

TECHNICAL MEMORANDUM

Date: September 7, 2021

To: Jack Varozza, PE – City of Roseville

From: John Gard, PE – Fehr & Peers

Subject: *Transportation Impact Study for Sierra View Residential Project*

RS21-4081

This memorandum analyzes the transportation impacts associated with construction of the Sierra View Residential Project, which would be situated west of Shasta Street and south of Diamond Oaks Road in Roseville, CA. Refer to **Figure 1** for project location and **Figure 2** for project site plan. This memorandum consists of the following sections:

- Existing Conditions
- Existing Plus Project Conditions
- Cumulative Conditions
- Vehicle Miles Traveled
- Review of Project Access

Existing Conditions

The project site would be served by the following roadways:

- Diamond Oaks Road – is an east-west, two-lane residential street with a posted speed limit of 25 miles per hour (mph) that extends 1.8 miles from Washington Boulevard to Reserve Drive. Single-family residences front the vast majority of this street. It is used to access local residences, the Diamond Oaks Golf Course, and is also used by some motorists as a cut-through route to access various destinations including Roseville High School. A motorist traveling the entirety of this roadway would encounter three all-way stop-controlled intersections, including at Diamond Oaks Road/Shasta Street.
- Shasta Street – is a north-south two-lane residential street with a posted speed limit of 25 mph that extends 1.0 miles from Diamond Oaks Road to Sierra Drive, which provides access to the “crooked bridge” connecting to Old Town Roseville. It also connects to Yosemite Avenue, which provides access to Atlantic Street and downtown Roseville and Interstate 80. Land uses along this segment include single-family (front-on) dwelling units, multi-family units, Ferris Spanger Elementary School, and Diamond Oaks Park. Similar to Diamond Oaks Road, Shasta Street is used for a variety of trip purposes.

Tech Memo: Transportation Impact Study for Sierra View Residential Project

Due to the COVID-19 pandemic and the resulting changes to travel patterns due to the statewide stay-at-home directive implemented in March 2020, existing traffic counts were not collected. Instead, traffic count data was obtained from a “Big Data” vendor, StreetLight Data, Inc. StreetLight Data captures anonymized location records from smart phones and navigation devices in connected cars and trucks. Because StreetLight Data collects location records at all times of the day and year, providing for a much larger data set when compared to a traditional data collection effort on a single day.

Table 1 displays the resulting Average Daily Traffic (ADT) on the study roadways. This data is also shown geographically on **Figure 3**. Mid-week (Tuesday through Thursday) traffic data was obtained from September and October 2019 to establish existing conditions. Data was collected for all movements at the Diamond Oaks Road/Shasta Street intersection for a typical 24-hour mid-week period. From this data, it was possible to identify both the amount of daily traffic on each roadway segment and the amount of AM and PM peak hour traffic at the intersection by turning movement. For quality control purposes, pre-COVID traffic data was obtained at the Diamond Oaks Road/Washington Boulevard signalized intersection using the City’s Intelligent Transportation System (ITS) count database to confirm that the volume of traffic on Diamond Oaks Road between Washington Boulevard and Shasta Street was similar for each source. This was found to be the case.

Table 1: Average Daily Traffic (ADT) on Study Roadways – Existing Conditions

Segment	ADT ¹
Diamond Oaks Road west of Shasta Street	5,200
Diamond Oaks Road east of Shasta Street	4,300
Shasta Street south of Diamond Oaks Road	4,200
Shasta Street south of Ferris Spanger Elementary School ²	4,500

Notes:

1. Data represents pre-COVID conditions (i.e., September/October 2019).
2. Estimated based on directionality of trips in/out of Ferris Spanger Elementary School and known usage of the Diamond Bar Lane-Manzanita Avenue route by Roseville High School students.

Values rounded to the nearest one hundred.

Source: Fehr & Peers, 2021.

Existing Plus Project Conditions

Project Description

According to the project site plan (*Sierra View Tentative Subdivision Map*, MacKay & Somps, April 2021), the project would consist of 75 single-family dwelling units in a gated community. All streets within the community would be private.

Vehicular access would be provided by a private street (shown as Whistling Straits Drive on the site plan) situated on the south side of Diamond Oaks Road about 550 feet west of Shasta Street. This access would have a turn-around area for vehicles that are turned away at the gate. An emergency vehicle access (EVA) would be provided on Shasta Street opposite Ferris Spanger Elementary School. Sidewalks would be provided on one side of each access street to connect the neighborhood to the adjacent public street.

Preliminary analyses of the project focused on the benefits and drawbacks of four distinct scenarios consisting of full, partial, and no vehicular access from the Diamond Oaks Road and Shasta Street access points. Below is a summary of how these options were evaluated (Appendix A provides additional details regarding site constraints and evaluation of the options):

- Two of the four options consisted of full access onto Shasta Street with varying levels of access on Diamond Oaks Road. These two options were removed from further consideration because they would have substantially increased vehicular conflicts with Ferris Spanger Elementary School and would have introduced a sight distance constraint (i.e., horizontal curvature of Shasta Street) that may have proven difficult to solve.
- A third option consisting of full access on Diamond Oaks Road and partial access on Shasta Street, allowing for exiting movements only (along with an EVA) was also considered. This was also rejected because of the potential for wrong-way travel as well as continued conflicts with school traffic.
- The fourth option is the proposed project.

Trip Generation

The project's trip generation was calculated based on trip rates and methodologies published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* (2017). Because the project consists of single-family detached units, the "Single-Family Detached Housing" land use category was used to estimate daily and peak hour trips generated by the project.

Table 2 shows the project’s trip generation on a daily basis and during the AM and PM peak hours. As shown, the project would generate approximately 710 daily trips, with 56 occurring during the AM peak hour and 75 occurring during the PM peak hour.

Table 2: Project Trip Generation

Land Use ²	Quantity	Units ¹	Daily Total	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Single-Family Detached Housing (Code 210)	75	du	708	14	42	56	47	28	75

Notes:

1. "du" represents dwelling units
2. Based on trip rates from *Trip Generation Manual, 10th Edition* (Institute of Transportation Engineers, 2017).

Source: Fehr & Peers, 2021.

Trip Distribution and Trip Assignment

Streetlight Data, Inc. offers another innovative data product consisting of quantification of the spatial distribution of trips generated by a given neighborhood. This data was obtained for this study, focusing on the neighborhood immediately north of the northerly terminus of Shasta Street (i.e., Nicklaus Circle).

Because the project would be situated in close proximity to this neighborhood, it would presumably have similar trip distribution characteristics. **Figure 4** displays the expected daily distribution of project trips based on the characteristics of these neighborhoods. This figure shows that the majority of trips (75 percent) are expected to be distributed to/from the east or west on Diamond Oaks Road. This makes sense because these routes provide access to a variety of retail destinations and employment centers.

Project trips were added to existing volumes to yield the Existing Plus Project roadway segment daily volumes shown on **Figure 5**. Key findings from this figure are:

1. The largest increase in project trips would occur on the segment of Diamond Oaks Road between Shasta Street and the project access. The volume on this segment would increase from 5,200 to 5,670 vehicles, a nine percent increase.¹ During the PM peak hour, the volume on this segment would increase by about 50 vehicles, or one additional vehicle per minute.

¹ To put this increase in perspective, it is typical to see fluctuations of five to ten percent in traffic from one weekday to the next.

2. The daily traffic volume on Diamond Oaks Road east of Shasta Street would increase from 4,300 to 4,590 vehicles, a seven percent increase.
3. Project-related traffic volumes on Shasta Street south of Diamond Oaks Road would be modest at about 200 vehicles per day.

The City of Roseville does not use roadway ADT values to analyze project impacts. This information has been prepared for informational purposes so that reviewers of the project understand how traffic volumes on surrounding roadways would change if the project was constructed.

Given the project's size and expected travel characteristics, it was deemed unnecessary to study any nearby intersections. During the PM peak hour, the project would add 26 trips to the Washington Boulevard/Diamond Oaks Road intersection, which is a small percentage of the current volume at the intersection. The intersection is in the midst of being widened to provide more capacity along Washington Boulevard. Analysis of that intersection would not have yielded the need for any additional improvements. The project would add 30 PM peak hour trips to Reserve Drive, which would be distributed either to the north toward Roseville Parkway or the south toward Berry Street. Again, this modest level of traffic increase would not materially affect operations at those locations.

Instruction at Ferris Spanger Elementary School begins at 8:15 AM and ends at 2:35 PM. During the schools' two peak hours (i.e., 8-9 AM and 2-3 PM), the project would add 11 and 12 trips, respectively, along the school frontage. This would represent about a three percent increase over the existing volumes during each school peak hour. This level of increase is less than the daily fluctuation in traffic on streets such as this, and thus would not be noticeable to most drivers.

Cumulative Conditions

Traffic forecasts were developed for cumulative conditions using the City of Roseville 2035 travel demand model. This model considers reasonably foreseeable land uses and roadway network improvements throughout the City as well as adjacent cities. Noteworthy improvements include the widening of Washington Boulevard from two to four lanes from south of Pleasant Grove Boulevard to Sawtell Road. This is an important alternate route to Shasta Street and Diamond Oaks Road.

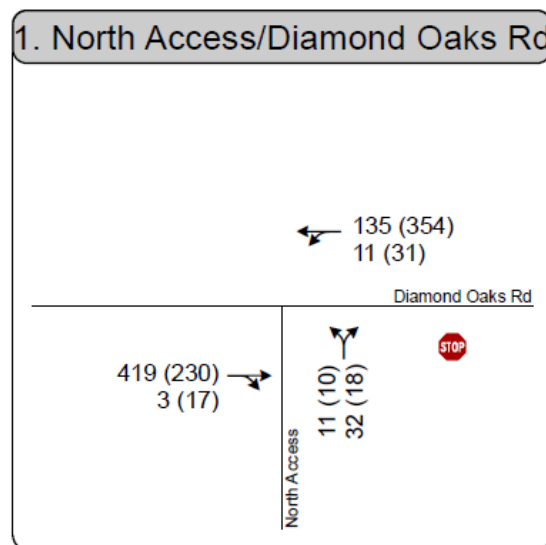
Figure 6 shows the Cumulative No Project ADT volumes on the study roadways. A comparison of these volumes to existing conditions shows the greatest growth in background traffic (about 800 ADT) would occur on Diamond Oaks Road west of Shasta Street.

Project trips were added to those volumes to yield the Cumulative Plus Project daily volumes also shown on that figure. Consistent with the earlier findings, project trips would be distributed in a fairly even manner on all three routes, with the most project trips (470 ADT) added to the short segment of Diamond Oaks Road between the project access and Shasta Street.

Evaluation of Project Access

Vehicular Access on Diamond Oaks Road

Shown below is the weekday AM (without parentheses) and PM (with parentheses) peak hour traffic volumes at the Diamond Oaks/Project Access intersection under Existing Plus Project conditions.



The following is recommended based on the traffic volumes shown above:

- Operate the Diamond Oaks/Project Access intersection with side-street stop-control.

A review of sight distance was conducted for motorists desiring to turn left from westbound Diamond Oaks Road into the project site. To the west of the access, Diamond Oaks Road features a gradual horizontal curve. Field observations indicate that motorists operating their vehicles at normal operating speeds would be visible for in excess of 7.5-seconds before passing the project access. This sight value, often referred to as the 7.5-second rule, is associated with adequate sight distance. Adequate sight distance would also be provided for motorists exiting the project site (provided that no shrubs or monuments or placed within the intersection sight triangle).

It is also noted that the project access intersection has been positioned such that the beam of a vehicle's headlights exiting the project would not be directed towards residents' windows on the north side of the street.

Emergency Vehicle Access on Shasta Street

A gate would be constructed at this access to prohibit travel by all motorists except emergency vehicles. Pedestrians and bicyclists would be able to access the project through a gated walkway. The project site plan shows the placement of landscaping and a detention basin along the project frontage of Shasta Street. This would effectively preclude the undesired current practice whereby parents park on the west side of the street and walk across Shasta Street to pick-up or drop-off their student. The following is recommended:

- Post "No Stopping" signs within the short EVA driveway apron.

Vehicle Miles Traveled (VMT)

Page 4.3-29 of the *City of Roseville General Plan Update Final EIR (2020)* contains the following statements regarding VMT analysis:

"Quantitative analysis would not be required if it can be demonstrated that a project is consistent with the General Plan and would generate VMT which is equivalent to or less than what was assumed in this General Plan EIR."

Page TI 16-22 of the *January 2021 Amendments to the City of Roseville Design and Construction Standards* contains the following statements regarding VMT analysis:

"A project may be screened from additional VMT analysis if it meets one or more of the following criteria. These criteria are based on the Governor's Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018)."

1. *Within Scope of Prior CEQA Analysis* – *The VMT generated by the project is within the scope of a prior CEQA analysis, and is therefore covered by a prior analysis, Prior analysis includes analysis performed for the General Plan.*

The project site would be situated within infill zone 100, which has an R3 zoning and Medium Density Residential land use designation. According to data from the City, there are 170 remaining units among the 223 units (i.e., 32.98 acres at 6.8 units per acre) that were allocated. Since the proposed project, which would include a rezone from Medium to Low Density Residential, proposes only 75

units, it would generate less VMT than what was assumed in the General Plan. Accordingly, VMT impacts would be less than significant.

We hope this information is helpful. Please with any questions or comments.

Appendix A – Vehicular Access Options for Sierra View Residential Project

Part 1 – Summary of Issues at Shasta Street Access

Proximity of the Ferris Spanger Elementary School

This school is situated directly across Shasta Street from the project site. Field observations during school hours revealed the following:

- Moderate queuing and congestion were observed along Shasta Street.
- Some parents/guardians were observed to park on the opposite side of Shasta Street from the school to pick-up students. This resulted in moderate numbers of pedestrian crossings.

The photos below illustrate existing conditions.



Image 1: Photo of pedestrians crossing Shasta Street during student pick-up.



Image 2: Photo of queued vehicles on northbound Shasta Street during student pick-up.

Horizontal Curvature of Shasta Street

The project's southerly access point would be directly south of a portion of Shasta Street that features a horizontal curve. Additionally, shrubs and tree branches and fencing also limit the line of sight. Refer to photo below for current line of sight.



Image 3: View of southbound Shasta Street from approximate location of southerly project access.

