TRIP GENERATION FACTORS

THE FOLLOWING TRIP END FACTORS SHALL BE USED IN DETERMINING THE AVERAGE DAILY TRAFFIC INVOLVED IN STREET DESIGN.

TRIP END: THE ORIGIN OR DESTINATION OF A TRIP. EACH TRIP HAS TWO ENDS. G.S.F.: GROSS SQUARE FEET OF FLOOR AREA.

<table>
<thead>
<tr>
<th>AVERAGE WEEKDAY VEHICLE TRIP ENDS (TE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE FAMILY ____________________________________________</td>
</tr>
<tr>
<td>APARTMENTS _____________________________________________</td>
</tr>
<tr>
<td>CONDOMINUM/PURD __________________________________________</td>
</tr>
<tr>
<td>MOBILE HOME ____________________________________________</td>
</tr>
<tr>
<td>RETIREMENT COMMUNITY ____________________________________</td>
</tr>
<tr>
<td>HOTELS _________________________________________________</td>
</tr>
<tr>
<td>MOTELS _________________________________________________</td>
</tr>
<tr>
<td>CITY PARK ______________________________________________</td>
</tr>
<tr>
<td>GENERAL OFFICE __________________________________________</td>
</tr>
<tr>
<td>MEDICAL OFFICE __________________________________________</td>
</tr>
<tr>
<td>FAST FOOD/DRIVE THRU ____________________________________</td>
</tr>
<tr>
<td>FREE STANDING RETAIL ____________________________________</td>
</tr>
<tr>
<td>SERVICE STATION _________________________________________</td>
</tr>
<tr>
<td>SUPERMARKET ____________________________________________</td>
</tr>
<tr>
<td>CONVENIENCE MARKET w/GAS PUMPS _________________________</td>
</tr>
<tr>
<td>CONVENIENCE MARKET ____________________________________</td>
</tr>
<tr>
<td>INDUSTRIAL/INDUSTRIAL PARK ______________________________</td>
</tr>
<tr>
<td>INDUSTRIAL SERVICE _________________________________</td>
</tr>
<tr>
<td>DAY CARE/PRESCHOOL ____________________________________</td>
</tr>
<tr>
<td>OFFICE PARK ____________________________________________</td>
</tr>
<tr>
<td>SHOPPING CENTER ________________________________________</td>
</tr>
</tbody>
</table>

FOR LAND USES AND/OR DEVELOPMENTS NOT SHOWN ABOVE, CONTACT THE CITY TRAFFIC ENGINEER.

SOURCE: "TRIP GENERATION" AN INFORMATIONAL REPORT, INSTITUTE OF TRANSPORTATION ENGINEERS (6TH EDITION) PERIODIC UPDATE, AND OTHER TRIP GENERATION PUBLICATIONS.

REV. NO. 1  REV. DATE 7/1/92  REV. BY KB
DIGITIZED 1/1/92
DWC. BY RC  SCALE NONE
CK. BY

TRIP GENERATION FACTORS CITY OF STOCKTON
DEPARTMENT OF PUBLIC WORKS

REVISION APPROVED BY CITY ENGINEER
PASO 09/02
DATE: 01/09/02
DRAWING NO. 10
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4" DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT) WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.
7. FIRE CODE REQUIRES AN UNOBSTRUCTED WIDTH OF 20 FT FOR FIRE ACCESS ON ALL PUBLIC AND PRIVATE STREETS. CURB TO CURB WIDTH SHOWN PROVIDES FOR THE FIRE CODE MINIMUM WIDTH AND TWO (2) SEVEN FOOT PARKING LANES. R/W AND ROADWAY WIDTH MAY BE REDUCED WITH THE ELIMINATION OF PARKING LANES, UPON APPROVAL OF THE CITY ENGINEER.
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKEY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4” DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT) WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.

LOCAL STREET
MEDIUM VOLUME RESIDENTIAL
CITY OF STOCKTON
DEPARTMENT OF PUBLIC WORKS

REV. NO.  REV. DATE  REV. BY
DIGITIZED  6/1/2003  

SCALE  NONE

SUPERcedes  11/25/03

DRAWING NO. 11B

REVISION APPROVED BY CITY ENGINEER

PROPERTY LINE

52’ R/W

10’

4’

6’

2%« ———

6”

2%« ———

32’

10’

4’

6’

2%« ———

VERTICAL TYPE CURB AND GUTTER
(SEEN COUNTYWIDE Dwg CW-C7)

EASEMENT DEDICATED FOR PUBLIC UTILITIES AND PLANTING AS REQUIRED (TYPICAL).

