NOTES:
1. ALL FITTINGS SHALL BE DUCTILE IRON
2. ALL EXCAVATION SHALL PROVIDE A MINIMUM OF 1'-0" CLEAR AROUND PIPE AND FITTINGS.
3. THESE PLANS ARE FOR DIP AND CID WATERMAINS 12" OR SMALLER, ALL OTHER SIZES AND TYPES SEE PROJECT DRAWINGS
4. REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) SHALL BE INSTALLED AS A UNIT (TWO SHUT-OFF VALVES, RELIEF PORT, TWO CHECK VALVES AND FOUR TEST COCKS). WHEN RPBA IS CONNECTED TO HYDRANT AND THE HOSE BIB FAUCET SAMPLE THEY SHALL BE CAPPED WHEN NOT IN USE. ASSEMBLY SHALL BE TESTED WHEN INSTALLED BY A WASHINGTON STATE CERTIFIED BACKFLOW ASSEMBLY TESTER (BAT) AND A CURRENT TEST REPORT SHALL BE ON SITE. FOR INSTALLATION PROCEDURES CALL 684-3536.
5. ALL FITTINGS AND MATERIALS FURNISHED BY CONTRACTOR AND TO BE INSTALLED BY SPU SHALL BE VERIFIED, INSPECTED AND ON THE JOB SITE PRIOR TO SHUTDOWN OF EXISTING MAIN. FAILURE TO MEET THIS REQUIREMENT COULD RESULT IN DELAYS.

LEGEND
△ CLEAN & DISINFECTED POTABLE WATER HOSE ONLY. SIZE FLUSHING RISER PER TABLE IN STD SPEC SEC 7-11.3(12)
△ HYDRANT PERMIT REQUIRED
△ CHECK WITH SEWER UTILITY BEFORE DISCHARGE TO SEWERS
① CONTRACTOR TO DETERMINE ALIGNMENT, GRADE AND OUTSIDE DIAMETER OF EXISTING PIPE PRIOR TO INSTALLING NEW WATERMAIN. ENGINEER TO DETERMINE OUTSIDE DIAMETER OF EXISTING PIPE WHEN CONTRACTOR EXCAVATES TO DETERMINE ALIGNMENT & GRADE.
② ALL EXCAVATION, PIPE, FITTINGS (EXCEPT AS NOTED BELOW), OTHER MATERIAL, BEDDING, BACKFILL, COMPACTION & STREET RESTORATION BY CONTRACTOR. ALL MATERIALS SHALL BE ON JOB SITE PRIOR TO SHUTDOWN OF EXISTING MAIN.
③ INSTALLED BY CONTRACTOR
④ CONNECTION PIPE: CONTRACTOR FURNISHED, INSTALLED BY SPU
⑤ WATERMAIN WITH PLAIN ENDS
⑥ MECHANICAL JOINT SLEEVE WITH Spacer CUT TO FIT GAP, FURNISHED AND INSERTED AT TIME OF CONNECTION BY SPU
⑦ TAPPING SLEEVE & TAPPING VALVE FURNISHED AND INSTALLED BY SPU
⑧ APPLIES TO PIPES 4" THROUGH 12". ALL LARGER SIZES TO BE ADDRESSED ON DRAWINGS
⑨ MECHANICAL JOINT SLEEVE, FURNISHED BY CONTRACTOR AND INSTALLED BY SPU, SPACERS BY SPU WHERE REQUIRED

REF STD SPEC SEC 7-11

City of Seattle
NOT TO SCALE
CONNECTIONS TO EXISTING WATERMAINS

**EXISTING PLUGGED TEE OR CROSS**

**NEW PLUGGED TEE OR CROSS**

**CONNECTIONS TO EXISTING TEE OR CROSS — PLAN VIEW**

**TABLE**

<table>
<thead>
<tr>
<th>SIZE OF WATERMAIN</th>
<th>DISTURBANCE ZONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP TO &amp; INCLUDING 10&quot;</td>
<td>10'-0&quot;</td>
</tr>
<tr>
<td>OVER 10&quot;</td>
<td>12'-0&quot;</td>
</tr>
</tbody>
</table>

* SPU MAY INCREASE DISTURBANCE ZONE.

