

# Ontario Ranch East

## Master Plan Line

### Sewer Analysis Results

Prepared For:

**Lewis Management Corp.  
And Richland**

Prepared By:

**L.D. King, Inc.**  
975 N. Haven Avenue, Suite 200  
Ontario, California 91764

**April 2022**

Updated August 2022

Updated October 2022

Updated November 2022

# Table of Contents

## **DESCRIPTION**

Introduction

Design Criteria

Sewer Analysis Data

Sewer Analysis Comments

Master Plan Sewer Location Map

Eastern Trunk Sewer Summary of Average Daily Wastewater Flow (ADWF) Capacities  
Conveyances Table

## **SEWER ANALYSIS**

MERRILL TRIBUTARY: Merrill, Bellegrave, Mill Creek

Sewer Generation Table

Sewer Evaluation Table

Sewer Reach Map

Sewer MH ID Map

WEST HAVEN TRIBUTARY: WEST Haven, Portion of The Avenue

Sewer Generation Table

Sewer Evaluation Table

Sewer Reach Map

Sewer MH ID Map

PARKSIDE TRIBUTARY

Sewer Generation Table

Sewer Evaluation Table

Sewer Reach Map

Sewer MH ID Map

VINEYARD TRIBUTARY

Sewer Generation Table

Sewer Evaluation Table

Sewer Reach Map

Sewer MH ID Map

CARPENTER TRIBUTARY: Carpenter and Hellman

Sewer Generation Table

Sewer Evaluation Table  
Sewer Reach Map  
Sewer MH ID Map

**APPENDIX**

Specific Plan Land Use Maps and Tables

Parkside  
Subarea 29  
West Haven

Table 3-2 of the Sewer Master Plan Update

2050 TOP

### Introduction:

The City of Ontario is updating The Ontario Plan which is titled the 2050 TOP. The 2050 TOP includes revised land uses. The land use revisions and subsequent density increases affect the sewer generation calculations used to analyze the Master Plan sewer lines within Ontario Ranch East.

Another factor affecting the sewer generation calculations for the Master Plan sewer lines is the Draft 2020 Sewer Master Plan update. Per the Master Plan Update the peaking factor used to calculate Peak Dry Weather Flows from Average Dry Weather Flows was reduced and Average Dry Weather Unit Flow Factors have been reduced.

As a result of the 2050 TOP Land Use revisions and the 2020 Sewer Master Plan update, the request was made for an updated analysis and updated model for several of the Master Plan Sewer lines within Ontario Ranch East. The Master Plan lines that are included in this analysis are;

- Merrill Ave / Bellegrave Ave /Mill Creek Ave
- West Haven / The Avenues
- Parkside
- Carpenter Ave /Vineyard Ave

See the attached **Master Plan Sewer Location Map** for the locations of these sewer systems.

Per the City of Ontario Sewer Master Plan, all the Master Plan lines that were studied are tributary to the Eastern Trunk Sewer. We were given a table from the Ontario Municipal Utilities Company, (OMUC) which contained sewer flows tributary to the Eastern Trunk Sewer. Using the newly calculated ADWFs that table was updated and included in this analysis. See the Eastern Trunk Sewer Summary of Average Daily Wastewater Flow (ADWF) Capacities Conveyances Table

### Design Criteria:

Using the 2050 TOP land uses we prepared **Sewer Generation Tables** for the subject sewer systems. As requested by OMUC, the maximum Dwelling Unit per acre (DU/acre) listed on the TOP for each Residential Land Use was used to determine the number of DU's within a planning area. For instance, for the Land Use Residential Medium Density (11.1 – 25 DU/ac), 25 DU/acre were used to

determine sewer generation. The TOP sewer generation flows were then entered into the City's existing sewer model, provided by OMUC, and **Hydraulic Analysis Result Tables** were created.

Criteria set forth in the Draft 2020 City of Ontario Sewer Master Plan Update, supplied by OMUC was used for this analysis. Sewer Unit Flow Factors were taken from Section 3, Table 3-2, and used to calculate the sewer generations. We have added a copy of Table 3-2 to the Appendix.

The peaking factors for dry weather flows and wet weather flows were taken from the Executive Summary, they are as follows.

- Peak Dry Weather Flows, PDWF = 1.77 X Average Dry Weather Flows, ADWF (mgd)  $^{\wedge}0.893$
- Peak Wet Weather Flow (PWWF) = 1.34 x Peak Dry Weather Flow (PDWF)

Sewer sizes are evaluated according to the depth to diameter ratio, d/D per the "Sewer System Criteria". They are listed below.

- Pipes 12-inches and smaller in diameter shall be designed to flow at a maximum of d/D of 0.5 under Peak Dry Weather Flows, PDWF
- Pipes 15-inches and greater in diameter shall be designed to flow at a maximum of d/D of 0.64 under Peak Dry Weather Flows, PDWF
- For either group, the depth of flow to d/D shall not exceed 0.82 with peak wet weather flows

#### Sewer Analysis Data

The following data is included for each Master Plan line evaluated.

- The Average Dry Weather Flows (ADWF) calculated using the 2020 Sewer Master Plan Sewer Unit Flow Factors are presented in the **Sewer Generation Tables**.
- The PDWF flows are shown in the **Hydraulic Analysis Result** Table which also shows the sizes and slopes for each reach of the

proposed and/or existing sewer lines within the study and the calculated velocities and depth to diameter ratios.

- A **Tributary Area Map** is included for each study.

Sewer Analysis Comments:

**Merrill Tributary: Merrill, Bellegrave, Mill Creek**

Analysis 1: Using the 2050 TOP Land Uses and high end densities and Existing Uses and SPA for Subarea 29 properties

- There is an 80-acre property located on the northeast corner of Mill Creek Avenue and Schaefer Avenue owned by Southern California Edison, (SCE). In Analysis 1, the Land Use for this 80-acre property is Business Park per the 2050 TOP.
- There is a section of an existing and future 8-inch sewer line within the Esperanza Specific Plan where the depth of flow ratio, d/D exceeds the maximum criteria of 0.50. The range of the d/D's in this section is 0.56 to 0.81. The location of the deficient lines are shown in the attached **Master Plan Sewer Location Map**.

Analysis 2: A second analysis of the system was modeled using the following revisions;

- ❖ The Land Use for the existing 80-acre SCE property, which currently contains a Substation, was changed to its existing land use resulting in no sewer flows tributary to the Mill Creek Sewer.
- ❖ The Land Use and densities for the Esperanza Specific Plan Area were taken from the Specific Plan, (SP) in lieu of the 2050 TOP.
- There is still a section within the Esperanza Specific Plan where the 8-inch sewer lines depth of flow ratio, d/D, exceeds the maximum criteria of 0.50. However the d/D is reduced to a range of 0.56 to 0.62.

**West Haven**

Using the TOP 2050 Land Uses and high end densities

- There is a section of existing 12-inch sewer lines within The Avenue where the depth of flow ratio,  $d/D$  exceeds the criteria of 0.50. The  $d/D$  is 0.52. The location of the deficient lines are from Archibald Avenue to approximately 575-feet east of Archibald Avenue
- There is a section of existing 10-inch sewer lines within West Haven SP where the depth of flow ratio,  $d/D$  exceeds the criteria of 0.50. The  $d/D$  ranges from 0.52 to 0.57. The location of the deficient lines are located in PA 5 of the Specific Plan and are shown in the attached **Master Plan Sewer Location Map**.

A second analysis of the system was modeled using the following revisions:

- ❖ The Land Use and density were taken from the West Haven Specific Plan.
- Results: The system met the City Sewer criteria.

**Parkside**

Using the TOP 2050 Land Uses and high end densities

- The system met the City Sewer criteria.

**Vineyard Ave**

Using the TOP 2050 Land Uses and high end densities

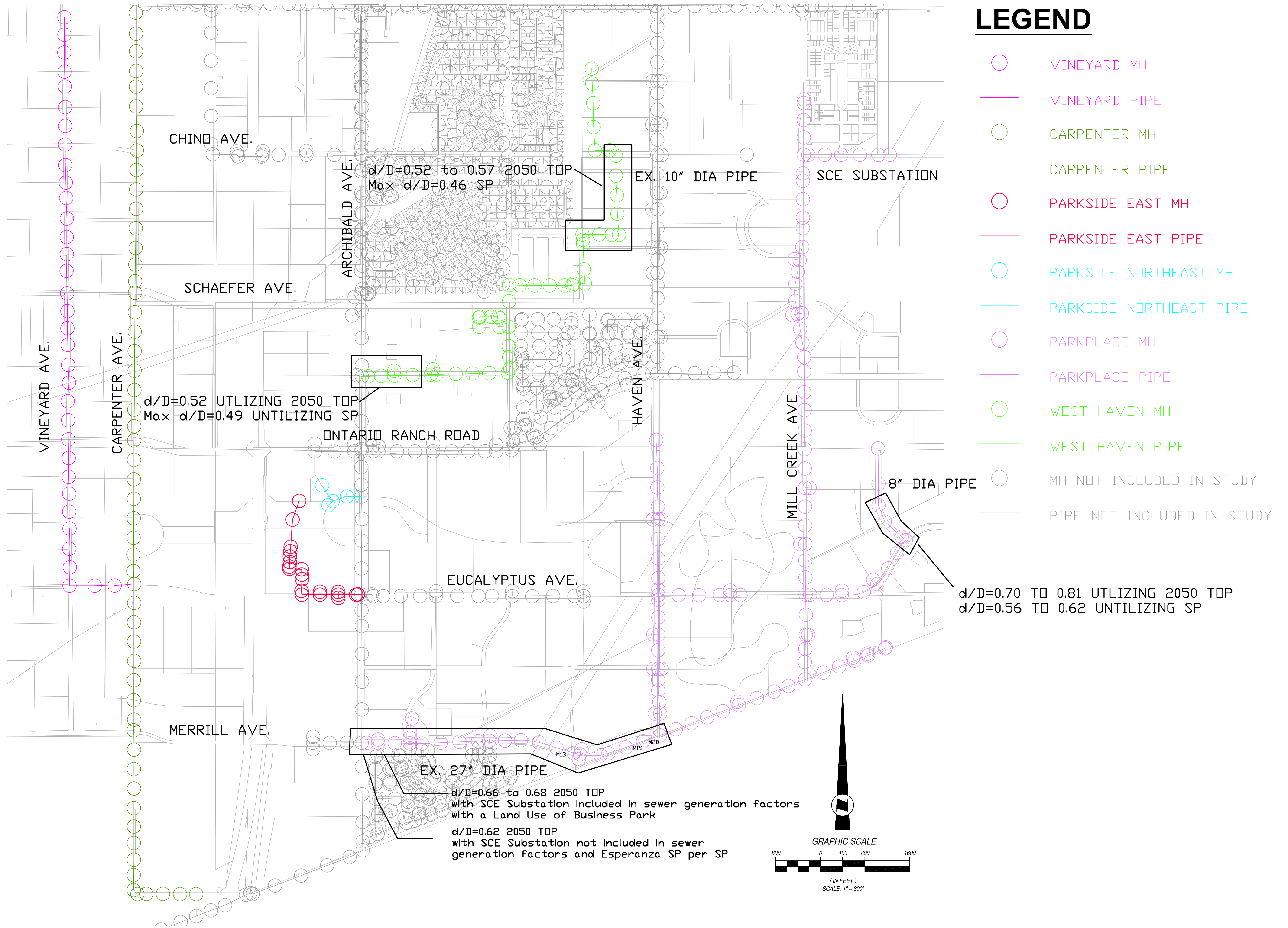
- The system met the City Sewer criteria.

**Carpenter Ave**

Using the TOP 2050 Land Uses and high end densities

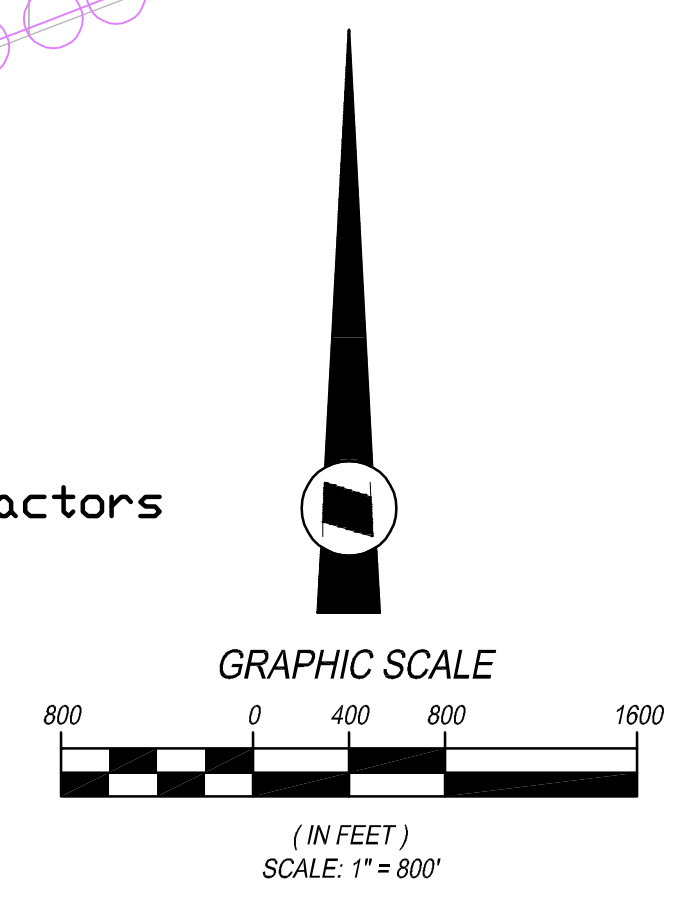
- The system met the City Sewer criteria.

# MASTER PLAN SEWER MAINS ANALYZED IN STUDY



## LEGEND

- VINEYARD MH
- VINEYARD PIPE
- CARPENTER MH
- CARPENTER PIPE
- PARKSIDE EAST MH
- PARKSIDE EAST PIPE
- PARKSIDE NORTHEAST MH
- PARKSIDE NORTHEAST PIPE
- PARKPLACE MH
- PARKPLACE PIPE
- WEST HAVEN MH
- WEST HAVEN PIPE
- MH NOT INCLUDED IN STUDY
- PIPE NOT INCLUDED IN STUDY



EX. 27" DIA PIPE  
 $d/D=0.66$  to  $0.68$  2050 TDP  
 with SCE Substation included in sewer generation factors  
 with a Land Use of Business Park  
 $d/D=0.62$  2050 TDP  
 with SCE Substation not included in sewer  
 generation factors and Esperanza SP per SP

$d/D=0.70$  TO  $0.81$  UTILIZING 2050 TDP  
 $d/D=0.56$  TO  $0.62$  UTILIZING SP



**Eastern Trunk Sewer  
Summary of Average Daily Wastewater Flow (ADWF) Capacities Conveyances**

| Segment ID | Location  | *Per Current Agreement    |                          |                                     | City of Ontario Capacity Needs            |
|------------|---|---------------------------|--------------------------|-------------------------------------|---|
|            |   | Total ADWF Capacity (mgd) | IEUA ADWF Capacity (mgd) | City of Ontario ADWF Capacity (mgd) | Land Use Change 2050 TOP Total Flow (mgd) |
| *4         | Archibald Ave at Chino Ave                          | 9.77                      | 9.00                     | 0.77                                | -   |
| *5         | Archibald Ave at Schaefer Ave                       | 11.00                     | 9.00                     | 2.00                                | -   |
| 6          | Archibald Ave at Ontario Ranch Road                 | 15.26                     | 9.00                     | 6.26                                | 3.858                                     |
| 7          | Archibald Ave at Eucalyptus Ave                     | 16.19                     | 9.00                     | 7.19                                | 4.240                                     |
|            | Archibald Ave North of Merrill (from SP Subarea 29) | 16.19                     |                          |                                     |   |
| 8          | Archibald Ave at Merrill Ave                        | 18.37                     | 9.00                     | 9.37                                | 6.056                                     |
|            | Archibald Ave South of Merrill (from SP Subarea 29) | 18.37                     |                          |                                     |   |
| 9          | Archibald Ave at City Boundary                      | 18.37                     | 9.00                     | 9.37                                | 6.125                                     |
| 10         | Southerly City Boundary at Carpenter Ave            | 18.37                     | 9.00                     | 9.37                                | 7.594                                     |

\* Information taken from AKM Report dated May 6, 2021

Definitions: ADWF = Average Dry Weather Flow  
ETS = Eastern Trunk Sewer  
IEUA - Inland Empire Utilities Agency

**Merrill Ave to Bellegrave Ave to  
Mill Creek Ave Including  
Southern Portion of Haven Ave**

| MERRILL TRIBUTARY: Merrill Ave to Bellegrave Ave to Mill Creek Ave Including Southern Portion of Haven Ave |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
|--|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|------|----------|------------|----------------|-----------|--------|
| Land Use and DU's per 2050 TOP with the  |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
| Exception of Subarea 29 where the existing DU's or Amended Specific Plan DU's were used                    |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
| Specific Plan and Planning Area  | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |      | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH  |        |
|  |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit |          |            |                |           |        |
| <b>TRIBUTARY TO MILL CREEK</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
| <b>Easterly Portion of Edenglen (per Specific Plan)</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
| Neighborhood Comm  | 10    |                      |                     |       | NC                  | 10                                  |                   |                          |           | 1610 | gpd/ac   | 16,100     | 16,100         |           |        |
| Business Park  | 10    |                      |                     |       | BP                  | 10                                  |                   |                          |           | 1610 | gpd/ac   | 16,100     | 32,200         |           |        |
| Industrial   | 36.9  |                      |                     |       | IND                 | 36.9                                |                   |                          |           | 1060 | gpd/ac   | 39,114     | 71,314         |           |        |
| Business Park (SCE)  | 12.8  |                      |                     |       | BP                  | 12.8                                |                   |                          |           | 1610 | gpd/ac   | 20,608     | 91,922         | 0.091922  | CSA60  |
| <b>Westerly Portion of Edenglen (Per Specific Plan)</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
| Edenglen SP P-1  | 5.7   | LDR                  | 21                  |       |                     |                                     |                   |                          | 208       |      | gpd/du   | 4,368      |                |           |        |
| Edenglen SP P-2  | 5.8   | LDR                  | 29                  |       |                     |                                     |                   |                          | 208       |      | gpd/du   | 6,032      |                |           |        |
| Edenglen SP P-3  | 10.8  | LMDR                 | 106                 |       |                     |                                     |                   |                          | 208       |      | gpd/du   | 22,048     |                |           |        |
| Edenglen SP P-4  | 3.8   | LMDR                 | 36                  |       |                     |                                     |                   |                          | 208       |      | gpd/du   | 7,488      |                |           |        |
| Edenglen SP P-5  | 8.4   | MDR                  | 139                 |       |                     |                                     |                   |                          | 174       |      | gpd/du   | 24,186     |                |           |        |
| Edenglen SP P-6  | 10.5  | LMDR                 | 87                  |       |                     |                                     |                   |                          | 208       |      | gpd/du   | 18,096     |                |           |        |
| Edenglen SP P-7  | 9.8   | LMDR                 | 67                  |       |                     |                                     |                   |                          | 208       |      | gpd/du   | 13,936     |                |           |        |
| Edenglen SP P-8  | 6.3   | MDR                  | 99                  |       |                     |                                     |                   |                          | 174       |      | gpd/du   | 17,226     |                |           |        |
| Park   | 4     | OS-R                 |                     |       |                     |                                     |                   |                          |           | 200  | gpd/ac   | 800        |                |           |        |
|  |       |                      | 584                 |       |                     |                                     |                   |                          |           |      |          | 114,180    | 114,180        | 0.114180  | CSA30  |
| <b>Colony High School from Model</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
|  |       |                      |                     |       |                     |                                     | 2180              |                          |           | 8    | gpd/st   | 17,440     | 17,440         | 0.017440  | MC350  |
| <b>RICH HAVEN</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |      |          |            |                |           |        |
| Rich Haven 1F  | 19.4  |                      | 213.4               | 11    | LMDR                |                                     |                   |                          |           | 208  |          | 44,387     | 44,387         | 0.044387  | MC340  |
| Rich Haven PA 4A - 4C  | 33    |                      |                     |       | IND                 |                                     |                   |                          |           |      |          |            |                |           |        |
| SW Cor. Mill Creek & Chino   |       |                      |                     |       |                     |                                     |                   |                          |           | 1060 | gpd/ac   | 34,980     | 34,980         |           |        |
| North SCE Sub Station  | 49.8  |                      |                     |       | LI                  |                                     |                   |                          |           | 1610 | gpd/ac   | 80,178     | 115,158        | 0.115158  | MC300  |
| Fuji Foods   | 27.8  |                      |                     |       | LI                  |                                     |                   |                          |           | 1610 | gpd/ac   | 44,758     | 44,758         | 0.044758  | CSA60  |
| Rich Haven 5B & 5D   | 44.5  |                      |                     |       | IND                 |                                     |                   |                          |           | 1060 | gpd/ac   | 47,170     | 47,170         |           |        |
| South Sub Station  | 77.6  |                      |                     |       | LI                  |                                     |                   |                          |           | 1610 | gpd/ac   | 124,936    | 172,106        | 0.172106  | MC260  |
| Rich Haven PA 6B   | 24.63 |                      |                     |       | IND                 |                                     |                   |                          |           | 1060 | gpd/ac   | 26,108     | 26,108         | 0.026108  | MC4L10 |
| Rich Haven PA7   | 20    |                      |                     |       | GC                  |                                     |                   |                          |           | 1610 | gpd/ac   | 32,200     | 32,200         |           |        |
| Rich Haven 9B  | 26.28 |                      |                     |       | MU                  |                                     |                   |                          |           | 2690 | gpd/ac   | 70,693     | 102,893        |           |        |
| Rich Haven 8A  | 16.56 |                      |                     |       | GC                  | 100,000                             |                   |                          |           | 120  | gpd/tsf  | 12,000     | 114,893        |           |        |
|  |       |                      | 224                 |       | MDR                 |                                     |                   |                          |           |      |          | 38,976     | 153,869        |           |        |
|  | 15.2  |                      |                     |       | School              |                                     | 1000              |                          |           |      |          | 8,000      | 161,869        | 0.1618692 | MC160  |
| 24A PA 2   | 28    |                      | 700                 | 25    | MDR                 |                                     |                   |                          |           | 174  |          | 121,800    | 121,800        |           |        |
|  | 12    |                      | 132                 | 11    | LMDR                |                                     |                   |                          |           | 208  |          | 27,456     | 149,256        |           |        |
| Esperanza PA 1   | 21.48 |                      | 537                 | 25    | MDR                 |                                     |                   |                          |           | 174  |          | 93,438     | 242,694        | 0.242694  | MC120  |
| Esperanza PA 2   | 24.68 |                      | 123                 | 5     | LDR                 |                                     |                   |                          |           | 208  |          | 25,667     | 25,667         | 0.025667  | MC3L10 |
| 24 A PA4   | 60    |                      | 660                 | 11    | LMDR                |                                     |                   |                          |           | 208  |          | 137,280    | 137,280        |           |        |
|  | 10    |                      | 50                  | 5     | LDR                 |                                     |                   |                          |           | 208  |          | 10,400     | 147,680        |           |        |
|  | 10    |                      | 110                 | 11    | MDR                 |                                     |                   |                          |           | 174  |          | 19,140     | 166,820        | 0.166820  | MC2L10 |

**MERRILL TRIBUTARY: Merrill Ave to Bellegrave Ave to Mill Creek Ave Including Southern Portion of Haven Ave**  
**Land Use and DU's per 2050 TOP with the**  
**Exception of Subarea 29 where the existing DU's or Amended Specific Plan DU's were used**

| Specific Plan and Planning Area                        | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |          | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH |
|--|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|----------|----------|------------|----------------|----------|
|  |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit     |          |            |                |          |
| <b>TRIBUTARY TO EUCALYPTUS AVENUE</b>                  |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Rich Haven PA 8B                                       | 20    |                      | 500                 | 25    | MDR                 |                                     |                   | 174                      |           |          | 87,000   |            |                |          |
| Esperanza PA3  | 19.84 |                      | 496                 | 25    | MDR                 |                                     |                   | 174                      |           |          | 86,304   | 173,304    | 0.173304       | ESP10MH  |
| Esperanza North Por. PA4                               | 15.24 |                      | 381                 | 25    | MDR                 |                                     |                   | 174                      |           |          | 66,294   | 66,294     | 0.066294       | ESP21MH  |
| Esperanza South Por. PA4                               | 8.57  |                      | 214.25              | 25    | MDR                 |                                     |                   | 174                      |           |          | 37,280   | 37,280     | 0.037280       | ESP30MH  |
| Esperanza PA 11  |       |                      |                     |       |                     |                                     | 1000              |                          | 8         | gpd/st   | 8,000    | 8,000      | 0.008000       | EUD5L100 |
| Esperanza PA 10 TM                                     |       |                      | 100                 |       |                     |                                     |                   | 208                      |           |          | 20,800   | 20,800     | 0.020800       | EUD3L10  |
| Esperanza PA 9   | 17.75 |                      | 82                  | 11    | LMDR                |                                     |                   | 208                      |           |          | 17,056   | 17,056     | 0.017056       | MCL10    |
| <b>TRIBUTARY TO BELLEGRAVE AVENUE</b>                  |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Esperanza PA 5   | 23.78 |                      | 157                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 32,656   |            |                |          |
| Esperanza PA 6   | 13.64 |                      | 78                  | 11    | LMDR                |                                     |                   | 208                      |           |          | 16,224   | 48,880     | 0.048880       | M10L10   |
| Esperanza PA 7   | 14.36 |                      | 76                  | 11    | LMDR                |                                     |                   | 208                      |           |          | 15,808   |            |                |          |
| Esperanza PA 8   | 23.72 |                      | 107                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 22,256   | 38,064     | 0.038064       | M300     |
| Subarea 29   |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| PA 33  | 47.6  |                      | 644                 | 13.5  | LMDR                |                                     |                   | 174                      |           |          | 112,056  | 112,056    | 0.112056       | M6L10    |
| <b>TRIBUTARY TO HAVEN AVENUE</b>                       |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Rich Haven 9A and Portion of 9b                        | 62.5  |                      |                     |       | MU                  |                                     |                   |                          | 2690      | gpd/ac   | 168,125  | 168,125    | 0.168125       | H160     |
| The Lakes 24A PA1                                      | 25    |                      | 625                 | 25    | MDR                 |                                     |                   | 174                      |           |          | 108,750  | 108,750    | 0.108750       | H150     |
| The Lakes 24A PA3                                      | 6     |                      |                     |       | NC                  |                                     |                   |                          | 1610      | gpd/ac   | 9,660    | 9,660      |                |          |
|  | 14    |                      | 630                 | 45    | HDR                 |                                     |                   |                          | 174       | gpd/acre | 109,620  | 119,280    |                |          |
|  | 13    |                      | 143                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 29,744   | 149,024    | 0.149024       | EUC5L10  |
| Subarea 29 PA 31                                       | 16.1  |                      | 172                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 35,776   | 35,776     | 0.035776       | H4L10    |
| Subarea 29 PA 32                                       | 42.5  |                      | 671                 | 15.8  | LMDR                |                                     |                   | 174                      |           |          | 116,754  | 152,530    | 0.152530       | H3L10    |
| School   | 19    |                      |                     |       |                     |                                     | 1200              |                          | 8         | gpd/st   | 9,600    | 9,600      | 0.009600       | H00      |
| <b>TRIBUTARY TO MERRILL</b>                            |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 Pa 28 and 29                                | 44.4  |                      | 222                 | 5     | LDR                 |                                     |                   | 208                      |           |          | 46,176   | 46,176     | 0.046176       | M4L10    |
| <b>TRIBUTARY TO PARKVIEW STREET</b>                    |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 PA 15                                       | 3.15  |                      |                     |       | PF                  |                                     |                   |                          | 1450      | gpd/acre | 4,568    |            |                |          |
| Subarea 29 PA 16                                       | 6.07  |                      | 41                  | 6.8   | LMDR                |                                     |                   | 208                      |           |          | 8,528    |            |                |          |
| Subarea 29 PA 17                                       | 8.38  |                      | 56                  | 6.7   | LMDR                |                                     |                   | 208                      |           |          | 11,648   |            |                |          |
| Subarea 29 PA 19                                       | 8.95  |                      | 61                  | 6.8   | LMDR                |                                     |                   | 208                      |           |          | 12,688   |            |                |          |
| Subarea 29 PA 20                                       | 13.29 |                      | 67                  | 5.0   | LDR                 |                                     |                   | 208                      |           |          | 13,936   | 51,368     | 0.051368       | Y19MH161 |
| Subarea 29 PA 4  | 17.81 |                      | 88                  | 4.9   | LDR                 |                                     |                   | 208                      |           |          | 18,304   |            |                |          |
| Subarea 29 PA 5  | 13.67 |                      | 68                  | 5.0   | LDR                 |                                     |                   | 208                      |           |          | 14,144   | 32,448     | 0.032448       | Y19MH158 |
| Subarea 29 PA 9a                                       |       |                      | 7                   |       | LMDR                |                                     |                   | 208                      |           |          | 1,456    | 1,456      | 0.001456       | Y19MH127 |
| Subarea 29 PA 11                                       | 6.23  |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/acre | 1,246    |            |                |          |
| Subarea 29 PA 14                                       | 7.64  |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/acre | 1,528    | 2,774      | 0.002774       | Y19MH151 |
| Subarea 29 PA 18                                       | 11.19 |                      |                     |       | PS-E                |                                     | 750               |                          | 8         | gpd/stu  | 6,000    |            |                |          |
| Subarea 29 PA 21                                       | 11.48 |                      | 48                  | 4.2   | LDR                 |                                     |                   | 208                      |           |          | 9,984    |            |                |          |
| Subarea 29 PA 22                                       | 21.34 |                      | 79                  | 3.7   | LDR                 |                                     |                   | 208                      |           |          | 16,432   |            |                |          |
| Subarea 29 PA 23                                       | 14.41 |                      | 82                  | 5.7   | LMDR                |                                     |                   | 208                      |           |          | 17,056   |            |                |          |
| Subarea 29 PA 24                                       | 13.71 |                      | 73                  | 5.3   | LMDR                |                                     |                   | 208                      |           |          | 15,184   |            |                |          |
| Subarea 29 PA 25                                       | 18.45 |                      | 102                 | 5.5   | LMDR                |                                     |                   | 208                      |           |          | 21,216   |            |                |          |
| Subarea 29 PA 26                                       | 12.03 |                      | 101                 | 8.4   | LMDR                |                                     |                   | 208                      |           |          | 21,008   |            |                |          |
| Subarea 29 PA 30                                       | 21.8  |                      | 180                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 37,440   | 144,320    | 0.144320       | Y20MH101 |
| Subarea 29 PA 27                                       | 9.58  |                      | 50                  | 5.2   | LMDR                |                                     |                   | 208                      |           |          | 10,400   | 10,400     | 0.010400       | M3AL10   |
| <b>TRIBUTARY TO ARCHIBALD AVE NORTH OF MERRILL AVE</b> |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 PA 1  | 83.1  |                      | 432                 | 5.2   | LMDR                |                                     |                   | 208                      |           |          | 89,856   | 89,856     |                |          |
| Subarea 29 PA 2  | 12.1  |                      |                     |       | COM                 |                                     |                   |                          | 1610      | gpd/ac   | 19,481   | 109,337    |                |          |
| Subarea 29 PA 3  | 34.5  |                      | 186                 | 5.4   | LMDR                |                                     |                   | 208                      |           |          | 38,688   | 148,025    | 0.148025       |          |
| <b>TRIBUTARY TO ARCHIBALD AVE SOUTH OF MERRILL AVE</b> |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 PA 6  | 13    |                      | 67                  | 5.2   | LMDR                |                                     |                   | 208                      |           |          | 13,936   | 13,936     |                |          |
| Subarea 29 PA 7  | 15.3  |                      | 65                  | 4.2   | LDR                 |                                     |                   | 208                      |           |          | 13,520   | 27,456     |                |          |
| Subarea 29 PA 8  | 9.1   |                      | 46                  | 5.1   | LMDR                |                                     |                   | 208                      |           |          | 9,568    | 37,024     |                |          |
| Subarea 29 POR. PA 9                                   |       |                      | 62                  | 7     | LMDR                |                                     |                   | 208                      |           |          | 12,896   | 49,920     |                |          |
| Subarea 29 PA 10                                       | 6.6   |                      | 57                  | 8.7   | LMDR                |                                     |                   | 208                      |           |          | 11,856   | 61,776     |                |          |
| Subarea 29 PA 12                                       | 9.5   |                      | 53                  | 5.6   | LMDR                |                                     |                   | 208                      |           |          | 11,024   | 72,800     |                |          |
| Subarea 29 PA 13                                       | 7.8   |                      | 75                  | 9.6   | LMDR                |                                     |                   | 208                      |           |          | 15,600   | 88,400     | 0.088400       |          |