95% RELATIVE COMPACTION FOR 6” MINIMUM DEPTH UNDER STRUCTURAL SECTION

SAND OR A.B.

AGGREGATE BASE

AGGREGATE SUB-BASE

A.C.

PAVING DETAIL AT LIP OF GUTTER
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4" DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT) WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4" DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT) WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.

LOCAL STREET INDUSTRIAL

PAVING DETAIL AT LIP OF GUTTER

REV. NO.  REV. DATE   REV. BY
DIGITIZED  6/1/2003

CITY OF STOCKTON
DEPARTMENT OF PUBLIC WORKS

REV. APPROVED BY CITY ENGINEER
SIGNED DATED  DRAWING NO.
11D

0.03' A.C.
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.
6. ON-STREET PARKING IS PROHIBITED FOR THIS STREET TYPE.
7. MEANDERING SIDEWALK MAINTAIN 2'-0" MINIMUM FROM PROPERTY LINE.
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4" DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT) WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.
7. MEANDERING SIDEWALK MAINTAIN 2'-0" MINIMUM FROM PROPERTY LINE.

PAVING DETAIL
AT LIP OF GUTTER
MINOR ARTERIAL STREET
CITY OF STOCKTON
DEPARTMENT OF PUBLIC WORKS

NOTES:
1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4" DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT) WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.
7. ON-STREET PARKING IS PROHIBITED FOR THIS STREET TYPE.
8. MEANDERING SIDEWALK MAINTAIN 2'-0" MINIMUM FROM PROPERTY LINE.
NOTES:

1. AT A MINIMUM STREET STRUCTURAL SECTION SHALL BE DESIGNED TO CALTRANS STANDARDS.
2. STRUCTURAL SECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS. THE ENGINEER SHALL SUBMIT CALCULATIONS.
3. LONGITUDINAL GUTTER SLOPE SHALL BE A MINIMUM OF 0.35%.
4. TILL THROUGH PARKWAY AREA PRIOR TO PLANTING.
5. INSTALL TWO 4" DIAMETER SCHEDULE 40 SLEEVES PER LOT (3 FOR CORNER LOT)

WITH CAPS UNDER SIDEWALK ACROSS LOT FRONTAGE FOR FUTURE IRRIGATION.
6. REFER TO STANDARD DRAWING NO. 14A FOR MINIMUM DESIGN TRAFFIC INDEX AND APPLICABLE AVERAGE DAILY TRAFFIC RANGE.
7. ON-STREET PARKING IS PROHIBITED FOR THIS STREET TYPE.
8. MEANDERING SIDEWALK maintains 2'-0" MINIMUM FROM PROPERTY LINE.
# Design and Operational Characteristics for Two Roundabout Categories

<table>
<thead>
<tr>
<th>Design Element</th>
<th>Urban Single-Lane</th>
<th>Urban Double-Lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Maximum Entry Design Speed (Miles/Hour)</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Maximum Number of Entering Lanes per Approach</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Typical Inscribed Circle Diameter (Feet) (1)</td>
<td>100–130</td>
<td>150–180</td>
</tr>
<tr>
<td>Splitter Island Treatment</td>
<td>Raised with Crosswalk Cut</td>
<td>Raised with Crosswalk Cut</td>
</tr>
<tr>
<td>Typical Daily Service Volumes on 4-Leg Roundabout (Vehicles/Day)</td>
<td>20,000</td>
<td>Varies (2)</td>
</tr>
</tbody>
</table>

