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**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS**

**ENGINEERING DIVISION**

RECOMMENDED ________________________ PROJECT MANAGER ________________________

APPROVED ________________________ CITY ENGINEER ________________________

STANDARD DRAWING BH 000

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Section I

Street Improvements
NOTES:
1. DRIVEWAY APPROACH, INCLUDING SIDEWALK SHALL BE CLASS 560-C-3250 PCC MONOLITHIC POUR.
2. ANY EXISTING TRAFFIC OR ELECTRICAL BOXES SHALL BE RELOCATED OUTSIDE OF DRIVEWAY APPROACH.
3. NO PORTION OF A PROPOSED DRIVEWAY APPROACH SHALL BE CONSTRUCTED CLOSER THAN TEN (10) FEET FROM THE CENTER OF ANY CITY TREE WITHOUT A WRITTEN APPROVAL OF THE CITY ARBORIST.
4. DOWELS SHALL BE USED AT EXISTING CURB AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
CITY OF BEVERLY HILLS
RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS AND GENERAL REQUIREMENTS
IN REFERENCE TO BEVERLY HILLS MUNICIPAL CODE SEC. 8-4-4

Definition: An approach is located between the edge of the gutter and property line. It is composed of sidewalk, an apron, and flairs (see sheet 1 of 2).

1. Any variation from this Driveway Approach Standard must be approved in writing by the City Director of Public Works or their designee. Permits are required for all activities in the public right-of-way.

2. Proposal Plan: A drawing shall be provided by the applicant to include: Width of proposed apron(s), width of proposed transitional flair areas at side of apron(s), measurement to nearest trees, street lights, other curb cuts, location of property line extension at each side of the site, location of any adjacent neighboring approach, height of the street curb in front of the property, width of the sidewalk, width of the roadway (landscaped area) and any other useful information. Note: If the project is part of a work to be performed on a private property, the drawing submitted must be stamped with the approval of the Building and Safety Department prior to issuance of an Engineering Driveway Approach permit.

3. Location: No portion of a driveway approach shall be closer than three feet (3') from any lighting standard, public utility, another driveway, or other device erected in the parkway. Except in single family residential zones, driveway approaches are restricted to access which lead directly to a carport, garage, or parking area located beyond the setback area. Two (2) driveway approaches authorized for any lot or parcel shall not be less than twenty eight feet (28') apart, and each such driveway approach shall be a minimum of two feet (2') from the side property line as measured at the beginning of the full height curb. Any circular driveway shall have a minimum outer radius of twenty six (26') feet. The transportation/engineering official may approve a driveway approach closer to the side property line, or closer to any tree, lighting standard, public utility, another driveway or a device erected in the parkway where necessary to accommodate existing topography or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. No portion of a proposed driveway approach shall be constructed closer than ten (10) feet from the center of any city tree without written approval of the City Arborist.

4. Concrete Finish: Approaches shall have a wood float, rotor finish. Sidewalk and curb face shall be troweled and light broom finished. Broken or defective public sidewalk, curb, and gutter adjacent to approaches shall be replaced if found necessary during the inspection of the work by Public Works inspectors.

5. Adjacent Approach: No raised curb will be permitted between two approaches which are adjacent to a common property line and less than 4 feet apart. The approaches shall be continuous. A written consent of adjacent property owner is required to construct a joint approach. Construction of a joint approach includes the removal of the existing adjacent approach and reconstruction of the entire shared approach.

6. Width: The maximum overall width of any residential driveway approach shall not exceed twenty feet (20'), and the maximum width of two (2) adjacent residential driveway approaches which are combined shall not exceed twenty six feet (26'). The minimum overall width of any driveway approach shall be sixteen feet (16'). The transportation/engineering official may approve driveway approaches which vary from the widths designated herein to accommodate existing topography, or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. Driveway approach widths shall be the transition distance, measured along the curb, from the full height curb on one side to the opposite side.

Number: Only one driveway approach shall be permitted in any residential zone on any lot or parcel with less than seventy five feet (75') of frontage, or with a front setback of less than twenty five feet (25'); with the exception that a circular driveway requiring two (2) driveway approaches shall be permitted where the parcel frontage is within four percent (4%) of the seventy five feet (75') minimum required for two (2) driveway approaches, and further, that no other deviation from the provisions of this code or discretionary action is required for such circular driveway.


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### RESIDENTIAL DRIVEWAY APPROACH

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: [Signature] DATE: 10-21-22
APPROVED: [Signature] DATE: 02-22-23

STANDARD DRAWING: BH 101
SHEET 2 OF 2
NON-RESIDENTIAL DRIVEWAY APPROACH

NOTES:
1. DRIVEWAY APPROACH, INCLUDING SIDEWALK SHALL BE CLASS 560-C-3250 PCC MONOLITHIC POUR.
2. ANY EXISTING TRAFFIC OR ELECTRICAL BOXES SHALL BE RELOCATED OUTSIDE OF DRIVEWAY APPROACH.
3. NO PORTION OF A PROPOSED DRIVEWAY APPROACH SHALL BE CONSTRUCTED CLOSER THAN TEN (10) FEET FROM THE CENTER OF ANY CITY TREE WITHOUT A WRITTEN APPROVAL OF THE CITY ARBORIST.
4. DOWELS SHALL BE USED AT CURB AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPoxy WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.
5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED
DATE 10-21-22

APPROVED
DATE 02-22-23

STANDARD DRAWING BH 102

SHEET 1 OF 2
CITY OF BEVERLY HILLS
NON-RESIDENTIAL DRIVEWAY APPROACH SPECIFICATIONS AND GENERAL REQUIREMENTS
IN REFERENCE TO BEVERLY HILLS MUNICIPAL CODE SEC. 8.4-4

Definition: An approach is located between the edge of the gutter and property line. It is composed of sidewalk, apron and flairs (see sheet 1 of 2).

1. Any variation from this Driveway Approach Standard must be approved in writing by the City Director of Public Works or their designee. Permits are required for all activities in the public right-of-way.

2. Proposal Plan: A drawing shall be provided by the applicant to include: Width of proposed apron(s), width of proposed transitional flair areas at side of apron(s), measurement to nearest trees, street lights, other curb cuts, location of property line extension at each side of the site, location of any adjacent neighboring approach, height of the street curb in front of the property, width of the sidewalk, width of the roadway (landscaped area) and any other useful information.
   Note: If the project is part of a work to be performed on a private property, the drawing submitted must be stamped with the approval of the Building and Safety Department prior to issuance of an Driveway Approach permit.

3. Location: No portion of a driveway approach shall be closer than three feet (3") from any lighting standard, public utility, another driveway, or other device erected in the parkway. Except in single family residential zones, driveway approaches are restricted to access which lead directly to a carport, garage, or parking area located beyond the setback area. Two (2) driveway approaches authorized for any lot or parcel shall not be less than twenty eight feet (28") apart, and each such driveway approach shall be a minimum of two feet (2") from the side property line as measured at the beginning of the full height curb. Any circular driveway shall have a minimum outer radius of twenty six (26") feet. The transportation/engineering official may approve a driveway approach closer to the side property line, or closer to any tree, lighting standard, public utility, another driveway or a device erected in the parkway where necessary to accommodate existing topography or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. No portion of a proposed driveway approach shall be constructed closer than ten (10) feet from the center of any city tree without written approval of the City Arborist.

4. Concrete Finish: Approaches shall have a wood float, rotor finish. Sidewalk and curb face shall be troweled and light broom finished. Broken or defective public sidewalk, curb, and gutter adjacent to approaches shall be replaced if found necessary during the inspection of the work by Public Works inspectors.

5. Adjacent Approach: No raised curb will be permitted between two approaches which are adjacent to a common property line and less than 4 feet apart. The approaches shall be continuous. A written consent of adjacent property owner is required to construct a joint approach. Construction of a joint approach includes the removal of the existing adjacent approach and reconstruction of the entire shared approach.

6. Width: The maximum overall width of any non-residential driveway approach shall not exceed forty feet (40'). The minimum overall width of any driveway approach shall be sixteen feet (16'). The transportation/engineering official may approve driveway approaches which vary from the widths designated herein to accommodate existing topography, or nonremovable objects, such as buildings, walls, trees, or natural rock outcroppings. Driveway approach widths shall be the transition distance, measured along the curb, from the full height curb on one side to on the opposite side.


NON-RESIDENTIAL DRIVEWAY APPROACH

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING

BH 102

SHEET 2 OF 2
CASE 3

CASE 4

CURB RAMPS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED  DATE  9-22-20
APPROVED  DATE  9-22-20

STANDARD DRAWING
BH 103
SHEET 2 OF 4
CASE 5

CURB RAMPS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING

BH 103

SHEET 3 OF 4

MARK | DATE | DESCRIPTION
--- | --- | ---

9-22-20

9-22-20
NOTE:
1. CONCRETE SHALL BE CLASS 560-C-3250 AND SHALL BE 4” THICK OVER 4” CRUSHED MISCELLANEOUS BASE AT 90% RELATIVE COMPACTION.

2. CURB RAMPS SHALL HAVE A RECESSED CAST IN PLACE YELLOW DETECTABLE WARNING SURFACE (PLATE) THAT EXTENDS THE FULL WIDTH AND 3’ DEPTH OF THE RAMP, EDGES SHALL BE FLUSH WITH THE SURFACE OF THE RAMP, SEE DETECTABLE WARNING DETAIL FOR SIZE AND PATTERN. THE EDGE OF THE DETECTABLE WARNING NEAREST TO THE STREET SHALL BE BETWEEN 6” AND 8” FROM THE GUTTER FL.

3. UTILITY PULL BOXES, MANHOLES, VAULTS AND OTHER UTILITY FACILITIES WITHIN THE BOUNDARIES OF THE CURB RAMP SHALL BE RELOCATED BY THE OWNER PRIOR TO, OR IN CONJUNCTION WITH, THE CONSTRUCTION OF THE RAMP.

4. TRANSITIONS FROM RAMPS AND LANDINGS TO WALKS, GUTTERS OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES.

5. MAXIMUM SLOPES OF ADJOINING GUTTERS, THE ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP OR ACCESSIBLE ROUTE SHALL NOT EXCEED 5 PERCENT WITHIN 48” OF THE TOP AND BOTTOM OF CURB RAMP.

6. IF DISTANCE FROM CURB TO BACK OF SIDEWALK IS TOO SHORT TO ACCOMMODATE RAMP AND 4’ - 0” LANDING AS SHOWN IN CASE 1 AND CASE 2, THE SIDEWALK MAY BE DEPRESSED LONGITUINALY AS IN CASE 5.

7. AS SITE CONDITIONS DICTATE, THE RETAINING CURB SIDE AND THE FLARED SIDE OF CASE 4 RAMP MAY BE CONSTRUCTED IN REVERSE POSITION.

8. IF LOCATED ON A CURVE, THE SIDES OF THE RAMP NEED NOT BE PARALLEL, BUT THE MINIMUM WIDTH OF THE RAMP AT ANY POINT SHALL BE 4’ - 0”.

9. DOWEL SHALL BE USED AT EXISTING CURB AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12” IN LENGTH, WITH A 6” EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

10. CURB RAMPS SHALL BE A MONOLITHIC POUR.

11. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

**SECTION A-A**

**SECTION B-B**

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### CURB RAMPS

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**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS

ENGINEERING DIVISION

RECOMMENDED: **DATE 9-22-20**

APPROVED: **DATE 9-22-20**

STANDARD DRAWING

**BH 103**

SHEET 4 OF 4
NOTES:
1. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT LOCATIONS SHOWN ON THE DETAIL AND/OR PLANS AND SHALL BE FORMED BY CUTTING A GROOVE IN THE PAVEMENT WITH A POWER Driven SAW. THE GROOVE FOR A TRANSVERSE JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-SIXTH OF THE PAVEMENT THICKNESS, WHICHER IS GREATER. THE GROOVE FOR A LONGITUDINAL JOINT SHALL BE CUT TO A MINIMUM DEPTH OF 1-1/2" OR ONE-FOURTH OF THE PAVEMENT THICKNESS, WHICHER IS GREATER; AND THE WIDTH SHALL BE THE MINIMUM WIDTH POSSIBLE WITH THE SAW BEING USED, BUT SHALL NOT EXCEED 1/4".

2. COLD JOINT SHALL BE CONSTRUCTED PER THE KEY DETAIL ON BH-105 AT LOCATIONS SHOWN ON THIS DRAWING AND/OR ON THE PLANS.

3. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT REGULAR INTERVALS NOT EXCEEDING 2.5' IN WALKS AND 20' IN GUTTERS. JOINTS IN CURB, GUTTER, AND WALK SHALL BE ALIGNED.

4. CURB AND GUTTER SHALL BE CONSTRUCTED SEPARATELY FROM SIDEWALK.

5. SIDEWALK AND CURBFACE SHALL BE TROOLED AND LIGHT BROOM FINISHED.

6. SIDEWALK, CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 560-C-3250 PCC.

7. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

8. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

9. EXPANSION JOINTS ARE REQUIRED IN SOME AREAS, AND AROUND SOME UTILITY POLES OR HYDRANTS.

CURB AND SIDEWALK JOINTS

REVISIONS

MARK | DATE | DESCRIPTION
--- | --- | ---
! | ! | REV. NOTE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE: 10/20/21
APPROVED DATE: 3/30/22

STANDARD DRAWING
BH 104

SHEET 1 OF 1
NOTES:

1. SIDEWALK SHALL BE CONSTRUCTED OF CLASS 560-C-3250 PCC.
2. SEE BH 104 FOR JOINT LOCATION PLACEMENT.
3. CRUSHED MISCELLANEOUS BASE TO BE APPROVED BY THE CITY ENGINEER.
4. SIDEWALK SHALL BE TROWLED AND LIGHT BROOM FINISHED.
5. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
6. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
NOTES:
1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 560-C-3250 PCC.

2. CURB FACE SHALL BE AS DESIGNED OR MATCH EXISTING.

3. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.

4. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES ("SHINER").

5. DOWELS SHALL BE USED AT EXISTING CURBS AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
NON-RESIDENTIAL INTEGRAL CURB AND GUTTER SECTION

NOTES:
1. CURB AND GUTTER SHALL BE CONSTRUCTED OF CLASS 560-C-3250 PCC.

2. CURB FACE SHALL BE AS DESIGNED OR MATCH EXISTING.

3. GUTTER WIDTH, W, SHALL MATCH EXISTING OR 24" MINIMUM, UNLESS OTHERWISE SPECIFIED.

4. AFTER THE CONCRETE HAS BEEN THOROUGHLY TAMPED TO FORCE THE LARGER AGGREGATE INTO THE CONCRETE AND BRING TO THE TOP SUFFICIENT FREE MORTAR FOR FINISHING, THE SURFACE SHALL BE WORKED TO A TRUE AND EVEN GRADE BY MEANS OF A FLOAT, TROWELED WITH A LONG HANDLED TROWEL OR "FRESNO", AND WOOD-FLOAT FINISHED. THE FLOWLINE OF THE GUTTER SHALL BE TROWELED SMOOTH FOR A WIDTH OF 4 INCHES ("SHINER").

5. DOWELS SHALL BE USED AT EXISTING CURBS AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED
DATE 9/7/21

APPROVED
DATE 3/30/22

STANDARD DRAWING BH 107

SHEET 1 OF 1
NOTES:

1. CURB RETURN RADIUS, R, SHALL BE 5' TYPICAL, UNLESS OTHERWISE SPECIFIED.

2. TOP OF CURB ELEVATIONS SHALL MATCH EXISTING SIDEWALK ELEVATIONS.

3. ALLEY APPROACH WITH A SLOPE EXCEEDING 16.66% SLOPE SHALL REQUIRE A SPECIAL PERMIT FROM THE TRANSPORTATION/ENGINEERING OFFICIAL.

4. ACTUAL SHAPE AND LOCATION OF ALLEY APPROACH SHALL BE DETERMINED IN THE FIELD BY THE PUBLIC WORKS INSPECTOR.

5. ALLEY APPROACH AND NEW SIDEWALK WITHIN ALLEY APPROACH SHALL BE A CLASS 560-C-3250 8" THICK MONOLITHIC POUR OVER 6" CRUSHED MISCELLANEOUS BASE AT 95% RELATIVE COMPACTION.

6. DOWELS SHALL BE USED AT EXISTING CURBS AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

ALLEY APPROACH DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 10/21/21
APPROVED DATE 3/30/22

STANDARD DRAWING BH 108

REVISIONS

MARK DATE DESCRIPTION

⚠ 9/14/2021 REV. NOTES
<table>
<thead>
<tr>
<th>W</th>
<th>8'</th>
<th>10'</th>
<th>15'</th>
<th>20'</th>
<th>25'</th>
<th>30'</th>
</tr>
</thead>
<tbody>
<tr>
<td>d1, MAX</td>
<td>4&quot;</td>
<td>5&quot;</td>
<td>7.5&quot;</td>
<td>10&quot;</td>
<td>12.5&quot;</td>
<td>15&quot;</td>
</tr>
<tr>
<td>d2, MIN</td>
<td>2&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
<td>3&quot;</td>
</tr>
</tbody>
</table>

**SECTION A-A**
NOT TO SCALE

6" CRUSHED MISCELLANEOUS BASE, 95% RELATIVE COMPACTION (THROUGHOUT)

**SECTION B-B**
NOT TO SCALE

FLOW LINE

ALLEY APPROACH DETAIL
NOTES:
1. MINIMUM CURB BREAK AND RECONSTRUCTION IS 3'-0" IN LENGTH.
2. CURB & GUTTER SHALL BE CLASS 560-C-3250 PCC MONOLITHIC POUR.
3. FOR MULTIPLE CURB DRAINS, SPACING BETWEEN C.I. PIPES SHALL BE A MINIMUM OF 6" O.C.
4. 3" PIPE IN 6" CURB IS ALLOWED BY CORING.
5. DOWELS SHALL BE USED AT EXISTING CURBS AND GUTTER. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").
7. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.
LONGITUDINAL GUTTER
NOT TO SCALE

CRUSHED MISCELLANEOUS
BASE: MINIMUM 95%
RELATIVE COMPACTION.

W
8" MIN.

6"

V

8" + V

EXISTING PAVEMENT

W

V

2'-0"  3/4"

4'-0"  1-1/2"

5.00' TRANSITION

WARP LONGITUDINAL
GUTTER TO MATCH
ALLEY APPROACH/
SIDEWALK

5.00' TRANSITION

BEGINNING OF GUTTER

ALLEY C/L

W2

6%

FLOW

FLOW

ALLEY C/L

W2

6%

SEE NOTE 2

NOTE 2

TRANSITION DETAIL A
BEGINNING OF LONGITUDINAL GUTTER

TRANSITION DETAIL B
END OF LONGITUDINAL GUTTER

NOTES:
1. LONGITUDINAL GUTTER SHALL BE CLASS 560-C-3250 PCC.