| Merrill Bellgrave Mill Creek Hydraulic Analysis Results (Table 1 of 2) |           |           |               |             |        |                            |            |                      |          |                       |
|--|-----------|-----------|---------------|-------------|--------|----------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information   |           |           |               |             |        | Ultimate Baseline Scenario |            |                      |          |                       |
| Pipe ID  | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                 | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| MC340P   | MC340     | MC330     | 12            | 306         | 0.0093 | 0.1474                     | 0.0618     | 2.48                 | 0.17     | 0.17                  |
| MC350P   | MC350     | MC340     | 12            | 65          | 0.0089 | 0.0476                     | 0.0174     | 1.75                 | 0.10     | 0.10                  |
| MC320P   | MC320     | MC310     | 15            | 312         | 0.0105 | 0.1474                     | 0.0618     | 2.52                 | 0.13     | 0.16                  |
| MC330P   | MC330     | MC320     | 12            | 312         | 0.0093 | 0.1474                     | 0.0618     | 2.48                 | 0.17     | 0.17                  |
| MC310P   | MC310     | MC300     | 15            | 337         | 0.0072 | 0.6268                     | 0.3127     | 3.37                 | 0.28     | 0.36                  |
| CSA10P   | CSA10     | MC310     | 15            | 79          | 0.0023 | 0.5148                     | 0.2509     | 2.11                 | 0.35     | 0.43                  |
| CSA20P   | CSA20     | CSA10     | 15            | 297         | 0.0027 | 0.5148                     | 0.2509     | 2.23                 | 0.33     | 0.42                  |
| CSA30P   | CSA30     | CSA20     | 15            | 295         | 0.0026 | 0.5148                     | 0.2509     | 2.23                 | 0.33     | 0.42                  |
| CSA40P   | CSA40     | CSA30     | 15            | 333         | 0.0028 | 0.2993                     | 0.1367     | 1.94                 | 0.25     | 0.31                  |
| MB120P   | MC280     | MB120     | 15            | 330         | 0.0043 | 0.8293                     | 0.4278     | 3.04                 | 0.38     | 0.47                  |
| MC270P   | MC270     | MC260     | 15            | 343         | 0.0109 | 0.8293                     | 0.4278     | 4.24                 | 0.30     | 0.37                  |
| MC290P   | MC295     | MC280     | 15            | 330         | 0.0044 | 0.8293                     | 0.4278     | 3.05                 | 0.37     | 0.47                  |
| MC300P   | MC300     | MC295     | 15            | 133         | 0.0079 | 0.8293                     | 0.4278     | 3.78                 | 0.32     | 0.40                  |
| CSA50P   | CSA50     | CSA40     | 15            | 332         | 0.0028 | 0.2993                     | 0.1367     | 1.94                 | 0.25     | 0.31                  |
| CSA60P   | CSA60     | CSA50     | 15            | 206         | 0.0031 | 0.2993                     | 0.1367     | 2.02                 | 0.24     | 0.30                  |
| 51   | MB120     | MC270     | 15            | 188         | 0.0106 | 0.8293                     | 0.4278     | 4.20                 | 0.30     | 0.37                  |
| MC180P   | MC180     | MC170     | 15            | 257         | 0.0076 | 1.1651                     | 0.6261     | 4.08                 | 0.39     | 0.49                  |
| MC190P   | MC190     | MC180     | 15            | 256         | 0.0076 | 1.1651                     | 0.6261     | 4.09                 | 0.39     | 0.49                  |
| MC200P   | MC200     | MC190     | 15            | 256         | 0.0073 | 1.1651                     | 0.6261     | 4.04                 | 0.39     | 0.49                  |
| MC210P   | MC210     | MC200     | 15            | 271         | 0.0074 | 1.1651                     | 0.6261     | 4.05                 | 0.39     | 0.49                  |
| MC4L10P  | MC4L10    | MC210     | 8             | 95          | 0.0047 | 0.0683                     | 0.0261     | 1.63                 | 0.24     | 0.16                  |
| MC220P   | MC220     | MC210     | 15            | 237         | 0.0099 | 1.1216                     | 0.6000     | 4.45                 | 0.35     | 0.44                  |
| MC230P   | MC230     | MC220     | 15            | 314         | 0.0102 | 1.1216                     | 0.6000     | 4.51                 | 0.35     | 0.44                  |
| MC240P   | MC240     | MC230     | 15            | 216         | 0.0107 | 1.1216                     | 0.6000     | 4.59                 | 0.35     | 0.43                  |
| MC250P   | MC250     | MC240     | 15            | 210         | 0.0105 | 1.1216                     | 0.6000     | 4.55                 | 0.35     | 0.44                  |
| MC260P   | MC260     | MC250     | 15            | 242         | 0.0107 | 1.1216                     | 0.6000     | 4.59                 | 0.35     | 0.43                  |
| MC110P   | MC110     | MC100     | 15            | 340         | 0.0073 | 1.8587                     | 1.0563     | 4.56                 | 0.51     | 0.64                  |
| MC3L10P  | MC3L10    | MC110     | 8             | 84          | 0.0048 | 0.0672                     | 0.0257     | 1.63                 | 0.24     | 0.16                  |
| MC120PP  | MC120     | MC110     | 15            | 345         | 0.0073 | 1.8183                     | 1.0306     | 4.52                 | 0.51     | 0.63                  |
| MC130P   | MC130     | MC120     | 15            | 346         | 0.0074 | 1.4306                     | 0.7879     | 4.28                 | 0.44     | 0.55                  |
| MC130PP  | MC140     | MC130     | 15            | 336         | 0.0074 | 1.4306                     | 0.7879     | 4.29                 | 0.44     | 0.55                  |
| MC150P   | MC150     | MC140     | 15            | 365         | 0.0073 | 1.4306                     | 0.7879     | 4.27                 | 0.44     | 0.55                  |
| MC160P   | MC160     | MC150     | 15            | 325         | 0.0074 | 1.4306                     | 0.7879     | 4.27                 | 0.44     | 0.55                  |
| MC170P   | MC170     | MC160     | 15            | 373         | 0.0069 | 1.1651                     | 0.6261     | 3.94                 | 0.40     | 0.50                  |
| ESP3P  | ESP21MH   | ESP25MH   | 8             | 389         | 0.0057 | 0.4941                     | 0.2396     | 2.93                 | 0.70     | 0.47                  |
| ESP1P  | ESP10MH   | ESP21MH   | 8             | 632         | 0.0060 | 0.3700                     | 0.1733     | 2.82                 | 0.56     | 0.38                  |
| MC40P  | MC40      | MC30      | 21            | 361         | 0.0062 | 2.5858                     | 1.5288     | 4.61                 | 0.39     | 0.68                  |
| MC50P  | MC50      | MC40      | 21            | 362         | 0.0074 | 2.5858                     | 1.5288     | 4.93                 | 0.37     | 0.65                  |
| EUD10P   | EUD10     | MC50      | 15            | 83          | 0.0226 | 0.6142                     | 0.3057     | 5.04                 | 0.21     | 0.26                  |
| MC60P  | MC60      | MC50      | 15            | 307         | 0.0075 | 2.1187                     | 1.2231     | 4.74                 | 0.55     | 0.69                  |
| MC70P  | MC70      | MC60      | 15            | 305         | 0.0076 | 2.1187                     | 1.2231     | 4.77                 | 0.55     | 0.68                  |
| MC80P  | MC80      | MC70      | 15            | 297         | 0.0074 | 2.1187                     | 1.2231     | 4.73                 | 0.55     | 0.69                  |
| MC2L10P  | MC2L10    | MC80      | 10            | 92          | 0.0047 | 0.3576                     | 0.1668     | 2.54                 | 0.42     | 0.35                  |
| MC90P  | MC90      | MC80      | 15            | 336         | 0.0071 | 1.8587                     | 1.0563     | 4.51                 | 0.52     | 0.64                  |
| MC100PP  | MC100     | MC90      | 15            | 336         | 0.0074 | 1.8587                     | 1.0563     | 4.57                 | 0.51     | 0.64                  |
| EUD20P   | EUD20     | EUD10     | 15            | 293         | 0.0229 | 0.6142                     | 0.3057     | 5.06                 | 0.21     | 0.26                  |
| EUD30P   | EUD30     | EUD20     | 15            | 275         | 0.0045 | 0.6142                     | 0.3057     | 2.84                 | 0.32     | 0.40                  |
| EUD3L10P   | EUD3L10   | EUD30     | 8             | 77          | 0.0075 | 0.0557                     | 0.0208     | 1.82                 | 0.19     | 0.13                  |
| EUD50P   | EUD50     | EUD40     | 15            | 282         | 0.0047 | 0.5767                     | 0.2849     | 2.83                 | 0.30     | 0.38                  |
| EUD40P   | EUD40     | EUD30     | 15            | 400         | 0.0043 | 0.5767                     | 0.2849     | 2.75                 | 0.31     | 0.39                  |
| EUD60P   | EUD60     | EUD50     | 15            | 348         | 0.0028 | 0.5623                     | 0.2769     | 2.33                 | 0.34     | 0.43                  |
| EUD5L10P   | EUD5L100  | EUD50     | 8             | 105         | 0.0053 | 0.0237                     | 0.0080     | 1.25                 | 0.14     | 0.09                  |
| EUD70P   | EUD70     | EUD60     | 15            | 319         | 0.0028 | 0.5623                     | 0.2769     | 2.32                 | 0.34     | 0.43                  |
| EUD80P   | EUD80     | EUD70     | 15            | 276         | 0.0023 | 0.5623                     | 0.2769     | 2.16                 | 0.36     | 0.45                  |
| EUD8L10P   | EUD8L10   | EUD80     | 8             | 92          | 0.0052 | 0.5623                     | 0.2769     | 2.86                 | 0.81     | 0.54                  |
| ESP6P  | ESP30MH   | EUD8L10   | 8             | 411         | 0.0057 | 0.5623                     | 0.2769     | 2.99                 | 0.78     | 0.52                  |
| ESP4P  | ESP25MH   | ESP30MH   | 8             | 312         | 0.0057 | 0.4941                     | 0.2396     | 2.93                 | 0.70     | 0.47                  |
| M29  | M290      | M280      | 24            | 314         | 0.0011 | 2.7423                     | 1.6328     | 2.48                 | 0.54     | 1.07                  |
| M30  | M300      | M290      | 15            | 348         | 0.0143 | 0.1999                     | 0.0869     | 3.07                 | 0.14     | 0.17                  |
| M31  | M310      | M300      | 15            | 300         | 0.0043 | 0.1195                     | 0.0489     | 1.73                 | 0.14     | 0.18                  |
| M32  | M320      | M310      | 15            | 286         | 0.0043 | 0.1195                     | 0.0489     | 1.73                 | 0.14     | 0.18                  |
| M33  | M330      | M320      | 15            | 255         | 0.0043 | 0.1195                     | 0.0489     | 1.73                 | 0.14     | 0.18                  |
| M34  | M340      | M330      | 15            | 324         | 0.0058 | 0.1195                     | 0.0489     | 1.92                 | 0.13     | 0.17                  |
| MC100P   | MC10      | M290      | 21            | 314         | 0.0065 | 2.6115                     | 1.5458     | 4.73                 | 0.39     | 0.67                  |
| MC120P   | MC20      | MC10      | 21            | 236         | 0.0061 | 2.6115                     | 1.5458     | 4.62                 | 0.39     | 0.69                  |
| MC30P  | MC30      | MC20      | 21            | 253         | 2.3821 | 2.6115                     | 1.5458     | 38.07                | 0.09     | 0.16                  |
| MCL10P   | MCL10     | MC30      | 8             | 39          | 0.0744 | 0.0467                     | 0.0171     | 3.85                 | 0.10     | 0.07                  |
| M10L10P  | M10L10    | M340      | 8             | 25          | 0.0060 | 0.1195                     | 0.0489     | 2.09                 | 0.30     | 0.20                  |
| M24  | M240      | M230      | 24            | 297         | 0.0011 | 2.9098                     | 1.7448     | 2.48                 | 0.56     | 1.12                  |

| Merrill_Belgrave_Mill Creek Hydraulic Analysis Results (Table 2 of 2) |           |           |               |             |         |                            |            |                      |          |                       |
|---|-----------|-----------|---------------|-------------|---------|----------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information  |           |           |               |             |         | Ultimate Baseline Scenario |            |                      |          |                       |
| Pipe ID   | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope   | PDWF (mgd)                 | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| M25   | M250      | M240      | 24            | 300         | 0.0011  | 2.9098                     | 1.7448     | 2.50                 | 0.56     | 1.11                  |
| M26   | M260      | M250      | 24            | 344         | 0.0011  | 2.7423                     | 1.6328     | 2.47                 | 0.54     | 1.07                  |
| M27   | M270      | M260      | 24            | 321         | 0.0011  | 2.7423                     | 1.6328     | 2.46                 | 0.54     | 1.08                  |
| M28   | M280      | M270      | 24            | 274         | 0.0011  | 2.7423                     | 1.6328     | 2.46                 | 0.54     | 1.08                  |
| H10P  | H010      | H00       | 15            | 300         | 0.0068  | 1.1249                     | 0.6019     | 3.88                 | 0.39     | 0.49                  |
| H20P  | H020      | H010      | 15            | 206         | 0.0091  | 1.1249                     | 0.6019     | 4.32                 | 0.36     | 0.45                  |
| H30P  | H030      | H020      | 15            | 210         | 0.0090  | 1.1249                     | 0.6019     | 4.31                 | 0.36     | 0.46                  |
| H40P  | H040      | H030      | 15            | 192         | 0.0090  | 1.1249                     | 0.6019     | 4.30                 | 0.36     | 0.46                  |
| H50P  | H050      | H040      | 15            | 195         | 0.0089  | 1.1249                     | 0.6019     | 4.30                 | 0.36     | 0.46                  |
| H3L10   | H3L10     | H050      | 8             | 60          | 0.0182  | 0.3063                     | 0.1402     | 4.06                 | 0.37     | 0.25                  |
| H60P  | H060      | H050      | 15            | 334         | 0.0091  | 0.8876                     | 0.4617     | 4.04                 | 0.32     | 0.40                  |
| H70P  | H070      | H060      | 15            | 280         | 0.0091  | 0.8876                     | 0.4617     | 4.04                 | 0.32     | 0.40                  |
| H4L10P  | H4L10     | H070      | 8             | 92          | 0.0070  | 0.0904                     | 0.0358     | 2.03                 | 0.25     | 0.17                  |
| H80P  | H080      | H070      | 15            | 312         | 0.0091  | 0.8259                     | 0.4259     | 3.96                 | 0.31     | 0.39                  |
| H082P   | H082      | H080      | 15            | 310         | 0.0091  | 0.8259                     | 0.4259     | 3.97                 | 0.31     | 0.39                  |
| M6L10P  | M6L10     | M250      | 8             | 68          | 0.0089  | 0.2507                     | 0.1121     | 2.96                 | 0.40     | 0.27                  |
| M19   | M190      | M180      | 24            | 321         | 0.0013  | 3.8053                     | 2.3564     | 2.84                 | 0.63     | 1.25                  |
| M20   | G10       | M190      | 24            | 315         | 0.0013  | 3.8053                     | 2.3564     | 2.83                 | 0.63     | 1.26                  |
| M21   | M210      | G10       | 24            | 296         | 0.0073  | 2.9098                     | 1.7448     | 5.02                 | 0.33     | 0.66                  |
| M22   | M220      | M210      | 24            | 297         | 0.0011  | 2.9098                     | 1.7448     | 2.51                 | 0.56     | 1.11                  |
| M23   | M230      | M220      | 24            | 297         | 0.0011  | 2.9098                     | 1.7448     | 2.51                 | 0.56     | 1.11                  |
| H00P  | H00       | G10       | 15            | 94          | 0.0063  | 1.1409                     | 0.6115     | 3.79                 | 0.40     | 0.51                  |
| H85P  | H085      | H082      | 15            | 91          | 0.0079  | 0.8259                     | 0.4259     | 3.77                 | 0.32     | 0.40                  |
| H87P  | H087      | H085      | 15            | 93          | 0.0045  | 0.5623                     | 0.2769     | 2.77                 | 0.30     | 0.38                  |
| H90P  | H090      | H087      | 15            | 211         | 0.0061  | 0.5623                     | 0.2769     | 3.08                 | 0.28     | 0.35                  |
| H100P   | H100      | H090      | 15            | 352         | 0.0056  | 0.5623                     | 0.2769     | 2.99                 | 0.29     | 0.36                  |
| H110P   | H110      | H100      | 15            | 350         | 0.0056  | 0.5623                     | 0.2769     | 3.00                 | 0.29     | 0.36                  |
| H120P   | H120      | H110      | 15            | 350         | 0.0056  | 0.5623                     | 0.2769     | 2.99                 | 0.29     | 0.36                  |
| H130P   | H130      | H120      | 15            | 230         | 0.00566 | 0.5623                     | 0.2769     | 3.00                 | 0.29     | 0.36                  |
| H140P   | H140      | H130      | 15            | 345         | 0.00514 | 0.5623                     | 0.27688    | 2.90                 | 0.29     | 0.37                  |
| EUC20P  | EUC20     | H085      | 15            | 361         | 0.00224 | 0.3234                     | 0.14902    | 1.84                 | 0.27     | 0.34                  |
| EUC30   | EUC30     | EUC20     | 15            | 371         | 0.00216 | 0.3234                     | 0.14902    | 1.82                 | 0.28     | 0.34                  |
| EUC40P  | EUC40     | EUC30     | 15            | 371         | 0.00219 | 0.3234                     | 0.14902    | 1.82                 | 0.27     | 0.34                  |
| EUC50P  | EUC50     | EUC40     | 15            | 185         | 0.00211 | 0.3234                     | 0.14902    | 1.80                 | 0.28     | 0.35                  |
| EUC5L10P  | EUC5L10   | EUC50     | 12            | 80          | 0.0033  | 0.3234                     | 0.1490     | 2.15                 | 0.34     | 0.34                  |
| H150P   | H150      | H140      | 15            | 349         | 0.0099  | 0.5623                     | 0.2769     | 3.66                 | 0.25     | 0.31                  |
| H160P   | H160      | H150      | 15            | 505         | 0.0100  | 0.3601                     | 0.1681     | 3.23                 | 0.20     | 0.25                  |
| M13   | M140      | Y20MH120  | 24            | 126         | 0.0014  | 3.8867                     | 2.4129     | 2.89                 | 0.63     | 1.26                  |
| M15   | M150      | M140      | 24            | 302         | 0.0013  | 3.8867                     | 2.4129     | 2.84                 | 0.64     | 1.28                  |
| M16   | M160      | M150      | 24            | 363         | 0.0013  | 3.8053                     | 2.3564     | 2.83                 | 0.63     | 1.26                  |
| M17   | M170      | M160      | 24            | 147         | 0.0014  | 3.8053                     | 2.3564     | 2.89                 | 0.62     | 1.24                  |
| M18   | M180      | M170      | 24            | 322         | 0.0013  | 3.8053                     | 2.3564     | 2.81                 | 0.63     | 1.26                  |
| M3AL10P   | M3AL10    | M150      | 8             | 86          | 0.0110  | 0.0300                     | 0.0104     | 1.73                 | 0.13     | 0.09                  |
| M4L10P  | M4L10     | M150      | 8             | 95          | 0.0121  | 0.1136                     | 0.0462     | 2.65                 | 0.25     | 0.16                  |
| Y20CL1017   | Y20MH120  | Y20MH121  | 24            | 321         | 0.0013  | 3.8867                     | 2.4129     | 2.85                 | 0.64     | 1.27                  |
| Y20CL1001   | Y20MH101  | Y20MH102  | 10            | 95          | 0.0042  | 0.3142                     | 0.1443     | 2.37                 | 0.40     | 0.34                  |
| Y20CL1018   | Y20MH121  | Y20MH122  | 24            | 324         | 0.0013  | 3.8867                     | 2.4129     | 2.84                 | 0.64     | 1.28                  |
| Y20CL1000   | Y20MH100  | Y20MH102  | 24            | 282         | 0.0128  | 3.8867                     | 2.4129     | 6.67                 | 0.33     | 0.66                  |
| Y20CL1019   | Y20MH122  | Y20MH100  | 24            | 280         | 0.0013  | 3.8867                     | 2.4129     | 2.83                 | 0.64     | 1.28                  |
| Y20CL1002   | Y20MH104  | Y20MH102  | 8             | 95          | 0.0099  | 0.0052                     | 0.0015     | 0.98                 | 0.06     | 0.04                  |
| Y20CL1003   | Y20MH102  | Y20MH103  | 27            | 194         | 0.0008  | 4.0958                     | 2.5587     | 2.43                 | 0.62     | 1.40                  |
| Y19CL1067   | Y20MH103  | Y19MH151  | 27            | 326         | 0.0008  | 4.0958                     | 2.5587     | 2.40                 | 0.63     | 1.42                  |
| Y20CL1004   | Y20MH105  | Y20MH104  | 8             | 146         | 0.02445 | 0.0052                     | 0.0015     | 1.34                 | 0.05     | 0.03                  |
| Y20CL1005   | Y20MH106  | Y20MH105  | 8             | 137         | 0.0100  | 0.0052                     | 0.0015     | 0.98                 | 0.06     | 0.04                  |
| Y19CL1066   | Y19MH151  | Y19MH152  | 27            | 330         | 0.0008  | 4.0997                     | 2.5615     | 2.39                 | 0.63     | 1.42                  |
| Y19CL1068   | Y19MH152  | Y19MH153  | 27            | 330         | 0.0008  | 4.0997                     | 2.5615     | 2.43                 | 0.62     | 1.41                  |
| Y19CL1070   | Y19MH153  | Y19MH154  | 27            | 216         | 0.0008  | 4.1063                     | 2.5660     | 2.39                 | 0.63     | 1.43                  |
| Y19CL1071   | Y19MH154  | Y19MH156  | 27            | 264         | 0.0008  | 4.1796                     | 2.6174     | 2.41                 | 0.64     | 1.44                  |
| Y19CL1073   | Y19MH155  | Y19MH154  | 8             | 92          | 0.0261  | 0.1249                     | 0.0514     | 3.57                 | 0.21     | 0.14                  |
| Y19CL1077   | Y19MH161  | Y19MH162  | 8             | 244         | 0.0057  | 0.1249                     | 0.0514     | 2.08                 | 0.31     | 0.21                  |
| Y19CL1078   | Y19MH162  | Y19MH155  | 8             | 96          | 0.0056  | 0.1249                     | 0.0514     | 2.07                 | 0.31     | 0.21                  |
| Y19CL1069   | Y19MH156  | Y19MH157  | 27            | 296         | 0.0008  | 4.1796                     | 2.6174     | 2.43                 | 0.64     | 1.43                  |
| Y19CL1072   | Y19MH157  | Y19MH159  | 27            | 203         | 0.0008  | 4.2258                     | 2.6499     | 2.42                 | 0.64     | 1.44                  |
| Y19CL1074   | Y19MH158  | Y19MH157  | 8             | 61          | 0.0419  | 0.0829                     | 0.0324     | 3.74                 | 0.15     | 0.10                  |
| Y19CL1075   | Y19MH159  | Y19MH100  | 27            | 90          | 0.0020  | 4.2258                     | 2.6499     | 3.44                 | 0.48     | 1.09                  |

| MERRILL TRIBUTARY: Merrill Ave to Bellegrave Ave to Mill Creek Ave Including Southern Portion of Haven Ave   |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
|--|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|---------|----------|------------|----------------|----------|
| Land Use and DU's per 2050 TOP With the Exception of SCE Prop where the Existing Use was used, Esperanza properties where the SP was used and Subarea 29 properties where the 2022 Amended Subarea 29 Specific Plans was used. |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
| Specific Plan and Planning Area  | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |         | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH |
|  |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit    |          |            |                |          |
| <b>TRIBUTARY TO MILL CREEK</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
| <b>Easterly Portion of Edenglen (per Specific Plan)</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
| Neighborhood Comm  | 10    |                      |                     |       | NC                  | 10                                  |                   |                          | 1610      | gpd/ac  | 16,100   | 16,100     |                |          |
| Business Park  | 10    |                      |                     |       | BP                  | 10                                  |                   |                          | 1610      | gpd/ac  | 16,100   | 32,200     |                |          |
| Industrial   | 36.9  |                      |                     |       | IND                 | 36.9                                |                   |                          | 1060      | gpd/ac  | 39,114   | 71,314     |                |          |
| Business Park (SCE)  | 12.8  |                      |                     |       | BP                  | 12.8                                |                   |                          | 1610      | gpd/ac  | 20,608   | 91,922     | 0.091922       | CSA60    |
| <b>Westerly Portion of Edenglen (Per Specific Plan)</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
| Edenglen SP P-1  | 5.7   | LDR                  | 21                  |       |                     |                                     |                   | 208                      |           | gpd/du  | 4,368    |            |                |          |
| Edenglen SP P-2  | 5.8   | LDR                  | 29                  |       |                     |                                     |                   | 208                      |           | gpd/du  | 6,032    |            |                |          |
| Edenglen SP P-3  | 10.8  | LMDR                 | 106                 |       |                     |                                     |                   | 208                      |           | gpd/du  | 22,048   |            |                |          |
| Edenglen SP P-4  | 3.8   | LMDR                 | 36                  |       |                     |                                     |                   | 208                      |           | gpd/du  | 7,488    |            |                |          |
| Edenglen SP P-5  | 8.4   | MDR                  | 139                 |       |                     |                                     |                   | 174                      |           | gpd/du  | 24,186   |            |                |          |
| Edenglen SP P-6  | 10.5  | LMDR                 | 87                  |       |                     |                                     |                   | 208                      |           | gpd/du  | 18,096   |            |                |          |
| Edenglen SP P-7  | 9.8   | LMDR                 | 67                  |       |                     |                                     |                   | 208                      |           | gpd/du  | 13,936   |            |                |          |
| Edenglen SP P-8  | 6.3   | MDR                  | 99                  |       |                     |                                     |                   | 174                      |           | gpd/du  | 17,226   |            |                |          |
| Park   | 4     | OS-R                 |                     |       |                     |                                     |                   |                          |           | gpd/ac  | 800      |            |                |          |
|  |       |                      | 584                 |       |                     |                                     |                   |                          |           |         | 114,180  | 114,180    | 0.114180       | CSA30    |
| <b>Colony High School from Model</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
|  |       |                      |                     |       |                     |                                     | 2180              |                          | 8         | gpd/st  | 17,440   | 17,440     | 0.017440       | MC350    |
| <b>RICH HAVEN</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |         |          |            |                |          |
| Rich Haven 1F  | 19.4  |                      | 213.4               | 11    | LMDR                |                                     |                   | 208                      |           |         | 44,387   | 44,387     | 0.044387       | MC340    |
| Rich Haven PA 4A - 4C  | 33    |                      |                     |       | IND                 |                                     |                   |                          |           |         |          |            |                |          |
| SW Cor. Mill Creek & Chino   |       |                      |                     |       |                     |                                     |                   |                          | 1060      | gpd/ac  | 34,980   | 34,980     | 0.034980       | MC300    |
| North SCE Sub Station  | 49.8  |                      |                     |       | SCE                 |                                     |                   |                          |           | gpd/ac  | -        | 34,980     | 0.044758       | CSA60    |
| Fuji Foods   | 27.8  |                      |                     |       | LI                  |                                     |                   |                          | 1610      | gpd/ac  | 44,758   | 44,758     | 0.044758       | CSA60    |
| Rich Haven 5B & 5D   | 44.5  |                      |                     |       | IND                 |                                     |                   |                          | 1060      | gpd/ac  | 47,170   | 47,170     | 0.047170       | MC260    |
| South Sub Station  | 77.6  |                      |                     |       | SCE                 |                                     |                   |                          |           | gpd/ac  | -        | 47,170     | 0.026108       | MC4L10   |
| Rich Haven PA 6B   | 24.63 |                      |                     |       | IND                 |                                     |                   |                          | 1060      | gpd/ac  | 26,108   | 26,108     |                |          |
| Rich Haven PA7   | 20    |                      |                     |       | GC                  |                                     |                   |                          | 1610      | gpd/ac  | 32,200   | 32,200     |                |          |
| Rich Haven 9B  | 26.28 |                      |                     |       | MU                  |                                     |                   |                          | 2690      | gpd/ac  | 70,693   | 102,893    |                |          |
| Rich Haven 8A  | 16.56 |                      |                     |       | GC                  | 100,000                             |                   |                          | 120       | gpd/tsf | 12,000   | 114,893    |                |          |
|  |       |                      | 224                 |       | MDR                 |                                     |                   | 174                      |           |         | 38,976   | 153,869    |                |          |
|  | 15.2  |                      |                     |       | School              |                                     | 1000              |                          | 8         | gpd/st  | 8,000    | 161,869    | 0.1618692      | MC160    |
| 24A PA 2   | 28    |                      | 700                 | 25    | MDR                 |                                     |                   | 174                      |           |         | 121,800  | 121,800    |                |          |
|  | 12    |                      | 132                 | 11    | LMDR                |                                     |                   | 208                      |           |         | 27,456   | 149,256    |                |          |
| Esperanza PA 1   | 28.97 |                      | 319                 | 11    | MDR                 |                                     |                   | 174                      |           |         | 55,506   | 204,762    | 0.204762       | MC120    |
| Esperanza PA 2   | 17.36 |                      | 113                 | 7     | LDR                 |                                     |                   | 208                      |           |         | 23,504   | 23,504     | 0.023504       | MC3L10   |
| 24 A PA4   | 60    |                      | 660                 | 11    | LMDR                |                                     |                   | 208                      |           |         | 137,280  | 137,280    |                |          |
|  | 10    |                      | 50                  | 5     | LDR                 |                                     |                   | 208                      |           |         | 10,400   | 147,680    |                |          |
|  | 10    |                      | 110                 | 11    | MDR                 |                                     |                   | 174                      |           |         | 19,140   | 166,820    | 0.166820       | MC2L10   |

| MERRILL TRIBUTARY: Merrill Ave to Bellegrave Ave to Mill Creek Ave Including Southern Portion of Haven Ave   |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
|--|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|----------|----------|------------|----------------|----------|
| Land Use and DU's per 2050 TOP With the Exception of SCE Prop where the Existing Use was used, Esperanza properties where the SP was used and Subarea 29 properties where the 2022 Amended Subarea 29 Specific Plans was used. |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Specific Plan and Planning Area  | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |          | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH |
|  |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit     |          |            |                |          |
| <b>TRIBUTARY TO EUCALYPTUS AVENUE</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Rich Haven PA 8B   | 20    |                      | 500                 | 25    | MDR                 |                                     |                   | 174                      |           |          | 87,000   |            |                |          |
| Esperanza PA3  | 11.4  |                      | 156                 | 14    | MDR                 |                                     |                   | 174                      |           |          | 27,144   | 114,144    | 0.114144       | ESP10MH  |
| Esperanza North Por. PA4   | 12.87 |                      | 202                 | 16    | MDR                 |                                     |                   | 174                      |           |          | 35,148   | 35,148     | 0.035148       | ESP21MH  |
| Esperanza South Por. PA4   | 6.43  |                      | 101                 | 16    | MDR                 |                                     |                   | 174                      |           |          | 17,574   | 17,574     | 0.017574       | ESP30MH  |
| Esperanza PA 11  |       |                      |                     |       |                     |                                     | 1000              |                          | 8         | gpd/st   | 8,000    | 8,000      | 0.008000       | EUD5L100 |
| Esperanza PA 10 TM   |       |                      | 100                 |       |                     |                                     |                   | 208                      |           |          | 20,800   | 20,800     | 0.020800       | EUD3L10  |
| Esperanza PA 9   | 17.75 |                      | 82                  | 11    | LMDR                |                                     |                   | 208                      |           |          | 17,056   | 17,056     | 0.017056       | MCL10    |
| <b>TRIBUTARY TO BELLEGRAVE AVENUE</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Esperanza PA 5   | 23.78 |                      | 157                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 32,656   |            |                |          |
| Esperanza PA 6   | 13.64 |                      | 78                  | 11    | LMDR                |                                     |                   | 208                      |           |          | 16,224   | 48,880     | 0.048880       | M10L10   |
| Esperanza PA 7   | 14.36 |                      | 76                  | 11    | LMDR                |                                     |                   | 208                      |           |          | 15,808   |            |                |          |
| Esperanza PA 8   | 23.72 |                      | 107                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 22,256   | 38,064     | 0.038064       | M300     |
| Subarea 29   |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| PA 33  | 47.6  |                      | 644                 | 13.5  | LMDR                |                                     |                   | 174                      |           |          | 112,056  | 112,056    | 0.112056       | M6L10    |
| <b>TRIBUTARY TO HAVEN AVENUE</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Rich Haven 9A and Portion of 9b  | 62.5  |                      |                     |       | MU                  |                                     |                   |                          | 2690      | gpd/ac   | 168,125  | 168,125    | 0.168125       | H160     |
| The Lakes 24A PA1  | 25    |                      | 625                 | 25    | MDR                 |                                     |                   | 174                      |           |          | 108,750  | 108,750    | 0.108750       | H150     |
| The Lakes 24A PA3  | 6     |                      |                     |       | NC                  |                                     |                   |                          | 1610      | gpd/ac   | 9,660    | 9,660      |                |          |
|  | 14    |                      | 630                 | 45    | HDR                 |                                     |                   |                          | 174       | gpd/acre | 109,620  | 119,280    |                |          |
|  | 13    |                      | 143                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 29,744   | 149,024    | 0.149024       | EUC5L10  |
| Subarea 29 PA 31   | 16.1  |                      | 172                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 35,776   | 35,776     | 0.035776       | H4L10    |
| Subarea 29 PA 32   | 42.5  |                      | 671                 | 15.8  | LMDR                |                                     |                   | 174                      |           |          | 116,754  | 152,530    | 0.152530       | H3L10    |
| School   | 19    |                      |                     |       |                     |                                     | 1200              |                          | 8         | gpd/st   | 9,600    | 9,600      | 0.009600       | H00      |
| <b>TRIBUTARY TO MERRILL</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 Pa 28 and 29  | 44.4  |                      | 222                 | 5     | LDR                 |                                     |                   | 208                      |           |          | 46,176   | 46,176     | 0.046176       | M4L10    |
| <b>TRIBUTARY TO PARKVIEW STREET</b>  |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 PA 15   | 3.15  |                      |                     |       | PF                  |                                     |                   |                          | 1450      | gpd/acre | 4,568    |            |                |          |
| Subarea 29 PA 16   | 6.07  |                      | 41                  | 6.8   | LMDR                |                                     |                   | 208                      |           |          | 8,528    |            |                |          |
| Subarea 29 PA 17   | 8.38  |                      | 56                  | 6.7   | LMDR                |                                     |                   | 208                      |           |          | 11,648   |            |                |          |
| Subarea 29 PA 19   | 8.95  |                      | 61                  | 6.8   | LMDR                |                                     |                   | 208                      |           |          | 12,688   |            |                |          |
| Subarea 29 PA 20   | 13.29 |                      | 67                  | 5.0   | LDR                 |                                     |                   | 208                      |           |          | 13,936   | 51,368     | 0.051368       | Y19MH161 |
| Subarea 29 PA 4  | 17.81 |                      | 88                  | 4.9   | LDR                 |                                     |                   | 208                      |           |          | 18,304   |            |                |          |
| Subarea 29 PA 5  | 13.67 |                      | 68                  | 5.0   | LDR                 |                                     |                   | 208                      |           |          | 14,144   | 32,448     | 0.032448       | Y19MH158 |
| Subarea 29 PA 9a   |       |                      | 7                   |       | LMDR                |                                     |                   | 208                      |           |          | 1,456    | 1,456      | 0.001456       | Y19MH127 |
| Subarea 29 PA 11   | 6.23  |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/acre | 1,246    |            |                |          |
| Subarea 29 PA 14   | 7.64  |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/acre | 1,528    | 2,774      | 0.002774       | Y19MH151 |
| Subarea 29 PA 18   | 11.19 |                      |                     |       | PS-E                |                                     | 750               |                          | 8         | gpd/stu  | 6,000    |            |                |          |
| Subarea 29 PA 21   | 11.48 |                      | 48                  | 4.2   | LDR                 |                                     |                   | 208                      |           |          | 9,984    |            |                |          |
| Subarea 29 PA 22   | 21.34 |                      | 79                  | 3.7   | LDR                 |                                     |                   | 208                      |           |          | 16,432   |            |                |          |
| Subarea 29 PA 23   | 14.41 |                      | 82                  | 5.7   | LMDR                |                                     |                   | 208                      |           |          | 17,056   |            |                |          |
| Subarea 29 PA 24   | 13.71 |                      | 73                  | 5.3   | LMDR                |                                     |                   | 208                      |           |          | 15,184   |            |                |          |
| Subarea 29 PA 25   | 18.45 |                      | 102                 | 5.5   | LMDR                |                                     |                   | 208                      |           |          | 21,216   |            |                |          |
| Subarea 29 PA 26   | 12.03 |                      | 101                 | 8.4   | LMDR                |                                     |                   | 208                      |           |          | 21,008   |            |                |          |
| Subarea 29 PA 30   | 21.8  |                      | 180                 | 11    | LMDR                |                                     |                   | 208                      |           |          | 37,440   | 144,320    | 0.144320       | Y20MH101 |
| Subarea 29 PA 27   | 9.58  |                      | 50                  | 5.2   | LMDR                |                                     |                   | 208                      |           |          | 10,400   | 10,400     | 0.010400       | M3AL10   |
| <b>TRIBUTARY TO ARCHIBALD AVE NORTH OF MERRILL AVE</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 PA 1  | 83.1  |                      | 432                 | 5.2   | LMDR                |                                     |                   | 208                      |           |          | 89,856   | 89,856     |                |          |
| Subarea 29 PA 2  | 12.1  |                      |                     |       | COM                 |                                     |                   |                          | 1610      | gpd/ac   | 19,481   | 109,337    |                |          |
| Subarea 29 PA 3  | 34.5  |                      | 186                 | 5.4   | LMDR                |                                     |                   | 208                      |           |          | 38,688   | 148,025    | 0.148025       |          |
| <b>TRIBUTARY TO ARCHIBALD AVE SOUTH OF MERRILL AVE</b>   |       |                      |                     |       |                     |                                     |                   |                          |           |          |          |            |                |          |
| Subarea 29 PA 6  | 13    |                      | 67                  | 5.2   | LMDR                |                                     |                   | 208                      |           |          | 13,936   | 13,936     |                |          |
| Subarea 29 PA 7  | 15.3  |                      | 65                  | 4.2   | LDR                 |                                     |                   | 208                      |           |          | 13,520   | 27,456     |                |          |
| Subarea 29 PA 8  | 9.1   |                      | 46                  | 5.1   | LMDR                |                                     |                   | 208                      |           |          | 9,568    | 37,024     |                |          |
| Subarea 29 POR. PA 9   |       |                      | 62                  | 7     | LMDR                |                                     |                   | 208                      |           |          | 12,896   | 49,920     |                |          |
| Subarea 29 PA 10   | 6.6   |                      | 57                  | 8.7   | LMDR                |                                     |                   | 208                      |           |          | 11,856   | 61,776     |                |          |
| Subarea 29 PA 12   | 9.5   |                      | 53                  | 5.6   | LMDR                |                                     |                   | 208                      |           |          | 11,024   | 72,800     |                |          |
| Subarea 29 PA 13   | 7.8   |                      | 75                  | 9.6   | LMDR                |                                     |                   | 208                      |           |          | 15,600   | 88,400     | 0.088400       |          |

