DOUBLE SERVICE PLAN

UTILITY EASEMENT
(5' OR 10' TYP)

5/8" x 3/4" METER
(BY CITY)

FINISH GRADE

12" TYP

RIGHT-OF-WAY
OR PROPERTY LINE

FREE DRAINING
WASHED ROCK

SINGLE AND DOUBLE SERVICE SECTION

CITY OF PACIFIC

3/4" SINGLE AND 1" DOUBLE WATER SERVICES

APPROVED:

BY CITY ENGINEER

DATE

DRWN:

E.H.

CHKD:

D.B.

SCALE:

NONE

PAGE 1 OF 2
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**DOUBLE SERVICE**

| 14 | 3/4” IPS–18” LONG BRASS NIPPLE |
| 15 | 3/4”x3/4”x1” BRASS BULLHAD TEE |
| 16 | 3/4” BRASS ELBOW |

---

**CITY OF PACIFIC**

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<th>3/4” SINGLE AND 1” DOUBLE WATER SERVICES</th>
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**APPROVED BY PUBLIC WORKS SUBCOMMITTEE ON 1/30/01**

**11–PMX.DWG**

**PAGE 2 OF 2**
LEGEND

1. 3/4” METER YOKE END CONNECTION EQUAL TO MUELLER H-14222
2. 3/4” IPS INSTA–TITE CORP STOP EQUAL TO MUELLER H-15026
3. 5/8”x3/4”x12” COPPER SETTER EQUAL TO MUELLER B2404
4. ROMAC SADDLE (3/4” I.P.T) SINGLE STAINLESS STEEL STRAP FOR PIPE DIAMETERS LESS THAN 10” AND DOUBLE STAINLESS STEEL STRAP FOR PIPE DIAMETERS 10” AND GREATER.
5. 3/4” HIGH MOLECULAR (200 PSI, SIDR 7) "POLY" PIPE (LENGTH AS REQUIRED)
6. 14 GAUGE WIRE FROM MAINLINE TAP TO METER BOX AND EXPOSE 6” MINIMUM IN BOX (RUN INSIDE 2” PVC GUARD CONDUIT WHERE APPLICABLE)
7. METER BOX – CARSON 1419 OR EQUAL (SET FLUSHED WITH FINISHED GRADE, PIT LID ADAPTER HOLE IN LID)
8. INSTALL SERVICE LINE IN 2” PVC GUARD PIPE (SCH–80) WHEN CROSSING ROADWAY (3’ MINIMUM BEYOND AND BENEATH PAVEMENT SECTION)
9. TOP ENTRY VERTICAL CHECK VALVE
10. ANGLE DUAL CHECK VALVE

CITY OF PACIFIC

3/4” WATER SERVICE

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CHKD: D.B.  SCALE: NONE

DWG. NO. 11-R

PAGE 3 OF 3
EXISTING ASPHALT PAVEMENT
ROADWAY WIDTH VARIES

FEATHER AND SEAL
JOINT WITH
AR 4000W
(TYPICAL)

1” MINIMUM COMPACTED
THICKNESS ASPHALT
CONCRETE CLASS "G"

TRENCH RESTORATION
SEE ASPHALT REPAIR

3' (TYPICAL)

45°
NOTES:
1. THIS ACCESS TURNAROUND SHALL ONLY BE UTILIZED IF SPECIFICALLY APPROVED IN WRITING BY THE CITY FIRE MARSHALL.
2. THESE DRAWINGS ILLUSTRATE TYPICAL APPROVED FIRE APPARATUS ACCESS TURNAROUNDS.
   THE SIDE ACCESS DESIGN MAY BE RIGHT OR LEFT (LEFT DIRECTION SHOWN).
3. ALL DIMENSIONS ARE MINIMUM REQUIREMENTS.
4. OTHER SHAPED ACCESS TURNAROUNDS ARE AN ACCEPTABLE ALTERNATIVE TO THOSE SHOWN, PROVIDED THE DESIGN MEETS THE MINIMUM DIMENSION REQUIREMENTS SHOWN ABOVE.
6. MINIMUM ROAD WIDTH SHOWN DOES NOT INCLUDE ANY SHOULDER DIMENSIONS OR CURB DIMENSIONS IF REQUIRED.

PACIFIC FIRE DEPT CRITERIA:
A. ALL LEGS OF THE TURNAROUND SHALL BE A MINIMUM OF 20 FEET OF UNDISTURBED PAVEMENT WIDTH IN A 25' ACCESS AND UTILITY EASEMENT OR TRACT.
B. THERE SHALL BE A MINIMUM OF 30 FEET INSIDE RADIUS BETWEEN THE FIRE ACCESS ROAD AND THE LEGS.
D. THE ALTERNATIVE FIRE APPARATUS ACCESS TURNAROUND SHALL BE MARKED AS A FIRE LANE PER CITY FIRE MARSHALL.
E. THE ALTERNATIVE FIRE APPARATUS ACCESS TURNAROUND SHALL MEET THE SAME GRADE AND SURFACING STANDARDS APPLIED TO FIRE ACCESS ROADS.
F. THE MAXIMUM CROSS SLOPE ON AN ALTERNATIVE FIRE APPARATUS ACCESS TURNAROUND SHALL NOT EXCEED SIX PERCENT.
G. ALTERNATIVE DESIGNS THAT DO NOT MEET THE CRITERIA ESTABLISHED IN THIS SECTION MAY BE APPROVED BY THE CITY FIRE MARSHALL.

CITY OF PACIFIC

ALTERNATIVE FIRE APPARATUS ACCESS TURNAROUNDS

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| APPROVED BY PUBLIC WORKS | DATE:  | DRWN: | CHKD: | SCALE: |
| SUBCOMITTEE ON 07/25/02  | 5/02   | PMX   | XX    | NONE   |

AAT−R−PMX.dwg
MANHOLE FRAME & COVER WITH "SEWERS" CAST ON COVER WITH 3" HIGH RAISED LETTERS (NON-SKID PATTERN) AS MANUFACTURED BY "SAHER MANUFACTURING CO., INC." NO. 6024-R. 3 HOLE LOCKING FRAME AND COVER. ONE (1) BOLT HOLE TO BE CENTERED OVER LADDER

4" X 24" PRECAST CONC. ADJUSTMENT RINGS
2 RINGS REQUIRED
4 RINGS MAXIMUM
PLASTER INSIDE AND OUTSIDE FACE WITH 1/2" THICK GROUT

48" DIA. X 8" THICK CONCRETE SLAB

48" MIN. INSIDE DIAMETER PRECAST MANHOLE

RUBBER GASKET SEALING ELEMENT
"APCO, CRISPIN OR VALMATIC" HEAVY-DUTY COMBINATION AIR AND VACUUM VALVE W/ STAINLESS STEEL INTERNALS & EPOXY COATING. SEATS SHALL BE SUPPLIED FOR THE FOLLOWING WORKING PRESSURES:
20 PSI, 20-150 PSI W/ FLUSHING ATTACHMENTS

POLYPROPYLENE LADDER
6" BLIND FLANGE, TAP FOR 2" AIR & VACUUM UNIT
SLOPE TO DRAIN
MJ TEE SIZE AS REQ'D WITH 6" FLANGE TEE
2" 90° BASE WITH 2" PIPE SUPPORT

NOTES:
1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL.
PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.

2. DROP OF GRADE THRU MANHOLE SHALL BE 0.10', UNLESS OTHERWISE APPROVED.

3. INSTALL CONCRETE COLLAR

CITY OF PACIFIC

AIR & VACUUM RELEASE ASSEMBLY

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SEE NOTE 1
SEE NOTE 3
FINISHED GRADE
24" DIA.

GROUT BETWEEN RINGS
POLYPROPYLENE MANHOLE STEPS NO. P-13938 LOCATED AT 12" O.C.

GROUT LIFT HOLES INSIDE AND OUTSIDE
TAG AIR AND VACUUM UNIT NON POTABLE TRANSMISSION LINE
2" GATE VALVE TH X TH

4" DIAMETER PVC DRAIN PIPE TO DAYLIGHT @ 2% SLOPE
FOUNDATION GRAVEL (8" MIN)
UNDISTURBED EARTH
NOTES:

1. GATE VALVE: AWWA RESILIENT SEAL, THRD x THRD WITH OPERATING NUT
2. ALL PIPING BETWEEN DOUBLE STRAP SADDLE AND INLET SIDE OF COMBINATION AIR & VAC ASSEMBLY SHALL BE BRASS
3. TAP MAIN AT SYSTEM HIGH POINT, LOCATION TO BE APPROVED BY THE CITY
4. PAINT PORTION ABOVE GROUND WITH TWO COATS PRESERVATIVE BRAND No. 43-616 YELLOW
ELEVATION

BLOW-OFF HYDRANTS SHALL BE NON-FREEZING, SELF-DRAINING TYPE.

1. SET UNDERGROUND IN CITY APPROVED METER BOX, THESE HYDRANTS WILL BE FURNISHED WITH A 2" RIP INLET, A NON-TURNING OPERATING ROD, AND SHALL OPEN TO THE DESIGN, AND BE SERVICEABLE FROM ABOVE GRADE WITH NO DIGGING.

2. THE OUTLET SHALL ALSO BE BRONZE AND BE 2-1/2" NST.

3. HYDRANTS SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE.

(SPECIFY OVERALL LENGTH 6" SHORTER THAN NORMAL DEPTH OF BURY. MINIMUM OPENING IN METER BOX SHALL BE 10").
1. VALVE MARKER POST PAINTED YELLOW WITH BLACK STENCILED DISTANCE & DIRECTION TO VALVE.
2. 17"X28" CONC. METER BOX WITH 3/8" STEEL DIAMOND PLATE COVER, FOG-TITE METER SEAL CO. NO.2
3. CAST IRON VALVE BOX
4. 2" AWWA RESILIENT SEAT GATE VALVE THD X THD, WITH OPERATING NUT
5. 2" TYPE "K" COPPER PIPE
6. DOUBLE STRAP SERVICE CLAMP
7. 90' BEND MUELLER No. H-15526 COMPRESSION X COMPRESSION
8. 2" COMBINATION AIR & VACUUM RELEASE ASSEMBLY; A. APCO MODEL 144.
B. CRISPIN MODEL CRAL 2.
9. 2"X90' ELL, GALV. WITH WEEP HOLE IN VERTICAL BEND
10. 2" GALV. IRON PIPE (FIELD LOCATE NEXT TO EXISTING PROPERTY LINE).
11. 2"X90' ELL (GALV.)
12. PAINT PORTION ABOVE GROUND WITH TWO COATS OF PRESERVATIVE BRAND No. 43-616 YELLOW PAINT
13. 2" BEEHIVE STRAINER
14. 2" OPEN PATTERN RETURN BEND
15. STRAIGHT COUPLING, MUELLER No. H-15428 COMPRESSION X COMPRESSION

NOTES:

1. ALL PIPING BETWEEN DOUBLE STRAP SADDLE AND INLET SIDE OF COMBINATION AIR AND VACUUM ASSEMBLY SHALL BE COPPER
2. TAP WATER MAIN AT HIGH POINT, LOCATION TO BE APPROVED BY THE CITY

CITY OF PACIFIC
COMBINATION AIR AND VACUUM RELEASE ASSEMBLY

APPROVED: ___________________________ DATE: ___________________________
BY CITY: _________________________ DWG. NO.: _________________________
DRWN: J.H. SCALE: _________________________
CHKD: T.J.O. CAVRA

DATE: 8/96
Curb and Gutter, See Standard Curb and Gutter Detail for Additional Information

Cast Iron Frame, See Standard Frame and Grate Detail

2 - #4 x 6' Top and Bottom, Place Top Bar 3'' from Top of the Curb, Place Bottom Bar 3'' from Bottom of the Curb

Plan

Cast Iron Frame, See Standard Frame and Grate Detail

Ductile Iron Grate, See Standard Frame and Grate Detail

#4 Bar Wrapped Around Catch Basin Frame

Thru Joint, Typ. Each Side

Top of Curb

#4 Bar Wrapped Around Catch Basin

Concrete Adjustment Risers Sections as Required

Set Grate 1/2'' Below Gutter Line

Grout as Required Slope

Pavement Section Varies, See Design Standards

Notes:
1. Catch Basins Shall Be Spaced Per Minimum City Design Standards
2. Type I Catch Basin is Used for Depths Less Than 5'-0'' From the Top of the Grate to I.E. (Invert)

Elevation

Catch Basin Type I

City of Pacific

Catch Basin Type I

Approved: CB-1

By City

Date: 8/96

Drwn: J.H.

Chkd: T.J.O.

Scale: None
FLOW RESTRICTOR
CATCH BASIN TYPE 2

NOTES:
1. PIPE SIZES AND SLOPES: PER APPROVED PLANS
2. OUTLET CAPACITY: NOT LESS THAN COMBINED INLETS
3. METAL PARTS: CORROSION RESISTANT. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT 1
4. FRAME AND LADDER OR STEPS OFFSET SO:
   A. CLEANOUT GATE IS VISIBLE FROM TOP
   B. CLIMB-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE
   C. FRAME IS CLEAR OF CURB
5. IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE: OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4"

CITY OF PACIFIC
FLOW RESTRICTOR
CATCH BASIN TYPE 2

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1. Catch basins shall be constructed in accordance with ASTM C476 (AASHTO M199) and ASTM C890 unless otherwise shown on plans or noted in the standard specifications.

2. Handholds in adjustment section shall have 3" min. clearance. Steps in catch basin shall have 6" min. clearance. Catch basin details: handholds shall be placed in alternating grade rings or leveling brick course with a min. of one handhold between the last step and top of the finished grade.

3. All reinforced cast-in-place concrete shall be class 4000. All precast concrete shall be class 4000.

4. Precast bases shall be furnished with cutouts or knockouts. Knockouts shall have wall thickness of 2" min. Unused knockouts need not be grouted if wall is left intact. Pipes shall be installed only in factory knockouts unless otherwise approved by the engineer.

5. Knockout or cutout hole size shall equal pipe outer diam. plus catch basin wall thickness. Max. hole size shall be 36" for 48" catch basin, 42" for 54" c.b., 48" for 60" c.b., 60" for 72" c.b., 72" for 96" c.b. Min. distance between holes shall be 8" for 48", 54", and 60" c.b.; 12" for 72" and 96" c.b.

6. Catch basin frames and grates or covers shall be in accordance with Sec. 7.05 of the standard specifications. Mating surfaces shall be finished to assure non-rocking fit with any cover position.

7. All base reinforcing steel shall have a min. yield strength of 60,000 psi and be placed in the upper half of the base with 1" min. clearance.