**CONNECTIONS TO EXISTING MAIN, NO TEE OR CROSS — PLAN VIEW**

(TAPPING SLEEVE & TAPPING VALVE)

**REF STD SPEC SEC 7-11**

City of Seattle

NOT TO SCALE

CONNECTIONS TO EXISTING WATERMAINS

NOTES:
1. 6" HYDRANT CONNECTION PIPE SHALL BE DIP CL52.
2. HYDRANT TEES SHALL BE SET HORIZONTALLY.
3. THE THREADED NIPPLE OR THE 4" PUMPER NOZZLE SHALL BE EQUIPPED WITH THE BLUNT START OR HIGEBEE CUT.
5. AFTER INSTALLATION, ALL SHACKLE BOLTS, NUTS, MECHANICAL JOINT CLAMPS AND SHACKLE RODS SHALL BE CLEANED AND COATED WITH TWO COATS OF ROYSTON R28 MASTIC.
6. AFTER BACKFILLING, THE OUTSIDE OF THE HYDRANT (ABOVE THE GROUND LINE) SHALL BE THOROUGHLY CLEANED AND PAINTED WITH TWO COATS OF KELLY-MOORE LUXLITE 43-616 CAT YELLOW.
7. PUMPER PORT SHALL FACE CURB.
8. RESTRAINT SHALL BE BY WEDGE RESTRAINT SYSTEM SUCH AS MEGALUG OR UNIFLANGE. SEE STD SPEC 9-30.5(5).
9. CONTRACTOR SHALL REMOVE TEMPORARY PIPE PLUGS FROM THE DRAIN VALVE OUTLET BEFORE BACKFILLING THE EXCAVATION.
NOTES:
1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCAS EMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE SHALL BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED.
WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HY DRANT BARREL SHALL BE TAPE COATED.
2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING-PERMITTED AREA, A SECOND 6" GATE VALVE SHALL BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310a.

REF STD SPEC SEC 7-14
NOTES:
1. 6" HYDRANT CONNECTION PIPE SHALL BE DI-P CL52.
2. HYDRANT TEES SHALL BE SET HORIZONTALLY.
3. THE THREADED NIPPLE ON THE 4" PUMPER NOZZLE SHALL BE EQUIPPED WITH THE BLUNT START OR HIGSEE CUT.
4. THE 2½" NIPPLES SHALL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION BULLETIN NO 194 DATED 1974.
6. AFTER BACKFILLING, THE OUTSIDE OF THE HYDRANT (ABOVE THE GROUND LINE) SHALL BE THOROUGHLY CLEANED AND PAINTED WITH TWO COATS OF KELLY-MOORE 6130-516 CAT YELLOW.
7. PUMPER PORT SHALL FACE CURB.
8. PUMPER PORT TO BE FITTED WITH QUICK CONNECT ADAPTOR PER FIRE MARSHAL.
9. RESTRAINT SHALL BE BY WEDGE RESTRAN SYSTEM USCH AS MEGALUG OR UNIFLANGE. SEE STD SPEC SEC 9-30.5(5).
10. CONTRACTOR SHALL REMOVE TEMPORARY PIPE PLUGS FROM THE DRAIN VALVE OUTLET BEFORE BACKFILLING THE EXCAVATION.
GENERAL NOTES:

1. WHERE WATERMAINS ARE INSTALLED WITH POLYETHYLENE ENCASEMENT OR TAPE COATINGS, THE HYDRANT BARREL AND VALVE SHALL BE SIMILARLY ENCASED, COATED AND/OR JOINTS BONDED. WHERE WATERMAIN IS THERMOPLASTIC COATED, THE HYDRANT BARREL SHALL BE TAPE COATED.

2. WHERE 6" GATE VALVE IS TO BE LOCATED WITHIN A PARKING-PERMITTED AREA, A SECOND 6" GATE VALVE SHALL BE INSTALLED AT THE HYDRANT ASSEMBLY PER STD PLAN NO 310a.