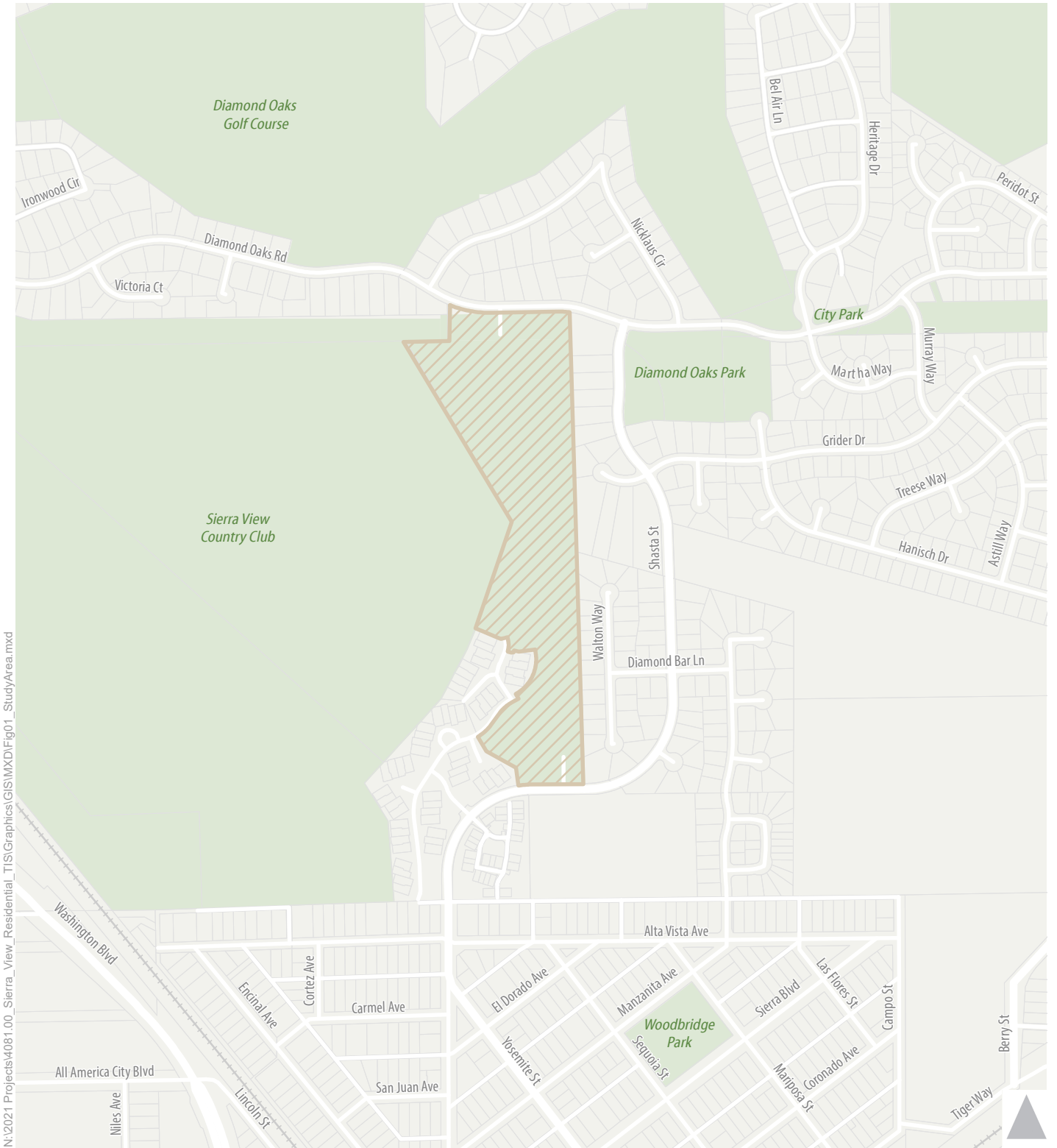
Part 2 – Evaluation of Four Access Scenarios

Table: Study Recommendations

Scenario	Recommendation
<u>Scenario 1</u> : Full Access on Diamond Oaks Road and Shasta Street	Remove from further consideration because it would introduce substantially increased vehicular conflicts with Ferris Spanger Elementary School.
<u>Scenario 2</u> : Full access on Shasta Street and emergency vehicle access (EVA) on Diamond Oaks Road	Remove from further consideration because it would introduce substantially increased conflicts with access to Ferris Spanger Elementary School and cause unnecessary traffic volume increases on Shasta Street
<u>Scenario 3</u> : Full access on Diamond Oaks Road and partial access on Shasta Street, allowing for exiting movements only	Less desirable than Scenario 4 because the two issues raised in Part 1 would be difficult to address ¹ .
<u>Scenario 4</u> : Full access on Diamond Oaks Road and emergency vehicle access (EVA) on Shasta Street	. Proposed Project

Note:

¹ Allowing outbound (exiting) movements would have less interference with school-related trips (versus full access). However, conflicts would nevertheless increase due to the frequency of activity along the street (turning vehicles, queued vehicles, parked vehicles, pedestrian crossings, etc.) in the immediate driveway vicinity.



N:\2021\Projects\4081.00_Sierra_View_Residential_TIS\Graphics\GIS\MXD\Fig01_StudyArea.mxd

-  Project Site
-  Park/Open Space



Figure 1
Study Area

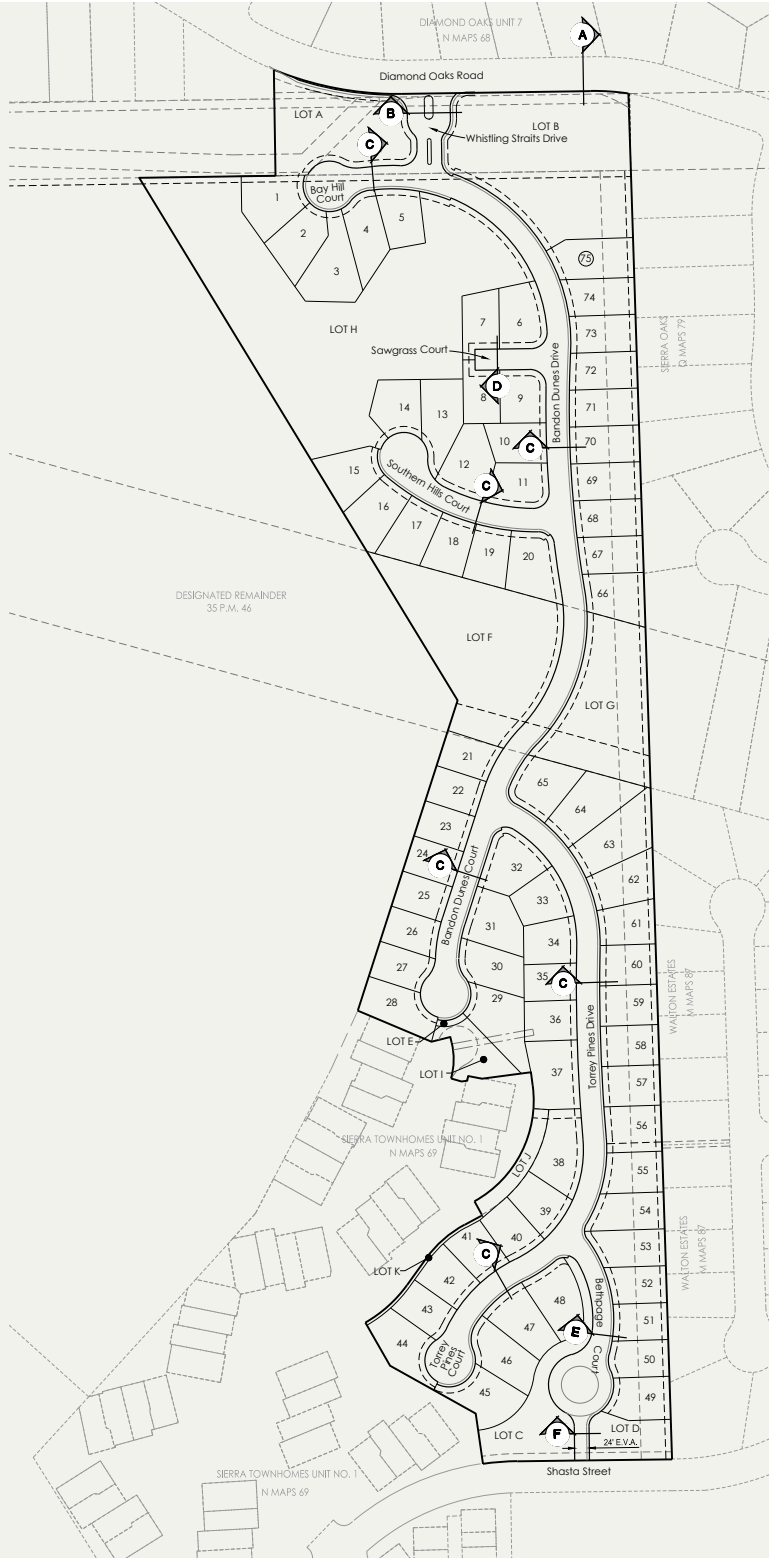
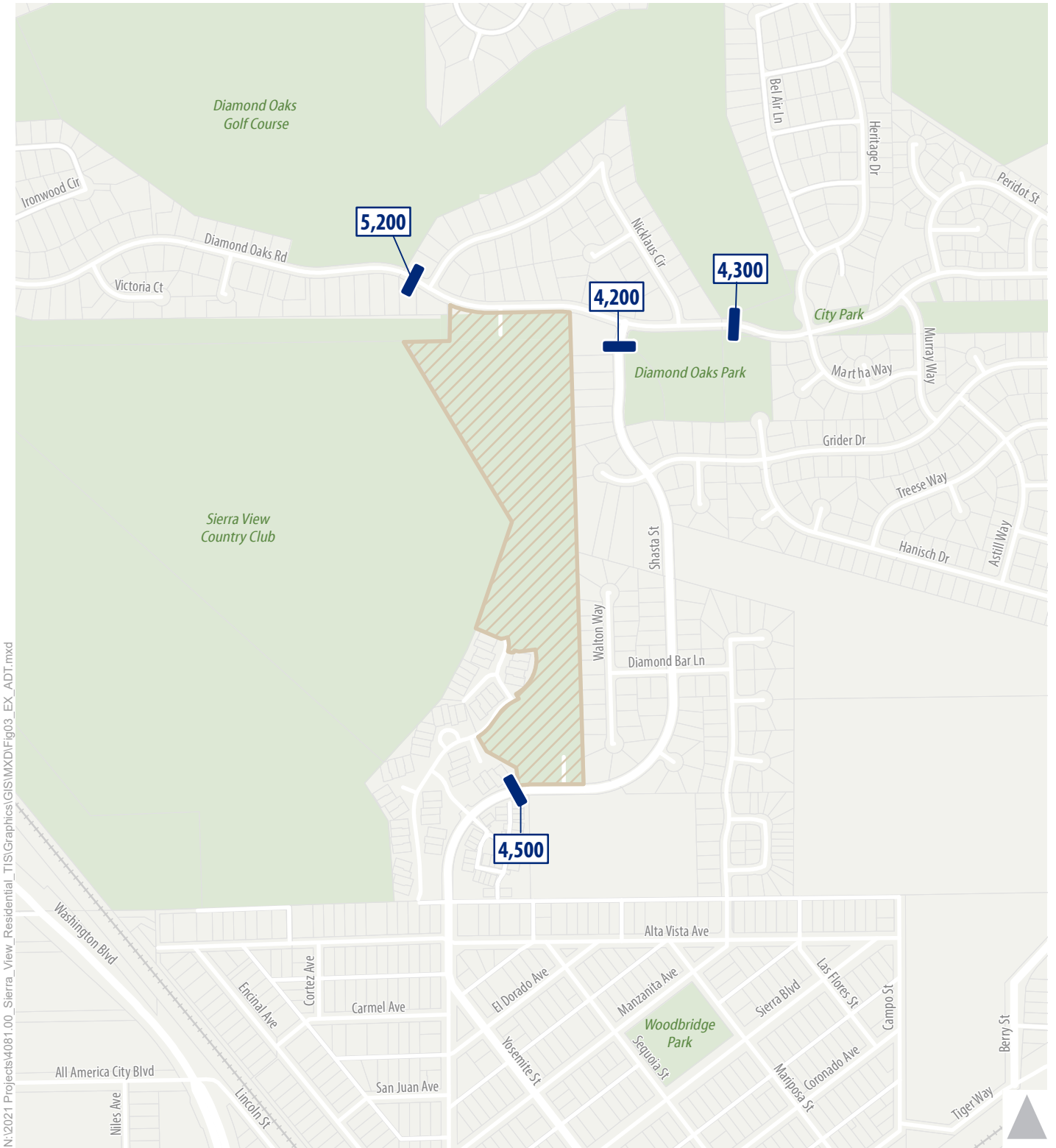


Figure 2
Project Site Plan



N:\2021\Projects\4081.00 Sierra_View_Residential_TIS\Graphics\GIS\MXD\Fig03_EX_ADT.mxd