2. LITE BROOM FINISH WITH 8" SHINER ALONG FLOWLINE, FIELD VERIFY SIZE WITH INSPECTION.

3. DOWELS SHALL BE USED AT EXISTING GUTTERS. DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

5. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

6. CONTROL JOINTS SHALL BE PLACED AT 10 FOOT INTERVALS FOR FULL LENGTH OF LONGITUDINAL GUTTER.

LONGITUDINAL GUTTER DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

STANDARD DRAWING
BH 111

RECOMMENDED DATE 10/20/21
APPROVED DATE 3/30/22

SHEET 1 OF 1
### FLOWLINE LAYOUT TABLE DIMENSIONS

<table>
<thead>
<tr>
<th>DIMENSION VARIABLE</th>
<th>27' MANHOLE/RING</th>
<th>28' MANHOLE/RING</th>
<th>29' MANHOLE/RING</th>
<th>37' MANHOLE/RING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - OFFSET</td>
<td>4'-2(\frac{1}{2})'</td>
<td>4'-3(\frac{1}{2})'</td>
<td>4'-4(\frac{1}{2})'</td>
<td>5'-1(\frac{1}{2})'</td>
</tr>
<tr>
<td>B - REF. ANGLE</td>
<td>30°</td>
<td>30°</td>
<td>30°</td>
<td>30°</td>
</tr>
<tr>
<td>D - OUTER EDGE OF RING</td>
<td>2'-3'</td>
<td>2'-4'</td>
<td>2'-5'</td>
<td>3'-1'</td>
</tr>
<tr>
<td>E - FROM POINT &quot;X&quot; TO POINT &quot;Y&quot;</td>
<td>1'-8(\frac{1}{2})'</td>
<td>1'-8(\frac{1}{2})'</td>
<td>1'-8(\frac{1}{2})'</td>
<td>1'-8(\frac{1}{2})'</td>
</tr>
<tr>
<td>F</td>
<td>20(\frac{1}{2})'</td>
<td>20(\frac{1}{2})'</td>
<td>20(\frac{1}{2})'</td>
<td>22(\frac{1}{2})'</td>
</tr>
<tr>
<td>G - OFFSET</td>
<td>4'-6(\frac{1}{2})'</td>
<td>4'-7(\frac{1}{2})'</td>
<td>4'-8(\frac{1}{2})'</td>
<td>5'-4(\frac{1}{2})'</td>
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<tr>
<td>H</td>
<td>7'</td>
<td>7(\frac{1}{2})'</td>
<td>7(\frac{1}{2})'</td>
<td>9(\frac{1}{2})'</td>
</tr>
<tr>
<td>J</td>
<td>13(\frac{1}{2})'</td>
<td>14'</td>
<td>14(\frac{1}{2})'</td>
<td>16(\frac{1}{2})'</td>
</tr>
</tbody>
</table>

---

**CASE 1 (2'-0" LONGITUDINAL GUTTER)**

**NOTES:**

1. ALL CONCRETE IS TO BE CLASS 560-C-3250 PCC.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

3. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

4. DIMENSIONS "F", "H", AND "J" ARE SYMETRICAL ABOUT CENTERLINE OF MANHOLE.

---

**LONGITUDINAL ALLEY GUTTER AT MANHOLE**

---

**REVISIONS**

<table>
<thead>
<tr>
<th>MARK</th>
<th>DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔴 9/14/2021</td>
<td>REV. DIMS</td>
<td></td>
</tr>
</tbody>
</table>

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**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

---

RECOMMENDED DATE 10/20/21

APPROVED DATE 3/30/22

STANDARD DRAWING BH 112

---

SHEET 1 OF 2
### Flowline Layout Table Dimensions

<table>
<thead>
<tr>
<th>Dimension Variable</th>
<th>27° Manhole/Ring</th>
<th>28° Manhole/Ring</th>
<th>29° Manhole/Ring</th>
<th>37° Manhole/Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Offset</td>
<td>4'-3&quot;</td>
<td>4'-4&quot;</td>
<td>4'-5&quot;</td>
<td>5'-1&quot;</td>
</tr>
<tr>
<td>B - Ref. Angle</td>
<td>30°</td>
<td>30°</td>
<td>30°</td>
<td>30°</td>
</tr>
<tr>
<td>D - Outer Edge of Ring</td>
<td>2'-3&quot;</td>
<td>2'-4&quot;</td>
<td>2'-5&quot;</td>
<td>3'-1&quot;</td>
</tr>
<tr>
<td>E - From Center of Manhole to Point &quot;Y&quot;</td>
<td>4'-6½&quot;</td>
<td>4'-7½&quot;</td>
<td>4'-8½&quot;</td>
<td>5'-4½&quot;</td>
</tr>
<tr>
<td>F</td>
<td>20½&quot;</td>
<td>20½&quot;</td>
<td>20½&quot;</td>
<td>22½&quot;</td>
</tr>
<tr>
<td>G</td>
<td>7&quot;</td>
<td>7½&quot;</td>
<td>7½&quot;</td>
<td>9½&quot;</td>
</tr>
</tbody>
</table>

---

**Notes:**

1. All concrete is to be Class 550-C-3250 PCC.
2. All work shall be constructed in accordance with the current standard specifications for public works construction ("Greenbook").
3. Contractor shall have a valid Class "A" or "C8" California contractor's license.
4. Dimensions "F" and "G" are symmetrical about centerline of manhole.

---

**Longitudinal Alley Gutter at Manhole**

**Revisions**

<table>
<thead>
<tr>
<th>Mark</th>
<th>Date</th>
<th>Description</th>
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<tbody>
<tr>
<td>🔴</td>
<td>9/14/2021</td>
<td>REV. DIMS</td>
</tr>
</tbody>
</table>

**City of Beverly Hills, California**

**Department of Public Works**

**Engineering Division**

**Recommended**

**Approved**

**Standard Drawing**

**BH 112**

**Sheet 2 of 2**
TEMPORARY PAVING OR COLD-MIX ASPHALT CONCRETE (CUTBACK) PLACED AROUND ALL EDGES OF PLATE AND ROAD SURFACE. USE WEDGES TO PREVENT RATTLING.

SURFACE

12" MIN. (TYP.) W

STEEL PLATE WITH NON-SKID SURFACE TREATMENT

T

12" MIN. (TYP.)

MILL ALL AROUND TRENCH, 12" x "T"

#4 x 12" PIN

TEMPORARY EXCAVATION

\[
\begin{array}{|c|c|}
\hline
"W" & "T" \\
\hline
\text{TRENCH WIDTH} & \text{MINIMUM STEEL PLATE THICKNESS} \\
\leq3' - 0" & 1 \text{ INCH} \\
>3' - 0", \text{ UP TO 4' - 0"} & 1\frac{1}{4} \text{ INCH} \\
\hline
\end{array}
\]

NOTES:

1. ALL STEEL TRENCH PLATES SHALL BE FULLY SUPPORTED AROUND THE PERIMETER TO PREVENT TIPPING.
2. TRENCHES AND EXCAVATIONS SHALL BE ADEQUATELY SHORED OR BRACED TO WITHSTAND HIGHWAY TRAFFIC LOADS.
3. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PREVENT NOISY PLATES. THE CONTRACTOR SHALL PROVIDE MATERIAL (IE - NEOPRENE BEARING PADS, NYLON ROPE, OR RUBBER STRIPS) TO DAMPEN VIBRATION.
4. WHEN TWO OR MORE PLATES ARE USED, THE PLATES SHALL BE TACK WELDED AT EACH CORNER OR AS REQUIRED BY THE CITY ENGINEER. PARTIAL OR COMPLETE JOINT PENETRATION WELDING MAY BE NECESSARY.
5. ALL TRENCH PLATES SHALL BE PINNED IN EACH CORNER WITH PINS MADE OF #4 REBAR, OR EQUIVALENT DIAMETER STEEL ROD, WITH A MINIMUM LENGTH OF 12".
6. ALL TRENCH PLATING SHALL BE DESIGNED FOR HS20-44 TRUCKLOADING.
7. FOR TRENCHES AND EXCAVATIONS WITH SPANS GREATER THAN FOUR FEET (4'), A STRUCTURAL DESIGN SHALL BE PREPARED BY A REGISTERED CIVIL OR STRUCTURAL ENGINEER AND REVIEWED BY THE CITY.
8. TRENCH PLATES SHALL BE USED WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY TO MAINTAIN ALL VEHICULAR, BICYCLE AND PEDESTRIAN TRAFFIC FLOW.
9. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

STEEL PLATE FOR OPEN TRENCH DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 10-12-22
APPROVED DATE 02-22-23

STANDARD DRAWING BH 113

SHEET 1 OF 1
CASE I - PLAN

CASE I - EXISTING SECTION: ASPHALT CONCRETE

1. CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10, 1" THICKER THAN THE EXISTING SECTION.

2. CONSTRUCT NEW ASPHALT CONCRETE WEARING COURSE:

<table>
<thead>
<tr>
<th>TYPES OF STREETS</th>
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<th>ASPHALT CONCRETE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESIDENTIAL STREETS/ALLEYS</td>
<td>2&quot;</td>
<td>TYPE D2, PG-64-10 (HMA)</td>
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<tr>
<td>MAJOR STREETS/ALLEYS</td>
<td>2&quot;</td>
<td>TYPE C2, OR 3C3, PG-64-10 (HMA)</td>
</tr>
<tr>
<td>STREET WITH ASPHALT RUBBER HOT MIX (A.R.H.M.)</td>
<td>2&quot;</td>
<td>TYPE C2, PG-64-10</td>
</tr>
</tbody>
</table>

1 AND 2: THE TOTAL THICKNESS OF 1 + 2 SHALL BE 6" MINIMUM FOR ALL STREETS AND ALLEYS

PAVEMENT REPLACEMENT SECTION - CASE I
TRENCH BACKFILL SHALL BE EITHER:

A. ONE SACK CEMENT SAND SLURRY OR EQUIVALENT (IE-100-E-100 OR CLSM)
B. CRUSHED AGGREGATE BASE
C. NATIVE MATERIAL

THE CONTRACTOR IS TO SUPPLY COMPACTION TEST RESULTS AT NO COST TO THE CITY (PER ASTM METHOD 1557) UNLESS SLURRY OR CLSM IS USED.

CONSTRUCT NEW CRUSHED AGGREGATE BASE TO MATCH EXISTING THICKNESS OR 4" THICKNESS, WHICHEVER IS GREATER. COMPACT TO 95% OF RELATIVE DENSITY.

SAWCUITING WILL BE REQUIRED AROUND THE PERIMETER OF THE T-CUT TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

T-CUTS ARE 12" WIDE AS MEASURED FROM THE FINAL EDGE OF TRENCH (AFTER SLUFFING).


IF THE REMOVALS ARE LESS THAN 5' APART OR LESS THAN 2' FROM A CONCRETE CURB, GUTTER, CROSS GUTTER, OR PROPERTY LINE THE T-CAP SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF THE CONCRETE.

FINAL T-CUT AND T-CAP MAY BE ALTERED AT THE CITY ENGINEER'S DISCRETION BASED ON THE EXISTING STREET OR ALLEY CONDITION.

ALL TRAFFIC STRIPOING AND/OR MARKINGS DAMAGED DURING RESTORATION WORK SHALL BE REPLACED.

WHEN WORK REQUIRES REMOVAL OF EXISTING CONCRETE STREET FEATURES, SUCH AS DRIVEWAY APPROACH, ALLEY APPROACH, DRIVEWAYS, CURB RAMPS, OR PORTION(S) THEREOF, RESTORATION OF CONCRETE STREET FEATURES SHALL CONFORM TO THE LATEST CITY STANDARDS. CONCRETE POUR SHALL BE MONOLITHIC AND CONCRETE SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

WHEN ROADWAY WORK REQUIRES REMOVAL OF EXISTING CONCRETE BUS PAD OR PORTION(S) THEREOF, CONTRACTOR SHALL RESTORE CONCRETE BUS PAD IN KIND MATCHING EXISTING PCG THICKNESS OR 8-IN MINIMUM WHICHEVER IS GREATER. CONCRETE POURS SHALL BE MONOLITHIC AND RESTORATION OF BUS PAD SHALL CONFORM TO THE LATEST STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION. CONCRETE BUS PAD SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY OR OTHERWISE APPROVED BY THE CITY ENGINEER.

ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

CONTRACTOR SHALL HAVE A VALID CLASS "A" OR APPROVED CALIFORNIA SPECIALTY CONTRACTOR'S LICENSE.
CASE II - EXISTING SECTION: PORTLAND CONCRETE CEMENT

1. Construct new PCC pavement 1" thicker than the existing concrete, 6" minimum using 560-C-3250.

2. The exact limits for removal shall be determined by the city engineer such that join lines are not within 2'-6" of existing pavement joints or significant cracks. If the excavations are less than 5' apart or less than 2'-6" from a concrete curb, gutter or expansion joint, the restoration shall be continuous between excavations and/or the edge of concrete.

3. For PCC streets or intersections the limits of the restoration shall be a rectangular area extending to the nearest construction joint. The structural section outside the utility trench area shall be equal to 1 + 5.

4. Trench backfill shall be either:
   A. One sack cement sand slurry or equivalent (IE-100-E-100 or CLSM)
   B. Crushed aggregate base
   C. Native material

   The contractor is to supply compaction test results at no cost to the city (per ASTM test method 1557), unless slurry or CLSM is used.

5. Construct new crushed aggregate base to match existing thickness or 4" thickness, whichever is greater. Compact to 95% of relative density.

PAVEMENT REPLACEMENT SECTION - CASE II

REVISIONS

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<th>DESCRIPTION</th>
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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: [Signature] DATE: 7/13/21
APPROVED: [Signature] DATE: 3/30/22

STANDARD DRAWING
BH 114
SHEET 3 OF 6
6. SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE T-CUT TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

7. DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

<table>
<thead>
<tr>
<th>CONCRETE THICKNESS</th>
<th>SIZE AND SPACING</th>
<th>EMBEDMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5&quot;</td>
<td>SEE KEY DETAIL CBH 105</td>
<td>NONE</td>
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DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

8. ALL TRAFFIC STRIPING AND/OR MARKINGS DAMAGED DURING RESTORATION WORK SHALL BE REPLACED.

9. WHEN WORK REQUIRES REMOVAL OF EXISTING CONCRETE STREET FEATURES, SUCH AS DRIVEWAY APPROACH, ALLEY APPROACH, DRIVEWAYS, CURB RAMPS, OR PORTION(S) THEREOF, RESTORATION OF CONCRETE STREET FEATURES SHALL CONFORM TO THE LATEST CITY STANDARDS. CONCRETE POUR SHALL BE MONOLITHIC AND CONCRETE SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

10. WHEN ROADWAY WORK REQUIRES REMOVAL OF EXISTING CONCRETE BUS PAD OR PORTION(S) THEREOF, CONTRACTOR SHALL RESTORE CONCRETE BUS PAD IN KIND MATCHING EXISTING PCC THICKNESS OR 8-IN MINIMUM WHICHEVER IS GREATER. CONCRETE POUR SHALL BE MONOLITHIC AND RESTORATION OF BUS PAD SHALL CONFORM TO THE LATEST STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION. CONCRETE BUS PAD SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY OR OTHERWISE APPROVED BY THE CITY ENGINEER.

11. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

12. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR APPROVED CALIFORNIA SPECIALTY CONTRACTOR'S LICENSE.

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**PAVEMENT REPLACEMENT SECTION - CASE II**

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**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

**STANDARD DRAWING**

BH 114

RECOMMENDED BY: [Signature]
DATE: 7/13/21

APPROVED BY: [Signature]
DATE: 3/30/22

SHEET 4 OF 6
**CASE III - EXISTING SECTION: ASPHALT OVER CONCRETE**

1. CONSTRUCT NEW PCC PAVEMENT 1" THICKER THAN THE EXISTING CONCRETE, 6" MINIMUM USING CLASS 560-C-3250.

2. CONSTRUCT NEW ASPHALT CONCRETE BASE COURSE, TYPE B, PG 64-10.

3. CONSTRUCT 2" NEW ASPHALT CONCRETE WEARING COURSE PER TABLE - 1.

4. THE EXACT LIMITS FOR REMOVAL SHALL BE DETERMINED BY THE CITY ENGINEER SUCH THAT JOIN LINES ARE NOT WITHIN 2'-6" OF EXISTING PAVEMENT JOINTS OR SIGNIFICANT CRACKS. IF THE EXCAVATIONS ARE LESS THAN 5' APART OR LESS THAN 2'-6" FROM A CONCRETE CURB, GUTTER OR EXPANSION JOINT, THE RESTORATION SHALL BE CONTINUOUS BETWEEN EXCAVATIONS AND/OR THE EDGE OF CONCRETE.

5. TRENCH BACKFILL SHALL BE EITHER:
   
   A. ONE SACK CEMENT SAND SLURRY OR EQUIVALENT (IE-100-E-100 OR CLSM)
   B. CRUSHED AGGREGATE BASE
   C. NATIVE MATERIAL

   THE CONTRACTOR IS TO SUPPLY COMPACTION TEST RESULTS AT NO COST TO THE CITY (PER ASTM TEST METHOD 1557), UNLESS SLURRY OR CLSM IS USED.

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**PAVEMENT REPLACEMENT SECTION - CASE III**

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**CITY OF BEVERLY HILLS, CALIFORNIA**

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 7/13/21
APPROVED DATE 3/30/22

STANDARD DRAWING BH 114
SHEET 5 OF 6
6. SAWCUTTING WILL BE REQUIRED AROUND THE PERIMETER OF THE T-CUT TO PROVIDE CLEAN, STRAIGHT, VERTICAL SIDES.

7. DOWEL SIZE, SPACING, AND EMBEDMENT SHOULD BE AS FOLLOWS:

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<th>CONCRETE THICKNESS</th>
<th>SIZE AND SPACING</th>
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DOWEL HOLE SHALL BE WIRE BRUSHED AND BLOWN FREE OF DEBRIS. EPOXY WILL BE INSERTED, AND DOWEL WILL BE SEATED TO FULL DEPTH OF HOLE. DOWEL SHALL BE 12" IN LENGTH, WITH A 6" EMBEDMENT, OR AS DIRECTED BY INSPECTORS.

8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY RESTORATION WORK SHALL BE REPLACED.

9. WHEN WORK REQUIRES REMOVAL OF EXISTING CONCRETE STREET FEATURES, SUCH AS DRIVEWAY APPROACH, ALLEY APPROACH, DRIVEWAYS, CURB RAMPS, OR PORTION(S) THEREOF, RESTORATION OF CONCRETE STREET FEATURES SHALL CONFORM TO THE LATEST CITY STANDARDS. CONCRETE POUR SHALL BE MONOLITHIC AND CONCRETE SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

10. WHEN ROADWAY WORK REQUIRES REMOVAL OF EXISTING CONCRETE BUS PAD OR PORTION(S) THEREOF, CONTRACTOR SHALL RESTORE CONCRETE BUS PAD IN KIND MATCHING EXISTING PCC THICKNESS OR 8-IN MINIMUM WHICHEVER IS GREATER. CONCRETE POUR SHALL BE MONOLITHIC AND RESTORATION OF BUS PAD SHALL CONFORM TO THE LATEST STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION. CONCRETE BUS PAD SHALL BE REMOVED AND REPLACED IN ITS ENTIRETY OR OTHERWISE APPROVED BY THE CITY ENGINEER.

11. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS ("GREENBOOK").

12. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR APPROVED CALIFORNIA SPECIALTY CONTRACTOR'S LICENSE.

