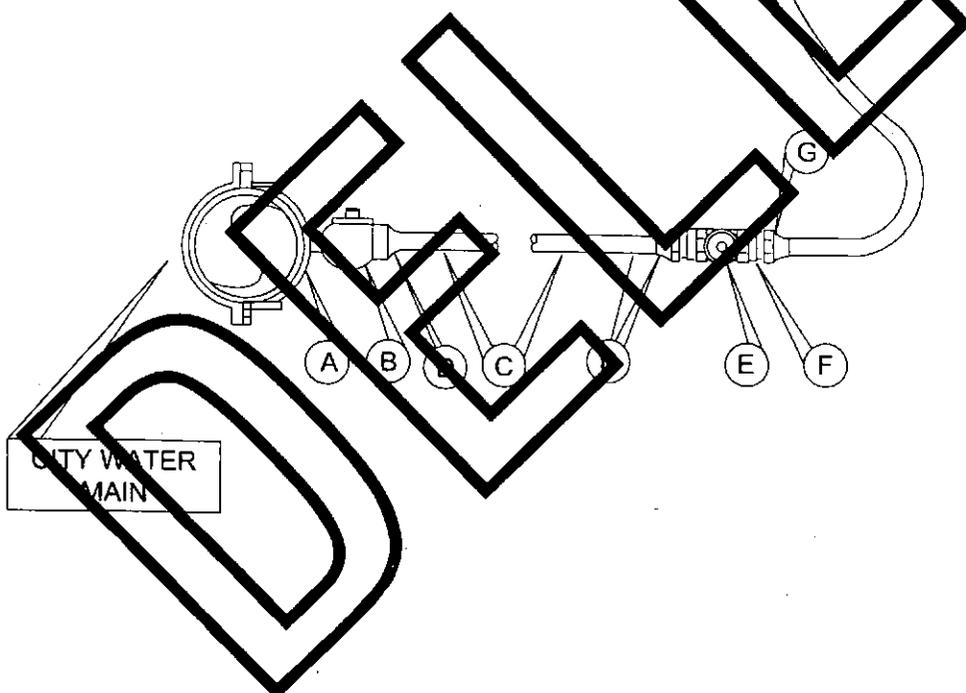
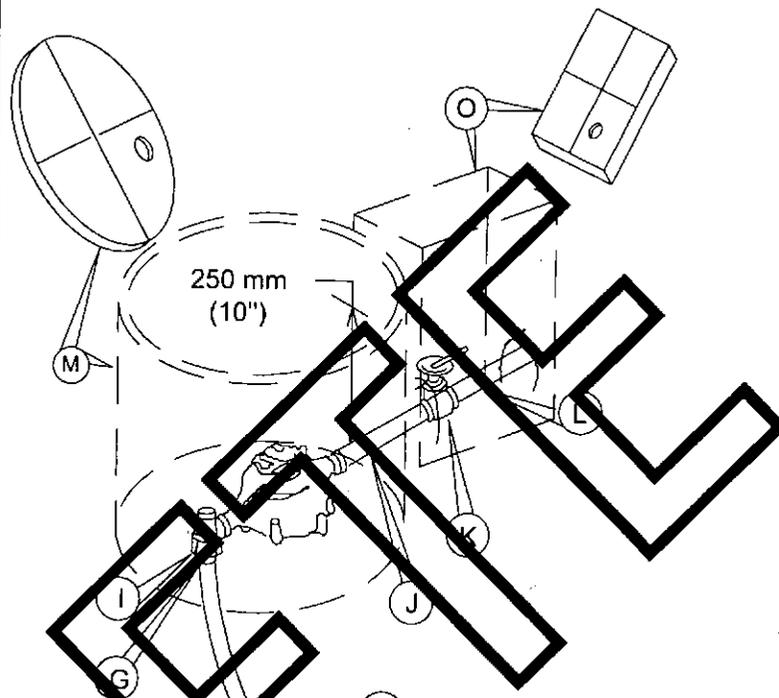
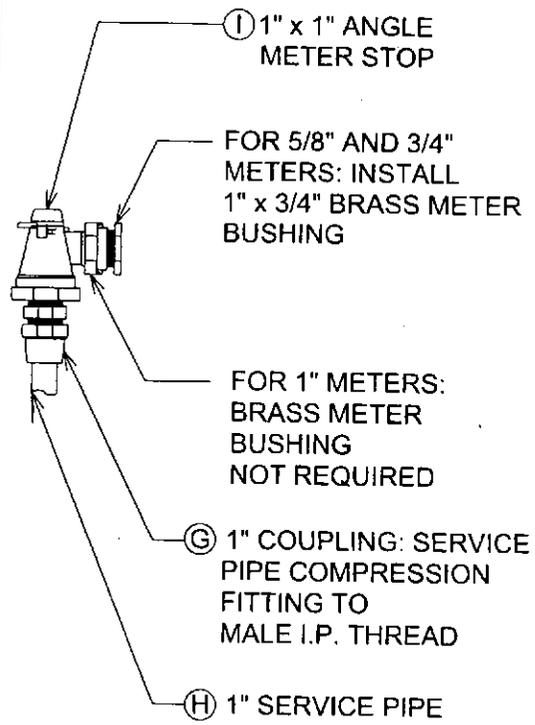
MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER
- (B) 38 mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- (C) 38 mm (1-1/2") SERVICE PIPE
- (D) 38 mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (E) 38 mm (1-1/2") BALL VALVE. SEE SPL WW-275; SEE NOTE 8
- (F) 38 mm (1-1/2") CLOSE NIPPLE, BRONZE I.P. THREAD
- (G) 38 mm (1-1/2") BRONZE TEE, SPL WW-68 OR 38 mm (1-1/2") BRONZE WYE SPL WW-68
- (H) BRONZE BUSHING, 38 mm X 25 mm (1-1/2" X 1") I.P. THREADS
- (I) 25 mm (1") COUPLING: SERVICE PIPE TO MALE I.P. THREAD, COMPRESSION FITTING
- (J) 25 mm (1") SERVICE PIPE
- (K) 25 mm (1") ANGLE METER STOP: SERVICE PIPE INLET X SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING:
 -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS: 25 mm X 19 mm (1" X 3/4") BRASS METER BUSHING
 -FOR 25 mm (1") METERS: BRASS METER BUSHING NOT REQUIRED
 -FOR ALL, SEE SPL WW-68
- (L) WATER METER COUPLING: MALE I.P.T. X SWIVEL COUPLING NUT:
 -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS: 19 mm X 213 mm (3/4" X 8-1/2") LONG
 -FOR 25 mm (1") METERS: 25 mm X 213 mm (1" X 8-1/2") LONG
- (M) 25 mm (1") BALL VALVE. SEE SPL WW-276
- (N) 25 mm (1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS
- (O) RECTANGULAR METER BOX AND COVER, SEE SPL WW-103A, FOR RECLAIMED WATER RESIDENTIAL CUSTOMERS. (MUST BE AMR/AMI COMPATIBLE)
- (P) PROPERTY OWNERS BALL VALVE BOX AND COVER, RECTANGULAR PLASTIC BOX, DFW #D1200.5 OR EQUAL. (MANUFACTURED OR COLORED PURPLE WITH "RECLAIMED WATER" CAST INTO COVER)

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM PER SPL WW-27D FOR RECLAIMED WATER.
3. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
4. TOP OF BOXES SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
6. METER BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
7. BALL VALVE (E) SHALL NOT BE LOCATED MORE THAN 914 mm (36") BELOW BELOW FINAL GRADE OR MORE THAN 610 mm (24") HORIZONTALLY FROM METER BOX. BALL VALVE (E) SHALL NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
8. A METER BOX IS REQUIRED FOR EACH 25 mm (1") METER.
9. METER BOX TO BE RECTANGULAR AND COVER SHALL BE MANUFACTURED PURPLE WITH "RECLAIMED WATER" CAST INTO IT.
10. ALL RECLAIMED WATER PIPING AND APPURTENANCES TO BE MANUFACTURED PURPLE, WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D, OR PAINTED PURPLE PER SPL WW-3C.

CITY OF AUSTIN AUSTIN WATER UTILITY		RECLAIMED WATER CONNECTION INSTALLATION FOR TWO 16 mm (5/8"), 19 mm (3/4") & 25 mm (1") RECLAIMED WATER METERS	
RECORD COPY SIGNED BY KATHI L FLOWERS		8/31/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
		STANDARD NO. 520S-9R SHEET 2 OF 2	



CITY RESPONSIBILITY ENDS ON THE CUSTOMER SIDE OF THE METER BOX

CITY OF AUSTIN AUSTIN WATER UTILITY	INSTALLATION FOR A 16mm, 19mm OR 25mm (5/8", 3/4" OR 1") POTABLE METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-11 1 OF 2

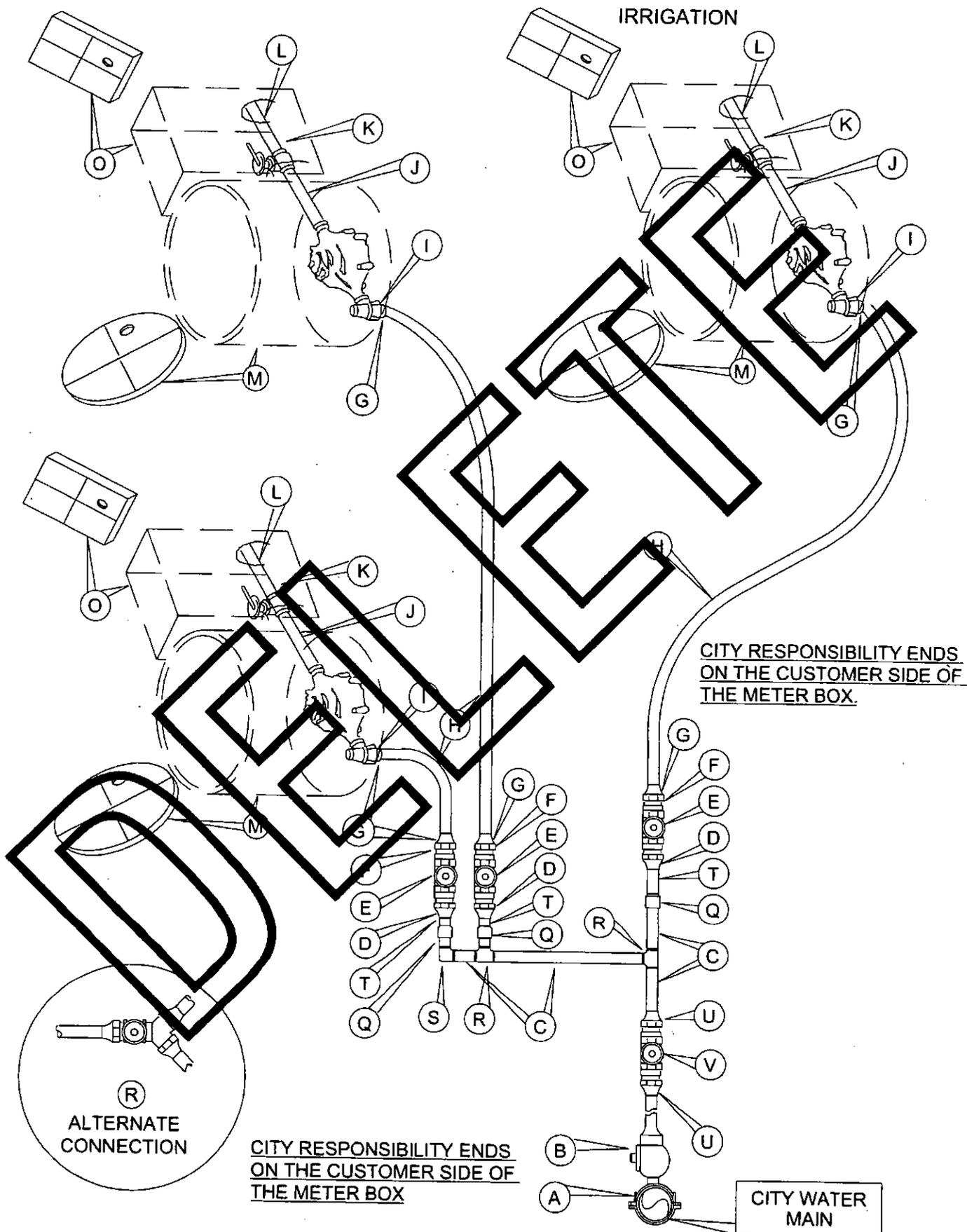
MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- (B) 38mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- (C) 38mm (1-1/2") SERVICE PIPE
- (D) 38mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (E) 38mm (1-1/2") BALL VALVE. SEE SPL WW -275
- (F) BRONZE BUSHING, 38mm x 25mm (1-1/2"x1") I.P. THREADS
- (G) 25mm (1") COUPLING: SERVICE PIPE TO MALE I.P.T.(COMPRESSION FITTING)
- (H) 25mm (1") SERVICE PIPE PER SPL-WW-65.
- (I) ANGLE METER STOP: SERVICE PIPE INLET x SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 25mm x 19mm (1"x3/4") BRASS METER BUSHING.
 -FOR 25mm (1") METERS: BRASS METER BUSHING NOT REQUIRED.
 -FOR ALL, SEE SPL WW-68.
- (J) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING NUT:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm x 213mm (3/4"x8-1/2") LONG
 -FOR 25mm (1") METERS: 25mm x 213mm (1"x8-1/2") LONG
- (K) BALL VALVE. SEE SPL WW-276. 19mm OR 25mm (3/4" OR 1") (PROPERTY OWNER'S CUT-OFF VALVE)
- (L) 19mm or 25mm (3/4" or 1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS.
- (M) AMR/AMI READY METER BOX AND LID PER SPL WW-145 OR WW-145A
- (N) N/A
- (O) PROPERTY OWNER'S BALL VALVE BOX AND LID, RECTANGULAR PLASTIC BOX, DFW #D1200 OR EQUAL.

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
6. BALL VALVE (K) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 900mm (36") BELOW FINAL GRADE.