8. Min. soil bearing value shall equal 3,300 pounds per square foot.

9. For details showing ladder, steps, handrails and top slabs, see other standard details.

10. See the standard specifications Sec. 7-05.3 for joint requirements.

---

**CITY OF PACIFIC**

**CATCH BASIN TYPE II**

**APPROVED:**

BY CITY:                      DATE:  8/96

**DRAWN:**                      **CHECKED:**  J.H.           T.J.O.

**DWG. NO.:**  CB-TP2

**SCALE:**  NONE
ROLLED CONCRETE CURB AND GUTTER

NOTES:
1. THE CURBS, GUTTERS AND SIDEWALKS SHALL HAVE CONTRACTION JOINTS (3/8" x 1 1/2") AT INTERVALS OF NOT GREATER THAN 15'-0"
2. CEMENT CONCRETE SHALL BE CLASS B

VERTICAL CONCRETE CURB AND GUTTER

CITY OF PACIFIC

CONCRETE CURB AND GUTTER

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PAVEMENT MARKING ARROWS

NOT TO SCALE

CITY OF PACIFIC

TURN ARROW DETAILS

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## Skip Centerline Stripe

- 10" Skip Stripe
- 30"

## Double Yellow Centerline Stripe

- 4" Gap
- 4" Yellow Solid Stripe

## Crosswalk

- 24" Thermo Plastic Stop Bar

## Pavement Markings

### City of Pacific

| Pavement Markings
| Approved: | Drawn: | Checked: | Scale: |
|------------|--------|---------|--------|-------|
| City       | Date: 8/96 | J.H. | T.J.O. | None  |
| Date:      |          |       |        |       |
| DWG. No.   |          |       |        |       |
| Chan-2     |          |       |        |       |
PARALLEL PARKING SPACE MARKING

ANGLE PARKING SPACE MARKING
DUCTILE IRON SOLID SLEEVE (STERILIZED) TYP. (LONG SLEEVE PATTERN)

NOTE:
1. NO DEFLECTION SHALL BE ALLOWED AT EITHER COUPLING
2. ADDITIONAL "IN-LINE" VALVES(S) MAY BE REQUIRED AT THE DIRECTION OF THE CITY.

STERILIZED PIPE SPOOL ASSEMBLED WITH TEE OR CROSS AS REQUIRED SEE NOTE 2.

DISCHARGE PRESSURE PRIOR TO REMOVAL OF THRUST BLOCK AND CONNECTION TO EXIST. SYSTEM.

CITY OF PACIFIC
CUT IN CONNECTION

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<tr>
<td>1. STATE APPROVED DOUBLE CHECK DETECTOR BACKFLOW PREV. ASSY, (W/O.S.&amp;Y. V.)</td>
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<td>2. ROMAC STYLE 'FCA 501' FLANGED COUPLING ADAPTER</td>
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<td>3. 5/8&quot; X 3/4&quot; SENSUS METER (GALLON READING)</td>
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<td>4. FORD V42 RESETTER</td>
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<td>5. SHUT-OFF VALVE</td>
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<td>6. STATE APPROVED 3/4&quot; DOUBLE CHECK VALVE ASSY.</td>
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<td>7. BRASS OR TYPE K COPPER</td>
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<td>8. 2 EA. ADJUSTABLE STANCHIONS (LOCATE AT ENDS OF DOUBLE CHECK)</td>
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<td>9. GALV. STEEL LADDER (LOCATE AS DIRECTED BY CITY)</td>
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<td>10. PIPE SPOOL, CL. 52 D.I. PLAIN END</td>
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<tr>
<td>11. UTILITY VAULT, NO. 5106--LA 5‘ X 10‘-6&quot; X 6‘-2&quot; H, INSIDE DIMEN., HINGED AND SPRING LOCKED STL, PL. COVER NO. 5106 TL--2-332 P (DOUBLE HATCH COVER) CHECK VAULT SIZE REQ'D FOR ENCLOSING ASSYS. SMALLER OR LARGER THAN 8&quot; SIZE</td>
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<td>12. 6&quot; PVC DRAIN LINE, DAYLIGHT OR STORM DRAIN TO CATCH BASIN</td>
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<td>13. WATER TIGHT GROUT, INLET AND OUTLET PIPE, DRAIN</td>
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**NOTE:**
1. AFTER PRESSURE TEST AND PURITY SAMPLES ARE RECEIVED A CERTIFIED BACKFLOW TECHNICIAN MUST SUPPLY CITY WITH A WRITTEN TEST REPORT ON EACH BACKFLOW ASSY.
2. PROVIDE FLEXIBLE COUPLINGS OUTSIDE VAULT BOTH INLET AND OUTLET
3. FLANGED COUPLING ADAPTERS SHALL BE LOCATED A MINIMUM OF 6" FROM INNER WALL

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**CITY OF PACIFIC**

**DOUBLE-CHECK DETECTOR BACKFLOW PREVENTION ASSY.**

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**LEGEND**

1. **DOUBLE-CHECK DETECTOR VALVE ASSEMBLY CAPABLE OF METERING WATER USAGE UNDER LOW FLOW CONDITIONS**. 10.0 P.S.I. HEAD LOSS AT 1600 GPM FOR 8" SIZE. ASSEMBLY TO BE STATE DOH APPROVED. SIZE AS APPROVED BY CITY. (SENSUS TOUCH READ)
   - 1A. 2 - CHECK VALVES, (FL)
   - 1B. 1 - BY-PASS METER 5/8" X 3/4" SENSUS (C.F. READING) METER TOUCH READ COMPLETE WITH SPUD NUT.
   - 1C. 1 - DOUBLE CHECK VALVE ASSEMBLY, (DOH APPROVED) 3/4" FOR 8" D.D.C.V.
   - 1D. 2 - GATE VALVES, (FL) W/HAND WHEEL; RISING STEM, RESILIENT SEATED AS PER CITY REQUIREMENTS.
   - 1E. 2 - GATE VALVES, (FL) W/HAND WHEEL; RISING STEM, RESILIENT SEATED AS PER CITY REQUIREMENTS.

2. **2 - FLANGED COUPLING ADAPTER, SIZE AS SPECIFIED ON PLANS. (LOCATE MINIMUM 6" FROM INNER WALL )

3. **2 - PIPE SPOOL, PLAIN END.**

4. **1 - REDUCER (MJ X MJ), IF REQUIRED.**

5. **RESTRAINED JOINT WATER MAIN CL50.**

6. **ALUMINUM (TELESCOPING) LADDER, LOCATE AS DIRECTED BY CITY, USE STAINLESS STEEL FASTNERS AT 3' MAX. SPACING**

7. **UTILITY VAULT CO. VAULTS SHALL BE CITY STD. OF QUALITY; SUBMIT ALTERNATIVES FOR APPROVAL. HINGED AND SPRING LOCKED STEEL DIAMOND P/L COVER 2-332P, (DOUBLE HATCH COVER.), 4" C.I. FLOOR DRAIN INTO 4" PVC DRAIN LINE. DAYLIGHT OR STORM SYSTEM. (NO SUMP PUMPS)**

8. **CHECK VAULT SIZE REQUIRED FOR ENCLOSING COMPLETE ASSEMBLIES.**

**NOTE:**

1. PAINT ALL PIPING WITH PARKER PAINT MARINE ENAMEL, MARATHON 1065 TAHOE BLUE

2. PROVIDE GRINNELL PIPE SUPPORTS, WHERE REQUIRED. (3 MINIMUM)

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**CITY OF PACIFIC**

**DOUBLE-CHECK DETECTOR WITH FIRE CONNECTION**

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<tr>
<td>8/96</td>
<td>J.H.</td>
<td>T.J.O.</td>
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</table>

**SCALE:**

| NONE |
**LEGEND**

1. DOUBLE-CHECK DETECTOR VALVE ASSEMBLY CAPABLE OF METERING WATER USAGE UNDER LOW FLOW CONDITIONS. 10.0 P.S.I. HEAD LOSS AT 1600 GPM FOR 8" SIZE. ASSEMBLY TO BE STATE DSHE APPROVED. SIZE AS SPECIFIED ON PLANS.
   - 1A. 2 - CHECK VALVES, (FL).
   - 1B. 1 - BY-PASS METER 5/8" X 3/4" SENSUS "GALLON" READING METER COMPLETE WITH SPUD NUT.
   - 1C. 1 - DOUBLE CHECK VALVE ASSEMBLY, (DSHE APPROVED.) 3/4" FOR 8" D.D.C.V.
   - 1D. 2 - GATE VALVES, (FL) W/HAND WHEEL; NON RISING STEM, RESILIENT SEATED AS PER STATE REQUIREMENTS.
   - 1E. 2 - GATE VALVES, (FL) W/ HAND WHEEL; NON-RISING STEM, RESILIENT SEATED AS PER STATE REQUIREMENTS.

2. 1/2" TAP W/ AUTOMATIC LOW - PRESSURE DRAIN

3. 1 - 2-WAY FIRE DEPT. PUMPER CONNECTION

4. 2 - FLANGED COUPLING ADAPTER, SIZE AS SPECIFIED ON PLANS. (LOCATE MINIMUM 6" FROM INNER WALL)

5. 4 - PIPE SPOOLS, PLAIN END. SAME SIZE AS SPECIFIED ON PLANS.

6. 4 - REDUCER (MJ X MJ), IF REQUIRED. SIZE AS SPECIFIED ON PLANS.

7. WATER MAIN CL52, SIZE AS SPECIFIED ON PLANS.

8. LADDER, LOCATE AS SPECIFIED ON PLANS.

9. MIN. VAULT SIZES:
   - 4" 5106 LA -- 5'-0" X 10'-6" X 6'-3" HIGH
   - 6" 5106 LA -- 5'-0" X 10'-6" X 6'-3" HIGH
   - 8" 612 LA -- 6'-0" X 12'-0" X 6'-6 1/2" HIGH
   - 10" 612 LA -- 6'-0" X 12'-0" X 6'-6 1/2" HIGH

---

**CITY OF PACIFIC**

**DOUBLE-CHECK DETECTOR WITH FIRE CONNECTION**

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<td>8/96</td>
<td>J.H.</td>
<td>T.J.O.</td>
<td>NONE</td>
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</tbody>
</table>
ELEVATION

1. HERSEY MODEL, DETECTOR DOUBLE CHECK VALVE ASSEMBLY SIZED BY CITY OR EQUAL
2. UNI-FLANGE WITH SET SCREWS
3. GALVANIZED STEEL LADDER TO BE SECURED TO VAULT
4. CONCRETE VAULT TO BE SIZED BY CITY, WITH BILCO COVER (H20 LOADING)
5. WATER-TIGHT GROUT: RESTRAIN INLET/OUTLET PIPE WITH WELDED FLANGE OR SHACKLE TO THRUST BLOCK TO PREVENT SHACKLE THROUGH VAULT IF CHECK VALVE ASSEMBLY IS REMOVED.
6. 4" MIN. DIAMETER PVC DRAIN TO DAYLIGHT WHERE APPLICABLE. MINIMUM SLOPE 2%.
7. ADJUSTABLE PIPE STANCHION, GRINELL PIPE SUPPORTS.
8. VALVE ASSEMBLY TO BE CENTERED IN VAULT
9. CL. 53 D.I., MJ WITH MEGALUGS

NOTES:

1. ASSEMBLY SHALL BE MAINTAINED BY PROPERTY OWNER AND ANNUAL CERTIFICATION REQUIRED.
2. FIRELINE SHALL NOT BE PUT INTO SERVICE UNTIL THE BACKFLOW PREVENTION DEVICE IS APPROVED BY THE DISTRICT.
3. A REDUCED PRESSURE BACKFLOW PREVENTION DEVICE MAY BE REQUIRED BY THE DIRECTION OF THE CITY.
4. PAINT PIPING WITH PARKER PAINT MARINE ENAMEL, MARATHON 1065, TAHOE BLUE.

CITY OF PACIFIC

DETECTOR DOUBLE-CHECK VALVE ASSEMBLY

APPROVED: DD-CVA

BY CITY DATE DWG. NO.
8/96 J.H. CHKD: SCALE: NONE

CHKD: T.J.O.
FINISHED GRADE

CULVERT PIPE

SEE NOTE FOR AREA IN FRONT OF DISCHARGE PIPE

PLACE QUARRY SPALLS IN A BERM ACROSS THE CHANNEL OF THE DITCH WHEN THE SLOPE OF THE DITCH IS GREATER THAN 3%, SEE NOTE 1

1. PLACE QUARRY SPALLS IN FRONT OF CULVERT DISCHARGE, ENGINEER SHALL SIZE QUARRY SPALL BERM

NOTES:

RIPRAP AND ENERGY DISSIPATION FOR DITCH

CITY OF PACIFIC

RIPRAP AND ENERGY DISSIPATION FOR DITCH

APPROVED: ___________________________  DWG. NO. ___________________________

BY CITY ___________________________  DATE ___________________________

CEMENT CONCRETE DRIVEWAY

THICKEN EDGE OF APPROACH FULL DEPTH OF CURB

MATCH EXISTING DRIVEWAY GRADE

4" CRUSHED SURFACING TOP COURSE

3/8" x 6" EXPANSION JOINT

VARIATES 5'-0" TO 10'-0" SEE DESIGN STANDARDS

VARIATES SEE DESIGN STANDARDS

SECTION A-A

CITY OF PACIFIC

CEMENT CONCRETE DRIVEWAY

APPROVED: ____________________________  DWG. NO. DW-1

BY CITY ____________________________  DATE ____________________________

NEWLY GRADED OR DISTURBED SIDE SLOPE

FILTER FABRIC MATERIAL

STAPLES OR WIRE RINGS

2" x 4" DOUGLAS FIR

NOTES:

1. WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL

2. TEMPORARY SILTATION TO BE CONSTRUCTED BY PLACING FILTER FABRIC FENCES ACROSS SWALES UTILIZING FILTER SYSTEM PRIOR TO DISCHARGE

3. ALL TEMPORARY SILTATION SHALL BE MAINTAINED IN A SATISFACTORY CONDITION UNTIL SUCH TIME THAT CLEARING AND/OR CONSTRUCTION IS COMPLETED AND SURFACE RESTORATION HAS BEEN COMPLETED

4. RETURN SILTATION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS, UNLESS SPECIFICALLY DIRECTED OTHERWISE BY THE CITY

CROSS SECTION

STAPLES OR WIRE RINGS FOR SECURING FABRIC TO 2" x 4" (TYPICAL)

FILTER FABRIC MATERIAL

2" x 2" x 2" x 14 GA. WELDED WIRE FABRIC OR EQUAL

ELEVATION

2" x 4" DOUGLAS FIR
© 4’ O.C. NO. 1 GRADE OR EQUAL

BOTTOM OF FILTER FABRIC MATERIAL IN 8” x 8” DITCH

SILT FENCE

CITY OF PACIFIC

SILT FENCE

APPROVED: ____________________________

BY CITY ____________________________ DATE ________________

DRWN: J.H. CHKD: TT.J.O. SCALE: NONE

DWG. NO. EC-1

DATE: 8/96
NOTES:

1. WHERE POSSIBLE, MAINTAIN NATURAL VEGETATION FOR SILT CONTROL.

2. TEMPORARY SILTATION AND DETENTION PONDS TO BE CONSTRUCTED BY PLACING STRAW BALES OR FILTER FABRIC FENCES ACROSS SWALES. PONDS SHALL BE CONSTRUCTED TO PROVIDE 2 CUBIC FEET OF SETTLING POND PER 50 SQUARE FEET OF CLEARED AREA TRIBUTARY TO THE POND.