REF STD SPEC SEC 7-14
CONCRETE SHEAR BLOCK SEE STD PLANS NO 310a & 311a

2" ISLAND SURFACE MATERIAL OVER 4" COMPACTED MINERAL AGGREGATE TYPE 2. MATCH SURROUNDING PAVEMENT MATERIAL AND BE FLUSH WITH TOP OF CURB

MARKER POST (TYP.)

EXTRUDED CURB MATERIAL TO MATCH EX. PAVEMENT MATERIAL. SEE STD SPEC SEC 8-06

TRAFFIC ISLAND MARKER POST LAYOUT FOR FIRE HYDRANTS IN PARKING AREAS

NOTES:
1. LAYOUT OF MARKER POST SHALL BE VERIFIED FIRST WITH SPU AND SDOT
2. MARKER POST WITH HIGH INTENSITY REFLECTORIZED BANDS PROVIDED BY SPU

MARKER POST LAYOUT FOR FIRE HYDRANTS IN PARKING AREAS

REF STD SPEC SEC 7-14
NOTE:
1. ROCK FOR ROCK FACING SHALL COMPLY WITH STD PLAN NO 141

SECTION A–A

REF STD SPEC SEC 2-13
NOTES:
1. NO PARKING ZONE WITHIN 15'-0" RADIUS OF FIRE HYDRANT
2. MIN DISTANCE FROM BACK FACE OF HYDRANT TO FRONT EDGE OF CONCRETE WALK SHALL BE 2'-0"

REFERENCE:
REF STD SPEC SEC 7-14

City of Seattle

FIRE HYDRANT LOCATIONS & CLEARANCES

NOTES:

1. Union point 2' outside vault or 2' from property line.
2. 6' clearance from new trees or clear of drip line for existing trees.
3. 3' clear from poles.
4. 2' clear from edge of driveway or ADA ramp.
5. Water service not to be installed in driveway, behind ADA ramp, or street corner.
6. Side sewer horizontal clearance 10' for cast iron water pipe or 5' for ductile iron water pipe.
7. Side sewer vertical clearance 1.5' min.
8. Vault horizontal clearance 12' min from other utilities unless otherwise noted in std specs.
9. Vertical clearance 12' min for all other utility crossings unless otherwise noted in std specs.
10. Allowable location of water service vault: 2' clear of curb and 2' clear of property line.

TYPES OF WATER SERVICES

☐ 6" & LARGER DOMESTIC SERVICE (DS) 6"X6" VAULT NCPV#

☐ 3" & 4" DOMESTIC SERVICE (DS) 5"X7" VAULT NCPV#

☐ 4" & LARGER FIRE SERVICES (DC DETECTOR CHECK) 4'X4' AREA (TYP DIRECT BURY) NCPV#

☐ 2" & SMALLER WATER SERVICE INSTALLED IN 1.5"X2" METER BOX MB#
300 WATERMAIN APPURTEINANCES

STANDARD PLAN NO 315a

REV DATE: 2003

NOTE:
VALVE BOX FOR USE ON 12" OR SMALLER VALVE INSTALLATIONS

PLASTIC FOAM RING
SEE STD PLAN NO 315b

OPERATING NUT EXTENSION
EXTENSION PIECE (2) WHEN REQ'D INSTALLED BETWEEN TOP & BASE SECTION

BASE SECTION, SEE SECTION A-A

TOP SECTION, SEE SECTION A-A

LID, VALVE BOX

PAVEMENT

WATERMAIN

DATE VALVE
(BIV INSTALLATION SIMILAR)

VALUE BOX ASSEMBLY
TYPICAL SETTING DETAIL

LENGTH AS REQUIRED

SECTION A-A

NOTE:

CAST IRON VALVE BOX & OPERATING NUT EXTENSION


City of Seattle

NOT TO SCALE
NOTES:
1. FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY
2. CASTINGS AND EXTENSIONS SHALL BE HOT-DIPPED IN ASPHALTIC VARNISH ROYSTON RYGOTE #612XM OR 2 COATS OF MASTIC ROYSTON INSIDE AND OUT.
3. VALVE BOXES SHALL BE RICH [045]: TOP SECTION, LID AND BASE; OR OLYMPIC FOUNDRY: LID #1906-33, TOP SECTION #106-33, BASE SECTION #1301-33
4. ALL CASTINGS SHALL BE DUCTILE OR GREY CAST IRON