CITY OF AUSTIN AUSTIN WATER UTILITY	INSTALLATION FOR A 16mm, 19mm OR 25mm (5/8", 3/4" OR 1") POTABLE METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-11 2 OF 2



CITY OF AUSTIN
AUSTIN WATER UTILITY

**DOUBLE WATER SERVICE FOR DUPLEX
WITH IRRIGATION METER**

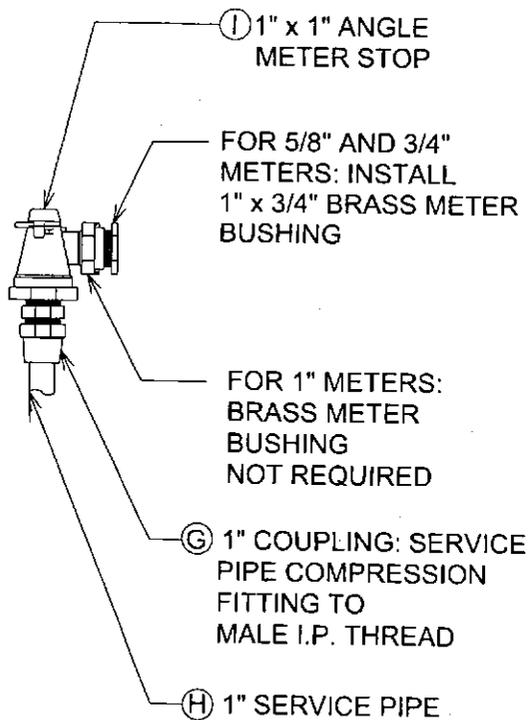
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THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.

520S-11A

1 OF 3



MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER
- (B) 50mm (2") CORPORATION STOP-SERVICE PIPE OUTLET.
- (C) 50mm (2") SERVICE PIPE.
- (D) 38mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (E) 38mm (1-1/2") BALL VALVE. SEE SPL WW-275.
- (F) BRONZE BUSHING, 38mm x 25mm (1-1/2" x 1") I.P. THREADS
- (G) 25mm (1") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (H) 25mm (1") SERVICE PIPE.
- (I) ANGLE METER STOP: SERVICE INLET x SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 25mm x 19mm (1"x3/4") BRASS METER BUSHING
 -FOR 25mm (1") METERS: BRASS BUSHING NOT REQUIRED.
 -FOR ALL, SEE SPL WW-68.
- (J) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING NUT:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm x 213mm (3/4" x 8-1/2") LONG
 -FOR 25mm (1") METERS: 25mm x 213mm (1" x 8-1/2") LONG
- (K) BALL VALVE. SEE SPL WW-276, 19mm OR 25mm (3/4" or 1") (PROPERTY OWNER'S BALL VALVE)
- (L) 19mm or 25mm (3/4" or 1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS.
- (M) AMM/FAMI READY METER BOX AND LID PER SPL WW-145 OR WW-145A.
- (N) N/A
- (O) PROPERTY OWNER'S BALL VALVE BOX AND LID RECTANGULAR PLASTIC BOX, DFW #D1200 OR EQUAL.
- (P) N/A
- (Q) 50mm x 38mm (2" x 1-1/2") REDUCER.
- (R) 50mm x 50mm (2"x2"x2") TEE OR 50mm (2") BRONZE WYE, SEE SPL WW-68.
- (S) NOT REQUIRED IF WYE IS INSTALLED.
- (T) 50mm x 50mm (2"x2") ELBOW.
- (U) 38mm (1-1/2") SERVICE PIPE.
- (V) 50mm (2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (W) 50mm (2") BALL VALVE. SEE SPL WW-275.

CITY OF AUSTIN
AUSTIN WATER UTILITY

DOUBLE WATER SERVICE FOR DUPLEX
WITH IRRIGATION METER

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.

520S-11A

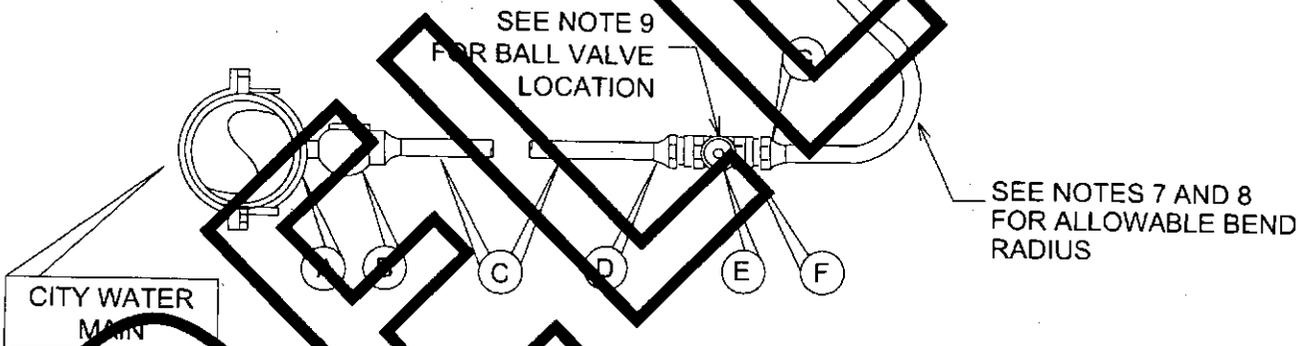
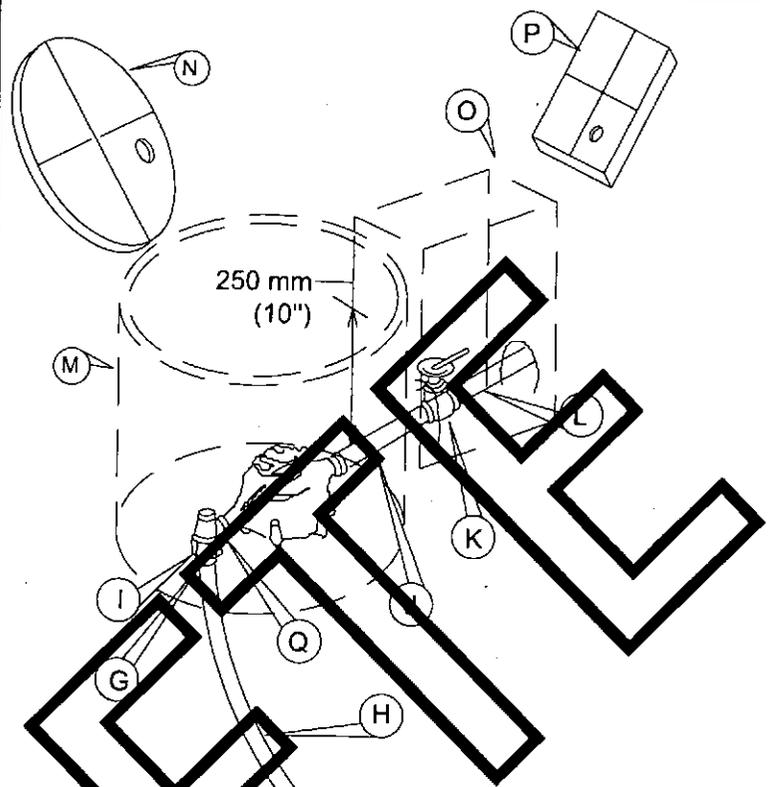
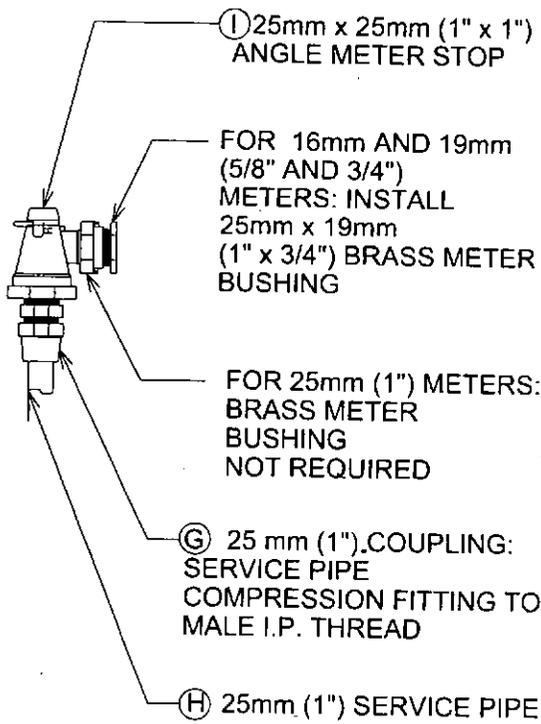
2 OF 3

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM
3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX SHALL BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
6. BALL VALVES (E) AND (V) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX AND 900mm (36") BELOW FINAL GRADE.
7. A METER BOX IS REQUIRED FOR EACH 25mm (1") METER.

DELETED

CITY OF AUSTIN AUSTIN WATER UTILITY	DOUBLE WATER SERVICE FOR DUPLEX WITH IRRIGATION METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-11A 3 OF 3



**CITY RESPONSIBILITY ENDS
ON THE CUSTOMER SIDE OF
THE METER BOX**

TABLE 1 (SEE NOTE 7)

Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	0.9m (3')
38mm (1-1/2")	1.2m (4')
50mm (2")	1.5m (5')

TABLE 2 (SEE NOTE 8)

Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	3.66m (12')
38mm (1-1/2")	4.86m (16')
50mm (2")	6.06m (20')

CITY OF AUSTIN
AUSTIN WATER UTILITY

POTABLE HDPE SERVICE & 16mm, 19mm, AND 25mm
(5/8", 3/4", AND 1") METER INSTALLATION

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.
520S-11B
1 OF 2

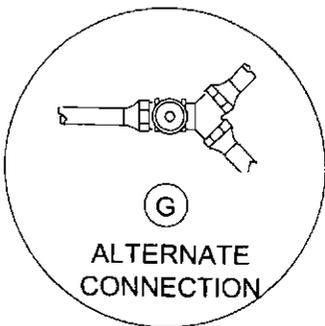
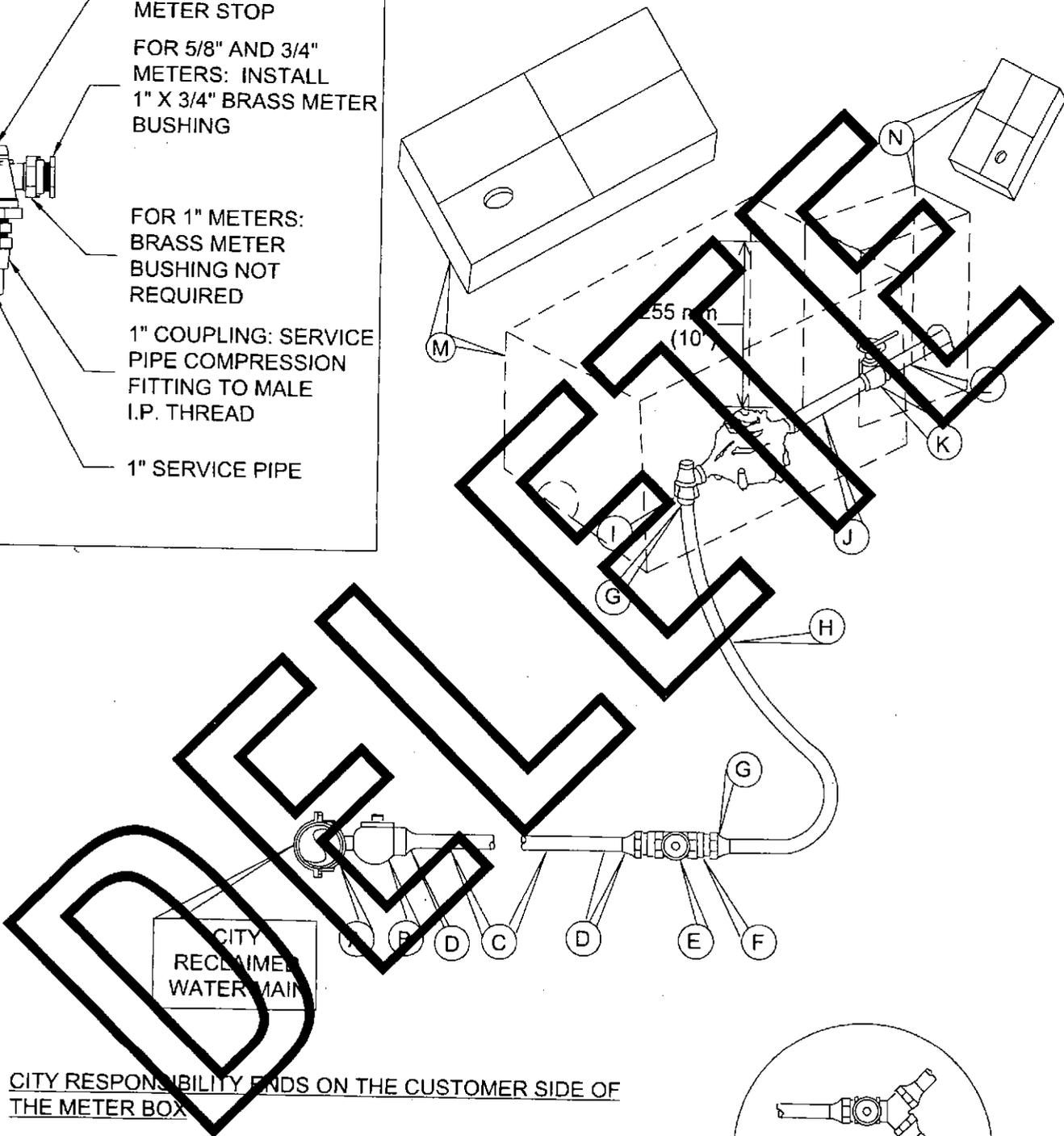
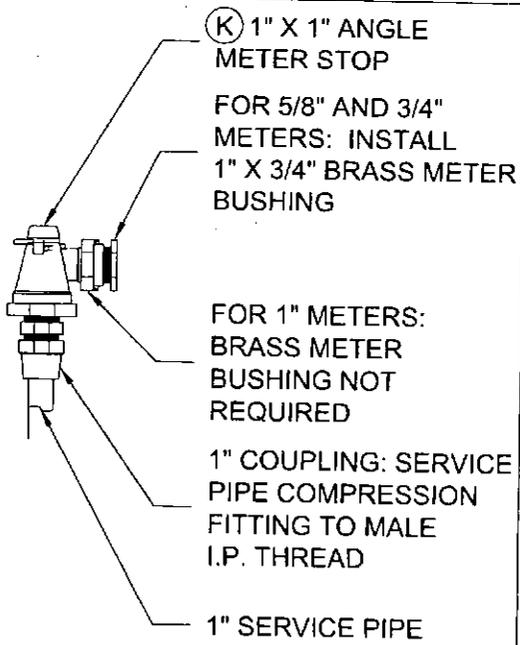
MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER.
- (B) 50mm (2") CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET, SPL WW-68.
- (C) 50mm (2") SERVICE TUBING.
- (D) COUPLING: 50mm (2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.
- (E) 38mm (1-1/2") BALL VALVE; SEE SPL WW-275 AND NOTE 9.
- (F) BRONZE BUSHING, 38mm x 25mm (1-1/2" x 1") I.P.T.
- (G) 25mm (1") COUPLING: COMPRESSION TO MALE I.P.T.
- (H) 25mm (1") SERVICE TUBING PER SPL WW-65.
- (I) ANGLE METER STOP: SERVICE TUBING INLET x SWIVEL COUPLING NUT OUTLET AND BRASS BUSHING:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 25mm x 19mm (1" x 3/4") BRASS BUSHING.
 -FOR 25mm (1") METERS BRASS METER BUSHING NOT REQUIRED.
 -FOR ALL SEE SPL WW-68.
- (J) WATER METER COUPLING: MALE I.P.T. x SWIVEL COUPLING NUT:
 -FOR 16mm AND 19mm (5/8" AND 3/4") METERS: 19mm x 213mm (3/4" x 8-1/2") LONG.
 -FOR 25mm (1") METERS: 25mm x 213mm (1" x 8-1/2") LONG.
- (K) BALL VALVE 19mm OR 25mm (3/4" OR 1") (PROPERTY OWNER'S CUT-OFF VALVE SEE SPL WW-176).
- (L) 19mm OR 25mm (3/4" OR 1") TUBING MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS.
- (M) METER BOX PER SPL WW-145 OR WW-145A.
- (N) AM/AMI READY LID-FOR METER BOX, LID FURNISHED WITH APPROVED BOX.
- (O) PROPERTY OWNER'S CUT-OFF VALVE BOX-RECTANGULAR PLASTIC BOX.
- (P) RECTANGULAR PLASTIC BOX LID, 300mm x 425mm x 300mm (12" x 17" x 12") OR EQUAL.
- (Q) ANGLE METER STOP: SERVICE TUBING INLET x SWIVEL COUPLING NUT OUTLET:
 -FOR 16mm and 19mm (5/8" and 3/4") METERS: 25mm x 19mm (1" x 3/4")
 -FOR 25mm (1") METERS: 25mm x 25mm (1" x 1")