3. FILTER FABRIC FENCES OR STRAW BALES TO BE LOCATED AT THE BOTTOM OR TOE OF NEWLY EXCAVATED SLOPES AS INDICATED ON THE PLANS.

4. CONSTRUCT ROCK CHECK DAMS IN OPEN DITCHES AS REQUIRED

5. TO PROVIDE EROSION CONTROL ON STEEP AND NEWLY GRADED SLOPES, CONTRACTOR SHALL EMPLOY EROSION CONTROL BLANKET OR CLEAR PLASTIC IMMEDIATELY AFTER GRADING SLOPES AND THE APPLICATION OF SEEDING. THIS SHALL BE DONE AND IN PLACE BEFORE THE FALL RAINFALL BEGINS.

6. ALL TEMPORARY EROSION CONTROL STRUCTURES SHALL BE MAINTAINED IN SATISFACTORY CONDITION UNTIL CLEARING AND/OR CONSTRUCTION IS COMPLETED AND SURFACE RESTORATION HAS BEEN COMPLETED.

7. RETURN SILTATION CONTROL AREAS TO ORIGINAL GROUND CONDITIONS.

ELEVATION

STRAW BALE DAM

CITY OF PACIFIC

STRAW BALE DAM

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</table>
1'-6" SEE NOTE 1

COMPRESSION STYLE

FIRE HYDRANT

BACK OF SIDEWALK

2 1/2" HOSE NOZZLE WITH NATIONAL STANDARD THREADS

EXTENSION SECTIONS AS REQUIRED

±3"

4 1/2" PUMPER PORT WITH NATIONAL STANDARD THREADS WITH STORZ 5" ADAPTOR AND CAP

FINISHED GRADE

6" RESILIENT SEAT GATE VALVE, (FL X MJ)

STANDARD 2-PIECE CAST IRON VALVE BOX

CONCRETE THRUST BLOCK

6" D.I. PIPE (CLASS 53)

WRAP DRAIN GRAVEL IN NON-WOVEN FILTER FABRIC

CONCRETE BEARING BLOCK

1/2 CU.YD. OF 1/2" WASHED DRAIN GRAVEL

NOTES:
1. OR 3' FROM BACK OF CURB

2. PROVIDE 8' OF 12" MINIMUM OR EQUAL IN SIZE TO ANY ADJACENT DITCH PIPE TO COUNTY, STATE OR CITY STANDARDS IF APPLICABLE.

3. PROVIDE MIN. 3'-0" CLEARANCE AND LEVEL AREA AROUND HYDRANT

4. PAINT FIRE HYDRANT WITH TWO COATS PRESERVATIVE BRAND No.43-616 YELLOW

5. STENCIL FOOTAGE TO VALVE ON FIRE HYDRANT FOOTAGE UNDER PORT

6. REMOVE ALL CHAINS FOR FIRE HYDRANT CAPS

CITY OF PACIFIC

FIRE HYDRANT ASSEMBLY

APPROVED: ___________________________ DATE: ___________________________

BY CITY: ___________________________ DRWN: J.H. CHKD: T.J.O.

DWG. NO. FHA

DATE: 8/96 SCALE: NONE
CITY OF PACIFIC
FIRE HYDRANT LOCATION
IN CUT OR FILL

<table>
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LEVEL ALL AROUND
MIN. 3' RADIUS

PROVIDE MINIMUM
12" CULVERT (15' MINIMUM LENGTH)
SIZE MAY BE SIGNIFICANTLY GREATER BASED ON LOCAL CONDITIONS

CUT

FILL
NOTES:

1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
   PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
   D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING
   EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL.
   PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND
   CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER
   BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT
   OR EQUAL.

2. DROP OF GRADE THRU MANHOLE SHALL
   BE 0.10’, UNLESS OTHERWISE APPROVED.
NOTES:
1. MINIMUM BOX SIZE 3/4"- 1" ASSEMBLIES, 10"x13"
   1 1/4"- 2" ASSEMBLIES, 14"x20"
2. ASSEMBLY MUST BE INSTALLED WITH TEST COCKS
   FACING UP OR TO ONE SIDE. INSTALL WATERTIGHT
   PLUGS IN ALL TEST COCKS.
3. SUFFICIENT DRAINAGE MUST BE PROVIDED TO
   PREVENT ASSEMBLY FROM BEING SUBMERGED.
4. PROVIDE SUPPORT BLOCKS AS MAY BE REQUIRED.
5. PROVIDE A STRAINER WITH BLOW OUT TAPPING
   AHEAD OF DEVICE IF REQUIRED BY CITY.
6. THOROUGHLY FLUSH THE LINE, PRIOR TO THE
   INSTALLATION OF THE DCVA.
7. PROTECT DEVICE FROM FREEZING BY INSTALLING IN
   STRUCTURE OR PER "HOT BOX" SHOWN IN REDUCED
   PRESSURE BACKFLOW DEVICE DETAIL.

CITY OF PACIFIC
"INDIVIDUAL" DOUBLE CHECK
DETECTOR ASSEMBLY

APPROVED:

BY CITY

DATE: 8/96

DRWN: J.H.

CHKD: T.J.O.

SCALE: NONE
NOTES:

1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
   PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
   D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING
   EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL.
   PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND
   CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER
   BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT
   OR EQUAL.

2. DROP OF GRADE THRU MANHOLE SHALL
   BE 0.10', UNLESS OTHERWISE APPROVED
   BY CITY INSPECTOR.

3. INSTALL CONCRETE COLLAR.
   SEE DETAIL

4. PRE-CHANNELED MANHOLE ARE NOT
   ACCEPTABLE

CITY OF PACIFIC

INSIDE DROP MANHOLE

APPROVED:

BY CITY

DATE:

8/96

DRWN:

J.H.

CHKD:

T.J.O.

SCALE:

NONE
NOTES:

1. PLANT ALL TREES ONE INCH HIGHER THAN LEVEL AT WHICH GROWN IN NURSERY
2. TAKE CARE TO AVOID ROOTS WITH STAKES
3. PLANT PIT 3'-0" ди OR 1'-0" LARGER THAN ROOT SPREAD, WHICHEVER IS GREATER.
SECTION

NOTE:
CONSTRUCT CONCENTRIC CONCRETE COLLARS AROUND ALL MANHOLE FRAMES LOCATED OUTSIDE OF PAVEMENT AREAS

MANHOLE FRAME COLLAR

CITY OF PACIFIC
MANHOLE FRAME COLLAR

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<td>CHKD: T.J.O.</td>
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<td>SCALE: NONE</td>
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</table>
MANHOLE FRAME AND COVER

1. Materials are ductile iron ASTM A-40 CLASS 30

2. Drill and tap three 5/8" holes thru frame at 1/20 and 11 1/16" radius

3. Sather Manufacturing Co. 6024-R or otherwise approved equal

4. Watertight Manhole frame and covers may be required based on local conditions

5. All Manholes located outside pavement areas shall be provided with locking

NOTES:

Minimum weight 180 lbs

PATTERN SHOWN FOR CLARITY.

Pattern Not Integral on top of cover

Non-Skid pattern shall be cast

Core, 3 holes typ.

See Note 2

With water distribution installation sewer installation, or "water" when in connection letters when used in connection with sanitary covers shall have the word "sewer" in raised

City of Pacific

MANHOLE FRAME AND COVER

Dwg. No. MHFC

Date

 CHKD: J.O.

By City

DATE: 8/96

Scale: None
GENERAL NOTES:
1. SEE DEVELOPMENT GUIDELINES FOR ADDITIONAL REQUIREMENTS
2. PROVIDE REINFORCED GALVANIZED SLEEVE PLANTED FIRMLY IN GROUND AND THROUGH SIDEWALL (USE JOINT FILLER AROUND SLEEVE).

CITY OF PACIFIC
MAILBOX DETAIL

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<td>8/96</td>
<td>J.H.</td>
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MATERIAL LIST - COPPER BY-PASS

1. FLEX CPLG TO FIT ROCKWELL 441 (4" X 3" REDUCER, M.J. FOR 3" METER
2. DOUBLE STRAP SERVICE CLAMPS, ROMAC 101 WITH IPS TAP, OR EQUAL
3. STRAIGHT CPLG. COPPER TO OUTSIDE I.P. THREAD MUELLER H-15425, H-15428
   11/0 COMP., OR EQUAL
4. 1 1/4" BEND CPLG COPPER TO COPPER MUELLER H-15525.
5. 1 1/4" BEND CPLG, COPPER TO OUTSIDE I.P. THREAD MUELLER H-15530, OR EQUAL
6. 1 BALL VALVE WITH PADLOCK WING OR LOCK CAP, FORD B21-444W OR B21-666
   WITH LOCK CAP OR B21-777 WITH LOCK CAP.
7. RESILIENT SEAT GATE VALVE, FL X FL (RISING STEM)
8. 1-3" TO 10" METER AS SPECIFIED BY CITY SHALL BE FURNISHED BY CONTRACTOR.
9. 1 C.I. ADPT. FL X PE LENGTH TO FIT
10. CPLG. ADPT., FL ROCKWELL 912, OR EQUAL
11. CAST IN PLACE OR PRECAST CONCRETE VAULT WITH (H20) BILCO HATCH) (OR OWNER
    APPROVED)
12. WELDED FL RESTRAINT OR SHAKLE TO THRUST BLOCK TO PREVENT MOVEMENT IF METER IS
    REMOVED
13. INSULATED CPLG. TO 3" CU SERVICE.
14. UNION

NOTES:
1. METERS 3" - 10" BY CONTRACTOR, READ IN CUBIC FEET.
2. VAULT SHALL BE PRECAST, UTILITY VAULT OR OWNER
   APPROVED EQUAL
3. ALL PIPE & FITTINGS 4" AND LARGER SHALL BE CEMENT LINED.
4. PIPING FROM MAIN TO VAULT SHALL BE 4" ON 3" METER
   INSTALLATION, TEE WITH VALVE ON EXISTING MAIN REQUIRED.

3" FROM TOP OF VAULT TO FINISHED
GRADE IN PLANTED AREAS

2" X 2" X 1/4 L CUT TO
FIT INSIDE BOX

2#5 BARS, TYP

#5 BAR 1'
OVERLAP
EACH CORNER

PIPE TO BE SHACKLED THROUGH WALL
OF VAULT (TYPICAL BOTH SIDES)

#5 AT 12" ON CENTERS
VERT & HORIZONTAL

STANDON OR GRINNEL
PIPE SUPPORTS

NOTES:
INSTALL 4" DRAIN PIPE TO DAYLIGHT UNLESS
OTHERWISE APPROVED. 1% MIN. SLOPE.

BACKFLOW PREVENTOR REQUIRED FOR ALL
FIRE LINES AND IRRIGATION LINES, IN
SEPARATE VAULTS

BRASS DOES NOT NEED TO BE PAINTED,
ALL OTHER PIPE TO BE PAINTED WITH
MARINE ENAMEL, MARATHON 1065
TAHOE BLUE.

OUTLET PIPES TO BE RESTRAINED (TYP)

<table>
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<tr>
<th>METER SIZE</th>
<th>MAIN-LINE</th>
<th>BYPASS</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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<td>3&quot; 4&quot; DI.</td>
<td>1 1/2&quot; BRASS</td>
<td>7&quot;-6&quot;</td>
<td>3&quot;-0&quot;</td>
<td>9 1/2&quot;</td>
<td>6&quot;</td>
<td>2&quot;-8&quot;</td>
<td>9&quot;</td>
<td>4&quot;</td>
<td></td>
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<tr>
<td>4&quot; 4&quot; DI.</td>
<td>1 1/2&quot; BRASS</td>
<td>7&quot;-6&quot;</td>
<td>3&quot;-0&quot;</td>
<td>9 1/2&quot;</td>
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<tr>
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<td>2&quot; BRASS</td>
<td>9&quot;-6&quot;</td>
<td>3&quot;-6&quot;</td>
<td>12&quot;</td>
<td>6&quot;</td>
<td>2&quot;-8&quot;</td>
<td>9&quot;</td>
<td>4&quot;</td>
<td></td>
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<td>8&quot; 8&quot; DI.</td>
<td>4&quot; DI.</td>
<td>11&quot;-0&quot;</td>
<td>4&quot;-0&quot;</td>
<td>12&quot;</td>
<td>9&quot;</td>
<td>3&quot;-6&quot;</td>
<td>14&quot;</td>
<td>6&quot;</td>
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<td>13&quot;-0&quot;</td>
<td>5&quot;-0&quot;</td>
<td>16&quot;</td>
<td>12&quot;</td>
<td>4&quot;-0&quot;</td>
<td>16&quot;</td>
<td>6&quot;</td>
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CITY OF PACIFIC
METER AND METER VAULT
ASSEMBLY 3" THROUGH 10"

APPROVED:

BY CITY DATE

8/96 J.H. T.J.O.

SCALE: NONE
NOTES
1. METERS 3" – 10" BY CONTRACTOR, READ IN CUBIC FEET.
2. VAULT SHALL BE PRECAST OR POURED IN PLACE CONCRETE AS SHOWN.
3. ALL PIPE & FITTINGS 4" AND LARGER SHALL BE CEMENT LINED.
4. PIPING FROM MAIN TO VAULT SHALL BE 4" ON 3" METER INSTALLATION, TEE WITH VALVE ON EXISTING MAIN REQUIRED.

MIN. HINGE IN 4 PLACES
1/4" GALV. 4 WAY SAFETY PLATE, MEDIUM PATTERN SIZE.
2#5 BARS, TYP
#5 BAR 1' OVERLAP EACH CORNER
#5 AT 12" ON CENTERS VERT & HORIZONTAL
6" X 12" INSPECTION LID CENTERED OVER METER REGISTER

STANDON OR GRINNELL PIPE SUPPORTS

NOTE: INSTALL 4" DRAIN PIPE TO DAYLIGHT UNLESS OTHERWISE APPROVED. 1% MIN. SLOPE.

NOTE: BACKFLOOR PREVENTOR REQUIRED FOR ALL FIRE LINES AND IRRIGATION LINES.

MATERIAL LIST – COPPER BY-PASS

1. 2-FLEX CPLG TO FIT ROCKWELL 441 (4" X 3"") REDUCER, M.J. FOR 3" METER
2. 2-SINGLE STRAP SERVICE CLAMPS, ROMAC 101 W/IPS TAP, OR EQUAL.
3. 3-Straight CPLG, COPPER TO OUTSIDE I.P. THREAD MUELLER H-15425, H-15428 110 COMP., OR EQUAL.
4. 1 1/4" BEND CPLG COPPER TO COPPER MUELLER H-15525.
5. 1 1/4" BEND CPLG, COPPER TO OUTSIDE I.P. THREAD MUELLER H-15530, OR EQUAL.
6. 1 BALL VALVE WITH PADLOCK WING OR LOCK CAP, FORD B21-444W OR B21-666 WITH LOCK CAP OR B21-777 WITH LOCK CAP.
7. 2-RESILIENT SEAT GATE VALVE, FL X FL
8. 1-3" TO 10" METER AS SPECIFIED BY DISTRICT SHALL BE FURNISHED BY CONTRACTOR.
9. 1 C.I. ADPT. FL X PE LENGTH TO FIT
10. 1-ADPT., FL ROCKWELL 912, OR EQUAL
11. CAST IN PLACE OR PRECAST CONCRETE VAULT.
12. WELDED FL REINFORCE OR SHAKLE TO THRUST BLOCK TO PREVENT MOVEMENT IF METER IS REMOVED.
13. INSULATED CPLG. TO 3" CU SERVICE.