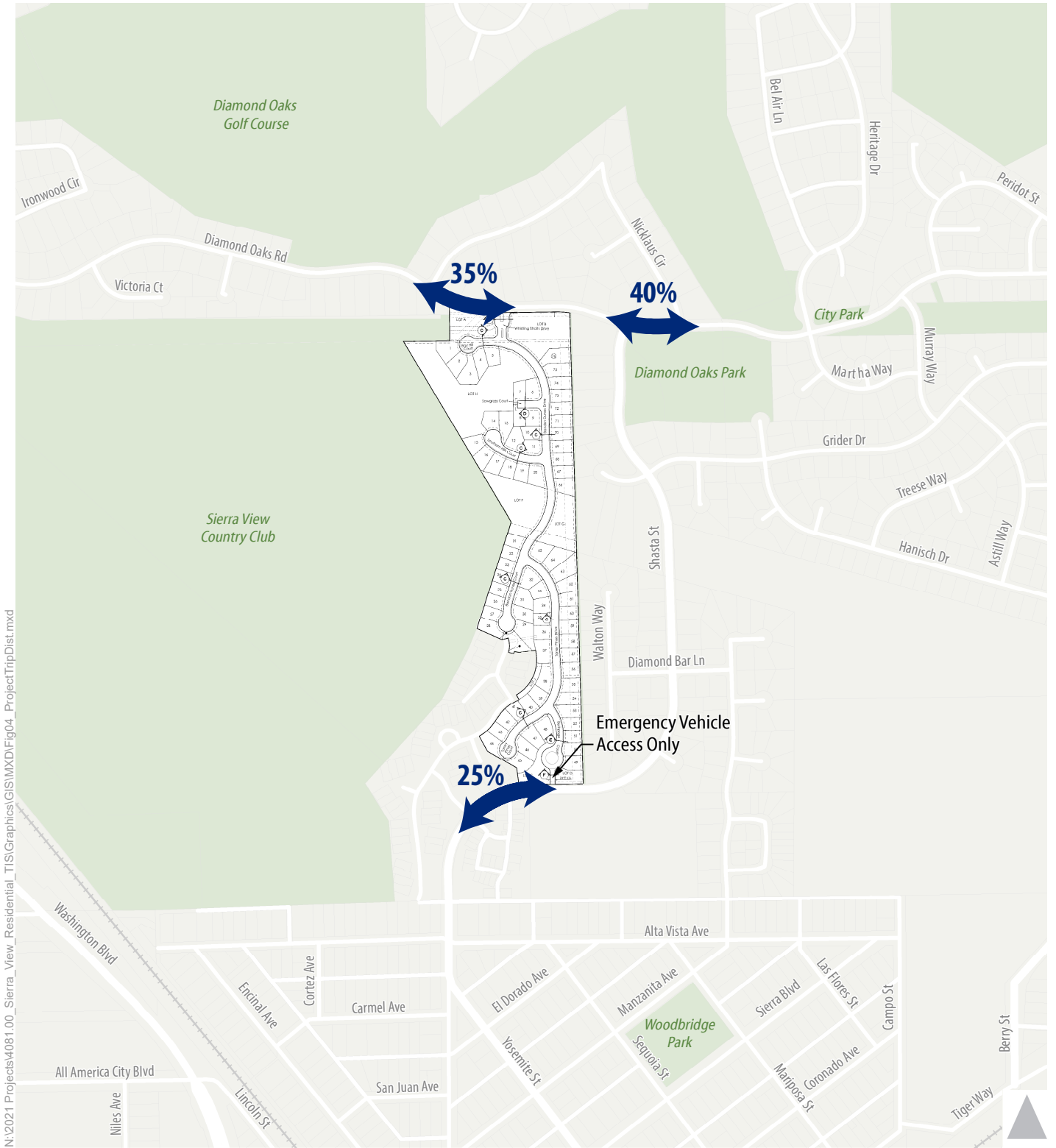
-  Average Daily Traffic Volume
-  Park/Open Space
-  Project Site

Figure 3

Average Daily Traffic Volumes - Existing Conditions





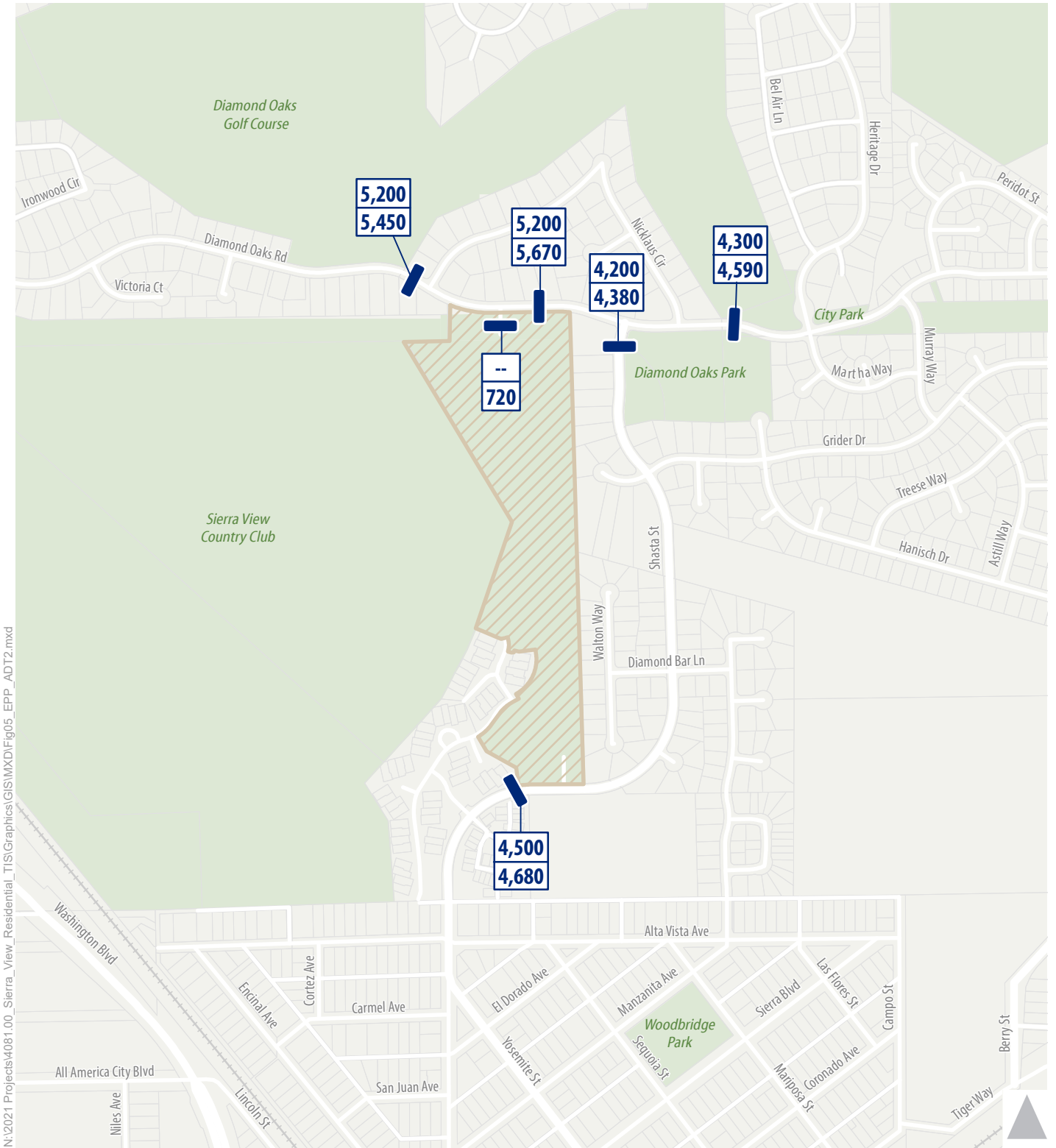
N:\2021\Projects\4081.00_Sierra_View_Residential_TIS\Graphics\GIS\MXD\Fig04_ProjectTripDist.mxd

xx%
 Project Trip Distribution Percentage

Project Site
 Park/Open Space



Figure 4
 Project Trip Distribution



N:\2021\Projects\4081.00 Sierra_View_Residential_TIS\Graphics\GIS\MXD\Fig05_EPP_ADT2.mxd

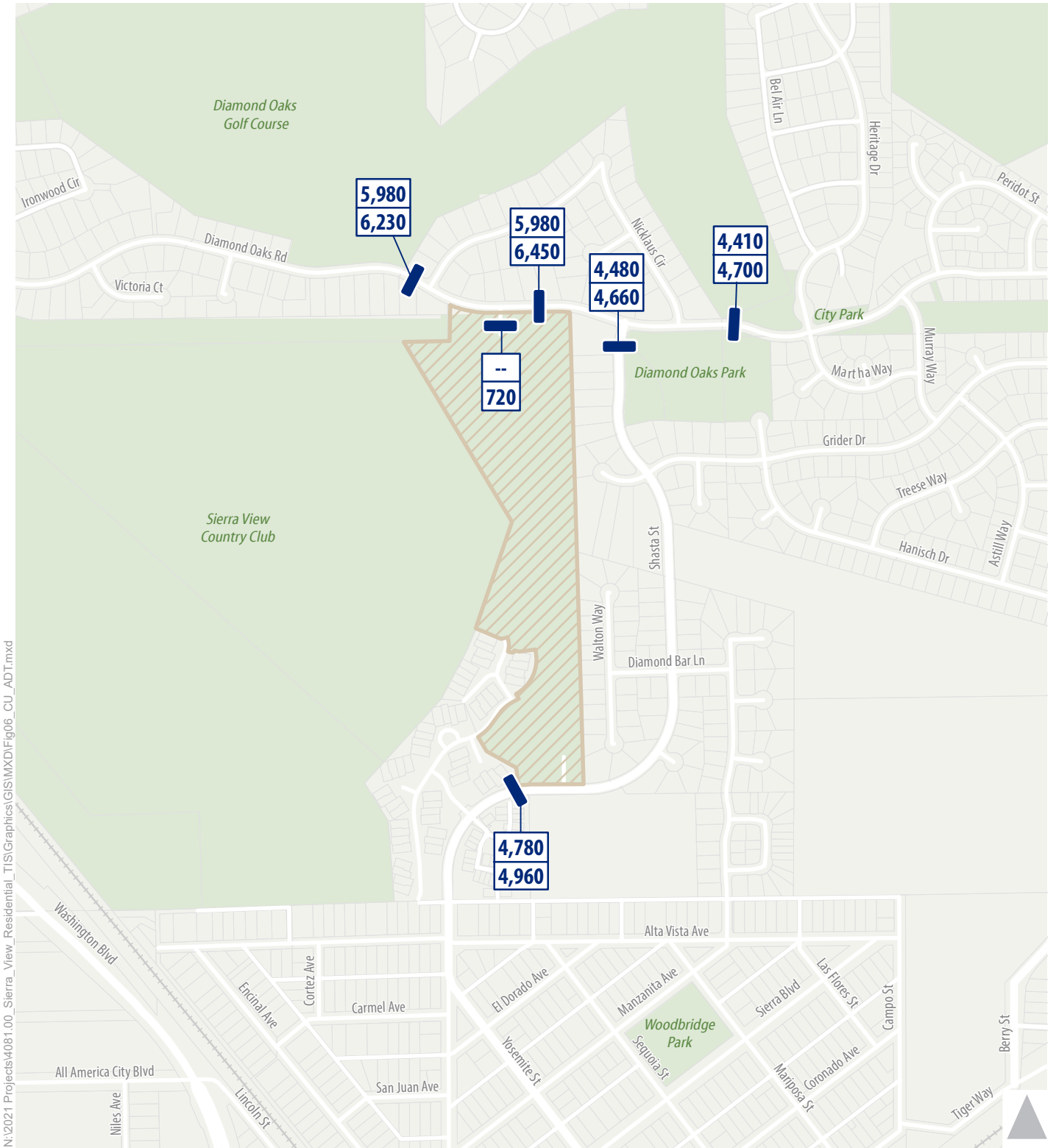
X,XXX Existing ADT
X,XXX Existing Plus Project ADT

Project Site
 Park/Open Space

Figure 5

Average Daily Traffic Volumes (ADT) - Existing Plus Project Conditions





N:\2021\Projects\4081.00 Sierra_View_Residential_TIS\Graphics\GIS\MXD\Fig06_CU_ADT.mxd

- X,XXX Cumulative No Project ADT
- X,XXX Cumulative Plus Project ADT
- Project Site
- Park/Open Space

Figure 6

Average Daily Traffic Volumes (ADT) - Cumulative Conditions



**CEQA AB52
Tribal Consultation Notice**

Date: August 4, 2021

To: Anna Starkey, Cultural Regulatory Specialist
United Auburn Indian Community
10720 Indian Hill Road
Auburn, CA 95603

Don Ryberg, Chairperson
Tsi Akim Maidu
PO Box 510
Browns Valley, CA 95918

Sara D. Setshwaelo, Cultural Committee Chair
Ione Band of Miwok Indians
P.O. Box 699
Plymouth, CA 95669

Nicholas Fonseca, Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

RE: Notice of Opportunity to Consult Under AB52 for the INFILL PCL 3 & 100 – Sierra View Subdivision Project (File #PL21-0162) in the City of Roseville

The City of Roseville will soon be initiating environmental review under the California Environmental Quality Act (CEQA) for the above referenced project. A project location map and preliminary project description are enclosed for your information.

In accordance with Assembly Bill 52 (AB 52) and Section 21080.3.1(d) of the California Public Resources Code (PRC), we are responding to your Tribe's request to be notified of projects in our jurisdiction that will be reviewed under CEQA. The above names were provided to the City of Roseville as the point of contact for your tribe. We are hereby notifying you of an opportunity to consult with us regarding the potential for this project to impact Tribal Cultural Resources, as defined in Section 21074 of the PRC. The purposes of tribal consultation under AB 52 are to determine, as part of the CEQA review process, whether or not Tribal Cultural Resources are present within the project area, and if so, whether or not those resources will be significantly impacted by the project. If Tribal Cultural Resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

Mackenzie Harrison is the City's Lead Agency Contact to receive replies in response to this notice. In accordance with Section 21080.3.1(d) of the PRC, you have 30 days from the receipt of this notice to either request or decline AB52 consultation in writing for this project from the City's Lead Agency Contact. Please send your written response by letter or by email to:

Mackenzie Harrison
311 Vernon Street
Roseville, CA 95678
msharrison@roseville.ca.us

Cc: Jason Camp, Tribal Historic Preservation Officer

Project Description:

The project site is located at 360 Diamond Oaks Road, within the City’s infill area. The site is approximately 23 acres and has a land use designation of Medium Density Residential (MDR) and a zoning designation of Multi-Family Residential (R3). The parcel has frontage on Diamond Oaks to the north and Shasta Street to the south and is adjacent to existing Low Density Residential (LDR) uses to the east and the Sierra View Country Club golf course and Medium Density Residential uses to the west.

The project includes a General Plan Amendment to change the land use designation from MDR to LDR, a Rezone to change the zoning designation from R3 to Small Lot Residential with modified Development Standards (RS/DS), and a Tentative Subdivision Map to subdivide the 23 acres into 75 MDR lots. A Tree Permit is also requested to remove 158 native oak trees. As part of the project, 95 units will be transferred from Infill Parcels 3 and 100 to Sierra Vista Specific Plan Parcels WB-31 (+32 units) and WB-41 (+63 units).