LEGEND:
1. AN OPERATING NUT EXTENSION SHALL BE INSTALLED WHEN THE GROUND SURFACE IS MORE THAN 2'-6" ABOVE THE VALVE OPERATING NUT. THE OPERATING NUT EXTENSION SHALL EXTEND INTO THE TOP SECTION OF THE STANDARD VALVE BOX AND SHALL CLEAR THE BOTTOM OF THE LID BY 6" MIN
2. EXTENSION PIECES (WHEN USED) SHALL CONFORM TO MINIMUM THICKNESS REQUIREMENTS AND SHALL FIT INTO THE TOP SECTION AND OVER THE BOTTOM SECTION

PLASTIC FOAM RING DETAIL
TYPE A BLOCKING FOR 11½° & 22½° VERTICAL BENDS

<table>
<thead>
<tr>
<th>PIPE SIZE NOM. INCHES</th>
<th>PB PRESSURE PSI</th>
<th>VERTICAL BEND DEGREES</th>
<th>NO. OF CUFT. CONC. BLOCKING</th>
<th>DIA. OF SHACKLE RODS (2) INCHES</th>
<th>BORE SIZE OF ROADS IN CONCRETE INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>300</td>
<td>11 ½</td>
<td>8</td>
<td>2</td>
<td>¾</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6&quot;</td>
<td>300</td>
<td>11 ½</td>
<td>12</td>
<td>2</td>
<td>¾</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8&quot;</td>
<td>300</td>
<td>11 ½</td>
<td>16</td>
<td>3</td>
<td>¾</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12&quot;</td>
<td>300</td>
<td>11 ½</td>
<td>64</td>
<td>4</td>
<td>¾</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

TYPE B BLOCKING FOR 45° VERTICAL BENDS

<table>
<thead>
<tr>
<th>PIPE SIZE NOM. INCHES</th>
<th>PB PRESSURE PSI</th>
<th>VERTICAL BEND DEGREES</th>
<th>NO. OF CUFT. CONC. BLOCKING</th>
<th>DIA. OF SHACKLE RODS (2) INCHES</th>
<th>BORE SIZE OF ROADS IN CONCRETE INCHES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>300</td>
<td>45</td>
<td>27</td>
<td>3</td>
<td>¾</td>
</tr>
<tr>
<td>6&quot;</td>
<td>300</td>
<td>45</td>
<td>64</td>
<td>4</td>
<td>¾</td>
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<td>¾</td>
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<tr>
<td>12&quot;</td>
<td>300</td>
<td>45</td>
<td>216</td>
<td>6</td>
<td>¾</td>
</tr>
</tbody>
</table>

For Notes see STD Plan No. 330b
### Type "C" Blocking for 11\(\frac{3}{4}\), 22\(\frac{3}{4}\), 45\(^\circ\), and 90\(^\circ\) Vertical Bends

<table>
<thead>
<tr>
<th>SOIL</th>
<th>Firm Silt or Firm Silty Sand</th>
<th>Compact Sand</th>
<th>Compact Sand &amp; Gravel</th>
</tr>
</thead>
<tbody>
<tr>
<td>FITTING</td>
<td>90(^\circ) Bend</td>
<td>TEE, 45(^\circ) Bend &amp; Dead End</td>
<td>11(\frac{3}{4})&amp; 22(\frac{3}{4})(\frac{3}{4}) Bend</td>
</tr>
<tr>
<td>H</td>
<td>4&quot;</td>
<td>5.8</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>6&quot;</td>
<td>13.3</td>
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</tr>
<tr>
<td></td>
<td>12&quot;</td>
<td>53.0</td>
<td>37.5</td>
</tr>
</tbody>
</table>

**Areas calculated on 300 PSI test pressure and 3'-0" min cover over watermain.**

**NOTES:**
1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE ENGINEER.
2. ALL BLOCKING FOR VERTICAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND.
3. ALL Poured THRUST BLOCKS SHALL BE BACKFILLED AFTER MIN. 1 DAY, PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED f′c.
4. ALL BLOCKING SHALL BE CONCRETE CL 3000.
5. AFTER INSTALLATION, SHACKLE RODS & TURNBUCKLES SHALL BE CLEANED AND COATED WITH 2 COATS OF ASPHALTIC VARNISH, ROYSTON ROYKOTE #612M OR APPROVED EQUAL.
6. SHACKLE RODS SHALL BE FUSION BONDED EPOXY COATED ROUND WILD STEEL, ASTM A 36, WITH THREADS ON ENDS ONLY.
7. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS. REASONABLE ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED.