NOTES:

1. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
2. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
3. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
4. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE AND/OR SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
5. INSTALL METALLIC WARNING TAPE (MAGNETIC TRACER TAPE) MIN. 300mm (1') ABOVE P.E. TUBING FROM TAP CONNECTION TO METER.
6. TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.
7. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1.
8. IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.
9. B.V. (E) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 900mm (36") BELOW FINAL GRADE.
10. INSERT STIFFENERS FOR P.E. TUBING PER SPL WW-65B TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

CITY OF AUSTIN AUSTIN WATER UTILITY		POTABLE HDPE SERVICE & 16mm, 19mm, AND 25mm (5/8", 3/4", AND 1") METER INSTALLATION	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-11B 2 OF 2



<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>RECLAIMED WATER CONNECTION INSTALLATION FOR A 16 mm, 19 mm OR 25 mm (5/8", 3/4", OR 1") RECLAIMED WATER METER</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS</p>	<p>8/31/11</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p> <p>STANDARD NO. 520S-11R SHEET 1 OF 2</p>

MATERIAL LIST

- (A) SERVICE CLAMP REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300mm (12") AND SMALLER
- (B) 38 mm (1-1/2") CORPORATION STOP-SERVICE PIPE OUTLET. SPL WW-68
- (C) 38 mm (1-1/2") SERVICE PIPE
- (D) 38 mm (1-1/2") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)
- (E) 38 mm (1-1/2") BALL VALVE. SEE SPL WW-275
- (F) BRONZE BUSHING, 38 mm X 25 mm (1-1/2" X 1") I.P. THREADS
- (G) 25 mm (1") COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING WITH STIFFENER)
- (H) 25 mm (1") SERVICE PIPE PER SPL WW-65B
- (I) ANGLE METER STOP: SERVICE PIPE INLET X SWIVEL COUPLING INLET OUTLET AND BRASS BUSHING:
 -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS: 25 mm X 19 mm (1" X 3/4") BRASS METER BUSHING
 -FOR 25 mm (1") METERS: BRASS METER BUSHING NOT REQUIRED
 -FOR ALL, SEE SPL WW-68
- (J) WATER METER COUPLING: MALE I.P.T. X SWIVEL COUPLING NUT:
 -FOR 16 mm AND 19 mm (5/8" AND 3/4") METERS: 19 mm X 213 mm (3/4" X 8-1/2") LONG
 -FOR 25 mm (1") METERS: 25 mm X 213 mm (1" X 8-1/2") LONG
- (K) BALL VALVE. SEE SPL WW-276. 19 mm OR 25 mm (3/4" OR 1") (PROPERTY OWNER'S CUT-OFF VALVE)
- (L) 19 mm OR 25 mm (3/4" OR 1") PIPE MEETING CITY OF AUSTIN PLUMBING CODE REQUIREMENTS
- (M) RECTANGULAR METER BOX AND COVER, SEE SPL WW-45A, FOR RECLAIMED WATER RESIDENTIAL CUSTOMERS. (MUST BE AMR/AMI COMPATIBLE)
- (N) PROPERTY OWNERS BALL VALVE BOX AND COVER, RECTANGULAR PLASTIC BOX, DFW #D1200.5 OR EQUAL. (MANUFACTURED OR COLORED PURPLE WITH "RECLAIMED WATER" CAST INTO COVER)

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM PER SPL WW-27D FOR RECLAIMED WATER.
3. TOP OF BOXES SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. METER BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
6. BALL VALVE (E) SHALL NOT BE LOCATED MORE THAN 914 mm (36") BELOW METER OR MORE THAN 610 mm (24") HORIZONTALLY FROM METER. BALL VALVE (E) SHALL NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
8. METER BOX TO BE RECTANGULAR AND COVER SHALL BE MANUFACTURED PURPLE WITH "RECLAIMED WATER" CAST INTO IT.
9. ALL RECLAIMED WATER PIPING AND APPURTENANCES TO BE MANUFACTURED PURPLE, WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D, OR PAINTED PURPLE PER SPL WW-3C.

CITY OF AUSTIN AUSTIN WATER UTILITY		RECLAIMED WATER CONNECTION INSTALLATION FOR A 16 mm, 19 mm OR 25 mm (5/8", 3/4", OR 1") RECLAIMED WATER METER	
RECORD COPY SIGNED BY KATHI L FLOWERS	8/31/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-11R SHEET 2 OF 2

CITY RESPONSIBILITY ENDS
ON THE CUSTOMER SIDE OF
THE METER BOX



<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>38mm & 50mm (1-1/2" & 2") METER INSTALLATION SHOWING OPTIONAL BYPASS</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520S-13 1 OF 3</p>

MATERIALS LIST

METER SIZE

	38 mm (1-1/2")	50 mm (2")
(A) SERVICE CLAMP FOR CONNECTION-REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ALL IRON PIPE 300 mm (12") AND SMALLER	38 mm (1-1/2")	50 mm (2")
(B) CORPORATION STOP - SERVICE PIPE OUTLET	38 mm (1-1/2")	50 mm (2")
(C) SERVICE PIPE	38 mm (1-1/2")	50 mm (2")
(D) COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)	38 mm (1-1/2")	50 mm (2")
(E) BALL VALVE. SEE SPL WW 275.	38 mm (1-1/2")	50 mm (2")
(F) TEES, BRASS	38 mm x 38 mm x 25mm (1-1/2"x1-1/2"x1")	50 mm x 50 mm x 25mm (2"x2"x1")
(G) CLOSE-NIPPLE, BRASS.	38 mm (1-1/2")	50 mm (2")
(H) ANGLE METER STOP, FEMALE I.P. THREAD INLET X FLANGE OUTLET	38 mm (1-1/2")	50 mm (2")
(I) WATER METER LENGTH WITH GASKETS	38 mm (13-1/2")	444 mm (17-3/4")
(J) FLANGE, BRASS; FEMALE I.P. THREAD	38 mm (1-1/2")	50 mm (2")
(K) NIPPLES, BRASS	38 mm x 200mm (1-1/2"x8")	50mm x 200 mm (2"x8")
(L) AWU'S BALL VALVE. SEE SPL WW 275.	38 mm (1-1/2")	50 mm (2")
(M) NIPPLES, BRASS	25 mm x 125mm (1"x5")	25 mm x 125 mm (1"x5")
(N) 90 DEGREE ELBOWS, BRASS	25 mm (1")	25 mm (1")
(O) NIPPLES, BRASS	25 mm x 75mm (1"x3")	25 mm x 75 mm (1"x3")
(P) CURB STOP, BRASS, FEMALE I.P. THREAD BOTH ENDS WITH LOCK NUTS	25 mm (1")	25 mm (1")
(Q) COUPLINGS, BRASS, SERVICE PIPE TO MALE THREAD	25 mm (1")	25 mm (1")
(R) SERVICE PIPE	25 mm (1")	25 mm (1")
(S) AIR/AM READY RECTANGULAR METER BOX AND LID. SEE SPL-WW-145 OR WW-147A		
(T) N/A		
(U) PROPERTY OWNER'S BALL VALVE BOX AND LID-RECTANGULAR PLASTIC BOX, DFW #D1200 OR EQUAL		
(V) CUSTOMER'S BALL VALVE.		

CITY OF AUSTIN
AUSTIN WATER UTILITY

38mm & 50mm (1-1/2" & 2") METER
INSTALLATION SHOWING OPTIONAL BYPASS

RECORD COPY SIGNED BY
KATHI L FLOWERS 08/31/2011

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE USE
OF THIS STANDARD.

STANDARD NO.

520S-13

2 OF 3

NOTES:

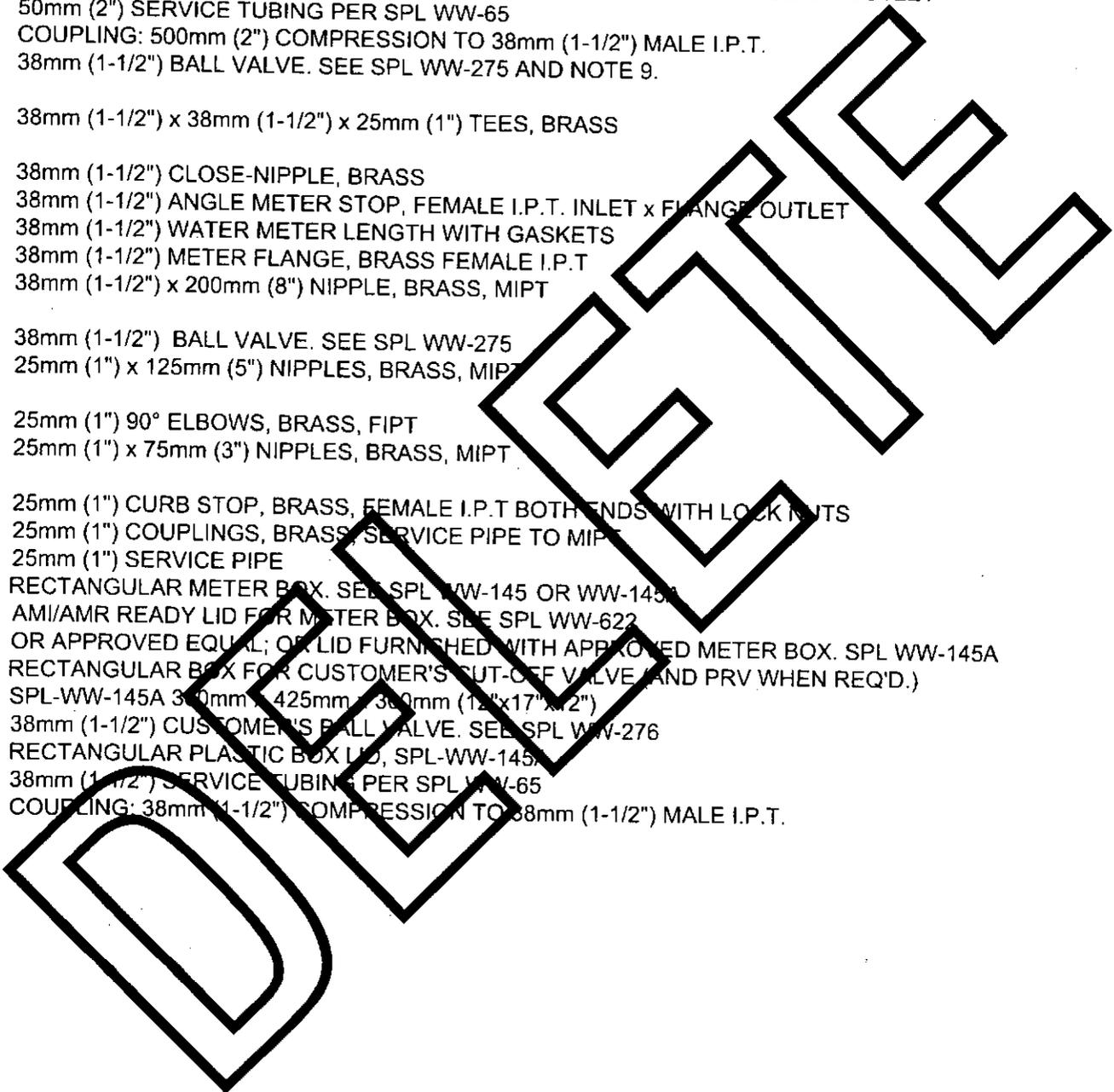
1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
3. TOP OF BOXES SHOULD BE 25mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND OUT OF VEHICULAR TRAFFIC AREA.
6. BALL VALVES SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT AND NOT LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 90mm (3 1/2") BELOW FINAL GRADE.