Aerial View of Project Site



**SB18
Tribal Consultation Notice**

August 4, 2021

To: Anna Starkey, Cultural Regulatory Specialist
United Auburn Indian Community
10720 Indian Hill Road
Auburn, CA 95603

Don Ryberg, Chairperson
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Grayson Coney, Cultural Director
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Regina Cuellar, Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

Pamela Cubbler, Treasurer
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604

Clyde Prout, Chairman
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604

Darrel Cruz, Cultural Resources Department, THPO
Washoe Tribe of Nevada & California
919 Hwy 395 South
Gardnerville, NV 89410

Subject: Tribal Consultation Pursuant to SB 18 for Project #PL21-0162: INFILL PCL 3 & 100 – Sierra View Subdivision in the City of Roseville

The City of Roseville is processing an application for the above-referenced project, located in the northwestern portion of the City of Roseville. Recognizing the importance of tribal participation in the local planning process, the City is requesting your review of the project to determine if formal consultation is appropriate pursuant to Government Code Section 65352.3 (SB 18). Pursuant to Government Code Section 65352.3(a)(2) you have 90 days from receipt of this letter to respond.

The project description is attached to this letter.

The City looks forward to hearing from you. Should you have any questions, please send your written response by letter or by email to:

Mackenzie Harrison
311 Vernon Street
Roseville, CA 95678
msharrison@roseville.ca.us

Project Description:

The project site is located at 360 Diamond Oaks Road, within the City's infill area. The site is approximately 23 acres and has a land use designation of Medium Density Residential (MDR) and a zoning designation of Multi-Family Residential (R3). The parcel has frontage on Diamond Oaks to the north and Shasta Street to the south and is adjacent to existing Low Density Residential (LDR) uses to the east and the Sierra View Country Club golf course and Medium Density Residential uses to the west.

The project includes a General Plan Amendment to change the land use designation from MDR to LDR, a Rezone to change the zoning designation from R3 to Small Lot Residential with modified Development Standards (RS/DS), and a Tentative Subdivision Map to subdivide the 23 acres into 75 MDR lots. A Tree Permit is also requested to remove 158 native oak trees. As part of the project, 95 units will be transferred from Infill Parcels 3 and 100 to Sierra Vista Specific Plan Parcels WB-31 (+32 units) and WB-41 (+63 units).

Aerial View of Project Site



SB18
Tribal Consultation Notice

August 17, 2021

To: Anna Starkey, Cultural Regulatory Specialist
United Auburn Indian Community
10720 Indian Hill Road
Auburn, CA 95603

Don Ryberg, Chairperson
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Grayson Coney, Cultural Director
Tsi Akim Maidu
P.O. Box 510
Browns Valley, CA 95918

Regina Cuellar, Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

Pamela Cubbler, Treasurer
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604

Clyde Prout, Chairman
Colfax-Todds Valley Consolidated Tribe
P.O. Box 4884
Auburn, CA 95604

Jesus Tarango, Chairperson
Wilton Rancheria
9728 Ken Street
Elk Grove, CA 95624

Steven Hutchason, THPO
Wilton Rancheria
9728 Kent Street
Elk Grove, CA 95624

Darrel Cruz, Cultural Resources Department, THPO
Washoe Tribe of Nevada & California
919 Hwy 395 South
Gardnerville, NV 89410

Dahlton Brown, Director of Admin.
9728 Kent Street
Elk Grove, CA 95624

Subject: Tribal Consultation Pursuant to SB 18 for Project #PL21-0162: INFILL PCL 3 & 100 – Sierra View Subdivision in the City of Roseville

The City of Roseville is processing an application for the above-referenced project, located in the northwestern portion of the City of Roseville. Recognizing the importance of tribal participation in the local planning process, the City is requesting your review of the project to determine if formal consultation is appropriate pursuant to Government Code Section 65352.3 (SB 18). Pursuant to Government Code Section 65352.3(a)(2) you have 90 days from receipt of this letter to respond.

The project description is attached to this letter.

The City looks forward to hearing from you. Should you have any questions, please send your written response by letter or by email to:

Mackenzie Harrison
311 Vernon Street
Roseville, CA 95678
msharrison@roseville.ca.us

Project Description:

The project site is located at 360 Diamond Oaks Road, within the City's infill area. The site is approximately 23 acres and has a land use designation of Medium Density Residential (MDR) and a zoning designation of Multi-Family Residential (R3). The parcel has frontage on Diamond Oaks to the north and Shasta Street to the south and is adjacent to existing Low Density Residential (LDR) uses to the east and the Sierra View Country Club golf course and Medium Density Residential uses to the west.

The project includes a General Plan Amendment to change the land use designation from MDR to LDR, a Rezone to change the zoning designation from R3 to Small Lot Residential with modified Development Standards (RS/DS), and a Tentative Subdivision Map to subdivide the 23 acres into 75 MDR lots. A Tree Permit is also requested to remove 158 native oak trees. As part of the project, 95 units will be transferred from Infill Parcels 3 and 100 to Sierra Vista Specific Plan Parcels WB-31 (+32 units) and WB-41 (+63 units).

Aerial View of Project Site





TECHNICAL MEMORANDUM

TO: Allison Wathen, Mackay & Soms Civil Engineers, Inc.
 PREPARED BY: Laney Nelson, Woodard & Curran
 REVIEWED BY: Chris van Lienden, PE, Woodard & Curran
 DATE: April 21, 2021
 RE: Sierra View Country Club Sewer Capacity Evaluation



1. BACKGROUND

Woodard & Curran was asked to analyze the impacts of the proposed Sierra View Country Club proposed development on the City of Roseville's sewer system. The location of the proposed site is shown in Figure 1. The proposed development includes 77 single family units on parcel 015-011-029 (21.2 acres) in Roseville on previously undeveloped land. The development would discharge sewer flows into City-owned sewers to the north on Diamond Oaks Road and to the south on Shasta Street. A conceptual site plan is included in Appendix A.

Woodard & Curran recently updated the City of Roseville's sewer system model as part of the City's June 2017 Sewer Model Update¹ (2017 Model Update). For the model update, the model was converted to the InfoWorks ICM software, which provides a fully-dynamic solution for modeling sanitary sewer systems. Pipeline information for all trunk sewers (pipes > 10-inches) was validated through review of record drawings while smaller diameter sewers were modeled based on pipe diameter and slope information in the City's GIS database. Recalibration was performed based on flow meter data collected during the 2015/2016 wet weather season, and future flows were estimated for 2050 and buildout land use conditions. Future flows did not include any flows from the location of the proposed development. Capacity improvements were not identified in the model update, though capacity limitations under the 10-year 24-hour design storm scenario were identified in the Church Street and Cedar Street areas as well as downstream of the SMD-2 meter on Old Auburn Road.

Subsequently, flows in the South Placer Wastewater Authority (SPWA) sewers were updated as part of the 2020 SPWA Systems Evaluation Update.

The purpose of this TM is to document whether the updated sewer model predicts that City and SPWA sewers will have capacity for the proposed development.

2. MODEL RESULTS & CONCLUSIONS

Wastewater flow projections for the proposed development were estimated based on the Average Dry Weather Flow (ADWF) unit flow factor of 190 gallons per day per dwelling unit (gpd/DU), resulting in an ADWF of 14,630 gpd. The flows were split into two subcatchments for the north development and the south development. The north development loads to the 12-inch sewer on Diamond Oaks Road and the south development loads to the 8-inch sewer on Shasta Street (Figure 1). For this analysis, a diurnal pattern was applied to the ADWF, as well as projected rainfall-dependent

¹ June 2017, City of Roseville Sewer Model Update Final Report, Woodard & Curran

infiltration and inflow (RDI/I) based on the City’s standard 10-year 24-hour design event. Modeled flows from the proposed development are summarized in Table 1.

Table 1: Modeled Sierra View Country Club Sewer Loads

Development Site	Loading Manhole (Roseville Model/ SPWA Model)	Equivalent Dwelling Units (EDUs)	Average Dry Weather Flow (gpd)	Peak Wet Weather Flow (mgd)
North Development	SMH D05-013	72	13,680	0.0258
South Development	SMH D05-082/ SMH C05-055	5	950	0.0018
Total	-	77	14,630	0.0276

For this evaluation, simulations for four model scenarios have been run. A profile indicating model results under buildout conditions with the development are indicated in Figures 2 through 5. The hydraulic profile for the sewers downstream of the portion of the development loading to the north are shown in Figures 2 and 3. Figure 2 includes the City sewers from the development loading point at SMH D05-013 to the SPWA trunk connection at SMH F02-055, and Figure 3 shows the SPWA trunk sewers from SMH F02-055 to the Pleasant Grove Wastewater Treatment Plant. Figures 4 and 5 show the hydraulic profile for the sewers downstream of the portion of the development loading to the south. Figure 4 includes the City sewers from the development loading point at SMH D05-082 to the SPWA trunk connection at SMH B04-131 and Figure 5 shows the SPWA trunk sewers from SMH B04-131 to the Dry Creek Wastewater Treatment Plant. Model results indicating d/D performance for each pipe segment for all scenarios is included in Appendix B.

City of Roseville design standards specify that pipes 10-inch diameter or less should have maximum depth of flow under design conditions of 0.7 times the diameter ($d/D < 0.7$). Pipes larger than 10-inches should have a $d/D < 1.0$. As indicated in Figure 4 and Appendix B, there are some City pipe segments in the sewers south of the development that the model predicts will be flowing full under buildout conditions ($d/D = 1$). This is due to 4 pipe segments where the full pipe capacity is less than the predicted peak wet weather flow (d/D indicated as “2” in the table, and are highlighted yellow). The model predicts no surcharge in the sewers north of the proposed development.

City design standards are typically applied to the design of new sewers. For existing sewers, it may be appropriate to use a less strict criteria, such as a minimum depth of freeboard, particularly when using a relatively conservative 10-year design event. However, the sewers projected to be surcharging are relatively shallow, resulting in freeboard of less than 2 feet in some locations. This surcharge occurs only under the buildout scenarios; under existing scenarios, no surcharge is predicted with or without the proposed development. To relieve the surcharge, pipe upsizes of approximately 2,300 feet may be needed (including about 500 feet of 12-inch upsized to 15-inch, and 1,800 feet of 10-inch upsized to 12-inch). Surcharge is not predicted under the existing scenario even with the proposed development; therefore, upsizing sewers is not needed at this time.

SPWA design standards from the Systems Evaluation indicate that surcharging up to within 5 feet of the manhole rims (ground surface) is considered acceptable under 10-year design storm PWWF, as long as the surcharge (flow height in the manhole) does not exceed 4 feet from the top of the pipe up the manhole. Based on this criteria, the modeled results of buildout conditions indicates no capacity issues from the proposed development in downstream SPWA sewers.

Figure Exported: 4/21/2021, By: dnelson, Using: \\woodardcurran.net\shared\Projects\0011966\001\Mackey & Somers\Sierra View County Club Sewer\wpic_GIS\WXP\01\SiteOverview.mxd

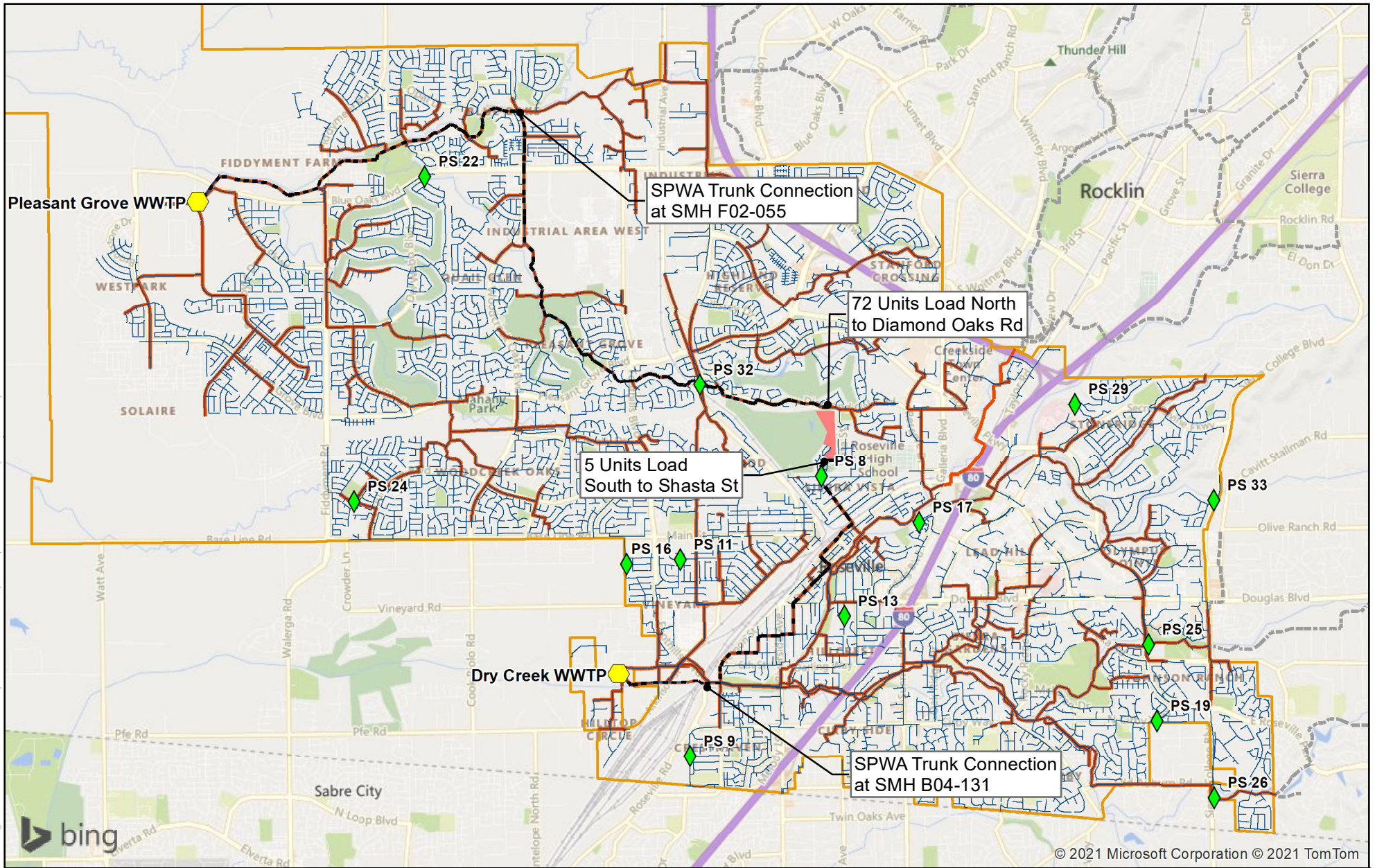
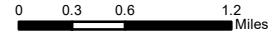


