Santa Clara City
Construction Design Drawings

Special Thanks To:
St. George City
Washington City
Todd Edwards of Bush & Gudgell
Rick Rosenberg of Rosenberg & Associates
Jerry Amundson of Carter & Burgess
Marvin Wilson of Sunrise Engineering

Ordinance No.
Resolution: 2016-15R
Adopted: October 12, 2016
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STANDARD CURB & GUTTER
(TYPE HB30-7)

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A".
NOTES:
1— ALL CONSTRUCTION & MATERIALS SHALL CONFORM TO CITY STANDARDS.
SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

DRIVEWAY CURB (TYPE HB30-7)
DETAILS

NOTES:
1- DISTANCE SHOWN IS FOR HB30-7 CURB ONLY.

DIP TO BE FORMED WITH GUTTER CONSTRUCTION OR SAW CUT TO EXACT DIMENSIONS

NO SCALE

SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

DATE DESCRIPTION BY

110  1 OF 1

APPROVED:

DATE: OCT 2008  BY: TE
SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

DRIVEWAY APRON DETAILS

REVISIONS
DATE DESCRIPTION BY

STANDARD DWG. NO. 111 1 OF 1

APPROVED: DATE: OCT 2008 | BY: TE

NOTES:
1- WIDTH OF DRIVEWAYS VARIES WITH USE - SEE CITY STANDARDS OR CONTACT ENGINEERING DEPARTMENT.

2- DRIVEWAYS WITH COMMERCIAL OR INDUSTRIAL USE REQUIRE ADDITIONAL THICKNESS. SEE ENGINEERING DEPARTMENT.

EXPANSION JOINTS
HEAVY BROOM FINISH ON RAMP
CONTROL JOINTS

SIDEWALK
CURB & GUTTER

SIDEWALK
CURB & GUTTER

EXPANSION JOINT

WIDTH VARIES SEE NOTE #1

SEE DRAWING #110

MEDIUM BROOM FINISH ON SIDEWALK
HEAVY BROOM FINISH ON RAMP

MATCH SIDEWALK WIDTH

6" (MIN.)
(SEE NOTE #2)

6" THICK UNTREATED BASE COARSE (MIN.)
(SEE NOTE #2)
GENERAL NOTES
1- CROSS SLOPE SHALL BE 1/4 INCH RISE PER FOOT FROM TOP OF CURB
   (SLOPE NOT TO EXCEED 1/2 INCH RISE PER FOOT).
2- UNTREATED BASE COURSE SHALL BE PLACED UNDER SIDEWALK AND COMPACTED
   TO A MIN. OF 95% THICKNESS OF UNTREATED BASE NOT LESS THAN 4 INCHES.
3- USE CLASS "A" CONCRETE ONLY (6 BAG, TYPE V CEMENT).
4- SIDEWALK SURFACE TO HAVE A MEDIUM BROOM FINISH.
5- SIDEWALKS IN COMMERCIAL ZONES SHALL BE A MIN. OF 7' WIDE
   WHERE DESIGNATED BY THE CITY.
6- WHERE SIDEWALKS CROSS DRIVEWAYS, MINIMUM THICKNESS SHALL BE AS FOLLOWS:
   RESIDENTIAL: 6" FOR SIDEWALK, 6" FOR ROADBASE
   COMMERCIAL/INDUSTRIAL: 8" FOR SIDEWALK, 8" FOR ROADBASE.
7- FIBER EXPANSION JOINTS SHALL BE PLACED AT BOTH ENDS OF DRIVEWAY
8- FIBER EXPANSION JOINTS SHALL ALSO BE PLACED BETWEEN DRIVEWAY AND BACK OF SIDEWALK.

<table>
<thead>
<tr>
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<th>ROAD TYPE</th>
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<tbody>
<tr>
<td></td>
<td>LOCAL</td>
</tr>
<tr>
<td>WIDTH</td>
<td>4'</td>
</tr>
<tr>
<td>SCORE JOINT</td>
<td>4'</td>
</tr>
<tr>
<td>SPACING</td>
<td></td>
</tr>
<tr>
<td>EXPANSION JOINT</td>
<td>20'</td>
</tr>
<tr>
<td>SPACING</td>
<td></td>
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NOTES:
1- POUR CURB & GUTTER SEPARATELY FROM RAMP SIDEWALK.
2- RAMP SHALL BE LOCATED AT MID-POINT OF CURB RETURN UNLESS OTHERWISE APPROVED.
3- MAXIMUM RAMP SLOPE IS 12:1.
4- RAMP SHALL HAVE A ROUGH BROOM FINISH TRANSVERSE TO RAMP OF THE RAMP.
5- RAMP SHOWN IS FOR 8'-30'-7 CURB & GUTTER ONLY—ADJUST OTHERS AS NECESSARY TO MEET MAXIMUM ALLOWABLE SLOPE.
6- LOCATE DETECTABLE WARNINGS SO THAT THE EDGE NEAREST TO THE CURB LINE OR OTHER POTENTIAL HAZARD IS 6 TO 8 INCHES FROM THE CURB LINE OR OTHER POTENTIAL HAZARD. PROVIDE 2'-9" MINIMUM WIDTH AND LENGTH EQUAL TO THE WIDTH OF THE RAMP. SEE FIGURE #3 FOR TRUNCATED DOMES SIZE AND SPACING DIMENSION DETAILS.
7- PROVIDE DETECTABLE WARNING EDGE LINE TO ALIGN WITH PED RAMP. DETECTABLE WARNING PANEL MAY NEED TO BE CUT GRIND EDGE OF ANY CUT TRUNCATED TO 45°.
8- LANDINGS MUST BE A MINIMUM OF 36" WITH A 50:1 MAX.
9- FOR RAMP WITH NO LANDING, FLARES MUST BE 12:1 MAX.
10- CURB CUT MUST BE 12:1 MAX.
11- ALL RAMPS MUST COMPLY WITH THE ADA ACT.
CONCRETE ABUTS
CLEAN CONCRETE
NO RIDGE (TYPICAL OF ALL JOINTS)
COLD JOINT
EXPANSION JOINT
FORM PLATE JOINT
SEALER APPLIED UNDER PRESSURE
SILICONE OR URETHANE JOINT
1/8" MIN.
3/16" MAX
3/16" MIN
2" MIN.
1/2"
R = 3/8" (TYPICAL)
R = 3/8" (TYPICAL)
R = 3/8" (TYPICAL)

SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

REVISIONS
DATE DESCRIPTION BY

STANDARD DWG. NO.
122 1 OF 1

APPROVED:
DATE: OCT 2008 BY: TE

STANDARD CONCRETE JOINT DETAILS
TYPICAL SECTION

NOTE: TRAIL TO MEET AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (ASHTO) "GUIDE FOR DEVELOPMENT OF BICYCLE FACILITIES" DESIGN STANDARDS.
**MARK LOCAL COLLECTOR ARTERIAL DIMENSIONS**

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<th>LOCAL</th>
<th>COLLECTOR</th>
<th>ARTERIAL</th>
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<tbody>
<tr>
<td>A</td>
<td>50'</td>
<td>60'</td>
<td>80'</td>
</tr>
<tr>
<td>B</td>
<td>1'</td>
<td>0.5'</td>
<td>0'</td>
</tr>
<tr>
<td>C</td>
<td>4'</td>
<td>5'</td>
<td>5'+</td>
</tr>
<tr>
<td>D</td>
<td>17.5'</td>
<td>23.0'</td>
<td>32.5'</td>
</tr>
<tr>
<td>E(MIN)</td>
<td>2.5&quot;</td>
<td>3&quot;</td>
<td>3.5&quot;</td>
</tr>
<tr>
<td>F</td>
<td>SEE STANDARD SPECIFICATIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>4&quot; FOR SIDEWALK, 6&quot; FOR DRIVEWAY APRONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>4&quot; UNDER SIDEWALKS, 6&quot; UNDER DRIVEWAYS</td>
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**NOTES:**

1— MAXIMUM ALLOWABLE DIFFERENCE IN CURB ELEVATION SHALL BE 12 INCHES AND MUST HAVE CITY ENGINEER APPROVAL PRIOR TO ITS USE.

2— FOR ROADS IN OR SERVING INDUSTRIAL AREAS, ASPHALT AND BASE THICKNESS SHALL BE INCREASED ACCORDING TO PROVISIONS FOR HEAVY TRUCK TRAFFIC.

3— MINIMUM ASPHALT THICKNESS IS SHOWN. THICKNESS SHALL BE BASED UPON ACTUAL ENGINEERING ANALYSIS, BUT IN NO CASE SHALL IT BE LESS THAN THE MINIMUM.
NOTES:
1) SHOULDER WIDTH & SLOPES WILL VARY FOR WIDER RIGHT-OF-WAY WIDTH.
2) FOR ROADWAY STRUCTURAL THICKNESS USE ROAD CROSS SECTION STANDARD IN STANDARD SPECIFICATIONS.
3) AREA BETWEEN EDGE OF ASPHALT AND PROPERTY LINE SHALL NOT BE PAVED EXCEPT AT DRIVES.
4) ALL DRAINAGE MUST SLOPE AWAY FROM PAVEMENT EDGE. DO NOT CHANNEL WATER ALONG ROADWAY EDGE.
5) OTHER EROSION CONTROL MATERIALS MAY BE USED UPON APPROVAL OF THE CITY ENGINEER.
6) ROADWAYS WITH RIGHT-OF-WAY WIDTHS GREATER THAN 66' (i.e., MAJOR COLLECTORS & HIGHER) SHALL COMPLY WITH THE CITY STANDARD STREET CROSS SECTIONS UNLESS OTHERWISE APPROVED.
7) 10' MINIMUM WIDE UTILITY EASEMENT REQUIRED OUTSIDE OF RIGHT OF WAY, BOTH SIDES OF STREET.
RESIDENTIAL ACCESS - A

CONDITIONS
1. PROPERTY OWNERS TO MAINTAIN LANDSCAPE STRIP.
2. CITY TO MAINTAIN SIDEWALK.
3. A 20.00' SETBACK FROM SIDEWALK TO GARAGE WILL NEED TO BE REQUIRED.
RESIDENTIAL ACCESS - B

CONDITIONS:
1. Property owners to maintain landscape strip.
2. City to maintain sidewalk.
3. A 20.00' setback from sidewalk to garage will need to be required.
UNTREATED ROAD BASE
THICKNESS AS REQUIRED
(MIN 8") COMPACTED
TO 95%.

6' CROSS SECTION

CURB AND GUTTER
WARP SURFACE TO
MEET FLOWLINE AND
GUTTER GRADES

NOTE:
1- FOR USE ON RESIDENTIAL & COMMERCIAL STREETS.
2- CROSS GUTTERS ARE USED AT INTERSECTIONS
ONLY UNLESS OTHERWISE APPROVED.
3- CROSS GUTTER SHALL CROSS THE MINOR
STREET.
4- ALL REINFORCING STEEL SHALL HAVE 2-INCH
MINIMUM CLEAR COVER. SUPPORT CHAIRS, BLOCKS
OR OTHER APPROVED EQUAL SHALL BE USED TO
RAISE STEEL OFF GROUND.
5- REINFORCING TO EXTEND TO LIMITS OF
CROSS GUTTER.
6- ALL REINFORCING STEEL SHALL BE GRADE
60 ASTM A 615.

REINFORCING DETAIL
SECTION AT DRIVEWAY C

NOTES:
1- ALL PIPE AND INSTALLATION TO MEET CITY STANDARDS.
2- CULVERT TO HAVE A MINIMUM SLOPE OF 0.5%.
3- DO NOT PAVE BETWEEN EDGE OF ASPHALT AND DRAINAGE DITCH EXCEPT AT DRIVEWAY.

12" MIN. DIA. DRAINAGE CULVERT

PLAN VIEW
PROPERTY INSTALL ASPHALT, CONCRETE OR MARK SECTION-A + - AS REQUIRED. INSTALL STANDARD ASPHALT & ROADBASE CITY OTHER TO CITY STANDARDS.

CROWN ROAD A

LC + - 2 ASPHALT (VARIES) 5'-0" LC DRAINAGE SWALE 5'-0"

PRIVATE DRIVEWAY OR LANDSCAPE "D"

NOTE: 1- DRIVEWAY SHALL NOT RESTRICT THE FLOW OF DRAINAGE WATER 2- COLD JOINT REQUIRED AT PROPERTY LINE. 3- DO NOT PAVE BETWEEN NEW EDGE OF ASPHALT AND DRAINAGE CENTERLINE EXCEPT AT DRIVEWAY. 4- 45° ANGLE MAY REPLACE RADIUS.