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**PAVEMENT REPLACEMENT SECTION - CASE III**

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CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 7/13/21
APPROVED DATE 3/30/22

STANDARD DRAWING
BH 114

SHEET 6 OF 6
STANDARD NOTES

1. ALL ARTERIAL AND COLLECTOR STREETS WITHIN CITY OF BEVERLY HILLS RIGHT-OF-WAY SHALL REQUIRE ASPHALT RUBBER PAVEMENT OVERLAY INSTALLATION. THE CITY ENGINEER MAY REQUIRE OTHER LOCATIONS TO CONFORM TO THIS STANDARD.

2. UNLESS OTHERWISE DETERMINED BY THE CITY ENGINEER, THE ARHM SHALL BE CLASS ARHM-GG-C.

3. ROADWAYS TO RECEIVE FULL-WIDTH COLDMILLING SHALL BE RESURFACED WITHIN 24 HOURS OF COLDMILLING ANY PORTION OF THE WORK.

4. THE ROADWAY CROSS SLOPE SHALL BE A MINIMUM OF 2 PERCENT OR MATCH THE EXISTING CROSS SLOPE IF HIGHER THAN 2 PERCENT.

5. THE NEW PAVEMENT SHALL BE FLUSH WITH THE LIP OF GUTTER ON EACH SIDE OF STREET.

6. THE COLDMILL, AND ARHM APPLICATION SHALL FULLY COMPLY WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, (GREENBOOK), LATEST EDITION.

7. THE LIMITS OF COLDMILL AND ASPHALT PAVEMENT SHALL BE THE FULL WIDTH OF THE STREET PAVEMENT.

8. ALL TRAFFIC STRIPING AND/OR MARKINGS REMOVED BY THE COLDMILL AND OVERLAY WORK SHALL BE REPLACED TO CURRENT STANDARD.

9. ANY IMPACTS TO EXISTING UTILITIES, STRUCTURES, AND SURVEY MONUMENTS DUE TO THE COLDMILL AND OVERLAY WORK SHALL BE RESTORED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARDS AND THE (GREENBOOK), LATEST ADDITION.

10. AFTER ANY GRINDING OR MICRO-MILLING OF ANY STREET OR ALLEY, CRACKS MUST BE CLEANED AND SEALED.

11. CONTRACTOR SHALL HAVE A VALID CLASS "A" OR "C8" CALIFORNIA CONTRACTOR'S LICENSE.

12. ANY DEVIATION OF THIS STANDARD PLAN, SHALL REQUIRE APPROVAL AND DIRECTION BY THE CITY ENGINEER OR THEIR DESIGNEE(S).

ASPHALT RUBBER COLDMILL AND OVERLAY

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED  DATE 03/05/2020

APPROVED  DATE 05/04/2020

BH 115
SECTION ACROSS ALLEY
NOT TO SCALE

ALLEY PLAN VIEW
NOT TO SCALE

NOTES:
1. DEPENDING ON THE CONDITION OF THE ALLEY, THE INSPECTOR MAY ADJUST THE SCOPE OF RESTORATION.
2. NEW PAVING MUST MATCH EXISTING ALLEY CROSSFALL.
3. REFER TO BH 114 FOR ASPHALT CONCRETE MIX DESIGNS AND OTHER PAVEMENT REQUIREMENTS.
ALLEY BLOCK WALL PAVING DETAIL

NOTES:
1. REFER TO BH 114 FOR ASPHALT CONCRETE MIX DESIGNS AND OTHER PAVEMENT REQUIREMENTS.
TYPICAL MICRO-TRENCH SECTION
(INTEGRAL CURB AND GUTTER SHOWN)
NOT TO SCALE

NOTES:

1. MICRO-TRENCHING SHALL ONLY BE USED TO INSTALL TELECOMMUNICATION CONDUITS IN ASPHALT STREETS ONLY. MICRO-TRENCHING SHALL NOT BE ALLOWED IN CONCRETE STREETS, SIDEWALKS, PARKWAYS, CURBS AND GUTTERS, SWALEs, SPANDELS, APPROACHES, BUS PADS, AND ETC.

2. THE CONTRACTOR SHALL IDENTIFY AND MAP ALL EXISTING UTILITIES, INCLUDING SERVICES, IN THE STREET AND/OR ALLEY. THIS INFORMATION WILL BE PRESENTED TO CITY STAFF IN ORDER TO CONFIRM AN APPROVED MICROTRENCH ALIGNMENT. PROPOSED ALIGNMENTS MUST BE A MINIMUM 2' CLEAR TO THE OUTSIDE EDGE OF ANY CITY UTILITY PIPELINE OR CONDUIT (SEWER, WATER, STORM DRAIN, STREET LIGHTING, TRAFFIC SIGNAL, FIBER OPTIC, ETC.).

3. THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES, INCLUDING SERVICE CONNECTIONS IN THE FIELD. THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (U.S.A.) AT LEAST 48 HOURS PRIOR TO START OF WORK AT 8-1-1, OR TOLL-FREE AT 1-800-422-4133. THE CONTRACTOR SHALL FURTHER SUPPLEMENT THE FINDINGS OF U.S.A. TO DETERMINE THE EXACT LOCATIONS AND DEPTHS OF ALL UTILITIES BY USING A MOBILE GROUND PENETRATING RADAR SYSTEM. THE CONTRACTOR SHALL POTHOLE ALL CROSSING UTILITIES AND PARALLEL UTILITIES WITHIN 18-INCHES OF THE PROPOSED ALIGNMENT TO A DEPTH OF 6-INCHES BELOW THE BOTTOM OF THE MICRO-TRENCH, TO DETERMINE THE EXISTING UTILITY ALIGNMENT AND ELEVATION. POTHOLES SHALL BE IMMEDIATELY BACKFILLED AND COMPACTED PER BH 114 OR AS DIRECTED BY THE PW INSPECTOR.

4. IF EXISTING UTILITIES ARE DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE INSPECTOR, ENGINEER AND UTILITY OWNER TO PERFORM THE REPAIRS PROMPTLY ACCORDING TO THEIR REQUIREMENTS AND PER ASSOCIATED CITY PERMITS.

MICRO-TRENCHING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED ___________________________ DATE ____________

APPROVED ___________________________ DATE ____________

STANDARD DRAWING BH 118
SHEET 1 OF 3

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5. THE FOLLOWING ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER FOR APPROVAL:

   A. PROVIDE A DETAILED SITE PLAN WHICH SHALL INCLUDE THE DISTANCES OF MICRO-TRENCH AND 
      EDGES OF GRIND AND CAP TO EDGE OF GUTTER, CURBFACE, CONCRETE PAVEMENT OR STRUCTURE AS 
      APPLICABLE.

   B. A TYPICAL MICRO-TRENCH DETAIL THAT INCLUDES THE FOLLOWING INFORMATION:

      (1) THE MAXIMUM ASPHALT CONCRETE (AC) ROADWAY THICKNESS, BASE, DEPTH AND WIDTH OF 
          MICRO-TRENCH, DEPTH OF TOPMOST CONDUIT, AND BACKFILL MATERIAL.

      (2) AC RE/INSTANTIATION INCLUDING WIDTH AND DEPTH OF GRIND AND CAP.

   C. DETAIL SHOWING CONDUIT FROM MAIN MICRO-TRENCH ALIGNMENT TO LATERAL SURFACE CONNECTIONS 
      INCLUDING TO ANY JUNCTION/PULL BOX. INCLUDE SPECIFIC INFORMATION OF DEPTH, SIZE, AND METHOD OF 
      EXCAVATION BELOW EXISTING CURB AND GUTTER.

   D. CUT SHEETS OF THE PROPOSED EQUIPMENT PARTICULARLY SUITABLE FOR MICRO-TRENCHING, INCLUDING:

      (1) MICRO-TRENCHER CAPABLE OF MEETING TARGET DEPTH AND WIDTH IN A SINGLE PASS WITH AN 
          INTEGRAL HOOD AND ASSOCIATED VACUUM SYSTEM. SELECTION OF CUTTING WHEEL SHALL BE SUCH 
          THAT IT MINIMIZES DAMAGE TO THE ADJACENT AC SURFACE.

      (2) MOBILE CONCRETE/SLURRY PLACEMENT WITH AN ON-BOARD VIBRATOR AND NARROW TROUGH TO MATCH 
          MICRO-TRENCH WIDTH.

      (3) MOBILE GROUND PENETRATING RADAR SYSTEM THAT IS CAPABLE OF LOCATING BOTH METALLIC AND 
          NON-METALLIC PIPES AND CABLES TO A DEPTH OF 24-INCHES.

   E. OTHER SITE SPECIFIC ITEMS AS REQUIRED BY THE ENGINEER.

LIMITS OF REMOVALS, TRENCH WIDTH, AND LOCATION

6. THE MICRO-TRENCH SHALL BE CONSTRUCTED WITH CONTINUOUS UNIFORM STRAIGHT AND NEAT EDGES.

7. MICRO-TRENCH ALIGNMENTS SHALL CONSIST OF RUNS PARALLEL TO THE CENTERLINE OF THE STREET. STREET 
   CROSSING MAY BE DONE PROVIDED THE ALIGNMENT IS PERPENDICULAR TO THE STREET CENTERLINE.

8. THE EDGE OF THE MICRO-TRENCH SHALL BE A MINIMUM OF 24-INCHES FROM THE EXISTING FACE OF THE GUTTER, 
   EXISTING CONCRETE STRUCTURE, OR CURB IF GUTTER IS NOT PRESENT.

9. THE MICRO-TRENCH WIDTH SHALL BE A MINIMUM OF 1-INCH AND A MAXIMUM OF 2-INCHES.

10. THE CONDUITS SHALL BE INSTALLED AT A MINIMUM DEPTH OF 12-INCHES BELOW THE EXISTING AC PAVEMENT 
     SURFACE; AT LEAST 1-INCH BELOW THE BOTTOM OF THE AC PAVEMENT, AND THE BOTTOM OF THE MICRO-TRENCH 
     SHALL BE AT A MINIMUM DEPTH OF 16-INCHES BELOW THE EXISTING AC PAVEMENT SURFACE.

11. ANCHORS/SPACERS SHALL BE PLACED AT A MAXIMUM OF 10-FEET APART ALONG THE ALIGNMENT TO ENSURE THE 
     CONDUIT DOES NOT RISE FROM THE BOTTOM OF THE MICRO-TRENCH AND DOES NOT TOUCH THE WALLS OF THE 
     MICRO-TRENCH DURING INSTALLATION.

### MICRO-TRENCHING

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RECOMMENDED BY [Signature] DATE 3/31/22

APPROVED BY [Signature] DATE 4/25/22

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

STANDARD DRAWING BH 118

SHEET 2 OF 3
BACKFILL

12. ALL MICRO-TRENCHES SHALL BE COMPLETELY BACKFILLED WITH A CEMENT SAND SLURRY 2500 PSI TO FINISH GRADE BY THE END OF THE WORK DAY.

GRIND AND RESURFACE SECTION

13. COMMENCEMENT OF SURFACE PREPARATION SUCH AS GRINDING/CHIPPING FOR ASPHALT CONCRETE PAVING REPLACEMENT WILL OCCUR NO SOONER THAN 48 HOURS AFTER SLURRY BACKFILL OF TRENCH. FIELD CONDITIONS OR MATERIAL USED MAY NECESSITATE A LONGER WAIT AS DETERMINED BY THE INSPECTOR.

14. AS SOON AS BACKFILL HAS CURED, NOT TO EXCEED 30 CALENDAR DAYS, ASPHALT CONCRETE SHALL BE GROUND AND CAPPED AS FOLLOWS:
   A. EXISTING AC AND SLURRY BACKFILL SHALL BE GROUND DOWN 4-INCHES, FOR A WIDTH OF 18-INCHES BUT NO LESS THAN 6-INCHES FROM BOTH EDGES OF THE MICRO-TRENCH. WHEN THE CAP LIMIT IS WITHIN 2 FEET OR LESS FROM THE GUTTER FACE, CURB, SLAB OR STRUCTURE, THE CAP LIMIT SHALL EXTEND TO THAT ITEM.
   B. TACK COAT ALL EDGES WITH SS-1H EMULSIFIED ASPHALT IMMEDIATELY BEFORE PAVING ASPHALT CONCRETE TYPE 3C3, PG 64-10 (HMA).
   C. WHERE ANGULAR CROSSING OR ANY LENGTH-WISE CUTS OF A BIKE LANE OCCUR BY MICRO-TRENCHING, THE CAPPING LIMITS SHALL EXTEND THE FULL WIDTH OF THE BIKE LANE. PERPENDICULAR CROSSINGS MAY RECEIVE TYPICAL CAPPING WIDTH PER NOTE 14A. ABOVE, PAVEMENT MARKINGS SHALL BE RESTORED IN KIND.

VAULTS AND SERVICE CONNECTIONS

15. CONNECTION TO SERVICE LATERALS, JUNCTION BOXES, ETC., SHALL BE DONE SUCH THAT CURB AND GUTTER ARE NOT DISTURBED, SETTLED OR DAMAGED. REMOVAL LIMITS OF SIDEWALK SHALL FOLLOW APPLICABLE STANDARDS AND REQUIREMENTS AS APPROVED BY THE ENGINEER.

16. THE USE OF HYDRO-JETTING IS NOT PERMITTED. TRENCHLESS METHODS SHALL NOT CREATE A VOID TWO TIMES GREATER THAN CONDUIT. VOID SHALL BE COMPACTED AND BACKFILLED WITH APPROVED CONTROLLED LOW-STRENGTH MATERIAL (CLSM).

IDENTIFICATION

17. EACH MICRO-TRENCH SHALL BE IDENTIFIED WITH TRACER WIRE INSTALLED.

ALTERNATE MICROTRENCH DESIGN

18. THE CONTRACTOR MAY PROPOSE TO BACKFILL THE MICROTRENCH WITH FASTPATCH 8400. DEPENDING ON THE FINAL CONDITION AND APPEARANCE OF THE ROADWAY, THE GRIND AND OVERLAY RESTORATION MAY BE WAIVED.

MICRO-TRENCHING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

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RECOMMENDED DATE 3/31/22
APPROVED DATE 4/25/22

STANDARD DRAWING BH 118
SHEET 3 OF 3
Section II

Sewer and Sanitation
**INSTALLATION NOTES:**

2. ALL PARTS OF THE MANHOLE FRAME AND COVER EXCEPT MACHINED SURFACES SHALL BE COATED WITH ASPHALTUM PAINT.
3. THE MANHOLE FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY. THE COVER SHALL FIT THE FRAME SNUGLY BUT NOT TIGHTLY.
4. RAISED SURFACES OF LETTERS SHALL BE FLUSH WITH SURFACES OF THE RAISED BLOCK TREAD.
5. ALL RADI 1/8" UNLESS OTHERWISE SPECIFIED.
6. DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.
INSTALLATION NOTES:
2. ALL PARTS OF THE MANHOLE FRAME AND COVER EXCEPT MACHINED SURFACES SHALL BE COATED WITH ASPHALTUM PAINT.
3. THE MANHOLE FRAME AND COVER SHALL BE TESTED FOR ACCURACY OF FIT AND SHALL BE MARKED IN SETS BEFORE DELIVERY. THE COVER SHALL FIT THE FRAME SNUGLY BUT NOT TIGHTLY.
4. RAISED SURFACES OF LETTERS SHALL BE FLUSH WITH SURFACES OF THE RAISED BLOCK TREAD.
5. ALL RADI 1/8" UNLESS OTHERWISE SPECIFIED.
6. DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.
NOTES:

1. IN NO CASE SHALL CONNECTION BE MADE DIRECTLY ON TOP OF SEWER MAIN.
2. NO MORE THAN ONE CUT-IN LATERAL CONNECTION WILL BE ALLOWED FOR EACH LENGTH OF VCP SEWER MAIN.
3. LINING SHALL BE CORED THE EXACT DIAMETER OF THE LATERAL. PUBLIC WORKS INSPECTOR SHALL BE ONSITE FOR CORING.
4. LATERAL SHALL BE FLUSH WITH THE LINING MATERIAL AND SHALL NOT PROTRUDE INTO THE MAIN.
5. ADD EPOXY TO UNDERSIDE OF SADDLE CONNECTION, PRIOR TO TIGHTENING BOLTS. MAKE SURE EPOXY IS EVENLY SPREAD AROUND SADDLE MOUNTING FLANGE. FINALLY, APPLY EPOXY INSIDE PVC SADDLE.
6. CITY WILL REQUIRE A CCTV INSPECTION PRIOR TO APPROVAL.
MODIFIED SDR 35 PIPE SECTION
⚠️ WITH SIKA® 31 EPOXY OR EQUIV

EXISTING SEWER PIPE LINING

EXISTING CONCRETE / VCP SEWER PIPE

STAINLESS STEEL BAND CLAMPS (2 REQ'D)

CONCRETE ENCASEMENT

REMOVE INTERFERING PORTION OF HOST VCP/CONCRETE PIPE

4" (TYP.)

2" MIN. OVERLAP

6"

6" TOP AND BOTTOM

SEE NOTE 1

EXISTING SEWER PIPE LINING

STAINLESS STEEL BAND CLAMPS (2 REQ'D)

EXISTING CONCRETE / VCP SEWER PIPE (BEYOND)

⚠️ CONCRETE ENCASEMENT MIX WITH MIN. 3250

SECTION A-A

NOTES:

1. ADD EPOXY TO UNDERSIDE OF SADDLE CONNECTION, PRIOR TO TIGHTENING BOLTS. MAKE SURE EPOXY IS EVENLY SPREAD AROUND SADDLE MOUNTING FLANGE TO PREVENT EPOXY FROM PROTRUDING INTO SEWER MAIN.
2. CITY WILL REQUIRE A CCTV INSPECTION PRIOR TO BACKFILL APPROVAL.
3. POUR CONCRETE ENCASEMENT AFTER INSPECTOR APPROVES ABANDONMENT.

CASE 1 - LINED SEWER MAIN

LATERAL ABANDONMENT

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED

DATE 10/26/21

APPROVED

DATE 3/30/22

STANDARD DRAWING

BH 215

SHEET 1 OF 2
NOTES:

1. LATERAL MUST BE APPROVED BY INSPECTOR AS TO CONDITION PRIOR TO PLUGGING.
2. EXISTING LATERAL OPENING SHALL BE FLUSH WITH THE GRIPPER PLUG OR APPROVED EQUAL.
3. POUR ENCASEMENT AFTER INSPECTION OF GRIPPER PLUG IS APPROVED.
4. DEPTH OF ENCASEMENT IS TO BE MINIMUM 6" ABOVE HIGH POINT OF LATERAL.
5. PLUGGED LATERAL WILL REQUIRE CCTV INSPECTION AFTER INSTALLATION.
6. PLUG MUST BE VISIBLE FROM INSIDE OF PIPE DURING CCTV INSPECTION.
7. TRENCH RESTORATION PER BH 114.