Figure 1
Proposed
Development Location

Legend

- ◆ Modeled Pump Station
- ⬡ WWTP
- Pipes Downstream of Development
- Sewer
- Sewer Trunk Network
- SPWA Trunk (Outside Roseville)
- Sierra View Country Club Development
- Roseville City Boundary



Project #: 1234567
 Map Created: April 2021

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. **Data Sources:**

Figure 2 –Hydraulic Profile (North City Sewers from SMH D05-013 to SMH F02-055)

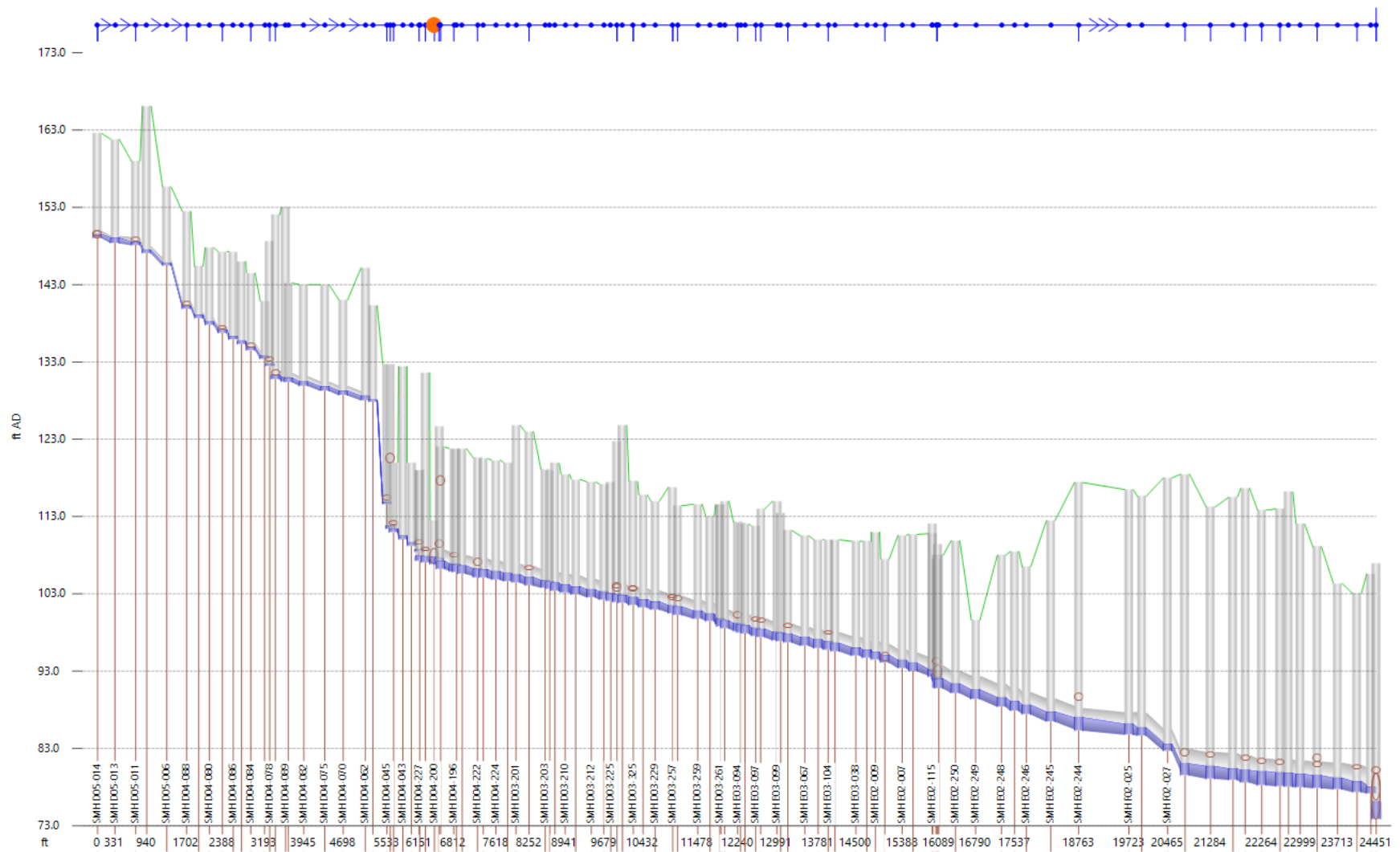


Figure 3 –Hydraulic Profile (North SPWA Sewers from SMH F02-055 to Pleasant Grove WWTP)

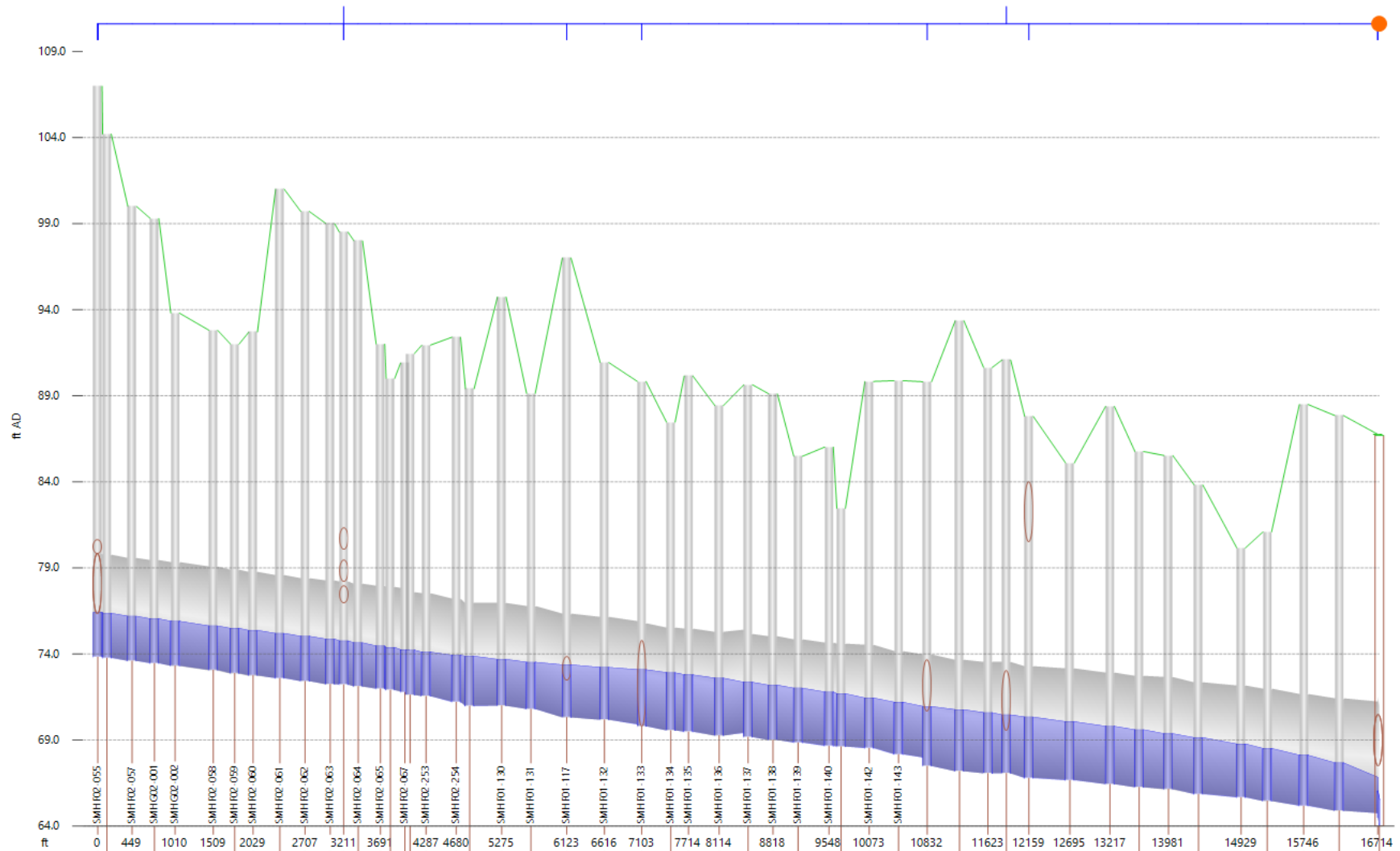


Figure 4 –Hydraulic Profile (South City Sewers from SMH D05-090 to SMH B04-131)

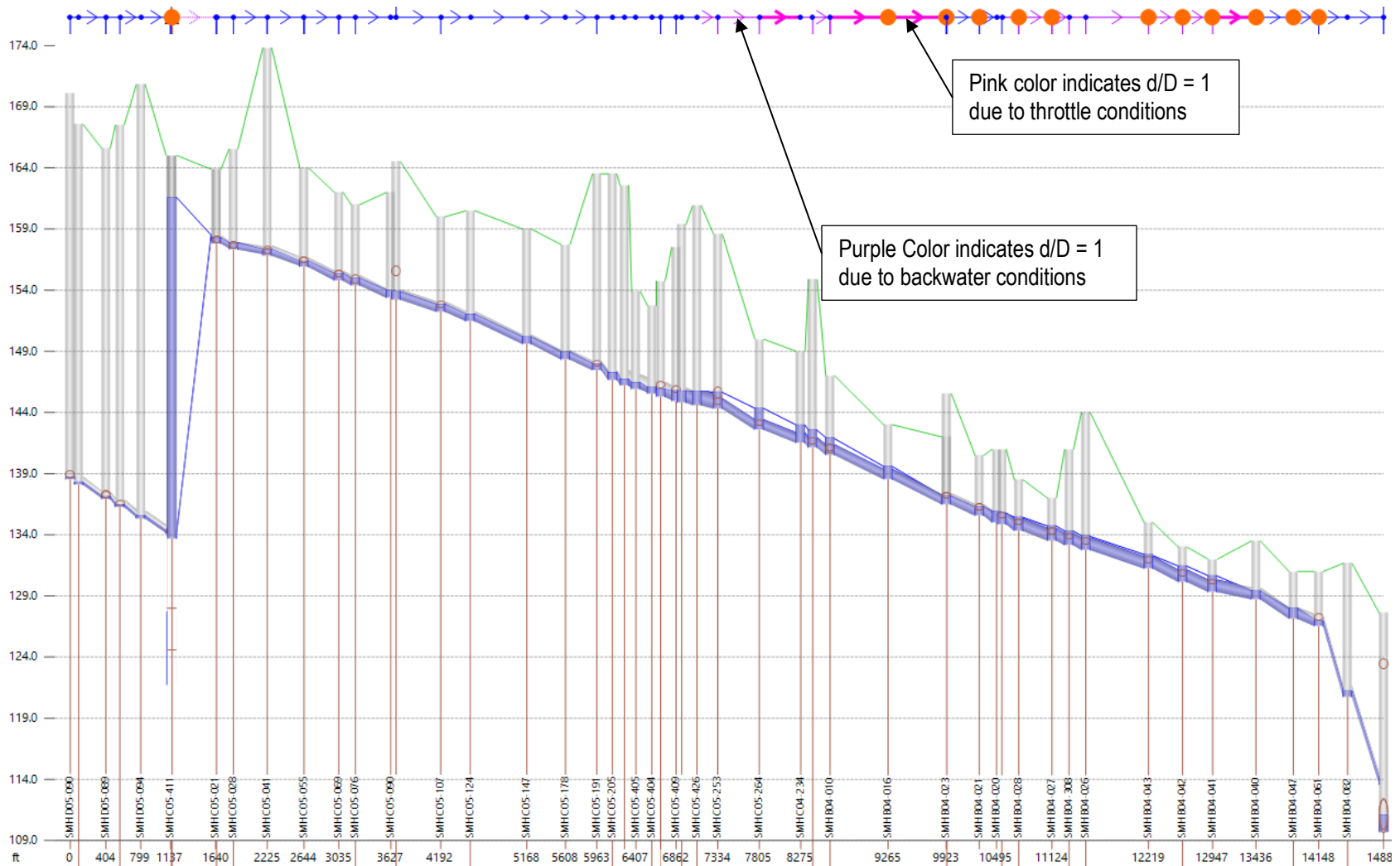
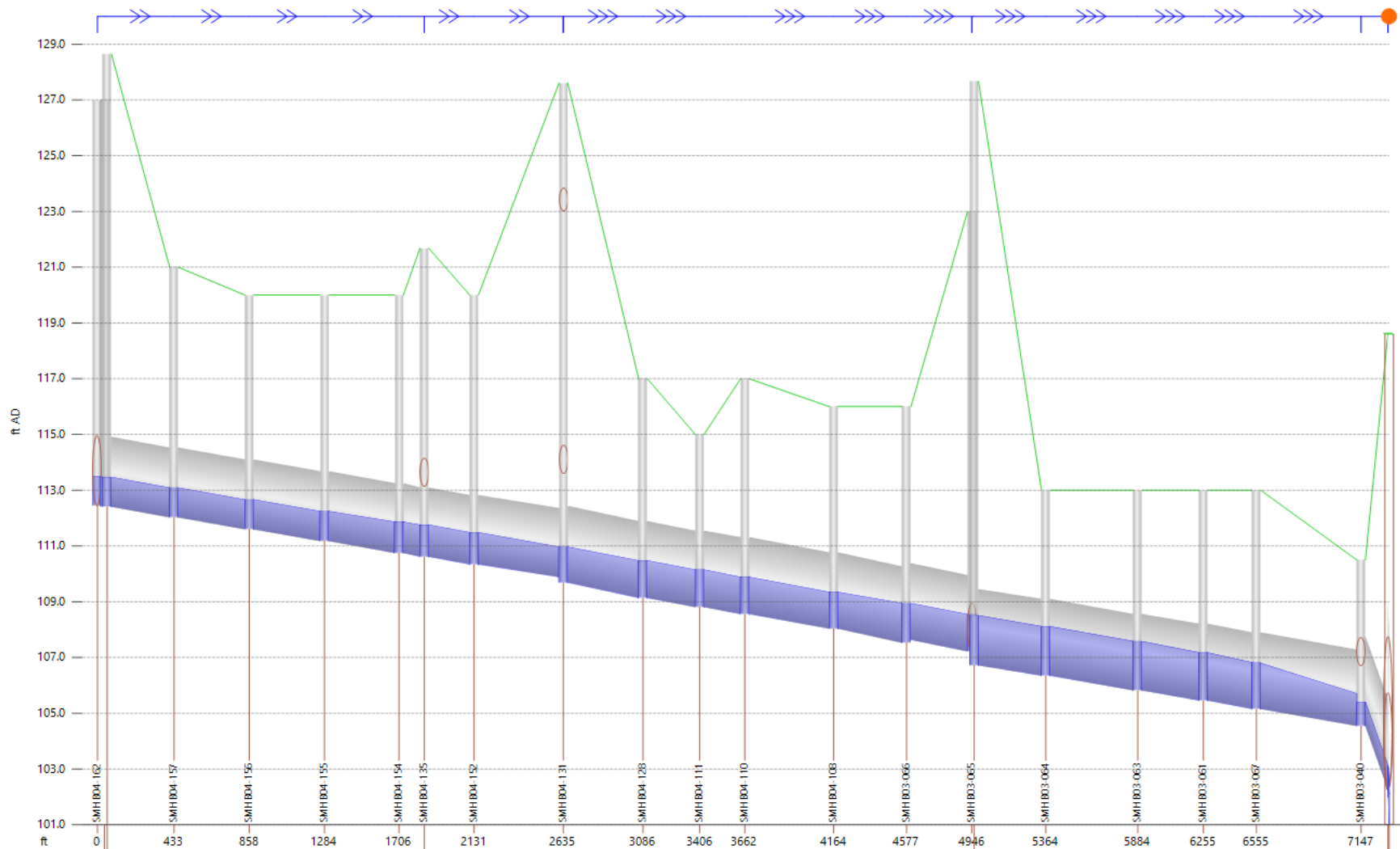