DELETED

CITY OF AUSTIN AUSTIN WATER UTILITY	38mm & 50mm (1-1/2" & 2") METER INSTALLATION SHOWING OPTIONAL BYPASS	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-13 3 OF 3

MATERIALS LIST

- (A) 50mm (2") SERVICE CLAMP FOR CONNECTION-REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND IRON PIPE 300mm (12") AND SMALLER.
- (B) 50mm (2") CORPORATION STOP - MALE THREAD INLET BY COMPRESSION OUTLET
- (C) 50mm (2") SERVICE TUBING PER SPL WW-65
- (D) COUPLING: 50mm (2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.
- (E) 38mm (1-1/2") BALL VALVE. SEE SPL WW-275 AND NOTE 9.
- (F) 38mm (1-1/2") x 38mm (1-1/2") x 25mm (1") TEES, BRASS
- (G) 38mm (1-1/2") CLOSE-NIPPLE, BRASS
- (H) 38mm (1-1/2") ANGLE METER STOP, FEMALE I.P.T. INLET x FLANGE OUTLET
- (I) 38mm (1-1/2") WATER METER LENGTH WITH GASKETS
- (J) 38mm (1-1/2") METER FLANGE, BRASS FEMALE I.P.T
- (K) 38mm (1-1/2") x 200mm (8") NIPPLE, BRASS, MIPT
- (L) 38mm (1-1/2") BALL VALVE. SEE SPL WW-275
- (M) 25mm (1") x 125mm (5") NIPPLES, BRASS, MIPT
- (N) 25mm (1") 90° ELBOWS, BRASS, FIPT
- (O) 25mm (1") x 75mm (3") NIPPLES, BRASS, MIPT
- (P) 25mm (1") CURB STOP, BRASS, FEMALE I.P.T BOTH ENDS WITH LOCK NUTS
- (Q) 25mm (1") COUPLINGS, BRASS, SERVICE PIPE TO MIPT
- (R) 25mm (1") SERVICE PIPE
- (S) RECTANGULAR METER BOX. SEE SPL WW-145 OR WW-145A
- (T) AMI/AMR READY LID FOR METER BOX. SEE SPL WW-622 OR APPROVED EQUAL; OR LID FURNISHED WITH APPROVED METER BOX. SPL WW-145A
- (U) RECTANGULAR BOX FOR CUSTOMER'S CUT-OFF VALVE (AND PRV WHEN REQ'D.) SPL-WW-145A 300mm x 425mm x 300mm (12"x17"x12")
- (V) 38mm (1-1/2") CUSTOMER'S BALL VALVE. SEE SPL WW-276
- (W) RECTANGULAR PLASTIC BOX LID, SPL-WW-145A
- (X) 38mm (1-1/2") SERVICE TUBING PER SPL WW-65
- (Y) COUPLING: 38mm (1-1/2") COMPRESSION TO 38mm (1-1/2") MALE I.P.T.



CITY OF AUSTIN WATER UTILITY	POTABLE HDPE SERVICE INSTALLATION FOR 38 mm (1-1/2") METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	STANDARD NO. 520S-13B 2 OF 3

NOTES:

1. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2mm (8 MIL) POLYETHYLENE FILM.
2. TOP OF BOXES SHALL BE 25mm (1") ABOVE GROUND.
3. PIPING AND TUBING IN RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
4. BOX SHALL BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND NOT LOCATED IN SIDEWALK OR VEHICULAR TRAFFIC AREA.
5. INSTALL METALLIC WARNING TAPE (MAGNETIC TRACER TAPE) MIN. 300mm (1') ABOVE P.E. TUBING FROM TAP CONNECTION TO METER.
6. TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.
7. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1.
8. IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.
9. B.V. (E) SHALL NOT BE LOCATED UNDER CURB OR PAVEMENT, AND NOT BE LOCATED MORE THAN 600mm (24") HORIZONTALLY FROM METER BOX OR 600mm (36") BELOW FINAL GRADE.
10. INSERT STIFFENER FOR P.E. TUBING TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS. SEE SPL WW-65B.

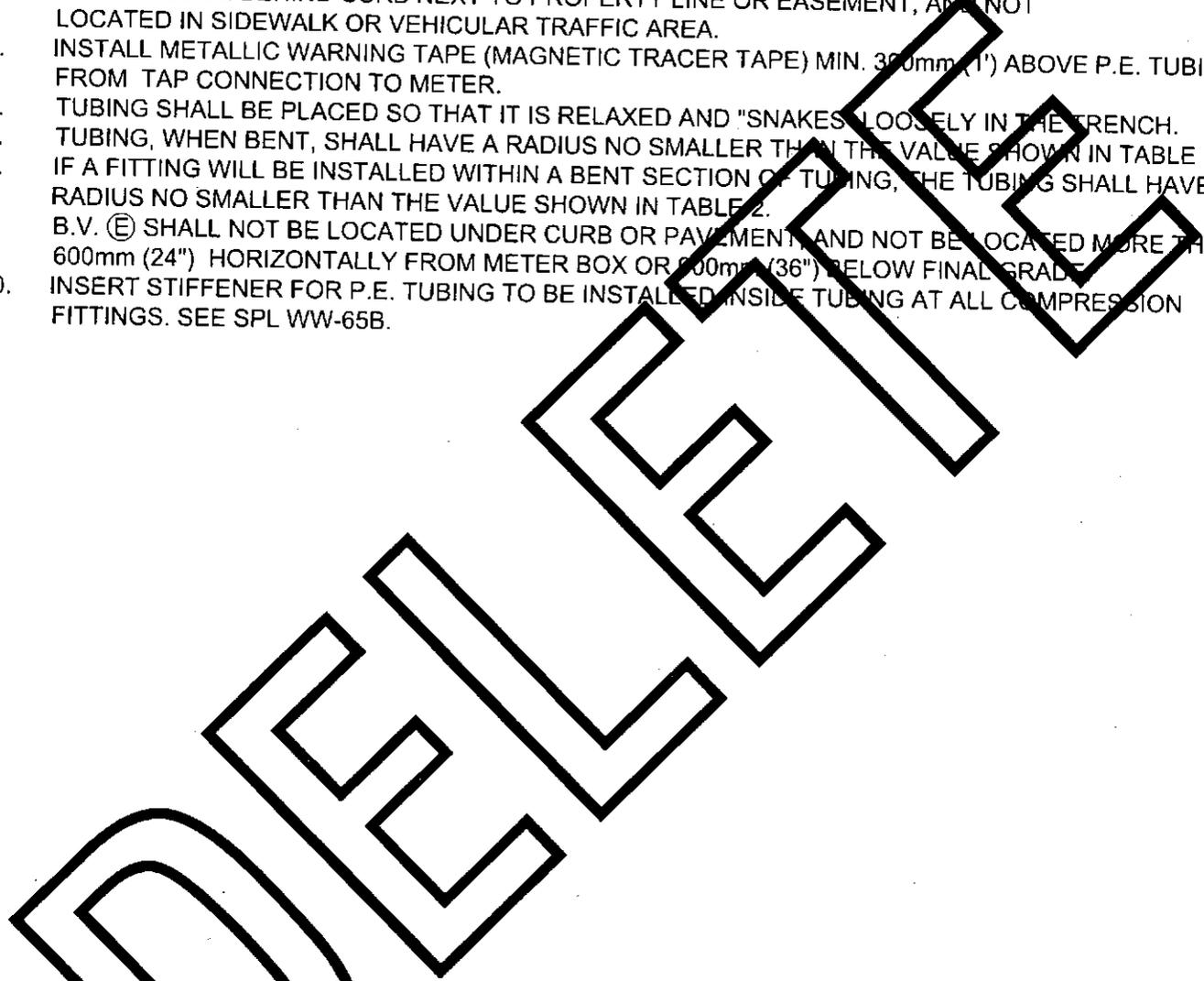
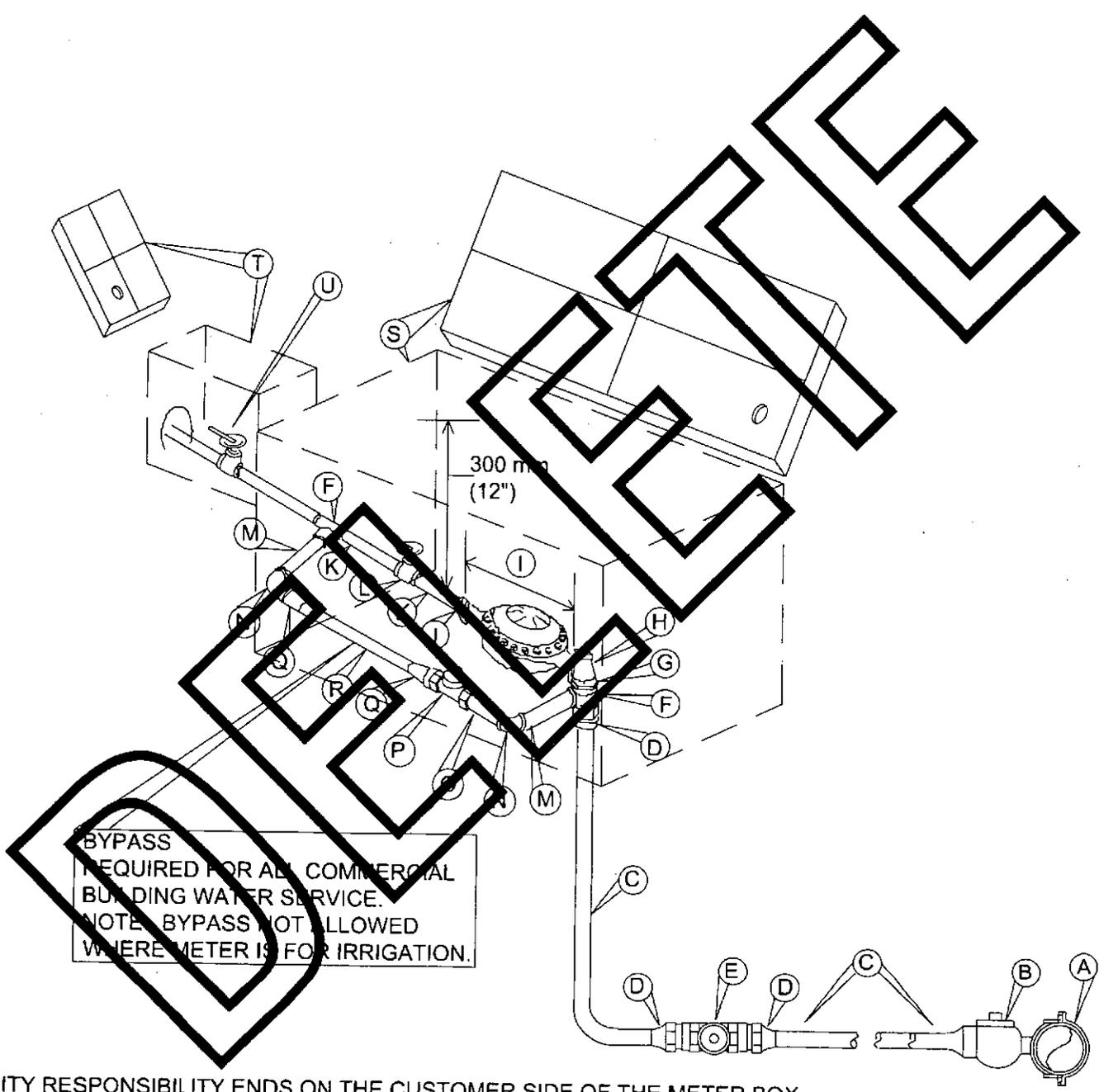


TABLE 1 (SEE NOTE 7)	
Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	0.9m (3')
38mm (1-1/2")	1.2m (4')
50mm (2")	1.5m (5')

TABLE 2 (SEE NOTE 8)	
Nominal Tubing Dia.	Bend Radius of at Least
25mm (1")	3.66m (12')
38mm (1-1/2")	4.86m (16')
50mm (2")	6.06m (20')

CITY OF AUSTIN WATER UTILITY		POTABLE HDPE SERVICE INSTALLATION FOR 38 mm (1-1/2") METER	
RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	STANDARD NO. 520S-13B 3 OF 3



BYPASS
 REQUIRED FOR ALL COMMERCIAL
 BUILDING WATER SERVICE.
 NOTE: BYPASS NOT ALLOWED
 WHERE METER IS FOR IRRIGATION.

CITY RESPONSIBILITY ENDS ON THE CUSTOMER SIDE OF THE METER BOX

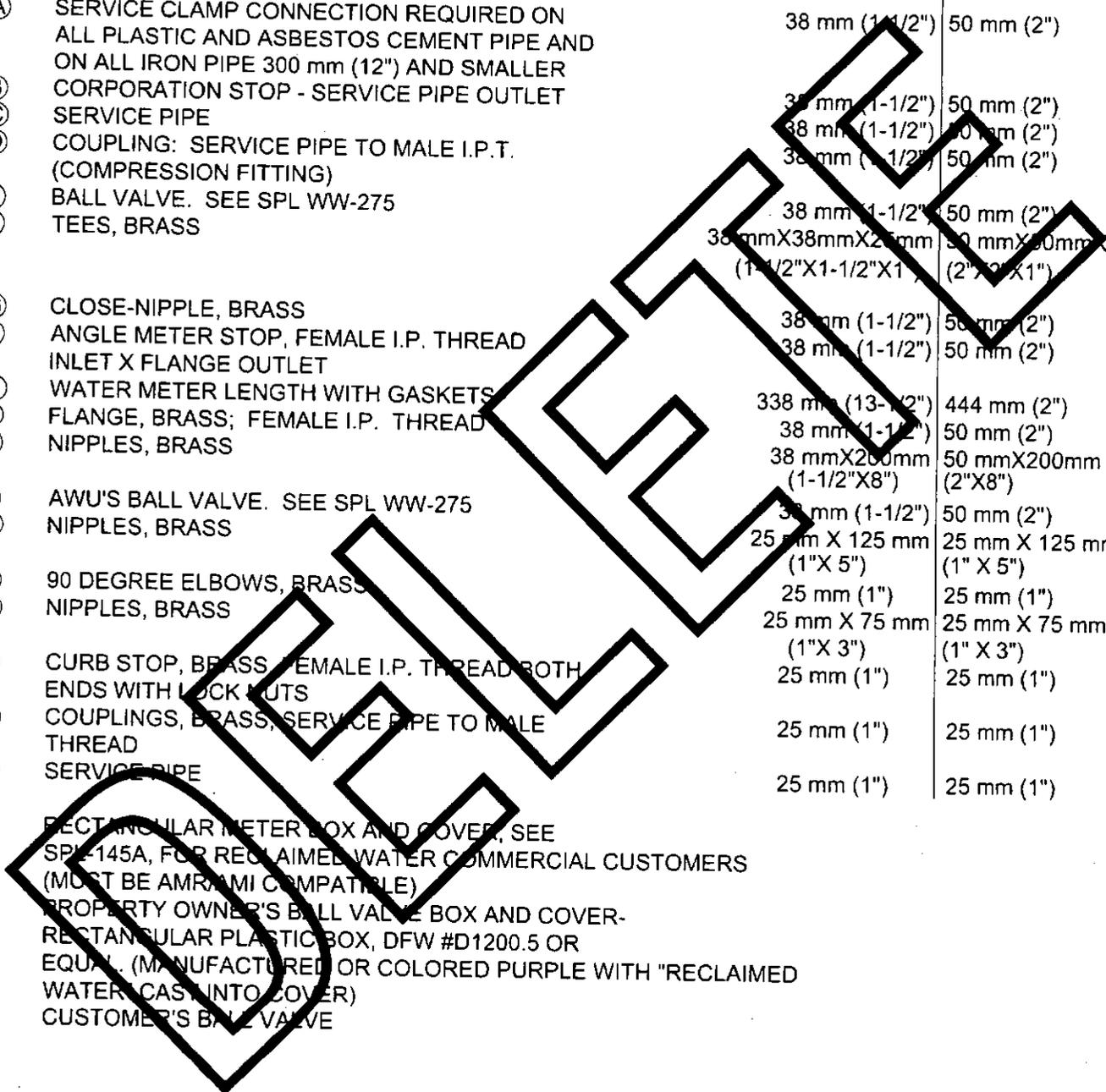
<p>CITY OF AUSTIN AUSTIN WATER UTILITY</p>	<p>RECLAIMED WATER CONNECTION INSTALLATION FOR A 38 mm & 50 mm (1-1/2" OR 2") RECLAIMED WATER METER SHOWING OPTIONAL BYPASS</p>	
<p>RECORD COPY SIGNED BY KATHI L FLOWERS</p>	<p>8/31/11</p> <p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520S-13R SHEET 1 OF 3</p>