NEW EDGE OF ASPHALT

MAINTAIN DRAINAGE DO NOT FORCE TO EDGE OF ASPHALT

COLD JOINT AT PROPERTY LINE

SEE NOTE #4

ROADWAY WIDTH

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<tr>
<th>MARK</th>
<th>50'</th>
<th>60'</th>
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<tbody>
<tr>
<td>A</td>
<td>VARIES</td>
<td>VARIES</td>
</tr>
<tr>
<td>B(MIN.)</td>
<td>A-6&quot;</td>
<td>A-7&quot;</td>
</tr>
<tr>
<td>C</td>
<td>A+1&quot;</td>
<td>A+1&quot;</td>
</tr>
<tr>
<td>D</td>
<td>20'</td>
<td>25'</td>
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NEW ASPHALT AS REQUIRED

EXISTING EDGE OF ASPHALT

SAW CUT EXISTING EDGE

plane VIEW

PRIVATE DRIVEWAY

INSTALL ASPHALT, CONCRETE OR OTHER APPROVED HARD SURFACE TO CITY STANDARDS.

INSTALL CITY STANDARD ASPHALT & ROADBASE AS REQUIRED. MATCH EXISTING ROAD SLOPE.

TACK COAT

EDGE OF EXISTING ASPHALT (VARIES)

DRIVEWAY SWALE 5'-0"

EDGE OF ASPHALT

PROPERTY LINE

CROWN "D"

2%±

SANTA CLARA PUBLIC SERVICES DEPARTMENT

DRIVEWAY ACCESS

WITHOUT CURBING (50' & 60' RIGHT OF WAY)

REVISIONS

DATE DESCRIPTION BY

STANDARD DWG. NO. 153 1 OF 1

APPROVED:

DATE: OCT 2008 BY: TE
Notes:
1. Make circular cut edges as smooth as possible.
2. Concrete surface shall have a medium broom finish.
3. Concrete surface shall be 1/8" - 1/4" lower than the existing road surface.
4. Minimum pipe length is 12" with total monument base depth of 30" - 36".
5. Circular asphalt cuts only. (No hexagonal or square cuts)
6. Land surveyor license number shall be stamped in the brass monument. (Min. size 1/4 letters)
7. Dimensions shown for brass marker are the minimum.
8. See city surveyor for list of commonly used abbreviations.

Abbreviations, see Note #7:
- L.S. XXXX
- Date cap is marked.
- License no. of land surveyor marking cap.
NOTES:

1- TYPE II MONUMENTS TO BE SET AT ALL CENTERLINE CONTROL POINTS NOT OTHERWISE IDENTIFIED BY A TYPE I MONUMENT AND AS REQUIRED BY THE CITY SURVEYOR.

2- THE REGISTERED LAND SURVEYOR'S NUMBER, AND A PUNCH MARK ARE TO APPEAR ON THE SURFACE OF THE CAP.

3- ALUMINUM CAP SHALL BE SET FLUSH WITH SURFACE OF ROAD.

CAP TO BE SECURED WITH PLASTIC INSERT OR EPOXY CONFORMING TO A.S.T.M. C881-78 SPECIFICATIONS.

ALUMINUM CAP (MINIMUM 1" DIAMETER) TO BE SET BY REGISTERED LAND SURVEYOR).

5/8" MINIMUM DIAMETER REBAR
18" MINIMUM LENGTH

TYPE II MONUMENT
1. ALL EXCAVATIONS WITHIN PUBLIC RIGHT-OF-WAY REQUIRE AN ENCROachment PERMIT FROM THE CITY ENCROACHMENT OFFICER.

2. MINIMUM THICKNESS OF ASPHALT AND BASE SHALL BE AS OUTLINED IN THE ROADDWAY STRUCTURAL REQUIREMENTS. IN NO CASE SHALL THE THICKNESS BE LESS THAN THE EXISTING.

3. FOUNDATION MATERIAL SHALL BE USED WHEN TRENCH BOTTOM IS UNSTABLE.


5. MINIMUM COMPACATION SHALL BE 95% WHEN APPROVED FLOWABLE FILM OR SLURRY IS USED COMPACTION TESTING WILL NOT BE REQUIRED.

6. WHEN MATERIAL UNDER THE 6" OVERCUT SLUFFS OFF OR IS REMOVED, BASE SHALL BE COMPACTED, TO THE BOTTOM LEVEL OF EXISTING ASPHALT. AN ADDITIONAL 6" IN WIDTH OF ASPHALT SHALL BE CUT, REMOVED AND REPLACED AS PART OF THE OVERALL PATCH.

7. WHERE ROAD SECTION HAS A DESIGNED GRANULAR SUB-BASE, IT SHALL BE REPLACED IN KIND OR WITH ROAD BASE GRAVEL.

8. IN GENERAL, STREET SURFACES LESS THAN 24 MONTHS OLD WILL NOT BE CUT IF A CUT MUST BE MADE, ADDITIONAL, STRICTER REQUIREMENTS MAY BE INVOKED, SEE ENCROACHMENT OFFICER.

9. 24 HOUR NOTICE REQUIRED ON ALL INSPECTIONS.

10. ALL TRENCH BACKFILL SHALL MEET MIN. COMPACTION REQUIREMENTS.

11. EXCLUDING EMERGENCY CLOSURES ALL ROAD CLOSURES AND DETOURS REQUIRE 48 HOURS PRIOR NOTICE.

12. 6" BEDDING MATERIAL UNDER PIPE IS REQUIRED IN ROCKY AREAS.

NOTES:

TRENCH BACKFILL AND REPAIR DETAIL

SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

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<th>DATE</th>
<th>DESCRIPTION</th>
<th>BY</th>
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<tr>
<td>APR 2012</td>
<td>MISC. NOTES</td>
<td>M.J.W</td>
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STANDARD DWG. NO. 170 1 OF 1

APPROVED: DATE: OCT 2008 BY: TE
**NOTES:**

1. Manholes, valve boxes and other similar items shall be adjusted to grade after paving is complete.

2. The surface of the adjusted ring shall match the grade of the concrete collar; concrete collar shall be 1/8" to 1/4" lower than asphalt.

3. Asphalt shall be cut in straight vertical lines.

4. Adjustments to grade shall be made with standard rings or extensions or as approved by the city representative.

5. All manholes, valve boxes, and other similar items shall have concrete collar as required unless otherwise approved. Where outside of asphalt, top of collar shall be 8" above grade.

6. 9" thick collars shall be reinforced. 12" thick collars do not require reinforcement.

