COMMON UTILITY TRENCH

POWER VAULT BEYOND (CONTRACTOR OR CONSULTANT TO CONTACT POWER CO. FOR SPECIFIC POWER VAULT REQUIREMENTS, LOCATIONS & CONDUIT ENTRANCES TO VAULT PRIOR TO CONSTRUCTION)

10' PUE WHEN REQ'D

ROW (INCLUDING SIDEWALK)

TRENCH BACKFILL SHALL CONFORM TO CITY STANDARD TRENCH DETAIL IN STREET SECTIONS (SEE DWG 2-105). IN OTHER AREAS, CONTACT THE UTILITY COMPANIES FOR THEIR PREFERRED DETAIL

LEGEND

G – NATURAL GAS  L – STREET LIGHTS
C – CABLE TELEVISION  P – PRIMARY POWER
T – TELEPHONE  S – SECONDARY POWER

MINIMUM BEDDING (SAND OR APPROVED GRANULAR MATERIAL)

NOTES:

1. COMMON TRENCH IS TO BE LOCATED BEHIND THE BACK OF SIDEWALK. IN MOST CASES, A PUBLIC UTILITY EASEMENT WILL BE REQUIRED.

2. ALL SAND MUST PASS THROUGH A NO. 10 SIEVE.

3. THE DEVELOPER SHALL HAVE HIS/HER CONSULTANT CONDUCT A PREDESIGN MEETING WITH CITY ENGINEERING AND ALL UTILITY COMPANIES/AGENCIES INVOLVED PRIOR TO SUBMITTING CONSTRUCTION PLANS TO CITY ENGINEERING.

CITY OF Klamath Falls

COMMON UTILITY TRENCH FOR DEVELOPMENT WITHIN THE CITY OF KLAMATH FALLS

Approved By: Mark Willrett

Drawn By: GDG

Date: 1/2002

Dwrg. No.: 2-100a
SERVICE UTILITIES CROSSING CITY UTILITIES

LEGEND

G = NATURAL GAS
C = CABLE TELEVISION
T = TELEPHONE
P = POWER

NOTES:

1. COMMON TRENCH IS TO BE LOCATED BEHIND THE BACK OF SIDEWALK. IN MOST CASE, A PUBLIC UTILITY EASEMENT WILL BE REQUIRED.

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CITY OF KLAMATH FALLS

DRAWN BY: WEM
DATE: 6/2005
DRAWING NO.: 2-100b

Approved By: Mike Kuenzi
NOTE:
1. 2nd sawcut is made after trench has been backfilled per trench section below.
2. Cuts into existing streets requires travel lane to be repaved
3. If cut is within 24" of the curb, asphalt shall be removed and replaced to curb

CONSTRUCTION NOTES:
1. All work & materials shall conform to the most current edition of the city of Klamath Falls standard drawings.
2. Asphalt depth per the design plans.
3. Bedding & pipe zone material shall be compacted to 95% of maximum density per AASHTO T-99.
4. Testing - Internal, 3' vertical, 50' length with 2 test min.
5. Crusher reject shall not be accepted as a substitute for 3/4"-0" state spec crushed aggregate.

SIDEWALL CLEARANCE EXCLUDING SHORING

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>W (Min.–Max.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 6&quot;</td>
<td>6&quot; – 12&quot;</td>
</tr>
<tr>
<td>8&quot; – 24&quot;</td>
<td>8&quot; – 12&quot;</td>
</tr>
<tr>
<td>27&quot; – 60&quot;</td>
<td>12&quot; – 18&quot;</td>
</tr>
<tr>
<td>Over 60&quot;</td>
<td>18&quot; – 21&quot;</td>
</tr>
</tbody>
</table>

TRENCH FOUNDATION STABILIZATION, AS REQ.

TRENCH SECTION

CITY OF KLAMATH FALLS

Date: 1/2002
Drwg. No.: 2-105

Approved By: Don Wilcox
CONSTRUCTION NOTES:

1. PAY ITEM FOR STANDARD MANHOLE INCLUDES ADJUSTMENT TO GRADE PER STANDARD DRAWING NO. 8-235 AFTER PAVEMENT IS PLACED.

2. MANHOLE RINGS AND BASE SHALL BE PRECAST PER THE APPLICABLE SECTION OF APWA, DIVISION 306.

3. MANHOLE COUPLINGS ARE TO BE THE SAME SIZE AND MATERIAL AS THE PIPE IN THE ADJACENT TRENCH AND INSTALLED WITH WATER STOP AND STAINLESS STEEL BANDS AT THE TIME OF FABRICATION.

4. PIPE STUBOUTS FOR FUTURE SEWER CONNECTION SHALL BE SEALED WITH THE APPROPRIATE WATER TIGHT PLUG.

SECTION A-A

SECTION B-B

CITY OF KLAMATH FALLS

STANDARD MANHOLE

Don Wilcox
CONSTRUCTION NOTES:

1. PAY ITEM FOR STANDARD MANHOLE INCLUDES ADJUSTMENT TO GRADE PER STANDARD DRWG. NO. 8-235 AFTER PAVEMENT IS PLACED.
3. MANHOLE COUPLINGS ARE TO BE THE SAME SIZE AND MATERIAL AS THE PIPE IN THE ADJACENT TRENCH AND INSTALLED WITH WATER STOP AND STAINLESS STEEL BANDS AT THE TIME OF FABRICATION.
4. PIPE STUBOUTS FOR FUTURE SEWER CONSTRUCTION SHALL BE SEALED WITH THE APPROPRIATE WATERTIGHT PLUG.
CONSTRUCTION NOTES

1. Concrete shall attain a minimum compressive strength of 4000 psi at 28 days. (See Std. DWG. B-100 for Conc. Specs)
2. Concrete shall be placed against undisturbed soil.
3. Concrete shall not be placed around bolts or bells.
4. Install approved isolation material between pipe and/or fittings before pouring concrete.
5. Some form work may be required, as determined by the engineer, for proper bearing, shape and/or containment.
6. Concrete mix shall be stiff, 3" to 4" slump.
7. Formwork shall not be left in trench after concrete has set or after backfill.
8. Utilities crossing a thrust block require a minimum of one-foot clearance.

CITY OF KLAMATH FALLS

STANDARD THRUST BLOCKS
**NEW MANHOLE INSTALLATION**

**CONNECTION TO EXISTING MANHOLE BASE**

- **Install new pipe coupling to lip shoulder and grout to provide a watertight seal.**
- **Install 5' length of new pipe.**
- **Core-drill existing base for installation of new pipe coupling.**
- **Grout new channel to match flowline.**
- **Concrete manhole pipes, cook concrete products, or equal.**
- **Precast concrete manhole base, cook concrete products, or equal, with pipe couplings as specified, cast in place.**

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**CITY OF KLAMATH FALLS**

**STANDARD MANHOLE BASES**

**EXISTING & NEW CONSTRUCTION**

Approved By: *Mike Kuenzi*

Drawn By: GDG

Date: 1/2002

Drwg. No.: 2-125