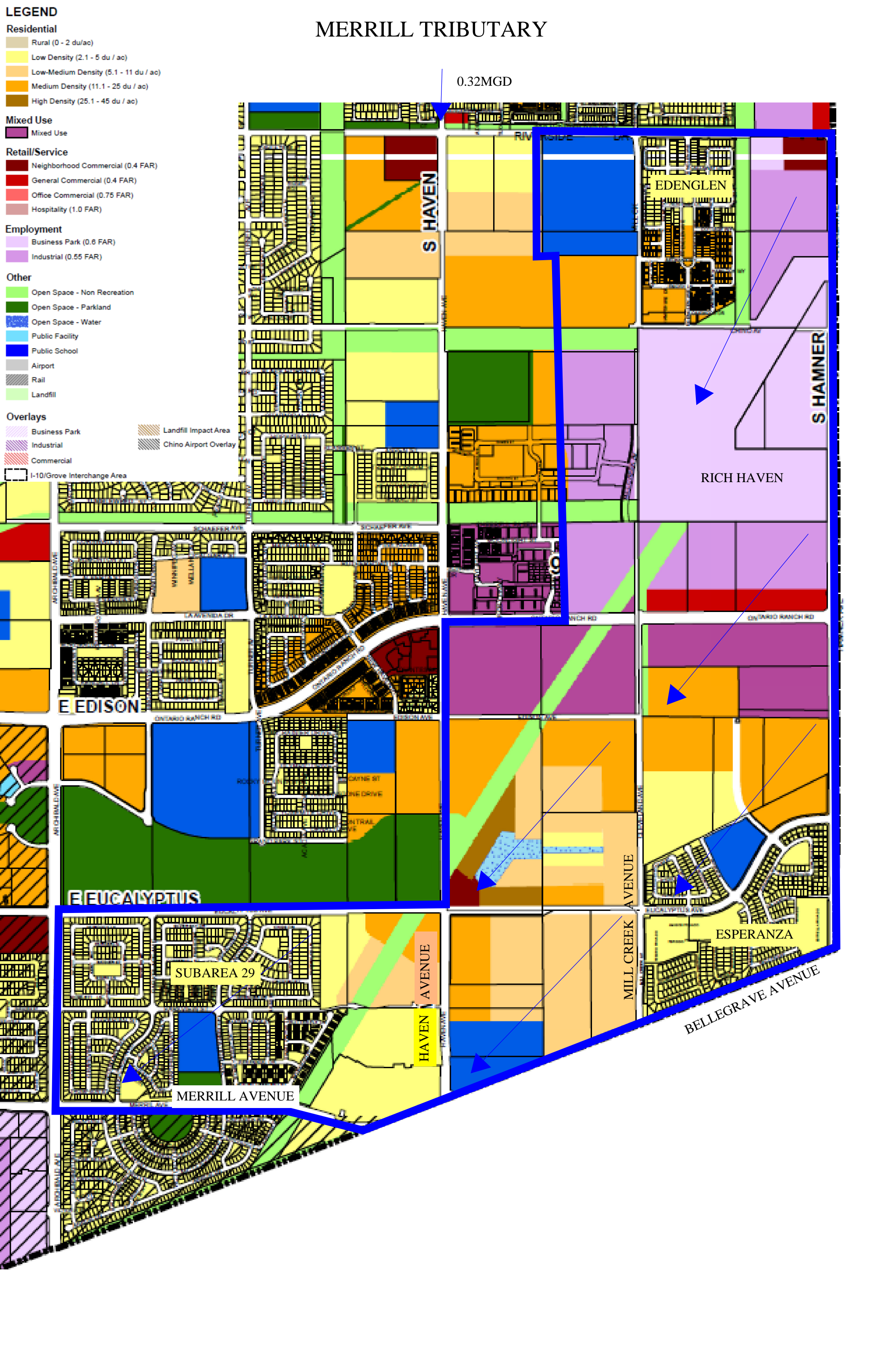


| Merrill Bellgrave Mill Creek Hydraulic Analysis Results (Table 1 of 2)          |           |           |               |             |        |                            |            |                      |          |                       |
|---|-----------|-----------|---------------|-------------|--------|----------------------------|------------|----------------------|----------|-----------------------|
| Per TOP with exception of SCE Prop as Existing Use and Esperanza SP area per SP |           |           |               |             |        |                            |            |                      |          |                       |
| General Pipe Information  |           |           |               |             |        | Ultimate Baseline Scenario |            |                      |          |                       |
| Pipe ID   | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                 | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| MC340P  | MC340     | MC330     | 12            | 306         | 0.0093 | 0.1474                     | 0.0618     | 2.48                 | 0.17     | 0.17                  |
| MC350P  | MC350     | MC340     | 12            | 65          | 0.0089 | 0.0476                     | 0.0174     | 1.75                 | 0.10     | 0.10                  |
| MC320P  | MC320     | MC310     | 15            | 312         | 0.0105 | 0.1474                     | 0.0618     | 2.52                 | 0.13     | 0.16                  |
| MC330P  | MC330     | MC320     | 12            | 312         | 0.0093 | 0.1474                     | 0.0618     | 2.48                 | 0.17     | 0.17                  |
| MC310P  | MC310     | MC300     | 15            | 337         | 0.0072 | 0.6268                     | 0.3127     | 3.37                 | 0.28     | 0.36                  |
| CSA10P  | CSA10     | MC310     | 15            | 79          | 0.0023 | 0.5148                     | 0.2509     | 2.11                 | 0.35     | 0.43                  |
| CSA20P  | CSA20     | CSA10     | 15            | 297         | 0.0027 | 0.5148                     | 0.2509     | 2.23                 | 0.33     | 0.42                  |
| CSA30P  | CSA30     | CSA20     | 15            | 295         | 0.0026 | 0.5148                     | 0.2509     | 2.23                 | 0.33     | 0.42                  |
| CSA40P  | CSA40     | CSA30     | 15            | 333         | 0.0028 | 0.2993                     | 0.1367     | 1.94                 | 0.25     | 0.31                  |
| MB120P  | MC280     | MB120     | 15            | 330         | 0.0043 | 0.6890                     | 0.3477     | 2.89                 | 0.34     | 0.43                  |
| MC270P  | MC270     | MC260     | 15            | 343         | 0.0109 | 0.6890                     | 0.3477     | 4.02                 | 0.27     | 0.34                  |
| MC290P  | MC295     | MC280     | 15            | 330         | 0.0044 | 0.6890                     | 0.3477     | 2.90                 | 0.34     | 0.42                  |
| MC300P  | MC300     | MC295     | 15            | 133         | 0.0079 | 0.6890                     | 0.3477     | 3.58                 | 0.29     | 0.36                  |
| CSA50P  | CSA50     | CSA40     | 15            | 332         | 0.0028 | 0.2993                     | 0.1367     | 1.94                 | 0.25     | 0.31                  |
| CSA60P  | CSA60     | CSA50     | 15            | 206         | 0.0031 | 0.2993                     | 0.1367     | 2.02                 | 0.24     | 0.30                  |
| 51  | MB120     | MC270     | 15            | 188         | 0.0106 | 0.6890                     | 0.3477     | 3.98                 | 0.27     | 0.34                  |
| MC180P  | MC180     | MC170     | 15            | 257         | 0.0076 | 0.8173                     | 0.4209     | 3.70                 | 0.32     | 0.40                  |
| MC190P  | MC190     | MC180     | 15            | 256         | 0.0076 | 0.8173                     | 0.4209     | 3.71                 | 0.32     | 0.40                  |
| MC200P  | MC200     | MC190     | 15            | 256         | 0.0073 | 0.8173                     | 0.4209     | 3.66                 | 0.32     | 0.41                  |
| MC210P  | MC210     | MC200     | 15            | 271         | 0.0074 | 0.8173                     | 0.4209     | 3.68                 | 0.32     | 0.40                  |
| MC410P  | MC410     | MC210     | 8             | 95          | 0.0047 | 0.0683                     | 0.0261     | 1.63                 | 0.24     | 0.16                  |
| MC220P  | MC220     | MC210     | 15            | 237         | 0.0099 | 0.7719                     | 0.3948     | 4.01                 | 0.29     | 0.36                  |
| MC230P  | MC230     | MC220     | 15            | 314         | 0.0102 | 0.7719                     | 0.3948     | 4.06                 | 0.29     | 0.36                  |
| MC240P  | MC240     | MC230     | 15            | 216         | 0.0107 | 0.7719                     | 0.3948     | 4.13                 | 0.29     | 0.36                  |
| MC250P  | MC250     | MC240     | 15            | 210         | 0.0105 | 0.7719                     | 0.3948     | 4.10                 | 0.29     | 0.36                  |
| MC260P  | MC260     | MC250     | 15            | 242         | 0.0107 | 0.7719                     | 0.3948     | 4.13                 | 0.29     | 0.36                  |
| MC110P  | MC110     | MC100     | 15            | 340         | 0.0073 | 1.4681                     | 0.8111     | 4.30                 | 0.45     | 0.56                  |
| MC3110P   | MC3110    | MC110     | 8             | 84          | 0.0048 | 0.0621                     | 0.0235     | 1.59                 | 0.23     | 0.15                  |
| MC120PP   | MC120     | MC110     | 15            | 345         | 0.0073 | 1.4301                     | 0.7876     | 4.25                 | 0.44     | 0.55                  |
| MC130P  | MC130     | MC120     | 15            | 346         | 0.0074 | 1.0929                     | 0.5828     | 3.98                 | 0.38     | 0.47                  |
| MC130PP   | MC140     | MC130     | 15            | 336         | 0.0074 | 1.0929                     | 0.5828     | 3.99                 | 0.38     | 0.47                  |
| MC150P  | MC150     | MC140     | 15            | 365         | 0.0073 | 1.0929                     | 0.5828     | 3.97                 | 0.38     | 0.47                  |
| MC160P  | MC160     | MC150     | 15            | 325         | 0.0074 | 1.0929                     | 0.5828     | 3.97                 | 0.38     | 0.47                  |
| MC170P  | MC170     | MC160     | 15            | 373         | 0.0069 | 0.8173                     | 0.4209     | 3.57                 | 0.33     | 0.41                  |
| ESP3P   | ESP21MH   | ESP25MH   | 8             | 389         | 0.0057 | 0.3239                     | 0.1493     | 2.68                 | 0.53     | 0.35                  |
| ESP1P   | ESP10MH   | ESP21MH   | 8             | 632         | 0.0060 | 0.2548                     | 0.1141     | 2.57                 | 0.45     | 0.30                  |
| MC40P   | MC40      | MC30      | 21            | 361         | 0.0062 | 2.0419                     | 1.1736     | 4.32                 | 0.34     | 0.60                  |
| MC50P   | MC50      | MC40      | 21            | 362         | 0.0074 | 2.0419                     | 1.1736     | 4.61                 | 0.33     | 0.57                  |
| EUD10P  | EUD10     | MC50      | 15            | 83          | 0.0226 | 0.4124                     | 0.1957     | 4.48                 | 0.17     | 0.22                  |
| MC60P   | MC60      | MC50      | 15            | 307         | 0.0075 | 1.7350                     | 0.9779     | 4.52                 | 0.49     | 0.61                  |
| MC70P   | MC70      | MC60      | 15            | 305         | 0.0076 | 1.7350                     | 0.9779     | 4.54                 | 0.49     | 0.61                  |
| MC80P   | MC80      | MC70      | 15            | 297         | 0.0074 | 1.7350                     | 0.9779     | 4.51                 | 0.49     | 0.61                  |
| MC2110P   | MC2110    | MC80      | 10            | 92          | 0.0047 | 0.3576                     | 0.1668     | 2.54                 | 0.42     | 0.35                  |
| MC90P   | MC90      | MC80      | 15            | 336         | 0.0071 | 1.4681                     | 0.8111     | 4.25                 | 0.45     | 0.56                  |
| MC100PP   | MC100     | MC90      | 15            | 336         | 0.0074 | 1.4681                     | 0.8111     | 4.30                 | 0.44     | 0.56                  |
| EUD20P  | EUD20     | EUD10     | 15            | 293         | 0.0229 | 0.4124                     | 0.1957     | 4.50                 | 0.17     | 0.22                  |
| EUD30P  | EUD30     | EUD20     | 15            | 275         | 0.0045 | 0.4124                     | 0.1957     | 2.53                 | 0.26     | 0.32                  |
| EUD3110P  | EUD3110   | EUD30     | 8             | 77          | 0.0075 | 0.0557                     | 0.0208     | 1.82                 | 0.19     | 0.13                  |
| EUD50P  | EUD50     | EUD40     | 15            | 282         | 0.0047 | 0.3730                     | 0.1749     | 2.50                 | 0.24     | 0.30                  |
| EUD40P  | EUD40     | EUD30     | 15            | 400         | 0.0043 | 0.3730                     | 0.1749     | 2.42                 | 0.25     | 0.31                  |
| EUD60P  | EUD60     | EUD50     | 15            | 348         | 0.0028 | 0.3577                     | 0.1669     | 2.05                 | 0.27     | 0.34                  |
| EUD5110P  | EUD5110   | EUD50     | 8             | 105         | 0.0053 | 0.0237                     | 0.0080     | 1.25                 | 0.14     | 0.09                  |
| EUD70P  | EUD70     | EUD60     | 15            | 319         | 0.0028 | 0.3577                     | 0.1669     | 2.04                 | 0.27     | 0.34                  |
| EUD80P  | EUD80     | EUD70     | 15            | 276         | 0.0023 | 0.3577                     | 0.1669     | 1.91                 | 0.29     | 0.36                  |
| EUD8110P  | EUD8110   | EUD80     | 8             | 92          | 0.0052 | 0.3577                     | 0.1669     | 2.65                 | 0.58     | 0.38                  |
| ESP6P   | ESP30MH   | EUD8110   | 8             | 411         | 0.0057 | 0.3577                     | 0.1669     | 2.75                 | 0.56     | 0.37                  |
| ESP4P   | ESP25MH   | ESP30MH   | 8             | 312         | 0.0057 | 0.3239                     | 0.1493     | 2.68                 | 0.53     | 0.35                  |
| M29   | M290      | M280      | 24            | 314         | 0.0011 | 2.2028                     | 1.2776     | 2.35                 | 0.47     | 0.94                  |
| M30   | M300      | M290      | 15            | 348         | 0.0143 | 0.1999                     | 0.0869     | 3.07                 | 0.14     | 0.17                  |
| M31   | M310      | M300      | 15            | 300         | 0.0043 | 0.1195                     | 0.0489     | 1.73                 | 0.14     | 0.18                  |
| M32   | M320      | M310      | 15            | 286         | 0.0043 | 0.1195                     | 0.0489     | 1.73                 | 0.14     | 0.18                  |
| M33   | M330      | M320      | 15            | 255         | 0.0043 | 0.1195                     | 0.0489     | 1.73                 | 0.14     | 0.18                  |
| M34   | M340      | M330      | 15            | 324         | 0.0058 | 0.1195                     | 0.0489     | 1.92                 | 0.13     | 0.17                  |
| MC100P  | MC10      | M290      | 21            | 314         | 0.0065 | 2.0684                     | 1.1906     | 4.44                 | 0.34     | 0.60                  |
| MC120P  | MC20      | MC10      | 21            | 236         | 0.0061 | 2.0684                     | 1.1906     | 4.34                 | 0.35     | 0.61                  |
| MC30P   | MC30      | MC20      | 21            | 253         | 2.3821 | 2.0684                     | 1.1906     | 35.48                | 0.08     | 0.14                  |
| MCL10P  | MCL10     | MC30      | 8             | 39          | 0.0744 | 0.0467                     | 0.0171     | 3.85                 | 0.10     | 0.07                  |
| M10L10P   | M10L10    | M340      | 8             | 25          | 0.0060 | 0.1195                     | 0.0489     | 2.09                 | 0.30     | 0.20                  |
| M24   | M240      | M230      | 24            | 297         | 0.0011 | 2.3745                     | 1.3896     | 2.36                 | 0.50     | 0.99                  |

| Merrill_Belgrave_Mill Creek Hydraulic Analysis Results (Table 2 of 2)           |           |           |               |             |                            |            |            |                      |          |                       |
|---|-----------|-----------|---------------|-------------|----------------------------|------------|------------|----------------------|----------|-----------------------|
| Per TOP with exception of SCE Prop as Existing Use and Esperanza SP area per SP |           |           |               |             |                            |            |            |                      |          |                       |
| General Pipe Information  |           |           |               |             | Ultimate Baseline Scenario |            |            |                      |          |                       |
| Pipe ID   | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope                      | PDWF (mgd) | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| M25   | M250      | M240      | 24            | 300         | 0.0011                     | 2.3745     | 1.3896     | 2.38                 | 0.49     | 0.99                  |
| M26   | M260      | M250      | 24            | 344         | 0.0011                     | 2.2028     | 1.2776     | 2.34                 | 0.47     | 0.94                  |
| M27   | M270      | M260      | 24            | 321         | 0.0011                     | 2.2028     | 1.2776     | 2.33                 | 0.47     | 0.95                  |
| M28   | M280      | M270      | 24            | 274         | 0.0011                     | 2.2028     | 1.2776     | 2.33                 | 0.47     | 0.95                  |
| H10P  | H010      | H00       | 15            | 300         | 0.0068                     | 1.1249     | 0.6019     | 3.88                 | 0.39     | 0.49                  |
| H20P  | H020      | H010      | 15            | 206         | 0.0091                     | 1.1249     | 0.6019     | 4.32                 | 0.36     | 0.45                  |
| H30P  | H030      | H020      | 15            | 210         | 0.0090                     | 1.1249     | 0.6019     | 4.31                 | 0.36     | 0.46                  |
| H40P  | H040      | H030      | 15            | 192         | 0.0090                     | 1.1249     | 0.6019     | 4.30                 | 0.36     | 0.46                  |
| H50P  | H050      | H040      | 15            | 195         | 0.0089                     | 1.1249     | 0.6019     | 4.30                 | 0.36     | 0.46                  |
| H3L10   | H3L10     | H050      | 8             | 60          | 0.0182                     | 0.3063     | 0.1402     | 4.06                 | 0.37     | 0.25                  |
| H60P  | H060      | H050      | 15            | 334         | 0.0091                     | 0.8876     | 0.4617     | 4.04                 | 0.32     | 0.40                  |
| H70P  | H070      | H060      | 15            | 280         | 0.0091                     | 0.8876     | 0.4617     | 4.04                 | 0.32     | 0.40                  |
| H4L10P  | H4L10     | H070      | 8             | 92          | 0.0070                     | 0.0904     | 0.0358     | 2.03                 | 0.25     | 0.17                  |
| H80P  | H080      | H070      | 15            | 312         | 0.0091                     | 0.8259     | 0.4259     | 3.96                 | 0.31     | 0.39                  |
| H082P   | H082      | H080      | 15            | 310         | 0.0091                     | 0.8259     | 0.4259     | 3.97                 | 0.31     | 0.39                  |
| M6L10P  | M6L10     | M250      | 8             | 68          | 0.0089                     | 0.2507     | 0.1121     | 2.96                 | 0.40     | 0.27                  |
| M19   | M190      | M180      | 24            | 321         | 0.0013                     | 3.2886     | 2.0011     | 2.75                 | 0.57     | 1.14                  |
| M20   | G10       | M190      | 24            | 315         | 0.0013                     | 3.2886     | 2.0011     | 2.75                 | 0.57     | 1.14                  |
| M21   | M210      | G10       | 24            | 296         | 0.0073                     | 2.3745     | 1.3896     | 4.74                 | 0.30     | 0.59                  |
| M22   | M220      | M210      | 24            | 297         | 0.0011                     | 2.3745     | 1.3896     | 2.39                 | 0.49     | 0.98                  |
| M23   | M230      | M220      | 24            | 297         | 0.0011                     | 2.3745     | 1.3896     | 2.39                 | 0.49     | 0.98                  |
| H00P  | H00       | G10       | 15            | 94          | 0.0063                     | 1.1409     | 0.6115     | 3.79                 | 0.40     | 0.51                  |
| H85P  | H085      | H082      | 15            | 91          | 0.0079                     | 0.8259     | 0.4259     | 3.77                 | 0.32     | 0.40                  |
| H87P  | H087      | H085      | 15            | 93          | 0.0045                     | 0.5623     | 0.2769     | 2.77                 | 0.30     | 0.38                  |
| H90P  | H090      | H087      | 15            | 211         | 0.0061                     | 0.5623     | 0.2769     | 3.08                 | 0.28     | 0.35                  |
| H100P   | H100      | H090      | 15            | 352         | 0.0056                     | 0.5623     | 0.2769     | 2.99                 | 0.29     | 0.36                  |
| H110P   | H110      | H100      | 15            | 350         | 0.0056                     | 0.5623     | 0.2769     | 3.00                 | 0.29     | 0.36                  |
| H120P   | H120      | H110      | 15            | 350         | 0.0056                     | 0.5623     | 0.2769     | 2.99                 | 0.29     | 0.36                  |
| H130P   | H130      | H120      | 15            | 230         | 0.00566                    | 0.5623     | 0.2769     | 3.00                 | 0.29     | 0.36                  |
| H140P   | H140      | H130      | 15            | 345         | 0.00514                    | 0.5623     | 0.27688    | 2.90                 | 0.29     | 0.37                  |
| EUC20P  | EUC20     | H085      | 15            | 361         | 0.00224                    | 0.3234     | 0.14902    | 1.84                 | 0.27     | 0.34                  |
| EUC30   | EUC30     | EUC20     | 15            | 371         | 0.00216                    | 0.3234     | 0.14902    | 1.82                 | 0.28     | 0.34                  |
| EUC40P  | EUC40     | EUC30     | 15            | 371         | 0.00219                    | 0.3234     | 0.14902    | 1.82                 | 0.27     | 0.34                  |
| EUC50P  | EUC50     | EUC40     | 15            | 185         | 0.00211                    | 0.3234     | 0.14902    | 1.80                 | 0.28     | 0.35                  |
| EUC5L10P  | EUC5L10   | EUC50     | 12            | 80          | 0.0033                     | 0.3234     | 0.1490     | 2.15                 | 0.34     | 0.34                  |
| H150P   | H150      | H140      | 15            | 349         | 0.0099                     | 0.5623     | 0.2769     | 3.66                 | 0.25     | 0.31                  |
| H160P   | H160      | H150      | 15            | 505         | 0.0100                     | 0.3601     | 0.1681     | 3.23                 | 0.20     | 0.25                  |
| M13   | M140      | Y20MH120  | 24            | 126         | 0.0014                     | 3.3715     | 2.0577     | 2.80                 | 0.57     | 1.15                  |
| M15   | M150      | M140      | 24            | 302         | 0.0013                     | 3.3715     | 2.0577     | 2.75                 | 0.58     | 1.16                  |
| M16   | M160      | M150      | 24            | 363         | 0.0013                     | 3.2886     | 2.0011     | 2.74                 | 0.57     | 1.14                  |
| M17   | M170      | M160      | 24            | 147         | 0.0014                     | 3.2886     | 2.0011     | 2.79                 | 0.56     | 1.13                  |
| M18   | M180      | M170      | 24            | 322         | 0.0013                     | 3.2886     | 2.0011     | 2.72                 | 0.57     | 1.15                  |
| M3AL10P   | M3AL10    | M150      | 8             | 86          | 0.0110                     | 0.0300     | 0.0104     | 1.73                 | 0.13     | 0.09                  |
| M4L10P  | M4L10     | M150      | 8             | 95          | 0.0121                     | 0.1136     | 0.0462     | 2.65                 | 0.25     | 0.16                  |
| Y20CL1017   | Y20MH120  | Y20MH121  | 24            | 321         | 0.0013                     | 3.3715     | 2.0577     | 2.77                 | 0.58     | 1.16                  |
| Y20CL1001   | Y20MH101  | Y20MH102  | 10            | 95          | 0.0042                     | 0.3142     | 0.1443     | 2.37                 | 0.40     | 0.34                  |
| Y20CL1018   | Y20MH121  | Y20MH122  | 24            | 324         | 0.0013                     | 3.3715     | 2.0577     | 2.76                 | 0.58     | 1.16                  |
| Y20CL1000   | Y20MH100  | Y20MH102  | 24            | 282         | 0.0128                     | 3.3715     | 2.0577     | 6.41                 | 0.31     | 0.61                  |
| Y20CL1019   | Y20MH122  | Y20MH100  | 24            | 280         | 0.0013                     | 3.3715     | 2.0577     | 2.75                 | 0.58     | 1.16                  |
| Y20CL1002   | Y20MH104  | Y20MH102  | 8             | 95          | 0.0099                     | 0.0052     | 0.0015     | 0.98                 | 0.06     | 0.04                  |
| Y20CL1003   | Y20MH102  | Y20MH103  | 27            | 194         | 0.0008                     | 3.5840     | 2.2035     | 2.36                 | 0.57     | 1.28                  |
| Y19CL1067   | Y20MH103  | Y19MH151  | 27            | 326         | 0.0008                     | 3.5840     | 2.2035     | 2.33                 | 0.58     | 1.30                  |
| Y20CL1004   | Y20MH105  | Y20MH104  | 8             | 146         | 0.02445                    | 0.0052     | 0.0015     | 1.34                 | 0.05     | 0.03                  |
| Y20CL1005   | Y20MH106  | Y20MH105  | 8             | 137         | 0.0100                     | 0.0052     | 0.0015     | 0.98                 | 0.06     | 0.04                  |
| Y19CL1066   | Y19MH151  | Y19MH152  | 27            | 330         | 0.0008                     | 3.5881     | 2.2063     | 2.32                 | 0.58     | 1.30                  |
| Y19CL1068   | Y19MH152  | Y19MH153  | 27            | 330         | 0.0008                     | 3.5881     | 2.2063     | 2.36                 | 0.57     | 1.29                  |
| Y19CL1070   | Y19MH153  | Y19MH154  | 27            | 216         | 0.0008                     | 3.5947     | 2.2108     | 2.32                 | 0.58     | 1.31                  |
| Y19CL1071   | Y19MH154  | Y19MH156  | 27            | 264         | 0.0008                     | 3.6692     | 2.2622     | 2.34                 | 0.59     | 1.32                  |
| Y19CL1073   | Y19MH155  | Y19MH154  | 8             | 92          | 0.0261                     | 0.1249     | 0.0514     | 3.57                 | 0.21     | 0.14                  |
| Y19CL1077   | Y19MH161  | Y19MH162  | 8             | 244         | 0.0057                     | 0.1249     | 0.0514     | 2.08                 | 0.31     | 0.21                  |
| Y19CL1078   | Y19MH162  | Y19MH155  | 8             | 96          | 0.0056                     | 0.1249     | 0.0514     | 2.07                 | 0.31     | 0.21                  |
| Y19CL1069   | Y19MH156  | Y19MH157  | 27            | 296         | 0.0008                     | 3.6692     | 2.2622     | 2.36                 | 0.58     | 1.31                  |
| Y19CL1072   | Y19MH157  | Y19MH159  | 27            | 203         | 0.0008                     | 3.7161     | 2.2946     | 2.36                 | 0.59     | 1.33                  |
| Y19CL1074   | Y19MH158  | Y19MH157  | 8             | 61          | 0.0419                     | 0.0829     | 0.0324     | 3.74                 | 0.15     | 0.10                  |
| Y19CL1075   | Y19MH159  | Y19MH100  | 27            | 90          | 0.0020                     | 3.7161     | 2.2946     | 3.33                 | 0.45     | 1.01                  |

# MERRILL TRIBUTARY

0.32MGD







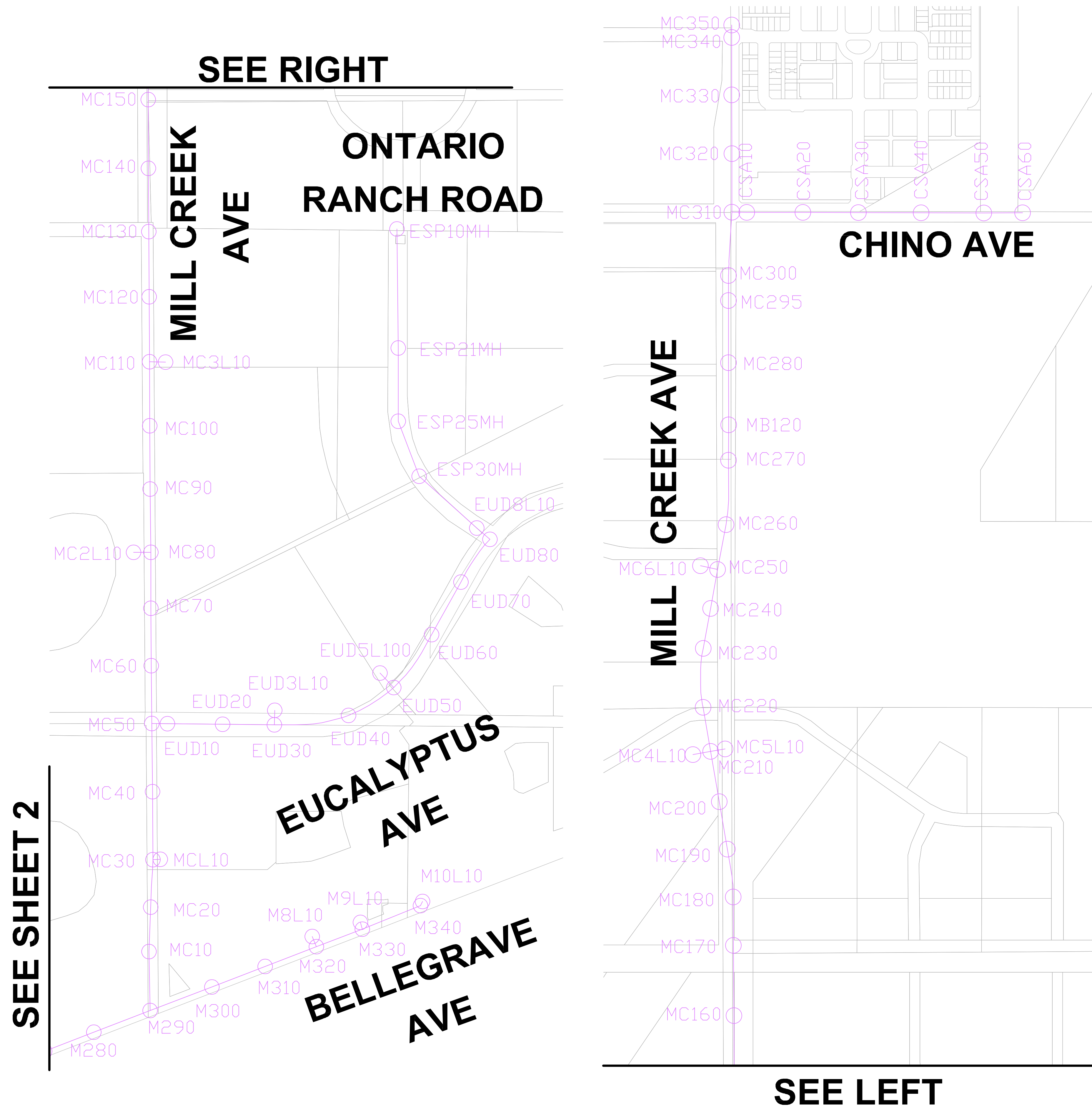
## LEGEND

- Residential**
  - Rural (0 - 2 du/ac)
  - Low Density (2.1 - 5 du / ac)
  - Low-Medium Density (5.1 - 11 du / ac)
  - Medium Density (11.1 - 25 du / ac)
  - High Density (25.1 - 45 du / ac)
- Mixed Use**
  - Mixed Use
- Retail/Service**
  - Neighborhood Commercial (0.4 FAR)
  - General Commercial (0.4 FAR)
  - Office Commercial (0.75 FAR)
  - Hospitality (1.0 FAR)
- Employment**
  - Business Park (0.6 FAR)
  - Industrial (0.55 FAR)
- Other**
  - Open Space - Non Recreation
  - Open Space - Parkland
  - Open Space - Water
  - Public Facility
  - Public School
  - Airport
  - Rail
  - Landfill
- Overlays**
  - Business Park
  - Industrial
  - Commercial
  - Landfill Impact Area
  - Chino Airport Overlay
  - I-10/Grove Interchange Area