Figure 5 –Hydraulic Profile (South SPWA Sewers from SMH B04-131 to Dry Creek WWTP)



APPENDIX A – SEWER FACILITY MAP

APPENDIX B – MODEL RESULTS

Model Results (Pipes with insufficient capacity highlighted yellow)

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
City Sewers								
SMH D05-014	SMH D05-013	12	331	0.2	0.55	0.57	0.62	0.64
SMH D05-013	SMH D05-011	12	398	0.1	0.55	0.57	0.62	0.64
SMH D05-011	SMH D05-007	12	211	0.4	0.35	0.36	0.39	0.4
SMH D05-007	SMH D05-006	12	384	0.4	0.35	0.36	0.39	0.4
SMH D05-006	SMH D04-088	12	378	1.5	0.34	0.35	0.37	0.38
SMH D04-088	SMH D04-081	12	233	0.5	0.36	0.37	0.4	0.41
SMH D04-081	SMH D04-080	12	204	0.4	0.36	0.37	0.4	0.41
SMH D04-080	SMH D04-087	12	249	0.4	0.36	0.37	0.41	0.42
SMH D04-087	SMH D04-086	12	206	0.4	0.37	0.38	0.42	0.42
SMH D04-086	SMH D04-085	12	159	0.4	0.37	0.38	0.42	0.42
SMH D04-085	SMH D04-084	12	177	0.5	0.39	0.4	0.43	0.44
SMH D04-084	SMH D04-083	12	263	0.4	0.39	0.4	0.43	0.44
SMH D04-083	SMH D04-078	12	100	1.0	0.32	0.32	0.35	0.35
SMH D04-078	SMH D04-077	15	106	1.6	0.38	0.39	0.43	0.43
SMH D04-077	SMH D04-089	15	198	0.2	0.38	0.39	0.43	0.43
SMH D04-089	SMH D04-426	15	50	0.2	0.38	0.39	0.43	0.43
SMH D04-426	SMH D04-082	15	298	0.2	0.38	0.39	0.43	0.44
SMH D04-082	SMH D04-075	15	400	0.2	0.38	0.39	0.43	0.44
SMH D04-075	SMH D04-070	15	353	0.2	0.39	0.4	0.44	0.44
SMH D04-070	SMH D04-062	15	421	0.2	0.39	0.4	0.44	0.44
SMH D04-062	SMH D04-052	15	146	0.2	0.37	0.38	0.42	0.42
SMH D04-052	SMH D04-045	15	268	4.9	0.2	0.2	0.21	0.21
SMH D04-045	SMH D04-036	15	64	4.9	0.29	0.29	0.32	0.32
SMH D04-036	SMH D04-044	18	64	0.7	0.26	0.27	0.29	0.29
SMH D04-044	SMH D04-043	18	176	0.5	0.26	0.27	0.29	0.29
SMH D04-043	SMH D04-042	18	164	0.5	0.26	0.27	0.29	0.29
SMH D04-042	SMH D04-227	18	150	0.5	0.26	0.27	0.29	0.29
SMH D04-227	SMH D04-226	18	10	6.9	0.17	0.17	0.18	0.18
SMH D04-226	SMH D04-199	24	110	0.1	0.29	0.3	0.34	0.34
SMH D04-199	SMH D04-200	24	170	0.1	0.42	0.42	0.47	0.47
SMH D04-200	SMH D04-201	24	87	0.1	0.42	0.42	0.47	0.47
SMH D04-201	SMH D04-408	24	33	0.1	0.38	0.38	0.43	0.43

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
SMH D04-408	SMH D04-196	30	251	0.1	0.36	0.36	0.4	0.4
SMH D04-196	SMH D04-241	30	53	0.1	0.36	0.36	0.4	0.4
SMH D04-241	SMH D04-197	30	108	0.1	0.35	0.35	0.39	0.39
SMH D04-197	SMH D04-222	30	292	0.1	0.36	0.37	0.41	0.41
SMH D04-222	SMH D04-223	30	112	0.0	0.41	0.41	0.45	0.46
SMH D04-223	SMH D04-224	30	241	0.1	0.37	0.37	0.42	0.42
SMH D04-224	SMH D03-200	30	225	0.1	0.37	0.37	0.42	0.42
SMH D03-200	SMH D03-201	30	158	0.1	0.37	0.37	0.42	0.42
SMH D03-201	SMH D03-202	30	251	0.1	0.36	0.36	0.41	0.41
SMH D03-202	SMH D03-203	30	308	0.1	0.37	0.37	0.41	0.41
SMH D03-203	SMH D03-204	30	89	0.1	0.34	0.34	0.37	0.38
SMH D03-204	SMH D03-205	30	99	0.1	0.34	0.34	0.38	0.38
SMH D03-205	SMH D03-210	30	193	0.1	0.36	0.36	0.4	0.41
SMH D03-210	SMH D03-211	30	203	0.1	0.36	0.36	0.4	0.4
SMH D03-211	SMH D03-212	30	297	0.1	0.36	0.36	0.4	0.4
SMH D03-212	SMH D03-213	30	238	0.1	0.36	0.36	0.41	0.41
SMH D03-213	SMH D03-225	30	136	0.1	0.36	0.36	0.41	0.41
SMH D03-225	SMH D03-226	30	119	0.1	0.36	0.36	0.41	0.41
SMH D03-226	SMH D03-227	30	103	0.1	0.36	0.36	0.41	0.41
SMH D03-227	SMH D03-325	30	207	0.1	0.36	0.36	0.41	0.41
SMH D03-325	SMH D03-228	30	188	0.1	0.36	0.36	0.4	0.41
SMH D03-228	SMH D03-229	30	231	0.1	0.37	0.37	0.42	0.42
SMH D03-229	SMH D03-257	30	335	0.1	0.37	0.37	0.41	0.41
SMH D03-257	SMH D03-258	30	94	0.1	0.36	0.36	0.4	0.4
SMH D03-258	SMH D03-259	30	386	0.1	0.37	0.37	0.42	0.42
SMH D03-259	SMH D03-260	30	234	0.2	0.35	0.35	0.39	0.39
SMH D03-260	SMH D03-261	30	189	0.1	0.34	0.34	0.37	0.37
SMH D03-261	SMH D03-262	30	21	1.0	0.3	0.3	0.33	0.33
SMH D03-262	SMH D03-263	30	71	0.1	0.34	0.34	0.37	0.37
SMH D03-263	SMH E03-094	30	247	0.2	0.35	0.35	0.39	0.39
SMH E03-094	SMH E03-093	30	55	0.1	0.34	0.34	0.38	0.38
SMH E03-093	SMH E03-096	30	88	0.1	0.36	0.37	0.41	0.41
SMH E03-096	SMH E03-097	30	201	0.1	0.36	0.37	0.41	0.41
SMH E03-097	SMH E03-098	30	96	0.1	0.38	0.38	0.42	0.42

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
SMH E03-098	SMH E03-099	30	311	0.1	0.38	0.38	0.42	0.43
SMH E03-099	SMH E03-079	30	72	0.1	0.38	0.38	0.42	0.43
SMH E03-079	SMH E03-101	30	136	0.1	0.38	0.38	0.43	0.43
SMH E03-101	SMH E03-067	30	325	0.1	0.39	0.39	0.43	0.43
SMH E03-067	SMH E03-058	30	257	0.1	0.39	0.39	0.43	0.43
SMH E03-058	SMH E03-104	30	191	0.1	0.4	0.4	0.44	0.44
SMH E03-104	SMH E03-050	30	130	0.1	0.37	0.38	0.42	0.42
SMH E03-050	SMH E03-038	30	398	0.1	0.37	0.37	0.42	0.42
SMH E03-038	SMH E03-107	30	209	0.1	0.37	0.37	0.42	0.42
SMH E03-107	SMH E02-009	30	166	0.1	0.36	0.36	0.41	0.41
SMH E02-009	SMH E02-008	30	182	0.1	0.35	0.36	0.39	0.39
SMH E02-008	SMH E02-007	30	331	0.2	0.37	0.37	0.41	0.41
SMH E02-007	SMH E02-006	30	207	0.1	0.37	0.37	0.41	0.41
SMH E02-006	SMH E02-115	30	366	0.1	0.37	0.37	0.41	0.41
SMH E02-115	SMH E02-114	30	10	0.1	0.3	0.3	0.33	0.33
SMH E02-114	SMH E02-011	30	63	0.2	0.31	0.31	0.35	0.35
SMH E02-011	SMH E02-252	36	15	1.4	0.19	0.19	0.21	0.21
SMH E02-252	SMH E02-329	36	9	9.3	0.31	0.32	0.4	0.4
SMH E02-329	SMH E02-251	36	31	0.2	0.31	0.31	0.4	0.4
SMH E02-251	SMH E02-250	36	317	0.2	0.31	0.31	0.4	0.4
SMH E02-250	SMH E02-249	36	384	0.2	0.31	0.31	0.4	0.4
SMH E02-249	SMH E02-248	36	497	0.2	0.31	0.31	0.4	0.4
SMH E02-248	SMH E02-247	36	250	0.2	0.31	0.31	0.4	0.4
SMH E02-247	SMH E02-246	36	225	0.2	0.31	0.31	0.4	0.4
SMH E02-246	SMH E02-245	36	466	0.2	0.32	0.32	0.41	0.41
SMH E02-245	SMH E02-244	36	535	0.2	0.37	0.37	0.49	0.49
SMH E02-244	SMH F02-025	36	960	0.1	0.44	0.44	0.56	0.56
SMH F02-025	SMH F02-026	36	243	0.0	0.37	0.37	0.46	0.46
SMH F02-026	SMH F02-027	36	499	0.4	0.27	0.27	0.34	0.34
SMH F02-027	SMH F02-028	36	332	0.8	0.22	0.22	0.33	0.33
SMH F02-028	SMH F02-029	42	487	0.1	0.37	0.37	0.46	0.46
SMH F02-029	SMH F02-030	42	430	0.0	0.37	0.37	0.46	0.46
SMH F02-030	SMH F02-031	42	232	0.1	0.34	0.34	0.44	0.44
SMH F02-031	SMH F02-069	42	318	0.1	0.41	0.41	0.51	0.51

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
SMH F02-069	SMH F02-070	42	349	0.0	0.41	0.41	0.51	0.51
SMH F02-070	SMH F02-071	42	163	0.0	0.4	0.4	0.5	0.5
SMH F02-071	SMH F02-072	42	223	0.0	0.39	0.39	0.49	0.49
SMH F02-072	SMH F02-073	42	323	0.0	0.39	0.39	0.48	0.48
SMH F02-073	SMH F02-074	42	391	0.0	0.38	0.38	0.46	0.46
SMH F02-074	SMH F02-075	42	372	0.1	0.33	0.33	0.41	0.41
SMH F02-075	SMH F02-077	42	267	0.1	0.31	0.31	0.38	0.38
SMH F02-077	SMH F02-055	42	99	0.9	0.2	0.2	0.24	0.24
City Sewers (South)								
SMH D05-090	SMH D05-082	8	95	0.4	0.29	0.29	0.3	0.3
SMH D05-082	SMH D05-089	8	309	0.4	0.29	0.3	0.3	0.3
SMH D05-089	SMH D05-256	8	159	0.4	0.3	0.31	0.33	0.33
SMH D05-256	SMH D05-094	8	236	0.4	0.3	0.31	0.33	0.34
SMH D05-094	SMH C05-411	8	338	0.4	0.31	0.31	0.34	0.34
SMH C05-411	SMH C05-287	10	10	0.3	0.29	0.29	0.31	0.31
TEE C05-428	SMH C05-021	6	493	-4.9	1	1	1	1
SMH C05-021	SMH C05-020	8	10	0.5	0.64	0.65	0.65	0.56
SMH C05-020	SMH C05-028	8	192	0.2	0.78	0.79	0.8	0.7
SMH C05-028	SMH C05-041	8	383	0.1	0.84	0.88	0.89	0.84
SMH C05-041	SMH C05-055	10	419	0.2	0.57	0.6	0.61	0.6
SMH C05-055	SMH C05-069	10	391	0.3	0.66	0.68	0.72	0.72
SMH C05-069	SMH C05-076	10	191	0.2	0.65	0.68	0.71	0.71
SMH C05-076	SMH C05-090	10	401	0.3	0.72	0.74	0.79	0.79
SMH C05-090	SMH C05-089	10	60	0.2	0.7	0.72	0.76	0.76
SMH C05-089	SMH C05-107	10	505	0.2	0.7	0.71	0.75	0.75
SMH C05-107	SMH C05-124	10	336	0.2	0.68	0.7	0.73	0.74
SMH C05-124	SMH C05-147	10	640	0.3	0.65	0.65	0.71	0.71
SMH C05-147	SMH C05-178	10	440	0.3	0.71	0.73	0.78	0.78
SMH C05-178	SMH C05-191	10	355	0.2	0.69	0.7	0.74	0.75
SMH C05-191	SMH C05-205	10	177	0.4	0.65	0.66	0.73	0.73
SMH C05-205	SMH C05-206	10	135	0.3	0.64	0.65	0.72	0.72
SMH C05-206	SMH C05-405	16	132	0.2	0.36	0.37	0.39	0.39
SMH C05-405	SMH C05-404	15	179	0.2	0.41	0.41	0.44	0.44
SMH C05-404	SMH C05-403	15	101	0.1	0.39	0.4	0.43	0.43