7. Mark concrete collar on water valve boxes with arrow indicating direction of flow and pipe size.
NOTE:
WATER VALVE COLLARS SHALL BE ENGRAVED WITH A SCHEMATIC OF FITTINGS AND PIPE SIZES.
CONCRETE COLLARS FOR SEWER MANHOLES SHALL BE ETCHED WITH FLOW DIRECTION AND SIZE OF PIPE.
NOTE:
IRRIGATION VALVE COLLARS SHALL BE ENGRAVED WITH A SCHEMATIC OF FITTINGS AND PIPE SIZES
SECTION VIEW

NOTES:
1- USE BICYCLE SAFE GRATES ONLY.
2- REINFORCEMENT SHALL MEET HS-20 LOADING REQUIREMENTS.
3- CONCRETE TO BE 4,000 PSI MIN.
4- 2" COVER OVER REINFORCING MIN.
5- REBAR SHALL BE 60 KSI MIN.
6- REBAR DESIGN SHALL BE SUBMITTED MEETING HS20 TRAFFIC LOAD RATING.

SANTA CLARA PUBLIC SERVICES DEPARTMENT

CURB INLET SINGLE CATCH BASIN BOX

REVISIONS

DATE DESCRIPTION BY

STANDARD DWG. NO.

200A 1 OF 4

APPROVED:

DATE: APR 2016 | BY: TO
SANTA CLARA PUBLIC SERVICES DEPARTMENT

CURB INLET DOUBLE CATCH BASIN BOX

NOTES:

1. USE BICYCLE SAFE GRATES ONLY.
2. REINFORCEMENT SHALL MEET HS-20 LOADING REQUIREMENTS.
3. CONCRETE TO BE 4,000 PSI MIN.
4. 2" COVER OVER REINFORCING MIN.
5. REBAR SHALL BE 60 KSI MIN.
6. REBAR DESIGN SHALL BE SUBMITTED MEETING HS20 TRAFFIC LOAD RATINGS.
FRAME PLAN

SECTION A-A

STEEL SUPPORT (40" LONG)

NOTES:
1- AS AVAILABLE FROM D&L SUPPLY - OR EQUAL.
2- ALL COMPONENTS SHALL BE HOT DIPPED GALVANIZED.
SECTION A-A

STEEL SUPPORT (76" LONG)

NOTES:
1- AS AVAILABLE FROM D&L SUPPLY - OR EQUAL.
2- ALL COMPONENTS SHALL BE HOT DIPPED GALVANIZED.
GRATE PLAN

SECTION

NOTES:

1- AS AVAILABLE FROM D&L SUPPLY – OR EQUAL.
2- ALL COMPONENTS SHALL BE HOT DIPPED GALVANIZED.
NOTES:
1- FINISH SHALL BE ONE COAT PRIMER.
   ONE FINISH COAT, LIGHT GRAY ENAMEL
2- LID SHALL BE ALL WEELC CONSTRUCTION.
3- FOR USE IN NON-TRAFFIC INSTALLATIONS.
4- LID SHALL BE DIAMOND PLATE STEEL

SECTION A-A

1-1/2" X 1/2" THICK FLAT STOCK
NOTE: STEEL LID TO BE FLUSH WITH CONCRETE SIDEWALK.

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

DETAIL B

DETAIL C

DIMENSION TABLE

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REQUIRES ENGINEERED DESIGN FOR LID & BOX.

NOTES:
1. ALL REBAR SHALL HAVE 2" MN. CLEAR.
2. STEEL LID SHALL BE FLUSH WITH CONCRETE.
3. BOX DIMENSIONS BASED UPON INLET PIPE SIZE "D".
4. ALL STEEL SHALL BE GRADE 60.
5. LID FOR CLEANOUT BOX SHALL HAVE
   1-4 ON "X" PLATE FOR LIFTING LID MAY BE SMOOTH OR DIAMOND PLATE STEEL
6. SIDEWALK LID SHALL BE DIAMOND PLATE STEEL
7. STANDARD REBAR SHALL NOT BE USED FOR STEEL ANCHORS.
8. ALL EXTERIOR EDGES OF CLEANOUT BOX TO HAVE 3/4" TRIM CHAMFER (NOT SHOWN IN DETAILS FOR CLARITY).
9. STEEL LIDS AND SEAT TO BE PAINTED GREY IN ACCORDANCE WITH CITY STANDARDS.

SANTA CLARA PUBLIC SERVICES DEPARTMENT

SIDEWALK DRAINAGE STRUCTURE
NOT ALLOWED
ROADWAY

NOTES:
1. BERM SHALL INCLUDE ø2" DRAIN PIPE. PIPE MUST EXTEND BEYOND THE OUTER FACE OF THE BERM.
2. EACH LOT MUST CONTAIN ITS OWN STORM WATER.
3. CROSS LOT DRAINAGE SHALL NOT BE ALLOWED.

SANTA CLARA PUBLIC SERVICES DEPARTMENT

TEMPORARY ON-SITE DRAINAGE RETENTION BERM
FOR UNIMPROVED SUBDIVISION LOTS

DATE: OCT 2008  BY: TE
**FEATURING:**

- 12" TYP.  
- MANHOLE STEPS REQUIRED
- 36"  
- PORTION OF PIPE
- 15" MIN.
- VARIES  
- 6" MAX. (TYP.)
- FINISHED GRADE
- 6" MIN.
- GRADE RINGS
- MANHOLE COVER AND FRAME
- E CCENTRIC CONE REQUIRED

**NOTES:**

1- SEE DRAWING NO. 220 FOR JUNCTION AND DROP MANHOLE DETAILS AND MANHOLE SIZES.  
2- PRECAST BASE MAY BE USED, BUT REQUIRES ADVANCED APPROVAL.  
3- IF OPTIONAL JOINT IS USED, ALL MANHOLE SECTIONS SHALL BE CLEARLY MARKED ON THE INSIDE AS TO THE MANUFACTURER AND TYPE OF JOINT BEING USED.

**SECTION THRU CENTER**

- UNDISTURBED EARTH WHERE NATURAL GROUND IS UNSTABLE USE 12" MIN. GRAVEL BASE.
- Poured in place base shall be class "A" concrete.

- Shaft rings (1', 2', 3' or 4' lengths)
- 6" MINIMUM

**REVISIONS**

- DATE: OCT 2008  
- APPROVED: TE
NOTES:
1- FOR SEWER PIPES LESS THAN 12-INCH DIAMETER USE 4-FOOT DIAMETER MANHOLE.
2- FOR SEWER PIPES WITH 12-INCH OR GREATER DIAMETER USE 5-FOOT DIAMETER MANHOLE.
3- WHEN THE SUM OF ALL PIPE SIZES CONNECTED TO THE MANHOLE TOTALS 24 INCHES OR GREATER USE A 5-FOOT DIAMETER MANHOLE.
4- WHEN SEWER DEPTH IS 12 FEET OR GREATER USE A 5-FOOT DIAMETER MANHOLE.
5- SEE DRAWING NO. __________ FOR ADDITIONAL DETAILS.
6- VERTICAL DROP PIPE AND FITTINGS SHALL BE THE SAME SIZE AS THE INCOMING SEWER PIPE.
NOTES:

1- INSTALL STEPS PER MANUFACTURERS RECOMMENDATIONS.