# TRIBUTARY AREA FOR MERRILL





## LEGEND

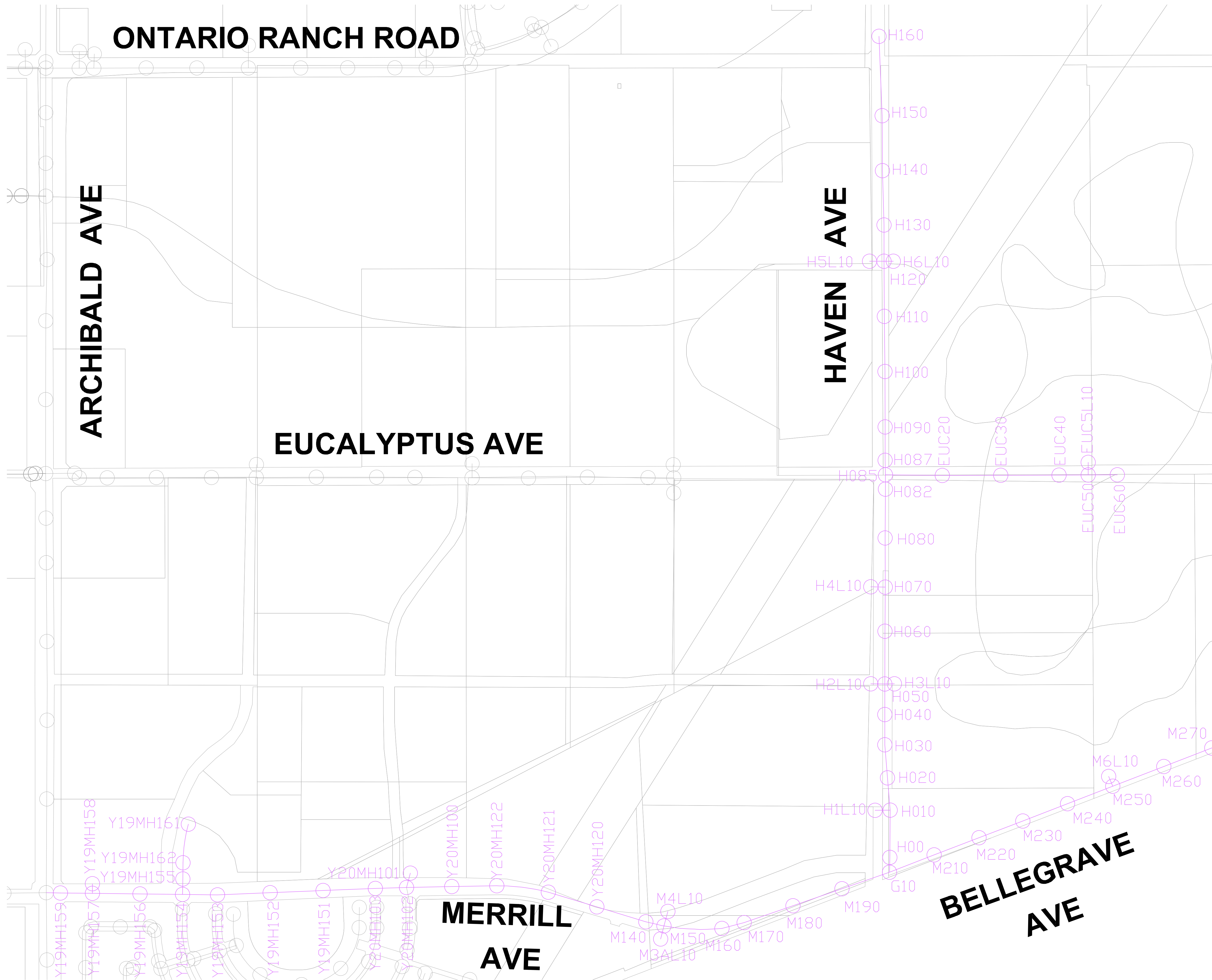
-  MERRILL MH ID
-  MERRILL PIPE ID
-  MH NOT INCLUDED IN STUDY
-  PIPE NOT INCLUDED IN STUDY



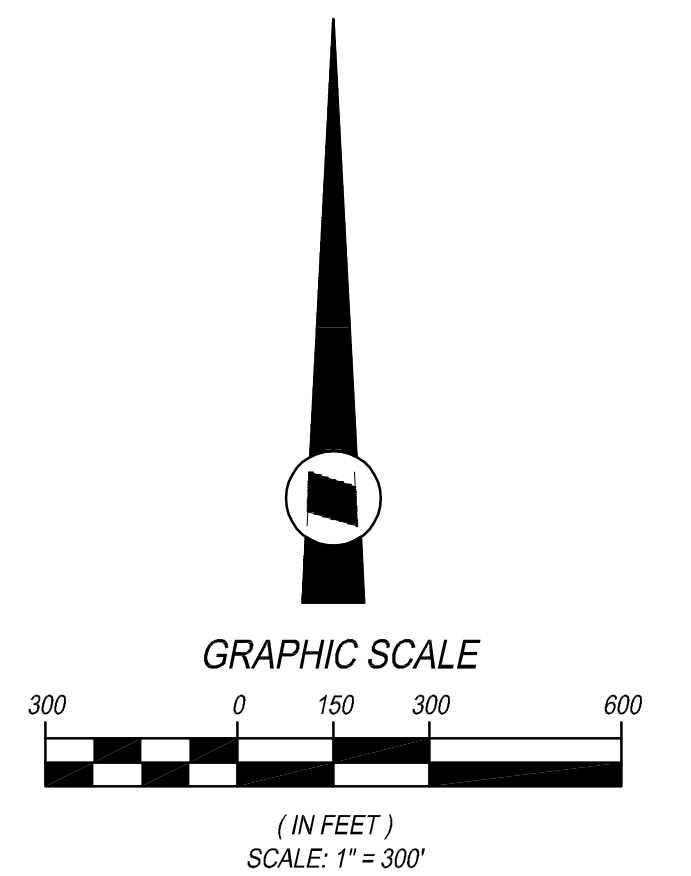
# TRIBUTARY AREA FOR MERRILL

## LEGEND

-  MERRILL MH ID
-  MERRILL PIPE
-  MH NOT INCLUDED IN STUDY
-  PIPE NOT INCLUDED IN STUDY



SEE SHEET 1



**West Haven Specific Plan and  
Portion of The Avenue**

West Haven Tributary

Land Use and DU's per TOP 2050

| Specific Plan and Planning Area     | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |             | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH  |
|-------------------------------------|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|-------------|----------|------------|----------------|-----------|
|                                     |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit        |          |            |                |           |
| <b>West Haven</b>                   |       |                      |                     |       |                     |                                     |                   |                          |           |             |          |            |                |           |
| West Haven PA 1                     | 28.52 | MDR                  | 713                 | 25    |                     |                                     |                   | 174                      |           |             | 124,062  | 124,062    | 0.124062       | WHMH16    |
| West Haven PA 3                     | 20.12 | LMDR                 | 221                 | 11    |                     |                                     |                   | 208                      |           |             | 46,035   | 46,035     | 0.046035       | WHMH18    |
| West Haven PA 4 TM 18026            | 20.11 | LDR                  | 106                 | 5     |                     |                                     |                   | 208                      |           |             | 22,048   | 22,048     | 0.022048       | WHMH22    |
| West Haven PA 5                     | 38.21 | LDR                  | 191                 | 5     |                     |                                     |                   | 208                      |           |             | 39,738   |            |                |           |
| West Haven PA7                      | 12.45 |                      |                     |       | PS-E                |                                     | 750               |                          | 8         | gpd/student | 6,000    | 45,738     | 0.045738       | WHMH30    |
| West Haven Por PA 6 & PA 8 TM 18027 |       | LDR                  | 11                  | 5     |                     |                                     |                   | 208                      |           |             | 2,288    | 2,288      | 0.002288       | WHMH46    |
| West Haven PA 9                     | 37.77 | LDR                  | 143                 | 3.8   |                     |                                     |                   | 208                      |           |             | 29,744   | 29,744     | 0.029744       | WH14      |
| The Avenue PA 9A TM 18993           | 10.60 | LDR                  | 20                  | 1.9   |                     |                                     |                   | 208                      |           |             | 4,160    | 4,160      | 0.004160       | U20MH127  |
| The Avenue PA 9B                    | 10.00 |                      |                     |       | PS-M                |                                     | 1000              |                          | 8         | gpd/student | 8,000    | 8,000      | 0.008000       | U20MH128  |
| The Avenue Por. PA 8A               | 5.33  | LDR                  | 23                  |       |                     |                                     |                   | 208                      |           |             | 4,784    | 4,784      | 0.004784       | V20MH103  |
| The Avenue PA 6B TM 20298           | 10.00 | LMDR                 | 106                 | 11.0  |                     |                                     |                   | 208                      |           |             | 22,048   | 22,048     | 0.022048       | V19MH104A |
| The Avenue Por. PA 7                |       |                      | 30                  |       |                     |                                     |                   | 208                      |           |             | 6,240    | 6,240      | 0.006240       | V19MH100  |
| The Avenue PA 6A TM 1841            | 49.90 | LDR                  | 229                 | 4.6   |                     |                                     |                   | 208                      |           |             | 47,632   | 47,632     | 0.047632       | V10MH111  |

| West Haven Hydraulic Analysis Per TOP 2050 Results |           |           |               |             |        |                                |            |                      |          |                       |
|--|-----------|-----------|---------------|-------------|--------|--------------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information                           |           |           |               |             |        | Ultimate Baseline Scenario TOP |            |                      |          |                       |
| Pipe ID  | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                     | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| V19CL1003  | V19MH105A | V19MH106A | 12            | 232         | 0.0033 | 0.7157                         | 0.3628     | 2.65                 | 0.52     | 0.52                  |
| V19CL1007  | V19MH103  | V19MH102  | 12            | 340         | 0.0042 | 0.6200                         | 0.3089     | 2.80                 | 0.45     | 0.45                  |
| V19CL1006  | V19MH102  | V19MH101  | 12            | 94          | 0.0044 | 0.6200                         | 0.3089     | 2.85                 | 0.44     | 0.44                  |
| V19CL1005  | V19MH101  | V19MH100  | 12            | 324         | 0.0042 | 0.6200                         | 0.3089     | 2.81                 | 0.45     | 0.45                  |
| V19CL1004  | V19MH100  | V19MH105A | 12            | 324         | 0.0046 | 0.6312                         | 0.3151     | 2.91                 | 0.44     | 0.44                  |
| V19CL1001  | V19MH107A | V19MH108A | 12            | 108         | 0.0033 | 0.7157                         | 0.3628     | 2.67                 | 0.52     | 0.52                  |
| V19CL1002  | V19MH106A | V19MH107A | 12            | 231         | 0.0033 | 0.7157                         | 0.3628     | 2.67                 | 0.52     | 0.52                  |
| V19CL1010  | V10MH111  | V19MH105A | 12            | 85          | 0.0080 | 0.1168                         | 0.0476     | 2.20                 | 0.16     | 0.16                  |
| V19CL1008  | V19MH104A | V19MH103  | 12            | 300         | 0.0041 | 0.6200                         | 0.3089     | 2.79                 | 0.45     | 0.45                  |
| V20CL1000  | V20MH100  | V20MH101  | 12            | 203         | 0.0041 | 0.5717                         | 0.2821     | 2.74                 | 0.43     | 0.43                  |
| V20CL1001  | V20MH101  | V20MH102  | 12            | 88          | 0.0042 | 0.5717                         | 0.2821     | 2.76                 | 0.43     | 0.43                  |
| V20CL1002  | V20MH102  | V20MH103  | 12            | 335         | 0.0041 | 0.5717                         | 0.2821     | 2.73                 | 0.43     | 0.43                  |
| V19CL1045  | V20MH103  | V19MH104A | 12            | 299         | 0.0042 | 0.5803                         | 0.2869     | 2.75                 | 0.43     | 0.43                  |
| U20CL1030  | U20MH127  | U20MH128  | 12            | 348         | 0.0041 | 0.5572                         | 0.2741     | 2.72                 | 0.42     | 0.42                  |
| U20CL1031  | U20MH128  | V20MH100  | 12            | 197         | 0.0042 | 0.5717                         | 0.2821     | 2.74                 | 0.43     | 0.43                  |
| U201029A   | U20MH125  | U20MH127  | 12            | 498         | 0.0042 | 0.5496                         | 0.2699     | 2.72                 | 0.42     | 0.42                  |
| WH107  | WHMH62    | U20MH125  | 12            | 293         | 0.0036 | 0.5496                         | 0.2699     | 2.56                 | 0.44     | 0.44                  |
| WH103  | WHMH58    | WHMH60    | 12            | 263         | 0.0035 | 0.5496                         | 0.2699     | 2.55                 | 0.44     | 0.44                  |
| WH104  | WHMH56    | WHMH58    | 12            | 265         | 0.0035 | 0.5496                         | 0.2699     | 2.55                 | 0.44     | 0.44                  |
| WH101  | WH14      | WHMH56    | 12            | 268         | 0.0035 | 0.5496                         | 0.2699     | 2.55                 | 0.44     | 0.44                  |
| WH99   | WHMH54    | WH14      | 12            | 132         | 0.0035 | 0.4952                         | 0.2402     | 2.47                 | 0.42     | 0.42                  |
| WH95   | WHMH50    | WHMH52    | 12            | 266         | 0.0035 | 0.4952                         | 0.2402     | 2.48                 | 0.42     | 0.42                  |
| WH97   | WHMH52    | WHMH54    | 12            | 38          | 0.0034 | 0.4952                         | 0.2402     | 2.45                 | 0.42     | 0.42                  |
| WH93   | WHMH48    | WHMH50    | 10            | 294         | 0.0043 | 0.4952                         | 0.2402     | 2.68                 | 0.52     | 0.43                  |
| WH105  | WHMH60    | WHMH62    | 12            | 190         | 0.0047 | 0.5496                         | 0.2699     | 2.83                 | 0.41     | 0.41                  |
| WH89   | WHMH44    | WHMH46    | 10            | 44          | 0.0043 | 0.4910                         | 0.2379     | 2.68                 | 0.52     | 0.43                  |
| WH91   | WHMH46    | WHMH48    | 10            | 333         | 0.0042 | 0.4952                         | 0.2402     | 2.66                 | 0.52     | 0.44                  |
| WH81   | WHMH36    | WHMH38    | 10            | 101         | 0.0042 | 0.4910                         | 0.2379     | 2.64                 | 0.52     | 0.43                  |
| WH83   | WHMH38    | WHMH40    | 10            | 164         | 0.0042 | 0.4910                         | 0.2379     | 2.65                 | 0.52     | 0.43                  |
| WH85   | WHMH40    | WHMH42    | 10            | 190         | 0.0042 | 0.4910                         | 0.2379     | 2.66                 | 0.52     | 0.43                  |
| WH87   | WHMH42    | WHMH44    | 10            | 56          | 0.0041 | 0.4910                         | 0.2379     | 2.63                 | 0.52     | 0.44                  |
| WH77   | WHMH32    | WHMH34    | 10            | 319         | 0.0042 | 0.4910                         | 0.2379     | 2.65                 | 0.52     | 0.43                  |
| WH79   | WHMH34    | WHMH36    | 10            | 332         | 0.0042 | 0.4910                         | 0.2379     | 2.66                 | 0.52     | 0.43                  |
| WH73   | WHMH28    | WHMH30    | 10            | 442         | 0.0042 | 0.4057                         | 0.1921     | 2.52                 | 0.47     | 0.39                  |
| WH75   | WHMH30    | WHMH32    | 10            | 421         | 0.0042 | 0.4910                         | 0.2379     | 2.65                 | 0.52     | 0.43                  |
| WH67   | WHMH20    | WHMH22    | 8             | 181         | 0.0073 | 0.3639                         | 0.1701     | 3.04                 | 0.52     | 0.35                  |
| WH69   | WHMH22    | WHMH24    | 10            | 176         | 0.0042 | 0.4057                         | 0.1921     | 2.53                 | 0.46     | 0.39                  |
| WH71   | WHMH24    | WHMH26    | 10            | 202         | 0.0042 | 0.4057                         | 0.1921     | 2.52                 | 0.47     | 0.39                  |
| 105  | WHMH26    | WHMH28    | 10            | 35          | 0.0042 | 0.4057                         | 0.1921     | 2.54                 | 0.46     | 0.39                  |
| WH63   | WHMH16    | WHMH18    | 8             | 99          | 0.0057 | 0.2745                         | 0.1241     | 2.57                 | 0.48     | 0.32                  |
| WH65   | WHMH18    | WHMH20    | 8             | 179         | 0.0057 | 0.3639                         | 0.1701     | 2.75                 | 0.57     | 0.38                  |

Definitions:

ID = identification

D/S = Downstream

ADWF = Average Dry Weather Flow

MH = manhole

U/S = Upstream

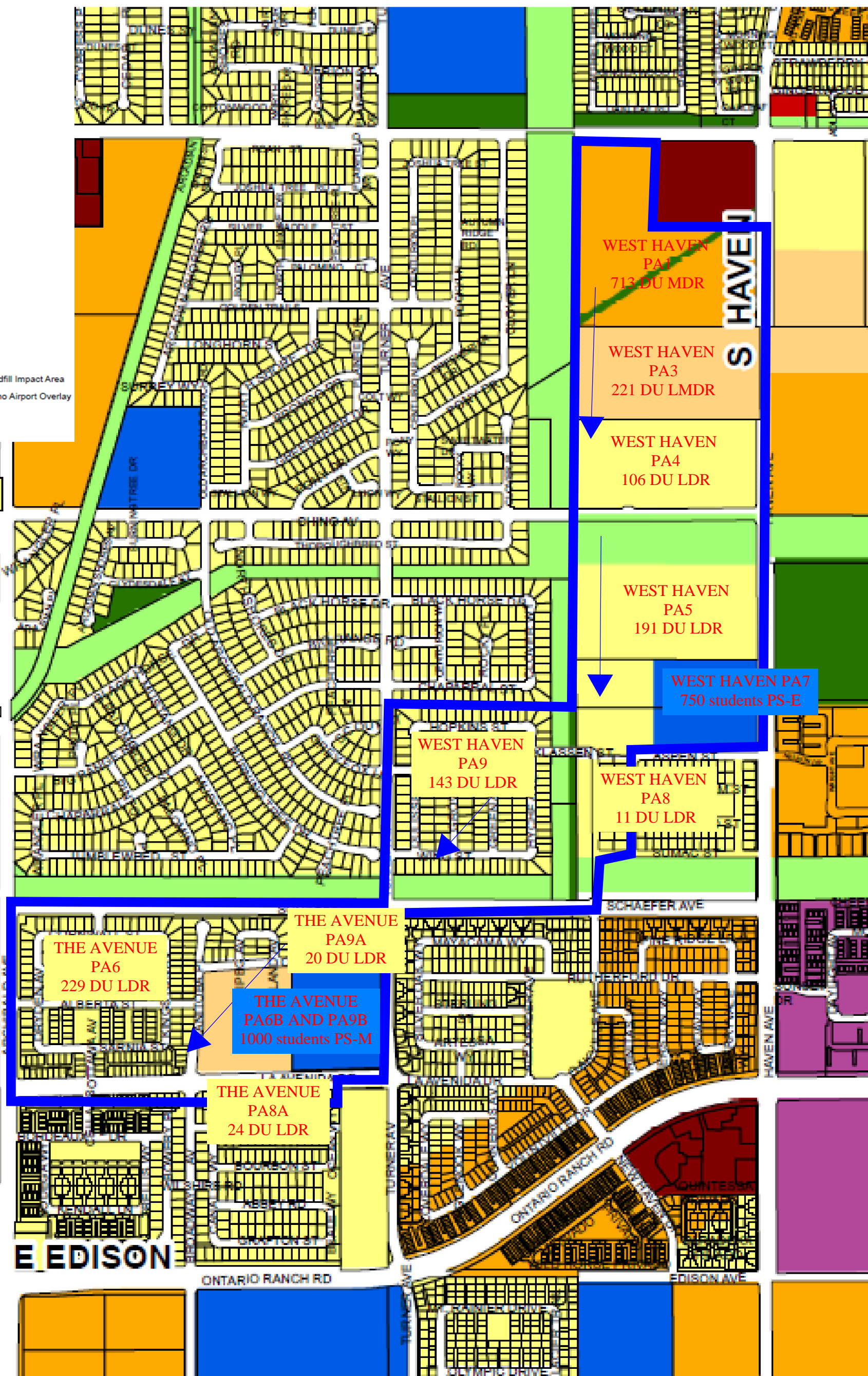
PDWF = Peak Dry Weather Flow

d/D = depth to diameter ratio



# WEST HAVEN TRIBUTARY

- LEGEND**
- Residential**
- Rural (0 - 2 du/ac)
  - Low Density (2.1 - 5 du / ac)
  - Low-Medium Density (5.1 - 11 du / ac)
  - Medium Density (11.1 - 25 du / ac)
  - High Density (25.1 - 45 du / ac)
- Mixed Use**
- Mixed Use
- Retail/Service**
- Neighborhood Commercial (0.4 FAR)
  - General Commercial (0.4 FAR)
  - Office Commercial (0.75 FAR)
  - Hospitality (1.0 FAR)
- Employment**
- Business Park (0.6 FAR)
  - Industrial (0.55 FAR)
- Other**
- Open Space - Non Recreation
  - Open Space - Parkland
  - Open Space - Water
  - Public Facility
  - Public School
  - Airport
  - Rail
  - Landfill
- Overlays**
- Business Park
  - Industrial
  - Commercial
  - Landfill Impact Area
  - Chino Airport Overlay
  - I-10/Grove Interchange Area



**WEST HAVEN PA1**  
713 DU MDR

**WEST HAVEN PA3**  
221 DU LMDR

**WEST HAVEN PA4**  
106 DU LDR

**WEST HAVEN PA5**  
191 DU LDR

**WEST HAVEN PA7**  
750 students PS-E

**WEST HAVEN PA9**  
143 DU LDR

**WEST HAVEN PA8**  
11 DU LDR

**THE AVENUE PA6**  
229 DU LDR

**THE AVENUE PA9A**  
20 DU LDR

**THE AVENUE PA6B AND PA9B**  
1000 students PS-M

**THE AVENUE PA8A**  
24 DU LDR

West Haven Tributary

Land Use and DU's per Specific Plan or Existing Development

| Specific Plan and Planning Area | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |             | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH  |
|---------------------------------|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|-------------|----------|------------|----------------|-----------|
|                                 |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit        |          |            |                |           |
| <b>West Haven</b>               |       |                      |                     |       |                     |                                     |                   |                          |           |             |          |            |                |           |
| West Haven PA 1                 | 28.52 | MDR                  | 451                 | 15.8  |                     |                                     |                   | 174                      |           |             | 78,474   | 78,474     | 0.078474       | WHMH16    |
| West Haven PA 3                 | 19.17 | LMDR                 | 203                 | 10.6  |                     |                                     |                   | 208                      |           |             | 42,224   | 42,224     | 0.042224       | WHMH18    |
| West Haven PA 4 TM 18026        | 19.73 | LDR                  | 102                 | 5.2   |                     |                                     |                   | 208                      |           |             | 21,216   | 21,216     | 0.021216       | WHMH22    |
| West Haven PA 5                 | 30.56 | LDR                  | 149                 | 4.9   |                     |                                     |                   | 208                      |           |             | 30,992   |            |                |           |
| West Haven PA 6                 | 29.00 |                      |                     |       | PS-E                |                                     | 750               |                          | 8         | gpd/student | 6,000    | 36,992     | 0.036992       | WHMH30    |
| West Haven Por PA 7             |       | LDR                  | 11                  | 5.0   |                     |                                     |                   | 208                      |           |             | 2,288    | 2,288      | 0.002288       | WHMH46    |
| West Haven PA 8                 | 30.74 | LDR                  | 143                 | 3.8   |                     |                                     |                   | 208                      |           |             | 29,744   | 29,744     | 0.029744       | WH14      |
| <b>The Avenue</b>               |       |                      |                     |       |                     |                                     |                   |                          |           |             |          |            |                |           |
| The Avenue PA 9A TM 18993       | 10.60 | LDR                  | 20                  | 1.9   |                     |                                     |                   | 208                      |           |             | 4,160    | 4,160      | 0.004160       | U20MH127  |
| The Avenue PA 9B                | 10.00 |                      |                     |       | PS-M                |                                     | 1000              |                          | 8         | gpd/student | 8,000    | 8,000      | 0.008000       | U20MH128  |
| The Avenue Por. PA 8A           | 5.33  | LDR                  | 23                  |       |                     |                                     |                   | 208                      |           |             | 4,784    | 4,784      | 0.004784       | V20MH103  |
| The Avenue PA 6B TM 20298       | 10.00 | LMDR                 | 106                 | 11.0  |                     |                                     |                   | 208                      |           |             | 22,048   | 22,048     | 0.022048       | V19MH104A |
| The Avenue Por. PA 7            |       |                      | 30                  |       |                     |                                     |                   | 208                      |           |             | 6,240    | 6,240      | 0.006240       | V19MH100  |
| The Avenue PA 6A TM 1841        | 49.90 | LDR                  | 229                 | 4.6   |                     |                                     |                   | 208                      |           |             | 47,632   | 47,632     | 0.047632       | V10MH111  |

| West Haven Hydraulic Analysis Per Specific Plan or Existing Development |           |           |               |             |        |                                |            |                      |          |                       |
|---|-----------|-----------|---------------|-------------|--------|--------------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information  |           |           |               |             |        | Ultimate Baseline Scenario TOP |            |                      |          |                       |
| Pipe ID   | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                     | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| V19CL1003   | V19MH105A | V19MH106A | 12            | 232         | 0.0033 | 0.6108                         | 0.3038     | 2.55                 | 0.48     | 0.48                  |
| V19CL1007   | V19MH103  | V19MH102  | 12            | 340         | 0.0042 | 0.5131                         | 0.2499     | 2.67                 | 0.40     | 0.40                  |
| V19CL1006   | V19MH102  | V19MH101  | 12            | 94          | 0.0044 | 0.5131                         | 0.2499     | 2.71                 | 0.40     | 0.40                  |
| V19CL1005   | V19MH101  | V19MH100  | 12            | 324         | 0.0042 | 0.5131                         | 0.2499     | 2.67                 | 0.40     | 0.40                  |
| V19CL1004   | V19MH100  | V19MH105A | 12            | 324         | 0.0046 | 0.5246                         | 0.2562     | 2.77                 | 0.40     | 0.40                  |
| V19CL1001   | V19MH107A | V19MH108A | 12            | 108         | 0.0033 | 0.6108                         | 0.3038     | 2.57                 | 0.48     | 0.48                  |
| V19CL1002   | V19MH106A | V19MH107A | 12            | 231         | 0.0033 | 0.6108                         | 0.3038     | 2.57                 | 0.48     | 0.48                  |
| V19CL1010   | V10MH111  | V19MH105A | 12            | 85          | 0.0080 | 0.1168                         | 0.0476     | 2.20                 | 0.16     | 0.16                  |
| V19CL1008   | V19MH104A | V19MH103  | 12            | 300         | 0.0041 | 0.5131                         | 0.2499     | 2.66                 | 0.41     | 0.41                  |
| V20CL1000   | V20MH100  | V20MH101  | 12            | 203         | 0.0041 | 0.4636                         | 0.2231     | 2.59                 | 0.38     | 0.38                  |
| V20CL1001   | V20MH101  | V20MH102  | 12            | 88          | 0.0042 | 0.4636                         | 0.2231     | 2.61                 | 0.38     | 0.38                  |
| V20CL1002   | V20MH102  | V20MH103  | 12            | 335         | 0.0041 | 0.4636                         | 0.2231     | 2.58                 | 0.38     | 0.38                  |
| V19CL1045   | V20MH103  | V19MH104A | 12            | 299         | 0.0042 | 0.4725                         | 0.2279     | 2.60                 | 0.39     | 0.39                  |
| U20CL1030   | U20MH127  | U20MH128  | 12            | 348         | 0.0041 | 0.4488                         | 0.2151     | 2.56                 | 0.38     | 0.38                  |
| U20CL1031   | U20MH128  | V20MH100  | 12            | 197         | 0.0042 | 0.4636                         | 0.2231     | 2.59                 | 0.38     | 0.38                  |
| U201029A  | U20MH125  | U20MH127  | 12            | 498         | 0.0042 | 0.4410                         | 0.2109     | 2.56                 | 0.37     | 0.37                  |
| WH107   | WHMH62    | U20MH125  | 12            | 293         | 0.0036 | 0.4410                         | 0.2109     | 2.41                 | 0.39     | 0.39                  |
| WH103   | WHMH58    | WHMH60    | 12            | 263         | 0.0035 | 0.4410                         | 0.2109     | 2.40                 | 0.39     | 0.39                  |
| WH104   | WHMH56    | WHMH58    | 12            | 265         | 0.0035 | 0.4410                         | 0.2109     | 2.40                 | 0.39     | 0.39                  |
| WH101   | WH14      | WHMH56    | 12            | 268         | 0.0035 | 0.4410                         | 0.2109     | 2.40                 | 0.39     | 0.39                  |
| WH99  | WHMH54    | WH14      | 12            | 132         | 0.0035 | 0.3850                         | 0.1812     | 2.31                 | 0.36     | 0.36                  |
| WH95  | WHMH50    | WHMH52    | 12            | 266         | 0.0035 | 0.3850                         | 0.1812     | 2.32                 | 0.36     | 0.36                  |
| WH97  | WHMH52    | WHMH54    | 12            | 38          | 0.0034 | 0.3850                         | 0.1812     | 2.29                 | 0.37     | 0.37                  |
| WH93  | WHMH48    | WHMH50    | 10            | 294         | 0.0043 | 0.3850                         | 0.1812     | 2.51                 | 0.45     | 0.37                  |
| WH105   | WHMH60    | WHMH62    | 12            | 190         | 0.0047 | 0.4410                         | 0.2109     | 2.67                 | 0.36     | 0.36                  |
| WH89  | WHMH44    | WHMH46    | 10            | 44          | 0.0043 | 0.3807                         | 0.1789     | 2.51                 | 0.45     | 0.37                  |
| WH91  | WHMH46    | WHMH48    | 10            | 333         | 0.0042 | 0.3850                         | 0.1812     | 2.49                 | 0.45     | 0.38                  |
| WH81  | WHMH36    | WHMH38    | 10            | 101         | 0.0042 | 0.3807                         | 0.1789     | 2.48                 | 0.45     | 0.37                  |
| WH83  | WHMH38    | WHMH40    | 10            | 164         | 0.0042 | 0.3807                         | 0.1789     | 2.49                 | 0.45     | 0.37                  |
| WH85  | WHMH40    | WHMH42    | 10            | 190         | 0.0042 | 0.3807                         | 0.1789     | 2.49                 | 0.45     | 0.37                  |
| WH87  | WHMH42    | WHMH44    | 10            | 56          | 0.0041 | 0.3807                         | 0.1789     | 2.47                 | 0.45     | 0.38                  |
| WH77  | WHMH32    | WHMH34    | 10            | 319         | 0.0042 | 0.3807                         | 0.1789     | 2.49                 | 0.45     | 0.37                  |
| WH79  | WHMH34    | WHMH36    | 10            | 332         | 0.0042 | 0.3807                         | 0.1789     | 2.49                 | 0.45     | 0.37                  |
| WH73  | WHMH28    | WHMH30    | 10            | 442         | 0.0042 | 0.3096                         | 0.1419     | 2.35                 | 0.40     | 0.33                  |
| WH75  | WHMH30    | WHMH32    | 10            | 421         | 0.0042 | 0.3807                         | 0.1789     | 2.49                 | 0.45     | 0.37                  |
| WH67  | WHMH20    | WHMH22    | 8             | 181         | 0.0073 | 0.2679                         | 0.1207     | 2.81                 | 0.44     | 0.29                  |
| WH69  | WHMH22    | WHMH24    | 10            | 176         | 0.0042 | 0.3096                         | 0.1419     | 2.35                 | 0.40     | 0.33                  |
| WH71  | WHMH24    | WHMH26    | 10            | 202         | 0.0042 | 0.3096                         | 0.1419     | 2.35                 | 0.40     | 0.33                  |
| 105   | WHMH26    | WHMH28    | 10            | 35          | 0.0042 | 0.3096                         | 0.1419     | 2.36                 | 0.40     | 0.33                  |
| WH63  | WHMH16    | WHMH18    | 8             | 99          | 0.0057 | 0.1824                         | 0.0785     | 2.31                 | 0.38     | 0.25                  |
| WH65  | WHMH18    | WHMH20    | 8             | 179         | 0.0057 | 0.2679                         | 0.1207     | 2.55                 | 0.47     | 0.31                  |