CASE 2 - UNLINED VCP/CONCRETE SEWER PIPE
1. EXISTING WYE MUST BE APPROVED BY INSPECTOR PRIOR TO BACKFILL, OR ENCASEMENT.
2. DAMAGED WYE/SADDLE MUST BE REPLACED. CONTACT PUBLIC WORKS INSPECTOR FOR DIRECTION.
3. LATERAL MATERIAL MAY BE VCP. SDR 35, OR ABS.
4. WHEN JOINING VCP OR ABS, USE STAINLESS STEEL ADJUSTABLE REPAIR COUPLINGS. THEN FIRMLY TIGHTEN BOLTS TO ENSURE NO LEAKAGE.
5. USE NO. 4 OR SMALLER CRUSHED ROCK, OR SAND FOR BEDDING. REFER TO BH 211 FOR OTHER REQUIREMENTS.
6. TRENCH RESTORATION PER BH 114.
Section III

Street Lighting and Traffic Signals
NOTES:
1. THREE TURNS OF DETECTA-DUCT OR TYPE 2 LOOP WIRE STACKED ONE WIRE ON TOP OF ANOTHER, A PRE-WOUND LOOP WIRE SHALL BE USED IN SLOTS GREATER THAN 1/4" IN WIDTH.
2. LOOP DETECTOR LEAD-IN CABLE EXTENDING FROM THE PULL BOX ADJACENT TO THE LOOP TO THE FIELD TERMINAL IN THE CONTROLLER CABINET SHALL BE TWO, THREE, OR FOUR PAIR #18 AWG INDIVIDUALLY TWISTED, INDIVIDUALLY SHIELDED, FILLED (WATER BLOCKED) CABLE. EACH CABLE SHALL BE IDENTIFIED BY THE INSTALLATION OF A RIGID PLASTIC TAG HELD IN PLACE WITH TWO NYLON TIES.
3. STUB OUT SHALL BE LOCATED AT THE EDGE OF GUTTER IN PAVEMENT, 4" BELOW FINISHED SURFACE OR INSTALL DETECTOR HANDHOLE (CITY OF BH, STANDARD DRAWING BH 402) AS DIRECTED BY CITY ENGINEER.
4. IF THE "STUB OUT" EXCAVATION AREA FOR LOOP HOMERUNS IS GREATER THAN 8" IN DIAMETER, BACKFILL WITH ASPHALT CONCRETE. IF EXCAVATION AREA IS LESS THAN OR EQUAL TO 6" IN DIAMETER, SEAL AREA WITH HOT RUBBERIZED ASPHALT SEALANT.
5. FILL SLOT WITH HOT MELT RUBBERIZED ASPHALT SEALANT IN ACCORDANCE WITH SECTION 88-5.01A OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS. POUR POTS ARE NOT ACCEPTABLE TO APPLY SEALANT.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

**ROUND INDUCTIVE LOOP DETECTOR INSTALLATION**

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING
BH 401

SHEET 1 OF 1
NOTES:
1. THREE TURNS OF DETECTA-DUCT OR TYPE 2 LOOP WIRE STACKED ONE WIRE ON TOP OF ANOTHER. A PRE-WOUND LOOP WIRE SHALL BE USED IN SLOTS GREATER THAN 1/4" IN WIDTH.
2. LOOP DETECTOR LEAD-IN CABLE EXTENDING FROM THE PULL BOX ADJACENT TO THE LOOP TO THE FIELD TERMINAL IN THE CONTROLLER CABINET SHALL BE TWO, THREE, OR FOUR PAIR #18 AWG INDIVIDUALLY TWISTED, INDIVIDUALLY SHIELDED, FILLED (WATER BLOCKED) CABLE. EACH CABLE SHALL BE IDENTIFIED BY THE INSTALLATION OF A RIGID PLASTIC TAG HELD IN PLACE WITH TWO NYLON TIES.
3. STUB OUT SHALL BE LOCATED AT THE EDGE OF GUTTER IN PAVEMENT, 4" BELOW FINISHED SURFACE OR INSTALL DETECTOR HANDHOLE (CITY OF BH, STANDARD DRAWING BH 402) AS DIRECTED BY CITY ENGINEER.
4. IF THE "STUB OUT" EXCAVATION AREA FOR LOOP HOMERUNS IS GREATER THAN 6" IN DIAMETER, BACKFILL WITH ASPHALT CONCRETE. IF EXCAVATION AREA IS LESS THAN OR EQUAL TO 6" IN DIAMETER, SEAL AREA WITH HOT RUBBERIZED ASPHALT SEALANT.
5. FILL SLOT WITH HOT MELT RUBBERIZED ASPHALT SEALANT IN ACCORDANCE WITH SECTION 86-5.01A OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS. POUR POTS ARE NOT ACCEPTABLE TO APPLY SEALANT.
6. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
7. FRONT LOOP (LOOP 1) SHALL EXTEND INTO CROSSWALK 12" WHERE APPLICABLE.
8. ROUND CORNERS OF ACUTE ANGLE SAWCUTS TO PREVENT DAMAGE TO CONDUCTORS.

BIKE LOOP DETECTOR INSTALLATION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED CITY ENGINEER DATE 11/15/11
APPROVED PUBLIC WORKS DIRECTOR DATE 11/18/11

STANDARD DRAWING BH 402

REVISIONS
MARK DATE DESCRIPTION

Sheet 1 of 1
NOTES:
1. NON-METALLIC BUSHING SHALL BE USED AT ROADWAY END OF CONDUIT.
2. TAPE WIRE 3" EACH SIDE OF ROADWAY BUSHING.
3. INSTALL DUCT SEAL COMPOUND TO EACH END OF ROADWAY CONDUIT BEFORE INSTALLING EPOXY OR
   OTHER APPROVED MATERIALS.
4. ROUND ALL SHARP EDGES WHERE WIRE HAS TO PASS.
5. SPLICE DETECTOR CONDUCTORS OR CABLE TO LEAD-IN CABLE FOR RUN TO CONTROLLER CABINET.
6. 2" PVC CONDUIT ENDS SEALED WITH APPROVED COMPOUND AFTER CONDUCTOR INSTALLATION.
7. EXACT LOCATION OF THE DETECTOR HANDEHOLE WILL BE DETERMINED BY THE CITY ENGINEER IN THE FIELD.
8. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF STANDARD
   SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

TRAFFIC SIGNAL DETECTOR HANDEHOLE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING

BH 403

SHEET 1 OF 1
LID
- FIBRELYTE LID, NON-CONCRETE
- ETCHED POLYETHYLENE FACE
- FACE ANCHORED IN CONCRETE
- ULTRA-VIOLET INHIBITOR

BOX
- CHRISTY OR EQUAL

TRAFFIC SIGNAL PULL BOX & LID

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED DATE 11/18/09
APPROVED DATE 11/18/11

STANDARD DRAWING
BH 404

SHEET 1 OF 1
Section IV

General Facilities
SYMmetrical Residential and Commercial Frontage

PAINTING DETAILS

PARKING SPACE MARKINGS

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RECOMMENDED

APPROVED

STANDARD DRAWING

BH 601

SHEET 1 OF 1
TYPICAL CONTINENTAL CROSSWALK DETAILS

1. ALL MARKED CROSSWALKS SHALL HAVE CONTINENTAL MARKINGS UNLESS APPROVED OTHERWISE.
2. MARKED CROSSWALK LOCATIONS CONSISTING OF BRICK PAVERS OR OTHER DECORATIVE PAVING SHALL BE PROVIDED WITH A LIMIT LINE ONLY.
3. SIGNALIZED INTERSECTIONS SHALL BE PROVIDED WITH A MARKED CROSSWALK ACROSS EACH LEG WHERE PEDESTRIANS ARE PERMITTED TO CROSS.
4. CONTINENTAL CROSSWALK MARKINGS SHALL BE ALIGNED PARALLEL TO THE DIRECTION OF VEHICULAR TRAVEL.
5. LIMIT LINES SHALL BE INSTALLED A MINIMUM OF 4 FEET IN ADVANCE OF MARKED CROSSWALKS FOR THE APPROACH LANES AT ALL CONTROLLED CROSSINGS.
6. MARKED CROSSWALKS SHOULD BE A MINIMUM OF 10 FEET IN WIDTH. PLACEMENT OF CONTINENTAL CROSSWALKS SHALL COMPLY WITH ACCESSIBILITY REGULATIONS PER THE MOST RECENT VERSION OF AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS.
7. THE CROSSWALK BETWEEN A DUAL RAMP CORNER AND A SINGLE RAMP CORNER SHALL BE AT LEAST 10 FEET WIDE AND SATISFY THE MINIMUM OF 2 FEET BEYOND THE FLARE REQUIREMENT FOR THE SINGLE RAMP.
8. CONTINENTAL CROSSWALK BARS SHALL BE UNIFORM WITHIN THE SAME CROSSING. NO PARTIAL BARS SHALL BE INSTALLED.
9. A CROSSWALK BAR SHALL BE CENTERED IN THE MIDDLE OF THE CROSSING.
10. CROSSWALK MARKINGS SHALL BE RETROREFLECTIVITY COMPLIANT AND SKID RESISTANT PER CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA-MUTCD).
11. FOR SCHOOL CROSSING LEGENDS, "SLOW SCHOOL XING" MARKING SHALL BE IN ACCORDANCE WITH CVC21368 AND CA-MUTCD 7C.03.
SPEED HUMP DETAIL

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

SPEED HUMP INSTALLATION NOTES:
1. SPEED HUMPS SHALL NOT BE PLACED OVER
   UTILITY COVERS.
2. EDGE OF SPEED HUMP SHALL BE 5 FEET
   MINIMUM FROM EDGE OF DRIVEWAY.
3. ADVANCE PAVEMENT MARKINGS AND/OR
   SIGNS AS DIRECTED BY CITY ENGINEER

EXISTING CURB

SECTION B-B

TAPER

SECTION A-A

18"

TACK COAT

TYPE D1, PG 70-10

2.3 IN.
2.6 IN.
2.9 IN.
3.1 IN.
3.3 IN.
3.4 IN.
3.5 IN.

5" MIN.

REFLECTIVE WHITE
PAVEMENT MARKING

EXISTING CURB
AND GUTTER

SEE NOTE 3
(TYP.)

ROAD C/L

BUMP

BUMP

8" (TYP.)

35' (TYP.)

24"

24"

24"

28"

72"

12" (TYP.)

12"

22"

12"

48"

6.00'

12.00'

3.5 IN.

3.5 IN.

3.4 IN.

3.3 IN.

3.1 IN.

2.9 IN.

2.6 IN.

2.3 IN.

1.9 IN.

1.5 IN.

1.1 IN.

0.6 IN.

0.0 IN.

6" TYP.
SPECIFICATIONS:

ALL MONUMENT COVERS SHALL BE MADE OF CAST IRON IN ACCORDANCE WITH A.S.T.M STANDARD SPECIFICATIONS A48M-03, CLASS 30, EXCEPT THAT NO TRANSVERSE TEST WILL BE REQUIRED.

ALL MONUMENT COVERS SHALL BE MADE TO THE DIMENSIONS AS SHOWN HEREON, SHALL BE OF UNIFORM THICKNESS AND FREE FROM FLAWS OR DEFECTS. ALL LETTERING SHALL BE RADIIALLY PLACED, UNIFORM IN SIZE AND SHALL CONFORM TO THE DIMENSIONS AS SHOWN HEREON WITHOUT FLAWS OR IRREGULAR LETTERING.

SECTION A-A

NOTES:

1. ALL RADII TO BE 1/16" UNLESS OTHERWISE SPECIFIED.

2. ALL DRAFT TO BE 1-1/2" UNLESS OTHERWISE SPECIFIED.
REAMED INSIDE OF TOP

DRILL Ø 1/4" HOLE
(ONE SIDE ONLY)

WOODEN WEDGES
1"x3/4"x2" ± LONG TO
HOLD POST UPRIGHT

POST FLANGE SET
IN CEMENT GROUT

FINISHED SURFACE

Curb and Gutter

Cement Grout

Clean Out Dirt Under
Sidewalk Approx. As
Shown

Concrete Sidewalk

Cut Ø 3-1/4" Hole
In Sidewalk

3-1/4"

32"

36"

48"

20"

12"

SPECIFICATIONS FOR POST:
STEEL PIPE, STANDARD WEIGHT, 2" X 48" LONG,
ASTM-A120-83T, NEW AND UNUSED, HOT DIPPED
GALVANIZED, TOP REAMED

ADDITIONAL NOTES:
1. POST TO BE LEVEL AND STRAIGHT
2. AREA TO BE LEFT CLEAN
3. CEMENT GROUT: 1 CEMENT : 2-1/2 SAND
4. TOP OF INSTALLED METER COIN/CARD SLOT SHALL
   NOT EXCEED 48" ABOVE FINISHED GRADE.

PARKING METER POST INSTALLATION - CONCRETE SETTING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
CIVIL ENGINEERING DIVISION

RECOMMENDED

APPROVED

PUBLIC WORKS DIRECTOR

STANDARD DRAWING
BH 606

REVISIONS

MARK | DATE | DESCRIPTION

RECOMMENDED | CITY ENGINEER | DATE

APPROVED | PUBLIC WORKS DIRECTOR | DATE
Section V

Water Pipe Line Installations
WATER NOTES
GENERAL:
1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, FIRE AND POLICE DEPARTMENT AT LEAST 72 HOURS PRIOR TO SHUTTING DOWN ANY WATER MAINS, FIRE HYDRANTS OR BLOCKING ACCESS TO ANY AREA. FIRE HYDRANT SHALL NOT BE OUT OF SERVICE FOR MORE THAN FOUR HOURS AND NONE SHALL BE OUT OF SERVICE OVERNIGHT OR DURING WEEKENDS.
2. THE CONTRACTOR SHALL FIELD VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL DETERMINE THE DEPTH OF GAS, ELECTRICAL, TELEPHONE, TELEVISION, STORM DRAIN, SEWER AND WATER AT ALL INTERSECTIONS PRIOR TO CONSTRUCTION AND AS NOTED ON THE PLANS. DAMAGED UTILITIES SHALL BE REPLACED IN KIND UNDER THE SUPERVISION OF THE OWNER AT CONTRACTOR'S EXPENSE.
3. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING SEWER, GAS LATERALS AND/OR ELECTRICAL UNDERGROUNDING MAY NOT BE AT LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
4. PRIOR TO SHUT DOWN AND CUTTING OF ANY EXISTING WATER MAIN, ALL EXISTING VALVES SHALL BE EXERCISED BY CITY PERSONNEL. THE CONTRACTOR SHALL NOTIFY THE CITY’S DEPARTMENT OF PUBLIC WORKS, WATER DIVISION SUPERVISOR AT 310-285-2493 A MINIMUM OF FOUR DAYS PRIOR TO COORDINATE THE SHUT DOWN OF ANY WATER MAIN.
5. FOR ALL WATER SYSTEM CONSTRUCTION, CONTRACTOR SHALL CONTACT SUPERVISING PUBLIC WORKS INSPECTOR AT 310-285-2518.
6. CONTRACTOR SHALL PROTECT IN PLACE THE EXISTING SURVEY MONUMENTS DURING WATER MAIN CONSTRUCTION. IF MONUMENTS ARE DESTROYED, THE CONTRACTOR SHALL SURVEY AND RESET RECORDED MONUMENTS.

DUCTILE IRON PIPE:
7. ALL D.I.P. WATER LINES AND FITTINGS SHALL BE CEMENT LINED, DOUBLE THICKNESS, CLASS 350 (CL 52) PRESSURE CLASS WITH POLYETHYLENE ENCASEMENT AND COMPLY WITH ANSI A21.1/AWWA C 151.
8. STATIC WATER PRESSURE IN VICINITY IS SHOWN FOR LOW AND HIGH ELEVATIONS ON THE PLANS. REFER TO TOP OR BOTTOM OF SHEETS.
9. PIPE MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND THE MANUFACTURER'S RECOMMENDATIONS.
10. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES, EXCEPT AT POINTS OF CONNECTION TO EXISTING WATER MAINS. REFER TO STD. DWG BH-709.
11. THE CONTRACTOR MAY VARY THE GRADE IN THE ALIGNMENT OF THE WATERLINE IF FIELD CONDITIONS WARRANT WITH THE APPROVAL OF THE ENGINEER.
12. PIPE DEFLECTIONS SHALL NOT EXCEED 60% OF THE MANUFACTURER’S RECOMMENDED ALLOWABLE DEFLECTIONS FOR DUCTILE IRON PIPE AND FITTINGS INSTALLATION.
14. THE OPEN ENDS OF ALL ABANDONED WATER LINES SHALL BE PLUGGED WITH CONCRETE PER STD DWG BH 707. THE LOCATION OF THE CONCRETE PLUGS SHALL BE APPROVED BY THE CITY ENGINEER IN THE FIELD.
16. ALL BACKFILL FOR THE ENTIRE PROJECT SHALL BE PER BH-709.

FITTINGS:
17. ALL FITTINGS AND MECHANICAL JOINTS SHALL BE DUCTILE IRON UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. ALL RESTRAINED JOINTS AS SHOWN SHALL BE CONSTRUCTED WITH RESTRAINTS (MEGAULG OR FIELD-LOK GASKETS).
18. ALL DUCTILE IRON TEES AND CROSSES SHALL BE CLASS 350 FLANGE FITTINGS UNLESS OTHERWISE NOTED ON THE PLANS. ALL OTHER DUCTILE IRON FITTINGS SHALL BE CLASS 350 WITH PUSH-ON JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. PROVIDE FITTINGS WITH ENDS THAT ARE COMPATIBLE WITH MECHANICAL RESTRAINTS WHERE RESTRAINED JOINTS ARE REQUIRED.
19. ALL "STANDARD TEE" INSTALLATIONS SHALL BE PER TYPICAL STD DWG BH-704, UNLESS SHOWN OTHERWISE ON CONSTRUCTION PLANS.
20. THE CONTRACTOR SHALL FURNISH ALL FITTINGS NECESSARY FOR DEVIATION OF PIPE ALIGNMENT NOT SHOWN ON CONSTRUCTION PLANS.

VALVES:
21. ALL VALVES SHALL BE BUTTERFLY OR GATE VALVES. VALVE ASSEMBLIES SHALL BE PER TYPICAL STD DWG BH-704 & BH-706.
22. BUTTERFLY VALVES SHALL BE PLACED WITH OPERATING NUT EITHER NORTH OR WEST OF THE WATER MAIN.
23. ALL VALVES CONNECTING TO TEES, CROSSES, AND REDUCERS SHALL HAVE FLANGED OR FLANGED X PUSH-ON ENDS.
24. NO VALVE SHALL BE LOCATED WITHIN A GUTTER OR OTHER CONCRETE DRAINAGE DEVICE, ALLEY GUTTERS, DRIVEWAY AND ALLEY APPROACHES OR SIDEWALKS, UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY ENGINEER.
25. THE CONTRACTOR SHALL ADJUST ALL VALVE SLEEVES TO FINISH GRADE UPON COMPLETION OF REPAVEMENT.
26. EXISTING PIPE, TEES, CROSSES AND OTHER FITTINGS WHICH INTERFERE WITH THE PROPOSED WATER SYSTEM IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF PROPERLY OR SALVAGED AS DIRECTED BY THE ENGINEER.
27. EXISTING VALVES SHALL BE SALVAGED UNDER THE DIRECTION OF THE ENGINEER. VALVE CANS SHALL BE REMOVED, BACKFILLED AND PAVED OVER.

GENERAL NOTES

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED

APPROVED

STANDARD DRAWING

BH-700

SHEET 1 OF 3
(CONTINUED) WATER NOTES

AIR VALVES AND PUMP WELLS:
28. THE CONTRACTOR SHALL CONSTRUCT A COMBINATION AIR VAC AIR RELEASE VALVE ASSEMBLY PER STANDARD DRAWING BH-717 AT ALL HIGH POINTS IN THE ALIGNMENT, WHETHER OR NOT IT IS SHOWN ON THE DRAWINGS.
29. CONTRACTOR SHALL CONSTRUCT A BLOW-OFF ASSEMBLY PER STANDARD DRAWING BH-718 AT ALL LOW POINTS IN THE ALIGNMENT, WHETHER OR NOT IT IS SHOWN ON THE DRAWINGS.