**REF STD SPEC SEC 7-11**
300 WATERMAIN APPURTENANCES

UNBALANCED CROSS

CROSS WITH PLUG

PLUGGED TEE

HORIZONTAL BEND

PIE & CAP

THRUST BLOCK AREA IN SQUARE FEET (SEE STD PLAN NO 331B)

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>SOIL</th>
<th>FIRM SILT OR FIRM SILTY SAND</th>
<th>COMPACT SAND</th>
<th>COMPACT SAND &amp; GRAVEL</th>
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</thead>
<tbody>
<tr>
<td>4&quot;</td>
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<td>4.2</td>
<td>2.9</td>
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<td>9.4</td>
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<td>16.7</td>
<td>16.7</td>
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<tr>
<td>12&quot;</td>
<td>53.0</td>
<td>37.5</td>
<td>37.5</td>
<td>15.0</td>
</tr>
</tbody>
</table>

AREAS CALCULATED ON 300 PSI TEST PRESSURE AND 3'-0" MIN COVER OVER WATERMAIN

ECOLOGY BLOCKS, PER STD PLAN NO 460, MAY BE USED, AT THE DISCRETION OF THE ENGINEER ONLY, IN LIEU OF Poured-IN-PLACE BLOCKING FOR FITTINGS IN HEAVY OUTLINED PORTION OF TABLE.

City of Seattle

WATERMAIN THRUST BLOCKING HORIZONTAL FITTINGS


NOT TO SCALE
NOTES:
1. LOCATION AND SIZE OF BLOCKING FOR PIPE LARGER THAN 12" DIAMETER AND FOR SOIL TYPES DIFFERENT THAN SHOWN SHALL BE DETERMINED BY THE ENGINEER.
2. ALL BLOCKING FOR HORIZONTAL FITTINGS (POURED IN PLACE) SHALL BEAR AGAINST UNDISTURBED NATIVE GROUND.
3. ALL POURED THRUST BLOCKS SHALL BE BACKFILLED AFTER MIN. 1 DAY. PRESSURE TESTING SHALL OCCUR AFTER CONCRETE HAS REACHED 70%.
4. ALL BLOCKING TO BE CONCRETE CL 3000.
5. BLOCKING AGAINST FITTINGS SHALL BEAR AGAINST THE GREATEST FITTING SURFACE AREA POSSIBLE, BUT SHALL NOT COVER OR ENCLOSE BELL ENDS, JOINT BOLTS OR GLANDS. ACCESS TO BOLTS AND GLANDS SHALL BE PROVIDED.
6. ALL HORIZONTAL BLOCKING THRUST AREAS SHALL BE CENTERED ON PIPE.
7. WHERE POURED-IN-PLACE BLOCKING IS REQUIRED AT A POINT OF CONNECTION TO AN EXISTING WATERMAIN, THE BLOCKING SHALL BE INSTALLED PRIOR TO CONNECTION.
8. TEMPORARY BLOCKING, IF USED, SHALL BE APPROVED BY ENGINEER.
FOR 4" WATERMAINS 4"X1-1/2" FIPT DUCTILE IRON, DOUBLE STRAPPED SADDLE (SEE STD PLAN NO 340b) W/ 1-1/2"X2" CORP STOP, BALL TYPE BRASS BODY MIPT X COMP