MATERIAL LIST

METER SIZE

38 mm (1-1/2") 50 mm (2")

(A)	SERVICE CLAMP CONNECTION REQUIRED ON ALL PLASTIC AND ASBESTOS CEMENT PIPE AND ON ALL IRON PIPE 300 mm (12") AND SMALLER	38 mm (1-1/2")	50 mm (2")
(B)	CORPORATION STOP - SERVICE PIPE OUTLET	38 mm (1-1/2")	50 mm (2")
(C)	SERVICE PIPE	38 mm (1-1/2")	50 mm (2")
(D)	COUPLING: SERVICE PIPE TO MALE I.P.T. (COMPRESSION FITTING)	38 mm (1-1/2")	50 mm (2")
(E)	BALL VALVE. SEE SPL WW-275	38 mm (1-1/2")	50 mm (2")
(F)	TEES, BRASS	38 mm (1-1/2")	50 mm (2")
(G)	CLOSE-NIPPLE, BRASS	38 mm (1-1/2")	50 mm (2")
(H)	ANGLE METER STOP, FEMALE I.P. THREAD INLET X FLANGE OUTLET	38 mm (1-1/2")	50 mm (2")
(I)	WATER METER LENGTH WITH GASKETS	338 mm (13-1/2")	444 mm (2")
(J)	FLANGE, BRASS; FEMALE I.P. THREAD	38 mm (1-1/2")	50 mm (2")
(K)	NIPPLES, BRASS	38 mm X 200 mm (1-1/2" X 8")	50 mm X 200 mm (2" X 8")
(L)	AWU'S BALL VALVE. SEE SPL WW-275	38 mm (1-1/2")	50 mm (2")
(M)	NIPPLES, BRASS	25 mm X 125 mm (1" X 5")	25 mm X 125 mm (1" X 5")
(N)	90 DEGREE ELBOWS, BRASS	25 mm (1")	25 mm (1")
(O)	NIPPLES, BRASS	25 mm X 75 mm (1" X 3")	25 mm X 75 mm (1" X 3")
(P)	CURB STOP, BRASS, FEMALE I.P. THREAD BOTH ENDS WITH LOCK NUTS	25 mm (1")	25 mm (1")
(Q)	COUPLINGS, BRASS, SERVICE PIPE TO MALE THREAD	25 mm (1")	25 mm (1")
(R)	SERVICE PIPE	25 mm (1")	25 mm (1")
(S)	RECTANGULAR METER BOX AND COVER, SEE SPL-145A, FOR RECLAIMED WATER COMMERCIAL CUSTOMERS (MUST BE AMRAMI COMPATIBLE)		
(T)	PROPERTY OWNER'S BALL VALVE BOX AND COVER- RECTANGULAR PLASTIC BOX, DFW #D1200.5 OR EQUAL. (MANUFACTURED OR COLORED PURPLE WITH "RECLAIMED WATER" CAST INTO COVER)		
(U)	CUSTOMER'S BALL VALVE		



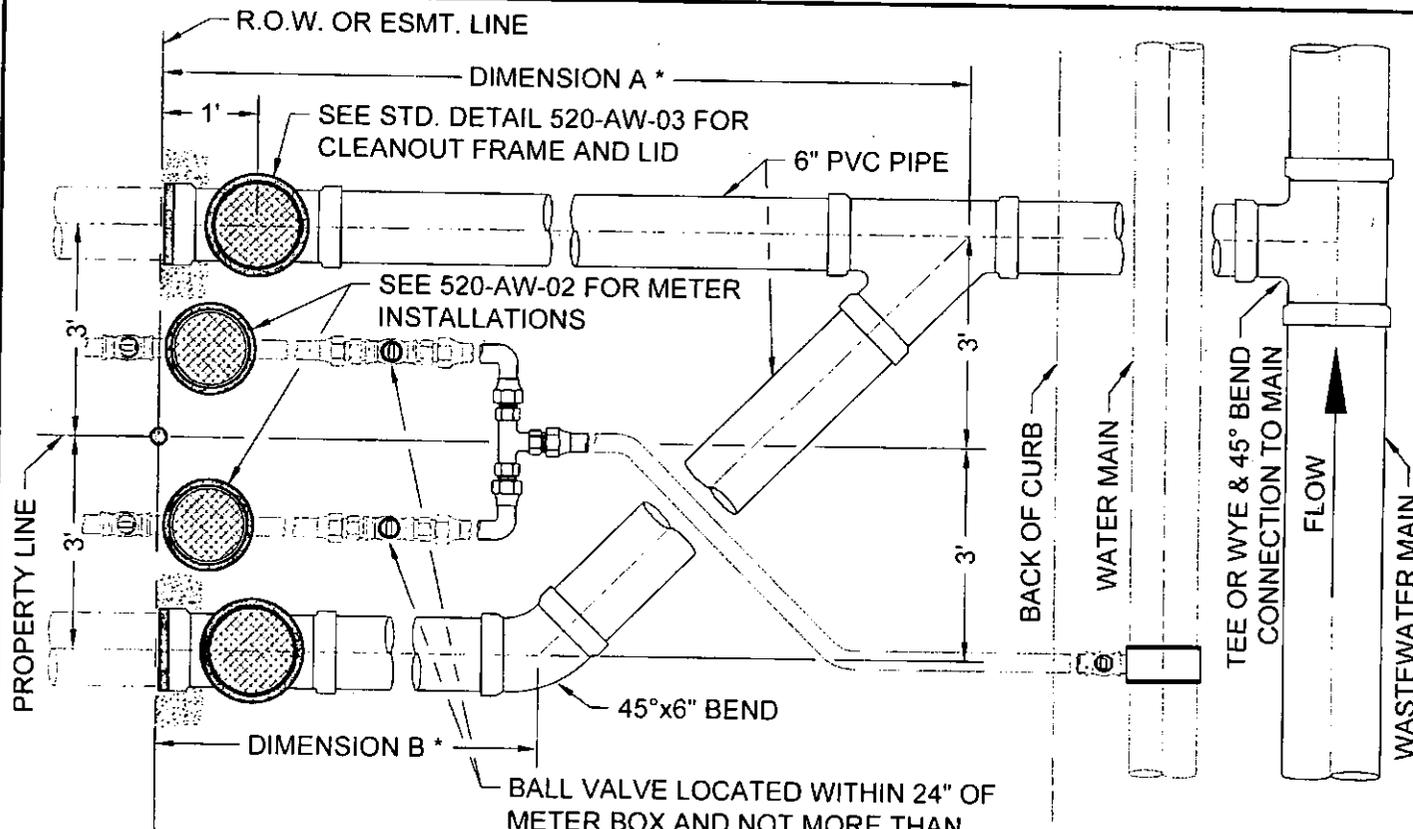
CITY OF AUSTIN AUSTIN WATER UTILITY		RECLAIMED WATER CONNECTION INSTALLATION FOR A 38 mm & 50 mm (1-1/2" OR 2") RECLAIMED WATER METER SHOWING OPTIONAL BYPASS	
RECORD COPY SIGNED BY KATHI L FLOWERS	8/31/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-13R SHEET 2 OF 3

NOTES:

1. SERVICE PIPE SHALL BE COPPER TUBE SIZE. IT SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 0.2 mm (8 MIL) POLYETHYLENE FILM PER SPL WW-27D FOR RECLAIMED WATER.
3. TOP OF BOXES SHOULD BE 25 mm (1") ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS: BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. METER BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT, AND OUT OF SIDEWALK AND VEHICULAR TRAFFIC AREA.
6. BALL VALVE (E) SHALL NOT BE LOCATED MORE THAN 914 mm (36") BELOW FINAL GRADE OR MORE THAN 610 mm (24") HORIZONTALLY FROM METER BOX. BALL VALVE (E) SHALL NOT BE LOCATED UNDER PAVING, SIDEWALK, OR DRIVEWAY.
8. METER BOX TO BE RECTANGULAR AND COVER SHALL BE MANUFACTURED PURPLE WITH "RECLAIMED WATER" CAST INTO IT.
9. ALL RECLAIMED WATER PIPING AND APPURTENANCES TO BE MANUFACTURED PURPLE, WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D, OR PAINTED PURPLE PER SPL WW-3C.

DELETED

CITY OF AUSTIN AUSTIN WATER UTILITY	RECLAIMED WATER CONNECTION INSTALLATION FOR A 38 mm & 50 mm (1-1/2" OR 2") RECLAIMED WATER METER SHOWING OPTIONAL BYPASS		
RECORD COPY SIGNED BY KATHI L FLOWERS	8/31/11	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-13R SHEET 3 OF 3

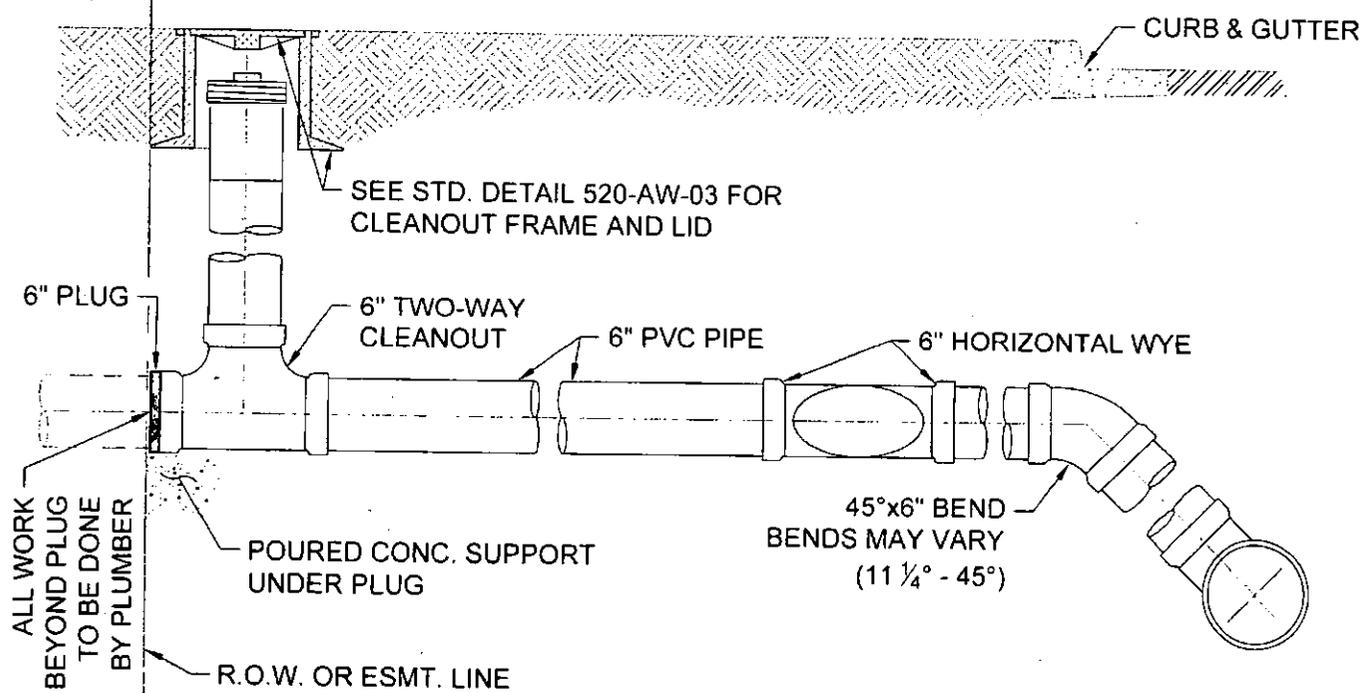


NOTE:
 BALL VALVE LOCATED WITHIN 24" OF METER BOX AND NOT MORE THAN 36" DEPTH FROM FINAL GRADE.

FOR SINGLE SERVICES, BOTH WATER AND WASTEWATER SERVICE SHALL BE PERPENDICULAR TO THE MAIN, FROM MAIN TO THE R.O.W. OR EASEMENT LINE.

* DIMENSION A AND B DESIRED 10' AND 4' RESPECTIVELY. IF NOT POSSIBLE, ENGINEER TO CALL OUT A AND B ON PLANS.