**Notes:**

1. A roundabout will be required where two collector streets intersect and the ultimate combined entering traffic volumes exceed 2,000 vehicles daily. A traffic signal may be required in lieu of a roundabout at the discretion of the Public Works Director.
3. Drawing 12A shows typical dimensions to accommodate a WB–50 vehicle within a single lane roundabout.
4. Assume 90-degree entries and no more than four legs.
5. Signage shall conform to "Manual on Uniform Traffic Control Devices."
6. Roundabout design shall be approved by the City Engineer based on engineering analysis.
1. SEE TABLE ON THIS PAGE FOR DESIGN CHARACTERISTICS FOR THREE TRAFFIC CATEGORIES.
2. TRAFFIC CIRCLE DESIGN AND SIGNAGE SHALL BE APPROVED BY THE CITY ENGINEER BASED UPON ENGINEERING ANALYSIS.
3. A TRAFFIC CIRCLE WILL BE REQUIRED WHERE TWO LOCAL STREETS INTERSECTION AND THE ULTIMATE COMBINED ENTERING TRAFFIC EXCEEDS 1,000 VEHICLES DAILY OR THE UNIMPEDED DISTANCE OR ANY OF THE APPROACHES NOT SUBJECT TO STOP CONTROL EXCEEDS 600 FEET. THIS REQUIREMENT MAY BE WAIVED AT THE DISCRETION OF THE PUBLIC WORKS DIRECTOR.

<table>
<thead>
<tr>
<th>FOR THIS STREET WIDTH</th>
<th>USE THESE CURB RADII</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>R1</td>
</tr>
<tr>
<td>34'</td>
<td>20'</td>
</tr>
<tr>
<td>25'</td>
<td>24'</td>
</tr>
<tr>
<td>32'</td>
<td>15'</td>
</tr>
<tr>
<td>20'</td>
<td>18'</td>
</tr>
<tr>
<td>25'</td>
<td>20'</td>
</tr>
<tr>
<td>30'</td>
<td>15'</td>
</tr>
<tr>
<td>20'</td>
<td>15'</td>
</tr>
<tr>
<td>25'</td>
<td>16'</td>
</tr>
<tr>
<td>ITEM</td>
<td>LOCAL STREET</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td></td>
<td>LOW VOLUME RESIDENTIAL</td>
</tr>
<tr>
<td>AVERAGE DAILY TRAFFIC (ADT)</td>
<td>0–750</td>
</tr>
<tr>
<td>NUMBER OF TRAVEL Lanes</td>
<td>2</td>
</tr>
<tr>
<td>WIDTH, CURB-TO-CURB (FEET)</td>
<td>30</td>
</tr>
<tr>
<td>ON-STREET PARKING ALLOWED?</td>
<td>YES</td>
</tr>
<tr>
<td>PARKING LANE WIDTH (FEET)</td>
<td>7</td>
</tr>
<tr>
<td>TRAVEL LANE WIDTH (FEET)</td>
<td>8</td>
</tr>
<tr>
<td>LEFT-TURN LANE WIDTH (FEET)</td>
<td>NONE</td>
</tr>
<tr>
<td>RAISED MEDIAN (14 FEET)?</td>
<td>NO</td>
</tr>
<tr>
<td>BLOCK LENGTH (FEET)</td>
<td>600</td>
</tr>
<tr>
<td>MINIMUM SIDEWALK WIDTH (FEET)</td>
<td>4</td>
</tr>
<tr>
<td>SIDEWALK BICYCLE PATH REQUIRED?</td>
<td>NO</td>
</tr>
<tr>
<td>LANDSCAPE STRIP REQUIRED?</td>
<td>YES</td>
</tr>
<tr>
<td>LANDSCAPE STRIP WIDTH (FEET)</td>
<td>6</td>
</tr>
<tr>
<td>MINIMUM TRAFFIC INDEX (4)</td>
<td>5</td>
</tr>
</tbody>
</table>

**NOTES:**

1. LOCAL STREET—COMMERCIAL AND LOCAL STREET INDUSTRIAL STREETS SHALL HAVE MINIMUM 4’–0” WIDE DETACHED OR MINIMUM 4’–6” ATTACHED SIDEWALKS.
2. BICYCLE LANES MAY BE REQUIRED ON ARTERIAL ROADWAYS IN LIEU OF SIDEWALK BICYCLE PATHS AT THE DISCRETION OF THE PUBLIC WORKS DIRECTOR.
3. LANDSCAPE STRIP WIDTHS FOR COLLECTOR AND ARTERIAL STREETS, INCLUDE PROVISION FOR SIDEWALK.
4. TRAFFIC INDEXES ARE MINIMUM. IF STREET IS A FEDERAL–AID URBAN STREET AND A DESIGNATED TRUCK ROUTE OR BUS ROUTE, TRAFFIC INDEX SHALL BE DETERMINED BY CITY ENGINEER.
NOTES:
1. INTERSECTION FLARES SHALL BE USED WHEN A COLLECTOR STREET INTERSECTS A COLLECTOR OR ARTERIAL STREET WITH A CURB-TO-CURB WIDTH OF 48 FEET OR MORE.
2. INTERSECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.
The following minimum curb radii shall be used at the intersection of streets:

<table>
<thead>
<tr>
<th>STREET TYPE</th>
<th>LOCAL STREET, LOW VOLUME RESIDENTIAL</th>
<th>LOCAL STREET, MEDIUM VOLUME RESIDENTIAL</th>
<th>LOCAL STREET, COMMERCIAL</th>
<th>LOCAL STREET, INDUSTRIAL</th>
<th>COLLECTOR STREET, BACK-UP RESIDENTIAL</th>
<th>COLLECTOR STREET, NON-RESIDENTIAL</th>
<th>ARTERIAL STREET, MINOR ARTERIAL</th>
<th>ARTERIAL STREET, MAJOR ARTERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCAL STREET, LOW VOLUME RESIDENTIAL</td>
<td>15'</td>
<td>15'</td>
<td>20'</td>
<td>30'</td>
<td>15'</td>
<td>25'</td>
<td>30'</td>
<td>30'</td>
</tr>
<tr>
<td>LOCAL STREET, MEDIUM VOLUME RESIDENTIAL</td>
<td>15'</td>
<td>15'</td>
<td>20'</td>
<td>30'</td>
<td>15'</td>
<td>25'</td>
<td>30'</td>
<td>30'</td>
</tr>
<tr>
<td>LOCAL STREET, COMMERCIAL</td>
<td>20'</td>
<td>20'</td>
<td>20'</td>
<td>30'</td>
<td>20'</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
</tr>
<tr>
<td>LOCAL STREET, INDUSTRIAL</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
<td>50'</td>
<td>50'</td>
</tr>
<tr>
<td>COLLECTOR STREET, BACK-UP RESIDENTIAL</td>
<td>15'</td>
<td>15'</td>
<td>20'</td>
<td>30'</td>
<td>15'</td>
<td>25'</td>
<td>30'</td>
<td>30'</td>
</tr>
<tr>
<td>COLLECTOR STREET, NON-RESIDENTIAL</td>
<td>25'</td>
<td>25'</td>
<td>30'</td>
<td>30'</td>
<td>25'</td>
<td>25'</td>
<td>50'</td>
<td>50'</td>
</tr>
<tr>
<td>ARTERIAL STREET, MINOR ARTERIAL</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
<td>50'</td>
<td>30'</td>
<td>50'</td>
<td>30'</td>
<td>30'</td>
</tr>
<tr>
<td>ARTERIAL STREET, MAJOR ARTERIAL</td>
<td>30'</td>
<td>30'</td>
<td>30'</td>
<td>50'</td>
<td>30'</td>
<td>50'</td>
<td>30'</td>
<td>30'</td>
</tr>
</tbody>
</table>
NOTES:

1. CURB EXTENSIONS (BULB-OUTS) MAY BE INSTALLED TO REDUCE PEDESTRIAN CROSSING DISTANCES AT INTERSECTIONS, SUBJECT TO THE APPROVAL OF THE CITY ENGINEER.

2. CURB EXTENSIONS SHALL NOT IMPede THE MOVEMENT OF EMERGENCY VEHICLES OR GARBAGE TRUCKS. AN ENGINEERING ANALYSIS OF VEHICLE TURNING MOVEMENTS SHALL BE PREPARED.

3. WHERE A LOCAL STREET INTERSECTS A COLLECTOR OR ARTERIAL STREET, THE DESIGN AND PLACEMENT OF CURB EXTENSIONS SHALL NOT RESULT IN SIGNIFICANT IMPACTS TO TRAFFIC CIRCULATION ON THE COLLECTOR OR ARTERIAL STREET, AS DETERMINED BY THE CITY ENGINEER.