2- STEPS SHALL BE ALIGNED VERTICALLY.
NOTES:
1- MATERIAL SHALL BE CAST IRON ASTM A48, CL30
ABS SCHEDULE 40 OR CAST IRON SOIL PIPE REQUIRED UNDER HOUSE TO A POINT 2' FROM HOUSE. (SEE APPLICABLE CODES.)

NOTES:
1- PROPERTY LINE AND OUTSIDE HOUSE CLEANOUTS ARE REQUIRED AS SHOWN.
2- CLEANOUT REQUIRED AT 100' MAX. SPACING (STRAIGHT RUNS) AND FOR EACH AGGREGATE CHANGE IN DIRECTION, WHERE TOTAL AGGREGATE CHANGE EXCEEDS 135 DEGREES.
3- ALL LATERALS CUT INTO EXISTING MAINS SHALL BE ADAPTED WITH SADDLES. WHERE SADDLES ARE NOT WATER TIGHT, A CONCRETE ENVELOPE SHALL BE REQUIRED. LATERALS SHALL NOT PROTRUDE INTO SEWER MAINS.
4- ALL CLEANOUTS LOCATED IN DRIVEWAYS OR OTHER AREAS SUBJECT TO VEHICLE TRAFFIC SHALL HAVE A CAST IRON RING AND COVER OR OTHER APPROVED PROTECTIVE DEVICE.
5- FOR COMMERCIAL APPLICATION CONTACT WASTE WATER DEPARTMENT.

SANTA CLARA PUBLIC SERVICES DEPARTMENT

TYPICAL RESIDENTIAL SEWER CONNECTION DETAILS

REVISIONS
DATE DESCRIPTION BY

STANDARD DWG. NO. 230 1 OF 1
APPROVED:
DATE: OCT 2008 BY: TE
STRAP CLAMP
OF SEWER LATERAL,
OPENING EQUAL TO O.D.

SELECT BEDDING 1" MINUS
12"
SMOOTH INSIDE
P.V.C. SOLVENT WELD

SELECT BACKFILL

STAINLESS STEEL
STRAP CLAMP

CUT SEWER MAIN WITH
OPENING EQUAL TO O.D.
OF SEWER LATERAL.

WYE SADDLE

PROPERTY LINE
5' MIN.
10' MAX.

CAP PIPE

CLEANOUT

45° ELBOW
(LONG SWEEP)

45° WYE

DEPTH VARIES

NOTES:

1- BACKFILL AND COMPACTION
REQUIREMENTS SHALL CONFORM
TO CITY STANDARD SPECIFICATIONS.

2- 4" DIAMETER- 2% MINIMUM.
6" DIAMETER- 1% MINIMUM.

3- CLEANOUT DIAMETER TO BE
SAME SIZE AS LATERAL.

4- INSTALL WYE SADDLE PER
MANUFACTURER'S RECOMMENDATIONS.
DURING INITIAL CONSTRUCTION.
INSTALL MOLDED "WYE".
SELECT BEDDING 1" MINUS.
12" ELBOW 2 SLOPE MIN.
WHERE SEWER LATERAL CROSS CURB LINE.
NEATLY INSCRIBE "S" IN CURB TO IDENTIFY WHERE SEWER LATERAL CROSSES CURB LINE.
DEPTH VARIES.
45° ELBOW (LONG SWEEP)
FUTURE SERVICE CONNECTION.
TEMPORARY PLUG OR CAP DURING INITIAL CONSTRUCTION.
(AM TIGHT)
45° WYE
FUTURE SERVICE CONNECTION.
INSTALL MOLDED "WYE" DURING INITIAL CONSTRUCTION.
NEW PVC PIPE-
FLOW
FLOW
NEW PVC PIPE-
FLOW
PROPERTY LINE
5' MIN. 10' MAX.
EXTEND PIPE CLEANOUT 2' ABOVE TOP OF CURB OR FINISHED GROUND (WHICH EVER IS HIGHER) AND CAP AND GLUE END.
2% SLOPE MIN. (SEE NOTE #3)
12" ELBOW

NOTES:
1- DURING INITIAL SEWER INSTALLATION CLEANOUT SHALL EXTEND AS SHOWN. AFTER HOME CONSTRUCTION CLEANOUT SHALL BE ADJUSTED TO GRADE.
2- BACKFILL AND COMPACTION REQUIREMENTS SHALL CONFORM TO CITY STANDARD SPECIFICATIONS.
3- 4" DIAMETER - 2% MINIMUM.
6" DIAMETER - 1% MINIMUM.
4- CLEANOUT DIAMETER TO BE SAME SIZE AS LATERAL.
5- BRASS PLUG MARKED WITH "S" PLACED IN TOP OF CURB MAY BE USED IN LIEU OF INSCRIBED "S" IN FACE.
NOTES:

1. METER BOX COLLAR SHALL NOT BE DOWELED INTO SIDEWALK.

2. IN DRIVEWAYS, USE M-20 RATED BOX AND LID.

3. LOCATE METER BOX OUTSIDE OF DRIVEWAY WHERE POSSIBLE.

4. A "W" SHALL BE SCRIBED IN THE TOP OF CURB.
NOTE:
1. Do not dowel meter box collar into sidewalk.

PLAN VIEW W/ SIDEWALK

PLAN VIEW NO SIDEWALK
NOTES:

1. In general, hydrants shall be placed a minimum of 1' behind sidewalk. Where a planter strip is used, hydrant may be placed in center provided width of planter is 4' or greater.