Definitions:

ID = identification

D/S = Downstream

ADWF = Average Dry Weather Flow

MH = manhole

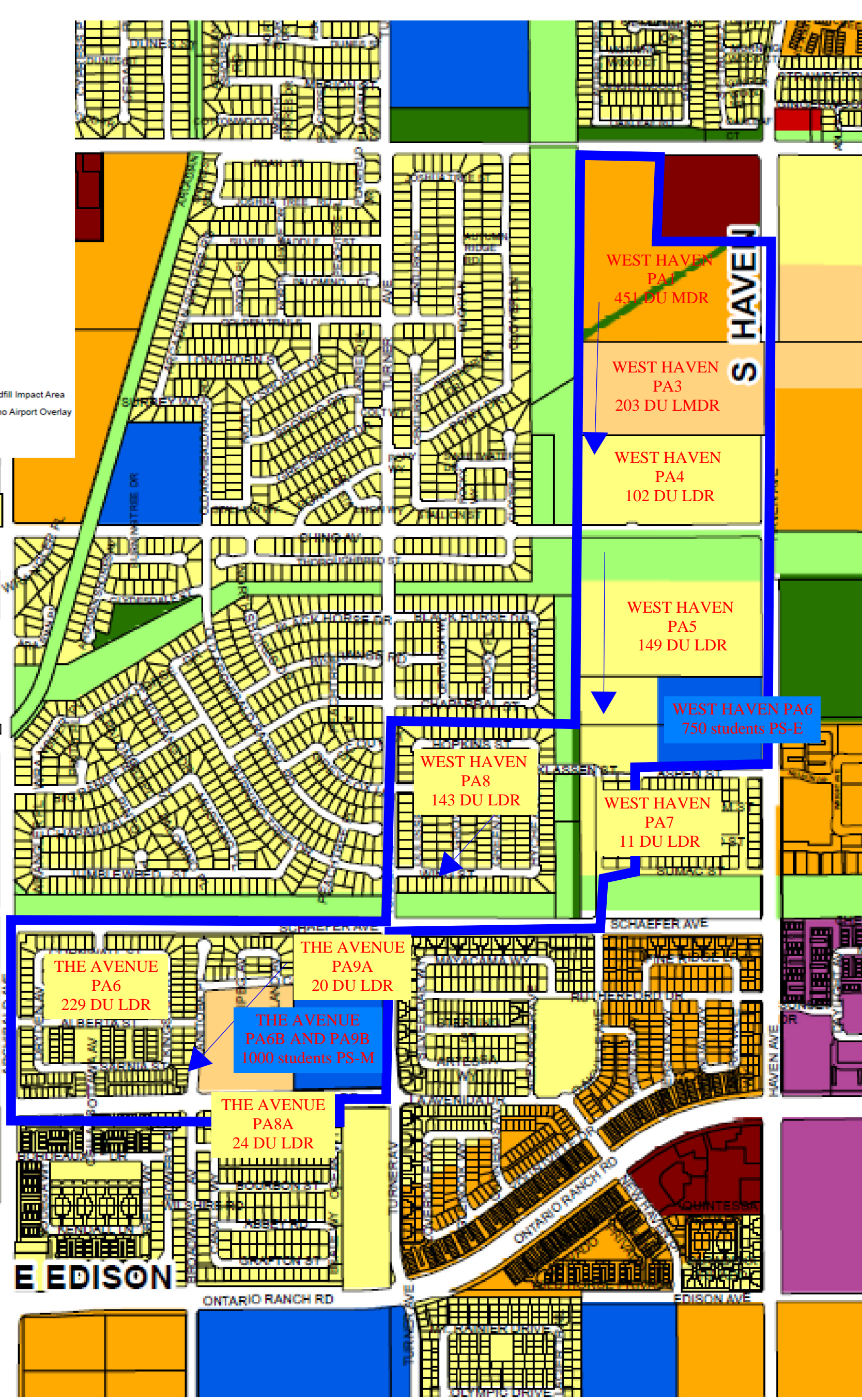
U/S = Upstream

PDWF = Peak Dry Weather Flow

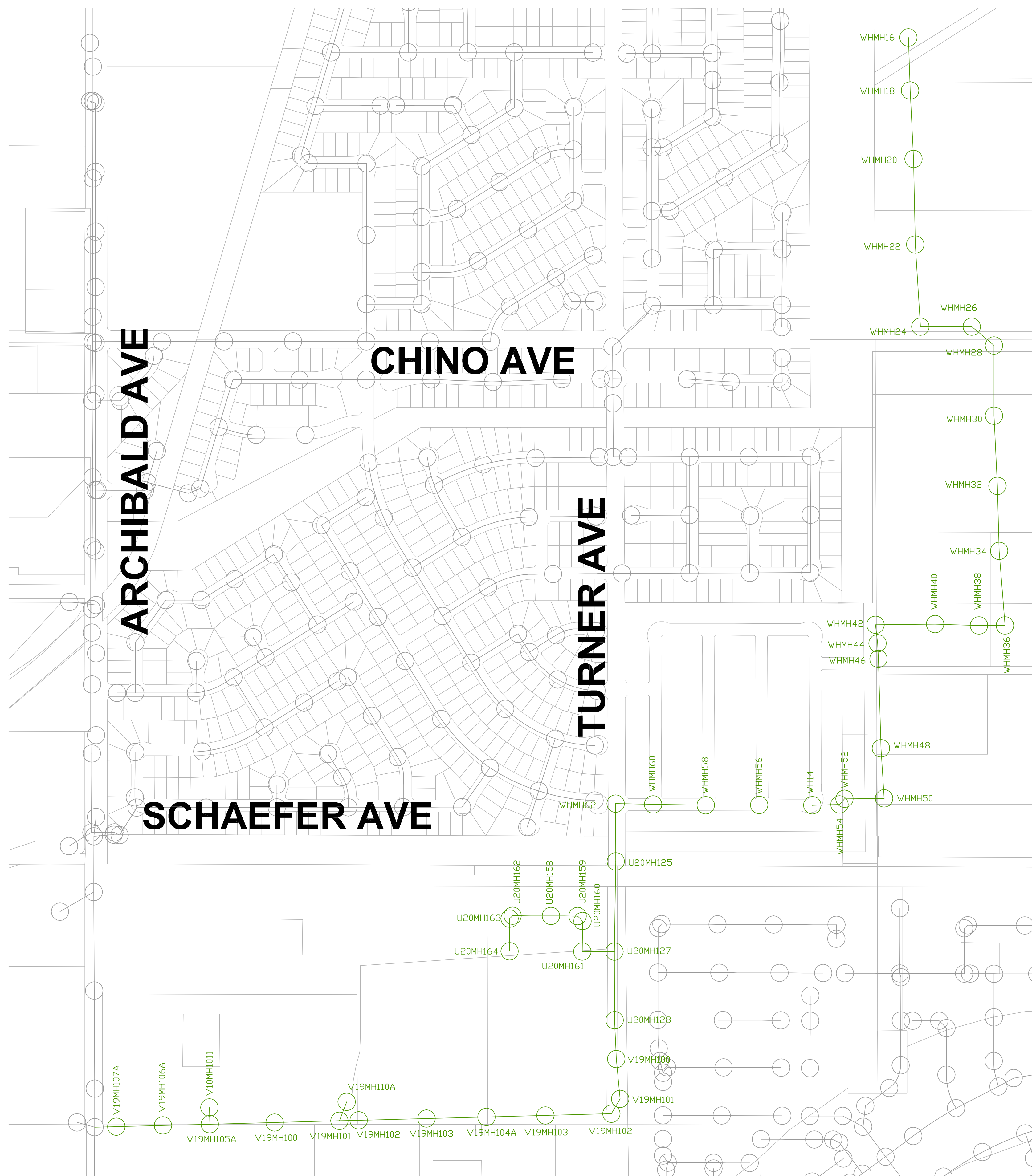
d/D = depth to diameter ratio

# WEST HAVEN TRIBUTARY PER SPECIFIC PLAN

- LEGEND**
- Residential**
- Rural (0 - 2 du/ac)
  - Low Density (2.1 - 5 du / ac)
  - Low-Medium Density (5.1 - 11 du / ac)
  - Medium Density (11.1 - 25 du / ac)
  - High Density (25.1 - 45 du / ac)
- Mixed Use**
- Mixed Use
- Retail/Service**
- Neighborhood Commercial (0.4 FAR)
  - General Commercial (0.4 FAR)
  - Office Commercial (0.75 FAR)
  - Hospitality (1.0 FAR)
- Employment**
- Business Park (0.6 FAR)
  - Industrial (0.55 FAR)
- Other**
- Open Space - Non Recreation
  - Open Space - Parkland
  - Open Space - Water
  - Public Facility
  - Public School
  - Airport
  - Rail
  - Landfill
- Overlays**
- Business Park
  - Industrial
  - Commercial
  - Landfill Impact Area
  - Chino Airport Overlay
  - I-10/Grove Interchange Area

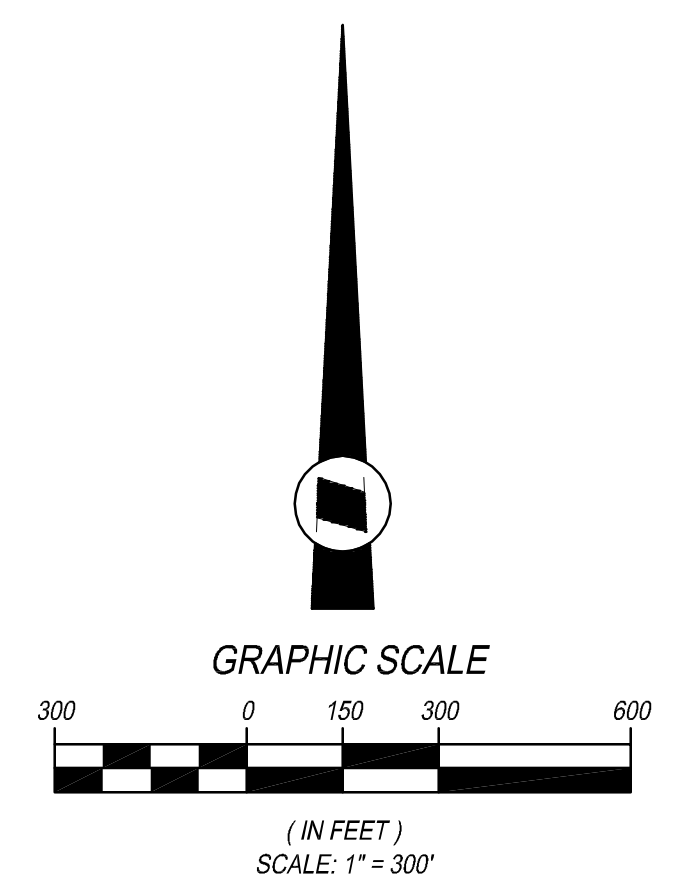


# TRIBUTARY AREA FOR WEST HAVEN



## LEGEND

- WEST HAVEN MH ID
- WEST HAVEN PIPE ID
- MH NOT INCLUDED IN STUDY
- PIPE NOT INCLUDED IN STUDY



## **Parkside Specific Plan (East)**

**PARKSIDE TRIBUTARY: Parkside East and Northeast**

**Land Use and DU's from 2050 TOP**

| Specific Plan and Planning Area                           | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |        | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH |
|---|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|--------|----------|------------|----------------|----------|
|   |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit   |          |            |                |          |
| <b>PARKSIDE EAST</b>                                      |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| NORTH OF GREAT PARK AND WEST OF MAIN STREET TRACT 20316   | 21.38 | MDR                  | 535                 | 25    |                     |                                     |                   | 174                      |           |        | 93,003   | 93,003     | 0.093003       | PSMH2    |
| POR. PA 3   |       | MDR                  | 40                  |       |                     |                                     |                   | 174                      |           |        | 6,960    | 6,960      |                |          |
| POR. PA 4   |       | MDR                  | 24                  |       |                     |                                     |                   | 174                      |           |        | 4,176    | 11,136     | 0.011136       | PSMH6    |
| POR. PA 1   |       | MDR                  | 236                 |       |                     |                                     |                   | 174                      |           |        | 41,064   | 41,064     |                |          |
| POR. PA 3   |       | MDR                  | 24                  |       |                     |                                     |                   | 174                      |           |        | 4,176    | 45,240     |                |          |
| PA 2  |       | MDR                  | 41                  |       |                     |                                     |                   | 174                      |           |        | 7,134    | 52,374     |                |          |
| Rec Center  | 1.9   |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/ac | 380      | 52,754     | 0.052754       | PSMH18   |
| POR. PA 4   |       | MDR                  | 181                 |       |                     |                                     |                   | 174                      |           |        | 31,494   | 31,494     | 0.031494       | PSMH22   |
| Great Park  | 7.97  |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/ac | 1,594    | 1,594      | 0.001594       | EUA3L10  |
| <b>PARKSIDE NORTHEAST</b>                                 |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| NORTH OF GREAT PARK AND EAST OF MAIN STREET               | 8.59  | MDR                  | 214.75              | 25    |                     |                                     |                   | 174                      |           |        | 37,367   | 37,367     | 0.037367       | PSMH109  |
| FIRE STATION NO. 9  | 1.4   |                      |                     |       | PF                  |                                     |                   |                          | 1450      | gpd/ac | 2,030    | 2,030      |                |          |
| GREAT PARK (within semi-circle adjacent to Archibald Ave) | 10.54 |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/ac | 2,108    | 4,138      | 0.004138       | PSMH106  |
| NEIGHBORHOOD COMMERCIAL                                   | 1.7   |                      |                     |       | NC                  |                                     |                   |                          | 1610      | gpd/ac | 2,737    | 2,737      | 0.002737       | PSMH102  |

| Parkside East Hydraulic Analysis Results Per TOP 2050 Table |           |           |               |             |        |                                |            |                      |          |                       |
|---|-----------|-----------|---------------|-------------|--------|--------------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information                                    |           |           |               |             |        | Ultimate Baseline Scenario TOP |            |                      |          |                       |
| Pipe ID   | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                     | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| EUA30P  | EUA30     | EUA40     | 12            | 320         | 0.0033 | 0.4454                         | 0.2133     | 2.35                 | 0.40     | 0.40                  |
| EUA40P  | EUA40     | EUA50     | 12            | 31          | 0.0029 | 0.4454                         | 0.2133     | 2.25                 | 0.41     | 0.41                  |
| EUA50P  | EUA50     | X19MH104  | 12            | 65          | 0.3117 | 0.4454                         | 0.2133     | 11.85                | 0.13     | 0.13                  |
| EUA20P  | EUA20     | EUA30     | 12            | 328         | 0.0032 | 0.3987                         | 0.1884     | 2.27                 | 0.38     | 0.38                  |
| EUA10P  | EUA10     | EUA20     | 12            | 326         | 0.0033 | 0.3987                         | 0.1884     | 2.28                 | 0.38     | 0.38                  |
| EUA1L10P  | EUA1L10   | EUA10     | 12            | 69          | 0.0032 | 0.3987                         | 0.1884     | 2.26                 | 0.38     | 0.38                  |
| PS25  | PSMH22    | EUA1L10   | 10            | 176         | 0.0051 | 0.3987                         | 0.1884     | 2.69                 | 0.44     | 0.36                  |
| PS07  | PSMH6     | PSMH8     | 8             | 116         | 0.0066 | 0.2348                         | 0.1041     | 2.60                 | 0.42     | 0.28                  |
| PS09  | PSMH8     | PSMH10    | 8             | 132         | 0.0065 | 0.2348                         | 0.1041     | 2.60                 | 0.42     | 0.28                  |
| PS11  | PSMH10    | PSMH12    | 8             | 83          | 0.0065 | 0.2348                         | 0.1041     | 2.59                 | 0.42     | 0.28                  |
| PS13  | PSMH12    | PSMH14    | 8             | 132         | 0.0066 | 0.2348                         | 0.1041     | 2.61                 | 0.42     | 0.28                  |
| PS15  | PSMH14    | PSMH16    | 8             | 64          | 0.0079 | 0.2348                         | 0.1041     | 2.79                 | 0.40     | 0.27                  |
| PS17  | PSMH16    | PSMH18    | 8             | 117         | 0.0057 | 0.2348                         | 0.1041     | 2.47                 | 0.44     | 0.29                  |
| PS05  | PSMH4     | PSMH6     | 8             | 276         | 0.0065 | 0.2122                         | 0.0930     | 2.53                 | 0.40     | 0.27                  |
| PS03  | PSMH2     | PSMH4     | 8             | 218         | 0.0064 | 0.2122                         | 0.0930     | 2.51                 | 0.40     | 0.27                  |
| EUA3L10P  | EUA3L10   | EUA30     | 8             | 51          | 0.0053 | 0.0654                         | 0.0249     | 1.68                 | 0.23     | 0.15                  |
| EUA2L10P  | EUA2L10   | EUA20     | 8             | 54          | 0.0052 | 0.0000                         | 0.0000     | 0.00                 | 0.00     | 0.00                  |
| EUA3AL10P   | EUA3AL10  | EUA30     | 8             | 56          | 0.0048 | 0.0000                         | 0.0000     | 0.00                 | 0.00     | 0.00                  |

Definitions:

ID = identification

MH = manhole

d/D = depth to diameter ratio

D/S = Downstream

U/S = Upstream

ADWF = Average Dry Weather Flow

PDWF = Peak Dry Weather Flow



| Parkside Northeast Hydraulic Analysis Results Per TOP 2050 Table |           |            |               |             |        |                                |            |                      |          |                       |
|--|-----------|------------|---------------|-------------|--------|--------------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information   |           |            |               |             |        | Ultimate Baseline Scenario TOP |            |                      |          |                       |
| Pipe ID  | U/S MH ID | D/S MH ID  | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                     | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| PS101  | PSMH100   | W19TM10042 | 8             | 104         | 0.0136 | 0.1047                         | 0.0421     | 2.69                 | 0.23     | 0.15                  |
| PS103  | PSMH102   | PSMH100    | 8             | 36          | 0.0414 | 0.1047                         | 0.0421     | 3.99                 | 0.17     | 0.12                  |
| PS105  | PSMH104   | PSMH102    | 8             | 163         | 0.0063 | 0.0986                         | 0.0394     | 2.01                 | 0.27     | 0.18                  |
| PS019  | PSMH109   | PSMH104    | 8             | 345         | 0.0058 | 0.0940                         | 0.0374     | 1.93                 | 0.27     | 0.18                  |
| PS107  | PSMH106   | PSMH104    | 8             | 105         | 0.0158 | 0.0070                         | 0.0020     | 1.26                 | 0.06     | 0.04                  |

Definitions:

ID = identification

D/S = Downstream

ADWF = Average Dry Weather Flow

MH = manhole

U/S = Upstream

PDWF = Peak Dry Weather Flow

d/D = depth to diameter ratio

# PARKSIDE TRIBUTARY

## LEGEND

### Residential

- Rural (0 - 2 du/ac)
- Low Density (2.1 - 5 du / ac)
- Low-Medium Density (5.1 - 11 du / ac)
- Medium Density (11.1 - 25 du / ac)
- High Density (25.1 - 45 du / ac)

### Mixed Use

- Mixed Use

### Retail/Service

- Neighborhood Commercial (0.4 FAR)
- General Commercial (0.4 FAR)
- Office Commercial (0.75 FAR)
- Hospitality (1.0 FAR)

### Employment

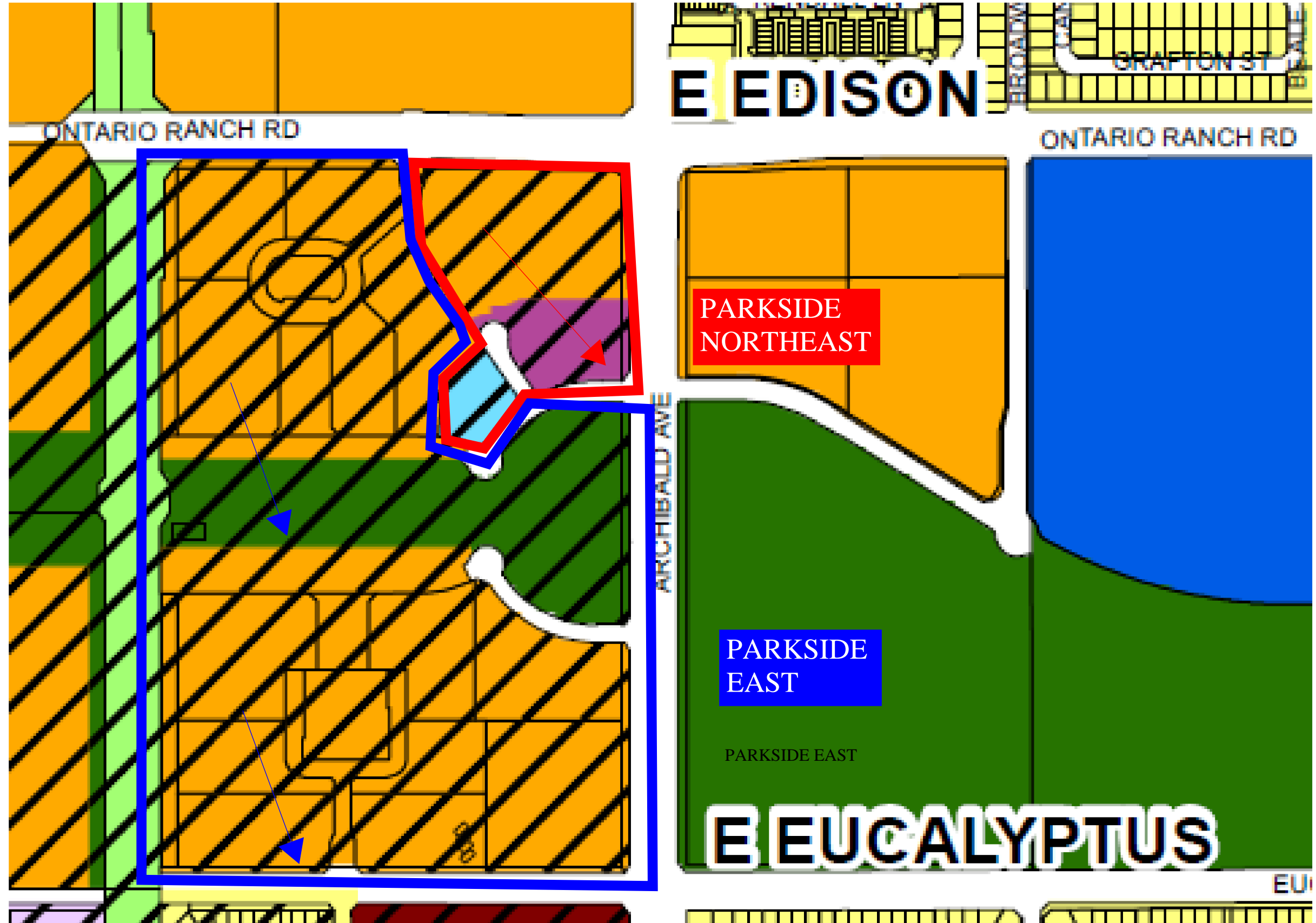
- Business Park (0.6 FAR)
- Industrial (0.55 FAR)

### Other

- Open Space - Non Recreation
- Open Space - Parkland
- Open Space - Water
- Public Facility
- Public School
- Airport
- Rail
- Landfill







### Overlays

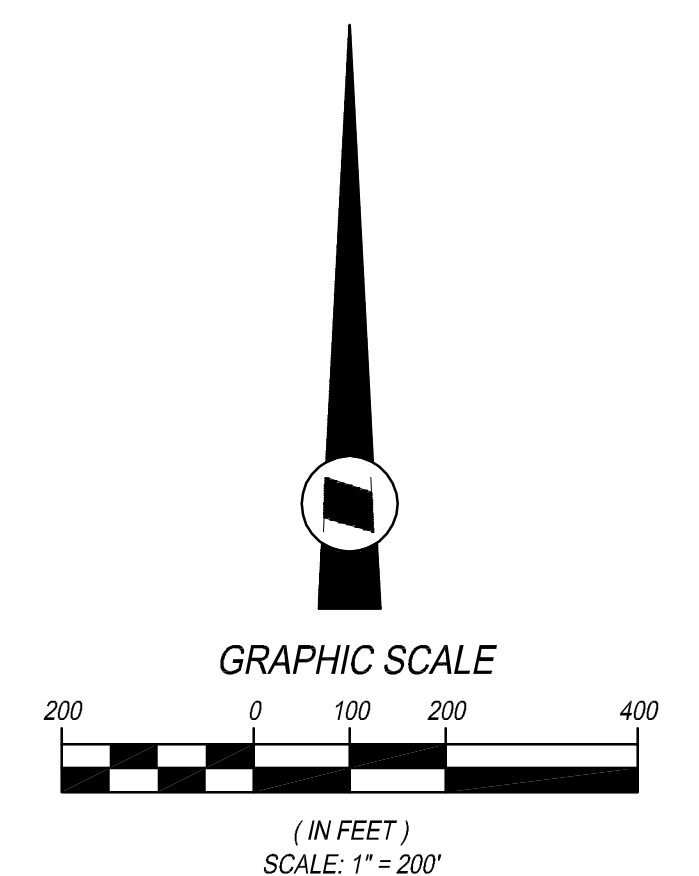
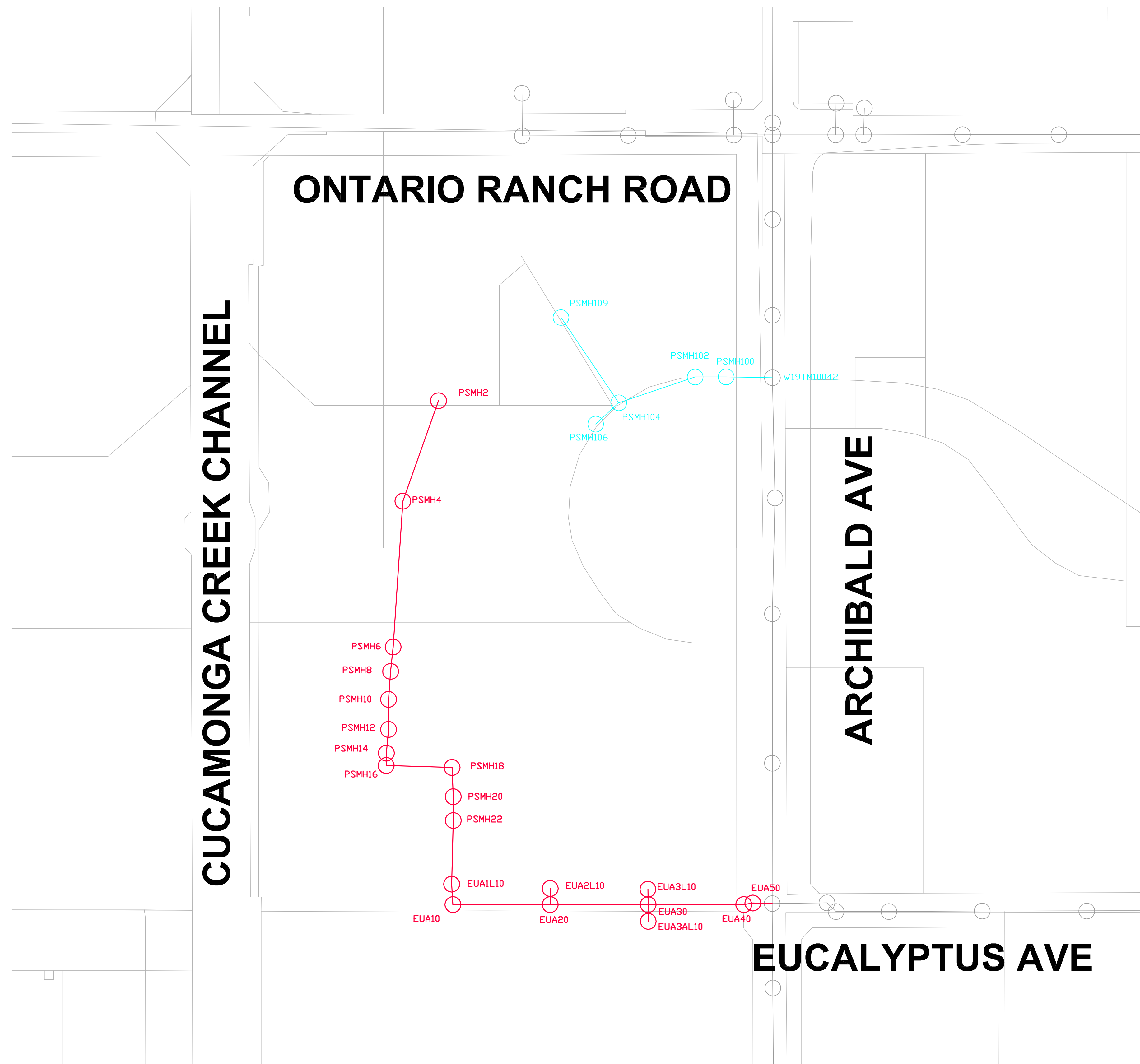
- Business Park
- Landfill Impact Area
- Industrial
- Chino Airport Overlay
- Commercial
- I-10/Grove Interchange Area



# TRIBUTARY AREA FOR PARKSIDE EAST AND NORTH EAST

## LEGEND

-  PARKSIDE EAST MH ID
-  PARKSIDE EAST PIPE ID
-  PARKSIDE NORTHEAST MH ID
-  PARKSIDE NORTHEAST PIPE ID
-  MH NOT INCLUDED IN STUDY
-  PIPE NOT INCLUDED IN STUDY



## Vineyard Ave

Vineyard Tributary

Land Use and DU's per 2050 TOP

| Specific Plan and Planning Area                   | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |        |      | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH |
|---|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|--------|------|----------|------------|----------------|----------|
|   |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | gal/AC | Unit |          |            |                |          |
| <b>TRIBUTARY TO VINEYARD</b>                      |       |                      |                     |       |                     |                                     |                   |                          |        |      |          |            |                |          |
| <b>ARMSTRONG RANCH</b>                            |       |                      |                     |       |                     |                                     |                   |                          |        |      |          |            |                |          |
| PA1   |       | LMDR                 | 96                  |       |                     |                                     |                   | 208                      |        |      | 19,968   | 19,968     |                |          |
| PA2   |       | LMDR                 | 87                  |       |                     |                                     |                   | 208                      |        |      | 18,096   | 38,064     | 0.03806        | CTS540   |
| <b>RIVERSIDE DR TO CHINO AVE WEST OF VINEYARD</b> |       |                      |                     |       |                     |                                     |                   |                          |        |      |          |            |                |          |
|   | 10    |                      |                     |       | NC                  |                                     |                   |                          | 1610   |      | 16,100   | 16,100     |                |          |
|   | 30    | LMDR                 | 330                 |       |                     |                                     |                   | 208                      |        | 330  | 68,640   | 84,740     | 0.08474        | CTS540   |
| <b>CHINO AVE TO SCHAEFER AVE</b>                  |       |                      |                     |       |                     |                                     |                   |                          |        |      |          |            |                |          |
|   | 10    |                      |                     |       | NC                  |                                     |                   |                          | 1610   |      | 16,100   | 16,100     |                |          |
|   | 70    | LDR                  | 350                 |       |                     |                                     |                   | 208                      |        | 350  | 72,800   | 88,900     | 0.08890        | CTS530   |
| <b>SCHAEFER AVE TO ORR</b>                        |       |                      |                     |       |                     |                                     |                   |                          |        |      |          |            |                |          |
|   | 46    | LDR                  | 230                 |       |                     |                                     |                   | 208                      |        | 230  | 47,840   | 47,840     |                |          |
|   | 8     |                      |                     |       | OS-R                |                                     |                   |                          | 200    |      | 1,600    | 49,440     |                |          |
|   | 24    | MDR                  | 600                 |       |                     |                                     |                   | 174                      |        | 600  | 104,400  | 153,840    | 0.15384        | CTS520   |
| <b>ORR TO EUCALYPTUS AVE</b>                      |       |                      |                     |       |                     |                                     |                   |                          |        |      |          |            |                |          |
| Mixed Use   | 46    | LDR                  | 230                 |       |                     |                                     |                   | 208                      |        | 230  | 47,840   | 47,840     |                |          |
| Park  | 10    |                      |                     |       | OS-R                |                                     |                   |                          | 200    |      | 2,000    | 49,840     |                |          |
|   | 24    | MDR                  | 600                 |       |                     |                                     |                   | 174                      |        | 600  | 104,400  | 154,240    | 0.15424        | CTS510   |

| Vineyard Hydraulic Analysis Results Per TOP 2050 Table |           |           |               |             |        |                                |            |                      |          |                       |
|--|-----------|-----------|---------------|-------------|--------|--------------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information                               |           |           |               |             |        | Ultimate Baseline Scenario TOP |            |                      |          |                       |
| Pipe ID  | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                     | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| CTS500P  | CTS500    | CTS499    | 15            | 350         | 0.0030 | 0.9867                         | 0.5197     | 2.78                 | 0.46     | 0.57                  |
| CTS499P  | CTS499    | CTS498    | 15            | 350         | 0.0030 | 0.9867                         | 0.5197     | 2.78                 | 0.46     | 0.57                  |
| CTS498P  | CTS498    | CTS230    | 15            | 350         | 0.0030 | 0.9867                         | 0.5197     | 2.78                 | 0.46     | 0.57                  |
| CTS501P  | CTS501    | CTS500    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS502P  | CTS502    | CTS501    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS503P  | CTS503    | CTS502    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS504P  | CTS504    | CTS503    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS505P  | CTS505    | CTS504    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS506P  | CTS506    | CTS505    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS507P  | CTS507    | CTS506    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS508P  | CTS510    | CTS507    | 15            | 350         | 0.0083 | 0.9867                         | 0.5197     | 4.04                 | 0.35     | 0.43                  |
| CTS511P  | CTS511    | CTS510    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS512P  | CTS512    | CTS511    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS513P  | CTS513    | CTS512    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS514P  | CTS514    | CTS513    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS515P  | CTS515    | CTS514    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS516P  | CTS516    | CTS515    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS517P  | CTS517    | CTS516    | 15            | 350         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS518P  | CTS520    | CTS517    | 15            | 300         | 0.0083 | 0.7205                         | 0.3655     | 3.69                 | 0.29     | 0.37                  |
| CTS521P  | CTS521    | CTS520    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS522P  | CTS522    | CTS521    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS523P  | CTS523    | CTS522    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS524P  | CTS524    | CTS523    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS525P  | CTS525    | CTS524    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS526P  | CTS526    | CTS525    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS527P  | CTS527    | CTS526    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS528P  | CTS530    | CTS527    | 15            | 350         | 0.0083 | 0.4424                         | 0.2117     | 3.21                 | 0.23     | 0.29                  |
| CTS531P  | CTS531    | CTS530    | 15            | 350         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |
| CTS532P  | CTS532    | CTS531    | 15            | 350         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |
| CTS533P  | CTS533    | CTS532    | 15            | 350         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |
| CTS534P  | CTS534    | CTS533    | 15            | 300         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |
| CTS535P  | CTS535    | CTS534    | 15            | 350         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |
| CTS536P  | CTS536    | CTS535    | 15            | 300         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |
| CTS537P  | CTS540    | CTS536    | 15            | 350         | 0.0083 | 0.2720                         | 0.1228     | 2.78                 | 0.18     | 0.23                  |