FIRE HYDRANTS:
30. ALL FIRE HYDRANTS, VALVES AND OTHER ASSOCIATED FACILITIES SHALL BE LOCATED IN THE FIELD AS DIRECTED BY THE CITY REPRESENTATIVE. THE LOCATION SHOWN ON THE PLANS ARE APPROXIMATE.
31. REMOVAL OF THE EXISTING FIRE HYDRANTS WILL INCLUDE CUTTING THE FIRE HYDRANT BURY TWO FEET (2'-0") BELOW EXISTING GRADE AND BACKFILLING WITH CONCRETE. SALVAGED FIRE HYDRANTS SHALL BE DELIVERED TO THE CITY OF BEVERLY HILLS WATER DIVISION YARD.
32. FIRE HYDRANT INSTALLATIONS SHALL INCLUDE NEW 2-INCH LATERALS, 6" VALVES WITH 6" x 6" OR 8" x 8" TEE PER CITY STANDARD DWG. BH-720.

WATER SERVICES AND METERS:
33. ALL WATER SERVICES AND FIRE LINES SHALL BE REPLACED FROM THE NEW WATER LINE UP TO THE METER PER STANDARD DRAWINGS BH-713, BH-717, AND BH-723.
34. THE CONTRACTOR SHALL LOCATE AND FIELD VERIFY ALL WATER SERVICE CONNECTIONS AND FIRE LINE SERVICES SIZES AND LOCATIONS PRIOR TO COMMENCING WORK ON THE PROJECT.
35. THE CONTRACTOR SHALL REPLACE ALL WATER METER BOXES ALONG THE NEW WATER MAIN DURING CONSTRUCTION WITH BOXES AND COVERS AS DEFINED IN THE CONTRACT SPECIFICATIONS, AND AS APPROVED BY THE CITY ENGINEER.

POTHOLEING/UTILITIES:
36. THE CONTRACTOR SHALL POTHOLE ALL TIE-IN CONNECTION LOCATIONS, PRIOR TO CONSTRUCTION TO FIELD VERIFY THE ACTUAL SIZE, DEPTH, AND ROUNDENESS OF THE EXISTING WATER SYSTEM. THE TIE-IN WILL BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION.
37. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION PLANS.
38. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS A MINIMUM DISTANCE OF 200 FEET IN ADVANCE OF WATER MAIN TRENCHING TO DETERMINE THE EXACT LOCATION AND VERIFY THE MATERIAL SIZE, DEPTH, AND ROUNDENESS OF ALL PARALLEL AND CROSSING UTILITIES WITHIN THE ALIGNMENTS OF THE NEW WATER MAIN. PIPE JOINTS SHALL BE DEFLECTED AT A MAXIMUM OF 80% OF THE MANUFACTURER'S RECOMMENDATION TO CLEAR INTERFERENCES WITH KNOWN OBSTRUCTIONS OR OTHER UTILITIES WHICH ARE SHOWN OR NOT SHOWN ON THE PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY INFORMATION GATHERED DEVIATING FROM THE PLANS SHALL BE CONVEYED TO THE CITY ENGINEER IN WRITING.
39. FAILURE TO COMPLY WITH ANY OF THE ABOVE ITEMS SHALL BE SUFFICIENT CAUSE FOR THE AGENCY TO ARRANGE FOR THE NECESSARY WORK TO BE PERFORMED BY OTHERS. ANY COSTS INCURRED TO COMPLETE THE NECESSARY WORK WILL BE CHARGED TO THE CONTRACTOR.

CONNECTIONS:
40. THE CONTRACTOR SHALL RECONNECT ALL EXISTING SERVICES INCLUDING, WATER SERVICE AND FIRE PROTECTION SERVICE CONNECTIONS FROM THE ABANDONED OR REPLACED WATERS MAIN TO THE NEW WATERS MAIN. THE CONTRACTOR SHALL ALSO PROVIDE ALL REQUIRED TEES, BLIND FLANGES, CAPS, FITTINGS, PIPES, AND RESTRICTED JOINT CONNECTIONS REQUIRED TO RECONNECT ALL SERVICES CONNECTIONS TO THE NEW WATER MAIN PER THE CITY OF BEVERLY HILLS STANDARDS. WATER AND FIRE SERVICE CONNECTIONS HAVE NOT BEEN SHOWN IN DETAIL FOR PLAN CLARITY.
41. AT CONNECTION POINTS, THE CONTRACTOR SHALL CUT THE EXISTING PIPE AND INSTALL FITTINGS, VALVES AND MAKE UP SPOOL PIECES AND JOIN PIPE ENDS WITH TRANSITION COUPLINGS.
42. IF ASBESTOS CEMENT PIPE (ACP) IS LOCATED, DO NOT CUT TO CONNECT. IF ACP IS INTERFERING WITH NEW WORK IDENTIFIED, NOTIFY THE CITY ENGINEER FOR MITIGATION MEASURES, BEFORE NEW WORK BEGINS.
43. CONNECTIONS OR INSTALLATION TO NEW WATER MAIN SHALL BE ACCORDING TO TYPICAL STANDARD DRAWINGS BH-719 - BH-722.
44. REFER TO TYPICAL INSTALLATION PIPELINE REPLACEMENT PER STANDARD DRAWING BH-722.

RESTRAINTS/THRUST BLOCKS:
45. RESTRAINING DEVICES SHALL BE INSTALLED ON BOTH SIDES OF ALL FITTINGS, VALVES, PLUGS, DEAD ENDS, AND ON ALL DIRECTION CHANGES. THE REQUIRED RESTRAINING FITTINGS SHALL BE PER STD. DWG. BH-708, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
46. THRUST BLOCKS SHALL ONLY BE INSTALLED AT LOCATIONS SPECIFICALLY APPROVED BY THE CITY ENGINEER/CITY DESIGNATED REPRESENTATIVE. WHEN APPROVED BY THE CITY ENGINEER, CONCRETE THRUST BLOCKS SHALL BE CONSTRUCTED PER THE CITY OF BEVERLY HILLS STANDARD DRAWING BH-708.
47. ALL NEW AND EXISTING WATER MAINS SHALL BE PROPERLY RESTRAINED BY THE CONTRACTOR DURING CONSTRUCTION AND HYDROSTATIC TESTING.
48. ALL FIRE SERVICE CONNECTIONS SHALL BE RESTRAINED.

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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/22/2023
APPROVED DATE 9/26/2023

STANDARD DRAWING BH-700
SHEET 2 OF 3
49. WATER SAMPLING STATIONS SHALL BE PROVIDED BY THE CITY. ALL APPURTENANCES, INCLUDING CONCRETE PAD AND SERVICE LINE TO THE STATION, SHALL BE PROVIDED BY THE CONTRACTOR. FINAL LOCATION OF THE WATER SAMPLING STATION SHALL BE FIELD APPROVED BY THE ENGINEER AND COORDINATED WITH THE CITY OF BEVERLY HILLS.

TESTING/DISINFECTION:

50. THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT ALL WATER MAINS HAVE BEEN RELIEVED OF ENTRAPPED AIR BY HOLDING HYDROSTATIC PRESSURE IN PIPELINES BEING TESTED AT A MINIMUM OF 4 HOURS PER AWWA C600 OR C605.

51. ALL WATER LINE INSTALLATIONS SHALL BE FREE OF DEBRIS AND ORGANIC MATERIALS. THE PIPE SHALL BE PRESSURE AND LEAKAGE TESTED, FLUSHED AND CHLORINATED. CHLORINATING SHALL BE IN ACCORDANCE WITH THE STATE OF CALIFORNIA HEALTH DIVISION OF DRINKING WATER, CONSISTING OF NOT LESS THAN 50 PPM INITIAL DOSAGE AND NOT LESS THAN 25 PPM RESIDUAL DOSAGE AFTER 24 HOURS. INSTALLATIONS SHALL BE FLUSHED AND A 48-HOUR BACTI TEST SHALL BE REQUIRED PRIOR TO PRESSURE TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BACTERIOLOGICAL TESTING BY A CERTIFIED LABORATORY. THE CONTRACTOR SHALL NOT HAVE CUSTODY OF THE WATER SAMPLES AT ANY TIME. ALL TESTING METHODS AND RESULTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO CONNECTING THE NEW WATER MAIN TO THE CITY’S WATER SYSTEM.

52. ALL BACTI AND PRESSURE TESTS SHALL BE APPROVED BY THE CITY REPRESENTATIVE PRIOR TO PLACEMENT OF PERMANENT RESURFACING.

HIGH LINING (BY-PASS):

53. BY-PASS WATER PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER FOR ALL WATER MAINS TO BE REMOVED AND REPLACED PER PLAN. ALL BYPASS PLANS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND COORDINATED AND APPROVED WITH THE CITY FIRE MARSHALL.

ABANDONMENT:

54. WHERE THE NEW WATER MAIN REPLACES AN EXISTING MAIN, THE EXISTING MAIN SHALL BE ABANDONED IN PLACE (UNLESS NOTED OTHERWISE), AND THE ENDS SHALL BE FILLED WITH 2 FEET MINIMUM OF SLURRY, CAPPED OR PLUGGED PROPERLY AND SECURED WITH CONCRETE PRIOR TO BACKFILLING.


56. REPLACE METER BOXES AS SHOWN PER PLAN OR DIRECTED BY THE CITY OF BEVERLY HILLS PER STANDARD DRAWINGS BH-714 THROUGH BH-717.

SEPARATIONS:

57. ALL WATER MAIN SEPARATIONS SHALL COMPLY WITH THE STATE OF CALIFORNIA WATER RESOURCES CONTROL BOARD, DIVISION OF DRINKING WATER GUIDANCE CRITERIA FOR THE SEPARATION OF WATER MAINS AND NON-POTABLE PIPELINES (LATEST EDITION) AND STANDARD DRAWING BH-712.

58. WHEREVER A WATER LINE Crosses A SEWER LINE, THE VERTICAL SEPARATION OF THE NEW WATER MAIN SHALL BE AT LEAST 1 FOOT ABOVE, NO JOINTS SHALL BE WITHIN 8 FEET FROM EITHER SIDE OF THE CROSSING. REFER TO STANDARD DRAWING BH-712. VERTICAL SEPARATION SHALL NOT BE LESS THAN 6 INCHES. A WAIVER FROM THE DDW SHALL BE REQUESTED IF SEPARATION IS BETWEEN 6 INCH AND 1 FOOT OR IF ANY JOINT IS LESS THAN 8 FEET AWAY OR IF THE ANGLE OF SEPARATION IS LESS THAN 45 DEGREES.


60. WHERE THE NEW WATER MAIN ENCROACHES WITHIN 10 FEET OF AN EXISTING NON-POTABLE UTILITY OUTER DIAMETER, ALTERNATIVE CONSTRUCTION IS REQUIRED AND A WAIVER REQUEST WILL BE MADE IN COMPLIANCE WITH DIVISION OF DRINKING WATER GUIDELINES.

TRENCHING AND BACKFILLING:

61. NO MECHANICAL EQUIPMENT IS PERMITTED TO OPERATE WITHIN THREE FEET OF A GAS LINE AND ANY CLOSER WORK MUST BE DONE BY HAND.

GENERAL NOTES

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</table>
JONES NO. J-3775 (6" x 4" x 4" x 2-1/2") FOR CITY OF BEVERLY HILLS,
JONES NO. J-3775 (6" x 4" x 2-1/2") FOR CITY OF WEST HOLLYWOOD,
ALL BRONZE BODY, OR APPROVED EQUAL

NOTES:
1. HYDRANT OUTLETS SHALL FACE THE STREET AT 45° OR AS DIRECTED BY THE CITY ENGINEER.
2. FINAL HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
3. CONNECTION OF THE FIRE HYDRANT TO THE WATER MAIN MAY REQUIRE FITTING AND COUPLINGS NOT SHOWN HEREON. THE CONTRACTOR SHALL PROVIDE AND INSTALL AT NO EXTRA COST.
4. BREAKAWAY BOLTS SHALL BE USED TO INSTALL THE HYDRANT HEAD ON THE BURY.
5. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 708 OR AS DIRECTED BY THE CITY ENGINEER.
6. FIRE HYDRANTS SHALL BE PAINTED IN ACCORDANCE WITH THE SPECIFICATIONS.
7. ALL HYDRANTS WATER OUTLET CAP MATERIAL SHALL BE BRONZE.
8. ALL FITTINGS USED TO CONNECT THE FIRE HYDRANT TO THE WATER MAIN SHALL BE PROPERLY REstrained WITH APPROVED STANDARD METHODS OR AS DIRECTED BY THE CITY ENGINEER.
9. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED PER BH-709 AS DIRECTED BY THE CITY ENGINEER.
10. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.
11. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

FIRE HYDRANT ASSEMBLY (TYPICAL)
EXISTING WATER MAIN TO REMAIN IN SERVICE

REMOVE INTERFERING PORTIONS OF EXISTING
PIPE, VALVES, FITTINGS, ETC. AS REQUIRED

UNDISTURBED SOIL

THRUST BLOCK

FLEXIBLE COUPLING

TEE MJ x FLG OUTLET

FLEXIBLE COUPLING

6" BUTTERFLY VALVE
MJ x FLG OR 6" GATE VALVE PER
STANDARD DRAWING BH 706

PROPOSED FIRE HYDRANT OR
SERVICE LATERAL.
SEE SHEET 1 OF 2 FOR
FIRE HYDRANT ASSEMBLY.

NOTES:

1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH 708 OR AS DIRECTED BY THE CITY ENGINEER.

2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.

3. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED PER BH-709 AS DIRECTED BY THE CITY ENGINEER.

4. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

FIRE HYDRANT LATERAL INSTALLATION
LATERAL INSTALLATION PER STANDARD DRAWING BH-701

EXISTING WATER MAIN

UNDISTURBED SOIL

THrust block

8" THICK x 30" SQ CONC. COLLAR
Curb and gutter

Valve box per standard drawing BH-706

Water main

6" BUTTERFLY VALVE MJ x FLG OR 6" GATE VALVE PER STANDARD DRAWING BH 706

6' BUTTERFLY VALVE MJ x FLG OUTLET

6" BUTTERFLY VALVE MJ x FLG OR 6" GATE VALVE PER STANDARD DRAWING BH 706

6"-90° BEND MJ x FLG

6" DUCTILE IRON PIPE CLASS 52 (CEMENT MORTAR LINED)

RESTRAINT JOINT MEGALUG TYPE (TYP.)

FACE OF CURB

FIRE HYDRANT AND BREAK OFF SPOOL PER BH-701

FIRE HYDRANT ASSEMBLY PER STANDARD DRAWING NO. BH-701

NOTES:

1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH-708 OR AS DIRECTED BY THE CITY ENGINEER.

2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITEMASTIC ENAMEL PRIOR TO BACKFILL.

3. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

FIRE HYDRANT INSTALLATION
WITH WATER MAIN BEHIND CURB
NOTES:
1. HYDRANT OUTLETS SHALL FACE THE STREET AT 45-DEGREE OR AS DIRECTED BY THE CITY ENGINEER.
2. FINAL HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
3. CONNECTION OF THE FIRE HYDRANT TO THE WATER MAIN MAY REQUIRE FITTINGS AND COUPLINGS NOT SHOWN HEREON. THE CONTRACTOR SHALL PROVIDE AND INSTALL AT NO EXTRA COST.
4. BREAKAWAY BOLTS SHALL BE USED TO INSTALL THE HYDRANT HEAD ON THE BURY.
5. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH-708 OR AS DIRECTED BY THE CITY REPRESENTATIVE.
6. FIRE HYDRANTS SHALL BE PAINTED SILVER FOR BEVERLY HILLS OR SAFETY YELLOW FOR WEST HOLLYWOOD.
7. ALL HYDRANTS WATER OUTLET CAP MATERIAL SHALL BE BRONZE.
8. ALL FITTINGS USED TO CONNECT THE FIRE HYDRANT TO THE WATER MAIN SHALL BE PROPERLY RESTRAINED WITH APPROVED STANDARD METHODS OR AS DIRECTED BY THE CITY ENGINEER.
9. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED PER BH-709 AS DIRECTED BY THE CITY ENGINEER.
10. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMASTIC ENAMEL PRIOR TO BACKFILL.
11. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
12. ALL PIPES AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE SLEEVE.
13. ALL NUTS SHALL BE ZINC COATED.

FIRE HYDRANT INSTALLATION - HOT TAP
NOTES:

1. THRUST BLOCKS SHALL BE PLACED PER STANDARD DRAWING BH-708 OR AS DIRECTED BY THE CITY ENGINEER.

2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH TAR BITUMASTIC ENAMEL PRIOR TO BACKFILL.

3. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED PER BH-709 AS DIRECTED BY THE CITY ENGINEER.

4. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.

5. ALL PIPES AND FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE SLEEVE.

HYDRANT LATERAL - HOT TAP
NOTES:
1. THRUST BLOCKS PER STANDARD DRAWING NUMBER BH-708 ARE REQUIRED AT ALL PLUGS, TEES, AND ENDS, OR AS DIRECTED BY THE CITY ENGINEER.
2. EXPOSED BOLT AND NUT ASSEMBLIES ON FLEXIBLE COUPLINGS AND/OR MECHANICAL JOINT FITTINGS SHALL BE COATED WITH BITUMASTIC ENAMEL PRIOR TO BACKFILL.
3. ALL PERMANENT PLUGS OR CAPS, PER STANDARD DRAWING NO. BH-707, SHALL BE CAPABLE OF WITHSTANDING A 200 PSI TEST PRESSURE.
4. FINAL FIRE HYDRANT LOCATION TO BE DETERMINED BY THE CITY ENGINEER.
5. REMOVE EXISTING TEE, VALVE, LATERAL, AND FIRE HYDRANT ASSEMBLY IF LOCATION REMAINS THE SAME.
6. TRENCHES WITHIN THE ROADWAY FOR LATERAL INSTALLATIONS OR REMOVALS SHALL BE BACKFILLED PER BH-709 AS DIRECTED BY THE CITY ENGINEER.
7. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
8. WHEN USING STANDARD PUSH-ON TEES, REGARDLESS OF SIZE, USE FIELD LOCK GASKETS PER CONTRACT SPECIFICATIONS. FOR ALL STANDARD FLANGE TEES, USE ONLY MEGALUG MECHANICAL JOINT RESTRAINTS APPROVED BY THE CITY REPRESENTATIVE.

UPGRADED HYDRANT LATERAL & STANDARD TEE

<table>
<thead>
<tr>
<th>REVISIONS</th>
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CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: ________________________ DATE: 8/22/2023

APPROVED: ________________________ DATE: 9/26/2023

STANDARD DRAWING
BH-704

SHEET 1 OF 1
PLAN VIEW

SECTION VIEW

12" DEEP ¾" GRAVEL BASE COMPACTED TO 90% R.D.

NOTE:
FOR WATER VAULT BOX AND LID, SEE STD. DWG. BH-710.