CITY OF PACIFIC
METER AND METER VAULT ASSEMBLY 3" THROUGH 10"

APPROVED: 

MMVA3-10

BY CITY 

DATE: 

8/96 

DRWN: J.H.

CHKD: T.J.O. 

SCALE: NONE
3" FROM TOP OF VAULT TO FINISHED
GRADE IN PLANTED AREAS

2" X 2" X 1/4" L CUT TO
FIT INSIDE BOX

2 #5 BARS, TYP
#5 BAR 1'
OVERLAP EACH CORNER
THRUST BLOCKING (TYPICAL)

PIPE TO BE SHACKLED THROUGH
WALL OF VAULT (TYPICAL BOTH SIDES)
AND ANCHORED TO PROVIDE IN PLACE
BLOCKING

#5 AT 12" ON CENTERS
VERT & HORIZONTAL

STANDON OR GRINNEL
PIPE SUPPORTS

NOTES:

INSTALL 4" DRAIN PIPE TO DAYLIGHT UNLESS
OTHERWISE APPROVED. 1% MIN. SLOPE.

BACKFLOW PREVENTOR REQUIRED FOR ALL
FIRE LINES AND IRRIGATION LINES, IN
SEPERATE VAULTS

BRASS DOES NOT NEED TO BE PAINTED,
ALL OTHER PIPE TO BE PAINTED WITH
MARINE ENAMEL, MARATHON 1065
TAHOE BLUE.
NOTES
1. "SENSUS" METERS (3” TO 10”) SHALL BE FURNISHED BY CONTRACTOR AND SIZED BY CITY. METERS SHALL READ IN CUBIC FEET.
2. VAULT SHALL BE PRECAST, UTILITY VAULT OR OWNER APPROVED EQUAL.
3. ALL PIPE & FITTINGS 4” AND LARGER SHALL BE CEMENT LINED.
4. PIPING FROM MAIN TO VAULT SHALL BE AS SHOWN IN TABLE BELOW. PROVIDE TEE WITH VALVE ON DISTRIBUTION MAIN.
5. ALL PIPING SHALL BE PAINTED (TWO COATS) WITH PARKER PAINT MARINE ENAMEL, MARATHON 1065, TAHOE BLUE.

<table>
<thead>
<tr>
<th>METER SIZE</th>
<th>MAIN-LINE DIAMETER</th>
<th>BYPASS DIAMETER</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tr>
<td>3”</td>
<td>4” DIA.</td>
<td>1 1/2” BRASS</td>
<td>7’-6”</td>
<td>3’-0”</td>
<td>9 1/2”</td>
<td>6”</td>
<td>2’-8”</td>
<td>9”</td>
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<td>4”</td>
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<tr>
<td>8”</td>
<td>8” DIA.</td>
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<td>11’-0”</td>
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<td>10”</td>
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<td>12”</td>
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CITY OF PACIFIC

METER AND METER VAULT ASSEMBLY 3” THROUGH 10”

APPROVED: ___________________________ DWG. NO. _________
BY CITY ___________________________ MMVAT _________
DATE: 8/96 DRWN: J.H. CHKED: T.J.O.
SCALE: NONE

PAGE 2 OF 3
MATERIAL LIST

1. 2–FLEX CPLG TO FIT ROCKWELL
   4 1/2" X 3" REDUCER, M.J. FOR
   3" METER

2. 2–DOUBLE STRAP SERVICE CLAMPS,
   ROMAC 101 WITH IPS TAP, OR EQUAL

3. 3–STRAIGHT CPLG. BRASS TO OUTSIDE
   I.P. THREAD MUELLER H–15425,H–15428
   110 COMP., OR EQUAL

4. 1 1/4" BEND CPLG BRASS TO BRASS
   MUELLER H–15525.

5. 1 1/4" BEND CPLG, BRASS TO OUTSIDE
   I.P. THREAD MUELLER H–15530, OR EQUAL.

6. 1 BALL VALVE WITH PADLOCK WING OR
   LOCK CAP, FORD B21–444W OR B21–666
   WITH LOCK CAP OR B21–777 WITH LOCK CAP.

7. 2–RESILIENT SEAT GATE VALVE, FL X FL, (RISING STEM)

8. 1–3” TO 10” COMPOUND METER (“SENSUS” TOUCH READ) – SIZE TO BE
   AS SPECIFIED BY CITY AND FURNISHED BY CONTRACTOR/DEVELOPER

9. 1 C.I. ADPT. FL X PE (LENGTH TO FIT)

10. 1–CPLG. ADPT., FL ROCKWELL 912,
    OR OWNER APPROVED EQUAL

11. CAST IN PLACE OR PRECAST CONCRETE VAULT
    WITH (H20) BILCO (HATCH SIZE AND
    LOCATION TO BE APPROVED BY CITY)

12. WELDED FL RESTRAINT OR SHAKLE TO THRUST
    BLOCK TO PREVENT MOVEMENT IF METER IS
    REMOVED

13. INSULATED CPLG. TO 3” CU SERVICE.

14. UNION

15. INSTALL ALUMINUM LADDER WITH TELESCOPIC RISER FASTEN TO WALL
    WITH STAINLESS STEEL FASTENER AT MAXIMUM THREE FOOT INTERVALS.

16. PROVIDE 4” DRAIN PIPE TO DAYLIGHT
    (MIN. SLOPE = 2%) OR CITY
    APPROVED SUMP PUMP SYSTEM
    AS REQUIRED.

CITY OF PACIFIC

METER AND METER VAULT
ASSEMBLY 3” THROUGH 10”

APPROVED: ___________________________  DWG. NO. __________
BY CITY ___________________________  MMVAT
DATE: ___________________________  SCALE: NONE
DATE: 8/96  DRWN: J.H.  CHKED: T.J.O.
NOTES:
1. MACHINE BEARING FACES OF COVER AND CASE TO INSURE POSITIVE FIT.
2. MATERIAL SHALL CONFORM TO THE "1994 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" PREPARED BY THE WASHINGTON STATE DEPT. OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.

MONUMENT COVER

NEAT LINE CUTS SHALL BE SEALED WITH A HOT ASPHALT EMULSION AND COVERD WITH SAND

CAST IRON MONUMENT COVER AND CASE

1 1/2" MIN. COMPACTED THICKNESS ASPHALT CONCRETE CLASS "B"

CEMENT CONCRETE CLASS 3000 PSI

1" MIN. SAND

PAVEMENT SECTION VARIES

BREONZE PLUG MARKER STAMPED BY LICENSED SURVEYOR

1-#3 STIRRUP

UNDISTURBED EARTH

POURED MONUMENT IN PLACE

CITY OF PACIFIC

POURED MONUMENT IN PLACE

APPROVED:

BY CITY: ____________________________ DATE: __________

DRWN: ____________________________ CHKD: ____________________________ SCALE: ______

8/96 J.H. T.J.O. NONE

MON-1
1. MJ X MJ X 6" FL D.I. TEE WITH REDUCING FLANGE TAPPED 2" AND MJ PLUG.
2. 2" TYPE "K" COPPER PIPE.
3. 2" GALVANIZED IRON PIPE.
4. CONCRETE THRUST BLOCK.
5. 2" AWWA RESILIENT SEAT GATE VALVE, THD X THD, WITH OPERATING NUT.
6. CAST IRON VALVE BOX
7. 1/4 CUBIC YARD WASHED GRAVEL POCKET.
8. 2" x 2-1/2" HOSE THREADS BRASS INSERT WITH CAP AND CHAIN
9. VALVE MARKER POST

NOTES
1. TURN NOZZEL TOWARDS ROADSIDE DITCH
2. INSTALL DIELECTRIC COUPLINGS AT DISSIMILAR METALS.
3. TEMPORARY BLOWOFFS INSTALLED FOR FLUSHING WATERMAIN SHALL BE SIZED TO PROVIDE 2.5fps VELOCITY IN MAIN LINE.

CITY OF PACIFIC
PERMANENT END–LINE BLOW OFF ASSEMBLY

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<td>T.J.O.</td>
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NOTES:
1. TURN NOZZEL TOWARDS ROADSIDE DITCH
2. INSTALL DIELECTRIC COUPLINGS AT DISSIMILAR METALS.
3. TEMPORARY BLOWOFFS INSTALLED FOR FLUSHING WATERMAIN SHALL BE SIZED TO PROVIDE 2.5fps VELOCITY IN MAIN LINE.

STRAIGHT COUPLING, MUELLER
No. H15428 COMPRESSION X M.I.P.

2" GALVANIZED PIPE

2" TYPE "K" COPPER PIPE

DOUBLE STRAP SADDLE TO FIT

2" AWWA RESILIENT SEAT GATE VALVE THD X THD, WITH OPERATING NUT.

CAST IRON VALVE BOX

1/4 CUBIC YARD WASHED GRAVEL POCKET.

2" x 2-1/2" HOSE THREADS BRASS INSERT WITH CAP AND CHAIN

VALVE MARKER POST

90° BEND, MUELLER
No. H-15533, COMPRESSION TO F.I.P. TAP BEND WITH 1/8" Ø WEEPO HOLE

NON-WOVEN FILTER FABRIC ENCASMENT

PAINT THAT PORTION ABOVE GROUND WITH TWO COATS PERSERVATIVE BRAND No. 43-616 YELLOW

THRUST BLOCK

THRUST BLOCK AS REQUIRED

NOZZLE

1

2

3

4

5

6

7

8

9

18"

2'-6"

CITY OF PACIFIC

PERMANENT IN-LINE BLOW OFF ASSEMBLY

APPROVED:

BY CITY PILBOA

DATE: 8/96

DRWN: J.H.

CHKD: T.J.O.

SCALE: NONE
FINISHED GRADE OR SUBGRADE

COMPACTED BACKFILL CONSISTING OF CRUSHED ROCK, SUITABLE EXCAVATED MATERIAL OR GRAVEL BORROW AS REQUIRED/DIRECTED BY THE CITY

SPECIAL PRECAUTIONS TO PROTECT PIPE TO THIS LEVEL

3" MIN. WIDTH FLOURESCENT ORANGE IDENTIFICATION TAPE "NON-POTABLE WASTEWATER" TO RUN CONTINUOUS WITH PIPE

HAND-PLACED, COMPACTED SELECT BACKFILL

DUCTILE IRON SEWER PIPE

FOUNDATION GRAVEL AS REQUIRED

UNDISTURBED EARTH

NOTE:

1. BACKFILL MATERIAL AND COMPACTION SHALL BE IN CONFORMANCE WITH THE CITY STANDARDS AND/OR THE STATE OR COUNTY PERMIT REQUIREMENTS, (AS MAY BE APPLICABLE)

2. FORCE MAIN MAY BE HDPE OR PVC OF THE SIZE AND CLASS APPROVED BY CITY IF CONDITIONS WARRANT SAME (AND AS REQUIRED AND DIRECTED BY CITY). WHEN HDPE OR PVC IS APPROVED, BEDDING SHALL EXTEND FROM 4" BELOW PIPE TO 4" ABOVE PIPE.

CITY OF PACIFIC
PRESSURE LINE AND FORCE MAIN TYPICAL TRENCH SECTION

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| NONE |
POLYPROPYLENE LADDER

POLYPROPYLENE STEP, LANE NO. P-13938 OR EQUAL

CITY OF PACIFIC
POLYPROPYLENE LADDER AND MANHOLE STEPS

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DATE: 8/96
PRESSURE REDUCING STATION
(To be sized by City)

LEGEND

1. Pressure reducing pressure sustaining valve (FL x FL), Cla-Val with valve support and indicator guage.

2. NRS resilient seat flanged gate valve with handwheel, and valve support assembly.

3. (FL x MJ) adaptor coupling.

4. Pressure gauge 0–200 psi with Ray pressure snubber and shut off cock.

5. 2” diameter double strap tapped saddle.

6. Valve extension stem and guide furnish with fork to fit handwheel and 2” opening nut and bracket to hatch side opening. Show detail.

7. Watertight grout for inlet pipe.

8. 2” diameter brass (THD x THD) with pipe support.

9. 2” 90° brass elbow (THD x THD) with pipe support.

10. 2” union.

11. 2” resilient seat gate valve (THD x THD) with pipe support.

12. 2” PRV, Cal-Val No. 90G-01AS with valve support.


14. Utility vault, adjustable cover to be specified and approved by the city. No. 4484–AT.

15. Bilco Hatch Co., aluminum access doors H–20 LOADING

16. Utility vault, size to be specified by the city.

17. Utility vault, size to be specified by the city.

18. Grinnell pipe supports, to include steel yoke, bolt to vault floor using recommended connection and sizes.

19. Ladder, bolt at floor and hatch opening.

NOTE:
1. All 2” pipe to be brass

2. Paint all piping with PARKER PACIFIC MARINE ENAMEL MARATHON 1065 TAHOE BLUE

CITY OF PACIFIC

PRESSURE REDUCING STATION

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| DRWN: | CHKD: | SCALE: |
| J.H. | T.J.O. | NONE |

DATE: 8/96

PAGE 2 OF 2
NOTE:
2" & 3" VALVES MAY BE BELL x BELL
AT THE CONTRACTORS OPTION
NOTE:
THE VALVE MAY BE BELL x BELL
AT THE CONTRACTOR'S OPTION

CITY OF PACIFIC
PRESSURE SEWER CO/
2"–4" PIG LAUNCHER

APPROVED: ________________________
BY CITY ________________________ DATE ________________

DWG. NO. PS–11

DATE: 7/03
DRWN: PMX
CHKD: XX
SCALE: N.T.S.
ELEVATION A

CITY OF PACIFIC

PVC PORT DETAIL (6" AND ABOVE)
PRESSURE SEWER

BY CITY

DRAWN:

CHKG:

APPROVED:

DATE: 7/03

SCALE:

PS-12A

DWC. NO.
NOTE:
CONTRACTOR SHALL PROVIDE 1 LAUNCHER FOR EACH PIG PORT INSTALLED.
USE SCH 80 PVC AND SOLVENT WELD ALL FITTINGS.
*LOCATION OTHER THAN GARAGE WALL OR REMOTE POST WILL BE CONSIDERED ON A CASE BY CASE BASIS.
PRESSURE DISCHARGE LINE:
1. FORD PACK JOINT COUPLER WITH INSERT STIFFENERS
2. SDR 7 HDPE TUBING
3. ALL POLY PIPE SPLICES SHALL BE MADE WITH A FORD PACK JOINT COUPLER
4. OR PUBLIC WORKS DEPARTMENT APPROVED EQUIVALENTS
5. A TRACER WIRE SHALL BE INSTALLED FROM PUMP TO GRAVITY CLEAN-OUT OR CONNECTION TO FORCEMAIN
6. THE DISCHARGE PIPE SHALL BE INSTALLED AT A MINIMUM DEPTH OF 24"

GRAVITY SIDE SEWER INLET:
1. 2% MINIMUM GRADE
2. 4" MINIMUM PVC SEWER PIPE
3. BUILDING CLEAN-OUT REQUIRED

CITY OF PACIFIC
TYPICAL GRINDER PUMP INSTALLATION DETAIL

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RESIDENTIAL GRINDER PUMP STATION NOTES:

1. The packaged grinder pump lift station shall be
   "Environment One" Model 2010 (http://www.eone.com)
   or a Public Works Department approved equivalent

2. The pump station shall be accessible for maintenance and
   repair. Finished grade shall slope away from the pump station.
   The pump station is not to be located within low areas that
   may pond. Fences, plants, or any other object shall not hinder
   in the maintenance or repair of the pump station.