Definitions:

ID = identification

MH = manhole

d/D = depth to diameter ratio

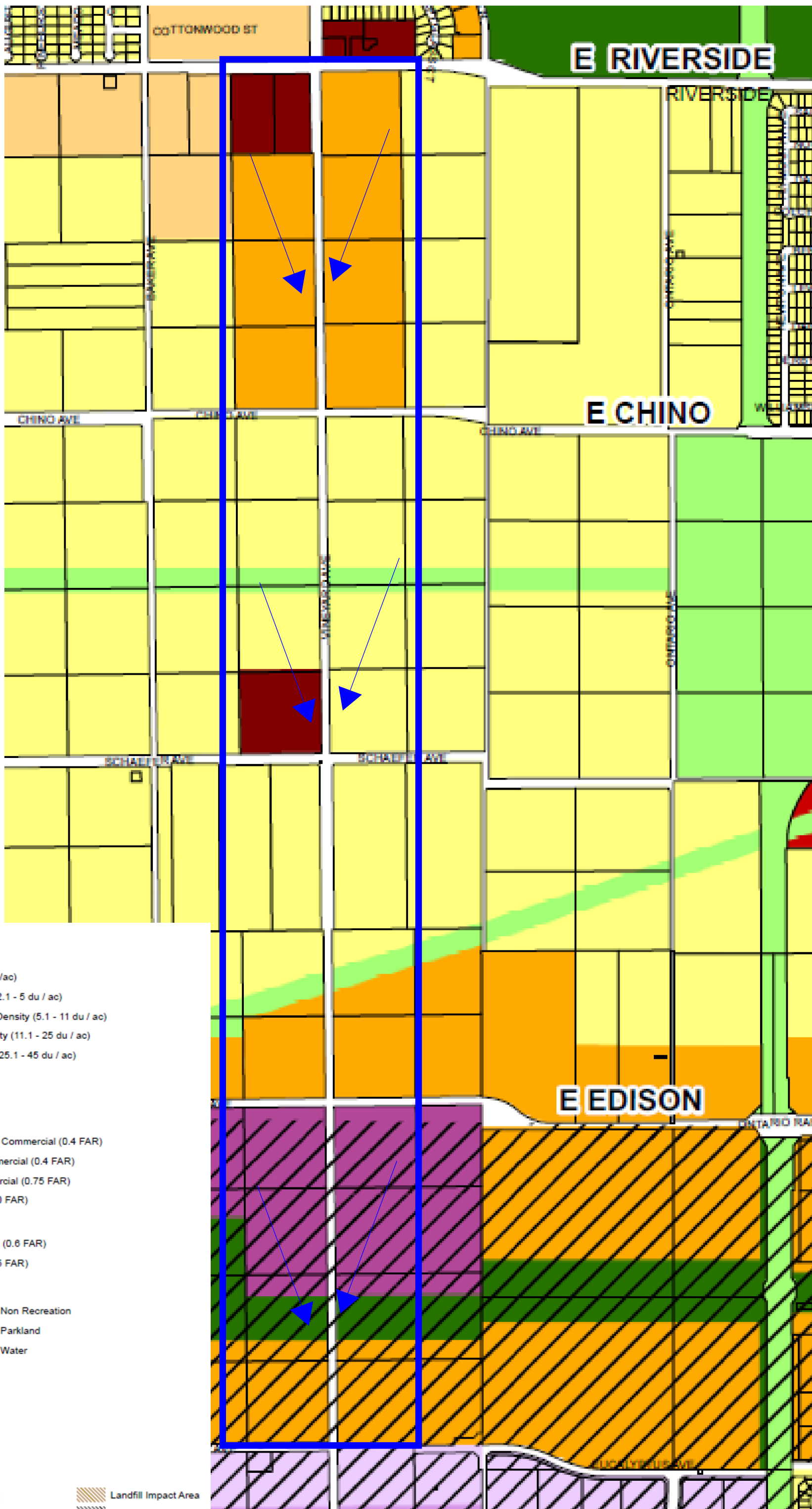
D/S = Downstream

U/S = Upstream

ADWF = Average Dry Weather Flow

PDWF = Peak Dry Weather Flow

# VINEYARD TRIBUTARY

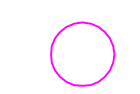

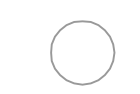



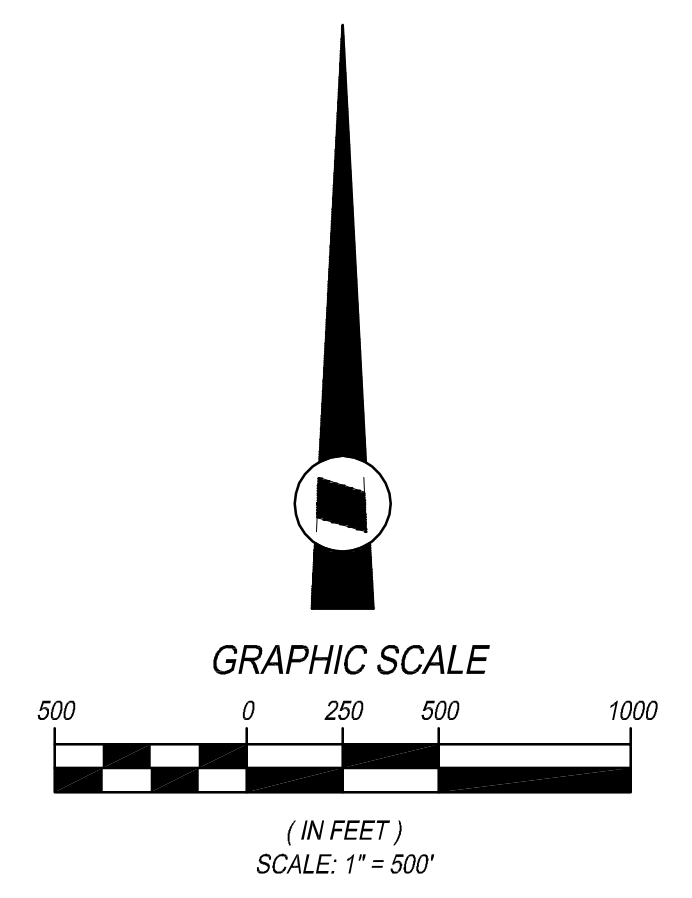
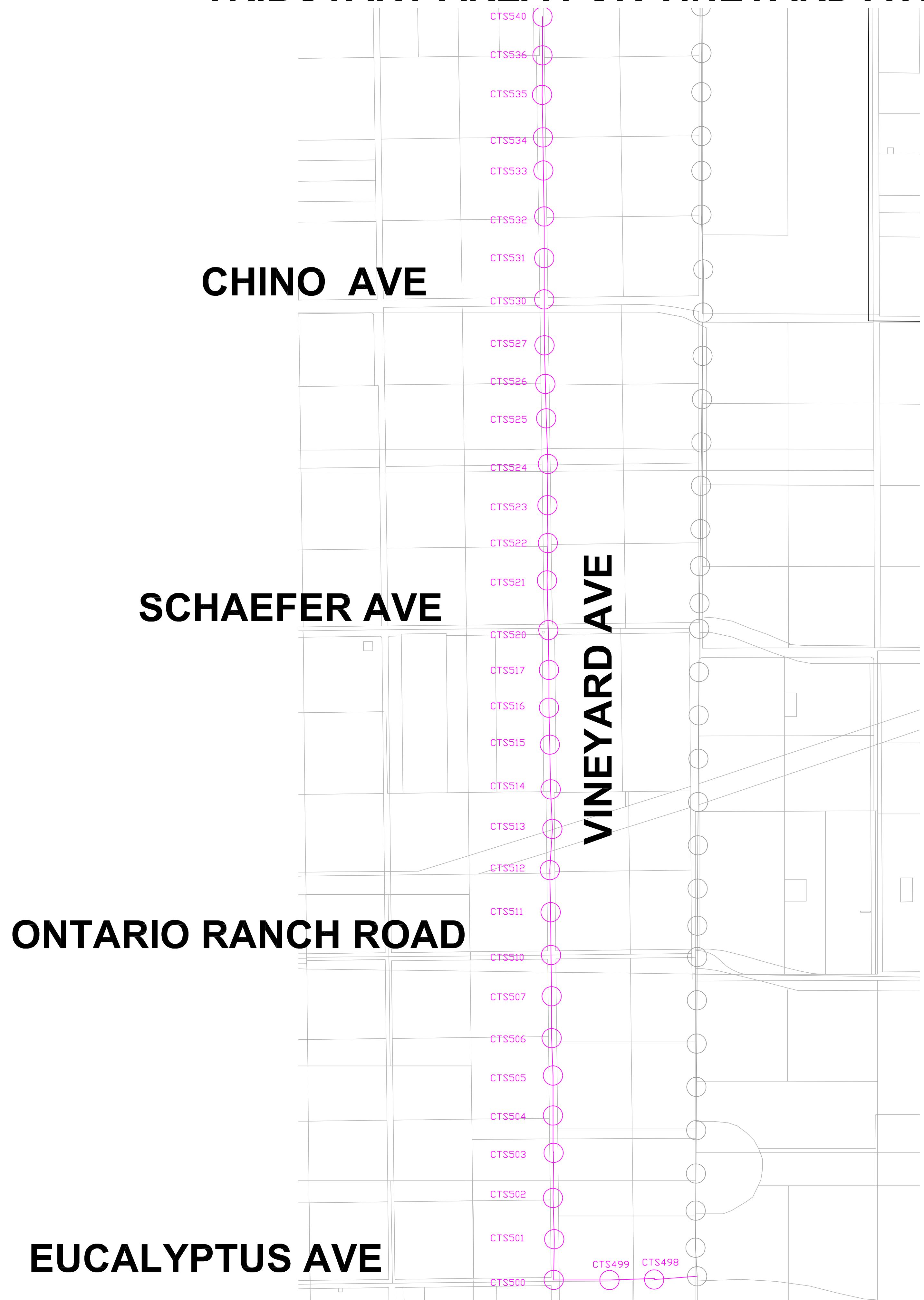
## LEGEND

- Residential**
  - Rural (0 - 2 du / ac)
  - Low Density (2.1 - 5 du / ac)
  - Low-Medium Density (5.1 - 11 du / ac)
  - Medium Density (11.1 - 25 du / ac)
  - High Density (25.1 - 45 du / ac)
- Mixed Use**
  - Mixed Use
- Retail/Service**
  - Neighborhood Commercial (0.4 FAR)
  - General Commercial (0.4 FAR)
  - Office Commercial (0.75 FAR)
  - Hospitality (1.0 FAR)
- Employment**
  - Business Park (0.6 FAR)
  - Industrial (0.55 FAR)
- Other**
  - Open Space - Non Recreation
  - Open Space - Parkland
  - Open Space - Water
  - Public Facility
  - Public School
  - Airport
  - Rail
  - Landfill
- Overlays**
  - Business Park
  - Industrial
  - Commercial
  - I-10/Grove Interchange Area
  - Landfill Impact Area
  - Chino Airport Overlay

# TRIBUTARY AREA FOR VINEYARD AVENUE

## LEGEND

-  VINEYARD MH ID
-  VINEYARD PIPE ID
-  MH NOT INCLUDED IN STUDY
-  PIPE NOT INCLUDED IN STUDY





## **Carpenter Ave**

CARPENTER TRIBUTARY: Carpenter Avenue

Using Land Use and DU's from 2050 TOP

| Specific Plan and Planning Area                        | Acres | Residential Land Use | # Residential Units | DU/ac | Employment Land Use | Employment Square Footage (Bldg SF) | School # Students | Unit Flow Factors        |           |        | ADWF gpd | Total ADWF | Flow Sum (mgd) | Input MH |
|--|-------|----------------------|---------------------|-------|---------------------|-------------------------------------|-------------------|--------------------------|-----------|--------|----------|------------|----------------|----------|
|  |       |                      |                     |       |                     |                                     |                   | Residential UFF (gpd/du) | Other UFF | Unit   |          |            |                |          |
| <b>TRIBUTARY TO CARPENTER</b>                          |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| <b>ARMSTRONG RANCH</b>                                 |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| PA-1   |       | LMDR                 | 96                  |       |                     |                                     |                   | 208                      |           |        | 19,968   | 19,968     |                |          |
| PA-2   |       | LMDR                 | 86                  |       |                     |                                     |                   | 208                      |           |        | 17,888   | 37,856     |                |          |
| PA-3   |       | LMDR                 | 66                  |       |                     |                                     |                   | 208                      |           |        | 13,728   | 51,584     |                |          |
| PA-4   |       | LDR                  | 66                  |       |                     |                                     |                   | 208                      |           |        | 13,728   | 65,312     |                |          |
| PA-5   |       | LDR                  | 76                  |       |                     |                                     |                   | 208                      |           |        | 15,808   | 81,120     | 0.081120       | CTS480   |
| <b>CHINO AVE TO SCHAEFER AVE</b>                       |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
|  | 40    | LDR                  |                     |       |                     |                                     |                   |                          | 1040      | gpd/ac | 41,600   | 41,600     | 0.041600       | CTS390   |
| <b>SCHAEFER AVE TO ORR WEST OF CARPENTER AVE</b>       |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
|  | 20    | LDR                  |                     |       |                     |                                     |                   |                          | 1040      | gpd/ac | 20,800   | 20,800     |                |          |
|  | 2     | LDR                  |                     |       |                     |                                     |                   |                          | 200       | gpd/ac | 400      | 21,200     |                |          |
|  | 18    | LDR                  |                     |       |                     |                                     |                   |                          | 4350      | gpd/ac | 78,300   | 99,500     | 0.099500       | CTS390   |
| <b>THE AVENUE</b>                                      |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| PA-1A  |       | LDR                  | 51                  |       |                     |                                     |                   | 208                      |           | gpd/du | 10,608   | 10,608     |                |          |
| PA-1B  |       | LDR                  | 42                  |       |                     |                                     |                   | 208                      |           | gpd/du | 8,736    | 19,344     |                |          |
| PA-1C  |       | LDR                  | 5                   |       |                     |                                     |                   | 208                      |           | gpd/du | 1,040    | 20,384     |                |          |
| PA-2A  |       | LDR                  | 147                 |       |                     |                                     |                   | 208                      |           | gpd/du | 30,576   | 50,960     | 0.050960       | CTS390   |
| <b>ORR TO EUCALYPTUS AVE WEST OF CARPENTER AVE</b>     |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| Mixed Use Office                                       | 18    |                      |                     |       | MU-O                |                                     |                   |                          | 4200      | gpd/ac | 75,600   | 75,600     |                |          |
| Park   | 4     |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/ac | 800      | 76,400     |                |          |
|  | 10    | MDR                  |                     |       |                     |                                     |                   |                          | 4350      | gpd/ac | 43,500   | 119,900    | 0.119900       | CTS310   |
| <b>PARKSIDE WEST</b>                                   |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| PA-12  | 11.80 | MDR                  | 192                 |       |                     |                                     |                   | 174                      |           |        | 33,408   | 33,408     |                |          |
| PA-11  | 10.74 | MDR                  | 188                 |       |                     |                                     |                   | 174                      |           |        | 32,712   | 66,120     |                |          |
| Portion of PA-21 - Great Park                          | 5.89  |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/ac | 1,178    | 67,298     |                |          |
| PA-10  | 10.02 | MDR                  | 207                 |       |                     |                                     |                   | 174                      |           |        | 36,018   | 103,316    |                |          |
| PA-9   | 8.37  | MDR                  | 184                 |       |                     |                                     |                   | 174                      |           |        | 32,016   | 135,332    | 0.135332       | CTS310   |
| <b>HELLMAN FROM CHINO TO EUCALYPTUS</b>                |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| Chino Ave to Schaeffer Ave                             | 40    | LDR                  | 200                 |       |                     |                                     |                   |                          | 1040      | gpd/ac | 41,600   | 41,600     | 0.041600       | CTS390   |
| The Avenue Schaeffer to ORR                            | 60    | LDR                  | 300                 |       |                     |                                     |                   |                          | 1040      | gpd/ac | 62,400   | 62,400     |                |          |
|  | 20    | MDR                  | 500                 |       |                     |                                     |                   |                          | 4350      | gpd/ac | 87,000   | 149,400    | 0.149400       | CTS310   |
| <b>PARKSIDE WEST</b>                                   |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| PA 13  | 8.53  | MDR                  | 128                 |       |                     |                                     |                   | 174                      |           | gpd/du | 22,272   | 22,272     |                |          |
| PA 14  | 9.5   | MDR                  | 163                 |       |                     |                                     |                   | 174                      |           | gpd/du | 28,362   | 50,634     |                |          |
| PA 15  | 8.62  | MDR                  | 126                 |       |                     |                                     |                   | 174                      |           | gpd/du | 21,924   | 72,558     |                |          |
| PA 16  | 9.77  | LMD                  | 105                 |       |                     |                                     |                   | 208                      |           | gpd/du | 21,840   | 94,398     |                |          |
| Great Park   | 12.98 |                      |                     |       | OS-R                |                                     |                   |                          | 200       | gpd/ac | 2,596    | 96,994     |                |          |
| PA 5   | 9.57  | MDR                  | 155                 |       |                     |                                     |                   | 174                      |           | gpd/du | 26,970   | 123,964    |                |          |
| PA 6   | 7.67  | MDR                  | 91                  |       |                     |                                     |                   | 174                      |           | gpd/du | 15,834   | 139,798    |                |          |
| PA 7   | 8.99  | MDR                  | 132                 |       |                     |                                     |                   | 174                      |           | gpd/du | 22,968   | 162,766    |                |          |
| PA 8   | 8.88  | MDR                  | 132                 |       |                     |                                     |                   | 174                      |           | gpd/du | 22,968   | 185,734    | 0.185734       | CTS230   |
| <b>MERRILL COMMERCE CENTER</b>                         |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| PA-6A  | 4.75  |                      |                     |       | BP                  |                                     |                   |                          | 1610      | gpd/ac | 7,648    | 7,648      |                |          |
| PA-6   | 25.05 |                      |                     |       | IND                 |                                     |                   |                          | 1060      | gpd/ac | 26,553   | 34,201     | 0.034201       | CTS230   |
| <b>EUCALYPTUS AVE TO MERRILL EAST OF CARPENTER AVE</b> |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| Business Park  | 10    |                      |                     |       | BP                  |                                     |                   |                          | 1610      | gpd/ac | 16,100   | 16,100     |                |          |
| Industrial   | 30    |                      |                     |       | IND                 |                                     |                   |                          | 1060      | gpd/ac | 31,800   | 47,900     | 0.047900       | CTS230   |
| <b>MERRILL TO KIMBALL EAST OF CARPENTER AVE</b>        |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
| Industrial   | 160   |                      |                     |       | IND                 |                                     |                   |                          | 1060      | gpd/ac | 169,600  | 169,600    | 0.169600       | CTS150   |
| <b>HELLMAN FROM EUCALYPTUS TO MERRILL</b>              |       |                      |                     |       |                     |                                     |                   |                          |           |        |          |            |                |          |
|  | 20    |                      |                     |       | BP                  |                                     |                   |                          | 1610      | gpd/ac | 32,200   | 32,200     |                |          |
|  | 40    |                      |                     |       | IND                 |                                     |                   |                          | 1060      | gpd/ac | 42,400   | 74,600     | 0.074600       | CTS150   |

| Carpenter Hydraulic Analysis Results Per TOP 2050 Table |           |           |               |             |        |                                |            |                      |          |                       |
|---|-----------|-----------|---------------|-------------|--------|--------------------------------|------------|----------------------|----------|-----------------------|
| General Pipe Information                                |           |           |               |             |        | Ultimate Baseline Scenario TOP |            |                      |          |                       |
| Pipe ID   | U/S MH ID | D/S MH ID | Diameter (in) | Length (ft) | Slope  | PDWF (mgd)                     | ADWF (mgd) | PDWF Velocity (ft/s) | PDWF d/D | PDWF Water Depth (ft) |
| CTS150P   | CTS150    | CTS140    | 24            | 348         | 0.0039 | 2.9198                         | 1.751587   | 4.00                 | 0.39     | 0.78                  |
| CTS160P   | CTS160    | CTS150    | 21            | 191         | 0.0096 | 2.5535                         | 1.507387   | 5.40                 | 0.34     | 0.60                  |
| CTS170P   | CTS170    | CTS160    | 21            | 350         | 0.0064 | 2.5535                         | 1.507387   | 4.66                 | 0.38     | 0.67                  |
| CTS180P   | CTS180    | CTS170    | 21            | 356         | 0.0074 | 2.5535                         | 1.507387   | 4.91                 | 0.37     | 0.65                  |
| CTS190P   | CTS190    | CTS180    | 21            | 349         | 0.0075 | 2.5535                         | 1.507387   | 4.95                 | 0.37     | 0.64                  |
| CTS200P   | CTS200    | CTS190    | 21            | 350         | 0.0150 | 2.5535                         | 1.507387   | 6.34                 | 0.31     | 0.54                  |
| CTS210P   | CTS210    | CTS200    | 21            | 346         | 0.0151 | 2.5535                         | 1.507387   | 6.36                 | 0.30     | 0.53                  |
| CTS220P   | CTS220    | CTS210    | 21            | 347         | 0.0151 | 2.5535                         | 1.507387   | 6.36                 | 0.31     | 0.53                  |
| CTS230P   | CTS230    | CTS220    | 21            | 338         | 0.0155 | 2.5535                         | 1.507387   | 6.42                 | 0.30     | 0.53                  |
| CTS240P   | CTS240    | CTS230    | 18            | 231         | 0.0041 | 1.3190                         | 0.719412   | 3.34                 | 0.38     | 0.57                  |
| CTS250P   | CTS250    | CTS240    | 18            | 300         | 0.0032 | 1.3190                         | 0.719412   | 3.07                 | 0.40     | 0.60                  |
| CTS260P   | CTS260    | CTS250    | 18            | 300         | 0.0032 | 1.3190                         | 0.719412   | 3.07                 | 0.40     | 0.60                  |
| CTS270P   | CTS270    | CTS260    | 18            | 350         | 0.0033 | 1.3190                         | 0.719412   | 3.07                 | 0.40     | 0.60                  |
| CTS280P   | CTS280    | CTS270    | 18            | 350         | 0.0091 | 1.3190                         | 0.719412   | 4.45                 | 0.31     | 0.46                  |
| CTS290P   | CTS290    | CTS280    | 18            | 350         | 0.0091 | 1.3190                         | 0.719412   | 4.45                 | 0.31     | 0.46                  |
| CTS300P   | CTS300    | CTS290    | 18            | 350         | 0.0091 | 1.3190                         | 0.719412   | 4.45                 | 0.31     | 0.46                  |
| CTS310P   | CTS310    | CTS300    | 21            | 350         | 0.0091 | 1.3190                         | 0.719412   | 4.39                 | 0.25     | 0.43                  |
| CTS320P   | CTS320    | CTS310    | 18            | 253         | 0.0081 | 0.6305                         | 0.31478    | 3.46                 | 0.22     | 0.32                  |
| CTS330P   | CTS330    | CTS320    | 18            | 300         | 0.0082 | 0.6305                         | 0.31478    | 3.47                 | 0.22     | 0.32                  |
| CTS340P   | CTS340    | CTS330    | 18            | 350         | 0.0082 | 0.6305                         | 0.31478    | 3.47                 | 0.22     | 0.32                  |
| CTS350P   | CTS350    | CTS340    | 18            | 350         | 0.0082 | 0.6305                         | 0.31478    | 3.47                 | 0.22     | 0.32                  |
| CTS360P   | CTS360    | CTS350    | 18            | 350         | 0.0056 | 0.6305                         | 0.31478    | 3.04                 | 0.24     | 0.36                  |
| CTS370P   | CTS370    | CTS360    | 18            | 350         | 0.0056 | 0.6305                         | 0.31478    | 3.04                 | 0.24     | 0.36                  |
| CTS380P   | CTS380    | CTS370    | 18            | 350         | 0.0056 | 0.6305                         | 0.31478    | 3.04                 | 0.24     | 0.36                  |
| CTS390P   | CTS390    | CTS380    | 18            | 350         | 0.0056 | 0.6305                         | 0.31478    | 3.04                 | 0.24     | 0.36                  |
| CTS400P   | CTS400    | CTS390    | 15            | 206         | 0.0089 | 0.1879                         | 0.08112    | 2.55                 | 0.15     | 0.19                  |
| CTS410P   | CTS410    | CTS400    | 15            | 300         | 0.0089 | 0.1879                         | 0.08112    | 2.56                 | 0.15     | 0.19                  |
| CTS420P   | CTS420    | CTS410    | 15            | 300         | 0.0089 | 0.1879                         | 0.08112    | 2.56                 | 0.15     | 0.19                  |
| CTS430P   | CTS430    | CTS420    | 15            | 350         | 0.0090 | 0.1879                         | 0.08112    | 2.56                 | 0.15     | 0.19                  |
| CTS440P   | CTS440    | CTS430    | 15            | 350         | 0.0090 | 0.1879                         | 0.08112    | 2.56                 | 0.15     | 0.19                  |
| CTS450P   | CTS450    | CTS440    | 15            | 350         | 0.0084 | 0.1879                         | 0.08112    | 2.51                 | 0.15     | 0.19                  |
| CTS460P   | CTS460    | CTS450    | 15            | 350         | 0.0084 | 0.1879                         | 0.08112    | 2.50                 | 0.15     | 0.19                  |
| CTS470P   | CTS470    | CTS460    | 15            | 350         | 0.0084 | 0.1879                         | 0.08112    | 2.50                 | 0.15     | 0.19                  |
| CTS480P   | CTS471    | CTS470    | 15            | 350         | 0.0085 | 0.1879                         | 0.08112    | 2.52                 | 0.15     | 0.19                  |
| CTS481P   | CTS472    | CTS471    | 15            | 350         | 0.0085 | 0.1879                         | 0.08112    | 2.52                 | 0.15     | 0.19                  |
| CTS482P   | CTS473    | CTS472    | 15            | 350         | 0.0085 | 0.1879                         | 0.08112    | 2.52                 | 0.15     | 0.19                  |
| CTS483P   | CTS474    | CTS473    | 15            | 350         | 0.0085 | 0.1879                         | 0.08112    | 2.52                 | 0.15     | 0.19                  |
| CTS484P   | CTS475    | CTS474    | 15            | 350         | 0.0085 | 0.1879                         | 0.08112    | 2.52                 | 0.15     | 0.19                  |
| CTS485P   | CTS476    | CTS475    | 15            | 350         | 0.0085 | 0.1879                         | 0.08112    | 2.52                 | 0.15     | 0.19                  |
| CTS486P   | CTS480    | CTS476    | 15            | 376         | 0.0079 | 0.1879                         | 0.08112    | 2.45                 | 0.15     | 0.19                  |
| CTS498P   | CTS498    | CTS230    | 15            | 350         | 0.0030 | 0.9873                         | 0.52014    | 2.78                 | 0.46     | 0.57                  |
| CTS10P  | CTS10     | AA18MH102 | 24            | 394         | 0.0034 | 2.9198                         | 1.751587   | 3.81                 | 0.40     | 0.81                  |
| CTS20P  | CTS20     | CTS10     | 24            | 289         | 0.0033 | 2.9198                         | 1.751587   | 3.75                 | 0.41     | 0.82                  |
| CTS30P  | CTS30     | CTS20     | 24            | 305         | 0.0034 | 2.9198                         | 1.751587   | 3.80                 | 0.40     | 0.81                  |
| CTS40P  | CTS40     | CTS30     | 24            | 300         | 0.0034 | 2.9198                         | 1.751587   | 3.83                 | 0.40     | 0.80                  |
| CTS50P  | CTS50     | CTS40     | 21            | 159         | 0.0039 | 2.9198                         | 1.751587   | 4.03                 | 0.47     | 0.83                  |
| CTS60P  | CTS60     | CTS50     | 24            | 98          | 0.0031 | 2.9198                         | 1.751587   | 3.67                 | 0.41     | 0.83                  |
| CTS70P  | CTS70     | CTS60     | 24            | 271         | 0.0024 | 2.9198                         | 1.751587   | 3.35                 | 0.44     | 0.89                  |
| CTS80P  | CTS80     | CTS70     | 24            | 273         | 0.0044 | 2.9198                         | 1.751587   | 4.20                 | 0.37     | 0.75                  |
| CTS90P  | CTS90     | CTS80     | 24            | 303         | 0.0034 | 2.9198                         | 1.751587   | 3.81                 | 0.40     | 0.81                  |
| CTS100P   | CTS100    | CTS90     | 24            | 295         | 0.0035 | 2.9198                         | 1.751587   | 3.85                 | 0.40     | 0.80                  |
| CTS110P   | CTS110    | CTS100    | 24            | 332         | 0.0025 | 2.9198                         | 1.751587   | 3.40                 | 0.44     | 0.88                  |
| CTS120P   | CTS120    | CTS110    | 24            | 350         | 0.0035 | 2.9198                         | 1.751587   | 3.83                 | 0.40     | 0.80                  |
| CTS130P   | CTS130    | CTS120    | 24            | 351         | 0.0034 | 2.9198                         | 1.751587   | 3.83                 | 0.40     | 0.80                  |
| CTS140P   | CTS140    | CTS130    | 24            | 347         | 0.0035 | 2.9198                         | 1.751587   | 3.85                 | 0.40     | 0.80                  |

Definitions:

ID = identification

D/S = Downstream

ADWF = Average Dry Weather Flow

MH = manhole

U/S = Upstream

PDWF = Peak Dry Weather Flow

d/D = depth to diameter ratio

# CARPENTER TRIBUTARY

## LEGEND

### Residential

- Rural (0 - 2 du/ac)
- Low Density (2.1 - 5 du / ac)
- Low-Medium Density (5.1 - 11 du / ac)
- Medium Density (11.1 - 25 du / ac)
- High Density (25.1 - 45 du / ac)

### Mixed Use

- Mixed Use

### Retail/Service

- Neighborhood Commercial (0.4 FAR)
- General Commercial (0.4 FAR)
- Office Commercial (0.75 FAR)
- Hospitality (1.0 FAR)

### Employment

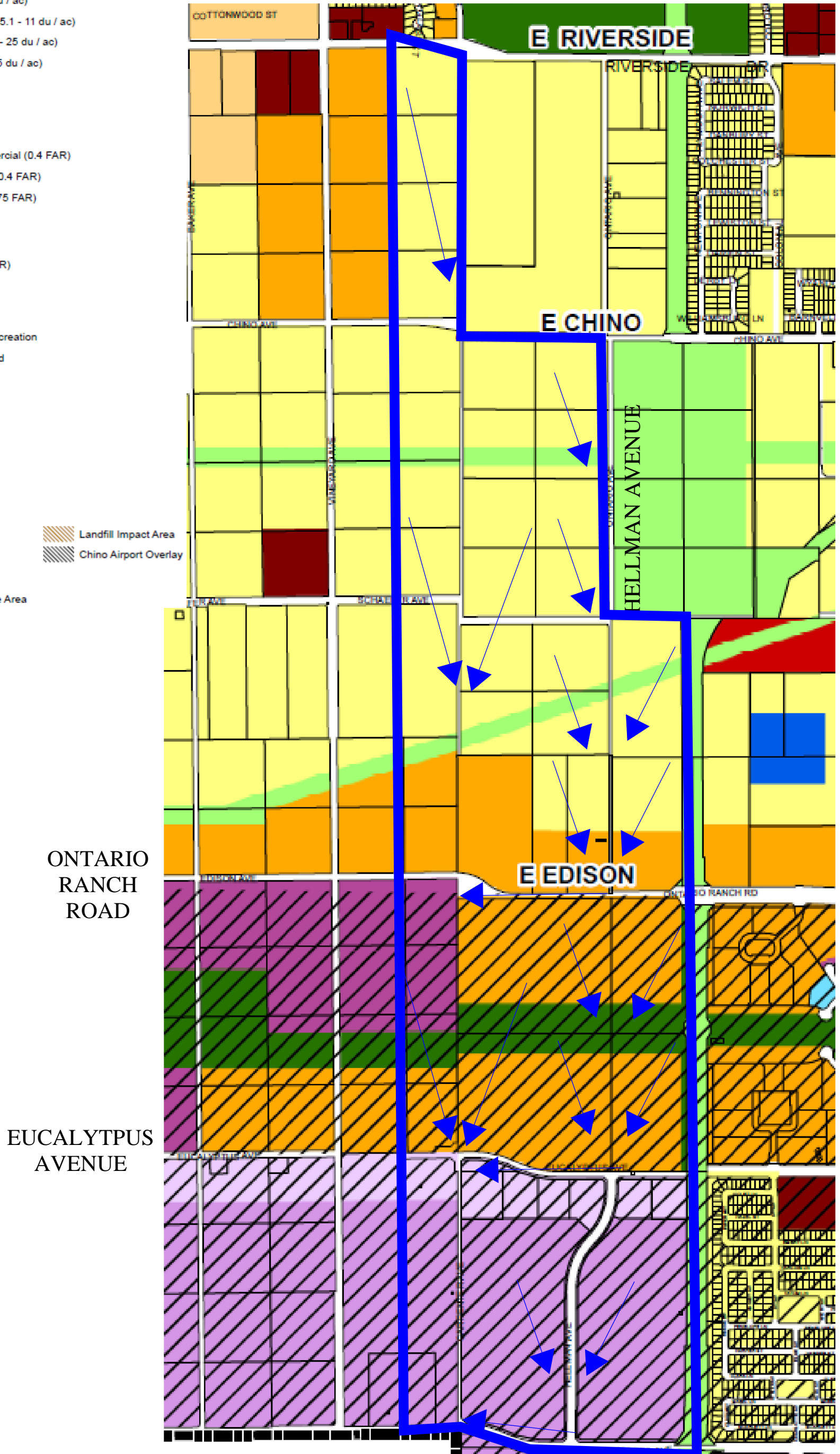
- Business Park (0.6 FAR)
- Industrial (0.55 FAR)