2. Install tracer wire from shut-off valve to hydrant.
INSTALL VALVE BOX & LID TO GRADE OVER VALVE
8" OR 6" FLANGED X M.J. RESILIENT SEAT GATE VALVES
MECHANICAL JOINT 8" OR 6" C-900 PVC OR CLASS 52 DUCTILE IRON WATER LINE
BELL & SPIGOT CAP OR 6" FIRE HYDRANT
STAINLESS STEEL TAPPING SADDLE (SAME DIAMETER AS WATER MAIN.)
14 GAUGE THIN WIRE
LENGTH VARIES

8" OR 6" WATER LATERAL (CONNECTION TO EXISTING LINE)

SANTA CLARA PUBLIC SERVICES DEPARTMENT

REVISIONS
DATE DESCRIPTION BY

STANDARD DWG. NO. 304 1 OF 1
Approved:
DATE: OCT 2008 | BY: TE
NOTES:
1. ALL TRENCH EXCAVATION AND COMPACTION SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS.
2. METER BOX SHALL BE RATED FOR H-20 LOADING IN TRAFFIC AREAS.
3. A "W" SHALL BE SCRIBED IN THE TOP OF CURB.
4. FOR SERVICES LARGER THAN 3/4", CONTACT WATER DEPARTMENT.
1. Calculated on 225 lb. test pressure & allowable bearing pressure of 2000 lbs. per square foot.

2. In poor soils special design is required.

3. Concrete shall be class "C" or better.

4. All thrust block bearing faces shall be poured against undisturbed soil or approved compacted backfill.

5. Prior approval from the water department required for use of concrete thrust blocks.

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**Note:**
- **1**  Revisions
- **2**  Date
- **3**  Description
- **4**  By
- **5**  Standard Dwg. No.

**Santa Clara Public Services Department**

**Water Line Thrust Block Details**

**Approval:**
- **Date:** Oct 2008
- **By:** TE
1. Restraining the two mechanical joints on the run sides of the tee, there should be a full 20’ length of pipe installed on each side of the run.

2. All joints within the length ‘L’ on the branch must be restrained. Use retainer gland at mechanical joints and harness on push-on pipe per City Specification.

3. For test pressures and laying conditions see Section on General Notes for use of restrained joint lengths.

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* - For this condition need only restrain the branch outlet of the tee.
**RESTRAINED LENGTHS, "L" (IN FEET)**

1. All joints within length "L" must be restrained. Use retainer gland at mechanical joints and harness with push-on pipe per city specification.

2. For test pressures and laying conditions, see section on general notes for use of restrained joint lengths.

**SIZE DIAMETER**

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**RESTRAINED LENGTHS, "L" (IN FEET)**

**VERTICAL DOWN BEND**

1. All joints within length "L" must be restrained. Use retainer gland at mechanical joints and harness with push-on pipe per city specification.

2. For test pressures and laying conditions, see section on general notes for use of restrained joint lengths.

**SIZE DIAMETER**

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<th>SIZE</th>
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1. RESTRAIN THE TWO MECHANICAL JOINTS ON THE RUN SIDES OF THE TEE. THERE SHOULD BE A FULL 18’ LENGTH OF PIPE INSTALLED ON EACH SIDE OF THE RUN.

2. ALL JOINTS WITHIN THE LENGTH ‘L’ ON THE BRANCH MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS ON PUSH-ON PIPE PER CITY SPECIFICATION.

3. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION ON GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.

** - FOR THIS CONDITION NEED ONLY RESTRAIN THE BRANCH OUTLET OF THE TEE.

### Restraint Lengths, ‘L’ (in Feet)

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**SANTA CLARA PUBLIC SERVICES DEPARTMENT**

**STANDARD DWG. NO.**

309

1 OF 1

**APPROVED:**

DATE: OCT 2008

BY: TE
1. ALL JOINTS WITHIN LENGTH "L" MUST BE RESTRAINED. USE RETAINER GLAND AT MECHANICAL JOINTS AND HARNESS WITH PUSH-ON PIPE PER CITY SPECIFICATION.

2. FOR TEST PRESSURES AND LAYING CONDITIONS SEE SECTION ON GENERAL NOTES FOR USE OF RESTRAINED JOINT LENGTHS.

RESTRAINED LENGTHS, "L" (IN FEET)

<table>
<thead>
<tr>
<th>BEND ANGLE</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
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<th>16</th>
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<tbody>
<tr>
<td>11.25</td>
<td>3</td>
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<td>4</td>
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<td>62</td>
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<td>28</td>
<td>33</td>
<td>38</td>
<td>43</td>
<td>53</td>
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</table>
1. All joints within length ‘L’ must be restrained. Use retainer gland at mechanical joints and harness with push-on pipe per city specification.

2. For test pressures and laying conditions see section on general notes for use of restrained joint lengths.

Pipe size in inches

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<td>71</td>
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</table>

Restained lengths, ‘L’ (in feet)

Restained joint lengths usage general notes

Restained length calculations are based on the following design typically used with backfill in St. George.

1. Three (3) feet minimum depth of cover.
2. A safety factor of 1.5
3. Soil type sandy clay
4. Type 5 trench compaction from four (4) inches minimum under the pipe to the center line of the pipe, and compacted granular or selected material from the center line of the pipe to the top of the pipe (90 percent standard proctor density, AASHTO T-99).
5. 200 PSI test pressures for four (4) through sixteen (16) inch size pipes.
6. An inline valve is considered a dead end.

If actual conditions differ from those listed above or the required restrained length cannot be met, the restrained joint length shall be determined by the city engineer.
1. All joints within length ‘L’ must be restrained. Use retainer gland at mechanical joints and harness with push-on pipe per city specification.

2. For test pressures and laying conditions see section on general notes for use of restrained joint lengths.

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<td>44</td>
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<td>82</td>
<td>99</td>
<td>118</td>
<td>135</td>
<td>153</td>
<td>169</td>
<td>187</td>
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REstrained Lengths, ‘L’ (in feet)

Restrained joint lengths usage general notes

Restrained length calculations are based on the following design typically used with backfill in St. George.

1. Three (3) feet minimum depth of cover.
2. A safety factor of 1.5
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5. 200 psi test pressures for four (4) through sixteen (16) inch size pipes.
6. An inline valve is considered a dead end.

If actual conditions differ from those listed above or the required restrained length cannot be met, the restrained joint length shall be determined by the city Engineer.
NOTES:

1. ALL AIR VALVES SHALL BE INSTALLED VERTICALLY PLUMB.

2. PIPE SIZES SHOWN FOR 2" AIR/VAC VALVE. PIPING TO CORRESPOND WITH ACTUAL AIR/VAC VALVE SIZE.

3. VALVES 2" AND GREATER SHALL BE GATE VALVES. VALVES LESS THAN 2" SHALL BE BRASS BALL VALVES.
NOTES:

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3. SHOWN FOR P.E. PIPE. MAY ALSO USE DIP BETWEEN GATE VALVES.
NOTES:

1. ALL FITTINGS ARE TO BE BRASS EXCEPT AS NOTED.
TYPICAL WATER & SEWER PIPE CROSSING

NOTES:
1. PIPE SEPARATION SHALL ADHERE TO SANTA CLARA CITY
   CONSTRUCTION DESIGN STANDARDS 3.5.6 AND 3.6.8 AND
   APPLICABLE SECTIONS OF THE UTAH ADMINISTRATIVE
   CODE. (SEE R309-550-7).
2. DISTANCES ARE MEASURED BETWEEN NEAREST OUTSIDES
   OF PIPES.