3. The Control/Alarm Panel shall be attached to the building. With
   City approval the Control Panel may be attached to a 3” X 8”
   galvanized pole with top cap, and set in concrete.

4. The Control/Alarm Panel shall be:
   A) Accessible for maintenance and repair
   B) In sight of the Pump Station
   C) The Alarm Light shall be visible from a 180 degree radius
   D) No fences, plants or other objects shall hide the Alarm Light from
      view

5. All electrical work shall conform to NEC Standards, and shall be
   inspected by a Washington State Electrical Inspector.

6. Grade must slope away from the pump station. No plants shall be
   placed within 5’ of the pump station.

7. Each building site shall have its own grinder pump station.

8. The property owner shall retain ownership and maintenance of the
   grinder pump station and associated lines to the property line gravity
   side sewer clean-out, or where the pressure line discharges to a City of
   Sumner owned gravity sewer clean-out, structure, or forcemain.

9. The property owner shall be responsible for any backups or spills due to
   power failure or pump and associated equipment failure.

10. Follow manufacturer’s instructions and installation procedures.
NOTE:
FRONT AND SIDE VIEWS SHOWN WITH GULLWING DOOR OPEN
NOTE:
1. STEP TANK INSTALLATION SHALL BE IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATIONS.
NOTES:

1. DELETE BAFFLE FOR A 3000 GALLON TANK UTILIZED AS A TRIPLEX PUMP VAULT.

2. THE OWNER WILL REVIEW TOLERANCES IN EXCESS OF DIMENSIONS SHOWN.

3. THE TRIPLEX PUMP VAULT REQUIRES TWO VAULTS AND TWO COMPLETE RISERS. ONE VAULT CONTAINS FLOATS AND ONE PUMP. THE SECOND VAULT CONTAINS TWO PUMPS.

4. 4500 GALLON TANKS OR LARGER SHALL HAVE THREE RISERS AND LIDS.

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<tr>
<th></th>
<th>1500 GAL</th>
<th>3000 GAL</th>
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<tr>
<td>D-1 (2)</td>
<td>60&quot;</td>
<td>72&quot;</td>
<td>72&quot;</td>
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<tr>
<td>D-2 (2)</td>
<td>43&quot;</td>
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<td>D-3 (2)</td>
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<td>1100 GAL</td>
<td>2400 GAL</td>
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CITY OF PACIFIC
1500, 3000, 4500 GALLON STEP TANK/PUMP TANK

APPROVED:

BY CITY

DATE

DRWN:

SCALE:
N.T.S.

CHECKED:

PMX

PS-4B
THE MATERIAL FOR DUPLEX, TRIPLEX, AND CLASS I DIVISION 1 INSTALLATIONS WILL VARY. THE CONTRACTOR SHALL MEET THE INTENT OF THE INSTALLATION REQUIREMENTS SHOWN IN THE TYPICAL STEP INSTALLATION.

NOTE:
1. FIBERGLASS STEP TANKS SHALL BE BEDDED AND BACKFILLED WITH MATERIAL CONFORMING TO WSDOT 9-03.16. BEDDING/BACKFILL MATERIAL THICKNESS SHALL BE 6” ON ALL SIDES OF THE TANK.

2. CONCRETE STEP TANKS SHALL BE BEDDED AND BACKFILLED WITH MATERIAL CONFORMING TO WSDOT 9-03.15. BEDDING/BACKFILL MATERIAL SHALL BE INSTALLED A MINIMUM OF 6” ABOVE AND BELOW THE TANK.

CITY OF PACIFIC

TYPICAL SIMPLEX STEP TANK INSTALLATION

APPROVED: 

BY CITY 

DATE: 7/03

DRWN: PMX

CHKD: XX

SCALE: N.T.S.
NOTE:
1. FIBERGLASS SDG TANKS SHALL BE BEDDED AND BACKFILLED WITH MATERIAL CONFORMING TO WSDOT 9-03.16. BEDDING/BACKFILL MATERIAL THICKNESS SHALL BE 6" ON ALL SIDES OF THE TANK.

2. CONCRETE SDG TANKS SHALL BE BEDDED AND BACKFILLED WITH MATERIAL CONFORMING TO WSDOT 9-03.15. BEDDING/BACKFILL MATERIAL SHALL BE INSTALLED A MINIMUM OF 6" ABOVE AND BELOW THE TANK.

CITY OF PACIFIC

TYPICAL SDG TANK INSTALLATION

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NOTE:
RISER AND LID SHALL BE 30" ON ALL STEP PUMP AND SDG VAULT INSTALLATIONS.

CITY OF PACIFIC
TYPICAL STEP/SDG TANK RISER

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SCALE: N.T.S.
* 30" PVC RISER REQUIRE 36" RING & CAST IRON COVER
SPICE TO EXISTING
14 GAUGE TONING
WIRE WITH BUTT
CONNECTORS AND
HEAT SHRINK TAPE

FINISH
GRADE

18''
MIN.

14 GA. INSULATED COPPER LOCATE WIRE

SPICE TONING WIRE FOR SERVICE TO
MAINLINE TONING WIRE AND WRAP
SPICE WITH HEAT SHRINK TAPE

FROM STEP TANK

CONNECT TO
EXISTING PVC
SERVICE LINE

REDUCER
IF REQUIRED

BALL VALVE, SL x SL

12''
MIN.

PRESSURE MAIN

60''
MIN.

SCHEDULE
40 PVC SWP

PVC SWING CHECK
VALVE SL x SL

BALL VALVE, SL x SL

PVC NIPPLE, SL x SL

PVC REDUCING TEE
SL x SL x TH
OR PIPE SADDLE

CITY OF PACIFIC

TYPICAL PRESSURE
SERVICE CONNECTION

APPROVED:

BY CITY DATE

7/03

DRWN: CHKD: SCALE:
PMX XX N.T.S.

DWG. NO.
PS-8
NOTE:
PLACE IN A NON–TRAFFIC AREA, UNION JOINTS SHALL BE SOLVENT WELDED. CITY TO FIELD LOCATE.
ELEVATION

NOTES:
1. ELBOWS SHALL NOT BE GREATER THAN 45°.
2. A CLEAN OUT IS REQUIRED FOR PIPE RUNS GREATER THAN 100' AND FOR EACH 90° ACCUMULATED BEND/100' OF LENGTH.
3. RIGHT-OF-WAY RESTORATION SHALL MATCH OR EXCEED ORIGINAL CONDITIONS.
4. TRENCH BACKFILL BENEATH PAVED SURFACE SHALL BE 5/8" MINUS CRUSHED SURFACING TOP COURSE, COMPACTED IN 12" LIFTS.
5. ALL PLUMBING OUTLETS SHALL BE CONNECTED TO THE SEWER. NO DOWNSPOUTS OR STORM DRAINAGE SHALL BE CONNECTED TO THE SANITARY SYSTEM.
6. 18" MINIMUM COVER ON ALL PIPES (PRIVATE PROPERTY) AND SLOPE @ 2% MINIMUM.
7. 5' MINIMUM PIPE COVER AT PROPERTY LINE.
8. LAY PIPE IN STRAIGHT LINE BETWEEN BENDS. MAKE ALL CHANGES IN GRADE OR LINE WITH AN ELBOW OR WYE.
9. 6" SEWER PIPE MINIMUM SIZE IN RIGHT-OF-WAY. LAY AT 2% MINIMUM GRADE, 45% MAXIMUM GRADE.
10. 4" SEWER PIPE MINIMUM SIZE ON PRIVATE RESIDENTIAL PROPERTY. 6" SEWER PIPE MIN. SIZE ON COMMERCIAL PROPERTIES. 2% MINIMUM GRADE, 45° MAXIMUM.
11. CONSTRUCTION IN RIGHT-OF-WAY SHALL BE PERFORMED BY A REGISTERED LICENSED CONTRACTOR. ACQUIRE CITY PERMIT.
12. ALL CONSTRUCTION REQUIRES A PERMIT AND PAYMENT OF FEE. COMPLETE LEGAL DESCRIPTION OF PROPERTY AND DIMENSIONS.
13. AS-BUILT DRAWING SHOWING LOCATION OF SIDE SEWER IN RELATION TO THE HOUSE AND EXISTING UTILITIES IS REQUIRED AFTER INSTALLATION.
14. IF CLEAN-OUT IS WITHIN DRIVING SURFACE, A LOAD-BEARING CASTING & COVER SHALL BE USED IN LIEU OF 10" ROUND VALVE BOX.

CITY OF PACIFIC

PRIVATE SIDE SEWER INSTALLATION

APPROVED: __________________________ DATE: __________
BY CITY ENGINEER: __________________________ __________________________
DWG. NO. PSSI-R

DATE: 12/00  DRWN: K.T.  CHKD: D.B.  SCALE: NONE

APPROVED BY PUBLIC WORKS SUBCOMMITTEE ON 1/30/01

PSSI-R-PMX.DWG
NOTES:

1. RAMP AND APPROACHES SHALL BE CLEAR OF OBSTACLES INCLUDING HYDRANTS, POLES, AND DRAINAGE STRUCTURES.

2. RAMP TEXTURING IS TO BE DONE WITH AN EXPANDED METAL GRATE PLACED AND REMOVED FROM WET CONCRETE TO LEAVE A DIAMOND PATTERN. THE LONG AXIS OF THE DIAMOND PATTERN SHALL BE PERPENDICULAR TO THE CURB. GROOVES SHALL BE 1/4" DEEP AND 1/4" WIDE.

CITY OF PACIFIC

SIDEWALK RAMP

APPROVED: ___________________________ DATE: ____________ DWG. NO. RAMP

BY CITY: ___________________________ DRWN: PMX CHKD: ____________ SCALE: NONE

DATE: XX

0.02 FT/FT

0.083 FT/FT

FLUSH, NOT TO EXCEED 1/2" LIP.

4" THICK CEMENT CONCRETE SIDEWALK

VARIES

6'-6" (TYP.)

5'-0" (TYP.)

SEES PLANS

SECTION A

RAMP TEXTURE DETAIL
NOTES:
1. FIRE HYDRANT MUST MEET S.L.W.D. REQUIREMENTS OR REPLACED WITH NEW FIRE HYDRANTS.
2. OR 3' FROM BACK OF CURB
3. PROVIDE 8' OF 12'' MINIMUM OR EQUAL INSIZE TO ANY ADJACENT DITCH PIPE TO COUNTY, STATE OR CITY STANDARDS IF APPLICABLE.
4. PROVIDE MIN. 3'-0" CLEARANCE AND LEVEL AREA AROUND HYDRANT
5. PAINT FIRE HYDRANT WITH TWO COATS PRESERVATIVE BRAND No.43-616 YELLOW
6. STENCIL FOOTAGE TO VALVE ON FIRE HYDRANT FOOTAGE UNDER PORT
7. REMOVE ALL CHAINS FOR FIRE HYDRANT CAPS
8. PROVIDE A STORZ 5" ADAPTOR AND CAP ON 4-1/2" PUMPER PORT

CITY OF PACIFIC
RELOCATE
FIRE HYDRANT ASSEMBLY

<table>
<thead>
<tr>
<th>APPROVED:</th>
<th>DWG. NO.</th>
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<th>SCALE:</th>
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<tbody>
<tr>
<td>CITY</td>
<td>8/96</td>
<td>J.H.</td>
<td>T.J.O.</td>
<td>NONE</td>
</tr>
</tbody>
</table>
ALARM CHECK VALVE

PROVIDE BLIND FLANGE UNTIL CONNECTION TO SPRINKLER SYSTEM

1' 0"

FOUNDATION WALL

( 3' MIN. )

PRIVATE SPRINKLER SYSTEM

TO VAULT

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2” GATE VALVE</td>
</tr>
<tr>
<td>2</td>
<td>FORD STAINLESS STEEL DOUBLE STRAP SADDLE (OR APPROVED EQUAL)</td>
</tr>
<tr>
<td>3</td>
<td>2” GALV. NIPPLE</td>
</tr>
<tr>
<td>4</td>
<td>2” GALV. 90° ELL</td>
</tr>
<tr>
<td>5</td>
<td>D.I. CL. 52 SUPPLY MAIN (SIZE AS DETERMINED BY FIRE FLOW REQUIREMENTS)</td>
</tr>
<tr>
<td>6</td>
<td>90° BEND (MJ X MJ) WITH MEGALUG ADAPTER</td>
</tr>
<tr>
<td>7</td>
<td>CONCRETE THRUST BLOCK (SIZE TO BE APPROVED BY CITY)</td>
</tr>
<tr>
<td>8</td>
<td>PIPE SLEEVE</td>
</tr>
</tbody>
</table>

NOTES:
1. AFTER SYSTEM IS TESTED, PURITY SAMPLES WILL BE TAKEN AT ALL RISERS IN SYSTEM

CITY OF PACIFIC

RISER DETAIL

APPROVED: ________________________

BY CITY ________________________ DATE ________________________

DWG. NO. RISER


NONE
SURFACE SEAL: MAY CONSIST OF IMPERVIOUS
SOIL OR FINE FREE DRAINING GRANULAR MATERIAL
EXISTING GROUND

DRAINAGE MATERIAL TO CONSIST OF CLEAN
ANGULAR WELL-GRATED QUARRY SQUALLS,
WITH 4" MAX. SIZE, OR OTHER MATERIAL
APPROVED BY A GEOTECHNICAL ENGINEER,
8" MIN. THICKNESS

FILTER FABRIC

DRAIN PIPE; 4" MIN. DIA. PERFORATED
OR SLOTTED RIGID PLASTIC ADS PIPE LAID
WITH A POSITIVE GRADIENT TO DISCHARGE
AWAY FROM THE WALL

SECTION

<table>
<thead>
<tr>
<th>SIZE</th>
<th>APPROXIMATE WEIGHT - LBS.</th>
<th>APPROXIMATE DIAMETER</th>
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<tbody>
<tr>
<td>1 MAN</td>
<td>50–200</td>
<td>12&quot;–18&quot;</td>
</tr>
<tr>
<td>2 MAN</td>
<td>200–700</td>
<td>18&quot;–28&quot;</td>
</tr>
<tr>
<td>3 MAN</td>
<td>700–2000</td>
<td>28&quot;–36&quot;</td>
</tr>
<tr>
<td>4 MAN</td>
<td>2000–4000</td>
<td>36&quot;–48&quot;</td>
</tr>
<tr>
<td>5 MAN</td>
<td>4000–6000</td>
<td>48&quot;–54&quot;</td>
</tr>
<tr>
<td>6 MAN</td>
<td>6000–8000</td>
<td>54&quot;–50&quot;</td>
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</tbody>
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* NOTE:
4' MIN. HIGH CYCLONE FENCE REQUIRED ABOVE
WALL WHEN WALL HEIGHT IS 3' OR GREATER

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<th>H</th>
<th>B</th>
<th>A</th>
<th>REVISIONS</th>
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<tr>
<td>6'- 0&quot; OR LESS</td>
<td>3'- 0&quot;</td>
<td>2'- 0&quot;</td>
<td></td>
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<tr>
<td>6'- 0&quot; H&lt; 8'- 0&quot;</td>
<td>4'- 4&quot;</td>
<td>3'- 0&quot;</td>
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</tbody>
</table>

ROCKERY SCHEDULE

ROCK WALL DETAIL

CITY OF PACIFIC

ROCK WALL DETAIL

APPROVED: ____________________________________

BY CITY: ____________________________________

DATE: 8/96

DRWN: J.H.