### Other

- Open Space - Non Recreation
- Open Space - Parkland
- Open Space - Water
- Public Facility
- Public School
- Airport
- Rail
- Landfill





### Overlays

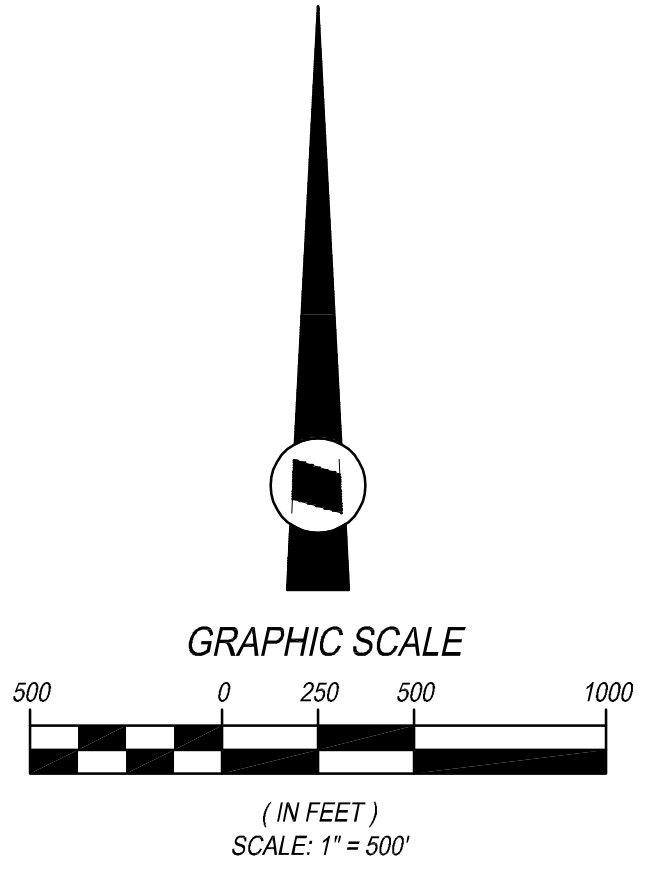
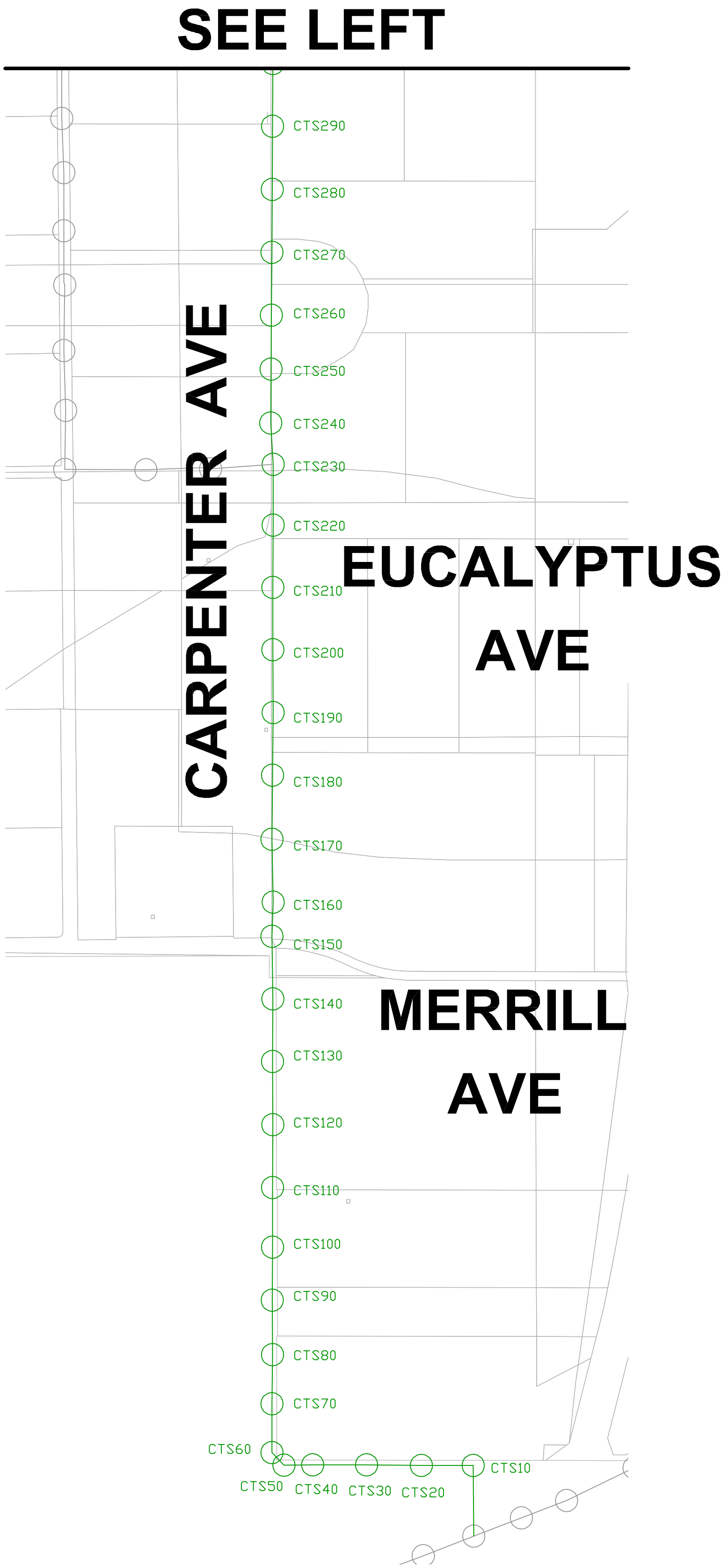
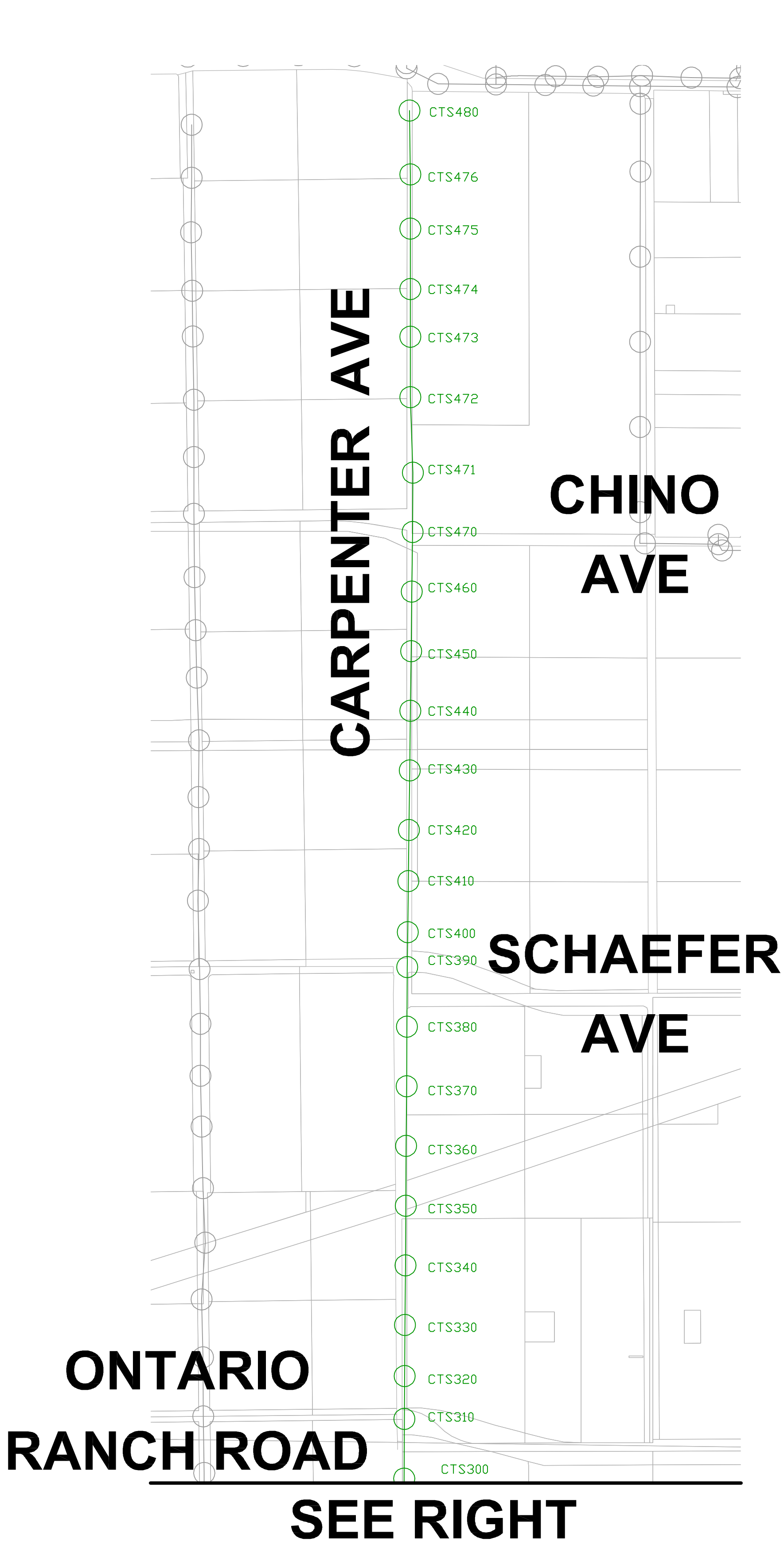
- Business Park
- Industrial
- Commercial
- Landfill Impact Area
- Chino Airport Overlay
- I-10/Grove Interchange Area



# TRIBUTARY AREA FOR CARPENTER

## LEGEND

-  CARPENTER MH ID
-  CARPENTER PIPE ID
-  MH NOT INCLUDED IN STUDY
-  PIPE NOT INCLUDED IN STUDY



# APPENDIX

## Specific Plan

### Land Use Map and Land Use Summaries

# Exhibit 10 - Land Use Plan

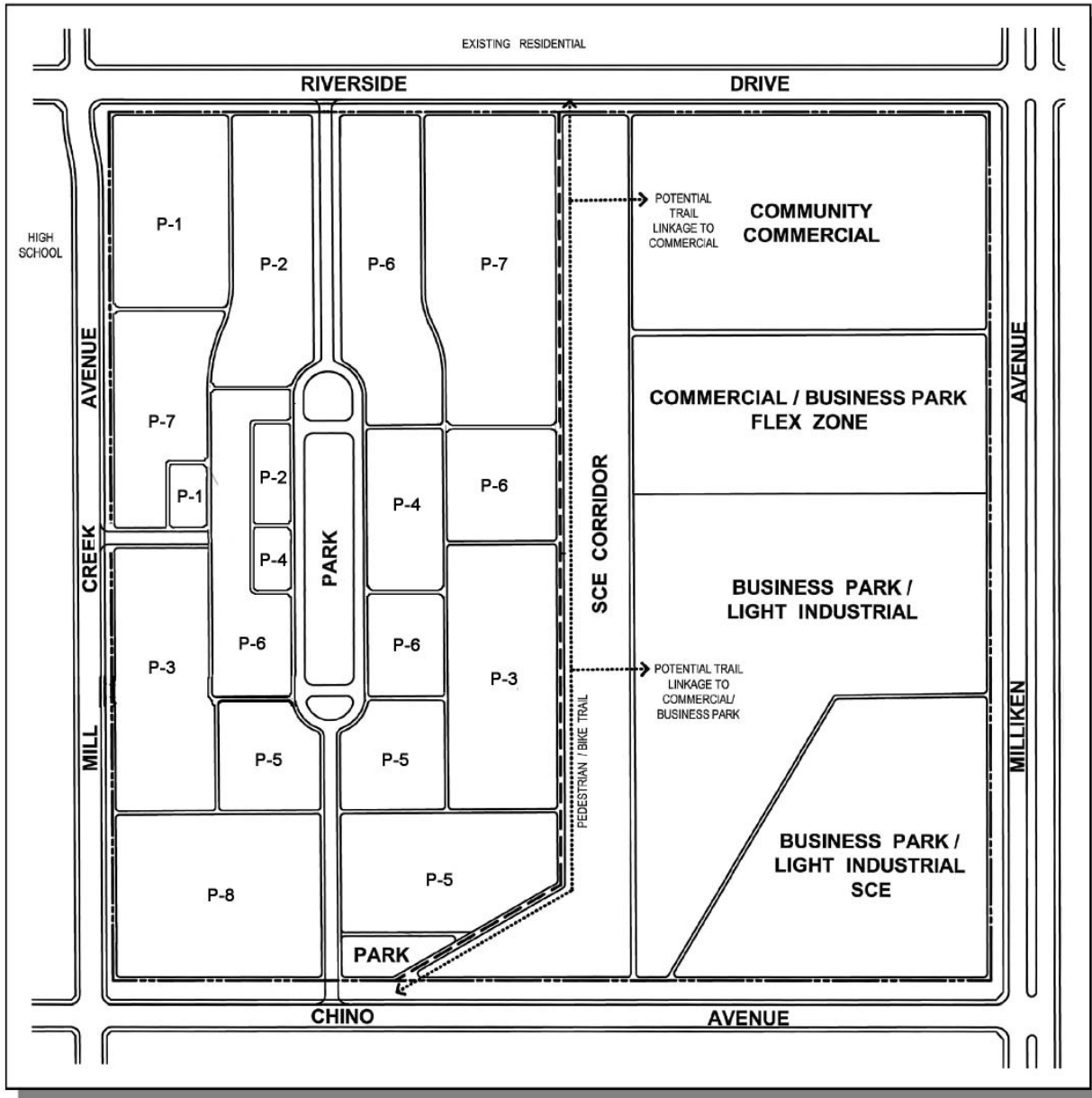




Table 2 - Land Use Summary

| LAND USE  | UNITS <sup>3</sup> | ACRES        | UNITS/NET ACRE | MAXIMUM SQUARE FEET |
|---|--------------------|--------------|----------------|---------------------|
| <b>Residential<sup>1</sup></b>                  |                    |              |                |                     |
| P-1   | 21                 | 5.7          | 3.7            |                     |
| P-2   | 29                 | 5.8          | 5.0            |                     |
| P-3   | 106                | 10.8         | 9.8            |                     |
| P-4   | 36                 | 3.8          | 9.5            |                     |
| P-5   | 139                | 8.4          | 16.6           |                     |
| P-6   | 87                 | 10.5         | 8.3            |                     |
| P-7   | 67                 | 9.8          | 6.8            |                     |
| P-8   | 99                 | 6.3          | 15.7           |                     |
| <i>Net Residential Subtotal</i>                 | <i>584</i>         | <i>61.1</i>  | <i>9.5</i>     |                     |
| Park  |                    | 4.0          |                |                     |
| Roadways, Edge Buffer                           |                    | 10.1         |                |                     |
| <i>Gross Residential Subtotal</i>               | <i>584</i>         | <i>75.2</i>  | <i>7.76</i>    |                     |
| <b>OTHER</b>                                    |                    |              |                |                     |
| Commercial                                      |                    | 20.0         |                | 217,520             |
| Commercial Business Park Flex Zone <sup>2</sup> |                    | 10.0         |                |                     |
| Business Park/Light Industrial                  |                    | 26.9         |                | 550,000             |
| SCE Property                                    |                    | 12.8         |                |                     |
| Edge Buffer                                     |                    | 5.5          |                |                     |
| Roadways  |                    | 8.3          |                |                     |
| <i>Other Land Uses Subtotal</i>                 |                    | <i>83.5</i>  |                |                     |
| <b>PROJECT TOTAL</b>                            | <b>584</b>         | <b>158.7</b> |                | <b>767,520</b>      |

<sup>1</sup> Includes Pocket Parks within each of the neighborhoods.

<sup>2</sup> The maximum commercial square footage between Community Commercial and Commercial/Business Park Flex Zone is 217,520 S.F.

<sup>3</sup> 10% of the units may be transferred as long as the transfer does not exceed 584 units and is consistent with the allowed density.

Section 4. LAND USE

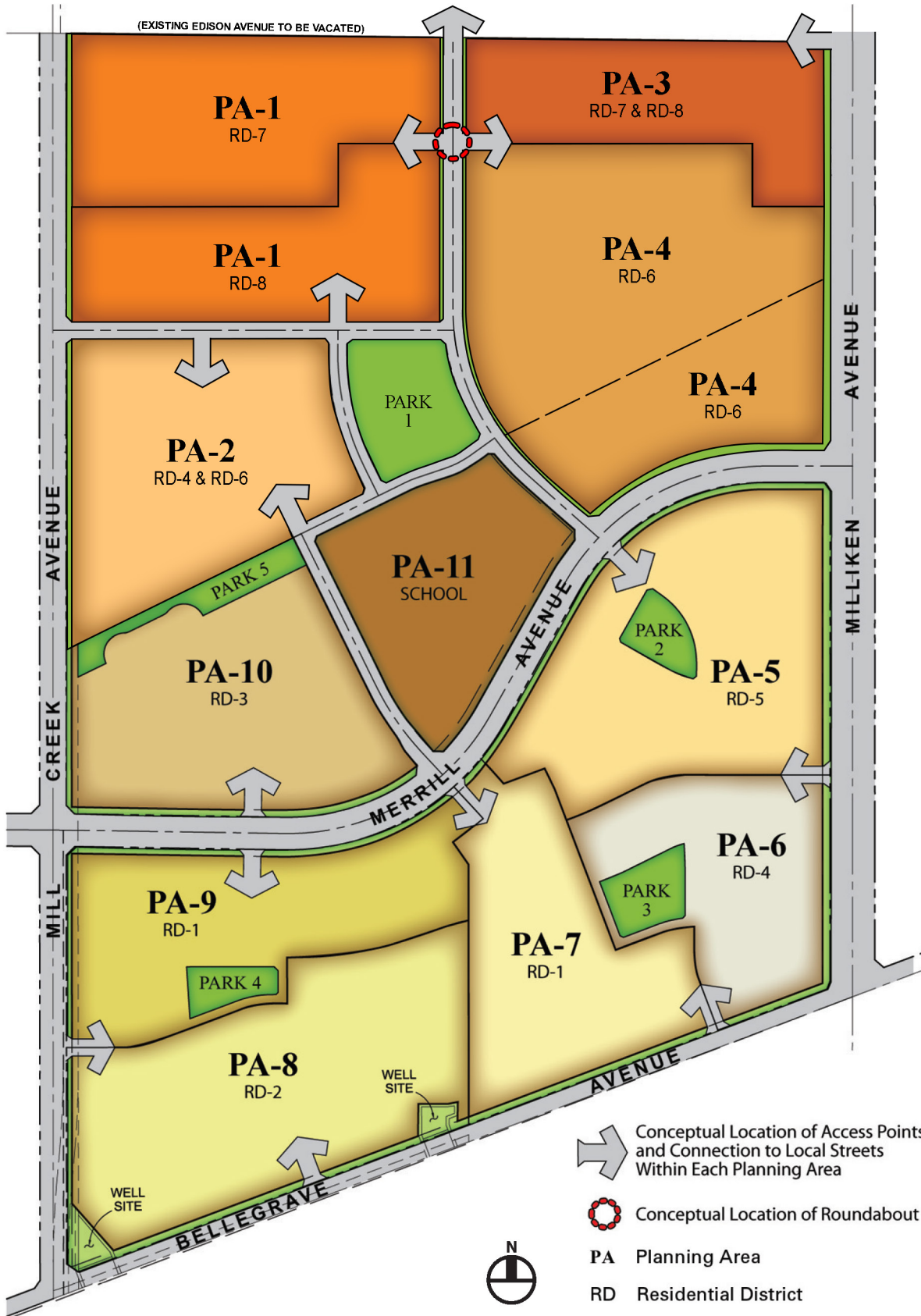


Exhibit 8  
Land Use Plan

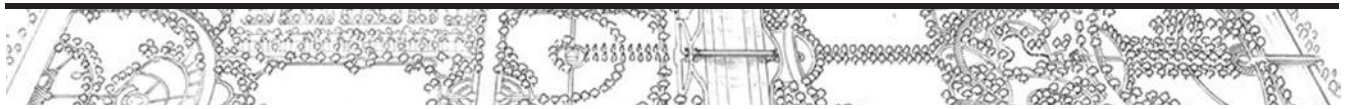
| LAND USE   | UNITS          | GROSS ACRES      | UNITS/ GROSS ACRES | NET ACRES        | UNITS/ NET ACRES  |
|--|----------------|------------------|--------------------|------------------|-------------------|
| <b>Residential Uses</b>  |                |                  |                    |                  |                   |
| PA-1 (RD-7/ Row Townhomes, RD-8/ Motorcourt Townhomes)         | 319 DU         | 29.35 AC         | 10.87 DU/AC        | 28.97 AC         | 11.01 DU/AC       |
| PA-2 (RD-4/ SFD Cottages, RD-6/ 6-Pack Courtyard)              | 113 DU         | 22.84 AC         | 4.95 DU/AC         | 17.36 AC         | 6.51 DU/AC        |
| PA-3 (RD-7 & RD-8/ Row Townhomes)                              | 156 DU         | 11.40 AC         | 13.68 DU/AC        | 11.10 AC         | 14.05 DU/AC       |
| PA-4 (RD-6/ 6-Pack Courtyard, 8-Pack Courtyard, Row Townhomes) | 303 DU         | 27.41 AC         | 11.05 DU/AC        | 19.30 AC         | 15.70 DU/AC       |
| PA-5 (RD-5/ 4-Pack Courtyard)                                  | 157 DU         | 23.78 AC         | 6.60 DU/AC         | 17.64 AC         | 8.90 DU/AC        |
| PA-6 (RD-4/ SFD Cottages)                                      | 78 DU          | 13.64 AC         | 5.72 DU/AC         | 10.00 AC         | 7.80 DU/AC        |
| PA-7 (RD-1/ SFD 50' wide lots)                                 | 76 DU          | 14.36 AC         | 5.29 DU/AC         | 12.56 AC         | 6.05 DU/AC        |
| PA-8 (RD-2/ SFD 55' wide lots)                                 | 107 DU         | 23.72 AC         | 4.51 DU/AC         | 19.26 AC         | 5.56 DU/AC        |
| PA-9 (RD-1/ SFD 50' x 80')                                     | 82 DU          | 17.75 AC         | 4.62 DU/AC         | 13.27 AC         | 6.18 DU/AC        |
| PA-10 (RD-3/ SFD 2-Pack)                                       | 100 DU         | 19.92 AC         | 5.02 DU/AC         | 14.62 AC         | 6.84 DU/AC        |
| Park 1   |                | 5.75*AC          |                    |                  |                   |
| <b>Residential land Use Total</b>                              | <b>1491 DU</b> | <b>209.90 AC</b> | <b>7.10 DU/AC</b>  | <b>164.08 AC</b> | <b>9.09 DU/AC</b> |
|  |                |                  |                    |                  |                   |
| <b>Parks</b>   |                |                  |                    | 9.89 AC          |                   |
| <b>Neighborhood Edge Buffers</b>                               |                |                  |                    | 6.62 AC          |                   |
| <b>Roadways</b>  |                |                  |                    | 28.25 AC         |                   |
| <b>SCE Easements and Well Sites</b>                            |                |                  |                    | 4.14 AC          |                   |
|  |                |                  |                    |                  |                   |
| <b>Community Facilities Use</b>                                |                |                  |                    |                  |                   |
|  |                |                  |                    |                  |                   |
| PA-11 (School)   |                | 13.10 AC         |                    | 10.02 AC         |                   |
|  |                |                  |                    |                  |                   |
| <b>PROJECT TOTAL</b>   | <b>1491 DU</b> | <b>223.00 AC</b> |                    | <b>223.00 AC</b> |                   |

## NOTES:

- Gross residential acres do not include the 13.10 gross acres for a school site.
- Net residential acres are gross acres less parks, neighborhood edge buffers, roadways, easements and net area for school site.

\* PA-2 includes 3.45 AC of Park 1

Table 2  
Land Use Summary



# Parkside



Exhibit 1-3: Land Use Plan





# Parkside

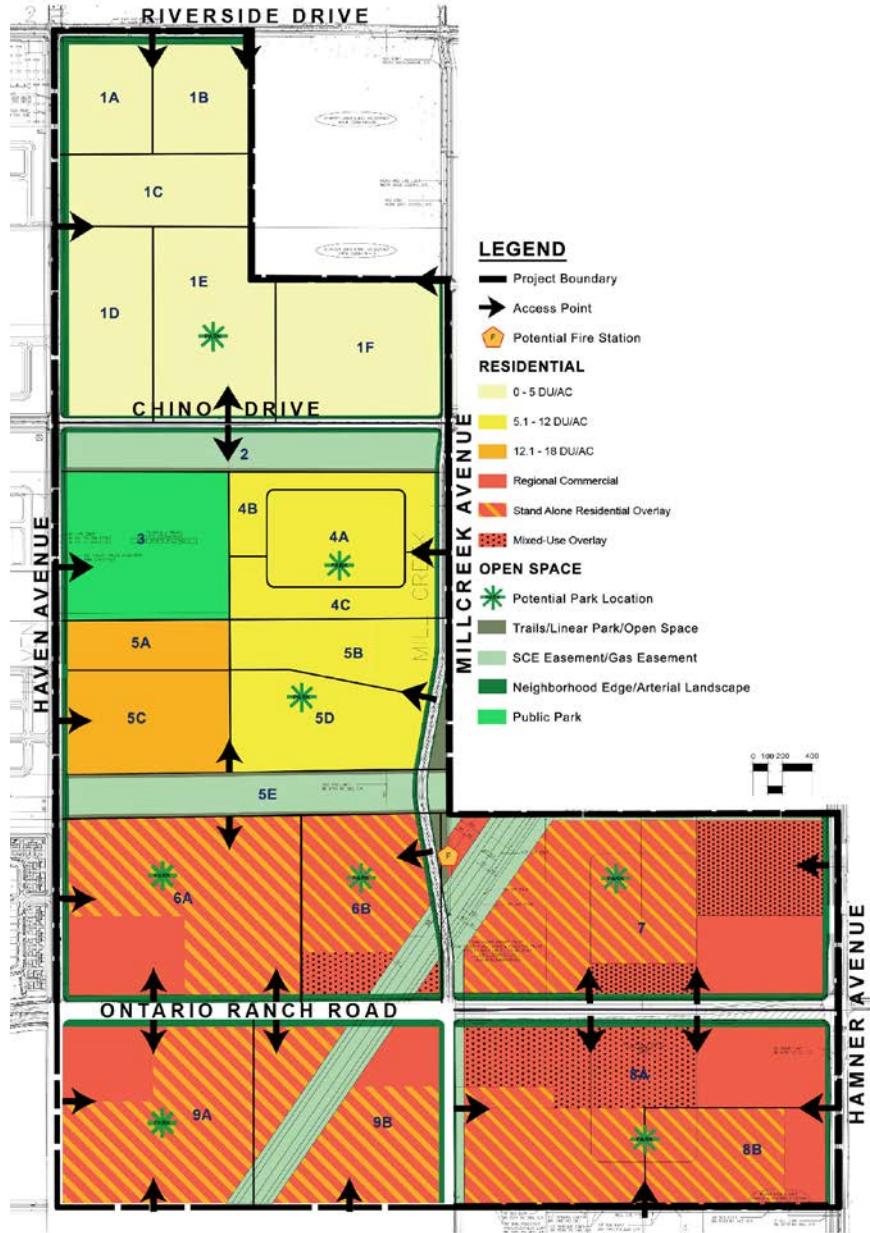
Table 1-1: Parkside Land Use Summary

| Land Use  | Lot Size / Use | Gross Acreage          | Net Acreage            | *Density Range / S.F.    | Lots / D.U.        |
|---|----------------|------------------------|------------------------|--------------------------|--------------------|
| <b>Residential</b>  |                |                        |                        |                          |                    |
| PA-1 (Green Court/Lane Loaded Products 1, 2 & 4)            | SFD            | 19.97                  | 15.57                  | 10-18                    | 236                |
| PA-2 (Lane Loaded Product 3)                                | SFD            | 3.57                   | 2.66                   | 10-18                    | 41                 |
| PA-3 (Lane Loaded Product 3)                                | SFD            | 3.06                   | 2.38                   | 10-18                    | 42                 |
| PA-4 (Green Court/Lane Loaded Products 1, 2, 3 & 4)         | SFD            | 15.5                   | 13.62                  | 10-18                    | 221                |
| PA-5 ( <del>HD Townhomes</del> ) Mixed Residential          | MF/SFD         | <del>9.57</del> 8.14   | <del>8.14</del> 7.59   | <del>15-22</del> 11.1-25 | <del>139</del> 155 |
| PA-6 ( <del>Attached Auto Court</del> ) Mixed Residential   | MF/SFD         | <del>7.34</del> 9.04   | <del>6.89</del> 6.89   | <del>8-14</del> 11.1-25  | <del>75</del> 91   |
| PA-7 ( <del>Auto Court 6-8 Plex</del> ) Mixed Residential   | SFD/MF         | <del>9.30</del> 7.9    | <del>7.49</del> 7.35   | <del>8-14</del> 11.1-25  | <del>68</del> 132  |
| PA-8 ( <del>Green Court 8-10 Plex</del> ) Mixed Residential | SFD/MF         | <del>6.64</del> 8.28   | <del>6.18</del> 8.03   | <del>10-16</del> 11.1-25 | <del>68</del> 132  |
| PA-9 ( <del>Triplex</del> ) Mixed Residential               | MF/SFD         | <del>10.49</del> 9.12  | <del>8.70</del> 8.61   | <del>10-16</del> 11.1-25 | <del>120</del> 184 |
| PA-10 ( <del>Row Townhomes</del> ) Mixed Residential        | MF/SFD         | <del>7.56</del> 9.64   | <del>7.22</del> 9.5    | <del>17-25</del> 11.1-25 | <del>143</del> 207 |
| PA-11 ( <del>HD Townhomes</del> ) Mixed Residential         | MF/SFD         | <del>8.11</del> 6.63   | <del>7.22</del> 6.54   | <del>15-22</del> 11.1-25 | <del>123</del> 188 |
| PA-12 ( <del>Triplex</del> ) Mixed Residential              | MF/SFD         | <del>11.8</del> 10.33  | <del>9.3</del> 9.57    | <del>12-18</del> 11.1-25 | <del>127</del> 192 |
| PA-13 ( <del>Attached Auto Court</del> ) Mixed Residential  | MF/SFD         | <del>8.53</del> 7.23   | <del>6.34</del> 6.53   | <del>8-14</del> 11.1-25  | <del>64</del> 128  |
| PA-14 ( <del>Duplex</del> ) Mixed Residential               | MF/SFD         | <del>7.12</del> 5.67   | <del>6.18</del> 5.5    | <del>12-18</del> 11.1-25 | <del>99</del> 163  |
| PA-15 ( <del>Duplex</del> ) Mixed Residential               | MF/SFD         | <del>8.62</del> 6.97   | <del>6.97</del> 6.5    | <del>12-18</del> 11.1-25 | <del>111</del> 126 |
| PA-16 ( <del>Triplex</del> ) Mixed Residential              | MF/SFD         | <del>7.83</del> 6.82   | <del>7.35</del> 6.64   | <del>10-16</del> 11.1-25 | <del>90</del> 105  |
| PA-17 ( <del>Row Townhomes</del> ) Mixed Residential        | MF/SFD         | <del>4.87</del> 22.74  | <del>4.54</del> 18.96  | <del>17-25</del> 11.1-25 | <del>82</del> 243  |
| PA-18 ( <del>HD Townhomes</del> ) Mixed Residential         | MF/SFD         | <del>6.74</del> 8.11   | <del>5.04</del> 7.51   | <del>15-22</del> 11.1-25 | <del>98</del> 260  |
| <b>Residential Subtotal</b>                                 |                | <b>156.62 168.72</b>   | <b>131.79 149.95</b>   | <b>14.77 16.87</b>       | <b>1,947 2,846</b> |
| <b>Non-Residential</b>                                      |                |                        |                        |                          |                    |
| PA-19 (Commercial)  |                | <del>15.66</del> 2.95  | <del>11.15</del> 2.77  | <del>15,000</del> SF     | -                  |
| PA-20 (Fire Station)  |                | 1.72                   | 1.39                   | -                        | -                  |
| PA-21 (Great Park)  |                | <del>58.86</del> 41.00 | <del>54.40</del> 41.00 | -                        | -                  |
| PA-22 (Private Rec)   |                | 1.00                   | 1.00                   | -                        | -                  |
| PA-23 (Private Rec)   |                | 1.90                   | 1.34                   | -                        | -                  |
| PA-24 (Private Rec)   |                | 1.00                   | 1.00                   | -                        | -                  |
| PA-25 (Private Rec)   |                | 1.00                   | 1.00                   | -                        | -                  |
| PA-26 (CD Well Site)  |                | 0.13                   | 0.13                   | -                        | -                  |
| <b>Non-Residential Subtotal</b>                             |                | <b>81.27 50.7</b>      | <b>71.41 46.86</b>     | <b>115,000 SF</b>        | <b>-</b>           |
| Channel ROW   |                | 13.00                  | 13.00                  | -                        | -                  |
| <b>Total Project</b>  |                | <b>250.89</b>          | <b>216.20</b>          |                          | <b>1,947 2,846</b> |

NOTES:

- 1) Gross acres taken to center line of streets.
- 2) Adjusted gross acres taken to street ROW dedicated to the City
- 3) Net acres taken to street right of way
- 4) A total of 34.69 acres of master planned roadway is included in the project
- \* Density range is shown is based on net acres. The General Plan is based on adjusted gross acres
- 5) Proposed product types in each Planning Area are subject to change based on final development submittal.