PLAN VIEW



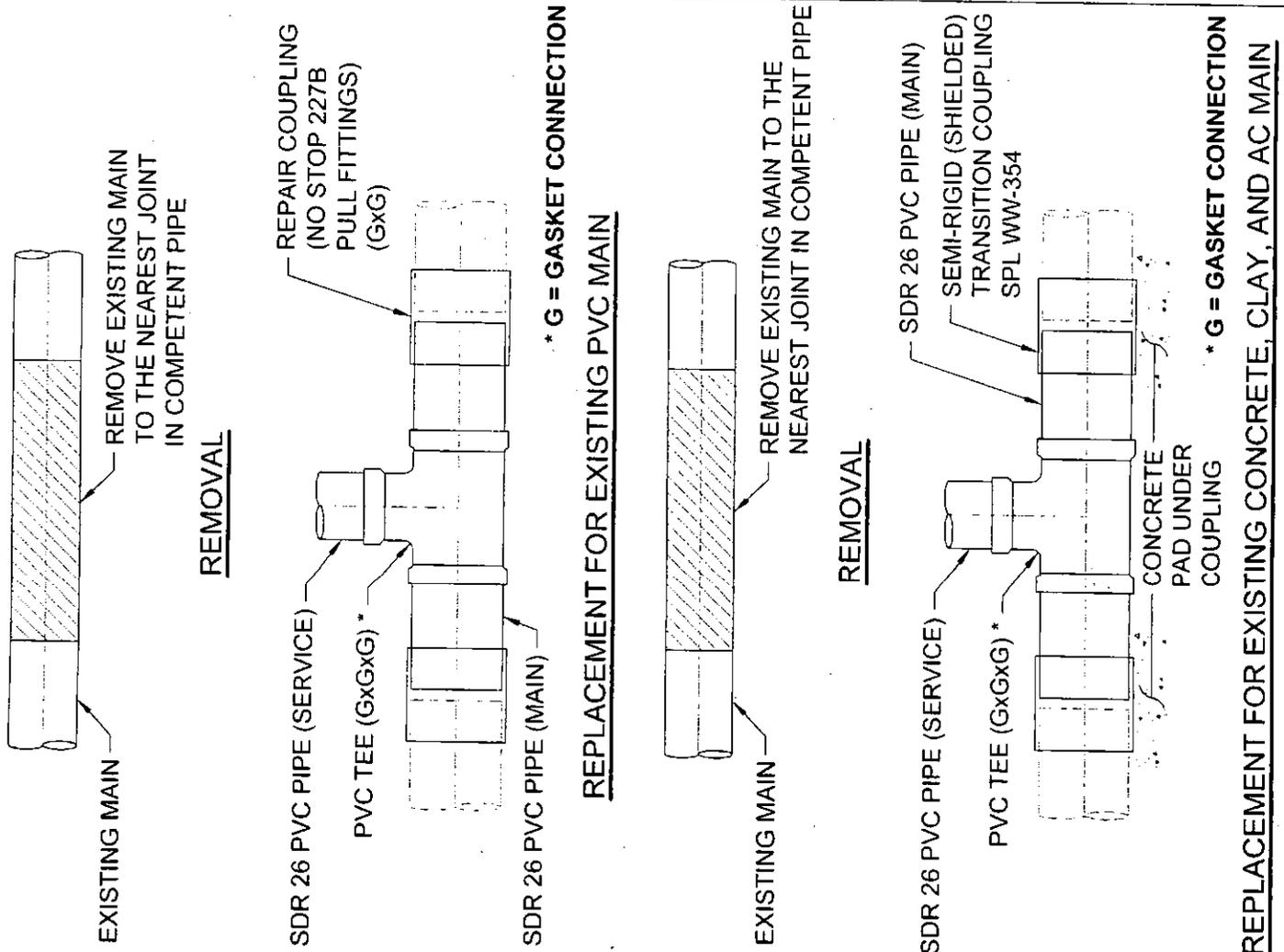
ALL WORK BEYOND PLUG TO BE DONE BY PLUMBER

PROFILE VIEW

CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	
_____ ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 1 OF 4

NOTES:

1. DURING SUBDIVISION CONSTRUCTION UTILITY CONTRACTOR INSTALLS WASTEWATER CONNECTION TO MAIN, 6" STUB, HORIZONTAL WYE FOR DOUBLE SERVICES, 6" SERVICE BRANCH WITH 2-WAY-CLEANOUT(S) AND RISER, FRAME, AND COVER CLEANOUT(S) PLUGGED AT PROPERTY LINE OR EASEMENT LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MIN. TO 45° MAX. DEPTH OF SERVICE AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4', OTHERWISE THE INSTALLED DEPTH WILL BE 4' MIN. AND 6' MAX. AT PROPERTY LINE. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, SEE SHEET 3 OF 4. UTILITY CONTRACTOR ALSO INSTALLS WATER CONNECTION TO MAIN WATER PIPE, FITTINGS AND VALVES INCLUDING STOP VALVE. REFER TO DETAIL 520-AW-02.
2. PIPING AND TUBING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MIN. COVER BELOW FINAL STREET GRADE OF 42".
3. NO METER BOX, BALL VALVE OR CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY AREA AND SHALL BE A MINIMUM OF 6" FROM ALL PAVED AREAS.
4. PLUMBER SHALL REMOVE PLUG AND CONNECT TO 2-WAY CLEANOUT. NO CONNECTION TO CLEANOUT STACK IS ALLOWED.



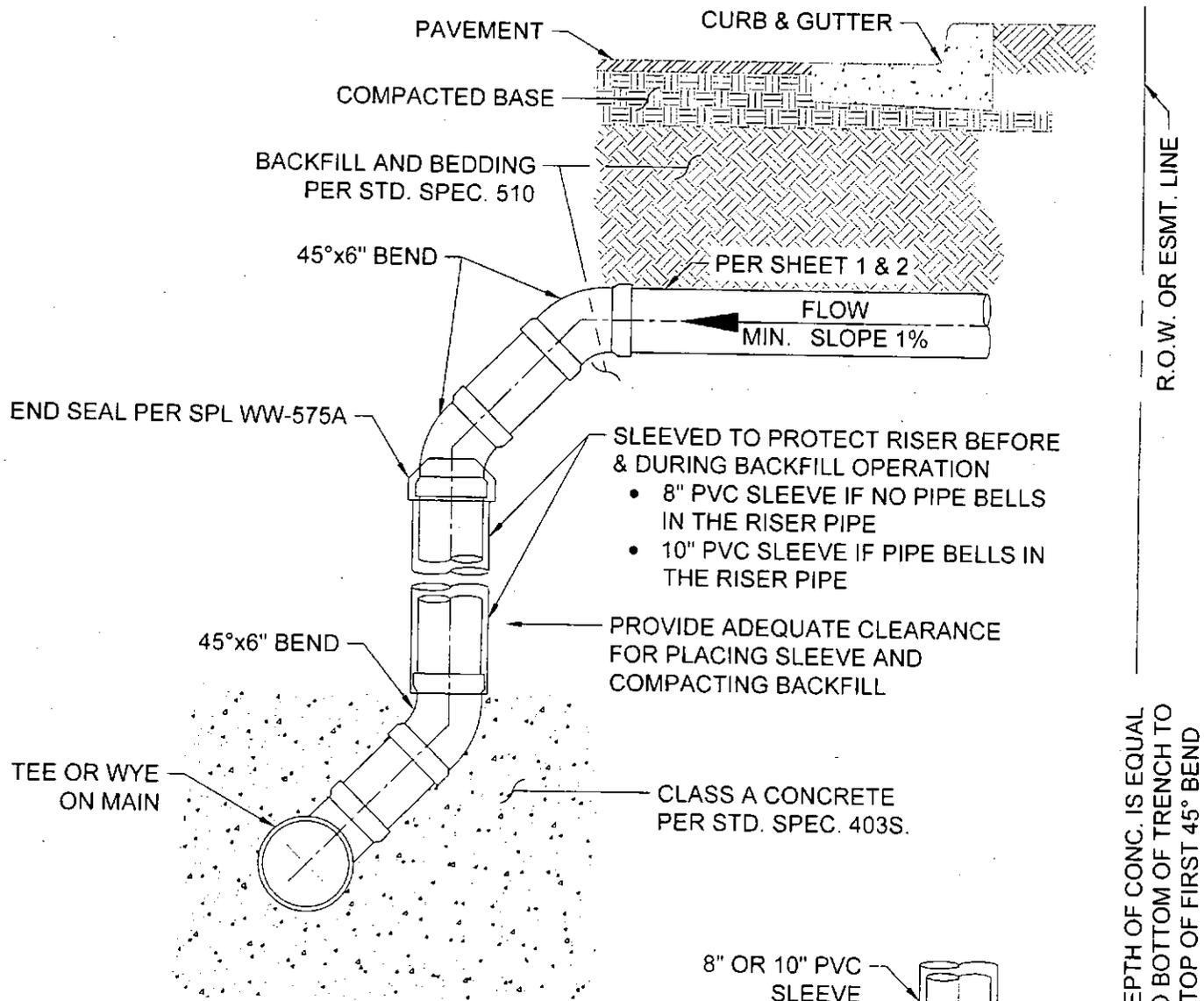
CITY OF AUSTIN
AUSTIN WATER

WATER SERVICE & WASTEWATER SERVICE
CONNECTION

ADOPTED

THE ARCHITECT/ENGINEER ASSUMES
RESPONSIBILITY FOR APPROPRIATE
USE OF THIS STANDARD.

STANDARD NO.
520-AW-01
2 OF 4



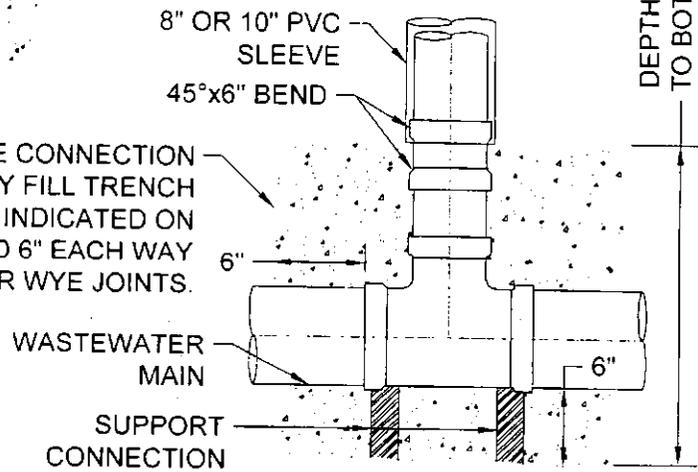
R.O.W. OR ESMT. LINE

- SLEEVED TO PROTECT RISER BEFORE & DURING BACKFILL OPERATION
- 8" PVC SLEEVE IF NO PIPE BELLS IN THE RISER PIPE
 - 10" PVC SLEEVE IF PIPE BELLS IN THE RISER PIPE

PROVIDE ADEQUATE CLEARANCE FOR PLACING SLEEVE AND COMPACTING BACKFILL

DEPTH OF CONC. IS EQUAL TO BOTTOM OF TRENCH TO TOP OF FIRST 45° BEND

CONCRETE AT SERVICE CONNECTION SHALL COMPLETELY FILL TRENCH WIDTH TO DEPTH INDICATED ON DETAIL AND EXTEND 6" EACH WAY BEYOND TEE OR WYE JOINTS.

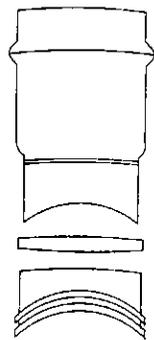
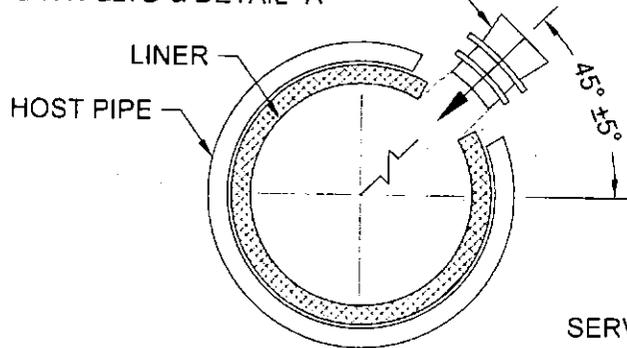


CONCRETE ENCASEMENT FOR SERVICE CONNECTION

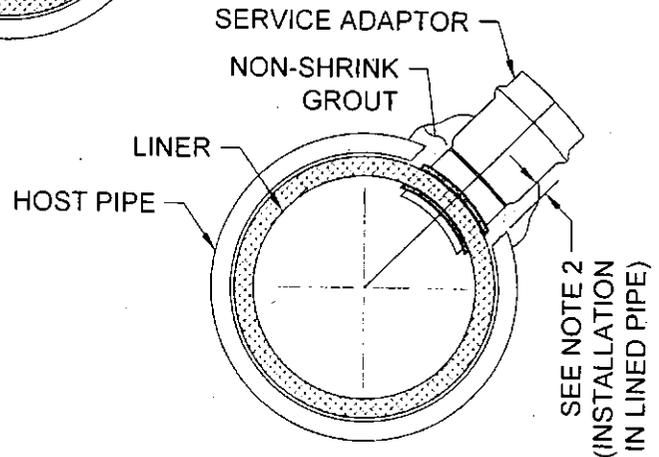
DEEP SERVICE CONNECTION

<p>CITY OF AUSTIN AUSTIN WATER</p>	<p>WATER SERVICE & WASTEWATER SERVICE CONNECTION</p>	
<p>_____ ADOPTED _____</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520-AW-01 3 OF 4</p>

SERVICE ADAPTOR CONSISTING OF SINGLE-BODY GASKETED BELL HAVING SDR 26 PVC HUB, RUBBER SLEEVE AND STAINLESS STEEL BAND. SEE SPL WW-227D & DETAIL "A"



DETAIL "A"



DETAIL "B"

INSTALLATION IN LINED PIPE:

1. MARK LOCATION OF TAP.
2. BREAK & REMOVE HOST PIPE SO THAT OPENING IS AT LEAST 2" BUT NO MORE THAN 3" WIDER THAN DIAMETER OF THE SERVICE ADAPTOR.
3. DO NOT DAMAGE LINER.
4. CORE HOLE THROUGH LINER USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
5. INSTALL SERVICE ADAPTOR.
6. HOLES CUT IN HOST PIPE SHALL BE PACKED WITH NON-SHRINK GROUT (ASTM C1107 GRADE). SEE DETAIL "B"

NOTES:

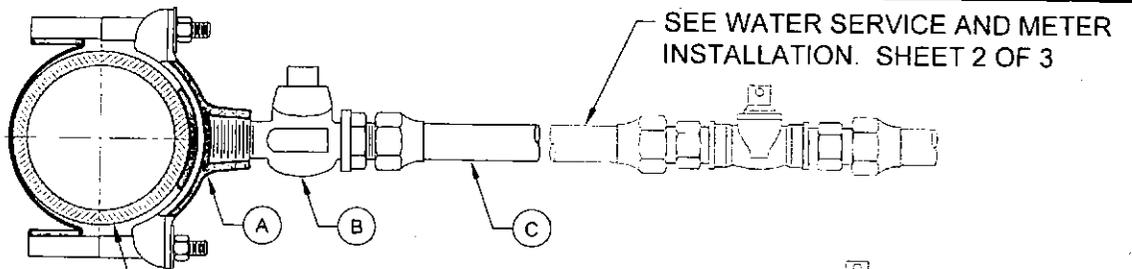
1. USE ONLY TO TAP EXISTING LINED PIPE.
2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.
3. THE EDGE OF THE CORE HOLE MUST BE AT LEAST 3' FROM THE ENDS OF THE PIPE, ANY OTHER CORE SERVICE CONNECTIONS, AND ANY FITTINGS.
4. FOR DEEP SERVICE APPLICATIONS SEE SHEET 3 OF 4, EXCEPT SUBSTITUTE A CORED HOLE, AND SERVICE ADAPTOR FOR THE TEE OR WYE.
5. SERVICE CONNECTIONS TO MANHOLES MUST BE MADE USING A PIPE-TO-MANHOLE CONNECTOR WHICH LIMITS THE PIPE SLOPE INTO THE MANHOLE TO 12% MAX.