CHKD: T.J.O.

SCALE: NONE

DWG. NO. RKWL
REDUCED PRESSURE BACKFLOW DEVICE

1 PROVIDE CITY APPROVED SUPPORT FOR 2 1/2" AND LARGER DEVICES.
1. GALVANIZED STEEL PLATE 8x14x1/4"
2. 24 GAGE METAL ROOFING MATERIAL, PAINTED, OVERHANG ALL SIDES.
3. 2X2 GALV. STEEL ANGLE
4. LIGHT FIXTURE, 2 SETS, WEATHER PROOF CAST ALUMINUM BOX AND COVER 2 150 WATT FLOOD LIGHTS EACH (ADJUSTABLE)
5. 6" I.D. ELECTRICAL GALV. CONDUIT (SCHEDULE 40) CLOSED TOP (WELDED)
6. ELECTRICAL CONDUIT, 3/4" GALV.
7. 2-1/2" SQUARE TUBE STEEL, 1/4" WALL WITH 4 ROOF SUPPORT STRINGERS.

CITY OF PACIFIC
ROOF STRUCTURE FOR ELECTRICAL ENCLOSURE

<table>
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<td>NONE</td>
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8/96 J.H. T.J.O.
Corner Post


2. CORNER POSTS SHALL BE INSTALLED AT ALL POINTS WHERE THE ALIGNMENT CHANGES 30° OR MORE.

Notes:

- Gate pin drop
- Fabric
- Brace
- Square
- Top rail

Width as noted

SECTION

(Trp. All Posts) Conc. Type B Post 12” Dia. Min.

Notes:

- Inside
- Grade
- Finished to drain
- Slope Conc.
- Outside
- Wire Arms with 3
CITY OF PACIFIC
KING/PIERCE COUNTY WASHINGTON

DEVELOPMENT GUIDELINES
FOR
PUBLIC WORKS STANDARDS

ADOPTED BY ORDINANCE NO.: ___
DATE: OCTOBER 1996

PREPARED BY: GRAY & OSBORNE, INC.
701 DEXTER AVENUE NORTH, #200
SEATTLE, WASHINGTON 98109
G&O 96685
NOTE:

1. PAINT PORTION OF SERVICE MARKER THAT IS ABOVE FINISHED GRADE WITH WHITE PAINT. STENCIL WITH BLACK LETTERS "S/S" USING 3" HIGH LETTERS. LOCATE SERVICE MARKER AT END OF EACH SERVICE. STENCIL TOTAL LENGTH OF 2x4.

2. TAP EXISTING SEWER MAIN WITH APPROVED CITY SADDLE. INSTALL NEW SIDE SEWER TEE ON NEW MAIN LINES.

3. WHEN TAPPED SERVICE IS PERMITTED, CONTRACTOR SHALL PROVIDE SEWER MAIN COUPON TO CITY STAFF.

4. SEE "TYPICAL SIDE SEWER DETAIL" FOR CONSTRUCTION IN NEW DEVELOPMENTS.

5. PROVIDE PEA GRAVEL PIPE BEDDING SEE TRENCH SECTION DETAIL.

---

**CITY OF PACIFIC**

**NEW SIDE SEWER SERVICE**

(WITHIN EXISTING STREET RIGHT-OF-WAY)

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<td>J.H.</td>
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<td></td>
<td>T.J.O.</td>
</tr>
<tr>
<td>SCALE:</td>
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</table>
NOTE:
SEE TYPICAL TRENCH SECTION
FOR DUCTILE IRON SEWER PIPE
FINISHED GRADE OR SUBGRADE

COMPACTED BACKFILL CONSISTING OF CRUSHED ROCK, EXCAVATED MATERIAL OR GRAVEL BORROW, AS REQUIRED/DIRECTED BY CITY

SPECIAL PRECAUTIONS TO PROTECT PIPE TO THIS LEVEL

D.I. SEWER PIPE

SPRING LINE

2ND BEDDING LIFT (HAUNCHING)

INITIAL BEDDING LIFT

FOUNDATION GRAVEL AS REQUIRED

UNDISTURBED EARTH

DISTANCE VARIES

1'-0"

4"

PEA GRAVEL OR OWNER APPROVED EQUAL

NOTE:
BACKFILL MATERIAL AND COMPACTION SHALL BE IN CONFORMANCE WITH CITY STANDARDS AND/OR THE STATE OR COUNTY PERMIT REQUIREMENTS, (AS BE APPLICABLE)

CITY OF PACIFIC
SANITARY SEWER TRENCH SECTION FOR D.I. PIPE

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<tr>
<td>J.H.</td>
<td></td>
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<tr>
<td>T.J.O.</td>
<td></td>
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</table>
FINISHED GRADE OR SUBGRADE

COMPACTED BACKFILL CONSISTING OF CRUSHED ROCK, EXCAVATED MATERIAL OR GRAVEL BORROW, AS REQUIRED/DIRECTED BY CITY

FINAL BEDDING LIFT 6" MIN. ABOVE CROWN OF PIPE

PVC SEWER PIPE

SPRING LINE

2ND BEDDING LIFT (HAUNCHING)

INITIAL BEDDING LIFT

FOUNDATION GRAVEL AS REQUIRED

UNDISTURBED EARTH

SPECIAL PRECAUTION TO PROTECT PIPE TO THIS LEVEL.

DISTANCE VARIES

6"

1'-0"

4"

PEA-GRAVEL OR OWNER APPROVED EQUAL

NOTE:
BACKFILL MATERIAL AND COMPACTION SHALL BE IN CONFORMANCE WITH CITY STANDARDS AND/OR THE STATE OR COUNTY PERMIT REQUIREMENTS (AS MAY BE APPLICABLE)

CITY OF PACIFIC
SANITARY SEWER TRENCH SECTION FOR P.V.C. PIPE

APPROVED: ____________________________

BY CITY ____________________________

DATE: 8/96

DRWN: J.H.

CHKD: T.J.O.

DWG. NO. SSTSPVCP

SCALE: NONE
NOTE

1. PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.
NOTE

1. PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.

2. 10' ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)

CITY OF PACIFIC
MINOR ARTERIAL STREET SECTION

APPROVED: ___________________________ DATE: 8/96
BY CITY: ___________________________ DRWN: J.H.
CHKD: T.J.O. SCALE: NONE

DWG. NO. ST-2
NOTE

① PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.

② 5' ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)
NOTE

1. PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.

2. 5' ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)

3. CITY TO DETERMINE WHICH SIDE OF STREET TO INSTALL PARKING STRIP.
NOTE

① PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.

② 5' ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)

③ CITY TO DETERMINE WHICH SIDE OF STREET TO INSTALL PARKING STRIP.
NOTE

1. PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.

2. 5' ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)

3. CITY TO DETERMINE WHICH SIDE OF STREET TO INSTALL PARKING STRIP.

4. PARKING SHALL BE ALLOWED ONLY ON ONE SIDE OF THE ROADWAY. APPROPRIATELY LOCATED "NO PARKING" SIGNAGE SHALL BE PROVIDED AS DIRECTED BY THE CITY.

CITY OF PACIFIC

HALF-STREET SECTION

APPROVED: ____________________________  DATE: 8/96

BY CITY  CHKD: T.J.O.  SCALE: NONE

DWG. NO. ST-2D

DRWN: J.H.
RIGHT-OF-WAY = 30'

R-O-W LINE

MAX 2:1 SLOPE

3' GRAVEL(TYP)

3%

STORM SYSTEM TO BE APPROVED BY CITY ENGINEER

PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED ENGINEER AND AS APPROVED BY CITY

CITY OF PACIFIC

ALLEY SECTION/PRIVATE ROAD

APPROVED: ____________________________

BY CITY ____________________________ DATE

DATE: 8/96

DRWN: J.H.

CHKD: T.J.O.

SCALE: NONE

DWG. NO. ST-4
NOTES:

1. DRIVEWAY WIDTH = 24’ MINIMUM TO 36’ MAXIMUM.

2. DRIVEWAY PAVING = 2” MINIMUM COMPACTED DEPTH ASPHALT CONCRETE PAVEMENT CLASS B, OVER 2” MINIMUM DEPTH CRUSHED SURFACING TOP COURSE OVER 8” MINIMUM DEPTH CRUSHED SURFACING BASE COURSE.

3. STORM DRAINAGE FROM DRIVEWAY SHALL NOT BE PERMITTED TO DRAIN ONTO ROADWAY SURFACE.

4. DRIVEWAY SHALL BE AT 90 DEGREES TO ROAD CENTERLINE.

5. 12” MINIMUM DIAMETER REINFORCED CONCRETE OR DUCTILE IRON CULVERT, LENGTH AS DETERMINED BY WIDTH OF DRIVEWAY, PLUS 5’ MINIMUM AT EACH END, WITH BEVELED END SECTIONS. CULVERT PIPE SHALL BE INSTALLED PER STORM DRAIN PIPE SECTION WITH GRAVEL FOUNDATION OVER FIRM AND UNYIELDING SUBGRADE.

6. CULVERT ENDS SHALL HAVE TRASH RACKS.

7. CULVERT INVERT ELEVATIONS PER DESIGN.
NOTES:

1. ALL MATERIALS EXCEPT A.C.P. AND BEDDING MATERIAL SHALL BE COMPACTED IN 6-INCH MAXIMUM LIFTS TO 95% DENSITY.

2. BEDDING SHALL CONFORM TO CITY STANDARDS OF STANDARD SPECIFICATIONS.

3. COMPACATION: BEDDING SHALL BE COMPACTED TO 95% MAX. AS DETERMINED BY ASTM D1557. BACKFILL SHALL BE COMPACTED TO 85% IN UNPAVED AREA, AND 95% IN PAVED OR SHOULDER AREAS AS DETERMINED BY ASTM D1557.

4. ALL MATERIALS, WORKMANSHIP, AND INSTALLATION SHALL BE IN CONFORMANCE WITH THE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AS AMENDED BY CITY STANDARDS.

5. KEEP TRENCH BOTTOM COMPACTED WITH UNIFORM GRADE. A BELL JOINT SHALL BE REQUIRED AT EACH JOINT FOR PROPER SUPPORT. NO TEMPORARY SUPPORTS, I.E. BLOCKS, WILL BE ALLOWED TO SUPPORT PIPE. TRENCH BOTTOM SHALL BE TO GRADE PRIOR TO PIPE INSTALLATION.
STOP OR YIELD CONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 25 M.P.H.

UNCONTROLLED INTERSECTIONS

EXAMPLE: MAJOR STREET SPEED LIMIT = 30 M.P.H.
MINOR STREET SPEED LIMIT = 20 M.P.H.
NOTE:
1. THE HOLE FOR THE MONUMENT SHALL BE CUT AFTER THE NEW PAVEMENT HAS BEEN CONSTRUCTED. THE UPPER 3" OF THE MONUMENT ENCASEMENT SHALL BE SHAPED TO A TRUE DIAMETER OF 8-INCH. CLASS "C" CONCRETE SHALL BE USED FOR ENCASEMENT. THE BRONZE MONUMENT WILL BE SET SIMULTANEOUSLY WITH THE POURING OF CONCRETE IN THE ENCASEMENT.

2. SURFACE MONUMENT WILL GENERALLY NOT BE ACCEPTED BUT WILL BE EVALUATED, UPON REQUEST, ON A CASE BY CASE BASIS.
NOTE

1. 10' ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)

2. PLANTER AND SIDEWALK MAYBE REQUIRED ON BOTH SIDES OF ROADWAY.
NOTE

1. IF ROAD PROFILE GRADE IS LESS THAN .7%, THEN CROSS SLOPE SHALL BE 3%

2. PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER.

3. 5’ ROAD AND/OR UTILITY EASEMENT REQUIRED (BOTH SIDES)

4. CITY TO DETERMINE WHICH SIDE OF STREET TO INSTALL PARKING STRIP.

CITY OF PACIFIC

LOCAL ACCESS STREET SECTION

APPROVED: ___________________________ DATE: 8/96

BY CITY: ___________________________ DRWN: J.H.

CHKD: T.J.O. SCALE: NONE

ST-2C
FINISHED GRADE OR SUBGRADE

BACKFILL MATERIAL CONSISTING OF CRUSHED ROCK, SUITABLE EXCAVATED MATERIAL OR GRAVEL BORROW AS REQUIRED, AND DIRECTED BY CITY

SPECIAL PRECAUTIONS TO PROTECT PIPE TO THIS LEVEL

HAND-PLACED, COMPACTED SELECT MATERIAL AS REQUIRED

RIGID STORM DRAIN PIPE AS SPECIFIED PER CITY STANDARDS

GRAVEL BACKFILL FOR PIPE BEDDING

FOUNDATION GRAVEL AS REQUIRED

UNDISTURBED EARTH

DEPTH VARIES

1'-0" SEE PIPE BELOW O.D.

1/2 VARY

* 4-INCHES FOR PIPE 18-INCH DIA. AND LESS 6-INCHES FOR PIPE GREATER THAN 18-INCH DIA.

CITY OF PACIFIC
RIGID STORM DRAIN PIPE TRENCH SECTION

APPROVED: ___________________________ Date: ______________

BY CITY: ___________________________ DRWN: J.H.

CHKD: T.J.O.

SCALE: NONE

DWG. NO. STOM-1
SAW CUT AS REQUIRED AND SEAL WHEN COMPLETED WITH AR4000W

EXISTING PAVEMENT

FULL MORTAR CONTINUOUS JOINT

CONCRETE ADJUSTMENT RINGS (4 MAX.)

REMOVE EXISTING ASPHALT AND RESTORE PER ASPHALT RESTORATION DETAIL

CLEAN AND TACK EDGES WITH SEALER CSSI AND SEAL JOINTS WITH HOT ASPHALT CEMENT (AR4000W)

1-1/2" MIN. COMPACTED THICKNESS ASPHALT CONCRETE CLASS "B"

CEMENT CONCRETE COLLAR (CLASS 3000 PSI) WITH WIRE MESH

---

CITY OF PACIFIC

MANHOLE, OR CATCH BASIN (TYPE II) GRADE ADJUSTMENT DETAIL

APPROVED: ____________________ DATE: ________________ DWG. NO. STOM-2

BY CITY: ____________________ DRWN: J.H. CHKED: T.J.O.