3" & LARGER WATER SERVICE WITH 4" BY-PASS
CONSTRUCTION NOTES:

1. D.I. PIPE TO MATCH METER SIZE (4" MIN.)
2. 4" X 3" D.I. REDUCER (FOR 3" SERVICE ONLY).
3. METER SIZE D.I. FLANGED TEE 4" MIN.
4. 4" D.I. FLANGED GATE VALVE WITH HAND WHEEL.
5. METER (GALLONS). METER TYPE AND BRAND TO BE DETERMINED BY THE CITY ENGINEER.
6. METER SIZE D.I. SPOOL PIPE, PE X PE 3" MIN.
7. 4" FLG x MJ ADAPTOR.
8. 4" DIP FLANGED 90-DEGREE BEND.
9. STAINLESS STEEL TAPPING SLEEVE AND VALVE PER BH-703, MAIN SIZE 4" MIN.
10. MEGALUG RETAINER GLAND 4" MIN.
11. METER SIZE MEGALUG RETAINER GLAND.
12. METER SIZE D.I. FLANGED COUPLING ADAPTER.
13. 2" MUELLER MODEL CORPORATION STOP (MODEL NO. B-20046, MIP x FIP).

3" & LARGER WATER SERVICE WITH 4" BY-PASS

<table>
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<tr>
<th>REVISIONS</th>
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</table>

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: ___________________________ DATE: 8/22/2023
WATER RESOURCES MANAGER

APPROVED: ___________________________ DATE: 9/26/2023
CITY ENGINEER
PROVIDE HEAVY DUTY CAST IRON VALVE BOX CAP,
WESTERN WATER WORKS SUPPLY COMPANY, 8" I.D.
NO. 84 OR APPROVED EQUAL, MARKED AS
INDICATED, PAINT AS INDICATED

<table>
<thead>
<tr>
<th>VALVE TYPE</th>
<th>PAINT COLOR: (VALVE LOCATED IN IN BEVERLY HILLS)</th>
<th>PAINT COLOR: (VALVE LOCATED IN IN W. HOLLYWOOD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER MAIN ISOLATION VALVE</td>
<td>YELLOW</td>
<td>YELLOW</td>
</tr>
<tr>
<td>FIRE HYDRANT BRANCH VALVE</td>
<td>SILVER</td>
<td>YELLOW</td>
</tr>
<tr>
<td>ZONE VALVE</td>
<td>RED</td>
<td>YELLOW</td>
</tr>
</tbody>
</table>

1-11/16"

TOP OF PAVEMENT

9-5/8"

12" MIN.

7-1/2"

8" MIN.

16 GAGE SPLIT GALVANIZED STEEL EXTENSION SLEEVE

3-5/8"

3-3/4"

1-1/15"

1-1/16"

6-3/4"

FOR FIRE HYDRANT USE 6" BUTTERFLY VALVE OR GATE VALVE MU x FLG

6" SCH 80 PVC STANDPIPE LOWER SLEEVE 1/8" MINIMUM THICKNESS, ASPHALT COATED TO PROVIDE 4" TO 6" OVERLAP (SLIP FIT)

NOTES:

1. VALVE OPERATORS SHALL BE A NON-TRAVELING NUT TYPE AND HAVE 2-INCH OPERATING NUTS.

2. SURFACE CONDITIONS SHALL BE RESTORED TO THE SATISFACTION OF THE CITY ENGINEER.
HUB-END OR RING-TITE FITTING OR VALVE

DUCTILE OR CAST IRON MAIN

FLANGED FITTING OR VALVE

STEEL MAIN

NOTES:
1. CONCRETE SHALL BE 2000 P.S.I.
2. POUR CONCRETE THRUST BLOCKS AGAINST UNDISTURBED SOIL.
3. REMOVE INTERFERING PORTIONS OF MAIN TO BE ABANDONED.
4. USE STEEL ANCHOR RODS OR STRAPS ONLY WHERE PERMITTED BY THE ENGINEER.
5. USE BRACE PIPE CLAMP ONLY WHERE PERMITTED BY THE ENGINEER.
6. SEE BH-708 FOR THRUST BLOCK DIMENSIONS.

TYPICAL CAPS AND PLUGS
## Horizontal Bends

<table>
<thead>
<tr>
<th>Nominal Pipe Size (Inches)</th>
<th>Test Pressure (P.S.I.)</th>
<th>Dead Ends and Tees</th>
<th>Bends Less Than or Equal To Angle:</th>
<th>All Bends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>11 - 1/4°</td>
<td>22 - 1/2°</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>6</td>
<td>200</td>
<td>2'-6&quot;</td>
<td>1'-6&quot;</td>
<td>6&quot;</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>4'-5&quot;</td>
<td>1'-6&quot;</td>
<td>8&quot;</td>
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<td>2'-0&quot;</td>
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<tr>
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<td>200</td>
<td>7'-6&quot;</td>
<td>2'-0&quot;</td>
<td>1-0&quot;</td>
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</tbody>
</table>

## Vertical Bends

<table>
<thead>
<tr>
<th>Nominal Pipe Size (Inches)</th>
<th>Test Pressure (P.S.I.)</th>
<th>Bends Less Than or Equal To Angle:</th>
<th>All Bends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>11 - 1/4°</td>
<td>22 - 1/2°</td>
</tr>
<tr>
<td></td>
<td></td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>6</td>
<td>200</td>
<td>1'-6&quot;</td>
<td>3'-0&quot;</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td>2'-0&quot;</td>
<td>4'-0&quot;</td>
</tr>
<tr>
<td>10</td>
<td>200</td>
<td>2'-0&quot;</td>
<td>4'-6&quot;</td>
</tr>
<tr>
<td>12</td>
<td>200</td>
<td>2'-6&quot;</td>
<td>5'-0&quot;</td>
</tr>
</tbody>
</table>

## Concrete Thrust Block Schedule

**Notes:**

1. Thrust block sizes are based on a bearing capacity of 1500 P.S.F., with a minimum soil cover of 3'-0". If soil cover is less than 3'-0", multiply bearing area by a factor of 1.5 for soil cover of 2'-0" to 3'-0", or by a factor of 3 for soil cover of 1'-0" to 2'-0".

2. Dimensions shown refer to thrust block types shown in detail and are minimum values only.

3. Concrete mix shall be in accordance with specifications for 2000 lbs. strength at 28 days when tested is accordance with ASTM 039.

4. All thrust blocks shall be poured solidly against firm, undisturbed soil.

5. If soils have been previously excavated and backfilled, contractor shall notify the City Engineer, who may direct that the dimensions shown shall be increased by a factor of 1.5.

6. Concrete poured against pipe fittings shall not extend beyond the fitting joints without the approval of the City Engineer.

7. Thrust reaction backing type (see drawing) shall be as directed by the City Engineer.

## Concrete Thrust Blocks

**Revisions**

<table>
<thead>
<tr>
<th>Mark</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>

**City of Beverly Hills, California**

Department of Public Works

Engineering Division

Recommended: [Signature] Date: 8/22/2023

Approved: [Signature] Date: 9/26/2023

Standard Drawing: BH-708

Sheet 1 of 8
3/4" ANCHOR ROD / FIELD LOCK GASKET

Tee

3/4" ANCHOR ROD / FIELD LOCK GASKET

Cross

3/4" ANCHOR ROD / FIELD LOCK GASKET

90 Degree Elbow

3/4" ANCHOR ROD / FIELD LOCK GASKET

Gate Valve

FOR AREA ON SIDE FACES, USE VALVES REQUIRED FOR TEES

NOTES:

1. CONCRETE FOR THRUST BLOCK TO BE 2000 P.S.I.
2. MINIMUM RESTRAINED JOINT LENGTH OF 40 FEET EACH WAY WITH FIELD LOCK GASKET AND RODS.

CONCRETE THRUST BLOCKS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: Date 8/22/2023

APPROVED: Date 9/26/2023

STANDARD DRAWING
BH-708
SHEET 2 OF 8
CONCRETE THRUST BLOCKS

NOTES:

1. SEE STANDARD DRAWING NO. BH-708, SHT. 1 FOR THRUST BLOCK SCHEDULE AND NOTES.
2. MINIMUM RESTRAINED JOINT LENGTH OF 40 FEET. EACH WAY WITH FIELD LOCK GASKET AND RODS.

SECTION B

TYPE I

TYPE II

TYPE III

TYPE IV

3/4" ANCHOR ROD / FIELD LOCK GASKET

3/4" ANCHOR ROD / FIELD LOCK GASKET

MAKE BLOCK WIDTH OF TRENCH

0.8 X O.D.

B/2

B/2

3/4" ANCHOR ROD / FIELD LOCK GASKET

3/4" ANCHOR ROD / FIELD LOCK GASKET
CONCRETE THRUST BLOCKS

**TYPE V**

MAKE BLOCK FULL WIDTH OF TRENCH

**SECTION L**

#5 REBAR @ O.D. OF PIPE, TOP AND BOTTOM

OBSTRUCTION ATTACHED TO PIPE TO PREVENT SLIPPAGE

**TYPE VI**

#5 @ 12" O.C. MAX. MIN. 2 REQUIRED ON EACH SIDE

**SECTION P**

WRAP WITH PLASTIC LINER TO PREVENT CORROSION

**TYPE VII**

#5 @ 12" O.C. MAX. MIN. 2 REQUIRED, TOP AND BOTTOM EACH SIDE

W 14 x 13

NOTES:

1. SEE STANDARD DRAWING NO. BH-708, SHT. 1 FOR THRUST BLOCK SCHEDULE AND NOTES.
2. MINIMUM RESTRAINED JOINT LENGTH OF 40 FEET. EACH WAY WITH FIELD LOCK GASKET AND RODS.
### Restraint Lengths, LR, for Ductile Iron Pipe

<table>
<thead>
<tr>
<th>Nominal Pipe Size Inches</th>
<th>Horizontal Bends</th>
<th>Tees</th>
<th>Vertical Offsets</th>
<th>Dead Ends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90° 45° 22-1/2°</td>
<td></td>
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<tr>
<td></td>
<td>LRN=0° LRN=10°</td>
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<tr>
<td>4</td>
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<td>79 33  16</td>
<td>145 121</td>
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<td>29 16</td>
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### Restraint Lengths, LR, for Ductile Iron with Polyethylene Wrap

<table>
<thead>
<tr>
<th>Nominal Pipe Size Inches</th>
<th>Horizontal Bends</th>
<th>Tees</th>
<th>Vertical Offsets</th>
<th>Dead Ends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>90° 45° 22-1/2°</td>
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<tr>
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<td>LRN=0° LRN=10°</td>
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<td>4</td>
<td>26 11  5</td>
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<tr>
<td>24</td>
<td>113 47  22</td>
<td>337 280</td>
<td>340 113</td>
<td>68 22</td>
</tr>
</tbody>
</table>

**Joint Restraint for Ductile Iron and Polyethylene Wrapped Ductile Iron Water Pipes**

**Notes:**

1. All joints within the specified length LR must be restrained. All lengths are given in feet.
2. The maximum test pressure shall not exceed 200 PSI.
3. The minimum depth of bury shall be 3' to top of pipe.
4. Restrained lengths may be reduced when supported by engineering calculations.
DEAD ENDS

LRN = SHORTEST LENGTH OF PIPE RESTRAINED TO THE RUN OF THE TEE FITTING (BOTH SIDES OF TEE).

HORIZONTAL BENDS

UNDISTURBED SOIL

TEES

VERTICAL UP BEND

UNDISTURBED SOIL

VERTICAL DOWN BENDS

JOINT RERAINT FOR DUCTILE IRON AND POLYETHYLENE WRAPPED DUCTILE IRON WATER PIPES

JOINT RERAINT

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

STANDARD DRAWING

BH-708

SHEET 6 OF 8

RECOMMENDED DATE 8/22/2023
WATER RESOURCES MANAGER

APPROVED DATE 9/26/2023
CITY ENGINEER
THIS DETAIL IS FOR USE ONLY ON UNDERGROUND INSTALLATIONS WHERE THE USE OF CONCRETE THRUST BLOCKING CANNOT BE USED BECAUSE OF OBSTRUCTIONS, OR REQUIREMENTS OF THE SPECIFICATIONS...

* CLAMPS SHALL BE 1/2 BY 2 INCHES FOR PIPE 4 AND 6 INCHES IN DIAMETER; 5/8 BY 2-1/2 INCHES FOR PIPE 8 AND 10 INCHES; 5/8 BY 3 INCHES FOR PIPE 12 INCHES. BOLT HOLES SHALL BE 1/16 INCH IN DIAMETER LARGER THAN BOLTS.

* RODS SHALL BE 3/4 INCHES IN DIAMETER FOR PIPES 4,6 AND 8 INCHES IN DIAMETER; 7/8 INCHES FOR PIPE 10 INCHES AND 1 INCH IN DIAMETER FOR PIPE 12 INCHES.

* BOLTS SHALL BE 5/8 INCHES IN DIAMETER FOR PIPE 4, 6 AND 8 INCHES IN DIAMETER; 3/4 INCHES FOR PIPE 10 INCHES AND 7/8 INCHES IN DIAMETER FOR PIPE 12 INCHES.

* WASHERS MAY BE CAST IRON OR STEEL, ROUND OR SQUARE, DIMENSIONS FOR CAST IRON WASHERS ARE 5/8 BY 3 INCHES FOR PIPE 4, 6, 8 AND 10 INCHES IN DIAMETER AND 3/4 BY 3-1/2 INCHES FOR PIPE 12 INCHES. DIMENSIONS FOR STEEL WASHERS ARE 1/2 BY 3 INCHES FOR PIPE 4, 6, 8 AND 10 INCHES IN DIAMETER AND 1/2 BY 3-1/2 INCHES FOR PIPE 12 INCHES IN DIAMETER. HOLES SHALL BE 1/8 INCH LARGER THAN THE RODS.

FOR PIPE LARGER THAN 12 INCHES IN DIAMETER, RESTRAINT DETAILS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.


2. HIGH STRENGTH, HEAT TREATED CAST IRON TEE-HEAD BOLTS WITH HEXAGON NUTS, ALL IN ACCORDANCE WITH THE STRENGTH REQUIREMENTS OF A.W.W.A. C-111, MAY BE USED IN LIEU OF THE CADMIUM PLATED BOLTS AND NUTS.

3. THE SKETCHES IN THESE FIGURES SHOW ACCEPTABLE METHODS OF PROVIDING ANCHORAGE. THERE IS NO PARTICULAR SIGNIFICANCE TO BE ATTACHED TO WHETHER THE SKETCH SHOWS A BELL AND SPIGOT JOINT OR A STANDARD MECHANICAL JOINT. THE ANCHORING PROCEDURE ILLUSTRATED APPLIES IN MOST CASES TO EITHER TYPE OF JOINT. IN SOME CASES, DIMENSIONS OF THE PARTICULAR PIPE OR HUB AND SPACE AVAILABLE FOR WORKING AROUND THE PARTICULAR JOINT WILL INFLUENCE THE CHOICE OF METHODS USED.


5. COATING TYPE: A.H.D. ASPHALTIC PRIMER 719(A). - ALL EXPOSED METAL.

<table>
<thead>
<tr>
<th>JOINT RESTRAINT WITH TIE RODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVISIONS</td>
</tr>
<tr>
<td>MARK  DATE  DESCRIPTION</td>
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CITY OF BEVERLY HILLS, CALIFORNIA  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION  

RECOMMENDED: [Signature]  DATE  8/22/2023  
APPROVED: [Signature]  DATE  9/26/2023  

STANDARD DRAWING  
BH-708  
SHEET 7 OF 8
<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>12-1/2&quot;</td>
<td>10-1/8&quot;</td>
<td>2-1/2&quot;</td>
<td>1-3/4&quot;</td>
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<tr>
<td>6&quot;</td>
<td>14-1-2&quot;</td>
<td>12-1/8&quot;</td>
<td>3-9/16&quot;</td>
<td>2-13/16&quot;</td>
</tr>
<tr>
<td>8&quot;</td>
<td>16-3/4&quot;</td>
<td>14-3/8&quot;</td>
<td>14-21/32&quot;</td>
<td>3-29/32&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>19-1/16&quot;</td>
<td>16-11/16&quot;</td>
<td>5-3/4&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>12&quot;</td>
<td>22-5/16&quot;</td>
<td>19-3/16&quot;</td>
<td>6-3/4&quot;</td>
<td>5-7/8&quot;</td>
</tr>
</tbody>
</table>

RODS ARE ATTACHED TO LUGS CAST ON BELL OF HYDRANT. IF HYDRANT IS NOT FITTED WITH LUGS, RODS ARE ATTACHED AS SHOWN BY THE DASHED LINES.

JOINT RESTRAINT WITH TIE RODS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED 8/22/2023
APPROVED 9/26/2023

STANDARD DRAWING BH-708
SHEET 8 OF 8
TRENCH FOR WATER LINE

NOTES:
1. WHEN TRENCH WORK CANNOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.
2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION ("GREENBOOK").

PIPE SIZE (D) | 4" | 6" | 8" | 10" | 12" | 14" | 16" | 20" | 24" | 30"
---|---|---|---|---|---|---|---|---|---|---
MAXIMUM ALLOWED TRENCH WIDTH | 20" | 20" | 20" | 22" | 24" | 26" | 28" | 32" | 36" | 42"

TYPICAL TRENCH DETAIL - CASE 1

NOT TO SCALE
NOTES:

1. WHEN TRENCH WORK CANNOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS
   STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT STANDARD SPECIFICATIONS FOR PUBLIC WORKS
   CONSTRUCTION ("GREENBOOK").
W-100 SERIES
2'-0" x 3'-0" UTILITY BOX WITH 4" WALLS

MINIMUM EXCAVATION SIZE:
3'-2" x 4'-2" x DEPTH REQUIRED.
**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>WT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>3/8&quot; x 27 1/2&quot; LAMINATE PLATE x 39 1/2&quot; @ 13.81 lb/ft² (SEE BELOW)</td>
<td>103 lbs</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/4&quot; BENT PLATE x 38 1/2&quot; @ 2.40 lb/ft² (SEE DETAIL &quot;B&quot;)</td>
<td>15 lbs</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/4&quot; BENT PLATE x 33 3/8&quot; @ 2.40 lb/ft² (SEE DETAIL &quot;C&quot;)</td>
<td>9 lbs</td>
</tr>
<tr>
<td>D</td>
<td>4</td>
<td>2 1/2&quot; x 2&quot; x 1/4&quot; ANGLE x 33 3/8&quot; @ 3.60 lb/ft²</td>
<td>28 lbs</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>1/4&quot; x 1 1/4&quot; FLAT BAR x 3&quot; @ 1.48 lb/ft²</td>
<td>1 lbs</td>
</tr>
<tr>
<td>F</td>
<td>4</td>
<td>1&quot; x 1&quot; x 3/16&quot; ANGLE x 13 1/2&quot; @ 1.16 lb/ft² (SEE DETAIL)</td>
<td>6 lbs</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>1/4&quot; x 1 1/2&quot; x 6-3/8&quot; EB @ 1.28 lb/ft²</td>
<td>32 lbs</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>1/4&quot; x 1 1/2&quot; FLAT BAR x 35 5/8&quot; @ 1.28 lb/ft² (SEE DETAIL)</td>
<td>10 lbs</td>
</tr>
<tr>
<td>J</td>
<td>2</td>
<td>2 1/2&quot; x 1 1/2&quot; x 3/16&quot; BENT PLATE x 3&quot; @ 2.44 lb/ft²</td>
<td>2 lbs</td>
</tr>
<tr>
<td>K</td>
<td>4</td>
<td>3/8-16 NUTS WELDED IN PLACE</td>
<td>1 lbs</td>
</tr>
<tr>
<td>L</td>
<td>2</td>
<td>COVERING (Provided by Customer)</td>
<td>1 lbs</td>
</tr>
</tbody>
</table>

**NOTES:**
1. TOTAL WEIGHT OF COVER IS 159 lbs.
2. COVER DESIGN PER CUSTOMER'S SPEC.
3. COVER DESIGNED PER CALCULATION NO. 302183.
4. STRUCTURAL ANGLE CAN BE USED IN LIEU OF BENT PLATES OR BENT PLATES IN LIEU OF ANGLES.