LAND USE



\* Circulation pattern for local streets within Specific Plan Area to be established at Tentative Tract Map submittal.

\*\* Residential development along the frontage of Haven Avenue within Planning Areas 5A, 5C and 6A and residential development along the frontage of Ontario Ranch Road within Planning Areas 6A and 7 shall average a density of 18 to 25 dwelling units per acre to support Bus Rapid Transit (BRT) along Haven Avenue.

\*\*\* After full dedication of Master Plan sheets and neighborhood edges, residential development within Planning Areas 6A + 9A and residential development within Planning Areas 6B + 9B shall meet a minimum net density of 14 dwelling units per acre.

The minimum density in Planting Areas 6A + 9B and Planning Areas 6B + 9B can be averaged between the two areas and shall be established at Tentative Tract submittal for each Planning Area.

RICH HAVEN SPECIFIC PLAN  
LAND USE PLAN

FIGURE 3-1

| Planning Area <sup>3,4</sup>         | Land Use                    | Dwelling Units <sup>1</sup> | Acres (Gross) | Density (Gross) |
|--------------------------------------|-----------------------------|-----------------------------|---------------|-----------------|
| 1A                                   | Residential - SFD           | 58                          | 12.8          | 4.5             |
| 1B                                   | Residential - SFD           | 57                          | 12.7          | 4.5             |
| 1C                                   | Residential - SFD           | 68                          | 14.9          | 4.5             |
| 1D                                   | Residential - SFD           | 91                          | 20.5          | 4.5             |
| 1E                                   | Residential - SFD           | 109                         | 23.4          | 4.5             |
| 1F                                   | Residential - SFD           | 120                         | 26.3          | 4.5             |
| <b>Subtotal</b>                      |                             | <b>503</b>                  | <b>110.6</b>  | <b>4.5</b>      |
| 2                                    | Edison Parcel <sup>2</sup>  |                             | 20.0          |                 |
| 3                                    | Park <sup>2</sup>           |                             | 27.0          |                 |
| <b>Subtotal</b>                      |                             |                             | <b>47.0</b>   |                 |
| 4A                                   | Residential – Small Lot SFD | 154                         | 14.0          | 11.0            |
| 4B                                   | Residential – Small Lot SFD | 101                         | 9.2           | 11.0            |
| 4C                                   | Residential – Small Lot SFD | 108                         | 9.8           | 11.0            |
| <b>Subtotal</b>                      |                             | <b>363</b>                  | <b>33.1</b>   | <b>11.0</b>     |
| 5A <sup>5</sup>                      | Residential – Small Lot SFD | 109                         | 9.1           | 12.1            |
| 5B                                   | Residential – Small Lot SFD | 165                         | 14.2          | 11.7            |
| 5C <sup>5</sup>                      | Residential – Small Lot SFD | 332                         | 27.0          | 12.3            |
| 5D                                   | Residential – Small Lot SFD | 361                         | 30.3          | 11.9            |
| 5E                                   | Edison Easement             | -                           | -             | -               |
| <b>Subtotal</b>                      |                             | <b>967</b>                  | <b>80.6</b>   | <b>12.0</b>     |
| <b>Subtotal Residential District</b> |                             | <b>1,833</b>                | <b>271.3</b>  | <b>8.2</b>      |

| Mixed Use District Planning Area <sup>5,6,7,8</sup> | Land Use                 | Gross Acreage | Residential Maximum | Commercial/ Office Min (SF) | Commercial/ Office Max (SF) |
|---|--------------------------|---------------|---------------------|-----------------------------|-----------------------------|
| 6A + 9A   | Residential & Commercial | 85.6          | 2,178               | 109,335                     | 166,182                     |
| 6B + 9B   | Residential & Commercial | 65.1          | 1,406               | 36,639                      | 76,320                      |
| 7 <sup>5</sup>                                      | Residential & Commercial | 81.1          | 725                 | 100,000                     | 440,800                     |
| 8A  | Residential & Commercial | 61.4          | 852                 | 95,000                      | 325,000                     |
| 8B  | Residential & Commercial | 19.70         | 200                 | 20,000                      | 123,400                     |
| <b>Total</b>  |                          | <b>312.9</b>  | <b>5,361</b>        | <b>360,974</b>              | <b>1,131,702</b>            |

**NOTES:**

1. ALL RESIDENTIAL DWELLING UNITS SHOWN IN LAND USE SUMMARY ARE MAXIMUMS.
2. PROJECT TOTAL & SUBTOTAL RESIDENTIAL DISTRICT DENSITIES ARE CALCULATED USING RESIDENTIAL ACREAGES ONLY, THEREFORE THE ACREAGES OF PA 2 & 3 ARE NOT INCLUDED.
3. WITHIN THIS SPECIFIC PLAN DOCUMENT, REFERENCES TO PLANNING AREAS ARE ONLY 1 THROUGH 9. SUB-PLANNING AREAS SUCH AS 1A, 1B, ETC ARE DESIGNATED TO HELP ADDRESS OWNERSHIP PATTERNS AND ARE NOT INTENDED TO BE USED FOR DENSITY TRANSFER.
4. PLANNING AREAS 1A THROUGH 1F SHALL INCLUDE A MINIMUM OF 80 LOTS OF 7,200 SQ. FT. OR ABOVE.
5. RESIDENTIAL DEVELOPMENT ALONG THE FRONTAGE OF HAVEN AVENUE WITHIN PLANNING AREAS 5A, 5C, 6A AND 7 SHALL AVERAGE A DENSITY OF 18 TO 25 DWELLING UNITS PER ACRE TO SUPPORT BUS RAPID TRANSIT (BRT) ALONG HAVEN AVENUE.
6. RESIDENTIAL DEVELOPMENT WITHIN PLANNING AREAS 6A, 6B, 7, 8A, 8B, 9A AND 9B SHALL MEET A MINIMUM NET DENSITY OF 14 DWELLING UNITS PER TOP ADJUSTED GROSS ACREAGE.
7. RESIDENTIAL DEVELOPMENT WITHIN PLANNING AREAS 6A + 9A AND RESIDENTIAL DEVELOPMENT WITHIN PLANNING AREAS 6B + 9B SHALL MEET A MINIMUM NET DENSITY OF 14 DWELLING UNITS PER TOP ADJUSTED GROSS ACREAGE. THE MINIMUM DENSITY IN PLANNING AREAS 6A + 9A AND PLANNING AREAS 6B + 9B CAN BE AVERAGED BETWEEN THE TWO AREAS AND SHALL BE ESTABLISHED AT TENTATIVE TRACT SUBMITTAL FOR EACH PLANNING AREA.
8. ALTERNATE COMMERCIAL/OFFICE SQUARE FOOTAGE OR RESIDENTIAL DWELLING UNITS MAY BE PERMITTED, IF A TRIP GENERATION ANALYSIS DEEMS THAT THE PROPOSAL IS CONSISTENT WITH OR LESS THAN SIGNIFICANT WITH THE ONTARIO PLAN EIR AVERAGE DAILY TRIPS (ADT) ASSUMPTION FOR THE PLANNING AREA. THE PROPOSAL SHALL BE REVIEWED AND APPROVED BY THE PLANNING DIRECTOR OR ASSIGNEE AT SUBDIVISION ENTITLEMENT.

## RICH HAVEN SPECIFIC PLAN LAND USE SUMMARY

TABLE 3-1

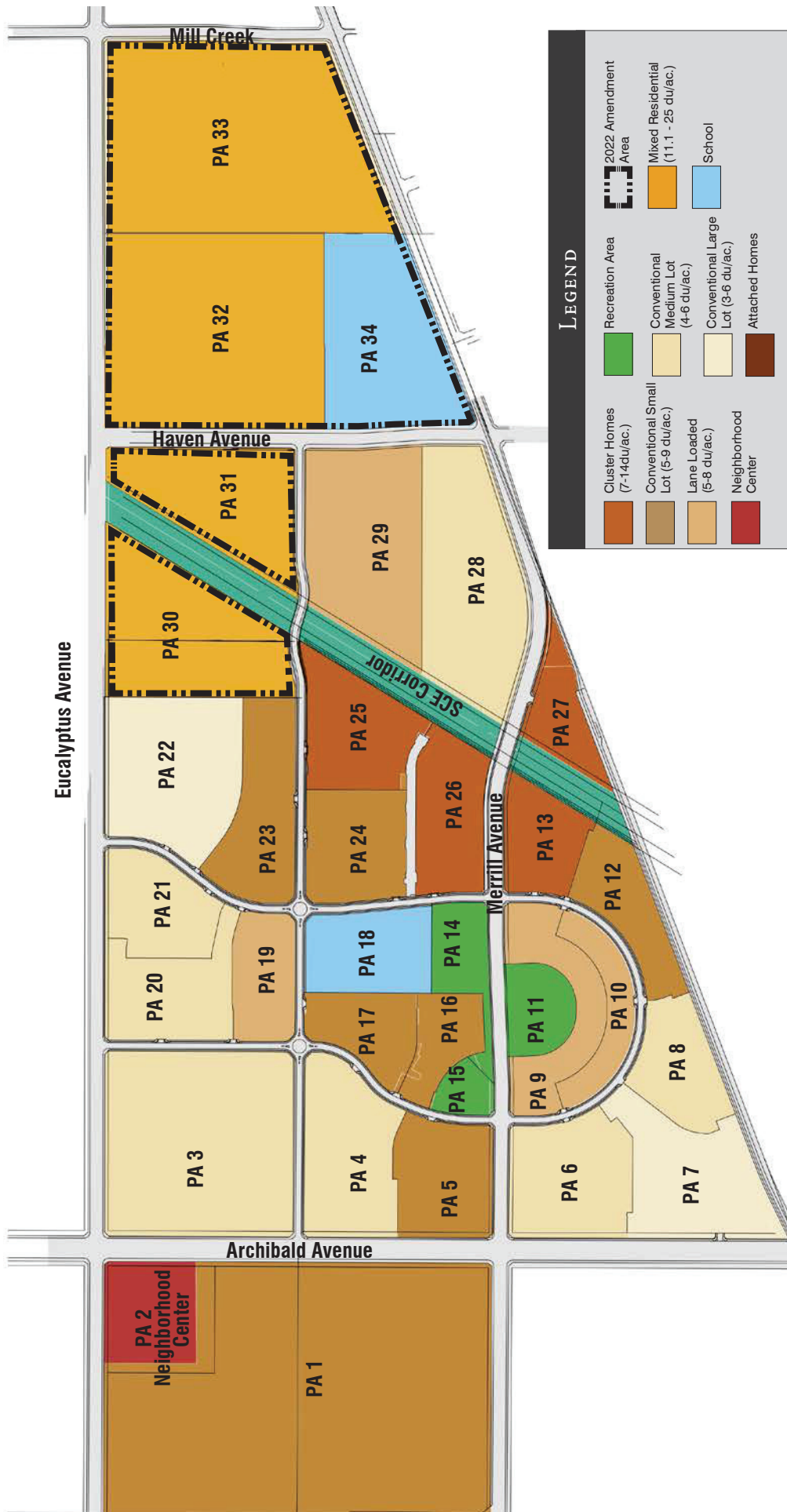


EXHIBIT 9—LAND USE PLAN





Table 1 - Subarea 29 Specific Plan Land Use Summary

| Planning Area            | Land Use                                     | Minimum Lot Size (S,F) | Planned Dwelling Units <sup>3,4,5</sup> | Net Acre <sup>1</sup>  | Planned Net Density (Du/Ac.) <sup>3,5</sup> | Gross Acres <sup>2</sup> | Planned Gross Density (Du/Ac.) <sup>3,5</sup> |
|--------------------------|--|------------------------|---|------------------------|---|--------------------------|---|
| 1*                       | Conventional Small Lot                       | 3,500                  | 432                                     | 83.1                   | 5.2   | 89.8                     | 4.8   |
| 2*                       | Commercial                                   | N / A                  | 0                                       | 12.1                   | 0.0   | 14.5                     | 0.0   |
| 3*                       | Conventional Medium Lot                      | 4,500                  | 186                                     | 34.5                   | 5.4   | 40.2                     | 4.6   |
| 4**                      | Conventional Medium Lot                      | 4,250                  | 88                                      | 10.1                   | 8.7   | 17.8                     | 4.9   |
| 5**                      | Conventional Small Lot                       | 3,825                  | 68                                      | 7.2                    | 9.4   | 13.7                     | 5.0   |
| 6**                      | Conventional Medium Lot                      | 5,000                  | 67                                      | 13.0                   | 5.2   | 17.0                     | 4.0   |
| 7**                      | Conventional Large Lot                       | 6,300                  | 65                                      | 15.3                   | 4.2   | 18.3                     | 3.6   |
| 8**                      | Conventional Medium Lot                      | 4,250                  | 46                                      | 9.1                    | 5.1   | 9.6                      | 4.8   |
| 9**                      | Lane Loaded                                  | 3,150                  | 69                                      | 9.9                    | 7.0   | 11.9                     | 5.8   |
| 10**                     | Lane Loaded                                  | 3,600                  | 57                                      | 6.6                    | 8.7   | 7.8                      | 7.3   |
| 11**                     | Neighborhood Park 2                          | N / A                  | 0                                       | 5.7                    | 0.0   | 6.2                      | 0.0   |
| 12**                     | Conventional Small Lot                       | 3,825                  | 53                                      | 9.5                    | 5.6   | 9.5                      | 5.6   |
| 13**                     | Cluster Homes                                | 2,100 <sup>A</sup>     | 75                                      | 7.8                    | 9.6   | 7.8                      | 9.6   |
| 14**                     | Neighborhood Park 1                          | N / A                  | 0                                       | 6.3                    | 0.0   | 7.7                      | 0.0   |
| 15**                     | Recreation Center                            | N / A                  | 0                                       | 2.7                    | 0.0   | 3.1                      | 0.0   |
| 16**                     | Conventional Small Lot                       | 3,015                  | 41                                      | 5.9                    | 7.0   | 6.1                      | 6.8   |
| 17**                     | Conventional Small Lot                       | 3,015                  | 56                                      | 5.3                    | 10.6  | 8.4                      | 6.7   |
| 18**                     | School                                       | N / A                  | 0                                       | 10.0                   | 0   | 11.2                     | 0   |
| 19**                     | Lane Loaded                                  | 3,150                  | 61                                      | 7.8                    | 7.9   | 9.0                      | 6.8   |
| 20**                     | Conventional Medium Lot                      | 4,250                  | 67                                      | 11.8                   | 5.7   | 13.3                     | 5.0   |
| 21**                     | Conventional Medium Lot                      | 5,000                  | 48                                      | 10.1                   | 4.8   | 11.5                     | 4.2   |
| 22**                     | Conventional Large Lot                       | 6,300                  | 79                                      | 19.7                   | 4.0   | 21.3                     | 3.7   |
| 23**                     | Conventional Small Lot                       | 3,825                  | 82                                      | 12.9                   | 6.3   | 14.4                     | 5.7   |
| 24**                     | Conventional Small Lot                       | 3,400                  | 75                                      | 8.1                    | 9.3   | 12.8                     | 5.8   |
| 25**                     | Cluster Homes                                | 2,100 <sup>A</sup>     | 102                                     | 8.6                    | 11.8  | 12.9                     | 7.9   |
| 26**                     | Cluster Homes                                | 2,100 <sup>A</sup>     | 102                                     | 8.7                    | 11.7  | 13.2                     | 7.7   |
| 27**                     | Cluster Homes                                | 1,750 <sup>A</sup>     | 73                                      | 7.6                    | 9.7   | 7.6                      | 9.6   |
| 28*                      | Conventional Medium Lot                      | 4,050                  | 121                                     | 23.0                   | 5.3   | 25.8                     | 4.7   |
| 29***                    | Lane Loaded or Conventional Medium Lot       | 3,150 or 4,000         | 108                                     | 21.4                   | 5.0   | 27.2                     | 4.0   |
| 30*                      | Conventional Large Lot<br>Mixed Residential  | 5,040<br>1,750         | 110<br>180                              | 21.2<br>21.1           | 5.0<br>8.5                                  | 28.3<br>21.8             | 3.9<br>8.3                                    |
| 31*                      | Conventional Medium Lot<br>Mixed Residential | 4,050<br>1,750         | 87<br>172                               | 16.0<br>15.5           | 5.4<br>11.1                                 | 23.1<br>16.1             | 3.8<br>10.7                                   |
| 32**                     | Mixed Residential                            | 1,750                  | 671                                     | 42.5                   | 15.8  | 43.6                     | 15.4  |
| 33*                      | Mixed Residential                            | 1,750                  | 644                                     | 47.6                   | 13.5  | 49.6                     | 13.0  |
| 34**                     | School                                       | N/A                    | 0                                       | 19.0                   | 0.0   | 20.0                     | 0.0   |
| Flood Control Channel    | Flood Control Channel                        | N / A                  | 0                                       | 7.2                    | 0.0   | 7.2                      | 0.0   |
| Pump Station             | Pump Station                                 | N / A                  | 0                                       | 0.2                    | 0.0   | 0.4                      | 0.0   |
| SCE Corridor             | Park Place SCE Easement                      | N / A                  | 0                                       | 11.2                   | 0.0   | 11.2                     | 0.0   |
| Amendment ROW            | City   | N / A                  | 0                                       | 11.7                   | 0.0   | 11.7                     | 0.0   |
| <b>Sub Area 29 Total</b> |  |                        | <b>2418<br/>3,888</b>                   | <b>449.9<br/>570.8</b> | <b>5.3<br/>6.8</b>                          | <b>539.7<br/>651.2</b>   | <b>4.4<br/>6.0</b>                            |

A) Minimum square footage identified is for exclusive use area on a per home basis, recorded lot size may differ.

1) Net Acres noted for Planning Areas 1 through 31 exclude street rights-of-way and SCE easements.

2) Gross Acres noted for Planning Areas 1 through 31 are calculated to centerline of Master Planned streets and SCE easements.

3) Actual total units and gross/net density and acreage will be dependent on final lotting.

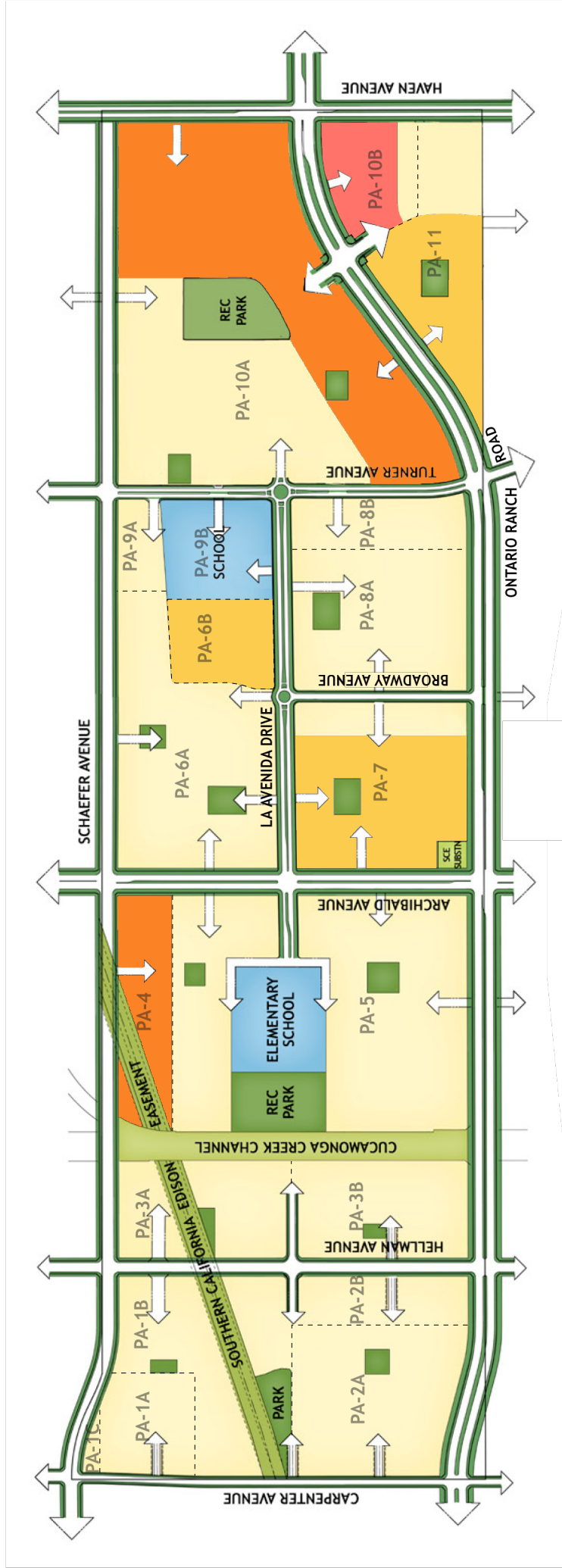
4) Planned unit count based on submitted Tentative "B" Maps

5) A density transfer of 15.0% may occur between Planning Areas.

\*) Indicates Planning Areas as controlled/owned by Richland Communities, Inc.

\*\*\*) Indicates "Park Place" Planning Areas as controlled/owned by SLOntario Development Company

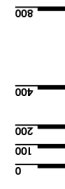
\*\*\*\*) Indicates Planning Areas as controlled/owned by BrookfieldHomes



**LEGEND**

- LOW DENSITY RESIDENTIAL
- LOW MEDIUM DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- RETAIL/COMMERCIAL
- SCHOOL
- PARK
- SCE EASEMENT
- STORM DRAIN EASEMENT

NOTE: The locations of the parks are conceptual and will be determined as part of the tract map approval process.



# The Avenue

SPECIFIC PLAN

## Land Use Plan

Table 2 - Statistical Analysis

| Former Subarea  | Planning Area | Gross Acres         | Excluded from Gross | Net Res. Acres | Homes        | Density <sup>(4)</sup> | Comm. SF       | Use                       |
|-----------------|---------------|---------------------|---------------------|----------------|--------------|------------------------|----------------|---------------------------|
| 17              | 1A            | 11.1                | -                   | 11.1           | 51           | 4.6                    |                | LDR                       |
| 17              | 1B            | 33.5                | 5.4 <sup>(1)</sup>  | 28.1           | 127          | 4.5                    |                | LDR                       |
| 17              | 1C            | 2.2                 | -                   | 2.2            | 5            | 2.3                    |                | LDR                       |
| 17              | 2A            | 32.0                | -                   | 32.0           | 147          | 4.6                    |                | LDR                       |
| 17              | 2B            | 12.5                | -                   | 12.5           | 58           | 4.6                    |                | LDR                       |
| 17              | 3A            | 21.7                | 2.6 <sup>(1)</sup>  | 19.1           | 86           | 4.5                    |                | LDR                       |
| 17              | 3B            | 21.5                | -                   | 21.5           | 97           | 4.5                    |                | LDR                       |
| 18              | 4             | 19.9                | -                   | 19.9           | 218          | 11                     |                | MDR                       |
| 18              | 5             | 82.6                | 10.0 <sup>(3)</sup> | 72.6           | 334          | 4.6                    |                | LDR/O.S./<br>Elem. School |
| 18              | 6A            | 49.9                | -                   | 49.9           | 230          | 4.6                    |                | LDR                       |
| 18              | 6B            | 10.0                | -                   | 10.0           | 106          | 10.6                   |                | LMDR                      |
| 18              | 7             | 28.9                | -                   | 28.9           | 287          | 9.5                    |                | LMDR                      |
| 18              | 8A            | 39.9                | -                   | 39.9           | 180          | 4.5                    |                | LDR                       |
| 18              | 8B            | 9.7                 | -                   | 9.7            | 44           | 4.5                    |                | LDR                       |
| 18              | 9A            | 10.6                | -                   | 10.6           | 20           | 2.0                    |                | LDR                       |
| 18              | 9B            | 10.0                | 10.0                | n/a            |              |                        |                | School                    |
| 12              | 10A           | 114.7               | -                   | 114.7          | 766          | 6.7                    |                | LDR/MDR                   |
|                 | 10B           | 10.0 <sup>(2)</sup> | 10.0 <sup>(2)</sup> | n/a            |              |                        | 130,680        | Retail                    |
| 24              | 11            | 33.4                | -                   | 33.4           | 225          | 6.7                    |                | LDR/LMDR                  |
| Cucamonga Creek |               | 12.8                | 12.8                | n/a            |              |                        |                |                           |
| SCE             | 7             | 1.2                 | 1.2                 | n/a            |              |                        |                |                           |
| <b>Total</b>    |               | <b>568.1</b>        | <b>52.0</b>         | <b>516.1</b>   | <b>2,981</b> |                        | <b>130,680</b> |                           |

<sup>(1)</sup> SCE Easement

<sup>(2)</sup> Retail Site

<sup>(3)</sup> Elementary School

<sup>(4)</sup> Density is measured to C/L of arterial streets per City standard for NMC entitlements

Notes:

All acreages approximate - exact acreages will be defined through tract map surveys. Additional studies may be required to transfer these units. See Section 3.1.1 for additional information.

# SECTION 3 • Land Use Plan



EXHIBIT 3-1: WEST HAVEN LAND USE PLAN

## SECTION 3 • Land Use Plan

| Land Use  | Dwelling<br>Units     | Gross Acres<br>(1)                  | Dwelling Units<br>/ Gross Acres  | Net Acres (2)                       |
|---|-----------------------|-------------------------------------|----------------------------------|-------------------------------------|
| <i>Residential Uses</i>   |                       |                                     |                                  |                                     |
| PA 1 (Detached Courtyard and Attached Homes) <del>&amp; 4,000 SF Lots</del> | 173 451 DU            | 28.52 AC                            | <del>6.07</del> 15.81 DU/<br>AC  |                                     |
| PA 3 <del>(4,950 SF Lots Detached and Attached Homes)</del>                 | 92 203 DU             | <del>20.12</del> 19.17 AC           | 4.57 10.01 DU/<br>AC             |                                     |
| PA 4 (3,825 SF Lots)  | <del>106</del> 102 DU | <del>20.11</del> 19.73 AC           | <del>5.27</del> 5.16 DU/<br>AC   |                                     |
| PA 5 (2,800 SF “Lane Loaded” & 5,100 SF Lots)                               | 149 DU                | <del>38.21</del> 30.56 AC           | 3.90 4.88 DU/<br>AC              |                                     |
| PA <del>8</del> 7 (4,250 SF Lots)   | <del>90</del> 94 DU   | <del>25.39</del> 29.00 AC           | <del>3.54</del> 3.24 DU/<br>AC   |                                     |
| PA <del>9</del> 8 (5,250 SF & 6,300 SF Lots)                                | 143 DU                | <del>37.77</del> 30.74 AC           | 3.79 4.65 DU/<br>AC              |                                     |
| <b>Residential Uses Total</b>   | <b>753</b> 1,142 DU   | <b>170.12</b> 157.72 AC             | <b>4.43</b> 7.52 DU/<br>AC       |                                     |
| <i>Community Facility Uses</i>  |                       |                                     |                                  |                                     |
| PA 2 (Neighborhood Center Commercial)                                       |                       | 11.74 AC                            |                                  | 9.25 AC                             |
| <del>PA 6 (Neighborhood Park)</del>   |                       | <del>5.00 AC</del>                  |                                  | <del>5.00 AC</del>                  |
| PA <del>7</del> 6 (School)  |                       | 12.45 AC                            |                                  | 9.80 AC                             |
| <b>Community Facility Uses Total</b>  |                       | <b>29.19 AC</b> <del>24.19 AC</del> |                                  | <b>24.05 AC</b> <del>19.05 AC</del> |
| <i>Other Uses</i>   |                       |                                     |                                  |                                     |
| Master Planned Roadways   |                       |                                     |                                  | 13.00 AC                            |
| Neighborhood Edge Buffers   |                       |                                     |                                  | 3.90 AC                             |
| SCE & SCG Easements   |                       |                                     |                                  | 25.10 AC                            |
| SCE Fee Owned Parcel  |                       | 2.69 AC                             |                                  | 2.04 AC                             |
| Old Schaefer R/W (To Be Abandoned)  |                       |                                     |                                  | 1.30 AC                             |
| <b>Other Uses Total</b>   |                       | <b>2.69 AC</b>                      |                                  | <b>45.34 AC</b>                     |
| <b>Project Total</b>  | <b>753</b> 1,142 DU   | <b>202.00</b> 184.6 Gross AC        | <b>3.73</b> 7.52 DU/<br>Gross AC |                                     |

(1) Gross Acres as calculated to street centerlines, including all easements.

(2) Net Acres for Planning Areas exclude all applicable items as listed under the Other Uses category.

Note: Refer to Table I-1, “Residential Density,” for City defined Residential Gross Density.

**TABLE 3-1: LAND USE SUMMARY (AS AMENDED 2022)**

**Table 3-2  
Sewer Unit Flow Factors**

| Landuse                              |        | Sewer Unit Flow Factors          |                                  |      |     |             |        |         |        |
|--------------------------------------|--------|----------------------------------|----------------------------------|------|-----|-------------|--------|---------|--------|
|                                      |        | Max Density (du/ac) <sup>1</sup> | Density (people/du) <sup>2</sup> | FAR  | gpd | unit        | gpd/ac | gpd/tsf | gpd/du |
| <b>Residential</b>                   |        |                                  |                                  |      |     |             |        |         |        |
| Rural Residential (OMC)              | RR     | 2                                | 3.997                            | -    | 52  | gpd/person  | 420    | -       | 208    |
| Low Density Residential (OMC)        | LDR    | 4                                | 3.997                            | -    | 52  | gpd/person  | 840    | -       | 208    |
| Low Density Residential (OR)         | LDR    | 5                                | 3.997                            | -    | 52  | gpd/person  | 1,040  | -       | 208    |
| Low Medium Density Residential (OMC) | LMDR   | 8.5                              | 3.997                            | -    | 52  | gpd/person  | 1,785  | -       | 208    |
| Low Medium Density Residential (OR)  | LMDR   | 11                               | 3.997                            | -    | 52  | gpd/person  | 2,300  | -       | 208    |
| Medium Density Residential (OMC)     | MDR    | 18                               | 3.347                            | -    | 52  | gpd/person  | 3,150  | -       | 174    |
| Medium Density Residential (OR)      | MDR    | 25                               | 3.347                            | -    | 52  | gpd/person  | 4,350  | -       | 174    |
| High Density Residential (OMC)       | HDR    | 35                               | 3.347                            | -    | 52  | gpd/person  | 6,125  | -       | 174    |
| High Density Residential (OR)        | HDR    | 40                               | 3.347                            | -    | 52  | gpd/person  | 6,960  | -       | 174    |
| <b>Commercial</b>                    |        |                                  |                                  |      |     |             |        |         |        |
| Business Park                        | BP     | -                                | -                                | 0.40 | 53  | gpd/job     | 1,610  | 90      | -      |
| General Commercial                   | GC     | -                                | -                                | 0.30 | 132 | gpd/job     | 1,610  | 120     | -      |
| Hospitality <sup>3</sup>             | HOS    | -                                | -                                | 1.00 | 116 | gpd/room    | -      | 100     | -      |
| Neighborhood Commercial              | NC     | -                                | -                                | 0.30 | 51  | gpd/job     | 1,610  | 120     | -      |
| Office Commercial                    | OC     | -                                | -                                | 0.75 | 31  | gpd/job     | 2,250  | 70      | -      |
| <b>Industrial</b>                    |        |                                  |                                  |      |     |             |        |         |        |
| Industrial                           | IND    | -                                | -                                | 0.55 | 51  | gpd/job     | 1,060  | 45      | -      |
| <b>Mixed Use<sup>4</sup></b>         |        |                                  |                                  |      |     |             |        |         |        |
| High Density Residential             | MU-HDR | 35                               | 2.000                            | -    | 52  | gpd/person  | 4,200  | -       | 104    |
| Office                               | MU-O   | -                                | -                                | -    | 31  | gpd/job     | 2,250  | 70      | -      |
| Non-Office                           | MU-NO  | -                                | -                                | -    | 91  | gpd/job     | 1,610  | 120     | -      |
| <b>Open Space</b>                    |        |                                  |                                  |      |     |             |        |         |        |
| Open Space Non-Recreational          | OS-NR  | -                                | -                                | -    | -   | -           | -      | -       | -      |
| Open Space Recreational              | OS-R   | -                                | -                                | -    | -   | -           | 200    | -       | -      |
| <b>Public</b>                        |        |                                  |                                  |      |     |             |        |         |        |
| Public Facility                      | PF     | -                                | -                                | -    | -   | -           | 1,450  | -       | -      |
| Public Middle or High School         | PS     | -                                | -                                | -    | 8   | gpd/student | -      | -       | -      |
| Public Elementary School             | PS     | -                                | -                                | -    | 8   | gpd/student | -      | -       | -      |

<sup>1</sup> Max Density per the City's Buildout Table (April 2015) for Original Model Colony. Density for LDR, LMDR, MDR, and HDR in Ontario Ranch were increased per the City Planning Department recommendation (March 2016).

<sup>2</sup> Density per the City's Buildout Table (April 2015)

<sup>3</sup> The sewage generation for a hotel is best estimated by the number of rooms.

<sup>4</sup> Mixed Use demands should be based on the types of landuse that make up the specific area and the unit demand factors provided above. The City's Buildout Table (April 2015) provides detailed information on the landuses that make up each mixed use area.

Definitions: ac = acre

du = dwelling unit

gpd = gallons per day

OMC = Original Model Colony

OR = Ontario Ranch

tsf = thousand square feet