6" WASTEWATER CONNECTION TO EXISTING LINED MAIN

CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & WASTEWATER SERVICE CONNECTION	
_____ ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-01 4 OF 4

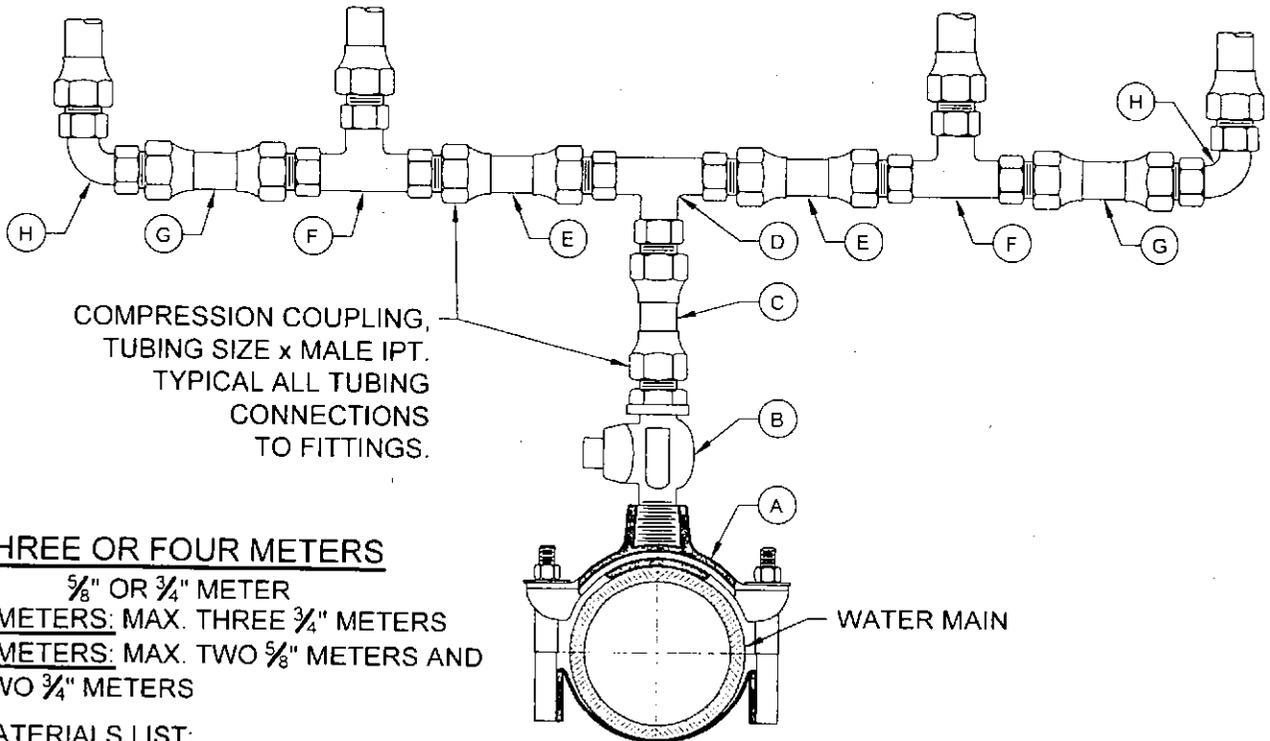
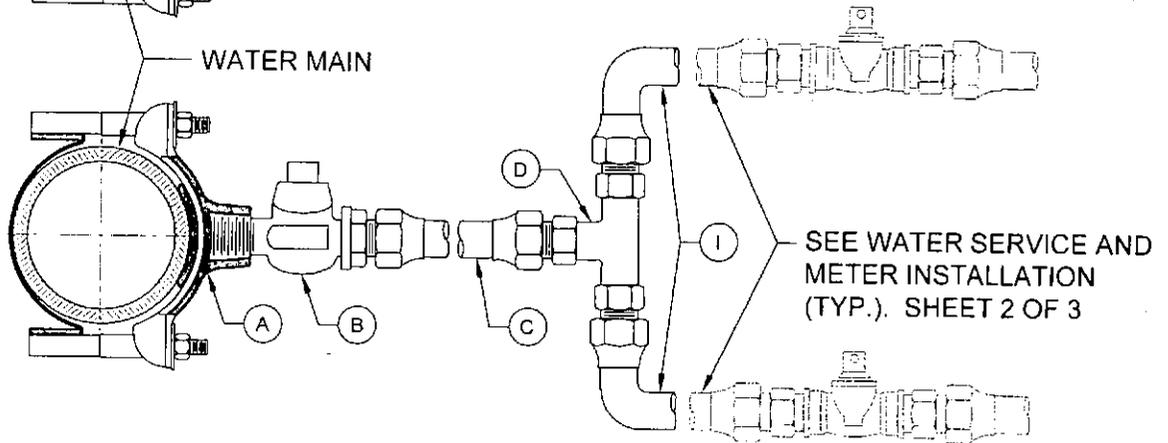
ONE METER

$\frac{5}{8}$ " $\frac{3}{4}$ " OR
1" METER



TWO METERS

$\frac{5}{8}$ " $\frac{3}{4}$ " OR
1" METER



COMPRESSION COUPLING,
TUBING SIZE x MALE IPT.
TYPICAL ALL TUBING
CONNECTIONS
TO FITTINGS.

THREE OR FOUR METERS

$\frac{5}{8}$ " OR $\frac{3}{4}$ " METER

3 METERS: MAX. THREE $\frac{3}{4}$ " METERS

4 METERS: MAX. TWO $\frac{5}{8}$ " METERS AND
TWO $\frac{3}{4}$ " METERS

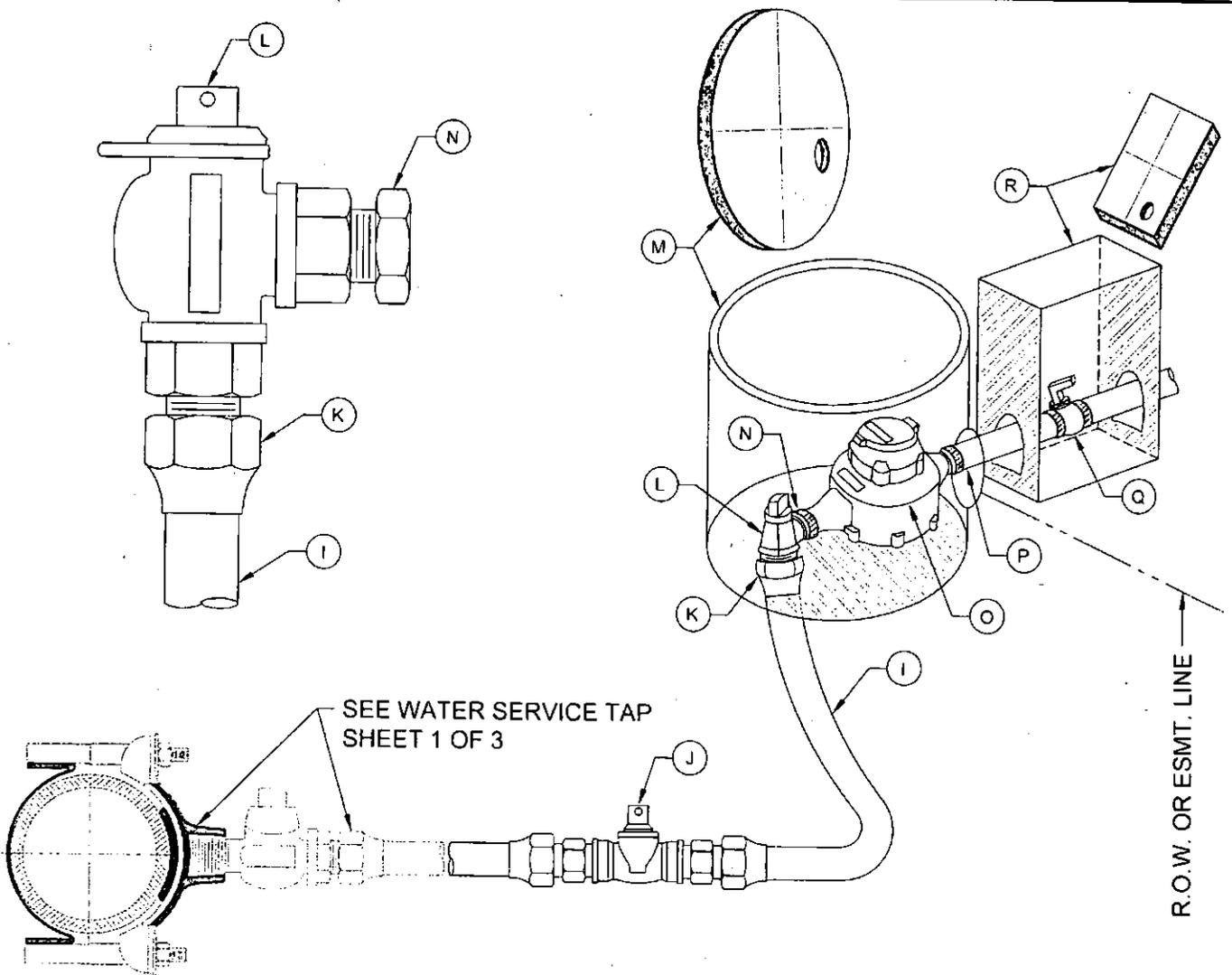
MATERIALS LIST:

- A. 2" SERVICE CLAMP
- B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET.
- C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT.
- D. TEE FOR THREE OR FOUR METERS ON WATER TAP. TEE OR WYE FOR TWO METERS ON WATER TAP. (2" x SERVICE TUBING SIZE "E") FOR THREE OR FOUR METERS. 2" TUBING BY SIZE "I" FOR TWO METERS.

(MATERIALS LIST CONT ON SHEET 2 OF 3)

WATER SERVICE TAP

<p>CITY OF AUSTIN AUSTIN WATER</p>	<p>WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS</p>	
<p>ADOPTED</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520-AW-02 1 OF 3</p>



MATERIALS LIST CONT:

- E. SERVICE TUBING, (1 1/2" COPPER OR 2" HDPE)
- F. BRONZE TEE, (SIZE EQUAL TO "E")
- G. SERVICE TUBING 1 1/2" COPPER OR 1 1/2" HDPE FOR 3/4" METER, 1" COPPER OR 1 1/2" HDPE FOR 5/8" METER. METER SIZES TO BE SHOWN ON PLANS.
- H. BRONZE ELBOW, (SIZE EQUAL TO "G"). ALL BRONZE FITTINGS PER SPL WW-68.
- I. SERVICE TUBING FOR SINGLE METER, 1 1/2" COPPER OR 2" HDPE FOR 1" METER. MIN. 1 1/2" COPPER OR 1 1/2" HDPE FOR 3/4" METER. MIN. 1" COPPER OR 1 1/2" HDPE FOR 5/8" METER. METER SIZES TO BE SHOWN ON PLANS.
- J. BALL VALVE, SPL WW-275 (SIZE EQUAL TO "I")
- K. COUPLING - COMPRESSION TO MALE IPT (SIZE "E" x SIZE "I")
- L. ANGLE METER STOP; SERVICE TUBING INLET x SWIVEL COUPLING NUT OUTLET (SIZE EQUAL TO "I")
- M. METER BOX AND COVER, SPL WW-145A

TO BE INSTALLED BY PLUMBER:

- N. BRASS BUSHING
- O. WATER METER (PURCHASED FROM AUSTIN WATER)
- P. PRIVATE PLUMBING PER CODE
- Q. CUSTOMER CUT-OFF VALVE
- R. CUSTOMER VALVE BOX AND LID

WATER SERVICE AND METER INSTALLATION

CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	
_____ ADOPTED _____	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 2 OF 3

NOTES:

1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
6. BALL VALVE "J" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.

COPPER:

- C1. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

HDPE:

- H1. INSTALL METALLIC WARNING TAPE MIN. 1' ABOVE HDPE TUBING FROM TAP CONNECTION TO METER.
- H2. TUBING SHALL BE PLACED SO THAT IT IS RELAXED AND "SNAKES" LOOSELY IN THE TRENCH.
- H3. TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 1.
- H4. IF A FITTING WILL BE INSTALLED WITHIN A BENT SECTION OF TUBING, THE TUBING SHALL HAVE A RADIUS NO SMALLER THAN THE VALUE SHOWN IN TABLE 2.
- H5. INSERT STIFFENERS FOR HDPE TUBING PER SPL WW-65B TO BE INSTALLED INSIDE TUBING AT ALL COMPRESSION FITTINGS.