**TOLERANCES:**
1. ALL LINEAR DIMENSIONS ARE ± 1/8".
2. "A" WILL BE SQUARE TO WITHIN 1/8" DIFFERENCE IN DIAGONAL MEASURE.

---

**METER BOX LID - (W-100 SERIES) - 4" & 6" FIRE SERVICE**

**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS**

**ENGINEERING DIVISION**

**RECOMMENDED**

**APPROVED**

**STANDARD DRAWING**

**BH-710**

**SHEET 2 OF 16**
FIRE SERVICE LID - (W-100 SERIES) - 4" & 6" FIRE SERVICE

BILL OF MATERIALS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>WT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>5/16&quot; x 27 1/2&quot; DIAMOND PLATE x 39 1/2&quot; Ø 13.61 lb/ft²</td>
<td>103 lbs</td>
<td></td>
</tr>
</tbody>
</table>

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/22/2023
APPROVED DATE 9/26/2023

STANDARD DRAWING BH-710
SHEET 3 OF 16
No. 200-T TOP SECTION
WT: 300 LBS.

No. 200 EXTENSION SECTION
WT: 330 LBS.

No. 200 LOWER SECTION
WT: 1674 LBS.

END WALL
KNOCKOUTS
(FOR PIPE)

W-200 SERIES
2'-6" x 4'-0"
UTILITY BOX WITH 4" WALLS

MINIMUM EXCAVATION SIZE:
3'-8" x 5'-2" x DEPTH REQUIRED.
BILL OF MATERIALS

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>3/32&quot; x 6&quot; DIAMETER PLATE 3.1/2&quot; x 91 1/2&quot; @ 1.0 Lb/Ft (See Below)</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
<td>4&quot; x 3/32&quot; ANGLE x 29 3/32&quot; @ 0.4 lb/Ft</td>
</tr>
<tr>
<td>C</td>
<td>3</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/4&quot; Weld Plate x 20 1/2&quot; @ 0.9 lb/Ft (See Detail)</td>
</tr>
<tr>
<td>D</td>
<td>2</td>
<td>1 1/2&quot; x 1 1/2&quot; x 1/4&quot; Weld Plate x 29 3/32&quot; @ 2.6 lb/Ft (See Detail)</td>
</tr>
<tr>
<td>E</td>
<td>8</td>
<td>1/4&quot; x 1/4&quot; STUDS x 3&quot; @ 1.0 lb/Ft</td>
</tr>
<tr>
<td>F</td>
<td>1</td>
<td>1/4&quot; x 4&quot; x 1/8&quot; x 1/8&quot; @ 0.5 lb/Ft</td>
</tr>
<tr>
<td>G</td>
<td>4</td>
<td>1/8&quot; x 1 1/2&quot; x 1/4&quot; x 1/8&quot; @ 1.0 lb/Ft</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>1/8&quot; x 1 1/2&quot; STUD x 48 1/2&quot; @ 1.0 lb/Ft (See Detail)</td>
</tr>
<tr>
<td>J</td>
<td>2</td>
<td>1 1/2&quot; x 2 1/2&quot; x 1/4&quot; STUD x 4&quot; @ 3.5 lb/Ft</td>
</tr>
<tr>
<td>K</td>
<td>4</td>
<td>1&quot; x 1/4&quot; x 3&quot; ANGLE x 13 1/2&quot; @ 1.0 lb/Ft (See Detail)</td>
</tr>
<tr>
<td>L</td>
<td>4</td>
<td>3/8-10 NUTS WELDED IN PLACE</td>
</tr>
</tbody>
</table>

NOTES:
1. COVER DESIGN FOR STRUCTURAL CALC. #1046.
2. TOTAL WEIGHT OF COVER IS 39 Lb
3. REFER TO DRAWING SHEETS FOR FRAME.
4. COVER WARNING FOR CUSTOMER SPEC.
5. STRUCTURAL ANGLE CAN BE USED IN LIEU OF WELT PLATE.

TOLERANCES:
1. ALL LINEAR DIMENSIONS ARE 1/8".
2. ALL """" To BE SQUARE TO WITHIN 1/8"" DIFFERENCE IN DIAGONAL MEASURE.

METER BOX LID - (W-200 SERIES) - 4" & 6" DOMESTIC SERVICE
No. 38 MB - BODY
WT. 128 lbs.

No. 38 MB - EXTENSION
WT. 128 lbs.

*METER BOX - 1" AND 1 1/2" SERVICE

*CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/22/2023
APPROVED DATE 9/26/2023

STANDARD DRAWING
BH-710

SHEET 7 OF 16
METER BOX LID - 1" AND 1 1/2" SERVICE

NON SKID SURFACE
ARMORCAST LOGO
POLYMER CONCRETE COVER
STD. MARKING
LIFT PIN

13 3/4"
2"
6 13/16"
23 1/4"

CUSTOMER
LOGO

ALC LARA STAR
UNIT LOCATION
(UNIT NOT SUPPLIED)

*NON-TRAFFIC RATED

APPROX. WT. = 33 LBS.
No. 65 MB - BODY
WT. 159 lbs.

No. 65 MB - EXTENSION
WT. 159 lbs.

4" WIDE x 4" HIGH PIPE HOLE

*METAL BOX - 1 1/2" & 2" SERVICE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: [Signature] DATE 8/22/2023
APPROVED: [Signature] DATE 9/26/2023

STANDARD DRAWING
BH-710
SHEET 9 OF 16
METER LID - 1 1/2" & 2" SERVICE

APPROX. WT. = 24 LBS.

POLYMER CONCRETE COVER

NON SKID SURFACE

ARMORCAST LOGO

LIFT PIN

CUSTOMER LOGO

6 13/16"

WATER

26 3/4"

ALCLARA STAR UNIT LOCATION
(UNIT NOT SUPPLIED)

*NON-TRAFFIC RATED

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/22/2023
WATER RESOURCES MANAGER

APPROVED DATE 9/26/2023
CITY ENGINEER
TRAFFIC BOX
REINFORCED CONCRETE
H-20 LOADING
166 lbs.

EXTENSION
REINFORCED CONCRETE
H-20 LOADING
163 lbs.
(AS REQUIRED IN FIELD)

NOTES:
1. FOLLOW CALTRANS No. 5T STATE
SPECIFICATIONS.
*TRAFFIC RATED

METER BOX - 13" x 24" - H/20 LOADING
METER BOX LID - 13" x 24" - H/20 LOADING

SECTION A-A

SECTIONAL DETAIL

MATERIALS
1. 1/2" DIAMOND CHECKER PLATE
2. 1/4" x 1-1/2" STEEL FLAT STOCK
3. 3/4" x 1/2" STEEL FLAT STOCK
4. 3/8" - 16 STEEL NUT
5. 3/16" THICK WASHER TO BE WELDED PER ASTM A-706
6. SURFACE AROUND WELD TO BE FLAT
7. USE BH-710 SHT 15 OR 16 FOR INSTALLATION
BOX
REINFORCED CONCRETE
H-20 LOADING
268 lbs.

EXTENSION
REINFORCED CONCRETE
H-20 LOADING
250 lbs.
(AS REQUIRED IN FIELD)

NOTES:
1. FOLLOW CALTRANS No. 6T STATE SPECIFICATIONS.
   *TRAFFIC RATED

METER BOX - 17" x 30" - H/20 LOADING

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: 8/22/2023
APPROVED: 9/26/2023

STANDARD DRAWING
BH 710
SHEET 13 OF 16
METER BOX LID - 17" x 30" H/20 LOADING

SECTION A-A

PLAN VIEW

SECTION B-B

SEE SECTIONAL DETAIL

MATERIALS

1. 1/2" DIAMOND CHECKER PLATE
2. 1/4" x 1-1/2" STEEL FLAT STOCK
3. 3/4" x 1/2" STEEL FLAT STOCK
4. 3/8" - 16 STEEL NUT
5. 3/16" THICK WASHER TO BE WELDED PER ASTM A-706
6. SURFACE AROUND WELD TO BE FLAT
7. USE BH 710 SHT. 15 OR 16 FOR INSTALLATION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED
APPROVED

BH 710 SHEET 14 OF 16
POLYMER CONCRETE LID WITH AMR - 7" X 13" X 1"

SECTION A-A

PLAN VIEW

END VIEW

BOTTOM VIEW

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

CITY OF BEVERLY HILLS, CALIFORNIA

RECOMMENDED  DATE  8/22/2023

APPROVED  DATE  9/26/2023

STANDARD DRAWING

BH-710

SHEET 16 OF 16
ADJUSTABLE PIPE SUPPORT DETAIL

ADJUSTABLE 'U' BOLT PIPE SUPPORT ANVIL FIG. 265, ECCENTRIC FIG. 49, OR EQ.

ADJUSTABLE PIPE SUPPORT ANVIL FIG. 63, TYPE T

GALVANIZED ANCHOR BOLT OR SELF-DRILLING CONCRETE ANCHOR WITH STUD AND TWO (2) NUTS EACH, SIZE TO SUIT FLANGE TYP. OF 4 AT 90°

GALVANIZED

DRY PACK

3" MINIMUM

MIN. 1"

ADJUSTABLE PIPE SUPPORT
APPROXIMATE DIMENSIONS IN INCHES

<table>
<thead>
<tr>
<th>PIPE SIZE</th>
<th>'A'</th>
<th>'B'</th>
<th>'C'</th>
<th>'D' MINIMUM</th>
<th>'D' MAXIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1/2</td>
<td>2-1/2</td>
<td>1-1/2</td>
<td>9</td>
<td>8</td>
<td>11-1/2</td>
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<tr>
<td>3</td>
<td>2-1/2</td>
<td>1-1/2</td>
<td>9</td>
<td>8-1/2</td>
<td>11-3/4</td>
</tr>
<tr>
<td>3-1/2</td>
<td>2-1/2</td>
<td>1-1/2</td>
<td>9</td>
<td>8-1/2</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>* 2-1/2</td>
<td>9</td>
<td>10-1/4</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>* 2-1/2</td>
<td>9</td>
<td>11-5/8</td>
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<td>13-5/8</td>
<td>16-1/2</td>
</tr>
<tr>
<td>10</td>
<td>3</td>
<td>* 2-1/2</td>
<td>9</td>
<td>14-5/8</td>
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<td>9</td>
<td>15-5/8</td>
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<td>4</td>
<td>3</td>
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<td>19-7/8</td>
<td>22-1/4</td>
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<tr>
<td>18</td>
<td>6</td>
<td>3-1/2</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
</tbody>
</table>

* DENOTES REFERENCE TO MANUFACTURER

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED _______________________________ DATE ____________

APPROVED _______________________________ DATE ____________

STANDARD DRAWING

BH-711

SHEET 1 OF 1
**CASE 1**

**NEW SEWER**

ZONE "A" 1

ZONE "P" 2

10' 6'

W

ZONE "P" 1

ZONE "B" 2

10' 6'

S

ZONE "P" 1

ZONE "B" 2

10' 6'


**CASE 2**

**NEW WATER MAIN**

ZONE "P" 1

ZONE "B" 2

10' 6'

S

ZONE "P" 1

ZONE "B" 2

10' 6'


ZONES SPECIAL CONSTRUCTION REQUIRED FOR SEWER

A. A SEWER LINE PLACED PARALLEL TO A WATER LINE SHALL BE CONSTRUCTED OF:

1. EXTRA STRENGTH VITRIFIED CLAY PIPE WITH COMPRESSION JOINTS.
2. PLASTIC SEWER PIPE WITH RUBBER RING JOINTS (PER ASTM D 3034) OR EQUIVALENT.
3. CAST OR DUCTILE IRON PIPE WITH COMPRESSION JOINTS.
4. REINFORCED CONCRETE PRESSURE PIPE WITH COMPRESSION JOINTS (PER AWWA C302-75).

P. PROHIBITED ZONE - NO SEWER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

ZONES SPECIAL CONSTRUCTION REQUIRED FOR WATER MAIN

B. A WATER LINE PLACED PARALLEL TO A SEWER LINE SHALL BE CONSTRUCTED OF SPECIAL/UPGRADED PIPE. SPECIAL PIPE MATERIAL WILL BE PER THE DESIGN AND PER THE ALTERNATIVE CHECKLIST. SEPARATION WAIVER SHALL BE REQUESTED FROM STATE WATER RESOURCES CONTROL BOARD FOR NEW WATER MAINS WITHIN THIS ZONE.

P. PROHIBITED ZONE - NO WATER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

**SEWER AND WATER MAIN SEPARATION (PARALLEL)**

**REVISIONS**

<table>
<thead>
<tr>
<th>MARK</th>
<th>DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>

**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS**

**ENGINEERING DIVISION**

**RECOMMENDED**

**WATER RESOURCES MANAGER**

**DATE** 8/22/2023

**APPROVED**

**CITY ENGINEER**

**DATE** 9/26/2023

**STANDARD DRAWING**

**BH-712**

**SHEET 1 OF 2**
CASE 1
NEW SEWER

ZONE "C"
ZONE "P"

CASE 2
NEW WATER MAIN

ZONE "D"
ZONE "P"

ZONE "P"
ZONE "C"

ZONE "P"
ZONE "D"

ZONE "C"

ZONE "P"

ZONE "D"

ZONE "P"

ZONE "C"

CASE 1
NEW SEWER

ZONE SPECIAL CONSTRUCTION REQUIRED FOR SEWER

C. A SEWER LINE CROSSING A WATER MAIN SHALL BE CONSTRUCTED OF:

1. DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING AND MECHANICAL JOINTS.
2. A CONTINUOUS SECTION OF CLASS 200 (DR 14 PER AWWA C900-97) PLASTIC PIPE OR EQUIVALENT, CENTERED OVER THE PIPE BEING CROSSED.
3. A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-75) CENTERED OVER THE PIPE BEING CROSSED.
4. ANY SEWER PIPE WITHIN A CONTINUOUS SLEEVE.

D. A SEWER LINE CROSSING A WATER MAIN SHALL BE CONSTRUCTED OF:

1. A CONTINUOUS SECTION OF DUCTILE IRON PIPE WITH HOT DIP BITUMINOUS COATING.
2. A CONTINUOUS SECTION OF CLASS 200 (DR 14 PER AWWA C990) PLASTIC PIPE OR EQUIVALENT CENTERED OVER THE PIPE BEING CROSSED.
3. A CONTINUOUS SECTION OF REINFORCED CONCRETE PRESSURE PIPE (PER AWWA C302-74) CENTERED OVER THE PIPE BEING CROSSED.
4. ANY SEWER PIPE WITHIN A CONTINUOUS SLEEVE.

P. PROHIBITED ZONE - NO SEWER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

CASE 2
NEW WATER MAIN

ZONE SPECIAL CONSTRUCTION REQUIRED FOR WATER MAIN

C. NO JOINTS WITHIN 10 FEET OF EITHER SIDE OF SEWER LINE. USE SPECIAL/UPGRADED PIPE AND CMC. SEPARATION WAIVER SHALL BE REQUESTED FROM STATE WATER RESOURCES CONTROL BOARD FOR NEW WATER MAINS WITHIN THIS ZONE.

D. NO JOINTS WITHIN 8 FEET OF EITHER SIDE OF SEWER LINE. USE SPECIAL/UPGRADED PIPE AND CMC. SEPARATION WAIVER SHALL BE REQUESTED FROM STATE WATER RESOURCES CONTROL BOARD FOR NEW WATER MAINS WITHIN THIS ZONE.

P. PROHIBITED ZONE - NO WATER MAINS ARE ALLOWED TO BE INSTALLED IN THIS ZONE.

ADDITIONAL NOTES:

1. WATER MAINS AND SEWER MAINS MUST NOT BE INSTALLED IN THE SAME TRENCH.
2. SEPARATION DISTANCES SPECIFIED SHALL BE MEASURED FROM THE NEAREST EDGE OF FACILITIES.
3. ALL CROSSINGS SHALL BE AT NO LESS THAN 45 DEGREES

SEWER AND WATER MAIN SEPARATION
(PERPENDICULAR <10°)

REVISIONS

MARK DATE DESCRIPTION

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: [Signature] DATE: 8/22/2023
APPROVED: [Signature] DATE: 9/26/2023

STANDARD DRAWING BH-712
SHEET 2 OF 2
**SERVICE CONNECTION SHORT - (TRAFFIC RATED) - 1" AND 1 1/2"

**NOTES:**
- FOR SHORT/LONG SERVICE
  1. FOR 1 1/2" INSTALL, USE 2" TUBING, 2" CORPORATION STOP, 2" SADDLE, AND 2" 90° ELBOW. INSTALL REDUCER AT 2" ANGLE STOP, MULLER B-24276N SERIES.

**ELEVATION**

**SHORT SERVICE**

TRAFFIC RATED

**SINGLE SERVICE PLAN**

11' TO 3' AND VAR. (SEE PLANS)

 existing meter box to be protected in place or replaced in kind use BH-710 SHEET 11. (TYPICAL FOR ALL SERVICES)

 POINT OF CONNECTION, JOIN CUSTOMER SERVICE AS REQUIRED

 GRAVEL BOTTOM

 REMOVE EXISTING WATER METER AND INSTALL NEW NEPTUNE T-10 METER

 1" - 90° ELBOW - COMP X COMP

 EXISTING PAVEMENT

 SAWCUT AND REPLACE FULL DEPTH AC PAVEMENT FOR METER BOX REPLACEMENT

 SEE DETAIL "A"

 existing concrete collar to be protected in place or replaced in kind

 SEE DETAIL "A"

 NEW DIP WATERLINE PER PLAN

 1" COPPER TUBING, TYPE K

 1" CORPORATION STOP, MUELLER B-25028 SERIES

 1" DOUBLE STRAP BRONZE SADDLE, MUELLER BR2B SERIES

**DETAIL "A"**

 TRAFFIC RATED (H20-44 LOADING)
 STEEL COVER USE BH-710 SHEET 12 WITH SHEET 15

 SAWCUT IS FOR ASPHALT PAVEMENT RESTORATION

 6" CONCRETE COLLAR FULL DEPTH

 BOLT DOWN HOLE

 12'
NOTES: FOR SHORT/LONG SERVICE

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.

2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICE WILL BE RENewed.

3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING BH-710 SHEET 11, AS DIRECTED BY THE CITY'S FIELD REPRESENTATIVE. INSTALLATION OF NEW METER BOX SHALL INCLUDE A 6" WIDE CONCRETE COLLAR AROUND THE METER BOX (SEE DETAIL "A"), ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.