TYPICAL WATER & SEWER PIPE SEPARATION

NOTES:
1. PIPE SEPARATION SHALL ADHERE TO SANTA CLARA CITY
   CONSTRUCTION DESIGN STANDARDS 3.5.6 AND 3.6.8 AND
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   CODE. (SEE R309-550-7).
2. DISTANCES ARE MEASURED BETWEEN NEAREST OUTSIDES
   OF PIPES.
UNDERWATER CROSSING NOTES:

1. ROCK SHALL BE BASALT OR APPROVED EQUIVALENT IN DENSITY.
2. WHEN HDPE PIPE IS USED FOR CROSSING, THE FLEX COUPLING WITH JOINT HARNES AS SHOWN ON BOTH SIDES OF THE WATER COURSE ARE NOT REQUIRED.
3. MECHANICAL JOINT RETAINERS OR FIELD LOCK GASKETS REQUIRED ON ALL JOINTS WITHIN THE FLOODPLAIN.

DETAIL – UNDERWATER CROSSING

PRECAST OR CAST IN PLACE CONCRETE MANHOLE STEPS @ 12° O.C. (SEE STD. DWG. #223)

GATE VALVE W/ HAND WHEEL
(SAME SIZE AS PIPELINE)

FLOW

GROUT PIPE PENETRATION, TYP.
60° MANHOLE FLAT BASE
2 #5 CONTINUOUS REBAR

SAMPLING MANHOLE NOTES:

1. PATCH ALL JOINTS, OPENINGS, AROUND PIPES, AND OTHER VOIDS WITH NON-SHRINK GROUT.
2. PAINT ALL NON-GALVANIZED EXPOSED PIPE.
3. SAMPLING MANHOLES SHALL BE LOCATED ON BOTH SIDES OF THE UNDERWATER CROSSING AT LOCATIONS NOT SUBJECT TO HIGH GROUND WATER OR FLOODING.

DETAIL – SAMPLING MANHOLE
NOTES:

1. OPTIONS 1 OR 2 SHOULD BE SELECTED DEPENDENT ON THE SPECIFIC SITUATION OF THE CROSSING.

2. EXPANSION JOINTS SUCH AS EBAA IRON EX-TEND SHALL BE UTILIZED TO PROVIDE LATERAL MOVEMENT.

3. PIPE SHALL BE INSULATED UNTIL THREE FOOT DEPTH MINIMUM TO TOP OF PIPE IS ACHIEVED.

4. MECHANICAL JOINT RESTRAINTS OR FIELD LOCK GASKETS REQUIRED ON ALL JOINTS WITHIN THE FLOODPLAIN. FIELD LOCK GASKETS REQUIRED ON ALL JOINTS INTEGRAL TO THE ASSEMBLY.

DETAIL – ABOVE WATER CROSSING

NOTES:

1. CASING PIPE DIAMETER, SPACERS, PIPE SUPPORT, AND PIPE HANGER SYSTEM SHALL BE DETERMINED BY PROFESSIONAL ENGINEER AND APPROVED BY CITY.

OPTION 1

OPTION 2
NOTES:

1. THIS DETAIL SHALL BE REQUIRED WHEN NEW OR EXISTING PIPE INSTALLATIONS WILL BE SUBJECT TO DAMAGE ANYTIME IN THE FUTURE DUE TO LACK OF PROPER COVER OR WHEN MINIMUM SEPARATION BETWEEN CROSSING OR ADJACENT UTILITIES CAN NOT BE MAINTAINED, AS DETERMINED BY THE ENGINEER.

2. FOR PIPE OVER 18" DIA., WOOD, METAL, OR GYPSUM BOARD FORMS MUST BE USED TO FORM THE SIDES OF THE ENCASEMENT. GYPSUM BOARD FORMS MAY BE LEFT IN THE GROUND BELOW THE TOP OF THE ENCASEMENT. THIS SHALL BE OPTIONAL WITH POURING AGAINST TRENCH WALLS FOR ENCASEMENT OF 18" AND SMALLER PIPE.

3. FOR ALL SITUATIONS WHERE SIDE FORMS ARE USED, TRENCH WALLS SHALL BE OVER-EXCAVATED TO ALLOW SUFFICIENT ROOM TO OPERATE PROPER MECHANICAL COMPACTION EQUIPMENT.

4. CONCRETE WHICH SPILLS BEYOND 12" FROM THE SIDES OF THE PIPE FOR ANY REASON SHALL BE REMOVED BACK TO THE PROPER LINE PRIOR TO BACKFILLING.

5. COVER TO BE APPROVED BY ENGINEER.

6. THE CONCRETE ENCASEMENT SHALL BE 3000 PSI CONCRETE WITH A MINIMUM THICKNESS ON ALL SIDES OF 6".
   1) 8" DIA. = .11 C.Y. OF CONCRETE PER LINEAL FT.
   2) 10" DIA. = .12 C.Y. OF CONCRETE PER LINEAL FT.
   3) 12" DIA. = .14 C.Y. OF CONCRETE PER LINEAL FT.
   4) 15" DIA. = .15 C.Y. OF CONCRETE PER LINEAL FT.
1. BACKGROUND SHALL BE GREEN, LEGEND AND LETTERS SHALL BE WHITE.
2. ALL SHEETING SHALL BE HIGH INTENSIRY REFLECTIVE SHEETING.
3. SIGNS SHOULD BE MADE BY THE "REVERSE OUT" PROCESS. NO STICK ON LETTERS. CONTACT CITY SIGN SHOP FOR DETAILS.
4. SIGN BLANK SHALL BE 6061-T6 HEAT TREATED HIGH TENSILE DEGREASED ALUMINUM WITH ALODINE 1200 FINISH. MIN. THICKNESS SHALL BE 0.080".
5. EACH SIGN SHALL CONSIST OF TWO PLATES RIVETED TOGETHER AND MOUNTED AS REQUIRED.
6. SIGNS ON PRIVATE ROADS ARE REQUIRED AND SHOULD MEET SAME SPECIFICATIONS OF STANDARD SIGNS EXCEPT FOR BACKGROUND COLOR.
7. ALL STREETS WITH NAMES SHALL ALSO HAVE THE COORDINATE DESIGNATION ON THE SIGN IN THE APPROPRIATE LOCATION UNLESS OTHERWISE APPROVED.
8. ADDRESS COORDINATOR SHALL BE CONTACTED PRIOR TO MAKING SIGNS TO VERIFY PROPER NAMES AND COORDINATES.
9. ALL LETTERS SHALL BE UPPER CASE. LETTERS AND NUMBERS SHALL CONFORM TO THE HEIGHT, WIDTH, STROKE WIDTH, AND SPACING AS PER THE U.S. DEPT. OF TRANSPORTATION PUBLICATION "STANDARD ALPHABET FOR HIGHWAY SIGNS".