TABLE 1 (SEE NOTE H3)	
NOMINAL TUBING DIA.	BEND RADIUS OF AT LEAST
1"	3'
1 1/2"	4'
2"	5'

TABLE 2 (SEE NOTE H4)	
NOMINAL TUBING DIA.	BEND RADIUS OF AT LEAST
1"	12'
1 1/2"	16'
2"	20'

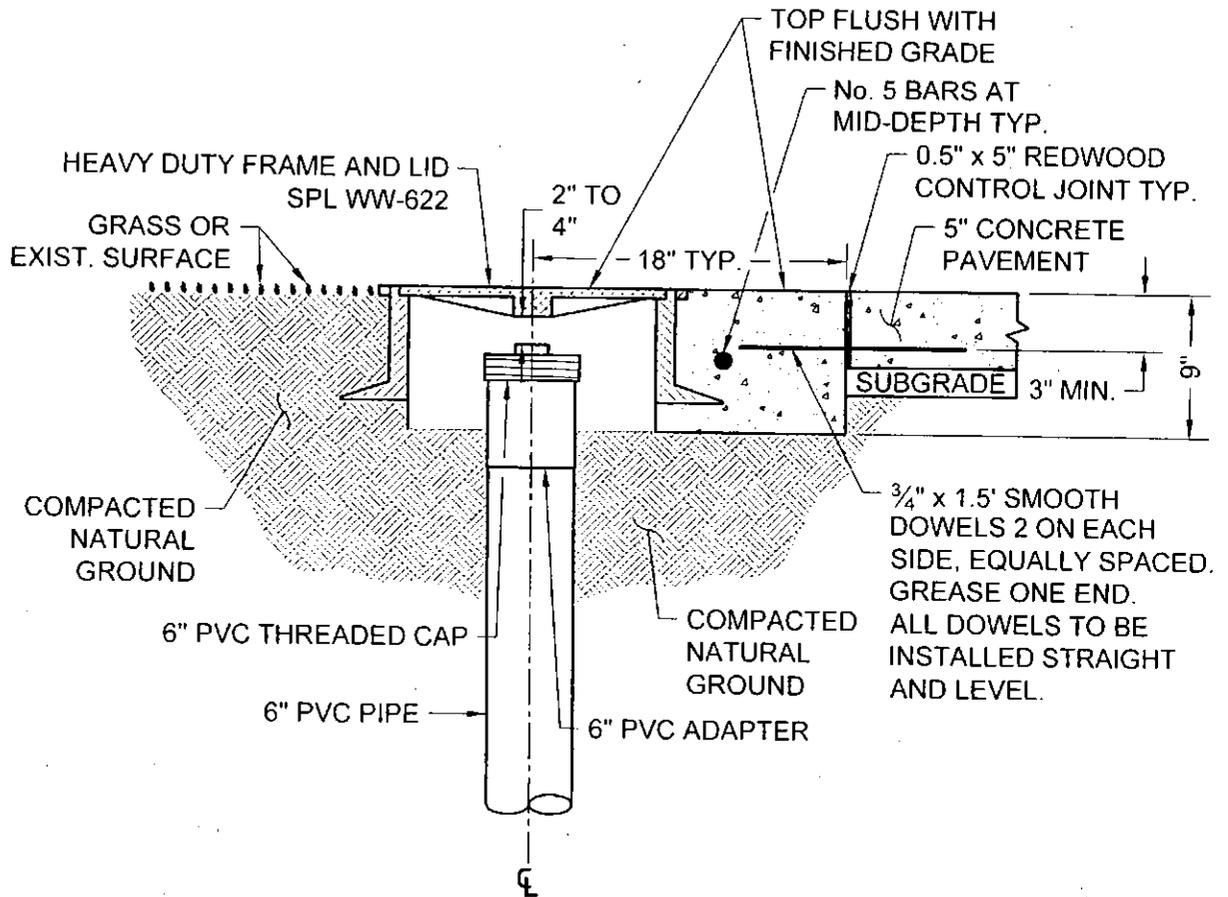
RECLAIMED WATER:

- R1. FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. HDPE TUBING SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS	
_____ ADOPTED _____	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-02 3 OF 3

UNPAVED

PAVED*



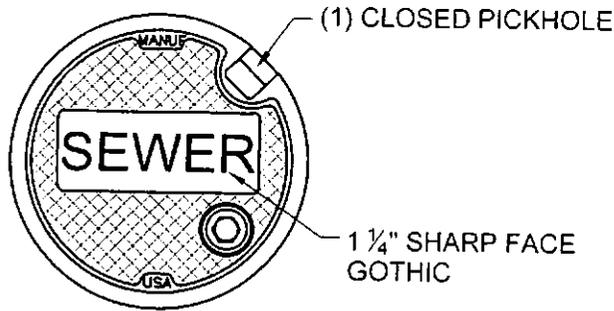
* CLEAN-OUTS MAY NOT BE PLACED IN PAVED AREAS - I.E. SIDEWALKS, DRIVEWAYS, OR PARKING LOTS, AND MUST BE LOCATED A MINIMUM OF 6" FROM ALL PAVED AREAS.

NOTES:

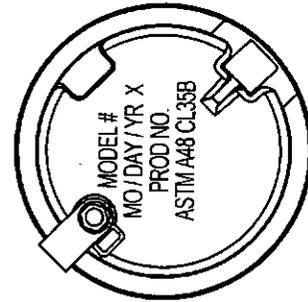
1. SUB-GRADE SHALL BE COMPACTED AS PER STD. SPEC. 201S, SUB-GRADE PREPARATION.
2. REINFORCING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
3. CONCRETE SHALL MEET ITEM 403S CLASS "A".
4. ALL PVC SHALL BE SDR 26.

CLEAN-OUT FRAME AND LID

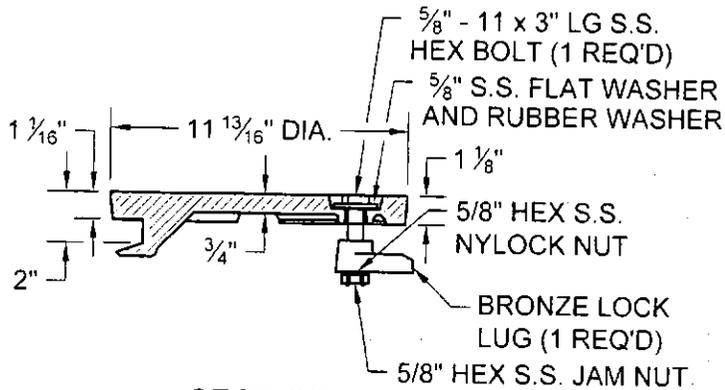
CITY OF AUSTIN AUSTIN WATER	WASTEWATER CLEAN-OUT FRAME AND LID	
_____ DATE	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-03 1 OF 2



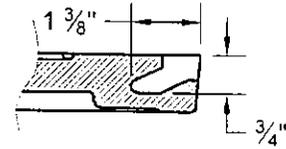
TOP VIEW



BOTTOM VIEW

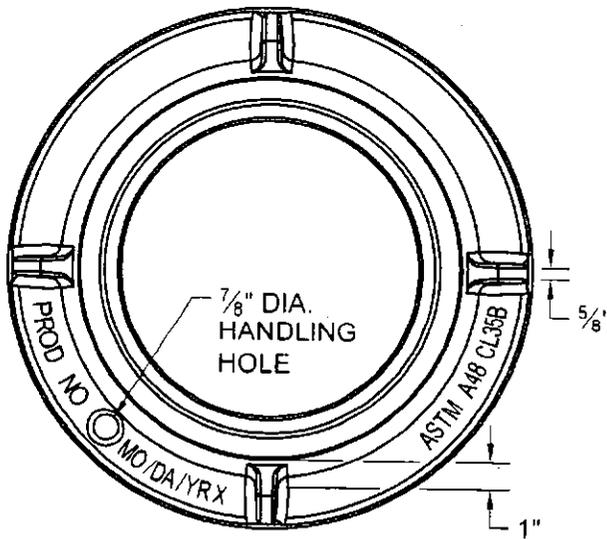


SECTION

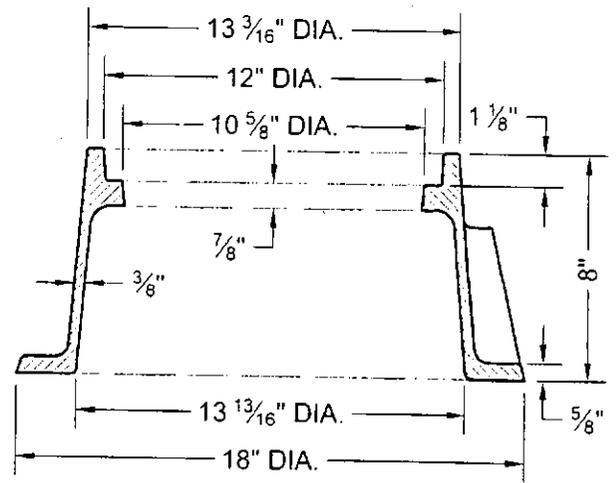


PICKHOLE DETAIL

CLEAN-OUT LID



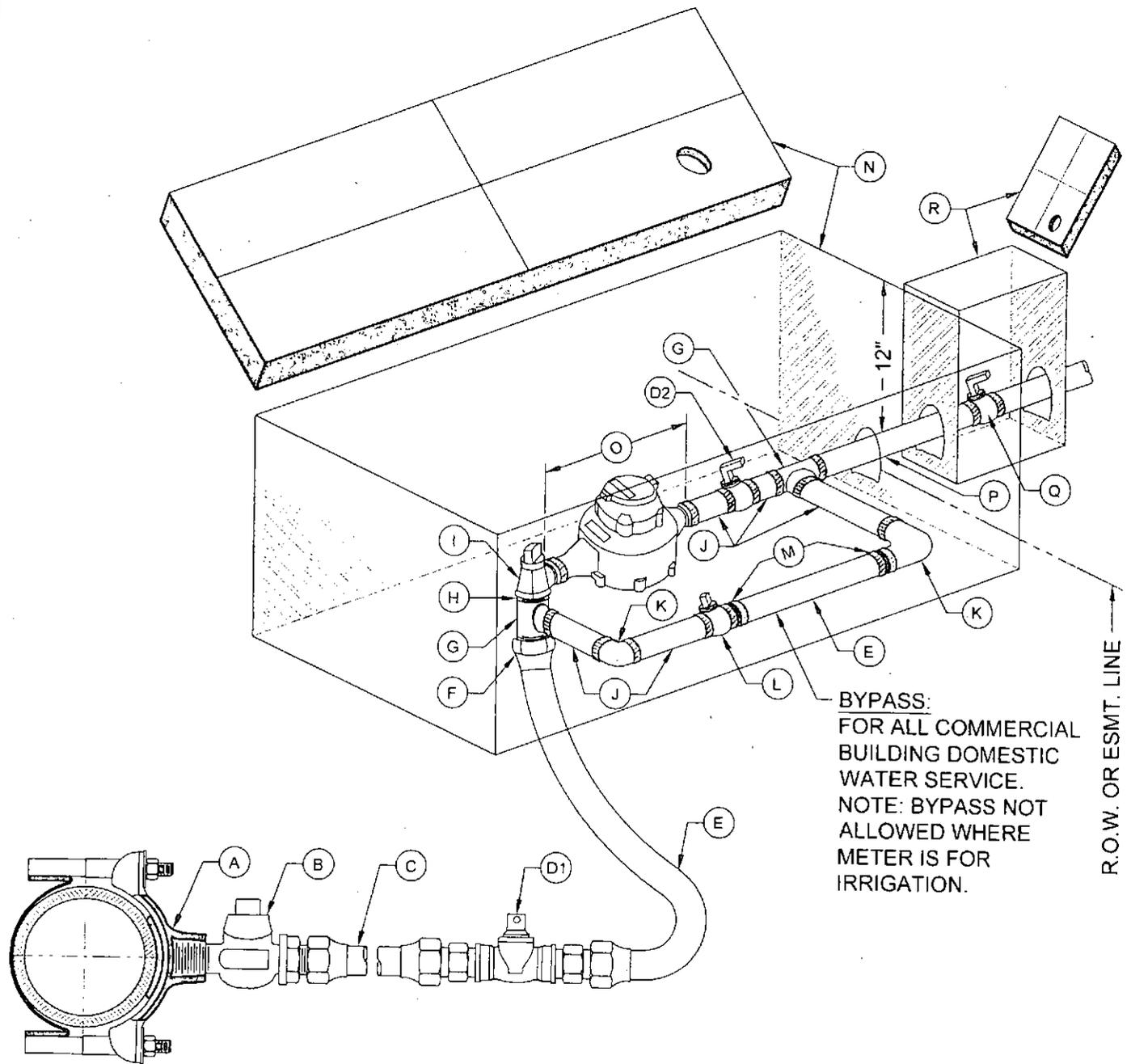
TOP VIEW



SECTION

CLEAN-OUT FRAME

<p>CITY OF AUSTIN AUSTIN WATER</p>	<p>WASTEWATER CLEAN-OUT FRAME AND LID</p>	
<p>_____ DATE _____</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520-AW-03 2 OF 2</p>



<p>CITY OF AUSTIN AUSTIN WATER</p>	<p>1 1/2" - 2" METER INSTALLATION SHOWING OPTIONAL BYPASS</p>	
<p>ADOPTED</p>	<p>THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.</p>	<p>STANDARD NO. 520-AW-04 1 OF 2</p>

MATERIALS LIST:

- A. 2" SERVICE CLAMP
- B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
- C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT
- D1. 2" BALL VALVE, SPL WW-275
- D2. 2" BALL VALVE, SPL WW-275
- E. 2" COPPER SERVICE TUBING
- F. 2" BRASS COUPLING - COMPRESSION TO MALE IPT
- G. 2" BRASS TEE
- H. 2" BRASS CLOSE-NIPPLE
- I. 2" ANGLE METER STOP; SERVICE TUBING INLET x FLANGED OUTLET
- J. 2" BRASS NIPPLE
- K. 2" BRASS ELBOW
- L. 2" LOCKABLE CURB STOP - FEMALE IPT INLET BY COMPRESSION OUTLET
- M. 2" BRASS COUPLING - SERVICE TUBING TO MALE IPT
- N. RECTANGULAR METER BOX AND COVER, SPL WW-145A

TO BE INSTALLED BY PLUMBER:

- O. WATER METER, LENGTH 13", (PURCHASED FROM AUSTIN WATER)
- P. 2" COPPER SERVICE TUBING (PRIVATE PLUMBING PER CODE)
- Q. CUSTOMER CUT-OFF VALVE
- R. CUSTOMER VALVE BOX AND LID

NOTES:

- 1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
- 2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
- 3. TOP OF BOXES SHOULD BE 1" ABOVE GROUND.
- 4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
- 5. BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
- 6. BALL VALVE "D1" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 24" HORIZONTALLY FROM METER BOX OR 36" BELOW FINAL GRADE.
- 7. COPPER SERVICE SHALL BE COPPER TUBING SIZE ANNEALED SEAMLESS TYPE "K" MEETING ASTM B88 WITH NO SWEAT OR SOLDERED JOINTS.

RECLAIMED WATER:

FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED PURPLE TUBING. ALL OTHER TUBING AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL TUBING AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE "RECLAIMED WATER" CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER	1 1/2" - 2" METER INSTALLATION SHOWING OPTIONAL BYPASS	
_____ ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520-AW-04 2 OF 2