4. CURB EXTENSIONS SHALL NOT REDUCE THE EFFECTIVE WIDTH OF A LOCAL STREET TO LESS THAN 20 FEET AT ANY POINT.

5. INTERSECTION DESIGN SHALL BE APPROVED BY THE CITY ENGINEER.
Paving shall fit the character of development (i.e., paving stones, textured concrete, and etc.), as required by city engineer.

Type "F" curb and apron. See countywide drawing CW-CB.

Shrubs shall provide color/textured accent and/or screen.

6" concrete banding to be flush with paving stones 10" below grade and 2" above grade.

Roadway

2% min.

PLANTING MEDIUM, DEPTH AND TYPE TO BE DETERMINED BY SITE CONDITIONS.

2'-0" min.

PLANTING AREA

2'-0" min.

PAVING

2% min.

NOTES:

1. Trees shall be selected from the city's tree planting list. They shall be planted a minimum of 30'-0" to 50'-0" on center spacing, or may be planted in groups for an informal planting effect using the same number of trees, as determined by the city landscape architect.

2. Shrubs shall be planted in groupings to provide a consistent planting scheme. Shrubs shall require minimum maintenance and be drought tolerant.

3. A ground cover or turf area may be included between the planting and paving areas where applicable. Maintenance shall be provided by a maintenance agreement or home owner's association.

4. Complete landscape and irrigation plans and details shall be submitted for review and approval as part of the development plans. All design proposals shall be subject to approval by the city landscape architect and the city engineer.
PRIVATE ROADWAY

PUBLIC ROADWAY

TABLE 1

<table>
<thead>
<tr>
<th># RESIDENTIAL UNITS</th>
<th>MINIMUM STACKING DISTANCE (FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP TO 80</td>
<td>80</td>
</tr>
<tr>
<td>80 AND UP TO 100</td>
<td>100</td>
</tr>
<tr>
<td>100 AND UP TO 120</td>
<td>120</td>
</tr>
<tr>
<td>120 AND UP TO 140</td>
<td>140</td>
</tr>
<tr>
<td>140 AND ABOVE</td>
<td>150</td>
</tr>
</tbody>
</table>

NOTES:
1. E.F.O.C. = EXTENSION FACE OF CURB
2. GATE WIDTH MAY BE REDUCED TO 20"-0" WITH CITY ENGINEER APPROVAL.
3. GATE WIDTH MAY BE REDUCED TO 16"-0" PROVIDED THAT 55'-0" OF CLEARANCE IS MAINTAINED BETWEEN THE GATE AND THE OPPOSITE FACE OF CURB.
NOTE S:

1. AFTER DRIVING STAKE, TOP OF STAKE TO BE CUT OFF FLUSH WITH 2"x4" HEADER (SEE DRAWING NO. 18A, FIG. 1).
2. T.I. 7 SHALL BE USED IN PAVEMENT DESIGN.
3. SEE DETAIL DRAWING NO. 25, FIG. 1.
4. CLASS "B" CONCRETE.
5. SEE DETAIL DRAWING NO. 38 FOR STANDARD COMMERCIAL DRIVEWAY.

CHRISTY U-23 CATCH BASIN 4'-0" DEEP, WITH RIVETED STEEL GRATE AND FRAME #71R+22, OR APPROVED EQUAL.
**CURVE DATA**

\[ \Delta_1 = \text{VARIABLE} \]

\[ \Delta_2 = \tan^{-1}\left(\frac{W+7}{50}\right) - \tan^{-1}\left(\frac{W}{X}\right) \quad \text{(for } W=50') \]

\[ = \tan^{-1}\left(\frac{W+10}{50}\right) - \tan^{-1}\left(\frac{W}{X}\right) \quad \text{(for } W=60') \]

\[ \Delta_3 = \Delta_1 + 2 \Delta_2 \]

\[ R_4 = W \]

\[ X = \sqrt{20(3W + 7)} \quad \text{(for } W=50') \]

\[ = \sqrt{20(3W + 10)} \quad \text{(for } W=60') \]

\[ Y_2 = R_5 \tan\left(\frac{\Delta_2}{2}\right) \]

\[ Y_1 = R_6 \tan\left(\frac{\Delta_2}{2}\right) \]

\[ R_6 = 100' \]