DATE: 8/96 SCALE: NONE

---

NONE
NOTES:

1. MATERIAL SHALL CONFORM TO THE "1994 STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION" PREPARED BY THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION AND AMERICAN PUBLIC WORKS ASSOCIATION, WASHINGTON STATE CHAPTER.

2. WHEN ROAD PROFILE EXCEED 6% "VANED" GRATES SHALL BE INSTALLED IN LIEU OF THE STANDARD FRAME AND GRATE, AT THE DISCRETION OF THE CITY.
2x2 WOOD STAKES AT EACH CORNER OF CATCH BASIN

NOTE:
WOOD STAKES AROUND PERIMETER OF INLET SHALL BE SPACED A MAXIMUM OF 3 FEET APART

CITY OF PACIFIC

STORM DRAIN INLET PROTECTION

APPROVED: 

BY CITY 

DATE: 8/96

DWG. NO. STOM-4

DRWN: J.H. 

CHKD: T.J.O.

SCALE: NONE
NEW DITCH CONTOUR LINE. PROVIDE A CONSTANT SLOPE IN DITCH BETWEEN CULVERTS TO PROVIDE PROPER DRAINAGE.

EXCAVATE MATERIAL AND WASTEHAUL – INSTALL RIP-RAP OR QUARRY SPALLS AS REQUIRED BY THE CITY ENGINEER TO STABILIZE SIDE WALLS AND BOTTOM.

CITY OF PACIFIC
NEW DITCH CONSTRUCTION

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<td>J.H.</td>
<td>T.J.O.</td>
<td>NONE</td>
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DATE: 8/96
FINISHED GRADE OR SUB-GRADE

BACKFILL MATERIAL CONSISTING OF CRUSHED ROCK, SUITABLE EXCAVATED MATERIAL OR GRAVEL BORROW AS REQUIRED, AND DIRECTED BY CITY

SPECIAL PRECAUTIONS TO PROTECT PIPE TO THIS LEVEL

TOP OF PIPE BEDDING

FLEXIBLE STORM DRAIN PIPE AS SPECIFIED PER CITY STANDARDS

GRAVEL BACKFILL FOR PIPE BEDDING

FOUNDATION GRAVEL AS REQUIRED

UNDISTURBED EARTH

DEPTH VARIES

6"

1'-0"

1/2

SEE PIPE BELOW O.D.

VARIERS

CITY OF PACIFIC

FLEXIBLE STORM DRAIN PIPE TRENCH SECTION

* 4-INCHES FOR PIPE 18-INCH DIA. AND LESS 6-INCHES FOR PIPE GREATER THAN 18-INCH DIA.

APPROVED: ___________________________ DATE: ____________

BY CITY: ___________________________ DRWN: J.H. SCALE: NONE

CHKD: T.J.O.

STOM-6

DWG. NO.
NOTES:

1. PAVEMENT DESIGN BY CURRENT WASHINGTON STATE LICENSED CIVIL ENGINEER AND AS APPROVED BY THE CITY ENGINEER. CONCRETE SLABS MAY EXIST AND NEED TO BE REMOVED.

2. RELOCATE EXISTING DITCH AS MAY BE NECESSARY. MAXIMUM SIDESLOPES SHALL BE 2:1.

3. MAXIMUM SLOPE INDICATED MAY BE REVISED BASED ON ACCEPTABLE GEOTECHNICAL INFORMATION AND CITY ENGINEER APPROVAL.

4. 2' GRAVEL SHOULDER WITH 8" MINIMUM CRUSHED SURFACING TOP COURSE.
2-INCH TOP SOIL & GRASS OR HYDROSEED

SIDEWALK WIDTH VARIES 5'-10'

2% SLOPE

VARIABLES

3/8" x 13" EXPANSION JOINT. FELT TO EXTEND 1" PAST BOTTOM OF CURB AND GUTTER SECTION

4" MIN.

18"

MINIMUM SIDEWALK WIDTHS

5' MINIMUM, 10' MAXIMUM
SEE DESIGN STANDARDS

NOTES:

1. THRU JOINTS AND CONTRACTION JOINTS SHALL BE AS SHOWN ABOVE. THRU JOINTS SHALL ALSO BE PLACED IN THE SIDEWALK SECTION AT DRIVEWAY AND ALLEY RETURNS. ALL JOINTS SHALL BE CLEAN AND EDGED WITH AN EDGE HAVING 1/4" RADIUS. JOINTS SHALL BE FLUSH WITH THE FINISHED SURFACE.

2. ALL UTILITY POLES, METER BOXES, ETC. IN SIDEWALK AREAS SHALL HAVE 3/8" JOINT MATERIAL (FULL DEPTH) PLACED AROUND THEM BEFORE PLACING CONCRETE.

3. PREMOLDED JOINT FILLER SHALL BE 3/8" x 2" ASPHALT SATURATED FELT OR PAPER.

4. FORMS SHALL BE EITHER WOOD OR STEEL AND SHALL MEET ALL REQUIREMENTS OF THESE SPECIFICATIONS.

5. CONCRETE SHALL BE CLASS 3000 PSI

SECTION

PLAN

SIDEWALK WITHOUT PLANTING STRIP

CITY OF PACIFIC

SIDEWALK WITHOUT PLANTING STRIP

APPROVED: 

BY CITY: DRWN: CHKD: SCALE:

DATE: 8/96 J.H. T.J.O. NONE

DWG. NO. SW-1
NOTE:
1. RAMP TEXTURING SHALL BE DONE WITH AN EXPANDED METAL CRATE PLACED AND REMOVED FROM WET CONCRETE TO PRODUCE A DIAMOND PATTERN AS SHOWN. THE LONG AXIS OF THE DIAMOND PATTERN SHALL BE PERPENDICULAR TO THE CURB. GROVES SHALL BE 1/8” DEEP AND 1/4” WIDE.

2. CURB RAMPS SHALL NOT BE POURED INTEGRAL WITH SIDEWALK AND SHALL BE ISOLATED BY EXPANSION JOINT MATERIAL ON ALL SIDES, BUT NOT AT THE END OF RAMP ADJACENT TO THE ROADWAY.

3. "V" GROVES SHALL BE SHAPED TO CORRESPOND TO THE MARKINGS IN EXISTING SIDEWALKS.

4. ALL UTILITY POLES, METER BOXES AND OTHER OBSTRUCTIONS SHALL HAVE 3/8” EXPANSION JOINT MATERIAL PLACED AROUND THEM.

5. ALL SIDEWALK EDGES SHALL HAVE A 1/4” RADIUS.

**RAMP TEXTURE DETAIL**

<table>
<thead>
<tr>
<th>CITY OF PACIFIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAMP TEXTURE DETAIL</td>
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<td>J.H.</td>
<td>T.J.O.</td>
<td>NONE</td>
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</table>
WHEEL CHAIR RAMP

NOTE:
1. WHEEL CHAIR RAMPS SHALL BE PROVIDED AT ALL INTERSECTIONS

CITY OF PACIFIC
WHEEL CHAIR RAMP

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<td>J.H.</td>
<td>T.J.O.</td>
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</table>
SECTION

MINIMUM SIDEWALK WIDTHS

5' MINIMUM, 10' MAXIMUM
SEE DESIGN STANDARDS

NOTES:

1. JOINTS THRU AND DUMMY JOINTS SHALL BE AS SHOWN ABOVE. THRU JOINTS SHALL ALSO BE PLACED IN THE SIDEWALK SECTION AT DRIVEWAY AND ALLEY RETURNS. ALL JOINTS SHALL BE CLEAN AND EDGED WITH AN EDGE HAVING 1/4" RADIUS. JOINTS SHALL BE FLUSH WITH THE FINISHED SURFACE.

2. ALL UTILITY POLES, METER BOXES, ETC. IN SIDEWALK AREAS SHALL HAVE 3/16" JOINT MATERIAL (FULL DEPTH) PLACED AROUND THEM BEFORE PLACING CONCRETE.

3. PREMOLDED JOINT FILLER SHALL BE 3/16" x 2" ASPHALT SATURATED FELT OR PAPER.

4. FORMS SHALL BE EITHER WOOD OR STEEL AND SHALL MEET ALL REQUIREMENTS OF THESE SPECIFICATIONS.

5. CONCRETE SHALL BE CLASS 3000 PSI
**MINIMUM BEARING AREA TABLE**

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<th>FITTING D</th>
<th>TEE</th>
<th>90°</th>
<th>45°</th>
<th>22 1/2°</th>
<th>11 1/4°</th>
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<td>6&quot;</td>
<td>4 SQ.FT.</td>
<td>6 SQ.FT.</td>
<td>3 SQ.FT.</td>
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<td>2 SQ.FT.</td>
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<td>15 SQ.FT.</td>
<td>9 SQ.FT.</td>
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<td>3 SQ.FT.</td>
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<tr>
<td>12&quot;</td>
<td>14 SQ.FT.</td>
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<td>6 SQ.FT.</td>
<td>4 SQ.FT.</td>
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<tr>
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<td>21 SQ.FT.</td>
<td>11 SQ.FT.</td>
<td>7 SQ.FT.</td>
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<tr>
<td>18&quot;</td>
<td>32 SQ.FT.</td>
<td>48 SQ.FT.</td>
<td>27 SQ.FT.</td>
<td>14 SQ.FT.</td>
<td>8 SQ.FT.</td>
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**NOTE:**

BEARING AREA TABLE BASED ON 250 PSI PRESSURE AND 2000 PSF SOIL BEARING. IF PRESSURE IS GREATER OR SOIL BEARING IS LESS, THE THRUST BLOCK SIZE SHALL BE INCREASED. DESIGN FOR THRUST BLOCK TO BE PROVIDED BY DEVELOPER.

THIS TABLE REPRESENTS THE "MINIMUM" CONSTRUCTION STANDARDS. THE DEVELOPER'S ENGINEER SHALL BE RESPONSIBLE FOR THE DESIGN AND SIZING OF ALL BLOCKING BASED ON SOIL CONDITIONS, TEST PRESSURES, AND OTHER RELEVANT CONSIDERATIONS.

---

**CITY OF PACIFIC**

**THRUST BLOCKS**

**(FOR WATER MAINS)**

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<th>CHKD:</th>
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<tr>
<td>T.J.O.</td>
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</table>
LOCATE MANHOLE FRAME AND COVER ON UPSTREAM SIDE OF MANHOLE AND TO THE SIDE OF CHANNEL ALIGN ONE BOLT HOLE OVER LADDER.

POLYPROPYLENE NO. P-13938 MANHOLE STEPS

PRECAST CONCRETE MANHOLE

CHANNEL AS REQUIRED

SHORT PIPE SECTION AT MANHOLE (D.I. PIPE ONLY)

SLOPE SHOULDERS 3/8" PER FOOT

NOTE:
PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING.
EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL.
PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.
ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE MADE WITH A CONCRETE CORING MACHINE UNLESS OTHERWISE APPROVED BY THE CITY.
MANHOLE FRAME & COVER WITH "SEWERS"
CAST ON COVER WITH 3" HIGH RAISED
LETTERS (NON-SKID PATTERN) AS
MANUFACTURED BY "SATHER MANUFACTURING
CO., INC." NO. 6024-R. 3 HOLE LOCKING
FRAME AND COVER. ONE (1) BOLT HOLE
TO BE CENTERED OVER LADDER

FIRST STEP
14" MIN.
18" MAX.

GROUT BETWEEN RINGS

POLYPROPYLENE MANHOLE
STEPS NO. P-13938 LOCATED
AT 12" O.C.

GROUT LIFT HOLES
INSIDE AND OUTSIDE

POLYPROPYLENE LADDER
(3' MAXIMUM LENGTH)

SEE NOTE 1
SLOPE 3/8"/FT
FLOW
GROUT FILL

NOTES:
1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING
EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL.
PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND
CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER
BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT
OR EQUAL.

2. DROP OF GRADE THRU MANHOLE SHALL
BE 0.10', UNLESS OTHERWISE REQUIRED/
APPROVED BY CITY ENGINEER.

3. LARGER MANHOLES WILL BE REQUIRED AT
THE DISCRETION OF THE CITY ENGINEER
BASED ON PIPE SIZE, NUMBER AND
ORIENTATION OF PIPE(S).

4. INSTALL CONCRETE COLLAR. SEE DETAIL.

5. PRE-CHANNELED MANHOLES ARE NOT
ACCEPTABLE.

CITY OF PACIFIC

TYPICAL PRECAST MANHOLE

APPROVED:

DWG. NO.

BY CITY

DATE

DRWN:

CHKD:

SCALE:

8/96

J.H.

T.J.O.

NONE
<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>90° BEND</th>
<th>45° BEND</th>
<th>22 1/2° BEND</th>
<th>11 1/4° BEND</th>
<th>TEE OR DEAD END CAP</th>
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<tbody>
<tr>
<td>4”</td>
<td>40</td>
<td>17</td>
<td>8</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>6”</td>
<td>55</td>
<td>23</td>
<td>11</td>
<td>6</td>
<td>39</td>
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<td>88</td>
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<td>9</td>
<td>67</td>
</tr>
<tr>
<td>12”</td>
<td>103</td>
<td>43</td>
<td>21</td>
<td>10</td>
<td>82</td>
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<td>16”</td>
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<td>27</td>
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<td>18”</td>
<td>145</td>
<td>60</td>
<td>29</td>
<td>15</td>
<td>124</td>
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REstrained lengths shown are minimum and for lineal feet required on each side of fitting indicated.

Footages are based on 250 psi pressure and 42 inches cover. If pressure is greater or cover is less, the restrained length shall be increased. Developer’s engineer to design same.
MANHOLE FRAME & COVER WITH "SEWERS"
CAST ON COVER WITH 3" HIGH RAISED LETTERS (NON-SKID PATTERN) AS MANUFACTURED BY "SATHER MANUFACTURING CO., INC." NO. 6024-R. 3 HOLE LOCKING FRAME AND COVER. ONE (1) BOLT HOLE TO BE CENTERED OVER LADDER

SEE NOTE 3

FINISHED GRADE

4" X 24" PRECAST CONC. ADJUSTMENT RINGS
2 RINGS REQUIRED
4 RINGS MAXIMUM PLASTER INSIDE AND OUTSIDE FACE WITH 1/2" THICK GROUT

48" TO 24" OFFSET CONE

PRECAST MANHOLE

RUBBER GASKET SEALING ELEMENT

SHORT PIPE SECTION AT MANHOLE (D.I. PIPE ONLY)

FLOW

FOUNDATION GRAVEL

UNDISTURBED EARTH

NOTES:
1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
   PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
   D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING EITHER SHALL BE 12" MAXIMUM DISTANCE FROM MANHOLE WALL.
   PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT OR EQUAL.