FOR LARGER THAN 4" WATERMAINS DIRECT TAP 1-1/2"X2" CORP STOP, BALL TYPE BRASS BODY, AWWA X CORP

STANDARD BOX AND LID
OLYMPIC FOUNDRY TYPE
SM29 TO BE LOCATED IN THE FIELD BY THE ENGINEER

SEE NOTE ON STD PLAN NO 340b

PLAN

MECHANICAL JOINT CAP OR PLUG
1/4" STEEL PLATE
CONC BLOCKING PER STD PLAN NO 331
UNDISTURBED GROUND

ELEVATION

2" PIPE CAP
2" GALV STEEL PIPE
2" PLASTIC FOAM MATERIAL
SEE STD PLAN NO 315
1 CU FT GRAVEL
MNRL AGG TYPE 9
2" GALVANIZED ELBOW
DRILL 1/8" DRAIN HOLE
2"X6" GALVANIZED NIPPLE
2" BRASS COUPLING MIPT X COMP

REF STD SPEC SEC 7-11

City of Seattle
NOT TO SCALE

2" BLOW OFF TYPE A
NON TRAFFIC INSTALLATION

FOR 4" WATERMAINS
4"x1½" FIPT DUCTILE IRON,
DOUBLE STRAPPED SADDLE
W/ ½"x2" CORR STOP, BALL TYPE
BRASS BODY MIPT X COMP

FOR LARGER THAN 4" WATERMAINS
DIRECT TAP (SEE STD PLAN NO 340a)
1½"x2" CORP STOP, BALL TYPE
BRASS BODY, AWWA X CORP

NOTE:
WHERE TAPE-WRAPPED DUCTILE IRON
PIPE IS USED, THE MECHANICAL JOINT
CAP, CORP AND SADDLE (IF REQUIRED)
SHALL BE WRAPPED PER AWWA C214

ELEVATION

PLAN

2" BLOW OFF DETAIL TYPE B
TRAFFIC INSTALLATION

REF STD SPEC SEC 7-11
BEDDING MATERIAL
CLASS B:
- FOR DISTRIBUTION WATERMAIN, MINERAL AGGREGATE TYPE 6 OR TYPE 7
- FOR TRANSMISSION WATERMAIN, MINERAL AGGREGATE TYPE 9
- SPECIAL BEDDING TO BE INDICATED ON DRAWINGS

NOTES:
1. EXCAVATE FOR THE BELL TO ENSURE UNIFORM SUPPORT FOR THE PIPE BARREL
2. FOR FLUIDIZED THERMAL BACKFILL (FTB) OR CDF CROSSINGS OF METALLIC PIPE, INCREASE CLASS B SAND DEPTH & COVER TO 12" MIN & ENCASE METALLIC PIPE IN 8 MIL POLYETHYLENE ENCASEMENT FOR FULL TRENCH WIDTH

BEDDING AT TRENCH CROSSING

REF STD SPEC SEC 7-11,7-17

City of Seattle

NOT TO SCALE
WATERMAIN TRENCH AND BEDDING

FRAME & COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS FOR DELIVERY.

BOTTOM VIEW

LIFTING HANDLE (2 REQUIRED)

TOP VIEW

SECTION A-A

TYPE 361 VALVE CHAMBER FRAME & COVER

REF STD SPEC SEC 7-12

City of Seattle

**SLIP JOINT BOND CONNECTION**

1. **Connection Sequence:**
   - Remove pipe coating to bright & clean metal

2. Strip insulation from test joint wire, install adapter sleeve

3. Hold mold firmly with opening away from operator and ignite

4. Remove slag and allow to cool

5. 16 ounce hammer test per Std. Spec Sec 7-11.3.15.3.1

6. Final connection to be made watertight with mastic coating or preformed thermit weld cap

**MECHANICAL JOINT BOND CONNECTION**

**THERMITE WELD CONNECTION**

Ref Std Spec Sec 7-11

---

City of Seattle | NOT TO SCALE | JOINT BONDING FOR DIP WATERMAINS & JOINTS BONDING DETAIL

STANDARD 3-WIRE TEST STATION

INSULATING COUPLING 5-WIRE TEST STATION

INSULATING FLANGE 5-WIRE TEST STATION

NOTE:
WIRE INSTALLATION PER STD SPEC SEC 9-30.12(3)

REFERENCE:
STD SPEC SEC 7-11.3(15) & 9-30.12

City of Seattle
NOT TO SCALE
ELECTROLYSIS TEST STATION
WIRE INSTALLATION DETAILS