4. FOR 1 1/2" INSTALL, USE 2" TUBING; 2" CORPORA TION STOP, 2" SADDLE, AND 2" 90° ELBOW. INSTALL REDUCER AT 2" ANGLE STOP, MULLER B-24276N SERIES.

SERVICE CONNECTION LONG - (TRAFFIC RATED) - 1" AND 1 1/2"

REVISIONS

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED

WATER RESOURCES MANAGER

APPROVED

CITY ENGINEER

STANDARD DRAWING
BH-713

SHEET 2 OF 2
NOTES: FOR SHORT/LONG SERVICE

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS, SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.
2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICE WILL BE RENewed.
3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING NO. BH-710 SHEET 7 AS DIRECTED BY THE CITY’S FIELD REPRESENTATIVE. ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.
4. FOR 1 1/2" INSTALL, USE 2" TUBING, 2" CORPORAION STOP, 2" SADDLE, AND 2" 90° ELBOW. INSTALL REDUCER AT 2" ANGLE STOP, MULLER B-24276N SERIES.

SERVICE CONNECTION LONG - (NON-TRAFFIC RATED) - 1" AND 1 1/2"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED BY: ________________________ DATE: 8/22/2023
APPROVED BY: ________________________ DATE: 9/26/2023

STANDARD DRAWING
BH-714
SHEET 2 OF 2
NOTES: FOR SHORT/LONG SERVICE

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.

2. NEW SERVICES WILL NOT BE SPLICEIL WHEN DAMAGED, SERVICE WILL BE RENEWED.

3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING BH-710 SHEET 13, AS DIRECTED BY THE CITY'S FIELD REPRESENTATIVE. INSTALLATION OF NEW METER BOX SHALL INCLUDE A 6" WIDE BY FULL DEPTH CONCRETE COLLAR AROUND METER BOX (SEE DETAIL "A"), ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.

SERVICE CONNECTION LONG - (TRAFFIC RATED) - 2"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: 
DATE 8/22/2023

APPROVED: 
DATE 9/26/2023

STANDARD DRAWING
BH-715
SHEET 2 OF 2
NOTES: FOR SHORT/LONG SERVICE

1. MATERIALS AND INSTALLATION SHALL CONFORM WITH THE APPLICABLE SECTIONS OF THE CITY OF BEVERLY HILLS SPECIFICATIONS FOR DOMESTIC WATER SYSTEMS.

2. NEW SERVICES WILL NOT BE SPLICED WHEN DAMAGED, SERVICE WILL BE RENEWED.

3. EXISTING OR DAMAGED METER BOXES SHALL BE REPLACED PER CITY STANDARD DRAWING BH-710 SHEET 9, AS DIRECTED BY THE CITY'S FIELD REPRESENTATIVE. ALL ASPHALT REPLACEMENT SHALL BE NEATLY SAWCUT.

SERVICE CONNECTION LONG - (NON-TRAFFIC RATED) - 2"
3-1/2" CONCRETE ANCHORS WITH STAINLESS FENDER WASHERS- REDHEADS

NOTE:
1. CONTRACTOR TO INSTALL CITY PROVIDED NAMEPLATE SAYING "BEVERLY HILLS AIR VAC".

1" AIR-VAC - A.R.I. MODEL NO. S050
1"x1"x1" BRASS TEE
1" BRASS CLOSE NIPPLE
1" BRONZE BALL VALVE
1" x BRONZE M.I.P. COMPRESSION ADAPTER
1" 90° BRONZE STREET ELBOW
1" COPPER TUBE - MAX 6"
SCREEN END - MCMASTER - CARR - 9877K514
24 INCH - PIPELINE PRODUCTS MODEL NO. VCAS-1424-BL

AIR-VAC WITH TESTING ASSEMBLY - 1"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED __________________________ DATE 8/22/2023
APPROVED __________________________ DATE 9/26/2023

STANDARD DRAWING BH-717
SHEET 1 OF 2
NOTE:
1. CONTRACTOR TO INSTALL CITY PROVIDED NAMEPLATE SAYING "BEVERLY HILLS AIR VAC".

1) 2" AIR-VAC - A.R.I. MODEL NO. D040
2) 2"x2"x2" BRASS TEE
3) 2" BRASS CLOSE NIPPLE
4) 2" BRONZE BALL VALVE
5) 2" BRONZE M.I.P. COMPRESSION ADAPTER
6) 2" 90° BRONZE STREET ELBOW
7) 2" COPPER TUBE - RIGID TYPE K - MAX 6"
8) SCREEN END - MCMASTER - CARR - 9877K514
9) 24 INCH - PIPELINE PRODUCTS MODEL NO. VCAS-1830-BL
10) 2" 90° ELBOW COMP X COMP

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: 8/22/2023
APPROVED: 9/26/2023

STANDARD DRAWING
BH-717
SHEET 2 OF 2
CONSTRUCTION NOTES:

1. 2" BALL VALVE WITH CAP.
2. 2" COPPER SLIP x I.P.T. ADAPTOR.
3. 2" COPPER TUBING (TYPE K-SOFT).
4. 2" BRASS BALL VALVE.
5. CONCRETE VAULT & COVER PER BH-710.

BLOW-OFF ASSEMBLY - 2"

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED DATE 8/22/2023
APPROVED DATE 9/26/2023

STANDARD DRAWING
BH-718

SHEET 1 OF 1
REPLACE EXISTING TEE WITH CROSS
CASE "A"

NEW CONNECTION / CUT IN TEE
CASE "B"

CONNECTIONS TO EXISTING AND PROPOSED WATERLINE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: [Signature] [Date: 8/22/2023]
APPROVED: [Signature] [Date: 9/26/2023]

STANDARD DRAWING
BH-719

SHEET 1 OF 1
FIRE SERVICE TEE

CASE "C"

NTS

FIRE SERVICE TEE: CASE "C" TYP. INSTALLATION
TYPICAL INSTALLATIONS: CASE "D" AND "E"
CONNECTIONS TO EXISTING AND PROPOSED WATER
CASE "F"

TYPICAL INSTALLATION PIPELINE REPLACEMENT CASE "F"
NOTES:

1. THE NEW LOCATION OF BAC-T SYSTEM AND BOLLARDS SHALL BE DETERMINED BY THE CITY REPRESENTATIVE.
NOTES:

1. ALL FITTINGS SHALL BE RESTRAINED WITH MEGALUGS.
2. LENGTH SHALL BE DETERMINED BY NEXT EXISTING JOINT.
3. LENGTH, DEPTH, AND HEIGHT SHALL BE FIELD DETERMINED.
4. APPLY BITUMATIC ENAMEL COATING TO ALL NUTS AND BOLTS.
5. BACKFILL SHALL BE 90% RELATIVE COMPACTION AND CONFORM TO SPECIFICATIONS.
6. AIR RELEASE VALVES ON OVERCROSSES ARE REQUIRED, AND SHALL CONFORM TO DETAIL BH-717, SHEET 2 OF 2, UNLESS OTHERWISE INDICATED.
7. SEPARATION PER CALIFORNIA CODE OF REGULATING (CCR), TITLE 72, DIVISION 4, CHAPTER 16, SECTION 64572, LATEST VERSION. SEPARATION SHALL BE 12" MINIMUM.
8. IF EXISTING PIPE OTHER THAN SEWER, STORM DRAIN OR RECYCLED WATER PIPE, SEPARATION IS 12".

OVERCROSSING (TYPICAL)
NOTES:
1. INSTALL ONE BOND ON TOP OF EACH PIPE FOR EACH JOINT.
2. PIPE JOINT CONFIGURATION IS SCHEMATIC ONLY.

PUSH-ON OR MECHANICAL JOINT DIP

JOINT BONDING FOR DUCTILE IRON PIPE: PUSH-ON JOINT
NOTES:

1. ALL FITTINGS SHALL BE RESTRAINED WITH MEGALUGS.

2. OVERALL LENGTH SHALL BE DETERMINED BY NEXT EXISTING JOINT.

3. LENGTH, DEPTH, AND HEIGHT SHALL BE FIELD DETERMINED.

4. APPLY BITUMASTICENAMEAL COATING TO ALL NUTS AND BOLTS.

5. BACKFILL SHALL BE 90% RELATIVE COMPACTION AND CONFORM TO SPECIFICATIONS.

6. BLOW OFF VALVES ON UNDERCROSINGS ARE REQUIRED, SEE BH-718.

7. SEPARATION PER CALIFORNIA CODE OF REGULATING (CCR), TITLE 72, DIVISION 4, CHAPTER 16, SECTION 64572, LATEST VERSION. SEPARATION SHALL BE 12" MINIMUM.

8. IF EXISTING PIPE OTHER THAN SEWER, STORM DRAIN OR RECYCLED WATER PIPE, SEPARATION IS 12".

UNDERCROSSING
FLANGED COUPLING
ADAPTER BONDING DETAIL

FLANGED JOINT BONDING DETAIL

JOINT BONDING FOR DUCTILE IRON PIPE: FLANGED JOINT
RISING STEM GATE VALVE (TYP.)
CITY OF BEVERLY HILLS TO PROVIDE HEAVY CHAINS, LOCKS, AND KEYS TO LOCK HANDWHEELS

WILKINS RP/DA WITH BY-PASS METER SHALL READ IN CUBIC FEET
VALVE POSITION DETECTOR SWITCH IF REQUIRED BY THE FIRE DEPARTMENT (TYP.)

TEE, FLG x FLG
2-1/2" SIAMESE FIRE DEPARTMENT CONNECTION WITH CHECK ASSEMBLY

PIPE SUPPORT SEE BH-711
CONC. SLAB

#4 BAR @ 6" O.C.E.W.

D.I. PIPE, CLASS 350 FLANGE FITTINGS
90° BEND, M.M.M.J w/ MEGA LUG RESTRAINTS

CITY OF BEVERLY HILLS FIRE SERVICE LATERAL

SECTIONAL VIEW

NOTE:
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE ONE COAT RUSTOLIUM PRIMER AND TWO FINISHING COATS OF ENAMEL PAINT (COLOR SHALL BE DETERMINED BY THE CITY OF BEVERLY HILLS.

PLAN VIEW

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>D.A. LENGTH (A)</th>
<th>MIN. / MAX. FLOW</th>
<th>WILKINS</th>
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<tbody>
<tr>
<td>2-1/12&quot;</td>
<td>20-1/8&quot;</td>
<td>75 - 224 GPM</td>
<td>MODEL 375ADA</td>
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<td>3&quot;</td>
<td>20-1/8&quot;</td>
<td>115 - 346 GPM</td>
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<td>4&quot;</td>
<td>19-7/8&quot;</td>
<td>198 - 595 GPM</td>
<td>MODEL 375ADA</td>
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<td>5&quot;</td>
<td>25-7/8&quot;</td>
<td>450 - 1351 GPM</td>
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<td>8&quot;</td>
<td>38-1/2&quot;</td>
<td>780 - 2339 GPM</td>
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<tr>
<td>10&quot;</td>
<td>38-1/2&quot;</td>
<td>1229 - 3687 GPM</td>
<td>MODEL 375ADA</td>
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BACKFLOW PREVENTION OR FIRE SPRINKLER SERVICE

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION

REVISIONS
MARK DATE DESCRIPTION

RECOMMENDED BY
DATE 8/22/2023
APPROVED BY
DATE 9/26/2023

STANDARD DRAWING BH-729
SHEET 2 OF 2
WILKINS RP BACKFLOW PREVENTER
"USC" APPROVED LEAD FREE

90° BEND, FLG x FLG
RW GATE VALVE WITH
HAND WHEEL, FLG x FLG

FINISHED
GRADE

1" MIN.

18" TYP.

3" MIN.
COVER

D.I. PIPE, CLASS 350
FLANGE FITTINGS

90° BEND

PIECE Support
PER BH-711

CONCRETE SLAB

#4 BAR @ 6"
O.C.E.W.

FROM CITY OF BEVERLY HILLS
IRRIGATION SERVICE

IRRIGATION SERVICE LINE
TO CUSTOMER

SECTIONAL VIEW

PLAN VIEW

NOTE:
ALL ABOVE GROUND PIPING & VALVES SHALL RECEIVE
ONE COAT RUSTOLIUM PRIMER AND TWO FINISHING
COATS OF ENAMEL PAINT (COLOR SHALL BE
DETERMINED BY THE CITY OF BEVERLY HILLS).

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>LENGTH (A)</th>
<th>MIN. / MAX. FLOW</th>
<th>WILKINS</th>
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<tr>
<td>2-1/12&quot;</td>
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<td>75 - 224 GPM</td>
<td>MODEL 375</td>
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<td>15-7/8&quot;</td>
<td>115 - 346 GPM</td>
<td>MODEL 375</td>
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<td>4&quot;</td>
<td>19-7/8&quot;</td>
<td>198 - 595 GPM</td>
<td>MODEL 375</td>
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</table>

LARGE IRRIGATION SERVICE BACKFLOW PREVENTER

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED:

APPROVED:

STANDARD DRAWING
BH-730

SHEET 1 OF 1
**NOTE:**

1. CONTRACTOR SHALL CLEARLY AND PERMANENTLY LABEL THE PRESSURE ZONES ON THE INLET AND OUTLET PIPES. METHOD TO BE APPROVED BY THE INSPECTOR. USE 2" MINIMUM HIGH NUMERALS AND LETTERS.

2. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

3. FINISH SURFACE (FS) ELEVATIONS SHALL BE SHOWN ON THE PLANS.

4. PIPING SHALL BE PAINTED "SAFETY BLUE" FOR POTABLE WATER AND PANTONE PURPLE FOR RECYCLED WATER.

5. \((D1) = \text{LARGE DIAMETER} \quad (D2) = \text{MEDIUM DIAMETER} \quad (D3) = \text{SMALL DIAMETER}\)

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<th>ITEM</th>
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<tbody>
<tr>
<td>1</td>
<td>((D1)) PRESSURE REDUCER CLA-VALVE, FLG</td>
<td>15 ((D2)) VICTAULIC COUPLING, GROOVED</td>
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<tr>
<td>2</td>
<td>((D2)) PRESSURE REDUCER CLA-VALVE, FLG</td>
<td>16 ((D3)) THREADED BRONZE UNION</td>
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<td>3</td>
<td>((D3)) PRESSURE REDUCER VALVE, FLG OR THREADED</td>
<td>17 ((D1)) 90 DEGREES ELBOW</td>
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<tr>
<td>4</td>
<td>3-1/2&quot; LIQUID FILLED PRESSURE GAUGE (0-160 PSI) ASSEMBLY</td>
<td>18 ((D1)) x ((D2)) FL D.I. TEE</td>
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<tr>
<td>5</td>
<td>((D1)) GATE VALVE RESILIENT WEDGE TYPE 3 V. MUELLER</td>
<td>19 ((D2)) FL D.I. TEE</td>
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<td>6</td>
<td>((D2)) GATE VALVE RESILIENT WEDGE TYPE 3 V. MUELLER</td>
<td>20 ((D2)) D.I. BLIND FLANGE WITH THREADED OUTLET</td>
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<td>7</td>
<td>((D3)) BRONZE BALL VALVE</td>
<td>21 ((D3)) 90 DEGREES BRONZE ELBOW</td>
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<td>8</td>
<td>((D1)) FL x GROOVED D.I. SPOOL, (LENGTH AS REQ'D)</td>
<td>22 PRESSURE ZONE LABEL</td>
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<td>9</td>
<td>((D1)) FL x FL D.I. SPOOL</td>
<td>23 4&quot; CONCRETE PAD OVER 12&quot; AGGREGATE BASE</td>
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<td>10</td>
<td>((D2)) FL x GROOVED D.I. SPOOL, (LENGTH AS REQ'D)</td>
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<td>11</td>
<td>((D2)) FL x FL D.I. SPOOL</td>
<td>25 INSULATING BUSHING</td>
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<td>12</td>
<td>((D3)) BRONZE PIPE WITH THR EADED ENDS</td>
<td>26 FOR FLANGED PRV, ((D3)) BRONZE FLANGE</td>
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<td>13</td>
<td>-</td>
<td>27 AUTOMATIC COMBO. AIR RELEASE &amp; VACUUM RELIEF VALVE</td>
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<tr>
<td>14</td>
<td>((D1)) VICTAULIC COUPLING, GROOVED</td>
<td>28 SEE PIPE SUPPORT DETAIL BH-711</td>
</tr>
</tbody>
</table>

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**PRESSURE REDUCING VALVE STATION DETAIL**

**CITY OF BEVERLY HILLS, CALIFORNIA**

**DEPARTMENT OF PUBLIC WORKS**

**ENGINEERING DIVISION**

<table>
<thead>
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**RECOMMENDED**

**APPROVED**

**STANDARD DRAWING**

**BH-731**

**SHEET 1 OF 2**

**8/22/2023** **9/26/2023**
NOTES:

1. CONTRACTOR SHALL CLEARLY AND PERMANENTLY LABEL THE PRESSURE ZONES ON THE INLET AND OUTLET PIPES. METHOD TO BE APPROVED BY THE INSPECTOR. USE 2" MINIMUM HIGH NUMERALS AND LETTERS.

2. MATERIALS SHALL BE SELECTED FROM THE APPROVED MATERIALS LIST.

3. FOR LIST OF MATERIALS, SEE STD. DWG. BH-734 SHEET 1 OF 2.

4. CONSTRUCTION PLANS SHALL CALL OUT ELEVATIONS.

5. FOR PIPE SUPPORT LOCATIONS, REFER TO SECTION A-A OF THIS SHEET. FOR MOUNTING, SEE CONSTRUCTION DETAIL BH-711.

6. P.R.V. STATION SHALL HAVE AN EXPANDED METAL ENCLOSURE SURROUNDING THE INSTALLATION HINGED SO IT CAN BE OPENED FOR MAINTENANCE ACCESS.

PRESSURE REDUCING VALVE STATION DETAIL
FILL TOP 270° AREA WITH GROUT OR PIT SAND AFTER PIPE HAS BEEN PLACED

CONTINUOUS GREASED SKIDS, NOTCH AND STRAP TO WATER MAIN

NOTE:
GROUT HOLES SHALL BE PROVIDED AT LOCATIONS ACCEPTABLE TO THE ENGINEER. FILL VOIDS OUTSIDE CASING PIPE WITH GROUT.

FABRICATED STEEL CASING, DIA. & THICKNESS PER PLAN

WATER MAIN PER PLAN

FILL TOP 90° AREA WITH GROUT AFTER PIPE HAS BEEN PLACED

JACKED CASING WITH WATER MAIN
NOT TO SCALE
NOTES:

1. WHEN TRENCH WORK CAN NOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARD SPECIFICATIONS.
CONCRETE ENCASEMENT DETAIL

NOTES:

1. WHEN TRENCH WORK CANNOT BE COMPLETED WITHIN THE SAME WORKING DAY, SEE BEVERLY HILLS STANDARD DRAWING BH-113 FOR STEEL PLATE PLACEMENT.

2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF BEVERLY HILLS STANDARD SPECIFICATIONS.

CONCRETE ENCASEMENT DETAIL

SCALE: NONE

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CONCRETE ENCASEMENT DETAIL

CITY OF BEVERLY HILLS, CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

RECOMMENDED: [Signature] DATE 8/22/2023
APPROVED: [Signature] DATE 9/26/2023

STANDARD DRAWING BH-734
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