2. DROP OF GRADE THRU MANHOLE SHALL BE 0.10', UNLESS OTHERWISE APPROVED BY CITY INSPECTOR.

3. INSTALL CONCRETE COLLAR.
   SEE DETAIL

---

CITY OF PACIFIC

TYPICAL SADDLE MANHOLE

<table>
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<tr>
<th>APPROVED:</th>
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<tbody>
<tr>
<td>BY CITY</td>
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</table>
NOTES:

1. PIPE CONNECTIONS TO MANHOLES SHALL BE AS FOLLOWS:
   PVC PIPE: CAST OR GROUT A MANHOLE COUPLING INTO WALL.
   D.I. PIPE: BELL AND SPIGOT JOINT OR FLEXIBLE COUPLING
   EITHER SHALL BE 12” MAXIMUM DISTANCE FROM MANHOLE WALL.
   PVC AND D.I. PIPE, OPTIONAL: CORE THE MANHOLE AND
   CONNECT SEWER PIPE WITH A WATER TIGHT FLEXIBLE RUBBER
   BOOT IN MANHOLE WALL, KOR-N-SEAL BOOT
   OR EQUAL.

2. DROP OF GRADE THRU MANHOLE SHALL
   BE 0.10’.

3. PRE-CHANNELED MANHOLES ARE
   NOT ACCEPTABLE.

4. CONSTRUCT CONCRETE COLLARS
   PER DETAILS.
NOTE:
PAINT PORTION OF SERVICE MARKER THAT IS ABOVE FINISHED GRADE WITH WHITE PAINT. STENCIL WITH BLACK LETTERS "S/S" USING 3" HIGH LETTERS. LOCATE SERVICE MARKER AT END OF EACH SERVICE. STENCIL TOTAL LENGTH OF 2x4.

1. MAXIMUM DEFLECTION NOT TO EXCEED PIPE MANUFACTURER RECOMMENDATIONS.
2. SIDE SEWER LATERAL SHALL BE THE SAME MATERIAL AS THE MAIN LINE SEWER AND BEDDED THE SAME.
3. PIPE BEDDING PER WSDOT 9–03.12(3)
4. IF CLEAN–OUT IS WITHIN DRIVING SURFACE, A LOAD–BEARING CASTING & COVER SHALL BE USED IN LIEU OF 10" ROUND VALVE BOX.

CITY OF PACIFIC
TYPICAL SIDE SEWER DETAIL
(WITHIN NEW DEVELOPMENT)

APPROVED: TSSD–A

BY CITY ENGINEER DATE DWG. NO.
12/00 K.T. CHKD: SCALE: NONE
APPROVED BY PUBLIC WORKS SUBCOMMITTEE ON 1/30/01 TSSD–A–PMX.DWG
Plan

6" Approved Watertight Screw Cap with 2" Nut

2x4x12' Long Service Marker

11'

VARIES

Property Line

6" Tee or Wye on Sewer Main

FINISHED GRADE

6" Watertight Screw Cap with 2" Nut Placed 2" Below Grade

10" Round Valve Box, at Grade

2x4x12' Long Service Marker

6" Inspection Wye with 45° Bend Fitting

Property Line

Terminate with Approved Watertight Plug (Typ.)

Elevation

6°-0' Typ.

5' 0" Typ.

6" Tee on Sewer Main

45° Maximum Slope

2% Minimum Slope

Notes:

1. Maximum Deflection Not to Exceed Pipe Manufacturer Recommendations.
2. Side Sewer Lateral Shall Be the Same Material as the Main Line Sewer and Bedded the Same.
3. Pipe Bedding Per WSDOT 9-03.12(3)
5. If Clean-Out is Within Driving Surface, A Load-Bearing Casting & Cover Shall Be Used in Lieu of 10" Round Valve Box.

City of Pacific
Typical Side Sewer Detail
(with Bar Ditch)

Approved: TSSD-B

By City Engineer: K.T.

Date: 12/00

Drwn: D.B.

Chkd: None

Approved by Public Works Subcomittee on 1/30/01

TSSD-B-FMX.DWG
NOTE:
PAIN T PORTION OF SERVICE MARKER THAT IS ABOVE FINISHED GRADE WITH WHITE PAINT.
STENCIL WITH BLACK LETTERS "S/S" USING 3" HIGH LETTERS. LOCATE SERVICE MARKER AT END OF EACH SERVICE. STENCIL TOTAL LENGTH OF 2x4.

6" SIDE SEWER
6" WYE

PROPERTY LINE
5' MIN (TYP) OR AS APPROVED
6" APPROVED WATERTIGHT SCREW CAP WITH 2" NUT

10" ROUND VALVE BOX, AT GRADE
2x4x12' LONG SERVICE MARKER
6" WATERTIGHT SCREW CAP WITH 2" NUT PLACED 2" BELOW GRADE

FINISHED GRADE
CLEAN FREE-DRAINING GRAVEL
6" INSPECTION WYE WITH 45° BEND FITTING

45° MAXIMUM SLOPE
2% MINIMUM SLOPE

PROPERTY LINE
TERMINATE WITH APPROVED WATERTIGHT PLUG (TYP.)

ELEVATION

NOTES:
1. MAXIMUM DEFLECTION NOT TO EXCEED PIPE MANUFACTURER RECOMMENDATIONS.

2. SIDE SEWER LATERAL SHALL BE THE SAME MATERIAL AS THE MAIN LINE SEWER AND BEDDED THE SAME.

3. PIPE BEDDING PER WSDOT 9-03.12(3)

4. IF CLEAN-OUT IS WITHIN DRIVING SURFACE, A LOAD-BEARING CASTING & COVER SHALL BE USED IN LIEU OF 10" ROUND VALVE BOX.

CITY OF PACIFIC
TYPICAL SPLIT SIDE SEWER DETAIL (WITHIN NEW DEVELOPMENT)

APPROVED:
BY CITY ENGINEER DATE DWG. NO.
TSSD-C

APPROVED BY PUBLIC WORKS SUBCOMMITTEE ON 1/30/01 TSSD-C-PMX.DWG

DATE: 12/00
DRWN: K.T.
CHKD: D.B.
SCALE: NONE
DISTANCE "MAY" BE GREATER THAN 3'-0" TO ACCOMODATE MIN. COVER AND VERTICAL CLEARANCE

CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF EXISTING AND/OR PROPOSED UTILITIES

FINISHED GROUND ELEVATION

EXISTING UTILITY LINES

PROPOSED WATER MAIN- SPACE JOINTS EQUAL DISTANCE FROM CROSSING

1'-0" MIN.

1'-0" MIN. CLEARANCE

3'-0" MIN. COVER

CITY OF PACIFIC

TYPICAL UTILITY CROSSING

APPROVED: ____________ DATE ____________

BY CITY ____________ DWG. NO. TUC ____________

DRWN: J.H. CHKD: T.J.O.

DATE: 8/96 SCALE: NONE
### Type "A" Blocking

For 11 1/4" - 22 1/2" Vertical Bends

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<th>S</th>
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### Type "B" Blocking

For - 45° Vertical Bends

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<td>8&quot;</td>
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<td>1 1/4</td>
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<td>20&quot;</td>
<td>820</td>
<td>9.4</td>
<td>1 3/8</td>
<td>4.5</td>
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**Note:**

This table represents the "minimum" construction standards. The developer's engineer shall be responsible for the design and sizing of all blocking based on soil conditions, test pressures, and other relevant considerations.

---

**City of Pacific**

**Anchor Block Detail**

- **Approved:**
- **By City:**
- **Date:** 8/96
- **Drwn:** J.H.
- ** CHKd:** T.J.O.
- **Dwg. No.:** VAB
- **Scale:** None
1. EACH VALVE SHALL BE PROVIDED WITH AND ADJUSTABLE CAST IRON VALVE BOX OF 5 INCHES (5") INSIDE DIAMETER. VALVE BOXES SHALL HAVE A TOP SECTION WITH AN EIGHTEEN INCH (18") MIN. LENGTH. THE VALVE BOX SHALL BE RICH NO. 940 OR APPROVED EQUAL. VALVE BOX EARS SHALL BE PLACED IN LINE WITH PIPE IT SERVES.

2. 15” MINIMUM, 36” MAXIMUM FOR OPERATOR NUT. EXTENSION MAY BE REQUIRED.
FINISHED GRADE

SEE CONCRETE COLLAR DETAIL

CAST IRON VALVE BOX

2" SQUARE OPERATING NUT WITH 1/4" THICK ROUND PLATE WELDED TO NUT & EXTENSION

1/4" CLEARANCE INSIDE

EXTENSION STEM – MAKE FROM 1" DIA. MILD STEEL OR DOUBLE EXTRA STRONG PIPE.

MAKE 2" SQUARE NUT SOCKET FROM 1/4" STEEL PLATE – WELD TO 1" EXTENSION STEM

42" MAX. BURY BEFORE EXTENSION
STEM IS REQUIRED

12" MIN.

24" MAX.

VARIABLE

CITY OF PACIFIC
VALVE EXTENSION STEM

APPROVED:

BY CITY

DATE: 8/96

J.H.

CHKD: T.J.O.

SCALE: NONE

DWG. NO.

VES
<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>A</th>
<th>B</th>
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<tbody>
<tr>
<td>6”−10”</td>
<td>36”</td>
<td>24”</td>
</tr>
<tr>
<td>12”−18”</td>
<td>36”</td>
<td>30”</td>
</tr>
<tr>
<td>20” &amp; OVER</td>
<td>42”</td>
<td>36”</td>
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**CITY OF PACIFIC**
**WATER STANDARD DETAILS**

**WATER MAIN DEPTH REQUIREMENTS**

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<th>APPROVED:</th>
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<td>J.H.</td>
<td>T.J.O.</td>
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<tbody>
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</table>
FINISHED GRADE OR SUBGRADE

COMPACTED BACKFILL CONSISTING OF CRUSHED ROCK, EXCAVATED MATERIAL OR GRAVEL BORROW AS REQUIRED/DIRECTED BY CITY

SPECIAL PRECAUTIONS TO PROTECT PIPE TO THIS LEVEL

HAND-PLACED, COMPACTED SELECT BACKFILL

DUCTILE IRON PIPE

FOUNDATION MATERIAL AS REQUIRED

UNDISTURBED EARTH

NOTE:
① BACKFILL MATERIAL AND COMPACTION SHALL BE IN CONFORMANCE WITH THE CITY STANDARDS AND/OR THE STATE OR COUNTY PERMIT REQUIREMENTS (AS MAY BE REQUIRED)
② PVC PIPE (CLASS SIZED BY CITY) SHALL BE INSTALLED IN LIEU OF DUCTILE IRON PIPE WHEN REQUIRED BY CITY.
<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>MAKER OR RATING</th>
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<tbody>
<tr>
<td>1. Double Stainless Steel Strap Saddle</td>
<td>Romac or Equal</td>
</tr>
<tr>
<td>2. Corporation Valve</td>
<td>Mueller or Equal</td>
</tr>
<tr>
<td>3. Pipe – High Molecular Polyethylene</td>
<td>AWWA C901</td>
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<tr>
<td>4. Compression Couplings</td>
<td>Mueller or Equal</td>
</tr>
<tr>
<td>5. Valve Box</td>
<td>Rich or Equal</td>
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<td>6. Meter Box</td>
<td>Carson or Equal</td>
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<tr>
<td>7. Meter Setter w/Lockable Bypass</td>
<td>Mueller or Equal</td>
</tr>
<tr>
<td>8. 90° Brass Street Elbow</td>
<td>14 Gauge Copper Wire</td>
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<td>9. Tracer Wire</td>
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<table>
<thead>
<tr>
<th>1-1/2”</th>
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<td>1-1/2”</td>
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<tr>
<td>Solid</td>
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CITY OF PACIFIC

1-1/2” & 2” WATER SERVICE

APPROVED: _______________  DWG. NO. WS2-R

BY CITY: _______________  DATE: _______________

CITY OF PACIFIC
WATER SAMPLING STATION

NOTE:
USE FORD S90 BRASS TAPPING SADDLE
IF WATER MAIN PIPE IS P.V.C. AND FB100,
FB 1101, CORPORATION STOPS AS
NECESSARY.

CORPORATION STOP
FORD *3/4" F500

DOUBLE STRAP SADDLE
SEE THE STANDARD
SPECIFICATIONS.

WATER MAIN

PACK JOINT COUPLING FORD*
C16-33 (FOR PE PIPE)
OR MUELLER INSTA-TITE
COUPLING #15408

KUPFERLE FOUNDRY CO.
"ECLIPSE" NO. 88 OR EQUAL

CONC. BASE
1'-4" x 4" x 4"
WITH OPENING
(2000 PSI)

BRASS ADAPTER
FOR 3/4" F.I.P. INLET &
HDPE X THRD CONNECTOR

3/4" 200# HDPE PIPE

FIELD LOCATE PER
CITY APPROVAL

ALUM. COVER

SLOPE TO
DRAIN (TYP.)

FINISH GRADE

3' MIN.

2' MIN.

3'-0" MINIMUM

7"

7"
NOTE:
USE FORD S90 BRASS TAPPING SADDLE
IF WATER MAIN PIPE IS P.V.C. AND FB100,
FB 1101, CORPORATION STOPS AS
NECESSARY.
CONCRETE THRUST BLOCK

EXISTING CI, DI, STEEL, OR A.C. PIPE

DUCTILE IRON OR FABRICATED STEEL TAPPING SLEEVE

DIRECT TAP, 1" CORP STOP, AND HOSE FOR TEMPORARY AIR RELIEF IF REQ'D. REPLACE CORP STOP W/TAPERED BRASS PLUG AFTER PURITY RESULTS HAVE PASSED.

NEW SYSTEM

REILIENT SEAT TAPPING GATE VALVE. OPERATION SHALL BE BY CITY PERSONNEL ONLY. CONTRACTOR SHALL NOT OPERATE VALVE.

NOTE:

① VALVE BOX TO HAVE A LOCKING LID UNTIL ACCEPTED BY THE CITY.

② O.D. STEEL PIPE SHALL USE S.S. SLEEVE (FUSION COATED).

③ STAINLESS STEEL SLEEVE IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. SEE SECTION 7-04 B3 "TAPPING SLEEVES AND TAPPING VALVES".

CITY OF PACIFIC

WET TAP CONNECTION

APPROVED:

BY CITY

DATE: 8/96

DRWN: J.H.

CHKD: T.J.O.

SCALE: NONE

DWG. NO.

WTC
CONCRETE COLLAR, SEE VALVE BOX ADJUSTMENT DETAIL

FINISHED GRADE

CAST IRON VALVE BOX

2" SQUARE OPERATING NUT WITH 1/4" THICK ROUND PLATE WELDED TO NUT & EXTENSION

1/4" CLEARANCE INSIDE

EXTENSION STEM – MAKE FROM 1" DIA. MILD STEEL OR DOUBLE EXTRA STRONG PIPE.

MAKE 2" SQUARE NUT SOCKET FROM 1/4" STEEL PLATE – WELD TO 1" EXTENSION STEM

3/4" COLD ROLLED BLACK STEEL PIPE W/ ONE COATING OF HARD-HAT SILVER RUST PREVENTION PAINT

2" SQUARE TUBING W/ 2-1/2" FLATBAR

### CITY OF PACIFIC

#### WATER VALVE STEM EXTENSION

<table>
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<th>APPROVED:</th>
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<tr>
<td></td>
<td>8/96</td>
<td>J.H.</td>
<td>T.J.O.</td>
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