NOTES:

SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

STANDARD STREET SIGN

REVISIONS
DATE DESCRIPTION BY

STANDARD DWG. NO.
400 1 OF 1

APPROVED:
DATE: OCT 2008 BY: TE
1- SIGNS SHALL CONFORM TO CITY STREET SIGN STANDARDS AND SPECIFICATIONS.
2- STANDARD BACKGROUND IS BLUE. LETTERS AND LEGEND SHALL BE WHITE. SHEETING TYPE SHALL BE HIGH INTENSITY.
3- SIGNS MOUNTED ON PUBLIC RIGHT OF WAY SHALL FOLLOW CITY INSTALLATION AND PLACEMENT STANDARDS. SAID STANDARDS ARE RECOMMENDED FOR INTERIOR SIGNS.
4- WHEN PROJECT IS ADDRESSED SIMILAR TO A SUBDIVISION WITH PUBLIC STREETS, THE ABOVE INTERIOR DIRECTIONAL SIGN IS NOT USED. SEE CITY ADDRESS COORDINATOR.
5- PROJECT LOGO, IF USED, MUST BE APPROVED BY THE CITY ADDRESS COORDINATOR PRIOR TO USE.

NOTES:

MAIN ENTRANCE STREET SIGN

INTERIOR DIRECTIONAL SIGN

SANTA CLARA CITY PUBLIC SERVICES DEPARTMENT

PRIVATE STREET SIGNS

PROJECT LOGO
8" (OPTIONAL)

MIRAGE ESTATES
UNITS #1-27
35-43 & 46
24" (MIN.)

COORDINATE DESIGNATION ONLY

MIRAGE ESTATES
PRIVATE ST: 1230 W

PROJECT LOGO
8" (OPTIONAL)

6" 3/4" RADIUS (TYPICAL)

3" MIN. 42" MAX.

35-43 & 46

INTERIOR DIRECTIONAL SIGN

MIRAGE ESTATES
UNITS #1-27

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5- PROJECT LOGO, IF USED, MUST BE APPROVED BY THE CITY ADDRESS COORDINATOR PRIOR TO USE.
1- SEE DRAWINGS #400 & 401 FOR SIGN SPECIFICATIONS.
2- SIGNS ON PRIVATE ROADS WHEN REQUIRED BY THE CITY ENGINEER SHALL MEET ALL SPECIFICATIONS OF STANDARD SIGNS EXCEPT BACKGROUND SHALL BE BLUE.
3- ADDRESS COORDINATOR MUST BE CONTACTED PRIOR TO MAKING SIGNS TO VERIFY PROPER NAMES AND COORDINATES.
4- ALL STREETS WITH NAMES WILL ALSO HAVE COORDINATES DESIGNATED ON SIGN.

STANDARD ST. GEORGE CITY SIGN

THIS FORM TO BE COMPLETED BY THE CITY ADDRESS COORDINATOR PRIOR TO ORDERING OF STREET SIGNS BY DEVELOPER.
1- SIGNS SHALL BE PLACED IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

2- STREET NAME SIGNS SHALL BE REQUIRED ON ALL CITY STREETS.

3- ALL POST COMPONENTS SHALL BE GALVANIZED STEEL.

4- STREET NAME SIGNS PLACED ABOVE STOP SIGN SHALL BE AS SHOWN IN DRAWING 110 (2 OF 2).

5- WHERE PLANTER STRIP LIES BETWEEN SIDEWALK AND CURB, SIGNS SHALL BE INSTALLED IN PLANTER STRIP AS PER M.U.T.C.D.

6- SIGNS SHALL BE PLACED TO BE CLEARLY VISABLE. ALL OBSTRUCTIONS SUCH AS TREES, POLES, OTHER SIGNS, ETC, SHALL BE AVOIDED.
INSTALLATION METHOD A

- Rivet sign blades together at all four corners (typ.).
- Attach street name signs to post w/ 3/8" dia. drive rivets, both sides (typ.).
- 30" stop sign may be placed under street sign. Larger sign will require 14' pole.

INSTALLATION METHOD B

- 2" sq. post (3/32" min. wall thickness).
- 2-1/2" square anchor (2-1/8" I.D.).
- 3/8" dia. bolt 16".

NOTES:
1. Post type shall be "Quick Punch".
2. Anchors shall have 3/16" min. wall thickness.
3. All posts & anchors shall be galvanized steel.
4. Cap bracket used on approval only. Contact City Street Department for type & size.

SIGN POST & MOUNTING DETAILS

- 3/8" dia. bolt 16".
- 2-1/2" square anchor (2-1/8" I.D.).
- 3/8" dia. bolt.
- 2-1/2" square anchor (2-1/8" I.D.).

SIGN ANCHOR DETAIL

- .390" diameter hole 4 required a.s.
- 1-1/2" 1-1/4"
- 3/16" thick wall

MARK DIM. TOLERANCE
D 2-1/8" +1/16", -0"
L 30" ±1/2"
W 2-1/2" ±1/64"
TYPICAL URBAN INSTALLATION

12' TO 16'
PLACE POST DIRECTLY
BEHIND SIDEWALK

10' MAX.

TYPICAL RURAL INSTALLATION

12' TO 16'

EDGE OF ASPHALT

NOTES:

1- PLACEMENT OF ALL SIGNS TO
CONFORM TO THE MANUAL ON
UNIFORM TRAFFIC CONTROL
DEVICES.

2- IF PLACEMENT STANDARDS
CANNOT BE MET, CONTACT
CITY ENGINEERING DEPARTMENT.

3- IF INSTALLATION ACCORDING
TO STANDARDS CAUSES THE SIGN
TO BE OBSTRUCTED OR ITS
VISIBILITY IMPAIRED IN ANY WAY,
MODIFICATIONS MAY BE NECESSARY.
CALL ENGINEERING DEPT. FOR
ASSISTANCE.