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
SMH C05-403	SMH C05-409	15	175	0.2	0.41	0.41	0.61	0.62
SMH C05-409	SMH C05-385	15	63	0.2	0.44	0.45	0.75	0.77
SMH C05-385	SMH C05-426	15	173	0.1	0.44	0.45	0.88	0.9
SMH C05-426	SMH C05-253	15	236	0.1	0.44	0.44	1	1
SMH C05-253	SMH C05-264	10	471	0.4	0.78	0.79	1	1
SMH C05-264	SMH C04-234	10	470	0.2	0.77	0.78	2	2
SMH C04-234	SMH B04-303	10	137	0.3	0.71	0.71	1	1
SMH B04-303	SMH B04-010	10	197	0.3	0.74	0.75	1	1
SMH B04-010	SMH B04-016	10	656	0.3	0.73	0.73	2	2
SMH B04-016	SMH B04-023	10	658	0.3	0.75	0.75	2	2
SMH B04-023	SMH B04-022	12	8	0.0	0.61	0.61	0.68	0.69
SMH B04-022	SMH B04-021	12	370	0.3	0.58	0.58	0.73	0.73
SMH B04-021	SMH B04-020	12	194	0.3	0.64	0.64	0.95	0.96
SMH B04-020	SMH B04-029	12	61	0.2	0.62	0.63	0.95	0.96
SMH B04-029	SMH B04-028	12	190	0.3	0.67	0.68	1	1
SMH B04-028	SMH B04-027	12	378	0.2	0.7	0.7	1	1
SMH B04-027	SMH B04-308	12	193	0.2	0.7	0.7	1	1
SMH B04-308	SMH B04-026	12	190	0.2	0.72	0.73	1	1
SMH B04-026	SMH B04-043	12	712	0.2	0.7	0.7	1	1
SMH B04-043	SMH B04-042	12	386	0.3	0.74	0.76	1	1
SMH B04-042	SMH B04-041	12	342	0.2	0.98	0.99	1	1
SMH B04-041	SMH B04-040	12	489	0.1	0.98	0.99	2	2
SMH B04-040	SMH B04-047	12	426	0.4	0.73	0.73	0.85	0.85
SMH B04-047	SMH B04-061	12	286	0.2	0.72	0.72	0.84	0.84
SMH B04-061	SMH B04-082	12	328	1.8	0.42	0.42	0.45	0.45
SMH B04-082	SMH B04-131	12	408	1.8	0.42	0.42	0.45	0.45
SPWA Sewers (North)								
SMH F02-055	SMH F02-056	72	120	0.1	0.360	0.36	0.43	0.43
SMH F02-056	SMH F02-057	72	329	0.1	0.360	0.36	0.43	0.43
SMH F02-057	SMH G02-001	72	292	0.0	0.360	0.36	0.43	0.43
SMH G02-001	SMH G02-002	72	269	0.1	0.360	0.36	0.43	0.43
SMH G02-002	SMH F02-058	72	499	0.1	0.350	0.35	0.43	0.43
SMH F02-058	SMH F02-059	72	280	0.1	0.360	0.36	0.43	0.43
SMH F02-059	SMH F02-060	72	240	0.1	0.360	0.36	0.43	0.43

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
SMH F02-060	SMH F02-061	72	349	0.0	0.360	0.36	0.43	0.43
SMH F02-061	SMH F02-062	72	329	0.1	0.360	0.36	0.43	0.43
SMH F02-062	SMH F02-063	72	329	0.1	0.360	0.36	0.43	0.43
SMH F02-063	SMH F02-049	72	175	0.0	0.360	0.36	0.43	0.43
SMH F02-049	SMH F02-064	72	190	0.1	0.350	0.35	0.42	0.42
SMH F02-064	SMH F02-065	72	290	0.0	0.340	0.35	0.42	0.42
SMH F02-065	SMH F02-066	72	129	0.1	0.340	0.34	0.41	0.41
SMH F02-066	SMH F02-067	72	189	0.0	0.330	0.33	0.41	0.41
SMH F02-067	SMH F02-068	72	70	0.2	0.350	0.35	0.43	0.43
SMH F02-068	SMH F02-253	72	208	0.0	0.350	0.35	0.43	0.43
SMH F02-253	SMH F02-254	72	393	0.1	0.360	0.36	0.45	0.45
SMH F02-254	SMH F02-255	72	177	0.1	0.380	0.38	0.48	0.48
SMH F02-255	SMH F01-130	72	418	0.0	0.380	0.38	0.48	0.48
SMH F01-130	SMH F01-131	72	381	0.1	0.350	0.35	0.45	0.45
SMH F01-131	SMH F01-117	72	467	0.1	0.380	0.38	0.51	0.51
SMH F01-117	SMH F01-132	72	493	0.0	0.380	0.38	0.51	0.51
SMH F01-132	SMH F01-133	72	487	0.1	0.360	0.36	0.53	0.53
SMH F01-133	SMH F01-134	72	379	0.1	0.390	0.39	0.56	0.56
SMH F01-134	SMH F01-135	72	232	0.0	0.390	0.39	0.56	0.56
SMH F01-135	SMH F01-136	72	400	0.1	0.390	0.39	0.55	0.55
SMH F01-136	SMH F01-137	72	378	0.0	0.390	0.39	0.55	0.55
SMH F01-137	SMH F01-138	72	326	0.0	0.370	0.37	0.53	0.53
SMH F01-138	SMH F01-139	72	326	0.0	0.370	0.37	0.53	0.53
SMH F01-139	SMH F01-140	72	404	0.0	0.370	0.37	0.52	0.52
SMH F01-140	SMH F01-141	72	158	0.0	0.370	0.37	0.52	0.52
SMH F01-141	SMH F01-142	72	367	0.0	0.360	0.36	0.51	0.51
SMH F01-142	SMH F01-143	72	384	0.1	0.360	0.36	0.5	0.5
SMH F01-143	SMH F01-144	72	375	0.1	0.360	0.36	0.5	0.5
SMH F01-144	SMH F01-145	78	421	0.1	0.410	0.41	0.55	0.55
SMH F01-145	SMH F99-001	78	370	0.0	0.410	0.41	0.55	0.55
SMH F99-001	SMH F99-002	78	242	0.0	0.410	0.41	0.54	0.54
SMH F99-002	SMH F99-004	78	294	0.1	0.410	0.41	0.54	0.54
SMH F99-004	SMH F99-006	78	536	0.0	0.410	0.41	0.54	0.54
SMH F99-006	SMH F99-007	78	522	0.0	0.390	0.39	0.52	0.52

From MH ID	To MH ID	Pipe Dia. (in)	Pipe Length (ft)	Pipe Slope (%)	Pipe Load: d/D (1 indicates backwater surcharge, 2 indicates insufficient pipe capacity)			
					1. Existing	2. Existing + Proposed Development	3. Buildout	4. Buildout + Proposed Development
SMH F99-007	SMH F99-008	78	382	0.0	0.390	0.39	0.51	0.51
SMH F99-008	SMH F99-009	78	382	0.0	0.390	0.39	0.51	0.51
SMH F99-009	SMH F99-010	78	392	0.1	0.380	0.38	0.5	0.5
SMH F99-010	SMH F99-011	78	556	0.0	0.380	0.38	0.5	0.5
SMH F99-011	SMH F99-012	78	342	0.1	0.360	0.36	0.48	0.48
SMH F99-012	SMH F99-079	78	475	0.1	0.360	0.36	0.47	0.47
SMH F99-079	SMH F99-013	78	464	0.1	0.350	0.35	0.45	0.45
SMH F99-013	SMH F99-016	78	504	0.0	0.330	0.33	0.42	0.42
SMH F99-016	F99-016D1	84	20	2.4	0.160	0.16	0.22	0.22
SPWA Sewers (South)								
SMH B04-162	SMH B04-161	30	40	0.1	0.36	0.36	0.42	0.42
SMH B04-161	SMH B04-160	30	15	0.1	0.36	0.36	0.42	0.42
SMH B04-160	SMH B04-157	30	378	0.1	0.36	0.36	0.42	0.42
SMH B04-157	SMH B04-156	30	425	0.1	0.36	0.36	0.42	0.42
SMH B04-156	SMH B04-155	30	426	0.1	0.37	0.37	0.42	0.42
SMH B04-155	SMH B04-154	30	422	0.1	0.4	0.4	0.44	0.44
SMH B04-154	SMH B04-135	30	143	0.1	0.42	0.42	0.46	0.46
SMH B04-135	SMH B04-152	30	282	0.1	0.43	0.43	0.46	0.46
SMH B04-152	SMH B04-131	30	504	0.1	0.43	0.43	0.46	0.46
SMH B04-131	SMH B04-128	33	451	0.1	0.47	0.47	0.49	0.49
SMH B04-128	SMH B04-111	33	320	0.1	0.47	0.47	0.49	0.49
SMH B04-111	SMH B04-110	33	256	0.1	0.47	0.47	0.48	0.48
SMH B04-110	SMH B04-108	33	502	0.1	0.46	0.46	0.48	0.48
SMH B04-108	SMH B03-066	33	413	0.1	0.49	0.49	0.51	0.51
SMH B03-066	SMH B03-065	33	369	0.1	0.47	0.47	0.48	0.48
SMH B03-065	SMH B03-053	33	13	3.8	0.64	0.64	0.65	0.65
SMH B03-053	SMH B03-064	33	405	0.1	0.63	0.63	0.65	0.65
SMH B03-064	SMH B03-063	33	520	0.1	0.62	0.62	0.64	0.64
SMH B03-063	SMH B03-061	33	371	0.1	0.62	0.62	0.64	0.64
SMH B03-061	SMH B03-067	33	300	0.1	0.6	0.6	0.62	0.62
SMH B03-067	SMH B03-040	33	592	0.1	0.58	0.58	0.6	0.6
SMH B03-040	CAP B03-DCWWTP	39	152	1.5	0.25	0.25	0.26	0.26
CAP B03-DCWWTP	B03-DCWWTPD1	84	7	14.3	0.14	0.14	0.16	0.16



MITIGATION MONITORING AND REPORTING PROGRAM

Table with 2 columns: Field Name and Value. Fields include Project Title/File Number, Project Location, Project Description, Environmental Document, Project Applicant, Property Owner, and Lead Agency Contact.

Section 21081.6 of the California Public Resources Code requires public agencies to “adopt a reporting and monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment.” This Mitigation Monitoring and Reporting Program has been adopted for the purpose of avoiding environmental impacts.

MONITORING PROCESS: Existing monitoring mechanisms are in place that assist the City of Roseville in meeting the intent of the California Environmental Quality Act (CEQA). These existing monitoring mechanisms eliminate the need to develop new monitoring processes for each mitigation measure. These mechanisms include grading plan review and approval, improvement/building plan review and approval and on-site inspections by City Departments. Given that these monitoring processes are requirements of the project, they are not included in the mitigation monitoring program.

It shall be the responsibility of the project applicant/owner to provide written notification to the City using the Mitigation Verification Cover Sheet and Forms, in a timely manner, of the completion of each Mitigation Measure as identified on the following pages. The City will verify that the project is in compliance with the adopted Mitigation Monitoring and Reporting Program. Any non-compliance will be reported by the City to the applicant/owner, and it shall be the project applicant’s/owner’s responsibility to rectify the situation by bringing the project into compliance. The purpose of this program is to ensure diligent and good faith compliance with the Mitigation Measures which have been adopted as part of the project.

MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>MM BIO 1: Conduct Pond Turtle Pre-Construction Survey: A western pond turtle survey shall be conducted in all areas within 150 feet of the intermittent drainage in within 48 hours prior to construction in that area. If no western pond turtles or nests are found, no further mitigation is necessary. If a western pond turtle is observed within the proposed impact area, a qualified biologist shall relocate the individual to suitable habitat outside of the proposed impact area prior to construction. If a western pond turtle nest is observed within the proposed impact area, the nest shall be fenced off and avoided until the eggs hatch. The exclusion fencing shall be placed no less than 25 feet from the nest. A qualified biologist shall monitor the nest daily during construction to ensure that hatchlings do not disperse into the construction area. Relocation of hatchlings will occur as stipulated above, if necessary.</p>	<p>Results of the preconstruction survey and other mitigation implementation (if needed) shall be submitted prior to the issuance of a grading permit. The applicant or developer shall coordinate with USFWS and/or CDFG to modify as necessary any mitigation plans in an effort to attain mitigation success.</p>	<p>Pre-Construction and Construction: Survey required prior to construction. If survey is positive for the specie, then remainder of mitigation steps are required prior to construction.</p>	<p>Engineering</p>	<p>Copy of pre-construction survey</p>	
<p>MM BIO-2: Protect Special Status Birds, Including Migratory Birds. For all construction-related activities that take place within the nesting season, between February 15 through August 31st, a preconstruction nesting-bird survey for special-status specie birds and migratory birds shall be conducted by a qualified biologist no more than two weeks prior to project initiation within the area of construction and a 300-foot buffer. If active nests are found, a no-disturbance buffer zone shall be established, the size of which will be determined in consultation with the City. Within this buffer zone, no construction shall take place until August 31st or the biologist determines that the nest is no longer active.</p>	<p>Results of the preconstruction survey and other mitigation implementation (if needed) shall be submitted prior to the issuance of a grading permit. The applicant or developer shall coordinate with USFWS and/or CDFG to modify as necessary any mitigation plans in an effort to attain mitigation success.</p>	<p>Pre-Construction and Construction: Survey required prior to construction. If the survey is positive for the species, then remainder of mitigation steps are required prior to construction.</p>	<p>Engineering</p>	<p>Copy of pre-construction survey</p>	
<p>MM BIO-3: Obtain a Lake and Streambed Alteration Agreement. For any construction that will occur on the bed and bank of a stream or other water body, including drainage canals, a Lake and Streambed</p>	<p>Results of implementation of conditions of approval and/or mitigation (if required) included as part of the agreement shall</p>	<p>Pre-Construction and Construction: Executed</p>	<p>Engineering</p>	<p>Copy of executed Lake and Streambed</p>	

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
Alteration Agreement shall be obtained that complies with Section 1602 of the California Fish and Game Code. The Lake and Streambed Alteration Agreement will contain conditions of approval and/or mitigation measures to avoid, minimize, or compensate for adverse effects to riparian habitat within the bed and bank of a stream or other water body that must be implemented as a condition of the agreement that ensures no net loss of riparian acreage. Obtaining this Agreement and adhering to its requirements ensures that performance standards sufficient to meet CEQA mitigation standards are satisfied.	be submitted prior to the issuance of a grading permit.	agreement required prior to construction and any agreement conditions of approval and/or mitigation measures are required prior to construction.		Alteration Agreement	
MM BIO-4: No Net Loss of Wetlands by Obtaining Requisite Federal and State Permits. For all wetlands and other Waters of the U.S. or State that are removed or disturbed by project construction, all requisite federal and State permits shall be obtained, including, at least, a discharge permit from the U.S. Army Corps of Engineers pursuant to Section 404 of the Clean Water Act, and possibly State-issued Waste Discharge Requirements pursuant to Division 7, Chapter 4, Article 4 of the Water Code established by the Porter-Cologne Water Quality Control Act. These federal and State permits will contain conditions of approval and/or mitigation measures that will ensure a net zero loss of wetlands and other waters. Obtaining these permits and adhering to their requirements ensures that performance standards sufficient to meet CEQA mitigation standards are satisfied.	Results of implementation of conditions of approval and/or mitigation (if required) included as part of the permits shall be submitted prior to the issuance of a grading permit.	Pre-Construction and Construction: Permits must be obtained prior to construction and any permit conditions of approval and/or mitigation measures are required prior to construction.	Engineering	Copy of issued permits	
MM BIO-5: Obtain Tree Permit and Adhere to Permit Conditions. For all native oaks trees protected by the City Code that shall be removed or encroached upon as a result of the project, a Tree Permit shall be obtained that includes payment of in-lieu mitigation fees to compensate for oak tree encroachment and removal and/or onsite replacement plantings consisting of both native and nonnative tree species as well as protection measures for the trees that will	Results of implementation of conditions of mitigation (if needed) included as part of the permit shall be submitted prior to the issuance of a grading permit.	Pre-Construction and Construction: Permit must be obtained prior to construction and any permit mitigation is	Engineering	Copy of issued permit	

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>remain onsite. Obtaining a Tree Permit and adhering to its requirements ensures that CEQA performance standards are satisfied.</p>		<p>required prior to construction.</p>			
<p>MM CUL-1: Inadvertent Discovery. If subsurface deposits believed to be cultural (historical, archeological, paleontological, or tribal) or human in origin are discovered during construction, all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for pre-contact and historic archaeologist shall be retained to evaluate the significance of the find (i.e., whether the subsurface deposits could qualify as an historical resource, a unique archaeological resource, or a tribal cultural resource) and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications and mitigation requirements shall apply, depending on the nature of the find:</p> <ol style="list-style-type: none"> 1. If the professional archaeologist determines that the find does not represent an historical resource, a unique archaeological resources, or a tribal cultural resource, work may resume immediately, and no agency notifications are required. 2. If the professional archaeologist determines that the find represents a potential historical resource, unique archaeological resource, or tribal cultural resource, the archaeologist shall immediately notify the City and the applicable landowner and/or Applicant. The City shall work with the archaeologist and, if necessary, with other experts or expert agencies (e.g., the State Historic Preservation Officer, in the case of a potential tribal cultural resource, the relevant Native American organization) to determine whether, based on statutory criteria, the find qualifies as an historical resource, a unique archaeological 	<p>This measure shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.</p>	<p>Construction: Measure applies if resources are discovered during construction.</p>	<p>Engineering and Building</p>	<p>Copies of construction and building plans containing this measure</p>	

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>resource, or a tribal cultural resource. If a determination is made in the affirmative, appropriate mitigation or treatment measures shall be taken, consistent with those set forth in Public Resources Code Section 21083.2, subdivisions (b) through (e), and CEQA Guidelines Sections 15126.4, subdivision (b)(3). Preservation in place is the preferred manner of mitigating impacts to archaeological sites, but data recovery may be permitted where preservation would be inconsistent with project design, logistics, and cost considerations. Work may not resume within the no-work radius until the City determines that the site either: 1) is not an historical resources, a unique archaeological resources, or a tribal cultural; or 2) that the mitigation or treatment measures have been completed to the City's satisfaction.</p> <p>3. If the find includes human remains, or remains that are potentially human, the City and/or the landowner or Applicant shall ensure that reasonable protection measures are taken to protect the discovery from disturbance (A.B. 2641 [Stats. 2006, ch. 863]). The archaeologist shall notify the Placer County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the Public Resources Code, and A.B. 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner is required by statute to notify the California Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the Project (Public Resources Code Section 5097.98). The designated MLD will have 48 hours from the time access to the property is granted to</p>					

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (Public Resources Code Section 5097.94). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Public Resources Code Section 5097.98). This reburial will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (A.B. 2641). Work may not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.</p>					
<p>MM GEO-1: If paleontological resources are discovered during the course of construction, work shall be halted immediately within 50 meters (165 feet) of the discovery, the City of Roseville shall be notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. If the paleontological resource is considered significant, it should be excavated by a qualified paleontologist and given to a local agency, State University, or other institution with expertise in paleontology, where the resource could be curated and displayed for public education purposes.</p>	<p>This measure shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.</p>	<p>Construction: Measure applies if resources are discovered during construction.</p>	<p>Engineering and Building</p>	<p>Copies of construction and building plans containing this measure</p>	
<p>MM NOISE-1: Limits Hours of Construction and Muffle/Maintain Construction Equipment. Project construction shall occur only between the hours of 7 a.m. and 7 p.m. on weekdays and 8 a.m. and 8 p.m. on weekends to limit construction noise. All construction equipment shall be fitted with factory installed muffling devices and maintained in good</p>	<p>This measure shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.</p>	<p>Construction: Measure applies during construction.</p>	<p>Engineering and Building</p>	<p>Copies of construction and building plans containing this measure</p>	

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
working order, pursuant to City Noise Ordinance Section 9.24.150(G).					
<p>MM TCR-1: Unpaid Tribal Observation. A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the Construction Manager shall notify the City of the proposed earthwork start-date, in order to provide the City representative sufficient time to contact the consulting tribe(s). A single tribal representative shall be invited to, at its discretion, voluntarily observe any or all ground-disturbing activities during construction. The tribe shall be provided 72 hours to accept or decline observation. The single tribal observer shall be required to comply with all job site safety requirements and shall sign a waiver of liability prior to entering the job site. Should the tribe choose not to observe any or all of the activity, the City shall deem the mitigation measure completed in good faith without tribal observation as long as the notification was made and documented.</p>	<p>This measure shall be reflected in all construction and building plans, and construction site managers shall be advised by the applicant or developer of this measure.</p>	<p>Pre-Construction and Construction: Measure applies just prior to and during construction.</p>	<p>Engineering and Building</p>	<p>Documentation of tribal notification</p>	
<p>MM TCR-2: Contractor Awareness Training. The Construction Manager shall ensure that a Contractor Awareness Training Program is delivered to train equipment operators about cultural resources and tribal cultural resources. The program shall be designed to inform construction personnel about: federal and state regulations pertaining to cultural resources and tribal cultural resources; the subsurface indicators of resources that shall require a work stoppage; procedures for notifying the City of any occurrences; and project-specific requirements; and enforcement of penalties and repercussions for non-compliance with the program.</p> <p>The training shall be prepared by a qualified professional archaeologist and reviewed by City for approval, and may be provided in an audio-visual format, such as a DVD. The Construction Manager shall provide culturally affiliated tribes that consulted on the</p>	<p>This measure shall be reflected in all construction and building plans, and construction site managers shall be advised by the applicant or developer of this measure.</p>	<p>Pre-Construction and Construction: Measure applies just prior to and during construction.</p>	<p>Engineering and Building</p>	<p>Copy of signed training roster</p>	

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>project the option of attending the initial training in person and/or providing additional materials germane to the unanticipated discovery of tribal cultural resources for incorporation into the training.</p> <p>The training program shall be required for all construction supervisors, forepersons, and operators of ground-disturbing equipment and all personnel shall be required to sign a training roster and display a hardhat sticker that is visible to City inspectors. The construction manager is responsible for ensuring that all required personnel receive the training. The Construction Manager shall provide a copy of the signed training roster to the City as proof of compliance.</p>					
<p>MM TCR-3: Post-Review Discovery Procedures. If subsurface deposits believed to be cultural or human in origin, or tribal cultural resources, are discovered during construction, all work shall halt within a 100-foot radius of the discovery, and the Construction Manager shall immediately notify the City of Roseville Development Services Director by phone. The Construction Manager shall also immediately coordinate with the monitoring archeologist or project archaeologist and (if present) tribal monitor, or, in the absence of either, contact the consulting tribe(s) and a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for archaeology and subject to approval by the City, to evaluate the significance of the find and develop appropriate management recommendations in coordination with the consulting tribe(s) if the find is a tribal cultural resource.</p> <p>All management recommendations shall be provided to the City in writing for the City's review and approval. If recommended by the qualified professional and consulting tribes and approved by the City, this may include modification of the no-work radius.</p>	<p>This measure shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.</p>	<p>Construction: Measure applies if resources are discovered during construction.</p>	<p>Engineering and Building</p>	<p>Copies of construction and building plans containing this measure</p>	

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>The professional archaeologist must make a determination, based on professional judgement and supported by substantial evidence, within one business day of being notified, as to whether or not the find represents a cultural or tribal resource or has the potential to be a cultural or tribal cultural resource. The consulting tribe shall also be given the opportunity to provide, within one business day of being notified, a determination as to whether or not the find represents a tribal cultural resource or has the potential to be a tribal cultural resource.</p> <p>The type of discovery, as described below will determine the subsequent actions. These include: 1) a work pause that, upon further investigation, is not actually a discovery and the work pause was simply needed in order to allow for closer examination of soil (a “false alarm”); 2) a work pause and subsequent action for discoveries that are clearly not related to tribal resources, such as can and bottle dumps, artifacts of European origin, and remnants of built environment features; and 3) a work pause and subsequent action for discoveries that are likely related to tribal resources, such as midden soil, bedrock mortars, groundstone, or other similar expressions.</p> <p>Whenever there is question as to whether or not the discovery represents a tribal resource, culturally affiliated tribes shall be consulted in making the determination. Whenever a tribal monitor is present, the monitor shall be consulted.</p> <p>The following processes shall apply, depending on the nature of the find, subject to the review and approval of the City:</p> <ul style="list-style-type: none"> • <u>Response to False Alarms:</u> If the professional archaeologist determines that the find is negative for any cultural indicators, and tribal representatives have 					

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>not indicated the find is a tribal cultural resource, then work may resume immediately upon notice to proceed from the City's representative. No further notifications or archaeological consultation is necessary if it is determined that the discovery is not a cultural or tribal cultural resource of any kind. The professional archaeologist shall provide written documentation of this finding to the City, which shall include as an attachment any written documentation provided by tribal representatives or monitors.</p> <ul style="list-style-type: none"> • <u>Response to Non-Tribal Discoveries</u>: If a tribal monitor is not present at the time of discovery and a professional archaeologist determines that the find represents a non-tribal cultural resource from any time period or cultural affiliation, the City shall be notified immediately, to consult on a finding of eligibility and implementation of appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines. The professional archaeologist shall provide a photograph of the find and a written description to the City of Roseville. The City of Roseville will notify any [tribe(s)] who, in writing, requested notice of unanticipated discovery of non-tribal resources. Notice shall include the photograph and description of the find, and 					

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>a tribal representative shall have the opportunity to determine whether the find represents a tribal cultural resource. If a response is not received within 24 hours of notification (none of which time period may fall on weekends or City holidays), the City will deem this portion of the measure completed in good faith as long as the notification was made and documented. If requested by a [tribe(s)], the City may extend this timeframe, which shall be documented in writing (electronic communication may be used to satisfy this measure). If a notified tribe responds within 24 hours to indicate that the find represents a tribal cultural resource, then the Response to Tribal Discoveries portion of this measure applies. If the tribe does not respond or concurs that the discovery is non-tribal, work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to its satisfaction.</p> <ul style="list-style-type: none"> • <u>Response to Tribal Discoveries</u>: If the find represents a tribal or potentially tribal cultural resource that does not include human remains, the consulting tribe(s) and City shall be notified. The City will consult 					

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>with the tribe(s) on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be either a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines, or a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code. Preservation in place is the preferred treatment, if feasible. Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) not a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code; or 3) that the treatment measures have been completed to its satisfaction.</p> <ul style="list-style-type: none"> • <u>Response to Human Remains</u>: If the find includes human remains, or remains that are potentially human, the construction supervisor or on-site archaeologist and (if present) tribal monitor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641) and shall notify the City and Placer County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and Assembly Bill 					

**MITIGATION MONITORING AND REPORTING PROGRAM
for Sierra View Redesignation and Rezoning Project / File No. PL21-0162**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to the City	Staff Use Only
<p>2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission (NAHC), which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. Public Resources Code § 5097.94 provides structure for mediation through the NAHC if necessary. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the Public Resources Code).</p> <p>If no agreement is reached, the landowner must rebury the remains in a respectful manner where they will not be further disturbed (§ 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.</p>					